

MINUTE ITEM 28

W40547
PRC 1466
PRC 410
Griggs
Gonzales

APPROVE WORKOVER OF EXISTING OIL AND GAS WELLS,
STATE OIL AND GAS LEASES PRC 1466 PRC 410
VENTURA COUNTY

Calendar Item 28, attached, was pulled from the agenda prior to the meeting.

Attachment: Calendar Item 28

A 35

S 18

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CALENDAR ITEM

A 35

28

07/15/91

W 40547

S 18

PRC 1466

PRC 410

Griggs

Gonzalez

APPROVE WORKOVER OF EXISTING OIL AND GAS WELLS,
STATE OIL & GAS LEASES PRC 1466 AND PRC 410
VENTURA COUNTY

LESSEES:

Bush Oil Company (Operator)
Attn: Neil Nelson
P. O. Box 1538
Taft, California 93268

ARCO Oil and Gas Company
Attn: Paul Langland
P. O. Box 147
Bakersfield, California 93302

AREA, TYPE LAND AND LOCATION:

State oil and gas lease PRC 1466, issued on August 29, 1955, comprises 1,175 acres of submerged land at the westerly end of Rincon Field, Ventura County, located approximately ten miles north of the City of Ventura. A drilling and production island, Rincon Island, was constructed in 1958 by the Lessee and is located approximately 3,000 feet from shore in 45 feet of water. The island is connected to the mainland by a causeway.

State oil and gas lease 410 was issued in April 1949 and consists of 50 acres of partially filled tide and submerged lands in the Rincon area, Ventura County (see Exhibit "A").

PROPOSED PROJECT:

Bush Oil Company, Lessee of State oil and gas leases PRC 466 and PRC 410, is proposing a project to enhance production of oil and gas from the "A" sand reservoirs in the offshore Rincon area. The project includes sidetracking and deepening 22 existing wells into the AH to AZ sands of the Pico-Repetto formation. Twenty-

one of the wells are located in Lease PRC 1466 on Rincon Island. The other well is located on lease PRC 410 about one mile east of Rincon Island. Lease PRC 410 is developed through an existing well onshore on Bush Oil Company property at 5750 West Pacific Coast Highway located north of Highway 101.

AB 884:
09/12/91.

OTHER PERTINENT INFORMATION:

1. Pursuant to the Commission's delegation of authority and the State CEQA Guidelines (14 Code Regs. 15025), an Initial Study was prepared by staff. Subsequent to preparation of the Initial Study, a Proposed Negative Declaration EIR ND 544, State Clearinghouse 91031041, was prepared. The Proposed Negative Declaration includes mitigation measures which were incorporated into the project, and which are the subject of the Mitigation Monitoring Plan, Exhibit "C".

The Proposed Negative Declaration was prepared and circulated for public review pursuant to the provisions of the CEQA. A copy of this environmental document is attached as Exhibit "B".

Based upon the Initial Study, the Proposed Negative Declaration, and the comments received in response thereto, there is no substantial evidence that the project, as proposed, will have a significant effect on the environment (14 Cal. Code Regs. 15074(b)).

2. This activity involves lands identified as possessing significant environmental values pursuant to P.R.C. 6370 et. seq. Based upon staff's consultation through the CEQA review process, it is the staff's opinion that the project, as proposed, is consistent with the use classification.

EXHIBITS:

- A. Location Map.
- B. Proposed Negative Declaration ND 544.
- C. Mitigation Monitoring and Reporting Plan.

CALENDAR ITEM NO. 28 (CONT'D)

IT IS RECOMMENDED THAT THE COMMISSION:

1. CERTIFY THAT A PROPOSED NEGATIVE DECLARATION, EIR ND 544, STATE CLEARINGHOUSE 91031041, WAS PREPARED FOR THIS PROJECT PURSUANT TO THE PROVISIONS OF THE CEQA AND THAT THE COMMISSION HAS REVIEWED AND CONSIDERED THE INFORMATION CONTAINED THEREIN.
2. ADOPT THE PROPOSED NEGATIVE DECLARATION AND DETERMINE THAT THE PROJECT, AS PROPOSED, WILL NOT HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT.
3. ADOPT, PURSUANT TO SECTION 21081.6 OF THE P.R.C., THE MONITORING PROGRAM CONTAINED IN EXHIBIT "C", FOR THE PROJECT TO ENSURE COMPLIANCE WITH THE REQUIRED MITIGATION MEASURES.
4. FIND THAT THIS ACTIVITY IS CONSISTENT WITH THE USE CLASSIFICATION DESIGNATED FOR THE LAND PURSUANT TO P.R.C. 6370 ET. SEQ.
5. APPROVE THE PROPOSAL BY BUSH OIL COMPANY TO WORKOVER 22 OIL AND GAS WELLS UNDER STATE OIL AND GAS LEASES PRC 1466 AND PRC 410.

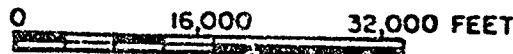
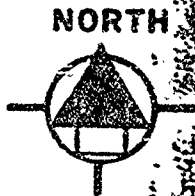
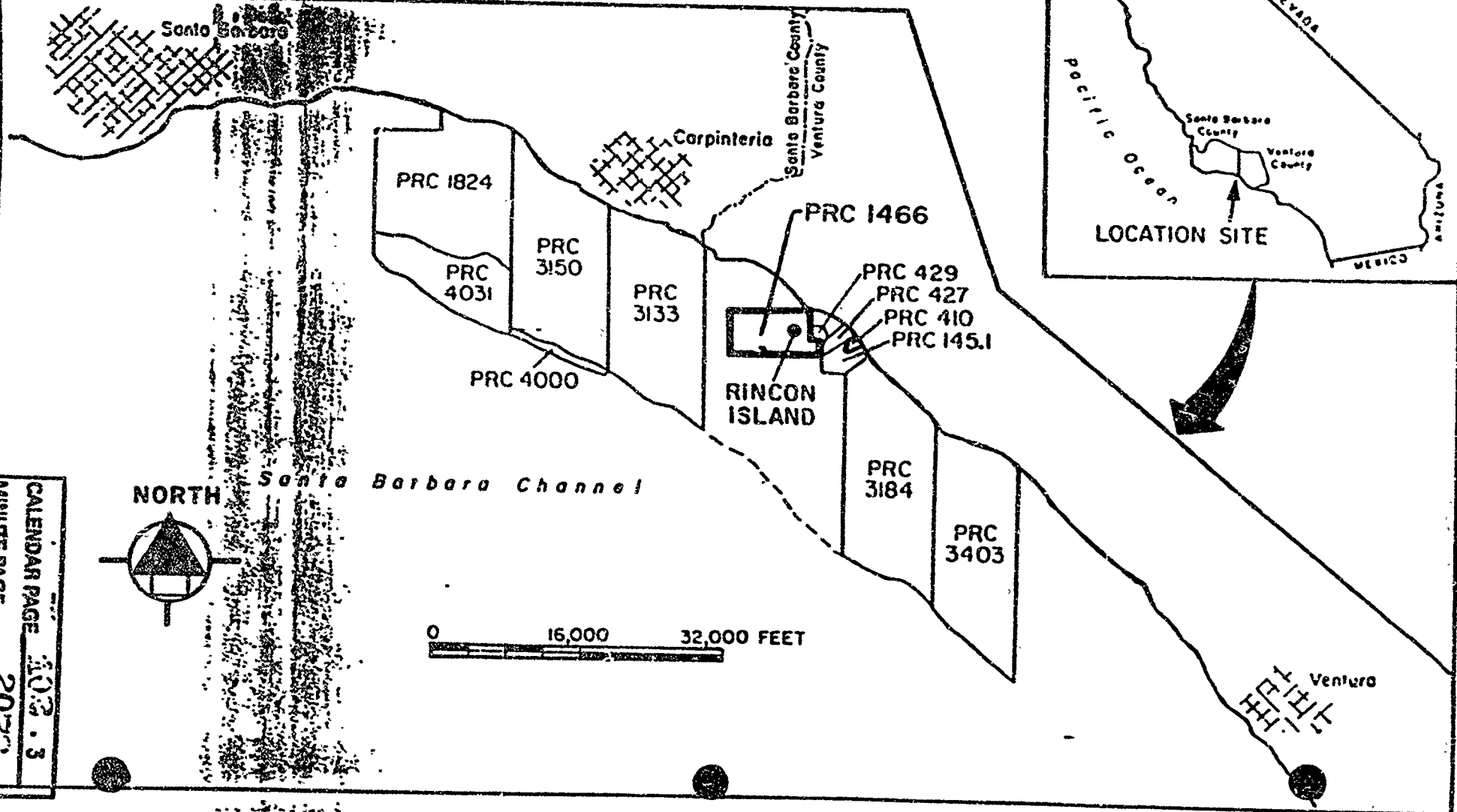
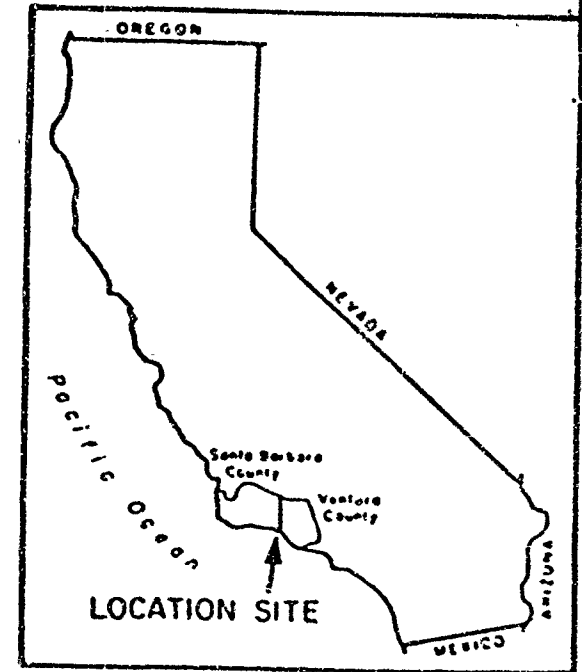
EXHIBIT "A"

WORKOVER PROJECT

RINCON ISLAND

BUSH OIL CO.

W40547, PRC 1466, 410



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STATE LANDS COMMISSION

JO T. McCARTHY, Lieutenant Governor
RAY DAVIS, Controller
THOMAS W. HAYES, Director of Finance

EXECUTIVE OFFICE
1807 - 13th Street
Sacramento, CA 95814

CHARLES WARREN
Executive Officer

March 11, 1991
File Ref.: W 40547
EIR ND: 544

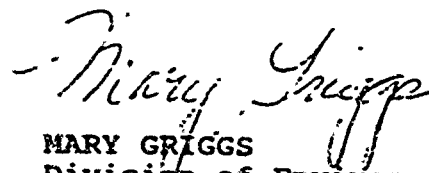
EXHIBIT B

NOTICE OF PUBLIC REVIEW OF A NEGATIVE DECLARATION
(SECTION 15073 CFR)

A 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 Regulations), and the State Lands Commission Regulations (Section 2901 et seq., Title 2, California Code Regulations) for a project currently being processed by the staff of the State Lands Commission.

The document is attached for your review. Comments should be addressed to the State Lands Commission office shown above, with attention to the undersigned. All comments must be received by April 11, 1991.

Should you have any questions or need additional information, please call the undersigned at (916) 322-0354.



MARY GRIGGS
Division of Environmental
Planning and Management

Attachment

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STATE LANDS COMMISSION

LEO T. McCARTHY, Lieutenant Governor
 GRAY DAVIS, Controller
 THOMAS W. HAYES, Director of Finance

EXECUTIVE OFFICE
 1807 - 13th Street
 Sacramento, CA 95811

CHARLES WARREN
 Executive Officer

PROPOSED NEGATIVE DECLARATION

EIR ND: 544
 File: W 40547
 SCH No.: 91031041

Project Title: Bush Oil Company Workover Project
 Proponent: Bush Oil Company
 Project Location: Rincon Island and 5750 Pacific Coast Highway, Ventura County.
 Project Description: Workover of 21 existing oil and gas wells on Rincon Island and one at 5750 Pacific Coast Highway.
 Contact Person: Mary Griggs Telephone: 916/322-0354

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 Regulations), and the State Lands Commission regulations (Section 2901 et seq., Title 2, California Code Regulations).

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

- this project will not have a significant effect on the environment.
- mitigation measures included in the project will avoid potentially significant effects.

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ENVIRONMENTAL IMPACT ASSESSMENT CHECKLIST - PART II

Form 13.20 (7/82)

File Ref.: WP 1466, WP 410

I. BACKGROUND INFORMATION

- A. Applicant Bush Oil Company
P. O. Box 1538
Taft, CA 93268
- B. Checklist Date: 9 / 21 / 90
- C. Contact Person: Mary Griggs
 Telephone: (916) 322-0354
- D. Purpose: Rehabilitate and redrill 22 existing oil and gas wells in order to drain "A" sands.
- E. Location: Rincon Island and 5750 Pacific Coast Highway, Ventura County.
- F. Description: Workover of 21 existing oil and gas wells on Rincon Island, and one at 5750 Pacific Coast Highway.
- G. Persons Contacted: _____

II. ENVIRONMENTAL IMPACTS. (Explain all "yes" and "maybe" answers)

- A. *Earth*. Will the proposal result in:
- | | Yes | Maybe | No |
|--|--------------------------|--------------------------|-------------------------------------|
| 1. Unstable earth conditions or changes in geologic substructures? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Disruptions, displacements, compaction, or overcovering of the soil? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Change in topography or ground surface relief features? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4. The destruction, covering, or modification of any unique geologic or physical features? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Any increase in wind or water erosion of soils, either on or off the site? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 6. Changes in deposition or erosion of beach sands, or changes in siltation, deposition or erosion which may modify the channel of a river or stream or the bed of the ocean or any bay, inlet, or lake? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 7. Exposure of all people or property to geologic hazards such as earthquakes, landslides, mudslides, ground failure, or similar hazards? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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 mudslides, ground
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	Yes	Maybe	No
B. Air Will the proposal result in			X
1 Substantial air emissions or deterioration of ambient air quality?			X
2 The creation of objectionable odors?			X
3 Alteration of air movement, moisture or temperature or any change in climate, either locally or regionally?			X
C. Water Will the proposal result in			X
1 Changes in the currents, or the course or direction of water movements, in either marine or fresh waters?			X
2 Changes in absorption rates, drainage patterns or the rate and amount of surface water runoff?			X
3 Alterations to the course or flow of flood waters?			X
4 Change in the amount of surface water in any water body?			X
5 Discharge into surface waters, or in any alteration of surface water quality, including but not limited to temperature, dissolved oxygen or turbidity?			X
6 Alteration of the direction or rate of flow of ground waters?			X
7 Change in the quantity of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations?		X	
8 Substantial reduction in the amount of water otherwise available for public water supplies?			X
9 Exposure of people or property to water-related hazards such as flooding or tidal waves?			X
10 Significant changes in the temperature, flow or chemical content of surface thermal springs?			X
D. Plant Life Will the proposal result in:			X
1 Change in the diversity of species, or number of any species of plants (including trees, shrubs, grass, crops, and aquatic plants)?			X
2 Reduction of the numbers of any unique, rare or endangered species of plants?			X
3 Introduction of new species of plants into an area, or in a barrier to the normal replenishment of existing species?			X
4 Reduction in acreage of any agricultural crop?			X
E. Animal Life Will the proposal result in			X
1 Change in the diversity of species, or numbers of any species of animals (birds, land animals including reptiles, fish and shellfish, benthic organisms, or insects)?			X
2 Reduction of the numbers of any unique, rare or endangered species of animals?			X
3 Introduction of new species of animals into an area, or result in a barrier to the migration or movement of animals?			X
4 Deterioration to existing fish or wildlife habitat?			X
F. Noise Will the proposal result in:			X
1 Increase in existing noise levels?			X
2 Exposure of people to severe noise levels?			X
G. Light and Glare Will the proposal result in			X
1 The production of new light or glare?			X
H. Land Use Will the proposal result in			X
1 A substantial alteration of the present or planned land use of an area?			X
I. Natural Resources Will the proposal result in			X
1 Increase in the rate of use of any natural resources?			X
2 Substantial depletion of any nonrenewable resources?			X

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- J. Risk of Upset.** Does the proposal result in:
1. A risk of an explosion or the release of hazardous substances (including, but not limited to, oil, pesticides, chemicals, or radiation) in the event of an accident or upset conditions? Yes Maybe No
2. Possible interference with emergency response plan or an emergency evacuation plan? Yes Maybe No
- K. Population.** Will the proposal result in:
1. The alteration, distribution, density, or growth rate of the human population of the area? Yes Maybe No
- L. Housing.** Will the proposal result in:
1. Affecting existing housing, or create a demand for additional housing? Yes Maybe No
- M. Transportation/Circulation.** Will the proposal result in:
1. Generation of substantial additional vehicular movement? Yes Maybe No
2. Affecting existing parking facilities, or create a demand for new parking? Yes Maybe No
3. Substantial impact upon existing transportation systems? Yes Maybe No
4. Alterations to present patterns of circulation or movement of people and/or goods? Yes Maybe No
5. Alterations to waterborne, rail, or air traffic? Yes Maybe No
6. Increase in traffic hazards to motor vehicles, bicyclists, or pedestrians? Yes Maybe No
- N. Public Services.** Will the proposal have an effect upon, or result in a need for new or altered governmental services in any of the following areas:
1. Fire protection? Yes Maybe No
2. Police protection? Yes Maybe No
3. Schools? Yes Maybe No
4. Parks and other recreational facilities? Yes Maybe No
5. Maintenance of public facilities, including roads? Yes Maybe No
6. Other governmental services? Yes Maybe No
- O. Energy.** Will the proposal result in:
1. Use of substantial amounts of fuel or energy? Yes Maybe No
2. Substantial increase in demand upon existing sources of energy, or require the development of new sources? Yes Maybe No
- P. Utilities.** Will the proposal result in a need for new systems, or substantial alterations to the following utilities:
1. Power or natural gas? Yes Maybe No
2. Communication systems? Yes Maybe No
3. Water? Yes Maybe No
4. Sewer or septic tanks? Yes Maybe No
5. Storm water drainage? Yes Maybe No
6. Solid waste and disposal? Yes Maybe No
- Q. Human Health.** Will the proposal result in:
1. Creation of any health hazard or potential health hazard (excluding mental health)? Yes Maybe No
2. Exposure of people to potential health hazards? Yes Maybe No
- R. Aesthetics.** Will the proposal result in:
1. The obstruction of any scenic vista or view open to the public, or will the proposal result in the creation of an aesthetically offensive site open to public view? Yes Maybe No
- S. Recreation.** Will the proposal result in:
1. An impact upon the quality or quantity of existing recreational opportunities? Yes Maybe No

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- T Cultural Resources**
- | | Yes | Maybe | No |
|---|--------------------------|--------------------------|-------------------------------------|
| 1. Will the proposal result in the alteration of or the destruction of a prehistoric or historic archeological site? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Will the proposal result in adverse physical or aesthetic effects to a prehistoric or historic building, structure, or object? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Does the proposal have the potential to cause a physical change which would affect unique ethnic cultural values? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4. Will the proposal restrict existing religious or sacred uses within the potential impact area? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

- U Mandatory Findings of Significance**
- | | | | |
|--|--------------------------|--------------------------|-------------------------------------|
| 1. Does the project have the potential to degrade the quality of the environment, 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Does the project have impacts which are individually limited, but cumulatively considerable? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

III. DISCUSSION OF ENVIRONMENTAL EVALUATION (See Comments Attached)

Please refer to the pages as indicated for those items requiring further discussion:

- II.A.7. pp. 9-12 and p. 34
- II.C.7. pp. 16-17 and p. 36
- II.G.1. pp. 19-22 and p. 36
- II.I. 2 p. 22
- II.J.1. p. 22 and pp. 34-38

IV. PRELIMINARY DETERMINATION

On the basis of this initial evaluation:

- I find 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 the mitigation measures described on an attached sheet have been added to the project. A NEGATIVE DECLARATION will be prepared.
- I find the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

Date: 01 / 16 / 91

For the State Lands Commission

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STATE OF CALIFORNIA
STATE LANDS COMMISSION
INITIAL STUDY FOR A REMEDIAL AND
WORKOVER PROJECT
ON
STATE OIL AND GAS LEASES
PRC 1466 AND PRC 410
OFFSHORE PUNTA GORDA
VENTURA COUNTY

1. THE PROJECT AND ITS LOCATION

Bush Oil Company, lessee of State Oil and Gas Leases PRC 1466 and PRC 410, is planning a project to enhance production of oil and gas from the "A" sand reservoirs in the offshore Rincon area. The enhancement is planned by sidetracking and deepening 22 existing wells into the AH to AZ sands. The location of the project in the area offshore Punta Gorda in Ventura County is shown in Exhibit A.

The plan provides for sidetracking and deepening twenty-two specific wells as listed in Table 1. Twenty-one of the specific wells planned for deepening are located in Lease PRC 1466 on Rincon Island, which was constructed in 1958 and is located at the end of a 3000 feet long trestle extending southward from shore at Punta Gorda. Sidetracking and deepening of these wells into the AS sand are planned.

One of the specific wells is planned for sidetracking and deepening into lease PRC 410 about one mile east of Rincon Island. Access to lease PRC 410 is made through an existing well on the Bush Oil Company property at 5750 West Pacific Coast Highway located north of Highway 101 and South of the old Rincon Highway between the Fire Station at the Seacliff off ramp and the underpass to the Mobil Piers. The well in Lease PRC 410 is planned for deepening into the AZ sands.

The general extent of redrilling will vary from about 1600 feet to 3200 feet reaching a maximum depth of about 4800 feet.

2. PURPOSE OF THE PROJECT AND EXPECTED RECOVERY

The purpose of the project is to recover additional hydrocarbon reserves in the AH to AZ sands within leases PRC 1466 and PRC 410. The wellbores currently available from the "A" sand reservoirs in the offshore Rincon area are not located in the most

EXHIBIT A

PROJECT AREA

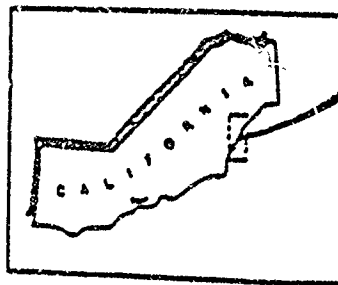
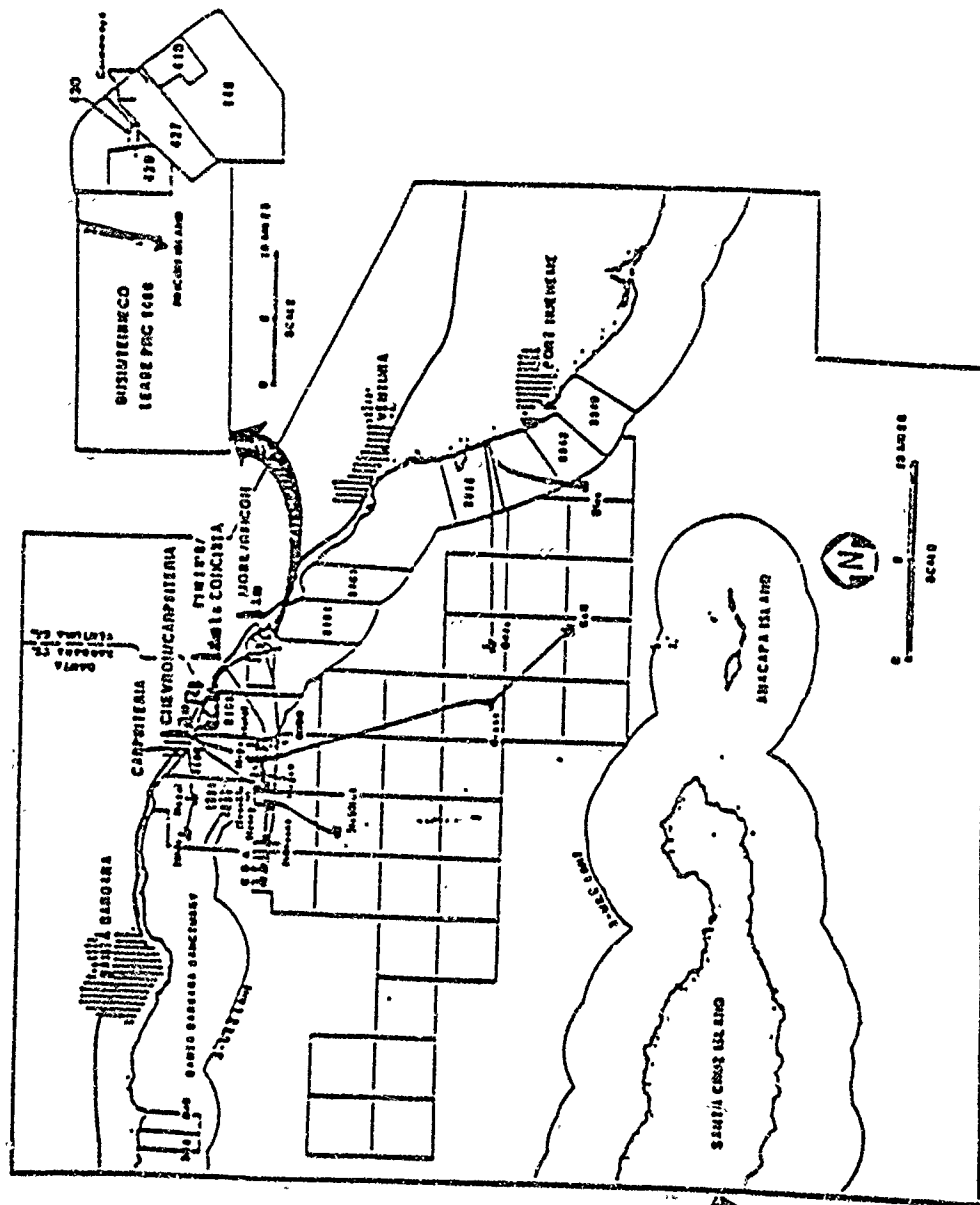


TABLE 1
ESTIMATED RESERVES TO BE RECOVERED
IN RINCON REDRILL PROGRAM

WELL	EXPECTED NET PAY	ESTIMATED RECOVERABLE RESERVES	
		OIL	GAS
1466 - 9R			
10	195'		
17	226'	164M BbLS	33MMCF
19	248'	190M BbLS	38MMCF
21R	250'	280M BbLS	42MMCF
22	250'	210M BbLS	42MMCF
27	225'	210M BbLS	42MMCF
28	220'	189M BbLS	38MMCF
40	260'	185M BbLS	37MMCF
42	215'	218M BbLS	44MMCF
44	240'	183M BbLS	37MMCF
45	230'	202M BbLS	40MMCF
46	225'	193M BbLS	39MMCF
48	190'	189M BbLS	38MMCF
54	195'	160M BbLS	32MMCF
57	260'	164M BbLS	33MMCF
60	220'	218M BbLS	44MMCF
61	190'	185M BbLS	37MMCF
62	180'	160M BbLS	32MMCF
63	190'	151M BbLS	30MMCF
66	228'	160M BbLS	32MMCF
410-8	215'	192M BbLS	38MMCF
	205'	181M BbLS	36MMCF
		172M BbLS	34MMCF
		4,084M BbLS	818MMCF

* Assume 1400 BAF OOIP
3 Acre Drainage Area
20% Ultimate Recovery

strategic locations and are generally not drilled deep enough to recover the hydrocarbons that are known to exist in the AH through AZ sands. Sidetracking of the existing wells to reach more strategic areas and deepening into the sands containing the additional known reservoirs are therefore necessary to fulfill the purpose of the project.

Expected recovery of oil from 22 specific well workovers is 4,084,000 barrels as shown in Table 1. The anticipated recovery is thus about 185,600 barrels of oil per well workover.

Natural gas recovery is anticipated at the Gas-Oil-Ratio of about 200 cubic feet per barrel. Thus about 818 million cubic feet of gas is expected from the 22 specific workovers listed in Table 1. Commercial production from the project is expected to continue over a 10-year period with approximately 10% depletion per year.

3. DESCRIPTION OF THE PROPOSED WORK

Bush Oil Company plans to conduct the remedial and workover project on one well at a time sequentially until all the work is completed. The average workover time per well is estimated to be 10 days, and completion of the entire project is expected within one year. Work on each well is planned for daylight hours only except when a hole is open, during which time the work is planned to continue on a 24 hour per day basis in order to ensure that critical operations are under constant attendance of the work crew. The normal workover crew will consist of 5 men.

A conventional drive-up type, mobile, well-servicing rig with conventional mud motors, and survey and directional equipment will be used for the workovers. A Diesel engine will power the rig. The mobile rig will be moved over each existing well for re-work. The strata already drained in the well will be plugged; then sidetracking and deepening will be accomplished using a 7 3/4 inch bit. The extent of the sidetracking and redrilling will vary between about 1600 feet and 3200 feet for each of the 22 wells, averaging about 2200 feet per well. Each hole will be cased with conventional pipe and cemented as necessary.

A high-quality, water-based mud will be used for the deepening. Produced water will be used for the mud mixture; no additional water from municipal sources will be required for the mud. The mud will be contained in interconnected steel tank mud pits, and the same mud used on the first well workover will be used on the following sequential workovers. Make-up mud will be added as necessary. As the mobile rig is moved between Rincon Island and the Bush Oil Company property ashore, the mud will be transported between the sites also in order to minimize the total quantity of mud needed for the project.

Cuttings will be separated from the mud mixture, temporarily stored in sand bins, and then hauled to approved Class II-I or Class I dumpsites as non-hazardous waste. Upon completion of the entire project, the mud will also be transported in a vacuum truck to a similar dumpsite as non-hazardous waste. A total of about 700 cubic yards of mud and cuttings is expected to be generated for disposal. As production is enhanced during the project, the oil, water, and gas will be processed through the existing Bush Oil Company facilities on Rincon Island, and on the Bush Oil Company property ashore. The existing production facilities are used to separate the produced fluid from the wells into crude oil, water, and natural gas streams. The produced fluid flows to a master trap in which separation into oil, water, and gas occurs. The stream containing primarily oil flows from the master trap to the wash tank and thence to the shipping tank. It is then sold to the Mobil Oil Company and is transported through an existing pipeline to Mobil's facilities north of Rincon Island, where it is treated further into pipeline-quality oil. Water from the master trap flows to a water tank where it is re-injected into the producing formation. All natural gas separated at the master trap, wash tank, and shipping tank is collected and sold to Southern California Gas Company through an existing 6 inch pipeline.

No new facilities will be necessary to carry out the project, and none will be constructed for the project. The existing facilities on and offshore are also sufficient for reception and temporary storage of all materials and equipment needed for the project.

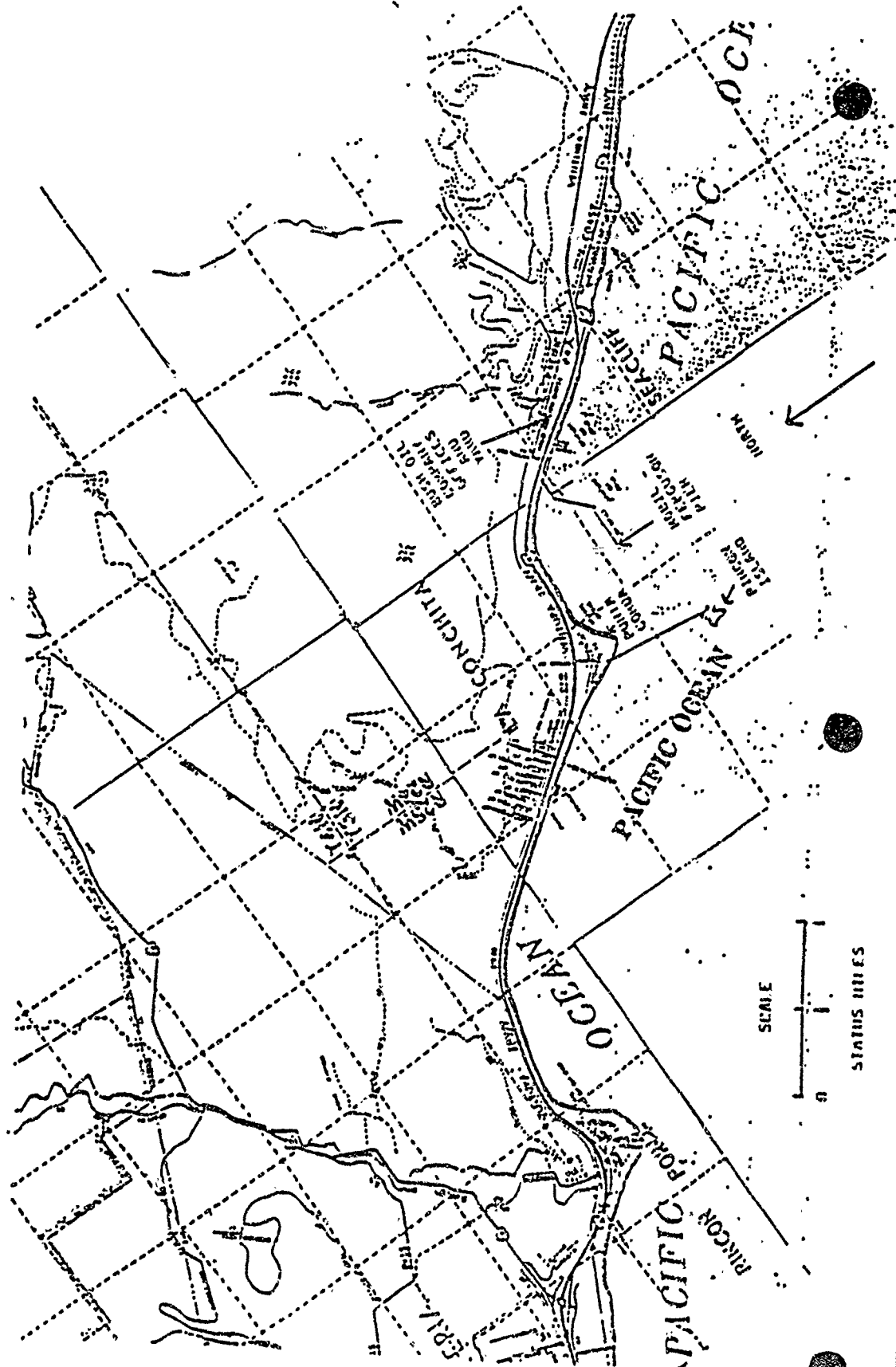
Upon completion of the project the mobile rig, all the equipment used, mud, and cuttings will be removed from the project area.

4. PRESENT ENVIRONMENT

A. GENERAL ENVIRONMENT

The local vicinity of the project work is shown in Exhibit B. The local environment within about 3 miles of the project area includes the coastal communities and beaches between Rincon Beach State Park and Hobson County Park, the offshore oil development facilities within the leases PRC 1466, 429, 427, 410, and 145 as shown in Exhibit A, onshore oil wells and oil treatment facilities north of Highway 101 roughly between Punta Gorda and the Seacliff offramp to the old Rincon Highway or Highway 1, a coastal bluff rising about 500 feet above the sea and paralleling the coast within about 1500 feet of the shore, and the Pacific Ocean generally south of the proposed remedial and workover project. Highway 101 and a single track railroad parallel the coast through the local area. To the north of the bluff lie sparsely occupied ranches and an area of oil wells east of Los Sauces Creek. The beaches within 3 miles of the project area are popular surfing and swimming

EXHIBIT B
PROJECT LOCAL VICINITY



areas. The land between Highway 101 and old Highway 1 southeast of the Seaciff offramp is used for agriculture.

Rincon Island in State Lease PRC 1466 is a man-made, sand-filled core surrounded by protective outer rock. The island covers approximately six acres on the ocean floor and 2.5 acres at sea level. It provides a useful work area of about one acre, and it is connected to Punta Gorda ashore by a 3000 foot long trestle. The residences nearest to the project are on Punta Gorda, and the Cliff Hotel at Mussel Shoal is also located on Punta Gorda. The only access to Rincon Island from land is from Highway 101 through the Punta Gorda beach community. The island and the trestle connecting the island to shore are visible to residents of the beach homes and hotel, some residents of La Conchita, motorists traveling on Highway 101, and from vantage points along the local coastline. The trestle is the structure that initially attracts viewer attention because of the distance it extends across the ocean surface. The trestle directs viewer attention toward the island, which appears as a relatively small rocky structure visually dominated by tall, scattered palm trees. These palm trees provide partial visual screening for the oil production facilities, which are situated within the depressed interior portion of the island. The existing production rig, when the mast is elevated, extends above the height of the palm trees and is visible from most local onshore vantage points.

The Bush Oil Company offices and yard lie north of Highway 101, and they are visible from Highway 101 but not from the nearby beach communities since the yard lies in an area lower than the Highway.

B. GEOLOGICAL ENVIRONMENT

Rincon Island and the rest of the project area are located on the modern wave-cut bench which extends inland past U.S. Highway 101 to the base of the coastal bluff. The face of the bluff is about 500 feet in height, and an elevated coastal terrace extends inland beyond its edge.

Surficial sediments in the area include scattered recent alluvial, colluvial, and beach material and Pleistocene terrace deposits which cap the elevated coastal terrace. These surficial deposits are unconformably underlain by tilted beds of the Pliocene Pico Formation which are well exposed in the face of the bluff. These beds are chiefly composed of silt/stone and conglomerate. Underlying the Pico Formation are the Pliocene Rapetto Formation (conglomerate, sandstone, and silty shale), the upper Miocene Santa Margarita Formation (massive diatomaceous mudstone), and the middle Miocene Monterey Formation (siliceous shale). Beneath the Monterey Formation is a thick sequence of lower Miocene, Oligocene, Eocene, and pre-

Tertiary sedimentary rocks which rest on a basement of crystalline or Franciscan sedimentary rocks.

Rincon Island and the project area are located slightly north of the axis of the Rincon anticline, part of the trend that includes the Rincon, Carpinteria offshore, and Dos Cuadras oil fields. In the immediate vicinity of the project area, the Rincon anticline is cut by several subsurface faults, including the Rincon field fault. Most of these faults do not extend to the surface. Several east-west trending surface or near-surface faults have been mapped in the general area. These are discussed in the following section.

5. ENVIRONMENTAL IMPACT OF THE PROPOSED PROJECT

A. EARTH

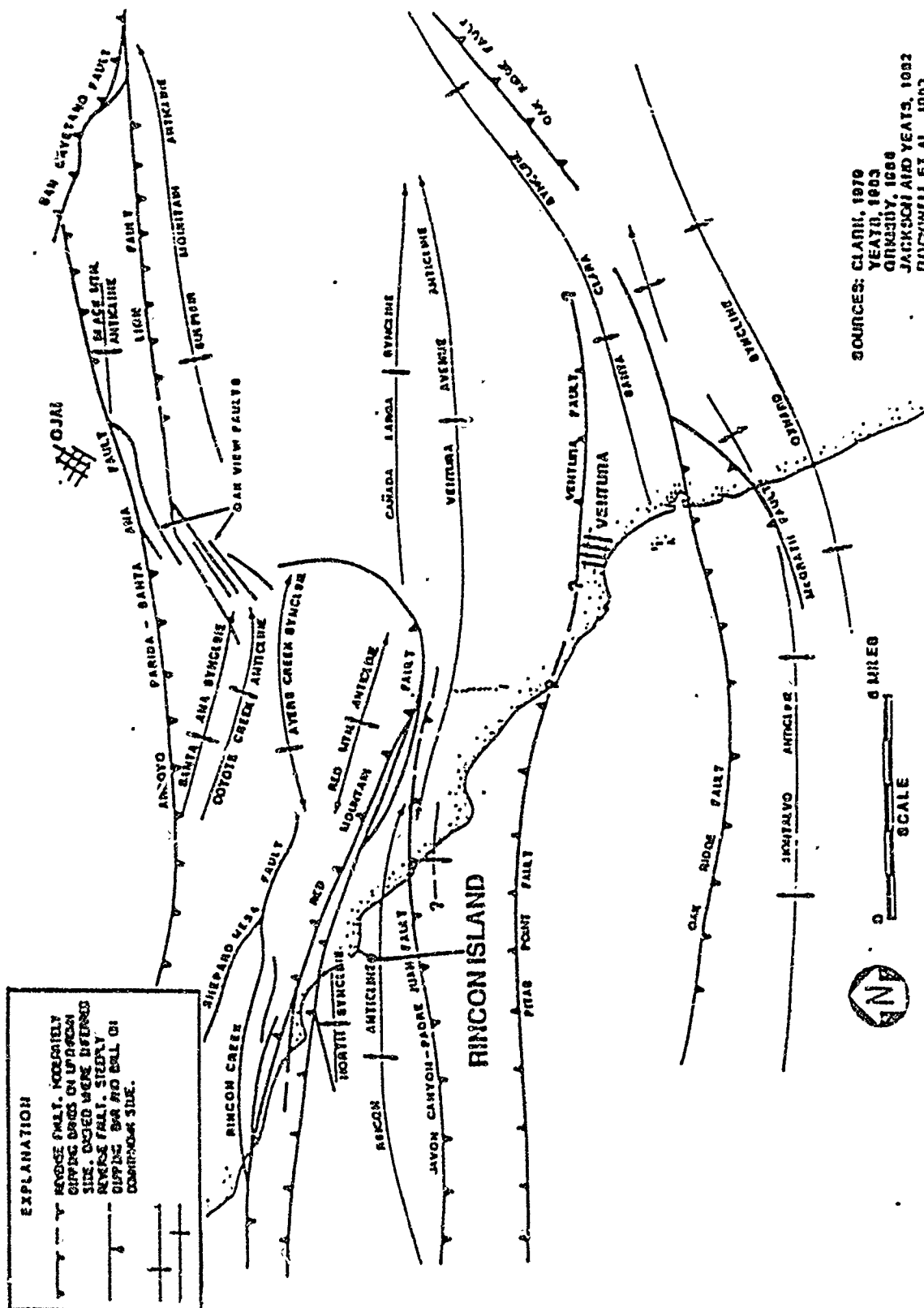
Rincon Island is a man-made structure that was built specifically to accommodate facilities for well drilling and oil and gas production. The proposed project would involve no changes to the island other than the introduction of temporary equipment within the production area. Consequently, there would be no changes in existing topography, soils, wind or water erosion, unique geologic features, siltation, or beach sand transport processes. The well reworked ashore on the Bush Oil Company property would also cause no changes to these features of the environment.

The proposed project facilities would be subject to potential adverse effects of various geologic phenomena, including earthquake ground motion, fault rupture, subsidence, and tsunami. These are briefly discussed below.

Earthquake Ground Motion: The major faults in the vicinity of Rincon Island are predominantly east-west trending reverse faults as illustrated in Exhibit C. The principal faults or fault zones thought to be seismically active and identified in the Rincon Island area are the Arroyo Parida - Santa Ana, the Red Mountain, the Pitas Point, and the Oak Ridge faults. The Arroyo Parida - Santa Ana and the Red Mountain faults are located approximately 4 1/2 and 1 mile northeast of the project area, respectively. The Pitas Point and the Oak Ridge faults are located approximately 3 and 7 1/2 miles south of the project area, respectively.

Instrumentally recorded seismicity in the Rincon Island region from 1902 to 1985 is shown on Exhibit D. It can be seen from this exhibit that seismic activity has occurred in a diffuse pattern throughout the region as well as in a few distinct clusters.

EXHIBIT C
REGIONAL TECTONIC MAP

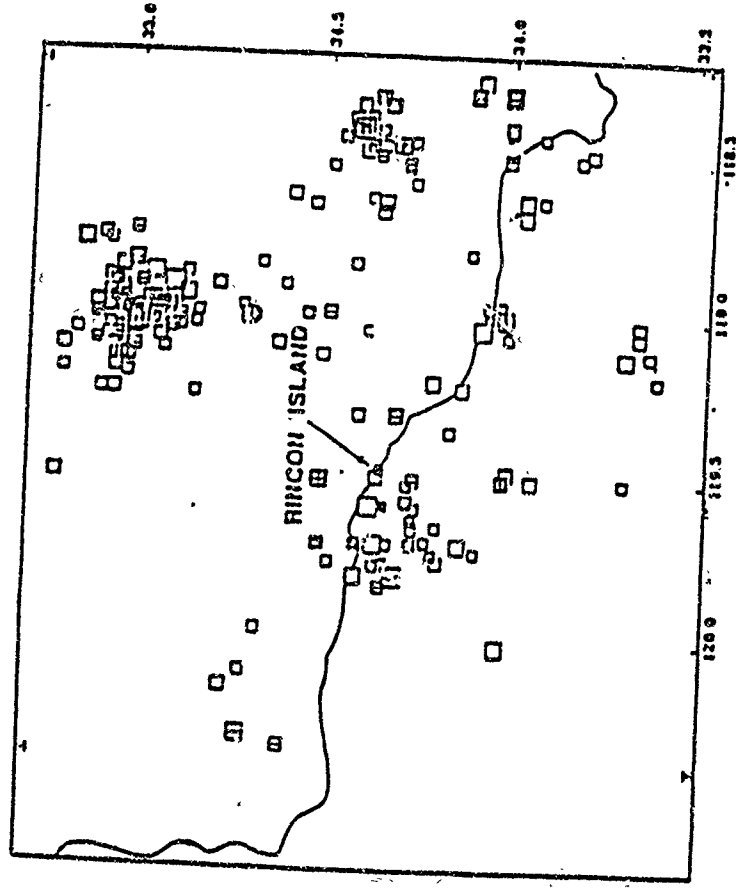


EXPLANATION

--- REVERSE FAULT, MODERATELY
DIPPING SIDES ON UP-DIP
SIDE. DOTTED WHERE DIPPED
SIDE. DOTTED WHERE DIPPED
SIDE. REVERSE FAULT, STEEPLY
DIPPING SW AND NW OR
CONVERSE SIDE.

SOURCES: CLARK, 1970
YEATS, 1963
GINSBURG, 1968
JACKSON AND YEATS, 1962
ROCKWELL ET AL., 1967

EXHIBIT D
 HISTORIC SEISMICITY OF SITE REGION
 JULY 1902 - APRIL 1985



EXPLANATION
 MAGNITUDE
 1 2 3 4 5 6 7 8
 MULTIPLE SQUARES OF SAME MAGNITUDE AT SAME LOCATION

Historically, the eastern Santa Barbara Channel has experienced a moderate level of seismicity. Much of this seismicity occurred as an earthquake swarm in 1968. Other moderate to large events occurred in the offshore Santa Barbara area in 1925, 1941, and 1978. Several other moderate magnitude events have occurred in the vicinity of the northern Channel Islands. Studies of earthquake focal mechanisms reveals that most events within the channel can be associated with the east-west trending reverse or left-slip faults.

Some level of earthquake ground shaking during the year-long project and during the 10 years of expected production are probable. Proper adherence to applicable State Lands Commission (SLC) and Division of Oil and Gas (DOG) regulations, as described in Section 7, would minimize the potential for significant environmental effects to occur as a result of the occurrence of ground shaking.

Fault Rupture: It is considered unlikely that any of the deepened well boreholes would penetrate the plain of one of the subsurface faults; however, should a fault experience movement that would damage well casing, proper adherence to applicable SLC and DOG regulations, as described in Section 7, would minimize the potential for significant environmental effects to occur as a result.

Subsidence: As production is enhanced during and after the remedial work, removal of fluids could potentially result in ground surface subsidence. Based on field history, occurrence of subsidence is considered unlikely. However, should it occur, SLC and DOG would be notified so that any appropriate mitigative measure could be instituted. Such mitigation typically consists of a program of controlled fluid injection.

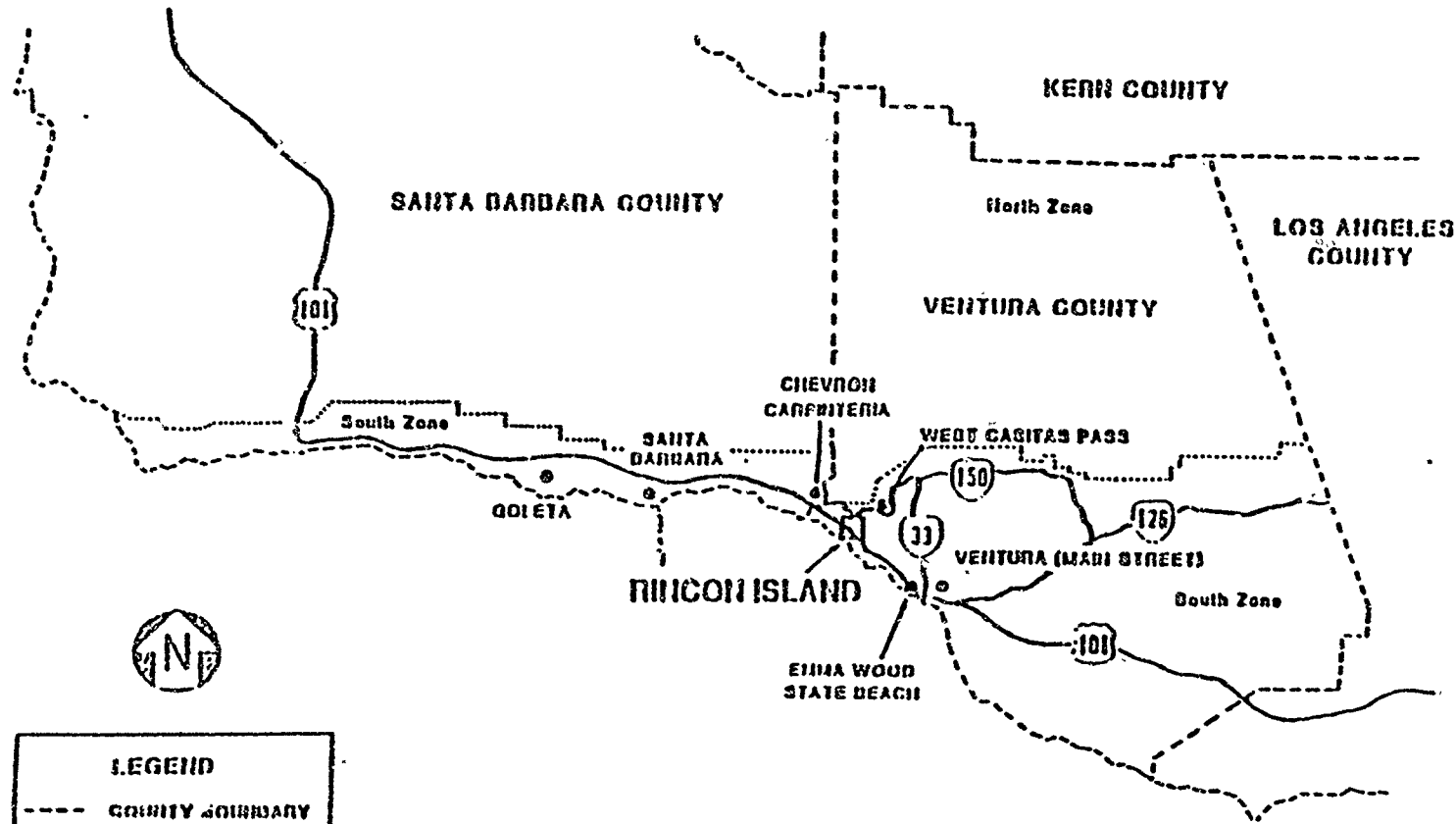
Tsunami: It is highly unlikely that Rincon Island would experience a tsunami during the lifetime of the proposed wells. Adherence to applicable SLC and DOG regulations, as described in Section 7, should ensure against significant damage occurring in the event of a tsunami.

B. AIR

The proposed project is located in Ventura County's Ojai Valley Airshed. The airshed is in the south zone of Ventura County which is considered to be a non-attainment area for ozone (03). The area is considered in attainment with respect to other pollutants. This airshed is currently designated as a non-growth area for Ventura County Air Pollution Control District (VCAPCD) planning purposes. The proposed project area is located near the southern portion of the South Coast region of Santa Barbara County (Region 1). This region, known as the Air Quality Management Area (AQMA) for Santa

EXHIBIT E
AIR MONITORING SITES LOCATED NEAR PROJECTED AREA

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LEGEND	
	COUNTY BOUNDARY
	AIR MONITORING SITE
	MAJOR HIGHWAY

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 DATE PAGE 2021

TABLE 2
MAXIMUM MEASURED POLLUTANT CONCENTRATIONS DURING 1983-1986 IN THE
SOUTHERN HALF OF THE SANTA BARBARA COUNTY SOUTH COAST
AREA AND THE SOUTH ZONE OF VENTURA COUNTY

POLLUTANT/ AVERAGEING TIME	SANTA BARBARA	WEST COAST PASS	OJAI	AMBIENT AIR		QUALITY STANDARD	
				ELMA WOOD STATE BEACH	EL RIO	(ppm)	(ppm)
O ₃ (ppm) 1-hour	0.16	0.16	0.16	0.10	0.18	0.12	0.09 (b)
NO ₂ (ppm) 1-hour	0.16	0.08	-	0.13	0.13	N/A	0.25
Annual	0.019	0.031	0.013	0.017	(0.037) (a)	0.05	N/A
CO (ppm) 1-hour	18	-(c)	-	-	6	35	20
8-hour	8.6	-	-	-	3.4	9	9
SO ₂ (ppm) 1-hour	0.04	-	-	-	-	N/A	0.25
24-hour	0.01	0.04	-	-	-	0.14	0.05
Annual	0.003	-	-	-	-	0.03	N/A
PM ₁₀ (ug/m ³) 24-hour	-	-	66	-	64	150	100
Annual	-	-	30.9	-	33.5	-	50
Pb (ug/m ³) 30-day	0.10	-	-	-	-	N/A	1.5
Quarterly	0.14	-	-	-	-	1.5 ug/m ³	N/A
SO _x (ug/m ³) 24-hour	15.0	-	-	-	-	N/A	25 ug/m ³

(a) Values in parentheses are valid, but data set is incomplete in that insufficient number of data points were collected to meet EPA and/or ARB criteria for representatives.

(b) On August 1, 1988, California Air Resources Board lowered the standard to 0.09 ppm. The previous standard was 0.10 ppm.

(c) Dashes indicate that pollutant is not measured at that particular site.

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TABLE 3
WORKOVER RIG EMISSIONS^a

<u>POLLUTANT</u>	<u>EMISSION FACTOR^b</u> <u>(g/hp-hr)</u>	<u>lb/hr^c</u>	<u>tons/well</u>	<u>TOTAL TONS</u> <u>(22 wells)</u>
Nitrogen Oxides	14	7.6	0.48	10.6
Sulfur Dioxide	0.93	0.5	0.03	0.7
Carbon Monoxide	3.03	1.6	0.10	2.2
Particulate Matter	1.0	0.5	0.03	0.7

a. Emissions based on a 350 hp engine operating at an average load of 70 percent for 128 hours per well.

b. Emission factors are from the EPA publication - Compilation of Air Pollutant Emission Factors (AP-42).

c. 1 lb = 453.6 grams

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TABLE 3a
MUD PUMP EMISSIONS^a

<u>POLLUTANT</u>	<u>EMISSION FACTOR^b (g/hp-hr)</u>	<u>lb/hr^c</u>	<u>tons/well</u>	<u>TOTAL TONS (22 wells)</u>
Nitrogen Oxides	14	3.6	0.14	3.0
Sulfur Dioxide	0.93	0.6	0.01	0.2
Carbon Monoxide	3.03	1.9	0.03	0.7
Particulate Matter	1.0	0.6	0.01	0.2

- a. Emissions based on a 400 hp engine operating at an average load of 70 percent for 32 hours per well (25% of workover rig operating time).
- b. Emission factors are from the EPA publication - Compilation of Air Pollutant Emission Factors (AP-42).
- c. 1 lb = 453.6 grams

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Barbara County, is currently classified as a non-attainment area for ozone (O₃). The South Coast Region is in attainment with National Ambient Air Quality Standards (NAAQS) for all other criteria pollutants.

The air quality monitoring network in the project region consists of six monitoring stations located in Ventura and Santa Barbara Counties (Exhibit E). The sites are located at: (1) Ventura Main Street, 14 miles southeast of the project site; (2) Emma Wood State Beach, 13 miles southeast of the project site; (3) West Casitas Pass, 4 1/2 miles northeast of the project site; (4) Chevron Carpenteria, 4 1/2 miles northwest of the project site; (5) Santa Barbara Canon Perdido Street, 14 miles northwest of the project site; and, (6) Goleta, 22 miles northwest of the project site. Maximum concentrations of pollutants measured in the project region at these monitoring stations are presented in Table 2. For comparison, NAAQS and California Ambient Air Quality Standards (CAAQS) are also shown in Table 2.

During the remedial and workover project, a 350 horsepower Detroit Diesel mobile workover rig would be used. Work on each of the 22 wells will take approximately 10 days. Work will be conducted during daylight hours only (10 hours per day) except when the hole is open (about 2 days per well) when work will continue 24 hours per day. Thus, each well will require about 128 rig hours. Air pollutant emissions estimates are shown in Table 3 and 3a.

Produced fluids would be commingled with existing Bush Oil Company production. Fluids would be processed using existing treating facilities; no new facilities would be added. Produced crude oil and natural gas would be transported via existing pipeline distribution systems.

The principal sources of possible emission increases during the enhanced production phase would be hydrocarbon tankage and equipment seals. Fugitive hydrocarbon emissions from tankage are not anticipated because all hydrocarbon vapors from tankage are collected and used onsite as fuel or sold offsite. Existing fugitive hydrocarbon emissions from equipment seals would not change as a result of additional production. In summary, enhanced production from the AH to AZ sands is not expected to increase existing emissions from production facilities, and therefore would not result in any significant impacts on air quality.

The Mobil facility is permitted to handle 1.5 million barrels of oil per month and they are currently handling approximately 422,000 barrels per month. they will not need to modify their current Ventura County APCD permit in order to process this additional oil.

The proposed workover will involve deepening the wells within the known

reservoir. No new zones will be penetrated. since no H₂S has been detected in any wells currently producing on the Island, Bush does not expect to encounter any in these wells.

Vehicular traffic associated with the proposed workovers will be the equivalent of normal well maintenance activity and will therefore no result in any appreciable increase in emissions. A single crew truck carrying a four-man crew will travel to and from the Island three times a day.

The rig used for the workover project is exempt from permit requirements of the Ventura County Air Pollution Control District under its Rule 23.D.5. Notwithstanding the exemption, the project would not be considered a major source because emissions of each pollutant are less than 25 tons per year.

C. WATER

Rincon Island has an external berm height of 30 feet above sea level on the southerly or weather side of the Island. The other exterior sides of the Island are of lesser height since wave action is less likely to broach these walls. On the Island is a spill containment system of containment walls around the tank battery and well cellar areas with drainage and return channels and berms to direct any spill back to the well cellar.

Surface water runoff on Rincon Island is contained and handled by an existing drainage system. The drainage system is connected to existing tankage where runoff water can be accumulated. The fluid is treated to separate out any oil, and the water is then disposed of through a system of existing injection wells. The proposed project would not alter this system or cause an increase in the rate and amount of surface water runoff. It is possible that ground water aquifers may be penetrated during the well deepening operations. Contamination of ground water would be prevented as described in Section 7.

The Island is visited regularly by a State Lands Commission inspector and all equipment is inspected for proper operating condition.

Produced water would be reinjected into a producing formation, rather than discharged to the ocean, through a system of existing injection wells. This system had a historic peak injection rate of 8,300 BWPD. The rate of reinjection for the proposed project is not known at this time; however, it would be significantly less than the historic peak injection rate.

Fresh water requirements for the project would be minimal and would be met through the existing municipal system. The only fresh water requirement

would be that for personal use of the work crew and sanitation since cement operations would use seawater and mud mixtures would use produced water.

In summary, implementation of the proposed project would not result in significant effects on hydrologic resources. There would be no alteration in the drainage pattern, quantity, or quality of existing surface water flow. No significant impacts on ground water aquifers are anticipated. The proposed project would not result in a significant long-term increase in fresh water use. The project activities would not involve discharges to the ocean or cause changes in the existing character of marine waters. There would be no increase in risk of exposure to potential hydrologic hazards.

D. PLANT LIFE

Commercial kelp beds grow along the coast between Ventura and Santa Barbara principally on rocky bottom areas. The beds are harvested to a maximum depth of 4 feet (Dames and Moore, 1988). The project is not expected to have any effect on these kelp beds nor on their commercial exploitation.

Vegetation around the project well on the Bush property ashore has been cleared. Vegetation on Rincon Island primarily consists of introduced palm trees, planted to shield onshore views of oil production facilities. No native vegetation types occur. The palms are situated on the perimeter of the island in planters and do not occur within the existing production facilities area. Because no new facilities would be constructed, no existing plant life would be disturbed or eliminated if the proposed project were implemented. No new species of plants would be introduced during the project, and the existing limited plant diversity would remain unchanged.

E. ANIMAL LIFE

There is no native terrestrial wildlife habitat present on Rincon Island. Consequently no use is made of the island by native terrestrial amphibian, reptile, or mammal species. The island may be used by terrestrial and marine birds for resting. Shorebirds do occur there regularly, primarily during resting periods. Some foraging by these shorebirds may occur on the rocky, outer portions of the island. No breeding by any native terrestrial wildlife species is expected to occur on the island.

Construction of Rincon Island resulted in the creation of a hard substrate intertidal and subtidal habitat in a marine environment predominantly characterized by soft bottom subtidal habitat. As a consequence, there was an associated increase in the abundance and diversity of marine biota at and

around the island as species colonized the newly available substrate. This colonization is commonly observed at man-made structures in the marine environment.

The northern Channel Islands region of the Southern California Bight is located at a major transition point between the biogeographical coastal provinces, the temperate Oregonian and the subtropical Californian or San Diegan. The biota of this transition zone include species from the northern subarctic and Southern Equatorial water masses, along with endemic and elements from the Central Pacific water mass. Species diversity in this area is higher than in areas to the north or south. The Santa Barbara Channel serves as a funnel for migrating birds, especially shearwaters and brant, as well as a migratory route for the gray whales (Dames and Moore, 1988).

Sensitive species that may potentially occur near the island include the state and federal listed endangered California brown pelican (*Pelecanus occidentalis californicus*) and the protected marine mammals-California sea lion (*Zapophus californianus*) and bottlenose dolphin (*Tursiops truncatus*). California brown pelicans may occasionally feed in the waters adjacent to the island but are not expected to occur regularly near the island. Small numbers of California sea lions may occasionally occur near the island, but if present, these animals have become acclimated to the oil production activities occurring on the island. Since the 1983 El Nino Southern Oscillation event, between 30 and 50 bottlenose dolphins have been recorded during each month on a yearly basis in the small bay immediately north of Rincon Island. These dolphins apparently feed in nearshore waters and are not expected to occur regularly near the island.

Neither the proposed remedial workover nor the following production operations are expected to have significant impacts on the biological resources of the project area. No new animal species would be introduced. Existing marine habitats currently used by wildlife would not be disturbed since the proposed project would involve activities on the industrialized portions of the island and the property ashore only.

F. NOISE

Ambient noise measurements were taken within a 2.5 mile radius of Rincon Island. The results of the measurements are presented in Table 4, and the locations of the measurement sites are shown on Exhibit F. Ambient noise within the 2.5 mile radius is primarily composed of truck and automobile traffic from U.S. Highway 101 and ocean surf. Additional noise is generated

TABLE 4

AMBIENT NOISE MEASUREMENTS

<u>Location</u>	<u>Representative Noise Levels *</u>			
	<u>Morning</u>	<u>Afternoon</u>	<u>Evening</u>	<u>Night</u>
Site 1 - Rincon Point	71	73	66	65
Site 2 - Punta Gorda	64	66	64	64
Site 3 - Punta Gorda	72	71	73	67
Site 4 - Oil Piers	73	72	72	67

Typical noise ranges during each site sampling period are as follows:

<u>Location</u>	<u>Observed Noise Level Range *</u>			
	<u>Morning</u>	<u>Afternoon</u>	<u>Evening</u>	<u>Night</u>
Site 1 - Rincon Point	63-77	61-77	62-76	60-70
Site 2 - Punta Gorda	53-69	55-71	61-76	60-76
Site 3 - Punta Gorda	60-76	58-74	62-76	61-71
Site 4 - Oil Piers	60-70	59-75	60-76	59-71

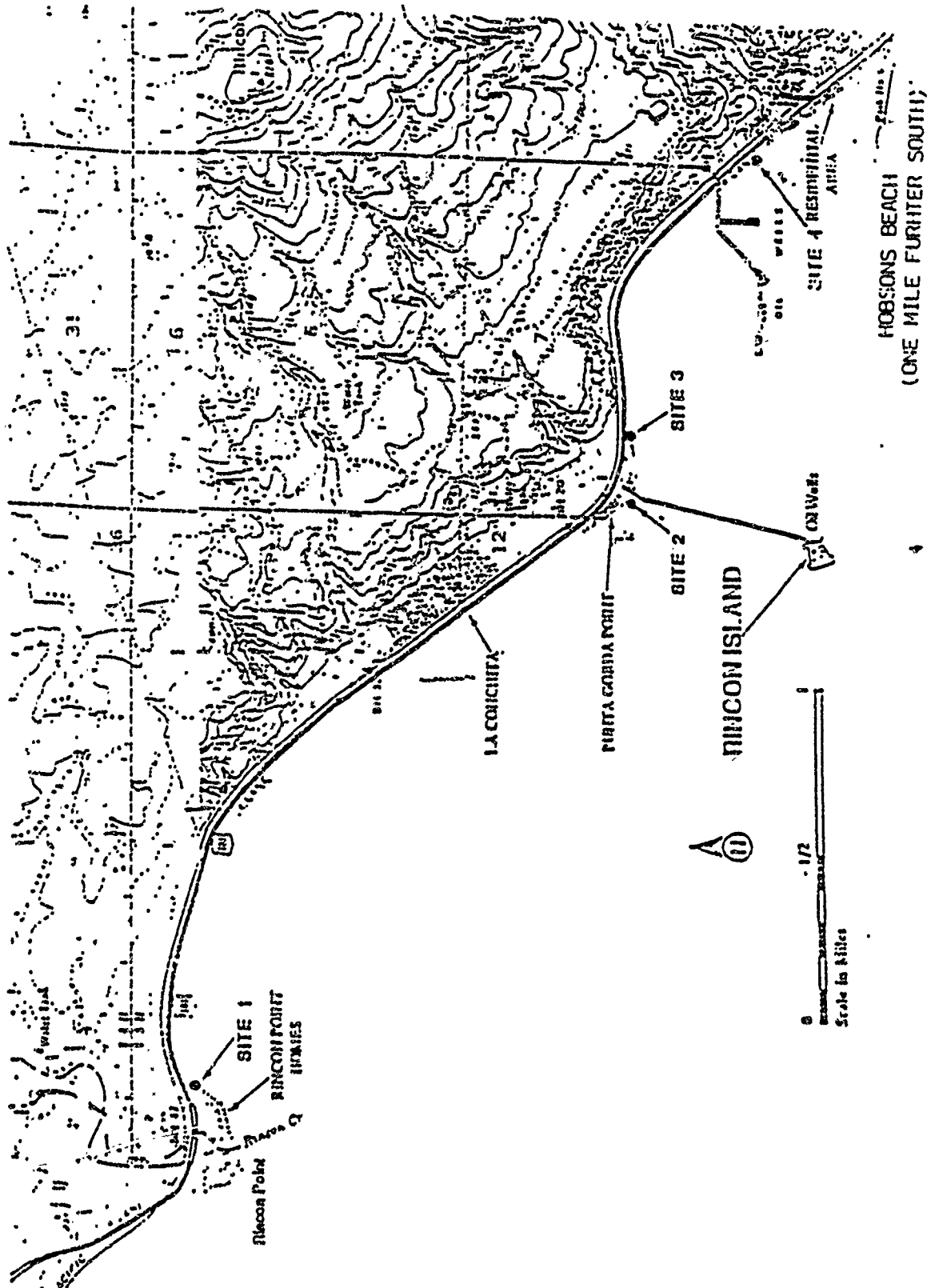
* measurements given in dB A

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 10.2.29

EXHIBIT F

LOCATIONS OF NOISE SURVEY SITES

TENNACO - RINCON ISLAND



by passing trains and occasional air traffic. The nearest noise sensitive receptors to Rincon Island and the project area are:

- Rincon Point Homes - 2.5 miles N.W. of Rincon Island;
- La Conchita - 1.0 miles N.N.W. of Rincon Island;
- Punta Gorda Point (Mussel Shoals) - 0.5 miles N. of Rincon Island;
- Seacliff Residential - 1.5 miles E.S.E. of Rincon Island, and;
- Campground (Hobson's Beach) - 2.0 miles E.S.E. of Rincon Island.

The receptor locations are also shown on Exhibit F.

During the remedial and workover project a 350 horsepower Detroit Diesel rig would be used, and some increase in traffic would occur. Any noise levels generated by the rig are expected to be attenuated substantially due to the distance between the project area and the receptors. Any sound generated by the project activities would not be perceived above existing ambient traffic, train, and surf noise levels, and there would therefore not be any significant noise effect. Since no new equipment is required for the production facilities, no incremental noise increases are expected.

G. LIGHT AND GLARE

Existing sources of light and glare in the project area are for the most part minor and consist of lights on Highway U.S. 101, street and residence lights in La Conchita, the beach residences and the hotel at Punta Gorda, the residences at the Seacliff beach community, and lighting in the project area on Rincon Island, the Mobil-Ferguson Pier, and the oil company areas along old Highway 1 north of Highway 101.

During the project nighttime operations lighting would be necessary around the well pads. Other sources of light would be from trucks delivering emergency supplies at night and crew vehicles. The nearest light sensitive receptors would be the residences and hotel located at Punta Gorda at least 3,000 feet from the project site. The substantial distance of light sensitive receptors to the project area and the plan to conduct project work in daylight hours except during critical open-hole operations are expected to result in only insignificant impacts from nighttime lighting as described in Section 7. During production, after the remedial work, the amount of lighting would not increase from current levels.

TABLE 5
VENTURA COUNTY POPULATION AND HOUSING ESTIMATED
JANUARY 1, 1990

REPORT 6-B
PAGE 63

CA. DEPARTMENT OF FINANCE
DEMOGRAPHIC RESEARCH UNIT
PRINTED 04/26/90

CITY	POPULATION		HOUSING UNITS				OCCUPY- -TION	%	PERSONS PER HOUSE- -HOLD		
	TOTAL	HOUSE- -HOLD	TOTAL	SINGLE FAMILY - - ATTACHED	2-3 UNITS	MOBILE - HOMES					
CAMBRILLO	50943	42154	899	10749	3092	700	2448	760	18107	2.45	2.701
FILLMORE	11431	11210	221	2424	146	237	483	232	3456	1.87	3.244
MOORPARK	26050	26055	4	5612	834	236	806	189	7663	1.72	3.400
OLIVE	7808	7642	319	2185	123	103	618	1	3047	2.06	2.603
OSIARD	12908	128256	1552	21470	2665	2068	10428	2329	30117	4.10	3.281
PORT LAFAYETTE	21243	19480	1762	2398	2117	1005	2142	70	6879	0.97	2.832
SAN ANTONIO	22264	21167	1087	20387	3334	4137	8475	2232	26208	3.15	3.511
SANTA PAULA	24016	23777	238	4417	628	1042	1170	733	7248	3.04	3.063
SIMI VALLEY	101523	101392	131	24462	24331	2119	4183	720	20603	6.73	3.312
UNION CITY	104381	104703	1688	24775	4333	1577	5876	832	25047	3.35	3.015
TOTAL INCORPORATED	570845	563043	7802	118688	19291	14101	36426	8132	188257	3.96	2.901
UNINCORPORATED	97708	94032	2676	24201	823	1143	2524	1628	20732	2.66	3.163
COUNTY TOTAL	668553	657075	11478	142889	20114	15244	38950	9760	218989	3.78	3.006

NOTE: Received from Ventura
County Planning Dept.
May, 1990

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TABLE 6
 COUNTY OF VENTURA
 1980 - 2010 POPULATION FORECAST

Growth Areas/ Nongrowth Areas*	Census 4/1/80	1985	1990	1995	2000	2005**	2010**
Camarillo GA	43,711	52,590	61,550	68,250	74,300	79,240	84,280
Camarillo NGA	3,668	3,620	3,050	3,610	6,160	6,640	7,100
Hillmore GA	9,604	10,300	12,220	13,210	14,250	15,220	16,170
Hillmore NGA	2,182	2,240	2,240	2,220	2,220	2,220	2,240
Las Posas NGA	1,312	2,020	2,120	2,240	2,340	2,440	2,520
Moortpark GA	8,054	14,250	22,020	29,590	35,740	41,590	47,080
Moortpark NGA	670	690	750	700	810	820	860
North Hill NGA	487	340	570	620	650	690	720
Oak Park GA	3,617	4,380	12,120	17,250	16,740	16,220	15,780
Oak Park NGA	223	300	320	340	350	370	390
Ojai GA	8,411	9,070	9,460	9,350	9,530	9,700	9,750
Ojai NGA	2,298	2,540	2,540	2,620	2,700	2,720	2,850
Ormond GA	121,055	127,700	144,000	159,000	180,000	198,000	217,300
Ormond NGA	4,997	5,000	5,120	5,100	5,100	5,390	5,370
Pico GA	1,368	1,400	1,310	1,980	2,250	2,200	2,440
Pico NGA	196	200	240	250	230	300	320
Port Huasteca GA	18,507	20,000	22,570	22,310	24,050	25,220	25,220
Santa Paula GA	20,389	22,320	24,500	25,000	27,500	29,000	30,500
Santa Paula NGA	2,358	3,030	3,050	3,050	3,350	3,050	3,350
Simi Valley GA	80,294	90,640	103,220	112,650	121,170	129,220	136,320
Simi Valley NGA	1,037	1,400	1,600	1,320	2,040	2,250	2,470
Thousand Oaks GA	91,962	101,910	109,500	113,200	124,500	132,500	139,200
Thousand Oaks NGA	1,070	1,220	1,220	1,350	1,450	1,540	1,550
Ventura GA	33,269	30,100	33,000	30,000	31,000	31,000	31,350
Ventura NGA	982	1,220	1,150	1,220	1,250	1,200	1,250
Ven. Riv. GA	12,369	12,500	14,000	14,260	14,580	15,100	15,300
Ven. Riv. NGA	1,509	1,510	1,510	1,520	1,560	1,590	1,620
TOTAL COUNTY	529,174	534,360	659,250	722,920	787,770	841,730	892,770

*See attached map. Growth Areas are generally larger than incorporated areas for census.
 **To be used for guideline purposes only.

Approved by Board of Supervisors on 5/7/85.

NOTE: Except for 1980, all forecasts are January 1 forecasts.

L76/1

NOTE: Received from Ventura
 County Planning Dept.
 May, 1990

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TABLE 7
 COUNTY OF VENTURA
 1980 - 2010 DWELLING UNIT FORECAST

Growth Area/ Nongrowth Areas*	Census 4/1/80	Forecast					
		1985	1990	1995	2000	2005**	2010**
Camarillo GA	15,804	19,389	22,144	24,314	27,434	31,454	35,484
Camarillo NGA	1,043	1,043	1,538	1,741	1,973	2,206	2,438
Fillmore GA	3,053	3,129	4,043	4,344	5,043	5,516	6,032
Fillmore NGA	729	740	773	797	820	843	866
Las Posas NGA	356	551	603	666	723	781	828
Moortark GA	2,476	4,361	7,373	9,820	12,221	14,732	17,134
Moortark NGA	257	259	304	322	343	358	377
North Half NGA	323	343	360	380	399	413	437
Oak Park GA	1,073	1,447	4,091	5,593	5,593	5,593	5,593
Oak Park NGA	76	95	110	120	120	140	150
Ojai GA	3,315	3,502	3,797	3,912	4,027	4,127	4,227
Ojai NGA	853	929	966	1,023	1,076	1,135	1,187
Oxnard GA	39,313	42,029	43,980	45,986	48,217	50,381	52,110
Oxnard NGA	1,237	1,293	1,293	1,454	1,509	1,563	1,520
Pismo GA	380	338	323	603	677	751	825
Pismo NGA	64	64	82	91	100	110	113
Port Hueme GA	6,942	7,251	8,201	8,980	9,539	10,333	11,013
Santa Paula GA	7,223	7,645	8,730	9,559	10,377	11,197	12,103
Santa Paula NGA	865	882	934	968	1,002	1,026	1,071
Simi Valley GA	23,534	25,423	31,761	35,873	39,988	44,102	48,215
Simi Valley NGA	447	561	663	774	883	997	1,101
Thousand Oaks GA	31,902	35,019	39,400	43,550	47,900	51,400	55,300
Thousand Oaks NGA	607	653	702	749	796	843	891
Ventura GA	33,311	36,124	38,430	42,357	47,425	50,342	54,249
Ventura NGA	627	674	698	722	744	767	791
Vta. Riv. GA	4,915	5,074	5,467	5,742	6,017	6,292	6,568
Vta. Riv. NGA	575	601	625	649	673	701	725
TOTAL COUNTY	133,334	150,342	171,312	193,905	214,574	232,173	249,143

*See attached map. Growth Areas are generally larger than incorporated areas for cities.
 **To be used for guideline purposes only.

Approved by Board of Supervisors on 5/7/85.

NOTE: Except for 1980, all forecasts are January 1 forecasts.

L76/2

NOTE: Received from Ventura
 County Planning Dept.
 May, 1980

EXHIBIT G
 VENTURA COUNTY
 POPULATION GROWTH AREA

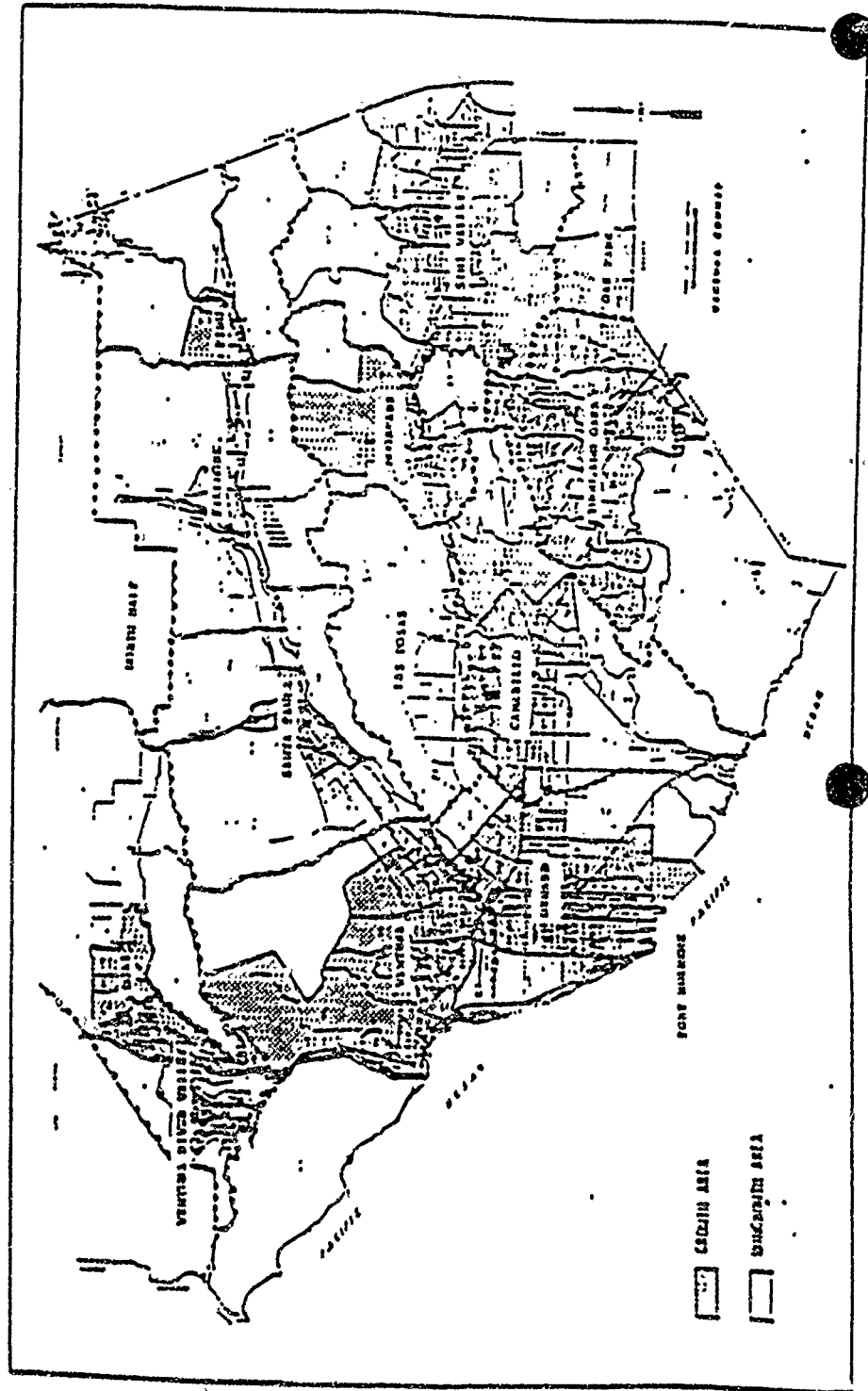


EXHIBIT II
 PEAK HOUR TRAFFIC VOLUMES
 1980

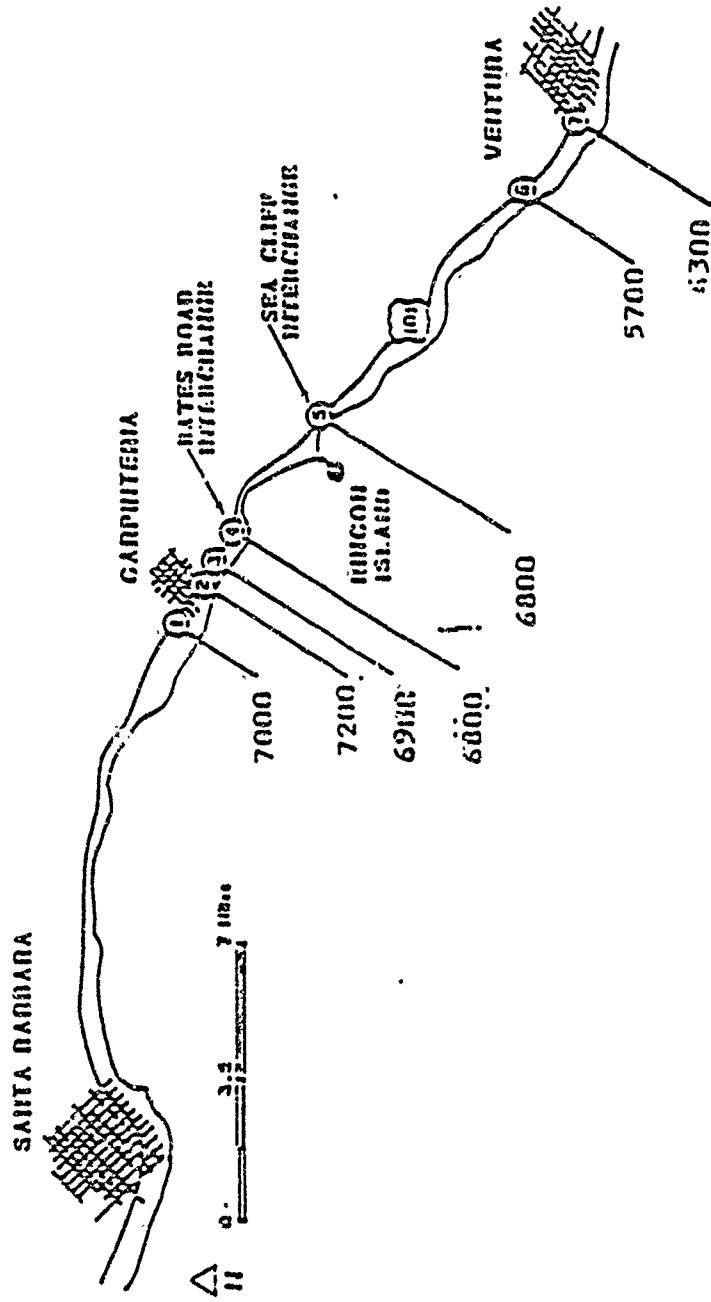


TABLE 9
 SANTA BARBARA COUNTY
 POPULATION, EMPLOYMENT, AND HOUSING FORECASTS

<u>Population:</u>	1990	-	350,900
	1995	-	378,500
	2000	-	404,200
	2005	-	425,000
<u>Housing Units:</u>	1990	-	134,269
	1995	-	144,548
	2000	-	154,187
	2005	-	161,344
<u>Employment:</u>	1988: Labor Force		178,700
	Employment		170,800
	Unemployment Rate		4.4%
	Estimated Employment in 2005		211,000

Source: "Forecast 89"
 Santa Barbara County-Cities
 Area Planning Council, August 1989

TABLE 10
1988 TRAFFIC COUNTS

29

<u>LOCATION</u>	<u>AVERAGE DAILY TRAFFIC PEAK HOUR</u>	<u>TRAFFIC PEAK MONTH</u>
1. Jct Rte. 244 Interchange	7,000	68,000
2. El Rincon Interchange	7,200	70,000
3. Jct. Rte. 150 Interchange	6,900	66,000
4. Bates Road Interchange	6,800	65,000
5. Sea Cliff Interchange	6,800	55,000
6. Solimar Interchange	5,700	55,000
7. Jct. Rte. 33 Interchange	6,300	64,000

** SOURCE: Caltrans Office, Los Angeles
Caltrans Office, San Luis Obispo

CALENDAR PAGE 30238
 MINUTE PAGE 2107

TABLE 8
VENTURA COUNTY
ESTIMATED TOTAL EMPLOYMENT
UNIT - JOBS

AREA	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	2000	2005	2010
Camarillo GA	15,454	16,651	16,841	17,429	17,994	18,564	19,131	19,699	20,121	20,513	20,964	21,384	21,808	21,519	25,442	20,014
Camarillo NGA	1,005	1,017	1,030	1,097	1,164	1,230	1,297	1,364	1,383	1,402	1,421	1,440	1,459	1,474	1,527	1,544
Fillmore GA	2,311	2,310	2,369	2,458	2,547	2,635	2,724	2,813	2,863	2,912	2,962	3,011	3,041	3,137	3,348	3,402
Fillmore NGA	437	442	448	466	484	502	520	538	537	537	536	536	536	550	402	450
Las Posas NGA	811	822	832	845	857	876	882	895	904	913	923	932	941	1,006	1,074	1,139
Moorpark GA	3,050	3,098	3,137	3,430	3,724	4,017	4,311	4,604	4,718	4,892	5,037	5,102	5,326	5,861	4,015	5,039
Moorpark NGA	0	0	0	35	70	104	139	171	212	251	289	328	367	567	772	1,030
Oak Park GA	48	48	49	92	135	177	220	243	315	366	418	459	521	670	812	1,020
Oak Park NGA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ojai GA	3,195	3,225	3,245	3,293	3,324	3,350	3,378	3,404	3,412	3,419	3,425	3,432	3,438	3,467	3,492	3,513
Ojai NGA	148	150	152	155	158	160	163	166	169	172	174	177	180	193	207	221
Oxnard GA	47,332	47,929	48,526	50,311	52,156	53,970	55,785	57,600	59,436	61,272	63,108	64,911	65,780	77,100	89,100	101,447
Oxnard NGA	7,901	8,000	8,100	8,292	8,485	8,677	8,870	9,052	9,955	10,118	10,281	10,445	9,792	10,408	11,351	13,078
Piru GA	191	194	195	207	211	230	242	253	258	263	267	272	277	280	299	308
Piru NGA	130	162	164	170	176	182	188	194	197	201	204	208	211	234	240	245
Port Hueneese GA	12,280	12,415	12,400	12,724	12,818	12,971	13,095	13,219	13,312	13,405	13,499	13,593	13,686	13,919	14,391	14,554
Santa Paula GA	6,531	6,614	6,696	6,827	6,958	7,086	7,219	7,350	7,440	7,530	7,620	7,710	7,800	8,250	8,700	9,015
Santa Paula NGA	411	419	455	462	468	475	481	488	500	512	525	537	549	580	641	681
Simi Valley GA	15,913	16,114	16,315	17,181	18,047	18,912	19,778	20,411	21,172	22,300	23,127	23,955	24,783	30,293	34,809	40,069
Simi Valley NGA	2,609	2,641	2,674	2,731	2,798	2,814	2,903	2,930	3,023	3,084	3,150	3,213	3,274	3,528	3,774	3,944
Thousand Oaks GA	29,821	30,197	30,573	31,712	32,851	33,989	35,128	36,267	37,531	38,795	40,060	41,324	42,508	48,070	54,345	60,267
Thousand Oaks NGA	95	95	97	108	120	131	143	154	165	136	127	118	109	116	123	132
Ventura (Oj) GA	5,466	5,535	5,604	5,619	5,634	5,650	5,665	5,680	5,790	5,900	6,011	6,121	6,231	6,658	7,014	7,252
Ventura (Po) GA	29,287	29,657	30,026	30,374	30,723	31,071	31,420	31,768	32,553	33,338	34,122	34,907	35,492	40,227	43,354	46,785
Ventura (SP) GA	12,038	12,190	12,342	12,861	13,380	13,898	14,417	14,936	15,803	16,670	17,538	18,405	19,272	23,594	28,171	32,291
Ventura (Oj) NGA	51	51	52	52	53	53	54	54	54	55	55	56	56	70	73	80
Ventura (Po) NGA	419	425	430	436	442	449	455	461	467	473	480	486	492	522	551	584
Ventura (SP) NGA	0	0	0	0	1	1	2	2	2	3	3	4	4	5	7	10
Ventura River GA	1,185	1,200	1,215	1,252	1,289	1,326	1,363	1,400	1,436	1,472	1,508	1,544	1,500	1,762	1,963	2,090
Ventura River NGA	62	63	64	64	64	64	64	64	64	66	65	65	65	83	85	92
North Half	110	112	113	115	118	120	123	125	127	129	132	134	136	156	173	200

Ojai Vty Airshd	10,097	10,224	10,352	10,435	10,519	10,603	10,687	10,770	10,925	11,082	11,238	11,395	11,550	12,233	12,834	13,256
Oxnard Pln Airshd	189,148	191,534	193,920	200,278	206,639	212,989	219,350	225,707	233,177	239,918	246,651	253,405	259,329	295,439	329,791	366,365
ADMP Plng Area	199,245	201,758	204,272	210,713	217,158	223,592	230,037	236,477	244,102	251,000	257,899	264,800	270,879	307,672	342,625	379,621
COUNTY TOTAL	199,355	201,870	204,385	210,828	217,276	223,712	230,160	236,602	244,229	251,129	258,031	264,934	271,015	307,828	342,798	379,821

NOTE: Received from Ventura County Planning Dept. May 31, 1990

H. LAND USE

Rincon Island was built specifically for the purpose of petroleum production. The proposed project would therefore be consistent with this existing, approved land use. The proposed project would also be compatible with the land uses near the Bush Oil Company yard which include other petroleum production operations. The production lifetime of 10 years following project work is not expected to significantly affect future land use options at the project location.

I. NATURAL RESOURCES

The project is expected to yield approximately 4.1 million barrels of oil and 818 million cubic feet of natural gas as shown in Table 1 and discussed in paragraph 2. The diesel powered workover rig will use fuel during the project.

J. RISK OF UPSET

Although very unlikely, the possibility of an accidental release of drilling mud or crude oil exists. The quantity of mud that could be released would be the amount contained within the well bore of approximately 100-150 barrels. The amount of crude oil that could be released would depend on the nature of the accident; however, all the project workover wells are non-free-flowing wells. The probability of an oil spill is therefore very low. The measures used to mitigate an accidental release of mud or oil are described in Section 7.

K. POPULATION AND HOUSING

Population centers in Ventura County include the cities of Oxnard, Ventura, and Port Hueneme. Ventura and Port Hueneme serve as major offshore and onshore petroleum industry centers. Port Hueneme functions as the principal supply port for offshore Santa Barbara and Ventura counties. Petroleum-related services in Ventura include oil field maintenance, oil well completion and pumping equipment, and oil well servicing. Exploration and production offices of several major oil companies are also located in Ventura. Oxnard, because of its substantial population base, provides a labor pool for petroleum-related industries in Ventura County.

Principal population centers in Santa Barbara County include the cities of Carpinteria, Guadalupe, Lompoc, Santa Barbara, and Santa Maria and the unincorporated Goleta Valley. Within the southern portion of Santa Barbara County, several oil companies, including Chevron, have had increased activities due to the construction of offshore platforms and onshore processing and terminal facilities. In northern Santa Barbara County, particularly near

Santa Maria, several companies operate oil field servicing and maintenance services for onshore petroleum production operations; little or none of their activity is related to offshore development.

Population, housing, and employment estimates for Ventura County vary considerably among various sources. Table 5 provides Ventura County Population and Housing Estimates dated January 1, 1990, from the California Department of Finance Demographic Research Unit. This source estimates total Ventura County housing units as 184, 227. Tables 6 and 7 provide population and dwelling unit forecasts as approved by the County Board of Supervisors in 1985 and provided by the County Planning Department in May 1990. Exhibit G, provided by the County Planning Department, illustrates growth and nongrowth areas within Ventura County. The Bush project is in a nongrowth area.

Table 8 provides estimates and forecasts of total employment in Ventura County. The total number of jobs is estimated as 236,602 for 1990. Unemployment among the labor force has been estimated roughly as 5 to 7 percent.

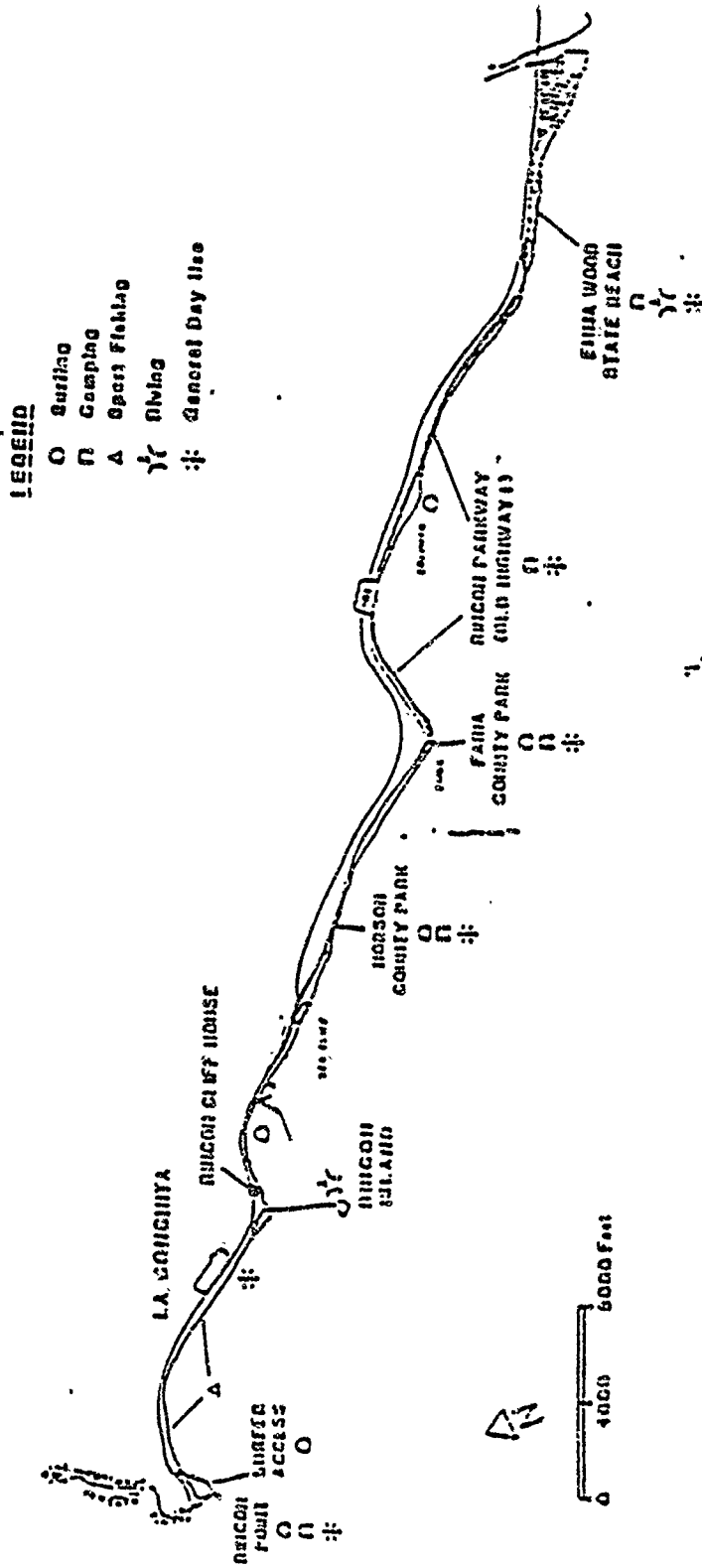
Table 9 provides forecasts of population, housing, and employment in Santa Barbara County (Santa Barbara County-Cities Area Planning Council, August, 1989). This document, Forecast 89, shows a 1990 Santa Barbara County population of 350,900.

In contrast a recent Environmental Report for OCS lease P-0525, about 10 miles south of the project area, shows population projections for Ventura and Santa Barbara Counties as follows (Dames and Moore February 1988):

<u>YEAR</u>	<u>SANTA BARBARA CO.</u>	<u>VENTURA CO.</u>
1990	339,700	682,400
1995	358,300	762,500
2000	373,800	838,500

During the proposed project approximately 5 workers would be involved in daily activities. This work force would come from the Ventura-Ojai area or the Santa Barbara area. Because of the small size and local nature of the work force, implementation of the proposed project would not result in any population changes, nor would it affect housing demand in the region. The production following the project work would involve existing work forces; no new permanent jobs would be produced, and housing demand would not be affected.

EXHIBIT I
RECREATIONAL AREAS



L. TRANSPORTATION CIRCULATION

U.S. Highway 101 1988 traffic volumes are presented in Table 10 for the project area. The annual average daily traffic is the total traffic volume for the year divided by 365 days. The peak month average daily traffic volume is the average daily traffic for the month of heaviest flow. Locations of the interchanges where the traffic volumes were measured are shown on Exhibit H.

The remedial and workover program would involve about two truck trips per week and 3 commuter vehicle trips per day. Access to the Bush Oil Company yard would be via the Seacliff offramp and the old Rincon Highway (Highway 1). All vehicles would use the trestle causeway from U.S. Highway 101 and Punta Gorda for access to or exit from Rincon Island. The maximum traffic generated would represent less than 0.05 percent of the existing 1988 daily traffic for a period of one year. The additional traffic generated during the proposed project would not have a significant impact on the existing transportation system. Since only the existing work force would be involved in production following workover, traffic levels in the area would not be increased, and the existing transportation system would not be affected. Measures to further reduce impact on the existing transportation system are described in Section 7.

M. PUBLIC SERVICES AND UTILITIES

Fresh water would be needed for personnel use only; this water would be supplied via the existing municipal water system. The existing fire water systems would be used to provide sea water for cementing operations, and produced water would be used for mud make up.

The existing sanitation systems would be used during all phases of the proposed project. There would be a negligible increase in the level of electrical power requirements.

Approximately 700 cubic yards of cuttings and waste mud would be generated during the entire workover project. These wastes would be disposed of at an approved Class II-I or Class I dumpsite as a non-hazardous waste.

The work force during the project would be small and local in nature, and the enhanced production following workover would involve only the existing work forces. Existing facilities would provide sanitation, fresh water, mud make up water, and other requirements. Therefore, it is anticipated that no significant new demand for public services (e.g., fire and police protection, schools) or utilities would occur as a result of the proposed project.

N. ENERGY

During the workover project, fuel would be required for the 350 horsepower diesel workover rig and for the mudpump as well as some small increase in electricity for night lighting.

Since no new facilities would be constructed, no significant increase in energy use would occur. Because of the limited scope of the proposed project, substantial use of fuel or energy would not be required. The proposed project would not substantially increase demand on existing energy sources, nor would it require the development of new energy sources.

O. HUMAN HEALTH

In dealing with crude oil and gas, the potential always exists for releases, spill, and fires. The potential for such accidents from this proposed workover project is very low because all the wells are no-free-flowing wells. Thus, the possibilities of a blowout is almost non-existent. During the 17-year period from 1971 to 1987, there were only 20 blowouts during workover operations on federal offshore wells and only two of these resulted in the release of oil, one for 200 bbls and one for 64 bbls (MMS, 1989). A spill from a well, pipeline, or tank would be contained on the island. A spill in the well area should be contained by the well bay which can contain up to 2400 bbls. All except one of the tanks on the island are located in a 4800 bbl containment area that can contain the contents of the largest tank, which is 1500 bbl. There is a 2000 bbl produced water tank outside the tank area. A spill from this tank would drain to the well bay. In addition, the sides of the Island are generally elevated at least 10 feet above the level of the production facilities area. Where the Island opens toward the trestle, the ground surface slopes down to the production facilities area. Consequently, if an oil spill occurred that exceeded the capacity of individual containment structures, the Island itself would serve as a further containment structure. The Island (not counting the well bay area and tank area) can contain at least another 10,000 bbls. A spill contained on the island would not pose a hazard to human health.

Although it would be difficult to ignite any spilled oil on the island, it is possible. As a worst case fire, it was assumed that a spill occurs that covers the entire floor of the Island and then ignites. The Port of Los Angeles Hazard Footprint Calculation Program (Reese-Chambers Systems Consultants, 1990) was used to calculate the radiant heat hazard footprint from such a fire. The distance to 1600 Btu/sq ft/hr was determined to be 550 feet from the edge of the Island. People located outside this distance should be safe from such a fire. Thus, such a fire would not pose a hazard to members of the

public on shore.

The gas produced on the island contains extremely low levels of H₂S and is thus classified as sweet gas. Such gas does not pose a toxic inhalation threat.

Thus, an accident on the Island should not pose a hazard to members of the public.

P. AESTHETICS

The project workover rig and other facilities would be situated within the depressed interior of Rincon Island and therefore partially hidden from view. Further visual screening would be provided by palm trees. The work on the Bush Oil Company Yard would appear to be similar to existing operations. Operation of the 98 foot high mobile workover rig, the mud tanks, and other facilities would cause a slight, temporary change in the visual environment of Rincon Island. Activities visible from shore during the workovers would appear similar to periodic maintenance operations which presently occur on the island. Given the temporary nature of the project and the visual similarity to present operations, no significant visual impact on offsite viewers is anticipated.

Q. RECREATION

Recreational areas in the vicinity of Rincon Island are shown on Exhibit I. Recreational activities include surfing, camping, sport fishing, diving, and general beach day use. The project is not expected to: (1) significantly increase the existing traffic conditions, (2) significantly decrease the offsite visual character of the Island, (3) significantly contribute to an increase in ambient noise levels, nor 4) import a significant number of new workers that would be using the available recreational facilities. Therefore, the proposed project is not expected to have a significant impact on existing recreation use in the area. The production operations following the project would require no new personnel, and no new equipment would be constructed. Therefore, no changes from existing conditions would be anticipated, and no impact is expected on existing recreational use in the area. Due to the separation of the project facilities from existing recreation facilities, it is not expected that recreation activities would have a significant impact on the project activities.

R. ARCHAEOLOGICAL AND HISTORICAL EFFECTS

No archaeological or historical resources are expected to be present in the project area. Therefore, no effects on such resources are anticipated during the project or during enhanced production following the project.

6. ANY ADVERSE EFFECTS THAT CANNOT BE AVOIDED IF THE PROPOSED PROJECT IS IMPLEMENTED

Potential environmental impacts of the proposed project are discussed in Section 5. These impacts would be localized, temporary, and of minor significance. Therefore, it is expected that no unavoidable significant adverse environmental impacts would result from implementation of the proposed project.

7. MITIGATING MEASURES WHICH HAVE BEEN INCORPORATED IN THE PROJECT

Where appropriate, mitigation measures are proposed to further reduce environmental impacts. The measures suggested for each environmental category are presented below:

A. EARTH

Bush would comply with applicable State Lands Commission, the California Division of Oil and Gas, and other appropriate regulations and requirements pertaining to well workovers, casing blowout prevention, and completion in order to minimize the potential for significant environmental impacts due to ground motion, fault rupture, subsidence and tsunamis.

B. AIR

No mitigation measures are proposed.

C. WATER

i. Bush will comply with all rules and regulations pertaining to the prevention of degradation of water quality. By implementing casing and cementing operations, it is expected that no fluids would be lost to either ground or surface waters. Should an accidental leak or spill occur, the mitigation measures included in the project design and Bush's Oil Spill Contingency Plan would prevent or minimize contamination of ocean or ground water.

ii. Cuttings and mud wastes would be disposed of at an approved Class II-1 or Class I dumpsite as a non-hazardous waste in accordance with appropriate regulatory requirements. No ocean discharge of muds or cuttings would be conducted.

D. PLANT LIFE

No mitigation measures are proposed.

B. ANIMAL LIFE

No mitigation measures are proposed.

F. NOISE

No mitigation measures are proposed.

G. LIGHTING AND GLARE

The illumination of the workover activities at night will be limited by appropriate shielding and directing techniques to reduce reflection and glare.

H. LAND USE

No mitigation measures are proposed.

I. NATURAL RESOURCES

No mitigation measures are proposed.

J. RISK OF UPSET

- i. The project operation would employ state-of-the-art blowout prevention technology and mud monitoring equipment.
- ii. All supervisory personnel will be blowout and well control certified.
- iii. The well bay on Rincon Island can contain 2400 barrels of fluid, mud, or oil.
- iv. Design of the Island is such that spilled mud drains into the well bay trough. There are cellars on either end of this trough from which the mud can be pumped to a steel separation tank to separate out any oily wastes. This mud can then be transferred to a vacuum truck for disposal at an approved dumpsite. Berms around the active areas of the Island would help contain any runoff.

- v. The well bay can contain 2400 bbl of fluid. The tank area is surrounded by a 10 foot high wall which can contain 4800 bbl of liquid. The floor of the island is generally 10 feet or more below the sides of the Island except along the wharf area. The road does slope down from the wharf toward the floor of the island. The island itself can contain at least another 10,000 bbl of oil over and above that of the well bay area.

Because the wells are non-free flowing, spills from blowouts are not expected (see discussion under "O - Human Health"). A spill from the largest tank within the tank area (1500 bbl) would easily be contained in the surrounding containment area. A spill from the 2000 bbl tank outside the tank containment area would flow to the well bay area.

The only other type of spill possible would be from a pipeline leak or rupture. The largest line is a four inch diameter line that collects the oil from the individual lines from the wells. This line is equipped with automatic shutdowns. The entire line all the way to shore only contains less than 50 bbl of oil. The production rate would be less than 2000 bbl/day and hence a spill that would go undetected for an hour would only result in an 83 bbl spill, plus possibly the contents within the pipeline.

- vi. Bush has an Oil Spill Contingency Plan on file with the State Lands Commission which addresses specific spill control measures for Rincon Island. This plan would be implemented in the event of a spill. Bush is a member of Clean Seas, Inc.

K. POPULATION AND HOUSING

No mitigation measures are proposed.

L. TRANSPORTATION/CIRCULATION

- i. In order to reduce the impact to the existing transportation system, left hand turns across Highway 101 traffic would not be performed during the project. All vehicles requiring to go north after exiting Rincon Island would make a right turn onto U. S. Highway 101 and drive south, exiting at the Seacliff Interchange, located about 1-1/2 miles south of Rincon Island. The vehicles would then cross U. S. 101 and enter it via the northbound Seacliff onramp. All vehicles approaching Rincon Island from the south would exit U. S. 101 at the Bates Road interchange, located about 2.5 miles north of Rincon Island. The vehicles would then cross U. S. 101 and enter it via the southbound

Bates onramp. Rincon Island may then be entered by a right turn off of U. S. 101. The interchanges discussed above are shown on Exhibit H.

- ii. Bush Oil Company workers usually carpool. Bush will require continuation of this practice and will shuttle workers from Bush's Rincon Field office to Rincon Island to minimize traffic on the Rincon Island causeway.

M. PUBLIC SERVICE UTILITIES

No mitigation measures are proposed.

N. ENERGY

No mitigation measures are proposed.

O. HUMAN HEALTH

No mitigation measures are proposed.

P. AESTHETICS

No mitigation measures are proposed.

Q. RECREATION

No mitigation measures are proposed.

R. ARCHAEOLOGICAL/HISTORICAL

No mitigation measures are proposed.

8. ORGANIZATIONS CONTACTED

Bush Oil Company, California District
State Lands Commission
Ventura County Air Pollution Control District
State of California, Department of Transportation
Ventura County Planning Department

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EXHIBIT "C"

BUSH OIL WORKOVER PROJECT

MITIGATION MONITORING AND REPORTING PLAN
(Section 21081.6, ERC)

Section 1

INTRODUCTION

This plan has been developed in conformance with the requirements of Section 21081.6 of the Public Resources Code and shall be known as the Mitigation Monitoring Plan (Plan) for the Bush Oil Workover Project which entails the workover of 21 existing oil and gas wells on Rincon Island and one at 5750 Pacific Coast Highway.

Section 2 provides a brief summary of the project. Section 3 describes each impact to be mitigated, each mitigation measure, and the monitoring requirements and scheduling of each implementation measure.

IMPLEMENTATION

Responsibilities

Bush Oil Company (the Applicant), its representative(s), or successors-in-interest, remain responsible for full implementation of all mitigation measures adopted within Applicant's project and described in the Negative Declaration.

The California State Lands Commission (SLC), as CEQA Lead Agency, through its Field Inspection units, shall be responsible for the administration of all provisions of this Plan. The Field Inspection units will ensure that complete monitoring reports are generated and that deficiencies or violations are promptly corrected.

Reporting

Verification of Compliance and Non-Compliance Reports shall be prepared by Field Inspectors using standard SLC reporting procedures. Copies of the reports will be transmitted to Bush Oil. Progress toward completion of the required mitigation program, or deficiencies thereof, shall be reported to Bush at SLC prescribed intervals or upon detection of the lack of compliance.

COMPLIANCE

SLC Field Inspectors, as well as Staff engineers and Supervisors, will make monitoring inspections on a regular basis and at critical operation phases to ensure compliance with the Plan. The SLC will acknowledge the successful completion of a mitigation measure after receipt of the Lessee's report and confirmation by SLC Staff.

VIOLATIONS

If a report identifies a violation of the mitigation program, the SLC, immediately upon receipt of the report, shall:

1. notify Bush Oil or its designated representative by telephone and order immediate compliance;
2. prepare written notification to Bush Oil of the violation ordering compliance, and;
3. identify the need for a follow-up field inspection

If compliance is not achieved, SLC Field Inspectors may order that work be stopped until compliance is achieved and notification is given by the SLC that work may resume. The period of time of the stop-work-order will be that time required to assure compliance has been achieved. Work on the project may not be resumed until compliance is achieved.

Violations of an approved mitigation measure which are not discovered until after Project Completion will result in one or more of the following actions affecting Bush Oil:

1. written notification and demand by the SLC for correction,
2. issuance of an infraction citation;
3. filing for legal action,
4. cancellation of lease and action for indemnification for damages from breach or non-compliance with lease terms

and provisions.

If a dispute arises concerning the implementation or success of a mitigation, the dispute may be referred to the Executive Officer and, if unresolved, to the Commission for legal action. In such a case, work on the project will be stopped until the dispute is resolved.

Failure to comply with all adopted mitigation measures will constitute a breach of the lease.

FEES

Direct costs for mitigation measure implementation shall be paid by Bush Oil.

Section 2

PROJECT DESCRIPTION

Bush Oil Company, lessee of State Oil and Gas Leases PRC 1466 and PRC 410, is planning a project to enhance production of oil and gas from the "A" sand reservoirs in the offshore Rincon area. The enhancement is planned by sidetracking and deepening 22 existing wells into the AH to AZ sands. The location of the project in the area offshore Punta Gorda in Ventura County is shown in Exhibit A.

The plan provides for sidetracking and deepening twenty-two specific wells. Twenty-one of the specific wells planned for deepening are located in Lease PRC 1466 on Rincon Island, which was constructed in 1958 and is located at the end of a 3000 foot long trestle extending southward from shore at Punta Gorda. Sidetracking and deepening of these wells into the AS sand are planned.

One of the specific wells is planned for sidetracking and deepening into Lease PRC 410 about one mile east of Rincon Island. Access to lease PRC 410 is made through an existing well on the Bush Oil Company property at 5750 West Pacific Coast Highway located north of Highway 101 and south of the old Rincon Highway between the Fire Station at the Seacliff off ramp and the underpass to the Mobil Piers. The well in Lease PRC 410 is planned for deepening into the AZ sands.

The general extent of redrilling will vary from about 1600 feet to 3200 feet reaching a maximum depth of about 4800 feet.

Section 3

PROJECT IMPACTS AND INCORPORATED MITIGATION

1. Impact: Discharge of muds or cuttings

Project Modification: No ocean discharge of muds or cuttings will occur.

Cuttings and mud wastes will be disposed at an approved Class II-I or Class I dumpsite as a non-hazardous waste in accordance with appropriate regulatory requirements.

Monitoring: All State oil and gas leases contain conditions establishing lease activity control, reporting and inspection mechanisms. The State Lands Commission has field inspection and monitoring staff to monitor and enforce the lease provisions and other SLC rules and regulations. The SLC inspectors will review and verify receipt slips for wastes disposed of at appropriate disposal sites.

2. Impact: During the night operations, lighting will be necessary around the well pads. The nearest light sensitive receptors would be the residences and hotel located at Punta Gorda at least 3,000 feet from the project site.

Project Modification: The illumination of the workover activities at night will be limited by appropriate shielding and directing techniques to reduce reflection and glare.

Monitoring: SLC inspectors will verify the placement of appropriate light shielding and placement.

3. Impact: Potential impact to existing transportation system on Highway 101.

Project Modification: In order to reduce the impact to the existing transportation system, left hand turns across Highway 101 traffic will not occur during the project. Contractor vehicles requiring to go north after exiting Rincon Island will make a right turn onto U. S. Highway 101 and drive south, exiting at the Seacliff Interchange, located about 1-1/2 miles south of Rincon Island. The vehicles will then cross U. S. Highway 101 and enter it via the northbound Seacliff onramp. All vehicles approaching Rincon Island from the south will exit U. S. 101 at the Bates Road interchange, located about 2.5 miles north of Rincon Island. The vehicles will then cross U. S. 101 and enter it via the southbound Bates onramp. Rincon Island may then be entered by a right turn off of U. S. 101.

As an additional measure to control traffic on Highway 101, Bush Oil Company workers usually carpool, and Bush will require continuation of this practice and will shuttle workers

from Bush's Rincon Field to Rincon Island to minimize traffic on the Rincon Island causeway.

Monitoring: A SLC inspector will monitor traffic flow and shuttling of workers to the work site.

4. Impact: Upset conditions could result in an accidental release or drilling mud or crude oil.

Project Modification: The following measures have been incorporated into the Bush project to minimize effects of upset conditions.

- a. The project operation would employ state-of-the-art blowout prevention technology and mud monitoring equipment.
- b. All supervisory personnel will be blowout and well control certified.
- c. The well bay on Rincon Island can contain 2400 barrels of fluid, mud, or oil.
- d. Design of the Island is such that spilled mud drains into the well bay trough. There are cellars on either end of this trough from which the mud can be pumped to a steel separation tank to separate out any oily wastes. This mud can then be transferred to a vacuum truck for disposal at an approved dumpsite. Berms around the active areas of the Island would help contain any runoff.
- e. The well bay can contain 2400 bbl. of fluid. The tank area is surrounded by a 10 foot high wall which can contain 4800 bbl. of liquid, the floor of the island is generally 10 feet or more below the sides of the Island except along the wharf area. The road does slope down from the wharf toward the floor of the island. The island itself can contain at least another 10,000 bbl of oil over and above that of the well bay area.

Because the wells are non-free flowing, spills from blowouts are not expected. A spill from the largest tank within the tank area (1500 bbl) would easily be contained in the surrounding containment area. A spill from the 2000 bbl tank outside the tank containment area would flow to the well bay area.

The only other type of spill possible would be from

a pipeline leak or rupture. The largest line is a four inch diameter line that collects the oil from the individual lines from the wells. This line is equipped with automatic shutdowns. The entire line all the way to shore only contains less than 50 bbl of oil. The production rate would be less than 2000 bbl/day and hence a spill that would go undetected for an hour would only result in an 83 bbl spill, plus possibly the contents within the pipeline.

Monitoring: Bush Oil has filed with the State Lands Commission, an Oil Spill Contingency Plan which addresses specific spill control measures for Rincon Island. This plan will be implemented in the event of a spill. Bush is also a member of Clean Seas, Inc.

SLC inspectors will ensure that such Plan is implemented as provided in the event of an upset condition at Rincon Island.