MINUTE ITEM
This Calendar Item No. C06 was approved as Minute Item No. 06 by the State Lands Commission by a vote of 3 to 0 at its 10/28/96 meeting.

CALENDAR ITEM
C06

A 15

S 7

10/28/96
PRC 7914 W 25329
Burks

GENERAL LEASE - RIGHT OF WAY USE

APPLICANT:

Tri-Valley Oil and Gas Company
Attn: Matthew Hickle
5464 Carpinteria Ave., Suite H
Carpinteria, California 93013

AREA, TYPE LAND AND LOCATION:

A 1.75-acre parcel, more or less, of tide and submerged land located in Piper Slough and False River between Bethel Island and Webb Tract, Contra Costa County.

LAND USE:

Construction of a six-inch welded steel natural gas pipeline to provide a pipeline connection for Tri-Valley's existing Webb Tract #1 gas well on Webb Tract connecting to Tri-Valley's existing Martins-Severin gas gathering system near Bethel Island Road.

PROPOSED LEASE TERMS:

Lease period:

Twenty years beginning October 16, 1996.

Surety bond:

$10,000.

Public liability insurance:

Combined single limit coverage of $1,000,000.

CONSIDERATION:

$221 per annum; with the State reserving the right to fix a different rent on each fifth anniversary of the lease.

BASIS FOR CONSIDERATION:

Pursuant to 2 Cal. Code Regs. 2003.

APPLICANT STATUS:

Applicant is permittee of upland.

PREREQUISITE CONDITIONS, FEES AND EXPENSES:

Filing fee and processing costs have been received.

STATUTORY AND OTHER REFERENCES:

A. Public Resources Code: Div. 6, Parts 1 and 2; Div. 13.

B. Cal. Code Regs.: Title 2, Div. 3; Title 14, Div. 6.

AB 884:

12/24/96

OTHER PERTINENT INFORMATION:

1. Pursuant to the Commission's delegation of authority and the State CEQA Guidelines (14 Cal. Code Regs. 15025), the staff has prepared a Proposed Negative Declaration, identified as ND 678, State Clearinghouse No. 96092032. Such Proposed Negative Declaration was prepared and circulated for public review pursuant to the provisions of CEQA.

   Based upon the Initial Study, the Proposed 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. Code Regs. 15074(b))

2. 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.

APPROVALS OBTAINED:

Reclamation District 2026; Bethel Island Municipal Improvement District; State Reclamation Board; U.S. Army Corps of Engineers; Contra Costa County.

FURTHER APPROVALS REQUIRED:

California State Lands Commission.

EXHIBITS:

A. Land Description
B. Location Map
C. Negative Declaration (SCH 96092032)
D. Summary of Mitigation Measures Incorporated into the Proposed Project

IT IS RECOMMENDED THAT THE COMMISSION:

1. CERTIFY THAT A PROPOSED NEGATIVE DECLARATION, ND 678, STATE CLEARINGHOUSE NO. 96092032, 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 NEGATIVE DECLARATION AND DETERMINE THAT THE PROJECT, AS APPROVED, WILL NOT HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT.

3. ADOPT THE MITIGATION MONITORING PLAN, AS CONTAINED IN EXHIBIT "D", ATTACHED HERETO.

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

AUTHORIZATION:

AUTHORIZE ISSUANCE TO TRI-VALLEY OIL & GAS COMPANY OF A 20-YEAR GENERAL LEASE - RIGHT OF WAY USE BEGINNING OCTOBER 16, 1996; IN CONSIDERATION OF ANNUAL RENT IN THE AMOUNT OF $221, WITH THE STATE RESERVING THE RIGHT TO FIX A DIFFERENT RENTAL ON EACH FIFTH ANNIVERSARY OF THE LEASE; PROVISION OF A $10,000 SURETY BOND; PROVISION OF PUBLIC LIABILITY INSURANCE FOR COMBINED SINGLE LIMIT COVERAGE OF $1,000,000; FOR CONSTRUCTION OF A SIX-INCH WELDED STEEL NATURAL GAS PIPELINE TO PROVIDE A PIPELINE CONNECTION FROM TRI-VALLEY'S EXISTING WEBB TRACT #1 GAS WELL TO THE EXISTING MARTINS-SEVEREIN GAS GATHERING SYSTEM NEAR BETHEL ISLAND ROAD; ON THE LAND DESCRIBED ON EXHIBIT "A" ATTACHED AND BY REFERENCE MADE A PART HEREOF.

LAUGENOUR AND MEIKLE
CIVIL ENGINEERS

2095-76
Revised October 22, 1996
July 2, 1996
P.J.A.

DESCRIPTION
for
AA PRODUCTION SERVICES, INC.
WEBB TRACT PIPELINE
PROPOSED BORE LOCATION
PIPER SLOUGH

A portion of projected Sections 3 and 4, Township 2 North, Range 3 East, Mount Diablo Meridian, Contra Costa County, California, being more particularly described as follows:

A strip of land fifty (50) feet wide, lying twenty-five (25) feet on each side of the following described centerline:

Beginning at a point in the South Levee of Piper Slough on Bethel Island, that is distant North 10°28'39" West 288.53 feet from the standard Contra Costa County street monument marking the intersection of the centerlines of Bethel Island Road and Willow Road West, as said monument appears on that Record of Survey, filed February 21, 1995, in Book 107 of L.S.M., at Pages 17 and 18, Contra Costa County Records; thence, from said POINT OF BEGINNING, North 07°52'26" East 429.40 feet, more or less, to the North Levee of Piper Slough, being also the South Levee of Franks Tract and the end of this strip of land.

EXCEPTING THEREFROM any portion lying above the Ordinary High Tide Line.

This exhibit is solely for purposes of generally defining the lease premises, and is not intended to be, nor shall it be construed as, a waiver or limitation of any State interest in the subject or other property.

EXHIBIT "A" 108
CALENDAR PAGE
MINUTE PAGE W25329 002473

LAUGENOUR AND MEIKLE
CIVIL ENGINEERS

2095-78
Revised October 22, 1996
July 2, 1996
P.J.A.

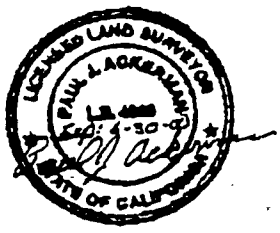
DESCRIPTION
for
AA PRODUCTION SERVICES, INC.
WEBB TRACT PIPELINE
PROPOSED BORE LOCATION
FALSE RIVER

A portion of projected Sections 3 and 4, Township 2 North, Range 3 East, Mount Diablo Meridian, Contra Costa County, California, being more particularly described as follows:

A strip of land fifty (50) feet wide, lying twenty-five (25) feet on each side of the following described centerline:

Beginning at a point in the South Levee of False River, that is distant North 10°28'39" West 288.53, North 07°52'26" East 429.40 feet, more or less, and North 07°52'26" East 1771.75 feet, more or less, from the standard Contra Costa County street monument marking the intersection of the centerlines of Bethel Island Road and Willow Road West, as said monument appears on that Record of Survey, filed February 21, 1995, in Book 107 of L.S.M., at Pages 17 and 18, Contra Costa County Records; thence, from said POINT OF BEGINNING, North 07°52'26" East 829.35 feet, more or less, to the North Levee of False River being also the South Levee of Webb Tract and the end of this strip of land.

EXCEPTING THEREFROM any portion lying above the Ordinary High Tide Line.



This exhibit is solely for purposes of generally defining the lease premises, and is not intended to be, nor shall it be construed as, a waiver or limitation of any State interest in the subject or other property.

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EXHIBIT "A"
W 25329 OC 2474

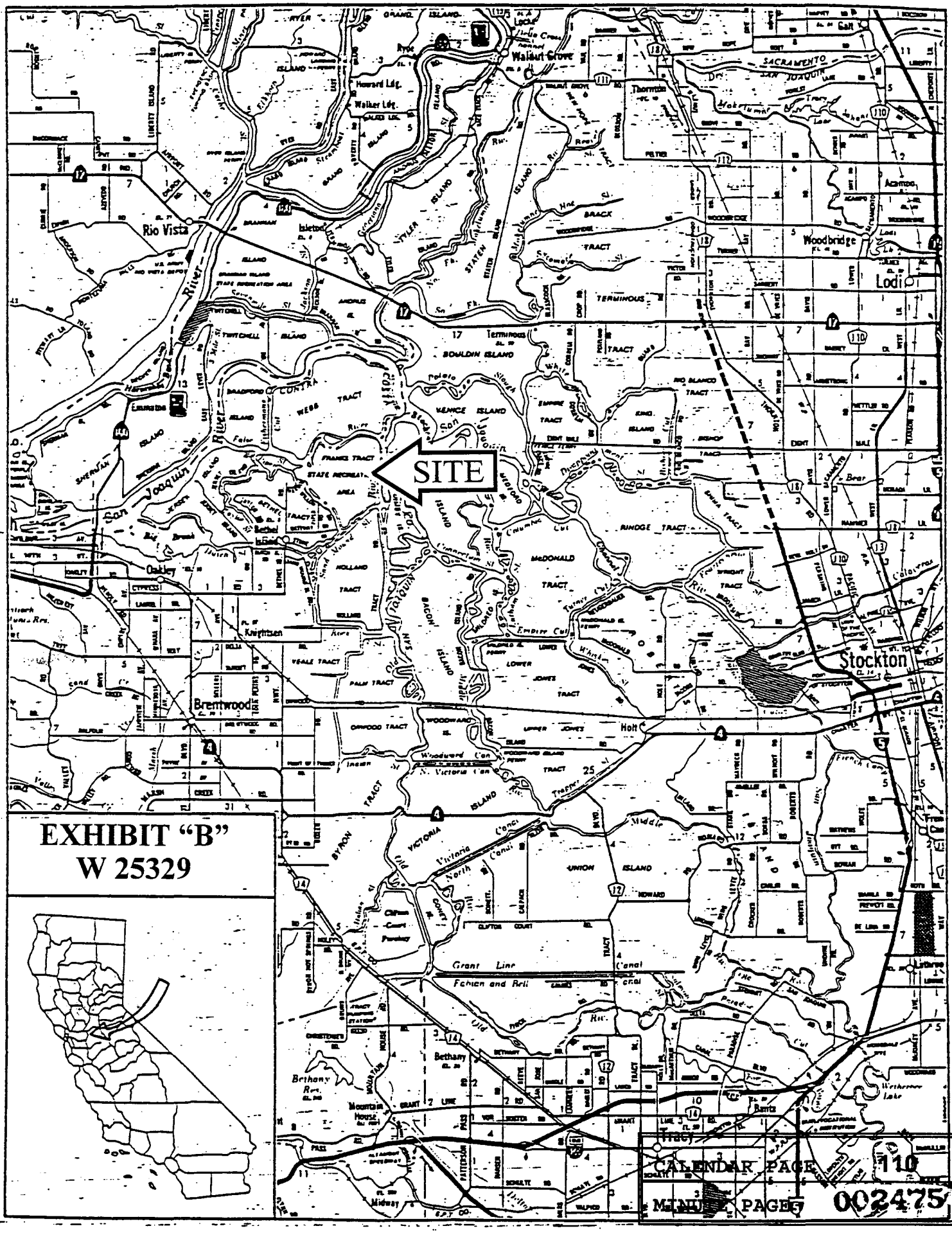

EXHIBIT "B"
W 25329

CALIFORNIA STATE LANDS COMMISSION
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825-8202

ROBERT C. HIGHT, *Executive Officer*
(916) 574-1800 FAX (916) 574-1810
California Relay Service From TDD Phone 1-800-735-2922
from Voice Phone 1-800-735-2929

September 16, 1996

File: W25329
ND 678
SCH: 96092032

EXHBIT "C"

W 25329

NOTICE OF PUBLIC REVIEW AND INTENT TO ADOPT A PROPOSED NEGATIVE DECLARATION

(SECTION 15073 CCR & SECTION 21092 PRC)

A Mitigated Negative Declaration has been prepared pursuant to the requirements of the California Environmental Quality Act (Section 21000 et seq., Public Resources Code), the State CEQA Guidelines (Section 15000 et seq., Title 14, California Code Regulations), and State Lands Commission Regulations (Section 2901 et seq., Title 2, California Code Regulations) for a project application currently being processed by the staff of the State Lands Commission.

This document is attached for your review. Comments should be addressed to the State Lands Commission office shown above with attention to the undersigned. All comments must be received by October 16, 1996.

The Mitigated Negative Declaration will be considered for adoption at a meeting of the State Lands Commission. You will be notified of the date and location at least 10 days prior to the meeting.

Should you have any questions or need additional information, please call the undersigned at (916) 574-1893.

GOODYEAR K. WALKER
Division of Environmental
Planning and Management

Attachment

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STATE OF CALIFORNIA
PETE WILSON, Governor

CALIFORNIA STATE LANDS COMMISSION
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825-8202

ROBERT C. HIGHT, *Executive Officer*
(916) 574-1800 FAX (916) 574-1810
California Relay Service From TDD Phone 1-800-735-2922
from Voice Phone 1-800-735-2929

PROPOSED NEGATIVE DECLARATION

File:W25329
ND 678

Project Title: Webb Tract Pipeline Crossing Project

Proponent: Tri Valley/Delta Rio Resources

Project Location: Contra Costa County

Project Description: A six inch welded steel natural gas pipeline will be installed under Piper Slough, Frank's Tract and False River between Bethel Island and Webb Tract, in Contra Costa County.

Contact Person: Goodyear K. Walker Phone: (916) 574-1893

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

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

___ this project will not have a significant effect on the environment.

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

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Notice of Completion Appendix F

See NOTE below

Mail to: State Clearinghouse, 1400 Tenth Street, Sacramento, CA 95814 916/445-0613

SCH 96092032

Project Title: Tri Valley Webb Tract Pipeline

Lead Agency: State Lands Commission

Contact Person: Goodyear K. Walker

Street Address: 100 Howe Ave, Suite 100 South

Phone: (916) 574-1893

City: Sacramento

Zip: 95825

County: Sacramento

Project Location

County: Contra Costa

City/Nearest Community: Bethel Island

Cross Streets: Harbor Road

Total Acres: less than 1.0

Assessor's Parcel No. N/A

Section: Twp. Range: Base:

Within 2 Miles: State Hwy #: 12

Waterways: under Piper Slough, Franks Tract, False River

Airports: none

Railways: none

Schools: none

Document Type

CEQA: __ NOP __ Supplement/Subsequent NEPA: __ NOI Other: __ Joint Document
__ Early Cons __ EIR (Prior SCH No.) ____ __ EA __ Final Document
X Neg Dec __ Other ____ __ Draft EIS __ Other ____
__ Draft EIR __ FONSI

Local Action Type

__ General Plan Update __ Specific Plan __ Rezone __ Annexation
__ General Plan Amendment __ Master Plan __ Prezone __ Redevelopment
__ General Plan Element __ Planned Unit Development __ Use Permit __ Coastal Permit
__ Community Plan __ Site Plan __ Land Division (Subdivision Parcel Map, Tract Map, etc.) X Other ROW lease
____

Development Type

__ Residential: Units ____ Acres ____
__ Office: Sq.Ft. ____ Acres ____ Employees ____
__ Commercial: Sq.Ft. ____ Acres ____ Employees ____
__ Industrial: Sq.Ft. ____ Acres ____ Employees ____
__ Educational ____
__ Recreational ____

__ Water Facilities: Type ____ MGD ____
__ Transportation: Type ____
__ Mining: Mineral ____
__ Power: Type ____ Watts ____
__ Waste Treatment: Type ____
__ Hazardous Waste: Type ____
X Other: Natural gas pipeline

Project Issues Discussed in Document

__ Aesthetic/Visual
X Agricultural Land
X Air Quality
X Archeological/Historical
__ Coastal Zone
X Drainage/Absorption
X Economic/Jobs
__ Fiscal
X Flood Plain/Flooding
__ Forest Land/Fire Hazard
X Geologic/Seismic
__ Minerals
X Noise
X Population/Housing Balance
X Public Services/Facilities
X Recreation/Parks
__ Schools/Universities
__ Septic Systems
__ Sewer Capacity
X Soil Erosion/Compaction/Grade
__ Solid Waste
X Toxic/Hazardous
X Traffic/Circulation
X Vegetation
X Water Quality
X Water Supply/Grndwater
X Wetland/Riparian
X Wildlife
__ Growth Inducing
X Landuse
X Cumulative Effects
__ Other ____

Present Land Use/Zoning/General Plan Use

Agricultural

Project Description

A six inch welded steel natural gas pipeline will be installed under the bed of Piper Slough, Frank's Tract and False River.

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Note: Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill it in.

Reviewing Agencies Checklist

KEY
S = Document sent by lead agency
X = Document sent by SCH
√ = Suggested Distribution

S	**Resources Agency**		**Environmental Affairs**
S	Boating & Waterways	S	Air Resources Board
___	Coastal Commission	S	APCD/AQMD
___	Coastal Conservancy	___	California Waste Management Board
___	Colorado River Board	___	SWRCB: Clean Water Grants
___	Conservation	S	SWRCB: Delta Unit
S	Fish & Game	S	SWRCB: Water Quality
___	Forestry	___	SWRCB: Water Rights
S	Office of Historic Preservation	S	Regional WQCB # ( )
S	Parks & Recreation		**Youth & Adult Corrections**
S	Reclamation	___	Corrections
___	S.F. Bay Conservation & Development Commission		**Independent Commissions & Offices**
S	Water Resources (DWR)	___	Energy Commission
	Business, Transportation & Housing	___	Native American Heritage Commission
___	Aeronautics	S	Public Utilities Commission
___	California Highway Patrol	___	Santa Monica Mountains Conservancy
S	CALTRANS District #	S	State Lands Commission
S	Dept of Transportation Planning (Headquarters)	___	Tahoe Regional Planning Agency
___	Housing & Community Development	___	Other _____
___	**Food & Agriculture**	___	Other _____
	Health & Welfare	___	Other _____
___	Health Services _____		
	State & Consumer Services		
___	General Services		
___	OLA (Schools)		

Public Review Period (to be filled in by lead agency)

Starting Date: September 16, 1996 Ending Date: October 16, 1996

Signature _____ Date: September 16, 1996

Lead Agency (Complete if applicable):

Consulting Firm: Jones and Stokes Associates, Inc.

Address:2600 V Street, Suite 100

City/State/Zip: Sacramento, CA 95818

Contact:Michael Langley

Phone: (916) 737-3000

Applicant:

Address:Tri Valley/Delta Rio Resources C/O AA Production Services Inc., 641 Airport Road

City/State/Zip Rio Vista, CA 94571

Phone: (707)374-2617

For SCH Use Only:

Date Received at SCH:

Date Review Starts:

Date to Agencies:

Date to SCH:

Clearance Date:

Notes:

Initial Study/Mitigated Negative Declaration

Webb Tract Pipeline
Piper Slough/Franks Tract/False River Crossing

Prepared for:

California State Lands Commission
100 Howe Avenue, Suite 100 South
Sacramento, CA 95818-1914
Contact: G. Kirk Walker
916/574-1893

Prepared by:

Jones & Stokes Associates, Inc.
2600 V Street, Suite 100
Sacramento, CA 95818-1914
Contact: Michael Langley
916/737-3000

September 6, 1996

This document should be cited as:

Jones & Stokes Associates, Inc. 1996. Initial study/mitigated negative declaration, Webb Tract pipeline, Piper Slough/Franks Tract/False River crossing. September 6, 1996. (JSA 96-146.) Sacramento, CA. Prepared for California State Lands Commission, Sacramento, CA.

TRI VALLEY OIL & GAS COMPANY
WEBB TRACT PIPELINE
PIPER SLOUGH/FRANKS TRACT/FALSE RIVER CROSSING

Project Description

1. Overview of Project:

A. Applicant - TRI VALLEY OIL & GAS COMPANY (TVO&GC) is an independent, privately owned gas gathering and production company presently operating in Contra Costa County. TVO&GC has designed and constructed, and now owns and operates nearly three (3) miles of gas gathering pipelines. Although TVO&GC is not considered a utility, it constructs and operates in compliance with regulations as found in the *Code of Federal Regulations, Title 49, Transportation, Subchapter D. Pipeline Safety, US. Department of Transportation* and the *California Public Utilities Commission General Order No. 112D.* These regulations provide strict guidelines for the design, construction, and operation of pipelines as may be operated by TVO&GC. All of the pipelines operated by TVO&GC are equipped with the applicable safety devices and systems to guarantee that its operations comply with reasonable standards for safety.

B. Project Brief - TVO&GC proposes to install a six-inch welded steel natural gas pipeline beneath Piper Slough, Franks Tract, and False River between Bethel Island and Webb Tract (see attached map). The crossing of the referenced waterways will be accomplished utilizing horizontal directional boring technology. The construction procedure is environmentally safe, and causes minimal disruption to any landowner activity. The actual length of the bored crossing will be approximately 3650 feet, and will maintain a minimum clearance beneath the waterways bed of 35 feet. The construction time is estimated to be 3 to 4 days during daylight hours only, and 1 day of around the clock work, and will involve 5 crew members. The project area is not viewable from the public road, as the construction area is on private agricultural property and set back at least 100' from public roads. In addition, the entry and exit points are in or adjacent to agricultural areas so that any impacts from dust emission will be minimal. All equipment used will have industry standard mufflers to assure that noise is kept at a minimum. Travel will also be minimal, as only one or two trucks will enter or exit the site during the construction. The California State Lands Commission, the primary jurisdictional body involved in this project is designated as the CEQA lead agency.

C. Siting - The project site for the pipeline crossing is the contiguous waterways defined as Piper Slough, Franks Tract, and False River. It is bounded on both shores by levees which are maintained by Reclamation Districts on each side of the river. The upland areas, outside of the levees, are on private agricultural lands. All construction activity will take place on private agricultural land outside the bounds of the levees. The bore entry point will be set back over 250' from the west bank of Piper Slough and the bore exit point will be set back approximately 150' from the east bank of False River in Contra Costa County. No disturbance or removal of any vegetation, other than agricultural, is involved. In addition, soil exploration borings were taken by Raney Geotechnical of Sacramento at the entry and exit points of the project to confirm the suitability and stability of the soil for a bore at this location.

D. Schedule - Installation of this project is scheduled to occur during a 5 to 6 day period, between October 1 and November 15, 1996.

E. **Purpose** - The proposed pipeline crossing is a project to provide a pipeline connection for TVO&GC's existing Webb Tract #1 gas well on Webb Tract connecting to TVO&GC's existing Martins-Severin gas gathering system near Bethel Island Road. The project is intended to enhance the gas gathering system and provide a sales outlet for gas production on Webb Tract. Any future construction to TVO&GC's pipeline gathering system will undergo whatever environmental review may be necessary with the appropriate public agencies having jurisdiction over the proposed route(s) at that time.

2. PIPELINE

A. Specifications:

1. Materials - The line pipe shall consist of 6.625" diameter by .280" wall thickness welded steel, weighing 19.00 pounds per foot. This pipe shall meet or exceed the quality standards established in the American Petroleum Institute (API) bulletin 5L (X42). Mill welding by Electric Resistance Welding (ERW) steel will be mill-tested by radiographic and hydrostatic means in conformity with API 1104, which provides specifications for welding. The pipe shall be coated with 12 mils Fusion Bonded Epoxy or X-tru coatings.

2. Design:

Yield Pressure	2,840	PSI
Test Pressure	1,847	PSI
Maximum Working Pressure	1,318	PSI

There will be no appurtenances such as flanges, junctions, reducers, pipe supports, anchors, thrust blocks, diffusers, manholes or any other devices, within or adjacent to the bored crossing. The pipeline will be protected against external corrosion by cathodic means. Protection will consist of sacrificial anodes and cathodic test stations. An anode bed (collection of anodes) consisting of four 37.5-pound magnesium anodes will be located at the western end of the bored crossing. Cathodic test stations will be located on both ends of the bored crossing.

B. Installation:

The following is the basic construction sequence and plan for the directionally drilled river crossing of Piper Slough, Franks Tract and False River on the Webb Tract Pipeline project.

1. A comprehensive survey of the directional route of the pipeline will be conducted, and the exact entry and exit points will be established using EDM (Electronic Distance Measurement) equipment. Both horizontal and vertical control points will be established at the entry and exit points.

2. The following construction areas will be prepared:

   a. Drilling Site Area (west of river)
   b. Receiving (Exit) Site Area (east of river)
   c. Pipe String Make-up Area (east of river and next to exit site area)

3. The product pipe string (6.625" ERW.280" Wall ASTM Grade X42 Coated Pipe) will be welded out,

radiographically inspected, and hydrostatically tested to 1847 psi. Fresh water for testing will be imported by truck to the site and, upon completion, exported to a disposal well consistent with applicable regulations and requirements.

4. Drilling contractor will mobilize equipment to drilling site. This equipment will include:
   a. (1) Drilling rig
   b. (1) Mud pump trailer
   c. (1) Backhoe
   d. (2) Sideboom tractors
   e. (2) Hydraulic boom trucks
   f (1) Excavator

   Access to the entry side of the crossing is by county road. The access to the exit side of the crossing will be by private ferry. There are adequate parking and storage areas at entry and exit areas. No clearing or disturbance of work areas is required, as these areas are presently used for either access to the existing Martins-Severin location or agricultural equipment access and storage.

5. A steering tool system consisting of a probe located in the drilling head assembly, interface unit and computer workstation will be used. The probe is the heart of the steering tool system and has six sensors which allow the driller to track the direction of the bore. A pilot hole utilizing the probe will be drilled and horizontal and vertical adjustments will be made at approximately 15 foot intervals to assure that the drilling profile matches the planned profile. Drilling mud (Bentonite slurry) will be used during advancement to erode the formation and aid in stabilizing the pilot hole.

6. Upon completion of the pilot hole, the steerable bottom hole assembly will be replaced with a reaming device of approximately 6 inches in diameter. The reamer will then be rotated and pulled back along the pilot hole profile toward the entry side. Bentonite slurry will be injected through the drill string to the reamer providing a carrier for the reamer cuttings and stabilizing the reamed hole. When the reamer reaches the entry side it will be pushed back through the hole to the exit side with Bentonite again injected to stabilize the hole.

7. The reamer assembly will then be replaced by a pulling swivel and circulating sub assembly. The product pipe will be made up to this assembly and the entire product string will be pulled into the hole. Bentonite slurry will be injected from the circulating sub to fill the annular space between the pipe and the reamed wall of the hole. All excess Bentonite slurry, with entrained bore "cuttings," will be hauled off-site and disposed of at an approved disposal area.

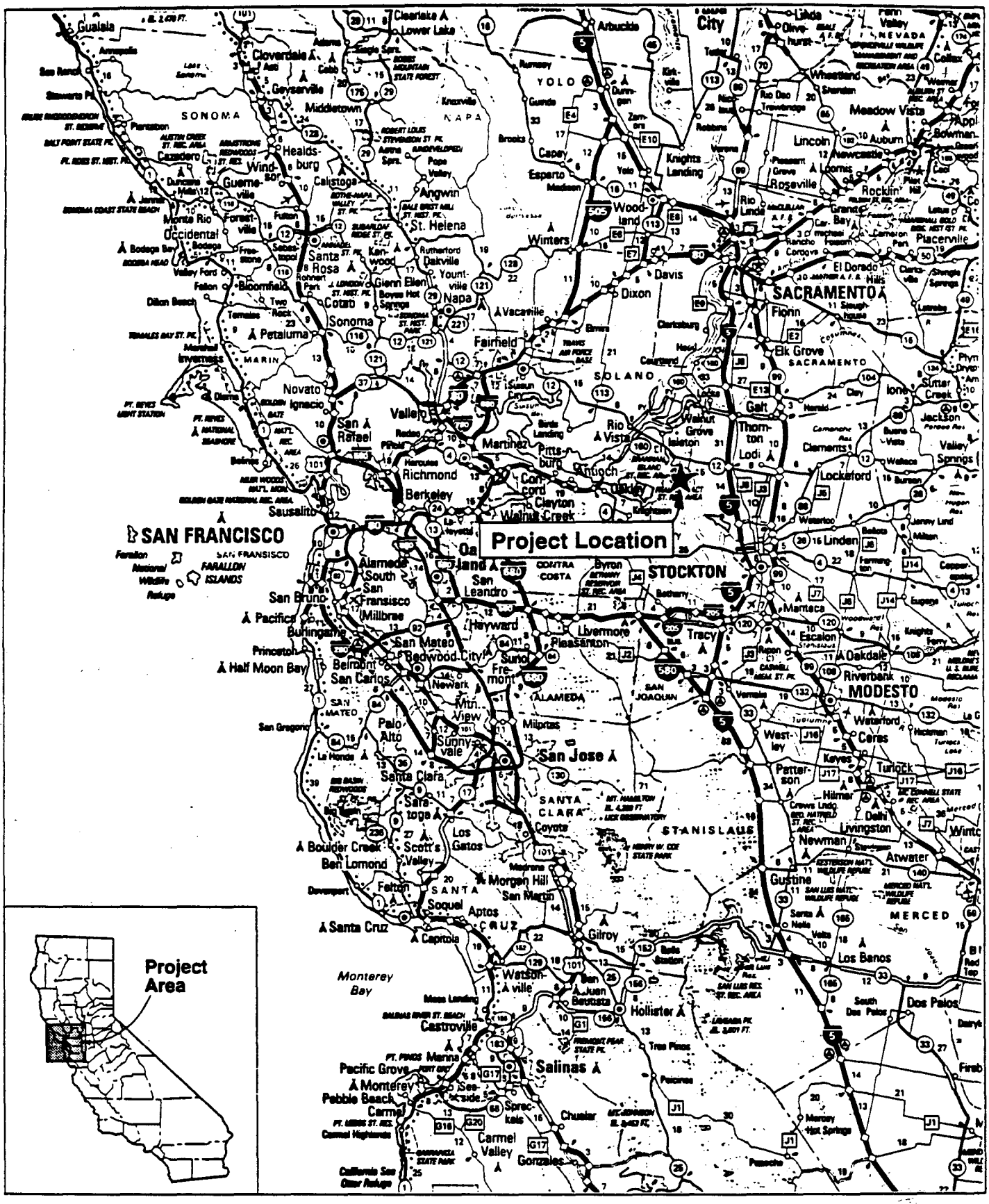
8. Drilling contractor will rig down and move equipment from location. Conventional pipe tie-ins will be made to the existing Martins-Severin Gas Gathering System, and to the Webb Tract #1 gas well, and entry and exit points back-filled.

C. **Quality Control** - All construction including pipe joining (welding) will be in accordance with the requirements of the *Code of Federal Regulations, title 49, Transportation, Subchapter D, Pipeline Safety, US. Department of Transportation* and the *California Public Utilities Commission General Order No. 112D.* The joining of pipe will be by the electric arc process. All welders will be qualified in accordance with the requirements of API Standard 1104 Section 3. All electrodes used for pipe joining (welding) will conform to ASTM Grades E6010, E7010, E8010 as applicable. All welds will be radiographically inspected in accordance with the requirements of API 1104. Required hydrostatic tests to be conducted and documented in accordance with the requirements of CPUC II 2-D paragraphs 192.503 and 192.505.

D. Contingency Plans - TVO&GC has an Abandonment Contingency Plan in the event drilling is suspended and a partially drilled hole is abandoned. This plan is part of TVO&GC's application request with the State Lands Commission.

The only known hazardous materials on the site during construction will be fuels and lubricants in the construction equipment. TVO&GC has a hazardous materials contingency plan on file with its State Lands Commission Application should some of the fuels for lubricants used in the construction leak from the equipment. In addition, the contractor shall maintain on-site equipment sufficient to control and extinguish any fire which might result from the welding, cutting, or related work necessary for the pipeline construction.

TVO&GC has a subsurface rupture contingency plan on file with the State Lands Commission. This plan will be executed in the event that a subsurface rupture occurs or bentonite slurry seepage is observed in the project area.



Jones & Stokes Associates, Inc.

Figure 1

Project Location Map

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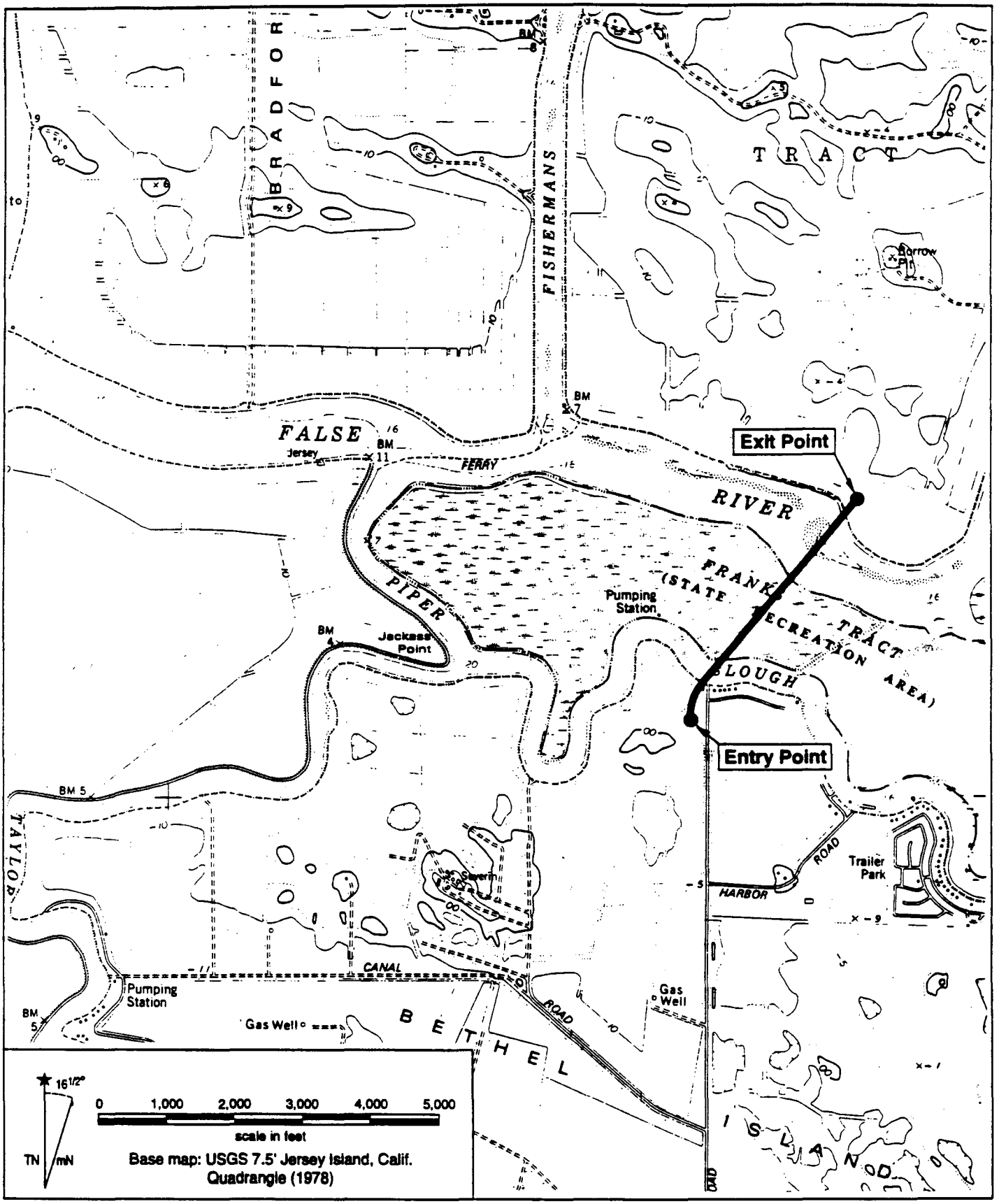

Jones & Stokes Associates, Inc.

Figure 2
Study Area

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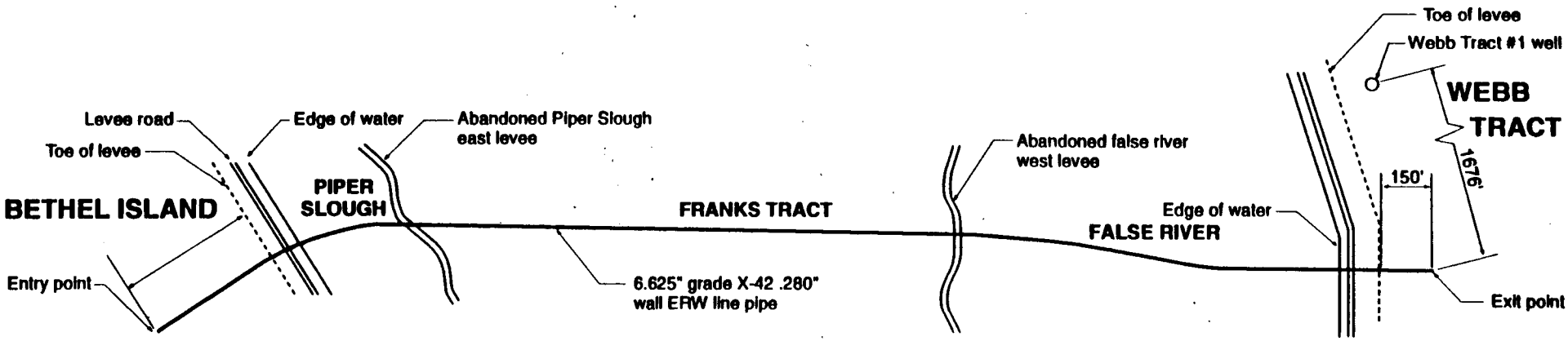
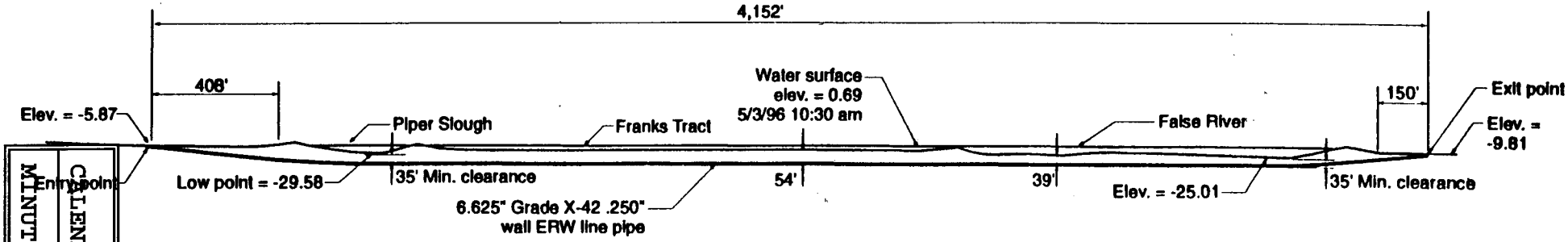


PLAN VIEW



CROSS SECTION

Source: AA Production Services, Inc. 1996.

Jones & Stokes Associates, Inc.

Figure 3
Webb Tract Pipeline

TRI VALLEY OIL & GAS COMPANY

WEBB TRACT PIPELINE

HAZARDOUS MATERIALS CONTINGENCY PLAN

CONSTRUCTION PHASE

The only known hazardous materials which will be on site during the construction phase will be fuels and lubricants in construction equipment. No fuels or lubricants will be stored on the construction location. The exposure to a fuel or lubricant spill will be limited to the actual tank capacity of the equipment.

In the event of a fuel or lubricant spill on the construction location the following plan is to be followed.

1. Primary Action At The spill location

   A. Notification of the Project Supervisor.

   B. Contain the spill by building earth dikes to surround the spill.

2. Secondary Action

   A. For small quantity spill apply absorbent pads, which are carried in each supervisors vehicle with additional pads stored in the construction storage container on site. All absorbent pads to be disposed of in plastic bags and placed into container marked for proper disposal.

   B. For larger quantity spills request the contracted hazardous waste removal contractor to mobilize to the site with a vacuum truck.

   C. If any hazardous material reaches any waterway or ditch containing water, deploy absorbent booms which are stored at the construction container on site.

3. Final Clean-up

   A. All contaminated soil or other contaminated materials to be removed and placed into plastic bags or other approved container and disposed of off site by the contracted hazardous waste contractor.

   B. Perform any remedial backfill and grading to restore area of spill.

4. Notifications

   A. Immediately notify on site contractor supervisor and owner representative.

B. Make all notifications to county and state agencies as appropriate and as required by the regulations of the Contra Costa County Department of Environmental Management or any other county agency with jurisdiction. A copy of this notification information is in the possession of the contractor site supervisor.

Contra Costa County Office Of Emergency Services	(510)228-5000
California Office Of Emergency Services	(800)852-7550
State Lands Commission	(310)590-5201

OPERATION PHASE

There will be no hazardous materials on the project location after the pipeline is placed into operation.

TRI VALLEY OIL & GAS COMPANY

Subsurface Rupture Contingency Plan for a Directionally Drilled River Crossing

The directional drilled river crossing procedure includes a very accurate monitoring and control system to track the progress and exact location of the drilling head at all times. Fine horizontal and vertical adjustments are made throughout the procedure to assure that the drilling profile matches the planned profile. Drilling mud (Bentonite slurry) is used during the advancement of the drill string to erode the formation and aid in stabilizing the pilot hole. The specific weight of the drilling mud is adjusted throughout the procedure to ensure hydrological stability. However, in the event a subsurface rupture should occur or that seepage of Bentonite slurry is noticed in the project area, operations will stop immediately and the following procedure will be implemented.

Containment and Control

Should seepage occur on the ground in the project area, on-site materials consisting of industrial grade PVC mesh with steel T-posts and natural straw bales will be installed around the seepage area to contain the fluid.

Should seepage occur beneath the waterway, on-site materials consisting of industrial grade PVC mesh with steel T-posts and natural straw bales will be installed above and below the crossing site where the depth of the waterway allows.

Note: Bentonite is a naturally occurring substance that would eventually be physically and biologically degraded without intervention.

After this entire procedure is implemented, any Bentonite seepage that has occurred will be removed using a vacuum truck and then transported to a disposal site as approved by the California Division of Oil and Gas.

Notification Procedures - The following agencies will be notified immediately in the event this contingency plan is implemented:

1.	California State Lands Commission Mr. Kirk Walker	916-574-1822
2.	State Department of Fish and Game Environmental Services	916-358-2929
3.	The Reclamation Board Mr. Donald L. Jackson	916-663-5434

Evaluation Plan - After the above action has been taken, Tri Valley Oil & Gas Company management and the contract drilling engineer will evaluate the feasibility of continuing the boring procedure or implementing the Abandonment Contingency Plan (ACP) after evaluating the following:

The exact location of the drilling head assembly will be verified with portable locating equipment. If it is determined that the drilling profile does not match the planned profile, and exceeds design limits, the ACP will be implemented.

If the location and profile are with design limits, the specific weight of the drilling mud will be verified to ensure a slightly overbalanced condition to the surrounding formation. The specific weight will be adjusted if necessary.

If location, profile, and drilling mud weight are determined to be within design limits, and seepage of Bentonite slurry is controlled, the contract drilling engineer may proceed.

Should it be determined that the stability of the bored crossing is in serious question, even if location, profile, and drilling mud weight are deemed satisfactory, the ACP will be implemented.

WEBB TRACT PIPELINE

PIPER SLOUGH, FRANKS TRACT, AND FALSE RIVER

DIRECTIONALLY DRILLED RIVER CROSSING

ABANDONMENT CONTINGENCY PLAN

The following general plan would be executed if for any reason the drilling operation were forced to be suspended and the partially completed drilled hole abandoned.

During Pilot Hole Drilling

If drilling were to be suspended during pilot hole drilling the following general procedure would be executed.

1. Advancement of the drill string would be halted.
2. Cement or Bentonite mixing and pumping equipment would be mobilized to the drilling location.
3. Cement or Bentonite pumping equipment would be rigged up to the drill string.
4. Drill string would be withdrawn, with pumped cement or Bentonite filling void and displacing the Bentonite slurry material.

During Reaming

If drilling were to be suspended during the reaming of the hole, the following general procedure would be executed.

1. Pull back of the reaming string would be halted.
2. Cement or Bentonite mixing and pumping equipment would be mobilized to the drilling location.
3. Cement or Bentonite pumping equipment would be rigged up to the drill string.
4. If possible the reamer would be pushed back to the exit end and:
   - A. The reamer would be replaced with a cementing head.
   - B. Drill string would be withdrawn with pumped cement or Bentonite filling void and displacing the Bentonite slurry material.

5. If reamer could not be pushed back to exit end, then:

   A. Drill string would be withdrawn with pumped cement or Bentonite filling void and displacing the Bentonite slurry material.

   B. Drilling rig would rig down at entry end and rig up at exit end.

   C. Run in pilot hole with cement head on pilot hole drill string until previously cemented reamed hole is bumped.

   D. Drill string would be withdrawn with pumped cement or Bentonite filling void and displacing the Bentonite slurry material.

EXHIBIT D

SUMMARY OF MITIGATION MEASURES INCORPORATED INTO THE PROPOSED PROJECT

1. The pipeline bore will be maintained with a minimum clearance of 35 feet below the natural bed of the river at all times.

2. The entry and exit pits for the pipeline bore will be adequately bermed to contain any spills.

3. The contractor will notify the State Lands Commission at least 24 hours in advance of beginning the directional bore.

4. The contractor will follow all procedures in the "Rupture Contingency Plan" approved by the State Lands Commission at all times.

5. The contractor will follow the " Abandonment Contingency Plan" approved by the State Lands Commission in the event that a bore must be abandoned for any reason.

6. The contractor will comply with the provisions of the "Hazardous Materials Contingency Plan" approved by the State Lands Commission at all times.

7. At the completion of the project, the bentonite/cuttings slurry will be collected and taken to a certified disposal site.

8. Any bentonite seepage discovered in the course of drilling will be collected by a vacuum truck and taken to a certified disposal site.

9. All engine-driven equipment will be kept in good condition and in proper tune at all times.

10. Construction shall take place during daylight hours to the maximum extent possible.

11. If any cultural artifacts or human remains are discovered in the course of construction, all work shall stop, and the State Lands Commission shall be immediately notified.

12. All dirt access roads shall be watered during construction to minimize dust generation.

INITIAL STUDY CHECKLIST

I. BACKGROUND

1. Project Title: Webb Tract Pipeline Piper Slough/Franks Tract/False River Crossing Project

2. Name of Project Applicant: Tri Valley/Delta Rio Resources (Contact: John Adams [AA Production Services])

3. Address and Phone Number of Applicant: Tri Valley/Delta Rio Resources, C/O AA Production Services, Inc., 641 Airport Road, Rio Vista, CA 94571

   Phone: (707) 374-2617

4. Lead Agency and Contact Person: State Lands Commission (Contact: G. Kirk Walker)

5. Lead Agency Address and Phone Number: 100 Howe Avenue, Suite 100 South, Sacramento, CA 95825-8202

   Phone: (916) 574-1893

6. Date Checklist Completed:

7. Party Completing Checklist: Jones & Stokes Associates, Inc. (Contact: Michael Langley), 2600 V Street, Suite 100, Sacramento, CA 95818-1914, Phone (916) 737-3000

8. Project Location: The project extends from an entry point on Bethel Island in Contra Costa County, under Piper Slough, Franks Tract, and False River to an exit point on Webb Tract (Figures 1, 2, and 3). The project area is located approximately 4 miles northeast of the community of Oakley in Contra Costa County and about 8 miles south of Isleton in Sacramento County.

9. General Plan Designation: Contra Costa County: entry point - AL (agricultural lands), exit point - DR (Delta recreation)

10. Zoning Classification: Contra Costa County: entry point - A3, exit point - A2

11. Description of Project *(Describe the whole action involved, including but not limited to, later phases of the project, and any secondary, support, or offsite features necessary for its implementation. Attach additional sheets if necessary)*: See preceding section of this report.

12. Surrounding Land Uses and Setting *(Briefly describe the project's surroundings)*: The project sites (the entry and exit points) are located in Contra Costa County in the Sacramento-San Joaquin River Delta region of northern California. The entry point is located near the northern terminus of Bethel Island Road on Bethel Island. This site is situated approximately 250 feet south of the Piper Slough levee and about 50 feet west of Bethel Island Road. The surrounding area is used primarily for cattle grazing. Recreational uses are prevalent along the waterfront. Several residences exist along the waterfront at the northern end of Bethel Island Road. The exit point is north and east of the entry point on Webb Tract. This area is primarily used for agricultural cropland.

13. Other Agencies Whose Approval Is Required *(e.g., permits, financing approval, or participation agreement)*: Permit or endorsement applications have been filed with the following agencies: Contra Costa County Public Works Department, local reclamation districts, State Lands Commission, State Reclamation Board, State Water Resources Control Board, and U.S. Army Corps of Engineers.

II. EVALUATION OF ENVIRONMENTAL IMPACTS

1. *A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question.* A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault-rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3. "Potentially Significant Impact" is appropriate if there is *substantial evidence* that an effect is significant.

4. Mitigation Identified: *Negative Declaration* applies where the incorporation of mitigation measures has reduced an effect from potentially significant to less than significant. The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less-than-significant level.

5. No Mitigation Identified: *EIR* applies where there is substantial evidence than an effect is significant and no mitigation is identified or more analysis is needed. When this determination is made, an EIR is required.

6. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. State CEQA Guidelines Section 15063(c)(3)(D).

7. References to information sources for potential impacts (e.g., general plans, zoning ordinances) should be provided. *Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.* A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

III. ENVIRONMENTAL ANALYSIS

Include explanations for all answers by adding text to form or on attached pages.

	No Impact	Less-than-Significant Impact	Potentially Significant Impact: Mitigation Identified - Negative Declaration	Potentially Significant Impact: No Mitigation Identified - EIR
1. Land Use and Planning				
a. Does the project conflict with adopted land use plans or policies that are applicable to the project site or to the project vicinity? [Note that on a project-specific basis, such applicable land use plans and policies may include those imposed by local agencies, by local or regional agencies, and by statewide land use agencies.]	X			
b. Would the project conflict with open space, low-income housing, or other adopted land use goals that are applicable to the project location?	X			
c. Would the project conflict with established recreational, educational, religious, or scientific uses at the project location?	X			
d. Would the project require cancellation of Williamson Act agricultural contracts, or convert agricultural land to a non-agricultural use within an area designated as Important Farmland by the Department of Conservation, or an area designated as Prime Farmland by the Soil Conservation Service of the federal Department of Agriculture?	X			
e. Would the project cause a nuisance to existing or planned land uses? Would existing or planned land uses cause a nuisance to the residents or users of the project?		X		

The proposed project would require construction in areas that are designated and currently used for agricultural uses (Hall pers. comm.). As stated in the project description, the project will be constructed during a 4- to 5-day period. After the pipeline is installed, the entry and exit points for the boring operation will be backfilled and restored to original conditions. The pipeline will then be connected to subsurface mainlines. No permanent surface structures will be constructed. There will, therefore, be only a short-term disturbance of a limited ground-surface area at the entry and exit points; there will be no long-term changes in land use. Agricultural operations and productivity would not be affected. No conflicts with onsite or adjacent land uses would result. The project would be consistent with existing land use plans and policies.

The entry and exit points are located within an area that is subject to the Delta Protection Act of 1992 (Senate Bill 1866). This law regulates development activities occurring within the Delta Region and resulted in the adoption of a resource management plan for lands identified in the Act. The entry point is within the designated Secondary Zone, and the exit point is within the Primary Zone. Exploration or extraction of gas and hydrocarbons are specifically excluded from the statutory definition for "development" contained in this law. Thus, the provisions of the law do not apply to this project.

Because the pipeline will be bored under the waterways in question, there will be no disturbance to the riverbeds, banks, or levees. Recreational uses associated with these areas would not be affected. Construction activities would not be visible to recreational users of the river because the levees will screen views of the construction sites from the river.

The project involves short-term construction in an area that is sparsely populated and used primarily for agricultural production. Construction noise may be considered a nuisance to some residents in this area, particularly those living near the site on Bethel Island. However, project construction will occur primarily during daylight hours over a very short duration of three to four days. There will be one day of work that will occur around the clock. There are no other nuisance conditions that would exist after completion of the project.

The proposed project is being constructed to address current needs with regard to natural gas infrastructure to support distribution of natural gas from existing production wells. Potential effects associated with any future gas exploration projects that may connect to the proposed pipeline would be addressed in separate environmental documents. At the present time, there are no known gas exploration projects under proposal in the immediate area that would use this pipeline.

			Potentially Significant Impact	
	No Impact	Less-than-Significant Impact	Mitigation Identified - Negative Declaration	No Mitigation Identified - EIR
2. Population, Employment, and Housing				
a. Does the project conflict with population, employment, or housing policies or projections established by government agencies with jurisdiction over the project?	X			
b. Will the project directly or indirectly cause substantial growth or concentration in the population beyond current levels?	X			
c. Will the project directly or indirectly cause a net loss in the number of jobs in the community or cause substantial job or income losses by changing the employment opportunities in a community?	X			
d. Does the project displace existing residences or otherwise create or exacerbate a housing shortage?	X			

This project involves short-term construction of natural gas infrastructure and will not generate any changes to population, housing, or employment in this region.

	No Impact	Less-than-Significant Impact	Potentially Significant Impact: Mitigation Identified - Negative Declaration	Potentially Significant Impact: No Mitigation Identified - EIR
3. Geology, Soils, and Seismicity				
a. Would the project conflict with applicable legal requirements regarding geohazards and soil conservation?	X			
b. Is the project likely to expose people or structures to significant geohazards? In particular, is the project located within an Alquist-Priolo Special Studies Zone, within a known active fault zone, in an area characterized by surface rupture that might be related to a fault, or in an area designated as geologic hazard area or subject to geohazard safety measures in a local plan or ordinance?		X		
c. Does the substrate at the project site consist of material that is subject to liquefaction or other secondary seismic hazards in the event of ground shaking?	X			
d. Is there any evidence of static hazards, such as landsliding or slopes in excess of 15%, that could result in slope failure?	X			
e. Is the project located on or in the vicinity of soil that is likely to collapse or subside, as might be the case with fill, old mining properties, or areas of subsidence caused by groundwater drawdown?		X		
f. Are soils characterized by shrink/swell potential that might result in deformation of foundations or damage to structures?	X			
g. Would the project result in substantial soil erosion or loss of topsoil?	X			
h. Would the project result in loss of (or lost access to) mineral resources, including rock/sand/gravel resources, or other known resources such as those identified in a Mineral Resource Zone identified by the California Department of Mines and Geology?	X			
i. Would the project result in loss of a unique geographical feature of statewide or national significance?	X			

The entry and exit points for this project are situated on ground that has been leveled to support agricultural production. The project area is generally flat and the duration of ground disturbance would be brief; thus, no significant soil erosion is expected.

The Midland Fault is located approximately 1 mile east of the project area. This is a pre-Quaternary fault, with an estimated age of more than 1.6 million years. There has been no recognized displacement from fault activity in this zone. (Jennings 1994) The project sites are not located within an Alquist-Priolo Special Studies Zone (Hart 1994). Although damage to property (the new pipeline) may occur during an earthquake, this project will not expose people to new earthquake hazards, because it will be built to all applicable codes.

Because of the high peat content of soils in the Delta region, land subsidence has occurred historically throughout the Delta, resulting in ground elevations that, in some areas, are below sea level. Continuing land subsidence that occurs in the project area is not expected to affect this project because of the depth of the boring (minimum of 35 feet below the river bottom).

	No Impact	Less-than-Significant Impact	Potentially Significant Impact: Mitigation Identified - Negative Declaration	Potentially Significant Impact: No Mitigation Identified - EIR
4. Hydrology and Water Quality				
a. Would the project conflict with applicable legal requirements relating to hydrology and water quality?	X			
b. Would the project cause direct or indirect wastewater discharges that would result in acute or eventual exposures to levels of hazardous materials that would adversely affect human health, wildlife, or plant species? Would the project otherwise substantially degrade surface water quality?	X			
c. Would the project substantially degrade groundwater quality, interfere substantially with groundwater recharge, or deplete groundwater resources in a manner that would cause water-related hazards such as subsidence?	X			
d. Would the project alter the existing drainage pattern of the site or area in a manner that results in flooding, erosion, or siltation, on- or off-site?	X			
e. Is the project located in a flood-prone area, based on either historical flood records or potential risks relating to existing or planned changes to flood control measures?		X		

The entry and exit points are located in flood-prone areas that are protected from inundation by the existing levee system along the edges of the islands. Project construction will occur over a brief period and will not increase the level of flood-risk exposure. The only hazardous substances to be used in the boring operation are fuels and lubricants associated with the operation of construction equipment at the sites. A nontoxic drilling mud (bentonite slurry) will be used in the bore hole. The bentonite slurry will be pumped and disposed of offsite at the completion of the project. Bore cuttings will be transported offsite to an approved landfill for disposal. A hazardous materials contingency plan is on file with the State Lands Commission and will be executed in the event of a fuel or lubricant spill at the construction sites.

In the event that a subsurface rupture or seepage of bentonite slurry is noticed in the project area, operations will stop immediately and the directionally drilled river crossing subsurface rupture contingency plan will be implemented. A copy of the plan is on file with the State Lands Commission and is included as an attachment to the project description. This plan includes containment and control procedures, notification procedures (including the Department of Fish & Game), and an evaluation plan to determine whether the boring operation should be continued.

Groundwater quality will not be substantially degraded because the intrusion into the substrate will occupy a very small area at the entry and exit points of the bored area, and there will be no subsurface discharge of any contaminants because containment pits will be used as described in the project description. Both construction areas will be restored to their original condition after construction is completed.

No alterations to existing drainage patterns will occur as part of this project. In addition, there will be no construction that would disturb existing drainages or watercourses. No siltation impacts are expected.

			Potentially Significant Impact	
	No Impact	Less-than-Significant Impact	Mitigation Identified - Negative Declaration	No Mitigation Identified - EIR
5. **Biological Resources**				
a. Would the project violate any environmental law or regulation designed to protect wildlife, fisheries, plant species, or habitat areas?	X			
b. Would the project directly harm a sensitive species or cause a net loss to the habitat of the species?		X		
c. Would the project interfere substantially with the movement of any resident or migratory fish or wildlife species, or with established resident or migratory corridors?		X		
d. Would the project cause any fish or wildlife population to drop below self-sustaining levels?	X			
e. Would the project cause a net loss of any riparian lands, wetlands, marshes, or other environmentally sensitive habitat areas?	X			
f. Would the project result in the loss of any "specimen tree" or tree with historic value?	X			

Appendix A is a detailed description of the biological evaluation conducted for this project. A biologist conducted pre-field research on the project area to determine the likelihood of special-status species occurring on the project sites. In addition, the entry and exit points for the boring operation and the trace of a potential pipeline connection on Webb Tract were surveyed to determine whether special-status plant and wildlife species exist on the project sites and whether the project would have an adverse effect on these species. No special-status species were encountered at the project sites.

A small wetland, with an area of approximately 0.04 acre, exists near the project site on Webb Tract. This wetland, which has been disturbed by farming activities, will not be further disturbed during pipeline construction.

Impacts on biological resources are expected to be minimal. Project construction will occur in relatively small areas that have been substantially disturbed by farming activities. The potential for impacts on special-status species is negligible.

	No Impact	Less-than-Significant Impact	Potentially Significant Impact: Mitigation Identified - Negative Declaration	Potentially Significant Impact: No Mitigation Identified - EIR
6. Cultural and Historical Resources				
a. Would the project conflict with the cultural and historic protection measures established by federal, state, or local regulatory programs?	X			
b. Would the project cause the physical disturbance of, or prevent future access to, a prehistoric, historic, or cultural site that is listed or eligible for listing on the National Register of Historic Places, the California Register of Historic Resources, or a Register of Historic Resources that has been adopted by resolution or ordinance of a local government?		X		
c. Would the project cause the physical disturbance of, or prevent future access to, a structure, parcel, or other feature of historic or cultural significance to a community, ethnic, or social group?		X		
d. Would the project cause the physical disturbance of, or prevent future access to, a unique paleontological site?		X		
e. Would the project cause the disturbance of any human remains?		X		

A records search was conducted at the Northwest Information Center, located at Sonoma State University in Rohnert Park, California, in July 1996. The records search was conducted to identify previously known cultural resources in or near the project area. As described in Appendix B, no resources are known to exist in the vicinity of the project.

The project sites were surveyed by an archaeologist to determine whether cultural resources exist at the sites (see Appendix B). No cultural resources were observed during the field surveys. This project would disturb a 70- by 30-foot area in the southern area of the project, and a linear area in the northern area of the project that is approximately 2000. by 300 feet, with a 700-foot extension at its eastern end. Because the Sacramento Delta region is known as a highly sensitive area for cultural resources, the potential exists for construction crews to encounter subsurface resources during boring operations. As described in the project description, specific actions would be taken by the construction crew if subsurface resources are found. If any cultural resources, such as structural features, unusual amounts of bone or shell, artifacts, human remains, or architectural remains, are encountered during construction, all work would be suspended and the State Lands Commission would be notified. Construction activity would not resume until the find has been evaluated by a qualified archaeologist and the construction site has been cleared for continued work. If human remains are found and are determined to be of Native American origin, the requirement for discovery outlined in the Native American Graves Protection and Repatriation Act will apply.

	No Impact	Less-than-Significant Impact	Potentially Significant Impact: Mitigation Identified - Negative Declaration	Potentially Significant Impact: No Mitigation Identified - EIR
7. Traffic and Transportation				
a. Would the project cause a new violation, or exacerbate an existing violation, of an applicable legal standard or goal relating to traffic levels of service (LOS) or volume/capacity (V/C) ratios, of a state or local agency? (LOS ratings range from "A" to "F", with many California agencies ranking "E" and "F" as unacceptable. V/C ratios range from 0 to 1.0, with many California agencies ranking an incremental worsening of 0.02 as unacceptable for intersections already operating at LOS E or F. These significance thresholds should be used to evaluate average and peak-hour project traffic impacts if the local agency has not adopted any particular significance standards for the project area.)	X			
b. Does the project conflict with an applicable Congestion Management Plan, air quality plan, or other plan or policy relating to automobiles or transit systems, adopted by a federal, state, or local agency?	X			
c. Would the project add traffic to a roadway that has design features (e.g., narrow width, roadside ditches, sharp curves, poor sight distance, inadequate pavement structure) or supports uses that would be incompatible with substantial increases in traffic (e.g., rural roads used by farm equipment, livestock, horseback riders, or pedestrians) that would result in safety problems with the addition of project-related traffic?		X		
d. Does the project have adequate internal circulation capacity, including entrance and exit routes, to safely accommodate average and peak-hour traffic loads?	X			
e. Does the project provide for safe pedestrian and bicycle circulation?	X			
f. Does the project provide sufficient parking capacity for the projected numbers of automobiles and bicycles? If not, is there sufficient commercial parking capacity available in the immediate project vicinity? If not, will unmet project parking demand worsen parking availability for existing residents or commercial enterprises?	X			
g. Is the project currently served by the community transit program? Is there sufficient capacity on the existing transit system for the project? If not, is there an adopted and funded plan to increase transit capacity to meet project demand?	X			

The existing roadways in the project area consist of county-maintained rural roadways and private farm roads that have relatively low volumes of local traffic. Webb Tract is accessible only via ferry. The proposed project will generate very little traffic in the vicinity of the project sites. The drilling operation will involve the use of eight pieces of equipment, including two trucks, that will be present for about 5 days. The unimproved roads that would be used to access the sites are used primarily by local farmers and have low traffic volumes. Although these roads will be used to bring the heavy construction equipment to the sites, there would be minimal impacts to traffic in the project area because the vehicles would be driven to and from the site only once. There would generally be no change in daily traffic volumes attributable to the project. No new access roads would be constructed. There are no impacts related to alternative modes of transportation, including mass transit.

			Potentially Significant Impact	
	No Impact	Less-than-Significant Impact	Mitigation Identified - Negative Declaration	No Mitigation Identified - EIR
8. Visual Quality and Aesthetics				
a. Would the project conflict with the applicable vista protection standards, scenic resource protection requirements, and design criteria of federal, state, and local agencies?	X			
b. Does the project alter or obstruct existing public view sheds from or across the project site, including scenic features associated with designated scenic highways?	X			
c. Does the project change the existing visual quality and character at the project site in a manner that is inconsistent with other uses that currently exist or have been approved for the area? Are such changes attributable to project size, massing, density, landscaping, regrading, or other changes to the physical environment?	X			
d. Does the project increase light and glare in the project vicinity so as to cause a hazard or nuisance condition?	X			
e. Does the project significantly reduce sunlight or introduce shadows in public areas? Would loss of sunlight or increase in shadows adversely affect sensitive species or habitats?	X			

Impacts on scenic resources are considered less than significant because of the short-term nature of the construction activities and the small areas that would be affected. No significant permanent changes to surface features will occur. Project construction will not take place after sunset except on one day; thus, there would be minimal glare from construction lighting. Because of the levees, which generally block views to the adjacent agricultural properties, project construction activities would not be visible to individuals engaged in recreational activities on the waterways.

	No Impact	Less-than-Significant Impact	Potentially Significant Impact: Mitigation Identified - Negative Declaration	Potentially Significant Impact: No Mitigation Identified - EIR
9. Air Quality				
a. Would the project violate any law or regulation designed to achieve or maintain compliance with ambient air quality standards or protect against adverse health effects caused by air pollution?	X			
b. Would the project violate any approved plan or policy regarding air pollution, including federal or state air quality management plans for achieving or maintaining compliance with applicable ambient air quality standards, local or regional growth or congestion management plans, and local or regional CEQA significance standards for air quality?	X			
c. Would the project result in a net increase of any criteria pollutant for which the project area has not attained applicable federal or state ambient air quality standards? Would such a net increase exceed any of the specific parameters listed below?		X		
d. Using the approved or established risk assessment methodologies of the air quality control agencies, would project toxic air contaminant (TAC) emissions cause a significant short- or long-term health risk? Would project TAC emissions cause an increased cancer risk of greater than ten per million?	X			
e. Would the project require the removal or demolition of building components containing asbestos, or the excavation or crushing of serpentine rock containing asbestos?	X			
f. Would the project require the removal or movement of soils contaminated by hazardous materials that can cause adverse health impacts if airborne?	X			
g. Would the project concentrate vehicle trips or vehicle-related emissions in a localized area (e.g., intersections, parking areas), which would cause a violation of the carbon monoxide ambient air quality standard?	X			
h. Does the project have the potential to cause an odor, visibility, or other problem that would create a public nuisance condition?	X			

Contra Costa County is classified as a state nonattainment area for ozone and PM10, and a federal nonattainment area for ozone. For other criteria pollutants, the county is either in attainment or unclassified. (California Air Resources Board 1994.) Construction projects generally have the potential to generate ozone precursors and PM10 during earthmoving activities and from engine exhaust. In this case, however, very small ground-surface areas will be affected during construction, which will take place over a 5-day period. The equipment to be used is diesel powered, conforms to industry standards, and is used regularly for boring projects. Use of the equipment will have only an insignificant impact on ambient conditions. In addition, the construction area and roads will be watered to control dust, as needed. Because the period of construction is very brief, engine emissions would be relatively minor and the contribution to regional ozone and PM10 concentrations would be negligible.

This project will not include any demolition activities or generate significant vehicle trips, directly or indirectly, that would result in the emission of significant quantities of air pollutants, including toxic air contaminants. No nuisance conditions would be created by this project.

	No Impact	Less-than-Significant Impact	Potentially Significant Impact: Mitigation Identified - Negative Declaration	Potentially Significant Impact: No Mitigation Identified - EIR
10. Noise and Vibration				
a. Would the project violate any established noise or vibration law, regulation, or standard?	X			
b. Would the project cause a permanent increase in ambient noise or vibration levels that would be perceptible to humans in the project vicinity, and that is perceptibly greater than the noise or vibration levels caused by existing development in the project area?	X			
c. Would the project cause a temporary or periodic increase in ambient noise or vibration levels that would be perceptible to humans in the project vicinity, and that is perceptibly greater than the noise or vibration levels caused by existing development and activity in the project area?		X		
d. Can the project noise and vibration level during construction activities be limited to daylight, weekday hours and be comparable to that required for construction of existing development in the project area?	X			

The project sites are located in a sparsely populated rural area with relatively low levels of ambient noise. Major noise sources in the vicinity of the project sites include recreational boating and heavy agricultural machinery. The proposed project will generate noise from construction equipment during the 4- to 5-day boring operation, which will mostly occur during daylight hours. During one day of the operation, boring will occur during nighttime hours. This noise will be comparable in magnitude to noise from agricultural operations and boating activities on the nearby sloughs. Standard industry mufflers will be used to reduce the noise levels of machinery at the project site. For these reasons, noise impacts from the boring operation are considered less than significant.

	No Impact	Less-than-Significant Impact	Potentially Significant Impact: Mitigation Identified - Negative Declaration	Potentially Significant Impact: No Mitigation Identified - EIR
11. Utilities and Infrastructure				
a. *Electricity*: Will the project require expansions in existing electrical generating facilities and existing high-power transmission lines?	X			
b. *Water*: Will the project comply with water conservation and supply requirements imposed by state and local agencies? Will the project require expansions in existing water supply treatment facilities or trunk conveyance lines? Has the water purveyor determined that it has adequate treatment facilities, conveyance capacity, and water supplies to serve project demand? Will the water supply be drawn from a groundwater basin that is overdrawn in relation to demand and historical levels?	X			
c. *Wastewater Treatment*: Will the project comply with wastewater pretreatment standards enforced by federal, state, and local regulatory agencies? Will the project require expansions of the wastewater treatment facilities and trunk conveyance lines? Has the wastewater treatment provider determined that it has adequate treatment and conveyance capacity to serve project demand?	X			
d. *Solid Waste*: Will the project comply with state and local requirements relating to recycling, litter control, and solid waste handling? Is a landfill available with sufficient capacity to accommodate on a long-term basis (10 or more years) solid waste generated by the proposed project?		X		

The proposed project will not generate any new requirements for infrastructure in the project area either during construction or after construction is completed. No new requirements for electricity or wastewater treatment will be created. Minimal new water requirements will be generated but will be short term. The project will generate solid waste in the form of cuttings from the bore hole, including bentonite clay slurry. This waste material will be hauled from the site and disposed of at an approved landfill.

	No Impact	Less-than-Significant Impact	Potentially Significant Impact: Mitigation Identified - Negative Declaration	Potentially Significant Impact: No Mitigation Identified - EIR
12. Public Services				
a. *Sheriff*: Will the project require additional staff or equipment to maintain acceptable service ratios, response times, or other performance objectives?	X			
b. *Fire*: Will the project require additional staff or equipment to maintain an acceptable level of service (i.e., response time, equipment capacity)?	X			
c. *Schools*: Will the project increase the population of school-age children in a K-12 school district that is or will be operating without adequate staff, equipment, or facilities?	X			
d. *Parks and Recreation*: Will the project increase use of existing park and recreational facilities, or require the creation of new park and recreational facilities, to comply with locally adopted park and recreational service standards?	X			

Because this project is of a short-term nature, there will be no impacts on public services. There will be no impact on law enforcement and fire protection services. There will be routine notification of the local fire department to inform it of the project. A fire watch will be maintained during any periods of cutting or welding. Public schools and local recreational facilities will not be affected.

	No Impact	Less-than-Significant Impact	Potentially Significant Impact: Mitigation Identified - Negative Declaration	Potentially Significant Impact: No Mitigation Identified - EIR
13. Energy				
a. Does the project comply with applicable laws and regulations regarding energy conservation?	X			
b. Does the project require quantities of nonrenewable sources of energy in excess of quantities required by recent, similar projects?	X			
c. Do the energy suppliers have the capacity to supply the project's energy needs with existing and planned energy sources and conveyance systems?	X			

This project will result in a minimal expenditure of energy over a brief period of time. Because the project consists of constructing a natural gas pipeline, the net effect of the project will be to increase the amount of energy available to consumers.

	No Impact	Less-than-Significant Impact	Potentially Significant Impact: Mitigation Identified - Negative Declaration	Potentially Significant Impact: No Mitigation Identified - EIR
14. Hazardous Materials				
a. Will the project comply with applicable federal, state, and local laws, regulations, and standards relating to hazardous materials?	X			
b. Is the soil or groundwater at the project site contaminated by hazardous materials? Is such contamination known to exist at another location that is within 2,000 feet of the project site?	X			
c. Does the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	X			
d. Does the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials to the environment?		X		
e. Will the project interfere with community emergency response plans or emergency evacuation plans in the event of a reasonably foreseeable emergency situation involving a hazardous material exposure or release?	X			
f. Are there hazardous material re-use, or one or more hazardous waste treatment or disposal, facilities available to lawfully accept and handle hazardous wastes generated by the project?	X			

No hazardous materials will be used during the construction of this project except fuel and lubricants used for the construction vehicles. Diesel fuel and the petroleum-based lubricants will be stored in approved containers and will be handled in a safe manner. Fuels and lubricants will be kept at a safe distance from any potential ignition sources to minimize the risk of hazard. A hazardous materials contingency plan is on file with the State Lands Commission and will be executed in the event of a fuel or lubricant spill at the construction sites.

			Potentially Significant Impact	
	No Impact	Less-than-Significant Impact	Mitigation Identified - Negative Declaration	No Mitigation Identified - EIR
15. Mandatory Findings of Significance				
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of fish or wildlife species, cause fish or wildlife populations 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?			X	
b. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? (A short-term impact on the environment is one that occurs in a relatively brief, definitive period of time while long-term impacts will endure well into the future.)	X			
c. Does the project have impacts that are individually limited, but cumulatively significant when placed in the context of other reasonably foreseeable projects?	X			
d. Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	X			

As documented in this checklist, there are no potentially significant impacts associated with this project. The proposed project includes mitigation that will reduce potential impacts to less-than-significant levels. This mitigation includes a contingency plan to be implemented in the event that a subsurface rupture occurs during boring operations, to minimize potential adverse effects on the environment. The plan would be implemented immediately if a rupture occurs. This project will not have the potential to achieve short-term environmental goals to the disadvantage of long-term goals. In addition, no cumulative impacts would result because any future gas exploration projects that would use the proposed pipeline would require separate permits and environmental documentation. No significant adverse impacts on human beings, direct or indirect, would result.

IV. DETERMINATION BASED ON ENVIRONMENTAL EVALUATION

On the basis of this Initial Study evaluation:

☐ The proposed project is CATEGORICALLY EXEMPT from CEQA under Class(es) _____, and there are no unusual circumstances or specified statutory conditions present that render reliance on such applicable Categorical Exemption(s) unlawful.

☐ The proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION should be prepared.

☒ 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 [above/in the attached list] will be a required condition of project approval, and accordingly a MITIGATED NEGATIVE DECLARATION should be prepared.

☐ There is substantial evidence that the proposed project may have a significant adverse impact on the environment, and an ENVIRONMENTAL IMPACT REPORT should be required.

Date: September 12, 1996

Sharon Hadlen
(Signature)

For Jaclyn K. Walker

CITATIONS

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Appendix A. Biological Resources Inventory Report for the Webb Tract Pipeline Project

BIOLOGICAL RESOURCES

Introduction and Setting

A Jones & Stokes Associates biologist and the U.S. Fish and Wildlife Service (USFWS), Sacramento Endangered Species Field Office, Sacramento, California, conducted a reconnaissance-level biological resource survey for a proposed Tri-Valley Oil & Gas Company natural gas pipeline project site in Contra Costa County on June 26 and 28, 1996. The area surveyed consists of two specific locations within the project site (Figure 2 of the project description). The proposed pipeline would extend from an entry point at the north end of Bethel Road next to an existing natural gas well 100 meters southwest of the terminus of Bethel Island Road and under Piper Slough, Franks Tract, and False River, and would emerge from an exit hole on Webb Tract. In addition, a 100-meter-long stretch of road running north-south north of the Webb Tract Island drilling site would potentially be used as an assembly area for the pipeline before installation in the bore tunnel. This road was also surveyed.

The purpose of the surveys was to identify potential jurisdictional wetlands and other waters regulated by the U.S. Army Corps of Engineers (Corps) and potential habitat for special-status species.

In summary, both impact sites within the project occur in heavily disturbed areas; the Webb Tract site being actively farmed, and the Bethel Island site being dominated by ruderal and invasive species. The proposed project is unlikely to have any significant impacts on biological resources and no further surveys are recommended.

Methods

Prior to the site visit, a Natural Diversity Data Base search was conducted to determine the potential for special-status species or sensitive habitat occurrences in the study area, and to determine the potential for onsite occurrence based those nearby.

The site was visited on June 26 and 28, 1996. During the site visit, wetlands and special-status species habitat were surveyed. Specific sensitive habitats for which surveys were conducted included vernal pools, special-status shrimp habitat, burrowing owl habitat, raptor-nest trees, and freshwater marsh.

Definitions

Jurisdictional Wetlands and Other Waters of the United States

Federal and state agencies have jurisdiction over specific activities conducted in stream channels, wetlands, and other water bodies. The federal government supports a policy of minimizing "the destruction, loss, or degradation of wetlands" (Executive Order 11990, May 24, 1977). The Corps and the Environmental Protection Agency (EPA) regulate the placement of dredged or fill material into "waters of the United States, including wetlands", under Section 404 of the Clean Water Act (CWA). Jurisdictional wetlands are defined for regulatory purposes as areas "inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3, 40 CFR 230.3). Sites qualifying for Corps regulatory jurisdiction as wetlands must meet criteria for three parameters: hydric soils, wetland hydrologic conditions, and hydrophytic vegetation.

Unvegetated stream channels, mudflats, and open water (such as ponds and lakes) are not considered wetlands, but also fall under Corps and EPA jurisdiction under Section 404 as "other waters of the United States". The jurisdictional limits of stream channels and lakes are delineated, in the absence of adjacent wetlands, at the ordinary high-water mark (33 CFR 328.4). The ordinary high-water mark is "indicated by physical characteristics such as a clear, natural line impressed on the bank; shelving; changes in the character of soil; destruction of terrestrial vegetation; the presence of litter and debris; or other appropriate means that consider the characteristics of the surrounding areas" (33 CFR 328.3). The territorial seas and all tidal areas up to the mean high-tide line are jurisdictional waters of the United States.

Jurisdictional Streams and Lakes Regulated under Section 1601 of the California Fish and Game Code

The California Department of Fish and Game (DFG) regulates work that will substantially divert, obstruct, or change the natural flow of a river, steam, or lake; substantially change the bed, channel, or bank of a river, stream, or lake; or use material from a streambed. These activities conducted by state and local agencies and public utilities that are project proponents are regulated under Section 1601 of the California Fish and Game Code. DFG may take jurisdiction over any stream or water body in which wildlife live or from which wildlife receive benefit. DFG includes under its jurisdiction the riparian habitat associated with the perennial and intermittent streams that would be altered by a project. If streams would be affected by implementation of the project, a streambed alteration agreement between DFG and the districts would be required before flow, bed, or bank modifications could proceed.

Special-Status Species

Special-status species are plants and animals that are legally protected under the state and federal Endangered Species Acts or other regulations and species that are considered sufficiently rare by the scientific community that they may qualify for such listing. For the purpose of this report, special-status species are defined in the following categories:

- species listed or proposed for listing as threatened or endangered under the federal Endangered Species Act (ESA) (50 CFR 17.11 for listed species and various Federal Register notices for proposed species) and

- other species meeting the definition of rare or endangered species under the California Environmental Quality Act (CEQA) (State CEQA Guidelines, Section 15380).

A records search of DFG's Natural Diversity Data Base (NDDB) was conducted to identify known occurrences of rare plants, wildlife, and habitats in the sewage intercepter corridor area. The California Native Plant Society's (CNPS's) inventory of rare and endangered plants was consulted to identify special-status plant species known to exist or with the potential to exist in the sewage intercepter corridor area.

Special-status wildlife species with the potential to occur in the pipeline project area include Conservancy fairy shrimp (*Branchinecta conservatio*), vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardi*), delta green ground beetle (*Elaphrus viridis*), curve footed hygrotus diving beetle (*Hygrotus curvipes*), burrowing owl (*Athene cunicularia*), and Swainson's hawk (*Buteo swainsoni*).

Special-status plant species with the potential to occur in the pipeline project area include California hibiscus (*Hibiscus lasiocarpus*), Suisun aster (*Aster lentus*), delta tule pea (*Lathyrus jepsonii* var. *jepsonii*), Mason's lilaeopsis (*Lilaeopsis masonii*), mudwort (*Limosella subulata*), and Sanford's arrowhead (*Sagittaria sanfordi*).

Special-Status Biological Communities

Special-status biological communities are habitats that are considered important because of their high species diversity, high productivity, unusual nature, limited distribution, declining status, or a combination of these qualities. These habitats are recognized by federal, state, and local agencies as important, although they have no legal status. DFG's NDDB maintains a list of rare natural communities. USFWS considers certain habitats, such as wetland and riparian communities, as important to wildlife and the Corps and EPA consider wetland habitats to be important for water quality and wildlife. The habitats in the project area that meet the criteria for special-status biological communities are vernal pools, seasonal wetlands, and freshwater marsh.

RESULTS

The overall study area supports ruderal habitat affected by farming and grazing practices. The project area on Bethel Tract Island is dominated by Bermuda grass (*Cynodon dactylon*), yellow star-thistle (*Centauria solstitialis*), and bindweed (*Convulvulus arvensis*). This part of the project site is actively grazed by cattle.

The Webb Tract Island impact area is located at the toe of the levee. The overland portion of the pipeline corridor follows a dirt road at the levee base, which is dominated along each side by wild radish (*Rhaphium* sp.), Bermuda grass, (*Cynodon dactylon*), Italian thistle (*Carduus pycnocephalus*), and bindweed (*Convulvulus arvensis*). The actual proposed drilling impact area is currently farmed for corn.

Wetland habitat is present northeast of the proposed drilling site on Webb Tract Island. This wetland is dominated by cattails (*Typha latifolia*), Bermuda grass, (*Cynodon dactylon*), nutsedge (*Cypera erogrostis*), and dallis grass (*Paspalum dilitatum*). The wetland occurs approximately 40 meters from the corner of the field, and 5 meters outside the impact area. It is approximately 0.04 acre in size and appears to be regularly plowed under as part of the farming operations.

No other sensitive habitats were present in or near the corridor. No special-status species populations or potential habitat were observed within the proposed pipeline project or within the immediate vicinity; therefore, the proposed project is unlikely to have any significant impacts upon biological resources and no further surveys are recommended.

Appendix B. Cultural Resources Inventory Report for the Webb Tract Pipeline Project

PROJECT DESCRIPTION

Tri-Valley Oil & Gas Company (TVO&GC) has contracted with Jones & Stokes Associates to conduct a cultural resources inventory for the Webb Tract Pipeline Piper Slough/Franks Tract/False River crossing project in Contra Costa County, California (Figure 1). The project involves installing steel pipeline under Piper Slough, the submerged Franks Tract, and False River between Bethel Island and Webb Tract, using horizontal directional boring technology. The south side of these waterways will be the entry point for the bore; the north side will be the exit point. The entry point is located directly east and adjacent to a gated pumping station. The exit point is located in an agricultural field. This report documents the results of the cultural resources inventory for the Webb Tract pipeline project conducted in compliance with the California Environmental Quality Act (CEQA).

SETTING

Prehistoric Context

Little is known of human occupation in the Delta region prior to 4500 before present (B.P.). Because of rapid alluvial and colluvial deposition in the Valley over the past 10,000 years, ancient cultural deposits have been deeply buried in many areas. The earliest evidence of widespread occupation of the lower Delta region comes from sites assigned to the Windmiller Pattern (previously "Early Horizon") dated between 4500 and 2500 B.P. Windmiller Pattern origins are believed to be linked to the arrival of Utian people from outside California, who were adapted to riverine and wetland environments (Moratto 1984)

Windmiller settlement patterns and subsistence strategies are poorly known because of the paucity of identified sites. However, based on available data, it seems clear that Windmiller sites are concentrated on low rises or knolls within the floodplains of major creeks or rivers. Such locations provided protection from seasonal flooding and access to riverine, marsh, and Valley grassland biotic communities. Most known Windmiller sites consist of cemeteries (suggesting a degree of sedentariness) in which skeletons are typically extended ventrally, oriented toward the west, and accompanied by abundant associated grave items. Subsistence apparently focused on hunting and fishing, as evidenced by large projectile (spear or dart) points, clay net sinkers, bone fishhooks and spears, and abundant faunal remains. Collecting and processing floral resources, such as seeds and nuts, is inferred from mortar and millingslab fragments recovered from a few of the sites. Other characteristic artifacts include charmstones, quartz crystals, bone awls and needles, and abalone (*Haliotis* spp.) and olive snail (*Olivella* spp.) shell beads and ornaments. Trade is reflected in the material from which utilitarian, ornamental, and ceremonial objects were produced. (Beardsley 1948, Heizer 1949, Heizer and Fenenga 1939, Lillard et al. 1939, Ragir 1972, Schulz 1970.)

The succeeding Berkeley Pattern (formerly "Middle Horizon") dates from 2500 to 1500 B.P., overlapping with at least some Windmiller manifestations. Berkeley Pattern sites are more numerous and widely distributed than Windmiller sites and are characterized by deep midden deposits, suggesting intensified occupation and a broadened subsistence base. The abundance of millingslabs, mortars, and pestles indicates a dietary emphasis on vegetation; however, distinct projectile points and faunal remains attest to the continued importance of hunting. Fishing technology improved and diversified, suggesting greater reliance on riverine estuarine resources. Similarities with the Windmiller Pattern include mortars and millingslabs, quartz crystals, charmstones, projectile point styles, shell beads and ornaments, bone tools, and a continuous reliance on trade economy. New elements include steatite beads, tubes and ear ornaments, slate pendants, and burial of the dead in flexed positions with variable orientation or cremations accompanied by fewer associated grave items. (Beardsley 1948, Fredrickson 1973, Heizer and Fenenga 1939, Lillard et al. 1939, Moratto 1984.)

The late prehistoric period dates from 1500 to 100 B.P. (formerly "Late Horizon") and is characterized by the Augustine Pattern (Fredrickson 1973). Development of the Augustine Pattern was apparently stimulated by the southward expansion of Wintuan populations into the Sacramento Valley (Moratto 1984). The Augustine Pattern represents the peak cultural development of the prehistoric period in the Delta region and is characterized by intensified hunting, fishing, and gathering subsistence strategies: large, dense populations; highly developed trade networks; elaborate ceremonial and mortuary practices; and social stratification. In addition to cultural elements from the preceding patterns, adapted new elements include shaped mortars and pestles; bone awls for basketry; bone whistles and stone pipes; clay effigies; and the introduction of the bow and arrow, as evidenced by small notched and serrated projectile points. Pottery is also found at a few of the sites and can be assigned to this period. Burials were flexed with variable orientation and generally lacked grave goods (Beardsley 1948, Fredrickson 1973, Johnson 1976, Moratto 1984, Ragir 1972).

Ethnography

"Miwok" is a term applied to a large and diverse number of people inhabiting coastal and central California areas. Miwok cultures include three primary divisions corresponding to gross environmental zones: the Coast Miwok, the Lake Miwok, and the Eastern Miwok. Miwok languages belong to the Miwokan subfamily of the Utian family (of Penutian stock) (Shipley 1978). Each of the primary Miwok divisions includes several dialects. The Eastern Miwok included five separate groups including the Bay Miwok, whose territory included the Delta region (Levy 1978). The Miwok were not organized to encompass all Miwokan-speaking people, nor did their organizational pattern encompass the smaller divisions such as the Bay Miwok. These modern designations refer to linguistic and geographic variations only. Similar to most Native American groups in California, the largest political entity among the Miwok was the tribelet. The tribelet was an independent group that defined a specific territory and controlled the natural resources within the territory (Levy 1978).

The Miwok were generally seasonally mobile gatherers and hunters with semipermanent villages. Miwok in the Delta region made use of the elevated sand mounds in the region. Acorns were the staple food resources among all groups. Other important food sources included buckeye, seeds, bulbs, nuts, deer, elk, rabbits, squirrels, fowl, salmon and other fish, bear, and insects. (Bennyhoff 1977, Levy 1978, Waugh 1986.)

Early contact between Miwok and Europeans occurred first in the coastal areas as early as 1579 with the visit of Sir Francis Drake, and gradually moved inland. Miwok of inland areas came into contact with Spanish explorers in the late 1700s. By 1776, Miwok individuals were being forcefully brought to the missions by Mission San Francisco (and later other nearby missions) to convert them to Catholicism. In the middle to late 1800s, with the arrival of settlers, ranchers, and miners, the Miwok were forced from their land and killed. Many fell victim to various epidemics for which they had no immunity. These events led to a tremendous Miwok depopulation and dispersement, and a subsequent loss of geographical knowledge (Levy 1978).

HISTORIC CONTEXT

The following contextual overview of the history of the project area was taken from Maniery & Fryman (1993).

Early Settlement and Reclamation Legislation

The Swamp and Overflow Land Act of 1850 transferred Delta lands from federal to state ownership, and opened the region to settlement (Thompson and West 1879). American settlers moved onto the drier and most accessible areas along the rivers, but did not begin to purchase large amounts of land until the second half of the decade (Chu 1970). In 1855, the State Legislature enacted a law allowing individuals to purchase swamp lands in lots of 320 acres (Paterson et al. 1978). In 1863, the Arkansas Act provided a mandate for the state legislature to aid in the reclamation of the Delta lands by organizing districts and appropriating swampland funds for levee and dam construction. Later, prospective landowners were able to acquire an unrestricted amount of swampland. Investment in such land began to draw the interest of corporate land speculators and wealthy entrepreneurs, who began an organized effort of reclamation for ranching and agricultural purposes in the 1860s (Paterson et al. 1978).

Early Reclamation and Agricultural Efforts

Webb Tract and Bethel Island were part of a larger land mass that included the areas currently designated as Bethel, Jersey, and Bradford Islands, and Webb and Franks Tracts.

Originally referred to as "Greater Webb Tract", this area of land presented a formidable engineering task to the early reclamation companies.

In 1869, the first levees were constructed along portions of Greater Webb Tract by George Roberts and T. H. Williams (Paterson et al. 1978). In winter of 1872-1873, however, the levees were destroyed by floodwaters. Although early reclamation efforts continued on Bethel Island, no known attempts were made to rebuild the levee around Webb Tract and it continued to be washed over annually until its final reclamation in 1912 (Paterson et al. 1978, Thompson and West 1879). In 1922, efforts were made to market Webb Tract as a proposed sale property by providing ferry transportation to and from the island (Paterson et al. 1978).

One of the most successful companies to conduct reclamation projects in the Delta was the California Delta Farms Company, led by Lee Phillips (Thompson 1957). This company obtained unreclaimed land, built levees, and leased the holdings for reclamation and farming. One of its biggest customers between 1902 and 1926 was a Japanese man by the name of George Shima, who was instrumental in preparing the reclaimed land for initial planting and for building farm camps to house agricultural workers. Between 1908 and 1920, virtually every island reclaimed by Phillips was farmed by Shima (Thompson 1957, Walker 1992).

Twentieth Century Agriculture

The 1920s marked a change in the way farming was conducted in the Delta region. After 1920, horses and hand labor were slowly replaced by mechanized equipment. Many farmers switched to using contract day laborers instead of sharecroppers. The use of fertilizer eliminated hand-labor methods of turning soil and nurturing plants. Many of the large land holdings were subdivided into small parcels and sold as small farms. Finally, the traditional rotation crops of potato, barley, and beans became less common as new crops were introduced (Thompson 1957). In addition, transport of goods was improved locally when, in 1929, the Southern Pacific Railroad extended a track from Sacramento to Terminous, joining the Western Pacific track from Stockton (Waugh 1986).

Grain crops became popular after World War I. By 1924, nearly all of the cultivable acreage on Webb Tract was planted with corn. During World War II, many of the agricultural fields remained fallow, while others were planted only on a limited basis. With the return of troops to California following the end of the war, agriculture once again escalated. By the mid-1950s widespread use of weed-killing sprays, the practice of bulk handling of grain, and the use of grain elevators contributed to a greater efficiency and increased agricultural production in the region (Thompson 1957).

METHODS

Pre-Field Research

In July 1996, a cultural resources records search of the project area was completed at the Northwest Information Center at Sonoma State University in Rohnert Park, California. The records search included previously identified cultural resources and previous investigations in the project area, as well as those within a ½-mile radius. The search revealed that no previous surveys had been conducted and no cultural resources had been located within the project area.

Field Survey

On June 26 and June 28, 1996, field surveys of the project area were conducted by a cultural resource staff member from Jones & Stokes Associates. Intensive coverage strategy was used to survey the project area in transects no wider than 15 meters apart (Figure 2). The entire project area was surveyed using this method.

RESULTS

No cultural resources were located as a result of the field survey conducted by Jones & Stokes Associates.

Impacts and Recommendations

No cultural resources were located in the project area; therefore, no impacts on cultural resources are anticipated. However, cultural resources not identified during the field survey could be unearthed during project activities, which could result in their destruction or damage. If cultural materials are located during project activities, work should be halted so that their significance can be determined by a qualified archaeologist.

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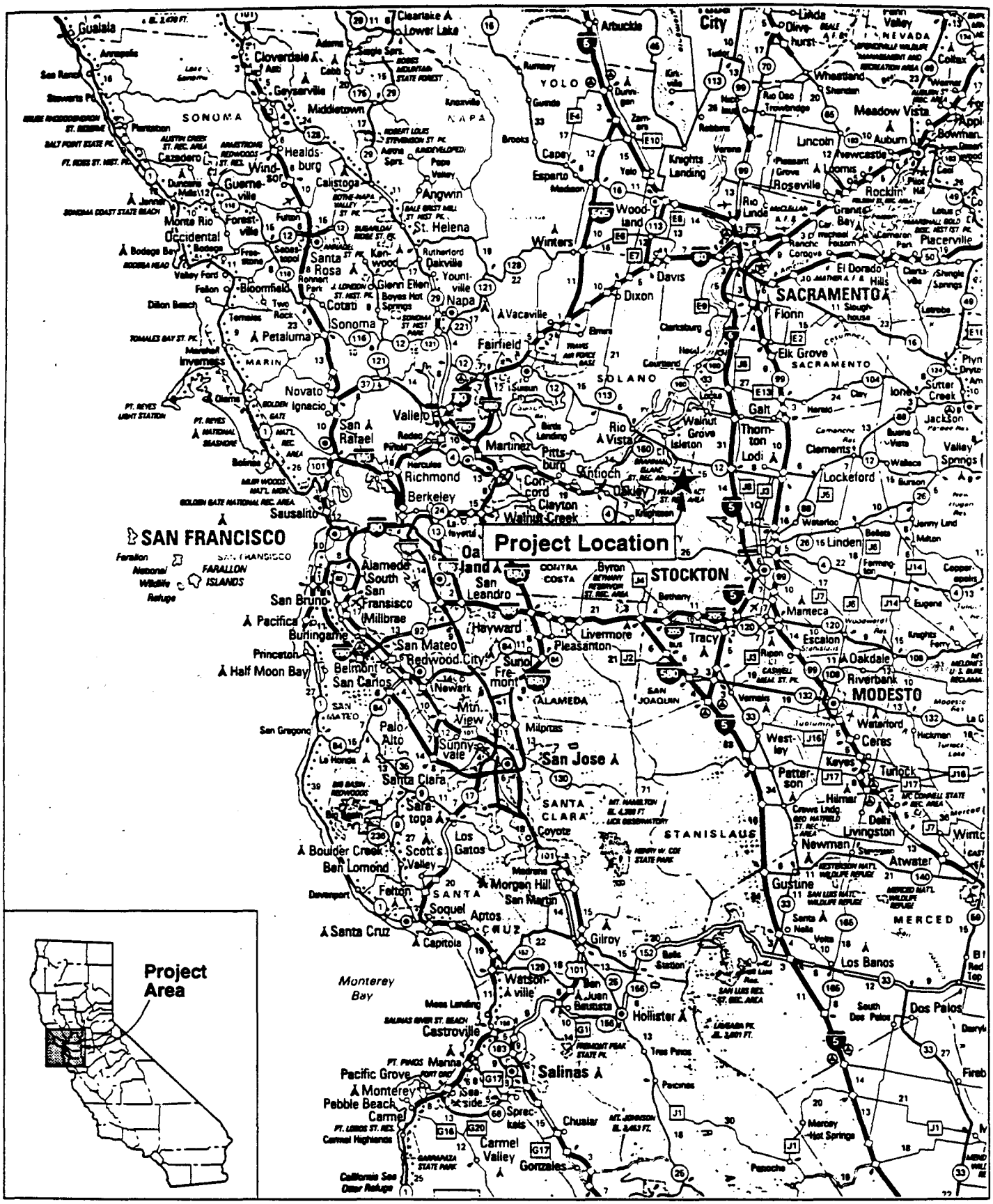

Jones & Stokes Associates, Inc.

Figure 1
Project Location Map

CALENDAR PAGE	162
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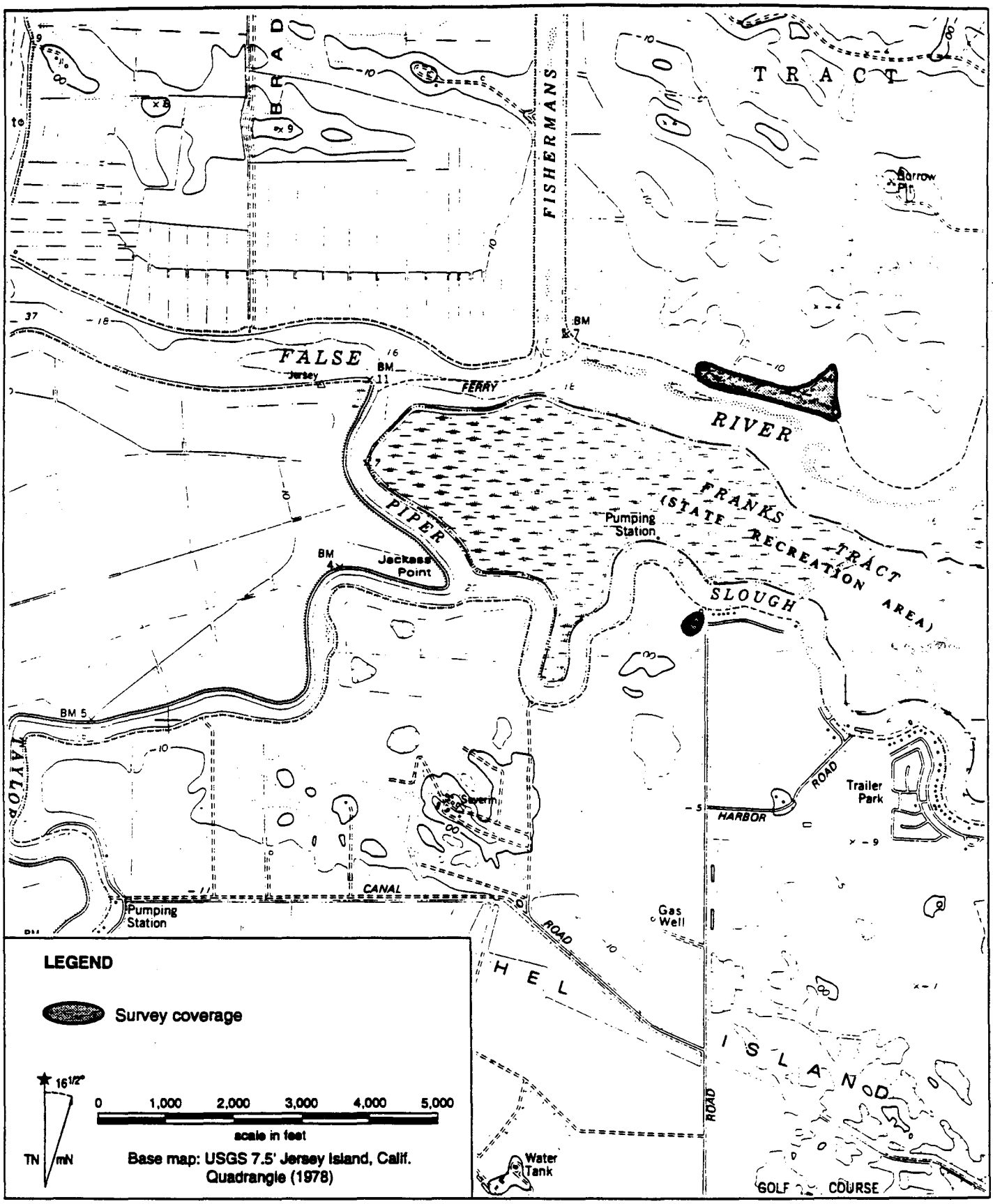

Jones & Stokes Associates, Inc.

Figure 2
Survey Coverage Map

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EXHIBIT D

Mitigation Monitoring Program for Pipeline Boring

1. Prior to start of construction, the State Lands Commission staff will review and approve all contingency plans for the project, to include the following:

   Rupture Contingency Plan
   Abandonment Contingency Plan
   Hazardous Materials Contingency Plan

2. Contractor will notify State Lands Commission staff at least 24 hours in advance of start of directional bore.

3. Staff of the State Lands Commission may inspect the site during bore operations to ensure that the provisions of the Negative Declaration and Contingency Plans are properly carried out.

4. As noted in the Contingency Plans and Cultural Resources section, the staff of the State Lands Commission will be notified immediately of any upset condition on the project site.