

MINUTE ITEM

This Calendar Item No. 27
was approved as Minute Item
No. 27 by the State Lands
Commission by a vote of 3
to 0 at its 12/17/81
meeting.

CALENDAR ITEM

12/17/81
W 40196
Hamilton

27

RESUMPTION OF LIMITED OFFSHORE DRILLING OPERATIONS
INTO STATE OIL AND GAS LEASE PRC 3133.1
FROM CHEVRON'S PLATFORM "HEIDI"

LESSEE: Exxon Corporation
1800 Avenue of the Stars
Los Angeles, California 90067
Attention: Art Wilson

AREA, TYPE LAND AND LOCATION:

State Oil and Gas Lease PRC 3133.1 was issued to Humble Oil & Refining Company (now Exxon Corporation) on May 28, 1964, and contains approximately 5,535 acres of sovereign lands lying offshore the City of Carpinteria in the Santa Barbara Channel, County of Santa Barbara.

SUMMARY:

Exxon Corporation, proposes to resume limited drilling operations into State Oil and Gas Lease PRC 3133.1 from existing facilities (Platform "Heidi") located on westerly adjoining State Oil and Gas Lease PRC 3150.1 as shown in Exhibit "A". The purpose of drilling is to investigate and further develop known oil and gas reserves lying within Lease PRC 3133.1. The proposed plan is to permit Chevron U.S.A. Inc. to drill a directional well from Platform "Heidi" (Lease PRC 3150.1) into lands leased by Exxon (Lease PRC 3133.1). This well(s) will be drilled from an existing facility (platform) and will be included as part of Chevron's 36-well development plan already approved by the Commission (Minute Item 19, 10-28-76) and previously described in Chevron's Final EIR (SCH 76032281); however, the direction will be eastward into lands (Exxon's Lease PRC 3133.1) not included in the Final EIR. All proposed operations, including drilling, production, etc., will be conducted by Chevron in a manner consistent with existing rules and regulations governing operations from Platform "Heidi". Currently, Lease PRC 3133.1 has one producing well that is operated for Exxon by Chevron from Platform "Heidi".

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BACKGROUND:

On February 1, 1969, in response to an oil and gas well blowout on Federal OCS in the Santa Barbara Channel, the State Lands Commission declared a moratorium on further drilling on State offshore oil and gas leases, and announced that no new wells would be approved pending a complete review of all offshore drilling regulations, techniques, and procedures.

On July 31, 1969, the Commission unanimously adopted a resolution rejecting the staff's recommendation that oil and gas drilling on State offshore leases be resumed. However, the resolution did provide that:

"Recommendations for drilling wells on existing leases may be brought to the Commission for consideration on a well-by-well basis if there are unique circumstances that justify and require such drilling." (Minutes, State Lands Commission, 1969, p. 867.)

In December 1974, the Commission authorized (1) the adoption of procedures for drilling and production operations from existing offshore leases, and (2) the resumption of drilling operations on a lease-by-lease basis, such resumption to be predicated upon a review by the State Lands Commission for compliance with the procedures, compliance with requirements of the CEQA, and upon final approval by the State Lands Commission.

PERTINENT INFORMATION:

On October 28, 1976 (Minute Item No. 19), the Commission authorized the resumption of drilling operations from existing facilities (Platforms "Hilda", "Hazel", "Heidi", and "Hope") located on State Oil and Gas Leases PRC 1824.1, PRC 3150.1, and PRC 4000.1, in accordance with terms and conditions of the leases and regulations of the State Lands Commission, subject to the mitigation measures specified in the Final Environmental Impact Report (SCH 76032281).

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Prior to the drilling moratorium, six exploratory wells were drilled on Lease PRC 3133.1. These wells identified hydrocarbon accumulations underlying the lease. In July 1968, State Well 3133.1 No. 7 was drilled and completed by Chevron for Exxon. The well was placed on production in November 1968 and is currently producing about 95 barrels per day of oil.

One mitigation measure specified in Chevron's Final EIR (SCH 76032281) requires that only one drilling rig be operated on all four platforms ("Hilda", "Hazel", "Heidi", and "Hope"). In 1978, the Commission approved the amendment of leases PRC 1824.1, PRC 3150.1, and PRC 4000.1 by establishing a drilling obligation of ninety days. In addition, to meet the above mitigation measure the leases were also amended to provide that the drilling on any one of the leases fulfilled the ninety day drilling obligation on the other two leases.

Exxon now wishes permission to resume limited drilling operations on Lease PRC 3133.1 from Chevron's Platform "Heidi". The current proposal is to drill a directional well eastward into a major oil bearing sand located within Lease PRC 3133.1 and the Carpinteria Offshore Field. The well will be drilled by Chevron for Exxon from Platform "Heidi" to a total depth of 7,400 feet. The production potential of the well will be tested as necessary and if it proves commercial, the drilling of an additional well(s) may be justified.

In order to meet the mitigation measures of one drilling rig in operation at any one time, to allow Chevron to drill a well(s) for Exxon, and to prevent a breach of the ninety day drilling obligation on PRC 1824.1, PRC 3150.1 and PRC 4000.1, the staff recommends that the Commission authorize the executive officer to sign an agreement. This agreement, attached as Exhibit "B" and by this reference made a part hereof, provides that while a well(s) is being drilled for Exxon into

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Lease PRC 3133.1, the ninety day drilling obligation on Leases PRC 1824.1, PRC 3150.1, and PRC 4000.1 will be suspended. The agreement also provides that the 120 day development drilling obligation of Lease PRC 3133.1 will be suspended while drilling activity is occurring for Leases PRC 1824.1, PRC 3150.1 and PRC 4000.1.

This and any other "substitution" well(s) drilled for Exxon by Chevron will be counted as part of the 36-well development plan already approved by the Commission to develop the known reserves lying within the Summerland and Carpinteria Offshore Fields. An agreement exists between Exxon and Chevron whereby Exxon can purchase conductor slots on Platform "Heidi" and process production through the Carpinteria processing facility. If there is new production from Lease PRC 3133.1, after separate metering and sampling through a LACT unit and gas meter, it will be added to Chevron's existing production operations. An important feature of this proposal is that the facilities necessary for its implementation are already in operation and are capable of handling the new production while still remaining in compliance with existing rules and regulations governing operations from Platform "Heidi" and environmental mitigation measures.

STATUTORY AND OTHER REFERENCES:

- A. P.R.C.: Div. 6, Parts 1 and 2; Div. 13; Div. 20.
- B. Cal. Adm. Code: Title 2, Div. 3; Title 14, Div. 6.

OTHER PERTINENT INFORMATION:

1. This resumption of drilling is compatible with existing laws because there will be no physical change in the environment, directly or ultimately, resulting from this proposal. No additional or new permits will be required since Chevron already has the necessary permits and will be performing the actual work for Exxon. Furthermore, there will be no expansion of existing facilities

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beyond that identified in Chevron's Final EIR (SCH 76032281), or any other existing agreement or permit. Therefore, an initial study which discusses and evaluates the environmental impacts associated with Exxon's resumption of drilling and the adequate coverage of the previously prepared EIR (SCH 76032281) was circulated pursuant to CEQA and the EIR Guidelines. No adverse comments were received. Staff believes the previously prepared EIR (SCH 76032281) adequately covers the proposed project and complies with CEQA.

2. This project is situated on State lands identified as possessing significant environmental values pursuant to P.R.C. 6370.1, and is classified in a use category, Class B, which authorizes limited use. Staff has coordinated this project with those agencies and organizations which nominated the site as containing significant environmental values. They have found this project to be compatible with their nomination.

AGREEMENTS FOR THE PROTECTION OF THIRD PERSONS:

Staff has prepared agreement which are addition to present lease requirements which are acceptable to the lessee, affording increased protection to third persons for any damages arising from operations conducted under the lease. The agreements provide:

1. Exxon Corporation will furnish the State Lands Commission with a certificate of insurance in the amount of \$10 million, evidencing insurance against liability for damages to third persons.
2. The procedures shall be established for the prompt processing of all claims and the prompt payment of uncontested claims.
3. To facilitate the settlement of contested claims by third persons without the necessity of litigation, Exxon will agree to mediation procedures approved by the Executive Officer after consultation with the Office of the Attorney General.

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AB 884: 8/31/82.

EXHIBITS: A. Location Map.
B. Agreement.
C. EIR Executive Summary and Summary of Initial Study.

IT IS RECOMMENDED THAT THE COMMISSION:

1. CERTIFY THAT A FINAL EIR NO. 203 (SCH 76032281) HAS BEEN PREVIOUSLY COMPLETED IN COMPLIANCE WITH CEQA, THE STATE EIR GUIDELINES, AND THE COMMISSION'S ADMINISTRATIVE REGULATIONS, AND THAT THE COMMISSION HAS REVIEWED AND CONSIDERED THE INFORMATION CONTAINED THEREIN AND HAS FOUND THAT THE ENVIRONMENTAL DOCUMENT IS ADEQUATE FOR THE PROJECT AT HAND; PRIOR TO THE APPROVAL OF THE PROJECT.
2. DETERMINE THAT THE PROJECT WILL NOT HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT.
3. FIND THAT GRANTING OF THIS AUTHORIZATION WILL HAVE NO SIGNIFICANT EFFECT UPON ENVIRONMENTAL CHARACTERISTICS IDENTIFIED PURSUANT TO SECTION 6370.1 OF THE P.R.C.
4. DETERMINE THAT THE PROJECT IS CONSISTENT WITH THE PROVISIONS OF THE CALIFORNIA COASTAL ACT OF 1976.
5. CONDITION APPROVAL OF EXXON'S APPLICATION ON ITS ACCEPTANCE OF AN AMENDMENT OF STATE OIL AND GAS LEASE PRC 3133.1 TO PROVIDE FOR COMPLIANCE WITH STATE LANDS COMMISSION REGULATIONS IN EFFECT ON DECEMBER 17, 1981.
6. AUTHORIZE THE RESUMPTION OF LIMITED DRILLING OPERATIONS ON STATE OIL AND GAS LEASE PRC 3133.1 FROM EXISTING FACILITIES (PLATFORMS "HEIDI") IN ACCORDANCE WITH THE TERMS AND CONDITIONS CURRENTLY IN EFFECT FOR DRILLING FROM PLATFORM "HEIDI" AND THE RULES AND REGULATIONS OF THE STATE LANDS COMMISSION SUBJECT TO THE UNDERSTANDING THAT EXXON CORPORATION HAS AGREED TO THE FOLLOWING PROVISIONS.
 - A. EXXON CORPORATION WILL FURNISH TO THE STATE LANDS COMMISSION A CERTIFICATE OF INSURANCE FROM A RECOGNIZED INSURANCE COMPANY, DOING BUSINESS IN CALIFORNIA, IN THE SUM OF \$10 MILLION, INCLUDING THE STATE AS A NAMED INSURED AND EVIDENCING INSURANCE AGAINST LIABILITY FOR DAMAGES TO THIRD PERSONS ARISING OUT OF ANY AND ALL DRILLING ACTIVITIES UNDER SAID LEASE--WHICH CERTIFICATE SHALL NOT BE CANCELABLE

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EXCEPT UPON 30 DAYS NOTICE, AND EXXON CORPORATION SHALL AGREE TO KEEP A CERTIFICATE OF INSURANCE MEETING THE ABOVE REQUIREMENTS IN EFFECT AT ALL TIMES UNTIL ALL DRILLING FROM SAID LEASE SHALL HAVE TERMINATED AND ALL WELLS HAVE BEEN PROPERLY ABANDONED IN THE MANNER REQUIRED BY LAW.

- B. SHOULD ANY EVENT OCCUR CAUSING A SUBSTANTIAL NUMBER OF CLAIMS FOR DAMAGES TO BE FILED AGAINST EXXON CORPORATION AS A RESULT OF OPERATIONS UNDER SAID LEASE, EXXON CORPORATION SHALL, WITHIN TEN DAYS AFTER SUCH EVENT, CAUSE TO BE OPENED, OR OPEN A CLAIMS OFFICE WITHIN THE CITY OF SANTA BARBARA STAFFED WITH SUFFICIENT PERSONNEL AND AUTHORITY TO PROCESS ALL CLAIMS AND TO SETTLE ALL UNCONTESTED CLAIMS. BARRING UNUSUAL CIRCUMSTANCES, THE STAFFING OF SAID OFFICE SHALL BE SUFFICIENT TO PROCESS ALL CLAIMS AND SETTLE ALL UNCONTESTED CLAIMS WITHIN 60 DAYS OF THE ESTABLISHMENT OF SAID OFFICE;
- C. ALL DRILLING SHALL BE CONDUCTED UNDER SAID LEASE IN ACCORDANCE WITH APPLICABLE LAW, THE RULES AND REGULATIONS OF THE STATE LANDS COMMISSION AND THE DIVISION OF OIL AND GAS, AND AS REFERRED TO OR DESCRIBED IN THE FINAL ENVIRONMENTAL IMPACT REPORT RELATING TO EXPLORATORY DRILLING OPERATIONS BY CHEVRON U.S.A., INC. FROM PLATFORM "HEIDI", ADOPTED BY THE STATE LANDS COMMISSION ON OCTOBER 28, 1976;
- D. TO FACILITATE THE SETTLEMENT OF CONTESTED CLAIMS BY THIRD PERSONS WITHOUT THE NECESSITY OF LITIGATION, EXXON CORPORATION WILL AGREE TO MEDIATION PROCEDURES APPROVED BY THE EXECUTIVE OFFICER AFTER CONSULTATION WITH THE OFFICE OF THE ATTORNEY GENERAL.
7. AUTHORIZE THE EXECUTION OF AN AGREEMENT, ATTACHED AS EXHIBIT "B" AND BY THAT REFERENCE MADE A PART HEREOF. WHICH MODIFIES THE DRILLING TERMS OF STATE OIL AND GAS LEASES PRC 1824.1, PRC 3150.1, PRC 4000.1 AND PRC 3133.1, ON FILE IN THE OFFICE OF THE STATE LANDS COMMISSION.

EXHIBIT B

STATE LANDS COMMISSION

STATE OF CALIFORNIA

STATE OIL AND GAS LEASES

PRC 1824.1, PRC 3133.1,
PRC 3150.1 AND PRC 4000.1

THIS AGREEMENT is entered into by and between the STATE OF CALIFORNIA, acting by and through the CALIFORNIA STATE LANDS COMMISSION, herein referred to as "STATE" and ATLANTIC RICHFIELD COMPANY, a Pennsylvania corporation, and CHEVRON U.S.A. INC., a California corporation, and EXXON CORPORATION, a New Jersey corporation.

R E C I T A L S

WHEREAS, EXXON CORPORATION, (hereinafter referred to as EXXON with respect to PRC 3133.1) is the Lessee under Oil and Gas Lease PRC 3133.1 made and entered into the 28th day of May, 1964; and

WHEREAS, ATLANTIC RICHFIELD COMPANY, CHEVRON U.S.A. INC., and EXXON CORPORATION are the Lessees of Leases PRC 1824.1, PRC 3150.1 and PRC 4000.1, and with respect to these leases are hereafter collectively referred to as "LESSEES"; and

WHEREAS, PRC 3133.1 is adjacent to PRC 3150.1 which is contiguous to Leases PRC 1824.1 and PRC 4000.1; and

WHEREAS, on February 1, 1969, STATE, by valid and duly adopted resolution of the State Lands Commission, imposed a moratorium on continued oil and gas drilling operations on all State offshore oil and gas leases including those named above; and

WHEREAS, on October 28, 1976, STATE, by valid and duly adopted resolution of the State Lands Commission, approved the resumption of drilling operations on Leases PRC 1824.1, PRC 3150.1 and PRC 4000.1 subject to certain conditions, and to the limitations and mitigation measures set forth in the document known as "Environmental Impact Report for Resumption of Drilling in the Santa Barbara Channel from Existing Standard Oil Company of California Platforms" (EIR No. 203; SCH# 76032281).

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WHEREAS, said EIR No. 203, as a mitigation measure, limits drilling operations to the use of only one drilling rig at any time on Leases PRC 1824.1, PRC 3150.1 and PRC 4000.1, combined; and

WHEREAS, the LESSEES under PRC 1824.1, PRC 3150.1, and PRC 4000.1 have agreed to restrict their drilling operations so that only one drilling rig might be operated on Leases PRC 1824.1, PRC 3150.1 and PRC 4000.1 combined, at any one time; and

WHEREAS, on November 30, 1977 Leases PRC 1824.1, PRC 3150.1 and PRC 4000.1 were modified in writing by agreement between STATE and LESSEE to set a development drilling obligation of 90 days and to provide that fulfillment or breach, respectively, of the drilling obligation of any one of Leases PRC 1824.1, PRC 3150.1 or PRC 4000.1 would constitute fulfillment or breach, as the case may be, of the drilling obligations on each of the other leases; and

WHEREAS, Lease PRC 3133.1 requires that EXXON commence and continue development drilling operations based on a 120-day drilling obligation schedule; and

WHEREAS, EXXON wishes to resume limited drilling on Lease PRC 3133.1 by directional drilling from Platform Heidi located on PRC 3150.1, and is willing to so restrict its operation as to limit the environmental impact of same and abide by the rules, regulations and procedures of the Commission and the mitigation measures of EIR 203; and

WHEREAS, the LESSEES, and each of them, under Leases PRC 1824.1, PRC 3133.1, PRC 3150.1 and PRC 4000.1, and each of them, have agreed that their interests would be served by the limited resumption of drilling on Lease PRC 3133.1 from Platform Heidi; and

WHEREAS, the LESSEES and STATE recognize that when drilling is occurring on PRC 3133.1 from Platform Heidi, no drilling can occur on PRC 1824.1, PRC 3150.1 and PRC 4000.1, and EXXON and LESSEES cannot reasonably be expected to fulfill the existing development drilling obligations on Leases PRC 1824.1, PRC 3133.1, PRC 3150.1 and PRC 4000.1, given the aforesaid agreed-upon limitation to the use of one drilling rig; and

WHEREAS, EXXON has made application to resume limited drilling on PRC 3133.1; and

WHEREAS, STATE deems the limited resumption of drilling on PRC 3133.1 to be in the best interest of STATE, and the State Lands Commission, by duly adopted resolution has authorized said limited resumption of drilling;

NOW, THEREFORE, in consideration of the premises, and of the covenants and conditions herein contained, STATE, LESSEES and EXXON do hereby mutually agree as follows:

I

While Platform Heidi is being used for drilling operations to satisfy the development drilling obligations of PRC 3133.1, the drilling obligations of PRC 1824.1, PRC 3150.1 and PRC 4000.1 are suspended. When Platform Heidi is not being so used, the drilling obligations of PRC 1824.1, PRC 3150.1 and PRC 4000.1, as amended, are in effect.

II

The development drilling obligation of 120 days contained in lease PRC 3133.1 shall be 90 days for drilling into PRC 3133.1 from Platform Heidi. This 90 day period is designed to make the development drilling obligation consistent on all four leases to avoid a possible breach and shall apply only to the limited resumption of drilling into PRC 3133.1 from Platform Heidi. When drilling is occurring on Leases PRC 1824.1 or PRC 3150.1 or PRC 4000.1, the development drilling obligation in PRC 3133.1, as applicable to the limited resumption of drilling, will be suspended. When drilling is not occurring on Leases PRC 1824.1 or PRC 3150.1 or PRC 4000.1 the agreed upon 90-day development drilling obligation, as applicable to the limited resumption of drilling on PRC 3133.1, is in effect.

III

This agreement shall become null and void at such time as (1) there are drilling operations on PRC 3133.1 other than drilling operations from Platform Heidi (in the event this agreement is so voided, the above-referenced agreements dated November 30, 1977 shall again be in force and effect) or (2) drilling operations on the three Leases PRC 1824.1, PRC 3150.1 and PRC 4000.1 are no longer restricted by law or governmental order, rule or regulation to the use of only one drilling rig at any time on the three leases combined.

IV

While drilling wells for EXXON into PRC 3133.1, CHEVRON U.S.A. INC. will continue to maintain insurance of Ten Million Dollars (\$10,000,000.00) including the State as an additional insured party, and perform other obligations as specified in the Commission's authorization to resume drilling. (Minute Item 19, October 23, 1976.)

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V

EXXON shall provide and maintain insurance from a recognized insurance company, doing business in California, in the sum of Ten Million Dollars (\$10,000,000.00) including the State as an additional insured party and evidencing insurance against liability for damages to third persons arising out of any and all drilling and production activities under the limited resumption of drilling into PRC 3133.1. A certificate of insurance shall be furnished to the Commission. The insurance shall not be cancellable except upon 30 days notice to the Commission. The insurance shall be maintained until all drilling and production from wells drilled pursuant to the limited resumption of drilling has terminated and all wells have been properly abandoned with Commission's staff approval.

VI

In all other respects and except as expressly agreed herein, the express and implied terms, definitions, conditions and covenants of Leases PRC 1824.1, PRC 3133.1, PRC 3150.1 and PRC 4000.1 shall remain in full force and effect.

VII

Except as provided above, this agreement shall be effective from and after December 20, 1981, until December 19, 1986.

STATE OF CALIFORNIA
STATE LANDS COMMISSION

DATE _____

By _____

Title _____

ATLANTIC RICHFIELD COMPANY

DATE _____

By _____
Its Attorney in Fact

CHEVRON U.S.A. INC.

DATE _____

By _____
Its Attorney in Fact

EXXON CORPORATION

DATE _____

By _____
Its Attorney in Fact

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EXHIBIT C

EXECUTIVE SUMMARY

INTRODUCTION

The proposed project involves the resumption of drilling to produce oil and gas from existing platforms in the Summerland and Carpinteria Offshore fields by Standard Oil Company of California. These platforms are on State lands in the Santa Barbara Channel, leased from the California State Lands Commission, offshore from the cities of Summerland and Carpinteria. The proposed project involves drilling or re-drilling a maximum total of 36 wells from these platforms to complete development of the oil and gas reserves in the two fields. Standard was engaged in drilling new wells in the Carpinteria Offshore Field when the moratorium on offshore drilling in State lands was imposed in 1969. This project will complete drilling operations suspended at that time.

Complete development of the oil and gas reserves cannot be accomplished with the existing wells; so it is necessary to drill additional wells to the various reservoirs to produce the remaining oil and gas reserves. Thus, the purpose of the proposed project is to fully develop the oil and gas reserves lying beneath the Summerland Offshore and Carpinteria Offshore fields. If this project is implemented, as much as 4.7 million barrels of oil and 6630 million cubic feet of natural gas may be produced.

This environmental impact report (EIR) addresses the resumption of drilling in the Summerland and Carpinteria Offshore fields with emphasis on existing environmental conditions of the site and vicinity, the potential significant environmental impacts, and the mitigating measures involved in the project which minimize potentially significant adverse

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impacts. A thorough literature search was conducted to establish existing environmental conditions in the project area, which was then followed by an assessment of the direct, indirect, and inverse impacts associated with project implementation. The aspects of the existing environmental setting addressed in the EIR are geotechnical considerations, meteorology, biology, oceanography, water quality, and socioeconomics.

Most potentially significant environmental impacts associated with the proposed project stem from the fact that oil could be accidentally released into the environment. The potential occurrence, movement, and fate of oil spills that may occur from the proposed project and their potential environmental impacts, including the frequency and magnitude of potential spills from the offshore platforms, the onshore facilities, the marine terminal, pipelines, and tankers, are discussed. Other environmental impacts from the proposed project are discussed according to the aspect of the environment affected (technical, biological, air quality, etc.).

The potentially significant adverse impacts associated with the proposed project have been grouped into three areas: the physical, the biological, and the social environments. Within these areas the potentially significant adverse impacts fall into the categories of geotechnical considerations and impacts generally resulting from the accidental release of oil.

Beneficial impacts primarily relate to increased production of crude oil, natural gas, and other liquid petroleum products that would result from project implementation. The natural gas and liquid petroleum products will be used as fuel. The crude oil will be refined into petroleum fuels and petrochemical raw materials. The produced natural gas has the added positive quality of being a relatively clean-burning source of energy and will generate fewer air pollutants than other fossil fuels. The revenues that will accrue to the country and the state, and the additional employment and wages spent in the local economy are also beneficial impacts.

Mitigating measures for the project deal primarily with oil spill prevention and control procedures because oil spills are the cause of most potentially adverse impacts. These measures involve the use of safety equipment during drilling and production and strict compliance with applicable federal, state, and local codes and regulations. These codes and regulations specify requirements for equipment and operations, including well casing, blowout prevention, drilling-mud programs, and equipment inspections designed to prevent well blowouts. Special programs for drilling personnel have been established to train them to recognize, prevent, and control a well "kick" or blowout. The careful selection of tanker approach routes, scheduling of berthing and transfer operations, and compliance with applicable maritime safety and navigation regulations will reduce the likelihood of an oil spill from marine terminal operation.

The following is a summary of the potentially significant adverse impacts, namely, geotechnical and oil spill considerations. These subjects are addressed separately under major headings in this EIR. Since no other significant adverse impacts are anticipated in implementation of the proposed project, this summary will not restate the less important environmental considerations presented in the text.

GEOTECHNICAL IMPACTS

Geotechnical impacts are assessed on the basis of the data presented in the description of the existing base line conditions. This section discusses potential impacts on the geotechnical environment by drilling and production operations and potential geologic hazards that may have impacts on the project and its facilities.

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Potential Impacts on the Geotechnical Environment
from Drilling and Production Operations

Potential impacts from drilling and production operations include disturbance of bottom sediments, subsidence, effects on the ground-water environment, use of water resources, effects on natural oil seeps, and man-made earthquakes. This project will disturb only a very small area of bottom surface sediment. The subsidence potential is very small in these offshore fields, and these operations should not affect local groundwater basins. However, use of water resources, effects on natural oil seeps, and man-made earthquakes could be important under some circumstances.

Standard Oil Company receives water from the Carpinteria County Water District. Its present requirements are 36,400 gallons per day (gpd), which represents about 0.9 percent of the district's total use. Recently, Standard Oil initiated a program to change the water used in hydraulic pumping from fresh water to produced water. When this program is completed, in mid-1977, the total freshwater usage of the four platforms and onshore facilities will be reduced to about 2100 gpd. The operation of one drilling rig, as planned for this project, will cause an increase of 6300 gpd until the drilling program is completed.

Natural oil and gas seeps are common along the Carpinteria coast and a few have been reported in the vicinity of the Carpinteria Offshore Field. It is not possible at this time to accurately assess the potential effects of petroleum production from the Summerland Offshore and Carpinteria Offshore fields on any natural seeps. Continued study may determine if there is any direct correlation between drilling and natural seeps. If a correlation is found, mitigation measures would be pursued if necessary.

One potential earthquake hazard in the Santa Barbara region is the possibility of causing small earthquakes in the course of normal production operations. Fault displacement is a potential environmental

hazard because even small displacements on short fault segments could shear well casings in the subsurface or break to the sea floor. Such displacements might seal off a well. However, there is no evidence that earthquakes have been caused by oil field operations in any of the Santa Barbara Channel offshore fields.

Potential Natural Geologic Hazards and Their Impact on Project Facilities

There are a variety of potential geologic hazards that may have impacts on project facilities. The potential hazards include earthquake shaking, ground rupture, liquefaction, tsunamis, submarine landslides, flooding and erosion, and excessive reservoir fluids and pressures. Of these, earthquake shaking and ground rupture are the most potentially significant to this project.

The Santa Barbara Channel is a seismically active region and is currently undergoing structural deformation. Maximum ground acceleration would occur at either offshore site from a magnitude 6.5 earthquake occurring on the Red Mountain thrust or the Pitas Point fault. (This is the estimated maximum magnitude earthquake that these faults can produce.) The platforms will undergo severe motions in response to ground accelerations. Minor damage, such as structural member distortions and cracks, would likely occur, but the probability of platform collapse is very small. However, should a platform collapse, oil spillage would be limited by automatically controlled subsurface safety valves and automatic pipeline shutdown valves.

Seismic shaking could cause a pipeline rupture or a tank failure. The 217,000-bbl storage tank is enclosed by dikes capable of holding the entire contents of the tank. The smaller tanks are similarly protected.

Ground surface rupture associated with faulting is most likely to occur along traces of faults established as active or potentially active. Numerous earthquake epicentral locations fall in the offshore areas

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adjacent to the Summerland and Carpinteria Offshore fields. Some of the active faults in this region may not have had recent surface expression; there are numerous shallow faults in both fields that do not have surface expression. These faults do not show evidence of Holocene movement on the seismic records reported by Ziony et al. (1974).

Onshore, the Carpinteria fault (Dibblee, 1966) and the Rincon Creek fault (Lion, 1954) are in the immediate vicinity of the Standard Oil Company onshore processing facility. Even though no historically active fault rupture extends through the area, future ground rupture during the expected lifetime of this project remains a remote possibility.

Surface rupture, either onshore or offshore, is a potential hazard to production facilities and related installations. Such a rupture could cause failure in the integrity of pipelines, tanks, and treatment facilities. If an offshore fault rupture resulted in failure of a platform, automatically controlled subsurface safety valves would limit the resulting spill.

The condition most likely to result in a large oil spill would be a well blowout during drilling operations. Also, fault movements could cause damage to producing wells. However, such movements have occurred in other California oil fields without causing serious oil leaks because the fault movement pinched off the well casing and inhibited leakage of oil (Vedder et al, 1969). The likelihood of a large spill and significant environmental impact is further reduced because most of the producing zones in these fields are substantially pressure-depleted by past production; although some zones may have the capability to flow naturally for a short period of time.

OIL SPILL IMPACTS

The proposed project involves few potentially significant adverse impacts, and most of them would occur as the result of oil being spilled into the marine environment. This discussion focuses on oil spills that

could result from this project, the potential movement and fate of these spills, and the significant environmental impacts that would result from them. The potential impacts include effects on the biological environment, existing socioeconomic conditions, marine water quality, air quality, and the effect of oil spill cleanup operations. Potential marine biological impacts are probably the most important.

The Occurrence of Spills

This project has three major facilities that must be considered as potential sources of oil spills: the four offshore platforms, the marine terminal, and the onshore processing and storage facilities.

Offshore Platforms. During drilling operations, a blowout is the most likely cause of a major oil spill, although not the most likely cause of any spill. During the periods 1956-1960 and 1964-1969, three blowouts resulted in oil spills for every 10,000 wells drilled (U.S. Department of the Interior, 1972).

Should an oil well blowout occur, one might reasonably expect a spill volume in the order of a few hundreds of barrels per day. Other potentially significant effects of blowouts include injury, loss of life, and property damage. This, as well as concern for oil spills, is the impetus for the strong blowout prevention program that will be implemented when drilling commences.

During production operations, oil spills can occur from blowouts, fires, pipeline leaks or ruptures, pump failures, and other operating equipment failures. During the period 1953-1972, between three and four major production accidents occurred for every 10,000 wells in production.

In general, leaks, ruptures, and equipment failures are the most common causes of oil spills from offshore facilities. From 1971 through 1974, the average annual spill volume rate was 18.6 bbl spilled per million barrels produced. In the most productive year, one can statis-

tically estimate that about 34 bbl will be spilled from production operations of the proposed project. In other years this statistical spill volume would be reduced in proportion to total production.

Standard Oil has recorded only three minor oil spills from these four platforms since the company began recording all oil spills in 1969. There has never been a major oil spill from these platforms. The three recorded spills totaled less than one barrel, giving a spill rate of about 0.2 bbl per million barrels produced.

Tankers and Marine Terminal. A complete rupture of the pipeline to the marine terminal during transfer could result in a spill of between 220 and about 1000 bbl. This range represents a reasonable maximum spill estimate for oil spills at the marine terminal. This maximum spill is highly unlikely; however, much smaller transfer-related spills are more likely to occur. Data on oil spills from tankers indicate that 31.4 bbl were spilled per million barrels transported during 1973 and 1974. This rate indicates that during the first five years of production from this project, the average spill volume would be 34 bbl per year. This statistically calculated spillage could occur anywhere along the tanker routes and would not be confined to the Santa Barbara Channel.

Spills may also occur at the marine terminal where the tankers are loaded. During the peak production year, about 1.8 million barrels will be produced and loaded into tankers. Spill statistics from marine transfer and fueling facilities indicate that 5.2 bbl are spilled per million barrels transferred. This statistical rate would indicate that about 9.4 bbl could be spilled in the peak year. Standard Oil has recorded no spills at the Carpinteria marine terminal since the company began keeping oil spill records in 1969. Between 1969 and 1974, Standard Oil has transferred at least 8.2 million barrels of crude oil in the marine terminal without an oil spill.

Onshore Facilities. The source of the largest potential onshore spill is the single 217,000-bbl crude stock tank, which is contained within a diked area with a capacity larger than that of the tank. The extremely unlikely simultaneous rupture of the tank and failure of the containment dikes could spill sufficient oil to affect large areas of land.

A spill from a broken pipeline would generally be contained by the roads and railroad tracks which essentially surround the site and would tend to prevent a spill from reaching the ocean. Standard Oil has not experienced an oil spill which has entered the water from the Carpinteria onshore facility or from the pipelines connecting the offshore platforms.

Oil Spill Movement

A 500-bbl spill at the terminal is considered representative of the maximum release of oil at the beach. Under typical wind and current conditions, contamination of the shoreline region between Sand Point and Rincon Point would be expected, with Rincon Point being most vulnerable on a probabilistic basis.

A 500-bbl/day release is considered representative of a spill that could result from an oil well blowout. Depending on the wind and current velocity conditions in the Santa Barbara Channel area at the time of the blowout, a multitude of oil slick movement trajectories are possible. One can conclude that significant Santa Barbara Channel shoreline contamination would be probable from a blowout at any platform and is more likely than the movement of oil out to sea.

Potential Oil Spill Impacts

In addition to the movement of an oil spill, the ultimate disposition or fate of the spilled oil is important in understanding the spill impacts. The fate of oil in a spill depends on a complex interaction among several variables. Some of the lighter fractions of oil will evaporate very rapidly; others are sensitive to sunlight and oxidize to

form other, often innocuous inert compounds (photooxidation); still other fractions will either dissolve, emulsify, or adsorb to sediment particles, depending on their physical properties. The physical dispersion of oil can occur by several methods: littoral deposition, physical removal, dissolution, flushing, elution, sedimentation, microbial oxidation, and organic uptake. These are discussed in more detail in the Oil Spill Impacts section of the EIR.

The evaluation of the potential environmental impact of an offshore spill can be based on the experience of the 1969 Santa Barbara oil spill, on the impacts of the several well-studied natural oil seeps in the area, and on data obtained from past spills in other areas, combined with a knowledge of the physical and biological regime of the Santa Barbara region.

Potential impacts that could occur as the result of an oil spill in the marine environment include effects on the biological environment, on existing socioeconomic conditions, on marine water quality, and on air quality. Oil spill cleanup activities can also have important effects. The potential impacts of an oil spill on each of the areas is discussed below.

Effects of Oil on Marine Ecosystems. A variety of marine ecosystems and species could be affected by the release of oil. The most significant areas of potential impact are in the intertidal zone, the salt marshes, and the bird populations. Most of the impacts discussed below are considered to have a low likelihood of occurrence and a lower probability of significant long-term effects.

The intertidal zone includes sandy beaches and rocky intertidal areas. The crude oil from either offshore field may be expected to cause relatively little long-term damage to the sandy beach fauna. There may be significant though not total short-term mortality. If the spill coincides with breeding or incubation periods of sand dwellers, increased mortality of eggs and larvae or reduced spawning will result from both the oil and the oil-removal techniques.

In the event of an accidental spill of oil that cannot be diverted from the rocky intertidal areas, the dominant mortality will occur among the limpets, barnacles, mussels, starfish, anemones, and some algae. These animals and plants may die from the immediate toxic effects of any of the light components of the oil that have not evaporated. They may also be smothered and die from prolonged torpor and starvation because of the coating of oil. Unless nontoxic forms are used, any detergent or dispersant placed on the rocky areas is likely to increase mortality of most invertebrate species. Straw will hinder recolonization of the intertidal areas because it provides an unstable substratum for sessile organisms. Furthermore, application of straw may aggravate situations by physical damage to sessile organisms and by compaction of oil into the sediment and the burrows of animals. Selective cleaning of areas of extensive mortality (probably the higher intertidal zone) may encourage faster resettlement of the affected areas, as long as only the oil is removed and debris remains to provide suitable substratum for larvae. However, even if cleanup is not effective, it is expected that the native species will recolonize the contaminated area and within a few years will return to pre-spill population levels.

The impacts of an oil spill reaching the salt marshes in the Santa Barbara Channel area will depend primarily on the amount and type of crude oil entering the marsh. Biological impacts of a minor volume of crude oil reaching a salt marsh are not likely to be significant or even measurable in the long term. The entry of a large volume of crude oil into a salt marsh is unlikely, but if it does occur, the main biological impacts are likely to be due to smothering of intertidal organisms. The major impacts are likely to be those affecting birds of the salt marsh.

The extent and significance of oil spill impacts on birds in salt marshes and on the open ocean will depend partly on the type and amount of oil but will also depend heavily on the time of year. The impact will probably be greatest during the spring and fall, when migrations occur. During the summer the impact on resident feeding or nesting

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birds can be significant. In the winter, although the number of species present is relatively small, significant numbers of waterfowl (especially western grebes and common murre) can be affected. The short-term biological impacts could be severe if a large proportion of the breeding population is affected. However, in general, the bird populations are expected to recover to pre-spill levels fairly rapidly, probably within one or two breeding periods. Long-term adverse impacts of a large spill are not expected to be significant. The possible exceptions are impacts on species that are rare or endangered and species with small local breeding populations, restricted ranges, and long generation times. These species may require several years to regain pre-spill population levels.

Socioeconomic Impacts of Oil Spills. An oil spill on the waters of the Santa Barbara Channel may have significant effects on the socioeconomic environment depending primarily upon duration and of the spill and possibly upon the cleanup activities. Commercial fishing and related businesses would incur financial losses until fishing activities resumed.

A major oil slick could prevent kelp harvesting and have adverse short-term financial effects on those involved. However, kelp harvesting could resume as soon as cleanup activities are completed and natural current and tidal forces have dissipated the oil and cleansed the kelp.

The amount of unrecoverable oil spilled into the marine environment will represent a loss of income to the producers, a product loss to the consumer, and revenue losses to local and state taxing agencies.

The introduction of crude oil into the existing environment would have adverse impacts upon the existing aesthetic qualities of the area. Areas of potential adverse aesthetic impacts include visible oil slicks and oil deposits on the beaches, associated noxious odors, and activities associated with cleanup.

Although it is not possible to accurately estimate the probable economic costs associated with an oil spill from the Standard Oil plat-

forms or the Carpinteria marine terminal, the economic costs could be significant and would produce adverse short-term impacts.

An onshore spill that ultimately reached the shoreline and caused oil contamination of the shoreline and ocean waters would result in impacts similar to those for a marine spill. The oil-contaminated onshore land area would be unusable for the duration of the cleanup. Significant long-term effects are unlikely because an onshore spill from the project facilities should not reach agricultural or forested lands.

Effects of Oil on Marine Water Quality. Some water quality parameters may be affected. These include aesthetics, bottom deposits and biostimulants, dissolved oxygen, biological oxygen demand, nutrients, odor, and transmission of light. However, experience from past spills does not indicate that significant adverse short-term or long-term changes are likely to occur.

Air Quality Impacts. Only a major oil spill occurring under a specific set of conditions can be expected to affect the local air quality. Significant effects are judged unlikely.

During an oil spill, the lighter fractions of the crude oil will evaporate, possibly emitting large quantities of hydrocarbons to the atmosphere. The effects of these emissions on the regional air quality are difficult to assess, being dependent on various oceanographic and meteorological conditions at the time of the spill. Regional concentrations of hydrocarbons and possibly of oxidants could increase noticeably for a short time in the case of a large single spill and for a longer time in the case of a prolonged well blowout.

A major fire associated with an oil well blowout could substantially increase several pollutant emissions in the region, potentially causing significant short-term air quality impacts.

Impact of Oil Spill Cleanup Procedures. Oil spill cleanup activities will minimize the effects of oil contamination; however, potentially adverse impacts can result from the cleanup procedures. The primary areas of potential impact will be beaches, rocky intertidal zones, and marshes. Experience with other spills of similar types of oil, including the Santa Barbara spill, show that often more biological damage is done by the cleanup than by the oil itself.

Every oil spill should be given individual consideration, and cleanup should be directed by experienced personnel who will consider the vulnerability of the affected areas in planning and conducting cleanup actions. It is most important to realize that there are strong pressures to clean up a spill immediately and that these pressures may be stronger than the concern for the welfare of the biological community. These pressures can cause ill-timed or ill-planned cleanup responses that do more harm to the already stressed flora and fauna.

INITIAL STUDY

The proposed "project" is an authorization by the Commission to allow the applicant (Exxon) to enter into an agreement with Chevron wherein Chevron would utilize one of its slots on Platform Heidi, which has been previously approved by the Commission and all other "Responsible Agencies", to drill into Exxon's lease PRC 3133.1. Chevron will drill a directional well from Platform Heidi (Lease PRC 3150.1) into lands leased by Exxon (Lease PRC 3133.1). This well(s) will be drilled from an existing facility (platform) and included as part of Chevron's 36-well development plan already approved by the Commission and previously described in Chevron's EIR; except that the direction will be eastward into lands (Exxon's Lease PRC 3133.1) not included in the subject EIR. All proposed operations, including drilling and

production, will be conducted by Chevron in a manner consistent with existing rules and regulations governing operations from Platform Heidi.

There will be no other change in Chevron's previously approved operations other than a change in the direction of its drilling from Platform Heidi. However, since the change in the direction of drilling will necessitate additional distance to enter into Exxon's lease, it may be construed as a project which may have a significant effect on the environment which would require the environmental analysis. Therefore, an initial study which discusses and evaluates the environmental impacts associated with Exxon's resumption of drilling and the adequate coverage of the previously prepared EIR (SCH #76032281) was circulated pursuant to CEQA and the EIR Guidelines. No adverse comments were received. Staff believes the previously prepared EIR (SCH #76032281) adequately covers the proposed project and complies with CEQA.