

State of California, ~~George Deukmejian, Governor~~
George Deukmejian, Governor
California Coastal Commission
631 Howard Street, 4th floor
San Francisco, California 94105
(415) 543-8555
Michael L. Fischer, Executive Director
William Travis, Deputy Director

Final Concur

File Number:	<u>CC-12-83</u>
Date Filed:	<u>5/19/83</u>
3-Month Period Ends:	<u>8/18/83</u>
6-Month Period Ends:	<u>11/18/83</u>
Staff:	<u>LTT & Staff</u>
Hearing Date/Item:	<u>11/15/83 - 5a.</u>

REGULAR CALENDAR

FINAL STAFF RECOMMENDATION ON CONSISTENCY CERTIFICATION

PROJECT DESCRIPTION

Applicant for federal permit: Chevron U.S.A., Inc.

Project Location: Offshore Lease OCS P-0316, approximately 7.3 miles south of Point Arguello and 8.5 miles west of Point Conception; intersecting the shoreline north of Point Conception; running 16 miles south and east along the coast to Gaviota, Santa Barbara County (see Exhibits 1 and 2)

Project Description: One 48-slot drilling and production platform (Hermosa) on Lease OCS P-0316; two subsea oil and gas pipelines from platform to shore; continuation of pipelines onshore to new oil and gas processing facilities at Gaviota; and an ocean outfall wastewater pipeline near Gaviota.

Substantive File Documents: see Appendix 1.

STAFF RECOMMENDATION

The staff recommends that the Commission adopt the following resolution, findings, and declarations:

I. CONCURRENCE

The Commission concurs with the Consistency Certification made by Chevron USA, Inc. for its Development and Production Plan for the Point Arguello Field because while the DPP affects the coastal zone, it does meet the policies of the approved California Coastal Management Program, and is therefore consistent with the CCMP. Specifically, the Commission finds that Chevron's proposed project includes adequate information to permit an assessment of its probable coastal zone effects, including cumulative impacts, and it complies with the enforceable policy requirements of Chapter 3 of the California Coastal Act (Public Resources Code Section 30000 et. seq.). The Commission furthermore finds that the DPP implements the national interest as required by Chapter 11 of the CCMP and Sections 302 and 303 of the CZMA.

The findings and declarations that follow explain in detail (1) the effects that this proposed activity has on the coastal zone where sufficient and adequate data has been submitted to so determine; and (2) how the activity is consistent with the specific mandatory provisions of the CCMP.

II. FINDINGS AND DECLARATIONS

The Commission finds and declares as follows:

A. COMMISSION REVIEW OF DEVELOPMENT PLANS

A Development and Production Plan (DPP), which is prepared by an applicant for a federal permit, includes an Environmental Report describing environmental impacts and a technical drilling and production plan. Two federal laws govern the content and review of a DPP: the Coastal Zone Management Act (CZMA) and the Outer Continental Shelf Lands Act (OCSLA). The Commission has the authority to review DPPs for consistency with the California Coastal Act because the federal government has approved the California Coastal Management Program (CCMP) under the CZMA. The Coastal Act policies are the enforceable standards of the CCMP. The Commission must act on DPPs within six months of their receipt.

Applicants are encouraged to include all other related federal permits for consistency review. Chevron has confirmed that its consistency certification includes the following related federal permits:

<u>Agency</u>	<u>Permits</u>
U.S. Minerals Management Service	Approval of the Development and Production Plan (DPP) and ER Right-of-Way Approval for Pipeline
U.S. Army Corps of Engineers	Platform and Pipeline Structure Permit Section 404 Permit
U.S. Environmental Protection Agency	NPDES Permit PSD Permit for Gas Facility
U.S. Coast Guard	Approval of Navigation Aids

OCSLA Regulations. Federal regulations adopted pursuant to OCSLA (30 CFR 250.34-3(b)(1)(i)(A)) require that a DPP contain an Environmental Report that is "as detailed as necessary to enable identification and evaluation of the environmental consequences of the proposed activity," including a brief description of:

The location, description, and size of any offshore and, to the maximum extent practicable, land-based operations to be conducted or contracted for as a result of the proposed activity. This shall include:

- (1) The acreage required within a State for facilities, rights-of way, and easements;

- (2) The means proposed for transportation of oil and gas to shore, the routes to be followed by each mode of transportation, and the estimated quantities of oil or gas, or both, to be moved along such routes....

CZMA Regulations. Federal regulations under the CZMA (15 CFR §930.70-77 and .56(b), .58) require that additional information must be submitted with the applicant's consistency certification to identify all activities in the DPP subject to consistency review, and to provide a brief assessment relating the probable coastal zone effects of the activities and their associated facilities (onshore support structures, pipelines, and other facilities necessary to operate the project) to the relevant elements of the management program. More detailed information may be required for coastal zone related facilities under the CZMA for consistency review than for the federal Minerals Management Service (MMS) review under OCSLA.

CZMA regulations allow the Commission to object to a consistency certification based on insufficient information only if the Commission has requested the additional information in writing and has explained to the applicant the nature of the information, and why the additional information is necessary for a consistency certification. The Commission staff met with Chevron representatives on June 14, 1983 to discuss the project and to request additional information, not included in the DPP, that the Commission needs to carry out its consistency review. On June 29, 1983, in a letter to Gordon Duffy, Secretary of Environmental Affairs, the staff commented on the project and requested additional information from the MMS for the Commission's review, as provided for in the OCS Lands Act. On July 13, 1983, Chevron responded to the staff's comments and request for additional information. Further letters and meetings with Chevron staff followed in August and September, with Chevron making a good faith effort in responding to the staff's comments and concerns. Nevertheless, critical information is still lacking, as the analysis under Section E on major issues demonstrates.

Commission Consistency Regulations (Section 13660). Frequently, facilities associated with OCS developments require coastal development permits. It has been the Commission's policy to strongly encourage consolidated review of OCS plans and permit applications (Chevron Platform Edith #E-82-35/CC-39-82). The Commission's regulation on this matter states:

13660.12 Associated Coastal Development Permits

Where a facility associated with an OCS plan requires a coastal development permit application under the California Coastal Act (e.g., pipeline marine terminal, onshore support and processing facilities, etc.), the applicant shall notify the Executive Director of the facility's relationship to the OCS plan at the time of submittal of the plan. Where an application for such a facility precedes submittal of the OCS plan to the Commission, the applicant shall notify the Executive Director that the facility is associated with a forthcoming OCS plan. If the Executive Director determines that a consolidated review of the applicant's consistency certification and application for a coastal development permit is necessary for complete and proper consideration of the matter, he shall recommend such consideration in whatever manner necessary to comply with applicable time limitations.

In the June 29th letter to Secretary Duffy, the Executive Director stated that a consolidated review of the project would be advisable and urged Chevron to use this approach and to withdraw its consistency certification and re-submit it along with an application for a coastal development permit.

In responding to the staff's comments to Secretary Duffy, Chevron contends that:

....a review of a federal OCS project for "consistency" was not intended by Congress to include the depth of review used for permit applications. In Chevron's view, consistency review is the preliminary step in the process of later acquiring permits for onshore energy development projects. ...If a federal OCS project is going to be reviewed to the depth required for a permit application during consistency review, then the whole concept of consistency of a federal activity with California's approved Coastal Zone Management Program appears unnecessary.

(Letter to Michael Fischer, dated July 13, 1983)

This contention that the Commission should regard its consistency concurrence as only a preliminary approval indicates a misunderstanding of the procedural provisions of the CZMA. The following information is provided to correct this error. Chevron first contends that the Commission's consistency review need not be "in depth" and second, that the onshore associated facilities will require additional permits at which time they should be more thoroughly and properly reviewed. The Commission's consistency certification for a DPP is the only opportunity for a State to review an OCS project in its entirety. Under federal CZMA regulations (15 CFR 930.77) the Commission is authorized to review:

...each of the proposed activities (e.g., drilling, platform placement) and their associated facilities (e.g., onshore support structures, offshore pipelines), and their effect (e.g., air water, waste discharge, erosion, wetlands, beach access impacts). (emphasis added)

The applicant is directed to provide brief findings and an assessment of the probable coastal zone effects so that the Commission can review the impacts of both the OCS structures and the onshore associated facilities.

Chevron questions whether the Commission's consistency review should be as comprehensive as a permit application. Although a consistency review and permit application review are not legally identical, substantive similarities exist. Consequently, to adequately evaluate either a consistency certification or a permit application, the Commission must have sufficient information to evaluate the "probable coastal zone effects" to determine if the activity and associated facilities are consistent with the CCMP. The CCMP consists of the Coastal Act, its regulations and the Program Description, which states that the Commission may also consider:

...reports and studies that are not part of the program in making decisions on the national interest, public welfare and balanced utilization of the coastal zone that are required by either the CZMA or the California

Coastal Act. In fact, the Commission has an obligation to consider all relevant material--whatever its source--in making these decisions. But it cannot use any of this material in isolation, as the basis for a CCMP decision; all CCMP implementing actions must be clearly based on the adopted policies of the management program. (CCMP, p.16)

Therefore, the CCMP contemplates an in-depth review for consistency certifications and grants the Commission discretion with regard to the degree of information necessary for individual projects. For projects of the magnitude as this DPP, the informational requirements are significant. Federal regulations expressly provide that applicants must supplement information provided to Interior if required by the state's CCMP (15 CFR 930.77). California's CCMP contains the following statement:

Consistency certifications for OCS plans will be processed as much as possible as if they were applications for coastal permits under the Coastal Act and its implementing regulations to allow for timely notice and hearings. (emphasis added, p. 93)

Thus, similarities between permits and consistency do exist. Furthermore, the Commission's regulations require that consistency applications contain "supporting information for all activities required to be described in detail in the plan." (Section 13660.3) The regulations also provide that the Executive Director may request additional data and information if he deems it necessary for a complete and proper review. Such information has been requested from Chevron and failure to submit such information may result in an objection (Section 13660.3). A thorough review, therefore, is contemplated by both federal and state law.

This review is expressly extended to both the OCS activities and the associated facilities, even though these facilities may be subject to further coastal permit review. Of course, some facilities will be located outside the coastal zone and will not require Coastal Commission permits. Others may be located in areas where they are subject to the Commission's appellate jurisdiction. These would only be reviewed by the Commission if a local government decision is appealed. But the important fact is that consistency review is the only stage where the Commission can review the development as a whole. This is extremely important in oil and gas development because of the relationship between the platforms, pipelines, oil and gas processing facilities, and crude transportation plans and their effects on coastal resources and land uses. Reviewing one element without the others would render the consistency process meaningless. Reviewing only part of a development plan would cripple the coordination of OCS planning. It would be impossible to evaluate such important coastal management issues as cumulative impacts, consolidation of facilities, less environmentally damaging alternatives, and adequate mitigation measures.

Finally, the federal regulations, themselves, specifically include the evaluation of facilities associated with OCS development. These are defined as facilities:

- (a) ... specifically designed, located, constructed, operated, adapted, or otherwise used in full or in major part, to meet the needs of a Federal action (e.g., activity, development project, license, permit, or assistance); and

- (b) without which the Federal action, as proposed, could not be conducted. All further requirements of this part related to the review of and consistency for federal activities including development project..., federal license, federal and permit activities...and federal assistance activities... also apply to associated facilities related to those Federal actions. Therefore, the proponent of a Federal action must consider whether the Federal action and its associated facilities affect the coastal zone and, if so, whether these interrelated activities satisfy the relevant consistency requirements of the Act. (15 CFR 930.21, emphasis added)

Clearly, then, state and federal law provide the Commission with the authority to review OCS activities along with the kinds of onshore associated facilities proposed in this and other similar certifications. In addition, these activities and facilities must be described in sufficient detail to enable the Commission to determine their probable coastal zone impacts and consistency with the CCMP. The precise nature of the information is left, to a significant degree, to the Commission's discretion, given its mandate under the CZMA.

NEPA/CEQA. Because the MMS has determined that Chevron's project is a "major federal action" under the National Environmental Policy Act (NEPA), the MMS must prepare an Environmental Impact Statement (EIS) on the project. This document is being prepared jointly with an Environmental Impact Report (EIR), required by the California Environmental Quality Act (CEQA). The scope of the EIR/EIS will be the offshore area from the Santa Ynez Unit northward to Union Oil Company's Lease OCS P-0441. Chevron submitted a permit application to Santa Barbara County for its coastal development and local permits on July 5th, and the County is currently reviewing it for completeness. The time clock under CEQA has not begun to run on the project, and the completion date for the EIR/EIS is not known at this time.

Timing of Commission Review. The applicant controls the schedule for consistency review by its submittal of the DPP to the MMS. Once the MMS determines that the plan is complete, MMS forwards it to the Commission, which starts the six month schedule for consistency review. Even though the MMS has determined that an EIS is required, the six month schedule for a state's consistency review remains unchanged.

Due to schedule limitations imposed by the federal regulations which implement the CZMA, the Commission must complete its review of the Chevron DPP prior to the preparation of the joint EIR/EIS for the project and before action is taken on the other state and local permit applications, including the coastal development permits. Therefore, the Commission does not have the benefit of all the environmental documents in reviewing this project, and must base its determination on the Environmental Report (ER) and other information provided by Chevron as part of the DPP.

Commission and Local Government Authority. The Commission has consistency review authority over federally licensed and permitted projects and their associated facilities that affect the use of the land and water in the coastal zone. In addition, the Commission permanently retains original permit jurisdiction over that portion of the project seaward of the mean high tide line (MHT) in state waters, even after Local Coastal Program (LCP) certification. Thus, portions of the pipelines seaward of the MHT line will require coastal permits from the Commission. Because it has a certified LCP, Santa Barbara County exercises coastal development

permit jurisdiction for portions of the project located on land in the coastal zone. (see Exhibit 3) Thus, the landward portions of the pipelines and the processing facilities will require coastal permits from the County. Because these portions are "major energy facilities," they are subject to appeal to the Commission and to the LCP override provisions under Section 30515 of the Coastal Act.

B. PROJECT DESCRIPTION AND HISTORY

Chevron U.S.A. Inc. proposes to begin development of the Point Arguello Field by:

- o installing one drilling and production platform (Hermosa) on Lease OCS P-0316, approximately 7.3 miles south of Point Arguello and 8.5 miles west of Point Conception;
- o installing two subsea oil and gas pipelines leading from the platform to shore;
- o continuing this pipeline system onshore to processing facilities;
- o constructing facilities at an existing site at Gaviota to process the oil and gas for subsequent transportation; and
- o installing an ocean outfall pipeline terminating within state waters to dispose of produced water extracted during onshore processing.

The DPP does not officially include any provisions for transporting the processed crude oil to refineries. However, Chevron has committed to use a pipeline to transport its oil from the Gaviota processing facility to refineries.

The Point Arguello Field is the underground reservoir extending under several offshore tracts near Point Conception (see Exhibits 2 and 4). Chevron is the operator and co-lessee with Phillips Petroleum Company and Champlin Oil of Lease P-0316 and operator of eleven other leases in this area. (see Exhibit 2). The Point Arguello Field includes tracts leased in both Lease Sales 48 and 53. Chevron's OCS Parcels 0316, 0317, and 0318, along with Texaco Inc.'s OCS P-0315, form the northern boundary of Lease Sale 48. Tracts immediately north of this boundary, including Chevron's OCS Parcels 0450 and 0451 and Getty's OCS Parcel 0449 where exploratory drilling is taking place, were leased under Lease Sale 53. Therefore, the extent of the Point Arguello Field is still being delineated. Chevron estimates that the field may contain as much as 500 million barrels of oil. Chevron has stated in its DPP that three or more additional platforms will be required in the future to fully develop the field, but these are not included as part of this DPP. There are currently no platforms in the project area. The closest OCS development is Exxon's Platform Hondo, which is located about 30 miles to the east of proposed Platform Hermosa. Two non-operating platforms in state waters, Texaco's Herman and Helen, are situated about 15 and 21 miles, respectively, to the east of Hermosa.

Chevron has designed the initial facilities in this DPP to handle future production from the Point Arguello Field. Platform Hermosa will be the central platform for the field, designed to accommodate pipeline hookups from up to three future platforms in the field, including Texaco's proposed platform on adjacent Lease OCS P-0315. It will be a conventional eight-leg jacket steel structure supported on the sea floor by pilings. The jacket structure will be towed from its

onshore fabrication site to the erection site. The platform will have 48 well slots, although Chevron plans to drill only 40 development wells at this time. Chevron expects the platform to be installed in May 1985 and the first oil to be produced in January 1986. Oil production from Platform Hermosa is expected to peak in 1989 at 27,000 barrels per day (BPD) with 28 million standard cubic feet per day (MMSCF/D) of gas.

The common carrier pipeline is designed to accommodate the estimated combined production of all potential producers in the Point Arguello Field. A 30-inch pipeline will carry 200,000 BPD of oil, and a 22-inch pipeline will transport 160,000 MMSCF/D of gas. According to Chevron, the pipeline system has expansion capacity beyond this amount. Ways to marginally increase flow are by the control of oil viscosity and temperature. The addition of booster pumps or compressor stations near the landfall or looping of the lines (constructing additional links to the original pipeline within the same corridor) would provide additional capacity.

Offshore, the pipelines will be laid within a one-mile corridor and will follow a direct route, about 10 miles in length, from the platform to a landfall on Chevron owned property just north of Point Conception. Pipeline installation probably will be by the conventional pipeline barge/stinger method, although a state-of-the-art towing technique may be used in the nearshore area. The pipelines will be trenched and buried at a minimum of three feet through the surf zone. From the landfall at Point Conception to Gaviota, the pipelines will run an additional 16 miles and will be laid in a 100-foot corridor (200 feet during construction) in or near the Southern Pacific Railroad right-of-way throughout most of the route. A 10-mile extension of the pipeline system may be constructed to Las Flores from Gaviota, if the proposed Exxon marine terminal is used for interim tankering of the processed oil. Conventional land pipelaying methods and equipment will be used. The pipelines will be buried with a minimum of three feet of cover over the entire route, except for stream and canyon crossings where they may be suspended on existing railroad bridges or on new pipe bridges.

New oil and gas processing facilities will be constructed at Chevron's existing gas processing plant site at Gaviota north of Highway 101 across from the existing Getty marine terminal and storage facilities (see Exhibits 5 and 6). Initial processing facilities will require approximately all of the existing 15-acre site. Maximum buildout will require about 57 acres. Chevron owns an additional 85-acre area east of the existing site that will provide enough space for maximum expansion. The new facilities will be installed in stages over a nine-year period as Arguello Field production increases. The initial facilities are designed to treat 148,000 BPD of oil and 98 MMSCF/D of gas. Chevron estimates that these facilities at maximum buildout will handle a peak oil production of 200,000 BPD in 1990 and of 120 MMSCF/D of gas in 1991. The ultimate capacity will be for 250,000 BPD of oil and 120 MMSCF/D of gas. Approximately 50,000 barrels per day of wastewater will be discharged through an ocean outfall pipeline located in state waters in the vicinity of the Getty Gaviota marine terminal.

C. CUMULATIVE IMPACTS

The Platform Hermosa DPP is the first development proposal for a Lease Sale 48 tract, a sale the Commission found consistent with the CCMP. Since that Sale the DOI has held Lease Sales 53, RS-2, and 68. Furthermore, Lease Sales 73 and 80 are scheduled for next year. The cumulative effects of the exploration and development, especially the timing, pace, and nature of the development triggered by these sales has not been addressed by the DOI in a comprehensive manner. As a result, impacts

on marine and coastal resources, most notably air quality, vessel safety, and land uses have been resolved on a case by case basis with the burden falling on the OCS operator proposing the activity. Clearly, this process does not provide the protection from cumulative impacts that the federal government could, not does it provide the certainty OCS operators deserve.

In spite of these short-comings in the federal procedures and requirements, Chevron has designed Platform Hermosa and the associated facilities, including crude oil transportation system, to consolidate all anticipated platform proposals in the southern Santa Maria Basin, to consolidate transportation and processing facilities, to provide pipeline transportation and to mitigate known impacts to the maximum extent feasible. These combined efforts allow the Commission to find that the project is consistent with Sections 30250 and 30262(b) of the Act.

Chevron's commitments and subsequent Commission's finding of concurrence does not lessen the Commission's general need of EIS/EIS level of data to address the cumulative impacts of other energy projects in the Santa Maria Basin and Santa Barbara Channel. For example, in the SYU DPP, Exxon had not provided assurances that their OS&T alternative or their crude oil transportation facilities of their onshore alternative were mitigated to the maximum extent feasible. Without these assurances it was impossible to find consistency and further information to the level contained in the EIR/EIS was needed. In Chevron's case, the company has committed to maximum feasible mitigation of adverse impacts, including those to be determined by a study on disposal of drill muds and cuttings and by use of best available air pollution control technology. It is only this commitment of mitigation by Chevron, the lack of impacts on marine resources, commercial fishing, vessel traffic safety, archaeological resources, and full compliance with the certified Local Coastal Program that allows the Commission to find the project consistent with the CCMP.

D. COASTAL DEPENDENCY AND RELATION TO INDUSTRIAL DEVELOPMENT

Section 30101 of the Act defines a coastal dependent development or use as that which "requires a site on or adjacent to the sea to be able to function at all." Ports, commercial fishing facilities, offshore oil and gas development, and mariculture are specifically mentioned in the Coastal Act as coastal dependent, although not all activities or facilities associated with such development would be considered coastal dependent uses. Coastal dependent developments are given priority over other development on or near the shoreline. In fact, the Coastal Act provides that a level of land and water access and service capacities must be reserved for coastal dependent uses that is not afforded non-coastal dependent or coastal related uses. Shoreline protective devices, that might otherwise not be permitted, are also permitted when required to serve coastal dependent uses.

A special provision of the Act, Section 30260 (and Sections 30261 and 30262, which are incorporated within 30260 by reference) provides for further consideration of coastal dependent industrial facilities if they fail to meet the policies contained in Sections 30200-30255 of Chapter 3. Under Section 30260, a coastal dependent industrial facility may be permitted if: (1) there are no feasible* less

* A key word in this policy is "feasible", which is defined by Section 30108 of the Act as able to be accomplished successfully within a reasonable period of time, taking into account economic, environmental, social, and technological factors.

environmentally damaging locations for the project; (2) denial of or objection to the project would adversely affect the public welfare; and (3) adverse environmental effects are mitigated to the maximum extent feasible. Section 30260 therefore provides special standards for coastal dependent facilities that otherwise fail to satisfy Coastal Act requirements.

Offshore oil and gas extraction is by its very nature "coastal dependent" because the operations to develop the petroleum resources take place where the resources are located, underneath the sea. In this particular project, the Commission finds that the platform and the pipelines from Platform Hermosa to shore are coastal dependent industrial facilities which must be evaluated under the overriding considerations provided in Section 30260 of the Act, if they are found to be inconsistent with other Chapter 3 policies.

In prior permit decisions, the Commission has found pipelines to be coastal dependent industrial facilities only when they transport products directly from offshore facilities (Four Corners, Permit E-81-12). However, Chevron's onshore pipelines and the processing facilities, which are proposed in the coastal zone at Gaviota, do not require a site on or adjacent to the sea within the meaning of Section 30101. Therefore, the Commission finds that these facilities are not coastal dependent, but instead are coastal related, and therefore do not qualify for the Section 30260 overriding considerations.

Nevertheless, all facilities associated with the proposed project are related to "oil and gas development" and thus are subject to Section 30262 of the Act. Section 30262 applies to all oil and gas development regardless of the development's compliance with Sections 30200-30255. This section permits oil and gas development "in accordance with Section 30260," if certain conditions are met, including maximum feasible consolidation and, by reference, the three tests contained in Section 30260. Therefore, the coastal related project components are subject to the same criteria as the coastal dependent components. However, the criteria by which they are evaluated are interpreted as additional requirements provided through Section 30262, and not as considerations that override other Coastal Act policies.

E. MAJOR COASTAL ACT ISSUES

1. Transportation of Crude Oil

Section 30232 of the Coastal Act states that:

Protection against the spillage of crude oil, gas petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.

Sections 30230 and 30231 of the Act require protection of the biological productivity of the marine environment. Section 30260 provides for possible approval of coastal dependent industrial facilities (which includes offshore oil and gas development) not otherwise consistent with Chapter 3 of the Coastal Act, if among other provisions, the adverse impacts are mitigated to the maximum extent feasible. Section 30262 requires consolidation to the maximum extent and legally permissible of new or expanded oil and gas facilities. Taken individually or together, all of these Coastal Act provisions mandate the use of the most

environmentally protective method of oil transportation. The following discussion clearly demonstrates the superiority of onshore pipeline transportation of crude over transportation by tanker if such a pipeline is feasible. This conclusion is based on the smaller volume of oil spills from onshore pipeline operations and the greater potential of catastrophic spills from tanker operations to the marine environment. State and federal planning studies dating from 1975 support this position by recognizing that onshore pipelines provide environmental benefits that oil transportation by marine tanker fails to provide. Specifically, the DOI's Draft Environmental Statement, Oil and Gas Development in the Santa Barbara Channel Outer Continental Shelf off California, 1975, states that:

The Council of Environmental Quality (CEQ) has analyzed the relative probability of oil spills during oil transport by tanker and subsea pipeline. They found that although the statistics vary greatly with the size of oil field and other factors, in general subsea pipelines have fewer spills and less total volume of oil spilled than do tankers (CEQ 1974, Report to the President). Although pipelines on land might have comparable rates of oil spillage as subsea pipelines, pipeline inspection, repair of leaks, and containment of spilled oil is much simpler from a pipeline break on land than on sea. This would be especially true during bad weather. For these reasons oil transport by onshore pipeline would appear to have less environmental risk than transport by tanker or barge. (emphasis added).

The same federal report reaches an even stronger conclusion, namely:

The potential for adverse environmental impact is greater, however, for tanker transport than for a land based pipeline. Once constructed, a pipeline would have minimal adverse environmental impacts, whereas marine tankers would present the continual danger of oil spills during loading or unloading operations or due to collision during transit. (emphasis added).

Likewise, the Rand Corporation Report, Energy Alternatives for California: Paths to-the-Future (Executive Summary), prepared for the State Assembly Committee on Resources, Land Use, and Energy (Dec. 1975), similarly points out that:

The primary policy issues for the Santa Barbara OCS are those of development.... Useful conditions that could be imposed include the consolidation of onshore facilities, coordination with other energy developments, and construction of onshore oil pipelines to reduce or eliminate coastal oil terminals (p. 14).

Recent studies prepared by the California State Lands Commission (1982) recognize that onshore pipelines are preferred over transportation by tanker. In the Finalizing Addendum of the Environmental Impact Report for the State Tidelands lease sale from Point Conception to Point Arguello, the State Lands Commission makes the following statement regarding reviewer's comments on tankering and vessels pipelining of oil:

The fact that the DEIR addresses a hypothetical project and related marine terminal is consistent with the intention that the DEIR address a broad range of potential impacts of the

leasing program.... In fact, pipeline transport of produced hydrocarbons would provide significant mitigation for several classes of impacts including, possibly, transportation costs; water and air quality impacts associated with tanker/barge transport; and associated potential effects on marine biota, terrestrial biota, land use, aesthetics, marine traffic and oil spill risk. [Finalizing Addendum, p. 105-106] (emphasis added)

Recent data produced by the Oil Spill Intelligence Report (Boston, Mass. 1981) records the number and volumes of major oil spills throughout the world. During 1981, 36 tanker spills resulted in 15,004,000 gallons or 27.4 percent of the total amount of oil spilled worldwide. Pipeline spills resulted in 1,988,000 gallons, accounting for 3.6 percent of the total oil spilled. The data also demonstrates that the massive spills in 1981 resulted from tanker incidents and not pipeline spills. A particularly critical statistic is the number of major spills over 1,000,000 gallons. Three major tanker spills over 1,000,000 gallons resulted in 11,593,000 gallons of spilled oil. No pipeline spills were over 1,000,000 gallons during 1981. Data for the 1980 intelligence report shows similar trends. Some recent data reported by the MMS indicates that subsea pipelines may have had spillage rates comparable with tanker spillage. However, this data is not a factor in weighing the advantages of land pipeline transportation of oil versus marine tankering.

Moreover, the most recent figures on spills in U.S. waters, provided by the U.S. Department of Transportation and the U.S. Coast Guard, indicate an even greater contribution to spills from tankers rather than from pipelines. The following table compares tank ships and barge spills to pipeline spills for 1981 and 1982.

	<u>TANK SHIPS</u>		<u>TANK BARGES</u>		<u>PIPELINES</u>	
	<u>1981</u>	<u>1982</u>	<u>1981</u>	<u>1982</u>	<u>1981</u>	<u>1982</u>
<u>Number of Spills:</u>	429	223	731	462	496	528
<u>Volume/Gallons:</u>	9,475,266	9,562,750	4,277,217	1,591,125	1,391,211	1,922,024
<u>% of Spills:</u>	53.6	56.3	24.2	7.5	7.9	11.3

Since 1977, at least one third of tanker spills and almost one-half of all barge spills have resulted from ships under U.S. Registry, according to data recently released from the U.S. Coast Guard's Pollution Incident Response System in Washington, D.C. (8/5/83). Therefore, the overwhelming evidence over the past 10 years demonstrates that less oil is spilled, and the impacts of spills are usually less from land transportation of crude by pipeline than from tankering.

Pipeline transportation of crude also has definite air quality advantages. Tankering of oil results in higher emissions of air pollutants than pipelining, due to the escape of hydrocarbon vapors resulting from both loading and unloading activities. Although a vapor recovery system would reduce the emissions of hydrocarbons substantially, system failure, repairs, or maintenance will release significant amounts of hydrocarbons. By contrast, pipeline transfer of oil completely contains vapors. Any pollutants emitted would stem from pumping operations that are also necessary for tanker loadings.

The Commission has therefore consistently found that the studies and data on oil spills and air quality demonstrate that pipeline transportation of oil is clearly preferable to the use of tankers.

This preference is supported by information in the Lease Sale 73 EIS, which states that while the rate of spills from pipelines may be slightly higher than from tankers (based on Department of Interior data), pipelines may still be environmentally preferable, since tankers carry very large volumes of oil and thus pose the risk of a catastrophic spill and consequent environmental disaster, as opposed to the smaller spills from pipelines. The DOI recognizes the advantages of a crude pipeline transportation system by containing pipeline stipulations in its OCS lease sales. The FEIS for Lease Sale 73 states:

The intent of this measure is to transport hydrocarbons by the safest and environmentally preferable method. This stipulation requires, when feasible, pipelines to be used instead of tankers to transport oil. The use of pipelines would reduce air quality impacts from the transportation of hydrocarbon products and trade off the marginally higher oil spill rate of pipelines versus the lower tanker spill rate (1.6 to 1.3 spills per billion barrels of oil transported). (Page II-22, emphasis added)

The Santa Barbara County LCP gives priority to pipeline transfer of oil by permitting pipelines in all land use designations. Permits for facilities related to oil development activities would be conditioned on pipeline use, if feasibility is determined by the County. Technical studies have shown that pipelines are technologically feasible. Moreover, the recent discoveries of vast quantities of oil in the Santa Maria Basin and Santa Barbara Channel, as discussed in Section C of this report, will have a positive effect on the economic feasibility of pipeline transportation.

The All American Pipeline Company and the Pacific Texas Pipeline Group have developed proposals for pipeline transportation of crude from California to the East and Gulf coasts by way of the Texas oil distribution area. These proposals would probably require the addition of heating devices to existing lines from Midland to refineries in Louisiana, the east coast, or other areas in Texas.

In a recent letter to the Commission, All-American has indicated that their application has been "Deemed Complete" by the Bureau of Land Management and the California State Lands Commission, and their application to Santa Barbara County has been filed. The Company estimates that all permits will be obtained by 1984 and that a 30 inch heated pipeline to Texas will be operational by 1987. The capacity of such a pipeline could accommodate over 400,000 BPD of the heavy crude currently found in the Santa Barbara Channel/Santa Maria Basin. All-American has stated that it believes its pipeline proposal is in the national interest.

Chevron's Proposal for Crude Oil Transportation

Chevron, as operator of the Hermosa platform, has committed to transport its oil produced from the Point Arguello Field by a common carrier pipeline from Gaviota to El Segundo and has committed to take the lead to build such a pipeline if one is not proposed by another company. (Exhibit 15) Such a Chevron built pipeline would be sized to handle all crude production from the Point Arguello field.

Prior to January 1, 1990 and absent the existence of a common carrier pipeline or a consolidated marine terminal, Chevron will use the Gaviota marine terminal as an interim facility to transport their Point Arguello oil by tanker to refinery centers. After January 1, 1990, the use of the Gaviota marine terminal, or a consolidated marine terminal if one exists, shall be restricted to temporary use only during pipeline or refinery interruptions beyond company control. These commitments substantially reduce the threat of oil spills during the transport of the crude oil. However, marine tankering of oil will still occur as an interim use until a pipeline has been built. For this reason, the Commission finds that Chevron's use of interim tankering is inconsistent with Sections 30230, 30231, and 30232 of the Act.

However, Chevron's commitments to transport its oil by pipeline and to build such a pipeline, if necessary, provides substantial benefits in the protection against crude oil spills, and marine resources and air quality impacts. These assurances that a pipeline transportation system is feasible and will be made available by Chevron provides maximum feasible mitigation and consolidation for this portion of the DPP. Phillips and Champlin, as Chevron's partners in this DPP, have not yet committed to transporting this oil by pipeline. As stated above, however, pipeline transportation has been made feasible by Chevron's commitments. Use of this pipeline by Champlin appears to be feasible since Champlin also has refining capacity in the Los Angeles area. Chevron could purchase Phillips' share of the P-0316 oil and transport it by pipeline to Chevron refineries. Moreover, before Phillips and Champlin can transport their Hermosa crude by means of tankers they must obtain coastal permits to connect the processing facilities to a marine terminal. At that time the Commission will use the full and complete authority of its regulatory powers to assure that all oil produced pursuant to this consistency concurrence is transported by means of pipeline. Nothing in this consistency certification authorizes or permits Champlin and Phillips from transporting its Hermosa crude by any means other than a pipeline. In addition, Chevron's commitments do not preclude the transportation of Point Arguello crude to Chevron's refineries in Richmond, California or Mississippi by pipeline if the El Segundo facility is inappropriate. Therefore, the Commission finds that the transportation portion of the project is mitigated and consolidated to the maximum extent feasible and therefore is consistent with Section 30260.

2. Marine Resources

The Coastal Act requires the protection of marine resources in Sections 30230-30236. Section 30230 of the Act states:

Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreation, scientific, and educational purposes.

Section 30231 of the Act states:

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff,

preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alternation of natural streams.

Chevron's proposal raises significant marine resource issues under these Coastal Act sections because the development plan will result in: (1) offshore disposal of drilling fluids and cuttings; (2) disturbance of marine mammals and other marine organisms from platforms, pipelines, construction equipment, crew and supply boats, and helicopters; (3) increased risk of oil spills; (4) adverse effects on kelp beds from pipeline construction and operation; and (5) adverse effects on commercial and sport fishing. Two issues, disposal of drilling muds and drill cuttings and commercial fishing, will be discussed under following Sections 3 and 4 of this report.

Resources of the Point Arguello - Point Conception Area. Platform Hermosa is proposed on Lease OCS P-0316, located approximately 8.5 miles west of Point Conception in 602 ft. of water. The prevailing northerly and southerly ocean currents come together at Point Conception, creating a complex hydrographic regime. Because of the convergence of the cold and warm masses, the Point Arguello - Point Conception area has long been recognized as the transition zone between two biogeographical provinces, the northern cold, temperate "Oregonian" province and the southern, warm, temperate Californian province. The Point Arguello - Point Conception area is the range limit for many northern and southern species. There are some short range endemic organisms which are thought to occur only in this area.

The Point Arguello - Point Conception area has had minimal human disturbance due to its proximity to Vandenburg Air Force Base and to the often extremely severe weather conditions. Consequently, the biological resources in this area are in much better condition than in many other areas in southern California. It has a rich array of biological resources including marine mammals, seabirds, invertebrates, and a healthy fishery. Upwelling occurs in the area, enriching the waters and thereby increasing primary productivity and enhancing fishery resources. The area supports large kelp beds and rich and diverse intertidal and subtidal communities. The kelp beds and rocky outcroppings provide excellent habitat for abalone. Large concentrations of intertidal abalone have been recorded south of Rocky Point. There are harbor seal haul out areas west of the Point Arguello Boathouse, at Jalama, and at Point Conception. Several species of seabirds nest at Point Arguello, Rocky Point and Point Conception. Gray whales pass through the area twice each year during migration. The endangered California Brown Pelican is often found feeding in the area.

Chevron's proposal for one new platform and associated subsea pipelines, as discussed below, presents numerous possibilities for disturbance and damage to marine resources.

Benthic Habitats/Kelp Beds/Intertidal Areas. Drilling, installation of pipelines, a new platform, a produced water outfall, and disposal of drilling muds will impact the benthic organisms and kelp beds. In some cases, if the area of disturbance is kept to a minimum, animals will be able to recolonize after the disturbance. The construction of a platform or installation of a pipeline will alter the bottom permanently, changing the types of organisms that will inhabit an area. Platforms are often cited by oil companies as a marine resource enhancement because of their reef-like qualities. While fish may congregate near platforms, no conclusive evidence exists demonstrating that either the absolute abundance or the diversity of the fishery is enhanced. In fact, the platform structures and their

discharges may lower both the abundance and diversity of some species. Often, only a few species will live on the cuttings pile and on the mussels which fall from the platform. The increased amount of clay in the sediments surrounding the platform can result in a decrease in the abundance of bottom-dwelling organisms unable to tolerate the new conditions. In addition, fish congregated at the platform will prey upon bottom-dwelling organisms, further reducing their abundance (Menzie et al, 1980).

A site specific marine biological survey was required as a part of Chevron's permit application to the MMS for development of oil and gas on Lease OCS P-0316. The MMS requires these biological surveys when development is proposed in hard bottom habitat areas. The survey was done by Dames & Moore in August and September of 1982. The survey was carried out with a submersible remote controlled vehicle (RCV), standard grabs, and trawl and diver sampling methods. The results of the survey are found in a February 14, 1983 published report, a map showing the rocky outcrops in relation to the platform and pipeline, photographs, and videotapes. The Commission staff has reviewed a representative group of the photographs and videotapes.

In late August the Commission's geologist made a field visit to the proposed sites for the pipeline landfall. Two alternatives were under consideration by Chevron. The preferred alternative runs through a predominantly sandy area with rocky shelf outcrops. The other choice would send the pipeline through a biologically valuable rocky intertidal area. Chevron has selected the preferred sandy bottom/rocky outcrop route, but has not yet provided adequate information to make Coastal Act findings on the proposed alignment. The landfall is in the coastal zone and would require a coastal permit.

The original biological survey did not cover the intertidal area where the pipeline from the platform will intersect the shoreline. The staff has requested more information on this area from Chevron. Chevron is addressing this information need by having a biological survey done on the intertidal area. The results of the survey probably will not be available until November 1983. The results of the survey will provide the information needed for evaluation of a coastal permit application.

The Dames & Moore survey noted four basic habitat types in the vicinity of proposed Platform Hermosa. The predominate habitat type is soft bottom, and the platform will be located in a soft bottom area. North to northeast of the platform site in 520-550 feet of water, are scattered small boulder fields from 5 to 25 meters in diameter. The boulders average one meter in maximum vertical relief. The boulder areas and rocky outcrops near the platform do provide habitat for fish and invertebrates.

A rock pavement area is found north and northwest of the proposed platform site. Offshore and southwest of the platform site in 660-700 feet of water depth, scattered rock pinnacles 1-1/2 meters high were found surrounded by small rock piles. Side-scan sonar records (Dames & Moore, 1982) suggest that this habitat type may be scattered throughout much of the southwest quadrant of OCS P-0316.

The habitat types along the pipeline route are described in detail in the Project Summary Report, (pages 12-14); Chevron has stated that in water depths of approximately 15 m, the pipeline will pass over or near an area of "low or shallow subsurface smooth hard bottom habitat." The pipeline will also pass over hard bottom habitat in an area 2000 m northeast of the platform site. These areas of hard bottom habitat will be disrupted by the pipeline.

As noted by Chevron, five reconnaissance marine biological surveys have been undertaken in the Point Conception area in the past three years. These studies have yielded some previously undiscovered organisms which may or may not be rare or endemic to the area. Correlation of the results of the studies is necessary, but will not be completed for some time. A description of the characteristic fauna found at the platform and pipeline sites in one such study appears on pages 12-14 in the Project Summary Report.

The Dames & Moore survey documents a variety of biological resources and habitat types at the platform site and along the pipeline route. Generally, rocky outcroppings with vertical relief are considered to support a greater number and diversity of marine species. Moreover, rocky outcroppings are a much less common habitat type than soft bottom areas. Chevron has located the platform and pipelines to avoid a large portion of the rocky areas. However, there are still some areas where Chevron's project would impact rocky habitat areas. The staff has reviewed the survey maps to determine whether further modifications in the pipeline route were possible. Based on the geologic information provided by Chevron on the bottom type, it appears that Chevron has chosen the alignment that will minimize the direct construction impacts on the most significant rocky areas.

Chevron states that no blasting for pipeline installation is anticipated offshore, but that trenching will be done. Trenching will cause damage to the habitat directly surrounding the pipeline, but the impact can be far more localized than blasting. Chevron should be required to keep all pipeline construction disturbance within a minimum corridor. Commission staff originally suggested a 100 foot wide construction corridor. Chevron staff verbally stated that they would be able to place the pipeline within 100 feet of the proposed alignment, but because of construction techniques and weather conditions, they would need an approximately 6,000 foot wide construction zone.

The construction of a new platform and the installation of pipelines will have a significant impact on new or rare species, rocky habitat areas, and kelp beds. Therefore, this portion of the project cannot be considered consistent with the marine resource protection policies, Sections 30230-30232, of the Act.

Because the platforms and pipelines to shore have been found by the Commission to be coastal dependent industrial facilities (see Section C), these portions of the project can be considered under the special provisions of Section 30260 of the Act, cited previously. Chevron has made a very significant effort to try and reduce the impacts of platform and pipeline construction on benthic habitats. Chevron has submitted written information which states that very little work will be done within the 6,000 foot construction corridor. The area will be used mainly for anchoring the construction barges. Chevron has stated that they will review the side scan sonar maps and avoid all rocky areas. This mitigation commitment and other refinements to the DPP made during the consistency review have significantly mitigated the impacts of the project on marine benthic habitats.

The biologic/geologic survey for the nearshore portion of the pipeline within the coastal zone has not yet been completed and submitted to the Commission. The general alignment of this part of the pipeline appears consistent with Coastal Act policies and any remaining Coastal Act issues can be resolved during coastal permit review.

In conclusion, the Commission finds that the platform and pipelines (except those requiring a coastal permit) have been sited and mitigated to the maximum extent feasible and are therefore consistent with Section 30260 of the Coastal Act.

Water Quality Impacts. In addition to the discharge of drill muds and cuttings discussed in the following section, the proposed project will discharge produced waters, hydrostatic test waters, and treated wastewater into the ocean. These waters have residuals of grease and oils, and trace amounts of other pollutants. The disposal of these waters must meet EPA and/or State Water Resources Control Board (SWRCB) discharges standards, and be consistent with the Coastal Act.

The DPP states that all facilities will be designed so that all wastewater will meet current water quality standards. Under Section 30412 of the Coastal Act, the Coastal Commission cannot establish water discharge standards beyond those established by the SWRCB. The Commission does have coastal permit jurisdiction over the construction and installation of a new produced water outfall.

Chevron has submitted a map showing the location of its new produced water ocean outfall from the proposed Gaviota processing facilities. It extends from the proposed processing facilities directly offshore to the 90-foot depth contour line. The map text states that the outfall discharge will start at 70-foot depth, or 300 feet beyond historical kelp bed boundaries, whichever is greater.

Chevron states that its produced waters will not adversely impact kelp beds or rocky areas since the outfall discharge point is not planned in either of these areas. While the terminus of the outfall will be out of the kelp bed, the wastewaters discharged are likely to enter the kelp beds. The exact constituents of the produced water that will be discharged is not yet known. The discharge must meet ocean plans standards and requires approval from the Regional Water Quality Control Board. While the Coastal Commission cannot set specific water quality standards, it can provide comments to the RWQCB. Chevron should be required to provide assurances to the RWQCB that the produced water discharge will not adversely impact the health of the kelp beds. KELCO, a kelp harvesting firm, has submitted a letter of concern which highlights potential impacts to the kelp beds from the future produced water outfall. These concerns are important and are yet to be resolved.

Chevron's DPP states that all facilities will be designed so that all wastewater will meet current water quality standards, although it provides few details on this portion of the project. Under Section 30412 of the Coastal Act, the Coastal Commission cannot establish water discharge standards beyond those established by SWRCB. However, the Commission does have the responsibility to analyze in detail the location and construction of the actual outfall. Chevron has not provided the Commission with sufficient project details, such as type of diffuser and overall construction impacts, on which to conduct this analysis. The Commission notes, though, that the produced water outfall is in the coastal zone and will require a coastal development permit, and, thus, another opportunity for the Commission to evaluate the produced water outfall. Nevertheless, the Commission cannot find the proposed wastewater discharge options consistent with Sections 30230 and 30231 of the Coastal Act because of insufficient information and the potential for impact to marine habitats.

Under Section 30260, the Commission can approve coastally dependent projects which are otherwise inconsistent with the Act if they meet the special provisions, discussed previously. The produced water outfall is in the coastal zone and will need a coastal permit. There is inadequate information available at this time to determine whether the project is consistent with the Coastal Act. Additional studies are underway to develop mitigation measures for the produced water outfall. These will be evaluated in the coastal permit application.

Disturbance to Marine Mammals from Increased Crew and Supply Boat, Helicopter, and Tanker Traffic to the Marine Terminal. Increases in crew and supply boats, helicopter, and tanker traffic to a marine terminal could affect marine mammals (especially gray whales) by collisions or disturbance of migration patterns. This is a seasonal impact, most pronounced during the winter and spring. In order to mitigate adverse impacts to marine mammals, Chevron has agreed to (1) follow regular crew and supply boat routes between the Ellwood pier and proposed Platform Hermosa; (2) work with the Western Oil and Gas Association (WOGA) to incorporate educational information into the Fisheries and Environmental Training Program on how to identify gray whales and avoid any harassment by the supply and crewboat operators; and (3) limit offshore construction activities to the months of April through October so as to avoid most of the peak whale migration period. Northward migration of whales occurs until early summer, but the majority of whales will have passed this location by April 15; therefore, as now proposed, Chevron has included feasible mitigation measures to protect marine mammals and the project is consistent with Section 30260.

Increased Risks of Oil Spills. The construction and operation of the proposed platform and associated pipelines, and the loading of crude oil onto marine vessels from an existing or expanded marine terminal for transport to refineries significantly increase the risk of an oil spill in the Point Arguello-Point Conception/Santa Barbara Channel area. Chevron has not proposed to use a pipeline for transporting crude oil to refineries. Numerous studies, cited previously in Section E-1 show that pipelines offer less of a risk of oil spills than transportation of oil by tankers.

An oil spill could seriously affect marine resources. According to Chevron's Oil Spill Contingency Plan, oil spilled from Platform Hermosa would move toward San Miguel Island from December through February. The rest of the year, oil would move toward Santa Cruz Island. Drift bottle studies (1973) performed by the Scripps Institute of Technology have shown, however, a tendency for oil movement north during some months, thus threatening the Sea Otter range. If oil does contact the islands or the Sea Otter range, the feathers of birds and the fur of marine mammals would be fouled. Birds, mammals, fish and invertebrates could ingest the oil. Both fouling and ingestion can result in the death of the animals. Oil-tainted fish could not be sold by the commercial fishermen. Depending on the extent of a spill, kelp beds, wetland areas, streams, and rocky intertidal areas could be damaged. The southern sea otter, an endangered species, is not now a resident of the area, but could move into the kelp beds in the future. The sea otter is especially susceptible to injury or death from oil contact.

The present response time of the Clean Seas oil spill response vessels of 5 to 6 hours is not adequate given these conditions. Risk of oil spills from this region will increase significantly with new development from Lease Sale 53 tracts and the proposed Lease Sale 73. Therefore, a new response vessel (with similar response capabilities to Mr. Clean II) should be located in the vicinity of the proposed platform site. Chevron has arranged to provide such a vessel near the platform site. This vessel will be acquired by Chevron and Texaco for response to new production platforms in this area. (Also see Section E-5)

3. Drilling Muds and Drill Cuttings

As discussed in the previous section, the Coastal Act requires the protection of marine resources. The offshore disposal of drilling fluids and cuttings has a major impact on marine resources.

Drilling muds are used in both exploration and production drilling to control hydrostatic pressure in the well, lubricate the drill bit, and remove the drill cuttings from the well. They are generally composed of mixtures of water, clays, barium sulfate, lignite, lignosulfonate, and other additives. Drill cuttings are small pieces of formation rock cut away by the drill bit. They range in size from microns to a few centimeters. They are carried to the surface of the well with the circulation of the drilling muds and are separated from the muds on the platform by the solids separation equipment.

In October 1981, the Commission established a policy to guide its actions on muds and cuttings discharges. At that time, it determined that muds and cuttings discharged under the Environmental Protection Agency's National Pollutant Discharge Elimination System (NPDES) permit more than 1000 meters from state waters had not been shown to affect the coastal zone and, therefore, would not require consistency review. Allowing for future changes in policy, however, the Commission, in its testimony before the Environmental Protection Agency in October 1981, stated:

Should any new information arise within the two-year life of this permit that demonstrates that discharges beyond 1000 meters do affect the coastal zone, the Commission reserves its right to re-examine this issue under its consistency review authority and to respond, in our case-by-case consistency review, to the sensitivity of a particular location.

Based on the availability of new information on the fates and effects of muds and cuttings, and because of increased drilling activity offshore California, the Commission instructed the staff, in the fall of 1982, to re-examine the Commission policy on muds and cuttings disposal. A January 31, 1983 letter to the Environmental Protection Agency notified the agency of the Commission's review:

The Commission is currently re-evaluating its position on drill muds discharges in light of more recent information on the fates and effects of muds, and may decide to require case-by-case review of each NPDES discharge activity. The Commission may also decide it cannot support the idea of a general permit, as was issued by the Environmental Protection Agency in February 1982. We therefore request that a clause be included in the general permit to advise companies that the general permit does not apply if the California Coastal Commission determines that consistency review is necessary for areas beyond 1000 meters from the coastal zone.

The EPA's present NPDES general permit for southern California expires on December 31, 1983, and therefore will not cover discharges from Chevron's project. The EPA intends to expand the area covered by the permit to include 39 additional tracts, and to extend the life of the permit until June 30, 1984. The extension, however, will not cover mud discharges from Platform Hermosa. The Commission intends to exert consistency review authority over the reissuance and extension of the NPDES permit and has so notified EPA in testimony dated August 11 and 25, 1983. Chevron's discharges would likely be covered under a third NPDES permit, which would be issued by EPA in July 1984, and is not even in draft form at this time. The Commission, therefore, has inadequate information at this time and cannot make consistency findings regarding the future NPDES permit for drill muds disposal from Platform Hermosa. The Commission has further suggested that EPA review permits for all development activities on a case by case basis rather than under a general permit (see Exhibits 12 and 13, Commission comments to EPA re: NPDES permits).

The Commission specifically finds it necessary to exert consistency authority over the NPDES permit for Chevron's project because the proposed discharges will effect the use of land and water in the coastal zone as demonstrated by the following factors:

- (1) New information on the toxicity and eventual fates of muds and cuttings has become available. This includes some new information from EPA's Gulf Breeze lab in Florida.
- (2) The magnitude of discharges from production platforms poses a cumulative threat to marine organisms. The discharges from Chevron's 40 wells have a greater potential to adversely affect the coastal zone than do individual discharges from exploratory wells. The oil industry estimates that over 1500 exploratory and production wells will be drilled in the Santa Barbara Channel and Santa Maria Basin over the next ten years. An estimated 1,171,500 tons of muds will be required to develop these wells. Chevron's discharges, when considered with discharges from other future oil development projects, raise concerns over long-term cumulative impacts in the western Santa Barbara Channel area on marine organisms.
- (3) The Department of Fish and Game, in a report on drilling muds prepared for the Coastal Commission (J. Steele, 1983), cited the lack of conclusive information available on long-term, wide-spread effects, and recommended that regulatory agencies continue to review new information. The report recommended that, until definitive information on the effects of discharges is available, the muds and cuttings from wells in state waters should be barged ashore for land disposal. In addition, a letter from the Department of Fish and Game to the CCC, dated June 16, 1983, states, "We believe there is sufficient cause for concern regarding possible accumulative impacts to California's coastal resources from drilling in the OCS to reconsider the policy with regard to the range of effects."
- (4) Muds discharged on the OCS may well travel into state waters or near state waters.
- (5) Discharges on the OCS can affect the marine resources of the coastal zone because many invertebrates and fish species spend some parts of their life cycles in near shore waters and some parts offshore in areas such as the Point Arguello Field.
- (6) Discharges of muds and cuttings can also have an economic impact on fishermen and onshore fish-related industries.

For these reasons, the Commission finds that Chevron's proposed discharges of muds and cuttings will affect use of land and water in the coastal zone, and therefore, the Commission finds it necessary to exert consistency review authority over the future EPA general NPDES permit which will cover Chevron's discharges.

Even though the Commission has found that insufficient information exists at this time to review the EPA NPDES permit, the following discussion indicates the impacts and possible mitigation measures that must be considered by Chevron in the NPDES consistency determination (or certification) when it is proposed.

(including Chevron) have met with the Commission staff and provided information on the environmental effects of these discharges. There remains substantial disagreement over the long-term chronic and cumulative effects of discharging these materials in OCS waters.

Chevron proposes to discharge drilling muds and cuttings directly into the ocean from up to 40 wells on one platform (Hermosa). Up to three additional platforms may be proposed in the future for the Point Arguello Field by Chevron, its partner, Phillips, and other lessees. The DPP states that 1500 barrels of drill muds/per well and 16,000 cubic feet of cuttings/per well will be discharged with a total of 60,000 barrels of muds and 640,000 cubic ft. of cuttings for the proposed 40 wells over the anticipated 5 years of drilling on Platform Hermosa. The muds and cuttings will be discharged through the "cutting chute", a pipe that will terminate at approximately 30 m (100 feet) below the surface of the water. The Commission staff has requested that Chevron analyze these projected drill mud quantities, as the figures are substantially lower than for other comparable projects. In an August 23, 1983 letter to Commission staff, Chevron explained as follows:

After meeting with members of your staff on August 9, we decided to again review our mud discharge volumes and compare them to those presented in Exxon's Environmental Report (ER) for Santa Ynez. It appears that the discrepancy between Exxon's volumes and ours is one of semantics. As stated in our DPP and the July 13 letter, muds are discharged in bulk at various times during drilling. We estimated that about 900 barrels of muds would be discharged from a typical 10,000 foot well. We also included the discharge of 600 barrels of solids-free completion fluid (usually sodium or potassium chloride), which is discharged infrequently since completion fluid is generally reused from well to well.

These numbers were based on our actual operating experience with Platform Grace, and we believe they are correct in terms of intermittent, bulk discharges.

After reviewing Exxon's ER and consulting our Drilling Department, we believe that Exxon's volumes include muds discharged with the cuttings. Some mud adheres to the cuttings even after passing through the shakers, desanders and desilters. This mud, discharged continuously along with the cuttings, could be as high as 3,000 barrels for a 10,000 foot well. This, added to the 900 barrels of mud discharged intermittently in bulk, closely approximates the 4,000+ barrels per well reported by Exxon.

At the time that the DPP was submitted, we estimated that 900 barrels of mud and 16,000 cubic feet of cuttings (approximately 2,000 barrels) would be discharged during the drilling of a 10,000 foot well. The bulk volumes remain as estimated at 900 barrels. These batch discharges would probably occur twice at each well, with each batch consisting of 200-500 barrels discharged at a rate of approximately 480 barrels per hour. For purposes of modeling we will use a "worst case" situation of two-500 barrel discharges.

We have refined the drilling program so that cuttings volumes can be precisely calculated rather than estimated. The estimates in our DPP were high (16,000 cu. ft.), and mud solids which adhere to the cuttings were not considered. Therefore, the following volumes will be input into the dispersion model. Calculations are based on a 10,000 foot well drilled to the following casing specifications:

24" Conductor set in 30" hole at 450'

13-3/8" Surface Casing in 17 1/2" hole at 2,300'

9-5/8" Intermediate Casing in 12 1/2" hole at 4,500'

7" Production String (or liner) in 8 1/2" hole at 10,400'

Discharges of Drill Cuttings and Associated Mud While Drilling:

2,891 barrels mud

1,472 barrels cuttings

Bulk Discharge of Muds:

1,000 barrels mud (Two - 500 barrels discharges at 480 barrels per hour)

Chevron will, then, in effect, discharge approximately 4,000 barrels of mud per well including the bulk mud discharges and the muds which have adhered to the cuttings. This revised explanation differs significantly from the original figure of 900 barrels of mud per well that was supplied to staff in the DPP and subsequent correspondence. The approximately 4,000 barrels of mud per well discussed in the above August 23, 1983 letter falls generally in the range of other companies' experiences.

Chevron, in its August 23, 1983 letter to the staff, has stated that it plans to use two generic muds for the major drilling portion of each well. Generic Mud #5, Spud Mud, will be used while drilling to a depth of approximately 2,300 feet and Generic Mud #7, Lightly Treated Lignosulfate Freshwater/Seawater Mud, will be used to complete the drilling (to approximately 10,000 feet). Chevron has stated that additives will be chosen from EPA's approved list and that the use of chrome-lignosulfate will be avoided. Any mud additives Chevron uses will need to be approved by EPA under the condition of the NPDES permit prior to discharge. Chevron will barge muds to shore if (1) the muds contain additives not approved by EPA or (2) the muds contain additives in concentrations beyond those approved by EPA.

In drilling, it becomes necessary at times to add substantial amounts of diesel oil (100 barrels or more) to the mud system to loosen a differentially stuck drill pipe. The EPA's NPDES permit prohibits the discharge of "free oil". According to the permit, substances discharged "shall not cause a film or sheen upon...the surface of the water or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines." It is unclear what amount of diesel in the mud system would produce these effects. Fairly low levels of diesel contamination may not be visible because the oil will absorb onto the clay particles

and will not produce a sheen. The oil will travel with the mud particles and will be worked into the sediments when the mud settles. Chevron has stated that muds which exhibit a sheen will be considered "oil-contaminated" and will be sent to shore.

Chevron has provided further information on their handling of diesel "pills." Chevron states, "Steps are always taken to ensure that all of the diesel pill and diesel contaminated mud is removed when it is circulated out of the hole. We use the following procedures:

- "1. The volume of drilling fluid ahead and behind the pill can be calculated and will be known at all times. These calculated volumes depend on hole and pipe sizes, and pump efficiency. The carbide lag time from the mudloggers can be used to gain an idea of actual hole size and pump efficiency.
2. A retort analysis can be made to determine the actual percentage of oil contained in the drilling fluid. This test is accurate to $\pm 0.5\%$ and takes 15-20 minutes to run. This test will be run continuously once oil is recovered to determine when all of the pill is recovered. If there are materials being used in the drilling mud which appear as oil in the retort, the percentage will be known and any increase will be considered diesel oil.
3. If an emulsifier is used to increase the density of the pill, the emulsifier will cause the drilling fluid to flocculate making it possible to visually identify the initial contaminated drilling fluid.
4. A buffer zone, or an amount of drilling fluid necessary to fill 250 linear feet of hold ahead and behind the diesel pill, can be removed. This volume is considered sufficient to recover all the pill.
5. Chevron's procedures specifically identify and assign the responsibility to keep track of all calculated volumes, to arrange for sufficient storage space for contaminated fluids, and to make sure procedure to recover diesel oil is set and followed. This person is our "Drilling Representative." Similarly, it is the mud engineer's responsibility to visually inspect the fluid coming back, and to run all retort tests beginning well before the buffer zone.

Because the diesel contaminated portion of the mud system is small (approximately 250 Bbl), it can be isolated and hauled to an approved disposal site. In any event, no mud will be discharged if it does not meet EPA permit conditions."

Barite, which is commonly added to mud as a weighting agent, often contains trace amounts of other heavy metals. Because the quantities of barite which will be added are so large, substantial amount of these potentially very toxic heavy metals

will be discharged into the ocean. It is estimated that from one platform, containing forty 7000 foot wells, the following quantities of metals could be discharged: 345 lbs. arsenic, 117 lbs. mercury, 117 lbs. cadmium, 938 lbs. nickel, 1.9 tons vanadium, 1.4 copper, 1.4 tons lead, 10.3 tons zinc. The staff has requested Chevron to specify the source and heavy metals content of the barite it intends to use in its Hermosa development. Chevron has stated that it does not know the sources of the barite at this time, but has provided an analysis of a likely source of barite. The heavy metals content of this barite is comparable to that proposed by Exxon. In addition to the heavy metals associated with the barite, other heavy metals may be added to the ocean from the drill cuttings. The metals content of the cuttings will vary depending on the composition of the formation rock.

Drilling muds and drill cuttings from both exploratory and production wells, behave as a two-part system once they are discharged into the water. The coarse-grained cuttings fall quickly through the water and form a pile below the rig, usually within a few hundred meters of the discharge. The fine particulates which comprise the muds tend to remain in suspension in the water. The muds are greatly diluted at the point of discharge, and they form into plumes as they disperse through the water. The plumes move with the circulation of the water, and eventually most of the particulates discharged from the Point Arguello Field will settle out at low points on the edge of the Continental Shelf. The staff has requested Chevron to supply oceanographic data which shows the most likely area of deposition. Chevron has not yet committed to run a computer simulation of dispersion for a hypothetical discharge of drill muds from Platform Hermosa. This model requires accurate oceanographic data. Chevron had expected to complete the modeling and to submit the results to the Commission by September 12, 1983. These results were not available until October 5. Therefore, Commission staff was not able to do a thorough evaluation of the computer simulation prior to the deadline for production of this report. Chevron's conclusions from the computer simulation are as follows:

- "1. Dilution of drilling fluids is very rapid, resulting in nontoxic concentrations of both soluble and particulate components in the water column within a short period of time.

The 96-hour- LC_{50} for generic drilling muds is equal to or greater than 10,000 ppm. We plan to use generic 7 mud, which has a 96 hr.- LC_{50} of 200,000 ppm. The model showed concentrations in the water column of 0.3 ppm within 40 feet of the platform. Exposure time: less than 2 minutes. Clearly, these concentrations are orders of magnitude below toxic levels.

2. Plumes are concentrated at a depth of 300-350 feet during upwelling periods, and at 275 feet depths at other times. Thus, the mid-depth current has the greatest effect on dispersion. The mid-length current was consistently reported as a WNW current, year-round. Therefore, mud discharges will disperse and settle to the west or northwest of the platform site.

3. Under the usual current conditions (see 2 above) the discharge will not impact State waters. Should the unlikely situation of shoreward transport occur, the bulk of the discharge will settle around the 300 foot contour, outside the coastal zone.

Based on the results of these simulations, we believe that the discharge of drilling fluids from Platform Hermosa will not adversely impact water column or benthic biota in the Point Conception Area, nor will the discharge "affect the use of land and water in the coastal zone (A detailed analysis is attached)."

The effects of drill muds and cuttings discharges on marine organisms are the subject of great controversy. The National Academy of Science's National Research Council produced a report entitled "Safety and Offshore Oil". This report states:

There is no clear agreement among ocean biologists as to whether low concentrations of petroleum or drilling fluids and cuttings produce significant effects on marine biota. Nor is there agreement about the cumulative effects of low levels of discharges or of disturbances caused by drilling operations to natural ecosystems, both being difficult to detect and to measure quantitatively. Moreover, the long-term effect of the discharges on an ecosystem or community has not been established adequately. Thus, while there is general agreement that the toxicity and smothering effects of large quantities of oil and drilling fluids and cuttings are harmful to pelagic birds, benthic organisms, and coral reefs, there is less agreement on the ability of those life forms to recover after a time.

Scientists are unable to agree on the degree of concentration of mud components in the water that will cause harm to organisms. Scientists do agree that diesel oil is very toxic to marine organisms. In fact, industry representatives have suggested that high toxicity values found in bioassay tests on some drilling muds may be attributable to diesel contamination of those muds. Physical effects, which include direct smothering, change of substrate, clogging of gills, and interference with ingestion in filter-feeding organisms, are easier to observe than are chronic chemical effects.

The DPP/ER states that "Chemical and physical properties of drilling mud and cuttings may degrade ocean water quality by the following ways:

1. Increase trace metal concentrations such as barite, chrome-ferro lignosulfonate, cadmium, copper, lead and mercury;
2. High dissolved oxygen demand;
3. Raised temperature;
4. Increased light attenuation;
5. Reduced hydrogen ion concentration (elevated pH, sodium hydroxide);
6. High concentrations of organic carbon, total nitrogen and phosphorous.

The Commission has requested quantification of several of these parameters. Chevron has stated that the mud is expected to be very near ambient temperatures and should not create any measurable changes in the ambient water temperature.

The discharge of drilling muds does not appear to result in acute toxicity to marine organisms because the muds are dispersed in the water rapidly enough to limit the persistence of lethal concentrations. Bottom-dwelling organisms living directly beneath the discharge outlet are buried by cuttings and smothered; this effect is limited to an area within a few hundred meters of the drilling site. The temporary turbidity produced by plumes of mud does not seem to seriously reduce availability of natural light to marine plants and animals.

The Commission finds, after a thorough review of the available literature on muds and cuttings, including those contained in the substantive file documents and in testimony before the Commission, that the scientific community has not reached a consensus on the long-term, sub-lethal effects on organisms from continued exposure to low concentrations of muds and mud components. While Chevron and other industry representatives assert that no such impacts have been documented, other studies indicate the possibility of chronic impacts, including decreases in reproductive rate due to interference with fertilization, build-up of heavy metals in tissues and bones, concentration of heavy metals higher in the food chain, changes in species abundance and distribution, and behavioral changes resulting in greater susceptibility to predation. Tagatz et al (1980) found that the presence of high mud concentrations in the sediments can inhibit settlement and recolonization by many types of organisms. Schatten (1982) found that barium interfered with the fertilization and early development of sea urchin embryos. Sweeney (1981 testimony before the EPA) has stated that small amounts of copper and other heavy metals in sea water are exceedingly toxic to phytoplankton; these tiny plants are the basis of the food chain on which many other organisms depend. Brannon and Rao (1979) found that ingestion of muds containing barite can result in significant increases in barium content in the tissues of grass shrimp. Neff (1979) investigated sublethal responses of organisms to used drilling muds and observed decreased growth rates in oysters, grass shrimp larvae, opossum shrimp, and killifish embryos, developmental anomalies in fish embryos, impairment of osmoregulation in shrimp, and hypoglycemia in crabs, at concentrations similar to or slightly lower than those that were acutely toxic.

Chevron's DPP states that, "Available literature suggests that drilling mud from the proposed Point Arguello Field development would not have significant or lasting effects on ocean water quality" and, therefore, the DPP does not propose measures to reduce or offset the effects of the discharges. The controversy over the long-term effects of the muds is far from resolved, and the discharges, as proposed by Chevron, cannot be considered to be sufficiently protective of the marine environment without significant mitigation measures.

When considering the EPA NPDES permit, if the Commission finds the ocean disposal of drill muds inconsistent with the marine resource policies of the Coastal Act (Sections 30230-30232), as it did in CC-11-83 for Chevron's Plan of Exploration on OCS P-0217, the project could still be permitted if they met the tests of Section 30260, cited previously. This analysis will require consideration of several alternative methods for discharge and/or disposal of muds and cuttings, including barging the muds to an onshore Class I or Class II-1 disposal site; barging the muds to an approved offshore ocean dumpsite; increasing mud storage space on the rig; treating the muds and cuttings with a silicate binding agent; shunting the muds to a particular depth in the water column; diluting the muds prior to discharge; and reusing the muds in production drilling.

Chevron maintains that barging muds and cuttings to shore or to an offshore dumpsite is not feasible due to added expense and safety risks. The industry's Offshore Operator's Committee estimates that the total cost to dump muds and cuttings at an authorized land site, for a 10,000 foot well in the Gulf of Mexico, would be \$243,000. This figure includes the cost of truck transportation to the dump site, the site usage charge, and the cost of two percent rig downtime, due to the predicted time when weather would prevent loading of the muds into a barge or supply boat. Industry spokesmen estimate that barging muds ashore and transporting them by truck to a dumpsite would increase NOx emissions by about 280 pounds/day, an increase of about 28 percent over the total daily operational outputs associated with drilling operations.

Disposal at an offshore dumpsite would necessitate the EPA's designation of an approved offshore site. Costs associated with disposal at such a site would be comparable, but somewhat less than those for an onshore site, because a usage fee and truck transportation would not apply.

While the Commission concurs with Chevron that the barging of all muds and cuttings is not expedient, some situations do exist in which some muds and cuttings must be disposed onshore and in such cases this alternative is not only feasible but necessary. As explained above, muds contaminated with certain additives may not be discharged under EPA's NPDES regulations and such muds must be barged ashore for land disposal. Diesel oil is the primary additive which necessitates onshore disposal of the muds. As discussed previously, scientists agree that diesel oil is very toxic to marine organisms.

Another mitigation measure discussed with representatives of the oil industry was the chemical fixation of muds and cuttings. In this process, silicate products are mixed with the muds and cuttings to bind the solids and keep them from dissolving in water. The efficacy of the chemical fixation process in binding heavy metals is not proven.

Shunting of muds through a shunt pipe to a given depth in the water column may be a useful mitigation in several situations. A pipe can carry the muds away from the surface waters, where a plume would be more likely to interfere with photosynthesis and would be more visible. Muds can also be shunted near to the ocean floor, so that most of the particulate matter will settle out and dispersion will be minimized. In deep water, where maximum dispersion is desirable, an exact placement of the shunt pipe is not essential. Muds discharged from Chevron's shunt pipes, which will terminate 100 feet below the water's surface, in a 600-foot water column, will disperse as the particles fall away from the discharge outlet. Varying the shunt depth as a necessary mitigation measure for this site should be considered.

Dilution of muds with seawater prior to discharge can be used to increase the rate of diffusion of the mud particles, particularly in shallow water. Although it does not significantly increase diffusion rates in deeper water, it still should be considered as a mitigation measure at this site.

Providing an additional mud storage space on the platform, separate from the regular mud tanks, can be a useful tool in the management of mud discharges and should be considered in the NPDES permit. If storage area capable of containing the maximum total volume of mud in the working system at any one time (approximately 1500 barrels) is available on the platform, the muds contaminated with diesel oil or other additives which cannot be discharged can be stored in bad weather, and

drilling can continue uninterrupted. Additional storage can make re-use of non-contaminated muds more feasible. In production drilling from a platform with two operating rigs, it is possible to alternate drilling schedules so that the same muds can be used by both rigs. Provision of mud storage space on the platform will allow mud of a certain formulation to be held until it is needed again; this could minimize the total volume of mud discharged. The high cost of muds makes this option economically attractive. The money saved in avoiding rig downtime and in reusing uncontaminated muds reduces the net cost of incorporating additional storage onto the platforms. Additionally, provision of storage space on the platform would allow Chevron flexibility in the future in its ability to adjust its mud program (i.e., increasing use of oil-based muds which require onshore disposal) and to comply with changed regulatory requirements. Should Chevron ever need to provide on-board storage, it would be less costly to incorporate additional storage capability into the platforms at the design stage than it would be to retrofit existing structures.

The current Chevron proposal includes platform storage capacity of 2,040 barrels of mud. These mud holding tanks are designed primarily to mix and hold fresh muds prior to use in the wells. Approximately 1000-1500 barrels capacity would have to be set aside for storage of contaminated muds to consider this a viable technique. Chevron has not agreed to this measure.

The Central Coast Regional Water Quality Control Board's Oceanographic Technical Advisory Committee has designed several drilling muds monitoring studies to be carried out by oil companies drilling in State waters. One goal of the studies is to identify an appropriate compliance monitoring tool (i.e., an array of settling tubes) which will accurately collect and record the mud components discharged from the wells. These studies on hard, soft, and combination bottoms will utilize benthic sampling, sediment settling, and larval recruitment results to evaluate the overall effects of muds and cuttings discharges. Results should be available by late 1984. Other groups, including the Georges Bank Biological Task Force, are also investigating the effectiveness of various monitoring systems. The Commission finds that to ensure compliance with discharge standards and to protect the marine resources of the Santa Maria Basin area, such compliance monitoring, in conjunction with independent analysis and verification procedures, is necessary.

Throughout the Commission's review of this project, Chevron has provided increasingly more detailed information on the operating techniques they intend to use to minimize the resource impacts caused by drill muds and cuttings disposal from Platform Hermosa. In an October 4 letter to the Commission, Chevron proposed to initiate a study to evaluate all available measures to mitigate the impact of the disposal of muds and cuttings to the marine environment. The study would be funded at approximately \$250,000, would be managed by a joint industry/agency task force. Chevron has agreed to implement feasible cost effective measures identified by the study. This study is to be tailored after the approach taken with the Commission NOx study.

This study proposal by Chevron is a sound one and a cooperative, focused effort by industry and agencies to develop feasible drill muds mitigation measures is critical. This study would be a logical complement to the "effects" study being carried out by the Regional Water Quality Control Board in State waters. Hopefully, with the combination of the two studies, some answers will come forth regarding effects and feasible mitigation measures. While Chevron's offer to do this mitigation study is a very positive step to the resolution of the drill muds disposal issue, a study, in itself, is not mitigation, even though Chevron has agreed to incorporate any cost effective measures identified by the study and as determined by the Commission.

The Commission finds, in this case, that it is most appropriate to handle the question of drill muds disposal through the Commission's future consistency review of the NPDES permit covering this project. Chevron has provided a commitment to implement all feasible mitigation measures that are identified in the joint industry/agency drill muds task force in addition to the future requirements made by EPA. As well as providing specific mitigation measures for Chevron's Platform Hermosa project, the study will promote a better knowledge of feasible and sound mitigation measures for other operations along the coast. This work will complement other ongoing studies by the RWQCB, EPA, and industry and promote the public welfare by moving toward resolution of the drill muds disposal issue in California waters. In conclusion, the Commission finds the drill muds position of the project consistent with Section 30260 of the Coastal Act because: (a) Chevron has initiated an industry/agency task force mitigation study which promotes public welfare; (b) Chevron has committed to implement all feasible drill muds disposal mitigation measures identified through the study; (c) the Commission will have full consistency review of the NPDES permit covering Chevron's discharge before any drill muds disposal could occur; and (d) the platform (where drill muds disposal would be likely to occur) has been located in water over 600 feet deep and away from special biological areas.

4. Commercial Fishing

Section 30230 of the Act, previously cited, requires that special protection be given to "areas and species of special...economic significance." This section further requires that, "Uses of the marine environment shall be carried out in a manner that will maintain healthy populations of marine organisms adequate for long-term commercial...purposes." Section 30231 requires maintenance of the biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes for optimum populations of marine organisms. Section 30234 of the Act states:

Facilities serving the commercial fishing and recreational boating industries shall be protected and, where feasible, upgraded. Existing commercial fishing and recreational boating harbor space shall not be reduced unless the demand for those facilities no longer exists or adequate substitute space has been provided. Proposed recreational boating facilities shall, where feasible, be designed and located in such a fashion as not to interfere with the needs of the commercial fishing industry.

The Commission finds that commercial fishing is an important element of the coastal economy which must be protected under Sections 30230, 30231, and 30234 of the Coastal Act. In addition to money earned directly by fishermen, the industry is considered a "primary industry," which generates many additional secondary jobs for seafood processors, brokers, dock workers, truck drivers, and boat yard crews. Revenues for the rent and the purchase of housing, food, and equipment are also generated by commercial fishing.

Chevron's Platform Hermosa and the offshore pipeline are located in Department of Fish and Game (DFG) fish blocks 658 and 657, respectively. Chevron discusses in the DPP the use of a new consolidated marine terminal at Gaviota, proposed by Getty Oil Company, as its first option for transportation of the processed oil, or use of

the marine terminal at Las Flores proposed by Exxon Company, USA. Chevron's proposal also includes an onshore processing facility which will require an outfall line for produced water. These facilities are located in fish blocks 655 and 656, respectively.

Information from DFG and Chevron indicates that commercial catches from all these blocks are comprised of numerous species, but mainly white seabass, halibut, abalone, crab, lobster, spot prawn, and sea urchin from the nearshore waters, and Pacific bonito, shark, bocaccio, rockfish, sole, tuna, and ocean shrimp in deeper waters. The most recent specific fish block data (1981) is only available for fish blocks 655, 656, and 657. Combined, these three fish blocks contributed a total of 10,400,000 pounds of fish and shellfish in 1981, with a value of \$1.6 million. Recognizing that there are at least three people working onshore in fishing-related businesses for every fisherman, total value of these fisheries to the local economies was almost \$5 million. Data from fish block 658 would boost these figures.

Information from DFG, Seafood Specialties (a commercial fish buying company), commercial gillnetters, and trawlers from Santa Barbara and Morro Bay define the potential impacts of the proposed project. Platform Hermosa, with its proposed location in 602 feet (approximately 100 fathoms) of water will be located on the outer (western) edge of the trawl fisheries for rockfish and bocaccio. Most local trawlers fish in waters less than 100 fathoms deep, although some trawl in the vicinity of the platform. While the proposed platform will not currently affect gillnetting for thresher shark, a DFG representative states that the thresher shark fishery is new and growing. Thus, additional oil and gas development in the Santa Barbara Channel, around Points Conception and Arguello, and in the Santa Maria Basin may displace this growing fishery in the future.

Drilling up to 48 wells from the proposed platform will entail ocean disposal of drill muds and cuttings. Commercial fishermen and the Commission have expressed concern about the short-term and long-term effects of these materials on commercially recoverable fish in previous considerations of development and exploration plans. The Commission continues to be concerned because of the uncertainty of the impacts, as expressed by the scientific community. The previous section in this report provides further analysis of the fates and effects of drill muds on marine biota.

Production from Platform Hermosa will increase the chance of oil spills, which could adversely impact commercial fisheries. Economic losses to the fishing industry can occur by (1) tainting marine organisms by direct coating or ingestion of hydrocarbons; (2) reducing the total available catch; (3) contaminating fishing gear and vessels, requiring either cleaning or replacement of the gear and cleaning of the vessels; and (4) preventing fishermen from leaving port due to placement of oil containment booms. Additional discussion of impacts from oil spills is provided in Section E-2.

Construction of the proposed offshore pipeline from Hermosa to shore will interfere with halibut, shrimp, and flatfish trawlers, halibut and white seabass set gill netters, abalone and sea urchin divers, lobster and crab trappers, salmon trollers, and hook and lining for rockfish. Up to fifty operators from ports in the Santa Maria Basin and Santa Barbara Channel could be affected.

The actual presence of the pipelaying barge will preclude fishing activities, and disturbance to the ocean floor from the barge's anchors and the pipeline will temporarily limit trawling, trapping, and diving activities. The construction corridor will be as much as 6,000 feet wide to accommodate the anchors required by the barge. The DPP states that the pipeline will be installed from May to October 1985. This scheduling will interfere with fishing for halibut which is a year round fishery, but peaks from February through July and October through December; crab, which is a year-round fishery; and white seabass, which is fished from July 15 through March 15, but peaks from June 15 through July and October 1st through February. Other set gill net activities center on soupfin shark, baracuda and angel shark, although catches were low in 1981. After construction, protrusions, such as pipeline connections or tie-ins, and protruding electrodes, will damage trawl nets travelling over these potential snags.

According to Phil Beguhl, a gillnet fisherman, both Getty's existing and proposed marine terminal at Gaviota, Chevron's preferred transportation option and Las Flores, the backup transportation option, are and will be located in prime halibut, crab and lobster fishing areas. These fisheries provide a significant percentage of commercial fishing revenues and fisheries habitat from the Santa Barbara Channel. According to a Seafood Specialties, a new marine terminal at either Gaviota or Las Flores will significantly affect the halibut, lobster, sea urchin, abalone, and rock crab fisheries. Both proposed terminals will preclude fishing within a two-mile radius of the structures, taking into consideration interference by the associated tanker traffic. However, the impact of an expanded terminal at Las Flores would be less than from expansion at Getty - Gaviota because fishing offshore Las Flores is less intense than in waters offshore Gaviota.

Support boat traffic for transportation of supplies and crew will also affect the nearshore fisheries by running over buoys and losing traps and nets.

To address the above impacts, Chevron has incorporated mitigation measures into the project. It will establish and identify to the local fishermen support boat routes from the piers between Carpinteria and Gaviota which will direct the boats outside the 30 fathom curve before proceeding west to the platform and pipeline (Exhibit 16, as an example). Chevron will compensate for damaged fishing gear as a result of the project activities, in accordance with general liability laws. It will complete a study of pipelaying methods by December 31, 1983 and will choose a method which will eliminate anchor scarring or minimize it to the maximum extent feasible. Chevron will conduct a post-construction survey in the construction corridor and will remove any retrievable debris. The DPP states that the pipeline will be designed and constructed with smooth profiled protective devices, such as shrouds for connections or tie-ins, and slope-sided enclosures for large protrusions. Chevron will also meet with the affected fishermen to identify concerns and move toward determination and implementation of feasible mitigation measures. The Commission believes that Chevron's mitigation measures are steps in the direction of resolving conflicts between the proposed project and commercial fishing activities, but that additional steps should be taken to assure continuance of the fisheries in the area.

In addition to analyzing individual impacts of proposed development, the Commission also analyzes the effects of projects in connection with effects of past, present, and future development in accordance with Section 30250 of the Act. The waters offshore California have historically supported and will continue to support oil and gas and commercial fishing industries. Future development and production facilities for oil and gas will be proposed in Lease Sale 53 and 68 tracts and

future exploration and development could occur in proposed Lease Sales 73 and 80 areas offshore central and southern California. In addition to future activities in the federal OCS, activity may increase in state waters, as evidenced by the proposed State Tidelands lease sale between Points Arguello and Conception.

California's offshore waters support significant numbers of commercially recoverable fish. In 1982, over 695 million pounds of fish and shellfish, worth \$241 million to commercial fishermen, were landed in California. When contributions to support, processing, transportation, and marketing industries were considered, using a multiplier of 3.1, the total value of California's commercial fishing industry is nearly \$750 million. Current state and federal management practices and regulations are designed to sustain levels of the exploitable fish stocks.

Through consideration of consistency certifications and coastal development permits for plans of exploration and development, the Commission is aware of numerous conflicts between the commercial fishing industry and oil and gas activities in the Santa Maria Basin and the Santa Barbara Channel.

It is evident that, as oil and gas activities increase offshore California, conflicts with the commercial fishing industry accelerate. As fishing areas are either temporarily or permanently closed off to the fishermen, the impacts cumulate, leading to significant decreases in catches and income to fishermen and local economies. As mentioned previously, Chevron's project is for initial development of the Arguello Field; the ultimate number of platforms needed to produce the field is not known at this time. Chevron argues that there has been a continual increase in fish catches over the past 20 years, in conjunction with increased oil and gas development. In its October 25, 1983 letter to Commission staff, Chevron quotes Jim Barroca of Ventura as stating that the number of fishing boats in Ventura Harbor have quadrupled since the platforms have been in place. The letter also states that Scripps Institute has found that the number of fish under southern California platforms was 20 to 50 times greater than in other areas. Although this may be true, the Commission is most concerned with the catch per effort and the overall catch and whether these figures have changed over time. Commercial fishermen at the Commission's hearing on Exxon's proposed development of the Santa Ynez Unit argued that the catch per boat had actually declined in the Gulf of Mexico.

The Commission also takes issue with a quote in Chevron's letter from the American Fisheries Society which states that it is the Society's belief that "...offshore hydrocarbon development is entirely compatible with fishing (both sport and commercial)." Numerous fishing representatives from Avila Beach, Morro Bay, Santa Barbara, and San Pedro, and the Department of Fish and Game, have testified on various exploration and development proposals (CC-8-81, CC-23-82, CC-26-82, CC-40-82, CC-2-83, CC-5-83, CC-6-83, and CC-7-83) that these developments could have affected the commercial fishing industry if the impacts were unmitigated. In addition, the Department of Interior acknowledged that oil and gas activities resulting from Lease Sale 73 would adversely impact fishing activities and has required:

Lessees shall consult with fishing industry representatives and the California Department of Fish and Game to assure that exploratory activities and production platform locations are compatible with seasonal fishing operations and will not result in permanently barring commercial fishing from important fishing grounds. (emphasis added)

As proposed, the Commission finds that the project will have both individual and cumulative impacts on commercial fisheries. Portions of traditional trawling grounds may be closed off due to unavoidable anchor scars. Construction of the pipeline will temporarily limit trawling and set gear operations during their respective fishing seasons. Because the thresher shark fishery is expanding, Platform Hermosa may adversely affect its future growth. This potential impact is compounded by the fact that the fishery already will be adversely affected by the development of the Santa Ynez Unit. Thus, the Commission finds that the project is inconsistent with Sections 30230, 30231, 30234, and 30250(a) of the Act.

The Commission found in Section C of this report that the platform and subsea pipelines portion of the project are coastal dependent industrial facilities. The Commission also has found that the marine terminal aspects of the project are coastal dependent. Although the proposed development does not comply with Sections 30230, 30231, and 30234, because the offshore components are coastal dependent, these must be further analyzed under the requirements of Section 30260, cited previously.

The first requirement of Section 30260 is that the applicant must demonstrate that alternative locations for the project are either infeasible or more environmentally damaging. Although relocation of the platform and pipelines may not be infeasible, it may precipitate conflicts of either equal or greater magnitude. If the platform is moved to shallower waters, it would pose greater interference with the trawlers because they generally trawl in waters less than 100 fathoms deep. Relocating the platform elsewhere between Point Arguello and Point Conception could also pose conflicts to commercial fishermen. As evidenced by DFG fish block data, the area from Point Arguello to Point Conception is trawled within the 100 fathom contour and the area from Point Arguello to Gaviota is fished with set gear within the 30 fathom contour. Relocation of the pipeline within these areas will pose similar conflicts with the commercial fishing industry.

Siting a new marine terminal between Point Arguello and Gaviota will also pose significant conflicts with the set gear fisheries. According to a gillnetter, each terminal precludes fishing within a two-mile radius of the structure. The Commission notes that use of the existing Getty terminal by Chevron will result in the expanded use of this facility, even if Getty's proposal for a new consolidated terminal is rejected, because more tankers will be required to handle the increased volume of crude output. Such expansion will occur in a prime nearshore fishery.

Chevron has proposed use of an onshore pipeline from Point Conception to refineries. This proposal would eliminate the need for Chevron's use of either proposed marine terminal. It will, however, use the existing terminal at Gaviota on an interim basis (until 1990) while the pipeline is being constructed.

Although the proposal includes use of the existing marine terminal, expanded use of the terminal is temporary; therefore Chevron's proposed use of the onshore pipeline is the least environmentally damaging alternative with regard to commercial fishing issues, and the Commission finds the entire project consistent with Section 30260(1) of the Act.

The third requirement of 30260 requires that adverse environmental effects be mitigated to the maximum extent feasible. Chevron has agreed to mitigation measures which will mitigate against the impacts of pipeline operation and construction,

support traffic, of construction of the project components by agreeing to notify the fishermen of the traffic routes and construction schedules, and location of the construction sites. The Commission finds the proposal consistent with Section 30260(3).

Even though the project is mitigated to the maximum extent feasible, traditional trawl and set gear fisheries will be displaced. Compensation for this lost space is an option to mitigate this impact; however, it is very difficult to determine the form of compensation, the parties which should be compensated, and the amount necessary to fairly compensate them. Also, the problem is cumulative as more areas in the Santa Maria Basin and Santa Barbara Channel are developed for oil and gas exploration and development, and more fishing areas are deleted. Oil company and fishing industry representatives have established a joint committee to address this problem along with other issues raised by the use of these areas by the two industries. The objectives of this group are to act as a liaison between the industries, to serve as a clearinghouse for disseminating information, study conflicts between the two industries, and to look at the cumulative impacts of oil and gas development on the fishing industry. The Commission believes the compensation issue would be better resolved by the industries. However, the Commission would be willing to address the issue if it cannot be resolved and still remains an issue.

5. Containment and Cleanup of Crude Oil Spills

Section 30232 of the Coastal Act, cited previously, requires protection of the marine environment from any spilling of crude oil, gas petroleum products, or other hazardous substances. For any development or transportation of these materials, the section further requires "effective containment and cleanup facilities and procedures" to be provided for spills that do occur.

The Commission interprets the word "effective" to mean that spill containment and recovery equipment must have the ability to keep spills off the coastline. Unfortunately, this equipment does not currently have the capability to clean up large oil spills in the open ocean. Spill cleanup efforts could not keep oil off the beaches during the Ixtoc I oil spill in the Bahia de Campache, Mexico, the Amoco Cadiz spill off the coast of France, or the 1969 Santa Barbara oil spill from Union's Platform A. On August 6, 1983, a Spanish supertanker with 73 million gallons aboard burst into flames and split in half off the African coast, causing a massive spill. Clean up of large spills is extremely difficult. A 1980 report from the International Tanker Owners Pollution Federation states: "If a large volume of crude is released into the sea relatively close to shore, it's highly unlikely that even the best organized cleanup flotilla can prevent some, if not most, of the oil from reaching the coastline. The only real saviors of the beaches in the case of a major spill are favorable winds and currents which take the oil out to sea where it can be dispersed naturally."

This principle also holds true for any small oil spills in the open ocean. In 1977, for example, the Chevron tanker Manhattan spilled approximately 20 barrels at Chevron's El Segundo terminal, most of which ended up on local beaches. While oil spill cleanup equipment can function with about 50 percent recovery efficiencies in calm seas, recovery efficiencies are drastically reduced in moderate or rough seas, thus limiting or eliminating the ability of the equipment to recover oil. According to data from the National Climatic Center in Ashville, North Carolina, wave height conditions for the Point Arguello-Point Conception area exceed two feet 74 percent of the time. Waves exceed six feet 20 percent of the year and nine feet six percent of the year.

Thus, the Commission cannot find that the proposal is consistent with Section 30232 due to the limited effectiveness of existing oil spill equipment in open ocean conditions.

As found in Section C of this report, the platform and subsea pipelines components of the project are found to be coastal dependent industrial facilities and therefore can be given additional consideration under Section 30260 of the Act. Oil spill containment and cleanup equipment, including response time and contingency planning, associated with Platform Hermosa and the pipelines to shore, must provide maximum feasible mitigation for the project to be consistent with Section 30260 of the Act.

Oil Spill Containment Equipment and Response. The Commission has determined in past permit and federal consistency certification decisions that the following oil spill containment and cleanup equipment must be located at the site of offshore drilling operations to help provide the first line of defense against oil spills:

- 1500 feet of oil spill containment boom capable of open ocean use;
- An oil recovery device (skimmer) capable of open ocean use;

- Oil storage capacity to handle skimmer throughput until the oil spill cooperative can arrive from shore with additional equipment;
- A boat located at the site of drilling operations or within 15 minutes of the site at all times;
- Oil sorbent material capable of absorbing 15 barrels of crude oil.

Chevron's DPP outlines the equipment and resources it originally planned to locate at the proposed facilities. The DPP states the following:

"Once the oil is on the water, the initial containment effort will be deploying the containment boom to encircle the spill, thus providing a physical barrier to contain the oil or other contaminant in a limited area. The boom is designed for fast deployment and will be maneuvered into position by the crewboat or workboat. If for some reason the crewboat or workboat is not immediately available, the onboard boom deployment boat will be used. After the spill has been contained, the oil will be mechanically removed by the skimmer. The skimmer will transfer the oil to a tank aboard the supply vessel. Additional storage, if required, will be supplemented by portable tanks. If high seas prevent the successful implementation of the oil boom and skimmer, a dispersant (Corexit 9527 or Corexit 7664) will be used. The use of a dispersant will be restricted to cases where physical removal is either not practical or where no more oil can be removed from the surface by physical means. The dispersant will be used only after permission is given by the Federal On-Scene Coordinator (OSC). A detailed discussion of containment and cleanup procedures for various open ocean and shoreline conditions is presented in the Oil Spill Plan which accompanies the DPP."

Chevron originally intended to provide the following oil spill cleanup equipment at the site of daily operations:

- o 21 foot Monarch Boom Deployment Boat or the Equivalent
- o 1500 feet - Whittaker Expandi Boom 18 inches freeboard x 25 inches Draft or Kepner compact Boom 15 inches Freeboard x 26 inches Draft (or equivalent)
- o 1 - Komara Mini-Skimmer or Acme Portable Skimmer
- o 2 - 1200 Gal. Kepner Sea Containers (or equivalent)
- o 240 feet - 3M or Conwed Sorbent Boom
- o 4 Box - 3M or Conwed Sorbent Pads 18 x 18 inches
- o 5 Drums - Corexit 9527 Dispersant
- o 1 Drum - Shell Oil Herder Surface Collecting Agent
- o 2 Backpack Sprayers for Chemical Agent Application

The proposed onsite boat (21 feet) was too small and underpowered for safe and efficient operation, the skimmer was not designed for open ocean use, and oil storage capacity was inadequate. This original proposal would not provide the maximum feasible protection of coastal resources from oil spills and therefore could not meet the objectives of the CCMP. Chevron has made recent commitments to provide adequate equipment. The specific commitments will be discussed later in these findings.

Chevron's Oil Spill Contingency Plan for Platform Hermosa recognizes that assistance from the Clean Seas oil spill cooperative for the Santa Barbara Channel and Santa Maria Basin will be necessary for large spills. The Clean Seas oil spill cooperative is composed of numerous oil companies which have pooled their personnel and financial resources for response to oil spills. Clean Seas has equipped eight onshore vans with equipment for shoreline protection, equipment at its Carpinteria storage yard, and two large oil spill response vessels, Mr. Clean I and Mr. Clean II. The cooperative's role is to provide assistance for spills exceeding Chevron's onsite capability and for initial response to large spills. Cleanup operations for large spills will probably require the assistance of other spill cooperatives, numerous contractors, and the U.S. Coast Guard Pacific Strike Team, located in the San Francisco Bay area.

The primary western Channel offshore response capability provided by Clean Seas is its 130-foot oil spill response vessel, Mr. Clean I, stationed in Santa Barbara Harbor. A similar vessel, Mr. Clean II, is located at Port San Luis. The contingency plan indicates that the response time of both these vessels to Platform Hermosa is approximately five hours. A six-hour response time is required by the U.S. Coast Guard/MMS planning guidelines. Both these vessels are located at the outer time range limit to respond to an emergency at Platform Hermosa. In addition, the vessels have only gone nine knots in Commission-sponsored oil spill response exercises instead of the twelve knots quoted in the contingency plan. To provide the maximum feasible response time, Chevron will acquire a vessel with similar response capability to Mr. Clean II at or near the site of oil operations. This vessel will be equipped with major open ocean oil skimmers both advancing and stationary, 3000 feet of oil containment boom, an onboard boat to assist boom deployment, adequate oil storage capacity, and dispersant application equipment. This boat will provide an onsite capability which far exceeds the Commission's equipment standard requirements. This level of response is necessary due to the 5-6 hour response time of the oil spill cooperative vessels to this location.

Clean Seas Cooperative. To provide the best means of oil recovery, vessels should be equipped with both stationary and advancing oil recovery equipment (skimmers) capable of open ocean use. This standard is required by the U.S. Coast Guard. The Mr. Clean I vessel is equipped with one open ocean skimming device, the Cyclonet 100 skimming system. The cooperative has acquired a stationary skimming system, the Walosep W3, but has not stored it on the Clean I vessel. The Commission notes that the Cyclonet 100 has performed poorly in tests and during cleanup operations at the Ixtoc I oil spill in the Bahia de Campeche, Mexico. In addition, the Cyclonet skimmer is mounted on Mr. Clean I in a manner that will reduce its effectiveness.

Mr. Clean II has two large skimming systems for use in the advancing and stationary methods. According to the manufacturer of the skimming equipment, the advancing system requires the vessel to cruise at speeds less than 1 to 1.5 knots. Unfortunately, this vessel is not capable of cruising this slow, and must be retrofitted to do so. If not retrofitted, the vessel will not be able to recover

oil as efficiently. During recent Commission action on Exxon's consistency certification on the Santa Ynez Unit, Exxon, the Commission, and the Coast Guard agreed to study this problem and to determine whether modifications to the vessel are necessary.

The Contingency Plan states that the Mr. Clean vessels can operate in 10-foot seas (Appendix 9 of the Plan) using the offshore devices skimming barrier. However, the Coast Guard Oil Pollution Response Planning Guide for extreme weather limits this system to Sea State 3, with marginal performance in Sea State 4. State 3 includes waves 3.1 to 5.4 feet and sea state 4 includes waves 5.4 to 7.5. As previously noted, waves in the Point Arguello area exceed six feet during 20 percent of the year.

Finally, the Mr. Clean vessels can only store about 500 barrels of fluid onboard. The Commission has found in previous actions that 1000 barrels of oil storage capacity is required to provide maximum feasible mitigation of oil spillage. In fact, Exxon recently committed in amendments to its Santa Ynez Unit DPP that 1000 barrels of oil storage capacity will be available at the site within six hours and that the Cyclonet skimmers will be replaced. Chevron has committed to assuring that these improvements are made by Exxon or themselves prior to the operation of Platform Hermosa. This commitment provides that the project meets the maximum feasible mitigation requirements of Section 30260 of the Act.

Oil Spill Contingency Plan. Under Coast Guard requirements, oil companies operating offshore must submit oil spill contingency plans with specific dispersant procedures to be used in a spill. This information must include a description of wind and wave conditions in areas where dispersants may be necessary, spill sizes where dispersant use is warranted, detailed descriptions of dispersant application systems, and, most importantly, an evaluation of whether the dispersant can function on the type of oil being produced. Although the Commission has requested this information, Chevron had previously not provided it. The Commission must have this information to adequately evaluate Chevron's plans for oil spill response.

Chevron has provided some dispersant information, but a few important issues are not adequately addressed. The oil spill dispersant planned for use by Chevron is Exxon's Corexit 9527. This dispersant is known to have difficulty working on heavy oils, such as the crude proposed for production in the Arguello Field. In addition, the dispersant and oil mixtures may be more toxic than the oil alone, according to a recent Environment Canada report titled, Acute Lethal Toxicity of Prudhoe Bay Crude Oil and Corexit 9527 to Arctic Marine Fish and Invertebrates, 1982. No independent analysis has been provided by Chevron to demonstrate that the dispersant will work on heavy Arguello crude or that the dispersant's toxicity level will be acceptable when mixed with this crude. However, Chevron has committed to providing additional information and to participate in effectiveness and toxicity testing of dispersants, prior to the operation of Platform Hermosa.

In summary, the Commission now has commitments that Chevron will adopt maximum feasible mitigation measures for response to spills. Therefore, the Commission finds that the oil spill response equipment does provide the maximum feasible mitigation for oil spill impacts as required by Section 30260(3). This finding is based on Chevron's commitment to provide: (1) adequate onsite oil spill containment and cleanup equipment, including open ocean booms, skimmers, sorbents, and deployment vessels; (2) adequate oil spill containment and cleanup equipment and procedures for larger spills; and (3) adequate dispersant information or an approved dispersant use plan.

6. Vessel Traffic Safety

Section 30262(d) of the Act states that:

Oil and gas development shall be permitted in accordance with Section 30260, if the following conditions are met:

(d) Platforms or islands will not be sited where a substantial hazard to vessel traffic might result from the facility or related operations, determined in consultation with the United States Coast Guard and the Army Corps of Engineers

Section 30261(a) of the Act states that:

(a) Multicompany use of existing and new tanker facilities shall be encouraged to the maximum extent feasible and legally permissible, except where to do so would result in increased tanker operations and associated onshore development incompatible with the land use and environmental goals for the area. New tanker terminals outside of existing terminal areas shall be situated as to avoid risk to environmentally sensitive areas and shall use a monobuoy system, unless an alternative type of system can be shown to be environmentally preferable for a specific site. Tanker facilities shall be designed to (1) minimize the total volume of oil spilled, (2) minimize the risk of collision from movement of other vessels, (3) have ready access to the most effective feasible containment and recovery equipment for oil spills, and (4) have onshore deballasting facilities to receive any fouled ballast water from tankers where operationally or legally required.

Furthermore, Section 30232 of the Act, quoted previously, requires that any development or transportation of crude oil must provide protection against spillage.

Platform Site. Chevron proposes to site Platform Hermosa on OCS P-0316, which is at least three miles north of the proposed extension of the Santa Barbara Channel Vessel Traffic Separation Scheme (VTSS). (see Exhibit 8). Although there are no platforms currently in the area, four platforms, including Hermosa, are planned for the area.

Presently, vessels traveling through the Santa Barbara Channel that have a destination on the North American coast commonly turn north after passing Point Conception, near the end of the existing Santa Barbara Channel VTSS. They then pass through the general area of the proposed platform site. Coast Guard radar tracking confirms this route, as does information contained in the State Lands Lease Sale EIR and Chevron's DPP for this project.

The U.S. Coast Guard has approved a northwesterly extension of the present Santa Barbara Channel Vessel Traffic Separation Scheme, which the Coast Guard expects will be approved by the International Maritime Organization (IMO) and go into effect sometime in 1984 or early 1985. However, if the Notice of Proposed Rulemaking process has not been completed by spring of 1984, then the lanes could not be in place until January 1986. The MMS does not oppose the extension of the lanes, but that agency wants the ability to interrupt or move the lanes for exploration purposes. Platform Hermosa is proposed to be installed in May 1985.

Chevron states that presently 93 percent of the vessels traversing the Santa Barbara Channel use the traffic lanes. The DPP states, "It may be concluded that these vessels will also follow the recommended VTSS extension past Point Conception." However, compliance with the VTSS outside the Santa Barbara Channel (northwest of Point Conception) may be lower than in the Channel. In 1979, when the oil industry proposed moving the vessel traffic lanes south of the Channel Islands, the maritime industry was strongly opposed because of the additional time and fuel such a course would require. While the maritime industry has not opposed the VTSS extension, the probability is that some vessel captains would continue to "cut the corner" and pass through the project area in order to save time and fuel.

The Davidson Current, from November to February, flows north, shoreward from the proposed Platform Hermosa site. Although weak, this current is still considered by some mariners to be of some aid in savings of time and fuel. The proposed VTSS extension will head north into the southeastern flowing California Current, with a mean speed of 0.3 knots. Current habits, modest savings of time and fuel by taking advantage of rather than fighting currents, and the non-mandatory nature of the VTSS, assuming it is effective when Platform Hermosa is installed, indicate a conflict with vessel traffic safety in relation to the siting of the proposed platform.

In addition, the proposed platform site is in an area of extreme weather conditions. According to the U.S. Coast Pilot (NOAA), "Off Point Arguello, sea fog becomes a persistent and frequent navigational hazard.These fogs are often thick, and Point Arguello is considered by mariners to be the most dangerous along the coast." The DPP, citing a study from January to March 1980, stated that wave heights exceeded nine feet 49 percent of the time.

Vessel traffic in the Channel, according to the DPP, is anticipated to increase 16 to 60 percent by the next decade. The DPP also states that the Point Arguello operators will generate 144 tanker trips per year and Exxon's Santa Ynez production will result in 132 tanker trips per year. Exxon's Santa Ynez Unit crude oil, according to Exxon's DPP, is headed for refineries "probably in the U.S. West and Gulf Coast areas." No figures are given for vessel trips generated by other developments in the area, such as the remaining areas of the Santa Maria Basin, Sockeye Field, and State Lands leases.

In the years 1970-1982 inclusive, 93 collisions occurred between offshore installations and vessels. Thirty of these resulted in loss of life. Twenty-four of the 93 collisions took place in the United States, where, after blowouts, collisions are the greatest cause of accidents to structural damage.

In response to concerns expressed by the Commission, Chevron has agreed to several additional mitigation measures beyond those proposed in the DPP. Chevron will install an Automatic Radar Plotting Aid (ARPA) on Hermosa. The ARPA tracks up to 60 ships, tells the radar operator what the closest point of approach between a ship and the platform will be, and how much time there is to the closest approach point. It also displays the speed and course of the ships. An inner and outer guard zone can be selected by the radar operator, and if a ship penetrates the guard zones, both visual and audible alarms are automatically activated.

Chevron will use the following guidelines in relation to approaching vessels:

(1) As soon as the approaching vessel appears on the radar's 24-mile range, the observer will attempt to make VHF radio contact on Channel 16. If radio contact is made, the observer will ascertain the vessel's intentions and ensure that the vessel will pass the platform at a safe distance.

(2) If radio contact cannot be made before an approaching vessel closes to within ten miles of the platform, the observer will alert a boat which will be permanently stationed by the platform. The actual time of dispatch of the boat (or helicopter, if one happens to be on the platform) will depend upon the speed and course of the approaching vessel as determined from the radar observer's vessel tracking.

(3) The boat, by means of loudspeaker and search lights, will notify approaching vessels of Platform Hermosa's location.

In conversations with officials of the Louisiana Offshore Oil Port (LOOP), located nineteen miles off the Louisiana coast, the Commission staff discussed what safety measures were used by that "super port" in relation to vessel traffic safety. In addition to boat interceptors agreed to by Chevron, the LOOP facility has a rotating aircraft beacon, blinking five-mile lights on the four corners of the facility, and a two-mile fog horn. Chevron has proposed these mitigation measures, and also has agreed to daytime lighting when visibility is less than three miles.

The DPP states that Platform Hermosa will be painted white. There are no U.S. Coast Guard regulations on platform colors, and Chevron informed Commission staff it would paint the platform "International Orange" if that was considered the safest, most visible color. However, because of MMS concerns over visual impacts to recreational and commercial boaters, it was agreed by all parties that the platform would be a light color and reflective of light, and would enhance safety without creating adverse visual impacts.

The Commission finds that, though the platform will be sited where it could pose a hazard to vessel traffic, Chevron has mitigated the project to the maximum extent feasible and, as mitigated, the project does not pose a substantial hazard to vessel traffic. Therefore, the Commission finds the project in conformance with 30262(d) and 30232 of the Act.

Marine Terminal Site. Although the transport of crude oil is not part of the DPP, the Commission considers transport of the processed oil as "associated facilities", which are subject to review under the consistency certification. Chevron has committed to using a pipeline to transport its processed oil to its refinery centers. Until such a pipeline is available, or January 1, 1990, Chevron will use the existing Getty marine terminal or a consolidated marine terminal if one is available, to transport its oil. Representatives of Getty Trading and Transportation Company have stated that the present Getty terminal can accommodate Chevron vessels up to 30,000 dwt with no additional retrofitting. The possible exception may be installation of an onshore waste disposal system. Getty stated that no changes in the existing lease with State Lands, which is up for renewal on December 31, 1985, would be required in order to handle Chevron tankers.

Under Section 30232, protection against the spillage of crude oil must be provided in relation to its transportation. With the exception of emergencies and interim use of a marine terminal until a pipeline is built, no marine terminal use is now a part of this DPP. Thus, the Commission finds that this DPP is consistent with Section 30232 of the Act.

7. Geologic Hazards

Section 30253(1) and (2) of the Act states that:

New development shall:

(1) Minimize risk to life and property in areas of high geologic, flood, and fire hazard.

(2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.

Section 30262 of the Act states in part that:

Oil and gas development shall be permitted in accordance with Section 30260, if the following conditions are met:

(a) The development is performed safely and consistent with the geologic conditions of the well site.

(e) Such development will not cause or contribute to subsidence hazards unless it is determined that adequate measures will be undertaken to prevent damage from such subsidence.

Where appropriate, monitoring programs to record land surface and near-shore ocean floor movements shall be initiated in locations of new large-scale fluid extraction on land or near shore before operations begin and shall continue until surface conditions have stabilized. Costs of monitoring and mitigation programs shall be borne by liquid and gas extraction operators.

Section 30263(a)(4) of the Act further states that:

New or expanded refineries or petrochemical facilities not otherwise consistent with the provisions of this division shall be permitted if ... (4) the facility is not located in a highly scenic or seismically hazardous area, on any of the Channel Islands or within or contiguous to environmentally sensitive areas;

Chevron's proposed development plan for the Point Arguello Field on OCS P-0316, located 9 miles due west of Point Conception, calls for the production of oil and gas from the Monterey Formation. Producing intervals from this formation have occurred at depths from 6,600 to 8,200 feet in this general area. The total Monterey thickness is approximately 1,000 feet throughout the Arguello Field.

Chevron's proposed development facilities consist of one offshore platform, an offshore pipeline running from Platform Hermosa to a Point Conception landfall, an onshore pipeline running from Point Conception to Gaviota, and a possible extension of the onshore pipeline from Gaviota to Las Flores.

Chevron's proposed Platform Hermosa is a three-deck, eight leg production platform with 48 well slots. Both the primary and alternate platform locations are located on the upper Arguello Slope in approximately 600 feet of water (Exhibit 9). The sea floor at the platform location is smooth and slopes 3.5 degrees to the southwest. The alternate site is located 1,400 feet northwest of the primary platform location.

A 30-inch oil pipeline and 22-inch gas pipeline are proposed to run from Platform Hermosa to a landfall at Point Conception, a distance of approximately 10 miles. After completing detailed geotechnical studies within an offshore pipeline corridor approximately 10 miles long and 1.4 miles wide; Chevron has selected two possible marine pipeline routes (primary and Alternate A), designed to avoid rocky outcrops on the seafloor. The seafloor is generally smooth along both routes with localized bedrock outcrops, tar mounds, and small depressions. A major portion of the pipeline lies on the Arguello Shelf which has an average gradient of about one-half degree.

Chevron's proposed onshore facilities consist of a pipeline route running from the Point Conception landfall along the coast to an oil and gas processing facility at Gaviota (16 miles) or possibly to an oil storage facility at Las Flores (an additional 10 miles). The pipeline is proposed to be located on the coastal terrace between the Santa Ynez Mountains on the north and the seacliff and narrow beach to the south. Chevron has selected a final pipeline route. Based on preliminary data submitted in the DPP, the major geologic hazards that will affect the onshore pipeline are headward erosion of coastal canyons and tributary drainage courses, blufftop erosion of seacliffs, liquefaction, landslides, mudflows, soil creep, and possible damage from fault rupture (South Branch-Santa Ynez). In addition, the selected pipeline route must ensure that the pipeline will not require a coastal protective device during the structure's design life.

Seismicity. The Santa Barbara Channel region is one of the most active seismic areas of California. The earliest recorded destructive earthquake, with an estimated magnitude of 7, occurred on December 21, 1812, and heavily damaged several missions along the coast. Since then, numerous events have been felt and several damaging earthquakes have occurred. For example, almost the entire business section of Santa Barbara was destroyed or rendered unsafe by the June 29, 1925 earthquake of magnitude 6.3. Santa Barbara was also damaged by the June 30, 1941 earthquake of magnitude 6. The epicenters of these last two earthquakes are poorly located, but are inferred to have occurred very near to the August 13, 1978 event. The 1978 earthquake, with a magnitude of 5.1, was located 4 km south of Santa Barbara at a depth of 12.5 km. This earthquake produced a maximum acceleration of 0.44 g at ground level (measured at UCSB), with widespread minor damage was reported.

Chevron maintains that Platform Hermosa and pipeline facilities will adhere to the state-of-the-art seismic design standards. In addition, federal requirements call for a third party review of the seismic design criteria and analysis for the platform. This third party review process was described in the Commission's Exxon Staff Recommendation (1983, page 46):

Under OCS Order No. 8 promulgated by the Minerals Management Service, a Certified Verification Agent (CVA) must verify that the design criteria and analysis procedures for each OCS platform meet industry standards of good practice, published regulations, and accepted procedures. Design will conform to API RP2A recommendations. The CVA's review will include consideration of all relevant environmental conditions, including seismic excitation in the area. Further specifics on the CVA process for platform design, fabrication, and installation are given in the USGS publication "OCS Platform Verification Program."

Chevron has submitted a detailed site and foundation seismic study (McClelland, 1982) for Platform Hermosa. These studies indicate that there is a fifteen percent probability that the platform site will experience a design level earthquake that will subject the platform site to a 0.15g peak acceleration at some time during a projected thirty-five year design life. Discussions with Chevron have also considered the ductile limit of the platform (the ductile limit is that acceleration value at which some form of deformation would occur in the platform). Deformation in the structure would probably take place at approximately 0.30g, but the platform would not collapse. Calculations by McClelland, 1982) indicate that there is a two percent probability that the 0.30g ductile limit would be exceeded during the project's 35-year design life. The Certified Verification Agent and the MMS will review all data used to arrive at the above mentioned values. In addition, Chevron's seismic studies have been forwarded to the California Division of Mines and Geology for continued comment.

Chevron's letter of August 24, 1983 has clarified staff questions regarding seismicity and faulting. Thus, the Commission finds that Chevron has met the seismic consistency requirements of Sections 30253 of the Coastal Act.

Liquefaction. The development of high pore-water pressures in certain types of sediments due to ground vibrations, such as can occur during an earthquake, can cause sediments to be altered from a solid state to a liquid state (Liquefaction). In some cases, liquefaction of sand induced by earthquake ground motions can cause overlying, sloping soil to slide laterally along the liquefied layer.

Chevron has determined that surficial sands on the seafloor are highly susceptible to liquefaction due to an earthquake (Dames and Moore, 1982). Generally, the area with the highest potential to liquefy is between the -275' and -75' water depths (Dames and Moore, 1982, p. 4-8). The pipeline will be engineered so that it will be supported buoyantly should the seafloor undergo liquefaction due to a large earthquake. Furthermore, according to Dames and Moore (1982, p. 4-8):

The less plastic soils (silty fine sands) could liquefy and flow downslope. Furthermore, there is also a potential for the plastic clays and silts to strain downslope. As the liquefiable soils are not deep (less than about three feet) the pipeline can be expected to settle and also move downslope somewhat on the

clays during a significant seismic event. The potential magnitude of these movements and their impact on design requirements and construction procedures can best be addressed during detailed design of the pipeline.

Liquefaction of surface seafloor sediments is considered unlikely at the platform location. Should liquefaction occur (limited to the near-surface sediments), the impacts on the platform will be negligible due to the deep seated piles (driven several hundred feet into the seafloor). However, where the pipeline connects to the platform is critical. The soils at this location are soft and some amount of settlement must be allowed even under static conditions.

Soils with a high potential to liquefy during a seismic event probably exist on the floors of coastal canyons or at site specific locations within terrace units. Engineering studies along the pipeline route will identify these locations and present design criteria to mitigate the problems posed by these soils.

The Commission concurs with Chevron's contention that any potential hazard posed by liquefaction can be successfully engineered at the platform site, along the marine pipeline route, and along the onshore pipeline route to Gaviota and/or to Las Flores. Therefore, the Commission finds that the project meets Section 30253 of the Act with regard to the liquefaction hazard.

Landslides and Coastal Erosion. No large submarine slumps exist immediately adjacent to or under the Platform Hermosa location or along the primary marine pipeline route. Approximately 8,000 feet southeast of the platform location, a contorted seafloor has been created due to a slump-type movement of material which has infilled a channel. Sea floor characteristics differ between the contorted slope area and the primary platform location. The thickness of soft recent sediment at the platform location is approximately 14 feet where the contorted slope area has 84 feet of similar soft Recent material. The stratigraphy and condition of the Plio-Pleistocene sequence, which underlies the Recent materials in both areas, also are different in the two areas (McClelland, 1982). Chevron's geotechnical studies also indicate that sediment creep is not likely at the platform location. If creep should occur, the most likely zone would be the upper three feet of the seafloor (McClelland, 1982).

Chevron's DPP points out that several locations along the proposed onshore pipeline route near the southern edge of the coastal terrace stability of the pipelines could be affected by seacliff retreat. Section 30253 of the Coastal Act requires that pipelines be set back from the blufftop in such a way that no protective device will be required during the pipelines' intended design life. Beach erosion and blufftop recession could also be a problem at the pipeline landfall. The DPP (p. 3-33) states:

Beach erosion at the landfall could present a potential problem where the pipeline crosses the beach, and headward erosion was noted to be threatening localized areas along the proposed pipeline corridor in the Southern Pacific Railroad right-of-way. In addition, several of the soil associations underlying the onshore components of the project are regarded as having a high erosion potential.

Coastal Erosion. Field inspection has revealed that the pipeline is either setback a sufficient distance from the coastal bluff or is on the landward side of Highway 101 or the railroad right-of-way. Site inspections indicate that almost all of the onshore coastal canyons are wide enough to bury the pipeline to a sufficient depth so as to avoid scour from heavy stream discharge. However, there may be some locations where either a canyon is too narrow or sidewalls too steep to trench. At these localities, the pipeline may be required to span canyons. Effort will be made to minimize or eliminate any accelerated erosion that could occur as a result of the pipeline at these locations.

The Commission concurs with Chevron's preferred landfall location over the Alternate A site. The preferred alignment enters the canyon mouth from the beach and turns immediately (within 100') to the south and runs up the canyon wall and onto the flat lying terrace units. Surf conditions at the Alternate A site appear to be harsh due to rocky offshore formations, and the canyon contains a wide variety of plant life which would be disturbed from sediment produced by trenching operations. The Commission therefore finds that through proper engineering, Chevron can mitigate either by design or avoidance, any problems posed by landslides or coastal erosion. The preferred onshore pipeline alignment and associated landfall represent the Commission's most desirable route. Therefore, the Commission finds that the project is consistent with Section 30253 of the Act with regard to landslides and coastal erosion.

Subsidence. Subsidence of the land surface can pose potential problems for oil development and any non-oil related structures. The main causes of subsidence in California oil fields have been the result of extraction of oil, water, and gas. Chevron maintains that (DPP, p. 3-30,31):

Subsidence in the Point Arguello Field is not expected to be a significant problem for several reasons. First, the shallowest producing horizon will be at a depth of approximately 1890m (6200 feet) below sea level in fractured rocks of the Monterey Formation. The siliceous, relatively well-indurated nature of these materials should resist significant compaction. Second, the reservoir rocks have been folded into a symmetrical anticline, further adding to their strength. Finally, the greater part of any compaction that might occur would be prevented from reaching the land surface as significant subsidence by bridging effects provided by approximately 670m (2200 feet) of overlying lithified, folded strata.

Discussions with the U.S. Geological Survey (Castle, 1983) and the MMS (McCarthy, 1983) have revealed that there has been no measured subsidence locations where there has been oil or water extraction from the Monterey Formation at onshore Santa Barbara County locations or offshore in state or federal waters. Should any subsidence occur, it is expected to be negligible and will be restricted to the offshore area. Any minor subsidence that may pose a threat to oil field production facilities could be eliminated by implementing a repressurization program. Therefore, subsidence should not pose a significant hazard to the structural integrity or stability of the development, either onshore or offshore.

Hydrocarbon Seepage or Accumulation. Hydrocarbon seeps, gas-charged sediments, and shallow gas zones are numerous throughout the offshore Santa Barbara Basin (Greene, oral communication, 1983). Near-surface bedrock outcrops, steeply dipping beds, or faults can act as conduits from possible pressurized gas zones. Should these conduits be intersected during drilling, hydrocarbons could escape and be released into the water column from the sea floor.

Areas of unconsolidated to semi-consolidated sediments saturated with interstitial gas under normal or near-normal pressures are known as gas-charged sediments (Richmond, et. al, 1981). Interstitial gas can reduce the shear strength of sediments and therefore contribute significantly to the instability of sedimentary units. Shallow gas zones with abnormally high pore pressures could cause blowouts if penetrated during drilling operations.

Historically, areas of gas-charged sediments, hydrocarbon seeps, and shallow gas zones that have posed potential constraints to oil development (either exploration or production) in the offshore Santa Barbara Basin have been mitigated by either avoidance or engineering design. Approximately 80 percent of the final offshore pipeline route lies on gasified sediments. The concentrations of gas within these sediments may lower shear strength and may therefore increase the possibility that the sediments will liquefy during a significant earthquake. These factors will be considered during engineering design. Chevron's final pipeline route has avoided areas of hydrocarbon seep and tar mounds and will minimize the impacts of shallow gas zones and gas saturated sediments through avoidance or engineering design. At locations along the pipeline route where gasified sediments increase the potential for bottom sediments to liquefy during an earthquake, the pipeline will be engineered to remain stable through buoyancy.

No seeps, gasified sediments, or shallow gas zones exist at the platform location. Furthermore, hydrocarbon seepage or accumulation should not pose any significant geologic constraints. Therefore, the Commission finds that Chevron's identification of shallow gas, gas-charged sediments, and hydrocarbon seeps is consistent with Section 30253 of the Act.

Faulting. Special engineering is required where pipelines are required to cross active faults. Fault surface rupture or creep can severely damage a marine or onshore pipeline. For this reason, the age and location of active faulting is critical to pipeline design. Chevron's detailed studies show little to no evidence of active or potentially active faulting along the marine pipeline route. However, numerous small faults contained in Tertiary units exist within the pipeline study area, but do not appear to break Holocene deposits. The offshore pipeline does cross two of these faults that were identified by examination of geophysical data and are described as follows (Dames and Moore, 1982, p. 4-3):

Only two faults inferred from the geophysical data set cross the proposed pipeline route (three along the Alternate A route). These faults are located about eight miles (12 km) west of Point Conception near the platform site, in the vicinity of line 03-209, shot point 106, and line 03-220, shot points 100 to 104. These faults can only be traced to within 50 feet (15 m) of the seafloor, with some segments only within 125 feet (38 m) of the seafloor; they exhibit no linear seafloor expression but occur in an area of local bedrock highs. Due to poor penetration and resolution of the geophysical data in this area, in part due to gasified sediments, estimates of the age of faulting are fair to poor. Although the fault apparently does not offset the base of the Holocene on the geophysical records, the validity of this interpretation is open to questions due to the poor quality of these records.

Upon examination of the geotechnical data, the Commission concurs with Chevron's belief that surface rupture along both marine pipeline route options is considered unlikely.

No active or inactive faults pass through or trend toward the Platform Hermosa site. Seven discontinuous faults (the largest of which is 3,500 feet in length) are within 4,000 feet of the platform site and McClelland (1982) believes that the latest movement along these faults to be Plio-Pleistocene. Therefore, surface rupture at the platform location is not expected.

No detailed geologic studies for the onshore pipeline have been submitted, and it is not known when these studies will be completed. The onshore pipeline will cross the south branch of the Santa Ynez fault. Chevron has considered this fault as "active" and will consider appropriate engineering design options. Discussions with Chevron technical staff and review of offshore geotechnical studies have revealed no major geologic hazards that would preclude development of the Point Arguello Field. Therefore, the Commission finds that the offshore portion (platform and both marine pipeline route options) meet the requirements of Sections 30253 and 30262 of the Coastal Act as they relate to geologic hazards.

8. Air Quality

Section 30253(3) of the Act states that:

New development shall:

(3) Be consistent with requirements imposed by an air pollution control district or the State Air Resources Control Board as to each particular development.

Section 30250 further requires new development to be located where it will not have "significant adverse effects, either individually or cumulatively, on coastal resources."

The primary pollutants typically emitted as a result of oil and gas development activities are described in Section D-8 of the July 27, 1983 Staff Summary Report. Ozone is not emitted directly, but is formed by photochemical reactions in the atmosphere between reactive hydrocarbons (referred to as volatile organic compounds, or VOC) and nitrogen oxides (NO_x) in the presence of sunlight.

Air pollutant emissions from both onshore and offshore sources will occur as a result of the construction and operation of the proposed offshore platform, pipelines, and onshore processing and storage facilities. Construction and drilling emissions will be of short duration, while emissions from production will occur throughout the life of the project.

During the construction and development phase, emissions of NO_x, carbon monoxide (CO), sulfur dioxide (SO₂), and total suspended particulate matter (TSP) will be produced by (1) turbines used to provide power for drilling, (2) construction equipment for installing the platform, pipelines, and onshore processing and support facilities, (3) tug, crew, and supply boats and helicopters, and (4) vehicular traffic for transporting personnel, equipment, and materials. The production phase will produce emissions from (1) power generation for oil pumping, water injection, and gas compression, (2) oil and gas processing, (3) crude oil storage, (4) tanker activities and pipeline facilities, (5) evaporative losses, and (6) venting and flaring produced gas (NO_x, VOC, SO₂, TSP).

With the control measures proposed in the DPP and consistency certification, Chevron contends that the air pollutant emissions from the project will meet all applicable standards and conform to both federal and local rules and regulations, and, therefore, that the project is consistent with the CCMP to the maximum extent practicable.

As discussed in the Staff Summary Report (Section D-8), three sets of air quality regulations exist. The DOI air quality regulations established under the OCS Lands Act Amendments (OCSLAA) specify levels of emissions from OCS facilities, based on distance from shore, to determine whether the facilities are subject to further review and air quality analysis. If projected emissions of NO_x, SO₂, CO, or TSP are above these levels, computer modeling is performed to determine whether the onshore impacts will be "significant." The calculated pollutant concentrations are compared to the DOI significance levels; if exceeded, Best Available Control Technology (BACT) is applied, or the lessee may reduce emissions to levels below the exemption or significance levels. Any VOC emissions above the distance-based exemption levels are considered to significantly affect onshore air quality, requiring the application of BACT, reduction to the exemption level, or offsets.

The regulations also provide for emissions controls for "exempt" facilities if the facility, either individually or in combination with other facilities, is shown to significantly affect the onshore quality. However, these provisions are optional and to date the MMS has declined to use them. The ARB and local APCDs believe that the DOI regulations do not protect state ambient air quality standards and that the exemption levels are so high, significant onshore impacts are not mitigated. (California v. Watt) The DOI air quality regulations are unclear whether retroactive emission controls on existing offshore sources can be imposed after an onshore air quality problem has developed.

The DOI's regulations also fail to recognize California's unique meteorology. Air quality modeling studies conducted by the ARB indicate that emissions from OCS development will exceed the DOI significance levels, even though the emissions are below the DOI distance-based formula. Chevron has stated that it disagrees with these studies. A 1980 tracer study conducted in the Santa Barbara Channel concluded that any tracer released in the Channel is eventually transported onshore (Lehrman, 1981). The prevailing wind flow in the project area also indicates that offshore emissions will be transported onshore. Thus, these emissions will directly affect the coastal zone and must meet the national and state ambient air quality standards.

Under the Clean Air Act (CAA), California is required to develop a State Implementation Plan for attaining and maintaining the national ambient air quality standards established by the EPA. Santa Barbara currently violates the standards for ozone and TSP (North County) and is designated a nonattainment area. If these standards are not met within the current deadline, the EPA could impose strict air pollution controls, resulting in restrictions on onshore industrial and commercial growth and withholding of federal highway and sewage funds. (In early September, EPA proposed to reduce the size of nonattainment areas for ozone and TSP. The County opposed the ozone attainment area boundary suggested by WOGA, favoring instead retention of the nonattainment designation throughout the County because of potential onshore transport of ozone and other impacts from future OCS development. Similarly, the County believes that future growth in the Lompoc area will eventually cause violations of the TSP standards and that the entire area should retain the nonattainment designation.)

The Santa Barbara County APCD "New Source Review" rule requires that all new or modified sources emitting more than five pounds per hour of any air pollutant except CO install BACT (the cutoff for CO is 50 pounds per hour). If the new source will emit more than ten pounds per hour of any air pollutant, then emission offsets may be required if they interfere with the attainment air maintenance of any national primary ambient air quality standard. Pollutant offsets are mandatory at 25 pounds per hour or 250 pounds per day or more. These five and ten pounds per hour maximums translate to 22 and 44 tons per year. Under DOI regulations, the minimum emission rate to trigger review is 100 tons per year at three miles from shore, increasing by 100 tons per year each additional three miles. While the components of the project under the direct jurisdiction of the APCD must conform to the rules and regulations before an authority to construct or permit to operate can be obtained, emissions from the OCS components of the project may adversely affect the County's ability to attain and maintain national and state ambient air quality standards.

The Coastal Act requires that the project be consistent with the requirements of the APCD or ARB, including the State's plan for attaining and maintaining federal ambient air quality standards. Thus, if the emissions from Chevron's project, either individually or in combination with other existing or proposed project emissions, impede the state's strategies for and progress toward attainment, the project cannot be found consistent to the maximum extent practicable with the CCMP.

Chevron's calculations for emissions from its OCS facilities show no exceedances of the DOI exemption levels; therefore, Chevron initially assumed the emissions will have little or no effect on onshore air quality. However, impacts to onshore air quality from emission sources on the OCS and sources onshore and within State waters, either individually from Chevron's project or in combination with other offshore development in the area, are likely to occur. In addition to potential environmental and public health impacts, there may be severe economic impacts if Santa Barbara County continues to be classified with nonattainment status under the CAA. These impacts could include the cost to local businesses of retrofitting facilities, the cost of EPA imposed sanctions, the cost to local government to develop and enforce nonattainment plans, increased health care costs, and losses to tourist- and agriculture-based industries.

At the request of the Commission staff, Chevron conducted a computer air quality modeling analysis to determine the onshore impacts expected to result from the proposed project. The major conclusion of this analysis is that the project will result in no violation of either the federal or state ambient air quality standards. After preliminary review of the modeling, however, both the ARB and the Santa Barbara County APCD state that the impacts to onshore air quality are underpredicted. It appears that the emissions used for the modeling are substantially lower than the estimated actual peak emissions, that the initial background concentrations selected for the model tend to minimize ozone impacts, and that the trajectories appear to be hypothetical and not constructed from actual wind data. The ARB states that even though the "inputs to the model may not represent anticipated maximum conditions, many of the modeled concentrations approach ambient air quality standards." As a result, the ARB believes that "the assumptions and modeling impacts should be closely reviewed to assure that the modeling does not underpredict actual future concentrations." Both agencies are analyzing the modeling analysis in more detail. Until this evaluation is complete, the Commission cannot determine the extent of the project's impacts on onshore air quality.

Chevron also agreed to address the effects the proposed project will have on air quality in combination with full development of Arguello field and in conjunction with other development in the area. In its review of this portion of the modeling analysis, the ARB states that it appears the emission estimates used in the model are not "representative of all the sources which may contribute to the cumulative impact of the Point Arguello area development." The ARB further believes that a trajectory model, such as used in Chevron's analysis, cannot adequately simulate cumulative onshore impacts from OCS emissions.

It is particularly important to make a comprehensive analysis of the potential cumulative effects because emissions from offshore oil and gas production were not considered or mitigated in Santa Barbara County's Air Quality Attainment and Maintenance Plan. Yet, air pollutant emissions in the area will increase as a result of past and future offshore development, making it difficult, if not impossible, to meet the statutory requirements under the CAA and State law. The State Lands Commission DEIR for the State Lease Sale proposed for Point Arguello to Point Conception concludes that the most significant cumulative impact from OCS and state land development will be the "likelihood that progress toward attainment planned in the AQAP for both the south coast and the Santa Ynez/Lompoc subbasins will be completely offset by the impact of new offshore emissions." In comments on the proposed project to Secretary Duffy, the ARB calls for analyses to identify the impacts from both full Arguello field development and all proposed and existing development in the general area. Because of the pace and extent of OCS development occurring off the coast of southern California, the ARB states that "it is important to know not only the impacts of individual development plans, but also the impacts of individual projects when combined with other proposed development." The ARB further states that "this analysis is needed to assure that state and federal ambient air quality standards will not be violated or that reasonable further process towards attainment of such standards will not be jeopardized."

Major General Jack L. Watkins, Commander at Vandenberg Air Force Base, also stated his concern in a letter to the Commission that "air quality impacts of offshore oil development are not being considered on a cumulative basis," and recommended that "oil development in federally controlled waters should have air quality management requirements consistent with the APCD."

In a letter commenting on the Exxon Company, USA plan of development for the Santa Ynez Unit recently before the Commission, Pasquale A. Alberico, Acting Director of the U.S. Environmental Protection Agency's Office of Federal Activities, describes the effects that OCS development can have on nonattainment areas, such as Santa Barbara and Ventura Counties.

EPA believes that a national interest and an Agency concern exist with regard to the impacts of the proposed facility on the ability of the onshore areas to attain and maintain the National Ambient Air Quality Standards (NAAQS) as required by Parts C and D of the Clean Air Act. Given the proposed action and the analysis to date a doubt exists as to the area's ability to meet these statutory obligations.

The Exxon development options are proposed for an area adjacent to two shoreside nonattainment counties (Santa Barbara and Ventura) with especially difficult problems in attaining the ozone national air quality standard. Both counties have been given extensions by EPA until 1987, the

maximum time allowable under the statute to attain the ozone NAAQS. EPA recently proposed the approval of the Santa Barbara Ozone Nonattainment Area Plan. The Ventura County 1982 Nonattainment Area Plan has been proposed for disapproval because of the failure to demonstrate attainment of the ozone NAAQS by 1987 (48 FR 5074, February 3, 1983).

The language of Sections 118 and 176(c) of the Clean Air Act and the Act's legislative history appear to place a responsibility on federal agencies to ensure that actions such as OCS are compatible with State and local efforts to attain and maintain the NAAQS in onshore areas. The SYU development is located within a very narrow geographic area where many OCS and State tidelands lease parcels are active or are being proposed for activity. Emissions from large scale oil development activities may inhibit the ability of these counties to attain and maintain the NAAQS. Exxon appears to have recognized this as evidenced by its voluntary imposition of various emission controls and negotiation of agreements with State and County Air Emissions Control Agencies. However, a comprehensive look needs to be taken of the cumulative impacts of offshore development and the ability of the State to accommodate these emissions and still meet the statutory requirements of the Clean Air Act.

Thus, all emissions information from existing and proposed OCS sources, regardless of the level of perceived significance, should be reported to the appropriate State and local agencies so that the total impact of these emissions may be included in the State's inventories, air quality analyses, and the federally approved Nonattainment Area Plan. (emphasis added)

Because of the apparent deficiencies in the emissions levels used in Chevron's modeling analysis, the Commission cannot determine the extent of onshore air quality impacts expected to result from the proposed project; thus, the Commission cannot determine if the project will result in violations of the national or state ambient air quality standards. Therefore, the Commission finds that it lacks sufficient information to find the proposed project consistent with Sections 30253(3) and 30250 of the Coastal Act with regard to air quality.

Although the Commission finds that the proposed project cannot be found consistent with Chapter 3 air quality policies, the coastal dependent industrial facilities portion of the project can nevertheless be permitted in accordance with Section 30260 if it meets the tests of this section.

Chevron has proposed mitigation measures to control emissions from the project. Chevron has agreed to install the most effective emission control technologies, performance standards, or emission limitations, other than offsets, which have been achieved successfully in practice in similar offshore applications, or that are used for onshore applications and can be transferred successfully to offshore applications, or that are technologically feasible and cost-effective. Only pollution control technologies which can be approved by the USCG, the American Bureau of Shipping, and/or other agencies as appropriate will be instituted.

Chevron's commitment includes the following specific emissions controls:

- (1) equipping turbine engines, both offshore and onshore, with water injection to reduce NOx emissions by 70%;
- (2) recovering waste heat from gas engines and turbines to reduce the need for burning additional fuel in process heaters to meet heat requirements;
- (3) using a gas blanketing and vapor and sulfur recovery system to reduce emissions from the oil and gas processing and storage facilities;
- (4) incorporating a vapor control system on transport ships to reduce hydrocarbon emissions;
- (5) using low sulfur fuel on all vessels to minimize SO₂ emissions;
- (6) instituting an inspection and maintenance program on valve, pump, flange, and compressor seals to minimize fugitive hydrocarbon emissions, and instituting a program to monitor compliance and effectiveness of installed air emissions control systems;
- (7) using low NOx burners on heaters, sweetened gas fuels and scrubbers on flare burners to reduce NOx and SOx emissions;
- (8) using water sprays to minimize fugitive dust during onshore construction activities;
- (9) implementing applicable control measures on crane and cementing engines on the platform and on supply and crew boat engines, as identified in the Air Quality Task Force Study (Radian, 1982); and
- (10) using low sulfur gas fuel in the turbines (except during start-up).

The use of offset reductions may prevent violations of the national and state air quality standards, and thus is a feasible mitigation measure to help bring the project into compliance with Section 30260(3) of the Act. Chevron has calculated the total amount of emissions to be offset and has stated that offsets are available through cogeneration credits and through changes in its Carpinteria facility. The Santa Barbara APCD disagrees that Chevron has committed to mitigation measures at a level of specificity to determine that these measures will, in fact, offset the new emissions generated by the physical development of this project. However, Chevron has reiterated its commitment to provide onshore offsets and other controls required by the APCD. These measures will be more specifically identified in Chevron's application to the APCD.

With the emission controls and other mitigation measures now proposed by Chevron, the Commission finds that the air quality impacts from the project are mitigated to the maximum extent feasible, and, therefore, that the project is consistent with Section 30260(3) of the Coastal Act.

9. Archaeological Resources

Section 30244 of the Act states:

Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required:

A detailed marine cultural resources survey at the proposed site and along the pipeline corridor revealed evidence of one anomaly, which is almost certainly a shipwreck, and of two other anomalies tentatively interpreted as possible shipwrecks. No relict landforms that could be associated with submerged archaeological sites were identified. Chevron has relocated the offshore pipeline route to avoid the anomalies.

Onshore, an intensive on-foot survey of the project area identified eleven archaeological sites along the pipeline corridor between the landfall alternatives north of Government Point and Gaviota. These sites range from an extensive Chumash Village to scattered shell and chert flakes. Railroad grade construction had damaged several sites. A similar situation existed along the pipeline corridor between Gaviota and Las Flores Canyon, where a total of five previously recorded sites were encountered. Another on-foot survey at the proposed processing facility site identified three areas of archaeological interest.

Chevron plans to minimize the impacts on archaeological and paleontological resources by using the following mitigation measures during construction. Sites will be avoided where possible. Where avoidance is not possible, trenching operations will be monitored by a qualified archaeologist and a Native American observer. Test excavations will be carried out within the impact zone at several designated sites prior to construction. Once the testing program is complete, the research potential of the site will be evaluated and proper mitigation measures formulated.

These mitigation measures are similar to those required by the Commission in permit actions over the years. Thus, the Commission finds that the proposed mitigation measures are reasonable and that the project is consistent with Section 30244 of the Act as it relates to the protection of archaeological resources.

10. Land Resources

Onshore facilities associated with OCS energy projects must be reviewed for consistency with the policies of the Coastal Act to avoid incrementally approving offshore development that could have substantial onshore impacts on coastal resources.

Section 30200 of the Act states in part that:

All public agencies carrying out or supporting activities outside the coastal zone that could have a direct impact on resources within the coastal zone shall consider the effect of such actions on coastal zone resources in order to assure that these policies are achieved.

Section 30231 of the Act, quoted previously, provides that the biological productivity and quality of coastal streams and waters be maintained, and, where feasible, restored through such means as controlling wastewater discharges, controlling runoff, preventing depletion of groundwater supplies, maintaining natural buffers that protect riparian habitats, and minimizing the alteration of natural streams.

Section 30236 of the Act states that:

Channelizations, dams, or other substantial alterations of rivers and streams shall incorporate the best mitigation measures feasible, and be limited to (1) necessary water supply projects, (2) flood control projects where no other method for protecting existing structures in the floodplain is feasible and where such protection is necessary for public safety or to protect existing development, or (3) developments where the primary function is the improvement of fish and wildlife habitat.

Finally, Section 30240 of the Act states that:

(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas.

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade such areas, and shall be compatible with the continuance of such habitat areas.

Terrestrial Biology. The onshore project area (Gaviota to Point Conception) is characterized by plant communities such as Southern Oak Woodland, Coastal Sage Scrub, Chaparral, and Grassland, which is the most common community in the area. Two sensitive habitats may occur in isolated areas. Coastal Strand vegetation, a low-growing sparse community located immediately adjacent to the coast, is present in and adjacent to rivermouths. This habitat contain several sensitive species. The second habitat, Riparian Woodland, occurs along perennial to ephemeral streams and ranges from a few clumps of willow to large oaks and sycamore. The Santa Barbara County LCP states that the riparian habitats from Gaviota to Jalama consist of 12 perennial and 14 intermittent creeks. Because riparian areas support a large number and diversity of both plant and wildlife species, they warrant protection and are designated environmentally sensitive habitat (ESH) in the LCP.

The project area also contains a diverse wildlife population. Avian resources range from shore and marine birds to species adapted to the Disturbed Grassland, Coastal Scrub, and Riparian Woodland habitats. The DPP states that the area is especially noted for raptors, including Golden Eagles, Red Tailed Hawks, Marsh Hawks, Rough-legged Hawks, American Kestrels, Turkey vultures, and White-tailed kites. The area supports many small mammals, amphibians, and reptiles.

The onshore facilities associated with the project will be the pipeline landfall, the 16-mile stretch of the two oil and gas pipelines from Point Conception to Gaviota, a potential 10-mile extension from Gaviota to Las Flores Canyon, the oil and gas processing facilities at Gaviota, and the landward portion of the ocean

outfall pipeline. The construction of the onshore pipelines will require grading, clearing, and trenching on the beach and with a 200-foot wide pipeline construction corridor on land for the pipeline trenching and burial. Blasting may be required through the underlying bedrock on the beach at Point Conception. Pipeline installation will also require the crossing of over 25 stream corridors. Information submitted by Chevron in its permit application to the County indicates that the preferred pipeline route will cross many riparian habitat areas. Chevron maps delineating sensitivity levels along the proposed route indicate that three areas crossed by the pipeline area of high sensitivity and 15 are of medium sensitivity. Chevron has stated in the SPP that only three riparian woodland corridors are determined to be of high sensitivity. The Coastal Act and the County's LCP resource maps designate all riparian woodland corridors as environmentally sensitive habitat (ESH). The Commission notes that pipelines are conditionally permitted uses in the ESH overlay in the County's LCP.

According to Chevron's County application and discussions with Chevron's staff, the pipeline will either be buried below or suspended across the various stream corridors, depending on stream canyon characteristics. Both of these methods can have adverse impacts on the natural habitat values of stream corridors and particularly those containing riparian vegetation, an ESHA. Further, the trenching and burial of the pipeline on the flat portions of the route will have adverse impacts to existing vegetation.

In order to find consistency with these Sections of the Act, this project must minimize or avoid impacts and provide maximum feasible mitigation. This can be accomplished by restoring all disturbed land to its original contours and reseed any disturbed areas with previously occurring species, all stream crossings shall be accomplished in the least damaging manner and no permanent structure shall be sited in any ESH areas. Any construction within or adjacent to any stream corridor shall be done during dry or low flow periods and all facilities shall be designed to minimize or prevent sediment flows into streams after completion.

According to its County application, Chevron plans to minimize adverse impacts by compacting and restoring the disturbed terrain along the pipeline route to its original contours and seeding these disturbed areas, where required, with native vegetation. Stream and water course pipeline crossings will be constructed during periods when streams are low or dry, minimizing the need for temporary water diversions. Disturbed banks of water courses will be restored, and, where necessary, will be reinforced by earth-filled bags or rock. In areas where erosion appears likely from runoff, water diversion terraces will be used for protection of slopes. Additionally, Chevron has stated that no permanent structures, other than the pipelines themselves, will be sited in any environmentally sensitive habitat area. Therefore, the Commission finds this portion of the project consistent with the County LCP policies and Sections 30231, 30236, and 30240 of the Act, and the maximum feasible mitigation requirement incorporated into Section 30262 of the Act.

The proposed oil and gas processing facilities at Gaviota will require extensive grading and landform modification that will greatly affect habitat resources. According to a preliminary grading plan submitted to the County, the processing site will require the cutting of two large pads and one medium pad, new roadways and a culvert. According to Chevron, this plan depicts the total grading that will take place at this site, although further facilities will be placed on the pads under the maximum nine-year buildout facilities.

The potential effects of grading will be significant due to the location of three riparian corridors associated with intermittent streams Leon, Alcatraz, and Cementerio on the site. Chevron's conceptual landscaping plan for the site indicates that the Leon stream and riparian canyon will be filled for use as a pad on which will be located a 125-foot gas flare stack, one SO₂ scrubber, and a catalyst bed. Moreover, a culvert was planned to channel Alcatraz stream, over which a roadway will be build. This stream also is an ESH area. There were no buffers indicated to protect these two streams and riparian corridors. Construction of the processing facilities will also result in the loss of about 12 acres of Disturbed Grassland habitat and of open space wildlife habitat. According to the Local Coastal Program, Canada Alcatraz contains trees used as habitat by Monarch butterflies. This species uses these trees for shelter from weather and for mating. According to the DPP, these trees will be removed in the process of clearing and grading the site prior to construction of facilities.

Chevron has committed to major changes of the physical construction of this facility and has provided further information on other aspects of the site. Construction of the facility will avoid all environmentally sensitive habitat areas, including Canada del Cementerio, Canada Alcatraz, and Canada del Leon. Buffer spaces are provided next to these areas for the protection of existing riparian habitat. All eucalyptus trees that are removed during grading and terracing of the site will be replaced in equal numbers and no trees currently used by Monarch butterflies will be removed. Chevron will also provide for a monitoring program by an entomologist to ensure that the facility construction and operation will have no adverse effect on the Monarch butterflies using the site. Further construction or fill in Canada Alcatraz will not occur and existing roads will be utilized. These measures, plus Chevron's commitment to construction in streamside areas only during low flow or dry periods, provides the maximum feasible mitigation for this portion and provides adequate protection for the resource values on or adjacent to the Gaviota site. Therefore, the Commission finds that this portion of the project is consistent with Sections 30236, 30240, and 30262 of the Coastal Act.

Water. Section 30231 of the Act requires protection of the integrity of groundwater basins, and Section 30250 requires that new development be located in areas with adequate public services or where it will not, either individually or cumulatively, adversely impact coastal resources.

The proposed processing facilities will require onsite wells. The DPP states that adequate water supplies will be available and that the onshore processing facilities will only use 20 acre feet of water annually. From information submitted in Chevron's application to the County, it appears that 20 acre feet is the maximum safe yield for the groundwater basin to be used. The water quality of the basin is currently unknown.

Onsite wells for the Gaviota facility will be located in close proximity to existing streams. Groundwater extraction, even when wells are not located directly in streambeds, can cause downdraft of aquifers, result in shortened yearly streamflows, and adversely affect streamside vegetation.

Chevron has committed to a testing program to determine safe yield and water quality of the aquifer. Further, Chevron is committed to produce only that amount of water necessary to operate the plant. If overdrafting occurs that could adversely affect nearby riparian vegetation, Chevron intends to import fresh water in sufficient quantities to bring water well consumption to a safe yield level. Therefore, the Commission finds that the project is consistent with Section 30231 of the Act.

Although water consumption of this individual project appears minor, the cumulative effect of this project along with other proposals for energy development in the area is important. Santa Barbara County currently has an overdraft of 40,000 acre feet of water per year. Chevron has committed to importing fresh water if the aquifer reaches an overdraft situation. Given this commitment, the Commission finds that this project is consistent with Section 30250 of the Act.

11. Visual and Scenic Resources

Section 30251 of the Act states:

The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

Section 30262, quoted previously, specifically pertains to oil and gas development.

The visible components of the proposed project are the offshore platform, 8.5 nautical miles west of Point Conception, and the oil and gas processing facilities at Gaviota near the northern boundary next to Highway 101. Pipeline construction activities will present temporary visual impacts in the Point Conception area, along an approximately 16-mile stretch near the Southern Pacific Railroad right-of-way, and along Highway 101 at Gaviota. An additional 10-mile segment between Gaviota and Las Flores Canyon may be altered if the proposed Exxon marine terminal is used for tankering. Consequently, the Point Conception area and Gaviota are the two sites most affected visually by the proposed project.

The scenic areas and views of the entire Santa Barbara County coastline are a resource of public importance. The coastal area has major parks and recreation areas of statewide significance, and the tourist and recreation industries rely heavily on the natural scenic quality of the coast. The Santa Barbara County LCP states that the scenic quality of the coastal zone in the North Coast planning area (Gaviota to Santa Maria River) is outstanding. The Point Conception area offers highly valuable, relatively undisturbed, and varied views. One of the most striking views in the area is of the expansive open ocean from the elevated coastal terrace. Currently, there are no fixed structures in the offshore project area. In its 1978 report, Designation of Areas Not Suitable for Power Plants, the Commission described the Point Conception area as the "largest remaining semi-wild area in the southern California coast," extending from Jalama State Beach southward to Point Conception. Because of its relatively pristine status, the Commission found in the report that Point Conception has high potential for semi-wild recreation, including hiking, nature study, and the enjoyment of solitude. It concluded that the construction of a power plant and transmission corridors, and construction of public services to support the work force and construction activities would be incompatible with the area's character and pristine status.

According to the DPP, Platform Hermosa and associated offshore construction activities will be potentially visible from one public use area, Jalama Beach County Park, which is about nine miles east of the platform site. Views of the platform site from Gaviota State Park 22 miles to the southeast will be restricted by the topographic orientation of Point Conception and distance. Viewers will include a few residents at the higher elevations of the Bixby and Hollister Ranches, beach users along the Point Arguello to Point Conception shoreline, passengers on the Amtrak rail line, surfers, and boaters in the proposed platform vicinity. Although the DPP concludes that the coastal fog will obscure the offshore project area about 10 to 38 percent of the year, primarily during July through October, and that the distance from shore will reduce its size, the platform will introduce a long-term structure to a previously natural seascape. The Commission finds that the offshore platform will cause a permanent visual impact on the scenic and recreational qualities of the Point Conception area, and therefore is inconsistent with Section 30251 of the Coastal Act. However, as previously stated, Platform Hermosa is a coastal dependent facility and therefore is found to be consistent under Section 30260 since the platform requires this specific location in order to function at all.

The Gaviota location, proposed for new oil and gas processing facilities, is located immediately north of Highway 101, a scenic highway. Elevation at the site ranges from 70 feet above mean sea level at the highway to 240 feet above mean sea level at the northern perimeter of the property. The immediate area is developed with the existing Chevron gas plant, the adjacent Getty-Gaviota oil and gas facilities to the south, a SCE substation and Vista Del Mar School to the east. The proposed facility, expanding from five acres to 55 acres, will greatly increase the use of the existing facility.

The most significant views of the proposed facility are found along Highway 101, where the driver has a succession of images while moving rapidly by the site. There are no overlooks or viewpoints from which an overall view of the proposed facility is possible. Other viewers include Amtrak passengers, people at the existing Getty-Gaviota facilities and Vista Del Mar School, and boaters in the nearshore area. The DPP states that visitors at Gaviota State Beach Park, including the extension of San Onofre and Molino beaches, will not be able to see the facility due to intervening topography and vegetation. However, the flaring of gas in emergencies at the facilities will be visible from adjacent recreation areas.

According to a visual analysis and landscape plan submitted as part of Chevron's application to Santa Barbara County, the processing facilities will include several 100-foot towers and one 125-foot emergency flare stack, all of which are located on the higher elevations of the site. The conceptual grading plan indicates that more than 50 percent of the site's existing vegetation, including trees, will be removed, thus reducing much of the present natural screening effect. The visual analysis states that, "While only a few of the actual project elements are high enough and/or massive enough to be of visual concern, these larger elements are repeated over the open site, creating a new visual pattern on the landscape. Because the facility will operate 24 hours a day, night lighting will be required on roadways, paths, and personnel parking areas. For aircraft safety purposes, red aviation lights may be required on top of the facility's higher elements.

To minimize and mitigate visual impacts, Chevron has committed to replace all removed trees with identical species in other locations sited to screen the facility from public view. Further, they will use berms and paint colors to screen or mask views from Highway 101 and will plant new, semi-mature trees along the CalTrans

right-of-way. This latter action requires CalTrans approval which has been granted contingent on a maintenance program that Chevron has stated it will provide. Other measures, such as below grade construction of the flare stacks, are possible at the Gaviota site to reduce visual impacts. Chevron has stated that such construction techniques are against company policy for safety reasons and therefore they are regarded as infeasible. Given these commitments, the Commission finds that this portion of the project is consistent with Section 30251 of the Coastal Act.

12. Public Access and Recreation

Sections 30210 - 30212 and Section 30252 of the Act provide for maximum public access to the coast and the maintenance and enhancement of public access.

Section 30210 of the Act states:

In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreation opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.

Section 30211 of the Act states:

Development shall not interfere with the public's right of access to the sea where acquired through use of legislative authorization, including but not limited to, the use of dry land and rocky coastal beaches to the first line of terrestrial vegetation.

Section 30212(a) of the Act states:

- (a) Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where (1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources; (2) adequate access exists nearby; or (3) agriculture would be adversely affected. Dedicated accessway shall not be required to be opened to public use until a public agency or private association agrees to accept responsibility for maintenance and liability of the accessway.

Section 30252 of the Act states:

The location and amount of new development should maintain and enhance public access to the coast by (1) facilitating the provision or extension of transit service; (2) providing commercial facilities within or adjoining residential development or in other areas that will minimize the use of coastal access roads; (3) providing non-automobile circulation within the development; (4) providing adequate parking facilities or providing substitute means of serving the

development with public transportation, (5) assuring the potential for public transit for high intensity uses such as high rise office buildings; and by (6) assuring that the recreational needs of new residents will not overload nearby coastal recreation areas by correlating the amount of development with local park acquisitions and development plans with the provision of onsite recreational facilities to serve the new development.

Furthermore, Sections 30213, 30220, and 30221 of the Act provide that lower cost visitor serving and recreational facilities be protected, encouraged, and where feasible, provided, and coastal areas and oceanfront land be protected for recreational use.

Section 30213 of the Act states:

Lower cost visitor and recreational facilities and housing opportunities for persons of low and moderate income shall be protected, encouraged, and where feasible, provided. Developments providing public recreational opportunities are preferred. New housing in the coastal zone shall be developed in conformity with the standards, policies, and goals of local housing elements adopted in accordance with the requirements of subdivision (c) of Section 65302 of the Government Code.

Section 30220 of the Act states:

Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.

Finally, Section 30221 of the Act states:

Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area.

As previously discussed in Section E-10, the onshore facilities and activities associated with the proposed project that affect public access and recreation will be pipeline construction and maintenance at the landfall on Chevron-owned property near Point Conception and along the 16-mile stretch of the two oil and gas pipeline routes from Point Conception to Gaviota, the oil and gas processing facilities at Gaviota, near Gaviota State Beach, and the ocean outfall pipeline. An additional 10-mile segment of pipelines may be constructed between Gaviota and Las Flores Canyon. In addition, staging and marshalling areas will be needed during the construction period.

Obviously, the pipelines portion of the proposed project crosses undeveloped ocean fronting parcels and therefore lies between the sea and the first public road paralleling the sea. Section 30212(a) requires that public access to the shoreline and along the coast be maximized and provided in all new development projects located between the first public road and the shoreline. This section makes clear that all new development resulting in any intensification of land use generates

sufficient burdens on public access to require access conditions in conjunction with that development. In the Statewide Interpretive Guidelines, the Commission concludes that "all new development projects cause a sufficient burden on public access to warrant the imposition of access conditions as a condition to development, subject only to the exceptions specified by the Legislature." To conform to these requirements the Commission has consistently applied access conditions on ocean fronting developments requiring a coastal development permit.

Furthermore, the Commission's experience with pipeline projects demonstrates that public access is an important consideration under the Coastal Act. One example is the South Central Regional Commission's action on the Chevron pipeline from Platform Grace facilities at Carpinteria and Mobil Rincon (Permit 205-27). The Regional Commission approved the project with conditions that required the applicant to record an irrevocable offer to dedicate an easement for public access and recreational use running from the MHT line to the toe of the bluff on certain parcels affected by the pipeline. Furthermore, the Regional Commission required the applicant to record an irrevocable offer to dedicate a 20-foot-wide alternate hiking and biking trail in the general project area. In another action on Pacific Interstate Pipeline Company's (PIPICO) proposed gas pipeline from Texaco's Platform Habitat to onshore facilities at Carpinteria, adjacent to Carpinteria State Beach Park, the Commission required the applicant to dedicate an eight-acre surface easement for public access and recreation (Permit E-82-21). Recently, the Commission approved a permit application (Permit E-83-17) submitted by Chevron for the replacement of an existing 18-inch submarine crude oil loading with a 20-inch pipeline at its Estero Bay marine terminal. A condition of the approval, agreed upon by Chevron, was dedication of a surface easement for lateral public access across Chevron's property.

In addition to these Coastal Act requirements, the Santa Barbara County LCP contains stringent standards that require the granting of vertical and lateral easements for all development between the first public road and the sea.

LCP Policy 7-2 states:

For all development between the first public road and the ocean granting of an easement to allow vertical access to the mean high tide line shall be mandatory unless:

- a) Another more suitable public access corridor is available or proposed by the land use plan within a reasonable distance of the site measured along the shoreline, or
- b) Access at the site would result in unmitigable adverse impacts on areas designated as "Habitat Areas" by the land use plan, or
- c) Findings are made, consistent with Section 30212 of the Act, that access is inconsistent with public safety, military security needs, or that agriculture would be adversely affected, or
- d) The parcel is too narrow to allow for an adequate vertical access corridor without adversely affecting the privacy of the property owner. In no case, however, shall development interfere with the public's right of access to the sea where acquired through use unless an equivalent access to the same beach area is guaranteed.

The County may also require the applicant to improve the access corridor and provide bike racks, signs, parking, etc.

LCP Policy 7-3 states:

For all new development between the first public road and the ocean, granting of lateral easements to allow for public access along the shoreline shall be mandatory. In coastal areas, where the bluffs exceed five feet in height, all beach seaward of the base of the bluff shall be dedicated. In coastal areas where the bluffs are less than five feet, the area to be dedicated shall be determined by the County, based on findings reflecting historic use, existing and future public recreational needs, and coastal resource protection. At a minimum, the dedicated easement shall be adequate to allow for lateral access during periods of high tide. In no case shall the dedicated easement be required to be closer than 10 feet to a residential structure. In addition, all fences, no trespassing signs, and other obstructions that may limit public lateral access shall be removed as a condition of development approval.

In addition, LCP Policy 7-22 addresses the County's plans for expanded public access and recreation opportunities in the area affected by the project. Policy 7-22 states:

Expanded opportunities for public access and recreation shall be provided in the North Coast planning area.

Implementing Actions:

- a) The County shall study alternatives for expanding Jalama Beach County Park for day and overnight uses. Sufficient excess road capacity on Jalama Road shall be reserved to accommodate traffic generated by increased use at Jalama County Park.
- b) A hiking trail which provides lateral and vertical access to beaches shall be developed to connect Rancho Guadalupe County Park to Point Sal State Park and Point Arguello or Jalama Beach to Gaviota State Park. The County, with the assistance of the State Department of Parks and Recreation and participation of affected property owners, shall initiate planning studies to determine the precise locations and procedures for implementing such a trail. The trail should eventually include hostels and/or walk-in campgrounds where feasible on publicly-owned land; one possible location for such facilities would be an area in the vicinity of Point Conception. (emphasis added)

The proposed project will pose burdens on public access due to proposed activities seaward and inland of the MHT line. These burdens present both short-term and long-term effects. In the short term, installation of the pipelines will involve trenching within the surf zone at Point Conception and across the beaches at Gaviota State Park and Refugio State Beach. Heavy construction equipment will be located at these beach areas during pipeline installation, impeding access

along the shoreline. Trench excavation and pipeline burial will damage or destroy marine and terrestrial resources, thereby adversely affecting the beach experience in this area. The construction corridor for the pipelines onshore will be 100 feet wide. To compound these adverse impacts, platform installation, offshore and onshore pipeline construction, and construction of the oil and gas processing plant will occur at the same time during the peak summer months, when public access and recreational uses are most in demand. Disruption of public use and access at the sites mentioned above will increase demands on nearby public beaches.

Aside from construction impacts, the project poses other short-term burdens to public access and recreation. The use of overnight facilities (hotels, motels, RV parks, and campgrounds) by temporary construction workers will have the effect of precluding their use for general recreational purposes. Motels in the general North County area are experiencing 95 percent average annual occupancy, indicating a severe shortage of overnight facilities. At the peak of employment, approximately 265 workers will be needed for the proposed project, with 20 percent coming from outside the local Santa Barbara-Ventura labor pool.

The project's construction and drilling phases will contribute increased vehicle and truck traffic to coastal access routes, particularly on U.S. Highway 101, which is the major access route to the beaches and state parks in Santa Barbara County. Peak daily traffic volumes during the summer months of 1985 will be 125 vehicles per day (vpd), representing a 1.3 percent increase over current traffic volumes of 16,000 vpd on Highway 101. While this input appears to be minimal, the cumulative impacts of such additional traffic volumes, when considered with Exxon's Santa Ynez Unit development and with other potential energy development in the area, is significant because Highway 101 already has a high level of service.

In addition to these short-term impacts, ongoing maintenance activities and potential adverse impacts from pipeline breaks and spills and necessary repair work intensify the real and potential impacts from both the onshore and offshore aspects of this project. Because this type of maintenance activity is required for the life of the pipeline, the Commission finds that the project will have significant long-term impacts on public access. The Coastal Act requires the Commission to look at the individual and cumulative impacts of specific developments. As noted above, the individual impacts alone require dedication of access sufficient to offset the impacts of the development. The Commission also notes that the cumulative impacts of similar projects in the western Santa Barbara Channel and Santa Maria Basin could significantly disrupt access opportunities along the central and north County areas. The potential impacts become apparent when viewed in light of additional construction and maintenance activities necessarily occurring in the project area and the extent of pipelines necessary to service proposed platforms in the western Channel and Santa Maria Basin.

Because the proposed project will result in the short and long-term disruption of public beaches and undeveloped ocean fronting parcels as well as adversely impact available lower cost recreation and visitor-serving facilities, the Commission finds that the project will pose significant burdens on public access and recreational uses. Chevron has stated that it recognizes the public access requirements of the Coastal Act and the County of Santa Barbara's LCP. To this end, Chevron has committed in writing to providing an offer to dedicate a lateral public access hiking easement over its 1500 acre parcel at Point Conception at the time its application for a coastal development permit is before the County of Santa Barbara. With this commitment, the Commission finds that this aspect of the project is consistent with Sections 30210-30212 and 30252 of the Coastal Act.

13. Consolidation of Facilities

Consolidation of facilities is a key policy of the Coastal Act. Section 30250 of the Act requires new industrial development to locate within, contiguous with, or in close proximity to existing developed areas. Section 30260 emphasizes the importance of consolidation for coastal-dependent industrial facilities. Section 30262(b) again highlights the need for consolidated oil and gas development facilities by requiring their consolidation to the maximum extent feasible and legally permissible.

According to the DPP, the proposed Platform Hermosa would be the first in a potential series of platforms producing from the Arguello Field. Texaco plans to install Platform Harvest on adjacent P-0315. Chevron will probably propose another platform on OCS P-0450. Getty recently announced a discovery on OCS P-0449, so another platform could be expected on this tract.

As discussed in the Project Description of this report, Platform Hermosa will be the central platform for the field, designed to accommodate pipeline hookups from up to three additional platforms in the Point Arguello area. (The Point Arguello area extends from the Santa Ynez Unit to Union's lease OCS P-0441, and is thought to contain several underground reservoirs, including the Arguello Field.) The on and offshore pipelines to be installed for this project are designed with a throughput capacity of 200,000 BPD of oil and 120,000 MSCFD of gas to serve other operators in the Arguello area. Likewise, the proposed processing facility at Gaviota will process production from the entire Arguello area. The throughput capacity estimates are based on a confidential Price-Waterhouse Survey, which includes producers in the Arguello area, and represent peak production for this area. Chevron also formed the Point Arguello Transportation System whereby eleven Arguello area OCS operators are participating in the design of the pipelines and onshore processing facilities.

Chevron has selected Gaviota as the site for the processing facilities because there is an existing industrial plant on the site and most of the site is zoned for coastal dependent industrial use (M-CD). The company also believes there are no feasible alternative locations which are less environmentally damaging. Chevron met with local groups in the Santa Barbara area, including Native Americans and Santa Barbara County Resource Management Department representatives, to discuss proposals for sites for an onshore processing facility last summer. Three sites were considered: Chevron's 1500-acre parcel at Point Conception, the Getty/Chevron property at Gaviota, and Exxon's property at Las Flores/Corral Canyon. Because of the County Resource Management Department's expressed desire to retain the rural atmosphere of the Point Conception area and of the religious significance of this area to the Chumash Indians, Chevron decided not to use the Point Conception site for processing facilities.

Regarding the Las Flores/Corral Canyon site, Chevron states that extensive grading and removal of riparian habitat would have to be undertaken in order to build processing facilities sized to process the Arguello crude. (Letter, 8/23/83) According to Chevron, the site designated by Exxon for an industry processing facility contains 34 acres necessary for a processing facility after terracing and cut and fill. The site is composed of three meadows and cleared areas apparently used for grazing. The meadows are divided by Corral Creek, which contains extensive riparian woodland habitat. Riparian habitat is estimated to account for thirty percent, or approximately 10.2 acres of the total acreage to be used for the facility. The riparian habitat of Corral Creek is relatively undisturbed and is used heavily for nesting, breeding, feeding, and as a water source for many animals. Construction activities would eliminate this undisturbed stream bed area.

In comparison, Chevron contends that the disturbance at the proposed Gaviota site will be less severe than at Las Flores. It states that the most common habitat at Gaviota is southern California grassland, which has already been disturbed by previous development. Chevron continues by stating that the Gaviota location differs from Las Flores in that most of the area has already been altered by the existence of a gas plant versus the relatively undisturbed riparian habitat at Las Flores. The Commission notes that the existing gas plant covers only about two acres of a 55-acre site and that riparian habitat areas will also be disturbed if the proposed facilities are constructed there. (see Section E-10)

Nevertheless, from a consolidation standpoint, Chevron has sited its new facilities within and contiguous to existing industrial developed areas able to accommodate it. The Santa Barbara County LCP (Policy 6-6) requires that "If new sites for processing facilities to serve offshore oil and gas development are needed, expansion of facilities on existing sites or on land adjacent to existing sites shall take precedence over opening up additional areas." The proposed Gaviota site has the requisite zoning designation, except for the five acres of agricultural land which must need to be rezoned. Thus the Commission finds that the project is consistent with Section 30250 of the Act. Furthermore, because Chevron has sized its pipelines and processing facilities to transport and process estimated maximum production from the Point Arguello area and has provided tie-ins on Platform Hermosa to accommodate future platforms, the Commission finds that the project is consolidated to the maximum extent feasible. Therefore, the Commission finds that the project is consistent with Section 30262(b) of the Act.

Consolidation policies of the Coastal Act also apply to the location of a possible new or expanded marine terminal. By finding the interim use of Getty's Gaviota terminal consistent, the Commission does not sanction Chevron and its Platform Hermosa partners' use beyond the time when a suitable pipeline transportation system, or consolidated terminal is in operation. Chevron has acknowledged this situation and committed to use new facilities when operational.

14. Compatibility with the Local Coastal Program

The Commission notes that the Santa Barbara County Local Coastal Program's standards are not yet incorporated into the California Coastal Management Program, and under the CCMP procedures, the Commission's consistency authority will never be delegated to local government. However, the Commission notes the LCP's importance to its review of associated facilities under the DPP because the Santa Barbara County Local Coastal Program (LCP) was certified by the Coastal Commission in August 1982. Any coastal onshore facility associated with the DPP will be evaluated under the County's permit authority and must be consistent with the LCP. Any major energy facility will be subject to appeal before the Commission. Facilities seaward of the MHT line fall within the Commission's original permit jurisdiction.

The LCP's Energy Component provides for a new coastal-dependent industry designation for all existing energy facility sites. This designation includes the landward support facilities of existing marine terminals and oil and gas separation and treatment facilities supporting offshore petroleum development. Most energy-related facilities are principally permitted uses in these designated areas. These facilities also may be conditionally permitted uses in other land use designations. For instance, crew boat facilities, marine terminals, and oil and gas processing facilities are conditionally permitted uses in the Agricultural II and Rural Residential designations and View Corridor overlay. Pipelines are a permitted use in all land use designations, and are conditionally permitted in the sensitive habitat overlay. Special conditions apply to pipelines through sensitive habitat, recreational, and archaeological areas.

According to the County's "Statement of Policy Relative to the Location of On-shore Oil Facilities," incorporated in the LCP under Policy 6-10, the County favors expansion of existing facilities onto adjacent lands over new sites. Consolidation of facilities on existing sites or on adjacent land is a preferred alternative to establishing new separate sites. The LCP allows only one additional marine terminal in the County, which must be located south of Point Conception. Furthermore, the County LCP gives priority to the transportation of crude oil to refineries by onshore pipeline rather than by marine tankering, and contains several policies that trigger the use of an onshore pipeline. If the County determines an onshore pipeline to be technically and economically feasible, then existing marine terminals will become non-conforming uses. Crude oil will be transported by pipeline, unless the County finds that this is infeasible for a particular operator.

At the time of certification of the County's LCP, the major planning questions regarding energy development were the need to reserve land for coastal dependent industrial energy facilities--a new zoning designation for the County--based on development anticipated at that time, and whether enough oil would be found to economically justify the feasibility of an onshore pipeline to refineries. The situation has changed dramatically due to recent oil discoveries in the Santa Maria Basin. Current industry projections as reflected in the PTC Phase II Report indicate already leased tracts (excluding Hondo A) will produce up to 400,000 BPD during the peak year, almost ten times the rate at the time of LCP certification. Thus, a greater amount of land is needed for onshore support facilities.

Santa Barbara County is actively and responsibly planning to accommodate the accelerated rate of OCS development. It is undertaking pipeline feasibility studies, an analysis of siting alternatives for crew and supply bases, and an analysis of consolidation potential of onshore processing facilities and marine terminals. These analyses are expected to result in amendments to its LCP within the next year.

Most of the new oil and gas processing facilities proposed by Chevron will be located on a site previously designated for coastal dependent industrial use. A portion of the proposed site will require an amendment to the LCP and a zoning change. As discussed in the previous section, Chevron's proposal attempts to consolidate the initial transport and processing of all Arguello Field production, including that of different operators. With respect to the issue of consolidation, the Commission finds that the project is compatible with current LCP policies. Further, Chevron plans to pipe its oil to refineries, and will only use a marine terminal until a pipeline is built. In this regard, the Commission finds that the proposal is compatible with County transportation policies in the LCP.

15. Public Welfare

Under Sections 30262(2) and 30260 of the Act, the Commission must determine whether a finding that Chevron's proposed coastal dependent industrial facilities are inconsistent with the CCMP will adversely affect the public welfare. Included in the concept of public welfare is consideration of the "national interest."

The Commission considers the national interest when it reviews federal licenses and permits. In addition to the Coastal Act, the Commission's approved CCMP includes a separate chapter (Chapter 11) that describes the process used for considering the national interest. The federal government has determined that the California coast is a resource of national significance, comprising more than half

the western coastline of the contiguous 48 states. In reauthorizing the federal Coastal Zone Management Act in 1980, Congress identified ten national objectives to be achieved by states through their coastal management programs. Nine of the ten objectives recognize the critical need to protect coastal zone environmental resources. However, the Congress, the California Legislature, and the Commission also recognized that a balancing must be made with respect to the protection of land and water resources and the development of domestic energy resources. This balancing takes place under the provisions of the "public welfare" test embodied in Section 30260 of the Coastal Act. Thus, under Section 30260, the Commission is empowered to balance the national interest in both resource protection and energy development as is required under the CZMA.

The Commission's record of approval in consistency certifications clearly shows its consideration of the national interest to meet energy needs. The Commission has recognized the need for California to contribute to the nation's energy supply through OCS development by supporting and approving OCS lease sales and development projects in areas where petroleum resources are high and an infrastructure exists to support offshore oil development. In other areas, the Commission has usually supported development of already leased tracts. For example, since 1978 the Commission acted on 77 plans of exploration offshore California. It fully concurred on 69 plans, partially objected to 5 plans, and fully objected to 3 plans. The Commission concurred or partially concurred with exploratory drilling on 112 OCS lease tracts and objected, in full, to drilling on 4 tracts. In addition, the Commission has concurred with all proposals for development platforms in the OCS. This record clearly demonstrates that the Commission has adequately considered the national interest in energy production.

To assist the Commission in considering the national interest in coastal projects, the CZMA regulations allow coastal states to secure the assistance of the Secretary of Commerce in "determining the nature of the national interest in a particular facility when a request to site that facility occurs." (15 CFR 923.52). On May 27, 1983, the Executive Director requested that the Office of Ocean and Coastal Resource Management (OCRM) contact other relevant federal agencies to provide the Commission with information on the national interest in Chevron's project, particularly on national defense, navigational safety, air quality, water pollution, commercial fishing, living marine resources, and other energy proposals.

On July 20, 1983, Commerce Secretary Malcolm Baldrige wrote to the following federal agencies asking for their comments on the national interest in Chevron's proposals:

Casper Weinberger, Secretary of Defense

William R. Gianelli, Assistant Secretary of the Army for Civil Works

Donald Paul Hodel, Secretary of Energy

C. M. Butler, III, Chairman, Federal Energy Regulatory Commission

James G. Watt, Secretary of the Interior

Russell E. Dickenson, Director, National Park Service

Elizabeth H. Dole, Secretary of Transportation

James S. Geary, Commandant, U.S. Coast Guard

William D. Ruckelshaus, Administrator, Environmental Protection Agency

William G. Gordon, Assistant Administrator for Fisheries, National Marine Fisheries Service

Raymond J. Donovan, Secretary of Labor

Harold E. Shear, Administrator, Maritime Administration, Department of Transportation

Verne Orr, Secretary of the Air Force

Donald T. Regan, Department of Treasury

Chevron also submitted a statement to OCRM asserting that its DPP is in the national interest. Chevron contends that the Hermosa project will make a substantial contribution to the nation's energy self-sufficiency, will bolster the economy because it represents an investment exceeding \$400 million, and will perpetuate or create thousands of jobs, will directly employ approximately 565 people during the construction phase and 100 people thereafter to handle day-to-day operations, and will provide royalty payments to the federal government in excess of \$2 billion.

The following responses have been received through Secretary Baldrige and through Secretary Duffy to assist the Commission in its consideration of the national interest in Chevron's DPP. (A copy of each response is attached in Exhibit 14).

- o : Major General Jack L. Watkins, USAF, Vandenberg Air Force Base,
said that the tentative positioning of Platform Hermosa significantly raises the risk factors associated with the Space Shuttle mission and that it is essential that the risk factors of space and missile launches remain acceptable. An attached memo from Colonel Theodore J. Eckert, Director of Safety, explains that Platform Hermosa is directly under the 193 degree launch trajectory of four out of five Space Shuttle launches and in an explosive overpressure hazard zone. The military stipulations in the OCS leases providing for sheltering or evacuation of personnel may have to be exercised for each Space Shuttle launch overflying the platform's position. The letter suggests that relocation of the platform further west or northwest would reduce the hazards significantly, placing the platform upwind of the trajectory and clear of the explosive overpressure hazard area. It recommends that an overpressure shelter area for personnel be constructed on the platform.

Colonel Eckert's letter goes on to state that, "if the explosivity conditions association with the launch of the Space Shuttle had been known at an earlier date, the Air Force would have asked that offshore tracts within six miles of Point Arguello be deleted from OCS lease sales 35, 48, 68, 73, 80, and the State of California lease sale."

Commander Watkins' letter also stated concern that the air quality impacts of offshore oil development are not being considered on a cumulative basis, and that this project could raise the ambient levels on the base to a point where local regulators would restrict the base's emissions. "Although the APCD does not have jurisdictional authority beyond State waters, oil development in federally-controlled waters should have air quality management requirements consistent with the APCD."

- o Donald Paul Hodel, Secretary of Energy, said that the Department of Energy continues to believe it is in the national interest to expand domestic production capacity wherever possible. Domestic production from the lower 48 states, including offshore production, is expected to decline by about 20 percent by the end of the century. Even with these projected declines, it is assumed that there will be significant production from the offshore domestic resources. If this is not realized, it may be necessary to increase imports which could have adverse national security implications.
- o Joan Simmons, Intergovernmental Affairs, Federal Energy Regulatory Commission, said that although we are currently experiencing a surplus of certain forms of energy, national interest considerations should not be limited to the short term. The further development of domestic oil and gas resources is still consistent with the long-term interests of the United States. At the same time, we also recognize the environmental sensitivity of the offshore and coastal areas of California. Development of the field should proceed in a manner compatible with the protection of the environment of offshore and coastal California and consistent with all federal, state, and local environmental concerns.
- o Franklin Willis, Policy and International Affairs, U.S. Department of Transportation, said that development of the substantial oil and gas resources in the Point Arguello field would decrease national dependence on potentially unreliable foreign sources of fuel, for both domestic and military uses. Investment in the project would stimulate economic growth and increase employment. Royalty payments and tax revenues would be increased as a result of the proposed development.
- o Rear Admiral F.P. Schubert, U.S. Coast Guard, Eleventh District, said that the risks are minimal with regard to personnel and navigational safety. Although the risk of a significant oil spill from the project is perceived to be low, the potential impact to the Channel Islands or coastline could be quite high if oil threatened either and if response equipment and measures

were not adequate. The letter goes on to state that industry is considering the stationing of one or two additional large oil spill response vessels in the vicinity of Point Conception. The Rear Admiral encourages the early acquisition of at least one of these vessels for stationing in the vicinity of the Arguello Field.

- o Pasquale Alberico, Office of Federal Activities, U.S. Environmental Protection Agency stated that emissions from future large scale oil development activities (including Chevron's project) may inhibit the ability of Santa Barbara and Ventura Counties to attain and maintain the NAAQS. A comprehensive look needs to be taken of the cumulative impacts of offshore development. A full analysis of the cumulative air quality impacts from the Santa Maria development and the expansion of common onshore oil and gas facilities should be included in the EIS being prepared for this proposal.

Mr. Alberico further said that the long-term impacts from oil and gas development on water quality in the Point Arguello area are uncertain because of the area's unique transitional nature and high biological productivity and diversity. The general NPDES permit, extended until June 1984, will not cover the proposed activities. Any further permitting activities must evaluate the cumulative impacts of the discharges on the area. Potential oil spills could have catastrophic impacts on the water quality and living resources of the area. All efforts should be taken to plan for and effectively contain and cleanup spills to minimize these impacts.

- o Manuel Johnson, Economic Policy, Department of the Treasury, said that increased oil supply puts downward pressure on energy prices and in that way reduces inflation and encourages economic growth. Royalty payments to the Treasury also should help reduce the federal deficit.
- o William Gordon, National Marine Fisheries Service, NOAA, said that a supplemental plan should be developed to discuss the cumulative impacts of full field development, to allow for early identification of potential impacts (particularly related to commercial fishing), and the development of appropriate mitigation recommendations. The letter noted that any pipelines traversing existing kelp beds have the potential for long-term impacts to these beds. The NMFS has recommended in the past that the permittee be required to restore impacted kelp beds to their former condition, if natural reestablishment does not occur within two years.

The views of the federal agencies indicate that, while approval of the Chevron proposal would contribute to some aspects of the national interest, such as progress toward energy self-sufficiency and contributions to the federal treasury, other issues of national concern, such as air quality, water quality, and environmental protection and safety also must be considered.

Chevron has indicated that the Arguello Field may contain as much as 500 million barrels of oil. Oil production from Hermosa is expected to peak in 1989 at 27,000 barrels per day with 28 MMSCF/D of gas. Oil production from the entire Arguello Field is anticipated to peak at 201,266 barrels per day in 1990 and gas production to peak at 120 MMSCFD in 1991. Peak production will thus occur only a

few years after the initial platform, Hermosa, has been installed. However, Chevron estimates that the productive life of the Arguello Field and Platform Hermosa is 25 to 30 years, provided other platforms are installed within a few years after Hermosa. These figures may vary depending on the extent of the reservoir. The Commission finds that the Arguello Field is of national importance and that its development will contribute significantly to the nation's energy needs.

The Commission, however, must weigh these figures on oil and gas productivity and their contribution towards alleviating the nation's dependency on foreign imports with the short-term, long-term, and possible irreversible adverse impacts to the environment. As currently proposed, the project will result in significant increases in air pollution and in the risk of oil spills, and will destroy and disrupt valuable marine and commercial fishing resources. The scenic quality associated with Point Conception and the Gaviota coastal area will be degraded. Furthermore, the location of the platform raises safety conflicts with Vandenberg Air Force Base launch programs.

The project will also have adverse economic impacts which must be considered. Undoubtedly, the project will result in substantial royalty payments to the federal government. However, many of the adverse impacts will be absorbed by local governments and citizenry who will not receive any royalty benefits or other payments to offset the adverse environmental and economic impacts. The Commission pointed out earlier that the value of the fisheries affected by project on the local economies was nearly \$5 million. This contribution could be reduced due to loss of fishing areas and fishing time and damage to equipment caused by the project.

Chevron has committed to mitigate this project's adverse impacts to air quality, marine, scenic, fisheries, and other resources through measures that are the maximum extent feasible at this time. Further, other site specific impacts such as drill muds disposal or specific marine resource impacts are being addressed through commitments to further mitigate such impacts after additional study or through the approval of required Federal, State, and local permits. With such commitments and mitigations, the Commission has found consistency under Sections 30230, 30231, 30232, 30250, 30253 and 30260(1)(3) of the Act. Based on these findings, the Commission finds that concurring with Chevron's consistency certification will not adversely affect the public welfare and the project meets the provisions of Section 30260(2) of the Act.

APPENDIX I

Substantive File Documents

1. Chevron USA, Inc., Development and Production Plan and Environmental Report, Point Arguello Field, December 1982.
2. Chevron USA, Inc., Oil Spill and Emergency Contingency Plan for Platform Hermosa, OCS Lease P-0316, October 1982.
3. Dames & Moore, Geohazard and Cultural Resource Investigation, Platform Hermosa Site, OCS P-0316, December 1982.
4. Dames & Moore, Geohazard and Cultural Resource Investigation, Marine Pipeline Route--Platform Hermosa Site to Government Point Area, December 1982.
5. Consistency Certification File CC-7-83, Exxon Company, USA, Santa Ynez Unit.
6. June 29, 1983 letter to Gordon Duffy from Michael Fischer re: Coastal Commission's comments on Chevron's DPP.
7. Santa Barbara County. Coastal Plan. January 1982.
8. National Maritime Research Center, Santa Barbara Channel Risk Management Program, April 1981.
9. California Air Resources Board, Air Quality Aspects of Offshore Oil and Gas Resources, February 1982.
10. California Air Resources Board, Report of the California Legislature on Air Pollutant Emissions from Marine Vessels (Draft), June 1983.
11. Petroleum Transportation Committee Phase II Final Report, County of Santa Barbara, Resource Management Department, June 1983.
12. California v. Watt, U.S.D.C., C.D. Cal. #813232-CBM (Mx)
13. Lehrman, D.E. et al, A Study of Transport Into, Within, and Out of Coastal Areas of Southern Santa Barbara County and Ventura County, Meteorology Research, Inc. and California Institute of Technology, Division of Chemistry and Chemical Engineering for Ventura County Air Pollution Control District, June 1981.
14. Letter from E.C. Fullerton, Department of Fish and Game, to Michael Fischer, concerning effects of muds and cuttings discharges.
15. Committee on Assessment of Safety of OCS Activities. Marine Board; Assembly of Engineering; National Research Council. "Safety and Offshore Oil" National Academy Press; Washington, D.C. 1981.

16. May 23, 1983 letter from EPA to Peter Tweedt, Director, Office of Ocean and Coastal Resource Management, concerning the Exxon SYU development and the National Interest.
17. Santa Barbara County-Cities Area Planning Council, Cumulative Assessment of Employment and Housing Impacts of the Space Shuttle, MX, LNG and OCS Projects, 1980.
18. South Central Coast Commission Permit #311-05.
19. Permit E-82-21; Appeal A-4-82-459 (PIPCCO).
20. Letter from Stuart R. Shaffer to Don Neuwirth October 4, 1982.
21. California Coastal Commission, Designation of Coastal Areas Where Construction of an Electric Power Plant Would Prevent Achievement of the Objectives of the California Coastal Act of 1976, September 1978, Revised April 1, 1982.
22. Petroleum Transportation Committee, County of Santa Barbara. Phase I Final Report, Vol. I; Appendices, Vol. II, 1983.
23. Oil & Gas Journal, "Getty Plans Big Expansion of California Terminal," January 17, 1983.
24. California Coastal Commission, "Revised Findings Policy Statement on Conflicts Between Vessel Safety and Offshore Oil and Gas Operations," August, 1982.
25. Exxon Company USA, Development and Production Plan and Environmental Report Santa Ynez Unit, October 1982.
26. Clean Seas Oil Spill Response Manual.
27. California Coastal Commission, Oil Spill Cleanup Capability Study, 1983.
28. Statistical Failure Mode Analysis of Submarine Pipeline Accidents MMS, 1983 Oil Spill Conference.
29. Southern California Coastal Pipeline Volumes I and II - Part C, Bechtel, 1982.
30. Alternative Pipeline Routes for Santa Barbara Channel Crude, Al Reynolds, 1983.
31. 1985 California Oil Scenario Study, Bonner & Moore.
32. California Energy Commission, Petroleum Logistics - Movement of Oil to California.
33. State Lands Commission, 1985 California Oil Transportation Study.
34. Research on Environmental Fate and Effects of Drilling Fluids and Cuttings, Lake Buena Vista, Florida, 1980 Symposium Proceedings.

35. An Environmental Assessment of Drilling Fluids and Cuttings Released onto the Outer Continental Shelf, Volumes I and II, Gary Petrazzuolo.
36. EPA NPDES Permit No. CA0110516 - General Permit; in Federal Register Volume 47, No. 33, 18 Feb. 1982.
37. Ayers, Robert and T.C. Sauer, The Generic Mud Concept for Offshore Drilling for NPDES Permitting, IADC/SPE 1983 Drilling Conference, New Orleans, LA.
38. Steele, J., A Review of Some Physical and Biological Effects of Oil Well Drilling Fluids, January 1983, California Department of Fish and Game.
39. Rieser A. and J. Spiller, Regulatory Drilling Effluents on Georges Bank and The Mid-Atlantic Outer Continental Shelf: A Scientific and Legal Analysis, April 1981.
40. Finalizing Addendum, EIR, Resumption of Exploratory Drilling Operations by the Shell Oil Company, Lease PRC 3314.1, Pierpont Prospect. Prepared by the State Lands Commission.
41. California Coastal Commission Position on National Pollutant Discharge Elimination System (NPDES) Permit activities on the OCS, October 16, 1981.
42. Palter, Alan, Santa Barbara: Offshore Drilling Muds and Cuttings, 1983-1992.
47. Papers submitted to the California Coastal Commission by Exxon, written by: J. Neff, R. Kolpack, T. Sauer, R. Meek, R. Ayers.
48. Oil Spill Intelligence Report, Boston, Massachusetts, August 20, 1981, Page 29.
49. Schatten, G., Effects of Barium on Fertilization and Early Development in Sea Urchin Eggs, 1982 (in press).
50. Brannan, A.C., and K.R. Rao, Barium, Strontium, and Calcium Levels in the Exoskeleton, Hepatopancreas and Abdominal Muscle of the Grass Shrimp, Palaemonetes pugio: Relation to Moulting and Exposure to Barite. Comp. Biochem. Physiol. 63 pp. 261-274, 1979.
51. Neff, J.M., Final Summary Report to the API, Effects of Used Drilling Muds on Benthic Marine Animals, 1979.
52. Sweeney, B., Testimony Before the Administrator, US EPA, In re Diamond M Drilling Company, 1981.
53. Tagatz, M.E. et al., Effects of drilling mud on development of experimental estuarine macrobenthic communities, pp. 847-865, Symposium, Research on Environmental Fate and Effects of Drilling Fluids and Cuttings, Lake Buena Vista, Florida, 1980.
54. Foy, M., Acute Lethal Toxicity of Prudhoe Bay Crude Oil and Corexit 9527 to Arctic Marine Fish and Invertebrates, Environment Canada/Environmental Protection Service, 1982.

55. Special Report: Ixtoc I., Oil Spill Intelligence Report, Boston, Mass., January 4, 1980.
56. Vielvoye, R., "A Sobering Message On Oil Spills", Oil and Gas Journal, August 11, 1980.
57. Kent, Donald B., Stephen Leatherwood, and Lyne Yohe, Responses of Migrating Whales, Eschrichtius robustus, to Oil on the Sea Surface: Results of a Field Evaluation. Vol. I of II.
58. Dames & Moore. Site Specific Marine Biological Survey Chevron Platform Hermosa Project Western Santa Barbara Channel for Chevron USA, Inc. February 14, 1983.
59. State Lands Commission, Chambers Consultants. Program Environmental Impact Report. Leasing, Exploration and Development of Oil and Gas Resources on State Tide and Submerged Lands, Point Conception to Point Arguello, Santa Barbara County, California. April 1982.
60. California Coastal Commission, "Revised Staff Report and Preliminary Recommendation - State Lands Commission - Point Conception-Point Arguello May 12, 1983. (considered at May, 25 1983 Coastal Commission hearing)
61. Orr, Robert T., Marine Mammals of California. Berkeley University of California Press, 1972.
62. Gotshall, Daniel W., Pacific Coast Inshore Fishes, Sea Challengers: Los Osos, California, 1981.
63. Ricketts, Edward F., and Calvin Jack, Between Pacific Tides. Stanford University Press, 1939, updated 1968.
64. Norris, K.S., T.P. Dohl, R.C. Guess, L.J. Hobbs, and M.W. Honig. 1976. Cetacea: numbers, distribution and movements in the Southern California Bight. In: University of California Santa Cruz, 1976. Marine Mammal and Seabird Survey of the Southern California Bight. Volume 3. Principal Investigators' Reports. Book 1: 270-441.
65. State Lands Commission, Technical appendices, draft program environmental impact report, leasing, exploration and development of oil and gas resources on state tide and submerged lands, Point Conception to Point Arguello, Santa Barbara County, California. Appendix A, Marine Biological Survey Report. 1982.
66. University of California, Santa Cruz, Marine mammal and seabird survey of the Southern California Bight. Volume II. Detailed Synthesis of Findings. 1978.
67. _____ . Marine mammal and seabird study, central and northern California. Annual Progress Report, U.S. BLM POCs Tech. Paper 92-1, 1982.
68. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Final environmental impact statement of the proposed Channel Islands marine sanctuary. 1980.
69. Nekton, Inc., A biological survey of a hard bottom feature, Santa Maria Basin, California. Report prepared for ARCO Oil and Gas Company.

70. Letter to Gordon W. Duffy, Secretary of Environmental Affairs, from Jack L. Watkins, Major General USAF, Commander, Headquarters 1st Strategic Aerospace Division, Vandenberg Air Force Base, received July 18, 1983.
71. Letter and attachments to Michael Fischer from Robert W. Carr, Director, San Luis Obispo County APCD, July 26, 1983.
72. Letter to Reid T. Stone, MMS, from Robert W. Carr, Director, San Luis Obispo County APCD, July 26, 1983.
73. Letters and attachments to David A. Schuenke, MMS, from John B. English, Director, Santa Barbara County APCD, July 7, 1983; Richard H. Baldwin, Director, Ventura County APCD, June 28, 1983, and Gordon Duffy, Chairman, ARB, July 11, 1983.
74. Letter to Peter L. Tweedt, OCRM, NOAA, from Pasquale A. Alberico, Acting Director, Office of Federal Activities, U.S. Environmental Protection Agency, May 23, 1983.
75. State Lands Commission, Program EIR. Leasing, Exploration and Development of Oil and Gas Resources on State Tide and Submerged Lands, Point Conception to Point Arguello, Santa Barbara County, California. April 1982.
76. Letters to Michael Fischer from Richard Harris, Chevron USA, Inc., containing Chevron's comments and additional information in response to preliminary staff report, September 26, 1983, October 4, 1983, October 11, 1983.
77. Letter from Douglas A Knapp to Michael Fischer concerning impacts on fisheries, September 29, 1983.
78. Letter to Douglas Uchikura, Chevron USA, Inc., from Alan Hur, Director of Fisheries Production Institute, concerning impacts of Hermosa project on fishing, September 29, 1983.
79. Chevron USA, Inc., Volume III, Response to Comments, Development and Production Plan, September 1983.
80. Application to County of Santa Barbara by Celeron Pipeline Company of California (part of All American Pipeline Company).
81. All American Pipeline Company, Crude Oil Transportation System, Emidio, California to McCamey, Texas, Volume I and Appendix, August 29, 1983.
82. Celeron Pipeline Company of California Crude Oil Transportation System, Las Flores to Emidio, California, Volume I, August 29, 1983.
83. Marine Casualty Report, Collision Involving the SS Arizona Standard and SS Oregon Standard at the Entrance to San Francisco Bay on January 18, 1971, U.S. Coast Guard Marine Board of Investigation Report and Commandant's Action, August 1, 1971.
84. Letter to Michael Fischer from Gordon Duffy, Chairman, Air Resources Board, concerning air quality impacts, November 2, 1983.

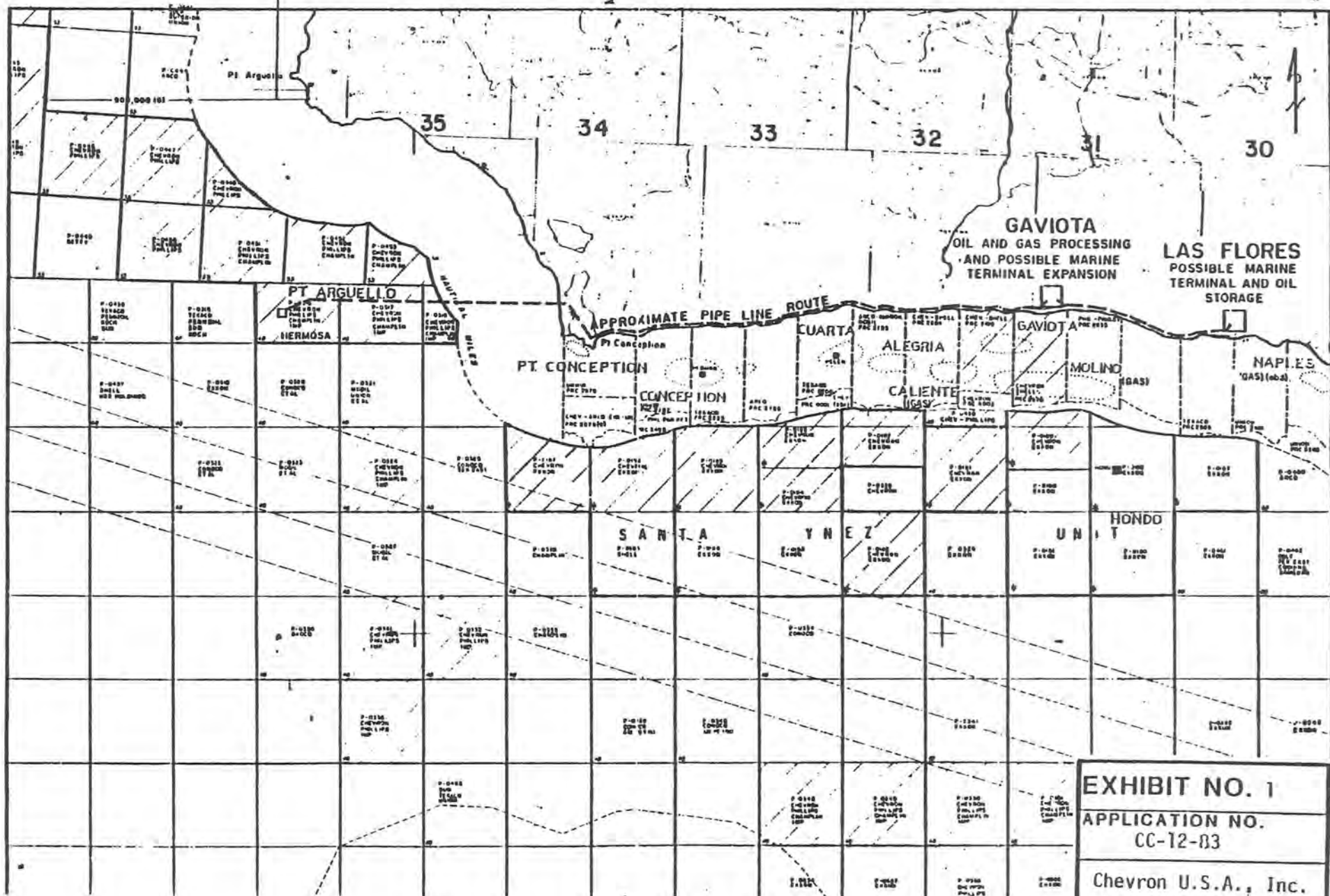



EXHIBIT NO. 1
APPLICATION NO.
 CC-12-83
 Chevron U.S.A., Inc.



California Coastal Commission

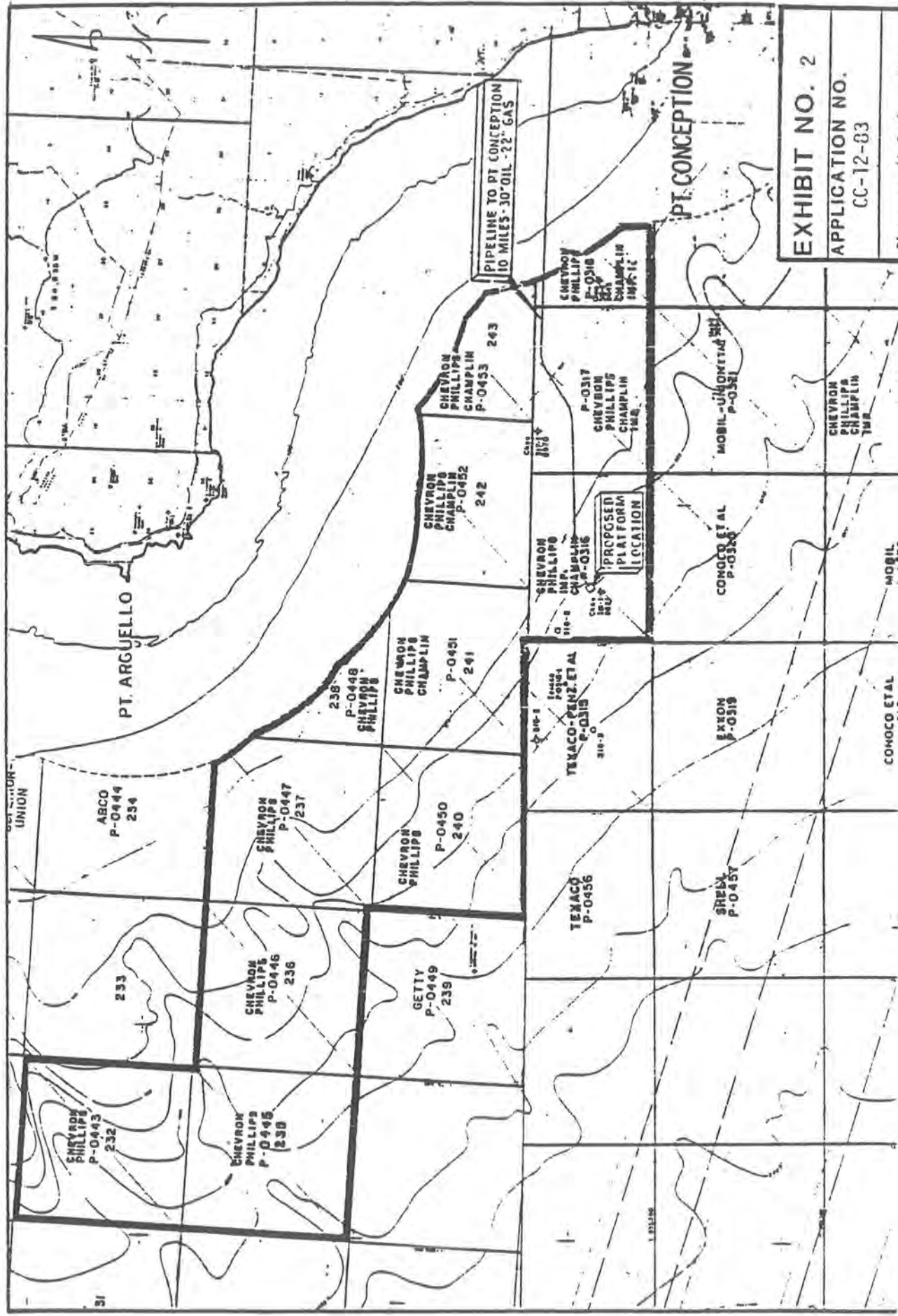


EXHIBIT NO. 2
APPLICATION NO. CC-12-83
Chevron U.S.A., Inc.
California Coastal Commission

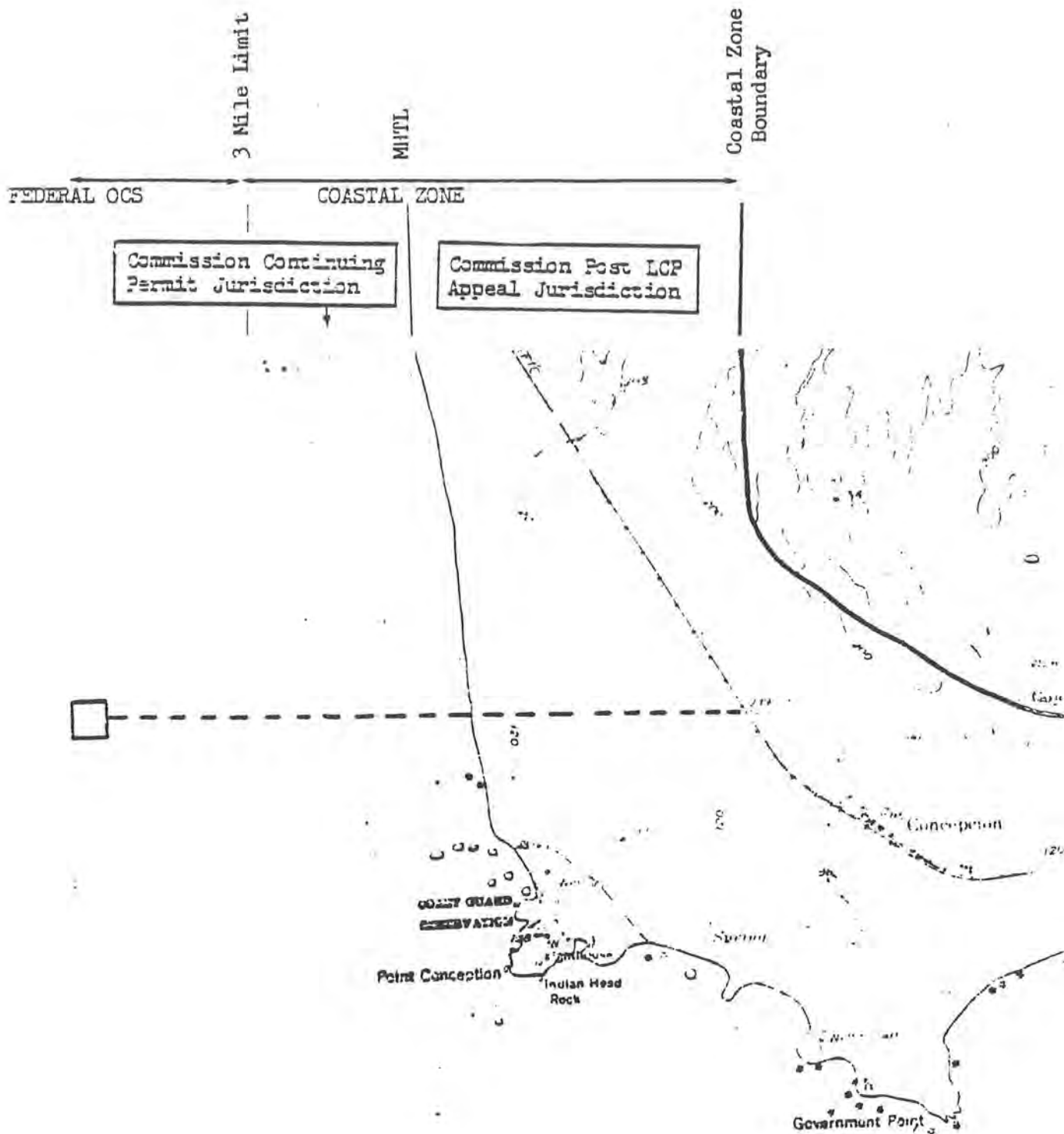


EXHIBIT NO. 3
APPLICATION NO. CC-12-03
Chevron U.S.A., Inc.
 California Coastal Commission

NOT TO SCALE

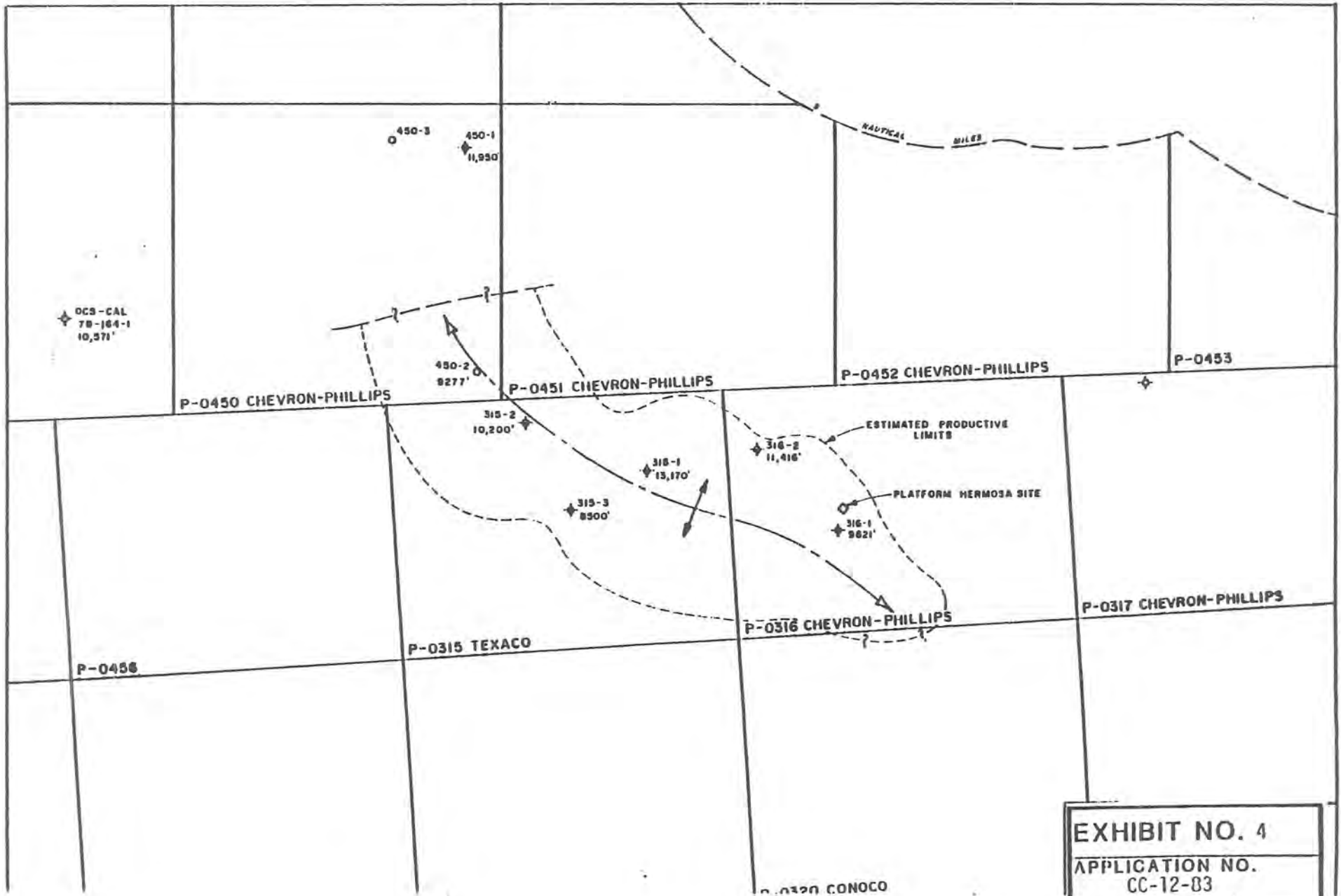



EXHIBIT NO. 4
APPLICATION NO. CC-12-83
Chevron U.S.A., Inc.
 California Coastal Commission

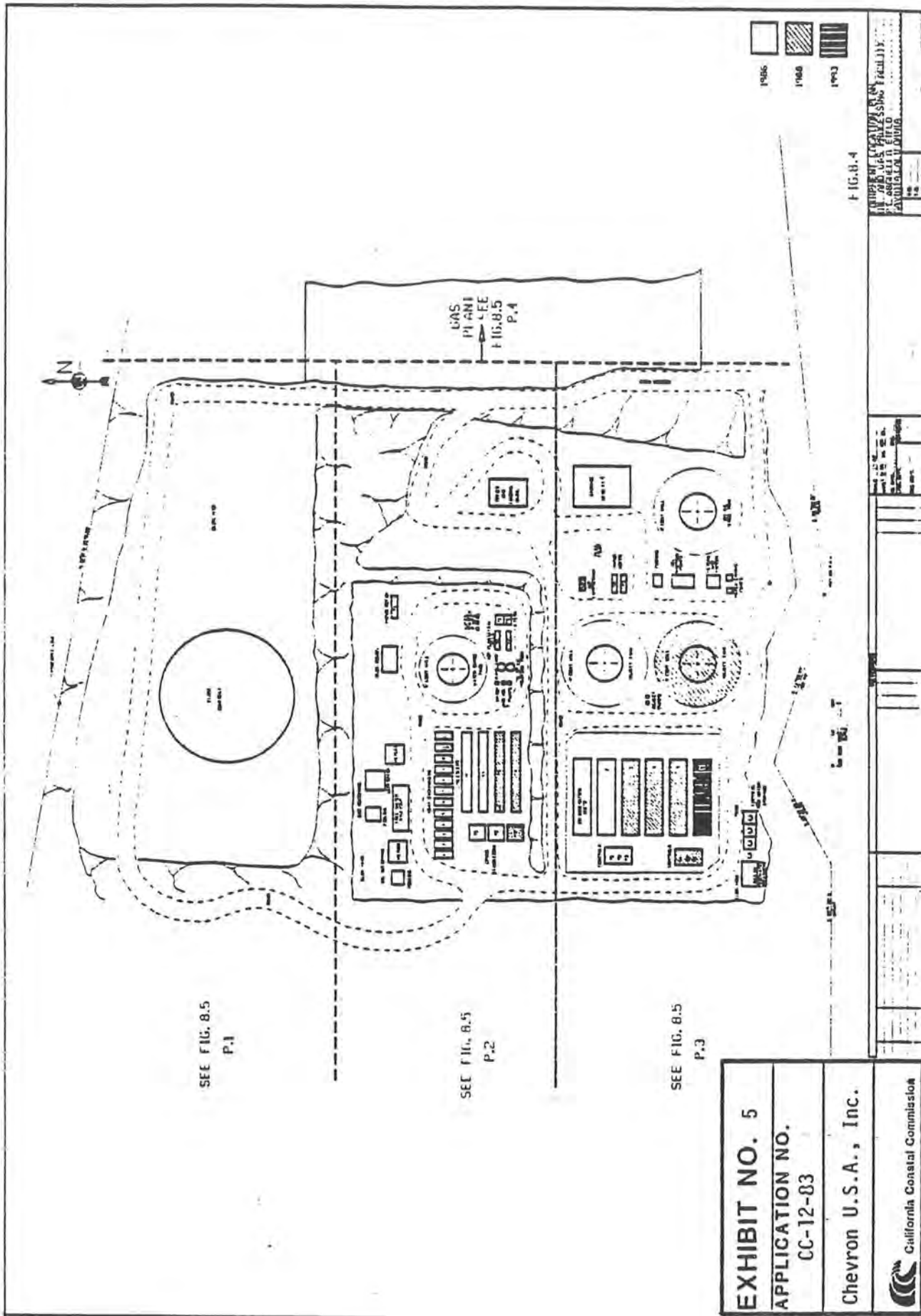


EXHIBIT NO. 6

APPLICATION NO.

CC-12-83

Chevron U.S.A., Inc.

California Coastal Commission

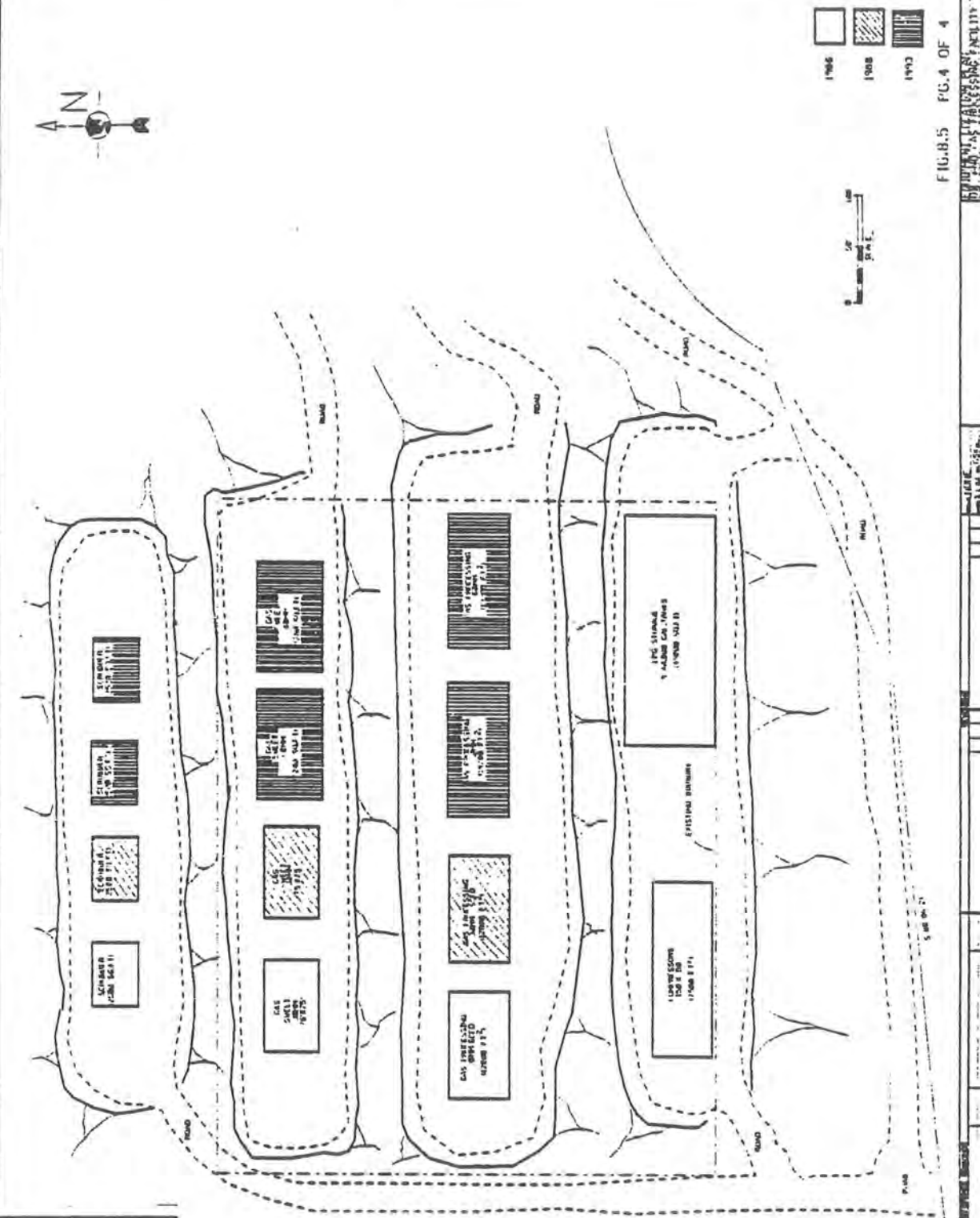
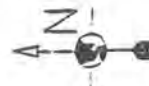


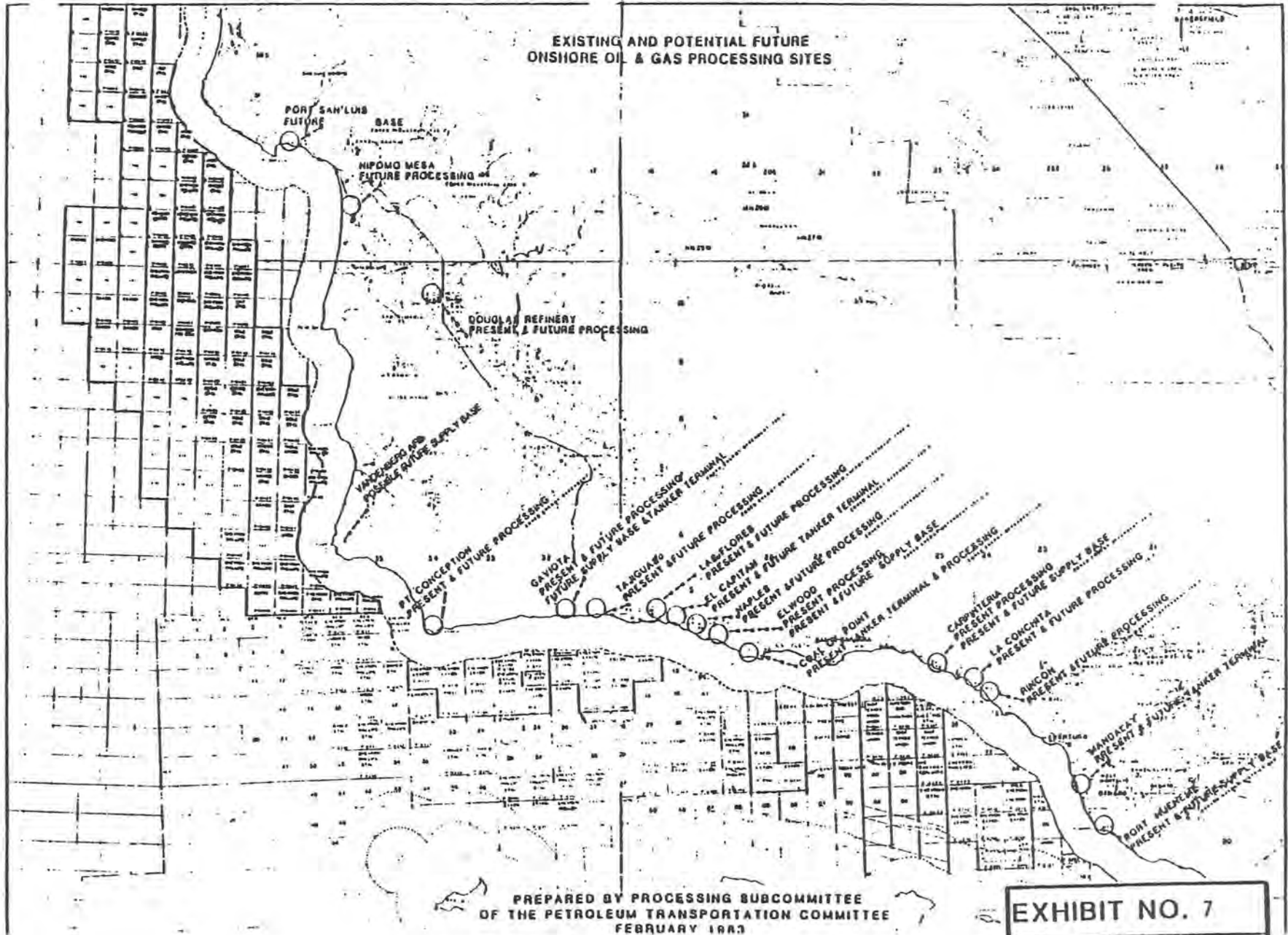
FIG. B.5 FIG. 4 OF 4



APPLICANT
PROJECT NO.
DATE
BY
CHECKED
DATE

SCALE: AS SHOWN

EXISTING AND POTENTIAL FUTURE
ONSHORE OIL & GAS PROCESSING SITES



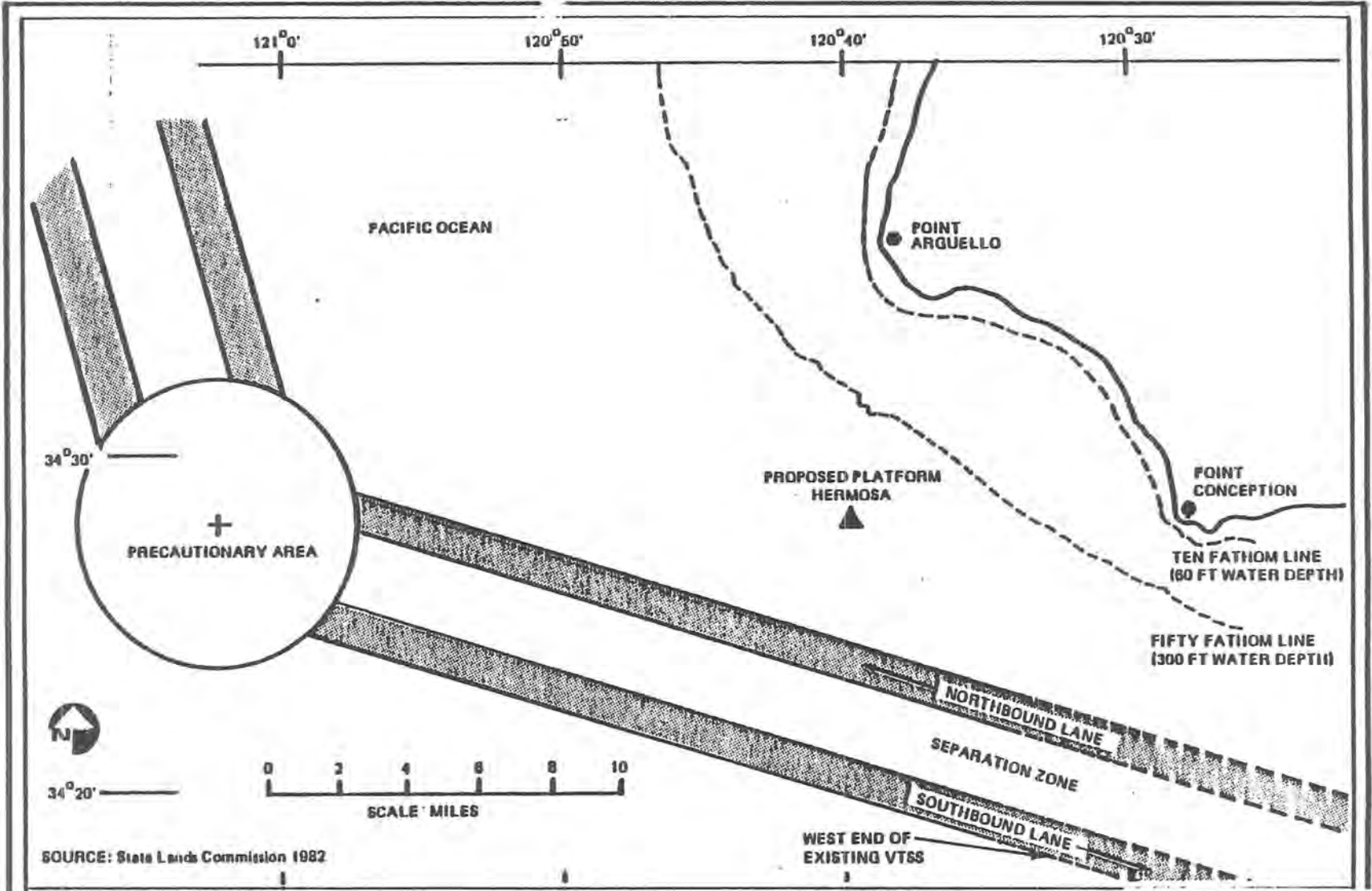
PREPARED BY PROCESSING SUBCOMMITTEE
OF THE PETROLEUM TRANSPORTATION COMMITTEE
FEBRUARY 1983

EXHIBIT NO. 7

APPLICATION NO.
CC-12-83

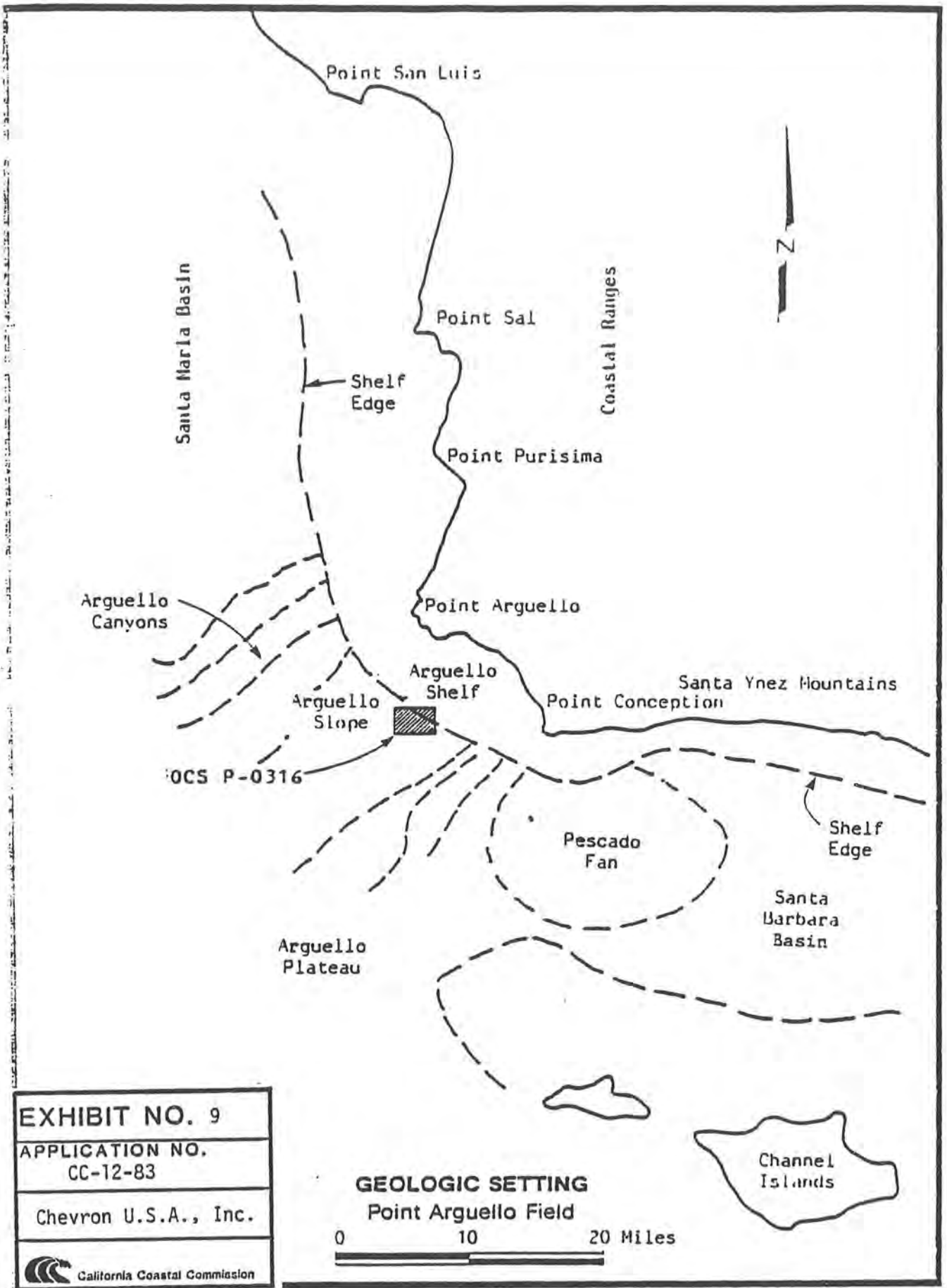
Chevron U.S.A., Inc.

64-7



Proposed Extension of Santa Barbara Channel Vessel Traffic Separation Scheme

EXHIBIT NO. 8
APPLICATION NO. CC-12-83
Chevron U.S.A., Inc.
 California Coastal Commission



ADDITIONAL CALIFORNIA COASTAL COMMISSION STAFF COMMENTS
ON PROPOSED MODIFICATION AND RESCINDANCE
OF GENERAL NPDES PERMIT NO. CAC011516

August 25, 1983

The staff of the California Coastal Commission objects to the proposed modification and rescindance of general NPDES permit No. CAC011516, and recommends that EPA, subsequent to the permit's expiration in December, 1983, ~~should~~ regulate discharges from offshore platforms and wells on an individual NPDES permit basis. The Commission staff at this time cannot concur with the idea of a general permit for either exploratory or production discharges on the OCS. The NPDES general permit is based on the premise that one permit can effectively regulate muds and cuttings discharges over the entire California coast. The OCS offshore southern California is biologically and oceanographically complex. Too many questions remain unanswered concerning long-term rates and effects of muds and cuttings discharges to enable a blanket general permit to effectively regulate discharges and prevent unreasonable degradation of California's valuable marine environment.

Finding of No Unreasonable Degradation

EPA Region IX, in its general permit fact sheet, has made a finding of "no unreasonable degradation" for this limited term permit. The Commission staff believes that there is insufficient information available to allow EPA to make such a finding. Region IX's brief discussion of the Ocean Discharge Criteria stands in marked contrast to EPA Region IX's lengthy, 4030 analysis and findings for Georges Bank permit No. G00030007.

Region I found, in its analysis, that it had insufficient information available to make a finding of no unreasonable degradation of the marine environment; the proposed Georges Bank permit anticipated a number of wells comparable to that predicted under California's general permit, and encompassed an area substantially smaller and less complicated, both oceanographically and biologically, than the California OCS. Specifically, the Georges Bank NPDES permit concludes:

o Insufficient information exists to enable EPA to make a determination of no unreasonable degradation with regard to significant changes in the biological community from bioaccumulation, threat to human health by ingestion of contaminated organisms, or loss of economic values because of impacts on commercial fisheries.

o Insufficient information exists to make a conclusive determination of no unreasonable degradation of commercial fisheries from discharges during exploratory drilling.

EXHIBIT NO. 10

APPLICATION NO.

CC-12-83

Chevron U.S.A. Inc



California Coastal Commission

c. There is insufficient information to accurately predict the transport of discharged materials and the immediate vicinity of the discharge area for assessment of biological impacts over time, potential for buildup of constituents in sediments leading to bioaccumulation, potential human health impacts, and economic losses from impacts to commercial fisheries at deposition sites.

d. There is insufficient information on acute and chronic toxicity to verify that bioassay results testing of the sever and types of applicable to the most sensitive and commercially important species in the Georges Bank area. There is also insufficient information to evaluate the long-term fate and longevity of deposition (persistence) of discharged materials. This information is insufficient to completely relate materials discharged to biological, human health, or economic impacts.

e. There is insufficient information to determine that there will be no unreasonable degradation of the biological communities. There is insufficient information on the vulnerability to drilling fluids of species important in the lease area.

Generic Muds

The Region is relied in large part on the concept of restricting discharges to "generic muds" of presumably low toxicity to insure protection of the marine environment. The validity of the generic mud concept is doubtful because "Specific down-hole conditions and requirements are additive result in essentially different muds from each well." Therefore, it is unrealistic to assume that toxicities will be either predictable or comparable for these spent muds. An author's introduction to his symposium on the effects of drilling muds (Results of an Innovative Environmental Assessment Modeling Exercise Concerning Potential Impacts of Drilling Muds and Cuttings on the Marine Environment) states:

The composition of a drilling mud is tailored to a particular or actual down-hole conditions. This mud, in addition to the typical base of bentonite or barite, various chemical agents are added as pH modifiers, biocides, corrosion inhibitors, defoamers, emulsifiers, flocculating agents, surfactants, thinners, particle dispersers, and mud weighting agents. [Second] Many of the chemical ingredients and materials accumulated from cuttings through the various formations may undergo change when exposed to bore temperatures and pressures or to each other (especially in deep wells typical of offshore drilling activities). The resulting complexity of discharged materials is reflected in the wide range of concentrations over which effects are observed.

Additives

While additives are approved by EPA prior to discharge, the regulations require only that these additives be used in concentrations which will not "materially increase" mud toxicity. EPA Region II has not compiled a single list of allowed speciality additives. Rather, it authorizes additives, often referred to by brand name and without specifying ingredients, in response to requests by individual companies. This system makes it difficult for the interested public or other regulatory agency to assess these allowable additives. EPA should compile a list of all approved additives, including chemical constituents as well as trade names.

EPA's reliance on the presumed low toxicity of "benzene muds" is ill-founded; more rigorous sampling and bio-assay of muds with additives ~~to be discharged~~ is necessary.

Adequate Monitoring

The monitoring requirements of the current general permit do not ensure compliance with the terms of the permit. The discharger is required only to submit, on a monthly basis, monitoring results obtained during the previous 12 months of operations. These data are to be summarized and reported on a Discharge Monitoring Report Form (DMR). Although the first report is due 13 months after the operator is initially covered by the permit, two of the three DMRs which were due to EPA had not been submitted when Commission staff last inquired. For each DMR permit, EPA should require that the "precise chemical inventory of all constituents and their volume added down-hole for each well" (p. 7325, A.1.f) be submitted to the Region IX office on a monthly basis. This log should be available for public inspection. (Such a provision is included in the Georges Bank permit.) In addition, EPA should require, for each well drilled, a compliance monitoring system which will sample discharges after they have been treated. The discharges can then be collected and analyzed to evaluate compliance with the discharge limitations.

Alternatives to Off-site Disposal

The Commission staff believes that the EPA must carefully examine alternatives to off-site ocean discharge of muds and cuttings. In particular, EPA should consider on-site disposal at an approved offshore dumpsite, as well as onshore disposal of muds and cuttings. An offshore dumpsite could be appropriately sited in a previously disturbed area, such as the radioactive dumpsite in Lease Sale 73. With the use of newly developed treatment and fixation processes, muds and cuttings can be dewatered and the heavy metals bound up, so that, with the approval of the Department of Health Services and the Regional Water Quality Control Boards, the treated discharges would no longer require disposal at a hazardous waste dumpsite. Such treatment processes are currently being evaluated by the Department of Health Services, as well as by regional water boards, sanitation districts, and representatives of the oil industry. The Commission staff supports these efforts. In California State waters, it is the policy of the State Water Quality Control Board, with concurrence from the Department of Fish and Game, to require that all muds and cuttings be barged ashore. EPA should ^{conduct} thorough evaluation of chemical detoxification processes, one of the onshore disposal alternatives.

Conclusions

In conclusion, we therefore:

- o object to the proposed modification and reissuance of general permit No. CA0110016;
- o object to the concept of a general permit for the California OCS;
- o recommend case by case review of NPDES permits by EPA;
- o request that Region IX undertake a thorough 403 C evaluation of NPDES discharges at a level of analysis in accordance with Region I's work on the Georges Bank;
- o request a careful evaluation of the generic muds concept;
- o request that EPA Region IX prepare a list of approved additives, identified by chemical constituents as well as trade names;
- o recommend that EPA require submittal by discharge^{WS} on a monthly basis of the detailed chemical logs from the rigs;
- o recommend that a compliance monitoring system be established which will sample discharges after they have been released;
- o request evaluation of alternatives to on-site discharges, including onshore disposal, chemical detoxification of muds, and disposal at an approved offshore dumpsite.

The rapid increase in both exploratory and development drilling along the California coast has resulted in a several-fold increase in the amount of muds & cuttings discharged. It is inconceivable that more stringent regulations are applied to disposal of drill muds and cuttings than are applied to disposal in the ocean. *onshore*

CALIFORNIA COASTAL COMMISSION STAFF COMMENTS ON
PROPOSED MODIFICATION AND REISSUANCE OF
GENERAL NPDES PERMIT NO. CA0110516

August 11, 1983
Santa Barbara

Presented by Martha Weiss

EXHIBIT NO. 11
APPLICATION NO. CC-12-83
Chevron U.S.A. Inc
 California Coastal Commission

Thank you for the opportunity to comment on this NPDES permit action. The Commission staff will be submitting more detailed comments in writing by August 25. The California Coastal Commission remains concerned over the offshore disposal of drill muds and cuttings, and is particularly concerned about the cumulative impacts of discharges from the very large number of exploratory and production wells anticipated in the western Santa Barbara Channel and Santa Maria Basin over the next decade.

Commission staff would like to emphasize the fact that the current general permit was never intended to cover discharges from the large number of exploratory wells and production platforms proposed for offshore California. The permit fact sheet states that it will cover "a very modest number of new wells for the area to which the permit applies." According to the fact sheet, industry estimated that 69 exploratory wells would be drilled, and two new platforms would be installed, during the two year life of the permit. Industry has estimated that over 1500 exploratory and production wells will be drilled in the Santa Barbara Channel and Santa Maria Basin over the next ten years. An estimated 1,171,500 tons of muds would be required to develop these wells. The analysis in the current general permit certainly does not consider discharges of this magnitude. One rationale for the issuance of a general permit, as stated by EPA, is that such a permit

allows the agency to address cumulative effects of multiple facilities operating in one geographic area, and to impose an area-wide monitoring program that can more effectively address environmental degradation. The Commission looks forward to seeing EPA's careful and thorough assessment, under Section 403c of the Clean Water Act, which will take into account the cumulative impacts of these anticipated discharges.

The Commission is currently re-evaluating its policy on muds and cuttings disposal. It may decide to extend its zone of case-by-case NPDES permit review seaward beyond the current 1000 meter line. Some of the nearshore Lease Sale 68 tracts proposed for coverage under the permit expansion would be affected by this action, and each mud disposal permit application would be subject to Commission consistency review.

In its policy re-evaluation, the Commission may also find that, while under certain conditions, it concurs with a general permit for exploratory activities, it cannot concur with a general permit which covers production activities. Because of the magnitude of the discharges from production activities, the Commission may find it necessary to maintain case-by-case review over such discharges.

Finally, the Commission staff would like to emphasize the fact that the effects of drill muds and cuttings discharges on marine organisms remain the subject of great controversy. To quote the National Academy of Science's National Research Council report on "Safety and Offshore Oil",

There is no clear agreement among ocean biologists as to whether low concentrations of petroleum or drilling fluids and cuttings produce significant effects on marine biota. Nor is there agreement about the cumulative effects of low levels of discharges or of disturbances caused by drilling operations to natural ecosystems, both being difficult to detect and to

measure quantitatively. Moreover, the long-term effect of the discharges on an ecosystem or community has not been established adequately. Thus, while there is general agreement that the toxicity and smothering effects of large quantities of oil and drilling fluids and cuttings are harmful to pelagic birds, benthic organisms, and coral reefs, there is less agreement on the ability of those life forms to recover after a time.



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
OFFICE OF OCEAN AND COASTAL RESOURCE MANAGEMENT
Washington, D.C. 20235

AUG 29 1983

N/ORM4:NE

RECEIVED

SEP 02 1983

CALIFORNIA
COASTAL COMMISSION

Mr. Michael Fischer
Executive Director
California Coastal Commission
631 Howard Street, 4th Floor
San Francisco, California 94105

Dear Mr. Fischer:

Enclosed are copies of the letters we have received from the Secretary of Energy and the Secretary of Defense in response to Secretary Baldrige's request for the assistance of other Federal agencies in determining the nature of the national interest in Chevron's proposal for oil and gas development in the Point Arguello Field. We shall forward any additional letters as we receive them.

Sincerely,

Peter L. Tweedt
Director

Enclosures

cc: William Grant
Minerals Manager
Pacific OCS Regional Office
Department of the Interior
1340 West Sixth Street
Los Angeles, California 90017

Claire Ghylin
Chevron U.S.A., Inc.
2120 Diamond Boulevard
Concord, California 94524

EXHIBIT NO. 12
APPLICATION NO. CC-12-83
Chevron U.S.A. Inc
California Coastal Commission





THE SECRETARY OF ENERGY
WASHINGTON, D.C. 20585

August 10, 1983

SECRET
1983 AUG 10 10 02 AM '83

338570

Honorable Malcolm Baldrige
Secretary of Commerce
Washington, D.C. 20230

Dear Mr. Secretary:

We are pleased to provide the following in response to your request for a statement regarding the national interest issues involved in the Chevron U.S.A. project for oil and gas production from the Point Arguello Field, offshore Points Arguello and Conception, California.

In calendar year 1982 domestic production of crude oil averaged 7.0 million barrels per day from the lower 48 states, including onshore and offshore production. According to preliminary National Energy Plan projections, production from the lower 48 states, which includes offshore production and increasing amounts of enhanced oil recovery, will decline to 6.5 million barrels per day in 1985; 6.3 million barrels per day in 1990; 5.8 million barrels of oil per day in 1995; and 5.7 million barrels of oil per day in 2000. Thus, we anticipate that domestic production from the lower 48 states, including offshore production, will decline by about 20 percent by the end of the century.

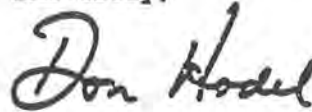
Even with these projected declines, it is assumed that there will be significant production from the offshore domestic resources. If this is not realized, it may be necessary to increase imports which could have adverse national security implications. Although 1982 was a year of depressed petroleum demand, the Nation still relied on foreign sources for an average of 5 million barrels per day of crude oil and petroleum products.

The Nation, as a whole, faces an increasing cost of crude oil from domestic sources because the next increment of reserves is generally harder to find and more expensive to produce. This will become more evident as the search for petroleum moves further offshore and into other remote and hostile areas, such as the Arctic. It is in the Nation's interest to develop and produce the less expensive sources that are at hand, thereby reducing the Nation's energy bill. This could also have an effect on the price we pay for foreign petroleum because the size of the domestic reserve base, the cost to produce those reserves, and our determination to produce them, influence the price others believe they can charge for energy. Therefore, our demonstrated willingness to produce lower cost oil should lower the expectations of foreign producers as to what the U.S. is willing to pay to import oil.

The Department of Energy continues to believe it is in the national interest to expand domestic petroleum production capacity wherever possible.

Thank you for the opportunity to comment on the national interest aspects of the Chevron U.S.A. project.

Sincerely,

A handwritten signature in cursive script that reads "Don Hodel". The signature is written in dark ink and is positioned below the word "Sincerely,".

DONALD PAUL HODEL



THE SECRETARY OF DEFENSE
WASHINGTON, THE DISTRICT OF COLUMBIA

338650

12 AUG 1983

Honorable Malcolm Baldrige, Jr.
Secretary of Commerce
Washington, D.C. 20230

Dear Mac:

Thank you for your July 19, 1983 letter that invited our views regarding the national interest in a Chevron U.S.A. project for oil and gas production from the Point Arguello Field, offshore Points Arguello and Conception, California. At your suggestion, the Deputy Assistant Secretary of the Navy (Installations and Facilities), our executive agent for such matters, will provide our views to your Office of Ocean and Coastal Resource Management.

Thank you again for the opportunity to comment on the Chevron U.S.A. proposal.

Sincerely,

A handwritten signature in dark ink, appearing to be "S. J. ...", written in a cursive style.



Chevron U.S.A. Inc.
2120 Diamond Boulevard, Concord, California
Mail Address: P.O. Box 4010, Concord, CA 94524

RECEIVED
JUN 16 1983
CALIFORNIA
COASTAL COMMISSION

Richard J. Harris
District Land Supervisor
Outer Continental Shelf
Land Department, Western Region

June 13, 1983

Point Arguello Development and
Production Plan
Santa Maria Basin

Mr. Peter L. Tweedt
Acting Director
Office & Ocean Coastal Resource
Management
United States Department of Commerce
3300 Whitehaven Street, N.W.
Washington D.C. 20235

Dear Mr. Tweedt:

We have recently received a letter addressed to you from Michael L. Fischer, Executive Director of the California Coastal Commission, requesting your assistance in determining the "national interest" of Chevron's Point Arguello Development and Production Plan. We appreciate the opportunity to give you our views.

I have enclosed an Executive Summary of our Plan to aid you in the study of its national interest aspects. Our Plan initially calls for one platform (Hermosa); two subsea pipelines (one for oil, one for gas) leading from the platform to shore; a continuation of the pipeline system onshore; and facilities at an existing site at Gaviota to process the oil and gas for subsequent transportation. The pipelines and the onshore processing facilities are being designed by Chevron to accommodate the estimated combined production of all the potential producers in the Point Arguello Field. Our Plan contemplates Platform Hermosa as the central platform for this field. Chevron is specifically designing this platform for the purpose of enabling future platforms in the area to tie into it. This is an important element of our Plan in that it implements both state and local environmental policies calling for the consolidation of facilities.

First and foremost, the national interest will be served by our Plan because development of the Point Arguello Field will make a substantial contribution to our country's energy self-sufficiency. The United States currently uses more than 16 million barrels of oil a day. While demand is expected to remain relatively stable, overall output in this country from currently producing fields will continue to decline. This means that new field discoveries of oil must be brought into production just to offset this decline and stay even with demand. Even so, imports will continue to provide between 35% and 40% of our total energy. It is estimated that the Point Arguello Field may contain as much as 500 million barrels of oil. Development of this field, starting with the Point Arguello Development and Production Plan, is a significant step toward achieving this country's stated goal of energy independence by increasing domestic oil production and commensurately decreasing foreign oil imports.

June 13, 1983

A second area wherein the national interest is served is the economy. Our Plan represents an investment that will exceed \$400,000,000. Many segments of the business community will benefit by this investment. The specific entities for work on this project have not yet been selected. However, let us give you an idea of the broad range of firms that must be utilized: steel manufacturing plants, platform fabrication yards, engineering firms, electrical firms, plumbing firms, welders, deep-sea divers, barge captains, tugboat operators and a myriad of businesses that support those listed. Thousands of jobs will either be perpetuated or created by this Plan.

Specifically, our Plan calls for the direct employment of approximately 240 people during the 5½ month installation phase of Platform Hermosa. The installation of the subsea pipeline will require approximately 100 people and construction of the onshore pipeline and facilities will require approximately 225 people. Once the platform and facilities are operational, approximately 100 people could be expected to be employed. These estimates do not include persons employed in the service industries nor other professional and technical personnel associated with either the platform or the onshore facilities.

Another aspect that cannot be ignored is the value of this Plan to the national treasury. We estimate that production from the Point Arguello Field will result in royalty payments to the Federal government in excess of \$2 billion.

Of equal importance is the compatibility of our Plan with the environment. Our Plan, when submitted to the Minerals Management Service for review, was accompanied by an Environmental Report. The conclusion of that Report was that our project could be pursued in total harmony with the environment and with other users of the coastal zone. In the next year, a major Environmental Impact Statement will be prepared which will address the environmental impacts our project is expected to make. The Environmental Impact Statement will support our conviction that all environmental impacts can be mitigated fully and that our project will be consistent with the national goal of energy independence, the nation's policy of environmental protection and the California Coastal Zone Management Plan.

We would be more than happy to visit you or meet with any agency representatives you feel appropriate to discuss our Plan in greater detail. If you have any questions, please call me at (415) 680-3033.

Very truly yours,



RJH:blp

cc: Mr. Michael Fischer
California Coastal Commission

Mr. Reid Stone
Minerals Management Service

[Handwritten scribble]



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
OFFICE OF OCEAN AND COASTAL RESOURCE MANAGEMENT
Washington, D.C. 20235

N/ORM4:NE

AUG 22 1983

RECEIVED

AUG 24 1983

CALIFORNIA
COASTAL COMMISSION

Mr. Michael Fischer
Executive Director
California Coastal Commission
631 Howard Street, 4th Floor
San Francisco, California 94105

Dear Mr. Fischer:

Enclosed are copies of the letters we have received from the Federal Energy Regulatory Commission, Department of Transportation, and the Coast Guard in response to Secretary Baldrige's request for the assistance of other Federal agencies in determining the nature of the national interest in Chevron's proposal for oil and gas development in the Point Arguello Field. We shall forward any additional letters as we receive them.

Sincerely,

[Handwritten signature]

Peter L. Tweedt
Director

Enclosures

cc: William Grant
Minerals Manager
Pacific OCS Regional Office
Department of the Interior
1340 West Sixth Street
Los Angeles, California 90017

Claire Ghylin
Chevron U.S.A., Inc.
2120 Diamond Boulevard
Concord, California 94524



FEDERAL ENERGY REGULATORY COMMISSION

WASHINGTON, D.C. 20426

AUG 5 1983

Honorable Malcolm Baldrige
Secretary of Commerce
Washington, D.C. 20230

Dear Secretary Baldrige:

Thank you for your letter of July 19, 1983, to Chairman Butler, in which you requested the views of the Federal Energy Regulatory Commission (FERC) regarding the national interest in the proposed development of the Point Arguello Field, offshore California. The proposed project would involve, among other things, the delivery of natural gas from offshore Federal leases through a submerged pipeline to onshore facilities, an activity under FERC jurisdiction. I am pleased to offer our initial views on this project.

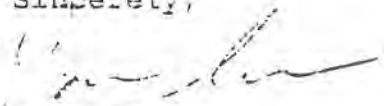
The development of domestic energy resources, such as those of the Point Arguello Field, can assist in satisfying the Nations energy requirements and can help reduce our dependence on foreign energy sources. Despite the fact that we are currently experiencing a surplus of certain forms of energy, national interest considerations should not be limited to the short term. The further development of domestic oil and gas resources is still consistent with the long-term interests of the United States.

At the same time that we acknowledge the national energy interests in developing this field, we also recognize the environmental sensitivity of the offshore and coastal areas of California. Development of the field should proceed in a manner compatible with the protection of the environment of offshore and coastal California and consistent with all Federal, State, and local environmental concerns.

To the extent the proposed construction activities fall within our certificate authority under the Natural Gas Act, the FERC will be responsible for the environmental analysis of the project. As project planning progresses, we ask that the Department of Commerce keep us informed of its concerns and of any new developments as they arise. FERC staff will contact the Minerals Management Service and State agencies in California to ensure that our involvement with the NEPA process can begin as soon as possible.

Thank you for requesting our comments on this project.

Sincerely,



Joan Simmons
Director
Intergovernmental Affairs

cc: Peter L. Tweedt, Director
Office of Ocean and Coastal
Resource Management
National Oceanic and Atmospheric
Administration
3300 Whitehaven Street, N.W.
Washington, D.C. 20235

Mr. Micheal L. Fischer
Executive Director
California Coastal Commission
631 Howard Street, 4th Floor
San Francisco, California 94105



U.S. Department of
Transportation

Office of the Secretary
of Transportation

Office of Assistant Secretary

400 Seventh St., S.W.
Washington, D.C. 20590

AUG 10 1987

CC:

Mr. Peter Tweedt
Acting Director, Office of Ocean
and Coastal Resource Management
National Oceanic and Atmospheric Administration
3300 Whitehaven Street, N.W.
Washington, D.C. 20235

Dear Mr. Tweedt:

This is in response to Secretary Baldrige's letter to Secretary Dole requesting the views of the Department of Transportation concerning national interest issues involved in a Chevron U.S.A. project for oil and gas production from the Point Arguello Field, in the Santa Barbara Channel.

We believe that there are a number of elements of the project which contribute to the national interest. Development of the substantial oil and gas resources in the Point Arguello field would decrease national dependence on potentially unreliable foreign sources of fuel, for both domestic and military uses. Investment in the project, estimated at \$400 million by Chevron, would stimulate economic growth and increase employment. Royalty payments and tax revenues would be increased as a result of the proposed development.

With respect to navigational safety, we have proposed, in the Coast Guard's Port Access Route Study, vessel traffic lanes which would be located seaward of the expected area of the Chevron development. Implementation of the proposed lanes should permit oil and gas development without negative impacts on navigation safety.

The views presented above represent a coordinated Departmental response, and reflect reviews of the Chevron proposal by the Maritime Administration, Coast Guard Headquarters and the Office of the Secretary. Detailed comments on vessel traffic safety and protection of the marine environment will be sent to you directly by Rear Admiral Fred P. Schubert, Commander, Eleventh Coast Guard District as soon as evaluation of the Chevron proposal and related data is completed.

Please let me know if I can be of further assistance.

Sincerely,

Franklin K. Willis
Deputy Assistant Secretary for
Policy and International Affairs



Chevron U.S.A. Inc.
 2120 Diamond Boulevard, Concord, California
 Mail Address: P.O. Box 8000, Concord, CA 94524

Chevron

RECEIVED
 AUG 25 1983
 CALIFORNIA
 COASTAL COMMISSION

Clair Ghylis
 General Manager
 Land Department, Western Region

August 22, 1983

Joint EIS/EIR
Point Arguello
Development and Production Plan

State of California
 Mr. Gordon Duffy
 Secretary of Environmental Affairs
 1102 Q Street
 Sacramento, CA 95814

Dear Mr. Duffy:

We met with representatives of the key federal, state and local agencies for our project on August 18, 1983. During the course of that meeting, we learned that the inter-agency Memorandum of Understanding will be executed in approximately one week. We did not learn, however, how the Joint Review Panel, to be established by the MOU, will be constituted. We would like to take this opportunity to give you our thoughts on that subject. Of course, our major concern is that there be no significant delay in the formulation of the Joint Review Panel.

We think that equal representation from the federal, state and local agencies on this Panel is very important. Each of the three levels of government represented, therefore, should speak with one voice. As far as the state is concerned, we have no objection to the inclusion of the California Coastal Commission and the State Lands Commission on the Panel. We believe it is important that each Commission be kept apprised of the progress of the EIS/EIR because of the role that each will play at the conclusion of that process.

In the event of a disagreement among the state agencies, the representative of your Office of Planning and Research would be essential to help find a state consensus.


We look forward to the joint EIS/EIR getting under way and working with this Panel.

Very truly yours,

Clair Ghylis

RJH:lkh

cc: William Grant - Minerals Management Service
 Claire Dedrick - State Lands Commission
 Michael Fischer - California Coastal Commission
 Dianne Guzman - Santa Barbara County

EXHIBIT NO. 13
APPLICATION NO. CC-12-83
Chevron U.S.A. Inc.
 California Coastal Commission

MODELING OF THE FATE OF DRILLING FLUID
DISCHARGES FROM PLATFORM HERMOSA

INTRODUCTION

A computer model has been developed by Exxon Production Research for API's Offshore Operator's Committee that predicts the fate of drilling fluid discharge in the marine environment. Using specific oceanographic data and mud characteristics, the distribution in time and space of soluble and solid mud components is estimated for both the water column and the bottom sediments. The model was tested using field and laboratory data and comparable results were obtained (Brandsma and Sauer, 1983).

This model has been used to predict the fate of drilling fluid discharges from the proposed Platform Hermosa in order to gain an understanding of the dispersion of muds and their distribution on the bottom in this vicinity under different oceanographic conditions. At present this model is in draft form embodying refinements not present in earlier drafts and possibly lacking some refinements which will be present in the final form. This should be kept in mind in reviewing the results presented here.

ENVIRONMENTAL CONDITIONS AT THE
PROPOSED SITE

Platform Hermosa will be located 8.5 nmi (15.7 km) due west of Pt. Conception and 5.9 nmi (10.9 km) due south of Point Arguello in 602 feet (183 m) of water. Oceanographic conditions in this vicinity vary seasonally and are characterized by three different periods. Current profiles for these periods were drawn largely from Joy and Hansen (1982) and Hansen and Joy (1981).

During the Oceanic period (from roughly July to November) the California Current dominates the nearshore current patterns. This current is a southeastward flow of Subarctic water which follows the coastline south past Point Conception. This current may extend to 1000 km offshore and varies in depth from 100 to 500 m (328-1640 ft.). During the Oceanic period surface currents traveled southeast (130°), NNW (325°) or ENE (75°). Mid-depth currents generally ran WNW (285°), and bottom currents traveled primarily southeast (135°).

From around the middle of November to mid-February the Davidson Current, a surface manifestation of an existing northward-moving countercurrent, is the dominant inshore transporter of water. The water mass associated with the Davidson Current is warmer and more saline than the California Current. Surface currents during the Davidson period were recorded traveling WNW (280°), northwest (310°), or southeast (130°). WNW currents (285°) were recorded at mid-depths, and bottom currents traveled generally in a southeasterly direction (135°).

Upwelling is prevalent along the California coast during the period from about February 15 to the end of July. The water mass associated with this upwelling current is cold and saline. Measurements taken during the Upwelling period indicated variable surface currents, primarily in a southeasterly direction (130°) but also northeast (45°) or WSW (250°). Mid-depth currents (around 300 feet) were generally WNW (285°), and bottom currents ran primarily southeast (135°).

Velocity profiles for the three periods were similar. Current speeds ranged from 0-1 kn. Average surface currents were about 0.5 kn (0.84 ft/sec.). Mid-depth current velocity averaged about 0.30 kn (0.51 ft/sec.), and bottom current velocities averaged about 0.15 kn (0.25 ft/sec.).

MODEL SIMULATION CONDITIONS

Four simulations of mud discharges from Platform Hermosa were conducted based on the oceanographic conditions and current speeds (Table 1). Simulation No. 1 reflects conditions existing at times in both the Oceanic and the Upwelling periods with surface currents running southeast parallel to the coast at average current velocities. Simulation No. 2 represents the same current conditions with reduced velocities. Simulation No. 3 approximates the Davidson period, with surface currents running northwesterly parallel to the coast at "average" velocities. Mid-depth and bottom currents for these three simulations were the same. The fourth simulation illustrates the hypothetical case where all currents are going in the same direction at average velocities.

Density structures for the three periods were constructed from temperature and salinity profiles measured offshore Point Arguello (Reid, 1975) and density tables in Riley and Chester (1971). Density curves for the Davidson and Oceanic periods were similar, while density was greater for the Upwelling period. Density gradient No. 1 (Upwelling) was used for simulations 1 and 2. Simulation No. 3 was computed using the density gradient corresponding to the Davidson period. The density profile for the Oceanic period was used in Simulation No. 4.

Wave heights and periods were estimated from Chevron Oil Field data collected for the platform design (Fluor Ocean Services, 1983; A. R. Fallon, pers. comm.) (Table 1). These parameters in fact have little effect since the discharge pipe is situated at 150 ft.

It is estimated that the most commonly used mud for these wells will be a lightly-treated lignosulfonate mud (Generic Mud Type 7) with a density of 10.1 pounds per gallon and

initial solids concentration of 3.04×10^5 mg/l. A bulk discharge of 480 bbl at 480 bbl/hr was used for these simulations, discharged at a depth of 150 ft. from a 48-in. diameter pipe. Since discharges of this size will occur only a few times during the drilling of a well, these simulations represent maximum, worst case discharge conditions.

SIMULATION RESULTS

All simulations were run over a period of 60,000 sec. (16.6 hrs.). Several time points for each simulation are presented in Tables 2 and 3. The maximum concentrations of mud in the water column were selected at each time point from grids showing the distribution of muds in the water, and dilution ratios were computed from these values.

The soluble components of the mud are dispersed more slowly than the particulate matter. Table 2 shows the results of the four simulations for this most conservative situation, the dilution of any soluble fluid component. In all four simulations using average current velocities a dilution of 300:1 was reached in about 2 minutes. In the average velocity simulations, a dilution of 1200-1500:1 occurred in 10-13 minutes, resulting in concentrations of 70-85 $\mu\text{g/ml}$ (ppb) 27-37 feet from the discharge pipe. This concentration is orders of magnitude below toxic levels in the water column. In the Davidson and Oceanic periods dilutions of four orders of magnitude (around 20,000:1) were achieved in 10,000 sec. (2.8 hrs.) at a distance of 4000-5000 ft. (1219-1524 m). Maximum concentrations were 1.64-4.26 $\mu\text{g/l}$ at this point. The Upwelling, low velocity period showed lower dilutions initially and reached a dilution of 20,000:1 at a shorter distance of 1500 ft. (457 m) in 10,000 sec. Dilution was greater in 10,000 sec. for the Upwelling average velocity period (61,000:1) at a distance of

4000 ft. (1219 m) and a concentration of 5.14 $\mu\text{g}/\text{l}$. At the end of the simulation (16.6 hr) dilutions were 380,000:1 (Upwelling velocity) and 40,000-48,000:1 for the other conditions.

Mud solids show different dispersion characteristics from the soluble component. After discharge they descend through the water column, in addition to dispersing more than soluble components. Consequently dilution ratios are greater for mud solids than for fluids.

Initial dispersion for muds can be described as similar or greater than that of the fluid component, e.g., 300:1 dilution in about two minutes, resulting in concentrations around 1000 mg/l (ppm). For the longer term (Table 3) dilutions were similar for the four simulations at 2000 sec. (33 min.) (1100-1300:1 at 100 feet from the discharge). Dilutions for simulations 1, 3, and 4 with average velocities at 10,000 sec. (2.8 hrs.) were similar (33,000-44,000:1) at similar distances from the discharge point (4000-5000 ft., 1219-1524 m), resulting in mud solid concentrations of 7-9 mg/ml, which is orders of magnitude below concentrations found to be toxic in the water column. In the low velocity simulation the solids traveled more slowly, resulting in a maximum concentration of 14 mg/ml at a distance of 1500 ft. (457 m) after 10,000 sec. and 5 mg/ml at 3000 ft. (914 m) after 20,000 sec. The solids traveled farther in simulations 3 and 4 than in the Upwelling simulations. Dilutions achieved after 16.6 hr. were 3,000,000:1 for the Upwelling high velocity situation and 460,000-480,000:1 for the other conditions. Due to rapid dilution, toxic levels are present for only a short duration in a small area.

The model also allows us to look at the material settling on the bottom. For the four conditions 17-20% of the mud solids settled out within the 16.6 hr. simulation period. In both

Upwelling simulations most of the material settled within 8000 ft. (2.4 km) of the platform in a westerly direction, corresponding to a coverage of about 1.5 g/m² over a 3.0 km² area for the high velocity and 0.70 g/m² over 7.4 km² for the low velocity condition, where the mud was concentrated nearer the platform (1.8 km). The mud was dispersed farther during the Davidson period and the unidirectional simulation, settling in a northwesterly direction within 16,000 ft. (4.9 km) and 24,000 ft. (7.3 km) respectively, corresponding to coverages of 0.86 g/m² (4.5 km² area) and 0.5 g/m² (7.8 km² area). Thus sedimentation from bulk mud discharges will not result in sufficient deposition or concentrations to adversely impact the benthos. (Note that cuttings discharges have not been modeled in these simulations.)

Several different current scenarios have been considered in these simulations. In the Upwelling period surface and bottom currents traveled southeast while the mid-depth current was in the opposite direction, which could lead to minimal dispersion, especially for the low velocity current regime. Simulation No. 4 represented the situation in which all currents were in the same direction, ostensibly leading to a different distribution of the solids. The simulations indicated that plumes were concentrated around 300-350 ft. depth (Upwelling) and 275 ft. (Davidson and Oceanic periods) and apparently were most strongly affected by the mid-depth current at 285°. This current was consistently reported bearing around 285° and was therefore held constant for all the simulations. Bottom currents apparently also had relatively little effect on the plumes. This accounts for the major distribution in the simulations of the solids west or northwest of the platform site in deeper water regardless of the surface and bottom current direction and means that for most current situations encountered here the 1000 m "buffer zone" and the adjacent State waters will not be impacted.

Muds were deposited on the bottom primarily within 2.4 km in the Upwelling period and 4.9 km and 7.3 km during the other two periods. With a west or northwest current direction the solids would actually take longer to settle than estimated here due to the increasing depth offshore. On the other hand, if the currents traveled toward shore (an unlikely situation) the solids would settle sooner and within a shorter distance due to the shallower depths. The concentrated portion of the plume will impact the bottom and settle out around the 300 ft. contour, which is seaward of the 1000 m state "buffer zone" boundary in most of the Pt. Conception area. Under the prevailing current conditions, however, the ultimate fate of dispersed mud will be offshore in greater depths.

The results of these simulations must be interpreted relative to the biological impact of discharged mud solids in the water column. It is extremely unlikely that any organisms in the vicinity of a discharge will actually be exposed continuously to high concentrations of mud for 96 hrs., the duration of most acute bioassays. Chronic bioassays are conducted over longer periods. Dispersion is very rapid, reaching a dilution of 300:1 in two minutes. In the worst case of a mud with a 96 hr. LC_{50} of 400 mg/l (measured for a larval stage of a sensitive species; Neff, 1982), the duration of this level of exposure under any of the simulation conditions would not exceed one-half to one hour. The toxicity of muds to be discharged in California waters will not exceed an LC_{50} of 10,000 mg/l for either the aqueous or the suspended particulate phase and previous bioassay of the generic mud to be used showed an LC_{50} of greater than 200,000 mg/l (Ayers and Sauer, 1983). In addition, this exposure is for a bulk discharge, which will occur only a few times during the drilling of a well. Thus the water column effects of discharge of drilling fluids will be localized at the site and will be minimal outside this vicinity.

RESULTS OF SIMULATIONS

1. Dilution of drilling fluids is very rapid, resulting in nontoxic concentrations of both soluble and particulate components in the water column within a short period of time.

The 96-hour LC_{50} for generic drilling muds is 10,000 ppm and greater. In the worst case, concentrations in the water column after 2 minutes were 0.3 ppm within 40 ft. of the platform. These concentrations are orders of magnitude below toxic levels.

2. Plumes are concentrated at a depth of 300-350 ft. during upwelling periods, and at 275 ft. depths at other times. Thus, the mid-depth current has the greatest effect on dispersion, overriding shallow and bottom currents. The mid-depth current was consistently reported as a WNW current, year-round, therefore mud discharges will disperse and settle to the west or northwest of the platform site. This was shown by the model. In sixteen hours 17-20% of the solids settled to the bottom at a concentration of 1.5 g/m^2 or less to the west or northwest of the platform site.
3. Under the usual current conditions the discharge will not impact State waters. Should the unlikely situation of shoreward transport occur, the bulk of the discharge will settle around the 300-ft contour, outside of the coastal zone. Furthermore, in the rare instance when currents towards shore have been recorded, their relocation were very slow. Therefore, the plume can be expected to settle out much faster than shown in this simulation.

This represents the greatest area which could be affected, because the model assumes a constant depth around the platform. In actuality, the ocean bottom slopes upward to the Northeast of the platform. Thus, the discharge will settle out sooner, as soon as it "hits" the slope.

Based on the results of these simulations, we feel that discharge of drilling fluids from Platform Hermosa will not adversely impact water column or benthic biota in the Point Conception Area.

REFERENCES

1. Ayers, R. C. Jr. and Sauer, T. C. Jr. (1983) The generic mud concept for offshore drilling for NPDES permitting. In: Proceedings, IADC/SPE 11399 1983 Drilling Conference: 327.
2. Fluor Ocean Services (1983) Structural design premise, drilling and production Platform Hermosa.
3. Hansen, R. M. and Joy, J. W. (1981) Wave, current and wind measurement program during exploratory drilling operations in the western Santa Barbara Channel, Station A Report 1338 I, Intersea Research Corporation.
4. Joy, J. W. and Hansen, R. M. (1972) Extreme currents near Point Conception, Report 1353, Intersea Research Corporation.
5. Neff, J. M. (1982) Fate and biological effects of oil well drilling fluids in the marine environment: a literature review. Report to U.S. EPA, Gulf Breeze, FL. EPA-600/S3-82-064, 151 pp.
6. Reid, J. L. (1965) Physical oceanography of the region near Point Arguello, IMR Reference 65-19, Institute of Marine Resources, University of California.
7. Riley, J. R. and Chester, R. (1971) Introduction to Marine Chemistry, Academic Press, New York.
8. Sauer, T. C. Jr. (1983) The OOC model prediction of short term fate of drilling mud in the ocean. In: Workshop Proceedings, An Evaluation of Effluent Dispersion and Fate Models for OCS Platforms, pp. 57-106. MBC Applied Environmental Sciences.

TABLE 1

SIMULATION CONDITIONS

Current Conditions

	<u>Upwelling Period #1</u>	<u>Upwelling Period #2</u>
Surface	130°, 0.84 ft/sec.	130°, 0.20 ft/sec.
Mid-depth	285°, 0.51	285°, 0.20
Bottom	135°, 0.25	135°, 0.10
	<u>Davidson Period #3</u>	<u>Oceanic Period #4 *</u>
Surface	280°, 0.85 ft/sec.	285°, 0.84 ft/sec.
Mid-depth	285°, 0.51	285°, 0.51
Bottom	135°, 0.25	285°, 0.25

Density Gradient (g/ml)

<u>Depth (ft)</u>	<u>Upwelling #1, 2</u>	<u>Davidson #3</u>	<u>Oceanic #4</u>
0	1.02544	1.02452	1.02479
50	1.02571	1.02484	1.02503
100	1.02592	1.02509	1.02534
200	1.02633	1.02575	1.02604
300	1.02667	1.02627	1.02649
400	1.02692	1.02665	1.02677
500	1.02715	1.02692	1.02705
600	1.02732	1.02723	1.02726

Wave Height and Period

	<u>Upwelling #1, 2</u>	<u>Davidson #3</u>	<u>Oceanic #4</u>
Height (ft.)	3.5	3.6	3.6
Period (sec.)	8.0	10.0	9.0

Discharge Conditions

Discharge: 480 bbl at 480 bbl/hr.

Discharge pipe: Depth 150 ft.
Diameter 48 in.

* Note: This does not mean that all three currents are unidirectional during the Oceanic Period. The actual current pattern for the Oceanic Period is represented by Upwelling Period #1. This is a hypothetical situation.

TABLE 1 (continued)

SIMULATION CONDITIONS

Mud Characteristics

Mud Density: 10.1 ppg
 Initial Solids Concentration: 3.04×10^5 mg/ml

Mud Solids

<u>Category</u>	<u>Solid Density (g/cm³)</u>	<u>Volume Fraction in mud</u>	<u>Fall Velocity (ft/sec.)</u>
1	3.053	.00796	1.68×10^{-2}
2	3.053	.01194	7.22×10^{-3}
3	3.053	.01592	3.68×10^{-3}
4	3.053	.03582	2.16×10^{-3}
5	3.053	.01592	1.25×10^{-3}
6	3.053	.01194	2.62×10^{-4}

Mud Fluid

Volume fraction 0.9005
 Soluble component concentration 100 mg/ml
 (ambient background - $1 \mu\text{g/ml}$)

~10% of the fine solids were uniformly forced from the plume during the plume's descent to form the upper plume observed in mud discharges.

TABLE 2

DILUTION RATIOS FOR A CONSERVATIVE
FLUID SOLUBLE COMPONENT

	Time (sec)	Distance (ft)	Maximum Concentration $\mu\text{g/l}$	Maximum Concentration Dilution Ratio
Upwelling Period ²	21.1	5.7	3,333	30:1
	133.5	27.4	333	300:1
	619.5	123.0	83	1,210:1
	10,000	4,000	1.64	60,980:1
	20,000	8,500	0.26	384,610:1
Upwelling Period ³	22.4	1.1	3,333	30:1
	141.8	4.4	333	300:1
	1,045.3	99.4	130	800:1
	10,000	1,500	5.14	19,490:1
	20,000	3,000	2.52	39,680:1
Davidson Period ⁴	18.0	7.7	3,333	30:1
	78.2	37.7	333	300:1
	750.9	432.1	70.3	1,420:1
	10,000	5,000	4.03	24,810:1
	20,000	12,000	2.07	48,310:1
Oceanic Period ⁵	8.7	3.1	3,333	30:1
	76.8	37.0	333	300:1
	786.7	452.1	68.0	1,470:1
	10,000	5,000	4.26	23,470:1
	20,000	12,000	2.19	45,660:1

¹Initial concentration of soluble component in mud
fluid - $1.0 \times 10^5 \mu\text{g/ml}$ (100 mg/l)

²Upwelling Period simulation #1

- current variation (130°, 285°, 135°, at surface, mid-depth, and bottom)
- high velocity (0.84, 0.51, 0.25 ft/sec. at surface, mid-depth, and bottom)
- 480 bbl at 480 bbl/hr.

³Upwelling Period simulation #2

- same as #1 except low velocity (0.2, 0.2, 0.1 ft/sec)

⁴Davidson Period simulation #3

- current variable (280°, 285°, 135°)
- high velocity (0.84, 0.51, 0.25 ft/sec.)
- 480 bbl at 480 bbl/hr.

⁵Oceanic Period simulation #4

- current unidirectional 285°
- high velocity (0.84, 0.51, 0.25 ft/sec.)
- 480 bbl at 480 bbl/hr.

TABLE 3

DILUTION RATIOS FOR MUD SOLIDS

	Time (sec)	Distance (ft)	Maximum Concentration mg/l)	Maximum Concentration Dilution Ratio
Upwelling Period ²	2,000	100	239.5	1,270:1
	10,000	4,000	6.93	43,970:1
	20,000	8,500	3.06	99,350:1
	40,000	18,500	0.10	3,102,000:1
Upwelling Period ³	2,000	100	266.7	1,140:1
	10,000	1,500	14.04	21,650:1
	20,000	3,000	4.98	61,040:1
	40,000	6,500	0.63	482,540:1
Davidson Period ⁴	2,000	100	273.42	1,110:1
	10,000	5,000	9.02	33,700:1
	20,000	11,000	3.27	92,970:1
	40,000	23,000	0.66	460,610:1
Oceanic Period ⁵	2,000	100	277.6	1,095:1
	10,000	5,000	9.27	32,800:1
	20,000	11,000	3.28	92,680:1
	40,000	23,000	0.65	467,690:1

¹Initial concentration of solids in mud - 3.04×10^5 mg/l

²Upwelling Period simulation #1

- current variable (130°, 285°, 135°, at surface, mid-depth, and bottom)
- high velocity (0.84, 0.51, 0.25 ft/sec. at surface, mid-depth, and bottom)
- 480 bbl at 480 bbl/hr.

³Upwelling Period simulation #2

- same as #1 except low velocity (0.2, 0.2, 0.1 ft/sec.)

⁴Davidson Period simulation #3

- current variable (280°, 285°, 135°)
- high velocity (0.84, 0.51, 0.25 ft/sec.)
- 480 bbl at 480 bbl/hr.

⁵Oceanic Period simulation #4

- current unidirectional 285°
- high velocity (0.84, 0.51, 0.25 ft/sec.)
- 480 bbl at 480 bbl/hr.

Chevron



Chevron U.S.A. Inc.

2120 Diamond Boulevard, Concord, California
Mail Address: P.O. Box 8000, Concord, CA 94524

Land Department
Western Region

October 27, 1983

RECEIVED AT COMMISSION
MEETING

OCT 27 1983

FROM _____

Point Arguello
Development and Production Plan

Mr. Michael L. Fischer
California Coastal Commission
631 Howard Street, 4th Floor
San Francisco, CA 94105

Dear Mr. Fischer:

Here is a copy of the statement which we read into the record at the Coastal Commission hearing on October 26, 1983.


We are offering this statement as additional information under Section 9.4 of our Development and Production Plan.

We have advised Mr. Dunaway of the Minerals Management Service of this statement and he is in receipt of a copy.

Very truly yours,


Richard J. Harris

RJH:pkc
Attachment

EXHIBIT NO. 14
APPLICATION NO. CG-12-83
Chevron U.S.A.
 California Coastal Commission

CHEVRON'S POSITION
CALIFORNIA OFFSHORE CRUDE OIL TRANSPORTATION AND REFINING

There are still many unknowns associated with future production of California offshore crude oil. Further drilling is needed to better define both the quantity and quality of this resource. Refinery modifications will be required to process this crude and the environmental permits for these modifications may be difficult to obtain. Chevron's current position on the complex problems concerning transporting and refining its California offshore crude oil is as follows:

1. As of today, Chevron's preferred option for transporting and refining its California offshore crude oil production from at least its initial platforms is to pipeline it to Los Angeles and refine it in its El Segundo Refinery.
 2. Chevron would participate in an industry crude oil pipeline if constructed from Santa Barbara to Los Angeles. In the interim, until this pipeline is constructed and in operation, Chevron will use a marine terminal. (1)
 3. Chevron's preferred option is contingent on obtaining the required permits.(2) If these permits are not available, it will be necessary to transport and refine the crude oil at locations other than its El Segundo Refinery. This may require a new marine terminal in Santa Barbara County.
 4. As more platforms are installed and experience is gained in the quantity and quality of crude oil, Chevron will review its position on the need for a marine terminal. If future production exceeds the El Segundo Refinery capacity for offshore crude, then transportation to other Chevron refineries will be required. If pipelines are available to those refineries, Chevron will use them in preference to a marine terminal.
 5. Chevron will continue in industry studies being conducted for a new marine terminal in Santa Barbara. This will be required as a fall-back position if the necessary permits for Los Angeles are not obtained, or if future production exceeds El Segundo capacity for offshore crude and pipelines are not available to other refineries.
 6. Chevron recognizes that other producers of offshore crude may not have outlets for their crude in Los Angeles. Other means of transporting their crude oil, including perhaps a new marine terminal will be required by them.
 7. Pursuant to the request of Santa Barbara County, Chevron will continue to participate in the development of the County's Oil Transportation Plan. The issue of transportation options to be utilized is most appropriately handled by Santa Barbara County as it implements its Local Coastal Plan, which has been certified by the Coastal Commission. In particular, the Local Coastal Plan requires the County to conduct a pipeline feasibility analysis.
-
- (1) If the new pipeline is constructed by late 1987, the existing Gaviota marine terminal may have sufficient capacity to handle industry Point Arguello production.
 - (2) Permits for major modifications at the El Segundo Refinery that would fall under the EPA construction ban would not be required.

Revised 10/21/83
10:30a.m.



Chevron U.S.A. Inc.
 575 Market Street, San Francisco, California
 Mail Address: P.O. Box 7643, San Francisco, CA 94120-7643

RECEIVED

NOV 04 1983

CA Coastal Commission

November 4, 1983

**Point Arguello
 Field Development & Production Plan
 Crude Transportation**

Mr. Michael L. Fischer
 California Coastal Commission
 631 Howard Street
 San Francisco, CA 92103

Dear Mr. Fischer:

This letter amplifies our position on the transportation of crude oil and supplements the statement we made to the Coastal Commission on October 26, 1983.

EXHIBIT NO. 15
APPLICATION NO. CC-12-83
Chevron U.S.A.
 California Coastal Commission

Transportation of Chevron's Share of Crude Oil

Chevron commits to transport its California offshore crude oil produced from the Point Arguello Field by pipeline to its El Segundo refinery. This commitment is contingent on obtaining the required permits and the construction of an industry-sponsored crude oil pipeline to Los Angeles. Chevron may, on an interim basis, use the existing Getty Marine Terminal at Gaviota until such time as a new or expanded consolidated marine terminal is operational, an industry sponsored pipeline to Los Angeles is constructed and operational, or January 1, 1990, whichever occurs first; provided however, that should acts of God, acts of government or other circumstances beyond the control of Chevron prevent the construction of either a new or expanded consolidated marine terminal or industry-sponsored pipeline to Los Angeles by January 1, 1990, then this date shall be extended until such time as a new or expanded consolidated marine terminal is operational or an industry-sponsored pipeline to Los Angeles is operational. However, if such a pipeline is not under construction by January 1, 1986, Chevron will assume the lead role in arranging for the design, permit, organization and capitalization of an industry-sponsored pipeline to Los Angeles. This will enable Chevron, to attempt in good faith, to phase out its interim use of the Getty Marine Terminal by January 1, 1990. The industry-sponsored pipeline to Los Angeles will be designed to provide the capacity to transport the Point Arguello Field crude oil production of other companies should such other companies decide or be required to use it. You and your staff recognize that obtaining required permits and sufficient industry support are conditions to this pipeline. After such a pipeline is operational, Chevron will transport its California offshore crude oil committed to such pipeline by tanker only if there is a temporary disruption of pipeline or refinery operations. If such tanker transport become necessary, Chevron shall use only a marine terminal which

Mr. Michael L. Fischer

-2-

November 4, 1983

has been lawfully authorized, and will not use such terminal for the sole purpose of extending the life of the terminal beyond that which is authorized by the implementation of Santa Barbara County's Local Coastal Program.

Transportation of Other Companies' Share of Crude Oil

Chevron's partners have been requested to provide the Commission staff with statements of intent regarding the transportation of their share of the crude oil produced from the Point Arguello Field. You recognize that the questions regarding the transportation of this crude oil will be more effectively examined, conditioned and permitted by Santa Barbara County in the implementation of its Local Coastal Program. In any event, you know that any facilities proposed to connect the Gaviota processing facilities with a marine terminal must be found consistent with the California Coastal Act. Further, all companies planning to use these facilities will have to apply for that use either individually or as co-applicants. Moreover, it is understood that the Getty Marine Terminal at Gaviota may become a non-conforming use under the Local Coastal Program. If this becomes the case, Commission concurrence in the consistency certification of this DPP will not prevent the phasing out of the existing Gaviota terminal after a pipeline and/or a consolidated marine terminal is operational. Chevron acknowledges and has advised its partners that the Commission's concurrence in the consistency certification of this DPP does not authorize the transportation of crude oil by any permanent method other than as specified above.

Yours very truly,

Clair Ghylin
General Manager - Land
Western Region

11/15/83 2:00 PM Sun
Champlin

November 8, 1983

Mr. Michael Fischer
Executive Director
California Coastal Commission
631 Howard Street, 4th Floor
San Francisco, CA 94105

Reference: Platform Hermosa Consistency Certification

Dear Mr. Fischer:

The attached statement represents Champlin Petroleum Company's position as to the transportation and refining of its offshore crude oil. Champlin has a 20% interest in Platform Hermosa. This statement is being forwarded to you for your information and further handling with the commission. It is our understanding from Chevron that you requested this statement in advance of the final hearing on November 15, 1983. Our representative, Mr. Ed Gladish, stands ready to read this statement into the record.

Sincerely,


Don R. Hankins

DRH:kb

Attachment

CC: Mr. Ed Gladish
Champlin Petroleum Company
5800 South Quebec Avenue
Englewood, CO 80202

Mr. R. J. Harris
Chevron U. S. A. Inc.
2120 Diamond Blvd.
Concord, CA 94520

CHAMPLIN PETROLEUM COMPANY'S POSITION
CALIFORNIA OFFSHORE CRUDE OIL TRANSPORTATION AND REFINING

There are still many unknowns associated with future production of California offshore crude oil. Further drilling is needed to better define both the quantity and quality of this resource. Refinery modifications will be required to process this crude and the environmental permits for these modifications may be difficult to obtain. Champlin's current position on the complex problems concerning transporting and refining its California offshore crude oil is as follows:

1. As of today, Champlin's preferred option for transporting and refining its share of Santa Barbara Channel offshore crude oil production from its initial platforms is to pipeline it to Los Angeles for refining in Champlin's Wilmington Refinery.
2. Champlin would utilize an economically competitive industry crude oil pipeline if constructed from Santa Barbara to Los Angeles. In the interim, until this pipeline is constructed and in operation, Champlin will use a marine terminal. If the new pipeline is constructed by late 1987, the existing Gaviota marine terminal may have sufficient capacity to handle industry Point Arguello production.
3. As more platforms are installed and experience is gained in the quantity and quality of crude oil, Champlin will review its position on the need for a marine terminal. If future production exceeds the Wilmington Refinery capacity for offshore crude, then transportation to other refineries will be required. If pipelines are available to those refineries and are economically competitive, Champlin will use them in preference to a marine terminal.
4. Champlin will continue to participate in industry studies being conducted for a new marine terminal in Santa Barbara. This facility will be required as a fall-back position if the necessary permits are not obtained, or if future production exceeds Wilmington capacity for offshore crude and economically competitive pipelines are not available to other refineries.
5. Champlin recognizes that other producers of offshore crude may not have outlets for their crude in Los Angeles. Other means of transporting their crude oil, including perhaps a new marine terminal will be required by them.
6. Champlin's preferred option is contingent on implementing the required modifications at its Wilmington Refinery. If required permits are not available, it will be necessary to transport and refine the crude oil at locations other than its Wilmington Refinery. This may require a new marine terminal in Santa Barbara County.
7. Pursuant to the request of Santa Barbara County, Champlin will continue to participate in the development of the County's Oil Transportation Plan. The issue of transportation options to be utilized is most appropriately handled by Santa Barbara County as it implements its Local Coastal Plan, which has been certified by the Coastal Commission. In particular, the Local Coastal Plan requires the County to conduct a pipeline feasibility analysis.

RECEIVED

NOV 14 1983

CA Coastal Commission

Department
of Transportation
United States
Coast Guard



Commandant
United States Coast Guard

Washington, DC 20593
Staff Symbol: G-WP-3
Phone: (202) 426-2262

1

3

The Honorable Malcolm Baldrige
Secretary of Commerce
Washington, D. C. 20230

Dear Mr. Secretary:

In response to your letter of July 19, the Coast Guard appreciates the opportunity to express its views with respect to the "national interest" in the Chevron U.S.A. oil and gas production project, offshore Point Arguello Field, California.

Since the Department of Transportation is preparing a coordinated Departmental response to the California Coastal Commission through the Office of Ocean and Coastal Resources Management, NOAA, we are having our comments incorporated in that response.

Sincerely,

A handwritten signature in black ink, appearing to read "J. S. Gracey", written over a horizontal line.

J. S. GRACEY
Admiral, U. S. Coast Guard
Commandant

U.S. DEPT. OF TRANSPORTATION
OFFICE OF THE SECRETARY
EXECUTIVE SECRETARIAT
AUG 9 3 16 PM '83



DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

GLUS

MAILING ADDRESS:
COMMANDER (mes)
ELEVENTH COAST GUARD DISTRICT
UNION BANK BLDG.
400 OCEANGATE
LONG BEACH, CA. 90822

16475

11 August 1983

Mr. Peter Tweedt
Office of Ocean and Coastal Resource Management
3300 Whitehaven St. N. W.
Washington, D.C. 20235

Dear Mr. Tweedt:

I have been asked by our Headquarters to comment directly to you on the Chevron Plan of Development (POD) for the Point Arguello Field. The Coast Guard concerns relate primarily to navigation safety, oil spills and personnel safety. With regard to personnel and navigation safety, we feel the risks are minimal. Platform Hermosa will be located several miles from the Santa Barbara Channel Traffic Separation Scheme. It will be outfitted with appropriate lights, sound signals, radio, radar and will be painted a color which provides maximum visibility in times of adverse weather. Likewise, it will be designed and inspected to ensure compliance with federal regulations concerning life saving and other personnel/platform safety equipment. These regulations are among the most stringent in the world and have proven effective.

We perceive the risk of a significant oil spill from this project to be low. The potential impact to the Channel Islands and/or California Coast could be quite high if oil threatened either and if response equipment and measures were not adequate. The MMS, based upon our recommendation, recently approved the oil spill plan, for Platform Hermosa. The plan, while meeting our standards will require routine updating about one year before drilling starts. At that time we will review the existing and planned spill response system and determine what, if any, additional equipment may be needed. This review will be based upon the federal guidelines which exist at the time and on our best estimate of the state of the art of spill technology. The review will consider the risk to the environment from spills, Chevron's on-scene equipment, that of the oil spill cooperative and other operator's equipment in the near vicinity.

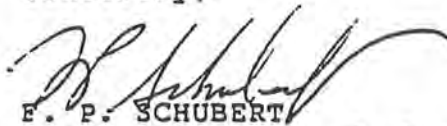
We know Chevron is reconsidering their proposed on-site spill response equipment and is planning to upgrade it with state-of-the-art equipment more capable of operating in the area. We expect this will be reflected in an updated spill contingency plan. This will result in an on site spill response capability suitable to handle small spills in the area.

(mes)
16465
11 August 1983

Response to large oil spills will require the support of the local oil spill cooperative. Its vessels are now stationed at least 5-6 hours away. Industry is giving consideration to stationing one or two more large oil spill response vessels in the vicinity of Point Conception. Since large spills from the Arguello Field could quickly impact several highly sensitive areas, strong consideration should be given to this enhancement of the cooperative. The State of California has recognized the environmental sensitivity of this area and has included such a stipulation in its proposed lease of state waters between Point Conception and Point Arguello. I support the State in this matter and encourage the early acquisition of at least one of these vessels for stationing in the vicinity of the Arguello Field.

In summary, I don't feel there is significant risk to navigation or personnel safety. Response to small oil spills should be adequately handled by Chevron as depicted in their Oil Spill Contingency Plan. Finally, response to large spills can be enhanced by stationing a large oil spill response vessel in the general area.

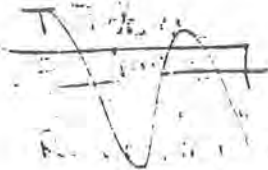
Sincerely,



F. P. SCHUBERT
Rear Admiral, U. S. Coast Guard
Commander, Eleventh Coast Guard District

Copy: Mr. Gordon Duffy, Secretary Environmental Affairs
Mr. Micheal Fischer, California Coastal Commission
Commandant (G-WP)

Calla



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
OFFICE OF OCEAN AND COASTAL RESOURCE MANAGEMENT
Washington, D.C. 20235

AUG 12 1983

RECEIVED

AUG 18 1983

CALIFORNIA
COASTAL COMMISSION

Mr. Michael Fischer
Executive Director
California Coastal Commission
631 Howard Street, 4th Floor
San Francisco, California 94105

Dear Mr. Fischer:

Enclosed are copies of the letters we have received from the Department of the Treasury and the National Marine Fisheries Service in response to Secretary Baldrige's request for the assistance of other Federal agencies in determining the nature of the national interest in Chevron's proposal for oil and gas development in the Point Arguello Field. We shall forward any additional letters as we receive them.

Sincerely,

James P. Tweedt
for Peter L. Tweedt
Director

Enclosures

cc: William Grant
Minerals Manager
Pacific OCS Regional Office
Department of the Interior
1340 West Sixth Street
Los Angeles, California 90017

Claire Ghylin
Chevron U.S.A., Inc.
2120 Diamond Boulevard
Concord, California 94524





ASSISTANT SECRETARY

DEPARTMENT OF THE TREASURY

WASHINGTON, D.C. 20220

AUG 2 1983

ACTION: CHANDLER/EVANS
CC: PT
GCOS

Dear Mr. Tweedt:

Secretary Regan has asked me to respond to Secretary Baldrige's request for the Treasury's views on the Chevron project to develop the Point Arguello field. The Treasury response considers only the national interest and usually does not focus on specific energy projects.

Developing domestic energy resources is important for reasons of national security, balance of payments, and economic well-being. Increased production of domestic oil and natural gas displaces imports. Some imports come from unreliable sources and an import reduction increases national security. Since oil imports are a major contributor to our import bill, a reduction of oil imports reduces trade deficits. Increased oil supply also puts downward pressure on energy prices and in that way reduces inflation and encourages economic growth.

In addition, other benefits accrue from increased development of domestic energy. By increasing employment and corporate profits domestic energy development increases net Federal revenues and reduces budget deficits. Furthermore, in this case the development is in an area under Federal jurisdiction, and consequently will generate royalty payments to the Treasury that should help reduce the Federal deficit.

In summary, the Treasury believes that development of the Port Arguello field is in the national interest.

Sincerely,

Manuel H. Johnson
Assistant Secretary
for Economic Policy

Mr. Peter L. Tweedt
Director
Office of Ocean and Coastal Resource Management
National Oceanic and Atmospheric Administration
Department of Commerce
Washington, D. C. 20235



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
300 South Ferry Street
Terminal Island, California 90731

July 21, 1983

F/SWR33:JS

Mr. H. T. Cypher
Regional Supervisor, Field Operations
Minerals Management Service
Pacific OCS Region
1340 West Sixth Street
Los Angeles, CA 90017

Dear Mr. Cypher:

We have reviewed the Point Arguello Field Development and Production Plan and Environmental Report - Chevron U.S.A., Inc., for the installation of Platform Hermosa, offshore and onshore pipelines and processing facilities to accommodate the anticipated production from the Point Arguello Field. In general the documents adequately describe the resource impacts to be expected from the construction and operation of oil and gas facilities required for the development of lease tract P 0316. If Chevron maintains close coordination with commercial fishing interests throughout the process of platform construction and laying of the required pipelines, conflicts may be kept to a minimum.

The major short-coming of the Point Arguello Field Development and Production Plan however, is that the cumulative effects of additional platforms and pipelines needed for complete field development are not discussed. If this aspect of field development is considered, the chance of significant conflict with commercial fishing activities rises considerably.

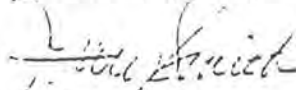
The consequences of full field development need to be addressed as early in the environmental review process as possible. It would seem appropriate, in light of the fact that Chevron is a co-lessee on all twelve of the leased tracts in the Point Arguello Field study area, for them to take the lead in preparing a supplemental environmental report discussing the cumulative impacts of full field development. That would certainly provide each of the entities involved in the review process a more solid basis for recommending modifications to the overall plan of development (or needed mitigation) while the program is still early in the design stages.

It should also be noted that any pipelines which are proposed to traverse existing kelp beds, whether they follow existing rights-of-way or not, have the potential for long term impacts to these beds. It has been our experience that pipelaying activities may impact a much larger kelp area than originally intended. Since these activities require a Corps of Engineers permit, we have recommended in the past that a special condition be included in the permit which requires the permittee to restore the impacted kelp beds to their former condition, if natural reestablishment does not occur within two years. We suggest that Chevron, as the unit operator, make a firm commitment towards the



acceptance of this requirement. This would minimize any delays in obtaining a permit from the Corps of Engineers.

Sincerely yours,



J. Gary Smith
Acting Regional Director

cc:

FWS, Laguna Niguel

CDFG, Long Beach

bc: F/M42 Roberts



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Washington, D.C. 20235

AUG 8 1983

F/M42:KM

ACTION: CHANDLER/EVANS
PT
GCOS

TO: N/ORM - Peter L. Tweedt
FROM: *W. G. Gordon*
F - William G. Gordon
SUBJECT: Consistency Determination by the California Coastal Commission
on Chevron Point Arguello Development and Production Plan

This is in response to the Secretary of Commerce's July 19, 1983, letter to me requesting the National Marine Fisheries Service's (NMFS) views on the national interest issues associated with Chevron's Development and Production Plan for the Point Arguello Field.

On July 21, 1983, the NMFS' southwest region provided written comments (copy attached) to the Department of the Interior's Minerals Management Service (MMS) on the Point Arguello Field Development and Production Plan. That document adequately identifies and discusses all relevant national interest issues of concern to NMFS.

However, we continue to believe that a supplemental plan should be developed to discuss the cumulative impacts of full field development. This would allow for early identification of potential impacts, and the development of appropriate mitigation recommendations.

Attachment



File Number: CC-12-83
Date Filed: 5/19/83
3-Month Period Ends: 8/18/83
6-Month Period Ends: 11/18/83
Staff: LTT & Staff
Hearing Date/Item: 9/30/83 - 12b.

Michael L. Fischer, Executive Director
William Travis, Deputy Director

REGULAR CALENDAR

PRELIMINARY STAFF RECOMMENDATION ON CONSISTENCY CERTIFICATION

PROJECT DESCRIPTION

Applicant for federal permit: Chevron U.S.A., Inc.

Project Location: Offshore Lease OCS P-0316, approximately 7.3 miles south of Point Arguello and 8.5 miles west of Point Conception; intersecting the shoreline north of Point Conception; running 16 miles south and east along the coast to Gaviota, Santa Barbara County (see Exhibits 1 and 2)

Project Description: One 48-slot drilling and production platform (Hermosa) on Lease OCS P-0316; two subsea oil and gas pipelines from platform to shore; continuation of pipelines onshore to new oil and gas processing facilities at Gaviota; and an ocean outfall wastewater pipeline near Gaviota.

Substantive File Documents: see Appendix 1.

STAFF RECOMMENDATION

The staff recommends that the Commission adopt the following resolution, findings, and declarations:

I. OBJECTION

The Commission objects to the Consistency Certification made by Chevron USA, Inc. for its Development and Production Plan for the Point Arguello Field because the DPP affects the coastal zone, does not meet the policies of the approved California Coastal Management Program, and is therefore inconsistent with the CCMP. Specifically, the Commission finds that Chevron's proposed project fails to include adequate information to permit an assessment of its probable coastal zone effects, including cumulative impacts, and its compliance with the enforceable policy requirements of Chapter 3 of the California Coastal Act (Public Resources Code Section 30000 et. seq.), as specifically enumerated below. The Commission furthermore cannot find that the DPP implements the national interest as required by

Chapter 11 of the CCMP and Sections 302 and 303 of the CZMA. Findings and declarations that follow explain in detail (1) the effects that this proposed activity has on the coastal zone where sufficient and adequate data has been submitted to so determine; (2) how the activity is inconsistent with the specific mandatory provisions of the CCMP; and (3) what alternative measures (if any) exist to enable Chevron to conduct its activities in a manner consistent with the CCMP. Chevron has the right to appeal this objection within 30 days to the Secretary of Commerce on the grounds described in 15 CFR Part 930, Subpart H.

II. FINDINGS AND DECLARATIONS

The Commission finds and declares as follows:

A. COMMISSION REVIEW OF DEVELOPMENT PLANS

A Development and Production Plan (DPP), which is prepared by an applicant for a federal permit, includes an Environmental Report describing environmental impacts and a technical drilling and production plan. Two federal laws govern the content and review of a DPP: the Coastal Zone Management Act (CZMA) and the Outer Continental Shelf Lands Act (OCSLA). The Commission has the authority to review DPPs for consistency with the California Coastal Act because the federal government has approved the California Coastal Management Program (CCMP) under the CZMA. The Coastal Act policies are the enforceable standards of the CCMP. The Commission must act on DPPs within six months of their receipt.

Applicants are encouraged to include all other related federal permits for consistency review. Chevron has confirmed that its consistency certification includes the following related federal permits:

<u>Agency</u>	<u>Permits</u>
U.S. Minerals Management Service	Approval of the Development and Production Plan (DPP) and ER Right-of-Way Approval for Pipeline
U.S. Army Corps of Engineers	Platform and Pipeline Structure Permit Section 404 Permit
U.S. Environmental Protection Agency	NPDES Permit PSD Permit for Gas Facility
U.S. Coast Guard	Approval of Navigation Aids

OCSLA Regulations. Federal regulations adopted pursuant to OCSLA (30 CFR 250.34-3(b)(1)(i)(A)) require that a DPP contain an Environmental Report that is "as detailed as necessary to enable identification and evaluation of the environmental consequences of the proposed activity," including a brief description of:

The location, description, and size of any offshore and, to the maximum extent practicable, land-based operations to be conducted or contracted for as a result of the proposed activity. This shall include:

- (1) The acreage required within a State for facilities, rights-of way, and easements;
- (2) The means proposed for transportation of oil and gas to shore, the routes to be followed by each mode of transportation, and the estimated quantities of oil or gas, or both, to be moved along such routes....

CZMA Regulations. Federal regulations under the CZMA (15 CFR §930.70-77 and .56(b), .58) require that additional information must be submitted with the applicant's consistency certification to identify all activities in the DPP subject to consistency review, and to provide a brief assessment relating the probable coastal zone effects of the activities and their associated facilities (onshore support structures, pipelines, and other facilities necessary to operate the project) to the relevant elements of the management program. More detailed information may be required for coastal zone related facilities under the CZMA for consistency review than for the federal Minerals Management Service (MMS) review under OCSLA.

CZMA regulations allow the Commission to object to a consistency certification based on insufficient information only if the Commission has requested the additional information in writing and has explained to the applicant the nature of the information, and why the additional information is necessary for a consistency certification. The Commission staff met with Chevron representatives on June 14, 1983 to discuss the project and to request additional information, not included in the DPP, that the Commission needs to carry out its consistency review. On June 29, 1983, in a letter to Gordon Duffy, Secretary of Environmental Affairs, the staff commented on the project and requested additional information from the MMS for the Commission's review, as provided for in the OCS Lands Act. On July 13, 1983, Chevron responded to the staff's comments and request for additional information. Another exchange of letters followed in August, with Chevron making a good faith effort in responding to the staff's comments and concerns. Nevertheless, critical information is still lacking, as the analysis under Section E on major issues demonstrates.

Commission Consistency Regulations (Section 13660). Frequently, facilities associated with OCS developments require coastal development permits. It has been the Commission's policy to strongly encourage consolidated review of OCS plans and permit applications (Chevron Platform Edith #E-82-35/CC-39-82). The Commission's regulation on this matter states:

13660.12 Associated Coastal Development Permits

Where a facility associated with an OCS plan requires a coastal development permit application under the California Coastal Act (e.g., pipeline marine terminal, onshore support and processing facilities, etc.), the applicant shall notify the Executive Director of the facility's relationship to the OCS plan at the time of submittal of the plan. Where an application for such a facility precedes submittal of the OCS

plan to the Commission, the applicant shall notify the Executive Director that the facility is associated with a forthcoming OCS plan. If the Executive Director determines that a consolidated review of the applicant's consistency certification and application for a coastal development permit is necessary for complete and proper consideration of the matter, he shall recommend such consideration in whatever manner necessary to comply with applicable time limitations.

In the June 29th letter to Secretary Duffy, the Executive Director stated that a consolidated review of the project would be advisable and urged Chevron to use this approach and to withdraw its consistency certification and re-submit it along with an application for a coastal development permit.

In responding to the staff's comments to Secretary Duffy, Chevron contends that:

....a review of a federal OCS project for "consistency" was not intended by Congress to include the depth of review used for permit applications. In Chevron's view, consistency review is the preliminary step in the process of later acquiring permits for onshore energy development projects. ...If a federal OCS project is going to be reviewed to the depth required for a permit application during consistency review, then the whole concept of consistency of a federal activity with California's approved Coastal Zone Management Program appears unnecessary.

(Letter to Michael Fischer, dated July 13, 1983)

This contention that the Commission should regard its consistency concurrence as only a preliminary approval indicates a misunderstanding of the procedural provisions of the CZMA. The following information is provided to correct this error. Chevron first contends that the Commission's consistency review need not be "in depth" and second, that the onshore associated facilities will require additional permits at which time they should be more thoroughly and properly reviewed. The Commission's consistency certification for a DPP is the only opportunity for a State to review an OCS project in its entirety. Under federal CZMA regulations (15 CFR 930.77) the Commission is authorized to review:

...each of the proposed activities (e.g., drilling, platform placement) and their associated facilities (e.g., onshore support structures, offshore pipelines), and their effect (e.g., air water, waste discharge, erosion, wetlands, beach access impacts). (emphasis added)

The applicant is directed to provide brief findings and an assessment of the probable coastal zone effects so that the Commission can review the impacts of both the OCS structures and the onshore associated facilities.

Chevron questions whether the Commission's consistency review should be as comprehensive as a permit application. Although a consistency review and permit application review are not legally identical, substantive similarities exist.

Consequently, to adequately evaluate either a consistency certification or a permit application, the Commission must have sufficient information to evaluate the "probable coastal zone effects" to determine if the activity and associated facilities are consistent with the CCMP. The CCMP consists of the Coastal Act, its regulations and the Program Description, which states that the Commission may also consider:

...reports and studies that are not part of the program in making decisions on the national interest, public welfare and balanced utilization of the coastal zone that are required by either the CZMA or the California Coastal Act. In fact, the Commission has an obligation to consider all relevant material--whatever its source--in making these decisions. But it cannot use any of this material in isolation, as the basis for a CCMP decision; all CCMP implementing actions must be clearly based on the adopted policies of the management program. (CCMP, p.16)

Therefore, the CCMP contemplates an in-depth review for consistency certifications and grants the Commission discretion with regard to the degree of information necessary for individual projects. For projects of the magnitude as this DPP, the informational requirements are significant. Federal regulations expressly provide that applicants must supplement information provided to Interior if required by the state's CCMP (15 CFR 930.77). California's CCMP contains the following statement:

Consistency certifications for OCS plans will be processed as much as possible as if they were applications for coastal permits under the Coastal Act and its implementing regulations to allow for timely notice and hearings. (emphasis added, p. 93)

Thus, similarities between permits and consistency do exist. Furthermore, the Commission's regulations require that consistency applications contain "supporting information for all activities required to be described in detail in the plan." (Section 13660.3) The regulations also provide that the Executive Director may request additional data and information if he deems it necessary for a complete and proper review. Such information has been requested from Chevron and failure to submit such information may result in an objection (Section 13660.3). A thorough review, therefore, is contemplated by both federal and state law.

This review is expressly extended to both the OCS activities and the associated facilities, even though these facilities may be subject to further coastal permit review. Of course, some facilities will be located outside the coastal zone and will not require Coastal Commission permits. Others may be located in areas where they are subject to the Commission's appellate jurisdiction. These would only be reviewed by the Commission if a local government decision is appealed. But the important fact is that consistency review is the only stage where the Commission can review the development as a whole. This is extremely important in oil and gas development because of the relationship between the platforms, pipelines, oil and gas processing facilities, and crude transportation plans and their effects on coastal resources and land uses. Reviewing one element without the others would render the consistency process meaningless. Reviewing only part of a development

plan would cripple the coordination of OCS planning. It would be impossible to evaluate such important coastal management issues as cumulative impacts, consolidation of facilities, less environmentally damaging alternatives, and adequate mitigation measures.

Finally, the federal regulations, themselves, specifically include the evaluation of facilities associated with OCS development. These are defined as facilities:

- (a) ... specifically designed, located, constructed, operated, adapted, or otherwise used in full or in major part, to meet the needs of a Federal action (e.g., activity, development project, license, permit, or assistance); and
- (b) without which the Federal action, as proposed, could not be conducted. All further requirements of this part related to the review of and consistency for federal activities including development project..., federal license, federal and permit activities...and federal assistance activities... also apply to associated facilities related to those Federal actions. Therefore, the proponent of a Federal action must consider whether the Federal action and its associated facilities affect the coastal zone and, if so, whether these interrelated activities satisfy the relevant consistency requirements of the Act. (15 CFR 930.21, emphasis added)

Clearly, then, state and federal law provide the Commission with the authority to review OCS activities along with the kinds of onshore associated facilities proposed in this and other similar certifications. In addition, these activities and facilities must be described in sufficient detail to enable the Commission to determine their probable coastal zone impacts and consistency with the CCMP. The precise nature of the information is left, to a significant degree, to the Commission's discretion, given its mandate under the CZMA.

NEPA/CEQA. Because the MMS has determined that Chevron's project is a "major federal action" under the National Environmental Policy Act (NEPA), the MMS must prepare an Environmental Impact Statement (EIS) on the project. This document is being prepared jointly with an Environmental Impact Report (EIR), required by the California Environmental Quality Act (CEQA). The scope of the EIR/EIS will be the offshore area from the Santa Ynez Unit northward to Union Oil Company's Lease OCS P-0441. Chevron submitted a permit application to Santa Barbara County for its coastal development and local permits on July 5th, and the County is currently reviewing it for completeness. The time clock under CEQA has not begun to run on the project, and the completion date for the EIR/EIS is not known at this time.

Timing of Commission Review. The applicant controls the schedule for consistency review by its submittal of the DPP to the MMS. Once the MMS determines that the plan is complete, MMS forwards it to the Commission, which starts the six month schedule for consistency review. Even though the MMS has determined that an EIS is required, the six month schedule for a state's consistency review remains unchanged.

Due to schedule limitations imposed by the federal regulations which implement the CZMA, the Commission must complete its review of the Chevron DPP prior to the preparation of the joint EIR/EIS for the project and before action is taken on the

other state and local permit applications, including the coastal development permits. Therefore, the Commission does not have the benefit of all the environmental documents in reviewing this project, and must base its determination on the Environmental Report (ER) and other information provided by Chevron as part of the DPP.

Commission and Local Government Authority. The Commission has consistency review authority over federally licensed and permitted projects and their associated facilities that affect the use of the land and water in the coastal zone. In addition, the Commission permanently retains original permit jurisdiction over that portion of the project seaward of the mean high tide line (MHT) in state waters, even after Local Coastal Program (LCP) certification. Thus, portions of the pipelines seaward of the MHT line will require coastal permits from the Commission. Because it has a certified LCP, Santa Barbara County exercises coastal development permit jurisdiction for portions of the project located on land in the coastal zone. (see Exhibit 3) Thus, the landward portions of the pipelines and the processing facilities will require coastal permits from the County. Because these portions are "major energy facilities," they are subject to appeal to the Commission and to the LCP override provisions under Section 30515 of the Coastal Act.

B. PROJECT DESCRIPTION AND HISTORY

Chevron U.S.A. Inc. proposes to begin development of the Point Arguello Field by:

- o installing one drilling and production platform (Hermosa) on Lease OCS P-0316, approximately 7.3 miles south of Point Arguello and 8.5 miles west of Point Conception;
- o installing two subsea oil and gas pipelines leading from the platform to shore;
- o continuing this pipeline system onshore to processing facilities;
- o constructing facilities at an existing site at Gaviota to process the oil and gas for subsequent transportation; and
- o installing an ocean outfall pipeline terminating within state waters to dispose of produced water extracted during onshore processing.

The DPP does not officially include any provisions for transporting the processed crude oil to refineries. However, Chevron has stated it will use the existing Getty marine terminal at Gaviota to tanker Arguello crude to refineries if new terminals at Gaviota or Las Flores are not built.

The Point Arguello Field is the underground reservoir extending under several offshore tracts near Point Conception (see Exhibits 2 and 4). Chevron is the operator and co-lessee with Phillips Petroleum Company of twelve leases in this area. (see Exhibit 2). The Point Arguello Field includes tracts leased in both Lease Sales 48 and 53. Chevron's OCS Parcels 0316, 0317, and 0318, along with Texaco Inc.'s OCS P-0315, form the northern boundary of Lease Sale 48. Tracts immediately north of this boundary, including Chevron's OCS Parcels 0450 and 0451 and Getty's OCS Parcel 0449 where exploratory drilling is taking place, were leased under Lease Sale 53. Therefore, the extent of the Point Arguello Field is still

being delineated. Chevron estimates that the field may contain as much as 500 million barrels of oil. Chevron has stated in its DPP that three or more additional platforms will be required in the future to fully develop the field, but these are not included as part of this DPP. There are currently no platforms in the project area. The closest OCS development is Exxon's Platform Hondo, which is located about 30 miles to the east of proposed Platform Hermosa. Two non-operating platforms in state waters, Texaco's Herman and Helen, are situated about 15 and 21 miles, respectively, to the east of Hermosa.

Chevron has designed the initial facilities in this DPP to handle future production from the Point Arguello Field. Platform Hermosa will be the central platform for the field, designed to accommodate pipeline hookups from up to three future platforms in the field, including Texaco's proposed platform on adjacent Lease OCS P-0315. It will be a conventional eight-leg jacket steel structure supported on the seafloor by pilings. The jacket structure will be towed from its onshore fabrication site to the erection site. The platform will have 48 well slots, although Chevron plans to drill only 40 development wells at this time. Chevron expects the platform to be installed in May 1985 and the first oil to be produced in January 1986. Oil production from Platform Hermosa is expected to peak in 1989 at 27,000 barrels per day (BPD) with 28 million standard cubic feet per day (MMSCF/D) of gas.

The common carrier pipeline is designed to accommodate the estimated combined production of all potential producers in the Point Arguello Field. A 30-inch pipeline will carry 200,000 BPD of oil, and a 22-inch pipeline will transport 160,000 MMSCF/D of gas. According to Chevron, the pipeline system has expansion capacity beyond this amount. Ways to marginally increase flow are by the control of oil viscosity and temperature. The addition of booster pumps or compressor stations near the landfall or looping of the lines (constructing additional links to the original pipeline within the same corridor) would provide additional capacity.

Offshore, the pipelines will be laid within a one-mile corridor and will follow a direct route, about 10 miles in length, from the platform to a landfall on Chevron owned property just north of Point Conception. Pipeline installation probably will be by the conventional pipeline barge/stinger method, although a state-of-the-art towing technique may be used in the nearshore area. The pipelines will be trenched and buried at a minimum of three feet through the surf zone. From the landfall at Point Conception to Gaviota, the pipelines will run an additional 16 miles and will be laid in a 100-foot corridor (200 feet during construction) in or near the Southern Pacific Railroad right-of-way throughout most of the route. A 10-mile extension of the pipeline system may be constructed to Las Flores from Gaviota, if the proposed Exxon marine terminal is used to tanker the processed oil. Conventional land pipelaying methods and equipment will be used. The pipelines will be buried with a minimum of three feet of cover over the entire route, except for stream and canyon crossings where they may be suspended on existing railroad bridges or on new pipe bridges.

New oil and gas processing facilities will be constructed at Chevron's existing gas processing plant site at Gaviota north of Highway 101 across from the existing Getty marine terminal and storage facilities (see Exhibits 5 and 6). Initial processing facilities will require approximately all of the existing 15-acre site. Maximum buildout will require about 57 acres. Chevron owns an additional 85-acre area east of the existing site that will provide enough space for maximum expansion. The new facilities will be installed in stages over a nine-year period as Arguello Field production increases. The initial facilities are designed to treat 148,000

BPD of oil and 98 MMSCF/D of gas. Chevron estimates that these facilities at maximum buildout will handle a peak oil production of 200,000 BPD in 1990 and of 120 MMSCF/D of gas in 1991. The ultimate capacity will be for 250,000 BPD of oil and 120 MMSCF/D of gas. Approximately 50,000 barrels per day of wastewater will be discharged through an ocean outfall pipeline located in state waters in the vicinity of the Getty Gaviota marine terminal.

Although a system for transportation of the processed oil is not included in the DPP, three options are discussed in the plan. One option would be to use a new consolidated marine terminal facility and pipeline to the San Joaquin Valley at Gaviota proposed by Getty Oil Company. The second option would be to construct a pipeline to carry the oil to the marine terminal at Las Flores proposed by Exxon USA. The pipeline would be installed in or adjacent to the Southern Pacific Railroad, Texaco, or Pacific Gas and Lighting rights-of-way. Both of these options are contingent upon permit approval by Santa Barbara County. If neither option exists when Chevron begins production, then the third option is to use the existing Getty marine terminal to tanker the processed oil.

C. RELATION TO OTHER PROJECTS

Section 30250(a) of the Coastal Act states in part that:

New residential, commercial, or industrial development, except as otherwise provided in this division, shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it or, where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources.

Section 30262(b) states that:

New or expanded facilities related to such [oil and gas] development are consolidated, to the maximum extent feasible and legally permissible, unless consolidation will have adverse environmental consequences and will not significantly reduce the number of producing wells, support facilities, or sites required to produce the reservoir economically and with environmental impacts.

Chevron's proposed development and production of the Arguello Field is only one of many energy proposals the Commission will review over the next few years (see Exhibit 7). In addition to Chevron, Arco, Texaco, Union, Getty, and Occidental have announced discoveries in the western Santa Barbara Channel and Santa Maria Basin offshore that could result in new facilities both offshore and onshore. The oil industry expects the Santa Maria Basin alone to yield up to one to two billion barrels of oil over its production lifetime.

Santa Barbara County, which has coastal permit authority over development landward of the MHT line, currently has seven project proposals related to offshore energy development before it for evaluation. Exxon Company USA proposes a marine terminal at El Capitan, and pipeline, processing facilities, and co-generation plant at Las Flores Canyon in conjunction with three to four new platforms in the Santa Ynez Unit. Chevron is considering construction of a crude upgrade facility in a location yet to be determined. Arco proposes to expand its processing facility at

Ellwood in conjunction with two new double platforms off Coal Oil Point, and to convert Ellwood Pier to a major supply base. Aminoil proposes to expand its marine terminal facilities at Coal Oil Point. Union proposes a new onshore pipeline and processing facilities at Lompoc. Getty proposes to expand its existing marine terminal at Gaviota into a multi-company terminal with a capacity of two million barrels, and to construct an onshore pipeline to Bakersfield. It also proposes a new major supply base at Gaviota. Finally, Chevron proposes an oil and gas processing facility and onshore pipeline at Getty's Gaviota facilities in conjunction with the installation of a new platform in the Point Arguello Field. Unless each of these projects is evaluated in the context of overall energy development within Santa Barbara County and the surrounding area, proliferation of facilities will occur and coastal resources will be adversely affected.

Moreover, federal lease sales and the State Lands Commission lease sale may generate further development. OCS Lease Sale 73, proposed to be held in October 1983, would open up over two million acres to oil and gas development in the same general area as OCS Lease Sale 53, which includes tracts now being explored and developed. The Final Environmental Impact Statement (FEIS) for Lease Sale 73 estimated potential resources of 300 to 970 million barrels of oil and 285 to 950 billion cubic feet of gas, resulting in five to thirty platforms. Potential future exploration and development activities from OCS Lease Sale 80, proposed for the area south of Point Conception to the Mexican border, also would add to the adverse effects from offshore development. Resource estimates for OCS Lease Sale 80 are 270,098 to 1.13 million barrels of oil and 510 million to two billion cubic feet of gas.

In its comments on the DEIS for Lease Sale 73, the Commission stated it "believes that the areas already leased in the Channel and north of Point Conception exceed the ability of Santa Barbara and San Luis Obispo Counties to accommodate onshore support facilities. These two counties are struggling to keep up with the rapid pace of OCS development and to select suitable onshore support areas (including processing facilities)." Santa Barbara County estimates daily oil production from existing leased tracts to increase from the current 70,000 BPD to 500,000 BPD by the early 1990's. These figures do not take into account tracts possibly leased under Lease Sales 73 and 80.

The Commission's experience in reviewing individual OCS projects has shown that it has not been able to adequately address cumulative impact and comprehensive planning issues on a project-by-project review. Even adequate project-by-project review has been difficult because Environmental Impact Statements have often not been completed by the time the Commission reviews a particular project, or individual projects are divided into components so that the Commission does not have an entire project before it. The Chevron project is illustrative of this problem. The DPP does not contain any cumulative impact analyses on either the future development of leases in the Arguello Field or the relation of this project to other present and future development in the western Channel and Santa Maria Basin. Chevron contends that cumulative impacts is a subject that is more appropriately analyzed in the joint EIS/EIR document. The Commission agrees, but because the applicant has submitted its consistency certification before the completion of this document, it must determine consistency with Sections 30262(b) and 30250 of the Act based on the information available at this time.

As stated earlier, the total production from the western Channel and Santa Maria Basin may exceed one billion barrels, an amount of oil which makes pipeline transportation to refineries, refinery modifications to handle the heavy, sour crude, and consolidation of associated facilities, both onshore and offshore, more

economically feasible. Impacts on marine resources, commercial fishing, vessel traffic safety, air quality, land resources, and public access and recreation are extensive when viewed in an overall context. The significant marine resources of the area will be adversely affected from the cumulative impacts if the projected development in the area occurs. These impacts include the destruction or degradation of habitat areas from the construction and installation of production facilities, the increased probability of oil spills as more development occurs, the accumulated discharge of drilling muds from new platforms, and the disturbance from increased vessel and helicopter traffic. Possible reduction in fisheries and increased competition for space, both offshore and in harbors, will affect the commercial fishing industry. The DOI projects a reduction in income from commercial fishing from the expected development from Lease Sale 73 alone, which does not take into account additional reductions that would result from other development in this same and nearby areas. Increased crew and supply boat and tanker traffic needed to support the projected offshore development will result in increased safety hazards and increased air pollutant emissions. The amount of shoreline docking and berthing space needed for the crew and supply boats will result in increased conflicts with commercial fishing and recreational uses of the facilities. And, as mentioned before, the availability of suitable land to accommodate onshore support facilities could soon be exceeded given the rapid pace of OCS development, resulting in conflict between uses and in the elimination of other important coastal land uses such as recreation and non-energy related coastal dependent industries. Chevron has not considered these impacts of the project in conjunction with other petroleum development expected to occur in the next five to ten years. Based on the information available at this time, the Commission finds that the project is inconsistent with Section 30250 of the Act. (see also Section E)

D. COASTAL DEPENDENCY AND RELATION TO INDUSTRIAL DEVELOPMENT

Section 30101 of the Act defines a coastal dependent development or use as that which "requires a site on or adjacent to the sea to be able to function at all." Ports, commercial fishing facilities, offshore oil and gas development, and mariculture are specifically mentioned in the Coastal Act as coastal dependent, although not all activities or facilities associated with such development would be considered coastal dependent uses. Coastal dependent developments are given priority over other development on or near the shoreline. In fact, the Coastal Act provides that a level of land and water access and service capacities must be reserved for coastal dependent uses that is not afforded non-coastal dependent or coastal related uses. Shoreline protective devices, that might otherwise not be permitted, are also permitted when required to serve coastal dependent uses.

A special provision of the Act, Section 30260 (and Sections 30261 and 30262, which are incorporated within 30260 by reference) provides for further consideration of coastal dependent industrial facilities if they fail to meet the policies contained in Sections 30200-30255 of Chapter 3. Under Section 30260, a coastal dependent industrial facility may be permitted if: (1) there are no feasible* less environmentally damaging locations for the project; (2) denial of or objection to the project would adversely affect the public welfare; and (3) adverse environmental effects are mitigated to the maximum extent feasible. Section 30260 therefore provides special standards for coastal dependent facilities that otherwise fail to satisfy Coastal Act requirements.

* A key word in this policy is "feasible", which is defined by Section 30108 of the Act as able to be accomplished successfully within a reasonable period of time, taking into account economic, environmental, social, and technological factors.

Offshore oil and gas extraction is by its very nature "coastal dependent" because the operations to develop the petroleum resources take place where the resources are located, underneath the sea. In this particular project, the Commission finds that the platform and the pipelines from Platform Hermosa to shore are coastal dependent industrial facilities which must be evaluated under the overriding considerations provided in Section 30260 of the Act, if they are found to be inconsistent with other Chapter 3 policies.

In prior permit decisions, the Commission has found pipelines to be coastal dependent industrial facilities only when they transport products directly from offshore facilities (Four Corners, Permit E-81-12). However, Chevron's onshore pipelines and the processing facilities, which are proposed in the coastal zone at Gaviota, do not require a site on or adjacent to the sea within the meaning of Section 30101. Therefore, the Commission finds that these facilities are not coastal dependent, but instead are coastal related, and therefore do not qualify for the Section 30260 overriding considerations.

Nevertheless, all facilities associated with the proposed project are related to "oil and gas development" and thus are subject to Section 30262 of the Act. Section 30262 applies to all oil and gas development regardless of the development's compliance with Sections 30200-30255. This section permits oil and gas development "in accordance with Section 30260," if certain conditions are met, including maximum feasible consolidation and, by reference, the three tests contained in Section 30260. Therefore, the coastal related project components are subject to the same criteria as the coastal dependent components. However, the criteria by which they are evaluated are interpreted as additional requirements provided through Section 30262, and not as considerations that override other Coastal Act policies.

E. MAJOR COASTAL ACT ISSUES

1. Transportation of Crude Oil

Section 30232 of the Coastal Act states that:

Protection against the spillage of crude oil, gas petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.

Sections 30230 and 30231 of the Act require protection of the biological productivity of the marine environment. Section 30260 provides for possible approval of coastal dependent industrial facilities (which includes offshore oil and gas development) not otherwise consistent with Chapter 3 of the Coastal Act, if among other provisions, the adverse impacts are mitigated to the maximum extent feasible. Section 30262 requires consolidation to the maximum extent feasible and legally permissible of new or expanded oil and gas facilities. Taken individually or together, all of these Coastal Act provisions mandate the use of the most environmentally protective method of oil transportation. The following discussion clearly demonstrates the superiority of onshore pipeline transportation of crude over transportation by tanker. This conclusion is based on the smaller volume of oil spills from onshore pipeline operations. Spills that do occur from onshore operations are usually less damaging than spills from tanker operations in the marine environment. State and federal planning studies support this position by

recognizing that onshore pipelines provide environmental benefits that oil transportation by marine tanker fails to provide. Specifically, the DOI's Draft Environmental Statement, Oil and Gas Development in the Santa Barbara Channel Outer Continental Shelf off California, 1975, states that:

The Council of Environmental Quality (CEQ) has analyzed the relative probability of oil spills during oil transport by tanker and subsea pipeline. They found that although the statistics vary greatly with the size of oil field and other factors, in general subsea pipelines have fewer spills and less total volume of oil spilled than do tankers (CEQ 1974, Report to the President). Although pipelines on land might have comparable rates of oil spillage as subsea pipelines, pipeline inspection, repair of leaks, and containment of spilled oil is much simpler from a pipeline break on land than on sea. This would be especially true during bad weather. For these reasons oil transport by onshore pipeline would appear to have less environmental risk than transport by tanker or barge. (emphasis added).

The same federal report reaches an even stronger conclusion, namely:

The potential for adverse environmental impact is greater, however, for tanker transport than for a land based pipeline. Once constructed, a pipeline would have minimal adverse environmental impacts, whereas marine tankers would present the continual danger of oil spills during loading or unloading operations or due to collision during transit. (emphasis added).

Likewise, the Rand Corporation Report, Energy Alternatives for California: Paths to-the-Future (Executive Summary), prepared for the State Assembly Committee on Resources, Land Use, and Energy (Dec. 1975), similarly points out that:

The primary policy issues for the Santa Barbara OCS are those of development.... Useful conditions that could be imposed include the consolidation of onshore facilities, coordination with other energy developments, and construction of onshore oil pipelines to reduce or eliminate coastal oil terminals (p. 14).

Studies prepared by the California State Lands Commission recognize that onshore pipelines are preferred over transportation by tanker. In the Finalizing Addendum of the Environmental Impact Report for the State Tidelands lease sale from Point Conception to Point Arguello, the State Lands Commission makes the following statement regarding reviewer's comments on tankering and vessels pipelining of oil:

The fact that the DEIR addresses a hypothetical project and related marine terminal is consistent with the intention that the DEIR address a broad range of potential impacts of the leasing program.... In fact, pipeline transport of produced hydrocarbons would provide significant mitigation for several classes of impacts including, possibly, transportation costs; water and air quality impacts associated with tanker/barge transport; and associated potential effects on marine biota, terrestrial biota, land use, aesthetics, marine traffic and oil spill risk. [Finalizing Addendum, p. 105-106] (emphasis added)

Recent data produced by the Oil Spill Intelligence Report (Boston, Mass. 1981) records the number and volumes of major oil spills throughout the world. During 1981, 36 tanker spills resulted in 15,004,000 gallons or 27.4 percent of the total amount of oil spilled worldwide. Pipeline spills resulted in 1,988,000 gallons, accounting for 3.6 percent of the total oil spilled. The data also demonstrates that the massive spills in 1981 resulted from tanker incidents and not pipeline spills. A particularly critical statistic is the number of major spills over 1,000,000 gallons. Three major tanker spills over 1,000,000 gallons resulted in 11,593,000 gallons of spilled oil. No pipeline spills were over 1,000,000 gallons during 1981. Data for the 1980 intelligence report shows similar trends. Some recent data reported by the MMS indicates that subsea pipelines may have had spillage rates comparable with tanker spillage. However, this data is not a factor in weighing the advantages of land pipeline transportation of oil versus marine tankering.

Moreover, figures on spills in U.S. waters, provided by the U.S. Department of Transportation and the U.S. Coast Guard, indicate an even greater contribution to spills from tankers rather than from pipelines. The following table compares tank ships and barge spills to pipeline spills for 1981 and 1982.

	<u>TANK SHIPS</u>		<u>TANK BARGES</u>		<u>PIPELINES</u>	
	<u>1981</u>	<u>1982</u>	<u>1981</u>	<u>1982</u>	<u>1981</u>	<u>1982</u>
<u>Number of Spills:</u>	429	223	731	462	496	528
<u>Volume/Gallons:</u>	9,475,266	9,562,750	4,277,217	1,591,125	1,391,211	1,922,024
<u>% of Spills:</u>	53.6	56.3	24.2	7.5	7.9	11.3

Since 1977, at least one third of tanker spills and almost one-half of all barge spills have resulted from ships under U.S. Registry, according to data recently released from the U.S. Coast Guard's Pollution Incident Response System in Washington, D.C. (8/5/83). Therefore, the overwhelming evidence over the past 10 years demonstrates that less oil is spilled, and the impacts of spills are usually less from land transportation of crude by pipeline than from tankering.

Pipeline transportation of crude also has definite air quality advantages. Tankering of oil results in higher emissions of air pollutants than pipelining, due to the escape of hydrocarbon vapors resulting from both loading and unloading activities. Although a vapor recovery system would reduce the emissions of hydrocarbons substantially, system failure, repairs, or maintenance will release significant amounts of hydrocarbons. By contrast, pipeline transfer of oil completely contains vapors. Any pollutants emitted would stem from pumping operations that are also necessary for tanker loadings.

The Commission has therefore consistently found that the studies and data on oil spills and air quality demonstrate that pipeline transportation of oil is clearly preferable to the use of tankers.

This preference is supported by information in the Lease Sale 73 EIS, which states that while the rate of spills from pipelines may be slightly higher than from tankers, pipelines may still be environmentally preferable, since tankers carry very large volumes of oil and thus pose the risk of a catastrophic spill and consequent

environmental disaster, as opposed to the smaller spills from pipelines. The DOI recognizes the advantages of a crude pipeline transportation system by containing pipeline stipulations in its OCS lease sales. The FEIS for Lease Sale 73 states:

The intent of this measure is to transport hydrocarbons by the safest and environmentally preferable method. This stipulation requires, when feasible, pipelines to be used instead of tankers to transport oil. The use of pipelines would reduce air quality impacts from the transportation of hydrocarbon products and trade off the marginally higher oil spill rate of pipelines versus the lower tanker spill rate (1.6 to 1.3 spills per billion barrels of oil transported). (Page II-22, emphasis added)

The Santa Barbara County LCP gives priority to pipeline transfer of oil by permitting pipelines in all land use designations. Permits for facilities related to oil development activities would be conditioned on pipeline use, if feasibility is determined by the County. Technical studies have shown that pipelines are technologically feasible. Moreover, the recent discoveries of vast quantities of oil in the Santa Maria Basin and Santa Barbara Channel, as discussed in Section C of this report, will have a positive effect on the economic feasibility of pipeline transportation.

Chevron Proposal for Crude Oil Transport. The Commission notes that the Chevron has not officially included a means for transporting the processed crude oil to refineries in its DPP. However, the Commission considers the crude transport system as an "associated facility," which is subject to the Commission's consistency review and which the Commission must find consistent with the Coastal Act. The DPP states that Chevron plans to transport oil by pipeline and along the shore to Getty's facility at Gaviota or Exxon's facility at Las Flores Canyon for eventual tankering to refinery centers. The proposed Gaviota facility will have a 2,000,000 barrel storage capacity, and will transport 50,000 BPD. It also may include a supply base, pier, and onshore pipeline to Bakersfield according to a proposal submitted to Santa Barbara County by the terminal operator, Getty Oil. If the Getty proposal is not constructed, then Chevron will use the proposed Exxon facility at Las Flores Canyon if it is built. Loading Chevron's oil at the Las Flores marine terminal probably would require that the Exxon terminal be expanded beyond what is proposed to include a second SALM. If expansion is not complete at the Getty facility or at the new Exxon terminal, then Chevron plans to tanker the crude oil out of the existing Getty facilities at Gaviota.

The DPP states that the company has eliminated offshore tankering as a "viable option because of current federal, state and local policies restricting this practice." While the option of tankering from the platform to shore is eliminated from consideration, Chevron does propose to tanker its crude to refinery centers. Chevron's proposal dismisses the option of pipeline transportation to refineries at this time. The DPP simply states that Chevron will continue to rely on the Petroleum Transportation Committee for analysis of this issue. In addition, Chevron states that tankering to refineries will not result in increased air emissions nor increased vessel accident risks relative to current vessel transport of crude. Chevron does not include any independent analysis of the potential to pipeline the oil. Moreover, the company does not provide any supporting information regarding its assertion that tankering will not "substantially increase" environmental risks associated with the project. For these reasons, the Commission cannot find that Chevron's transport proposal is consistent with Sections 30230, 30231, and 30232 of the Act.

Although the Commission finds that Chevron's transport proposal is inconsistent with Sections 30230-32 of the Act, it also finds that the marine tankering portion of the project is a coastal dependent industrial use and thus qualifies for further consideration under Section 30260 of the Act. Section 30260 states that:

Coastal-dependent industrial facilities shall be encouraged to locate or expand within existing sites and shall be permitted reasonable long-term growth where consistent with this division. However, where new or expanded coastal-dependent industrial facilities cannot feasibly be accommodated consistent with other policies of this division, they may nonetheless be permitted in accordance with this section and Sections 30261 and 30262 if (1) alternative locations are infeasible or more environmentally damaging; (2) to do otherwise would adversely affect the public welfare; and (3) adverse environmental effects are mitigated to the maximum extent feasible.

In response to the staff's requests for information on crude oil transportation alternatives, Chevron has stated, "If a land pipeline were to be constructed to transport crude oil from the Gaviota processing facility to Bakersfield and if the tariff or throughput charge were economical, Chevron would use such a pipeline to take a nominal amount of its Arguello crude to Kern County and then on to its Richmond refinery via an existing pipeline. However, we must again emphasize that this transportation method is not in lieu of but supplemental to our use of a new marine terminal to be constructed either at Gaviota or Las Flores." (Letter, 8/23/83, emphasis added) Thus, Chevron intends to use a marine terminal even if an onshore pipeline is built. Chevron has no independent plans to construct a pipeline for the transportation of their crude. Clearly, Chevron has not demonstrated that tanker transportation is the least environmentally damaging alternative or that it provides the maximum feasible protection from oil spills, as required by Section 30260. To adequately show this, Chevron must compare the tankering proposal to the alternative of pipeline transportation if pipeline transportation is found to be feasible.

There are significant developments which indicate that pipeline transportation of crude may be feasible. The San Joaquin pipeline system could be used to transport oil north to Chevron's Richmond refinery in the San Francisco Bay area. There is significant expansion potential in that pipeline route. According to California Energy Commission staff analysis, three pipelines owned by Getty, Chevron, and Union are currently in place along this northern route from Bakersfield to the Bay Area. The Getty pipeline connects with Exxon's only California refinery in Benicia. In addition, Getty is proposing a pipeline from its Gaviota storage and terminal facility to Bakersfield. The Chevron line connects with its own major refinery in Richmond. On a yearly average, approximately 30,000 BPD of excess capacity may exist in the Getty and Chevron lines, based on preliminary Energy Commission staff calculations included in the paper Refinery Capacity to Process OCS Crude in California. On a yearly average, the Union line is operating at capacity with little expansion potential. The Energy Commission analysis indicates that with the necessary retrofits these lines could handle up to 418,000 BPD, a potential increase of 388,000 BPD. Getty has recently expanded the capacity of its line by approximately 35-50,000 BPD for heavy crude transport, according to the engineering manager for the proposed Getty/Gaviota facility.

Another possibility for Chevron would be to pipeline the oil to its El Segundo refinery. Existing lines through the San Joaquin Valley have little expansion potential. Additional pipeline construction would be necessary for this option. California refineries cannot handle the heavy, high sulfur and heavy metal crude from the Santa Maria Basin without blending it with lighter crude. Refinery retrofits or a crude upgrade facility will be necessary to refine the Arguello oil. An upgrade facility would partially refine or upgrade oil to quality similar to the Alaskan North Slope crude currently being refined in Richmond. The construction of crude upgrade facilities are currently being investigated by Chevron, but are not considered in the DPP.

The All American Pipeline Company and the Pacific Texas Pipeline Group have developed proposals for pipeline transportation of crude from California to the East and Gulf coasts by way of the Midland, Texas oil distribution area. These proposals would probably require the addition of heating devices to existing lines from Midland to refineries in Louisiana, the east coast, or other areas in Texas. According to the Oil and Gas Journal, the All American Pipeline's proposed pipeline is expected to connect with Getty's proposed pipeline from Gaviota to Bakersfield. Another possibility would be to run a pipeline from Santa Barbara to Los Angeles and then to a new pipeline along the route to Midland, Texas, currently being proposed by Pacific Texas. Both the All American Pipeline Company and the Pacific Texas Pipeline Group have submitted preliminary applications to BLM for these proposals.

There is some concern that an onshore pipeline to carry new production from the Santa Maria Basin to California refineries will perpetuate existence of those refineries and their attendant air pollutant emissions. Although construction of a new pipeline system to in-state refineries may result in continued use of a few refineries, conversely, Chevron's tankering of Arguello crude will not cause a shut-down or decrease in refinery operations and emissions. Chevron has refineries in the San Francisco Bay area and Los Angeles that could receive oil from a pipeline or by tanker. Other companies may prefer pipeline transportation of crude. Production from other fields belonging to Chevron, Texaco, Arco, and Union may go to their refineries in California. In addition, Chevron's proposal includes the possible tankering of Arguello crude to Los Angeles and Bay Area ports. Tankering by Chevron, on the other hand, would result in emissions at both loading and unloading points, as well as continued refinery emissions. Pipeline transfer of oil would serve to mitigate the refinery sources of air pollutants.

Santa Barbara County's consultant, Purvin and Gertz, Inc., has released its findings regarding the Exxon Pipeline Feasibility Study. The study outlines Exxon's individual oil transportation alternatives and their associated costs. Key problems for Exxon include the lack of refining facilities on the west coast, the cost of backing out Alaskan North Slope (ANS) crude from their existing Benicia refinery, and with retrofitting that facility, and the potential marketing penalties that may result from having to sell the crude to other refineries on the west coast (buyers market). A primary factor in the economic analysis for Exxon is whether the costs of backing out ANS crude should be included as part of the economic analysis. Without including this cost, construction and operation of a pipeline to Benicia, combined with a refinery retrofit, is comparable in cost to tankering to the Gulf Coast.

Chevron, on the other hand, has two major refineries on the west coast (Richmond and El Segundo) that handle only small volumes of ANS crude. Thus, Chevron could more easily refine and market the oil from these facilities, thus avoiding market penalties. Although not part of the Pervin and Gertz analysis, it appears that it may be economically feasible for Chevron to transport all or

significant amounts of its oil by pipeline because it owns refineries on the west coast and does not have significant amounts of ANS crude that must be displaced by new Arguello production. No specific findings are included in the Purvin and Gertz study regarding the feasibility or infeasibility of pipeline transportation for Chevron.

The present lack of adequate analysis on pipeline alternatives by Chevron, and the need for the completion of the Santa Barbara County feasibility analysis make it impossible for the Commission to determine at this time if Chevron is providing the maximum feasible protection for this project by tankering its crude. The Commission, therefore, finds that insufficient information exists to find that the project impacts are mitigated to the maximum extent feasible as required by Section 30260(3).

As mentioned previously, Chevron has not demonstrated that tanker transportation is the least environmentally damaging alternative. Chevron does have in-state refining capacity. Possible refinery destinations for Hermosa crude include Chevron's Richmond refinery, Chevron's El Segundo facility, other refineries in the San Francisco or Los Angeles areas, and refineries in the Gulf and East coasts. Transportation of oil to these or other refineries by tanker would result in higher risk of oil spills and air quality problems from tanker loading and offloading than pipeline transportation.

A key issue is whether the oil could be refined in California. The staff has requested Chevron to supply a breakdown on what is refined at Chevron refineries and where it comes from. Chevron is conducting extensive studies on where the Arguello crude will be refined, but these studies will not be completed until the end of this year. Chevron states, however, that preliminary information indicates that modest volumes of Arguello production may be processed in California. The following possibilities are available to Chevron for refining Arguello crude within California.

California refineries cannot refine the Arguello crude without blending it with lighter crudes first. However, if a crude upgrade facility is constructed, the oil could be partially refined by removing high sulfur, metals, and heavy bottoms from the crude. This partially refined crude could be similar in quality to the crude currently refined in Richmond and El Segundo. The construction of a crude upgrade facility could open up refinery options for Arguello crude, such as in California or even the eventual distribution by pipeline to Gulf Coast refineries. An upgrade facility could also be used by Arco, Texaco, Union, and other producers to partially refine crude oil from their fields.

Chevron has not provided sufficient information on refining options to allow the Commission to adequately review the potential feasibility of pipeline construction. Therefore, the Commission finds that insufficient information exists to find that the requirement of Section 30260(1) has been met.

2. Marine Resources

The Coastal Act requires the protection of marine resources in Sections 30230-30236. Section 30230 of the Act states:

Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreation, scientific, and educational purposes.

Section 30231 of the Act states:

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

Chevron's proposal raises significant marine resource issues under these Coastal Act sections because the development plan will result in: (1) offshore disposal of drilling fluids and cuttings; (2) disturbance of marine mammals and other marine organisms from platforms, pipelines, construction equipment, crew and supply boats, and helicopters; (3) increased risk of oil spills; (4) adverse effects on kelp beds from pipeline construction and operation; and (5) adverse effects on commercial and sport fishing. Two issues, disposal of drilling muds and drill cuttings and commercial fishing, will be discussed under following Sections 3 and 4 of this report.

Resources of the Point Arguello - Pt. Conception Area. Platform Hermosa is proposed on Lease OCSP-0316, located approximately 8.5 miles west of Point Conception in 602 ft. of water. The prevailing northerly and southerly ocean currents come together at Point Conception, creating a complex hydrographic regime. Because of the convergence of the cold and warm masses, the Point Arguello - Point Conception area has long been recognized as the transition zone between two biogeographical provinces, the northern cold, temperate "Oregonian" province and the southern, warm, temperate Californian province. The Point Arguello - Point Conception area is the range limit for many northern and southern species. There are some short range endemic organisms which are thought to occur only in this area.

The Point Arguello - Point Conception area has had minimal human disturbance due to its proximity to Vandenburg Air Force Base and to the often extremely severe weather conditions. Consequently, the biological resources in this area are in much better condition than in many other areas in southern California. It has a rich array of biological resources including marine mammals, seabirds, invertebrates, and a healthy fishery. Upwelling occurs in the area, enriching the waters and thereby increasing primary productivity and enhancing fishery resources. The area supports large kelp beds and rich and diverse intertidal and subtidal communities. The kelp beds and rocky outcroppings provide excellent habitat for abalone. Large concentrations of intertidal abalone have been recorded south of Rocky Point. There are harbor seal haul out areas west of the Point Arguello Boathouse, at Jalama, and

at Point Conception. Several species of seabirds nest at Point Arguello, Rocky Point and Point Conception. Gray whales pass through the area twice each year during migration. The endangered California Brown Pelican is often found feeding in the area.

Chevron's proposal for one new platform and associated subsea pipelines, as discussed below, presents numerous possibilities for disturbance and damage to marine resources.

Benthic Habitats/Kelp Beds/Intertidal Areas. Drilling, installation of pipelines, a new platform, a produced water outfall, and disposal of drilling muds will impact the benthic organisms and kelp beds. In some cases, if the area of disturbance is kept to a minimum, animals will be able to recolonize after the disturbance. The construction of a platform or installation of a pipeline will alter the bottom permanently, changing the types of organisms that will inhabit an area. Platforms are often cited by oil companies as a marine resource enhancement because of their reef-like qualities. While fish may congregate near platforms, no conclusive evidence exists demonstrating that either the absolute abundance or the diversity of the fishery is enhanced. In fact, the platform structures and their discharges may lower both the abundance and diversity of some species. Often, only a few species will live on the cuttings pile and on the mussels which fall from the platform. The increased amount of clay in the sediments surrounding the platform can result in a decrease in the abundance of bottom-dwelling organisms unable to tolerate the new conditions. In addition, fish congregated at the platform will prey upon bottom-dwelling organisms, further reducing their abundance (Menzie et al, 1980).

A site specific marine biological survey was required as a part of Chevron's permit application to the MMS for development of oil and gas on Lease OCS P-0316. The MMS requires these biological surveys when development is proposed in hard bottom habitat areas. The survey was done by Dames & Moore in August and September of 1982. The survey was carried out with a submersible remote controlled vehicle (RCV), standard grabs, and trawl and diver sampling methods. The results of the survey are found in a February 14, 1983 published report, a map showing the rocky outcrops in relation to the platform and pipeline, photographs, and videotapes. The Commission staff will be reviewing the photographs and videotapes prior to the Commission hearing on the preliminary staff recommendation. The biological survey did not cover the intertidal area where the pipeline from the platform will intersect the shoreline. The staff has requested more information on this area from Chevron.

In late August the Commission's geologist made a field visit to the currently proposed sites for the pipeline landfall. Two alternatives are still under consideration by Chevron. The preferred alternative runs through a predominantly sandy area with rocky shelf outcrops. The other choice would send the pipeline through a biologically valuable rocky intertidal area. Chevron has not yet provided adequate information to make Coastal Act findings on either alternative and the landfall is in the coastal zone and would require a coastal permit. At this time, the Commission's preferred alternative would be to avoid all rocky outcrops and rocky intertidal areas.

The Dames & Moore survey noted four basic habitat types in the vicinity of proposed Platform Hermosa. The predominate habitat type is soft bottom, and the platform will be located in a soft bottom area. North to northeast of the platform site in 520-550 feet of water, are scattered small boulder fields from 5 to 25 meters in size. The boulders average one meter in maximum vertical relief.

A rock pavement area is found north and northwest of the proposed platform site. Offshore and southwest of the platform site in 660-700 feet of water depth, scattered rock pinnacles 1-1/2 meters high were found surrounded by small rock piles. Side-scan sonar records (Dames & Moore, 1982) suggest that this habitat type may be scattered throughout much of the southwest quadrant of OCS P-0316.

The habitat types along the pipeline route are described in detail in the Project Summary Report, (pages 12-14). Chevron has stated that in water depths of approximately 15 m, the pipeline will pass over or near an area of "low or shallow subsurface smooth hard bottom habitat." The pipeline will also pass over hard bottom habitat in an area 2000 m northeast of the platform site. These areas of hard bottom habitat will be disrupted by the pipeline.

As noted by Chevron, five reconnaissance marine biological surveys have been undertaken in the Point Conception area in the past three years. These studies have yielded some previously undiscovered organisms which may or may not be rare or endemic to the area. Correlation of the results of the studies is necessary, but will not be completed for some time. A description of the characteristic fauna found at the platform and pipeline sites in one such study appears on pages 12-14 in the Project Summary Report.

The Dames & Moore survey documents a variety of biological resources and habitat types at the platform site and along the pipeline route. Generally, rocky outcroppings with vertical relief are considered to support a greater number and diversity of marine species. Moreover, rocky outcroppings are a much less common habitat type than soft bottom areas. Chevron has located the platform and pipelines to avoid a large portion of the rocky areas. However, there are still some areas where Chevron's project would impact rocky habitat areas. The staff is reviewing the survey maps to determine whether further modifications in the pipeline route or other mitigation measures can be carried out to protect marine resources.

Chevron states that no blasting for pipeline installation is anticipated offshore, but that trenching will be done. Trenching will cause damage to the habitat directly surrounding the pipeline, but the impact can be far more localized than blasting. Chevron should be required to keep all pipeline construction disturbance within a corridor no wider than 100 feet wide. The construction of a new platform and the installation of pipelines will have a significant impact on new or rare species, rocky habitat areas, and kelp beds. Therefore, this portion of the project cannot be considered consistent with the marine resource protection policies, Sections 30230-30232, of the Act.

Because the platforms and pipelines to shore have been found by the Commission to be coastal dependent industrial facilities (see Section C), these portions of the project can be considered under the special provisions of Section 30260 of the Act, cited previously. While Chevron has attempted to reduce the impacts to benthic habitat areas, there appear to be additional feasible measures that can be taken to reduce impacts on these marine resources. These include some rerouting of the pipelines, a firm commitment to prohibit all blasting, and establishment of the narrowest possible construction corridor. Therefore, because there are additional feasible mitigation measures available, the project cannot be considered consistent with Sections 30260(1) and (3) at this time.

Water Quality Impacts. In addition to the discharge of drill muds and cuttings discussed in the following section, the proposed project will discharge produced waters, hydrostatic test waters, and treated wastewater into the ocean. These

waters have residuals of grease and oils, and trace amounts of other pollutants. The disposal of these waters must meet EPA and/or State Water Resources Control Board (SWRCB) discharges standards, and be consistent with the Coastal Act.

The DPP states that all facilities will be designed so that all wastewater will meet current water quality standards. Under Section 30412 of the Coastal Act, the Coastal Commission cannot establish water discharge standards beyond those established by the SWRCB. The Commission does have coastal permit jurisdiction over the construction and installation of a new produced water outfall.

Chevron has submitted a map showing the location of its new produced water ocean outfall from the proposed Gaviota processing facilities. It extends from the proposed processing facilities directly offshore to the 90-foot depth contour line. The map text states that the outfall discharge will start at 70-foot depth, or 300 feet beyond historical kelp bed boundaries, whichever is greater.

Chevron states that its produced waters will not adversely impact kelp beds or rocky areas since the outfall discharge point is not planned in either of these areas. While the terminus of the outfall will be out of the kelp bed, the wastewaters discharged are likely to enter the kelp beds. The exact constituents of the produced water that will be discharged is not yet known. The discharge must meet ocean plans standards and requires approval from the Regional Water Quality Control Board. While the Coastal Commission cannot set specific water quality standards, it can provide comments to the RWQCB. Chevron should be required to provide assurances to the RWQCB that the produced water discharge will not adversely impact the health of the kelp beds.

Chevron's DPP states that all facilities will be designed so that all wastewater will meet current water quality standards, although it provides few details on this portion of the project. Under Section 30412 of the Coastal Act, the Coastal Commission cannot establish water discharge standards beyond those established by SWRCB. However, the Commission does have the responsibility to analyze in detail the location and construction of the actual outfall. Chevron has not provided the Commission with enough information on which to conduct this analysis. The Commission notes, though, that the produced water outfall is in the coastal zone and will require a coastal development permit, and, thus, another opportunity for the Commission to evaluate the produced water outfall. Nevertheless, the Commission cannot find the proposed wastewater discharge options consistent with Sections 30230 and 30231 of the Coastal Act because of insufficient information.

Disturbance to Marine Mammals from Increased Crew and Supply Boat, Helicopter, and Tanker Traffic to the Marine Terminal. Increases in crew and supply boats, helicopter, and tanker traffic to a marine terminal could affect marine mammals (especially gray whales) by collisions or disturbance of migration patterns. This is a seasonal impact, most pronounced during the winter and spring. In order to mitigate adverse impacts to marine mammals, Chevron has agreed to (1) follow regular crew and supply boat routes between the Ellwood pier and proposed Platform Hermosa; (2) work with the Western Oil and Gas Association (WOGA) to incorporate educational information into the Fisheries and Environmental Training Program on how to identify gray whales and avoid any harrassment by the supply and crewboat operators; and (3) limit offshore construction activities to the months of April through October so as to avoid most of the peak whale migration period. Northward migration of whales occurs until early summer.

Increased Risks of Oil Spills. The construction and operation of the proposed platform and associated pipelines, and the loading of crude oil onto marine vessels from an existing or expanded marine terminal for transport to refineries significantly increase the risk of an oil spill in the Point Arguello-Point Conception/Santa Barbara Channel area. Chevron has not proposed to use a pipeline for transporting crude oil to refineries. Numerous studies, cited previously in Section E-1 show that pipelines offer less of a risk of oil spills than transportation of oil by tankers. Chevron does not provide any analysis regarding the potential of pipelining its crude to refinery centers or on the spill risks associated with tanker transport versus pipelining.

An oil spill could seriously affect marine resources. According to Chevron's Oil Spill Contingency Plan, oil spilled from Platform Hermosa would move toward San Miguel Island from December through February. The rest of the year, oil would move toward Santa Cruz Island. Drift bottle studies (1973) performed by the Scripps Institute of Technology have shown, however, a tendency for oil movement north during some months, thus threatening the Sea Otter range. If oil does contact the islands or the Sea Otter range, the feathers of birds and the fur of marine mammals would be fouled. Birds, mammals, fish and invertebrates could ingest the oil. Both fouling and ingestion can result in the death of the animals. Oil-tainted fish could not be sold by the commercial fishermen. Depending on the extent of a spill, kelp beds, wetland areas, streams, and rocky intertidal areas could be damaged. The southern sea otter, an endangered species, is not now a resident of the area, but could move into the kelp beds in the future. The sea otter has been proved to be especially susceptible to injury or death from oil contact.

The present response time of the Clean Seas oil spill response vessels of 5 to 6 hours is not adequate given these conditions. Risk of oil spills from this region will increase significantly with new development from Lease Sale 53 tracts and the upcoming Lease Sale 73. Therefore, a new Clean Seas response vessel (with similar response capabilities to Mr. Clean II) should be located in the vicinity of the proposed platform site. (Also see Section E-5)

3. Drilling Muds and Drill Cuttings

As discussed in the previous section, the Coastal Act requires the protection of marine resources. The offshore disposal of drilling fluids and cuttings has a major impact on marine resources.

Drilling muds are used in both exploration and production drilling to control hydrostatic pressure in the well, lubricate the drill bit, and remove the drill cuttings from the well. They are generally composed of mixtures of water, clays, barium sulfate, lignite, lignosulfonate, and other additives. Drill cuttings are small pieces of formation rock cut away by the drill bit. They range in size from microns to a few centimeters. They are carried to the surface of the well with the circulation of the drilling muds and are separated from the muds on the platform by the solids separation equipment.

In October 1981, the Commission established a policy to guide its actions on muds and cuttings discharges. At that time, it determined that muds and cuttings discharged under the Environmental Protection Agency's National Pollutant Discharge Elimination System (NPDES) permit more than 1000 meters from state waters had not been shown to affect the coastal zone and, therefore, would not require consistency review. Allowing for future changes in policy, however, the Commission, in its testimony before the Environmental Protection Agency in October 1981, stated:

Should any new information arise within the two-year life of this permit that demonstrates that discharges beyond 1000 meters do affect the coastal zone, the Commission reserves its right to re-examine this issue under its consistency review authority and to respond, in our case-by-case consistency review, to the sensitivity of a particular location.

Based on the availability of new information on the fates and effects of muds and cuttings, and because of increased drilling activity offshore California, the Commission instructed the staff, in the fall of 1982, to re-examine the Commission policy on muds and cuttings disposal. A January 31, 1983 letter to the Environmental Protection Agency notified the agency of the Commission's review:

The Commission is currently re-evaluating its position on drill muds discharges in light of more recent information on the fates and effects of muds, and may decide to require case-by-case review of each NPDES discharge activity. The Commission may also decide it cannot support the idea of a general permit, as was issued by the Environmental Protection Agency in February 1982. We therefore request that a clause be included in the general permit to advise companies that the general permit does not apply if the California Coastal Commission determines that consistency review is necessary for areas beyond 1000 meters from the coastal zone.

The EPA's present NPDES general permit for southern California expires on December 31, 1983, and therefore will not cover discharges from Chevron's project. The EPA intends to expand the area covered by the permit to include 39 additional tracts, and to extend the life of the permit until June 30, 1984. The Commission intends to exert consistency review authority over the reissuance of the NPDES permit.

Representatives of the oil industry have been helpful to the staff in its re-evaluation of the Commission's discharge policy. Industry representatives (including Chevron) have met with the Commission staff and provided information on the environmental effects of these discharges. There remains substantial disagreement over the long-term chronic and cumulative effects of discharging these materials in OCS waters. Although a revised policy statement is not yet completed, the Commission finds it necessary to exert consistency authority over the NPDES permit for Chevron's project for several reasons:

- (1) New information on the toxicity and eventual fates of muds and cuttings has become available.
- (2) The magnitude of discharges from production platforms poses a threat to coastal waters. The discharges from Chevron's nearly 40 wells have a greater potential to adversely affect the coastal zone than do individual discharges from exploratory wells. The oil industry estimates that over 1500 exploratory and production wells will be drilled in the Santa Barbara Channel and Santa Maria Basin over the next ten years. An estimated 1,171,500 tons of muds will be required to develop these wells. Chevron's discharges, when considered with discharges from other future development projects, raise concerns over long-term cumulative impacts in the western Santa Barbara Channel area.

(3)

The Department of Fish and Game, in a report on drilling muds prepared for the Coastal Commission (J. Steele, 1983), cited the lack of conclusive information available on long-term, wide-spread effects, and recommended that regulatory agencies continue to review new information. The report recommended that, until definitive information on the effects of discharges is available, the muds and cuttings from wells in state waters should be barged ashore for land disposal. In addition, a letter from the Department of Fish and Game to the CCC, dated June 16, 1983, states, "We believe there is sufficient cause for concern regarding possible accumulative impacts to California's coastal resources from drilling in the OCS to reconsider the policy with regard to the range of effects."

- (4) Mud discharged on the OCS may well travel into state waters. Chevron did not conduct a computer simulation of dispersion for a hypothetical discharge of muds from their proposed new platform. However, Exxon did perform a computer simulation of dispersion for a hypothetical 500 barrel discharge of muds from proposed platform Hondo B. In the simulation, the surface current travelled due west, and the mid and bottom depth currents travelled due north (towards shore). The largest concentration of muds settled about 3.7 miles from shore, in an area approximately 2.8 miles NNW of the Hondo B site. Although current patterns at Platform Hermosa will be different from those at Hondo, the muds will be transported in a similar fashion. In addition, the proposed Chevron platform is in an area of "upwelling" which may accelerate movement of muds toward shore.
- (5) Discharges on the OCS can affect the marine resources of the coastal zone because many invertebrates and fish species spend some parts of their life cycles in near shore waters and some parts offshore in areas such as the Point Arguello Field.
- (6) Discharges of muds and cuttings can also have an economic impact on fishermen and onshore fish-related industries.

For these reasons, the Commission finds that Chevron's proposed discharges of muds and cuttings will affect use of land and water in the coastal zone, and therefore, the Commission finds it necessary to exert consistency review authority over the future NPDES permit which will cover Chevron's discharges.

Chevron proposes to discharge drilling muds and cuttings directly into the ocean from up to 40 wells on one platform (Hermosa). Up to three additional platforms may be proposed in the future for the Point Arguello Field by Chevron, its partner, Phillips, and other lessees. The DPP states that 1500 barrels of drill muds/per well and 16,000 cubic feet of cuttings/per well will be discharged with a total of 60,000 barrels of muds and 640,000 cubic ft. of cuttings for the proposed 40 wells over the anticipated 5 years of drilling on Platform Hermosa. The muds and cuttings will be discharged through the "cutting chute", a pipe that will terminate at approximately 30 m (100 feet) below the surface of the water. The Commission staff has requested that Chevron analyze these projected drill mud quantities, as the figures are substantially lower than for other comparable projects. In an August 23, 1983 letter to Commission staff, Chevron explained as follows:

After meeting with members of your staff on August 9, we decided to again review our mud discharge volumes and compare them to those presented in Exxon's Environmental Report (ER) for Santa Ynez. It appears that the discrepancy between Exxon's volumes and ours is one of semantics. As stated in our DPP and the July 13 letter, muds are discharged in bulk at various times during drilling. We estimated that about 900 barrels of muds would be discharged from a typical 10,000 foot well. We also included the discharge of 600 barrels of solids-free completion fluid (usually sodium or potassium chloride), which is discharged infrequently since completion fluid is generally reused from well to well.

These numbers were based on our actual operating experience with Platform Grace, and we believe they are correct in terms of intermittent, bulk discharges.

After reviewing Exxon's ER and consulting our Drilling Department, we believe that Exxon's volumes include muds discharged with the cuttings. Some mud adheres to the cuttings even after passing through the shakers, desanders and desilters. This mud, discharged continuously along with the cuttings, could be as high as 3,000 barrels for a 10,000 foot well. This, added to the 900 barrels of mud discharged intermittently in bulk, closely approximates the 4,000+ barrels per well reported by Exxon.

At the time that the DPP was submitted, we estimated that 900 barrels of mud and 16,000 cubic feet of cuttings (approximately 2,000 barrels) would be discharged during the drilling of a 10,000 foot well. The bulk volumes remain as estimated at 900 barrels. These batch discharges would probably occur twice at each well, with each batch consisting of 200-500 barrels discharged at a rate of approximately 480 barrels per hour. For purposes of modeling we will use a "worst case" situation of two-500 barrel discharges.

We have refined the drilling program so that cuttings volumes can be precisely calculated rather than estimated. The estimates in our DPP were high (16,000 cu. ft.), and mud solids which adhere to the cuttings were not considered. Therefore, the following volumes will be input into the dispersion model. Calculations are based on a 10,000 foot well drilled to the following casing specifications:

24" Conductor set in 30" hole at 450'

13-3/8" Surface Casing in 17½" hole at 2,300'

9-5/8" Intermediate Casing in 12¼" hole at 4,500'

7" Production String (or liner) in 8½" hole at 10,400'

Discharges of Drill Cuttings and Associated Mud While Drilling:

2,891 barrels mud

1,472 barrels cuttings

Bulk Discharge of Muds:

1,000 barrels mud (Two - 500 barrels discharges at 480 barrels per hour)

Chevron will, then, in effect, discharge approximately 4,000 barrels of mud per well including the bulk mud discharges and the muds which have adhered to the cuttings. This revised explanation differs significantly from the original figure of 790 barrels of mud per well that was supplied to staff in the DPP and subsequent correspondence. The approximately 4,000 barrels of mud per well discussed in the above August 23, 1983 letter falls generally in the range of other companies' experiences.

Chevron, in its August 23, 1983 letter to the staff, has stated that it plans to use two generic muds for the major drilling portion of each well. Generic Mud #5, Spud Mud, will be used while drilling to a depth of approximately 2,300 feet and Generic Mud #7, Lightly Treated Lignosulfate Freshwater/Seawater Mud, will be used to complete the drilling (to approximately 10,000 feet). Chevron has stated that additives will be chosen from EPA's approved list and that the use of chrome-lignosulfate will be avoided. The staff has twice requested additional information from Chevron on the proposed use of additives. Namely, which additives are likely to be used and all additives which will definitely not be used. With this information a more accurate judgment can be made regarding the potential impacts of disposing of the drill muds. Any mud additives Chevron uses will need to be approved by EPA under the condition of the NPDES permit prior to discharge. The use of some additives will require barging contaminated muds to shore.

Occasionally, in drilling, it becomes necessary to add substantial amounts of diesel oil (100 barrels or more) to the mud system to loosen a stuck drill pipe. The EPA's NPDES permit prohibits the discharge of "free oil". According to the permit, substances discharged "shall not cause a film or sheen upon...the surface of the water or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines." It is unclear what amount of diesel in the mud system would produce these effects. Fairly low levels of diesel contamination may not be visible because the oil will absorb onto the clay particles and will not produce a sheen. Surfactants added to the mud system to help emulsify the diesel can also prevent formation of a visible sheen. The oil will travel with the mud particles and will be worked into the sediments when the mud settles. Chevron has stated that muds which exhibit a sheen will be considered "oil-contaminated" and will be sent to shore.

Barite, which is commonly added to mud as a weighting agent, often contains trace amounts of other heavy metals. Because the quantities of barite which will be added are so large, substantial amount of these potentially very toxic heavy metals will be discharged into the ocean. It is estimated that from one platform, containing forty 7000 foot wells, the following quantities of metals could be discharged: 345 lbs. arsenic, 117 lbs. mercury, 117 lbs. cadmium, 938 lbs. nickel, 1.9 tons vanadium, 1.4 copper, 1.4 tons lead, 10.3 tons zinc. The staff has requested Chevron to specify the source and heavy metals content of the barite it

intends to use in its Hermosa development. Chevron has stated that it does not know the possible sources of the barite at this time, but will attempt to provide this information as soon as a mud company is selected. In addition to the heavy metals associated with the barite, other heavy metals may be added to the ocean from the drill cuttings. The metals content of the cuttings will vary depending on the composition of the formation rock.

Drilling muds and drill cuttings from both exploratory and production wells behave as a two-part system once they are discharged into the water. The coarse-grained cuttings fall quickly through the water and form a pile below the rig, usually within a few hundred meters of the discharge. The fine particulates which comprise the muds tend to remain in suspension in the water. The muds are greatly diluted at the point of discharge, and they form into plumes as they disperse through the water. The plumes move with the circulation of the water, and eventually most of the particulates discharged from the Point Arguello Field will settle out at low points on the edge of the Continental Shelf. The staff has requested Chevron to supply oceanographic data which shows the most likely area of deposition. Chevron has not yet supplied this data, but has committed to run a computer model to determine the fates and effects of drill muds discharges from Platform Hermosa. This model requires accurate oceanographic data. Chevron expects to complete the modeling and to submit the results to the Commission by September 12, 1983. These results will be evaluated in the final staff recommendation.

The effects of drill muds and cuttings discharges on marine organisms are the subject of great controversy. The National Academy of Science's National Research Council produced a report entitled "Safety and Offshore Oil". This report states:

There is no clear agreement among ocean biologists as to whether low concentrations of petroleum or drilling fluids and cuttings produce significant effects on marine biota. Nor is there agreement about the cumulative effects of low levels of discharges or of disturbances caused by drilling operations to natural ecosystems, both being difficult to detect and to measure quantitatively. Moreover, the long-term effect of the discharges on an ecosystem or community has not been established adequately. Thus, while there is general agreement that the toxicity and smothering effects of large quantities of oil and drilling fluids and cuttings are harmful to pelagic birds, benthic organisms, and coral reefs, there is less agreement on the ability of those life forms to recover after a time.

Scientists are unable to agree on the degree of concentration of mud components in the water that will cause harm to organisms. Scientists do agree that diesel oil is very toxic to marine organisms. In fact, industry representatives have suggested that high toxicity values found in bioassay tests on some drilling muds may be attributable to diesel contamination of those muds. Physical effects, which include direct smothering, change of substrate, clogging of gills, and interference with ingestion in filter-feeding organisms, are easier to observe than are chronic chemical effects.

The DPP/ER states that "Chemical and physical properties of drilling mud and cuttings may degrade ocean water quality by the following ways:

1. Increase trace metal concentrations such as barite, chrome-ferro lignosulfonate, cadmium, copper, lead and mercury;
2. High dissolved oxygen demand;
3. Raised temperature;
4. Increased light attenuation;
5. Reduced hydrogen ion concentration (elevated ph, sodium hydroxide);
6. High concentrations of organic carbon, total nitrogen and phosphorous.

The staff has requested quantification of several of these parameters. Chevron has stated that the mud is expected to be very near ambient temperatures and should not create any measurable changes in the ambient water temperature.

The discharge of drilling muds does not appear to result in acute toxicity to marine organisms because the muds are dispersed in the water rapidly enough to limit the persistence of lethal concentrations. Bottom-dwelling organisms living directly beneath the discharge outlet are buried by cuttings and smothered; this effect is limited to an area within a few hundred meters of the drilling site. The temporary turbidity produced by plumes of mud does not seem to seriously reduce availability of natural light to marine plants and animals.

The Commission finds, after a thorough review of the available literature on muds and cuttings, including those contained in the substantive file documents and in testimony before the Commission, that the scientific community has not reached a consensus on the long-term, sub-lethal effects on organisms from continued exposure to low concentrations of muds and mud components. While Chevron and other industry representatives assert that no such impacts have been documented, other studies indicate the possibility of chronic impacts, including decreases in reproductive rate due to interference with fertilization, build-up of heavy metals in tissues and bones, concentration of heavy metals higher in the food chain, changes in species abundance and distribution, and behavioral changes resulting in greater susceptibility to predation. Tagatz et al (1980) found that the presence of high mud concentrations in the sediments can inhibit settlement and recolonization by many types of organisms. Schatten (1982) found that barium interfered with the fertilization and early development of sea urchin embryos. Sweeney (1981 testimony before the EPA) has stated that small amounts of copper and other heavy metals in seawater are exceedingly toxic to phytoplankton; these tiny plants are the basis of the food chain on which many other organisms depend. Brannon and Rao (1979) found that ingestion of muds containing barite can result in significant increases in barium content in the tissues of grass shrimp. Neff (1979) investigated sublethal responses of organisms to used drilling muds and observed decreased growth rates in oysters, grass shrimp larvae, opossum shrimp, and killifish embryos, developmental anomalies in fish embryos, impairment of osmoregulation in shrimp, and hypoglycemia in crabs, at concentrations similar to or slightly lower than those that were acutely toxic.

Chevron's DPP states that, "Available literature suggests that drilling mud from the proposed Point Arguello Field development would not have significant or lasting effects on ocean water quality" and, therefore, does not propose measures to

reduce or offset the effects of the discharges. The controversy over the long-term effects of the muds is far from resolved, and the discharges, as proposed by Chevron, cannot be considered to be sufficiently protective of the marine environment without significant mitigation measures.

The Coastal Commission has carefully considered the drill muds disposal element of Chevron's project and, based on the information currently available and discussed above, finds the project to be inconsistent with the marine resource policies of the Coastal Act Sections 30230-30232. This finding of inconsistency regarding ocean disposal of drill muds is in accordance with the Commission's past action on the Chevron OCS plan of exploration for OCS P-0217 (CC-11-83).

EPA's general NPDES permit that is currently in effect will expire before the Chevron project comes on line. This general permit is likely to be extended until July 1984, but the renewal does not and was never intended to cover Chevron's mud discharge. Chevron's discharges would likely be covered under a third NPDES permit, which would be issued by EPA in July 1984. The Commission, therefore, has inadequate information at this time and cannot make a consistency determination regarding the future NPDES permit for drill muds disposal from Platform Hermosa. The Commission intends to exert consistency authority over all of EPA's future NPDES permit actions on disposal of drill muds off California. The Commission has further suggested that EPA review permits for all development activities on a case by case basis rather than under a general permit (see Exhibits 12 and 13, Commission comments to EPA re: NPDES permits).

The ocean disposal of drill muds has been clearly found inconsistent with the marine resource policies of the Coastal Act. Nevertheless, the coastal dependent industrial facilities portion of the project could be permitted if they met the tests of Section 30260, cited previously.

The Commission staff has considered several alternative methods for discharge and/or disposal of muds and cuttings, including barging the muds to an onshore Class I or Class II-1 disposal site; barging the muds to an approved offshore ocean dumpsite; increasing mud storage space on the rig; treating the muds and cuttings with a silicate binding agent; shunting the muds to a particular depth in the water column; diluting the muds prior to discharge; and reusing the muds in production drilling.

Chevron maintains that barging muds and cuttings to shore or to an offshore dumpsite is not feasible due to added expense and safety risks. The industry's Offshore Operator's Committee estimates that the total cost to dump muds and cuttings at an authorized land site, for a 10,000 foot well in the Gulf of Mexico, would be \$243,000. This figure includes the cost of truck transportation to the dump site, the site usage charge, and the cost of two percent rig downtime, due to the predicted time when weather would prevent loading of the muds into a barge or supply boat. Industry spokesmen estimate that barging muds ashore and transporting them by truck to a dumpsite would increase NOx emissions by about 280 pounds/day, an increase of about 28 percent over the total daily operational outputs associated with drilling operations.

Disposal at an offshore dumpsite would necessitate the EPA's designation of an approved offshore site. Costs associated with disposal at such a site would be comparable, but somewhat less than those for an onshore site, because a usage fee would not be charged.

While the Commission concurs with Chevron that the barging of all muds and cuttings is not expedient, some situations do exist in which some muds and cuttings must be disposed of onshore and in such cases this alternative is not only feasible but necessary. As explained above, muds contaminated with certain additives may not be discharged under EPA's NPDES regulations and such muds must be barged ashore for land disposal. Diesel oil is the primary additive which necessitates onshore disposal of the muds. As discussed previously, scientists agree that diesel oil is very toxic to marine organisms.

Another mitigation measure discussed with representatives of the oil industry was the chemical fixation of muds and cuttings. In this process, silicate products are mixed with the muds and cuttings to bind the solids and keep them from dissolving in water. The efficacy of the chemical fixation process in binding heavy metals is not proven. Although more information will be forthcoming on the process, the Commission finds that it is not a feasible mitigation measure at this time.

Shunting of muds through a shunt pipe to a given depth in the water column may be a useful mitigation in several situations. A pipe can carry the muds away from the surface waters, where a plume would be more likely to interfere with photosynthesis and would be more visible. Mud can also be shunted near to the ocean floor, so that most of the particulate matter will settle out and dispersion will be minimized. In deep water, where maximum dispersion is desirable, an exact placement of the shunt pipe is not essential. Mud discharged from Chevron's shunt pipes, which will terminate 100 feet below the water's surface, in a 600-foot water column, will disperse as the particles fall away from the discharge outlet. Therefore, the Commission finds that modification of shunt depth is not a necessary mitigation measure for these sites.

Dilution of muds with seawater prior to discharge can be used to increase the rate of diffusion of the mud particles, particularly in shallow water. It does not significantly increase diffusion rates in deeper water, and therefore is not an appropriate mitigation measure at these sites.

The Commission finds that provision of additional mud storage space on the platform, separate from the regular mud tanks, can mitigate the effects of mud discharges in two ways. First, if storage area capable of containing the maximum total volume of mud in the working system at any one time (approximately 1500 barrels) is available on the platform, the muds contaminated with diesel oil can be stored in bad weather, and drilling can continue uninterrupted. Second, additional storage can make re-use of non-contaminated muds more feasible. In production drilling from a platform with two operating rigs, it is possible to alternate drilling schedules so that the same muds can be used by both rigs. Provision of mud storage space on the platform will allow mud of a certain formulation to be held until it is needed again; this could minimize the total volume of mud discharged. The high cost of muds makes this option economically attractive. The money saved in avoiding rig downtime and in reusing uncontaminated muds reduces the net cost of incorporating additional storage onto the platforms. Additionally, provision of storage space on the platform would allow Chevron flexibility in the future in its ability to adjust its mud program (i.e., increasing use of oil-based muds which require onshore disposal) and to comply with changed regulatory requirements. Should Chevron ever need to provide on-board storage, it would be less costly to incorporate additional storage capability into the platforms at the design stage than it would be to retrofit existing structures.

The current Chevron proposal includes platform storage capacity of 2,040 barrels of mud. These mud holding tanks are designed primarily to mix and hold fresh muds prior to use in the wells. At least 1500 barrels capacity would have to be set aside for storage of contaminated muds to consider this a viable mitigation measure. Chevron has yet to make this commitment.

The Central Coast Regional Water Quality Control Board's Oceanographic Technical Advisory Committee has designed several drilling muds monitoring studies to be carried out by oil companies drilling in State waters. One goal of the studies is to identify an appropriate compliance monitoring tool (i.e., an array of settling tubes) which will accurately collect and record the mud components discharged from the wells. Other groups, including the Georges Bank Biological Task Force, are also investigating the effectiveness of various monitoring systems. The Commission finds that to ensure compliance with discharge standards and to protect the marine resources of the Santa Maria Basin area, such compliance monitoring, in conjunction with independent analysis and verification procedures, is necessary.

In conclusion, the Commission finds that provision of additional mud storage space on the platforms, as well as development and emplacement of a compliance monitoring system, are both feasible mitigation measures. However, Chevron has not adequately addressed these measures. Therefore, the Commission finds that Chevron has not mitigated this impact to the maximum extent feasible and the project is inconsistent with Section 30260(3) of the Coastal Act.

4. Commercial Fishing

Section 30230 of the Act, previously cited, requires that special protection be given to "areas and species of special...economic significance." This section further requires that, "Uses of the marine environment shall be carried out in a manner that will maintain healthy populations of marine organisms adequate for long-term commercial...purposes." Section 30231 requires maintenance of the biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes for optimum populations of marine organisms. Section 30234 of the Act states:

Facilities serving the commercial fishing and recreational boating industries shall be protected and, where feasible, upgraded. Existing commercial fishing and recreational boating harbor space shall not be reduced unless the demand for those facilities no longer exists or adequate substitute space has been provided. Proposed recreational boating facilities shall, where feasible, be designed and located in such a fashion as not to interfere with the needs of the commercial fishing industry.

The Commission finds that commercial fishing is an important element of the coastal economy which must be protected under Sections 30230, 30231, and 30234 of the Coastal Act. In addition to money earned directly by fishermen, the industry is considered a "primary industry," which generates many additional secondary jobs for seafood processors, brokers, dock workers, truck drivers, and boat yard crews. Revenues for the rent and the purchase of housing, food, and equipment are also generated by commercial fishing.

Chevron's Platform Hermosa and the offshore pipeline are located in Department of Fish and Game (DFG) fish blocks 658 and 657, respectively. Chevron discusses in the DPP the use of a new consolidated marine terminal at Gaviota, proposed by Getty

Oil Company, as its first option for transportation of the processed oil, or use of the marine terminal at Las Flores proposed by Exxon Company, USA. These facilities are located in fish blocks 655 and 656, respectively.

Information from DFG and Chevron indicates that commercial catches from all these blocks are comprised of numerous species, but mainly white seabass, halibut, abalone, crab, lobster, spot prawn, and sea urchin from the nearshore waters, and Pacific bonito, shark, bocaccio, rockfish, sole, tuna, and ocean shrimp in deeper waters. The most recent specific fish block data (1981) is only available for fish blocks 655, 656, and 657. Combined, these three fish blocks contributed a total of 10,400,000 pounds of fish and shellfish in 1981, with a value of \$1.6 million. Recognizing that there are at least three people working onshore in fishing-related businesses for every fisherman, total value of these fisheries to the local economies was almost \$5 million. Data from fish block 658 would boost these figures.

Information from DFG, a seafood buyer, commercial gillnetters, and trawlers from Santa Barbara and Morro Bay define the potential impacts of the proposed project. Platform Hermosa, with its proposed location in 602 feet (approximately 100 fathoms) of water will be located on the outer (western) edge of the trawl fisheries for rockfish and bocaccio. Most local trawlers fish in waters less than 100 fathoms deep, although some trawl in the vicinity of the platform. While the proposed platform will not currently affect gillnetting for thresher shark, a DFG representative states that the thresher shark fishery is new and growing. Thus, additional oil and gas development in the Santa Barbara Channel, around Points Conception and Arguello, and in the Santa Maria Basin may displace this growing fishery in the future.

Drilling up to 48 wells from the proposed platform will entail ocean disposal of drill muds and cuttings. Commercial fishermen and the Commission have expressed concern about the short-term and long-term effects of these materials on commercially recoverable fish in previous considerations of development and exploration plans. The Commission continues to be concerned because of the uncertainty of the impacts, as expressed by the scientific community. The previous section in this report provides further analysis of the fates and effects of drill muds on marine biota.

Production from Platform Hermosa will increase the chance of oil spills, which could adversely impact commercial fisheries. Economic losses to the fishing industry can occur by (1) tainting marine organisms by direct coating or ingestion of hydrocarbons; (2) reducing the total available catch; (3) contaminating fishing gear and vessels, requiring either cleaning or replacement of the gear and cleaning of the vessels; and (4) preventing fishermen from leaving port due to placement of oil containment booms. Additional discussion of impacts from oil spills is provided in Section E-2.

Construction of the proposed offshore pipeline from Hermosa to shore will interfere with halibut trawlers, halibut and white seabass set gill netters, abalone and sea urchin divers, lobster and crab trappers, salmon trollers, and hook and lining for rockfish. Up to 50 operators from ports in the Santa Maria Basin and Santa Barbara Channel could be affected.

The actual presence of the pipelaying barge will preclude fishing activities, and disturbance to the ocean floor from the barge's anchors and the pipeline will temporarily limit trawling, trapping, and diving activities. The DPP states that

the pipeline will be installed from May to October 1985. This scheduling will interfere with fishing for halibut which is a year round fishery, but peaks from February through July and October through December; crab, which is a year-round fishery; and white seabass, which is fished from July 15 through March 15, but peaks from June 15 through July and October 1st through February. Other set gill net activities center on soupfin shark, baracuda and angel shark, although catches were low in 1981. After construction, protrusions, such as pipeline connections or tie-ins, and protruding electrodes, will damage trawl nets travelling over these potential snags.

According to a gillnet fisherman, both Getty's existing and proposed marine terminal at Gaviota, Chevron's preferred and backup transportation option is and will be located in prime halibut, crab and lobster fishing areas. These fisheries provide a significant percentage of commercial fishing revenues and fisheries habitat from the Santa Barbara Channel. According to a seafood buyer, a new marine terminal at either Gaviota or Las Flores will significantly affect the halibut, lobster, sea urchin, abalone, and rock crab fisheries. Both proposed terminals will preclude fishing within a two-mile radius of the structures, taking into consideration interference by the associated tanker traffic. However, the impact of an expanded terminal at Las Flores would be less than from expansion at Getty - Gaviota because fishing offshore Las Flores is less intense than in waters offshore Gaviota.

Support boat traffic for transportation of supplies and crew from Port Hueneme and Ellwood pier will also affect the nearshore fisheries by running over buoys and losing traps and nets.

To address the above impacts, Chevron has incorporated mitigation measures into the project. It has established support boat routes to minimize the conflict between the boats and the set gear fisheries. Chevron will compensate for damaged fishing gear as a result of the project activities, in accordance with general liability laws. It will complete a study of pipelaying methods by December 31, 1983 and will consider the disturbance to the ocean floor as it would affect other users of the marine environment. The DPP states that the pipeline will be designed and constructed with smooth profiled protective devices, such as shrouds or sand bags for connections or tie-ins, and slope-sided enclosures for large protrusions. Chevron will also meet with the affected fishermen to identify concerns and move toward determination and implementation of feasible mitigation measures. The Commission believes that Chevron's mitigation measures are steps in the direction of resolving conflicts between the proposed project and commercial fishing activities, but that additional steps should be taken to assure continuance of the fisheries in the area.

In addition to analyzing individual impacts of proposed development, the Commission also analyzes the effects of projects in connection with effects of past, present, and future development in accordance with Section 30250 of the Act. The waters offshore California have historically supported and will continue to support oil and gas and commercial fishing industries. Future development and production facilities for oil and gas will be proposed in Lease Sale 53 and 68 tracts and future exploration and development could occur in proposed Lease Sales 73 and 80 areas offshore central and southern California. In addition to future activities in the federal OCS, activity may increase in state waters, as evidenced by the proposed State Tidelands lease sale between Points Arguello and Conception.

California's offshore waters support significant numbers of commercially recoverable fish. In 1982, over 695,000 million pounds of fish and shellfish, worth \$241 million to commercial fishermen, were landed in California. When contributions to support, processing, transportation, and marketing industries were considered, using a multiplier of 3.1, the total value of California's commercial fishing industry is nearly \$750 million. Current state and federal management practices and regulations are designed to sustain levels of the exploitable fish stocks.

Through consideration of consistency certifications and coastal development permits for plans of exploration and development, the Commission is aware of numerous conflicts between the commercial fishing industry and oil and gas activities in the Santa Maria Basin and the Santa Barbara Channel. The Commission has considered 50 consistency certifications for POEs in Lease Sale 53 tracts. In at least three-quarters of these projects, commercial fishing conflicts were unresolved by the review process of the MMS. The Commission had to object or partially object to seven POEs because the conflicts with commercial fishing activities could not be resolved. The proposed wells were located in valuable trawl areas in which fishing activities would have been displaced. The proposed production platforms for Exxon (CC-7-83) in the Santa Ynez Unit will be located in a significant thresher shark area. According to representative drift gillnetters, the area contributes up to thirty percent of the thresher shark catch for the Santa Barbara area fishermen. The Commission has also objected to exploratory drilling on two tracts in the Santa Barbara Channel because of conflicts between trawlers and drift gill netters, and oil and gas activities. This entire area--the Santa Barbara Channel and the Santa Maria Basin--supports significant catches of shrimp, groundfish, thresher shark, and swordfish.

It is evident that, as oil and gas activities increase offshore California, conflicts with the commercial fishing industry accelerate. As fishing areas are either temporarily or permanently closed off to the fishermen, the impacts cumulate, leading to significant decreases in catches and income to fishermen and local economies. As mentioned previously, Chevron's project is for initial development of the Arguello Field; the ultimate number of platforms needed to produce the field is not known at this time.

As proposed, the Commission finds that the project will have both individual and cumulative impacts on commercial fisheries. Portions of traditional trawling grounds may be closed off due to snags from dropped debris and anchors. Construction of the pipeline will temporarily limit trawling and set gear operations during their respective fishing seasons. Although trawling and gillnetting activities are limited in the proposed platform area, fishermen involved in these activities will be forced to avoid the site. Because the thresher shark fishing is expanding, and the Point Arguello area is a prime location for this fishery, Platform Hermosa may adversely affect its future growth. This potential impact is compounded by the fact that the fishery already will be adversely affected by the development of the Santa Ynez Unit. Thus, the Commission finds that the project is inconsistent with Sections 30230, 30231, 30234, and 30250(a) of the Act.

The Commission found in Section C of this report that the platform and subsea pipelines portion of the project are coastal dependent industrial facilities. The Commission also has found that the marine terminal aspects of the project are coastal dependent. Although the proposed development does not comply with Sections 30230, 30231, and 30234, because the offshore components are coastal dependent, these must be further analyzed under the requirements of Section 30260, cited previously.

The first requirement of Section 30260 is that the applicant must demonstrate that alternative locations for the project are either infeasible or more environmentally damaging. Although relocation of the platform and pipelines may not be infeasible, it may precipitate conflicts of either equal or greater magnitude. If the platform is moved to shallower waters, it would pose greater interference with the trawlers because they generally trawl in waters less than 100 fathoms deep. Relocating the platform elsewhere between Point Arguello and Point Conception could also pose conflicts to other types of commercial fishermen. As evidenced by DFG fish block data, the area from Point Arguello to Point Conception is trawled within the 100 fathom contour and the area from Point Arguello to Gaviota is fished with set gear within the 30 fathom contour. Relocation of the pipeline within these areas will pose similar conflicts with the commercial fishing industry.

Siting a new marine terminal between Point Arguello and Gaviota will also pose significant conflicts with the set gear fisheries. According to a gillnetter, each terminal precludes fishing within a two-mile radius of the structure. The Commission notes that use of the existing Getty terminal by Chevron will result in the expanded use of this facility, even if Getty's proposal for a new consolidated terminal is rejected, because more tankers will be required to handle the increased volume of crude output. Such expansion will occur in a prime nearshore fishery.

The least environmentally damaging alternative is to use a pipeline instead of a marine terminal to transport the crude oil. If a pipeline is shown to be infeasible, then the next less environmentally damaging alternative is to locate a marine terminal in a less productive fishing area, such as Las Flores, to close down the existing Getty terminal, and to require the use of one consolidated marine terminal by the operators. Such requirements will minimize the cumulative impacts of this and other OCS development by reducing the displacement of nearshore fisheries. Because Chevron's proposal does not provide for the least environmentally damaging alternative with regard to commercial fishing, the Commission finds that the project is inconsistent with Section 30260(1) of the Act.

The third requirement of 30260 requires that adverse environmental effects be mitigated to the maximum extent feasible. Mitigation measures should include conducting subsea surveys or trawling in the construction zones of the platforms and pipeline for dropped debris after the conclusion of construction activities to ensure that lost equipment, which can damage trawl nets, is not within the trawl areas. If debris is found, Chevron should commit to its removal. Although the industry is prohibited from dropping debris overboard, it does happen, as evidenced by testimony offered by commercial fishermen in Commission meetings on CC-6-83 (Exxon) and CC-7-83 (Exxon). Chevron also should commit to using a pipelaying method that will eliminate or minimize to the maximum extent feasible anchor scarring. Anchor scars from laying of pipeline between Platforms Grace and Hope has forced abandonment of a significant shrimp trawl fishery in the Santa Barbara Channel for the last three years. Although Chevron has attempted to smooth out the scars, trawl nets continue to snag, leading to damage of the gear and continued abandonment of the fishery. Chevron states that the seabed along much of the proposed route is quite similar to seabed conditions along the Grace-Hope pipeline route.

Although construction operations will occur during some fishing seasons, information from representative fishermen indicates that many of the peak fishing months are avoided by the current construction schedule. If the schedule is

changed, Chevron should agree to Commission review of its schedule to ensure that any changes do not increase impacts on commercial fishing. The Commission believes that any change should not result in greater impacts than those caused by the current schedule.

Without a commitment to employ these mitigation measures, the Commission finds the proposal inconsistent with Section 30260(3) because the environmental effects are not mitigated to the maximum extent feasible.

5. Containment and Cleanup of Crude Oil Spills

Section 30232 of the Coastal Act, cited previously, requires protection of the marine environment from any spilling of crude oil, gas petroleum products, or other hazardous substances. For any development or transportation of these materials, the section further requires "effective containment and cleanup facilities and procedures" to be provided for spills that do occur.

The Commission interprets the word "effective" to mean that spill containment and recovery equipment must have the ability to keep spills off the coastline. Unfortunately, this equipment does not currently have the capability to clean up large oil spills in the open ocean. Spill cleanup efforts could not keep oil off the beaches during the Ixtoc I oil spill in the Bahia de Campache, Mexico, the Amoco Cadiz spill off the coast of France, or the 1969 Santa Barbara oil spill from Union's Platform A. On August 6, 1983, a Spanish supertanker with 73 million gallons aboard burst into flames and split in half off the African coast, causing a massive spill. A 1980 report from the International Tanker Owners Pollution Federation states: "If a large volume of crude is released into the sea relatively close to shore, it's highly unlikely that even the best organized cleanup flotilla can prevent some, if not most, of the oil from reaching the coastline. The only real saviors of the beaches in the case of a major spill are favorable winds and currents which take the oil out to sea where it can be dispersed naturally."

This principle also holds true for any small oil spills in the open ocean. In 1977, the Chevron tanker, Manhattan, spilled approximately 20 barrels at Chevron's El Segundo terminal, most of which ended up on local beaches. A small 15 barrel oil spill from the Shell/Beta platform off Los Angeles and Long Beach could not be contained properly with equipment or dispersed with chemicals. While oil spill cleanup equipment can function with about 50 percent recovery efficiencies in calm seas, recovery efficiencies are drastically reduced in moderate or rough seas, thus limiting or eliminating the ability of the equipment to recover oil. According to data from the National Climatic Center in Ashville, North Carolina, wave height conditions for the Point Arguello-Point Conception area exceed two feet 74 percent of the time. Waves exceed six feet 20 percent of the year and nine feet six percent of the year.

Thus, the Commission cannot find that the proposal is consistent with Section 30232 due to the limited effectiveness of existing oil spill equipment in open ocean conditions.

As found in Section C of this report, the platform and subsea pipelines components of the project are found to be coastal dependent industrial facilities and therefore can be given additional consideration under Section 30260 of the Act. Oil spill containment and cleanup equipment, including response time and contingency planning, associated with Platform Hermosa and the pipelines to shore, must provide maximum feasible mitigation for the project to be consistent with Section 30260 of the Act.

Oil Spill Containment Equipment and Response. The Commission has determined in past permit and federal consistency certification decisions that the following oil spill containment and cleanup equipment must be located at the site of offshore drilling operations to help provide the first line of defense against oil spills:

- 1500 feet of oil spill containment boom capable of open ocean use;
- An oil recovery device (skimmer) capable of open ocean use;
- Oil storage capacity to handle skimmer throughput until the oil spill cooperative can arrive from shore with additional equipment;
- A boat located at the site of drilling operations or within 15 minutes of the site at all times;
- Oil sorbent material capable of absorbing 15 barrels of crude oil.

Chevron's DPP outlines the equipment and resources it plans to locate at the proposed facilities. The DPP states the following:

"Once the oil is on the water, the initial containment effort will be deploying the containment boom to encircle the spill, thus providing a physical barrier to contain the oil or other contaminant in a limited area. The boom is designed for fast deployment and will be maneuvered into position by the crewboat or workboat. If for some reason the crewboat or workboat is not immediately available, the onboard boom deployment boat will be used. After the spill has been contained, the oil will be mechanically removed by the skimmer. The skimmer will transfer the oil to a tank aboard the supply vessel. Additional storage, if required, will be supplemented by portable tanks. If high seas prevent the successful implementation of the oil boom and skimmer, a dispersant (Corexit 9527 or Corexit 7664) will be used. The use of a dispersant will be restricted to cases where physical removal is either not practical or where no more oil can be removed from the surface by physical means. The dispersant will be used only after permission is given by the Federal On-Scene Coordinator (OSC). A detailed discussion of containment and cleanup procedures for various open ocean and shoreline conditions is presented in the Oil Spill Plan which accompanies the DPP."

Chevron intends to provide the following oil spill cleanup equipment at the site of daily operations:

- o 21 foot Monarch Boom Deployment Boat or the Equivalent
- o 1500 feet - Whittaker Expandi Boom 18 inches freeboard x 25 inches Draft or Kepner compact Boom 15 inches Freeboard x 26 inches Draft (or equivalent)
- o 1 - Komara Mini-Skimmer or Acme Portable Skimmer
- o 2 - 1200 Gal. Kepner Sea Containers (or equivalent)
- o 240 feet - 3M or Conwed Sorbent Boom
- o 4 Box - 3M or Conwed Sorbent Pads 18 x 18 inches
- o 5 Drums - Corexit 9527 Dispersant

- o 1 Drum - Shell Oil Herder Surface Collecting Agent
- o 2 Backpack Sprayers for Chemical Agent Application

The approximate time required to deploy the spill containment equipment from the platform is 30 minutes. Estimated response times to obtain equipment and manpower from the oil spill cooperatives is three to seven hours. (emphasis added)

Chevron proposes that this oil spill containment and cleanup equipment be located onsite at Platform Hermosa for response to spills. Chevron plans to locate a small boat at the platform for use if a work or crew boat is not immediately available at the time of the spill. This vessel is not designed, however, to deploy and control the boom in open ocean conditions. Larger boats in the 32 foot range, will be necessary for this purpose. The proposed Komara mini skimmers are not designed for use in the open ocean and do not represent adequate equipment for use on this platform. Chevron must provide proper equipment and shall be required to demonstrate its use in both planned and surprise oil spill deployment drills.

Chevron's Oil Spill Contingency Plan for Platform Hermosa to calls for an onsite response team to carry out cleanup operations. For spills larger than could be handled by the onsite personnel and equipment, the Clean Seas oil spill cooperative for the Santa Barbara Channel and Santa Maria Basin will be notified.

The Clean Seas oil spill cooperative is composed of numerous oil companies which have pooled their personnel and financial resources for response to oil spills. Clean Seas has equipped eight onshore vans with equipment for shoreline protection, equipment at its Carpinteria storage yard, and two large oil spill response vessels, Mr. Clean I and Mr. Clean II. The cooperative's role is to provide assistance for spills exceeding Chevron's onsite capability and for initial response to large spills. Cleanup operations for large spills will require the assistance of other spill cooperatives, numerous contractors, and the U.S. Coast Guard Pacific Strike Team, located in the San Francisco Bay area.

The primary western Channel offshore response capability provided by Clean Seas is its 130-foot oil spill response vessel, Mr. Clean I, stationed in Santa Barbara Harbor. A similar vessel, Mr. Clean II, is located at Port San Luis. The contingency plan indicates that the response time of both these vessels to Platform Hermosa is approximately five hours. A six-hour response time is required by the U.S. Coast Guard/MMS planning guidelines. Both these vessels are located at the outer time range limit to respond to an emergency at Platform Hermosa. In addition, the vessels have only gone nine knots in Commission-sponsored oil spill response exercises instead of the twelve knots quoted in the contingency plan. To provide the maximum response time, and thus, the maximum feasible mitigation, the Commission finds that another Clean Seas vessel should be located in the Santa Maria Basin region.

To provide the best means of oil recovery, vessels should be equipped with both stationary and advancing oil recovery equipment (skimmers) capable of open ocean use. This standard is required by the U.S. Coast Guard. The Mr. Clean I vessel is equipped with one open ocean skimming device, the Cyclonet 100 skimming system. The cooperative has acquired a stationary skimming system, the Walosep W3, but has not stored it on the Clean I vessel. The Commission notes that the Cyclonet 100 has performed poorly in tests and during cleanup operations at the Ixtoc I oil spill in the Bahia de Campeche, Mexico. In addition, the Cyconet skimmer is mounted on Mr. Clean I in a manner that will reduce its effectiveness.

Mr. Clean II has two large skimming systems for use in the advancing and stationary methods. According to the manufacturer of the skimming equipment, the advancing system requires the vessel to cruise at speeds less than 1 to 1.5 knots. Unfortunately, this vessel is not capable of cruising this slow, and must be retrofitted to do so. If not retrofitted, the vessel will not be able to recover oil as efficiently. During recent Commission action on Exxon's consistency certification on the Santa Ynez Unit, Exxon, the Commission, and the Coast Guard agreed to study this problem and to determine whether modifications to the vessel are necessary.

Another operational deficiency involves the Offshore Devices Skimming Barrier. The Contingency Plan states that the Mr. Clean vessels can operate in 10-foot seas (Appendix 9 of the Plan) using the barrier. However, the Coast Guard Oil Pollution Response Planning Guide for extreme weather limits this system to Sea State 3, with marginal performance in Sea State 4. State 3 includes waves 3.1 to 5.4 feet and sea state 4 includes waves 5.4 to 7.5. As previously noted, waves in the Point Arguello area exceed six feet 20 percent of the year.

Finally, the Mr. Clean vessels can only store about 500 barrels of fluid onboard. The Commission has found in previous actions that 1000 barrels of oil storage capacity is required to provide maximum feasible mitigation of oil spillage. In fact, Exxon recently committed in amendments to its Santa Ynez Unit DPP that 1000 barrels of oil storage capacity will be available at the site within six hours and that the Cyclonet skimmers will be replaced. The Commission finds that similar commitments from Chevron are necessary in order for the project to meet the maximum feasible mitigation requirements of Section 30260 of the Act.

Oil Spill Contingency Plan. Under Coast Guard requirements, oil companies operating offshore must submit oil spill contingency plans with specific dispersant procedures to be used in a spill. This information must include a description of wind and wave conditions in areas where dispersants may be necessary, spill sizes where dispersant use is warranted, detailed descriptions of dispersant application systems, and, most importantly, an evaluation of whether the dispersant can function on the type of oil being produced. Although the staff has requested this information, Chevron has not provided it. The Commission must have this information to adequately evaluate Chevron's plans for oil spill response.

Chevron has provided some dispersant information, but a few important issues are not adequately addressed. The oil spill dispersant planned for use by Chevron is Exxon's Corexit 9527. This dispersant is known to have difficulty working on heavy oils, such as the crude proposed for production in the Arguello Field. In addition, the dispersant and oil mixtures may be more toxic than the oil alone, according to a recent Environment Canada report titled, Acute Lethal Toxicity of Prudhoe Bay Crude Oil and Corexit 9527 to Arctic Marine Fish and Invertebrates, 1982. No independent analysis has been provided by Chevron to demonstrate that the dispersant will work on heavy Arguello crude or that the dispersant's toxicity level will be acceptable when mixed with this crude.

In summary, the Commission does not have commitments that Chevron will adopt maximum feasible mitigation measures to improve its capability to respond to spills, particularly large spills. Therefore, the Commission finds that the oil spill response equipment does not provide the maximum feasible mitigation for oil spill impacts as required by Section 30260(3). For the Commission to find that the project provides the maximum feasible mitigation, Chevron must provide: (1) a commitment to provide adequate onsite oil spill containment and cleanup equipment,

including open ocean booms, skimmers, sorbents, and deployment vessels; and (2) a commitment to provide adequate oil spill containment and cleanup equipment and procedures for larger spills. This can be accomplished if the oil spill cooperative Clean Seas makes the necessary improvements to the response vessels so that they are compatible with state-of-the-art skimmer design; and (3) an adequate dispersant information or an approved dispersant use plan.

6. Vessel Traffic Safety

Section 30262(d) of the Act states that:

Oil and gas development shall be permitted in accordance with Section 30260, if the following conditions are met:

(d) Platforms or islands will not be sited where a substantial hazard to vessel traffic might result from the facility or related operations, determined in consultation with the United States Coast Guard and the Army Corps of Engineers

Section 30261(a) of the Act states that:

(a) Multicompany use of existing and new tanker facilities shall be encouraged to the maximum extent feasible and legally permissible, except where to do so would result in increased tanker operations and associated onshore development incompatible with the land use and environmental goals for the area. New tanker terminals outside of existing terminal areas shall be situated as to avoid risk to environmentally sensitive areas and shall use a monobuoy system, unless an alternative type of system can be shown to be environmentally preferable for a specific site. Tanker facilities shall be designed to (1) minimize the total volume of oil spilled, (2) minimize the risk of collision from movement of other vessels, (3) have ready access to the most effective feasible containment and recovery equipment for oil spills, and (4) have onshore deballasting facilities to receive any fouled ballast water from tankers where operationally or legally required.

Furthermore, Section 30232 of the Act, quoted previously, requires that any development or transportation of crude oil must provide protection against spillage.

Platform Site. Chevron proposes to site Platform Hermosa on OCS P-0316, which is at least three miles north of the proposed extension of the Santa Barbara Channel Vessel Traffic Separation Scheme (VTSS). (see Exhibit 8). Although there are no platforms currently in the area, four platforms, including Hermosa, are planned for the area.

Presently, vessels traveling through the Santa Barbara Channel that have a destination on the North American coast commonly turn north after passing Point Conception, near the end of the existing Santa Barbara Channel VTSS. They then pass through the general area of the proposed platform site. Coast Guard radar tracking confirms this route, as does information contained in the State Lands Lease Sale EIR and Chevron's DPP for this project.

The U.S. Coast Guard has approved a northwesterly extension of the present Santa Barbara Channel Vessel Traffic Separation Scheme, which the Coast Guard expects will be approved by the International Maritime Organization (IMO) and go into effect sometime in 1984 or early 1985. However, if the Notice of Proposed Rulemaking process has not been completed by spring of 1984, then the lanes could not be in place until January 1986. The MMS does not oppose the extension of the lanes, but that agency wants the ability to interrupt or move the lanes for exploration purposes. Platform Hermosa is proposed to be installed in May 1985.

Chevron states that presently 93 percent of the vessels traversing the Santa Barbara Channel use the traffic lanes. The DPP states, "It may be concluded that these vessels will also follow the recommended VTSS extension past Point Conception." However, compliance with the VTSS outside the Santa Barbara Channel (northwest of Point Conception) may be lower than in the Channel. In 1979, when the oil industry proposed moving the vessel traffic lanes south of the Channel Islands, the maritime industry was strongly opposed because of the additional time and fuel such a course would require. While the maritime industry has not opposed the VTSS extension, the probability is that some vessel captains would continue to "cut the corner" and pass through the project area in order to save time and fuel.

The Davidson Current, from November to February, flows north, shoreward from the proposed Platform Hermosa site. Although weak, this current is still considered by some mariners to be of some aid in savings of time and fuel. The proposed VTSS extension will head north into the southeastern flowing California Current, with a mean speed of 0.3 knots. Current habits, modest savings of time and fuel by taking advantage of rather than fighting currents, and the non-mandatory nature of the VTSS, assuming it is effective when Platform Hermosa is installed, indicate a conflict with vessel traffic safety in relation to the siting of the proposed platform.

In addition, the proposed platform site is in an area of extreme weather conditions. According to the U.S. Coast Pilot (NOAA), "Off Point Arguello, sea fog becomes a persistent and frequent navigational hazard.These fogs are often thick, and Point Arguello is considered by mariners to be the most dangerous along the coast." The DPP, siting a study from January to March 1980, stated that wave heights exceeded nine feet 49 percent of the time.

Vessel traffic in the Channel, according to the DPP, is anticipated to increase 16 to 60 percent by the next decade. The DPP also states that the Point Arguello operators will generate 144 tanker trips per year and Exxon's Santa Ynez production will result in 132 tanker trips per year. Exxon's Santa Ynez Unit crude oil, according to Exxon's DPP, is headed for refineries "probably in the U.S. West and Gulf Coast areas. No figures are given for vessel trips generated by other developments in the area, such as the remaining areas of the Santa Maria Basin, Sockeye Field, and State Lands leases.

In the years 1970-1982 inclusive, 93 collisions occurred between offshore installations and vessels. Thirty of these resulted in loss of life. Twenty-four of the 93 collisions took place in the United States, where, after blowouts, collisions are the greatest cause of accidents to structural damage.

In response to concerns expressed by Commission staff, Chevron has agreed to several additional mitigation measures beyond those proposed in the DPP. Chevron will install an Automatic Radar Plotting Aid (ARPA) on Hermosa. The ARPA tracks up to 60 ships, tells the radar operator what the closest point of approach between a ship and the platform will be, and how much time there is to the closest approach

point. It also displays the speed and course of the ships. An inner and outer guard zone can be selected by the radar operator, and if a ship penetrates the guard zones, both visual and audible alarms are automatically activated.

Chevron will use the following guidelines in relation to approaching vessels:

(1) As soon as the approaching vessel appears on the radar's 24-mile range, the observer will attempt to make VHF radio contact on Channel 16. If radio contact is made, the observer will ascertain the vessel's intentions and ensure that the vessel will pass the platform at a safe distance.

(2) If radio contact cannot be made before an approaching vessel closes to within ten miles of the platform, the observer will alert a boat which will be permanently stationed by the platform. The actual time of dispatch of the boat (or helicopter, if one happens to be on the platform) will depend upon the speed and course of the approaching vessel as determined from the radar observer's vessel tracking.

(3) The boat, by means of loudspeaker and search lights, will notify approaching vessels of Platforms Hermosa's location.

In conversations with officials of the Louisiana Offshore Oil Port (LOOP), located nineteen miles off the Louisiana coast, the Commission staff discussed what safety measures were used by that "super port" in relation to vessel traffic safety. In addition to boat interceptors agreed to by Chevron, the LOOP facility has a rotating air craft beacon, blinking five-mile lights on the four corners of the facility, and a two-mile fog horn. Chevron has proposed these mitigation measures, and also has agreed to daytime lighting when visibility is less than three miles.

The DPP states that Platform Hermosa will be painted white. There are no U.S. Coast Guard regulations on platform colors, and Chevron informed Commission staff it would paint the platform "International Orange" if that was considered the safest, most visible color. However, because of MMS concerns over visual impacts to recreational and commercial boaters, it was agreed by all parties that the platform would be a light color and reflective of light, and would enhance safety without creating adverse visual impacts.

The Commission finds that, though the platform will be sited where it could pose a hazard to vessel traffic, Chevron has mitigated the project to the maximum extent feasible and, as mitigated, the project does not pose a substantial hazard to vessel traffic. Therefore, the Commission finds the project in conformance with 30262(d) and 30232 of the Act.

Marine Terminal Site. Although the transport of crude oil is not part of the DPP, the Commission considers transport of the processed oil as "associated facilities", which are subject to review under the consistency certification. The DPP states that Chevron plans to use either Exxon's proposed single anchor leg mooring (SALM) marine terminal at Las Flores or Getty's proposed double berth fixed pier or SALM marine terminal and onshore pipeline at Gaviota, provided either one is built. If the new Las Flores or Gaviota marine terminal is not operational by the first quarter of 1986, Chevron proposes to tanker the Arguello Field crude oil out of Getty's existing marine terminal at Gaviota. Representatives of Getty Trading and Transportation Company have stated that the present Getty terminal can handle

Chevron vessels up to 30,000 dwt with no additional retrofitting. The possible exception may be installation of an onshore waste disposal system. Getty stated that no changes in the existing lease with State Lands, which is up for renewal on December 31, 1985, would be required in order to handle Chevron tankers.

Since the DPP was submitted to the Commission, Santa Barbara County has sent out Request for Proposals (RFPs) for an industry funded study to determine the least environmentally damaging consolidated marine terminal site on the Channel. Chevron has agreed to abide by the conclusions of the county's study, but if a pipeline is part of the chosen project, Chevron states that it will only use the pipeline for a "nominal amount" if the tariff or throughput change were economical."

Under Section 30232, protection against the spillage of crude oil must be provided in relation to its transportation. As Chevron will not know where and how it will be transporting its oil until the Santa Barbara County study is completed, it is difficult to determine whether the proposed project conforms to Section 30232. Previously in this report, the Commission found that a marine terminal is a coastal dependent industrial use and is subject to Section 30260, which also requires compliance with Sections 30261 and 30262. The Commission cannot find that "alternative locations are infeasible or more environmentally damaging," because it does not have a specific site before it. Neither can it find that the "adverse environmental effects are mitigated to the maximum extent feasible," and that the tanker facilities are designed to "minimize the total volume of oil spilled" and "minimize the risk of collision from movement of other vessels." Therefore, the Commission finds that the present proposal for a marine terminal does not contain sufficient specificity for the Commission to find the project consistent with Sections 30260, 30261, and 30262 of the Act.

7. Geologic Hazards

Section 30253(1) and (2) of the Act states that:

New development shall:

- (1) Minimize risk to life and property in areas of high geologic, flood, and fire hazard.
- (2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.

Section 30262 of the Act states in part that:

Oil and gas development shall be permitted in accordance with Section 30260, if the following conditions are met:

- (a) The development is performed safely and consistent with the geologic conditions of the well site.

(e) Such development will not cause or contribute to subsidence hazards unless it is determined that adequate measures will be undertaken to prevent damage from such subsidence.

Where appropriate, monitoring programs to record land surface and near-shore ocean floor movements shall be initiated in locations of new large-scale fluid extraction on land or near shore before operations begin and shall continue until surface conditions have stabilized. Costs of monitoring and mitigation programs shall be borne by liquid and gas extraction operators.

Section 30263(a)(4) of the Act further states that:

New or expanded refineries or petrochemical facilities not otherwise consistent with the provisions of this division shall be permitted if ... (4) the facility is not located in a highly scenic or seismically hazardous area, on any of the Channel Islands or within or contiguous to environmentally sensitive areas;

Chevron's proposed development plan for the Point Arguello Field on OCS P-0316, located 9 miles due west of Point Conception, calls for the production of oil and gas from the Monterey Formation. Producing intervals from this formation have occurred at depths from 6,600 to 8,200 feet in this general area. The total Monterey thickness is approximately 1,000 feet throughout the Arguello Field.

Chevron's proposed development facilities consist of one offshore platform, an offshore pipeline running from Platform Hermosa to a Point Conception landfall, an onshore pipeline running from Point Conception to Gaviota, and a possible extension of the onshore pipeline from Gaviota to Las Flores.

Chevron's proposed Platform Hermosa is a three-deck, eight leg production platform with 48 well slots. Both the primary and alternate platform locations are located on the upper Arguello Slope in approximately 600 feet of water (Exhibit 9). The seafloor at the platform location is smooth and slopes 3.5 degrees to the southwest. The alternate site is located 1,400 feet northwest of the primary platform location.

A 30-inch oil pipeline and 22-inch gas pipeline are proposed to run from Platform Hermosa to a landfall at Point Conception, a distance of approximately 10 miles. After completing detailed geotechnical studies within an offshore pipeline corridor approximately 10 miles long and 1.4 miles wide; Chevron has selected two possible marine pipeline routes (primary and Alternate A), designed to avoid rocky outcrops on the seafloor. The seafloor is generally smooth along both routes with localized bedrock outcrops, tar mounds, and small depressions. A major portion of the pipeline lies on the Arguello Shelf which has an average gradient of about one-half degree.

Chevron's proposed onshore facilities consist of a pipeline route running from the Point Conception landfall along the coast to an oil and gas processing facility at Gaviota (16 miles) or possibly to an oil storage facility at Las Flores (an additional 10 miles). The pipeline is proposed to be located on the coastal terrace between the Santa Ynez Mountains on the north and the seacliff and narrow beach to the south. Chevron has selected a final pipeline route. Based on preliminary data

submitted in the DPP, the major geologic hazards that will affect the onshore pipeline are headward erosion of coastal canyons and tributary drainage courses, blufftop erosion of seacliffs, liquefaction, landslides, mudflows, soil creep, and possible damage from fault rupture (South Branch-Santa Ynez). In addition, the selected pipeline route must ensure that the pipeline will not require a coastal protective device during the structure's design life.

Seismicity. The Santa Barbara Channel region is one of the most active seismic areas of California. The earliest recorded destructive earthquake, with an estimated magnitude of 7, occurred on December 21, 1812, and heavily damaged several missions along the coast. Since then, numerous events have been felt and several damaging earthquakes have occurred. For example, almost the entire business section of Santa Barbara was destroyed or rendered unsafe by the June 29, 1925 earthquake of magnitude 6.3. Santa Barbara was also damaged by the June 30, 1941 earthquake of magnitude 6. The epicenters of these last two earthquakes are poorly located, but are inferred to have occurred very near to the August 13, 1978 event. The 1978 earthquake, with a magnitude of 5.1, was located 4 km south of Santa Barbara at a depth of 12.5 km. This earthquake produced a maximum acceleration of 0.44 g at ground level (measured at UCSB), with widespread minor damage was reported.

Chevron maintains that Platform Hermosa and pipeline facilities will adhere to the state-of-the-art seismic design standards. In addition, federal requirements call for a third party review of the seismic design criteria and analysis for the platform. This third party review process was described in the Commission's Exxon Staff Recommendation (1983, page 46):

Under OCS Order No. 8 promulgated by the Minerals Management Service, a Certified Verification Agent (CVA) must verify that the design criteria and analysis procedures for each OCS platform meet industry standards of good practice, published regulations, and accepted procedures. Design will conform to API RP2A recommendations. The CVA's review will include consideration of all relevant environmental conditions, including seismic excitation in the area. Further specifics on the CVA process for platform design, fabrication, and installation are given in the USGS publication "OCS Platform Verification Program."

Chevron has submitted a detailed site and foundation seismic study (McClelland, 1982) for Platform Hermosa. These studies indicate that there is a fifteen percent probability that the platform site will experience a design level earthquake that will subject the platform site to a 0.15g peak acceleration at some time during a projected thirty-five year design life. Discussions with Chevron have also considered the ductile limit of the platform (the ductile limit is that acceleration value at which some form of deformation would occur in the platform). Deformation in the structure would probably take place at approximately 0.30g, but the platform would not collapse. Calculations by McClelland, 1982) indicate that there is a two percent probability that the 0.30g ductile limit would be exceeded during the project's 35-year design life. The Certified Verification Agent and the MMS will review all data used to arrive at the above mentioned values. In addition, Chevron's seismic studies have been forwarded to the California Division of Mines and Geology for continued comment.

Chevron's letter of August 24, 1983 has clarified staff questions regarding seismicity and faulting. Thus, the Commission finds that Chevron has met the seismic consistency requirements of Sections 30253 of the Coastal Act.

Liquefaction. The development of high pore-water pressures in certain types of sediments due to ground vibrations, such as can occur during an earthquake, can cause sediments to be altered from a solid state to a liquid state (Liquefaction). In some cases, liquefaction of sand induced by earthquake ground motions can cause overlying, sloping soil to slide laterally along the liquefied layer.

Chevron has determined that surficial sands on the seafloor are highly susceptible to liquefaction due to an earthquake (Dames and Moore, 1982). Generally, the area with the highest potential to liquefy is between the -275' and -75' water depths (Dames and Moore, 1982, p. 4-8). The pipeline will be engineered so that it will be supported buoyantly should the seafloor undergo liquefaction due to a large earthquake. Furthermore, according to Dames and Moore (1982, p. 4-8):

The less plastic soils (silty fine sands) could liquefy and flow downslope. Furthermore, there is also a potential for the plastic clays and silts to strain downslope. As the liquefiable soils are not deep (less than about three feet) the pipeline can be expected to settle and also move downslope somewhat on the clays during a significant seismic event. The potential magnitude of these movements and their impact on design requirements and construction procedures can best be addressed during detailed design of the pipeline.

Liquefaction of surface seafloor sediments is considered unlikely at the platform location. Should liquefaction occur (limited to the near-surface sediments), the impacts on the platform will be negligible due to the deep seated piles (driven several hundred feet into the seafloor). However, where the pipeline connects to the platform is critical. The soils at this location are soft and some amount of settlement must be allowed even under static conditions.

Soils with a high potential to liquefy during a seismic event probably exist on the floors of coastal canyons or at site specific locations within terrace units. Engineering studies along the pipeline route will identify these locations and present design criteria to mitigate the problems posed by these soils.

The Commission concurs with Chevron's contention that any potential hazard posed by liquefaction can be successfully engineered at the platform site, along the marine pipeline route, and along the onshore pipeline route to Gaviota and/or to Las Flores. Therefore, the Commission finds that the project meets Section 30253 of the Act with regard to the liquefaction hazard.

Landslides and Coastal Erosion. No large submarine slumps exist immediately adjacent to or under the Platform Hermosa location or along the primary marine pipeline route. Approximately 8,000 feet southeast of the platform location, a contorted seafloor has been created due to a slump-type movement of material which has infilled a channel. Seafloor characteristics differ between the contorted slope area and the primary platform location. The thickness of soft Recent sediment at the platform location is approximately 14 feet where the contorted slope area has 84 feet of similar soft Recent material. The stratigraphy and condition of the Plio-Pleistocene sequence, which underlies the Recent materials in both areas, also are different in the two areas (McClelland, 1982). Chevron's geotechnical studies also indicate that sediment creep is not likely at the platform location. If creep should occur, the most likely zone would be the upper three feet of the seafloor (McClelland, 1982).

Chevron's DPP points out that several locations along the proposed onshore pipeline route near the southern edge of the coastal terrace stability of the pipelines could be affected by seacliff retreat. Section 30253 of the Coastal Act requires that pipelines be set back from the blufftop in such a way that no protective device will be required during the pipelines' intended design life. Beach erosion and blufftop recession could also be a problem at the pipeline landfall. The DPP (p. 3-33) states:

Beach erosion at the landfall could present a potential problem where the pipeline crosses the beach, and headward erosion was noted to be threatening localized areas along the proposed pipeline corridor in the Southern Pacific Railroad right-of-way. In addition, several of the soil associations underlying the onshore components of the project are regarded as having a high erosion potential.

Coastal Erosion. Field inspection has revealed that the pipeline is either setback a sufficient distance from the coastal bluff or is on the landward side of Highway 101 or the railroad right-of-way. Site inspections indicate that almost all of the onshore coastal canyons are wide enough to bury the pipeline to a sufficient depth so as to avoid scour from heavy stream discharge. However, there may be some locations where either a canyon is too narrow or sidewalls too steep to trench. At these localities, the pipeline may be required to span canyons. Effort will be made to minimize or eliminate any accelerated erosion that could occur as a result of the pipeline at these locations.

The Commission concurs with Chevron's preferred landfall location over the Alternate A site. The preferred alignment enters the canyon mouth from the beach and turns immediately (within 100') to the south and runs up the canyon wall and onto the flat lying terrace units. Surf conditions at the Alternate A site appear to be harsh due to rocky offshore formations, and the canyon contains a wide variety of plant life which would be disturbed from sediment produced by trenching operations. The Commission therefore finds that through proper engineering, Chevron can mitigate either by design or avoidance, any problems posed by landslides or coastal erosion. The preferred onshore pipeline alignment and associated landfall represent the Commission's most desirable route. Therefore, the Commission finds that the project is consistent with Section 30253 of the Act with regard to landslides and coastal erosion.

Subsidence. Subsidence of the land surface can pose potential problems for oil development and any non-oil related structures. The main causes of subsidence in California oil fields have been the result of extraction of oil, water, and gas. Chevron maintains that (DPP, p. 3-30,31):

Subsidence in the Point Arguello Field is not expected to be a significant problem for several reasons. First, the shallowest producing horizon will be at a depth of approximately 1890m (6200 feet) below sea level in fractured rocks of the Monterey Formation. The siliceous, relatively well-indurated nature of these materials should resist significant compaction. Second, the reservoir rocks have been folded into a symmetrical anticline, further adding to their strength. Finally, the greater part of any compaction that might occur would be prevented from reaching the land surface as significant subsidence by bridging effects provided by approximately 670m (2200 feet) of overlying lithified, folded strata.

Discussions with the U.S. Geological Survey (Castle, 1983) and the MMS (McCarthy, 1983) have revealed that there has been no measured subsidence locations where there has been oil or water extraction from the Monterey Formation at onshore Santa Barbara County locations or offshore in state or federal waters. Should any subsidence occur, it is expected to be negligible and will be restricted to the offshore area. Any minor subsidence that may pose a threat to oil field production facilities could be eliminated by implementing a repressurization program. Therefore, subsidence should not pose a significant hazard to the structural integrity or stability of the development, either onshore or offshore.

Hydrocarbon Seepage or Accumulation. Hydrocarbon seeps, gas-charged sediments, and shallow gas zones are numerous throughout the offshore Santa Barbara Basin (Greene, oral communication, 1983). Near-surface bedrock outcrops, steeply dipping beds, or faults can act as conduits from possible pressurized gas zones. Should these conduits be intersected during drilling, hydrocarbons could escape and be released into the water column from the sea floor.

Areas of unconsolidated to semi-consolidated sediments saturated with interstitial gas under normal or near-normal pressures are known as gas-charged sediments (Richmond, et. al, 1981). Interstitial gas can reduce the shear strength of sediments and therefore contribute significantly to the instability of sedimentary units. Shallow gas zones with abnormally high pore pressures could cause blowouts if penetrated during drilling operations.

Historically, areas of gas-charged sediments, hydrocarbon seeps, and shallow gas zones that have posed potential constraints to oil development (either exploration or production) in the offshore Santa Barbara Basin have been mitigated by either avoidance or engineering design. Approximately 80 percent of the final offshore pipeline route lies on gasified sediments. The concentrations of gas within these sediments may lower shear strength and may therefore increase the possibility that the sediments will liquefy during a significant earthquake. These factors will be considered during engineering design. Chevron's final pipeline route has avoided areas of hydrocarbon seep and tar mounds and will minimize the impacts of shallow gas zones and gas saturated sediments through avoidance or engineering design. At locations along the pipeline route where gasified sediments increase the potential for bottom sediments to liquefy during an earthquake, the pipeline will be engineered to remain stable through buoyancy.

No seeps, gasified sediments, or shallow gas zones exist at the platform location. Furthermore, hydrocarbon seepage or accumulation should not pose any significant geologic constraints. Therefore, the Commission finds that Chevron's identification of shallow gas, gas-charged sediments, and hydrocarbon seeps is consistent with Section 30253 of the Act.

Faulting. Special engineering is required where pipelines are required to cross active faults. Fault surface rupture or creep can severely damage a marine or onshore pipeline. For this reason, the age and location of active faulting is critical to pipeline design. Chevron's detailed studies show little to no evidence of active or potentially active faulting along the marine pipeline route. However, numerous small faults contained in Tertiary units exist within the pipeline study area, but do not appear to break Holocene deposits. The offshore pipeline does cross two of these faults that were identified by examination of geophysical data and are described as follows (Dames and Moore, 1982, p. 4-3):

Only two faults inferred from the geophysical data set cross the proposed pipeline route (three along the Alternate A route). These faults are located about eight miles (12 km) west of Point Conception near the platform site, in the vicinity of line 03-209, shot point 106, and line 03-220, shot points 100 to 104. These faults can only be traced to within 50 feet (15 m) of the seafloor, with some segments only within 125 feet (38 m) of the seafloor; they exhibit no linear seafloor expression but occur in an area of local bedrock highs. Due to poor penetration and resolution of the geophysical data in this area, in part due to gasified sediments, estimates of the age of faulting are fair to poor. Although the fault apparently does not offset the base of the Holocene on the geophysical records, the validity of this interpretation is open to questions due to the poor quality of these records.

Staff examination of the geotechnical data concurs with Chevron's belief that surface rupture along both marine pipeline route options is considered unlikely.

No active or inactive faults pass through or trend toward the Platform Hermosa site. Seven discontinuous faults (the largest of which is 3,500 feet in length) are within 4,000 feet of the platform site and McClelland (1982) believes that the latest movement along these faults to be Plio-Pleistocene. Therefore, surface rupture at the platform location is not expected.

No detailed geologic studies for the onshore pipeline have been submitted, and it is not known when these studies will be completed. The onshore pipeline will cross the south branch of the Santa Ynez fault. Chevron has considered this fault as "active" and will consider appropriate engineering design options. Discussions with Chevron technical staff and review of offshore geotechnical studies have revealed no major geologic hazards that would preclude development of the Point Arguello Field. Therefore, the Commission finds that the offshore portion (platform and both marine pipeline route options) meet the requirements of Sections 30253 and 30262 of the Coastal Act as they relate to geologic hazards.

8. Air Quality

Section 30253(3) of the Act states that:

New development shall:

(3) Be consistent with requirements imposed by an air pollution control district or the State Air Resources Control Board as to each particular development.

Section 30250 further requires new development to be located where it will not have "significant adverse effects, either individually or cumulatively, on coastal resources."

The primary pollutants typically emitted as a result of oil and gas development activities are described in Section D-8 of the July 27, 1983 Staff Summary Report. Ozone is not emitted directly, but is formed by photochemical reactions in the atmosphere between reactive hydrocarbons (referred to as volatile organic compounds, or VOC) and nitrogen oxides (NOx) in the presence of sunlight.

Air pollutant emissions from both onshore and offshore sources will occur as a result of the construction and operation of the proposed offshore platform, pipelines, and onshore processing and storage facilities. Construction and drilling emissions will be of short duration, while emissions from production will occur throughout the life of the project.

During the construction and development phase, emissions of NO_x, carbon monoxide (CO), sulfur dioxide (SO₂), and total suspended particulate matter (TSP) will be produced by (1) turbines used to provide power for drilling, (2) construction equipment for installing the platform, pipelines, and onshore processing and support facilities, (3) tug, crew, and supply boats and helicopters, and (4) vehicular traffic for transporting personnel, equipment, and materials. The production phase will produce emissions from (1) power generation for oil pumping, water injection, and gas compression, (2) oil and gas processing, (3) crude oil storage, (4) tanker activities and pipeline facilities, (5) evaporative losses, and (6) venting and flaring produced gas (NO_x, VOC, SO₂, TSP).

Although a specific method of transporting the produced crude oil to refineries is not proposed as part of the project, the DPP includes emissions from tankers assumed to load at a marine terminal at either Gaviota or Las Flores. If neither of these terminals or a pipeline transportation system is operative at the time Chevron's production would begin, Chevron proposes to use an existing marine terminal at Gaviota.

Chevron proposes a number of measures to reduce emissions from the project. These include:

- (1) equipping turbine engines with water injection to reduce NO_x emissions by 50% or more offshore and 70% onshore;
- (2) recovering waste heat from gas engines and turbines to reduce the need for burning additional fuel in process heaters to meet heat requirements;
- (3) using a gas blanketing and vapor and sulfur recovery system to reduce emissions from the oil and gas processing and storage facilities;
- (4) incorporating a vapor control system on transport ships to reduce hydrocarbon emissions;
- (5) using low sulfur fuel on tankers to minimize SO₂ emissions (up to .7% while within state waters, and 2% maximum at all other times; Santa Barbara County APCD rules and regulations require .5%);
- (6) instituting an inspection and maintenance program on valve, pump, flange, and compressor seals to minimize fugitive hydrocarbon emissions;
- (7) using low NO_x burners on heaters, sweetened gas fuels and scrubbers on flare burners to reduce NO_x and SO_x emissions; and
- (8) using water sprays to minimize fugitive dust during onshore construction activities.

In its letter of August 23, 1983, Chevron further agreed to implement interim control measures identified in the Air Quality Task Force Study (Radian, 1982) for small supply and crew boat engines on this project, if these measures are feasible and are approved by the American Bureau of Shipping.

With these control measures, Chevron contends that the air pollutant emissions from the project will meet all applicable standards and conform to both federal and local rules and regulations, and, therefore, that the project is consistent with the CCMP to the maximum extent practicable. In addition to the measures included in the consistency certification and DPP, Chevron states that it will further reduce emissions from other onshore sources, such as retrofitting gas engines at Chevron's Carpinteria processing facility with catalyst systems, to provide any "offsets" required by the APCD.

Chevron treats emission from each segment of the project separately, and applies three sets of air quality regulations (as discussed in the Staff Summary Report, Section D-8). The DOI air quality regulations established under the OCS Lands Act Amendments (OCSLAA) specify levels of emissions from OCS facilities, based on distance from shore, to determine whether the facilities are subject to further review and air quality analysis. If projected emissions of NO_x, SO₂, CO, or TSP are above these levels, computer modeling is performed to determine whether the onshore impacts will be "significant." The calculated pollutant concentrations are compared to the DOI significance levels; if exceeded, Best Available Control Technology (BACT) is applied, or the lessee may reduce emissions to levels below the exemption or significance levels. Any VOC emissions above the distance-based exemption levels are considered to significantly affect onshore air quality, requiring the application of BACT reduction to the exemption level, or offsets.

The regulations also provide for emissions controls for "exempt" facilities if the facility, either individually or in combination with other facilities, is shown to significantly affect the onshore quality. However, these provisions are optional and to date the MMS has declined to use them. The ARB and local APCDs believe that the DOI regulations do not protect state ambient air quality standards and that the exemption levels are so high, significant onshore impacts are not mitigated. (California v. Watt) The DOI air quality regulations are unclear whether retroactive emission controls on existing offshore sources can be imposed after an onshore air quality problem has developed.

The DOI's regulations also fail to recognize California's unique meteorology. Air quality modeling studies conducted by the ARB and the oil industry show that emissions from OCS development will exceed the DOI significance levels, even though the emissions are below the DOI distance-based formula. A 1980 tracer study conducted in the Santa Barbara Channel concluded that any tracer released in the Channel is eventually transported onshore (Lehrman, 1981). The prevailing wind flow in the project area also indicates that offshore emissions will be transported onshore. Thus, these emissions will directly affect the coastal zone and must meet the national and state ambient air quality standards.

Chevron's calculations for emissions from Platform Hermosa show no exceedances of the DOI exemption levels. However, with the emissions from sources onshore and within the 3-mile limit and from potential tankering of the crude oil, adverse impacts to onshore air quality in the project area are likely to occur. It therefore will be necessary for Chevron to conduct air quality modeling analyses for emissions from the entire project, as well as emissions from potential development in the area, before the Commission can determine if the project as proposed is consistent to the maximum extent practicable with the CCMP.

Under the Clean Air Act (CAA), California is required to develop a State Implementation Plan for attaining and maintaining the national ambient air quality standards established by the EPA. Santa Barbara currently violates the standards for ozone and TSP (North County) and is designated a nonattainment area. If these standards are not met within the current deadline, the EPA could impose strict air pollution controls, resulting in restrictions on onshore industrial and commercial growth and withholding of federal highway and sewage funds.

The Santa Barbara County APCD "New Source Review" rule requires that all new or modified sources emitting more than five pounds per hour of any air pollutant except CO install BACT (the cutoff for CO is 50 pounds per hour). If the new source will emit more than ten pounds per hour of any air pollutant, then emission offsets may be required if they interfere with the attainment air maintenance of any national primary ambient air quality standard. Pollutant offsets are mandatory at 25 pounds per hour or 250 pounds per day or more. These five and ten pounds per hour maximums translate to 22 and 44 tons per year. Under DOI regulations, the minimum emission rate to trigger review is 100 tons per year at three miles from shore, increasing by 100 tons per year each additional three miles. While the components of the project under the direct jurisdiction of the APCD must conform to the rules and regulations before an authority to construct or permit to operate can be obtained, emissions from the OCS components of the project may adversely affect the County's ability to attain and maintain national and state ambient air quality standards. Chevron assumes emissions from its OCS facilities have little or no effect on onshore air quality because the emissions are below the DOI significance levels. Without a complete air quality modeling analyses, however, the impacts to the coastal zone, both individually from Platform Hermosa and in combination with other offshore development in the area, cannot be determined.

Chevron has not addressed the impacts of the project in a comprehensive manner, but has analyzed the impacts on air quality as they pertain to each component of the project. The Coastal Act requires that the project be consistent with the requirements of the APCD or ARB, including the State's plan for attaining and maintaining federal ambient air quality standards. Thus, if the OCS emissions from Chevron's project, either individually or in combination with other existing or proposed project emissions, impede the state's strategies for and progress toward attainment, the project cannot be found consistent to the maximum extent practicable with the CCMP. To determine if the onshore impacts from the proposed project will impede such strategies and progress, Chevron should conduct computer air quality modeling analyses. In meetings with Commission staff, Chevron has agreed to conduct such analyses, but no further information is available at this time.

In addition to the modeling analyses, Chevron should assess the impacts on air quality from pipeline transportation of the crude oil as compared with marine tankering. Chevron's consistency certification also ignores the potential local economic impacts on nonattainment status under the Clean Air Act that may result from the project (see Section E-15 for further discussion). Chevron must address these issues as well.

Finally, Chevron does not adequately address the effects the proposed project will have on air quality in combination with full development of Arguello field or in conjunction with other development in the area. Chevron believes that cumulative effects are "more appropriately dealt with in the EIR/EIS process." The Commission agrees that the EIR/EIS can better address cumulative impacts of overall development in the area. However, as noted above, Section 30250 requires cumulative impacts to be taken into account in this determination of consistency with the CCMP.

This is particularly important because emissions from offshore oil and gas production were not considered or mitigated in Santa Barbara County's Air Quality Attainment and Maintenance Plan. Yet, air pollutant emissions in the area will increase as a result of past and future offshore development, making it difficult, if not impossible, to meet the statutory requirements under the CAA and State law. In comments on the proposed project to Secretary Duffy, the ARB calls for analyses to identify the impacts from both full Arguello field development and all proposed and existing development in the general area. Because of the pace and extent of OCS development occurring off the coast of southern California, the ARB states that "it is important to know not only the impacts of individual development plans, but also the impacts of individual projects when combined with other proposed development." The ARB further states that "this analysis is needed to assure that state and federal ambient air quality standards will not be violated or that reasonable further process towards attainment of such standards will not be jeopardized."

Major General Jack L. Watkins, Commander at Vandenberg Air Force Base, also stated his concern in a letter to the Commission that "air quality impacts of offshore oil development are not being considered on a cumulative basis," and recommended that "oil development in federally controlled waters should have air quality management requirements consistent with the local APCD."

In a letter commenting on the Exxon Company, USA plan of development for the Santa Ynez Unit recently before the Commission, Pasquale A. Alberico, Acting Director of the U.S. Environmental Protection Agency's Office of Federal Activities, describes the effects that OCS development can have on nonattainment areas, such as Santa Barbara and Ventura Counties.

EPA believes that a national interest and an Agency concern exist with regard to the impacts of the proposed facility on the ability of the onshore areas to attain and maintain the National Ambient Air Quality Standards (NAAQS) as required by Parts C and D of the Clean Air Act. Given the proposed action and the analysis to date a doubt exists as to the area's ability to meet these statutory obligations.

The Exxon development options are proposed for an area adjacent to two shoreside nonattainment counties (Santa Barbara and Ventura) with especially difficult problems in attaining the ozone national air quality standard. Both counties have been given extensions by EPA until 1987, the maximum time allowable under the statute to attain the ozone NAAQS. EPA recently proposed the approval of the Santa Barbara Ozone Nonattainment Area Plan. The Ventura County 1982 Nonattainment Area Plan has been proposed for disapproval because of the failure to demonstrate attainment of the ozone NAAQS by 1987 (48 FR 5074, February 3, 1983).

The language of Sections 118 and 176(c) of the Clean Air Act and the Act's legislative history appear to place a responsibility on federal agencies to ensure that actions such as OCS are compatible with State and local efforts to attain and maintain the NAAQS in onshore areas. The SYU development is located within a very narrow geographic area where many OCS and State tidelands lease parcels are active or are being proposed for activity. Emissions from large scale oil

development activities may inhibit the ability of these counties to attain and maintain the NAAQS. Exxon appears to have recognized this as evidenced by its voluntary imposition of various emission controls and negotiation of agreements with State and County Air Emissions Control Agencies. However, a comprehensive look needs to be taken of the cumulative impacts of offshore development and the ability of the State to accommodate these emissions and still meet the statutory requirements of the Clean Air Act.

Thus, all emissions information from existing and proposed OCS sources, regardless of the level of perceived significance, should be reported to the appropriate State and local agencies so that the total impact of these emissions may be included in the State's inventories, air quality analyses, and the federally approved Nonattainment Area Plan. (emphasis added)

Without an analysis of the cumulative impacts and without the modeling analysis to determine the specific impacts from the proposed project, the Commission cannot determine if the project will result in violations of the national or state ambient air quality standards. Therefore, the Commission finds that it lacks sufficient information to find the proposed project consistent with Sections 30253(3) and 30250 of the Coastal Act with regard to air quality.

Although the Commission finds that the proposed project cannot be found consistent with Chapter 3 air quality policies, the coastal dependent industrial facilities portion of the project can nevertheless be permitted in accordance with Section 30260 if it meets the tests of this section.

Alternative Locations. Chevron has only briefly assessed the effect on air quality of processing facilities at two alternative locations--Point Conception and Las Flores Canyon. While the air quality impacts at a processing facility at Point Conception would probably be less than at Gaviota, potential land use conflicts could be greater (see Section E-13). The air impacts from Chevron's facilities would be added to those from other development in the Las Flores Canyon if that site is used. The impact may not be significantly greater, but it would probably be greater than at Gaviota. No other sites were evaluated.

Chevron has not addressed the air quality impacts of alternative sites for marine terminals or supply bases.

The Commission finds that it lacks sufficient information to find that there are no less environmentally damaging alternative locations for the proposed project with regard to air quality, and, therefore, that the project cannot be found consistent with Section 30260(1) of the Coastal Act at this time.

Mitigation. As noted above, Chevron has proposed mitigation measures to control emissions from the project. These measures are designed to reduce emissions from new sources only; specific offset reductions, other than the co-generation facility, have not yet been proposed. The use of offset reductions could prevent violations of the national and state air quality standards. Such reductions may be a feasible mitigation measure to help bring the project into compliance with Section 30260(3) of the Act. However, Chevron has not calculated the total amount of emissions to be offset, specified where the offsets will be obtained, or certified that these offsets will be available when and if the project is approved. These issues will be addressed in the EIR/EIS.

In addition, there may be other feasible mitigation measures that can be applied to the project. First, Chevron has not adequately addressed the use of pipeline transportation of crude oil in lieu of or in addition to marine tankering. As discussed in Section E-1, above, pipeline transportation results in fewer emissions than transporting oil by tankers. In addition, Chevron proposes to use 2800 kw turbines to generate power on the platform, rather than transmitting electrical power through subsea cables as has been proposed in other recent plans for production platforms. This is primarily due to the distance from shore. Also, there are no onshore facilities available to supply sufficient power to the platform within many miles of the nearest landfall. Even if a cable is feasible, Chevron contends that its use will probably not create a substantial benefit to air quality since some onshore power plants generate more NOx emissions per megawatt hour of electricity produced than is expected from the proposed platform turbines. Because it plans to use waste heat from the turbines to heat the oil, Chevron also states a larger heater on the platform will be necessary if the platform used electricity generated onshore. However, Chevron has not yet analyzed the cumulative emissions that could result from potential production of the entire Arguello field, or from potential production in the entire area. Chevron should compare the emissions from the three to four additional platforms needed just to develop Arguello and the potential platforms needed to develop federal and state leases in the area with emissions from an onshore generation facility to determine if constructing and using onshore power generation, if feasible, would be preferable with regard to air quality.

As proposed, the air quality impacts from the project may not be mitigated to the maximum extent feasible. The Commission finds that it lacks sufficient information to determine if additional mitigation measures are feasible for this project. The Commission therefore cannot find that the project is consistent with Section 30260(3) of the Coastal Act.

9. Archaeological Resources

Section 30244 of the Act states:

Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required:

A detailed marine cultural resources survey at the proposed site and along the pipeline corridor revealed evidence of one anomaly, which is almost certainly a shipwreck, and of two other anomalies tentatively interpreted as possible shipwrecks. No relict landforms that could be associated with submerged archaeological sites were identified. Chevron has relocated the offshore pipeline route to avoid the anomalies.

Onshore, an intensive on-foot survey of the project area identified eleven archaeological sites along the pipeline corridor between the landfall alternatives north of Government Point and Gaviota. These sites range from an extensive Chumash Village to scattered shell and chert flakes. Railroad grade construction had damaged several sites. A similar situation existed along the pipeline corridor between Gaviota and Las Flores Canyon, where a total of five previously recorded sites were encountered. Another on-foot survey at the proposed processing facility site identified three areas of archaeological interest.

Chevron plans to minimize the impacts on archaeological and paleontological resources by using the following mitigation measures during construction. Sites will be avoided where possible. Where avoidance is not possible, trenching operations will be monitored by a qualified archaeologist and a Native American observer. Test excavations will be carried out within the impact zone at several designated sites prior to construction. Once the testing program is complete, the research potential of the site will be evaluated and proper mitigation measures formulated.

These mitigation measures are similar to those required by the Commission in permit actions over the years. Thus, the Commission finds that the proposed mitigation measures are reasonable and that the project is consistent with Section 30244 of the Act as it relates to the protection of archaeological resources.

10. Land Resources

Onshore facilities associated with OCS energy projects must be reviewed for consistency with the policies of the Coastal Act to avoid incrementally approving offshore development that could have substantial onshore impacts on coastal resources.

Section 30200 of the Act states in part that:

All public agencies carrying out or supporting activities outside the coastal zone that could have a direct impact on resources within the coastal zone shall consider the effect of such actions on coastal zone resources in order to assure that these policies are achieved.

Section 30231 of the Act, quoted previously, provides that the biological productivity and quality of coastal streams and waters be maintained, and, where feasible, restored through such means as controlling wastewater discharges, controlling runoff, preventing depletion of groundwater supplies, maintaining natural buffers that protect riparian habitats, and minimizing the alteration of natural streams.

Section 30236 of the Act states that:

Channelizations, dams, or other substantial alterations of rivers and streams shall incorporate the best mitigation measures feasible, and be limited to (1) necessary water supply projects, (2) flood control projects where no other method for protecting existing structures in the floodplain is feasible and where such protection is necessary for public safety or to protect existing development, or (3) developments where the primary function is the improvement of fish and wildlife habitat.

Finally, Section 30240 of the Act states that:

(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas.

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade such areas, and shall be compatible with the continuance of such habitat areas.

Terrestrial Biology. The onshore project area (Gaviota to Point Conception) is characterized by plant communities such as Southern Oak Woodland, Coastal Sage Scrub, Chaparral, and Grassland, which is the most common community in the area. Two sensitive habitats may occur in isolated areas. Coastal Strand vegetation, a low-growing sparse community located immediately adjacent to the coast, is present in and adjacent to rivermouths. This habitat contain several sensitive species. The second habitat, Riparian Woodland, occurs along perennial to ephemeral streams and ranges from a few clumps of willow to large oaks and sycamore. The Santa Barbara County LCP states that the riparian habitats from Gaviota to Jalama consist of 12 perennial and 14 intermittent creeks. Because riparian areas support a large number and diversity of both plant and wildlife species, they warrant protection and are designated environmentally sensitive habitat (ESH) in the LCP.

The project area also contains a diverse wildlife population. Avian resources range from shore and marine birds to species adapted to the Disturbed Grassland, Coastal Scrub, and Riparian Woodland habitats. The DPP states that the area is especially noted for raptors, including Golden Eagles, Red Tailed Hawks, Marsh Hawks, Rough-legged Hawks, American Kestrels, Turkey vultures, and White-tailed kites. The area supports many small mammals, amphibians, and reptiles.

The onshore facilities associated with the project will be the pipeline landfall, the 16-mile stretch of the two oil and gas pipelines from Point Conception to Gaviota, a potential 10-mile extension from Gaviota to Las Flores Canyon, the oil and gas processing facilities at Gaviota, and the landward portion of the ocean outfall pipeline. The construction of the onshore pipelines will require grading, clearing, and trenching on the beach and with a 200-foot wide pipeline construction corridor on land for the pipeline trenching and burial. Blasting may be required through the underlying bedrock on the beach at Point Conception. Pipeline installation will also require the crossing of over 25 stream corridors. Information submitted by Chevron in its permit application to the County indicates that the preferred pipeline route will cross many riparian habitat areas. Chevron maps delineating sensitivity levels along the proposed route indicate that three areas crossed by the pipeline area of high sensitivity and 15 are of medium sensitivity. Only three riparian woodland corridors are determined to be of high sensitivity. The Coastal Act and the County's LCP resource maps designate all riparian woodland corridors as environmentally sensitive habitat (ESH). The Commission notes that pipelines are conditionally permitted uses in the ESH overlay in the County's LCP.

According to Chevron's County application and discussions with its staff, the pipeline will either be buried below or suspended across the various stream corridors, depending on stream canyon characteristics. Both of these methods have adverse impacts on the natural habitat values of stream corridors and particularly those containing riparian vegetation, an ESHA. Further, the trenching and burial of the pipeline on the flat portions of the route will have adverse impacts to existing vegetation.

Chevron plans to compact and restore the disturbed terrain along the pipeline route to its original contour and reseed, with native vegetation, any disturbed areas. Stream crossings will be constructed during periods of low stream flow and any erosion from areas will be terraced and/or reinforced.

Due to the adverse impacts of removal of coastal grasslands and destruction of riparian habitat during pipeline burial or stream crossing construction, the Commission finds that this portion of the project is inconsistent with Sections 30231, 30236, and 30240 of the Coastal Act. In order to find consistency with these Sections of the Act, this project must minimize or avoid impacts and provide maximum feasible mitigation. This can be accomplished by restoring all disturbed land to its original contours and reseed any disturbed areas with previously occurring species, all stream crossings shall be accomplished in the least damaging manner and no permanent structure shall be sited in any ESH areas. Any construction within or adjacent to any stream corridor shall be done during dry or low flow periods and all facilities shall be designed to minimize or prevent sediment flows into streams after completion.

According to its County application, Chevron plans to minimize adverse impacts by compacting and restoring the disturbed terrain along the pipeline route to its original contours and seeding these disturbed areas, where required, with native vegetation. Stream and water course pipeline crossings will be constructed during periods when streams are low or dry, minimizing the need for temporary water diversions. Disturbed banks of water courses will be restored, and, where necessary, will be reinforced by earth-filled bags or rock. In areas where erosion appears likely from runoff, water diversion terraces will be used for protection of slopes. If terrain, stream crossings, and riparian habitats are restored to their original conditions, the Commission can find this portion of the project consistent with the County LCP policies and Sections 30231, 30236, and 30240 of the Act, and the maximum feasible mitigation requirement incorporated into Section 30262 of the Act. These assurances must be received by Chevron, however, before the Commission can make this finding.

The proposed oil and gas processing facilities at Gaviota will require extensive grading and landform modification that will greatly affect habitat resources. According to a preliminary grading plan submitted to the County, the processing site will require the cutting of two large pads and one medium pad, new roadways and a culvert. According to Chevron, this plan depicts the total grading that will take place at this site, although further facilities will be placed on the pads under the maximum nine-year buildout facilities.

The effects of grading will be significant due to the location of three riparian corridors associated with intermittent streams Leon, Alcatraz, and Cementerio on the site. Chevron's conceptual landscaping plan for the site indicates that the Leon stream and riparian canyon will be filled for use as a pad on which will be located a 125-foot gas flare stack, one SO_2 scrubber, and a catalyst bed. The location of this pad will result in the filling and substantial alteration of a coastal stream, which is an ESH area. Moreover, a culvert is planned to channel Alcatraz stream, over which a roadway will be build. This stream also is an ESH area. There are no buffers indicated to protect these two streams and riparian corridors. Construction of the processing facilities will also result in the loss of about 12 acres of Disturbed Grassland habitat and of open space wildlife habitat. According to the Local Coastal Program, Canada Alcatraz contains trees used as habitat by Monarch butterflies. This species uses these trees for

shelter from weather and for mating. According to the DPP, these trees will be removed in the process of clearing and grading the site prior to construction of facilities. No mitigation has been provided.

Clearly, the construction of the processing facilities will result in an irreversible loss of riparian vegetation. This loss of riparian habitat will increase runoff and siltation in coastal streams, thereby causing adverse effects on water and marine resources. Construction of the proposed facilities will also take place during the rainy season. Construction of the culvert and pad will severely alter Leon and Alcatraz streams. Stream alterations are allowable under Section 30236 of the Act only if a project incorporates the best mitigation measures feasible and if they are limited to water supply projects, certain flood control projects, or developments that improve fish and wildlife habitat. Section 30240 of the Act limits development in ESH designated areas to those uses dependent on such resources. Industrial facilities are not considered resource-dependent uses. Furthermore, the location of processing facilities in these areas will significantly degrade their habitat values. Finally, the project does not provide maximum feasible mitigation, such as buffers, or alternative locations, as required by Section 30262 of the Act. Thus, the Commission finds that the installation of the culvert and the pad do not qualify for any of the exemptions provided in Sections 30236 and 30240 and that this portion of the project is therefore inconsistent with Sections 30236 and 30240 of the Act.

In order to concur with the DPP for this portion of the site, several changes must take place. All feasible resource protection measures must be undertaken, including the preservation of the riparian habitat and adjacent streamside buffer areas, retention of the butterfly habitat trees, construction activities timed for the dry season, and erosion control measures during design and construction to ensure minimum sedimentation.

Water. Section 30231 of the Act requires protection of the integrity of groundwater basins, and Section 30250 requires that new development be located in areas with adequate public services or where it will not, either individually or cumulatively, adversely impact coastal resources.

The proposed processing facilities will require onsite wells. The DPP states that adequate water supplies will be available and that the onshore processing facilities will only use 20 acre feet of water annually. From information submitted in Chevron's application to the County, it appears that 20 acre feet is the maximum safe yield for the groundwater basin to be used. The water quality of the basin is currently unknown.

Onsite wells for the Gaviota facility will be located in close proximity to existing streams. Groundwater extraction, even when wells are not located directly in streambeds, can cause downdraft of aquifers, result in shortened yearly streamflows, and adversely affect streamside vegetation.

Although water consumption appears negligible, the cumulative effect of this project along with other proposals for energy development in the area is important, considering Santa Barbara County currently has an overdraft of 40,000 acre feet per year. Chevron has not proposed any conservation measures to be used to alleviate the overdraft conditions nor has it proposed mitigation measures to ensure continuation of streamside habitats. Therefore, the Commission finds that the project is inconsistent with Sections 30231 and 30250 of the Act in regards to water consumption.

11. Visual and Scenic Resources

Section 30251 of the Act states:

The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

Section 30262, quoted previously, specifically pertains to oil and gas development.

The visible components of the proposed project are the offshore platform, 8.5 nautical miles west of Point Conception, and the oil and gas processing facilities at Gaviota near the northern boundary next to Highway 101. Pipeline construction activities will present temporary visual impacts in the Point Conception area, along an approximately 16-mile stretch near the Southern Pacific Railroad right-of-way, and along Highway 101 at Gaviota. An additional 10-mile segment between Gaviota and Las Flores Canyon may be altered if the proposed Exxon marine terminal is used for tankering. Consequently, the Point Conception area and Gaviota are the two sites most affected visually by the proposed project.

The scenic areas and views of the entire Santa Barbara County coastline are a resource of public importance. The coastal area has major parks and recreation areas of statewide significance, and the tourist and recreation industries rely heavily on the natural scenic quality of the coast. The Santa Barbara County LCP states that the scenic quality of the coastal zone in the North Coast planning area (Gaviota to Santa Maria River) is outstanding. The Point Conception area offers highly valuable, relatively undisturbed, and varied views. One of the most striking views in the area is of the expansive open ocean from the elevated coastal terrace. Currently, there are no fixed structures in the offshore project area. In its 1978 report, Designation of Areas Not Suitable for Power Plants, the Commission described the Point Conception area as the "largest remaining semi-wild area in the southern California coast," extending from Jalama State Beach southward to Point Conception. Because of its relatively pristine status, the Commission found in the report that Point Conception has high potential for semi-wild recreation, including hiking, nature study, and the enjoyment of solitude. It concluded that the construction of a power plant and transmission corridors, and construction of public services to support the work force and construction activities would be incompatible with the area's character and pristine status.

According to the DPP, Platform Hermosa and associated offshore construction activities will be potentially visible from one public use area, Jalama Beach County Park, which is about nine miles east of the platform site. Views of the platform site from Gaviota State Park 22 miles to the southeast will be restricted by the topographic orientation of Point Conception and relative distance. Viewers will include a few residents at the higher elevations of the Bixby and Hollister Ranches, beach users along the Point Arguello to Point Conception shoreline, passengers on

the Amtrak rail line, surfers, and boaters in the proposed platform vicinity. Although the DPP concludes that the coastal fog will obscure the offshore project area about 10 to 38 percent of the year, primarily during July through October, and that the distance from shore will reduce its size, the platform will introduce a long-term structure to a previously natural seascape. The Commission finds that the offshore platform will cause a permanent visual impact on the scenic and recreational qualities of the Point Conception area, and therefore is inconsistent with Section 30251 of the Coastal Act. However, as previously stated, Platform Hermosa is a coastal dependent facility and therefore is found to be consistent under Section 30260 since the platform requires this specific location in order to function at all.

The Gaviota location, proposed for new oil and gas processing facilities, is located immediately north of Highway 101, a scenic highway. Elevation at the site ranges from 70 feet above mean sea level at the highway to 240 feet above mean sea level at the northern perimeter of the property. The immediate area is developed with the existing Chevron gas plant, the adjacent Getty-Gaviota oil and gas facilities to the south, a SCE substation and Vista Del Mar School to the east. The proposed facility, expanding from five acres to 55 acres, will greatly increase the use of the existing facility.

The most significant views of the proposed facility are found along Highway 101, where the driver has a succession of images while moving rapidly by the site. There are no overlooks or viewpoints from which an overall view of the proposed facility is possible. Other viewers include Amtrak passengers, people at the existing Getty-Gaviota facilities and Vista Del Mar School, and boaters in the nearshore area. The DPP states that visitors at Gaviota State Beach Park, including the extension of San Onofre and Molino beaches, will not be able to see the facility due to intervening topography and vegetation. However, the flaring of gas in emergencies at the facilities will be visible from adjacent recreation areas.

According to a visual analysis and landscape plan submitted as part of Chevron's application to Santa Barbara County, the processing facilities will include several 100-foot towers and one 125-foot emergency flare stack, all of which are located on the higher elevations of the site. The conceptual grading plan indicates that more than 50 percent of the site's existing vegetation, including trees, will be removed, thus reducing much of the present natural screening effect. The visual analysis states that, "While only a few of the actual project elements are high enough and/or massive enough to be of visual concern, these larger elements are repeated over the open site, creating a new visual pattern on the landscape. Because the facility will operate 24 hours a day, night lighting will be required on roadways, paths, and personnel parking areas. For aircraft safety purposes, red aviation lights may be required on top of the facility's higher elements.

To minimize visual impacts, however, Chevron plans to plant new vegetation and to use berms to screen views from Highway 101 motorists. The facilities will be painted in appropriate earth tone colors, to blend in more effectively with the surrounding landscape. Although these measures will lessen the impacts of a large industrial facility in a rural area, the facility's view impact will be great. The area is currently impacted by the existing facilities and the Vista del Mar School and although somewhat screened, the existing gas plant does intrude and alter the previously undeveloped nature of this area. The proposed expansion of the gas facility will be major and will further impact an already degraded area. While Chevron's DPP provides for site design that somewhat lessens the visual impact of the new facilities, some structures will be visible from Highway 101 and the overall

impact of the existing visual impact will be increased. Therefore, the Commission finds that this portion of the project is inconsistent with Section 30251 of the Coastal Act. In order to find consistency, this facility should be altered to provide further vegetation screening to mitigate the loss of the existing trees on the site and, where feasible, provide for siting and other measures (including below grade construction) to minimize or prevent the viewing of structures from Highway 101.

Because the Commission found in Section C of this report that the processing facilities are not coastal dependent industrial facilities, they do not qualify for further consideration under Section 30260 of the Act.

12. Public Access and Recreation

Sections 30210 - 30212 and Section 30252 of the Act provide for maximum public access to the coast and the maintenance and enhancement of public access.

Section 30210 of the Act states:

In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreation opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.

Section 30211 of the Act states:

Development shall not interfere with the public's right of access to the sea where acquired through use of legislative authorization, including but not limited to, the use of dry land and rocky coastal beaches to the first line of terrestrial vegetation.

Section 30212(a) of the Act states:

(a) Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where (1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources; (2) adequate access exists nearby; or (3) agriculture would be adversely affected. Dedicated accessway shall not be required to be opened to public use until a public agency or private association agrees to accept responsibility for maintenance and liability of the accessway.

Section 30252 of the Act states:

The location and amount of new development should maintain and enhance public access to the coast by (1) facilitating the provision or extension of transit service; (2) providing commercial facilities within or adjoining residential development or in other areas that will minimize the use of coastal access roads; (3) providing non-automobile circulation

within the development; (4) providing adequate parking facilities or providing substitute means of serving the development with public transportation, (5) assuring the potential for public transit for high intensity uses such as high rise office buildings; and by (6) assuring that the recreational needs of new residents will not overload nearby coastal recreation areas by correlating the amount of development with local park acquisitions and development plans with the provision of onsite recreational facilities to serve the new development.

Furthermore, Sections 30213, 30220, and 30221 of the Act provide that lower cost visitor serving and recreational facilities be protected, encouraged, and where feasible, provided, and coastal areas and oceanfront land be protected for recreational use.

Section 30213 of the Act states:

Lower cost visitor and recreational facilities and housing opportunities for persons of low and moderate income shall be protected, encouraged, and where feasible, provided. Developments providing public recreational opportunities are preferred. New housing in the coastal zone shall be developed in conformity with the standards, policies, and goals of local housing elements adopted in accordance with the requirements of subdivision (c) of Section 65302 of the Government Code.

Section 30220 of the Act states:

Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.

Finally, Section 30221 of the Act states:

Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area.

As previously discussed in Section E-10, the onshore facilities and activities associated with the proposed project that affect public access and recreation will be pipeline construction and maintenance at the landfall on Chevron-owned property near Point Conception and along the 16-mile stretch of the two oil and gas pipeline routes from Point Conception to Gaviota, the oil and gas processing facilities at Gaviota, near Gaviota State Beach, and the ocean outfall pipeline. An additional 10-mile segment of pipelines may be constructed between Gaviota and Las Flores Canyon. In addition, staging and marshalling areas will be needed during the construction period.

Obviously, the pipelines portion of the proposed project crosses undeveloped ocean fronting parcels and therefore lies between the sea and the first public road paralleling the sea. Section 30212(a) requires that public access to the shoreline and along the coast be maximized and provided in all new development projects

located between the first public road and the shoreline. This section makes clear that all new development resulting in any intensification of land use generates sufficient burdens on public access to require access conditions in conjunction with that development. In the Statewide Interpretive Guidelines, the Commission concludes that "all new development projects cause a sufficient burden on public access to warrant the imposition of access conditions as a condition to development, subject only to the exceptions specified by the Legislature." To conform to these requirements the Commission has consistently applied access conditions on ocean fronting developments requiring a coastal development permit.

Furthermore, the Commission's experience with pipeline projects demonstrates that public access is an important consideration under the Coastal Act. One example is the South Central Regional Commission's action on the Chevron pipeline from Platform Grace facilities at Carpinteria and Mobil Rincon (Permit 205-27). The Regional Commission approved the project with conditions that required the applicant to record an irrevocable offer to dedicate an easement for public access and recreational use running from the MHT line to the toe of the bluff on certain parcels affected by the pipeline. Furthermore, the Regional Commission required the applicant to record an irrevocable offer to dedicate a 20-foot-wide alternate hiking and biking trail in the general project area. In another action on Pacific Interstate Pipeline Company's (PIPICO) proposed gas pipeline from Texaco's Platform Habitat to onshore facilities at Carpinteria, adjacent to Carpinteria State Beach Park, the Commission required the applicant to dedicate an eight-acre surface easement for public access and recreation (Permit E-82-21). Recently, the Commission approved a permit application (Permit E-83-17) submitted by Chevron for the replacement of an existing 18-inch submarine crude oil loading with a 20-inch pipeline at its Estero Bay marine terminal. A condition of the approval, agreed upon by Chevron, was dedication of a surface easement for lateral public access across Chevron's property.

In addition to these Coastal Act requirements, the Santa Barbara County LCP contains stringent standards that require the granting of vertical and lateral easements for all development between the first public road and the sea.

LCP Policy 7-2 states:

For all development between the first public road and the ocean granting of an easement to allow vertical access to the mean high tide line shall be mandatory unless:

- a) Another more suitable public access corridor is available or proposed by the land use plan within a reasonable distance of the site measured along the shoreline, or
- b) Access at the site would result in unmitigable adverse impacts on areas designated as "Habitat Areas" by the land use plan, or
- c) Findings are made, consistent with Section 30212 of the Act, that access is inconsistent with public safety, military security needs, or that agriculture would be adversely affected, or

- d) The parcel is too narrow to allow for an adequate vertical access corridor without adversely affecting the privacy of the property owner. In no case, however, shall development interfere with the public's right of access to the sea where acquired through use unless an equivalent access to the same beach area is guaranteed.

The County may also require the applicant to improve the access corridor and provide bike racks, signs, parking, etc.

LCP Policy 7-3 states:

For all new development between the first public road and the ocean, granting of lateral easements to allow for public access along the shoreline shall be mandatory. In coastal areas, where the bluffs exceed five feet in height, all beach seaward of the base of the bluff shall be dedicated. In coastal areas where the bluffs are less than five feet, the area to be dedicated shall be determined by the County, based on findings reflecting historic use, existing and future public recreational needs, and coastal resource protection. At a minimum, the dedicated easement shall be adequate to allow for lateral access during periods of high tide. In no case shall the dedicated easement be required to be closer than 10 feet to a residential structure. In addition, all fences, no trespassing signs, and other obstructions that may limit public lateral access shall be removed as a condition of development approval.

In addition, LCP Policy 7-22 addresses the County's plans for expanded public access and recreation opportunities in the area affected by the project. Policy 7-22 states:

Expanded opportunities for public access and recreation shall be provided in the North Coast planning area.

Implementing Actions:

- a) The County shall study alternatives for expanding Jalama Beach County Park for day and overnight uses. Sufficient excess road capacity on Jalama Road shall be reserved to accommodate traffic generated by increased use at Jalama County Park.
- b) A hiking trail which provides lateral and vertical access to beaches shall be developed to connect Rancho Guadalupe County Park to Point Sal State Park and Point Arguello or Jalama Beach to Gaviota State Park. The County, with the assistance of the State Department of Parks and Recreation and participation of affected property owners, shall initiate planning studies to determine the precise locations and procedures for implementing such a trail. The trail should eventually include hostels and/or walk-in campgrounds where feasible on publicly-owned land; one possible location for such facilities would be an area in the vicinity of Point Conception. (emphasis added)

The proposed project will pose burdens on public access due to proposed activities seaward and inland of the MHT line. These burdens present both short-term and long-term effects. In the short term, installation of the pipelines will involve trenching within the surf zone at Point Conception and across the beaches at Gaviota State Park and Refugio State Beach. Heavy construction equipment will be located at these beach areas during pipeline installation, impeding access along the shoreline. Trench excavation and pipeline burial will damage or destroy marine and terrestrial resources, thereby adversely affecting the beach experience in this area. The construction corridor for the pipelines onshore will be 100 feet wide. To compound these adverse impacts, platform installation, offshore and onshore pipeline construction, and construction of the oil and gas processing plant will occur at the same time during the peak summer months, when public access and recreational uses are most in demand. Disruption of public use and access at the sites mentioned above will increase demands on nearby public beaches.

Aside from construction impacts, the project poses other short-term burdens to public access and recreation. The use of overnight facilities (hotels, motels, RV parks, and campgrounds) by temporary construction workers will have the effect of precluding their use for general recreational purposes. Motels in the general North County area are experiencing 95 percent average annual occupancy, indicating a severe shortage of overnight facilities. Approximately 265 peak workers will be needed for the proposed project, with 20 percent coming from outside the local Santa Barbara-Ventura labor pool.

The project's construction and drilling phases will contribute increased vehicle and truck traffic to coastal access routes, particularly on U.S. Highway 101, which is the major access route to the beaches and state parks in Santa Barbara County. Peak daily traffic volumes during the summer months of 1985 will be 125 vehicles per day (vpd), representing a 1.3 percent increase over current traffic volumes of 16,000 vpd on Highway 101. While this input appears to be minimal, the cumulative impacts of such additional traffic volumes, when considered with Exxon's Santa Ynez Unit development and with other potential energy development in the area, is significant because Highway 101 already has a high level of service.

In addition to these short-term impacts, ongoing maintenance activities and potential adverse impacts from pipeline breaks and spills and necessary repair work intensify the real and potential impacts from both the onshore and offshore aspects of this project. Because this type of maintenance activity is required for the life of the pipeline, the Commission finds that the project will have significant long-term impacts on public access. The Coastal Act requires the Commission to look at the individual and cumulative impacts of specific developments. As noted above, the individual impacts alone require dedication of access sufficient to offset the impacts of the development. The Commission also notes that the cumulative impacts of similar projects in the western Santa Barbara Channel and Santa Maria Basin could significantly disrupt access opportunities along the central and north County areas. The potential impacts become apparent when viewed in light of additional construction and maintenance activities necessarily occurring in the project area and the extent of pipelines necessary to service proposed platforms in the western Channel and Santa Maria Basin.

Because the proposed project will result in the short and long-term disruption of public beaches and undeveloped ocean fronting parcels as well as adversely impact available lower cost recreation and visitor-serving facilities, the Commission finds that the project will pose significant burdens on public access and recreational uses. Thus, the Commission finds that the project is not consistent with Sections

30210-30212 and 30252 of the Act because it does not maximize, maintain, or enhance public access to the coast. In order to be consistent with these policies, Chevron would have to submit an offer of dedication of an easement for public access and recreation, such as an easement for a hiking and biking trail along its 1500-acre ocean-fronting parcel at Point Conception.

13. Consolidation of Facilities

Consolidation of facilities is a key policy of the Coastal Act. Section 30250 of the Act requires new industrial development to locate within, contiguous with, or in close proximity to existing developed areas. Section 30260 emphasizes the importance of consolidation for coastal-dependent industrial facilities. Section 30262(b) again highlights the need for consolidated oil and gas development facilities by requiring their consolidation to the maximum extent feasible and legally permissible.

According to the DPP, the proposed Platform Hermosa would be the first in a potential series of platforms producing from the Arguello Field. Texaco plans to install a platform on adjacent P-0315. Chevron will probably propose another platform on OCS P-0450. Getty recently announced a discovery on OCS P-0449, so another platform could be expected on this tract.

As discussed in the Project Description of this report, Platform Hermosa will be the central platform for the field, designed to accommodate pipeline hookups from up to three additional platforms in the Point Arguello area. (The Point Arguello area extends from the Santa Ynez Unit to Union's lease OCS P-0441, and is thought to contain several underground reservoirs, including the Arguello Field.) The on and offshore pipelines to be installed for this project are designed with a throughput capacity of 200,000 BPD of oil and 120,000 MSCFD of gas to serve other operators in the Arguello area. Likewise, the proposed processing facility at Gaviota will process production from the entire Arguello area. The throughput capacity estimates are based on a confidential Price-Waterhouse Survey, which includes producers in the Arguello area, and represent peak production for this area. Chevron also formed the Point Arguello Transportation System whereby eleven Arguello area OCS operators are participating in the design of the pipelines and onshore processing facilities.

Chevron has selected Gaviota as the site for the processing facilities because there is an existing industrial plant on the site and most of the site is zoned for coastal dependent industrial use (M-CD). The company also believes there are no feasible alternative locations which are less environmentally damaging. Chevron met with local groups in the Santa Barbara area, including Native Americans and Santa Barbara County Resource Management Department representatives, to discuss proposals for sites for an onshore processing facility last summer. Three sites were considered: Chevron's 1500-acre parcel at Point Conception, the Getty/Chevron property at Gaviota, and Exxon's property at Las Flores/Corral Canyon. Because of the County Resource Management Department's expressed desire to retain the rural atmosphere of the Point Conception area and of the expressed desire to retain the rural atmosphere of the Point Conception area and of the religious significance of this area to the Chumash Indians, Chevron decided not to use the Point Conception site for processing facilities.

Regarding the Las Flores/Corral Canyon site, Chevron states that extensive grading and removal of riparian habitat would have to be undertaken in order to build processing facilities sized to process the Arguello crude. (Letter, 8/23/83)

According to Chevron, the site designated by Exxon for an industry processing facility contains 34 acres necessary for a processing facility after terracing and cut and fill. The site is composed of three meadows and cleared areas apparently used for grazing. The meadows are divided by Corral Creek, which contains extensive riparian woodland habitat. Riparian habitat is estimated to account for thirty percent, or approximately 10.2 acres of the total acreage to be used for the facility. The riparian habitat of Corral Creek is relatively undisturbed and is used heavily for nesting, breeding, feeding, and as a water source for many animals. Construction activities would eliminate this undisturbed stream bed area.

In comparison, Chevron contends that the disturbance at the proposed Gaviota site will be less severe than at Las Flores. It states that the most common habitat at Gaviota is southern California grassland, which has already been disturbed by previous development. Chevron continues by stating that the Gaviota location differs from Las Flores in that most of the area has already been altered by the existence of a gas plant versus the relatively undisturbed riparian habitat at Las Flores. The Commission notes that the existing gas plant covers only about two acres of a 55-acre site and that riparian habitat areas will also be disturbed if the proposed facilities are constructed there. (see Section E-10)

Nevertheless, from a consolidation standpoint, Chevron has sited its new facilities within and contiguous to existing industrial developed areas able to accommodate it. The Santa Barbara County LCP (Policy 6-6) requires that "If new sites for processing facilities to serve offshore oil and gas development are needed, expansion of facilities on existing sites or on land adjacent to existing sites shall take precedence over opening up additional areas." The proposed Gaviota site has the requisite zoning designation, except for the minimal five acres of agricultural land needed to be rezoned. Thus the Commission finds that the project is consistent with Section 30250 of the Act. Furthermore, because Chevron has sized its pipelines and processing facilities to transport and process estimated maximum production from the Point Arguello area and has provided tie-ins on Platform Hermosa to accommodate future platforms, the Commission finds that the project is consolidated to the maximum extent feasible. Therefore, the Commission finds that the project is consistent with Section 30262(b) of the Act.

14. Compatibility with the Local Coastal Program

The Commission notes that the Santa Barbara County Local Coastal Program's standards are not yet incorporated into the California Coastal Management Program, and under the CCMP procedures, the Commission's consistency authority will never be delegated to local government. However, the Commission notes the LCP's importance to its review of associated facilities under the DPP because the Santa Barbara County Local Coastal Program (LCP) was certified by the Coastal Commission in August 1982. Any coastal onshore facility associated with the DPP will be evaluated under the County's permit authority and must be consistent with the LCP. Any major energy facility will be subject to appeal before the Commission. Facilities seaward of the MHT line fall within the Commission's original permit jurisdiction.

The LCP's Energy Component provides for a new coastal-dependent industry designation for all existing energy facility sites. This designation includes the landward support facilities of existing marine terminals and oil and gas separation and treatment facilities supporting offshore petroleum development. Most energy-related facilities are principally permitted uses in these designated areas. These facilities also may be conditionally permitted uses in other land use

designations. For instance, crew boat facilities, marine terminals, and oil and gas processing facilities are conditionally permitted uses in the Agricultural II and Rural Residential designations and View Corridor overlay. Pipelines are a permitted use in all land use designations, and are conditionally permitted in the sensitive habitat overlay. Special conditions apply to pipelines through sensitive habitat, recreational, and archaeological areas.

According to the County's "Statement of Policy Relative to the Location of On-shore Oil Facilities," incorporated in the LCP under Policy 6-10, the County favors expansion of existing facilities onto adjacent lands over new sites. Consolidation of facilities on existing sites or on adjacent land is a preferred alternative to establishing new separate sites. The LCP allows only one additional marine terminal in the County, which must be located south of Point Conception. Furthermore, the County LCP gives priority to the transportation of crude oil to refineries by onshore pipeline rather than by marine tankering, and contains several policies that trigger the use of an onshore pipeline. If the County determines an onshore pipeline to be technically and economically feasible, then existing marine terminals will become non-conforming uses. Crude oil will be transported by pipeline, unless the County finds that this is infeasible for a particular operator.

At the time of certification of the County's LCP, the major planning questions regarding energy development were the need to receive land for coastal dependent industrial energy facilities--a new zoning designation for the County--based on development anticipated at that time, and whether enough oil would be found to economically justify the feasibility of an onshore pipeline to refineries. The situation has changed dramatically due to recent oil discoveries in the Santa Maria Basin. Current industry projections as reflected in the PTC Phase II Report indicate already leased tracts (excluding Hondo A) will produce up to 400,000 BPD during the peak year, almost ten times the rate at the time of LCP certification. Thus, a greater amount of land is needed for onshore support facilities.

Santa Barbara County is actively and responsibly planning to accommodate the accelerated rate of OCS development. It is undertaking pipeline feasibility studies, an analysis of siting alternatives for crew and supply bases, and an analysis of consolidation potential of onshore processing facilities and marine terminals. These analyses are expected to result in amendments to its LCP within the next year.

Most of the new oil and gas processing facilities proposed by Chevron will be located on a site previously designated for coastal dependent industrial use. A portion of the proposed site will require an amendment to the LCP and a zoning change. As discussed in the previous section, Chevron's proposal attempts to consolidate the initial transport and processing of all Arguello Field production, including that of different operators. With respect to the issue of consolidation, the Commission finds that the project is compatible with current LCP policies. However, Chevron plans to tanker its oil to refineries, and will only use an onshore pipeline to transport nominal amounts of Arguello crude, if one is built, even though it has in-state refinery capacity. In this regard, the Commission finds that the proposal is not compatible with County transportation policies in the LCP unless Chevron commits to use an onshore pipeline, if determined feasible by the County, to transport a substantial portion of its crude oil to refineries.

15. Public Welfare

Under Section 30262(2) of the Act, the Commission must determine whether a finding that Chevron's proposed coastal dependent industrial facilities are inconsistent with the CCMP will adversely affect the public welfare. Included in the concept of public welfare is consideration of the "national interest."

The Commission considers the national interest when it reviews federal licenses and permits. In addition to the Coastal Act, the Commission's approved CCMP includes a separate chapter (Chapter 11) that describes the process used for considering the national interest. The federal government has determined that the California coast is a resource of national significance, comprising more than half the western coastline of the contiguous 48 states. In reauthorizing the federal Coastal Zone Management Act in 1980, Congress identified ten national objectives to be achieved by states through their coastal management programs. Nine of the ten objectives recognize the critical need to protect coastal zone environmental resources. However, the Congress, the California Legislature, and the Commission also recognized that a balancing must be made with respect to the protection of land and water resources and the development of domestic energy resources. This balancing takes place under the provisions of the "public welfare" test embodied in Section 30260 of the Coastal Act. Thus, under Section 30260, the Commission is empowered to balance the national interest in both resource protection and energy development as is required under the CZMA.

The Commission's record of approval in consistency certifications clearly shows its consideration of the national interest to meet energy needs. The Commission has recognized the need for California to contribute to the nation's energy supply through OCS development by supporting and approving OCS lease sales and development projects in areas where petroleum resources are high and an infrastructure exists to support offshore oil development. In other areas, the Commission has usually supported development of already leased tracts. For example, by December 1982, the Commission had concurred with consistency certifications allowing 160 wells to be drilled in offshore waters west and north of Point Conception, while only eight wells were objected to in this area. The Commission has concurred with all 48 plans of exploration that have come before it from tracts leased in Lease Sale 53. This record clearly demonstrates that the Commission has adequately considered the national interest in energy production.

To assist the Commission in considering the national interest in coastal projects, the CZMA regulations allow coastal states to secure the assistance of the Secretary of Commerce in "determining the nature of the national interest in a particular facility when a request to site that facility occurs." (15 CFR 923.52). On May 27, 1983, the Executive Director requested that the Office of Ocean and Coastal Resource Management (OCRM) contact other relevant federal agencies to provide the Commission with information on the national interest in Chevron's project, particularly on national defense, navigational safety, air quality, water pollution, commercial fishing, living marine resources, and other energy proposals.

On July 20, 1983, Commerce Secretary Malcolm Baldrige wrote to the following federal agencies asking for their comments on the national interest in Chevron's proposals:

Casper Weinberger, Secretary of Defense

William R. Gianelli, Assistant Secretary of the Army for Civil Works

Donald Paul Hodel, Secretary of Energy

C. M. Butler, III, Chairman, Federal Energy Regulatory Commission

James G. Watt, Secretary of the Interior

Russell E. Dickenson, Director, National Park Service

Elizabeth H. Dole, Secretary of Transportation

James S. Geary, Commandant, U.S. Coast Guard

William D. Ruckelshaus, Administrator, Environmental Protection Agency

William G. Gordon, Assistant Administrator for Fisheries, National Marine Fisheries Service

Raymond J. Donovan, Secretary of Labor

Harold E. Shear, Administrator, Maritime Administration, Department of Transportation

Verne Orr, Secretary of the Air Force

Donald T. Regan, Department of Treasury

Chevron also submitted a statement to OCRM asserting that its DPP is in the national interest. Chevron contends that the Hermosa project will make a substantial contribution to the nation's energy self-sufficiency, will bolster the economy because it represents an investment exceeding \$400 million, and will perpetuate or create thousands of jobs, will directly employ approximately 565 people during the construction phase and 100 people thereafter to handle day-to-day operations, and will provide royalty payments to the federal government in excess of \$2 billion.

The following responses have been received through Secretary Baldrige and through Secretary Duffy to assist the Commission in its consideration of the national interest in Chevron's DPP. (A copy of each response is attached in Exhibit 14).

- o Major General Jack L. Watkins, USAF, Vandenberg Air Force Base, said that the tentative positioning of Platform Hermosa significantly raises the risk factors associated with the Space Shuttle mission and that it is essential that the risk factors of space and missile launches remain acceptable. An attached memo from Colonel Theodore J. Eckert, Director of Safety, explains that Platform Hermosa is directly under the 193 degree

launch trajectory of four out of five Space Shuttle launches and in an explosive overpressure hazard zone. The military stipulations in the OCS leases providing for sheltering or evacuation of personnel may have to be exercised for each Space Shuttle launch overflying the platform's position. The letter suggests that relocation of the platform further west or northwest would reduce the hazards significantly, placing the platform upwind of the trajectory and clear of the explosive overpressure hazard area. It recommends that an overpressure shelter area for personnel be constructed on the platform.

Colonel Eckert's letter goes on to state that, "if the explosivity conditions association with the launch of the Space Shuttle had been known at an earlier date, the Air Force would have asked that offshore tracts within six miles of Point Arguello be deleted from OCS lease sales 35, 48, 68, 73, 80, and the State of California lease sale."

Commander Watkins' letter also stated concern that the air quality impacts of offshore oil development are not being considered on a cumulative basis, and that this project could raise the ambient levels on the base to a point where local regulators would restrict the base's emissions. "Although the APCD does not have jurisdictional authority beyond State waters, oil development in federally-controlled waters should have air quality management requirements consistent with the APCD."

- o Donald Paul Hodel, Secretary of Energy, said that the Department of Energy continues to believe it is in the national interest to expand domestic production capacity wherever possible. Domestic production from the lower 48 states, including offshore production, is expected to decline by about 20 percent by the end of the century. Even with these projected declines, it is assumed that there will be significant production from the offshore domestic resources. If this is not realized, it may be necessary to increase imports which could have adverse national security implications.
- o Joan Simmons, Intergovernmental Affairs, Federal Energy Regulatory Commission, said that although we are currently experiencing a surplus of certain forms of energy, national interest considerations should not be limited to the short term. The further development of domestic oil and gas resources is still consistent with the long-term interests of the United States. At the same time, we also recognize the environmental sensitivity of the offshore and coastal areas of California. Development of the field should proceed in a manner compatible with the protection of the environment of offshore and coastal California and consistent with all federal, state, and local environmental concerns.
- o Franklin Willis, Policy and International Affairs, U.S. Department of Transportation, said that development of the substantial oil and gas resources in the Point Arguello field would decrease national dependence on potentially unreliable foreign sources of fuel, for both domestic and military uses. Investment in the

project would stimulate economic growth and increase employment. Royalty payments and tax revenues would be increased as a result of the proposed development.

- o Rear Admiral F.P. Schubert, U.S. Coast Guard, Eleventh District, said that the risks are minimal with regard to personnel and navigational safety. Although the risk of a significant oil spill from the project is perceived to be low, the potential impact to the Channel Islands or coastline could be quite high if oil threatened either and if response equipment and measures were not adequate. The letter goes on to state that industry is considering the stationing of one or two additional large oil spill response vessels in the vicinity of Point Conception. The Rear Admiral encourages the early acquisition of at least one of these vessels for stationing in the vicinity of the Arguello Field.
- o Pasquale Alberico, Office of Federal Activities, U.S. Environmental Protection Agency stated that emissions from future large scale oil development activities (including Chevron's project) may inhibit the ability of Santa Barbara and Ventura Counties to attain and maintain the NAAQS. A comprehensive look needs to be taken of the cumulative impacts of offshore development. A full analysis of the cumulative air quality impacts from the Santa Maria development and the expansion of common onshore oil and gas facilities should be included in the EIS being prepared for this proposal.

Mr. Alberico further said that the long-term impacts from oil and gas development on water quality in the Point Arguello area are uncertain because of the area's unique transitional nature and high biological productivity and diversity. The general NPDES permit, extended until June 1984, will not cover the proposed activities. Any further permitting activities must evaluate the cumulative impacts of the discharges on the area. Potential oil spills could have catastrophic impacts on the water quality and living resources of the area. All efforts should be taken to plan for and effectively contain and cleanup spills to minimize these impacts.

- o Manuel Johnson, Economic Policy, Department of the Treasury, said that increased oil supply puts downward pressure on energy prices and in that way reduces inflation and encourages economic growth. Royalty payments to the Treasury also should help reduce the federal deficit.
- o William Gordon, National Marine Fisheries Service, NOAA, said that a supplemental plan should be developed to discuss the cumulative impacts of full field development, to allow for early identification of potential impacts (particularly related to commercial fishing), and the development of appropriate mitigation recommendations. The letter noted that any pipelines traversing existing kelp beds have the potential for long-term impacts to these beds. The NMFS has recommended in the past that the permittee be required to restore impacted kelp beds to their former condition, if natural reestablishment does not occur within two years.

The views of the federal agencies indicate that, while approval of the Chevron proposal would contribute to some aspects of the national interest, such as progress toward energy self-sufficiency and contributions to the federal treasury, other issues of national concern, such as air quality, water quality, and environmental protection and safety also must be considered.

Chevron has indicated that the Arguello Field may contain as much as 500 million barrels of oil. Oil production from Hermosa is expected to peak in 1989 at 27,000 barrels per day with 28 MMSCF/D of gas. Oil production from the entire Arguello Field is anticipated to peak at 201,266 barrels per day in 1990 and gas production to peak at 120 MMSCFD in 1991. Peak production will thus occur only a few years after the initial platform, Hermosa, has been installed. However, Chevron estimates that the productive life of the Arguello Field and Platform Hermosa is 25 to 30 years, provided other platforms are installed within a few years after Hermosa. These figures may vary depending on the extent of the reservoir.

The Commission must weigh these figures on oil and gas productivity and their contribution towards alleviating the nation's dependency on foreign imports with the short-term, long-term, and possible irreversible adverse impacts to the environment. The proposed project will result in significant increases in air pollution and in the risk of oil spills, and will destroy and disrupt valuable marine and commercial fishing resources. The scenic quality associated with Point Conception and the Gaviota coastal area will be degraded. Furthermore, the location of the platform raises considerable safety conflicts with Vandenberg Air Force Base launch programs.

There also are adverse economic impacts to be considered. Undoubtedly, the project will result in substantial royalty payments to the federal government. However, many of the adverse impacts will be absorbed by local governments and citizenry who will not receive any royalty benefits or other payments to offset the adverse environmental and economic impacts. The Commission pointed out earlier that the value of the fisheries affected by project on the local economies was nearly \$5 million. This contribution could be reduced due to loss of fishing areas and fishing time and damage to equipment caused by the project.

Regarding air quality impacts, Santa Barbara County currently has nonattainment status under the CAA. If the County continues to be nonattainment as a result of OCS development, the economic impacts could be severe. These include the cost to local business of retrofitting facilities to achieve the NAAQS, the cost of EPA imposed sanctions, the cost to local government to prepare, administer, and enforce nonattainment plans, increased health care costs, and losses to tourist-based industries. In addition, development activities may result in economic losses to the agriculture industry due to crop yield reductions. Studies over the past several years have shown the dramatic effects of poor air quality on the yields of several crops. Of major significance is the effect of ozone, for which the County is nonattainment, on grape production. Northern Santa Barbara County has a growing wine industry. In addition, lettuce, beans, and various cut flowers are susceptible to air pollution damage at relatively low levels.

Therefore, the Commission finds that these adverse effects pose unacceptable risks to marine and coastal resources, national security, maintenance of biological productivity in the marine and terrestrial environment, preservation of scenic resources, production of seafood, and clean air and water unless the project is mitigated to the maximum extent feasible as explicitly discussed in this section.

National policy also encourages local government participation in coastal management decision-making. Section 303(2)(H) of the CZMA requires states to provide "opportunities for public and local government participation in coastal decision-making." Section 303(4) also states that it is the national policy "to encourage the participation and cooperation of the public, state, and local governments..." in carrying out the purposes of the CZMA. Section 306(e)(2), 302(2), and 305(8) of the CZMA also requires the Commission to consider the national interest in planning and siting energy facilities either within, or which may significantly affect the coastal zone, and to develop a planning process for anticipating and managing these facilities. This is accomplished through certification of LCPs for each jurisdiction within the coastal zone. As discussed in Section E-14 of this report, Santa Barbara County is actively engaged in updating its LCP based on recent massive oil discoveries.

The Chevron project will be subject to a joint EIR/EIS before action is taken on other state and local permit applications. Santa Barbara County, the local government most affected by the project, is the lead agency for the state in preparing the EIR. Chevron's project cannot go forward until this document is completed and acted upon by the County. Delaying action on the project by objecting until sufficient information is provided and CCMP requirements are met, therefore, will not affect the timing of the project nor procedurally delay the applicant. However, concurring with the project now will undercut the County's siting analysis, will preclude the County's options for transporting OCS crude oil and in dealing with other applicants, and will prejudice any amendments to the LCP. Thus, such action would curtail the County's participation in coastal management decision-making, which is contrary to the national interest as expressed in the policies of the CZMA.

Furthermore, the Commission has found that information on the project has not been provided in several critical areas: the feasibility of an onshore pipeline to refineries, cumulative impacts associated with the project, and impacts associated with air quality. Absent this information, the Commission cannot make the necessary findings of consistency under Sections 30230, 30231, 30232, 30253, 30250, and 30260(1) and (3) of the Act, as discussed in the previous sections. Not knowing the full ramifications of the project is clearly not in the public interest.

Based on these reasons, the Commission finds that objecting to Chevron's consistency certification will not adversely affect the public welfare and, therefore, that the project does not meet the provisions of Section 30260(2) of the Act.

APPENDIX I

Substantive File Documents

1. Chevron USA, Inc., Development and Production Plan and Environmental Report, Point Arguello Field, December 1982.
2. Chevron USA, Inc., Oil Spill and Emergency Contingency Plan for Platform Hermosa, OCS Lease P-0316, October 1982.
3. Dames & Moore, Geohazard and Cultural Resource Investigation, Platform Hermosa Site, OCS P-0316, December 1982.
4. Dames & Moore, Geohazard and Cultural Resource Investigation, Marine Pipeline Route--Platform Hermosa Site to Government Point Area, December 1982.
5. Consistency Certification File CC-7-83, Exxon Company, USA, Santa Ynez Unit.
6. June 29, 1983 letter to Gordon Duffy from Michael Fischer re: Coastal Commission's comments on Chevron's DPP.
7. Santa Barbara County. Coastal Plan. January 1982.
8. National Maritime Research Center, Santa Barbara Channel Risk Management Program, April 1981.
9. California Air Resources Board, Air Quality Aspects of Offshore Oil and Gas Resources, February 1982.
10. California Air Resources Board, Report of the California Legislature on Air Pollutant Emissions from Marine Vessels (Draft), June 1983.
11. Petroleum Transportation Committee Phase II Final Report, County of Santa Barbara, Resource Management Department, June 1983.
12. California v. Watt, U.S.D.C., C.D. Cal. #813232-CBM (Mx)
13. Lehrman, D.E. et al, A Study of Transport Into, Within, and Out of Coastal Areas of Southern Santa Barbara County and Ventura County, Meteorology Research, Inc. and California Institute of Technology, Division of Chemistry and Chemical Engineering for Ventura County Air Pollution Control District, June 1981.
14. Letter from E.C. Fullerton, Department of Fish and Game, to Michael Fischer, concerning effects of muds and cuttings discharges.
15. Committee on Assessment of Safety of OCS Activities. Marine Board; Assembly of Engineering; National Research Council. "Safety and Offshore Oil" National Academy Press; Washington, D.C. 1981.

16. May 23, 1983 letter from EPA to Peter Tweedt, Director, Office of Ocean and Coastal Resource Management, concerning the Exxon SYU development and the National Interest.
17. Santa Barbara County-Cities Area Planning Council, Cumulative Assessment of Employment and Housing Impacts of the Space Shuttle, MX, LNG and OCS Projects, 1980.
18. South Central Coast Commission Permit #311-05.
19. Permit E-82-21; Appeal A-4-82-459 (PIPCCO).
20. Letter from Stuart R. Shaffer to Don Neuwirth October 4, 1982.
21. California Coastal Commission, Designation of Coastal Areas Where Construction of an Electric Power Plant Would Prevent Achievement of the Objectives of the California Coastal Act of 1976, September 1978, Revised April 1, 1982.
22. Petroleum Transportation Committee, County of Santa Barbara. Phase I Final Report, Vol. I; Appendices, Vol. II, 1983.
23. Oil & Gas Journal, "Getty Plans Big Expansion of California Terminal," January 17, 1983.
24. California Coastal Commission, "Revised Findings Policy Statement on Conflicts Between Vessel Safety and Offshore Oil and Gas Operations," August, 1982.
25. Exxon Company USA, Development and Production Plan and Environmental Report Santa Ynez Unit, October 1982.
26. Clean Seas Oil Spill Response Manual.
27. California Coastal Commission, Oil Spill Cleanup Capability Study, 1983.
28. Statistical Failure Mode Analysis of Submarine Pipeline Accidents MMS, 1983 Oil Spill Conference.
29. Southern California Coastal Pipeline Volumes I and II - Part C, Bechtel, 1982.
30. Alternative Pipeline Routes for Santa Barbara Channel Crude, Al Reynolds, 1983.
31. 1985 California Oil Scenario Study, Bonner & Moore.
32. California Energy Commission, Petroleum Logistics - Movement of Oil to California.
33. State Lands Commission, 1985 California Oil Transportation Study.
34. Research on Environmental Fate and Effects of Drilling Fluids and Cuttings, Lake Buena Vista, Florida, 1980 Symposium Proceedings.

35. An Environmental Assessment of Drilling Fluids and Cuttings Released onto the Outer Continental Shelf, Volumes I and II, Gary Petrazzuolo.
36. EPA NPDES Permit No. CA0110516 - General Permit; in Federal Register Volume 47, No. 33, 18 Feb. 1982.
37. Ayers, Robert and T.C. Sauer, The Generic Mud Concept for Offshore Drilling for NPDES Permitting, IADC/SPE 1983 Drilling Conference, New Orleans, LA.
38. Steele, J., A Review of Some Physical and Biological Effects of Oil Well Drilling Fluids, January 1983, California Department of Fish and Game.
39. Rieser A. and J. Spiller, Regulatory Drilling Effluents on Georges Bank and The Mid-Atlantic Outer Continental Shelf: A Scientific and Legal Analysis, April 1981.
40. Finalizing Addendum, EIR, Resumption of Exploratory Drilling Operations by the Shell Oil Company, Lease PRC 3314.1, Pierpont Prospect. Prepared by the State Lands Commission.
41. California Coastal Commission Position on National Pollutant Discharge Elimination System (NPDES) Permit activities on the OCS, October 16, 1981.
42. Palter, Alan, Santa Barbara: Offshore Drilling Muds and Cuttings, 1983-1992.
47. Papers submitted to the California Coastal Commission by Exxon, written by: J. Neff, R. Kolpack, T. Sauer, R. Meek, R. Ayers.
48. Oil Spill Intelligence Report, Boston, Massachusetts, August 20, 1981, Page 29.
49. Schatten, G., Effects of Barium on Fertilization and Early Development in Sea Urchin Eggs, 1982 (in press).
50. Brannan, A.C., and K.R. Rao, Barium, Strontium, and Calcium Levels in the Exoskeleton, Hepatopancreas and Abdominal Muscle of the Grass Shrimp, Palaemonetes pugio: Relation to Moulting and Exposure to Barite. Comp. Biochem. Physiol. 63 pp. 261-274, 1979.
51. Neff, J.M., Final Summary Report to the API, Effects of Used Drilling Muds on Benthic Marine Animals, 1979.
52. Sweeney, B., Testimony Before the Administrator, US EPA, In re Diamond M Drilling Company, 1981.
53. Tagatz, M.E. et al., Effects of drilling mud on development of experimental estuarine macrobenthic communities, pp. 847-865, Symposium, Research on Environmental Fate and Effects of Drilling Fluids and Cuttings, Lake Buena Vista, Florida, 1980.
54. Foy, M., Acute Lethal Toxicity of Prudhoe Bay Crude Oil and Corexit 9527 to Arctic Marine Fish and Invertebrates, Environment Canada/Environmental Protection Service, 1982.

55. Special Report: Ixtoc I., Oil Spill Intelligence Report, Boston, Mass., January 4, 1980.
56. Vielvoye, R., "A Sobering Message On Oil Spills", Oil and Gas Journal, August 11, 1980.
57. Kent, Donald B., Stephen Leatherwood, and Lyne Yohe, Responses of Migrating Whales, Eschrichtius robustus, to Oil on the Sea Surface: Results of a Field Evaluation. Vol. I of II.
58. Dames & Moore. Site Specific Marine Biological Survey Chevron Platform Hermosa Project Western Santa Barbara Channel for Chevron USA, Inc. February 14, 1983.
59. State Lands Commission, Chambers Consultants. Program Environmental Impact Report. Leasing, Exploration and Development of Oil and Gas Resources on State Tide and Submerged Lands, Point Conception to Point Arguello, Santa Barbara County, California. April 1982.
60. California Coastal Commission, "Revised Staff Report and Preliminary Recommendation - State Lands Commission - Point Conception-Point Arguello May 12, 1983. (considered at May, 25 1983 Coastal Commission hearing)
61. Orr, Robert T., Marine Mammals of California. Berkeley University of California Press, 1972.
62. Gotshall, Daniel W., Pacific Coast Inshore Fishes, Sea Challengers: Los Osos, California, 1981.
63. Ricketts, Edward F., and Calvin Jack, Between Pacific Tides. Stanford University Press, 1939, updated 1968.
64. Norris, K.S., T.P. Dohl, R.C. Guess, L.J. Hobbs, and M.W. Honig. 1976. Cetacea: numbers, distribution and movements in the Southern California Bight. In: University of California Santa Cruz, 1976. Marine Mammal and Seabird Survey of the Southern California Bight. Volume 3. Principal Investigators' Reports. Book 1: 270-441.
65. State Lands Commission, Technical appendices, draft program environmental impact report, leasing, exploration and development of oil and gas resources on state tide and submerged lands, Point Conception to Point Arguello, Santa Barbara County, California. Appendix A, Marine Biological Survey Report. 1982.
66. University of California, Santa Cruz, Marine mammal and seabird survey of the Southern California Bight. Volume II. Detailed Synthesis of Findings. 1978.
67. _____. Marine mammal and seabird study, central and northern California. Annual Progress Report, U.S. BLM POCS Tech. Paper 92-1, 1982.
68. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Final environmental impact statement of the proposed Channel Islands marine sanctuary. 1980.
69. Nekton, Inc., A biological survey of a hard bottom feature, Santa Maria Basin, California. Report prepared for ARCO Oil and Gas Company.

70. Letter to Gordon W. Duffy, Secretary of Environmental Affairs, from Jack L. Watkins, Major General USAF, Commander, Headquarters 1st Strategic Aerospace Division, Vandenberg Air Force Base, received July 18, 1983.
71. Letter and attachments to Michael Fischer from Robert W. Carr, Director, San Luis Obispo County APCD, July 26, 1983.
72. Letter to Reid T. Stone, MMS, from Robert W. Carr, Director, San Luis Obispo County APCD, July 26, 1983.
73. Letters and attachments to David A. Schuenke, MMS, from John B. English, Director, Santa Barbara County APCD, July 7, 1983; Richard H. Baldwin, Director, Ventura County APCD, June 28, 1983, and Gordon Duffy, Chairman, ARB, July 11, 1983.
74. Letter to Peter L. Tweedt, OCRM, NOAA, from Pasquale A. Alberico, Acting Director, Office of Federal Activities, U.S. Environmental Protection Agency, May 23, 1983.

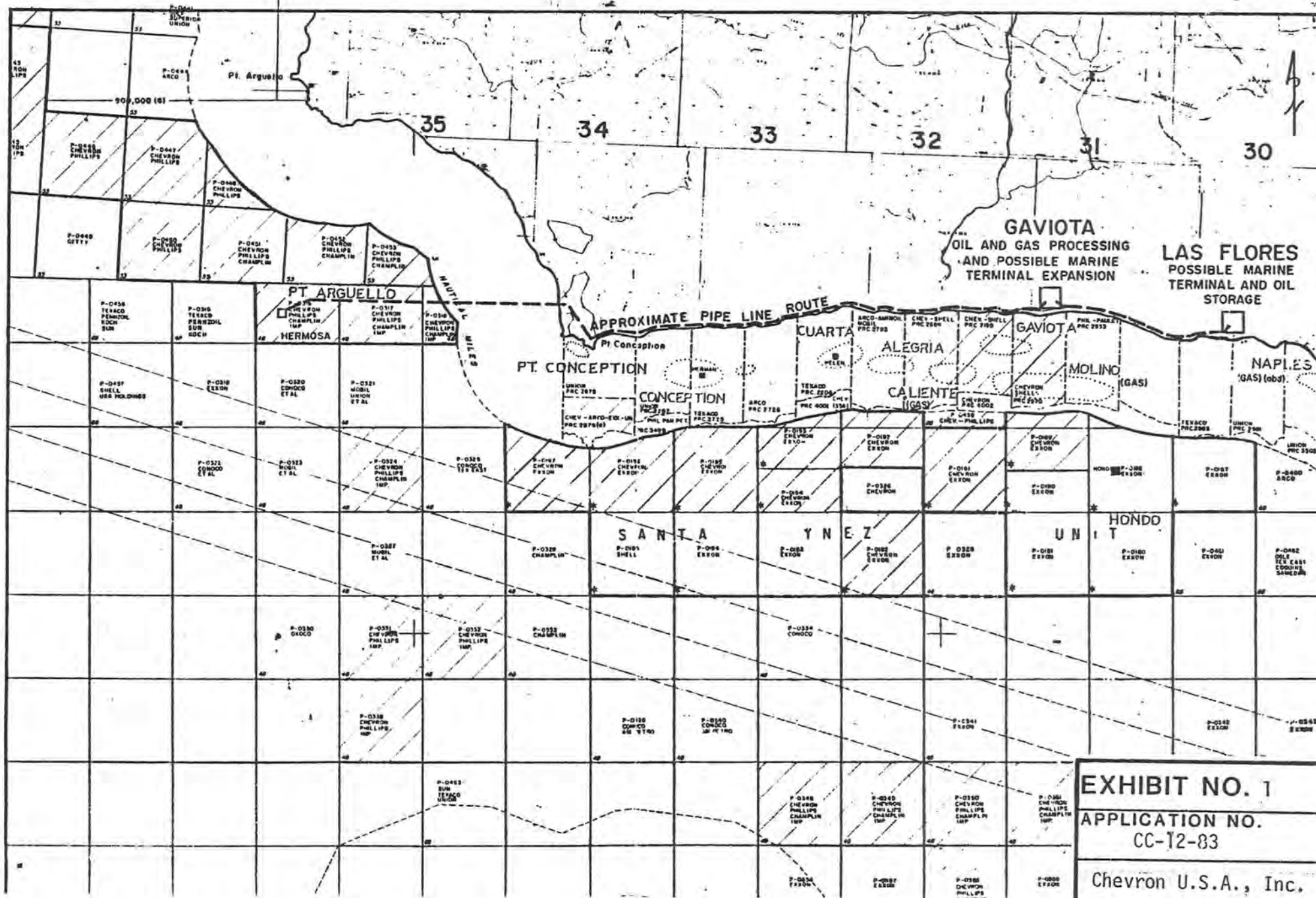



EXHIBIT NO. 1
APPLICATION NO.
 CC-12-83
Chevron U.S.A., Inc.

 California Coastal Commission

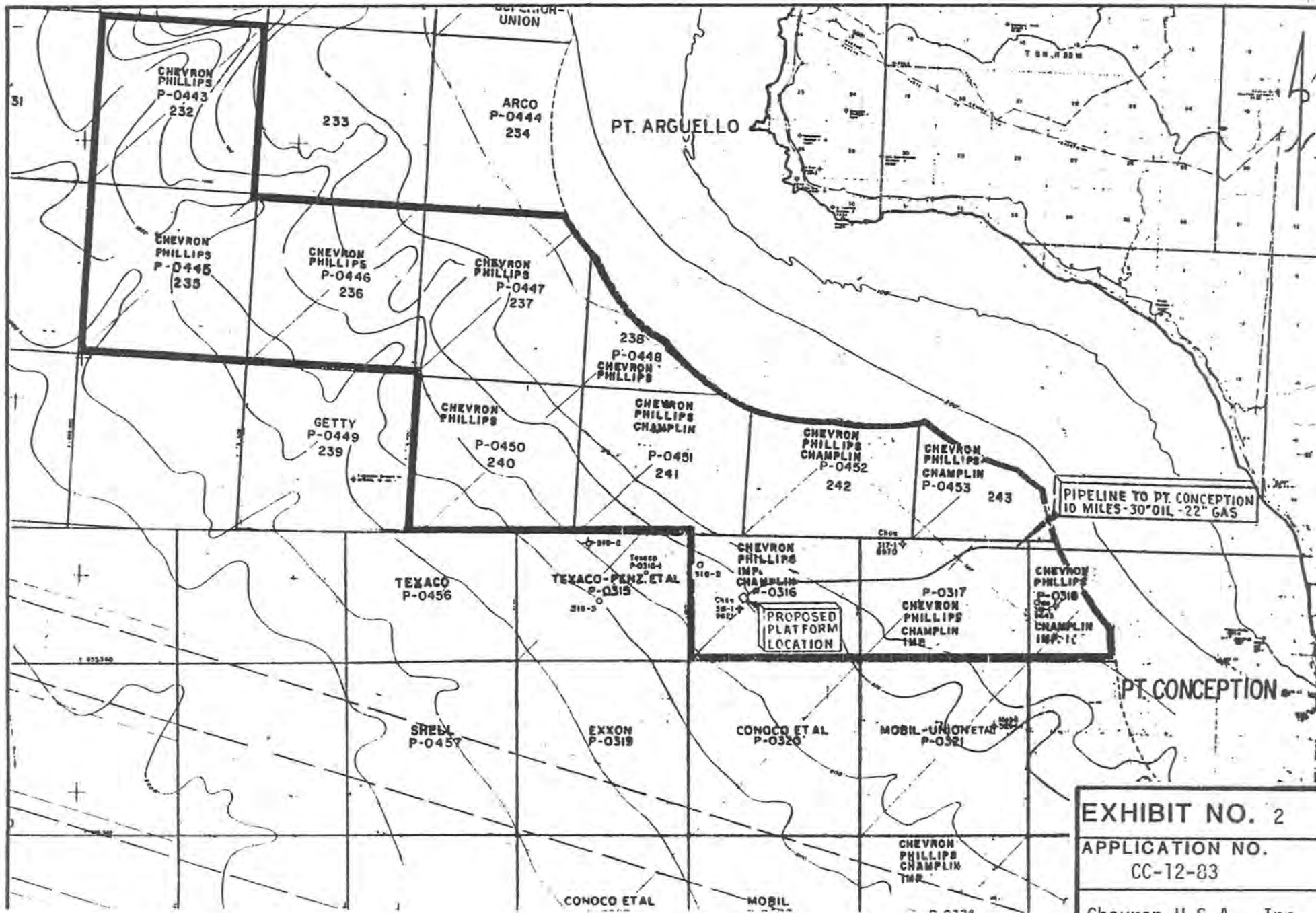
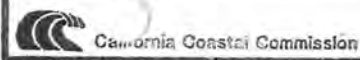


EXHIBIT NO. 2

APPLICATION NO.
CC-12-83

Chevron U.S.A., Inc.



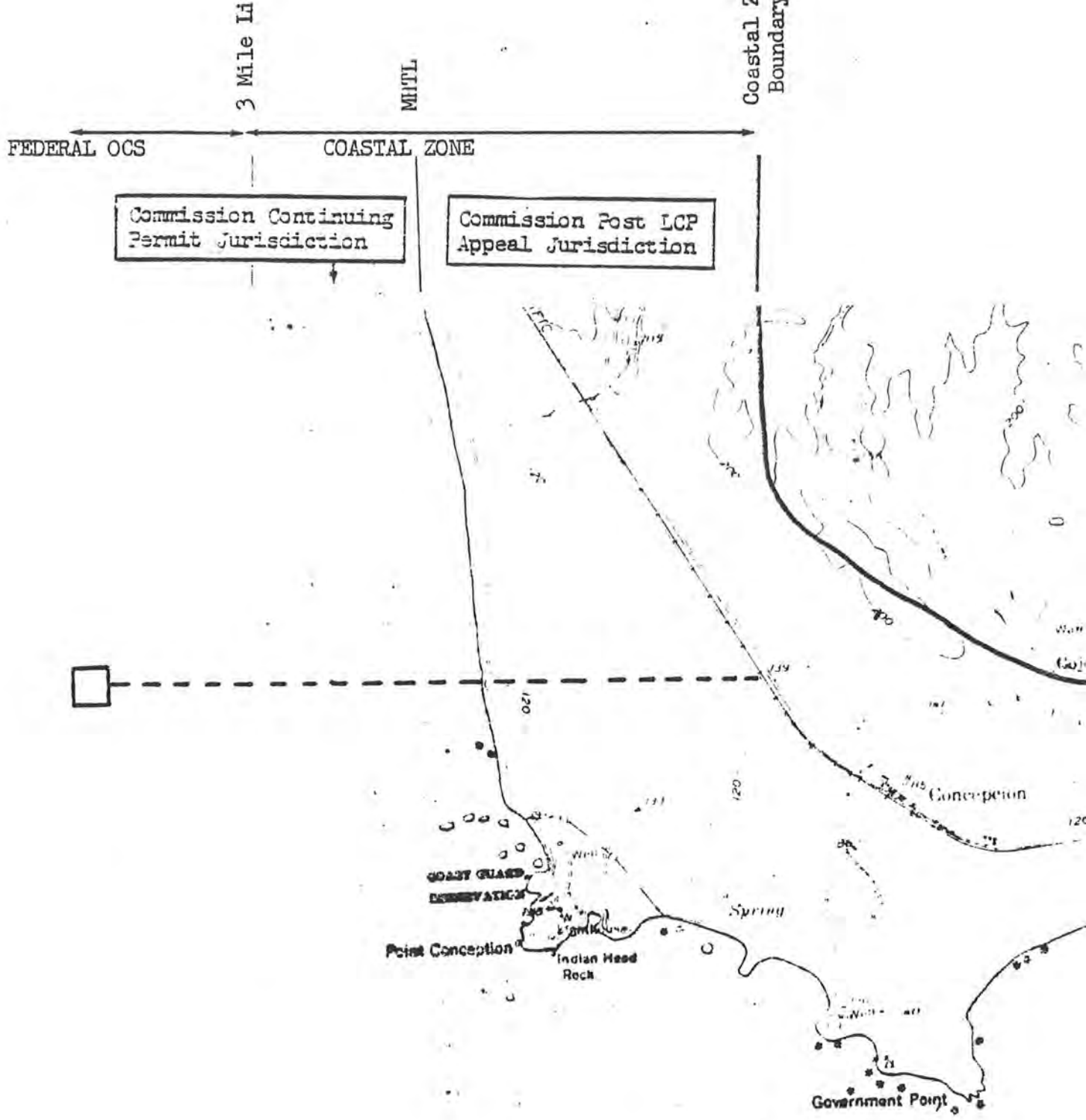



EXHIBIT NO. 3
APPLICATION NO. CC-12-83
Chevron U.S.A., Inc.
 California Coastal Commission

NOT TO SCALE

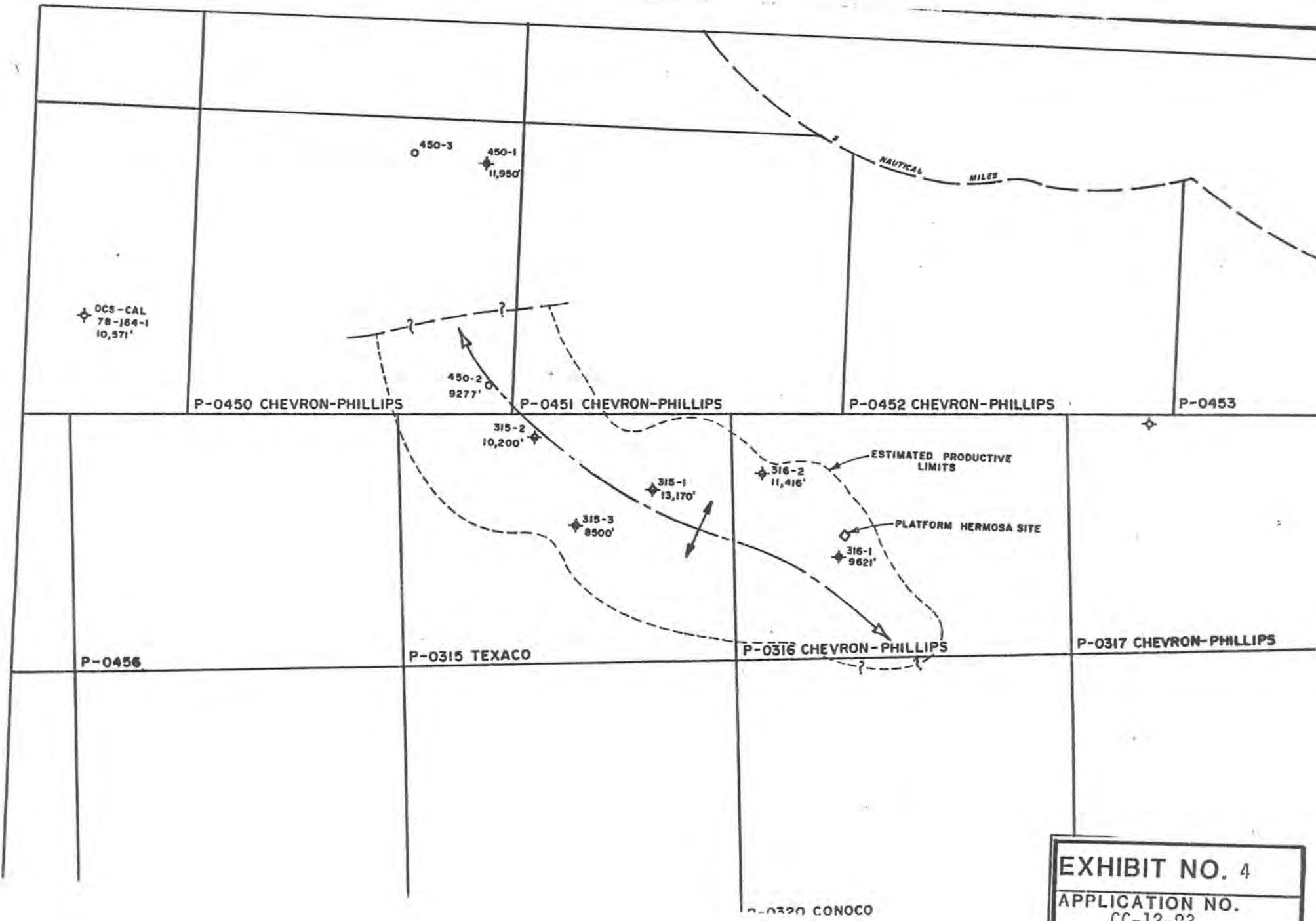
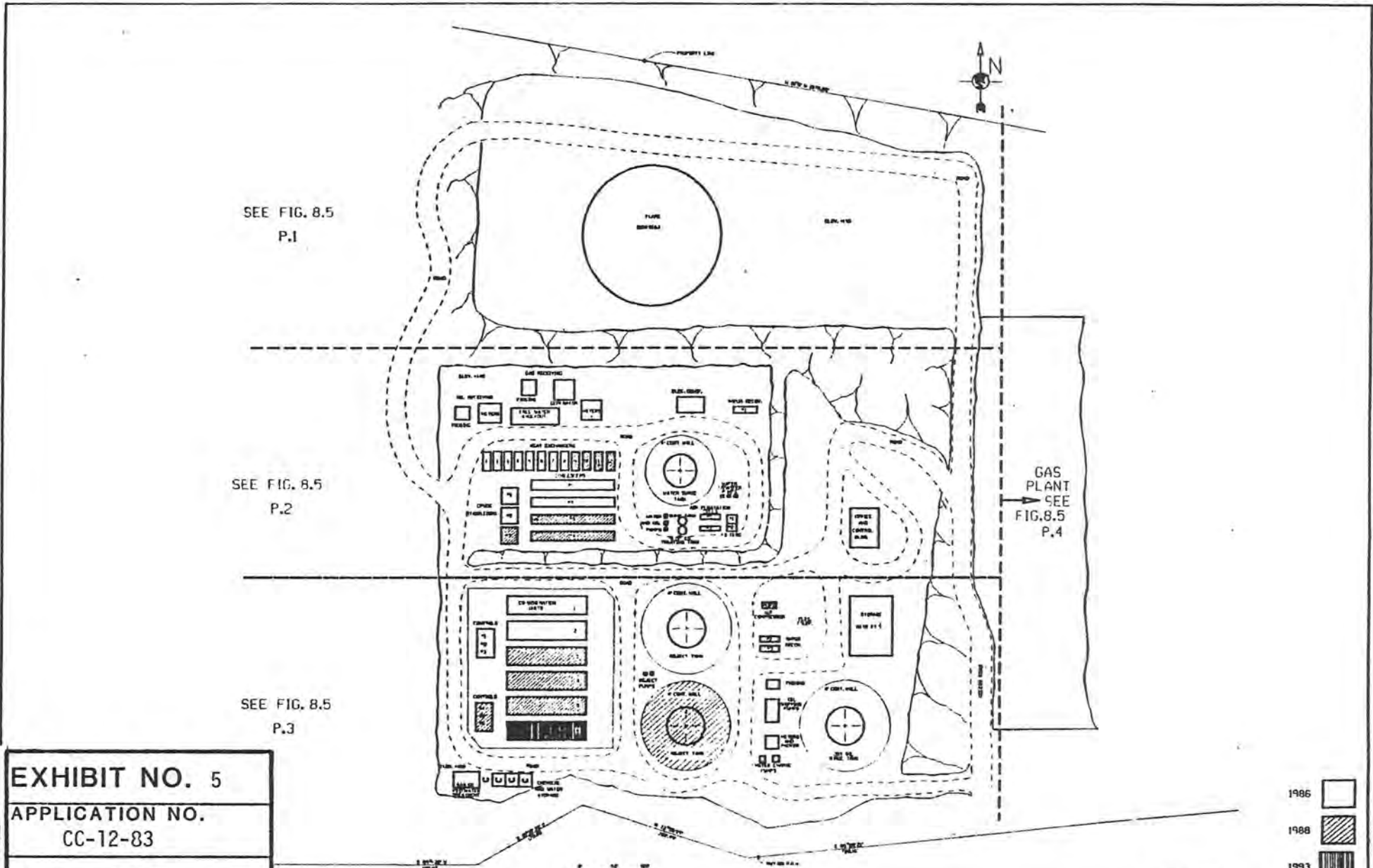


EXHIBIT NO. 4
 APPLICATION NO.
 CC-12-83
 Chevron U.S.A., Inc.





SEE FIG. 8.5
P.1

SEE FIG. 8.5
P.2

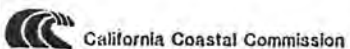
SEE FIG. 8.5
P.3

GAS PLANT
SEE
FIG. 8.5
P.4

EXHIBIT NO. 5

APPLICATION NO.
CC-12-83

Chevron U.S.A., Inc.



- 1986
- 1988
- 1993

FIG. 8.4

EQUIPMENT LOCATION PLAN
OIL AND GAS PROCESSING FACILITY
PT. ARGUELLO FIELD
GAVITO, CALIFORNIA

DATE: 11/87	SCALE: 1" = 50'
DRAWN BY: J. B. [unclear]	CHECKED BY: [unclear]
DESIGNED BY: [unclear]	APPROVED BY: [unclear]
FILE NO.: [unclear]	

EXHIBIT NO. 6

APPLICATION NO.

CC-12=83

Chevron U.S.A., Inc.



California Coastal Commission



DE. PLAN
PG. 12.3

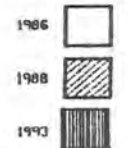
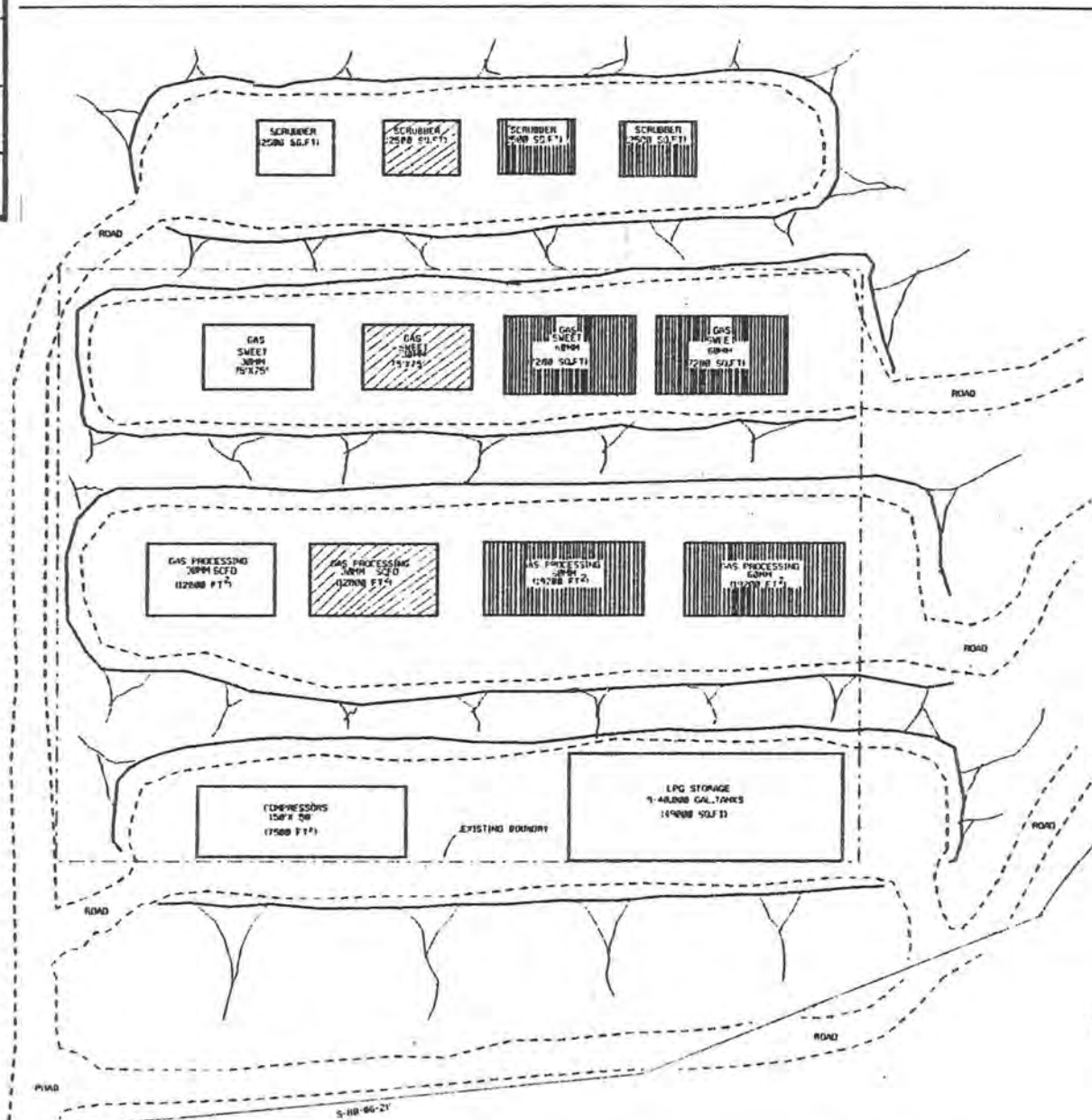
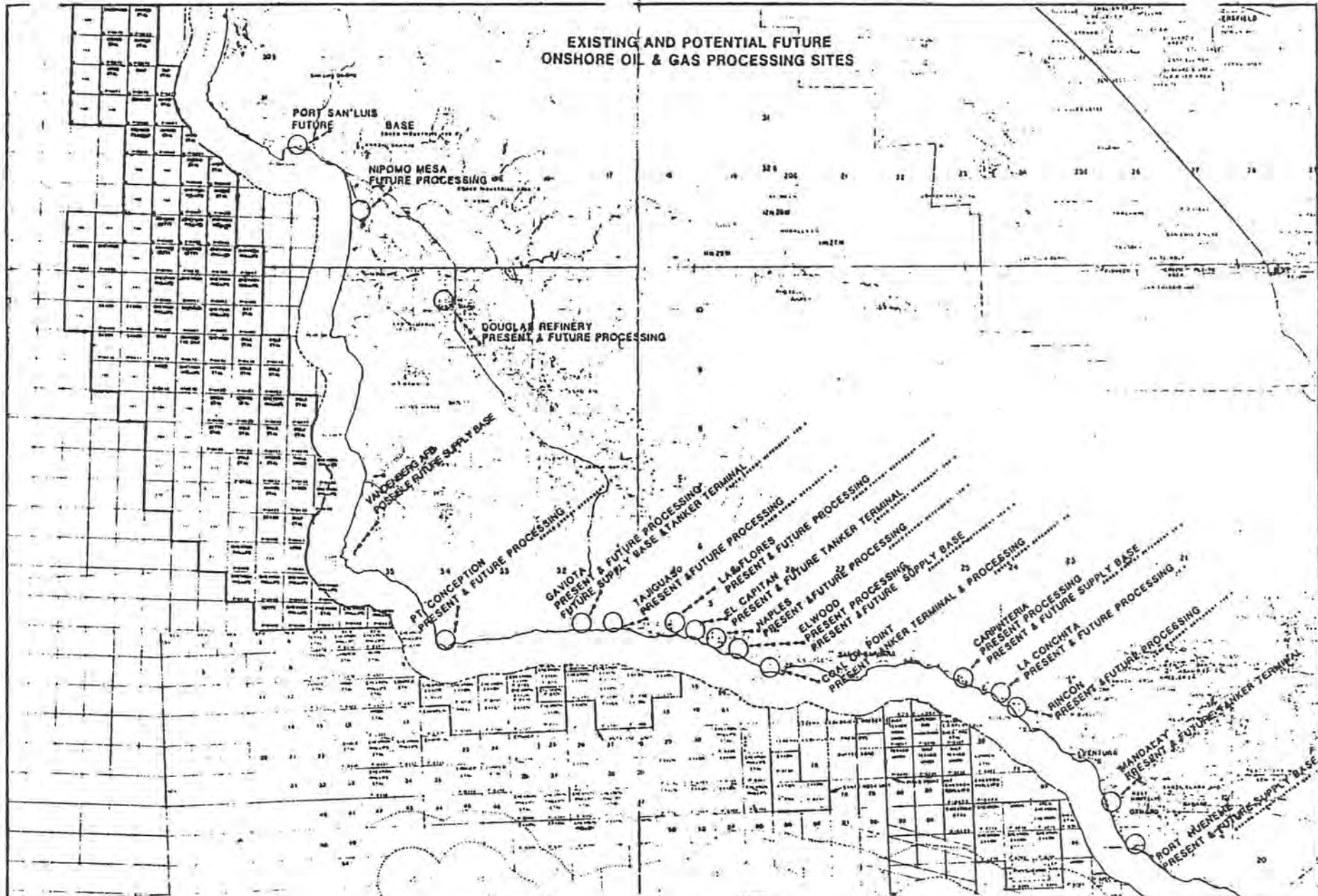


FIG.8.5 PG.4 OF 4

NO. 1	NO. 2	NO. 3	NO. 4	NO. 5	NO. 6	NO. 7	NO. 8	NO. 9	NO. 10	NO. 11	NO. 12	NO. 13	NO. 14	NO. 15	NO. 16	NO. 17	NO. 18	NO. 19	NO. 20	NO. 21	NO. 22	NO. 23	NO. 24	NO. 25	NO. 26	NO. 27	NO. 28	NO. 29	NO. 30	NO. 31	NO. 32	NO. 33	NO. 34	NO. 35	NO. 36	NO. 37	NO. 38	NO. 39	NO. 40	NO. 41	NO. 42	NO. 43	NO. 44	NO. 45	NO. 46	NO. 47	NO. 48	NO. 49	NO. 50	NO. 51	NO. 52	NO. 53	NO. 54	NO. 55	NO. 56	NO. 57	NO. 58	NO. 59	NO. 60	NO. 61	NO. 62	NO. 63	NO. 64	NO. 65	NO. 66	NO. 67	NO. 68	NO. 69	NO. 70	NO. 71	NO. 72	NO. 73	NO. 74	NO. 75	NO. 76	NO. 77	NO. 78	NO. 79	NO. 80	NO. 81	NO. 82	NO. 83	NO. 84	NO. 85	NO. 86	NO. 87	NO. 88	NO. 89	NO. 90	NO. 91	NO. 92	NO. 93	NO. 94	NO. 95	NO. 96	NO. 97	NO. 98	NO. 99	NO. 100
-------	-------	-------	-------	-------	-------	-------	-------	-------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	---------

EQUIPMENT LOCATION PLAN
OIL AND GAS PROCESSING FACILITY
PT. ARGUELLO FIELD
SAVITA CALIFORNIA

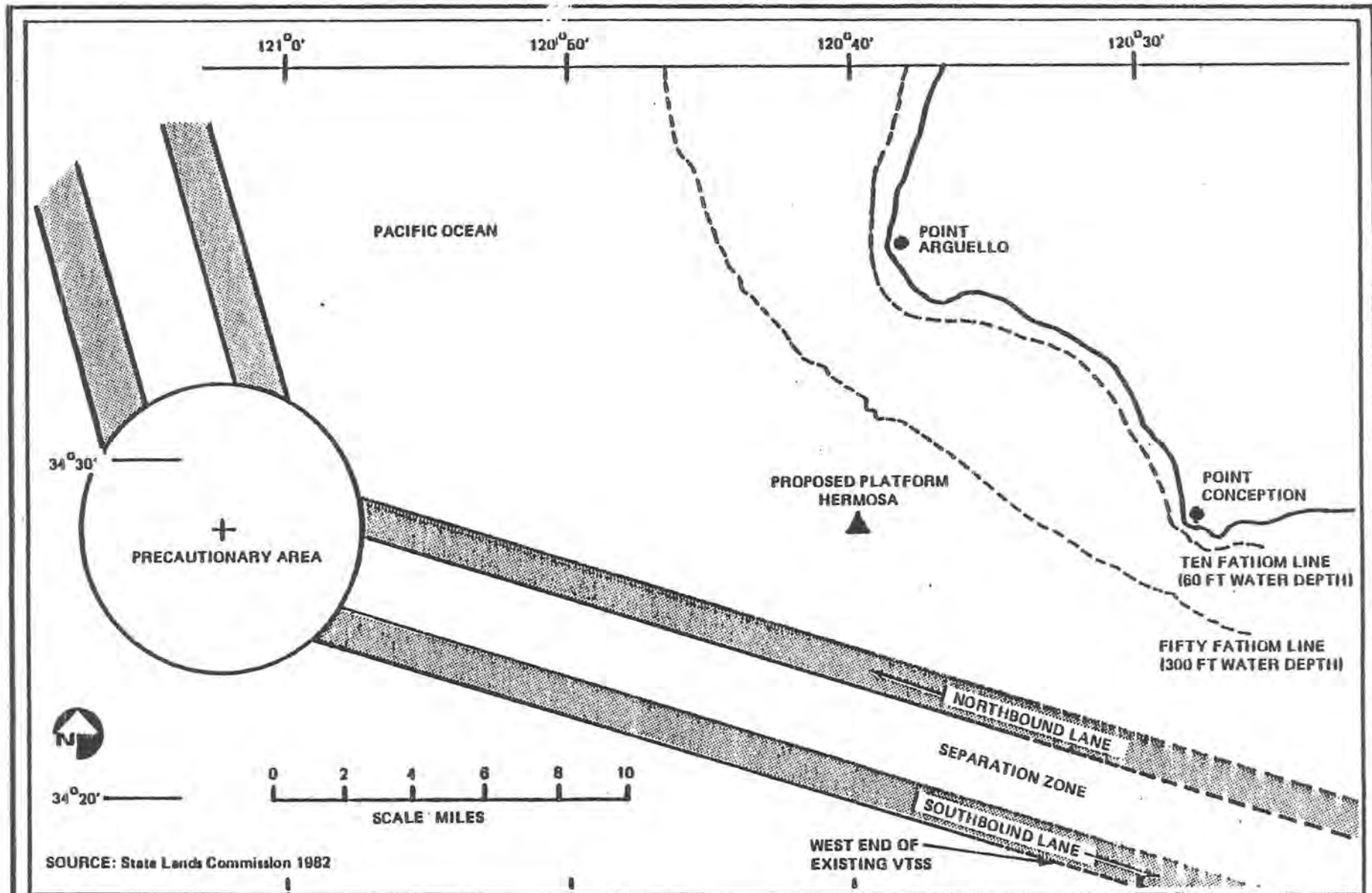
EXISTING AND POTENTIAL FUTURE
ONSHORE OIL & GAS PROCESSING SITES



PREPARED BY PROCESSING SUBCOMMITTEE
OF THE PETROLEUM TRANSPORTATION COMMITTEE
FEBRUARY 1983

EXHIBIT NO. 7
APPLICATION NO. CC-12-83
Chevron U.S.A., Inc.

4-48



SOURCE: State Lands Commission 1982

Proposed Extension of Santa Barbara Channel Vessel Traffic Separation Scheme

EXHIBIT NO. 8

APPLICATION NO.
CC-12-83

Chevron U.S.A., Inc.

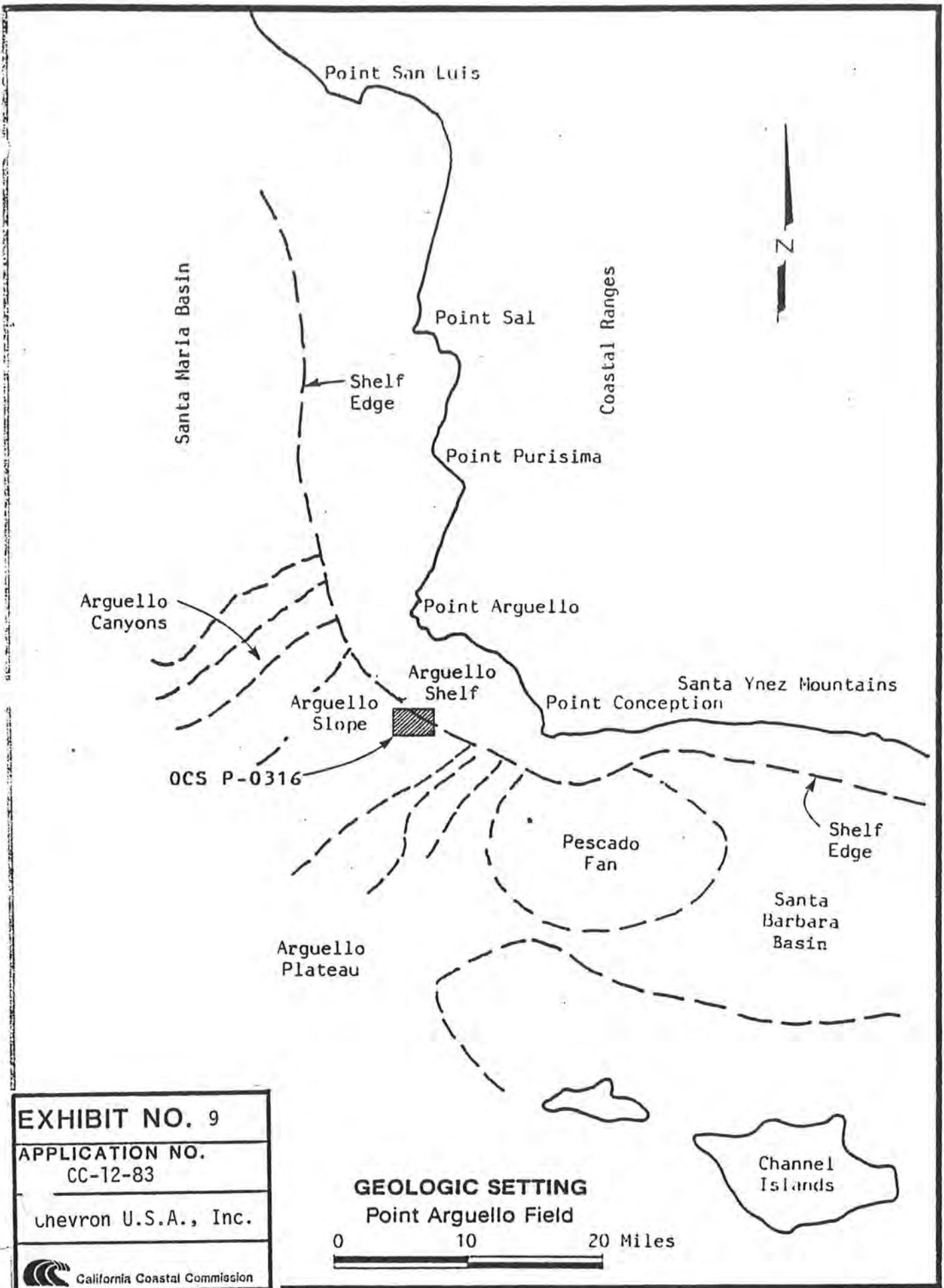


EXHIBIT NO. 9


APPLICATION NO.
CC-12-83

Chevron U.S.A., Inc.

 California Coastal Commission

GEOLOGIC SETTING
Point Arguello Field

0 10 20 Miles



CALIFORNIA COASTAL WATERS

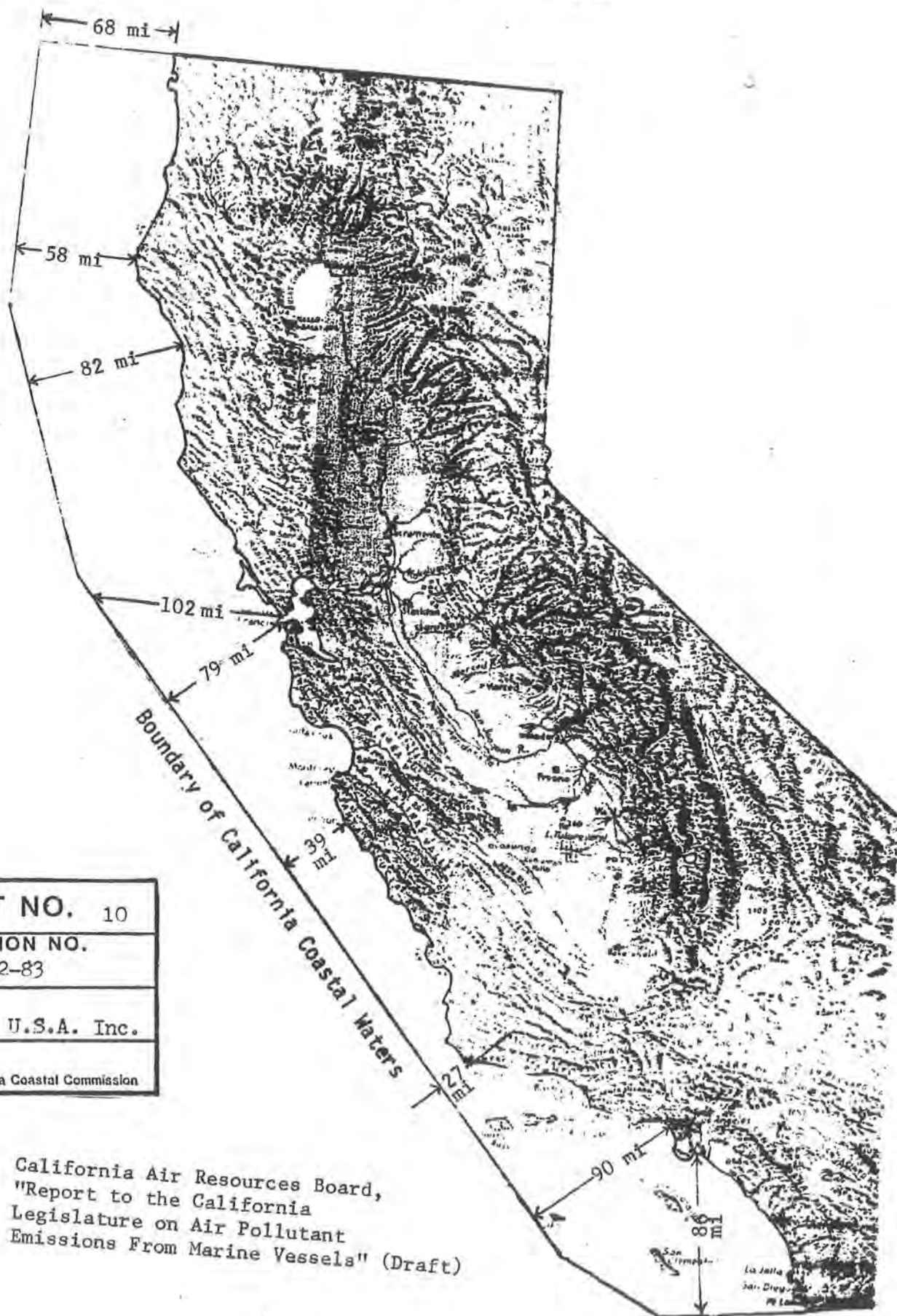

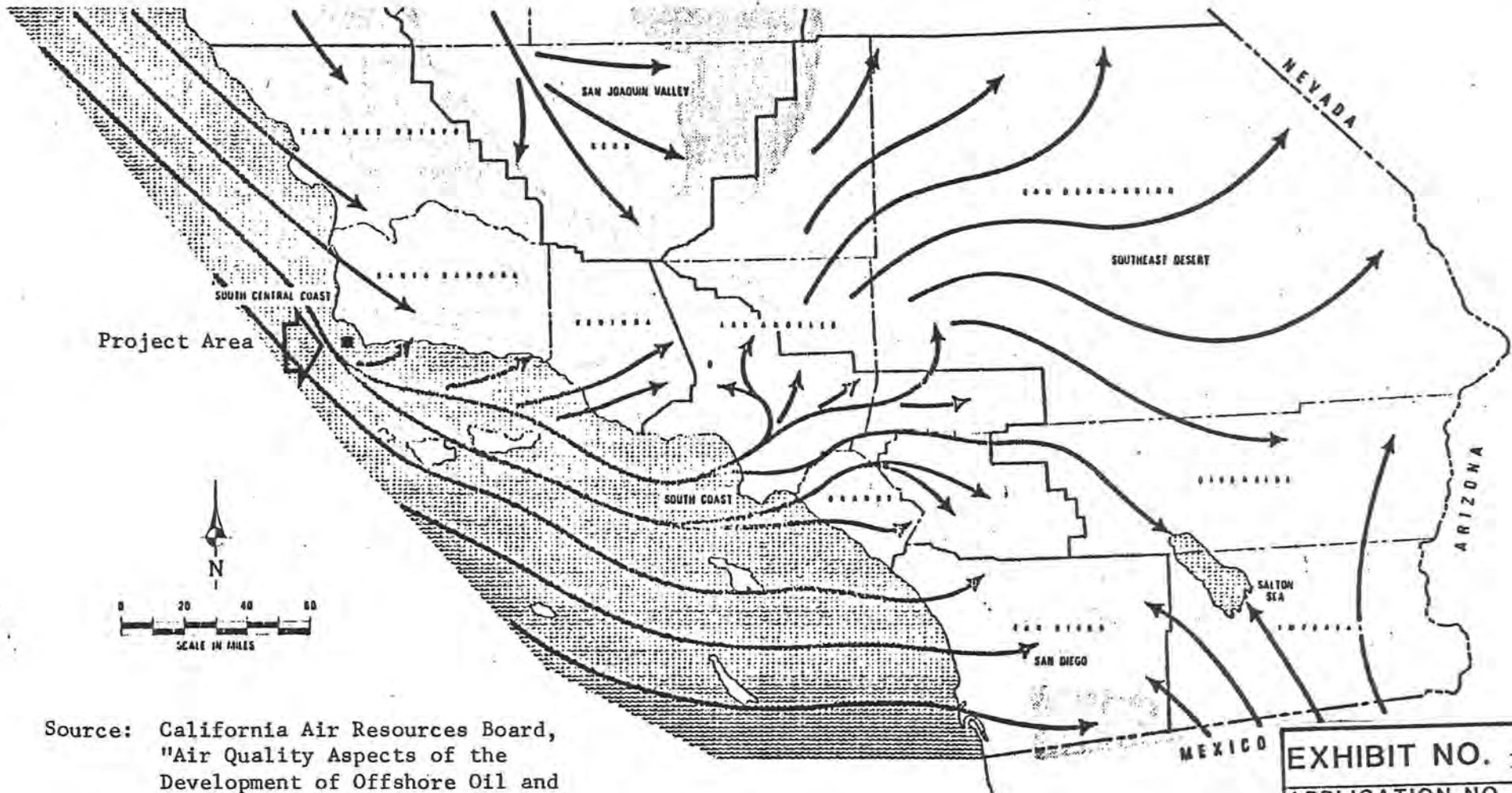



EXHIBIT NO. 10
APPLICATION NO. CC-12-83
Chevron U.S.A. Inc.
 California Coastal Commission

Source: California Air Resources Board,
"Report to the California
Legislature on Air Pollutant
Emissions From Marine Vessels" (Draft)

**SOUTHERN CALIFORNIA
PREDOMINANT WIND FLOW PATTERNS
SUMMER (JUNE, JULY, AUGUST)**



Source: California Air Resources Board,
"Air Quality Aspects of the
Development of Offshore Oil and
Gas Resources"

EXHIBIT NO. 11
APPLICATION NO. CC-12-83
Chevron U.S.A. Inc.
 California Coastal Commission

ADDITIONAL CALIFORNIA COASTAL COMMISSION STAFF COMMENTS
ON PROPOSED MODIFICATION AND REISSUANCE
OF GENERAL NPDES PERMIT NO. CA0110516

August 25, 1983

The staff of the California Coastal Commission objects to the proposed modification and reissuance of general NPDES permit No. CA011516, and recommends that EPA, subsequent to the permit's expiration in December, 1983, ~~should~~ regulate discharges from offshore platforms and wells on an individual NPDES permit basis. The Commission staff at this time cannot concur with the idea of a general permit for either exploratory or production discharges on the OCS. The NPDES general permit is based on the premise that one permit can effectively regulate muds and cuttings discharges over the entire California coast. The OCS offshore southern California is biologically and oceanographically complex. Too many questions remain unanswered concerning long-term fates and effects of muds and cuttings discharges to enable a blanket general permit to effectively regulate discharges and prevent unreasonable degradation of California's valuable marine environment.

Finding of No Unreasonable Degradation

EPA Region IX, in its general permit fact sheet, has made a finding of "no unreasonable degradation" for this limited term permit. The Commission staff believes that there is insufficient information available to allow EPA to make such a finding. Region IX's brief discussion of the Ocean Discharge Criteria stands in marked contrast to EPA Region I's lengthy 403C analysis and findings for Georges Bank permit No. GB0030007.

Region I found, in its analysis, that it had insufficient information available to make a finding of no unreasonable degradation of the marine environment; the proposed Georges Bank permit anticipated a number of wells comparable to that predicted under California's general permit, and encompassed an area substantially smaller and less complicated, both oceanographically and biologically, than the California OCS. Specifically, the Georges Bank NPDES permit concludes:

o Insufficient information exists to enable EPA to make a determination of no unreasonable degradation with regard to significant changes in the biological community from bioaccumulation, threat to human health by ingestion of contaminated organisms, or loss of economic values because of impacts on commercial fisheries.

o Insufficient information exists to make a conclusive determination of no unreasonable degradation of commercial fisheries from discharges during exploratory drilling.

EXHIBIT NO. 2
APPLICATION NO. CC-12-83
Chevron U.S.A. Inc
 California Coastal Commission

o There is insufficient information to accurately predict the transport of discharged materials beyond the immediate vicinity of the discharge site for assessment of biological impacts over time, potential for build up of constituents in sediments leading to bioaccumulation, potential human health impacts, and economic losses from impacts to commercial fisheries at deposition sites.

o There is insufficient information on acute and chronic toxicity to verify that bioassay results from testing of the seven mud types of applicable to the most sensitive and commercially important species in the Georges Bank area. There is also insufficient information to evaluate the long-term fate and longevity of deposition (persistence) of discharged materials. This information is insufficient to completely relate materials discharged to biological, human health, or economic impacts.

o There is insufficient information to determine that there will be no unreasonable degradation of the biological communities. ...There is insufficient information on the vulnerability to drilling fluids of species important in the lease sale area.

Generic Muds

EPA Region IX relies in large part on the concept of restricting discharges to "generic muds" of presumably low toxicity to ensure protection of the marine environment. The validity of the generic mud concept is doubtful because site-specific down-hole conditions and requirements for additives result in essentially different muds from each well. Therefore, it is unrealistic to assume that toxicities will be either predictable or comparable for those spent muds. An EPA's introduction to its symposium on the effects of drilling muds (Results of an Adaptive Environmental Assessment Modeling Workshop Concerning Potential Impacts of Drilling Muds and Cuttings on the Marine Environment) states:

The composition of a drilling mud is tailored to expected or actual down-hole conditions. This means that in addition to the typical base of bentonite or barite, various chemical agents are added as pH modifiers, biocides, corrosion inhibitors, defoamers, emulsifiers, flocculating agents, surfactants, thinners, particle dispersers, and mud weighting agents. [Second] Many of the chemical ingredients and materials accumulated from cutting through the various formations may undergo change when exposed to bore temperatures and pressures or to each other (especially in deep wells typical of offshore drilling activities). The resulting complexity of discharged materials is reflected in the wide range of concentrations over which effects are observed.

Additives

While additives must be approved by EPA prior to discharge, the regulations require only that these additives be used in concentrations which will not "greatly increase" mud toxicity. EPA Region IX has not compiled a single list of allowed speciality additives. Rather, it authorizes additives, often referred to by brand name and without specifying ingredients, in response to requests by individual companies. This system makes it difficult for the interested public or other regulatory agency to assess these allowable additives. EPA should compile a list of all approved additives, including chemical constituents as well as trade names.

EPA's reliance on the presumed low toxicity of "generic muds" is ill-founded; more rigorous sampling and bio-assay of muds with additives ~~to be discharged~~ is necessary.

Inadequate Monitoring

The monitoring requirements of the current general permit do not ensure compliance with the terms of the permit. The discharger is required only to submit, on a yearly basis, monitoring results obtained during the previous 12 months of operations. These data are to be summarized and reported on a Discharge Monitoring Report Form (DMR). Although the first report is due 13 months after the operator is initially covered by the permit, two of the three DMRs which were due to EPA had not been submitted when Commission staff last inquired. For each RIDE permit, EPA should require that the "precise chemical inventory of all constituents and their volume added down-hole for each well" (p. 7325, A.1.f) be submitted to the Region IX office on a monthly basis. This log should be available for public inspection. (Such a provision is included in the Georges Bank permit.) In addition, EPA should require, for each well drilled, a compliance monitoring system which will sample discharges after they have been released. The discharges can then be collected and analyzed to evaluate compliance with the discharge limitations.

Alternatives to On-site Disposal

The Commission staff believes that the EPA must carefully examine alternatives to on-site ocean discharge of muds and cuttings. In particular, EPA should consider consolidated disposal at an approved offshore dumpsite, as well as onshore disposal of muds and cuttings. An offshore dumpsite could be appropriately sited in a previously disturbed area, such as the radioactive dumpsite in Lease Sale 73. With the use of newly developed treatment and fixation processes, muds and cuttings can be dewatered and the heavy metals bound up, so that, with the approval of the Department of Health Services and the Regional Water Quality Control Boards, the treated discharges would no longer require disposal at a hazardous waste dumpsite. Such treatment processes are currently being evaluated by the Department of Health Services, as well as by regional water boards, sanitation districts, and representatives of the oil industry. The Commission staff supports these efforts. In California State waters, it is the policy of the State Water Quality Control Board, with concurrence from the Department of Fish and Game, to require that all muds and cuttings be barged ashore. EPA should ^{conduct} thorough evaluation of chemical detoxification processes, and of the onshore disposal alternative.

Conclusions

In conclusion, we therefore:

- o object to the proposed modification and reissuance of general permit No. CA0110516;
- o object to the concept of a general permit for the California OCS;
- o recommend case by case review of NPDES permits by EPA;
- o request that Region IX undertake a thorough 403 C evaluation of NPDES discharges at a level of analysis in accordance with Region I's work on the Georges Bank;
- o request a careful evaluation of the generic muds concept;
- o request that EPA Region IX prepare a list of approved additives, identified by chemical constituents as well as trade names;
- o recommend that EPA require submittal by discharge ^{logs} on a monthly basis of the detailed chemical logs from the rigs;
- o recommend that a compliance monitoring system be established which will sample discharges after they have been released;
- o request evaluation of alternatives to on-site discharges, including onshore disposal, chemical detoxification of muds, and disposal at an approved offshore dumpsite.

The rapid increase in both exploratory and development drilling along the California coast has resulted in a several-fold increase in the amount of muds & cuttings discharged. It is inconceivable that more stringent regulations are applied to disposal of drill muds and cuttings than are applied to disposal in the ocean. *onshore*

CALIFORNIA COASTAL COMMISSION STAFF COMMENTS ON
PROPOSED MODIFICATION AND REISSUANCE OF
GENERAL NPDES PERMIT NO. CA0110516

August 11, 1983
Santa Barbara

Presented by Martha Weiss

EXHIBIT NO. 13
APPLICATION NO. CC-12-83
Chevron U.S.A. Inc
 California Coastal Commission

Thank you for the opportunity to comment on this NPDES permit action. The Commission staff will be submitting more detailed comments in writing by August 25. The California Coastal Commission remains concerned over the offshore disposal of drill muds and cuttings, and is particularly concerned about the cumulative impacts of discharges from the very large number of exploratory and production wells anticipated in the western Santa Barbara Channel and Santa Maria Basin over the next decade.

Commission staff would like to emphasize the fact that the current general permit was never intended to cover discharges from the large number of exploratory wells and production platforms proposed for offshore California. The permit fact sheet states that it will cover "a very modest number of new wells for the area to which the permit applies." According to the fact sheet, industry estimated that 69 exploratory wells would be drilled, and two new platforms would be installed, during the two year life of the permit. Industry has estimated that over 1500 exploratory and production wells will be drilled in the Santa Barbara Channel and Santa Maria Basin over the next ten years. An estimated 1,171,500 tons of muds would be required to develop these wells. The analysis in the current general permit certainly does not consider discharges of this magnitude. One rationale for the issuance of a general permit, as stated by EPA, is that such a permit

allows the agency to address cumulative effects of multiple facilities operating in one geographic area, and to impose an area-wide monitoring program that can more effectively address environmental degradation. The Commission looks forward to seeing EPA's careful and thorough assessment, under Section 403c of the Clean Water Act, which will take into account the cumulative impacts of these anticipated discharges.

The Commission is currently re-evaluating its policy on muds and cuttings disposal. It may decide to extend its zone of case-by-case NPDES permit review seaward beyond the current 1000 meter line. Some of the nearshore Lease Sale 68 tracts proposed for coverage under the permit expansion would be affected by this action, and each mud disposal permit application would be subject to Commission consistency review.

In its policy re-evaluation, the Commission may also find that, while under certain conditions, it concurs with a general permit for exploratory activities, it cannot concur with a general permit which covers production activities. Because of the magnitude of the discharges from production activities, the Commission may find it necessary to maintain case-by-case review over such discharges.

Finally, the Commission staff would like to emphasize the fact that the effects of drill muds and cuttings discharges on marine organisms remain the subject of great controversy. To quote the National Academy of Science's National Research Council report on "Safety and Offshore Oil",

There is no clear agreement among ocean biologists as to whether low concentrations of petroleum or drilling fluids and cuttings produce significant effects on marine biota. Nor is there agreement about the cumulative effects of low levels of discharges or of disturbances caused by drilling operations to natural ecosystems, both being difficult to detect and to

measure quantitatively. Moreover, the long-term effect of the discharges on an ecosystem or community has not been established adequately. Thus, while there is general agreement that the toxicity and smothering effects of large quantities of oil and drilling fluids and cuttings are harmful to pelagic birds, benthic organisms, and coral reefs, there is less agreement on the ability of those life forms to recover after a time.



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
OFFICE OF OCEAN AND COASTAL RESOURCE MANAGEMENT
Washington, D.C. 20235

AUG 29 1983

N/ORM4:NE

RECEIVED

SEP 02 1983

CALIFORNIA
COASTAL COMMISSION

Mr. Michael Fischer
Executive Director
California Coastal Commission
631 Howard Street, 4th Floor
San Francisco, California 94105

Dear Mr. Fischer:

Enclosed are copies of the letters we have received from the Secretary of Energy and the Secretary of Defense in response to Secretary Baldrige's request for the assistance of other Federal agencies in determining the nature of the national interest in Chevron's proposal for oil and gas development in the Point Arguello Field. We shall forward any additional letters as we receive them.

Sincerely,

Peter L. Tweedt
Director

Enclosures

cc: William Grant
Minerals Manager
Pacific OCS Regional Office
Department of the Interior
1340 West Sixth Street
Los Angeles, California 90017

Claire Ghylin
Chevron U.S.A., Inc.
2120 Diamond Boulevard
Concord, California 94524

EXHIBIT NO. 14

APPLICATION NO.
CC-12-83

Chevron U.S.A. Inc



California Coastal Commission





THE SECRETARY OF ENERGY
WASHINGTON, D.C. 20585

August 10, 1983

SECRET
EXCLUDED FROM AUTOMATIC
DOWNGRADING AND
DECLASSIFICATION
AUG 12 1 03 PM '83

338570

Honorable Malcolm Baldrige
Secretary of Commerce
Washington, D.C. 20230

Dear Mr. Secretary:

We are pleased to provide the following in response to your request for a statement regarding the national interest issues involved in the Chevron U.S.A. project for oil and gas production from the Point Arguello Field, offshore Points Arguello and Conception, California.

In calendar year 1982 domestic production of crude oil averaged 7.0 million barrels per day from the lower 48 states, including onshore and offshore production. According to preliminary National Energy Plan projections, production from the lower 48 states, which includes offshore production and increasing amounts of enhanced oil recovery, will decline to 6.5 million barrels per day in 1985; 6.3 million barrels per day in 1990; 5.8 million barrels of oil per day in 1995; and 5.7 million barrels of oil per day in 2000. Thus, we anticipate that domestic production from the lower 48 states, including offshore production, will decline by about 20 percent by the end of the century.

Even with these projected declines, it is assumed that there will be significant production from the offshore domestic resources. If this is not realized, it may be necessary to increase imports which could have adverse national security implications. Although 1982 was a year of depressed petroleum demand, the Nation still relied on foreign sources for an average of 5 million barrels per day of crude oil and petroleum products.

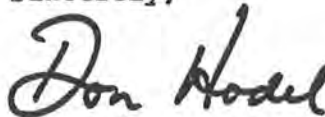
The Nation, as a whole, faces an increasing cost of crude oil from domestic sources because the next increment of reserves is generally harder to find and more expensive to produce. This will become more evident as the search for petroleum moves further offshore and into other remote and hostile areas, such as the Arctic. It is in the Nation's interest to develop and produce the less expensive sources that are at hand, thereby reducing the Nation's energy bill. This could also have an effect on the price we pay for foreign petroleum because the size of the domestic reserve base, the cost to produce those reserves, and our determination to produce them, influence the price others believe they can charge for energy. Therefore, our demonstrated willingness to produce lower cost oil should lower the expectations of foreign producers as to what the U.S. is willing to pay to import oil.

2

The Department of Energy continues to believe it is in the national interest to expand domestic petroleum production capacity wherever possible.

Thank you for the opportunity to comment on the national interest aspects of the Chevron U.S.A. project.

Sincerely,

A handwritten signature in cursive script that reads "Don Hodel". The signature is written in dark ink and is positioned below the word "Sincerely,".

DONALD PAUL HODEL



THE SECRETARY OF DEFENSE

WASHINGTON, THE DISTRICT OF COLUMBIA

338650

12 AUG 1983

Honorable Malcolm Baldrige, Jr.
Secretary of Commerce
Washington, D.C. 20230

Dear Mac:

Thank you for your July 19, 1983 letter that invited our views regarding the national interest in a Chevron U.S.A. project for oil and gas production from the Point Arguello Field, offshore Points Arguello and Conception, California. At your suggestion, the Deputy Assistant Secretary of the Navy (Installations and Facilities), our executive agent for such matters, will provide our views to your Office of Ocean and Coastal Resource Management.

Thank you again for the opportunity to comment on the Chevron U.S.A. proposal.

Sincerely,

A handwritten signature in dark ink, appearing to be "J. J. ...".



Chevron U.S.A. Inc.
2120 Diamond Boulevard, Concord, California
Mail Address: P.O. Box 8000, Concord, CA 94524

RECEIVED
JUN 16 1983
CALIFORNIA
COASTAL COMMISSION

Richard J. Harris
District Land Supervisor
Outer Continental Shelf
Land Department, Western Region

June 13, 1983

Point Arguello Development and
Production Plan
Santa Maria Basin

Mr. Peter L. Tweedt
Acting Director
Office & Ocean Coastal Resource
Management
United States Department of Commerce
3300 Whitehaven Street, N.W.
Washington D.C. 20235

Dear Mr. Tweedt:

We have recently received a letter addressed to you from Michael L. Fischer, Executive Director of the California Coastal Commission, requesting your assistance in determining the "national interest" of Chevron's Point Arguello Development and Production Plan. We appreciate the opportunity to give you our views.

I have enclosed an Executive Summary of our Plan to aid you in the study of its national interest aspects. Our Plan initially calls for one platform (Hermosa); two subsea pipelines (one for oil, one for gas) leading from the platform to shore; a continuation of the pipeline system onshore; and facilities at an existing site at Gaviota to process the oil and gas for subsequent transportation. The pipelines and the onshore processing facilities are being designed by Chevron to accommodate the estimated combined production of all the potential producers in the Point Arguello Field. Our Plan contemplates Platform Hermosa as the central platform for this field. Chevron is specifically designing this platform for the purpose of enabling future platforms in the area to tie into it. This is an important element of our Plan in that it implements both state and local environmental policies calling for the consolidation of facilities.

First and foremost, the national interest will be served by our Plan because development of the Point Arguello Field will make a substantial contribution to our country's energy self-sufficiency. The United States currently uses more than 16 million barrels of oil a day. While demand is expected to remain relatively stable, overall output in this country from currently producing fields will continue to decline. This means that new field discoveries of oil must be brought into production just to offset this decline and stay even with demand. Even so, imports will continue to provide between 35% and 40% of our total energy. It is estimated that the Point Arguello Field may contain as much as 500 million barrels of oil. Development of this field, starting with the Point Arguello Development and Production Plan, is a significant step toward achieving this country's stated goal of energy independence by increasing domestic oil production and commensurately decreasing foreign oil imports.

A second area wherein the national interest is served is the economy. Our Plan represents an investment that will exceed \$400,000,000. Many segments of the business community will benefit by this investment. The specific entities for work on this project have not yet been selected. However, let us give you an idea of the broad range of firms that must be utilized: steel manufacturing plants, platform fabrication yards, engineering firms, electrical firms, plumbing firms, welders, deep-sea divers, barge captains, tugboat operators and a myriad of businesses that support those listed. Thousands of jobs will either be perpetuated or created by this Plan.

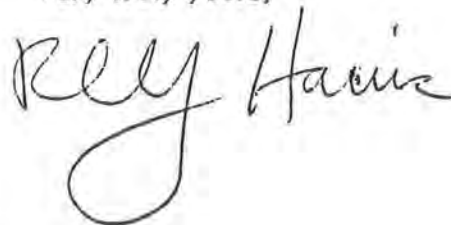
Specifically, our Plan calls for the direct employment of approximately 240 people during the 5½ month installation phase of Platform Hermosa. The installation of the subsea pipeline will require approximately 100 people and construction of the onshore pipeline and facilities will require approximately 225 people. Once the platform and facilities are operational, approximately 100 people could be expected to be employed. These estimates do not include persons employed in the service industries nor other professional and technical personnel associated with either the platform or the onshore facilities.

Another aspect that cannot be ignored is the value of this Plan to the national treasury. We estimate that production from the Point Arguello Field will result in royalty payments to the Federal government in excess of \$2 billion.

Of equal importance is the compatibility of our Plan with the environment. Our Plan, when submitted to the Minerals Management Service for review, was accompanied by an Environmental Report. The conclusion of that Report was that our project could be pursued in total harmony with the environment and with other users of the coastal zone. In the next year, a major Environmental Impact Statement will be prepared which will address the environmental impacts our project is expected to make. The results of that Statement will support our conviction that all environmental impacts can be mitigated fully and that our project will be consistent with the national goal of energy independence, the nation's policy of environmental protection and the California Coastal Zone Management Plan.

We would be more than happy to visit you or meet with any agency representatives you feel appropriate to discuss our Plan in greater detail. If you have any questions, please call me at (415) 680-3033.

Very truly yours,



RJH:blp

cc: Mr. Michael Fischer
California Coastal Commission

Mr. Reid Stone
Minerals Management Service

Handwritten scribble or signature in the top left corner.



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
OFFICE OF OCEAN AND COASTAL RESOURCE MANAGEMENT
Washington, D.C. 20235

N/ORM4:NE

AUG 22 1983

RECEIVED

AUG 24 1983

CALIFORNIA
COASTAL COMMISSION

Mr. Michael Fischer
Executive Director
California Coastal Commission
631 Howard Street, 4th Floor
San Francisco, California 94105

Dear Mr. Fischer:

Enclosed are copies of the letters we have received from the Federal Energy Regulatory Commission, Department of Transportation, and the Coast Guard in response to Secretary Baldrige's request for the assistance of other Federal agencies in determining the nature of the national interest in Chevron's proposal for oil and gas development in the Point Arguello Field. We shall forward any additional letters as we receive them.

Sincerely,

Peter L. Tweedt

Peter L. Tweedt
Director

Enclosures

cc: William Grant
Minerals Manager
Pacific OCS Regional Office
Department of the Interior
1340 West Sixth Street
Los Angeles, California 90017

Claire Ghylin
Chevron U.S.A., Inc.
2120 Diamond Boulevard
Concord, California 94524



FEDERAL ENERGY REGULATORY COMMISSION

WASHINGTON, D.C. 20426

AUG 5 1983

Honorable Malcolm Baldrige
Secretary of Commerce
Washington, D.C. 20230

Dear Secretary Baldrige:

Thank you for your letter of July 19, 1983, to Chairman Butler, in which you requested the views of the Federal Energy Regulatory Commission (FERC) regarding the national interest in the proposed development of the Point Arguello Field, offshore California. The proposed project would involve, among other things, the delivery of natural gas from offshore Federal leases through a submerged pipeline to onshore facilities, an activity under FERC jurisdiction. I am pleased to offer our initial views on this project.

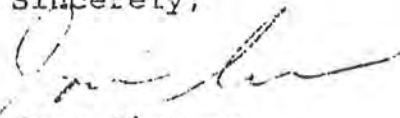
The development of domestic energy resources, such as those of the Point Arguello Field, can assist in satisfying the Nation's energy requirements and can help reduce our dependence on foreign energy sources. Despite the fact that we are currently experiencing a surplus of certain forms of energy, national interest considerations should not be limited to the short term. The further development of domestic oil and gas resources is still consistent with the long-term interests of the United States.

At the same time that we acknowledge the national energy interests in developing this field, we also recognize the environmental sensitivity of the offshore and coastal areas of California. Development of the field should proceed in a manner compatible with the protection of the environment of offshore and coastal California and consistent with all Federal, State, and local environmental concerns.

To the extent the proposed construction activities fall within our certificate authority under the Natural Gas Act, the FERC will be responsible for the environmental analysis of the project. As project planning progresses, we ask that the Department of Commerce keep us informed of its concerns and of any new developments as they arise. FERC staff will contact the Minerals Management Service and State agencies in California to ensure that our involvement with the NEPA process can begin as soon as possible.

Thank you for requesting our comments on this project.

Sincerely,



Joan Simmons
Director
Intergovernmental Affairs

cc: Peter L. Tweedt, Director
Office of Ocean and Coastal
Resource Management
National Oceanic and Atmospheric
Administration
3300 Whitehaven Street, N.W.
Washington, D.C. 20235

Mr. Micheal L. Fischer
Executive Director
California Coastal Commission
631 Howard Street, 4th Floor
San Francisco, California 94105



**U.S. Department of
Transportation**

Office of the Secretary
of Transportation

Office of Assistant Secretary

400 Seventh St., S.W.
Washington, D.C. 20590

AUG 10 1983

CC:

Mr. Peter Tweedt
Acting Director, Office of Ocean
and Coastal Resource Management
National Oceanic and Atmospheric Administration
3300 Whitehaven Street, N.W.
Washington, D.C. 20235

Dear Mr. Tweedt:

This is in response to Secretary Baldrige's letter to Secretary Dole requesting the views of the Department of Transportation concerning national interest issues involved in a Chevron U.S.A. project for oil and gas production from the Point Arguello Field, in the Santa Barbara Channel.

We believe that there are a number of elements of the project which contribute to the national interest. Development of the substantial oil and gas resources in the Point Arguello field would decrease national dependence on potentially unreliable foreign sources of fuel, for both domestic and military uses. Investment in the project, estimated at \$400 million by Chevron, would stimulate economic growth and increase employment. Royalty payments and tax revenues would be increased as a result of the proposed development.

With respect to navigational safety, we have proposed, in the Coast Guard's Port Access Route Study, vessel traffic lanes which would be located seaward of the expected area of the Chevron development. Implementation of the proposed lanes should permit oil and gas development without negative impacts on navigation safety.

The views presented above represent a coordinated Departmental response, and reflect reviews of the Chevron proposal by the Maritime Administration, Coast Guard Headquarters and the Office of the Secretary. Detailed comments on vessel traffic safety and protection of the marine environment will be sent to you directly by Rear Admiral Fred P. Schubert, Commander, Eleventh Coast Guard District as soon as evaluation of the Chevron proposal and related data is completed.

Please let me know if I can be of further assistance.

Sincerely,

Franklin K. Willis
Deputy Assistant Secretary for
Policy and International Affairs



DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

GCUS

MAILING ADDRESS:
COMMANDER(mes)
ELEVENTH COAST GUARD DISTRICT
UNION BANK BLDG.
400 OCEANGATE
LONG BEACH, CA. 90822

16475

11 August 1983

Mr. Peter Tweedt
Office of Ocean and Coastal Resource Management
3300 Whitehaven St. N. W.
Washington, D.C. 20235

Dear Mr. Tweedt:

I have been asked by our Headquarters to comment directly to you on the Chevron Plan of Development (POD) for the Point Arguello Field. The Coast Guard concerns relate primarily to navigation safety, oil spills and personnel safety. With regard to personnel and navigation safety, we feel the risks are minimal. Platform Hermosa will be located several miles from the Santa Barbara Channel Traffic Separation Scheme. It will be outfitted with appropriate lights, sound signals, radio, radar and will be painted a color which provides maximum visibility in times of adverse weather. Likewise, it will be designed and inspected to ensure compliance with federal regulations concerning life saving and other personnel/platform safety equipment. These regulations are among the most stringent in the world and have proven effective.

We perceive the risk of a significant oil spill from this project to be low. The potential impact to the Channel Islands and/or California Coast could be quite high if oil threatened either and if response equipment and measures were not adequate. The MMS, based upon our recommendation, recently approved the oil spill plan, for Platform Hermosa. The plan, while meeting our standards will require routine updating about one year before drilling starts. At that time we will review the existing and planned spill response system and determine what, if any, additional equipment may be needed. This review will be based upon the federal guidelines which exist at the time and on our best estimate of the state of the art of spill technology. The review will consider the risk to the environment from spills, Chevron's on-scene equipment, that of the oil spill cooperative and other operator's equipment in the near vicinity.

We know Chevron is reconsidering their proposed on-site spill response equipment and is planning to upgrade it with state-of-the-art equipment more capable of operating in the area. We expect this will be reflected in an updated spill contingency plan. This will result in an on site spill response capability suitable to handle small spills in the area.



1
3

The Honorable Malcolm Baldrige
Secretary of Commerce
Washington, D. C. 20230

Dear Mr. Secretary:

In response to your letter of July 19, the Coast Guard appreciates the opportunity to express its views with respect to the "national interest" in the Chevron U.S.A. oil and gas production project, offshore Point Arguello Field, California.

Since the Department of Transportation is preparing a coordinated Departmental response to the California Coastal Commission through the Office of Ocean and Coastal Resources Management, NOAA, we are having our comments incorporated in that response.

Sincerely,

J. S. GRACEY
Admiral, U. S. Coast Guard
Commandant

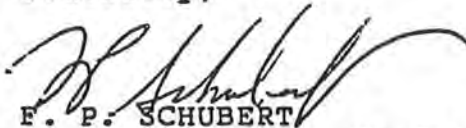
U.S. DEPT. OF TRANSPORTATION
OFFICE OF THE
SECRETARY
EXECUTIVE SECRETARIAT
Aug 9 3 16 PM '93

(mes)
16465
11 August 1983

Response to large oil spills will require the support of the local oil spill cooperative. Its vessels are now stationed at least 5-6 hours away. Industry is giving consideration to stationing one or two more large oil spill response vessels in the vicinity of Point Conception. Since large spills from the Arguello Field could quickly impact several highly sensitive areas, strong consideration should be given to this enhancement of the cooperative. The State of California has recognized the environmental sensitivity of this area and has included such a stipulation in its proposed lease of state waters between Point Conception and Point Arguello. I support the State in this matter and encourage the early acquisition of at least one of these vessels for stationing in the vicinity of the Arguello Field.

In summary, I don't feel there is significant risk to navigation or personnel safety. Response to small oil spills should be adequately handled by Chevron as depicted in their Oil Spill Contingency Plan. Finally, response to large spills can be enhanced by stationing a large oil spill response vessel in the the general area.

Sincerely,



F. P. SCHUBERT
Rear Admiral, U. S. Coast Guard
Commander, Eleventh Coast Guard District

Copy: Mr. Gordon Duffy, Secretary Environmental Affairs
Mr. Micheal Fischer, California Coastal Commission
Commandant (G-WP)

Celia

Xc T. Tolson
R. ...



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
OFFICE OF OCEAN AND COASTAL RESOURCE MANAGEMENT
Washington, D.C. 20235

AUG 1 2 1983

RECEIVED
AUG 18 1983
CALIFORNIA
COASTAL COMMISSION

Mr. Michael Fischer
Executive Director
California Coastal Commission
631 Howard Street, 4th Floor
San Francisco, California 94105

Dear Mr. Fischer:

Enclosed are copies of the letters we have received from the Department of the Treasury and the National Marine Fisheries Service in response to Secretary Baldrige's request for the assistance of other Federal agencies in determining the nature of the national interest in Chevron's proposal for oil and gas development in the Point Arguello Field. We shall forward any additional letters as we receive them.

Sincerely,

James P. Tweedt
Peter L. Tweedt
Director

Enclosures

cc: William Grant
Minerals Manager
Pacific OCS Regional Office
Department of the Interior
1340 West Sixth Street
Los Angeles, California 90017

Claire Ghylin
Chevron U.S.A., Inc.
2120 Diamond Boulevard
Concord, California 94524





ACTION: CHANDLER/EVANS
CC: PT
GCOS

DEPARTMENT OF THE TREASURY

WASHINGTON, D.C. 20220

AUG 2 1983

ASSISTANT SECRETARY

Dear Mr. Tweedt:

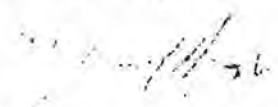
Secretary Regan has asked me to respond to Secretary Baldrige's request for the Treasury's views on the Chevron project to develop the Point Arguello field. The Treasury response considers only the national interest and usually does not focus on specific energy projects.

Developing domestic energy resources is important for reasons of national security, balance of payments, and economic well-being. Increased production of domestic oil and natural gas displaces imports. Some imports come from unreliable sources and an import reduction increases national security. Since oil imports are a major contributor to our import bill, a reduction of oil imports reduces trade deficits. Increased oil supply also puts downward pressure on energy prices and in that way reduces inflation and encourages economic growth.

In addition, other benefits accrue from increased development of domestic energy. By increasing employment and corporate profits domestic energy development increases net Federal revenues and reduces budget deficits. Furthermore, in this case the development is in an area under Federal jurisdiction, and consequently will generate royalty payments to the Treasury that should help reduce the Federal deficit.

In summary, the Treasury believes that development of the Port Arguello field is in the national interest.

Sincerely,


Manuel H. Johnson
Assistant Secretary
for Economic Policy

Mr. Peter L. Tweedt
Director
Office of Ocean and Coastal Resource Management
National Oceanic and Atmospheric Administration
Department of Commerce
Washington, D. C. 20235



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
300 South Ferry Street
Terminal Island, California 90731

July 21, 1983

F/SWR33:JS

Mr. H. T. Cypher
Regional Supervisor, Field Operations
Minerals Management Service
Pacific OCS Region
1340 West Sixth Street
Los Angeles, CA 90017

Dear Mr. Cypher:

We have reviewed the Point Arguello Field Development and Production Plan and Environmental Report - Chevron U.S.A., Inc., for the installation of Platform Hermosa, offshore and onshore pipelines and processing facilities to accommodate the anticipated production from the Point Arguello Field. In general the documents adequately describe the resource impacts to be expected from the construction and operation of oil and gas facilities required for the development of lease tract P 0316. If Chevron maintains close coordination with commercial fishing interests throughout the process of platform construction and laying of the required pipelines, conflicts may be kept to a minimum.

The major short-coming of the Point Arguello Field Development and Production Plan however, is that the cumulative effects of additional platforms and pipelines needed for complete field development are not discussed. If this aspect of field development is considered, the chance of significant conflict with commercial fishing activities rises considerably.

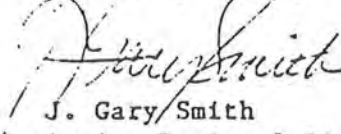
The consequences of full field development need to be addressed as early in the environmental review process as possible. It would seem appropriate, in light of the fact that Chevron is a co-lessee on all twelve of the leased tracts in the Point Arguello Field study area, for them to take the lead in preparing a supplemental environmental report discussing the cumulative impacts of full field development. That would certainly provide each of the entities involved in the review process a more solid basis for recommending modifications to the overall plan of development (or needed mitigation) while the program is still early in the design stages.

It should also be noted that any pipelines which are proposed to traverse existing kelp beds, whether they follow existing rights-of-way or not, have the potential for long term impacts to these beds. It has been our experience that pipelaying activities may impact a much larger kelp area than originally intended. Since these activities require a Corps of Engineers permit, we have recommended in the past that a special condition be included in the permit which requires the permittee to restore the impacted kelp beds to their former condition, if natural reestablishment does not occur within two years. We suggest that Chevron, as the unit operator, make a firm commitment towards the



acceptance of this requirement. This would minimize any delays in obtaining a permit from the Corps of Engineers.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "J. Gary Smith".

J. Gary Smith
Acting Regional Director

cc:

FWS, Laguna Niguel

CDFG, Long Beach

bc: F/M42 Roberts



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Washington, D.C. 20235

AUG. 8 1983

F/M42:KM.

ACTION: CHANDLER/EVANS
cc: PT
GCOS

TO: N/ORM - Peter L. Tweedt

FROM: F - *W. G. Gordon*
William G. Gordon

SUBJECT: Consistency Determination by the California Coastal Commission
on Chevron Point Arguello Development and Production Plan

This is in response to the Secretary of Commerce's July 19, 1983, letter to me requesting the National Marine Fisheries Service's (NMFS) views on the national interest issues associated with Chevron's Development and Production Plan for the Point Arguello Field.

On July 21, 1983, the NMFS' Southwest Region provided written comments (copy attached) to the Department of the Interior's Minerals Management Service (MMS) on the Point Arguello Field Development and Production Plan. That document adequately identifies and discusses all relevant national interest issues of concern to NMFS.

However, we continue to believe that a supplemental plan should be developed to discuss the cumulative impacts of full field development. This would allow for early identification of potential impacts, and the development of appropriate mitigation recommendations.

Attachment





Chevron U.S.A. Inc.
 2120 Diamond Boulevard, Concord, California
 Mail Address: P.O. Box 8000, Concord, CA 94524

Celia

RECEIVED
 AUG 25 1983
 CALIFORNIA
 COASTAL COMMISSION

Clair Ghylin
 General Manager
 Land Department, Western Region

August 22, 1983

Joint EIS/EIR
Point Arguello
Development and Production Plan

State of California
 Mr. Gordon Duffy
 Secretary of Environmental Affairs
 1102 Q Street
 Sacramento, CA 95814

10/21/83
(circled)

Dear Mr. Duffy:

We met with representatives of the key federal, state and local agencies for our project on August 18, 1983. During the course of that meeting, we learned that the inter-agency Memorandum of Understanding will be executed in approximately one week. We did not learn, however, how the Joint Review Panel, to be established by the MOU, will be constituted. We would like to take this opportunity to give you our thoughts on that subject. Of course, our major concern is that there be no significant delay in the formulation of the Joint Review Panel.

We think that equal representation from the federal, state and local agencies on this Panel is very important. Each of the three levels of government represented, therefore, should speak with one voice. As far as the state is concerned, we have no objection to the inclusion of the California Coastal Commission and the State Lands Commission on the Panel. We believe it is important that each Commission be kept apprised of the progress of the EIS/EIR because of the role that each will play at the conclusion of that process.

In the event of a disagreement among the state agencies, the representative of your Office of Planning and Research would be essential to help find a state consensus.

We look forward to the joint EIS/EIR getting under way and working with this Panel.

Very truly yours,

Clair Ghylin

RJH:ikh

- cc: William Grant - Minerals Management Service
- Claire Dedrick - State Lands Commission
- Michael Fischer - California Coastal Commission
- Dianne Guzman - Santa Barbara County

State of California, George Deukmejian, Governor

File Number: CC-12-83
Date Filed: 5/19/83
3-Month Period Ends: 8/18/83
6-Month Period Ends: 11/18/83
Staff: LTT & Staff
Hearing Date/Item: 7/27/83, 4b.

California Coastal Commission
631 Howard Street, 4th Floor
San Francisco, California 94105
(415) 543-8555



REGULAR CALENDAR

STAFF SUMMARY

NOTED-DUNAWAY

PROJECT DESCRIPTION

Applicant for federal permit:

Chevron U.S.A., Inc.

Project Location:

Offshore Lease OCS-P 0316, approximately 7.3 miles south of Point Arguello and 8.5 miles west of Point Conception; intersecting the shoreline north of Point Conception; running 16 miles south and east along the coast to Gaviota, Santa Barbara County (see Exhibits 1 and 2)

Project Description:

One 48-slot drilling and production platform (Hermosa) on Lease OCS-P 0316; two subsea oil and gas pipelines from platform to shore; continuation of pipelines onshore to new oil and gas processing facilities at Gaviota; and an ocean outfall wastewater pipeline near Gaviota.

Substantive File Documents:

see Appendix 1.

STAFF NOTES

A. COMMISSION REVIEW OF DEVELOPMENT PLANS

A Development and Production Plan (DPP), which is prepared by an applicant for a federal permit, includes an Environmental Report describing environmental impacts and a technical drilling and production plan. Two federal laws govern the content and review of a DPP: the Coastal Zone Management Act (CZMA) and the Outer Continental Shelf Lands Act (OCSLA). The Commission has the authority to review DPPs for consistency with the California Coastal Act because the federal government has approved the California Coastal Management Program (CCMP) under the CZMA. The Coastal Act policies are the enforceable standards of the CCMP. The Commission must act on DPPs within six months of their receipt.

Applicants are encouraged to include all other related federal permits for consistency review. Chevron has confirmed orally, with written confirmation to follow soon, that its consistency certification includes the following related federal permits:



<u>Agency</u>	<u>Permits</u>
U.S. Minerals Management Service	Approval of the Development and Production Plan (DPP) and ER(P) Right-of-Way Approval for Pipeline
U.S. Army Corps of Engineers	Platform and Pipeline Structure Permit Section 404 Permit
U.S. Environmental Protection Agency	NPDES Permit PSD Permit for Gas Facility
U.S. Coast Guard	Approval of Navigation Aids

OCSLA Regulations. Federal regulations adopted pursuant to OCSLA (30 CFR 250.34-3(b)(1)(i)(A)) require that a DPP contain an Environmental Report that is "as detailed as necessary to enable identification and evaluation of the environmental consequences of the proposed activity," including a brief description of:

The location, description, and size of any offshore and, to the maximum extent practicable, land-based operations to be conducted or contracted for as a result of the proposed activity. This shall include:

- (1) The acreage required within a State for facilities, rights-of way, and easements;
- (2) The means proposed for transportation of oil and gas to shore, the routes to be followed by each mode of transportation, and the estimated quantities of oil or gas, or both, to be moved along such routes....

CZMA Regulations. Federal regulations under the CZMA (15 CFR §930.70-77 and .56(b), .58) require that additional information must be submitted with the applicant's consistency certification to identify all activities in the DPP subject to consistency review, and to provide a brief assessment relating the probable coastal zone effects of the activities and their associated facilities (onshore support structures, pipelines, and other facilities necessary to operate the project) to the relevant elements of the management program. More detailed information may be required for coastal zone related facilities under the CZMA for consistency review than for the federal Minerals Management Service (MMS) review under OCSLA.

CZMA regulations allow the Commission to object to a consistency certification based on insufficient information only if the Commission has requested the additional information in writing and has explained to the applicant the nature of the information, and why the additional information is necessary for a consistency certification. On June 29, 1983, in a letter to Gordon Duffy, Secretary of Environmental Affairs, the staff commented on the project and requested additional information from the MMS for the Commission's review, as provided for in the OCS Lands Act. The Commission may have difficulty acting on Chevron's consistency certification because it lacks critical information on alternative transportation systems, cumulative impacts, and on impacts associated with marine resources, water

quality, habitat disturbance, oil spill containment, vessel traffic safety, air quality, land resources, and consolidation of facilities. These issues are discussed in Section D of this report.

Commission Consistency Regulations (Section 13660). Frequently, the facilities associated with OCS developments required coastal development permits. It has been the Commission's policy to strongly encourage consolidated review of OCS plans and permit applications (Chevron Platform Edith #E-82-35/CC-39-82). The Commission's regulation on this matter states:

13660.12 Associated Coastal Development Permits

Where a facility associated with an OCS plan requires a coastal development permit application under the California Coastal Act (e.g., pipeline marine terminal, onshore support and processing facilities, etc.), the applicant shall notify the Executive Director of the facility's relationship to the OCS plan at the time of submittal of the plan. Where an application for such a facility precedes submittal of the OCS plan to the Commission, the applicant shall notify the Executive Director that the facility is associated with a forthcoming OCS plan. If the Executive Director determines that a consolidated review of the applicant's consistency certification and application for a coastal development permit is necessary for complete and proper consideration of the matter, he shall recommend such consideration in whatever manner necessary to comply with applicable time limitations.

In the June 29th letter to Secretary Duffy, the Executive Director stated that a consolidated review of the project would be advisable and urged Chevron to use this approach and to withdraw its consistency certification and re-submit it after the EIS/EIR has been completed.

NEPA/CEQA. Because the MMS has determined that Chevron's project is a "major federal action" under the National Environmental Policy Act (NEPA), the MMS must prepare an Environmental Impact Statement (EIS) on the project. This document is being prepared jointly with an Environmental Impact Report (EIR), required by the California Environmental Quality Act (CEQA). The scope of the EIR/EIS will be the offshore area from the Santa Ynez Unit northward to Union Oil Company's Lease OCS-P 0441. Chevron submitted a permit application to Santa Barbara County for its coastal development and local permits on July 5th, and the County is currently reviewing it for completeness. The time clock under CEQA has not begun to run on the project, and the completion date for the EIR/EIS is not known at this time.

Timing of Commission Review. The applicant controls the schedule for consistency review by its submittal of the DPP to the MMS. Once the MMS determines that the plan is complete, MMS forwards it to the Commission, which starts the six month schedule for consistency review. Even though the MMS has determined that an EIS is required, the six month schedule for a state's consistency review remains unchanged.

The Commission will follow the schedule below in its review of the Chevron DPP.

May 19	Received Chevron DPP
July 26-29	Commission hearing on project description and issue identification report in Marina del Rey
August 10	Public workshop in Santa Barbara
September 20-23	Commission hearing on preliminary staff recommendation in San Diego
October 25-28	Commission hearing and vote on final staff recommendation in Santa Barbara
November 15-18	Back-up Commission hearing if action continued
November 18	Six-month deadline from the day certification was received

Due to schedule limitations imposed by the federal regulations which implement the CZMA, the Commission must complete its review of the Chevron DPP prior to the preparation of the joint EIR/EIS for the project and before action is taken on the other state and local permit applications, including the coastal development permits. Therefore, the Commission does not have the benefit of all the environmental documents in reviewing this project, and must base its determination on the Environmental Report (ER) and other information provided by Chevron as part of the DPP.

Commission and Local Government Authority The Commission has consistency review authority over federally licensed and permitted projects and their associated facilities that affect the use of the land and water in the coastal zone. In addition, the Commission permanently retains original permit jurisdiction over that portion of the project seaward of the mean high tide line (MHTL) in state waters, even after Local Coastal Program (LCP) certification. Thus, portions of the pipelines seaward of the MHTL will require coastal permits from the Commission. Because it has a certified LCP, Santa Barbara County exercises coastal development permit jurisdiction for portions of the project located on land in the coastal zone. (see Exhibit 3) Thus, the landward portions of the pipelines and the processing facilities will require coastal permits from the County. Because these portions are "major energy facilities," they are subject to appeal to the Commission and to the LCP override provisions under Section 30515 of the Coastal Act.

National Interest Provisions. The Commission considers the national interest when it reviews federal licenses and permits. To assist the Commission in considering the national interest in coastal projects, the CZMA regulations allow coastal states to secure the assistance of the Secretary of Commerce in "determining the nature of the national interest in a particular facility when a request to site that facility occurs." (15 CFR 923.52) On May 27, 1983, the Executive Director requested that the Office of Ocean and Coastal Resource Management contact other relevant federal agencies to provide the Commission with information on the national interest in Chevron's project. Specifically, information on the implications of the proposal on navigational safety, commercial fishing, living marine resources, national recreational needs, other energy proposals, and national defense was requested.

B. PROJECT DESCRIPTION AND HISTORY

Chevron U.S.A. Inc. proposes to begin development of the Point Arguello Field by:

- o installing one drilling and production platform (Hermosa) on Lease OCS-P 0316, approximately 7.3 miles south of Point Arguello and 8.5 miles west of Point Conception;
- o installing two subsea oil and gas pipelines leading from the platform to shore;
- o continuing this pipeline system onshore to processing facilities;
- o constructing facilities at an existing site at Gaviota to process the oil and gas for subsequent transportation; and
- o installing an ocean outfall pipeline terminating within state waters to dispose of produced water extracted during onshore processing.

The DPP does not include any provisions for transporting the processed crude oil to refineries.

The Point Arguello Field is the underground reservoir extending under several offshore tracts near Point Conception (see Exhibits 2 and 4). Chevron is the operator and co-lessee with Phillips Petroleum of twelve leases in this area. (see Exhibit 2). The Point Arguello Field includes tracts leased in both Lease Sales 48 and 53. Chevron's OCS-Parcels 0316, 0317, and 0318, along with Texaco Inc.'s OCS-P 0315, form the northern boundary of Lease Sale 48. Tracts immediately north of this boundary, including Chevron's OCS-Parcels 0450 and 0451 where exploratory drilling is taking place, were leased under Lease Sale 53. Therefore, the extent of the Point Arguello Field is still being delineated. Chevron estimates that the field may contain as much as 500 million barrels of oil. Chevron has stated in its DPP that three or more additional platforms may be required in the future to fully develop the field, but these are not included as part of this DPP. There are currently no platforms in the project area. The closest OCS development is Exxon's Platform Hondo, which is located about 30 miles to the east of proposed Platform Hermosa. Two non-operating platforms in state waters, Texaco's Herman and Helen, are situated about 15 and 21 miles, respectively, to the east of Hermosa.

Chevron has designed the initial facilities in this DPP to handle future production from the Point Arguello Field. Platform Hermosa would be the central platform for the field, designed to accommodate pipeline hookups from up to three future platforms in the field, including Texaco's proposed Platform Hueso on adjacent Lease OCS-P 0315. It would be a conventional eight-leg jacket steel structure supported on the seafloor by pilings. The jacket structure would be towed from its onshore fabrication site to the erection site. The platform would have 48 well slots, although Chevron plans to drill only 40 development wells at this time. Chevron expects the platform to be installed in May 1985 and the first oil to be produced in January 1986. Oil production from Platform Hermosa is expected to peak in 1989 at 27,000 barrels per day (BPD) with 28 million standard cubic feet per day (MMSCF/D) of gas.

The common carrier pipeline is designed to accommodate the estimated combined production of all potential producers in the Point Arguello Field. A 30-inch pipeline would carry 200,000 BPD of oil, and a 22-inch pipeline would transport 160,000 MMSCF/D of gas. Offshore, the pipelines would be laid within a one-mile

corridor and would follow a direct route, about 10 miles in length, from the platform to the landfall just north of Point Conception on Chevron owned property. Pipeline installation probably would be by the conventional pipeline barge/stinger method, although a state-of-the-art towing technique may be used in the nearshore area. The pipelines would be trenched and buried at a minimum of three feet through the surf zone. From the landfall at Point Conception to Gaviota, the pipelines would run an additional 16 miles and would be laid in a 100-foot corridor (200 feet during construction) in or near the Southern Pacific Railroad right-of-way throughout most of the route. A 10-mile extension of the pipeline system may be constructed to Las Flores from Gaviota, if the proposed Exxon marine terminal is used to tanker the processed oil. Conventional land pipelaying methods and equipment would be used. The pipelines would be buried with a minimum of three feet of cover over the entire route, except for stream and canyon crossings where they may be suspended on existing railroad bridges or on new pipe bridges.

New oil and gas processing facilities would be constructed at Chevron's existing processing plant site at Gaviota north of Highway 101 across from the existing Getty marine terminal and storage facilities (see Exhibits 5 and 6). Initial processing facilities would require approximately all of the existing 15-acre site. Maximum build-out would require about 55 acres. Chevron owns an additional 85 acre area east of the existing site that would provide enough space for maximum expansion. The new facilities would be installed in stages over a nine-year period as Point Arguello Field production increases. The initial facilities are designed to treat 148,000 BPD of oil and 98 MMSCF/D of gas. Approximately 37,000 to 50,000 barrels per day of wastewater would be discharged through an ocean outfall pipeline located in state waters in the vicinity of Gaviota. The DPP does not provide any information on the exact location, depth or length of the outfall line.

Although transportation of the processed oil is not part of the DPP, two options are discussed in the plan. One option would be to use a new consolidated marine terminal facility and pipeline to the San Joaquin Valley at Gaviota proposed by Getty Oil Company. The other option would be to construct a pipeline to carry the oil to the marine terminal at Las Flores proposed by Exxon Company. The pipeline would be installed in or adjacent to the Southern Pacific Railroad, Texaco, or Pacific Gas and Lighting rights-of way. Both of these options are contingent upon permit approval by Santa Barbara County. If neither option exists when Chevron begins production, then it plans to use the existing Getty marine terminal to tanker the processed oil on an interim basis.

C. RELATION TO OTHER PROJECTS

Chevron's proposed development and production of the Point Arguello Field is only one of many energy proposals the Commission will review over the next few years (see Exhibit 7). In addition to Chevron, Arco Oil and Gas Company, Texaco, Union Oil Company, and Occidental Petroleum have announced discoveries in the western Santa Barbara Channel and Santa Maria Basin offshore that could result in new facilities both offshore and onshore. Santa Barbara County, which has coastal permit authority over development landward of the mean high tide line, currently has seven project proposals related to offshore energy development before it for evaluation. Exxon Company USA proposes a marine terminal at El Capitan, and pipeline, processing facilities, and co-generation plant at Las Flores Canyon in conjunction with three to four new platforms in the Santa Ynez Unit. Chevron is considering construction of a crude upgrade facility in a location yet to be determined. Arco proposes to expand its processing facility at Ellwood in conjunction with two new double

platforms off Coal Oil Point, and to convert Ellwood Pier to a major supply base. Aminoil proposes to expand its marine terminal facilities at Coal Oil Point. Union proposes a new onshore pipeline and processing facilities at Lompoc. Getty proposes to expand its existing marine terminal at Gaviota into a multi-company terminal with a capacity of two million barrels, and to construct an onshore pipeline to Bakersfield. It also proposes a new major supply base at Gaviota. Finally, Chevron proposes an oil and gas processing facility and onshore pipeline at Getty's Gaviota facilities in conjunction with the installation of a new platform in the Point Arguello Field. Moreover, OCS Lease Sales 73 and 80 and the State Lands Commission lease sale may generate further development. Unless each of the proposed projects is evaluated in the context of overall energy development within Santa Barbara County, proliferation of facilities will occur and coastal resources will be adversely affected.

Section 30262(b) of the Coastal Act requires new or expanded facilities for oil and gas development to be consolidated to the maximum extent feasible. Section 30250 requires new development to be "located within, contiguous with, or in close proximity to, existing developed areas" and where it will not have "significant adverse effects, either individually or cumulatively, on coastal resources." Chevron's project raises concerns under these sections of the Act. The DPP does not contain any cumulative impact analyses on both the future development of leases in the Point Arguello Field and the relation of this project to other present or future development in the western Channel and Santa Maria Basin. The total production from this area may exceed one billion barrels, an amount of oil which makes pipeline transportation to refineries, refinery modifications to handle the heavy, sour crude, and consolidation of associated facilities, both onshore and offshore, more economically feasible. Impacts on marine resources, commercial fishing vessel traffic safety, air quality, land resources, and public access and recreation would be extensive when viewed in the overall context. Chevron does not consider these impacts of the project in conjunction with other petroleum development expected to occur in the next five to ten years. Until these concerns are addressed, the Commission will have difficulty assessing mitigation measures that will be needed for the project to be found consistent with these sections of the Act.

D. MAJOR COASTAL ACT ISSUES

1. Transportation of Crude Oil

Section 30232 of the Coastal Act requires the protection of marine resources against the spillage of crude oil, gas, petroleum products, or other hazardous substances related to the development or transportation of such materials. The Commission has a long standing position that pipeline transportation of oil is environmentally preferable to tanker transfer because of the reduced air pollution and risk of oil spills associated with pipeline use. This position stems from the policies of the Act, which require mitigation of adverse environmental effects to the maximum extent feasible and the use of the least environmentally damaging alternative. The State of California has also held this position on every proposed federal lease sale since 1975, recommending to the Department of the Interior that areas of the OCS which cannot be developed using pipeline transportation of produced oil not be leased.

State and federal planning studies support this position by recognizing that onshore pipelines provide environmental benefits that oil transportation by marine tanker fails to provide. Specifically, the U.S. Department of Interior's Draft Environmental Statement, Oil and Gas Development in the Santa Barbara Channel Outer Continental Shelf off California, 1975, states that:

The Council of Environmental Quality (CEQ) has analyzed the relative probability of oil spills during oil transport by tanker and subsea pipeline. They found that although the statistics vary greatly with the size of oil field and other factors, in general subsea pipelines have fewer spills and less total volume of oil spilled than do tankers (CEQ 1974, Report to the President). Although pipelines on land might have comparable rates of oil spillage as subsea pipelines, pipeline inspection, repair of leaks, and containment of spilled oil is much simpler from a pipeline break on land than on sea. This would be especially true during bad weather. For these reasons oil transport by onshore pipeline would appear to have less environmental risk than transport by tanker or barge. (emphasis added).

The same federal report reaches an even stronger conclusion, namely:

The potential for adverse environmental impact is greater, however, for tanker transport than for a land based pipeline. Once constructed, a pipeline would have minimal adverse environmental impacts, whereas marine tankers would present the continual danger of oil spills during loading or unloading operations or due to collision during transit. (emphasis added)

Likewise, the Rand Corporation Report, Energy Alternatives for California: Paths to-the-Future (Executive Summary), prepared for the State Assembly Committee on Resources, Land Use, and Energy (Dec. 1975), similarly points out that:

The primary policy issues for the Santa Barbara OCS are those of development.... Useful conditions that could be imposed include the consolidation of onshore facilities, coordination with other energy developments, and construction of onshore oil pipelines to reduce or eliminate coastal oil terminals (p. 14).

Studies prepared by the California State Lands Commission recognize that onshore pipelines are preferred over transportation by tanker. In the Finalizing Addendum of the Environmental Impact Report for the State tidelands lease sale from Point Conception to Point Arguello, the State Lands Commission makes the following statement regarding reviewer's comments on tankering and vessels pipelining of oil:

The fact that the DEIR addresses a hypothetical project and related marine terminal is consistent with the intention that the DEIR address a broad range of potential impacts of the leasing program.... In fact, pipeline transport of produced hydrocarbons would provide significant mitigation for several classes of impacts including, possibly, transportation costs; water and air quality impacts associated with tanker/barge transport; and associated potential effects on marine biota, terrestrial biota, land use, aesthetics, marine traffic and oil spill risk. [Finalizing Addendum p. 105-106] (emphasis added)

Recent data produced by the Oil Spill Intelligence Report (Boston, Mass. 1981) records the number and volumes of major oil spills throughout the world. During 1981, 36 tanker spills resulted in 15,004,000 gallons or 27.4 percent of the total amount of oil spilled worldwide. Pipeline spills resulted in 1,988,000 gallons, accounting for 3.6 percent of the total oil spilled. The data also demonstrates that the massive spills for 1981 resulted from tanker incidents and not pipeline spills. A particularly critical statistic is the number of major spills over 1,000,000 gallons. Three major tanker spills over 1,000,000 gallons resulted in 11,593,000 gallons of spilled oil. No pipeline spills were over 1,000,000 gallons during 1981. Data for the 1980 intelligence report shows similar trends. Some recent data reported by the MMS indicates that subsea pipelines may have had spillage rates comparable with tanker spillage. However, this data is not a factor in weighing the advantages of land pipeline transportation of oil over marine tankering. The overwhelming evidence over the past 10 years demonstrates that less oil is spilled, and the impacts of spills are usually less from land transportation of crude by pipeline than from tankering.

Pipeline transportation of crude also has definite air quality advantages. Tankering of oil results in higher emissions of air pollutants than pipelining. Both loading and unloading activities result in escape of hydrocarbon vapors. Although a vapor recovery system would reduce the emissions of hydrocarbons substantially, system failure, repairs, or maintenance will release significant amounts of hydrocarbons. By contrast, pipeline transfer of oil completely contains vapors. Any pollutants emitted would stem from pumping operations that are also necessary for tanker loadings.

The Santa Barbara County LCP gives priority to pipeline transfer of oil by permitting pipelines in all land use designations. Permits for facilities related to oil development activities would be conditioned on pipeline use, if feasibility is determined by the County. The issue of feasibility of pipeline transportation has been raised by several applicants for offshore oil development. Studies on Chevron's Platform Grace, Union's Platforms Gina and Gilda, and Texaco's Platform Habitat all showed pipeline transportation to be feasible. Studies being conducted by Santa Barbara County's consultant Purvin and Gertz, are in progress and will be released in late August.

The DPP states that Chevron plans to transport oil by pipeline and along the shore to Getty's facility at Gaviota or Exxon's Facility at Las Flores Canyon for eventual tankering to refinery centers. The proposed Gaviota facility will have 2,000,000 barrel storage capacity, and will process 50,000 bbl/day. It also may include a supply base, pier, and onshore pipeline to Bakersfield according to a proposal submitted to Santa Barbara County by the terminal operator, Getty Oil. If the Getty proposal is not constructed, then Chevron would use the proposed Exxon facility at Las Flores Canyon. Loading Chevron's oil at the Las Flores marine terminal probably would require a second SALM at that site. If improvements are not complete at the Getty facility or at the new Exxon terminal, then Chevron plans to temporarily tanker the crude oil out of the existing Getty facilities at Gaviota.

Under the Offshore Storage and Treatment of Crude Oil section, the DPP states that the company has eliminated offshore tankering as a "viable option because of current federal, state and local policies restricting this practice." While the option of tankering from the platform to shore is eliminated from consideration, Chevron does propose to tanker their crude to refinery centers. Chevron's proposal dismisses the option of pipeline transportation to refineries at this time. The DPP simply states that Chevron would continue to rely on the Petroleum Transportation

Committee for analysis of this issue. In addition, Chevron states that tankering to refineries would not result in increased air emissions nor increased vessel accident risks relative to current vessel transport of crude. Chevron does not include any independent analysis of the potential to pipeline the oil. Moreover, the company does not provide any supporting information regarding its assertion that tankering will not "substantially increase" environmental risks associated with the project.

2. Marine Resources

The Coastal Act requires the protection of marine resources in Sections 30230-30236. Section 30230 states:

Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreation, scientific, and educational purposes.

Section 30231 requires that the biological productivity and the quality of coastal waters appropriate for maintaining optimum populations of marine organisms be maintained and, where feasible, restored. Section 30232 further requires the protection of marine resources against the spillage of crude oil, gas, petroleum products, or hazardous substances related to the development or transportation of such materials.

Chevron's proposal raises significant marine resource issues under these Coastal Act sections because the development plan will result in: (1) offshore disposal of drilling fluids and cuttings; (2) disturbance of marine mammals and other marine organisms from platforms, pipelines, construction equipment, crew and supply boats, and helicopters; (3) increased risk of oil spills; (4) adverse effects on kelp beds from pipeline construction and operation; and (5) adverse effects on commercial and sport fishing. Two issues, drilling muds and drill cuttings and commercial fishing, will be discussed under separate sections of this report.

Resources of the Point Arguello - Pt. Conception Area. Platform Hermosa is proposed on Lease OCS-P 0316, located approximately 8.5 miles west of Point Conception in 602 ft. of water. The prevailing northerly and southerly ocean currents come together at Point Conception, creating a complex hydrographic regime. Because of the convergence of the cold and warm masses, the Point Arguello - Point Conception area has long been recognized as the transition zone between two biogeographical provinces, the northern cold, temperate "Oregonian" province and the southern, warm, temperate Californian province. The Point Arguello - Point Conception area is the range limit for many northern and southern species. There are some short range endemic organisms which are thought to occur only in this area.

The Point Arguello - Point Conception area has had minimal human disturbance due to its proximity to Vandenburg Air Force Base and the often extremely severe weather conditions. As a result, the biological resources in this area are in much better condition than in many other areas in southern California. It has a rich array of biological resources including marine mammals, seabirds, and invertebrates and a healthy fishery. Upwelling occurs in the area which enriches the waters, thereby increasing primary productivity and enhancing fishery resources. The area

supports large kelp beds and rich and diverse intertidal and subtidal communities. The kelp beds and rocky outcroppings provide excellent habitat for abalone. Large concentrations of intertidal abalone have been recorded south of Rocky Point. There are harbor seal haul out areas west of the Point Arguello Boathouse, at Jalama, and at Point Conception. Several species of seabirds nest at Point Arguello, Rocky Point and Point Conception. Gray whales pass through the area twice each year during migration. The endangered California Brown Pelican is often found feeding in the area.

Chevron's proposal for one new platform and associated subsea pipelines, as discussed below, presents numerous possibilities for disturbance and damage to marine resources.

Benthic Habitats/Kelp Beds/Intertidal Areas. Drilling, installation of pipelines, a new platform, a produced water outfall, and disposal of drilling muds would impact the benthic organisms and kelp beds. In some cases, if the area of disturbance is kept to a minimum, animals would be able to recolonize after the disturbance. The construction of a platform or installation of a pipeline would alter the bottom permanently, changing the types of organisms that will inhabit an area. Platforms are often cited by oil companies as a marine resource enhancement because of their reef-like qualities. While fish may congregate near platforms, no conclusive evidence exists that demonstrates that either the absolute abundance or diversity of the fishery is enhanced. In fact, the platform structures and their discharges may lower both the abundance and diversity of some species. Often, only a few species may live on the cuttings pile and on the mussels which fall from the platform. The increased amount of clay in the sediments surrounding the platform can result in a decrease in the abundance of bottom-dwelling organisms unable to tolerate the new conditions. In addition, fish congregated at the platform would prey upon bottom-dwelling organisms, further reducing their abundance (Menzie et al, 1980).

A site specific marine biological survey was required as a part of Chevron's permit application to the MMS for development of oil and gas on Lease OCS-P 0316. The MMS requires these biological surveys when development is proposed in hard bottom habitat areas. The survey was done by Dames & Moore in August and September of 1982. The survey was carried out with a submersible remote controlled vehicle (RCV), standard grabs, and trawl and diver sampling methods. The results of the survey are found in a February 14, 1983 published report, a map showing the rocky outcrops in relation to the platform and pipeline, photographs, and videotapes. The Commission staff will be reviewing the photographs and videotapes prior to the Commission hearing on the preliminary staff recommendation. The survey did not cover the intertidal area where the pipeline from the platform would intersect the shoreline. The staff has requested more information on this area from Chevron.

The Dames & Moore survey noted four basic habitat types in the vicinity of proposed Platform Hermosa. The predominate habitat type is soft bottom. The platform would be located in the soft bottom area. North to northeast of the platform site in 520-550 feet of water, are scattered small boulder fields from 5 to 25 meters in size. The boulders average one meter in maximum vertical relief.

A rock pavement area is found north and northwest of the proposed platform site. Offshore and southwest of the platform site in 660-700 feet of water depth scattered rock pinnacles 1-1/2 meters high were found surrounded by small rock piles. Side-scan sonar records (Dames & Moore, 1982) suggest that this habitat type may be scattered throughout much of the southwest quadrant of OCS-P 0316.

The following quotes from the Dames & Moore survey (Feb. 83) document the habitat types along the pipeline route from the platform towards shore:

Proceeding shoreward along the pipeline corridor (see Figure 1), there are scattered boulder fields at the top of the slope (depth about 110 m or 360 feet). Dames & Moore surveyed the largest of these which is located in the southwest corner of Lease OCS-P 0452 (see Figure 4), and ran three other RCV transects between these areas. The pipeline route passes south of all of these features.

In a water depth of about 100 m (325 feet) is a large boulder field to the north of the proposed pipeline route (target 25 in Figure 1). Maximum local vertical relief observed was between one and two meters and average height of boulders was less than one meter. There appear to be some low ridges and ledges in this boulder field.

In a water depth of about 55 m (185 feet) the pipeline route passed north of an extensive area of ridges, boulders, and ledges to nearly five meters in local vertical relief. Considerable drift kelp was observed trapped among the rocks at this station (target area 21), and the first evidence of attached algae was observed.

Nearshore in 15 m (50 feet) of water the pipeline route passes over or near an area of low (0.1 m, or 4 inches) or shallow subsurface, smooth hard bottom habitat. This hard bottom appears as linear features parallel to shore and was observed sporadically on the bottom into depths of about 6 m (20 feet). There is more evidence of scour near these features nearshore, but vertical relief above the surrounding sea bed was observed at only a few isolated boulders or remnant higher bedrock features in 8 to 10 m depth (25 to 35 feet). Further to the south, on Transect II, there is extensive rocky outcrop as ridges and raised rock of one to two meters in local vertical relief in 6 to 17 m depths (20 to 55 feet). This last habitat was apparently also observed during the survey for the State Lands Commission report (1982; their Station 15). (emphasis added)

The following quote from the Dames & Moore study (Feb. 83) discusses the characteristic fauna found at the platform and pipeline sites:

The characteristic fauna of the soft bottom habitat in the vicinity of the platform site includes sea pens (Acanthoptilum gracile and Stylatula elongata, cerianthid anemones (Pachycerianthus sp. and Botruanthus sp.), the predatory opisthobranch Berthella californica, shrimps (Pandalus spp., and Crangon spp.), the two California king crabs (Paralithodes californicus and P. rathbuni), three starfish (Luidea foliolata, Mediaster aequalis and Rathbunaster californicus), several sea urchins (Allocentrotus, Brisaster, Brissopsis, Lytechinus and Spatangus), a small flatfish (Citharichthys sordidus) and a sand dwelling rockfish (Sebastes elongatus).

Much of this fauna is continued along the pipeline route into depths of 65 m (215 feet). The urchins excepting Lytechinus and the two species of commercially harvested shrimps (Pandalus jordani and P. platyceros), were restricted to the area beyond 150m (500 feet), but the other species continued into the mid-shelf area. Inshore the soft bottom epifauna is characterized by sea pens (Stylatula elongata, Ptilosarcus gurneyi and Acanthoptilum gracile), by polychaete tube-building worms (Diopatra spp.), by crabs of the genus Cancer, by the sand crab Blepharipodaa occidentalis, by various starfish (including Pycnopodia, Mediaster, Patiria, Astropecten, Dermasterias and Luidea), and by the flatfish (Citharichthys sordidus).

The hard bottom habitats in the platform area support a diverse assemblage of epifaunal species. Table 8 provides a list of characteristic species. As with the soft bottom epifauna, some of these species are found only in these deeper (100 m, or 325 feet) waters (e.g., Gorgonocephalus caryi and Florimetra serratissima), while others have very wide depth ranges (e.g., Strongylocentrotus franciscanus and Mediaster aequalis). (emphasis added)

Variety increased up slope and toward shore from target areas 31, 32, 34, through the target 25 to target 21 (Figure 1). This last area marked the greatest depth habitat (60 to 65 m, 200 to 215 feet) at which attached algae were observed, and fish fauna at this station was the richest observed.

The hard bottom area near the shorefall of the pipeline route (Stations I-1 and I-2) showed signs of regular abrasion and burial. It supports a very reduced epifauna, a few small algae, and no associated fish. Further to the south (Stations II-1 and II-2) raised rock reefs support a diverse epibiota including many species of red algae (see Appendix B), abalone, lobster, crabs and a wide variety of kelp bed fishes. This habitat is dominated by the brown algae Pterygophora, and the kelp Macrocystis sp. is also present. No Vema or Allopora were observed at any station.

Data on the marine fishes of the project area have been summarized by Dames & Moore (1977, 1977a and 1982a). Dames & Moore (1982b) also carried out a Remote Controlled Vehicle (RCV) survey and a limited longline survey of rocky areas in the southern Santa Maria Basin (Dames & Moore, 1982b). Data from these sources have been reviewed and a total of 175 species of fish have been observed during these surveys. A review of the list of species indicates patterns of distribution by habitat (sedimentary, rocky, kelp bed) and depth. Feder et al. (1974) listed a total of 125 species of marine fishes "known to occur in Southern California kelpbeds".

The intertidal and rocky nearshore species (those observed during subtidal diving and gillnetting and during intertidal fish collection surveys) include sculpins, rockfish, (blue rockfish, kelp rockfish) and surfperches (pileperch, rainbow

seaperch and rubberlip sea perch) being observed in these habitats throughout the project area. The species commonly associated with offshore platforms included cabezon, lingcod, rockfishes and surfperches (California Department of Fish and Game, 1974, unpublished, and Carlisle et al., 1964).

The survey documents a variety of biological resources and habitat types at the platform site and along the pipeline route. Generally, rocky outcroppings with vertical relief are considered to support a greater number and diversity of marine species. Moreover, rocky outcroppings are a much less common habitat type than soft bottom areas. Chevron has located the platform and pipelines to avoid a large portion of the rocky areas. However, there are still some areas where Chevron's project would impact habitat areas. The staff is reviewing the survey maps to determine whether further modifications in the pipeline route or other mitigation measures can be carried out to protect marine resources.

Chevron has proposed a new produced water ocean outfall from the proposed Gaviota processing facilities. The DPP does not specify the size, length or location of the produced water outfall. No specific information is provided on the amount and locations of blasting operations for pipeline installation. Without knowing the locations of the nearshore pipelines and the produced water outfall, the Commission cannot assess whether the nearshore portion of the project would disturb significant rocky reef areas and kelp beds. Chevron should use detailed resource information to develop final nearshore pipeline and outfall routes so that no blasting would be required and that little or no work would be required through the kelp beds to ensure the avoidance of significant benthic habitats.

Water Quality Impacts. Besides the discharge of drill muds and cuttings discussed in the following section, the proposed project would discharge produced waters, hydrostatic test waters, and treated wastewater into the ocean. These waters have residuals of grease and oils, and trace amounts of other pollutants. The disposal of these waters must meet EPA and/or State Water Resources Control Board (SWRCB) discharge standards, and be consistent with the Coastal Act. Chevron must indicate whether all wastewaters would be discharged away from kelp beds and other special habitat areas.

The DPP states that all facilities would be designed so that all wastewater would meet current water quality standards. Under Section 30412 of the Coastal Act, the Coastal Commission cannot establish water discharge standards beyond those established by the SWRCB. The Commission does have jurisdiction over the construction and installation of a new produced water outfall.

Disturbance to Marine Mammals from Increased Crew and Supply Boat, Helicopter, and Tanker Traffic to the Marine Terminal. Increases in crew and supply boats, helicopter, and tanker traffic to a marine terminal could affect marine mammals (especially gray whales) by collisions or disturbance of migration patterns. This is a seasonal impact, most pronounced during the winter and spring. The DPP does not include provisions to minimize disturbance of marine mammals (especially the threatened gray whale). Mitigation for this adverse impact could be accomplished through careful timing of activities, spotters on ships, and designation of support vessel routes.

Increased Risks of Oil Spills. The construction and operation of the proposed platform and associated pipelines, and the loading of crude oil onto marine vessels from a new or expanded marine terminal for transport to refineries significantly

increase the risk of an oil spill in the Point Arguello-Point Conception/Santa Barbara Channel area. Chevron has not proposed to use a pipeline for transporting crude oil to refineries.

Numerous studies, cited previously in Section D-1 show that pipelines offer less of a risk of oil spills than transportation of oil by tankers. An oil spill would seriously affect marine resources. The feathers of birds and the fur of marine mammals would be fouled. Birds, mammals, fish and invertebrates could ingest the oil. Both fouling and ingestion can result in the death of the animals. Oil-tainted fish could not be sold by the commercial fishermen. Depending on the extent of a spill, kelp beds, wetland areas, streams, and rocky intertidal areas could be damaged. The southern sea otter, an endangered species, is not now a resident of the area, but could move into the kelp beds in the future. The sea otter has been proved to be especially susceptible to injury or death from oil contact.

3. Drilling Muds and Drill Cuttings

As discussed in the previous section, the Coastal Act requires the protection of marine resources. One of the major impacts on marine resources is the offshore disposal of drilling fluids and cuttings.

Drilling muds are used in both exploration and production drilling to control hydrostatic pressure in the well, lubricate the drill bit, and remove the drill cuttings from the well. They are generally composed of mixtures of water, clays, barium sulfate, lignite, lignosulfonate, and other additives. Drill cuttings are small pieces of formation rock cut away by the drill bit. They range in size from microns to a few centimeters. They are carried to the surface of the well with the circulation of the drilling muds and are separated from the muds on the platform by the solids separation equipment.

In October 1981, the Commission established a policy to guide its actions on muds and cuttings discharges. At that time, it determined that muds and cuttings discharged under the Environmental Protection Agency's National Pollutant Discharge Elimination System (NPDES) permit more than 1000 meters from state waters had not been shown to affect the coastal zone and, therefore, would not require consistency review. Allowing for future changes in policy, the Commission, in its testimony before the Environmental Protection Agency in October 1981, stated:

Should any new information arise within the two-year life of this permit that demonstrates that discharges beyond 1000 meters do affect the coastal zone, the Commission reserves its right to re-examine this issue under its consistency review authority and to respond, in our case-by-case consistency review, to the sensitivity of a particular location.

Based on the availability of new information on the fates and effects of muds and cuttings, and because of increased drilling activity offshore California, in the fall of 1982, the Commission instructed the staff to re-examine the Commission policy on muds and cuttings disposal. A January 31, 1983 letter to the Environmental Protection Agency notified the agency of the Commission's review:

The Commission is currently re-evaluating its position on drill muds discharges in light of more recent information on the fates and effects of muds, and may decide to require case-by-case review of each NPDES discharge activity. The Commission may also decide it cannot support the idea of a general permit, as was issued by the Environmental Protection Agency in February 1982.

- We therefore request that a clause be included in the general permit to advise companies that the general permit does not apply if the California Coastal Commission determines that consistency review is necessary for areas beyond 1000 meters from the coastal zone.

The EPA's present NPDES general permit for southern California expires on December 31, 1983, and therefore will not cover discharges from Chevron's project. The EPA intends to expand the area covered by the permit to include 39 additional tracts, and to extend the life of the permit until June 30, 1984. The Commission intends to exert consistency review over the reissuance of the NPDES permit.

Representatives of the oil industry have been helpful to the staff in its re-evaluation of the Commission's discharge policy. Industry representatives (including Chevron) have met with the Commission staff and provided information on the environmental effects of these discharges. There remains substantial disagreement over the long-term chronic and cumulative effects of discharging these materials in OCS waters. A revised Commission policy statement is nearing completion.

Chevron proposes to discharge drilling muds and cuttings directly into the ocean from up to 40 wells on one platform (Hermosa). Up to three additional platforms may be proposed in the future for the Point Arguello Field by Chevron and its partners. The DPP states that 1500 barrels of drill muds/per well and 16,000 cubic feet of cuttings/per well would be discharged with a total of 60,000 barrels of muds and 640,000 cubic ft. of cuttings for the proposed 40 wells over the anticipated 5 years of drilling on Platform Hermosa. The muds and cuttings would be discharged through the "cutting chute", a pipe that would terminate at approximately 30 m (100 feet) below the surface of the water. The Commission staff has requested that Chevron analyze these projected drill mud quantities, as the figures are substantially lower than for other comparable projects.

Chevron has stated that it will use three or four different types of "generic" water based muds. The Commission staff has requested Chevron to specify which muds and all additives that are likely to be used, as well as any additives which specifically will not be used. Any mud additives Chevron uses would need to be approved by EPA under the condition of the NPDES permit prior to discharge. The use of some additives would require barging contaminated muds to shore.

Occasionally, in drilling, it becomes necessary to add substantial amounts of diesel oil (100 barrels or more) to the mud system to loosen a stuck drill pipe. The EPA's NPDES permit prohibits the discharge of "free oil". According to the permit, substances discharged "shall not cause a film or sheen upon...the surface of the water or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines." It is unclear what amount of diesel in the mud system would produce these effects. Fairly low levels of diesel contamination may not be visible because the oil will absorb onto the clay particles and will not produce a sheen. Surfactants added to the mud system to help emulsify the diesel can also prevent formation of a visible sheen. The oil will travel with the mud

particles and will be worked into the sediments when the mud settles. Chevron has stated that all "oil contaminated" muds would be barged to shore. The Commission staff has asked Chevron for a definition and method of determining "oil contamination".

Barite, which is commonly added to mud as a weighting agent, often contains trace amounts of other heavy metals. Because the quantities of barite which will be added are so large, substantial amount of these potentially very toxic heavy metals will be discharged into the ocean. It is estimated that from one platform, containing forty 7000 foot wells, the following quantities of metals could be discharged: 345 lbs. arsenic, 117 lbs. mercury, 117 lbs. cadmium, 938 lbs. nickel, 1.9 tons vanadium, 1.4 copper, 1.4 tons lead, 10.3 tons zinc. The staff has requested that Chevron specify the source and heavy metals content of the barite it intends to use in its Hermosa development. In addition to the heavy metals associated with the barite, other heavy metals may be added to the ocean from the drill cuttings. The metals content of the cuttings will vary depending on the composition of the formation rock.

Drilling muds and drill cuttings from both exploratory and production wells behave as a two-part system once they are discharged into the water. The coarse-grained cuttings fall quickly through the water and form a pile below the rig, usually within a few hundred meters of the discharge. The fine particulates which comprise the muds tend to remain in suspension in the water. The muds are greatly diluted at the point of discharge, and they form into plumes as they disperse through the water. The plumes move with the circulation of the water, and eventually most of the particulates discharged from the Point Arguello Field settle out at low points on the edge of the Continental Shelf. The staff has requested Chevron to supply oceanographic data which would show the most likely area of deposition.

The effects of drill muds and cuttings discharges on marine organisms are the subject of great controversy. The National Academy of Science's National Research Council produced a report entitled "Safety and Offshore Oil". This report states:

There is no clear agreement among ocean biologists as to whether low concentrations of petroleum or drilling fluids and cuttings produce significant effects on marine biota. Nor is there agreement about the cumulative effects of low levels of discharges or of disturbances caused by drilling operations to natural ecosystems, both being difficult to detect and to measure quantitatively. Moreover, the long-term effect of the discharges on an ecosystem or community has not been established adequately. Thus, while there is general agreement that the toxicity and smothering effects of large quantities of oil and drilling fluids and cuttings are harmful to pelagic birds, benthic organisms, and coral reefs, there is less agreement on the ability of those life forms to recover after a time.

Scientists are unable to agree on the degree of concentration of mud components in the water that will cause harm to organisms. Scientists do agree that diesel oil is very toxic to marine organisms. In fact, industry representatives have suggested that high toxicity values found in bioassay tests on some drilling muds may be attributable to diesel contamination of those muds. Physical effects, which include direct smothering, change of substrate, clogging of gills, and interference with ingestion in filter-feeding organisms, are easier to observe than are chronic chemical effects.

The DPP/ER states that "Chemical and physical properties of drilling mud and cuttings may degrade ocean water quality by the following ways:

1. Increase trace metal concentrations such as barite, chrome-ferro lignosulfonate, cadmium, copper, lead and mercury;
2. High dissolved oxygen demand;
3. Raised temperature;
4. Increased light attenuation;
5. Reduced hydrogen ion concentration (elevated ph, sodium hydroxide);
6. High concentrations of organic carbon, total nitrogen and phosphorous.

The staff has requested quantification of several of these parameters.

The discharge of drilling muds does not appear to result in acute toxicity to marine organisms because the muds are dispersed in the water rapidly enough to limit the persistence of lethal concentrations. Bottom-dwelling organisms living directly beneath the discharge outlet are buried by cuttings and smothered; this effect is limited to an area within a few hundred meters of the drilling site. The temporary turbidity produced by plumes of mud does not seem to seriously reduce availability of natural light to marine plants and animals.

A thorough review of the available literature on muds and cuttings reveals that the scientific community has not reached a consensus on the long-term, sub-lethal effects on organisms from continued exposure to low concentrations of muds and mud components. While Chevron and other industry representatives assert that no such impacts have been documented, other studies indicate the possibility of chronic impacts, including decreases in reproductive rate due to interference with fertilization, build-up of heavy metals in tissues and bones, concentration of heavy metals higher in the food chain, changes in species abundance and distribution, and behavioral changes resulting in greater susceptibility to predation. Tagatz et al (1980) found that the presence of high mud concentrations in the sediments can inhibit settlement and recolonization by many types of organisms. Schatten (1982) found that barium interfered with the fertilization and early development of sea urchin embryos. Sweeney (1981 testimony before the EPA) has stated that small amounts of copper and other heavy metals in seawater are exceedingly toxic to phytoplankton; these tiny plants are the basis of the food chain on which many other organisms depend. Brannon and Rao (1979) found that ingestion of muds containing barite can result in significant increases in barium content in the tissues of grass shrimp. Neff (1979) investigated sublethal responses of organisms to used drilling muds and observed decreased growth rates in oysters, grass shrimp larvae, opossum shrimp, and killifish embryos, developmental anomalies in fish embryos, impairment of osmoregulation in shrimp, and hypoglycemia in crabs, at concentrations similar to or slightly lower than those that were acutely toxic.

The DPP further states that "Available literature suggests that drilling mud from the proposed Point Arguello Field development would not have significant or lasting effects on ocean water quality and, therefore, does not propose measures to reduce or offset the effects of the discharges. The controversy over the long-term effects of the muds is far from resolved, and the discharges, as proposed by Chevron, cannot be considered to be sufficiently protective of the marine environment without significant mitigation measures.

4. Commercial Fishing

Section 30230 of the Act requires that special protection be given to "areas and species of special...economic significance." This section further requires that, "Uses of the marine environment shall be carried out in a manner that will maintain healthy populations of marine organisms adequate for long-term commercial...purposes." Section 30231 requires maintenance of the biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes for optimum populations of marine organisms.

The proposed platform and offshore pipelines are within the Department of Fish and Game designated fish blocks 657 and 658. The Department has established a grid system of 10 minute longitude by 10 minute latitude (approximately 9 by 11 nautical miles) fish blocks to local commercial and sport fishing catches from the marine and estuarine waters of California. The DPP/ER gives fish catch data for these blocks and nearby block 643 for the years 1967 through 1977. Commercially important species landed anchovy, pacific bonito, albacore, rockfish, and red abalone. The Point Conception-Point Arguello area contains a wide diversity of species because of the transitional nature of the ocean currents and the presence of both northern cold water and southern warm water species. Although principal species of fish are harvested almost year round, the DPP/ER states that fish block statistics compiled in 1975 indicate that a majority are caught in the fall and winter.

Although fish catch data in the DPP/ER is complete through 1977, new fisheries may have developed since that year. Therefore, more recent data from 1981 should be used in conjunction with the older data to help determine which species are fished in the project area. The staff has requested Chevron to submit the 1981 data to enable the Commission to adequately assess the fishery resource which may be impacted by the project.

In addition to obtaining the fish catch data, commercial fishing interests should be consulted to determine how their activities would be affected by the proposal. Loran C coordinates and navigational charts or bathymetric maps locating the platform, marine terminal and pipeline should be disseminated immediately so they can respond to the project during the Commission's yearly review of the proposal.

The DPP states that the impact of the project on commercial fisheries would be longterm but of minor significance because of the area-wide availability of similar habitats within the project vicinity. Potential fishing space would be lost at the platform location during construction and operation of the platform. During construction of the pipeline, temporary exclusion zones would be established around the pipeline corridor, precluding fishing activities for approximately five months. Installation of the pipeline could leave trenches and mounds on the ocean floor due to lay barge anchoring. However, the DPP states the impact on trawling activities could be lessened by compensating the fishermen for damaged gear. Chevron would study the seabed and meet with the potentially affected parties to determine if the scarring would be permanent and what constitutes a compromise to fishing or other interested parties. Chevron would be involved in discussions with the various fishing representatives to maintain a working dialogue to determine and to implement feasible mitigation measures.

Although specific commercial fishing issues need further evaluation, based on previous Commission analysis of many exploration plans, potential conflicts between the proposed facilities and fishing activities can be foreseen. The affected fisheries in the vicinity of the platform, marine terminal, and pipeline may be significantly impacted, either individually or cumulatively by: (1) the presence of the facilities which would encompass and block areas traditionally available to the fishing industry, (2) the crew and supply boats interfering with the traps, nets, and boats, (3) construction activities, (4) increased tanker traffic, and (5) ocean disposal of drill muds and cuttings which could smother and poison the commercially recoverable bottom species. In addition, various fishing techniques described below that are used to catch the different fish species, could be impacted.

Gillnetting. Gillnets are walls of netting set vertically in the water. Two varieties are used: set or stationary nets, and drift nets.

Set nets are used primarily in shallow waters to catch halibut, white sea bass, sea herring, barracuda, bonito, and, in deep water, rockfish. The net is kept upright using floats at the top and weights at the bottom, and is anchored to keep in in place. This form of gillnetting could be most severely affected by crew and supply boats which could run over the nets and buoys, thereby destroying them.

Drift nets are primarily used offshore for catching sharks. One end of the net is attached to the vessel, while the other is secured to a free-floating buoy. The net also has floats on the top and weights on the bottom that can be changed, allowing the net to fish at or below the surface. The vessel and the net drift together, limiting the boat's maneuverability. Because the nets and vessels drift with the ocean current, the nets can become entangled with structures or other vessels, leading to their destruction. The presence of the proposed platform, therefore, would restrict the use of drift nets. Crew and supply vessels could also destroy the drifting nets.

Trawling. Trawlers or draggers trail a net behind the fishing vessel to catch rockfish, sole, and shrimp. Because a trawler has limited maneuverability while fishing, it cannot dodge moving vessels such as crew or supply boats, which may cross its path and entangle its net. Nets can be damaged or destroyed by catching on the ridges left by pipeline laying barges, on exposed parts of pipelines, and on debris which is dumped from the facilities during construction and operation.

Trapping. Commercial species caught with traps in nearshore waters up to 30 fathoms (180 feet in depth), are crabs, lobsters, and sablefish. The traps are strung together, usually with ten traps per string. The line is marked at the water surface by buoys and anchored to the ocean floor. Commercial trappers have lost their traps from crew and supply boats running over, and losing the buoys. Moreover, the traps continue operating until destruct clips erode away (taking up to five months), and the traps break down. Since crabs and lobsters are cannibalistic, a large number of crustaceans could destroy themselves and significantly reduce the fishery resource, especially if many traps are lost.

Purse Seining. The purse seine is a large vertical wall of netting used to surround and entrap schools of fish, such as anchovies, albacore, mackerel, and bonito. Once the net is in the water and set, the vessel cannot maneuver until the net is once again onboard. During the time the net is in the water, the vessel and the net may drift a considerable distance.

Significant reductions in the fish catch would obviously affect the fishing boat operators and the fishing related businesses in the coastal zone. Interstate Electronics Corporation, in its Training Handbook--Fisheries and Environmental Training Program for Central and Northern California, states that there are at least three people onshore in fishing-related businesses for every fisherman, and that these related businesses include canneries, marine supply companies, net makers, shipyards, marinas, seafood restaurants, and fish markets. As an example, Ventura Harbor has a fish processing plant, loading dock, ice plant, and 200 boat slips for the exclusive use of the commercial fishing industry, totaling a \$27 million investment. A significant reduction in fishing from the Santa Maria Basin and western Santa Barbara Channel may cause a substantial loss of revenue for these facilities.

Cumulatively, the impacts on the commercial fishing industry could be great, as additional OCS areas are developed. The presence of additional permanent facilities, construction equipment, and crew and supply boats could significantly reduce the fishing resources and the amount of area left to fish. This, in turn, would reduce the fishing industry's economic contribution and could significantly impact fishery-associated industries.

5. Containment and Cleanup of Crude Oil Spills

Section 30232 of the Act requires protection of the marine environment from any spilling of crude oil, gas petroleum products, or other hazardous substances. For any development or transportation of these materials, the section further requires "effective containment and cleanup facilities and procedures" to be provided for spills that do occur. If coastal-dependent industrial facilities fail to meet this requirement, the development may be permitted if it meets the three tests of Section 30260. One of the tests requires that adverse environmental effects resulting from the development are mitigated to the maximum extent feasible. "Feasible" is defined in Section 30108 as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors." If the tests in Section 30260 are successfully met, the requirements of Section 30261 and 30262 would also apply. Section 30261 requires in part that tanker facilities "have ready access to the most effective feasible containment and recovery equipment for oil spills."

Whether containment and cleanup equipment and procedures are "effective" depends on the characteristics of available equipment, which is only capable of containing oil during moderate weather conditions and which cannot be expected to keep large oil spills heading toward shore from contacting beaches. Chevron's proposed oil spill response capability would, therefore, be considered in accordance with the policies of Sections 30260 and 30261 requiring the most feasible mitigation measures and the most effective feasible equipment.

Oil Spill Equipment and Response. Chevron's contingency plans for offshore oil spills include locating oil spill containment and cleanup equipment onsite at the proposed platform, training onsite personnel in deployment and operation of the equipment, and calling for assistance from the Clean Seas oil spill cooperative when necessary. Chevron plans to locate small boats at the proposed platform for use if a work or crew boat is not immediately available at the time of a spill. These vessels are not designed, however, to deploy and to control the boom in open ocean conditions. Larger boats would be necessary for this purpose. The staff has discussed this and other deficiencies with Chevron to ensure that proper equipment would be provided.

Chevron's Oil Spill Contingency Plan is organized to call an onsite response team to carry out the cleanup operations. For spills larger than could be handled by the onsite personnel and equipment, the Clean Seas oil spill cooperative for the Santa Barbara Channel and Santa Maria Basin would be notified. The cooperative operates two response vessels: Mr. Clean I, stationed in Santa Barbara Harbor, and Mr. Clean II, located at Port San Luis. The Contingency Plan states that the Mr. Clean vessels can operate in 10-foot seas using the Offshore Devices Skimming Barrier. The Coast Guard manual covering response in extreme weather limits a system with side booms, such as that operated by Clean Seas, to four-foot seas. According to data from the National Climatic Center in Ashville, North Carolina, wave height conditions for the Point Arguello areas exceed two feet 74 percent of the time. Waves exceed six feet 20 percent of the year and nine feet six percent of the year. In addition, the DPP states that Mr. Clean II could respond with equipment from Port San Luis within five hours, using a 12 knot cruising speed. However, in Commission-sponsored oil spill response exercises, the Clean Seas vessels have only gone 9 knots instead of the 12 knots quoted in the plan. With a nine knot forward speed, response time to the proposed Platform Hermosa would take six or more hours.

A second response vessel is located at Port San Luis and additional equipment is stored in various locations along the coast. If a spill is beyond the capability of the cooperative, other cooperatives and the U.S. Coast Guard would be called for assistance.

For the past two years, the Commission staff has been evaluating the oil spill cleanup capability available for the industry and its cooperatives. This evaluation has shown that large open ocean spills heading toward shore cannot be kept off beaches using equipment now available. The equipment can reduce the impacts, but cannot eliminate them. The effectiveness of the cleanup operations in the open ocean can be improved if industry and cooperatives acquire and use equipment which is designed for that use. The oil spill cooperatives have made major improvements to their spill response capability over the past two years. However, some of Chevron's equipment available onsite and through the Clean Seas cooperative may not be adequate for open ocean use. For example, the need for additional large skimmers and boats, and additional storage capacity must be considered.

Although a small stockpile of EPA-approved dispersant is included in the onsite equipment list, the DPP does not include an analysis of the effectiveness or potential toxicity of the dispersant when used with Hermosa crude oil.

Chevron's proposal includes marine loading operations, either Getty's expanded marine terminal in Gaviota or at marine terminal facilities offshore Las Flores Canyon. The DPP does not address the feasibility of pipeline construction and operation to move oil to refinery centers. Pipeline transport of crude oil can reduce the possibility of oil spills and usually the impacts from pipeline spills on land are less than similar sized spills in the marine environment.

Chevron's Oil Spill Contingency Plan predicts potential spill movements for the Santa Maria Basin under predominant wind and current conditions for each month of the year. Oil spilled from the proposed Platform Hermosa would migrate in a south-southeasterly direction toward San Miguel Island, resulting in oil contamination of the island's shoreline. For the remainder of the year, a slick originating at the platform would move toward Santa Cruz Island, possibly contacting its shoreline after approximately 60 hours. Oil slick movement from the proposed pipeline route during the months of February through July would be very slow due to

the prevailing wind and current conditions. For at least the initial 96 hours following a spill, the slick would remain between Points Arguello and Concepcion. The slick could contaminate the shoreline in this area. In December and January, oil would move north from the spill site before migrating southeast toward San Miguel Island. From August through November, a slick would migrate in a southeasterly direction, reaching the Santa Cruz Island area in approximately 42 hours. Potential for contamination of a portion of the island's shoreline would exist.

The plan notes in conclusion that predictions refer only to the most common wind and surface current directions occurring during a given month. If some of the less common wind/surface current combinations are used in making spill movement predictions, the potential for a slick contacting shoreline would be greatly increased. The trajectory analysis included in the plan is intended to present a general picture of possible spill movement from Platform Hermosa, and by no means does it depict the only direction of spill movement.

6. Vessel Traffic Safety

Section 30232 of the Act requires protection against the spillage of oil and other hazardous substances in relation to any development or transportation of such materials. Section 30261 requires in part that tanker facilities be designed to minimize the risk of collision from movement of other vessels. Section 30262 further requires in part that oil and gas platforms not be sited where they or their related operations may pose a substantial hazard to vessel traffic.

Platform Site. Chevron proposes to install one platform over three miles north of the proposed extension of the Santa Barbara Channel Vessel Traffic Separation Scheme (VTSS). (see Exhibit 8) The DPP states in one section that current northbound vessel traffic passes five or more miles west of the proposed platform location. In another section, however, the DPP states that current traffic heads north between two and five miles west of Point Concepcion, resulting in traffic passing five to eight miles east of the proposed platform location. Consequently, vessels heading north would pass both east and west of the proposed platform location. Therefore, the placement of the proposed platform in this location may pose hazards to vessel traffic.

These hazards may be compounded because the present VTSS ends southeast of the proposed site. In its Port Access Route Study, the U.S. Coast Guard concluded that an extension of the existing VTSS is warranted. The extension would continue the VTSS in a northwesterly direction into a Precautionary Area, beyond the limit of OCS Lease Sales 68 and 53 tracts. Compliance with the current VTSS in the Santa Barbara Channel is estimated from 93 to 99 percent, but it is likely that compliance in the proposed extension area outside the Channel would be much lower. Because the lanes are in international waters and are not mandatory, many vessels may not follow the lanes, but may continue to "cut the corner" on their way north. Vessel traffic in the Channel, according to the DPP, is anticipated to increase 16 to 60 percent by the next decade. The DPP states that Point Arguello operators would generate 144 tanker trips per year and Exxon's Santa Ynez production would result in 132 tanker trips per year. No figures are given for vessel trips generated by other developments in the area, such as the remaining areas of the Santa Maria Basin, Sockeye Field, and State Lands leases. In July 1982, the Commission adopted a policy statement on conflicts between vessel safety and offshore oil and gas operations. The Commission's policy provides that any significant proposed increases in vessel traffic in the Santa Barbara Channel be accompanied by a new, intensive investigation of the need for a Vessel Traffic Monitoring System.

Marine Terminal Site. Chevron plans to use either Exxon's proposed single anchor leg mooring (SALM) marine terminal at Las Flores or Getty's proposed double berth fixed pier or SALM marine terminal and onshore pipeline at Gaviota. Very little information is given in the DPP on the design of the terminals, and no information is given in relation to possible safety mitigation measures for a marine terminal. If the new Las Flores or Gaviota marine terminals are not operational by the first quarter of 1986, Chevron proposes to temporarily tanker the Arguello Field crude oil out of the existing marine terminal at Gaviota. The existing terminal design, throughput, or condition is not described in the DPP. The staff has requested information on any changes required at the existing facility to accommodate this increased use and on conditions in the existing State Lands lease.

7. Geologic Hazards

Section 30253 of the Act requires new development to minimize risks to life and property in areas of high geologic hazard and to "neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area, or require the construction of protective devices. Section 30262 further requires oil and gas development permitted in accordance with Section 30260 to be "performed safely and consistent with the geologic conditions of the well site." Section 30263 requires that new or expanded petrochemical facilities not be located in a seismically hazardous area.

The DPP states that Platform Hermosa would produce oil and gas from the offshore Monterey Formation. Producing intervals from this formation have occurred at depths from 6,600 to 8,200 feet in this general area. The total Monterey thickness is approximately 1,000 feet throughout the Point Arguello Field.

Chevron's proposed Platform Hermosa is a three-deck, eight leg drilling and production platform with 48-well slots. Both the primary and alternate platform locations are located on the upper Arguello Slope in approximately 602 feet of water. (see Exhibit 9) The seafloor is smooth at both locations and slopes 3.5 degrees to the southwest. The alternate site is located 1,400 feet northwest of the primary location. Chevron's detailed geotechnical studies indicate that no active faults or seafloor slumps underlie either location.

According to the DPP, a 30-inch oil and 22-inch gas pipeline are proposed to run from Platform Hermosa to a landfall at Point Conception, a distance of approximately 10 miles. According to Chevron, the pipelines are designed to avoid rocky outcrops on the seafloor. The seafloor is generally smooth along the pipeline route with localized bedrock outcrops, tar mounds, and small depressions. A major portion of the pipeline lies on the Arguello Shelf, which has an average gradient of about a one-half degree. Two faults cross the marine pipeline route, but do not offset recent sediments. Certain locations along the pipeline route have been identified as susceptible to liquefaction and/or downslope movement under seismic loading. Detailed geohazard studies for the marine pipeline and associated engineering mitigation design plans have been completed by Chevron and have been requested by the Commission staff. Site specific engineering plans for that portion of the pipeline located in the intertidal zone have also been requested.

Chevron's proposed onshore facilities consist of a pipeline route running from the Point Conception landfall along the coast to an oil and gas processing facility at Gaviota (16 miles) or possibly to an oil storage facility at Las Flores (an additional 10 miles). The pipeline is proposed to be located on the coastal terrace

between the Santa Ynez Mountains on the north and the seacliff and narrow beach to the south. Chevron has not selected a final pipeline route nor has a geohazard study been completed. Based on preliminary data submitted in the DPP, the major geologic hazards that would affect the pipeline are headward erosion of coastal canyons and tributary drainage course, blufftop erosion of seacliffs, liquefaction, landslides, mudflows, soil creep, and fault rupture (South Branch-Santa Ynez). In addition, the selected route must ensure that the pipeline will not require a coastal protective device during the structure's life.

Both the onshore and offshore components of the proposed project lie within a region that has been subject to moderate levels of historic seismic activity. Studies for the proposed LNG terminal prepared for the Commission identified several active faults in the area. Seismic shaking and fault rupture could threaten the integrity of the platform and pipeline facilities and pose potentially catastrophic effects on coastal resources. Chevron has supplied detailed seismic information on the proposed development to the Commission staff for the offshore platform and marine pipeline.

8. Air Quality

Section 30253(3) of the Act requires that new development be consistent with the rules and regulations of the local air pollution control districts and the State Air Resources Board. Section 30250 requires new development to be located where it will not have "significant adverse effects, either individually or cumulatively, on coastal resources". Section 30263(b) further requires negative air quality impacts from new sources to be offset by other emission reductions in the area.

Chevron's proposed project includes onshore processing facilities which are considered refineries under the Coastal Act since these facilities perform the first steps necessary to transform crude oil as it is produced to marketable fuels. Processing facilities generally are located close to the production area for economic reasons. Produced oil contains varying amounts of waste mixed with oil. Transportation of the oil/water mixture is more expensive than removing a portion of the water and transporting only the "dried" oil. Similar processing is carried out at refineries.

Sources of Air Pollution. The primary sources of emissions resulting from oil and gas development and production are from power-generating equipment, crew and supply boats, tankers, cranes, pumps, and other drilling and processing equipment, from vents and leaks in storage and transportation systems, and from flaring high sulfur content gas. The major pollutants are oxides of nitrogen (NO_x) and sulfur (SO_x), volatile organic compounds (VOC) or hydrocarbons (HC), particulate matter (PM), and carbon monoxide (CO). The operation of diesel engines results in NO_x emissions, which are formed by the high temperature reaction between nitrogen and oxygen in the combustion air; VOC, PM and CO emissions from incomplete fuel combustion; and SO_x and PM emissions from fuel contaminants. The dehydration, heater treater, water treatment, and transfer and storage operations result in hydrocarbon emissions, and the flaring of high sulfur content gas results in sulfur dioxide emissions.

Air Quality Off California. The meteorological conditions of California's coastal areas are responsible for the transport of pollutants released offshore to inland areas. The California Air Resources Board analyzed the meteorological conditions off the coast to determine the offshore area--called California Coastal

Waters--where emissions released over these waters would be transported onshore. (see Exhibit 10) Tracer studies and analyses show that pollutants released offshore are likely to be transported onshore by northwesterly wind flows. In particular, the daytime air flow in the Santa Barbara Channel is likely to transport offshore pollutants either inland to Santa Barbara County, or to Ventura County and the South Coast Air Basin. (see Exhibit 11) While the night time wind flows tend to carry emissions into Ventura County or into the gulf of Santa Catalina off the South Coast Air Basin, the pollutants can then be carried into the Los Angeles area with the daytime sea breeze. These pollutants also can persist for a long period in the coastal area because of the diurnal wind flow reversals and temperature inversions above which pollutants cannot rise.

State and National Regulations. National and state ambient air quality standards have been established to protect the public health and welfare. The Clean Air Act (CAA) authorizes the U.S. Environmental Protection Agency (EPA) to set standards for attaining and maintaining air quality. Under the CAA, the EPA has the authority to review and approve a state's implementation plan to ensure each state would meet federal standards in a timely manner. If an area cannot meet the National Ambient Air Quality Standards, it is designated as a non-attainment area, and given additional time to attain the standards. The CAA recognizes the authority of a state to adopt emission standards and limitations more stringent than those established under federal law.

As a requirement of the OCS Lands Act Amendments, the Department of the Interior has developed regulations to control OCS emissions. DOI's regulations allow much higher emission levels than do California's rules and generally disregard the cumulative impacts from numerous OCS facilities. Also, any mitigation requirements that may be imposed by DOI are weaker than those that would be required by EPA or California, particularly with regard to offset reduction ratios for non-attainment areas. Litigation against DOI challenging the adequacy of the regulations in protecting California's air quality is pending [California v. Watt, U.S.D.C., C.D.Cal. #81-3234-CBM (Mx)].

The California Air Resources Board (ARB) established standards, as authorized by the California Health and Safety Code. Under these state standards, local air pollution control districts have established regulations and air quality management plans and strategies for meeting the federal standards within the deadlines provided by federal law. These standards prescribe levels for the major pollutants--oxidant or ozone, nitrogen dioxide, sulfur dioxide, suspended particulate matters, and sulfates.

The "New Source Review" (NSR) rule of the Santa Barbara County APCD, an element of the plan to meet federal standards, basically requires all new or modified major stationary sources in its jurisdiction to reduce emissions and to "offset" the remaining emissions by reducing emissions at other facilities. This rule applies to sources located in the California Coastal Waters extending well into the OCS defined by the ARB. The application of the NSR to portions of the OCS is based on the likelihood of emissions from facilities in these locations being transported onshore, resulting in adverse impacts to onshore air quality.

Furthermore, the federal Coastal Zone Management Act authorizes states with approved coastal management programs to exercise jurisdiction over activities in the OCS and requires states to incorporate state and local air quality requirements into the coastal management program. The enforceable standards of California's CMP are

the policies of the Coastal Act, which, as stated above, require new development to be consistent with the requirements of state and local air pollution control agencies. It is with these requirements that Chevron's DPP must be found consistent.

Impacts of Project and Proposed Mitigation Measures. Air pollutant emissions from both onshore and offshore sources would occur as a result of the construction and operation of the proposed offshore platform, pipelines, and onshore processing and storage facilities. Construction and drilling emissions would be of short duration, while emissions from production operations would occur throughout the life of the project.

The major sources of emissions during the construction and installation of the proposed platform, pipelines, and onshore processing facilities would be from tugboats, barges, supply and crew boats, helicopters, employee transportation, supply trucks, cranes and construction equipment, and platform generators. During drilling and production operations, pollutants would be emitted from platform and onshore turbine engines, cement pump, crane, fire pump, and emergency generator engines, flare pilots and burning, heaters, and a sulfur recovery system. Chevron proposes to use 2800 kw turbines to generate power on the platform, rather than transmitting electrical power through subsea cables as has been proposed in other recent plans for production platforms that have been reviewed by the Commission. Although a specific method of transporting the produced crude oil to refineries is not proposed as part of the project, the DPP includes emissions from tankers assumed to load at a new, consolidated marine terminal at either Gaviota or Las Flores. If neither of these terminals or a pipeline transportation system is operative at the time Chevron's production would begin, Chevron proposes an interim use of the existing marine terminal at Gaviota.

Chevron proposes a number of measures to reduce the new source emissions from the project. These include:

- (1) equipping turbine engines with water injection to reduce NOx emissions by 50% or more offshore and 70% onshore;
- (2) recovering waste heat from gas engines and turbines to reduce heating demands and therefore power generation emissions;
- (3) using a gas blanketing and vapor and sulfur recovery system to reduce emissions from the oil processing and storage facilities;
- (4) incorporating a vapor control system on transport ships to reduce hydrocarbon emissions;
- (5) using low sulfur fuel on tankers while within state waters;
- (6) instituting an inspection and maintenance program on valve, pump, flange, and compressor seals to minimize fugitive hydrocarbon emissions;
- (7) using low NOx burners on heaters, sweetened gas fuels and scrubbers on flare burners to reduce NOx and other emissions; and
- (8) using water sprays to minimize fugitive dust during onshore construction activities.

The air pollutant emissions from the proposed development are projected to meet DOI regulations. However, these emissions may violate the more stringent air quality standards of the state since the prevailing winds in the project area tend to transport offshore emissions into onshore areas. The DPP does not analyze the onshore impacts of pollutants emitted from the platform, onshore oil and gas processing facilities, and system used to transport the oil and gas.

Santa Barbara and Ventura Counties, areas which would be impacted from the project's emissions, are designated non-attainment areas in meeting the national and state air quality standards. Emissions from offshore oil and gas production to the extent now anticipated were not considered or mitigated in their Air Quality Attainment Plans. Chevron's proposed mitigation measures are designed to reduce emissions from new sources only. Air pollutant emissions in the area would, therefore, increase, making it difficult to meet the statutory requirements. Additional mitigation measures and offset reductions in other pollutant emissions in the area may be required. The Santa Barbara County APCD has not yet received nor reviewed an application from Chevron on the proposed project. The Commission staff has requested Chevron to submit emissions information on the onshore and cumulative impacts of this project and on alternative transportation systems so that the Commission can evaluate the total impact on onshore air quality. Additional mitigation and reduction measures may be necessary.

9. Archaeological Resources

Section 30244 of the Act requires that where development would adversely impact archaeological resources, reasonable mitigation measures be required. Cultural resources in the offshore project vicinity may include submerged prehistoric sites, isolated bottom-founded artifacts, and shipwrecks. The rugged coastline around Point Conception is infamous as a hazard to navigation, and at least 15 shipwrecks are documented for the area. Onshore, 62 recorded archaeological sites are located along the coastline in the project area.

A detailed marine cultural resources survey was conducted at the proposed platform site and along the pipeline route to determine the location of potential archaeological sites and artifacts. Remote sensing data revealed evidence of one anomaly, which is almost certainly a shipwreck, and of two other anomalies tentatively interpreted as possible shipwrecks. No relict landforms that could be associated with submerged archaeological sites were identified. Chevron has relocated the offshore pipeline route to avoid the anomalies.

Although numerous onshore field surveys have been completed between Point Conception and Las Flores Canyon, an intensive on-foot archaeological survey of the project area was conducted for the DPP/ER. A total of 11 archaeological sites were encountered along the pipeline corridor between the landfall alternatives north of Government Point and Gaviota, ranging from an extensive Chumash Village to scattered shell and chert flakes. Railroad grade construction had damaged several sites. A similar situation existed along the pipeline corridor between Gaviota and Las Flores Canyon where a total of 5 previously recorded sites were encountered. The remaining 6 sites within the railroad right-of-way were destroyed during construction of the railroad bed and were not encountered.

In addition to the field survey along the pipeline corridor, an on-foot survey was conducted of the existing Chevron processing facility at Gaviota and of about 85 acres east of this facility. Three areas of archaeological interest were noted; two within the 85-acre parcel and one previously recorded site within the existing facility.

While all the encountered archaeological sites are considered important, there is much variation in the amount of information they may yield, partly because of the disturbance to many sites during the railroad construction. The DPP outlines several approaches to be followed during pipeline and processing facility construction to mitigate the impacts to cultural resources in the project area. Sites would be avoided where possible. Where avoidance is not possible, trenching operations would be monitored by a qualified archaeologist and a Native American observer. Test excavations would be carried out within the impact zone at several designated sites prior to construction. Once the testing program is complete, the research potential of the site would be evaluated and proper mitigation measures formulated.

10. Land Resources

Section 30200 of the Act requires the Commission to consider spillover effects on resources within the coastal zone. Onshore facilities associated with OCS energy projects must be reviewed for consistency with the policies of the Coastal Act to avoid incrementally approving offshore development that could have substantial onshore impacts on coastal resources. Sections 30231 and 30240 of the Act provide in part that environmentally sensitive habitat areas be protected and that the biological productivity and quality of coastal streams and waters be maintained, and, where feasible, restored through such means as controlling wastewater discharges, controlling runoff, preventing depletion of groundwater supplies, maintaining natural buffers that protect riparian habitats, and minimizing the alteration of natural streams. Section 30236 of the Act provides in part that substantial alteration of streams shall incorporate the best mitigation measures feasible, and be limited to water supply projects, flood control projects where there is no other feasible method, or developments to improve fish and wildlife habitat. Section 30260 of the Act also provides for the expansion of coastal-dependent industrial facilities where they cannot feasibly be accommodated consistent with other policies of Chapter 3 if adverse environmental effects are mitigated to the maximum extent feasible.

Terrestrial Biology. The onshore project area (Gaviota to Point Conception) is characterized by plant communities such as Southern Oak Woodland, Coastal Sage Scrub, Chaparral, and Grassland, which is the most common community in the area. Two sensitive habitats may occur in isolated areas. Coastal Strand vegetation, a low-growing sparse community located immediately adjacent to the coast, may be present in and adjacent to rivermouths. This habitat has the potential to contain several sensitive species. The second habitat, Riparian Woodland, occurs along perennial to ephemeral streams and ranges from a few clumps of willow to large oaks and sycamore. The Santa Barbara County LCP states that the riparian habitats from Gaviota to Jalama consist of 12 perennial and 14 intermittent creeks. Because riparian areas support a large number and diversity of both plant and wildlife species, they warrant protection and are designated environmentally sensitive habitat (ESH) in the LCP.

The project area also contains a diverse wildlife population. Avian resources range from shore and marine birds to species adapted to the Disturbed Grassland, Coastal Scrub, and Riparian Woodland habitats. The DPP states that the area is especially noted for natural resources, including Golden Eagles, Red Tailed Hawks, Marsh Hawks, Rough-legged Hawks, American Kestrels, Turkey vultures, and White-tailed kites. The area supports many small mammals, amphibians, and reptiles.

The onshore facilities associated with the project would be the pipeline landfall, the 16-mile stretch of the two oil and gas pipelines from Point Conception to Gaviota, a potential 10-mile extension from Gaviota to Las Flores Canyon, the oil and gas processing facilities at Gaviota, and the landward portion of the ocean outfall pipeline. The construction of the onshore pipelines would require grading, clearing, and trenching on the beach and within the pipeline corridor. Possible blasting may be required through the underlying bedrock on the beach at Point Conception. Pipeline installation would also require the crossing of several streams within canyon mouths along the coast. The DPP states that disturbance to stream beds would be minimized by suspending the pipelines from bridge bottoms if possible. As discussed previously, the onshore pipeline route has not been finalized, and it is not known how many streams would have to be crossed or whether suspended crossings would be feasible. The staff has requested information on the final pipeline route and on the extent and the location of riparian habitat to be removed. Also of concern is the potential spillage of oil into riparian and marine habitats through the rupture of onshore pipelines.

The proposed oil and gas processing facilities would require grading and landform modification that may affect habitat resources within the coastal zone. The extent of grading at the site is not known, but its effects could be significant because of the location of two ESH designations in Alcatraz and Cementerio Canyons adjacent to the east and west of the proposed site. According to the DPP, construction of the proposed processing facilities would result in the loss of about 12 acres of Disturbed Grassland habitat and of open space wildlife habitat. Areas where oil or hazardous substances are present would be enclosed by berms.

The potential loss of riparian habitat along the proposed pipeline route and from the construction of oil and gas processing facilities could increase runoff and siltation in coastal streams, thereby causing adverse effects on water and marine resources. The potential loss of buffer vegetation could increase erosion. These concerns are particularly important because construction of onshore facilities is scheduled during the rainy season.

Water. The proposed processing facilities would require onsite wells. The DPP states that adequate water supplies would be available and that the onshore processing facilities would only use 20 acre feet of water annually. Although water consumption appears negligible, the cumulative effect of this project along with other proposals for energy development in the area is important, considering Santa Barbara County currently has an overdraft of 40,000 acre feet per year. The staff has requested Chevron to submit information on whether an overdraft situation exists at the groundwater basin it would use, and if so, the conservation measures to be used to alleviate such conditions.

11. Visual and Scenic Resources

Section 30251 of the Act requires in part that the scenic and visual qualities of coastal areas to be considered and protected as a resource of public importance and that development be sited and designed in part to protect views to and along the ocean and to be visually compatible with the character of the surrounding area.

The visible components of the proposed project would be the offshore platform, 8.5 nautical miles west of Point Conception, and the oil and gas processing facilities at Gaviota near the northern boundary next to Highway 101. Pipeline construction activities would present temporary visual impacts in the Point

Conception area, along an approximately 16-mile stretch of the Southern Pacific Railroad, and along Highway 101 at Gaviota. Consequently, the Point Conception area and Gaviota are the two sites most affected visually by the proposed project.

The Santa Barbara County LCP states that the scenic quality of the coastal zone in the North Coast planning area (Gaviota to Santa Maria River) is outstanding. The Point Conception area offers highly valuable, relatively undisturbed, and varied views. One of the most striking views in the area is of the expansive open ocean from the elevated coastal terrace. Currently, there are no fixed structures in the offshore project area. In its 1978 report, Designation of Areas Not Suitable for Power Plants, the Commission described the Point Conception area as the "largest remaining semi-wild area in the southern California coast," extending from Jalama State Beach southward to Point Conception. Because of its relatively pristine status, the Commission found in the report that Point Conception has high potential for semi-wild recreation, including hiking, nature study, and the enjoyment of solitude. It concluded that the construction of a power plant and transmission corridors, and construction of public services to support the work force and construction activities would be incompatible with the area's character and pristine status.

According to the DPP, Platform Hermosa and associated offshore construction activities would be potentially visible from one public use area, Jalama Beach County Park, which is about nine miles east of the platform site. Views of the platform site from Gaviota State Park 22 miles to the southeast would be restricted by the topographic orientation of Point Conception and relative distance. Viewers would include a few residents at the higher elevations of the Bixby and Hollister Ranches, beach users along the Point Arguello to Point Conception shoreline, passengers on the Amtrak rail line, surfers, and boaters in the proposed platform vicinity. Although the DPP concludes that the coastal fog would obscure the offshore project area about 10 to 38 percent of the year, primarily during July through October, and the distance from shore would reduce its size, the platform would introduce a long-term structure to a previously natural seascape.

The Gaviota facility site is located immediately north of Highway 101. Elevation ranges from 120 feet above mean sea level near the highway to 240 feet above mean sea level at the northern perimeter of the property. The majority of the proposed project area is undeveloped except for the existing Chevron gas plant, the adjacent Getty-Gaviota oil and gas facilities to the south, and a SCE substation and Vista Del Mar School to the east. Views of the proposed site would be obtained by motorists travelling Highway 101, Amtrak passengers, people at the existing Getty-Gaviota facilities and Vista Del Mar School, and boaters in the nearshore area. The DPP states that visitors at Gaviota State Beach Park, including the extension of San Onofre and Molino beaches, would not be able to see the facility due to intervening topography and vegetation. Chevron plans to mitigate the visual impacts at this site by vegetative screening and the placement of some facilities below grade. Facilities onsite would be clustered to the maximum extent feasible and would not impact public views to the ocean.

12. Public Access and Recreation

Coastal Act policies 30210-30212 provide that maximum public access and recreational opportunities shall be provided and that development shall not interfere with the public's right of access to the sea. Section 30252 provides that the location and amount of new development should maintain and enhance public access

to the coast. And, Sections 30213, 30220, and 30221 provide that lower cost visitor serving and recreational facilities be protected, encouraged, and where feasible, provided, and coastal areas and oceanfront land be protected for recreational use.

As previously discussed in Section 10, the onshore facilities associated with the proposed project that could affect public access and recreation would be pipeline construction at the landfall (Point Conception) and along the 16-mile stretch of the two oil and gas pipelines from Point Conception to Gaviota, the oil and gas processing facilities at Gaviota, near Gaviota State Beach, and the landward portion of the ocean outfall pipeline. An additional 10-mile segment of pipelines may be constructed between Gaviota and Las Flores Canyon. In addition, staging and marshalling areas would probably be needed during the construction period, although these are not discussed in the DPP. The Commission's experience with pipeline projects demonstrates that public access is an important consideration under the Coastal Act. In recent action on Pacific Interstate Pipeline Company's (PIPICO) proposed pipeline from Texaco's Platform Habitat to onshore facilities at Carpinteria, adjacent to Carpinteria State Beach Park, the Commission required the applicant to dedicate a surface easement for public access and recreation (Permit E-82-21).

Installation of the offshore pipelines would involve trenching within the surf zone at Point Conception. The onshore pipeline route would parallel several beachfront areas, and the construction corridor would be up to 200 feet wide. The Santa Barbara County LCP requires the granting of easements to allow for both vertical (with exceptions) and lateral public access for all development between the first public road and the ocean. Chevron is the property owner of the land where the pipeline landfill would be located. Pipeline trenching and installation across the beaches at Gaviota State Park and Refugio State Beach would require approximately one week each. Platform installation, offshore and onshore pipeline construction, and construction of the oil and gas processing plant phases would overlap, taking place during the peak summer months of 1985.

The work force required for the proposed project would range from 265 workers during peak months in mid-1985, 193 monthly throughout 1986, to 123 monthly from 1987 to 1990. Thereafter, 43 workers would be employed during the production phase. The DPP estimates that 80 percent of the work force would come from the local Santa Barbara-Ventura labor pool, with 20 percent coming from outside of the area.

The project's construction and drilling phases would contribute increased vehicle and truck traffic on coastal access routes, particularly on Highway 101, which is a major access route to the beaches and state parks in Santa Barbara County. Maximum traffic volumes generated by offshore support personnel and onshore construction works would occur during peak summer months in 1985. Daily traffic volumes during this period would be 125 vehicles per day (vpd). Daily traffic volumes would decline to 144 vpd during the last quarter of 1985, with further decreases to 97 vpd during 1986. An estimated 80 percent of all personnel vehicle trips would travel to or from the southeast via Highway 101. The remaining 20 percent of vehicle trips would be to or from the northeast via Highway 101.

The additional traffic generated by the work force and supply movement of both onshore and offshore facilities could have impacts on regional access routes. While the DPP estimates that such impacts would be of low significance because maximum traffic volumes would represent only a 1.3 percent increase over current traffic volumes of 16,000 vpd on Highway 101, the additional traffic could affect capacity available on the access routes for recreational users, especially in peak summer

months. The cumulative impacts of such additional traffic volumes, when considered with other potential energy development in the area, could be significant, considering the major roadway system in the County already has a relatively high existing level of service.

Work force demands generated by the proposed project also could impact available lower cost recreational and visitor facilities. Temporary workers could occupy available transient accommodations otherwise available to regional visitors, and could occupy a substantial number of available low cost RV/camping areas at adjacent parks. The DPP contends that the existing inventory of transient housing is sufficient to accommodate the non-local work force. However, the existing inventory of such housing in the project area needs to be described, the housing needed by the project established, and the cumulative effect of this project on the County's housing supply analyzed. The staff has requested Chevron to submit this information. The potential use of parks by construction workers associated with this project is a concern because information from the Commission's access program indicates that state park camping facilities are often used as temporary housing for such workers. Since the maximum length of stay is 15 days at these facilities, demands by temporary workers could have an impact on the availability of these facilities for visitors.

Any potential increase in noise from the construction and operation of the proposed processing facilities, helicopters, and crew and supply boats could also affect the recreational use of the beach areas. Potential oil spills from offshore and onshore facilities could impact recreational use of beaches.

13. Consolidation of Facilities

Consolidation of facilities is a key policy of the Coastal Act. Section 30250 of the Act requires new industrial development to locate within, contiguous with, or in close proximity to existing developed areas. Section 30260 emphasizes the importance of consolidation for coastal-dependent industrial facilities. Section 30262(b) again highlights the need for consolidated oil and gas development facilities by requiring their consolidation to the maximum extent feasible and legally permissible.

According to the DPP, the proposed Platform Hermosa would be the first in a potential series of platforms producing from the Arguello Field. Chevron anticipates that as other platforms come on-line, they would be connected to Platform Hermosa by the consolidation of Chevron pipelines to shore. The on-and offshore pipelines to be installed for this project are designed with a throughput capacity to serve other operators based on discoveries known at this time. The onshore pipeline would function as a common facility in response to the oil and gas transportation policies established by Santa Barbara County. Moreover, the onshore oil and gas processing facilities at Gaviota and the crude oil storage tanks to be located at either Gaviota or Las Flores are designed to accommodate estimated resource volumes generated by the entire Arguello Field and not just Platform Hermosa. The DPP contends that Chevron's use of Exxon's proposed marine terminal at Las Flores or the proposed consolidated terminal at Gaviota would eliminate the need for an additional new marine terminal along the Santa Barbara coastline, and therefore, could be considered to be a consolidation measure.

Because the proposed project represents the initial development of the Arguello Field, the extent of which is still being delineated through exploratory drilling, it will be difficult for the Commission to determine whether the Coastal Act requirement for consolidation is met by this project. To assist the Commission in this determination, the staff has requested Chevron to provide information on how the proposed processing facility could accommodate the needs of other oil and gas development in Santa Maria Basin. Projections on the number of platforms and wells and the amount of oil to be extracted from the Arguello Field are needed to determine whether the proposed pipelines and processing facilities are adequately sized to accommodate the extensive development projected for this area, and whether these facilities are consolidated to the maximum extent feasible. The proposed platform must be located in the optimum position to extract oil and gas, to minimize the number of platforms necessary to produce the Arguello Field resources. Information has also been requested by the staff on why the Caviota processing site was selected over other sites, such as Las Flores Canyon, and why this site would be the least environmentally damaging location.

14. Compatibility with the Local Coastal Program

The Santa Barbara County LCP was certified by the Coastal Commission in August 1982. Any onshore facility associated with the DPP must be consistent with the LCP. Facilities seaward of the MHTL fall within the Commission's original permit jurisdiction (see Exhibit 3).

The LCP's Energy Component provides for a new coastal-dependent industry designation for all existing energy facility sites. This designation includes the landward support facilities of existing marine terminals. Most energy-related facilities also may be conditionally permitted uses in other land use designations. For instance, crew boat facilities, marine terminals, and oil and gas processing facilities are conditionally permitted uses in the Agricultural II and Rural Residential designations and the View Corridor overlay. Pipelines are permitted uses in all land use designations, and are conditionally permitted in the sensitive habitat overlay. Special conditions apply to pipelines through sensitive habitat, recreational, and archaeological areas. Although outside the coastal zone, the County has designated the Exxon site at Las Flores Canyon for coastal-dependent industry, the County is currently carrying out studies that may lead to amendments in the LCP.

According to the County's "Statement of Policy Relative to the Location of Onshore Oil Facilities," incorporated in the LCP under Policy 6-10, the County favors expansion of existing facilities onto adjacent lands over new sites. Consolidation of facilities on existing sites or on adjacent land will be favored as an alternative to establishment of new separate sites. In addition, Policy 6-6 specifically requires new processing facilities to serve offshore oil and gas development to locate at existing sites or on land adjacent to existing sites, unless the environmental impacts of opening up a new site are less than the impacts of expansion on or adjacent to existing sites. The County, which has coastal permit jurisdiction over those portions of a marine terminal that are on land, favors no more than one additional marine terminal south of Point Conception. The LCP states that marine terminals are not considered appropriate at this time in areas between Point Conception and the Santa Maria River.

The County LCP gives priority to the transportation of crude oil to refineries by onshore pipeline rather than by marine tankering, and contains several policies that trigger the use of an onshore pipeline. If the County determines an onshore

pipeline to be technically and economically feasible, then existing marine terminals will become non-conforming uses. Crude oil will be transported by pipeline, unless the County finds that this is infeasible for a particular operator. Proposals for the expansion, modification, or construction of new oil and gas processing facilities also will be conditioned to require transshipment of oil through the pipeline, unless infeasible for a particular operator.

The County is currently preparing a major amendment to its LCP that will provide information on consolidation, feasible sites, and pipeline feasibility. This information will be crucial to the Commission in its determination that the project meets the consolidation policies of the Coastal Act.

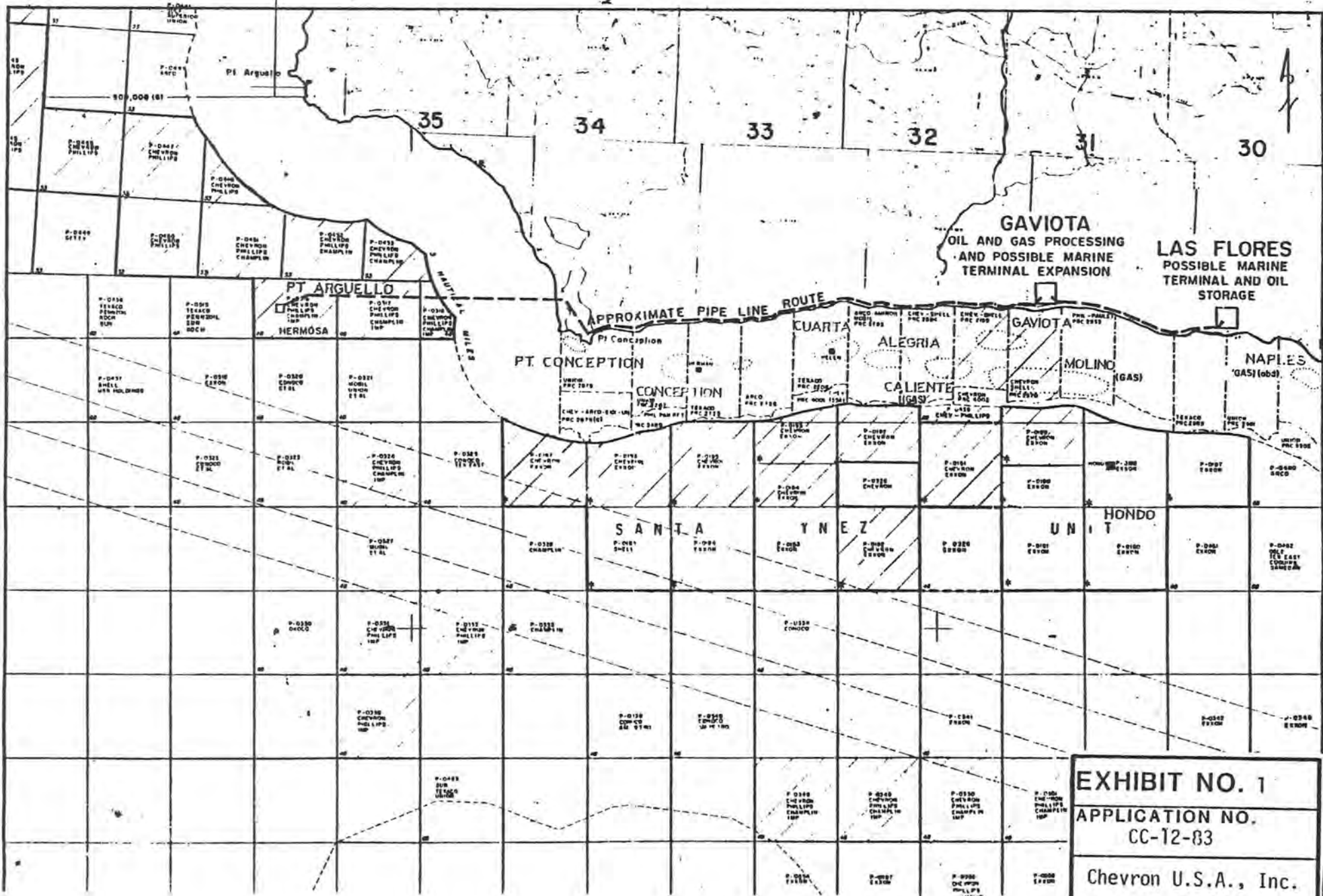



EXHIBIT NO. 1
APPLICATION NO.
 CC-12-83
 Chevron U.S.A., Inc.



California Coastal Commission

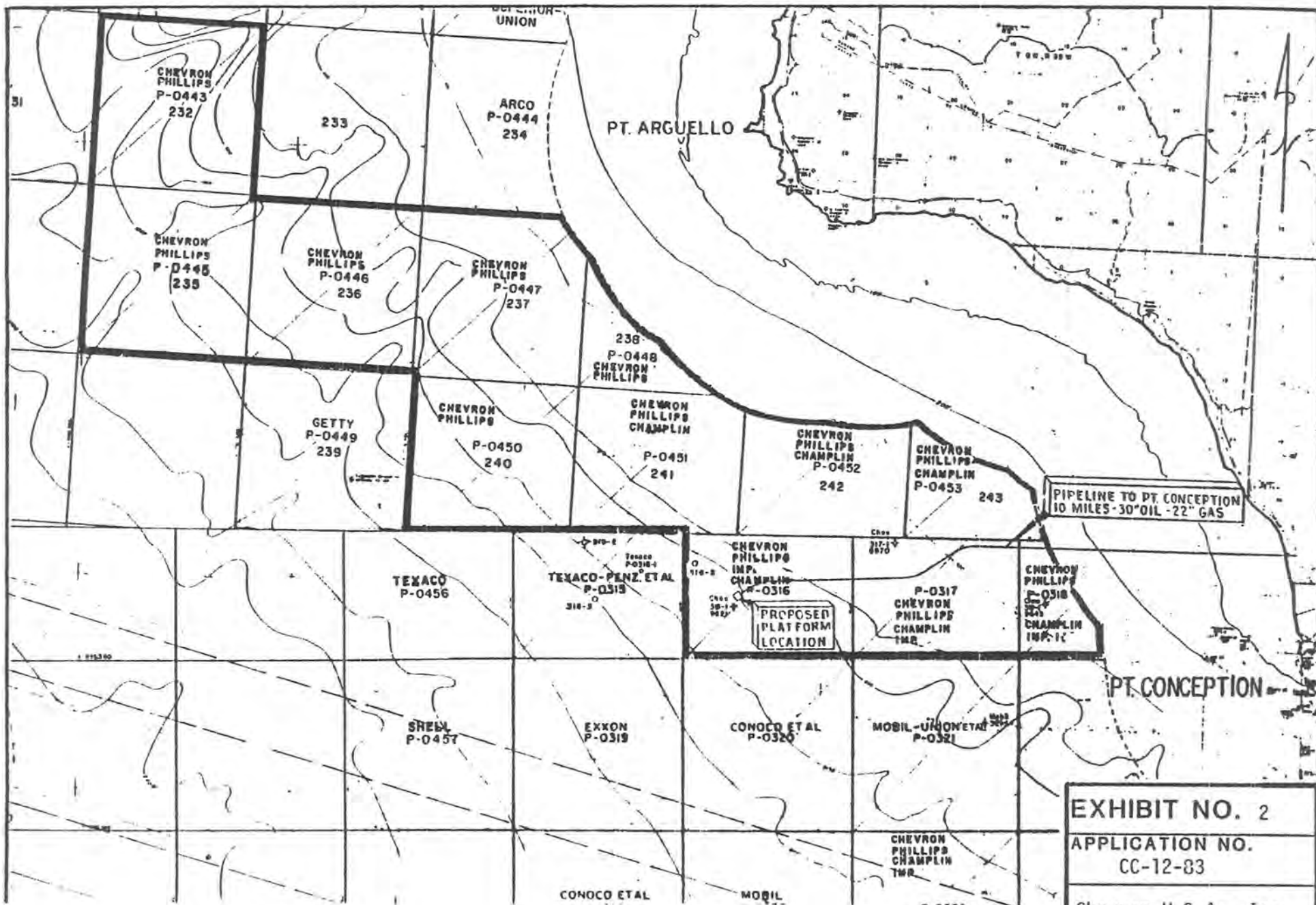


EXHIBIT NO. 2

APPLICATION NO.
CC-12-83

Chevron U.S.A., Inc.

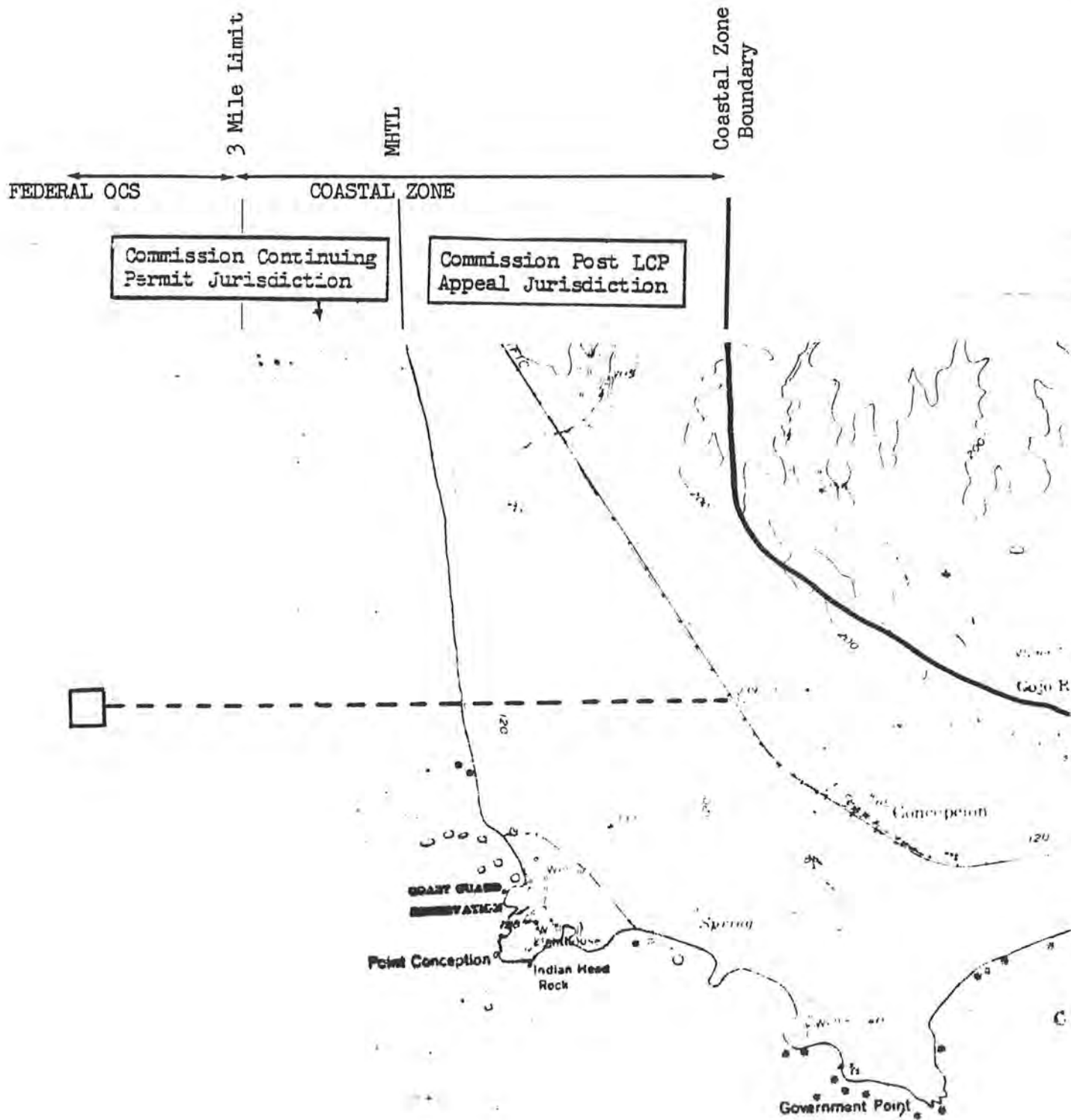



EXHIBIT NO. 3
APPLICATION NO. CC-12-83
Chevron U.S.A., Inc.
 California Coastal Commission

NOT TO SCALE

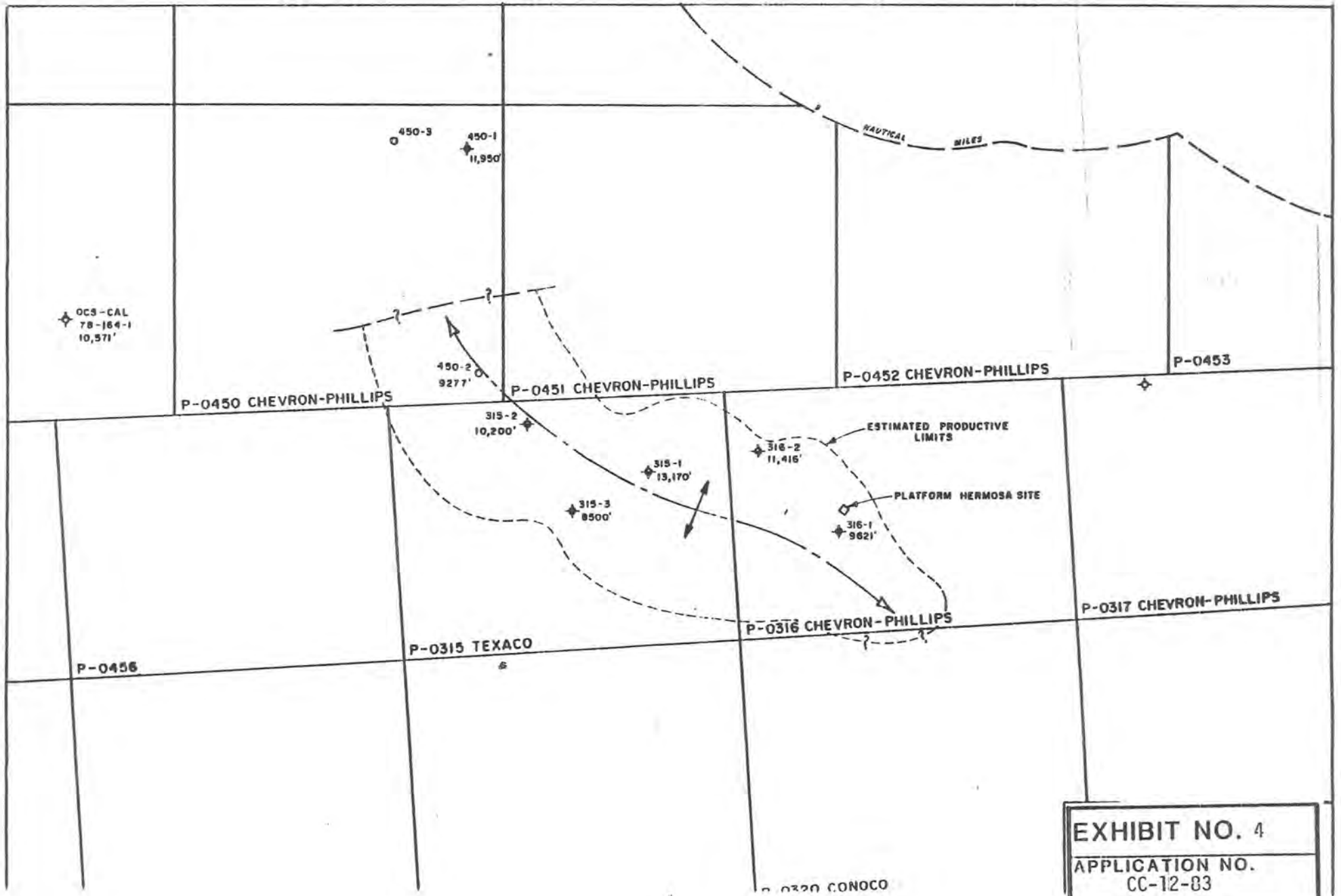
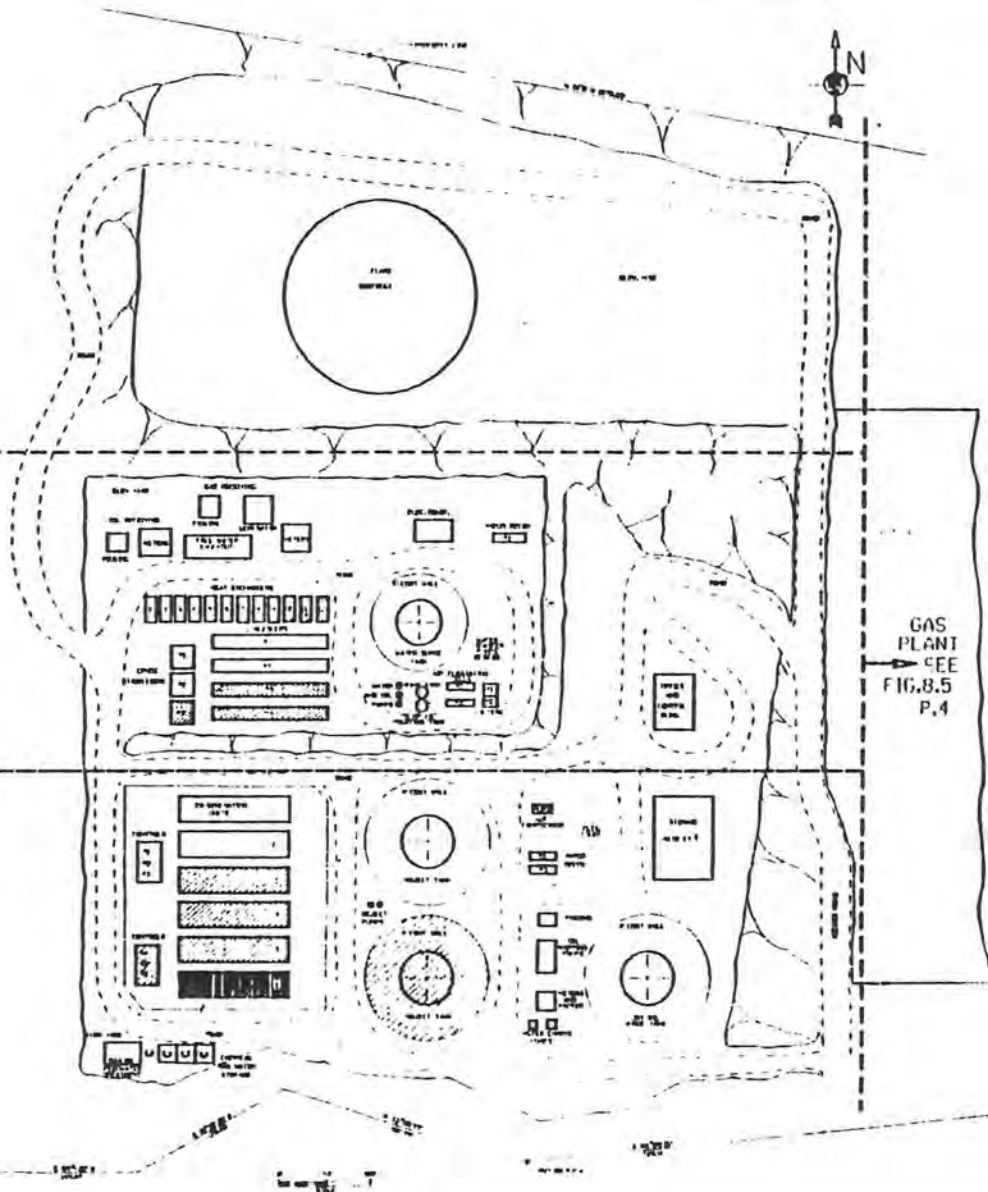


EXHIBIT NO. 4
APPLICATION NO. CC-12-83
Chevron U.S.A., Inc.
 California Coastal Commission

SEE FIG. B.5
P.1

SEE FIG. B.5
P.2

SEE FIG. B.5
P.3



GAS PLANT
SEE FIG. B.5
P.4

EXHIBIT NO. 5

APPLICATION NO.
CC-12-83

Chevron U.S.A., Inc.



California Coastal Commission

- 1986
- 1988
- 1993

FIG. B.4

EQUIPMENT LOCATION ON
OIL AND GAS PROCESSING FACILITY
AT ARCADE FIELD
SAVONUCO, ALABAMA

DATE: 11/83

EXHIBIT NO. 6.

APPLICATION NO.

CC-12-83

Chevron U.S.A., Inc.

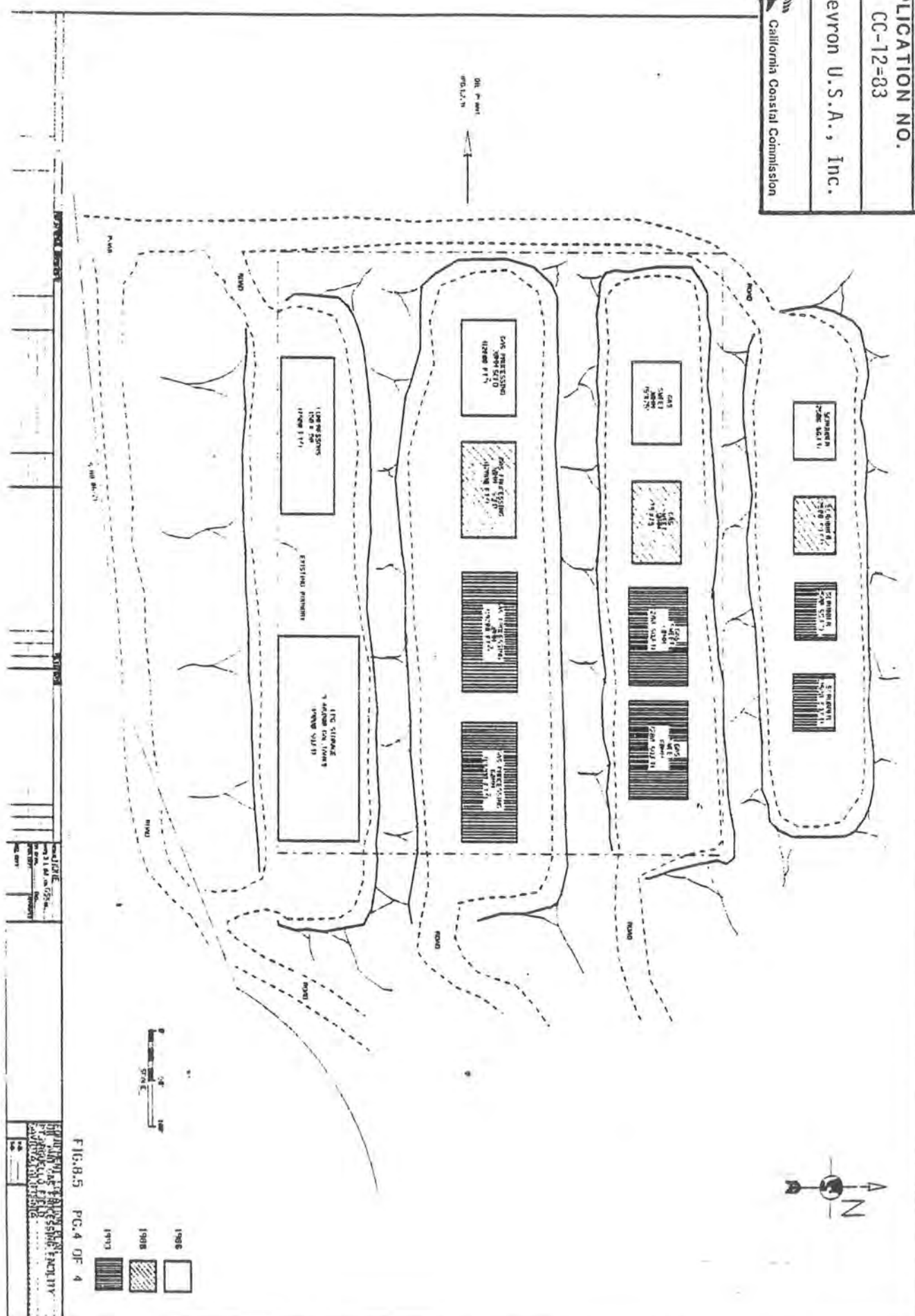
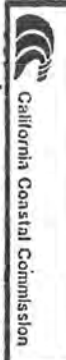
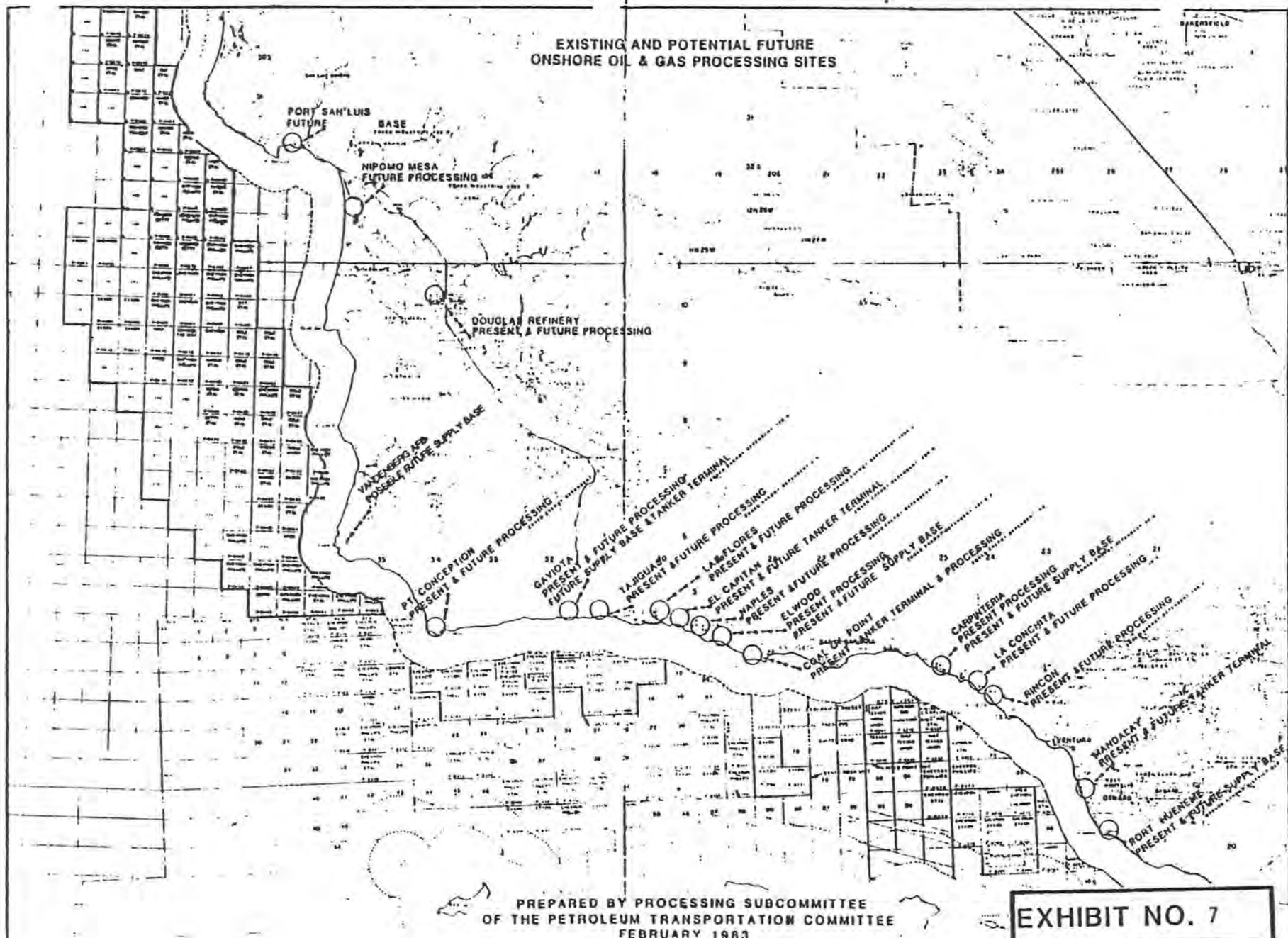


FIG. 8.5 PG. 4 OF 4


DATE: 1/12/84
SCALE: 1" = 50'
DRAWN BY: [illegible]
CHECKED BY: [illegible]

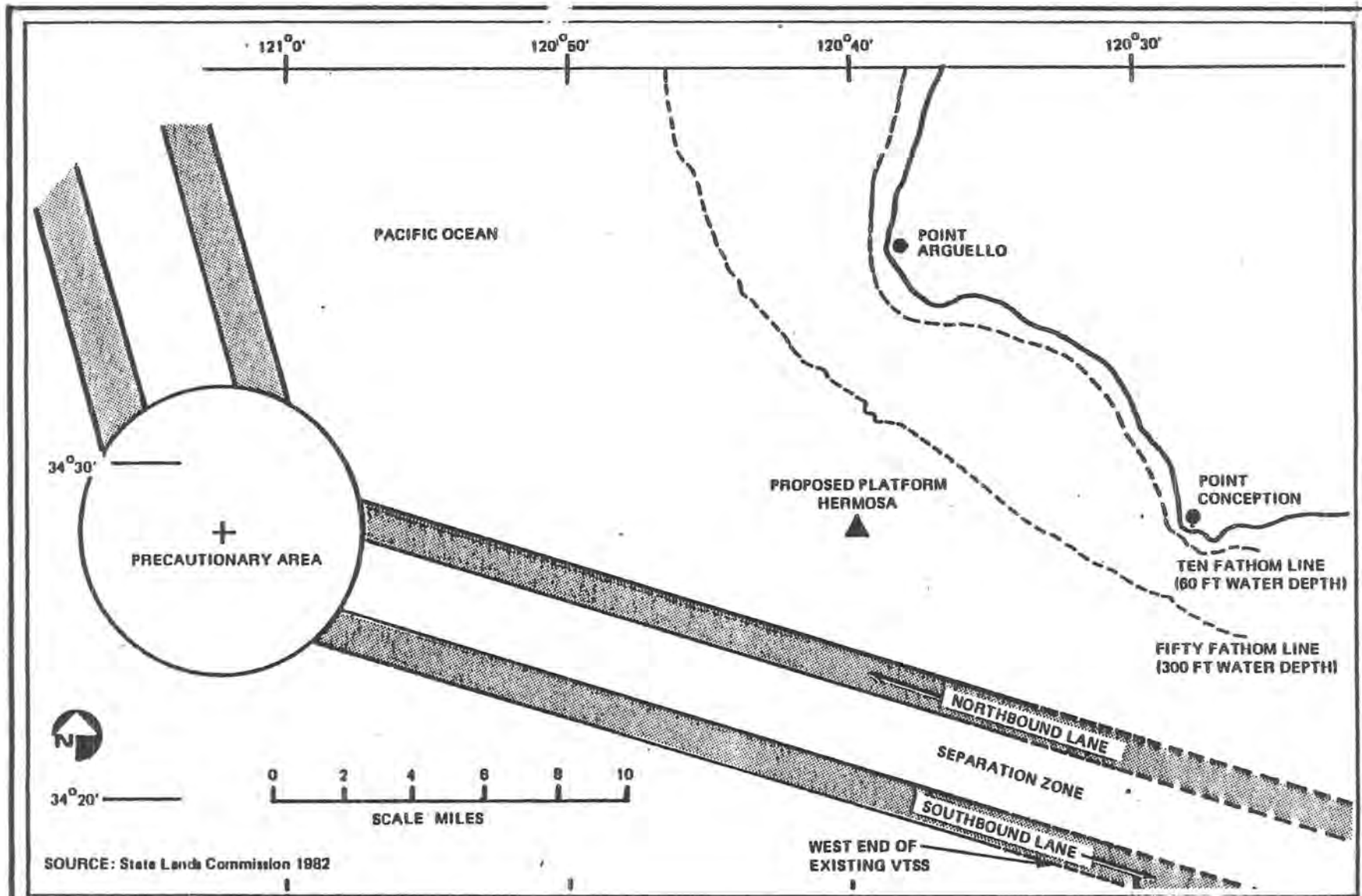
CHEVRON U.S.A., INC.
REFINERY
SOUTH BAY, CALIFORNIA

EXISTING AND POTENTIAL FUTURE
ONSHORE OIL & GAS PROCESSING SITES



PREPARED BY PROCESSING SUBCOMMITTEE
OF THE PETROLEUM TRANSPORTATION COMMITTEE
FEBRUARY 1983

EXHIBIT NO. 7
APPLICATION NO. CC-12-83
Chevron U.S.A., Inc.
 California Coastal Commission



Proposed Extension of Santa Barbara Channel Vessel Traffic Separation Scheme

EXHIBIT NO. 8

APPLICATION NO.
CC-12-83

Chevron U.S.A., Inc.

California Coastal Commission

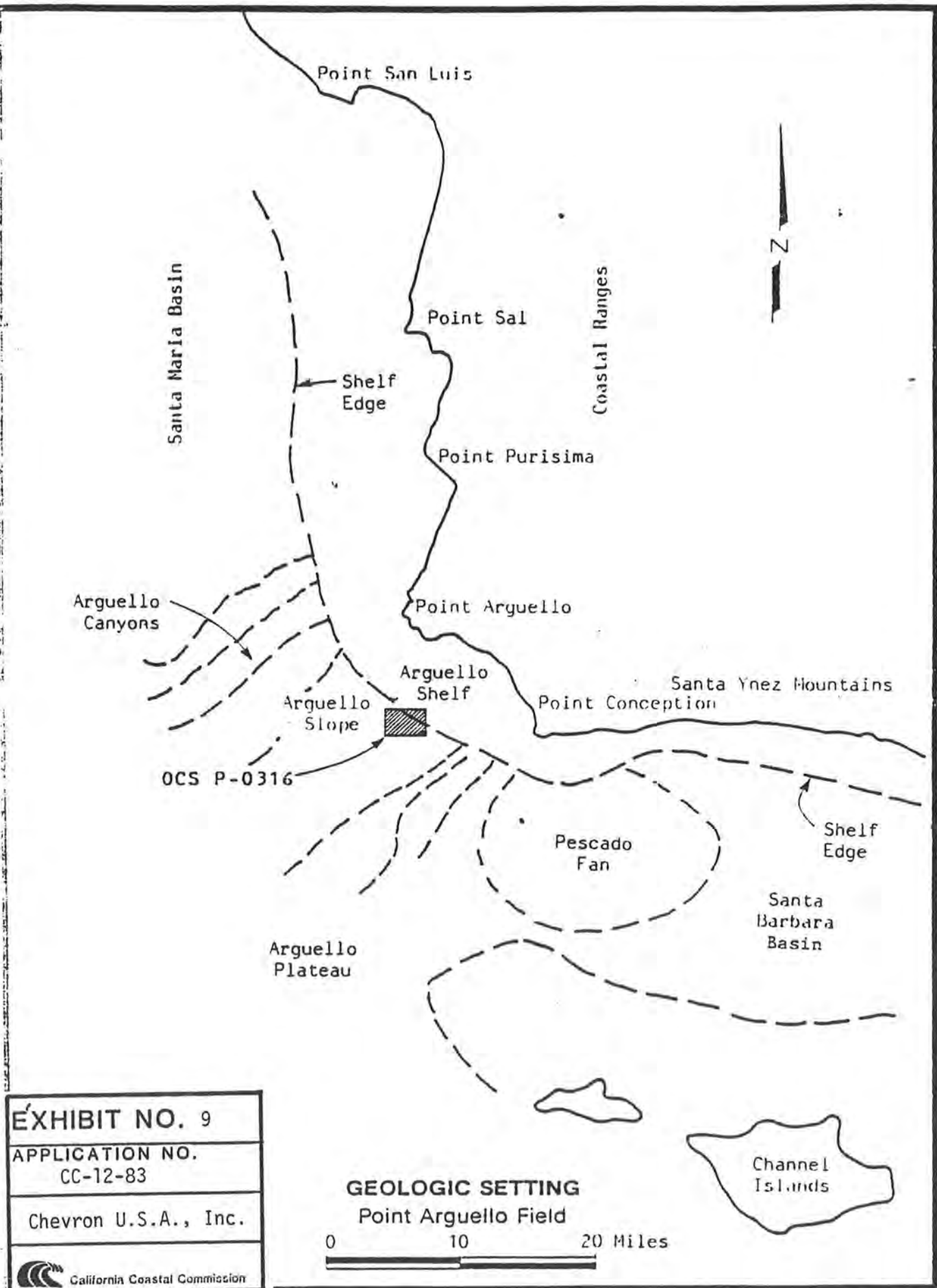



EXHIBIT NO. 9

APPLICATION NO.
CC-12-83

Chevron U.S.A., Inc.

 California Coastal Commission

GEOLOGIC SETTING
Point Arguello Field

0 10 20 Miles



CALIFORNIA COASTAL WATERS

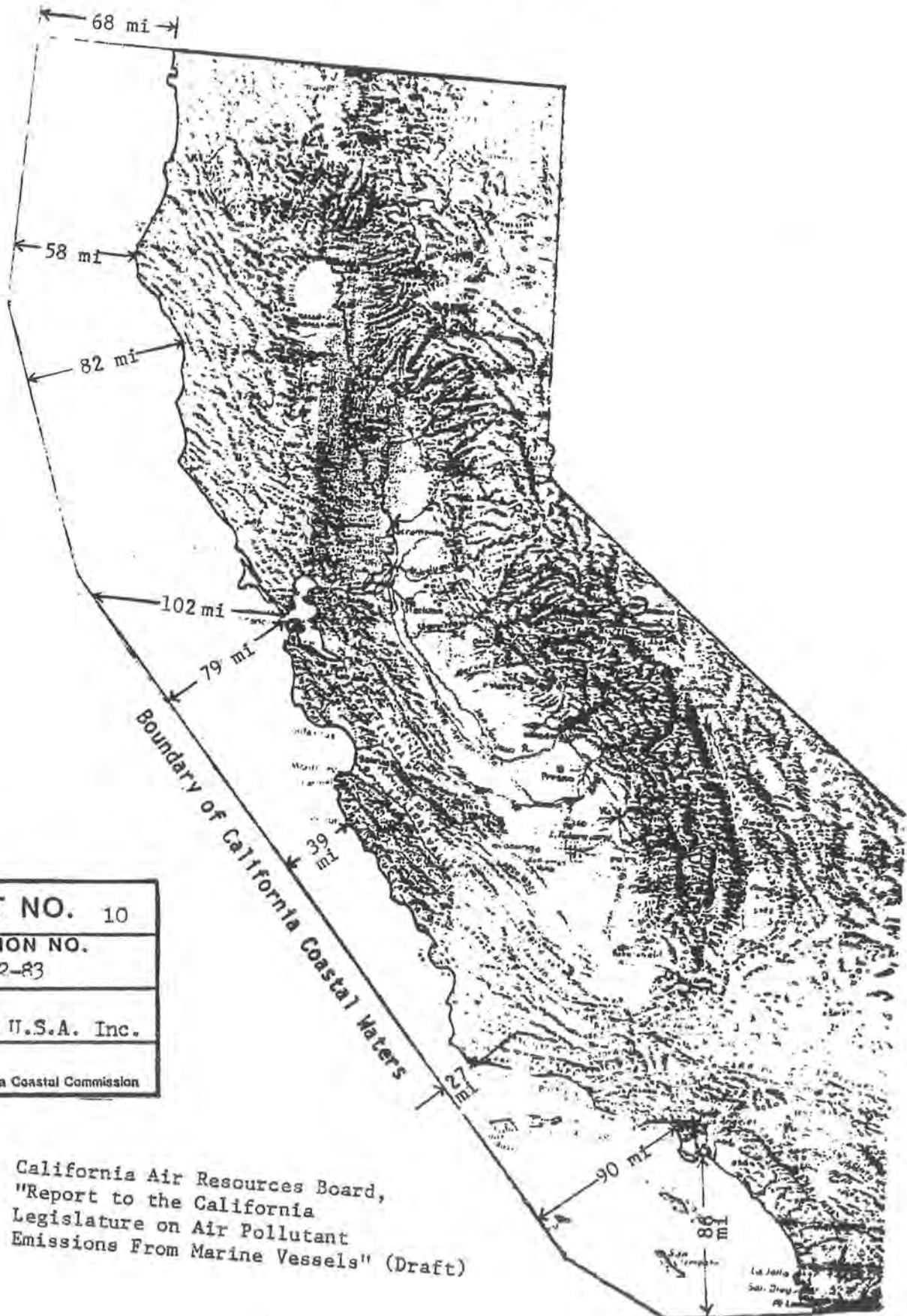

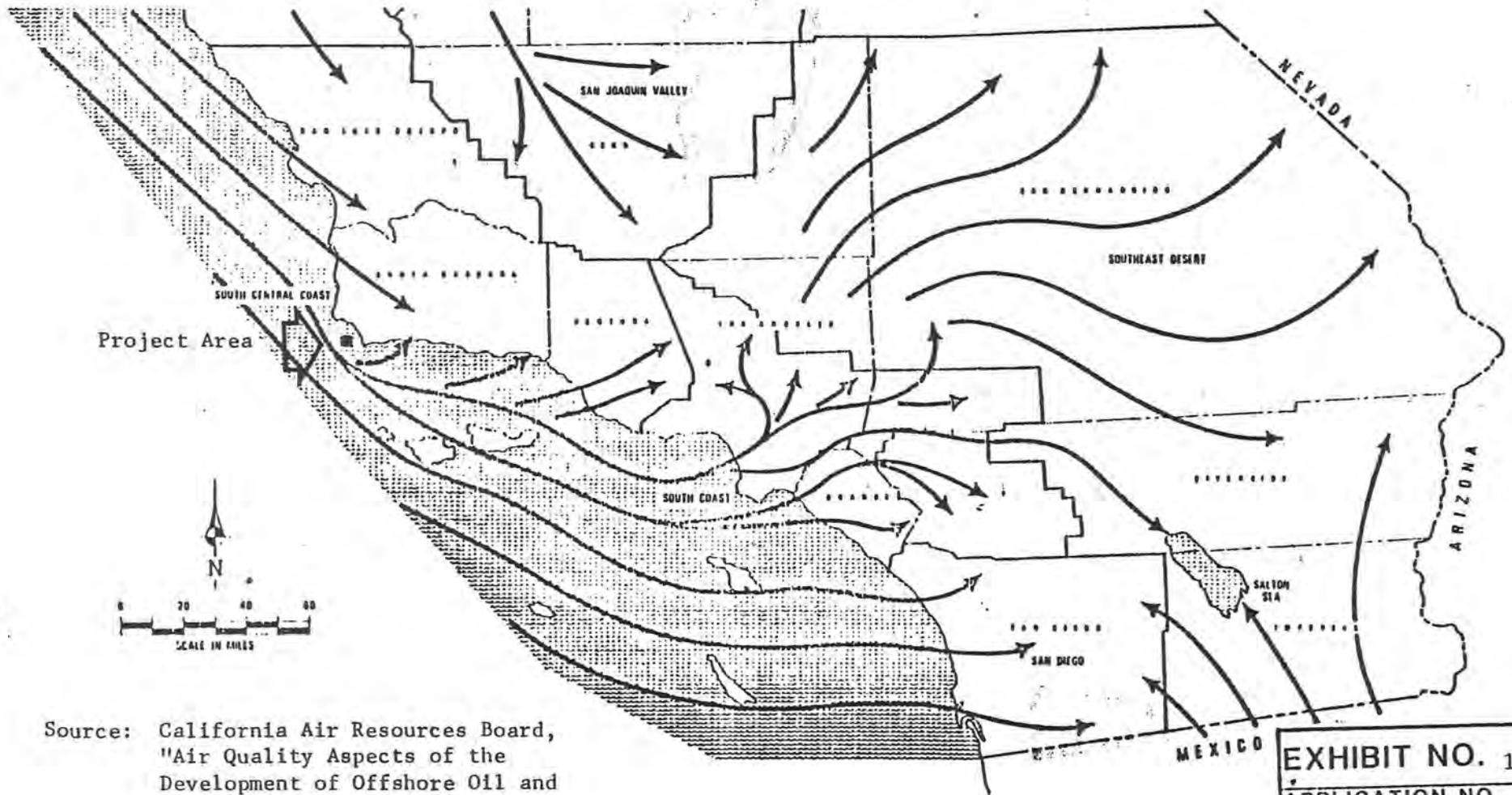



EXHIBIT NO. 10
APPLICATION NO. CC-12-83
Chevron U.S.A. Inc.
 California Coastal Commission

Source: California Air Resources Board,
"Report to the California
Legislature on Air Pollutant
Emissions From Marine Vessels" (Draft)

**SOUTHERN CALIFORNIA
 PREDOMINANT WIND FLOW PATTERNS
 SUMMER (JUNE, JULY, AUGUST)**



Source: California Air Resources Board,
 "Air Quality Aspects of the
 Development of Offshore Oil and
 Gas Resources"

EXHIBIT NO. 11
APPLICATION NO. CC-12-83
Chevron U.S.A. Inc.
 California Air Resources Board Commission

APPENDIX I

Substantive File Documents

1. Chevron USA, Inc., Development and Production Plan and Environmental Report, Point Arguello Field, December 1982.
2. Chevron USA, Inc., Oil Spill and Emergency Contingency Plan for Platform Hermosa, OCS Lease P-0316, October 1982.
3. Dames & Moore, Geohazard and Cultural Resource Investigation, Platform Hermosa Site, OCS P-0316, December 1982.
4. Dames & Moore, Geohazard and Cultural Resource Investigation, Marine Pipeline Route--Platform Hermosa Site to Government Point Area, December 1982.
5. Consistency Certification File CC-7-83, Exxon Company, USA, Santa Ynez Unit.
6. June 29, 1983 letter to Gordon Duffy from Michael Fischer re: Coastal Commission's comments on Chevron's DPP.
7. Santa Barbara County. Coastal Plan. January 1982.
8. National Maritime Research Center, Santa Barbara Channel Risk Management Program, April 1981.
9. California Air Resources Board, Air Quality Aspects of Offshore Oil and Gas Resources, February 1982.
10. California Air Resources Board, Report of the California Legislature on Air Pollutant Emissions from Marine Vessels (Draft), June 1983.
11. Petroleum Transportation Committee Phase II Report, Draft for Public Comment, County of Santa Barbara, Resource Management Department, June 1983.
12. California v. Watt, U.S.D.C., C.D. Cal. #813232-CBM (Mx)
13. Meteorology Research, Inc. and California Institute of Technology, Division of Chemistry and Chemical Engineering, A Study of Transport Into, Within, and Out of Coastal Areas of Southern Santa Barbara County and Ventura County, for Ventura County Air Pollution Control District, June 1981.
14. Letter from E.C. Fullerton, Department of Fish and Game, to Michael Fischer, concerning effects of muds and cuttings discharges.
15. Committee on Assessment of Safety of OCS Activities. Marine Board; Assembly of Engineering; National Research Council. "Safety and Offshore Oil" National Academy Press; Washington, D.C. 1981.
16. May 23, 1983 letter from EPA to Peter Tweedt, Director, Office of Ocean and Coastal Resource Management, concerning the Exxon SYU development and the National Interest.

17. Santa Barbara County-Cities Area Planning Council, Cumulative Assessment of Employment and Housing Impacts of the Space Shuttle, MX, LNG and OCS Projects, 1980.
18. South Central Coast Commission Permit #311-05.
19. Permit E-82-21; Appeal A-4-82-459 (PIPCCO).
20. Letter from Stuart R. Shaffer to Don Neuwirth October 4, 1982.
21. California Coastal Commission, Designation of Coastal Areas Where Construction of an Electric Power Plant Would Prevent Achievement of the Objectives of the California Coastal Act of 1976, September 1978, Revised April 1, 1982.
22. Petroleum Transportation Committee, County of Santa Barbara. Phase I Final Report, Vol. I; Appendices, Vol. II, 1983.
23. Oil & Gas Journal, "Getty Plans Big Expansion of California Terminal," January 17, 1983.
24. California Coastal Commission, "Revised Findings Policy Statement on Conflicts Between Vessel Safety and Offshore Oil and Gas Operations," August, 1982.
25. Exxon Company USA, Development and Production Plan and Environmental Report Santa Ynez Unit, October 1982.
26. Clean Seas Oil Spill Response Manual.
27. California Coastal Commission, Oil Spill Cleanup Capability Study, 1983.
28. Statistical Failure Mode Analysis of Submarine Pipeline Accidents MMS, 1983 Oil Spill Conference.
29. Southern California Coastal Pipeline Volumes I and II - Part C, Bechtel, 1982.
30. Alternative Pipeline Routes for Santa Barbara Channel Crude, Al Reynolds, 1983.
31. 1985 California Oil Scenario Study, Bonner & Moore.
32. California Energy Commission, Petroleum Logistics - Movement of Oil to California.
33. State Lands Commission, 1985 California Oil Transportation Study.
34. Research on Environmental Fate and Effects of Drilling Fluids and Cuttings, Lake Buena Vista, Florida, 1980 Symposium Proceedings.
35. An Environmental Assessment of Drilling Fluids and Cuttings Released onto the Outer Continental Shelf, Volumes I and II, Gary Petrazzuolo.
36. EPA NPDES Permit No. CA0110516 - General Permit; in Federal Register Volume 47, No. 33, 18 Feb. 1982.

37. Ayers, Robert and T.C. Sauer, The Generic Mud Concept for Offshore Drilling for NPDES Permitting, IADC/SPE 1983 Drilling Conference, New Orleans, LA.
38. Steele, J., A Review of Some Physical and Biological Effects of Oil Well Drilling Fluids, January 1983, California Department of Fish and Game.
39. Rieser A. and J. Spiller, Regulatory Drilling Effluents on Georges Bank and The Mid-Atlantic Outer Continental Shelf: A Scientific and Legal Analysis, April 1981.
40. Finalizing Addendum, EIR, Resumption of Exploratory Drilling Operations by the Shell Oil Company, Lease PRC 3314.1, Pierpont Prospect. Prepared by the State Lands Commission.
41. California Coastal Commission Position on National Pollutant Discharge Elimination System (NPDES) Permit activities on the OCS, October 16, 1981.
42. Palter, Alan, Santa Barbara: Offshore Drilling Muds and Cuttings, 1983-1992.
47. Papers submitted to the California Coastal Commission by Exxon, written by: J. Neff, R. Kolpack, T. Sauer, R. Meek, R. Ayers.
48. Oil Spill Intelligence Report, Boston, Massachusetts, August 20, 1981, Page 29.
49. Schatten, G., Effects of Barium on Fertilization and Early Development in Sea Urchin Eggs, 1982 (in press).
50. Brannan, A.C., and K.R. Rao, Barium, Strontium, and Calcium Levels in the Exoskeleton, Hepatopancreas and Abdominal Muscle of the Grass Shrimp, Palaemonetes pugio: Relation to Moulting and Exposure to Barite. Comp. Biochem. Physiol. 63 pp. 261-274, 1979.
51. Neff, J.M., Final Summary Report to the API, Effects of Used Drilling Muds on Benthic Marine Animals, 1979.
52. Sweeney, B., Testimony Before the Administrator, US EPA, In re Diamond M Drilling Company, 1981.
53. Tagatz, M.E. et al., Effects of drilling mud on development of experimental estuarine macrobenthic communities, pp. 847-865, Symposium, Research on Environmental Fate and Effects of Drilling Fluids and Cuttings, Lake Buena Vista, Florida, 1980.
54. Foy, M., Acute Lethal Toxicity of Prudhoe Bay Crude Oil and Corexit 9527 to Arctic Marine Fish and Invertebrates, Environment Canada/Environmental Protection Service, 1982.
55. Special Report: Ixtoc I., Oil Spill Intelligence Report, Boston, Mass., January 4, 1980.

56. Vielvoye, R., "A Sobering Message On Oil Spills", Oil and Gas Journal, August 11, 1980.
57. Kent, Donald B., Stephen Leatherwood, and Lyne Yohe, Responses of Migrating Whales, Eschrichtius robustus, to Oil on the Sea Surface: Results of a Field Evaluation. Vol. I of II.
58. Dames & Moore. Site Specific Marine Biological Survey Chevron Platform Hermosa Project Western Santa Barbara Channel for Chevron USA, Inc. February 14, 1983.
59. State Lands Commission, Chambers Consultants. Program Environmental Impact Report. Leasing, Exploration and Development of Oil and Gas Resources on State Tide and Submerged Lands, Point Conception to Point Arguello, Santa Barbara County, California. April 1982.
60. California Coastal Commission, "Revised Staff Report and Preliminary Recommendation - State Lands Commission - Point Conception-Point Arguello May 12, 1983. (considered at May, 25 1983 Coastal Commission hearing)
61. Orr, Robert T., Marine Mammals of California. Berkeley University of California Press, 1972.
62. Gotshall, Daniel W., Pacific Coast Inshore Fishes, Sea Challengers: Los Osos, California, 1981.
63. Ricketts, Edward F., and Calvin Jack, Between Pacific Tides. Stanford University Press, 1939, updated 1968.
64. Norris, K.S., T.P. Dohl, R.C. Guess, L.J. Hobbs, and M.W. Honig. 1976. Cetacea: numbers, distribution and movements in the Southern California Bight. In: University of California Santa Cruz, 1976. Marine Mammal and Seabird Survey of the Southern California Bight. Volume 3. Principal Investigators' Reports. Book 1: 270-441.
65. State Lands Commission, Technical appendices, draft program environmental impact report, leasing, exploration and development of oil and gas resources on state tide and submerged lands, Point Conception to Point Arguello, Santa Barbara County, California. Appendix A, Marine Biological Survey Report. 1982.
66. University of California, Santa Cruz, Marine mammal and seabird survey of the Southern California Bight. Volume II. Detailed Synthesis of Findings. 1978.
67. _____. Marine mammal and seabird study, central and northern California. Annual Progress Report, U.S. BLM POCS Tech. Paper 92-1, 1982.
68. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Final environmental impact statement of the proposed Channel Islands marine sanctuary. 1980.
69. Nekton, Inc., A biological survey of a hard bottom feature, Santa Maria Basin, California. Report prepared for ARCO Oil and Gas Company.

Fifty miles north of Santa Barbara a narrow blacktop road peels off Pacific Coast Highway and heads west across El Cojo-Jalama Ranch toward a high bluff that overlooks the open sea. There is little to see now save a distant scatter of drilling rigs, harbingers of the coming transformation. This reach of water between Point Conception and Pismo Beach is currently America's hottest exploration play, the site of the most significant oil discoveries since petroleum was found beneath Alaska's Prudhoe Bay in 1968. In coming years, huge production platforms will be installed within sight of this bluff—ten or twelve at the outset, perhaps many more before the supply is exhausted. In a sense, they will be Interior Secretary James Watt's firstborn, the first tangible fruit of his crusade to open the coast to energy moguls. Watt entered office during a huge squabble over leasing in this region, he stood firm against the environmental ditherers, and he made some intriguing royalty decisions—decisions that might have raised questions about his custodianship of public resources but passed unnoticed. While environmentalists were rallying to "save" these waters two years ago, America's secretive oil companies were engaged in an entirely different game. It might be called exploration poker, the stakes were billions of dollars, and this is how the cards were played.

THE STORY RE-
volves around a
mysterious rock
called the Mon-
terey formation, a
rock that yields tarry
sludge in some wells
and fine oil in others,
a rock that eluded all
understanding until
very recently. Like
most worthy enigmas,
the Monterey can as-
sume several forms, but a common sample is dark brown,
flecked with yellow, and finely grained, like a slow-growing
wood. Its surface is sometimes scarred with innumerable
tiny fractures that glisten in strong light and give it a slick,
greasy appearance, although it is cold and dry to the touch.
This formation is the key to the new California offshore oil
boom.

To understand why, we must step back to the Miocene
era, when saber-toothed tigers were at large and the
breakers of a sea lapped at what are now the outskirts of
Taft, in Kern County. The waters of that sea were rich in
microscopic marine life. As these creatures died, their
corpses accumulated in great drifts on the floor of a vast
sedimentary basin that lay north of today's Santa Ynez
range. Over the millennia these deposits were buried be-
neath 10,000 feet of silt and organic detritus, subjected to
heat and pressure, and transformed into an oil-bearing
rock known properly as the Miocene Monterey. In time,
powerful tectonic forces raised the eastern portion of the
basin out of the sea and plunged its seaward sector deeper
into the earth's crust. Seven million years later geologists
named this feature the Santa Maria basin and struck oil in
its dry land portion in 1902. They suspected there might be
oil in its submarine sector, too, but they had to wait 77

years before the federal government opened it up for
exploration.

In part, the delay was caused by environmentalists, who
figured there was too little oil in the basin to justify pillage
of the fragile coast. In Jerry Brown, California had a gov-
ernor sympathetic to that point of view, a man whose eyes
were fixed on a vision of alternative, benign energy
sources. Brown loved to denounce oil's dark empire—
"mammon, money, profit," and in his eight years in office
he was involved in seven major lawsuits to slow or stop
the advance of the oil rigs northward from Santa Barbara.
The haggling over the Santa Maria basin began in 1976
and dragged on for five years. Under pressure from ecologi-
sts, bureaucrats were reduced to such futile tasks as

balancing critical
energy needs against
the Chumash Indians'
belief that Point Con-
ception was the gate-
way to heaven. As for
the oil companies,
their high-minded
cant about "national
security" and "energy
independence" con-
cealed little more than
prospectors' greed.
The petroleum multi-
nationals had grown
fat and torpid on
cheap foreign oil, but
by the late seventies
OPEC had usurped
their reign over the
world oil market. In
every oily corner of
the Third World the
once-docile native
had risen up and
grabbed up to 98 per-
cent of oil revenues
for their own. Amer-
ican oil companies
were turning their at-
tention back to their
home turf, where the

THE SANTA MARIA GAMBIT

Spies watched the drillships
in the Santa Maria basin.
Chevron was up to something,
and its rivals were running
out of time to discover what.

BY RIAN MALAN

government was reliable and sweeter royalty deals were to
be had.

Consider the plight of Standard Oil Company of Cali-
fornia, or Socal, fifth largest of the oil world's legendary
"seven sisters," the three largest American companies being
Exxon, Mobil, and Texaco. In its youth, "Big Red" was an
aggressive "upstream" operator, willing to take exploration
risks. The company opened up most of California's major
fields, and in 1935 it made the first historic discoveries
beneath the sands of Saudi Arabia. In the early years it held
50 percent of Aramco, the consortium that controlled the
Saudi concession, and grew dangerously dependent on
crude oil from that locale. After Saudi Arabia's 1977
takeover of Aramco, however, Socal began to lose control
of its own destiny. In all, foreign sources accounted for 86
percent of its 1977 production. On the domestic side its
crude output had been declining steadily for some ten
years. The San Francisco-based company needed a big
domestic find in the worst way.

When the first federal leases in the basin were put on the
auction block in June 1979, Socal's domestic subsidiary,
Chevron U.S.A., and three partners dominated the bid-
ding. They snapped up 21 exploration tracts for \$5
million—a show of enthusiasm that mystified the competi-

tion. The sale terrain didn't seem all that promising—a mere five years earlier, in fact, the oil companies had rated it second lowest of seventeen regions in which they wanted to hunt for oil. “They didn't know what the heck we were doing,” chuckles Chevron's district manager, Jim Kistler, “because they didn't know what we had.”

Oil exploration is a stealthy business, which suggests why security is so tight around Chevron's western exploration headquarters, located in an industrial park in Concord, California. The building is sheathed in black glass, giving it a vaguely forbidding aspect, and visitors must pass through a security post in the lobby, through a turnstile manned by red-jacketed guards, and ride in an elevator that moves only if a valid security pass is held against a black box on its wall. The doors open on a warren of offices in which geologists and geophysicists labor over maps and computer printouts. Circa 1978 someone in this building—Chevron won't say exactly when, or who—was poring over geophysical data on the Santa Maria basin when something caught his eye.

The data he was looking at had been gathered by seismic research vessels, which trolled back and forth above the basin while technicians measured the time it took shock waves to penetrate the seabed, bounce off the various rock strata beneath, and return to the mother ship. As the data was processed and reprocessed, a dim and indistinct picture of the subterranean landscape emerged. To take liberties with an abstruse science, layer upon layer of rock was peeled back to reveal a dozen or so vague, sluglike shapes lying on the floor of the basin, thousands of feet beneath the seabed. The largest of these structures were several square miles in extent and thousands of feet high—one, in fact, reared up more than a mile and broke out on the sea floor, where tar seeped from fissures on its surface. They were potential oil traps, huge folds of Monterey rock buried deep in the crust and sealed beneath drapes of the younger, impermeable Sisquoc formation. If there was oil in the basin, it would be found within them.

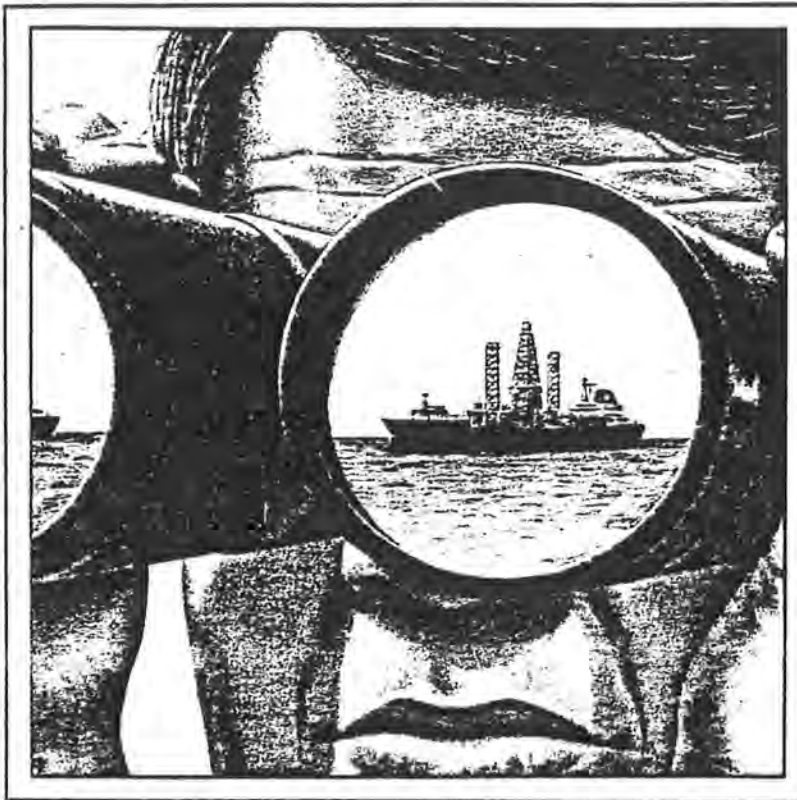
To the considerable extent that offshore exploration is a gamble, these traps were shells in a shell game. Geophysics is an exacting but limited science. Only the drill bit determines if there's oil, and before any drilling is done, the oil companies must buy exploration rights from the federal government. Sold to the highest bidder at competitive auctions, offshore exploration leases are a very risky investment. Some of the traps in the depths of the Santa Maria basin were seductive, but so was the Destin Dome, an enormous trap off the coast of Florida, and it had fooled the best geophysicists in the business in 1973. By the time it was drilled and found dry, oil companies had spent a collective

\$1.5 billion on worthless exploration leases. Two years later, the same illusory promise beguiled the industry into squandering \$162 million on the barren Tanner Bank, off San Diego. In the offshore oil game, you win big, you lose big. Or, you find a way to beat the odds, as Chevron's mystery strategist did back in 1978.

At the time, several oil companies were interested in a giant trap that lay thirteen miles from the Point Conception lighthouse and 7,000 feet beneath the sea. It was about six miles long, three miles wide, and it bulged at either end, which led one exploration team to name it *hueso*, Spanish for “bone.” Chevron noticed that the bone trended across the border between the areas of lease-sale 48, scheduled for June 1979, and lease-sale 53, set for May 1981. About

three-fifths of its massive bulk lay north of the border line in lease-sale 53. A daring strategy beckoned. If Chevron bought certain parcels in the first sale, it would hold exploration rights to the bone's southern portion and might get a chance to drill into it before the second sale—to see what lay beneath the shell, so to speak. If there was oil on one side of the border, there probably would be oil on the other, and Chevron would be in an unbeatable position in the 1981 sale.

The first phase of Chevron's Santa Maria gambit went into effect in June 1979, when the company's consortium picked up 21 tracts in lease-sale 48. Among



them were parcels 316, 317, and 318, which lined the boundary of the future sale. Parcel 316 lay above the bone; its neighbors likewise covered geological features that spanned the border. Chevron's plan was to drill all three—provided, of course, that the next sale was actually held.

Opposition ran higher than ever, because lease-sale 53 was initially supposed to extend all the way north to Eureka. Jerry Brown mounted yet another court challenge. A congressional subcommittee held six stormy hearings in California, at some of which Chevron's representative, often the only oilman present, was booed and jeered. The sale hung in the balance until October 27, 1980, when the Interior Department finally lopped off the northern terrain and announced that the auction of the Santa Maria basin would proceed the following May. Chevron scrambled into action. By Christmas, it had moved three drillships out onto the border of the coming sale.

It was a cold, foggy winter, but an auspicious season for oil exploration. The unofficial spot price for crude had recently hit \$44 a barrel, and experts were saying it would reach \$100 by the end of the century. What's more, Ronald Reagan had just been elected president—with oil company support, of course—and he had sworn to decontrol domestic oil prices as soon as he stepped into office. Given this

rosy outlook, there was much suppressed excitement at Chevron as exploration proceeded.

The honor of drilling the bone fell to the *Glomar Atlantic*, a drillship chartered from Global Marine. From his crow's nest, the rig's derrickman had a fine view of the Santa Barbara Channel, leading off to the east like a broad river, and the islands of Santa Rosa and San Miguel, rising like sounding whales some thirty miles to the south. The *Glomar Grand Isle* and the *Glomar Coral Sea*, the second and third instruments of Chevron's gambit, were anchored close by. To the east lay Point Conception, and beyond it rose the rugged Santa Ynez range. As his eyes traversed this sector of the horizon, the *Atlantic's* derrickman might well have caught the glint of sunlight on binoculars, because his drillship was being watched.

AT FIRST, ANGLERS fishing for sand perch on the beaches around Point Conception thought the men on the bluffs were watching whales, but their interest was too intense, too persistent. They had appeared soon after the drilling started. They would spend hours staring out to sea through their high-powered telescopes and binoculars and jotting down notes, even though there was nothing out there save the distant line of drillships. But to the trained eyes of these well-paid oil scouts, the drillships were endlessly fascinating. The spies were keeping track of the lengths of drill pipe that went down Chevron's wells; from that, they could calculate the holes' depths and guess Chevron's probable targets.

There were other mysterious goings-on—light planes and helicopters that came out of the south and buzzed the rigs at 500 feet, parties of geologists who chipped at tarry outcrops on the beach—sights that the locals noted and shrugged off. Point Conception wasn't the sort of place where one expected to be drawn into a secret game of high-stakes poker, the object of which was to breach Chevron's security by May 28, 1981, the date set for the next sale. The scouts, whoever they worked for, were left to their anonymous selves.

Port Hueneme was an equally unlikely setting for intrigue, a 600-yard wharf and a row of warehouses on the coast south of Oxnard. A dwindling fishing fleet docked there alongside the weekly Del Monte banana boat from

Rian Malan is a contributing editor of California Magazine. His last feature was "The Final Deal," in the December 1982 issue.

Ecuador and a flotilla of oil-field supply boats, sturdy dray horses that plied to and from the oil platforms out in the Santa Barbara Channel. At the outset, some oil skippers were sworn to secrecy and contracted to make the ten-hour run up the coast to Chevron's exploration site. Their boats carried steel pipe and heavy machinery on the outward journey and returned laden with sewage and drilling-rig trash—routine stuff, until the day a young wharf master was refused permission to inspect one of Chevron's cargoes. That was unheard of.

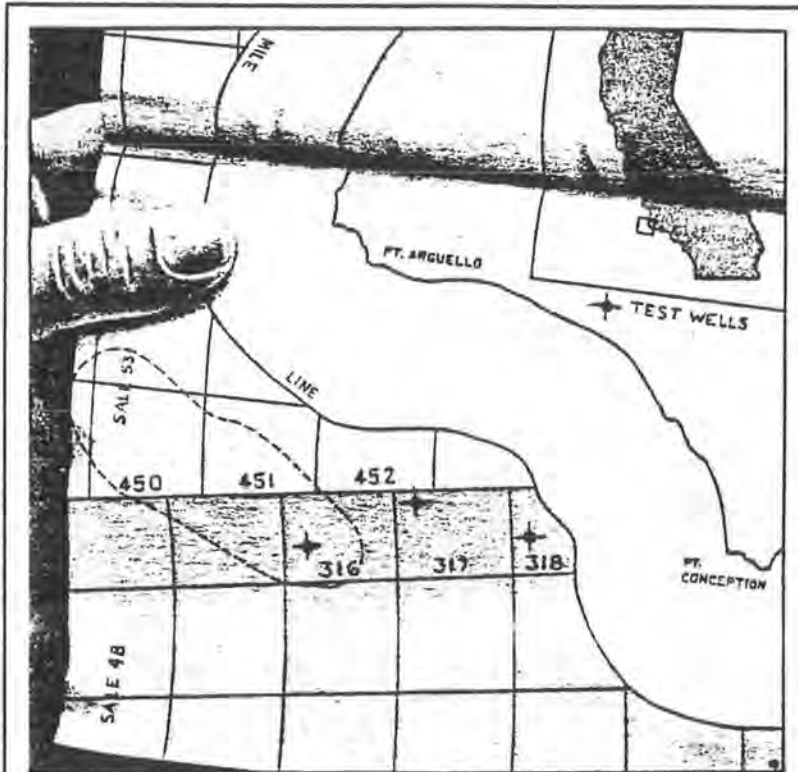
"What do you have there?" he demanded. "Nothing," Chevron's men replied. He had to threaten to kick the boat out of port before the seamen grudgingly admitted that they had several hundred barrels of something aboard, although they were damned if they would say what.

Soon after this standoff, Chevron's supply boats and barges began coming into port under cover of darkness. On those nights the wharf crawled with uniformed Chevron guards. While scouts watched from the shadows, vacuum trucks rolled up out of the dark and parked along the quay. Men slung hoses onto the boats and pumped out their contents. The trucks roared off with a guard riding shotgun in every cab, the scouts often tailing them until they disappeared through the gates of a Chevron facility. Chevron was taking no chances. Once the trucks had left the wharf, workers moved in and wiped it down, lest any of these mysterious liquids had spilled, and, finally, dusted it with a sandy substance. At the harbor office, Chevron was

booking its shipments as sludge and water, but at least one wily scout knew better. He noticed that each truck carried a sticker warning that its contents were flammable and also a code that seemed to signify something. All it took was a phone call to the Department of Motor Vehicles to find out that the code stood for crude oil.

The Santa Maria sale was growing desperately competitive, and small wonder. Most of the world's oil fields were located in politically turbulent backwaters, far from major markets; here was a potential source within spitting distance of Los Angeles and literally in the shadow of the Vandenberg missile base. Above all, it was geologically promising. "We knew there was oil out there," says Lawrence Funkhouser, parent company Socal's senior vice president for exploration. "The only question was where."

Among the reasons for Funkhouser's optimism was a



Chevron noticed that parcel 316 lay above the giant oil trap. A daring strategy beckoned.

revelation that befell his company and Exxon in 1969, when they were drilling in a sector of the Santa Barbara Channel that eventually became the half-billion-barrel Hondo field. Having failed to find the sandstone they were searching for, they decided to test the ubiquitous Monterey, more or less for the hell of it. The formation was regarded as a dead loss at the time. It was known to produce oil of a lowly sort in onshore fields—heavy, sulphurous crude that had to be coaxed out of the ground by patient horsehead pumps at the rate of a few barrels a day. Such dubious sludge could never support the enormous costs of offshore production, so offshore drillers had pretty much ignored it until this occasion. Boom—they struck oil light enough and flowing strongly enough to be produced profitably at sea.

Puzzled, the companies set out to discover why their assumptions about the Monterey were so far off base. Exxon won't discuss its conclusions at all—in fact, no oil companies save Chevron were prepared to talk about their exploration activities, and Chevron's employees did so only under strictly guarded conditions. Stopping far shy of full disclosure, Chevron conceded that the so-called bug factor seemed to be responsible for the Monterey enigma. Onshore, the formation has been uplifted so far from the earth's molten core that it is relatively cool—cool enough to be infested with microbes that attack the oil, eating the lighter hydrocarbon molecules, and leaving a stubborn, tarry residue. Offshore, on the other hand, the formation is sometimes buried in deep, torrid regions where microbes can't survive. Chevron's geochemists calculated that a Monterey deposit heated to more than 150 degrees stood a good chance of containing medium-grade oil.

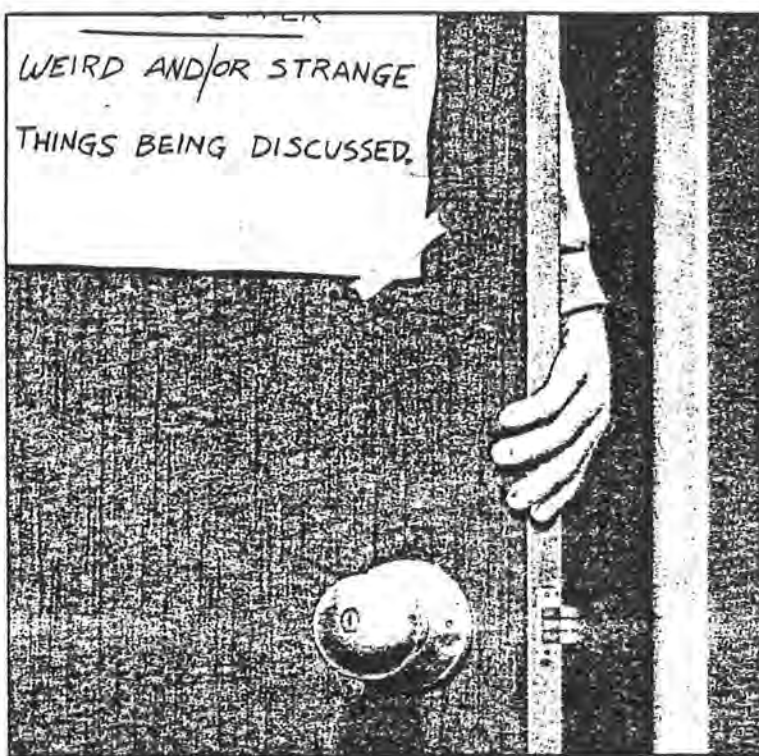
This hypothesis cast a particularly exciting light on the Santa Maria basin, where—Chevron's strategists now recalled—an abandoned exploration well had drilled through rich beds of oily Monterey back in 1965. In the basin's bowels there were strange thermal anomalies, mysterious upwellings of heat from the earth's molten core. What caused them was uncertain, but they meant that the vast Monterey deposits were probably too hot to be infested with microbes.

Before Chevron could exploit its discovery, however, a Union Oil well down the channel from the Hondo strike blew out and fouled beaches with 3 million gallons of crude. The January 1969 spill also poisoned the political climate

against oil exploration, which slowed to a crawl for the next eleven years. It took two devastating energy crises and President Carter's declaration of the "moral equivalent of war" on energy shortages to get the process moving again, and by that time, Chevron had secretly accumulated a storehouse of research on the Monterey.

In a feverish, last-minute attempt to catch up with Chevron, rival companies began to besiege Caroline Isaacs, a young U.S. Geological Survey staffer who had been studying the formation in utter obscurity for six years. But now, as lease-sale 53 drew close, she was press-ganged into leading a field tour of the Point Conception region. Four busloads of corporate geologists showed up for the trip, and more tagged along in their own cars. Anarchy

resulted. Isaacs wound up striding down the beach at the head of a three-mile-long straggle of anxious geologists. Chevron was up to something, and the competition was running out of time to discover what.



Mero sensed a thrill ripple through the exploration department. Now secrecy was redoubled.

the formation. But was there enough of it? Was it light enough to be produced at sea?

Larry Funkhouser wasn't optimistic. "The mud log was whispering instead of ringing bells," he says. Chevron was thus not overly concerned when one of its partners, Champlin Petroleum, decided to break away and bid with a rival consortium in lease-sale 53. Chevron had wanted to "promote" Champlin—have it bear a disproportionate share of the exploration costs in return for the privilege of playing on Chevron's team in the upcoming sale. Champlin balked, and walked. It was a major strategic error on Chevron's part, and the company would bitterly regret it.

The *Atlantic* drilled for 52 days, and finally, on February 27, 1981, the well was ready to be tested to see what the rocks beneath the sea would bring forth. A device known as a gun was brought aboard. It resembled nothing so much

as a 40-foot pipe bomb, bristling with charges designed to smash the well's lining and cut twenty inches into solid rock. Now, it was carefully positioned in the heart of the trap, and the moment of truth had come.

In Chevron's corporate offices on Market Street in San Francisco, geologist Bill Mero struggled to keep his mind on his work. An angular, intense man in his forties, he had been with Chevron since 1962, and this test was something of a high point in his career. He knew the bone very well. He had mapped it back in 1978, and it was partly to his credit that it had been drilled at all. "I'll be honest," he says, "I mapped optimistically"—meaning that he stretched the data to support his conclusions. Mero sold his notions to his immediate superior, district manager Jim Kistler, who in turn sold them to those further up the exploration hierarchy, so that Mero at last had "generated a play," as he put it. This in itself was a triumph. Offshore wells are so expensive to drill (\$20 million) and risky (three in four fail) that a geologist's chances of seeing his work realized are almost as slender as a Hollywood screenwriter's.

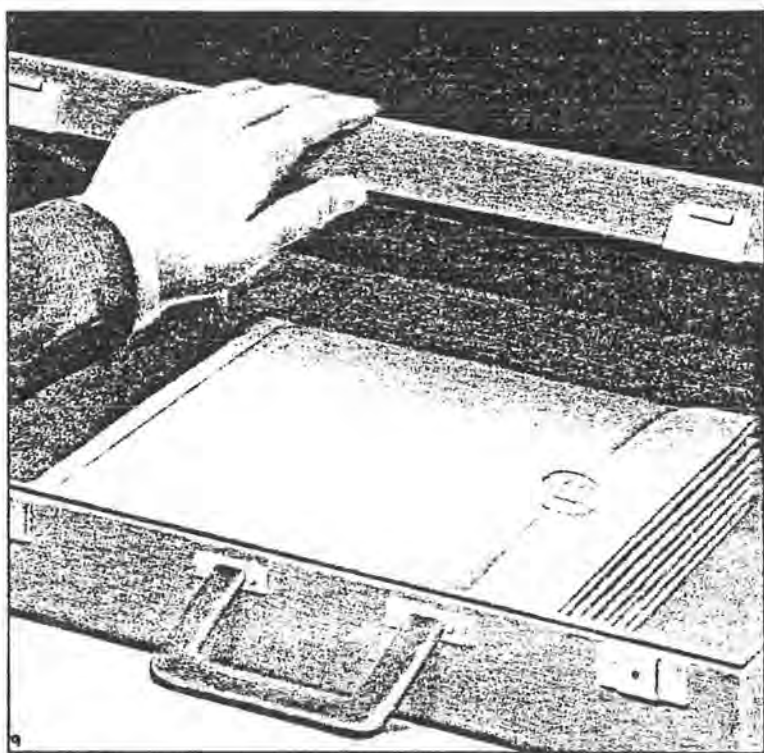
Mero knew the test was under way, and he was hopeful in spite of the dismal mud log. The gun was detonated in the course of the morning, and a liquid began to pour out of the wounded rock. Chevron's man on the rig contacted headquarters via scrambled radio-telephone and announced that there was something in the pipe, and rising fast. At that stage there was no way of telling what it was—oil or just salt-water. Mero sensed a thrill ripple through the exploration department. Senior geologists scurried in and out of one another's offices, slamming the doors behind them. It took 90 nerve-racking minutes for the rise to reach the surface, and then, finally, Jim Kistler took Mero into his office and closed the door. "He warned me to keep my mouth shut," Mero says, and then briefed Mero on the results. Oil was gushing out of the well.

Now the urgency and secrecy were redoubled. Mero and his team of five—the only rank-and-file employees let in on the secret—had to calculate the extent of the reservoir. The fact that there was oil in this trap cast a glow on all prospects to the north, and Chevron had to adjust its lease-sale 53 bids accordingly. Mero returned to his office, took out his maps of the Santa Maria basin, and hung a sign on his door. It read PLEASE KNOCK—WEIRD AND/OR STRANGE THINGS BEING DISCUSSED. He was seldom to emerge in the

next thirteen weeks, and when he did, he was racked by a bleeding ulcer.

Chevron conducted four more tests in the bone. The well produced a heady flow rate of 6,480 barrels of oil a day, plus 1.68 million cubic feet of gas. The oil column—the bed of oil-bearing rock within the trap—was more than 1,000 feet thick. As exploration manager Bill Crain put it later, "We figured we'd found a giant oil field"—"giant" being industry slang for at least 100 million barrels.

There was one hitch, though. The newly found reserves drained away to the north, accumulating chiefly under lease-sale 53's parcel 450, under terrain that didn't yet belong to Chevron. It belonged to the citizens of America, and Interior Secretary James Watt was about to sell it on their behalf. It was time for phase two of Chevron's gambit.



The day of the sale had come,
and Ghylin's briefcase contained
a surprise for the other bidders.

IN WASHINGTON, D.C., representative John Burton, the San Francisco Democrat, was telling a House subcommittee what a thoroughly rotten fellow James Watt was. "It is obvious," Burton stormed, "that lock, stock, and barrel, he is in the pocket of the oil industry. He is going to destroy the fishing industry in our area, he is going to destroy the ecology of our area, and he's doing it in the name of—well, I'm sure he can think of something." It was March 5, 1981. Watt had been in office a mere six weeks, and already he had generated a firestorm of controversy. The immediate cause of Burton's ire was Watt's "Neanderthal" notion of pushing lease-sale 53 back up to Eureka. "That is the biggest garbage in the world," Burton declared, and he seemed

to be speaking for all California. Amid the fuss nobody paid any attention to Chevron's drilling program off Point Conception.

Once the *Atlantic* found oil, it became critical to Chevron that the sale not be delayed. Sooner or later someone was bound to talk—an oil boat skipper, a rig crew member, a renegade employee. Chevron knew how nasty these things could get. Prior to a previous sale a rival company had retrieved shredded documents from a dump and pieced Chevron's top-secret maps together again. "Time alone will break your confidentiality," says Chevron's Clair Ghylin. As the company's lands manager, Ghylin was in charge of acquisition of new exploration terrain, and he was not particularly troubled by the battle in Washington; it revolved around waters far to the north. A more immediate threa

(continued on page 145)

THE GAMBIT

(continued from page 66)

came from the California Coastal Commission, which was demanding a delay in the Santa Maria portion of lease-sale 53. The commission maintained there was too little ecological data on which to base a sound decision.

This was precisely the sort of obstructionism Ghylin had come to expect from the commission. A slight, graying lawyer, Ghylin had been working doggedly toward lease-sale 53 for nearly five years, and now, with a giant reservoir almost in his hands, the lack of a study on wind and wave patterns threatened to ruin his plans. "God," he said later, "it's such a waste!" The election of President Reagan promised some ease of his torment, and Ghylin was an unabashed admirer of the new administration. The bureau in his office sported a photograph of the president as a movie cowboy and a CALIFORNIANS FOR WATT lapel button. Chevron had done a little business with the new Interior secretary in his days with the Mountain States Legal Foundation, an industry lobby in Denver, and the new president had never disguised his affection for oil's rugged soldiers of free enterprise. Chevron was obviously hoping Watt and Reagan would put the Coastal Commission in its place.

Sure enough, one of Reagan's first moves in office was to eliminate most of the federal portion of the commission's 1982 budget. Next, Watt moved to deprive it of the obscure talisman from which it drew its power to obstruct the sale. On March 17, 1981, Watt wrote a letter to his cabinet colleague over at the Commerce Department, Malcolm Baldrige. It concerned a single phrase in the federal Coastal Zone Management Act (CZMA), a phrase stating that the federal government could take no action "directly affecting" the California coast without the state commission's blessing. Watt wanted the troublesome words excised before lease-sale 53. "While this is an ambitious schedule," he wrote, "I believe it can be met." To make absolutely certain Baldrige got the message, he penned a personal note across the top of the letter: "Mac, this is of critical importance to us."

A furious outcry arose from oil-producing states when Baldrige bowed to Watt's directive. Michael Fischer, executive director of the California Coastal Commission, went to Washington to reason with Watt. They spent 30 minutes arguing over the "directly affecting" clause, moving from the secretary's office to his limousine, and finally Watt said, "We'll fight

you to the end on this one, Mike." The Californian asked why.

"He looked out of the window," Fischer recalls, "as though he were preaching to the entire city, and started talking about energy independence, keeping America free, and carrying out the President's mandate."

Watt's attack on the California Coastal Commission was not necessarily something the secretary had thought up all by himself. Both the budget cut and the emasculation of the CZMA had been suggested by Social vice chairman L.C. Soileau III, who sent the new secretary a lengthy wish list on February 11, three weeks after Reagan's inauguration. It is interesting to wonder what Watt knew about the *Atlantic's* strike before he moved against the Coastal Commission, and before he set royalties for the Santa Maria basin. On the basis of earlier resource estimates compiled by staff geologists, the Interior Department had provisionally decided to auction parcel 450 at the minimal 16.6 percent royalty and at a reserve price of only \$3 million. The low royalty was consistent with what government geologists initially believed to be a singularly dismal exploration area. But after the strike, Watt was no longer selling mere exploration privileges; he was selling

the right to exploit what was almost certain to be a huge oil field. Normally the government would consider a royalty of at least 33.3 percent under such circumstances.

Perhaps Watt didn't realize the strike's significance, even though the law requires companies drilling on federal leases to turn in highly classified reports detailing their activities. As early as mid-March, these reports should have contained raw data about the find, allowing five weeks for Watt to increase royalties before the sale. After passing through federal offices in Los Angeles, the reports disappeared into Watt's secretive and arrogant fiefdom, where they were beyond the reach of even the Freedom of Information Act. It proved impossible to find out what they contained, or what the secretary made of them, but this much was clear: as custodian of the public resources, it was Watt's business to stay abreast of those documents. Indeed, according to Interior regulations, his critical royalty decisions were based partly on the secret information they contained—the very reason his minions put forward for refusing to explain or justify his rulings on the Santa Maria basin, or any other. This staggering Catch-22 veils offshore sales in obscurity. We can do no more than note—with raised

**ALL NEWS
ALL THE TIME.
BECAUSE
THAT'S WHEN IT
HAPPENS.**

KFWB RADIO 98



Every course is flawlessly prepared and graciously served." —TRAVEL HOLIDAY MAGAZINE

The HOBBIT

... a unique dining experience

BY RESERVATION ONLY cancellation openings

(714) 997-1972

(714) 997-3181

2932 E. Chapman Ave., Orange, CA 92669

enjoy
our
"FLYING
DECK"

Overlooking
the main channel

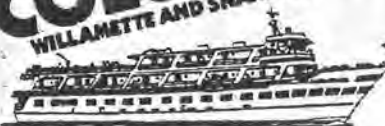
basco

4451 Admiralty Way • 823-6395
Marina del Rey

LUNCH, DINNER, SAT., SUN. & HOL. BRUNCH
LATE LUNCH, EARLY DINNER SPECIALS
Open: M-F from 11:30 am, S-S from 10 am

CRUISE THE COLUMBIA

WILLAMETTE AND SNAKE RIVERS



The Great Rivers
of the West FROM \$449

Two new itineraries between Portland, Oregon and Lewiston, Idaho, on the Lewis and Clark route. Cruise up to 900 miles of the Columbia, Willamette and Snake Rivers. See picturesque towns, Indian culture, spectacular Hell's Canyon, and traverse the nation's most extensive system of locks and dams.

For reservations or a free full-color brochure, see any local TRAVEL AGENT, mail this coupon, or CALL TOLL-FREE:

1-800-426-0600

In Washington State call: (206) 624-8551



**EXPLORATION
CRUISE LINES®**

1500 Metropolitan Park Bldg. Dept. BKJ
Seattle, Washington 98101

Please send your Columbia and Snake Rivers Brochure!

NAME _____

ADDRESS _____

CITY _____

STATE _____

ZIP _____

eyebrows—that neither the 16.6 percent royalty nor the \$3 million reserve bid had changed when Watt's final notice of sale appeared on April 27. Presuming there are 400 million barrels of oil in the bone—a conservative figure—this apparent oversight could easily save Chevron several billion dollars over the life of the field.

Watt hadn't hesitated to tinker with the royalty systems in ways that favored the oil industry, though. Some of the basin's most alluring tracts—including parcel 396, site of the 1965 well that hit oil-saturated beds of Monterey—were to have been auctioned on a profit-sharing basis, with the government taking a hefty 45 percent of any profits generated. This reformist notion was anathema to the oilmen. Besides cutting their revenues, it allowed federal auditors to stick their noses in the oil industry's books. When Watt stepped into office, the industry demanded that use of such unwieldy systems be "subject to the secretary's discretion," the unstated implication being that Watt's discretion was as sound as their own. Indeed, one of his first acts in office was to scrap the scheme of profit sharing and convert the tracts concerned to the flat 16.6 percent royalty.

Secretary Watt has declined to discuss this scenario, but were he to do so, he would no doubt point to Chevron's huge bids as proof that justice had been done, that the people of the United States were receiving a fair price for their mineral rights. He would attribute this to the workings of the free market, and he would not be far off the mark. But the credit does not go to Watt for his administration of the public trust. Nothing could have forced Chevron to offer 100 times the government's reserve price for tract 450, for instance, but raw fear of its powerful and ruthless competitors.

STANDARD OIL OF CALIFORNIA'S empire spans the globe; its employees number 38,000, and its nerve center lies in a hushed suite of offices on the eighteenth floor of its Bush Street headquarters. A visitor to this august sanctum was ushered down a voluptuously carpeted hallway, through an antechamber manned by a dignified male secretary, and into a spacious office. A globe stood in one corner, and a model of the 264,000-ton supertanker *Lawrence W. Funkhouser* stood in another. Behind the desk sat Funkhouser himself—the veteran exploration chief who has led Socal to huge finds in the Sudan, Newfoundland, and elsewhere. Trophies of these strikes, in the form of vials of crude oil, lined the bureau behind him. He was thinking back to the try-

ing weeks before lease-sale 53, the weeks in which there was "bleeding and sweating" on this floor, according to one of his colleagues. "I was very much surprised Champlin took that hard stand," Funkhouser was saying.

The situation he was referring to, of course, concerned his company's difference with Champlin Petroleum—the Fort Worth, Texas, outfit that fell out with Chevron while drilling of the discovery well was under way. "At the time the decision was made," Funkhouser said, just a little ruefully, "the importance of the information we were going to get from that well was not known." At that stage, the game could have gone any way. Forty-three companies were plotting their strategies for the coming sale, trying to guess which tracts contained oil, which shells hid the peas. One geologist's guess was about as good as the next's, so Chevron was unperturbed when Champlin signed up with a formidable team consisting of Amoco, Arco, and two smaller independents. But then the *Atlantic* struck oil.

Chevron's glee must have been instantly tempered by the realization that Champlin, having already paid more than 10 percent of the discovery well's cost, was entitled to all the data from it. Champlin was contractually bound not to disclose secrets—especially the discovery well's critical flow rates—to its new partners, but that was small consolation. "We felt quite sure the wouldn't disclose the logs or the details of the testing," Funkhouser said, "but by the same token, their enthusiasm could have infected their bidding partners." A nudge, a wink, a raised eyebrow—the smallest gesture or nuance would betray Chevron's secret.

Champlin, too, was on a razor's edge. There were bound to be harrowing legal complications if it broke its secrecy pledge. When the Amoco-Arco consortium began meeting in Los Angeles and Denver, in conference rooms carefully swept for electronic bugs, Champlin's Dave Goodwill was tortuously circumspect. "It was horrible," says a source who was present. "Nobody knew where he stood." The Champlin contingent suggested a bid of \$258 million for tract 450, the one above the bone, but wouldn't produce data to back up its position. Without the critical production rates from the *Atlantic* well, Arco was reluctant to go along. "It was very tricky," says the source. Finally, Arco dropped out of the bidding for that tract, and the weakened consortium was left to stand alone against Chevron and its remaining partner, Phillips Petroleum.

Chevron had no way of knowing this, of course, and had to base its judgment on the maximum conceiv-

able bid the Champlin group might muster. One day, when the sale was very close, Funkhouser padded down the corridor to see George Keller, Standard Oil's new chairman of the board. Keller had assumed his position mere weeks earlier, and Funkhouser thought it only fair to warn him of the magnitude of his first major decision. The stakes were excruciatingly high, even for a company with annual revenues of \$44 billion. "We're looking at something here that's extremely important," he told Keller. "Large reserve potential, which the company really needs." Then he mentioned the sum he was thinking of committing to lease-sale 53. Keller turned white, but quickly steadied himself. "If that's the way it is," Keller said, "we'll have to do it."

AS DAWN BROKE ON THE MORNING of May 28, 1981, lands manager Clair Ghylin was pacing the concourse outside the Anaheim Convention Center, briefcase in hand. The day of the sale had finally come, and he was too excited to sleep. In three hours representatives of America's largest oil companies would arrive to conclude their Olympian poker game, and there was a surprise for them in Ghylin's briefcase, which hadn't left his grasp for 24 hours. The previous evening, briefcase clutched between his knees, he had debated Governor Jerry Brown on ABC's *Nightline*. As usual, the environmentalists were all worked up over worthy but already peripheral issues, and utterly oblivious to the bottom line. At the start of the show, an activist resurrected the specter of the 1969 Santa Barbara oil spill and intimated that worse was to come. "We are really looking at the end of the world," she said. Governor Brown praised the "pristine beauty" of the coast, denouncing the oil industry's determination to drill it as "morally repugnant." Ghylin made some low-key remarks about energy independence and national security, but he wasn't about to say, look, man, we've already got a find out there—a massive find, so don't talk to me about cute little sea otters.

After the show, Ghylin spent a few minutes chatting with the governor, who was draped over the door of his famous blue Plymouth in ABC's parking lot. "World's greatest hypocrite," Ghylin thought. Asked about the briefcase, the Chevron executive jokingly remarked that it contained "more money than I've seen in my entire life." Indeed it did—about \$300 million in cashier's checks, a down payment on the submarine real estate Ghylin hoped to buy the following morning.

Even at this late stage, on the very morning of the sale, Ghylin couldn't be

quite sure that Chevron had pulled off its Santa Maria gambit. One never knew what Exxon might do. Exxon was so big and powerful that other big, powerful oil companies were scared of it, calling it Exxon Intergalactic behind its back. The Houston contender had a habit of throwing its weight around at lease-sales, always grabbing the biggest and best structures. Perhaps it would go after parcel 450. Or perhaps some judge would hand down a last-minute injunction barring the sale. It had happened before, often.

By 9:00 A.M., 700 oilmen were milling around in the lobby, watching one another turn in sealed bids. All the high rollers were there. Exxon's Bill Selvidge and Vahl Vladyka, with their own briefcase and bodyguard; representatives from Amoco, Texaco, Union, Gulf—a veritable who's who of American oil might. The only surprise was the presence of Santa Barbara's Ogle Resources, a mom-and-pop outfit that somehow had mustered the cash and courage to play with the big boys. Usually, smaller companies can't raise the stakes to play offshore poker. When the cards were shown at the end of this game, there would be \$4.9 billion in bets—sealed bids, that is—on the table, an average commitment of \$110 million per company. A CBS television crew had got wind of the breaking story and was there to see what happened.

To the very end, Chevron tried to keep the opposition guessing. Ghylin worried that if the competition so much as found out what tracts he had bids for, they would make a snap analysis of Chevron's strategy and adjust their own bids accordingly. He waited until the very last minute before walking up to the table at which a government official was accepting sealed envelopes. A contingent of Chevron men moved up with him, crowding around to make sure that none of the onlookers could see what was happening. The time was 9:25.

As the crowd filed to its seats, Bill Mero and Larry Funkhouser exchanged nods with Linn Adams, a former Chevron man who was now Champlin's regional manager. The Champlin contingent took seats one row behind Chevron. Nothing was said.

At 10:00, Bill Grant, regional director of the Bureau of Land Management, took the podium and declared the sale open. He slit the first sealed envelope: parcel 250 to Diamond Shamrock for \$279,000. The second: parcel 251 to the Arco consortium for \$561,000. This was paltry stuff. The first hefty bids came on parcel 396, site of the promising 1965 well. Exxon bid \$61 million, but Chevron came in at \$163 million. The crowd murmured.

That was a whopping bid. The highest bid on record was \$213 million, for part of the ill-fated Destin Dome. Astonishment mounted as Chevron took four more tracts in the area for bids totaling \$258 million. Exxon took the next big structure to the south—the giant that broke out on the seabed—and Arco the one after that. As Grant read the bids, they were transmitted via radio to a conference room in San Francisco, where tense Chevron executives were tracking the sale. It took an hour for Grant to work his way down to the southern end of the basin, to parcel 450, the bid everyone was waiting for, the one above the bone.

The low bid was Conoco's \$968,000. Next, Texaco's \$36 million. Gulf was in for \$48 million. Grant opened the Champlin consortium's envelope. "One hundred and sixty-one million dollars," he intoned. There was a stir in the Chevron contingent. Funkhouser turned around and looked his old friend Adams in the eye. He shook his head.

"I didn't think it would," Adams said quietly.

There was dead silence as Grant opened the Chevron envelope. He glanced at the sheet of paper in front of him, looked up, and then back down. "Three hundred and thirty-three million dollars," he said. There was no reaction. He read it again: "\$333 million." Then the crowd broke into a roar, and the TV cameras swung around on the front row and on Funkhouser and Ghylin's beaming faces.

EPILOGUE

Eleven months later, Chevron sank the first confirmation well on parcel 450, and vindicated its record-breaking bet; the bone indeed contained oil—at least 400 million barrels of it. As luck would have it, the reservoir extends under terrain owned by Texaco, which thus shares in the bonanza. Exxon was less fortunate; the giant structure on which it had gambled \$81 million was drilled and reportedly turned out to contain worthless, heavy oil. Arco, likewise, seems to have struck out on leases for which it paid \$208 million. Union and Occidental have announced strikes elsewhere in the basin, and drilling continues.

Last year, Chevron's partner, Phillips Petroleum, started exploring the \$163 million parcel 396, the site of the well that was abandoned as hopeless before the Monterey's rehabilitation. An impenetrable security cordon was thrown up around the rig, and the word on the wharf at Port Hueneme is that it has found oil. Once again, the well is on the border of an upcoming sale—lease-sale 73, scheduled for next fall. Once again, Chevron and Phillips are holding the high cards.