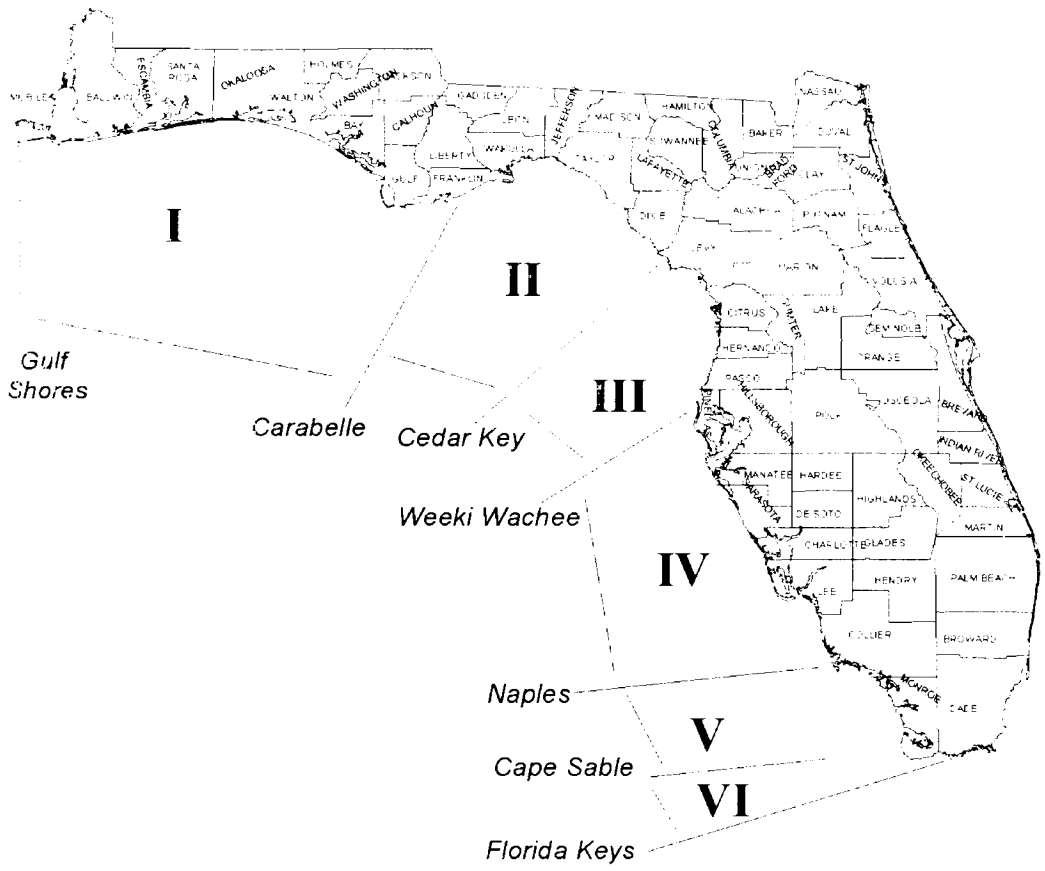
OCS Study
MMS 99-0064

Stakeholders' Issues in the Eastern Gulf of Mexico

Volume II: Annotated Bibliography



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Stakeholders' Issues in the Eastern Gulf of Mexico

Volume II: Annotated Bibliography

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ABSTRACT

This is a study of Stakeholders' attitudes toward offshore oil and gas production in the Eastern Gulf of Mexico. The purpose of the study was to "provide in a single document an identification of stakeholder groups in the Eastern Gulf of Mexico, the definitions of their interests and the degree of their concerns about OCS oil and gas activity." This required identification of stakeholders' social and economic issues. A second requirement was to prepare an annotated bibliography of the relevant materials. The study resulted in an inventory of stakeholders in the Eastern Gulf of Mexico and an annotated bibliography of relevant social science sources.

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PREFACE

This bibliography was prepared by Debra J. Webb and Laurie Bates, research assistants to Dallas A. Blanchard, Chair of the Department of Sociology, Anthropology and Social Sciences Interdisciplinary, The University of West Florida, and principal investigator for the Stakeholders Project. Dallas Blanchard also edited this volume.

INTRODUCTION

The National Environmental Policy Act (NEPA) of 1969 stipulates that Federal agencies use an integrated, interdisciplinary approach in research involving assessment of environmental impacts. Therefore, the social sciences, in addition to the natural sciences, are taken into consideration by the Minerals Management Service of the U.S. Department of the Interior prior to granting approval of offshore oil and gas exploration and production projects.

In keeping with these requirements, The University of West Florida, Department of Sociology, Anthropology and Social Sciences Interdisciplinary was contracted by the MMS to conduct a study of Stakeholder's attitudes toward offshore oil and gas production, "Socioeconomic Outer Continental Shelf Issue Analysis of Stakeholders in the Eastern Gulf of Mexico." The study area consisted of Florida coastal counties from Escambia, which borders Alabama, (and the adjacent Baldwin County, Alabama), to the Florida Keys, and the southernmost Gulf-bordering county of the state, Dade.

The purpose of the study was to "provide in a single document an identification of stakeholder groups in the Eastern Gulf of Mexico, the definitions of their interests and the degree of their concerns about OCS oil and gas activity." This required identification of stakeholders' social and economic issues.

A second requirement was to prepare an annotated bibliography of the relevant materials. That is this volume.

The purposes of the annotated bibliography were to (1) provide the researchers with the relationship of this project to the previous research, (2) provide the researchers with a preliminary understanding of the issues as depicted by the media, and (3) provide the reader with enough information about the items to determine whether the reader needs to examine an entry on greater detail.

HYPOTHESES

Hypotheses, based upon the previous research and media reports for the Eastern Region, are examined in Volume I. Those hypotheses were:

> 1. Coastal communities will exhibit a wide variety in their extent of social organization. For example, on one extreme there will be communities with a wealth of social organizations dedicated to diverse goals. Those organizations will have a web of interlocking memberships. At the other extreme, there will be communities with a dearth of organizations, and those organizations which do exist will exist largely in isolation from one another.

2. Attitudes vary by the type of tourism, if any, now being serviced and types desired for the future.

3. Attitudes vary by the proportion of permanent residents.

4. Attitudes vary by the political context.

5. Attitudes vary by type(s) of accommodations available to tourists.

6. Attitudes vary by historical experiences with the extractive history of offshore oil and gas activities.

7. Values and interests related to offshore activities of areas will vary by socioeconomic base.

8. The greater the distance of existing leases from shore, the greater the acceptance of offshore activity.

9. The nearer to the coast existing off-shore activity, the more intense the resistance to it.

10. Key correlates of opposition to off-shore activity will be social class, age, and occupation.

11. The more diversified the economic base of a community the higher the probability that a chamber of commerce will take no position on off-shore development.

12. The greater a community's economic base is centered on retirees and tourism the more likely a chamber of commerce will oppose off-shore development.

METHODOLOGY

Included here are sources which explore environmental sociological research in diverse areas, such as: in terms of environmental activism and its effect in specific cases perceived as threatening to the health and quality of life of communities; surveys of the 'new environmental paradigm'; and, popular attitudes toward sustainable development (and how that might impact future extraction-related industry). Industry literature detailing OCS development and current trends through the years also provides something of an historical perspective of the oil and gas industry. A continuing chronicle of state and national news concerning OCS oil & gas production and exploration issues is also part of the bibliography.

News articles included here were collected through various data bases, including: LEXIS/NEXIS, newspapers and wire services. Also, World Wide Web sources, e.g., WebLuis, The Associated Press, UPI, and other online sources were utilized.

The Bibliography is divided into two sections. The first consists of the more technical articles, in addition to official correspondence, e.g., letters from Florida officials (including town resolutions), and articles concerning congressional testimony.

The final section, "News and Online Sources," is composed primarily of popular journalism: newspaper articles, wire service articles, and news posted to online sources. Additionally there are non-technical commentary and news from some of the same trade publications which are included in the previous "Technical Sources" section. MMS and environmental organization websites are listed here, also.

The focus of this bibliography has been to convey a thorough representative sampling of the body of extant research on the sociological impacts of offshore oil and gas production, in addition to covering relevant news reportage.

Please note: annotations in this document are not intended to be comprehensive reviews of the works included. The primary goal of analysis was to capture what was most pertinent to this research. Therefore, the annotations vary widely in length according to their pertinence or perceived importance to this research. At the same time, we sought to provide enough information to prove useful to readers with other interests.

TECHNICAL SOURCES

American Petroleum Institute. 1993. Basic Petroleum Data Book. American Petroleum Institute. Washington, D.C.

The American Petroleum Institute "serves as a forum, information bureau, technical clearing house and national trade association for the petroleum industry." The Basic Petroleum Data book is updated three times a year and contains tables documenting: energy; reserves, crude oil; exploration and drilling; production; financial; prices; demand; refining; imports; exports; offshore; transportation; natural gas; OPEC and miscellaneous. Data such as "world energy consumption" and "United States gross and net energy consumption" and "world crude oil production by area" are included.

Anton, William J. 1984. Socioeconomic effects of offshore oil and gas activities upon Texas coastal communities. M.A. Thesis. Univ. of Texas, Austin. 114 pp.

This thesis documents the "diffusion of leasing on the Texas OCS and demonstrates the relationship between the pattern of leasing and the nature, magnitude, and timing of onshore impact in three coastal communities--Port Arthur, Port O'Connor, and Aransas Pass/Ingleside."

While these communities aren't experiencing typical impacts experienced by "frontier offshore areas," according to the author, they are, however, "experiencing fiscal deficits caused by supplying the offshore-related facilities with municipal services." There is no federal program set up to provide financial assistance to the impacted communities.

The objectives of this research are to:

(1) identify the pattern of leasing on the Texas OCS

(2) examine the relationship between the pattern of leasing and the nature and timing of onshore impacts

(3) compare the actual impacts experienced by Texas coastal communities with those suggested in the literature

(4) document the measures taken by the coastal communities to mitigate impacts resulting from offshore activity.

Arcury, T.A., T.P. Johnson, and S.J. Scollay. 1987. Sex differences in environmental concern and knowledge: The case of acid-rain. Sex Roles. 16(9-10): 463-472.

Previous theories have "predict[ed] differences between women and men in attitudes toward the environment due to differences in sex roles. Research...has tended to examine general

environmental concern, and the results have generally been weak and inconclusive" (463). This study explores sex differences in "concern" and "knowledge" about one specific issue--acid rain.

The two common lines of argument which purport to explain differences in environmental attitudes between men and women are both based on Western society's use of the natural world as resource, "...to be conquered and developed by science and technology for the primary use of human industry" (Ibid.). The first argument sees men as in command of the technoscientific, with an accompanying socialization for "unecological attitudes toward the environment" (464). In the same scenario women having been "denied access to the technoscientific realm,... have been socialized to the more ecologically benign roles of mother and nurturer" (ibid.). The second argument based on the use of environment as commodity "states that the male market mentality is geared toward economic growth no matter what [the environmental consequences]" (ibid.). Along with women's traditional exclusion from the marketplace comes less acceptance of the toll taken on the environment.

Early research on these environment/sex role issues "relied on single-item questions to measure concern...[and, according to Arcury, Scollay and Johnson] have poor validity and reliability" (Ibid.). Later research which used a more multi-dimensional survey seemed to show "statistically significant though modest positive correlations between being female and environmental concern" (Ibid.). This report claims to contradict previous hypotheses, indicating that: "if there is a sex difference, men are found to be more concerned and knowledgeable about the environmental problem" (463).

"The two major dependent variables in this study are concern about acid rain and knowledge about acid rain. Three separate measures of concern are analyzed: stated concern, relative concern, and active concern" (467). Independent variables are considered also in the analysis, including: education, income, age, and two measures of "information sources (number of days per week reading the newspaper...and watching television news...)" (467-468).The data was collected from 516 adults from a phone survey in Kentucky.

While no significant difference in stated or relative concern between men and women was apparent, there was a statistically significant difference of male concern in the *active* response (which includes asking respondents if they would pay roughly double their current electric bill to reduce acid rain). A "linear regression analysis confirm[ed] that males have a significantly greater knowledge of acid rain" (469). But here, admittedly, sex is only one of the factors of significance in assessing differences of knowledge: education is a factor, and age "has an effect equivalent to that of sex" (470).

It may also be appropriate to consider the overall disparity between the incomes of the women surveyed as compared to the men regarding "active concern." (After all, women's reluctance to double their power bill may well reflect more basic concerns than that of acid rain.) And, in the same respect, some effort could be made to address the level of male to female educational attainment before drawing conclusions about sex roles and environmental knowledge.

Baird, Brian N.R. 1986. Tolerance for environmental health risks: The influence of knowledge, benefits, voluntariness, and environmental attitudes. Risk Analysis. 6(4): 425-435.

This study was conducted as a Doctoral dissertation in Clinical Psychology. Research data concerned proposed air pollution standards for an arsenic emitting copper smelter--and public sentiment of area residents concerning risk factors. "Results indicated that informal risk estimates and risk tolerance were closely associated with judged benefits of the hazard source, acceptance or denial of vulnerability, judgments of exposure voluntariness, and environmental attitudes" (425).

The aspect of public opinion which has the greatest bearing on OCS development, as indicated from this research, concerns environmental attitude. It is evident from this study that "strong support for environmental ideology is likely to be associated with desires for reductions [in risks]," but conversely, not all those who generally support environmental protection or risk reduction will necessarily also "support the application of risk reduction measures in specific instances" (434). According to Baird, this is especially to be noted in cases where national policy must be implemented on a local level. "Many people may react to the local regulations in ways that might appear contrary to their attitudes in general" (Ibid.).

Other findings which may be of interest are in regard to risk denial, which occurs most commonly in those who are at greatest risk from a hazard--particularly if they also stand to receive the greatest benefits (such as employment related to the technology/hazard). Also, this article dealt with the aspect of informing the public of risks. In summary, Baird stated :

> ...persons less tolerant of risks were significantly more likely to know certain factual information...[but] factual knowledge was not a very useful predictor of risk tolerance... having or not having the facts did not seem to make much difference in how people reacted to risks (Ibid.).

Baird maintains that this is not to suggest that efforts to disseminate relevant information to the public aren't necessary, "but it does suggest that one should not expect information alone to strongly affect public opinion" (Ibid.).

Bartkowski, John P. and W. Scott Swearingen. 1997. God meets Gaia in Austin, Texas: A case study of environmentalism as implicit religion. Review of Religious Research. 38(4): 308-324.

Most research on environmentalism and religion has focused on denominational affiliation and "the effects of formal religious participation on individual ecological attitudes" (308). This paper seeks to reveal the "implicitly religious character of grassroots environmentalism. Drawing on insights from Mircea Eliade's theory of sacred space..."(Ibid.). The case in point is Barton Springs located in the center of Austin, Texas. The authors suggest that Barton Springs is an example of how a natural resource can come to be construed by individuals as: "[sacred] nodal space that provides individuals with access to ultimate reality, (2) integrative space which binds them to the local Austin community, and (3) demarcative space that furnishes Austin with a distinctive character in opposition to surrounding locales" (Ibid.).

The lack of scholarly attention to the religious character of environmentalism is a surprising oversight, according to Bartkowski and Swearingen--given the "recent 'spiritualization' of the environment and ecological issues that have been ushered in by a growing coterie of popular eco-theologians, deep ecologists, and ecological feminists" (Ibid.). They cite British atmospheric scientist James Lovelock's Gaia hypothesis as being used by its proponents to interject religious imagery into the idea of the earth as living organism (with an interdependent matrix of systems including humanity.) Implicit religion is described here as "quasi-religious" because it is "a non-traditional, extra-institutional, highly-personalized confrontation with issues of ultimate concern "(309).

This investigation of ecology as religion "focuses on the grassroots sacralization of urban space among environmentalists in Austin, Texas...[d]rawing on insights from Mircea Eliade's seminal treatise, *The Sacred and the Profane*..."(Ibid.). "Natural resources which combine land and water are deemed especially important because the latter has historically been thought to provide the means for individual purification and group sanctification (see Eliade, 1961)" (310). Not only can these spaces and landscapes represent group cosmogony or world view, they also may serve to "exhibit both identity-building and identity-distinguishing aspects" (Ibid.). And even though global culture has effectively desacralized nature, as Eliade puts it, "...nature still exhibits a charm, a mystery, a majesty in which it is possible to decipher traces of ancient religious values. No modern man, however irreligious, is entirely insensible to the charms of nature..."(Eliade, 1961) (311). Sacred landscape typically features some striking characteristic which serves as a liminal intersection or break in boundary "between mundane, everyday existence on the one hand and an absolute or transcendent reality on the other. Eliade uses the terms 'theophany' and 'hierophany' to describe this process..." (314).Theophany being the "point of transition," with hierophany being "a feeling of direct (and often physical) connection with transcendent reality...'a primary religious experience that precedes all reflection on the world' (Eliade, 1961) (Ibid.).

Those who were interviewed for this research expressed feelings toward Barton Springs that were "strikingly similar to (though more colloquial than) Eliade's conceptualizations" (Ibid.). The implications are apparent for other community's attachments to their own "sacred spaces" comprising land and water. Coastal beaches, like Barton Springs may illustrate "theophanic character" with a similarly "distinct disjuncture between a natural, peaceful world on the one hand and a more frenetic urban environment created by human hands on the other" (315). Additionally, the actual physical contact and immersion in the water may be, as with the Austin community, "an empirical bonding between physical, human activity on the one hand and a spiritualized, ultimate reality on the other. In this highly tactile sense, then, Barton Springs and the spring-fed pool it sustains seem to be hierophanic" (Ibid.).

Another consideration is the sense of group cohesion fostered by those sharing sacred space, and the ways in which symbolic space "ties the current generation to the previous generation" (317). This expresses aspects of integrativeness which promotes community solidarity. And finally, the sense of belonging is reinforced by the ways in which a treasured natural resource distinguishes one community from another--thus defining, or making a demarcation of the character of a community "...in opposition to various 'outsiders' (eg. land speculators and other prominent cities in Texas)" (321).

In the final analysis the authors offer two "important implications" (Ibid.) First, that "prognoses positing the imminent demise of religion, broadly defined, in the modern world may be premature" (ibid.) And, the authors suggest that baby boomers so-called preoccupation with "private troubles" may not be entirely accurate. It appears that this group may, in fact, evidence convictions that "...affirm both the individual and the community in which he/she is situated (Roof, 1993)" (Ibid.).

Beer, J. 1991. Decision: State of Louisiana et al v. Manuel Lujan, United States District Court, Eastern District of Louisiana. Civil Action no. 91-2910. 777 F. Sup. 486 (E.D. La. 1991.)

Opponents of Outer Continental Shelf Sale 135 filed for a temporary injunction to prohibit the sale. To be granted the injunction, the plaintiffs had to show that they would eventually prevail on merit, that they would be harmed if the injunction was not granted, that the possible harm to the plaintiff was greater than the harm the injunction might do to the defendants, and that the injunction would not "disserve the public interest" (487-88). The Court denied the plaintiffs motion for an injunction because the plaintiffs failed to meet the first requirement, proving they were likely to prevail. The Court decided against the plaintiffs in part because the plaintiffs were not timely in making their objections and filing against the OCS sale. In addition, the plaintiffs failed to prove that the OCS sale was inconsistent with Louisiana's Coastal Zone Management Program. They had the burden of proving that the secretary's decision on the sale was "arbitrary and capricious" (489).

The Court found that the secretary made a reasonable decision based on the information he had before him. Finally, the plaintiffs claimed the Environmental Impact Statement "was inadequate in that it failed to properly estimate the resulting impact from the lease-sale, including the socioeconomic impacts which the plaintiffs contend will result from the sale" (489). Again, the plaintiffs had to show the Court that the Department of the Interior did not disclose the statement and that they decided on the sale arbitrarily and capriciously. The plaintiffs failed to convince the Court.

Bendzsel, M. and I. Kiss. 1987. The Socio-Ethical Dimension of Invention. Impact of Science on Society. 147: 233-40.

This article provides an overview of the history of invention in Western society, and then addresses many of the general ethical considerations regarding the "equilibrium of the man-nature-society system" (239). According to Bendzsel and Kiss, "Here the ethical question is, to what extent are politicians and experts able and willing to draw people affected by the changes into the assumptions of risks?" (Ibid.).

The authors mention the Club of Rome in the 1970's, and *Limits to growth* in the 1980's as examples of indicators that "mankind is heading for its own destruction" (233). And they state

that "modification of the trends of development cannot be expected without a considerable change in our levels of consciousness...even if we criticize the final doomsday conclusions...we have to take seriously the message..drawing our attention to the inherited values and forms of consciousness" (234). They go on to say that we have reached a stage in which "technology and new inventions are really the dominant promoters of our era's way of life and imagination," but warn that these things "transform our environment, social relations, and moral conduct with consequences the recognition of which the technocrats shrink back from" (236).

Philosophically, the authors' stance is best demonstrated by their reference to the *Tao-te-Ching* of Lao-tsu, which they claim contains an important warning, "To know [and yet to think] we do not know is the highest [attainment]; Not to know [and yet to think] we do know is a disease" (239).

Brabant, S. 1993. The impact of a boom/bust economy on poverty. Pp. 161-194. In S. Laska, V. Baxter, R. Seydlitz, R. Thyer, S. Brabant, and C. Forseyth. Impact of offshore oil explorations and production on the social institutions of Coastal Louisiana. Minerals Management Service: New Orleans, La.

There may be as many as 2000 millionaires in Lafayette, Louisiana, a town of only 85,000 people, according to the author. "Once-in-a-lifetime fortunes are being made by those engaged directly in the oil business, and by those capitalizing on the prodigious, oil-induced growth of Lafayette itself" (161). But, along with the boom can also come bust--since oil is an elastic commodity, rising and falling with demand and the world market.

"Rapid population growth, increased cost of living, and the suddenness and unexpectedness of the bust" were all experienced by Coastal Louisiana. But, this report focuses on poverty. It was found that poverty increased during both boom and bust cycles. "Before the boom, the poor...were similar to the poor in other rural areas of the South"(188). The boom benefitted some of the traditionally poor, especially where union labor was prevalent. "For some, however, the rising cost of living made things even worse. This was especially true for the elderly."

In addition to the native poor, the "growth economy drew poor from other areas" (Ibid.). Although some found work, often this involved shift work "which separated families already in crisis. With respect to single men, the need for a readily available labor force led to human exploitation at its worse, the labor camps" (Ibid.).

Besides these impacts, a "new poor" emerged. "These people included both white and blue collar workers. What they had in common was that they had never been poor before" (Ibid.). Those who did not out-migrate stayed on as the underemployed "rather than separating from family and kin networks. There is evidence that these persons and /or their children may eventually constitute a new underclass population" (Ibid.).

Given these findings, this report made several recommendations:

1) Carefully controlled leasing of mineral rights could minimize social costs both to individuals and to communities. Massive growth inevitably ties local economics to the vicissitudes of the

commodities market. Leasing less area over longer periods of time would result in more stable economic and employment conditions.

2) Communities impacted by offshore drilling should be closely monitored. This should include but not be limited to cost of housing, cost of food, and changes in food stamp eligibility determinations. These figures, rather than unemployment rates, would be better indicators of a community's health.

3) Legislation protecting migrant labor should be expanded or enacted to include extractive and extractive related industries. Work camps need to be monitored for housing conditions, job contracts, pay scales, and the degree to which salaries can be indebted.

4) Networking between public employment agencies with respect to the availability of jobs needs to be developed.

5) Development of housing for workers and their families should be considered as part of the pre-leasing negotiations.

6) Programs to alleviate the pressure of the high cost of living inherent in boom conditions for those on fixed incomes should be developed. The cost of these programs should be part of the leasing costs.

7) Preparation throughout the boom for the inevitable bust to come should include, but not be limited to the following: Promotion of general education as well as skill development, i.e., trades. Educational programs across subpopulations on the elastic nature of extractive economy.

Brabant, S. 1984. Education in the Coastal Zone parishes. Pp. 135-164. In R. Gramling and S. Brabant, (eds.), The role of Outer Continental Shelf activities in the growth and modification of Louisiana's Coastal Zone. U.S. Department of Commerce/Louisiana Department of Natural Resources: Lafayette, La.

As mentioned previously in this volume, "...the direct effect of OCS production on the [impacted] parishes can not be determined", so Ms. Brabant compares and contrasts coastal zone parishes in terms of education prior to and following the commencement of offshore drilling (135). In addition, a review of boom town literature which relates to impacts of oil and gas production is provided here.

Boom town literature describes energy related development as "...both costly and disruptive" in widespread socioeconomic and quality of life issues. Overtaxed infrastructure and school systems; higher percentages of high school dropouts; increased cost of living without

corresponding teacher salary increases, (meaning fewer new teachers, more students and overburdened teachers), are some of the prevalent factors of energy related development on education, that are "...both negative and long term."

The author acknowledges the shortcomings of common research methods, due especially to an absence of baseline data. "The quality of education in the area prior to the energy related development is not known and the long range effects are often speculative" (160). And, according to this research, the effect on education due to offshore industry has not confirmed the many negatives of boom town literature. The impacts have "...not been uniform, either across parishes or across time periods" (162). "With respect to student population, cost per pupil of registration and educational attainment, the repercussions on education in a boom area suggested in the boom town literature either have not occurred in the coastal zone parishes, have been limited to a specific time period, or have been positive" (163).

Bullard, Robert D. 1994. Grassroots flowering: The Environmental Justice Movement comes of age. Amicus Journal. 16(1): 32-37.

This article gives a brief summary of how the environmental justice movement began and what it does. The environmental justice movement tries to eliminate environmental racism. The Reverend Benjamin F. Chavis defined environmental racism as "racial discrimination in environmental policy making, enforcement of regulations and laws, and targeting of communities of color for toxic waste disposal and siting of polluting industries" (32).

The author points out that one important effect of the environmental justice movement is the redefining of what environmentalism is. He writes: "At home, the environmental justice movement has broadened the very definition of environmentalism. Partly as a result of the movement's work, the public's concept of 'the environment' now includes endangered urban habitats, childhood lead poisoning, energy and transportation, facility siting, equal protection, and a host of other issues related to where people live, work, and play "(35).

Butte, F.H. 1987. New directions in environmental sociology. Annual Review of Sociology. 13:465-88.

Butte presents a review of research in environmental sociology. Along with a brief history of the development of environmental sociology, five areas of related scholarship are discussed here: the "new human ecology"; environmental attitudes, values, and behaviors; the environmental movement; technological risk and risk assessment, and the political economy of the environment and environmental politics.

Perhaps of greatest interest in regard to the Stakeholders' project is the mention of previous research on environmentally-related community activism. Butte states that "discontent should not be treated as a constant," and the "character of movement mobilization depends upon the class

composition of the local community and the response of local government and business elites to initial protest actions" (478). Also, the controversy surrounding the "environmental risk establishment" is thoroughly discussed here. This report refers to Allan Schnaiberg (who, along with Freudenburg, Catton, and Dunlap are prominent figures in environmental sociology.) He "...has stressed that bias exists in the assessment of technological risks in the direction of overestimating social benefits and ignoring major social costs," whereas other research holds the opposite view. The comments on Perrow's work (concerning "normal accidents") should also be noted.

Early environmental sociologists sought to be the vanguard of the "reorientation of sociology toward a more holistic perspective that would conceptualize social processes within the context of the biosphere" (466). But, according to Butte "these lofty ambitions...have largely failed to come to fruition" (Ibid.). However, environmental sociology has served to stimulate research and has been a catalyst for the critique of mainstream sociology.

The "new ecological paradigm (NEP)" is central to Catton & Dunlap's influential research, which is reviewed here. This is in contrast to the anthropocentric paradigm or the "human exemptionalism paradigm (HEP)." In essence, they insist that: "a sociology that is relevant to the pressing problems of the modern world--must shed its anthropocentrism and reject the notion that humans, because of their capacity for culture, technological innovation, and so on, are exempt from the ecological laws that govern the existence of lower species" (468). (Catton is perhaps best known for the dire predictions of *Overshoot.*)

Butte, F.H. 1986. Sociology and the environment: The winding road toward human ecology. International Social Science Journal. 38(3): 337-56.

The history of environmental sociology is described in detail in this article, particularly vis-a-vis the influence of the works of classical social theorists Marx, Durkheim, and Weber. This article points out "an inherent duality in human existence--humans as strands in the web of life in the larger biosphere...and humans as creators of unique and distinctly social 'environments' --and that this duality leads to an ambivalent relationship between sociology and biology" (Butte, 338). This is articulated here as a basic conflict in applying sociological theory to address human relationship or interaction with the natural world.

In terms of OCS production, this article presents a very well-explained overview of how environmental sociology may be applied in broad theoretical terms to issues which relate to production versus the "New Environmental Paradigm (NEP)". Environmental sociologists, though diverse, generally adhere to Catton and Dunlap's concept of NEP, which is premised on the 'ecosystem dependence' of human societies. The most salient aspect of this report, and of environmental sociology as a discipline, is "the question of the nature and degree of biophysical limits to economic expansion" (353).

The flaws and potential ability of the sub-discipline of environmental sociology to affect the discipline of sociology, and finally to be used to direct a new consciousness are explored. Perhaps the most relevant points made here concern a shifting of the underlying anthropocentrism which

not only informs all of sociology, but also society's view of a natural world in which "progress can continue without limit." The argument being:

> ...these assumptions, bolstered by the boom of Western expansion underwritten by finite but readily accessible supplies of fossil fuels and other non-renewable raw materials, have led to notions that 'have been tantamount to assuming an environment's carrying capacity is always enlargeable as needed--thus denying the possibility of scarcity (345).

Cable, Sherry and Charles Cable. 1995. Environmental Problems, Grassroots Solutions. St. Martin's Press: New York. 143 pp.

This book is designed as a college text which serves as a primer on the sociological aspects of environmental problems. A brief but thorough historical overview is included, which explores ways in which economic growth has occurred at the expense of the environment. The authors "place issues such as the effects of modern industrialization; the use of corporate power; and the push for economic growth, resource management, and environmental deregulation into a cohesive framework" (cover).

Grassroots organizations and national organizations are profiled here, and their effectiveness assessed. This text also provides basic info on environmental science, a time line of key environmental events in the U.S., a glossary, a list of environmental organizations, and list of selected readings.

Chess, Caron. December, 1987. Encouraging effective risk communication in government: Suggestions for agency management. Environmental Communication Research Program, New Jersey Agricultural Experiment Station. Cook College, Rutgers University. 9 pp.

(This report complements *Improving dialogue with communities: A risk communication manual for government* and *Improving dialogue with communities: A short guide for government risk communication*, written by Caron Chess, Billie Jo Hance, and Peter M. Sandman.)

"[Agencies'] process for dealing with communities typically has more impact than their explanations of risk", according to this report (1). Often there is a mutual frustration and misunderstanding between government agencies and communities over the communication of issues relating to environmental health risks. Effective risk communication can help agencies to:

"Understand public perception and more easily anticipate community response to agency actions; increase the effectiveness of risk management decisions by involving concerned publics; reduce unwarranted tension between communities and agencies; explain risks more effectively; and, alert communities to risk in productive ways" (Ibid.).

Effective risk management depends on how agency personnel interact with the public from day to day. Consistent support is also necessary from management to develop effective communication standards in agency practices. (See: *Improving dialogue with communities: A risk communication manual for government* for specific guidelines of risk communication). This report suggests various ways management can work within an agency to promote effective methods of risk communication. These suggestions are directed primarily to environmental health agencies rather than to the state Department to Environmental Protection. The authors mention that a number of these recommendations may, in fact, already be implemented.

Broad categories of discussion include: organizational climate; decision-making; organizational structure; staff support; planning and evaluation; resource allocation; and interagency communication. "Final note" cautions against using this type of information as "freeze-dried risk communication" programs--since " only monologues can be pre-packaged" (9). "The dialogue with communities that is key to successful risk communication requires commitment from agency management as well as implementation by agency staff" (Ibid.).

Chiles, Lawton. 27 August, 1996. Letter to Florida Senator Bob Graham.

In this letter Governor Chiles makes a firm statement of his personal opposition to Coastal Petroleum Inc.'s efforts to begin drilling "approximately 10 miles offshore of St. George Island in the Florida Panhandle." Governor Chiles says, "Because some of Florida's most pristine beaches are found in the panhandle, the activities associated with drilling are not environmentally and economically compatible. I will continue to use every authority I have to protect our valuable coastal resources...I am firmly committed to protecting Florida's beaches and tourism industry and I hope you continue to work with me toward this goal."

The letter also provides a time line of the history of Florida's dealings with Coastal Petroleum. In summation, this time line includes:

1941 — During wartime domestic fuel source production was "a high public priority. Spills from coastal exploration are not considered detrimental and economic development is more important than any environmental consideration."

1947-1967 — Coastal Petroleum Company (Coastal) purchases Arnold Explorations and by this time, the contract has been separated into three leases. The first two leases encompass Gulf coast offshore areas. The offshore area runs from Apalachicola to six miles south of Naples, from the coast seaward 10.36 miles. The third lease covers Lake Okeechobee and fresh water bodies.

Coastal begins exploratory drilling ...spending more than $16 million...and no oil is ever discovered.

1968 A dispute concerning rights to mine limestone beneath Lake Okeechobee begins between Coastal, the State and the U.S. Army Corp. of Engineers.

1969 The Santa Barbara, California oil spill contaminates miles of beaches and "brings the threat of spillage from oil production to the attention of Floridians."

1976 The State and Coastal settle over Lake Okeechobee. Coastal agrees to revised drilling rights. They retain only a residual royalty right to 6.25% of any oil and gas produced in the "nearshore corridor," (defined as within 4.36 miles of the coast) until the year 2016. They surrender the "middle corridor" (4.36 to 7.36 miles offshore), and retain active rights to explore only in the "offshore corridor" of state jurisdiction (7.36 miles to 10.36 miles).

1990 The Florida Legislature limits offshore drilling by passing Chapter 90-2, Laws of Florida. Coastal files suit in Circuit Court. The dispute is tried in the Circuit Court and appealed (see 1996).

1992 Coastal submits five applications to the Department of Natural Resources (now the Department of Environmental Protection) for permits to drill offshore, four of which are subsequently withdrawn.

1993 The Department recommends denial of the remaining permit application. . .based upon the applicant's failure to provide a $515 million surety bond to cover potential spills. Coastal appeals the order.

1995 In August, The First District Court of Appeals reverses the Final Order, ruling that the Department has no authority to require a bond exceeding $4,000. The case is remanded back to the Department.

In May, the Governor and Cabinet vote to require a bond of at least $500 million...and directs the Department to prepare another recommendation based upon a more catastrophic spill. Coastal appeals, and in June, the Governor and Cabinet vote to increase the bond to $1.9 billion. The Department again denies the permit for failure to post the required bond.

1996 The First District Court of Appeals finds that the bond requirement impairs the contract (lease) in violation of the Florida Constitution. The Board of Trustees appeal to the Florida State Supreme Court, which declines to accept the case for review. The final order is remanded back to the Department, directing that the permit cannot be denied for lack of a bond required outside of the legally binding lease agreement between the State and Coastal.

In August, the Circuit Court ruled for the State regarding the lease of the "nearshore corridor," saying "the decision to prohibit drilling was made in the public trust." Coastal has appealed.

On August 16, the Department sent a notice of its intent to issue the drilling permit to Coastal, which must advertise the Department's intent. Once the notice appears, any person whose interests may be affected by the Department's decision may petition for an administrative hearing. The Department will then have to defend its decision before an Administrative Hearing Officer. The Hearing Officer will hear all testimony, formulate a recommendation, and submit it to the Secretary of the Department. The Department will accept the Hearing Officer's recommendation and issue a Final Order implementing it, or disagree, explain the legal basis for disagreement and issue its own Final Order. That order can be appealed to the First District Court.

Coastal will need three other permits before they can begin drilling:

1) Environmental Resource Permit--for placing a rig in the water
2) U.S. Army Corp. of Engineers fill permit--for placing a rig in the water
3) Air pollution control permit from the DEP

"These permits will also be subject to notice provisions, and interested parties will have the opportunity to challenge any agency decisions."

Cicin-Sain, B. 1986. Ocean resources and intergovernmental relations: An analysis of the patterns, pp. 241-262. In M. Silva, (ed.), Ocean Resources and U.S. Intergovernmental Relations in the 1980s. Westview Press: Boulder, CO.

This article compares state/federal relations in terms of marine policy, for: coastal zone management, fisheries management, marine mammal and endangered species protection, and offshore oil development. This study is based on observations made over a ten to fifteen year period concerning the enactment and implementation of the Coastal Zone Management Act of 1972 (CZMA), the Marine Mammal Protection Act of 1972 (MMPA), the Endangered Species Act of 1973 (ESA), the Magnuson Fishery Conservation and Management Act of 1976 (MFCMA), and the Outer Continental Shelf Lands Act Amendments of 1978 (OCSLAA).

California and the Pacific Coast are the main areas of focus for this study, although "the patterns of federalism described [here] also echo a number of the hypotheses and conclusions reached about other regions by the authors..." (241).

The author concludes that the "wholesale applicability of 'dominant' models of federalism" is questionable (258). The notion of dominant models of intergovernmental relations prevailing during certain time periods is particular to urban policy and economic policy areas specifically, and are not representative of all types of policies, according to Cicin-Sain (259).

Cicin-Sain, B., R. Gramling, R. Johnson and C. Wolf. 1992. The evolution of the federal OCS Program: National and regional perspectives, pp. 107-137. In National Research Council, Assessment of the U.S. Outer Continental Shelf Environmental Studies Program: III. Social and Economic Studies. National Academy Press: Washington D.C.

This article is appendix C in the OCS volume. It gives a national overview of the evolution of the OCS, and then examines the course of offshore oil development in the regions of the United States where OCS development has either taken place or been proposed, including the Gulf of Mexico. In conclusion, observations concerning the factors that "either facilitated or impeded the program's progress in the various regions are given" (107).

From a national perspective, the OCS program provides 8-10% of total domestic production of crude oil and 20-25% of domestic natural gas production. OCS revenues are the fourth largest source of federal revenue for the U.S. Treasury (after "personal income taxes, social insurance receipts, and corporate income taxes")(Ibid.). Federal revenue totals more than $100 billion. MMS estimates 130,000 jobs related directly or indirectly to the program in the Gulf region.

Besides the obvious benefits, "...the development of offshore oil and gas resources in the United States has been marked by extensive and recurrent conflict between the federal government and the affected states and localities." This contention, starting in the 1940's, has involved resource ownership, management control, spillover effects on adjacent communities, and distribution of benefits (Cicin-Sain and Knecht, 1987).

Other factors which have shaped and determined the course of the OCS Program include: world energy supply and demand; actions of the oil industry; orientations of various U.S. administrations; patterns of public consumption of energy resources; and public attitudes toward the environment.

The historical overview details federal leasing from 1954-1978; OCS Lands Act Amendments of 1978; Implementing the 1978 amendments: Conflict and controversy; Regional variations: including the Gulf of Mexico region, and Eastern Gulf (Florida).

Two themes have remained consistent in Florida's public attitudes toward OCS development: the state legislature has "maintained that it is not opposed to OCS development as long as sufficient consideration is given to Florida's unique coastal environment"; and that "there is insufficient information to be able to determine impacts from oil and gas activity in the environmentally sensitive and economically important area south of 26 degrees N latitude" (121). Despite the state's opposition, lease sales were conducted, although a moratorium on drilling was imposed in lieu of collecting 3 years of physical oceanographic and biological research data; and biological surveys, in addition to pledging to work with the Dept. of the Interior to monitor subsequent drilling (Ibid.). These same issues arose once more regarding the 1987 to 1992 proposed "five-year plan". Then-Governor Martinez, citing lack of sufficient impact information negotiated with Interior Secretary Hodel, resulting finally in a Presidential moratorium, and pending federal buyback of leases in the area south of 26 degrees N latitude and east of 86 degrees W longitude.

Actual impacts in Florida have primarily been what Freudenburg and Gramling call "opportunity-threat" impacts (122). "Unlike biological or physical systems, for which no impacts occur prior to concrete alterations of the physical environment, social systems can be affected by

changes in the social environment" (Ibid.). The mere announcement of a lease sale instigates measurable social repercussions. "Opportunity-threat impacts include those to environmental and health systems, and to economic, social, cultural, and psychological systems" (Freudenburg and Gramling, 1992). "In Florida these effects included community organizing and political opposition to OCS activities" (Ibid.).

In conclusion, the authors say that the perspective toward the OCS program developed in the Gulf of Mexico (which comprises the bulk of the OCS program) "became more or less the perspective of the federal agencies initially charged with the OCS program [USGS and BLM]" (137). This resulted in escalating conflict between the majority of coastal states and these federal agencies. The MMS "finds its position in conflict with most of the coastal states. This has resulted in MMS being denied access to the majority of these resources" (Ibid.)

The report closes with this statement:

> The Gulf "model" simply has not worked outside the socioeconomic and political environment where it emerged, and it is instructive to note that the only other successful OCS development has occurred under an almost diametrically opposed model in the southern California area. It is interesting that this development, unlike that in the Gulf, clearly follows the requirements of OCSLA to monitor the effects of OCS activities subsequent to leasing. The implications of this fact are not lost on the Socioeconomic Panel (Ibid.).

Collier County, Florida; Resolution No. 97-155. 11 March, 1997.

This resolution from the Collier County Board of County Commissioners, with a cover letter to Governor Lawton Chiles, urges "denial of offshore geophysical investigations permit applications and the prohibition of offshore drilling." The resolution states that "whereas, Collier County's economic well-being is dependent upon tourism, predominantly centered around the natural beauty of our beaches and coastal waters...exploitation of oil reserves...threatens very valuable and sensitive natural systems as well as the economic well-being of Collier County..."

Connerly, C.E. 1986. Growth management concern: The impact of its definition on support for local growth controls. Environment and Behavior. 18(6): 707-732.

This paper seeks to "extend" earlier research done by Van Liere and Dunlap in 1981. The analysis is meant to determine "the degree to which support for controlling local population growth is affected by how growth controls are defined" (707). These differences in definition of growth management are investigated here--in regard to how they "...relate to each other, to a measure of support for environmental protection, and to various respondent characteristics, including social status, and political ideology" (Ibid.).

Findings show that, "how growth management is measured does make a difference, in some cases, when individual responses are classified by social status or ideology" (Ibid.). Concerns over rapid growth overlap with some areas of environmental concern--but these two areas remain distinct. Sensitivity to problems inherent in development (such as traffic congestion, and increasing taxes) "does not necessarily imply concern for the environment "(708).

The two-fold purpose of this article is:

1) [To] compare different types of growth management concern measures...in terms of various demographic and political attitude variables...and to [a] measure of environmental concern.
2) [To] weigh the importance of ...two sets of variables in affecting growth management concern [social status or ideological characteristics].

Significant findings indicate that, "When confronted with trading off lower taxes, lower housing costs, job creation, and private property rights, support for limiting population growth declined significantly...The more opponents of controls articulate the costs of controls to the public, the better their chance of reducing support for growth management" (722-723). Also of note: "... people who are more educated are more likely to support costly growth controls, whether or not they are affluent, suggest[ing] that education is not serving as a measure of social status, but may simply be a measure of the awareness that there is no such thing as a free lunch "(724).

Other factors which influence growth control policies are race and age. "...[B]lacks are significantly less likely to support specific or costly growth control policies" (725). Economic concerns, such as unemployment, rated higher with those African-American's surveyed. As for age, "the elderly have less to lose in sacrificing employment opportunities or lower housing costs because they have less need for jobs and new housing than younger households" (726). Although there is "mixed evidence" in support of growth control being predicted by political ideology, "supporters of the dominant social paradigm [are expected to be] less supportive of growth controls. In contrast,...individuals favoring less state spending on the poor are *more* likely to favor growth controls" (Ibid.).

"Finally, most of the background and political attitude variables discussed here are not significantly associated with support for increased spending for environmental protection" (727).

The authors conclude with an admission that "the research reported here forced people to assume that growth controls would be costly, in order to determine the impact of these costs. But this does not tell us whether people actually think that growth controls do bear costs" (Ibid.).

"As the research reported here suggests, support for limiting growth can actually increase substantially when people are asked about specific approaches to controlling growth" (728).

Darce, Keith. 10 March, 1997. The deeper they go... New Orleans City Business. 17(36): 17.

Petroleum corporations are undergoing extensive re-organization due to the great increase in deepwater drilling exploration and production. Shell Offshore Inc. pioneered deepwater drilling in the Gulf. They have been operating under two subsidiaries--Shell Deepwater Development, Inc. and Shell Deepwater Production, Inc. This type of corporate structuring is now being done by other industry leaders such as Texaco and Chevron.

Wells drilled in water below 1,000 feet "present challenges not encountered when drilling in shallower water or on land." Conventional drilling platforms are not feasible, for example. Floating rigs and production facilities are typical of deepwater operations--which require specialized expertise in both design and operation personnel.

Chevron's general manager of projects and services R.D. Pitre says, regarding deepwater drilling, "This is where our large capital investments are taking place." The company has divided its gulf operations into "profit centers," or distinct operating areas. Partnership arrangements between oil and gas companies are conducted differently in terms of deepwater production, also, due to the high operating costs--with partners merging their resources rather than each developing separate aspects of production.

"The number of deepwater fields with proven resources, 20 in 1995, is expected to grow by 80% to 36 by 2000, according to the Gulf of Mexico Outer Continental Shelf Region of the Minerals Management Service." Natural gas production is also expected to be up by at least 24% from 1995. "Deepwater oil production rose 260% between 1992 and 1996, while deepwater natural gas production (sic) 375%."
1997 lease bids for the central Gulf smashed records for the second year in a row.

This boom in oil and gas production and exploration will "require a flood of reviews, inspections and studies to be done [by the Minerals Management Service]." The MMS has asked for a staff increase of 24 new workers to its 480-member staff. "OCS last month issued a 43-page report that attempts to quantify the office's growing work load." "In the short term, the agency's resources will be strained as demand for its services grows. ...The impacts on the workload...as a result of deepwater activities are just beginning." The growing volume is not the only factor which will continue to impact the MMS's regulatory workload. New technology which is now being utilized to probe depths that were considered "unreachable" until recently "...present new challenges to the agency workers who must evaluate the safety and environmental impact of the projects." Logistically, inspection sites now often require specially chartered helicopters and take hours of air commute time to reach, and the platforms are typically more complex and much more difficult to inspect.

An OCS office report has been prepared and there are hopes this will "...convince the Republican-led Congress to provide the resources [the] agency needs to keep up with the growth in the oil and gas industry." Hiring MMS staff is part of the new federal budget, which is expected to be debated for several months before a final vote is taken.

Davis, Donald W. and John L. Place. 1983. The oil and gas industry of Coastal Louisiana and its effect on land use and socioeconomic patterns. U.S. Department of Interior/U.S. Geological Survey (Open File Report 83-118). Reston, VA.

Twenty parishes of south Louisiana were researched for this study. Emphasis was placed on the southernmost eight parishes. Aerial photos, topographic maps, literature searches, interviews and fieldwork were analyzed. Land use patterns were studied here, in addition to coastal settlement patterns.

The purpose of the research concerns the need to increase domestic sources of energy, and in doing so, to "anticipate impacts on land use and land cover and on socioeconomic patterns of the coastal states adjacent to the prospective offshore fields"(2). This investigation seeks to use Louisiana's hydrocarbon industry as a model from which lessons may be learned and applied to future regions impacted by similar development--"specifically ...the knowledge of the impact that occurred with development of onshore facilities to support offshore oil and gas operations" (Ibid.).

Geographical, historical and technical background on south Louisiana is provided in this report, in addition to thorough discussion of "impact on the land, land use, and society."

Research conclusions state that both the land and the economics of these areas are "significantly modified by such developments"(67). Participating businesses line the waterfronts, workers migrate from rural inland communities, in addition to an "influx of skilled labor from other regions" (Ibid.). Also, the moving of oil and gas by pipeline inland to refineries or processing plants is a major source of impact--specifically due to the necessary canal network, which affects the hydrologic, vegetative and wildlife environment" (68).

"Without question, the economy of the Louisiana coast has been stimulated at least temporarily by extraction of oil and gas...major changes, however, in land surface configuration and in land use have resulted, with direct and indirect effects on the water, flora, fauna, and social structure of the coastal parishes" (Ibid.).

Deepwater finds boost U.S. associated gas (discoveries of large deepwater offshore oil deposits with associated gas deposits). (Includes related article on deepwater tension-leg platform planned for Gulf of Mexico.) 03 Feb, 1997. The Oil & Gas Journal. 95(5):26-28.

According to a Natural Gas Supply Association (NGSA) analysis of U.S. Energy Information (EIA) data, "large deepwater oil discoveries in the Gulf of Mexico the past decade have nearly doubled the contribution associated gas makes to total U.S. gas reserves."

One reason for this is a shift in emphasis and allocation of resources by oil and gas producers. In mid-1991 about 40% of U.S. drilling rigs were searching for natural gas, whereas by mid-1996 the proportion had risen to 60%. A small number of offshore deepwater rigs has found "giant oil reservoirs with enormous associated gas reserves" in the deepwater Gulf. The importance of the deepwater Gulf is continually growing for U.S. gas production.

The larger natural gas producers have increased exploration, while the smaller firms concentrate increasingly on the management of mature gas fields.

A new deepwater tension-leg platform (TLP) development project is advancing in the Gulf of Mexico. The project will develop Marlin oil and gas field, 125 miles from New Orleans and 100 miles south of Mobile, Ala. Construction is slated to begin later this year. Production from Marlin will come ashore via "the Amoco-operated Main Pass Oil Gathering System, installed in 1996, and gas will be transported to market through the Destin pipeline, a planned joint-venture pipeline of Amoco, Shell and Southern Natural Gas Co. The Destin pipeline will come ashore at Pascagoula, Mississippi, where an Amoco/Shell gas processing complex will be built. From there, the pipeline will extend north and connect with five interstate pipelines in Mississippi. Oil and gas sales pipelines will be laid to connect with the Main Pass and Destin systems."

Defenbaugh, Richard E. 1990. The Gulf of Mexico--A management perspective. American Zoologist. 30(1): 7-13.

This article presents a general overview of the mission of the MMS in regard to how scientific knowledge aids in dealing with management concerns of the agency. Both the general management perspective and the regional management perspective are presented here. Generally, the MMS seeks to conduct the utilization of resources in such a way that, "damage to other resources, including biological resources, is minimized and never becomes irreversible" (7).

According to Defenbaugh, a management perspective is "the sum of the responsibilities and constraints that together define the mission and work plan of an agency. Elements include the resource being managed, industry or activity being regulated, applicable legislative and regulatory framework, risk setting, social setting, and environmental setting (including both physical and biological resources)" (Ibid.). All of these elements are addressed in this report.

Defenbaugh provides a very concise synopsis of the MMS's mission in regard to the themes mentioned above. The Gulf is considered a composite of eight regions, and the particular concerns of each of these areas are listed here. Anti-drilling public attitudes are not addressed, or alluded to.

Destin Dome 56 Unit. Executive Summary and Project Description, Volume I. Destin Dome 56 Unit Development & Production Plan. Amended, July 1997. Destin Dome Asset Management Team, Chevron U.S.A. Production Company, GOM Business Unit. New Orleans, La.

This summary gives a description of Chevron's planned project, which will be located on eleven lease tracts approximately 25 miles due south of Pensacola. The project will consist of up to twenty one wells, based on early drilling rates, or "geological success." All analyses in the development and production plan are based on maximum case scenarios.

Satellite well locations will produce the gas which will then be routed through infield flow lines to a central processing facility, and then moved by pipeline across the floor of the Gulf, to Mobile, Alabama.

A summarized description is given of the field, route and processing facility; geology; physical environment; socioeconomic data and information; and, "studies completed as a result of previous activity", particularly in regard to drilling discharges. Also discussed is the "avoidance of accidental spills." In terms of "consistency," the activities planned for Florida are very similar to those already undertaken off Mississippi and Alabama, and are, according to the summary, "consistent with each state's Coastal Management Program. In conclusion, this Chevron document says "the effects of [drilling] activity on the environment are minimal."

Destin Dome 56 Unit. Site Specific Hydrocarbon Spill Contingency Plan, Volume XIII.A. July 1997. Destin Dome 56 Unit Development & Production Plan. J. Connor Consulting, Inc.--for Chevron U.S.A. Production Company, GOM Business Unit. New Orleans, La.

The Hydrocarbon Spill Contingency Plan (HSCP) is a guide for management and field personnel in the event of a spill in the Destin Dome area. It gives detailed procedures to be followed in response to spills that might result from "exploration, development, production, or transportation activities" (1).

An "Incident Command System (ICS)" is the basis for the HSCP--it is specifically designed to "facilitate planning and coordination of response resources in the Gulf of Mexico E & P environment" (2).

The mobilization, deployment, and coordination of personnel and equipment in response to spills of "any reasonable foreseeable size" are directed by HSCP guidelines" (Ibid.).

This site specific contingency plan is lengthy, consisting of 27 sections. These sections include: Detection, action and internal notification; Regulatory reporting; Response organization; Incident command center and communications; Documentation guidelines and meeting schedules; Cooperatives and contractors; Preparedness for response exercise program; Discharge calculations; Monitoring and predicting spill movement; Environmentally sensitive areas; Protection strategies; Description of response; Dispersant use; Shoreline cleanup techniques; Transfer and storage strategies/methods; Oil/water/debris separation strategies/methods; site safety plan/MSDS; Waste minimization and disposal strategies/methods; Rig/Structure information; Fuel loading procedure; EPA NPDES permit; Media relations; and Hurricane procedures.

Of particular note is the section on discharge calculations. A description of worst case spills are considered for trajectory modeling and for effective response planning. Potential oil spills considered here result from drilling, from a pipeline rupture, a platform release, or from a well blow out --where all oil stored on the central production platform (CPF) is released as a result of the blowout. The potential for pollution to the water from the well itself is not considered, because Destin Dome 56 Unit is a dry natural gas well. In the event of a drilling-related spill during operations the maximum spill volume is estimated at 1500 Bbls. In the case of a pipeline

rupture, spill volumes are given of 5.62 Bbl (or CIS lines) and a volume of 3500 Bbls if liquid hydrocarbon injection from the field is required in the export pipeline. Chevron currently has no plans for the injection of liquid hydrocarbons into the export gas line" (Section 10, pp. 2). "Spill exposure from platform release is associated with storage and transport of hydrocarbons on the CPF" (Ibid.). In the event that a leak went unnoticed for 2 1/2 hours a spill volume estimated at 1500 Bbl could result. To satisfy regulatory requirements, a spill case was considered assuming the loss of all hydrocarbons stored on the CPF and contained in all connected CIS pipelines, simultaneous with a well blowout. The total volume of hydrocarbon liquids in this respect is 7869 Bbl., with the modeling designed for 10,000 Bbls. That scenario is called "the ultimate limit of exposure" in the report, as "it is not supported by historical data, scientific evidence, or the benefits of the safety systems incorporated in the facility design as required both by industry practices and regulations...No such incident has ever been documented in the history of oil production operations in the Gulf of Mexico" (Section 9, pp. 2-3).

During the period from 1/87 to 12/96 three hydrocarbon spills were recorded from Chevron's operations. All three were reported at volumes under 6 gallons. "No discernible environmental impacts resulted from these spills" (Section 9, p. 3).

Destin Dome 56 Unit. Shoreline Protection Guide, Volume XIII.B. July 1997. Destin Dome 56 Unit Development & Production Plan. Morris Environmental, Inc.--for Chevron U.S.A. Production Company, GOM Business Unit. New Orleans, La.

This protection guide is intended, according to Morris Environmental, Inc., as a "reference only" which may not depict actual deployments and response strategies accurately. Response to a spill or blowout would be contingent on many factors, including site-specific conditions such as weather or sea conditions. "Totals and locations specified in this guide reflect initial assessments for equipment and personnel mobilizations. The magnitude of the spill, the actual impact zone and priority of sensitivities will eventually determine the level or priority of the response effort" (disclaimer).

"Overview [including a map of the Destin Dome Area]; Environmental sensitivities; Shoreline protection plans; Shoreline type cleanup methods; and, Available shoreline response equipment by staging area," are the main divisions of the guide. Environmental sensitivities are delineated for coastal counties of Mississippi, Alabama and Florida (Escambia and Okaloosa).* The shoreline protection plans are for specific areas such as barrier islands, beaches, and bays. Staging areas of response equipment are Pascagoula, MS; Theodore, AL; Pensacola, FL; and Panama City, FL.

Color graphic maps are included here which depict shoreline types along the coast (although the use of the same colors for varying types of topography render much of the information indistinguishable).

There are also maps which show sensitive areas by locations of fish, invertebrates, waterfowl, plants, etc.

More details are given in listings which follow each map. Tables give the type of cleanup methods, including total recovery rate and storage capacity of recovered oil.

*Note: Environmental sensitivity maps and shoreline protection plans for the entire Gulf Coast from Brownsville, TX to Okaloosa County, FL are available through Clean Gulf Associates.

Destin Dome 56 Unit. (Oil Spill Model) Trajectory and Fates Simulation for a Diesel Spill,Volume XIV. Destin Dome 56 Unit Development & Production Plan. November 1996, amended July 1997. Applied Science Associates, Inc.--for Chevron U.S.A. Production Company, GOM Business Unit. New Orleans, La.

Spills of diesel fuel from two sites offshore of Northwest Florida were simulated in this study, using OILMAP*. The first site for the modeled spill (Destin Dome) was approximately 28 miles southeast of Pensacola Bay. Release volumes were 10, 1,500 and 10,000 bbls. The second site (MO 916) was approximately 13 miles southeast of the entrance to Mobile Bay. Release volumes for this site were 10 and 3,500 bbls.

Stochastic simulations regarding releases was done for each of the four seasons for each of the spill locations. Four hundred five-day simulations were conducted for each season. Eleven-year long wind and current data sets were used in the simulation data (1983-1993).

Findings indicated that spill transport rates and distances were greater in the fall and winter. Principal transport directions were shore parallel in fall and winter, omni-directional in the summer and toward the coast in the spring. So, the highest probability of shoreline impact was for the spring. Probabilities for shoreline impact within five days in the case of a spring spill were between zero and ten percent for Destin Dome, and ten to twenty percent for the MO 916 spill site. Worst case trajectory simulations were figured, based on the shortest time for a spill trajectory to reach a bay entrance (cleanup and containment are most difficult in these areas, and the most fragile coastal resources lie in the protected waters behind the barrier beaches.) In this "worst case" shoreline impact could occur 56 hours after release for Destin Dome and 18 hours for the MO 916 site.

For each of the previous scenarios, simulations were made using NOAA HAZMAT Adios short term oil fate modeling to figure weathering predictions. Varying characteristics (e.g., API values) for the input diesel oils accounted for the spread in weathering estimates using the model. For the 10,000 bbl spill from the Destin Dome site, no surface oil was predicted to remain after five days for a light or medium grade diesel, but twenty percent was predicted to remain on the surface for a heavier Marine diesel. (Offshore spill response and shoreline protection strategies are covered in other volumes.)

*Note: "OILMAP uses oil spill trajectory and fates algorithms tested and validated in the Worldwide Oil Spill Model (WOSM) project, funded by a consortium of U.S. and Canadian oil companies and government agencies." Using various environmental data, this spill model is flexible enough to apply to any area in the world.

Destin Dome 56 Unit. Environmental Impact Analysis Development and Production Plan, Volume II. November 1996. Destin Dome 56 Unit Development & Production Plan. Barry A. Vittor & Associates, Inc.--for Chevron U.S.A. Production Company, GOM Business Unit. New Orleans, La.

Potential environmental impacts of Chevron's proposed development and production operations in the Destin Dome 56 Unit are evaluated here. The analysis separately discusses two major categories: impacts of routine activities and impacts of oil spills. "Within each category, the impact analysis begins with a discussion of impact-producing agents, using the maximum development scenario, followed by a discussion of worst-case impacts for each component of the affected environment" (3).

Routine activities include: drilling rig and platform installation; pipeline and flowline installation; presence of structures; drilling mud and cuttings discharges; operational discharges; support activities; air emissions; noise; trash and debris; and, platform removal. These activities are discussed in terms of their associated environmental impacts.

Accidental hydrocarbon discharges are not considered a great potential risk, according to the report, since no oil has been encountered during previous drilling in the Norphlet Trend. The potential for spills is mostly associated with vessel traffic. Possible impacts of vessel-related spills are addressed in terms of the following issues: worst case scenarios, response to spills of short duration and limited maximum volume; and, effects on components of the affected environment.

Destin Dome 56 Unit . Economic, Fiscal, and Infrastructure Impacts--1994 Report, Volume IV.A. DestinDome 56 Unit Development & Production Plan. Amended November 1996. Foster Associates, Inc, with Continental Shelf Associates, and Dr. Philip E. Sorenson--for Chevron U.S.A. Production Company, GOM Business Unit. New Orleans, La.

Petroleum companies that plan production of oil or gas are required to submit a Development and Production Plan (DPP) to the MMS, Gulf of Mexico OCS Region. The DPP must identify the affected environment, including baseline and impact descriptions of physical, biological and socioeconomic conditions...relevant information that reveals the effects of offshore activity on local social and economic conditions." (This document is a companion volume to *Public Perception Regarding Natural Gas Development*, Charlton Research, November 1996.)

Two broad areas of research are analyzed in this document: 1) Economic effects to the Gulf Coast from historic (baseline) gas development, and proposed Destin Dome gas exploration and development activities, and 2) Baseline infrastructure effects of gas development in Coastal Alabama, and impacts related to proposed Destin Dome gas exploration and development. Mobile Bay and the Florida Panhandle are primary, although economic impacts "related to specialized services home-based in Louisiana and Texas are also considered."

Section 1.0 of the DPP is a summary, which includes: "Since Mobil's first Norphlet discovery in 1979, ...nearly $3 billion [has been added] to the Gulf Coast regional economy..." The Destin Dome is predicted to add "nearly $700 million more..." Figures are also given for

"Government receipts from Mobile Bay and Destin Dome; Regional economic stimulus of gas exploration and development expenditures and government spending; Baseline profile of the Mobile Bay MSA economy; Economic impact of Mobile Bay baseline gas industry; Economic impacts of Destin Dome extension, and, Public services and community infrastructure."

The next section (2.0) details the "Natural gas development baseline." Focusing on Mobile Bay, the historic build-up; exploration, development, and production are given. Several sections describe forecasts of Mobile Bay development and fiscal contributions, with and without Destin Dome.

Subsequent topics of analysis are: "Economic and public service assessment of the Alabama coastal region; economic assessment of Florida Panhandle counties; regional economic impacts of Mobile Bay natural gas development and production; and, economic and infrastructure impacts of Destin Dome exploration and development." The appendices contain well over 100 tables and figures relating to the demographics, financial data, maps, etc.

Destin Dome 56 Unit. Economic, Fiscal and Infrastructure Impacts--1996 Data Update and Model Re-estimation, Volume IV.B. Destin Dome 56 Unit Development & Production Plan. November 1996. Foster Associates, Inc.--for Chevron U.S.A. Production Company, GOM Business Unit. New Orleans, La.

This is a supplement to volume IV. A of the DPP. There was a delay in filing which "resulted in the data ...becoming not current." The objective of this volume is to "revise and update the tables and figures of that report and add selected other tables; re-estimate economic effects to Coastal counties, state of Alabama, and Louisiana/Texas associated with changes to the baseline Coastal Alabama gas industry and to the Destin Dome project, since 1994

There is a brief discussion of the changes observed in the data since 1994. This re-estimation is benefitted by the more than two-year interval comparison--which serves to reinforce findings, according to Foster Associates.

A list of "key findings" of the revised data includes:

1) Mobile and Baldwin counties have significant growth...since 1992. Growth related to tourism in Baldwin County is particularly robust.
2) Alabama commercial fisheries have sustained several years of healthy harvests...reversing an eight year downward slide, increasing 40 percent over 1993 to nearly $50 million.
3) Baseline Coastal Alabama gas production did not achieve the 1994 forecast...[and] 1996 baseline production forecast (without Destin Dome) is lower than the 1994 forecast.
4) Alabama Trust Fund earnings [and related revenue] are nonetheless, near $150 million for 1995 and 1996. Mobile county's budget is up 20 % since 1992 on a per capita basis.
5) The delay in Chevron's Destin Dome project pushes the associated economic stimulus into the 21st century. Coming after baseline production is in decline, Destin Dome activity sustains already existing infrastructure in Mobile County, Louisiana and Texas and preserves employment and income that otherwise would decline.
6) Public service and fiscal impacts in Mobile county related to Destin Dome are insignificant.

Destin Dome 56 Unit. Economic, Fiscal and Infrastructure Impacts--Appendices, Volume IV.C. Destin Dome 56 Unit Development & Production Plan. November 1996. Foster Associates, Inc.--for Chevron U.S.A. Production Company, GOM Business Unit. New Orleans, La.

This document contains the appendices for the DPP on Chevron U.S.A.'s proposed production in the Gulf of Mexico Business Unit (GOMBU). As described previously, two economic modeling approaches were used for the Destin Dome social and economic impact analyses. The REMI dynamic simulation model was used here to assess impacts of offshore and OCS gas development on Mobile County and the rest of Alabama. While a static input-output system was used to assess regional effects of supplying related facilities and services from Louisiana to Texas. These appendices go into detail on these models from a methodological standpoint, along with listing numerous tables used in the analysis dealing with demographics such as employment statistics, contractor activity, production operating and maintenance, etc.

Destin Dome 56 Unit. Development & Production Plan, Volume V.A.- Public Opinion Survey and Report. November, 1996. Social and economic impacts of proposed Destin Dome development: Public perceptions regarding natural gas developments. Charlton Research Company-- for Chevron U.S.A. Production Company, GOM Business Unit. New Orleans, La.

This report opens with the statement that a 1992 National Research Council study identified problems, but not solutions, whereas this "survey research corrects for the problem" (4). (The problem being that past studies emphasized economic effects, rather than individual's perceptions of those effects.) The information gathered from respondents here includes: "The extent of respondent's knowledge of a subject; respondent's attitudes and opinions; respondent's reported behavior patterns; and demographic information" (Ibid.). In "correcting the problem," surveys were employed to gather info about respondents specifically in relation to natural gas development off the Florida Panhandle, and Mobile Bay. Focus groups were conducted prior to telephone surveys, which sought information from the general public and "opinion leaders" in nine coastal counties: Escambia, Santa Rosa, Okaloosa, Walton, Bay, Gulf and Franklin in Florida, and Mobile and Baldwin counties in Alabama. The report claims that all three groups surveyed "produced consistent results" (5).

In summary, the analysis of the data indicated that:

Respondents place a high value on the beaches and waters of the region [seeing these as] special and unique...The 300 miles of white sand and the attendant lifestyle generates pride among the citizens and a special way of life for the communities along the beach.

Respondents in the focus groups felt strongly that the beaches should be protected... The issues people are most concerned about for themselves and their families are first and

foremost the economy...The environment was mentioned as a salient issue, but always ranked fifth or sixth in people's top of mind concerns. By comparison to other concerns, people do not perceive that their environment is threatened.

Awareness of possible natural gas development in the Gulf of Mexico...was high among Floridians (60 percent) and moderate among Alabama citizens (38 percent). Leaders in Florida (90 percent) and Alabama (60 percent) were much more aware...

After 15 years of exploration and development in Mobile Bay both Alabama citizens and opinion leaders hold a strong positive opinion toward development. Significantly higher percentages of Alabama opinion leaders than Florida leaders agreed that offshore natural gas development would have little or no effect on tourism and fisheries, and would stimulate the local economy, according to this report.

The survey process was designed to ascertain people's opinions concerning the Destin Dome project early in the interview, provide facts and claims (pro and con)...and then re-evaluate respondents opinions. The initial response to the general survey showed that a plurality in both states supported the Destin Dome project...(58 percent in Florida and 67 percent in Alabama).

Florida opinion leaders stuck to the positions expressed in the early ballot to a larger degree than did the general population. Residents of Escambia and Santa Rosa Counties, located near Destin Dome, were less likely to favor the Destin Dome development. It should be noted that subsequent votes of the Florida legislature, in the period following this research, have been unanimous in opposition to offshore drilling.

Alabama opinion leaders initially favored natural gas development more than the general population...but each group shifted their position about 20 percentage points in the late ballot ...

The significant increase in the general public's vote in favor of the Destin Dome development appears to be related to the information about natural gas *provided within the survey*. [One might wonder whether this could be considered skewing of data.] The initial ballot results appear to have been conditioned on perceptions of spill risk related to *oil* development.

Respondents showed a high acceptance of natural gas as a fuel and showed support for the following attitudes: Natural gas development would be economically beneficial; Increased use of natural gas is beneficial both environmentally and economically; Drilling for natural gas poses minimal environmental risks.

The study suggests two bottom line conclusions:

1) Respondents perceived strong economic benefits and minimal environmental risks related to natural gas development.
2) Information about the characteristics of natural gas...exploration and development caused the survey group to increase their favorable opinions toward the Destin Dome project.

Of special note in the summary of opinions is the mention that "a slight majority (51 percent) in Florida and a plurality (42 percent) in Alabama responded positively when asked if they would support a ban on offshore drilling within 100 miles of the Florida coast" (7). The authors attribute this apparent inconsistency to: "The public's generalized desire to protect the coastline in a situation with no other considerations or trade-offs, or the public's opposition to oil drilling with its perceived spill risk and attendant beach pollution" (8).

The general contents of this document includes: Overview; Methodology; Findings and analysis; Special things about the area; Issues and problems; Awareness of Destin Dome drilling;

Attitudes towards natural gas drilling in Destin Dome; Handout questions--early and late; Paired arguments; and appendices--Demographics; and, Topic guide. Extensive charts and graphs are used to break down each of the areas of inquiry. Respondents are listed in terms of demographic profiles which include ideology, ethnicity and income, among other considerations.

Destin Dome 56 Unit . Public opinion survey and report , Florida data. Volume V.B. Destin Dome 56 Unit Development & Production Plan. November 1996. Charlton Research Company--for Chevron U.S.A. Production Company, GOM Business Unit. New Orleans, La.

This volume consists entirely of survey questions and statistics gathered indicating public response of Florida residents. The basic themes here concern quality of life in Florida/Alabama as perceived by those surveyed, and response to possible natural gas development in the Gulf of Mexico. Some of the more salient issues relating to gas production along the Gulf Coast in the surveys include: environmental concerns, employment, tourism, and pro and anti-drilling opinions. Respondents are broken down into various groups demographically.

According to this survey, a nearly equal percentage of respondents are in favor of/oppose gas drilling off the Florida coast--40% favor, 38% oppose, 22% don't know. Of note, 19% of respondents "strongly favored" drilling, while 28% "strongly opposed." While twice as many respondents had negative (versus positive) impressions of the issue from what they had heard/read, many didn't know or didn't answer. In a seeming contradiction, respondents agreed by a large majority that "Florida should develop its natural gas resources because it's the right thing to do."

Destin Dome 56 Unit Development & Production Plan. Public opinion survey and report, Alabama data. Volume V.C. Destin Dome 56 Unit Development & Production Plan. November 1996. Charlton Research Company--for Chevron U.S.A. Production Company, GOM Business Unit. New Orleans, La.

This volume consists of survey results of questions posed to Alabama residents. Statistical results are given for each inquiry, and categorized demographically. Questions are essentially the same as those in the previously annotated volumes (V.A. and V.B.)--so, many of them refer to issues concerning offshore development of Florida. Respondents had unfavorable impressions according to what they had heard/read of "possible natural gas development in the Gulf of Mexico" by a 2 to 1 ratio. But, favorable impressions of natural gas development in Mobile Bay were 58%, as opposed to 21% unfavorable and 21% don't know. Those in favor of offshore development stated jobs and economic reasons as paramount, while those opposed were concerned for the environment and beaches. These surveys unequivocally indicate that a large percentage of the public remains uninformed of the issues.

Destin Dome 56 Unit. Baseline Offshore Environmental Surveys, Volume VI. Destin Dome 56 Unit Development & Production Plan. November 1996. Continental Shelf Associates, Inc.--for Chevron U.S.A. Production Company, GOM Business Unit. New Orleans, La.

Five sampling surveys covered the entire Destin Dome Block 56 Unit, along with the pipeline corridor which extends from Mobile Block 916 east-southeast to DD Block 56, Blocks 96 and 97 and Blocks 51 and 52.

Sampling in these study areas consisted of the following elements: meteorological data; water current data (including temperature, conductivity and pressure); hydrographic profiling and continuous measure of temperature and salinity; sedimentation rates and heavy metal concentrations in suspended particulates in the water column; deployment of optical backscattering sensors to estimate loading of suspended particulates in the water column; sediment sampling (for particle size, clay mineralogy, heavy metal concentrations, hydrocarbon concentrations, and macroinfauna); photographic transects for delineation of habitats and epibiotal coverages; and trawling to collect macroepibiotal and ichthyofaunal specimens.

Program design and schedule, methodology and results are detailed here. And, there is a discussion section, in addition to summary and conclusions.

Destin Dome 56 Unit. Photodocumentation Survey Export Gas Pipeline Route, Volume IX. Destin Dome 56 Unit Development & Production Plan. November 1996. Continental Shelf Associates, Inc.--for Chevron U.S.A. Production Company, GOM Business Unit. New Orleans, La.

This report documents a proposed pipeline route from Mobile (area Block 916) to Destin Dome Block 56. The photodocumentation survey was conducted in the summer of 1991. The purpose of the survey was to "establish a pipeline route which did not cross areas of live bottom and to characterize the bottom along the established route" (1).

"Live bottom areas" are defined as seagrass communities or areas that contain biological communities consisting of sessile invertebrates (such as corals, sponges, anemones); "or areas whose lithotope favors the accumulation of turtles, fishes, and other fauna" (Ibid.). Prior to any drilling-related activities the lessee is required to submit a live bottom survey report. This must contain a bathymetry map prepared using data gathered from remote-sensing and photodocumentation. These reports and surveys encompass areas "within a minimum 1000-meter distance of a proposed activity site" (Ibid.).

A video camera and camera mounted on a sled was towed along the 50 mile (80 km) long corridor. The survey area was 6,562 feet (2,000-m) wide. Video on 1/2-in. tapes and still photos were made. Video was shot continuously as the sled was towed just above the bottom, and still photos were taken on average of one every 492 feet over sand bottom areas and more frequently within live bottom areas. Side-scan sonar was utilized to assure complete coverage of the width of the survey area. The video feed was continuously monitored by personnel who kept an annotated log which was used in mapping, along with review of all video and slides. "These results as well

as the preliminary mapping of habitats done aboard ship were then used to map the live bottom areas and various substrate types along the pipeline corridor" (5).

A revised pipeline corridor route is show in figures 3 and 4 which indicates a re-positioning due to live bottom areas associated with rock outcroppings in Destin Dome Area Block 8. For the most part however, the pipeline follows a direct route east-southeast from the Mobile area to Destin Dome area.

Tables list epifaunal taxa identified in still photos and video in both fine sand and coarse sand bottom areas. Other illustrations give some detail on the bottom features. A map is also provided (at 1" = 2000') of bottom features and proposed pipeline route. Appendices include representative color photos.

Destin Dome 56 Unit. Photodocumentation Survey Wellsites, Flowlines and Facility Locations, Volume X. (Photographic documentation of bottom habitats at satellite platform and central production facility locations and along flowline routes in Destin Dome area Bock 56 Unit.) November 1996. Destin Dome 56 Unit Development & Production Plan . Continental Shelf Associates, Inc.--for Chevron U.S.A. Production Company, GOM Business Unit. New Orleans, La.

Color photographs are included in this volume which were taken during three separate surveys of various blocks in Destin Dome 56 Unit. These slides were taken along "...survey transects on the average of at least one per 150-m navigation fix (sic) interval, with specific photographs taken of specific items of interest along the survey lines" (1). Slides selected to be included in this report were chosen according to location within areas delineated by Chevron as satellite platform locations and flowline routes. A complete coverage of these areas was the focus of further selection. These were then reproduced as color photographs.

The "navigation post-plots of the survey transects and position fixes" are located in one of the appendices (Ibid.). A map is also included which shows locations of platforms, central production facility, hard bottom and algal community areas, and locations of the photographs.

Bottom types in the described areas "...consist primarily of coarse sand and rubble in shallower water depths and finer sands at greater depths. Photographs from some of the deeper locations lack resolution due to elevated turbidity levels in the near-bottom waters during segments of the surveys. The photos may also be compared with those in Continental Shelf Associates, Inc. (1996) which are representative of the Destin Dome Area Block 56 Unit" (Ibid.).

Destin Dome 56 Unit. Hydrogen Sulfide Plan, Volume XII. Destin Dome 56 Unit Development & Production Plan. November 1996. Total Safety, Inc.--for Chevron U.S.A. Production Company, GOM Business Unit. New Orleans, La.

There are hazards inherent in deep well drilling or "completing in formations that may contain hydrogen sulfide". This plan was developed because of those potential hazards. It specifies "precautionary measures, safety equipment, emergency procedures, responsibilities and duties pertaining to Chevron's drilling operations". This contingency plan will go into effect at a depth of 15,000 feet. Hydrogen sulfide could be released into the atmosphere in the event of a "sour gas" well.

"In the event of severe well control problems...[it might be necessary to] ignite the well" (22). This would occur if human life is endangered, or "there is no hope of controlling the blowout..." (Ibid.). If the well is ignited, the burning hydrogen sulfide would be converted to SO2, "which is also highly toxic and heavier than air. Hence, do not assume the area is safe after the well is ignited" (Ibid.).

Destin Dome 56 Unit. Air Impact Assessment Offshore Development Activities, Volume XV. Destin Dome 56 Unit Development & Production Plan. November, 1996. KBN Engineering and Applied Sciences, Inc.--for Chevron U.S.A. Production Company, GOM Business Unit. New Orleans, La.

The air quality impact assessment here applies to OCS Blocks 12, 13, 14, 15, 16, 54, 55, 56, 57, 99 and 100--an area approximately 25 miles offshore from Escambia and Bay counties in Florida. This information is required as part of the Development and Production Plan submitted to the Dept. of the Interior, Minerals Management Service to obtain approval in order for Chevron to drill.

This report covers not only air emissions and impacts, but also related information on climatology, meteorology, and severe weather as required by MMS regulations. Among the sources of air pollution emissions will be two drilling rigs; installation and operation of a central production facility (CPF); installation and operation of fifteen satellite platform facilities; and a pipelay barge and vessels. "The number and type of air emission sources reflect a potential maximum development scenario that produces a 'worst-case' air emissions estimate... Actual emissions are expected to be significantly less."

Besides the overview, and a review of all air quality regulations, there is an emission inventory given here which charts particulates, chemical and heavy metals emission rates that are expected from both construction and production. Fifty six receptors used to monitor emissions will be located from the coastline of Horn Island, off Mississippi, to St. Joseph Island near Panama City, Florida. These will be used in the "modeling analysis to determine the maximum impacts from the proposed facility at all nearby coastline locations and the Breton National Wildlife Refuge."

Maximum air pollution would occur "at the boundary of the nearest onshore areas" or in Florida, and according to this report would be "below the EPA significant impacts levels; impacts are less than 1 percent of the applicable AAQS."

Destin Dome 56 Unit. Drilling Effluent Dispersion Studies, Destin Dome 97 #1 and 57 #1, Volume XVI. Destin Dome 56 Unit Development & Production Plan. November 1996. Maynard Brandsma, P.E.--for Chevron U.S.A. Production Company, GOM Business Unit. New Orleans, La.

Well DD57-1 in Chevron's Destin Dome project will be located on the slope of a submarine canyon, near the canyon rim where a hard/live bottom community (HLBC) is located. "This report documents predictions of the fate of drilling effluent (mud and cuttings) to be discharged from this well" (ii). The primary concern is suspended solids occurring above the HLBC and deposition of drilling solids upon the HLBC. Two computer models were used to make the predictions, Offshore Operator's Committee (OOC) Mud and Produced Water Discharge Model and The Brandsma Engineering high resolution trajectory model.

Four discharge scenarios were analyzed, based on depths of the discharges and on statistical descriptions of currents in the area. Estimates of mud and cuttings discharge volume were supplied by Chevron based on a straight well bore. Particle settling distributions were based on averages obtained from samples of another of Chevron's wells.

Expected worst case discharge rates are given here. Concentration of total suspended solids (TSS) are projected at 2.2 to 17.6 mg/L immediately above the HLBC. Shunting the discharge to 16m above the sea floor increases the maximum TSS concentrations on the HLBC by a factor of approximately 1.6. But, with expected currents, TSS concentrations are dramatically reduced by shunting to estimates of 2.2 to 0.32 mg/L for a 400 bbl/hour rate of discharge.

The scenarios projected here show a pattern of solid deposition in which heaviest concentrations occur "immediately around the well and declines exponentially with distance from the well" (Ibid.). Overall depositions of drilling-related solids on the HLBC are predicted to be comparable to "periodically occurring natural background sedimentation" (Ibid.). Baseline surveys were conducted in order to make this comparison. Drilling related deposition does, however, exceed natural processes within a radius of 100 to 180 m from the well.

In conclusion, shunting of the discharges is recommended, with the maximum thickness of drilling solids that will be deposited anywhere on the HLBC under any current regime [estimated at] 0.11 cm (assuming no erosion for 150 days). Natural sedimentation is estimated at the rate of 0.35 (again assuming no erosion for 150 days). Adding these two figures gives a total deposition thickness of 0.46 cm, deposited over a 150 day period (assuming no erosion). According to the report, this worst case scenario is equivalent to "a bit less than one third the thickness of this page" (Ibid.).

Destin Dome 56 Unit. Destin Dome Block 57, #1 Well Site, Volume XVII. Destin Dome 56 Unit Development & Production Plan. November, 1996. Barry A. Vitor & Associates, Inc.-- for Chevron U.S.A. Production Company, GOM Business Unit. New Orleans, La.

Wellsite 57 #1 was located in the vicinity of habitats containing epibiota (which included fauna such as sponges, as well as plants). The habitats were evaluated before and after drilling to

gauge impact of drilling discharges. Also, water column and bottom sediment sampling was performed "to determine the extent to which suspended solids or bottom sediments were effected by drilling fluid transport and/or deposition" (v).

The water column monitoring indicated that the discharge plume "was negligible..." Results of total suspended solids (TSS) monitoring "generally corroborated model predictions of dispersion and dilution of solids discharged from the rig" (Ibid.). Sediment barium distribution patterns showed only a "dusting" of the hardbottom habitat where the epibiota were situated.

Quantitative estimates of the hardbottom epibiota showed "no significant difference" between pre-drilling and post-drilling assemblages. The monitoring survey claims that natural perturbations (i.e., tropical cyclones, winter storms, and natural sediment transport) along with other seasonal processes "influenced hardbottom assemblages more than the deposition of drilling mud from Chevron's exploratory drilling operations at this wellsite" (Ibid.).

Observations were also made using bottom video photography. Drilling discharges could not be determined to have had a "discernible impact on which species of fish were present around the hardbottom habitats of the rim feature" (Ibid.).

Note: Other volumes in this series not reviewed here include: *Destin Dome 56 Unit Water Quality; Chemical Oceanographic and Biological Components; Destin Dome 56 Unit Photodocumentation Surveys; Destin Dome 56 Unit Photodocumentation Surveys Bathymetric and Video Maps; and Observations and Modeling of Ocean Currents Near Destin Dome 56 Unit.*

Dietz, T. 1987. Theory and method in social impact assessment. Sociological Inquiry. 57(1): 54-69.

According to the author, "Social Impact Assessment (SIA) is a method of policy analysis that offers great potential for integrating scientific policy analysis into a democratic political process" (54). A brief definition of SIA is that it is: "the identification, analysis, and evaluation of the social impacts resulting from a particular event. A social impact is a significant improvement or deterioration in people's well-being or a significant change in an aspect of community concern" (56).

Dietz claims that the potential good use of SIA has not been fully realized due to a lack of theoretical framework. That is the stated purpose of this paper--to establish the means to use SIA as a "mechanism of reducing the conflict between scientific policy analysis and democracy" (55).

Habermas's (1970) pragmatist approach to policy provides the theoretical basis for this study. But, Dietz believes that the SIA could be more useful in integrating science and values in terms of policy "...informing the public, encouraging their participation in policy debate, and reducing disproportionate influence of special interest groups in the decision-making process"(60). Representative examples are given to illustrate how SIA might function. For instance, a rancher might be disinterested in "the cost-effectiveness of a particular public lands

policy. But he or she will understand and be concerned with the impact of a policy on his or her ranch, neighbors, and town" (Ibid.).

This paper presents several suggestions for improving methodology, with a view toward SIA making a great contribution to rational policy-making, "...but that potential can be realized only if an investment is made in improving the data base and techniques available for SIA" (67).

DOE urges close contact with communities to avoid leasing rifts. 06 February, 1995. Inside Energy/with Federal Lands, sec. OCS: 16.

The DOE has advised the MMS to "consult with communities early and closely when it is determining which tracts to open to oil and gas development." This is the advice given to the Interior Department agency in an effort "to avoid local opposition to offshore drilling once leases have been issued." The federal Coastal Zone Management Act makes "such state determinations...necessary before MMS can issue drilling permits." The DOE has endorsed ongoing MMS talks with California communities over the drilling issue. "Such efforts may serve as models for other regions," the DOE stated. The DOE has, however, also recommended that the MMS continue "annual, areawide lease sales in the Central and Western Gulf of Mexico."

Drill smart drill deep: Changing direction is profitable way to keep oil flowing; Technology adds new dimension to industry. 19 May, 1996. The Washington Times, sec. Business: A13.

What may amount to a revolution in oil and gas development is gaining momentum thanks to new technology. "The success of 3D [seismic sensing] has absolutely rekindled the exploration efforts of a number of companies in the United States and has breathed new life into the independents," according to a seismic software firm.

The actual impact of this and 4D sensing (which takes into account the element of the reservoirs' change through time) may be far-reaching. (Success rates using these models to guide exploratory drilling and extraction have approximately doubled yields.)

In essence, underground rock formations and reservoirs are no longer seen as simple flat imagery, instead the maps are computer models showing depth--"the difference is like the difference between a statue and a photo," experts say. This dramatically more comprehensive way of "seeing" where to drill, when paired with recent innovations in the ability to manipulate drilling directionally, could greatly increase yields at each site.

Previously, the crisscrossing of an area with 2D surveys in order to obtain enough data to construct a 3D image generated an unmanageable amount of information that required supercomputers to process. But, during the 1980s computer technology and collection techniques evolved to the point that current software design is finally able to utilize the data. Also, 3D

seismic is able to identify prospects at a depth range of 20,000 feet, compared to around 12,000 for 2D.

The 3D and 4D imaging is being compared to MRI (magnetic resonance imaging) used by surgeons."We use it to tell the oil guys exactly where to drill and what sort of drill to use..."

Dubner, Barry Hart. 1994. Problem on the United States Continental Shelf--Measuring the environmental 'effectiveness' of the Outer Continental Shelf Act (OCSLA). Natural Resources Journal. 34(3): 519-534.

The author's stated purpose in this paper "concerns focusing on attempting to develop criteria for measuring the [environmental] effectiveness " of the OCSLA. The Outer Continental Shelf Lands Act was passed by congress in 1953, and further modified through various boundary dispute cases culminating in the state having ownership out to three miles, with some exceptions, and federal jurisdiction beyond that.

Dubner details the problems and concerns surrounding "environmentalists vs. industry scientists," the "statutory scheme and its interplay with environmental regulations," problems with the OCSLA regulatory scheme, and the "effectiveness of the domestic shelf legislation". He asks, "has any of this legislation changed the behavior of the companies, the government and the public?"

The overall theme of Dubner's research is that of state/federal jurisdictional conflict: "the federal government is concerned primarily with the revenue it obtains from the outer continental shelf. Some of the states are concerned with the environmental impact on their respective shelves and the uncertainty that exists in connection therewith. The problems with the legal regime of domestic legislation are that the environmental statutes are too fragmented to be effective, the legislation is not well drafted, enforcement is lacking, commitment to discovering chronic problems is weak, and the environment is playing second fiddle to the revenue concerns of the state and federal governments. I believe that the environmental long-range problems could be discovered and resolved if our populations develop an interest or ethic in correcting this situation...There should be a model developed that uses all science, including, iter alia: economic, social, political, and jurisprudential fields..."(527).

This article is thought provoking, articulating many of the essential issues which must be addressed in order to serve the interests of preserving environmental integrity while meeting current fossil fuel needs of the U.S.

Dunlap. Riley E. 1983. Environmental sociology: A bibliography of conceptual, methodological and theoretical readings. Vance Bibliographies Architectural Series, No. 1001. 10 pp.

Since the 1970's sociologists have been studying the relationship between society and the physical environment. This work has become recognized as "environmental sociology," an area of specialization within the larger discipline of sociology. The diversity of this new field precludes an exact consensus concerning the nature of environmental sociology, however. "Thus, environmental sociologists study human behavior and social organizations relative to both 'built' and 'natural' environments, and at both the 'micro' and 'macro' levels" (1).

The multiplicity of methods, concepts and theoretical approaches used in environmental sociology, while not undesirable, would benefit from "greater awareness among its practitioners of these various approaches." The goal of this bibliography then, is to introduce readers to a body of literature dealing with these aspects of environmental sociology, with a particular emphasis on "core" environmental sociology literature.

The bibliography includes selections of "historically significant works that represent important precursors to contemporary environmental sociology" and journal symposia, and other articles and papers. Included works date from 1946-1983.

Dunlap, Riley R., and M. E. Olsen. 1984. Hard-path versus soft-path advocates: A study of energy activists. Policy Studies Journal. 13(2): 413-428.

"Hard-path" energy activists are also known as expansionists--they emphasize economic growth as priority and advocate co-requisite growth of energy supplies. Whereas, "soft-path" energy futurists are also considered "limitationists" who emphasize reducing energy demand via conservation, and renewable sources such as solar power. They consider "hard-path" energy sources such as nuclear and coal to be inadequate for maintaining a high quality of life, and wish to avoid environmental degradation and presumed social disamenities (e.g., high prices and lack of citizen control).

This paper is an analysis of a study undertaken to examine the memberships of energy interest groups. These individuals are likely to:

> ...play significant roles--individually as well as via organizations--in the development of energy policy. By examining the memberships of competing interest groups we hope to shed light on the degree, and bases, of their disagreements. This is important because energy analysts are increasingly calling for compromise among the contending parties in energy policy debates in order to facilitate necessary progress in policy-making (413).

Dunlap and Olsen studied members of four energy organizations in Washington state in order to determine whether energy activists actually do coalesce into hard-path and soft-path advocates. They also studied a sample of Washington residents as a point of reference. Energy policy research in Washington is particularly relevant due to the "visibility of Hanford Nuclear Reservation, the Northwest Power planning council and the Washington Public Power Supply System (which recently defaulted on its bond repayments for building two nuclear plants)" (414). Two of the energy organizations studied included a pro-production organization and a pro-nuclear organization, and a pro-conservation organization and a pro-solar organization. According to the authors, these four groups have clearly had considerable influence.

The fourteen page questionnaire used for this study focused on issues particularly relevant to national and state energy policy. Some significant findings include citizen participation in energy policy decision-making. Soft-path advocates typically "push for a high level of citizen participation" because they often feel that "their interests are not adequately represented within government" (419). "Participatory democracy" is considered to be a "crucial component of the soft-path orientation" (Ibid.). Most importantly, the soft-path proponents, as well as the majority of the public feel that the "'most influence in deciding energy issues' should rest with 'local residents through voting'" (Ibid.) Other conclusions seem to indicate that it is harder to *draw conclusions* over inherent characteristics of hard-path vs. soft-path attitudes. The authors indicate that achievement of consensus over social characteristics of the two opposing groups are not so clearly drawn, due in large part that their conflicting perspectives on energy stem from differing locations in the social structure, and are filtered through differing political ideologies.

Efforts to reach some consensus to avoid continuing stalemates in energy policy-making are the ultimate aim of Dunlap and Olsen's efforts in this research. However, "compromise must be based on a thorough appreciation and understanding of the scale and depth of the current lack of consensus" (426).

Dunlap, Riley E. and Angela G. Mertig. 1992. American Environmentalism: The U.S. Environmental Movement, 1970-1990. Taylor and Francis: Philadelphia. 115 pp.

Social science, rather than the typical historical perspective, is the focus of this work on environmental movements in the U.S. The opening chapter does place the current movement in a historical context, but also depicts typical social movements as a baseline from which to evaluate the efficacy of environmentalism. Chapter two examines the major national environmental organizations, particularly how they have changed over two decades. Subsequent chapters document the diversity of the environmental movement, and emerging major components, including: the grassroots movement (NIMBY, Not in my backyard); the African-American movement; deep ecology and radical environmentalism, and the global/international movement. These six chapters were written by academic analysts.

Chapter seven is written by the former president and current chairman of the Sierra Club, as "An insider's view." The book closes with what may be most relevant to OCS issues--"Trends in public opinion toward environmental issues: 1965-1990."

Dunlap, Riley E. and K. D. Van Liere. 1984. Commitment to the dominant social paradigm and concern for environmental quality. Social Science Quarterly. 65: 1013-28.

This paper seeks empirical substantiation of the hypothesis that "the dominant social paradigm" (DSP) leads to lack of environmental concern. The authors define DSP as the "constellation of 'common values, beliefs, and shared wisdom about the physical and social

environments' which constitute a society's basic 'worldview'" (Pirages, 1977). This DSP is carried over through the generations "via institutional socialization" and "forms the core of a society's cultural heritage" (1013). Even though such worldviews are not universal, they do strongly influence social and individual behavior.

The DSP was formed during previous eras of great abundance, but much of this behavior ("e.g., commitments to laissez faire, individualism, progress and growth") is no longer adaptive in this "era of ecological limits" (1014). This traditional paradigm must therefore be replaced with a sustainable or "more ecologically benign worldview--or a 'person-planetary' paradigm" (Ibid.). "This argument is consistent with sociological theories which emphasize that a societal value system may become maladaptive if the conditions facing the society change" (Ibid.).

Empirical examination of the linkage between commitment to the DSP and concern for protecting environmental quality is the purpose of this research. The analysis includes four components: 1) measurement of the dimensions of the DSP most relevant to environmental issues; 2) an examination of the hypothesis that there is a negative relationship of environmental concern to individual commitment to the DSP; 3) an examination of the relative importance of various dimensions of the DSP in relation to environmental concern (e.g.., "support for property rights versus support for economic growth"), and 4) these relationships are examined "while controlling for relevant demographic characteristics" (1015).

Analyses were based on a 14-page questionnaire sent to a statewide sample of adult residents of Washington state. Three issues showed consistent negative correlations with regard for environmental quality: support for private property rights, support for economic growth, and faith in material abundance. Support for laissez faire government was also important. Overall, "our results strongly support the hypothesis that commitment to the dominant social paradigm leads to lower levels of concern for environmental protection...Thus, our results substantiate the claims made by [numerous social scientists] that traditional American values and beliefs pose barriers to the development of a strong pro-environmental orientation, an important claim that has heretofore lacked a solid empirical foundation" (1023).

Dunlap, Riley E., and Kent D. Van Liere. 1978. Environmental Concern: A bibliography of empirical studies. Vance Bibliographies, Public Administration Series: Bibliography #P 44. 38 pp.

This bibliography, which covers the early literature gauging "environmental concern," is primarily focused on those studies which provide empirical bases for assessing public concern toward the environment. The concern for the quality of the physical environment is typically gauged on "the level of concern among the public or the personality, social-psychological or demographic variables associated with environmental concern, or both--which is often the case" (3). Studies listed here are based on either attitudinal or behavioral indicators. An international variety of research is also listed here, with studies from various nations, besides the United States. And, while most of the research was conducted by sociologists and psychologists, other disciplines are included, such as geography, education and political science.

Several distinctions are drawn between substantive and methodological issues within the literature listed here--in order to divide the studies into different categories. The bibliography consists primarily of original studies, although the first section is a literature review and a conceptual-methodological discussion, which covers some problem areas

Eckberg, Douglas Lee, and T. Jean Blocker. December 1996. Christianity, environmentalism, and the theoretical problem of fundamentalism. Journal for the Scientific Study of Religion. 35(3):343-355.

According to the authors, "previous studies of the relationship between religion and environmental- ism have suffered the lack of measures of religious belief or of environmental attitudes and behaviors, or samples that were not clearly representative or sufficiently large" (343). A large cross-section of data from the 1993 General Social Survey is used in this research in hopes of more adequately addressing the issue, and overcoming the perceived shortcomings of previous studies.

In summary, the findings supported Lynn White's thesis that Christian theology has an "antienvironmental" effect. There was also no support found for the contention that [Christian theology] exerts a stewardship effect. The results were not clear-cut, however. "Further, the negative effect of Christian 'theology' seems to be largely an effect of fundamentalism or sectarianism. While this could be theologically oriented, it might also be an offshoot of conflict between conservatives and liberals" (Ibid.).

Lynn White's 1967 article in Science magazine, "The historical roots of our ecological crisis" prompted tremendous controversy. He proposed that Christian beliefs "carry an antinature bias." White based this on the "desacralization of nature in Genesis 1 [which] predisposes Christians to regard the environment as having value primarily through its use by humans, and as falling properly under human dominion" (Ibid.). This leading to a lack of concern for the state of nature, and exploitation.

There are three topics upon which the arguments resulting from White's thesis center:

1) The relationship between Christian beliefs and environmental attitudes.
2) White's theological astuteness; whether the creation stories in Genesis actually support dominion over nature.
3) ...that of evidence for a stewardship effect (...scholars have argued that a proper interpretation of Genesis leaves room for a nurturant 'stewardship' element that is present in Genesis 2) (344).

As mentioned before, the findings are not unanimous or unambiguous. The following are some of the specific conclusions drawn from this research: "The more traditional or orthodox the belief the less actively 'green' one is likely to be" (348).

"Beliefs are much more important than are common religiosity or religious participation" (349). "Breaking the trend, frequency of prayer *positively* predicts cultural greenness (albeit weakly) and does not negatively predict scores on any [environmental] action index. Also, while

being Christian does tend to predict nonparticipation in environmental actions, being in a conservative (fundamentalist) church is clearly more important" (350).

The lack of ready explanations for the findings in this research can possibly be explained by the fact that there are indeed "contrasting dominion and stewardship effects of Christian theology. Dominion receives some support. A problem with stewardship is that we find no pro-environmentalism effects of Christian *beliefs*..."(353). The authors go on to question whether dominion attitudes "come from acceptance of Genesis 1..."(Ibid.). They wonder, "Is it possible that the effect has no biblical roots at all? This solution suggests that dominion attitudes are fundamentalist or sectarian *instead of* biblical. Something about religious sectarianism subverts environmentalism" (Ibid.).

According to the data, "those who actively work to protect nature or live in harmony with it tend to be religiously active and nonsectarian" (Ibid.). In other words, those Christians who have green tendencies are not typically fundamentalist.

Eikeland, P.O. 1994. U.S. Environmental NGOs: New strategies for new environmental problems. Journal of Social, Political, and Economic Studies. 19(3): 259-85.

Given that non-governmental organizations (NGOs) influence policy-making in environmental matters, this study asks "whether their mode of working has changed in response to a new generation of environmental problems. "Generation" refers here to "first generation" problems such as wilderness, and wildlife; "second generation" problems such as pollution; and "third generation" global climate change, or "globalization of pollution from energy use". (Each of these eras in the U.S. environmental movement are given a brief-but-thorough historical background here.) The authors hypothesize that "differences in values/goals and problems targeted may explain why NGOs have chosen different strategies" (261).

Strategies of environmental NGOs are categorized along "four different dimensions". One aspect is "conflict vs. cooperation" such as coalition vs. litigation toward either industry or government; another dimension is "role of government" as in trying to influence "market actors' dispositions directly" by doing such things as influencing consumer choices, as opposed to traditional strategies such as lobbying. "A related dimension concerns the government's choice of instruments...such as market-economic instruments or rather traditional command-and-control policies". The final strategic dimension concerns NGO's stance toward science and technological solutions.

This article provides valuable insight into the workings of environmental NGOs. Some of the conclusions drawn are that, among the large national organizations there are certain differences "in views on the kind of role government [and the role economic growth] should play in order to secure vital environmental quality..."(282). Of paramount importance, however, (in determining these differences) seems to be the type of issue each NGO is focused upon. Those working with third generation issues "tend to accept and promote the use of other strategies, more oriented towards cooperation with industry [and/or government]" (Ibid.). These NGOs also tend to "be more open to the use of economic instruments and private sector initiatives". In

essence, "they have become advisors, with highly competent staff aiming to work out practicable solutions" (282).

Conflict and "traditional policy instruments" have in the past proven in many cases not to be the most efficacious way to bring about change; this may be one reason for the present strategies. Of course, as the authors point out, there is the danger of NGOs' co-optation "by government and industry and los[ing] their role of correcting decisions to the benefit of the environment" (Ibid.). Today, "...the only feasible solution to the comprehensive global climate change problem seems to be a change in the way energy is used" (Ibid.).

Elliott, Euel, James L. Regens, and Barry J. Seldon. 1995. Exploring variation in public support for environmental protection. Social Science Quarterly. 76(1):41-52.

The distinctive feature of this report is that the research was oriented toward macroanalysis, rather than individual-level data. The basic finding is that variations in pro-environmental public support (specifically in terms of spending) support the hypothesis that real per-capita income influences attitudes toward environmental policy. In other words, "improving economic conditions make citizens more likely to support the provision of collective goods" (41). Other factors to be taken into account are the influence of the media, and the occurrence of certain events which have a bearing on public opinion. "As media attention increases, so does the belief that the current level of spending on environmental protection is sufficient" (50). (The data used here was taken from public opinion polls from both the National Opinion Research Center, NORC, and Roper Surveys.)

Earlier research concerning individual-level support for environmental concerns concluded that "there is little empirical evidence for either the social determinants approach or what [is] referred to as the 'economic contingency' argument. Instead, individual attributes such as age, education, ideology, and partisan affiliation are substantially stronger and more stable factors..." (42).

The authors suggest that "ongoing debates" concerning the relative merits of environmental protection will continue "as long as there is a business cycle" (50). And, that advances in environmental protection are vulnerable if this correlation of "economic performance and environmental quality [continues to] dominate the policy agenda" (51).

Elliott, W.R. and W.L. Rosenberg. 1987. Media exposure and beliefs about science and technology. Communication Research. 14(2): 164-88.

This study investigates peoples' attitudes toward science and technology, and their beliefs about controversial issues that have a scientific basis. Using a "media dependency theory approach" the authors find that "feeling competent about handling scientific information and being enthusiastic about scientific and technological advances are most strongly related to exposure to

media science information, while beliefs about specific science and technology issues (disarmament, the need to maintain scientific and technical superiority for national security reasons) depend more on social location and public affairs media exposure" (164).

The research here tested media dependency theory's claim that science in the media would influence people after controlling for social locator variables and public affairs media input. The social locator variables of sex, educational level, political conservatism, and technological experience accounted for "comparatively sizeable portions of the variance...[with] level of education [as] the most important" (185). "Public affairs media exposure appeared to be the least important" (Ibid.). The authors explain this by saying that although news media carry science stories, those with a preexisting interest in science and technology, "make special efforts to seek out additional science information from specialized publications..."(Ibid.).

Another finding that is of interest is that "media influence seem related to the type of belief or feeling being measured"(Ibid.). For beliefs such as the need for nuclear disarmament versus a strong military, "social location and public affairs media exposure may provide people with a general orientation to issues involving factors other than science and technology. Here it is national security, not physics, that guides our beliefs" (186).

In conclusion, the authors "feel confident" that they have demonstrated their hypothesis that exposure to science in the media is a significant factor in "explaining people's feelings about their competency to handle science and technology issues" (Ibid.). And, is a factor "at least as important" as the "more traditionally used social locator variables of education, sex, and political position" (Ibid.).

Engler, Robert. 1977. The Brotherhood of Oil: Energy Policy and the Public Interest. University of Chicago Press: Chicago. 350 pp.

Much of this book concerns power: "the economic power over production, markets, and prices wielded by the merchants of oil, and the political power that flows from such control" (ix). The focus here being the "giant corporations" and their relationship with government, in regard to the public interest. Secondarily, this work explores the "interdependence of people everywhere," whose lifestyles are dependent on the petroleum industry. The author states his concern with replacing the "bottom line" standards of industry with "planning which acknowledges the fraternity of all mankind and encourages directions which are economically just, ecologically sane and politically accountable" (ix).

Specifically, Mr. Engler's research used the "energy crisis" of 1973-1974 as a case study, and takes a retrospective view from that point "...to trace the efforts of the industry to tie up energy resources at home and abroad" (x). The influence which oil interests exert on national policy as well as international foreign policy is discussed . This book attempts to "appraise such counterforces as the environmental movement and awakened nationalism...[and the effectiveness of] challenging the 'first world government' by introducing standards of responsibility other than those of this private government of oil" (x).

The Santa Barbara oil spill, alternative energy, and "the new international economic order" are some of the issues included here. Research was conducted in New England, Appalachia, Alaska, Puerto Rico, Mexico, Canada, Great Britain, the Middle East and the U.S. (mostly Washington, D.C.).

Engler, Robert. 1961. The Politics of Oil: Private Power and Democratic Directions. University of Chicago Press: Chicago. 565 pp.

This work is a history of the relationship between the oil industry and the U.S. Government. A series of award-winning articles published during the late 1950's was the basis for the book, in addition to several hundred interviews with oilmen, association officials, lobbyists, lawyers, politicians, and various stakeholders in the affected regions.

Engler's contention is that the oil industry has become, in effect, a private government controlling world resources of petroleum. He sees the petroleum industry as the most powerful group in American politics and business--which is exerting influence far beyond what most citizens are aware of.

Some of the chapter topics include: "The private government of oil; Toward world government; The blending of public and private abroad; Private profits and national security; Oilmen in government; Private pressure and political paralysis."

Farrow, R. Scott. 1990. Managing the Outer Continental Shelf Lands: Oceans of Controversy. Taylor and Francis: New York. 320 pp.

There are three parts to *Managing the OCS Lands*, which analyze, describe and predict relevant policy issues. The author states that "good policy analysis and good policy require both knowledge about institutions and skill in analysis." The author also points out that, in addition to using logic and data, this document is also an "attempt to use feelings about what is right and wrong, about what are large and small issues, to motivate studying theories and data useful to the management of the Outer Continental Shelf lands."

Part one describes current "Management purpose and practice," which means "the social and technical context of OCS management decisions and the goals of the institutions involved in OCS management." The chapters here reflect the interests and viewpoints of Congress, the Dept. of the Interior, and of states, local governments, and interest groups.

"Policy analysis" is covered in section two, at both macro and micro levels. Resources and exploration; The environment; Fair market value; and Aggregate analysis: The pace of leasing and financial accounting--are detailed here.

Part three consists of "Emerging Policy Issues." "Nonfuel minerals"and "Management and research" are the main topics in addressing future design, potential resources, and making recommendations for policy and research.

Fife-Schaw, C., G.M. Breakwell, T. Lee, and J. Spencer. Feb. 1987. Attitudes towards new technology in relation to scientific orientation at school: A preliminary study of undergraduates. British Journal of Educational Psychology. 57: 114-21.

The question of how British university student's attitudes towards technology and their orientation toward science effects their choice of pursuing technological training and careers is addressed in this study. A survey was made of students, which questioned background variables, political conservatism, protestant work ethic, and attitudes toward new technology (which included "Green Issues" as a subscale.)

According to the authors, gender differences in which "females are less likely to take up technological training or jobs...and teenage schoolgirls have attitudes less favorable to science and industrial work" have several possible explanations (114). The "socialization of girls away from interests in science and industry...social prejudices on the part of educators and employers...and the absence of female scientist role models" are all possible factors"(Ibid.). Findings show that of the few women who take applied sciences, those who do seem to favor technological training as steadfastly as the men surveyed. Which suggests that "if girls' interests in science could be maintained throughout school, then there is no limitation to their motivation to train for technological jobs in industry"(120).

But, gender differences are not the focus here. This study claims to have found a direct correlation between attitudes toward new technology and the courses of study which have been chosen by the students. Other findings suggest that "scientific orientation is a real, across-gender factor associated with attitudes" (Ibid.). It was also found that "'general benefits' evaluations were related to gender whilst attitudes to the 'green issues' (and Conservatism) were not" (Ibid.). In closing, the authors state that "the evidence here suggests that scientific orientation is a real psychological construct with real consequences for training choices, and hence clear implications for policy programmes..."(Ibid.).

Fischer, David W. 1989. Returns to society from offshore hard mineral resource development: Special interests are seeking to monopolize public land under the sea by doing away with the 1953 Act. American Journal of Economics and Sociology. 48(1): 31-46.

The Reagan administration "proclaimed U.S. sovereignty over the seabed waters and all marine resources from the coastline to 200 nautical miles seaward. This act added about 4 billion acres to the U.S., nearly doubling its present size of 2.3 billion acres" (31). This Exclusive Economic Zone (EEZ) gives government control over fisheries, oil and gas and hard minerals. This paper deals only with hard minerals.

The OCS Lands Act of 1953 (OCSLA) and its 1978 amendments, and the Lowry Bill are compared here with a view to which would be most beneficial to the American public interest. The Lowry Bill is indicted. The author feels it is designed to "generate unearned rent for narrower interests and militate against national mineral and economic needs" (44).

Fletcher, Sam. 21 January, 1997. Escalating costs for rigs, equipment won't slow drilling boom, officials say; Information presented at Smith Barney Natural Gas/Energy Conference. The Oil Daily. 13(47):3

Drilling activity will not be slowed by escalating costs for rigs and other equipment, according to industry representatives. They also predict wellhead prices well below current market rate will continue to sustain the industry's recovery. Prices currently run 1.80/Mcf for gas and $18/bbl for oil.

Major producers are, in fact, "testing [the economic feasibility of] their offshore projects at even lower price thresholds than that." Even the North Sea fields can break-even with prices under $5-10/bbl, said Robert Long, a senior vice president of Transocean Offshore Inc.

Growing demand is credited for boosting world prices for oil and U.S. prices for gas--in turn, increasing drilling activity. Limited numbers of rigs to carry the skyrocketing demands has doubled dayrates, and drilling contractors see "no end in sight." Jackup rig charges have reportedly risen more than "$1000 per day in each of the last 12 months." That these increased operating costs might stifle future activity, is a rumor perpetuated by oil companies reluctant to pay higher rates, according to Long. "A rig is only on site for two or three months, but the wells it drills will still be producing years later."

Major rig manufacturers are producing at up to 95% utilization, at this point. They, along with other related service industries see the "boom" as an opportunity to raise prices. "Service companies no longer raise prices the same amount for all product lines. 'We now look at what adds the most value to a customer's operations...if it improves his bottom line, we expect him to help us. However, we've been very careful not to slam the customer in the face [with higher prices]'."

Floyd, James G., Mike Forrest, Forrest A. Garb, Joseph H. Netherland Jr., James K.B. Nelson, Paul L. Kelly, Alexander Kemp. December, 1995. What's ahead in 1995; Petroleum industry; Industry overview. World Oil. 215:12.

The editorial advisors of World Oil discuss their views of the industry's "ups and downs," and its future. The price of oil, and excess supplies, U.S. versus world drilling activity, U.S. potential and "The Outer Continental Shelf Leasing Program: Moving beyond conflict to consensus" are a few of the subjects detailed here."Until promising areas, such as the OCS or Arctic National Wildlife Refuge coastal plains, are made available, the...industry must work to create new, non-U.S. markets in order to prosper." Other subjects of interest here are, for example: "Gas prices buoy leasing recovery," and "Independents spark behind Gulf of Mexico." Higher prices are needed in order to build a stronger future, according to World Oil. And natural gas is "the fuel of the future."

The common industry sentiment seems to be "...to continue installing new platforms and strengthening...production efforts. If low prices persist through the spring, we, like most independents, will be forced to rethink our Gulf of Mexico activities."

Fort Myers Beach, Florida. Resolution No. 96-32. 12 December, 1996.

This resolution from the Town of Fort Myers Beach opposes the "exploration and production of oil or gas in the Gulf of Mexico off the coast of Florida," and urges the State of Florida to deny applications to drill exploratory wells and to prohibit the exploration and development of any oil and gas fields in the[se] areas of the Gulf." Fort Myers Beach encompasses Estero Island which is a barrier island. This statement expresses how the town is "...entrusted with conserving, protecting and preserving the natural ecosystems of the island and its surrounding waters, which include coral reefs, sea grass beds, mangrove forests and shoreline organisms."

The resolution also stresses the threat of "...severe and long-term impact on the economy and quality of life" that the oil and gas industry poses.

Freudenburg, William R. 1992. Addictive Economies: Extractive industries and vulnerable localities in a changing world economy. Rural Sociology. 57(3):305-332.

Society's changing relationship with environment and technology in regard to local economies based on raw material extraction is explored in this paper. What was once considered lucrative and desirable industry has been revealed as more likely to produce an "economic addiction" (305).

Key to the addictive activities are the rising costs of operation of most extractive production, combined with "downward trends in world commodity prices" (Ibid.). Regions and communities that are vulnerable typically are geographically isolated, have "imbalances of scale and power with respect to extractive industries, and the absence of realistic alternatives for diversified development" (Ibid.).

Additionally, the ambiguity of price signals, employment and development scenarios for remote regions and the eventual exhaustion of finite resources make extractive industry problematical, in terms of long range feasibility or socioeconomic outlook. As to the advisability of forming dependence "on a single economic sector, the very regions and nations having the greatest need to hear such advice may also have the lowest realistic ability to respond to it" (Ibid.)

Some of the factors taken into consideration in this analysis of extractive-industry communities are as follows: Unemployment rates in extractive-based counties consistently exceeded rates of agricultural counties, "even during the 'farm crisis' years of the 1980s" (307). Other studies have revealed the highest poverty rates not in counties dependent on agriculture or tourism, but in counties based on mining and forestry. There is also the "potential for certain forms of extractive growth to be accompanied by social disruptions" (308). Freudenburg predicts, in fact, that the future may involve "*economic hardship well before the resources are exhausted...*" (309). He sees increase in oil prices as "an aberration, brought about mainly by successful cartelization" (308). Oil prices also reflect "powerful market manipulations or disruptions" (309). "While the finite character of mineral deposits may yet lead to enduring increases in commodity prices, the realities to date have failed to support this expectation" (310).

Freudenburg suggests areas where research is urgently needed before definitive answers can be given concerning extractive industry: longitudinal studies focusing on "specific types of extractive activities in specific regions"; "and broader studies that include larger samples of communities from across the nation," possibly international. "Policy implications deserve attention as well. Until or unless the presumed rural development benefits of extractive industries can actually be demonstrated empirically, residents of [these] regions need to be aware of the potential risks of simply assuming--or hoping--that developmental implications of extractive enterprises will be good ones" (328). The communities impacted should consider that "growing evidence suggests that longer-term implications of extractive enterprises may fall far short of initial hopes" (Ibid.). Freudenburg closes with advising community leaders and residents to be skeptical.

Freudenburg, William R. and Robert Gramling. 1994a. Oil in Troubled Waters: Perceptions, Politics, and the Battle over Offshore Drilling. SUNY Press: New York. 179 pp.

This book is primarily concerned with public attitudes concerning OCS development, from a sociological perspective. It is a comparative case study of perceptions in Louisiana and northern California. More broadly, "the book is intended to provide a balanced discussion of the most important of the underlying complexities..." involved in the dispute between citizens, and not only industry, but much of the scientific and technical community, and "...government that, in a democratic system, is expected to represent the will of the governed. The battle over offshore drilling offers an opportunity to improve our understanding of the underlying reasons" (xii).

The broadest themes concern: "technological controversies, resource policy, the credibility of federal government agencies, and ... relationships between society and the biophysical environment" (Ibid.).

The authors also discuss their methods. The three main types of data come from documentary sources, including a "quantitative content analysis of the comments on the draft Environmental Impact Statement [for] northern CA" (xiii). There is also quantitative analysis from other sources, such as maps and topographical charts. Additional background information is given from histories, news articles, and technical material (from both academic and agency reports). Several dozen "in-depth interviews" from 1989-1992 also contributed to the research.

Finally, the authors "have drawn from [their] own first-hand experiences and observations" (Ibid.). Freudenburg and Gramling both served on the National Academy of Sciences/National Research Council, which endeavored to "evaluate the adequacy of the scientific studies performed by the Minerals Management Service,...as well as the adequacy of the scientific data base for proposed lease sales" (xiv). Additionally, one of the authors worked for the Scientific Advisory Committee for the MMS for six years, and the other lived in Lafayette, LA (headquarters for much of the oil industry in the Gulf) for more than a decade--"where he has been systematically studying the consequences" (Ibid.) .

The authors have drawn heavily from the work of academic analysts, but have sought to interpret and make this information accessible, and jargon free. They maintain that their research was conducted with the strictest interest in fairness--funded by, but not unduly influenced by the MMS.

Freudenburg, William R. and Robert Gramling. 1994b. Bureaucratic slippage and the failures of agency vigilance: The case of the Environmental Studies Program. Social Problems. 41(2):214-239. May 1994.

This paper focuses on bureaucratic slippage--"the tendency for broad policies to be altered through successive reinterpretation..." to the extent that actual enforcement of the policy has little resemblance to the originally-stated intent (214). The Environmental Studies Program (ESP) of the Minerals Management Service is the case study for this research. This program has spent $500 million since its inception. "Independent evaluations, however, have found the studies to be lacking" (Ibid.). In summary, this paper "...suggests the need to go beyond the analysis of policies and to devote far greater attention to the 'details' of implementation" (Ibid.).

President Bush directed the National Academy of Sciences to evaluate the ESP after it received much criticism by activists who believe "the only *real* goal of the Studies Program is to help the agency lease more oil" (224). The agency countered these charges by saying the citizens in question, "have simply been intent on obstructing the program, based on political rather than scientific motives" (Ibid.). When the final evaluation was made, however, "to the evident chagrin of the agency," the National Academy of Sciences (in a report actually prepared by the National Research Council) "did not support the agency's beliefs and claims" (Ibid.). In a "straightforward" report, the NRC concluded that "the available scientific and technical information bearing on potential environmental impacts is currently inadequate for decisions...in all three OCS lease areas" (Ibid.). Additional reports criticized the ESP's failure to "...document precisely the kinds of 'impacts on human, marine, and coastal environments' that the agency (and the program) are expected to address" (Ibid.). The NAS/NRC report particularly faulted the Gulf of Mexico region in this regard.

According to the authors, even though funding appears to have been generous for the ESP, "the necessary research appears not to have been done. This means that a number of potential opportunities to avoid undue environmental risk have been lost"(Ibid.). Using this case as an example, this paper then examines "bureaucratic slippage." These problems appear to be often subtle, and often a question of "blind spots" and acts of "omission," more so than flagrant inadequacy or inattention--as far as the discrepancy between "the statement of goals and the reality of implementation" (232). Also, examples are given here where the executive branch of the government has taken steps which effectively waylaid regulations long before actual enforcement. Among the hurdles are re-evaluation by the Office of Management and Budget, review by the Council on Competitiveness, executive "moratorium" on "non-essential" regulations, and "judicial deference" by the courts.

Freudenburg and Gramling suggest that bureaucratic agencies generally should not dismiss their critics as "not credible." The consequences of such convictions can involve "...real-world

outcomes that prove to be literally a million times as risky as had been predicted by the complex, official, and apparently scientific 'quantitative risk assessments' that had been prepared in advance" (235). Also, the authors suggest an increased emphasis on the "'visibility' of agency actions" (Ibid.).

In conclusion:

To the extent to which our expectations prove to be accurate, however, potential weaknesses in the stock of available information on social and environmental impacts can translate into significant shortfalls of enforcement--...[which] can translate into cumulatively significant failings in the effort to deal with environmental and other social problems. The net result can be that, while the "details of implementation" can be expected to be less entertaining than is the drama of the "policy debate"...they may ultimately prove to be no less important (Ibid.).

Freudenburg, William R. and Robert Gramling. 1993. Socio-environmental factors and development policy: Understanding opposition and support for offshore oil. Sociological Forum. 8:341-364.

The MMS estimates that offshore activities in the Gulf of Mexico create 190,000 jobs with an annual payroll of $5 billion. The authors look at why big money does not equal approval of offshore activities in some communities. They compare the reaction to offshore activities in Louisiana, where it is generally supported, and in California, where it is strongly opposed. To investigate this issue, the study used publicly available statistics, personal observations, and interviews with key informants. Freudenburg and Gramling conclude that Louisiana and California differ in three ways: "*historical* factors, differences in *biophysical* conditions, and differences in *social and economic* conditions" (346).

Historical: Offshore oil production developed in Louisiana in the 1930's before environmental awareness was high, and it developed at a time when offshore fisheries were uncommon. Further, the technology for offshore oil production developed in Louisiana, often in response to local problems. In contrast, by the time oil industries tried to develop in California, environmental awareness had grown. By the 1990's environmental concern was at an all time high.

Biophysically, California and Louisiana have different geographies, degrees of accessibility, and population and roadway distribution. According to the graphs given, California has a much higher percentage of its population on the coast and a higher percentage of coastline with roads (Florida has similar figures). Louisiana, on the other hand, has numbers far below California's. Also, Louisiana's coast has a low relief and low wave energy levels. The authors point out that :

> Perceptions of the coast are radically affected by the difference in coastal elevations and also by the relatively low levels of wave energy along the beaches. In California, residents frequently observe the power of the sea where it meets the coast, and they often comment upon it with what they themselves call 'awe.' By contrast, the Gulf of Mexico off the coast of Louisiana is a sedate body of water during normal periods, and even when the Gulf does inspire awe (as during tropical storms and hurricanes) few alive today have seen it (352).

Because of marine topography--the slope of bottoms and the composition of the bottoms themselves, in Louisiana offshore drilling platforms are quite popular with fishermen. In the Gulf, the continental shelf covers a much larger area than the continental shelf along the California coastline. The larger the area is, the fewer use conflicts. Therefore, fishermen do not bump into each other or drilling platforms as much as they would in California. Also, the Gulf of Mexico has silt bottoms. Certain fish need "hard" substrate to form reefs rather than silt. Oil platforms in the Gulf act as that hard substrate. The platforms become artificial reefs.

In terms of social factors, the authors found four sets of social characteristics that influence opposition or acceptance to offshore activities: "differences in average educational levels, the patterns of social contacts, the pre-oil significance of extractive industries, and the potential for overadaptation" (355). So many people support environmental protection that few variables strongly correlate with environmental awareness and concern.

One exception is educational level: better educated people show higher levels of environmental concern. Coastal Louisiana, around the time of the first offshore wells, had low educational levels. Also, Louisiana's other industries at the time of the first offshore wells involved extracting resources from the natural surroundings. "As a rule of thumb (cf. Freudenburg, 1991), persons involved in extractive activities . . . will be less likely to object to new extractive industries than will persons in manufacturing or service industries" (356).

By comparison, California is more of a service economy and relies on the beauty of its environment to attract visitors. Louisiana's residents may also show support for offshore industries since many people in the coastal cities either work in the industry or know someone who does. Further, in the 1930's and 40's few people moved to Louisiana unless they were going to work in the oil industry. Thus, few imported "new ideas and perspectives other than a support for oil development" (357). The opposite is true in California. It has much in-migration, and many people are attracted to California's coast solely for aesthetic and environmental factors. Also, "a typical resident of the northern California coast would be much more likely to have friends and neighbors whose livelihood would depend on fishing and/or tourism--sources of income that may be more likely to be threatened by the presence of OCS development than its absence" (357).

One last point, Californians interviewed felt oil representatives were "'arrogant," 'pushy,' or 'not interested in what *we* think'" (357). The authors, who found oil industry representatives quite friendly, believe the negative feelings may have more to do with the politicization of the offshore drilling issue than with the individual representatives.

Freudenburg, William R. and Robert Gramling. 1992. Community impacts of technological change: Toward a longitudinal perspective. Social Forces. 70:937-57.

Most of the existing research on understanding community-level impact has been focused on "the relatively brief developmental stage of construction and rapid expansion" (937). Whereas, little has been done to document and analyze the social changes that occur in affected communities both before and after the physical phases of expansion--specifically in the long-term.

This paper attempts to "provide the outlines of an explicitly longitudinal theoretical perspective"(938).

Included in this analysis is a discussion of previous literature and critique of analyses that are "too narrow in their temporal scope"(Ibid.). And, a more lengthy section then details community impacts of predevelopment and postdevelopment phases. Then attention is drawn to overadaptation--"a longer-term problem that has often been overlooked" (Ibid.). In conclusion, Freudenburg and Gramling call for sociologists to "consider the implications of development in a more longitudinal and more systematic way" (Ibid.).

Of interest to this study are findings that indicate community impacts taking place *"before* the onset of development [can be] significantly greater than those taking place during the construction-development phase" (939). This is often true even in regions considered to have long-term stability from resource extraction economies--"such as the oil-dependent regions of coastal Louisiana" (939). For example, a 1990 study by these same sociologists found "it was possible to explain over 90% of the variation in *total* local employment, over the past two decades, merely by knowing the world price of oil [and other industry-related data] "(Ibid.). According to the authors, "the net result has been that entire categories of impacts have effectively been overlooked..."(Ibid.).

Another salient point which is made here is that the "return to normal hypothesis" is a fallacy. The logic being that short-term impacts are merely temporary disruptions/benefits, and that eventually conditions will return naturally to some equilibrium. Whereas, even in communities that have enjoyed a lengthy period of prosperity (versus "boomtowns"), after industry pulls out what emerges "does not seem to be anything like 'normalcy' either in the eyes of local residents or of outside researchers"(944).

The authors see the most basic problem involved here as "overadaptation" of communities that have become heavily dependent on large-scale extractive industries. Overadaptation refers to an organism's susceptibility to "perturbations and environmental changes" if it becomes too precisely attuned to certain conditions. The two main factors in this case being "the loss or decay of capital and resources and the excessively specialized nature of investments; both can readily be illustrated with the case of offshore oil development "(945). The point being that communities which invest most heavily in "given forms of development--or...have become most highly adapted to a given set of economic conditions--are those that seem to have the greatest amount to lose" (951).

Failure of previous impact assessment has on a pragmatic level, according to the authors, resulted in risks being "transferred from the principal beneficiaries of development to local communities and residents who are little more than innocent bystanders" (952).

Freudenburg, William R. and Susan K. Pastor. 1992. Public responses to technological risks: Toward a sociological perspective. Sociological Quarterly. 33(3): 389-412.

Risk management is a field experiencing "phenomenal growth," surrounded by controversy, according to this report. "Given the profound growth of technological efficacy, in the face of

modest [growth in] social control mechanisms, the management of technological risks is likely to become increasingly problematic for sociology as well as for society" (389). Some see the potential viability of strictly quantitative estimates of risk, while others see the field as: "offering so many opportunities for manipulation and subterfuge as to call into question its very validity" (390). Other debates concern issues of social cleavage created by those who hold a stake in the framing of or discursive assessment of risk--as in the case of risk posed by energy production. One problem is approaching risk management as a field defined by non-sociologists--the authors are attempting to focus on how risk can further our understanding of society.

This report seeks a "more coherent conceptual framework [in] dealing with the behaviors and interests of societal institutions entrusted with the management of risks" (389). A perfect example of a situation in which social actors disagree over the desirability of particular forms of development is one in which: "...a tourism-dependent region is asked to accept offshore oil development..."(390). "'Development issues' become 'technological risk conflicts' when an individual or group becomes concerned about potential risk and mobilizes to stop or change the path of development " (Ibid). This paper is also concerned with the influence that risk assessment might have on social actors, or stakeholders.

Technological risk assessment harbors unique implications as compared to other types of risk; especially regarding "questions of power, social control, and the trustworthiness of specialized experts..."(391). The basic issue appears to be the imposition of risk on one group by another--which moves the conflict into the political realm. And, as mentioned, the discursive question asks "how is 'benefit' or 'progress' defined?" The authors state that a more systematic and balanced research is called for "that will ultimately allow such a determination to be based on solid, empirical evidence" (Ibid.).

Of note is a discussion of :

...what supporters of technology see as a gap between 'real' risks and public perceptions. Much of the literature on individual risk perception has been interpreted as depicting a public that irrationally fears science and technology, [but sociological research] paints a different picture. Studies of attitudes toward science and scientists, for example, tend to find persistent and strongly favorable orientations toward science within the American public...[E]ven research on the opponents of specific technological installations does not tend to support the view of an emotional, hysterical, and anti-science public that some proponents of formal risk models portray (392-393).

And, in terms of public perceptions, there is a measurable correlation between educating the community and increasing levels of activism and protest. The authors suggest that the "public rationality/irrationality" framework is not the most fruitful means of analyses--instead they suggest "highlighting instead of hiding the political and discursive struggles embedded in technological risks" (398).

Other aspects of this research include "political sociology/social movements, and media influences/community dynamics. (The media often supports development interests, according to this article, rather than oppositional groups--which is contrary to general perceptions of the role media plays.)

Frickel, Scott and William R. Freudenburg. 1996. Mining the past: Historical context and the changing implications of natural resource extraction. Social Problems. 43(4):444-466.

Commonly, rural areas seek out industry which they believe will provide jobs and "an antidote to regional poverty"(444). This paper cautions that resource extraction has changed through the course of time to the extent that it is no longer likely that industry based on natural resource extraction will lead to local or regional development. There are four specific "causal factors" cited as reasons for extractive industry's non-reliability as a source of local economic prosperity.

The causal factors are: "historically contingent levels of resource-extraction capacities; pre-existing competition; linkage specialization; and transportation. Also to be taken into account is the finite nature of resource deposits, and the "volatility of world raw materials prices" (445). (Louisiana's offshore oil industry is analyzed here as one of three case studies from which to examine the authors' theories.)

These conclusions are, it must be noted, controversial, and not accepted by some economists and social scientists. According to economists, the broad subsets of benefits from extractive economies are input linkages and output linkages, or the private-sector goods and services necessary to extractive operations, and the processing of the raw materials. And local leaders often cite the build-up of public-sector infrastructure as benefitting communities. The real economic advantage of these investments has been sharply criticized by "an increasingly broad range of theorists spelling out 'underdevelopment,' 'dependency,' 'unequal exchange,' 'and 'world systems' perspectives' " (446). In essence, rather than representing "diversified development,...even linked industries and infrastructural investments in an extractive region can wind up putting still more of that region's economic eggs in a single, unstable, extractive basket" (447).

As for the four ways in which the dynamics between resource extraction and regional development have evolved over time, technology has changed the situation drastically. A resource deposit that might have been a stable source of employment for decades, for example, in the "British coal industry in 1700, might today be sufficient to provide jobs only for a few miners at a single mine for a single year" (449). The second factor to consider is that in "capital-intensive industries such as mining, the competitive field is already populated with firms that supply most of the market demand" (460). Thirdly, linkage specialization is related to the second factor, in that innovations which emerge today are much more specialized in nature, and aren't likely to find applications beyond the specific demands of the extractive sector. Therefore, these technical innovations remain "tied to the volatile fates of specific commodities, and...offer far less in the way of actual diversification" (450). Finally, transportation systems have reached such a degree of efficiency, that "transportation-related geographic insulation," an important contributing factor historically in regional development, no longer holds true. There is now the "tendency for processing and manufacturing to occur closer to sites of consumption, rather than in extractive regions" (461).

Specific findings for Louisiana's offshore oil industry were that even though Louisiana became "a center of innovation, it did so for an increasingly specialized and esoteric set of extraction-related technologies" (456). And despite the great boom experienced by the state due to the oil-industry, "the developmental implications of oil extraction proved to be less stable and diversified than they first appeared...The sudden drop in world oil prices in the mid-1980's led to a veritable domino effect of local impacts;...affecting the linked industries as well" (457). The coastal parishes heavily involved in the oil industry "...actually saw a *greater* drop in linked employment than in the extractive sector itself, at 60.5 percent versus 57.6 percent (Freudenburg and Gramling 1993)" (458). As for local infrastructure, after the "bust" the region found its infrastructure "...to provide more burden than benefits...operation and maintenance expenses for infrastructure remained stubbornly high, even after the oil-related tax revenues suddenly became quite low" (Ibid.).

In closing, the authors note that developing nations that had hoped to repay international loans "on the basis of resource-related development have found themselves saddled instead with growing debt" (461). And that even in the U.S., in respect to "now legendary experiences with extraction," it seems that "ghost towns proved to be far more common than cases of continuing prosperity" (Ibid.).

Gill, James D., Lawrence A. Crosby, and James R. Taylor. 1986. Ecological concern, attitudes, and social norms in voting behavior. Public Opinion Quarterly. 50:537-554.

This study investigates relationships between ecological concern and voter/consumer behavior , specifically toward bottle bills in California and Colorado. This research and previous studies show, however, that the "degree of intercorrelation among standardized measures produce[s] mixed results." The intent here was to measure ecological concern as an attitude, and to draw conclusions about subsequent behavior. According to the authors, "the supported hypotheses confirm the fundamental role of ecological concern as a background variable which indirectly affects behavior" (549).

The level of concern appears to be mediated "...by more specific attitudinal, normative, and behavioral intention variables." In summary, the study raises the question of whether past research on the effects of ecological concern may "have been misinterpreted and improperly specified," and indeed whether these types of data analyses are inaccurate as "individual-level prediction."

It is suggested that "respondents' evaluations of outcomes made salient by an environmental issue, may provide a more accurate indication of their ecological concern than scores on a very abstract environmental attitude index" (549). In closing, strategies and tactical advice are given "...for those concerned with solving environmental problems" (550).

Goldstein, Joan (ed.). 1982. The Politics of Offshore Oil. Praeger: New York. 208 pp.

This book is divided into four parts, "designating four distinctive perspectives". Part I, the environmentalist's perspective, offers an essay by the legislative director of Friends of the Earth, and "examines in depth the fight over renewed drilling off the CA coast" during the late 70's and early 80's. (The 1969 Santa Barbara oil spill figures prominently throughout this book.)

"Part II, the states' perspective, offers two essays. The first details the history of the intense legislative battle over leasing rights in Georges Bank, New England's outer continental shelf region; "...offering a perspective on the struggle between levels of governmental jurisdiction and industries over control of the planning process and ultimately the resource." The second essay documents the Middle Atlantic Governors Coastal Resources Council: "a secret organization of governors...who generated influence upon federal policy...[by forcing] the issue of representative power on the federal planning level."

Part III presents the federal perspective. Included is a debate on the Alaska issues by the states' manager of the federal OCS program. Specifically, "the consideration given to the host communities...in terms of impact from development." The BLM manager of the OCS office and the public info officer "discuss environmental issues and look at two negative themes pervading the reactions of the public to oil drilling and development off the mid-Atlantic coast, and they offer some findings since the mid-1970's". The final essay in part III is by Bert Brun of the U.S. Fish and Wildlife Service and concerns the mid-Atlantic region. He provides a very detailed description of potential impact of an oil spill on undersea life (much of which is applicable to other regions).

Part IV is the industry perspective, authored by Shell Oil's Mgr. of Govt. and Industry Relations. It presents an argument favoring offshore drilling, which addresses "the issues raised in the preceding chapters concerning regulation, production, and the environment."

The concluding chapter is written by the editor who is a sociologist and member of the mid-Atlantic OCS Technical Working Group. It is a summary which addresses the socioeconomic and political forces "that influence the decision-making process." This book was written during the James Watt (Sect. of the Interior) and Reagan administration.

Note: All quotations are from the "Introduction" by Joan Goldstein, ed.

Gould, Gregory J. 1989. Gulf of Mexico update: May 1988-July 1988; Outer Continental Shelf oil and gas activities. Minerals Management Service: Herndon, VA.

The update is divided into four sections: Offshore oil and gas resources of the Gulf of Mexico OCS Region, Magnitude and timing of offshore developments, Postproduction transportation and facilities, and Issues related to development of OCS resources. Gould begins the first section with a brief summary of the history of exploration activities on the Jurassic Norphlet in the Gulf. Interest in exploring the Jurassic Norphlet waned in the 1970's because

onshore Norphlet fields were limited. However, significant quantities of natural gas were discovered in 1979 off Alabama's coast, and the Norphlet became a primary exploration target.

In the third section, Gould states that the Gulf of Mexico had "the most extensive offshore pipeline network in the world" but none of the pipelines were in the Eastern Gulf Planning Area" (31). He goes on to talk about vessel transportation, including shipping fairways and anchorages and access route studies, and onshore support industries. Concerning the latter, he writes, "As in other sectors, the offshore service and supply industry continues to feel the negative effects of unstable oil prices, low gas prices, and the decline of development projects in the Gulf of Mexico Region during the past few years" (33).

The last section of the update briefly discusses the rigs-to-reefs program; controlling offshore drilling wastes; Coastal Zone Management Act reauthorization; marine sanctuaries; Section 8(G) revenue distribution; marine debris; and, wetland legislation. Regarding controlling offshore wastes, Gold talks about the Resource Conservation and Recovery Act. It "...temporarily exempted drilling fluids, produced waters, and other wastes associated with exploration, development, and production of oil, gas, and geothermal energy" (41). The EPA "recommended to Congress that the wastes from the oil and gas and geothermal industries were regulated sufficiently to protect human health and the environment and did not merit full regulation as hazardous wastes" (41). The EPA "identified marine debris as a major pollution concern in setting up its new Gulf of Mexico office" (45). As for wetlands legislation, the EPA has a 'No Net Loss' policy, meaning for any wetlands destroyed, new wetlands must be created.

Gould, Gregory J., Robert M. Karpas and Douglas L. Slitor. June, 1991. OCS National Compendium: Outer Continental Shelf oil & gas information through October, 1990. OCS Information Report/MMS 91-0032. U.S. Department of the Interior, Minerals Management Service, OCS Information Program: Herndon, VA.

The 1978 Amendments to the OCS Lands Act mandated The Outer Continental Shelf Information Program (OCSIP). This document is one type of report prepared to meet the requirements of this mandate. The OCS National Compendium presents historical information on all of the OCS regions.

The MMS's OCSIP is responsible for disseminating the appropriate data on OCS activities to States, local governments, and other affected parties.

Since the OCSIP receives many requests for out-of-print publications, "the purpose of the OCS National Compendium is to consolidate the historical data and to present the data on an OCS-wide and regional scale" (1). This facilitates regional comparisons. A fold-out timeline is presented in these documents and a predominantly graphic format is used for easier accessibility.

The contents of this document include major sections titled: OCS Regional geology, Petroleum potential, and resource estimates; OCS oil and gas leasing program; Postlease activities on the OCS; Oil and gas transportation and onshore support facilities; Special topics related to OCS programs; and, an appendix featuring a bibliography of OCS information reports.

Gore, Al. 1992. Earth in the Balance: Ecology and the human spirit. Houghton Miflin: New York. 407 pp.

Then-Senator Gore was first exposed to environmental concerns due to soil erosion on his family farm, and by his mother's "troubled response" to Rachel Carson's seminal book *Silent Spring*. He also encountered agent orange while serving in Vietnam. These factors helped to inspire his search to understand the workings of both local and global ecology.

This book goes to some lengths in discussing "The shadow our civilization throws," by detailing various threats and extant environmental and climatological problems of varying degrees--many severe. For example, Gore describes a visit to an area that was once part of the Aral Sea, where fleets of fishing vessels sit stranded far inland in desert sands. In one of the three sections of this work that deal with 'balance', Gore explores "We are what we use; Eco-nomics: Truth or consequences; Dysfunctional Civilization; and Environmentalism of the Spirit." There is an obvious philosophical bent to Gore's work here, in addition to the pragmatism of the sociopolitical.

Sweeping suggestions are offered for solutions in concluding chapters, particularly a "Global Marshall Plan" inspired by the alliance between Western nations that rebuilt post WWII Europe. Gore proposes cooperation and planning on a planet-wide scale to address seemingly insurmountable problems like global warming, and overpopulation. Gore refers to this as a "Strategic Environmental Initiative" (SEI), with the stated goals of: stabilizing world population; developing and sharing appropriate technologies; a new global eco-nomics; a new generation of treaties and agreements; and a new global environmental consensus.

Specific ideas relating to energy issues, besides conservation and increased efficiency, include: "Fuel switching" to promote use of renewable energy such as wind-driven power; or natural gas, in addition to utilizing methane from landfills for fuel--as a substitute for present rates of use of oil and coal. He also proposes repairing massive and persistent methane leaks in gas pipelines throughout Eastern Europe and the Soviet states; and, utilizing the wasted energy, or waste heat, which is a byproduct of most manufacturing and industry. (This is called "cogeneration" and could be an "enormous" source of energy, according to Gore.) New technologies which may revolutionize energy use and resources are also discussed, such as greatly improved electrical storage capacity which will offset energy wasted during non-peak periods by power plants. Similar technology may also make electric cars practical in the future.

This book is meticulously researched and referenced. And, it offers not only a striking wake-up call in terms of the dire ecological situation humanity faces, but also detailed, thoughtful and rational solutions.

Gramling, Robert. 1995. Oil in the Gulf: Past development, future prospects. OCS Study MMS 95-0031. U.S. Dept. of the Interior, Minerals Management Service, Gulf of Mexico OCS Region, New Orleans, La. 72 pp.

This report describes the process by which an MMS-funded workshop designed a social science research agenda for MMS in the Gulf of Mexico. Here LUMCON "a group of social scientists from all over the U.S., Canada, and Norway met [to collaborate on the research design]." Appendix D "presents the descriptions of the recommended projects to implement that agenda" (v).

Gramling, Robert. 1992. Employment data and social impact assessment. Evaluation and Program Planning. 15:219-225.

This paper suggests using employment data rather than simply using population figures, as is traditionally done in SIA, for assessment of social impacts on communities. The author "presents the problems and advantages encountered with the use of population statistics, and the problems and advantages of employment data, and an example of the use of both in a community setting" (219).

Some discussion of boomtown phenomena and a move toward more longitudinal studies of SIA are two of the features of this study. "Although Gramling and Brabant have argued that the boomtown is not a generic phenomenon but a point on a continuum of growth, the intervening variables which they identify modify but do not negate the causal efficacy of the initiating factors of development, jobs, and human migration" (Ibid.).

In summary, Gramling suggests viewing population and employment figures not as "competing sets of data, [rather as to] what purpose the analysis is designed to serve, and who is the audience" (223).

Gramling, Robert, Sarah Brabant, (eds.), David P. Manual and E. F. Stallings. 1984. The role of Outer Continental Shelf activities in the growth and modification of Louisiana's Coastal Zone. University of Southwestern Louisiana. U.S. Department of Commerce/Louisiana Department of Natural Resources: Lafayette, LA. 231 pp.

The Louisiana Department of Natural Resources contracted the University of Southwestern Louisiana to study the impacts of oil and gas activities on the Louisiana Coastal Zone. This collection of studies describes: development of OCS techniques; trends in Louisiana OCS activity; population growth in the coastal zone; median income in coastal zone parishes; employment and industrial growth; OCS activities and their relationship to occupational shifts in the coastal zone parishes; modification and consumption of scarce coastal resources; housing in the coastal zone parishes; education in the coastal zone parishes; other impacts of OCS production in the Louisiana Coastal Zone; East St. Mary Parish: A case study; population, OCS production, and industrial growth: projections to 1990; and, conclusions and recommendations.

Gramling, Robert. 1984. Conclusions and recommendations, pp. 217-225. In Robert Gramling and Sarah Brabant (eds.), The role of Outer Continental Shelf activities in the growth and modification of Louisiana's Coastal Zone. University of Southwestern Louisiana. U.S. Department of Commerce/Louisiana Department of Natural Resources: Lafayette, LA.

This concluding chapter begins by stating that since there appears to be no foreseeable decline in oil and gas production offshore Louisiana's coastal zone, "OCS activities will undoubtedly become a more common phenomena throughout the Gulf and eastern seaboard, [moreso] than at this writing" (217). Therefore, the impacts of these activities "must be understood now in order to plan for the future" (Ibid.).

The focus of this research was to "delineate" the impacts OCS activities have had in coastal Louisiana. This report concludes generally that the impacts were "minimal and mostly positive" (218). Among the details provided is a description of the diversity of the coastal zone that goes into the non-homogeneity of its physical, cultural, and economic makeup. Impacts described include: land use, canal construction, pipeline canal construction, erosion of waterway banks, and danger of spills. The conclusion reached is that "...bearing a major oil spill OCS production has little adverse impact upon the physical environments and is basically a clean industry" (221).

Socioeconomically, OCS activities have generated an increase in employment, increased median incomes "at a faster rate than the state or nation," and in practically every parish have not had a massive impact. (The exception cited is East St. Mary Parish, which, for various reasons, experienced a boomtown syndrome.) There had been anticipated "rather massive socioeconomic impacts" (like those in East St. Mary Parish), with rapid population growth, disruption of the education process, and housing shortages, for example. These generally failed to occur in any negative sense, according to this report.

Gramling, Robert and Shirley Laska. 1993. A social science research agenda for the Minerals Management Service in the Gulf of Mexico. OCS Study/MMS 93-0017. U.S. Department of Interior, Minerals Mgmt. Service, Gulf of Mexico OCS Regional Office, New Orleans, La. 69pp.

This report details the history of offshore oil development in the Gulf of Mexico "...and of the events and technological development that preceded and allowed that development to go forth" (v). National and international events that impacted offshore development in the Gulf are covered here. Also included are the effects of offshore development "in general and of the Federal Outer Continental Shelf leasing program, initiated in 1954, in particular" (Ibid.).

Chapters in the report are: "The early technology and politics of offshore oil; Moving offshore; Political storm clouds: OPEC, California, and the embargo; Boom and bust in the Gulf" (vii).

Some of the subheadings which are especially relevant are: "The legacy of exploration and development in inland waters; Response to the new technology; Emergence of the offshore

system: Technology; Development of the onshore support system; The social environment; Economic adaptations to mobility; Continuing technological development; The boom; Rebuilding the environment; Beginning of the end; The bust; Current trends" (4-56).

This report contains some useful tables and charts, showing "Gulf Offshore areas; World oil production, 1969-1991; GOM OCS activities; Population and growth rates, coastal La. and Texas; Gulf area by leases sold," in addition to other data concerning socioeconomic factors.

Gramling, Robert and William R. Freudenburg. 1996. Crude, Coppertone and the coast: Developmental channelization and constraint of alternative development opportunities. Society & Natural Resources. 9:483-506.

This article contrasts the socioeconomic development of two similar geographical regions, southern Florida and southern Louisiana. While these areas share the distinction of having the two most extensive coastal wetlands in the continental U.S., the issue of oil and gas production has been polarized between these two states. The authors cite this paired-comparison case study as an example of "developmental channelization."

The channelization metaphor comes from the meandering of rivers, which generally stay within their banks and thus reinforce their own channel, and yet occasional factors do cause shifts to occur. These factors are "probabalistic, rather than deterministic, and are subject to systematic pressures and sudden catastrophic events" (485). In other words "this paper argues that virtually any development direction, once selected, is likely to create constraints as well as opportunities for subsequent development, potentially containing the seeds of its own destruction, as well as a mechanism for its own maintenance" (Ibid.).

Southern Florida and southern Louisiana's nearly diametrical developmental scenarios are referred to here as "A tale of two trajectories" (486). Louisiana has embraced oil and gas production in a style unparalleled throughout the globe, whereas Florida has remained staunch in its opposition to even the idea of offshore drilling. Reasons beyond the obvious explanations are explored here, beginning with a historical overview of the early development of both regions.

Interestingly, southern Louisiana's early history included summer resorts which attracted tourists particularly in the Grand Isle/barrier island area. One description from the mid 19th century described, "the beach is smooth, and covered with small white shells, the water is clear and salt..."(490). However, after the massive land-clearing of westward expansion and the "breaking" of the prairies, the resulting Mississippi River silt load began to cloud Louisiana's coastal waters. Once the submersible drilling platform was put to use in Louisiana in the 1930's, various geographical factors (such as easy access to the Gulf and inland transportation), combined with common oil strikes (versus dry holes off Florida), made Louisiana the ideal location for extractive industry.

Meanwhile, Florida's development had largely been limited to the coastal ridges bordering the Gulf and Atlantic, due to the problematic nature of the swampy interior. The combination of transportation and hotel building, the recognition of leisure as a necessity and right after the turn

of the century, steady rise in family disposable incomes, and a shift in fashion--which made both suntans and brief bathing suits popular--resulted in an entire industry being built around coastal/beach tourism. Later, air conditioning was the deciding factor in making tourism in south Florida a year-round activity. "Thus, tourism did not become, as in many areas, a dominant element in the economy; it became the economy" (498).

As a direct result of this beach-based lifestyle, offshore oil is considered overwhelmingly incompatible in Florida. "Indeed, so distinctive is southern Florida that the residents often express not just an opposition to the activity, but a disbelief that anyone who is familiar with the region would even think that offshore development was an option" (499-500). According to one respondent to this research, "the mere rumor of a potential oil spill would ripple through the coastal tourism-based economy, bringing significant costs, and an actual spill would bring catastrophe" (501).

In light of the finite nature of Louisiana's extractive economy and various pressing problems in south Florida such as water shortages, runaway population growth and the fear of skin cancer--the authors address the issue of whether each of these regions might select a different developmental direction in the future. According to the authors, "It may well be that the exploitation of virtually any renewable or nonrenewable resource both can be self-accelerating and can contain within the developmental process at least the seeds of its undoing, and that the real lesson for communities from the comparison above may have to do with the importance of trying to keep options open" (503).

Gramling, Robert and William R. Freudenburg. 1992. Opportunity-threat, development, and adaptation: Toward a comprehensive framework for social impact assessment. Rural Sociology. 57(2): 216-234.

Traditionally, social impact assessment has focused on effects from the actual development projects taking place within communities. Whereas, it has become clear that significant impacts take place as soon as plans for development become known, and continue to some degree indefinitely. The authors here work to provide an analytical framework "...for dealing with the impacts that can take place across different temporal stages and across different systems of the human environment" (217).

The passage of the National Environmental Policy Act in 1969 began to require agencies to "assess the impacts of a project before implementation" (216). This provided the impetus for the field of social impact assessment (SIA). This paper gives a summary and overview table of the authors' analytical framework for SIA that spans the planning phases, the implementation of development, and the process of adaptation over the longer term. It is titled "Temporal phases and affected systems," and is organized to show: "Opportunity-threat, Development/event, and Adaptation/post-development in each of these affected systems: Physical, Cultural, Social, Political/legal, Economic, Psychological" (218). This is a concise and perceptive treatment of the sociological impacts common to communities experiencing changes due to development, and would seem to be an effective way both to conceptualize and organize relevant data.

Of special interest here is the opportunity-threat analysis as it relates to OCS oil and gas development. As the authors mention, this issue represents widely divergent things to people in the affected communities. Offshore development has long been considered an economic boon to Louisiana and Texas. But, "Recent proposals for OCS oil development along the coasts of Florida and northern California, for example, have been so contentious that they eventually required Presidential intervention" (219). According to Gramling and Freudenburg, agencies that have been charged with the responsibility for assessing the effect projects might have on communities "have hidden behind the ambiguity and inadequacy of past terminology...[following] bureaucratically simpler courses of action, insisting that they see no need to deal with impacts that are 'merely perceptual,' or those that purportedly are so far in the future as to be 'beyond our control' "(230-231). While, these impacts are every bit as empirically quantifiable and significant as the development phases that *are* considered legitimate. As the authors state, these things may have been "not so much beyond our *control* as beyond our *concepts" (231).* This research may go a long way toward improving the process of SIA, and thereby lead to better decision-making.

Gramling, Robert and William R. Freudenburg. 1990. A Closer Look at 'Local Control': Communities, commodities, and the collapse of the Coast. Rural Sociology. 55(4): 541-58.

Sociologists Gramling and Freudenburg present an analysis of external boom-bust forces on resource-dependent communities. Existing research and literature on the subject typically focuses on local planning when discussing the management of disruptions in resource-extraction communities. Whereas, this report takes a broadly ecological approach, emphasizing the complex and multi-causal forces which affect world commodity markets--which then have a direct impact on local economies.

The authors suggest that the "appropriate approach to planning and impact assessment is not to place faith in the anticipation of *most likely* outcomes..." but rather to anticipate unexpected turns of events, such as fluctuations of global pricing of commodities which might in turn prompt a boom-bust cycle (543). While there seems to be "an absence of serious policy efforts by local communities to control the potential problems of development...," it is not clear exactly "...what local policies, if any, could have moderated the impacts to an appreciable degree" (554). In essence, Gramling and Freudenburg caution that communities having a dependence on resource extraction may be gambling their futures on the commodities market.

This research suggests that small communities in the U.S. and the rest of the world that are willing to take "drastic steps to encourage economic development" would do well to: remain flexible; plan for possible failure of proposed development, "...exercise considerable skepticism about the ability of a small community to avoid large disruptions," and avoid "...the tempting assumption that local preparedness will avert any problems" (554).

These conclusions were drawn from research surveys done in two extractive-resource (oil and gas) dependent parishes of coastal Louisiana, St. Mary and Lafayette parishes, during the boom-bust period of the 1970's and 1980's. The dependent variable was total employment--which the authors cite as "a straightforward indicator of an area's economic vitality" (547).

Gulf Coast Environmental Defense. December, 1997. Newsletter.

In 1992 GCED was formed to "protect the Northwest Florida coast from the threat of offshore drilling. We have expanded to include other marine, coastal and quality of life issues...GCED has collected over 17,000 petition signatures and 300 government and business resolutions against offshore drilling. We have helped secure annual bans on new offshore drilling lease sales in Florida waters. Our work helped cancel six nearshore drilling leases in August of this year, and won the introduction of a bill to Congress that would permanently ban new lease sales within a hundred miles of shore." Among the other GCED activities listed in the newsletter is "government accountability." GCED is part of a coalition of environmental groups that are monitoring environmental agencies to be sure they "...fulfill their public protection missions."

Gulf Coast Environmental Defense. 15 October, 1997. Minerals Management Service Scoping Session: Concerns about Chevron's production plan and EIS.

A letter was sent by GCED to many area citizens urging them to attend the MMS Scoping Session. Included with a cover letter was an information sheet with a list of what "The Chevron Environmental Impact Statement (EIS) should include." (In summary):

- Address visual impacts accurately. An earlier EIS stated that from the beach a rig can be seen for almost 26 miles, and up to 49 miles from the top of a highrise.

- ...Tourism is based on the public's perception, and the public's perception is that rigs will cause the beach to be dirty and a less desirable place to visit.

- Cumulative impacts of all rigs...should be evaluated in terms of their *added* impact, not their *comparative* impact.

- ...The EIS should utilize independent data. Past EIS's have used data from MMS studies conducted in a biased and limited manner.

- An exhaustive search of available scientific literature for information on impacts...

- The EIS should be subject to thorough peer review, including its methodology, research design and findings.

- The requirement that all toxic materials be logged into a manifest, to be verified on return to shore. Past EIS's have not adequately addressed the disposal of...materials routinely dumped into the Gulf of Mexico.

- EIS conclusions and summary should be peer reviewed for consistency with the

scientific findings, and should avoid making political arguments in favor of drilling.

- ...National security...needs to be addressed truthfully, admitting that the U.S. ...can never be energy independent with fossil fuels. In addition, the eastern Gulf of Mexico holds only a three month supply of natural gas--hardly a national security issue. It should be reported that Saudi Arabia and Japan are the world's largest producers of solar power, a situation which could ensure America's dependence on foreign nations for the technology of the most independent energy source in existence....As long as wells are permitted, there is no incentive to research and develop alternative energy sources.

- The EIS should include Chevron's safety record in detail, including all known violations.

- The EIS should include Chevron's plans for dealing with trash...generated by rigs. The statistics demand a plan for trash accountability.

- The EIS must include baseline data on local beach trash, tarballs, and other direct coastal impacts (researched independently and subject to peer review).

- The EIS should consider all twenty Chevron wells a *single point source* for air quality permitting, rather than considering each rig a single point source.

- The EIS should address the impact of the twenty wells on Escambia County's record of non-attainment of EPA's clean air standards.

- Any mention of revenues to Florida from offshore drilling should be placed in the context of threatened tourism revenues. While Chevron's production could generate $2 million in revenues, tourism generates $91.4 million per day for the state of Florida.

- The contingency spill plan should define clearly which partner in the permit is responsible for cleanup.

- The EIS should evaluate zero discharge as an option. All muds, fluids, cuttings, diesel, ...must be returned to shore for proper treatment and disposal.

- All impacts of offshore activity must include environmental impacts of onshore activity...

- Additional points concerned the effects of discharge on endangered sea turtles; the "ridiculous negative energy profile report on Florida," versus the EIS addressing Florida's potential for producing renewable power from "clean, safe, wind and wave energy." "That is, if the issue is energy production rather that producing our fair share of oil company profits and pollution."; and a suggestion that independent inspection teams should be used to assure compliance of offshore rigs.

Gulf Coast Environmental Defense. October, 1997. Offshore Drilling Primer: Compelling reasons to oppose natural gas drilling off Florida's coast.

This material was a four page handout that was provided at the October 15, 1997 MMS Scoping Session to give Pensacola area residents an opportunity to make their concerns known over the issue of Chevrons' plans to conduct offshore drilling. Specifically, the purpose of the meeting was to solicit community input for MMS's Environmental Impact Statement.

A long catalog of perceived potential environmental hazards from virtually every stage of oil and gas development in the Gulf of Mexico comprises the bulk of this work.

Gulf Coast Environmental Defense. Sept. 1995. Rigs aren't worth the risk: A case against drilling in the Eastern Gulf of Mexico. Gulf Coast Environmental Defense: Gulf Breeze, FL.

This report has three sections: the environmental impacts of offshore oil and gas drilling and exploration, the socioeconomic impacts of drilling, and suggestions for conserving energy. GCED believes the environmental costs of drilling outweigh the benefits. They describe the probable pollutants: drilling muds, produced water/oil field brine, naturally occurring radioactive materials (NORMs), and air emissions. Pollution is likely to result not only from the drilling itself but also from transporting materials to and from the platforms, and oil and gas mishaps. In the section on the socioeconomic impacts of drilling, GCED provides a brief socioeconomic profile of the Panhandle and Pensacola. Then, they list the costs and benefits of drilling.

Specifically, GCED believes that offshore oil and gas drilling will have a negative effect on many socioeconomic aspects of coastal living. GCED says, citing a study by Dr. Charles M. Tolbert, greater income inequality exists in extraction-based economies like Texas and Louisiana than in service-based economies like Florida's. Oil production could harm the desirability of Pensacola as a tourist spot, and offshore activities could destroy commercial and recreational fishing. Further, offshore production would likely result in onshore industrialization which has several costs and dubious benefits. Pensacola and the Panhandle's image, identity, and quality of life would be changed by offshore drilling activities.

In the appendix is a list of various federal, state, and local government contacts. Rep. Porter Goss (R-Sanibel) and Rep. Joe Scarborough are mentioned as co-sponsors of a House bill that would delay offshore exploratory drilling until socioeconomic studies are done. Scarborough also opposed a tax break for oil companies drilling in the Gulf.

Hahn-Baker, David. 1994. Rocky roads to consensus: Traditional environmentalism meets environmental justice. Amicus Journal. 16(1): 41-43.

This article explores the separation of the traditional environmental organizations and the environmental justice movement. In the past, the environmental justice movement has accused the traditional organizations of racism. Recently, however, more cooperation has occurred between the two movements. Hahn-Baker says the problem with the split is that "it is a damming up of much of our intellectual, political, and spiritual power. Ultimately, diversity comes down to that most basic environmental rule: learning to make better use of our resources" (43).

Hance, Billie Jo, Caron Chess and Peter M. Sandman. 1988. Improving dialogue with communities: A risk communication manual for government. Rutgers Univ. Environmental Communication Research Program: New Brunswick, NJ. 83 pp.

The New Jersey Dept. of Environmental Protection issued this manual on risk communication to provide guidelines for "planning and undertaking effective environmental health risk communication." It is intended for use by state agencies. There are summaries of "practical lessons learned from successful as well as unsuccessful efforts to generate two-way communication with affected publics." The focus of this manual is for agencies to "allow the affected public to have a genuine 'stake' in the decisions being made" on their behalf, in communities with environmental health situations.

Issues detailed in each section of this document include: How communities see risk; Earning trust and credibility; Deciding when to release information; Interacting with the community; Explaining risk.

Of particular interest is the final section "Ten myths of risk communication" (29). Erroneous perceptions concerning informing the public of risks involving environmental health problems are explored here. Basically, the authors encourage industry to communicate with the public by reasoning that generally it is in their own best interests especially from a public relations standpoint, and as a preventative measure.

Hayden, Tom. 1996. The Lost Gospel of the Earth: A Call for Renewing Nature, Spirit and Politics. Sierra Club Books: San Francisco. 280 pp.

"In September 1995, twenty-five hundred experts on the Intergovernmental Panel on Climate Change declared that the cause of global warming is the burning of fossil fuels, and called for a 60 percent reduction in fossil fuel use to prevent a worsening of the trend. Industry representatives and government officials continue to deny the conclusion of the world's scientists. Paid lobbyists for the oil industry recently spent $1 million in an effort to cast 'scientific doubt' on the threat. The fossil fuel industries showed that not even a proven threat to the world's climate could alter their behavior. During the decade that scientists were issuing their warnings, electricity use in the United States went up 22 percent" (6-7).

California Senator Tom Hayden uses a variety of statistics and data, along with personal narratives, to make his case regarding the dire state of the planet. He includes items such as headlines about the melting of the polar ice caps (exposing ice that has not melted for 20,000 years) due to global warming; and the increasing possibility that cancer and male infertility are a result of exposure to chemical toxins (including petrochemicals) in the environment.

The three sociological attitudes toward nature are, according to Hayden: Lordship (or domination and exploitation), Stewardship (or wise-use, still regarding nature as a resource), and Kinship (interdependent relationship with the natural world.) The focus of this book is to encourage a paradigm shift in which the kinship approach to nature creates a sense of the intrinsic value and sacredness of the biosphere. Seeing ourselves as integrated within the environment, rather than separate, or in 'Lordly' dominance, in Hayden's opinion, is pivotal to changing our government and economic structure in time to prevent global catastrophe.

An evolved standard of ethics and values where mental health and maturity would be defined by an individual's adjustment to the 'web of life' is suggested: "The oil industry executive who dismissed the Arctic Wilderness as a 'flat, crummy place' could be given counseling for incipient schizophrenia, not employed as an Alaskan resource official (as he was)" (37). And, Hayden's take on the economic recession which began with the oil embargo of the 1970's:

> Although this economic slowdown had everything to do with myopic anti-environmental policies, it was soon blamed on alleged environmental extremists with their costly agendas. In fact, the actual causes of the economic downturn included an irrational American investment in capital-intensive energy strategies based on fossil fuels and nuclear power. At the same time, America's leading competitors in Japan and Germany applied energy conservation techniques that achieved a dollar's worth of production at half the energy costs of American firms (215).

This book presents a convincing, well-researched and hard-felt argument. One of the suggested means of recovering the 'Lost Gospel of the Earth" is by reclaiming the Native American heritage of this continent, which encompasses the values necessary for sustainable culture. Other chapters are: "Overcoming the divide of soul from nature; The default of organized religion; The lost gospel in the Judeo-Christian tradition; The lost gospel in Buddhism; The lost gospel, environmentalism and politics". As Father Leonardo Boff put it in "Ecology and Liberation," we need nothing less than a new cosmology, in which "the human race is part of nature and the biosphere, not the center of the universe."

Hogan, Rick. 27 November, 1996. Chevron starts filing plan to develop Destin Dome acreage off Florida coast; Eastern Gulf of Mexico offshore gas plans being filed with US Minerals Management Service. The Oil Daily. 226(46):1.

Chevron's plan calls for the development and production of Destin Dome 56, "a block of 11 federal outer continental shelf leases located about 25 miles south of Pensacola, Fla." Aggressive opposition to offshore development has thus far prevented drilling in the area. The Destin Dome

is of great value to industry, however, with some estimates at up to 3 trillion cubic feet of gas--"enough to supply the state of Florida for five to nine years."

Florida can still file an objection with the MMS under the state Coastal Zone Management Act. This could delay Chevron's production plans.

Chevron will submit the first portion of its 64-volume development program to MMS this week. Part of the details include construction of a gas pipeline to connect with existing output near Mobile, Ala. If all goes as proposed, drilling will begin in 1999. Chevron is currently operating "three gas wells... about 30 miles offshore Alabama." And the company also "owns acreage in the Norphlet Trend, which stretches 80 miles from Mobile Block 861 offshore Mississippi to the Destin Dome." Chevron hopes to repeat their success in the Panhandle of Florida.

Chevron plans to phase out their operations offshore California to concentrate instead "on the deep-water regions of the central Gulf." While Chevron's plans are for federally controlled waters, "...state governments along the eastern Gulf coast...have sent clear signals to oil and gas companies that their state waters are off limits." This opposition includes Alabama and Florida Governors James and Chiles.

Hogan, Rick. 03 December, 1996. MMS opening information office in Pensacola to make case for drilling offshore Florida. The Oil Daily. 228(46):1.

The opening of a "pilot information office" in Pensacola by the Minerals Management Service is, according to the Oil Daily, "a bid to win over the public." The goal is improved communication "with communities and environmental groups concerned about oil and gas drilling and production in...the OCS in the eastern Gulf of Mexico."

Local demand for information prompted the DOI to open an office in the Panhandle. MMS spokesman Barney Congdon said, "The political climate in the state is not very good for offshore drilling, but this office should open doors to more environmental studies in the region." To date the MMS has spent "$41 million on environmental studies in the eastern Gulf..." MMS's jurisdiction "starts about 10 miles offshore, [and extends] from Baldwin County, Ala., south to the top of the Florida Keys."

The Pensacola office will have two administrative personnel and an environmental scientist on staff, and will "serve solely as a public relations outpost for MMS, not as an operational headquarters." MMS regional headquarters is in New Orleans. 1980 was the last year MMS conducted lease sales in the eastern Gulf. That was the year Congress began the "federal moratoria against offshore leasing in most U.S. waters."

There are 64 blocks which aren't active under lease in the Panhandle area of the Gulf, and about 156 active leases in the region. The Jurassic Smackover and Norphlet formations are the geological designations of the areas where oil and gas companies have made their finds. 47 wells have been drilled in the eastern Gulf since 1959. "Eight of the 32 wells drilled offshore Alabama and Florida's Panhandle have been commercially producible."

By "providing information" and "listening to citizens" industry representatives such as Bob Stewart, president of the National Ocean Industries Association (NOIA), hopes public perception of oil and gas development will change. He claims that, although opposition to offshore drilling is politically popular, it is "not rooted in facts [about environmental safety]. It's rooted in emotion." NOIA has "target[ed] five counties in the Florida Panhandle in early 1997 with a program to teach the public about offshore drilling and production."

Holing, Dwight. 1990. Coastal Alert: Ecosystems, energy, and offshore drilling. Island Press: Washington, D.C. 126 pp.

This small book is a useful primer on every major aspect of offshore drilling. A concise synopsis is provided on: leasing; environmental and socioeconomic impacts; "how offshore oil and gas are developed"; the mechanisms of citizen action (using California as an example of various successes); and "how energy alternatives can replace offshore drilling." Appendices go into some detail on: the lease sale process; offshore oil and gas development regulations; model letters and press announcements (suggested formats for various citizen actions from letters to the editor, to government resolutions and fact sheets); a list of resources; and, a glossary of terms.

The Natural Resources Defense Council, "...a national organization that has a solid record of research and advocacy on behalf of the environment" (xii), and the Central Coast Regional Studies Program prepared this volume. The focus of the work is to teach citizen advocacy for protection of coastal waters, and present perceived viable alternatives to continued lease sales and drilling--which could meet our nation's energy needs in a more ecologically sound manner. Primary rationales for stepping-up offshore drilling such as decreasing foreign dependency, and an increase in regional jobs--are revealed here to be largely a fallacy. Instead, according to this report, "We need to tell the government to develop alternative energy sources, practice energy efficiency, and squeeze more oil out of already existing developed fields." Technology exists today "...to make automobiles, buildings, and factories that use half the current amount of energy" (68). Ultimately, a "national energy policy reform" based on least-cost, is proposed here.

There are numerous statements in this book that will be unsettling to readers, e.g., "According to official government estimates, additional offshore drilling will likely cause twenty-two to forty-six major oil spills; a 1989 study commissioned by the President "...concluded that the DOI has been proceeding with oil drilling leases despite insufficient scientific information regarding environmental and socioeconomic impacts" (7); regarding oil spills' aftermath: "...there is grim and disturbing evidence that oil pollution is chronic and it's impacts irreversible" (xiii); and according to the National Academy of sciences, the DOI's risk analysis model is "fatally flawed," and does not take into account spills under 1,000 barrels (15). Recent testing of areas where heavy spills have occurred still show harmful residue twenty years later. Produced water from drilling "...often contains levels of radioactivity above what can be legally discharged from a nuclear power plant" (25). "Drilling a single well produces 1,500 and 2,000 tons of waste materials" (24). "Oil industry data indicate that over 1.5 million barrels of wastewater were discharged into the Gulf of Mexico each day of 1986" (24). An EPA study of wastewater in the

Gulf of Mexico revealed levels of carcinogenic napthalene "...100 times the level found by the U.S. Fish and Wildlife Service to be toxic to fish eggs and benthic organisms" (Ibid.).

And there are also the issues of: air emissions/greenhouse gases, wildlife and commercial fisheries impacts; pipeline impacts, and service traffic routine pollution and potential accidents; onshore industrialization, and, socioeconomic impacts. "...[A]ccording to a report issued by the National Academy of Sciences, the DOI routinely performs inadequate social and economic analyses prior to making the decision to lease an area to oil companies" (33).

As for offshore gas drilling, much deepwater drilling is sour gas (containing hydrogen sulfide) and is under tremendous pressure, thereby increasing blowout probabilities. "Sour gas is odorous, and according to a report issued by the Washington Sea Grant Program, can be highly poisonous" (44).

Jasper, James M. Demography and the environment. 1996. Demography: 225-228.

Four books on environmentalism are reviewed in this article: *The Fading of the Greens: The Decline of Environmental Politics in the West* by Anna Bramwell; *The Green Rainbow: Environmental Groups in Western Europe* by Russell J. Dalton; *Green Networks: A Structural Analysis of the Italian Environmental Movement* by Mario Diani; and *Losing Ground: American Environmentalism at the Close of the Twentieth Century* by Mark Dowie.

Jasper calls environmentalism "the darling of intellectuals, who have hailed ecology as the first new ideology since socialism, and the environmental movement as the paradigm of postindustrial 'new social movements'" (225). This has resulted in a large number of books being published dealing with these themes. But, according to Jasper, after reading this selection of material, it was "like the old story about several people trying to imagine an elephant by feeling its separate parts, it's hard to imagine that these authors studied the same movement" (Ibid.).

OECS administrator Anna Bramwell's examination of ideology reflects her "opinionated, idiosyncratic world," and is a "screed against environmentalists" (226). She attacks deep ecologists, for example, for "hav[ing] embraced Leftist criticism of trade and hold[ing] their beliefs as an unfalsifiable religious faith" (Ibid.). Jasper cites instances in which Bramwell's polemics are inaccurate and distorted, and reflect a clear bias against environmentalists. (Bramwell is an environmental policy bureaucrat in Eastern Europe.)

In contrast, Jasper refers to Dalton's work as "accurate" and done in "sound social-scientific fashion" (Ibid.). Dalton, a political scientist, researched 69 environmental groups--"their formal organizations in relation to their ideologies," in order to "address hypothesis drawn from the literature on protest movements." This book pays particular attention to "the contrast between resource-mobilization and new-social-movement approaches" (Ibid.).

Mark Dowie, former editor and publisher of "Mother Jones," has written an expose on what he perceives to be the corruption of large national environmental organizations. He cites, for example, cases of "polluters trying to buy a better image through modest support of environmental groups, which have become too willing to compromise," (227). Dowie believes these groups are "run by a small elite" who are drawing funds through direct-mail appeals from

"many Americans who care about the environment" (Ibid.). The proposed solutions in this book rely on "fourth wave environmentalism," which includes grassroots democracy and the environmental justice movement.

In contrast to Dowie's non-scholarly approach, Mario Dani has written a "dense study of the Milan environmental movement in the late 1980's," which explores the "network ties" among the various organizations. His findings indicate a surprisingly low number of "ties" or interactions between individuals and various organizations--"identification with one's protest movement, it would seem, is mostly in the head" (Ibid.).

The commonalities between these books, in Jasper's view, may be their coverage of the "relationship between the environmental impulse and traditional political cleavages between right and left"; and (in all except Dowie) "the middle-class base of environmentalism" (Ibid.). This affinity with the middle class is a large part of environmentalism's fascination for scholars and writers, according to Jasper.

Jones, R.E. and L.F. Carter. 1994. "Concern for the environment among Black Americans: An assessment of common assumptions." Social Science Quarterly. 75(3): 560-579.

This paper seeks to assess the "overall validity" of the assumption that black Americans and other minorities are not as concerned about environmental problems as white Americans. According to the authors, "many of these claims are based on inadequate and sometimes misinterpreted evidence" (561). "The exhaustive review of research which follows suggests that a number of once widely held beliefs about race and concern for environmental quality are largely collective myths" (562).

"The three common assumptions about race differences in environmental concern find very meager support in the accumulated evidence of two decades" (573). Suggestions that concern over environmental issues is "only a white thing" when judged against long term data analyses, demonstrates that in many cases, especially in relative terms, blacks are equally or *more* concerned about the environment. "Blacks, however, are less likely than whites to be actively involved in environmental organizations," though there is a rapidly growing level of participation in grass-roots organizations "...that address the impacts of race, poverty, and pollution in the local community." The "environmental justice movement" is an example if this type of grass-roots organization.

The second assumption--the "economic contingency hypothesis"--suggested that disadvantaged groups such as blacks would "disproportionately withdraw their support" for the environment during hard times (574). Data indicate that the reverse may be true. Under economic duress, black respondents tend to "retain their commitment to environmental protection more so than do white respondents, at least in terms of advocating governmental spending" (Ibid.). Generally, people of color have also been more consistent over the long term than whites in this regard.

Finally, there is the "concern gap" notion--that blacks are disinterested in environmental issues--compared to whites. The assessment of this claim is complex, since relative and absolute

concern, local and global issues, and "pressing" social problems, compared to more abstract environmental issues, all can be figured in. The authors note that this notion is subject to confusion. For example, "we should note...that ranking a problem lower than problems viewed as even more pressing is not at all the same thing as 'disinterest' or 'lack of concern...The research act of asking people to rank problems...carries the risk of misinterpreting their *lower priorities* as *disinterest*' (574).

Some findings of note: "Blacks are...as likely to mention as important the same kinds of environmental problems as whites and rate them with the same degree of seriousness--even nature preservation issues such as loss of natural scenic areas, oil spills, and loss [of habitat] "(566).

Jones, Robert Emmet and Riley E. Dunlap. 1992. Social bases of environmental concern. Rural Sociology. 57(1): 28.

Two hypotheses concerning possible changes in public environmental concern are tested here using data from the National Opinion Research Center's General Social Surveys (1973-1990). The "broadening base" hypothesis proposes that environmental concern "will diffuse throughout the populace, resulting in a broader base of support for environmental protection," while the "economic contingency" hypothesis predicts a withdrawal of support from those economically disadvantaged during times of economic downturn (28).

In light of the tremendous changes both socially and environmentally during the two decades surveyed "it seem[ed] reasonable to assume not only that the degree of public support for environmental protection may have changed, but that the sectors of society from which this support is drawn may have changed as well" (Ibid). However, analysis of the data did not support either theory, and in fact indicated that public support for environmental spending has "...remained remarkably stable over nearly two decades despite fluctuating economic, political, and environmental conditions" (Ibid.).

This research also showed the "key sociopolitical correlates...age, education, and political ideology--have remained stable over time; in other words,...younger adults, the well-educated and political liberals remain more environmentally concerned than their counterparts..."(29).

One other observation which seems relevant after the 104th congress's similar attempt to dismantle existing regulations: "Underestimating the continuing strength of public concern over the environment, the Reagan administration attempted to reduce the burden of environmental regulations on industry and, in general, give economic growth priority over environmental quality. The strategy apparently backfired...[leading] to a significant resurgence of public support for environmental protection..."(30).

The survey also indicated "the continuing minor importance of socioeconomic status as a predictor of environmental concern" which would seem to contradict the common charge of elitism leveled by environmental opponents" (45).

Kanagy, C.L., C.R. Humphrey, and G. Firebaugh. 1994. Surging environmentalism: Changing public-opinion or changing publics. Social Science Quarterly. 75(4):804-19.

This research tested the hypothesis that "the growing environmental concern in the United States from 1980 to 1990 reflected a post-World War II cohort replacement process" (804). This theory was supported using data from the General Social Survey, but it was discovered that "a period effect [the current zeitgeist] operating on all cohorts during the decade was an even more important source of growing environmental concern" (Ibid.). In other words, the "spirit of the times" has greater bearing than the "period during which one came of age" (810). The only other variables found to be significant were "religion and political orientation" (804).

The "collective memory" acquired from each cohort's unique experience of different "slice[s] of history" determines cohort member's "thinking and orientation" (805). And, according to comparative public opinion research a "new worldview" may be emerging today. European research, for example, found substantial numbers of respondents "expressing interest in participatory democracy, protecting nature, reducing the size of the military, nuclear disarmament, and attaining satisfying work even if it means lower income" (Ibid.). These interests are apparently interrelated, and represent a "postmaterialist" worldview.

"Concern about the environment is an important part of postmaterialism. Residents in the United States and Germany favor environmental protection over national economic growth by a ratio of better than two to one" (Ibid.).

A notable aspect of this research is the inclusion of the independent effects of specific variables in addition to cohort and year (period effect), all of which have "statistically significant effects, all in the expected direction" (814). These measures included current characteristics: church attendance, fundamentalism, Democratic party affiliation, region of country; and past statuses of socialization: (education and farm background); and general willingness to spend for social causes (814). Race and gender were found to have no independent effect.

In conclusion, cohort replacement was foreseen to (predictably) continue "ratchet[ing] up" environmental support. Of note here was the particular attention "...paid to the source of the cohort differences that underlie cohort replacement effects"--which were found to be a consistent difference in attitude, and not merely life cycle effects. So, the data suggests that cohort differences may stem more from socialization (imprint of historical events during their formative years) than from life cycle state[s]" (817). It can also be assumed that in the future "new social movements [may have some bearing on increasing] general public concern for the environment" (Ibid.).

The authors did point out that environmental support will not necessarily continue to grow, however, due to the possibility of negative period effects occurring.

Kearney, A.T. 1991. Impacts of oil and gas development on the recreation and tourism off the Florida Straits. OCS Study/MMS 91-0039. U.S. Dept. of the Interior, Minerals Management Service, Atlantic OCS Region. New Orleans, La.

Monroe County is the site of the Florida Keys, and the Everglades National Park. This study opens with the statement that this area is "one of the most dependent in the United States on tourism and marine dependent recreation opportunities..[therefore] OCS operations which change the character of the region, or an oil spill, have the potential to impact the base economy..." (1-1). The objective of this document is to "develop a model to simulate the effects of various OCS activities on tourism visitation, expenditures, and regional economic impacts" (Ibid.).

This study seeks to address criticisms of the National Research Council (1989) which stressed the inadequacy of the OCS Environmental Studies Program. Data was collected here specifically to "assess the potential impacts of OCS oil and gas activities" (Ibid.). Interviews were conducted in South Florida to gain information from visitors. Profiles of these tourists, their expenditure patterns, and their attitudes and projected response toward hypothetical OCS development scenarios were gathered. There is also a review of literature on these topics included here. Baseline data utilized in this research was from that compiled by Monroe County Industrial Development Authority (1989).

Results of the study are to aid preparation of MMS Environmental Impact Statements, and other socioeconomic analysis required by the National Environmental Policy Act of 1969 and the OCS Lands Act. Since the analysis is meant to provide a model, the impacts were measured specifically for the study area, not the entire state. And, this study measures "gross, not net impacts" (Ibid.).(This issue is examined in detail in section 8.8).

Secondary objectives of the study are to assess "the information requirements of effective predictive tourism studies"; to compare predictive results to "...economic impacts measured by retrospective assessments"; and to determine "what lessons and conclusions are applicable to MMS's requirements to evaluate coastal tourism/recreation impacts from oil and gas development" (1-2).

Kowaleski, D. 1995. How movements move: The dynamics of an ecoprotest campaign. Social Science Journal. 32(1): 47-67.

Two heuristic models for the dynamics of new social movements (NSMs) in postindustrial polities are presented here: vanguard mobilization, and grassroots initiative. This study concentrates on dissent dynamics over time, rather than structural conditions that gave rise to these movements. Three "political collectivities" are detailed for "their effects on dissent dynamics: (1) the community, (2) the movement within the community , and (3) the new adherents within the movement. First, how do the attitudes of citizens in a community change toward a movement's cause? Second, how does the influx of new recruits alter a movement's composition? Third, how do differences among the new adherents affect a movement's behavior?" (49).

The grassroots initiative model is largely inspired by democratic-populist theory, it "emphasizes the changing interests of classes and sectors...stress[ing] longstanding grievances and spontaneity from below. The vanguard mobilization model of NSM is inspired by elitist theory,

and "emphasizes the power of ideas propagated by an organizationally skilled set of cadres...stress[ing] the role of new ideology and leadership from above" (50).

Sociopolitical change is said to "derive from movement challenges" (Ibid.). And these movements seem to generally follow a "cycle of growth, cooptation, success, and demise" (Ibid.). This study hopes to explain the cycle by examining movement dynamics over time. A general analysis of how class structure, political influence, alienation and deprivation (as motivations), and the radicalization of various social sectors (as in the political elite and economic elite) all affect alliances is perceptively explored here. The cooptation of movements and their leaders into state bureaucracies is also covered.

According to this report, "both the grassroots and the vanguard models mispredict[ed] the social nature of opinion change on postindustrial issues..." in terms of radicalization of the community (56). Also, "the radicalized were diverse with respect to change-motivation, a finding at odds with both models" (Ibid.). Of interest also were "diametrically opposed elite-sector reactions" (Ibid.). Government officials were radicalized once the mass nature of the movement became apparent, whereas economic-elites became conservatized. "Both models suggest that a community undergoes polarization in the course of a movement "(57).

The authors conclude with a "plea of ignorance" in establishing definitive theories on dissent dynamics, saying: "Coalitions in a community are best conceived as highly dynamic sets of collectivities rather than stable social formations" (60). There are some worthwhile observations here concerning the evolution of environmental movements and community involvement, especially in terms of social class. And also, "The findings may shed some light on public policy innovations resulting from movement pressures" (65).

Krueger, Robert B. and Louis H. Singer. 1979. An analysis of the Outer Continental Shelf Lands Act Amendments of 1978. Natural Resources Journal. 19:909-927.

This article gives an in-depth look at the 1978 amendments to the OCSLA of 1953. The Outer Continental Shelf is mentioned here as "America's best hope for finding additional oil and gas resources and reducing our dependence on foreign oil" (909). In 1979, this article referred to the 1.3 million square miles of continental shelf and slope beneath which lies enormous reserves of oil and natural gas; estimated at possibly over 200 trillion cubic feet of gas, and up to 50 billion barrels of oil.

Besides the amendments to the 1953 act, the 1978 act established an Oil Spill Pollution Fund, a Fishermen's Contingency Fund and amends the Coastal Zone Management Act of 1972. Among the many policy objectives were the following:

(1) To make oil and other natural resources available to meet domestic energy needs energy needs as rapidly as possible; (2) To balance development with protection of the environment; (3) To insure the public a fair return in exchange for development of the resources of the OCS; (4) To preserve and maintain free enterprise competition with respect to such development; (5) To

provide coastal states with an opportunity to participate in policy and planning decisions relating to the resources of the OCS.

The 1953 OCSLA was "the first federal act to authorize the leasing of the OCS," but it failed to establish standards or guidelines for selection of prospective tracts. Charges were leveled that the DOI "had too much discretion" and was technically uninformed in making assessments. The 1978 act requires the Secretary of the Dept. of the Interior to submit a comprehensive oil and gas leasing program to the Congress, which takes into account all relevant considerations, including "obtain[ing] a proper balance between the potential for environmental damage, the potential for discovery of oil and gas, and the potential for an adverse impact upon the coastal zone" (912). State and local governments play a greater role because the Secretary is also required to solicit comments from the governors of states affected by proposed leasing, "who may in turn request comments from local governments" (Ibid.). This effectively gives state and local government some control, unless the Secretary decides the stance of the state is "arbitrary or capricious" (Ibid.).

The 1978 act (in addition to the National Environmental Policy Act) is predicted to "hinder the rapid development of offshore resources, another goal of the 1978 act "(913). This is to ensure the protection of the coastal and marine environment, "a proposition which can and should be empirically tested" (Ibid.). So, the 1978 amendments are meant to meet the objective of increasing federal knowledge of offshore resources. This goal is "furthered by the enactment of the oil and gas information program...[part] of regulations recently adopted by the USGS" (Ibid.).

The "Allocation of Lands; Lease Sales" is covered here in detail, including "alternative bidding systems, joint bidding, persons who may hold leases: term" (922-923). Operations on the OCS are also affected by the 1978 act. It "amends the 1953 act to limit administrative discretion and to provide for additional planning and studies, new sanctions, and closer governmental supervision in these areas" (919). These studies include assessment of impact on the human, marine, and coastal environments.

Other Elements of the OCSLA Amendments of 1978 discussed are "Offshore oil spill pollution fund," and other elements, such as the "Fishermen's Contingency Fund," which pays "for damages to commercial fishing vessels and gear due to OCS activities"(925). Title V also amends the Coastal Zone Management Act of 1972, granting funds to "coastal states impacted by OCS energy activities"(926). There is also an amendment which requires listing flaring gas wells and shut-in oil wells.

In conclusion, early criticisms of the amendments are discussed: "Perhaps that was a predictable result, given the inherent conflicts among the act's objectives..." such as between industry production and environmental protection, and "maximizing revenue to the federal government...[and encouraging] private participation in resource development"(927). The 1978 act is described as following the "leasehold or concession approach to the development of natural resources on the OCS...[giving] the federal government the means of further asserting its presence in the management of its offshore resources" (Ibid.).

Lamphear, F. Charles, James R. Schmidt, and Ronald T. Konecny. 1986. Analysis of Indicators for Socioeconomic Impacts due to OCS Oil and Gas Activities in the Gulf of Mexico, Year II. OCS Study/MMS 87-0040. U.S. Department of the Interior, Minerals Management Service, Gulf of Mexico OCS Regional Office, New Orleans, Louisiana. Volume I.

This Sociological Assessment Model (SAM) has been developed to be used in calculating OCS oil and gas related impacts, as per MMS needs and requirements. Those needs and requirements include: (1) exclusive use of nonsurvey information; (2) industry detail at the three-and-four digit Standard Industrial Classification (SIC) level; (3) socioeconomic assessments at the multicounty/parish level; (4) assessment measures that include industry output, income, employment, and population; (5) full editing and information updating capabilities; and (6) full use on the MMS Perkin-Elmer 3500 computer system (iv).

The analytical structure of this SAM is based on a "nonsurvey regional input-output model (I/O)" (Ibid.). The four components included here are: Data base, Input-Output, Demographics, and Output. The Data Base component contains "all the files used in model development and impact assessment"; the Input-Output component "generates industry output, income, and employment effects for the Coastal areas"; the Demographic component calculates population effects' consistency with estimated employment effects; and the Output component "summarizes, in tabular form, the estimated socioeconomic effects (i.e., the industry, income, employment, and population effects) for reporting purposes" (Ibid.).

SAM is designed to operate on the MMS Perkin-Elmer 3500 Computer system--enabling the analyst to insert updates or variables in order to "experiment with alternative approaches available in the literature for constructing nonsurvey regional input-output models" (Ibid.).

Part of this project involved the use of SAM to estimate socioeconomic impacts at the Coastal Area level for the period 1981 through 1984. The "Information Collection Log--II.B.2 and 3.," and "Introductory Training" (January 26, 1987) and Volume I of the "Draft Final Report" each cover these impact analyses.

Lamphear, F. Charles, James R. Schmidt, and Ronald T. Konecny. 1986. Analysis of Indicators for Socioeconomic Impacts due to OCS Oil and Gas Activities in the Gulf of Mexico, Year II. OCS Study/MMS 87-0041. U.S. Department of the Interior, Minerals Management Service, Gulf of Mexico OCS Regional Office, New Orleans, Louisiana. Volume II.

This volume gives more detailed information on the socioeconomic assessment model (SAM) developed for the MMS. (See volume I, also.) A non-survey regional input-output model (I/O) is the basic analytical structure for SAM. The four basic components of SAM are discussed in detailed sections here: I/O component, demographic component, data base and output components. Operations section is "devoted to instructions on program operations. SAM contains a variety of commands that permit the analyst to carry out not only the development of non-survey regional input-output models, linked with demographic parameters, but also to use these models to conduct various kinds of socioeconomic assessments for local area economies" (1).

Appendix A to this volume gives documentation for SAM for the Perkins-Elmer 3500 system. SIC definitions, input-output sector definitions and software documentation is also provided.

Lamphear, F. Charles, James R. Schmidt, and Ronald T. Konecny. 1986. Analysis of indicators for socioeconomic impacts due to OCS oil and gas activities in the Gulf of Mexico, Year II. OCS Study/MMS 87-0042. U.S. Department of the Interior, Minerals Management Service, Gulf of Mexico OCS Regional Office, New Orleans, Louisiana. Appendix to Vol. II.

This appendix to volume II consists of: SAM and documentation; National use and make directory; the 116 Sector aggregation directory; Price index directory; County business patterns industry codes; and, CBP.FTN program and SAM macros.

Laska, S., V.K. Baxter, R. Seydlitz, R.E. Thayer, S. Brabant, and C. Forsyth. 1993. Impact of offshore petroleum exploration and production on the social institutions of Coastal Louisiana. Prepared by the Environmental Social Science Research Institute, University of New Orleans. OCS Study/MMS 93-0007. U.S. Dept. of the Interior, Minerals Mgmt. Service, Gulf of Mexico OCS Regional Office. New Orleans, La. 246 pp.

This report "considers the relationship of oil production--a primary economic activity--to five social institutions: the family, poverty and social service provision; communities; government; and the political economy" (abstract). This document covers the state of Louisiana, which is "...unique...for having its economy and people involved in such a major way over such a long period of time [in oil production]" (1).

Primary questions which are addressed here include:

1) What are the social and economic impacts of resource extraction activities?

2) Is the impact of offshore resource extraction different from that experienced by communities and regions which extract resources on land?

3) To what extent are the impacts positive, negative, or a mixture?

4) How have the impacts been distributed among social institutions, among sub-groups of the population, and among regions of the state--those proximate and those more distant from the extraction activity?

5) How does the history and culture of the area affect the way in which it

responds to involvement in the resource extraction activities?

6) What are the dynamics and mechanisms of national and world oil markets which have influenced oil company investment decisions and the rate of demand for Gulf of Mexico oil and gas; and, thus the timing and extent of impacts experienced in Louisiana?

7) How can the negative effects of resource extraction in Louisiana be mitigated? (Ibid.)

In-depth interviews were conducted with offshore workers and their families, social service agency and government officials, and with oil company executives. Research was also done based on the examination of records and documents.

A thorough summary of the study is given in "Findings." Conclusions listed include: Impacts on families; and, the adjustments necessary to "compensate for the absence of the father from the family for long periods of time." Poverty is affected by oil production. The differing dynamics of boom/bust economies are especially relevant to issues which effect the poor, and the "new poor" who become destitute from the bust cycle. Social services' efforts to compensate for these problems are explored here.

"High levels or rapidly changing amounts of activity in the petroleum industry are associated with higher incidence of social problems (higher homicide and suicide rates), increases in basic human capital (lower high school dropouts) and decreases in enhancement level human capital (fewer high school graduates going on to college)" (4). Though, when figured on an annual basis, the average rate of social problems is not directly correlated to a Louisiana parish's level of involvement in petroleum. Long-term advantages of greater oil involvement "...are higher incomes and lower unemployment rates" (Ibid.). But, parishes with greater oil industry presence have accompanying disadvantages like higher cost of housing, less available housing, too fast population growth. These factors require costly adjustments in infrastructure and services.

"Perhaps the most important impact of oil in Louisiana was to foster dependence on an exhaustible resource to meet basic employment and social service needs. State budgets grew to rely for employment and tax revenues on what was only later to be revealed to be a vulnerable industry" (5). The state did not prepare for the inevitable exhaustion of resources. "Nearly 90% of proven onshore and 70% of proven offshore reserves are gone" (Ibid.). A litany of negative economic impact is then listed. Offshore resource extraction benefits and disadvantages are compared to communities and regions which extract resources from the land. Economic, family and community factors are weighed in this section of the report.

In summation, the impact of oil and gas activity in Louisiana is predictably mixed. "The impact on the family is believed to be largely negative" (6.) Economic impacts on citizens are especially mixed in relation to poverty--some aspects of which are previously mentioned. "The negative impact of higher suicide and homicide rates is obvious" (7). And there is the reduced rate of college attendance. Involvement with the oil industry has not remedied Louisiana's rating at or near the bottom in educational attainment. But, Louisiana OCS activity has "provided a generation of employment for tens of thousands of people..."(8). While state infrastructure's dependence on tax revenues from the oil and gas industry will be a problem as resources continue to decline.

Other broad areas investigated are "How have the impacts been distributed among social institutions...sub-groups of the population, and among regions of the state...?"(Ibid.). Also, "How does the history and culture of the area affect the way in which it responds to involvement in the resource extraction activities?"; "What are the dynamics and mechanisms of national and world oil markets which have influenced oil compan[ies]...and the impacts experienced in Louisiana? " And finally, "How can the negative effects of resource extraction in Louisiana be mitigated?"

Some of the suggestions this report makes to attempt mitigation of negative impacts on the state and it's people are: "carefully controlled leasing of mineral rights," [better] monitoring of the social and economic health areas, [social] programs [of information and counseling] should be developed; oil companies should be required to establish college scholarship programs so teenagers will consider the long-term benefits of a college degree equally valuable as the short-term benefits of a high-paying oil job. The authors also stress the importance of more research for a better understanding of the socioeconomic components of oil and gas extraction--in hopes of promoting better planning and lessening negative impacts.

League of Conservation Voters. Southeast Regional scorecard. February 1996.

This is a special edition of the League of Conservation Voters (LCV) National Environmental Scorecard. "Experts from 27 national environmental groups volunteered their time to help identify the most crucial environmental votes cast during 1995. This document reflects the priorities of the entire environmental community."

The Senate and Congressional environmental voting records of each representative is listed here (pro or con) state by state, including Alabama, Florida, Mississippi, and Louisiana. There is also an accompanying description of each vote, or issue.

LeBlanc, Leonard. April, 1994. Industry marches into deepwater: the offshore years (1954-994.) Offshore. 54(4): 36-47.

An in-depth overview of the history of the offshore oil and gas production industry is provided here. Some of the topics include: "Independents emerge; Explosion in the 50's; Contractors emerge; Third industry recession; On the trail of gas; Big reserves; 1973 oil embargo." There is also an extensive listing of milestones in "hydrocarbon history".

Lee County, Florida; Resolution No. 97-03-41. 27 March, 1997.

This resolution from the Board of Lee County Commissioners urges "the Legislature of the State of Florida to support our...strong, permanent opposition to any future exploration of oil in

state waters off the coast of Florida." The Board states that it is "unalterably opposed to any oil exploration projects off Florida's west coast...Whereas, Lee County's major industries are tourism and fishing and an oil spill off the coast of Florida would have severe and long-term, if not permanent, impacts on our economy and quality of life. Every consideration must be taken to preserve the integrity of our coastline and immensely productive bays and estuaries."

Londonberg, Ron. September, 1973. Florida hearing draws opposition but outlook is good (Three states favor sale of tracts in eastern Gulf of Mexico. Only Florida makes strong objections.) Offshore. Pp. 36-37.

At the environmental impact hearing regarding offshore lease sales in Tallahassee, "objections were emotional and numerous" and came mostly from Floridians. Mississippi, Louisiana and Alabama representatives "seemed eager for the sale to take place." Representatives from Texas failed to appear.

Of the 159 tracts under consideration in the Northeastern Gulf, 4 are in the Mobile area, 50 in the Mobile South No. 1 area, 59 in the Pensacola South No. 1 area, 29 in the Apalachicola South area, 6 in the Tarpon Springs area, and 11 in the Tampa area.

The hearing lasted for three days, and about 170 people made statements up to 10 minutes in length. Items discussed included "the energy crisis, a threat to national security as a result of heavy reliance on imports, oil spills, dangers to fishing, the ecology and tourism, and offshore operators' effect on the military installations along the Panhandle of the Florida coast."

Florida Governor Rubin Askew questioned whether the amount of oil produced from the leases (only a four to six month supply at the present rate of use) would be "worth the risk of damaging beaches and delicate ecosystems that took aeons to create?"

A spokesman on behalf of the Attorney General of the state of Florida pointed out Exxon's fines amounting to only $300,000 for 150 drilling violations in 1970. "He said, 'the drilling giants prefer to drill unsafely and pay small penalties'". Conversely, Assistant Secretary of the Interior for land and water resources, Jack Horton asked if the speaker was aware of how much oil is imported annually for use in Florida, and that "oil spills were coming from the tankers importing that oil, and that only 1.2% of Florida's annual oil consumption comes from onland production within the state."

State Representative Richard A. Price "strongly opposed" offshore drilling due to: "1) the need to present a referendum to the people of Florida before 'prostituting their state'; 2) the 1970 St. Petersburg oil spill; 3) bewitching oil ads showing new boats and bikini clad 'lovelies' thus enticing people to buy more energy consuming machines; 4) Industry blackmail consisting of projecting the concept of an energy crisis which actually didn't exist; and, 5) the lure of more jobs

in communities where the industry is allowed to come in." Several Mayors of Florida resort communities expressed support for alleviating the energy crisis, but asked that "strong regulations and precautions be taken."

Industry spokesmen made rebuttals to the accusations of pollution, saying that only one of 104 surface water samples taken around rigs contained oil. The American Petroleum Institute president Frank Ikard took issue with the so-called contrived nature of the energy crisis. He denied that large oil interests created this situation to "increase profits; exert pressure to build the Alaska pipeline; despoil the environment; and drive the non-branded independent marketers out of business." Ikard insisted that these are unfounded rumors "almost without parallel in American history..." Another statement by John McKetts, the former chairman of the President's National Energy Committee, blamed the energy crisis on large scale wastefulness, and the imposition of "...unjustified and irresponsible economic, environmental and legislative barriers in the way of our continued energy development."

Longboat Key; Resolution No. 97-09. 07 April, 1997.

This resolution by the Longboat Key Town Commission states that Longboat Key is a barrier island "...known worldwide for its beaches, its natural beauty, its wildlife, and its commitment to the preservation and protection of same. Whereas, the beaches of Longboat Key and the State of Florida are the primary asset to the State's tourist-based economy...these natural resources, for which so many have struggled to protect and are enjoyed by so many visitors and residents alike, are now placed in jeopardy by proposals for oil and gas development...in proximity to this and other fragile coastal areas." The resolution "proclaims vigorous opposition" and urges the State to prohibit oil exploration and development off Southwest Florida and the Panhandle.

Lovins, Amory. 1991. Soft energy paths: towards a durable peace, pp. 121-127. In Andrew Dobson, (ed.), The Green Reader: Essays Toward a Sustainable Society. Mercury House, Inc.: San Francisco.

Lovins argues that hard energy paths or technologies (associated with oil, gas, coal and uranium) promote inherent political climates "...characterized by centralization, secret decision-making, threats to civil liberties and loss of local control" (121). Soft technologies (sustainable energy paths, e.g., wind, wave and sun) by comparison are said to be "less coercive, more participatory and more 'convivial'" (Ibid.). This type of more benign politics is geared toward a healthier environment and long-term sustainability.

"Soft" technologies are so named because, according to Lovins, they are not "vague" or "speculative," but rather "...flexible, resilient, sustainable, and benign." There are five characteristics of soft technologies: 1) They rely on renewable energy..."on energy income, not on

depletable energy capital" (122); 2) "They are diverse...[functioning as a national energy supply... an aggregate of very many individually modest contributions" (Ibid.); 3) "They are flexible and relatively low technology--which does not mean unsophisticated, but rather, easy to understand and use without esoteric skills, accessible rather than arcane" (Ibid.); 4) "They are matched in *scale* and in geographic distribution to end-use needs, taking advantage of the free distribution of most natural energy flows; 5) They are matched in *energy quality* to end-use needs" (Ibid.).

According to this article, renewable energy sources have become viable in recent years as replacement for fossil fuel-based energy systems. Solar heating and cooling, for example, "...are incrementally cheaper than electric heating, and far more inflation-proof, practically anywhere in the world" (Ibid.). Also, "...exciting developments in the conversion of agricultural, forestry, and urban wastes to methanol and other liquid and gaseous fuels now offer practical, economically interesting technologies sufficient to run an efficient U.S. transport sector" (Ibid.). Wind and hydraulic systems may compete with nuclear power in the U.S. and Western Europe. And, the oft-criticized energy storage problem of energy income technologies has been addressed to the extent that "...on the whole, energy storage is much less of a problem in a soft energy economy than a hard one..." (123).

Lovins believes that the most profound difference in the two divergent approaches to energy technology lies in the domestic sociopolitical impact. Admittedly, converting to a soft approach to energy would entail sweeping changes. But, "...the kinds of social change needed for hard path are apt to be much less pleasant, less plausible, less compatible with social diversity and personal freedom of choice, and less consistent with traditional values than are the social changes that could make a soft path work" (124). Tax incentives and public education are suggested ways of sensitively implementing some of the needed changes. The soft path would be "pluralistic" and rely on "...consumer choice in deploying a myriad of small devices and refinements, the hard path depends on difficult, large-scale projects requiring a major social commitment under centralized management" (Ibid.). Socially, soft path decentralization would make nations less vulnerable to wide-spread system disruption, and also promote local involvement and control of communities in their own energy production and consumption.

Manuel, David P. 1984. Trends in Louisiana OCS activities. In R. Gramling and S. Brabant (eds.) The role of Outer Continental Shelf activities in the growth and modification of Louisiana's Coastal Zone. U.S. Department of Commerce/ Louisiana Department of Natural Resources: Lafayette, La. Pp. 27-40.

The Coastal Zone of Louisiana's record of hydrocarbon production is documented in this article. The magnitude of OCS production in this area, and the relevant trends between 1954 and 1980 are detailed. One final section is devoted to new wells in Louisiana waters.

McKenzie, L.S., III, P.J. Xander, M.T.C. Johnson, B. Baldwin, and D.W. Davis. 1993. Socioeconomic impacts of declining Outer Continental Shelf oil and gas activities in the Gulfof Mexico. OCS Study MMS 93-0028. U.S. Department of the Interior, Minerals Management Service, Gulf of Mexico OCS Region, New Orleans, Louisiana. 240 pp.

This document is third "in a series of phased studies" concerning the socioeconomic impact of OCS oil and gas activities in the Gulf of Mexico. (Phase I dealt with OCS work-force data and the economic impact on coastal communities along the Gulf; while the Phase II study "involved the development of an economic input/output model" designed to estimate indirect economic impact of OCS-related activities in the Gulf "(1).

Price-related declines in oil and gas production have created a recession within coastal communities whose economic base depends on these activities. The resulting boom/bust conditions "provide a case study scenario upon which future socioeconomic impacts resulting from a resource depletion can be formulated" (Ibid.).

The main objectives of this study are:

1) to analyze the socioeconomic impacts of the recent price-related decline in outer continental shelf (OCS) oil and gas activity, and
2) to formulate a set of conceptual cause-effect models that express the relationships between changes in OCS activities and select socioeconomic attributes.

The study area included 49 counties and parishes in four Gulf states, extending from Baldwin County, Alabama to Cameron County, in South Texas. There are select inland/metropolitan areas included in this area. The objectives of the study were achieved through methodology which included: "a compilation and analysis of secondary data, a review of relevant boom-bust phenomena literature, and statistical analyses and associated cause-effect modeling"

One section of the document gives "Baseline Socioeconomic Conditions, 1960-1980," which includes an extensive demographic study, listing data such as: net migration, educational attainment, jobs by major industry, in addition to standard population/race/gender/age statistics. Following the Baseline section is an analysis of the recent decline (1981-1986). Other sections of the document cover "Implications of the recent decline," a bibliography, and a number of appendices. This study contains a large number of figures and tables that illustrate the data.

Mead, W., A. Moseidjord, D. Mauraoka, and P. Sorensen. 1985. Offshore Lands: Oil and gas leasing and conservation on the Outer Continental Shelf. Pacific Institute for Public Policy Research. 172 pp.

The U.S. Government owns almost a billion acres of land on the OCS. Estimates project as much as 40 billion barrels of oil and 230 trillion cubic feet of natural gas within this area--waiting to be developed. In 1978 Congress enacted legislation for alternative bidding methods to the conventional cash bonus system for OCS oil and gas leasing. However, these policy changes apparently did not please anyone involved--environmentalists or industry. The problems involved

in leasing are the focus of this book. "The authors employ exhaustive economic analysis to examine the various problems involved in the process by which firms bid for leases on OCS tracts, particularly as they affect resource conservation. Oil spills and other environmental concerns, and political pressures from adjacent states and localities are also discussed" (back cover). The authors make proposals for reform, "including the extension of private property and liability law to OCS lands, and OCS revenue sharing with states and municipalities" (Ibid.).

Note: The Pacific Institute for Public Policy Research sponsored this study. They are an independent, non-profit organization which "seeks to evaluate the premises and consequences of government policy, and provide the foundations necessary for constructive policy reform."

Melichar, K. E. 1987. The making of the 1967 Montana Clean-Air Act: A struggle over the ownership of definitions of air-pollution. Sociological Perspectives 30(1): 49-70.

"This article uses the social definitional process approach to understand the making of the 1967 Montana clean air act" (49). The proponents of this approach believe the pivotal factor in law making is the way in which those involved (the "social actors") define the objective conditions and then act--not the objective/structural condition in itself. Competing groups articulate the situation, e.g. air pollution, as problematic, then establish the parameters of the issue with subjective definitions, and then act in "claims-making activities that they seek to have legitimated in law. In the struggle for the legitimation of the various competing definitions, the groups attempt to claim ownership (disownership) as well as to assign causal and political responsibility for the problem" (Ibid.).

Melichar's report has some bearing on the issue of the MMS granting lease rights for OCS oil and gas production--in the sense that competing groups appear to follow certain recognizable patterns in defining situations which involve the quality of the environment versus resource development. And this process of subjective definition is basic to an understanding of the dynamics of social actors involved in any conflict between production and environmentalism--especially as "lawmaking is a symbolic process whereby the various social actors seek to have their particular ways of seeing a social issue codified into law" (51).

The other aspect of the social definitional approach to law making involves the "structure of public issues. It consists of ownership and responsibility. Public issues, like property, are owned and disowned...and can be passed on to different social actors" (Ibid). In the area of responsibility there are two dimensions: causal and political responsibility. For example, industrial plants are believed to be responsible (causal) for air pollution, and the EPA has the political responsibility for solving the problem.

The interplay of the parties and people involved in the passing of the different legislative bills through the years in Montana is described in enough detail to evoke some understanding of the dynamics of similar situations. The clean air forces won the battle by assigning "causal responsibility to industrial capital and political responsibility to the State Board of Health. The result was to increase the role of state government in the affairs of industry, part of a broader societal trend...[which] meant that human needs and the protection of the environment were just as

important as the private appropriation of nature and the particular needs of the forces of industrial capital" (68-69).

Mertig, A.G., and R.E. Dunlap. 1995. Public approval of environmental protection and other new social-movement goals in Western Europe and the United States. International Journal of Public Opinion Research. 7(2): 145-56.

Using data from a poll done for *Reader's Digest* by Gallup, Mertig and Dunlap compared approval ratings for new social movements to each other, and cross-nationally. New social movements are "defined as those that pursue non-economic goals in contrast to those pursued by traditional, labor-based movements" (146). For this study, the new social movements studied are wildlife protection, environmental protection, abolishing nuclear power, destroying nuclear weapons, women's rights, human rights, and animal rights. The data showed that approval for environmental protection is very high in Western Europe and the United States. It is "the most widely endorsed of the various new social movements" (154).

Milbrath, Lester W. 1989. Envisioning a Sustainable Society: Learning Our Way Out. State University of New York Press: New York. 403 pp.

Lester Milbrath is Director of the Research Program in Environment and Society and Professor of Political Science at SUNY. This book presents a convincing story of how earth's physical systems are being irrevocably altered, and the fact that these changes are "global and interconnected and unavoidable" (cover). The analysis by Milbrath concludes that science and technology cannot be relied upon to miraculously reverse the damage. He believes there must be an overarching shift in values and mindset in society to avoid ecological catastrophe. According to the author, "We must share a new vision for society before we can realize it" (1).

This book makes specific suggestions for altering education, economics, etc., in order to create a sustainable culture. Here also, the issue of fossil fuels is discussed. "American agriculture, much heralded for its productivity, requires approximately ten calories of fossil input for each calorie of food delivered to a dinner table. How long can this continue?" (16). There is a chart of "World Population, Economic Output, and Fossil Fuel Consumption, 1950-1986" that illustrates how population has doubled, yet fossil fuel consumption has quadrupled. And, nearly 40 percent of "...the potential net primary productivity on land is now used directly or indirectly by human populations...The proportion remaining to sustain all other species, and to maintain the integrity of natural systems, gets smaller and smaller as the size and demands of the human population mount" (14).

In summary, the author states that "...maintaining the integrity and good functioning of its ecosystem should be the most fundamental value in the value structure of a sustainable society. Without a viable ecosystem, life cannot be sustained, society cannot function, and it will be impossible to realize quality in living" (35)..

Milbrath mentions that Schmookler's *The Parable of the Tribes*, Eisler's *The Chalice and the Blade*, and Sagan's *Microcosmos* inspired him in searching for a new perspective on human history and society, with a view to designing an ecologically sound value system.

Minerals Management Service. March 1998. Gulf Focus: News from the Gulf of Mexico OCS region.

This special flyer from MMS focuses on issues unique to the Gulf of Mexico Region. The UN has designated 1998 the International Year of the Ocean (YOTO). Details are given of how the MMS is celebrating YOTO. MMS will participate in a year-long initiative with at least 25 other federal agencies to "focus attention on the importance of the oceans and marine environments as resources for sustainable development."

Cynthia Quarterman, MMS Director, states that the focus will be on fostering cooperative efforts between industry, the public, and constituents regarding the use of resources "...while at the same time protecting America's coastal and marine environments." The ocean is mentioned here as a "fragile environment."

Articles featured here are: "Scoping meeting yield report; MMS/State of Alabama jointly developed stipulation to minimize line-of-sight concerns; Eastern Gulf of Mexico development activities; MMS Sponsors NEED Workshop".

Of further note are the mention of these items: of the public input from six scoping sessions held in Alabama and Florida, "approximately 85 percent of the comments were received during the meetings in Pensacola." The state of Alabama recently took a stand opposing the offering of lease tracts within 15 miles of Baldwin County; also, Alabama is working with MMS to try to minimize visual impact from OCS structures in Alabama waters. And, Amoco has plans for developing the "King's Peak" field 105 miles offshore of Florida beaches.

Minerals Management Service. February 1996. Proposed Outer Continental Shelf oil & gas leasing program, 1997 to 2002: Decision document. U.S. Department of the Interior, Minerals Management Service, Gulf of Mexico OCS Regional Office, New Orleans, La.

This document describes the procedures and guidelines the Department of the Interior used to create the proposed leasing program and briefly describes the lease options for the program areas. For the Gulf of Mexico region, the MMS would like to hold annual sales in the Western and Central regions and one sale in 2001 in the Eastern region. Other options for the Western section include selling no leases or holding sales in 1997, 1999, and 2001. Other options in the Central section are no sales or sales in 1998, 2000, and 2002. In the Eastern Gulf, other plans include selling no leases, adding 384 blocks in deep water to sell in 2001, and selling the deep water blocks in 1999 and holding a sale in 2001 in the program area.

If annual sales were held, the MMS expects OCS production to result in changes in water quality, degradation of marine waters, and deposits of trash on beaches. They project production

to have minor effects on the fish, bird, and mammal populations. Tourism would perhaps decline due to trash and oil washing up on the beaches, but recreational fishermen and divers would be attracted to the drilling platforms. According to the MMS, the other options also offer environmental problems. Reduced OCS production would mean greater need for imported oil which would come into the Gulf by tanker. They say tanker spills are more likely to happen and much harder to contain than pipeline leaks.

Appendix 1

Appendix one summarizes comments the Department of the Interior received in response to *Federal Register* notice of August 11, 1995 asking for input on the Draft Proposal. Overall, the Department of Interior received 97 written comments about OCS activity. Below are summaries of comments regarding Gulf of Mexico OCS activity.

Governors/State Agencies

Alabama Geological Survey

They refer to Governor Fob James' comments listed earlier in the *Federal Register* and emphasize that states affected by oil and gas production should receive a fair share of the financial benefits.

Florida (Governor Lawton Chiles)

He is pleased the Draft Proposal recognizes Florida's wish to keep a 100 mile buffer zone, but he is still worried about the dangers Florida faces from existing leases.

Florida Department of Environmental Protection

It does not object to the DPP lease sale schedule.

Florida Department of State (Division of Historical Resources)

This department would like to review and comment on specific lease sales to determine if underwater archaeological sites would be endangered.

Florida Department of Transportation

The impact of oil and gas production on Florida's transportation system must be evaluated.

Louisiana Department of Natural Resources

Louisiana argues that states, specifically the Gulf states, that bear the brunt of oil and gas production need the most assistance, relief, and funding from the federal government. Louisiana's rural coastal communities have been detrimentally affected by boom-bust economic cycles and development associated with drilling activities.

Government

City of Bayou La Batre (Alabama)

The city supports the Draft Proposed Program.

Apalachee Regional Planning Council (Florida)

Responded to the Federal Register Notice of November 16, 1994, and has no additional comments to make.

U.S. Department of Energy

This department, while recognizing that it takes time to build support for leasing and drilling in controversial areas, urges MMS to fund studies and make steps to prepare those areas for the 2002-2007 program.

U.S. Environmental Protection Agency

They have no comments to add to earlier remarks.

National Aeronautics and Space Administration

Since the DPP does not include areas off the east coast of Florida, the Middle Atlantic States, or California, NASA does not think their programs will be affected.

U.S. Department of the Navy

The Navy prefers option (1)(b) for the Eastern Gulf of Mexico. Options (2) and (1)(a) would make available for leasing blocks that the Navy and Interior agreed to defer.

National Oceanic and Atmospheric Administration

They agree with the area considered for leasing in the Eastern Gulf. They suggest a method for calculation environmental sensitivity/marine productivity.

Environmental & Business Groups

Business Council of Alabama

They support leasing in the Eastern Gulf and believe it would benefit the Gulf states.

Dames & Moore, Inc.

Dr. Scott Farrow points out the DPP does not discuss the important matter of distribution of benefits. Also, he suggests that allowing only for gas development may reduce opposition to offshore drilling.

Florida Public Interest Research Group

They support the DPP because it supports the 100 mile buffer zone and the withdrawal of leases below 26 degrees North. They believe removing Florida from drilling would not hurt the nation's energy supplies. Drilling along the coast presents environmental and economic problems.

Gulf Coast Environmental Defense

They are pleased the MMS removed Florida from lease sales but are still concerned about continued leasing off Alabama's coast. Spills and pollution from Alabama rigs are likely to affect Florida. If MMS does decide to lease off Florida's coast, after 45 years of drilling Florida's environment and economy would be ruined. Every tax dollar gained from drilling would be matched by a loss from another part of the economy. Further, GCED does not agree with the MMS that natural gas is environmentally friendly fuel.

Marine Environmental Sciences Consortium (22 public and private colleges and universities in Alabama)

They support considering leasing in the Eastern Gulf, but are concerned about expanding pipelines and other onshore operations.

Mobile Bay Audubon Society (Alabama)

They oppose lease sales in the Gulf. In summary of their comments:
They state that the DPP is based on three questionable policy objectives: (1) Consensus-based decision making by whom--industry?; (2) Science-based decision making is questionable when the science itself in all Environmental Impact Statement's (EIS's) questioned the numerous unknowns they were trying to deal with in trying to assess impacts; and (3) The use of natural gas as an environmentally preferred fuel is an industry-biased opinion and not based on scientific fact. (1-23)

Mobile Chamber of Commerce

They support lease sales off Alabama and are pleased Alabama is included.

ReefKeeper International (Florida)

They support the removal from leasing of blocks below 26 degrees north and request that any block that includes shelf-edge coral also be removed from leasing. The DPP seems to ignore the existence of coral communities. Additionally, the DPP suggests that oil spills are the only relevant environmental issue, yet coral communities may be permanently impacted from routine drilling operations.

Sierra Club, Coastal/Oceans Forum

They are pleased the DPP offers no leases off 26 degrees N and along the Atlantic coast. However, they do not support leasing off Alabama in the Eastern Gulf of Mexico region. In fact, they oppose all proposed lease sale options in the Eastern Gulf.

Industry

Anadarko Petroleum Corporation

They urge the MMS not to make any changes that would result in legal action and therefore, delays.

American Petroleum Institute

They wonder why the DPP accepts state and community resistance to leasing. They support, to a degree, the formation of regional task forces, but those same task forces could create more resistance to leasing rather than more support for it.

BP Exploration Inc.

They support the DPP plan for leasing, but would like sales as early as 1998 or 1999.

Chevron USA, Production Company

They want to shift the boundaries of the Central and Eastern gulf so Florida could not dictate the use of the entire Eastern area. They would like annual areawide leasing, but offer their own alternatives if that is not possible.

Exxon Exploration Company

Exxon believes the DPP does not provide access to resources in a timely, reliable, and predictable fashion.

Independent Petroleum Association of America

They are disappointed by the small area offered in the Eastern Gulf of Mexico Region.

Marathon Oil Company

They are concerned by the small scope of the OCS program. They support option (1)(a) for the Eastern Gulf of Mexico and oppose changing the boundary between the Central and Eastern areas. Moving the boundary could create too many legal problems. Finally, they oppose Florida's "assertion of veto power over a 100-mile buffer zone" (1-32).

Mobil Exploration and Producing U.S. Inc.

Mobil believes the DPP isn't aggressive enough about leasing. They support the principle of consensus-based decision making.

National Ocean Industries Association

They say the DPP is the "most modest 5-year schedule ever proposed" (1-33). The Florida 100-mile buffer zone is not rational. They believe depending on foreign oil puts the nation in peril and developing offshore resources can be done responsibly.

Phillips Petroleum Company

Phillips agrees with the DPP, but would like to see the first sale in the Eastern Gulf take place in 1998. Again, they suggest the MMS not change the boundaries of the Central and Eastern sections as it could create legal problems.

Shell Exploration and Production Company

Shell supports leasing in the Central and Western Gulf and urges MMS to offer as many blocks as possible off Florida's coast above 26 degrees North and more than 100 miles off the

coast. For moratoria areas, Shell supports the use of conflict resolution groups but is concerned that MMS has given over too much control to stakeholder groups and the states.

Texaco, Inc.

Texaco would like annual sales in the Eastern Gulf that start in 1998 not 2001. They encourage MMS to offer leases as far to the east and the south as possible. They criticize MMS's willingness to allow the states to makes decisions on OCS development.

Vastar Resources, Inc.

They support leasing in the Eastern Gulf but would like a larger sale. They endorse the comments of the IPAA, NOIA, and API.

Minerals Management Service. September 1994. Fact Sheet.

This sheet gives a brief summary of the history of the MMS, and its purposes. It was created on January 19, 1982 for two purposes: collecting revenues from minerals leases offshore and on Federal and Indian lands; and, to develop "America's offshore energy and minerals resources while properly safeguarding the environment." The funds generated by offshore production are the largest Federal revenue source outside the Treasury Department.

Minerals Management Service. 1985. Proceedings: Fifth annual Gulf of Mexico information transfer meeting. International Hotel, New Orleans, LA, 27-29 Nov. 1984.

This document provides an overview of major Gulf of Mexico environmental studies programs as presented in the MMS Fifth Annual Information Transfer Meeting held Nov. 27-29, 1984. It is divided into several sections: Opening Plenary; Gulf of Mexico Special Concerns; Wetlands Loss: Contributing Factors and Potential Mitigating Measures; Commercial Fisheries, Development and Use of Ecological Models; Marine Date Archiving and Indexing; Technology Assessment and Research Program for Offshore Minerals Operations; Socioeconomics; Rigs to Reefs; The Deep Sea; Physical Oceanography; and Current Studies in Underwater Archaeology. Some of these sections deal with technical aspects of offshore drilling that appear to have little or nothing to do with socioeconomic studies. The others, however, do seem relevant, and their summaries follow.

In the *Opening Plenary* session's keynote address "The Fisheries Management Council," John Green, chairman of the Gulf of Mexico Fisheries Management Council, discusses a beneficial effect of offshore drilling. He says,

Our reef fish management plan regulates snapper and grouper resources throughout their range. MMS and the oil and gas industry have contributed greatly to the enhancement of these resources through the construction of artificial offshore habitats in the use of platforms.

> Information in our plan indicates that some of the reef fish species, principally red snapper, are being grossly over-fished as a result of excessive fishing pressure in the near-shore waters. Without significant production of additional offshore habitat by the oil and gas industries, this trend would certainly have been intensified. (9)

He continues by saying that "the continued productivity of fisheries, such as shrimp, are indicative that offshore mineral resource extraction could be managed to cause little or no detrimental impact on our living natural resources" (10).

In the *Gulf of Mexico Special Concerns* session, one section of the session was "A Panel Discussion on Coastal Management Concerns of Gulf Coast States" led by Mr. William Johnstone, MMS, Gulf of Mexico Region. Four of the five Gulf states [Florida, Mississippi, Louisiana, and Texas] had representatives on the panel. Mr. Johnstone states:

> Each state rep. addressed the audience on matters concerning his coastal management program and problems that have been encountered. During the individual presentations and the open discussion that followed, a number of concerns were expressed: 1) oil spills and their effect on the environment, 2) ocean incineration and its effect on air quality, 3) the lack of effective interagency coordination, 4) wetlands loss, 5) the need for more federal funds for environmental studies by Gulf States, and 6) reduction of the pace of leasing in the Gulf of Mexico (47-48).

The third session, *Wetlands Loss: Contributing Factors and Potential Mitigating Measures*, deals with wetlands loss in coastal Louisiana. Many factors could have contributed to wetlands loss, but "the possible contribution of canals that have been installed in coastal Louisiana to support OCS oil and gas development is the connection between the Minerals Management Service and the wetlands loss issue" (53).

In *Commercial Fisheries*, Ralph Rayburn of the Texas Shrimp Association and Secy. William Perrett of the Louisiana Dept. of Wildlife and Fisheries conclude that "the cumulative net impact of the oil industry on the outer continental shelf fishery resources has been beneficial" (119).

In the session overview for the *Socio-Economic Impacts of the Offshore Oil and Gas Industry*, John Rodi, MMS GOM Region, says there's good news and bad news about the socio-economic impacts of offshore oil production--for every benefit there is an equal drawback. Regarding economic impact, participation in the industry has dropped off due to increased costs. That results in reduced competition for outfitting wells. The offshore drilling industry provided a better standard of living for some Cajun, Italian, and Yugoslavian communities in Louisiana, but the local industries and cultures of those same communities has been adversely affected.

In the *Rigs-to-Reefs* overview, Villere Reggio, MMS GOM Region, writes that "if we are to be successful and make significant progress in reef development in the Gulf of Mexico, it will be because of the oil and gas industry and not in spite of them" (300). Inactive oil platforms act as "de facto" artificial reefs. Rather than requiring oil companies to dismantle rigs once oil production is through, some people are pushing to turn them into reefs.

Attending from Florida:
Mr Jim Barrett--Fla. Dept. of Natural Resources
3900 Commonwealth Blvd. Tallahassee, FL 32303

Mr. Duane Bradford--FLA Dept. of Natural Resources
Education Information Division
3900 Commonwealth Blvd. Tallahassee, FL 32301

Dr. Larry Danek--Environmental Science & Engineering
Box ESE Gainesville FL 32602

Mr. Jerry Ford--FAMU College of Eng. Sci., Tech. & Ag.
PO Box 338 Tallahassee FL 32307

Ms. Lynn Griffin--FL Dept. of Env. Reg. Div of Permitting
2600 Blair Stone Rd. Twin Towers Office Bldg.
Tallahassee FL 32301

Dr. Gregory Han--General Oceanics, Inc.
1295 NW 163 St. Miami, FL 33169

Mr. George E. Henderson--FL Dept. of Nat. Resources
Bureau of Marine Research
100 8th Ave. St. Pete FL 33701

Mr. Theodore Hoehn--State of FL Dept. of Environmental Regulation
Twin Towers, Blair Stone Road Tallahassee FL 32301

Mr. Terence Jernigan--State of FL Resource Management Div.
2571 Executive East Tallahassee FL 32301

Dr. Edwin Keppner--National Marine Fisheries Service
Environmental Assessment Branch
3500 Delwood Beach Road Panama City FL 32407

Dr. Thomas Lee--U of Miami Rosensteil School
4600 Rickenbacker Causeway Miami Fl 33149

Dr. Heward Mathews--St. Petersburg Junior College
Biology Dept.
2465 Drew St. Clearwater FL 33575

Dr. George A. Maul--NOAA Atlantic Oceanography & Meteorology Lab.
4301 Rickenbacker Causeway Miami FL 33149

Dr. James W. Miller--Florida Institute of Oceanography
830 First Street, South St. Pete FL 33701

Dr. DeWitt Myatt--Sport Fishing Institute
Artificial Reef Development Center
6711 NW 25th Way Ft. Lauderdale, FL 33309

Ms. Lorna Sicarello--US Fish and Wildlife Service
Ecological Services Division
1612 June Ave. Panama City, FL 32405

Dr. Tony Sturges--FSU Dept. of Oceanography
Tallahassee, FL 32306

Mr. John Sylvester--NOAA/NESDIS
4301 Rickenbacker Causeway Miami, FL 33149

Mitchell, Ronald. May 95. Lessons from intentional oil pollution: (Includes related articles.) Environment. 37(4):10-22.

This article details international efforts to control discharges of waste oil at sea by tankers. This issue also serves here as a model for the examination of inherent problems of international environmental regulation and enforcement.

Thorough discussion is provided of the International Convention for Prevention of Pollution of the Sea by Oil (OILPOL) and the International Convention for Prevention of Pollution from Ships (MARPOL). These treaties, according to the author, "show that treaties can--but do not always lead--powerful governments and corporations to behave in new ways, particularly if they opposed them initially." International relations scholars have concluded that "considerations of power rather than of law determine[s] compliance."

The lessons learned from the efforts to reduce this source of ocean pollution according to the author, "provides the foundation for several policy prescriptions." These lessons can, in broad terms, be applied to the process of enforcing environmental regulations, especially in terms of situations where divergent interests must cooperate.

A related article included here gives some startling information on the nature of ocean oil pollution. "400 tons of oil is discharged for each voyage of a typical tanker." According to this article, "intentional oil discharges from tanker operations have consistently overshadowed accidents as the major source of ship-related oil pollution." Oil tankers must fill their empty ballast tanks for the return voyage after delivery. Traditionally, the crude-laden sea water used is simply jettisoned. Such discharges "were a major pollution problem by the 1950's." Crude oil can travel long distances before dissipating, even though it does eventually breakdown, "thus posing environmental and aesthetic threats to coasts far from their release."

Intentional oil pollution was first recognized as an environmental threat in 1926, when a draft international treaty was proposed. Today, scientists continue to disagree "over the extent of the environmental harm caused by oil discharges," though oil-drenched sea birds, tar balls and oil

patches on beaches continue to "prompt regular public complaints." Efforts to address the tanker discharges have led to segregated ballast tanks (SBTs), load-on-top tank cleaning methods, and crude oil washing (COW) systems, and OILPOL regulations on the oil-to-water ratio allowable in discharge water. Enforcement and reportage of compliance remain problematic, however.

MMS has awarded contracts to help it plan energy development. 24 October, 1994. Inside Energy/with Federal Lands, sec. Federal Lands: 17.

MMS has awarded contracts for OCS energy development planning, and to "promote the development of new environmental technologies." One of the contracts was for technology to reduce emissions from engines involved in production on the OCS--to "help industry comply with the Clean Air Act." MMS acting director Cynthia Quarterman said, "MMS constantly seeks out improvements that will reduce environmental risks."

Satellite data will be used by the MMS in other research to help make decisions on resource development in the Gulf of Mexico. The MMS awarded a contract to the University of South Florida to analyze data, in order to "build an atlas with surface circulation features of [the Northeastern] Gulf."

The University of Alaska has received a third contract to "improve an existing socioeconomic modeling system, which will also include a model for monitoring of environmental consequences of OCS activities, should such a need occur." Other contracts have also been awarded by the MMS for environmental studies, including one to the Petroleum Engineering Department of LSU.

MMS News Release. 25 March, 1996. MMS issues final notice of sale for central Gulf of Mexico sale 157 and interim rule for deepwater royalty relief.

This sale was held April 24, 1996, in New Orleans. The area covered in the sale amounts to 5,649 available blocks encompassing about 30.3 million acres in the central GOM OCS Planning Area offshore Louisiana, Mississippi, and Alabama. The blocks included are located from three to approximately 200 miles offshore in water as deep as 3,425 meters. The Deep Water Royalty Relief Act of November, 1995, will be the basis of the MMS's application of royalty suspension volumes to these new fields.

According to Cynthia Quarterman, the MMS is soliciting comments on the interim rule, before the final rule is established.

MMS reviewing Destin Dome project. 25 August, 1997. Oil & Gas Journal, sec. Drilling: 38.

The MMS has begun formal review of Chevron U.S.A. Inc.'s Development Plan for leases off the Florida Panhandle. If approved, this would be "industry's first field development off Florida, where there is heavy opposition to offshore drilling." Chevron and its partners in the field, Murphy Exploration & Production Co., and Conoco Inc. submitted the plan in November of 1996.

MMS has already done an "initial completeness review" before moving on to the formal review of the development plan for Destin Dome 56 Unit. Technical review, engineering and environmental analyses will determine whether the plan will be approved. It will include "...structural specifications, safety systems, installation verification, drilling procedures, pipeline specifications, and environmental protection." The review by the MMS may take up to 2 years to complete. The development plan covers blocks located about 25 miles off the coast of northwest Florida, south of Pensacola Beach.

Additionally, MMS will prepare a draft Environmental Impact Statement (EIS), which should take about a year. Potential impact on coastal, marine and human environments are evaluated in the EIS.

Chevron plans to drill 12-21 wells and will export the gas from the project site via a 30 inch pipeline to a "complex located on Mobile Block 917 and then to a gas processing complex in Mobile County, Ala." Start up is planned for March 1999.

MMS cannot issue final permits unless Florida agrees that Chevron's plan meets Coastal Zone Management Program standards. "In addition to MMS requirements, Chevron and partners must obtain permits and approvals from other federal and state agencies prior to production start. Permits include air emissions and water quality from U.S. Environmental Protection Agency."

MMS: Special Information. 02 October, 1997. Summary: Chevron USA's Destin Dome 56 unit development and production plan.

MMS distributed this 8-page special information document at the October Scoping Session concerning proposed Chevron gas production offshore of Pensacola, Florida. General information on the DD Unit is provided here; a map of "Chevron's proposed natural gas development plan"; description of platforms; description of corrosion inhibiting solvents (CIS) used; onshore support bases; important milestones in the EIS process; opportunities for public input into the EIS process; and, frequently-asked questions about Chevron's proposed development project.

A summary of the special information report follows:

GENERAL INFORMATION:

- The DD unit consists of 11 blocks...
- Chevron, Murphy Exploration and Production Company, and Conoco Inc. each own one-third interest in the unit.

- Three exploratory wells have been drilled so far which confirm the presence of large quantities of natural gas. No other forms of hydrocarbons have been encountered so far at any depths in these three wells.

- Up to 21 wells with production up to 450 MMCFD would be the "maximum" scenario.

- Two jack up rigs would be utilized operating concurrently during the drilling phase of development.

- Gas will be routed to a central processing facility (CPF), moved by pipelines in Federal waters to an area off the coast of Mobile, AL, and sent to shore through existing or proposed third party lines to existing gas plants in Mobile County, AL.

- Boat and helicopter support will use existing shorebases in Pascagoula, MS or Theodore, AL.

- Water depths in the...unit range from 100-500 ft. The depths where the wells will be drilled range from 105-252 ft.

- The target is the Jurassic Norphlet Formation...A typical well would be drilled to a depth of +/- 24,000 ft.

PIPELINES

- A Flowline bundle -will run from each satellite to the CPF. Each bundle will consist of: 1-flowline carrying produced gas...; 1-pipeline carrying corrosion inhibiting solvent...; 1-fuel gas pipeline...

- A Combined Production line bundle-will be run from each header platform to the CPF. Each bundle will consist of: 1-flowline carrying gas...; 1-CIS pipeline carrying CIS...; 1-fuel gas pipeline carrying fuel gas...

- One Export pipeline -30" export pipeline will run from the CPF at Destin Dome block 12 to Unocal's Platform at Mobile Block 916.

- Connecting pipelines will be run as required from Mobile Block 916 to Shell's Block 113 Platform, Mobil's Block 823 Platform, Exxon's 112 Platform, or Chevron's Block 864 Platform where they will tie into existing pipelines carrying the gas to shore.

PLATFORMS

- The plan will involve three types of platforms--Satellite Well platforms, Central Production Platforms, and a Bunkhouse Platform.

- The "maximum" development case will consist of:
  10-single-well satellites
  4-two-well satellites
  2-eight-pile CPF's (Block 12)
  1-three-well satellite
  1-bunkhouse platform

- Satellites- Satellite platforms would be installed at each well location. Gas from the well bore would be routed to treating facilities on the satellite platform. (Satellite platform deck dimensions will be about 80' by 80'. The platform for the CPF(s) will be about 180' by 90'.)

CORROSION INHIBITING SOLVENTS (CIS)

- CIS would be transported to the CPF's by crewboats in 100 BBL DOT certified transporter containers.

ONSHORE SUPPORT BASES

- [Existing bases are to be used in Theodore, AL and Pascagoula, MS] It is not anticipated that expansion of any onshore support base will be necessary to support development of the Destin Dome Unit.

IMPORTANT MILESTONES IN THE EIS PROCESS

- (MMS's planned schedule is listed here: scoping meetings, scoping report distribution, draft EIS, public hearings, comment period, final EIS filing, end of comment period, and final decision: August 1999.)

OPPORTUNITIES FOR PUBLIC INPUT INTO THE EIS PROCESS

- (More details, besides scheduled dates, are provided here, in reference to scoping meetings, public comment-periods, distribution of draft and final EIS, and period for written comments.)

FREQUENTLY ASKED QUESTIONS ABOUT CHEVRON'S PROPOSED DEVELOPMENT PROJECT

1) Will discharges of muds and cuttings and other materials be allowed from Chevron's proposed operations?

   Materials can be discharged only if they are covered by a U.S. EPA National Pollution Discharge Elimination System (NPDES) Permit and only if they are treated and tested for

toxicity...Potential impacts of discharges to environmental resources will be thoroughly analyzed by the Minerals Management Service and the EPA during preparation of the EIS.

2) Don't drilling discharges harm marine life?

...Only materials that are treated and tested to meet stringent requirements set by the EPA are allowed to be discharged into the marine environment.

3) How can the public be assured that oil spills won't occur from the proposed activities?

Gas Prone- To date, the major finds in this portion of the Gulf of Mexico have been mostly natural gas...The extreme heat and pressure conditions found at these depths literally cook oil and convert it to natural gas. Limited diesel fuel storage and use-...Companies are able to tap the natural gas stream and use a portion of this as feed stock for their generators [versus typically using only diesel fuel oil] thus cutting down on the need for storing large quantities of diesel fuel on site. Oil SpillContingency Planning- Operators are required by law to file Oil Spill Contingency Plans for all OCS oil and gas operations. These plans assure that a full response capability exists and is available for commitment in the event of an oil spill. MMS Inspection Program- The MMS enforces high safety standards through inspections and a rigorous system for reporting, responding to, and investigating accidents. Oil Spill Modeling- Potential impacts from oil spills will be thoroughly analyzed in the EIS.

4) How can the public be assured that live-bottom communities are not impacted from the proposed activities?

...When the leases were acquired ...they carried with them MMS's Live Bottom (Low-Relief)Stipulation...requir[ing]...numerous studies...including photodocumentation and continuous videos that depict the water bottoms in the Destin Dome 56 Unit and pipeline corridor...Potential impacts of Chevron's proposed activities to live-bottom areas will be thoroughly evaluated in the EIS and mitigative measures will be developed, as appropriate, to protect these valuable resources.

5) Will I be able to see Chevron's proposed operation from Pensacola Beach?

No. Based on the curvature of the earth, optimum atmospheric conditions, and calm seas, line-of-sight is approximately 14 statute miles. Chevron's activities would be located approximately 25 miles from Pensacola Beach. 6) Where can I send my written comments...? (MMS's New Orleans address is given).

MMS: Special Information. 07 February, 1996. Preparation of the 5-Year Outer Continental Shelf (OCS) oil and gas leasing program for 1997-2002.

A schedule is provided here "to assure adequate opportunities for MMS to consult with constituents on the new program while allowing a timely and orderly transition from the current one."

Background on the 5-year program is given also, including the two to three year preparation process. A map is provided with a "Draft Proposed Program" showing the Planning Area in the Eastern Gulf.

MMS Today: U.S. Dept. of the Interior, Minerals Management Service. February 1996, 6(1).

The focus of this issue is the science and technological research that MMS is conducting. This issue details the MMS's Environmental Studies Program (ESP) which was stepped-up beginning in 1992. The ESP's research guides all aspects of the OCS lease program.

"News from the Gulf of Mexico OCS Region" is an entire pullout section devoted to current lease info, agency meetings in the Florida panhandle, etc. The "15th Information Transfer Meeting" in New Orleans is also profiled here.

Articles included here are: "Operations Monitoring Project" which explains Phase I of the Gulf of Mexico Offshore Operations Monitoring Experiment (GOOMEX) which is concerned with the "subtle long-term impact" of OCS development.

"From the White house" discusses the Clinton administration's commitment to environmental technologies and recent advances in oil-spill cleanup technology.

"Environmental Studies--From A to Z and Coast to Coast" lists and briefly describes each MMS research project by region. "Gulf of Mexico studies" summarizes: "Marine sanctuary program; effects of noise; whales, dolphins and sea turtles; marine animal populations; sea anemones; air quality; air emissions; Breton Wildlife Refuges, and shift in operators."

"Congressional Report" mentions legislation which will affect leasing or national environmental concerns.

MMS Trims proposed schedule for OCS oil and gas lease sales. 11 May, 1992. Oil & Gas Journal. 22(3): 90.

The U.S. Interior Department has proposed 18 leases for the next five year period, instead of the earlier draft plan calling for 23 sales. MMS director Scott Sewell said that the new schedule emphasizes leasing of "gas prone areas"(22). The proposed 18 sale plan covers 207 million acres (versus 38 sales of 800 million acres in the 1987-92 period.) According to Sewell, OCS gas production is "safe, economical, and environmentally benign" (Ibid). He also said the 5 year program will help maintain "thousands of OCS related jobs in the U.S."

868 blocks within 10 miles of the Florida Panhandle shoreline will not be included in the eastern Gulf of Mexico sale. Comments on the sale included a spokesman for the National Ocean Industries Association who feels that the new 5 year program "is driven by politics that dictate ever

decreasing OCS access in exchange for a perceived advantage at the polls" (23). Also, The American Petroleum Institute "reluctantly" supports the plan, complaining that federal policy has "close[d] promising areas [particularly California and Southwest Florida]...on the basis of unfounded claims of environmental harm" (Ibid).

Mormont, Marc. 1987. Rural natures and urban natures. Sociologia Ruralis. 27(1):3-20.

This analysis of the "social use of nature" involves primarily the establishment of regional nature parks. The general concepts discussed concern rural sociology. However, the dynamics involved in designating areas as reserves versus the economic utilization of these areas are broadly applicable to those issues concerning OCS development (especially near-shore areas which are adjacent to or used for recreational use/tourism). The ideology involved in conflicts over development between strict conservationists, ecologists (who advocate compromise use), and government/ business interests are explored here, and although the arena differs, the sociological parallels may be significant. A threefold analytical approach is taken here: "examining simultaneously the social provenance of the park project, the space where these projects materialize, and the representations of nature that substantiate and empower them."

Morris, Sheryl. 26 December, 1994. MMS mulls its approach on OCS leasing moratoria in new Congress. Inside Energy/with Federal Lands, sec. OCS: 13.

The "Republican-controlled" 104th Congress has MMS "still debating internally" how to deal with the offshore-leasing moratoria when approaching the new appropriations committees. The new chairman of the House Appropriations Committee, Rep. Bob Livingston, R-La., is an outspoken opponent of "restricting offshore leasing through funding bills, as Congress has done since 1982." But, these limits have continued to be enforced with bi-partisan support.

Acting MMS director Cynthia Quarterman has said that moratoria "is not the best way to manage offshore lands...[and] that she thinks MMS should be allowed to 'do its job' in deciding where leasing should occur, based on scientific information." Quarterman is also quoted in this article discussing deep-water royalty relief. (She is acting director of MMS since former Director Tom Fry was indicted for fraud.)

National Research Council. 1992. Assessment of the U.S. Outer Continental Shelf Environmental Studies Program: II. Ecology. National Academy Press, National Academy of Sciences: Washington, D.C. 162 pp. (Volume I in this series is *Physical Oceanography.*)

The review which led to this report was initiated in May 1986, while under the Bush administration, by the NRC at the request of the MMS. The Committee to Review the OCS Environmental Studies Program (ESP) "was formed to carry out the overall assignment" (vii). Of the three panels which were formed, the Ecology Panel investigated the ecological aspects of the ESP.

Thirteen years previously, an NRC review (OCS Oil and Gas: An Assessment of the Department of the Interior Environmental Studies Program) recommended shifting emphasis of study from that of descriptive baselines to predicting impacts of OCS operations.

Some of the conclusions drawn from this study are:

"MMS has allocated its resources to studies that support specific lease sales at the expense of longer-term studies that would have provided a better scientific basis for prediction and assessment of impacts of OCS activities" (99).

Generally the panel found that research on "inventories and distribution of marine birds and mammals and the characterization of benthic environments were adequate to define the resources at risk because of OCS activities. The principle exception ...is the lack of information collected for OCS areas in the Gulf of Mexico" (Ibid.). More info is needed, according to the panel, on at-sea distribution of birds and mammals, particularly sea turtles; and characterization of benthic communities in deeper waters.

Process-oriented programs for many regions of the OCS are inadequate. More study is needed to assess the "sensitivity and vulnerability of biological communities to OCS-related activities, [which] will also provide a basis for developing strategies for reducing impacts and mitigating them" (Ibid.). Studies are needed which assess not only short-term effects of exploratory drilling on the OCS, but the long-term effects of chronic discharges...(the latter point was recommended in an earlier review...NRC, 1978)" (Ibid.). Studies are also recommended to assess potential cumulative effects on migratory species, e.g., whales.

The panel charges that insufficient focus has been made in the ESP on OCS-related impacts on nearshore and onshore communities. Impact analysis has been "narrowly focused" on the potential impacts of spilled oil, with a lack of study concerning potential problems associated with chronic discharges, ship and air traffic, pipeline construction, overall effects of industrialization, etc.

Six general recommendations were made by the panel:

1) The ESP should support more ecological process-oriented studies and studies of ecological relationships designed to predict environmental impacts of OCS oil and gas activities.
2) More emphasis is needed on long-term and post-lease studies that are directed toward a better understanding of the environmental impacts of OCS development and production.
3) Models are important for understanding ecosystem processes and environmental impacts of OCS activities. However, the development of models requires observational data for verification, and use of models does not replace the need for further work in the assessment of environmental impacts of OCS activities.
4) MMS needs a data management system that is accessible in a timely manner and allows the integration of information form different disciplines.

5) MMS should sharpen its focus on the specific scientific hypothesis underlying its strategies for the acquisition of information so that the information can be incorporated into regional study plans, and should strive to integrate regional study plans across disciplines and regions.
6) MMS should help in the curatorship of the large collections obtained during its studies.

National Research Council. 1992. Assessment of the U.S. Outer Continental Shelf Environmental Studies Program: III. Social and economic studies. (Socioeconomics Panel; Committee to Review the Outer Continental Shelf Environmental Studies Program; Board on Environmental Studies and Toxicology; Commission on Geosciences, Environment, and Resources.) National Academy Press, National Academy of Sciences: Washington, D.C. 164 pp.

The Department of the Interior is required to do impact assessment evaluations on potential effects on human environment of OCS oil and gas production, as delineated by the OCS Lands Act. The review which led to this document, which is one of three in a series of reports, was initiated in May 1986 by the National Research Council at the request of the Minerals Management Service of the U.S. Dept. of the Interior. (The other two reports deal with physical oceanographic and ecological aspects of the same DOI program.) "Three panels were established for this purpose, including the Socioeconomics panel, which investigated a full spectrum of social and economic aspects of the Environmental Studies Program (ESP)" (vii).

One of the significant events which occurred since 1986 when the OCS committee first began this project, (besides the Exxon Valdez spill), was President Bush's 1990 decision not to explore several offshore areas, including parts of Florida--which was placed off limits until 2000. The decision was based in part on a report by this committee.

This report begins with an explanation of why, due to the inherent complexities of the task, "the only useful course it could recommend was to use previous experiences to guide the development of a process for obtaining the needed information; the report outlines such a process in some detail" (Ibid.) The authors also say this approach "might be a disappointment to MMS..." (Ibid.). The focus of the research here is the "adequacy and applicability of the ESP's socioeconomic studies in meeting program goals during this period" (viii).

The panel found a lack of documentation of a "systematic program for identifying and analyzing important socioeconomic issues for study in the Gulf of Mexico region" (47). Much of "the considerable expenditure of funds under the heading of socioeconomic studies" has been used for various other projects involving such things as identifying archaeological sites(shipwrecks) and funding ecological/oceanographically-oriented scientific meetings. Existing studies are deemed inadequate. And, the authors mention that "it is most unfortunate that the opportunity was not taken to monitor and study the effects of actual development as it occurred, especially in the Gulf of Mexico" (62). And, "the vociferous opposition to leasing in many coastal states has made it clear that a great deal remains to be learned" (Ibid.).

Additionally, the panel concludes: "With the exception of Alaska, the environmental studies program has not proved capable of collecting and analyzing the information needed for assessment

and management of effects on the human environment...This is a particular fault for the Gulf of Mexico region" (Ibid.). They recommend assessment and monitoring of cumulative effects in the Gulf region.

Recommendations to MMS for correcting the above mentioned inadequacies are given as follows:

MMS needs to establish a national, comprehensive, credible socioeconomics studies program. To accomplish its goals, MMS needs to strengthen its in-house expertise in socioeconomic disciplines,especially outside of Alaska...[which will require] an increase in funding; and MMS should establish a process to identify, in general terms, the socio-economics information it needs and a process to translate that description into a program of studies.

Details are given in "Conclusions and Recommendations" for designing future socioeconomic studies, with "scientific integrity" cited as a prerequisite for success. And, increased understanding is encouraged between management personnel and scientists, to alleviate "disagreements that lead to disagreements..." (65).

New U.S. Congress has little time for action on energy, environment. 06 March, 1995. Oil & Gas Journal, sec. General Interest: 21.

The House Republican's 'Contract with America' "is producing the most interesting U.S. Legislative session in many years, but it will be far from the most productive." The bills which currently "preoccupy Congress" have left little room for energy and environmental legislation. Some of the provisions in the works include: Leasing of ANWR (Alaska National Wildlife Refuge), increasing oil production, offshore spill liability, cost/benefit analysis, and exports of Alaskan North Slope crude. This article also discusses "downsizing of the DOE."

The implications and possible national impacts of exporting Alaska North Slope crude are detailed here. Also possible DOE actions which could "lower insurance limits in the 1990 Oil Pollution Act (OPA90), relaxing the ANS export ban, granting royalty relief for deepwater Gulf of Mexico production, and allowing the expensing of geological and geophysical costs."

Further information on Congressional action in regard to energy policy and the environment is also provided in this lengthy article, such as "passage of unfunded mandates, risk assessment, and takings laws...[which could] radically change reauthorization of several environmental laws, including the Clean Water Act..."

Okaloosa Board of County Commissioners; Letter to Senator Bob Graham. 14 April, 1997.

This letter declares the County Commissions' support for a "ban on further leasing of oil and gas drilling (sic) in the waters off Northwest Florida. Reasons they cite, include:

1) To protect our natural resources including the sugar white beaches.

2) Reasons of safety and economics (specifically, concerns for "encroachment of Eglin Air Force Base's water resources...The military accounts for 64 percent of our economy".)
3) Offshore drilling is incompatible with our quality of life.

Offshore oil: Dialogues toward understanding. 22-27 June, 1977. Proceedings of a National Conference on the Effects of OCS Oil and Gas Development on Coastal States. Presented by the General Land Office of Texas. Prepared by Research and Planning Consultants, Inc. 188 pp.

This three day conference in Galveston was for the purpose of "providing a forum for increasing communication among all the affected interests and providing greater understanding of the problems and needs being faced by coastal communities and industries" (iii).

The document opens with a letter from Texas Lieutenant Governor William Hobby, Jr. He states that, "how is the demand [for oil and gas] going to be satisfied?" is the subject of the conference. Particularly, he questions the degree to which importation or domestic production will be used to supply the U.S. According to Lt. Gov. Hobby, other major issues to be addressed here are environmental concerns, the risks of transportation of petrochemicals (he says 35 percent of spills in 1976 came from Tankers), the importation of explosive liquid natural gas versus domestic production, and regional versus national interests in energy policy. Compensation by offshore operators for environmental damages (including fishing and recreational), compensation to "states and localities for the adverse effects of OCS development" and the fiscal drain on local governments resulting from OCS activities are also mentioned here by Hobby (39).

Some suggestions for improved relations between industry and communities are: to "insist on the hiring of local people for offshore jobs," finding some remedy for housing shortages, which "push[es] rents up and penalizes people on fixed incomes," and the imposition of performance standards on energy facilities.

Representatives of Exxon; the Natural Resources Defense Council; the Department of Environmental Protection, New Jersey; and several panels concerned with: sociological effects; local economic effects; effects on the environment; fishing and recreation--have articles included in this document.

Offshore oil: Its impact on Texas communities. Volume I, Executive summary. June, 1977. Presented by the Texas Coastal Management Program, General Land Office of Texas. Prepared by Research and Planning Consultants, Inc. 60 pp.

"Texas bears a major share of the burden of satisfying the nation's energy needs." And, according to this report, greatly increased activity in the federal OCS will "benefit many coastal communities, but not without cost" (iii). The objective of this document is to "enable state and

local governments to avoid the economic, social, and environmental detriments of OCS development" (Ibid.).

The three basic features of the report are to:

1) present a tested methodology for impact estimates;
2) "provide OCS development scenarios to acquaint public and private decision-makers with the potential onshore impacts of OCS activities on their areas of responsibility;"
3) analyze federal programs for state and local compensation of fiscal deficits caused by OCS development.

Outer Continental Shelf Natural Gas and Oil Resource Management Comprehensive Program, 1992-1997: Draft Environmental Impact Statement. July 1991. Minerals Management Service. Washington, D.C.: The Service.

This document gives detailed information on Environmental Impact related to oil production for the Gulf of Mexico region, Alaska region, Pacific region, and Atlantic region. The document opens with a summary giving the "Scope of the Analysis , Proposal for Leasing Consideration, Alternatives to the Proposal, and Possible Future OCS Development."

Also summarized are "Principle Concerns About Possible Program Effects, Potential [ecological] Impacts of the Proposal, and Possible Socioeconomic Impacts. Under "Potential Impacts of the Alternatives" are listed: "No Action; Slower Leasing Pace; Consider Leasing in Fewer Planning Areas; and, Exclude Certain Seafloor Features".

The text addresses the above-listed aspects, in addition to "Establish Coastal Buffers," "Exclude Designated Bathymetric Features," and ends with a "Summary of Comparison of Impacts."

Under "Affected Environment," each region is discussed in great detail in relation to physical environment, biological environment, and socioeconomic environment. "Environmental Consequences" addresses: generic impacts (routine activities and accidents); assessment of programmatic concerns (military use, human activities, global climate change); effects of the physical environment on oil and gas operations; and environmental impacts of each of the above-listed "alternatives" (giving base case, high case and cumulative case). Also under "Environmental Consequences" : "unavoidable adverse environmental effects, relationship between short-term uses of environment [versus] long-term productivity, irreversible and irretrievable commitment of resources, and unlikely accidental event."

"Consultation and Coordination" describes the process of preparation involved in developing the Draft Proposal Program and associated EIS. "References" provides a listing of all individuals and agencies involved in preparing the document. There is also an "Appendix" which contains a glossary and a listing of abbreviations and acronyms. Of special interest is a comparative analysis of energy alternatives to OCS oil and gas (which lists alternate energy sources, their projected viability, and impact). Also included are oil spill response capabilities, assumed mitigation measures, and an analysis of (AK) sale options.

Outer Continental Shelf production safety, pollution prevention and response. 26 April, 1993. House of Representatives Subcommittee on Coast Guard & Navigation, Committee on Merchant Marine & Fisheries. U.S. Government Printing Office: Washington, D.C. 97 pp.

Louisiana's House of Representatives called this hearing to address issues of OCS safety. Topics discussed, while specific to Louisiana's industry, also have some relevance to Eastern Gulf oil and gas production. This session record contains a variety of statements from representatives of government, Coast Guard, Merchant Marine, environmental interests, and industry.

Peebler, Robert P. February, 1997. Innovation at the intersections. Offshore, sec. Beyond the horizon: 92.

Geoscientists take a 3D visualization system offshore to steer a well horizontally; a small oil company "processes and interprets a 3D survey during acquisition, improving survey design and cutting cycle time in half"; another oil company constructs a common work environment for a multi-disciplinary team, which then "completes an integrated reservoir study in record time, achieving 100% drilling success in the field." These are examples of the dramatic results due to technical and operational innovations while using a multi-disciplinary approach to drilling.

"Real-time collaboration between groups will impact productivity far more than new tools within any particular discipline." This article goes into some detail concerning the diverse crews, specialists, engineers, geoscientists, seismic specialists, etc. involved in drilling technology and production--with a view to better coordination of these specific areas of expertise. "Few oil companies make these disciplines an integral part of their asset teams. But gaps between them can have enormous impact on the bottom line." One example given of this is how recent software innovations allow geoscientists to create well paths inside 3D reservoir models using some of the same tools drilling engineers use to calculate final trajectories. Cross-discipline training is also suggested here, such as drilling engineers "...have to learn some geology to collaborate effectively."

Pierce, J.C., T. Tsurutani, T. Abe, and N.P. Lovrich. 1987. Culture, politics and mass publics: Traditional and modern supporters of the New Environmental Paradigm in Japan and the United States. Journal of Politics. 49(1): 54-79.

The value of this paper to the non-sociologist may be in its concise definitions of concepts often-used in reference to environmental issues. In exploring the link between "Postmaterial values and the New Environmental Paradigm (NEP) among mass publics in Japan (Shizuoka Prefecture) and the United States (Spokane, Washington)" several relevant concepts are succinctly defined--in

addition to the discussing the research. The significant conclusion in comparing Japan's environmentalism to the U.S. concerns "the traditional Japanese view of the unity of nature and humans, a view that is mirrored in the NEP. Unlike the United States, then, in Japan the New Environmental Paradigm is not really all that new" (54).

Western democracies that have moved into the stage of development some call "postindustrialism" are characterized by: "the economic dominance of the service sector, by the development of complex nationwide communications networks, by the expansion of the knowledge industry, by the growth of the public sector, and by a widespread affluence" (Ibid.). This stage of development is accompanied by changes in the political orientations of the people, along with alterations of the "pattern of individual need structures..."(55). "Higher order needs have supplanted...subsistence needs as the motivational source of social behavior (Ibid.)." "Higher order" needs include "beauty, recreation, and reflection" (Ibid.).

Along with these shifts in perception and values "emerging from postindustrialism" have come "a new set of beliefs concerning the relationship of humans to nature" (Ibid.). This concept is commonly called the "New Environmental Paradigm" (from Dunlap and Van Liere, 1978.) This paper examines levels of support for the NEP. Marked differences are shown between Japan and the U.S. "which seem linked to nation-specific cultural patterns," even though both nations share postindustrial status" (Ibid.).

New ideas of the ecological balance of the earth have challenged the previous "Dominant Social Paradigm" which was based on "'belief in abundance and progress, our devotion to growth and prosperity, our faith in science and technology, and our commitment to laissez-faire economy, limited governmental planning and private property rights" (Dunlap and Van Liere, 1978, p. 10). This broadly shared belief system is widely thought--with the benefit of hindsight--to have contributed to what many environmentalists consider to be a shameful history of ecological and natural resource degradation"(56).

The "New Environmental Paradigm" is a "spaceship earth" worldview stressing "'high valuation of nature, [a] sense of empathy which generalizes compassion toward other species, other peoples and other generations, [the] desire to carefully plan and act so as to avoid risks to humans and nature, [the] recognition that there are limits to growth to which humans must adapt, and [the] desire for a new society that incorporates new ways to conduct our economic and political affairs' "(Milbrath, 1984) (Ibid.). This worldview has developed along with postmaterialist values, "although the causal connection...varies"(Ibid.). These social values are "thought to be brought on by the relative security and affluence of postindustrial society" (Ibid.).

Contrast and comparison of Japan versus the U.S. in terms of environmentalism is relevant to this report only in the broadest of terms. Briefly, Japan sees "human as victim" rather than "nature as victim"; in Japan, there seem to be fewer postmaterialists, therefore NEP values would not seem to have the same impact as in the U.S. On the other hand, Japan traditionally values an intimate integration with nature--all of which add up to a distinctive cultural approach to the NEP.

Rasinski, K.A., T.W. Smith, and S. Zuckerbraun. 1994. Fairness motivations and trade-offs

underlying public support for government spending in 9 Nations. Journal of Social Issues. 50(3): 179-97.

The research for this study was "...assessed by examining responses to surveys [in each country as] part of the International Social Survey Program" (179). There was a great deal of variability across countries at the aggregate level. There were some indications that "the young and more educated were more supportive of environmental spending," and that prosocialist values also were associated with increased support. Social responsibility values reflecting probusiness and progovernment concerns "were less likely to endorse spending on the environment at the expense of other social programs" (Ibid.).

Psychological models of public opinion (which can also be applied to support for the environment) are, according to the authors, supported by the "linkage of resource distribution's tradeoffs to values" (Ibid.). These models include: "issue saliency, based on the idea the public sympathies can be evoked through the media; rational self-interest, based on the common-sense notion that policy support is directly related to that which will directly benefit the individual; values, [which] suggest that one's policy support is consistent with one's values, that is with one's sense of what government ought to be doing and what concerns ought to be addressed "(180). These are the three models that are traditionally tested "by considering policies in isolation" (Ibid.). Rasinski, Smith and Zuckerman suggest that it might be more useful to "consider the tradeoffs [with other social issues] that people make in their support for different government policies," in terms of what each individual deems "fair" (Ibid.). An example is given of how policies that protect the spotted owl would be opposed by those who work in the logging industry.

Liberal values and post-materialist values are also mentioned as having a consistent influence on individual's policy support. "Tradeoff" considerations "show more ideological consistency than support for environmental spending. Publics are apparently willing to make hard choices consistent with their values"(195).

Ray, J. J. 1987. A participant observation study of social-class among environmentalists. of Social Psychology. 127(1): 99-100.

Ray says that many studies conclude that environmental organizations are typically composed of upper-middle-class people. On the other hand, he mentions that "studies of the population at large conclude that environmentalism has broad support that transcends social class" (99). For this study of social class in environmental organizations, Ray sent students to meetings of six different environmental groups in the metropolitan area of Sydney, Australia. At the meetings, the students tried to talk to as many people as possible, asking their names and occupations. The distribution of occupations showed 88 people had nonmanual occupations and 37 had manual occupations. A door to door sample of homes in Sydney yielded a similar distribution of 101 nonmanual and 44 manual occupations. Therefore, "when studied by nonreactive methods, environmentalist activists do not appear to be particularly middle-class" (100).

Ray, John J., and Geoff P. Hall. 1995. Are environmentalists radical or conservative? Some Australian data. Journal of Social Psychology. 135(2):225-8.

A measure of the relationship between environmentalism and conservatism was attempted by a survey of 299 shoppers in Brisbane, Australia. The research was based on an environmentalism scale (of 16 items) of "known internal consistency, and scales of three different types of conservatism [moral, economic, and social]" which were completed by a fairly representative community sample of interviews (225).

Conclusions were that environmentalists are "clearly far from homogenous ...[with] considerable unpredictability in their responses" (226). And, while allowing for the pitfalls also inherent in measurements of political ideology, this survey seems to contradict formerly perceived consistently negative correlations between environmentalism and conservatism. According to Ray and Hall, these two viewpoints are "essentially unrelated" (225).

Rhyne, Edwin H. 1987. Making environmental sociology sociological. Sociological Spectrum. 7:335-346.

The purpose of this paper is to show "that the use of a limited number of explicitly sociological ideas can provide a useful framework for studying environmental issues" (335). The three sociological ideas or distinctions Rhyne makes are the following: the environment as home or workplace, the physical and legal separation of home and workplace, and "thing work versus people work". Whether the environment is defined as a home or a workplace is important since how one defines a place results in specific ideas about how that place should be used. That idea relates to the physical and legal separation of home and workplace. Traditionally, the home and the workplace occupied the same physical space, meaning people had to balance the demands that their home life and work life made on an area. Now, home and work are largely separate. About the separation, Rhyne writes:

> The sociological implications of this separation are profound: instead of the same people in the same organization continually having to balance their pleasures of life against their own efficiencies of work and sustenance, there is now a diverse population viewing the same physical site or activity in contradictory terms. Modern life compromises the environmental interests of one group in society for that of another (338).

Another possible cause of disparate views about the environment is the fact that some people do people-work (providing services) and some do thing-work (producing goods). Rhyne says that people-workers judge their workplaces "in terms of comfort, safety, and beauty" (339). Thing-workers judge their workplaces "in terms of the ease, efficiency, and profitability with which specific aspects of the environment can be manipulated" (339).

In the next section of his paper, Rhyne applies the ideas he discussed previously. First, he looks at pollution as a social problem. He makes the point that problems only exist when people

define the situation as a problem. "To define any environmental problem as pollution or degradation without taking into account human reactions and attitudes is to presume that a purely technical, physical, even ecological procedure is sufficient" (340). Rhyne gives an example of a pig farmer to explain what he means. Years ago, the average pig farmer's home/business was surrounded by other home/businesses. If the pigs stunk, the neighbors understood and made allowances because their pigs stunk, too. Now, that same farmer's pigsty is often surrounded by people who see their land not as a workplace but as a homeplace. Therefore, the stinky pigs are a problem.

Rhyne says the "specialization of environmental usage is itself a source of environmental problems" (341). "The more specialized is an environmental activity, whether 'home' or 'sustenance' in focus, the more likely it is to lead to environmental problems for some people" (341). If the workers do not have to live in the mess they create, then what incentive do they have to clean it up. Similarly, the "single minded pursuit of home environments solely as home can lead to environmental stresses" (343). "Sociologically, what is important ... is that multidimensional concerns and decision responsibility are more likely to lead to less environmental stress than the reverse" (343).

Last, Rhyne discusses the social bases of the environmental movement. He points out that "most of the time when we speak of environmentalism as a social movement we are speaking of those whose concern for their world is largely in making it cleaner, more healthful, prettier, or wilder" (343)--one of those single-minded pursuits. "The more any person or family can take sustenance for granted, the more intense can be their concern for the quality of their home" (344). Therefore, although the relationship is not completely clear, the environmental movement tends not to be composed of poor people. Additionally, service workers are more likely to be strong environmentalists, women tend to have stronger ties to the movement than men (traditional role in the home and thus as people workers tends to lead to strong environmental ties), and college students and retired senior citizens are expected to be more involved in environmental issues than other people.

Riposa, Gerry. 1989. After Reagan's deregulation: State-federal conflict over energy policy. Policy Studies Review. 8:36-54.

The stated purpose of this paper is to "examine the implications of increased state policy roles...within the substantive area of energy policy [during the Reagan administration]" (37). Riposa's hypothesis is that "Reagan's New Federalism, with its dual priorities of deregulation and decentralization, has produced intergovernmental conflict in energy policy [when state governments do not wish to follow the mind-set of the Reagan administration]" (Ibid.).

Basically, Reagan's energy policy promoted deregulation, because government regulation of the energy market was seen as the "prime obstacle to effective energy solutions"--meaning: "decontrolling oil and natural gas, private leasing for energy exploration of public lands, and relaxing environmental standards" (38-39). Decentralization was meant to "sen[d] states the message that they would be increasing their policy roles, albeit on less money" (39). But, as

mentioned previously, there was and is intense conflict involved when state's seek to exert (what appears to be merely token) authority when opposing federal standards.

Riposa provides a comprehensive overview of the U.S. energy policy of the 1980's, and then does an analysis using case studies in four areas: (1) fossil fuel production, (2) energy conservation, (3) nuclear power, and, (4) energy preparedness policy. The relevance to the question of OCS development may lie in those precedents which were set during the Reagan administration which continue to affect the issue of state versus national interests in fossil fuels policy. This report is, therefore, not only of interest from a historical standpoint, but also represents a clash of ideologies at the state and federal levels, which is perhaps best epitomized by the U.S. Supreme Court case of "Secretary of the Interior, James Watt v. California." So, insights may be provided here which parallel current conflicts, such as that between Florida and MMS over oil and gas drilling.

Sanibel, Florida; Resolution No. 97-46. 24 March, 1997.

The City of Sanibel is a barrier island off the coast of Southwest Florida. This resolution "urges the State of Florida to prohibit [oil and gas] production." The city was "...incorporated in 1974 for the express purpose of conserving, protecting and preserving the natural ecosystems; and whereas, Sanibel Island is known worldwide for its shelling beaches, its natural beauty, its wildlife, and its commitment to the preservation and protection of same." The resolution states that the beaches are the "primary asset to our tourist based economy;...[and] are now placed in jeopardy..." The City Council of the City of Sanibel "publicly proclaims its vigorous opposition to the exploration and production of oil and gas in the Gulf of Mexico off the coast of South Florida."

Sarasota, Florida; Resolution 96-220. 12 November, 1996.

The Southwest Florida Regional Planning Council and the Sarasota Board of County Commissioners (Natural Resources Dept.) state their strong opposition to "the exploration and production of oil and gas in the Gulf of Mexico off the coast of Florida." The County board states that "whereas, Coastal Petroleum Company has applied for permission to drill exploratory wells ...three miles from shore...[and] recent scientific studies have reinforced our concerns about the long-term effects of oil spills on coral reefs, sea grass beds, mangrove forests and other shoreline and near shore organisms." Those natural communities are described as being "...of inestimable economic, environmental and aesthetic value." The County, besides citing the environmental concerns, also mentions here "the importance of preserving the integrity of the coastline and critically important bays, lagoons, and estuaries."

Schneider, Devon M. (ed.) 1977. Planning for onshore development: Discussion papers. An

ASPO (American Society of Planning Officials) Training project: Onshore impacts of Outer Continental Shelf oil and gas development. Sponsored by Resource and Land Investigations Program, U.S. Department of the Interior, and Office of Research and Development, U.S. Environmental Protection Agency. 266 pp.

The discussion papers which comprise this document were prepared as background materials for an American Society of Planning Officials workshop session. The session was entitled, "Local planning approaches for industrial facility siting." Planning for new industry in broad terms, and not only for oil and gas was the emphasis. Reasons given for this focus were that oil and gas industry planning is similar to considerations needed for industry in general terms, and "many local officials have indicated that they would prefer to develop tools and techniques for industrial development planning in a broader sense rather than conduct specific OCS-related projects" (i).

Each of the papers included here opens with an introduction to the issue, gives supporting materials illustrating local government responses to issues (versus hypothetical modeling), and if "appropriate and possible, [gives] planning techniques which relate directly to oil and gas facilities" (Ibid.).

The main issues covered here are: policy development, local industrial development programs, impact assessment, and land use and development controls.

Under "Local industrial development programs" the topics include: "determining a community's suitability for new industrial development; packaging a community to attract industry; and using inducements to attract industry" (iii). Listed under "Impact assessment" are: environmental impacts, socioeconomic impacts, and fiscal impacts. Under "Land use and development controls" topics are: "local requirements for environmental impact statements; zoning for new coastal industries; identifying appropriate environmental performance controls; developing industrial performance standards; and zoning to prevent sprawl" (Ibid.).

Seligman, C., G.J. Syme, and R. Gilchrist. 1994. Role of values and ethical principles in judgments of environmental dilemmas. Journal of Social Issues. 50(3): 105-19.

Ethical issues, in terms of the environment, are surveyed here regarding the "extent to which individuals apply values and ethical principles in a consistent way." The context in which one's values are assessed is of primary importance, according to the authors. This study was based on data concerning water allocation in Australia. "Just" decision-making procedures are discussed in terms of the fact that, "localized values and ethics" would make these procedures appear to be "highly situational" (117).

In issues of environmental decision-making, especially those that are commonly perceived to be zero-sum situations, the authors suggest more "psychological research on environmental justice" needs to be done. Some conditions were specified that may "influence the degree to which personal consistency in the application of values and ethical principles" are demonstrated. "Assessment procedure for measuring value importance, the similarity of the factor structure of the

target issues, and possibly the expertise of the respondents who are making these judgements" are listed as salient factors (118).

Seydlitz, R. and S. Laska. 1993. Social and economic impacts of petroleum 'Boom and Bust' cycles." Prepared by the Environmental Social Science Research Institute, University of New Orleans. OCS Study/MMS 94-0016. U.S. Dept. of the Interior, Minerals Mgmt. Service, Gulf of Mexico OCS Regional Office. New Orleans, La. 131 pp.

The social and economic impacts of petroleum production in the Gulf of Mexico on communities in Louisiana is explored in this report. Since resource extraction activities are "primary activities...[that] have impacts on communities involved in these activities" this research seeks to address the dearth of extant research on this topic. "Specifically, the study examines the effect of petroleum production on social problems, educational attainment and strain, and community economic health in parishes in Louisiana" (v).

The findings indicate that petroleum production does affect the above-mentioned factors of each community--but is variable, depending on both the degree of involvement and type of involvement (extraction or related activities). "Overall, the results imply that community economic health and basic level educational attainment temporarily improve while social problems and educational strain temporarily worsen due to increases in petroleum activity, especially in the highly involved and extraction parishes" (Ibid.).

This document recommends impact mitigation such as: "data collection; sharing of information about potential impacts with community residents; counseling and treatment programs; and the expansion of government assistance and programs that help citizens cope with impacts" (Ibid.).

Seydlitz, Ruth, Shirley Laska, Daphne Spain, Elizabeth W. Triche, and Karen L. Bishop. 1993a. Development and social problems: The impacts of the offshore oil industry on suicide and homicide rates. Rural Sociology. 58:93-110.

"There are few studies in the literature concerning economic development that examine the impact of offshore oil and gas extraction on communities and even fewer that use annual data, examine more than one community and account for the degree of involvement of the community in the oil industry. This study seeks to rectify these problems. The results support hypotheses derived from social disorganization and relative deprivation theories by demonstrating that higher levels of and rapid changes in development are associated with higher homicide and suicide rates, especially in communities that are more involved in resource extraction. The utility of the methods and the implications of the results for theory and future research are discussed" (abstract).

In terms of offshore oil extraction, or extractive development: profits are less concentrated at the extraction site, the labor is more expeditionary, the infrastructure created is even more specific to the extraction enterprise and more likely to become obsolete when the resource is depleted, and the land has no value except as access to the oil.

Of great theoretical interest is the effect of resource extraction on community social problems. The research was designed to examine the effect of oil industry involvement on social problems to determine whether social problems are affected by changes in oil industry activity, and whether the level of social problems differs by the degree of involvement of the community in the industry.

"Evidence consistently shows that immigrants, adolescents, and women are negatively affected by boomtown characteristics. New comers in boomtowns are significantly less happy than newcomers in non-boom communities and newcomers experience more stress and dissatisfaction than do long-time residents. Adolescents in boom communities have more negative attitudes toward the community than do adolescents in nonboom communities and women have difficulty coping with the negative aspects of boomtowns" (95).

Seydlitz, Ruth, Shirley Laska, Daphne Spain, Elizabeth W. Triche and Karen L. Bishop. 1993b. Development, human capital, and economic health: An empirical examination, pp. 105-125. In Shirley Laska (ed.), Impact of offshore oil exploration and production on the social institutions of Coastal Louisiana. OCS Study MMS 93-0007. U.S. Dept of the Interior, Minerals Management Service, Gulf of Mexico OCS Regional Office. New Orleans, LA.

Communities impacted by offshore oil extraction are subject to socioeconomic changes such as "changes in crime, mental health and community satisfaction, ability to provide basic services, employment and wages, and educational attainment of residents" (105). There are similarities here to studies of communities in the Western United States that have undergone rapid development. These include "the cyclical nature of extraction, the creation of local jobs, and the attraction of immigrants in response to perceived job opportunities. In contrast, [some OCS jobs draw workers who commute from outside the immediate communities]" (Ibid.).

According to the authors, offshore oil industry development in Louisiana "provides an excellent opportunity to examine the impact of development on long-term human capital and economic health because the development has taken place over decades and has been massive" (Ibid.). And, as of the writing of this article, studies of the impacts of offshore oil and development concerning the Gulf of Mexico are not thoroughly covered.

Shaiko, R.G. 1987. Religion, politics, and environmental concern: A powerful mix of passions. Social Science Quarterly. 68.2: 243-62.

The first major interdisciplinary debate on the environment and religion was largely prompted by historian Lynn White's address to the annual convention of the American Association for the Advancement of Science. His remarks were published as "The Historical Roots of Our Ecological Crisis" (1967). Here, he concluded that "Modern science is an extrapolation of natural theology...[and technology] is at least partly...a realization of Christian dogma." [And] he

concluded that "...if modern science and technology are the cultural forces that have led us into the environmental crisis, then 'Christianity bears a huge burden of guilt' for that crisis" (243).

This study by Ronald Shaiko uses data collected from members of environmental/ conservation groups to "assess White's thesis in a contemporary political context" (244). Three models (the domination-over-nature orientation; diversity among representatives of the three major religious institutions: Catholic, Protestant, and Jewish; and the influence of political ideology) are presented for each of five environmental issues (mastery-over-nature orientations, nuclear power, runaway technology, industrial pollution, and wilderness protection). Overall White's mastery-over-nature proposition received qualified support (253). But, "Jewish respondents [were] as strongly opposed to the [dominance ethic] as non-Judeo-Christians" (252). And when the issue preferences are evaluated along with other factors, such as political affiliation, the salience of religious affiliation is significantly lessened. The author suggests that "the gradual reevaluation of [the dominance] perspective is underway "...in most denominations, with the focus being on a revisioning of stewardship of nature" (260). According to Shaiko, White's ideas of "resolving the environmental dilemma in terms of a religious transformation" [where he advocates a "new environmental paradigm"] are unrealistic--new concepts of stewardship are "much more plausible" (246,259).

One might wonder how accurately this study addresses White's thesis, considering the survey research was drawn exclusively from subjects who are active environmentalists.

Shapiro, Mark. 1996. To the highest bidder: the polluted politics of Capitol Hill. (Money, politics and the environment.) Environmental Action, Inc.

This article is an expose' of the money being paid to U.S. legislators by Political Action Committees (PACs) to influence the dismantling of existing environmental regulations, open pristine wilderness to commercial development, and generally choose exploitation over regulation or conservation. Legislation to open the Arctic National Wildlife Refuge to oil drilling has just been recommended by Congress, and is the focus for the beginning of this paper.

"Oil and gas PACs alone have donated over $17 million to Senators and Representatives over the past six years, twelve times the amount given by anti-drilling forces." The two leaders of the push to drill in the Arctic Refuge (Murkowski, and Stevens) received "$122,835 and $90,425, respectively," while yet another Alaskan, Don Young, Chair of the House Resources Committee "received $188,005 from oil and gas PACs." Industry PACs "got the desired return on their investment" when Congress approved exploratory drilling in the Arctic wilderness. (This was still subject to President Clinton's signature, however.)

According to the author, these scenarios are "hardly extraordinary in Congress," and are a "clear consequence of political campaign financing." It takes "more than half a million dollars to hold onto a House seat--double that to challenge an incumbent--and upwards of $10 million for the average Senate campaign." What is new about all this is the "clarity with which one can track the influence of those campaign contributions on the legislative agenda of the recipient Congressmen."

Phil Klapp, director of the Environmental Information Center in Washington D.C., and former legislative aide says, "I have never seen such a brazen link between the money flow and the legislation in Congress." The 104th Congress' "steady assault on the structure of environmental protection built up over the past two decades," is, according to the author, "a testament to how money talks on Capitol Hill."

Corporations or corporate PACs gave $24 million (versus $2 million from pro-environment advocates) to promote a "scaling back of environmental regulations." Under the guise of reducing "environmental costs" these interests have been able to advance re-definition of the EPA's regulatory rationale--forcing a cost-benefit analysis *before* enforcement of regulations. "This means we are going to have to start coming up with the economic value of IQ points lost to lead exposure among children," according to a top EPA official. The House Appropriations bill for the EPA calls for a "30 percent funding decrease for enforcement," also.

The previous administration had the White House Office of Competitiveness to work on dismantling environmental regulations, chaired by Dan Quayle. Today, corporate America has "Project Relief" to champion its efforts toward "regulatory relief." Many of the 350 members are reps of Fortune 500 companies. And they contributed "an average of $20,892 to each of the 21 members of the House Regulatory Task Force, set up to push the reforms through Congress." Members of Project Relief include the Adolph Coors, Co., Walmart, Chevron, General Electric, the National Association of Realtors, Associated General Contractors ("an anti-union construction association"), and the Conservative Caucus.

Polls invariably show a decisive majority of Americans "over 80 percent, by some measures--support strong environmental protection." But, "one after another, key legislative elements of environmental protection are being rewritten, reformed, defanged, and defunded along the lines demanded by the petrochemical, agricultural, mining, timber, and real estate interests." At the "top of the industry hit list" is the Clean Water Act (CWA). Since being passed in 1970 two-thirds of U.S. waterways have been classified as "clean"--versus the same percentage considered unclean 25 years ago. But the new "'reforms'...[will] drastically reduce the authority of the EPA to regulate emissions of toxic waste and effluent into the nation's waterways through several means." This would include removing "60-80 percent of American wetlands from federal protection."

Other insidious effects of these reforms will be to reclassify toxic chemicals used by petrochemical, pulp, and pesticide industries which currently require stringent control--to more nearly-benign, and less threatening classifications. Also, federal environmental standards may be open to revision by states--which may then "put environmental quality on the bargaining table..." and do with them as they see fit. PACs opposed to the CWA "contributed over $57 million to Congressional candidates between 1989 and 1994."

This article gives specific examples of Corporate payoffs/exemptions to federal environmental regulations. All of which graphically shows "that continued reliance on private financing of election campaigns comes with a price." "The money flow provides a cool and dispassionate indicator of what lies behind the rhetoric of the Republican's 'Contract with America' (its original name, perhaps more appropriate, was 'Buying Back Congress')." And, according to this reporter, Mark Shapiro, the Democrats aren't any "less impacted."

The Working Group on Electoral Democracy, is a grassroots organization "committed to introducing public financing of political campaigns." Initiatives to take the "private money out of

public campaigns are now being considered in half-a-dozen state legislatures and over twenty municipalities across the country."

Shell tops depths in Gulf exploration boom. 07 January, 1998. From Online news source (reprinted from August, 1997 Business & Industry Communications newspaper.)

The recent boom of deep-water exploration is led by Shell Oil Co.'s Shell Offshore Inc.--Deepwater Division. Currently 25 percent of deep-water acreage is leased by Shell. And Shell is the "proven leader in the field," drilling deeper than most, and bringing in 50 percent of all announced discoveries and "nine of the 21 announced developments..."

Deepest well drilling to date is also Shell's Mensa subsea development; drilling in 5,300 feet of water. Previous record holder was off Brazil at 3,400 feet. Record-setting production rates are also a part of the deepwater trend. Besides Shell Oil, other industry majors involved in deepwater production and exploration include: Amoco, British Petroleum, Chevron, Conoco, Exxon, Marathon and Texaco to name a few.

A recent study surveyed 39 major oil companies in the U.S. and found that exploration and development soared 21 percent in 1996--"a $2.9 billion increase from the previous year..." The increase relates primarily to Gulf of Mexico deep-water projects. Rising oil and gas prices also play a part in encouraging spending, with per barrel prices at highest consistent levels since 1986.

Industry problems today are not survival, according to one industry spokesman, but "Now, it's 'How do we manage our growth?'" The main problem for industry is the shortage of drilling rigs and skilled workers available to exploit these new opportunities.

Silva, Maynard, Ed. 1986. Ocean resources and U.S. intergovernmental relations in the 1980's. Westview Press: Boulder. 279 pp.

"This book examines the U.S. system of intergovernmental relations as they pertain to ocean resources. The exploitation of the oceans, with regard to fisheries, marine mammals, hydrocarbons and economic minerals, waste disposal, and coastal zone management is analyzed in the context of the Reagan Administration's New Federalism. The contributors document the relationships between the various levels of government that are involved in ocean resource management and explore the problems associated with the use of specific resources. They suggest reasons as to why no single pattern of governmental guidelines for dealing with the oceans has emerged during the Reagan years and discuss how existing federal systems might be altered to improve the management and conservation of ocean resources" (title page).

Maynard Silva is a research specialist with the Marine Policy and Ocean Management Center, Woods Hole Oceanographic Institution .

This is a collection of essays which includes: "Models of American intergovernmental relations; How Federalism matters in Natural Resources Policy; Ocean resources and

intergovernmental relations: The record to 1980; Intergovernmental relations in Marine Fisheries Management, marine mammals, endangered species, and intergovernmental relations; Ocean resources and intergovernmental relations in the 1980s: Outer Continental Shelf hydrocarbons and minerals; Intergovernmental relations and marine policy change: Ocean dumping and at-sea incineration of hazardous waste; Building a federal-state partnership for U.S. ocean resource management; The Exclusive Economic Zone: A new opportunity in Federal-State ocean relations" (vii-viii).

Simmons, Matthew R. May, 1996. NOIA Chairman's message to industry. Offshore:114.

This lengthy report from Mr. Simmons describes in detail NOIA's lobbying efforts to promote the offshore industry--by changing governmental legislation. In fact, this paper would serve as recruitment information for any related business that is not a member of NOIA. According to Simmons, "What happens in Washington can cost companies in the U.S. offshore oil and gas industry time and money. That is why it's doubly important for businesses seeking to have a hand in domestic offshore oil and gas exploration and production to consider membership in the National Ocean Industries Association. NOIA represents a strong Washington-based partner with many strengths to help your company achieve success and improve your company's bottom line objectives. NOIA builds its strategy around two overarching themes--gaining greater access to the Outer Continental Shelf and improving the economic climate for NOIA members to do business in this country...NOIA team advances a broad agenda on Capitol Hill in areas that include OCS leasing, regulatory reform, and environmental, technology, and safety issues..."

Simmons goes on to articulate the efforts of NOIA in detail, including how NOIA "helped build and sustain a solid lobbying effort to support the triumphant 1995 campaign to enact the deepwater royalty relief legislation..." Other triumphs of NOIA are the changes in MMS regulations, "...replacing highly prescriptive rules and regulations with performance-based approaches...eliminat[ing] inconsistency from the regulatory process..." in addition to supporting the MMS when abolishing the service was suggested by the Clinton administration. Apparently, National Ocean Industries Association values the MMS, and its influence within the bureau. "NOIA positioned itself as a catalyst for industry support to defeat the proposal...In the end, industry prevailed and the proposal was withdrawn."

Regarding "Deep Water Royalty Relief," legislation was recently passed creating a royalty holiday for deep water projects in the Central and Western Gulf of Mexico (200 meters or deeper)." This letter mentions the opposition to this bill, which "critics called 'corporate welfare,' a give-away to the oil industry, a government subsidy. The opposition had launched a major operation to spread misinformation on the impacts..." According to Simmons, "what made this legislative victory so remarkable was the dramatic turnaround by members of Congress that many in the industry believe has no precedent." Simmons describes their effort along with "a small army of individuals in Washington" to lobby for deep water royalty relief--their message being that it would "enhance economic and energy security, boost needed domestic production, increase federal revenues and create jobs nationwide."

Regarding "Defeating the MMS devolution proposal," according to Simmons, "In the absence of the stable, consistent and predictable regulatory climate that has been the hallmark of MMS management of the offshore oil and gas program, the activity level in the Gulf would not be possible." Thanks in large part to NOIA efforts the proposal was withdrawn.

Other concerns of the NOIA are also discussed, such as the debate on AREA-WIDE LEASING (NOIA worked for two years to maintain this practice.) These efforts "culminated in March with the announcement by MMS Director Cynthia Quarterman to continue holding annual area-wide lease sales..." According to Simmons these lease practices have "fostered robust competition in the Gulf due to the program's consistency and predictability." NEW REGULATORY APPROACHES have been pushed by NOIA through its Regulatory Reform Task Force--"helping spur reform in MMS' approach to regulating the offshore industries--from the old-style prescriptive method to the more flexible and effective performance-based approach." At last report, "MMS appears to be moving toward objectives sought by NOIA." MORATORIA ON THE OUTER CONTINENTAL SHELF. "This year, for the first time in more than a decade, the offshore industries gained some ground." NOIA "lobbied strenuously" to overturn the moratoria. NOIA was disappointed when the moratoria provisions were upheld, but Simmons says that the groundwork is being laid "for an aggressive campaign in the years ahead to...expand OCS lease sales into new and promising areas not available in the current 5-year Leasing Plan for 1997-2002."

In 1995, NOIA and allies succeeded in lobbying to AMEND THE OIL POLLUTION ACT of 1990 (OPA). The imposition of what were previously viewed by industry interests as the "unjustifiably heavy burden on operators who present minimal environmental risk" was altered and made more amenable to NOIA.

OPPORTUNITIES FOR IMPROVEMENT THROUGH PRIVATIZATION, and GAINING A COMPETITIVE ADVANTAGE are discussed here in some detail. NOIA is also supportive of administrations USING TECHNOLOGY TO ACHIEVE ENVIRONMENTAL COMPLIANCE, especially the utilization of synthetic drilling mud.

Other issues which NOIA is working to support include: "the Royalty Simplification and Fairness Act"; relief from "EPA's costly bureaucratic reporting and record keeping requirements"; "Correcting misperceptions and maintaining public trust." According to Simmons, "Unfortunately, the public's negative perceptions of our industry and lack of trust in our commitment to environmental preservation have deterred any rational examination or judgment of the facts about our industry." For example, he says, "offshore drilling accounts for less than 2% of the oil found in the oceans while natural seeps put five times more oil into the oceans."

The report also describes NOIA's work in the media, classrooms and other "outreach and advocacy," all aimed at refitting perceptions of the oil industry. NOIA has a grassroots lobbying network "Domestic Energy Advocates" which is working alongside NOIA to promote the domestic energy industry.

Simmons, I.G. Ecology of natural resources. 1981. Halsted Press: New York. 438 pp.

This introductory level text by a biological ecologist explores not only the scientific concepts of ecology, but also the sociocultural factors which play into the wise use of resources. Simmons considers ecology "...the study of the relationships of living organisms to each other and their inanimate environment, and I include man as one of those organisms" (preface). This text is designed to avoid "stridency" and alarmist tones common in such literature, according to the author.

An overview of world energy supplies and use is provided here, including 'alternative' or renewable energy sources such as wind, solar and hydropower. Regarding oil, the author points out that it has many other vital uses besides as a fuel source, and that as supplies dwindle, it will be considered "...too precious to burn." Keeping in mind major breakthroughs in drilling technology, which will serve to prolong availability, much of the projected energy-use scenario in this book may still be valid, albeit with a time-frame set later in the next century.

Smith, Kerry V. 1995. Does education induce people to improve the environment? Journal of Policy Analysis and Management. 14(4): 599-604.

Public choice theory "attempts to explain why some people participate in actions which promote a collective outcome and others do not" (599). One aspect of this question concerns whether educational curricula "induce[s] people to support collective activities intended to improve the environment" (Ibid.). There is apparently enough empirical evidence to prompt acceptance of this as fact in cases of environmental policy, since there are federal and state initiatives to alter public opinion/behavior through environmental education.

Smith's analysis was based statistically upon a special supplement to the National Opinion Center's 1993 General Social Science Survey. The supplement sought to gauge people's knowledge about general science through 12 questions. Also the respondents were asked about their actions involving: (1) donating money to environmental groups, (2) signing petitions for environmental issues, and, (3) participation in recycling. The respondent's income, level of education, and college major were also factored in.

Conclusions reached included a statistically significant correlation between income and participation in all three activities. White respondents are more likely to sign petitions, and females to make donations. There was a consistently positive relationship between the "measure of general science knowledge based on the count of correct answers to these five questions and the participation in all three activities" (602). Another interesting indication is that economics and business majors "tend to behave differently from some of the other college majors. Of the majors with significant effects on collective behavior, only [these categories reduced] the likelihood of participation" (Ibid.).

The evidence therefore, strongly suggests that "some curricula may reinforce tendencies to promote self-interest over cooperative responses," and broadly indicates that "education may be able to change behavior" (Ibid.).

Stallings, E.F., T.F. Reilly, R.B. Gramling and D.P. Manuel (eds.). 1977. Outer Continental Shelf Impacts: Morgan City, Louisiana. Government Printing Office: Washington, D.C. 326 pp.

From 1954-1972 OCS oil production increased by over a hundred fold (in terms of barrels produced.) And likewise, production "within three miles of Louisiana's coast increased from 12.6 million barrels in 1954 to 63.4 million in 1972" (summary). This huge increase in petroleum industry presence in Morgan City and St. Mary Parish, and the associated impacts, are detailed here.

Employment, income, and occupations are analyzed statistically. Also, the social and cultural effects of the oil boom are discussed--benefits and problems. Municipal services, land use and environmental impact are included in this analysis.

Steger, M.A.E. and S.L. Witt. Dec. 1989. Gender differences in environmental orientation. Western Politics Quarterly. 42(4): 627-650.

Gender differences in the "environmental orientations of male and female publics and environmental activists in two postindustrial nations--Canada and the United States" are covered in this study (627). The questions concern primarily: "(1) Are women more likely than men to hold pro-environmental beliefs? (2) If so, will this difference be evident among both the general public and those individuals [who have joined] environmental organizations? (3) Will this difference persist when publics and activists are compared in two countries that have opposing viewpoints on the environmental issue of most concern in this study--acid rain? "(Ibid.).

Previous studies on the social bases of environmental concern have shown mixed results in terms of gender. There appears to be some consistency, however, in "women's high perceptions of risk and their protective stance toward the environment. One [theory] is that women have been socialized to be more compassionate, nurturing, and protective than men" (628).

Ecofeminism seeks to combine ecology and feminism into a new movement that values these "closer ties to natural phenomenon" that women are said to have "because of their nurturing and reproductive roles; [in contrast to the] dominant culture[s']...desire to conquer nature through science and technology" (Ibid.). This can be considered biological determinism, however, and is seen by many as problematic. The authors instead "rely on the extensive findings in the sex role socialization literature" to explain what may currently be perceived as inherent gender-specific ways of humans relating to the natural world" (Ibid.). But, the authors also point out the positive implications of ecofeminist values: "In opposition to the coercive and manipulative relation that male science and technology have traditionally maintained to nature is offered a more sympathetic, intuitive, respectful and loving relation--one that recognizes the interconnectedness of all things" (628-629). The awareness of the interrelation of all things is also the "basis for a belief system that is essential to contemporary environmentalism" (629).

This new conception of humanity's relationship to nature is termed (by Dunlap and Van Liere) the New Environmental Paradigm (NEP). This integration of people and nature is "similar

to the notion of 'spaceship Earth.' That is, the natural and human worlds are integrated interdependently in a closed system with finite resources" (Ibid.).

The surveys used in this research included the following items: (which are, according to the authors, "most central to the major dimensions of traditional and modern views of the environment...")

1) The balance of nature is very delicate and easily upset by human activities.
2) The earth is like a spaceship with only limited room and resources.
3) Plants and animals do not exist primarily for human use.
4) Modifying the environment for human use seldom causes serious problems.
5) There are no limits to growth for nations like the United States or Canada.
6) Humankind was created to rule over the rest of nature.

Analysis confirmed that "the sex of the individual had an effect on all of the pro-environmental measures used in this study--protective orientations, perceptions of risk, support for the NEP, and support for a moratorium on acid rain causes. Rather than suppressing the effect of gender, activism and country often interacted with gender so that, with few exceptions, those individuals expressing the highest pro-environmental attitudes tended to be women who were activists and Canadians" (646-647).

The study also concluded that "there appears to be a link between the spaceship earth basis of the NEP and the socialization of women...It appears that female socialization patterns produce attitudes and beliefs that are easily aligned with those expressed by environmentalists" (647). The theory is presented that women tend to personalize moral dilemmas, to see them in terms of relationships, (leading to the interconnectedness philosophy) whereas men tend to see issues "in terms of rules and legal constraints." This leads to a greater emphasis on policy relevant knowledge in men--knowledge which "may not provide as strong a motivation to support environmental causes as does women's socialization" (Ibid.). Men in both the U.S. and Canada "had higher levels of policy relevant information but lower support for environmentalism" than the women surveyed (Ibid.). "Yet, in both countries, women to a greater extent than men participated broadly in environmental politics and believed that government provided them with opportunities to express their view on natural resource issues. It is possible that women's [activism]...reflects high perceptions of the serious risks of pollution and the recognition that all living things are interconnected and must, therefore, be protected" (Ibid.).

Of particular interest to the OCS issue: "Although women do not necessarily participate in natural resource politics in greater numbers than men, those women who are active tend to participate in a wider range of political activities directed at influencing natural resource policy making."

The authors conclude that if gender-specific socialization patterns do not evolve, the differences in "environmental orientations should become even more evident as more women are mobilized to participate in environmental politics" (Ibid.).

Stern, P.C., T. Dietz, and J.S. Black. 1986. Support for environmental protection: The role of

moral norms. Population and Environment. 8.3-4: 204-22.

Public support for environmental protection is presented here as a theoretical model. It is hypothesized as "a social-psychological process involving the activation of moral norms against harming innocent people" (204). Popular ideas about the moral obligations of industry were found to depend on the "awareness of harmful consequences to people (AC), and on ascription of responsibility (AR) for those consequences to industry; government, however, was held to be morally obligated to act even if it was not responsible for the harm" (Ibid.).

The authors use the model to assess the factors that determine changing public opinion on the environment, "the tactics of advocacy groups in environmental policy conflicts, and the process that mobilizes pressure for political causes in the absence of tangible group interests" (Ibid.). They propose that those who support environmental protection see problems not just as "unfortunate situations but as morally intolerable" (205). The two factors which figure into this social-psychological model are the "perception of threat to innocents, and the identification of responsible parties" (Ibid.). While this paper acknowledges that various factors determine behavior, the two most salient factors are awareness of consequences (AC) and "ascription of responsibility (AR) for remedial action, that is, whether a person judges himself or herself personally responsible for the positive or negative outcome" (Ibid.). In other words, the belief that ones's actions can make a difference (AC) and that one is personally responsible (AR) for putting pressure on industry or government to do what is right" (209). This norm-activation model has been used previously to study helping, volunteering and other altruistic behavior, but the theory has also been found to be relevant to individual beliefs and actions regarding pollution and energy use. The authors "conceive of this extended norm-activation theory in the context of a larger social process by which environmental regulation gains public support" (207).

Thus, the model is applied not only to the realm of personal action, but also "social and political action, particularly in the area of environmental hazards" (206). "In short, we conceive the social-psychological processes as part of a dialectic in which events and social forces shape individual moral judgement and in which individual action, operating through social groups, helps bring about social change" (207). Some theories about the tactics of advocacy groups are also suggested here, based on this model.

The study confirms the author's use of the model, in that there does appear to be a moral dimension to public support for environmental protection. "People hold industry to a set of moral norms of the same kind they apply to individuals. However, the norms our respondents apply to government are of a different kind. They seem to believe government has a moral obligation to act to solve certain kinds of collective problems whether or not government is responsible for causing them" (218).

St. George Island; Petition to the Florida Department of Environmental Protection. 05 October, 1996.

This is a formal request for an administrative hearing with the DEP, concerning Coastal Petroleum Co.'s permit for exploratory drilling. The St. George Island Civic Club also protests the failure of Coastal and the DEP "to give the people of Franklin County the opportunity to tell the Department how and why we are totally against oil drilling for our coastline, and that given time, we can show you an almost unanimous, clearly stated, and resounding local negative opinion toward offshore drilling in our backyard. We have yet to hear of anyone but Philip Ware [President of Coastal] who is for the experimental drilling." The St. George letter goes on to say that they feel Coastal tried to "sneak this permit through the back door of the DEP. Coastal Petroleum refus[ing] to place the NOTICE OF INTENT TO ISSUE PERMIT in the legal section of the Apalachicola Times" (emphases in original). The Sierra Club filed the legal notice to which they responded, "fortunately for us" according to the St. George Club.

This petition gives details of local concerns over drilling, which they "see as a direct threat to our ecological custodial duties, and our continued existence in this place that we call home."

Study targets offshore habitats. 04 March, 1994. E & P Environment: 5(5).

Using a small research submersible six offshore exploratory drill sites have been surveyed in a project funded by the Minerals Management Service. The study of the habitat impacts of offshore drilling was done in a variety of environments and water depths. The project revealed a "wide variability of impacts from site to site...," with time being the "single most important factor determining the nature of habitat recovery." Older sites were reported as being "relatively pristine." And "sites with the most debris, including open boreholes, attracted the 'most abundant and diverse fish and fauna'." One of the sites (four years old) had a debris and contaminant field of approximately four acres.

Testimony June 23, 1994 R.E. Galvin Presdent (sic) Cevron (sic) USA Production Company House Natural Resources/Energy and Mineral Resources Oversigt (sic) and Investigation Oil and Gas Industry Oversight. Federal Document Clearing House Congressional Testimony: Federal Document Clearing House, Inc.

The statement by Mr. Galvin was made on behalf of the American Petroleum Institute (API) concerning the state of the domestic offshore oil and gas industry. (The API "represents approximately 300 companies involved in all aspects of the oil and gas industry.") In the statement he discusses the "increasing energy needs of the U.S. economy," "the status of the domestic offshore oil and gas industry, and its ability to satisfy those energy needs," and "how restrictions on access to offshore areas and regulatory policies are limiting our ability to satisfy America's future energy needs."

Testimony May 10, 1994 Honorable Dan Miller House Appropriations/Interior and related agencies FY 95 Interior appropriations. Federal Document Clearing House Congressional testimony: Federal Document Clearing House, Inc.

Dan Miller's statement was made as representative of the 13th Congressional District of Florida, "which borders the Gulf of Mexico, and consists of lower Hillsborough, all of Manatee and Sarasota, and northern Charlotte counties." Here he supports the continuation of the current drilling and leasing moratoria on the OCS "...south of 26 degrees north latitude (south of Naples), the Straits of Florida and the Florida Keys, and for the leasing moratorium from Naples north to Pensacola."

The reasons given for the state of Florida's anti-drilling stance, according to Miller, are: "...routine pollution, destruction of wildlife and habitat, onshore pollution; and the risks of major accidents--all of which are incompatible with Florida's coastal waters and ecosystem. Florida's tourism and fishing industries are dependent upon a clean and healthy coastline."

Miller concludes with stressing the "important and necessary environmental studies being conducted to fully assess the risks of drilling activity in the outer continental shelf. Until these studies have been completed, we cannot accurately estimate the potential hazard."

Testimony October 26, 1993 David Colson Ambassador Senate Foreign Relations Pending Treaties. Federal Document Clearing House Congressional Testimony. 26 October, 1993, sec. Capital Hill Hearing Testimony.

The Cartegena Convention is discussed here as it relates to the marine environment of the Gulf of Mexico. Some of the items include: taking of marine mammals for the purpose of display, in connection with disposal of offshore drilling rigs, and as incidental catch related to fishing operations. It is stated that: "the United States has actively promoted environmental impact assessment internationally."

Tracy, Lloyd M. October 1992. Accidents Associated with Oil and Gas Operations: Outer Continental Shelf 1956-1990. OCS Study/MMS 92-0058. U.S. Dept. of the Interior, Minerals Management Service: Herndon, Va. 325 pp.

Gulf of Mexico OCS Region, Pacific OCS Region and Alaskan OCS Region are documented individually here, in terms of the history of accidents and spills. The final section IV is comprised of graphs of data pertaining to accidents associated with OCS operations.

Blowouts, explosions and fires, pipeline breaks and leaks, significant pollution incidents, and major accidents are all recorded here. Brief details, locations, pollution results, injuries and fatalities are all charted. This amounts to a lengthy account of incidents, some of which were serious.

U.S. Dept. of the Interior, Minerals Management Service. February 1998. Scoping Report for the Destin Dome 56 Unit Development and Production Plan. U.S. Dept. of the Interior, Minerals Management Service, Gulf of Mexico OCS Region, New Orleans, La. 89 pp.

The National Environmental Policy Act (NEPA) OF 1969 requires that all Federal agencies integrate the natural and social sciences in an integrative approach to environmental protection. NEPA also requires an environmental impact statement (EIS) on any major Federal action that can significantly impact the environment. "Scoping" is a term referring to the scope and significance of major issues associated with Federal action "through coordination with Federal, State, and local agencies; the public; and any interested individual or organization prior to the development of an impact statement. During the scoping process, information that may pertain to the proposal, as well as any alternatives to the proposal, is sought from various sources." This process also eliminates unnecessary or irrelevant issues.

MMS decided to issue this scoping report as part of the EIS process. The EIS process will culminate with the preparation of a final EIS and a decision to "approve, disapprove, or approve with modification the proposed activities." This report identifies 217 specific items of concern, approximately 85 percent of which were expressed as comments during the meetings in Pensacola.

Categories addressed in the scoping report are: Inspection, safety and enforcement; liability; marine mammals; sea turtles; water quality; staff and data sources; positive effects; cumulative impacts; Mississippi, Alabama and Florida; pre- and post-production structures, operations, infrastructure, and pipelines; geology; oil spills; physical oceanography; tourism; socioeconomics; discharges; visual impacts; USEPA/air/water; trash; waste disposal; fisheries; and, transportation and support vessels.

Also included are various written comments, including a letter from the National Park Service, which holds over 2 million acres in the fragile Gulf Islands National Seashore (GUIS)area. NPS official Sheila Colwell urges MMS to consider zero discharge regulations in order to offset some of the environmental hazards and routine pollution associated with OCS activities. She states that, "Routine marine and atmospheric discharges that typically accompany offshore drilling and production activities, as well as the threat of a catastrophic accident, pose potential for damaging resources enjoyed by GUIS visitors." Besides letters of vehement protest by residents, business interests, state and county government and officials, there are carefully articulated letters of warning against drilling by geologists, oceanographers and other scientists--who carefully list and explain the threat to the Panhandle ecosystem, beaches and Gulf waters.

U.S. Dept. of the Interior, U.S. Geological Survey, Biological Resources Division. 1997. Characterization and trends of recreational and commercial fishing from the Florida Panhandle. August 1997. Continental Shelf Associates, Inc. USGS/BRD/CR--1997-0001

and Minerals Management Service, Gulf of Mexico OCS Region, New Orleans, La, OCS Study MMS 97-0020. 122 pp. + app.

The fisheries of the continental shelf offshore of the Florida panhandle were studied as part of overall environmental impact assessment prior to oil and gas development. Objectives of the research were to:

1) determine the number of marine recreational and commercial fishing trips initiated from the Florida Panhandle;
2) determine the fishery gear-type and the species groups targeted for the trips;
3) determine the location(s), including but not limited to features such as natural live bottom or artificial reefs, where fishing was performed during the trips ;
4) describe trends in recreational and commercial fishing as related to the first three objectives; and
5) identify any relationship(s) between recreational and commercial fisheries initiated from the panhandle and outer continental shelf oil and gas structures within the Gulf of Mexico (v).

Existing databases were used to figure characteristics and trends of Florida panhandle fisheries, using annual dockside weights and values of fish and invertebrates landed between 1983 and 1993 in Escambia, Santa Rosa, Okaloosa, Walton, Bay, Gulf, Franklin and Wakulla counties. Data on commercial effort (number of trips) was available from 1986 to 1993. Gear types used in commercial fishing and recreational survey data were obtained for the 1983-1993 period. Data from recreational and commercial data sets were aggregated into species groups prior to analyses. Commercial gear types included gill nets, purse net, trawl, hook and line, trap and other. Trends in pounds landed, effort, dockside price, nominal value and dockside value were analyzed using data from all counties combined for each species group. Additionally, data was post-stratified geographically by county.

Headboats (recreational) experienced a decline in catch and effort over the 1986 to 1993 period. Inland recreational fishers also experienced a downward trend in catch and number of trips over the study period. "Inshore fishing areas produced the highest recreational catches and effort over the study period" (vi). A significant decline was registered in numbers of fish caught by private boat anglers over the study period (1983-1993). Franklin County consistently produced the highest number of commercial landings due to the shrimp and oyster catch--which are also "the most valuable commercial entities" (vi).

Trends in commercial fishing differed according to species group. During the study period baitfish effort and dockside values increased; reef fishes showed a decline and a later increase in landings; Coastal pelagic species showed no significant trend in landings; Oceanic pelagic landings increased exponentially from 1983 to 1986 then leveled off from 1987 to 1993. Demersal fish landings decreased; Invertebrate landings declined (shrimp, oysters and crabs.)

Conclusions regarding the relationship of fisheries to oil and gas structures were hampered by the fact that none of the fisheries data gave exact locations. Additionally, there is a continuing data gap due to lack of cooperation of fishers in divulging exact locations of their catches. "Landing data alone were insufficient to track the actual fishing areas used by panhandle anglers" (Ibid.).

Some research indicated, however, that commercial reef fishers with larger boats from Escambia and Okaloosa counties "fished almost exclusively around oil and gas structures in the waters of adjacent states" (69). And, according to this report the trend is likely to continue.

Overfishing, regulatory measures and environmental degradation are listed here as contributing to the "many causes" of decline in fisheries.

U.S. Dept. of the Interior, Minerals Management Service. 1995. Gulf of Mexico Sales 157 & 161: Central and Western Planning Areas. Final Environmental Impact Statement, Volumes I & II. November 1995. OCS Study/MMS 95-0058. Gulf of Mexico OCS Regional Office, New Orleans, La. Volume 1: 300 pp., Volume II: 373 pp.

This final EIS is for the regions of the Gulf stretching from Alabama waters (adjacent to the Eastern Gulf, Florida waters) to the southernmost coast of Texas. Broad topics included are: Proposed actions and alternatives relating to Central & Gulf sales; mitigating measures; action scenarios analyzed; significant issues [in terms of environmental and socioeconomic impact]; impact conclusions; coastal resources; offshore, and other resources.

U.S. Department of the Interior, Minerals Management Sevice. 1992. Outer Continental Shelf Natural Gas and Oil Resource Management Comprehensive Program 1992-1997. Final Environmental Impact Statement. OCS Study MMS 92-0004. Gulf of Mexico OCS Regional Office, New Orleans, La. Volumes I-III.

Environmental impacts that could result from implementing a nationwide program for the sale of natural gas and oil leases within the OCS from mid-1992 to mid-1997 are described in these documents. The area in question ranges from the Arctic to the straights of Florida.

The basic proposal is designed to persuade the Department of the Interior to hold lease sales in areas bordering the Gulf of Mexico, along with other OCS areas. Additionally, there are alternative plans covered in the EIS: No action [leasing]; slow the pace of leasing; exclude certain planning areas; exclude certain coastal areas [i.e., the eastern Gulf]; and, exclude certain seafloor features [e.g., coral outcrops and submarine canyons].

The proposed leasing schedule or an alternative as described here may extend over a period of 40 years, according to this report. Among the activities analyzed for environmental impact in these documents are: installing and operating offshore platforms; natural gas and oil transportation pipelines; and onshore support facilities; and, transporting oil using ships. Admittedly, there are many unknowns involved in any projection of this type, such as amounts and locations of these activities.

Also detailed in this proposal are "principal concerns about possible program side effects" including: spills; ecological issues, e.g., impacts on air, water, animal species, and shorelines; economic and social issues, e.g., tourism, fishing, recreation, aesthetics, land use and public

facilities. Potential impacts are covered under the two categories of 'routine or permitted activities' and 'accidental events'. "No permanent degradation of water quality is expected to result from implementing the proposal." However, this sweeping statement does not address consistent detrimental effects during production. "No substantive...[or] permanent change..." is expected in the above-mentioned categories, in regard to environmental impact, according to this report.

U.S. Dept. of the Interior, Minerals Management Service. 1987. Analysis of indicators for socioeconomic impacts due to OCS oil and gas activities in the Gulf of Mexico, Year II. Volume I. July 1987. Prepared by Resource Economics & Management Analysis, Inc. OCS Study/MMS 87-0040. U.S. Dept. of the Interior, Minerals Management Service, Gulf of Mexico OCS Regional Office. 106 pp.

Impacts associated with oil and gas production on Gulf of Mexico coastal communities fluctuate--reflecting levels of exploration and development. "The erratic nature of impacts from OCS activity..." has necessitated this research, the primary purpose of which is to develop a computer model that MMS personnel can use to analyze changes in OCS activities, and the resulting future socioeconomic impact estimates. The computer program is called SAM, Socioeconomic Assessment Model.

SAM is based on:

1) exclusive use of nonsurvey information;
2) industry detail at the three and four-digit Standard Industrial Classification (SIC) level;
3) socioeconomic assessments at the multicounty/parish level;
4) assessment measures that include industry output, income, employment, and population;
5) full editing and information updating capabilities; and
6) full use on the MMS Perkin-Elmer 3500 computer system.

This volume contains a discussion of the objectives and conditions necessary for this project, based on the requirements of MMS.

U.S. Dept. of the Interior, Minerals Management Service. 1987. Analysis of indicators for socioeconomic impacts due to OCS oil and gas activities in the Gulf of Mexico, Year II. Volume II. July 1987. Prepared by Resource Economics & Management Analysis, Inc. OCS Study/MMS 87-0041. U.S. Dept. of the Interior, Minerals Management Service, Gulf of Mexico OCS Regional Office. 148 pp.

The Socioeconomic Assessment Model (SAM) designed for MMS analytical purposes is described in greater technical detail in this volume. "A nonsurvey regional input-output model was selected as the basic analytical structure for SAM," which contains four components or modules. These are: an input-output component that generates industry output, income and employment

effects for each area; a demographic/population component; data base component; and an output component.

One section of this volume explains the formulation, development, linkages of the I/O components. In addition, the other components are detailed in "Structure." The next section, "Operations" is devoted to instructions on program operations. The final section, "Commands" provides a quick reference guide to commands and options of SAM. The appendix contains SIC definitions, input-output sector definitions, and software documentation.

U.S. Dept. of the Interior, Minerals Management Service. 1987. Analysis of indicators for socioeconomic impacts due to OCS oil and gas activities in the Gulf of Mexico, Year II. Appendix to Volume II. July 1987. Prepared by Resource Economics & Management Analysis, Inc. OCS Study/MMS 87-0042. U.S. Dept. of the Interior, Minerals Management Service, Gulf of Mexico OCS Regional Office. 236 pp.

This lengthy appendix gives the technical documentation for the Socioeconomic Model Program (SAM), which is designed for the Perkin-Elmer 3500 computer system. The main program, along with two subroutines, is given here.

U.S. Dept. of the Interior, Minerals Management Service. Methodology Evaluation Report (Deliverable Two): Analysis of Indicators for Socioeconomic impacts due to OCS oil and gas activities in the Gulf of Mexico, Year II. 01 April, 1986. Prepared by Resource Economics & Management Analysis, Inc. 28 pp.

This report evaluates the main methods for estimating indirect economic effects of OCS oil and gas activities. This includes econometric models, input-output models, and economic base models. These models are analyzed based on MMS requirements for socioeconomic impact studies for the Gulf of Mexico.

MMS specifications for the selection of an acceptable model requires the provision of: "indirect economic impacts on income, employment, and population, at a minimum, for multicounty areas; industry detail at the three and four digit S.I.C. code level, whenever appropriate; and that the model be constructed entirely from secondary data sources that are consistent across time and space" (abstract).

In conclusion, the input-output model is considered the best tool for tracing impacts through an economic system, even though there are shortcomings when dealing with small area applications. According to the authors, "the choice of the 'best' appropriate current technique represents a trade-off between inherent problems of a methodology and its benefits with respect to the particular problem at hand" (Ibid.).

U.S. Dept. of the Interior, Minerals Management Service. 1986. Indicators of the direct economic impacts due to oil and gas development in the Gulf of Mexico: Exhibits/Volume II --Results of Year I. January 1986. Prepared by Centaur Associates, Inc., OCS Study MMS 86-0016. Gulf of Mexico OCS Regional Office, New Orleans, La.

The information in this volume includes the "direct primary effect and secondary effects exclusively for offshore oil and gas activities" (i). The analysis and findings are for the Gulf of Mexico region and concern economic impacts of oil and gas exploration, development and production.

Personnel and financial records of nine major offshore producers (Amoco, Exxon, Odeco, Chevron, Gulf, Shell, Conoco, Mobil and Texaco) provided the data used in this analysis. The data includes: employment profiles, residence distribution of employment, and the expenditure patterns for various oil and gas exploration and production activities" (A-10). This data will be used to make estimates of employment and wages within the oil and gas support industries, leading to the "first detailed and comprehensive data base on the coastal county impacts of OCS oil and gas leasing in the Gulf of Mexico" (Ibid.).

This volume consists exclusively of exhibits: tables, and various types of charts, which convey data such as: offshore/onshore job descriptions; number of offshore wells; offshore oil, gas, and energy production; drilling activity; and, schematic representations of economic impacts.

U.S. Minerals Management Service: New rule allows burning of liquid hydrocarbons. 27 May, 1996. The Oil and Gas Journal. 94(22): 1.

The MMS has "issued a rule changing its rules" restricting flaring or venting of gas. Regulations now allow the burning of liquid hydrocarbons. MMS spokesman said, "Requests to burn liquid hydrocarbons are increasing, and we determined that we need to provide regulatory guidance."

Valparaiso, Florida. Resolution No. 03-02-10-97. 10 February, 1997.

This City resolution seeks "to note the potential impact of offshore oil and gas drilling on the economy and quality of life of Valparaiso and the Florida Panhandle region, to oppose such drilling operations in the Gulf of Mexico off the Florida Panhandle coast, and to support legislative efforts for equitable treatment of offshore oil and gas drilling lease owners."

Valparaiso states that offshore drilling is incompatible with "the quality of our environment, especially the beaches that are regularly rated as the 'Best in the World', it is also incompatible with our economy and way of life..." The resolution also urges Florida's legislators to "aggressively seek a Presidential Executive Order [for] a moratorium ...," in addition to supporting federal

efforts to buy back existing leases, "fairly compensating" leaseholders; thereby protecting the interests of Panhandle residents as well as the oil industry.

Wade, William and Jay Plater. 10 November, 1997. Mobile Bay enjoying banner year despite production problems; off the coast of Alabama; includes related article on exploration technologies. The Oil and Gas Journal. 95(45): 29.

"Sour, high-temperature, high-pressure deep Norphlet gas..." has inherent challenges involved in drilling and production. Operators in Mobile Bay on the Alabama coast claim success in surmounting these obstacles. New production rates have increased by 40% in 1997 over 1996 figures.

High production output rates are expected to be maintained in the future by starting production from the Destin Dome area, 22 miles south of Pensacola, FL. Although, in 1997, Unocal and Chevron's discoveries in blocks 861, 864, 820, and 904 on the Mississippi side of the Mobile OCS are the "most dynamic area of the Norphlet..." Gas from these tracts are conveyed by 10-in. Chandeleur pipeline to Chevron's Pascagoula refinery and from there to the Koch Gateway Interstate pipeline.

"Several gas wells have been damaged or lost during either completion or start up." Norphlet gas is a "hot, sour, high-pressure, corrosive mixture of methane and free water. Handling it is difficult, dangerous, and expensive." Problems from "hostile downhole challenges" and superpressurized reservoirs include: diamonoid plugging, scaling, and water coning. Several wells "...have produced water problems (so much water is intruded that the wells are either plugged and abandoned or can produce at only reduced rates)."

Chevron hit 'pay dirt' with three of four exploratory wells in the Destin Dome geological structure, and filed a development plan in 1996. Production is slated to begin in 2000. This will be the first natural gas production form the Destin Dome area in the eastern Gulf of Mexico. Production is estimated to yield 115 MMcfd in 2000, peaking at 300 MMcfd in 2003 until 2010. By 2003, Coastal Alabama production is expected to be in decline.

3D seismic and computer-aided exploration (CAEX) technologies have greatly enhanced the production yields of the Norphlet, even though the largest reservoirs were discovered before 3D was widely used. Previously, conventional 2D seismic functioned only to supply information on structural positioning. The fast computing of CAEX combined with 3D imaging of reservoir structure allows for precisely pinpointing bottomhole locations, and sophisticated side-tracking.

Wall, Glenda. 1995. General versus specific environmental concern: A Western Canadian case. Environment and Behavior. 27(3): 294-316.

Using results from a survey of residents of Edmonton, Alberta, Canada, the author studied the effects of socioeconomic factors on the level of general and specific environmental concern.

General concern related to how a person felt about the earth's environment as a whole. Specific concern related to environmental issues that were present in Edmonton at the time of the survey. Wall thought that specific environmental concern would vary with class. Supposedly, if asked whether protecting the purity of a stream was worth losing hundreds of jobs created by a paper mill, the person in the worst economic position would answer differently than the person in a better position. Wall found that "education was a significant predictor of general and specific environmental concern in Edmonton, Alberta" (309). Political-party identification was also a significant predictor. Surprisingly, age, family income, and political ideology were not significant factors even though "[r]eviews of empirical evidence in the 1980s concluded that age, education, urban residence, and political ideology were the only variables that consistently predicted environmental concern" (297). Wall concludes that her "findings are in line with Morrison's (1986) suggestion that environmental concern is 'trickling down' the class structure and becoming diffused throughout the population" (310).

Warshall, Peter. 1995. Crude Awakening: The oil mess in America--Wasting energy, jobs and the environment. [Review of *Crude Awakening: The oil mess in America--Wasting energy, jobs and the environment.*] Whole Earth Review. 86: 71.

This reviewer calls *Crude Awakening* " well-documented whistle-blowing; environmental research at its best." The book highlights "the oil industry's sloppy technology and careless managerial efforts...[and] the industry's disgusting environmental abuses." Also contained in the research is a detailed explanation of "...perverse U.S. tax incentives that encourage credible waste of the crude oil left in the ground," according to Warshall.

Some of the examples given here of problems discussed in *Crude Awakening* include:

- As a result of oil leaks and inefficiencies, America leaks more oil than the entire country of Australia consumes.

- According to the EPA, oil and gas wastes alone exceed the combined total of all other categories of municipal, agricultural, mining, and industrial wastes...[with] as much as 57 million tons of oil field wastes disposed of in landfills annually.

- The cost of plugging and clearing up after the industry's 1.2 million abandoned oil wells is still unknown...Texas estimates it will spend $300 million.

- According to the General Accounting Office, 16,000 oil spills occurred in navigable waters in 1988, amounting to more than 46 million gallons of oil. Further, the routine release of oil and grease in 'operational discharges' from barges and tankers may exceed the annual amount of oil spilled each year.

Waste management plan, Volume XVIII. May, 1996. Destin Dome Asset Management Team. Chevron U.S.A. Production Company, Gulf of Mexico Business Unit (GOMBU). New Orleans, La.

The proposed development of Destin Dome 56 Unit will generate waste from several different sources. This plan was prepared to describe how those wastes generated will be managed. The stated intent of the document is to "promote the minimization of wastes (sic) streams generated from the project and to insure that all waste streams generated from the project are effectively managed in compliance with applicable laws and regulations."

Major components of the plan consist of: flowcharts to assist with the categorization of wastes; Alabama waste regulations; offshore development waste handling protocol; and a listing of licensed disposal sites that could be considered for the handling of wastes generated by the project.

In the foreword to this document Chevron states its intention to "reduce the volumes and toxicity of any waste we generate" and cites source reduction, and reuse/recycling as goals, with disposal to be used as "last choice when we have exhausted all other economic possibilities." The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) makes Chevron responsible for many items after they are sent for disposal.

Topics covered in detail include: regulatory overview; waste classification; waste generator facilities; waste disposal facilities; record keeping and reporting; waste information sheets; waste minimization goals; employee awareness program; and waste management review procedures. Appendices cover various regulatory restrictions and guidelines.

Why mobile drilling units will be able to moor in 10,000 foot depths. April, 1997. Offshore, sec. Deepwater mooring: 32.

Mooring projects and installation of mobile offshore drilling units (MODU) are discussed here. With the ability of MODU's to remain on site and drill year round the question of risk factors must be addressed in terms of surviving tropical storms and hurricanes. (MODU's are typically abandoned at the approach of severe storms.) Generally, "...operating and risk factors must also be addressed in Gulf of Mexico drilling operations, not the least being the overall economic and environmental impact of a potential blowout or riser loss due to a drive-off or emergency riser disconnect. This factor cannot be over-emphasized in light of the high well pressures and flow rates currently being experienced or anticipated at Gulf of Mexico deepwater tracts. A well loss could lead to an event that dwarfs the environmental impact of the Valdez incident and creates a critical political scenario that could impact all deepwater development." Deepwater MODU deployment also "...requires considerable engineering and planning to ensure a safe operation..."

Wikle, T.A. 1995. Geographical patterns of membership in U.S. environmental organizations. Professional Geographer. 47(1): 41-48.

The purpose of this study is to identify the spatial patterns of environmental group membership. The author examined the membership rolls of ten nationally based, environmental organizations and found the highest concentrations of members in counties in the Northeast, along the Pacific Coast, and in the Rocky Mountain states. At the state level, the Northeastern states, the Pacific states, and Colorado showed high densities of members. The South, with the exception of Florida, had low concentrations of members. Wikle concludes that high membership levels are associated with "predominantly upper-middle class residents, significant outdoor recreation opportunities, or conflicts tied to threatened resources" (47).

Williams, David C. and Jeffrey A. Zinn. 1977. Onshore impacts of Outer Continental Shelf oil and gas development: Source Book, prepared for the American Society of Planning Officials. Conservation Foundation: Washington, D.C. 89 pp.

This document is a primer of info relating to oil and gas drilling activities. It describes: facilities, equipment, onshore impacts, and closes with an exhaustive reference section listing other pertinent sources of information.

The section dealing with activities and onshore facilities describes: geophysical surveying; exploratory drilling; development drilling and production; temporary service bases; permanent service bases; repair and maintenance yards; general shore support; steel platform fabrication yards (and service bases); concrete platform fabrication yards; pipelines and landfills; pipeline installation service bases; pipe coating yards; partial processing plants; gas processing and treatment plants; marine terminals; refineries; and petrochemical complexes. The items described include concise summaries, diagrams and line-drawings.

"Onshore impacts of offshore development" lists: methodologies for estimating impacts; environmental impacts; socioeconomic impacts; and fiscal impacts. After a brief summary of each item, a list of "sources" is given which cites examples (or models) of each subject.

The final section provides a lengthy annotated bibliography of a variety of reference materials dealing with offshore drilling issues. It covers Federal, State and local sources as well as audio-visual, periodicals, "less-technical" readings, National public interest organizations, and Environmental Impact Statements, among other source materials.

Zimmer, M.R., T.F. Stafford, and M.R. Stafford. 1994. Green issues: Dimensions of environmental concern. Journal of Business Research. 30(1): 63-74.

This article is about finding the "green" consumer, and marketing products to the expanding green market. The authors surveyed 118 juniors and seniors enrolled in a marketing course in a Southeastern university to determine the green issues important to consumers. Those issues are concern for waste, concern for wildlife, concern for biosphere, concern for popular issues (climate

change, erosion, overpopulation, citizen participation), concern for health, energy awareness, and concern for environmental technology.

"Various studies" indicate that approximately 75% of Americans consider themselves environmentalists. And the Marketing Science Institute declares that this under-researched, and as yet largely untapped consumer base is now at the top of their agenda. Previous research suggests the environmentally concerned consumer is most likely young, highly educated, earning a higher income, living in an urban area and politically liberal. However, these authors mention that there is a major gap in the literature about the environmentally concerned consumer. He or she may no longer be as young, educated, and well off as assumed.

The value of this article may lie in its framework for research concerning public interest and the environment. "Cooperative environmental activity in the manufacturing sector" is mentioned, the "development of scales to measure constructs related to environmental concerns"; and recent work on "demographic descriptors of concerned segments" are some of the research issues addressed here, in addition to the basic purpose of the study. "To delineate the green issues that are of current importance to consumers and to provide a basis from which future research can begin to develop the tools needed to identify and segment the growing green market" is the focus here. And, as the authors state: "certainly...oil companies would like to know more about consumers who are energy-aware."

NEWS AND ONLINE SOURCES

This portion of the annotated bibliography has been prepared as an impartial record of current, published thinking among Eastern Gulf Region residents, legislators and environmentalists--in addition to giving a continuing account of government and industry spokespersons, scientists, and scholars on the controversial issue of offshore drilling.

A company that's hardly a good citizen. 17 February, 1997. The Tampa Tribune, Editorial, sec. Nation: 12.

This article pulls no punches in criticizing Coastal Petroleum. They are accused of not being "good corporate citizens" for their plans to drill 10 miles off Florida's coast: "an exercise that would forever ruin fertile marine fishing grounds and sandy beaches." According to the Tribune, the "bullying attempt" by Coastal to drill is "an exercise in ruthless greed."

The EPA's study of Coastal's proposed drilling site estimated a maximum spill at 42 million gallons--which could "travel 29 miles within 24 hours." Local fisheries are threatened by not only spills, but drilling wastes, and associated pollution from production, according to this report. This editorial goes on to say that, "many people suspect Coastal is not as interested in excavating oil as in snagging a hefty settlement from the state."

The Florida DEP granted Coastal a drilling permit, but also granted a request by environmentalists that an extensive review would be required in an administrative hearing. "An administrative hearing is essentially an appeal of a state decision." Coastal's appeal to bypass the hearing was overturned last week. But, in regard to continuing litigation, "Coastal is holding the state hostage over an ignorant state decision made half a century ago." The Governor and the Cabinet have tried previously to require a $1.9 billion bond against possible damages, but a district court overturned the demand. A new bill is being supported by Florida legislators that would give the state the power to legally require surety bonds as a prerequisite to drilling.

Note: The president of Coastal makes a rebuttal to this editorial, which follows--see under "Ware, Phil."

All the help they can get. 07 July, 1997. Sarasota Herald-Tribune, sec. Perspectives: 2F.

The deaths of 158 endangered manatees along the southwest Florida coast is called here the "year's most famous marine mystery." It has been determined that the cause was red tide, rather

than some mysterious new virus or malady. Only about 2600 of the animals remain as counted during aerial surveys earlier in the year.

There was speculation that various sources of pollution had been the catalyst for the manatee deaths, however, "researchers have been unable to link the formation of red tide to any man-made cause such as pollution, undersea oil drilling or other events." There is a strong belief that contaminated run-off contributes to the red tide phenomenon when it occurs in shallow, nearshore waters. "Now it is up to humans to remedy what has never been a mystery--the cause of the continuing pollution of the manatee's home, the rivers and estuaries of the Florida coast."

Armbruster, Edward D. 20 October, 1997. There are options to offshore drilling. Pensacola News Journal, sec. letters: 7A.

This letter is in response to an earlier letter to the editor, "If we don't drill for it here, where will the energy come from?" by Terry Mead of Pensacola. Mr. Armbruster opens with declaring that he disagrees with Mr. Mead, but also says, "First, let me state that I am not an environmentalist. In fact, I am opposed to all those things that the environmentalists take beyond the realm of common sense."

Armbruster goes on to express his hopes for the phasing out and elimination of fossil fuels: "It is difficult for me to believe that people cannot see the simple solution of changing our source of fuel...We have known for 50 years that oil-base fuels produce soot and smog. We also know that gasoline, diesel and oils pollute our soils. What if we could eliminate this source of fuel, put the farmers of America to work and start a new era of alcohol production plants to produce fuel for the trucks and cars of this country?" Details for this plan are given here, such as Congressional intervention to "outlaw gasoline engines," and employing farmers to grow grains on a large scale for fuel, and building alcohol production plants across the country. According to Armbruster the immediate benefits would include less air pollution, and freedom from foreign oil dependency. This plan would also, "keep our dollars at home, employ farmers, employ [former] oil workers ...eliminate drilling offshore and perhaps lower the number of land-based oil wells."

"Personally, I agree with Rep. Joe Scarborough and Sen. Connie Mack. I think it's time to find alternative fuels and end the dependency on oil and all the side effects we suffer from as a result of dependency on oil...We can have the best of both worlds and a cleaner, healthier environment and cleaner air to breathe."

Armstrong faults OCS moratoria as "too general, too overriding." 20 September, 1993. Inside Energy/with Federal Lands, sec. OCS: 13.

Floridans who support the ban on OCS oil and gas exploration are misinformed, according to an assistant secretary for the Interior Department, in a recent Senate Energy Committee meeting. He said "banning OCS oil and gas exploration is 'a triumph of bad policy and politics over

planning.'" Armstrong defended the development in Florida waters, saying, "any facilities associated with the Chevron project would not be close enough to shore to be seen from the beaches." J. Bennett Johnston of Louisiana, Senate Energy Committee Chairman, also complained about Florida's "enlistment of Congress in restricting certain new development off the state's coast."

Ash, Jim. Crucial decisions loom in drilling battle. 03 Sept. 1996. Pensacola News Journal:1A, 8A.

The Aug. 16 decision by state regulators to grant a drilling permit to Coastal Petroleum (at a site near St. George Island "cherished for its state park and public beaches," and Apalachicola Bay "the unofficial oyster capital of the Deep South") has resulted in a challenge being issued by the Sierra Club Legal Defense Fund.

Coastal Petroleum and the state of Florida are currently "wrangling" over whether the oil company will have to "endure more public hearings." No court dates are set for the Sierra Club challenge. Drilling opponents say that allowing Coastal to drill would set a dangerous precedent--states that have supported FL's resistance to development "will refuse to support a moratorium...[on FL offshore leases] if Florida caves in to Coastal Petroleum in inshore waters."

"Since 1947, Coastal has spent more that $10 million on lawyers and only $670,000 on oil exploration." David Guest, attorney for the Sierra Club, says Coastal's real motivation is to pressure the state into buying back the leases. "This is extortion," according to Guest.

The current five-year moratorium on new leases doesn't affect the existing 232 leases between Pensacola and Sarasota. And "there is growing evidence that those tracks contain pay dirt." Although Chevron is presently "in a holding pattern," a well could be in place at the site 29 miles off Pensacola "within three years if permits are granted".

Amy Belanger of GCED has met with President Clinton's chief of staff Leon Panetta asking that the drilling ban promise made in Pensacola four years ago by then-vice presidential candidate Al Gore, be honored. According to Belanger, "the mere act of drilling an exploratory well ...[releases] 2,000 pounds of toxic muds into the surrounding water." "There is no such thing as a safe...offshore rig. That is a public relations lie." As for the risk to Florida's tourism industry: " A major spill could drive visitors away for years...the $200 million spent to buy back the leases near the Florida Keys represents only two-and-a-half days of revenue generated by tourists."

Also quoted were Bob Geist, spokesman for U.S. Rep. Porter Goss, R-Southwest FL., and Chevron USA's Bobby Boone from New Orleans.

Barge hits oil rig off Louisiana. 16 February, 1998. The Associated Press/AOL.

A barge and oil platform burst into flames when they collided during stormy weather. Eight workers were injured. The platform fire burned for more than four hours, although the blaze on the

barge was "quickly extinguished." The accident happened in Southwest pass, 15 miles south of the mouth of the Mississippi River. Injuries consisted of smoke inhalation and severe abrasions. All of the workers on the platform were forced to flee--two in a helicopter that was on the platform and four in an escape capsule they launched into the high seas and fog. The capsule was picked up a short time later by a passing boat. No report was available of exactly what was burning aboard the rig.

This was the second day of accidents on the Gulf. Besides a barge and bridge collision in Lake Pontchartrain, a tugboat sinking and a fishing vessel grounding--the day before, the freighter 'Manzur', hauling chemicals, caught fire. Coast Guard fire fighting boats were called. In addition, the Coast Guard was said to be working with the ship's owners "to determine how to dispose of any hazardous waste."

Barge owners fined $7M for spill. 25 September, 1997. The Associated Press/Prodigy.

Eklof Marine Corp. have admitted criminal negligence and agreed to pay $7 million in fines after Rhode Island's worst oil spill. A barge and tug were involved in the spill. Eklof, "its president and two affiliates admitted the barge and tug involved were improperly equipped to navigate the stormy waters." They also admitted that winter storm warnings were ignored--contributing to the incident.

The fines are still subject to approval by federal and state courts. If they are enforced as planned they would be the largest criminal fines ever paid in New England.

One of Eklof's owners, Doug Eklof, "expressed 'profound regret' over the spill." "...It is our sincere hope that the actions we have taken since the accident occurred will not only help to restore the ecology of the area, but will also ensure that such a tragedy will not occur again," he said.

"The January 1996 incident occurred after the unmanned barge North Cape ran aground on Moonstone Beach in South Kingstown, spilling 828, 000 gallons of home heating oil. The tug Scandia had caught fire, forcing its crews to jump into 30-foot high seas in a winter storm. They were rescued by the Coast Guard.

$3.5 million of the settlement is slated for the federal government for wetlands protection, with another $3.5 million going to Rhode Island state government. An additional $1 million fine will be assessed if the company "does not complete remedial safety measures." Eklof is also to pay $1.5 to the Nature Conservancy to purchase land around the spill on Moonstone Beach, "which is near a chain of ecologically fragile freshwater ponds where fish lay eggs." Civil damages are still pending for payments to fishermen and lobstermen. Attorney General Jeff Pine said these amounts could be much higher than the criminal fines.

Total damages from the spill are assessed at $10 million. "Damage to lobsters, clams, birds and other wildlife is still being assessed." The company has already reimbursed Rhode Island over $1 million in cleanup costs and $2 million for federal cleanup.

Barnes, Brad. 22 May, 1997. Drilling opponents few, but determined: Mobil permit hearing a sham. Pensacola News Journal, sec: 1A.

The hearing to review Mobil Exploration and Producing U.S. Inc.'s request for an air emissions permit drew a small turnout in Pensacola's Saenger Theater. Local sentiment seems to be that the hearing process is merely a token review, since the EPA has already said "that it intends to issue a permit, because it considers the operation a minor source of pollutants." According to local resident Michael Waters, "This hearing tonight, it's a sham."

Most of the protestors in attendance were from Gulf Coast Environmental Defense, or were representatives of Governor Lawton Chiles, and U.S. Rep. Joe Scarborough. "They read letters in which both elected officials cited not only environmental concerns about rigs, but also the impact to the billions of dollars from Florida's tourism industry." Drilling opponents questioned the EPA's "definition of a 'minor pollutant'." "You guys think it's a drop in the bucket, but we've got a pretty full bucket in Pensacola already," said Barbara Caselli of GCED. Two of the people in attendance were in favor of drilling. "They decried the environmental concerns as alarmist, and cited the need for fuels."

Final decisions on the permit will be made after May 30th by the EPA.

Barnes, Brad. 20 August, 1997. Chevron vows to drill for gas in area waters. Pensacola News Journal: 1A.

"Chevron U.S.A. is not backing down from its plans to put at least 12 natural gas wells in the Gulf of Mexico 25 miles south of Pensacola." Drilling is scheduled to begin in two years after the Minerals Management Service's review of Chevron's plan is completed. The proposed wells are expected to yield between 12 and 18 percent of Chevron's annual production of natural gas--300 million to 450 million cubic feet per day.

Chevron's project has not been without local opposition. Enid Sisskin, president of the grassroots environmental group Gulf Coast Environmental Defense (GCED), has pledged to "...[go] after them every step of the way." Sisskin also mentioned hopes that Chevron will decide not to go ahead with production, as was the case with Mobil Oil. In June, Mobil dropped drilling plans when a bill was introduced to buy back their leases located 17 miles from Pensacola Beach. After Mobil made the announcement, however, the lease purchase bill was removed from legislation. "Now the legislation would only prevent future leases in federal waters off Florida shores."

Mobil's abandoning of their drilling plans was a mixed blessing for local environmentalists. Amy Belanger, executive director of GCED said, "By Mobil pulling out, they effectively removed the buy-back provision from the bill. It could've been used as a precedent for buy-backs."

This article lists, under "It's your right," locations to obtain copies of Chevron's Destin Dome 56 Unit Development Production Plan.

Barnes, Brad. 24 March, 1996. Scarborough joins fight against drilling. Pensacola News Journal:1A.

Republican congressman Joe Scarborough is against drilling for oil and gas off Florida's coast. Some are surprised that an otherwise conservative politician would side with environmentalists on this issue. Scarborough says, "This is not a party issue and not strictly an ideological issue. There has not been any evidence that drilling off our coast would do anything but damage the environment."

Barrett, Rick. 20 July, 1996. Alabamians fight efforts to move rigs close to shore: This is what we get for being so nice to the oil industry. Pensacola News Journal:1A, 16A.

Forty-eight "angry" business and civic leaders "chastised" MMS officials for plans to allow oil and gas drilling 4-6 miles off Gulf Shores and Orange Beach and within a few miles of Perdido Key. (The rigs would also be located within 10 miles of Florida's coast.)

No new leases had been granted in this area since the 1988 Congressional Moratorium. A compromise of a 15 mile buffer zone was proposed by Alabama. (Florida currently has a 100-mile restriction.)

Note: comments were made in this article by Penny McIntosh, president of the Civic Association of Ft. Morgan ("This is what we get for being so nice..."), and David Lawrenz, president of the Alabama Gulf Coast Chamber of Commerce ("It's not that we're against drilling. We simply don't want rigs within sight of our beaches). GCED spokesman Jerry Jackson said "...the [drilling dangers] are grossly understated by the MMS."

Barrett, Rick. 05 March, 1996. Chevron all but certain gas well is a winner. Pensacola News Journal: 1A.

Chevron USA says geological features at 22,463 feet depth indicate a well off Pensacola Beach may hit gas pockets. The eastern Gulf of Mexico is thought to have as much as 3 trillion cubic feet of natural gas. This well, 29 miles off of Pensacola Beach, is Chevron's fourth attempt in seven years to find gas here. If the well does indeed contain gas, Chevron's next step will be to seek permits from the Minerals Management Service.

In Mobile on March 28, MMS will hold a public hearing on offshore drilling. Critics of offshore drilling say that it threatens the environment and the beaches. They have vowed to turn out in full force at the Mobile hearing. Sammie Mattucks, a member of Gulf Coast Environmental Defense of Gulf Breeze says, "Our beaches are more important than a few tracts of oil and gas."

Barrett, Rick. 03 November, 1995. Chevron to begin drilling Saturday. Pensacola News Journal, sec. Local: 1C.

Chevron will drill an exploratory gas well 29 miles off Pensacola Beach. It will be the only exploratory gas well off Florida's coast. The Gulf of Mexico has more than 3,000 oil and gas platforms, but those are off Texas, Louisiana, and Alabama. More oil and gas production has the potential to make oil companies millions of dollars and decrease U.S. dependence on foreign petroleum, but many Florida residents oppose the drilling for environmental and socioeconomic reasons. Michael O'Donovan of Gulf Coast Environmental Defense says, "People in Florida realize these rigs are going to be factories in the ocean, directly off our pristine coastline." Also quoted were: Bobby Boone, Chevron USA, Atlanta; and Barney Congdon, of New Orleans, spokesman for the MMS.

Barrett, Rick. 23 Apr. 1996. Chevron well hits pay dirt. Pensacola News Journal: 1A.

Chevron is optimistic about drilling prospects off Florida's gulf coast. An exploratory gas well off Pensacola Beach flowed at 41 million cubic feet per day. In the past fifteen years, oil companies have drilled more than 45 dry or small wells off Florida's coast, but this latest well appears to confirm geologists' predictions that the eastern Gulf of Mexico may have vast oil or natural gas resources.

Chevron's president Ray Galvin says, "This well will help replace declining national reserves and potentially provide additional clean burning energy for Florida's growing demand for natural gas." Critics, including citizens groups and Florida's state and federal legislators, say that offshore drilling will harm Florida's beaches, waters, and marine life. Ingrid Mellone of Gulf Coast Environmental Defense says, "Drilling is a dirty business that is completely incompatible with our way of life in Florida."

Barrett, Rick. 13 September, 1996. Drilling foes plan weekend blitz: Group wants public officials to cancel leases. Pensacola News Journal, sec. Local: 1C.

Gulf Coast Environmental Defense, the Gulf Breeze-based citizens group, has organized a conference, "Taking Power: Offshore Drilling, Energy and Citizen Action." The purpose of this conference is to "blitz public officials and oil companies" with e-mail, faxes, letters and petitions in an effort to halt offshore lease sales in the eastern Gulf of Mexico. GCED wants President Clinton to "cancel the 64 remaining leases within 100 miles of the Panhandle coast." The group is also seeking Republican support from U.S. Rep. Joe Scarborough, of Pensacola, and U.S. Senator Connie Mack, R-Cape Coral. Chevron USA officials said they will decide by the end of the year whether they will pursue development of an offshore natural gas site 29 miles south of Pensacola

Beach. There is also a planned oil and gas well near Apalachicola which concerns environmentalists.

Barrett, Rick. 12 Feb., 1996. Hearings to Move to Mobile. Pensacola News Journal, sec. Local: 1C, 3C.

The MMS will conduct hearings on its five-year offshore lease plan and take public comments in Mobile on the 28th of March. Some Pensacola residents accuse MMS of scheduling a Mobile meeting to avoid a "hostile crowd" in Pensacola. Mark Ferrulo of Florida Public Interest Research Group says, "It's obvious that MMS is gun-shy about coming back here again. Mobile is an oil industry town and is safer ground for them." An MMS spokesman says Mobile was picked because Alabama is more affected by offshore drilling than Florida. The press secretary for Rep. Joe Scarborough believes public pressure may eventually bring a hearing to Florida.

Gulf Coast Environmental Defense of Gulf Breeze plans to bus people to Mobile for the hearing. Ingrid Mellone, president of the group, worries the MMS plan for Florida will be similar to the plan for Alabama which allows drilling just 3 miles off the coast. That's 7 miles closer than the Florida limit now. Mellone is also concerned about MMS's "lax" rig inspections. Critics say offshore drilling pollutes the air and water.

People mentioned or quoted:
Mark Ferrulo, campaign manager, Florida Public Interest Research Group
Barney Congdon, MMS agency spokesman
Gulf Coast Environmental Defense:
Ingrid Mellone, president
Jerry Jackson, member
David Stafford, press secy. for Rep. Joe Scarborough

Barrett, Rick. 29 March, 1996. 100 protest offshore drilling. Pensacola News Journal:1A.

Over 100 Florida residents turned out to voice their concerns over the Minerals Management Service's plans for Florida's coast. Some say that "Florida's coast could be dotted with ugly rigs." Ingrid Mellone, president of Gulf Coast Environmental Defense, said, "If the general public doesn't get involved to protest drilling, we will have the oil industry setting up shop on our shores." Representatives from the Minerals Management Service counter that concerns about pollution and environmental risks are exaggerated. Barney Congdon of the MMS said, "The only pollution risk from the rigs would be fishermen spilling their fuel in the water getting to the rigs where fishing is plentiful."

Becker, David. 06 July, 1997. Stepped-up effort to work with local groups envisioned by new wilderness society leader. America Online (from the Wilderness Society).

Long-time conservationist Bert Fingerhut, the new chairman of the Wilderness Society's Governing Council, "says he intends to make a special effort to solidify the organization's ties with local and regional environmental groups." "One of the great challenges for the conservation community is to find the best ways to meld the various strengths of the many organizations involved in this work." One example of this is the way in which "the Wilderness Society's economists, scientists, and GIS technicians have been able to put tools in the hands of local conservationists that have made them more effective. Similarly, those who live closest to the places that need protection bring with them a wealth of knowledge about those places and an understanding of the needs of the local communities."

Bedard, Paul. 14 August, 1996. Clinton signs energy bill that cuts drilling red tape; But Federal land in Alaska, elsewhere is preserved. The Washington Times, sec. Nation: 4A.

President Clinton is "wooing the environmental vote," while assuring "major gas and oil producers, energy lobbyists and his campaign officials...that his administration is pro-industry and will fight Republican hopes of eliminating the Energy Department." He signed a bill that was passed by unanimous vote that "encourages industry to drill for more oil and gas on federal land already leased for energy development." The bill provides for a drastic cut in bureaucratic red tape and paperwork previously required before drilling. This will serve to expedite industry production. The new measure does, however, open no new federal land for development, particularly the Alaska National Wildlife Refuge.

During a previous meeting with energy producers, Clinton "stressed that while his sympathies tilt more toward the environment than to industry, he has expanded oil drilling in the Gulf of Mexico and lifted the 23-year ban on Alaskan oil exports."

The passage of the bill came the day after he made a deal in which the government prevented mining on a Montana mountain only miles from Yellowstone National Park. The government will find a parcel of federal land to trade for the New World Mine site--which will be returned to the U.S. Forest Service.

Belanger, Amy. November/December 1997. Director's Report: 1997 in Review. The Coastal Defender. Gulf Coast Environmental Defense: Gulf Breeze Florida.

Ms. Belanger is the Executive Director of Gulf Coast Environmental Defense (GCED), an active grassroots environmental group that leads the local effort to prevent offshore drilling off the Florida Panhandle. According to Ms. Belanger, GCED "is nearing the end of an amazingly

productive year!...We have accomplished primary goals for '97 and more: 1) secured the introduction of legislation to ban future offshore drilling lease sales, to be reintroduced in January with support from Rig Free Florida; 2) secured the cancellation of six offshore drilling leases, targeted by name in the legislation; 3) responded to numerous threats to our area's water quality, coastal environments and quality of life..."

Belanger, Amy. November/December 1997. MMS: Scoping sessions. The Coastal Defender. Gulf Coast Environmental Defense: Gulf Breeze, Florida.

The October 15, 1997 Scoping Sessions held by MMS in Pensacola were to hear public input regarding research involved in the environmental impact statement (EIS). The EIS must be evaluated by MMS, EPA and the Army Corps of Engineers, and public hearings held on those studies before allowing Chevron's production plan to proceed.

According to GCED director Amy Belanger, "in a revealing demonstration of [MMS's] intentions regarding public input, [Barney] Congdon immediately sent security guards to have [a GCED information table in the lobby] removed, though... [it was later admitted to the local press] that there was nothing inappropriate about the table or the GCED volunteers." Belanger questions whether this was what was meant by MMS director Cynthia Quarterman and Interior Dept. Secretary Bruce Babbitt's announcements of "supporting the free and open exchange of ideas" and a new "consensus" philosophy, while funding the pro-drilling public relations staff and materials of MMS.

Approximately 140 people attended the two scoping sessions, and altogether participants delivered over a hundred comments asking for specific issues to be addressed in the EIS. Five items were highlighted in this article: 1) Study how drilling impacts the environment cumulatively (all rig pollution added to other pollution), rather than comparatively; 2) All studies should be peer reviewed, including methodology, research design and findings; 3) Study whether permitting the wells will encourage dependence on fossil fuels and increase global warming; 4) Collect baseline data on local beach trash, tar balls, and other direct coastal impacts before drilling proceeds, to determine how the coastline changes from drilling activities; 5) Evaluate "zero discharge"--requiring muds, fluids, cuttings, diesel, cleaning agents, and other chemicals and litter to be returned to shore for proper treatment and disposal.

Ms. Belanger cautioned that if MMS does not include the public's demands in the scope of the EIS, "we will have more supporting evidence for moving regulation of drilling out of the MMS and into an agency more accountable to the public." She also said that even though there is little "...public faith in MMS's ability to produce an unbiased and comprehensive EIS, participation in the hearing was important to demonstrate the Panhandle's continued opposition to offshore drilling, and to put the MMS on notice that we will challenge bias at every turn."

Belanger, Amy. 08 June, 1997. Give up the fight? No way. Pensacola News Journal, sec. Reader's Forum: 17A.

Executive director of Gulf Coast Environmental Defense (GCED), Amy Belanger, says the offshore drilling fight is "in better shape than ever. More than 17,000 petition signatures and 300 business and government resolutions have been collected against offshore drilling in the Panhandle."

Local environmentalists have been given great encouragement by U.S. Senator Connie Mack's promise to immediately draft legislation "to cancel Mobil's lease and buy it back!" If Mobil's lease is purchased, halting the impending exploratory well 17 miles from Pensacola, there is hope that "[this] opens the door for cancellation of still more leases," according to Belanger.

Although there is some question of the possibility of canceling existing leases (such as the site of Chevron's rig 27 miles from Pensacola), "options remain for preventing drilling on them and buying time until we do..." says Belanger. One of these hoped-for reprieves for the anti-drilling factions may come from U.S. Rep. Porter Goss's bill to require independent environmental and economic impact studies before production is allowed. Also, state legislators are working to have Florida's shores deemed an "Area of Biological Concern, which would prevent (only) offshore drilling."

Ms. Belanger urges "our elected representatives...to influence the outcome of the EPA's decision to grant permits for water pollution from rigs in the region." She feels Florida legislators must contact the EPA to prevent it from "caving into prodrilling pressures" from Alabama and Mississippi representatives. In conclusion, Belanger suggests that citizens "must act now" to remind President Clinton to "follow through on his campaign promise to issue an executive order protecting our shores," and pressure Congress to extend the annual leasing moratorium.

BLM, Oil co. investigate cow deaths. 06 November, 1997. The Associated Press/Prodigy Services Corporation (online).

Six head of cattle were discovered dead within 300 yards of a gas well near Laramie Wyoming. The U.S. Bureau of Land Management and Snyder Oil Co. is investigating. Such deaths have occurred previously in oil and gas drilling areas.

The dead cattle were found near the well's flare pit, "a feature used to burn off gas that comes out of the ground along with material injected into the ground to enhance the flow of gas."

Bryant, Elizabeth. 09 July, 1997. On the Hill: Money talks and so do polls. State News Service.

"Lawmakers passed another one-year moratorium on offshore oil drilling in the Gulf of Mexico, and approved a fat paycheck for Everglades restoration."

Cabinet again delays Gulf Coast oil drilling. 13 May, 1998. The Associated Press/Pensacola News Journal, sec. Money: 8D.

Florida's Cabinet has ruled unanimously that Coastal Petroleum's plans to drill off St. George Island must have another review by a Department of Administrative Hearings administrative law judge. The previous ruling stated that Coastal could drill if it posted a $224.5 million surety bond.

However, this may not be an adequate amount for reparations in the case of a worst-case scenario. Earthjustice Legal Defense Fund attorney David Guest "...told the cabinet that it would take more than that to cover potential damage along the panhandle shore from an offshore well spewing out of control."

An attorney representing Coastal has threatened to sue over the delay. Judge Mary Clark ruled previously that the bond amount was adequate for the exploratory well proposed for state waters approximately nine miles south of St. George Island.

Camber, Dennis. 02 March, 1994. Panel ok's incentives for oil, gas producers. Gannett News Service.

Senator Bennett Johnston, D-La., is chairing the Senate Energy and Resources Committee incentive plan which offers financial incentives to oil and gas producers to drill in the Gulf of Mexico. "The measure would apply to operations in water deeper than 600 feet and to wells which would not be drilled without the incentives." The incentives would affect the OCS west of Florida's offshore boundary.

"With this legislation, reserves which could not have been developed before will now be profitable," Johnston said.

Cardona, Mercedes M. 22 August, 1994. Stock pickers, value rule strategies make the difference in a difficult quarter. Pensions & Investments, pp. 29.

The market performance of "energy stocks such as oil and gas producers and refineries reflected the good performance of the sector as a whole," according to The Mitchell Group's president. "There were consistent gains across the group...[with] very few oil-related stocks that did not benefit from the rise in oil prices during the quarter," he said. Oil prices are anticipated to continue rising, according to Mr. Mitchell.

Chambers, Dexter. 31 May, 1998. Offshore drilling critics call for Chevron boycott. Pensacola News Journal, sec. Local: 17C.

At a kickoff rally for the "Save Our Shores" campaign plans were unveiled to boycott Chevron products statewide. Gulf Coast Environmental Defense and Florida Public Interest Research Group announced the plan to hit Chevron "...where it hurts most--in their wallet," unless the company halts plans for a major production site 25 miles offshore of Pensacola.

In February the Florida Department of Community Affairs (FDCA) rejected a request for Chevron to drill. Chevron has asked the Department of Commerce to overturn the state's decision. GCED Executive Director Amy Belanger is quoted here making suggestions to "...cut up your Chevron credit cards and mail them in. Don't buy their products and don't buy gas at the Chevron stations." Belanger also said, "It will send a clear message to Chevron that they are not wanted here." Chevron officials could not be reached for comment.

Offshore drilling is inconsistent with Florida's plan for managing coastal resources according to FDCA and environmentalists. GCED & FL PIRG's goal is to convince the Dept. of Commerce to uphold FDCA's ruling. GCED is currently circulating a petition which will be sent to the Commerce Department.

Besides the threat of spills, there is also concern stated in this article for daily air emissions resulting from drilling production. Escambia County already has been in noncompliance for air pollution, with readings nearly double EPA maximum allowable ozone limits at times.

Chambers, Dexter. 30 May, 1998. Group joins forces to block drilling off Pensacola. Pensacola News Journal, sec. Local: 3C.

Local environmental group Gulf Coast Environmental Defense (GCED) is combining forces with Florida Public Interest Group (FL PIRG) to launch a campaign to "...convince the Commerce Department to support the state's rejection to (sic) the rig because offshore drilling is inconsistent with Florida's plan for managing its coastal resources."

The Florida Department of Community Affairs rejected Chevron's request for drilling in February. Chevron is presently trying to persuade the Department of Commerce to overturn the state's decision. The decision could come by the end of the year.

According to Mark Ferrulo, campaign director of Florida PIRG, "It is a statewide issue. The fact is that our entire state rallied behind stopping any drilling in the Keys and now we have to rally behind this cause." Ferrulo also said 1998 is the critical year in terms of preventing offshore drilling in Florida. "We are looking at the possibility of eastward expansion if this goes forward."

Part of GCED's plan involves sending volunteers to every home along the beachfront to garner public support. If permitted, Chevron would have the first permanent production rig off Florida's coast. The gas from the site would also require 70 miles of buried pipeline to transport it to an area offshore of Mobile.

Chambers, Dexter. 05 April, 1997. Area residents put out by drilling plans. Pensacola News Journal, sec. Local: 3B.

According to this article "area residents and environmentalists feel outraged and helpless about a proposal for another company to explore for oil and natural gas off Florida's coastline." Several local people are quoted here saying, in effect, they feel powerless to prevent the drilling plans. For example, Elaine McDaniels said, "I don't think we have any say in it though...if they do discover anything I'm sure it's going to look like offshore New Orleans."

Officials have set a meeting with area officials for April 18--one that is not open to the public. Mobil could start drilling 17 miles off Pensacola to search for oil and natural gas on August 15. A brief review by the MMS, and issuance of the air emissions permit by the EPA are all that remain to clear the way for Mobil's rig.

Chevron: Coming to a beach near you? November/December 1997. The Coastal Defender. Gulf Coast Environmental Defense: Gulf Breeze, Florida.

Gulf Coast Environmental Defense's (GCED) news flyer urges public intervention to stop the impending development of Chevron's huge natural gas find 25 miles offshore of Pensacola beach. "Our elected officials have made it clear that, though they support our opposition, they will not step in to cancel Chevron's leases the way they did with Mobil's six cancelled leases this summer." Mobil had limited hopes for the yield from those leases, while the projected volume of Chevron's find makes lease buy-back options prohibitively expensive. "Cancelling those leases would result in a lawsuit in which the federal government could be forced to pay hundreds of millions in damages for lost revenues," according to Julia Hathaway, environmental aide to Florida Senator Bob Graham. (Graham, and Florida Senator Mack had earlier sponsored a bill to cancel Mobil's six leases, but Mobil chose to opt out of the leases rather than have them cancelled.) At this point the federal government has paid $200 million in damages for the cancellation of South Florida gas and oil leases.

According to GCED, "Chevron has nothing to lose and everything to gain by continuing to pursue their natural gas find. The losers in the game will be Pensacola area residents and visitors, sealife impacted by toxic leaks and spills, our beaches, and our economy. Floridians hold no assurances of safe operations, given Chevron's dismal safety record, and the fact that no offshore drilling operation is safe and clean."

With no legislation planned to try stopping Chevron's project, GCED makes the following suggestions for intervention: CONSISTENCY CHALLENGE--ask the governor "to issue a consistency challenge declaring Chevron's drilling proposal inconsistent with the economic development plans of the state of Florida"; UNBIASED STUDIES-"the hazards of offshore drilling have been documented...Contact the MMS demanding peer review"; ECONOMIC PRESSURE--"Chevron needs to know that Florida expects an ethical response to our opposition to offshore drilling. Chevron must withdraw or face divestments and boycotts from [those] who treasure Florida's unspoiled shores"; EXECUTIVE ORDER--Let the president and vice president

know that "you expect them to follow through on their commitment to protect Florida...Demand an executive order cancelling all nearshore drilling leases."

GCED reiterates their questioning of what they consider to be conflict of interest in the Minerals Management Service being responsible for "regulating, managing and promoting offshore drilling activities." According to GCED, "MMS cannot be trusted to conduct fair and accurate environmental studies, when their mission of building public support for drilling calls into question their ability to (sic) negative findings in environmental and socioeconomic studies."

This "concern over agency bias" was the focus of much of the public input at the MMS October 15 Scoping Sessions at the Grand Hotel in downtown Pensacola. In GCED's view, the sessions were "designed to get public input into the scope of the environmental studies planned for Chevron's production permit, after sharp public criticism of large gaps and inconsistencies in past studies."

Chevron plans to drill again south of Pensacola: New rig would be 26 miles off shore. 2 Oct., 1995. Pensacola News Journal, sec. Final Edition: 1A.

MMS issued a permit to Chevron USA for another exploratory gas well approximately 26 miles south of Pensacola, over objections by Florida Governor Lawton Chiles, and environmentalists.

Previously, there have been 45 exploratory wells off Florida, none of which has resulted in oil or gas production. But Chevron has recently discovered a "substantial natural gas reserve...within 10 miles of the new site."

"Chiles, other state officials and environmentalists have strongly objected, contending the wells pose a potential hazard to the state's waters and beaches and, in turn, its multibillion-dollar tourism industry."

Persons quoted in this article: Rick Trilsch of FL Public Interest Research Group (Florida PIRG) : "a drilling rig is like a garbage can in the middle of the ocean"; and, according to Michael O'Donovan of GCED, "The wishes of our state are not being heard in Washington...". Karen Pankowski, a spokesperson for Governor Chile's office, said the Governor will continue to insist on a 100 mile buffer zone.

Chevron USA Inc. will pay a record $1.16 million. 06 March, 1997. The Associated Press/America Online.

Chevron is paying a record sum to settle an uncontested lawsuit, "alleging it operated an offshore oil platform with faulty blowout-prevention valves." The civil penalty is "the largest ever assessed for violating the Outer Continental Shelf Lands Act." The platform in question is located in the Santa Barbara Channel, an area especially wary of offshore production since the 1969 blowout, which spilled "millions of gallons of crude into coastal waters."

Chiles: Cancel Drilling Plans. 28 January, 1994. The Palm Beach Post, Final Edition: 1A.

Florida Governor Lawton Chiles has written a letter urging Interior Secretary Babbitt to cancel plans for a task force meant to facilitate oil and gas drilling offshore of the Panhandle. The Governor has also repeated his urging for a moratorium on drilling south of the Panhandle.

Cotterell, Bill. 20 August, 1996. Chiles promises to thwart oil wells. The Tallahassee Democrat, sec. Local: 3C.

Florida Governor Lawton Chiles told St. George Island residents and tourists that they will not see offshore oil drilling "in my political lifetime." Coastal Petroleum President Phil Ware has plans to start drilling before Chiles leaves office in 1999.

Ware has claimed that offshore drilling would be an economic boon for Franklin County, which "has been hard hit by losses in the fishing industry over the past few years." Ware also said he believes the leases off Apalachicola to be a 'highly prospective area' for oil." The DEP recently notified Coastal of their intent to issue a permit for drilling in the lease area held since 1941. This has no relation to a ruling that said "Coastal could not drill on the nearshore, from the coast to more than four miles out in the Gulf." The DEP permit concerns 7-10 miles from shore.

Intent to grant a permit is not the same as having the permit--and the Sierra Club Legal Defense Fund is one among many concerned parties which plan to request an administrative hearing. This process could tie the issue up for some time. "Meanwhile, the 1997 and 1998 Florida legislative sessions could adopt laws making it harder to drill for oil off the state's coasts."

Clark, Ronni Patriquin. 26 January, 1997. Oil riches down below. Mobile Register, Online.

Advances in deep-water drilling technology have opened a reservoir 100 miles south of Mobile, Alabama "so vast it could dwarf Alaska's Prudhoe Bay discovery of 20 years ago." Huge deep-water rigs can now drill thousands of feet below the Gulf of Mexico, and have spawned a new oil and gas boom, "much larger than the one of the 1960's and 70's..."

This article discusses the deep-water Gulf Coast area as a "multi-billion barrel frontier oil and gas province that could be one of the few remaining opportunities of this size..." But, according to this report there are doubts that communities east of Louisiana or Mississippi will actually experience much of an economic boom, particularly Mobile. "At least one economist believes the potential onshore benefits of deep offshore drilling can tend to be overstated." Bill Gunther, director of the Center for Business and Research at the University of Alabama, said "This is a very

capital-intensive activity. It doesn't produce a lot of jobs...If people in Mobile County want it, that's fine with me. But I would have significant problems with the state providing any incentives package to get it here."

Other local business people disagree, such as director of Alabama State Docks, Jack Raven. "All of us in Mobile have to do what we can to bring as much of this ashore in South Alabama as we can...I am cautiously optimistic." Mobile County just "lost out to Pascagoula on a natural gas pipeline planned to bring in gas from 80 miles offshore to join a nationwide pipeline network near Meridian, MS." Officials in five Mississippi counties were told they must give tax breaks to Sonat to get the "210-mile, 36-inch-wide pipeline," or else it would go to Mobile. "But Mobile's economic development people weren't told about it until it was too late, much less given a chance to offer a better deal, said Jim Apple, the Mobile Chamber of Commerce vice president for economic development."

Beginning 80 to 100 miles offshore, from Texas to Alabama, the "big petroleum companies have found tremendous potential in the previously untapped waters...in an area many viewed as pretty much played out just a few years ago, industry experts say." Shell is the "industry-acknowledged leader" of the deep-water Gulf. And today has two platforms that are "producing previously unheard-of quantities for single platforms in the Gulf." These new rig platforms are "as large as three football fields...and [can drill] for as many as 20 wells simultaneously." Depths of up to a mile are planned for future projects, and within "10 years, drilling at 10,000 feet will be feasible."

In light of the tremendous boom which may be only just beginning, Mobile hopes to benefit at some point in the future. But, according to this article, "the area's chances of cashing in on the Gulf's projected oil and gas bonanza are somewhat iffy..." Due mostly to offshore services and infrastructure already being entrenched in Louisiana and Texas ports. Also, pre-existing natural gas drilling revenues in the Mobile area have "tended to go out of state." Locals hope to lure the big boys of industry to run pipelines into Alabama, rather than MS., believing this is key to opening economic input farther eastward.

As this boom escalates the industry will be transporting "billions of barrels of oil through the Gulf of Mexico." According to Florida's Public Research Interest Group (PIRG) this is not the only cause for concern. They "point to smaller spills that happen every year, the damage that ship-channel dredging can do, the sludge that is a by-product of drilling and the pollution from refineries, [and wastewater discharge from offshore drilling]." And the National Transportation Safety Board "has been critical of the industry's efforts to prevent pipeline spills."

"The largest oil spill in history came not from a tanker or pipeline, but when an exploratory rig itself opened up a fissure in the earth in the southern Gulf in 1979, PIRG reports. For almost a year, more than 140 million gallons of oil seeped out." There are also concerns for the area's fishing. "Joy Clark, an environmental economist at Auburn University in Montgomery, said oil and gas exploration can benefit Mobile, but she worries it might also be a blow to the area's commercial fishing industry." She cites the requisite ship-channel dredging for tankers as a "major hazard for shrimp and oysters."

Clinton adds 10 years to drilling ban: President also tags $224 million for ocean, fishing conservation. 13 June, 1998. Pensacola News Journal: 1A.

President Clinton announced at the National Oceans Conference in Monterrey Bay, CA that 10 years will be added to the current ban on offshore oil drilling. The ban was set to expire in 2002.

Although the moratorium covers "virtually all" the North Atlantic and Pacific Coasts, southwest Florida, New England, the Mid-Atlantic, and southern Alaska--the ban will not prevent development of pre-existing leases. Northwest Florida is not included in the moratorium, much to the chagrin of Florida residents. (See: "Did drill ban use wrong map?") "White House officials said Clinton was not making the ban permanent everywhere in order to allow for flexibility if future science and technology were to lead to safer offshore oil and gas development."

Also included in the executive order were new restrictions designed to prevent over-fishing, and to increase monitoring of fish stocks. "One out of every six U.S. jobs is marine-related, and U.S. residents are moving to ocean side developments at a rate of 3,600 a day. With Americans consuming an average of 15 pounds of fish and seafood every year, fish stocks are in decline."

Clinton's order barred new leases in 12 new national marine sanctuaries permanently. There were also provisions for attending to damaged coral reefs and preventing further degradation.

Coastal awaits Florida ruling; Coastal Petroleum Co. offshore drilling permit application. 14 November, 1997. The Oil Daily. 47(218): 8.

Coastal Petroleum, after a public hearing on its drilling permit applications in November, is awaiting a ruling in mid-February. Coastal appealed Florida's newly enacted $4.3 billion surety bond requirement at the hearing. It took three weeks of testimony to conclude the matter.

Along with company representatives, and Florida Department of Environmental Protection officials, the Audubon Society, the Sierra Club, and Florida Wildlife Federation participated.

Coastal balks at $4.3 billion drilling bond. 10 September, 1997. Pensacola News Journal, sec. Local: 5C.

Coastal Petroleum is once again at the mercy of Florida legislators--who changed the law in order to circumvent the state Supreme Court previously overturning a DEP requirement for the posting of a billion-dollar-plus surety bond. Coastal President Phillip Ware calls the bond "ridiculously absurd," something "no king of Saudi Arabia" could post.

"Earlier this year, after the court also struck down the Cabinet's authority to impose a bond, lawmakers passed a bill to require the state to set 'reasonable' surety bonds for drilling permits." The bill sets the bond amounts based on cleanup cost and environmental damage for a worst-case scenario, and "specifically included pending as well as new applications." The DEP upped the

amount recommendation from the previously-set $1.9 billion. Governor Chiles and the Cabinet approved it without debate.

Coastal petroleum can't expect royalties, court rules. 06 August, 1997. Pensacola News Journal, sec. Florida:7A.

"After more than a half century in court, Coastal Petroleum's days may be running out." The 1st District Court of Appeals ruled that the company "is not entitled to money based on its long-standing offshore drilling leases." State lands are, according to the court, held as a public trust. So, no royalty award was made because the court upheld a lower court decision that no property right was lost.

Companies dread environmental audits. 10 August, 1997. The Associated Press/Online.

It is a catch-22 situation. If industry does an in-house environmental audit and discovers an existing problem which they are by law required to report to the state--they are then subject to fines. This, in effect, serves as a deterrent for industry to self-regulate their emissions and pollution control functions. "If you try really hard to do what's right and you find out doing nothing could have avoided a penalty, you have a disincentive to try hard to do what is right," according to a Chemical company lobbyist. Twenty four states have "stepped in to protect industry" in the last four years, shielding them from penalties, "if they find and fix their own problems." This is alarming to environmentalists, who see this as giving industry free license to set their own standards outside the Clean Air and Clean Water Acts. Advocacy and citizens groups in several states have filed notice to sue the EPA for tolerating this situation, so the EPA has threatened to "...pull federal dollars from states that pass them."

There is also the complication of environmental audit laws, which vary from state to state. All offer 'privilege' or 'immunity' or both. This often results in the offending companies being allowed to keep their records closed to not only third parties who might litigate, such as local citizens, but in such cases even regulators aren't privy to company records.

Attorneys for industrial concerns maintain that these protections are in the best interest of encouraging compliance, rather than simply collecting fines.

Corrigan, John C. Drilling for answers. 10 March, 1997. The Tampa Tribune, Letter to the editor, sec. Nation: 6.

This editorial letter is in support of offshore development. Stating that as long as it is located "20 or 40 miles offshore, no one would see a thing from any beach." Corrigan cites these reasons

for his support: reduce foreign energy dependency; reduce deficit; provide revenue for the state; provide jobs and payroll for Floridians. He goes on to say that, "I'm not aware that offshore oil has ruined Texas, Louisiana, California or other states. Last I knew, they were doing well. Why are we paranoid?"

Court asked to speed up offshore drilling permit. 29 August, 1996. The Miami Herald: C1.

Coastal has asked Florida appellate court to "force the state to issue an offshore drilling permit immediately." The permitting process, as it stands, could take more than a year--and "gives environmental groups their say in the fight to keep oil and gas wells out of a three-mile-wide area seven to 10 miles offshore between Apalachicola and Naples."

Craig, Michael. 10 March, 1997. Deepwater Gulf of Mexico more profitable than previously thought. (Offshore oil production). The Oil & Gas Journal. 95(10):41-48.

The profitability of deepwater drilling in the Gulf has been reevaluated in terms of economics and recent experience. There are four factors given here for the change of viewpoint:

1) Deepwater reservoirs' productivities far exceed those typical of the continental shelf;

2) Recent advances in technology and lower perceived risks have lowered the cost of floating production systems;
3) Projects now get online quicker--meaning faster production time from project approval to first production;
4) A collection of other factors is mentioned, including reduced geologic risk and associated high success rates for deepwater GOM wells due primarily to improved seismic imaging and processing tools; absence of any political risk in the deepwater GOM (common overseas, and very significant in some international areas); and, positive impact of deepwater federal royalty relief.

The article goes on to use "...hypothetical reserve distributions and price forecasts to illustrate indicative economics of deepwater prospects. Economics of Shell Oil Co.'s three deepwater projects are also discussed."

Crow, Patrick. 15 April, 1996. Exporting environmentalism. (Clinton administration intends to pursue more aggressive environmental policies internationally through bilateral agreements with key countries through the remainder of 1996.) The Oil and Gas Journal. 94(16):30.

According to U.S. Secretary of State Warren Christopher, the United States has a new and ambitious plan for improving earth's environment. He said the Clinton administration "has recognized from the beginning that our ability to advance our global interests is inextricably linked to how we manage the earth's natural resources. That is why we are determined to put environmental issues where they belong: in the mainstream of American foreign policy."

Some of the stated goals of the Clinton administration include seeking: further cuts to greenhouse emissions, global action on toxic chemicals, world forestry strategy, a treaty to "preserve the diversity of plant and animal species," and ratification of "the Law of the Sea Treaty to ensure access to ocean resources."

Christopher stressed that there must be a global approach to these problems, "because pollution respects no boundaries, and the growing demand for finite resources in any part of the world inevitably puts pressure on the resources in all others." The U.S. plans to begin work with our North American neighbors, Canada and Mexico.

The State Department's new "Partnership for Environment and Foreign Policy" hopes to unite environmentalists, business leaders, and foreign policy experts to achieve its stated goals. Beginning in 1997, annual reports will assess the global environment, pressing problems and international policy developments in order to determine U.S. priorities.

The *Oil and Gas Journal* says in this report, "...The oil industry should be concerned. It knows from experience the Clinton administration has never balanced its domestic energy and environmental policies. If the administration persuades other nations to accept a similar imbalance, energy production and other economic developments around the world could feel the consequences."

Crow, Patrick, and A. D. Koen. July 18, 1994. Industry pushes for more access to offshore oil and gas resources. Oil &Gas Journal. 92(29): 16-21.

This article opens with: "Washington's offshore petroleum policy is a clumsy combination of fact and fiction many say is wringing the life from U.S. activity in federal waters." Statistics are then provided on the economic input from oil and gas production.

"Politically fictional" is what many in the petroleum industry say about the ecological damage being done to the OCS. Instead, oil and gas producers and service companies "...contend that federal offshore policies..." are doing significant harm to offshore development.

NOIA (National Ocean Industries Association), a group of more than 250 companies involved in oil and gas production and exploration, says "federal offshore environmental policies should be devised based more on cost-benefit analyses, full assessment of all perceived risks, and good science and less on emotional responses to effects--often short term--of oil spills on aquatic life."

Offshore environmental issues have divided the U.S. Congress to the extent that "...the entire OCS chapter had to be dropped from the bill that became the 1992 Energy Policy Act so the measure could be passed." Other legislation discussed, especially in regard to industry attitudes,

includes the Offshore Pollution Act (OPA) of 1990. Noble Oil's spokesman says this is an example of legislation which is "suffocating the U.S. offshore petroleum industry."

Crow provides some details on other "contentious" issues: "excessive surety required," "sources of spills," "moratoriums nothing new," "fear over science," "leasing bans attacked," "calls for more access," and he concludes with a "breakout of cumulative leasing on the U.S. OCS."

Crowden, G. Michael. December, 1993. At last, Chevron to drill off Florida. Offshore, sec. Gulf of Mexico: 15.

"The last hurdle has been cleared in Chevron's quest to drill in the Destin Dome area off the Florida Panhandle." The state of Florida's longtime opposition to drilling has been superseded by the "federal agencies with power to prevent [or allow] drilling."

Crowden, G. Michael. February, 1994. If Florida loses, does Chevron win? Offshore, sec. Gulf of Mexico: 15.

Chevron has spent years and a fortune trying to obtain the necessary permits from state and federal governments due to the "near religious fervor with which the State of Florida opposes offshore drilling."

This article ends with commentary on Florida's "oil spill phobia."

Crowden, G. Michael. 09 November, 1993. Oil industry cutting off nose to spite Clinton. The Houston Chronicle, sec. Outlook: 17A .

The Clinton administration had made unanticipated concessions to the domestic oil and gas industry. However, the administration's detractors are, according to Crowden, "...self-serving and detrimental to the industry they claim to serve." These so-called detractors, "which account for the majority at any given oil industry gathering...are spreading misinformation about the administration's goals."

Partisan politics are blamed here for arbitrarily attacking industry-friendly policies: "Obviously...the aim is to prevent any success by the Clinton administration." The example cited is a bogus quote attributed to Energy Secretary Hazel O'Leary during a multinational conference, at which she allegedly referred to those in the oil and gas business as a "dying breed," (which Ms. O' Leary denies.) In reality, O'Leary is the "first energy secretary in more than a decade to take a keen interest in the domestic oil and gas industry..."

The real facts are, according to this report, that "the Clinton administration has gone a long way toward revitalizing the long-ignored domestic oil and gas industry...in a very short time." Examples are given to support this view.

Crowden, G. Michael. August, 1995. Permanent ban sought for entire Outer Continental Shelf. Offshore, sec. Gulf of Mexico: 22.

California Republican Rep. Frank Riggs is pursuing legislation to permanently ban offshore drilling and leasing. The two bills he has proposed are receiving little support, however.

Crowden, G. Michael. 13 March, 1994. Whitewater and black oil--dilemmas of a kind. The Houston Chronicle, sec. Outlook: 1.

Crowden draws parallels between the petroleum industry and President Clinton's credibility problems: "...their record is one of world-class achievement. Yet their credibility continues to be questioned. Their progress is continually thwarted by politically motivated foes intent on their destruction. Suspicion bred by misinformation hampers their every move."

This report views the offshore drilling industry as "...one of the most environmentally sound in the world." And points out the mistaken public perception which plagues the petroleum industry. "It's not what you do or how well you do it. What matters most is how you look and what you say apart from your appointed tasks."

Crude oil slick reported near L.A. 29 September, 1997. The Associated Press/America Online.

A crude oil slick is drifting near Point Arguello, 130 miles northwest of Los Angeles, off Santa Barbara County. The slick apparently leaked from an undersea pipeline. The two mile by four mile area covered is estimated at over 12,000 gallons. There is also crude remaining in the pipeline, however, and it was not known at the time of the report whether the remainder had spilled out or was still in the pipe. A Coast Guard Pacific Strike Force oil spill response team has been dispatched and is scheduled to arrive approximately twelve hours after the first report of the spill. The discharge occurred between Torch Operating Co.'s platform three miles offshore, and the shoreline terminal. "The spill's potential effect on wildlife in the area was not immediately clear."

California's largest oil spill occurred offshore in 1969 in the Santa Barbara Channel, to the south of the current spill. "About 4 million gallons of oil spilled from a platform, fouling beaches and wildlife, and spurring an extensive anti-drilling movement."

Danny slows to tropical storm. 19 July, 1997. ABCNEWS online.

Hurricane Danny lingered off the Alabama coast long enough to dump over 30 inches of rain in some areas. It remained nearly stationary and battered the coast with 80 mile-per-hour winds.

"Off the coast of Pascagoula, Mississippi, Danny ripped an oil drilling rig from its berth and rammed it into a research tank. About 500 gallons of fuel were spilled into Bayou Casotte..."

Davis, John. 06 July, 1998. Natural gas drilling finds opposition: Group has collected about 4,000 signatures. Pensacola News Journal, sec. Local: 1C.

About 40 beach businesses and 4,000 residents have signed a petition voicing their opposition to Chevron's offshore gas drilling and pipeline project. The petition began being circulated by Gulf Coast Environmental Defense in June. The petition asks the Commerce Department to refuse Chevron's appeal to the state's refusal to allow drilling, on the grounds that the project is inconsistent with the Coastal Zone Management Plan.

In addition, a rally, "Energy Independence Day" was held on Pensacola Beach. It was co-sponsored by GCED and Florida Public Interest Research Group in order to educate area citizens on Chevron's project--in hopes of increasing anti-drilling support.

Amy Belanger, Executive Director of GCED said, "It is not often businesses join with environmentalists on issues...It's the most unique alliance I've ever seen."

Sandy Johnston, executive director of the Pensacola Beach Chamber of Commerce voiced hopes of getting the local business community involved in opposing drilling off Panhandle beaches, due to fears of pollution's impact on the area's economy. "Chevron argues that they're only drilling for natural gas. What they don't say is that oil spills and marine pollution can still be associated with natural gas drilling."

Davis, Michael. 15 June, 1998. Oil Prices fall to 1986 levels: Local economy's growth may slow. Houston Chronicle Online.

Oil prices hit lows not seen since the "...dark days of 1986, the year that marked the beginning of the oil bust in Houston." Prices per barrel for the July contract for light, sweet crude closed at $11.56 a barrel, down $1.03 a barrel.

Reasons listed here for the abrupt drop in prices include fears over the "deepening" Asian economic crisis; predictions of the lifting of sanctions against Iraq, which will flood the market with oil; and a belief that additional ouput cuts by OPEC wont be enough to boost prices. Also, there were reports this week that last year's oil boom has peaked in the shallow waters of the Gulf of Mexico.

The decline in oil prices is "...coupled with a strong dollar that makes U.S. exports more expensive..." and is expected to slow Houston's economy. A spokesman for the Federal Reserve

Bank of Dallas said, "I really believe we are in for a significant slowdown." A recession is predicted, as opposed to an economic collapse, however. While motorists are enjoying lower prices at the pumps, drillers are seeing substantial cuts in profits. Dayrates for jackup rigs, for example, have lowered by $15,000 per day from a peak in December. Estimates of the most efficient costs of production per barrel are between $5 and $6 dollars per barrel. "With taxes and royalties added on, the producers have a scant profit margin at current prices." Crude prices began its "free fall" after a U.N. team member responsible for searching for chemical and biological weapons said Iraq may be as near as two months away from the ending of sanctions.

One commodities trader was quoted as saying Iraq is "just an excuse," and that the primary reason behind the price drop is the growing economic crisis in Asia, specifically Japan, whose currency just hit an eight-year low. This spokesman, Warren Tashnek, VP of Fimat Futures USA in Houston, said that he expects the Asian crisis to "weigh down the world economy for some time to come."

'Dead Zone' could hurt seafood industry: Contaminated watershed contributes to 3 largest areas recorded over last 3 years. 7 Dec. 1995. Pensacola News Journal: 16A.

Record flooding in 1993 siphoned pollutants through the Mississippi River into the Gulf of Mexico, "creating the largest 'dead zone' yet recorded." This phenomenon "causes irritation or death to sea life." The area affected totals 7,032 square miles, and "has serious implications for the seafood industry, a Louisiana environmental official said." Representatives of states within the Mississippi River's watershed ("which drains 40 percent of the nation") convened in New Orleans to make a preliminary assessment of the situation.

"The Gulf's dead zone poses an enormous threat to the biological integrity and productivity of the Gulf of Mexico, and exposes the precarious ecological condition of the entire Mississippi River," said Melissa Samet of the Sierra Club Legal Defense Fund. The Defense Fund has petitioned the EPA to hold a formal conference to deal with the issue.

Persons quoted here include: Bill Kucharski, Secretary of the Louisiana Dept. of Environmental Quality; Frank Patti, owner of Joe Patti's Seafood Co.; Nancy Rebalais, researcher with Louisiana Universities Marine Consortium; and Donald Harper of Texas A & M Marine Laboratory.

Delegation letter helps drill fight. 27 July, 1997. Pensacola News Journal, editorial, sec: Opinion: 8A.

The entire Florida congressional House delegation has signed a letter urging Commerce Secretary William Daley to stop offshore drilling. This editorial hopes that Daley "...won't be able to ignore it."

Republican Rep. Joe Scarborough is credited here with "taking the initiative to get all 23 members of the House delegation to reinforce to Daley their opposition to drilling off Florida's coast." "Commerce Department officials have told local drilling opponents that they won't be affected by political pressure." According to this article that response is to be expected, because Washington rhetoric is about "...posturing, about testing public opinion, about repositioning yourself to defend what you do."

"Of course, Florida is a big state, with 23 votes in the House. And of course Congress is the source of the Commerce Department's budget." In summary, the editorial supports the stance of the Florida delegation, and cautions that the Commerce Department decision is subject to "politics." "The politically expedient decision is not always the right one in Washington."

Did drill ban plan use wrong map? 16 June, 1998. Pensacola News Journal, Editorial, sec. Opinion: 10A.

This Op-Ed piece states that, "Omitting the Panhandle from a drilling ban executive order threatens our quality of life." It goes on to say that, "...once again Northwest Florida is not included in the coastal areas designated as no drill zones..." According to this article, the president made a campaign promise to "...extend the drilling ban to the Gulf of Mexico waters off our shores. We're still waiting for that promise to be fulfilled, but maybe the president has more important things to worry about, like Monica Lewinsky."

Much of Florida--the southwest coast and the keys--is covered by a ban that was first initiated by then-president George Bush. According to this report, "...in the political give and take over the issue, Northwest Florida was left off the ban list as a sop to the big oil companies--in return for keeping this area open, they wouldn't object to losing some of South Florida."

A 100-mile-wide no-drill zone off the entire Gulf Coast of Florida is what is suggested here:

Florida's economy is much more dependent on tourism than oil or gas drilling, and tourism is directly dependent on a healthy natural environment. With the world awash in a glut of oil--prices are falling, stocks are high, production capacity far out-strips demand--there seems little reason to endanger our coast with more drilling.

Drilling bill a gusher for senators, Florida. (Sens. Mack and Graham have the vision that Florida and its coasts are inexorably linked.) 29 June, 1998. Pensacola New Journal, sec. Opinion: 6A.

This op-ed piece voices strong support for the bi-partisan efforts of Florida Senators Connie Mack and Bob Graham's proposed legislation "...to protect Florida's coast--including Northwest Florida--from offshore drilling."

The legislation would ban new leasing within 100 miles of the coast ,and make the federal moratorium on new oil and gas drilling off the Gulf Coast permanent. "It's also reassuring to see

the senators siding with the clear will of the majority of Floridians against drilling. The pressure from big oil companies to drill in our coastal waters is intense."

The article goes on to say this will also be a test of "political muscle" in getting the legislation through Congress. The unanimous support of the Florida delegation, and its clout as "one of the largest in Congress" is mentioned.

"Pour a layer of oil over the vision, [of Florida as an outdoor recreational tourist attraction] and it goes away."

Don't like drilling? Hit beach Saturday. 12 Sept. 1996. Pensacola News Journal, Editorial: 10A.

This editorial is basically an advertisement for the Gulf Coast Environmental Defense's anti-drilling conference. The three main areas of concern at the conference will be: "the economic, pollution, and energy impacts of drilling; alternative energy; and 'what everyday people can do to change the system". U.S. Rep. Joe Scarborough, R-Fl, and state Rep. Buzz Ritchie, D-Pensacola are slated to appear. Also scheduled are Cynthia Sartou of the Sierra Club Legal Defense Fund; Linda Young, publisher of the *Pro Earth Times*; and representatives of the University of Florida (discussing "Clean Energy"); and the Legal Environmental Assistance Foundation.

Drilling opponents will not give up. 16 May, 1998. Pensacola News Journal, Op-Ed, (from GCED website.)

"We support the efforts of Rep. Joe Scarborough of Pensacola in seeking a permanent ban on drilling in the eastern Gulf of Mexico along the coast of Florida." This editorial goes on to state that unanimous bi-partisan opposition to drilling from Florida's legislature "...show[s] the strength of public opinion against drilling on our coast."

What is likely, according to this article, is that Scarborough and Rep. Porter Goss, R-Fort Myers, will win passage of a bill calling for a five-year "timeout," or moratorium, in which to conduct thorough impact assessment. The strong political pressure for expanding Gulf drilling may preclude a ban along the coast, so it is suggested here that the best compromise would be enforcement of a buffer zone of "...at least 100 miles."

Concerned residents are directed to contact local anti-drilling environmental group Gulf Coast Environmental Defense. "Both people and politicians in Florida have come together to oppose drilling in an unusually close partnership. Given the sensitivity and natural biological richness of the coast, overwhelming public opinion is to preserve it from the impacts of drilling."

The overabundance of oil production, with artificial production cuts to keep prices higher, expanding natural gas production, and the big money involved are mentioned as obstacles to "Keeping our little corner of the world drilling-free--certainly withing 100 miles of the coast [. It]

doesn't seem like such a big thing to ask for." The editorial closes with "In Florida, they will continue to meet opposition."

Drilling on hold, bureaucracy rambles on. 01 August, 1997. The Pensacola News Journal, sec. Opinion: 18A.

A permanent drilling moratorium is promoted in this editorial. Sen. Connie Mack, and U.S. Rep. Joe Scarborough "say the necessary ban will be considered by the Senate's Energy and Natural Resources Committee this fall." The article goes on to describe "humorous...bureaucratic residue" where the EPA continues to post legal notices to permit air emissions to Mobil long after their announcement of relinquishing the six leases 17 miles from Pensacola.

"Likely all this will clear up should Congress agree with Mack and Scarborough that the moratorium should be permanent--a reasonable request for protecting the Panhandle's sensitive coastal areas, which should be equally important to agencies committed to preserving natural resources rather than selling them."

Drilling protection needed by state. 26 July, 1997. Pensacola News Journal, sec. Editorial: 18A.

"Florida could face devastating costs should damage from an oil spill affect fishing, oystering and tourism." This editorial is strongly anti-drilling, and advocates the posting of "surety bonds of sizeable amounts as a safeguard against oil spills before allowing an energy company to begin drilling operations within state waters." The state legislature recently changed the law to "accommodate a Florida Supreme Court ruling, giv[ing] the state the increased muscle to burden those who would be responsible for damage to the fragile coast."

The editorial reminds Coastal's President Philip Ware that, although he may consider the price of the bond unreasonable, "the state could also face devastating costs should damage from a spill affect fishing, oystering and tourism aspects of Florida coastal recreation, industries earning tens of millions of dollars along the Gulf Coast each year."

In conclusion, "Florida must protect it's natural assets, regardless of the burden that may be placed on oil and gas companies whose sole purpose is the extraction of energy that can be obtained elsewhere in less environmentally sensitive areas."

Dunkelberger, Lloyd. 10 September, 1997. Oil firm faces $4.3 billion drilling bond; Coastal Petroleum likely to fight Cabinet's decision in court. The Sarasota Herald-Tribune, sec. Local/State: 5B.

Florida's state legislature continues to stand firm against offshore drilling. In a unanimous decision, state officials "slapped" a $4.3 billion fond requirement on Coastal Petroleum--the company that plans to sink an exploratory well off St. George Island, in Franklin County. Once again, Coastal President Phil Ware will be forced to challenge the new requirement in an ongoing administrative hearing. Ware calls the amount of the bond "ridiculously absurd."

State Attorney General Bob Butterworth said the Cabinet basically does not want drilling, "but if we have to have it, we definitely want a sufficient bond. It would be terrible if there's an oil spill and it literally ruins what are considered to be the most beautiful beaches in the world."

This third attempt to impose a surety bond before allowing Coastal to drill is a result of recent legislation which authorized the state to "set a reasonable amount of surety" that would cover cleanup costs and environmental damages in the event of a spill. Previous efforts to require a bond were overturned by state courts which said the state did not have the legal right to make such requirements.

Worst case scenarios by state geologists estimate the St. George well could release as much as 3 million barrels of oil. This could effect the coast from Pensacola to Pasco county. The estimates are based in part on the Ixtoc spill which occurred off Mexico. Walter Schmidt, head of Florida's geology bureau said, "It can happen. It's a reality."

Coastal says this law cannot be applied retroactively to a pending drilling operation and also claim the state's estimates of amount of possible spill are incorrect. A Coastal spokesman said the Ixtoc spill was an erroneous basis from which to calculate because "Mexican authorities allowed the flow to go on for 295 days." Worst case spill, according to Coastal, would be contained in no longer than 21 days. The federal government requires a $35 million bond to drill exploratory wells in federal waters. The $4 billion amount will effectively make drilling unfeasible for Coastal, according to Phil Ware. "If oil is found off St. George, Ware estimated Coastal would need 109 wells operating on six platforms to extract it." Ware also said if the state allows Coastal to drill, state revenues could amount to more than $90 million annually.

Despite the previous two defeats, "Chiles said the new law will help the state prevail in the latest legal battle with Coastal". He said, "We're on a sounder basis than we have been in the past."

Eisler, Peter. 01 July, 1994. Medicine for Gulf's ills bottled up in Congress. Gannett News Service.

1992 was Congress' "self-proclaimed 'Year of the Gulf of Mexico.'" There were several bills proposed which would create a "full-blown Gulf of Mexico program at the EPA...bills to clean and control ground water running into the Gulf, bills to restrict offshore oil and gas drilling, bills to limit commercial fish catches." But the bills remain largely unaddressed, because as Rep. Porter Goss, R-Fla. said, "We have a very serious problem in the Gulf, and that is, how are we going to answer the conflicting use problems?" This article goes on to articulate some of the conflicts, and specific environmental problems already existing in the Gulf.

Eisler, Peter. 23 June, 1994. House passes new ban on offshore drilling. Gannett News Service.

Legislation was passed by the House to extend the year-to-year ban that "...blocks the government from opening new coastal waters for offshore oil and natural gas drilling."

According to Rep. Porter Goss, R-Fla., government buy-back of existing leases is "impractical". He instead supports a moratorium in which comprehensive research is done to evaluate the impact of drilling on marine ecosystems, in an effort to address both industry and environmental needs.

Eisler, Peter. 12 May, 1994. Shaky alliance should limit acreage for Coastal drilling. Gannett News Service.

The Clinton administration is continuing to support "...a year-to-year ban that bars the government from opening new waters for drilling off Florida, the mid-Atlantic states and most of the West Coast." This is referred to as "stretching its honeymoon with coastal states."

Rep. Porter Goss, R-Fla., and Rep. Harry Johnston, D-Fla., leaders in Florida's resistance to drilling, "have introduced bills that would address some of the long term questions...involving the Gulf of Mexico."

Increasing pressure to increase domestic use and production of natural gas, and the pro-industry support of lawmakers (who have killed several anti-drilling measures) from states where oil and gas are key to the economy is likely to bring an end to the "honeymoon," according to this article.

Energy Needs. 11 October, 1993. The Orlando Sentinel, Editorial: A14.

This editorial refers to a recent Sentinel article ("White House Takes a Look at Florida Offshore Drilling," Sept. 20), in which Deputy Energy Secretary William White declares the need to "bolster the oil industry."

"Someone should remind White that America does not exist to support the oil industry; the oil industry exists to help America meet its energy needs...America needs to bolster conservation and long-term renewable energy development efforts, not the already-wealthy oil companies." The article goes on to say, "Offshore gas and oil will not meet the energy needs of this nation." (Estimates are that the oil and gas in the Eastern Gulf of Mexico comprises only a three-day national supply.) Finally, the commentary urges an end to dependence on fossil fuels.

Environmentalists applaud U.S. action to save the rainforest. 04 January, 1997. America Online.

The U.S. Fish and Wildlife Service has "announced that the U.S. will seek sweeping protective measures for the embattled Amazon big-leaf mahogany tree. (In 1992, the U.S. bowed

to industry pressure and withdrew its proposal.)" The U.S. proposal will be voted on by the international community, which is scheduled to meet for the Convention on International Trade in Endangered Species (CITES), to be held in June.

The continued support of the U.S. on this issue could signal a new concern for ecological issues, since the U.S. previously has also been the "world's leading consumer of tropical hardwoods." "Both U.S. mahogany trade and Brazil's deforestation-rates are on the rise at a time when other nations are importing dramatically less tropical timber."

"According to scientists, mahogany logging is a leading force behind the destruction of the Amazon rainforest."

Environmental group aims to block oil-drilling permit. 30 August, 1996. Orlando Sentinel Tribune, sec. Local & State: 3D.

The Sierra Club Legal Defense Fund has filed an objection to the state's decision to grant permission to Coastal Petroleum to drill in Florida waters. The environmental group argues that "the drilling would endanger the underwater ecosystem and Florida's beaches. Further, the permit should be denied because Coastal has never found oil in 50 years of holding leases to the Gulf of Mexico sea floor."

Coastal president Phil Ware has stated that the Sierra Club has "no standing to stop them." Company representatives have gone to the 1st District Court of Appeal in Tallahassee to ask that Coastal be allowed to "circumvent the legal process that lets citizens challenge a permit."

Environmental group pans DEP, Wetherell compares it to abortion bombers. 07 February, 1998. N-J wire services/EnviroLink.

"A national group of environmental agency workers, including staffers of the Florida Department of Environmental Regulation...accused DEP's Pensacola-based Northwest District of disregarding the agency's own regulations and ignoring massive pollution discharges." The district includes 16 counties; from Pensacola to Jefferson County, east of Tallahassee.

The organization, known as Public Employees for Environmental Responsibility (PEER), wrote an expose titled "Dereliction of Duty" contending "the district is the least protective of any in the state and that it intimidates staff members, purges public files and improperly issues permits." This prompted derogatory remarks by DEP Secretary Virginia Wetherell regarding the "...very radical people in [the Pensacola] area." She went on to say, "You're familiar with people who have blown up your abortion clinics." Wetherell said PEER "won't be specific [in its complaints]." Whereas, the report cites eight specific cases, including reports that Air Products and Monsanto have been allowed to operate with expired pollution permits. Both of these industries previously employed current DEP district director Bob Cooley.

PEER executive director Jeffrey Ruch stated, "The Northwest District management's preoccupation with pleasing members of the regulated community has resulted in the violation of numerous environmental safeguards and evasion of public oversight."

The "Dereliction of Duty" report was written anonymously by DEP staffers, with assistance from local publisher of an environmental newsletter (*Pro Earth Times*), Linda Young.

Director Cooley denies allegations that he purged files, searched employees desks "...at night to find out who they talk with," and transferred workers as punishment for opposing his policies.

EPA grants Chevron permit to drill exploratory well for natural gas. 20 January, 1994. BNA State Environment Daily.

The Environmental Protection Agency has issued an air permit to Chevron U.S.A. This was the last hurdle for Chevron to clear before being allowed to drill an exploratory well off the Florida Panhandle.

Epstein, Gady A. Bond bill creates drilling obstacle. 07 March, 1997. The Tampa Tribune, sec. Florida: 6.

Florida Senate Resources Committee unanimously passed a bill that would require any company wishing to drill in the Gulf to post a bond to insure possible cleanup of spills. Currently, only a $4000 fee is required. Although the bond is applauded by environmentalists and Florida legislators, it still may "...face rough times ahead."

The bill by Senator Jack Latvala, R-Palm Harbor was changed only slightly by the Florida Senate, but "Latvala seemed concerned the House version would face tougher scrutiny." The House Environmental Protection committee is considered "less sympathetic" to the anti-drilling effort than Latvala. This bill is primarily intended to stop Coastal Petroleum, which is partly owned by Tampa-based Lykes Brothers--a company that contributed more than $60,000 to state lawmakers and political action committees during the last election.

Florida effectively banned offshore drilling in 1990, but this doesn't apply to Coastal's leases that stretch from Apalachicola to Naples. The leases were purchased 56 years ago. Coastal is being accused of "greenmail." Their actions are seen by some as being calculated to force the state to buy back the leases--since Coastal doesn't presently have the equipment or personnel to go into production.

Originally, the Florida legislators wanted Coastal to post a $1.9 billion bond, "but an appellate court threw out the decision." Coastal Petroleum President Phil Ware said he would accept federal guidelines.

Epstein, Gady E. Court blocks immediate oil drilling permit. 12 February, 1997. The Tampa Tribune, sec. Florida: 1.

Florida First District Court of Appeals "has denied Coastal Petroleum Co.'s request for an immediate offshore drilling permit, instead allowing groups opposed to drilling the right to a potentially lengthy administrative hearing." This is considered a "costly setback" by Coastal, especially coming after five years of litigation in an attempt to sink a well less than 10 miles off the Panhandle. The hearing process "...could delay the permit for perhaps a year or stop the permit altogether."

Environmentalists such as the Sierra Club Legal Defense Fund, "are elated," according to attorney David Guest. They also charge that Coastal is attempting to "greenmail" the state into buying back the leases. Coastal says the state is merely trying to make things difficult for them--that they have a "right to look for oil." Coastal President Phil Ware said "You could drill a well right now for the cost of the permit process." The company is considering "asking the First District Court of Appeals to take up the issue."

Epstien, Gady A. 22 July, 1997. $4.3 billion bond asked for drilling. The Tampa Tribune, sec. Florida/Metro: 1.

Once again Florida legislators and environmentalists are hoping to effectively block Coastal Petroleum Inc.'s plan to drill offshore. The Department of Environmental Protection has recommended that Coastal post a nearly $4.3 billion dollar surety bond. This would serve as insurance against environmental damages incurred in their drilling efforts off Florida's Panhandle near St. George Island.

Two years ago the governor and Cabinet tried to require Coastal to post a $2 billion bond. They are expected to approve the DEP recommendation at an Aug. 12 meeting. Coastal continues to be accused of "using the threat of drilling to compel the state to buy its oil and gas rights." Coastal President Phil Ware calls the bond proposal "...sublimely ridiculous." Two years ago the $1.9 billion bond was thrown out by Florida's appellate court. But, this year "the Legislature passed a law expressly giving the governor and Cabinet the authority to impose such a bond, setting the stage for next month's meeting."

The high price of the bond is based on a worse-case scenario in which oil could spill and extend west to Pensacola and southeast as far as Pasco County, "and threaten beaches, salt marshes, sea life and the oyster-rich estuary of Apalachicola Bay." A 1979 spill off the Gulf Coast of Mexico, involving 140-million gallons, provided the figures on which the calculations were based.

Epstein, Gady. 25 June, 1997. State moves to outflank oil drilling. The Tampa Tribune, sec. Florida/Metro: 1.

Coastal Petroleum's "seemingly endless battle for a permit to sink an offshore well near the beaches of the Panhandle, "...may be prolonged for several more years." Since a new law was enacted last month, the State now has authority to require a "huge environmental bond." The

company has called this "...[an] illegal attempt to require additional security..." A company spokesman said, the law is "the brainchild of [Coastal President] Ware's adversaries in the attorney general's office."

The DEP, "with the blessing of environmentalists, is asking Administrative Law Judge Mary Clark to put that [upcoming environmental protest] hearing on hold so the state can again try to impose a bond requirement on Coastal. This time, the DEP argues, it has the new state law on its side." Clark could make the decision right away, but it could then be appealed by either side. In addition to a delay from the appeal over the hearing, Coastal may appeal the new bond requirement.

"And, if a new bond requirement holds up, Coastal could find itself without a permit--after many years of legal wrangling and millions of dollars spent in fees."

Epstein, Gady A. 26 February, 1997. Oil company seeks OK to drill in Bay area. The Tampa Tribune, sec. Florida: 1.

"Coastal Petroleum, a company heavily backed by Lykes Bros., is asking for permission to drill for oil within 10 miles of Tampa Bay area beaches." Coastal has been battling in the courts for over five years seeking to drill one well off the Panhandle. Now Coastal has asked the Florida DEP for permits to drill in 12 new sites that would be visible from Tampa area beaches. Coastal holds 56-year old leases which cover 880,000 offshore acres between Apalachicola and Naples.

Beaches possibly impacted by Coastal's future plans include Gasparilla Island, Anclote Key, Longboat Key, Sanibel, Naples, the Fenholloway River area and St. George Island. "Those places are some of the highest valued real estate in Florida," said David Guest, attorney for the Sierra Club Legal Defense. "'Offshore drilling simply is not compatible with Florida's coastal economy or fragile environment,"said Mark Ferullo, legislative director of Florida Public Interest Research Group. "Coastal should know they're not wanted here."

Some environmentalists say Coastal "is seeking leverage by intentionally picking sites near the most environmentally sensitive and commercially valuable spots on the west coast of Florida."

A 1995 attempt by the state to force Coastal to post a $1.9 billion bond before drilling near St. George Island was overturned by an appellate court. But, Coastal still faces "what could be a lengthy administrative hearing," and there is speculation over "what the real chances are that Coastal will ever sink a well, much less produce any oil." They've already spent millions on legal fees in a bid to sink one well. However, Coastal is backed by Coastal Caribbean Oils & Minerals Ltd. ("valued at more than $100 million") and they have Lykes Bros. as a weighty recent investor--all of whom "someday hope to hit the jackpot."

Governor Chiles continues to "...repeat his determination to use any legal means necessary to prevent drilling in Florida's waters."

Epstein, Gady. 08 August, 1996. State angles for new legal way to avoid offshore drilling permit. The Tampa Tribune.

With the threat of drilling less than 10 miles from the Panhandle shoreline, environmentalists are preparing for battle against Coastal Petroleum Co. The Governor and

Cabinet tried to "force Coastal to post a $1.9 billion bond as environmental insurance before drilling for oil, but that bid was rejected last week by the State Supreme Court."

Now the State is "scrambling" to find some other legal means to impede Coastal's drilling plans. Attorney for the Sierra Club Legal Defense Fund, David Guest, said, "I think at stake is the long-term future of Florida's coasts. It would be ridiculous to risk their complete destruction in order to make a few dollars on oil drilling."

The state has agreed with environmentalists that "Coastal doesn't really want any oil, just a huge cash settlement from the government." Or, as environmentalists put it, this is a case of "greenmail."

Coastal President Phil Ware "dismisses talk of the dangers of offshore drilling, calling it 'propaganda'." Even after receiving the permit, Coastal still lacks two other necessary permits--both of which are subject to an Administrative Hearing process. So, "the company may not sink a well for years, if ever." Especially considering that the Governor and legislators are "sworn to stop [Coastal]." As the Governor's spokeswoman said, "He believes it is far too risky, and is not what the people of Florida want."

Epstein, Gady A. State welcomes offshore drilling protest. 31 August, 1996. The Tampa Tribune, sec. Florida: 1.

State officials are reportedly "pleased" that environmental groups are protesting Coastal Petroleum's permit to begin drilling in Florida waters. State officials were reluctant to issue the permit on Coastal's preexisting lease. A drilling ban has been in effect for six years. According to Epstein they were "counting on" environmentalists to hinder Coastal's plans. Environmentalists have accused Coastal of "greenmail," alleging they have no real intentions of oil or gas development , they are simply pressuring the state to buy out their leases.

The Sierra Club Legal Defense Fund has "filed the protest on behalf of the Florida Wildlife Federation, the Florida Audubon Society, and the Florida chapter of the Sierra Club. The state's Division of Administrative Hearings will handle the challenge." Coastal has appealed the DEP's refusal to issue the permit without a hearing. But, the 1st District Court could "take months" to make a decision.

State Assistant Attorney General Denis Dean, and the DEP are said to welcome the administrative hearing--and have vowed to "join in the environmentalists' fight, which could take two years to resolve."

David Guest, an attorney for the Sierra Club Legal Defense "...accuses [Coastal] of using its right to drill as a threat to bilk cash out of waterfront communities during the 1960's and '70's--back when Coastal had exploration rights all the way to the shoreline. Now, he says, the company is doing the same thing to the state."

Eskimos worry about oil drilling. 07 October, 1997. The Associated Press.

Nuiqsut Eskimos' tribal homeland is the North Slope of Alaska--a place where oil drillers estimate "1 billion barrels of oil can be found below the tundra." Interior Secretary Bruce Babbitt toured the area recently before his office makes a decision over whether to open up 23 million acres to drilling. "The Interior Department is expected to decide next year--in half the normal time--on drilling leases."

Native residents attempted to show Interior Secretary Babbitt the importance of wilderness to their lives by taking him to a hunting and fishing camp, and on a fishing trip. "Hunting and fishing 'is not about sport, it's not about game. It's about life and death,' [Babbitt] acknowledged."

"Many Alaska Natives [say] the fish, caribou, whales and fowl they take from the land and water account for most of their diet and many of their cultural trappings. But they also like the cash and conveniences oil has brought, and do not depend solely on wild game for food." They are among the shareholders of Arctic Slope Regional Corp., and get thousands of dollars a year in oil revenue, much of which comes from Prudhoe Bay.

Alaska Governor Knowles, and Arco Alaska's president both made statements voicing their efforts to "balance the impact of oil development with the Natives' concerns."

Evangelical Environmental Network. 31 Jan. 1996. Reuters.

Christian environmentalists are trying to protect the Endangered Species Act. Ron Seder, the president of Evangelicals for Social Action, says the Bible carries "a clear message that God rejoices in his creation" and that people should be "stewards of God's gorgeous garden." Calvin DeWitt, a founder of the Evangelical Environmental Network, says, "People in their arrogance are destroying God's creation, yet Congress and special interests are trying to sink the Noah's Ark of our day--the Endangered Species Act." The EEN plans to spend at least $1 million to pressure and lobby Congress to protect the Endangered Species Act.

Farragher, Thomas and Elsa C. Arnett. 27 June, 1995. Offshore drilling ban is rescued. The Miami Herald.

The 14-year moratorium on offshore oil and natural gas drilling was upheld by the House Appropriations Committee.

Fight near-shore oil rig placement. 29 July, 1996. Pensacola News Journal, Editorial: 6A.

This editorial strongly urges Alabamians to oppose near-shore drilling rigs, citing the unsightly aspects of placing rigs within sight of Alabama's beaches, in addition to the potential hazards of pollution.

The similar fight NW Florida has waged is mentioned as being far from over "...considering the press for profits and the pro-business attitude of the federal regulatory agencies."

Fiore, Faith. 22 June, 1995. Enemies unite to urge ban on oil drilling; Environment: Legislators from both parties launch dual strategies to keep a moratorium on exploration in coastal waters. A close house vote is expected. The Los Angeles Times, sec. Metro: 3A.

A group of California legislators, joined by legislators from "at least half a dozen other coastal states...rallied in a rare show of bipartisanship to protect the coastline from what they called as much an economic threat as an environmental one." This was in reference to the perceived threat to coastal tourism by oil and gas drilling.

Fletcher, Sam. 02 May, 1994. Action possibly near on greater incentives in offshore drilling. The Houston Post.

MMS is considering reducing its 12.5 percent royalty rate on some new federal leases, as an incentive to "develop some marginal prospects in the shallow waters of the Gulf of Mexico." Interior Secretary Babbitt said, "offering those tracts at a lower royalty rate...may promote continued development, culminating in production." Babbitt also said he supports the concept of "coastal impact assistance," to offset demands made on the infrastructure of coastal communities by oil and gas production.

Fletcher, Sam. 10 January, 1994. Gas producers want more than rhetoric; Say government often working contrary to industry's interests. The Houston Post.

President Clinton has voiced strong support for increasing U.S. use of natural gas. The oil and gas industry "wants President Clinton to put federal money where his mouth had been." Industry observers "claim existing government policies favor other fuels in competition with gas." There are complex opposing forces "that keep natural gas from competing equally with oil and coal for new markets." Examples are then given here of those conflicts.

The conversion of vehicles and electrical heating and cooling to natural gas is being researched, by the DOE, among others. Different approaches in implementing the Clean Air Act is also mentioned as either a potential source of encouraging natural gas conversion, or of preventing it.

Fletcher, Sam. 18 July, 1994. Plans to drill off Florida coast strike controversy. The Houston Post, final edition.

Chevron's natural gas well "30 miles offshore Pensacola, FL., has become a focal point in the controversy over some state's efforts to ban drilling off their coasts." An MMS spokesman stressed the added interest in the project due to its being gas rather than oil. According to this article, "Florida officials say opposition to offshore drilling is strong," in a state where 98 percent of all the energy consumed has to be imported. Chevron claims "87 percent of the petroleum and petroleum products consumed in Florida enters the state by waterborne transportation," and that "87 percent of the oil spilled offshore comes from tanker incidents."

The well in question is actually "the 42nd drilled in Florida's offshore area--the 18th since Florida passed its Coastal Zone Management Act," according to Bobby Boone of Chevron. In Chevron's defense Boone also stated that a "110-foot work boat [is] stationed around the clock" to pick up any debris or trash falling from the rig; and, "one city bus generates more pollution in a day than we have during the time we've been out there."

The EPA "finally issued a permit in January allowing the rig to work a maximum 280 days," after a four-year delay.

Fletcher, Sam. 18 July, 1994. Oil interests take fight offshore: California and Florida still block development. The Houston Post, final edition.

Domestic production of oil is falling sharply, and "Congress and the White House are banning oil and gas exploration along most U.S. Coasts except for Texas and Louisiana...which support virtually all this nation's offshore drilling operations." Industry officials claim Florida and California "hold the best prospects for new sources of oil and gas," and are hoping the Department of the Interior will overcome the existing drilling bans in those areas.

Statistics are given in this article detailing import and export economics. Industry spokesmen argue that advances in drilling production technology make offshore production safe. Chevron would like to invest "...close to $1 billion developing natural gas reserves in the [Gulf]." The GOM is the "...biggest natural gas basin in the United States." Florida legislators seek a "cooling off" period that would ban further leasing until 2002. This would effectively extend the ban President Bush imposed previously for those areas south

of the 26th parallel. The MMS will be required to study the potential impact of drilling, "and perhaps permanently close those waters to exploration."

The frustration of several spokesmen for the oil and gas industry is articulated here, along with the stance of environmentalists.

Florida's Chiles says Babbitt's call for OCS Task Force is premature. 31 January, 1994. Inside Energy/with Federal Lands.

Interior Secretary Bruce Babbitt's idea for a task force to deal with Florida's opposition to oil and gas development "...would not be a wise use of resources" according to Florida's governor.

Instead, Governor Chiles urges making informed decisions based on "thorough and updated scientific information" from "data accumulated in yet-to-be-completed scientific studies in the Eastern Gulf."

Florida's Coastal loses round, looks to court. 22 December, 1993. Platt's Oilgram News. 71(247): 2.

Florida Governor Lawton Chiles and the state Cabinet rejected a request by Coastal Petroleum for drilling permits, which the Florida Department of Environmental Protection later refused to overturn. Coastal's president has said a suit will be filed with the state's First District Court of Appeals soon.

Florida denies Coastal Petroleum. 02 February, 1998. The Oil Daily. 48(21): 7.

The Florida Supreme Court has declined to "...review an appellate ruling against [Coastal Petroleum] in its royalty-interest claim against the state." Compensation was being sought from the state "...for its expropriation of Coastal's royalty interests in any petroleum or minerals that might be found on 2.5 million tidal acres along the Gulf Coast." The suit was first initiated in 1990.

Coastal is a subsidiary of Coastal Caribbean Oils & Minerals, Ltd. According to company statements, the ongoing effort to obtain a drilling permit "...involves working-interest acreage that is not affected by the high courts ruling." Coastal also said they are considering an appeal to the U.S. Supreme Court.

Four people killed La. oil fire (sic). 03 March, 1998. The Associated Press Online.

The explosion of a 1,000 gallon oil tank at a production facility in western Louisiana killed four workers. It took three hours to extinguish the fire at the Sonat Exploration Co., a subsidiary of Exxon. The cause was unknown. "Police initially suspected an oil well blowout..." The facility is about 100 miles northwest of Baton Rouge, and has 16 crude storage tanks. The victims were contract workers employed by Quantum Production Well Services of Hessmer, La.

Gas rig explodes in rural Louisiana. 17 June, 1997. AP/America Online.

Three rig workers are missing and authorities are still "scrambling" to bring a fire at a natural gas well under control in Louisiana's bayou country. Twenty two workers were aboard the rig in Little Pigeon Bayou, approximately 60 miles west of New Orleans.

The cause of the explosion is unknown. Flames shot 200 feet into the sky after the explosion, according to reports. The Gulf Strike Team of Mobile, Alabama which specializes in marine emergencies (such as oil spills, natural gas pipeline blowouts and chemical spills) has been contacted to work on containing the fire.

Ghesquierre, Steve. 29 Sept. 1996. Let's not mess with offshore drilling: We can get power from the sun. Pensacola News Journal, Letter to the editor: 21A.

"The fight to stop offshore drilling off our pristine Panhandle waters is an honorable fight," according to Ghesquierre. He goes on to ask "Why don't oil companies pursue clean energy systems instead of dangerous and polluting ones? Answer--corporate greed and irresponsibility." In essence, he advocates the development of solar energy in Florida. Ghesquierre cites Saudi Arabia's use of solar power: "They...have realized that fossil fuels are dirty and supplies are finite."

Gibson, William E. 28 June, 1995. Offshore drilling ban extended: Committee foils attempt by oil industry to tap Florida tracts. The Sun-Sentinel (Fort Lauderdale), Final edition.

The House Appropriations Committee overturned an earlier subcommittee vote to eliminate the ban on new oil and gas drilling off the shores of Florida and much of the rest of the nation.

In Tallahassee, Florida Governor Chiles and the Cabinet continued to work to block drilling by demanding a $1.92 billion bond from Coastal Petroleum before allowing production to commence.

Godwin, Diana. 03 Sept. 1996. 1941 Deal kicked off oil, gas exploration. Pensacola News Journal: 8A.

The increased demand for fossil fuels during WW II resulted in a "war-era contract" being signed in 1941 which granted [oil and gas] lease rights to "vast expanses of Florida's western coast." "This ...contract has given countless headaches to state officials, environmental activists and attorneys concerned about oil drilling near Florida's beaches." These areas were originally leased to Arnold Explorations, which was subsequently bought by Coastal Petroleum in 1947. In a 1976 settlement with the state, these lease area holdings were greatly reduced. Since 1990 Coastal has been engaged in legal battles to begin drilling in the Apalachicola Bay area; "one of the most productive estuarine areas in the world."

Gohrbandt, Klaus. 09 August, 1998. Chevron's drilling will have little impact on Gulf's environment. Pensacola News Journal, sec: Reader's Forum: 13A.

Mr. Gohrbandt is a local resident (of Gulf Breeze) and has "38 years of experience in petroleum geology." In this letter he addresses concerns that Chevron's production site off Pensacola will be visible from area beaches, and could result in a crude oil spill.

Gohrbandt seeks to refute several of the objections made to the project, including the visibility of rigs. He claims that the structures, which will extend no more than 115 feet above the water, will only be visible from the 30th floor of a high-rise with a telescope. He also states that the Pensacola News Journal gave a number of up to 150 rigs for the Chevron project, whereas there are currently plans for only a maximum of 20.

As for the possibility of a crude oil spill, according to Gohrbandt, the geological formations are at such depth and heat that all crude oil has been thermally converted to dry natural gas. Drilling so far in this formation has yielded no trace of crude oil, he says. "Therefore I must consider GCED's statement [regarding the possibility that gas drilling might strike oil which could foul beaches] to be a malicious misrepresentation." He also states that "I am also not aware that gas production around Mobile Bay has caused environmental deterioration...On the contrary, fishermen love the platforms!"

"I share the concerns about the environmental impact of gas development offshore Pensacola and I have expressed my opinion in writing to the Minerals Management Service...However, I consider it unethical to spread false statements to achieve public attention and create unfounded fear."

Gohrbandt, Klaus. 08 June, 1997. In our backyard? It's needed. Pensacola News Journal, sec. Reader's Forum: 17A.

Gohrbandt feels that local citizens should re-examine their "not-in-my-backyard" attitude toward offshore drilling. He cites several statistics to support his views, including: the U.S. imports "44 percent of its liquid petroleum and some natural gas," with DOE forecasts of 61 percent by 2015, which means a continuing trade deficit and dependence on foreign energy sources; the "imbalance" of Florida's oil and gas production versus rate of consumption; planned exploration and production sites will be beyond visibility limits from onshore beaches; the reservoir offshore Pensacola "is the same deep reservoir which produces gas in Mobile Bay. No oil was encountered at any depth in the three wells drilled [by Chevron]; and "Gulf Coast Environmental Defense's (GCED) estimates of four to six rigs/platforms per block off the Panhandle is clearly in error and dramatically overstates any reasonable projections," as Gohrbandt quotes the MMS regional director.

Gohrbandt concludes by quoting the Department of Energy, "...these natural gas resources could be explored for and produced in a way that poses less of a threat to Florida's coast and coastal waterways than does the continued annual import of petroleum products." According to the DOE, as cited here, Florida would do well to use the offshore gas instead of "coal and residual fuels in power plants"--this would lead to better air and more jobs.

Note: See GCED executive director Amy Belanger's "Give up the fight? No way." This article was printed alongside Gohrbandt's, under the headline "Drilling."

Goldschmidt, Keith. 23 July, 1997. Coastal likely to face $4.2 billion obstacle to offshore drilling. Pensacola News Journal, sec. Local: 1C.

The Florida state Department of Environmental Protection is seeking a surety bond from Coastal Petroleum before allowing the company to begin oil drilling operations off St. George Island. The DEP is asking for $4.2 billion. Sierra Club spokesperson Susan Caplowe typified environmentalist's pleased response, "For tourists and the environment, which go hand in hand, it's a good thing."

The amount of the bond was assessed as the potential cost of a spill occurring off the barrier island near Apalachicola. According to Coastal President Phillip Ware, "It's fairly ridiculous. They've got a row to hoe to make that stick."

A vote by the governor and the Cabinet is scheduled for August 12. Ware stated he is "confident they'll approve it, especially because they approved a $1.9 billion bond for Coastal at the same site a few years ago." Last year, however the requirement was overturned by the Florida State Supreme Court. Legislators retaliated by changing the law. The bonds can only be instituted in state waters, however. Proposed drilling in the Gulf of Mexico 20 miles offshore of Pensacola Beach would not be affected by the law.

DEP Secretary Virginia Wetherell stated, "Coastal Petroleum should not be allowed to risk damage to the state's environment for a penny less than $4,287,500.00." A spill could cause damage as far west as Pensacola or as far east as Pasco county.

Coastal Petroleum has held Gulf leases for five decades on 880,000 of submerged land. After Coastal won the battle against the previous bond, "the DEP issued an intent to issue the permit, but that was quickly challenged by the Sierra Club." A hearing on these issues comes up in September.

Graham, Mack hail end to Mobil Oil threat on Florida's Gulf: Say company's decision to forego drilling will preserve environment, save dollars. 24 June, 1997. Congressional Press Release.

"Five days after the introduction of Florida Coast Protection Act and less than two months before it was scheduled to begin exploratory drilling off Florida's Panhandle, Mobil indicated that it was ending its drilling operation--once its letter of notification reaches [the MMS]." Florida Senators Bob Graham and Connie Mack introduced the legislation which will cancel six oil leases near Pensacola and compensate Mobil Oil.

Senator Graham said that this does not completely eliminate the threats posed by oil drilling, but "...it does mean that the residents of Florida's Gulf Coast fear one less potential oil spill, one less environmental catastrophe in-the-making...In the wake of legislation we introduced last week, Mobil's decision not to drill off Pensacola is a significant victory for Florida's sensitive environment."

Graham and Mack's legislation would have purchased the leases from Mobil, but Mobil's decision to let the leases expire means no federal costs will be incurred. Mack said, "Clearly, Mobil recognizes what we have said all along--that offshore drilling poses a real risk to our environment

and our economy." A recent EPA report "indicates that a typical oil rig can discharge between 6,500 and 133,000 barrels of waste and warns of further harmful impact on marine mammal populations, fish population and air quality. Senator Mack, however, urged continued vigilance. "We can't allow today's victory to cause us to lose sight of our goal--the total elimination of oil drilling off our coast. The Clinton administration should once and for all issue a permanent moratorium on drilling off Florida's coast."

Griggs, Ted. 22 June, 1995. Offshore proposal might help Louisiana. The Advocate (Baton Rouge), sec. Business: 1D.

Louisiana is hoping for increased offshore drilling along the east and west coasts, expecting that it would have a "very positive effect" on Louisiana's economy. Most of the support for offshore drilling is "directed from Louisiana." "Drilling rigs, platforms, and service companies such as diving, helicopter, and workboat firms..." are based in Louisiana.

"From a public policy standpoint, the facts are that the moratorium does not make much sense either economically or politically...It's safer to pipe oil and gas in from offshore than to ship it in by tanker," according to a policy analyst for LSU's Center for Energy Studies.

Graybiel, Ginny. 13 May, 1998. Group meets tonight, plans summer no-drilling campaign. Pensacola News Journal, sec. Local 6C.

Gulf Coast Environmental Defense is planning to meet to discuss a grassroots campaign to "visit thousands of homes, encourage letters to decision-makers, and pass out 'rig buster' stickers to businesses and individuals," in an effort to "sink" Chevron's plans to drill off Pensacola.

Chevron plans to begin drilling in 2001. "The Florida Department of Community Affairs rejected Chevron's proposal in February as inconsistent with the state's Coastal Zone Management Plan." Chevron has appealed to the Department of Commerce, which has the authority to overturn the state's rejection. The state must respond to the appeal by June 20.

GCED plans to concentrate its attention on the Commerce Department, in addition to passing on research they conduct to aid the state. The group will open a campaign office on May 29 and kickoff the protest campaign on May 30.

Graybiel, Ginny. 27 April, 1998. Environmentalists, Chevron clash over offshore gas wells. Pensacola News Journal: 1A.

The Florida state legislature and environmentalists are "digging in their heels" to oppose Chevron's plans to drill for natural gas 25 miles off Pensacola Beaches. The production project

does not comply with The Florida Department of Community Affairs assessment of what is allowable in the state's coastal management plan. The department stated concerns that Chevron's development would "...escalate offshore activity now associated with Texas and Louisiana...thus exposing Florida and its sensitive marine and coastal resources to increased risk inherent in offshore development."

Of particular concern to the Florida Department of Community Affairs in connection with offshore production, besides impacts from drilling fluids, are the possibilities of diesel fuel spills from extensive pipeline systems within the rig structures; pipeline burial damage to marine life and habitat; and potential impact on area spawning of Spanish mackerel and redfish. The department has complained that Chevron has not provided sufficient data to fully evaluate production impacts.

Gulf Coast Environmental Defense has stated that they are gearing up for a major campaign for the summer of 1998 to stop what the president of the grassroots activist group calls "the equivalent of an industrial park off our coast." The forthcoming effort will center on the Commerce Department.

Chevron's plans call for platforms to accommodate between 12 and 21 wells to tap what is considered a major field in the Destin Dome. The gas would then be carried through approximately 70 miles of buried pipeline to near Mobile. Chevron continues to state that their production typically "...has taken place without impact to the environment."

Florida law has banned drilling in state waters within 10 miles of the coast for many years, until 1991 when the state created a 100 mile buffer zone extending into federal waters. Florida has reiterated that it plans to continue to "...urge the Department of Commerce to turn down Chevron's encroachment on that policy." Chevron has appealed to the U.S. Department of Commerce. The company has set production startup for January 2001. Chevron submitted a reply to the FDCA's objection in April. The state has until June 20 to respond. The issue is expected to end up in court.

Gruss, Jean. 27 March, 1998. DEP rejects Coastal bids for drilling. The Tampa Tribune, sec. Business & Finance: 1.

Twelve applications submitted by Coastal Petroleum for exploratory drilling have been denied by the Florida Department of Environmental Protection. Six of the sites were to be located off the Tampa Bay area, near Sanibel Island and Longboat Key.

The Lykes Brothers-backed oil company president Phillip Ware said, "...this was totally expected." He also said Coastal plans to appeal the permit denial. The applications were originally submitted in February of 1997. In September of 1997, Florida Governor Lawton Chiles and the State Cabinet told the company it must post a $4.3 billion surety bond before drilling. The issue is pending.

Gulf Coast Environmental Defense Website. <www.gced.org>

GCED's website features local plans for mobilizing support for a rig-free Florida Panhandle; a chronological listing of articles from newspapers, including topics such as: opposition to drilling; increasing incidents of well blowouts and accidents; and, other environmental concerns of area residents, e.g., plans by a paper mill to discharge effluent into Escambia Bay. Information is provided about the organization, its membership, and "Save Our Shores," the local anti-drilling campaign.

Gulf Coast Environmental Defense (GCED), newsletter. 14 June, 1996. Health and Safety Alert. GCED: Gulf Breeze, Florida. 1 pp.

According to GCED, the oil industry and the Minerals Management Service are "teaming up to force offshore drilling on the Panhandle. Their plan would expose you and your children, without your knowledge, to dangerous neurotoxins and carcinogens... MMS will not tell you what is buried in its 1,000 page environmental impact statement: drilling will have unavoidable, adverse effects on the water and air, commercial and recreational fishing, archeological resources, recreation and tourism."

This "alert" also warns of expected oil spills on local beaches, and the threat of refineries being built onshore. "MMS will not tell you these things because it depends on drilling for its own funding!" (All emphases in original).

Gunter, Booth. 01 August, 1995. 9 Firms surrender oil leases: Environmentalists herald the news, but fret over the possibility of drilling along other Florida coasts. The Tampa Tribune, final edition, Metro: 1.

Nine oil companies have reached a $200 million deal to "relinquish their Reagan-era drilling leases along the mangrove coasts of southwest Florida..." The leases were originally purchased in 1984 and 1985 at a cost of $109 million. Since then, a "series of one-year moratoriums" and the 1990 Bush administration 10-year ban have prohibited exploratory drilling. Governor Chiles supports a 100-mile buffer zone around the entire Florida coastline.

Gunter, Booth. 11 August, 1995. Drilling restricted under plan: The Federal proposal protects Florida's coast until at least 2003. The Tampa Tribune, final edition: 8.

The U.S. Department of the Interior has exempted Florida's coastal waters from its five-year plan for offshore oil development "...for the first time since the late 1970s." If the proposed plan is

accepted, sales of new oil leases within 100 miles of Florida's coast will be banned until at least 2003.

The Florida Public Interest Research Group spokesman said, "it shows a radical departure in policy at the DOI and MMS. The MMS first began selling leases in the Gulf in 1954." The first five-year plan was issued under former Interior Secretary James Watt in the early 1980s."

Hartman, Brian. 21 June, 1995. Jones joins bicoastal group to decry offshore drilling. States News Service.

North Carolina Rep. Walter Jones, R-Farmville, has joined a coalition of lawmakers from several coastal states to oppose a House subcommittee vote to overturn the 14-year moratoria on offshore drilling. Legislators from California, New Jersey, and Florida have also "...queued behind a podium with Jones just outside the capitol to attack the plan, calling it a 'contract on America's coasts'." Jones said, "the big story here is the bipartisan effort."

Hauserman, Julie. 29 May, 1997. Chiles signs law on petroleum drilling. St. Petersburg Times, sec. City & State: 5B.

"Flanked by environmentalists," Florida's Governor Chiles has just signed a law requiring companies to post multi-million dollar bonds before sinking wells in state waters. This law is hoped to hinder Coastal Petroleum's hopes of drilling off Tampa Bay, Naples, Sanibel and the Panhandle. Florida's drilling ban (in effect since 1990) didn't effect Coastal because it purchased the leases in question decades ago. An effort two years ago to force Coastal to post a $1.9 billion bond was struck down by the courts--who said the state did not have the authority. The law Chiles signed provides that authority. "Meanwhile, oil giants Chevron and Mobil want permits to drill farther out, in federal waters off Florida's coast..." But, Florida legislators are said to be "working...to keep the oil rigs at bay."

Hu, Winnie. 02 August, 1996. 15-Mile Buffer zone has wide support: Coastal residents join forces against gas exploration. Pensacola News Journal, sec. Local: 3C.

Alabama is waging a campaign to prevent future leasing of natural gas wells as near as 3 miles offshore. Alabama wants to prevent any exploration or development so near Gulf Shores and Orange Beach. Gov. Fob James and many Alabama officials have called for a 15-mile buffer zone. (The MMS was to submit the state's plea to Interior Secretary Bruce Babbitt.)

Their efforts are "gaining support from nearby Florida residents". The proximity to panhandle beaches of the proposed Alabama leasing has prompted involvement by Gulf Coast Environmental Defense. Michael O'Donovan, Vice President of GCED, advocated a 100-mile buffer zone off

Alabama--which would be the same as the one presently enacted in Florida . (This moratorium began after Chevron leased a tract 23 miles off Pensacola.)

Alabama has 32 miles of coastline. There is currently no development off the 15 miles along Gulf Shores and Orange Beach "which have about 9000 residents and attract more than 1 million visitors every year." There is gas exploration off the other 17 miles of the Alabama coast, however.

Bob Paley of Perdido Key was quoted as saying: "Anything that happens over there washes over here because we're all part of the same Gulf."

David Lawrenz government affairs Director for the Alabama Gulf Coast Area Chamber of Commerce, also made a statement in support of a 100-mile buffer zone.

Jackson, Jerry. November/December 1997. Letter to an oil company. The Coastal Defender. Gulf Coast Environmental Defense (GCED): Gulf Breeze, Florida.

This letter is addressed to an oil company executive (name withheld by request). Jerry Jackson, a member of GCED, met this person at the MMS Scoping Session and responded to their meeting with this letter. Jackson stresses the fact that small citizens groups like GCED are struggling with "huge, well-financed corporations like yours...beg[ging] you to be responsible partners in life like the rest of us." Jackson says that the planet is "awash in toxic chemicals" because of ""maximum-profit business decisions made by companies who prefer to pay fines or litigate than protect the environment...[and because] the investors won't make as much."

Jackson also states that the issue is not about energy dependence. "To be truly energy independent we desperately need to develop alternative energy applications not fossil fuel production." He says that it's not about national security, or the U.S. would be "leading the world in proven alternative energy technologies and promoting the conservation of existing resources." Instead, he foresees the U.S. using all its energy reserves and then having to purchase the new energy technologies from foreign cartels who saw the end in sight.

"We know it's not safe," according to Jackson. "You name the area where offshore drilling has occurred, I'll name a disaster whose risk was known ahead of time and downplayed by oil companies." He goes on to suggest that a large part of oil & gas profits should be used to develop clean energy sources. Jackson tells this executive, "people like you are in a unique position to steer the energy industry's cutting edge away from strictly profit motives toward globally sustainable technology decisions...It's time your company put more thought into the implications of it's actions and less effort toward convincing us that drilling is good for us."

Judge: Company should post millions for offshore drilling (Bond to cover cost of possible oil spill). 10 April, 1998. Pensacola News Journal/AP, sec. Florida:12A.

A recommendation by Administrative Law Judge Mary Clark may grant Coastal Petroleum the right to drill an exploratory well off a pristine area of the Florida Panhandle if a bond of $224.5 million is posted. Coastal had appealed a previous bond requirement of $4.3 billion set lest year by

the Governor and Florida Cabinet. The judge's recommendation must still go to the Florida Cabinet, and may then be appealed.

The ruling "drew praise" from the Earthjustice Legal Defense Fund because it will still make drilling a very costly proposition for Coastal. "Exploratory drilling would threaten one of the largest and most productive estuaries in the U.S.," according to Earthjustice lawyer Ansley Sansom of Tallahassee. Sansom went on to praise the bond as a precedent-setting decision. The amount of the bond was based on "expert testimony" regarding worst-case scenario oil spill damage and cleanup costs.

Coastal's proposed drilling site is about nine miles off St. George Island near Apalachicola. The barrier island is "lined with luxury beach homes, condominiums and miles of pristine beaches and dunes protected by a state park." According to Earthjustice lawyers, "With one of the largest, most intact seagrass beds in the Gulf of Mexico directly in the trajectory of a spill...the risks are clear.." "The judge recognized that risk and told Coastal Petroleum that if they want to drill, they have to assume the financial burden of those risks."

Judice, Mary. 18 June, 1997. Oil and gas blowouts rise at alarming rate; drilling boom behind increase. The Times-Picayune, sec. Money: 1C.

So far this year, four Louisiana oil or gas wells have blown out of control. The fourth such blowout is burning out of control currently, in the Atchafalaya Basin. With a 40 percent increase in drilling permits since last year, the potential for accident is proportionally increased. MMS data indicates that "explosions and fires have almost doubled from 41 in 1995 to 81 in 1996 and that the number of blowouts has tripled from a single incident in 1995."

Judson, David. 28 September, 1997. Bipartisan plan protects oceans, coasts. Pensacola News Journal, sec. Environment: 8A.

A Congressional initiative led by Sen. Ernest Hollings, D-S.C., and Rep. Sam Farr, D-Calif., has been launched to create a presidential commission "...to recommend ways to turn back growing pollution, declining fisheries and new threats of ocean-born pathogens affecting human health and wildlife."

Hollings said, "Our nation's oceans and coastal regions are under siege from a variety of man-made attacks...If we do not act now, we are sentencing our fragile ocean ecosystems to certain destruction." He predicted his proposal will pass the House and Senate by year's end.

Farr, whose district includes the Monterrey Bay area with it's "17 institutions dedicated to marine research and the nation's largest marine sanctuary--said attention to the plight of oceans and coasts is overdue and urgent." "Congress spends more money exploring outer space than it spends exploring our oceans," he said.

The outbreak of the newly-discovered microbe Pfiesteria, apparently spawned by ecological imbalance, was used to help plead the case for the planned initiative. This microbe has been blamed

for "massive fishkills in the Chesapeake Bay region and is suspected as a culprit in human illness." And, there are additional new marine diseases promulgated by ecological change. Other concerns listed here include: "Declining commercial fish catches worldwide; the estimated loss of 28,000 acres of coastal U.S. wetlands each year; and, the strain of such realities as half of the nation's population living within 50 miles of a coast."

Just how much is a coastline worth? Offshore drilling moratorium faces a regressive attack. 18 June, 1995. The Los Angeles Times, sec. Opinion: 4M.

This editorial calls the idea of lifting the moratorium in California waters "dubious logic," [which] represents an act of extraordinary recklessness for California and other coastal states." The two-fold argument against the moratorium is "disingenuous," according to this report, which attempts to dismantle the logic behind the objections.

"What would drilling accomplish? Easing restrictions would affect less than one-half of 1% of total world oil reserves, according to federal estimates. At the 1994 U.S. rate of oil consumption, proven reserves off California would last just 41 days. Surely our coastal waters are worth more than that."

Kearce, Tammy. 02 June, 1998. Join local environmental groups to save our shores from Chevron. Voyager: The Student Newspaper of the University of West Florida, XXVII (32): 11.

This university newspaper article encourages participating in Gulf Coast Environmental Defense (GCED) and Florida Public Interest Research Group's (Florida PIRG) summer campaign to "Save Our Shores." This is referred to as "...possibly the last and best hope to protect Florida's Gulf Coast from the environmental and economic consequences of off-shore drilling."

The planned campaign is slated to garner public support and thereby influence the Commerce Department's decision on whether to uphold the Governor's recent rejection of Chevron's drilling permit. Chevron plans to drill 25 miles offshore of Pensacola Beach. If the Commerce Department overrules the Governor's decision, Chevron could have as many as 21 wells off the Florida Panhandle by 2000.

Possible consequences of spills "[from] pockets of crude oil between the rock layers that can escape and create a spill" when drilling for natural gas; and the toxic effects of chemicals used in daily drilling processes are discussed here. "...Pollutants generated by each well include drilling mud, naturally occurring radioactive materials, and air emissions." According to this reporter, "..it would not take long" for these things to cause deterioration of the coast and effect the local economy. Five Florida Panhandle beaches were ranked in the top 12 in the country. Visitor spending generates $91.4 million per day in Florida.

MMS is mentioned here, also. "Although the oil and gas industry is regulated, the same agency responsible for regulating offshore drilling is also responsible for promoting the industry, so a conflict of interest arises for which Florida's Gulf Coast may suffer the consequences."

The article concludes by assessing drilling opposition in the state, listing the Governor and "...the entire Florida Congressional Delegation, hundreds of businesses and government agencies and more than 17,000 individual petition signers."

Keep up the fight against gas drilling. 06 April, 1997. Pensacola News Journal, Editorial, sec. Opinion: 18A.

"Despite the efforts of the vast majority of this community--if not the entire state of Florida--including the governor, every member of the state's congressional delegation, tourism officials, county commissioners, their mothers, fathers, aunts and uncles, the big-money oil industry appears on the verge of triumph: an offshore rig is an odds-on bet to begin drilling later this year off our beaches."

A meeting slated for April 18 between federal MMS representatives is mentioned in this editorial as "apparently ...little more than a courtesy call." Since an MMS spokesman was quoted as saying that the denial of the drilling permit is "highly unlikely, if not impossible."

"What can you do? Keep fighting," according to the Pensacola News Journal. Suggestions for community activism are given here, such as phone numbers for local officials (Tom Banjanin) and environmental groups (GCED). "The last chance to strike a blow against the project will come May 21 in Pensacola, when the EPA [holds a permit hearing]."

"The simple fact of the matter is that this community is against drilling...We see no compatibility between drilling operations off our shores and this area's clear water and clean beaches."

Kelley, Daryl. 06 March, 1997. Chevron agrees to pay fine of $1.2 million; Environment: Oil firm violated federal act by operating a platform off Ventura coast with faulty safety valve. Los Angeles Times, sec. Metro desk: 3A.

Chevron U.S.A. must pay a fine of $1.2 million for operating an oil well in California waters without its key safety feature, an anti-blowout valve, being in working order. This is the largest fine for violation of the Outer Continental Shelf Lands Act, "eclipsing a $1 million penalty against Chevron in 1970 for safety violations in the Gulf of Mexico." Also, in 1992 Chevron paid $8 million for "repeatedly dumping oil, grease and other toxic wastes into the ocean in violation of the Clean Water Act."

U.S. Attorney Nora M. Manella said, "No one wants another Santa Barbara oil spill." She was referring to a disastrous 1969 well rupture and massive spill. According to prosecutors and company records Chevron operated for five months knowing that the safety valve was broken. Chevron also "pleaded guilty five years ago to 65 violations of the Clean Water Act for dumping

toxins...[from the same platform] into the ocean." At that time the company paid a total of $8 million in criminal penalties.

Ironically, "Carnie Block, a Chevron vice president, said his company's safety record has been exemplary, as shown by three commendations since 1991 from the Minerals Management Service..."

The recent settlement must still be approved by a federal judge. "The money would go into the U.S. Treasury."

Kenworthy, Tom and Gary Lee. 24 November, 1995. Divided GOP falters on environmental agenda. The Washington Post: 1A.

GOP plans to dismantle environmental legislation have hit a few serious snags, according to this article. For example Republican Senator Conrad Burns co-sponsored a bill to give states rights over 270 million acres of federal land. Hunters responded with a vigorous media campaign reading, "For sale. Public lands." Burns, "stung by the reaction...now says he wouldn't vote for the bill he co-sponsored."

The Republican agenda is opposed by "a newly emboldened president, normally lukewarm to environmental concerns, whose reading of the polls tells him the electorate is growing more upset about the perceived dismantling of environmental laws."

GOP leaders and committee chairmen came into office aiming at nearly every major environmental law enacted in the last generation. They planned to revise laws governing air and water pollution, toxic wastes, safe drinking water, wildlife protection, energy exploration and management of federal lands for industrial uses such as mining and timber production. They vowed to curtail the government's authority to regulate private property, and to subject environmental regulations to rigorous cost-benefit tests. Some conservative lawmakers even mapped out campaigns to scale back the national park system and transfer huge chunks of federal land in the West to the states.

But, with the 104th Congress coming to a close, "the wheels haven't totally come off the GOP's environmental bandwagon, but the bearings are making ominous noises." Much of the proposed legislation was not brought to fruition. Even the all-Republican Alaskan delegation's hopes for opening the Alaskan National Wildlife Refuge for oil drilling and increasing timber sales in the Tongass National Forest are "...both in trouble, the former from a presidential veto threat and the latter from the House revolt on the Interior appropriations bill."

Republicans have, however, made significant changes in legislation that "would have been unthinkable just a year ago." The $16 billion rescissions bill carried a rider that "greatly expands logging, [puts new] restrictions on listing new hazardous waste sites, reduces protection for wildlife, and gives relief to states from federal Clean Air Act requirements. Separate legislation temporarily halted the designation of new endangered species and their habitats...The president is [also] expected to sign a bill ...that provides royalty relief for deep-water oil wells in the Gulf of Mexico. Last week he...postponed new fuel efficiency standards for trucks and minivans." Republicans also have plans for other changes such as cutting tax incentives for renewable energy.

The EPA is slated to experience a significant cut in budget thanks to the 104th Congress, also. President Clinton, however, "...assured leaders of more than two dozen of the nation's largest environmental organizations that he would veto bills with unacceptable environmental riders. Imposing party discipline is increasingly difficult for the Republicans when fundamental environmental legislation is at stake, according to this article. Many in the party "fear losing the public relations war over their initiatives." Kish, House Resources Committee staff director, said "the resolve of some Republicans has weakened because they are facing, for the first time, the organized clout of the environmental lobby..."

He also said, "Environmental groups are not the old unsophisticated bunch of dope-smoking hippies that used to come to town. It's big money, big politics, big consultants, big polling."

King, Marsha. 29 September, 1996. Oppose the Drilling. Pensacola News Journal, Letter to the Editor: 21A.

According to Marsha King, "The fossil fuel industry costs taxpayers from $100 billion to $300 billion annually in lost jobs, tax credits and health and environmental damage as well as a subsidy of $25 million annually." King also says drilling "poses serious risks to Florida's environment, economy and way of life." The pollution from burning methane as fuel, the "chronic low-level pollution" from drilling, and the threat to tourism are also pointed out. King advocates contacting state representatives to support buyback of the 64 active leases. "We have the power to stop this insanity."

Klein, Joseph. 04 February, 1997. Pensacola against offshore drilling: Congressmen have asked President Clinton to impose a moratorium on drilling in the Eastern Gulf of Mexico. Voyager: The Student Newspaper of the University of West Florida, XXV(9): 1.

At a public hearing with EPA officials "rigs aren't worth the risk" is reportedly what Pensacola residents, environmentalists and business owners had to say. The hearing was held to provide local input on the EPA's Draft Environmental Impact Statement. Some of the "near maximum capacity crowd" gave "impassioned" anti-drilling statements. And Congressman Joe Scarborough's statement supported the belief that "drilling is incompatible with an economy based largely on tourism and recreation..." Scarborough also said there was nothing "to change his mind" in the Draft EIS. The 64 active leases could hold 250-400 rigs within 100 miles of the Florida Panhandle.

Dr. Enid Sisskin, pathobiologist and president of the Gulf Coast Environmental Defense (GCED) said "This [drilling] would treat the entire Gulf of Mexico as a giant laboratory." GCED requested a permanent drilling ban within 100 miles of the coast, and also "proposed that inspectors be present on all rigs at all times to prevent operators from throwing pollutants over the

sides." Over 17,000 local residents and over 400 government offices "have signed petitions calling for no drilling ..." according to GCED.

Kliendienst, Linda. 29 May, 1997. Law requires bond before oil drilling; Coastal petroleum claims it is target of newest measure. Sun-Sentinel (Fort Lauderdale, FL--Palm Beach edition) sec. Local: 15B.

"Florida's efforts to prevent oil drilling in state waters have gotten a major boost with a new law that could require oil companies to post billions of dollars in bonds--in case something goes wrong."

The governor and state Cabinet will be granted the authority to require that a surety bond be purchased before oil drilling is allowed in Florida waters. "The state controls nine miles into the Gulf of Mexico and three miles into the Atlantic Ocean."

Governor Lawton Chiles said, during a ceremonial signing of the bill, that "Florida's pristine coast is the most valuable asset we have, along with our beaches. This helps us strengthen the protection of our environment. The surety bond is based on projected cleanup costs."

Coastal Petroleum is the only company impacted by the new law. Company president Phil Ware said, concerning the law, "It's aimed solely at Coastal and we have questions on the constitutionality because they're trying to make it retroactive." Ware said he plans to keep fighting the state in court. "The state has got to let us drill or buy out the lease. We have a valuable property right and we're due compensation."

The state had previously asked Coastal for a $1.9 billion bond before drilling, but a court said the state didn't have the authority. The new law "...gives the state that power and says the bond will be based on projected cleanup costs and natural-resource damage."

However, according to Mark Ferullo, of The Florida Public Interest Research Group, "This is certainly a victory. But it may turn out to be a hollow victory if Mobil and Chevron can drill off Florida in federal waters. The commercial fishing industry alone is a $5 billion to $7 billion industry that would be severely impacted by offshore-drilling activity."

Krueger, Curtis. 27 June, 1995. Young vows to defend drilling ban. St. Petersburg Times, City Ed., sec. Largo-Seminole Times: 1.

Florida Rep. C.W. Bill Young has stated "...that he will urge a congressional committee today to keep in place a moratorium banning oil drilling on Florida's coast." His district runs from St. Petersburg to Clearwater. The statement was in response to a House subcommittee's refusal to renew the ban on drilling in the eastern Gulf of Mexico. (The ban also had protected Pacific and Atlantic coastline, and Alaska's Bristol Bay.)

La. experts hope to cap gas blowout. 02 June, 1997. Associated Press/America Online.

Blowout of a natural gas well in the Gulf of Mexico 40 miles southeast of Cameron, La. has "...forced a 39 member crew to flee in lifeboats." An attempt to cap the well is being made by "experts," according to The Houston Explorations Company, which owns the well. Their spokesman also claimed there was no pollution to the Gulf from the blowout. There was no fire or injury involved.

La. gas explosion kills three workers. 17 June, 1997. The Associated Press/America Online.

"Flames shot up like a 200-foot blowtorch" at a natural gas well explosion in a Louisiana swamp, killing three workers and preventing a search for another missing crew member. There were also two injuries. The "raging fire, [was] apparently being fed by spewing gas." Drilling had actually been completed at the site, and crews were finishing operations when it blew. International Well Control was brought in to fight the blaze. The rig is about 45 minutes from Butte La Rose, the nearest town. Or, about 60 miles west of New Orleans in Little Pigeon Bayou.

Lease buy-backs remain best drilling defense. 27 August, 1997. Pensacola News Journal, Editorial: 6A.

This editorial expresses regret that the lease buy-back provision was dropped from Rep. Joe Scarborough's bill concerning offshore drilling. "It might have been the best--if not only--weapon to stop the Chevron drilling planned 25 miles south of Pensacola." The legislation still includes "important" provisions to ban new leases in federal waters, however.

Chevron's project, which will entail up to 21 wells is a "serious one," according to this article. "And the federal Minerals Management Service, charged with regulating offshore drilling, seems more interested in facilitating drilling than worrying about the wishes of Panhandle residents or the possibility of environmental damage to our coast."

Mobil's decision to back out of previous drilling plans off Panhandle waters is speculated on here. The lease buy-back bill or economic considerations were credited with Mobil's decision. According to this editorial, "...When big money is in play there is no telling what's going on. Anti-drilling activists might be right in suspecting Mobil has a plan to come back later and try again after defusing the buy-back provision (Mobil was the only company singled out in the bill.)

"...We still think buying back leases is the best way to ensure that drilling is kept away from the Panhandle coast."

Lease buyback offers up very sound plan. 24 June, 1997. Pensacola News Journal, Editorial: 6A.

"Drilling and tourism don't mix," is the message of this editorial, based on the efforts of Florida lawmakers to cancel existing leases and permanently ban new leases in Florida waters. The recently filed bills "...authorize leaseholders to enter into negotiations with the federal government to recover their investments."

Senator Connie Mack, who helped introduce the legislation, said, "The reason for our ongoing crusade to end drilling off Florida's coast is simple: In Florida, a healthy environment means a healthy economy. Millions of people come to our state each year to enjoy our waters and our wonderful climate. It would only take one disaster to change that."

With the promise of large yields based on test well results, large oil companies such as Mobil, (which is planning gas production just 17 miles off Pensacola Beach), would probably stand to lose money from settling with the federal government in a lease buy-back. The editorial suggests that "rather than looking at the potential profits, the company--and others--should look at the public price tag. Floridians don't want offshore oil and gas drilling. The governor and cabinet proved that by voting unanimously (how often does that happen?) to oppose offshore drilling."

Lester, Will. 25 Nov. 1995. Paper industry faces intense scrutiny. Pensacola News Journal, sec. Local: 1C.

This article is from an investigative series on the threat posed by toxic waste, by The Associated Press. The paper and pulp industry in North Florida "employs more than 42,000 workers, with a payroll of $1.1 billion." But, "the cost...[has been] the release of millions of gallons of toxic wastewater into the region's...rivers, the Gulf of Mexico, and the Atlantic Ocean." Florida's "top ten counties for waterway pollution" (1993) include Escambia and Santa Rosa counties.

Levine, Samantha. 26 July, 1996. Congressman presses offshore drilling plan. The Palm Beach Post, sec. Local: 4B.

Each spring Florida legislators press for an extension of the offshore drilling moratoria. But, the long-term issue of protecting Florida's coastline is not being addressed, according to Rep. Porter Goss, R-Fla. Goss introduced a bill along with Democratic Rep. Harry Johnston, to see that oil and gas exploration off the Florida coast should be "...suspended until a joint federal-state task force studies the scientific risks and benefits."

The proposed bill would stop any new leasing and pre-leasing and prevent any exploration activities off all of Florida's coastline until 2002--"after the expiration of the next scheduled leasing program."

"The federal government must make a scientific decision, not one made annually and based on political pressures," Goss added. "Goss maintains that the federal government can either codify the moratoria into law, which would be unfair to many groups, give states veto power over federal decisions; or go on a negotiating basis grounded in the best science available." Goss said, "The last

option is the best one. The benefits of this approach are clear: It provides a long-term strategy for safe and environmentally sound development of the natural resources off Florida's coast. Floridians would be assured greater protection, and the oil industry would be provided greater certainty."

It has been thirteen years since the drilling ban was first enacted--it has been annually renewed. It "was upheld for 1997 on June 19 with the passage of the Interior Department appropriations bill."

"I think that, 13 years later, everyone realizes that we need to find a better way to do business," Goss said.

Long-term solution is crying need In battle over offshore oil drilling. 03 July, 1995. Sun-Sentinel (Fort Lauderdale), Palm Beach edition: Editorial.

The U.S. House Appropriations Committee, aware of the overwhelming opposition in Florida's state government, voted 33-20 this week to reimpose the offshore oil-drilling ban for another year. "The committee rejected a recommendation by a congressional subcommittee to overturn the ban. This perilous fight...has been successful so far, [but] for the future, considering the nation's long-term oil needs as well as local economies and the environment, a stable, scientifically-based policy is required."

Lots of talk, little action at hearings. 08 June, 1997. Pensacola News Journal: 3A.

The House Resources Committee, one of Congress' key environmental panels, is criticized here for too much discussion, and not enough legislation. "Even the panel's traditional supporters have grown frustrated," according to this report. One bill which was authored by Rep. Richard Pombo, R-Calif., was seen by opponents as "an underhanded attempt to gut the environmental protection law." The bill lacked support, and was withdrawn. One spokesperson said the failure of "Pombo's flooding bill signaled a death knell to undertake any more reform of the Endangered Species Act or clean water or other major reforms."

Louisiana, Alabama plea for bigger paybacks from OCS development. 13 February, 1995. Inside Energy/with Federal Lands, p.21.

The states of Alabama and Louisiana, both heavily involved in oil and gas drilling, have filed comments with the MMS requesting financial assistance for the "onshore impact of [industry] development." Congress has considered encouraging local support for OCS drilling by providing impact assistance to those states which accommodate the oil and gas industry, but have not passed the appropriate legislation. The Interior Dept. is "open to the idea of revenue-sharing as a means of

gaining local support for the OCS program, [but] an MMS spokesman noted that the matter has been a 'non-issue' for the Clinton administration."

Conoco has "urged a 'consensus' on offshore policy to obviate the need for annual congressional moratoria on leasing and drilling of certain offshore areas." This comment is only one of the opinions of various organizations, speaking from both industry and environmental interests, that are listed here.

Mably, Richard. 25 Mar., 1997. Greenoil. Reuter/AOL.

Greenpeace has "challenged the world's oil industry" by making a bid for offshore acreage off the Northern coast of Scotland. Greenpeace said it hopes to "block the multi-billion dollar aspirations of the international oil industry and turn the site into a marine sanctuary."

A Greenpeace spokesman was quoted as saying, "Opening up pristine ocean for new oil development is madness fueled by greed."

Greenpeace also claims that British Petroleum started rumors about Greenpeace plans to intervene in BP operations in the Shetland Island area. According to Greenpeace, direct action may in fact occur in the future, but no such plans currently exist.

Mack, Toni. 07 July, 1997. Damned if he does, damned if he doesn't. Forbes, sec. Law and issues: 82.

The question of whether to drill for what geologists believe to be newly-discovered vast reserves of oil beneath the Arctic National Wildlife Refuge (ANWR), has now become equated with tax cuts and balancing the budget. The pristine nature of the 9 million acre refuge may be at risk because "Congress [has] discover[ed] there are more votes to be had by cutting taxes and balancing the budget than by kowtowing to extreme environmentalist groups," according to this article. "Don't be surprised if the feds permit at least test-drilling for oil in the Arctic National Wildlife Refuge." Taxes and lease revenues could amount to nearly $2 billion for the federal government.

The state of Alaska, "since it lives off oil revenues, is less squeamish about drilling than the feds are." Alaska has already leased drilling rights to over 200,000 acres bordering ANWR. And plans on opening another 100,000 acres if "forthcoming U.S. Supreme Court decisions transfers control from federal to state hands." Bruce Babbitt hopes to tax what some figure to be ANWR oil that is seeping westward to state leased drill sites adjacent to the refuge, although he has stated his opposition to drilling in ANWR.

No one denies the fragile nature of the environment of ANWR. One naturalist, Berry Lopez observes "... that truck tracks will last for decades." The debate has "quasi-religious overtones" in the opinion of this reporter. New methods of drilling in the arctic (such as building ice roads in the winter that disappear in the spring, and horizontal drilling capabilities--up to 5 miles from the rig site) have reportedly decreased impacts. So, Congress' desire to cut taxes without cutting

spending, the Sourdough find, and the improved environmental approach to arctic drilling may soon change the fate of ANWR.

MacLeod, Steve. 30 January, 1997. Sable offshore project gets final green light. The Hamilton Spectator, Online edition.

A three billion dollar gas project offshore of Nova Scotia has obtained final approval to proceed with drilling. The six fields are near Sable, "a windswept crescent of sand about 200 kilometers east of Halifax." A consortium led by Mobil Oil Canada of Calgary is in charge of the proposed project.

A near-zero discharge policy is planned for limiting the release of drilling mud and cuttings. The project is expected to create 3,000 to 4,000 jobs during the construction phase. A pipeline will carry gas from the field to the New England states., "...where its primary market is expected to be home heating." American approval of the entire pipeline route is still pending.

Maddox, Jennifer. 22 June, 1997. Bipartisan lawmakers protect state. The Stuart News/Port St. Lucie News: 1A.

Many senior Florida legislature members have retired recently, leaving the delegation one of the "most junior [in Congress]." The political balance has also shifted from a long-time Democratic majority to a Republican majority. This article describes the new-found bipartisan cooperation and activism of the Florida legislature. One of the examples given concerns Senators Mack and Graham's cooperation on a proposed bill to ban offshore drilling in the Gulf of Mexico. The senators are trying to make a lease buy-back deal for "thousands of leases Coastal Petroleum Corp. owns in federal waters so drilling won't be a possibility."

Mack will "use his pull" to influence the Republican chairman of the Senate committee that will discuss the bill. While Graham will use his influence within the Democratic delegation. Graham said, "I can go to (Treasury Secretary) Bob Rubin and present our case much more effectively...You've got to persuade them all."

Matthews, Tia. 21 June, 1995. California politicians try to stop offshore drilling. States News Service.

California representatives Riggs and Farr were joined by "more than a dozen House members...to announce their support for a continued ban on new offshore drilling." Six states were represented in the "bipartisan, bicoastal fight" to maintain the moratorium. According to California representative Filner, "We will not allow the economic and environmental damage caused in Santa Barbara, Prince William Sound, or the Gulf of Mexico to be repeated anywhere on California's coast." President Clinton remains staunchly against new drilling, while an industry spokesmen

said, "It's far preferable to see offshore oil developed in a prudent and careful way now so that when we are in a crisis we don't rush into it without careful planning."

McKinney, Joan. 21 June, 1994. Panel lifts ban on oil, gas drilling. The Advocate (Baton Rouge, La.), sec. News: 1A.

A U.S. House panel has, at the urging of Louisiana Republican Bob Livingston, voted to repeal "a 14-year-old ban on oil and gas drilling off most of the nations's coastline." This has sparked "instant opposition" from President Clinton. This vote is not final, however, as it must first "clear a half-dozen or more hurdles in Congress."

Mead, Terry. 27 July, 1997. If we don't drill for it here, where will our energy come from? Pensacola News Journal, sec. Reader's Forum: 19A.

According to Mead, "Big oil has been a favorite whipping boy for politicians since the days of John D. Rockefeller." The proposed lease buy-back is a "politically correct action to satisfy the local squeaky wheels," according to this offshore production operator, and area resident. He points out the potential dangers of importing oil by tanker, and suggests locals ask U.S. Rep. Joe Scarborough "where are we going to get the energy from and how are we going to get it here?"

Mellone, Ingrid. November/December 1997. Rig Free Florida: Shores await permanent protection. The Coastal Defender. Gulf Coast Environmental Defense: Gulf Breeze, Florida.

The Florida Coast Protection Act is being rewritten, only months after legislation was introduced to "permanently protect the fragile Panhandle coast." The original bill amended the Outer Continental Shelf Lands Act to cancel Mobil's six nearshore leases and ban future lease sales from within 100 miles of Florida's coast. After bills S. 937 and H.R. bill 1989 were proposed however, Mobil decided not to renew the contended leases. "Because of the lease cancellation," according to Ms. Mellone, "the Florida Coast Protection Act is being rewritten to exclude the buyback language but to further restrict activity on other existing leases..." The bills are to be reintroduced early next year.

"What you can do?" Suggestions are given here to "ask your friends and neighbors to write Representative Scarborough and Senator Mack, thanking them for taking action and encouraging them to follow through on the bills." Mellone also suggests asking "your out-of-state contacts who visit the area to write their elected officials, urging support of the bills." E-mail addresses of committees considering the bills are given here as points of contact, also.

Mellone, Ingrid . 28 Mar. 1996. Offshore oil and gas drilling brings unacceptable risks. Gulf Coast Environmental Defense statement.

The Minerals Management Service's plans for Florida's coast do not agree with what Floridans want, according to Ms. Mellone. In addition, she proposes that certain actions by the MMS are not in compliance with the National Environmental Policy Act. She asks that people call on the President to stop drilling off Florida's coast "now and forevermore".

Morgan City, LA: fire for four days on a drilling platform. 29 Jan. 1996. Reuters.

A fire on a drilling platform in the Eugene Island area of the Gulf was extinguished by sea water. Fire fighters have not been able to cap the well, and natural gas continues to spout out of the damaged well. The fire started when piping was being attached to the well. The Coast Guard is investigating the accident and monitoring for pollution.

People or organizations mentioned:

Wild Well Control Co. of Houston
Oryx Energy Co. (platform operator)
John O'Keefe, spokesman
Mike Saucier, MMS regulator

Morgan City, LA; capping a blown natural gas well. 31 Jan. 1996. Reuters.

The effort to cap the Eugene Island well mentioned previously was hampered by heavy seas in the Gulf and the damage done by the fire. Wild Well Control Co. plans to try capping the well again. Although natural gas is spouting out of the well, the Coast Guard says there are no signs of pollution.

Mintz, Bill. 28 June, 1995. Panel keeps drilling ban off coasts; Prohibition on oil, gas development upheld. The Houston Chronicle, sec. Business: 1.

Drilling opponents won a victory with the 13-year-old moratorium being upheld, but "the energy industry is expected to approve a balanced budget plan that includes a provision that would open the Arctic National Wildlife Refuge of Alaska to oil drilling... Still, the Appropriations Committee's decision to continue the ban on most offshore drilling represented a rare victory for environmentalists since the Republicans took control of Congress..."

Minerals Management Service Website. <www.mms.gov> , and <www.gomr.mms.gov> for the Gulf of Mexico Region.

The Minerals Management Sevice provides a comprehensive website featuring info such as: "The Year of the Ocean," and, "What's new," with recent news releases, innovations and other pertinent info for each region of the OCS. Also, there is a section on current environment and science research, and "Managing offshore resources," "About MMS" and, a "Reading room" where a listing of literature is available.

Mobil Oil gets approval to drill off Panhandle. 02 July, 1995. The Orlando Sentinel, Metro.

The U.S. Commerce Department has granted Mobil Oil a permit for a well off the Florida Panhandle "just days after Interior Secretary Babbitt declared his opposition to such offshore drilling." If the EPA grants an air pollution discharge permit Mobil can start drilling about 13 miles south of Pensacola Beach.

Mohon, Barbara. 24 Dec. 1995. Help fight drilling. Pensacola News Journal, sec. Readers' Forum: 17A.

One primary reason given for oil and gas production in the Gulf of Mexico is to lessen U.S. dependency on imported fuels. But, according to Mohon, a recent bill allows for 25% of Alaskan oil to be exported. The same law waives payment for Gulf of Mexico deepwater drilling leases for five years--which Mohon calls "corporate welfare". She also points out that the U.S. holds only [apx. 3-4%] of the world's reserves of natural gas and oil, stressing that "the only true way to reduce dependency...is to conserve and begin using alternative, renewable energy resources."

Mohon also warned that the methane constituent of natural gas is twenty times more conducive to global warming than carbon dioxide.

Mohon, Barbara. 21 Mar. 1996. They're not listening on drilling. Pensacola News Journal: 13A.

Barbara Mohon, former president of Gulf Coast Environmental Defense, makes a case for halting offshore drilling. She says the oil industry is not compatible with Pensacola's way of life. Every oil job gained may mean a service sector job lost. Further, the Outer Continental Shelf Lands Act requires studying the effects of drilling on "the human environment." Mohon suggests the MMS is not properly considering socioeconomic impacts since MMS studies will not be completed until 1999. In addition, she claims the MMS is avoiding dealing with the effects on Floridians by holding a public hearing in Mobile rather than in Florida.

Money talks. 17 January, 1995. The Houston Post, sec. Business: 1C.

Low prices for U.S. natural gas, according to Global Marine, "continues to dampen demand for rigs in the Gulf of Mexico." Whereas, the North Sea and Southeast Asia have experienced "improved" market conditions, according to industry sources.

Murley, Jim. 09 February, 1998. Thank plentiful ocean resources for state's prosperity. Sun-Sentinel (Ft. Lauderdale, FL), sec. Editorial: 19A.

"With more than 8,400 miles of continuous coastline on three shores, it is critical that Floridians become good ocean stewards..." From any one point in the state "one is not more than 65 miles from the water's edge." According to this editorial, this access to water is key to the state's prosperity, and "Everyone from government to weekend water enthusiasts can make a difference. Citizen input is on issues ranging from offshore oil drilling to commercial fishing [and] is vital to a balanced, healthy ocean."

The emphasis here is on the challenge of balancing "...ocean resources and the demands on those resources." 1998 has been declared 'The Year of the Ocean' by Governor Lawton Chiles. A statewide conference is slated to address these issues. "We know that protecting the environment is a good thing, but when it comes to our day-to-day lives, how do we do it? This conference is a first step."

Natural gas rig explodes. 17 June, 1997. The Associated Press.

"Flames [are] roaring 200 feet above the swamp" in Louisiana's bayou country at a natural gas well site. At least two workers died as a result of the explosion, and there are unconfirmed reports of several missing, and injuries. Twenty two workers were on the rig at the time. Cause of the blowout is unknown.

The rig is in Little Pigeon Bayou, "about 60 miles west of New Orleans and 45 minutes away by boat from the nearest town, Butte La Rose."

A Coast Guard team was dispatched from Mobile, Alabama, to help fight the fire. "The rig is owned by Denbury Management, Inc., the Coast Guard said."

The blowout happened around 10:30 p.m. in the Atchafalaya basin.

New environmental watchdog group says Florida underprotected. 02 September, 1997. N-J wire services/Envirolink.

Public Employees for Environmental Responsibility (PEER) "a low-profile environmental watchdog group" has accused the Florida Department of Environmental Protection of pandering to big business interests while sacrificing the environment.

After receiving insider information from calls made by disgruntled DEP employees, and after conducting a survey of DEP employees--the group issued a "stinging report." "The report attacked the agency, calling it 'sick,' and said that environmental regulation takes a back seat to political back-slapping and personal power grabs by agency administrators." And two more reports have followed since, criticizing the Florida DEP's wetlands protection and lax enforcement in the Panhandle district.

DEP officials have returned a volley of criticism toward PEER, accusing them of distorting the truth and even comparing them to anti-abortion bombers. PEER's approach differs from that of typical environmental groups in that they seek to pressure agencies into strict enforcement of preexisting laws, rather than trying to bring about change through additional legislation. National field director Rob Perks said, "In Florida, we're not looking to stir up trouble...but some states need more help than others. From the sound of it, there are some scary things going on at DEP. There are some things I'd like to tell you about, but I can't confirm them."

Nieland, Heidi. 16 October, 1997. Gas wells under fire at meeting: Opponents fear rigs will be visible from beaches. Pensacola News Journal: 1A.

The Chevron project 25 miles offshore of Pensacola Beach will be linked to a Mobile gas processing plant by pipeline. The steel pipe will be buried "only 3 feet under the Gulf floor." If permitting goes as scheduled the twelve to 21 rigs will start producing by 1999. This offshore industrial complex will be serviced by boat and helicopter from Pascagoula, Miss. and Theodore, Ala. The question of whether the rig suppliers will impact the area was asked. But, of more concern was the issue of whether the rigs will be visible from the beaches.

Darrel Jones, executive director of the Emerald Coast Convention & Visitors Bureau, Inc. was quoted here saying, "I'm not getting a clear answer on whether you can see them [the rigs] or not. If you can, we're risking a $2 to $5 billion tourism industry."

According to this report, 140 people attended the "workshop...to collect public concerns to be addressed in the agency's Environmental Impact Statement (EIS)." While MMS material handed out at the session claimed the rigs would not be visible, Enid Sisskin, president of Gulf Coast Environmental Defense cited the agency's gas and oil leasing plan which said the rigs would be visible for up to 26 miles from the beaches and from the air up to 49 miles offshore. Sisskin commented that decreasing attendance at the MMS hearings are due to the fact that "people feel they aren't being heard."

MMS initially gave GCED the okay to set up an information table at the hearing, but, "MMS officials who first approved the display told volunteers to take it down five minutes after it was erected. Three off-duty Pensacola police officers supervised the process."

A draft of the EIS should be completed by August 1998, with another public hearing set for September. The EPA is set to make a decision by August 1999 about whether to grant Chevron's permit to proceed with production.

Nearly everyone at the session in Pensacola was opposed to drilling. One local resident who recently retired from the oil industry, Jim Robertson, expressed his concern for the long distance between the rigs and the service areas. "If you are mobilizing out of Theodore, the diesel will be on Pensacola Beach before you get a containment vessel out there. An ounce of prevention is worth a pound of cure on these beautiful beaches." Another local resident, Will Johnston said, in reference to fining Chevron in the case of pollution, "If Chevron made $2.6 billion in 1996, what's a $100,000 fine to them?"

Chevron U.S.A.., Murphy Exploration and Conoco Inc. are partners in the panhandle project. Chevron spokeswoman Sandi Fury said "It's not only prudent for us to develop this source, it wouldn't be socially responsible to walk away."

Nieland, Heidi. 01 September, 1997. Offshore drilling criticism may rise: Group protests Chevron plans. Pensacola News Journal: 1A.

Public reaction to Chevron U.S.A, Inc.'s plans to go ahead with offshore drilling has not caused the "phone [to] ring off the hook" in Rep. Joe Scarborough's Washington office, according to this report. Even though, in Gulf Coast Environmental Defense president Enid Sisskin's opinion, "Chevron is going against the will of the majority of the residents in this area." Sisskin also stated that GCED plans to step up their efforts, "going at them [drilling proponents] with scientific evidence that drilling is not as benign as they would have us believe." GCED advocates that anti-drilling opinions should be directed to legislators in letters, and Sisskin indicated possible plans for a boycott of Chevron products.

Chevron's proposed project would contain at least 12 wells located 25 miles south of Pensacola, with production planned for 1999. Florida legislators Mack, Graham and Scarborough are sponsoring legislation that would place a moratorium on future leasing within 100 miles of Florida's Gulf Coast. But, this would not prevent drilling on previously acquired leases, such as the one in question. "Chevron knows there's natural gas on its leases and vowed to forge ahead." A spokesman for Scarborough's office said the congressman is "looking for other ways to stop future drilling."

Nieland, Heidi. 25 June, 1997. Mobil says no drilling near here: Lawmakers credit their efforts; environmentalists wait and see. Pensacola News Journal: 1A.

Rep. Joe Scarborough credits the bill the Florida Legislature introduced last week with Mobil Oil's decision to "pull out of waters off Pensacola Beach." "I think when Mobil saw 22 of 23 members of Florida's delegation signed on to this legislation; in order for them to be good neighbors, it made better sense to back away now," he said.

But, according to Mobil, the proposal had "little impact on their decision." Instead, Mobil claimed it was simply a case of "internal economic parameters." Mobil has other leases within 100 miles of Florida's coast. The lease buy-back (valued at $15 million) will remain a possibility for the

holdings in question however, according to Scarborough, until there is solid evidence the company won't drill. And, the legislation "hasn't been heard in committee yet."

Local environmentalists haven't uncorked the champagne, however. "Dr. Enid Sisskin, president of GCED, said she fears Mobil may somehow lease the land again after being excluded from the legislation." She said, "I want to see something in writing from the Dept. of the Interior before I get too optimistic."

Chevron USA still has plans to produce gas 26 miles from Pensacola Beach. The exploratory well is capped off and Chevron has submitted a drilling plan to the MMS. But, according to a Chevron spokesman, "drilling is several years away."

Nieland, Heidi. 29 May, 1997. Mack proposes buyback of area drilling leases. Pensacola News Journal, sec. 1A.

U.S. Senator Connie Mack plans to "make one of the strongest moves yet to keep offshore drilling away from the Panhandle." Mack has stated that he plans to introduce legislation to buy back oil and gas leases offshore of Pensacola. The Republican Senator from Cape Coral wants to prioritize the choice of sites to buyback based on how soon they are to be developed. "That puts acreage 15 miles off Pensacola Beach first on the list, since Mobil Exploration and Producing U.S. Inc. plans to sink an exploratory well in August." According to Mack, "It is going to be a lot easier to purchase back a lease where there has been no discovery."

Gulf Coast Environmental Defense president Amy Belanger said, "This is a wonderful step," for Florida legislators who have been supporting the drilling moratoria. The leases in question were purchased before the moratoria started. The precedent for Mack's proposal was set by a 1992 executive directive by then-President Bush--where the federal government "bought back more than $100 million in leases in the Gulf off the Florida peninsula."

Nieland, Heidi. Offshore drilling opponents gather. 21 May, 1997. Pensacola News Journal, sec. Local: 1C.

This article is notification of an EPA hearing in Pensacola concerning an air emissions permit application filed by Mobil Exploration and Producing U.S. Inc.--for a gas well to be located 17 miles offshore. Preliminary reports indicate the "chances of preventing another exploratory natural gas well...are slim." Nevertheless, according to the Pensacola News Journal, "environmentalists plan to make their presence known at tonight's EPA hearing."

The permit will probably be granted because the well is considered a "minor source of pollutants under the law...[which] means it will emit less than 250 tons of carbon monoxide, nitrogen oxide, sulfur dioxide and other contaminants per year."

One local resident was quoted saying, "I think it would be a crying shame to put rigs off Pensacola Beach. I don't want to see it turned into a garbage pit like the Louisiana coastline."

Another local EPA hearing was held in January concerning allowing permanent rigs beyond 30 miles offshore, "past where the continental shelf drops off..." Approximately 500 people packed that hearing. A final ruling has not been made.

Nieland, Heidi. 23 January, 1997. EPA: Drilling problems short term/too many unknowns, opponents say. Pensacola News Journal: 12A.

Local environmentalists have expressed disappointment with the recent EPA Draft Environmental Impact Statement (EIS), which concludes that "most environmental problems would be minor and short term and that some rigs might be safely permitted." A local environmentalist spokesperson said, "There are still too many blanks, and when the impacts aren't known, the oil companies are allowed to proceed." The manager of a Pensacola beach motel has kept an anti-drilling petition on the front desk for five years, "asking guests to sign it if they agree." She was quoted as saying, "...Visitors to the island would be able to see some of the rigs, and an oil spill would be devastating."

A spokesman for U.S. Rep Joe Scarborough, R-Pensacola said, "He doesn't feel there have been enough studies done on the impact of drilling off the Florida coast. It's premature to go forward with the drilling."

Amy Belanger of the Gulf Coast Environmental Defense (GCED) listed potential problems from offshore drilling that might include:

- Damage to oysters' and other bottom dweller's reproductive systems from toxic chemicals used in erecting production platforms.
- Carrying of those toxins to larger animals that eat bottom dwellers.
- Death of dolphins, manatees, and sea turtles from explosives used in setting up rigs.

When the Minerals Management service first opened a Pensacola office, it was picketed by members of the GCED. There are, however, some local business owners who have expressed a lack of concern about offshore rigs. One seafood market manager was in favor of the rigs for their use as artificial reefs. The most consistent worry was that rigs would be visible from local beaches.

NPCA Applauds FY 1999 budget, land acquisition requests. 02 February, 1998. U.S. Newswire, sec. National Desk, Environment writer.

The Clinton administration's Fiscal Year (FY) 1999 National Park Service (NPS) Budget features projects such as the purchase of the 13,000 acre Royal Teton Ranch outside Yellowstone, which will "provide a safety zone for bison that leave the park, and $6.4 million to purchase private holdings in the Cumberland Island National Seashore."

National Parks and Conservation Association (NPCA), is a 500,000 member non-profit citizen park-advocacy organization. NPCA President Tom Kiernan said, "We are still being asked to choose from among many very legitimate and real needs. For example, NPS has a $1.5 billion land allocation backlog while Congress refuses to spend money piling up in a $11 billion trust fund from offshore oil drilling leases."

O'Driscoll, Mary. 28 June, 1995. Appropriators vote to continue OCS leasing plan. The Energy Daily.

A long-standing ban on new federal oil and gas leasing on the Outer Continental Shelf has been retained by the House Appropriations Committee. The OCS leasing prohibition has been in effect since 1982. The vote of 33-20 was considered a major victory by environmentalists. "But it may not be permanent as the oil and gas industry is expected to mount a campaign to overturn the vote on the House floor."

Offshore drilling: Coast Guard orders protest-free zone. 15 February, 1994. Greenwire.

The Coast Guard is enforcing a "safety zone" around Chevron's exploratory well 28 miles south of Pensacola, Florida. Boaters are to stay at least 500 meters from the rig, due to industry fears that protestors will be a safety hazard. Local environmentalists' common sentiment ran along the lines of: "It's kind of ironic that your tax dollars are being spent to protect Chevron rather than to protect the coast."

Offshore drilling...here? September, 1996. Gulf Coast Environmental Defense publication.

This flyer was distributed at "Taking Power: Offshore Drilling, Energy, and Citizen Action," a conference to mobilize Florida Panhandle residents "in a community-wide campaign against offshore drilling and in support of clean, renewable energy." Included are "10 simple reasons to stop offshore drilling," "Rigs aren't worth the risk," "The drilling debate" and a set of six perforated, self-addressed postcards to send to the appropriate government officials (President Clinton, Senator Connie Mack, Senator Bob Graham, Governor Chiles, D.O.I. Secretary Bruce Babbitt, and Rep. Joe Scarborough) to protest drilling, and the 64 active leases.

Offshore drilling mustn't happen. 30 August, 1996. Sarasota Herald-Tribune, sec. Letters to the Editor: 16A.

Lawrence and Barbara Lacina of Holmes Beach write that they are "very upset to learn that Coastal Petroleum ...is preparing to drill on the Florida Gulf coast...We are even more disturbed to learn that the state seems to have resigned itself to the idea..."

The Lacina's go on to express skepticism about Governor Chiles claims of doing anything in his power to stop offshore drilling. "Intentions are one thing and action is quite another. In this case, Chiles appears not to be taking any real action to halt this potential environmental nightmare." They then urged every citizen to write to Chiles and "demand an immediate stop to Coastal Petroleum's preparations to drill."

Offshore drilling permits rejected. 27 March, 1998. Press Journal (Vero Beach, FL), sec: A14.

Florida has rejected a dozen permit applications by Coastal Petroleum because the state "had insufficient information to ensure compliance with its laws," according to Walt Schmidt, geological survey bureau chief for the Department of Environmental Protection.

The lease locations, stretching from Apalachicola to Naples, would have contained drilling sites with depths ranging from 8000 to 23,000 feet.

Off-shore exploration bill approved. 03 March, 1994. National Journal's Congress Daily, sec: Energy.

The Senate Energy and Natural Resources Committee has approved "...legislation sponsored by Chairman Johnston to give royalty relief to encourage oil and gas exploration in deep waters off the Gulf of Mexico."

An additional amendment was adopted at the Interior Department's urging to "...assure royalty relief occurs only in cases in which wells would otherwise not be economically viable." This bill excludes Florida. However, the bill has been described as "...a perfect vehicle for Florida senators to seek a permanent 100-mile buffer zone free from drilling..."

Oil drill bans a boon for Florida, but long-term solutions needed. 05 July, 1995. Sun-Sentinel (Fort Lauderdale), Broward edition: Editorial.

All 25 members of the Florida congressional delegation stood firm in a bi-partisan vote to continue the offshore drilling ban for the fourteenth consecutive year. Reps. Harry Johnston, D-Boynton Beach, and Porter Goss, R-Sanibel have proposed a bill to establish a task force for further study seeking recommendations for a possible compromise in which drilling could be permitted.

Oil firms get $198 million offshore drilling refund. 01 August, 1995. The Dallas Morning News , sec. Business: 14D.

This article concerns lease buy-backs off the coasts of southwest Florida and Bristol Bay, Alaska.

Oil industry optimism lifts market 5.11. 28 August, 1997. The San Diego Union-Tribune, sec. Business: 2C.

Optimism about oil exploration and service profits are being credited for stock prices rising for the first time in a week. The expected pickup of exploration in the Gulf of Mexico boosted offshore oil drilling contractors for a second day. "The U.S. Minerals Management Service said yesterday that energy companies submitted a record number of bids for the rights to search for oil and gas off the coasts of Texas and Louisiana."

Oil slick threatens Louisiana marshland. 18 May, 1997. The Associated Press.

An underground oil pipeline leak "threatens sensitive marshlands that surround a Louisiana lake." The Texaco pipeline on Lake Barre has created a slick "seven miles long and two miles wide," amounting to over 10,000 gallons of medium-weight oil. The 16-inch line is buried under eight feet of mud. The cause of the leak has not been determined.

"This is a serious spill," according to Texaco spokesman Pierre DeGruy. There is a possibility that shrimpers will be restricted from this area--as the season is slated to open this week. Wind currently threatens to "push the oil into the marsh on the lake's northern edge, a sensitive area. Marsh grasses around the lake nurture birds, fish and shrimp..."

If the grasses are killed, the area turns into non-productive, open water," according to Kerry St. Pe of the state Department of Environmental Quality. Lake Barre is about 40 miles southwest of New Orleans.

Oil and gas exploration still a battle. 14 December, 1997. The Associated Press.

According to this report, North Carolina Outer Banks residents "haven't warmed a bit to oil and gas exploration off their coast since the idea surfaced nearly a decade ago." The local tourist economy is the greatest concern. "They say they don't care how big an oil or gas deposit might be found. It won't help them and the risks are too great to make any well worth it."

Chevron has recently proposed to drill an exploratory well in 2000 on federal leases that cost $40 million. Last month, North Carolina's Governor Hunt instituted "new, more stringent exploratory rules..." While Chevron makes statements about the minimal risks involved in

exploratory drilling, "coastal residents and leaders are skeptical, and say they'll stay that way. An economy based on beaches and fishing will benefit North Carolina's Outer Banks, but oil wells won't, they say."

A decade ago, the state defeated another proposed drilling project by Mobil Oil, planned for the same area--which also happens to be a renowned sportfishing area. The area, about 45 miles off Cape Hatteras, is near an underwater current junction in the Gulf Stream called the Point. This location, according to one member of the Atlantic States Marine Fisheries Commission, is "...a tremendous area...that's so durn valuable to the sport fishermen. I think they [Chevron] need to give a real good explanation of how they don't make mistakes." The charter fishing industry is also not happy with the idea of oil or gas production. Neither is the County Board of Commissioners. Chairwoman Geneva Perry said, "We're very protective of our tourism. We have to be. Our natural resources are so fragile and our economy is so dependent on the clean beaches and water."

State Senator Marc Basnight, D-Dare County, "predicts oil drilling off the state's coast would wreck the county's economy. He estimates the county's annual take from tourism at $800 million." Anti-drilling sentiment could prompt the Coastal Management Commission to "cripple it by deciding the project isn't consistent with state coastal management policy." Scientific reviews, public hearings and Congressional legislation are all slated over the issue.

Olinger, David. 27 Feb. 1997. Oil company applies again to drill offshore. St. Petersburg Times, sec. City & State: 8B.

Sanibel, Boca Grande, and Longboat Key are all wondering if oil derricks are in their future. If Coastal Petroleum, "a little Apalachicola company with 56-year old offshore leases" starts drilling there could be rigs within sight of Florida's beaches. The area included in Coastal's leases begins just 7 to 10 miles offshore. The most recent drilling sites that are proposed "...happen to lie off some of the most environmentally sensitive--and expensive--waterfront land in Florida."

Coastal President Phil Ware and environmentalists are in direct conflict, apparently. Ware "has repeatedly characterized environmental groups' fears of oil spills uninformed propaganda'," while environmentalists accuse Coastal of attempting "greenmail." They believe Coastal is trying to manipulate the government into buying back its leases.

This month environmental groups won in an effort to block Coastal's bid to drill a well off the Panhandle. "An appeals court refused to throw out their challenge."

Olinger, David and Jennifer S. Thomas. 01 August, 1995. U.S. buys back oil rights off Florida coast. St. Petersburg Times, City edition:1A.

Nine oil companies have surrendered offshore drilling rights west of Everglades National Park and north of the Florida Keys. These companies, which are led by Mobil and Chevron, still

hold leases to drill off the Florida Panhandle. Florida is "vying in court" with Coastal Petroleum, which holds leases stretching from Apalachicola to Naples.

Piniak, Amy. 20 August, 1995. The choice Between Newt and nature. St. Petersburg Times, City edition: 1D.

"House Speaker Newt Gingrich's anti-government agenda includes a broad attack on federal protection of the environment, and it is forcing those who represent [Florida] to make a...declaration...[A]re they with Newt or with nature?"

This article gives details on the voting records and environmental stance of specific members of Florida's state legislature, especially concerning recent proposed legislation such as EPA riders (designed to undercut regulatory enforcement,) and the "Private Property Protection Act." A recent poll of Florida residents showed that more than 63 percent said "federal environmental regulations were not too strict," but the Florida state delegation as a whole supported the Gingrich agenda which is characterized here as representing "radical attacks on environmental law."

Although the Florida delegation "is a mixed bag when it comes to environmental votes...the entire Florida delegation supports an oil drilling ban."

Pollock, Vance. 02 August, 1995. The Tampa Tribune, Letter to the editor.

This letter urges a boycott of Lykes Brothers' products due to their support of offshore drilling.

Public hearing can affirm 'no drill' message. 05 July, 1998. Pensacola News Journal, sec. Opinion: 18A.

This op-ed piece begins with a sarcastic remark aimed at Chevron. "No, of course Chevron doesn't want a public hearing on offshore drilling in Pensacola this summer. Chevron wants to drill, and it knows that opposition to offshore drilling in the Panhandle--and throughout Florida--is strong."

Chevron's reason for not wanting to hold a hearing is that it would be "duplicative," according to David Duplantier, a company attorney. Whereas, Estus Whitfield, environmental policy coordinator in the governor's office said, "...if you're trying to look out for the public interest, the more public hearings the better." This article concluded by stating that, "...U.S. Commerce Secretary William Daley, who will rule on Chevron's appeal, has a bigger responsibility, and that includes giving the public a full hearing on this matter."

Record drilling rights sold for central Gulf. 06 March, 1997. The News Herald/AP Wire (Panama City, FL), sec. Business:1D.

The strongest showing of interest in over ten years was evidenced by "a record 1,790 bids totaling $1.2 billion, the highest for a central Gulf lease sale since [1985, just before oil prices crashed]." Independent operators came out in force to "seek 1032 federally owned tracts, some for deepwater exploration, off the coasts of Louisiana, Mississippi and Alabama..."

The return of petroleum operators to the gulf in the past several years is attributed to "higher oil and natural gas prices and federal royalty relief that provides more tax breaks the deeper an offshore well is drilled." Previously, the Gulf was referred to by frustrated industry spokesmen as the "Dead Sea." An industry analyst mentioned that the lack ofprevious activity has left a dearth of support-industry infrastructure--which might hinder timely development.

Robins, Todd. 23 September, 1997. Regulatory "reform" threatens public health and the environment. U.S. Public Interest Research Group (PIRG), Online.

A special interest bill has been proposed that, according to the U.S. Public Interest Research Group, will "open the door to rolling back decades of critical health and environmental protection." Senators Fred Thompson (R-TN) and Carl Levin (D-MI) are pushing the "extreme so-called 'regulatory reform' bill (S. 981) in the Senate."

The bill is supported by the Business Roundtable, Chemical Manufacturers Association and other business and industry interests that form Alliance USA hoping to "effectively get government regulations off their backs." Public health, labor, environmental, public interest and consumer groups universally oppose this bill.

The Governmental Affairs Committee, chaired by Thompson, is called here a "stacked-deck hearing" because pro-S. 981 industry reps outnumbered public interest witnesses four to one." In addition, "Nancy Donely, an Illinois mother and activist whose child was killed by..bacteria in tainted meat, was denied an opportunity to speak...in opposition to S. 981."

Levin and Thompson are promising a floor vote on the bill "BEFORE Congress adjourns in late October," and this "ALERT" urges "(1) making sure every U.S. Senator knows that this is NOT a moderate bill, but a controversial health and safety rollback bill and (2) push for additional hearings on the bill in order to slow down the process and make our voices heard."

A sample letter is included to send to Senators, for those who would protest the bill. Three points are made to discount the Senators' claims of the moderation of the proposed bill. According to U.S. PIRG:

1) S. 981 would give special interests special access to weaken, delay, and roll back a generation of popular and successful public health, worker safety, and environmental protection programs.

2) S. 981 would require the government to put regulations through lopsided tests that overvalue industry's cost concerns and undervalue the human health and environmental benefits of protective standards.

3) S. 981 would create mountains of new red tape, further delaying important public health programs at taxpayer's expense.

Roewert, Raymond. 10 May, 1996. We should not permit oil drilling in Gulf waters. St. Petersburg Times, Letter to the editor: 19A.

This letter was written in reference to a May 2 article titled "Deep in Gulf is high-tech oil rush." "It was with great sadness that I read this article, for it shows that our precious environment is once again being placed in further jeopardy for the wanton greed of the corporate structure. Must we risk yet another ecological disaster like ...Prince William Sound...? Will the residents of the states surrounding the Gulf of Mexico need to see scores of dead, oil-covered birds and fish lining shores before they see that our oil dependence has gone too far?...Let's stand firm and put a stop to this travesty before it's too late."

Rosen, Yareth. Eight years after the Exxon Valdez oil spill... 26 Jan., 1997. Reuters.

The ecological recovery of Prince William Sound has been "sporadic and uneven but shown progress," eight years after the Exxon Valdez oil spill. The bald eagle is the only species "considered fully recovered from the 1989 disaster."

The period since the spill has "brought changes and some ailments to marine and coastal species..." According to an Exxon Valdez Oil Spill Trustee Council scientist, "These ecosystems are always in flux." But, "pinpointing the cause of the problems this long after the tanker disaster is difficult," according to Ted Cooney, a University of Alaska marine scientist. "Nobody can...say 'It was all spill effect,' or "It was all environmental effect,'" he said.

The trustee council is "responsible for administering the $900 million that Exxon pledged to pay over 10 years to settle government civil damage claims arising from the spill."

Roache, Marlo. 13 October, 1996. Lawmakers ask Clinton to ban offshore drilling. Sarasota Herald-Tribune: 9A.

110 lawmakers sent a letter to the president urging him to permanently ban offshore drilling along the East Coast, the Gulf of Mexico off Florida, and much of the Pacific Coast. The proposed ban would allow continuing development in areas where drilling is already allowed.

The letter campaign was organized by Rep. Lynn Wolsey, D-California, who suggested a permanent ban would promote long-term planning, and contribute to a "sound national energy policy." President Clinton has supported the yearly bans, and is outspoken in his support of the issue. The legislators are seeking an executive order from the president. If the ban should pass it could be overturned by subsequent administrations. However, presidential candidate Bob Dole has "pledged to impose a similar ban if elected." Rep. Porter Goss, R-Fla., said "We're calling on [government] for stewardship of America for now and into the future."

Russell, Gordon. 12 March, 1997. Drillers may need a hefty deposit; Bills in the House and Senate would require oil drillers to deposit enough money to cover the cost of any cleanup. Sarasota Herald-Tribune, sec: 1A.

Under current law drillers are only required to post $4000 in surety deposits before beginning production. A proposed bill would require a hefty deposit--and apparently has the full support of the governor and the Cabinet.

"Environmentalists and owners of beachfront land can rest a little easier; there probably won't be any oil rigs off Longboat Key anytime soon." Coastal Petroleum had recently applied for drilling permits for new sites just offshore of the Tampa and Sarasota area.

Environmental groups and also politicians have speculated that Coastal is using "greenmail" to try to force the state into lease buybacks. "They note that the company generally applies for permits next to popular tourist spots, a move they say is designed to frighten the state into buying out drilling rights at a higher price." Coastal is partly owned by Lykes Bros., a "well-heeled Tampa firm"--which has fed over $60,000 into state legislative campaigns recently. Coastal reportedly "has only two employees and no drilling equipment--not even a boat."

Florida Wildlife Federation's attorney David Gluckman was quoted praising Florida's GOP for "...taking the lead on this [issue]."

Coastal has protested what they consider to be an infringement of their property rights in the Gulf. This is expected to be countered by "bringing up the rights of coastal property owners whose views could be blocked by derricks or whose beaches could be fouled by a spill."

Rylander, Carole Keston. 15 December, 1997. Smart oil-and-gas policy fosters growth. San Antonio Business Journal, (from an online news source.)

"After a decade of decline, the oil-and-gas industry has rebounded and revived. The additional wealth created...in 1996 created more than 75,000 direct and indirect jobs..." This new prosperity has also provided an additional $454 million in tax revenues for Texas (nearly half of the state's billion dollar budget surplus.) Today the oil and gas industry is near "pre-boom" levels.

According to this article, regulators and policymakers must keep up with the "bang" by "minimization of the tax and regulatory burden at the state and federal levels." Additionally, long-term growth is reliant on a growing resource base, and continued technological improvements.

What was once accepted as a finite resource, with a requisite end-in-sight for the petroleum industry now has given way to beliefs such as: "...many experts are now arguing that we just don't know how much recoverable oil and gas there is in the world." According to Dr. William Fisher of the University of Texas at Austin, "...[there is] a broad consensus that the remaining resource base is abundant."

According to this writer, "we must continue to do everything we can to remove the disincentives to oil-and-gas drilling and provide incentives instead. I believe we must: minimize state and federal regulatory costs; bring common sense to environmental regulations, starting with ending the Clinton administration's dangerous global climate-change initiatives;...improve energy and environmental education so the next generation will be prepared technically and intellectually for new challenges; create a state-based energy policy to reduce reliance on unstable, Middle Eastern oil supplies; abolish the U.S. Department of Energy--nearly 85 percent of this department's $17 billion budget has no direct relation to its stated mission of promoting conservation and developing alternative supplies of energy." The author goes on to state, "My goal is to have the least costly energy regulatory process in the country but the most productive and efficient." (Carole Keeton Rylander is a commissioner of the Railroad Commission of Texas.)

Sandalow, Marc. 28 June, 1995. House panel reinstates offshore oil drilling ban. The San Francisco Chronicle, sec. News: 1A.

Lawmakers from Florida and California "united to protect their coasts" leading the House Appropriations Committee to reverse the decision of an Interior Department subcommittee. As a result, a 13-year-old ban on offshore oil drilling was upheld, even though the House panel had voted to lift it.

Sands, David R. 28 June, 1995. House Panel balks at cutting subsidies; Peanuts, tobacco, in spending bills. The Washington Times, sec. Nation: 12A.

"Tractors proved more powerful than oil drills...as the House Appropriations Committee turned back efforts to cut federal support for tobacco and peanut farmers but...reinstat[ed] a 13-year-old moratorium on oil and gas drilling off the Atlantic and Pacific coasts, Alaska and parts of the Gulf of Mexico."

Sayre, Alan. Record number of bids for Western Gulf. 26 August, 1997. AOL News.

The all time record number of bids for the latest federal auction of offshore leases in the Gulf are mostly located offshore of Texas. There were 929 bids received, in comparison to 465 in 1990. This latest sale concerned the central Gulf off Louisiana, Mississippi and Alabama.

Higher oil and gas prices, and new deep-water drilling incentives from federal royalty relief ("which provides more tax breaks the deeper an offshore well is drilled") have drawn the petroleum industry back to the Gulf in the last three years. Drilling restrictions which have made much of the coast of the U.S. off-limits have also prompted renewed interest in the Gulf.

Scandlin, Monica. 19 September, 1997. Ralph Nader to speak at PJC. Pensacola News Journal, sec. Local: 3C.

Local activists are anticipating a lecture by "nationally known consumer activist" Ralph Nader at Pensacola Junior College." The director of Gulf Coast Environmental Defense, Amy Belanger is quoted as considering Nader "one of the heroes of our time."

Nader is "expected to address local environmental issues such as offshore drilling--an important issue to some Pensacolians who believe it's important to preserve natural resources to continue attracting tourists..." State coordinator for the Green Party, Johnny Ardis (who also was Nader's Florida campaign manager when he ran for President in 1996 on the Green Party Ballot) said, "If people associate Pensacola with offshore rigs, it could affect our tourism industry. If there is ever any pollution from those rigs, it'll affect the fishing industry."

Ralph Nader first achieved national press attention when his 1965 book *Unsafe at any speed* sparked an auto safety movement."

Scarborough adds a powerful voice. 29 March, 1996. Pensacola News Journal, Editorial: 16A.

This editorial is a reaction to U.S. Rep. Joe Scarborough's support for preventing offshore drilling in Florida and to the Minerals Management Service meeting held in Mobile. The commentary is critical of locating the meeting in Mobile, instead of in the panhandle, (citing the 400 people who turned out for the last meeting in Pensacola and "the heat they brought to bear"), and raises the issue of the export of Alaskan oil overseas. Scarborough is applauded for his opposition to offshore rigs, as well as his vote to deny the five year waiver for royalty payments on gas leases.

Senate OKS offshore drilling bonds. 08 April, 1997. The Palm Beach Post: 8A.

Any company seeking to drill for oil off Florida's coast may have to pay a high bond if the governor and the Cabinet have their way. The proposed bill won unanimous Senate approval, in

an attempt to effectively reverse a previous Florida Supreme Court ruling. The state had attempted to require Coastal petroleum to post a $1.9 billion security bond, but was overruled--with the court requiring only $4000 from Coastal with $1500 yearly payments.

The bill would give the Department of Environmental Protection "the power to require whatever it considers a reasonable bond to ensure that any abandoned or dry wells are plugged and any spills cleaned up."

Sisskin, Enid. November/December 1997. MMS: Conflict of interest. The Coastal Defender. Gulf Coast Environmental Defense: Gulf Breeze, Florida.

According to the president of local grassroots environmental organization Gulf Coast Environmental Defense (GCED), Enid Sisskin, "The Minerals Management Service (MMS) is just one in a long list of government agencies who are more concerned about the interests of the industry they regulate than the public good." She lists the FAA, the Forest Service, and the DOE as examples of other federal agencies protecting industry profits at the expense of the American public. The header of this article reads: "The Minerals Management Service, a federal agency whose apparent mission is to team up with oil companies to promote offshore drilling in the face of widespread community opposition!"

"MMS and the oil companies conduct or fund most of the research upon which drilling decisions are based, using manipulative research design, making all data and conclusions suspect. To properly address the public's right to know, studies on drilling impacts must be independently reviewed by non-agency and non-industry scientists."

Sisskin reiterates this point with a quote taken from a local newspaper, by reporter Ellen Goodman, "...the American public has learned something from its encounters with the tobacco folks. It's a bit of skepticism about industry-financed science and corporate disinfomercials." Sisskin closes by saying locals should remember this lesson when asked by MMS to "support their pro-drilling agenda or trust their blithe comments about drilling being good for our community."

Sisskin, Enid. 15 October, 1997. Public must show it opposes drilling. Pensacola News Journal, sec. Letters: 11A.

Dr. Sisskin begins her statement, "Chevron is moving forward with its plans to drill and set up a 12-to-20 well 'industrial park' just 25 miles off our shores, and we don't want this to happen." MMS's two scoping meetings set for Pensacola are then discussed--public input to the environmental impact statement (EIS) being the purpose. Sisskin encourages public participation by assuring that "you need not have read Chevron's production plan or previous environmental impact statements, and you need not be an expert. The EIS must address the 'human environment' and your concerns must be considered."

A list of issues of concern is given: Tourism and economy, safety, marine life, cumulative impacts, and air quality. Some selected remarks for each topic are as follows: "Tourism is based on the public's perception of an area, and the public perception is that rigs will cause the beach to be a dirtier and less desirable place to visit." "What we might get in royalties would not compare to what we could lose in tourist revenues...serous accident could close the area for an entire tourist season and eliminate commercial fishing for two seasons."

Chevron's safety record is reviewed, as reported by a recent L.A. Times article citing several million-dollar-plus penalties/fines that were assessed against them. One of these was $8 million for violating the Clean Water Act. Effects on sea turtles of legally dumping "thousands of barrels of wastes" involved with drilling operations has not been studied, according to Sisskin. Nor has the impact of the explosive removal of rigs on marine life been assessed.

"Previous EIS's have warned us that the health of the Gulf of Mexico was declining. The cumulative impacts of these wells should be added to, not compared with, all other impacts," according to Dr. Sisskin. As for air quality, "The EIS should consider all wells together as a single point source for air pollution and determine what their effect will be on Escambia County's ability to meet the new clean air standards in light of its past record of non-attainment under the old, less strict standards."

The letter went on to again "urge strong public participation" at the MMS Scoping Sessions. Sisskin also brought up what she indicted as "an unacceptable conflict of interest" over the involvement of MMS in making public presentations to "promote the industry and claim that drilling is safe and environmentally undamaging." She sees this as acting as "regulator, promoter and financial beneficiary of drilling revenues."

Dr. Sisskin concludes by mentioning the introduction of "The Florida Coastal Protection Act of 1997." This bill would permanently prevent new leasing, and is due to be reintroduced this fall. Contact info for Florida legislators is given, along with a request for those concerned to contact them in support of the bill.

Sonali, Paul. 31 July, 1995. U.S. pays oil firms not to drill off Alaska, Florida. Reuters.

Almost $100 million dollars will be paid to nine oil companies by the Clinton administration "to settle the companies claims against the government for barring oil and gas drilling where they had leases." "This settlement is good for the environment, good for the taxpayers, good for the economy and fair to the oil companies," President Clinton said.

Environmentalists "hailed the outcome" of the settlement, but said it was a shame taxpayers had to pay for it--that the leases made in the 1980's were "a terrible mistake."

Sonner, Scott. 04 December, 1996. Study: More women heed environment. The Associated Press (from America Online.)

"Women stand out as the biggest advocates of protecting Mother Nature," according to this study. The "environmental gender gap" was addressed in a Roper Starch poll, which indicated that a substantially higher percentage of the women than men surveyed were concerned about environmental quality.

Although general attitudes about the environment have "remained fairly steady over the past five years," there has been a significant change in people's opinion of "whether government regulation has gone too far or not far enough." This year, 45 percent of those surveyed said, "not far enough," compared to 63 percent in 1992.

The poll was commissioned by the National Environmental Education and Training Foundation, a non-profit group "established under an act of Congress in 1990 to promote learning about the environment through cooperative efforts with government agencies, private corporations and other non-profit groups."

Spear, Kevin. 08 January, 1994. Chevron gets U.S. gas drilling permit, A move many in state dislike. The Orlando Sentinel, sec. Local: D1.

The "Norphlet trend" gas reserve offshore of Florida's panhandle is "believed to be the largest U.S. gas discovery since Prudhoe Bay..." And Chevron has been granted the final permit needed to begin drilling a third natural gas well, despite opposition from: "[Governor] Chiles, the Cabinet, the state House of Representatives, most of Florida's congressional delegation, and state and national environmental groups [who] say the industry threatens the state's coastal environment and tourism industry.

Spear, Kevin. 05 December, 1993. Drilling off Florida natural-gas boom, natural beauty bust? Orlando Sentinel: G1.

The Gulf of Mexico has become a "pincushion for wells" in the fifty years since oil & gas drilling techniques for floating rigs were first developed, according to this report. There have been approximately 30,000 wells and dry holes, yet only 73 have been drilled off Florida.

Florida held little to draw energy interests, in contrast to Louisiana and Texas waters, until the discovery 14 years ago in Alabama of the huge natural gas reservoir of the Norphlet Trend. The largest pocket of natural gas discovered in the U.S. besides Prudhoe Bay has been revealed to extend to Florida--"Tourist-sensitive Florida is not pleased with the discovery."

In 1989 Florida banned all drilling within 10 miles of its Gulf Shores. Currently, "... everyone from the Governor to Greenpeace is asking the federal government to suspend all offshore drilling near Florida." Although President Bush agreed to a temporary ban in the Florida Keys in 1990, he left the panhandle open for further development. Besides Mobil and Chevron, Shell, Conoco, Texaco and Amoco hold drilling rights to nearly 1.5 million acres of Gulf bottom in the eastern Gulf.

During the 1992 presidential campaign, Clinton promised to protect Florida's shores; but, candidate Clinton also stressed an energy policy that would increase usage of natural gas. "Bill Clinton won't do for North Florida what George Bush did for the Keys, " said Ann Whitfield, director of Florida Public Interest Research Group. "We think the panhandle deserves the same."

Gary Casper, an environmentalist who fought against drilling, and who lives on Mobile Bay (which is now dotted with nearly 30 wells), said, "Florida is going to fall, plan on it." "He has since concluded that oil and gas companies...are relentless, and that one's energy is better spent coaxing better environmental behavior out of them."

Compared to hitting "dusters" or dry holes for years, the flow of gas in the Norphlet wells of Florida overwhelmed test equipment. Production rates of 25 million cubic feet of gas a day are expected--compared to an average of 4 million. The gas is "...extremely deep, hot, corrosive, toxic, and pressurized, [and] getting it to market will be unusually expensive..." But, industry feels it is well worth it--expecting the Norphlet well lifespan to last 15 to 20 "prolific" years.

Chevron has tried to dispel fears of pollution by comparing the atmospheric discharge in accidents to the messiness of oil spills. "They make it sound like they are drilling for milk," said one anti-drilling activist. Besides "millions of gallons" of drilling mud discharge; dumping or spilling other toxic chemicals and fuel; disrupting marine life with anchors, pipelines and support legs--environmentalists warn that deep natural gas is "...steaming with water that contains high levels of salt, other minerals and radioactive elements." Oil companies say this "produced water" is safely diluted when dumped into the Gulf, but Alabama does require that the water be carried by pipeline to shore where it is injected "far underground."

Scenic pollution is of major concern to panhandle residents and business people also. Having rig structures visible by day and rig lights seen on the horizon at night is vehemently opposed.

Spear, Kevin. 05 December, 1993. From Alabama, lessons on living with big oil. The Orlando Sentinel, sec. Insight: 1G.

Local citizens' experiences living in close proximity to natural gas and oil company production is described in this article centered on the area around Mobile, Alabama. People with natural gas pipelines buried in their back yards, elderly shrimpers and other longtime locals discuss the risks and the perceived benefits of "living with big oil."

Of note is the "zero-discharge" rule in all state waters including Mobile Bay, which was industry's concession to environmental concerns. Also there is a detailed description of the difficulties involving natural gas production from Mobile Bay and the Florida Panhandle: "...[it] is as difficult to tap as any in the world."

Specht, Jim. 20 June,1995. Subcommittee votes to end offshore drilling ban. Gannett News Service.

The standing congressional ban on offshore drilling was not renewed by a House Appropriations subcommittee, "but Democrats from both coasts vowed to find a way to make the restriction permanent." The new Republicans in Congress were said to be responsible for this preliminary attempt to overturn the ban, although "support for the ban crosses party lines in coastal states." Clinton administration spokesman for the Interior Department, Jay Zeigler, said "the environmental risks far outweigh potential benefits."

State blocks oil drilling. 27 March, 1998. Sarasota Herald-Tribune, sec. Local/State: 3B.

"Oil derricks won't start popping up offshore of Longboat Key, Gasparilla Island, Naples, Sanibel Island and other famous Florida beaches." Drilling permits have been denied to Coastal Petroleum by the state Department of Environmental Protection. The state rejected the applications for exploratory drilling due to "insufficient information."

State to give OK to drill offshore oil: Legal losses force 1st permit in two decades. 18 August 1996. Pensacola News Journal: 1A.

After more than 20 years without offshore oil drilling in Florida, Coastal Petroleum Co. has been granted permission by the Florida Supreme Court to sink a well south of Apalachicola. The Florida court rejected the DEP's bid to require a $1.9 billion bond "as environmental insurance before [giving] the permit". David Guest, legal counsel for the Sierra Club Legal Defense Fund, said he was "absolutely shocked at the department's willingness" to allow Coastal Petroleum to drill because "they have no financial ability to clean up even the smallest oil spill..."

Offshore oil drilling was banned in Florida in 1990. Currently, Chevron's gas test well 29 miles off Pensacola is Florida's only offshore rig.

Stovall, Ivy. 23 September, 1997. Nader cheers, urges Pensacolians to effect big social change locally. Voyager: The Student Newspaper of the University of West Florida, sec. Downtown: 7.

"Ralph Nader, vigilant guard of consumer's and citizen's rights since the 1960's, spoke at Pensacola Junior College on Friday night...Though he made headlines [previously] for his valiant, grand-scale attacks on such giants as the Federal Trade Commission and the General Motors corporation, he has focused in the 1990's on rallying local grassroots movements."

"Nader commended the citizens of Pensacola for their strong community voice, especially the groups Citizens Against Toxic Exposure and Rig-free Florida for contesting offshore-drilling..." Nader made a point of mentioning the influence citizens have had on Republican

Representative Joe Scarborough--who previously had a "distinctly pro-corporation voting record." Scarborough has been an unyielding advocate of drilling opponents--voting repeatedly against oil industry interests. This is an example of how "small, concerned dedicated groups can and do effect significant change both locally and nationally," according to Nader.

Environmental issues such as deforestation and air pollution were referred to by Nader as "silent, cumulative violence" or violence committed by corporations against citizens, for profit. He stressed the manipulative agenda and social conditioning perpetrated by corporate America. He also cited statistics describing the money used to lobby Congress for industry interests, and corporate welfare. "Nader ultimately divided America into three power spheres: the government, the corporations and the citizens. 'Power abhors a vacuum,' he said, meaning that corporations readily step in to usurp citizens power if citizens do not organize and lobby on their own behalf. Corporations have formed an alliance with the government that should rightly belong to the people, and Nader urged citizens to reclaim that alliance and force the government to protect people against corporate violence." Nader referred to the U.S. government as "one of the Exxons, for the GM's, by the Duponts."

Stoddard, A.B. 17 January, 1996. Republican lawmakers rein in government by attacking environmental regulations. The Hill, pp. 33. Capitol Hill Publishing Corp.

Moderate Republicans have taken a stand, along with environmentalists, to resist hardline GOP efforts to cut environmental rules and regulations--"cornerstone of the GOP majority's efforts to shrink the power of the federal government." And the environmental community, being "more invigorated than it has been in years" is fighting back.

Cost-benefit analysis and risk assessment as a requirement of future federal environmental regulation has died in the Senate, but the Clean Water Act and Endangered Species Acts are still threatened by lawmakers who see "regulations to protect wetlands and threatened species as onerous to business and small landowners alike."

The repeal of the 23-year old ban on exporting Alaskan oil does not bode well for ecological concerns. This will increase domestic production in Alaska and California. And there is the recent enactment of tax credit for drilling in the deep waters of the Gulf of Mexico. GOP interests are also hoping to get an opportunity to tack on legislation to drill in the Alaskan National Wildlife Refuge (ANWR) with a balanced budget package.

"Another point of contention is the proposed elimination of the Coastal Zone Management Program which oversees mandatory control of non-point source pollution in states participating in the program." Democrats and moderate Republicans were able to modify the bill to maintain EPA approval of any control plan--versus the proposed voluntary compliance for states.

Environmentalists claim that more than 90 percent of the Alaskan coastal plain is already open to drilling, and that the ANWR area threatened by drilling is part of a "last great pristine wilderness." The ANWR issue has split environmentalists, the oil lobby and two native groups as well--one of which favors drilling, while the other fears disruption of caribou migration.

Reforms of the Endangered Species Act would de-emphasize species protection and enforcement--replacing it with "incentive-based voluntary cooperation." The controversial provision known as "takings" requires that the federal government compensate landowners "whose land has been devalued by regulations protecting endangered or threatened species." The bill was tabled while attempts to come up with some acceptable compromise are sought. It is said here to have a "long way to go before passing in the House and Senate and reaching the president's desk."

Storm fears send natural gas higher. 01 August, 1995. The Houston Chronicle, sec. Business: 1.

The evacuation of hundreds of offshore oil workers from the Gulf of Mexico in order to avoid Hurricane Erin has caused natural gas prices to soar. "On the New York Mercantile Exchange Monday, concerns about the storm sent natural gas prices surging to their highest levels in more than a month." Fears of slowed production prompted the sharp rise, along with higher summer demands.

Streater, Scott. 26 July, 1998. Public gets new deadline on Chevron: Department of Commerce will take comments on drilling until January. Pensacola News Journal: 1A.

Written comments on the "controversial Chevron proposal" will be entered into the public record until January by the U.S. Department of Commerce. This public comment period has been extended from the initial deadline of August 9, 1998. This extension has been granted because the Commerce Department is planning to delay the public hearing process from Fall of 98 until at least January of 1999.

Commerce Dept. Secretary William Daley will be responsible for sustaining or overruling Florida's opposition to Chevron's extensive development project proposed for 25 miles offshore Pensacola. The State Department of Community Affairs has refused Chevron's plan due to inconsistency with the state's Coastal Zone Management Plan. Chevron has appealed. The matter now rests with the U.S. D.O.C. and Daley.

If Daley overrules the state's decision, "Such a move would severely damage Florida's ability to control drilling off its coastline. If the state action is upheld, it almost certainly will set a precedent against offshore drilling in the state's waters."

Businesses, citizens and even unanimous bi-partisan state government officials have all united with environmentalists and residents in opposition to drilling off Florida beaches. The Florida Public Interest Research Group has collected more than 5000 signed postcards to send to Daley, and has helped unite "more than 100 Chambers of commerce and 45 public interest and environmental groups against the Chevron proposal. "U.S. Rep. Joe Scarborough, R-Pensacola,

last week persuaded all 23 state House members to sign a letter opposing the Chevron plan. The letter was sent to Daley..."

Streater, Scott. 19 July, 1998. Gulf drilling may bypass fall hearing: Feds taking written comments over Chevron natural gas wells. Pensacola News Journal: 1A, 3A.

A public hearing planned for August or September may be postponed until 1999, if the U.S. Dept. of Commerce is granted a delay by Florida Governor Lawton Chile's office. The U.S. D.O.C. has asked to set back the hearing until an environmental impact statement issued by the Minerals Management Service is released. In lieu of the fall hearing, concerned citizens are invited to submit written comments during a 30 day period.

The Florida Department of Community Affairs ruled in February that Chevron's planned development is inconsistent with the state's Coastal Zone Management Plan. Chevron has appealed this ruling to the U.S. Department of Commerce. Commerce Secretary William Daley can overrule the state and allow Chevron to proceed, however. Public input is supposed to play a part in the Secretary's final decision.

"But organizers of a local effort to fight the Chevron proposal are worried that delaying the meeting could slow momentum and dilute public interest." The Pensacola based Gulf Coast Environmental Defense has organized a concerted grassroots effort this summer to mobilize anti-drilling forces. Chevron continues to oppose the hearing, calling it unnecessary and redundant.

Streater, Scott. 01 July, 1998. Feds to hear comments on drilling: Hearing planned for August or September. Pensacola News Journal, sec. Local: 1C.

The U.S. Dept. of Commerce has agreed to set up a hearing in Pensacola to allow residents of Northwest Florida to voice their concerns over offshore development to federal regulators. Chevron has openly opposed the public hearing.

The Commerce Department is considering an appeal from Chevron after the Florida Department of Community Affairs refused their plan to drill--on the basis that it is inconsistent with the Coastal Zone Management Plan. Public input is said to be a factor in Commerce Secretary William Daley's decision.

Regarding the importance of public turnout at the hearing, Enid Sisskin, president of Gulf Coast Environmental Defense, (a Pensacola-based group formed in 1992 to fight offshore drilling) said, "...This is the best shot we have at it."

Not only do Chevron's plans hinge on the Commerce Department's ruling, but so does the state's authority to control offshore drilling in the future. "This is one of the bigger environmental issues that the state has engaged in for many, many years," according to Estus Whitfield, environmental policy coordinator for the governor's office. Governor Chiles made a formal request for the hearing to the Commerce Department. Chevron officials wrote to the department

saying that such a hearing was "unnecessary." "But, Whitfield counters that there have been no public hearings since the state rejected Chevron's proposal in February."

Streater, Scott. 27 June, 1998. Chevron still seeks Gulf leases. Pensacola News Journal: 1A.

Chevron has expressed its commitment to developing leases 25 miles offshore of Pensacola, despite proposed legislation that would ban future offshore oil and gas leases in the area. U.S. Senators Connie Mack and Bob Graham introduced similar legislation last year that may have played a part in Mobil Oil Corp. withdrawing from their development plans for leases off Pensacola's coast.

Chevron spokesmen "...argue that the two lawmakers are trying to subvert procedures for obtaining permission to drill." The Florida Dept. of Community Affairs rejected Chevron's development plans for the waters of Northwest Florida. Chevron has appealed to the Department of Commerce. Meanwhile, "Mack and Graham have sent a letter to Commerce Secretary William Daley asking him to delay a decision on the Chevron appeal..." They argue that drilling impacts have not been adequately researched. Chevron maintains that there are "...a lot of studies on the environmental impacts of drilling."

A spokesman for Senator Graham said, "...the stark reality is that offshore drilling for gas and oil represents a dire threat to the Florida environment and the economy--period."

Local group Gulf Coast Environmental Defense has organized a "Save Our Shores" campaign, and a boycott of Chevron products.

Streater, Scott. 08 June, 1997. Punishment down for polluters: Investigations on the rise, but DEP fines plummet. Pensacola News Journal: 1A.

In 1993 Governor Lawton Chiles combined the state departments of environmental regulations and natural resources. Since that time "fines assessed and collected by the state's top anti-pollution agency have plummeted to a quarter of what they were..." In the Northwest District, which encompasses Escambia County, warning letters, for example, have dropped from 256 in 1994 to 65 last year. But, at the same time environmental crime investigations have increased--quadrupling in the Panhandle.

Opinions concerning the effectiveness of the DEP are polarized. Some people, including some environmental activists, say they have seen improvement in the environment since the department consolidated. While others, "including employees within the department, say policy changes have hurt the environment." The question of blame over decrease in enforcement involves "a lot of finger-pointing going on between the top boss and his staff who blame each other...," according to this report. The President of the Legal Environmental Assistance Foundation says, "There is no doubt that enforcement as we know it is dead."

One local couple who have owned a home near Santa Rosa Sound for 46 years are moving due to "DEP-sanctioned development that they say has lessened the quality of the Sound." Louis Dequine Jr. is quoted as saying "One of the reasons we're leaving is, we don't want to spend the last of our years...living in a sewer."

"In a state with nearly 16 million acres of pine-shrouded forests, 7,800 lakes and more than 1,000 miles of beaches that draw tourists worldwide, environmental protection is an intimate concern to many." But fines and penalties collected by Florida's top environmental agency are at a decade-low.

DEP employees who made statements about district director Cooley (with their identities held in confidence) express criticisms which are exemplified by one who says, "Cooley is the scourge of the environment. He's the worst thing that ever happened to the environment," according to one supervisor. And these negative comments are reiterated by some of those who have retired from the agency.

Streater, Scott. 04 April, 1997. Offshore drilling could start in August. Pensacola News Journal: 1A.

Mobil oil has applied for a permit to sink an exploratory well 17 miles off Pensacola Beach in August. The 21,500 foot well will search for oil and natural gas. "While there have been several exploratory wells off the Florida Panhandle, there are no active wells in the northern Gulf." MMS spokesman Chris Oynes, when asked if the MMS might decline the application for permit to drill, said, "Highly unlikely, if not impossible." Mobil had been in the process of securing permission for this well since 1990, and has only a brief review by MMS, and air emissions permit left to complete before drilling can proceed.

Florida previously filed an objection saying that the well would be "inconsistent with its Coastal Zone Management program. But in June 1995, the Department of Commerce overruled the state's objections."

"Critics say oil and gas drilling has spoiled Alabama, Louisiana and Texas beaches through tar balls and oil slicks from minor spills."

Streater, Scott and Winnie Hu. 1 Jan. 1996. New year bears fate of beaches, political contests. Pensacola News Journal, Final ed.: 1A.

The future of Pensacola Beach interests are discussed in this article.
Persons who were quoted include: Kevin Lakins, Vice President of Pensacola Beach Residents and Leaseholders Assoc.; and Michael O'Donovan, Vice President of Gulf Coast Environmental Defense.

Taking power: Offshore drilling, energy, and citizen action. 14 September, 1996. Gulf Coast Environmental Defense publication.

This brochure was distributed at a citizen's action conference at the Comfort Inn, Pensacola Beach, September 14, 1996. The conference was called to "educate and mobilize Panhandle residents in a community-wide campaign against offshore drilling and in support of clean, renewable energy."

Speakers at the conference included representatives of state and area environmental groups, local area elected officials, chambers of commerce, residential and leaseholder associations, and a number of business owners.

Texas Digest. 11 October, 1994. Austin-American Statesman, sec. Business: 1F.

Panhandle Eastern Corp. and Associated Natural Gas Corp. have announced a "tax-free stock-for-stock merger " worth close to a billion dollars. The merger will create "the nation's third-largest independent natural gas marketing company, the fourth-largest natural gas gathering company, and one of the top 15 natural gas liquids producers in the country."

The Environment--Gulf Oil. June, 1996. Florida Trend. 39(2):27.

"A curious Bermuda-based venture called Coastal Caribbean Oils & Minerals, Ltd., has no revenues, no earnings and just two employees." According to this article, "What the company really explores are ways around the Florida state government's reluctance to permit oil drilling in coastal waters." Coastal seeks to drill in a three-mile wide strip which lies from 7.36 to 10.36 miles offshore and stretching 42.5 miles along Florida's west coast, from Apalachicola to Naples.

"Ultimately, Coastal Petroleum may try to sell its leases back to the state at a profit, rather than obtain a drilling permit--but if the recent rise in oil prices continues, drilling may seem the more lucrative option."

The offshore drilling threat. 15 February, 1995. The Tampa Tribune, Final edition: Editorial.

The bi-partisan anti-drilling stance of Florida's state senators, 23 representatives, and Governor Chiles are discussed here. Oil and gas production "poses a grave threat to Florida's $30 billion-a-year tourism industry," and is "simply not compatible with Florida's fragile coast," according to this editorial.

Turni, Karen. 15 July, 1997. Local preservationists try to stop drilling plan; They propose alternate route. The Times-Picayune, sec. National: 1A.

Local preservationists are fighting to save a wetlands area near Lake Borgne in the Biloxi State Wildlife Management Area from drilling. Louisiana Mining and Minerals, Inc. has approval to drill for oil and gas, but when their permits were amended to allow tow boats to drag along channel bottoms, locals objected accordingly. "At issue is how much authority local government has to regulate wetlands oil and gas activity. It's a matter that's expected to heat up because exploration is on the rise."

U.S. offshore drilling bans could be lifted in 1996. 18 May, 1995. Reuters: Energy News.

Bob Livingston, R-Louisiana, House Appropriations chairman says he "does not want to use the budget to legislate drilling bans." A spokesman for Livingston said, "They are not going to get the moratoria through the back door by using appropriations anymore."

A spokesman for the Center for Marine Conservation called the moratoria "the environmental litmus test" for politicians in California, "which is a key state for presidential contenders."

U.S. Interior Department rates Florida's thanks for plan on drilling. 17 August, 1995. The Tampa Tribune, sec. Nation/World: 12.

Interior Secretary Bruce Babbitt is recognized here for his sensitivity to the "will of Florida's people and the welfare of its shoreline." "The U.S. Interior Department's plan for future oil and gas leases prohibits any leases within 100 miles of the Florida coast." This is contrasted to past examples of Secretaries Lujan, Hodel, and Watt.

The plan is considered a victory for Governor Chiles, "who's worked hard, both as governor and as U.S. senator, to keep Florida from becoming an oily mess." However, this plan does not affect the 100+ companies with preexisting leases--so offshore exploration is not actually prevented.

U.S. to pay firms $200 million in deal on offshore oil rights. 01 August, 1995. St. Louis Post-Dispatch, sec. News: 1A.

The Clinton administration has agreed to an offshore lease buy-back that involves nine oil companies. The leases are in "environmentally sensitive areas." This agreement was reached after "more than two years of negotiation and litigation..."

The oil companies maintain that they are "entitled to compensation because they had been barred from using assets for which they had paid." The leases were off southeastern Florida, Cape Hatteras, N.C., and in Bristol Bay, Alaska.

Ware, Phillip W. 28 February, 1997. The Tampa Tribune, Letter to the editor, sec. Nation/World: 12.

This letter is by the President of Coastal Petroleum, in response to a previous editorial calling Coastal's actions "disgraceful" and accusing the company of not being "good corporate citizens" in their "bullying attempt to drill." Ware begins by saying this is "totally misleading."

According to Ware, the issue boils down to property rights. "How do you think your readers would feel if the state took their homes, farms, or cars and prohibited them from using them? Would they not be a 'good citizen' if they protested?"

Other accusations Ware addresses include: "the notion that Coastal had ample opportunity to pursue drilling [in the past]." He call this "disingenuous," and says that they have been hindered in various ways through the years by the state, so "Who is the bully here?" Another of the "numerous inaccuracies" Ware disputes is the DEP's "ludicrous maximum spill of 42 million gallons at Coastal's proposed well site." He claims this amount is based on an imaginary scenario involving terrorists attacking a Petroleum storage center. "The total spill from all [20,000 wells in the Gulf] combined has been only... 37,800 gallons. Somebody here needs a reality check." The Coastal rig is planned as a "zero-discharge facility. Nothing--not...even a rig-hand's spit...goes in the water." This is in reference to accusations of toxic contaminants at rig sites.

The charges of "greenmail" are alluded to here, also. Ware claims that the potential profit from the oil drilling would far exceed the so-called "geyser of money" from the state they are said to be seeking. He concludes by saying that the state requiring a $1.9 billion bond would necessitate an impossible yield of oil at the site just to pay interest on the bond, so the "illegal" bond has "in effect confiscate[d] the company's mineral rights...It is not Coastal's actions that are disgraceful."

Washburn, Jennifer. February, 1997. Oiling Slick Willie: Petroleum companies grease the hand that feeds. The Progressive. 61(2):28.

President Clinton received media accolades for saving Yellowstone National Park from a nearby gold-mining operation--Clinton saying, "We don't have to make a choice between the environment and the economy"--and the next day the President met with "members of the nation's top oil and gas companies, to sign the Federal Oil and Gas Royalty Simplification Act, a giveaway to industry." A move which, according to this reporter was trademark " Clintonism," gestures to

please the environmental movement followed by special incentives to industry, "to trash the nation's public lands."

"The oil and gas executives must have been overjoyed. They have long wanted to exploit the plentiful deposits that lie directly beneath the Greater Yellowstone region...[Drilling will now be allowed in] 95 percent of the Greater Yellowstone ecosystem."

A seven year statute of limitations on royalty collections, according to this reporter, will only add to industry's continued "bilking the government," with artificially low prices at the wellhead (which are then recouped "later in the production process by jacking up transportation costs and consumer prices at the gas pump.") The article goes on to accuse the U.S. Department of the Interior's Minerals Management Service of "consistently trying to cover up widespread royalty underpayment practices by the oil industry, despite evidence within agency files showing that it was well aware of the undervaluation problem." On July 18, the MMS announced that it would begin collecting "$440 million of the 856 million owed in California." Carolyn Maloney, Democrat and ranking member of the Government Management Subcommittee, "had been pressuring the agency to collect this money without further delay." According to Maloney, "The Minerals Management Service has had a terrible record of avoidance on this issue in the past."

The Project on Government Oversight estimates that unpaid royalties may "amount to $2.1 billion . . . nationwide." The oil industry is currently in the midst of "a flurry of investigations and lawsuits" over royalty-repayment issues. "The Justice Department is conducting a nationwide review, in preparation for a false-claims lawsuit."

This reporter believes that the Clinton administration is seeking to lure the oil industry away from the Republican party with corporate welfare--by "approving a substantial body of pro-industry legislation."

Besides the royalty-simplification act, other pro-oil laws include: a "royalty holiday"--an exemption to encourage deep-sea oil drilling in the Gulf of Mexico and among other things "changes in the Oil Pollution Act of 1990, designed to reduce the 'financial burden' on companies with offshore facilities, and an end to the twenty-three-year ban on Alaskan oil exports

A litany of "the destruction that results from oil and gas operations" is included here, with various statistics. "By volume, oil and gas production is the single largest source of waste in the United States today--more waste, in fact, than the combined total of all mining, agricultural, industrial, and municipal wastes put together," (quote from Jack Doyle's book Crude Awakening.) The article goes on to say that these waste materials, even though often dangerously toxic, are "exempt from federal regulation, due to oil lobbyists efforts. Also detailed are oil industry's environmental record on federal and Indian land, which "has not been pretty." And presently, thanks to an industry-friendly administration, "oil companies are leasing land in [National Forests and other wild areas] in state after state..."

The argument that "if U.S. companies stop drilling on federal lands, they will be forced to shift production overseas, thereby increasing U.S. dependence on imported oil...doesn't hold up. Until America overcomes it's oil-guzzling addiction in favor of energy efficiency, the United States will always be largely dependent on foreign oil; the nation has, at best, 4 percent of the world's oil resources, yet uses 26 percent of the world oil supply." Billions of barrels of oil and gas remain to be tapped from existing wells, according to this report. Yet, "instead of calling on companies to invest in existing wells and promoting a national energy plan, Congress and the

President have allowed industry to manipulate the nation's energy debate. "A well-orchestrated campaign targeting the oil industry's lucrative subsidies and environmental exemptions could arouse public indignation and prevent further ravaging of our public lands."

Weiner, Rebecca S. 27 June, 1995. Florida lawmakers help reinstate moratorium on offshore drilling. States News Service.

Efforts by Republicans, spearheaded by House Appropriations Committee Chairman Bob Livingston, were unsuccessful in preventing the renewal of the moratorium on offshore drilling. Livingston blamed the moratorium for "driving away 440,000 oil related jobs since its inception in 1982."

"On the other hand, Rep. Deutsch of Florida says, 'In Florida, the environment is the economy'." Florida Rep. Porter Goss also said of the ban, "...It protects our beaches, our economy and our special way of life." Goss and Democrat Harry Johnston are cosponsoring a bill that would "create a task force to review scientific data about offshore drilling. Until the task force completes its study, there would be a moratorium on all drilling and a permanent ban on drilling in the Florida Keys."

Weiner, Rebecca S. 09 June, 1995. On the Hill: Local Reps cut foreign spending, end flag flap. States News Service.

In the midst of reorganization and spending cuts drafted by Republicans, Sarasota's local Reps. Dan Miller and Porter Goss "joined forces with the rest of the Florida delegation to protect the state's coast from offshore drilling. Some Republican lawmakers have pushed for lifting the drilling ban for parts of the Gulf of Mexico."

"'People move to Florida for a different quality of life. If people wanted to move to Galveston, they would,' Goss said, referring to the tar-covered beaches in Texas that have resulted from offshore drilling."

Wheeler, Larry. 15 May, 1998. Lawmaker wants permanent resolution on drilling. Pensacola New Journal, sec. Local: 1C.

Rep. Joe Scarborough told Congress this week that there is inadequate scientific data on impacts to warrant a change of Florida's no drilling policy--and that a permanent solution must be found in the Eastern Gulf.

Chevron USA has a gas well planned for 25 miles off the beaches in Scarborough's district. His comments were made during a hearing before the House Energy and Mineral Resources

subcommittee. Although a moratorium on new leases has been renewed yearly since 1982 in the Eastern Gulf, there are approximately 150 previously existing leases. "The fear is that deep-water operations could lead to a large, catastrophic spill or degrade the environment through steady, daily pollution associated with offshore drilling operations."

In February the state of Florida rejected Chevron's request to situate up to 21 wells in the Gulf off Pensacola. Commerce Secretary William Daley could overrule Florida's denial of the Chevron request. Area environmentalists plan to lobby the Secretary, and stage "a summer of protests." In 1997 Scarborough introduced legislation that would have made the drilling ban permanent in the Eastern Gulf and instituted a lease buy-back for Mobil Oil's leases 17 miles off Pensacola. But, when the company dropped their bid to drill the legislation was also dropped.

Scarborough is supported by the entire Florida delegation, "but not everyone in Congress agrees." Particularly Rep. Nick Lampson, R-Texas, who calls keeping development out of the Eastern Gulf "unfair." He cited economic statistics for the amount of revenue and jobs generated by the oil industry, and said the oil industry is "99.999 percent safe."

Rep. Porter Goss, R-Fort Myers, FL has also introduced a bill, which Scarborough supports, that would impose a five-year "...timeout while scientists, environmentalists and business leaders consider the facts and propose a binding recommendation seeking fairness to all interested parties."

Wheeler, Larry. 22 June, 1997. Environmentalists find a friend in Scarborough. Pensacola News Journal, sec. Local: B1.

Legislation to block offshore drilling from the waters of Pensacola has been introduced by Joe Scarborough, R-Pensacola, Bob Graham, D-Miami Lakes and Connie Mack, R-Cape Coral. Area environmentalists are hopeful that this will "end [their] long-running frustration..." The frustration was formerly directed at Earl Hutto, according to this article. He was northwest Florida's representative, and an advocate of offshore drilling until Scarborough took office in 1994.

Joe Scarborough is said here to "embrace the point of view that the nation's energy giants should be banned from sinking exploratory wells or setting up rigs in waters adjacent to Florida's coast." He has also said, "The economy of Florida is dependent on the condition of our beaches..."

All 23 of Florida's House members signed onto the recently introduced bill which authorized the federal government to cancel six leases in an area 17 miles off the coast of Pensacola. Leaseholders would thereafter be able to seek payment from the federal government to recover their investments. The leases in question have an estimated value of $15 million. The bill would also ban leases from waters bordering Florida.

Wheeler, Larry. 31July, 1995. Oil firms agree to relinquish drilling rights off coast. Gannett News Service.

Lease buy-backs amounting to just under $200 million have been agreed to in an out-of-court settlement between the Clinton Administration and nine oil companies. Conoco, Amoco, Chevron, Shell, Mobil, Murphy, Pennzoil, Union, and Texaco have dropped lawsuits and are relinquishing drilling leases in 73 parcels in the Gulf roughly south of Naples, Florida. The buy-backs also include offshore areas of North Carolina, and Alaska.

Wheeler, Larry. 31 July, 1995. Out-of-Court settlement has no impact on Pensacola-area drilling. Gannett News Service.

The recent lease buy-back settlement made by the Clinton administration will not prevent oil and gas exploration in the waters offshore of the Pensacola area. There are more than 200 valid leases still held off the Florida Panhandle, according to the Florida Public Interest Research Group (PIRG), "a non-profit environmental organization with more than 35,000 members across the state." The settlement is considered an environmental victory for the Florida Keys and the Everglades, but a PIRG spokesman "expressed concern that nothing similar is being done about the leases off the Panhandle."

Wheeler, Larry. 03 August, 1995. Scarborough says votes balance concerns about pollution, government. Gannett News Service

Florida Republican Joe Scarborough's campaign vows were to stand firm against offshore drilling. His support of California Democrat Rep. George Miller's resolution to overturn a senate plan to give oil companies a $10 billion windfall serves to give credibility to his newfound environmental zeal. Scarborough was "the only Republican member to speak in support of the Miller measure." He also was part of a rebuke aimed at GOP leadership's plans "to slash the Environmental Protection Agency enforcement powers." (During his first six months in office Scarborough's voting record did not indicate a pro-environmental stance.) "Scarborough explained his actions as those of a lawmaker trying to balance concerns about pollution with a campaign pledge to deliver a smaller, less intrusive government."

Whitney, David. 27 October, 1995. ANWR Provision faces fight, but Senate passage expected. Anchorage Daily News, sec. Nation: 1A.

A Republican-written budget bill with an attached provision to open the coast of the Arctic National Wildlife Refuge (ANWR) to oil drilling is headed for a vote in the Senate. The money raised by the drilling (projected at about $1.3 billion) is slated to help balance the federal budget deficit by 2002. But, this was "barely mentioned" in the House debate. GOP moderates questioned whether leasing the ANWR's 1.5 million acre coastal plain would in fact generate the predicted income. They also complained that "being forced to vote on drilling as part of the larger budget package was furthering an anti-environment image of the Republican Party.

Meanwhile, the White House has been threatening to veto any budget bill that endangers the ANWR. "The House budget package also contains provisions to lift the 22-year-old ban on the export of North Slope crude oil...but it is stalled in a House-Senate conference committee over a provision to suspend royalty payments for deep-water drilling in the Gulf of Mexico.

Willon, Phil. 20 June, 1997. Offshore oil drilling ban sought. The Tampa Tribune, sec. Florida/Metro: 1.

Two Florida senators have filed a bill to "ban future offshore drilling leases along Florida's coast and cancel six existing oil and gas leases near Pensacola." Senators Connie Mack and Bob Graham have proposed the Florida Coast Protection Act wherein "the federal government would buy out a half-dozen drilling and exploration leases." Those leases are held by Mobil, 17 miles off the coast of Pensacola. Senator Mack stated that, "The reason for our ongoing crusade to end drilling off Florida's coast is simple: In Florida, a healthy environment means a healthy economy ...It would only take one disaster to change that." This bill is expected to face strong opposition.

In January, legislation calling for a temporary ban on all oil and gas exploration in federal waters off Florida "until the risks can be studied in greater detail" was filed by U.S. Rep. Porter Goss. The bill is still pending.

A recent Supreme Court ruling granting federal control over an area of the Arctic National Wildlife Refuge--in a case in which the state sought oil exploration and production--is not expected to have any impact on Florida's lease situation.

Willon, Phil. 28 June, 1995. Oil spill bonding demanded: State officials ask for $1.9 billion. The Tampa Tribune, Final edition.

Florida's Governor and state Cabinet have set a $1.9 billion bond in case of a major oil spill before Coastal Petroleum Co. will be allowed to drill. Coastal was "outraged by the proposal and accused the state of inflating damage estimates..." in order to hinder offshore production. State Comptroller Milligan said the "hefty bond" was necessary to protect taxpayers from potential spill clean-up costs.

Woodyard, Chris and David Ivanovich. 28 June, 1996. Energy turnaround bringing new jobs, economic growth. From Geoprobe online/Houston Chronicle.

Economic prosperity is the trend now in energy centers such as Houston for the first time in more than a decade. The petroleum industry is cutting costs, while concurrently enjoying a sharp increase in profit. "Oil and gas producers are rushing headlong into the deeper waters of the Gulf of Mexico in search of big discoveries. Companies are spending millions of dollars to drill for untapped onshore reserves. And foreign countries are aggressively courting U.S. firms for help in developing their own energy reserves."

The boom may not be short-lived either, considering that global demand for energy is rising at 2 percent yearly. And, American consumers have recently begun to buy "big, gas-hungrier vehicles." Also, as developing nations grow their demand for energy is also developing.

Lower oil and gas prices have "healed the industry" according to one spokesman, by forcing industry to develop more efficient technology and cut overhead costs. The new technologies have not only cut the cost of exploration, but have also greatly increased production.

Over a decade of downturn in the energy industry resulted in outdated equipment and worker attrition. The sudden and sharp turnaround has stretched much of "what's left...to the limit." Headhunters are reporting up to a 70 percent increase in demand, for example, for "oil and gas talent." There are shortages in several occupations, e.g., welders and "fishing tool specialists." Supply and service sector businesses are enjoying doubled or tripled rates; and every available rig is being utilized, with a surge in manufacturing running round-the-clock crews in some cases.

Congress' decision to "cut royalty payments to encourage drilling in deeper water" was a tremendous shot in the arm for industry. Yet, according to this article, much of the credit for industry resurgence is due to innovations in technology. Only a decade ago drilling was limited to water depths of a few hundred feet. Shell is currently building a platform that will operate in a mile of water. Seismic survey sophistication has radically improved exploration results--with better ability to locate underground reservoirs, therefore reducing the risks and costs incurred. Seismic crews are booked sometimes a year in advance at this point. New drill bits are able to bore sideways and with such accuracy that far more yield per well is possible. "...Drill bits are steered with such accuracy that they can snake underground for a distance equal to the Washington Monument and still reach a spot the size of a common picture frame." New technology has reduced industry costs of finding a barrel of oil from $6.07 in 1991 to $4.32 last year.

Workers to tackle blowout; International Well Control to extinguish gas well blowout in Louisiana. 10 June, 1997. The Oil Daily. 45(124):8.

Seven days after a June 16 blowout near Morgan City, LA, specialists from a Houston-based well control firm--including former employees of Paul (Red) Adair--are still struggling to extinguish the fire.

Four workers were killed in the blowout. The cause of the accident is still unknown. The U.S. Coast Guard plans to investigate.

The Department of the Interior Mission

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The Department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

The Minerals Management Service Mission

As a bureau of the Department of the Interior, the Minerals Management Service's (MMS) primary responsibilities are to manage the mineral resources located on the Nation's Outer Continental Shelf (OCS), collect revenue from the Federal OCS and onshore Federal and Indian lands, and distribute those revenues.

Moreover, in working to meet its responsibilities, the **Offshore Minerals Management Program** administers the OCS competitive leasing program and oversees the safe and environmentally sound exploration and production of our Nation's offshore natural gas, oil and other mineral resources. The MMS **Royalty Management Program** meets its responsibilities by ensuring the efficient, timely and accurate collection and disbursement of revenue from mineral leasing and production due to Indian tribes and allottees, States and the U.S. Treasury.

The MMS strives to fulfill its responsibilities through the general guiding principles of: (1) being responsive to the public's concerns and interests by maintaining a dialogue with all potentially affected parties and (2) carrying out its programs with an emphasis on working to enhance the quality of life for all Americans by lending MMS assistance and expertise to economic development and environmental protection.