MINUTE ITEM
This Calendar Item No. C83 was approved as Minute Item No. 83 by the California State Lands Commission by a vote of 3 to 0 at its 9-17-01 meeting.

CALENDAR ITEM
C83

A 35

S 18

09/17/01
PRC 208.1
PRC 3242.1
J. Planck

CONSIDER REQUEST TO REDRILL THREE WELLS ON PLATFORM HOLLY, OIL AND GAS LEASE NOS. PRC 208.1 AND 3242.1, ELLWOOD AREA, OFFSHORE SANTA BARBARA COUNTY

LESSEE/OPERATOR:

Venoco, Inc.
Attn.: Mr. Stephen A. Greig
5464 Carpinteria Ave., Suite J
Carpinteria, CA 93013-1423

AREA, TYPE LAND AND LOCATION:

Oil and Gas Lease Nos. PRC 208.1 and PRC 3242.1 contain 1,920 acres and 4,290 acres, respectively, of tide and submerged lands, Ellwood area, offshore Santa Barbara County.

BACKGROUND:

Oil and Gas Lease No. PRC 208.1 was originally issued to Signal Oil and Gas Company on January 18, 1946. Oil and Gas Lease No. PRC 3242.1 was originally issued on April 8, 1965, to Atlantic Richfield Company (ARCO) and Mobil Oil Company. The present lessee is Venoco, Inc., (Venoco), who operates Lease Nos. PRC 208.1, PRC 3242.1, and PRC 3120.

Platform Holly was constructed by ARCO in 1966. There are 30 well slots, and all have been used to drill wells in Leases PRC 3120.1 and 3242.1 between 1966 and 1985. Lease No. PRC 208.1 produced from onshore wells from 1946 until 1993, when all wells were plugged and abandoned to current State regulatory standards.

In response to the federal blowout in the Santa Barbara Channel in 1969, the

California State Lands Commission (Commission) executed a moratorium on all drilling pending a lease by lease review of operations and environmental documentation. The Commission approved resumption of drilling from Platform Holly (PRC 3120.1 and PRC 3242.1) in May 1975. The Commission approved resumption of exploratory drilling on Lease PRC 208.1 in February, 1982, and an exploratory well was drilled and abandoned from a mobile vessel in that lease in 1984/1985.

The project proposes to redrill three (3) existing wells on Platform Holly. Redrilling is a normal development procedure to fully develop mature oil fields, and to fulfil lease requirements. The wells are scheduled to take 60-90 days each to drill and complete. The wells will be drilled over an 18-month period. One well is proposed to be drilled in PRC 3242.1, and two wells are proposed to be drilled into PRC 208.1. The current production from Platform Holly is approximately 4,100 barrels of oil per day, and 4.1 million MCF gas per day. The project may generate an additional 1,500 to 2,000 barrels of oil per day, and 1.5 to 2.0 million MCF of gas per day. The oil and gas contain hydrogen sulfide (H_2S), as does all production from the Monterey formation. However, the drilling and production facilities on Platform Holly have been designed for this corrosive and toxic gas, and all precautions and training are already in place.

At the request of Commission staff, a structural review of Platform Holly was conducted by an engineering firm, and the results were confirmed by Commission staff. The structural analysis concluded that two columns on the platform need reinforcement to support loads projected to be generated by the redrill project. Venoco proposes to strengthen these columns by adding (welding) four "T"-beams on each column. In addition, several drilling deck truss joints will also be installed (consisting of triangular plates added at the intersection of the diagonal bracings). In order to ensure the weld, the paint will need to be stripped in the areas to be welded. Through the lead content is well below Cal/OSHA thresholds, a Paint Stripping and Containment Procedure was provided to comply with the State's no discharge requirement. That procedure has been included in the environmental documentation that was prepared for this project.

In addition, a Commission Engineering Safety Audit was performed with Venoco on Platform Holly between July and December 1999. Corrective actions were taken by Venoco, and there remains only some low priority action items to be completed. All of the items are scheduled to be completed by January 1, 2002. Staff recommends that the Commission condition initiation of the redrilling of the

first well of the project, if approved, only upon the successful completion of these action items.

STATUTORY AND OTHER REFERENCES:

A. Public Resources Code section: Division 6, Parts 1 and 2; Division 13.

B. California Code of Regulations section: Title 3, Division 3; Title 14, Division 6.

OTHER PERTINENT INFORMATION:

1. Pursuant to the Commission's delegation of authority and the State CEQA Guidelines (Title 14, California Code of Regulations, Section 15025), the staff prepared a Proposed Negative Declaration identified as CSLC ND 705, State Clearinghouse No. SCH 2001021016, and circulated that document for thirty (30) days for public review and comment on February 5, 2001. The document was revised due to subsequent amendments to the project description submitted by Venoco, and in consideration of comments received on the original Proposed Negative Declaration. The Proposed Revised Mitigated Negative Declaration identified as CSLC MND 705, State Clearinghouse No. SCH 2001021016, was recirculated for public review and comment on May 18, 2001. The document was revised again to amend the project description to include the additional structural work to be done, and in consideration of comments received on the Proposed Revised Mitigated Negative Declaration, specifically the addition of a degasser to the drilling fluids handling equipment (requested by SBAPCD). The Proposed Revised Mitigated Negative Declaration identified as CSLC MND 705, State Clearinghouse No. SCH 2001021016, was recirculated for an additional 20 days for public review and comment on July 12, 2001.

2. The Proposed Mitigated Negative Declaration and the Proposed Revised Mitigation Negative Declaration was prepared and circulated for public review and comment pursuant to the provisions of the CEQA.

   Based upon the Initial Study, the Proposed Revised Mitigated Negative Declaration, and the comments received in response thereto, there is no substantial evidence that the project will have a significant effect on the environment; Title14, California Code of Regulations, section 15074(b).

3. A Mitigation Monitoring Program has been prepared in conformance with

the provisions of the CEQA (Public Resources Code, section 21081.6) and is contained in Appendix A, attached hereto, in the Proposed Revised Mitigated Negative Declaration.

4. This activity involves lands identified as possessing significant environmental values pursuant to Public Resources Code, section 6370, et seq. Based upon staff's consultation with the applicant and through the CEQA review process, it is the staff's opinion that the project, as proposed, is consistent with its use classification.

5. Venoco has also submitted an application to the Commission staff and Santa Barbara County on a separate and unrelated project entitled the "Full Field Development." The project, as we currently understand it, envisions an extension of Oil and Gas Lease No. PRC 3242 eastward (toward the City of Santa Barbara), extended reach drilling from platform Holly into the extension area, removal of the Ellwood marine oil terminal, reduction in the size of the Ellwood onshore processing facility, and a new oil pipeline to move the "new oil" out to a common carrier. This would also generate new revenue to the State and County. The application is currently incomplete and staff is waiting on resubmission of the application.

EXHIBITS:

A. Location Map
B. Proposed Revised Mitigated Negative Declaration and Mitigation Monitoring Program (MMP)

PERMIT STREAMLINING ACT DEADLINE:

N/A.

RECOMMENDED ACTION:

IT IS RECOMMENDED THAT THE COMMISSION:

CEQA FINDINGS:

1. CERTIFY THAT A PROPOSED REVISED MITIGATED NEGATIVE DECLARATION, CSLC MND 705, STATE CLEARINGHOUSE NO. 2001021016 WAS PREPARED FOR THIS PROJECT PURSUANT TO THE PROVISIONS OF THE CEQA, THAT THE COMMISSION HAS REVIEWED AND CONSIDERED THE INFORMATION CONTAINED THEREIN; AND IN THE COMMENTS RECEIVED IN RESPONSE

THERETO AND THAT THE MITIGATED NEGATIVE DECLARATION REFLECTS THE COMMISSION'S INDEPENDENT JUDGEMENT AND ANALYSIS.

2. ADOPT THE PROPOSED REVISED MITIGATED NEGATIVE DECLARATION AND DETERMINE THAT THE PROJECT, AS APPROVED, WILL NOT HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT;

3. ADOPT THE MITIGATION MONITORING PROGRAM, AS CONTAINED IN APPENDIX A OF EXHIBIT B, ATTACHED HERETO, AND INCORPORATED BY REFERENCE HEREIN; AND,

4. FIND THAT THIS ACTIVITY IS CONSISTENT WITH THE USE CLASSIFICATION DESIGNATED BY THE COMMISSION FOR THE LAND PURSUANT TO PUBLIC RESOURCES CODE, SECTION 6370, ET SEQ.

AUTHORIZATION:

APPROVE THE APPLICATION FOR THE PROJECT AS DESCRIBED WITHIN THE ATTACHED PROPOSED REVISED MITIGATED NEGATIVE DECLARATION, FOR THE DRILLING OF THREE WELLS (REDRILLS) FROM PLATFORM HOLLY OVER AN EIGHTEEN (18) MONTH PERIOD, SUBJECT TO THE FOLLOWING CONDITIONS:

1. APPLICANT TO ADHERE TO THE MITIGATION MONITORING PROGRAM (MMP) DETAILED IN APPENDIX A OF THE PROPOSED REVISED MITIGATED NEGATIVE DECLARATION;

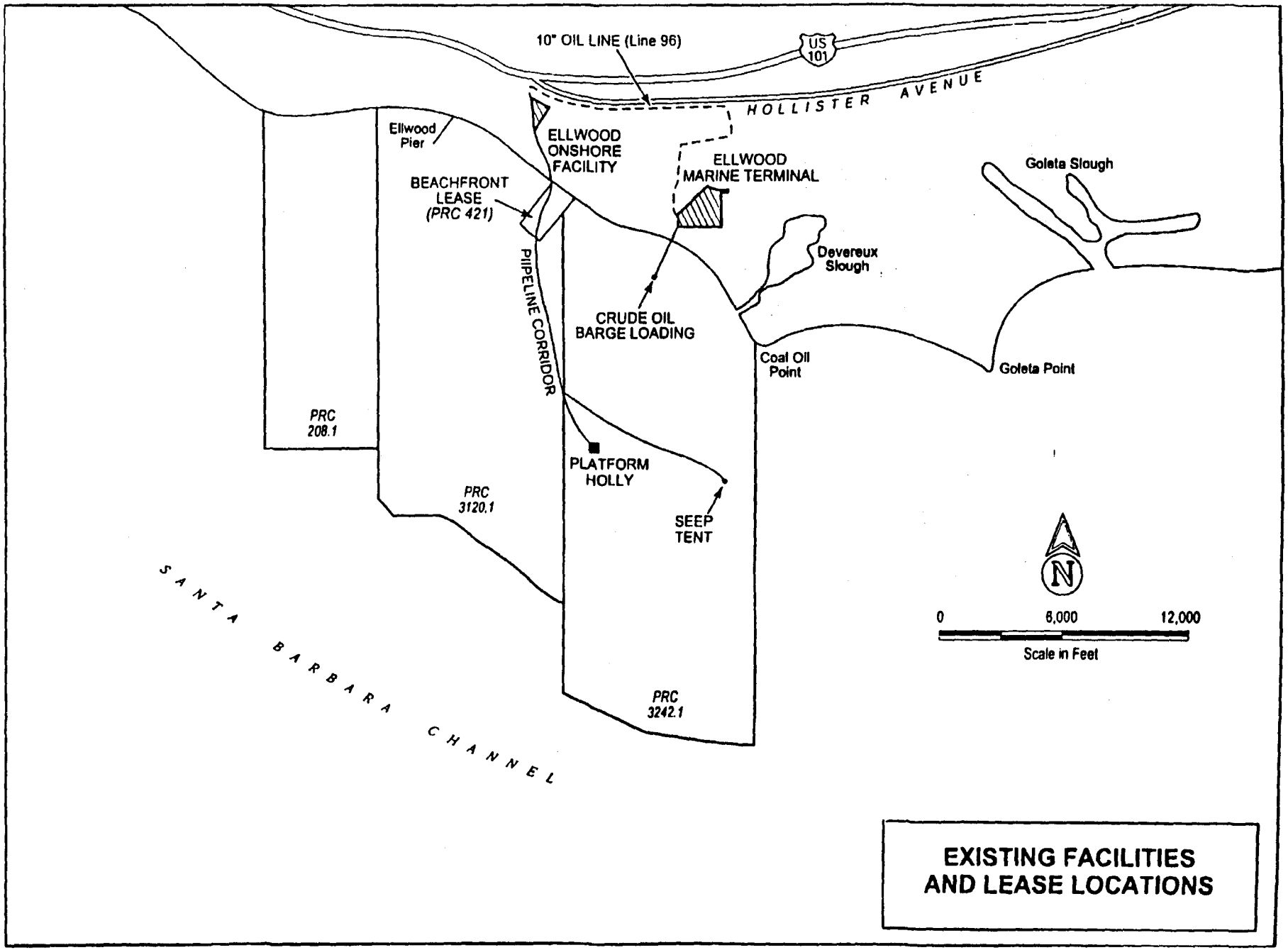
2. APPLICANT MAY NOT INITIATE ANY DRILLING UNTIL ALL OF THE ACTION ITEMS IN THE COMMISSION'S 1999 AUDIT OF PLATFORM HOLLY AND THE STRUCTURAL STENGTHENING ARE COMPLETED AND APPROVED BY COMMISSION STAFF;

3. APPLICANT MUST SUBMIT A WELL PROGRAM FOR EACH WELL, INCLUDING ALL INFORMATION REQUIRED BY THE COMMISSION'S RULES AND REGULATIONS, AND THE LEASE, FOR ENGINEERING APPROVAL BY THE CHIEF OR

ASSISTANT CHIEF OF THE MINERAL RESOURCES MANAGEMENT DIVISION OF THE COMMISSION, PRIOR TO INITIATION OF DRILLING; AND

4. APPLICANT SHALL ENTER INTO A REIMBURSIBLE AGREEMENT WITH THE COMMISSION FOR MITGATION MONITORING IN ORDER TO REIMBURSE THE COMMISSION OR THE COMMISSION'S CONSULTANT'S COSTS TO IMPLEMENT AND/OR ENFORCE THE PROPOSED REVISED MITIGATED NEGATIVE DECLARATION AND INCORPORATED BY REFERENCE HEREIN.

EXHIBIT A



STATE OF CALIFORNIA

EXHIBIT B

GRAY DAVIS, *Governor*

CALIFORNIA STATE LANDS COMMISSION
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825-8202

PAUL D. THAYER, *Executive Officer*
(916) 574-1800 FAX (916) 574-1810
California Relay Service From TDD Phone 1-800-735-2
from Voice Phone 1-800-735-2

Contact Phone: **(916) 574-1884**
Contact FAX: **(916) 574-1885**

July 11, 2001

File Ref: PRC 208, 3242
W40800/W30118, MND 705

SCH No. **2001021016**

NOTICE OF PUBLIC REVIEW AND INTENT TO ADOPT A PROPOSED MITIGATED NEGATIVE DECLARATION (SECTION 15073 CCR & SECTION 21092 PRC)

A Mitigated Negative Declaration has been prepared pursuant to the requirements of the California Environmental Quality Act (Section 21000 *et seq.*, Public Resources Code), the State CEQA Guidelines (Section 15000 *et seq.*, Title 14, California Code of Regulations), and State Lands Commission Regulations (Section 2901 *et seq.*, Title 2, California Code of Regulations) for a project application currently being processed by the staff of the State Lands Commission.

This document is attached for your review. Comments should be addressed to the State Lands Commission office shown above with attention to the undersigned. The State Lands Commission has requested a shortened Clearinghouse review period of 20 days pursuant to CEQA Guidelines Section 15105(d); if approved by the State Clearinghouse, all comments must be received by July 31, 2001 (alternatively, if a 30-day review period is specified, comments must be received by August 10, 2001).

The Proposed Mitigated Negative Declaration will be considered for adoption at a meeting of the State Lands Commission no earlier than July 31, 2001 or the close of the public comment period, whichever is later. You will be notified of the date and location at least 10 days prior to the meeting.

Should you have any questions or need additional information, please call the undersigned at (916) 574-1884.

CY R. OGGINS
Division of Environmental
Planning and Management

Attachment

STATE OF CALIFORNIA GRAY DAVIS, Governor

CALIFORNIA STATE LANDS COMMISSION
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825-8202

PAUL D. THAYER, Executive Officer
(916) 574-1800 FAX (916) 574-1810
California Relay Service From TDD Phone 1-800-735-2922
from Voice Phone 1-800-735-2929

Contact Phone: (916) 574-1884
Contact FAX: (916) 574-1885

July 12, 2001

File Ref: PRC 208, 3242
W40800/W30118, MND 705
SCH 2001021016

PROPOSED MITIGATED NEGATIVE DECLARATION

Project Title:	Venoco Platform Holly Re-Drilling Project
Proponent:	Venoco, Inc.
Project Location:	In State waters offshore Santa Barbara County within the South Ellwood Field. Operations will be conducted from the existing Platform Holly
Project Description:	Re-drill of three production wells from Platform Holly into the Monterey Formation (South Ellwood Field) on State Leases 208 and 3242. No new lease or extension of lease term is required.
Contact Person:	Cy R. Oggins Telephone: (916) 574-1884

This document is prepared pursuant to the requirements of the California Environmental Quality Act (Section 21000 et seq., Public Resources Code), the State CEQA Guidelines (Section 15000 et seq., Title 14, California Code of Regulations), and the State Lands Commission regulations (Section 2901 et seq., Title 2, California Code of Regulations).

Based upon the attached Initial Study, it has been found that:

/ ____ / this project will not have a significant effect on the environment.

/ X / mitigation measures included in the project will avoid potentially significant effects.

Notice of Completion

Appendix F

Mail to: State Clearinghouse, 1400 Tenth Street, Sacramento, CA 95814 916/445-0613

SCH 2001021016

Project Title: VENOCO PLATFORM HOLLY RE-DRILLING PROJECT

Lead Agency: California State Lands Commission — Contact Person: Cy R. Oggins

Street Address: 100 Howe Ave, Suite 100 South — Phone: (916) 574-1884

City: Sacramento, California Zip: 95825-8202 — County: Sacramento

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Project Location Offshore of California within the South Ellwood Field located in the Santa Barbara Channel. Proposed activities will be conducted from the existing Platform Holly (latitude 34°23.2'N, longitude 119°54'19.7")

County: Santa Barbara — City/Nearest Community: Goleta

Cross Streets: — Total Acres:

Assessor's Parcel No. — Section: Twp. — Range: — Base:

Within 2 Miles: State Hwy #: — Waterways:

Airports: — Railways: — Schools:

Document Type

CEQA: ___ NOP ___ Supplement/Subsequent NEPA: ___ NOI Other: ___ Joint Document

___ Early Cons ___ EIR (Prior SCH No.) ___ EA ___ Final Document

X Neg Dec ___ Other ___ Draft EIS ___ Other ___ ___ Draft EIR

___ FONSI

Local Action Type

___ General Plan Update ___ Specific Plan ___ Rezone ___ Annexation

___ General Plan Amendment ___ Master Plan ___ Prezone ___ Redevelopment

___ General Plan Element ___ Planned Unit Development ___ Use Permit ___ Coastal Permit

___ Community Plan ___ Site Plan ___ Land Division (Subdivision Parcel Map, Tract Map, etc.) ___ Other ___

Development Type

___ Residential: Units ___ Acres ___

___ Office: Sq.Ft. ___ Acres ___ Employees ___

___ Commercial: Sq.Ft. ___ Acres ___ Employees ___

___ Industrial: Sq.Ft. ___ Acres ___ Employees ___

___ Educational ___

___ Recreational ___

___ Water Facilities: Type ___ MGD ___

___ Transportation: Type ___

X Mining: Mineral Oil and Gas

___ Power: Type ___ Watts

___ Waste Treatment: Type ___

___ Hazardous Waste: Type ___

___ Other: ___

Project Issues Discussed in Document

X Aesthetic/Visual — X Flood Plain/Flooding — X Schools/Universities — X Water Quality

X Agricultural Land — ___ Forest Land/Fire Hazard — ___ Septic Systems — X Water Supply/Grndwater

X Air Quality — X Geologic/Seismic — X Sewer Capacity — X Wetland/Riparian

X Archeological/Historical — X Minerals — X Soil Erosion/Compaction/Grade — X Wildlife

X Coastal Zone — X Noise — X Solid Waste — X Growth Inducing

X Drainage/Absorption — X Population/Housing Balance — X Toxic/Hazardous — X Land Use

___ Economic/Jobs — X Public Services/Facilities — X Traffic/Circulation — X Cumulative Effects

___ Fiscal — X Recreation/Parks — X Vegetation — ___ Other ___

Present Land Use/Zoning/General Plan Use

Various

Project Description

Re-drill of three production wells from existing Platform Holly into the Monterey Formation (South Ellwood Field) on State Leases 208 and 3242. No new lease or extension of lease term is required.

Note: Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. from a Notice of Preparation or previous draft document) please fill it in.

0582

1934

Reviewing Agencies Checklist

KEY

S = Document sent by Lead Agency
X = Document sent by SCH
= Suggested Distribution

/	Resources Agency		
/	Boating & Waterways		
S	Coastal Commission		
___	Coastal Conservancy		
___	Colorado River Board		**Environmental Affairs**
/	Conservation	/	Air Resources Board
/	Fish & Game (Region 5)	S	APCD/AQMD
___	Forestry	___	California Waste Management
___	Office of Historic Preservation	___	SWRCB: Clean Water Grants
/	Parks & Recreation	___	SWRCB: Delta Unit
___	Reclamation	/	SWRCB: Water Quality
___	S.F. Bay Conservation & Development Commission	___	SWRCB: Water Rights
___	Water Resources (DWR)	/	Regional WQCB # (3)
	Business, Transportation & Housing		**Youth & Adult Corrections**
___	Aeronautics	___	Corrections
___	California Highway Patrol		**Independent Commissions &**
/	CALTRANS District # 5	/	Energy Commission
___	Dept of Transportation Planning (Headquarters)	/	Native American Heritage Commission
___	Housing & Community Development	/	Public Utilities Commission
___	**Food & Agriculture**	___	Santa Monica Mountains Conservancy
	Health & Welfare	/	State Lands Commission
___	Health Services _____	___	Tahoe Regional Planning Agency
	State & Consumer Services	/	Other: Fish & Game (Marine Region) _____
___	General Services	/	Other: Toxic Substances Control _____
___	OLA (Schools)	___	Other _____

Public Review Period (to be filled in by lead agency)

Starting Date: July 12, 2001

Ending Date: August 1, 2001

Signature _____

Date: July 11, 2001

Lead Agency (Complete if applicable):

Consulting Firm: Padre Associates, Inc.

Address: 5450 Telegraph Road, Suite 101

City/State/Zip: Ventura, CA 93003

Contact: Scott Robertson or Simon A. Poulter

Phone: (805) 644-2220 x 55.

For SCH Use Only:

Date Received at SCH:

Date Review Starts:

Date to Agencies:

Date to SCH:

Clearance Date:

Notes:

Applicant: Venoco, Inc.

Address: 5464 Carpinteria Ave.

City/State/Zip: Carpinteria, CA 93101

Contact: Steve Greig

Phone: (805) 745-2255

SCH # 2001021016

Revised Mitigated Negative Declaration for Venoco Platform Holly Re-Drilling Project

Lead Agency:

California State Lands Commission
100 Howe Avenue, Suite 100-South
Sacramento, California 95825-8202
Contact: Mr. Cy R. Oggins
(916) 574-1884

Project Applicant:

Venoco, Inc.
5464 Carpinteria Ave.
Carpinteria, CA 93013-1423

Prepared by:
Padre Associates, Inc.
5450 Telegraph Road, Suite 101
Ventura, California 93003

July 9, 2001

STAFF NOTE

As a result of a structural evaluation completed by a third-party engineering firm in anticipation of the placement and operation of new equipment on Platform Holly for the proposed Re-drilling Project, the project applicant (Venoco, Inc.), in consultation with California State Lands Commission (CSLC) staff, has amended its project description to include the reinforcement of two columns (B1 & B2) on the platform's northwest corner. Since this work was not described in the May 15, 2001 revised Proposed Mitigated Negative Declaration (MND), the CSLC staff is re-circulating the Proposed MND for public review and comment.

This document was originally circulated as a Proposed Negative Declaration (ND) on February 5, 2001. On May 15, 2001, the document was re-circulated following amendments to the project description submitted by Venoco, and in consideration of comments received on the original Proposed ND. Project changes discussed in the May 15, 2001 revised Proposed MND included the following:

- The bottom holes of the three proposed re-drill wells were relocated to Leases 208 and 3242, instead of one well each in Leases 208, 3120, and 3242.

- Mitigation measures were incorporated into the project to reduce identified potential significant impacts to a level of insignificance. The Evaluation of Environmental Impacts section (Section 14) was revised accordingly, and a Mitigation Monitoring Program was included.

This revised proposed Mitigated Negative Declaration (MND) includes the additional changes listed below.

- An updated project description discusses the proposed platform reinforcement work and the proposed addition of a drill mud degasser (the latter at the request of Santa Barbara County Air Pollution Control District staff).

- Potential impacts associated with the additional platform reinforcement work and the new equipment are analyzed,

- Information has also been added in response to comments received.

- New appendices are provided for air emissions data (Appendix B) and a Paint Debris Containment Plan (Appendix D).

Responses to comments on the February 5, 2001 and May 15, 2001 documents are provided in Appendix E and F, respectively. The original State Clearinghouse Number (SCH # 2001021016) has been retained.

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TABLE OF CONTENTS (Continued)

TABLES

FIGURES

LIST OF ACRONYMS

ACP	Area Contingency Plan
APCD	Air Pollution Control District
API	American Petroleum Institute
APN	Assessors Parcel Number
ATC	Authority to Construct
BACT	Best Achievable Control Technology
bbl	Barrel
BHP	Boiler Horsepower
BLM	Bureau of Land Management
BOP	Blowout Preventer
BOPD	Barrels of Oil Per Day
CARB	California Air Resources Board
CCC	California Coastal Commission
CDFG	California Dept. of Fish and Game
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CNEL	Community Noise Equivalent Level
CO	Carbon Monoxide
CSLC	California State Lands Commission
dB	Decibel
DOGGR	Division of Oil and Gas and Geothermal Resources
DOT	Dept. of Transportation
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EOF	Ellwood Onshore Facility
EP	Exploration Plan
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
ESU	Evolutionary Significant Unit
H_2S	Hydrogen Sulfide
HAZOPS	Hazards and Operability Study
JOFLO	Joint Oil/Fisheries Liaison Office
kV	Kilovolt
kW	Kilowatt
L_{DN}	Day-Night Average Level
L_{EQ} (DNL)	Equivalent Noise Level
LPG	Liquefied Petroleum Gas
m	Meter
M	Thousand
MM	Million (thousand thousand)
MMscfd	Million Standard Cubic Feet Per Day
Mscfd	Thousand Standard Cubic Feet Per Day
MMS	Minerals Management Service
MND	Mitigated Negative Declaration
ND	Negative Declaration
NEPA	National Environmental Policy Act
NGL	Natural Gas Liquids
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NO_X	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
OCS	Outer Continental Shelf
OSCP	Oil Spill Contingency Plan
OSPR	Office of Spill Prevention and Response (CDFG)
OSRA	Oil Spill Risk Analysis
OVA	Organic Vapor Analyzer
$PM_{2.5}$	Particulate Matter (≤ 2.5 microns)
PM_{10}	Particulate Matter (≤ 10 microns)
ppm	Parts Per Million
PSD	Prevention of Significant Deterioration
psia	Pounds Per Square Inch Absolute
psig	Pounds Per Square Inch Gauge
PTO	Permit to Operate (APCD)
PUC	Public Utilities Commission
QRA	Quantitative Risk Analysis
ROC	Reactive Organic Compounds
RWQCB	Regional Water Quality Control Board
SCB	Southern California Bight
SCE	Southern California Edison
scf	Standard Cubic Feet (volume)
SCH	State Clearinghouse
SLAMS	State and Local Air Quality Monitoring System
SO_x	Sulfur Oxides
SPCC	Spill Prevention, Control, and Countermeasure
SWARS	Subsea Well Abandonment and Rig Sharing
UCSB	University of California, Santa Barbara
USCG	U.S. Coast Guard
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VRU	Vapor Recovery Unit

ENVIRONMENTAL CHECKLIST FORM

1.0 PROJECT TITLE:

Venoco Platform Holly Re-Drilling Project

2.0 LEAD AGENCY NAME AND ADDRESS:

California State Lands Commission
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825-8202

3.0 CONTACT PERSON AND PHONE NUMBER:

Cy R. Oggins, Environmental Specialist
(916) 574-1884, ogginsc@slc.ca.gov

Jeff Planck, Sr. Engineer
(562) 590-5306, planckj@slc.ca.gov

4.0 PROJECT LOCATION:

The proposed re-drilling project will be conducted within the South Ellwood Field located in the Santa Barbara Channel. Portions of the South Ellwood Field are located within State tideland leases PRC 208.1, 3120.1 and 3242.1.

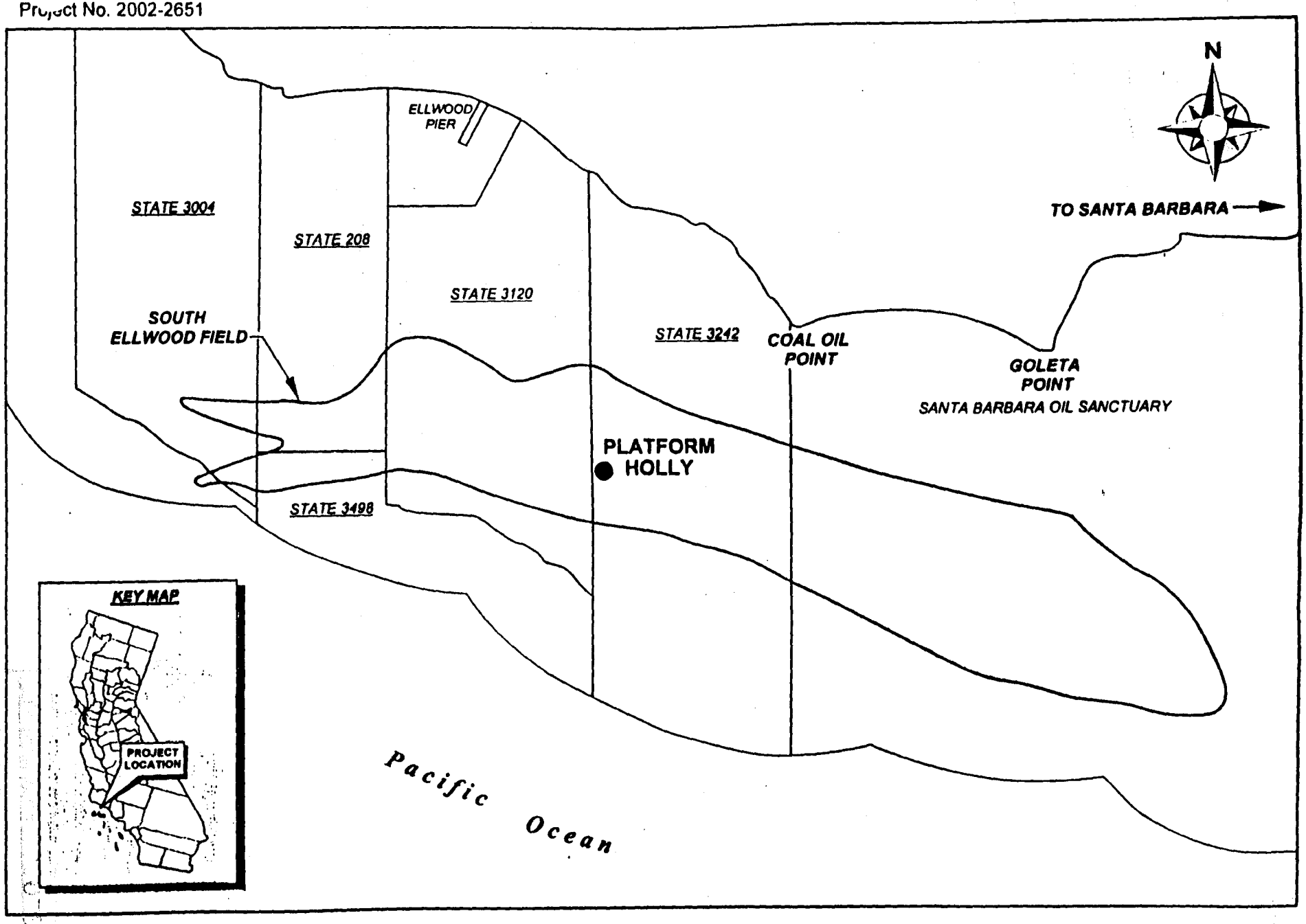
Proposed project activities will be conducted from the existing Platform Holly, which is located on PRC 3242.1 (at latitude 34°23.2' N, longitude 119°54'19.7" W), approximately 2.4 miles offshore Coal Oil Point, Goleta, Santa Barbara County in about 211 feet of water (Figure 4-1). Oil and gas will be sent via existing pipelines to the Ellwood Onshore Facility (EOF). No project-related changes will occur at the EOF, which encompasses approximately 4.5 acres located on the south side of the Union Pacific Railroad tracks, approximately 1,600 feet west of the intersection of U.S. Highway 101 and Hollister Avenue, west of Goleta, on Assessors Parcel Number (APN) 79-210-42.

5.0 PROJECT SPONSOR'S NAME AND ADDRESS:

Venoco, Inc.
5464 Carpinteria Ave.
Carpinteria, CA 93013-1423

Contact: Mr. Steve Greig, (805) 745-2255

N J01
Project No. 2002-2651



padre associates, inc.
ENGINEERS, GEOLOGISTS & ENVIRONMENTAL SCIENTISTS

PLATFORM HOLLY AND
SOUTH ELLWOOD FIELD MAP
FIGURE 4-1

6.0 PROJECT BACKGROUND:

6.1 Geologic Setting

The project area is situated in the northwest portion of the Transverse Range Geomorphic Province of Southern California, which is characterized by predominately east-west trending topographic and structural elements, including extensive faulting, folds, mountain ranges, and valleys or basins. Physiographic features include the mainland shelf offshore, a raised platform or terrace along the coastline and low hills and mountainous terrain that form the southern flank of the Santa Ynez Mountains.

6.2 South Ellwood Field

The South Ellwood Field is located 2 miles offshore in State waters, approximately 12 miles west of Santa Barbara, California (Figure 4-1). The South Ellwood Field lies within State leases PRC 208, 3120, and 3242, and extends at least 3.75 miles into the Santa Barbara Oil Sanctuary east of PRC 3242. All production from the South Ellwood Field is produced through Platform Holly. The South Ellwood Field belongs to a regional east-west anticlinal trend that runs along the northern flank of the Santa Barbara Channel and extends to the onshore Ventura basin. This anticlinal trend includes several giant oil fields, including the Dos Cuadras, San Miguelito, and Ventura fields.

The South Ellwood main structure is an approximately 7-mile-long faulted anticlinal trap that has a trend of about N70W and plunges to the northwest. The anticline verges to the south (i.e., the south flank dips more steeply than the north flank), and thrust faults parallel to the anticlinal axis are present on both the north and south flanks of the anticline. These faults have vertical displacements that range from 100 to 600 feet. A down-to-the-north fault cuts the northwest and north flank of the structure.

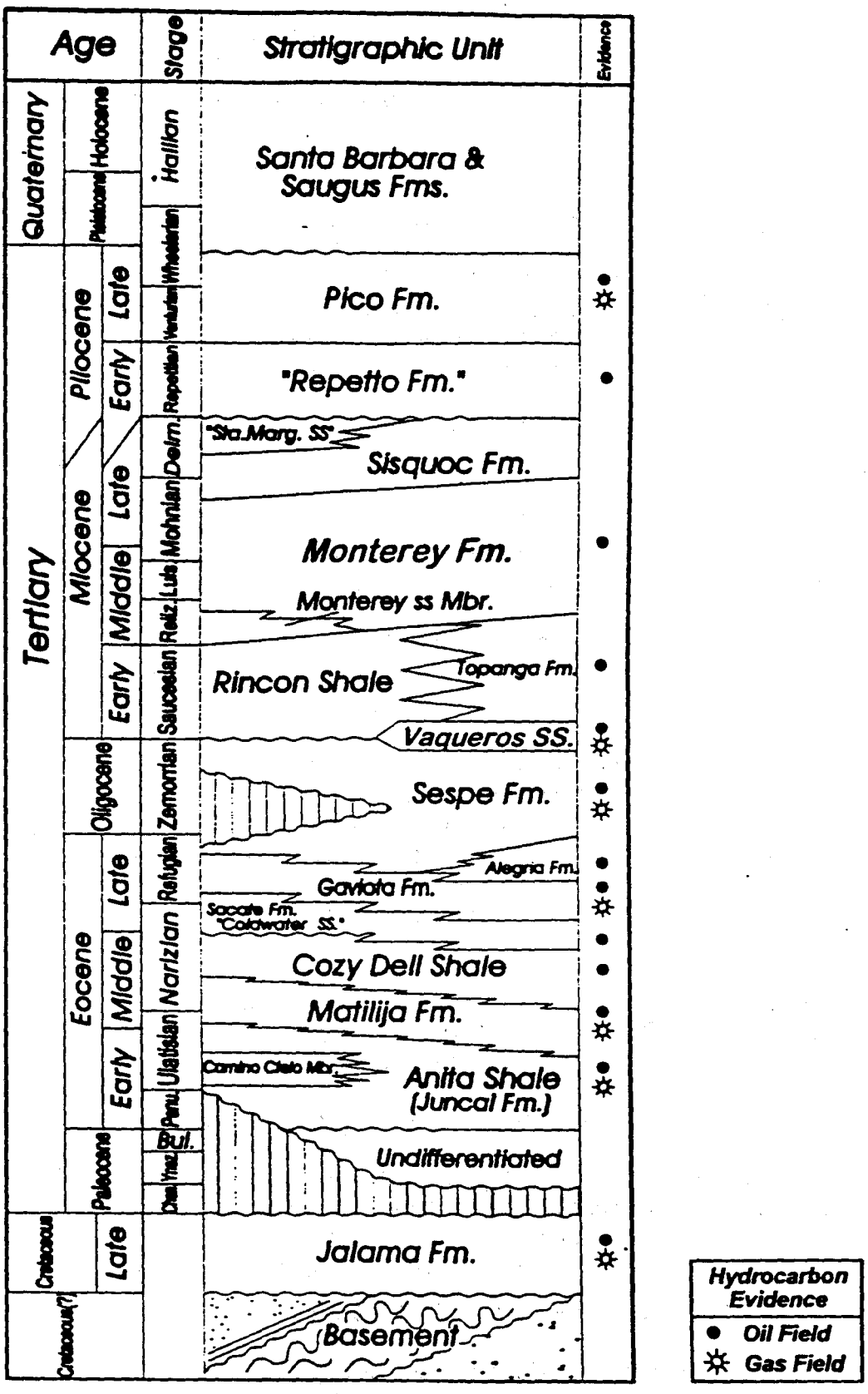
Productive reservoirs in the South Ellwood Field include the Middle Miocene Monterey Formation, Lower Miocene Rincon Formation, Oligocene Vaqueros Formation, and the Oligocene Sespe Formation (Figure 6.2-1). The tops of these formations lie at depths of approximately -3,500 to -5,700 feet subsea.

6.3 Monterey Formation

The primary producing reservoir in the South Ellwood Field is the Monterey Formation. The Monterey consists primarily of chert, dolomite, porcelanite, organic mudstone, and siliceous shale. Due to the highly fractured nature of the formation, the Monterey has excellent vertical and horizontal permeability.

7.0 DESCRIPTION OF PROJECT:

The proposed project would involve re-drilling three production wells from Platform Holly into the Monterey Formation (South Ellwood Field) on State leases 208 and 3242. No new lease or extension of existing lease term is required for this project, and no project-related changes are proposed onshore.



SOURCE: Jim Galloway-MMS, Camarillo

padre associates, inc.
ENGINEERS, GEOLOGISTS & ENVIRONMENTAL SCIENTISTS

STRATIGRAPHIC CHART OF
SANTA BARBARA - VENTURA BASIN
FIGURE 6.2-1

1945

7.1 Project Objective

The purpose of the proposed development work in the South Ellwood Field is to accelerate depletion of the recoverable oil. Depletion will be accelerated by changing the bottom hole location of three wells that are located in poorly producing areas of the reservoir to areas of more productivity. The number of wells on Platform Holly will not increase; however, the bottom hole (subsurface) locations of three wells will change. The activities associated with this project are similar to previously approved drilling activities on Holly. Table 7.1.1 compares estimated production from the three re-drill wells (upon completion) with current and permitted production.

Table 7.1-1. Current, Estimated Project, and Permitted Oil and Gas Production Rates

	Oil (barrels of oil per day [BOPD])	**Gas** (million standard cubic feet per day [MMscfd])
Estimated total production from three re-drills	1,500 – 2,000	1.5 - 2
Approximate current production on Holly	4,100	4.7
Permitted production rate: Holly	20,000 *	13
Permitted production rate: EOF	13,000 **	13

* Oil/water ("wet") emulsion volume. ** "Dry" oil, in contrast to the oil/water emulsion volume from Holly.

Venoco estimates that the South Ellwood Field consists of over 4.15 million acre-feet of oil-bearing reservoir rock. Fifty million barrels (bbls) have been produced from the Monterey formation, and an estimated 150 million bbls of recoverable oil remains to be produced from the formation. Historically, production at the South Ellwood Field (Leases PRC 3120.1 and PRC 3242.1) has reached over 11,000 BOPD from Platform Holly to the EOF. Since 1992, production has been essentially flat at around 4,100 BOPD. This flat production has occurred without significant well work in the field or additional wells.

At the South Ellwood Field, the oil accumulation is underlain by a significant amount of bottom water (the water leg). As oil is produced from the field, pressure within the formation is reduced; this pressure depletion causes the bottom water to displace oil up through the fracture system within the Monterey Formation (see Section 6.3). The oil then travels to the nearest producing well (the area of reduced pressure). Some wells producing from the top of the Monterey Formation have experienced very little, if any, decline in production rates. This low decline is due to the significant volumes of recoverable oil remaining in place. Other wells, such as the three proposed for re-drilling, are located where the fracture system has either watered out or is not well developed. The wells will be re-drilled to more crestal locations where significant pockets of undrained oil have been identified.

The life of an oil field and its production facilities is a function of the size of the reservoir and the rate at which it can be efficiently developed (assuming the price of oil justifies the effort). This re-drilling project does not change the volume of recoverable oil available in this reservoir. Its goal is to accelerate depletion of the recoverable oil by improving the production rate of three wells on Platform Holly. The project does not add to the recoverable reserves of the South

Ellwood Field and thus does not extend the life of the field. The absence of the project would not result in an earlier cessation of production on Platform Holly and processing at the EOF; these facilities would continue to operate.

7.2 Project Components

7.2.1 Existing Leases and Use of Existing Facilities

The proposed project involves the continued development from an existing platform of two existing State leases: State lease PRC 208.1 was acquired in 1946 by Signal Oil and Gas, who was subsequently succeeded by ARCO; and State lease PRC 3242.1 was acquired by Richfield and Mobil in 1965. The third lease in the South Ellwood Field, PRC 3120.1, was acquired by Richfield and Mobil in 1964; Since the beginning of production from the leases, operations have been conducted by ARCO and Mobil. Venoco, Inc. purchased the leases from Mobil and ARCO in 1997-1998, and has operated the onshore and offshore facilities since that time.

No new lease or extension of existing lease term is required for this project. State leases 3120.1 and 3242.1 are currently producing, while State lease 208 is currently not producing. Project work will be conducted offshore from Platform Holly. No changes to the existing onshore facility, subsea pipelines, or power cable are proposed under this project. (See Section 8.0 for a description of the existing facilities.)

7.2.2 Proposed Change of Bottom Hole Location for Three Wells

Of the 30 wells located on Platform Holly, 22 are currently producing oil and gas, two are used for gas injection, and six are idle. Venoco is proposing to change the bottom hole location of three of the 30 wells. Two of the wells (wells 3120-13 and 3242-7-1) are active, and one (well 3242-6) is idle. These three existing wells will be re-drilled across the top of the anticlinal structure where the water drive will push the oil to the top of the Monterey interval. These wells will accelerate the production of oil. The wells proposed to be re-drilled from Platform Holly into the Monterey Formation are into leases PRC-208 and PRC-3242. Table 7.2-1 lists these wells and the coordinates for the proposed bottom hole locations; Figure 7.2-1 shows the existing and proposed bottom-hole locations. Actual bottom hole locations will be subject to review and approval by CSLC staff.

7.2.3 Column Reinforcement

As a result of a structural evaluation prepared by a third-party engineering firm (Thomas & Beers 2001) for review by California State Lands Commission (CSLC) staff in anticipation of placement and installation of new equipment for the re-drilling project, Venoco, in consultation with CSLC staff, will reinforce two columns (B1 & B2) on the northwest corner of the platform. This will allow for project design loads for the two wells on the north end of Platform Holly. T-Section (split I-beam) reinforcing will be welded to the columns and extend from just below the Drilling Deck down to approximately the +7 ft elevation level. In addition, some drilling deck truss joints will receive plate bracket reinforcing to achieve a direct transfer of loads across the joints.

Table 7.2-1. Proposed New Bottom-Hole Locations

Re-drill No.	Lease No.	Original Well No. & API No.	X (dist from Holly)	Y (dist from Holly)	Z (subsea)	Length of re-drilled wellbore
1	PRC-208	3120-13 (28320278)	9,360 ft West	6,220 ft North	-4743 ft	13,000 ft
2	PRC-208	3242-6 (28320065)	10,600 ft West	2,170 ft North	-4,400 ft	11,900 ft
3	PRC-3242	3242-7-1 (28320067)	8,137 ft East	2,397 ft South	-4,300 ft	11,000 ft

The reinforcement work will take approximately 20 to 25 days and be performed by approximately 18 to 20 personnel. Transportation of materials, personnel, and equipment for this work will use the existing crew and supply boat trips (see Section 7.2.7). Materials to be shipped include scaffolding and steel T-Section (split I-beams). An electric welding unit, using existing platform power, will be used. Therefore, no new air emissions will be generated by this work.

Prior to welding, the surface will be prepared by removing paint from the narrow strips to be welded. Analysis of paint samples from the area to be stripped indicated a lead content of 28 ppm, which is below the threshold limits of 699 ppm for solids per Cal/OSHA Title I, Section 1532.1(d)(5). A Final Paint Stripping and Containment Procedure, including the contractor's safe working procedures, will be submitted and approved by CSLC staff prior to initiating the work. Venoco has prepared a Paint Debris Containment Plan (Appendix D) that discusses the methods that will be used to catch paint particles and prevent their discharge overboard, and the disposal of materials onshore at a permitted disposal site.

7.2.4 Equipment/Personnel

Venoco proposes to use both equipment already existing on the platform and new equipment brought to the platform to conduct the re-drilling operations (Table 7.2-2). A detailed description of Platform Holly and its associated equipment is provided in Section 8.0. The natural gas for the generators is Public Utilities Commission (PUC) gas piped from shore. Air emissions from the equipment to be used for this project are calculated in Section 14.3. Although the new equipment may be idle after the project, it will stay on the platform.

During drilling, gas and/or air may become entrained in the drilling fluid (mud) due to a variety of reasons. A degasser is often used to help "break out" the entrained gas. There are various types of equipment in use to accomplish this, but they are all based on using baffles in the mud flow to agitate and spread out (increase the surface area) of the fluid to allow the gas to "break out." The mud may enter the degasser by being pumped (or "sucked") into the equipment, and the gas is removed (or vented) through the top of the equipment. The gas can be vented to air, captured and sent to the vapor recovery unit for further processing, or, if natural gas is involved, flared through the stack.

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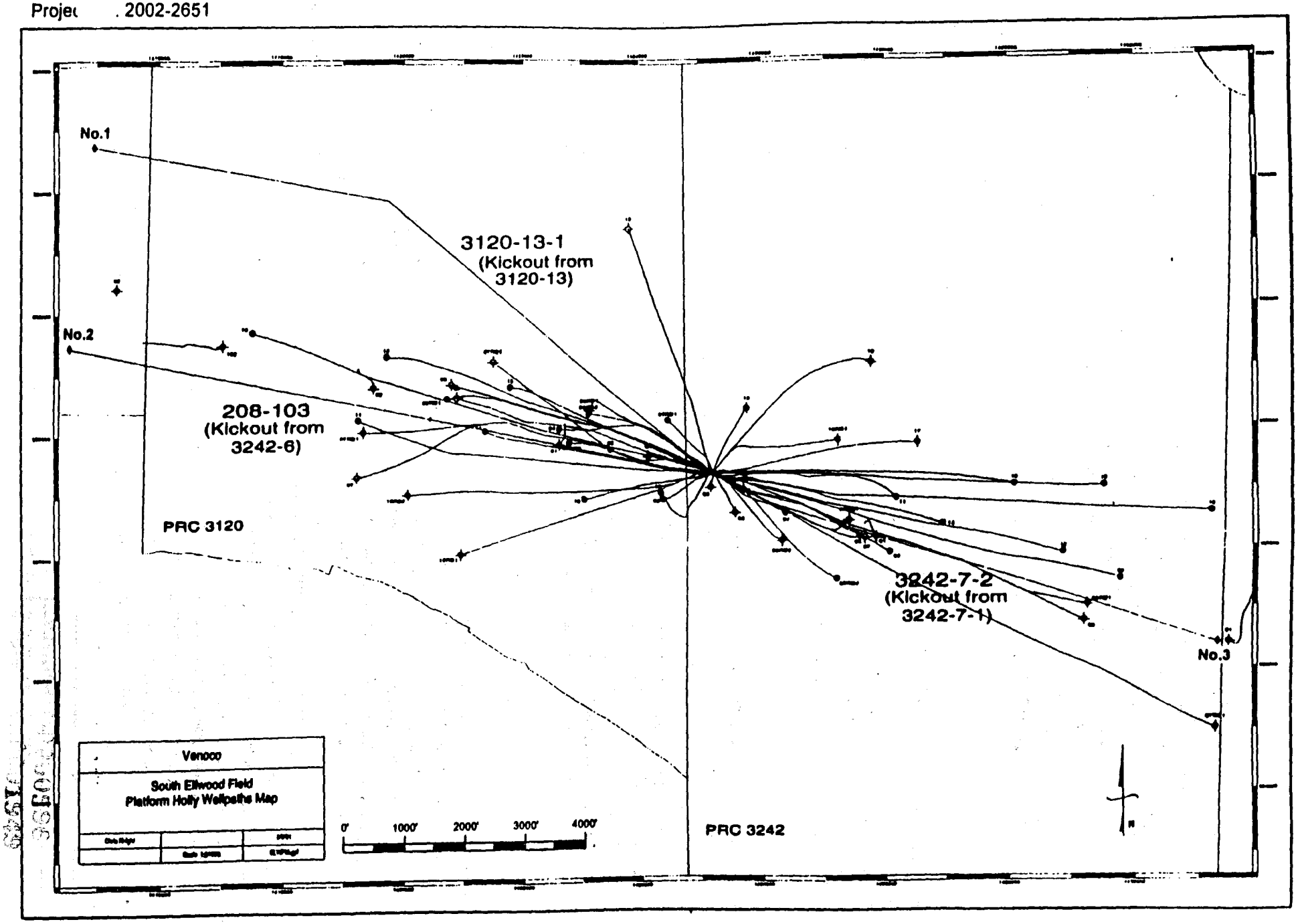

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BOTTOM-HOLE LOCATION
FIGURE 7.

Table 7.2-2. Equipment Needed for the Re-drill Project

Existing Equipment	New Equipment (and Purpose)
• Diesel driven crane • Electric line unit • Slick line unit • Hydraulic unit for casing tongs coil • Tubing unit • Drill rig • 2 Natural gas powered, 803 BHP generators	• Electric top drive unit – To allow use of longer stands of pipe and to rotate drilling pipe as it is being removed from well, which provides greater control. • Electric cement unit – For plugging the abandoned old wells and cementing the annulus of the new wells. • Electric SWACO cuttings injection system – For grinding the cuttings prior to injection. • Natural gas 1053 BHP generator – An additional unit to supply power for the new electric equipment. • Mud degasser – To remove entrained gas and/or air from drilling mud.

Power for the new electrical equipment will be provided by the natural gas powered generators as well as the existing subsea power cable from shore. The drilling rig power loads are very cyclic depending on the nature of the activity. Power for the heavy loads will be provided by the generators. Aspects of the rig with relatively constant loads will be configured so that they can be fed from either rig power (generators) or platform power (from cable). The existing power systems on Platform Holly run the subsea power cable close to its maximum capacity. If the company chooses to run a moderate load [e.g., the cuttings injection system at approximately 325 kilowatts (kW)] using platform power, an equivalent 325 kW of platform power would be temporarily shut in while configured in this manner. After the re-drilling project is completed, there will be no additional power needs above the present use.

The number of personnel necessary to conduct this work will be similar to those needed for well workovers periodically conducted as part of the normal operations on the platform. Specifically, there will be approximately 18 additional people at one time (per shift) on Platform Holly during the drilling activity of the proposed project. (Another way to describe this is 18 additional people working a 12-hour shift, with two shifts per day, seven days per week. In contrast, a normal workover operation would use 15-16 additional people and only work during the daylight shift.)

Consistent with existing operations (see Section 8.2.2), personnel reporting to Holly will arrive and, if applicable, park their vehicles at the Ellwood Pier, located approximately 1/2-mile west of the EOF. Venoco expects that crews for this re-drilling project will be transported via the normally scheduled crew boat trips that are part of the ongoing work on the platform. The only circumstance where special trips might be needed is if the timing of the arrival of an individual with special expertise (e.g., a mud expert) does not correspond to scheduled trips. Ordinarily, scheduled trips are frequent enough to obviate special trips.

7.2.5 Drilling Activities

Prior to re-drilling the wells, the existing well bores to be used will be abandoned and plugged with cement, and the inner casing will be cut and recovered, to a depth above which the new drilling will kick off. CSLC and Division of Oil, Gas, and Geothermal Resources (DOGGR) staffs will approve the abandonment procedures. DOGGR will witness and approve the activities.

Each well will then be directionally drilled to its new bottom hole location. The top drive unit to be used for the drilling will allow use of longer stands of pipe, which results in less time required to drill each well; and allows rotating the drilling pipe as it is run or removed from the well. This provides a safer and more efficient drilling operation, and will reduce the drilling time of each well over conventional methods. While a cellulose/seawater based mud system is planned to be used to drill to the target bottom hole location, mineral oil based mud may be used if needed. (The *use* of mineral oil-based muds is not prohibited by the CSLC, Regional Water Quality Control Board [RWQCB] for State waters, or U.S. Environmental Protection Agency [EPA] for federal waters. However, pursuant to current CSLC policy, no muds and cuttings from the development of State Tidelands can be *discharged* into marine waters and must be either injected or transported to shore.)

An intermediate casing string will be set at the top of the Monterey formation. The Monterey will then be drilled and may be completed with a cemented production liner set at the base of the productive zone. A cellulose/seawater based mud system will be used for this section of the hole. Monterey wells contain hydrogen sulfide (H_2S). See Section 8.3 for pollution prevention and safety at Holly.

The equipment to abandon the wells is virtually the same used on the drilling projects. Re-drilling is a common industry practice and has been done on all of the platforms off California (as well as the rest of the world). A re-drill uses existing tubulars to the greatest extent possible. On Holly, all of the slots are occupied currently by well bores, many producing, some idle. Any drilling on Holly, at this point, would require use of an existing slot (unlike the Full Field Development project which contemplates additional well slots to be constructed [see Section 7.3.1]).

The "pipes" extending from the platform down to the seafloor are called "risers." These are the largest outer well casing, commonly referred to as "drive pipe" or conductor casing, which typically are only a couple of hundred feet into the subsurface and are not in contact with the production casing and are not subject to pressure or drilling or production materials. They amount to a "protective sheath" around the well casing and production pipe. These risers are included in the overall cathodic protection and corrosion control & prevention system used on State (and all) platforms. Regardless, when the blowout preventers are installed, the competency of the well bore casing (inside of the risers) is usually hydrostatically tested with the blowout preventers to the working pressure of the preventer stack. If the test fails, the pipe would have to be replaced, or repaired, or the slot could not be used for the drilling activity.

7.2.6 Drilling Fluids and Disposal

Platform Holly will operate in a zero discharge mode, therefore no wastes (including drill muds, drill cuttings, or produced waters) are discharged to the marine environment. During the proposed drilling operations, daily average generation of waste mud and cuttings are estimated to be 120 bbls and 25 bbls, respectively. Venoco is proposing to grind the produced cuttings and dispose of these cuttings and associated drilling fluids by injection into an approved Class II disposal well on the platform. If mineral oil based muds are used, Venoco will most likely ship the muds back to the vendor for recycling (if not recycled, they would be injected with the other muds and cuttings).

Venoco will need to add the electric SWACO Cuttings Injection System to the platform to grind the cuttings prior to injection. With permission from the DOGGR and the CSLC, Venoco conducted a reinjection test to ensure that reinjection of muds and cuttings can be successfully completed for this project. Reported test results indicate that the well is capable of handling the projected fluid and cuttings volumes. Formal approval from DOGGR for use of this disposal well for this project will be obtained prior to commencement of drilling. If injection fails or if DOGGR does not approve injection, Venoco would have to cease drilling while reapplying to the CSLC, Santa Barbara County Air Pollution Control District (APCD), and other applicable agencies for approval to barge muds and cuttings to shore

Produced gases generated from the muds during the drilling phase will be captured through the addition and use of a mud degasser. Pursuant to Mitigation Measure AIR-3, Venoco must obtain CSLC and APCD approval of the design specifications and operational procedures of a system to control the gas from the mud degasser (e.g., vapor recovery unit, flare, or carbon) prior to initiating the re-drilling project.

After completion of this project, and oil production from the re-drilled wells begins, produced water will be disposed of using an approved, onshore injection well, as is currently practiced with existing wells.

7.2.7 Support Operations

Crew changes and delivery of small supplies in support of the re-drilling project will be via the crew boat that runs between the Ellwood Pier and Platform Holly (see also Section 8.1.5). The frequency of trips can vary, with a maximum of eight per day. The crew boat currently makes about five trips per day, and is always available in case of emergency (it takes about 20 minutes to reach the platform from the pier). Except in rare circumstances, such as during upset conditions or where a mud expert or other special expertise person cannot take a scheduled trip (see Section 7.2.4), no increase is expected as a result of this project.

Supply boats periodically bring larger supplies from Port Hueneme. Typically each load is one-third of the boat's capacity. During the course of this project, Venoco anticipates that two additional trips per well (total six additional trips) will be necessary to transport equipment and larger supplies such as drilling mud and drilling pipe from Port Hueneme to support the re-drilling. These will be full loads and the supply boat will remain at the platform site for longer periods during off-loading.

The project will not result in any changes to permitted operations at the EOF, which is located approximately 0.7 miles east of the Ellwood Pier.

7.2.8 Schedule

After the wells have been prepared and the equipment required is on board and rigged up, each well is estimated to take approximately three months to drill and complete. Following completion of the first well, it will be tested prior to the start of drilling the second well. The second well will be drilled within six months of completion of the first well. Following completion of the first two wells, they will both be tested on production for an extended period of time. Testing of the first two wells will last for at least 12 months from the start of the first well. For the purpose of identifying potential environment impacts, Venoco will not begin drilling the third well until 12 months from the start of the first well.

7.3 Potential Future Projects

7.3.1 Full Field Development

In February 2001, Venoco applied to the CSLC and Santa Barbara and Ventura Counties to allow for expanded development of the South Ellwood Field from Platform Holly (Venoco, *Development Plan Application for Full Field Development of the South Ellwood Field*, February 2001). As currently proposed, the project is comprised of the following components:

- Extend the lease boundary of existing State lease 3242.1 to allow for expanded development of the South Ellwood Facility from Platform Holly;
- Construct additional well slots, construct and initiate gas processing activities, and initiate oil/water separation activities on Holly;
- Decommission and remove all oil and gas processing facilities at the EOF;
- Decommission, abandon, and restore the Ellwood Marine Terminal and discontinue marine transportation via barge; and
- Construct a new offshore pipeline to transport oil from Platform Holly to the existing Rincon Oil Separation Facility in Ventura County.
- Transport oil from State Lease 421 to Platform Holly (see Section 7.3.3).

The evaluation process for Venoco's Full Field Development Plan will begin after Venoco's application is filed as complete (in February 2001, the applications were deemed incomplete). The process would involve environmental and technical review of the project under the California Environmental Quality Act (CEQA), such as the preparation of an Environmental Impact Report (EIR), and may involve concurrent review pursuant to the National Environmental Policy Act (NEPA).

The Full Field Development deals with new production by adding to the reserves that could be produced from Platform Holly by accessing the heretofore undeveloped eastern portion of the reservoir. The proposed Re-drill Project does not add any reserves; it increases the efficiency of present production as part of proper management of the reservoir within existing leases.

7.3.2 Power Cable Replacement

The 16.5 kilovolt (kV) subsea power cable from shore to Platform Holly (see Section 8.1.4) is approaching the end of its useful life. Venoco has discussed replacing this cable with a cable of greater capacity to allow optimization and greater efficiencies of power use for ongoing and future work at the platform. Although Venoco has not yet applied for agency approval to replace the power cable, the company believes that replacement of the cable in the near future needs to occur regardless of whether or not the proposed Re-drill Project is approved.

7.3.3 State Lease 421

In July 1997, the CSLC assigned State lease 421 to Venoco (from Mobil). The lease has two idle wells—a water injection well and an oil production well—on small piers near the EOF and adjacent to the Sandpiper Golf Course. Both wells have been out of service since 1994 (in 1994, production was about 40 BOPD). In 2001, Venoco received emergency permits from the California Coastal Commission (CCC) and Santa Barbara County to secure each well to prevent a release of petroleum hydrocarbons into marine waters. Although Venoco has not yet applied to the CSLC to return the well(s) to production, Venoco's Full Field Development Plan proposes the transport of Lease 421 production to Platform Holly. The status of remnants of an oil pier (Bird Island) on Lease 421 is also currently being reviewed regarding its disposition.

7.3.4 Gato Canyon Unit

Samedan Oil Corporation has submitted a proposal to the Minerals Management Service (MMS) to drill one delineation well from a mobile offshore drilling unit (MODU) into the Gato Canyon Unit (located in the central Santa Barbara Channel offshore Las Flores Canyon) during the second quarter of 2003. Drilling is expected to take about 90 days. The operator will submit a revision to the previously approved Exploration Plan (EP). The MMS will conduct a complete technical and environmental evaluation of the EP including an assessment of the cumulative effect of the all proposed MODU projects and other activities in the area. The MMS is preparing an Environmental Impact Statement (EIS) covering the proposed delineation drilling projects in three areas: Gato Canyon Unit, Offshore Santa Maria Basin, and Bonito Unit. The EIS is scheduled to be published in draft for public review in Summer 2001. The MMS decision on the revised EPs, originally scheduled for Fall 2001, has been postponed following the June 2001 U.S. District Court for the Northern District of California decision upholding California's legal authority to review the renewal of offshore oil and gas leases in the Santa Barbara Channel.

7.3.5 EOF Odorant Station

In August 2000, Venoco applied to the Santa Barbara County Energy Division for the proposed addition of an odorant injection equipment package (odorant station) at the EOF to odorize the Ellwood sales gas prior to it entering into the Ellwood Sales Gas Line. The gas in the pipeline must be odorized in accordance with Department of Transportation (DOT) regulations, and due to a pending reclassification of the Ellwood Sales Gas Pipeline, or portions of the pipeline, from Class 1 to Class 3. The County has deemed the application incomplete pending the receipt of additional information. The gas currently produced on Platform Holly has a sour (H_2S) odor.

7.4 SWARS Issues

The proposed re-drill project does not have the potential to emit 10 tons or more per year of any regulated pollutant, and therefore it does not necessitate enhanced procedural review pursuant to the SWARS Settlement Agreement and General Release (1996).[1]

8.0 EXISTING FACILITIES:

8.1 Current Status of Operations and Description of Facilities

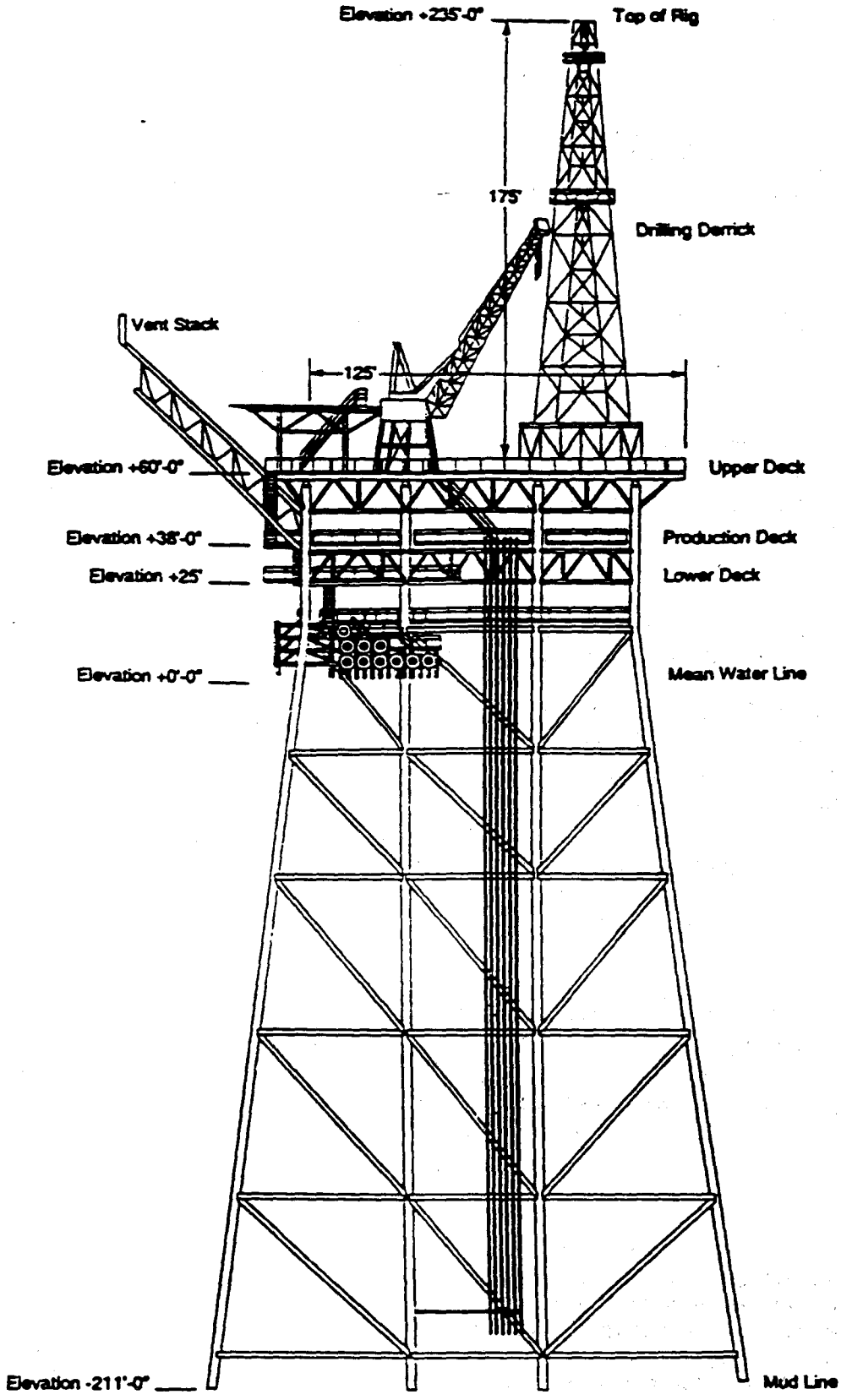
8.1.1 Platform Holly

Platform Holly is a conventional, self-contained oil drilling and production platform built on PRC 3242.1 in 1966 (Figure 8.1-1). The platform is divided into three deck elevations including the Upper Drill Deck, Production Deck, and Lower Landing Deck. The jacket is comprised of eight 40-inch-diameter legs with 37-inch piling driven through them and terminated at the (+)17.5-foot elevation above the mean water line. The jacket is of tubular steel construction with an impressed current cathodic protection system. Many of the topside tubular braces have been grouted in a deck retrofit, adding weight to the structure. Process and control equipment, drilling systems, and living quarters have all been revamped in recent years.

The platform produces oil/water emulsion and natural gas, which are separately transported via subsea pipelines to the EOF. The gas is compressed and then dehydrated on the platform to remove water vapor that could cause pipeline corrosion. A portion of the produced gas is compressed to high pressure, then used for artificial lift (gas lift) in producing wells; the remainder of the produced gas is transported via a 6-inch diameter pipeline that is currently rated for an operating pressure of 720 pounds per square inch gauge (psig). The oil/water emulsion is transported through a separate 6-inch diameter pipeline that is currently rated for an operating pressure of 720 pounds psig.

Platform Holly is currently permitted at a production rate of 20,000 bbls of oil emulsion per day and 13 MMscfd of natural gas. The peak production rate on the platform has reached 17,000 bbls of wet emulsion (11,000 bbls of oil and 6,000 bbls of water) per day. Facilities on the platform include 30 wells at a current production rate of 15,000 bbls of wet emulsion (4,100 oil and 10,900 water) per day. Currently, 22 of these wells are producing, six are idle, and two are for gas injection.

[1] In 1995, the CSLC certified a Final EIR (CSLC EIR No. 663, SCN 94121042) and approved the Subsea Well Abandonment and Rig Sharing (SWARS) Program for the abandonment and removal of various wells and flowlines located on offshore State tide and submerged lands. Following a legal challenge to this certification and approval, the CSLC and other named parties agreed to establish (among other terms and procedures and through May 2001) a public consultation process for "any proposed oil and/or gas project which is located in whole or in part in Santa Barbara County and has the potential to emit 10 tons or more per year of any regulated pollutant, and for which (a) an application has been received by the Commission, (b) a permit, approval, or other entitlement for use, is required from the Commission in the exercise of its discretion, and (c) the Commission serves as lead agency under the CEQA."



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PLATFORM HOLLY LOOKING SOUTH
FIGURE 8.1-1

The distribution of equipment on the platform is as follows:

a. **Drill Deck.** The drill deck is located at elevation (+)60-foot and is mostly open with a drill skid frame over the well bay and some major pieces of production equipment on the east side adjacent to and under the helideck as listed below. Maximum load capacity of the crane ranges up to 100 tons, depending on its configuration (e.g., 100-foot boom to 50-foot boom, 4 or 6 lines, and boom angle; as noted in Venoco's Full Field Development application, its present configuration is rated at 4.5 tons at an 80° radius).

Drill Deck West	Drill Deck Center	Drill Deck East
Drill Skid Frame Fresh Water Tank	Clear Deck	Vapor Recovery Unit (VRU) VRU Aftercooler Pedestal Crane After Scrubber Absorber White Superior Compressor Unit Ingersoll-Rand (IR) Compressor Unit Fin Fan Glycol Regeneration Unit Helideck

b. Production Deck. The production deck is located at the elevation (+)38-foot and is relatively full of process equipment. The west module well bay has 30 production trees and associated piping. The center module has extensive process piping and tankage, and the east end contains the control room and additional piping as listed below:

Well Bay West	Well Bay Center	Well Bay East
30 Production Trees Annulus Compressor Suction Scrubber Annulus Separator Well Bay Test Separator Test Trap 3242 Test Trap 3120 Test Trap Rincon Group Separator 3120 Stack Scrubber Crude Oil Test Tank	Pig Launchers Shipping Pumps Meter Prover Loop Chemical Injection Hydraulic Pumps Change Room Transformer Lab Firewater Pump Flare Boom	Air Compressors Office/Control Room Repair Shop Switchgear Building Galley
	Mezzanine	**Mezzanine**
	Surge Tank 3242 Surge Tank 3120 Group Separator 3242 Acid Surge Air Receiver	Ventilation Blowers Foreman's Office Conference Room

c. **Landing Deck.** The Landing Deck is located at elevation (+)25-foot and supports a number of tanks and workshops as listed below:

Landing Deck
Drilling Change Room
Fresh Water Tanks A and B
Flotation Cell
Salvage Tank
Retention Tank
Surge Skimming Tank

d. **Boat Landing.** The boat landing is located at elevation (+)14-foot and includes an oil spill boom reel.

8.1.2 Ellwood Onshore Facility (EOF)

The EOF is permitted to process 13,000 BOPD ("dry" oil, in contrast to the oil emulsion volume from Platform Holly) and 13 MMscfd of natural gas, 10 million (MM) gallons of liquefied petroleum gas (LPG) per year, and 5 MM gallons of Natural Gas Liquids (NGL) per year. Historically, production has reached over 11,000 BOPD from Platform Holly to the EOF (Leases PRC 3120.1 and PRC 3242.1).

8.1.3 Pipelines

Four pipelines run from Platform Holly to the EOF. Produced natural gas and crude oil are sent separately through two 6-inch pipelines to the EOF. A 4-inch utility pipeline is currently utilized to transport PUC quality natural gas to the platform. Other uses include transport of produced salt water or produced gas or oil/water emulsion. Water is processed to a dedicated disposal well at the plant. A 2-inch water pipeline is currently not in service.

8.1.4 Utility Systems

Electric power is supplied to Platform Holly via a 2-inch, 16.5kV (nominal) subsea power cable that originates at the EOF and runs adjacent to the pipelines. This cable has operated continuously since its installation in 1966. Electrical distribution equipment on the platform consists of two main power transformers that reduce the voltage to 2,400 and 480 volts, respectively. Power is supplied to the EOF by buried Southern California Edison (SCE) power lines. Platform Holly currently consumes approximately 3,000 kW of electric power.

Water is loaded into portable water "tote" tanks and transported to Platform Holly on an as-needed basis during regularly scheduled crew boat runs. Present water consumption averages 30,000 gallons per month.

8.1.5 Support Vessels

Santa Barbara County APCD Permit to Operate (PTO) No. 8234 currently restricts vessel traffic to Platform Holly to 192 supply boat trips per year and 2,912 crew boat trips per year. The use of boats by the current operations varies greatly depending on activity on the platform. Crew and service vessel traffic is restricted by the Oil Service Vessel Traffic Corridor Program established by the Joint Oil/Fisheries Liaison Office (JOFLO) in coordination with local fishermen and the petroleum industry to reduce the potential for adverse interaction between the two industries. A crew boat makes periodic runs between the Ellwood Pier and Platform Holly for crew changes and delivery of small supplies and averages about five trips per day. Supply boats bring larger supplies from Port Hueneme on an as-needed basis. Historically, depending on the activities on the platform, this has averaged from approximately two to 16 trips per month.

8.1.6 Permits

Project facilities currently operate under a number of State, local, and federal permits and/or approvals. These permits and/or approvals include:

Agency	Type of Permit/Approval
• California State Lands Commission	• Lease Agreement Provisions
• California Department of Conservation, Division of Oil, Gas, and Geothermal Resources	• Permit to Conduct Well Operations
• California Regional Water Quality Control Board	• Section 401 Water Quality Certification
• California Coastal Commission	• Coastal Development Permit
• Santa Barbara County Air Pollution Control District	• PTO No. 8234 for Platform Holly
• U.S. Army Corps of Engineers	• Section 10 and Section 404 Permits

8.2 Platform Holly Activities

The primary operations involved on Platform Holly are production, well maintenance and workover operations, primary separation, emulsion shipping, vapor recovery, gas compression, and dehydration, and gas lift compression. Most of these operations are conducted by the automated equipment on the platforms. This equipment is monitored by the platform operators 24 hours per day. Additional activities and personnel are used for periodic routine maintenance, well maintenance, and workover operations.

8.2.1 Well Maintenance and Workover Operations

Well maintenance and workover operations are periodically required in order to sustain production from the wells. Routine maintenance such as replacing gas lift valves or servicing subsurface safety valves is conducted with a portable slick-line wireline unit. A production rig (double or triple mast) is used to remove production tubing from a well in order to perform well maintenance or stimulation tasks. Such a (triple-mast) rig is already on the platform and, with the addition of an electric "top drive" drilling unit, will be used to re-drill the wells for this project.

A production rig is also used to set cement isolation plugs or bridge plugs in the wellbore to isolate non-productive intervals of the reservoir. A production rig, platform drilling rig, or cantilever jackup drilling rig can be used to workover, recomplete, abandon, sidetrack, or re-drill an existing well. A recompletion involves changing the zone of production by completing additional reservoir intervals. A re-drill or sidetrack involves drilling a new hole interval. Sections of steel casing are milled or pulled from the wellbore to allow re-drilling (which will be done prior to initiating drilling in this project). All of these well maintenance and workover operations have been performed at some time in the past on Platform Holly. In the past, several wells have been recompleted and worked-over to increase production. During these operations, additional supply boats are used for equipment (and some personnel) transportation.

8.2.2 Personnel Requirements

Platform Holly has two operators on board 24 hours per day, seven days per week. Operators work 12-hour shifts, beginning at 7:00 a.m. and 7:00 p.m. Maintenance personnel from the EOF are used as needed. All personnel reporting to Holly arrive and, if applicable, park their vehicles at the Ellwood Pier, located approximately 1/2-mile west of the EOF. From the pier, personnel are transported by crew boat to Platform Holly. Because of its close proximity to the pier, personnel are not housed on the platform.

8.3 Pollution Prevention and Safety

8.3.1 Current Condition of Project Facilities (Within Past Three Years)

In 1999, the CSLC, County of Santa Barbara, and Venoco conducted a comprehensive audit of Venoco's facilities, including Platform Holly. A number of corrective actions were identified and action items were prioritized based on risk and potential consequence. Venoco also completed Hazards and Operability Studies (HAZOPS) and a Quantitative Risk Analysis (QRA).

Implementation of the recommendations from Venoco's HAZOPS and QRA, and the 1999 CSLC/County of Santa Barbara audit will ensure the continued safe operation of Platform Holly. To date, all critical (priority one and two) items, including all the QRA recommendations, have been corrected and all of the high priority objectives have been met. Pollution prevention and safety have been enhanced by the establishment of a well-defined, comprehensive preventive maintenance program, developing a specific operating procedure for the sour gas pipeline, and upgrading or repairing various equipment. Venoco is working directly with the regulatory agencies to complete the implementation of the remaining lower priority items. The project does not impact any of the remaining safety audit objectives, and so will not have any effect on Venoco's ability to complete the remaining objectives.

In 1998, the platform underwent a structural review, which was approved by the CSLC, when the existing drilling/workover rig was placed on the platform. The continued integrity of the platform is sustained by the active cathodic corrosion protection system. Venoco cooperates with the CSLC to ensure the continued structural integrity of the platform. For example, at the recommendation of CSLC, two members on the platform have previously been strengthened. A structural evaluation prepared for review by CSLC for placement and installation of the re-drilling

project equipment resulted in the plan to reinforce two columns on the platform, as described in Section 7.2.3.

In April 1999 an agreement was reached between the Santa Barbara County APCD and Venoco (working with several Santa Barbara County agencies) to correct air pollution problems, including releases of H_2S during July 1998 and February and March 1999. Venoco has addressed the items of that agreement, which included installing a flare at Platform Holly to handle vented gas, installing a backup power system at the EOF, allowing agency safety audits of the facilities, installing a comprehensive pollution monitoring system, and improving barge loading procedures. Venoco is in full compliance with Santa Barbara County APCD regulations (see Section 14.3).

8.3.2 Equipment

Platform Holly is provided with strategically located shutdown switches and alarms. Control valves on the oil wells are actuated pneumatically and hydraulically so that all valves will close when instrument air pressure is suddenly reduced. All safety shut-in devices are tested monthly in the presence of CSLC staff and quarterly in the presence of DOGGR representatives.

Valves and pumps are included as part of the Inspection and Maintenance Program. The program requires a visual inspection of components at a manned facility every 12 hours. Pumps, compressors, and any previous leak sites are inspected every month. Accessible components and transfer units in light hydrocarbon service are tested with an organic vapor analyzer (OVA) every three months. All other components are tested similarly each year.

Platform decks are equipped with curbs, gutters, drip pans, and drains to collect contaminants not authorized for discharge. Drilling deck drains lead to a sump tank located underneath the production deck from which deck water is drained into a surge tank of a flotation cell system for removal. Oil recovered from this system is pumped into the pipeline to the EOF via the test tank. A visual inspection of the ocean water around the perimeter of the platform is conducted daily and recorded.

A Blowout Preventer (BOP) assembly will be in place for emergency well pressure control. The topmost preventer is an annular type that can provide a seal between the casing and the drill pipe. Below this are hydraulically operated ram-type preventers that can quickly seal off the well. An example of a typical BOP stack is illustrated in Figure 8.3-1. Additional measures to control well pressure are the kill line, which can be used to pump drilling mud into the hole to restore pressure balance, and the choke line, which runs to chokes used to relieve pressure in a blowout situation. These are connected to the BOP.

The gas currently produced with the oil on Platform Holly has a sour (H_2S) odor; therefore, odorant does not need to be added to the gas at the EOF. Because the re-drilled wells will be producing from the same reservoir as all existing wells on Holly, the gas produced with the oil from the re-drilled wells is expected to be essentially be the same as the gas produced in the rest of the field. As discussed in Section 7.3.5, although Venoco has proposed to add an odorant station at the EOF if compositionally-different natural gas is produced (i.e., if the gas produced from the re-drilled wells has a different composition and does not have an odor), this

event is unlikely, and the addition of an odorant station at EOF is not part of Venoco's Re-drill project. When drilling is completed, each well will be tested for the composition of the oil and gas. The gas is also checked in accordance with DOT regulations to maintain compliance.

If evacuation of Platform Holly is necessary in an emergency, there are three 15-man life rafts at Holly; this is sufficient to accommodate all the normal platform personnel and the additional persons working on the Re-drill project. Since Holly is only two miles from shore, transportation by helicopter is rarely necessary; however, if needed, the platform heliport is in good condition and rated for "API 2L" service, the same level as the offshore federal platforms that are under the jurisdiction of the MMS, U.S. Department of Interior.

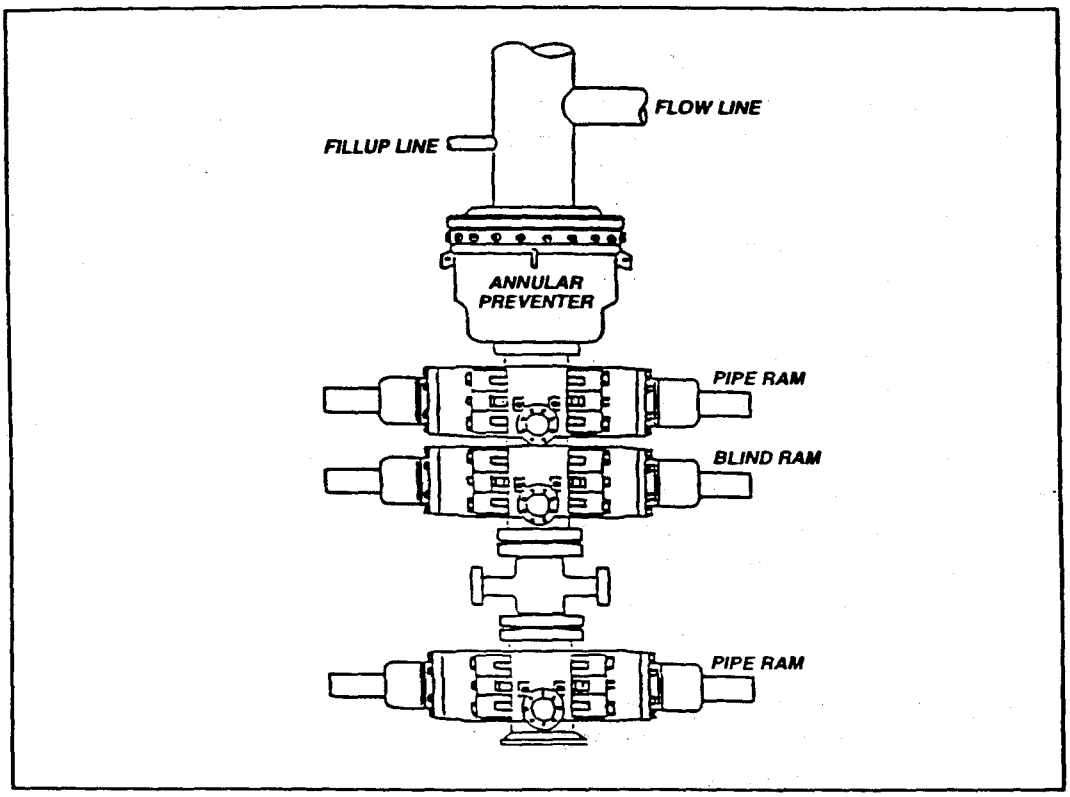


Figure 8.3-1. Typical Blowout Preventer (BOP) Stack

8.3.3 Waste

No hazardous waste disposal is conducted at Platform Holly. Any such waste generated (paint, batteries, oil filters, solvents, etc.) is shipped to the EOF for handling and proper disposal at an approved Class I facility. Wastes such as oily absorbent pads, used glycol filters, and small empty hydrocarbon containers are taken to a Class II disposal site. Ordinary rubbish (e.g., paper, plastic, etc.) is disposed of at a standard Class III landfill. Materials such as empty drums and clean-up rags are returned to the original supplier for recycling. Any additional waste will be disposed of as currently permitted.

No wastes are discharged from Platform Holly to ocean waters. Normal, ongoing operations include the following documentation and handling protocols: (1) A debris log is maintained aboard the platform. If items are lost overboard, they are logged and reported. (2) Any liquids lost overboard are treated as spills and responded to accordingly. (3) Storm water is collected via deck drains to the surge tank, and subsequently shipped to shore for disposal. In addition, Venoco has developed a Paint Debris Containment Plan for the proposed structural work on Holly (see Appendix D).

8.3.4 Plans and Training

Hazardous Waste/Hazardous Materials Management Plans and an OSPR approved Oil Spill Response Plan have been developed by Venoco to comply with State and federal regulations. The Plans include a written commitment of manpower, equipment and materials, clear notification procedures with current personnel contacts, a list of available resources for clean up and control, and immediate response procedures for both major and minor spills. The Plans are updated annually with the review and training for the Spill Prevention, Control, and Countermeasure (SPCC) Plan.

The emergency response training program of Venoco's Initial Response and Sustained Response Teams consists of regular classroom instruction, field briefings, and exercises and drills involving the deployment of response equipment.

As appropriate for their position, facility personnel are instructed in the operation and maintenance of equipment to prevent oil discharges and are made aware of the requirements of the applicable pollution control laws, rules, and regulations. All personnel are trained to at least the technician level for hazardous waste response activities. Environmental, health, and safety meetings are held once per month for two hours. Periodically, oil spill response is a part of the discussion. The SPCC Plan is discussed at least annually and more frequently if necessary. Personnel attending this training include all operators, foremen, and environmental staff. The refresher training reviews the purpose and scope of the SPCC and each person's role in spill prevention, control, and cleanup. The review includes discussions of all recent spill events, malfunctions, equipment changes, and precautionary measures.

Venoco has an H_2S Contingency Plan for the platform. This Plan provides information of the hazards of H_2S gas, the kinds and locations of relevant safety equipment, alarms, evacuation procedures in the event of an emergency, and the roles and responsibilities of personnel on the platform. It includes a section specific to safety procedures if an H_2S release occurs during drilling operations. Platform Holly is equipped with air packs and a cascading air system as required by regulation. There are sufficient masks and other protective gear for 45 people, which is the maximum number of people allowed on the platform.

9.0 MITIGATION MEASURES INCORPORATED INTO THE PROJECT

9.1 Applicant Proposed Measures to Reduce Potential Impacts

Venoco has incorporated a number of measures into the Re-drill Project to avoid potential project-related impacts or to reduce potentially significant impacts to a level of insignificance. These measures are identified below.

1. The proposed re-drilling will not require any modification to the existing EOF and the currently permitted processing levels will not be exceeded. No equipment is proposed that would cause emissions from the EOF to change.

2. The oil and gas produced from the re-drilled wells will be transported to shore via existing subsea oil and gas pipelines. No new or modified subsea pipelines will be constructed.

3. Muds or cuttings generated from the re-drilling activities will be disposed of by injection into an approved Class II disposal well at the Platform. Other wastes will be transported to the EOF per existing standard practice. Holly will remain a zero discharge platform.

4. Venoco will adhere to all existing pollution prevention and safety plans, including: Oil Spill Prevention and Response (OSPR approved); Hazardous Waste/Hazardous Materials Management; Spill Prevention, Control, and Countermeasure (SPCC); and H_2S Contingency.

5. To the maximum extent feasible, crews and supplies associated with the re-drill project will be scheduled with other boat trips. In no case will the re-drill activities exceed the current permitted boat trips to the platform.

6. All vessels will adhere to established support vessel traffic corridors. All personnel who work offshore (including boat captains) are required to view a training and orientation video that includes instructions on avoidance of marine mammals. An annual review of this material is required.

7. Project-related drilling and muds and cuttings equipment will be driven with electric motors, with electricity supplied by natural gas powered generators.

8. In the unlikely event that the composition of the gas from Platform Holly changes, and it no longer has a natural odor, an odorant station will be added to comply with DOT regulations.

9.2 Mitigation Measures

The following mitigation measures have been incorporated into the proposed project to eliminate any potential significant environmental impacts. All mitigation will be monitored as described in Appendix A – Mitigation Monitoring Program.

9.2.1 Air Quality

AIR-1. Venoco shall re-drill no more than two wells in any 12-month period.

AIR-2. Venoco shall implement the following actions throughout the duration of the proposed project. [These measures are based upon the conditions identified in the Santa Barbara County APCD Permit Exemption Request Approval letter (May 3, 2001; Exemption Number 10406-1) and comments received from APCD on June 18, 2001.]

- Supply boat trips shall be limited to no more than one per day.
- Required minimum control efficiencies shall be maintained across each of the catalytic converters.
- An air-fuel ratio controller shall be installed and operated on each catalytic converter to maintain the required removal efficiencies.
- Emissions source testing shall be performed on the Caterpillar G399 and G-3516 engines.
- A Generator Engine Inspection and Maintenance Plan shall be implemented for each generator.
- Fuel consumption of the project engines shall be monitored.
- Emissions from engines used for the project shall be calculated.
- Emission and vessel traffic data shall be transmitted to the Santa Barbara County APCD monthly, with a summary of the data provided to the CSLC each quarter.

AIR-3. Venoco shall submit to the APCD and CSLC for approval the design specifications and operational procedures of a system to control produced gases from the mud degasser (e.g., vapor recovery unit, flare, or carbon) prior to initiating the re-drilling project.

9.2.2 Biological Resources

BIO-1. Venoco shall incorporate the items specified below into its annual training and orientation program to boat captains and offshore crew. A copy of this list shall be provided on the bridges of the support vessels. Support vessel operators shall observe the following requirements taking into account vessel safety and navigational rules and regulations. Should a requirement be violated, Venoco shall report the incident in writing to the CSLC within three (3) days. The report shall describe the violation, surrounding circumstances, and why the incident could not be avoided.

- Support vessels will make every effort to maintain a distance of 1,000 feet from sighted whales and other threatened or endangered marine mammals and sea turtles.

- Support vessels will not cross directly in front of migrating whales.
- When paralleling whales, support vessels will operate at a constant speed that is not faster than the whales.
- Female whales will not be separated from their calves.
- Support vessels will not be used to herd or drive whales.
- If a whale engages in evasive or defensive action, support vessels will drop back until the animal calms or moves out of the area.
- Collisions with marine mammals or sea turtles shall be reported promptly to the federal and State agencies listed below pursuant to each agency's reporting procedures. Collisions with marine mammals shall also be reported to the below-listed Marine Mammal Rescue Center.

Stranding Coordinator, Southwest Region (currently, Joe Cordero)
National Marine Fisheries Service
Long Beach, CA 90802-4213
(310) 980-4017

Enforcement Dispatch Desk
California Dept. Fish and Game
Long Beach, CA 90802
(909) 597-9823
(916) 445-0045 (during non-business hours)

California State Lands Commission
Environmental Planning and Management Division
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825-8202
(916) 574-1890

Marine Mammal Rescue Center
389 North Hope Ave.
Santa Barbara, CA 93110-1572
(805) 687-3255

9.2.3 Hazards

HAZ-1. If the composition of the gas from any of the three re-drilled wells on Platform Holly changes so that the gas is odorless, Venoco will shut down drilling on that well until an odorant station is permitted and constructed to comply with DOT regulations. Development and/or production on the well shall not recommence until so approved by the CSLC.

10.0 SURROUNDING LAND USES AND SETTING:

10.1 Surrounding Land Use

The onshore area adjacent to the South Ellwood Field can be characterized as suburban coastal development, with residential and recreational areas. In the western Goleta Valley in the vicinity of Ellwood there are five County-owned public parks. Privately owned recreation facilities include golf courses, baseball fields, and the Bacara Resort and Spa. In addition, there are approximately 800 acres of open space, bisected by an extensive series of informal roads/trails used by the public, and a major public education institution, the University of California, Santa Barbara. Oil and gas from Platform Holly are processed at the EOF, which is located in west Goleta near the intersection of U.S. Highway 101 and Hollister Avenue. Surrounding land uses include Sandpiper Golf Course to the south and east; Pacific Ocean to the south; Union Pacific Railroad and U.S. Highway 101 to the north; and Bell Creek and the Bacara Resort to the west. Zoning for the surrounding area is for recreation. Offshore recreational activities in the vicinity of Platform Holly include boating and sportfishing.

10.2 Environmental Setting

Platform Holly is located two miles from shore at a water depth of 211 feet, on the northern side of the Santa Barbara Channel between the mainland and the northwestern-most group of islands and is near natural oil and gas seeps. The Channel is the northwestern portion of the Southern California Bight, which extends from Point Conception to the Mexican border and is a unique biogeographical transition zone between two provinces, exhibiting a diversity of habitats as well as a diversity of benthic flora and fauna.

The EOF is located in Bell Canyon on an elevated terrace at an elevation of approximately 20 feet above mean sea level. This area is on the coastal plain of the Goleta Valley, which lies between the Santa Ynez Mountains and the Pacific Ocean.

Additional setting information is provided under the evaluation of environmental impacts below.

11.0 OTHER PUBLIC AGENCIES WHOSE APPROVAL IS REQUIRED (E.G., PERMITS, FINANCING APPROVAL, OR PARTICIPATION AGREEMENT):

Department of Conservation–Division of Oil, Gas, and Geothermal Resources (DOGGR): (1) Notice of Intent to Rework Wells. (2) Compliance with filing, notification, operating, and testing requirements for underground injection projects pursuant to Sections 1724.7 and 1724.10 of California Code of Regulations.

Santa Barbara County Air Pollution Control District (APCD): (1) Minor Part 70 Operating Permit. (2) A Permit Exemption for the drilling project has been granted based on expectation of less than 25 tons of emission of Nitrogen Oxides (NO_x), Reactive Organic Compounds (ROC), Carbon Monoxide (CO), Particulate Matter (PM), or PM_{10} per year. An Authority to Construct (ATC) permit and PTO will be required if emissions exceed 25 tons per year.

California Coastal Commission (CCC): may require a Coastal Development Permit.

12.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology /Soils
☐ Hazards & Hazardous Materials	☐ Hydrology / Water Quality	☐ Land Use / Planning
☐ Mineral Resources	☐ Noise	☐ Population / Housing
☐ Public Services	☐ Recreation	☐ Transportation/Traffic
☐ Utilities / Service Systems	☐ Mandatory Findings of Significance	

13.0 DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

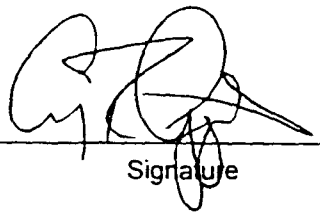
☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.



Signature

7/9/01

Date

Cy R. Oggins

Printed Name

California State Lands Commission

For

CALENDAR PAGE

MINUTE PAGE

14.0 EVALUATION OF ENVIRONMENTAL IMPACTS:

This section provides an analysis of the potential environmental impacts associated with the proposed project. The analysis is organized by environmental issue area (e.g., aesthetics, agricultural resources, air quality, etc.). Each issue area begins with a checklist, which identifies criteria that have been used to assess the significance or insignificance of each potential impact. The checklists used were developed by the State of California, and are provided as Appendix G of the State CEQA Guidelines. The checklists also indicate the conclusions made regarding the potential significance of each impact. Explanations of each conclusion are provided after the checklists. In some cases, setting descriptions and recommended mitigation measures are also provided. Where applicable, residual impacts (i.e., with the implementation of recommended mitigation measures) are assessed, and any issues that are in need of further study (i.e., in an EIR) are identified.

Impact classifications used in the checklists are the following:

- **Potentially Significant Impact:** an impact that may be significant based on substantial evidence, and that requires further study in an EIR.
- **Less than Significant Impact with Mitigation Incorporation:** an impact that is "Potentially Significant" but that can feasibly be mitigated to a "Less than Significant Impact" with the incorporation of mitigation measures.
- **Less than Significant Impact:** an impact that would not be significantly adverse.
- **No Impact:** applied when the project would not result in any impact to a specific issue area.

14.1 Aesthetics

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☐	☒
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

Setting:

Platform Holly is located approximately two miles offshore of Ellwood Beach in Santa Barbara County. The platform stands 60 feet above mean water level and covers approximately 9,600 square feet (about 80 feet by 120 feet). It has a boat landing at the 14-foot elevation and three decks located at the 25-foot, 38-foot, and 60-foot elevations. General machinery and processing equipment are located on the bottom two decks and a crane hoist is located on the top deck (see Figure 8.1-1). The platform is painted gray-green in color and utility and safety lighting is screened wherever possible to minimize visibility from onshore viewpoints at night. Platform Holly is the only platform located offshore of the Ellwood area and is prominently visible from the Isla Vista and Ellwood coastlines.

Impact Discussion:

a-c) The proposed re-drilling and development project will be conducted using the existing drilling rig located on the platform. Additional equipment required for the project will be small relative to other existing platform equipment. The added equipment will not result in a change in the platform's profile, and the overall visual character of the landscape will not be altered. Therefore, no impacts to the existing visual quality of the area would result due to project implementation.

d) Platform Holly is currently lighted at night in conformance with U.S. Coast Guard navigational requirements and Cal/OSHA worker safety requirements. No additional lighting will be required for the proposed re-drill project. Therefore, the proposed project

will not result in the creation of a new source of substantial light or glare which would adversely affect views in the area.

Cumulative Impacts:

Impacts associated with project-related drilling activities on aesthetics are non-existent. No other drilling activities will be undertaken in the region within the project timeframe. Upon completion of drilling, production from Platform Holly will be below existing permitted limits. Therefore, project implementation will not contribute to cumulative aesthetic impacts.

Mitigation and Residual Impacts:

a-d) No significant impacts to aesthetics would result due to project implementation; therefore, no mitigation is required.

14.2 Agricultural Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	☒

Setting:

The proposed project site is located approximately two miles offshore, away from active agricultural areas.

Impact Discussion:

a-c) Because the proposed project is located offshore, no impacts to agricultural resources will occur from the proposed operations.

Cumulative Impacts:

Impacts associated with project-related drilling activities on agriculture are non-existent. No other drilling activities will be undertaken in the region within the project timeframe. Upon completion of drilling, production from Platform Holly will be below existing permitted limits. Therefore, project implementation will not contribute to cumulative impacts on agriculture.

Mitigation and Residual Impacts:

a-c) No impacts to agricultural resources would result due to project implementation; therefore, no mitigation is required.

14.3 Air Quality

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☒	☐	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☒	☐	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☒	☐	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Setting:

All project components are located within the Santa Barbara County portion of the South Central Coast Air Basin. Ozone is the primary pollutant of concern in Santa Barbara County. Ozone is formed in the atmosphere through photochemical reactions involving sunlight, oxygen, oxides of nitrogen, and hydrocarbons. Ozone concentrations tend to be highest during late morning and early afternoon when solar radiation is most intense. Persistent inversion layers may limit vertical mixing and trap pollutants, which result in high ozone concentrations. Maximum ozone concentrations occur when strong, persistent inversions and relatively low wind speed coincide (Mobil 1997).

Air quality standards are specific concentrations of pollutants that are used as thresholds to protect public health and the public welfare. The U.S. Environmental Protection Agency (EPA) has developed two sets of standards; one to provide an adequate margin of safety to protect human health and the second to protect the public welfare from any known or anticipated adverse effects. (At this time, sulfur dioxide is the only pollutant for which the two sets of standards differ.) The California Air Resources Board (CARB) has also developed ambient air quality standards to protect human health and welfare for California. California and/or national

standards have been established for ozone, carbon monoxide (CO), nitrogen oxides (NOx), sulfur oxides (SOx), lead, and suspended particulate matter (PM) less than 10 microns in diameter (PM10) and less than 2.5 microns (PM2.5).[2] In addition, California has standards for sulfates, hydrogen sulfide (H2S), vinyl chloride, and visibility reducing particles. Table 14.3-1 lists applicable State and federal air quality standards.

Table 14.3-1. Ambient Air Quality Standards

Pollutant	Averaging Time	State Standard	Federal Standard
Ozone	1-Hour	0.09 ppm	0.12 ppm
	8-Hour	NA	0.08 ppm
Carbon Monoxide (CO)	1-Hour	20 ppm	35 ppm
	8-Hour	9.0 ppm	9 ppm
Nitrogen Dioxide (NO_2)	1-Hour	0.25 ppm	NA
	Annual Average	NA	0.053 ppm
Fine Particulate Matter ($PM_{2.5}$)	24-Hour	NA	650 µg/m3
	Annual Arithmetic Mean	NA	15 µg/m3
Inhalable Particulate Matter (PM_{10})	24-Hour	50 µg/m3	150 µg/m3
	Annual Geometric Mean	30 µg/m3	NA
	Annual Arithmetic Mean	NA	50 µg/m3
Sulfur Dioxide (SO_2)	24-Hour	0.04 ppm	0.14 ppm
	Annual Average	NA	80 µg/m3

Santa Barbara County's air quality has historically violated State and federal ozone standards. The County recently and by a small margin attained the federal ozone standard, but does not meet the State standards for ozone or PM_{10}. For other criteria pollutants, such as CO and SOx, the County is either in attainment or unclassified. Santa Barbara County is now implementing its 1998 Clean Air Plan (approved by the EPA in June 2000), which represents a partnership among the County Air Pollution Control District (APCD), CARB, EPA, Association of Governments, local businesses, and the community-at-large to reduce pollution from all sources.

The Santa Barbara County APCD requires permits for new, or modifications to existing, air pollution-emitting facilities. Facility operators are required to obtain an Authority to Construct (ATC) before construction or modification begins. The APCD integrates State and federal requirements for new source review into its ATC process. After construction is completed, but before operation begins, operators are required to obtain a PTO. Upon determining that the

[2] In July 1997, EPA implemented new health-based ozone and PM standards. The new federal ozone standard is based on a longer averaging period (8-hour vs. 1-hour), recognizing that prolonged exposure is more damaging. The new federal PM standard is based on finer particles (2.5 microns [PM2.5] and smaller vs. 10 microns and smaller [PM_{10}]), recognizing that finer particles may have a higher residence time in the lungs and cause greater respiratory illness. In February 2001, the U.S. Supreme Court upheld the EPA's ability to enforce the standards (full details of that case can be found on the Internet at http://www.epa.gov/airlinks/airlinks4.html).

facility is complying with all applicable APCD rules, staff may issue a PTO with enforceable permit conditions to ensure continuing rule compliance. Specific operations, equipment or emission sources may be exempt from the requirement to have a permit, but must comply with specified emission standards and prohibitions. In such cases, the APCD requires the facility owner or operator to provide calculations, usage records, emissions records, and/or operational data as necessary to substantiate any exemptions that apply to the subject facility.

The air quality of Santa Barbara County is monitored by the California Environmental Protection Agency, CARB, APCD, and industry. Air quality monitoring stations operated by the CARB and the APCD are part of the State and Local Air Quality Monitoring System (SLAMS). The majority of the monitoring stations are operated by industry under protocols developed by the APCD as required by permit conditions to detect project related impacts. These stations are referred to as Prevention of Significant Deterioration (PSD) stations. The nearest station to Platform Holly—the West Campus (University of California at Santa Barbara) station, located about 2 miles to the northeast—monitored ozone, nitrogen dioxide (NO_2), H_2S, hydrocarbons, sulfur dioxide (SO_2), and PM_{10}, until July 1998, when monitoring at the station was discontinued. Maximum concentrations and number of exceedances of air quality standards monitored at the West Campus station from 1996 to 1998 are presented in Table 14.3-2.

Table 14.3-2. Air Quality Standard Exceedances

Pollutant	1996	1997	1998
Ozone (ppm)			
Worst Hour	0.110	0.092	0.100
Number of State 1-hour exceedances	2	0	1
Number of Federal 1-hour exceedances	0	0	0
Number of Federal 8-hour exceedances	0	0	0
Sulfur Dioxide (ppm)			
Worst 24-hour period	0.003	0.002	0.001
Number of State 24-hour exceedances	0	0	0
Number of Federal 24-hour exceedances	0	0	0
Number of Federal annual exceedances	0	0	0
Nitrogen Dioxide (ppm)			
Worst Hour	0.071	0.054	0.043
Number of State 1-hour exceedances	0	0	0
Number of Federal annual exceedances	0	0	0
PM10 (micrograms/cubic meter)			
Worst Sample	40.4	59.8	32.9
Number of State 24-hour exceedances	0	1	0
Annual Geometric Mean	23.5	25.7	20.0
Annual Arithmetic Mean	24.9	27.9	20.1

Thresholds of Significance

Santa Barbara County has adopted a significance threshold of 25 pounds per day NOx and reactive organic compounds (ROC) for long-term projects, but has determined that short-term air quality impacts associated with some activities (e.g., construction) are less than significant.

The Santa Barbara County APCD has also adopted air quality significance criteria that "are applied during the CEQA review of projects for which the APCD is lead agency and [that are] recommended for CEQA review of all other projects in the county for which the APCD is responsible agency or concerned agency" (APCD 2000). Pursuant to the APCD's Environmental Review Guidelines, "A proposed project will not have a significant air quality effect on the environment, if: Operation of the project will:

- emit (from all project sources, mobile and stationary), less than the daily trigger for offsets set in the APCD New Source Review Rule for any pollutant [equals 240 pounds per day as adopted by the APCD Board in 1995]; and
- emit less than 25 pounds per day of oxides of nitrogen (NOx) or reactive organic compounds (ROC) from motor vehicle trips only; and
- not cause or contribute to a violation of any California or National Ambient Air Quality Standard (except ozone); and
- not exceed the APCD health risk public notification thresholds adopted by the APCD Board; and
- be consistent with the adopted federal and state Air Quality Plans" (APCD 2000).

In addition, APCD Rule 202.F.6 exempts drilling activities in State waters from permits, unless emissions from all drilling equipment exceed 25 tons per 12-month period. This Rule indicates that drilling projects with emissions less than 25 tons per year are considered less than significant.

The APCD has reviewed Venoco's Well Re-drill Project operations and emissions data and has determined that, other than a Minor Part 70 permit for the drill rig equipment, no permits are required for the project provided that Venoco meets the conditions identified in their Permit Exemption Request Approval letter (May 3, 2001; Exemption Number 10406-1). The conditions are that Venoco obtain and maintain records to demonstrate the exemption threshold is not exceeded: i.e.,

(1) Maintain required minimum control efficiencies across each of the catalytic converters,

(2) Install and operate an air-fuel ration controller on each catalytic converter to maintain the required removal efficiencies,

(3) Perform emissions source testing on the Caterpillar G399 and G-3516 engines,

(4) Implement a Generator Engine Inspection and Maintenance Plan for each generator

(5) Monitor the fuel consumption of the project engines,

(6) Calculate emissions from engines used for the project, and

(7) Transmit the data to APCD monthly.

The APCD has also reviewed the proposed structural upgrades to Platform Holly and determined the following: "Based on the information provided [by Venoco], the APCD concurs that no additional air emissions will occur due to this project description change" (E-mail from Mike Goldman, Santa Barbara County APCD, to Stephen Greig, Venoco, June 30, 2001).

Following some accidental releases of H_2S during July 1998 and February and March 1999, Venoco and the APCD (working with several Santa Barbara County agencies) reached an agreement to install additional equipment and procedures to correct air pollution problems (such as releases) and prevent future occurrences. Venoco has satisfied the milestones set out in the April 1999 agreement—which included installing a flare at Platform Holly and a backup power system at the EOF, allowing agency safety audits of the facilities, installing a comprehensive pollution monitoring system, and improving barge loading procedures—and is in full compliance with APCD regulations.

The proposed project does not have the potential to emit 10 tons or more per year of any regulated pollutant, and therefore it does not necessitate enhanced procedural review pursuant to the SWARS Settlement Agreement and General Release (1996) (see Section 7.4).

Impact Discussion:

a-c) Any project that is in a region that regularly exceeds established air quality standards (as does Santa Barbara County for ozone) may result in a contribution to the violation of an ambient air quality standard, and thus could significantly impact air quality.

The proposed project would result in additional use of existing platform equipment, the crane, and engine-driven electrical generators. As a well is drilled through rock containing formation gas, the muds and cuttings circulated back to the surface will release gas to the atmosphere at the shale shaker and the mud pits. The estimated total gas volume in the drilling mud from a single well (drilling in the gas zone for an estimated 20 days) is 85,000 scf. This gas is estimated to contain 20% ROCs. A degasser will be used to help "break out" and capture entrained gas from the drilling mud. In addition, the proposed project would result in two additional supply boat trips per well.

Worst-case (two wells in 12 months) emissions estimates for the proposed project are estimated on a peak day and total 12-month project basis, and presented in Table 14.3-3, as are emissions for the remaining well in the following year and the total three-well project numbers. The emissions estimates are based on implementation of Best Available Control Technology (BACT) for the generators, consisting of non-selective catalytic reduction, which has been estimated by the vendor to reduce NOx emissions by 93 percent and ROC emissions by 50 percent. Peak day emissions estimates include well drilling and a two-way supply boat trip from Port Hueneme (including on-

board generator usage). The project has incorporated BACT, reflecting full implementation of feasible mitigation measures to further minimize potential impacts to air quality.

Table 14.3-3. Project Air Emissions Estimates (see also Appendix B)

Project Component	Peak Day – Pounds					Project – Tons (1st Year, 2 wells)				
	NOx	ROC	CO	SOx	PM_{10}	NOx	ROC	CO	SOx	PM_{10}
Platform Equipment	163.9	14.9	71.1	1.7	18.2	6.89	1.10	7.69	0.05	1.51
Muds and Cuttings	0.0	57.5	0.0	0.0	0.0	0.0	1.15	0.0	0.0	0.0
Supply Boat	1155.4	47.1	179.7	114.4	68.4	2.03	0.07	0.30	0.20	0.12
Total	**1319.3**	**119.5**	**250.8**	**116.1**	**86.6**	**8.92**	**2.32**	**7.99**	**0.25**	**1.63**

Project Component	Peak Day – Pounds					Project – Tons (2nd Year, 1 well)				
Platform Equipment	163.9	14.9	71.1	1.7	18.2	3.44	0.55	3.84	0.02	0.75
Muds and Cuttings	0.0	57.5	0.0	0.0	0.0	0.0	0.58	0.0	0.0	0.0
Supply Boat	1155.4	47.1	179.7	114.4	68.4	1.01	0.04	0.15	0.10	0.06
Total	**1319.3**	**119.5**	**250.8**	**116.1**	**86.6**	**4.45**	**1.17**	**3.99**	**0.12**	**0.81**

Project Component	Peak Day – Pounds					Total Project – Tons (Both Years, 3 wells)				
Platform Equipment	163.9	14.9	71.1	1.7	18.2	10.33	1.65	11.53	0.07	2.26
Muds and Cuttings	0.0	57.5	0.0	0.0	0.0	0.0	1.73	0.0	0.0	0.0
Supply Boat	1155.4	47.1	179.7	114.4	68.4	3.04	0.11	0.45	0.30	0.18
Total	**1319.3**	**119.5**	**250.8**	**116.1**	**86.6**	**13.37**	**3.49**	**11.98**	**0.37**	**2.44**

Overall, the Re-drill project would not extend the life of Platform Holly or the EOF, and if the project were denied, the platform and processing facilities would remain in place. The proposed Re-drill project will not result in modifications at the EOF, and no changes to the permitted throughput are proposed. Implementation of the conditions identified in the Santa Barbara County APCD Permit Exemption Request Approval letter (May 3, 2001; Exemption Number 10406-1) are necessary to reduce project-related air quality impacts to a less than significant level.

Project operations as proposed—the re-drilling of three wells with drilling spaced over an 18-month period—and mitigated would not result in exceedances of the daily significance criterion trigger of 240 pounds per day adopted by the Santa Barbara County APCD in 1995; nor would the project result in emissions from all drilling equipment of more than 25 tons per 12-month period as specified in APCD Rule 202.F.6. Mitigation Measure AIR-1 (which is based on the use of the two-wells-in-12-months "worst case" emissions estimates) is required to ensure that no more than two wells will be re-drilled within any 12-month period. Mitigation Measure AIR-2 is required to ensure that the project is implemented as proposed in the Santa Barbara County APCD Permit Exemption Request Approval letter (May 3, 2001; Exemption Number

10406-1). Mitigation Measure AIR-3 is required to ensure that gas entrained in the mud is controlled in a manner approved by the APCD and CSLC.

d) The nearest sensitive receptors are residential land uses and elementary schools at Ellwood and Isla Vista, located about 2 miles to the north and northeast, respectively. Emissions generated by platform equipment and the supply boat are expected to be sufficiently dispersed upon reaching these receptors. As a result, air quality impacts to onshore sensitive receptors would be less than significant.

e) Platform Holly produces oil emulsion and natural gas containing H_2S which is highly toxic. Odors associated with H_2S and related sulfur-containing compounds are occasionally reported as emanating from Platform Holly. However, existing drilling methodologies and equipment (cemented annulus, mud system, blow-out preventer) will be fully implemented to reduce the potential for releases of these materials into the environment. Therefore, potential impacts would be similar to existing conditions, and considered less than significant.

Mitigation Measures

The following mitigation measures have been incorporated into the proposed project to reduce short-term air quality impacts from the project to a less than significant level. These mitigation measures shall be monitored pursuant to CSLC and Santa Barbara County APCD rules and regulations.

AIR-1 Venoco shall re-drill no more than two wells in any 12-month period.

AIR-2. Venoco shall implement the following actions throughout the duration of the proposed project. [These measures are based upon the conditions identified in the Santa Barbara County APCD Permit Exemption Request Approval letter (May 3, 2001; Exemption Number 10406-1) and comments received from APCD on June 18, 2001.].

- Supply boat trips shall be limited to no more than one per day.
- Required minimum control efficiencies shall be maintained across each of the catalytic converters.
- An air-fuel ratio controller shall be installed and operated on each catalytic converter to maintain the required removal efficiencies.
- Emissions source testing shall be performed on the Caterpillar G399 and G-3516 engines.
- A Generator Engine Inspection and Maintenance Plan shall be implemented for each generator.
- Fuel consumption of the project engines shall be monitored.

- Emissions from engines used for the project shall be calculated.

- Emission and vessel traffic data shall be transmitted to the Santa Barbara County APCD monthly, with a summary of the data provided to the CSLC each quarter.

AIR-3. Venoco shall submit to the APCD and CSLC for approval the design specifications and operational procedures of a system to control produced gases from the mud degasser (e.g., vapor recovery unit, flare, or carbon) prior to initiating the re-drilling project.

Cumulative Impacts:

Air quality impacts associated with project-related drilling activities are mitigated to a level of insignificance. No other drilling activities will be undertaken in the region within the project timeframe. Upon completion of drilling, production from Platform Holly will be below existing permitted limits. Therefore, project implementation will not contribute to cumulative impacts on air quality.

Residual Impacts:

a-e) Provided that the required mitigation measures are implemented, air quality impacts for the project would be less than significant.

14.4 Biological Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Setting:

The Santa Barbara Channel occupies the northwest corner of the Southern California Bight (SCB) and comprises a relatively protected and benign environment for marine organisms. The Channel is considered a biogeographical transition zone between the northern Oregonian Province and the marine assemblages of Southern California. Platform Holly is located in the Santa Barbara Channel between the mainland and the northwestern-most group of islands and is near natural oil and gas seeps.

Point Conception, located approximately 28.5 miles west of Platform Holly, has been recognized as the dividing point between the Oregonian and Californian biogeographic provinces for intertidal organisms (Hall 1964). The SCB, which extends south of Point Conception to the Mexican border, exists as a unique biogeographical transition zone between these two provinces exhibiting a diversity of habitats as well as a diversity of benthic flora and fauna. Hydrographic conditions, which are representative of both provinces are found throughout the Bight allowing species from each area to coexist in relative close proximity to one another (BLM 1979). In addition, there exist species endemic to the SCB with highly limited ranges (as little as 100 kilometers).

Algae. Benthic algae and marine grasses are discussed in NOAA (2000), Murray and Bray (1993), and Murray (1974). Most attached algal species are limited to the nearshore subtidal shallower than 50 m (164 ft) due to light limitation. Giant kelp (*Macrocystis pyrifera*), common from 3 to 30 m (10 to 100 ft), is a keystone species that transforms rocky reefs into lush underwater forests. Other smaller kelps include boa kelp (*Egregia menziesii*), sea palms (*Eisenia arborea* and *Pterygophora californica*), and oarweeds (*Laminaria* spp. and *Agarum fimbriatum*) (NOAA 2000).

Invertebrates. Recent summaries of the invertebrate benthos of the Santa Barbara Channel can be found in the draft EIS for the Channel Islands National Marine Sanctuary (NOAA 2000) and the review by Thompson et al. (1993). Other notable papers include: Bright (1974), Allan Hancock Foundation (1965), BLM (1977), Hartman and Barnard (1960), Jones (1969), Lewbal et al. (1981), Nekton (1983), and Pequegnat (1964). Much of this information is summarized in BLM (1979).

Most of the Santa Barbara and Ventura County coastline is composed of sandy beaches (often backed by cliffs). Upper beach areas are typically dominated by amphipods of the genera *Orchestoidea* and *Orchestia*. Lower beach areas near Santa Barbara are dominated by the sand crab (*Emerita analoga*); which characterize exposed surf-swept beaches.

Red, purple, and white sea urchins are major predators of kelp. Suspension-feeding invertebrates of deeper reefs include sponges, sea anemones, sea fans, plume worms, bryozoans, and tunicates.

Over 90 percent of deep-water benthic habitats consist of fine sands, and silt and clay sediments in deeper portions. Invertebrates in these areas are infaunal detritus feeders such as sea pens, polychaete worms, echiuran worms, amphipods, brittle stars, and small snails and

clams, and epifauna such as shrimp, octopus, sea cucumbers, sea stars, and heart urchins (NOAA 2000).

Invertebrates are the dominant catch of the commercial fisheries in the area. Data collected from California Department of Fish and Game Fish Block 654, in which Platform Holly is located, show that for the past several years (1989-1999) the most abundant species caught by commercial fishing vessels have been urchins, ridgeback shrimp, sea cucumbers, lobsters, and crabs. Squid and spot prawns have also been abundant. Shrimps, prawns, and sea cucumbers are taken by trawl. With the exception of fishing for halibut, trawling is prohibited in state waters, and thus in the vicinity of Platform Holly.

Fish. About 481 species of fish inhabit the Santa Barbara Channel (Cross and Allen 1993). This great diversity is due to the previously mentioned transitional nature of the area as well as the diversity of habitats available: soft bottom, rock reefs, kelp beds, estuaries, bays, and lagoons (USN 2000). Pelagic, nearshore, schooling fishes include Pacific barracuda, northern anchovy, Pacific herring, jack mackerel, and Pacific bonito. Rockfish are abundant in rocky areas, reefs, and deepwater canyons. Garibaldi, sheephead, senorita, opaleye, and bass are found in rocky areas and reefs, kelp beds, and deepwater canyons. Demersal flat fish are common on sandy bottoms (NOAA 2000).

A three-year study (1995-1997) of Platform Holly found a relatively high species richness: 28 species (Schroeder 1999). This species richness remained relatively stable throughout the year. The top three species in abundance were pelagic species: sardine (mean density 1341.3/1000 m^3), jack mackerel (115.3/1000 m^3), and silversides (102.6/1000 m^3). Platform Holly was the only platform (of nine surveyed) where silversides were recorded.

Deep-sea or midwater fish (50 – 600 m; or 165 – 1970 ft) comprise about 200 species in California, and over 50 percent of those taxa are found in the SCB (Horn 1980). The most abundant midwater fish are the Myctophidae (lantern fishes), Gonostomatidae (lightfishes), and bathylagidae (deep-sea smelts). Although many midwater species vertically migrate toward the surface at night, these species are not likely to be present in the vicinity of Platform Holly.

The MMS (1983) includes nine taxa (flatfishes, lingcod, midshipman, ratfish, rockfish, sablefish, soupfin and spiny dogfish sharks, and surfperch) as the most commonly occurring offshore demersal fishes of the Santa Barbara Channel. Pelagic taxa, dominated by the northern anchovy, include tuna, sharks, mackerel, salmon, bonito, yellowtail, and billfishes (MMS 1983).

The Santa Barbara Channel historically supports a number of commercial fisheries. The purse seine fishery targets mainly pelagic schooling fishes such as anchovy, sardines, and mackerel. Bottom trawls are used for flatfish and rockfish (as well as for invertebrates), but, as noted above, is allowed only for halibut in state waters. Gill net fisheries target a wide range of species including halibut, seabass, rockfishes, and some sharks (JOFLO 1986). Hook and line (set longline and vertical) primarily targets rockfish, though these fish have seriously declined in recent years. Trolling is conducted for salmon, albacore, and halibut (NOAA 2000). Fishing seasons and peak months for some of the more abundant species are provided in Table 14.4-1.

Table 14.4-1 Commercial Fishing Seasons for most abundant species caught near Holly

Species – Gear	Open Season	Peak Months
Dungeness crab – trap	-Nov. 15 - June 30	Dec. - April
Halibut – gillnet	Year round	Feb. - June
Halibut – trawl	June 15 – March 15	June – Aug., Nov – Jan.

Birds. Over 195 species of seabirds use the open water, shore, and island habitats in the SCB (NOAA 2000). Over 2.5 million seabirds may pass through or reside in the area at any one time. Based on aerial and ship surveys, average seabird densities in the open water areas of the Santa Barbara Channel are between 90 and 125 birds per square mile (MMS 1993 cited in USN 2000). The marine avifauna population in the SCB fluctuates seasonally because the area is located along the Pacific flyway. Few species remain in the area throughout the year since most are non-breeding transients (U.C. Santa Cruz 1978). The seasonal distribution of some of the more abundant coastal birds is summarized in Table 14.4-2. In a study conducted for the MMS (Varoujean et al. 1983), bird transects off Coal Oil Point encountered all the species noted in Table 14.4-2 (except for the Common Murre). Birds readily observed in the vicinity of Platform Holly are California brown pelicans, gulls, and cormorants.

Table 14.4-2. Seasonal Distribution of Coastal Seabirds in the Project Area

Winter	Spring	Summer	Autumn
Pacific Loon*	Pacific Loon*		Pacific Loon*
	Sooty Shearwater	Sooty Shearwater	Sooty Shearwater
	Red-necked Phalarope		Red-necked & Red Phalaropes
Cassin's Auklet			Cassin's Aucklet
Common Murre	Common Murre		Common Murre
		Pigeon Guillemont	
	Xantus' Murrelet	Xantus' Murrelet	
Western & Clark's** Grebe	Western & Clark's** Grebe		Western & Clark's** Grebe
	Brandt		
Surf Scoter	Surf Scoter		
Brown Pelican	Brown Pelican	Brown Pelican	Brown Pelican
Brandt's Cormorant	Brandt's Cormorant	Brandt's Cormorant	Brandt's Cormorant
Pelagic Cormorant			
Forster's Tern			
		Elegant Tern	Elegant Tern
California Gull	California Gull	California Gull	California Gull
Western Gull	Western Gull	Western Gull	Western Gull
Mew Gull			
Bonaparte's Gull	Bonaparte's Gull		Bonaparte's Gull
Heerman's Gull	Heerman's Gull		

Source: Dohl et al. 1983; National Geographic Society 1987; NOAA 2000.
* Formerly called Arctic Loon
** Formerly combined as Western Grebe

Marine Mammals. Thirty species of cetaceans occasionally visit, migrate through, or inhabit the SCB. At least nine species generally can be found in the area in moderate or high numbers either year-round or during annual migrations into or through the area. These include Dall's porpoise, Pacific white-sided dolphin, Risso's dolphin, bottlenose dolphin, short-beaked and long-beaked common dolphins, northern right whale dolphin, Cuvier's beaked whale, and gray whale (USN 2000). Their seasonality and habitat preferences are provided in Table 14.4-3. In addition, sightings of Humpback and Blue whales in the Santa Barbara Channel have become more common in recent years. The common dolphins, white-sided dolphin, and Pacific bottlenose dolphin, are permanent residents of the region (BLM 1981) and are likely to be observed near Platform Holly. Other cetacean species, such as the gray whale, migrate past and through the Santa Barbara Channel. Often the gray whales swim from less than 0.5 miles to two miles from shore, and thus are likely to occur near Platform Holly.

Table 14.4-3. Seasonality and Habitats of Cetaceans Found in the SMB/SBC (USN 2000)

Species	Seasonality	Habitat Preferences
Dall's porpoise	Year-round resident, peak numbers in autumn/winter. Low numbers in summer.	Continental shelf, slope, and offshore; prefers deep waters.
Pacific white-sided dolphin	Year-round resident with N-S movements to colder-water areas in late spring and summer.	Continental shelf, slope, and offshore: water < 17°C.
Risso's dolphin	Year-round resident, peak in winter, low numbers in summer.	Mostly offshore, recently over continental shelf.
Bottlenose dolphin	Year-round resident. No seasonal peak.	Coastal: Within 0.5 miles of shore. Offshore: Continental shelf, slope, and offshore waters.
Short-beaked common dolphin	Summer resident.	Coast to 300 miles or farther from shore.
Long-beaked common dolphin	Year-round resident, peak numbers in summer.	Coast to 50 miles from shore.
Northern right whale dolphin	Resident in winter and spring, peak numbers in winter.	Continental slope; water 8-19°C
Cuvier's beaked whale	Unknown, historically perhaps fall-winter.	Pelagic
Gray whale	Southbound migration Dec.-Feb., peaking in Jan.; northbound Feb.-May, peaking in March.	Mostly coastal but offshore routes are used near Channel Islands.

The five most common species of pinnipeds inhabiting the Santa Barbara Channel are the California sea lion, northern fur seal, harbor seal and the northern elephant seal (BLM 1981). The adult breeding population of pinnipeds is estimated at 32,000 individuals and 20,000 young are born each year. The harbor seal is the most common pinniped in the project area. A significant harbor seal pupping and haulout area exists along the Naples area east of the Ellwood Pier; another haulout area are the Goleta Rocks offshore from the More Mesa Bluffs,

west of the entrance to the Goleta Slough (USCG & OSPR 2000). The other abundant pinniped likely to be seen around Platform Holly is the California Sea Lion, which haulout on beaches in the vicinity of Bell Canyon Creek east of Ellwood Pier and at Goleta Point (USCG & OSPR 2000).

The California portion of the Steller sea lion population, which breeds as far south as Año Nuevo Island near Monterey Bay (two historic rookery locations on San Miguel Island have not been occupied since the 1982-83 El Niño event [NOAA 2000]), has recently been listed as threatened. A sixth species, the Guadalupe fur seal, occasionally appears in the summer in the breeding grounds of the resident sea lions and northern fur seals on San Miguel Island and occasionally elsewhere in the SCB. The National Marine Fisheries Service has listed the Guadalupe fur seal as a threatened species (NMFS 1985).

The established habitat range of the southern sea otter does not extend into the Santa Barbara Channel at the present time. However, recent population expansion has resulted in the establishment of a year-round presence of sea otters in Cojo Bay. In addition, although it is not an established habitat, there are more frequent sightings of the Southern Sea Otter in the Santa Barbara Channel in recent years.

Endangered, Threatened, and Other Listed Species. All the marine mammals discussed above are protected under the Marine Mammal Protection Act. Some of the species that may occur in this area are also listed under the Endangered Species Act (ESA) as Endangered (sperm whale, blue whale, fin whale, humpback whale, northern right whale) or Threatened (Steller sea lion, Guadalupe fur seal, southern sea otter).

Endangered bird species found in the project area or nearby shores include the California least tern, the California brown pelican, western snowy plover, and the light-footed clapper rail. However only the California least tern and California brown pelican feed offshore, and thus may occasionally fly near Platform Holly.

The California brown pelican is federally endangered and California endangered. This species is common along the southern California coast within 19 miles of shore between the months of June - October, and breeds on the Channel Islands (CDFG 1990). Brown pelicans roost on the mainland or islands using beaches, mudflats, rocks, wharfs, or jetties, and they forage in early morning or late afternoon diving for fish or crustaceans.

The California least tern is present from April through August, nesting in mid-May and June (CDFG 1990). Least terns feed near shore in open ocean, estuaries, or lagoons. Their primary prey includes anchovies, silversides, and shiner surf-perch, two of which are among the top three species in abundance surrounding Platform Holly. They roost on barren to sparsely vegetated sand or gravel ground areas.

The Western snowy plover nests along the Southern California coast and on some of the Channel Islands from April through August (CDFG 1990). Snowy plovers nest on sandy gravel beaches using a shallow depression in the substrate. The US Fish and Wildlife Service has designated several beaches along the Pacific Coast as Critical Habitat for this species (USFWS

1999). One such area is Devereaux Beach, located approximately two miles from Platform Holly.

The Light-footed clapper rail breeds from March through July in saline wetlands and forages in marsh vegetation and tidal mudflats along the coast.

The south-central evolutionary significant unit (ESU) stock of steelhead trout (ranging from Santa Cruz County to the Santa Maria River in Santa Barbara County) has been listed as threatened by the National Marine Fisheries Service in August of 1997 (NMFS 1999). The tidewater goby is listed as endangered under the federal ESA. It inhabits brackish waters of lagoons and lower stream reaches. This species is currently under consideration for removal from the endangered species list. The bocaccio rockfish is presently a candidate species for listing under the ESA.

There are four listed sea turtles that may occur within the project area: Endangered: Green sea turtle, Pacific Ridley sea turtle, Leatherback sea turtle; Threatened: Loggerhead sea turtle.

Several of the threatened or endangered species mentioned above may occur offshore within the vicinity of the platform, nearshore or onshore within the vicinity of areas that have been identified by MMS oil spill modeling as having the potential for being contacted by an oil spill if one occurred at this site (see spill trajectory discussion in Section 14.7 – Hazards and Hazardous Materials). The Area Contingency Plan (USCG & OSPR 2000) identifies those locations where these species may occur. The relevant ACP locations and species present are listed in Table C-1 of Appendix C.

Impact Discussion:

Potential impacts to biological resources due to project implementation include noise emanating from the platform or vessels, physical interactions between marine wildlife and the platform or support vessels, and pollution that may result from the release of a hazardous substance or in the unlikely event of an oil spill (addressed in Section 14.7–Hazards and Hazardous Materials and Section 14.8–Hydrology and Water Quality).

Previous studies have shown that noise generated from drilling and related activities does not completely mask cetacean sounds emitted during communication, navigation, and detection of predators and prey. Masking is maximized when the source sound and the masking noise are directionally aligned (Richardson et al. 1995). Noise associated with re-drilling and development may cause an avoidance of the source by cetaceans, or a slowing in proximity to the source during the southbound and northbound gray whale migrations, although no significant deviations from normal migratory patterns are expected. Avoidance reactions, such as reduced swimming speed and slight diversions from their path, can be expected from gray whales 4 to 20 meters (m) from a platform (Richardson et al. 1995).

Contact between marine wildlife and project-related vessels (including the proposed additional support vessels as well as the existing crew and support boats used for transport of personnel and materials to and from Platform Holly) and project-related noise from the vessels and from the actual drilling process are considered potential sources of impacts to marine wildlife.

Marine mammals may react to noise or presence of vessels. Gray whales may change their course at a distance of 200-300 meters (m) in order to avoid a vessel in their paths (Wyrick 1985 in Richardson et al. 1995); although some may not react until the ship is within 15-20 m (Schulberg et al. 1989; Richardson et al. 1995). The traffic caused by marine vessels could potentially divert whales on a shallow, inshore track or further offshore and away from the project site. In addition, dolphins may splash and jump near the work vessels. Pinnipeds often tolerate close and frequent approaches by vessels when in the water; however, they are more responsive to vessel noise when hauled out on land, and react by moving into the water with the approach of a vessel (Richardson et al. 1995). Sea turtles may also occur within the project site.

With respect to marine mammals other than cetaceans, an increase in ambient noise will result in either curious investigation or direct avoidance, which is temporary until the marine mammal habituates to the noise level. Pinnipeds demonstrate some tolerance of noise associated with drilling and are common around production platforms (Richardson et al. 1995). For example, harbor seals tend to avoid an area of noise until they habituate to the new stimulus, whereas sea lions display curiosity. As mentioned above, the nearest haulout areas for harbor seals and California sea lions are on the mainland in the Naples area, Goleta Point, and Goleta Rocks (approximately 4, 3.5, and 6 miles from Platform Holly). In addition, high concentrations of marine mammals pupping and breeding exist on Santa Cruz Island, Santa Rosa Island, and San Miguel Island (USCG & OSPR 2000), located approximately 18 to 30 or more miles away.

In addition, there is potential for impacts to biological resources and sensitive areas near Platform Holly in the event of an oil spill. Since the drilling is to be conducted by deviating from existing wells, and into a reservoir that has been extensively studied, the likelihood of a spill is quite small. However, a discussion of potential oil spill trajectories is presented in Section 14.7 – Hazards and Hazardous Materials. Biological resources and sensitive areas existing on the mainland and island shorelines with at least a 1% chance of contact by oil in the event of a spill from Platform Holly (MMS spill trajectory modeling) are presented in Appendix C.

a & d) Other than logistic onshore activities (e.g. shipping of crew members and small supplies, which would be conducted from the Ellwood Pier), the majority of the work associated with this proposed project would take place offshore. Since none of the onshore activities would be conducted on shorelines or habitats where Endangered or Threatened species are found (with the possible exception of California brown pelican, which may roost on the pier), and since the project will not result in an increase in vessel traffic from the Ellwood Pier, no adverse impact to any of the sensitive onshore species noted above is expected.

Offshore, migratory birds using the Pacific Flyway may pass through the vicinity of Platform Holly. In addition, gray whales and sea turtles migrate through the Santa Barbara Channel and may pass near the platform. Platform Holly and its associated pipelines were installed in 1967 (see Section 8.0 – Existing Facilities), and it is speculated that resident and migratory wildlife commonly occurring within the Santa Barbara Channel have adapted to the presence of Platform Holly over the years. This proposed project involves the use of existing facilities and does not involve the

construction of additional structures in the air or in the water that would represent a new impediment to any native resident species or to the migration of wildlife within the vicinity of the project site.

The offshore re-drilling activities would be conducted on existing facilities (i.e., Platform Holly) and would be performed within pre-disturbed and existing well sites. In addition, potential impacts that may be associated with platform discharges are not a concern here, since Platform Holly is a zero discharge facility. Therefore, the proposed project activities do not represent a substantial change from currently permitted and ongoing activities within the project area. As such, implementation of the re-drilling activities will not result in adverse effects either directly or through habitat modifications to any of the candidate, sensitive, or special status marine mammals, birds, fish, and turtles identified above.

Although contact between marine wildlife and the crew and support vessels is not anticipated, such contact would be potentially significant. Implementation of the mitigation measure identified in this section would reduce impacts of the project to a less than significant level of impact in conjunction with the measures listed below that Venoco has in place or that are included in the project description.

- Crews and supplies associated with the project will usually be scheduled with other boat trips and will not exceed currently permitted limits.

- Venoco boat operators will operate in approved vessel corridors only and will take care to avoid impacts to migratory and resident wildlife. The routes of the transport vessels will not be in the vicinity of existing pinniped haulout or pupping areas. Sensitive areas in the vicinity (including those for marine mammals) are identified in Venoco's Response Manual, the Clean Seas Regional Response Manual, and in the Area Contingency Plan.

- All personnel who work offshore (including boat captains) are required to view a training and orientation video that includes instructions on avoidance of marine mammals. An annual review of this material is required.

In the unlikely event of an oil spill, candidate, sensitive, or special status birds and marine mammals that use the ocean surface, as well as those that use mainland and island shorelines could be impacted. However, due to the low probability of such an occurrence (as discussed in the following Section 14.7 – Hazards and Hazardous Materials), and the implementation of the Oil Spill Response Plan incorporated into this project, adverse impacts to sensitive species are not expected.

b-c) None of the activities associated with the proposed project (i.e., drilling and vessel traffic) would take place in and/or adjacent to coastal streams or wetland habitat areas; thus there will be no project-related adverse effects on sensitive riparian habitat areas or federally protected wetlands as defined by Section 404 of the Clean Water Act. If an oil spill occurred under tide and storm conditions conducive to high water at the mouths of streams or slough entrances, the possibility would exist that oil could impact riparian and

wetland habitats. However, due to the low probability of such an occurrence, and the implementation of the Oil Spill Response Plan incorporated into this project, adverse impacts to riparian habitat areas are not expected.

e) The majority of the proposed project is to be conducted two miles offshore on existing Platform Holly. Therefore, the proposed project does not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. Therefore, no impacts to such policies or ordinances are expected due to project implementation.

f) This project does not take place in an area covered by an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan; therefore, neither drilling, nor vessel traffic would conflict with provisions of such plans. However, there are some areas that should be considered in the unlikely event of an oil spill; the Coal Oil Point Natural Reserve, managed by the University of California, Santa Barbara, includes shoreline west of the entrance to Devereaux Slough, and the Channel Islands National Marine Sanctuary located 15 miles west of the project site. These areas would be considered vulnerable to an oil spill as illustrated in Section 14.7 – Hazards and Hazardous Materials. However, due to the low probability of such an occurrence, and the implementation of the Oil Spill Response Plan incorporated into this project, adverse impacts to the natural integrity of these areas and existing management plans are not expected due to project implementation.

Mitigation Measures:

The following mitigation measure is required to reduce the potential biological impacts of the project to a less than significant level. This mitigation measure shall be monitored by a person or persons designated by Venoco and approved by the CSLC.

BIO-1. Venoco shall incorporate the items specified below into its annual training and orientation program to boat captains and offshore crew. A copy of this list shall be provided on the bridges of the support vessels. Support vessel operators shall observe the following requirements taking into account vessel safety and navigational rules and regulations. Should a requirement be violated, Venoco shall report the incident in writing to the CSLC within three (3) days. The report shall describe the violation, surrounding circumstances, and why the incident could not be avoided.

- Support vessels will make every effort to maintain a distance of 1,000 feet from sighted whales and other threatened and endangered marine mammals and sea turtles.
- Support vessels will not cross directly in front of migrating whales.
- When paralleling whales, support vessels will operate at a constant speed that is not faster than the whales.

- Female whales will not be separated from their calves.
- Support vessels will not be used to herd or drive whales.
- If a whale engages in evasive or defensive action, support vessels will drop back until the animal calms or moves out of the area.
- Collisions with marine mammals or sea turtles shall be reported promptly to the federal and State agencies listed below pursuant to each agency's reporting procedures. Collisions with marine mammals shall also be reported to the below-listed Marine Mammal Rescue Center

Stranding Coordinator, Southwest Region
(currently, Joe Cordero)
National Marine Fisheries Service
Long Beach, CA 90802-4213
(310) 980-4017

Enforcement Dispatch Desk
California Department of Fish and Game
Long Beach, CA 90802
(909) 597-9823
(916) 445-0045 (during non-business hours)

California State Lands Commission
Environmental Planning and Management Division
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825-8202
(916) 574-1884

Marine Mammal Rescue Center
389 North Hope Ave.
Santa Barbara, CA 93110-1572
(805) 687-3255

Cumulative Impacts:

Impacts associated with project-related drilling activities on biological resources are mitigated to a level of insignificance. No other drilling activities will be undertaken in the region within the project timeframe. Upon completion of drilling, production from Platform Holly will be below existing permitted limits. Therefore, project implementation will not contribute to cumulative impacts on biological resources.

Residual Impacts:

a-f) Provided that the required mitigation measures are implemented, biological impacts for the project would be less than significant. Venoco intends to continue to employ designated vessel corridors and exercise the procedures of their Oil Spill Response Plan should the need arise.

14.5 Cultural Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 5064.5 of the CEQA Guidelines?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 5064.5 of the CEQA Guidelines?	☐	☐	☐	☒
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒

Setting:

A records and literature search was conducted by the University of California, Santa Barbara for the EIR for the Pacific Pipeline project. The records search indicates that numerous cultural resource investigations have been performed within or in the vicinity of the project facilities (Mobil 1997).

Remote sensing data has detected potential cultural resources in the vicinity of the platform. These data were reinterpreted in the Pacific Pipeline EIR, which indicated that 67 anomalies were present in the vicinity of the platform pipelines (PUC 1993). These anomalies were not completely defined and are therefore assumed to be "potential cultural properties." The probability that these anomalies actually represent a shipwreck is remote, and their exact locations are indefinite. However, they are assumed to be eligible for the National Register of Historic Places until otherwise shown (Mobil 1995).

Onshore, a recorded prehistoric site (CA-SBA-1689) is located within Bell Canyon near the EOF. It is described as a diffuse scatter of faunal remains and chipped stone detritus that has been bisected by an abandoned oil facility road. A second site (CA-SBA-71) is located on the top of the bluff to the northwest of the facility. It is described as a prehistoric habitation site with midden deposits consisting of shellfish remains and artifacts. No recorded historic sites were identified by the records search (Mobil 1995).

The proposed project will be conducted offshore on existing structures and the re-drilling operation will be performed by directional drilling from existing wells. Therefore, the proposed project will not result in any changes to the existing sea floor features. In addition, all muds and cuttings generated by the project will be properly disposed of by injection into an approved Class II disposal well at the Platform.

Impact Discussion:

a-d) Since there are no known archaeological or historical resources in the area, and since there will be no activities that could affect any unknown archaeological or historical resources in the area, no impacts will occur from the proposed operations.

Cumulative Impacts:

Impacts associated with project-related drilling activities on cultural resources are non-existent. No other drilling activities will be undertaken in the region within the project timeframe. Upon completion of drilling, production from Platform Holly will be below existing permitted limits. Therefore, project implementation will not contribute to cumulative impacts on cultural resources.

Mitigation and Residual Impacts:

a-d) No impacts to cultural resources would result from the proposed project; therefore, no mitigation is required.

14.6 Geology and Soils

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☐	☒
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☒
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☒
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

Setting:

The geology of the project area has been described in Mobil (1997). The project area is located on the northern edge of the Santa Barbara Channel in the western part of the Transverse Range Physiographic Province. This region is characterized by east-west oriented topographic and structural elements. The Santa Barbara Channel is the submerged western extension of the Ventura Basin, and is bounded on the north by the Santa Ynez Range and on the south by the northern Channel Islands. Total relief from the western portion of the Santa Ynez Mountains to the floor of the Santa Barbara Channel is about 6,000 feet. The Santa Ynez Mountains rise from a narrow coastal plain to elevations of more than 4,000 feet.

Offshore, the mainland shelf slopes gently seaward from the coastline to depths of about 280 feet where it intersects the northern slope of the Santa Barbara Channel. The mainland slope dips relatively steeply toward the center of the Channel. Water depths in the central part of the Channel vary from 650 to 2,000 feet. To the south, the Santa Barbara Channel rises along a submarine slope to a narrow nearshore shelf bordering the four northern Channel Islands: Anacapa, Santa Cruz, Santa Rosa, and San Miguel. These islands represent the western physiographic extension of the Santa Monica Mountains. Maximum elevations of the Channel Islands vary from 830 feet on San Miguel Island to 2,450 feet on Santa Cruz Island.

The Santa Barbara Channel is underlain by a thick sequence of upper Mesozoic and Tertiary marine and continental sediments resting on basement rocks of the Jurassic-age Franciscan complex. It is bounded on the north and south by major east-west trending fault systems. The Santa Ynez fault system to the north is over 90 miles long and was responsible for the uplift of the Santa Ynez Mountains in late Tertiary to Quaternary time. To the south is the Santa Monica-Santa Cruz Island fault system. Both the Santa Ynez and Santa Monica-Santa Cruz Island fault systems are characterized by left-lateral strike-slip and reverse separations along their lengths. In addition to these two major fault systems, numerous left-oblique and reverse faults and steep-limbed folds occur within and adjacent to the Santa Barbara Channel.

Historically, the Santa Barbara Channel has experienced a low to moderate level of seismic activity. Studies of the instrumental seismic record for the Channel area show that earthquake epicenters can generally be correlated with east-west trending reverse faults and with concentrations of activity in the central and northeastern portions of the channel. Recorded seismicity is relatively sparse in the western portion of the Channel. Only five earthquakes have exceeded magnitude 5.0 since 1900, with a maximum magnitude of 6.2 in 1925.

Platform Holly is located on the mainland shelf at a water depth of 211 feet, about 2 miles offshore from Coal Oil Point. It is about 1 mile shoreward of the north slope of the Santa Barbara Channel, which descends to a depth of about 1,800 feet about 11 miles to the south. The north channel slope is a prominent physiographic feature that abruptly separates the nearshore shallow shelf from the deeper portions of the Santa Barbara Channel.

Platform Holly is located above the Sisquoc Formation and immediately adjacent to the Repetto Formation. The Sisquoc Formation is upper Miocene to lower Pliocene in age and consists of thin-bedded, clay shale, siltstone, or claystone. The Monterey Formation is under the Sisquoc. Oil, gas, and tar seepage has been documented from fractures along anticlinal axes. Quigley

et al. (1999) have concluded that Platform Holly oil production from the Monterey Formation has reduced reservoir pressure and resulted in substantial reductions in natural seepage within an area surrounding 13 km^2 (5 $mile^2$) of the platform. The Repetto Formation is Pliocene in age and consists of siltstone and claystone. The thickness of unconsolidated marine sediments lying over these formations varies from 10 to 13 feet in the vicinity of Platform Holly (State Lands Commission et al. 1986).

Impact Discussion:

a) The proposed project involves re-drilling existing offshore wells to new bottom hole locations within the same reservoir. All project activities will be performed from the decks of an existing structure (Platform Holly) located 2 miles offshore. As discussed above, recorded seismicity within the project area has been relatively sparse and the potential for the occurrence of a major earthquake within the area is considered low. Therefore, the proposed project will not have an impact to people or structures from landslide, seismic ground shaking or failure, or earthquake fault rupture.

b) Because the project is located offshore, it will not have an impact related to erosion or loss of topsoil.

c) The project will be conducted from an existing offshore structure (Platform Holly), the legs of which are driven into the sea floor. The platform has been in place for 34 years and is known to be on a stable surface. Therefore, the project will have no impact on the stability of the sea floor beneath the platform.

d) The proposed project is located offshore. It will have no impact on expansive soil.

e) The proposed project is located offshore, and wastewater is transported via crew vessel to EOF for processing. The proposed project does not represent an increase in the existing wastewater volumes generated at Platform Holly in previous operations. Therefore, the proposed project will have no impact on existing septic tank support or alternative wastewater disposal systems.

Cumulative Impacts:

No geological or soil related impacts are anticipated as a result of project-related activities. No other drilling activities will be undertaken in the region within the project timeframe. Upon completion of drilling, production from Platform Holly will be below existing permitted limits. Therefore, project implementation will not contribute to cumulative impacts on geology or soils.

Mitigation and Residual Impacts:

a-e) No impacts to geological resources are anticipated; therefore, no mitigation is required. It should be noted that past production from Platform Holly has reduced the rate of oil and gas emissions from near-by oil seeps. The anticipated acceleration of depletion of recoverable oil by this project may further reduce the natural oil seepage within the project area.

14.7 Hazards and Hazardous Materials

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	☒
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

Setting:

The wells at Platform Holly produce a mixture of oil, gas, and water. Separators on the platform separate natural gas from the oil/water emulsion from the producing wells. The concentration of H_2S in the crude oil produced at Platform Holly is 65 ppm. The sour gas (natural gas with H_2S) is piped to shore where it is processed to remove the H_2S. Existing operations have the potential to produce hazards including natural gas explosion, H_2S release, and oil spill. Response plans have been previously developed to deal with these situations, should they occur. This proposed project does not represent an alteration to previously approved activities on the platform and would not result in any increase in risks from any of these hazards discussed above.

As discussed in Sections, 8.2.1, 8.5, and 14.3, as a result of Venoco's agreement with the APCD, and implementation of recommendations from the audit by CSLC and the County of Santa Barbara, the risks of a significant hazard to the public or the environment have been reduced by the addition of a flare, upgrading or repairing equipment, establishing a preventive maintenance program, and new operating procedures. Venoco is in full compliance with APCD regulations, and the CSLC has concluded that Venoco has developed the infrastructure necessary to maintain the facilities in a safe and compliant condition. In addition, the structural integrity of the platform has been evaluated and determined to be sufficient. To accommodate the additional weight of project equipment and drilling from a corner of the platform, two support columns under that area will be reinforced (see Section 7.2.3).

It is unknown if contamination of sediments beneath Platform Holly has occurred. However, due to the lack of major oil spills and to the dilution associated with wave and current action, contamination is not expected. No hazardous waste disposal is conducted at Platform Holly. Any such waste generated (paint, batteries, oil filters, solvents, etc.) are shipped to the Ellwood Onshore Facility for handling and proper disposal.

Materials that will be transported to Platform Holly in support of this project include the equipment discussed in Section 6.2.2, drill pipe, and drill mud ingredients. None of this material is considered to be hazardous. Small quantities of acids or other caustics are periodically transported to the platform for well stimulation. If these materials are used in the new wells, the transportation and use will be similar to previous work.

Oil Spill Risk Analysis. Based on an analysis of MMS data for oil spills associated with oil operations on the Outer Continental Shelf (OCS), the probability of a release greater than 50 barrels (bbls) from one of the subject wells would be 4.5×10^{-3} per year, or one spill approximately every 220 years. The probability of a release greater than 1,000 bbls would be 6.6×10^{-4} per year, or one spill every 1,500 years.

The potential for a spill is higher during drilling activities because of the potential for blowouts. The inclusion of blowouts that have occurred during all phases of development, including exploration, development, production, workover, and completion results in a probability of blowout of 5.9×10^{-3} per well drilled or one blowout per 168 wells drilled. Of the 116 blowouts reported to MMS between 1971 and 1989, only 7 resulted in a release of oil or condensate. This equates to a probability of 3.6×10^{-4} of a blowout with release of oil or condensate per well drilled, or one blowout per 2,800 wells drilled.

In July 2000, the MMS used their Oil Spill Risk Analysis (OSRA) for the California Pacific region, which provides a probabilistic analysis of oil spill trajectories for use in preparing spill response plans. The results of this analysis were reviewed to identify land segments and resources on the California coast and nearby islands most likely to be impacted by an oil spill if one occurred at Platform Holly. Figure 17.8-1 shows the Southern California coastline and nearby islands with a grid numbering system used by MMS to identify specific land segments. These segments correspond closely to USGS quadrangle maps and to the maps in Section 4600 of the Los Angeles/Long Beach Area Contingency Plan (ACP) (USCG & OSPR 2000).

The MMS results list probabilities that specific land segments will be contacted by an oil spill starting at a particular location within 3, 10, and 30 days for each of the four seasonal periods (Table 14.8-1). Low, non-zero probabilities are shown for locations on the Santa Barbara Channel mainland and some of the islands. Oceanographic and wind conditions create seasonal differences in the possible distributions of oil spills. Variable conditions during each season create a range of probabilities of contact with land. These are summaries of many runs of the model; a single oil spill is unlikely to actually impact every area cited.

If an oil spill originated at Platform Holly, the MMS model predicted greater than one-percent probabilities of contact at least some time during the year at the following island locations: the northern end of San Clemente, north-central and western Santa Catalina, Santa Cruz, north-central and western Santa Rosa, and San Miguel; and on the mainland: Tajiguas (El Capitan) to Point Conception. The highest probabilities occurred on the western end of Santa Cruz Island and the north-central portion of Santa Rosa Island. Changing circulation patterns among the different seasons of the year result in variable risks of oil contact to different shoreline areas (see Table 14.8-1). It should be noted that not all of these areas would be hit in any one spill.

Model results are useful for identifying land segments with resources at risk if an oil spill occurred. Biological resources and sensitive areas on mainland and island shorelines (from the Area Contingency Plan: USCG & OSPR 2000) with at least a 1% chance of contact by oil in the event of a spill (Table 14.8-1) are presented in Appendix C.

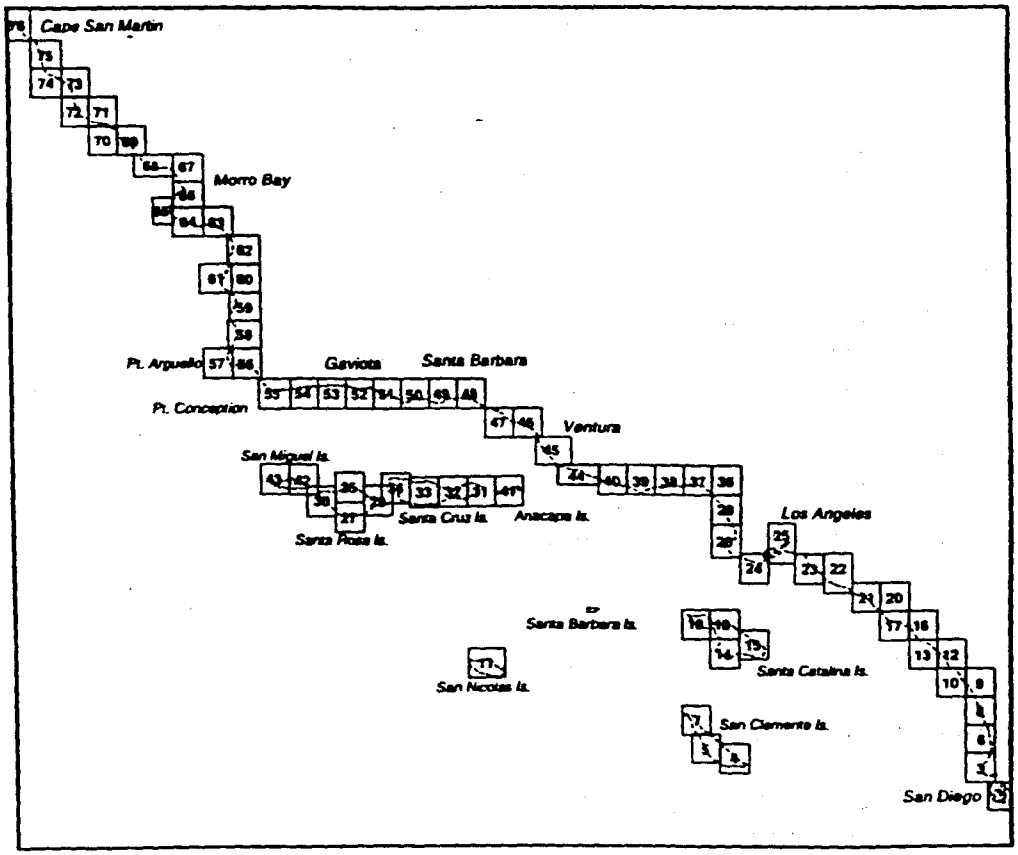


Figure 14.8-1. Southern California Coastline with MMS (2000) Grid Identifying Specific Land Segments

CALENDAR PAGE
MINUTE PAGE

Table 14.8-1. Conditional Probabilities (Expressed as Percent Chance) that an Oil Spill Starting at a Platform Holly in Each Season Will Contact a Certain Land Segment Within 3, 10, and 30 Days (MMS, 2000)

Shoreline Segments	Winter Season			Spring Season			Summer Season			Autumn Season		
	Contact within			Contact within			Contact within			Contact within		
	3 days	10 days	30 days	3 days	10 days	30 days	3 days	10 days	30 days	3 days	10 days	30 days
Island Segments												
4			1									
5						1						
7			2			4						
14			1			1						
18						2						
19						3						
27												1
29		1	1							1	1	1
30		3	3		4	4		11	11		6	7
31		2	2		2	2			1			
32	1	9	9		7	7		1	1	1	2	3
33		4	4		2	2		1	1	1	3	3
34		15	15		19	21		15	15	1	6	6
35		12	13		17	18		35	35		11	11
42		3	3		3	3		9	9		3	3
43		3	4		3	3		11	11		11	11
Mainland Segments												
45					1	1						
50					1	1						
51										1	1	1
52	4	4	4	1	1	1	1	1	1	5	5	5
53	8	9	9	1	1	1	3	3	3	7	8	8
54	2	5	5				1	1	1	3	6	6
55	1	3	3							3	5	5
56											1	1

Note: blank cells = from 0.0 to less than 0.5 percent chance

Impact Discussion:

a) No hazardous material is being transported to the platform for use by this project. Therefore, there will be no impact to the public or the environment through the routine transport, use, or disposal of hazardous materials.

b) This project is not different than the previous activities performed on the platform and does not represent any increase in the frequency of risks of upset or accident that would result in the release of hazardous materials to the environment (i.e., oil spill). In addition, the probability of such an occurrence is considered extremely low as discussed above, and the inclusion of an Oil Spill Response Plan as part of the project further minimizes the likelihood of impacts from such an event.

Because the gas produced with the oil on Platform Holly has a sour (H_2S) odor, odorant does not currently need to be added to the gas at the EOF. As discussed in Section 8.3.2, this situation is not expected to change as a consequence of the re-drilled wells, since the gas produced with the oil from the re-drilled wells will essentially be the same as the gas produced in the rest of the field. However, a significantly greater hazard would be created if (1) the gas produced from the re-drilled wells has a different composition and does not have an odor, and, after mixing with the gas from the other wells, the co-mingled gas piped to shore does not have a sufficiently detectable odor, and (2) a release of the odorless gas occurred. Venoco has proposed to add an odorant station at the EOF if compositionally-different natural gas is produced. Mitigation Measure 1 reduces the risk to less than significant by requiring Venoco to shut down drilling on any well from which odorless gas is produced until the odorant station is permitted and constructed. When drilling is completed, each well will be tested for the composition of the oil and gas. The gas is also checked in accordance with Department of Transportation (DOT) regulations to maintain compliance.

Therefore, the potential for the project to create a significant hazard to the public and/or environment through a reasonably foreseeable upset or accidental spill is considered less than significant.

c) Because the proposed project is located offshore, no impacts to schools will occur from the proposed operations.

d) This offshore project is not on a list of hazardous materials sites and thus does not create this kind of hazard to the public nor the environment.

e & f) The proposed project is located offshore and is more than two miles from a public or private airport. Consequently, there are no safety hazards to the general public from the proposed operations.

g) Because the proposed project is located offshore, no impacts to the implementation of public emergency response plans will occur from the proposed operations. Venoco's emergency response plans include responding to accidents that might arise from the project.

h) Because the proposed project is located offshore, no impacts relating to wildland fires will occur from the proposed operations.

Mitigation Measures

The following mitigation measure is required to reduce the potential hazardous materials impacts of the project to a less than significant level. This mitigation measure shall be monitored by a person or persons designated by Venoco and approved by the CSLC.

HAZ-1 If the composition of the gas from any of the three re-drilled wells on Platform Holly changes so that the gas is odorless, Venoco will shut down drilling on that well until an odorant station is permitted and constructed to comply with DOT regulations. Development and/or production on the well shall not recommence until so approved by the CSLC.

Cumulative Impacts:

Impacts associated with project-related drilling activities on hazards or hazardous materials are mitigated to a level of insignificance. No other drilling activities will be undertaken in the region within the project timeframe. Upon completion of drilling, production from Platform Holly will be below existing permitted limits. Therefore, project implementation will not contribute to cumulative impacts to hazards or hazardous materials.

Residual Impacts:

a) No impact is anticipated; therefore, no mitigation is required.

b) Response plans have been previously developed by Venoco for potential upsets or accidental releases from Platform Holly (e.g., H_2S and Oil Spill Response plans). These plans will be in place and implemented in the unlikely event of an oil spill and/or accidental release of a hazardous substance during proposed drilling operations. Mitigation Measure 1 addresses potential hazards associated with the accidental release of any odorless gas.

c-h) No impacts are anticipated; therefore, no mitigation is required.

14.8 Hydrology and Water Quality

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☐	☒
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☐	☒
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☐	☒
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	☒
f) Otherwise substantially degrade water quality?	☐	☐	☐	☒
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

Setting:

The onshore area adjacent to the project is located in the Goleta Hydrologic Subarea of the South Coast Hydrologic Area, a subdivision of the South Coast Hydrologic Unit. The South Coast Hydrologic Unit occurs from near Point Arguello to Rincon Point and from the crest of the Santa Ynez Mountains to the coastline. The climate of the Hydrologic Unit is semi-arid Mediterranean-type. Approximately 90 percent of the precipitation occurs between the months of November and April. Precipitation is variable in the area, averaging 16 inches per year near the coast to over 30 inches per year in the high mountain slopes. Since most of the drainages are steep and have relatively small watersheds, they are very responsive to precipitation, mostly flowing in direct response to rainfall. Types of surface water in the region include: perennial streams, intermittent streams, man-made impoundments, springs, and vernal pools (Mobil 1997).

The project area is located immediately adjacent to, but not within, the Goleta Groundwater Basin.

In general, marine water quality in the area around Platform Holly is considered good with the exception of elevated hydrocarbon levels. These levels are the result of naturally occurring oil, gas, and tar seeps. Other sources of water pollutants include discharge of municipal wastewater off Goleta. Tissue samples of spider crabs and kelp bass taken at Naples Reef and the Goleta wastewater outfall indicate elevated tissue concentrations of copper, lead, and zinc at the outfall (Mobil 1997).

A possible mode of violation of a water quality standard would be from the unlikely occurrence of an oil spill. The risk of oil spills and their potential impacts are addressed in Section 14.7–Hazards and Hazardous Materials.

Impact Discussion:

a) As described in Section 8.5 – Pollution Prevention and Safety, safety systems and platform decks curbs, gutters, drip pans, and drains are in place to prevent the discharge of contaminants to the ocean. All wastes (other than muds and cuttings) generated due to facility operations are shipped to the EOF for handling and proper disposal. Platform Holly operates in a zero discharge mode. Venoco will follow its Paint Debris Containment Plan (Appendix D) to ensure that no material falls into the water during paint removal prior to welding during the column reinforcement work (see Section 7.2.3). Muds and cuttings from the proposed re-drilling project will also be properly disposed of by injection into an approved Class II disposal well at the Platform. Vessel traffic in support of the project is similar to ongoing support of existing operations and does not violate water quality standards or water discharge requirements. The risk of an oil spill is extremely low and no impact is anticipated. Therefore, there would be no impacts associated with violation of existing water quality standards or water discharge requirements resulting from the proposed project.

b) The project is located outside the Goleta Groundwater Basin. The removal of oil from the South Ellwood field will not deplete, interfere with, or otherwise impact groundwater supplies.

c-e) The project is located offshore. Therefore, there will be neither impacts on stream or river drainage patterns nor contribution of runoff water to stormwater drainage systems.

f) While an oil spill would substantially degrade water quality beyond that caused by the natural seeps in the area, as noted above, the risk of an oil spill is extremely low. In addition, this proposed project will be re-drilling into a reservoir with which Venoco is very familiar. This should further reduce the risk of an oil spill. Therefore, no impact from an oil spill is expected from this proposed project.

g-i) The proposed project is located offshore on an existing facility. Therefore, no housing or other structures will be constructed in a 100-year flood hazard area, nor will people or structures be exposed to risks from levee or dam failures as a result of this proposed project.

j) Seiches are freestanding or oscillatory waves associated with large enclosed or semi-enclosed bodies of water. Due to the fact that the proposed project is located in the Santa Barbara Channel, potential impacts associated with seiches are not anticipated. .

Tsunamis are large-scale sea waves produced by seafloor disturbances. Based upon a review of the Santa Barbara County tsunami and seiches problem-rating map, the project is in an area designated as having a low problem rating for inundation by seiche or tsunami. Therefore, potential impacts associated with tsunamis are not anticipated.

Additionally, since this is an offshore project, there is no potential impact that would result from inundation by mudflows.

Cumulative Impacts:

No impacts to water quality or hydrology are anticipated as a result of project-related activities. No other drilling activities will be undertaken in the region within the project timeframe. Upon completion of drilling, production from Platform Holly will be below existing permitted limits. Therefore, project implementation will not contribute to cumulative impacts to water quality or hydrology.

Mitigation and Residual Impacts:

a-j) No impacts to water quality are expected; therefore, no mitigation is required.

f) As noted above in Section 14.6 "Geology and Soils," the anticipated acceleration of depletion of recoverable oil by this project may further reduce natural oil seepage and thus partially improve local marine water quality within the vicinity of the project.

14.9 Land Use and Planning

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

Setting:

The proposed re-drill project will be conducted within the South Ellwood Field located in the Santa Barbara Channel. Portions of the South Ellwood Field are located within State tideland leases PRC 342.1, 3120.1, and 208.1

Proposed project activities will be conducted from the existing Platform Holly, which is located on PRC 3242.1 approximately 10,000 feet southwest of Coal Oil Point (latitude 34°23.2' N, longitude 119°54'19.7" W) (see Figure 4-1).

The onshore area adjacent to the South Ellwood Field can be characterized as suburban coastal development. In addition to residential and recreational areas, there are approximately 800 acres of open space, bisected by an extensive series of informal roads/trails used by the public, and a major public education institution, the University of California, Santa Barbara.

Impact Discussion:

a) This proposed project involves re-drilling existing wells from an offshore oil platform and is similar to previously approved activities. The nearest community is located approximately 2 miles east within Goleta. Onshore support activities for the project take place at the existing Ellwood Pier, which can accommodate the work without expansion and will have no impacts to the established nearby communities. Therefore, the proposed project will not result in the division of any established community.

b) The activities associated with this project are similar to the previously approved activities on Platform Holly. Thus, it is compatible with existing plans and policies.

c) The project is located offshore, at Platform Holly. This area does not fall within a habitat conservation plan or natural community conservation plan. Therefore, project implementation would not result in any impacts to the management policies of existing conservation plans.

Cumulative Impacts:

Land use and planning impacts associated with project-related drilling activities are non-existent. No other drilling activities will be undertaken in the region within the project timeframe. Upon completion of drilling, production from Platform Holly will be below existing permitted limits. Therefore, project implementation will not contribute to cumulative impacts to existing federal, state, and/or local plans, policies, or regulations.

Mitigation and Residual Impacts:

a-c) There is no impact or change to existing land use by either the re-drilling activities on the platform or the onshore logistical activities and vessel support traffic. Therefore, no mitigation is required.

14.10 Mineral Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

Setting:

The objective of this project is to improve the extraction of oil from the South Ellwood Field. By changing the bottom hole location of three wells to areas in the reservoir that will be more productive the depletion of recoverable oil will be accelerated.

Impact Discussion:

a & b) Rather than resulting in the loss of availability of a resource (oil), this proposed project will enhance the availability of it. There is no impact to any other known resources.

Cumulative Impacts:

Impacts associated with project-related drilling activities on mineral resources are non-existent. No other drilling activities will be undertaken in the region within the project timeframe. Upon completion of drilling, production from Platform Holly will be below existing permitted limits. Therefore, project implementation will not contribute to cumulative impacts to mineral resources.

Mitigation and Residual Impacts:

a & b) No impacts are expected; therefore, no mitigation is necessary.

14.11 Noise

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☐	☒
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	☒
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Setting:

Noise is generally defined as unwanted or objectionable sound. Noise levels are measured on a logarithmic scale because of physical characteristics of sound transmission and reception. Noise energy is typically reported in units of decibels (dB). Noise levels diminish (or attenuate) as distance to the source increases according to the inverse square rule, but the rate constant varies with the type of sound source. Sound attenuation from point sources such as industrial facilities is about 6 dB per doubling of distance. Heavily traveled roads with few gaps in traffic behave as continuous line sources and attenuate at 3 dB per doubling of distance. Noise from more lightly traveled roads is attenuated at 4.5 dB per doubling of distance (Mobil 1997).

Community noise levels are measured in terms of the A-weighted decibel (dBA). A-weighting is a frequency correction that correlates overall sound pressure levels with the frequency response of the human ear. Equivalent noise level (Leq) is the average noise level on an energy basis for a specific time period. The duration of noise and the time of day at which it occurs are important factors in determining the impact of noise on communities. Noise is more disturbing at night and noise indices have been developed to account for the time of day and duration of noise generation. The Community Noise Equivalent Level (CNEL) and Day-Night Average Level (DNL or L_{DN}) are such indices. These indices are time-weighted average values equal to the amount of acoustic energy equivalent to a time-varying sound over a 24-hour period. The CNEL index penalizes night-time noise (10 p.m. to 7 a.m.) by adding 10 dB and evening noise (7 p.m. to 10 p.m.) by adding 5 dB to account for increased sensitivity of the community after dark. The Ldn index penalizes night-time noise the same as the CNEL index, but does not penalize evening noise (Mobil 1997).

Land uses considered to be sensitive noise receptors by Santa Barbara County include residences, hotels, motels, hospitals, nursing homes, schools, libraries, and churches.

Primary noise sources in the project area are aircraft operating from the Santa Barbara Municipal Airport, Southern Pacific Railroad operations, and motor vehicle traffic on U.S. 101 and major arterial roadways. However, surf-related noise dominates in the immediate vicinity of the coast and has been measured as 62 dBA at the shore (ADL 1984). Railroad noise can be expected to be 60 dBA or greater within 600 ft of the tracks; similar levels result from highway (U.S. 101) traffic with 250 to 600 ft (Santa Barbara County 1986).

Noise generation associated with the Platform Holly wells is primarily limited to maintenance periods (workover and re-drilling); however, flow of produced fluids may generate audible vibrations. Noise sources associated with well maintenance include diesel engines, mud pumps, cement pumps, and drill strings. Maintenance-related noise levels may exceed 88 dBA at 50 feet. Noise levels from a variety of drilling activities can range from 60 to 84 dBA at 50 ft; and CNEL normalized noise levels from jack-up rig drilling were 86 dBA at 50 ft and attenuated to 44 dBA at 6400 ft and 38 dBA at 12,800 ft (Continental Shelf Associates, Inc. 1995).

Noise sources on Platform Holly include various pumps, compressors, diesel engines (crew boat, crane, and workover rig), pneumatic valves, and other miscellaneous equipment. Noise monitoring has not been conducted and decibel levels are unknown; however, noise from Platform Holly is not expected to be discernible from background at onshore receptors except during periods of unusually high noise levels (well drilling) and ideal meteorological conditions. The nearest sensitive receptors are residential land uses and an elementary school at both Ellwood and Isla Vista, about 2 miles to the north and the northeast, respectively (Mobil 1997). Venoco reports that noise levels are not distinguishable at any noise sensitive land use receptors, and that there have been no complaints or concerns voiced during past well workover activities, which have similar noise levels to the proposed re-drilling project.

Drilling from bottom founded platforms apparently does not result in much underwater noise, as indicated by studies and by reactions from marine mammals (Richardson et al. 1995).

Recorded noise from drilling/production platforms off California was nearly undetectable during sea states ≥ 3 (Gales 1982, in Richardson et al. 1995).

Impact Discussion:

a) This project is typical of previous work conducted on the platform and will not result in severe noise levels beyond that experienced in normal operations. Workers on the platform will be required to wear hearing protection in noisy areas during proposed re-drilling operations. The Community Noise Exposure criterion for "normally acceptable" in a low-density residential land use area (the most stringent category) is < 60 dBA (Santa Barbara County 1986). Being approximately two miles from shore, the platform transmits little, if any noise to sensitive onshore receptors. Therefore, the proposed project would not result in exposure of severe noise levels to the onshore public.

b) This project is located about 2 miles offshore. There would, therefore, be no impact from groundborne vibration or groundborne noise due to this project.

c) This project is of a relatively short-term duration. Each well is expected to take up to three months to drill and testing occurs following the drilling of each well. The total project is expected to last one and a half years (two wells in the first 12 months, one well in the last six months). Since the only noise increase is that associated with the re-drilling activities, there will be no permanent increase in ambient noise levels once the project is completed. Therefore, the project will not result in a substantial increase in ambient noise levels in the project vicinity.

d) The proposed project will result in a temporary increase in ambient noise levels on Platform Holly. It is anticipated that these noise levels will not exceed the noise levels of similar, previously approved workover activities on the platform. Further, they will not represent a substantial increase in noise levels in the project vicinity above existing conditions. Additionally, as discussed in Section 14.4–Biological Resources, noises due to re-drilling and logistical activities associated with this proposed project are not anticipated to impact marine mammals. Therefore, short-term impacts due to the temporary or periodic increases in ambient noise levels in the project vicinity would be considered less than significant.

e) This project will be located about two miles from shore and is not within an airport land use plan. The closest airport is the Santa Barbara Municipal Airport, which is approximately four miles from Platform Holly. Therefore, the proposed project will not result in the exposure of the people residing or working onshore to excessive noise levels.

f) This project will be conducted offshore, not within the vicinity of a private airstrip. Therefore, there will be no impacts to residents or workers associated with an airstrip.

Cumulative Impacts:

Noise impacts associated with project-related drilling activities are insignificant or non-existent. No other drilling activities will be undertaken in the region within the project timeframe. Upon completion of drilling, production from Platform Holly will be below existing permitted limits. Therefore, project implementation will not contribute to cumulative impacts relating to noise.

Mitigation and Residual Impacts:

a-c) No impact is expected; therefore, no mitigation is required.

d) The impact is less than significant; therefore, no mitigation is required.

e & f) No impact is expected; therefore, no mitigation is required.

14.12 Population and Housing

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Setting:

The proposed project is located offshore of Santa Barbara County. The County is divided into two distinct subregions: the South Coast and the North County. The North County is divided into five distinct census divisions: Santa Ynez, Lompoc, Santa Maria, Guadalupe, and Cuyama. The South Coast area includes two census districts: Carpinteria and Santa Barbara. All of the project sites are located within the unincorporated portion of the Santa Barbara census district.

The present population of the county is over 400,000. The population grew 11% in the last decade and is projected to increase another 14 percent by 2010. The population of unincorporated areas is about 50,000 and contributed about 1.6 percent to the previous growth. Growth in the unincorporated areas in the next period is not expected to increase at as high a rate as the urban areas (Santa Barbara County 2000).

Impact Discussion:

a) The proposed re-drilling project is short-term and expected to be completed within an 18-month period. Further, the project proponent intends to use existing workers in the area to complete the proposed activities. The proposed project will therefore not result in any population growth in the area either directly or indirectly.

b-c) As discussed above, the proposed offshore project is short-term in nature and will not result in the displacement of existing housing and/or people. Therefore, the construction of replacement housing will not be necessary.

Cumulative Impacts:

Growth related impacts associated with project-related drilling activities are non-existent. No other drilling activities will be undertaken in the region within the project timeframe. Upon completion of drilling, production from Platform Holly will be below existing permitted limits. Therefore, project implementation will not contribute to cumulative impacts to population or housing within the region.

Mitigation and Residual Impacts:

a-c) As there would be no impacts, no mitigation is required.

14.13 Public Services

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

Setting:

The proposed project is located in the Santa Barbara Channel, approximately 2 miles offshore of Santa Barbara County. County public service providers, as well as federal emergency response providers with jurisdiction over the project are identified in Table 14.13-1. In an emergency, any of the local groups and ambulance service can be contacted by dialing 911.

Table 14.13-1. Public Service Providers

Public Facilities/Services	Service Provider
Law enforcement	Santa Barbara County Sheriff
Fire protection	Santa Barbara County Fire Department
Ambulance	Various
Medical Services	Santa Barbara County Emergency Medical Services
Spill Response	US Coast Guard, California OSPR

Venoco has a variety of written plans in place to address pollution prevention, safety, and response in the event of an upset (Table 14.13-2). These plans comply with a variety of relevant Federal and State regulations. Current copies of these Plans are located at Platform Holly and the EOF and are on file at the State Lands Commission. County of Santa Barbara required documents are filed at the Energy Division.

Table 14.13-2. Response and Safety Plans

Plan	Purpose	Date of Last Revision	Update Frequency
Oil Spill Contingency Plan, Platform Holly	Provides details of notification and spill response procedures in the unlikely event of an oil spill	10-19-99	Reviewed annually Updated as necessary
Emergency Action Plan, South Ellwood Field	Delineates the equipment and procedures to be followed by the emergency response team to prevent, report, and contain spills, natural gas leaks, and fire hazards	4-23-99	Reviewed annually Updated as necessary
Hazardous materials Business Plan	Describes the proper handling of hazardous materials generated and/or stored onboard the facility during proposed project operations	1-6-00	Reviewed biennially Updated as necessary
Spill Prevention, Control and Countermeasures Plan (SPCC)	Presents information and procedures with the goal of preventing spills	7-98	Reviewed triennially Updated as necessary

Impact Discussion:

a) In the event of an unforeseen accident during drilling operations, public services are available from the U.S. Coast Guard (offshore), the U.S. Environmental Protection Agency (onshore), the California Office of Emergency Services (offshore/onshore), and the California Department of Fish and Game, Office of Spill Preparedness and Response (OSPR) for spills. The role of each of these entities in the event of an emergency is presented in the Emergency Response Plan. The role of public agencies in the event of an oil spill is presented in Venoco's "Oil Spill Response Plan." Response capabilities from these agencies would be adequate to address any type of emergency condition that could potentially occur within the project area.

Law enforcement and fire protection services to the onshore facilities are currently provided by the Santa Barbara County Sheriff and Fire departments. Emergency Medical Services are also provided by nearby County facilities. The successful conduct

of this project is not expected to have an impact on these services. Therefore, project implementation would not result in an impact to existing public services within the region.

Cumulative Impacts:

Impacts associated with project-related drilling activities on existing public services are not anticipated. No other drilling activities will be undertaken in the region within the project timeframe. Upon completion of drilling, production from Platform Holly will be below existing permitted limits. Therefore, project implementation will not contribute to cumulative public service impacts.

Mitigation and Residual Impacts:

a) Since no impacts are expected, no mitigation is required.

14.14 Recreation

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	☒

Setting:

In the western Goleta Valley in the vicinity of Ellwood and the University of California, Santa Barbara (UCSB), there are a number of recreational facilities, including five County-owned public parks: Stow Grove Park, Lake Los Carneros County Park, Goleta Beach County Park, Isla Vista Park, and Santa Barbara Shores Park. Privately owned recreation facilities open to the public include the Sandpiper Golf Course, the Ocean Meadows Golf Course, the Little League Baseball Fields, and various facilities at UCSB. The Bacara Resort and Spa, adjacent of the EOF, opened in the Fall of 2000. In addition to these facilities, privately owned, undeveloped open space areas exist along the coast in the Ellwood area. The public historically has used numerous trails through these properties to gain access to the beach. It should be noted that property owners do not authorize this access.

Offshore recreational activities in the vicinity of Platform Holly include boating and sportfishing. Since the area is a considerable distance from the Santa Barbara Harbor, recreational boating activity is minimal. Due to the known presence of oil seeps, the area is not considered a prime destination for commercial sportfishing. Most sportfishing in the area is conducted at Naples Reef, located west of the platform (Mobil 1997).

Impact Discussion:

a) The crews for this short-term project will be working exclusively offshore, on Platform Holly. Thus there will be no net increase in the use of existing parks or other recreational facilities within the area due to project implementation.

b) The proposed project does not involve and/or include the construction of recreational facilities; thus, there will be no impact from construction or expansion of such facilities.

Cumulative Impacts:

No recreational impacts are anticipated as a result of project-related activities. No other drilling activities will be undertaken in the region within the project timeframe. Upon completion of drilling, production from Platform Holly will be below existing permitted limits. Therefore, project implementation will not contribute to cumulative impacts to recreation.

Mitigation and Residual Impacts:

a-b) As discussed above, the proposed project would not result in any impacts to recreation; therefore, no mitigation is required.

14.15 Transportation/Traffic

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☐	☐	☒
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☐	☒
f) Result in inadequate parking capacity?	☐	☐	☒	☐
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☒

Setting:

The regional transportation network near the project area consists of U.S. 101 and Hollister Avenue (major arterial) along the coast and State Route 217 linking the University of California with U.S. 101. Major intersections in the project area include Winchester Canyon Road/U.S. 101 off-ramp, Calle Real/Hollister Avenue, Hollister Avenue/U.S. 101 ramps, Storke Road/Hollister Avenue, and Storke Road/U.S. 101 ramps. Based on completion of ongoing or planned improvements to the Storke Road/U.S. 101 interchange and the Storke Road/Hollister

Avenue intersection, each of these intersections will operate at a level of service (LOS) C or better at the time the proposed project is implemented.

Minor supplies will continue to be delivered to the platform by the crew boat that runs between Ellwood Pier and the platform. Major supplies will be shipped by supply boat from Port Hueneme. Onshore transportation and persons employed on these supply boats and other large vessels would board these vessels in Port Hueneme. Therefore, project-related vehicle trips would be generated in Ventura County. The primary entrance to port facilities is from the east on Hueneme Road. About 350 parking spaces are provided for persons involved in offshore oil and gas production or sportfishing. Since Port Hueneme is the only deep-water port between Los Angeles and San Francisco, it handles a substantial amount of cargo for the area, with a corresponding amount of related truck traffic. The local roads and highways are operating at acceptable levels of service, except for congestion experienced on the roads at peak afternoon hours. Truck traffic in support of the anticipated six supply boat trips during the duration of the project should be negligible in relation to existing traffic in Ventura County and around Port Hueneme.

Transportation to Platform Holly is provided by crew boat from the Ellwood Pier. The Pier is accessed from a dedicated road with a direct turnoff from U.S. 101. About 36 daily motor vehicle trips are associated with the Ellwood Pier and the majority of these trips do not occur during peak hours.

Impact Discussion:

a) The amount of material to be delivered to the platform is not substantially different from previous drilling or workover projects on Platform Holly. Therefore, there will not be a substantial increase in associated traffic and no impact on the capacity of the existing street system.

b) Since there will not be a substantial increase in vessel or vehicle trips associated with the proposed project, there will be no impact either individually or cumulatively to the level of service established by the County congestion management agency for designated roads or highways.

c) Neither the drilling on the platform nor the vessel support efforts will have any impact on or change to air traffic patterns on the existing street systems.

d) This is primarily an offshore project; therefore, it will have no impact on hazards associated with existing road design features.

e) This is an offshore project; therefore, it will have no impact on the adequacy of existing emergency access facilities.

f) Parking for workers involved with the proposed project (18 persons per 12-h shift) would be provided at the Ellwood pier. There are 23 parking spaces available at the pier, which may not be adequate at peak loads. Venoco will encourage car-pooling. Limited parking may be available at the EOF. If alternate parking is required, Venoco will

arrange for it (e.g., in the past, parking space above the pier parking area has been leased).

g) This offshore project will have no impact on any aspect of alternative transportation such as buses or bicycles.

Cumulative Impacts:

Transportation or traffic impacts associated with project-related drilling activities are insignificant or non-existent. No other drilling activities will be undertaken in the region within the project timeframe. Upon completion of drilling, production from Platform Holly will be below existing permitted limits. Therefore, project implementation will not contribute to cumulative impacts to transportation or traffic.

Mitigation and Residual Impacts:

a-g) No traffic impacts would result due to project implementation; therefore, no mitigation is required.

14.16 Utilities and Service Systems

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the projects solid waste disposal needs?	☐	☐	☐	☒
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

Setting:

The Goleta Water District provides potable water service to the onshore facilities. Although a 2-inch water pipeline is provided to Platform Holly from the EOF, it is currently not in service. Southern California Edison supplies electrical power to Platform Holly and associated wells and the EOF. The natural gas used as fuel on the platform is Public Utilities Commission (PUC) gas purchased from the Gas Company and transported to the platform by pipeline.

Freshwater and wastewater is transported to and from the Platform by crew boat. Wastewater is handled by the municipal sewage system at the EOF. Seawater is used for the drilling mud. Freshwater (<200 bbl/well) will be used for the cement work.

The re-drilling of three wells is not a long-term energy consuming use and would not use substantial amounts of fuel or energy. As such, the proposal would not result in substantial increase in demand upon existing sources of energy, nor require the development of new sources. Once the re-drilling activities are completed, no energy consumption associated with the project would occur.

Impact Discussion:

There will be a maximum of approximately 18 additional people per shift on Platform Holly working on this project. They will be working approximately 12 hours per day, 7 days per week, for the duration of the proposed project. This is slightly more (2 or so) than the number of additional people who are periodically brought to the platform for workover or maintenance activities.

a) Previous periods with similar numbers of workers on the platform have not exceeded any wastewater treatment requirements. Therefore, no impacts to wastewater treatment requirements are anticipated with project implementation.

b) The number of individuals on this project is insignificant compared to the total capabilities of the water and wastewater facilities, and no new construction or expansion of these kinds of facilities is necessary. Consequently, there would be no resulting impacts.

c) The platform presently has adequate stormwater drainage facilities. This project will have no impact on those facilities nor on additional stormwater handling needs.

d) The platform is not a high freshwater user and all their needs are met by transporting it within a container via the crew boat. The re-drilling activities may require less than an additional 600 bbl of freshwater (total) for cement work on the three wells, which does not impact any water resources or entitlements.

e) See a) above.

f) The primary solid wastes associated with this project are muds and cuttings, which will be injected into an approved disposal well at the platform. All other solid waste will be transported ashore as described above. Previous periods with similar numbers of workers on the platform have not exceeded any solid waste handling needs

g) As in the past, with similar work (workovers, maintenance, etc.) provided by extra personnel on the platform, all statutes related to solid waste will be complied with.

Cumulative Impacts:

Utility and service system impacts associated with project-related drilling activities are non-existent. No other drilling activities will be undertaken in the region within the project timeframe. Upon completion of drilling, production from Platform Holly will be below existing permitted limits. Therefore, project implementation will not contribute to cumulative impacts to utilities or service systems.

Mitigation and Residual Impacts:

a-g) No impacts to utilities and service systems are expected due to project [illegible], therefore, no mitigation is required.

15. MANDATORY FINDINGS OF SIGNIFICANCE	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

16.0 INFORMATION SOURCES

16.1 Agencies and Individuals Consulted

Santa Barbara County Emergency Medical Services.

Cy Oggins, California State Lands Commission

Jeff Planck, California State Lands Commission

David Mercier, California State Lands Commission

Mike Goldman, Santa Barbara County Air Pollution Control District

James Galloway, Minerals Management Service

Steve Greig, Venoco, Inc.

Tom Napoli, California Department of Fish and Game

Richard Rosenbaum, Venoco, Inc.

Bob Van Nostrand, Venoco, Inc.

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APPENDIX A
MITIGATION MONITORING PROGRAM

OVERVIEW

This Mitigation Monitoring Program was developed to ensure that mitigation measures included in the Mitigated Negative Declaration (MND) are fully implemented to reduce environmental impacts to a less than significant level. In addition, the [illegible] Program complies with the requirements of Public Resources Code 21081.6, which requires the lead agency to adopt a reporting or monitoring program.

The core of this program is the attached Implementation Table (Table A-1) listing mitigation measures from the project's MND, implementation timing, documentation required, and the agency responsible for monitoring. Venoco will conduct all re-drilling activities in coordination with California State Lands Commission (CSLC), Department of Conservation–Division of Oil, Gas, and Geothermal Resources (DOGGR), and Santa Barbara County Air Pollution Control District (APCD) staffs. All mitigation measures are required by the California State Lands Commission. This program is based on the following compliance actions:

- Air quality monitoring and reporting;
- Biological resources monitoring and reporting;
- Hazards and hazardous materials monitoring and reporting.

AIR QUALITY MONITORING AND REPORTING

Venoco will use existing Santa Barbara County APCD processes for monitoring and documentation to demonstrate compliance with the mitigation implementation in Table A-1. In addition, Venoco shall submit quarterly compliance reports to the CSLC.

BIOLOGICAL RESOURCES MONITORING AND REPORTING

Venoco will supply evidence to CLSC to ensure that the specified Biological Resources items in Table A-1 are incorporated into its annual training and orientation program to boat captains and offshore crew. The monitor shall also ensure that a copy of the mitigation measure requirements is provided on the bridges of the project vessels. Venoco will allow CSLC staff to inspect vessel bridges to ensure compliance. Any collisions with marine wildlife shall be reported to the National Marine Fisheries Service, California Department of Fish and Game, and CSLC pursuant to each agency's reporting procedures. In addition, Venoco shall submit quarterly reports to the CSLC summarizing any encounters with whales or other marine wildlife (i.e., threatened and endangered marine mammals and sea turtles).

HAZARDS AND HAZARDOUS MATERIALS MONITORING AND REPORTING

Venoco will monitor each re-drilled well to confirm that the gas from the well contains H_2S and therefore does not require the addition of odor. If the gas does not have a natural odor, Venoco will shut down drilling on that well until an odorant station is permitted and constructed to comply

with DOT regulations. Development and/or production on the well shall not recommence until so approved by the CSLC. Venoco shall submit H_2S data and findings for each re-drilled well to the CSLC and the Santa Barbara County Energy Division within two weeks after the completion of each re-drilled well.

Table A-1. Mitigation Monitoring Required by California State Lands Commission for Venoco Platform Holly Re-Drilling Project– Implementation Table

Mitigation Number	Mitigation Measure	Implementation Timing	Documentation Required	Agency Responsible
Air Quality				
AIR-1	Venoco shall re-drill no more than two wells in any 12-month period.	Throughout the re-drilling period	Quarterly Monitoring Report	CSLC
AIR-2	Venoco shall implement the following actions throughout the duration of the proposed project. [These measures are based upon the conditions identified in the Santa Barbara County APCD Permit Exemption Request Approval letter (May 3, 2001; Exemption Number 10406-1) and comments received from APCD on June 18, 2001.]	As required by Santa Barbara County APCD rules and regulations throughout the re-drilling period	APCD Air Quality Monitoring Records Quarterly compliance summary reports to the CSLC	Santa Barbara County APCD and CSLC
	Supply boat trips shall be limited to no more than one per day.			
	Required minimum control efficiencies shall be maintained across each of the catalytic converters.			
	An air-fuel ratio controller shall be installed and operated on each catalytic converter to maintain the required removal efficiencies.			
	Emissions source testing shall be performed on the Caterpillar G399 and G-3516 engines.			
	A Generator Engine Inspection and Maintenance Plan shall be implemented for each generator.			
	Fuel consumption of the project engines shall be monitored.			
	Emissions from engines used for the project shall be calculated.			

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Table A-1. Continued

Mitigation Number	Mitigation Measure	Implementation Timing	Documentation Required	Agency Responsible
AIR-2 (continued)	Emission and vessel traffic data shall be transmitted to the Santa Barbara County APCD monthly, with a summary of the data provided to the CSLC each quarter.			
AIR-3.	Venoco shall submit to the APCD and CSLC for approval the design specifications and operational procedures of a system to control produced gases from the mud degasser (e.g., vapor recovery unit, flare, or carbon) prior to initiating the re-drilling project.	Prior to commencement of re-drilling	Design specifications and operational procedures	CSLC and APCD
Biological Resources				
BIO-1	Venoco shall incorporate the items specified below into its annual training and orientation program to boat captains and offshore crew. A copy of this list shall be provided on the bridges of the support vessels. Support vessel operators shall observe the following requirements taking into account vessel safety and navigational rules and regulations. Should a requirement be violated, Venoco shall report the incident in writing to the CSLC within three (3) days. The report shall describe the violation, surrounding circumstances, and why the incident could not be avoided.	Throughout the re-drilling period	Copy of written information provided to boat captains. Copy of training Video. Written permission for CSLC staff to confirm provision of written materials on support vessels. Incident reports submitted in writing to the CSLC within three (3) days that describe any violation, surrounding circumstances, and why the incident could not be avoided. Quarterly reports summarizing any encounters with whales or other marine wildlife (i.e., threatened and endangered marine mammals and sea turtles).	CSLC
	Support vessels will make every effort to maintain a distance of 1,000 feet from sighted whales and other threatened and endangered marine mammals and sea turtles.			
	Support vessels will not cross directly in front of migrating whales.			
	When paralleling whales, support vessels will operate at a constant speed that is not faster than the whales.			
	Female whales will not be separated from their calves.			
	Support vessels will not be used to herd or drive whales.			

Table A-1. Continued

Mitigation Number	Mitigation Measure	Implementation Timing	Documentation Required	Agency Responsible
BIO-1 (continued)	If a whale engages in evasive or defensive action, support vessels will drop back until the animal calms or moves out of the area. Collisions with marine mammals or sea turtles shall be reported promptly to the federal and State agencies listed below pursuant to each agency's reporting procedures. Collisions with marine mammals shall also be reported to the below-listed Marine Mammal Rescue Center. Stranding Coordinator, Southwest Region (currently, Joe Cordero) National Marine Fisheries Service Long Beach, CA 90802-4213 (310) 980-4017 Enforcement Dispatch Desk California Dept. Fish and Game Long Beach, CA 90802 (909) 597-9823 (916) 445-0045 (during non-business hours) California State Lands Commission Environmental Planning and Management Division 100 Howe Avenue, Suite 100-South Sacramento, CA 95825-8202 (916) 574-1890 Marine Mammal Rescue Center 389 North Hope Ave. Santa Barbara, CA 93110-1572 (805) 687-3255			
Hazards and Hazardous Substances				
HAZ-1	If the composition of the gas from any of the three re-drilled wells on Platform Holly changes so that the gas is odorless, Venoco will shut down drilling on that well until an odorant station is permitted and constructed to comply with DOT regulations. Development and/or production on the well shall not recommence until so approved by the CSLC.	Throughout the re-drilling period	H_2S data and report on odor findings for each re-drilled well, submitted to the CSLC and the Santa Barbara County Energy Division within two weeks after the completion of each re-drilled well.	CSLC

APPENDIX B

Platform Holly

AIR EMISSIONS DATA

Table 1
Venoco Drill Rig Monitoring Program
Equipment Description

Number	Equipment Description	Engine				Emission Factors (lb/MMBtu)[1]				
		Make	Model	HP Rating	Fuel Type	NOx	ROC	CO	SO2	PM10
1	Crane	-	-	96	Diesel	4.41	0.30	0.95	0.05	0.30
2	Electric Line Unit	-	-	135	Diesel	4.41	0.30	0.95	0.05	0.30
3	Slick Line Unit	-	-	90	Diesel	4.41	0.30	0.95	0.05	0.30
4	Hydraulic Unit for Casing Tongs	-	-	40	Diesel	4.41	0.30	0.95	0.05	0.30
5	Coil Tubing Unit	-	-	257	Diesel	4.41	0.30	0.95	0.05	0.30
6	Generator No. 1	Caterpillar	G399 SITA	803	N Gas	0.166	0.037	0.292	0.0006	0.046
7	Generator No. 2	Caterpillar	G399 SITA	803	N Gas	0.166	0.037	0.292	0.0006	0.046
8	Generator No. 3	Caterpillar	G3516 SITA	1,053	N Gas	0.143	0.029	0.215	0.0006	0.046

[1] Source of emission factors:

Diesel engines - Form APCD-70B, Table B.1 with S = 0.05 wt.%

Generators - NOx, ROC (NMHC), and CO from attached Caterpillar specification sheets. Conversion of units for the G399 is based on 7233 scf/hr nat. gas at full load and 905 Btu/scf (LHV) gas [= 1005 Btu/scf (HHV)].

Conversion of units for the G3516 is based on 7697 Btu/bhp-hr.

SO2 from AP-42, Table 3.1-1, footnote e. PM10 from Form APCD-70B, Table B.2.

Fuel Data		
Diesel	N Gas - G399	N Gas - G3516
0.055 gal/hp-hr	9.01 scf/hp-hr	7,697 Btu/hp-hr
140,000 Btu/gal	1,005 Btu/scf	

Table 2
Venoco Drill Rig Monitoring Program
Worst-Case Day Emissions

Equipment Identification		Max Rating	Maximum Time	Max Daily Fuel Use	Max Daily Energy Use	Worst-Case Day Emissions (lbs/day)[1]				
Number	Description	(hp)	(hrs/day)		(MMBtu)	NOx	ROC	CO	SO2	PM10
1	Crane	96	8	42.2 gal	5.9	26.08	1.77	5.62	0.30	1.77
2	Electric Line Unit	135	24	178.2 gal	24.9	110.02	7.48	23.70	1.26	7.48
3	Slick Line Unit	90	0	0.0 gal	0.0	0.00	0.00	0.00	0.00	0.00
4	Hydraulic Unit for Casing Tongs	40	0	0.0 gal	0.0	0.00	0.00	0.00	0.00	0.00
5	Coil Tubing Unit	257	0	0.0 gal	0.0	0.00	0.00	0.00	0.00	0.00
6	Generator No. 1	803	0	0.000 mmscf	0.0	0.00	0.00	0.00	0.00	0.00
7	Generator No. 2	803	0	0.000 mmscf	0.0	0.00	0.00	0.00	0.00	0.00
8	Generator No. 3	1053	24	195 MMBtu	194.5	27.82	5.64	41.82	0.12	8.95
	TOTAL					163.92	14.90	71.14	1.68	18.21

[1] Based on all engines running at 100% load for hours indicated.

Table 3
Venoco Drill Rig Monitoring Program
Annual Emissions
First Year - Two Wells

Equipment Identification		Max Rating	Maximum Time	Max Annual Fuel Use	Max Annual Energy Use	Projected Annual Emissions (tons/yr)[1]				
Number	Description	(hp)	(hrs/yr)		(MMBtu)	NOx	ROC	CO	SO2	PM10
1	Crane	96	630	3,326 gal	466	1.03	0.07	0.22	0.01	0.07
2	Electric Line Unit	135	200	1,485 gal	208	0.46	0.03	0.10	0.01	0.03
3	Slick Line Unit	90	200	990 gal	139	0.31	0.02	0.07	0.00	0.02
4	Hydraulic Unit for Casing Tongs	40	200	440 gal	62	0.14	0.01	0.03	0.00	0.01
5	Coil Tubing Unit	257	120	1,696 gal	237	0.52	0.04	0.11	0.01	0.04
6	Generator No. 1	803	1,600	11.6 mmscf	11,634	0.97	0.22	1.70	0.00	0.27
7	Generator No. 2	803	1,600	11.6 mmscf	11,634	0.97	0.22	1.70	0.00	0.27
8	Generator No. 3	1053	4,320	35,013 MMBtu	35,013	2.50	0.51	3.76	0.01	0.81
	TOTAL					6.89	1.10	7.69	0.05	1.51

[1] Based on all engines running at 100% load for hours indicated.

Table 4
Venoco Drill Rig Monitoring Program
Annual Emissions
Subsequent Years - One Well

Equipment Identification		Max Rating	Maximum Time	Max Annual Fuel Use	Max Annual Energy Use	Projected Annual Emissions (tons/yr)[1]				
Number	Description	(hp)	(hrs/yr)		(MMBtu)	NOx	ROC	CO	SO2	PM10
1	Crane	96	315	1,663 gal	233	0.51	0.03	0.11	0.01	0.03
2	Electric Line Unit	135	100	743 gal	104	0.23	0.02	0.05	0.00	0.02
	Slick Line Unit	90	100	495 gal	69	0.15	0.01	0.03	0.00	0.01
	Hydraulic Unit for Casing Tongs	40	100	220 gal	31	0.07	0.00	0.01	0.00	0.00
	Coil Tubing Unit	257	60	848 gal	119	0.26	0.02	0.06	0.00	0.02
	Generator No. 1	803	800	5.8 mmscf	5,817	0.48	0.11	0.85	0.00	0.13
	Generator No. 2	803	800	5.8 mmscf	5,817	0.48	0.11	0.85	0.00	0.13
	Generator No. 3	1053	2,160	17,507 MMBtu	17,507	1.25	0.25	1.88	0.01	0.40
	TOTAL					3.44	0.55	3.84	0.02	0.75

[1] Based on all engines running at 100% load for hours indicated.

FOR PLATFORM HOLLY RE-DRILL AIR EMISSIONS ESTIMATES

1. AIR EMISSIONS CALCULATIONS FOR SUPPLY BOAT

(Data and method from February 22, 2001 letter from M. Goldman, SBC-APCD to C. Oggins CSLC)

Current operating permit limits are based on 192 supply boat trips. There will be a total of 6 project-related supply boat trips.
Total project emissions from the supply boat will therefore be 6/192 of the permitted annual emission rates for the suppy boat.
Therefore, the total project emissions of the supply boat are as follows:

	Emissions (tons)				
	NOx	ROC	CO	SOx	PM10
Project total (6 trips)	3.04	0.11	0.45	0.30	0.18
Year 1 (4 trips)	2.03	0.07	0.30	0.20	0.12
Year 2 (2 trips)	1.01	0.04	0.15	0.10	0.06

Current daily emissions operating permit limits for the supply boat are based on 24 hours of operation.
One daily round trip for this project is 9.25 hours.
Project emissions for one day for the supply would therefore be 9.25/24 th of the permitted daily emissions, which would be:

	Emissions (pound/day)				
	NOx	ROC	CO	SOx	PM10
Peak day (one round-trip)	1155.4	47.1	179.7	114.4	68.4

2. EMISSIONS FROM MUDS AND CUTTINGS

(Data from Mobil Clearview Project calculations; June 23, 1995; provided by M. Goldman, APCD, 2-22-01)
Assume: 100 days to drill one well.
Assume: 20 days in interval containing gas.
Estimated: 85,000 SCF gas total per well (containing 20% ROC)
Estimated escapage from shale shaker & mud pits (2% of total): 1700 SCF in 20 days.
85 SCF/day

	Emission Factors (pound/day/SCF)				
	NOx	ROC	CO	SOx	PM10
Shale shaker & mud pits	0.0	0.0135	0.0	0.0	0.0

(Calculations for Holly Re-Drill Project -- using Clearview Project assumptions)
Estimated escapage from shale shaker & mud pits (100% of total): 85,000 SCF in 20 days.
4250 SCF/day

	Emissions (pound/day)				
	NOx	ROC	CO	SOx	PM10
Shale shaker & mud pits	0.0	57.4	0.0	0.0	0.0

	Emissions (amount/well)				
	NOx	ROC	CO	SOx	PM10
Shale shaker & mud pits (lbs)	0.0	1147.5	0.0	0.0	0.0
(tons)	0.0	0.574	0.0	0.0	0.0

	Emissions (amount/ 2 wells)				
	NOx	ROC	CO	SOx	PM10
Shale shaker & mud pits (tons)	0.0	1.15	0.0	0.0	0.0

APPENDIX C

Table C-1. Natural Resources of Concern Cited in Area Contingency Plan

The 2000 Area Contingency Plan (ACP 2000) (Section 4600, pages 4600-199 through 4600-402, 4600-406 through 4600-436, 4600-444 through 4600-465, and 4600-473 through 4600-490) lists the following resources of primary concern for the shoreline areas along the mainland California coast and Santa Barbara Channel Islands that were identified as potentially affected if an offshore release from Platform Holly occurred. The ACP should be consulted for more detail.

MMS Land Segment No.	ACP Map No.	Site No.	Site	Marine Mammals	Birds	Intertidal Resources/ Wetland Biota/ Other	Seasonal Concerns
55	99	A-4-010	Pt Conception Government Pt	Harbor Seals Elephant Seals, Grey Whales Sea Otters	Cormorants, Pigeon Guillemots, Gulls, Snowy Plovers (at Perco's Beach), Brown Pelicans	Rich & diverse rocky intertidal community.	Jan. – June: Harbor Seals pupping & breeding. All year: High conc. of Harbor Seals, Elephant Seals and seabirds, and rich intertidal biota and kelp beds, rafts of Sea Otters. Rich rocky intertidal community.
		A-4-071	Damsite Canyon Creek	None identified	None identified	Wetland biota and habitat	Whenever the creek mouth is open to the ocean (rainy season)
54	100	A-4-072	Arroyo El Bolito	Sea Otters	Snowy Plovers	Wetland biota	When wetland habitat is open to ocean. Spring & summer for snowy plover nesting on upper beach.
		A-4-012	Canada De Santa Anita (creek)	Sea Otters	Brown Pelicans, Snowy Plovers, other seabirds, shorebirds, & waterfowl	Wetland & aquatic biota including Steelhead Trout and Tidewater Goby.	Whenever the creek mouth is open to the ocean (rainy season) Steelhead Trout and Tidewater Goby at risk. All year: seabirds, shorebirds, waterfowl.
		A-4-013	Canada De Alegria	Sea Otters	Brown Pelicans, Snowy Plovers, other seabirds, shorebirds, & waterfowl	Wetland & aquatic biota including Steelhead Trout and Tidewater Goby.	Whenever the creek mouth is open to the ocean (rainy season): Steelhead Trout and Tidewater Goby at risk. All year: seabirds, shorebirds, waterfowl.
		A-4-073	Canada Del Agua Caliente	Sea Otters	None identified	Wetland biota including tidewater goby.	All year: wetland biota including tidewater goby.

Table C-1. (Continued)

MMS Land Segment No.	ACP Map No.	Site No.	Site	Marine Mammals	Birds	Intertidal Resources/ Wetland Biota/ Other	Seasonal Concerns
53	101	A-4-014	Gaviota Creek	Harbor Seals, Calif. Sea Lions, Elephant Seals, Sea Otters	Brown Pelicans, other seabirds, shorebirds, & waterfowl	Wetland biota including Steelhead Trout and Tidewater Goby.	Whenever the creek mouth is open to the ocean (much of year, depending on rain): Wetland biota including Steelhead Trout and Tidewater Goby, waterfowl, and saltwater & freshwater marsh habitats. All year: seabirds, shorebirds, waterfowl, Harbor Seals.
52	102	A-4-017	Refugio Creek	Sea Otters	Shorebirds, seabirds, and waterfowl	Wetland biota including Tidewater Goby	Whenever the creek mouth is open to the ocean (late Fall – early Summer, depending on rain): Wetland biota All year: seabirds.
		A-4-018	El Capitan Creek	None identified	Brown Pelicans, seabirds, shorebirds	Wetland biota	Whenever the creek mouth is open to the ocean (late Fall – early Summer, depending on rain): Wetland biota.
43	175	A-4-042	Pt Bennett Area – San Miguel Island	Harbor Seals, Northern Fur Seals, Guadalupe Fur Seals, Sea Lions, poss. Sea Otters	Brandt's Cormorant, Western Gull, Ashy Storm Petrel, Pigeon Guillemot, Cassin's Auklet	None identified	All year: high concentrations of marine mammals pupping and breeding and nesting seabirds.
		A-4-043	Castle Rock Area – San Miguel Island	Harbor Seals, Northern Fur Seals, Sea Lions, poss. Sea Otters	Brandt's & Pelagic Cormorant, Western Gull, Ashy & Leach's Storm Petrel, Pigeon Guillemot, Cassin's Auklet, Xantus' Murrelet	None identified	All year: high concentrations of marine mammals pupping and breeding and nesting seabirds.
		A-4-044	East Simonton Cove – San Miguel Island	Harbor Seals, Northern Elephant Seals, Sea Lions	Brandt's & Pelagic Cormorant, Western Gull, Black Oystercatcher, Snowy Plover, Peregrine Falcon	Important intertidal resources, including abalone	All year: high concentrations of marine mammals pupping and breeding and nesting seabirds, and for important intertidal resources.

Table C-1. (Continued)

MMS Land Segment No.	ACP Map No.	Site No.	Site	Marine Mammals	Birds	Intertidal Resources/ Wetland Biota/ Other	Seasonal Concerns
42	176	A-4-045	Harris Pt. To Bat Rock – San Miguel Island	Harbor Seals, Northern Elephant Seals	Brandt's & Pelagic Cormorant, Western Gull, Black Oystercatcher, Pigeon Guillemot, Ashy Storm Petrel, Cassin's & Rhinoceros Auklet, Peregrine Falcon	None identified	Dec. – April for marine mammals pupping and breeding. March – July for nesting seabirds. All year for important intertidal resources.
		A-4-046	Cuyler Harbor, East Side – San Miguel Island	None identified	Snowy Plovers	None identified	March – Aug. for Snowy Plovers nesting.
		A-4-047	Prince Island – San Miguel Island	None identified	Brown Pelicans; Pelagic, Brandt's, & Double Crested Cormorant; Western Gull, Black Oystercatcher, Pigeon Guillemot; Ashy, Leach's & Black Storm Petrel, Cassin's & Rhinoceros Auklet, Tufted Puffin	None identified	March – July for nesting seabirds. All year for high con. of sea birds.
		A-4-048	Bay Point Area – San Miguel Island	Harbor Seals	Pelagic & Brandt's Cormorant; Western Gull, Black Oystercatcher, Pigeon Guillemot	None identified	Jan. – June for Harbor Seals pupping and breeding. March – July for seabirds. All year for Harbor Seal and Seabird conc.

Table C-1. (Continued)

MMS Land Segment No.	ACP Map No.	Site No.	Site	Marine Mammals	Birds	Intertidal Resources/ Wetland Biota/ Other	Seasonal Concerns
35	178	A-4-051	North Central Area – Santa Rosa Island	Harbor Seals, Calif. Sea Lions	Brandt's & Pelagic Cormorants, Pigeon Guillemots, Black Oystercatchers, Western Gulls	Important intertidal resources include Black Abalone and surfgrass beds.	Dec. – June for Harbor Seals pupping and breeding, May – Aug. for Calif. Sea Lions, March – July for nesting seabirds. All year for high conc. of marine mammals, seabirds, and impt. intertidal resources.
34-33	181-182	A-4-059	Northwest Area – Santa Cruz Island	Harbor Seals, Calif. Sea Lions, Northern Elephant Seals	Brandt's & Pelagic Cormorants, Pigeon Guillemots, Cassin's Auklets, Ashy Storm Petrels, Black Oystercatchers, Western Gulls	Various intertidal resources	Dec.-Aug. for Marine Mammals pupping and breeding, Mar.-Aug. for Nesting Seabirds, All year for Important Intertidal Resources
32	183	A-4-060	Prisoner's Harbor – Santa Cruz Island	Harbor Seals	Pelagic Cormorants, Western Gulls	None identified	During heavy rains creek and wetland biota are at risk (open to ocean), Dec.-June for Marine Mammals pupping and breeding, Mar.-July for nesting Seabirds, All year for conc. of Marine Mammals and Seabirds
		A-4-061	Water Harbor Area – Santa Cruz Island	Harbor Seals	Pelagic Cormorants, Western Gulls	None identified	Dec.-June for Marine Mammals pupping and breeding, Mar.-July for nesting Seabirds, All year for conc. of Marine Mammals and Seabirds
32-31	183-184	A-4-062	Northeast End – Santa Cruz Island	Harbor Seals, Calif. Sea Lions	Brown Pelicans, Snowy Plovers, Pelagic and Brandt's Cormorants, Black Oystercatchers, Ashy Storm Petrels, Western Gulls	None identified	Dec.-Aug for Marine Mammals pupping and breeding, Mar.-Aug. for nesting Seabirds. All year for conc. of Marine Mammals and Seabirds
30	177	A-4-050	West End – Santa Rosa Island	Harbor Seals Elephant Seals	Snowy Plover, Brandt's & Pelagic Cormorants, Black Oystercatcher, Western Gull	Important intertidal resou[illegible]s including Black Abalone.	Dec.-Aug for Marine Mammals pupping and breeding, Mar.-July for nesting Seabirds. All year for impt. intertidal resources.

MINUTE PAGE
CALENDAR PAGE
[illegible]

Table C-1. (Continued)

MMS Land Segment No.	ACP Map No.	Site No.	Site	Marine Mammals	Birds	Intertidal Resources/ Wetland Biota/ Other	Seasonal Concerns
29	180	A-4-052	Northeast End – Santa Rosa Island	Harbor Seals, Calif. Sea Lions	Snowy Plover, Pelagic Cormorant, Black Oystercatcher, Pigeon Guillemot, Western Gull	Important intertidal resources including Pismo Clams and surfgrass beds.	Dec. – June for Harbor Seals pupping and breeding, May – Aug. for Calif. Sea Lions, March – Aug. for nesting seabirds. All year for high conc. of marine mammals, seabirds, and impt. intertidal resources.
		A-4-053	Lagoon (East Side) – Santa Rosa Island	None identified	Waterfowl, seabirds, and shorebirds	Wetland Biota	Whenever the lagoon is open to the ocean (during periods of high rainfall, or with extreme high tides).
19-18-14	188-191	A/C-5-020	Arrow Point – Santa Catalina Island	Harbor Seals	None identified	Small Marshland	March – April: Harbor Seal pupping.
		A/C-5-021	Catalina Harbor – Santa Catalina Island	Harbor Seals	None identified	Small Marshland	March – April: Harbor Seal pupping.
		A-5-022	Ship rock – Santa Catalina Island	None identified	Brown Pelican, Cormorants	None identified	Year round.
		A-5-023	Bird Rock – Santa Catalina Island	None identified	Brown Pelican, Cormorants	None identified	Spring: Nesting
		A/C-5-024	China Point – Santa Catalina Island	Harbor Seals	None identified	None identified	March – April: Harbor Seal pupping.
		A/C-5-025	Salta Verde Point – Santa Catalina Island	Harbor Seals	None identified	None identified	March – April: Harbor Seal pupping.
		A/C-5-026	Seal Rock – Santa Catalina Island	Harbor Seals	None identified	None identified	March – April: Harbor Seal pupping.

Table C-1. (Continued)

MMS Land Segment No.	ACP Map No.	Site No.	Site	Marine Mammals	Birds	Intertidal Resources/ Wetland Biota/ Other	Seasonal Concerns
7			San Clemente Island				

APPENDIX D

Platform Holly Rig Program

PAINT DEBRIS CONTAINMENT PLAN

General

In order to support the loads anticipated from a drilling program, it is necessary to install reinforcement members to two of the columns on Platform Holly. The columns, identified here, as B-1 and B-2, will receive T-Section reinforcing, spaced at 90-degree intervals, from just below the Drilling Deck, through the Production Deck and down to the +7 foot elevation (approximately). Additionally, platform trusses will receive plate bracket reinforcing and weld reinforcing.

In order to apply these reinforcement sections to the existing members on Platform Holly, it is necessary to remove a narrow band of paint in the area of welding. This document addresses the issue of maintaining VENOCO's "zero discharge policy" at Platform Holly by mitigating the chance of paint debris falling into the waters below the platform.

Analysis of Paint Samples

Paint samples from Column B-2 (down to bare metal) were taken on May 30th, 2001 and sent for Lead (Pb) analysis. The results of the analysis indicate a Lead content of 28mg/Kg (28ppm), which is far below the threshold for solids prescribed by Cal/OSHA Title 8, Section 1532.1, Paragraph (d)(5) of 600ppm, which therefore provides a Negative Initial Determination. However, this determination does not absolve the Contractor from taking appropriate precautions during the removal of paint from the columns to perform welding, etc. Such precautions involve using methods of paint removal such as by needle guns/scalers, chippers or chemical stripping, or any means that does not result in the production of airborne dust particles. Sandblasting or disc sanding by the paint film by nature of the process would result in airborne particles. A copy of the CAPCO analysis report is provided at the end of this document.

Paint Debris Containment Requirements

IMPORTANT NOTE: It is VENOCO's intent to maintain a "zero discharge policy" at Platform Holly. Accordingly, the CONTRACTOR shall thoroughly understand the requirements and implications of this document and shall ensure that ALL paint debris created during the weld zone preparation (paint removal) is contained and disposed of properly.

- As a guideline, it is expected that paint debris will fall and scatter a distance of approximately 3 -4 ft per 10 ft drop (without wind). Accordingly, as a minimum, to be confirmed when paint removal commences, and adjusted as conditions dictate, drop cloths or tarps shall be laid out below the areas where paint is being removed such as to capture all paint debris particles from the area selected for paint removal.

- If the lateral space available for tarps is less than that approximated for the debris drop, then vertical curtain tarps shall be erected to ensure that the debris will be captured.

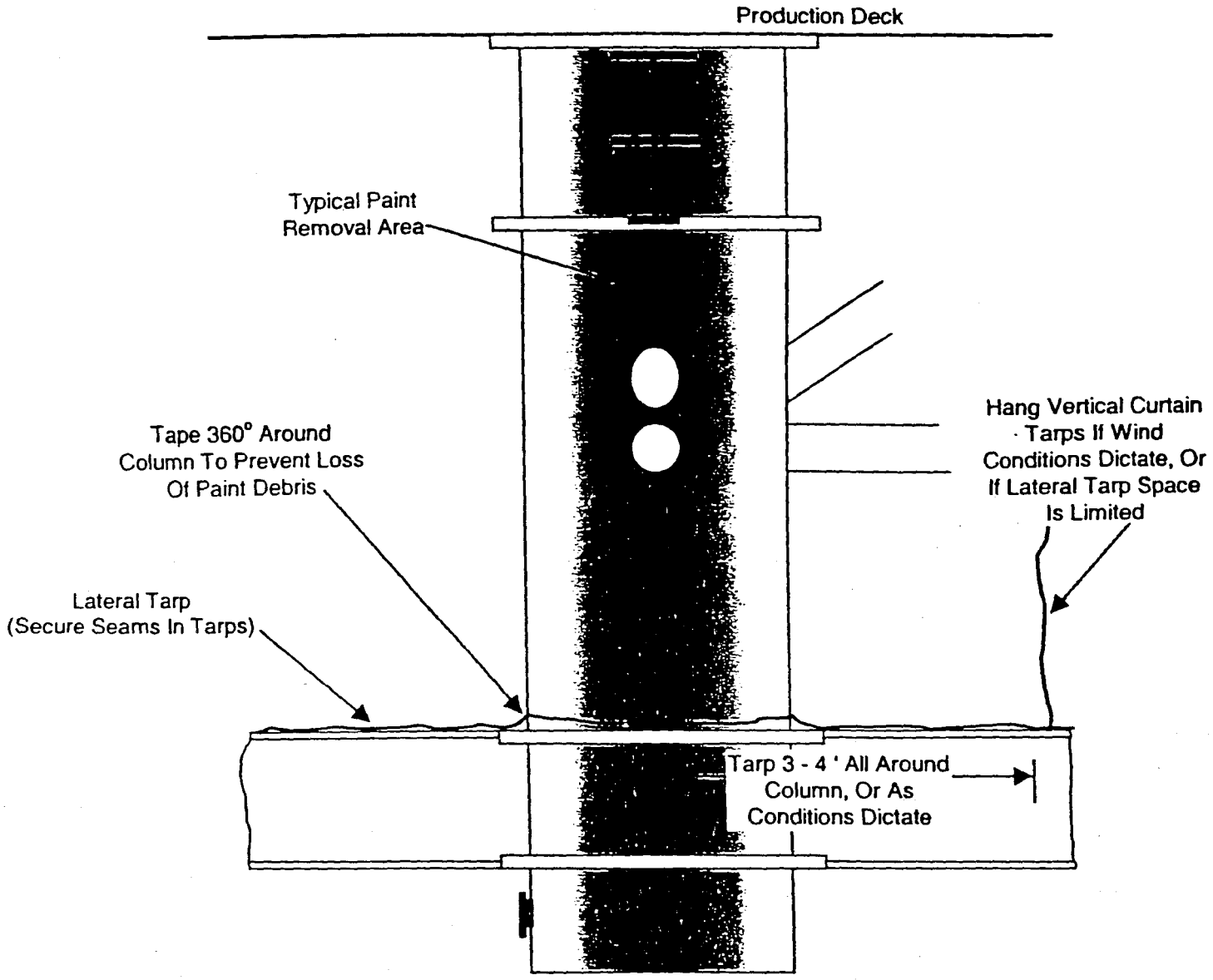
- Once the lowest vertical extent of the area selected for paint removal is established and tarp(s) are laid out, around a column for example, the tarp(s) shall be securely taped to the column. Taping shall be done is such a way as to avoid folds that would trap paint particles that could be lost when the tarps are removed.

- Secure the seams of multiple tarps to ensure paint debris will not work its way through.

- In the event that wind velocity in the area of paint removal is of such a magnitude that paint debris particles may be transported beyond the laterally (horizontal) placed containment tarps, then vertical tarps/curtains shall be erected prior to commencement of paint removal to ensure that all paint debris will be captured in the tarp system and can be collected for later disposal.

- When paint removal operations in the selected area are completed, care shall be exercised in removing the tarps to ensure that paint debris is not lost. Particular care shall be given when removing any taped sections of tarp. By lightly shaking the tarps the paint debris can be worked into a localized area for removal and subsequent disposal.

- In the event wind conditions are such that collecting the paint debris from the tarps per above may result in loss of debris particles, the tarps shall be rolled up with the paint debris inside and transported to shore for debris removal and disposal.



Example Of Considerations For Paint Removal Tarping

Capco Analytical Services Inc. (CAS)
1536 Eastman Avenue, Suite B
Ventura CA 93003
(805) 644-1095

Client: Fairweather Pacific
Lab ID: 011105
Date Received: 6/5/01
Date Analyzed: 6/8/01

Sample Matrix: Paint Chips
Date Sampled: 5/30/01
Analyst: AS

TOTAL LEAD ANALYSIS
EPA Method 6010

CAS Lab#	Sample ID	RESULT Pb (mg/Kg)	PQL (mg/kg)
01110501	Leg B-2 Paint	28	10
01110502	Conduit & Box Paint	38	10
011105-MB	Method Blank	BQL	10

PQL: Practical Quantitation Limit
BQL: Below Practical Quantitation Limit

Principal Analyst

CAPCO Analytical Services, Inc.

APPENDIX E

Responses to Comments on the Negative Declaration of February 5, 2001

CSLC Staff Note: Venoco has amended its project description to the CSLC after the release of the initial Negative Declaration (ND) in February 2001. New information has been incorporated both in the revised Mitigated Negative Declaration (MND) and in the following responses to the comments that were received on the original ND. The document sections noted in the Responses refer to sections in the new MND.

Commentor	Comment Number	Comment	Response
California Coastal Commission	1-1	Section 6.2.3, p. 5. The last sentence states that "Oil based muds may be used where appropriate." Our understanding is that the new NPDES permit for platform discharges effectively prohibits the use of non-aqueous based drilling muds. This should be confirmed.	U.S. Environmental Protection Agency (EPA) staff confirm that the proposed new NPDES General permit prohibits the *discharge* of oil and other non-aqueous based drilling muds; it does not prohibit the *use* of such muds as long as the muds are not discharged (personal communication with Eugene Bromley, EPA, March 8, 2001). Platform Holly has operated in a no-discharge mode, as far as CSLC staff can ascertain, since the 1970s. Pursuant to current CSLC policy, muds and cuttings from the development of State Tidelands cannot be discharged into marine waters and must be either injected or transported to shore. This information has been added to Section 7.2.4. This information has been added to Section 7.2.4.
	1-2	Section 11, p. 18. A Coastal Development Permit or other approval will likely be required for the proposed project. Please list the California Coastal Commission as a public agency whose approval is required.	California Coastal Commission (CCC) and Santa Barbara County Air Pollution Control District (APCD) have been added to the list of agencies. Also, the type of permits, approvals, and/or exemptions required by the Division of Oil and Gas and Geothermal Resources (DOGGR), APCD, and CCC are identified in Section 11

Commentor	Comment Number	Comment	Response
County of Santa Barbara, Planning and Development, Energy Division	2-1	Onshore Equipment Needs. The initial study states on page 17 that no new equipment will be needed at the Ellwood Onshore Facility (EOF) as a result of this project. However, the ND does not address the potential need for new odorant equipment at the EOF in response to compositionally-different and higher yields of natural gas. Venoco has submitted an application to the County for installation of an odorant station at the EOF. It is our understanding that the gas has a natural odor currently, and therefore meets Department of Transportation regulations. However, Venoco has indicated that an odorant station will be necessary if the gas composition should change. This issue should be addressed in the ND.	New text has been added to Sections 8.3.2, 9.0 and 14.7 (Hazards) to address this issue. When drilling is completed, each well will be tested for the composition of the oil and gas. If a change did occur, DOT regulations may require the addition of an odorant station at the EOF. Although the need for an odorant station at the EOF is unlikely (because the gas from Platform Holly is not expected to change significantly as a result of this re-drilling project), a measure has been added to mitigate potential impacts to less than significant by requiring the shut down of any re-drilled well on Holly if it results in the necessity of an odorant station.
	2-2	Parking Capacity at EOF. The impacts discussion on transportation and traffic states on page 70 that workers involved in this project will park at the EOF, "which contains adequate parking capacity for the projected personnel." Our understanding of parking capacity at the EOF is that it is currently inadequate to sufficiently handle existing needs, including that of contractors hired to address deficiencies identified in the 1999-2000 safety audit. The ND should identify the number of workers required to support this project and an alternate parking area to be used.	Section 7.2.3 has been revised to specify the number of workers proposed for the project (approximately 18 per 12-hour shift) and to indicate that the workers will park at the Ellwood Pier (not the EOF). As discussed in Section 14.15, sufficient parking should be available at the Pier; however, alternate accommodations will be available at the EOF or by the leasing of parking space above the Pier parking area (as has been done in the past).

Commentor	Comment Number	Comment	Response
SB County Energy Division (continued)	2-3	New Production Schedule. On page 3, the initial study points out that the project's stated goal is "to accelerate the depletion of the recoverable oil" in the South Ellwood Field (p. 3) but provides insufficient information on changes in the production schedule. Although the initial study does provide data on current production rates and on historical peak production rates (p. 9), no data is provided on the anticipated production rates resulting from the re-drilling project. Specific data on how the proposed project would affect production rates and on the lifetime of production at Platform Holly would enable a better analysis of the project's impacts and benefits. The applicant should provide projected production curves for both the proposed project and the no-action alternative to assist in determining these effects.	Venoco estimates that the total production from the three new wells, upon completion, will range from 1,500 to 2,000 BOPD and 1.5 to 2 MMscfd of gas (see revised Section 7.1). The actual production rate of each of the three wells is unknown until the wells are drilled. Platform Holly is currently permitted at a production rate of 20,000 barrels of oil emulsion per day and 13 MMscfd of natural gas, and the EOF is permitted to process 13,000 BOPD ("dry" oil, in contrast to the oil emulsion volume from Holly) and 13 MMscfd of natural gas. Although the re-drilling of the proposed wells will result in an accelerated rate of depletion within their effective production zones, production from these wells in unlikely to affect the overall production life of the Ellwood Field.
	2-4	Electrical Demands. The proposed new equipment listed in Table 6.2-2 is primarily electrically driven. What would be the overall increase in electrical demand at Platform Holly as a result of this project? Describe what contribution, if any, this increased demand has on Venoco's pending proposal to replace the power cable from the platform to shore.	Text has been added to Section 7.2.3 to describe flexible use of electrical power supplied by the generators on the platform and by the power cable from shore. Power for heavy loads will be supplied by the generators. This project can be conducted without replacing the subsea power cable.
	2-5	List of Pollutants. Table 14.3-3 on page 28 lists project air emissions estimates. The only pollutants discussed are ones that have potential SWARS triggers. As this document should examine all potential environmental effects, it should list all pollutants, not just pollutants associated with SWARS. Hence, data on other pollutants such as CO, SO_2, and PM10 should be included.	Table 14.3-3 has been revised to include the additional pollutants.

Commentor	Comment Number	Comment	Response
SB County Energy Division (continued)	2-6	Marine Wildlife Contingency Plan. In the impact discussion section for biological resources, the initial study states on page 38 that "Venoco intends on implementing their existing Marine Wildlife Contingency Plan." What assurance does State Lands Commission have of this intention? Will implementation of this plan be attached as a condition on the permit for this project?	Reference to a Marine Wildlife Contingency Plan was an error. However, while Venoco has no formal Plan, Venoco boat operators protect marine wildlife by adhering to approved transportation corridors and avoiding marine wildlife that may appear in their path. Appropriate behavior by vessel operators and other offshore personnel is also included in an annual orientation and training. A mitigation measure has also been added to incorporate marine mammal avoidance requirements into support vessel operations. Text in Section 14.4 has been corrected to reflect this information.
	2-7	Effect on Safety Audit Deficiencies. What effect will this project have on Venoco's ability to complete outstanding deficiencies identified in the State Lands Commission / Santa Barbara County SSRRC 1999 Safety Audit?	Information on the safety audit has been added to Section 8.3.1. All priority 1 and 2 objectives have already been completed. The remaining low priority items will be completed per an agency approved schedule and will not affect or be affected by the project.
	2-8	Power Distribution Lines. In Section 8.3-3, please note that power is supplied via buried (not overhead) distribution lines by Southern California Edison.	Correction made (see revised Section 8.1.4).

Commentor	Comment Number	Comment	Response
Santa Barbara County Air Pollution Control District (APCD)	3-1	Project Air Emission Estimates: We had difficulty in understanding the basis for the emissions data presented in Table 14.3-3 (*Project Air Emissions Estimates*). The Platform Equipment category data does not correspond to Table 1 of Venoco's September 8, 2000 letter addressed to the State Lands Commission. This letter listed platform NOx and ROC annual emissions as 9.89 tons and 1.82 tons respectively (versus the 9.33 tons and 1.71 tons in Table 14.3-3). In addition, please see our comments below regarding Marine Vessel and Produced Gas emissions. We recommend that Table 14.3-3 be revised to address our comments.	Table 14.3-3 has been revised.
	3-2	Emission Calculations – Marine Vessels: Although the use of existing crew and supply boats may be allowable under the APCD's operating permit for Platform Holly, the increased use of these vessels for the re-drill project should still be added to the Re-Drill Project Emission Estimates for review under CEQA. According to the document, there will be 6 additional supply boat trips. Our calculations, base on the existing operating permit for Platform Holly, show the annual and daily emissions from these additional supply boat trips at the following levels: Annual [1]: 3.04 tpy NO_x; 0.11 tpy ROC; 0.45 tpy CO; 0.30 tpy SO_x; 0.18 tpy PM_{10}. Daily [2]: 1155.4 lb/day NO_x; 47.1 lb/day ROC; 179.7 lb/day CO; 114.4 lb/day SO_x; 68.4 lb/day PM_{10}. The APCD recommends the use of the above emissions data for use in Table 14.3-3 (*Project Air Emissions Estimates*) on page 28.	Table 14.3-3 has been revised to include APCD's approach, based on two supply boat trips per well.

[1] Annual emissions based on 6 round trips using the current operating permit limits that are based on 192 trips and taking the ratio of 6/192 times the permitted annual emission rates for the supply boat.

[2] Daily emissions are based on one daily round trip of 9.25 hours using the current operating permit limits that are based on 24 hours per day and taking the ratio of 9.25/24 times the permitted daily emissions rates for the supply boat.

Commentor	Comment Number	Comment	Response
APCD (continued)	3-3	Emission Calculations - Produced Gases During Drilling and Production Testing: We could not find any discussion regarding the disposition of produced gases generated during the drilling and production testing phases. For example, are produced gases emitted at the mud degasser, mud-gas separator, shale shakers and mud pit tanks routed to the platform's existing vapor recovery system? Are they flared? Attached is a copy of Mobil's detailed application completeness discussion regarding the drilling of wells for their proposed South Ellwood Field Clearview Project which is useful for understanding the potential emissions from this project component. This attached also provides guidance on performing mass emission calculations. We recommend that these additional emissions should be included in the CEQA analysis.	A discussion of emissions from muds and cuttings has been added to the text and included in the calculation of project emissions. (See Section 14.3 [impact discussion] and Table 14.3-3.)
	3-4	We recommend that, pursuant to Section 15070 of the State CEQA Guidelines, this document be revised to be a Mitigated Negative Declaration. Our rationale is that the applicant has proposed their project with mitigation (i.e., BACT for the four 803 bhp generator units).	With the noted addition of recommended mitigation measures, the document has been revised to a Mitigated Negative Declaration (MND).
	3-5	Evaluation of Environmental Impacts – Air Quality: We recommend that the summary table on page 24 be revised to state that the impacts would be "Less Than Significant with Mitigation Incorporated" for items (b) and (c). Also, the 'Mitigation and Residual Impacts' summary on page 28 should reflect the use of BACT mitigation as proposed by the applicant for items (b) and (c). Our rationale is that the applicant has proposed their project with mitigation (i.e., BACT for the four 803 bhp generator units).	The suggested revisions to Section 14.3 have been made.

Commentor	Comment Number	Comment	Response
APCD (continued)	3-6	Evaluation of Environmental Impacts – Air Quality: Will this project extend the economic life of the field? If so, given the history of oil activities in the Ellwood area, the project would prolong the time frame time during which odors could be a problem (as compared to the no project alternative). Please discuss any additional measures that could be implemented to reduce this potential.	Text has been added to Section 7.1 to clarify that this project will not extend the life of the field
	3-7	Construction: Please revise the document (top of page 27) to reflect the APCD's position that the drilling projects are not considered construction activities.	Sentence has been deleted from the text.
	3-8	APCD Rule 202.F.6 Exemption: Please clarify the first paragraph on page 27 to note that the Rule 202.F.6 exemption is a 'rule' and not a 'policy' and that this exemption specifically applies to drill rig IC engines only. Other equipment, such as tanks, flares and marine vessels are not subject to this rule exemption.	Text clarification made.
David Sangster	4-1	The final paragraph in Section 6.1 does not clearly state the potential objectives of the project, and the data presented makes it difficult to determine if in reality the life of the platform may actually be extended by the project, and at the same time possibly doubling the production rate.	Section 7.1 has been revised to clarify that this project will not extend the life of the field, and to provide an estimated range for the total production from the three new wells, upon completion. (See also the Responses 2-3 and 3-6.)
	4-2	Giving only the positions of the new bottom-hole locations without showing where the original bottom-hole locations are makes it impossible to determine if the footprint is indeed being extended. The location of all the bottom-holes should be given graphically in the study, i.e., on a map with a scale. It appears that the three new bottom-hole locations extend out to the eastern edge of State [lease] 3242, to the western edge of State [lease] 3120, and to the eastern edge of State [lease] 208. Where are all the other holes, and specifically, are there any holes that extend out as far or further than the new holes?	Figure 7.2-1, which shows the proposed, revised locations of the new bottom holes, has been added. As explained in the text, the new bottom hole locations were selected to more efficiently produce oil from the existing leases on the South Ellwood Field, including two wells in Lease 208, which is not currently being developed. The locations of the wells do not extend the areal extent of the reservoir.

Commentor	Comment Number	Comment	Response
David Sangster (continued)	4-3	The final "therefore ... the absence of the project would not result in an earlier cessation of production on Platform Holly and processing at the [EOF]" does not say very much.... What is the anticipated time for the cessation of production ... i.e., will it be in operation next year? Nowhere is it stated that at current production levels and current market conditions the platform is currently breaking even.	Clarifying text has been added to the MND. As discussed in Section 7.1, the re-drill project does not add to the recoverable reserves of the South Ellwood Field and thus does not extend the life of the field. The absence of the project would not result in an earlier cessation of production on Platform Holly and processing at the EOF; these facilities would continue to operate. The status of current market conditions is not part of this project.
	4-4	Although most of the geological details of the field ... should have been covered in the original permits ... I do wonder about the potential for seismic activity caused by the extraction of additional oil at even faster extraction rates. It is quickly pointed out in the study that water enters the reservoir as oil is produced, but it is not stated from where the water comes. If it comes from adjacent formations as opposed to the ocean, then there still is a potential for subsidence, considering the fractured nature of the formations. Any potential effects from significant increases in actual production volumes should be evaluated, monitored, and mitigated.	The pressure depletion that has occurred in the South Ellwood field is limited to this fault block and will not cause fluid migration from adjoining areas or affect the potential for seismic activity. Also, there is no record from other reservoirs of an increase in seismic activity from drilling and oil and gas extraction. Water underlies the oil reservoir and flows upward as oil is extracted. The Monterey formation is mainly composed of dolomites and cherts with very compressive strengths and negligible porosity. Therefore, no subsidence is expected.

Commentor	Comment Number	Comment	Response
David Sangster (continued)	4-5	The onshore impacts of increased production should also be looked at, even though the rates may be below the permitted levels for the platform. There is a new proposed housing development just one-third of a mile from the [EOF] called the Sandpiper Housing Project. It is almost directly downwind from [the EOF].... Would there be an increase in risks from hazardous gas releases to unacceptable levels? There are also the barge loading operations off Ellwood beach, and increased production would call for even more loadings per month. Would all of the facilities be within permitted operating levels if production was doubled? Are there any weak links in the entire system that would affect the safety to the neighborhoods?	As noted in Section 8.3.1 and Section 14.3, Venoco has addressed air quality concerns raised by the Santa Barbara APCD and California State Lands Commission (CSLC). There are no project-related changes at the EOF. Venoco is permitted to process 12,000 bbl/day of oil to be transported by barge. Permitted volumes will not be exceeded. See also Responses 2-1 (concerning construction of an odorant station) & 2-7 (concerning the safety audit conducted by the CSLC, Santa Barbara County, and Venoco).
	4-6	Not mentioned, however, is the details of the loading line from the marine terminal out to the barge.... I wonder about all the other inspections and corrections on the majority of other critical equipment out of the public view.	Concern noted. The loading line is neither a part of nor affected by this project. Venoco has been encouraged to inspect the line and is required to ensure its continued safe operation.
	4-7	One of my major concerns, however, is the structural condition of the platform. There must be some load limitations for the aging substructure of the platform, and as it ages, I would assume that the safe loads would be lessened. What is the age and expected life of the structure and what safety margins are applied as it gets older? There seems to be a lot of new equipment required to do the re-drilling.... Have static loads been evaluated, as well as seismic, storm and wind loads?	Text has been added to Section 8.3.2 to explain that a structural review was conducted in 1998. Cathodic protection and mandated inspections ensure the structural integrity of the platform.

Commentor	Comment Number	Comment	Response
David Sangster (continued)	4-8	It is also not too clear why both the abandoning of the three holes and the re-drilling of the new holes has to be done at the same time. To minimize the extra machinery present on the plat form at one time, why not first do the abandonment, and then do the re-drilling? Are the new holes really a re-drilling operation, or would they technically be considered new wells if the older wells were not abandoned? How much of the old pipes leading from the platform down to the seafloor are being reused, and what is their age and condition?	The approached used is standard industry practice. Abandonment and re-drilling procedures use the same equipment. It is called re-drilling because the wells are starting from existing well-bores. The kick off point for the redrilled wells is subsurface so existing pipe/casing will be used above that point, including the portion between the seafloor and the platform. These pipes are cathodically protected to prevent corrosion. Any casing string that will be exposed to wellbore pressures will be pressure tested prior to drilling. See Response 4-7 regarding the structural integrity of the platform.
	4-9	One final concern is the planning and financing of the final abandonment of the three facilities....	Field and facility abandonment is not part of this project. Pursuant to its leases from the CSLC, the operator will be required to abandon Platform Holly, the subsea pipelines, and the Ellwood Marine Terminal. When that time comes the operator will need CEQA review and permits prior to abandonment activities.
Baker & McKenzie (representing Bacara Resort & Spa and an entity operating the Sandpiper Golf Course)	5-1	This project requires an EIR. A Negative Declaration is inappropriate. Negative declarations are only issued when it is determined that a project "would not have a significant effect on the environment" Pub. Res. Code 21080(c). Such a determination can be made only if "[t]here is *no* substantial evidence in light of the whole record before the lead agency" that such an impact *may* occur. Pub. Res. Code 21080(c)(1).	CSLC staff has determined that there will not be a significant effect on the environment because of revisions in the project that have been made by or agreed to by the project proponent. The document has been changed to MND pursuant to the lead agency determination.

Commentor	Comment Number	Comment	Response
Baker & McKenzie (continued)	5-2	The project description in the Initial Study and Negative Declaration or EIR must be accurate. "Only through an accurate view of the project may affected outsiders and public decision-makers balance the proposal's benefits against it environmental costs." *County of Inyo v. City of Los Angeles*, (1977) 71 Cal. App. 3d 185, 192-3. A project description is required for an Initial Study. See Guidelines, § 15063(d)(1). The description of this project has been widely misstated. First, the sixty-day time frame of this project is wildly optimistic. This 60 day estimate fails to consider the period of preparation of Platform Holly. An expert in offshore drilling, Jeffrey R. Hughes of HTK Consultants, who has reviewed this Negative Declaration and the application submitted by Venoco, has supplied his comments as an attachment to this letter. Under his estimates, which are discussed in detail, 90 days is a more realistic timeframe for each well.	The applicant has amended its project description to the CSLC. The applicant's revised project description calls for a 90-day per well drilling and completion period (see Section 7.2.7). To address potential impacts to air quality, a mitigation measure has also been added to limit re-drilling to no more than two wells in any 12-month period (see Section 14.3). Therefore, the project now has an "average" drilling time of 3 wells over an 18-month period.
	5-3	Not only is the timeframe unrealistic, but the Project misstates the equipment necessary to complete the construction contemplated. The existing 15 ton pedestal crane is too small to lift the new equipment listed. A minimum 30 ton crane will be required.	Section 8.1.1 (Drill Deck) has been revised to clarify that the maximum load of the crane can be varied by its configuration and ranges up to 100 tons. When necessary, equipment systems can be partially dismantled to allow lower weight lifts. See Response 5-2 re the timeframe.
	5-4	Jeffrey Hughes is further convinced, in his professional opinion, that this project will be run as a 24-hour operation, and not a 12-hour operation as contemplated in the Negative Declaration. The State Lands Commission does not have a manner of monitoring the hours worked on this project.	Section 7.2.3 of the MND has been clarified to show the applicant's intention to conduct the project as a 24--hour operation.

Commentor	Comment Number	Comment	Response
Baker & McKenzie (continued)	5-5	The Negative Declaration's project description is further inaccurate in that it fails to describe where the oil base mud and cuttings will be disposed of if the oil base mud and oil base mud cuttings fail to inject.	Venoco expects that DOGGR will approve the injection of muds and cuttings into a Class II disposal well. Venoco understands that if it does not receive approval for injection of muds and cuttings there is NO PROJECT. Specifically, Section 7.2.5 has been revised to clarify that oil-based muds (if used) would be shipped back to the vendor for recycling or injected with other muds and cuttings. If injection fails or if DOGGR does not approve injection, Venoco would have to cease drilling while reapplying to the CSLC and APCD for approval to barge muds and cuttings to shore
	5-6	The Negative Declaration further fails to discuss the disposal of other wastes from Platform Holly, including food, garbage, sewage, and waste treatment. By not including this information, the Lead Agency is depriving the "affected outsiders and public decision-makers" a clear understanding of the environmental effects of this project.	Disposal of wastes is addressed in the MND Sections 8.3.3 and 14.16. ((See also Response 6-13.)
	5-7	This section reflects the fundamental error found throughout the document, as it fails to distinguish between the magnitude of a potential accident and the likelihood that accident will occur. The Initial Study concedes that the magnitude of an impact should an oil spill occur will be enormous. But instead of recognizing there is substantial evidence that the project may have an impact, the Study dismisses the potential significant impacts and searches for actual impacts, and finds none. The standard thus applied does not comply with CEQA.	The Initial Study makes no statement that the magnitude of an oil spill impact would be enormous. Potential impacts are identified, evaluated, and discussed.

Commentor	Comment Number	Comment	Response
Baker & McKenzie (continued)	5-8	The Holly Re-drill project as proposed is not a stand-alone project. First, Venoco has additional wells it will likely wish to re-drill on the same platform, and, second, there are several Venoco projects pending in the adjacent area with the goal of significantly increasing oil and gas production in the area, increasing the amount of oil and gas processed, and increasing the amount of oil and gas transported.	See response below.
		The Holly re-drill project is a stand-alone project. Venoco has the right to completely develop its current leases, and total oil and gas production including the re-drilled wells will not exceed existing permitted levels. Although Venoco may eventually wish to re-drill additional wells from Platform Holly, such plans are too speculative to include in the analysis here. Any decision to conduct additional re-drilling would be based on the results and information from this project, the economics at the time of future proposals, and other currently unknown factors. It is not proper or possible to speculate concerning Venoco's future business decisions. Thus it is not possible to evaluate the environmental impacts from any future re-drill project. There may or may not be future re-drill proposals. The expected types of impacts from any future re-drilling would likely be very similar to those described for this project. Any future well re-drilling will be subject to environmental analysis under the CEQA in an appropriate CEQA document at that time. Venoco has proposed expanded, "Full Field Development" (FFD) of the South Ellwood Field from Platform Holly; however, it has not yet submitted a complete application for this major project. See the revised text concerning this potential project in Section 7.3.1. The purpose of FFD would be to expand development from Holly into the previously undeveloped eastern portion of the reservoir to add new reserves. It would include all activities necessary to achieve that purpose and could also include re-drilling existing wells if Venoco determines that would help meet that purpose.	

Commentor	Comment Number	Comment	Response
Baker & McKenzie (continued)	5-8 (continued)	In contrast, the limited re-drilling project proposed now will accelerate, but not expand, oil and gas recovery from the existing leases to help meet Venoco's lease obligations on these specific leases. No new reserves will be added. Re-drilling the wells on existing leases are actions consistent with good lease management, whether or not FFD ever occurs. FFD is not dependent on the re-drilling project because FFD could proceed without the re-drilling now under consideration. Therefore, FFD is not a reasonably foreseeable consequence of the re-drilling project. Furthermore, FFD will not change the scope or nature of the re-drilling project or its environmental effects. The environmental effects from the re-drilling project will be independent and distinct from the lease expansion contemplated by FFD. Since a decision about FFD will be completely discretionary after the re-drilling project, a decision about FFD is not necessary for a reasoned decision on the re-drilling project. Potentially significant environmental impacts are likely from FFD. An EIR analyzing environmental impacts of FFD will be prepared if and when Venoco submits a complete application.	
	5-9	In addition to the other wells offline, the Initial Study also fails to adequately consider the impacts of re-drilling on these wells currently in production. It is important to establish whether these wells run the risk of being damaged and thus unable to produce in the future, or whether the re-drill project could potentially damage the operating wells and thereby result in oil leaks into the Santa Barbara Channel.	Although we do not completely understand the question, re-drills are a common occurrence on oil platforms. The courses of new wells are designed to avoid damage to other wells.

Commentor	Comment Number	Comment	Response
Baker & McKenzie (continued)	5-10	Second, there are several Venoco projects pending in the adjacent area with the goal of significantly increasing oil and gas production in the area. The Potential Future Projects section (p. 6) only considers the Full Field Development project and the Power Cable Replacement Project. This report was certified in February, significantly after both Venoco's earlier attempts to bring its SLC 421 wells back online and after the events of November and December of 2000 provided Venoco with the opportunity to take significant steps toward bringing its SLC 421 wells back online. The SLC 421 wells will greatly increase the amount of oil being processed by the EOF and the Marine Terminal, just as the re-drill project accomplishes the same effect of increased flow-through.	Additional text concerning the Lease 421 wells has been added in Section 7.3.3. See Response 2-4 concerning the power cable. Concerning the Lease 421 wells, it is highly unlikely that the SLC 421 wells will "greatly increase" the amount of oil being processed by the EOF; whether those wells ever can come back on is speculative at this time. There will be no increase above presently permitted quantities at any of the Ellwood facilities.
	5-11	One environmental effect of the proposed re-drilling Project is to process oil and gas on Holly and the EOF faster, increasing the amount of oil and gas to be processed on the south Santa Barbara Coast. There are many substantially similar projects proposed in the immediate area, the effects of which must be considered in an EIR in order to accurately consider the cumulative impacts of these various projects. First and foremost are the multiple projects by Venoco itself that need to be considered alongside this Project for their cumulative impacts [such as] Venoco has proposed a "Full Field Development Plan" .... Venoco has applied to recommence projection at its SLC 421 wells .... Venoco may have separate but similar projects pending in Carpinteria and in Ventura County.	See Responses 5-8 & 5-10 concerning other projects. See Response 5-1 concerning the lead agency's determination that a MND will be prepared. The drilling procedure and increased amount of oil and gas production from Venoco's re-drill project will not, as mitigated, result in significant effects on the environment. Therefore, even if other oil and gas projects in the area have significant effects on the environment, Venoco's project as mitigated will not add to the cumulative impacts of these potential projects.
	5-12	The second set of cumulative impacts result from the actions of other oil and gas firms. A quick survey of the publicly available "County of Santa Barbara Offshore Oil and Gas Status Report" reveals that multiple projects are planned for the region:	See Responses 5-11.

Commentor	Comment Number	Comment	Response
Baker & McKenzie (continued)	5-13	The current situation regarding the odorization of the gas presents yet another significant potential impact from this Project that was not considered in the Negative Declaration. Venoco is currently running a non-odorized natural gas pipeline under Bacara's property. Gas is odorized artificially in order to permit people to detect a natural gas leak by their sense of smell. Venoco has been permitted to run a non-odorized line under a densely inhabited area because it was able to demonstrate to the satisfaction of the federal authorities that the natural gas currently being produced contains sufficient natural odor so as to be detected by ordinary people. Experts on oil and gas production will concede, however, that oil and gas from different sections of the Monterey Formation possess different properties, and this new produced gas may not contain the same natural odor, and the health and safety of the guests at Bacara would be jeopardized.	See Response 2-1.
	5-14	The Initial Study clearly documents significant biological impacts, then dismisses these impacts without considering their significance. This fails to meet the test for a unmitigated Negative Declaration set forth above, which is only allowed where "there is no substantial evidence whatsoever that the project may have a significant effect on the environment." Here, the Initial Study has admitted that there will be significant impacts, both from the admitted impacts on cetaceans, the potential oil spills, and the impacts on ocean habitat, yet the Lead Agency does not address these issues specifically in its decision to undertake an EIR.	See Response 5-1 concerning the lead agency's determination that a MND will be prepared.

Commentor	Comment Number	Comment	Response
Baker & McKenzie (continued)	5-15	After admitting to impacts, the Initial Study then inexplicably claims there would be no biological impacts whatsoever. The data cited to confirm the lack of impact is itself not recent. Most of the studies cited data from six years ago or older (see pp. 36-39), suggesting no relevant data was collected for this project. The Lead Agency should require an independent scientific analysis for this project prior to drafting the EIR.	The Initial Study does not claim "there would be no biological impacts whatsoever." The opening table of Section 14.4 indicates that less than significant impacts may occur to wildlife movement or habitat use. The Impact Discussion in Section 14.4 identifies the source of that impact as noise and vessel traffic. The baseline condition for this project is an existing production platform that already has noise and vessel traffic associated with it (and neither of which is creating a significant impact to wildlife). Other than vessel traffic this project does not add significantly to the existing condition. A mitigation measure has been added to address the additional support vessel traffic The studies cited are from internationally recognized experts and provide an adequate basis to form conclusions. No new studies are necessary. See also Response 5-1 concerning the lead agency's determination that a MND will be prepared.

Commentor	Comment Number	Comment	Response
Baker & McKenzie (continued)	5-16	Additionally, the Initial Study states "there is a potential for impacts to biological resources and sensitive areas near Platform Holly in the event of an oil spill." (p. 37.) This is substantial evidence in the record supporting a fair argument that significant impacts may occur, and thus an EIR is required. This risk is all the more concerning given the fact that "Holly was the only platform (of nine surveyed) where silversides were recorded." (p. 31.) Thus this project is endangering the rare silverside, as well as further endangering protected sea mammals, for no purpose other than to accelerate the production of oil to which Venoco already has access.	A more complete discussion of oil spill risks is presented in a subsequent section (Section 14.7). As explained in the text, the risk of an oil spill occurring as a result of this project is not zero ("no impact"), but it is less than significant. The silverside is not "rare." There are three species of silverside that are common in southern California waters. This re-drilling project is based from existing facilities and wells. It is doubtful that marine organisms will be able to detect that a project is being conducted—which is quite different than being actively endangered by it. See Response 5-1 concerning the lead agency's determination that a MND will be prepared.
	5-17	The Initial Study does not reveal any analysis undertaken for this particular Project. Many of the reports relied on in the Initial Study are very old and were clearly undertaken with alternate goals.	Information from previous reports is considered to be valid and adequate to provide relevant information.
	5-18	There is no any independent geological analysis indicated for this project.	CSLC staff believe that an independent geological analysis is not required, since the strata being drilled are the same as existing wells at Platform Holly.
	5-19	There is no discussion of the long term impact of the new well depths.	There will be no incremental long-term environmental impact resulting from the new well depths.

Commentor	Comment Number	Comment	Response
Baker & McKenzie (continued)	5-20	On page 17, it states that "project related major equipment will be driven with electric motors," yet on page 4, table 6.2-2, in the equipment needed table, the first item listed is a Diesel driven crane. The table and accompanying text suggests that this crane is both necessary and major. These two statements need to be reconciled.	Section 9.1.1 has been revised to state that drilling-related equipment will be electric. The emissions of the crane, which will be used to bring project-related equipment on board the platform, are included in the project totals.
	5-21	On page 17, in the section entitled Mitigation Measures, in discussing the number of boat trips to Holly, the Initial Study states: In no case will the re-drill activities exceed the current permitted limits." By not stating what those current limits are, the study fails to provide notice to the public of the impacts the project will (or will not) have on the environment.	Santa Barbara County APCD PTO No. 8234 currently restricts vessel traffic to Holly to 192 supply boat trips per year and 2,912 crew boat trips per year (see Section 8.1.5).
	5-22	There is some suggestion on page 3 that the project would hasten the end of the production life for Platform Holly. This is clearly an environmental impact, but the Initial Study does not discuss the relevant criteria, such as how much sooner would Holly end its productive life and what Venoco plans to do at the end of Holly's productive life.	Production from these wells in unlikely to affect the overall production life of the Ellwood Field. See Response 2-3.
	5-23	The Negative Declaration fails to discuss the effect of the increased emissions that result from the increased flow through from this project. The Initial Study seems focused on only the construction aspect of the re-drilling, when the Project will result in higher treating and sulfur recovery requirements which will have significant, long-term impacts radiating from the EOF, the Marine Terminal, and Holly processing significantly higher quantities of oil and gas. The Initial Study also mentions the EOF handling and disposing of waste generated at Holly (such as oil filters, solvents, etc.), without analyzing the environmental effects of this increased amount of waste. An analysis is also required of the environmental impacts at the end refinery.	There will be no increase above presently permitted quantities at any of the Ellwood facilities.

Commentor	Comment Number	Comment	Response
Baker & McKenzie (continued)	5-24	The Negative Declaration and Initial Study fail to discuss whether a change in bottom hole location would adversely effect seepage from the bottom of the channel. For instance, if the new bottom hole were much closer the ocean floor or there were fissures from where the seep is occurring, one could reasonably expect the seep could be increased.	The proposed new bottom holes are 3,600 to 5,500 feet below the sea floor. Section 14.6 of the MND describes the documented reduction of seep activity in the vicinity of Platform Holly resulting from past oil production. CSLC staff is unaware of any increase in seepage due to drilling the formation to date, and does not expect any to occur as a result of this re-drilling project.
	5-25	The Negative Declaration and Initial Study fail to make clear, whether the "New Equipment" (Table 6.2-2) is temporary for the re-drill project only, or will continue to be present and operated by Venoco after the re-drill of these proposed wells.	The equipment will stay on the platform (see Section 7.2.3).
	5-26	The Negative Declaration and Initial Study suggests without stating definitively that completion will be limited to the Monterey formation and not any other formation further up the well.	This is correct.
	5-27	The Negative Declaration and Initial Study indicate four new gas fired generators but do not indicate the size (i.e., horsepower). This information is crucial in permitting the public to understand the less than 10 ton/year NOx emissions estimated by the report.	Two 803 BHP generators are currently on the platform, and one 1053 BHP generator will be added. The horsepower of the generators (803 BHP) has been added to Table 7.2.2.
	5-28	The Negative Declaration and Initial Study indicate peak and current oil production but do not provide peak and current sour gas production. This information is important and should be estimated because it would affect emissions from the EOF. Also it should be estimated how much of the additional sour gas will be re-injected to produce the oil and how much will be transmitted to the EOF.	The estimated volume of gas to be processed at the EOF in 2001 is 1766 million standard cubic feet per second (MMscf). The peak volume is expected to occur in 2002 at 1781 MMscf and then decrease in subsequent years. No permitted limit will be exceeded.

Commentor	Comment Number	Comment	Response
Baker & McKenzie (continued)	5-29	The Negative Declaration and Initial Study indicate estimates of emissions from the six month re-drill project but do not estimate emissions from the increased sour oil and gas production. (Table 14.3-3.) This information is basis to any understanding of the environmental effects of the project.	As noted in Response 5-28, no permitted limits will be exceeded.
	5-30	The Initial Study does not appropriately balance the benefits and risks of the project.	See Responses 5-1. Benefits and risks would be weighed in a Statement of Overriding Considerations when a project evaluated in an EIR has unmitigated significant environmental impacts. Balancing is unnecessary in a mitigated negative declaration because there are no significant effects. The re-drilling project and incorporated mitigation proposed here will produce no significant effects and thus no balancing is required.
HTK Consultants, Inc.	6-1	By my calculations, Re-drill #1 is a 78º angle well with a measured depth of +/- 13,000', Re-drill #2 is a 73º angle well with a measured depth of +/- 14,000', and Re-drill #3 is an 81º angle well with a measured depth of +/- 10,700'. These are not going to be easy wells to drill and could take longer than the 60 days each that Venoco anticipates for the reasons set forth below.	Venoco calculates that the maximum angle to be drilled will be 77°. High angle wells such as this are commonly drilled in the Santa Barbara Channel. This is standard industry practice. No unexpected challenges are expected during the Platform Holly re-drill project, and the schedule is considered to be reasonable. The revised Study estimates 90 days per well and Staff believes that the wells, barring severe problems, could be drilled in that time frame, and is a reasonable estimate. (See also Response 5-2.)
	6-2	The existing crane is a 15 ton pedestal crane and in my opinion too small to lift the anticipated top drive unit, cement unit, Waco cuttings injection system, and natural gas generator that are listed as new equipment.	See Response 5-3.

Commentor	Comment Number	Comment	Response
HTK Consultants, Inc. (continued)	6-3	The top paragraph on Page 5 of the Neg Dec seems to indicate that this operation is somehow going to be a daylight only operation ("12 hours per day").	See Response 5-4.
	6-4	6.2.3 Drilling Activities The third paragraph says that the Monterey formation will be "cased and completed" yet the Re-Drill Application to the California State Lands Commission dated December 23, 1999 states in Attachment B that the Monterey will be completed in the open hole.	The Monterey may be completed either way. The revised text (Section 7.2.4) allows for cementing a liner through the Monterey, although a "bare foot" completion may be deemed preferable. We do not see the significance (environmentally) of either option.
	6-5	Secondly, due to the extreme hole angle and displacement of these wells, I would almost guarantee that an oil based mud will be used to drill them.	As noted in Response 6-1, wells of this angle are standard industry practice in the Santa Barbara Channel. Section 7.2.4 has been revised to clarify that Venoco plans to use cellulose/seawater based mud, but that mineral oil based muds may be used if necessary (see also Response 1-1).
	6-6	Finally, no mention is made of personnel safety while drilling where H_2S is known to be present. Even though there is an H_2S contingency plan for Platform Holly, does this plan pertain to drilling? Are there enough masks and protective gear on board for everyone in case of emergency? The study lacks anything specific on this.	Sections 8.3.2 and 8.3.3 have been revised to further describe the emergency and H_2S safety status at Platform Holly.
	6-7	6.2.4 Drilling Fluids and Disposal The first paragraph seems to indicate that Venoco has approval to grind and dispose of cuttings while they drill. The last sentence of the second paragraph would indicate that they do not. It is one thing to get approval to dispose of oil base mud and oil base mud cuttings down a well.	Venoco expects that DOGGR will approve the Class II disposal well. Venoco understands that if it does not receive approval for injection of muds and cuttings there is NO PROJECT. (See Responses 5-5 & 1-1.).

Commentor	Comment Number	Comment	Response
HTK Consultants, Inc. (continued)	6-8	I would assume that Venoco conducted a reinjection test with water as described in Paragraph 2. This does not mean that oil base mud and cuttings will inject with the same success. We need to know if Venoco will indeed be able to inject oil base mud and oil base mud cuttings down a well otherwise they will have to send the material to a shorebase for disposal.	See Responses 5-5 & 6-7.
	6-9	6.2.5 Support Operations If there are going to be personnel staying on board Platform Holly during the re-drill operation, then there needs to be a provision for a standby boat stationed nearby or an escape capsule on the platform for emergencies. In addition, more life rafts may be needed on Platform Holly due to the additional personnel. The need for a standby boat would obviously have an impact on emissions. Also, no mention is made of the condition of the heliport. If an air evacuation is needed, is the heliport in good shape and lighted? There needs to be more detail as pertains to potential air traffic.	Section 8.3.2 has been revised to describe the adequacy of modes of evacuation.
	6-10	6.2.6 Schedule This schedule does not take into account the time needed to get the rig and platform ready to drill. Initially, the crane needs to be replaced to allow offloading and rigging up of the top drive unit, the cementing unit, the cuttings injection system, and the additional gas generator. After that is done, tanks need to be spotted and drill pipe and supplies need to be taken on board. The fishing job that includes cutting and recovering the existing 8-5/8" casing could, in itself, take an extra 7 - 10 days per well. Complications in re-drilling could take another 7 - 10 days. In summary, I think 60 days per well is not enough time.	Some initial set up time will be necessary before drilling. The crane does not need to be replaced for this project (see Response 6-2). The 60-day schedule originally proposed is considered reasonable compared to similar drilling conducted in the Santa Barbara Channel, and includes contingency time for unexpected problems. Cutting and pulling pipe is included in the schedule. The revised project description allows for a 90-day average per well. See also Response 5-2.

Commentor	Comment Number	Comment	Response
HTK Consultants, Inc. (continued)	6-11	8.4.1 Well Maintenance and Workover Operations I read with some surprise that at least someone at the California State Lands Commission thinks that coil tubing is a good idea. Paragraph 2 says in part that "A...coil tubing unit ... can be used to workover, recomplete, abandon, sidetrack, or re-drill an existing well". Nevertheless, let me repeat that what is being contemplated here to re-drill 3 wells is no ordinary workover operation. This is a complicated, risky, time-consuming sidetrack of an old well. A number of things can and usually will go wrong. They may not be able to cut and pull the 8-5/8" casing and will have to mill a window in the 13-3/8" casing. This means steel cuttings will come out of the well. How will they dispose of that? After they drill a 12-1/4" hole and underream to 14" the 10-3/4" casing may still become stuck. What is the contingency plan if that happens? And finally, what if they get stuck while drilling the 9-7/8" hole at 78°. I can tell you that the fishing operation could take weeks.	Comments noted. See Responses 6-1 & 6-10.
	6-12	8.4.2 Personnel Requirements The last sentence leads me to believe there are no living quarters or galley on Platform Holly. We would certainly need both those things during the re-drill operation if we are going to be out there for six months or more.	Quarters and galley are not needed. The platform is only 2 miles from shore. A regularly scheduled, 20-minute boat ride will transport the crew changes.
	6-13	8.5.1 Waste If there are to be personnel on Platform Holly for six months or more, then there needs to be provision for the disposal of food, garbage, sewage, and waste treatment. This has not been addressed.	Waste handling is addressed in Sections 8.3.3 and 14.16.

APPENDIX F

Responses to Comments on the Mitigated Negative Declaration of May 15, 2001

CSLC Staff Note: The document sections noted in these Responses refer to sections in the May 15, 2001 MND.

Commentor	Comment Number	Comment	Response
Santa Barbara County Air Pollution Control District	1-1	Page 10. If the barging of drilling muds is necessary, Venoco will need to make application to the APCD for any marine vessels associated with the barge (i.e., tugs and/or assist vessels).	Section 7.2.5 (new 7.2.6) has been modified to identify the APCD as one of the approving agencies.
	1-2	Page 32. The last sentence of footnote 1 needs to be revised. On February 27, 2001 the US Supreme Court over-ruled the US Court of Appeals decision. The details of that case may be found at http://www.epa.gov/airlinks/airlinks4.html.	Thank you. The footnote has been modified as noted.
	1-3	Page 36. Table 14.3-3 shows the project's emissions data for both daily and annual scenarios. We could not, however, find the backup spreadsheet calculations to assess the basis for these emissions data. We would appreciate it if this spreadsheet could be e-mailed to us for our review and we also suggest that it be included as an attachment to the proposed MND.	The spreadsheets have been forwarded to the APCD for review and are included herein as Appendix B.

Commentor	Comment Number	Comment	Response
Santa Barbara County Air Pollution Control District (continued)	1-4	Appendix C - Page 6. It is still not clear to the APCD what the disposition of produced gases will be from the drilling phase (e.g., mud de-gasser, mud-gas separator) and production testing phase. The APCD needs to assess whether Venoco will be able to comply with Rule 325.E which requires that produced gases be controlled at all times. If Venoco intends to flare this gas, then they will need to revise PTO 8234 to allow for this activity.	Venoco has amended its project description to include the installation of a mud degasser at the mud pit. Mitigation Measure AIR-3 requires CSLC and APCD staff approval of the design and installation, prior to the first re-drill, of the device selected by Venoco to control the gases from the degasser (e.g., vapor recovery unit, flare, or other device). All liquids, gas, or other product generated during the production testing phase are routed into the production stream. Thus there are no additional emissions.
	1-5	In order to ensure that air emissions from Venoco's Well Re-Drill Project on Platform Holly are kept below our CEQA threshold significance criteria of 240 lb/day, we recommend the following conditions of approval by the State Lands Commission: (1) Limit supply boat trips to no more than one per day. (2) Require Venoco to track the date and times of each supply boat trip and to report this vessel activity to the State Lands Commission and the SBCAPCD on a monthly basis.	Mitigation Measure AIR-2 has been modified to include the APCD's recommendations.
County of Santa Barbara, Planning and Development, Energy Division	2-1	Electrical Demands – The MND states (Section 7.2.3, p. 7) that the electrical demand on the existing subsea power cable runs close to the cable's maximum capacity, and that, in certain situations where electrical demands exceed the cable' capacity, some Platform equipment would have to be temporarily shut in. How would this affect operations, particularly with respect to systems safety? In light of the electricity requirements discussed in the MND, and, in particular, capacity constraints, Venoco's pending power cable replacement project should be considered as part of the CEQA document.	As discussed in Section 7.3.2, the re-drilling project can be conducted without replacement of the power cable. Replacement of the power cable is not part of this project. Decisions to run project equipment on rig power (generators) or platform power (from cable) will be based on operational efficiencies and will be monitored by CSLC staff for safety concerns and by APCD staff for air emissions. In no case shall Venoco shut down any equipment that would compromise platform or worker safety.

Commentor	Comment Number	Comment	Response
County of Santa Barbara, Planning and Development, Energy Division (continued)	2-2	Air Quality – The section on Thresholds of Significance (p. 34) cites County significance thresholds, APCD thresholds, and SWARS thresholds. ... Peak daily NOx and ROC emissions of the Platform Holy re-drilling project (listed in Table 14.3-3, p. 36) exceed the County's 25 lb/day significance thresholds. Although the Threshold Significance section states that Santa Barbara County "has determined that short-term air quality impact associated with some activities (e.g., construction) are less than significant," the County would not consider drilling over an 18-month period to be short-term or construction related. Therefore, as currently discussed, the project does not include sufficient mitigation to render air quality impacts to less than significant levels. We have discussed this with the Santa Barbara County APCD and asked them what mitigation measures could be incorporated. If emission offsets are difficult to secure, the project's impacts could be mitigated through mitigation fees. APCD's Innovative Technology Group program might be a particularly good fit, given the 18-month time frame of the project.	The CSLC staff has consulted with APCD staff and has concluded that the significance thresholds applicable for this project are set forth in the Santa Barbara County APCD New Source Review Rule for any pollutant [equals 240 pounds per day as adopted by the APCD Board in 1995]. These criteria that "are applied during the CEQA review of projects for which the APCD is lead agency and [that are] recommended for CEQA review of all other projects in the county for which the APCD is responsible agency or concerned agency" (APCD 2000). The project as proposed does not exceed the APCD thresholds. Section 14.3 has been modified to include this information.
California Department of Fish and Game	3-1	No information on potential cumulative impacts has been included in RMND. ... The RMND describes potential future projects (Section 7.3) intended to be carried out as part of the production of oil from offshore reserves. In addition, other oil and gas production companies are revising and expanding offshore exploration and production plans as a result of the relatively high price of oil and gas and other favorable economic conditions. These and other current and proposed operations should be reviewed and evaluated for cumulative impact to the environment.	Impacts associated with project-related drilling activities are either insignificant or are mitigated to a level of insignificance. No other drilling activities are anticipated in the region within the project timeframe. Upon completion of drilling, production from Platform Holly will be below existing permitted limits. Therefore, project implementation does not raise the issue of cumulative impacts

Commentor	Comment Number	Comment	Response
California Department of Fish and Game (continued)	3-2	The Department considers oil spills into the Santa Barbara Channel as significant events with deleterious effects on impacted marine life and associated commercial and recreational fishing activities in the impact area. Impacts would be different in magnitude for certain species and activities depending on when a spill occurred. For instance, impacts would be greater for seabirds during winter migratory months and greater for certain cetaceans based on seasonal migratory patterns. No information is given in the RMND as to the specific months in which the project is proposed to be carried out. In addition, the RMND incorporates an "Oil Spill Response Plan" into the project. This plan was not included.... As such, the Department is unable to provide comments regarding the incorporated spill response plan.	Although the project is scheduled to occur during an 18-month period, the re-drilling of each well is expected to take two to three months. These brief activities are presently not scheduled. The California Department of Fish and Game, Office of Spill Prevention and Response has previously commented on and approved Venoco's Oil Spill Response Plan.
	3-3	This document utilizes the United States Coast Guard Area Contingency Plan (ACP) as the source of information on the occurrence and location for listed species. The ACP is intended for use during oil spill response and is not intended to be used for species management or environmental review. The Department recommends utilizing additional sources of information for your discussion on impacts to biological resources. (Recommended sources listed.)	In the MND, the ACP is used as *one* source of information on the distribution of some species because their distribution is important for oil spill considerations. For example the ACP includes in its Category A–First Priority for Protection: "Sites of significant concentrations of vulnerable and sensitive species, e.g. pinniped pupping and nursery areas during the pupping season." The ACP is used as a source of information in the MND in two cases: (1) in discussions specific to oil spill planning, and (2) as a reference to locations of pinniped haulout, pupping, and breeding areas in areas potentially at risk in the event of an oil spill. The use of the ACP is relevant in these cases. Several other ("additional") sources of information are used to establish the distribution of a variety of species.

Commentor	Comment Number	Comment	Response
California Department of Fish and Game (continued)	3-4	Please note that the Department's Enforcement Dispatch Desk telephone number is 916-445-0045. Also the Department's OSPR office should be cited as California Department of Fish and Game, Office of Spill Prevention and Response, (OSPR) (see page 65).	The Enforcement Dispatch Desk phone numbers provided on page 49 of the MND are no longer valid. The correct number for this region (which includes Santa Barbara County) is (909) 597-9823. During non-working hours, the alternate number should be used: (916) 445-0045. The citation for OSPR has been corrected. (There is no OSPR reference on page 65. The comment may refer to the reference on page 76.)
National Marine Fisheries Service	4-1	The NMFS recommends that Venoco develop a monitoring plan to ensure that their zero discharge operation is functioning as expected.	Venoco monitors its conformance to zero discharge as part of its normal, ongoing operations. Examples of documentation and handling are as follows: A debris log is maintained aboard the platform. If items are lost overboard they are logged and reported. Any liquids lost overboard are treated as spills and responded to accordingly. Storm water is collected via deck drains to the surge tank, and subsequently shipped to shore for disposal.
	4-2	Marine mammals are Federally protected under the Marine Mammal Protection Act (MMPA). Under the MMPA, it is illegal to "take" a marine mammal without prior authorization from NMFS. ... With the proposed mitigation in place, the likelihood that this project will "take" a marine mammal is low. Therefore, I do not recommend that you apply for an incidental harassment authorization.	Comment noted.

Commentor	Comment Number	Comment	Response
National Marine Fisheries Service (continued)	4-3	The MND identified several potentially significant impacts associated with the proposed project which may affect species listed as endangered and threatened under the Endangered Species Act (ESA). Such impacts include noise and disturbance associated with re-drilling, production and vessel traffic, and potential oil spills. However, with the proposed mitigation in place, and with Venoco's continued efforts to manage the prevention and response to oil spills, NMFS concurs that the proposed project is not likely to adversely affect listed species under its jurisdiction.	Comment noted.