

MINUTE ITEM
This Calendar Item No. 48
was approved as Minute Item
No. 48 by the State Lands
Commission by a vote of 3
to 2 at its 7/10/88
meeting.

CALENDAR ITEM

48

08/10/88
W 6005.4 PRC 7238
Livenick

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APPROVAL OF A GEOPHYSICAL SURVEY PERMIT FOR STATE-OWNED
TIDE AND SUBMERGED LANDS IN THE SAN JOAQUIN DELTA
SAN JOAQUIN COUNTY

APPLICANT: CGG American Services, Inc.
Attn.: Mr. Jim Prossick
P. O. Box 488
Thornton, California 95686

PROPOSED AUTHORIZATION:

Approval of a Geophysical Survey Permit to
conduct geophysical seismic studies on Van
Sickle Island (two lines totalling 6.07 miles)
and Grizzley Island (two lines totalling 15.5
miles) crossing private lands and proprietary
lands and waterways in the Sacramento-San
Joaquin Delta area of Solano County.

TYPE OF LAND: The State lands subject to this permit are
those tide and submerged lands in the waterways
crossed by the four seismic survey lines and
State-owned proprietary lands on Grizzley
Island.

TERM: The term of the Geophysical Survey Permit shall
be from August 1, 1988 through October 31, 1989.

PROJECT: CGG American Services, Inc. has proposed
conducting a geophysical seismic survey in the
Sacramento-San Joaquin Delta area of Solano.
The survey will be performed in four lines
totalling approximately 22 miles as shown in
the accompanying map of Exhibit "A". The
survey line will cross State-owned and
privately-owned uplands and portions of
State-owned waters. Approximately 1,170
four-inch diameter holes will be drilled on
100-foot centers to a depth of 50-100 feet.

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The holes may be loaded with a five-pound explosive charge and/or geophone instrumentation. The hole will be backfilled with bentonite to seal the hole. In sensitive wildlife habitat, no holes may be drilled and no explosives used; only a passive geophone will be placed on the ground surface.

CGG is coordinating this project with all the affected landowners, trustee agencies, such as the Department of Fish and Game and Reclamation Districts, and other permitting and responsible local agencies listed in Attachment D of the Negative Declaration, Exhibit "B".

Special operating conditions have been developed by the Reclamation Districts and the Department of Fish and Game to eliminate any hazard to the levees, wildlife and habitat crossed by the survey lines and are reflected in the survey as proposed. Special permits and monitoring of the operations by Department of Fish and Game (DFG) personnel will be required for sensitive areas as determined by DFG. The geophysical information to be acquired is for the use of the oil and gas industry and possibly may benefit the State as an aid in development of the State's resources from adjacent private lands.

BOND: Applicant will submit a faithful performance bond of \$25,000 in favor of the State.

STATUTORY REFERENCES:

- A. P.R.C. 6826.
- B. 14 Cal. Adm. Code, Title II, Article 2.9, Section 152 et. seq.
- C. P.R.C. 21080.5 and CEQA Guidelines, Section 15250 et. seq.

AB 884: 11/01/88.

OTHER PERTINENT INFORMATION:

1. Pursuant to the Commission's delegation of authority and the State CEQA Guidelines (14 Cal. Adm. Code 15025), the staff has

CALENDAR ITEM NO. 48 (CONT'D)

prepared a Negative Declaration EIR ND 439, State Clearinghouse #88041917. The Negative Declaration was prepared and ~~circulated~~ for public review pursuant to the provision of the CEQA. A copy of this environmental document is attached as Exhibit "B".

Based upon the initial study, the Negative Declaration, and the comments received in response thereto, there is no substantial evidence that the project will have a significant effect on the environment (14 Cal. Adm. Code 15074(b)).

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

Subsequent to circulation of the Negative Declaration for this proposed project, the Applicant modified the project description. The modification involves the omission of one line and a minor alteration in the alignment of an other. The types of potential impacts and mitigations presented in the Initial Study/Negative Declaration will not change as a result of this modification; there will, however, be a decreased potential for such impacts due to the diminished scope of the proposal. All agencies contacted during the Initial Study and Negative Declaration circulations were again contacted regarding this modification proposal, and each believed that the circulated documents adequately addressed the potential impacts of the amended project.

EXHIBITS:

- A. Survey Location Maps.
- B. Negative Declaration.

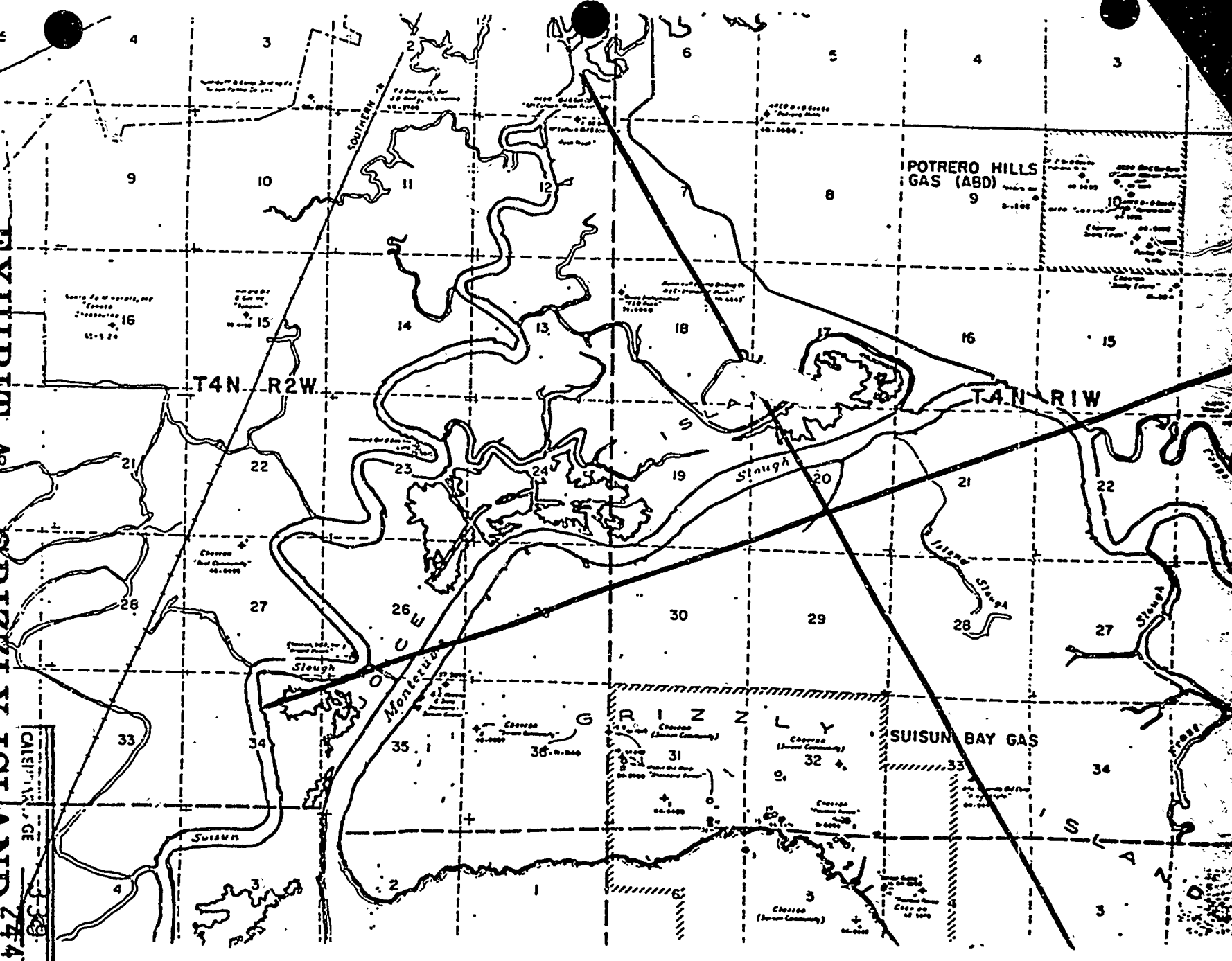
CALENDAR ITEM NO. 48 (CONT'D)

IT IS RECOMMENDED THAT THE COMMISSION:

1. CERTIFY THAT A NEGATIVE DECLARATION EIR ND 439 STATE CLEARINGHOUSE #88041917 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. DETERMINE THAT THE PROJECT, AS APPROVED, WILL NOT HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT.
3. FIND THAT THIS ACTIVITY IS CONSISTENT WITH THE USE CLASSIFICATION DESIGNATED FOR THE LAND PURSUANT TO P.R.C. 6383 ET. SEQ.
4. AUTHORIZE THE ISSUANCE TO CGG AMERICAN SYSTEM, INC. OF A PERMIT TO CONDUCT GEOPHYSICAL SEISMIC SURVEYS ON STATE-OWNED PROPRIETARY AND TIDE AND SUBMERGED LANDS IN THE SACRAMENTO-SAN JOAQUIN DELTA AREA OF SOLANO COUNTY FOR THE PERIOD OF AUGUST 1, 1988 THROUGH OCTOBER 31, 1989.

EXHIBIT A -- GRIZZLY ISLAND

CLASSIFICATION
SECRET
7448



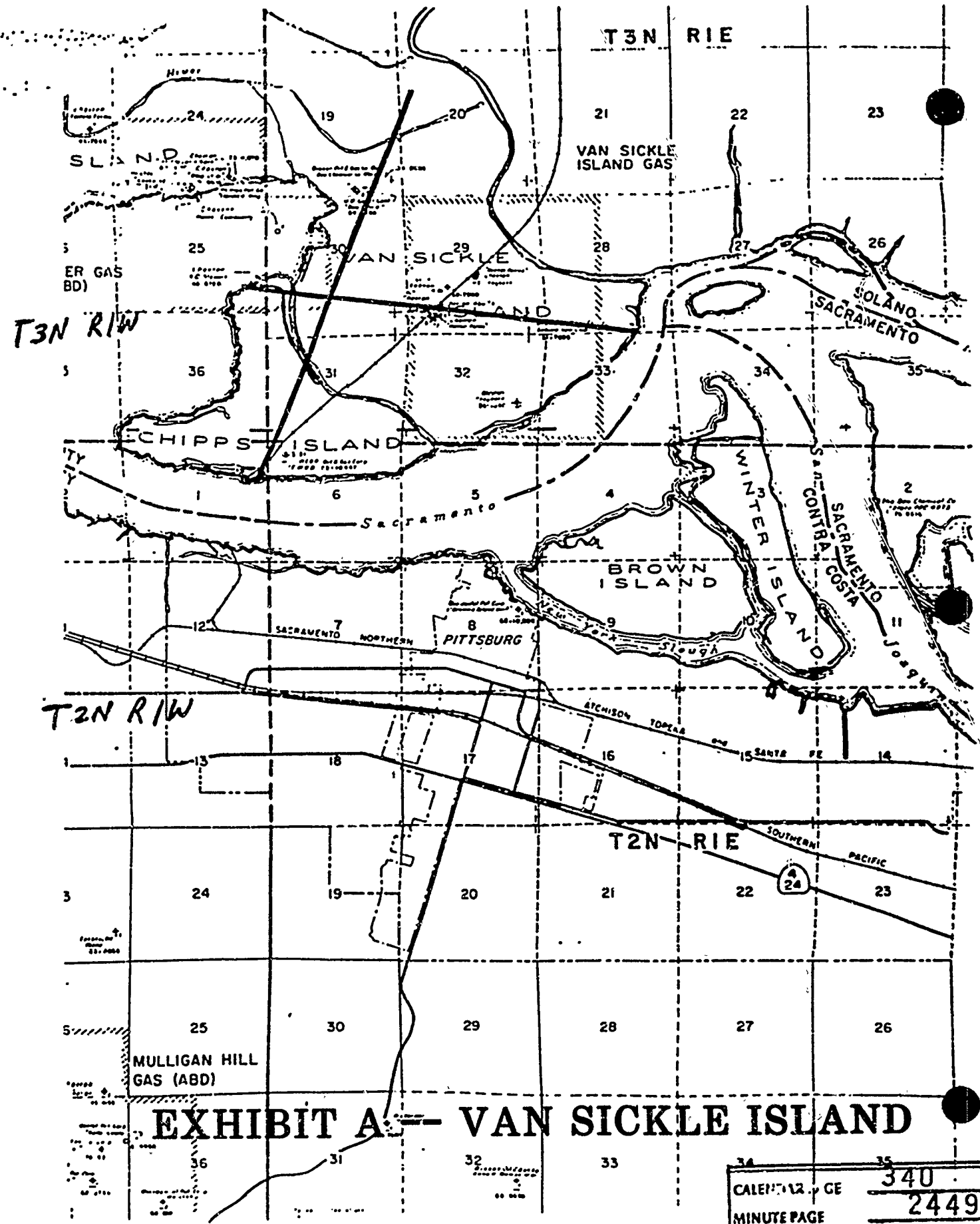


EXHIBIT A -- VAN SICKLE ISLAND

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EXHIBIT B

STATE OF CALIFORNIA

STATE LANDS COMMISSION

LEO T. McCARTHY, *Lieutenant Governor*
GRAY DAVIS, *Controllor*
JESSE R. HUFF, *Director of Finance*

GEORGE DEUKMEJIAN, *Governor*

EXECUTIVE OFFICE
1807 - 13th Street
Sacramento, California 95314

CLAIRE T. DEDRICK
Executive Officer



April 15, 1988
File Ref: W 6005.4

NOTICE OF INTENT TO ADOPT NEGATIVE DECLARATION (Section 21092 PRC)

An application for the following described project is currently being processed by the staff of the State Lands Commission:

Project Title: CGG Van Sickle Island and Grizzly Island Seismic Survey

Project Proponent: CGG American Services, Inc.

Project Location: Van Sickle and Chipps Islands; Grizzly Island, Sacramento-San Joaquin Delta, Solano County.

Project Description: A seismic survey is proposed for potential natural gas deposits on two lines in the area of Van Sickle Island (totaling approximately 6.07 miles), and on two lines in the area of Grizzly Island (totaling approximately 15.5 miles). A total of 1,170 shot holes will be drilled (4-inch diameter, 50-100 foot depth) at 100-foot intervals. Most holes will be loaded with a geophone and a 5-15 pound charge, and some will house only a geophone. The holes will be filled with bentonite immediately after drilling. When the charges are detonated, the travel time of the seismic waves generated by the explosion will be recorded.

The applicant shall comply with the requirements of all other permitting agencies with respect to this proposed project.

(CONTINUED)

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APRIL 15, 1988

Contact Person: Dan Cohen Telephone: (916) 324-8497

A Negative Declaration identified as EIR ND 439, State Clearinghouse No. has been prepared pursuant to the requirements of the California Environmental Quality Act.

The above described document will be considered for adoption at a regular meeting of the STATE LANDS COMMISSION scheduled for May, 1988 (specific date unknown at this time), at 10:00 a.m., State Capitol, Room 447, Sacramento, California. Anyone interested in this matter is invited to comment on the document by written response prior to the meeting or by personal appearance at the meeting. Persons wishing to appear at the meeting should call (916) 322-4107 so that time can be allotted for such appearance. (NOTE: Time and place of Commission meeting is subject to change.)

CLAIRE T. DEDRICK
Executive Officer

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STATE LANDS COMMISSION

1807 13TH STREET
SACRAMENTO, CALIFORNIA 95814PROPOSED NEGATIVE DECLARATION

EIR NO 439

File Ref.: W 6005.4

SCH#:

Project Title: CGG Van Sickle Island and Grizzly Island Seismic Survey
Project Proponent: CGG American Services, Inc.
Project Location: (1) Van Sickle and Chipps Island; (2) Grizzly Island,
Sacramento - San Joaquin Delta, Solano County.

Project Description:

A seismic survey is proposed for potential natural gas deposits on two lines in the area of Van Sickle Island (totalling approximately 6.07 miles), and on two lines in the area of Grizzly Island (totalling approximately 15.5 miles). A total of 1,170 shot holes will be drilled along the lines at 100-foot intervals. The shot holes will be loaded with a geophone and a 5-15 pound charge (some holes will be loaded with a geophone only). The holes will be filled with bentonite immediately after drilling to prevent comingling of aquifers.

Contact Person: Dan Cohen Telephone: (916) 324-8497

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

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

STATE LANDS COMMISSION
1807 13TH STREET
SACRAMENTO, CALIFORNIA 95814



File Ref.: W 6005

Date: 4/15/88

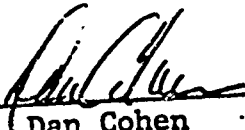
NOTICE OF PUBLIC REVIEW
OF A
PROPOSED NEGATIVE DECLARATION
(Section 15073 CAC)

A Proposed 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 Administrative Code), and the State Lands Commission regulations (Section 2901 et seq., Title 2, California Administrative Code), 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 May 10, 1988.

Should you have any questions or need additional information, please call (916) 324-8497.

ATTACHMENT



Dan Cohen
Environmental Coordinator

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ENVIRONMENTAL IMPACT ASSESSMENT FORM - Part I

(To be completed by applicant)

FORM 69.3(11/82)

A. GENERAL INFORMATION

1. Name, address, and telephone number:

a. Applicant

CGG American Services, Inc.P.O. Box 488Thornton, CA 95686ATTN: Jim Prossick(209) 794-2382

b. Contact person if other than applicant:

2. a. Project location: (Please reference to nearest town or community and include county)

Secs. 25, 26, 34, 35, T. 4N, R. 2W, &
Grizzly Island: Secs. 14, 15, 19, 20-22, 30, T. 4N, R. 1WSec. 1, T. 2N, R. 1W; Sec. 25, T. 3N, R. 1W;Van Sickle Isd: Secs. 19, 20, 28-31, T. 3N, R. 1E; Sec. 6, T. 2N, R. 1E.ALL SAC-SAN JOAQUIN DELTA, MDB&M, SOLANO COUNTY

b. Assessor's parcel number: _____

3. Existing zoning of project site: Agricultural, wetlands4. Existing land use of project site: Agriculture, marsh and wetlands, recreational5. Proposed use of site: Proposed - 4 seismic survey lines (total approximately
22 miles). Total of 1,170 shot holes drilled at 100' intervals,loaded with geophone and explosive charge. Holes to be sealed with
bentonite.6. Other permits required: DFG streambed alteration, Corps permit, Solano Countyexplosives permit, Solano County Seismic Survey permit, U.S. CoastGuard permit, BCDC, Rec. Dist. #1607, Suisun Resource Conserv. Dist.

B. PROJECT DESCRIPTION

1. For building construction projects, complete "ATTACHMENT A".

2. For non-building construction projects: Describe fully, the proposed activity, its purpose and intended use, e.g. for proposed mineral prospecting permits, include the number of test holes, size of holes, amount of material to be excavated, maximum surface area of disturbance, hole locations, depth of holes, etc. Attach plans or other drawings as necessary.

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C. ENVIRONMENTAL SETTING

1. Describe the project site as it exists before the project, including information on topography, soil stability, plants and animals, and any cultural, historical, or scenic aspects. Describe any existing structures on the site, and the use of the structures.
2. Describe the surrounding properties, including information on plants and animals and any cultural, historical, or scenic aspects. indicate the type of land use (residential, commercial, etc.), intensity of land use (one-family, apartment houses, shops, department stores, etc.), and scale of development (height, frontage, set-back, rear yard, etc.).

D. ENVIRONMENTAL IMPACT ASSESSMENT *This portion of the Delta encompasses wetlands & marsh areas, agricultural areas & rolling hills, several streams & sloughs.*

Answer the following questions by placing a check in the appropriate box. Discuss all items checked "yes" or "maybe".
(Attach additional sheets as necessary)

	YES	MAYBE	NO
Will the project involve:			<input checked="" type="checkbox"/>
1. a change in existing features of any bays, tidelands, beaches, lakes, or hills, or substantial alteration of ground contours?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. a change in scenic views or vistas from existing residential areas or public lands or roads?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. a change in pattern, scale, or character of the general area of project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. a significant effect on plant or animal life?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. significant amounts of solid waste or litter?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6. a change in dust, ash, smoke, fumes, or odors in the vicinity?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7. a change in ocean, bay, lake, stream, or ground water quality or quantity, or alteration of existing drainage patterns?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		See Initial Study	
8. a change in existing noise or vibration levels in the vicinity?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		See Initial Study	
9. construction on filled land or on slope of 10 percent or more?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10. use or disposal of potentially hazardous materials, such as toxic or radioactive substances, flammables, or explosives?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11. a change in demand for municipal services (police, fire, water, sewage, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
12. an increase in fossil fuel consumption (electricity, oil, natural gas, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
13. a larger project or a series of projects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

E. CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this initial evaluation to the best of my ability, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Date: April 15, 1988

Signed: *Dan Cohen* Dan Cohen
(for project applicant)

ENVIRONMENTAL IMPACT ASSESSMENT CHECKLIST - PART II

Form 13.20 (7/82)

File Ref.: W 6005.4

I. BACKGROUND INFORMATION

A. Applicant: CGG American Services, Inc.
P.O. Box 488
Thornton, CA 95686
ATTN: Jim Prossick

B. Checklist Date: 4 / 08 / 88

C. Contact Person: Dan Cohen
Telephone: (916) 324-8497

D. Purpose: To perform a seismic survey for Chevron, U.S.A.

E. Location: Please See Supplement A

F. Description: Please See Supplement B

G. Permits Obtained: San Francisco Bay Conservation and Development Commission, U.S. Coast Guard, U.S. Army Corps of Engineers, Solano County Fire Warden Explosives Permit, Solano County Public Works Department Seismic Survey Permit.

H. Permit/Compliance Required: California Department of Fish and Game, Suisun Resource Conservation District, Solano County Dept. of Environmental Management, Reclamation District No. 1607

I. Agencies Contacted: U.S. Army Corps of Engineers, California Department of Fish and Game.

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

A. Earth. Will the proposal result in:

- 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?

Yes Maybe N

Grid of checkboxes for Yes, Maybe, and N for each item.

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- B. Air.** Will the proposal result in:
- Substantial air emissions or deterioration of ambient air quality?
 - The creation of objectionable odors?
 - Alteration of air movement, moisture or temperature, or any change in climate, either locally or regionally?
- C. Water.** Will the proposal result in:
- Changes in the currents, or the course or direction of water movements, in either marine or fresh waters?
 - Changes in absorption rates, drainage patterns, or the rate and amount of surface water runoff?
 - Alterations to the course or flow of flood waters?
 - Change in the amount of surface water in any water body?
 - Discharge into surface waters, or in any alteration of surface water quality, including but not limited to temperature, dissolved oxygen or turbidity?
 - Alteration of the direction or rate of flow of ground waters?
 - Change in the quantity of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations?
 - Substantial reduction in the amount of water otherwise available for public water supplies?
 - Exposure of people or property to water-related hazards such as flooding or tidal waves?
 - Significant changes in the temperature, flow or chemical content of surface thermal springs?
- D. Plant Life.** Will the proposal result in:
- Change in the diversity of species, or number of any species of plants (including trees, shrubs, grass, crops, and aquatic plants)?
 - Reduction of the numbers of any unique, rare or endangered species of plants?
 - Introduction of new species of plants into an area, or in a barrier to the normal replenishment of existing species?
 - Reduction in acreage of any agricultural crop?
- E. Animal Life.** Will the proposal result in:
- 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)?
 - Reduction of the numbers of any unique, rare or endangered species of animals?
 - Introduction of new species of animals into an area, or result in a barrier to the migration or movement of animals?
 - Deterioration to existing fish or wildlife habitat?
- F. Noise.** Will the proposal result in:
- Increase in existing noise levels?
 - Exposure of people to severe noise levels?
- G. Light and Glare.** Will the proposal result in:
- The production of new light or glare?
- H. Land Use.** Will the proposal result in:
- A substantial alteration of the present or planned land use of an area?
- I. Natural Resources.** Will the proposal result in:
- Increase in the rate of use of any natural resources?
 - Substantial depletion of any nonrenewable resources?

- 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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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)


See Supplement C.

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: 04 / 15 / 88

 Dan Cohen
 For the State Lands Commission

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SUPPLEMENT A

Project Location:

Both the Grizzly Island and the Van Sickle Island projects are located in the Sacramento-San Joaquin Delta, Solano County. Specifically -

Grizzly Island: Sections 25, 26, 34, 35, T.4N, R.2W and Sections 14, 15, 19, 20-22, 30, T.4N, R.1W, MDB&M, Solano County.

Van Sickle Island: Section 1, T.2N, R.1W, Section 25, T.3N, R.1W, Sections 19, 20, 28-31, T.3N, R.1E, and Section 6, T.2N, R.1E, MDB&M, Solano County.

(Please see enclosed location maps)

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SUPPLEMENT B

SUPPLEMENT 13

Project Description:

A seismic survey is proposed for potential natural gas deposits on two lines in the area of Van Sickle Island (totaling approximately 6.07 miles), and on two lines in the area of Grizzley Island (totaling approximately 15.5 miles). A total of 1,170 shot holes will be drilled (4-inch diameter, 50-100 foot depth) at 100-foot intervals. Most holes will be loaded with a geophone and a 5-15 pound charge, and some will house only a geophone. The holes will be filled with bentonite immediately after drilling. When the charges are detonated, the travel time of the seismic waves generated by the explosion will be recorded.

The applicant shall comply with the requirements of all other permitting agencies with respect to this proposed project.

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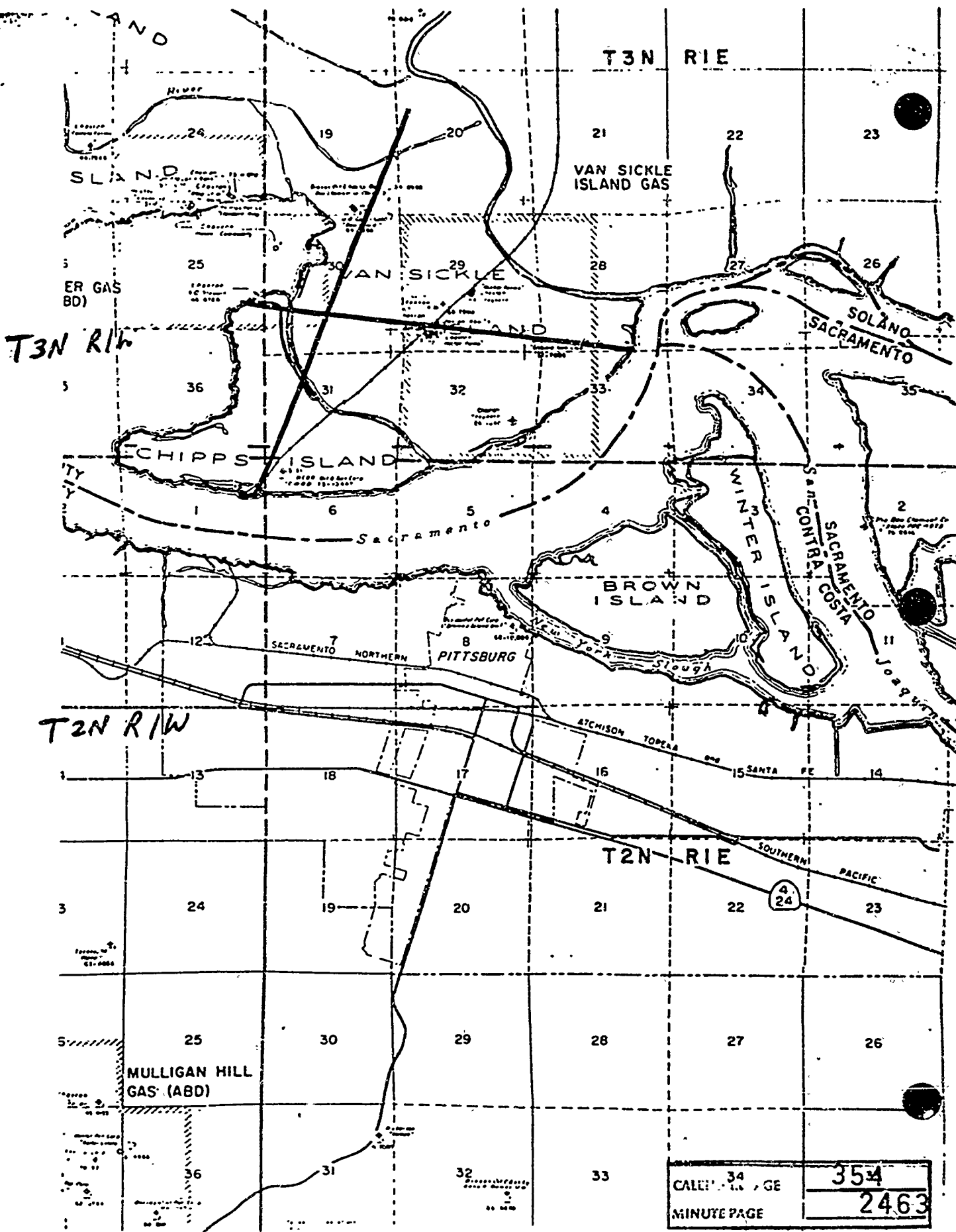
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SUPPLEMENT C
SUPPLEMENT

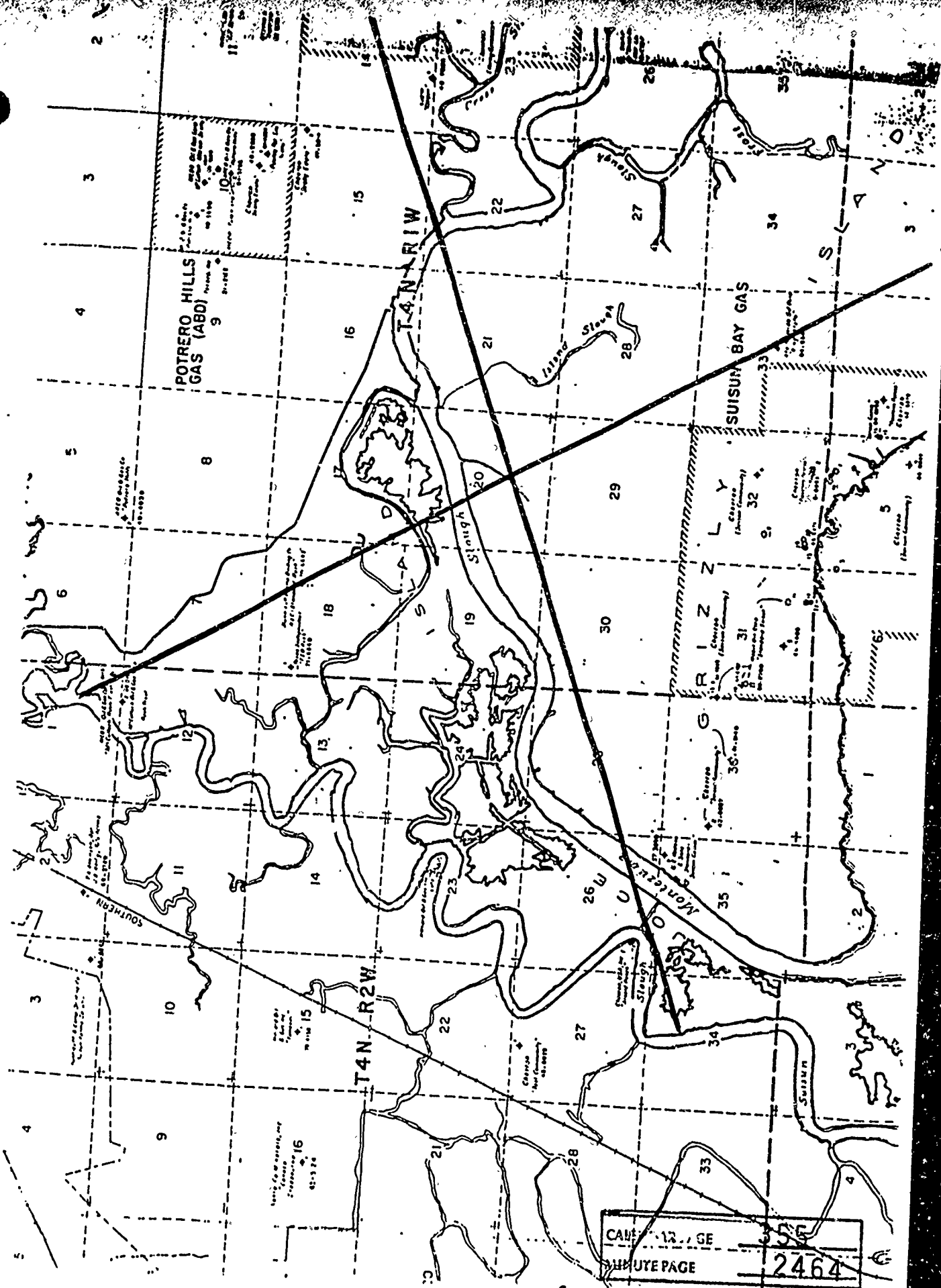
- A.2. Holes will be drilled approximately 4 inches in diameter, and 50-100 feet deep at 100-foot intervals. Shot holes will be backfilled and capped with excavated material.
- C.5. Release of drilling spoils into the water column at the drill sites could potentially affect water quality. However: the total amount of released spoils will be approximately 2,000 cubic yards; the spoils will be released in incremental amounts of less than three-fourths of a cubic yard in 1,170 widely scattered locations in Suisun and Grizzly Bays, and; most of the spoils will be released in areas with relatively good water circulation. The release of spoils, therefore, should not significantly affect water quality.
- E.1. To minimize adverse effects on migratory fish, no work will be performed during December and January. To reduce fish mortality, only the minimum charge size necessary shall be used. No blasting will be performed near large accumulations of fish.
- F.1. Noise will occur from the shot-hole explosive charges. The impact, however, will be short-term (10-14 days), and at sites away from densely populated areas.
- J.1. When explosives are used there is always the risk of injury or damage caused by an accidental detonation. However, every reasonable safeguard will be employed, and all restrictions set forth by the Solano County Fire Warden will be strictly followed.

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POTRERO HILLS GAS (ABD)

SUISUN BAY GAS

T4N R1W

T4N R2W

RIZZ

MONTECITO

CAMP 12, SE
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