MINERALS MANAGEMENT SERVICE

RECORD OF DECISION

PREPARED PURSUANT TO TITLE 40 CFR PART 1505.2

Following Joint Preparation of
tne Environmental Impact Statement/Environmental Impact Report entitled
"Point Arguello Field and Gaviota Processing Facility Area Study and
Chevron/Texaco Development Plans" by
U. S. Dept. of the Interior, Minerals Management Service
County of Santa Barbara
California State Lands Commission
California Coastal Commission

U. S. DEPARTMENT OF THE INTERIOR
MINERALS MANAGEMENT SERVICE
PACIFIC OUTER CONTINENTAL SHELF REGION
OFFICE OF FIELD OPERATIONS

RECORD OF DECISION

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I. INTRODUCTION

The Minerals Management Service, as the lead Federal agency, in cooperation with the County of Santa Barbara, California State Lands Commission, and California Coastal Commission, completed a joint EIR/EIS for the Point Arguello area in November 1984. This EIR/EIS, entitled "Point Arguello Field and Gaviota Processing Facility Area Study and Chevron/Texaco Development Plans", considers the proposed OCS oil and gas development of the Point Arguello Field located in the lower Santa Maria Basin offshore Santa Barbara County, California, and the related processing of produced oil and gas at facilities proposed at Gaviota. The EIR/EIS specifically considers operations proposed by Chevron and Texaco in three Development and Production Plans (DPP's) submitted to MMS. Chevron's DPP for Lease OCS-P 0316 includes proposed installation of Platform Hermosa, a system of consolidated offshore and onshore pipelines to carry oil and gas to Gaviota, and proposed installation of a consolidated processing facility at Gaviota. Texaco's DPP for Lease OCS-P 0315 covers proposed installation of Platform Harvest and subsea pipelines to Platform Hermosa. Chevron's DPP for Lease OCS-P 0450 includes proposed installation of Platform Hidalgo and subsea pipelines to Platform Hermosa. Because of the potential for additional development in this area over the next 10 years, the document also evaluates impacts for projected Southern Santa Maria Basin development assuming installation of five additional platforms with associated pipelines.

Being a joint document, the EIR/EIS was prepared to meet requirements of both the California Environmental Quality Act (CEQA) of 1970, amended in 1984, and the National Environmental Policy Act (NEPA) of 1969 and its implementing Council on Environmental Quality (CEQ) regulations of 1979. The Record of Decision document presented here is prepared in accordance with Section 1505.2 of the CEQ regulations which mandates that agencies rendering decisions on projects where an EIS was completed prepare a concise public record of decision.

CEQ also states that this record shall:

"(a) State what the decision was,

(b) Identify all alternatives considered by the agency in reaching its decision, specifying the alternative or alternatives which were considered to be environmentally preferable. An agency may discuss preferences among alternatives based on relevant factors including economic and technical considerations and agency statutory missions. An agency shall identify and discuss all such factors including any essential considerations of national policy which were balanced by the agency in making its decision and state how those considerations entered into its decision.

(c) State whether all practicable means to avoid or minimize environmental harm from the alternative selected have been adopted, and if not, why they were not. A monitoring and enforcement program shall be adopted and summarized where applicable for any mitigation."

This Record of Decision specifically covers Chevron's DPP's for Leases OCS-P 0316 and OCS-P 0450 and Texaco's DPP for Lease OCS-P 0315. It also covers all impacts identified in the Final EIR/EIS where MMS has authority (as identified in the EIR/EIS), and the Biological Opinions rendered by the U.S. Fish and Wildlife Service and National Marine Fisheries Service for the Point Arguello Area Study.

II. PROJECT DESCRIPTION

Chevron U.S.A. Inc. and Texaco U.S.A. are proposing to install three offshore oil and gas drilling/production platforms to develop the Point Arguello Field which lies offshore Santa Barbara County in Federal waters, 10 to 15 miles west of Point Conception.

Chevron is proposing to install Platforms Hermosa and Hidalgo on Leases OCS-P 0316 and OCS-P 0450, respectively, with Texaco proposing to install Platform Harvest on Lease OCS-P 0315. Hermosa is proposed as the central platform in the Point Arguello Field; production from Hidalgo and Harvest would be transported by subsea lines to Hermosa where it would be placed in consolidated industry pipelines to shore.

These industry lines come onshore about 1.5 miles north of Point Conception and then approximately follow the coastline to Chevron's proposed processing facility at Gaviota which lies north of Highway 101 approximately 28 miles west of Santa Barbara and 15 miles east of Point Conception. Figure 2-1 provides an overall system diagram showing the interrelationships of the components proposed by Chevron and Texaco.

It is estimated that production from the three platforms will peak at 80,000 barrels per day (B/D) of dry oil in 1988 and 56 million standard cubic feet per day (MMSCF/D) of gas in 1995. Due to the anticipated future development of the Point Arguello Field and surrounding area, Chevron is designing the industry pipelines and facilities for a peak capacity of 250,000 B/D of wet oil (200,000 B/D of dry oil and 50,000 B/D of produced water) and 120 MMSCF/D of gas.

Project Components

The Chevron Hermosa application includes the following components:

- One 48-slot drilling and production platform (Hermosa);
- Two subsea industry pipelines, one wet oil and one gas, between Platform Hermosa and the landfall near Point Conception;
- Continuing industry pipelines from the landfall to new oil- and gas-processing facilities at Gaviota;
- New oil- and gas-processing facilities at Gaviota;
- One onshore dry oil pipeline from the processing facility to either the Getty marine terminal at Gaviota or the proposed Exxon marine terminal at Las Flores;
- One ocean outfall waste water pipeline near Gaviota.

The Chevron Hidalgo application includes the following:

- One 56-slot drilling and production platform (Hidalgo);
- Two subsea pipelines, one wet oil and one gas, between Platforms Hidalgo and Hermosa.

The Texaco application includes the following components:

- One 50-slot drilling and production platform (Harvest);
- Two subsea pipelines, one wet oil and one gas, between Platforms Harvest and Hermosa.

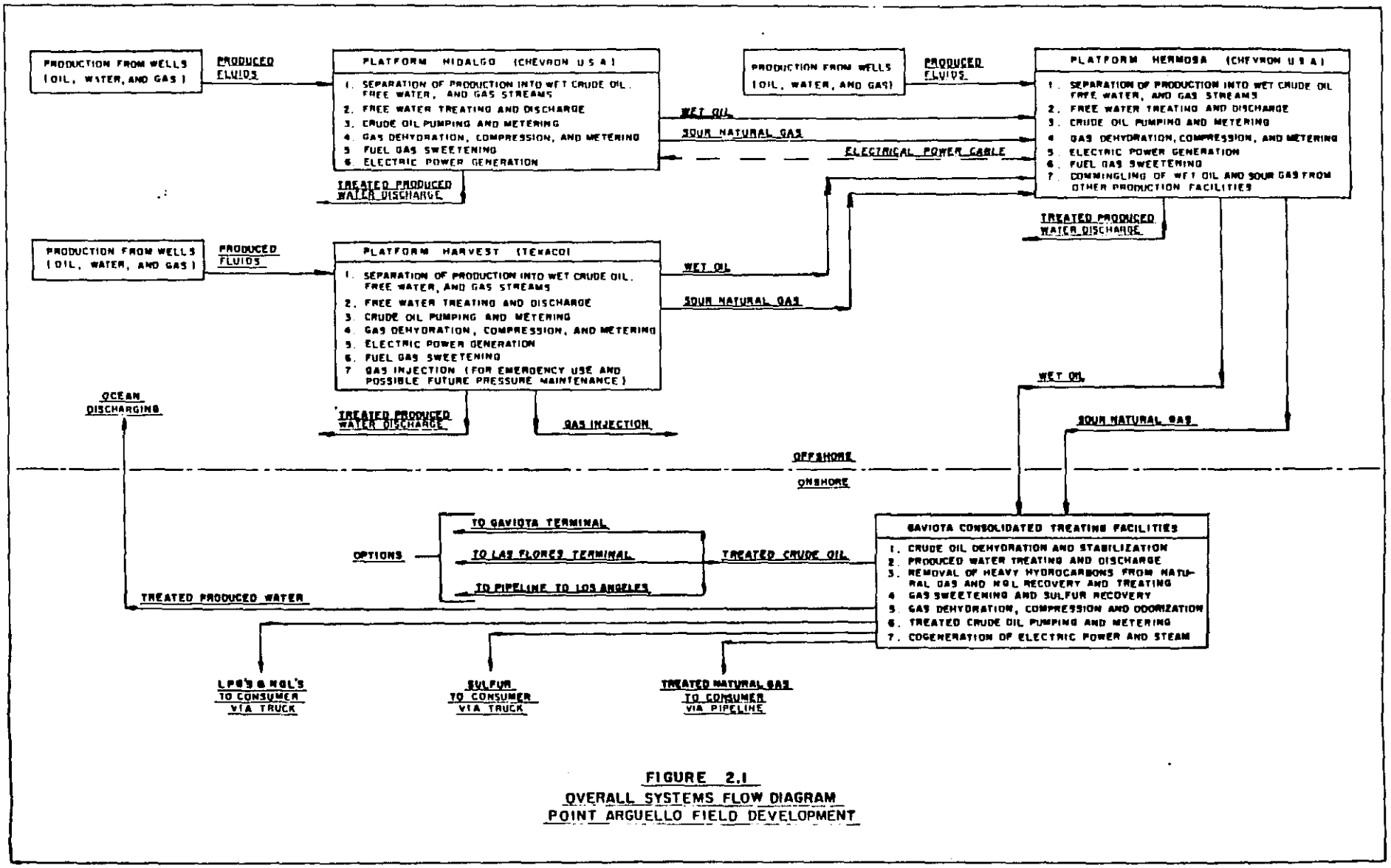

FIGURE 2.1
OVERALL SYSTEMS FLOW DIAGRAM
POINT ARGUELLO FIELD DEVELOPMENT

Platforms

All three of the proposed platforms will be conventional eight-leg, steel jacket, bottom-founded platforms anchored to the ocean bottom by pilings. The locations of the three platforms and their related pipelines are shown in Figure 2-2. Table 2-1 provides some general specifications for the three proposed platforms.

TABLE 2-1

GENERAL PLATFORM SPECIFICATIONS

Specification	Platforms		
	Hermosa	Hidalgo	Harvest
Water Depth (feet)	602	430	670
Well Slots	48	56	50
Wells to be drilled	40	48	42
Peak Production			
- Gas (MMSCF/D)/Year	28/1995	10/1996	42/1988
- Dry Oil (B/D)/Year	27,000/1989	20,000/1992	46,000/1988
OCS Lease	P 0316	P 0450	P 0315

The platform design, fabrication, installation, and operation will be in accordance with the requirements of the Pacific OCS Region, Minerals Management Service (MMS) as well as the requirements of the applicable EPA NPDES regulations and the appropriate API and other industry standards. This will include an independent third-party verification pursuant to MMS OCS Order No. 8. The platforms are designed to withstand the maximum credible wind, wave, and seismic conditions expected off Point Conception. Fabrication of the platforms (jackets, decks, and components) will occur outside the Santa Barbara Channel area and be towed to the installation sites on barges. The platform jacket will then be installed and anchored to the ocean bottom. The production and drilling decks and components will then be installed on the jackets. Once all the equipment modules have been installed, each platform will undergo hookup and commissioning prior to starting drilling activities.

Aids to navigation will consist of quick flashing, Coast Guard-approved, 5-mile white lights, and a Coast Guard-approved 2-mile fog horn. All aids to navigation will meet Coast Guard Regulations for Class A Structures. The crane booms and drilling rig derricks will be illuminated for aviation safety with a combination of steady and flashing red lights.

Corrosion of the platform and associated equipment will be controlled by using corrosion-resistant coatings on the top side structures and equipment. Underwater sacrificial anode systems will be used to prevent corrosion on submerged equipment. Internal coatings to prevent corrosion will be used on selected piping, vessels, and tanks. Corrosion inhibitors may also be employed during the lifetime of the platforms.

The crew-based support activities for the platforms will involve transporting personnel via helicopter from the Santa Barbara Airport to and from the platforms. This will require about four helicopter round-trips per day for all

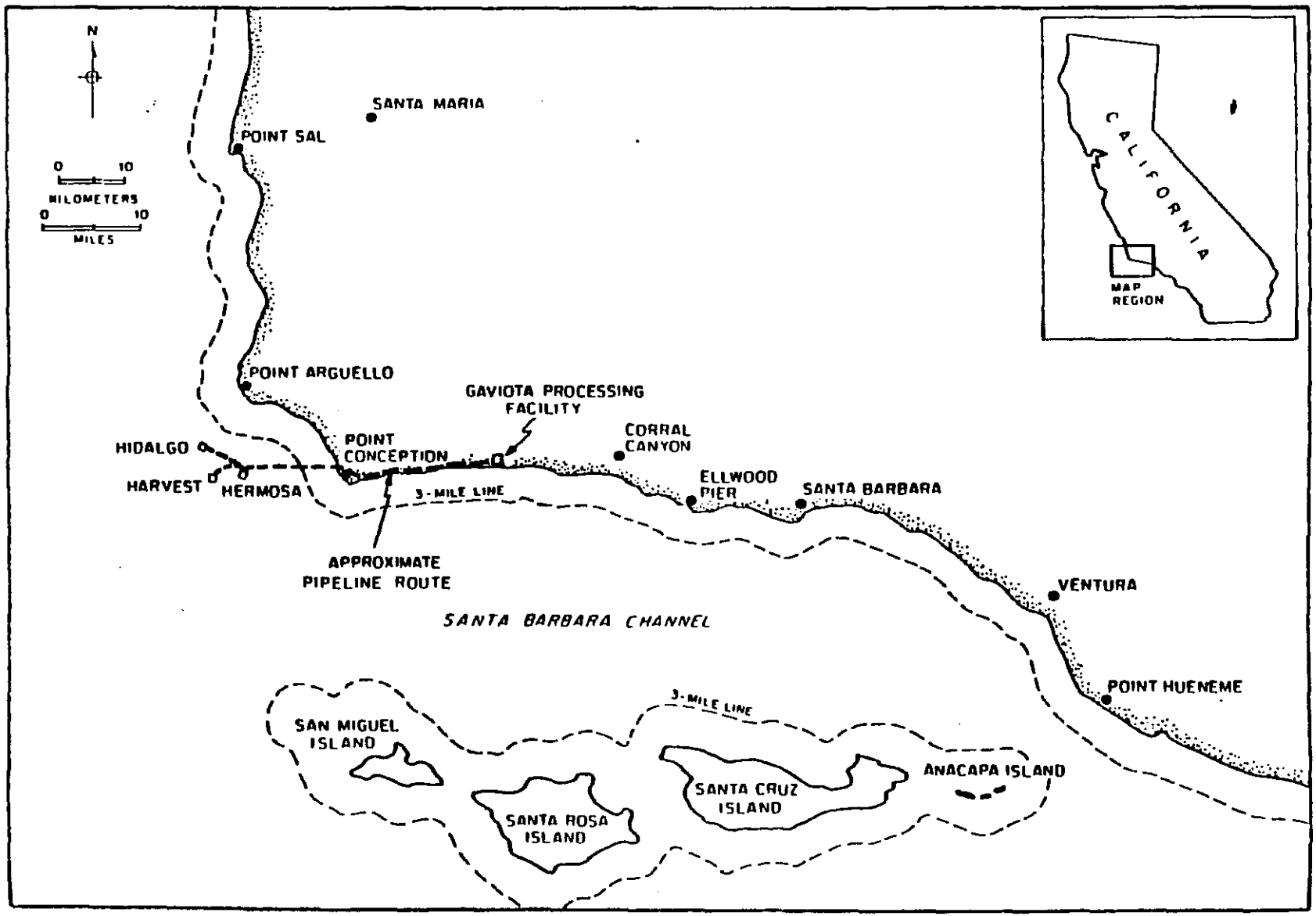

FIGURE 2-2 PROPOSED POINT ARGUELLO FIELD DEVELOPMENT

three platforms. Supply-based activities for the platforms will be by boat out of Port Hueneme.

Drilling

Drilling activities will be in accordance with MMS OCS Order No. 2 and field drilling rules, EPA NPDES permit conditions, and accepted industry standards. Drilling activities include the operations from the start (or spudding) of the well, to actual production from the well. The operations include actual drilling, setting and cementing of casing, and installation of production tubing in the well. Drilling will continue for 5 or 6 years until all the wells have been drilled, at which time the drill rigs may be removed. Major safety-related components of the drilling operations are: the mud system used to control well pressure, lubricate the drill pipe and bit, and convey drill cuttings to the surface; the blowout preventor (BOP) system to seal the well in the event of an emergency and prevent oil from escaping into the environment; and the Critical Operations and Curtailment Plan.

In compliance with OCS Order No. 2, a Critical Operations and Curtailment Plan (COCP) for each platform has been submitted as part of the "Oil Spill and Emergency Contingency Plan." The COCP describes the critical operations that are likely to be conducted and under what circumstances or conditions the critical operations would be curtailed.

Production

Once the first production well has been drilled and completed, production activities on the platform will start. These will be conducted in accordance with MMS OCS Orders, other Federal regulations, and industry standards. MMS will continuously monitor production activities and ensure compliance with requirements throughout the life of the project. Production activities include the producing of reservoir fluids, primary separation of these fluids, treatment of waters, and transfer of fluids into pipelines.

Each platform will contain production facilities for initial separation of the produced oil, gas, and free water. From the platform, an emulsion of oil and water will be piped to onshore facilities where the crude oil will be stabilized and the water removed. The gas will contain hydrogen sulfide (H_2S), carbon dioxide (CO_2), and hydrocarbon liquids; it will be dehydrated on the platform and then sent onshore, where it will be treated to remove the H_2S and CO_2, and hydrocarbon liquids. A small portion of the gas will be sweetened on the platform and utilized there as fuel for the power generation equipment and compressors, and as a blanket gas on production vessels.

The production facilities for each platform will include the well bay manifolds; the production, test, and cleanup separators; the oil-handling system; the produced water-handling system; and the gas-handling system. Figure 2-3 shows a simplified block flow diagram of a typical platform production facility.

The utilities on the platforms will include systems for electrical power, fuel gas, water desalination, waste water treating, air compression, seawater cooling, chemical injection, and vents and flares. The electrical power requirements on the three proposed platforms will be provided by gas-fired turbine generators that are equipped with a waste heat recovery system which supplies the heating

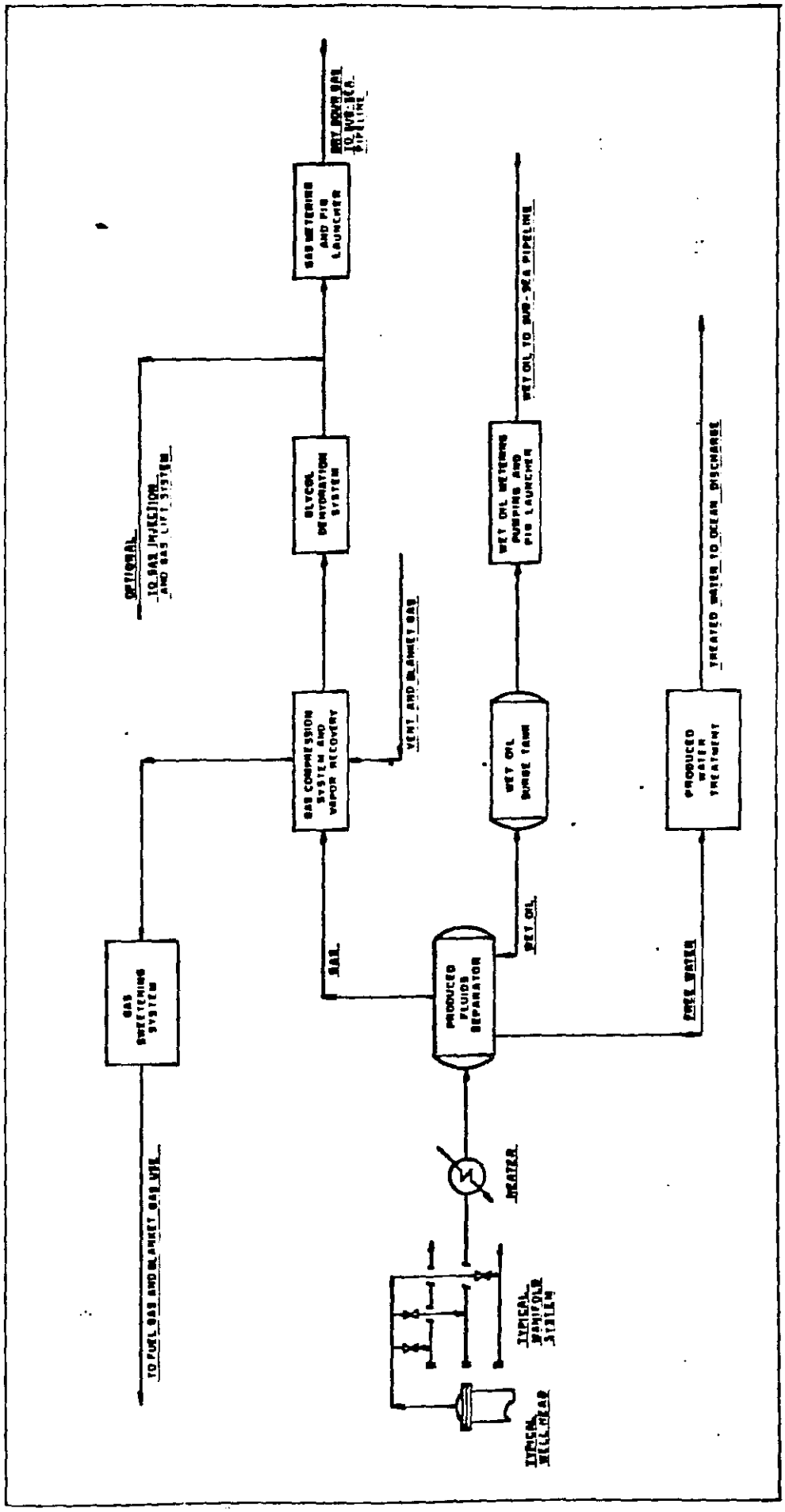

FIGURE 2-3
GENERALIZED PLATFORM
PROCESS FLOW

requirements of the platform. Platforms Hidalgo and Hermosa will be interconnected by an electrical subsea cable, so they can share the electrical power load. Standby power on all platforms will be provided by diesel-powered generators. Diesel fuel will be used for power generation during initial platform startup, until fuel gas becomes available from production wells, or in cases of emergency.

Major safety-related components of the production system include the control and monitoring systems; subsurface safety valves on the wells; the gas blanketing and vapor recovery system; the emergency flare; and the deck drainage/sump system.

All pressure vessels, surge tanks, and other process equipment, operating at or near atmospheric pressure, will be connected to a gas blanketing and vapor recovery header system which maintains a slight positive pressure on the system. As gas is released from process fluids or forced out of vessels and tanks as they are filled, it is compressed by vapor recovery compressors and flows into the sales gas system. As fluids are withdrawn from vessels and tanks, blanket gas is made up from sweet gas from the platform fuel gas system. This type of gas blanketing and vapor recovery reduces explosion hazards by eliminating oxygen intake, and eliminates VOC (volatile organic compounds) emissions normally associated with atmospheric tanks and vessels, enabling the recovery of fuel that would otherwise be lost.

All vapor safety relief valves vent into a closed flare header system which gathers the emergency releases and routes them through a scrubber to a flare burner.

All decks will be solid steel plate and have a minimum 6-inch high curb around the perimeter to prevent any run-off overflow into the ocean. Spray shields will be included where necessary to prevent liquid hydrocarbon spray from reaching the ocean.

For Platforms Hermosa and Hidalgo, all drainage from the decks will go to a water tank where entrained solids will drop out and free oil will float to the surface. Water from this tank, together with any oil, will then flow into a corrugated plate separator where oil will be separated out and returned to a hydrocarbon sump tank. This oil will then be pumped into the emulsion system or into a holding tank. Clean water from the corrugated plate interceptor will be discharged to the ocean through a disposal caisson. All drains that may contain oil will be piped directly to the hydrocarbon sump tank.

For Platform Harvest, the drainage from the upper decks, drip pans in the rig substructure, and rig floor will gravitate to a waste tank located on the lower deck. Drainage from the lower deck areas will drain into a sump tank below the lower deck from which the liquids will be pumped into the waste tank. Oily waste water from the waste tank will be sent to the production train for treating.

Washed cuttings and oil-free sediments from the waste tank will gravitate to the skim pile for ocean disposal in accordance with NPDES permit conditions.

Platform Safety Features

Safety sytems can be broadly classified as those devices and practices that safeguard life and limb, the environment, and equipment. They relate specifically to good design practices, personnel training, and operational and emergency modes. The safety features that are proposed for the three platforms include:

- fire detection and suppression systems;
- navigational aids;
- corrosion control program;
- critical operations and curtailment plans;
- H_2S contingency plans;
- emergency power and lighting;
- communications facilities;
- escape and life-saving equipment; and
- the oil spill contingency plan.

A reliable fire water system will be supplied on each platform. Each will use a combination of electrically and diesel-driven fire water pumps. The fire water includes hose reel stations, monitor nozzles, and deluge systems appropriately located about the platform. Additional fire-fighting systems will be incorporated, such as fixed fire protection systems for gas turbine generators and portable fire extinguishers strategically located on the platform.

The fire detection system will make extensive use of smoke detectors and flame detectors to provide early warning in the event of any fire. Pushbutton fire stations will be located about the platform for use by platform personnel.

The Oil Spill and Emergency Contingency Plan for each of the platforms contains a detailed emergency plan to be followed when encountering formations that may contain hydrogen sulfide (H_2S) while drilling. These plans comply with the rules and regulations of the MMS under Pacific Region OCS Order No. 2. The platforms will be equipped with self-contained breathing apparatus for all working crews and supervisors. Spare air bottles with refill capability will also be available.

Hydrogen sulfide sensors and alarms will be located at the intake for the air ventilation system, and in other process areas where localized concentrations of H_2S are likely to occur. In these areas, H_2S sensors will have both visible and audible alarms set to activate when a level of 10 ppm is reached.

Emergency AC power for lighting, communications equipment, hazard detection systems, quarters, controls, and minor utility systems will be provided by a battery-backup uninterruptable power supply.

Battery-powered emergency lighting units will be installed in several areas of the platform to illuminate critical escape or facility backstart work areas.

Battery chargers and battery systems will be provided for aids to navigation, communications, general alarm systems, generator startings, electrical switchgear control, and control and monitoring systems.

Intra-platform communication will utilize hardwired speakers and handsets. Additionally, there will be hand-held portable radios for operational communication. For external communication with crew boats, supply boats, helicopters, shore bases, etc., there will be a wide-area radio system for each platform, as well as a microwave system to provide telephone service and circuits for the pipeline leak detection system and onshore emergency shutdown system.

Each platform will be equipped with U.S. Coast Guard-approved escape capsules or life boats, plus an adequate number of life preservers, life floats, ring life buoys, first-aid kits, litters, and other lifesaving appliances as required by 33 CFR 144.

Oil Spill Contingency Plan

An Oil Spill Contingency Plan for each platform has been developed to specify the measures that will be taken in the event of an oil spill and the personnel and equipment available to implement spill containment and cleanup procedures. The basic procedure for a spill is to immediately ensure personnel safety, stop the pollutant flow, begin the containment and cleanup procedures, and contact designated company personnel and government agencies. Overall, the equipment and procedures developed represents current state-of-the-art for oil spill containment and control.

The initial response activity would be conducted by the platform personnel. For a spill beyond the capability of the platform personnel and equipment, the primary sources of assistance would be the industry-sponsored spill containment boat and Clean Seas, Inc.

Pipelines

All oil and gas produced from the three project platforms will be gathered and commingled at Platform Hermosa via interplatform pipelines and shipped ashore through industry subsea pipelines from Hermosa to Point Conception and then overland to the onshore processing facility at Gaviota. The pipeline systems will be designed and fabricated in accordance with all applicable Federal, API, and ANSI standards and specifications. Table 2-2 provides the design data for the pipelines.

The offshore pipelines will be concrete-coated if needed to provide density control. All pipelines will be protected from external corrosion by a protective coating supplemented with cathodic protection, which will be of the sacrifical anode type.

The offshore pipelines will be installed using the lay barge method. In this method, individual lengths of precoated pipe are taken aboard a lay barge and inspected for defects before being used in the pipeline. The pipe joints are then welded and the field joints coated to form a continuous string. Each weld will be 100 percent radiographically inspected.

TABLE 2-2

OFFSHORE PIPELINE DESIGN DATA

Pipeline	Diameter (in.)	Length (miles)	Design Throughput
Hidalgo to Hermosa			
- Wet Oil Line	16	5.4	100,000 B/D
- Gas Line	10	5.4	40 MMSCF/D
Harvest to Hermosa			
- Wet Oil Line	12	3.2	90,000 B/D
- Gas Line	8	3.2	50 MMSCF/D
Hermosa to Point Conception and on to Gaviota			
- Wet Oil Line	24	10.0 offshore 16.0 onshore	250,000 B/D
- Gas Line	20	10.0 offshore 16.0 onshore	160 MMSCF/D

These pipelines will be connected to the platforms through the use of J tubes or risers, which will be pre-installed on the platform jackets.

The industry pipelines from Platform Hermosa to Gaviota will be trenched and buried to a minimum of 3 feet through the surf zone at Point Conception out to a water depth of 100 feet for the gas pipeline, and out to a water depth of 80 feet for the oil pipeline. The remainder of the offshore pipelines will be laid along the ocean bottom.

After the offshore pipe-laying operations have been completed, a survey will be conducted to verify that the pipeline was not damaged, that it was positioned properly on the ocean floor, and that the ocean floor was not adversely altered by the operations.

All the subsea pipelines will have an automatic block valve on each platform in accordance with MMS OCS Order No. 9. Each line from Platform Hermosa to Gaviota will have a remotely operated block valve at the Point Conception landfall and the onshore sections will have additional electrically-operated block valve located approximately 4 miles from the facility and at the facility. These lines will also be equipped with relief valves located at the Gaviota processing facility to prevent overpressuring due to thermal expansion of static liquid or excessive pump pressure.

Once the pipelines are installed, they will be hydrostatically tested with inhibited water to 1.25 times the maximum design pressure. The test water will remain in the pipelines until production begins, pursuant to NPDES permit requirements.

Once production on the platforms has begun, the oil and gas will be metered volumetrically before being pumped into their respective pipelines. The oil will be moved through the pipelines by electrically-driven positive-displacement or centrifugal pumps; the gas will be moved by electrically- or gas turbine-driven reciprocating or centrifugal compressors.

During the life of the pipelines, corrosion inhibitors, pipeline pigs (cylindrical devices that move through the pipelines), and instrumented pigs will be used to ensure that the pipelines remain free of potentially harmful deposits, corrosion products, and defects. During normal operations, the gas pipeline will require pigging once or twice a day, with the oil pipeline being pigged weekly.

An oil pipeline monitoring system has been designed to measure the volumetric flows at each platform into the pipeline system and compare the sum of these with the total flow leaving the pipeline at Gaviota. A supervisory control and data acquisition (SCADA) system will monitor all pipelines. If differences in input and output oil volumes are detected, alarms will sound at the Gaviota facility. Also, high- and low-pressure sensors throughout the line will shut down the oil pipeline if pressures reach preset limits.

Because of the two-phase (i.e., gas plus condensate) flow occurring in the gas pipeline, volumetric measurement for leak detection can not be used. Instead, the gas lines will use low- and high-pressure sensors that will shut the line down if pressures reach preset limits.

Oil- and Gas-Processing Facility

The proposed site of the oil- and gas-processing facility is located near the shoreline of the Pacific Ocean approximately 28 miles west of Santa Barbara, California. The site comprises approximately 64 acres of coastal terrace at the southern edge of the Santa Ynez Mountains and is actually comprised of two adjoining parcels. The principal site area is owned by Getty and leased to Chevron to accommodate their existing gas facilities. The adjoining parcel, known as the Gervais Fee property, is owned by Chevron and is approximately 84 acres in size, although Chevron is proposing to develop only 5 acres of the property.

The crude oil produced from the Point Arguello Field is expected to have a gravity of approximately 20 degrees API and a relatively high viscosity. The oil, along with the produced gas, will be sent to the Gaviota processing facilities, which will be designed to heat and dehydrate approximately 250,000 B/D of wet oil, and to sweeten and treat 120 MMSCF/D of sour gas.

The processing facility will be installed in two phases to accommodate production buildup. The inital phase will include three 50,000-B/D trains for oil processing, and two 30-MMSCF/D gas trains. As production increases, two additional 50,000-B/D oil treatment trains will be added along with one 60-MMSCF/D gas train. During peak production, it is anticipated that up to 50,000 B/D of produced water will be cleaned and disposed of through an ocean outfall line.

The final products from the Gaviota processing facility will include crude oil suitable for feed to refineries; gas that will go to the natural gas distribution system; and four by-products which will be shipped by tank truck--propane, butane, NGL (natural gas liquids), and sulfur.

Project Alternatives

Thorough consideration was given to various project alternatives during the Minerals Management Service's review of the proposed Point Arguello Field DPP's. The EIR/EIS evaluated project alternatives as required by NEPA (Section 1502.14) and CEQA (Section 15126(d)). The MMS participated in this evaluation and was a member of the Joint Review Panel. Environmental and operational advantages and disadvantages were evaluated for each proposed alternative. The results were weighed in order to determine the adequacy of the project's proposed components and the benefits that an alternative would provide.

The MMS concurs with the local and State agencies with regard to the decisions rendered on alternatives in their respective areas of jurisdiction. Following are the major project alternatives that were evaluated during the review of this project:

1. No-Project Alternative

2. Pipeline Alternative: Offshore route for pipelines from Platform Hermosa to Gaviota.

   The County of Santa Barbara concluded that the onshore route from the Point Conception area to Gaviota as proposed by Chevron is preferable

to the alternative offshore route. The MMS has been ensured by Chevron and the County that the potential impacts resulting from the emplacement and operation of the onshore portion of the pipeline can be mitigated to a level of insignificance.

3. Locations for Onshore Processing Facilities.

Chevron owns 1,500 acres of simple fee property near Point Conception which was evaluated as a project alternative in the EIR/EIS. The MMS concurs with the findings in the EIR/EIS that the originally proposed Gaviota site is the preferable option.

4. Transportation of LPG and NGL's.

The use of pipeline and rail were evaluated as possible alternatives to truck delivery. EIR/EIS findings indicated that the use of the above alternative systems would still require direct delivery to consumer by truck.

5. Alternative Locations for Offshore Support.

Chevron and Texaco proposed to support their offshore activities from a supply base at Port Hueneme and to operate a helicopter service from Santa Barbara Airport for the platform crews. When weather precludes helicopter transport, crew boats would be operated from Carpinteria (Chevron) and Ellwood (Texaco). The alternatives considered are as follows:

- Both crew and supply base at Elwood;
- Both crew and supply base at Gaviota; and
- Crew base at Carpinteria and supply base at Port Hueneme.

It has been concluded that the alternative sites at this time do not offer a viable option to those originally proposed.

III. IMPLEMENTATION OF MITIGATION; A. Impact Table - Taken from the FEIR/EIS Impact Summary Tables

Source	Description of Impact	Scope	Mitigation Measures	Action
		GEOLOGY		
No potential significant impacts identified; no mitigation required beyond MMS's regulations				
		AIR QUALITY		
Platforms Hermosa, Harvest & Hidalgo	*1. NO_x and HC emissions from offshore platforms and support activities may contribute to violations of the ozone standard and hinder the reasonable further progress of attaining the standard.	Southern Santa Barbara and Ventura Counties	Reduce NO_x emissions at platforms by replacing electroc generators with power from the grid through land lines. Secure NO_x/HC emission offsets.	No Action
Platform Harvest	Potential violation of ozone standard (1-hr) during flaring at Platform Harvest because of compressor failure. Flaring under this upset could also cause DOI significance levels of SO_2 for 3-hr and 2-4-hr averages to be exceeded.	Southern Santa Barbara and Ventura Counties	Maintain a spare standby compressor on Platform Harvest.	No Action
		MARINE WATER RESOURCES		
Platforms Hermosa, Harvest & Hidalgo	2. Potentially toxic concentrations of biocides possible in discharge of drilling fluids from platforms.	Local, short- to long-term	Avoidance of specific drill fluids containing such chemicals, alternate offshore or onshore discharge of fluids and muds containing such chemicals.	Adopt
Platforms Hermosa, Harvest & Hidalgo	3. Accumulation of pollutant chemicals in sediments (over long-term) to potentially harmful levels possible due to discharges of formation water, drilling fluids and other waste waters (from both platforms and outfall).	Regional, long-term	Monitor discharges, sediment quality, and toxicity in marine biota. Take action to reduce discharges if impacts found unacceptable.	Adopt

*Number indicates order considered in the record of decision.

Impact Table - taken from the FEIR/EIS Impact Summary Tables (Cont.)

Source	Description of Impact	Scope	Mitigation Measures	Action
		MARINE BIOLOGY		
All project platforms & associated Pipelines	Loss of hard-bottom benthos due to construction-vessel anchoring.	Local individually to regional combined, short to long term	Pre-construction, demarcation, restricting vessel activities, consolidated moorings, establishment of additional hard-bottom features.	Adopt
All project platforms	Damage to local hard-bottom biota due to discharge deposition near platforms	Local, short to long term	Pre-operations survey, continue during operations: as necessary further restrict discharge mode, mud components, disposal sites; establish new hard bottom features.	Adopt
All project platforms	Loss of habitat upon removal of platforms	Local, short to long	Create or maintain similar habitats.	No action at this
Area study platforms	Cumulative damages to Arguello Slope hard-bottom biota due to operation of offshore platforms.	Regional, short to long term	Monitor effects of first-generation projects, as necessary condition second-generation and/or impose cap on of concurrent development projects.	Adopt
Cumulative - oil and gas development in State & Federal waters; seismic activity; vessel traffic	Possible disruption of gray whale migration by cumulative offshore seismic testing and construction noise.	Regional, short-term to long-term	Restriction of construction to non-migration periods; restriction of over-lapping construction schedules, restriction of seismic survey activities.	No Action

Impact Table - taken from the FEIR/EIS Impact Summary Tables (Cont.)

Source	Description of Impact	Scope	Mitigation Measures	Action
		CULTURAL RESOURCES		
Industry lines (3) Platform Harvest/ pipeline (3) pipeline Hidalgo to Hermosa (1)	During installation of offshore platforms known cultural resources may be impacted.	Site specific	Require anchoring plans and accurate positioning of anchors, or install protective ring of buoys around each potential cultural resource.	Adopt
		VISUAL RESOURCES		
All proposed platforms	Direct impact on ocean views due to appearance of three platforms.	Long-term locally significant Jalama Beach County Park. Long-term regionally significant impacts on views from Southern Pacific Rail Line.	Paint platforms grey/white.	No Action
		COMMERCIAL FISHING		
All proposed platforms & pipelines	Pre-emption of harvest in 10-15% of productive rockfish tow area by construction of offshore platforms and connecting pipelines.	Regional, short-term	Minimize extent of simultaneous offshore construction. Establish notification procedures with Liaison Office.	Adopt
Industry lines	Combined pre-emption of halibut tow area off Point Conception and set gear area off Gaviota closely sequenced construction of hydrocarbon and wastewater pipelines.	Regional, short-term	Construct nearshore portions of pipelines at opposite ends of construction period	Adopt
Cumulative: Pt. Arguello proposed construction and Santa Ynez proposed construction.	Pre-emption of drag fishing areas by concurrent construction of Santa Ynez Unit and Point Arguello Field projects.	Regional, short-term	Schedule projects to avoid overlapping construction.	Adopt

Impact Table - taken from the FEIR/EIS Impact Summary Tables (Cont.)

SYSTEMS SAFETY AND RELIABILITY

Causal Event	Resulting from	Location	Frequency	Criticality	Mitigation	Action
Produced Water System	Mechanical Defects,	Platform	Likely	Negligible/ Minor	Additional Instrumentation	No Action
Pig Receiver Spill	Mechanical Defects, Operational Error	Onshore, Platform	Likely/Rare Likely/Unlikely	Minor Minor	Improve Instrumentation Control	Adopt
Pig Launcher Spill	Mechanical Defects, Operational Error	Platform, Onshore	Likely/Rare Likely/Rare	Minor Minor	Improve Instrumentation Control	Adopt
Subsea Pipeline Break or Large Leak	Structural Failure	Offshore	Unlikely	Major	Install Subsea Valves	No Actio
Subsea Pipeline	Structural Failure	Offshore	Likely	Minor	Install Subsea Valves	No Actio

Impact Table - taken from the FEIR/EIS Impact Summary Tables (Cont.)

ACCIDENTS

Source	Description of Impact	Scope	Mitigation Measures	Action
		MARINE WATER RESOURCES		
Unlikely Major Offshore Oil Spill Accident from each project component & cumulative	Surface oil slicks, tar balls, contamination of sediments and other adverse water quality changes (lowering of dissolved oxygen, solubilization of potentially toxic chemicals, decrease in light transmittance) due to unlikely major oil spills.	Local to regional - short to long-term	Modify contingency plans as necessary to provide removal equipment to nearshore waters off Point Conception to Point Arguello in less than 3 hours.	Adopt

Impact Table - taken from the FEIR/EIS Impact Summary Tables (Cont.)

Source	Description of Impact	Scope	Mitigation Measures	Action
	Surface oil slicks, tar balls and contamination of sediments likely from small to moderately sized oil spills.	Local long-term	Rapid and efficient spill cleanup.	ADOPT
		MARINE BIOLOGY		
	Mortality and disturbance of seabirds and/or marine mammals due to unlikely major oil spill and cleanup activities.	Regional, short to long term	Achieve adequate response time at key locations, selective use of dispersants for oil, animal recovery assistance.	ADOPT
	Damage to subtidal ecology due to unlikely major oil spill.	Local or regional, short	Request that RRT consider pro-xedures which avoid use of chem-ical agents if only these resources are threatened.	NO ACTI
	Damage to estuarine lagoons and/or wetlands due to unlikely offshore spill reaching shore in very bad weather. Impacts the same as above.	Local or regional (loca-tion specific), long-term	Install barriers at upstream culverts; implement restoration program following cleanup.	DEFER T COUNTY
	Cumulative affect on marine biology from all sources.		Minimize response time at key locations, selective use of dis-persants and sinking agents, animal recovery assistance, limitation of concurrent produc-tion activities.	ADOPT
		COMMERCIAL FISHING		
	Pre-emption of harvest in rockfish/halibut tow, halibut/ shellfish set gear areas, or abaline diving areas by unlikely major oil spill.	Local to regional, short to long term	Minimize spill response time at key locations, avoid use of sink-ing agents, compensate affected parties for lost revenue.	ADOPT

Impact Table - taken from the FEIR/EIS Impact Summary Tables (Cont.)

Source	Description of Impact	Scope	Mitigation Measures	Action
		RECREATION		
Support vessel operations	Damage to marine mammals due to unlikely encounters with support vessel activities.	Regional, short to long term	State-of-the-art operator training, reporting requirements, adhere to vessel traffic corridor program (voluntary compliance).	ADOPT
Interference from vessel operations	Damage to fishing gear and/or vessels due to collision with and/or hangup on project structures or support vessels.	Regional, short- to long-term	Apply a training program for vessel operators, require removal of construction debris and use of smooth pipelines; ensure timely full compensation for losses.	ADOPT

III. IMPLEMENTATION OF MITIGATION - Continued

B. CHEVRON OCS-P 0316 DPP (Platform Hermosa and Industry Pipeline)

PROJECT-RELATED IMPACTS AND MITIGATION

Geology No significant impacts identified; no mitigation required beyond MMS's current regulations and requirements.

Air Quality

1.

Impact
NO_X and HC emissions from offshore platforms and support activities may contribute to violations of the ozone standard and hinder the reasonable further progress of attaining the standard.

Mitigation Identified
Reduce NO_X at the platform by replacing electric generators with power from the grid via landlines and/or secure NO_X/HC offsets.

Action NO ACTION

Discussion
The TRACE Model (Trajectory Model for Regional Atmospheric Chemistry and Emissions) was used in the EIR/EIS to estimate the effects of the project and Area Study sources upon ambient onshore ozone concentrations. This model uses conservative assumptions to estimate potential worst-case impacts from the project. Such assumptions include inadequate compensation for lateral mixing during windspeed and direction changes, and worst-case peak hourly emission rates.

Five trajectories were developed for evaluating photochemical pollutant impacts. Of the four trajectories which related to proposed project elements, only one trajectory estimated ozone values approaching the Federal ozone standard of 0.12 ppm. This trajectory originated offshore Point Arguello and continued through the Santa Barbara Channel to the Ojai Valley. Modeling of the Chevron project alone resulted in a value of 0.121 ppm; results from modeling both the Chevron and Texaco platforms indicated a value of 0.118 ppm. The actual contribution from this project (which may be more important to consider than final values due to the uncertainty of background values) is estimated as 0.01 ppm for the proposed project, and 0.02 ppm for the study area.

MMS's interpretation of these results is influenced by several factors. First, the model does not adequately compensate for lateral mixing in the analysis. As discussed and modeled in the Final Technical Appendix F, when more realistic, large lateral mixing coefficients are used, the values are reduced by 0.01 ppm, thereby attributing much lower impacts to the offshore platforms.

Second, MMS believes the model is precise, at best, to 0.01 ppm rather than 0.001 ppm as implied in the EIR/EIS. This 0.001 ppm precision is not reasonable given the precision of the input data, the approximation in the physical and chemical assumptions incorporated in the model and the uncertainty in the background pollutant concentrations. Such precision is implied since the information is reported to three significant digits even though the discussion on page 5.2-17 states that the third digit, while not precise, is reported to aid the reader in determining whether a predicted concentration would be greater or less than a standard. Unfortunately, misinterpretation of the reliability of this third significant digit can lead to misinterpretation of the modeling result.

In addition, MMS has concerns about implementation of the proposed mitigation to supply power to the platforms via a grid system. First, this grid power is not presently available at Point Conception. In order for the platforms to utilize grid power, power lines would either need to be buried in a separate trench alongside the proposed oil and gas pipelines or placed on towers from Gaviota to Point Conception. Both options pose serious additional environmental impacts onshore to cultural, biological, or visual/recreational resources. Additionally, due to the distance from the power sources, a substation would also need to be placed at Point Conception, which would cause high environmental impacts.

Second, such power could also not be made available until the late 1980's, well after the proposed installation of Platforms Hermosa and Harvest. Such delay would result in cost to the government from lost revenues. Any delay is not in agreement with the OCS Lands Act that calls for the prompt and efficient development of resources and fair return to the government.

Third, in the interest of conservation, grid power at this location is not preferable since grid power is a much less efficient source of energy, particularly when considering line loss present when delivered by a cable. Platform power will be supplied by natural gas turbines which are very efficient.

As such, given the additional environmental impacts from the mitigation, the affect on agency mandates, and the belief that significant impacts are not presented by this project; implementation of the mitigation is not deemed appropriate.

The MMS will, however, collect fuel consumption data and performance data from these platforms to see that NO_x and HC emissions from actual operations are as predicted in the DPP and especially to document the effectiveness of the BACT water injection technology imposed to reduce NO_x emissions. Should MMS find actual emissions to be at levels higher than suggested or if at any time MMS suspects that air emissions may be in violation, additional modeling or anlaysis will be required. The MMS is also participating and helping finance the Joint Interagency Modeling Study (JIMS) which is a sophisticated ozone modeling project with the EPA Region 9 and California Air Resources Board, and local APCDs. This project will enable MMS and other agencies to better predict the photochemical process in the Santa Maria Basin Area and Santa Barbara Channel and the offshore oil/gas contribution to ozone levels in the Study Area.

Marine Water Resources

2.

Impact
Potentially toxic concentrations of biocides possible in the discharge of drilling fluids from platforms. (Completion fluids also may contain biocides)

Mitigation Identified
Avoidance of specific drill fluids containing such chemicals, alternate offshore or onshore discharge of fluids and muds containing such chemicals.

Action ADOPT

Mechanism
MMS prohibits the use of halogenated phenols (of particular concern). All biocides discharged must be approved in type and quantity by EPA. The discharge will be monitored by EPA through compliance with its NPDES permit. In addition MMS will monitor the discharges during routine inspections and will monitor potential impacts through the MMS funded Long-term Monitoring Program.

3.

Impact
Accumulation of pollutant chemicals (organics and trace metals) in sediments over long-term to potentially harmful levels possible due to discharges of formation waters, drilling fluids, and waste waters.

Mitigation Identified
Monitor discharges, sediment quality, and marine biota. Take action to reduce discharges if impacts found unacceptable.

Action ADOPT

Mechanism
MMS is funding a Long-term Monitoring Program, which includes monitoring of discharges, collecting and analyzing sediment samples, and determining effects on communities of marine biota. This program will monitor impacts from operations at Platform Hermosa and several other platforms. If elevated levels of pollutants are found in the sediments or animal tissues subsequent to commencement of drilling, MMS will consult with recognized experts to determine the significance of these levels. If these levels are determined to be unacceptable, MMS will take corrective action which may include barging the discharges to another site, or restricting discharge mode or components.

Marine Biology

4.

Impact
Loss of hard bottom benthos due to construction vessel anchoring (i.e. anchoring required to install both the platform and offshore pipeline).

Mitigation Identified
Pre-construction demarcation, restricting vessel activities, consolidated moorings, establishment of additional hard bottom features.

Action: ADOPT

Mechanism
MMS will require the operator to submit pre-installation plans for approval, will monitor installation procedures onsite, and will require post-installation surveys to ensure compliance. Specifically:

(a) MMS will require submittal of detailed anchoring plans for installation of the platform and pipelines and will approve corridors for anchor placement which minimize impact to hard bottom features to the maximum extent possible. Anchors shall not be placed on hard bottom features if at all possible.

(b) MMS will review pipelaying procedures to ensure anchor size, placement and retrieval will minimize anchor dragging and impact to hard bottom features. The operator will also submit an Operations Curtailment Plan for MMS approval which lists conditions (weather or other constraints) under which operations would be halted.

(c) The operator shall submit locations for permanent moorings for MMS approval. Such moorings would be intended for consolidated use by supply and crew boats servicing the platform over the life of the project. Placement of moorings will be done to minimize impacts to hard bottom features.

(d) MMS will hold meetings with the operator and its pipelaying contractor prior to installation to ensure the contractor is cognizant of MMS requirements.

(e) MMS will monitor the installation of the platform and pipelines on site. The operator will provide room for MMS inspectors and observers as appropriate, and will notify MMS 72 hours in advance of commencement so inspectors may be present. MMS inspectors will monitor installation activities to ensure compliance with MMS regulations and requirements.

(f) MMS will require post-installation geophysical surveying over the area of operation to determine amount of disturbance and any need for remedial action. Operator shall submit a side scan sonar mosaic with their survey results.

If the side scan sonar mosaic indicates that anchor placement has affected hard bottom features, the lessee will be required to conduct

Marine Biology - Continued

additional biological surveys in specified areas to determine the level of impact. If MMS finds that the level of disturbance is significant (for example, if 10-15 percent of the area's hard bottom substrate is damaged or if population changes of a 5-year duration are anticipated) the lessee will be required to restore the habitat, which would include, but not be limited to, establishment of new hard bottom features, or demonstrate to MMS's satisfaction that recovery is occurring within a year of the damage.

5.

Impact
Impact to local hard-bottom biota due to discharge deposition near the platform site. (This potential impact is not as pronounced for Platform Hermosa as it is for Platform Harvest due to the fewer number of large features and general presence of natural sedimentation which has suppressed establishment of hard-bottom communities on features nearest the platform site. MMS analysis of the biological surveys conducted in the area indicates that significant adverse changes in the biota would not likely occur from Platform Hermosa discharges.)

Identified Mitigation
Pre-operations survey, continue during operations; as necessary, further restrict discharge mode, mud components, disposal sites; establish new hard bottom features.

Action ADOPT

Mechanism
Discharges from Platform Hermosa will be monitored as a part of the MMS Long-term Monitoring Program. This program will include sediment and benthic organisms sampling during operations over a 6-year period (minimum) and measurement of changes in community structure. This program is designed to detect changes in the benthos around the platform, particularly the effects on hard bottom communities in the Point Arguello Field Area, which may be caused by oil and gas operations. If measured changes are detected during the monitoring, MMS will contact recognized experts to determine the significance. Corrective action (which may include restriction of the discharges or specified components; barging muds and/or cuttings to another disposal site, and/or establishment of new hard bottom features) will be taken if impacts are believed to be significant.

Marine Biology - Continued

6.

Impact
Loss of habitat upon removal of platforms.

Identified Mitigation
Create or maintain similar habitats.

Action NO ACTION AT THIS TIME

Discussion
MMS regulations currently require operators to remove the platform and clear the site unless MMS determines other action is more appropriate. Since abandonment procedures would not be considered for 20-25 years, no action is deemed appropriate at this time. It must be recognized that MMS must act in accordance with the applicable rules and regulations in existence at that time. MMS anticipates that when abandonment procedures are being considered, MMS will consult with state, local and commercial fishing interests to determine if removal is appropriate at this location.

7.

Impact
Possible disruption of gray whale migration due to cumulative offshore seismic testing and construction noise.

Action NO ACTION

Discussion

Mitigation Identified
Restriction of construction to non-migrating periods, restriction of overlapping construction schedules, restriction of seismic survey activities.

This concern has been previously raised by the National Marine Fisheries Service. MMS plans to fund a study beginning in Fiscal Year 1986 to address this issue. The objective of the study is to assess the effects of oil and gas activities on whales migrating through an area experiencing increased routine operations associated with oil and gas exploration and development. Effects of interest are behavior and migration route changes. This study will help MMS determine if installation of additional platforms poses a concern or if additional mitigation is necessary to ensure minimum impact to the whale population. Since this impact is projected only on a cumulative basis, installation of proposed platforms are already scheduled for non-migrating periods, and MMS is currently studying this concern, no action is deemed appropriate at this time.

Marine Biology - Continued

8.

Impact
Cumulative damages to Arguello Slope hard-bottom biota due to operation of area study offshore platforms (all eight). (This is in reference to the cumulative discharge of drilling muds and cuttings.)

Mitigation Identified
Monitor effects of first-generation projects; as necessary, condition second-generation projects accordingly or impose cap on number of concurrent development projects.

Action ADOPT

Mechanism
MMS's Long-term Monitoring Program will enable MMS to monitor the effects from the initial platforms in this area. Results from that monitoring will be used to evaluate subsequent projects and provide for additional conditions as appropriate. Mitigations which will be considered by MMS include barging, restricting the use of certain components, and shunting. Some combination of mitigations would reduce impacts to an insignificant level. MMS would not consider imposing a cap on the number of concurrent development projects.

Cultural Resources

9.

Impact
Impact to identified potential cultural resources due to installation of platforms/pipeline.

Mitigation Identified
Require anchoring plans and accurate positioning of anchors, or install protective ring of buoys around each potential resource.

Action ADOPT

Mechanism
MMS will require the lessee to submit anchoring plans and procedures to accurately position anchors where potential resources have been identified. In addition MMS will require the lessee to submit an Operations Curtailment Plan, and conduct post-installation side-scan sonar mosaics to ensure that resources are not impacted by the pipelaying activity and show MMS where actual impacts occur. MMS will also meet with the pipeline contractor. (Conditions from OCS-P 0316 DPP Item No. 4 generally also apply here to protect potential cultural resources.) Avoidance of impact to potential cultural resources is required. MMS will monitor the installation activity in the field to ensure compliance. It was determined that placing a protective ring of buoys would not increase our ability to protect the resource.

Visual Resources

10.

Impact
Impact on ocean views due to presence of three platforms.

Mitigation Identified
Paint platforms grey/white (as opposed to orange, white, or mixed colors).

Action NO ACTION

Discussion
MMS has approved a white color scheme for Platform Hermosa. After reviewing comments received from the U.S. Coast Guard, MMS has determined that the platforms should be painted white rather than the grey/white proposed due to navigational safety reasons. White, however, is preferable to orange or yellow when considering visual impacts. MMS believes that the mitigation identified cannot be fully adopted due to overriding safety considerations.

Commercial Fishing

11.

Impact
Pre-emption of harvest in 10-15 percent of productive rockfish tow area by construction of offshore operations and connecting pipelines.

Mitigation Identified
Minimize extent of simultaneous construction. Establish notification procedures with Fisheries Liaison Office.

Action ADOPT

Mechanism
Initial measures have been taken to reduce potential impacts. The MMS has met with the Fisheries Liaison Office and Chevron to review the potential fishing areas and seasons and are working to minimize impacts to all fisheries which may be affected during construction. MMS will require that this schedule is finalized before construction begins. Followup is required prior to and during installation to consider any potential changes in installation schedules. Notification procedures have been established with the Liaison Office. Chevron is to report locations of installation equipment weekly to the Liaison Officer throughout the installation activity. This will allow fishermen to predict areas under construction and reoccupy areas shortly after construction.

Commercial Fishing - Continued

12.

Impact
Combined preemption of halibut tow area off Point Conception and set gear area off Gaviota due to closely sequenced construction of hydrocarbon and waste water pipelines.

Mitigation Identified
Construct nearshore portions of pipelines at opposite ends of construction period (impacts to the marine mammals and seabirds must also be weighed if any changes in construction schedule occur).

Action ADOPT

Mechanism
Mechanism is the same as condition No. 11. Construction schedule will be reviewed by MMS, the Liaison Office, and Chevron to minimize preemption impacts to all commercial fisheries.

System Safety and Reliability

13.

Accidents which have the potential to cause environmental impacts and public hazards.

Event
Release of oily - produced water due to mechanical defects.

Criticality - Negligible/minor.

Proposed Mitigation
Additional instrumentation (oil-in-water analyzers).

Action NO ACTION

Discussion
The MMS after reviewing the available options has concluded that oil-in-water analyzers will not be required on the Point Arguello Field platforms. The analyzers have a record of poor performance when used in a similar-type application. Inquiries indicated that the analyzers consistently gave high oil-in-water readings because of water turbidity, color, air bubbles, and other parameters that cause reflection or refraction of the light used in the instrument. The high frequency of "false alarms" that are predicted make the instrument ineffective for this particular application.

The MMS regulations specify that all discharges from OCS facilities must be in accordance with applicable NPDES permit guidelines as issued by the United States Environmental Protection Agency. (Violations of permit requirements will result in either written warnings, an order to shut-in, and/or civil penalties.)

System Safety and Reliability - Continued

The MMS is currently consulting with EPA on existing monitoring procedures and the likely implementation of new testing/monitoring techniques that will verify compliance with the applicable NPDES requirements. The MMS has determined that the most effective way to ensure compliance is through the use of its inspection and enforcement program.

14.

Accidents which have the potential to cause environmental impacts and public hazards.

Event
Pig Receiver/Launcher Spill

Criticality Minor.

Proposed Mitigation
Improve instrumentation/control.

Action ADOPT

Discussion
The MMS will require the installation of mechanical interlocks and appropriate instrumentation on the proposed platform to reduce the probability of a pig launcher/receiver-related oil spill. The operators will be required to train platform personnel on correct operating procedures and instrumentation monitoring. The MMS will at least annually inspect and function-test, with assistance from the operator, each pig launcher/receiver and its related equipment and instrumentation to ensure satisfactory performance.

15.

Accidents which have the potential to cause environmental impacts and public hazards.

Event
Subsea pipeline break or large leak.

Frequency Unlikely.

Proposed Mitigation
Install subsea valves.

Action NO ACTION

Discussion
The Minerals Management Service (MMS) has thoroughly considered requiring the installation of subsea block valves during its review of this Point Arguello Field pipeline system. The MMS has concluded that subsea valves will not be

System Safety and Reliability - Continued

required for the proposed offshore portion of the pipeline system after weighing the following related impacts and conclusions.

- The valves if installed would increase the potential for a leak occurrence.
- The valve housing would add to the potential for fishing net and gear fouling.
- The potential benefits that the valves provide in the event of a pipeline leak will in many portions of the pipeline be a redundancy of the protection that is provided naturally due to the sea-floor contours that the pipeline will traverse.

The MMS maintains that proper design is the best deterrence to pipeline leaks. The Point Arguello Field pipeline system has been designed to meet or exceed all applicable MMS requirements. The pipeline installation will be closely monitored to insure that the field practices employed do not result in any detriment to the integrity of the pipeline.

To minimize the potential volume of an oil spill resulting from a pipeline leak, the MMS has required Chevron, as operator of the pipeline, to design, install, and maintain a pipeline leak detection system that provides the maximum sensitivity and reliability that is feasibly possible. The system of leak detection that will be used consists of three different leak detection methods:

(1) Over-short accounting, to detect very small leaks by continuously integrating the difference between inflow and outflow system wide.

(2) Volumetric balance with line pack correction, to detect small to moderate leaks by reconciling inflow and outflow against inventory changes system wide.

(3) Pressure profiling, to detect larger leaks by monitoring pressure changes along the lines system wide and additional pressure profiling on the laterals to detect smaller leaks.

Operator controls, readouts and alarms will be located at the Gaviota processing facility. The system will scan some 200 measurement points every 10 seconds. This combined approach has the sensitivity for the Hermosa to Gaviota line to detect a leak of approximately 10 bpm within 1 minute, and for the laterals between Harvest and Hermosa and Hidalgo and Hermosa, a leak of approximately 3 bpm within 0.2 minute.

This system will allow for the early detection of an unlikely pipeline leak or break. If a leak is detected, the operator will initiate its pre-planned response to minimize the volume of the spill while simultaneously activating containment and cleanup procedures.

ACCIDENT-RELATED IMPACTS AND MITIGATION

Unlikely Major Oil spill and/or Moderately Sized Spills

1.

Impacts:

- Water quality changes, sediment contamination, etc.
- Mortality and disturbance of seabirds and/or marine mammals due to spill and cleanup activities.
- Damage to subtidal ecology.
- Damage to estuarine lagoons both from spill and cleanup (tidewater goby)
- Pre emption of harvest in rockfish/halibut tow, halibut/shellfish and set gear areas or abalone diving areas.
- Hits to public beaches and impact on local recreation and tourism.

Mitigations:

- Modify Oil Spill Contingency Plans (OSCP's) as necessary to provide equipment to Point Conception in less than 3 hours.
- Rapid and efficient spill cleanup.
- Achieve adequate response time at sensitive haulout and nesting locations, animal recovery assistance, selective use of dispersants.
- Request Regional Response Team to consider procedures to avoid use of chemical agents if only subtidal affected.
- Modify OSCP to clarify response procedures for lagoons specified to prevent entry of oil into lagoon.
- Implement restoration following cleanup.
- Avoid use of sinking agents; compensate affected fishermen for lost revenue.

Action: Adopt

Discussion:

The MMS has required Texaco and Chevron to submit OSCP's as part of their respective Development and Production Plans (DPP's) for review and approval prior to the commencement of any field operations. Currently the OSCP's are undergoing a thorough review by the MMS. During this review, the MMS consults with other agencies and the operators to ensure that the plans contain the information and response strategies necessary to effectively respond to an unlikely oil spill. Plans determined to be deficient in either response strategy or cleanup capability must be modified and reevaluated before approval will be granted. In addition, Chevron's and Texaco's OSCP's will be reviewed annually and updated as necessary to ensure that the response strategies and equipment utilized remain state-of-the-art.

The MMS fully recognizes the intent of the above mitigations and considers it to be consistent with MMS goals. Decisions with respect to each of the mitigation measures identified above will be reached as our oil spill contingency plan review process progresses. The MMS will continue to provide direction to lessees in order to achieve the best feasible response to an oil spill.

Unlikely Major Oil Spill and/or Moderately Sized Spills - Continued

The MMS is aware that the County of Santa Barbara as part of its permitting on the final Development Plan will be reviewing access and response time to sensitive lagoon areas between Point Conception and Gaviota. The MMS will assist the County as necessary, and will require the incorporation of appropriate measures into Chevron's and Texaco's respective plans.

Vessel Collisions With Marine Life

2.

Impact
Damage to marine mammals due to unlikely encounters with support vessels.

Mitigation Identified
State-of-the-art operator training, reporting requirements, adhere to vessel traffic corridor program (voluntary compliance).

Action ADOPT

Mechanism
The MMS Fisheries Training Program which will be required to be given to all offshore personnel associated with this project is also designed to familiarize personnel with the types of marine mammals which may be present in the area, potential sources of impact from oil and gas activities and avoidance procedures. Chevron has also indicated that they will adhere to the vessel traffic corridor program which is a voluntary compliance program monitored by the oil and gas industry and commercial fishing industry. This program also tend to minimize conflict with marine mammals since it restricts vessel traffic in nearshore waters.

The Endangered Species Consultations and the resultant Biological Opinions from National Marine Fisheries Service and U.S. Fish and Wildlife Service also address this as "incidental take". Refer to these opinions and the discussions in this document for other requirements designed to minimize damage to marine mammals from this type of accident.

Vessel Interference With Fishing Boats/Gear

3.

Impacts
Damage to fishing gear and/or vessels due to collision or hangup on project structures/support vessels.

Mitigation Identified
Operator's training program, require removal of construction debris and use of smooth pipelines, timely compensation of losses.

Action ADOPT

Vessel Interference With Fishing Boats/Gear - Continued

Mechanism

To reduce the potential for damage to fishing gear and/or vessels from this type of accident:

(a) The MMS Fisheries Training Program will be given to all personnel associated with this project. This program familiarizes personnel with fishing activities, potential sources of conflict, and avoidance procedures.

(b) MMS requires a smooth pipeline design to be used. MMS also requires annual external video coverage of the line so that MMS may monitor the integrity of the line and ensure that it is maintained in a manner that does not obstruct fishing activities.

(c) MMS will monitor installation procedures and require an Operations Curtailment Plan (which describes weather conditions under which the operator would curtail installation activities) to ensure the lines are installed properly and to reduce the likelihood of impact from anchor scarring.

(d) In accordance with OCS Orders, the operator must mark all equipment which could present a hazard to fishing if lost overboard so that ownership may be verified in the event of conflict. Operators are also required to either remove debris accidentally lost overboard or demonstrate that it does not present a hazard to fishing (i.e. is buried). If it should subsequently be identified as a hazard, the operator is liable for any damages and would be required to remove it. If an operator is physically unable to remove the equipment, the coordinates are given to the US Coast Guard and Fisheries Liaison Office.

(e) Operators must contribute to the Fisheries Contingency Fund. This fund reimburses fishermen for lost gear when no responsible party can be identified.

(f) Should the MMS be notified of incidents of gear damage or conflict by fishermen, other agencies or operators, MMS will notify the proper parties and will participate as necessary to ensure the conflict is resolved in a timely manner.

USFWS Biological Opinion (These excerpts are taken directly from the Opinion prepared for the Point Arguello Field Area. Refer to the Opinion for more detail, attached.)

Special Conditions to Minimize Incidental Take:

1. FWS and MMS review the existing oil spill contingency plan to assure protection of the most sensitive/critical individuals and habitat (e.g., nesting sites, foraging areas, etc.) of listed species located in the project area--Point Arguello to Gaviota;

Discussion
MMS has given USFWS copies of the Oil Spill Contingency Plans (OSCP's) for this area for review. Review of OSCP's is an ongoing process over the life of the project. MMS requires that an approved OSCP is on file prior to commencing operations and that all OSCP's are reviewed and updated annually thereafter. MMS is in the process of reviewing the OSCP's for these DPP's in light of the mitigations identified for this project. FWS will be given another opportunity to review and comment on any changes to the OSCP prior to commencement of activities at any of the platforms considered by this project.

2. Encourage permitting agency of onshore pipeline construction that it should not occur within 1 mile of an active peregrine aerie during the breeding season (February through July). Surveys may be necessary to ensure no peregrines are nesting in historic and potential locations along the pipeline route; and

Discussion
The permitting agency, County of Santa Barbara, has placed a permit condition on the portion of the activity under their jurisdiction which requires the hiring of an environmental coordinator. This environmental coordinator's function will be to ensure the protection of resources along the pipeline route onshore before and during installation. MMS will meet with the County and this person and provide them with information on potential peregrine areas of concern. It would be the responsibility of this coordinator to require surveying if needed to determine the locations of peregrines along the route. This approach is agreeable with the County Energy staff (personal communication Warhurst to Scott, 12/17/84).

3. All dead or injured individuals shall be retrieved and turned over the California Department of Fish and Game immediately.

Discussion
If observed as a part of MMS's ongoing inspection program or if notified by lessees, public, etc., of the presence of dead or injured individuals, MMS will immediately notify California Dept of Fish and Game of the locations of such individuals. Since MMS does not have personnel offshore with the proper expertise to physically retrieve such animals, MMS will rely upon

assistance from the USFWS, CDFG and/or NMFS for the actual retrieval. MMS will provide these resource agencies with additional assistance as required in the recovery operations.

Terms and Conditions

4. If more than the specified level of incidental take identified above for the APF, SSO, CLT, LFCR, and CBP (0, 1, 2, 5, or 5, respectively) occurs, MMS shall require that the causitive action of such take cease immediately, and shall initiate consultation to reevaluate the incidental take impacts; and (2) as a result of the ongoing MMS inspection program, MMS shall immediately telephone the Sacramento Endangered Species Office if incidental take occurs, as a result of the project, and prepare a written report which shall include the date, location and circumstances surrounding the taking and the disposition of the individual(s) taken. Written and telephone reports should be directed to Project Leader, USFWS, Sacramento Endangered Species Office, 2800 Cottage Way, Room E-1823, Sacramento, California 95825 (916)484-4935.

Discussion
The MMS will comply with the above requirement by notifing USFWS of project-related incidents which result in the accidental taking of species considered in this Opinion, and will document the event as specified.

5. MMS and USFWS will also initiate a program which provides for an exchange of information on the inspection program and biological implications of project operations.

Discussion
The MMS and USFWS have initiated such a program designed to encourage good communications and working relations between our agencies and to familiarize each agency with the programs/missions/concerns of the other agency. This is anticipated to be an ongoing program.

III. IMPLEMENTATION OF MITIGATION - Continued

C. TEXACO OCS-P 0315 DPP

PROJECT-RELATED IMPACTS AND MITIGATION

Air Quality

1.

Impact
Potential violation of Federal ozone standard (1-hour) during flaring at Platform Harvest because of compressor failure. Flaring under this upset could also cause DOI significance levels of SO_2 for 3-hour and 24-hour averages to be exceeded.

Mitigation Identified
Maintain a spare standby compressor on Platform Harvest.

Action NO ACTION

Discussion
The impact described was derived from projected flaring incidents of 3 hour and 24 hour durations during worst case meteorological conditions. Based on flaring experience from other existing Pacific OCS platforms, MMS believes flaring incidents will not last more than 20 minutes due to compressor failures or other contributing causes. As documented in our well records, Texaco, as well as other platform operators, shut-in production or lower production rates to minimize this type of flaring when incidents occur. Texaco has demonstrated this with their activities at Platform Habitat.

The Point Arguello Field EIR/EIS has calculated that 17 compressor failures are expected at Platform Harvest. Assuming a 3-hour flaring episode, the probability of flaring occurring during worst-case meteorology which occurs infrequently over a year is low. It is also unrealistic to expect the same worst-case meteorology to occur continuously for a 24-hour period. Therefore, MMS does not find that exceedences of the DOI significance levels (30 CFR 257-1, para (c)) of SO_2 for 3-hour and 24-hour averages will occur from potential flaring episodes at Platform Harvest. We also do not find that such episodes would produce potential violations of the Federal ozone standard. We believe that any flaring event will be of such short duration, less than 20 minutes, and would emit such a small amount of NO_x that this would not have a discernable effect on onshore ozone concentration.

In addition, MMS does not believe that the mitigation identified, to maintain a spare standby compressor on Platform Harvest, is appropriate. Due to the late start-up time expected from this type of standby compressor, and the short duration of the actual episodes, it is not likely that installing a spare compressor would actually reduce the amount flared.

Air Quality - Continued

MMS investigates each flaring event to determine cause and likelihood of recurrence. If cause is determined to be poor maintainance, poor equipment design, or some other avoidable problem, action will be taken to correct the problem. MMS may also request operators to reduce production on certain wells or shut-in the platform if appropriate to address safety or air quality consideration.

2.

CHEVRON OCS-P 0316 Condition No. 1 applies---NO ACTION

Marine Water Resources

3.

CHEVRON OCS-P 0316 Condition No. 2 applies---ADOPT

4.

CHEVRON OCS-P 0316 Condition No. 3 applies---ADOPT

Marine Biology

5.

CHEVRON OCS-P 0316 Condition No. 4 applies---ADOPT

6.

CHEVRON OCS-P 0316 Condition No. 5 applies---ADOPT
This impact, described as damage to local hard-bottom biota due to discharge deposition near the platform site, is potentially more significant at the Platform Harvest site since Platform Harvest will be located within 500 feet of the high-relief undisturbed features on the lease. This platform will be monitored by the MMS Long-term Monitoring Program. Corrective action (which may include shunting, restriction of the discharges or specified components; barging muds and/or cuttings to another disposal site, and/or establishment of new hard bottom features) will be taken if impacts are believed to be significant.

7.

CHEVRON OCS-P 0316 Condition No. 6 applies---NO ACTION AT THIS TIME

8.

CHEVRON OCS-P 0316 Condition No. 7 applies---NO ACTION AT THIS TIME

9.

CHEVRON OCS-P 0316 Condition No. 8 applies---ADOPT

Cultural Resources

10.

CHEVRON OCS-P 0316 Condition No. 9 applies---ADOPT
Three potential cultural resources were identified in the vicinity of Texaco's proposed activity.

Visual Resources

11.

CHEVRON OCS-P 0316 Condition No. 10 applies---NO ACTION

Commercial Fishing

12.

CHEVRON OCS-P 0316 Condition No. 11 applies---ADOPT

13.

CHEVRON OCS-P 0316 Condition No. 12 does not apply---NO ACTION

Systems Safety and Reliability

14.

CHEVRON OCS-P 0316 Condition No. 13 applies---NO ACTION

15.

CHEVRON OCS-P 0316 Condition No. 14 applies---ADOPT

16.

CHEVRON OCS-P 0316 Condition No. 15 applies---NO ACTION

ACCIDENT-RELATED IMPACTS AND MITIGATION

CHEVRON OCS-P 0316 Conditions Nos. 1, 2, and 3 all apply---ADOPT

D. CHEVRON OCS-P 0450 DPP (Platform Hidalgo and Pipelines)

PROJECT-RELATED IMPACTS AND MITIGATION

Geology

Air Quality

1.

Chevron OCS-P 0316 Condition No. 1 applies---NO ACTION

Marine Water Resources

2.

Chevron OCS-P 0316 Condition No. 2 applies--ADOPT

3.

Chevron OCS-P 0316 Condition No. 3 applies--ADOPT

Marine Biology

4.

Chevron OCS-P 0316 Condition No. 4 applies--ADOPT

5.

Chevron OCS-P 0316 Condition No. 5 applies--ADOPT

6.

Chevron OCS-P 0316 Condition No. 6 applies--NO ACTION AT THIS TIME

7.

Chevron OCS-P 0316 Condition No. 7 applies--NO ACTION AT THIS TIME

8.

Chevron OCS-P 0316 Condition No. 8 applies--ADOPT

Cultural Resources

9.

Chevron OCS-P 0316 Condition No. 9 applies--ADOPT
One potential resource was identified near the proposed pipeline route from Hidalgo to Hermosa. No potential resources were identified adjacent to Platform Hidalgo.

Visual Resources

10.

Chevron OCS-P 0316 Condition No. 10 applies--NO ACTION

Commercial Fishing

11.

Chevron OCS-P 0316 Condition No. 11 applies--ADOPT
Such discussions with the Fisheries Liaison Office will be conducted several months prior to proposed installment of the platform to minimize potential conflict.

12

Chevron OCS-P 0316 Condition No. 12 does not apply--NO ACTION REQUIRED

Systems Safety and Reliability

13

Chevron OCS-P 0316 Condition No. 13 applies---ADOPT

14.

Chevron OCS-P 0316 Condition No. 14 applies---ADOPT

15.

Chevron OCS-P 0316 Condition No. 15 applies---ADOPT

ACCIDENT-RELATED IMPACTS AND MITIGATION

Chevron OCS-P 0316 Conditions Nos. 1, 2, and 3 all apply---ADOPT.

CONCLUSION

Development of the Point Arguello Field is a major undertaking on the part of both industry and government. Much effort has been expended to date; these efforts will continue as the project proceeds.

The Minerals Management Service has evaluated mitigation measures and project alternatives proposed in the EIR/EIS for protection of the environment. In our deliberations, consideration was given to many factors, including environmental protection and economic feasibility. We have adopted those measures found to be appropriate and have issued conditions of project approval based on the various measures requiring special action by the operators.

I have found that this project, when conducted in accordance with existing MMS legal requirements and combined with conditions of approval resulting from the aforementioned mitigation measures, can proceed in an environmentally sound manner while providing benefits associated with production from the Point Arguello Field--including the strengthening of national security as the United States moves toward energy independence, revenue for government, and employment opportunities.

Thomas W. Dunaway 1-15-85

Thomas W. Dunaway (Date)
Regional Supervisor
Office of Field Operations