United States Department of the Interior
Geological Survey
Pacific OCS Region
Los Angeles, California

OCS ENVIRONMENTAL ASSESSMENT

March 4, 1980

Operator Chevron U.S.A. Plan Type Exploration

Lease OCS-P 0316, Block 55 N., 84 W.

Platform NA

Date Submitted February 4, 1980

Prepared by F. J. Schambeck, Oil and Gas Supervisor
Pacific OCS Region

Related Environmental Documents
Final EIS for OCS Sale No. 35
Santa Barbara Channel Oil and Gas Development EIS
Final EIS For OCS Sale No. 48

OCS ENVIRONMENTAL ASSESSMENT

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I. Description of the Proposed Action

The United States Geological Survey (USGS) is considering issuing a permit to Chevron U.S.A., Inc. to drill up to three exploratory oil and gas wells on Federal Lease OCS-P 0316 approximately 10 miles (16.1 km.) offshore, west of Point Conception. Figures 1 and 2 of Chevron's Environmental Report (ER) show the location of the lease and the proposed locations of each well on that lease (Appendix 5). The Lambert Grid Zone VI Coordinates for each well are listed on the appropriate Application for Permit to Drill (APD) in Chevron's Plan of Exploration (Appendix 5). Following submittal of the APDs, the coordinates for the number 2 well were changed to X = 680,400 feet and Y = 866,000 feet in order to avoid an area of possible rocky bottom.

A thorough discussion of the proposed project is contained in Section 1.0 "Introduction" and Section 2.0 "Description of Proposed Action" of the ER on pages 1 through 9 (Appendix 5). The certificate of coastal zone consistency appears as the page directly preceeding page 1 of the ER.

A description of the floating drilling vessel *Glomar Grand Isle* is given in Appendix A of the ER as well as the Plan of Exploration (Appendix 5).

II. Description of Affected Environment

This subject is discussed as Section 3.0 "Environmental Setting" on pages 9 through 27 of the Environmental Report (Appendix 5). Specifically, the geology of the area is covered on pages 10 through 14 of the ER. Additional information has been furnished by the USGS District Geologist in Los Angeles (Appendix 6).

Meteorology is discussed on pages 15 through 17 of the ER.

Physical oceanography is covered on pages 17 through 20 of the ER.

Other uses of the area are contained in various sections of the ER. These include commercial fishing, kelp harvesting, flora, and fauna which are included in Section 3.5 "On-site Flora and Fauna," pages 20 through 24. Refuges, preserves, marine sanctuaries, and related subjects are discussed in Section 3.6 "Environmentally Sensitive Areas," pages 24 through 26. Shipping, military use, small craft boating, sport fishing, and other mineral uses are contained in Section 3.7 "On-Site Uses of the Area," pages 26 and 27.

No pipelines, cables, or ocean dumping activities exist in the area of the proposed action.

The subject of socio-economic impacts is discussed in Sections 2.3 "Onshore Support and Storage Facilities," 2.4 "Personnel Requirements of Offshore, Onshore and Transportation Activities," and 2.5 "Routes and Frequency of Travel between Offshore and Onshore Facilities" on pages 4 and 5 of the ER. Also, Section 2.7 "Estimated Requirements for Major Supplies, Services, and Resources" on page 9 of the ER contains information on the services and supplies which will be required by the proposed exploratory drilling project. Due to the on-going nature

of the oil business in the area, no increase in employment is expected to occur as a result of this project. As such, no increased unemployment would be expected following its termination. No measurable impact will result in the population and industry centers of Carpinteria, Port Hueneme, and Goleta which will serve as bases for goods and services. No unusual public opinion either for or against the proposed action has been made known.

III. Environmental Consequences

This aspect of the proposed project is discussed in Section 4.0 "Assessment of Direct Effects on the Environment" on pages 28 through 32 of the ER (Appendix 5).

The subject of geologic hazards is adequately discussed in the input furnished by the District Geologist (Appendix 6). The hazards analysis conclusions are as follows: "The geophysical data indicate possible slump material underlying the proposed drill sites for OCS-P 0316-1 and OCS-P 0316-3. Steep slopes will not be a problem at any of the proposed locations. Seeps and faults will not present a hazard to the three proposed sites." Chevron has investigated the problem of slumping and has concluded that, "The No. 1 and No. 3 drill sites are on a slope of over four percent and near the leadward edges of landslide areas. The sites themselves do not appear to be subject to slumping during severe ground shaking . . ."

Only temporary limitation or suspension of various project activities may occur due to severe weather conditions. This is thoroughly covered in Chevron's Critical Operations and Curtailment Plan previously submitted and placed on file with USGS. Section 4.1(a) "Air Quality" on page 28 of Chevron's ER (Appendix 5) states that only minor, short-term impacts on air quality can be expected in the vicinity of the proposed drill sites.

Sea temperature, currents, tides, sea state, and water depth are not expected to have any significant effect on the proposed exploratory drilling. Any short-term delays caused by high seas are discussed in the Critical Operations and Curtailment Plan.

The short-term, minor degradation of water quality which will result from NPDES permit discharges is discussed in Section 4.1(b) "Marine Environment" on page 29 of Chevron's ER (Appendix 5). The effects possible in the unlikely event of an oil spill are covered on page 30 of that document.

Impacts on other uses of the area will be minimal as discussed in Section 3.7 "On-Site Uses of the Area" on pages 26 and 27 of the ER (Appendix 5). As stated on page 27, "Potential conflicts in usage are dealt with in Stipulations 1 and 2 of the lease . . .". These stipulations provide the necessary coordination between the Operator and any military actions which may occur in the area.

The U. S. Coast Guard (Appendix 7) has raised the question of possible conflicts between the proposed activity and " . . . commercial vessels entering and leaving the west end of the Santa Barbara Channel Traffic Separation Scheme (SBCTSS)." The Coast Guard feels, " . . . that the proposed operation could

have a significant effect on vessel traffic, especially those on coastwise routes." This would not be the case if the Coast Guard would enforce the use of the SBCTSS as called for in their regulations. The drilling vessel to be used for the proposed project will be equipped with all the aids to navigation as called for by 33 CFR 67. This, and the fact that the proposed drill sites will be 3 to 6 miles (4.8 to 9.7 km.) from the traffic lanes, will minimize the chance for possible conflict.

Cultural resources are discussed in Section 3.8 "Archeological and Cultural Resources," on page 27 of the ER (Appendix 5). The results of the survey run on OCS-P 0316 are contained in Appendix C of that document. There are two unidentified sonar targets near proposed drill site number 2. As recommended by the Bureau of Land Management (Appendix 7), these unidentified targets will be avoided by the drill ship anchors.

Various agencies have been contacted in reference to possible impacts on the flora and fauna present in the area of the proposed action. National Marine Fisheries Service states, "We have reviewed the subject plan and find those fishery resources for which we have a responsibility will not be significantly affected" (Appendix 7). NMFS has studied the question of possible impact on certain marine mammal species. In their September 15, 1979 Endangered Species Act, Section 7 consultation on OCS oil and gas projects (Appendix 1), NMFS stated that, " . . . the identified activities are not likely to jeopardize the continued existence of any of the endangered or threatened species in question."

The Bureau of Land Management (Appendix 7) stated, " . . . that discharge of drilling muds and cuttings, as proposed, will not result in significant environmental degradation. There will be some destruction of marine biota and habitat. However, these effects are likely to be localized and short term." In addition, the Operator will be required to avoid any known areas of exposed rock with the anchors and anchor chains.

U. S. Fish and Wildlife Service reviewed the proposed project and has no objections (Appendices 1 and 7).

Based upon the information received from National Marine Fisheries Service, Bureau of Land Management, and Fish and Wildlife Service (Appendices 1 and 7), we have determined that approval of the proposed action will not affect an endangered or threatened species or critical habitat.

The negligible socio-economic impact which would result from the proposed exploratory drilling is discussed in Section 2.4 "Personnel Requirements of Offshore, Onshore and Transportation Activities" on pages 4 and 5 and Section 4.3 "Socio-economic Impacts" on page 30 of the ER (Appendix 5).

No unusual demand for goods and services will be expected to occur as a result of the proposed action. This subject is covered in Section 2.7 "Estimated Requirements for Major Supplies, Services and Resources" on page 9 of the ER (Appendix 5).

No onshore support facilities will be built or enlarged as a result of this exploratory drilling project. As such, no discussion of this subject is

required. The only environmental impacts which are to be expected from the project are temporary, localized degradations of offshore air and water quality which are discussed in Section 4.5 "Unavoidable and Irreversible Impacts" on page 31 of the ER (Appendix 5).

Discussion of possible, but not probable, minor and major accidents which could result in a hydrocarbon spill and the associated impacts is contained in Section 4.1(b) "Marine Environment" on pages 29 and 30 and Section 4.5 on page 32 of the ER (Appendix 5). Chevron's Oil Spill Contingency Plan, which was previously submitted to USGS, adequately outlines prevention, control, and clean-up measures which will minimize any potential impacts. These measures are summarized in Section 2.2 "Oil or Waste Material Prevention, Reporting and Cleanup" on pages 2 through 4 of the ER.

IV. Alternatives to the Proposed Action

One alternative to drilling one to three exploratory wells on OCS-P 0316 is disapproving the activity as proposed. Under existing law and terms of the lease, the Department of the Interior must respond to legitimate applications to drill on valid leases providing all terms and conditions are met. In light of the above, the Nation's urgent need for domestic oil and gas, and in consideration of the minimal impacts posed to the environment by this proposed action, disapproval is not considered to be a viable alternative.

Another alternative is approving the activity subject to specific operating stipulations. Following are three such possible stipulations and the reasons why they are not viable alternatives:

Relocation of the proposed drill sites to different parts of the lease. Based on available geologic data, no increase in the possibility of locating hydrocarbons or decrease in potential hazardous conditions would result. No difference in environmental impact would result from relocation.

Alternatives to the on-site disposal of oil-free drilling mud, drill cuttings, and cement are disposal at a different ocean location and disposal onshore. Considering the minimal impact of on-site disposal and the increased engine exhaust, which would result from barging of these materials, these alternatives are not acceptable as long as on-site disposal is possible.

Alternatives to flaring any natural gas entrained in the drilling mud and cuttings, and produced during drill stem tests would be to re-inject or transport to shore. Due to the low volumes and minimal impact on air quality, flaring is the most feasible method of disposal.

V. Unavoidable Adverse Environmental Effects

There are some adverse environmental effects which may, or will, occur as a result of drilling the proposed exploratory wells. These include the following:

- Short-term disturbance of bottom sediment;
- Minor alteration of bedrock structure;
- Short-term increase in local turbidity, with associated effects on water quality and marine biota;
- Minor short-term decrease in local (offshore) air quality;
- Short-term preclusion of the area from competing uses such as commercial and sport fishing;
- Possible minor temporary disruption of normal activities of marine mammals;
- Possible temporary disruption of use/activities and resources due to oil spills.

All practical measures to eliminate, or at least decrease, these effects will be taken.

VI. Controversial Issues

The drilling vessel *Glomar Grand Isle* has been issued NPDES Permit No. CA 0110125 which authorizes the discharge of various materials on the OCS. However, the Environmental Protection Agency has not amended the discharge permits of any drill ships to include those leases obtained in Lease Sale No. 48, including OCS-P 0316. This has occurred due to the possibility that the waters within 6 miles (9.7 km.) of the northern Channel Islands may be included in a Marine Sanctuary. Some public concern has arisen that no discharge permit amendments should be issued even though OCS-P 0316 is located outside the 6 mile (9.7 km.) limit and that the regulations for the proposed Marine Sanctuary allow NPDES permit discharges on Sale No. 48 leases.

It is felt that this matter will be resolved shortly and the permit amendments will be issued.

In the case that the amendments are not issued, the alternatives to on-site disposal discussed in Section IV. of this EA become viable. That is, those items usually disposed of on site would have to be barged to a different ocean location where the NPDES permits are in effect, or to shore for onshore disposal. No significant change in environmental impacts would result from these procedures, and the proposed project would proceed under those restrictions.

VII. Finding of No Significant Impact (FONSI)

The USGS has examined the impacts of the proposed action, one to three exploratory wells on OCS-P 0316, in the preceding pages of the environmental assessment. The following summary shows the evaluation of these impacts against each of the parameters listed for "significance" in 40 CFR 1508.27 and the background impact reference for our reasons of determining the no-impact or no-significant-impact category.

Key
NI - No impact
NS - No significant impact

CEQ Parameter 40 CFR 1508.27(b)	Severity of Impact Level/Degree of Significance	EA Page and Paragraph Reference
1. Beneficial and/or adverse effects.	NS	Page 3 - 5
2. Public health & safety.	NS	Page 4
3. Unique characteristics of the geographical area.	NI	
4. Effects highly controversial.	NI	
5. Highly uncertain effects or unique or unknown risks.	NS	Appendix 1
6. Establishes precedent for future actions or is a decision in principle about future action.	NI	
7. Assessment of cumulative actions and impacts thereof. Note 400 CFR 17.	NS	Page 5
8. Effect on districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural historical resources.	NI	
9. Effects on endangered or threatened species or their habitat that have been determined to be critical under the Endangered Species Act of 1973.	NI	
10. Threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.	NI	
11. Other related NEPA and environmental documents.	Documents available:	Cover sheet

VIII. Environmental Assessment Determination

In my opinion, approval of Chevron's proposed action involving the drilling of one to three exploratory wells on OCS-P 0316, described in this environmental assessment, does not constitute a major Federal action significantly affecting the quality of the human environment in the sense of NEPA section 102 (2). (c). In rendering this opinion, I have given special consideration to 30 CFR 250.34-4 (compliance with NEPA).

F. J. Schamback — 3/5/80

Oil and Gas Supervisor, Pacific Region — Date

I determine that preparation of an environmental impact statement is not required.

Conservation Manager, Pacific Region — Date

IX. References

See references cited in Chevron's Environmental Report (Appendix 5), the cover page of this Environmental Assessment, and the appendices.

X. Appendices

APPENDIX 1

Endangered and Threatened Species Clearance and Related Correspondence

Endangered and Threatened Species Clearance
U. S. Fish and Wildlife Service Correspondence
National Marine Fisheries Service Correspondence

United States Department of the Interior

GEOLOGICAL SURVEY

160 FEDERAL BUILDING
1340 W. SIXTH STREET
LOS ANGELES, CALIFORNIA 90017

March 4, 1980

An environmental review for the following activity has been conducted in accordance with Section 402.04 of Part 402, Chapter IV. Endangered Species Act of 1973 (16 U.S.C. 1531, et seq.):

CHEVRON, U.S.A.
AS OPERATOR
PLAN OF OPERATION (POE)
OFFSHORE CALIFORNIA
OCS-P 0316, WELLS 1, 2, and 3

A determination has been made that the above activity will not jeopardize the continued existence of any endangered species or result in the destruction or adverse modification of critical habitat.

F. J. Schambeck

F. J. Schambeck
Oil and Gas Supervisor
Pacific Region

3/5/80
Date

United States Department of the Interior

FISH AND WILDLIFE SERVICE
WASHINGTON, D.C. 20240

In Reply Refer To:
FWS/OES 375.419
USGS 79-2

NOV 1 1979

Memorandum

To: Director, U.S. Geological Survey

From: Acting Director

Subject: Biological Opinion Regarding Oil and Gas Exploration and Certain Development Activities in Southern California

On April 24, 1979, the Fish and Wildlife Service (FWS) sent a memorandum to the U.S. Geological Survey (GS) requesting initiation of consultation under Section 7 of the Endangered Species Act of 1973, as amended, for Outer Continental Shelf (OCS) oil and gas exploration, development, and production activities on tracts in the OCS Sale No. 35 area (Southern California). By memorandum dated May 18, 1979, (Attachment 1) GS requested consultation with the FWS and expanded the scope of the request to include all lease sale activities off Southern California not previously subject to Section 7 consultation.

In response to this request, I appointed a consultation team by memorandum dated May 30, 1979, (Attachment 2) to assist me in determining whether the subject exploration, development, and production activities off Southern California are likely to jeopardize the continued existence of Endangered or Threatened species or result in the destruction or adverse modification of Critical Habitat of such species.

The team was comprised of Nancy Sweeney, Brian Kinnear, Steve Tonjes, and David Watts, Office of Endangered Species, Washington, D.C.; and Ralph Swanson, Sacramento Area Office, FWS.

On June 5 and 6, 1979, the FWS consultation team and National Marine Fisheries Service (NMFS) representatives met with GS representatives in Los Angeles, California, to discuss the exploration, development, and production activities in Southern California and their impact on Threatened and Endangered species within the area. A list of the participants is attached (Attachment 3).

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The consultation team reviewed reports, publications, and correspondence from knowledgeable sources on the species considered in this consultation identified below, and numerous telephone contacts were made with other experts. Information contained in the Final Environmental Impact Statements (FEIS) for OCS Sales 35 and 48, Southern California, was carefully evaluated to ascertain the effects of the exploration activities on listed species and their habitats. In addition, development plans were reviewed for seven development tracts. Copies of pertinent records and documents are included in an administrative record maintained at the Office of Endangered Species and are incorporated herein by reference.

Project Description

GS has primary regulatory authority for exploration, development, and production activities in the OCS after the issuance of the leases by the Bureau of Land Management (BLM).

Exploration of the OCS requires certain onshore support facilities including office space, helicopter and/or fixed-wing aircraft facilities, docks for boating activities, and supply bases. Due to the uncertain nature of oil exploration, companies are generally unwilling to construct new facilities to support exploration activities and usually prefer to utilize existing areas and facilities. At present, the numerous onshore facilities in Southern California being used for exploration activities will support any proposed new exploration.

Therefore, the biological opinion is based on the assumption that existing onshore facilities will continue to be utilized for exploration activities. Should the use pattern of these facilities be changed or additional onshore facilities be required which may affect listed species or their habitats, GS must reinitiate consultation.

Development and production (development/production) activities planned for seven specific tracts are included in this consultation. In the future, GS will review each development/production plan to insure compliance with Section 7.

Development/production plans include the location for the platform placement, possible transportation routes (pipelines and/or barges, tankers), and identification of specific onshore facilities and their intended use, i.e. storage, refinement, etc. These plans have more specific information than do the exploration plans.

Your request for consultation included the following species: bald eagle (Haliaeetus leucocephalus), American peregrine falcon (Falco peregrinus anatum), southern sea otter (Enhydra lutris nereis), brown pelican (Pelecanus occidentalis), California least tern (Sterna albifrons browni), light-footed clapper rail (Rallus longirostris levipes), Aleutian Canada goose (Branta canadensis leucopareia), San Clemente loggerhead shrike

(Lanius ludovicianus mearnsi), San Clemente sage sparrow (Amphispiza belli clementae), Smith's blue butterfly (Shijimiaeoides enoptes smithi), San Clemente broom (Lotus scoparius ssp. traskiae), San Clemente Island bush-mallow (Malacothamnus clementinus), San Clemente Island larkspur (Delphinium kinkiense), San Clemente Island Indian paintbrush (Castilleja grisea), olive Ridley sea turtle (Lepidochelys olivacea), green sea turtle (Chelonia mydas), loggerhead sea turtle (Caretta caretta), and leatherback sea turtle (Dermochelys coriacea).

After reviewing the proposed activities and biological data on the above species, we have determined that the following species will not be affected because they are not known to occur in the impact area from the proposed exploration and the specific development/production activities. They are the Aleutian Canada goose, San Clemente loggerhead shrike, San Clemente sage sparrow, Smith's blue butterfly, San Clemente broom, San Clemente Island bushmallow, San Clemente Island larkspur, and San Clemente Island Indian paintbrush. Therefore, they are not considered in this consultation.

The sea turtles listed above were also included in your consultation request. The NMFS has jurisdiction over Endangered and Threatened sea turtles while they are in the aquatic environment; they are under the jurisdiction of the FWS onshore. Since these four sea turtles have no known nesting sites within the proposed project area, we defer consultation to NMFS.

We feel that two additional species should be included in this consultation: El Segundo blue butterfly (Shijimiaeoides battoides allyni) and salt marsh bird's beak (Cordylanthus maritimus ssp. maritimus).

The following species are included in this biological opinion: El Segundo blue butterfly, bald eagle, American peregrine falcon, southern sea otter, California brown pelican, California least tern, light-footed clapper rail, and salt marsh bird's beak.

After evaluating the proposed activities and their effects on the following eight species, it is my biological opinion that these activities, as proposed, are not likely to jeopardize the continued existence of the species.

A summary of the biological data and considerations of the consultation team are provided for each of the eight species.

El Segundo Blue Butterfly (Shijimiaeoides battoides allyni)

The El Segundo blue butterfly is an insect endemic to the Southern California coastal strand. This species was listed as Endangered on June 1, 1976. Critical Habitat has not yet been designated for this species.

This butterfly is limited to two small remnants of the once extensive El Segundo Dunes system (36 square miles) extending from the Los Angeles Airport to San Pedro, in Los Angeles County. Its current distribution is limited to dunes adjacent to the Los Angeles Airport and a small parcel of commercially owned land on the Chevron oil refinery in El Segundo.

The El Segundo blue is dependent upon coastal dune habitat which contains two species of buckwheat (Eriogonum) that provide the butterfly with nesting, feeding, and resting habitat. The conversion of this essential dune habitat to urban developments threatens the continued survival of this species.

Onshore activities such as the placement of pipelines and the location of refineries, present the greatest threat to the destruction of this species' habitat. However, since existing onshore facilities are to be used, proposed oil and gas exploration or development/production activities are not expected to jeopardize the continued existence of this species.

Bald Eagle (Haliaeetus leucocephalus)

The bald eagle was listed as Endangered in 43 of the contiguous 48 States including California, and Threatened in the remaining five States on February 14, 1978. Critical Habitat has not yet been determined for this species. This large bird occurs from Alaska to northern Mexico and lives in association with aquatic habitats such as lakes, large rivers, and estuaries.

Bald eagles nested on the Channel Islands until the mid 1950's. Reproductive failure, probably due to pesticide contamination of its food sources, and habitat losses have been the chief causes for the eagle's decline and present status. The reintroduction of the bald eagle to the northern Channel Islands is planned for the future. In addition, Santa Catalina is also being considered for eagle hacking within the near future.

Successful reintroduction of bald eagles to their former nesting range in California will result in the increased numbers utilizing coastal areas.

The potential impacts to the eagle from proposed oil and gas exploration and development/production activities are disturbance to its nesting areas resulting from onshore activities and the possibility of an oil spill reaching the coast and subsequently oiling the eagles and/or contaminating the food source. Oiled eagles returning to the nest to incubate could contaminate the eggs or nestlings. Toxicological studies have indicated that even small amounts of oil applied to an egg are toxic to the embryo.

Recent information indicates that bald eagles may be wintering on the Channel Islands. Since no onshore development is proposed for the Islands, the impacts from an oil spill to wintering eagles would be limited to the contamination of the eagle's food source or feather contamination of individual eagles.

However, the present concentrations of California's eagle population are located along inland lakes and rivers, and are removed from the impacts of coastal oil and gas development activities.

American Peregrine Falcon (Falco peregrinus anatum)

The American peregrine was listed as Endangered on June 2 and October 13, 1970, and a portion of the peregrine's Critical Habitat was designated in the August 11, 1977, Federal Register. This subspecies once occurred widely through much of North America from southern Alaska and Canada, to northern Mexico. This peregrine is migratory in the northern portion of its breeding range, but exhibits less migratory behavior toward the southern portion of its range. In California, the species once occurred throughout the State where cliff faces and steep rocky slopes provided suitable nesting locations. The mountains, sea coast, and Channel Islands historically harbored significant populations.

The species has suffered a drastic decline throughout its range primarily due to reproductive failure resulting from pesticide contamination of its avian prey. Currently, less than fifty known pairs remain in California and the species has been extirpated from the Channel Islands.

Several historic eyries are located along the coast from Point Conception south to the Mexican border. At present, however, only one active nest site, located west of Santa Barbara, exists along this reach of the coast. Considerable effort is currently being expended toward recovery of this species, chiefly through captive propagation and reintroduction. The Channel Islands include several sites where reintroduction efforts may eventually be made. Natural expansion of American peregrines is anticipated with the decreased usage of residual pesticides.

The falcons prey heavily upon coastal birds. The potential impacts on the American peregrine falcon from oil and gas exploration and development/ production activities are identical to those on the bald eagle.

At this time, there are no proposals for new onshore facilities along the Southern California coast, particularly in the vicinity of Point Conception. Should additional facilities be proposed, GS must reinitiate Section 7 consultation. The Oilspill Risk Analysis, prepared by GS for the Southern California (Proposed Sale 48) Outer Continental Shelf Lease Area, arbitrarily divides the California coast into segments and projects the probability of oil impacting these segments from various offshore lease locations. According to this analysis, the probability of an OCS related oil spill reaching the vicinity of the one active peregrine nest is less than ten percent. Since the Critical Habitat is outside of the area considered in this consultation, that habitat will not be destroyed or adversely modified by the proposal.

Transient American peregrines may be found in small numbers along the coast, especially during migration and winter periods. We recommend that the majority of the estuaries, bays, lagoons, and rivers have available cleanup equipment to close off these areas within two hours of a spill occurrence. This action would minimize the impact of the oil, should it reach the shore.

Southern Sea Otter (Enhydra lutris nereis)

The southern sea otter was listed in the Federal Register as Threatened on January 14, 1977. Critical Habitat has not yet been determined for this species.

Historically, the southern sea otter was found in relative abundance along the California coast. The principal population decreases resulted from commercial harvest by fur traders during the 1800's, and the population was brought to near extinction at the turn of the century.

In 1938, the southern sea otter was identified off Point Sur, California and that population has expanded to an estimated high of 1,856 individuals (1976 census) with a range between Point San Luis (San Luis Obispo County) to Ano Nuevo Point (Santa Cruz County). A few wandering individuals have been sighted to the north and south of these range limits. Provided the population continues to increase at the current census rate, it is presumed that the population will extend its range to the Channel Islands and mainland south of Point Conception. Because the area considered in this consultation is part of the southern sea otter's historical range, it will be considered in this consultation.

The southern sea otter is an opportunistic predator which forages in both the rocky and soft sediment communities, seldom ranging beyond the 20-30 fathom depth curve.

An oil spill could affect sea otters in several ways. When trying to determine these effects, the physical configuration and the amount of oil on the surface of the water must be considered. The oil is influenced by environmental factors including wind, waves, temperature, suspended sediments, and time. Direct contact with oil would mat the coat and decrease the otter's natural insulation against temperature loss. Constant preening to maintain the insulating quality of the coat would result in the direct injestion of some petroleum products. As stated in the DES for Sale No. 48, "Accidental exposure of two sea otters to a small but unknown amount of oil (probably diesel) in an experimental holding pool on Amchitka Island resulted in fur matting, progressively severe distress, emergence from the water, and death by exposure within several hours" (K.W. Kenyon, unpublished data). "The oil in this case formed a visible sheen comparable to that sometimes present in harbor areas where gulls appear unaffected by it."

The sea otter feeds on benthic organisms such as abalone, pismo clams, and urchins.

There are natural factors which affect the persistence of oil such as dilution, evaporation, photo-oxidation, sedimentation by adsorption on suspended particles and microbial degradation. Because of these factors, it makes it difficult to determine the effects of oil on benthic communities. Oil which settles to the bottom, depending upon the factors identified above, could kill benthic organisms by smothering the organisms or from its toxic effects.

In the event of an oil spill, another major effect on otters would be the local loss of food sources. The secondary effect would be the long term contamination of shellfish populations which may also result in the injestion of petroleum products by the sea otters.

The southern sea otter does not presently inhabit the area considered in this consultation. Should the otter move into this area during the life of these activities, GS must reinitiate Section 7 consultation to determine whether the ongoing activities are likely to jeopardize the continued existence of the sea otter.

California Brown Pelican (Pelicanus occidentalis californicus)

The California brown pelican was originally listed as Endangered on October 13, 1970. Critical Habitat has not yet been determined for this species. All subspecies of brown pelicans were listed on December 2, 1970.

The only regular breeding colonies of this subspecies in the United States are located on Anacapa Island and nearby Scorpion Rock. This nesting population is augmented from late July through early November by large numbers of pelicans which regularly disperse north from Mexican waters. These migrants are generally gone again by early December; however, it has been recently determined that some may be recruited into the Anacapa breeding population.

Pelicans rarely are found far from salt water, or farther than 20-30 miles offshore. They forage intensively in the Santa Barbara Channel. Their major food is small fishes (primarily anchovy), which they capture near the surface by plunge-diving from the air.

During the late 1960's and early 1970's, the Anacapa colony suffered catastrophic nesting failure induced by DDT and its derivatives accumulating in the reproducing adults. Following the ban on this pesticide, the fledging rate has continued to fluctuate widely but has not dropped to the low numbers experienced earlier.

Pelicans may be affected by oil spills through contamination of their plumage as they dive for food or drift on the surface. This may contribute to direct mortality or result in reduced hatchability of eggs oiled from the fouled plumage of an adult bird. Individual pelicans that have been found oiled have responded well to treatment.

In accordance with the Oilspill Risk Analysis, we have identified ten segments which contain habitats important to the listed species and are susceptible to damage from oil (Attachment 4). Of these ten, Anacapa, Segment 50, has the greatest projected likelihood of being hit by oil from the greatest number of sources (Attachment 5).

It is difficult to predict from oil spill probabilities what the effects of oil activities might be on Anacapa. The only known incident of significant numbers of pelicans being oiled was after a spill from the Navy vessel Manatee in August 1973. Concentrations of light tar washed up on beaches from San Clemente south into Mexico. Twenty to 25 juvenile pelicans were found oiled. In contrast, no pelicans were reported oiled as a result of the January 1969, Santa Barbara blowout. Judging only from location of the spills, the results should have been reversed, but timing was the determinant in these cases. The San Clemente spill occurred in the late summer, when large numbers of pelicans were dispersed throughout the area; the Santa Barbara spill occurred in the winter, just following a severe storm, when relatively few pelicans were in the area and fewer still would have been far from shelter. While the breeding grounds and feeding areas surrounding Anacapa Island are extremely vulnerable locations, the San Clemente spill indicates that large amounts of oil anywhere within the pelicans' range could cause significant damage at the wrong time of year.

No pelican losses from OCS activities off Southern California have been reported to date, nor from nearby activities in the State tidelands. Additional threat from OCS Sale 48 has been considerably reduced by the withdrawal of tracts that were close to Anacapa.

To assist GS in carrying out their responsibility for the conservation of the listed species, the following recommendations are given.

From Attachment 5, the following tracts, transportation routes, and pipeline routes indicate a high probability of an oil spill contacting Anacapa Island. Tracts leased before Sale No. 48: 166, 202, 203, 204, 205, 208, 210, 215, 216, 217, 233, 234, 240, and 241. Tracts leased in Sale No. 48: 337, 346, 347, and 361. Transportation Route: T6 and T7. Pipleline Route: L4 and L6.

We recommend that GS require the lessee to assign a high priority and prescribe specific measures for the protection of Anacapa Island in all Oil Spill Contingency Plans submitted to GS for exploration or development/production within the above listed tracts, and for activities that might result in substantially increased tanker traffic over the identified transportation routes.

In accordance with OCS Operating Order No. 7, the proper authorities must be notified in the event of an oil spill occurrence. We would like to insure maximum protection to Anacapa Island by further recommending that GS require the oil spill containment equipment, which is maintained on the invididual platforms, also be required to respond to a spill from another platform in the area.

California Least Tern (Sterna albifrons browni)

The California least tern was listed as Endangered in the Federal Register on October 13, 1970. Critical Habitat has not yet been designated for this subspecies.

The least tern migrates from Mexico each spring to establish breeding colonies on the California coast. It occupies coastal habitats from the Pacific coast of Baja California to the San Francisco Bay from April to September.

The least tern usually chooses a nesting location in an open expanse of sand, dirt, or dried mud close to a lagoon or estuary where food can be obtained. Prey consists of small fish such as the northern anchovy (Engraulis mordax), deepbody anchovy (Anchoa compressa), jacksmelt (Atherinopsis californiensis), topsmelt (Atherinops affinis), California grunion (Leuresthes tenuis), shiner surfperch (Cymatogaster aggregata), California killifish (Fundulus parvipinnis), and mosquitofish (Gambusia affinis). The reduction in numbers of least terns has resulted from the loss of feeding and nesting habitats and disruption of nest sites by human-associated activities.

Potential threats to the California least tern from oil and gas activities are related to oil spills and increased human activities in coastal areas where nesting colonies occur. The birds could be contaminated by a spill as they dive for food. This may contribute to direct mortaility or result in reduced hatchability of eggs oiled from the fouled plumage of an adult bird. Oil spills cause severe damage when they enter coastal wetlands, and could destroy essential feeding areas for the terns.

To assist GS in implementing its responsibility for the conservation of the species, the following recommendation is given. GS should require that the Oil Spill Contingency Plans include provisions for the deployment of adequate containment equipment into the areas listed below to prevent the entry of an advancing oil spill. The necessary equipment must be onsite, within two hours, on any of these areas that are threatened by a spill.

The areas identified in the Recovery Plan as essential habitat for least terns are: Mission Bay; Sweetwater Marsh Complex; Tijuana River Estuary; South San Diego Bay; North San Diego Bay; Los Penasquitos Lagoon; San Diequito Lagoon; San Elijo Lagoon; Batiquitos Lagoon; Aqua Hedionda Lagoon; Buena Vista Lagoon; Santa Margarita River; Santa Ana River; Anahiem Bay/ Huntington Harbor; San Gabriel River/Alamitos Bay; Harbor Lake; Terminal Island; Playa del Rey; Mugu Lagoon; and Ormond Beach (Attachment 4).

Light-footed Clapper Rail (Rallus longirostris levipes)

The light-footed clapper rail was listed as Endangered on October 13, 1970. Critical Habitat has not yet been designated for this subspecies. Histori-

cally, the clapper rail's range extended from Santa Barbara County, California, to San Quintin Bay, Baja California, Mexico. Currently, this subspecies probably occurs in 16 California marshes and at least two marshes in Baja California. Distribution is along approximately 200 miles of United States coastline from Goleta Slough in Santa Barbara County south to the Tijuana Estuary in San Diego County.

Food consists of various invertebrates (crustaceans, mollusks and annelids) found in tidal coastal marshes. Past decline of the species has been attributed to the loss of over 65 percent of its former habitat as well as overhunting prior to 1939.

Potential threats from oil and gas activities could be from oil spills and increased human activities in the estuaries where existing populations live. The population estimate of 1976 suggested a total population of 250 birds distributed throughout 16 locations in California. Of these, five are in public ownership and may contain over 40 percent of the estimated population in California. Through the efforts of the Light-Footed Clapper Rail Recovery Team, a plan to stabilize this species through land acquisition and marsh management has been approved.

According to the Oilspill Risk Analysis, the possibility of an oil spill hitting clapper rail habitat is low. In addition, with the use of existing onshore facilities, no increased human disturbance from these activities is likely.

In order to assist GS in carrying out its responsibility to conserve the species, it is recommended that GS require the lessee to deploy the required containment equipment onto those areas identified in the Draft Recovery Plan as essential clapper rail habitat (Attachment 4). The necessary equipment should be onsite within two hours of an oil spill to prevent the entry of any advancing spill. Those areas to be included in the Oil Spill Contingency Plans for exploration and development/production are: Mission Bay; Sweetwater River complex; Tijuana River Estuary; South San Diego Bay; San Diego River mouth; Los Penasquitos Lagoon; upper Newport Bay; Anaheim Bay; Mugu Lagoon area; Carpinteria Marsh; and Goleta Slough.

Salt Marsh Bird's Beak (Cordylanthus maritimus ssp. maritimus)

Salt marsh bird's beak is an annual herb (15-30 cm high) with purple flowers, that inhabits the upper elevations of tidal salt marshes. Populations of bird's beak are associated with pickleweed (Salicornia) and salt grass (Distichlis) near elevations at and above high tide. The bird's beak was listed as Endangered in the Federal Register on September 28, 1978. Critical Habitat has not yet been determined for C. m. maritimus.

Historically, this subspecies occurred from Carpinteria in Santa Barbara County south to San Diego County and northern Baja California, Mexico.

Today, distribution is restricted to the Sandyland Marsh (Carpinteria) in Santa Barbara County, Point Mugu in Ventura County, and the Tijuana River Estuary in San Diego County.

Destruction of coastal salt marshes is the major factor responsible for the elimination of this wetland species.

The Carpinteria Marsh area and the Tijuana River Estuary are in public ownership; and since existing onshore facilities will be utilized, the potential for further destruction of the bird's beaks' existing habitat from OCS activities has been reduced. The probability of an oil spill reaching this species' habitat is minimal.

Although the remaining populations of the salt marsh bird's beak are located inside protected estuaries and along the upper elevations of tidal salt marshes, the potential for inundation by an OCS related oil spill still exists.

In order to assist GS in carrying out their responsibility to conserve the listed species, it is recommended that GS require the necessary containment equipment be deployed to those three areas identified above within two hours of an oil spill. This requirement should be a part of the Oil Spill Contingency Plan for each exploration and development/production plan.

Development Plans

This consultation includes three existing development activities and four proposed development plans. A discussion of these development tracts follows:

The three existing development tracts are located in the Santa Barbara Channel (tracts 166, 240, and 241). The proposed development plans for tracts 188, 202, and 217 are also located in the Santa Barbara Channel. The remaining development plan (tract 300) is located south of Long Beach.

There are two platforms on tract 166—Hogan and Houchin--located five miles south of Carpinteria. These platforms are sending 4,600 barrels of oil per day via pipeline to existing facilities at La Conchita. Crew boats make two or three round trips a day from existing facilities at Carpinteria.

Another tract under development, tract 241, has three platforms sending 20,024 barrels of oil per day via existing pipeline to the Rincon facilities. These platforms require two to three crew boat trips a day from Carpinteria.

The third producing tract is tract 240, containing platform Hillhouse. This tract is located ten miles south of Summerland. The platform is serviced by two or three crew boats a day from Carpinteria. The 7,752 barrels of oil per day is transported by connecting pipeline to the tract 241 pipeline which goes to the Rincon facilities.

There are four proposed development plans being considered in this consultation. The first is a proposal for tract 217 for platform Grace. The estimated production is 16,000 barrels of oil per day by 1982. The tract is located 12 miles south-southwest of Rincon. It is proposed to connect this platform to the State platform Hope via pipeline, then to Carpinteria via existing pipeline. An additional pipeline proposal associated with this platform, is a 5.8 mile overland pipeline from Carpinteria south to Ventura. This pipeline is south of Carpinteria Marsh.

Tract 188 is located five miles south of Refugio Cove and platform Hondo will be placed on the tract. It is estimated that a production rate of 60,000 barrels of oil per day will be produced by 1982. The oil will be transported by pipeline to an offshore storage and transport (OS&T) vessel. This OS&T vessel will be located within the same tract. It is anticipated that two to three crew boat trips per day will originate from Carpinteria and two helicopter trips per week out of Ventura or Santa Barbara will be servicing this platform. From the OS&T vessel the oil will be tankered to an existing onshore facility.

Platform Girty is proposed for tract 202, located four miles southwest of Oxnard. Oil production is estimated to be 6,000 barrels per day and will travel via pipeline to a proposed onshore facility south of McGrath Lake at Ventura. It is estimated that three boat trips a day and three to four helicopter trips a month from Ventura will be needed to service this platform. From the proposed facility in Ventura, the oil will go to the Carpinteria facilities and then to Rincon facilities. There are two proposed onshore pipeline routes from Carpinteria to Rincon—one directly to Rincon, the other from Carpinteria to Rincon via La Conchita.

The fourth proposed development plan is located on tract 300, seven miles south of Long Beach. There will be two platforms on this tract, Ellen and Elly, with an estimated production rate of 16,000 barrels of oil per day by 1982. A proposed pipeline will connect these platforms to Long Beach refinery facilities. Three to four crew boats a day and two helicopter trips per week from Huntington Beach are anticipated to serve this tract. There is a proposal to place a platform, Eureka, on the adjacent tract, number 301. This platform will be joined to those on 300 by pipeline.

The four proposed development plans (tracts 188, 202, 217, and 300) specifically address the proposed pipeline routes and the onshore facilities to be used. We have reviewed the proposals and believe that the proposed pipeline routes and the construction of the onshore facility are not likely to jeopardize the continued existence of the listed species or destroy or adversely modify the Critical Habitat of the American peregrine falcon. However, Section 7 consultation must be reinitiated should any of the following occur which may affect listed species or their Critical Habitats: (1) alternative pipeline route be planned; (2) the construction of additional onshore facilities; (3) a change in the use pattern be conducted at the onshore facilities mentioned above; or (4) a new species be listed.

Cumulative Effects

There are numerous offshore and coastal projects and activities in Southern California. Those known to the Office of Endangered Species which could have an impact on the Endangered and Threatened species are considered in this consultation.

The Standard Oil Company of Ohio (SOHIO) pipeline project proposes to transport Alaskan crude oil from Valdez, Alaska to a new (unconstructed) unloading facility at Long Beach, California by tanker. Fourteen tankers will be required, each making 23 round trips per year, to transport the oil. From Long Beach, 500,000 barrels of oil per day will be transported by pipeline to Midland, Texas.

Additional increases in tankers carrying oil out of California can be attributed to the Naval Petroleum Production Act transporting oil from Elk Hills in the San Joaquin Valley to Port Hueneme via pipeline. It is proposed that 350,000 barrels of crude oil a day be sold to any interested party, which makes it difficult to predict the transport routes. However, it could possibly go to the Los Angeles/Long Beach area or even to the east coast traveling through the Panama Canal.

The Chanslor-Western Oil and Development Company has proposed to explore the Vaca Tar Sands. Because the oil would be extremely viscous, an oil processing plant or coking facility would probably be needed at the project site before being shipped by pipeline.

Additional vessel traffic can be expected in the San Pedro and Santa Barbara Channels from the Space Shuttle program.

There are two nuclear power plant proposals. The first, at Diablo Canyon in San Luis Obispo County, has been constructed, but start-up has not been granted. The second plant is in operation but has proposed to expand the facilities. This one is located at San Onofre, Orange County.

There are several Liquified Natural Gas (LNG) facilities proposed for Southern California. None have received approval yet. The onshore LNG plant would be at Point Conception and the offshore sites being considered are: Beachers Bay; Chinese Harbor; San Pedro Point; Smugglers Cove; East Channel Shelf; and Camp Pendleton. If the onshore LNG facility at Point Conception is approved, it will be processing gas from Alaska (400 million cubic feet a day) and from Indonesia (500 million cubic feet a day). This would increase tanker traffic (190 trips a year) into Point Conception.

The Office of Coastal Zone Management (OCZM) has proposed a marine sanctuary be designated around the northern Channel Islands and Santa Barbara Island which would exclude oil and gas activities within six nautical miles of the islands. Concurrently, the OCS Sale No. 48 excluded those tracts within six nautical miles of the Channel Islands and Santa Barbara Island.

The State of California leases tracts within three nautical miles of the coast. These activities generate the placement of pipelines, increased crew boats/supply boats and helicopters servicing the rigs, possible construction of additional processing facilities, and increased tankering.

There are several U.S. Army Corps of Engineers projects in the area including maintenance dredging, beach erosion, and harbor deepening projects.

All of the above projects potentially increase the disturbance to Endangered and Threatened species' habitat and/or increase the possibility of an oil spill occurring within the Southern California area considered in this consultation.

An individual project or activity may have no significant impact upon the listed species, but when considered in light of the numerous projects within the same area, significant impacts could occur.

With accelerated offshore oil and gas activities, the probable risk of oil spills also increases. Additional oil spillage could increase the impacts to Endangered and Threatened species. Due to this, immediate oil spill containment response is extremely necessary.

An increase in onshore activities presents another possible impact to the listed species. There are numerous coastal activities in this area. Due to the stress on the coastal area, changes in OCS related onshore activities must be evaluated carefully.

Conclusion

This biological opinion covers the oil and gas exploration activities for those tracts leased prior to OCS Sale 35, and those leased in OCS Sale 35 and 48. It also covers the seven development tracts identified above.

We have rendered our conservation recommendations for the protection of the El Segundo blue butterfly, the California brown pelican, the California least term, the light-footed clapper rail, and the salt marsh bird's beak. Any activity or program authorized, funded, or carried out by a Federal agency which may affect any listed species or its Critical Habitat, will require Section 7 consultation.

The GS is reminded of their continuing responsibility to review their activities in light of their Section 7 obligations. Should additional onshore facilities be proposed, or the use pattern of existing facilities be changed, or a new species be listed that may be affect by exploration activities, Section 7 consultation must be initiated if a "may affect" determination is made. Also, should the construction of additional onshore facilities be proposed, different pipeline routes be proposed, a change in

the use pattern of the existing onshore facilities be proposed, or a new species be listed which may be affected by the development plans contained in this consultation, Section 7 consultation must be reinitiated.

GS must review all development/production plans not covered by this consultation in light of Section 7(c) of the Endangered Species Act of 1973, as amended.

We would like to thank GS for their consideration in providing the necessary information needed to conduct this consultation.

Robert S. Cook

Attachments (5)

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Washington, D.C. 20235

NOTED - CONCURRED

F6:TRL

SEP 25 1979

Mr. J. S. Cragwall, Jr.
Acting Director
Geological Survey
U.S. Department of the Interior
Reston, Virginia 22092

Dear Mr. Cragwall:

This letter responds to your May 18, 1979, request for formal consultation pursuant to Section 7 of the Endangered Species Act, as amended, regarding the possible impact to listed species from Outer Continental Shelf (OCS) oil and gas exploration activities in southern California. The enclosed biological opinion concludes that the identified activities are not likely to jeopardize the continued existence of listed species.

The opinion recommends that the Geological Survey allow the utilization of offshore storage and treatment facilities only under the most stringent safety guidelines possible and only when no other alternatives are available.

I look forward to continued cooperation in future consultations.

Sincerely yours,

for Terry L. Leitzell
Assistant Administrator
for Fisheries

Enclosure

Endangered Species Act

Section 7 Consultation

Agency: United States Geological Survey

Activity or Program: Development of Outer Continental Shelf Oil and Gas Reserves in the Southern California Bight

Consultation Conducted by: National Marine Fisheries Service, Regional Director, Southwest Region

Summary:

By memorandum of May 18, 1979, the Director of the Geological Survey (GS) requested formal consultation on all Outer Continental Shelf (OCS) oil and gas exploration, development, and production activities in the Southern California Bight according to regulations promulgated under Section 7 of the Endangered Species Act of 1973, as amended. To assist me in responding to the request, a team was appointed consisting of representatives from National Marine Fisheries Service (NMFS) Southwest Region and Central Office. Although not participating as team members, the Southwest Fisheries Center and the Northwest and Alaska Fisheries Center were helpful in providing information used in the formulation of our biological opinion.

The team met June 5-7, 1979, with representatives of GS and the Fish and Wildlife Service consultation team to discuss ongoing and proposed GS activities in the Southern California Bight. These activities are the result of development of tracts leased in pre-lease sale 35 offerings, lease sale 35, and lease sale 48.

After reviewing available information and discussing effects of ongoing and proposed activities with GS, the consultation team recommended that GS allow the utilization of offshore storage and treatment (OS&T) facilities only under the most stringent safety guidelines possible and only when no other alternatives are available. The team also recommended that GS work with NMFS, Fish and Wildlife Service and any other concerned agencies to establish a program to monitor cumulative impacts of OCS oil and gas development on the threatened and endangered species in the area. The team concluded that the identified activities are not likely to jeopardize the continued existence of any of the endangered or threatened species in question.

Proposed Action

The project area includes the U.S. contiguous zone from Point Conception to the California-Mexico border. Five groups of tracts within the project area have been identified as potential oil and gas producing areas. These areas are the Santa Barbara Channel, the Santa Rosa Ridge, Santa Barbara Island, San Pedro Bay, and Tanner-Cortes Bank.

There are currently 15 platforms located in the Santa Barbara Channel, eight in State waters and seven in Federal waters. The majority (10) are located southwest of Carpenteria. The other five are located in the west end of the Channel; four are in State waters between Coal Oil Point and Point Conception, and one, the Hondo platform, is in Federal waters approximately five miles south of Refugio Cove. Forty subsea completions have been installed in the Santa Barbara Channel, all in State waters. An OS&T is planned for installation near Hondo platform as soon as it receives Environmental Protection Agency approval. The OS&T will separate the crude oil from the oil-water emulsion that comes from the wells. The crude oil will be stored and water will be piped back to the platform for injection into the formation. At regular intervals, depending on the rate of production, the OS&T will transfer the crude oil to shuttle tankers for transport to onshore refineries.

The only other existing platforms in the Southern California Bight are two in State waters south of Huntington Beach. There are, however, four platforms planned for installation in late 1979. Two of these will be placed in the east end of the Santa Barbara Channel and two will be placed in San Pedro Bay. There are no platforms or subsea completions in any of the other groups of tracts.

GS has estimated that approximately 371 wells will have to be drilled to adequately explore leased tracts for oil deposits. Exploration of leased tracts is currently being conducted by four drilling ships. Since there are no plans to bring in additional exploration vessels, the necessary exploratory wells will be drilled without an increase in the current overall level of activities related to exploration during the course of the project. If more drilling ships are required in order to speed up the exploration process, the cumulative environmental impacts would probably remain the same, but the increased level of activity in the short term would be more likely to have an immediate adverse impact on the species involved. An additional 87 platforms, 86 subsea completions, and over 1,000 miles of pipelines have been estimated to be required to fully develop these offshore fields. The length of time necessary for this development is 25 years and the total life of the project is estimated to be 40 years.

The distribution of the oil fields in the OCS appears to be patchy. The subsea completions are expected to be concentrated around the deep water (300m.) oil fields at the west end of the Santa Barbara Channel, in the southern half of the San Pedro Bay group of tracts, and around the Tanner-Cortes Bank. Where ecologically and economically feasible, pipelines will be used to bring crude products to existing refineries on shore. When pipelines prove infeasible, OS&T's coupled with tanker and barge transportation will be utilized. GS estimates that four OS&T systems may be required during the development of the Southern California Bight oil and gas reserves.

Endangered Species Present in the Project Area

The species of concern in the consultation were as follows:

blue whale (Balaenoptera musculus)
fin whale (B. physalus)
sei whale (B. borealis)
humpback whale (Megaptera novaeangliae)
sperm whale (Physeter catadon)

gray whale (Eschrictius robustus)
right whale (Eubalaena glacialis)
Pacific ridley turtle (Lepidochelys olivacea)
green sea turtle (Chelonia mydas)
loggerhead turtle (Caretta caretta)
leatherback turtle (Dermochelys coreacea)

All of these are either casual visitors or migrants through the Southern California Bight.

The North Pacific population of blue whales is approximately 1,700 individuals. A significant portion migrates through the project area from May through July on their way to their summer feeding grounds and again from September to February during their return migration to their wintering grounds in the warm waters off southern Baja California. The probable migratory pathway and distribution of the blue whale in the Southern California Bight has been described as generally offshore, very near or outside of the Channel Islands, and along the Santa Rosa Ridge to Tanner-Cortes Banks. While they are frequently observed around the Channel Islands, they are seldom seen from shore.

The North Pacific population of the fin whale numbers approximately 17,000 individuals. Fin whales may be found west of the Channel Islands year round. They are, however, most abundant in late spring or early summer.

Sei whales in the North Pacific number about 9,000 whales. Little is known about their migratory habits. Sei whales may be found off Southern California, west of the Channel Islands during the late summer or early fall. There is also a possibility that these whales may be feeding in the southern California Bight.

Sperm whales are the most abundant of the large whales in the North Pacific, numbering about 300,000 individuals. They are common in the project area from April until the middle of June and again from late August to mid-November, indicating a northward migration in the spring and return migration in the fall. The boundaries of the migratory path are not well known but probably are quite broad.

The humpback whale is one of the most severely depleted of the whale stocks. The North Pacific population is estimated at approximately 850 individuals. A portion of this population migrates from Alaska south to its calving and breeding grounds off the western coast of Baja California, where it spends the winter months. During the summer these whales may be found in any portion of their range.

The most prominent whale occurring in the Southern California Bight is the gray whale. The current population is estimated at about 15,000 whales. Its rather narrow migratory path along the California coastline makes it the most frequently observed endangered whale as well as the species most likely to be adversely impacted as a result of OCS development. Essentially, the entire population of gray whales migrates through the project area from late September through December on its southern migration to the calving and breeding grounds in Baja California, and again on its northward migration between February and June. Juvenile gray whales have been known to take up residence for extended periods in the kelp beds along the coast and around the Channel Islands, in order to feed on the crustaceans living in the kelp canopy.

The most depleted species stock is the North Pacific population of Pacific right whales which numbers only about 220 individuals.

Individuals of all four species of listed sea turtles may be found in the project area. They are probably transient portions of their respective populations feeding at the northern limits of their ranges. They are not known to nest here. There is no historical evidence of any nesting beaches north of Guerro Negro Lagoon, Baja California Sur, Mexico, and there are no known nesting beaches remaining on the Baja Peninsula.

Probable Impacts

The most probable source of adverse impacts on endangered species in the project area are oil spills from various sources; increased vessel traffic due to the greater number of platform support vessels as well as increased tanker and barge traffic; and increased levels of noise resulting from exploration, construction, and production activities.

The severest impacts are likely to result from a catastrophic event resulting in a large oil spill. Such events include blowouts, the sinking of or breaking up of tankers, and accidents involving OS&T's. The probability of an oil spill occurring during the life of this project has been estimated by GS to be 100%. In the light of this high probability we recognize that the availability of oil spill containment and clean-up equipment reduces the likelihood of severe impacts resulting from a spill when it does occur.

There are few data available pertaining to the effects of oil on endangered species. Some anecdotal information indicates that gray whales swim through naturally occurring oil slicks in the Santa Barbara Channel. There is no way to access the long term or chronic effects of contacting oil. Some of the adverse effects which could result from contact with an oil spill include eye damage, inhalation of toxic fumes or aerosols, ingestion of oil, and the fouling of baleen plates.

The species most likely to be impacted by an oil spill is the gray whale. If a large spill occurred during the whales migration, a significant portion of the population could encounter the spill, and possibly suffer one or more of the adverse effects listed above.

A catastrophic spill would have the most severe impact on the North Pacific population of right whales. The probability of right whales encountering such a spill is small, because their population is so depleted. Although there has not been a documented sighting of a right whale in the project area since 1956, the elimination of just a few individuals could result in the loss of the recruitment of an entire season.

We are not aware of any information on the effects of oil on sea turtles. Presumably they would be susceptable to the same sorts of ill effects as the cetaceans. Since the few sea turtles occurring in the project area are feeding at the northern extent of their range and since there are no nesting beaches in or near the project area, the impacts of a spill on the sea turtle populations is expected to be slight.

OS&T's appear to represent a threat to the environment because they require unnecessary handling of oil at sea. The OS&T planned for installation near the Hondo platform in the Santa Barbara Channel will be located outside of the three-mile territorial sea where it will encounter the full force of the severe winter storms that occur in the Channel. Although the mooring system is designed to withstand a hundred year storm, should the the OS&t break loose it would probably ground and break up, resulting in a spill of up to 200,000 barrels of oil. There is also the threat of a collision between the OS&T and the shuttle tankers that it would load. Even though the possibility of such accidents is remote, the threat of such accidents could be eliminated by utilizing onshore storage and and treatment facilities coupled with nearshore marine terminals for shuttle tankers.

Increased vessel traffic increases the probability of the occurrance of whale-vessel collisions. Every year a few whales wash ashore with definite signs of injury resulting from confrontations with large vessels. We do not know how many whales are killed or seriously injured in this manner each year nor do we know the impact of this mortality on endangered species populations.

The gray whale is most likely to be impacted by increased vessel traffic because it is most abundant endangered species in the project area and its migratory route coincides with traffic lanes in the Southern California Bight. Vessel traffic could be one of the stimuli pushing the gray whale migration offshore.

Noise in the Southern California Bight issues from several sources, including commercial vessel traffic, pleasure craft traffic, fishing operations, military operations and OCS mineral development. There are no data available that indicate the relative amounts of noise contributed by each of these sources. Therefore, we are not able to predict what the impacts of noise from OCS oil and gas development on endangered species will be.

However, increased activities will increase noise levels by some degree. Our concern is that noise levels in the Southern California Bight may reach a threshold resulting in the abandonment of migratory routes and feeding grounds by endangered whales.

Estimates prior to the mid-1960's indicated only 5-10% of the gray whale population migrated along offshore routes. Recent observations indicate a higher percentage of the population is utilizing offshore routes around the Channel Islands. The reasons for this apparent offshore shift are not clear. The increasing population, currently 15,000 whales, up from 3,000 in 1952, may be expanding the migratory path seaward as a result of population pressures, or the gray whales may be migrating further offshore in an effort to avoid noise from human activities, which have increased substantially in the last 20 years.

In October, 1978, humpback whales were observed feeding on Northern anchovies over the Santa Rosa Ridge. Additional feeding areas may be found around the Tanner-Cortes Bank. If noise levels reach a threshold the whales may abandon these areas, thus diminishing available feeding areas and increasing competition on remaining feeding grounds.

Conclusions:

Based on current population estimates and data on distribution of species, NMFS concludes that development of OCS oil and gas reserves in the Southern California Bight is not likely to jeopardize the continued existence of any of the endangered species under consideration.

With the exception of the gray whale, endangered cetaceans are widely distributed in the North Pacific. Their distributions serve to protect them from being inundated by activities in a relatively small portion of their ranges.

The gray whale is the species most likely to be impacted by this project because of its biannual migration through the project area. This population is recovering from heavy exploitation by commercial whalers and is approaching pre-exploitation levels. Based on this resiliency and the fact that it is a migrant through the area and not a resident, NMFS has determined that the continued existence of this species is not likely to be jeopardized.

The right whale population, if impacted by the project, is likely to suffer severely. However, the small population is widely distributed and no individuals have been reported in the project area in over 20 years. Therefore, the probability of this project jeopardizing this species is small.

The distribution and migration of Pacific ridley, green, loggerhead, and leatherback sea turtles in the eastern North Pacific is poorly known. There are no nesting beaches in the project area nor are there any nesting beaches outside the project area that would be impacted by oil from a catastrophic spill in the project area. The sea turtles found in the project area are apparently feeding near the northern limits of their ranges and, although a few individuals of each species may suffer impacts from the project, the project is not likely to jeopardize the continued existence of any of the endangered sea turtle populations.

Recommendations:

We recommend that GS establish a program to monitor the impacts of OCS oil and gas development in the Southern California Bight. The purpose of this program would be to centralize information already available to various offices within GS, so that other agencies could have access to that information. The type of information we are interested in includes, among other things, location and cause of chronic pollution, results of exploratory activities so that we may anticipate the development of areas which may be important to endangered species, and any reports on behavior of animals around drill-ships and platforms.

We recommend that GS cooperate with NMFS in the placement of observers aboard exploratory vessels and platforms when in the opinion of the Regional Director, Southwest Region, NMFS the placement of an observer may yield data useful in the determination of impacts of oil and gas development on endangered species. The Southwest Region currently reviews Environmental Reports for plans of exploration and development and could as part of the review consider the benefit of placing an observer on board a particular vessel or platform without consuming much additional time. Should the Regional Director decide to place an observer aboard a vessel or platform we would expect GS assistance in providing support.

We recommend OS&T's be utilized only when onshore storage and treatment facilities and near shore marine terminals are not feasible. NMFS is concerned with the use of OS&T's. OS&T's require extra handling of oil while at sea thus increasing the chance of a spill that could impact endangered species. We further recommend that any OS&T's that are installed be closely monitored by GS and that GS in consultation with Coast Guard and NMFS develop and implement strict procedural guidelines, for the safe transfer of oil from the OS&T to shuttle tankers, prior to the initiation of the proposed operations. These guidelines should include, among other things, criteria for the cessation of transfer of oil during high seas or inclement weather.

We recommend that GS contact the Regional Director, Southwest Region, NMFS to initiate development of a monitoring program and OS&T operational guidelines.

Finally, we recommend that consultation be reinitiated in the event that studies, being funded by the Bureau of Land Management, on the effects of noise and oil pollution on marine mammals produce information relevant to this opinion, or data indicating potential adverse impacts on listed species of whales and sea turtles become available, or should another species in the project area be listed as threatened or endangered.

APPENDIX 2

Cultural Resource Survey

Previously submitted to
U. S. GEOLOGICAL SURVEY

Archeologist's Report
See Chevron's Environmental Report
(Appendix 5)

APPENDIX 3

Oil Spill Contingency Plan
Outer Continental Shelf
Pacific Region

CHEVRON, U.S.A., OPERATOR

Previously submitted to
U. S. GEOLOGICAL SURVEY

APPENDIX 4

See Chevron's Environmental Report
(Appendix 5) and U. S. Geological Survey
District Geologist's input (Appendix 6)
for pertinent maps and diagrams

APPENDIX 5

Non-proprietary copy of Environmental
Report and Plan of Exploration

APPENDIX 6

U. S. Geological Survey
District Geologist's input

POE 2-1-80

February 6, 1980

TW Dunaway 2/6/80.

Mtg 2-6-80

Memorandum

To: District Geologist, Los Angeles

From: Oil and Gas Supervisor, Pacific Region

Subject: Exploration Plan, OCS-P 0316, Nos. 1, 2 and 3
Chevron U.S.A., Inc.

On February 4, 1980, Mr. Rick Ensele of this office delivered to Mr. Jim Cummings of your office the additional data for Chevron's P 0316 POE you requested in your memorandum dated January 17, 1980. The data sent by Chevron is listed in the attached letter from Chevron.

On February 5, 1980, Mr. Cummings informed Mr. Ensele that the data was adequate for the hazards analysis, but not everything that was requested from Chevron was shipped. Since the missing data is not required by NTL 77-2, it was decided to begin the 30-day clock on February 5, 1980. However, Mr. Ensele will contact Chevron and inquire about obtaining the additional data.

Since the 30-day decision period begins on March 5, 1980, we will need your site-specific geologic input for our EA by February 22, 1980. APDs for the three proposed wells are included with the Plan. Please note that Chevron has changed the location of well No. 2, OCS-P 0316, to X = 680,400' and Y = 866,000' (Lambert Grid Zone VI) to avoid an area of probable exposed rock.

If you have any questions, please contact Mr. Rick Ensele of this office.

(Orig. Sgd.) F. J. SCHAMBECK

F. J. Schambeck

Enclosure

cc: Acting Conservation Manager, Pacific Region
District Engineer, Santa Barbara District
OCS-P 0316, POE

This Copy for

ELEE/RDENSLEE/fls

January 16, 1980

Memorandum

To: District Geologist, Los Angeles

From: Oil and Gas Supervisor, Pacific Region

Subject: Plan of Exploration, OCS-P 0316 Nos. 1, 2 & 3, Chevron U.S.A. Inc.

Enclosed for your review is the following material concerning the subject Plan of Exploration:

1. Chevron's transmittal letter dated 1-11-80
2. Exploration Plan - Confidential
3. Environmental Report

Please inform this office by c.o.b. January 22, 1980 as to the acceptability of Chevron's data. If it is found to be unacceptable, please furnish this office with a list of inadequacies and actions to correct same.

We shall need your site-specific geologic input for our EA, as well as regional geology. We are assuming our 30-day decision period will begin on January 25, 1980, therefore, we shall need your input by February 15, 1980. If the dates change, you will be notified.

Enclosed within the Plan are APDs for the three proposed wells. Please commence your hazards analyses and transmit them directly to the District Engineer, Santa Barbara with a copy to this office. If you have any questions, please contact Rick Ensele of this office.

(Orig. Sgd.) H. T. CYR
for F. J. Schambeck

Enclosures

cc: District Engineer, Santa Barbara
Chief, Environmental Section ~~~ This Copy for
Chief, Offshore Operations
OCS-P 0316 POE

ELEE/fls

United States Department of the Interior

GEOLOGICAL SURVEY

1340 W. Sixth Street
Suite 100
Los Angeles, California 90017

NOTED - DUNAWAY

20 February 1980

Memorandum

To: Oil and Gas Supervisor, Pacific OCS Region

From: Acting District Geologist, Pacific OCS Region

Subject: Environmental Geology for OCS P-0316

Introduction

Application has been received from Chevron USA, Inc. for approval of a plan to drill three exploratory wells in OCS Lease P-0316 for the purpose of evaluating possible hydrocarbon potential. Lease P-0316 is located in the western part of the Santa Barbara Channel about 88 km west of the City of Santa Barbara and approximately 16 km west of Point Conception (Fig. 1). This lease is one of a group of tracts in the Point Conception area leased in OCS Sale 48. The proposed site of the initial well to be drilled, P-0316-1, is slightly southwest of the center of the lease. Water depth at this site is approximately 190 m. The proposed site for well P-0316-2 is in the northeast portion of the lease in approximately 105 m of water. Proposed well P-0316-3 is located in the northwestern part of the lease near the boundary between P-0316 and P-0315. Water depth at this site is approximately 195 m.

Data used for this report includes various published and unpublished reports, information supplied by the applicant, and previous survey data obtained by the USGS.

Lease Area Geology

Lease P-0316 is located approximately 16 km due west of Point Conception in the transition zone between the generally west structural trend of the Transverse Ranges and the general north trend of the Coast Ranges. This transition zone extends from the offshore Santa Maria basin area south to the Point Conception OCS. Most faults and folds within this zone of transition are the result of repeated tectonism throughout Cenozoic time. This area has been described as a zone of "tectonic fight" (Hamilton and Jahns, 1978) and faults with reverse, normal, and strike-slip separation are present within the area. The larger interpreted anticlines generally trend west-northwest at oblique angles to the major fault zones (Vedder and others, 1976).

Geophysical profiles indicate that most deep structures within the lease area trend west. They possibly represent the offshore western extension of the west-trending Santa Ynez mountains into the transition zone.

Shallow structure in the lease appears to have a general west trend. A series of northwest-trending shallow faults are oblique to this general trend. Shallow faults trending north and northeast were also noted within the lease.

Geologic Hazards Analysis

Seafloor Slope

The regional slope of the seafloor of Lease P-0316 is to the southwest. The seafloor slope at the site for proposed well P-0316-1 is 3.8° SW. The seafloor slope at the sites proposed for P-0316-2 and P-316-3 is 0.5° SW and 3.6° SW, respectively.

Surficial Sediments

The seafloor in the vicinity of the proposed drillsites is composed of sediments of probable Holocene age. High-resolution, shallow-penetration geophysical profiles indicate that surface sediments range from 0 m to 90 m in the areas of the proposed exploratory wells. The applicant expects to encounter consolidated stiff clays and silts that are expected to become firmer with depth.

The proposed drillsite for P-0316-1 is underlain by 41 m of unconsolidated surficial sediments and is located on a possible slump.

Proposed well P-0316-2 is underlain by 7.5 m of unconsolidated surficial sediments. No disturbed sediments or slumping is indicated in the area of this proposed wellsite.

The site of proposed well P-0316-3 is underlain by 10.7 m of unconsolidated surficial sediment and is located on a possible slump.

Faulting

The two major faults in the area of Lease P-0316 are the Honda fault located approximately 17 km to the north and the Santa Ynez fault located approximately 23 km ENE of the lease. Faults within the lease show three separate trends. The faults in the western part of the lease show a northwest trend, while those in the eastern part have a northeast trend. A lesser number of faults within P-0316 show a north-south alignment.

Faults identified from geophysical profiles are at least 150 m below the seafloor, and are located at least 245 m away from any of the proposed drillsites.

Shallow Gas Zones and Seeps

Geophysical data indicate the nearest water column anomalies (possible seeps) are located 780 m ESE of the proposed location for well P-0316-1.

Geophysical data indicate a water column anomaly (possible seep) approximately 174 m north of the proposed drillsite for P-0316-2. This anomaly is associated with a rock outcrop. A second water column anomaly (possible seep) is located approximately 180 m SSE of the proposed drillsite.

Geophysical data indicate the nearest water column anomalies (possible seeps) are located 600 m NW of the proposed location of well P-316-3. A second area of possible extensive seepage lies northwest to north of the location.

Seismicity

The Santa Barbara Channel region is seismically active (figs. 2 and 3). A detailed history of the seismic network and earthquake epicenter locations in the area can be found in FES 76-13 (USGS, 1976). The large earthquakes that have occurred in the southern California area (magnitude 6 and greater) are plotted in figure 4. Studies have shown that some of the earthquakes were related to known faults or fault trends in the channel and the transition zone to the north. However, many of the earthquakes appear to be completely unrelated to any known faults.

From June 26 to August 3, 1968, a series of earthquakes shook the Santa Barbara Channel area. This swarm of 63 earthquakes (maximum magnitude 5.2) was located along a northwest-trending gravity and magnetic ridge. Focal mechanism studies indicate the oblique-slip movement occurred along a northwest-trending fault. This indicates the possibility of a deep (10-20 km) northwest-trending structure different from shallow (to 10 km depth) east-west structures of the Santa Barbara Channel (Sylvester and others, 1970).

A swarm of earthquakes occured near Santa Barbara offshore on August 13, 1978. The largest magnitude was 5.1, followed by more than 200 aftershocks. Since 1932, a seismograph network has been operating in the southern California area. The earthquake epicenters have been

plotted by the California Institute of Technology and show the areas of seismic activity. Figures 2 and 3 show the areas of interest to this study. According to Greene and others (1975), the epicenter locations indicate discrepancies when compared with the U.S. Geological Survey network plots thus making correlation to faults difficult.

Tsunami

The only recorded sea inundation of the Santa Barbara area occurred as a result of the 1812 major earthquake located offshore near the City of Santa Barbara. The earthquake reportedly caused a massive tsunami that flooded the south part of the then lightly populated village. In 1927, on earthquake off Point Arguello caused waves up to 2 m high, but the waves only reached the inner beach area. The 1925 (magnitude 6.3) and 1941 (magnitude 6.0) Santa Barbara area earthquakes apparently caused no discernable wave development.

Conclusions

The geophysical data indicates possible slump material underlying the proposed drillsites for P-0316-1 and P-0316-3. Steep slopes will not be a problem at any of the proposed locations. Seeps and faults will not present a hazard to the three proposed sites.

Erick V. Kaarlela

Erick V. Kaarlela

DE/sds

References

Allen, C.R., St. Amand, P., Richter, C.F., and Nordquist, J.M., 1965, Relationship between seismicity and geologic structure in the southern California region: Seismol. Soc. America Bull., v. 55, p. 753-797.

U.S. Geol. Survey, 1976, Oil and gas development in the Santa Barbara Channel Outer Continental Shelf off California: Final Environmental Statement 76-13.

Fischer, P.J., 1972, Geologic evolution and Quaternary geology of the Santa Barbara Basin, California: Univ. Southern California unpub. Ph.D. thesis, 337 p.

Greene, H.G., Clarke, S.H., Jr., Field, M.E., Linker, F.I., and Wagner, H.C., 1975, Preliminary report on the environmental geology of selected areas of the southern California continental borderland: U.S. Geol. Survey Open-File Report 75-596.

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Hileman, J.A., Allen, C.R., and Nordquist, J.M., 1973, Seismicity of southern California region: California Inst. Tech., Div. of Geology and Planetary Sciences, Contr. No. 2385, 487 p.

McCulloch, D.S., Clarke, S.H., Jr., Field, M.E., Scott, E.W., and Utter, P.M., 1977, A summary report on the regional geology, petroleum potential, and environmental geology in the area of proposed lease sale 53-A, central and northern California Outer Continental Shelf: U.S. Geol. Survey Open-File Report 77-593, 39 p.

Sylvester, A.G., Smith, S.W., and Scholz, C.H., 1970, Earthquake swarm in the Santa Barbara Channel, California, 1968: Seismol. Soc. America Bull., v. 60, p. 1047-1060.

Vedder, J.G., Wagner, H.C., and Schoellhamer, J.E., 1969, Geologic framework of the Santa Barbara Channel Region, in Geology, Petroleum Development, and Seismicity of the Santa Barbara Channel Region, California: U.S. Geol. Survey Prof. Paper 679-A, 11 p.

Vedder, J. C., Greene, H.G., Scott, E.W., Taylor, J.C., and others, 1976, A summary report of the regional geology, petroleum potential, environmental geology, and technology for exploration and development in the area of proposed lease sale 48, California continental borderland: U.S. Geol. Survey Open-File Report 76-787, 43 p.

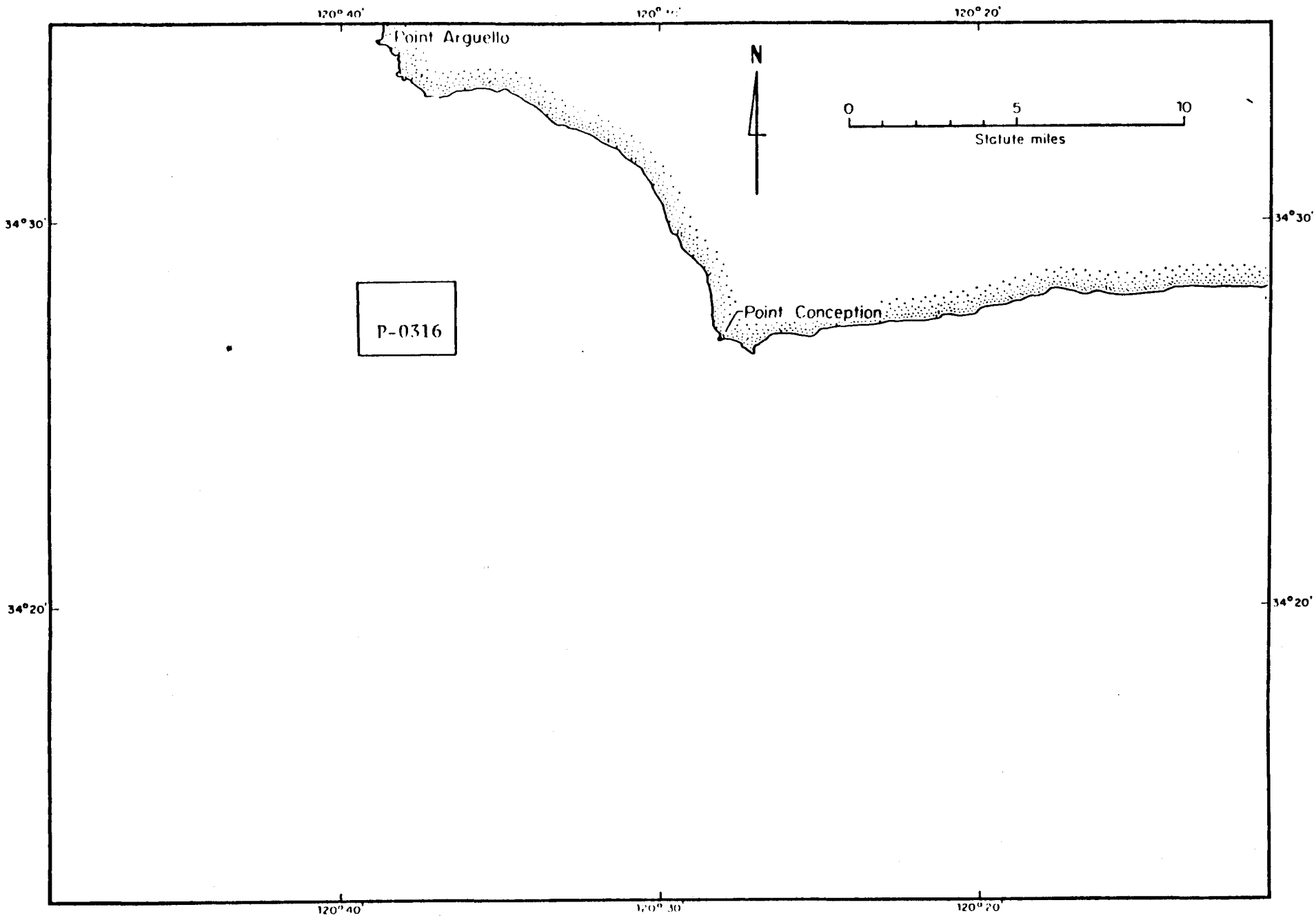
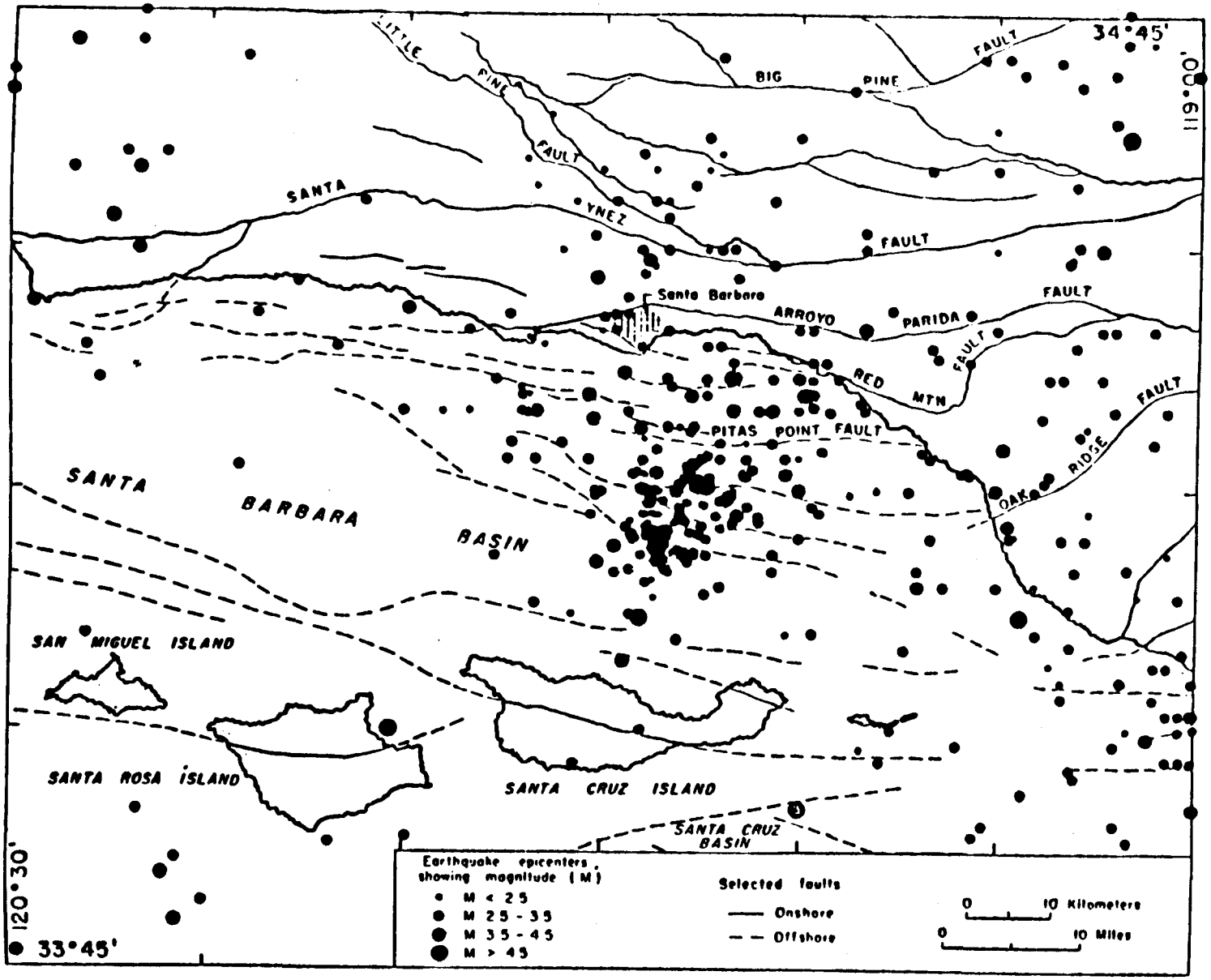
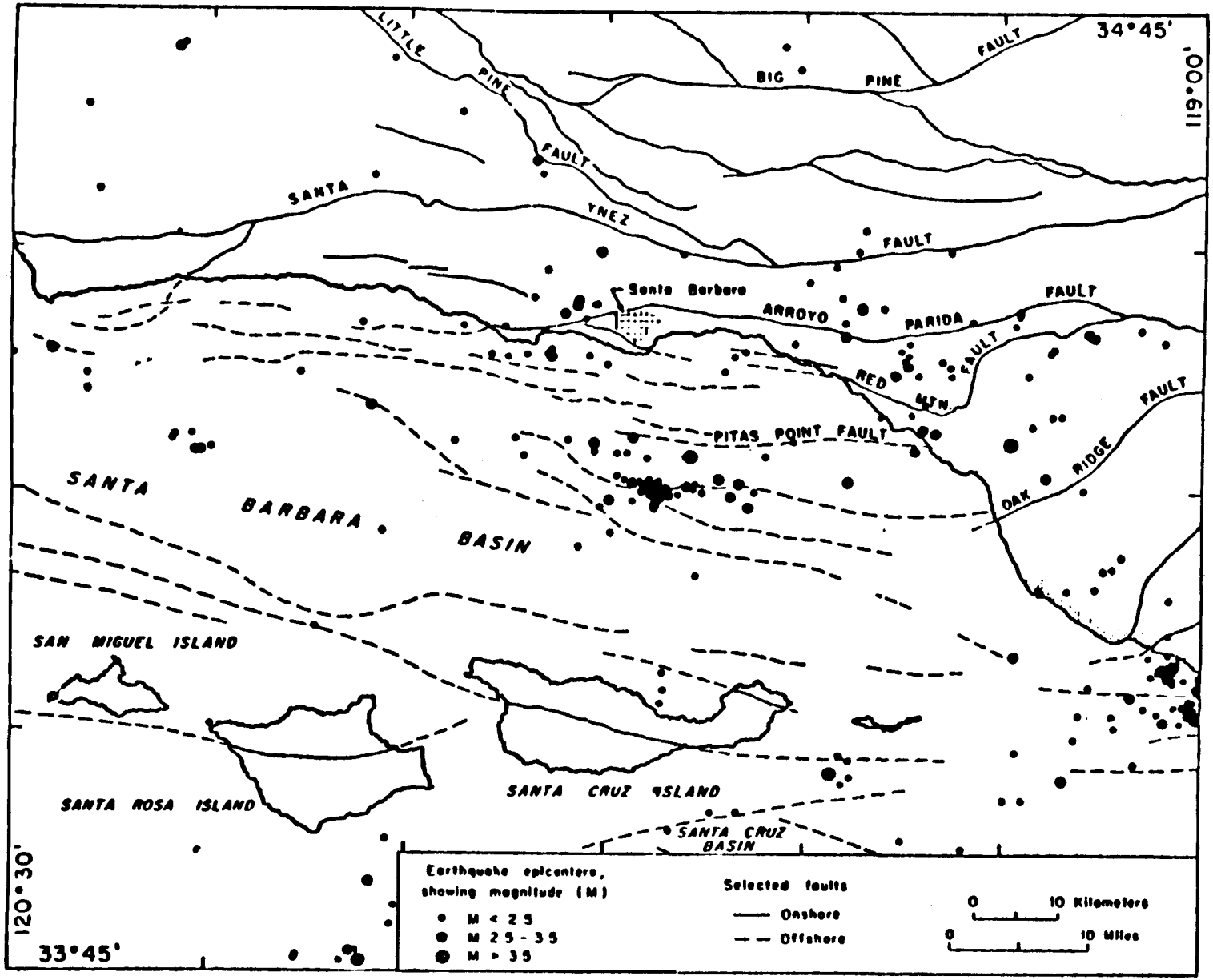


Figure 1. Index Map.



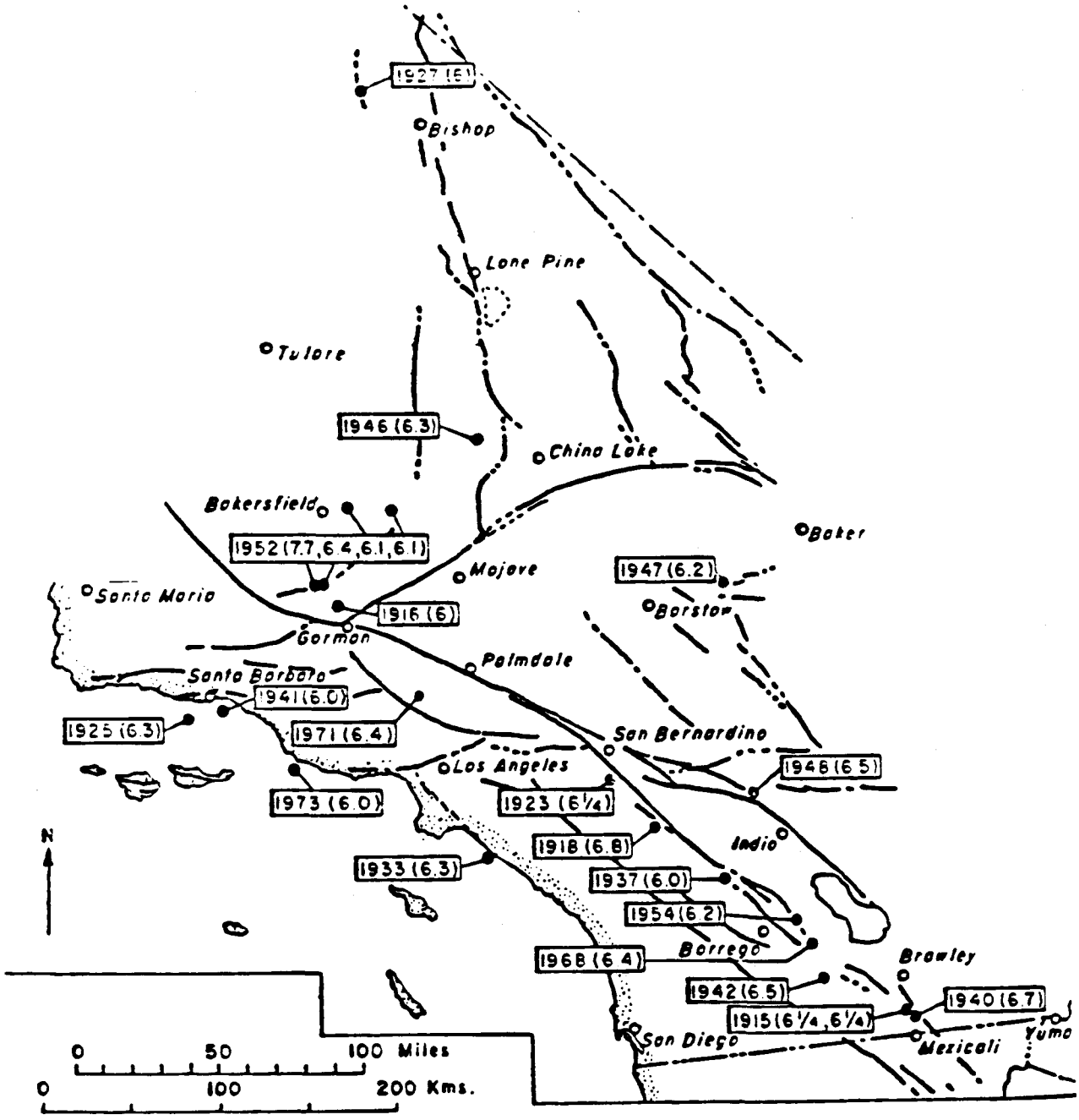
Earthquake epicenters in the Santa Barbara Channel region from 1932 to 1971 as determined by Caltech

Figure 2.



Earthquake epicenters in the Santa Barbara Channel region from 1970 to 1973 as determined by USGS

Figure 3.



Earthquakes of magnitude 6 and greater in southern California since 1912. Modified from Allen and others, (1965) From Hileman and others, 1973.

Figure 4.

APPENDIX 7

Review Comments and Related Correspondence from
Other Agencies and/or the Public

*National Park Service
*State of California
*California Coastal Commission
*U. S. Office of Coastal Zone Management
*U. S. Coast Guard
**Heritage Conservation and Recreation Service
U. S. Fish and Wildlife Service
National Marine Fisheries Service
Bureau of Land Management

*No response as of March 4, 1980
**Telephone response February 21, 1980, no comment

United States Department of the Interior

GEOLOGICAL SURVEY

160 FEDERAL BUILDING
1340 W. SIXTH STREET
LOS ANGELES, CALIFORNIA 90017

February 5, 1980

Memorandum

To: National Park Service, San Francisco, California

From: Oil and Gas Supervisor, Pacific Region

Subject: S. O. 2974 Review, Plan of Exploration, Wells Nos. 1, 2, and 3, OCS-P 0316, Chevron U.S.A., Inc.

Chevron U.S.A., Inc. as operator, has submitted to this office a Plan of Exploration (POE) for proposed drilling at the following locations. (Please be advised that coordinates for Well No. 2 have been revised to avoid an area of probable exposed rock.):

OCS-P 0316 Well No.	Lambert Grid Zone VI Coordinates	Water Depth (feet)
1	X = 674,350' Y = 860,220'	623
	Original	
2	X = 680,210' Y = 866,320'	344
	Revised	
	X = 680,400' Y = 866,000'	
3	X = 668,840' Y = 862,820'	640

Pursuant to S.O. 2974 (Revised), signed August 9, 1978, we are forwarding Chevron U.S.A., Inc.'s POE and Environmental Report (ER) for your review and comment.

ONE HUNDRED YEARS OF EARTH SCIENCE IN THE PUBLIC SERVICE

These copies are non-proprietary and may be retained by your office and made available for public inspection. Due to the 30-day time constraint, only those comments received here prior to February 22, 1980 can be used in the preparation of our Environmental Assessment.

Should you have any questions regarding the requirements of this memorandum or the enclosed documents, please contact Messrs. Tom Dunaway or Rick Ensele at FTS 798-2846.

F. J. Schambeck

Enclosures

cc: Acting Conservation Manager, Pacific Region
District Engineer, Santa Barbara
Chief, Offshore Operations Section
Chief, Environmental Section ← This copy for

United States Department of the Interior

GEOLOGICAL SURVEY

160 FEDERAL BUILDING
1340 W. SIXTH STREET
LOS ANGELES, CALIFORNIA 90017

February 5, 1980

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

State of California
Governor's Office of Planning and Research
1400 Tenth Street
Sacramento, California 95184

Attention: Mr. Gregory M. Fox

Re: Review of Plan of Exploration, OCS-P 0316, Wells Nos. 1, 2, and 3, Chevron U.S.A. Inc.

Gentlemen:

With the California Coastal Management Program (CCMP) having become effective on August 31, 1978, any plan submitted to the Secretary of the Interior for the exploration or development of a lease in the OCS and which significantly affects any land or water use of California's coastal zone must have attached to it a certification that each activity complies with the CCMP and will be carried out in a manner consistent with the CCMP.

Enclosed with this letter is one "Public Information" copy of the Plan of Exploration and Environmental Report for OCS-P 0316, Wells Nos. 1, 2, and 3, as submitted to the U. S. Geological Survey by Chevron U.S.A., Inc., the operator. Coordinates for Well No. 2 have since been revised to X = 680,400' and Y = 866,000' to avoid an area of probable exposed rock. The required consistency certification appears on page iii of the Environmental Report. The California Coastal Commission and the U. S. Office of Coastal Zone Management have also been provided with copies of these documents.

It has been determined that the submission is complete and meets with the requirements of 30 CFR 250.34. As such, the 30-day processing time mandated by the OCS Lands Act Amendments has begun. Please commence your review upon receipt of this letter and the enclosed documents. Due to the 30-day time constraint, only those comments received here before February 22, 1980 can be

used in the preparation of our Environmental Assessment.

Should you have any questions regarding the requirements of this letter or the submitted documents, please contact Messrs. Tom Dunaway or Rick Ensele at (213) 688-2846.

Sincerely yours,

(Orig. Sgd.) F. J. Schambeck

F. J. Schambeck
Oil and Gas Supervisor
Pacific Region

Enclosures

cc: Acting Conservation Manager, Pacific Region
District Engineer, Santa Barbara
Chief, Offshore Operations Section
Chief, Environmental Section ← This copy for

United States Department of the Interior

GEOLOGICAL SURVEY

160 FEDERAL BUILDING
1340 W. SIXTH STREET
LOS ANGELES, CALIFORNIA 90017

February 5, 1980

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

California Coastal Commission
631 Howard Street
San Francisco, California 94105

Attention: Ms. Mari Gottdiener

Re: California Coastal Commission Consistency Review of Plan of Exploration, OCS-P 0316, Wells Nos. 1, 2,and 3; Chevron, U.S.A., Inc., Operator

Gentlemen:

With the California Coastal Management Program (CCMP) having become effective on August 31, 1978, any plan submitted to the Secretary of the Interior for the exploration or development of a lease in the OCS and which significantly affects any land or water use of California's coastal zone must have attached to it a certification that each activity complies with the CCMP and will be carried out in a manner consistent with the CCMP.

For the purpose of initiating the consistency review process, we have enclosed with this letter seven "Public Information" copies of the Plan of Exploration and Environmental Report for OCS-P 0316, Wells Nos. 1, 2, and 3, as submitted to the U. S. Geological Survey by Chevron U.S.A., Inc. on February 5, 1980. (The coordinates for Well No. 2 have been revised to X = 680,400' and Y = 866,000' to avoid an area of probable exposed rock.) The required consistency certification appears on page iii of the Environmental Report. The U. S. Office of Coastal Zone Management and the Governor's Office of Planning and Research have also been provided with copies of these documents.

It has been determined that the submission is complete and meets the requirements of 30 CFR 250.34. As such, the 30-day processing time mandated by the

OCS Lands Act Amendments has begun. Please commence your review upon receipt of this letter and the enclosed documents. Due to the 30-day time restraint, only those comments received here before February 22, 1980 can be used in the preparation of our Environmental Assessment.

Should you have any questions regarding the requirements of this letter or the submitted documents, please contact Messrs. Tom Dunaway or Rick Ensele of this office at (213) 688-2846.

Sincerely yours,

(Orig. Sgd. [illegible])

F. J. Schambeck
Oil and Gas Supervisor
Pacific Region

Enclosures

CC: Acting Conservation Manager, Pacific Region
District Engineer, Santa Barbara
Chief, Offshore Operations Section
Chief, Environmental Section ← This copy for

United States Department of the Interior

GEOLOGICAL SURVEY

160 FEDERAL BUILDING
1340 W. SIXTH STREET
LOS ANGELES, CALIFORNIA 90017

February 5, 1980

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Pacific Regional Manager
U. S. Office of Coastal Zone Management
National Oceanic and Atmospheric
Administration
3300 Whitehaven Street, N.W.
Washington, D. C. 20235

Attention: Mr. D. Hoydysh

Re: Plan of Exploration, OCS-P 0316, Wells Nos. 1, 2, & 3, Chevron U.S.A., Inc.

Gentlemen

Chevron U.S.A., Inc., as operator, has submitted to this office a Plan of Exploration (POE) for the proposed drilling of OCS-P 0316 Wells Nos. 1, 2, and 3. It has been determined that the submission is complete and meets the requirements of 30 CFR 250.34. As such, the 30-day processing time mandated by the OCS Lands Act Amendments has begun.

Enclosed with this letter is a "Public Information" copy of the POE and Environmental Report for OCS-P 0316 Wells Nos. 1, 2, and 3, as submitted to the U. S. Geological Survey by Chevron. (Please be advised that the proposed coordinates for Well No. 2 have been revised to X = 680,400' and Y = 866,000' to avoid an area of probable exposed rock.) The California Coastal Commission and the California Governor's Office of Planning and Research have also been provided with copies of these documents.

Since this office is currently preparing an Environmental Assessment of the subject action, we would appreciate your comments or suggestions. Due to the 30-day time constraint, only those responses received here prior to February 22, 1980 can be used. Should you have any questions regarding the requirements of this letter or the submitted documents, please contact Messrs. Tom Dunaway or Rick Ensele of this office at FTS 798-2846.

Sincerely yours,

F. J. Schambeck
Oil and Gas Supervisor
Pacific Region

Enclosures

cc: Acting Conservation Manager, Pacific Region
District Engineer, Santa Barbara
Chief, Offshore Operations Section
Chief, Environmental Section ← This copy for

ONE HUNDRED YEARS OF EARTH SCIENCE IN THE PUBLIC SERVICE

United States Department of the Interior

GEOLOGICAL SURVEY

160 FEDERAL BUILDING
1340 W. SIXTH STREET
LOS ANGELES, CALIFORNIA 90017

February 5, 1980

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Permits Branch
U. S. Environmental Protection Agency, Region 9
215 Fremont
San Francisco, California 94105

Attention: Mr. Ted Durst

Subject: Plan of Exploration; OCS-P 0316, Wells Nos. 1, 2, and 3; Chevron U.S.A., Inc.

Gentlemen:

Chevron U.S.A., Inc. as operator, has submitted to this office a Plan of Exploration (POE) for the proposed drilling of OCS-P 0316, Wells Nos. 1, 2, and 3. It has been determined that the submission is complete and meets the requirements of 30 CFR 250.34. As such, the 30-day processing time mandated by the OCS Lands Act Amendments has begun.

Enclosed with this letter is a "Public Information" copy of the POE and Environmental Report for OCS-P 0316, Wells Nos. 1, 2, and 3 as submitted to the U.S. Geological Survey by Chevron. (Please be advised the coordinates for Well No. 2 have been revised to X = 680,400' and Y = 866,000' to avoid an area of probable exposed rock.) Since this office is currently preparing an Environmental Assessment of the subject action, we would appreciate your comments or suggestions. Due to the 30-day time constraint, only those responses received here prior to February 22, 1980 can be used.

Should you have any questions regarding the requirements of this letter or the submitted documents, please contact Messrs. Tom Dunaway or Rick Ensele of this office at FTS 798-2846.

Sincerely yours,

(Orig. Sgd.) F. J. Schambeck

F. J. Schambeck
Oil and Gas Supervisor
Pacific Region

Enclosures

cc: Acting Conservation Manager, Pacific Region
District Engineer, Santa Barbara
Chief, Offshore Operations Section
Chief, Environmental Section

This copy for

ONE HUNDRED YEARS OF EARTH SCIENCE IN THE PUBLIC SERVICE

February 5, 1980

CERTIFIED MAIL -
RETURN RECEIPT REQUESTED

Commander (MEPPS)
Eleventh Coast Guard District
Union Bank Building
400 Oceangate
Long Beach, California 90822

Re: Plan of Exploration, OCS-P 0316, Well Nos. 1, 2, and 3, Chevron U.S.A., Inc.

Dear Commander:

Chevron U.S.A., Inc., as operator, has submitted to this office a Plan of Exploration and accompanying Environmental Report for proposed drilling at the following locations. (Please be advised that coordinates for Well No. 2 have been revised to avoid an area of probable exposed rock.)

OCS-P 0316 Well No.	Lambert Grid Zone VI Coordinates	Water Depth (feet)
1	X = 674,350' Y = 860,220'	623
2	Original	
	X = 680,210 Y = 866,320'	
	Revised	
	X = 680,400' Y = 866,000'	344
3	X = 669,840' Y = 862,820'	640

We have enclosed a "public information" copy of each document for your review and comment.

Any comments of yours, if received by this office before 2-22-80 will be used in the preparation of our Environmental Assessment. Should you have any questions regarding the requirements of this letter or the enclosed documents, please contact Messrs. Tom Dunaway or Rick Ensele at (213) 688-2846.

Sincerely yours,

(Orig. Sgd. F. J. Schambeck)

F. J. Schambeck
Oil and Gas Supervisor
Pacific Region

Enclosures

cc: Conservation Manager, Pacific Region
District Engineer, Santa Barbara
Chief, Offshore Operations Section
Chief, Environmental Section [redacted] This Copy To
OCS-P 0316 POE
ELEE/fls

DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

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

16475/30
FEB 21 1980

U. S. Dept. of Interior
Geological Survey
160 Federal Bldg.
1340 W. Sixth St.
Los Angeles, CA 90017

NOTED - SCHAMBECK Ref: Plan of Exploration, OCS-P 0316
well Numbers, 1,2 & 3, Chevron,
U.S.A. Inc.

Dear sir:

The referenced Plan of Exploration and accompanying Environmental Report for tract OCS-P 0316 have been reviewed. Subject to our comments herein, the Coast Guard has no objection to the drilling of three exploratory wells on this tract west of Pt. Conception by Chevron, U.S.A., Inc.

The Environmental Report fails to adequately address the impact of the proposed activity on commercial vessels entering and leaving the west end of the Santa Barbara Channel Traffic Separation Scheme (SBCTSS). Although the referenced tract is approximately three miles outside the extension to the SBCTSS, it is felt that the proposed operation could have a significant effect on vessel traffic, especially those on coastwise routes. This subject should be addressed further.

You are reminded of the standard regulations of this agency which will apply to this operation; such as 33 CFR 67 for Aids to Navigation Requirements for Class "A" structures and 33 CFR Parts 140-147 for requirements with respect to safety equipment and other matters relating to the promotion of safety of life and property on fixed and temporary structures on the OCS.

Thank you for the opportunity to comment on these documents.

Sincerely,

D. M. TAUB
Captain, U. S. Coast Guard
Chief, Marine Safety Division
Eleventh Coast Guard District
By the direction of the District Commander

United States Department of the Interior

GEOLOGICAL SURVEY

160 FEDERAL BUILDING
1340 W. SIXTH STREET
LOS ANGELES, CALIFORNIA 90017

February 5, 1980

Memorandum

To: Regional Director, Heritage Conservation and Recreation Service
Pacific Southwest Region, San Francisco, California

From: Oil and Gas Supervisor, Pacific Region

Subject: S. O. 2974 Review, Plan of Exploration, Wells Nos. 1, 2, and 3, OCS-P 0316, Chevron U.S.A., Inc.

Chevron U.S.A., Inc. as operator, has submitted to this office a Plan of Exploration (POE) for proposed drilling at the following locations. (Please be advised that coordinates for Well No. 2 have been revised to avoid an area of probable exposed rock.):

OCS-P 0316 Well No.	Lambert Grid Zone VI Coordinates	Water Depth (feet)
1	X = 674,350' Y = 860,220'	623
	Original	
2	X = 680,210' Y = 866,320'	344
	Revised	
	X = 680,400' Y = 866,000'	
3	X = 668,840' Y = 862,820'	640

Pursuant to S.O. 2974 (Revised), signed August 9, 1978, we are forwarding Chevron U.S.A., Inc.'s POE and Environmental Report (ER) for your review and comment.

ONE HUNDRED YEARS OF EARTH SCIENCE IN THE PUBLIC SERVICE

These copies are non-proprietary and may be retained by your office and made available for public inspection. Due to the 30-day time constraint, only those comments received here prior to February 22, 1980 can be used in the preparation of our Environmental Assessment.

Should you have any questions regarding the requirements of this memorandum or the enclosed documents, please contact Messrs. Tom Dunaway or Rick Ensele at FTS 798-2846.

(Orig. Sgd.) F. J. SCHAMBECK

F. J. Schambeck

Enclosures

cc: **Acting Conservation Manager, Pacific Region**
District Engineer, Santa Barbara
Chief, Offshore Operations Section
Chief, Environmental Section ⟵ This copy for

United States Department of the Interior

GEOLOGICAL SURVEY

160 FEDERAL BUILDING
1340 W. SIXTH STREET
LOS ANGELES, CALIFORNIA 90017

February 5, 1980

Memorandum

To: Regional Director, U. S. Fish and Wildlife Service
Portland, Oregon

From: Oil and Gas Supervisor, Pacific Region

Subject: S. O. 2974 Review, Plan of Exploration, Wells Nos. 1, 2, and 3, OCS-P 0316, Chevron U.S.A., Inc.

Chevron U.S.A., Inc. as operator, has submitted to this office a Plan of Exploration (POE) for proposed drilling at the following locations. (Please be advised that coordinates for Well No. 2 have been revised to avoid an area of probable exposed rock.):

OCS-P 0316 Well No.	Lambert Grid Zone VI Coordinates	Water Depth (feet)
1	X = 674,350' Y = 860,220'	623
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	X = 680,400' Y = 866,000'	
3	X = 668,840' Y = 862,820'	640

Pursuant to S.O. 2974 (Revised), signed August 9, 1978, we are forwarding Chevron U.S.A., Inc.'s POE and Environmental Report (ER) for your review and comment.

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Should you have any questions regarding the requirements of this memorandum or the enclosed documents, please contact Messrs. Tom Dunaway or Rick Ensele at FTS 798-2846.

for Sgd. F. J. SCHAMBECK

F. J. Schambeck

Enclosures

cc: Acting Conservation Manager, Pacific Region
District Engineer, Santa Barbara
Chief, Offshore Operations Section
Chief, Environmental Section ← This copy for

United States Department of the Interior

FISH AND WILDLIFE SERVICE
LLOYD 500 BUILDING, SUITE 1692
500 N.E. MULTNOMAH STREET
PORTLAND, OREGON 97232

February 20, 1980

NOTED - DUNAWAY

NOTED - GORDON BECK

To: Oil and Gas Supervisor, Pacific Region, Geological Survey, Los Angeles, California

From: Acting Regional Director, FWS, Portland, Oregon

Subject: Secretarial Order No. 2974 Review, Plan of Exploration, Wells No. 1, 2, and 3, OCS-P 0316, Chevron U.S.A., Inc.

We have reviewed the Environmental Report for Wells No. 1, 2, and 3 and do not object to the proposed exploratory activity on Lease OCS-P 0316.

We will retain the copies of the Plan of Exploration and the Environmental Report for our files.

James W. Teeter

United States Department of the Interior

GEOLOGICAL SURVEY

160 FEDERAL BUILDING
1340 W. SIXTH STREET
LOS ANGELES, CALIFORNIA 90017

February 5, 1980

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Regional Director
National Marine Fisheries Service
300 South Ferry Street
Terminal Island, California 90731

Attention: Mr. Gerald V. Howard

Re: Plan of Exploration, Wells Nos. 1, 2, and 3, OCS-P 0316, Chevron U.S.A., Inc.

Gentlemen:

Chevron U.S.A., Inc., as operator, has submitted to this office a Plan of Exploration for the proposed drilling of OCS-P 0316 Wells Nos. 1, 2, and 3. It has been determined that the submission is complete and meets the requirements of 30 CFR 250.34. As such, the 30-day processing time mandated by the OCS Lands Act Amendments has begun.

Federal regulations require the United States Geological Survey to consult the appropriate agencies with regulatory responsibilities or special expertise requesting assistance in providing input into an environmental analysis. Since this office is currently preparing an Environmental Assessment of the subject action, we would appreciate your comments, suggestions, or requirements. Due to the 30-day time constraint, only those responses received here prior to February 22, 1980 can be used.

Specifically, the U. S. Geological Survey interim guidelines for environmental analyses of offshore operations state:

> "The Area Oil and Gas Supervisor or District Engineer will contact the Fish and Wildlife Service and the National Marine Fisheries, in writing, requesting information on endangered or threatened species and critical habitat for these species in the area of the proposed action. A copy of the request and the responses from Fish

and Wildlife Service and National Marine Fisheries Service will be attached to the environmental analysis. Data supplied by FWS and NMFS will be used in preparing the environmental analysis."

The enclosed documents are "Public Information" copies of Chevron U.S.A., Inc.'s Plan of Exploration and Environmental Report and may be retained by your office. (Please be advised that coordinates for Well No. 2 have been revised to X = 680,400' and Y = 866,000' to avoid an area of probable exposed rock.) Should you have any questions regarding the requirements of this letter or the submitted documents, please contact Messrs. Tom Dunaway or Rick Ensele of this office at FTS 798-2846.

Sincerely yours,

(Orig. Sgd.) F. J. Schambeck

F. J. Schambeck
Oil and Gas Supervisor
Pacific Region

Enclosures

cc: Acting Conservation Manager, Pacific Region
District Engineer, Santa Barbara
Chief, Offshore Operations Section
Chief, Environmental Section ← This copy for

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

February 11, 1980 F/SWR31:JL

Mr. F. J. Schambeck
Oil and Gas Supervisor, Pacific Area
U. S. Geological Survey
1340 W. Sixth Street, Room 160
Los Angeles, CA 90017

NOTED - DUNAWAY

Dear Mr. Schambeck:

Subject: Plan of Exploration, Wells Nos. 1,2, & 3, OCS-P 0316, Chevron USA

We have reviewed the subject plan and find that those fishery resources for which we have a responsibility will not be significantly affected. However, the plan could impact certain marine mammal species.

Our concerns are for those whale species identified in our September 25, 1979 biological opinion which was issued pursuant to an Endangered Species Act, Section 7 consultation between our respective agencies. That consultation addressed all Geological Survey activities ongoing and proposed for sites that were leased in either lease sale number 48 or prior lease sales in the Southern California Bight.

That consultation contains the information necessary for the completion of your environmental analysis as well as our recommendations for reducing the impacts of mineral development in the Southern California Bight.

Should you require any additional information, please contact Mr. Jim Lecky of my staff at FTS 796-2518.

Sincerely yours,

Gerald V. Howard
Regional Director

United States Department of the Interior

GEOLOGICAL SURVEY

160 FEDERAL BUILDING
1340 W. SIXTH STREET
LOS ANGELES, CALIFORNIA 90017

February 5, 1980

Memorandum

To: Manager, Pacific OCS Office,
Bureau of Land Management

From: Oil and Gas Supervisor, Pacific Region

Subject: S.O. 2974 Review, Plan of Exploration, Wells Nos. 1, 2, and 3, OCS-P 0316, Chevron U.S.A., Inc.

Chevron U.S.A., Inc. as operator has submitted to this office a Plan of Exploration (POE) for proposed drilling at the following locations (please be advised that coordinates for Well No. 2 have been revised to avoid an area of probable exposed rock):

OCS-P 0316 Well No.	Lambert Grid Zone VI Coordinates	(feet) Water Depth
1	X = 674,350' Y = 860,220'	623
	Original	
2	X = 680,210' Y = 866,320'	344
	Revised	
	X = 680,400' Y = 866,000'	
3	X = 669,840' Y = 862,820	640

Pursuant to S.O. 2974 (revised), signed August 9, 1978, we are forwarding Chevron U.S.A., Inc.'s Plan of Exploration, Geological and Geophysical Data, and Environmental Report (ER) for your review and comment. Magnetometer and side scan data are available in the District Geologist's office. Due to the 30-day time constraint, only those comments received here prior to February 22, 1980 can be used in the preparation of our Environmental Assessment.

ONE HUNDRED YEARS OF EARTH SCIENCE IN THE PUBLIC SERVICE

The first two documents noted above are considered to be proprietary and have been marked "CONFIDENTIAL." Safeguarding this material must be in accordance with Departmental regulations.

Please acknowledge receipt of this material on the copy of this memorandum and return the copy to this office. Upon completion of your review, the proprietary documents must be returned to this office, the primary office of control. The ER may be retained by your office and made available for public inspection.

Should you have any questions regarding the requirements of this memorandum or the enclosed documents, please contact Messrs. Tom Dunaway or Rick Ensele of this office at FTS 798-2846.

F. J. Schambeck

Enclosures

Receipt acknowledged _____
(Date)

By _____
(Name) (Title) (Office)

cc: Acting Conservation Manager, Pacific Region
District Engineer, Santa Barbara
Chief, Offshore Operations Section
Chief, Environmental Section ← This copy for

UNITED STATES GOVERNMENT

memorandum

DATE: FEB 26 1980

NOTED - SCHAMBECK

REPLY TO ATTN OF: Manager, Pacific OCS Office

1780-11
OCS-P 0316

SUBJECT: Plan of Exploration OCS-P 0316, Chevron U.S.A., Inc.

TO: Oil and Gas Supervisor, Pacific Region

NOTED - DUNAWAY

We have reviewed Chevron's Plan of Exploration and Environmental Report, and our comments are:

1. We have found no legal conflicts nor encumbrances on the lease. Chevron is properly designated as the operator.

2. The oil spill contingency plan is acceptable.

3. Comments on cultural resources are:

   There are two unidentified sonar targets of concern regarding the proposed Exploratory Plan which are near the proposed drill Site P-0316-2 (see Plate V). We recommend that these unidentified sonar targets be avoided by the drillship anchors.

   We concur with the recommendation in the Archaeologist's Report that archaeological analyses be conducted on any "near surface cores from geotechnical studies done within the area to determine the potential for now submerged human occupation sites, even though none were recognized within the block" (p. 4).

4. Comments on biological resources are:

   Our information, calculations and judgment pertaining to this location suggests that discharge of drilling muds and cuttings, as proposed, will not result in significant environmental degradation. There will be some destruction of marine biota and habitat. However, these effects are likely to be localized and short term.

   We, therefore, make the following recommendations:

   a. We concur with the revised well location No. 2.

   b. The anchor locations should avoid exposed rock areas. The anchor chains also should avoid exposed rock areas if possible.

   c. If more permanent activity should take place near the rocky areas, additional biological information may be required at that time.

5. Comments on the Environmental Report (ER) are:

The "Archaeological and Cultural Resources" part (p. 27) of the "Environmental Setting" section of Chevron's Environmental Report does not describe the archaeological context of the archaeologist's report (Appendix C). The appended report by Chevron's archaeologist provides analysis of the remote sensing data and is therefore not an adequate substitute for a description of the environmental setting. Thus, we consider the ER to be incomplete.

We recommend approval of the Exploration Plan. We also recommend that the drillship anchors avoid the two unidentified sonar targets and the exposed rock areas near the proposed drill Site P-0316-2.

We are returning the following information:

1. Chevron U.S.A. Inc. Operator. 1980. Exploratory Plan Lease OCS-P 0316, Outer Continental Shelf, Santa Barbara Channel Offshore, California. January 4. (confidential)

2. Geological and Geophysical Data. (confidential)

William E. Grant

Enclosures

April 9, 1982

Memorandum

To: Deputy Minerals Manager, Resources Evaluation

From: Deputy Minerals Manager, Field Operations

Subject: Exploration Plan, OCS-P 0316 Nos. 1 - 3

Chevron U.S.A. Inc. has drilled at the first of three locations covered by the subject Exploration Plan. The company is planning to drill the second well at either the No. 3 approved location or at an alternative location, 1700 feet away, discusad in the enclosed April 6, 1982 letter. (The number of wells allowed under the Exploration Plan remains at three.)

We request that a Geologic Hazards Analysis be performed for the newly proposed location by April 16, 1982. If the data originally submitted for the Exploration Plan is inadequate, then please provide this office with a list of any additional data needed.

No. 3 Location	(LGZ VI)	Alternate
x = 669,840'		x = 670,741'
y = 862,820'		y = 864,134'
TD: 10,468' v.s.s.		TD: 11,000' v.s.s.

for H. T. Cypher

Enclosure

cc: DS, V
FILES: OCS-P 0316 POE Gen. Corres.
OCS-P 0316 Well No. 3
Supv. Env. Unit
Supv. Ops. Unit
MM Chron
Chron

RLee/fjj, Disk 6, Doc. 35

ENV.

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

Land Department
Western Region

April 6, 1982

Exploration Plan
OCS P-0316
Tentative Revised
Drilling Location

Mr. H. T. Cypher
Deputy Minerals Manager
Field Operations, Pacific OCS Region
Minerals Management Service
1340 W. Sixth Street
Los Angeles, California 90017-1297

Attention: Mr. A. Clifton

Dear Mr. Cypher:

Your office approved the Exploration Plan for OCS P-0316 March 5, 1980. The Plan included three proposed well locations. We finished drilling the first well on OCS P-0316 April 4, 1981. Our current plans call for drilling a second well on the lease, which may be the No. 3 location as stated in the drilling program in the subject Exploration Plan.

However, in order to maintain some flexibility in our drilling program, we would like your office to review an alternate location which is approximately 1,700 feet away from the No. 3 location. The coordinates for this tentative alternate location are: x = 670,741 and y = 864,134 which is 2,810 feet South and 1,290 feet East of the Northwest corner of P-0316. The proposed total depth is 11,000 feet v.s.s. Our geologists have reviewed the hazard surveys for this location and have found nothing of particular geologic significance. The hazard surveys that you have for this Plan cover the proposed alternate location.

We hope to have a drilling vessel on location within approximately three weeks. If you have any questions concerning your review of the above, please let me know as soon as possible.

Sincerely,

Susan P. Callister

SPC/bh