CALIFORNIA COASTAL COMMISSION
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Date CDP Filed:	July 11, 2003
49th Day:	August 29, 2003
180th Day:	January 7, 2004
Staff:	TRL-SF
Staff Report:	July 17, 2003
Hearing Date:	August 7, 2003

STAFF REPORT: REGULAR CALENDAR

APPLICATION FILE NO.:	**E-03-003**
APPLICANT:	**Forexco, Incorporated**
PROJECT LOCATION:	Across the Eel River, near the town of Alton, Humboldt County
PROJECT DESCRIPTION:	Use horizontal directional drilling to place a natural gas pipeline beneath the bed of the Eel River to connect wells west of the river to a distribution system east of the river.
LOCAL APPROVALS:	Humboldt County Coastal Development Permit No. 02-32, and Conditional Use Permit No. 02-14.
SUBSTANTIVE FILE DOCUMENTS:	See Appendix A

1.0 PROJECT SUMMARY: This staff report evaluates a proposed natural gas pipeline to be drilled under the bed and channel of the Eel River, approximately 10 river miles inland from the river mouth, near the town of Alton, in Humboldt County. Portions of the proposed project are within the Local Coastal Program jurisdiction of Humboldt County, including five well pads and distribution pipelines linking the pads. The proposed horizontal directional drilling and placement of approximately 3000 feet of pipeline below the Eel River is within the retained jurisdiction of the Coastal Commission. This pipeline would link the wells on the west side of the river with an existing natural gas distribution pipeline to the east of the river.

Staff recommends that the Commission approve the proposed project, as conditioned. **Special Condition 1** would require the applicant to submit a monitoring and spill contingency plan for Executive Director approval. **Special Condition 2** would allow project construction only prior to October 15th, 2003, to ensure work occurs during periods of low river flow.

Staff has determined that the proposal, as conditioned, will comply with Coastal Act sections 30253 (hazard prevention), 30232 (spill prevention, containment, and cleanup), 30231 and 30240 (biological resources), 30211 (public access and recreation), and 30251 (scenic and visual resources).

2.0 STAFF RECOMMENDATIONS

The staff recommends conditional approval of the permit application.

Motion:

> *I move that the Commission approve Coastal Development Permit E-03-003 subject to conditions specified below.*

Staff recommends a YES vote. Passage of this motion will result in approval of the permit as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of Commissioners present.

Resolution:

> *The Commission hereby approves a Coastal Development Permit for the proposed development and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.*

2.1 Standard Conditions

1. Notice of Receipt and Acknowledgment. The permit is not valid and development shall not commence until a copy of the permit, signed by the applicant or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.

2. Expiration. If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.

3. Interpretation. Any questions of intent of interpretation of any condition will be resolved by the Executive Director or the Commission.

4. Assignment. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

5. Terms and Conditions Run with the Land: These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

2.2 Special Conditions

1. Monitoring and Spill Contingency Plan. Prior to starting construction, the applicant shall submit for review and written approval by the Executive Director a detailed plan to monitor drilling conditions in order to prevent, contain, and clean up any drilling muds or other liquid or semi-liquid materials used during drilling. At a minimum, the plan shall describe the equipment to be stored at the project site, personnel that will be on site to observe drilling activities and potential "frac-outs", measures to be taken should a release occur, and emergency responders to be contacted in the event of a release.

   Upon approval of the plan, the applicant shall implement the drilling in accordance with the approved plan. Any proposed changes to the plan shall be reported to the Executive Director. No changes to the approved plan shall occur without a Commission amendment to this CDP unless the Executive Director determines that no amendment is legally required.

2. Project Timing. Project construction done pursuant to this permit shall be completed by October 15, 2003.

3.0 PROJECT DESCRIPTION, SETTING, AND BACKGROUND

The proposed project involves using horizontal directional drilling under the bed of the Eel River to place a natural gas pipeline. The pipeline would be used to transport natural gas from up to five wells being developed west of the river to an existing Pacific Gas & Electric gas main pipeline and regulator station at Alton, in Humboldt County. The wells were previously developed as exploratory wells in the early 1990s.

The project is adjacent to, and under, the Eel River approximately 10 river miles inland from the mouth and about a mile downstream from where the river exits its relatively narrow canyon to its broad coastal floodplain (see Exhibit 1). At the site of the pipeline crossing, the active low-flow channel of the river is about 200 feet wide, and the full channel is about 2000 feet wide.

The majority of the project – including the natural gas wells, wellpads, and associated pipelines leading to and from the area of the river channel – are within the certified LCP jurisdiction of Humboldt County. The County issued its coastal development permit on March 6, 2003. The portion of the project within the Commission's retained jurisdiction includes the drilling and placement of the gas pipeline under the channel of the Eel River (see Exhibits 2 and 3 showing

the Coastal Zone jurisdictions and the locations of project elements). The County's General Plan and the Local Coastal Program include this portion of the Eel River under a "Natural Resource" designation.

The entry and exit points for the drilling are located outside of both the low-flow and the main channels and outside of a levee and revetment that extend along this section of the river. The entry point for drilling will be at a previously developed wellpad approximately 2000 feet west of the low-flow river channel and several hundred feet west of a rock revetment separating the main channel from the surrounding agricultural land and residences. The pipeline will be drilled to a depth approximately 80 feet below the active channel of the river into a relatively consolidated sandy geologic unit known as the Carlotta Formation. The materials above the Carlotta Formation consist primarily of unconsolidated gravels and sediments and would provide poor drilling conditions for emplacement of the pipeline. Based on data obtained from four exploratory boreholes drilled along the pipeline route and previous geologic information, the Carlotta Formation is expected to provide good drilling conditions. The pipeline will be 6.625-inch diameter epoxy-coated, welded steel. The exit point will be in a gravel pit approximately 1000 feet east of the low-flow channel and 200 feet east of a levee separating the river floodway from adjacent developed areas.

The drilling activities are expected to take six to eight weeks during the low-flow period on the river. They are scheduled to be completed before October 15, 2003 to avoid the main flood season on the Eel River and to reduce the potential for hazards or damages related to flooding.

3.1 Other Permits and Approvals

The project is also subject to the following permits and approvals:

- Humboldt County:
  - CEQA Negative Declaration (State Clearinghouse No. 2003022015), March 6, 2003.
  - Coastal Development Permit No. 02-32, approved March 6, 2003.
  - Conditional Use Permit No. 02-14, approved March 6, 2003.

- California Department of Fish and Game: Streambed Alteration Agreement No. 03-0147, issued July 7, 2003.

- California Department of Oil, Gas, and Geothermal Resources: Permit to Conduct Well Operations, approved March 21, 2003.

- California State Water Resources Control Board: Notice of Intent to Comply with General Permit to Discharge Storm Water Associated with Construction Activity (Water Quality Order No. 99-08-DWQ), March 20, 2003.

- California State Lands Commission: General Lease Right of Way, staff recommendation for approval issued July 9, 2003, scheduled for Commission consideration on August 19, 2003.

4.0 FINDINGS AND DECLARATIONS

Standard of Review: The standard of review is whether the project complies with the policies of Chapter 3 of the Coastal Act. The Commission may also refer to the provisions of the certified LCP for guidance.

4.1 Hazard Prevention

Coastal Act Section 30253 states:

> *New development shall:*
>
> *(1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.*
>
> (2) *Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs...*

The proposed project involves drilling under the channel of the Eel River to place a natural gas pipeline. To ensure project construction and operation are done safely and that risks are minimized, the applicant incorporated several measures in the project design that would reduce the potential for hazardous situations.

To minimize hazards along the pipeline route, the pipeline will be placed using horizontal directional drilling about 80 feet below the active channel of the Eel River. This depth was selected to ensure the pipeline would cross the channel while contained within the Carlotta Formation. This formation is relatively consolidated and stable, and provides better drilling conditions than the overlying strata of gravels, sands and unconsolidated alluvium. To further reduce the potential for pipeline damage or associated hazards due to flooding, the entry and exit points for the drilling are located outside of the active floodway and in areas protected by levees, and the work will occur only between May 1 and October 15 during the low-water period in the river. To further reduce the potential for "frac-outs" of drill muds, some of the borehole data were used to determine that the entry point should be moved further from the river channel than originally planned. This will allow the pipeline route to be within the Carlotta Formation under the full width of the main river channel.

To ensure the pipeline itself is structurally sound, the pipe used for the crossing will be 0.432-inch thick epoxy-coated welded steel. This thickness provides an increased safety factor during both pipeline installation and ongoing operations. Additionally, the pipeline will use cathodic protection and will be installed with a "smart pigging" facility that will allow future internal inspections to determine the structural integrity of the pipeline. Additionally, and again based in part on the borehole data, the applicant will use welded steel casing when drilling through the angled entry angle to the Carlotta Formation depth. This will help minimize the potential for drilling fluid "frac-outs" in the difficult drilling conditions expected in the unconsolidated

gravels and sands. Additionally, the ongoing operations of the natural gas pipeline will be subject to conditions and requirements of the State Lands Commission and the Department of Oil, Gas, and Geothermal Resources.

With these measures, the Commission finds that the proposed project will neither create nor contribute significantly to erosion, geologic instability, or destruction of the site consistent with the requirements of Coastal Act Section 30253(2).

Conclusion:

For the reasons above, the Commission finds the project is consistent with Section 30253 of the Coastal Act.

4.2 Water Quality and Biological Resources

Coastal Act section 30231 states:

> *The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas, that protect riparian habitats, and minimizing alteration of natural streams.*

The Eel River is the largest of the many North Coast rivers in California and provides habitat to numerous wildlife species. The river itself is home to several endangered or threatened anadromous fish species, and the surrounding habitat supports a number of endangered, threatened, or sensitive terrestrial or avian species that are dependent on the river. The project location, just downstream of where the Eel River leaves a relatively narrow canyon and enters its coastal plain, is a transition area between different habitat types.

Portions of the proposed project within the Commission's retained jurisdiction would take place below the active channel of the Eel River and should not result in adverse effects. The primary risk to biological resources or water quality would be due to potential "frac-outs" of drilling muds. The bentonite-based muds consist primarily of a natural clay, which is generally inert and non-toxic; however, it can cause adverse impacts to organisms by physical abrasion, clogging, or smothering when released in significant quantities. Bentonite may contain elevated concentrations of barium and other metals that are present as trace impurities in clay. However, these metals usually take the form of insoluble salts and therefore are generally not biologically available. Drill muds may be released during drilling if the geologic formation is fractured or loosely consolidated. If these geologic characteristics are close to the surface, high drilling pressures may result in the release of drilling fluids to the surface. Despite this risk, drilling in such situations is a common practice, even if it results in a "frac-out" or loss of drilling fluids.

The project will involve the use of up to several thousand gallons of drill muds. The applicant has included a number of measures and design features that will minimize the potential for adverse effects to biological resources or water quality, including determining the drilling depth necessary to ensure the pipeline will be largely contained within the Carlotta Formation as it crosses the main river channel, and using a vacuum truck to remove all drilling fluids used during the project for disposal at a licensed facility.

To further reduce the potential adverse effects that may be caused by "frac-outs" and to ensure adequate response should such a release occur, **Special Condition 1** requires submittal of a response plan for Executive Director approval prior to the start of construction. Additionally, **Special Condition 2**, which requires work to be completed by October 15, 2003, ensures any such releases would occur during lower flow periods in the river and outside the main migration periods for anadromous fish.

One other element of the project that could adversely affect biological resources and water quality is the use of a hydrostatic test when pipeline installation is complete. After it is installed, the pipeline will be filled with water to test its integrity. When the water is pumped out at the end of the test, it could contain drill muds or other materials in the pipeline. To minimize potential impacts, the applicant will dispose of this water in accordance with conditions of the Construction Stormwater Permit issued by the State Water Resources Control Board.

With these measures, and as conditioned, the Commission therefore finds that the project is consistent with Section 30231 of the Coastal Act.

Conclusion:

For the reasons above, the Commission finds that, as conditioned, the project is consistent with Section 30231 of the Coastal Act.

4.3 Public Access and Recreation

Coastal Act Section 30211 states:

> *Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.*

The drilling equipment used during project construction will be located on private property within the coastal zone, approximately ten miles inland from the coast on roads used primarily for residential, agricultural, or industrial access rather than coastal access. Project construction would result in a minor and temporary increase in vehicle traffic during drilling operations; however, the increase will be short-term and is not expected to adversely affect coastal access.

Because the surface work will occur outside the river channel and the subsurface work will occur well below the channel, there is not likely to be any adverse effects on the public's use of the river for fishing, boating, or other recreational uses. Therefore, the Commission finds that the traffic generated by the proposed development will not significantly interfere with public access to the coast.

Conclusion:

For the reasons above, the Commission finds the project is consistent with Section 30211 of the Coastal Act.

4.4 Scenic and Visual Qualities

Coastal Act Section 30251 states:

> *The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded area.*

The proposed project will result in minor and temporary visual effects from the river channel during construction due to the use of drilling rigs and temporary structures set up to support the drilling activities. These project elements will be located several hundred feet from the active channel and will likely be only partially visible since they will separated from the channel by a levee and revetment. Because the construction is temporary and relatively minor, the proposed project will not result in significant adverse impacts to coastal views. The Commission therefore finds that the proposed development will not adversely affect views to and along the scenic coastal area where it is located.

Conclusion:

For the reasons above, the Commission finds that, as conditioned, the project is consistent with Section 30251 of the Coastal Act.

5.0 CALIFORNIA ENVIRONMENTAL QUALITY ACT

Section 13096 of the Commission's administrative regulations requires Commission approval of CDP applications to be supported by a finding showing the application, as modified by any conditions of approval, to be consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of the CEQA prohibits approval of a proposed development if there are feasible alternatives or feasible mitigation measures available that would substantially lessen any significant impacts that the activity may have on the environment.

The Commission incorporates its findings on Coastal Act consistency at this point as if set forth in full. As discussed above, the proposed project has been conditioned to be found consistent with the policies of the Coastal Act. These findings address and respond to all public comments regarding potential significant adverse environmental effects of the project that were received prior to preparation of the staff report. Mitigation measures that will minimize or avoid all significant adverse environmental impacts have been required. As conditioned, there are no feasible alternatives or feasible mitigation measures available, beyond those required, which would substantially lessen any significant adverse impact that the activity would have on the environment. Therefore, the Commission finds that the proposed project, as conditioned to mitigate the identified impacts, can be found consistent with the requirements of the Coastal Act and to conform to CEQA.

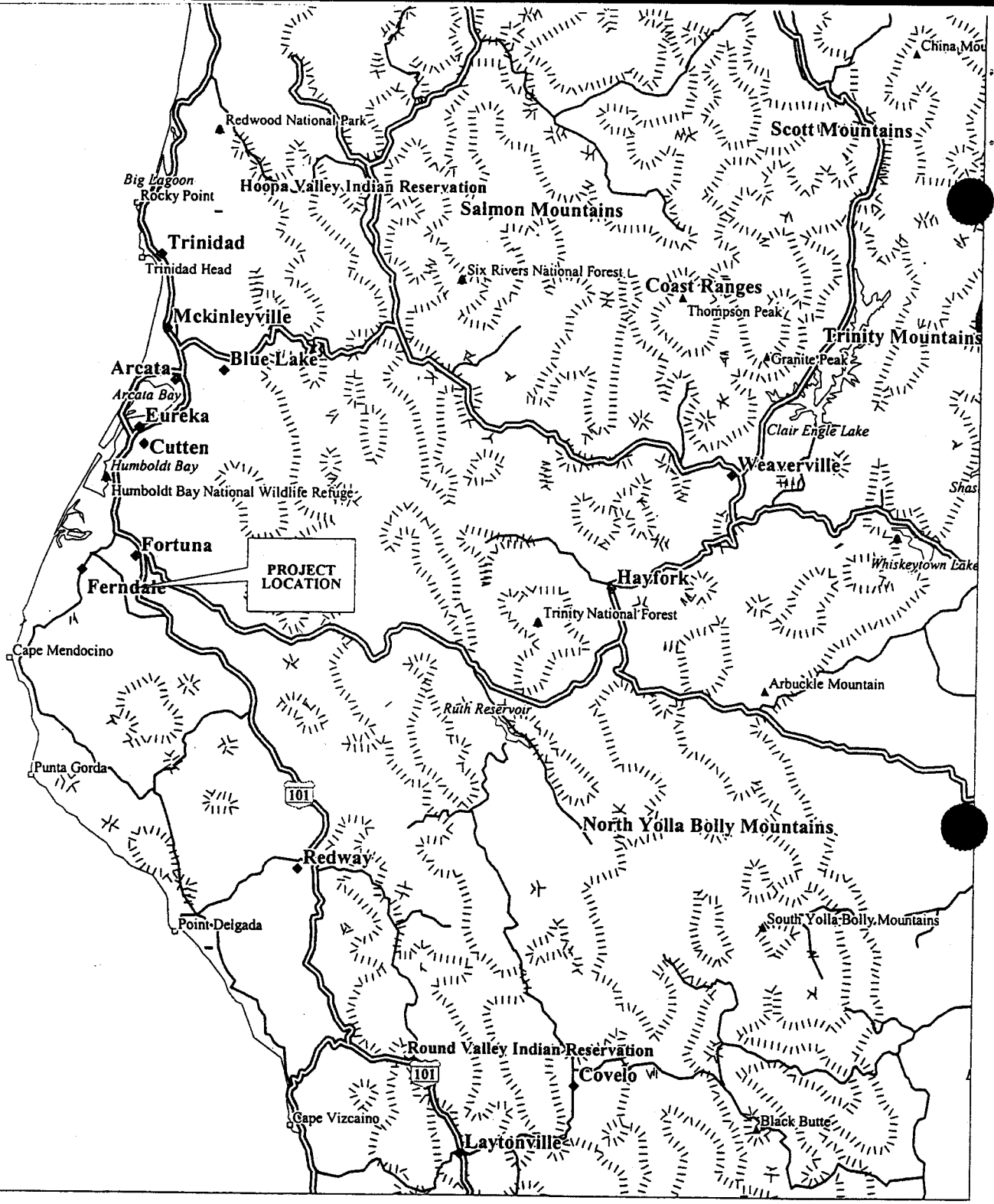
APPENDIX A: Substantive File Documents

March 12, 2003 original permit application submittal.

June 23, 2003 submittal documents from SHN Consulting Engineers & Geologists, Inc. (SHN) for State Lands Commission application, including geologic information, engineering information about pipe to be used, drill mud data sheets, etc.

June 26, 2003 letter from SHN describing test bore results and change to entry point for cross-channel drilling.

July 9, 2003 letter from State Lands Commission staff stating that staff will recommend lease approval at the August 19, 2003 Commission meeting.



LEGEND

- Geo Feature
- Town, Small City
- Hill
- Park
- US Highway
- Population Center
- Major Street/Road
- State Route
- US Highway
- Land Mass
- Open Water
- Contours

Scale 1:1,000,000 (at center)

20 Miles

20 KM

FOREXCO - FORTUNA PROJECT
Mag 9.00
Wed Jun 18 08:15:14 2003

EXHIBIT NO. 1
APPLICATION NO.
E-03-003
LOCATION MAP

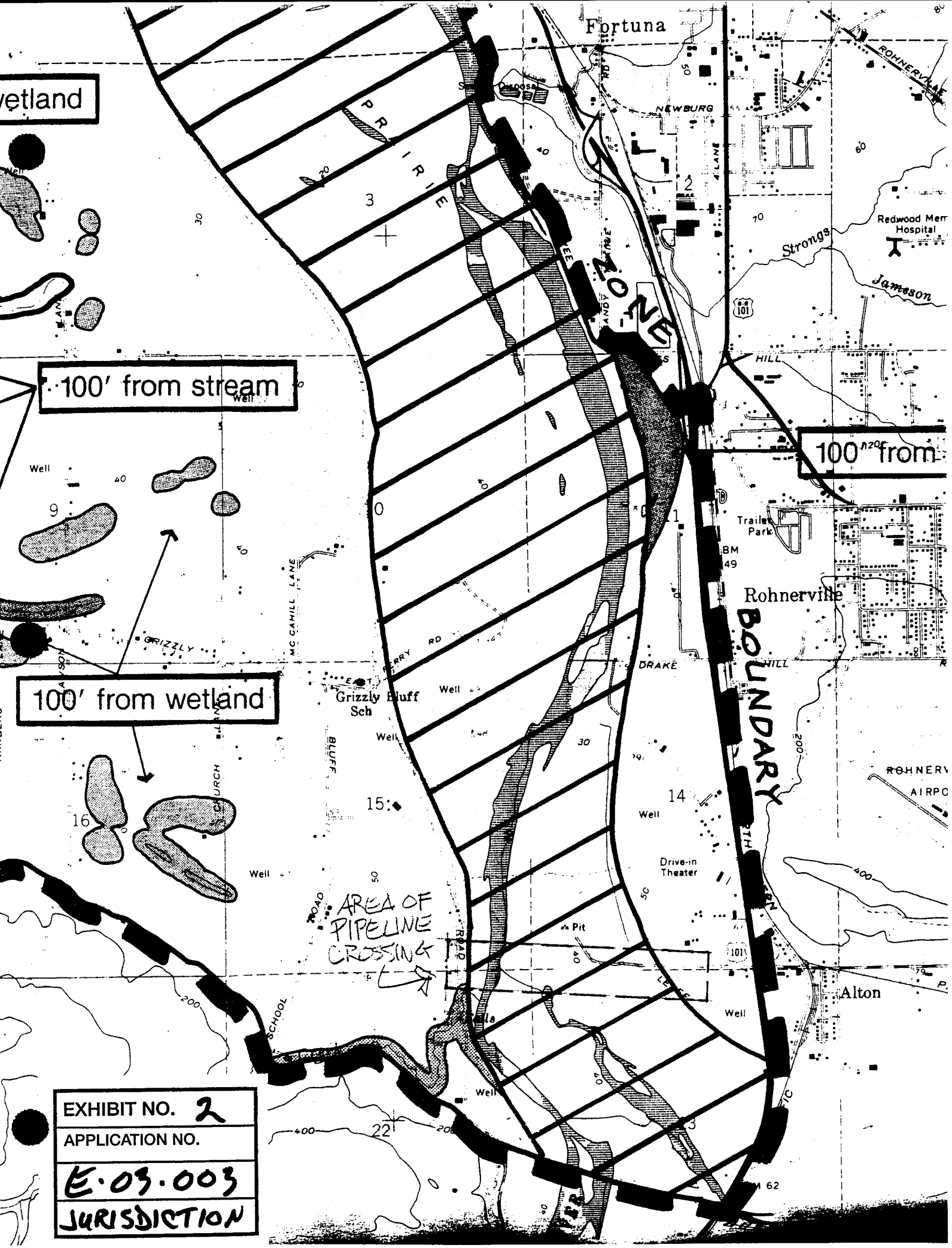


EXHIBIT NO. 2
APPLICATION NO.
E-03-003
JURISDICTION

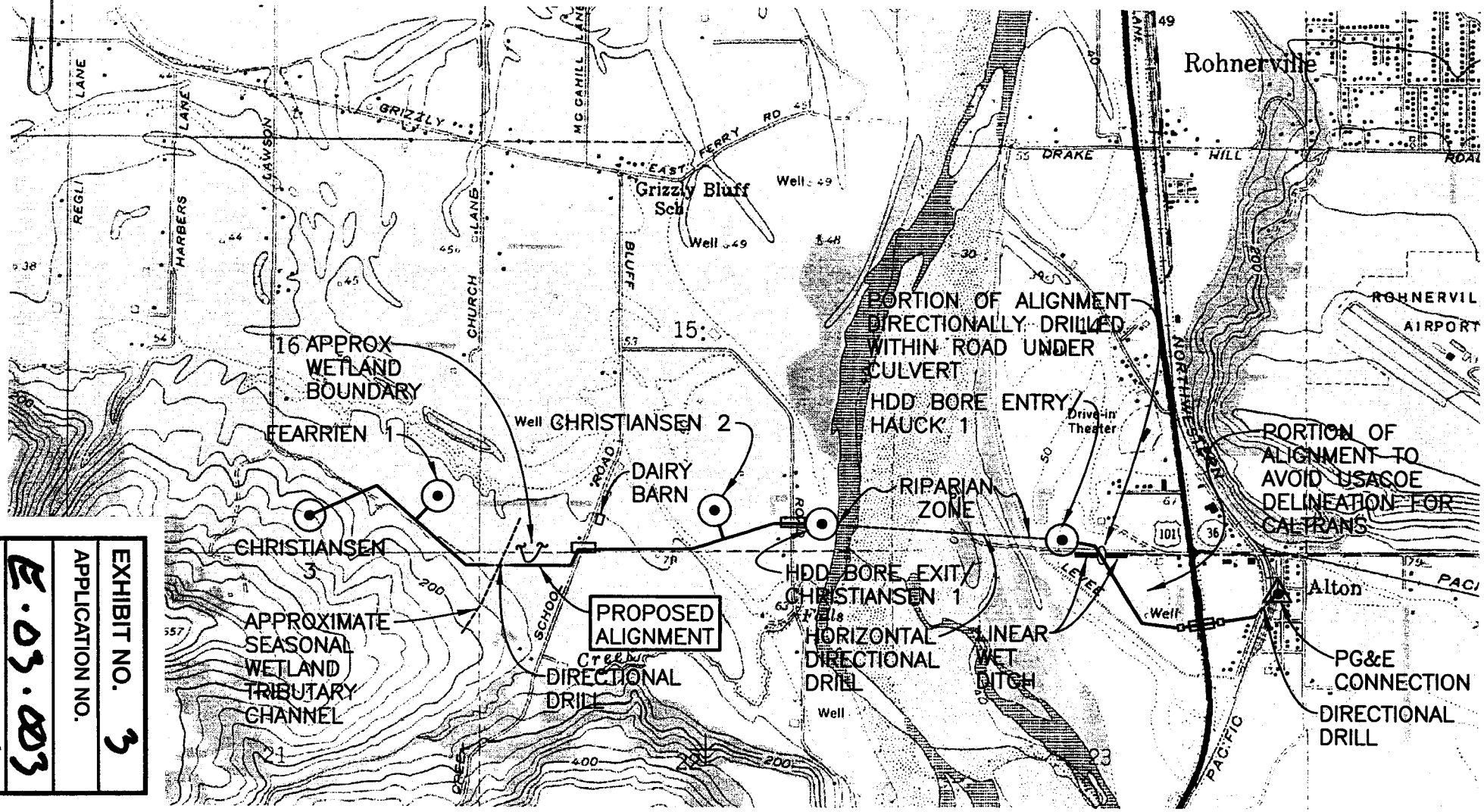


EXHIBIT NO. 3
APPLICATION NO.
E-03-003
PROJECT DESIGN

EXPLANATION

- TRENCH CUT
- JACK AND BORE
- HORIZONTAL DIRECTIONAL DRILL

1"=1200±

FOREXCO GAS
ALTON, CALIFORNIA

REVISED PRELIMINARY PROJECT ALIGNMENT AND WELL SITES

SHN 002221.200
JUNE 2003
FIGURE 1