MINUTE ITEM
This Calendar Item No. C60 was approved as Minute Item No. 60 by the California State Lands Commission by a vote of 3 to 0 at its 11/07/97 meeting.

CALENDAR ITEM
C60

A 8, 10, 15, 17

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11/07/97
PRC8004 W 40764
A. Nitsche

CONSIDER APPROVAL OF A NON-EXCLUSIVE GEOPHYSICAL SURVEY PERMIT ON TIDE AND SUBMERGED LANDS UNDER THE JURISDICTION OF THE STATE LANDS COMMISSION

APPLICANT:

Western Atlas International
Attn: Mr. Russ Gentry
370 17th Street, Suite 1800
Denver, CO 80202-5618

AREA, LAND TYPE AND LOCATION:

The proposed Geophysical Survey will cover:

Twitchell Island, Andrus Island and Tyler Island, Sacramento County.
Webb Tract and Franks Tract, Contra Costa County.
Staten Island, Terminous Tract, Empire Tract, Bouldin Island, Rindge Tract, King Tract, Brack Tract, Canal Ranch Tract, Venice Island, Mandeveille Island and Medford Island, San Joaquin County.

And cross these waterways:

Georgiana Slough, North Mokelumne, South Mokelumne, Mokelumne River, San Joaquin River, Seven Mile Slough, Potato Slough, Little Potato Slough, White Slough, Old River, Middle River, Honker Cut, Disappointment Slough, White Slough, Sycamore Slough, Hog Slough and Stockton Deep Water Channel.

TERMS OF PROPOSED PERMIT:

November 1, 1997 through October 31, 1998. No shot holes will be drilled or air guns set off in State waterways under this Geophysical Survey Permit.

PREREQUISITE CONDITIONS, FEES AND EXPENSES:

Required fees, expense deposit, and other security have been received.

PROPOSED SURVEY:

There will be 38 parallel receiver lines trending northwest to southeast. The combined length of the receiver lines will be approximately 263.6 miles. Each line consists of 150 - 260 receiver stations located every 220 feet. Receiver lines are 1,320 feet apart. There are approximately 6,772 receiver stations within the scope of the project. The receiver seismic cable is approximately ¼ inch insulated cable and carries no detectable electrical current. The Receiver line cables will be weighted down to the bottom of all waterways and Franks Tract where they cross. Geophone stations will be marked by buoys at the 220 foot receiver interval. Placement of the seismic cable will be done boat or barge.

There are approximately 799 source lines each containing six source points that are 1,320 feet in length. The source points are placed along the source lines at 220 foot intervals. Source lines are bricked perpendicular to receiver lines at 220, 880 and 1,320 foot intervals. There are approximately 6,772 sources within the scope of the project for a cumulative source line length of approximately 200 miles. No shot holes will be drilled or air guns set off in State waterways under this Geophysical Survey Permit.

STATUTORY AND OTHER REFERENCES:

A. Public Resources Code section 6826.
B. Public Resources Code section 21080(c).
C. Public Resources Code section 6870.
D. California Code of Regulations, Title 2, Article 2.9, 2100.
E. California Code of Regulations, Title 2, 2905(e)(3).
F. California Code of Regulations, Title 14, 15074.

PERMIT STREAMLINING ACT DEADLINE:

March 27, 1998

OTHER PERTINENT INFORMATION:

1. Pursuant to the Commission's delegation of authority and the State CEQA Guidelines (Title 14, California Code of Regulations, section 15025), the staff has prepared a Proposed Mitigated Negative Declaration identified as CSLC ND 682, State Clearinghouse No. 97092033. Such Proposed Mitigated Negative Declaration was prepared and circulated for public review pursuant to the provisions of the CEQA.

Based upon the Initial Study, the Proposed Mitigated Negative Declaration, and the comments received in response thereto, there is no substantial evidence that the project will have a significant effect on the environment; Title 14, California Code of Regulations, section 15074 (b).

2. A Mitigation Monitoring Program has been prepared in conformance with the provisions of the CEQA (Public Resources Code section 21081.6).

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

EXHIBITS:

A. Survey Area
B. Location Map
C. Mitigation Monitoring Program

RECOMMENDED ACTION:

IT IS RECOMMENDED THAT THE COMMISSION:

CEQA FINDINGS:

1. CERTIFY THAT A PROPOSED MITIGATED NEGATIVE DECLARATION, CSLC ND NO. 682, STATE CLEARINGHOUSE NO. 97092033, WAS PREPARED FOR THIS PROJECT PURSUANT TO THE PROVISIONS OF THE CEQA AND THAT THE COMMISSION HAS REVIEWED AND CONSIDERED THE INFORMATION CONTAINED THEREIN.

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

3. ADOPT THE MITIGATION MONITORING PROGRAM, AS CONTAINED IN EXHIBIT C, ATTACHED HERETO.

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

AUTHORIZATION:

AUTHORIZE ISSUANCE TO WESTERN ATLAS INTERNATIONAL OF A NON-EXCLUSIVE GENERAL PERMIT TO CONDUCT LOW ENERGY GEOPHYSICAL SURVEYS FOR THE PERIOD NOVEMBER 1, 1997 THROUGH OCTOBER 31, 1998 WITHIN THE SURVEY AREA DESIGNATED ON EXHIBIT A.

Prospect: Delta 3D - Phase 1
Design: T3
Detectors In Water Moved
Client: Texaco Exploration and Prod.
Area: San Joaquin, Sacramento & Contra Costa Counties, CA

Detector Pattern:
8 lines of 100 channels

Detector Point Spacing: 220 ft
Detector Line Spacing: 1320 ft

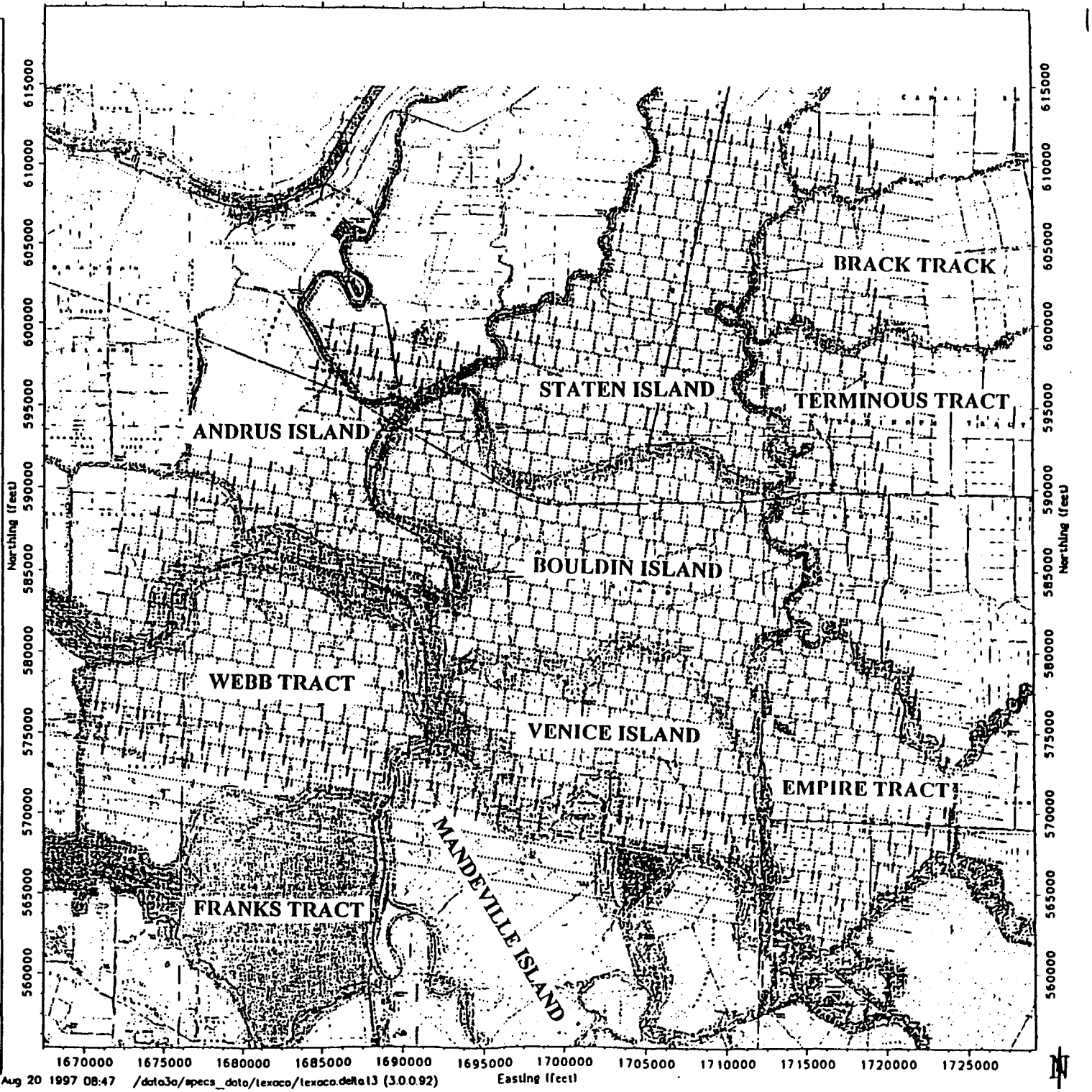
Source Point Spacing: 220 ft
Source Line Spacing: 1320 ft

North American Datum - 1927
Projection: California Coordinate System
Zone 3
(Lambert Conformal Conic)
**** North Arrow is Grid Relative ****

7.5 Minute Topographic Maps
-Bouldin Island, CA
-Isleton, CA
-Jersey Island, CA
-Rio Vista, CA
-Terminous, CA
-Thornton, CA

Cell Size:
110.0 x 110.0 ft

X Source
+ Detector



CALENDAR PAGE
MINUTE PAGE
317
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Map Scale: 1:78000

Design Compliments of
WESTERN ATLAS
Western Geophysical

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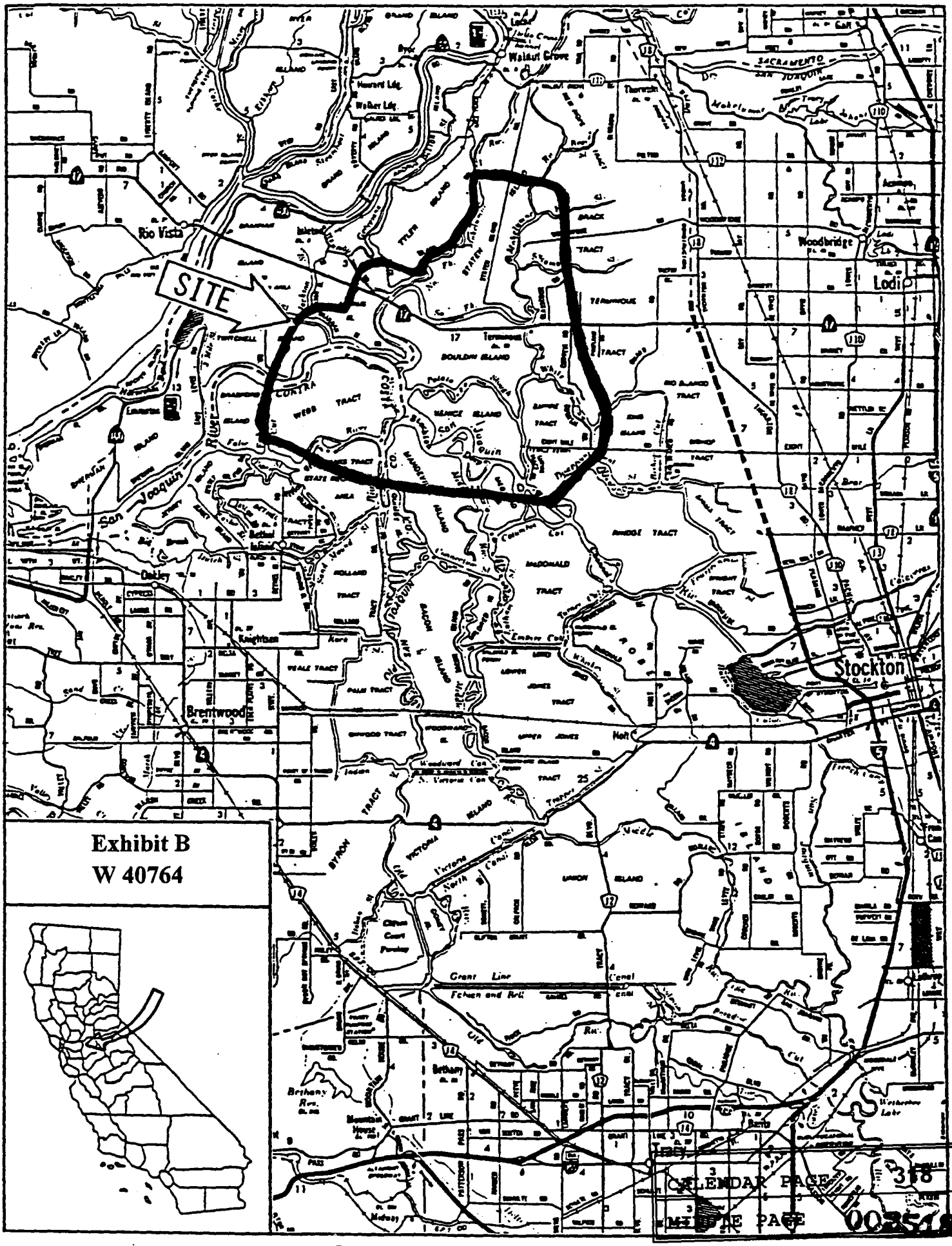
SITE
Rio Vista
Walnut Grove
Thornton
Woodbridge
Lodi
Stockton
Brentwood
Oakley
Holt
Grant Line
Exhibit B
W 40764

EXHIBIT C

MITIGATION MONITORING PROGRAM

Western Geophysical Central Delta Natural Gas Exploration Seismic Survey Mitigation Monitoring Program

Mitigation Measure	Implementation	Monitoring Criteria	Compliance and Verification	Effectiveness
BIOLOGICAL RESOURCES				
Western Geophysical shall implement the following mitigation measures to reduce impacts to vegetation and wildlife biological resources to a less-than-significant level. 1. Avoid disturbance to roosting areas. [Mitigation Measure 2.7.3.1, attached] 2. Avoid direct mortality of greater sandhill cranes and Aleutian Canada geese. [Mitigation Measure 2.7.3.2, attached] 3. Avoid prolonged construction activities that would disturb waterfowl foraging areas. [Mitigation Measure 2.7.3.3, attached] 4. Prohibit all project activities within 200 feet of all biologically unique habitats. [Mitigation Measure 2.7.3.4, attached] 5. Avoid disturbance to riparian and other wetland habitats associated with waterways. [Mitigation Measure 2.7.3.5, attached] 6. Avoid removing natural vegetation. [Mitigation Measure 2.7.3.6, attached] 7. Provide biological monitors to provide clearance for biologically sensitive areas. [Mitigation Measure 2.7.3.7, attached]	State Lands Commission as approving agency to include measures, agreed to by the applicant to be a part of the project, in conditions of approval for seismic survey activities. Western Geophysical to include/implement measures during all seismic survey activities.	Inclusion of measures into conditions of approval for seismic survey activities. Avoidance of impacts to sensitive biological resources and habitat areas in conjunction with all seismic survey activities as specified by criteria listed in Mitigation Measures 2.7.3.1 through 7.	State Lands Commission as approving agency to verify compliance.	

Western Geophysical Central Delta Natural Gas Exploration Seismic Survey
Mitigation Monitoring Program (Continued)

Mitigation Measure	Implementation	Monitoring Criteria	Compliance and Verification	Effectiveness
CULTURAL RESOURCES				
Western Geophysical shall implement the following mitigation measure to reduce impacts to cultural resources to a less-than-significant level. 1. Ensure that no seismic activities are conducted near known cultural resource sites and halt work within 100 feet of any find of above-ground or buried cultural resources until the find is assessed by a qualified archeologist. [Mitigation Measure 2.14.3.1, attached]	State Lands Commission as approving agency to include measure, agreed to by the applicant to be a part of the project, in conditions of approval for seismic survey activities. Western Geophysical to include/implement measure during all seismic survey activities.	Inclusion of measures into conditions of approval for seismic survey activities. Avoidance of disturbance to cultural resources in conjunction with all seismic survey activities as specified by criteria listed in Mitigation Measures 2.14.3.1.	State Lands Commission as approving agency to verify compliance.	

2.7 BIOLOGICAL RESOURCES

2.7.3 Mitigation Measures

Mitigation Measure 2.7.3.1. **Avoid Disturbance to Roosting Areas**. The project proponent shall ensure that all major roosting areas for waterfowl, greater sandhill cranes, and Aleutian Canada geese will be identified by a qualified biological monitor on an on-going basis throughout the duration of the project (refer to Mitigation Measure 2.7.3.7) and shall be avoided while they are occupied. Generally, birds will disperse off roost sites in the morning and return during the late afternoon. Timing restrictions for all project activities shall be implemented as follows:

> No project activities, including helicopter flights, will occur within 1,000 feet of waterfowl, crane, or Aleutian Canada goose roost sites until after 8:00 am each morning and only up until 4:00 pm each evening. These timing restrictions shall be modified based on the findings of the initial monitoring (refer to Mitigation Measure 2.7.3.7). If monitoring determines that roosts are occupied for longer periods during the day, these areas shall be avoided until cleared by the biological monitor.

Responsible Party: Western Geophysical
Timing: Prior to and at all times during field operations.
Standards for Success: Disturbance to roost sites are avoided.
Monitoring Program: Refer to Mitigation Measure 2.7.3.7

Mitigation Measure 2.7.3.2. **Avoid Direct Mortality of Greater Sandhill Cranes and Aleutian Canada Geese.** To avoid mortality of cranes and Aleutian Canada geese, the project proponent shall ensure that no helicopter flights occur within 1,000 feet of all roost sites (as identified by the biological monitor) and areas identified by the biological monitor as major feeding concentrations until birds disperse from these areas and clearance is provided by the biological monitor.

Responsible Party: Western Geophysical
Timing: Prior to and at all times during field operations.
Standards for Success: Mortality is avoided.
Monitoring Program: Refer to Mitigation Measure 2.7.3.7

Mitigation Measure 2.7.3.3. **Avoid Prolonged Concentrated Activities.** To avoid keeping birds off of important sandhill crane and waterfowl foraging areas for extended periods, the project proponent shall avoid continual concentrated activity in any specific area for more than 5 consecutive days. If clean-up work or other activities require additional time in any specific area,

no work will be permitted until after 5 consecutive non-work days, unless the area is given clearance by the biological monitor.

Responsible Party: Western Geophysical
Timing: Prior to and at all times during field operations.
Standards for Success: Prolonged disturbances to foraging sites are avoided.
Monitoring Program: Refer to Mitigation Measure 2.7.3.7

Mitigation Measures 2.7.3.4. **Prohibit All Project Activities Within 200 feet of all Biologically Unique Habitats.** To avoid impacts on sensitive habitats and associated plant and wildlife species, the project proponent shall ensure that all project activities remain at least 200 feet away from areas determined to be biologically unique habitats. These areas include in-basin wetland habitats associated with blow-out lakes and ponds, wetland and riparian habitats associated with irrigation channels, and all in-channel islands. The biological monitor shall identify these areas and establish the 200-foot buffer zone, and inspect them to ensure compliance with this measure.

Responsible Party: Western Geophysical
Timing: Prior to and at all times during field operations.
Standards for Success: Biologically unique habitats are avoided.
Monitoring Program: Refer to Mitigation Measure 2.7.3.7

Mitigation Measure 2.7.3.5. **Avoid Disturbance to Riparian and Other Wetland Habitats and Rare Plants Associated with Waterways.** To avoid impacts on riparian and other wetland habitats and rare plants, the project proponent shall ensure that project activities will avoid vegetated areas on the water side of levees. Where project activities must be conducted in these areas, the activities shall take place away from the riparian, or streamside, vegetation and emergent marsh vegetation. No excessive foot or vehicular traffic shall take place in the zone between 5 feet below mean tide and 8 foot above mean tide unless it is essentially unvegetated. For instance, the coupling and decoupling of geophones and cables shall be conducted on unvegetated portions of the levee above the vegetation zone; or in vegetation, so long as it is more than 8 feet above the mean tide level; or in boats or water areas beyond any emergent vegetation (rooted vegetation extending to or above the water surface). Boat landings will be minimized. Where landings are necessary they shall be on unvegetated sand, gravel bars, or rip-rap revetment areas, whenever possible. Mud flat areas, vegetated or not, shall be avoided to the fullest extent possible.

Responsible Party: Western Geophysical
Timing: Prior to and at all times during field operations.
Standards for Success: Disturbance to riparian and other wetland habitats are avoided.
Monitoring Program: Refer to Mitigation Measure 2.7.3.7

Mitigation Measure 2.7.3.6. **Avoid Removing Natural Vegetation**. To avoid impacts on sensitive habitats and rare plants, the project proponent shall ensure that no vegetation will be cut, cleared, or otherwise removed in any habitat types other than agricultural or herbaceous upland (ruderal) types. The biological monitor will identify natural vegetation areas and assist the project personnel with rerouting to avoid these areas.

Responsible Party: Western Geophysical
Timing: Prior to and at all times during field operations.
Standards for Success: Disturbance to natural vegetation is avoided.
Monitoring Program: Refer to Mitigation Measure 2.7.3.7

Mitigation Measure 2.7.3.7. **Provide Biological Monitors to Provide Clearance for Biologically Sensitive Areas Prior to Project Activities.** The project proponent shall hire at least one qualified biologist to monitor project activities in the field and to provide clearance of sensitive areas before any project activity commences throughout the duration of the project. Monitors shall act to ensure that project activities are conducted in a manner consistent with the mitigation measures so that impacts on sensitive habitats and special-status species are avoided or minimized. Monitors will serve two primary functions: 1) identify sensitive habitats and important crane and waterfowl roosting areas before project activities commence, alert field crews of the presence of such species and instruct field crews to avoid these areas as specified in Mitigation Measures 2.7.3.1 through 2.7.3.6; and 2) conduct pre-project activity surveys for rare plant species and special-status wildlife species in suitable habitats as project activities proceed to ensure that these resources are avoided and to direct project construction crew personnel with regard to any necessary rerouting. Monitors will have experience in waterfowl and waterbird identification and behavior, habitat assessment, experience with identification of special-status plants (including Mason's lilaeopsis and Delta mudwort) and wildlife species, and general knowledge of natural resources of the Delta. The monitors will be responsible for the following:

- Determining compliance with all mitigation measures described above. The monitors shall report incidents of noncompliance directly to field crews, project supervisors and the CSLC Project Manager.

- Identifying roosting areas for greater sandhill cranes, Aleutian Canada geese, and waterfowl. The biological monitor shall identify the boundaries of roost sites, determine activity periods for the roosts and provide clearance for the area as needed. Project activities shall be prohibited within 1,000 feet of roost sites until the major concentration of birds have left the roosting area and clearance is provided by the biological monitor.

- Identifying all major feeding concentrations of sandhill cranes, Aleutian Canada geese, and waterfowl in the project area as project work proceeds. To the extent feasible, project activities shall be prohibited within 500 feet of major feeding areas (as defined by the biological monitor), until the major concentration of birds have moved off of the area. Where feeding areas are used daily for prolonged periods, the biological monitor shall

determine the most appropriate time of day for project activities to occur, to minimize the effects of project activities.

- Identifying all biologically unique habitats (i.e., wetlands associated with blow-out lakes and channels, in-channel islands) that will be avoided by the project proponent. The monitor shall inspect these sites prior to and during activities to ensure that project activities are not occurring within 200 feet.

- Monitoring and providing clearance for helicopter activity to avoid direct impacts on sandhill cranes and waterfowl.

- Conducting preconstruction surveys for rare plants in all suitable habitats potentially affected by project activities.

- Monitoring vegetation removal to ensure that removal of natural vegetation is avoided.

- Communicating directly with the project supervisor and field crews. Monitors shall provide information daily to the project supervisors on the locations of important roost and feeding areas. If necessary, a qualified biologist shall conduct and employee orientation program for all project personnel. The orientation shall include the occurrence and distribution of listed species and other sensitive resources in the project area, measures being implemented to protect these sensitive resources during project actions, and applicable definitions and prohibitions under the state and federal Endangered Species Acts.

Responsible Party: Western Geophysical
Timing: Prior to and at all times during field operations.
Standards for Success: Compliance with mitigation measures

Detailed Implementation Procedures for Mitigation Measures 2.7.3.1 to 2.7.3.7

Under the direction of the CSLC, the biological resource surveys and project compliance monitoring contractor (Project Monitor) shall ensure compliance with the requirements of the Negative Declaration for this project.

The Project Monitor shall be familiar with, and follow, guidelines recommended for seismic operations published in the International Association of Geophysical Project Monitors (IAGC) "Land geophysical operations: Safety Manual" (IAGC 1991 and current edition).

The Project Monitor's scope of services will be to provide survey and project compliance monitoring for impacts to sensitive wildlife and special status plant species. Because of the specialized qualities of the sensitive biological resources in the project area, the Project Monitor

shall assign personnel trained in botanical and wildlife resource inventory with experience in seismic prospecting surveys in the Delta and adjacent San Joaquin Valley areas. The Project Monitor shall be responsible for directing layout crews in repositioning travel paths for source and receiver lines, as necessary, within travel corridors so as to meet agency criteria for T&E resource avoidance.

The Project Monitor shall employ agency-approved methods of the California Native Plant Society, (CNPS 1991), CDFG (1984, 1990), Orloff (1987), Nelson (1987), The California Burrowing Owl Consortium (1993), Tollestrup (1976), and USFWS (1990, 1995) and guidelines given in Section 402.12 of the Federal Register Vol. 51, No. 106, pp. 19960-19963 to survey for sensitive wildlife and special status plant species and to prepare biological assessment reports.

Biological Surveys and Compliance Monitoring Tasks

To avoid disturbance to sensitive habitat areas (i.e., waterfowl roosting areas), the Project Monitor shall coordinate with the cable layout, pick-up and shothole (drilling) crews, at a morning meeting each day, to provide biological survey data (collected ahead of the crew and from the previous day) for sensitive wildlife and special status plant species and unique habitats. These areas will be flagged in the field for project personnel avoidance. Communication will occur between the biologist and the seismic crew via hand-held two-way radio, mobile phone, and at the daily morning meeting concerning these issues. The biologist will survey for resources and monitor resource compliance throughout the day. The monitor will work in close proximity to the crew each day. A biologist will be assigned to each crew if the crew is working in areas that are potential habitat for sensitive wildlife and special status plant species. This approach will also be used to document all sensitive floral and faunal resources, and direct seismic field crews for resource avoidance and cable and/or shothole re-routing and relocations. Compliance monitoring will be conducted on a daily basis as the crew moves through a particular area.

A typical day for the biologist monitors will be as follows:

1. Attend a morning meeting at the Western Geophysical office (5:30 am) to report on previous day's surveys, monitoring. Communication on a daily basis and at numerous times per day is mandatory between the biologist and the seismic crew so that resource avoidance and compliance will be met.

2. Dispatch to the field and conduct surveys for roosting waterfowl, and other sensitive wildlife and special status plant species as defined in the Negative Declaration, prior to project activities. Roost data collected the evening before will assist the biologist(s) on making decisions as to avoidance. Sensitive water channel crossings and other types of habitats will be identified in advance for avoidance.

3. Communicate with the crew(s) by two-way radio several times per day, as necessary, to direct the crew(s) for reroutes, relocations, planning prior to approaching a sensitive habitat and/or resource.

4. The biologist(s) will direct the crew(s) throughout the day while conducting pre-activity biological surveys just ahead of the crew as they progress in laying out cable, or moving on to a new shothole drill site.

5. At the end of each day, the biologist(s) will return to the office and update the party manager and biological resource map(s). Biological resources and sensitive habitats will be placed on the map each day. Seismic surveyors will digitize these areas into their data base. The crew(s) will be briefed on the location and provided with instructions for best practices of avoidance and mitigation. The briefing will be conducted at the morning meeting the next day and reinforced to the crew(s) throughout the day, as the biologist(s) work with them.

The Project Monitor shall provide surveys for sensitive wildlife and special status plant species and provide direction to Western Geophysical's seismic crews for resource avoidance throughout the project. The Project Monitor shall also monitor for compliance and non-compliance issues and report them to CSLC and to Western Geophysical. It will prepare and submit to the CSLC weekly status reports with results of biological surveys and project compliance. Infractions will be conveyed to the seismic crew(s) and their managers and to CSLC by phone or e-mail. Strategies will be implemented immediately to correct non-compliance, repair damage and ensure that they do not recur.

Special Issues: Plants, wetlands, riparian areas

Because the project will be implemented during a season that will make identifying special status plants challenging (see table below), we will avoid areas within the project site that have potential to support populations of special status plant species. Appropriate survey periods for sensitive plants are:

Aster lentus	August-November
Hibiscus laiocarpus	August-September
Lathyrus jepsonii ssp. jepsonii	May-June
Lilaeopsis masonii	April-October
Limosella subulata	May-August
Scutellaria galericulata	June-September

Because of the somewhat inappropriate season to conduct proper botanical surveys, the Project Monitor's biologist(s) will identify areas in the field that have potential to support special status plant species (McCarten 1990). These areas will be avoided by all types of vehicle and boat

travel, used as a landing and/or staging zone. Seismic crew foot traffic (limited to 1-2 persons and directed by a biologist) will only be allowed in these areas. Examples of such areas include streamside edges that have potential to support sensitive wildlife and special status plant species. buffer zones adjacent to wetland areas.

Reference and Methodology Literature Cited

California Burrowing Owl Consortium. 1993. Burrowing owl survey protocol and mitigation guidelines. Draft Unpubl. Rpt. by the California Burrowing Owl Consortium. 15 pp.

California Department of Fish and Game (CDFG). 1984. Guidelines for assessing effects of proposed developments on rare and endangered plants and plant communities. The Resources Survey, CDFG. 1 pp.

California Department of Fish and Game (CDFG). 1990. Region 4 Survey methodologies for San Joaquin kit fox, blunt-nosed leopard lizard, San Joaquin antelope squirrel, Tipton kangaroo rat, giant kangaroo rat. Compiled by R. Rempel and G. Presley. 10 pp.

California Native Plant Society (CNPS). 1991. Mitigation guidelines regarding impacts to rare, threatened, and endangered plants. Unpublished manuscript by CNPS - Rare plant scientific advisory committee. 17 pp.

International Association of Geophysical Project Monitors (IAGC). 1991. Land geophysical operations: Safety manual. Printed by Conoco Inc., Ponca City, Oklahoma. 191 pp.

Jones and Stokes Associates, Inc. 1997. Initial study and proposed negative declaration for Western Geophysical natural gas exploration seismic survey of the Central Delta. Unpublished report prepared for the California Sate Lands Commission. Various paging McCarten, N. F. 1990. Report on a study of sensitive plant species occurring in Frank's Tract State Recreation Area. Unpublished report prepared for California Department of Parks and Recreation. 20 pp.

Nelson, J. R. 1987. Rare plant surveys: Techniques for impact assessment. pp. 159-166. In: T. Elias (ed.), Conservation and Management of Rare and Endangered Plants. California Native Plant Society, Sacramento, CA.

Orloff, S. G. 1987. San Joaquin kit fox survey techniques. Proceedings of a conference on endangered and sensitive species of the San Joaquin Valley, California. Bakersfield, CA. Pp. 185-197.

Tollestrup, K. 1976. A standardized method of obtaining an index of densities of blunt-nosed leopard lizards, Crotaphytus silas. Contract 14-16-0001-579RF, U.S. Department of the Interior, U.S. Fish and Wildlife Service. unpubl. ms. 11 pp.+ appendices.

U.S. Fish and Wildlife Service (USFWS). 1990. San Joaquin kit fox pupping den issues in the Metropolitan Bakersfield Area, Kern County, CA. 4 pp.+appendix.

U.S. Fish and Wildlife Service (USFWS). 1995. Standardized recommendations for the protection of the San Joaquin kit fox. Advisory notice issued by USFWS, Sacramento, CA. 6 pp. + appendix.

2.14 CULTURAL RESOURCES

2.14.3 Mitigation Measures

Mitigation Measure 2.14.3.1. Halt Work Within 100 Feet of Any Find of Above-Ground or Buried Cultural Resources until the Find is Assessed by a Qualified Archeologist. Western Geophysical shall ensure that no seismic survey activities are conducted near known sites of cultural resources including structures, levees, canals, and ditches that would result in adverse physical impacts to the site. If above-ground or buried cultural resources (such as chipped or ground stone, historic debris, building foundations, human bone, remnants of village structure, lithic scatters) are inadvertently discovered during seismic survey activities (including drilling, cable and platform placement, and detonation), Western Geophysical shall stop work within that area and within 100 feet of the find until a qualified archeologist can assess the significance of the find and, if necessary, develop appropriate treatment measures in consultation with the State Historic Preservation Officer (SHPO). Appropriate treatment measures shall be implemented before ground-disturbing activities in the area are resumed.

Responsible Party: Western Geophysical.
Timing: During all phases of the seismic survey operation.
Standards for Success: Identification and Protection of Important Cultural Resources at the Project Site.
Monitoring Program: Cultural resource monitoring would be limited to the vicinity of the survey site. No additional monitoring is recommended.

Detailed Implementation Procedures for Mitigation Measure 2.14.3.1.

1. Prior to the commencement of any further explosives core hole drilling activities, the project proponent shall have prepared, for the Commission, a records search by the applicable information centers of the California Archeological Survey, to identify the location and nature of recorded cultural resources in areas remaining to be drilled. The results of the records search shall be interpreted by a qualified archeologist to determine the potential for project activities to be conducted within 100 feet of recorded cultural resources and presented to the Commission's Project Manager.

2. If the records search indicates that any such resources exist in these areas,the project proponent shall retain a qualified archeologist, who shall report to the Commission's Project Manager, to train the field equipment personnel to recognize indicators of the presence of such resources on the ground surface by inspection of drilling cores.

3. The project proponent shall ensure that a qualified archeologist is present at drill sites within 100 feet of any identified potential cultural resource site, to monitor the equipment personnel activities, inspect the drilled cores, direct the drilling activities so as to avoid known cultural resource and unearthed sites, assess the significance of any enearthed cultural resources and, if necessary, develop appropriate treatment measures in consultation with the Commission's Project Manager and SHPO, as specified in Mitigation Measure 2.14.3.1.