MINUTE ITEM
38

9/23/82
W 40155
Graber

AWARD OF NEGOTIATED
OIL AND GAS AGREEMENT

Calendar Item 38 attached was pulled from the agenda prior to the meeting.

Attachment: Calendar Item 38

CALENDAR PAGE
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CALENDAR ITEM

9/23/82
W 40155
Graber
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38

AWARD OF A NEGOTIATED OIL AND GAS AGREEMENT

APPLICANT: Shell Oil Company
200 N. Dairy Ashford
P. O. Box 527
Houston, Texas 7700

AREA, TYPE LAND AND LOCATION:
7,540± acres of tide and submerged lands under the beds of Montezuma Slough and Roaring River, and certain proprietary lands in the Grizzly Island Wildlife Management Area, Solano County, California. For the purpose of this lease only, the Grizzly Island parcel shall be deemed to contain 7,115 acres; Montezuma Slough 345 acres; and Roaring River Slough 80 acres.

AB 884: N/A.

PERTINENT INFORMATION:

1. P.R.C. Section 6815(b) provides that the Commission may negotiate and enter into leases for compensation to the State for the development of State-owned lands where it appears that wells drilled upon private or public lands are draining or may drain oil or gas from lands owned by the State or where the competitive bid provisions of P.R.C. Section 6827 are impracticable. The State owns a 50 percent mineral interest in the uplands subject parcel (7,115 acres), and 100 percent interest in Montezuma Slough and Roaring River (425 acres).

A 4

S 4

(Revisd 9/16/82)

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The Attorney General's Office and Commission staff have considered the applicability of this statute and the Legislature's intent in leasing State lands and have concluded that a lease can be negotiated because of the lack of available drillsites on the State lands other than those already held by the applicant for development of the other 50 percent mineral interests in the Grizzly Island Wildlife Management Area.

2. Under the proposed negotiated oil and gas lease, the applicant agrees to pay to the State annually the sum of (a) $25 per net acre of leased lands (b) 30 percent flat rate royalty and (c) a 5 percent pass-through royalty on all oil and gas produced from non-State-owned lands as specified in the lease on file in the office of the State Lands Commission. Royalties will be calculated and paid on the basis of the percentage of the State's interest in each parcel.

ENVIRONMENTAL IMPACT:

The State Lands Commission staff, in accordance with 2 Cal. Adm. Code, Div. 3, Chapter 1, Article 10, has conducted an Initial Study and has concluded that the project will not have a significant effect on the environment. Therefore, a Negative Declaration was prepared and filed with the State Clearinghouse.

This project is situated on Grizzly Island Wildlife Refuge bounded by Montezuma Slough on the north and east and Roaring River to the south and west. The beds of Montezuma Slough and Roaring River are included in the lease area. This project is situated on lands identified as Class 3 (PRC 6370.1), limited use and possessing environmental values. This project has been determined to be compatible with the provisions of 2 Cal. Adm. Code, Div. 3, Chapter 1, Article

CALENDAR ITEM NO. 38 (CONTD)

EXHIBITS:
A. Site Map.
B. Lease Area Map.
C. Land Description.
D. Negative Declaration.

IT IS RECOMMENDED THAT THE COMMISSION:

1. DETERMINE THAT AN EIR HAS NOT BEEN PREPARED FOR THIS PROJECT AND CERTIFY THAT A NEGATIVE DECLARATION (EIR NO. 315) HAS BEEN COMPLETED IN COMPLIANCE WITH CEQA OF 1970, AS AMENDED AND THE STATE GUIDELINES, THAT THE PROJECT WILL HAVE NO SIGNIFICANT EFFECT ON THE ENVIRONMENT, AND THAT THE COMMISSION HAS REVIEWED AND CONSIDERED THE INFORMATION THEREIN.

2. FIND THAT IN ACCORDANCE WITH P.R.C. SECTION 6818, THE DIRECTOR OF PARKS AND RECREATION WAS NOTIFIED OF THE PROPOSED LEASE AND HAS DETERMINED THE PROJECT WILL NOT INTERFERE WITH RECREATIONAL USE OF THE LITTORAL LANDS.

3. FIND THAT GRANTING OF THE LEASE WILL HAVE NO SIGNIFICANT EFFECT UPON THE ENVIRONMENTAL CHARACTERISTICS IDENTIFIED PURSUANT TO P.R.C. SECTION 6370.1.

4. FIND THAT IN ACCORDANCE WITH P.R.C. SECTION 6815(b) THE COMPETITIVE BIDDING PROVISIONS OF SECTION 6827 ARE IMPRACTICAL BECAUSE OF THE LACK OF AVAILABLE DRILLSITES OTHER THAN THOSE HELD BY THE APPLICANT.

5. AUTHORIZE THE ISSUANCE OF A SUBSURFACE OIL AND GAS LEASE ON 7,540 ACRES OF UPLANDS AND TIDE AND SUBMERGED LANDS AND PROPRIETARY LANDS, DESCRIBED IN EXHIBIT "B" ATTACHED AND BY REFERENCE MADE A PART HEREOF, PURSUANT TO DIV. 6 OF THE P.R.C. TO SHELL OIL COMPANY FOR CONSIDERATION OF AN ANNUAL RENTAL OF $25 PER ACRE, 30 PERCENT ROYALTY ON ALL OIL AND GAS PRODUCED FROM STATE-OWNED LANDS AND 5 PERCENT OF THE VALUE OF ALL OIL AND GAS PRODUCED BY WELLS DRILLED THROUGH STATE LANDS AND INTO ADJACENT PRIVATE LANDS WHICH HAVE NOT BEEN INCLUDED IN A POOLING OR UNITIZATION AGREEMENT APPROVED BY THE STATE.

(Revised 9/16/82)

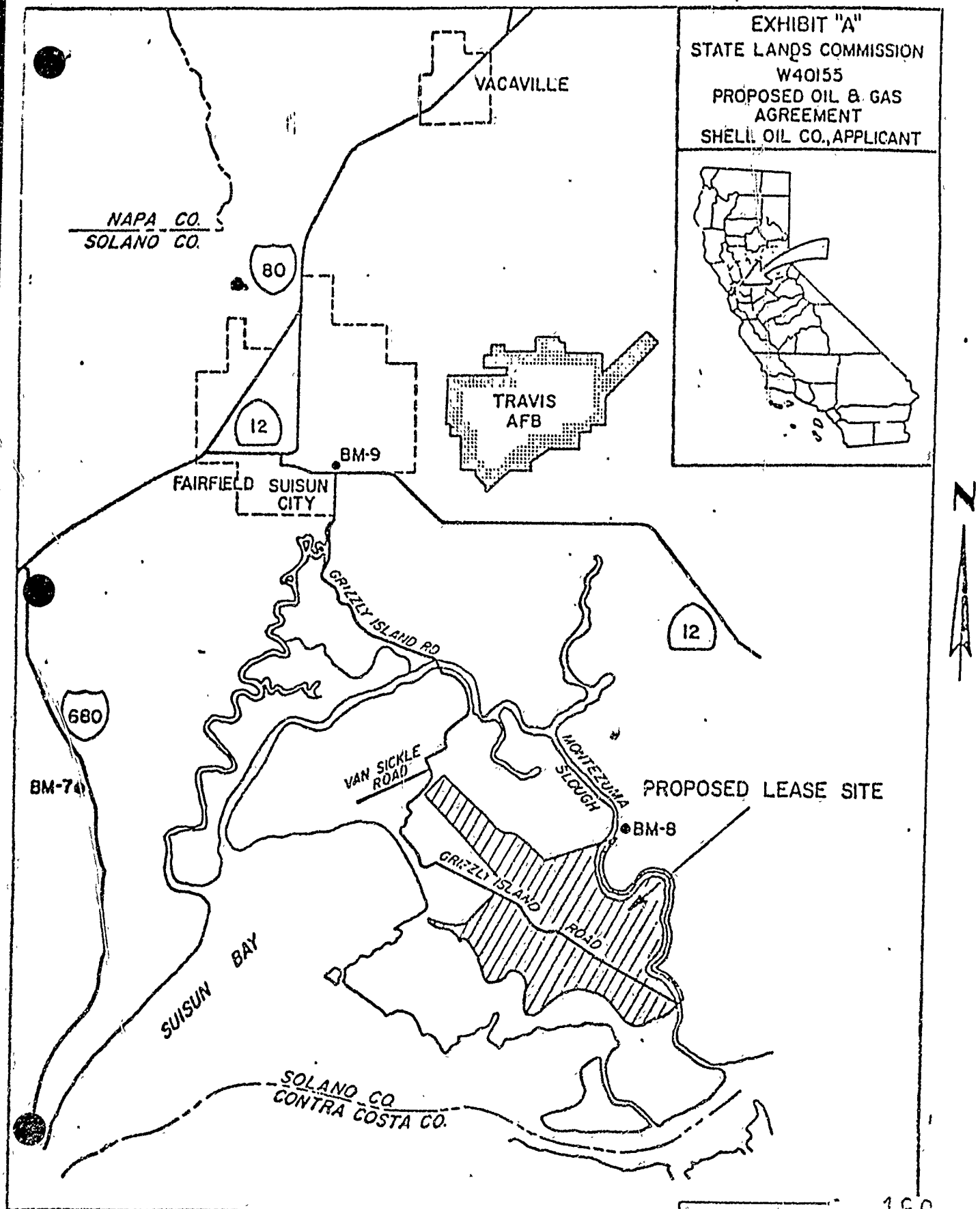
EXHIBIT "A"
STATE LANDS COMMISSION
W40155
PROPOSED OIL & GAS AGREEMENT
SHELL OIL CO., APPLICANT
VACAVILLE
NAPA CO.
SOLANO CO.
80
12
TRAVIS AFB
BM-9
FAIRFIELD
SUISUN CITY
GRIZZLY ISLAND RD
680
BM-7
VAN SICKLE ROAD
MONTEZUMA SLOUGH
PROPOSED LEASE SITE
BM-8
GRIZZLY ISLAND ROAD
SUISUN BAY
SOLANO CO.
CONTRA COSTA CO.
N

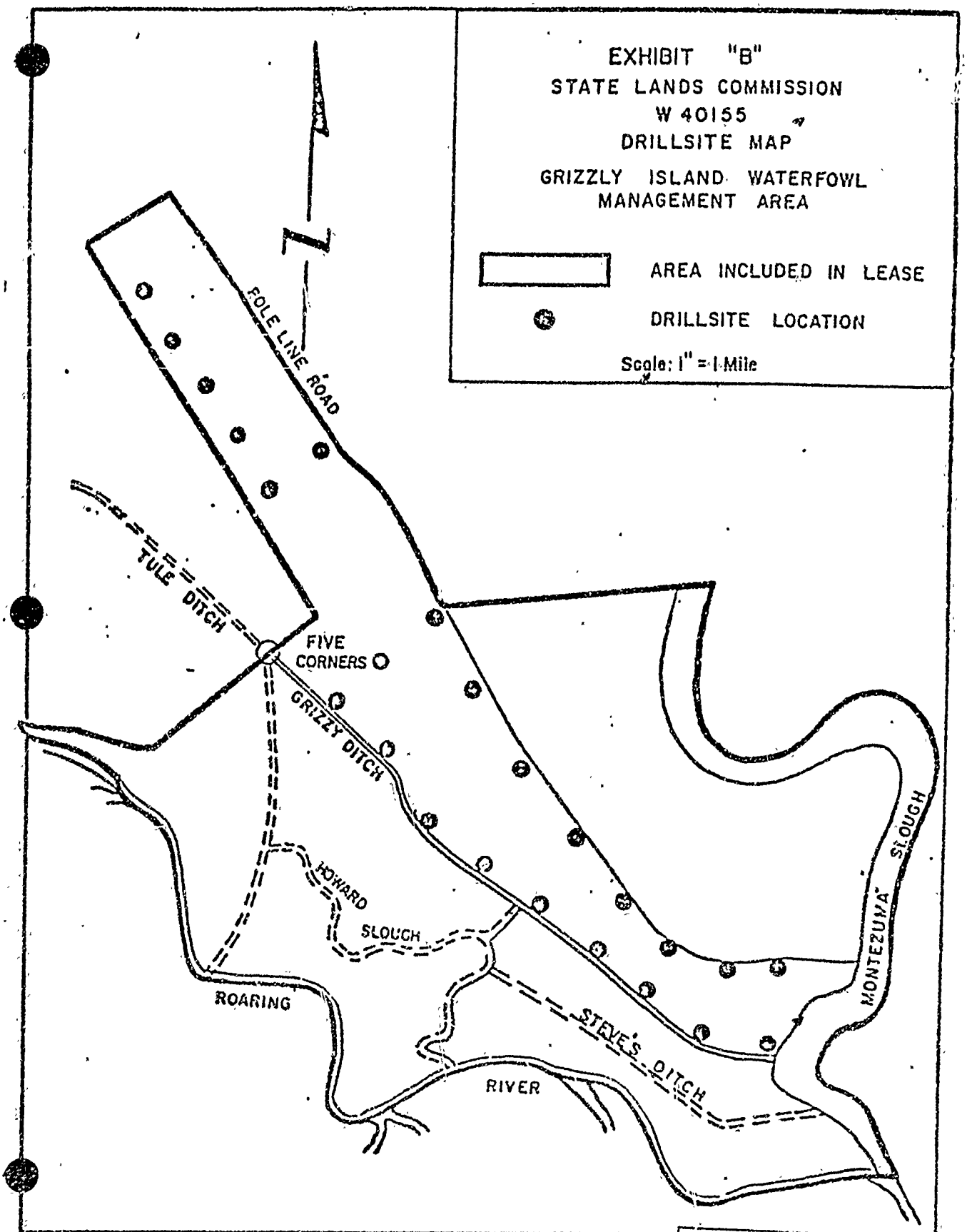

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EXHIBIT "C"
LAND DESCRIPTION

PARCEL 1

BEGINNING at Post I as shown on Map of Survey for J. W. Dutton and F. N. Chaplin, April, 1910, by E. N. Eager, Licensed Surveyor, which map was filed in the office of the County Recorder, September 10, 1910. Said point of beginning is on the easterly boundary of land of Rosemoor Farms Company and is the most southerly corner of land of L. A. Kronigshofer; thence N 71° 45' E 2934.4 feet to Post XIII; thence along the boundary of land of Alice M. Barker and land of John Lawler S 59° 48' E 569.6 feet to Post XIV, S 52° 53' E 861.3 feet to Post XV, S 51° 34' E 800.6 feet to Post XVI, S 45° 02' E 895.0 feet to Post XVII, S 53° 26' E 592.8 feet to Post XVIII, S 46° 30' E 1008.5 feet to Post XIX, S 42° 38' E 805.2 feet to Post XX, S 40° 32' E 1402.5 feet to Post XXI; thence S 36° 11' E 1425.6 feet to Post XXII, S 42° 45' E 337.9 feet to Post XXIII, S 55° 10' E 1026.3 feet to Post XXIV; thence on same course about 33 feet to the middle of Solano Cut; thence along the southwesterly boundary of Chaplin Subdivision on Grizzly Island as shown on map filed August 25, 1911, Solano County Records, to the most southerly corner thereof; thence along the westerly boundary of land of B. B. Company S 22° 02' E 1198.6 feet, S 40° 28' E 2377.3 feet, S 35° E 214.5 feet; S 31° 37' E 736.6 feet, S 32° 35' E 689.7 feet, S 34° 45' E 660.0 feet, S 40° 00' E 238.3 feet, S 49° 30' E 1260.6 feet to the most southerly corner of land of said B. B. Company; thence S 45° E to the ordinary high water mark of Roaring River; thence following the ordinary high water mark of Roaring River westerly to the northerly corner of that certain 85-acre parcel of land hitherto deeded to Sprig Farm Association by J. W. Dutton; thence along the northerly boundary of land of Sprig Farm Association as occupied, S 75° W 792 feet, more or less, N 48° W 1810 feet, more or less, N 78° 45' W 1690 feet, more or less, N 71° 45' W 1376 feet, more or less, N 26° 30' W 191 feet, more or less to the southerly line of Tide Land Location No. 39; thence easterly along southerly line of same and along southerly boundary of B. B. Company 440-acre tract as occupied 4000 feet, more or less, to the southeast corner of southwest quarter of southwest quarter of Section 10, T3N, R1W, MDM; thence N 45° E 6100 feet; thence northwesterly to a point in the centerline of Chaplin Dredger Cut at the southeast corner of lands of Rosemoor Farms and from which point the point of beginning bears N 23° 30' W 1819 feet; thence N 23° 30' W 1819 feet to the point of beginning.

EXCEPTING THEREFROM the portion thereof in Tide Land Survey No. 33 described in Deed from Fontana Farms Company to Fred D. Alexander and wife, dated August 17, 1945, recorded October 2, 1945, in Book 332 of Official Records at page 120 - Instrument No. 10074, Solano County Records, to-wit:

BEGINNING at Post I as shown on Map of Survey for J. W. Dutton and F. W. Chaplin, April 1910, by E. N. Eager, Licensed Surveyor, which map was filed in the office of the County Recorder, Solano County, September 10, 1910. Said point of beginning is on the easterly boundary of land of John Lawler and is the most southerly corner of land of L. A. Kronigshofer; thence N 71° 45' E 2934.4 feet to Post XIII; thence along the boundary of land of Alice M. Barker S 59° 48' E 569.6 feet

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to Post XIV; thence along the centerline of Chaplin Cut produced and the centerline of Chaplin Cut S 48° W 3436.0 feet to the easterly corner of land of John Lawler, aforesaid, thence N 23° 30' W 1819.0 feet along the easterly boundary of said land to the place of beginning, and being a portion of Tide Land Survey No. 33.

PARCEL 2

Being part of Lots 2 and 3 of said Grizzly Island, according to survey and map made by R. H. Stretch in 1871, which map is filed in the office of the County Recorder of the County of Solano, State of California, in Book 41 of Deeds, page 160, being also part of Swamp and Overflowed Land Survey No. 564 in said County of Solano, being more particularly described as follows:

BEGINNING at the most southerly corner of a tract of land heretofore conveyed by said J. Warren Dutton to Emily I. Beman, by deed dated October 1, 1910, and recorded in Book 187 of Deeds, page 89, in the Office of the County Recorder of Solano County, said point of beginning being also the most southerly corner of Lot 5 of Chaplin's Subdivision No. 1, a map of which is filed in the office of the said Recorder of said Solano County, August 25, 1911; thence along the southerly line of a tract of land conveyed by said J. Warren Dutton to Frank H. Howell, by Deed dated October 1, 1910, said line being the middle of a dredger ditch, N 70° 22' E 96.70 chains to the levee along Montezuma Slough; thence along said levee S 8° 34' W 33.54 chains; S 17° 17' E 20.87 chains; thence S 66° 21' W 65.64 chains to a point at public road; thence along the easterly line of said road, N 35° W 3.25 chains; N 40° 28' W 36.02 chains; N 22° 02' W 18.16 chains to the place of beginning.

Also, beginning at the Montezuma Slough, Levee, at the northeasterly corner of said above-described tract, running thence along said levee, S 8° 34' W 33.54 chains; S 17° 17' E 20.87 chains; thence N 66° 21' E 1.50 chains to the ordinary high water mark of Montezuma Slough; thence along the ordinary high water mark on the westerly bank of said slough, northerly about 55 chains to the land of Frank H. Howell; thence S 83° 45' W 5.70 chains to the place of beginning.

PARCEL 3

Situate on Grizzly Island, in Section 12, T3N, R1W, MDM, and in Section 7, T3N, R1E, MDM, and being part of Lot 2 of Grizzly Island, according to survey and map by R. H. Stretch in 1871, which map is filed in the office of the Recorder of Solano County, California, in Book 41 of Deeds at page 160; being also part of Swamp and Overflowed Land Survey No. 564, Solano County.

BEGINNING at that certain post marked "D" and "E" situate on the northeasterly side of that certain public road running westerly and northwesterly from Dutton's Ferry, at Montezuma Slough, near the junction of said road with that certain public road, which leads from said public road to Dutton's old landing on Gray's Island at Suisun Bay; thence N 16° 55' E 38.40 chains to the middle of a small slough; thence along the middle of said small slough, northeasterly about 34 chains, more or less, to a stake on the middle of that certain levee along Montezuma

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Slough, said stake being situate between two flood gates; thence along the middle of said levee N 32° 45' W 1.11 chains to the middle of the northerly one of said two flood gates; thence N 22° 15' W 14.80 chains; N 14° 55' W 7.46 chains to that certain post situate on the said levee, said post being on the line between the tract herein described and the land sold to J. S. Bridenstine; thence S 66° 21' W 65.64 chains to that certain post situate on the northeasterly side of said public road, said post being also on the line between the land herein described and the land sold to J. S. Bridenstine; thence along the northeasterly side of said public road S 31° 37' E 11.16 chains; S 32° 35' E 10.45 chains; S 34° 45' E 12.00 chains; S 40° 00' E 3.61 chains; S 49° 30' E 19.10 chains to the place of beginning.

Also, beginning at said point of said levee between said two flood gates; thence along said levee, N 32° 45' W 1.11 chains to the middle of the northerly of said two flood gates; thence N 22° 15' W 14.80 chains; N 14° 55' W 7.46 chains to that certain post situate on said levee; being the northeast corner of said above-described tract of land; thence N 66° 21' E about 1.50 chains to the ordinary high water mark on the westerly bank of Montezuma Slough; thence along said ordinary high water mark southerly about 23 chains; thence S 40-1/4 W about 1 chain to the point of beginning.

PARCEL 4

BEGINNING at a point on the most Southerly corner of the lands conveyed in the Deed from Edwin H. Crawford et ux to B. B. Company, dated March 29, 1935, recorded April 19, 1935, in Book 140 of Official Records of Solano County, California, at Page 232; thence along the Easterly boundary of said land North 16° 55' East 2534.4 feet to the middle of a small slough; thence down same Easterly about 2310 feet to a point on the ordinary high water mark of the westerly bank of Montezuma Slough; thence along said ordinary high water mark easterly and southerly 23,460 feet, more or less, to the dam across Roaring river; thence along the ordinary high water mark on the northerly bank of Roaring River westerly to a point which bears S 45° E from the point of beginning; thence N 45° W to the point of beginning.

PARCEL 5

A parcel of tide and submerged land in the bed of Roaring River Slough, Solano County, California, described as follows:

1. Bounded on the west by a line extending due north from the north quarter corner of projected Section 16, T3N, R1W, MDM.

2. Bounded on the east by the confluence of said Roaring River Slough with Montezuma Slough in projected Section 20, T3N, R1E, MDM.

3. Bounded northerly and southerly by the ordinary high water marks of said Roaring River Slough.

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EXHIBIT "C"

PARCEL 6

A parcel of tide and submerged land in the bed of Montezuma Slough, Solano County, California, described as follows:

1. Bounded on the north by a line of north latitude having a California Coordinate System Zone 2 coordinate of y = 170,300, said north boundary is located approximately 0.5 mile southwesterly of Meins Landing.

2. Bounded on the south by a line of north latitude at the confluence of Roaring River Slough having a California Coordinate System Zone 2 coordinate of y = 154,600.

3. Bounded on the east and west by the ordinary high water marks of said Montezuma Slough.

END OF DESCRIPTION

REVISED AUGUST 17, 1982 BY BOUNDARY AND TITLE UNIT, LEROY WEED, SUPERVISOR

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STATE OF CALIFORNIA
STATE LANDS COMMISSION

EXECUTIVE OFFICE
1807 - 13th Street
Sacramento, California 95814

EXHIBIT "D"

PROPOSED NEGATIVE DECLARATION

EIR ND 315

File Ref.: W 40155

SCH#: 82032308

Project Title: Grizzly Island Prospect.

Project Location: On Grizzly and Hammond Islands approximately 10 miles southeasterly of the City of Suisun City, Solano County.

Project Description: To explore for and, if commercial quantities are found, to develop new natural gas reserves.

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

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

☒ the project will not have a significant effect on the environment.

☐ the attached mitigation measures will avoid potentially significant effects.

Contact Person: Ted T. Fukushima
1807-13th Street
Sacramento, CA 95814
Telephone: (916)3227813

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Form 13.17 (3/77)

COMMENTS FROM AGENCIES
ON INITIAL STUDY GRIZZLY ISLAND W 40155

COMMENTS FROM DEPARTMENT OF FISH AND GAME
ON PUBLIC HEARING

COMMENTS

Drillpad sizes not to unnecessarily cover execessive marsh area or wetlands. Drilling operations are to be suspended in case of pollution or accident. Drilling to be conducted between June 1 and October 1.

RESPONSE

Drillpad size and production pad construction will follow requirements as specified in the San Francisco Bay Conservation and Development Commission Control Plan and the Suisun Marsh Protection Plan. Drilling operations are to be conducted as specified in the D.O.C. regulations and as referred in the Initial Study "Measures Required to Minimize Impacts". Drilling shall be conducted during the time as specified in the SFBCDC Control Plan (see Initial Study Discussion of Environmental Evaluation Item II.F.1.).

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COMMENTS FROM SUISUN RESOURCE CONSERVATION DISTRICT

COMMENTS

Habitat disturbance to be kept to a minimum, and restoration done whe project is complete. Pollution and accident sources to be controlled to prevent impacts on the marsh. Drilling period confined to summer months. Concern for proper subsidence control.

RESPONSE

Habitat impact is to be kept to a minimum as specified in the SFBCDC Control Plan and the Suisun Marsh Protection Plan. Pollution and accidents are to be controlled as specified in the Initial Study (see "Measures Required to Minimize Impacts"). Drilling period to be conducted as specified in the SFBCDC Marsh Control Plan. Monitoring and control of subsidence will be carried out as discussed in the Initial Study (see Subsidence Monitoring and Control Plan).

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INITIAL STUDY CHECKLIST
Form 13.20 (7/80)

File Ref.: W 40155

I. BACKGROUND INFORMATION

A. Applicant: Shell Oil Company
200 North Dairy Ashford
P. O. Box 527
Houston, TX 77001

B. Checklist Date: 3 / 2 / 82

C. Contact Person: Jacques A. Graber (916) 323-7209

Telephone: ( )

D. Purpose: Oil and Gas Lease

E. Location: Grizzly Island, Solano County

F. Description: To develop natural gas reserves

G. Persons Contacted: This Initial Study and The Initial Study Check List (13.20 - 7/80) have been reviewed and verified by Susan Lennick et al

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?	☐	☐	☒
2. Disruptions, displacements, compaction, or overcovering of the soil?	☒	☐	☐
3. Change in topography or ground surface relief features?	☒	☐	☐
4. The destruction, covering, or modification of any unique geologic or physical features?	☐	☐	☒
5. Any increase in wind or water erosion of soils, either on or off the site?	☐	☐	☒
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?	☐	☐	☒
7. Exposure of all people or property to geologic hazards such as earthquakes, landslides, mudslides, ground failure, or similar hazards?	☐	☐	☒

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	Yes	Maybe	No
B. *Air.* Will the proposal result in:			
1. Substantial air emmissions 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:			
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:			
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:			
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:			
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:			
1. The production of new light or glare?	X		
H. *Land Use.* Will the proposal result in:			
1. A substantial alteration of the present or planned land use of an area?			X
I. *Natural Resources.* Will the proposal result in:			
1. Increase in the rate of use of any natural resources?			X
2. Substantial depletion of any nonrenewable resources?		X	

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	Yes	Maybe	No
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?	☐	☒	☐
2. Possible interference with emergency response plan or an emergency evacuation plan?	☐	☐	☒
K. *Population.* Will the proposal result in:			
1. The alteration, distribution, density, or growth rate of the human population of the area?	☐	☐	☒
L. *Housing.* Will the proposal result in:			
1. Affecting existing housing, or create a demand for additional housing?	☐	☐	☒
M. *Transportation/Circulation.* Will the proposal result in:			
1. Generation of substantial additional vehicular movement?	☐	☒	☐
2. Affecting existing parking facilities, or create a demand for new parking?	☐	☐	☒
3. Substantial impact upon existing transportation systems?	☐	☐	☒
4. Alterations to present patterns of circulation or movement of people and/or goods?	☐	☐	☒
5. Alterations to waterborne, rail, or air traffic?	☐	☐	☒
6. Increase in traffic hazards to motor vehicles, bicyclists, or pedestrians?	☐	☒	☐
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?	☐	☐	☒
2. Police protection?	☐	☐	☒
3. Schools?	☐	☐	☒
4. Parks or other recreational facilities?	☐	☐	☒
5. Maintenance of public facilities, including roads?	☐	☐	☒
6. Other governmental services?	☐	☐	☒
O. *Energy.* Will the proposal result in:			
1. Use of substantial amounts of fuel or energy?	☐	☐	☒
2. Substantial increase in demand upon existing sources of energy, or require the development of new sources?	☐	☐	☒
P. *Utilities.* Will the proposal result in a need for new systems, or substantial alterations to the following utilities:			
1. Power or natural gas?	☐	☒	☐
2. Communication systems?	☐	☐	☒
3. Water?	☐	☐	☒
4. Sewer or septic tanks?	☐	☐	☒
5. Storm water drainage?	☐	☐	☒
6. Solid waste and disposal?	☐	☐	☒
Q. *Human Health.* Will the proposal result in:			
1. Creation of any health hazard or potential health hazard (excluding mental health)?	☐	☐	☒
2. Exposure of people to potential health hazards?	☐	☐	☒
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?	☒	☐	☐
S. *Recreation.* Will the proposal result in:			
1. An impact upon the quality or quantity of existing recreational opportunities?	☐	☐	☐

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	Yes	Maybe	No
T. *Cultural Resources.*			
1. Will the proposal result in the alteration of or the destruction of a prehistoric or historic archeological site?	☐	☐	☒
2. Will the proposal result in adverse physical or aesthetic effects to a prehistoric or historic building, structure, or object?	☐	☐	☒
3. Does the proposal have the potential to cause a physical change which would affect unique ethnic cultural values?	☐	☐	☒
4. Will the proposal restrict existing religious or sacred uses within the potential impact area?	☐	☐	☒
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?	☐	☐	☒
2. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?	☐	☐	☒
3. Does the project have impacts which are individually limited, but cumulatively considerable?	☐	☐	☒
4. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒

III. DISCUSSION OF ENVIRONMENTAL EVALUATION *(See Comments Attached)*

IV. 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: 6 / 30 / 82

For the State Lands Commission

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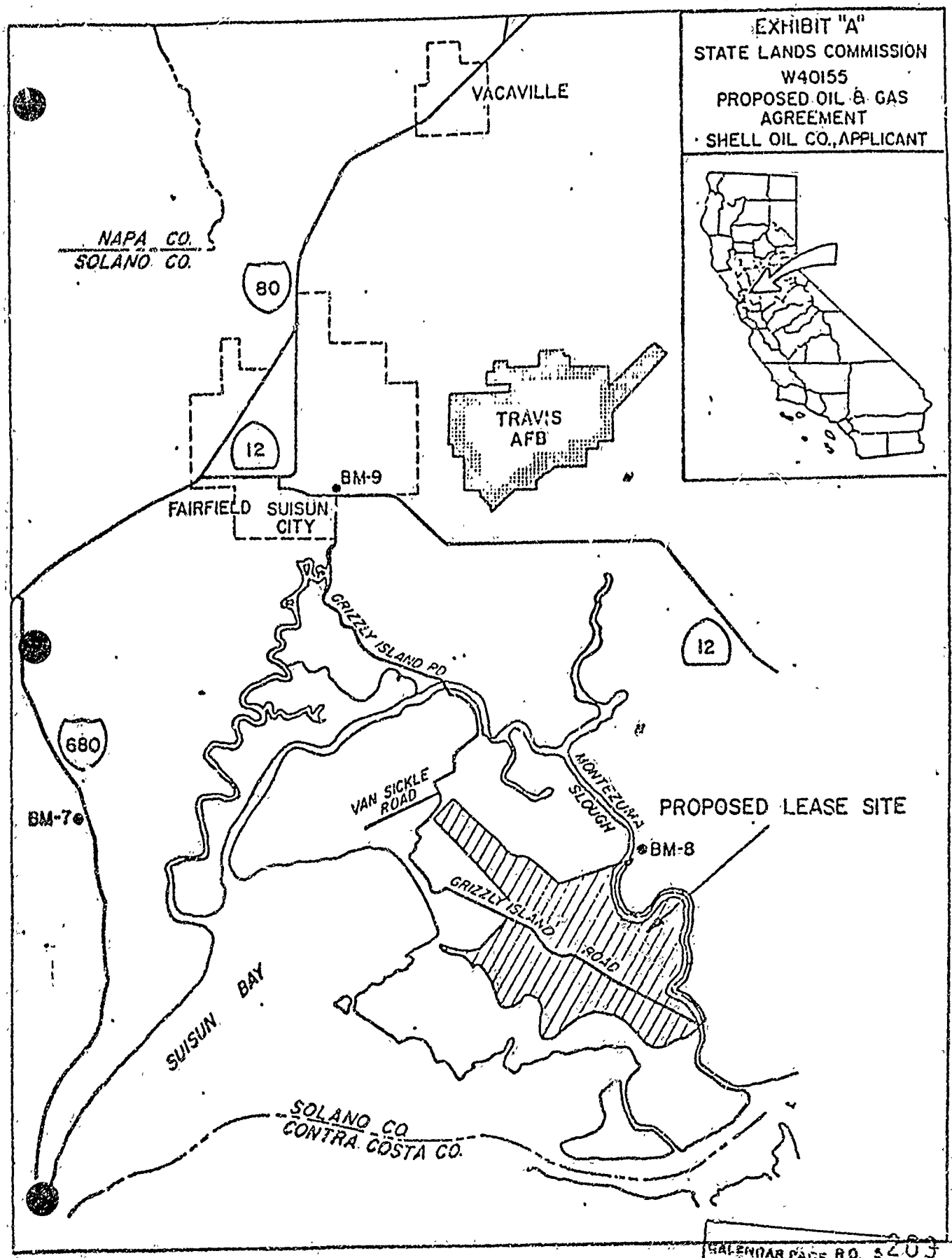
Form 1[illegible] (7/80)



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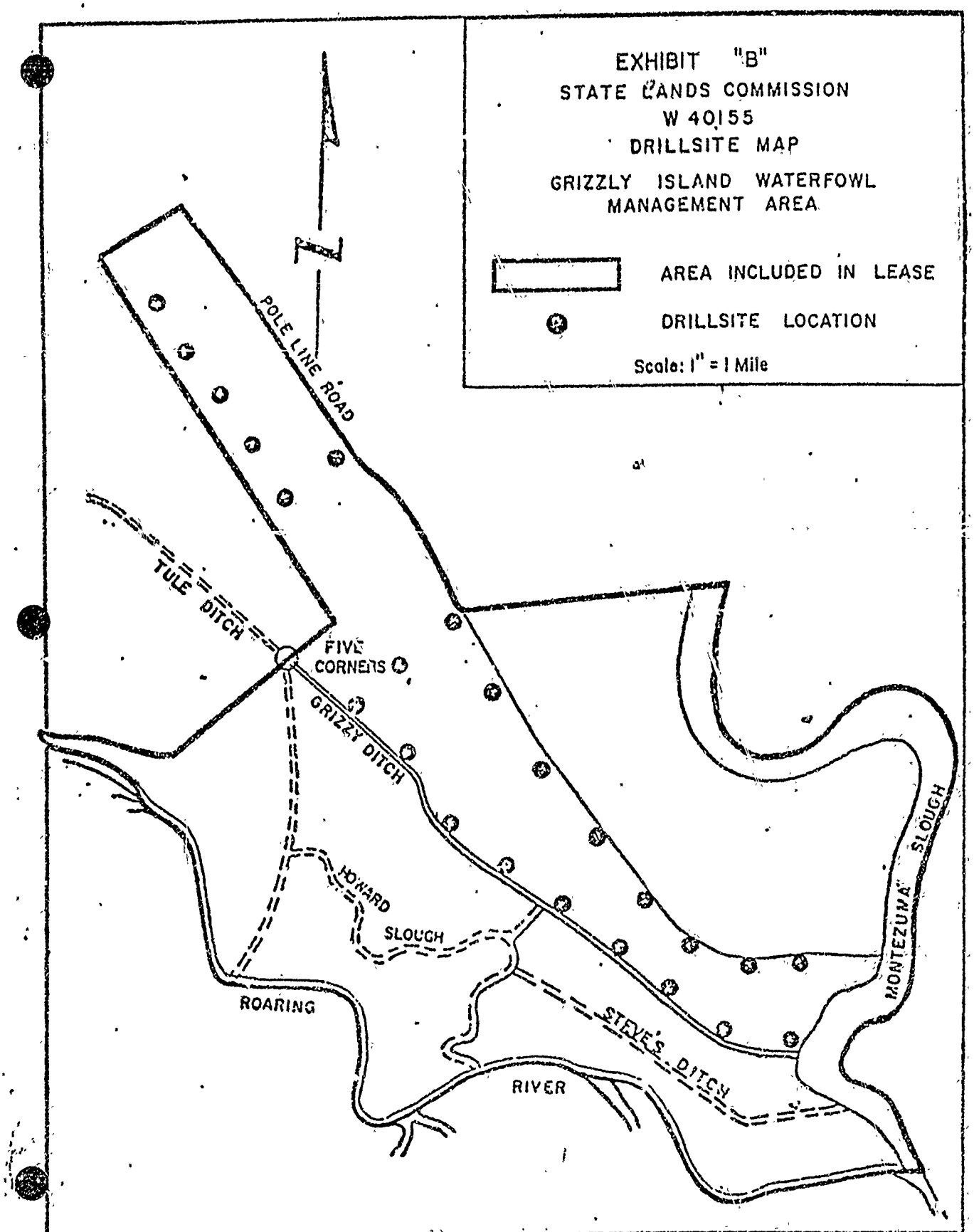

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PROJECT DESCRIPTION

The proposed project, identified as the Grizzly Island Prospect, is an effort by the applicant, Shell Oil Company, to explore for and, if commercial quantities are found, to develop new natural gas reserves in the vicinity of Grizzly Island, Solano County, California. The project is located in Sections 1, 2, 3, 10, 11, 12, 13, 14, 15, 23 and 24, T3N, R1W, Sections 18, 19 and 20, T3N, R1E, and portions of Sections 33 and 34, T4N, R1W, MDB&M (see Exhibit "A").

The proposed oil and gas lease area covers a portion of Grizzly and Hammond Islands, Montezuma Slough and Roaring River shown in Exhibit "B". The surface of these lands is managed by the Department of Fish and Game as the "Grizzly Island Wildlife Refuge".

The proposed oil and gas lease will allow oil and gas exploration and production by the applicant. The exploration plan proposes the directional drilling of one or more exploratory wells from an approved surface drilling location in the marsh. The Department of Fish and Game has authorized 24 drillsite locations within a narrow strip in the middle portion of the lease area. These drillsites are located between Pole Line and Grizzly Island Roads (see Exhibit "B").

The authorized drillsites are located outside of a designated area used for a Tule Elk preserve. The sites are immediately adjacent to Pole Line Road and Grizzly Island Road which will minimize impact on the marsh surface. A conventional drilling rig can be brought to any of these sites.

Prior to moving in drilling equipment, pilings will be driven to hard ground and a pad graded, leveled and surfaced with gravel. The pad will occupy approximately two acres for exploration and, if it is decided to develop the prospect, production equipment.

If commercially producible gas is discovered, the well, as proposed, will be free flowing, requiring no lifting equipment and only a limited amount of production equipment. Following completion of development drilling, the drilling equipment will be removed, the sumps mounted on trailers will be hauled away and the spent drilling fluids disposed of at an approved dumpsite. All traces of the drilling phase will be removed.

If commercially producible quantities of gas are found, the well will be hooked up with production equipment including a 2-phase heater, separator, water storage tank, gas detection system and flow meter. The gas will be transported via a new pipeline to the existing Steelhead Pipeline leading to Martinez, southwest of Grizzly Island.

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If a gas discovery is made, the reservoir should be depleted within 10 to 15 years at which time the wells would be abandoned in accordance with State regulations. Production equipment will be removed and all signs of the site restored to the original condition.

ENVIRONMENTAL SETTING

The proposed project is to be located on Grizzly and Hammond Islands on the north side of Suisun Bay. Both islands are in the peat marsh system on Suisun Bay. The project area is bounded by Montezuma Slough on the west, north and east. Suisun Bay borders the project area to the southwest, and Roaring River lies to the south. Grizzly Island and the surrounding area are presently and have been historically areas of gas exploration and production. The western side of Grizzly Island has an active gas field operated by Chevron. Much of the proposed lease area lies within the Grizzly Island Wildlife Refuge; upland portions of the proposed lease area outside the refuge are in either open space or under agricultural development.

Small portions of the lease area lie under the beds of Montezuma Slough and Roaring River, which are tide and submerged lands. No surface activity associated with the proposed lease will occur in the vicinity of the submerged lands.

The Department of Fish and Game has designated certain areas of the Grizzly Island Wildlife Refuge as off limits to any surface drilling or projection activities. The Department has designated 24 possible drillsite locations in the center of the refuge, adjacent to Pole Line Road and Grizzly Island Road where the marsh environment has already been altered.

A recent check of the marsh vicinity has been made with Marianne L. Russo, Assistant Regional Officer of the California Archaeological Site Survey in Sacramento. It has been determined that there are no significant archaeologic sites in the immediate vicinity of the drilling project. The nearest sites are in the Montezuma Hills, some five miles east of Grizzly Island. No archaeologic precautions are required for the proposed project.

PERSONS OR AGENCIES CONTACTED

Memos:

California State Department of Fish and Game
California State Department of Conservation, Division of Oil and Gas
State Water Resources Control Board
Solid Waste Management Board
California Department of Health
The Reclaimation Board
OPR Clearinghouse ATTN: Anna Polvos
California Department of Parks and Recreation
Department of Transportation District 3
Air Resources Board
Office of Historic Preservation
State Lands Commission, Sacramento

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Letters:

Shell Oil Co. (Applicant)
Yolo-Solano APCD
Solano County Planning Department
U.S. Coast Guard
Suisun Resources Conservation District
Contra Costa County APCD
Contra Costa County Planning Department

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DISCUSSION OF ENVIRONMENTAL EVALUATION

II A.

2. Construction of the initial drilling pad and its associated access adjacent to Pole Line Road or Grizzly Island Road would disrupt an area of slightly more than two acres. If discovery of gas in commercial quantities is made, additional land will be required for more drilling pads. (Also approximately two acres per drillsite). Access to additional drillsites would also be from Pole Line Road or Grizzly Island Road. After completion of drilling and testing, any constructed production facilities would require a pad of approximately one-quarter acre per well. Produced gas would be transported from the site via a new pipeline connecting with the existing Steelhead Pipeline in Martinez.

   The areas chosen for potential drillsites in the refuge were selected by the Department of Fish and Game in areas where the least damage to the marsh environment would occur as the result of developing drillsites. When any drillsite area is no longer required for operations the applicant will restore the area to as nearly natural conditions as possible. The applicant will adhere to the regulations of the San Fransicso Bay Conservation and Development Commission, from which a permit will be required for all proposed activities.

3. The possibility that subsidence could occur is discussed in Exhibit "D". Also enclosed is a subsidence monitoring and control plan as required by Public Resources Code Section 6873.2 attached as Exhibit "E".

II B.

1. A small amount of air pollution would be generated during operation of diesel engines used in powering drilling operations. Exhibit "C" provides data on operational emissions for the diesel engines in a 750 H.P. rating. Duration of use of the drilling rig will be ten to twenty days for drilling a well.

   Properly maintained power engines will help reduce the amount of air pollution generated. The impact resulting from emissions in the immediate vicinity of the refuge will be minimal since a small quantity will be produced. No impact will be expected on neighboring communities as the nearest residential community, Suisun is five miles northwest of Grizzly Island. A small recreational community north of the drillsite area will not be impacted as it is a mile from any drilling.

2. Relating to drilling phase, a small amount of odor would be created due to diesel exhaust released in operating the power engines for the drill rig.

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This could be controlled by properly adjusted engines and adequate pollution control devices. If commercially producible quantities of gas are discovered, minimal emissions or odor will be released from the production equipment.

II D.

1. The authorized drillsite locations are situated so as to reduce the impact of overcovering on the natural marsh habitat. The area chosen is part of a managed wetland area which is artificially flooded. Marsh tules would be the significant plant type covered by drillsites during drilling and any possible production. If no gas is found in commercial quantities the drillsite(s) will be removed allowing repopulation by local vegetation.

II E.

1. Construction of each drillsite would cause a temporary disturbance to the area. The area on which the potential site or sites would be located is tidal marsh which is managed by the Department of Fish and Game. The marsh is often flooded by Fish and Game to induce ducks to the area. Other marsh wildlife inhabits the area. The drillsites would temporarily displace wildlife from the immediate zones but upon completion of drilling operations and removal of the equipment and pad material, wildlife would return to the area.

2. The drillsites being temporary, wildlife would be displaced during the period required to drill and complete from one to eight wells. A rookery for the Great Blue Heron and Greater Egret is located nearby but at sufficient distance (5 miles west) so as not to be interfered with by the proposed drilling operations.

4. The authorized drilling areas are located in the south central portion of Grizzly Island between Pole Line Road and Grizzly Island Road. The channels of Roaring River and Montezuma Slough are located about fifty yards from the drillsite areas. Levees with an eight foot height separate the sloughs from the island portion. Flood gates are installed in major drainage channels to control tidal flow between the sloughs and internal water ways on the island. Shell will be required to maintain a well control contingency plan. Proper operation and maintenance of the drilling equipment should reduce the chance of an accident (see II J 1).

II F.

1. There will be an increase in noise level in the immediate vicinity of the drilling site due to the construction equipment and drilling machinery. Noise levels could be as much as 70 decibels at 1,000 feet distance from the site. The noise would be further reduced at greater distances from the site. This increased noise level would last through the initial drilling operation or 10 to 20 days. This time would be extended for each additional

site if commercial reserves are found. If production equipment is installed, there will be no noise generated during its projected operation life of 10 to 15 years. If compressors are required, mufflers would be installed to mitigate noise. Other measures will be taken by the applicant, as necessary, to reduce impact of production equipment on the surrounding habitat. Drilling will proceed during the period set forth by the San Francisco Bay Conservation and Development Commission Control Plan.

2. There may be some periods of extreme noise generation during gas or drill stem testing. The project area is located adjacent to a Tule Elk preserve in which 25 head of elk are kept. The noise should not disturb the habits of the animals as their exposure to human contact has reduced their sensitivity to human activities. The nearest major human community is on Montezuma Slough approximately two miles north of the drillsite zone. This distance should attenuate the noise impact.

G.

1. The drill rig would be highly visible at night due to high intensity lighting needed for the round-the-clock operations of drilling. The effect would be temporary, occurring only durin the drilling phase (22 days).

   This impact is not anticipated to affect wildlife in the vicinity, and human activity is limited to day use in the refuge.

II H.

1. If a commercially producible amount is discovered, the rate of use of natural gas will be increased.

2. If a commercially producible amount is discovered, natural gas is the only non-renewable resource that will be removed.

II J.

1. During drilling operations, there is a possibility for a gas blowout and fire, but the probability of this occurring during drilling operations is greatly reduced by the stringent safety regulations of the State Lands Commission under which the well(s) must be drilled.

   All applicable standards and regulations will be followed in the design and construction of the surface facilities and the gathering lines. Routine inspections will be conducted, and in the event of a leak, field personnel will be dispatched to locate and repair it.

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II M.

1. During the drilling phase, additional traffic will result while construction equipment, drill rigs and well service vehicles and equipment are introduced into the area.

   Private vehicles will be present as drilling crews arrive and leave on each shift during the drilling phase.

6. With the presence of drilling operations within the area, the additional movement of employee and service vehicles and construction equipment related to drilling operations will increase the potential of traffic hazard. Proper caution in the operation of vehicles will help to avoid potential traffic hazards.

II P.

1. If commercial quantities of natural gas are discovered, gas transmission line hook-up will be required, necessitating construction of new gathering lines to existing systems nearby (Shell Steelhead line to Martinez).

II R.

1. Obstruction of vistas or views will be of a temporary nature, occurring during drilling operations. The drilling derrick will be removed when the drilling operations are complete.

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EXHIBIT "C"

DIESEL POWERED INDUSTRUAL ENGINE
EMISSION FACTORS AND RATES

	750 H.P.[1] g/H.P. hr.[2]	at 75%[3] load factor	g/sec	tons/mo
Carbon Monoxide (CO)	3.030	2.27	0.47	1.37
Exhaust Hydrocarbons (HC)	1.124	0.84	0.17	.51
Evaporative Hydrocarbons	None	---	---	---
Crankcase Hydrocarbons	None	---	---	---
Nitrogen Oxides (NO_x)	14.000	10.50	2.18	6.32
Aldehydes	0.210	0.16	0.03	.12
Sulfur Oxides (SO_x)	9.931	0.70	0.15	.42
Particulate (Part)	1.000	0.75	0.16	.45

1. Total H.P. two engines of approximately 350 H.P. and 400 H.P. will be used.

2. Data obtained from EPA, AP42 supplement 5; December 1975, p. 3.3.31.

3. Hoisting operations will require 675 H.P. for approximately 6 hours/day and drilling operations will require 525 H.P. 18 hours/day.

load factor 1 = 675/750 = 90%
load factor 2 = 525/750 = 70%
verage load factor $\frac{(0.90)\ (6) + (0.70)\ (18)}{24}$ = 75%

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EXHIBIT "D"

COMMENT ON LAND LEVEL VARIATIONS

Considering subject IIA-3, land subsidence could occur. A discussion and analysis of subsidence in this area of Grizzly Island on the Suisun marsh reads as follows.

Extraction of natural gas in this area is not considered a significant cause of subsidence. Other possibilities for subsidence include the affect of peat soils. Peat soils, which can range from a few feet up to 40 or 50 feet in thickness, cover virtually all of the marsh region.

Historically peat soils experience continually subsiding land levels as the result of oxidation of the peat fibers, wind erosion, compaction by farm equipment, and loss of water in the upper few feet during the dry season. The California Department of Water Resources cites this subsidence as averaging three inches per year in their Bulletin 76, publ. December, 1960. Running counter to this trend is a swelling of the peat soil which occurs during inundation the area in the wet season. As a consequence of these factors no on-going effort has been maintained with respect to elevation control in the marsh proper. However, the levees have had to be raised periodically as the marsh soil has subsided.

When considering the relationship of possible gas production from beneath the marsh to land stability in this area, it is reasonable to remove the influence of the peat soils from the question, and consider only the behavior of the solid rock substrata underlying the marsh. With this view in mind, the writer has reviewed the historic record of land levels available from the National Geodetic Survey, the U.S. Geological Survey, the Soil Conservation District office, and some California Highway Department stations, with the object of determining the pattern of past experience in the region in question. A few stations (Bench Marks) were available in the marsh proper and these are reported separately below. The bulk of the traceable elevation records has been obtained from stations around the periphery of the marsh which are sited on solid ground.

The results of this survey of the records may be summarized as follows:

East of the marsh

Average subsidence over periods of 12 - 32 years = .165 inches/year.

Maximum - .19 inches/year

Minimum - .04 inches/year

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North of the marsh

Average subsidence over period of 8 - 32 years = .11 inches/year

Maximum = .44 inches/year

Minimum = .008 inches/year

Some stations north of the marsh were elevated over the period of observation:

Average increase in elevation over period of 8 - 11 years = .09 inches/year

Maximum = .21 inches/year

Minimum = .009 inches/year

West of the marsh

Average subsidence over periods of 9 - 37 years = .05 inches/year

Maximum = .07 inches/year

Minimum = .009 inches/year

Some stations west of the marsh were elevated over the period of observation:

Average increase in elevation over periods of 9 - 23 years = .12 inches/year

Maximum = .27 inches/year

Minimum = .03 inches/year

On the marsh

Readings on the peat soil at the south edge of the marsh all indicated subsidence:

Average subsidence over a seven year period = .34 inches/year

Maximum = .46 inches/year

Miminum = .23 inches/year

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A general review of this regional data shows that elevation changes, including those few stations on the marsh, have been very small, comparable to, or even less than, those observed in the Freeport area (further east along the Sacramento River) in a previous study. The erratic nature of the readings north and west of the marsh suggests that some crustal adjustment may be continuing in this region. The strata of the area are known to be deformed by numerous folds and faults, and the period of structural adjustment may not be entirely over.

Subsidence in the Sacramento River delta region is generally attributed to three causes:

1) Ground water withdrawal

2) Oxidation, deflation and compaction of peat soils

3) Tidal fluctuations

In the Suisun marsh general area cause (1) is probably affecting elevation changes to some extent. In the marsh proper cause (2) is undoubtedly an on-going factor. Cause (3) is likely to have a very small effect which is cyclical in nature. The erratic nature of some of the readings (north and west of the marsh) supports the interpretation that structural movement of the crust is continuing.

There are four fields (active and inactive) in the marsh proper or surrounding area (Kirby Hill, Suisun Bay, Potrero Hills and Ryer Island). Gas has been extracted for as long as 42 years from these fields. They had produced over 243 million MCF of gas as of 12/31/79. This activity appears to have had little or no affect on the land elevations because, as noted above, the subsidence history correlates rather closely with a non-producing area such as Freeport.

Reasons for the withdrawal of gas to have had no effect on the land levels are generally believed to be:

(1) The areas of gas accumulation are limited, and the gas columns are not large.

(2) The reservoir sands are quite competent and resist compaction.

(3) The water drive fills the pore spaces as the gas is withdrawn.

(4) Water is not extracted with the gas.

(5) The volume of gas withdrawn is quite small relative to the rock column from which it is produced.

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Measures Required to Minimize Impacts

Drilling and completion operations will be conducted to conform to regulations of the State Lands Commission and the Division of Oil and Gas. Surface casing will be set as prescribed by regulations to provide anchorage for blowout prevention equipment and to protect fresh water formations. Approved blowout prevention equipment will be used during drilling operations. The blowout prevention equipment will be tested for pressure integrity and operation on a routine basis. All drilling personnel will be trained in well-controls operations and drills will be conducted at least once a week for each crew.

Freshwater aquafers that may extend to 2000 feet will be cased and/or protected with cement at the time of completion or abandonment. If toxic materials are used in the drilling fluids, the sumps will be mounted on trailers which will be vacumed out and the spent mud will be disposed of at a site approved by the Regional Water Quality Control Board. The applicant will also contact the Board to determine if adherance to waste discharge requirements will be necessary. Subsequently, the site will be cleaned up as nearly as possible to its original condition.

If producible gas accumulation is discovered, the gas will be moved from the drillsite(s) by pipeline and there will be no venting or release of gas to the atmosphere during the production phase. No impact is expected from these drillsites on neighboring communities because the nearest community, Suisun, is five miles northwest.

Grizzly Island and neighboring sloughs are well protected from the drillsite area by two levees which stand 8 to 10 feet above ground level between the Island, slough and proposed drillsite area. However, the Lessee will be required to suspend all drilling and production operations, except those which are corrective, protective or mitigative, immediately in the event of any disaster or contamination or pollution resulting from operations under its lease. Such drilling or productions shall not be resumed until adequate measures have been taken and authorization for resumption of operations has been made by the Commission.

Residuary products of oil, drilling fluid, sanitary wastes and other refuse shall be disposed of in approved dumping areas. None of these products will be permited to enter the slough, bay or any marsh lands connected therewith.

Corrective measures shall be taken immediately whenever pollution has occurred.

The Lessee will be required to comply with the Commission's Rules and Regulations for Drilling and Production Operations on Tidal and Submerged lands.

The drilling regulations include requirements for well casing, cementing of well casing, blowout prevention equipment, supervision and training of

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drilling personnel, drilling mud system and control, safe drilling practices and drilling inspection. The production regulations include well completion and safety equipment, remedial and well maintenance work, subsurface injection projects, waste disposal, safety equipment and procedures relating to production facility operations, and the operation and maintenance of pipelines.

It is the responsibility of the Division of Oil and Gas and the State Lands Commission to see that the procedures are followed, and a system of inspections and reports are required to insure that this is being done.

Though the chance of an accident is slight, the lessee will be required to maintain a current well control contingency plan, for initiating corrective action to control a gas blowout or a water/gas blowout and any possible fire. The plan will cover both minor and major accidents associated with drilling operations.

The plan will cover both minor and major accidents associated with drilling operations. Clean Bay Inc., a nonprofit oil spill cleanup and preventive organization will form an integral part of this contingency plan having cleanup equipment available in Concord and Martine_.

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EXHIBIT "E"

SUBSIDENCE MONITORING AND CONTROL PLAN

The lessee, upon the discovery of natural gas and/or oil, will be required to determine a subsidence rate based on the current USGS, USC and GS Data before large volumes of gas are produced from the subject lease. This will be accomplished by precision leveling surveys of bench marks (USGS, USC and GS and others) in the area. The lessee will also be required to establish bench marks (preferably one on each side of the lease area) which will be tied by precise leveling into the control network. Such bench marks set by the lessee will be surveyed each year and the control network surveyed every two years.

It has been established by USGS that during subsidence (due to removal of subsurface elements) bench marks will move toward the center or toward the area of deepest subsidence. In monitoring this subsidence, detailed horizontal surveys could serve to effectively detect areal subsidence.

After discovery, a well may be drilled and programmed to include a casing joint survey. A casing joint survey is a procedure in which a magnetic tool is lowered into the well and, as it is withdrawn, records the magnetic density of the casing. Lengths of casing can be accurately determined by such technique and comparisons with later surveys or "runs" may indicate casing deformation, a sign of possible subsidence. While a casing joint survey may not reveal a total subsidence rate, it will permit the operator to determine if casings opposite the producing sands are undergoing deformation. These surveys would be run about every two years as part of the subsidence monitoring procedure.

Many gas sand reservoirs in the delta region are pressured by subsurface water that results in a partial or full waterdrive-producing mechanism in the reservoir. Under these conditions a withdrawal rate could be determined which would allow the formation pressures to remain stable and constant, and thereby negate any subsidence attributed to gas production.

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