# RE-EVALUATION OF THE DEPARTMENT'S DECISION TO APPROVE THE PLAN OF DEVELOPMENT FOR THE NORTHERN PORTION OF THE SANTA CLARA UNIT SANTA BARBARA CHANNEL OFF CALIFORNIA

An Analysis and Rationale for the Conclusion That the Preparation of an Additional Environmental Impact Statement for Platform Grace, Santa Clara Unit, Santa Barbara Channel, Is Not Necessary

Prepared pursuant to
Memorandum of Decision
January 11, 1979
in *Get Oil Out v. Andrus*
(C.D. Cal. No. CV78-1721 - HP)

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# PREFACE

A notice of availability of this document and the accompanying environmental analysis will be published on March 12 and 13, 1979 in the Ventura County Star-Free Press, Ventura, California; the Santa Barbara News-Press, Santa Barbara, California; and the Santa Maria Times, Santa Maria, California.

Two copies of this document will be available for public review in the following locations: Ventura County Library - E. P. Foster Branch, 651 East Main Street, Ventura, California; Ventura County Library - H. P. Wright Branch, 57 Day Road, Ventura, California; Ventura County Library - Camarillo Branch, 3100 Ponderosa Drive, Camarillo, California; Ventura County Library - Conejo Branch, 191 West Wilbur Road, Thousand Oaks, California; Santa Barbara City Library, Central Branch, 1021 East Anacapa Street, Santa Barbara, California; Goleta Library, 500 North Fairview Avenue, Goleta, California; Santa Barbara City Library - Eastside Branch, 1002 East Montecito Street, Santa Barbara, California; and Santa Maria Library, 420 South Broadway, Santa Maria, California.

In addition, copies of this document and the accompanying environmental analysis will be forwarded to the following parties and organizations: Plaintiffs Get Oil Out, Inc., Santa Barbara, California; The Environmental Coalition of Ventura County, Inc., Ventura, California; Scenic Shoreline Preservation Conference, Inc., Santa Barbara, California; and Yvon and Melinda Chouinard, Ventura, California; Attorneys for Plaintiffs Bruce J. Terris and Edward H. Comer, Washington, D. C. and Geoffrey Cowan and John R. Phillips, Los Angeles, California; Intervenors Chevron U.S.A. Inc., San Francisco, California, Union Oil Company of California, Los Angeles, California, and Sun Oil Company, Ventura, California; Attorneys for Intervenors Phillip K. Verleger and B. J. Kerwin, Los Angeles, California; California Coastal Commission, San Francisco, California; Governor's Office of Planning and Research, Sacramento, California; County of Santa Barbara, Santa Barbara, California; County of Ventura, Ventura, California; Environmental Protection Agency, Region IX, San Francisco, California; National Oceanic and Atmospheric Administration, Washington, D. C.; and U. S. Army Corps of Engineers, District Engineer, Los Angeles, California.

A limited number of the documents will also be available for distribution at no charge upon written request to the Oil and Gas Supervisor, Pacific Area, U. S. Geological Survey, 7211 Federal Building, Los Angeles, California 90012. If the supply of printed copies is exhausted, those wishing to obtain copies for their own use will be asked to pay the cost of reproduction.

Written comments are invited and should be submitted to the Oil and Gas Supervisor, Pacific Area, U. S. Geological Survey, 7211 Federal Building, Los Angeles, California 90012 by April 13, 1979.

1. Introduction

Pursuant to the Court Order of January 11, 1979, in *Get Oil Out v. Andrus* (C. D. Cal. No. CV78-1721-HP), the Department of the Interior has prepared this analysis to re-evaluate its earlier decision not to prepare an Environmental Impact Statement (EIS) prior to its approval of the development and production plan for Leases OCS-P 0215, 0216, and 0217 in the Santa Barbara Channel. This re-evaluation approaches the earlier determination from two perspectives: (1) the significance of the environmental impacts of the first platform proposed for the Santa Clara Unit, and (2) the scope and coverage of the existing EISs concerning Outer Continental Shelf (OCS) oil and gas development in the Santa Barbara Channel.

After careful evaluation of the existing Environmental Impact Statements addressing oil and gas development in the Santa Barbara Channel, the Environmental Assessment prepared to analyze the impacts of Platform Grace and recent information which was not available when the first Development Plan for Platform Grace was approved, the Conservation Manager tentatively concluded that:

A. The construction, installation, and operation of Platform Grace in its proposed location in the Santa Barbara Channel would not significantly affect the human environment; and

B. The impacts of the proposed Platform have been comprehensively analyzed and described in existing EISs, thus another EIS would not be necessary even if Platform Grace would cause a significant effect on

the human environment.

The reasons for these conclusions are set forth in this document which will be made available for a 30-day public comment period; the Department will consider the comments before making a final determination as to whether an EIS should be prepared on Platform Grace.

2. Description of Proposed Action

On January 7, 1977, Chevron U.S.A., submitted a plan of development for the northern portion of the Santa Clara Unit, a group of eight leases which are being treated as one lease for purposes of development. The development plan calls for the installation and operation of Platform Grace on Lease OCS-P 0217; this Platform will be used to produce from Leases OCS-P 0216 and 0217. The Platform is proposed for a site approximately 12 miles southwest of Ventura, California, and will be located in 318 feet of water. Platform Grace will be a conventional 12-leg template-type structure with space for 48 wells. The produced water, gas and oil will be treated on Platform Grace.

It is possible that at least one and perhaps two more platforms will be necessary to completely develop the north portion of the Santa Clara Unit. Future platform proposals will be treated as major modifications of the development plan; individual Environmental Assessments will be prepared for each such proposal.

Chevron's proposed method of transporting the production from Platform Grace is through one 10-inch gas and one 12-inch oil pipeline to Platform Hope, an existing Platform located in State waters within the three-mile

limit, and from there to shore (at Carpinteria) through existing pipelines. The only new support facilities for Platform Grace would be the two pipelines, the modification of a gas compressor on Platform Hope, the addition of a gas compressor on existing Platform Heidi located next to Platform Hope, and the addition of an oil metering device at an existing onshore storage facility. The current plan does not provide for the construction or modification of any other facilities. At the onshore facility at Carpinteria, the production from Platform Grace would be directed to an existing 217,000-barrel storage tank and the gas would be routed through the Carpinteria Plant for removal of liquid hydrocarbons and then sold to a utility. The stored oil would initially be transported from Carpinteria to refineries by tanker as is presently done for production from State lands. However, Chevron has initiated the necessary action to install an onshore crude pipeline to transport Santa Clara Unit crude from its Carpinteria facility to the Ventura area; such a pipeline would eliminate tanker loading from Carpinteria.

U. S. Geological Survey's approval of the twelve-mile pipeline from Platform Grace to Platform Hope will depend on an accompanying approval by the County of Santa Barbara of a one-half mile segment that would be located within State waters. Pursuant to a memorandum of understanding between the Geological Survey, the California Coastal Commission and the County of Santa Barbara, a joint environmental impact report is being prepared on the proposed pipelines from Platform Grace to Platform Hope.

The Platform will be equipped with aids to navigation in compliance with

United States Coast Guard regulations. All facilities will be equipped with surface and subsurface control devices to insure that appropriate alarms will indicate any malfunctions; the Platform will be shut-in automatically if a malfunction constitutes an operational hazard, or if any emergency situation exists. The shut-in controls for safety and pollution control equipment and procedures will conform to OCS Order No. 8. A National Pollution Discharge Elimination System (NPDES) permit to dispose of effluents to the waters of the Santa Barbara Channel from the Platform will be required by the EPA. The OCS operator will be required to adhere to all applicable EPA and Coast Guard discharge regulations and water permit conditions.

3. Consideration and Scope of Existing Environmental Impact Statements: Why Another EIS for Platform Grace is Unnecessary

In 1968, when Parcel 0217 was leased by the Department of the Interior, there was no National Environmental Policy Act and consequently no requirement for the Secretary to prepare an Environmental Impact Statement. Nevertheless, on several occasions since the lease sale, operations in the Santa Barbara Channel in general and on the Santa Clara Unit in particular have been the subject of thorough environmental reviews. The purpose of this section is to describe the various EISs which analyze the impacts of OCS oil and gas development in the Santa Barbara Channel in order to demonstrate that each environmental impact of a proposed platform such as Platform Grace has already been identified and exhaustively addressed in existing EISs and consequently a duplicative EIS is unnecessary.

In March of 1976, the Department of the Interior issued a three-volume EIS (FES 76-13) entitled *Oil and Gas Development in the Santa Barbara Channel*. One purpose of the document was to examine the potential impacts arising from oil and gas production in Federal OCS lands in the Santa Barbara Channel. In addition, the EIS specifically discusses possible activities on existing leases. The preface to the EIS states that "this environmental impact statement will provide an analysis of potential environmental impacts which could result from such activities [exploration and development activities pursuant to rights established under leases issued in 1966 and 1968 in the Santa Barbara Channel] and will be used by the Department in its review of such requests as may be submitted to it for approval in the future." (FES 76-13, Vol. 1, i-3)

The 1976 EIS contains a detailed description and analysis of the potential environmental impacts of oil and gas operations in Santa Barbara Channel. Chapter One of the EIS describes (in over 250 pages) the potential levels of OCS development activities. The existing OCS leases are examined, the various methods of oil and gas development are discussed, activities associated with oil and gas development (such as transportation and processing facilities) are considered, and the relationship of oil and gas activities to other projects in the area is examined. Chapter Two of the EIS describes (in over 600 pages) the Santa Barbara Channel environment. Geology, meteorology, oceanography, resources, biology, and air and water quality are considered at length in the specific context of potential oil and gas activities on existing OCS leases. The

EIS specifically notes the potential oil and gas activities in the Santa Clara Unit. While the EIS was prepared prior to the submission of the development plan for Platform Grace, it was prepared after the leasing of OCS-P 0217 and after the unitization of the Santa Clara Unit, which occurred in 1973. Thus, the EIS specifically refers to potential activities associated with the Santa Clara Unit (FES 76-13, Vol. 1, I-15 and I-160 to I-161).

The three-volume EIS entitled *Proposed Plan of Development, Santa Ynez Unit, Santa Barbara Channel, off California* (FES 74-20) was prepared by the Department of the Interior and released in 1974. It deals with environmental impacts and alternatives of a proposed plan of production and development for the Santa Ynez Unit covering over 83,000 acres in the Santa Barbara Channel. Much of the discussion in that EIS is applicable to the entire Santa Barbara Channel, and not just the smaller area comprising the Unit. For instance, the EIS addresses the entire Channel in its description of the environment (II-1, 2, 14 to 30, 204 to 256, 375 to 518, 520 to 568); environmental impacts (III-1 to 209); mitigating measures (IV-1 to 232); commitment of resources (VII-1 and 2; and alternatives (VIII-1 to 11, 83 to 291). Thus this EIS has been a valuable source of information for considering subsequent exploration and development plans in the Santa Barbara Channel. The EIS for the Santa Ynez development plan was prepared because a pre-lease EIS was not prepared (or required) prior to the 1968 sale of the leases which comprise that Unit.

The EIS entitled *Drilling of Exploration Wells in Santa Barbara Channel Offshore California* was released in 1971 by the Department of the Interior. This EIS utilized information gathered from the drilling of 70 exploratory wells on Federal leases in the Santa Barbara Channel since 1967, as well as from other drilling, including the drilling of the Union Oil Company well which blew out in 1969. The EIS discusses the geology of the area, the history of oil and gas production in the Channel and the environmental impact of exploratory drilling. This report concluded that "properly conducted exploratory drilling operations should not have a major adverse impact on the environment of the Santa Barbara Channel Region." (EIS, Vol. 1, I-i)

A three-volume EIS, in excess of 1,000 pages, entitled *Proposed Increase in Oil and Gas Leasing on the Outer Continental Shelf,* was prepared by the Department of the Interior and released in 1975. This is a programatic EIS on the national OCS program and specifically considers leasing off the Coast of California.

In 1975, the Department of the Interior released an EIS on proposed Lease Sale 35, offshore southern California. This EIS is in five volumes and well over 3,000 pages. Although none of the tracts leased in Sale 35 are in the Santa Barbara Channel proper, much of the data reported in the EIS is generally applicable to the Santa Clara Unit.

Finally, the draft and final Environmental Impact Statements for proposed OCS Lease Sale 48 were issued in 1977 and 1978. Figure 1.A.-1 of that

EIS indicates potential lease offerings in the Southern California Offshore Area, including those in and adjacent to the Santa Barbara Channel. While prepared after the Platform Grace Environmental Assessment, the five-volume document indicates nothing contradictory to prior EISs and is yet another detailed EIS covering the Santa Barbara Channel.

In preparing the Environmental Assessment which is the subject of this litigation, the Department of the Interior carefully considered the environmental information and impacts described in each of these existing EISs. These comprehensive documents fully evaluate the environmental consequences of oil and gas OCS leasing and development in the Santa Barbara Channel and provide the Department with sufficient environmental information to make knowledgeable decisions concerning the installation of Platform Grace without preparation of a duplicative EIS.

Despite the existence of the information in the prior EISs, a decision to prepare another EIS addressing only Platform Grace would have been made if there had been any indication that unique impacts which have not been previously analyzed would result from the Platform or if any elements of the environment would be impacted that have not already been the subject of intensive study and consideration.

In addition to the Environmental Impact Statements described above, additional information concerning the impacts of the two 12-mile pipelines which are proposed to connect Platform Grace to Platform Hope became available to the Department after the initial decision to approve the

development plan was made. This information includes a study of the potential effects on offshore marine activities of non-buried pipelines associated with Platform Grace, an evaluation of the fault movement capacity for the pipelines, and a study of the effect of currents on the proposed pipeline. This information revealed no unique impacts or unforeseen risks and confirmed the original decision that all impacts resulting from operations on Platform Grace have been thoroughly identified and analyzed.

4. Analysis of Environmental Impacts: Why the Installation of Platform Grace is Not a Major Federal Action Significantly Affecting the Environment

The purpose of this section is to explain why the Conversation Manager has tentatively affirmed his earlier decision that the installation of Platform Grace and the approval of the initial Plan of Development for the Santa Clara Unit is not a "major Federal action affecting the human environment." The environmental impacts of the proposed activity are summarized, the factors considered by the Conservation Manager in determining whether the impacts are sufficiently significant to require the preparation of an EIS are identified, and the rationale which directed the Conservation Manager to his decision is described. This section also identifies portions of existing EISs which specifically analyze the impacts of OCS oil and gas development in the Santa Barbara Channel.

It is critical to recognize that, in making this determination, the Conservation Manager was not making a decision of first impression concerning whether oil and gas development in the Santa Barbara Channel

should occur. That decision was considered in the programatic EIS done in 1976 and has been reflected in subsequent actions of the Secretary of the Interior which have allowed development to proceed. Rather, the narrow issue for the Conservation Manager was whether the installation of the proposed Platform, as part of a series of actions designed to implement an on-going program which has already been the subject of several EISs, is a "major Federal action significantly affecting the human environment."

A. Summary of Environmental Impacts of the Proposed Action

Positive impacts identified in the existing EISs and the Environmental Assessment include:

(1) Increase in fisheries because the Platform provides an artificial reef.
(2) Positive impact on the local economy resulting from service contracts associated with the Platform.
(3) Possible ocean bottom enrichment as a result of artificial reefs.

Negative impacts identified in the existing EIS, the Environmental Assessment and other recent information include:

(1) Slight visibility of Platform from shore on very clear days.
(2) Existing rocky-bottom biotic communities at the proposed site would be destroyed by cuttings covering parts of 2.5 acres.
(3) Approximately one square mile of fishing grounds may be eliminated.
(4) Severe effects on flora, fauna, beaches and economy if a major oil spill occurs.

(5) Turbidity of the water in the immediate area of the Platform.

(6) Disturbance of benthic habitat within a ten-foot-wide corridor over the length of each pipeline which will re-establish within one to two years in the area not covered by the pipelines.

The above-described beneficial and adverse impacts are characteristic of the types of impacts which generally result from OCS development and which were analyzed in detail in the existing EISs and the recent Draft Environmental Impact Report on the proposed pipeline installation from Platform Grace to Platform Hope.

The EISs and Environmental Assessment also revealed the following information indicating the absence of impacts:

(1) There are no bottom, sub-bottom, or geological hazards at the Platform site or along the pipeline route.

(2) No fault traces have been found underlying the proposed site.

(3) The rocky bottom alleviates problems with slumping and liquefaction of sediments.

(4) No water degradation from human waste or garbage disposal will result because on-platform sewage treatment and garbage disposal at onshore sites will be required.

(5) There will be no negative impact on any rare or endangered species, any cultural resources, any National Historic Site or any kelp bed.

(6) The emissions generated from Platform Grace are not likely to significantly affect onshore air quality.

To the extent that these eimssions have the potential to affect onshore air quality, they will be regulated. The emissions resulting from onshore production activities will be fully regulated under State and local law.

(7) Except for the installation of an oil metering device, no expansions or modifications of onshore processing facilities will be necessary to handle Platform Grace production.

B. Analysis

(1) Factors considered

To determine if the above-summarized impacts are of sufficient magnitude to have a significant effect on the human environment of the adjacent localities (primarily Santa Barbara and Ventura Counties), the following factors, which are emphasized in the recently published Council on Environmental Quality (CEQ) regulations have been considered (see 43 Fed. Reg. 55978, 56005-06 (1978)(to be codified as 40 CFR § 1508.27)):

(a) The effect of the Platform on the public health and safety.

(b) The degree to which Platform Grace would affect any unique characteristics of the area (cultural resources, parks, wetlands, ecologically critical areas, etc.).

(c) Whether the impacts from Platform Grace are individually insignificant but would, in concert with other similar platforms, cause a cumulatively significant effect.

(d) The extent to which the impacts of the Platform

on the human environment are controversial and uncertain or involve unique or unknown risks.

(e) Whether the action would cause a violation of any environmental law of a Federal, State or local jurisdiction.

(f) Whether installation of Platform Grace will establish a precedent for future platform installations with possible significant effects or will represent a decision in principle about a future consideration.

Additionally, the Department has considered the issue in the context of the following five areas of environmental concern:

(a) The environmental impacts of the proposed action and in particular the onshore impacts including the impact on air quality over California.

(b) The adverse environmental effects of Platform Grace which cannot be avoided.

(c) The alternatives to the installation of Platform Grace.

(d) The relationship between local short-term use of the Santa Barbara Channel for oil and gas production and the maintenance and enhancement of long-term productivity in the Channel.

(e) The irreversible and irretrievable commitments of resources which would be involved in the proposed Platform installation, should it occur.

(2) Rationale

(a) The Environmental Impacts

The impacts summarized above, which were comprehensively described and discussed in one or more of the existing EISs, the

Environmental Assessment of Platform Grace, or the recent Impact Report done on the pipelines, constitute all known adverse and beneficial environmental effects which could result from the installation and operation of Platform Grace in the Santa Barbara Channel 12 miles off the coast of Ventura, California. Platform Grace involves no environmental consequences which were not discussed in detail in the existing EISs, either site-specifically or in general discussions of the effect of a specific activity on a certain type of environment.

The only impact which could have a significant adverse effect on the environment is a major oil spill resulting from an accident, an earthquake, or other natural disaster. Such impacts have been considered in the existing EISs in vast detail (see FES 76-13: Vol. 2, III-125 to III-177; Vol. 2, III-125 (natural seeps), Vol. 2, III-28 to III-35 (causes of spills), Vol. 2, III-78 (storage tanks), Vol. 2, III-140 to III-175 (water quality), III-254 to III-256 (birds), and III- 331 to III-334 (mammals and marine organisms).

Of importance also, in evaluating the significance of the environmental impacts, is that in many instances the EISs and Environmental Analysis indicated an absence of impacts. For instance, the only major support facility which will be installed is the 12 miles of pipeline between Platform Grace and Platform Hope. The existing EISs indicate that the impact of such a pipeline on the oceanography, geology and biology of the Channel would be either absent or minor and of short duration. This conclusion is dramatically confirmed by the Draft Environmental Impact

Report on the Proposed Pipeline Installation which provides:

"The proposed pipeline would not appear to have any potential for significant adverse impact on the geological environment." (EIR, Vol. 1, 4 to 6)

"No significant environmental impacts on oceanographic paramenters are expected from the proposed project." (EIR, Vol. 1, 5 to 6)

"There will be no significant biological impacts from minor modifications to the Carpinteria facility and Platforms Hope and Heidi.

"Installation of the 10- and 12-inch subsea pipelines will result in the disturbance of benthic habitat within a 10-foot-wide corridor over the length of each pipeline (11.7 miles), or approximately 30 acres per corridor. Although the majority of epifaunal organisms will be destroyed, many infaunal organisms may survive. Within a short period of time (one to two years) most species will re-establish populations in the disturbed area which is not covered by the pipelines.

"Although each of the two subsea pipelines will eliminate approximately 10 acres of benthic habitat, these pipelines will provide a considerable amount of substratum for the settlement and growth of species which are adapted to hard bottoms. The species composition of this new community of organisms are expected to be considerably different from that of the displaced benthic community.

"Disposition of sediments may eventually cover portions of the proposed subsea pipelines. Where this occurs, species representative of the displaced benthic community are expected to re-colonize sediments overlying the buried pipelines." (EIR, Vol. 1, 7-10 and 7-11)

This study firmly supports the Conservation Manager's initial decision, as well as his tentative decision upon re-evaluation, that the approval of Platform Grace does not constitute a major Federal action which will significantly affect the human environment.

In re-evaluating this proposed action, the Conservation Manager was also impressed by the fact that no expansions or modifications of existing onshore processing facilities will be necessary to handle Platform Grace production. Thus the likelihood of major onshore impacts is diminished.

In recent months, an extensive study of the possible air quality impacts of development associated with Platform Grace has become available. That extensive study is incorporated in the Draft Environmental Impact Report on the Proposed Pipeline, EIR, Vol. 1, 3-1 to 3-149. Both onshore and offshore emissions were inventoried and air impacts were predicted using a variety of modeling techniques. This information has been submitted to EPA as a request for an agency determination as to whether the Platform will be subject to various provisions of the Clean Air Act. To the extent that the emissions generated offshore have significant onshore effects, they will be regulated; technological adjustments or offsets will be necessary. Of course, all onshore air emissions

will be subject to all substantive and procedural air quality requirements of the State and local governments.

Given this abundance of information concerning air impacts of Platform Grace and the involvement of EPA in this matter, the Conservation Manager believes that air concerns do not justify treatment of approval of Platform Grace as a "major Federal action."

In summary, the minor beneficial and adverse impacts, as well as the lack of all but very minor onshore impacts, were important factors in the Conservation Manager's decision that Platform Grace is not a "major Federal action significantly affecting the environment" and requiring the preparation of an EIS.

(b) Unavoidable Adverse Environmental Effects

The adverse environmental effects of Platform Grace which cannot be avoided are few. It is unavoidable that part of the structure will be visible on clear days. It is likewise impossible to avoid the removal of perhaps as much as one square mile of fishing grounds which would be taken up by the structure and a buffer zone around the structure. However, this removal is somewhat mitigated by the enhancement of the surrounding fishing grounds because of the presence of the structure. The destruction of a small portion of the bottom biotic community is also unavoidable, but not permanent because the community will eventually be re-established on the cuttings and the Platform structure.

Obviously, an accident resulting in a major oil spill would have adverse impacts, some of which would be unavoidable. Because of the strict requirements for containment and clean-up plans and equipment, some of the adverse impacts of a spill could be avoided. Those which are unavoidable would be severe in the short-term but, according to many experts, would not cause severe long-term adverse effects.

The Conservation Manager's decision that an EIS would not be necessary was in part based on the very low number of unavoidable impacts and the existence of many methods of mitigating any adverse impact that might occur.

(c) Alternatives

Four alternatives to approval of Platform Grace have been considered:

1) Delay or deny approval;
2) Approve the Plan only if another production method is used;
3) Approve the Platform in a different location;
4) Approve the Plan only if an offshore loading and storage facility is used.

The decision to deny or delay approval would prevent development of already discovered hydrocarbon resources and cause loss of royalty income for the United States.

While subsea completions could be used as an alternative, the costs of drilling and completion would be three to five times higher. Furthermore, from a safety, monitoring control, and potential leakage control standpoint, platform-based wells are more desirable.

Platform Grace could be moved a slight distance, but no advantages would be gained by relocation and the environmental impact associated with platform installation would be the same as at the proposed site.

An offshore loading and storage facility would be highly controversial and perhaps the subject of intense litigation. Such a proposal was not well-received by State and local governments in the Santa Ynez Unit area.

(d) Short-term Uses vs. Enhancement of Long-term Productivity

The principal short-term use of Platform Grace would be for extraction of oil from Leases OCS-P 0216 and 0217. This mineral extraction would diminish the oil and gas reserves of these leases. The Platform would have a relatively short life (about 30 to 40 years) and would be removed when mineral extraction was completed. The extraction of oil and gas would be in the interest of national security and balance of payments. The wealth created would be distributed in various proportions among the workers, the unit operator, the Federal Government, and local governments. How this wealth were used would have both a short-term and a long-term effect on the environment of the Santa Barbara Region. No long-term, direct, adverse impact, such as scarred terrain, would remain. Short-term effects would result in the possibility of minor or major oil spills. The local short-term use of the marine and existing shore treatment facilities should have little adverse effect on other uses, either for the short or long term.

(e) Irreversible and Irretrievable Commitment of Resources

Development of Leases OCS-P 0216 and 0217 by

Platform Grace would involve commitment of oil and gas resources on the leases. Minor amounts of water supply, other mineral resources, and benthic biota probably would be committed (lost). However, the artificial reef effect of the Platform would be beneficial to biota during the life of the Platform. An irretrievable commitment of some construction materials would result: mainly sub-oceanfloor casing, cement, and chemicals. Some construction materials, mainly steel, might have salvage value and be retrieved. An irreversible or irretrievable commitment of fish, fowl, and other habitats could occur in the area of a massive oil spill; however, investigators such as Straughn believe the wildlife to have recovered from the 1969 spill. Recurrent low levels of oil pollution may result in a small degree of harm to some biota. However, since the Santa Barbara Channel has historically experienced low-level pollution from natural seeps, the existence or degree of such loss is undeterminable.

These relatively minor commitments of resources helped convince the Conservation Manager that Platform Grace was not a "major Federal action significantly effecting the environment."

(f) Public Health and Safety

The impact analyses which have been undertaken and described in detail in prior EISs and the Environmental Assessment indicate that the general public health and safety are not jeopardized by the proposed Platform. None of the negative impacts identified in the prior EISs or the Environmental Assessment have the potential for

significantly endangering the health or safety of the public. Even the "worst case" major oil spill would not likely endanger the health or safety of the general population. At most, specific accidents could create short-term dangers for employees working on the Platform. However, extensive safety programs have been developed to decrease this possibility.

(g) Impact on Unique Resources Areas

The impact on cultural resources, unique natural areas, recreational areas, ecologically sensitive areas, and other areas with unique geographic characteristics were considered in detail in the existing EISs. An archeological clearance of the area was obtained from a certified marine archeologist. No cultural resources are known to be in the area of the proposed action.

Carpinteria Marsh is a 230-acre natural marsh area located approximately 12 miles from the proposed site of Platform Grace. The Goleta Slough and the Mugu Lagoon are also within approximately 12 miles of the Platform. The Fish and Wildlife Service of the Department of the Interior and the California Department of Fish and Game specifically studied the possible impacts of OCS development on these natural areas and neither objected to the proposed action.

The impacts of oil and gas development on unique natural areas of the Santa Barbara Channel have been analyzed in the existing EISs. Some specific examples of such analyses follow:

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Note that section IV, p. IV-1 to IV-151, "Mitigating Measures" is related to all aspects of preventing or reducing all impacts.

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The fact that the impacts of oil and gas development on these natural areas in and near the Santa Barbara Channel have been the subject of intense analysis convinced the Conservation Manager that the possible impacts on unique natural areas were not sufficiently substantial to constitute a "major Federal action significantly affecting the human environment."

The impact analyses also indicate that recreational areas will be both positively and negatively impacted, but not to any significant degree. While approximately one square mile of fishing area will be eliminated by the

proposed Platform, the sportfishing and commercial fishing will be enhanced by the artificial reefs and nursery areas created. Thus the positive and negative impacts are somewhat balanced and neither is substantial. These impacts were thoroughly analyzed in existing EISs.

Specific references to Recreational Areas in EISs follow:

Oil and Gas Development in the Santa Barbara Channel OCS off California

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Note that section IV, p. IV-1 to IV-151, "Mitigating Measures" is related to all aspects of preventing or reducing all impacts.

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In deciding that the approval of Platform Grace does not constitute a "major Federal action significantly affecting the human environment," the Conservation Manager was impressed by the information derived from the above sources, which indicates that the possibility of adverse negative impacts on recreational areas is remote.

(h) Cumulative Impacts

The Department of the Interior, realizing that the cumulative impacts of individual platforms in the Santa Barbara Channel could be significant, did an EIS in 1976 to determine the cumulative effects of oil and gas development in the area. Thus, while it is true that the addition of Platform Grace to the existing platforms in the Santa Barbara Channel would result in an incremental cumulative effect, that effect has been thoroughly analyzed in a previous EIS and has been determined to be minimal.

(i) Controversy and Risks

The possible impacts of oil and gas production in the Santa Barbara Channel has been the subject of numerous investigations. While the proposal is controversial in that Get Oil Out, Inc. has initiated litigation, the question of what impacts the Platform may have on the area are not the subject of substantial controversy. To the contrary, the risks involved are known and understood and the impacts of the Platform have been identified and analyzed on numerous occasions. Thus, no highly controversial debate about the impacts of the proposed action exists.

(j) Consistency with Federal, State and Local Law

The installation of Platform Grace and associated

production thereon will not result in the violation of any Federal, State or local law designed to protect the environment. All EPA and Coast Guard water discharge and permit conditions must be met by the lessees. To the extent that air emissions from Platform Grace significantly affect onshore areas, they will be regulated by the Department of the Interior. Any air emissions from onshore facilities treating oil or gas produced from Platform Grace would be subject to all State and local permits and regulations.

(k) Precedential Implications

The installation of Platform Grace does not represent a decision in principle about the acceptability of other platforms, including any other platforms which may be proposed for the Santa Clara Unit. Each proposed platform will be analyzed for significance on its own merits; whether an EIS is necessary will depend on the intensity of the impacts identified in the Environmental Assessment. These decisions will be made on a case-by-case basis and, thus, a decision of no significant impact in this instance does not set a precedent for the treatment of future development plans.

5. Conclusion and Recommendation

Upon careful re-evaluation of the information in existing EISs, supplemented by the Environmental Assessment and the new information described in this document, I have concluded that the construction, installation and operation of Platform Grace in the Santa Barbara Channel 12 miles offshore from Ventura County, California would not have a significant effect on the human environment pursuant to §102 (2) (c) of the

NEPA. Furthermore, I have concluded that an EIS would not be necessary even if Platform Grace would cause a significant effect because the environmental impacts of a platform in the Santa Barbara Channel similar to the one proposed have been comprehensively analyzed and described in existing EISs and no new impacts have been identified. Accordingly, I recommend that the proposed installation of Platform Grace is not a "major Federal action significantly affecting the human environment."

F. J. Schumacher 5/7/79
Oil and Gas Supervisor
Pacific Area

I have given renewed consideration to the recommendation of the Oil and Gas Supervisor and those concerns raised during the comment period mandated by the court. I have evaluated the comments in light of 40 CFR 1500 et seq., and with regard to all applicable existing environmental documents. No issue has been raised which would cause me to alter my original position that an additional EIS for Platform Grace is unnecessary.

The preparation of an additional EIS would not provide any meaningful new data, nor change the alternatives that have been considered. Neither would it modify the alternatives selected, which have been mutually agreed upon by the State of California and the County of Santa Barbara.

5/10/79
Conservation Manager
Western Region

NEPA. Furthermore, I have concluded that an EIS would not be necessary even if Platform Grace would cause a significant effect because the environmental impacts of a platform similar to the one proposed have been comprehensively analyzed and described in existing EISs. Accordingly, I recommend that the proposed installation of Platform Grace is not a "major Federal action significantly affecting the human environment."

F. J. Hancock 3/6/79
Oil and Gas Supervisor
Pacific Area

Based on the reasons stated in this document and the recommendation of the Oil and Gas Supervisor, Pacific Area, I hereby affirm my earlier decision that the installation and operation of Platform Grace in the Santa Barbara Channel does not constitute an action which would significantly affect the human environment and therefore does not require the preparation of an EIS.

Conservation Manager
Western Region

(The Conservation Manager's final decision will be made after consideration of all comments submitted during the 30-day public comment period.)

# Environmental Analysis

Chevron U.S.A., Inc. as Operator

Santa Clara Unit Plan of Development

Leases OCS-P 0215, 0216, 0217

Santa Barbara Channel off California

Revised July 1977

# ENVIRONMENTAL ANALYSIS

CHEVRON U.S.A., INC. AS OPERATOR
SANTA CLARA UNIT PLAN OF DEVELOPMENT
LEASES OCS-P 0215, 0216, 0217
SANTA BARBARA CHANNEL OFF CALIFORNIA

## Table of Contents



## ATTACHMENTS

## I. Proposed Action and Background

In January 1977, Chevron U.S.A., Inc. submitted a Plan of Development for the Santa Clara Unit in the Santa Barbara Channel.

Chevron U.S.A., Inc. has been designated operator for the Santa Clara Unit. Other participants include Exxon U.S.A., Union Oil Company of California, and Atlantic Richfield Company. The Unit is located in Federal waters approximately 5 to 15 miles southwest of Ventura, California, and totals 46,080 surface acres on eight parcels. See Figure 1.

The Plan of Development includes: a geotechnical review of the area; field history and reservoir data; drilling plans; platforms and platform facilities; subsea pipelines; onshore sites and facilities; an offshore production and loading system; and contingency plans.

The Plan covers overall development of the north portion of the Santa Clara Unit on Parcels 0215, 0216, and 0217. Three platforms may be required to fully develop these parcels. As a first step, one platform is planned: a 48-well drilling-production structure on Parcel OCS-P 0217 on the so-called Montalvo Trend in 318 feet of water.

The remaining portions of the Trend, Parcels OCS-P 0215 and 0216, await further delineation drilling. Water depths on these three parcels range from about 60 feet to 600 feet.

Additional steps toward accomplishment of the overall development of the Montalvo Trend will be possible installation of the two remaining platforms. Detailed plans for these two platforms will be covered by amendments to the overall plan. No firm plans for development work other than those proposed for the Montalvo Trend have been established.

The discovery well for the Santa Clara Unit was drilled by Union Oil Company of California on Parcel 0216 in 1970. Since then, four follow-up wells have been drilled on these three parcels, including the 1975 discovery by Standard Oil Company of California of the extension of the oil field onto OCS-P 0217.

There are no production facilities presently installed within the Santa Clara Unit. A projected schedule for the proposed single platform indicates installation and initial production beginning in 1979. Production from the single platform during the first year (1979) is projected to be 2,000 B/D oil (maximum) of sour crude and 2,000,000 CF/D gas (maximum) of sour gas. Peak production is anticipated to be 16,000 B/D oil and 16,000,000 CF/D gas during 1982 or 1983, with field life estimated at about 30 years. Produced water is predicted to occur, starting in 1980, and reach a peak of 16,000 B/D in 1989. Production is proposed for shipment to shore through subsea pipelines to an onshore site; oil can then be transshipped by tanker or pipeline to refineries and the gas

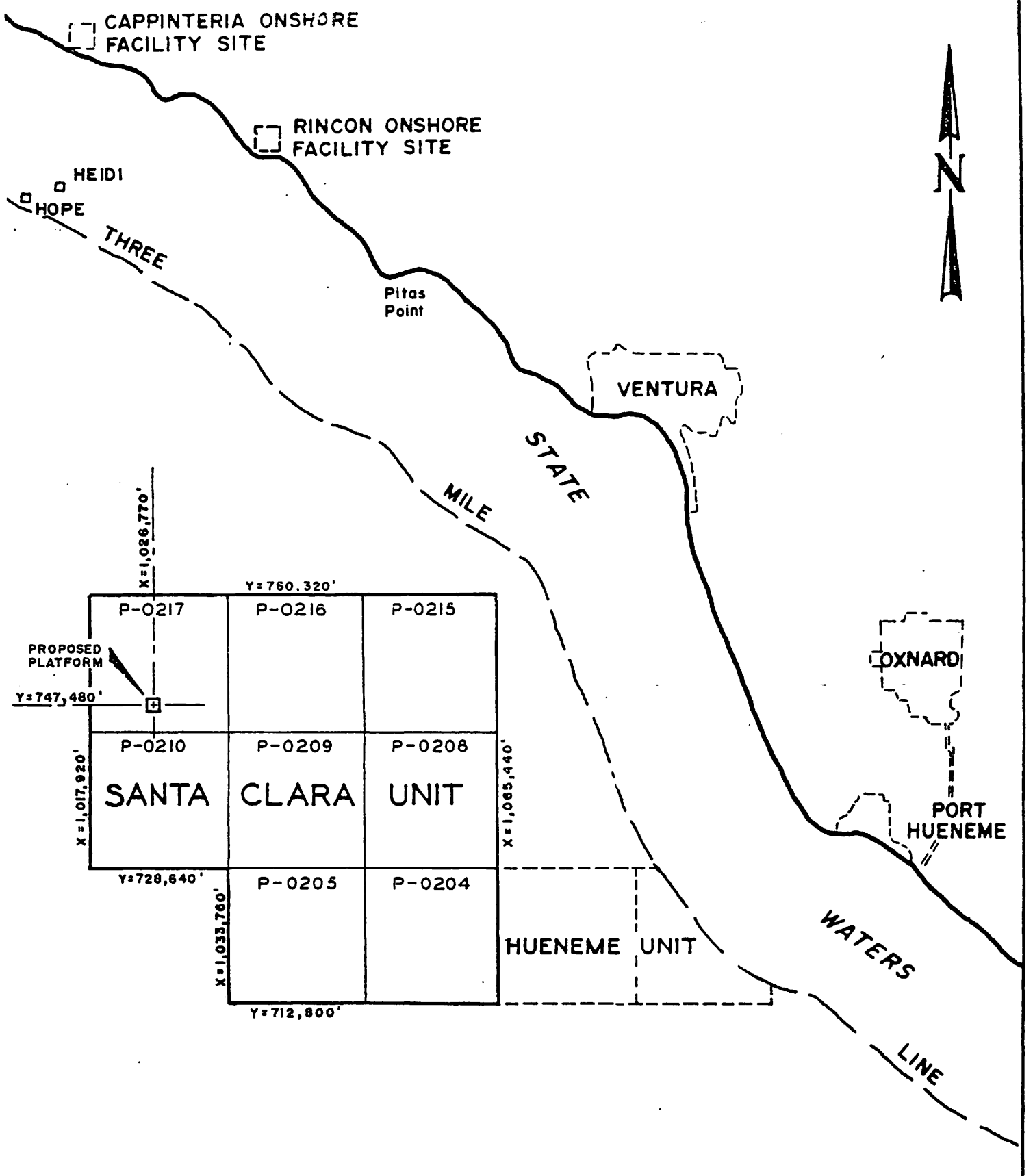



Figure I

PLATFORM LOCATION
SANTA CLARA UNIT

sold to a utility. To assist in determining the most viable alternative for transshipment of crude, Standard Oil Company of California is participating in an industry study of tanker emissions during loading operations (Western Oil and Gas Association) and is participating in a study for moving Santa Barbara Channel production to market by means of a new onshore pipeline (Santa Barbara County Board of Supervisors).

The one platform now proposed will provide a foundation for the drilling of the development wells and for the offshore production facilities. It is a conventional 12-leg template-type platform, 175 feet x 120 feet, to be installed in approximately 318 feet of water. Structure design is detailed in Section IV of the Operator's Plan of Development; Drilling facilities in section V, Platform Facilities in Section VI.

Pipeline capacities will be sufficient for handling production from not only OCS-P 0217, but also from future Santa Clara Unit platforms and from other parcels which might logically be included in the system. Choice of pipeline route will depend upon the location of the onshore processing facilities. It is not known if both the crude oil and gas pipelines would be routed to the same onshore facilities.

Four alternate pipeline routes have been considered.

- One route, approximately 12 miles long, is in a primarily northern direction from the proposed platform and routed directly to the Rincon onshore facility site near Sea Cliff. Currently these onshore facilities serve Platforms A and B operated by Union and Platform Hillhouse operated by Sun.

- A second route, also approximately 12 miles long, is likewise in a primarily northerly direction from the platform toward an existing Socal-operated onshore facility site at Carpinteria. The crude line would be either tied into an existing 10-inch submarine pipeline serving Socal platforms in State waters or taken directly to shore. The gas line would be either tied into the present platform gas system or taken directly to shore.

- A third route, 12 to 16 miles long, is in an easterly direction from the platform toward a possible new onshore facility in the Ventura-Oxnard area.

- As an alternative to a crude oil pipeline to shore, a subsea pipeline to an offshore loading and storage terminal could be installed as a part of the overall system of oil transportation to refineries.

A concept for an offshore loading and storage system is discussed in Section IX of the Operator's Plan of Development. No one specific

manufacturer's design is proposed. Selection of the most appropriate design would be determined in future detailed studies. Offshore treating, storage and loading facilities are described in the SBC-EIS (Vol. 1, p. I-49ff.) and the Santa Ynez Unit EIS (Vol. 1, p. I-146ff.).

The following sites are potential candidates for handling Santa Clara Unit production.

- Carpinteria. A Chevron U.S.A., Inc. facility located in the City of Carpinteria currently handles oil and gas production from four platforms in State waters (Hope, Heidi, Hilda and Hazel). Equipment consists of heaters, treaters, LACT's, storage tanks, and a gas processing plant. The facility presently has sufficient capacity for handling anticipated production from the single Santa Clara Unit platform. Comingling restrictions, production accountability, etc., could require a modest increase in tankage and related equipment. Ultimately, increased facilities may be required depending upon production changes from existing State platforms and the possible installation of additional Santa Clara Unit platforms.

- Rincon. A facility located near the community of Sea Cliff is operated by Mobil Oil Corporation on behalf of seven owners, including Mobil. It processes oil, gas, and water from 3 platforms in Federal waters (Hillhouse, Platform A and Platform B). Equipment consists of a free water knockout, heater treaters, LACT's, storage tanks, and a gas processing plant. At present the facility has surplus capacity. Negotiations have been initiated between Chevron U.S.A., Inc. and Mobil Oil Corporation, representing the owners, to determine if Santa Clara Unit production could be processed through this facility.

- Ventura-Oxnard Area. Chevron U.S.A., Inc. has operations in the Oxnard area. However, the handling of Santa Clara Unit production would require separate facilities due to the nature of the crude and the limited capacity of existing facilities. New facilities would not be as extensive as those now installed at Carpinteria or Rincon and would consist of holding tanks, pumps, and dew point depression equipment for gas. Present zoning and land-use requirements pose special problems for this area.

- Separate Sites for Oil and Gas Facilities. As previously indicated, the possibility exists of oil and gas being handled separately. This situation could develop if the Pacific Offshore Pipeline Company (POPCO), an affiliate of Southern California Gas Company, were to install a single coordinated

gas gathering system for the Santa Barbara Channel. In this event, it might be proposed to install a gas line to the nearest tie-in point of the POPCO system while the oil would be routed to one of the aforementioned sites.

SBC-EIS 76-13

The Santa Barbara Channel EIS 76-13 considers the status of the proposed action as of the date of publication (March 4, 1976):

- Santa Clara Unit Potential Field Areas — Vol. I, p. I-115
- Santa Clara Unit Discovery Area — Vol. I, p. I-160 and I-161

II. Location and Natural Setting

A comprehensive, 3-volume Final Environmental Statement has been prepared by the USGS on Oil and Gas Development in the Santa Barbara Channel Outer Continental Shelf off California (FES 76-13, March 4, 1976). Section II (Vol. I, p. II-1 to II-226, and Vol. II, p. II-227 to II-655) presents a Description of the Environment including:

- Geography and Geomorphology — Page II-1
- Geology — II-9
- Meteorology — II-155
- Oceanography — II-182
- Biology — II-227
- Resources — II-346
- Air and Water Quality — II-575

Therefore, this Environmental Analysis considers aspects of the location and natural setting with specific reference to the Santa Clara Unit Plan of Development.

a. Geology and Seismology

Introduction

The Santa Clara Unit lies in the eastern portion of the Santa Barbara Channel on the Oxnard Shelf. The center of the unit, which is comprised of eight lease tracts, is approximately 10 miles southwest of the City of Ventura.

The unit lies within the Oakridge fold belt which includes the Oakridge and McGrath faults, the Montalvo and Twelve-Mile Trend anticlines, and the Santa Clara and Oxnard synclines (Greene and others, 1977). The proposed platform lies on the Twelve-Mile Trend which is an anticline running through the southern portion of the three northern tracts of the unit.

The trapping mechanism is an asymetrical, east-west trending, faulted anticline. Production is from rocks of Miocene and potentially from Pliocene age at depths of approximately 4,600 to 8,000 feet below sea level.

Nine exploratory wells have been drilled within the unit area since the granting of Federal leases. Six of these were drilled along the Twelve-Mile Trend of which two are on Lease P-0217. Information from these wells and seismic data (mostly proprietary) along with published data are the primary information used in the analyses of potential geologic hazards.

Surface and Near-Surface Geology and Potential Geologic Hazards

The Holocene deposits on the sea floor of the Oxnard Shelf reach a maximum thickness of approximately 200 feet and have been described as alluvial deposits of clay, silt and sand. The sediment distribution on the Oxnard Shelf grades from sand near shore to mud on the outer shelf. The source of sediments is the Santa Clara River (FES 76-13). More than 15 cm. of sediments can be deposited on the inner part of the Oxnard Shelf during major floods of the Santa Clara River, and these are later redistributed by wave and current action. (Drake and others, 1972). Surface currents flow southeast along the eastern Santa Barbara Channel coast (Kolpack, 1971).

Below these deposits are found upper Pleistocene deposits of marine and nonmarine sands, gravels and clays up to 200 feet thick on the Oxnard Shelf. Onshore these deposits form terraces. Lower Pleistocene strata, the San Pedro Formation, consist of marine and nonmarine mudstone, sandstone, siltstone and conglomerate and have a maximum thickness of 1,500 feet on the Oxnard Shelf (FES 76-13).

Approximately 700 feet of shallow unconsolidated sediments are reported in the region and ranging from Recent Holocene through Pleistocene. There are numerous unconformities throughout.

The slope at the site of the platform (1 or 1A) is less than $1^{o}$ SW. Slope increases below 340 feet of water to $3^{o}$ SW down to the floor of the Santa Barbara Basin.

Subsurface Geology

A review of wells drilled in the lease blocks around the platform site indicate that the following strata will be penetrated:

| Age | Formation | Rock Unit |
|---|---|---|
| Recent-Upper Pleistocene | | Unconsolidated sand and mud |
| Lower Pleistocene | San Pedro | Marine and non-marine mudstone, sandstone, siltstone, and conglomerate |
| Upper Pliocene | Pico | Marine sands, clays, siltstones |
| Lower Pliocene | Repetto | Marine sands, clays, siltstones |
| Miocene | Santa Margarita | Siltstone and shales |
| Miocene | Monterey | Marine chert, siliceous shale with limestone to siltstones and sands at base |
| Oligocene-Upper Eocene | Sespe | Non-marine sands, shales, conglomerates |

Oil production will be from the Miocene and Pliocene rocks and will range in depth from approximately 4,600 to 8,000 feet subsea.

Lost circulation has occurred within the Monterey Formation. Abnormal pressure zones have been found in the wells drilled on this structure. These are in the lower Pico, Repetto, Santa Margarita and Monterey Formations. The Repetto has shown a salt water flow in one well. These problems are taken care of by modern drilling techniques.

Drilling for hydrocarbons (including casing and blowout prevention equipment), well completion methods, and production methods are discussed in FES 76-13, Vol. 1, p. I-210 - I-222.

Fresh water aquifers have been identified offshore beneath the Oxnard Shelf (Green and others, 1977) and these, where encountered, will be protected from salt water intrusion.

Seismicity

The Santa Barbara Channel area has had a long history of seismic activity. The proposed site is located in a seismically active area. Table I contains a list of the earthquakes significant to the site that have occurred since 1812.

The historic seismic record from 1932 through 1975 (Hilman, Allen, and Nordquist, 1973, updated to include the years 1973 through 1975) and the major historic events before 1932 (Townley and Allen, 1939; U.S. Coast Geodetic Survey, 1929-31) for the statistical analysis indicates that the total seismic activity rate is 0.00019 events of mag. 4 or greater per year per square kilometer. The major earthquake-induced ground motion at the site would be a result of seismic activity along the major seismotectonic zones shown in Table II. Faults are assigned limiting magnitudes based on their length and historic activity.

The mean recurrence intervals for the site are computed as represented in Table III.

Earthquake Related Damage

1. Ground Rupture

A study of the published literature and an analysis of the test borings and the high resolution sections indicate that evidence is not present for a fault trace beneath the proposed site.

2. Ground Failure

(a) Liquefaction

The subsurface soils at the proposed site can safely support the proposed platform. The studies to evaluate soil properties and liquefaction potential indicate that the potential for liquefaction at the proposed platform site is extremely low.

(b) Slumping

The ocean bottom in the immediate area is nearly flat with a very gentle bottom slope, and there are no indications of slumping at or near the proposed location. Potential slumping is unlikely.

TABLE I

LIST OF SIGNIFICANT EARTHQUAKES

| Year | Date | Location | N. Lat. | W. Long. | Epicentral MMI* |
|---|---|---|---|---|---|
| 1812 | Dec. 8 | Santa Barbara Channel | 34 | 120 | X |
| 1852 | Nov. 27-30 | Lockwood Valley | 34.5 | 119 | IX-X |
| 1857 | Jan. 9 | Fort Tejon | 35 | 119 | X-XI |
| 1893 | Jun. 1 | Santa Barbara | 34.5 | 119.5 | VII |
| 1902 | Jul. 27-31 | Santa Barbara County | 34.5 | 120.5 | IX |
| 1912 | Dec. 14 | Oxnard | 34 | 119 | VI-VII |
| 1925 | Jun. 29 | Santa Barbara | 34.3 | 119.8 | VIII-IX |
| 1926 | Jun. 29 | Santa Barbara | 34.5 | 119.5 | VII |
| 1927 | Nov. 4 | Off Pt. Arguello | 34.5 | 121.5 | IX-X |
| 1930 | Aug. 5 | Santa Barbara | 34.5 | 119.5 | VII |
| 1941 | Jun. 30 | Santa Barbara Channel | 34.3 | 119.6 | VIII+ |
| 1952 | Aug. 21 | Kern County | 35 | 119 | X-XI |
| 1968 | Jun. 26 | Off Santa Barbara | 34.2 | 119.7 | V |
| 1968 | Jul. 4 | Off Santa Barbara | 34.1 | 119.7 | VI |
| 1971 | Feb. 9 | San Fernando | 34.4 | 118.4 | VIII-IX |
| 1973 | Feb. 21 | Off Point Mugu | 34.1 | 119 | VII |

*Modified Mercalli Intensity

TABLE II

DIRECTLY DETERMINED ROCK ACCELERATIONS

| Fault | Magnitude | Distance to the Site* | Site Rock Acceleration |
|---|---|---|---|
| Santa Cruz Island | 7.0 | 23 | 0.23 |
| Santa Inez | 7.5 | 33 | 0.23 |
| Santa Monica Bay | 7.0 | 54 | 0.11 |
| Red Mountain | 6.5 | 19 | 0.20 |
| Pitas Point | 6.5 | 15 | 0.23 |
| Oakridge | 6.5 | 8 | 0.37 |
| More Ranch | 7.0 | 38 | 0.14 |
| San Andreas | 8.25 | 76 | 0.23 |
| South Channel | 6.5 | 8 | 0.30 |
| North Channel | 6.5 | 5 | 0.32 |
| Random Event (directly beneath the site) | 6.0 | 5 | 0.40 |

*Hypocentral distance (kilometers)

TABLE III

MEAN RECURRENCE INTERVALS

FOR THE SITE

| Acceleration (% g) | Mean Recurrence Interval (Years) |
|---|---|
| 5 | 4 |
| 10 | 10 |
| 15 | 30 |
| 20 | 70 |
| 25 | 200 |
| 30 | 600 |
| 35 | 1,500 |
| 40 | 3,000 |
| 50 | 20,000 |
| 60 | 80,000 |

3. Tsunami

Based on the study of the published data and the location of the site, tsunami damage should not be a factor to be considered significant at the site.

Conclusions:

Proprietary and published data concerning potential geologic hazards have been reviewed. The geologic hazards considered and the conclusions reached are as follows:

ocean floor slope stability - almost level at platform site
ocean floor slumping - none evident
faulting - none reaching ocean floor in the immediate area
seeps - none in the area
fresh water zones - present but no hazard
shallow gas zones - none evident
above normal pressures - present but no hazard
lost circulation zones - present but no hazard
seismicity - present but effects can be minimized by platform design
liquefaction - no hazard
tsunami - no hazard

It was concluded that the proposed plan of development for the Santa Clara Unit, lease P-0217, can be carried out without undue risk to the environment. Formations containing hydrogen sulfide (sour gas) are likely to be encountered while drilling wells on the Santa Clara Unit. The $H_2S$ contingency plan for the protection of all personnel from its toxic effects is presented as Appendix I-6 of the Operator's Oil Spill and Emergency Contingency Plan for Santa Barbara Channel OCS Leases. The plan describes $H_2S$ monitoring, personnel training, safety and medical supplies, first aid, procedure for operating conditions (initial warning -- $H_2S$ present in levels between 10 and 20 ppm; hazardous conditions -- 20+ ppm $H_2S$), responsibilities of personnel, evacuation plan, and agency notification.

b. Living Resources

A large commercial fishery including bonito and jack mackeral exists in the Santa Clara Unit area.

Terrestrial and marine biology of the Santa Barbara Channel area are discussed in detail in FES 76-13, Vol. 2, p. 227 - 325. Rare and endangered birds and animals are listed on p. II-244 of the FES. None are present at the proposed platform site. Marine mammals, including rare and endangered species are discussed on

p. II-303 through II-314. The gray whale - *Eschrichtius robustus*, blue whale - *Balaenoptera musculus*, thin-back whale - *Balaenoptera physalus*, hump-backed whale - *Megaptera novaeangliae* are listed as endangered species. These are occasional or limited seasonal visitors to California inshore waters.

The Areas of Special Biological Significance (ASBS) nearest the proposed platform location are Santa Cruz Island (10 miles) and Anacapa Island (12 miles). Anacapa Island is one of the four northern Channel Islands and is designated a Channel Islands National Monument.

c. Archeological and Historical

The water depth at the proposed platform site is 318 feet. There is no evidence of cultural resources in the area as documented in the clearance survey performed on the site.

d. Other

Meteorology, Oceanography, Socioeconomics and Area Utilization, and Air and Water Quality have been thoroughly documented in FES 76-13. No comments were received in connection with these subjects.

The proposed site is about 5 miles northeast of the northbound shipping lane and some 10 miles southeast of other areas of drilling and production platforms in Federal and State waters.

III. Impacts

Section III of FES 76-13, discusses "Environmental Impact of Further Santa Barbara Channel Development" (Vol. 2, p. III-1 through III-357). Section III.O. summarizes environmental impacts by affected resource. Tables III-16 and III-17 (Vol. 2, p. III-345 through III-347) summarizes impacts of petroleum development. The impact summary of this EA addresses the proposed platform (first phase of development).

In accordance with Secretarial Order 2974 (Revised) of January 19, 1977, Section 4(f)3, review comments on the plan of development were requested and received from: (1) Fish and Wildlife Service (FWS), and (2) Bureau of Land Management (BLM) (See attachment 1). As stated in Section VI. of the EA, FWS has no objection to the development activities and BLM recommended approval of the plan of development.

a. Area Requirement

The present tentative platform deck design is 175 feet by 120 feet. The seafloor removed from human use is approximately the same. A service life of 25 years is estimated. For commercial fishing and shipping operations, approximately 3 to 4 square miles would be removed from use (approximately 1 mile around the platform).

b. Subsurface Impacts

No subsurface impacts are expected as care will be taken to prevent communication between strata and any uncontrolled conduction of formation fluids to the surface.

c. Living Resources Impacts

The Fish and Wildlife Service has no objection to the development activities planned in Lease OCS-P 0217 but commented that (1) impacts on marshes and wetlands should be avoided, and (2) Leases OCS-P 0215, 0216, and 0217 are in an area of intense commercial fishing. (Please see attachment 1.)

Neither Fish and Wildlife Service nor the Bureau of Land Management noted concern for endangered species in regard to the specific proposed action. As discussed in section II.b., several species of endangered whales are occasional or limited visitors to California inshore waters. No adverse impacts on cetacians have been reported from existing platforms in Federal or State waters.

Marshes and wetlands in the area include Carpinteria Marsh, Goleta Slough and Mugu Lagoon. The Fish and Wildlife Service, supplied a wetland report on Carpinteria Marsh. Figure 2, Carpinteria Marsh Habitats, is reproduced from this report. Carpinteria Marsh comprises 230 acres and is located just north of the City of Carpinteria.

Impact on the marine ecology would probably be beneficial as demonstrated by the excellent reef effect previous Channel platforms have exhibited.

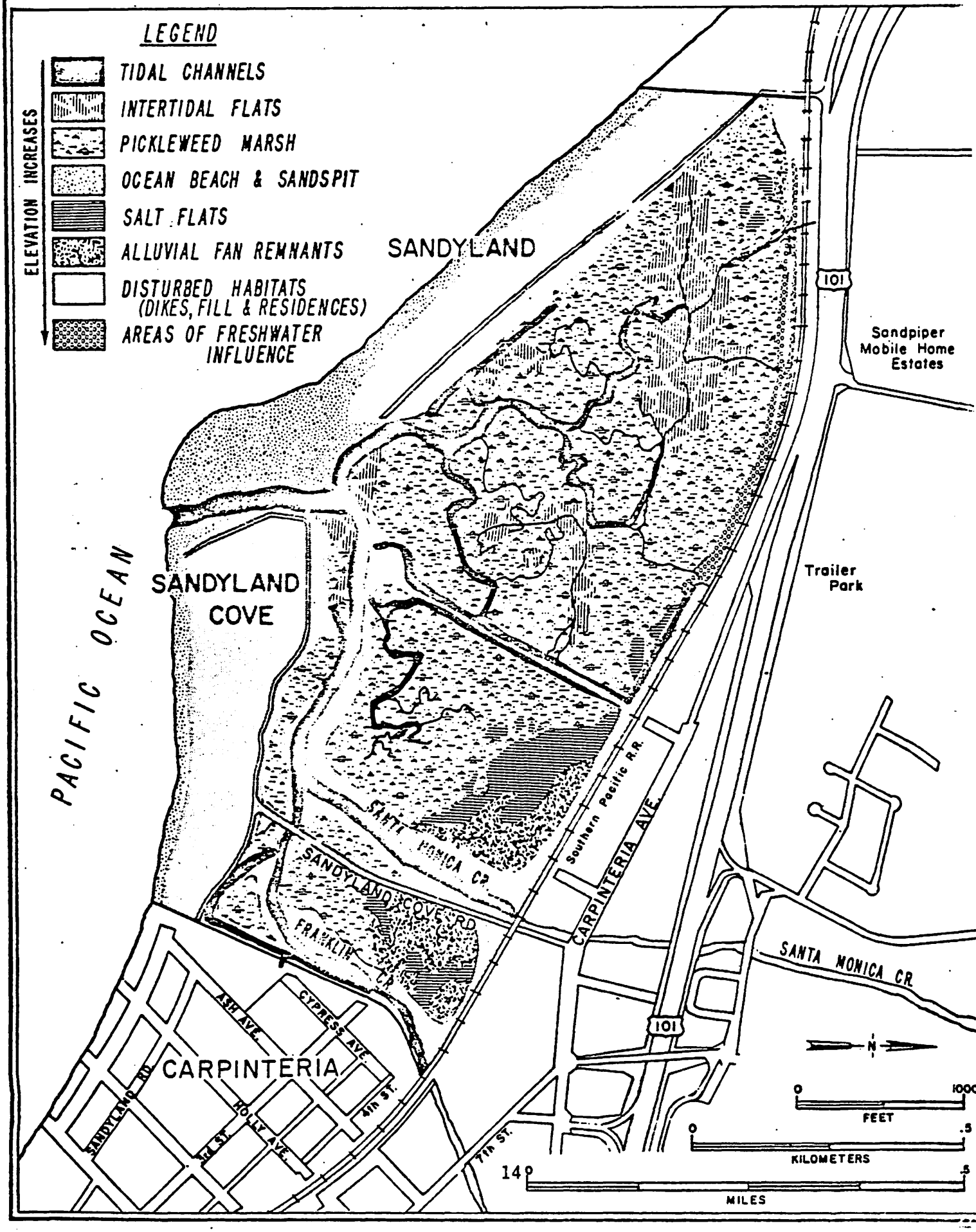
d. Socioeconomic and Area Utilization Impacts

Socioeconomic impacts of oil and gas activities on the Channel area are presented in FES 76-13 (Vol. 2, p. III-258 to 327). The impact of development of the Santa Clara Unit would be a modest component of possible cumulative impacts on the regional Channel economy and area utilization, e.g., the possible range of additional platforms for the whole Channel is given as 10 to 21, development wells as 190 to 520. Ventura and Santa Barbara Counties historically have provided personnel support for onshore and offshore oil and gas development.

A partial list of services and facilities and their locations that are available is provided below.

Fiture 2 (From: Macdonald, 1976, p. 24

# CARPINTERIA MARSH HABITATS



- Contractors and manpower immediately available to assist Clean Seas, Inc.:

  Saticoy, CA.
  Ventura, CA.

- Privately owned sites for disposal of oil, oil-soaked drill cuttings, oil-soaked trash:

  Ventura, CA.
  Fillmore, CA.
  Oxnard, CA.

- Divers for underwater welding and inspection:

  Santa Barbara, CA.
  Goleta, CA.

- Heavy equipment for hauling and earthmoving:

  Ventura, CA.
  Santa Barbara, CA.
  Port Hueneme, CA.

- Marine equipment contractors, service/crew boats, barges, salvage vessels, skimming vessels, tugs:

  Santa Barbara, CA.
  Goleta, CA.
  Port Hueneme, CA.

- Helicopters for transport of personnel, materials, equipment:

  Ventura, CA.

Fabrication of the platform would occur in an industrialized area (outside of the Santa Barbara Channel area). Personnel for the construction and operational phases would be predominantly from Ventura, Santa Barbara, and to a lesser degree, Los Angeles, and Orange Counties. (EIS 76-13, Vol. 2, p. III-260 through III-268).

Final selection of an onshore processing site and consequent pipelines will be influenced by tactical feasibility. Four potential options were noted.

e. Air and Water Quality Impacts

No significant deterioration of air quality in the vicinity of the proposed platform will occur. The only emissions to the atmosphere

will be exhaust and combustion products from the drawworks, supply and crew boat diesel engines and helicopters. Due to the favorable circulation and air quality in the area, negative air impacts would be dispersed a short distance from the sources. Impacts on air quality from crude and processed oil transportation and oil treating and processing have received increased attention recently. Findings vary with assumptions and methodology.

The major potential for adverse impact is the remote possibility of a large oil spill. The effects of such a spill were demonstrated in the platform A incident of 1969. Technology and regulation improvements along with different structural conditions make the likelihood of such a spill very remote. The impacts of major and minor oil spills on marine and littoral environments are discussed in FES 76-13, Vol. 2, p. III-125 to III-176.

During production, non-toxic produced waste water brines might be discharged to the ocean, but only if essentially all oil and grease had been removed. No water quality degradation from human waste or garbage disposal would result because of the requirement for on-platform sewage water treatment and transporting of garbage and trash to an onshore approved disposal site.

f. Archeological and Historical Impacts

"We have reviewed the archeological report for this site and concur with the clearance given by Dr. Ruppe, a certified marine archeological surveyor." (Bureau of Land Management, February 10, 1977; see attachment 1)

g. Aesthetics, Noise, and Traffic Impacts

Due to the location (12 miles from nearest mainland shore) the platform, supply boats and helicopters might be visible to some degree throughout the year. Localized noise and traffic impacts would be negligible. See FES 76-13, p. III-302 through III-315 for a discussion of impacts on aesthetic and scenic values.

h. Long-Term vs. Short-Term Use and Productivity and Irretrievable Commitment of Resources

The only irretrievable commitment of resources would be utilization of hydrocarbons. Short-term use would be their use at this time as compared to some time in the future (long-term).

i. Impact Matrix

The following impact matrix is reproduced from Table III-16 of EIS 76-13 (Vol. 2, p. 343). It is a qualitative synopsis demonstrating relative judgments of the task force.

| Rating Scale<br>+ Beneficial impact<br>0 No impact or not likely to occur<br>5 Most impact or most likely to occur<br>3 Possibility of occurrence / Rating of impact 3/5 | Terrestrial | | | | Marine | | | | | | | | | Socioeconomic | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Fishing | | | Transportation | | | | Economic | | | |
| | Birds | Mammals | Endangered Species | Vegetation | Birds | Mammals | Benthic Organisms | Pelagic Organisms | Endangered Species | Vegetation | Bottom Sediments | Commercial | Sport | Recreation and Tourism | Onshore | Offshore | Air Quality | Water Quality | National | State | Regional |
| **Impact of Drilling & Production Platforms** | | | | | | | | | | | | | | | | | | | | | | |
| Construction Phase | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 0 | 1 | 1 | 3 | + | 1 | 1 | 1 | 0 | 1 | 0 | + | + | |
| Operation Phase | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 2 | + | 1 | 0 | 1 | 0 | 2 | + | + | + | |
| Post-Production Phase | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Impact of Pipelines** | | | | | | | | | | | | | | | | | | | | | | |
| Construction Phase | 2 | 3 | .0 | 2 | 1 | 0 | 3 | 2 | 0 | 3 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 0 | 0 | + | |
| Operation Phase | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | + | + | + | |
| Post-Production Phase | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Impact of Marine Loading Terminal** | | | | | | | | | | | | | | | | | | | | | | |
| Construction Phase | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 0 | + | + | |
| Operation Phase | 0 | 0 | 0 | 0 | + | + | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 2 | 0 | + | + | |
| Post-Production Phase | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Impact of Onshore Treating & Storage Facilities** | | | | | | | | | | | | | | | | | | | | | | |
| Construction Phase | 2 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 2 | 2 | + | + | + | |
| Operation Phase | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 2 | + | + | + | |
| Post-Production Phase | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Impact of Offshore Treating & Storage Terminal** | | | | | | | | | | | | | | | | | | | | | | |
| Construction Phase | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | + | + | |
| Operation Phase | 0 | 0 | 0 | 0 | + | + | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | + | + | + | |
| Post-Production Phase | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Impact of Submerged Production System** | | | | | | | | | | | | | | | | | | | | | | |
| Construction Phase | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | + | |
| Operation Phase | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | |
| Post-Production Phase | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Impact of Oil Spills** | | | | | | | | | | | | | | | | | | | | | | |
| Major Spills | 1/3 | 1/3 | 1/1 | 1/4 | 1/5 | 1/4 | 1/4 | 1/4 | 1/3 | 1/3 | 1 | 1/4 | 1/4 | 1/3 | 2 | 2 | 2 | 1/3 | 1/3 | 1/2 | 1/4 | |
| Minor Spills | 3/1 | 3/1 | 3/1 | 3/2 | 3/1 | 3/1 | 3/1 | 3/1 | 3/2 | 3/1 | 0 | 3/1 | 3/1 | 3 | 0 | 1 | 1 | 3/1 | 1 | 2 | 2 | |
| Very Minor Spills | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 1 | 1 | 2 | 0 | 2 | 1 | 2 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | |

TABLE III-16 IMPACT SUMMARY, PETROLEUM DEVELOPMENT, SANTA BARBARA CHANNEL OCS, OFF CALIFORNIA

Activities impacting on the environment are divided into two groups: (1) phase of proposed component (construction, operational, and post-operational), and (2) possible oil spills. Not all impacts indicated are inevitable. Many are potential or "threatened", and may not occur. The summary of impacts is made in the context of the entire FES 76-13 Statement - including current engineering design criteria, consideration for areas of special significance, multi-agency jurisdictional controls, and other mitigations. It should be considered that damage to facilities or components may result without, as well as with, an adverse impact on the environment.

In rows indicated by a diagonal separation, i.e., impact of oil spills, the upper number is an estimate of the probability of occurrence (on a 0 to 5 scale); the lower number is the severity of impact (same scale). Relative ratings are indicated by a single symbol (same scale). Relative ratings may have both positive and negative considerations depending both on factual considerations and point of view.

Short-term or long-term impacts are implied by the phase of development. For oil spills, ratings are for a period of approximately up to one year.

## IV. Mitigating Measures

A variety of mitigating measures will be made to decrease the potential adverse impact from platform installation and oil and gas recovery operations. General mitigations related to OCS activities include use of regulations by the U. S. Geological Survey, Department of Transportation, EPA, Army Corps of Engineers and others. The USGS Pacific Area OCS Orders and notices to Lessees provide detailed operations instructions to operators. Regular inspections of platforms and procedures allow enforcement of USGS and other agency rules.

Various contingency plans now exist for cleanup of oil spills should they occur. Chevron U.S.A., Inc. has submitted its detailed oil spill and $H_2S$ contingency plans for the Santa Clara Unit. Clean Seas, Inc. operates in the Channel and has a large inventory of containment materials and equipment on ready status at all times. Various natural factors also work as potential mitigation factors in the event of oil spills. The Santa Barbara Channel has relatively high concentrations of organisms due to natural oil seeps which in the event of spills aid breakdown of hydrocarbons by metabolic processes.

Chevron U.S.A., Inc. will have, on the Santa Clara Unit platforms, an assortment of oil spill cleanup and containment equipment consisting of an 18-foot Monarch boat on davits, 1,000 feet of oil spill boom, an oil skimmer, sorbent boom, five drums of dispersant, and two drums of "Oil Herder".

Use of state-of-the-art safety devices, such as subsurface safety valves and other equipment will greatly reduce risk of environmental impacts from oil spill releases. Detailed well control training programs for all platform personnel will also very positively increase safety and environmental protection security. All Chevron and contractor personnel will be trained in boom deployment and cleanup operations.

Air and water quality will be carefully controlled by enforcement of all applicable EPA and other appropriate agency rules.

FES 76-13 (Vol. 3, Section IV) documents in detail both (1) general mitigations related to OCS Oil and Gas Operations and Facilities, and (2) mitigations related to the specific phases and components of potential activities. Selected cross-references to the FES 76-13 documentation follow.

Volume I



Volume IV

## V. Alternatives

Possible alternatives to approval of the initial Santa Clara Unit Platform installation include "Other Production Methods" and "No Action".

Subsea completions could be effectively used as an alternative, however, at the depth considered, drilling and completion costs would be three to five times more expensive and they would require a network of undersea flow lines. Well workovers would also be correspondingly more costly. From a safety, monitoring control, and potential leakage control standpoint, platform-based wells would be more desirable. One may take note of the advanced and constantly improving state-of-the-art for subsea completion systems. Subsea completions would also require abandonment sooner than platform wells due to earlier sub-economic status as a result of their inherently higher costs.

The alternative "No Action" in these circumstances consists of the possibility of (1) no action now or in the foreseeable future; and (2) deferral of approval for now. Both of these would prevent development of already discovered, much needed hydrocarbon resources and would likely result in legal action against the United States and loss of royalty income for the United States. The initial Santa Clara Unit platform could be moved a slight distance, however, the proposed location is optimal. No advantages would be gained by relocation to another site over the target formations, and environmental impacts associated with platform installation would be the same as at the proposed location.

The Plan of Development includes the alternative of using an offshore loading and storage terminal with shuttle tankers for shipping the produced crude oil (Section IX, in Operator's Plan of Development). The present EA notes this alternative to pipeline transportation in Section I of this EA, Proposed Action and Background. Should an offshore loading and storage terminal be officially proposed, it would likely be controversial with both the State and local governments, and subject to litigation based on parallel experience at the Santa Ynez Unit. 1/ However, the present EA basically concerns the first stage of the development plan (the platform). Later stages of the development plan (e.g., pipeline route and/or the offshore alternative) will be analyzed when submitted for approval.

---

1/ Litigation and issues involving the offshore loading and storage terminal for the Santa Ynez Unit are complex and on-going. In addition to trade journal and newspaper reports, details may be found in:

State of California, February 1977, Offshore Oil and gas development: Draft findings and recommendations.

_____, December 1976, Offshore oil and gas development: Preliminary draft.

_____, August 1976, Offshore oil and gas development: Preliminary draft.

## VI. Outside Agency Contacts and Public Interest

Hearings on Oil and Gas Development in the Santa Barbara Channel OCS (FES 76-13), including the Santa Clara Unit, were held in Santa Barbara in August 1975.

There is a minority, but well organized and very vocal, opposition to all oil and gas activity in the Channel. With approval of a Santa Clara Unit platform, it is expected that the opposition will voice some degree of displeasure. The level of positive and negative public opinion response that will be generated in the Santa Barbara area by platform installation will probably be somewhere from mild to large. The platform location is 10 miles to the southeast of present development and off Ventura County. Numerous public interest groups, governmental agencies, and private citizens have been informed of OCS activities and took part in the 1975 hearing.

An agreement between the Department of the Interior (DOI) and the City and County of Santa Barbara was executed between September 29 and October 7, 1976. In this agreement, any proposed action, including platforms, in the areas of the Santa Barbara Channel designated as the "Santa Ynez Unit", the "Santa Clara Unit", and lease OCS-P 0262 operated by Mobil Oil Corporation off Port Hueneme are exempted from the following provision. That is that, in the event of future applications for development plans which provide for the installation of platforms in the Santa Barbara Channel, the City and County of Santa Barbara be given notice thirty (30) days in advance of a decision and advised whether the action contemplated by the application is not considered a major Federal action within the meaning of NEPA or if a decision is anticipated without the preparation of a further EIS. (Emphasis supplied)

The U. S. Fish and Wildlife Service (FWS) and the U. S. Bureau of Land Management (BLM) have been contacted under the provisions of Secretarial Order No. 2974 for their review of, and input and comments on, the proposed action.

Responses were received from each agency (Attachment 1). The FWS has no objection to the development activities planned in OCS-P 0217. BLM recommended approval of Chevron, U.S.A., Inc.'s Plan of Development.

VII. Determination

I recommend that the proposal (~~does~~) (does not) constitute a "major Federal action" significantly affecting the quality of the human environment in the sense of NEPA, Section 102(2)(c).

for F. J. Schambeck
Oil and Gas Supervisor
Pacific Area

7/13/77
(Date)

I determine that the proposal (~~does~~) (does Not) constitute a "major Federal action" significantly affecting the quality of the human environment in the sense of NEPA, Section 102(2)(c).

Conservation Manager
Western Region

7-13-77
(Date)

## Selected References


Aquatronics International, Inc. (1974), Report on high resolution geophysical survey Santa Barbara Channel offshore California. Houston, Texas. Unpublished report in the files of the Standard Oil Company of California.

Ard, R. W., Jr., 1976, Coast Guard's response to spilled oil: *in* Environmental Science and Technology, Vol. 10, No. 3, March 1976.

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California Coastal Zone Conservation Commission, 1975, California Coastal Plan: 443 p.

Chevron Oil Field Research Company (La Habra, October 1976), Report on Santa Clara Unit normal oceanographic/meteorological conditions. Prepared for Standard Oil Company of California.

Chevron U.S.A., Inc., 1976, Santa Clara Unit plan of development Parcel OCS-P 0215, 0216, and 0217.

_____, Western Region, Production Department, 1977, Oil spill and emergency contingency plan for Santa Barbara Channel OCS leases.

Dames and Moore Geotechnical Services, October 1976, Santa Clara Unit: for Standard Oil Company of California, Western Operations, Inc., 3 v. (Final site investigation Vol. I and II, Oakridge Fault zone geophysical surveys, Vol. III).

Erickson, R. C. et al (1975), Urban oil production and subsidence control - a case history, Beverly Hills (East) Oil field, California, Society of petroleum engineers of AIME. Paper No. SPE 5603.

Greene, H. G. (1976), Late Cenozoic geology of the Ventura Basin, California, Miscellaneous Publication 24, Pacific Section AAPG, pp. 499-529.

Library of Congress, Congressional Research, March 1976, Effects of offshore oil and natural gas development on the coastal zone: a study for the use of the Ad Hoc Select Committee on Outer Continental Shelf, House of Representatives.

Macdonald, K. B., 1976, The natural resources of Carpinteria Marsh their status and future: prepared for the State of California Department of Fish and Game under contract to the U. S. Fish and Wildlife Service.

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U. S. Geological Survey, 1976a, Final environmental statement, oil and gas development in the Santa Barbara Channel Outer Continental Shelf off California: 3 vol.

_____, June 7, 1976b, Lease Sale No. 35 development - scenario data: prepared for Bureau of Land Management.

_____, 1976c, Infrastructure report of Lease Sale 48: prepared for Bureau of Land Management.

Vedder, J. G., et al (1969), Geologic framework of the Santa Barbara Channel Region, "Geology, Petroleum and Seismicity of the Santa Barbara Channel Region, California", Geological Survey Professional Paper 679.

## Geologic References

Drake, D. E. and others, 1972, Sediment Transport on the Santa Barbara Oxnard Shelf, Santa Barbara Channel, California, in Swift, D. J. P., and others (eds), Shelf sediment transport: process and pattern: Dowden, Hatchinson and Ross, Inc., Stroudsburg, Pa., p. 307-332.

Greene, H. G. and others, 1977, The Marine Geology of the Eastern Santa Barbara Channel with Particular Emphasis on the Ground Water Basins offshore from the Oxnard Plain, Southern California: in press.

Kolpack, R. L., ed. 1971, Physical, Chemical and Geological studies: biological and oceanographical survey of the Santa Barbara Channel oil spill, 1969-1970, V. II, Allan Hancock Foundation, University of Southern California, 477 p.

U. S. Geological Survey, 1976, Final Environmental Statement, Oil and Gas Development in the Santa Barbara Channel Outer Continental Shelf off California.

OPTIONAL FORM NO. 10
JULY 1973 EDITION
GSA FPMR (41 CFR) 101-11.6

UNITED STATES GOVERNMENT

# *Memorandum*

1782.1
OCS P-0215,
0216, 0217

**TO** Oil and Gas Supervisor, Pacific Area **DATE:** FEB 10 1977

**FROM** : Manager, Pacific OCS Office

**SUBJECT:** Review of Materials Forwarded for Santa Clara Unit, Plan of Development, Leases OCS P-0215, 0216 and 0217, Standard Oil Company of California

Your materials regarding Standard Oil Company's Plan of Development have been reviewed. The following specific comments are offered regarding the status of the lease and submitted materials:

1. There are no legal conflicts nor encumbrances on the lease, and Standard Oil Company of California is properly designated as the operator.

2. Comments on Cultural Resources are as follows:

   We have reviewed the archeological report for this site and concur with the clearance given by Dr. Ruppe, a certified marine archeological surveyor. Standard Oil Company is to be commended for providing the cultural resources assessment in the absence of Geological Survey requirements.

3. Comments on the Oil Spill Contingency Plan are as follows:

   The Oil Spill Contingency Plan is an excellent document; however, Appendix 3 should contain the Clean Coastal Waters Revision 8, dated November 1976 instead of Revision 5, dated February 1976.

We recommend an approval of Standard Oil Company's Plan of Development when the suggested correction is made to the Oil Spill Contingency Plan.

We are returning all proprietary materials which were forwarded to us as detailed in your cover memorandum of February 4, 1977. These materials for the subject lease are as follows:

5010-110

1. Plan of Development for Leases OCS-P 0215, 0216 and 0217, Standard Oil Company of California

2. Oil Spill Contingency Plan, Chevron

3. Final Site Investigation, Volumes I, II and III, Dames and Moore.

Enclosures

Acting

Attachment 1.

Correspondence

United States Department of the Interior

FISH AND WILDLIFE SERVICE
1500 N.E. IRVING STREET
P.O. BOX 3737
PORTLAND, OREGON 97208

March 7, 1977

TO: Oil and Gas Supervisor, Pacific Area
U. S. Geological Survey
Los Angeles, California

FROM: Acting Regional Director
U.S. Fish & Wildlife Service
Portland, Oregon

SUBJECT: Santa Clara Unit, Plan of Development Leases OCS-P 0215, 0216, 0217, Chevron, U.S.A., Inc.

This is in response to your memorandum of February 18, 1976 requesting our review of the subject Plan of Development.

We have no objection to the development activities planned in OCS Lease P-0217. However, in relation to the pipeline routes (three alternate routes), we advise you that valuable estuary and marshland are located in the vicinity. For example, Carpinteria Marsh is located immediately west of the City of Carpinteria. Impacts upon these marshes and wetlands should be avoided. We have enclosed a wetland report on Carpinteria Marsh for your information.

The BLM map of commercial fish landings (1970-72) indicates that leases OCS-P 0215, 0216, and 0217 are in an area of intense commercial fishing. The developer should be appraised of this fishing activity in the area.

In reference to the comments in paragraph 3 of your memorandum, we consider it necessary to review the Plan of Development to insure that fish and wildlife needs receive full consideration in the OCS development process.

Our response has been provided in accordance with Section 4(f)3 of Secretarial Order No. 2974 (Revised) of January 19, 1977. Attached are the Plan of Development, the Final Site Investigation - Vols. I, II, III, and the oil spill and $H_2S$ contingency plan.

CONSERVE AMERICA'S ENERGY

Lawrence W. De Bates

Lawrence W. De Bates

Attachments

*Save Energy and You Serve America!*

Attachment 2.

Letter of Approval

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
7211 FEDERAL BUILDING
300 NO. LOS ANGELES STREET
LOS ANGELES, CALIFORNIA 90012

July 14, 1977

Chevron U.S.A. Inc.
P. O. Box 446
La Habra, CA 90631

Attention: Mr. J. R. Shore

Re: Santa Clara Unit, Plan of Development

Gentlemen:

Your plan of development for the Santa Clara Unit in the Santa Barbara Channel submitted January 7, 1977 and consisting of proposals to construct and install a combination drilling and production platform on lease OCS-P 0217 and to drill approximately 36 wells from the platform is hereby approved. Later phases of the development plan, including the installation of pipelines to handle produced fluids from the platform are approved in concept, with site specific assessment to be made as more details are received and a specific route is selected. Each phase of the proposed development will require review and approval of the Area Oil and Gas Supervisor (hereinafter referred to as the Supervisor) and will be subject to, but not limited to, the following stipulations:

1. Adherence to the requirements contained in the Federal regulations for the Outer Continental Shelf and in pertinent OCS Orders, both present and future, issued by the Oil and Gas Supervisor, Pacific Area.

2. A description of each planned phase of the operation for the service life of the project; this shall include provisions for abandonment and removal and a statement as to the conflict with commercial fishing operations and recreational activities in the area during the life of the project.

3. All phases of the proposed installation shall be certified by a registered professional engineer, mechanical, electrical, or structural, as appropriate.

4. Prior to the commencement of construction and installation a tentative progress schedule shall be submitted to the Supervisor. This schedule shall be updated, as appropriate, during the course of construction and installation.

5. During construction and installation, the Supervisor, or his authorized representative shall have access to the site or sites of activity.

6. Periodic progress reports shall be submitted to the Supervisor, at intervals of approximately one month, or as particular phases are completed or substantial progress made.

7. The Supervisor shall be notified upon the completion of each phase of the project and upon final completion. As-built drawings shall be furnished to the District Engineer and the Supervisor for each installation completed.

8. Submittal to, and approval by, the Supervisor of the following, in regard to construction and installation of the platform:

   a. Final design of the structure including static and dynamic stress analyses to indicate acceptability with the seismicity and geotechnical characteristics at the site as well as wind, wave, and current forces in the area.

   b. Detailed description of lifting and installation methods and procedures.

   c. Drilling and production equipment installation.

      1) Plan view of each platform deck outlining any non-hazardous area/areas which are unclassified with respect to electrical equipment installations, and areas in which potential ignition sources are to be installed. Plan views shall include any surrounding production or other hydrocarbon source. Also, a description of deck, overhead, and firewall shall be included.

      2) A flow schematic showing size, capacity, and design working pressure of separators, treaters, storage tanks, compressors, pumps, metering devices, valves, and similar equipment including a reference to welding specifications or codes used.

      3) Flow schematics of pollution and safety controls identified according to nomenclature (definition, symbols, and identification) contained in API-RP 14C shall be accompanied by an explanation as to functions and sequence of operation.

         a) Pollution control systems.

            (1) High and low shutoffs and alarms for level, pressure and temperature.

(2) Manual control shutoff stations and systems.

(3) Water disposal (produced and sanitary) cleanup systems.

(4) Platform drainage and sump systems.

(5) Solids disposal - drill cutting and drilling mud, sewage, garbage, etc.

b) Safety control systems.

(1) Combustible gas and $H_2S$ alarm and shutoff systems.

- Enclosed area pressurized systems and ventilation systems.
- A diagram specifying the type, location and number of detection or sampling heads.
- Cycling, non-cycling, and frequency information.
- Type and kind of alarm, including emergency equipment to be activated.

(2) Fire control systems.

- Heat and flame detection, alarm and shutoff systems.
- Deluge and water line systems.
- Chemical systems.
- Fusible plug systems.
- A diagram of the fire-fighting system showing the location of all equipment.

c) Personnel protection.

(1) Living quarters.

(2) Control stations.

(3) Boat landings and helicopter decks.

(4) Egress routes.

4) Diagrams of the electrical system to include the following:

a) Locations of generators/alternators, or other source; panel boards; major cabling/conduit routes and identification of wiring method.

b) Type, rating, and operating and safety controls of generators/alternators and prime movers.

c) Main and satellite switchboards including interlocks, controls, and indicators.

d) Feeder and branch circuits, including circuit load, wire type and size, motor protection, and circuit breaker setting.

e) Calculation or measurement of electrical system voltage drop caused by starting current of largest motor while normal load-operating conditions exist.

f) Elementary electrical schematic of any platform safety/alarm/shutdown system with functional legend.

9. Submittal to, and approval by, the Supervisor in regard to construction and installation of pipelines.

a. General information concerning the pipeline including the following:

1) Geologic and seismic review of route, ocean bottom and current survey with water depths.

2) Product or products to be transported by the pipeline, with anticipated volumes, working pressures, and gravity or density of product.

3) Length of line, size, weight and grade of pipe; maximum working pressure and capacity of line.

4) Installation procedure with bulk specific gravity of the line (line empty).

5) Description of protective coating and type or types of corrosion protection.

6) Type, size, pressure rating, and location of pumps and prime movers, and similar information for any intermediate stations.

b. Drawing(s) showing the major features and other pertinent data including:

1) Route.

2) Location.

3) Water depth.

4) Length.

5) Connecting facilities.

6) Size.

7) Burial depth, if buried.

c. A schematic drawing showing the location and function of pipeline safety equipment:

1) High-low pressure sensors and alarms.

2) Automatic shut-in valves.

3) Check valves.

4) Vessels and traps.

5) Manifolds.

6) Volumetric metering system.

7) Corrosion monitoring and protection equipment.

10. Prior to commencing operations emergency operating procedures and contingency plans shall be submitted to the Supervisor for approval:

a. Oil spill: containment and cleanup procedures.

b. $H_2S$.

c. Critical operations.

1) Simultaneous operations.

a) Narrative description.

b) Schematic plans showing areas of activities.

c) Identification of critical areas of simultaneous activities.

d) Procedures for mitigation of potential undesirable events including:

(1) Guidelines the operator will follow to assure coordination and control of simultaneous activities.

(2) Indication as to the person having overall responsibility, as person in charge at the site, for safety of platform operations.

(3) An outline of any additional safety measures required for simultaneous operations.

(4) Specifications of any added or procedural conditions imposed when simultaneous activity is in progress.

2) A welding and burning safe-practices plan similar to the above.

11. Prior to commencing operations, a communications plan and personnel and material transportation plans including any provisions for standby boats during hazardous operations shall be submitted to the Supervisor for approval. These will primarily be the responsibility of the District Engineer and shall be reviewed periodically with the District Engineer.

12. Prior to commencement of drilling, generalized drilling and completion programs shall be submitted for approval by the Supervisor. At the same time, or as soon as sufficient information is obtained, detailed completion practices shall be submitted for approval to the Supervisor. The provisions of OCS Order No. 11 shall be followed in this regard. This is not to be interpreted as nullifying the requirement to obtain an approved application to drill from the District Engineer prior to commencing drilling operations, nor to obtain subsequent permits (supplementary notices, etc.) prior to program changes, completions, etc.

13. Plans and procedures for inspections, training and drills shall be submitted to the Supervisor for approval. These will primarily be the responsibility of the District Engineer and shall be reviewed periodically with the District Engineer. These plans and procedures should cover all normal activities and emergency procedures, concerned with any and all installations mentioned above, and any events that might be expected to occur on the proposed installation. They shall include methods and frequency of testing, calibration, drills, and training as well as organizational or personnel responsibility that insures that plans and procedures are carried out.

All of the above stipulations are intended as a guide to insure prompt approval for each phase of your development program. The Supervisor reserves the right to request any further information he may require. The manner in which you submit the above information may make it possible to include several requirements on the same submittal. Duplicate submittals of the same material will not be necessary and may be included by reference.

The oil spill and $H_2S$ contingency plans previously submitted in conjunction with your plan of development for the Santa Clara Unit have also been reviewed and are hereby approved.

Sincerely yours,

H. T. Cypher
Acting Oil and Gas Supervisor
Pacific Area