

MINUTE ITEM

This Calendar Item No. 36
was approved as Minute Item
No. 36 by the State Lands
Commission by a vote of 2
to 0 at its 4-23-87
meeting.

CALENDAR ITEM

A 4, 10

S 2, 5

36

09/23/87

W 6005 PRC 7126
Gonzalaz

APPROVAL OF A GEOPHYSICAL SURVEY PERMIT FOR STATE-OWNED
TIDE AND SUBMERGED LANDS IN THE SACRAMENTO DELTA
SACRAMENTO, SOLANO AND SAN JOAQUIN COUNTIES

·APPLICANT: CGG American Services, Inc.
Attention: Mr. Jim Prossic
P. O. Box 488
Thornton, California 95686

PROPOSED AUTHORIZATION:

Approval of a Geophysical Survey Permit to
conduct geophysical studies along two lines
totaling 30 miles in length crossing private
uplands and State-owned waterways in the
Sacramento Delta in of San Joaquin, Solano, and
Sacramento counties.

TYPE OF LAND:

The State lands subject to this permit are
those tide and submerged lands in the waterways
crossed by the two seismic survey lines. These
waterways include the Sacramento River, Three
Mile Slough, Seven Mile Slough, Georgiana
Slough, Snodgrass Slough, Mokelumne River, and
Grizzly Slough. These waterway areas are
subject to State Oil and Gas Leases E 415 and
PRCs 714, 729 and 2966.

TERM:

The term of the Geophysical Survey Permit shall
be from October 1, 1987 through November 1,
1988.

PROJECT:

CGG American Services, Inc. has proposed
conducting a geophysical seismic survey in the
Sacramento Delta Area of San Joaquin, Solano,
and Sacramento counties. The survey will be
performed in two lines totaling approximately
30 miles as shown in the accompanying maps of

CALENDAR ITEM NO. 36 (CONT'D)

Exhibit "A". The survey lines will cross privately owned uplands and portions of State-owned waters. Approximately 960 four-inch diameter holes will be drilled on 165-foot centers to a depth of 50-100 feet. The holes may be loaded with a five-pound explosive charge and/or geophone instrumentation. The hole will be backfilled with bentonite to seal it.

CGG is coordinating this project with all the affected land owners, 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 State's oil and gas lessees and for the ultimate benefit to the State as an aid in development of the State's resources.

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 15250 et. seq.
- C. P.R.C. 21080.5 and CEQA Guidelines, Section 15250 et. seq.

AB 884: 08/24/88.

CALENDAR ITEM NO. 36 (CONT'D)

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 prepared a Negative Declaration identified as EIR ND 423 State Clearinghouse 87082516; such 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 possessing significant environmental values pursuant to P.R.C. 6370 et. seq. Based upon 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.

EXHIBITS:

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

IT IS RECOMMENDED THAT THE COMMISSION:

1. CERTIFY THAT A NEGATIVE DECLARATION EIR ND 423 STATE CLEARINGHOUSE 87082516, 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 PROPOSED, 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. 6370, ET. SEQ.

CALENDAR ITEM NO. 36 (CONT'D)

4. AUTHORIZE THE ISSUANCE TO CGG AMERICAN SYSTEM, INC. OF A PERMIT TO CONDUCT GEOPHYSICAL SEISMIC SURVEYS ON STATE-OWNED TIDE AND SUBMERGED LANDS IN THE SACRAMENTO DELTA AREA OF SACRAMENTO, SOLANO, AND SAN JOAQUIN COUNTIES FOR THE PERIOD OF OCTOBER 1, 1987 THROUGH NOVEMBER 1, 1988.

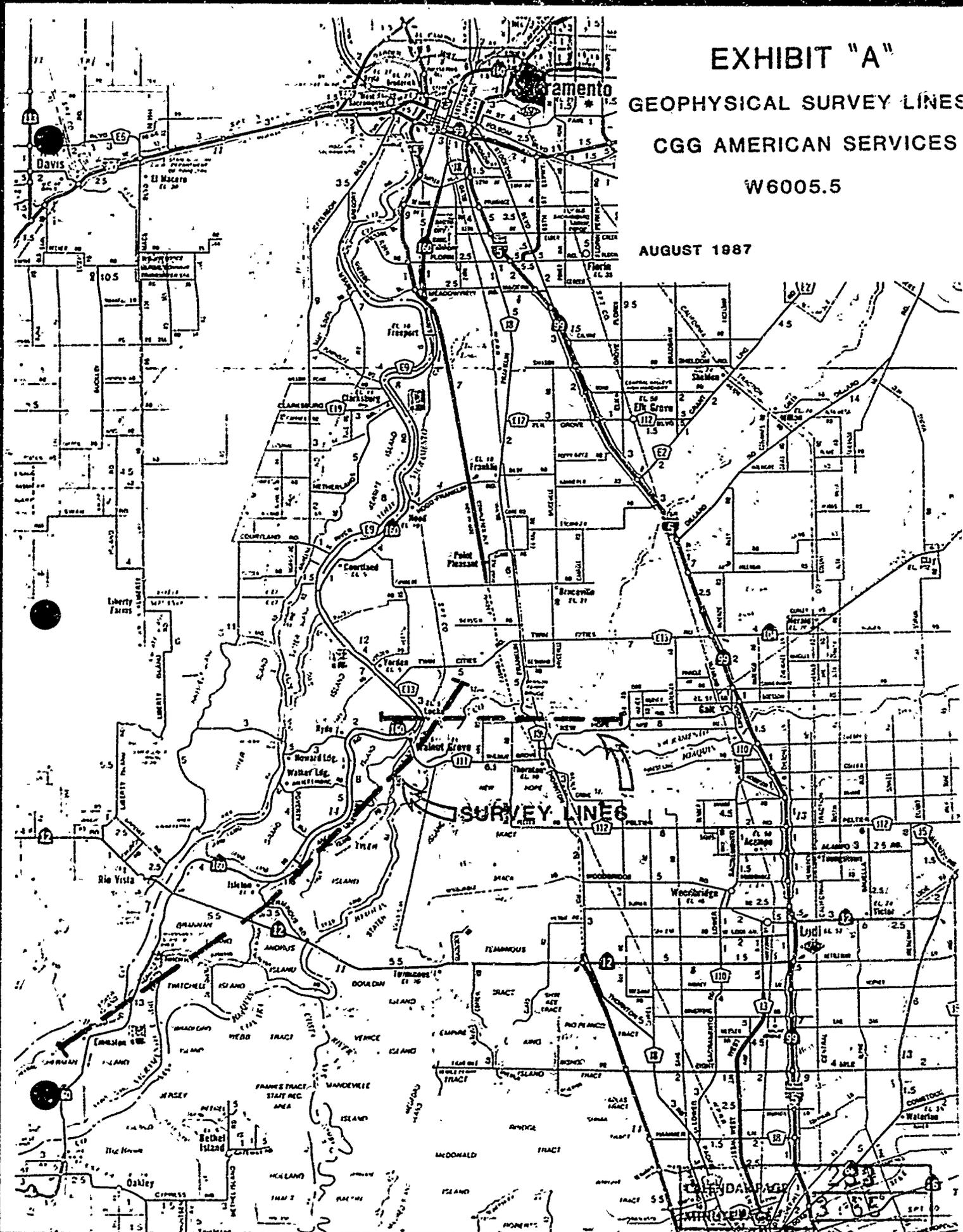
EXHIBIT "A"

GEOPHYSICAL SURVEY LINES

CGG AMERICAN SERVICES

W6005.5

AUGUST 1987



STATE LANDS COMMISSION
1807 13TH STREET
SACRAMENTO, CALIFORNIA 95814

PROPOSED NEGATIVE DECLARATION

EIR ND 423

File Ref.: W 6005.5

SCH#: 87082516

Project Title: West Thornton Geophysical Survey
Project Proponent: CGG Land Seismic
Project Location: Sacramento Delta Area: San Joaquin, Solano and Sacramento Counties

Project Description:

CGG American Services, Inc. proposes to conduct a geophysical seismic survey in the Sacramento delta Area of the San Joaquin, Solano and Sacramento Counties. The survey will be performed in two lines totaling approximately 30 miles over privately-owned uplands and portions of State waterways. Approximately 960 four-inch diameter holes will be drilled on 165 foot centers to a depth of 50-100 feet and loaded with a five pound explosive charge and/or geophone instrumentation.

Contact Person: Dwight E. Sanders, Chief Telephone: (916) 322-6877
Division of Research and Planning

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.

(ADDED PGS. 234 - 234.32)

CALENDAR PAGE	234
MINUTE PAGE	3:56

STATE LANDS COMMISSION

File Ref.: W 6005.5

August, 1987

WEST THORNTON GEOPHYSICAL SURVEY
SACRAMENTO DELTA AREA

INTRODUCTION

CGG American Services, Inc. has proposed conducting a geophysical seismic survey in the Sacramento Delta Area of San Joaquin, Solano and Sacramento Counties. The survey will be performed in two lines totaling approximately 30 miles as shown in the accompanying maps labeled "Attachment A". The survey lines will cross privately owned uplands and portions of State-owned waterway. Approximately 950 four-inch diameter holes will be drilled on 165 foot centers to a depth of 50-100 feet. The holes may be loaded with a 5 pound explosive charge and/or geophone instrumentation. The hole will be backfilled with bentonite to seal the hole. See Attachment B and C for further operational details.

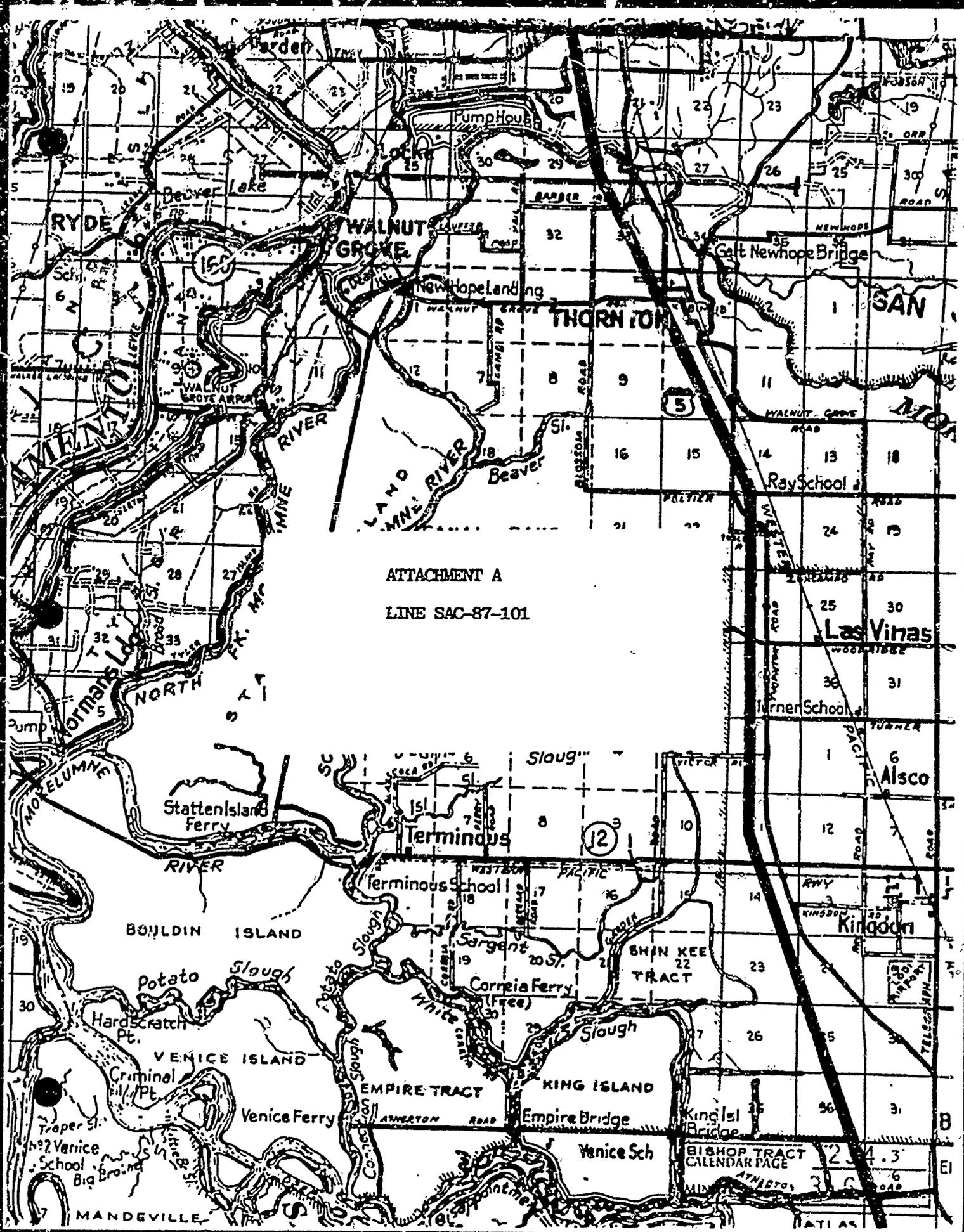
CGG is coordinating this project with all the effected land owners, trustee agencies, such as the Department of Fish and Game and other permitting and responsible local agencies listed in Attachment D.

CALENDAR PAGE	234.1
MINUTE PAGE	3:67

ATTACHMENT A
Line SAC-87-102



CALENDAR PAGE 234 of 2
MINUTE PAGE 368



ATTACHMENT A

LINE SAC-87-101

5

12

BISHOP TRACT
CALENDAR PAGE

2

3

6

B

EI

ATTACHMENT B

CGG's proposed West Thornton Project is composed of two seismic lines SAC-87-101 and SAC-87-102. This project is situated in the Sacramento Delta Region. The total mileage involved for both lines will be approximately 30 miles. The goal of this project is to determine possible oil and natural gas reserves through geophysical methods.

The geophysical method used in this case will involve the drilling of holes every 165', along our seismic lines. Each hole will be approximately 4" in diameter and generally drilled to a depth of 50'. Where explosives will be used under a waterway they will be drilled to 100'. The majority of the holes will be loaded with a 5 lbs. charge and a geophone. In some instances only a geophone will be loaded in the holes. Every hole will be properly plugged using a bentonite solution. CGG's drilling interval of 165' will be modified when crossing levees. Except where otherwise changed by the Reclamation Districts, the procedure for drilling in the vicinity of the levees is as follows: No hole loaded with a charge shall be closer than 250' from the crown of any levee; A hole loaded with "a geophone only" may be placed within 165' from the crown of any levee and if needed a geophone only hole may be drilled in the crown of the levee itself. For this project CGG anticipates drilling 960 ± holes. On land CGG will use buggy drills and in the water a pontoon drill will be used.

LINE SAC-87-101

This Line has an East-West orientation and is 7 ± miles in length. As indicated on the enclosed map, the line begins in the west on Grand Island at a point approximately 1 mile NW of the town of Walnut Grove. It proceeds across agricultural lands for 4000' ± crossing the Sacramento River. In crossing the river improved levee banks and a deep water channel would be encountered. The line continues in an easterly direction through a pear orchard for 1500' ±, across an abandoned railway through a narrow waterway and into the marsh area known as The Meadows. When leaving the railway the line would come through some large hardwood trees and brush leaving the levee bank and crossing a 200' ± waterway. It would then enter a marsh environment consisting mainly of high reeds, traversing the area for 1000' ±, where the line would exit the main body of the marsh through an area of large hardwood trees and brush. Crossing a narrow channel it would enter a small island consisting mainly of large hardwood trees and brush. The line would then continue across Snodgrass Slough and enter the Bean Ranch up an improved levee bank, sparsely covered with brush. The line would transect The Bean Ranch using an East-West road, leaving the island and crossing the Mokolumne River, entering what is known as the New Hope Tract. In crossing the river the line would cross improved levee banks, sparsely vegetated on both sides. The distance across the river would be 150' ±.

The line would continue across New Hope Tract through a wide variety of agricultural concerns, crossing Thornton Road, Interstate HWY 5 and The Western Pacific Railway, all approximately 1000' south of where they intersect the Mokolumne River. The line would leave the New Hope tract and cross a narrow portion of the Mokolumne river, traversing sparsely vegetated, improved levee banks on either side. The line would continue across agricultural lands for 5000'±, crossing Grizzly Slough at a point 1000'± south of it's intersection with the Consumnes. In crossing the slough the line would cross an improved sparsely vegetated levee bank on the west side and a lightly forested area on the east bank. That area of forest would be 150' or less in width. The line would continue 2900'± to the east terminating on the west side of Bear Slough.

SAC-87-102

This line has a SW to NE orientation and would be 23± miles in length. Starting in the SW the line begins on Sherman Island, as indicated on the enclosed map. The line proceeds in a NE direction, across a variety of agricultural concerns, for 7200'± crossing Horseshoe Bend at a point 2600'± east of it's intersection with the Sacramento River. The line transects the grazing lands of Decker Island, crossing Horseshoe bend to the NE at a point 4000'± SE of it's intersection with the Sacramento River. Both of the water crossings on Horseshoe Bend are similar. The line will enter and exit sparsely vegetated, improved levee banks on Sherman Island crossing a narrow growth of reeds on the water side of the levee in both cases. Entering and exiting Decker Island will also necessitate the crossing of a narrow column of sparse reeds, crossing unimproved levee banks on either side of the island. The distances across the water portion of Horseshoe Bend will be 1000'± on the southerly crossing and 1400'± on the crossing to the north.

Upon reentering Sherman Island the line continues to the NE across grazing lands leaving the island at a point where it crosses Three Mile Slough, 8000'± North of the intersection of the slough and the San Joaquin River. The water crossing at this point would be across improved levee banks covered with rip-rap, crossing the waterway itself for 900'±. The line would continue across the agriculture of Twitchell Island, crossing Seven Mile Slough 1800'± east of it's intersection with Tomato Slough. The water crossing would be less than 200' in distance over sparsely vegetated, improved levee banks. Entering Brannan Island the line would continue to the NE for approximately 3.25 miles, leaving the island 1000'± North of the intersection Jackson Slough Road and Terminous Road. Once on Andrus Island the line continues across various types of agriculture, generally maintaining a location in the center of the island. It would leave the island where it crosses The Georgiana Slough, as indicated in attachment A. The water crossing itself would be 300'± across sparsely vegetated, improved levee banks.

The line continues to the NE across the agriculture of Tyler and Dead Horse Island. It crosses Snodgrass slough and Dead Horse Cut on either side of Dead Horse Island. Both would be narrow water crossings over sparsely vegetated, improved levee banks. The line then extends across the Bean Ranch terminating on it's North boundary, as indicated on Attachment A.

ATTACHMENT C

In general the majority of the two seismic lines proposed will occur in agricultural lands with private ownership of the surface. The mode of operations for these areas will be buggy-mounted drills with pickup truck support and some use of helicopters for the transportation of personnel and equipment. In those areas shown on the attached map where water crossings are anticipated, the operations will be modified as follows:

--A. Any Holes drilled in the waterway are subject to the terms of the list of guidelines made a part of this agreement (attachment E). The method for drilling the holes in waterways shall be through the use of a pontoon drill, which is self propelled and which enters and exits the water at approved locations.

--B. In order to place our sensing equipment from levee to levee it will be necessary at every water crossing and in marsh areas to place by hand a cable/phonx system, which enters and exits the water. No alteration of the stream bed will occur and no heavy equipment will be needed between the levee crown and the waters edge on either side of a water crossing or in marsh areas. The cable/phonx system shall be weighted and shall extend across the bottom of the watercourse or marsh for 2-3 days whereupon it shall be removed by hand on land and by boat in the water. The cable/phonx system is comprised of a "cable" the size of an outside extension cord, a "field unit" (5"x5"x4") box that sends a signal from the phonx to the cable, and the phonx itself a pressure sensitive hydrophone which generates the seismic signal to the field unit. Each unit as described weighs 35 lbs. total and extends 165' in length. Numerous units are connected together to create the seismic line.

--C. In cases where there are narrow water crossings and a boat is not already launched, it will be necessary to hand carry from a pickup truck on the levee a 12-15' aluminum boat to transport the cable across the water. Just as with the cable/phonx system the launching of the boat will be done by hand without stream bed modification.

--D. For this survey drilling operations will occur only in Horseshoe Bend and Three Mile Slough and these holes will be loaded with geophones only - as described in attachment E. All other water crossings, including those in the marsh lands, shall require the placement of our cable/phonx system as described above.

ATTACHMENT D

- 1.) Department of The Army
- 2.) Cal Trans Permit
- 3.) San Joaquin Local Health District
- 4.) Sacramento County Dept. of Public Works
- 5.) Sacramento County Sheriff's Department
- 6.) Solano County Fire Warden
- 7.) San Joaquin County Sherrif-Coroner
- 8.) Department of Water Resources
- 9.) Various Reclamation Districts



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
SACRAMENTO DISTRICT CORPS OF ENGINEERS
850 CAPITOL MALL
SACRAMENTO, CALIFORNIA 95814-479-

June 19, 1987

Regulatory Section (N6-006)

Mr. James F. Prossick
CGG Land Seismic
Post Office Box 488
Thornton, California 95686

Dear Mr. Prossick:

I reviewed the map submitted with your letter dated June 10, 1987, showing the routes for your proposed seismic survey.

The Department of the Army has issued a nationwide general permit for survey activities, including seismic exploratory operations, in navigable waters of the United States. Your proposed surveying can be done under the authority of the nationwide permit provided the work meets the conditions of the enclosed information sheet. I have assigned Number N6-006 to this proposed work.

I suggest you contact Aids to Navigation, U.S. Coast Guard, prior to start of any work within a waterway. Their address is: Commander (oan), 11th Coast Guard District, 400 Oceangate Boulevard, Long Beach, CA 90822-5399

If you have any questions, please contact Phyllis Petros, Room 6538 at the above letterhead address, or telephone (916) 551-2272.

Sincerely,

Robert M. Clark
Chief, Regulatory Unit 1

Enclosure

CALENDAR PAGE	234.9
MINUTE PAGE	3.75

DEPARTMENT OF TRANSPORTATION (CALTRANS)
ATTACHMENT PERMIT
 M-P-522A (REV 2/82)

Compliance with (check one):

Your application of MAY 26, 1987

Utility Notice No. _____ of _____

Agreement No. _____ of _____

I/W Contract No. _____ of _____

Permit No.	1987-6-GC-0421	
Dist/Co/Res/PH	10-SJ, SAC-49.71.3.0.6.22	
Date	May 27, 1987	
Fee Paid	Deposit	
\$80	\$	
Bond Amount	\$	
Bond Company		
Bond Number		

CGG LAND SEISMIC-ASI CREW 0524
 P O BOX 488
 THORNTON, CA 95686

ATTN: JAMES PROSSICK (209) 794-2382

PERMITEE

subject to the following, PERMISSION IS HEREBY GRANTED to place and remove geophysical cable under and across State Highway 5 in existing culvert 400 feet south of Mokelumne River, on State Highway 12 1400 feet west of Jackson Slough Road, and on State Highway 160 4000 feet south of Three Mile Slough. All work shall be done in accordance with this permit and the attached geophysical survey requirements.

In accordance with General Provision No. 7, THREE WORKING DAYS PRIOR to the start of this work, permittee shall notify grantor's representative, Fred Sharp, Modesto, (209) 576-6299, 142 N 9th Street, suite B, Modesto, CA 95350. All work under this permit must meet with the approval of the grantor's representative.

IMMEDIATELY FOLLOWING COMPLETION OF WORK PERMITTED HEREIN, PERMITEE SHALL FILL OUT AND MAIL NOTICE OF COMPLETION PROVIDED BY GRANTOR.

This permit is not valid until permittee has obtained permission from
 (CONTINUED ON SHEET 2)

following attachments are also included as part of this permit. (Check applicable):

- Yes No General Provisions
- Yes No Utility Maintenance Provisions
- Yes No Special Provisions 180, 181, 183
- Yes No A Cal-USA permit required prior to beginning work

In addition to fee the permittee will be billed actual costs for:

- Yes No Review
- Yes No Insertion
- Yes No Field Work

(If any Caltrans effort expended)

N.A. The information in the environmental documentation has been reviewed and considered prior to approval of this permit.

permit is void unless the work is completed before **NOVEMBER 27, 1987**.
 permit is to be strictly construed and no other work other than specifically mentioned is hereby authorized.
 project work shall be commenced until all other necessary permits and environmental clearances have been obtained.

PERM PAINT FISHWAY	APPROVED:	
	P. W. FELLE, District Director	
	BY: <i>C. A. Rice</i>	
	C. A. RICE, District Permit Engineer	
		FULL PAGE 234.10 HALF PAGE 3.76

**APPLICATION FOR PERMIT
SAN JOAQUIN LOCAL HEALTH DISTRICT
1601 E. HAZELTON AVE., STOCKTON, CA
Telephone (209) 468-6781**

PERMIT EXPIRES 1 YEAR FROM DATE ISSUED

Application is hereby made to the San Joaquin Local Health District for a permit to construct and/or install the work herein described. This application is made in compliance with San Joaquin County Ordinances No. 540 for sewage or No. 1862 for well/pump and the Rules and Regulations of the San Joaquin Local Health District.

Job Address: San Joaquin County, see map Lot Size _____ PM _____

Owner's Name: COG Land Seismic Address: 699 Hampshire Rd., Ste 203 Westlake Village, CA 91361 Phone: (209) 794-2382

Contractor: COG Land Seismic Address: 7127th CA 95626 License No. _____ Phone _____

TYPE OF WELL/PUMP: NEW WELL WELL REPLACEMENT DESTRUCTION (I)
 PUMP INSTALLATION SYSTEM REPAIR OTHER (I) Well Wells
 DISTANCE TO NEAREST: SEPTIC TANK _____ SEWER LINES _____ DISPOSAL FLD. _____ PROP. LINE _____
 FOUNDATION _____ AGRICULTURE WELL _____ OTHER WELL _____ PITS/SUMPS _____

INTENDED USE	TYPE OF WELL	PROBLEM AREA	CONSTRUCTION SPECIFICATIONS	
<input type="checkbox"/> Industrial	<input type="checkbox"/> Open Bottom	<input type="checkbox"/> Manteca	Dia. of Well Excavation: _____	Dia. of Well Casing _____
<input type="checkbox"/> Domestic/Private	<input type="checkbox"/> Gravel Pack	<input checked="" type="checkbox"/> Tracy	Type of Casing _____	Specifications _____
<input type="checkbox"/> Public	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Delta	Depth of Grout Seal _____	Type of Grout _____
<input type="checkbox"/> Irrigation	<input type="checkbox"/> Approx. Depth _____	<input type="checkbox"/> Eastern	Surface Seal installed by _____	
Repair Work Done <input type="checkbox"/>	Type of Pump _____	H.P. _____	State Work Done _____	
Well Destruction <input type="checkbox"/>	Well Diameter <u>4"</u>	Sealing Material (top 5') <u>Coarse Bentonite clay</u>		
	Depth <u>50'</u>	Filter Material (Below 50') _____		

TYPE OF SEPTIC WORK: NEW INSTALLATION REPAIR/ADDITION DESTRUCTION LI (No septic system permitted if public sewer is available within 200 feet.)

Installation will serve: Residence _____ Commercial _____ Other _____
 Number of living units: _____ Number of bedrooms: _____

Character of soil to a depth of 3 feet: _____ Water table depth _____
 SEPTIC TANK Type/Mfg _____ Capacity _____ No. Compartments _____
 PKG. TREATMENT PLT. Method of Disposal _____

Distance to nearest: Well _____ Foundation _____ Property Line _____

LEACHING LINE No. & Length of lines _____ Total length/size _____
 FILTER BED Distance to nearest: Well _____ Foundation _____ Property Line _____

SEEPAGE PITS Depth _____ Size _____ Number _____
 SUMPS Distance to nearest: Well _____ Foundation _____ Property Line _____

DISPOSAL PONDS

I hereby certify that I have prepared this application and that the work will be done in accordance with San Joaquin county ordinances, state laws, and rules and regulations of the San Joaquin Local Health District.
 Home owner or licensed agent's signature certifies the following: "I certify that in the performance of the work for which this permit is issued, I shall not employ any person in such manner as to become subject to workman's compensation laws of California." Contractor's hiring or sub contracting signature certifies the following: "I certify that in the performance of the work for which this permit is issued, I shall employ persons subject to workman's compensation laws of California."

The applicant must call for all required inspections. Complete drawing on reverse side.

Signed X Michael Jordan Title: Permit Agent Date: 6-16-87

Application Accepted by Ted Morgan Date 6-17-87 Area 12

Final Inspection by _____ Date _____

Additional Comments: _____
 Sbk 468-6781 Lodi 369-3821 Manteca 823-7104 Tracy 835-8385

Applicant - Return all copies to: Environmental Health Permit/Services 1601 E. Hazelton Ave., P.O. Box 2009, Sbk, CA 95201

FEE INFO	AMOUNT DUE	AMOUNT REMITTED	CASH	RECEIVED BY	DATE	PERMIT NO.
	35.00	35.00				77

SACRAMENTO COUNTY DEPARTMENT OF PUBLIC WORKS
 627 - 7th ST., SACRAMENTO, CALIFORNIA
 PHONE 440-8544

PERMIT NO. 87-409
 MAINTAINED ROAD MAP NO. 003
 COORD. NO. _____

U.S.A. TICKET NO. _____

APPLICATION FOR ENCROACHMENT PERMIT

1. Application is made for permission to excavate, construct and/or otherwise encroach on county right of way by performing the work described below on:

SEE ATTACHED PLANS Between _____
(Name of Road)
(Cross Roads or Address)

2. Estimated

(a) Excavations: _____
(Type: PVC, Metal, etc.) (Conveying water, gas, etc.)
(Sidewalk, Sign, Driveway, etc.) Description

(b) Conduits: _____
(Type: PVC, Metal, etc.) (Conveying water, gas, etc.)
(Sidewalk, Sign, Driveway, etc.) Description

(c) Other: Shot hole seismic survey; (laying cable across h.i.w.)

3. Attach Plans to applications in quadruplicate.
4. Applicant must check with all Utility Companies serving the area covered by this permit, for location of existing underground pipes, conduits or cables.
5. Before starting work, the Permittee shall notify Sacramento County Construction Inspection, Phone (916) 366-2201, 24 hours in advance of the date work is to begin.
6. Attention is directed to the General Provisions and Specific Conditions printed on the reverse side of this permit and to any Special Provisions attached hereto and made a part hereof.

In consideration of the granting of this application, it is agreed by the applicant that the County of Sacramento and any officer or employee thereof shall be saved harmless by the applicant from any liability or responsibility for any accident, loss or damage to persons or property happening or occurring as the proximate result of any of the work undertaken under the terms of this application and the permit or permits which may be granted in response thereto, and that all of said liabilities are hereby assumed by the applicant. It is further agreed that if any part of this installation interferes with the future use of the highway it must be removed or relocated as designated by the Director of Public Works at the expense of the applicant or their successor in interest.

Applicant: CGG American Services
(Print Business Name)

Address: P.O. Box 488 Phone: 209 1774
Thurston CA (Zip) 75686

Signature: Michael Kwidon

FOR USE BY UTILITY COMPANIES

District: _____ Division: _____
 Engineer: _____ Job No.: _____

SPACE FOR SKETCH OR COMMENTS:

Assessor Parcel No. _____

SEE ATTACHED

DEPARTMENTAL REVIEW	
County Water	Highways <u>11-118</u>
Water Resources <u>11-118</u>	Water Quality <u>11-118</u>
Deposit: \$	Code: 0077-0301
Permit Fee: \$ <u>200.00</u>	Code: 2900-9258-SH000-062270
Validation:	

CONDITION

1. _____
2. _____
3. _____
4. _____

Application approved subject to payment of fees. CONDITIONS OF WORK, and is revocable at any time.

This permit is nontransferable and EXPIRES ONE YEAR from date issued

D.W. MCKENZIE, Director of Public Works

By: Jana R. Brown Date: 7/1/87

Inspector Approval

ENCLOSURE PAGE 234/12
 MINUTE PAGE 3:78



CGG LAND SEISMIC
A DIVISION OF CGG AMERICAN SERVICES, INC.

7-5-87

Sacramento County Sheriff's Department
711 G. Street
Sacramento, CA
Attn: Sgt. R. Howell

Dear Sgt. Howell:

In reference to our phone conversatio on the 3rd I am forwarding the necessary information to amend CGG's current explosives permit. I have enclosed a map of the area we will be working in. The materials we will be using consist of 100' SSS caps (Dupont), and 5 lb. sticks of the 60% Seisgel type.

If you require any additional information please call me at our Thornton field office.

Thank you for your time and consideration in this matter.

Sincerely,

Michael Riordan

Michael Riordan
permit agent

SHAMPSHIRE ROAD
1E 703
WESTLAKE VILLAGE, CALIFORNIA
91361

NOV 496 4331
213 991 7050
TELEX: 182879



CGG LAND SEISMIC
A DIVISION OF CGG AMERICAN SERVICES, INC.

MICHAEL RIORDAN 4.13
Permit Agent
FIELD OFFICE 277-2728

1515 CHIMPA

659 SHAMPSHIRE ROAD UNIT
WESTLAKE VILLAGE, CA 91361

called in 8-11-85

FOR INFORMATION

SACRAMENTO COUNTY SHERIFF'S DEPARTMENT
711 B Street, Sacramento, California

EXPLOSIVES PERMIT

Permit No. 105-86
New
Renewal

Fingerprint No. _____
Application Date 4-3-85
Permit Date 7-3-85
(Min. 7 day waiting period)

**NOTIFY 24 hrs
in Advance**

1. Permittee:

Name McMillon, Jerry Allen
(Last) (First) (Middle)

Address 5240 Shortway Drive Phone No. 916-395-2249
Street City

Representing: C.G.G. Land Seismic Phone No. 916-452-2058 or 2059

Address 699 Hampshire Road Suite 203 Westlake, Ca. 91361
Street City State Zip Code

Driver Lic.# 2828027 State Ca. Expiration Date 1986

Social Security # 519-52-4790 Date of Birth 2-12-50

2. Transport Vehicle:

Make Ford Model P/U Yr. 1984 License No. 2J31801 State CA.

Travel Route & Safe Stopping Places Freeport, Meadowview, Mack Rd., Franklin Rd.

3. Activity:

Manufacture Store Receive and/or Transport Use Sell or Dispose

Restrictions Store, Transport, & Use seismic operations

4. Material:

Type of Explosives Vibro-Gel Quantity 100+ lbs

Location of storage 8685 River Road

Type of storage Class A Type Magazine

How and/or where used Seismic Exploration in Sacramento County

I, the undersigned, certify that I understand and will abide by all Federal, State and local laws, ordinances, rules or orders to perform those acts noted herein. I also understand that all unused inventory covered by the permit on or before the expiration date will be disposed of in the following manner:

- (1) Returned to source
- (2) Totally destroyed
- (3) Turned over to the authority issuing the permit or reapply for a new permit.

Jerry McMillon
Signature

APPROVAL

This permit is granted on 11-14-86 to perform those activities noted above, and will expire 11-14-87 or until suspended or revoked.
(1 yr. max. from date of issue)

The permittee is limited to perform these activities as indicated times or during the tenure of the permit, subject to the conditions noted below. This permit is not transferable.

Sgt. R. Howell
ISSUING AUTHORITY
Sgt. R. Howell #12
916-440-6153

Distribution:

- (1) Permittee - White
- (2) 10 Copy - Green
- (3) State Bureau of CII, Sacramento - Yellow
- (4) Chief fire authority where explosives to be stored or used - Pink REPORT

PERMITS PAGE 234.14
3:20

DEPARTMENTAL RECEIPT NUMBER

SOLANO COUNTY FIRE WARDEN
COURTHOUSE ANNEX
600 TEXAS STREET
FAIRFIELD, CALIFORNIA 94533

EXPLOSIVES APPLICATION AND PERMIT

APPLICATION & PERMIT # 181 APPLICATION DATE 6-30-87 PERMIT DATE _____
MINIMUM 7 DAY WAITING PERIOD FEE: \$2.00 - 100 LBS OR LESS XX \$10.00 - MORE THAN 100 LBS.

- PERMITEE: NAME Michael White Riordan BLASTERS PERMIT NO. _____
ADDRESS 8927 Wickfield, San Antonio, TX 78217
AGE 25 HT 6'3" WT 195 EYES Blue HAIR Brn SEX Male DRIVERS LICENSE NO. 09143283
REPRESENTING CGG American Services, Inc., 699 Hampshire Rd, Ste 203, Westlake Village, CA 91361
- VEHICLE: MAKE & MODEL Nissan 4 x 4 YEAR 86 STATE & LICENSE NO. 475-1DB TX
TRAVEL ROUTE & SAFE STOPPING PLACE _____
- ACTIVITY: MANUFACTURE _____ STORE _____ RECEIVE &/OR TRANSPORT _____ USE _____
SELL OR OTHERWISE DISPOSE _____ *OPER. TERMINAL _____ PARK VEHICLE _____
- MATERIAL: TYPE 100' SSS Caps (Dupont) 60% Seisgel, 5 lb. sticks QUANTITY 2600 10.13, 10.14
HOW & WHERE STORED Material will be transported in not stored in Solano County.
HOW & WHERE USED See Attachment Underground Seismographic geophysical surveys.

I, THE UNDERSIGNED, CERTIFY THAT I UNDERSTAND AND WILL ABIDE BY ALL FEDERAL, STATE AND LOCAL LAWS, ORDINANCES, RULES OR ORDERS TO PERFORM THOSE ACTS NOTED HEREIN. I ALSO UNDERSTAND THAT ALL UNUSED INVENTORY COVERED BY THIS PERMIT, ON OR BEFORE THE EXPIRATION DATE, WILL BE DISPOSED OF BY RETURNING TO THE SOURCE, OR BY RETURNING TO THE AUTHORITY ISSUING THE PERMIT OR REAPPLYING FOR A NEW PERMIT.

SIGNATURE Michael White Riordan

APPROVAL

THIS PERMIT IS GRANTED ON 6/30/87 TO PERFORM THOSE ACTIVITIES NOTED ABOVE.
EXPIRE ON 6/30/88 (ONE YEAR MAXIMUM FROM DATE OF ISSUANCE)

PERMITEE IS LIMITED TO PERFORM THOSE ACTIVITIES LISTED ABOVE DURING THE TENURE OF THIS PERMIT, SUBJECT TO THE CONDITIONS NOTED BELOW. THIS PERMIT IS NOT TRANSFERABLE AND IS VALID ONLY IN SOLANO COUNTY.

SOLANO COUNTY FIRE WARDEN OR REPRESENTATIVE
ISSUING AUTHORITY

Chester W. Neal

COMMENTS: BEFORE USAGE OF EXPLOSIVES, CONTACT SOLANO COUNTY DISPATCH CENTER 707-429-6331 TO INFORM THEM OF THE LOCATION AND TIME OF BLASTING.

CONDITIONS: _____

WHITE-Applicant BLUE-Applicant GREEN-Auditor CANARY-Sheriff PINK-Dept of Justice GOLD-Insurance Auditor
*TERMINAL APPROVALS SHALL BE FORWARDED TO: Enforcement Services Division, California Highway Patrol

PO Box 898, Sacramento, CA 95804

DATE	234.15
AMOUNT	3.81

SAH JOAQUIN COUNTY SHERIFF-CORONER

COURTHOUSE
STOCKTON, CALIFORNIA

APPLICATION AND PERMIT
EXPLOSIVES

Application & Permit No. 87-7 Application Date July 24th 1987

Fee: \$ 2.00 100 lbs. or less. Permit Date July 29, 1987
\$10.00 more than 100 lbs. (Minimum 7 day waiting period)

1. Permittee:
Name James F. Prossick Address Suite 100A
699 Hampshire Rd Westlake Village, CA. 91361

D.O.B. 5-22-58 Hgt. 6' 2" Wgt. 185 Color Green Eye Green Hair Black Sex M Drivers Lic. No C3164453
(Min. 21)

Representing: CGG American Services Inc.

2. Vehicle for Trans: Make Ford/Ford Model U/PU Yr. 83/82 Lic. No. 5DD199/2S95310
State Registration CO. App/CA. Travel Route and Safe Stopping Places SEE ATTACHED MAP

3. Activity: Manufacture Store Receive and/or Transport Use Sell or other-
wise dispose Operate Terminal* Park Vehicle

4. Material: Type of Explosive Seisgel 60% Quantity 3000 lbs.
How and/or where stored In approved magazine in Sacramento County

How and/or where used New Hope Tract

I, the undersigned, certify that I understand and will abide by all Federal, State and Local laws, ordinances, rules, or orders to perform those acts noted herein. I also understand that all unused inventory covered by the permit on or before the expiration date will be disposed of in the following manner: (1) Returned to source
(2) Totally destroyed
(3) Turned over to the authority issuing the permit or reapply for a new permit

James F. Prossick
Applicant's Signature

APPROVAL

This permit is granted on July 29, 1987 to perform those activities noted above, and
(Date)

will expire July 29, 1988

1 year maximum from date of issue

The permittee is limited to perform these activities See attached addendum times or during the tenure of the permit, subject to the conditions noted below. This permit is not transferable

JOHN ZUNINO, Sheriff-Coroner

By Ken Wagner
Issuing Authority

Ken Wagner, Assistant Sheriff

Restrictions:

Distribution:

- (1) Permittee
- (2) Issuing Authority
- (3) County Fire Marshall
- (4) State Bureau of CII, Sacramento
- (5) Chief fire authority where explosives to be stored or used.

*Terminal approvals shall be forwarded to:

California Highway Patrol
Motor Carrier Safety Section
2611 - 26th Street
Sacramento, CA 95814

SEARCHED PAGE 234.16
INDEXED PAGE 3:32

DEPARTMENT OF WATER RESOURCES
THE RECLAMATION BOARD9th Street, Room 455-6
Sacramento, CA 95814
(916) 445-9454

June 17, 1987

File No. 3001.70.001

Mr. James F. Prossick
CGG American Services, Inc.
P. O. Box 488
Thornton, CA 95686

Dear Mr. Prossick:

The Reclamation Board has no objection from a flood control standpoint to your conducting seismic surveys in the Sacramento Delta along the survey lines shown on the map enclosed with your May 31, 1987 letter provided that:

1. Your company shall notify the Department of Water Resources by telephone, 916-445-3942, at least three working days prior to start of work.
2. The energy charge shall be limited to 5 pounds and shall not be placed within 250 feet from the levee toes.
3. The seismic survey shall not interfere with levee maintenance work.
4. Geophysical cables may be placed on or near the levees and across the Sacramento, Cosumnes, and Mokelumne Rivers. Cables placed across the rivers should not interfere with river navigation.
5. The work shall be completed by October 1, 1987.

CALL CHARGE	234.17
DUPLICATE PAGE	3133

Mr. James F. Prossick
Page 2
June 17, 1987

Enclosed are an approved copy of your permission request and a copy of your map showing the locations of the survey lines.

If you have any questions, please contact Ed Greiner at the above address or telephone 916-324-3889.

Sincerely,



RAYMOND E. BARSCH
General Manager

Enclosure

cc: Colonel Wayne J. Scholl
District Engineer
Sacramento District
U. S. Army Corps of Engineers
650 Capitol Mall
Sacramento, CA 95814

LEND PAGE	234.18
REPORT PAGE	3:34

MURRAY, BURNS AND KIENLEN

A CORPORATION
CONSULTING CIVIL ENGINEERS
1618 29TH STREET SUITE 300
SACRAMENTO CALIFORNIA 95816
TELEPHONE (916) 458-4400

JOSEPH I. BURNS P.E.
DONALD E. KIENLEN, P.E.

JERRY J. ELLIOTT, P.E.
JOHN F. WRIGHT P.E.
GILBERT CONRO, JR. P.E.
MARC VAN CAMP

ANGUS NORMAN MURRAY
1610 - 1685

July 21, 1987

Reclamation District No. 348
c/o D. D. Geiger
400 Bank of Stockton Building
311 E. Main Street
Stockton, California 95202

Re: Seismic Work - CGG Land Seismic

Dear Mr. Geiger:

Reference is made to a proposal by CGG Land Seismic to conduct seismic testing work within Reclamation District No. 348, New Hope Tract.

From the maps submitted by the CGG Land Seismic it appears that the test work will be done on an east-west alignment located north of Barber Road and south of the north levee of Reclamation District No. 348.

According to a letter dated May 28, 1987 by the CGG Land Seismic the mode of operation used by the company is as follows:

1. No holes loaded with a charge will be drilled closer than 250 feet from any levee.
2. Holes that are not loaded with a charge will be drilled no closer than 165 feet from any levee.
3. A hole may be drilled in the crown of the levee but no charge may be loaded in that hole.
4. All holes will be backfilled with bentonite.

These same methods have been utilized in other reclamation districts and no problems have been encountered.

LENSA PAGE	234.19
INDEX PAGE	3185

Reclamation District No. 348

July 21, 1987

-2-

I see no objection to the proposed seismic testing provided that the limitations in and near the district levees are strictly adhered to by the CGG Land Seismic Company.

Sincerely,

MURRAY, BURNS and KIENLEN

By: *[Signature]*
John F. Wright

cc:→CGG Land Seismic
P. O. Box 488
Thornton, California 95686
Attn: James Prossick

NO. OF PAGES	234	20
NO. OF COPIES	3	86



Reclamation District 556

Do not use this form for other than the purpose intended

CGG LAND SEISMIC
A DIVISION OF CGG AMERICAN SERVICES, INC

G.C. Wilson

5-28-87

P.O. Box 248

DATE

Walnut Grove, CA. 950

916-776-1142

C.G.G. as an independent contractor, hereby requests permission to conduct a geophysical survey on lands owned/leased by you and described as follows:

T. R. S. County CGG Line No.
Properties owned/governed by Reclamation District indicated on map

In consideration for granting this permission we agree that:

- All operations will be conducted at our own risk and expense.
- This Company will indemnify and hold you harmless from all liability to or claims of others which may result from our operations on your lands.
- We will assume full responsibility for any damages caused by or arising from our operations on your lands.
- Necessary permission will be obtained from Private Landowners prior to commencement of our operations.
- Special conditions: Shot Hole 50' depth 5 lbs. charge

Please indicate your agreement hereto by signing and returning the attached duplicate of this letter.

Very truly yours,

By *James F. Prossick*

C.G.G. James F. Prossick

Crew 0524

Local Crew Phone Number: (209) 794-2382

George Wiley

LANDOWNER

DATE

LESSEE

DATE

REMARKS:

255 HAMPSHIRE ROAD
SUITE 100A
SANTA MONICA VILLAGE, CALIFORNIA

805 496 4311
818 991 7050
TELEX 162875

PERMITS PAGE 234.21
RECORD PAGE 3187



Reclamation District 2111

CGG LAND SEISMIC
A DIVISION OF CGG AMERICAN SERVICES, INC.

George C. Wilson

5-28-87
DATE

P.O. Box 248

Walnut Grove, CA. 95690

916-776-1142

C.G.G. as an independent contractor, hereby requests permission to conduct a geophysical survey on lands owned/leased by you and described as follows:

T. R. S. County CGG Line No.
Properties owned/governed by Reclamation District indicated on map

In consideration for granting this permission we agree that:

1. All operations will be conducted at our own risk and expense.
2. This Company will indemnify and hold you harmless from all liability to or claims of others which may result from our operations on your lands.
3. We will assume full responsibility for any damages caused by or arising from our operations on your lands.
4. Necessary permission will be obtained from Private Landowners..... prior to commencement of our operations.
5. Special conditions: Shot Hole 50' Depth 5 lbs. charge.....

Please indicate your agreement hereto by signing and returning the attached duplicate of this letter.

Very truly yours,

By James F. Prossick

C.G.G. James F. Prossick

Crew..... 0524.....

Local Crew Phone Number: (209) 794-2382

<u>George C. Wilson</u>	<u>6-4-87</u>		
LANDOWNER	DATE		
LESSEE	DATE		
REMARKS			

8 HAMPSHIRE ROAD
RTE 100A
AXE VILLAGE, CALIFORNIA

05 496 4311
18 991 7040
ELEX 182875

NO. OF PAGES 234.22
SERIAL NO. 3188



Reclamation District 1601

CGG LAND SEISMIC
A DIVISION OF CGG AMERICAN SERVICES, INC.

John V. Da Cruz

5-28-87
DATE

Star Route Box 460A

Rio Vista, CA. 94571
(916) 777-~~1521~~ 5266

C.G.G. as an independent contractor, hereby requests permission to conduct a geophysical survey on lands owned/leased by you and described as follows:

T. _____ R. _____ S. _____ County _____ CGG Line No. _____
Properties owned/governed by Reclamation District indicated on Map

In consideration for granting this permission we agree that:

1. All operations will be conducted at our own risk and expense.
2. This Company will indemnify and hold you harmless from all liability to or claims of others which may result from our operations on your lands.
3. We will assume full responsibility for any damages caused by or arising from our operations on your lands.
4. Necessary permission will be obtained from Private Landowners prior to commencement of our operations.

5. Special conditions: Shot Hole 50' depth 5 lbs. charge every 165'
No holes loaded with a charge will be drilled closer than 250' from any levee bank. Holes that are not loaded with a charge will be drilled no closer than 165' from any levee bank. A hole may be drilled in crown of the levee, but no charge may be loaded in that hole.

Please indicate your agreement hereto by signing and attaching the attached duplicate of this letter.

Very truly yours,

By: James F. Prossick
C.G.G. James F. Prossick

Crew... 0524

Local Crew Phone Number: 209-794-2382

John V. Da Cruz

~~XXXXXXXX~~ President, Reclamation District No. 1601 DATE _____

LESSEE _____ DATE _____

REMARKS _____

FORMER PAGE	234 23
FORMER PAGE	3:39

899 HAMPSHIRE ROAD
PO BOX 100A
LAKE VILLAGE, CALIFORNIA

805 496 4311
818 991 7040
TELEX 182875



Reclamation District 563

called 6-25 will return call

CGG LAND SEISMIC
A DIVISION OF CGG AMERICAN SERVICES, INC.

Peter Brown

5/28/87

DATE

P.O. Box 247

Walnut Grove, CA. 95690

(916) 776-1334

C.G.G. as an independent contractor, hereby requests permission to conduct a geophysical survey on lands owned/leased by you and described as follows:

T. R. S. County CGG Line No.
Properties owned/governed by Reclamation District indicated on Map

In consideration for granting this permission we agree that:

- All operations will be conducted at our own risk and expense.
- This Company will indemnify and hold you harmless from all liability to or claims of others which may result from our operations on your lands.
- We will assume full responsibility for any damages caused by or arising from our operations on your lands.
- Necessary permission will be obtained from Private Landowners prior to commencement of our operations.
- Special conditions: Shot Hole 50' depth 5 lbs. charge

Please indicate your agreement hereto by signing and returning the attached duplicate of this letter.

VERBAL OK 6/26
By Peter Brown

Very truly yours,

By.....

C.G.G.: James F. Pronnick

Crew.....0524.....

Local Crew Phone Number: (209) 794-2382.....

Jim P. 6-25-87

Peter Brown called
can be reached at
home after 6:00

DATE

DATE
JWN

99 HAMPSHIRE ROAD
100A
LAKE VILLAGE, CA

705 496 4311
218 991 7060
TELEX 182873

Terry

234.24
3:00



Reclamation Districts 407, 2067
Brannan Andrus Levee Maintenance District

Rec. Dist. 3

CGG LAND SEISMIC
A DIVISION OF CGG AMERICAN SERVICES, INC.

J.R. Lauritsen Jr. (SR)

9-28-87

P.O. Box 747

DATE

San Vista, CA 94571

(707) 374-6717

CGG, as an independent contractor, hereby requests permission to conduct a geophysical survey on lands owned/leased by you and described as follows:

County _____ CGG Line No. Line 2
On Reclamation Districts & Levee districts indicated on Map.

In consideration for granting this permission we agree that:

1. All operations will be conducted at our own risk and expense.
2. This Company will indemnify and hold you harmless from all liability to or claims of others which may result from our operations on your lands.
3. We will assume full responsibility for any damages caused by or arising from our operations on your lands.
4. Necessary permission will be obtained from Private Landowners prior to commencement of our operations.
5. Special conditions: Shot Hole .50". Depth 5 lbs. charge every 165'.

August Cornejo 777-6473 (407)

Please indicate your agreement hereto by signing and returning the attached duplicate of this letter

Call James Bird Superintendent
916-777-6187/1st

7-7 OK by Lauritsen
200' off.

LANDOWNER

LESSEE

REMARKS:

VERBAL OK 7-7

w/200' offset

IMPORTANT MESSAGE

FOR Jim Prosser / Mike Richmond
DATE _____ TIME 3:15 PM A.M. P.M.

WHILE YOU WERE OUT

M Jim LAURITSEN CALLED
OF _____

PHONE NO. 707-374-6717

TELEPHONED	PLEASE CALL
CALLED TO SEE YOU	WILL CALL AGAIN
WANTS TO SEE YOU	GUSS

RETURNED YOUR CALL

MESSAGE CAN'T DRILL WITHIN LEVEE SECTION. STAY 200' FROM CENTERLINE ON LANDWARD

SIDE _____ 234.25

SIGNED _____ HOURS 3.91

888 HAMPSHIRE ROAD
180A
LAKE VILLAGE, CALIFORNIA

805 496 4311
818 991 7050
TELEX 182873

ATTACHMENT E

Additional Operational Information:

In conducting the survey there will be no use of explosives in areas under Horseshoe Bend during the months of April, May, June, September, or October. In areas where explosives will be used under rivers or sloughs the charges will not exceed 5 pounds and will be placed at the bottom of holes 100 feet below the bottom of the watercourse. In areas where only geophones are placed below the waterway they will be at the bottom of holes 50 feet below the waterway.

For this survey heavy equipment, drilling operations, and use of explosives will be limited to the areas outside riparian or marsh wetlands. Any equipment entering or exiting waterways will do so at locations approved by the Department of Fish and Game or their observer. Any explosive operations will be conducted pursuant to permits from the Department of Fish and Game as well as local counties.

LEAD PAGE	234.26
TRAIL PAGE	392

ATTACHMENT F

File Ref.: _____

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. 95686(209) 794-2382

b. Contact person if other than applicant:

Jim Prossick2. a. Project location: (Please reference to nearest town or community and include county)
See attachment Bb. Assessor's parcel number: N/A3. Existing zoning of project site: Agriculture4. Existing land use of project site: Farm Lands, Marsh, or Waterways5. Proposed use of site: Geophysical Survey6. Other permits required: See Attachment D**B. PROJECT DESCRIPTION**

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.
 SEE Attachment B

NUMBER OF PAGES	234.27
NUMBER OF	3.93

C. ENVIRONMENTAL SETTING - SEE Attached Map & description of operations

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

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

Will the project involve:	YES	MAYBE	NO
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 type="checkbox"/>	<input checked="" type="checkbox"/>
8. a change in existing noise or vibration levels in the vicinity? <i>Drilling operation - Attachment B</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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? <i>See attachment B</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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: 8-17-87

Signed: Jane F. Bressich

ENVIRONMENTAL IMPACT ASSESSMENT CHECKLIST -- PART II

Form 13.20 (7/82)

File Ref.: W 6005.5

I. BACKGROUND INFORMATION

- A Applicant CGG American Services Inc.
P.O. Box 488
Thornton, CA 95686
- B Checklist Date: 08/24/87
- C Contact Person Alex F. Gonzalez, SLC (213) 590-5201 or Mary Griggs SLC, (916) 322-0354
 Telephone ()
- D Purpose Geophysical Seismic Survey
- E Location Sacramento Delta Area. San Joaquin, Solano and Sacramento Counties. See map attachment "A"
- F Description Conduct geophysical seismic surveys along two lines for a total length of approximately 30 miles. See introduction and Attachment "B"
- G Persons Contacted State and local agencies - See attachment D

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

- A *Lands* 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? <u>See attachment "B"</u> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input 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 people or property to potential hazards from earthquakes, landslides, or tsunamis? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

- | | Yes | Maybe | No |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| B. Air. Will the proposal result in: | | | |
| 1. Substantial air emissions or deterioration of ambient air quality? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. The creation of objectionable odors? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Alteration of air movement, moisture or temperature, or any change in climate, either locally or regionally? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? .. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Changes in absorption rates, drainage patterns, or the rate and amount of surface water runoff? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Alterations to the course or flow of flood waters? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4. Change in the amount of surface water in any water body? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Discharge into surface waters, or in any alteration of surface water quality, including but not limited to temperature, dissolved oxygen or turbidity? See attachments B & C | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 6. Alteration of the direction or rate of flow of ground waters? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 7. Change in the quantity of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 8. Substantial reduction in the amount of water otherwise available for public water supplies? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 9. Exposure of people or property to water-related hazards such as flooding or tidal waves? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 10. Significant changes in the temperature, flow or chemical content of surface thermal springs? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Reduction of the numbers of any unique, rare or endangered species of plants? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Introduction of new species of plants into an area, or in a barrier to the normal replenishment of existing species? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4. Reduction in acreage of any agricultural crop? Due to land drilling operation. - see Attachment B | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 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)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Reduction of the numbers of any unique, rare or endangered species of animals? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Introduction of new species of animals into an area, or result in a barrier to the migration or movement of animals? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4. Deterioration to existing fish or wildlife habitat? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| F. Noise. Will the proposal result in: | | | |
| 1. Increase in existing noise levels? See attachment B | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Exposure of people to severe noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| G. Light and Glare. Will the proposal result in: | | | |
| 1. The production of new light or glare? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| H. Land Use. Will the proposal result in: | | | |
| 1. A substantial alteration of the present or planned land use of an area? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| I. Natural Resources. Will the proposal result in: | | | |
| 1. Increase in the rate of use of any natural resources? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Substantial depletion of any nonrenewable resources? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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J. Risk of Upset. Does the proposal result in:

- | | Yes | Maybe | No |
|--|--------------------------|-------------------------------------|-------------------------------------|
| 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? <small>See Attachment B - OSHA standards are followed for drilling</small> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Possible interference with emergency response plan or an emergency evacuation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

K. Population. Will the proposal result in:

- | | | | |
|---|--------------------------|--------------------------|-------------------------------------|
| 1. The alteration, distribution, density, or growth rate of the human population of the area? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|

L. Housing. Will the proposal result in:

- | | | | |
|---|--------------------------|--------------------------|-------------------------------------|
| 1. Affecting existing housing, or create a demand for additional housing? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|

M. Transportation/Circulation. Will the proposal result in:

- | | | | |
|--|--------------------------|--------------------------|-------------------------------------|
| 1. Generation of substantial additional vehicular movement? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Affecting existing parking facilities, or create a demand for new parking? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Substantial impact upon existing transportation systems? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4. Alterations to present terms of circulation or movement of people and/or goods? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Alterations to waterborne, rail, or air traffic? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 6. Increase in traffic hazards to motor vehicles, bicyclists, or pedestrians? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Police protection? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Schools? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4. Parks and other recreational facilities? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Maintenance of public facilities, including roads? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 6. Other governmental services? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

O. Energy. Will the proposal result in:

- | | | | |
|---|--------------------------|--------------------------|-------------------------------------|
| 1. Use of substantial amounts of fuel or energy? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Substantial increase in demand upon existing sources of energy, or require the development of new sources? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

P. Utilities. Will the proposal result in a need for new systems, or substantial alterations to the following utilities:

- | | | | |
|------------------------------|--------------------------|--------------------------|-------------------------------------|
| 1. Power or natural gas? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Communication systems? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Water? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4. Sewer or septic tanks? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Storm water drainage? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 6. Solid waste and disposal? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Q. Human Health. Will the proposal result in:

- | | | | |
|--|--------------------------|--------------------------|-------------------------------------|
| 1. Creation of any health hazard or potential health hazard (excluding mental health)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Exposure of people to potential health hazards? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|

S. Recreation. Will the proposal result in:

- | | | | |
|---|--------------------------|--------------------------|-------------------------------------|
| 1. An impact upon the quality or quantity of existing recreational opportunities? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|

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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?
- 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?

VI. DISCUSSION OF ENVIRONMENTAL EVALUATION (See Comments Attached)

See attachments A, B, C & E

VII. 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: .. / - / ..

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