

DOE/EA-(0962)
BLM EA # CA-016-93-140
BLM R/W SERIAL NO. CA 31330

JOINT ENVIRONMENTAL ASSESSMENT
FOR
THE CONSTRUCTION AND ROUTINE OPERATION
OF A 12-KILOVOLT (KV) OVERHEAD POWERLINE
RIGHT-OF-WAY, AND FORMAL AUTHORIZATION FOR
A 10-INCH AND 8-INCH FRESH WATER PIPELINE RIGHT-OF-WAY,
NAVAL PETROLEUM RESERVE NO. 1,
KERN COUNTY, CALIFORNIA

OCTOBER 1994

U.S. DEPARTMENT OF ENERGY
NAVAL PETROLEUM RESERVES IN CALIFORNIA

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
CALIENTE RESOURCE AREA

MASTER

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INTRODUCTION

Naval Petroleum Reserve No. 1 (NPR-1) also known as the Elk Hills oil field was created by an executive order issued by President William H. Taft on September 2, 1912. Except for a period between 1921 and 1927, when the Reserve was assigned to the Department of the Interior, management of NPR-1 was vested in the Secretary of the Navy until 1977. Except for national defense purposes, the facility was maintained in a reserve shut-in status until 1976. Since then, production has been at the maximum efficient rate (MER), pursuant to the Naval Petroleum Reserves Production Act of 1976 (Public Law 94-258) which was passed as the result of oil shortages in the 1970's. Since 1977, management has been under the authority of the Secretary of Energy pursuant to the Department of Energy (DOE) Organization Act (Public Law 95-91).

The NPR-1 site comprises 47,409 acres (74 square miles) within the Elk Hills, a long, narrow ridge about 16 miles long by 6 miles wide, oriented generally east-west in the southern San Joaquin Valley (Figure 1). NPR-1 contains production development at various levels in 90% of the 78 sections that lie partially or entirely within its civil boundaries. Within the boundaries of NPR-1, Chevron U.S.A. (CUSA) owns 10,360 acres (about 22%), and the remaining 37,049 acres are owned by the government (about 78%). NPR-1 is surrounded on three sides by extensively developed oil and gas fields that have been in production since the early 1900's. Extensively developed agricultural lands lie to the north and northeast of NPR-1. Naval Petroleum Reserve No. 2 (NPR-2) is south of NPR-1 and shares a common border with NPR-1. NPR-2 consists of approximately 30,181 acres, 10,446 acres of which are owned by the government and have been developed under lease to private oil companies since the 1920's. The other 19,735 acres are owned by private oil companies. Like NPR-1, NPR-2 government lands are under the jurisdiction of DOE. Together, NPR-1 and NPR-2 constitute what is known as Naval Petroleum Reserves in California (NPRC).

NPR-1 currently purchases all of its fresh water under a contract with the West Kern Water District (WKWD). To support the pumping capacity of 56,000 barrels of water per day (BWPD), four 150 horsepower electric motor driven pumps are currently operated by DOE under an existing permit at the WKWD Station A in the NE¼ of Section 5, T.31S., R.25E, MDB&M. NPR-1 currently purchases an average of approximately 29,000 barrels/day from WKWD for a variety of purposes: potable drinking water, construction, process water, drilling operations, fire protection, etc. Currently, 8-inch and 10-inch pipelines, approximately 15,000 feet in length, from the NPR-1 Unit Pumps at the WKWD Station A are used to transport fresh water to NPR-1. Approximately 80% of the 10-inch water line is below the ground surface. Where the pipeline is above the ground surface, it is supported on wood blocks to prevent corrosion and subsequent loss of water from the pipe. The proposed action would connect the NPR-1 fresh water pumps at the WKWD Station A to the NPR-1 electrical distribution system which utilizes lower cost transmission rate power.

Electrical power at the WKWD Station A is currently supplied by Pacific, Gas and Electric Company (PG&E) with commercial rate power. An overhead powerline extension from an existing NPR-1 power supply to the WKWD Station A has been proposed which will significantly reduce the NPR-1 overall utility power bill by utilizing the NPR-1 transmission rate power from PG&E. Currently NPR-1 is experiencing excessive commercial power rates at the WKWD Station A. PG&E provides power to NPR-1 at six locations or service points throughout NPR-1. The main service point is at the 35R Substation where the power rate is approximately \$0.067/kilowatt-hour (kWh). The rate at the WKWD Station A is a commercial rate which is currently set at \$0.09673/kWh. The proposed line would result in a savings of \$0.0293/kWh. The proposed powerline would have a net

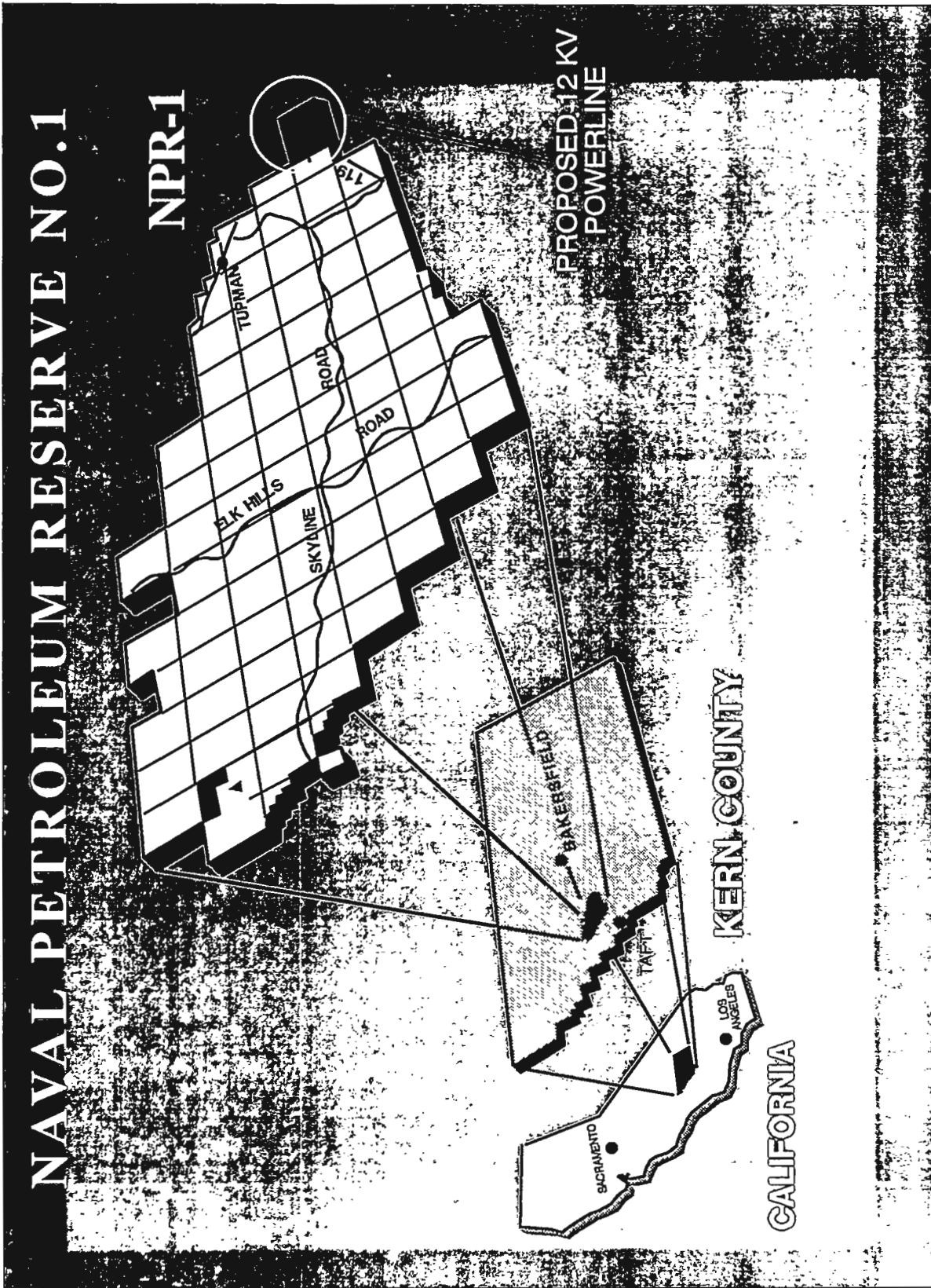


Figure 1 - Regional Location Map

savings to the DOE (without the Cogeneration Facility on-line) of \$80,985/yr. When the Cogeneration Facility comes on-line in FY 1995 a net savings of \$159,396/yr. will be saved from the proposed powerline.

The proposed 12kV overhead powerline would directly and indirectly affect three landowners, one right-of-way, one lessee, and one conservation easement holder. The proposed action will cross properties administered and/or controlled by DOE, Bureau of Land Management (BLM), Atlantic Richfield Company (ARCO), California Department of Transportation (CALTRANS), WKWD lands, and California Department of Fish and Game (CDFG).

The proposed overhead powerline has the potential to adversely affect environmentally sensitive resources as defined in DOE's National Environmental Policy Act Implementing Procedures, 10 CFR 1021. The powerline may impact federally/state listed species and would minimally impact their habitat. The DOE powerline would cross the State of California designated Coles Levee Ecosystem Preserve. The CDFG has a conservation easement for all of the ARCO property the proposed action will cross. Under the terms of the conservation easement, the DOE is required to consult with the CDFG and receive state agency concurrence to proceed with the proposed action prior to receiving a Right-of-Way (ROW) agreement to cross ARCO property.

This Environmental Assessment (EA) complies with the National Environmental Policy Act, as amended; the Council on Environmental Quality's regulations codified at 40 CFR Parts 1500-1508; the Department of Energy's regulation 10 CFR 1021; Department of Energy Order 5440.1E; and the May 1993 "Recommendations for the Preparation of Environmental Assessments and Environmental Impact Statements," prepared by the Department of Energy's Office of National Environmental Policy Act Oversight.

CONFORMANCE WITH APPLICABLE LAND USE PLAN:

Bureau of Land Management

The proposed action falls within the Coast/Valley Resource Management Plan (RMP) approved September 1985. This plan has been reviewed to determine if the proposed action conforms with the land use plan, terms, and conditions as required by 43 CFR 1610.5-3(a).

Areawide Realty Standard Operating Procedures (SOP) include, "A full range of land uses will be considered/evaluated on a case-by-case basis within the constraints of the plan." Also, "Special emphasis will be placed on resolution of unauthorized uses (trespass) of public land." The proposed action lies within the Temblor-Caliente/Valley Management Area.

RELATIONSHIP TO STATUTES, REGULATIONS, AND OTHER PLANS:

Bureau of Land Management

Authorization for the existing water pipelines and installation and maintenance of a powerline on public land is consistent with Title V of the Federal Land Policy and Management Act of 1976 (90 Stat 2743; 43 U.S.C. 1701) and regulations at 43 CFR 2800; and specifically for reservations to other Federal agencies, consistent with 43 USC 1767 and 43 CFR 2807.

1.0 PURPOSE AND NEED FOR THE PROPOSED ACTION

The purpose and need of the proposed action, which is the installation of an overhead powerline extension from an NPR-1 power source to the WKWD Station A, is to significantly reduce NPR-1's overall utility costs. While the proposed action is independently justified on its own merits and is not tied to the proposed NPR-1 Cogeneration Facility, the proposed action would enable DOE to tie the NPR-1 fresh water pumps at Station A into the existing NPR-1 electrical distribution system. With the completion of the cogeneration facility in late 1994 or early 1995, the proposed action would save additional utility costs.

The proposed action also includes the authorization from the BLM for a .5 mile portion of an existing 2.85 mile pipeline on BLM lands. A 10-foot wide ROW contains the 8" and 10" diameter buried (80%), and above ground (20%), fresh water pipelines which cross all the listed properties above. These pipelines were installed by the Department of the Navy without a ROW authorization from BLM in the mid-1970's to replace an aging smaller diameter pipeline which serviced NPR-1. Total length of the pipelines on BLM land is 2,650 feet (.61 acre). Easements were obtained in the mid-1970's from the other affected property owners for the portions of the ROW that crosses their properties.

This EA has been prepared by the DOE as lead agency, with the BLM as a cooperator, in compliance with the requirements of National Environmental Policy Act. The sources of information and reviewing agencies/affected parties for this EA include the following: Bechtel Petroleum Operations, Inc. (BPOI), the Unit Operator for the NPR-1; Biological Assessment and supplemental report entitled "Results of a Preactivity for a Proposed 12 Kilovolt Powerline in 5M/6M" (1994) prepared by DOE; Cultural Resource Assessment Report prepared by California State University Staff Archaeologists; the BLM; the U.S. Fish and Wildlife Service (FWS); the CDFG; the State Historic Preservation Office (SHPO); ARCO; CALTRANS; and WKWD.

2.0 ALTERNATIVES INCLUDING THE PROPOSED ACTION

2.1 NO-ACTION

Under the no-action alternative, the DOE would not pursue the installation of an 12kV overhead powerline from NPR-1 to the NPR-1 fresh water pumps at the WKWD Station A. Therefore, the current system of purchasing power from PG&E would continue utilizing a commercial rate which is currently set at \$0.09673/kWh. The no-action alternative would deny the DOE a reliable energy source and the ability to tie the NPR-1 fresh water pumps at WKWD Station A into the NPR-1 electrical system. Thus, the realization in a savings of tax dollars for NPR-1 operating costs would be foregone.

Under the no-action alternative, the DOE would continue operation and maintenance of the water pipelines on BLM land without a right-of-way authorization. Maintenance activities would continue, some of which could be in violation of various environmental statutes (National Environmental Policy Act, Endangered Species Act, National Historic Preservation Act, etc.) as well as the Federal Land Policy and Management Act.

2.2 PROPOSED ACTION

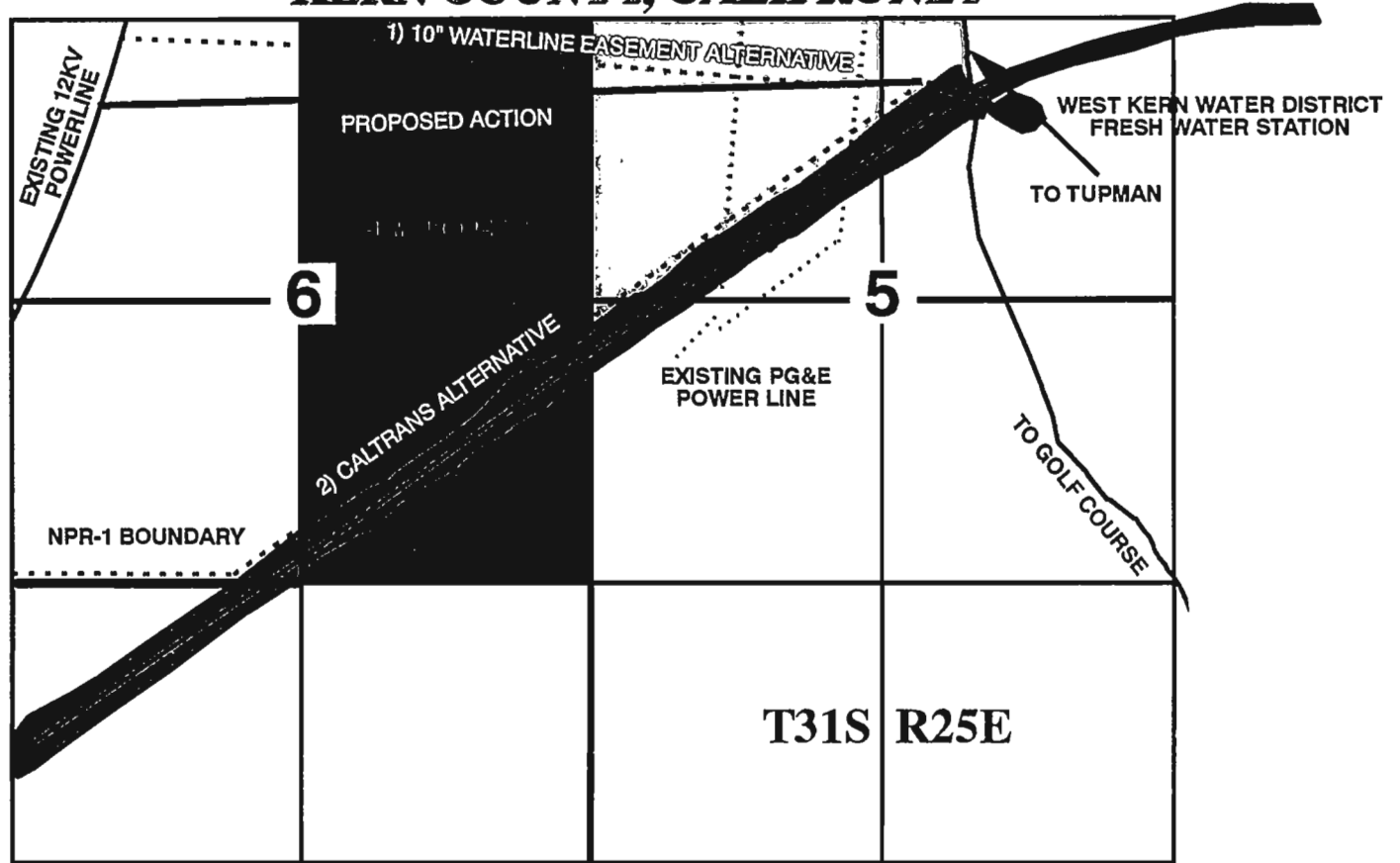
The proposed action is entitled the "original ROW proposal." Under the proposed action, a 12kV overhead powerline would be installed in the NW quadrant of Section 5M, T.31S., R.25E., MDB&M, on NPR-1 to the NPR-1 fresh water pumps at the WKWD Station A. The 1.62 mile long (8,588 feet) 12kV powerline would be routed from a transformer at an existing 12kV transmission line on NPR-1 and would terminate at the NPR-1 fresh water pumps at the WKWD Station A (Figure 2 and Appendix A).

This proposal would require a request for a 20-foot wide ROW from the affected land owners to support the placement of the proposed powerline. The proposed action is located between the routes proposed in the "10-inch Waterline Easement Alternative" (Alternative 1) and the "CALTRANS Alternative" (Alternative 2). Approximately 29 powerline poles would be installed within the proposed ROW. The powerline would extend due east from an existing 12kV powerline in the NW ¼ of the NW ¼ of Section 6. It continues east through Section 6 and the NW ¼ of Section 5, ending at the WKWD Station A in the NW ¼ of Section 5. Under the proposed action, the powerline would extend approximately 2,175 feet across NPR-1, approximately 2,651 feet across BLM property, approximately 2,868 feet across property owned by ARCO and occupied by the Coles Levee Ecosystem Preserve, approximately 880 feet across a ROW operated by CALTRANS and 40-feet across property owned by WKWD. Total length of the proposed powerline route is approximately 8,588 feet. Activities involved in the construction of the powerline, including all ingress and egress routes, will be confined to existing roads and the 20-foot ROW width. A CALTRANS encroachment permit (Permit No. 06-92-6UC-0930) was issued to BPOI for the crossing of Highway 119 on July 15, 1993. In response to a comment made by the State of California Resources Agency on the draft EA (see Section 4.1), CALTRANS standard ROW stipulations were incorporated into Appendix C (see stipulations Nos. 22 and 23 on page C-3). An extension of this permit is currently being requested due to the pending expiration of the permit. This action also includes the ROW authorization by the BLM for the portions of the 10-foot wide ROW containing 8-inch and 10-inch diameter buried (80%) and above ground (20%) fresh water pipelines that cross BLM lands (2651 feet) (Appendix B). BLM standard ROW stipulations shall apply and are included in Appendix C. If planned or unplanned maintenance is required, a preactivity survey would be conducted prior to maintenance activities beginning, with all maintenance being confined to existing roads and/or the designated ROW.

The proposed powerline would be assembled and constructed in 20 working days along the proposed ROW. Materials would be transported to an assembly site via existing roads. Assembly of the crossarms, associated hardware, and post insulators to the poles would be accomplished on-site utilizing existing roads. The borings for the poles would be accomplished using a line truck with an attached auger. The line truck would be restricted to existing roads and/or the approved ROW to access the proposed ROW for pole borings and transporting the pole assemblies (Appendix A). The only disturbed areas during line construction would be within the ROW. No new roads, trails or paths would be necessary to access the ROW.

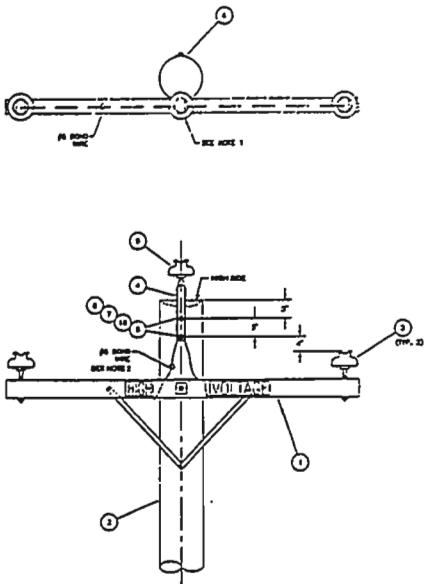
The proposed power line would consist of three #4 aluminum conductor steel-reinforced (ACSR) conductors supported by wood poles at approximately 300 foot intervals. The conductors would be arranged in a triangular pattern with one conductor located on the top of the pole and the other conductors located at each end of a wooden crossarm (Figure 3). The total distance between conductors is 4 feet, 6 inches. The short conductor spans and triangular conductor configuration with extra conductor spacing eliminates any possibility of electrocution of birds and reduces the potential

PROPOSED 12KV POWERLINE KERN COUNTY, CALIFORNIA

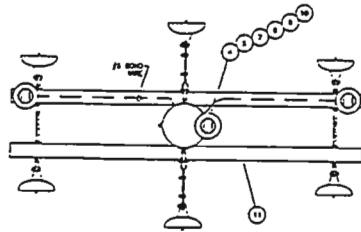


- NPR-1 (2175 ft)
- BLM (2625 ft)
- ARCO (2868 ft)
- CALTRANS ROW (880 ft)
- WKWD (40 ft)
- OTHER OWNERSHIP
- PROPOSED ACTION FOR 12 KV POWERLINE
- NPR-1 WATERLINE EASEMENT (BLM)
- 12 KV POWERLINE ALTERNATIVES (2)

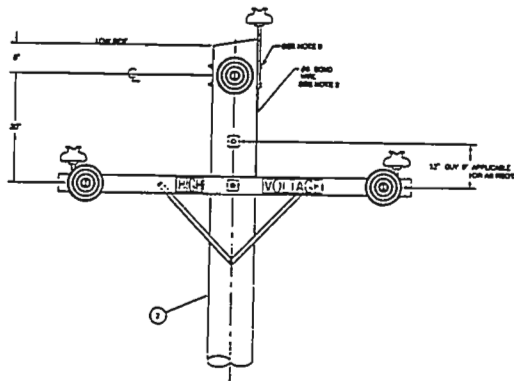
Figure 2 - Proposed Site Location Map
Including Alternative Routes



TANGENT CONFIGURATION
FIGURE 1



DOUBLE DEADEND CONFIGURATION
FIGURE 2



DOUBLE DEADEND CONFIGURATION
FIGURE 2

BILL OF MATERIAL		
ITEM	QUANTITY	DESCRIPTION
1		CROSSARM FRAMING (SEE DWG. SC-9004 FIGURE B.)
2		POLES AND GAINS (SEE DWG. SC-9001)
3		INSULATOR, PIN TYPE (SEE DWG. SC-9002)
4	1	PIN, STRAIGHT POLE TOP, 1" LEAD THREAD, 18" LONG, A.S. CHANCE No. 2170
5	2	BOLT, MACHINE, 5/8" x LENGTH AS REQUIRED
6	2	WASHER, CURVED STEEL, 3" FOR 5/8" BOLT
7	4	WASHER, ROUND, 1 3/4" O.D. FOR 5/8" BOLT
8	2	WASHER, LOCK, GALVANIZED, FOR 5/8" BOLT
9	1	INSULATOR, PIN LOW-VOLTAGE, 1" PORCELAIN THREAD, RADIO ANSI 55-5
10	1	WASHER, LP HOT DIP GALV. 5/8" THRD. HOLE
11	1	DEADEND CONFIGURATIONS (SEE DWG. SC-9007)

NOTES:

- MANTAIN POLE TOP "KINGPIN" FOR TOP INSULATOR ON THE OPPOSITE SIDE OF THE POLE FROM THE CLIMBING SPACE.
- THE BONDING CONDUCTOR SHALL BE ROUTED ON THE BOTTOM SIDE OF THE CROSSARM. REFER TO DWG. SC-9002 FOR DETAILS
- DOUBLE NUT ALL MACHINE BOLTS AND POLE TOP PINS.

REV.	DESCRIPTION	DATE	RPOI APPROVALS					REV. CHECKED
			DATE	ENG.	ELC.	SWP	OPS	
REVISIONS		RPOI APPROVALS					REV. CHECKED	
NAVAL PETROLEUM RESERVES IN CALIFORNIA DEPARTMENT OF ENERGY BECHTEL PETROLEUM OPERATIONS, INC. UNIT OPERATOR OVERHEAD LINE STANDARD CONSTRUCTION TRIANGULAR PRIMARY CONSTRUCTION								
DRAWING No.		SHEET		REV.		SCALE		
SC-9035		0		1"		= 1'		

Figure 3 - Overhead Line Standard Construction
for the Proposed Powerline

for ground fires. The proposed action would not include the installation of transformers. Routine line maintenance would be conducted by visual inspection on a yearly basis via existing roads using binoculars. The proposed 12kV powerline typically would require no repairs for at least 30 years and is considered a very low maintenance activity. If planned or unplanned maintenance is required, a preactivity survey would be conducted prior to maintenance activities beginning, with all maintenance being confined to existing roads and/or the ROW.

2.3 ALTERNATIVES ELIMINATED FROM CONSIDERATION

2.3.1 Alternative Routes Proposed for the Powerline

Alternative locations to the proposed powerline were considered during initial site planning. Such alternatives would require a request for a larger ROW (40 feet) or increasing the length of the ROW (2136 feet), thereby creating equal or greater potential impacts to endangered species habitat and cultural resources.

Alternative 1 is entitled the "Existing 10-inch Water Line Proposal." This alternative would require that an existing 10-foot ROW for the NPR-1 fresh water lines be expanded to 40-feet and authorization of the 8-inch and 10-inch water line ROW with BLM. Approximately 29 powerline poles would be installed within the existing 10-foot ROW and proposed 30-feet of additional ROW. The powerline would extend from an existing 12kV powerline in the NW¼ of the NW¼ of Section 6, east through Section 6 and the NW¼ of Section 5, ending at the WKWD Station A in the NW¼ of the NE¼ of Section 5. Under this alternative, the proposed powerline would extend approximately 1,760 feet across NPR-1, approximately 2,650 feet across BLM property, approximately 3,110 feet across property owned by ARCO, approximately 880 feet across a CALTRANS ROW and 40-feet across property owned by WKWD. Total length of the proposed powerline route would be approximately 8,440 feet. This alternative would include the authorization from the BLM for the portions of BLM lands across which a 2.85 mile long, 10-foot wide ROW containing an 8-inch and 10-inch diameter buried (80%) and above ground (20%) fresh water pipelines extend. The pipelines affect approximately 2,651 feet of BLM land.

Alternative 2 is entitled the "CALTRANS Proposal." This alternative would require a request for a 20-foot wide ROW to support placement of the proposed powerline and authorization of the 8-inch and 10-inch water line ROW with BLM. This alternative is located south of the "original ROW proposal" described in the proposed action. Approximately 42 powerline poles would be installed within the proposed ROW. The powerline would be installed along a route beginning at the southwest corner of Section 6. The line would extend along the southern side of Section 6 to where it intersects with Highway 119, at which point it would extend northeast and parallel to the highway, ending at WKWD Station A in the NW¼ of the NE¼ of Section 5. Under this alternative, the proposed powerline would traverse approximately 3,633 feet of NPR-1 lands, approximately 7,051 feet of CALTRANS ROW, and 40-feet across property owned by WKWD. Total length of the proposed powerline route would be approximately 10,724 feet. This alternative would include the authorization from the BLM for the portions of BLM lands across which a 2.85 mile long, 10-foot wide ROW containing an 8-inch and 10-inch diameter buried (80%) and above ground (20%) fresh water pipelines extend. The pipelines affect approximately 2,651 feet of BLM land.

These two alternative routes have been thoroughly reviewed and eliminated from further consideration within this document because both would have the potential for greater adverse ground impacts in the short and long term.

3.0 ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION AND THE NO-ACTION ALTERNATIVE

3.1 THE PROPOSED ACTION

Impacts of the proposed action would be similar to those for other oil and gas activities on NPR-1, adjacent private lands, and similar government lands managed by the BLM. The primary environmental impacts caused by the proposed action would be surface disturbance associated with the installation of power poles on the site, ingress and egress from the ROW, and routine maintenance of the power line once installed. Total permanent and temporary habitat loss for the estimated 20 year life of the project would be approximately .01 acres and 3.9 acres respectively. Potential environmental impacts have been identified in Table 3.1 and are further described in the following sections.

TABLE 3.1 POTENTIAL ENVIRONMENTAL IMPACTS					
Critical Element	Affected		Critical Element	Affected	
	Yes	No		Yes	No
Air Quality		✓	Threatened and Endangered Species	✓	
Area of Critical Environmental Concern		✓	Wastes, Hazardous/Solid		✓
Cultural Resources	✓		Water Quality		✓
Farmlands, Prime/Unique		✓	Wetlands/Riparian Zones		✓
Floodplains		✓	Wild & Scenic Rivers		✓
Nat. Amer. Concerns	✓		Wilderness		✓

3.1.1 Air Quality

Air quality in the Kern County region is considered marginal, with the San Joaquin Valley Air Basin being designated as a nonattainment area for two of the six criteria air pollutants (ozone and PM-10 [particulate matter less than 10 microns]) for which National Ambient Air Quality Standards (NAAQS) have been established. All DOE activities are governed by an extensive air pollutant permitting and monitoring program operated by the San Joaquin Valley Unified Air Pollution Control District.

All emissions generated by construction activities for the proposed powerline would be of temporary duration and minimal in amount. Construction of access roads are not required for the proposed action. Site access will be accomplished by construction vehicles traveling over the existing road network and overland through the proposed ROW, therefore minimal atmospheric emissions of particulate matter (PM-10) in the form of fugitive dust from earthwork activities and vehicle exhaust should result. Vehicle traffic is expected to increase by an estimated 3-5 vehicles per day for a construction period of 28 days (20 working days), which includes transportation of

construction workers to and from the site. Gaseous emissions from the internal combustion engines of construction equipment would include oxides of sulfur (SO_x), oxides of nitrogen (NO_x), carbon monoxide (CO), and volatile organic compounds (VOC). Because of the relatively small size of the construction site (3.9 acres), emissions from construction related activities would be localized and limited to about a one month period, and changes in ambient levels of PM, SO_x, NO_x, CO, and VOC would be minimal. No permits are required for the proposed action.

3.1.2 Water Resources

All surface water in the region can be characterized as dry wash run off from sparse rainfall in an arid environment. Total annual rainfall is approximately five to six inches per year, with about 70 percent of that occurring from December through March. Groundwater quality in the Buena Vista area varies considerably, with total dissolved solids (TDS) levels ranging from 50 parts per million (ppm) in perched groundwater to over 2-3,000 ppm in certain unconfined aquifers.

Construction of the powerline is not expected to negatively impact surface water resources, as all impacts would be minor and temporary in nature. If there are significant areas of disturbance, these areas would be stabilized and revegetated to prevent erosion.

3.1.3 Geology and Soils

There would be no impacts to the geologic structure of the area from the proposed action. Negative impacts to soil on the proposed project site would be of short-term duration and created principally from surface disturbance during construction activities, which may increase erosion slightly. The site is currently characterized by rough rolling hills with numerous small drainages. The proposed route is occupied by the Lower Sonoran Grassland community (Twisselmann, 1967) and naturally subject to wind and water erosion. Areas directly impacted by the proposed action would be reclaimed and revegetated after completion of construction work.

3.1.4 Land Use

NPR-1 consists of 47,409 acres and has been extensively utilized for petroleum extraction and gas processing since the early 1900's. Oil production, gathering, and processing (and related support activities) currently are the predominant land uses within the boundaries of the site. It is anticipated that NPR-1 lands will continue to be used for petroleum extraction and processing for several decades. Land uses in the area surrounding NPR-1 follow the general patterns found throughout Kern County, which are dominated by agriculture, livestock grazing, and oil and gas extraction and production. Surface and mineral rights on lands surrounding the site are owned primarily by major oil companies or administered by the Federal Government. ARCO has granted to the CDFG a conservation easement for the Coles Levee area, which designates the property as a wildlife area and ecological reserve, pursuant to Title 14 California Code of Regulations, Section 550-680. The purpose of the easement, now designated as the Coles Levee Ecosystem preserve, is to ensure that the property will be retained forever in a natural condition and to prevent any use of the preserve that will significantly impair or interfere with the conservation values of the property, except for and subject to ARCO's reserved rights within the easement.

The construction and routine operation of the proposed powerline would require that 3.9 acres of NPR-1 and adjacent lands be dedicated as a ROW for a powerline, which is consistent

with existing land uses on and adjacent to NPR-1. This includes compatibility with the Coles Levee Ecosystem preserve. Thus, no direct adverse impacts to land use are anticipated.

3.1.5 Waste Management

In general, the waste stream and by-products associated with the proposed powerline would be minimal. However, small amounts of items such as spent solvents, paints, and lubricating oils may be utilized during the construction and routine maintenance of the proposed powerline, and these substances are subject to RCRA hazardous waste regulations. Any hazardous wastes resulting from construction activities and routine operation of the powerline would be removed from the site in accordance with all federal, state and local laws and regulations with subsequent removal and disposal by a RCRA-licensed-carrier to one of several RCRA permitted hazardous waste facilities.

The construction of the proposed powerline would create small amounts of solid waste and construction debris that would be temporarily stored on-site for subsequent removal to the county landfill.

3.1.6 Ecological Impacts

Any ecological impacts of the proposed action would be created by the permanent disturbance of .01 acres due to power pole placement, and by the temporary disturbance of approximately 3.9 acres of surface habitat due to construction activities. Habitat loss due to the powerline construction would take two forms: 1) permanent habitat loss due to installation of power poles, and 2) temporary habitat disturbance due to vehicular travel for power pole installation. Permanent habitat loss due to power pole installation would take place in small, discontinuous patches. Temporary habitat disturbances would result from vehicle travel within the 20 foot ROW.

The predominate vegetation association in the proposed construction area is the Lower Sonoran grassland. The proposed powerline routes generally traverse areas of undisturbed land which surround varying levels of gas and oil field development. Vegetation of the area is predominantly a sparse cover of red brome (Bromus rubens) and red-stemmed filaree (Erodium cicutarium). Saltbush (Atriplex polycarpa) is present along slopes and in washes and drainages in hillier areas. Cheesebush (Hymenoclea salsola) is the most abundant shrub in washes and flat sandy areas on the lower slopes. Other relatively common shrubs include bladderpod (Isomeris arborea) and matchweed (Gutierrezia bracteata).

The projected impacts of the proposed action on plant and animal communities and threatened and endangered species were analyzed in a Biological Assessment (1993) and supplemental survey (1994). The extent of impacts and potential loss of habitat from the construction and operation of the 12-kV powerline has been determined to be minor. The installation of approximately 28 power poles would be the primary impact, with all temporary disturbance limited to the 20-foot ROW along the entire powerline route. There is a potential for adverse effects to threatened and endangered species from the proposed powerline installation and routine operation. Potential adverse impacts to San Joaquin kit foxes and blunt-nosed leopard lizards may result from several sources. Individual animals may be directly injured or killed by (1) vehicle strikes resulting from increased project related traffic and (2) through inadvertent entrapment in collapsed dens or burrows during use of heavy construction equipment. Consistent with the above determination, formal consultation for the proposed action was initiated on March 29, 1994 (see Appendix D). Based on the June 10, 1994 Biological Opinion, the FWS determined that the installation, operation, and routine maintenance of

the powerline would not jeopardize the continued existence of listed species. All mitigation measures as outlined in Appendix C would be adhered to during construction and routine operation of the powerline. DOE expects to conclude consultation with the CDFG (Appendix D) shortly and will incorporate compliance with all mitigation measures into the final project design.

3.1.7 Floodplain and Wetlands

The proposed powerline and existing pipelines are located above the 100-year floodplain. No wetlands would be affected by construction and routine operation of the powerline and water pipeline maintenance and operation.

3.1.8 Socioeconomic Impacts

Construction of the proposed powerline would require one crew made up of four workers (subcontractor) at peak construction. Once the powerline is completed no permanent jobs would be added for routine operation and maintenance of the powerline. Routine maintenance and operations would be conducted utilizing existing manpower by the Unit Operator for NPR-1. The proposed action would not increase the local population or have an adverse impact on housing, public services, or local infrastructure. The local economy would realize a short term, positive impact from expenditures for locally available services, equipment, and supplies.

3.1.9 Cultural Resources

An archaeological assessment and subsequent testing of CA-KER-3397 was conducted by a qualified archaeologist for the proposed action (Sutton, Marc Q.; 1993). The assessment and test determined that no resources eligible for inclusion into the National Register of Historic Places were present within the area of potential effect (APE) and no further consideration is warranted. Pursuant to the requirements of the National Historic Preservation Act, the State Historic Preservation Officer (SHPO) was consulted and concurred with the survey testing findings and no effect determination (Appendix E).

3.1.10 Visual Resources

The proposed powerline route is in an area that has been developed in the past and utilized for petroleum production for over 70 years. There are no vistas or small scale scenes in the area that can be deemed "visual resources," and the proposed project would not affect this in any way.

3.1.11 Noise

During construction and routine operation of the proposed powerline, increased ambient noise levels would be experienced. Because of the remote location of the proposed action, off-site perception of ambient changes in noise levels is not expected. No long-term noise effects are anticipated from the proposed action. No known sensitive receptors exist adjacent to the proposed powerline route.

3.1.12 Occupational Health and Safety

Negative impacts to occupational health and safety are not anticipated as a result of the proposed action. Any potential exposure of workers to hazards from chemical substances or physical agents would be minimized using a combination of engineering controls, work practices and procedures and personal protective equipment. Training programs are in place and implemented to ensure that workers are knowledgeable of potential hazards and effectively able to use available control measures. Workers would be protected from unexpected hazards arising during construction and routine operation by adherence to existing Unit Operator Policy and Procedures, DOE Orders, occupational health and safety laws and regulations required by local, federal and state agencies.

3.2 NO-ACTION ALTERNATIVE

Under the No-Action Alternative, there would be no impacts or change to the present environmental conditions at the project site or surrounding area. However, under this alternative DOE would not be allowed to construct an overhead powerline extension from an existing NPR-1 power supply to the WKWD Station A facility. DOE would be denied the opportunity to save tax dollars initially by utilizing a significantly lower power rate and in 1995, when the cogeneration facility is operational, further significant savings would not be realized. Additionally, DOE would not have a back-up system in place if one power source failed.

No action would continue the routine operation and maintenance of the existing water pipelines without BLM ROW authorization. Therefore, adoption of the "No Action" alternative would continue DOE's trespass on BLM lands. Impacts would be the same as the surface disturbing maintenance activities described under 3.1 "Proposed Action," 3.1.6 and 3.1.7.

3.3 CUMULATIVE IMPACTS

The cumulative impacts of constructing the powerline under the proposed action are expected to be minimal. Most areas within and adjacent to NPR-1 have been utilized for petroleum development, related activities, and the proposal would increase the developed area by a minimal amount (0.01 acre of permanent disturbance and 3.9 acres of indirect impacts). Other activities occurring in the vicinity of NPR-1 include intensive petroleum development on Federal and private properties, agricultural operations using extensive irrigation practices, livestock grazing, the Kern Water Bank Plan (Kern Fan Element), the California Aqueduct, the Kern County Buena Vista Aquatic Recreation Area, the Tule Elk State Reserve, and scattered residential/commercial development. All of these activities are on a vastly larger scale than the proposed action.

3.4 SUMMARY OF IMPACTS

A summary of the impacts of the proposed action are provided in Table 3.2 for each impact area. Potential impacts to ecological values, cultural resources, and land use are the primary areas of concern. As outlined in the table and throughout the EA, the DOE is committed to mitigation measures contained within this document for the proposed action to reduce or eliminate environmental impacts and risks for the proposed action.

TABLE 3.2		
IMPACT	PROPOSED ACTION	NO ACTION
Air Quality	Small, short term increases in PM, SO _x , NO _x , CO, and VOC during construction; no permits required.	None
Water Resources	No ground water impacts; surface water impacts minimized by standard construction procedures.	None
Geology/Soils	No impacts to geologic structures; possible minimal erosion of soils during construction; site reclamation after construction/abandonment would beneficially impact soils in the long term.	None
Land Use	None; Coles Levee Ecosystem Reserve Conservation Easement; some livestock grazing; area intensively utilized for petroleum production and related activities since 1900's.	None
Waste Management	Small amounts of solid waste during construction; minimal quantities of RCRA wastes (paint, cleaning solvents, etc.) during construction and routine operation.	None
Ecology	Site is sparsely vegetated with non-native annual grassland. Shrubs are present mostly along drainages. A variety of animal species use the general area. Impacts to Federal and State listed species would be avoided.	None
Floodplain/Wetlands	None	None
Socio-economic	Small short term beneficial impacts due to employment.	None
Cultural	None; in case of accidental discovery, all operations in the find area would be suspended until authorization to proceed is issued.	None
Visual	None	None
Noise	Minimal during construction; remote location has no nearby receptors.	None
Health/Safety	None	None
Cumulative	None	None

4.0 LIST OF AGENCIES AND PERSONS CONSULTED

U.S. Fish & Wildlife Service
Sacramento Endangered Species Office
280 Cottage Way, Room E-1823
Sacramento, CA 95825-1986
Mr. Joel A. Medlin, Field Supervisor

California Department of Fish and Game
1416 9th Street
Sacramento, CA 95814
Mr. Craig Manson, General Counsel
Mr. David Showers, Endangered Species Consultation Coordinator

California Department of Fish and Game
Region 4
1234 E. Shaw Avenue
Fresno, CA 93710
Dr. Jeffrey Single, Environmental Specialist

State of California, State Clearing House
Governor's Office of Planning and Research
1400 Tenth Street
Mr. Michael Chiriatti, Jr., Chief
Sacramento, CA 95814

State of California Department of Parks and Recreation
Office of Historic Preservation
1416 9th Street
Sacramento, CA 94296-0001
Ms. Cheryl E. Widell,
Deputy State Historic Preservation Officer

State of California, Department of Transportation
(CALTRANS)
1120 "N" Street
Sacramento, CA 95814

State of California, Department of Water Resources
1416 Ninth Street
P.O. Box 942836
Sacramento, CA 94236-0001

State of California, The Resources Agency
The Resources Building
801 K Street
Sacramento, CA 95814
Mr. James T. Burroughs, Deputy Secretary and
General Counsel

State of California, The Resources Agency
Department of Conservation
Division of Oil, Gas, and Geothermal Resources
801 K Street
Sacramento, CA 95814
Ms. Linda Campion

Tule River Tribal Council
P.O. Box 589
Porterville, CA 93258
Ms. Irma L. Hunter
Chairperson

American Indian Council of Central California
2441 G Street
Bakersfield, CA 93301
Ms. Colleen Alvary

Mr. Ron Wermuth
P.O. Box 168
Kernville, CA 93238

Cuyama Pipeline Company (Four Corners Pipe Line Company)
Box 147
Bakersfield, CA 93302

Atlantic Richfield Company
1300 W. Eighth Street
Long Beach, CA 90813

Leonard Bidart
Bidart Brothers
34741 - 7th Standard Road
Bakersfield, CA 93312

4.1 STATE OF CALIFORNIA REVIEW COMMENTS

The Resources Agency

Pete Wilson
Governor



Douglas P. Wheeler
Secretary

of California

California Conservation Corps • Department of Boating & Waterways • Department of Conservation
Department of Fish & Game • Department of Forestry & Fire Protection • Department of Parks & Recreation • Department of Water Resources

September 29, 1994

U. S. Department of Energy
Naval Petroleum Reserves in California
ATTN: James C. Killen
P. O. Box 11
Tupman, CA 93276

Dear Mr. Killen:

The State has reviewed the Joint Environmental Assessment (DOE/EIS-0962), The Construction and Routine Operation of a 12-Kilovolt (kV) Overhead Powerline Right-of-Way, Naval Petroleum Reserve No. 1, Kern County, submitted through the Office of Planning and Research.

We coordinated review of this document with the State Water Resources, and Central Valley Regional Water Quality Control Boards; Energy Resources, Conservation and Development, Public Utilities, and State Lands Commissions; and the Departments of Fish and Game, Parks and Recreation, Transportation, and Water Resources.

The Department of Transportation states:

The following comment should be included in Appendix C-Mitigation Measures/Right-of-Way Stipulations:

An Encroachment Permit must be obtained from Caltrans for any work within the State highway right-of-way. Engineering drawings of all work are to be submitted with the application. Work planned within the State right-of-way will be performed to State standards and specifications at no cost to the State.

Please call Marta Frausto at (209) 488-4168 for any general information concerning this review.

The Resources Building Sacramento, CA 95814 (916) 653-5656 FAX (916) 653-8102

California Coastal Commission • California Tahoe Conservancy • Colorado River Board of California
Energy Resources, Conservation & Development Commission • San Francisco Bay Conservation & Development Commission
State Coastal Conservancy • State Lands Commission • State Reclamation Board

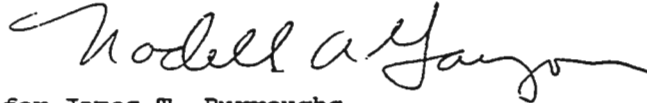
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4.1 STATE OF CALIFORNIA REVIEW COMMENTS (continued)

U. S. Department of Energy
September 29, 1994
Page Two

Thank you for providing an opportunity to review this project.

Sincerely,



for James T. Burroughs
Deputy Secretary and General Counsel

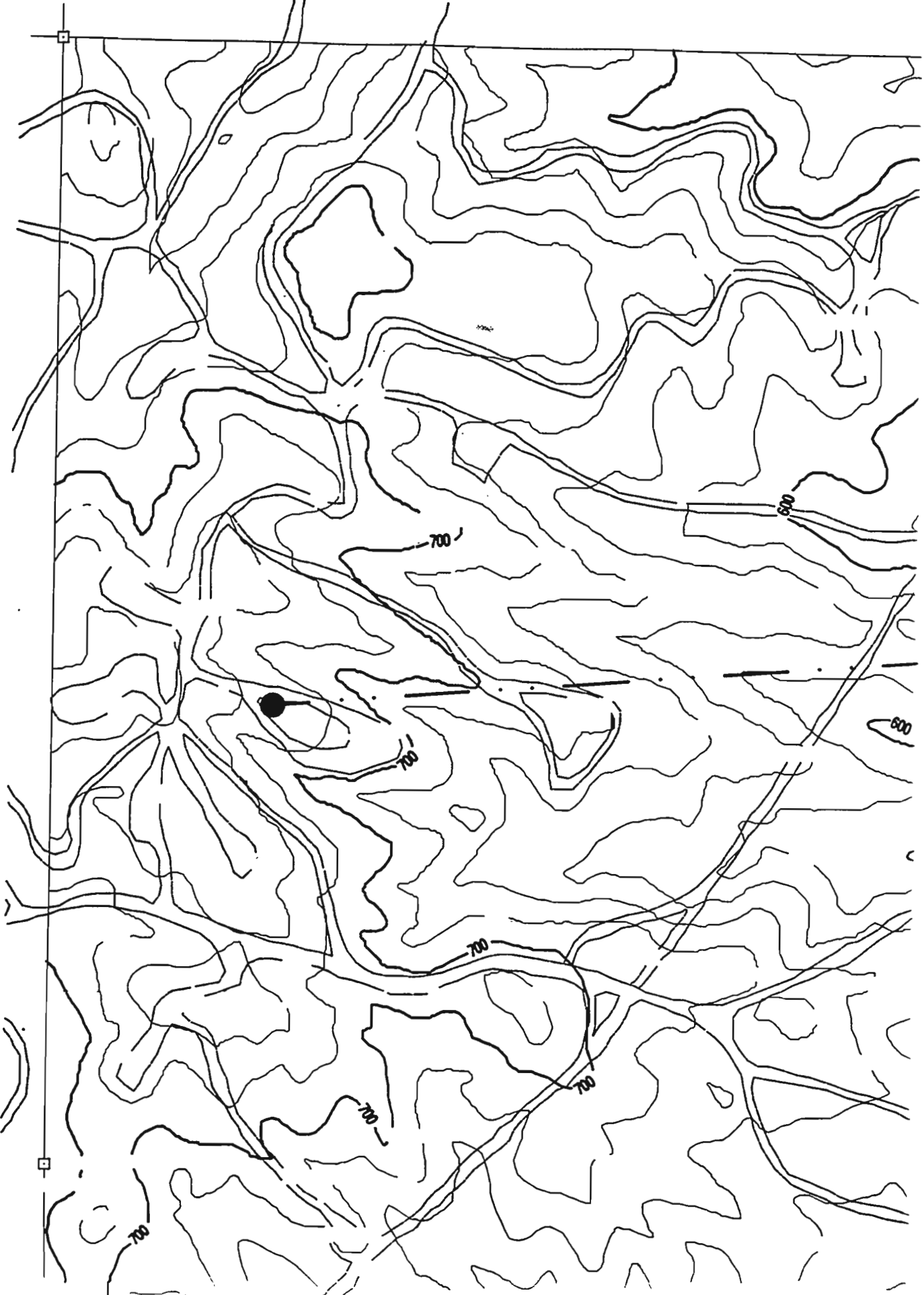
cc: Office of Planning and Research
1400 Tenth Street
Sacramento, CA 95814
(SCR 94094001)

5.0 REFERENCES

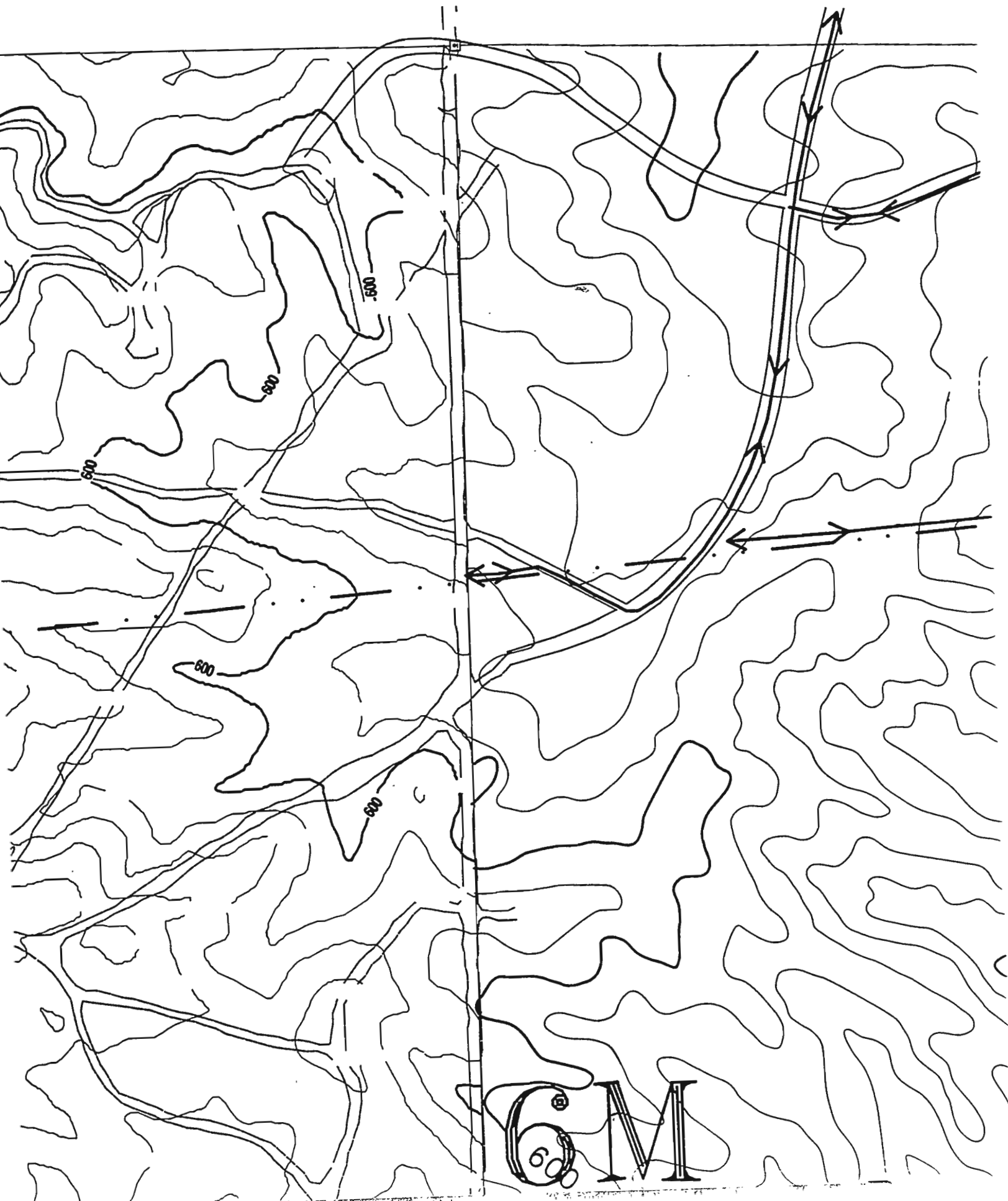
1. U.S. Department of Energy; 1993. Final Supplemental Environmental Impact Statement, Continued Development of Naval Petroleum Reserve No. 1 (Elk Hills).
2. U.S. Department of Energy; 1979. Final Environmental Impact Statement: Petroleum Production at Maximum Efficient Rate, Naval Petroleum Reserve No. 1 (Elk Hills), Kern County, California.
3. U.S. Department of Energy; 1991. Naval Petroleum and Oil Shale Reserves Annual Report of Operations, Fiscal Year 1990 (DOE/FE-0222P).
4. U.S. Department of Energy; 1993. Biological Assessment of the Effects of Installation of a 12,000 Volt Overhead Powerline and Authorization of a 10-Inch Waterline of Federally Listed, State Listed, and Candidate Species on/and Adjacent to Naval Petroleum Reserve No. 1; Kern County, California.
5. U.S. Department of Energy; April 20, 1994. Results of a Preactivity Survey for a Proposed 12 Kilovolt Powerline in 5M/6M; Kern County, California.
6. Sutton, Marc Q.; June 1993. Archaeological Assessment of three Proposed Powerline Routes on the Elk Hills Naval Petroleum Reserve No.1 Near Taft, Kern County, California. Cultural Resource Facility, California State University, Bakersfield, California.
7. Sutton, Marc Q.; August 1993. Archaeological Testing at CA-KER-3397, Northeast of Dustin Acres, Kern County, California. Cultural Resource Facility, California State University, Bakersfield, California.
8. Twisselmann, E.C., 1967. A Flora of Kern County, California Wasmann Journal of Biology, 25:1-395.

APPENDIX A

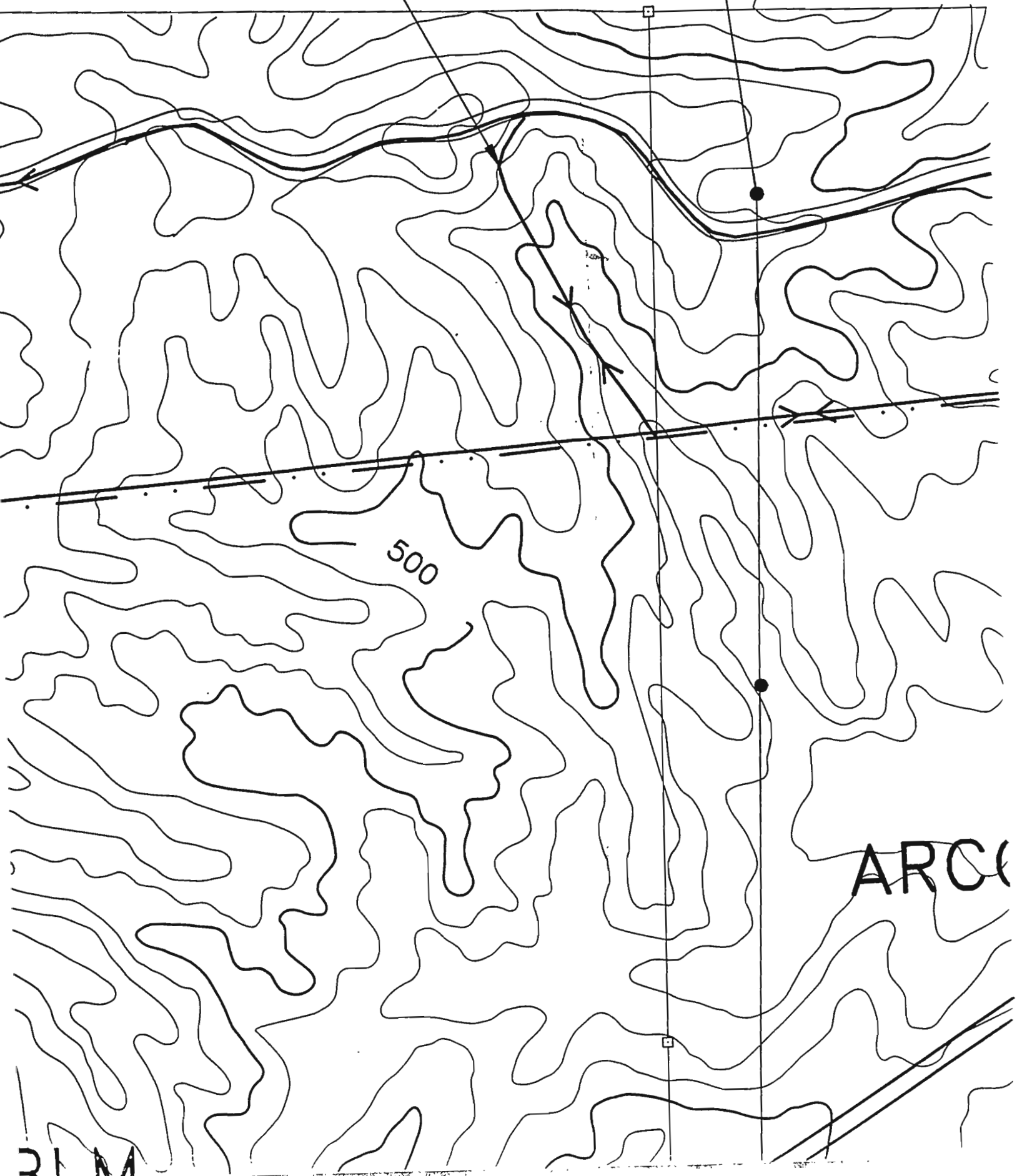
**NPR-1 POWER IMPROVEMENT SECTIONS 5M
AND 6M OVERHEAD POWER LINE
TOPOGRAPHY MAP**



EXISTING



EXISTING PG&E ROAD

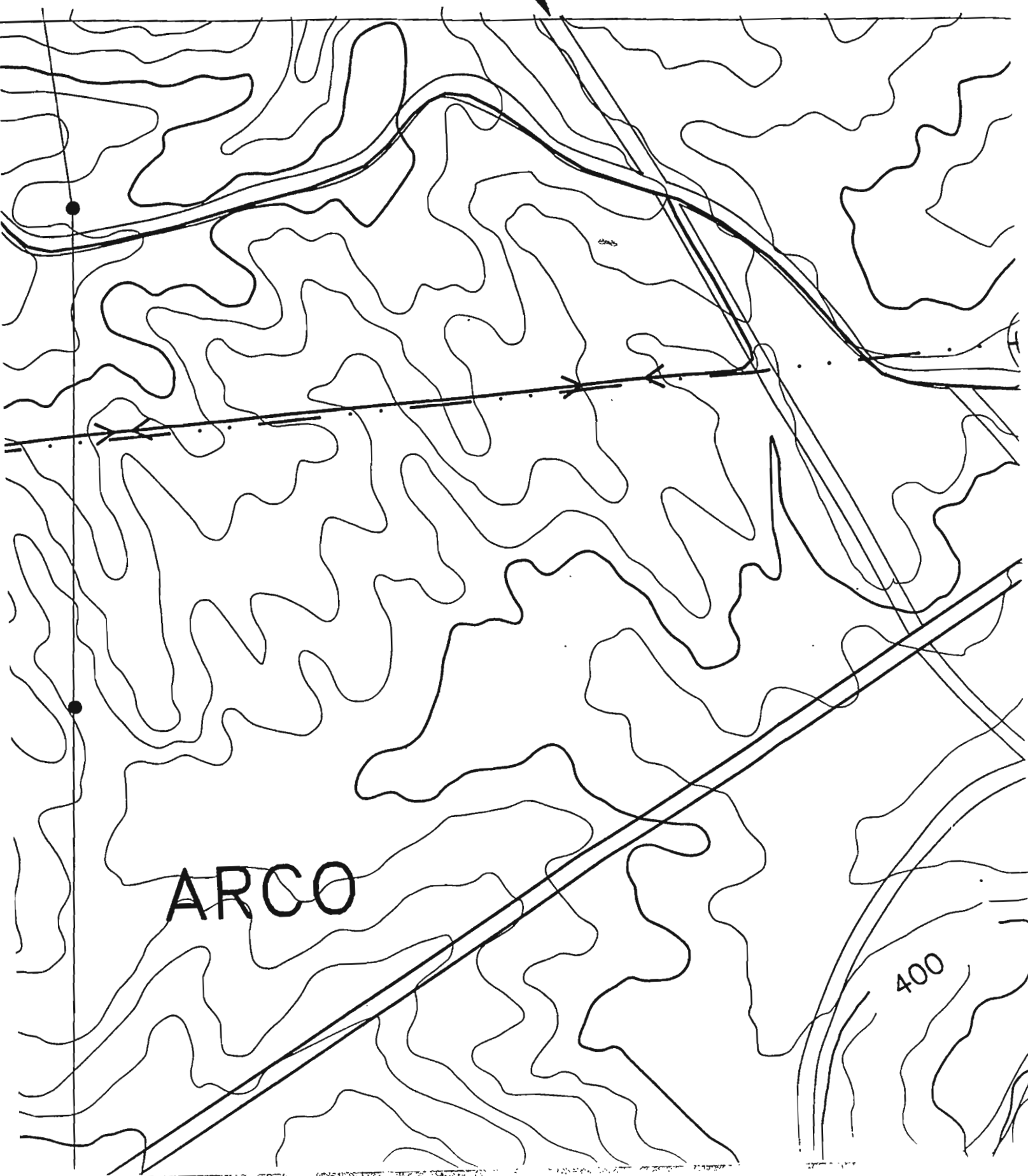


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RIM

SOUTHERN CALIFORNIA GAS
RIGHT-OF-WAY ROAD



ARCO

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CALIFORNIA GAS PIPELINE
WAY ROAD



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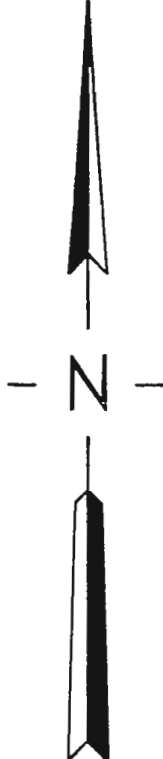
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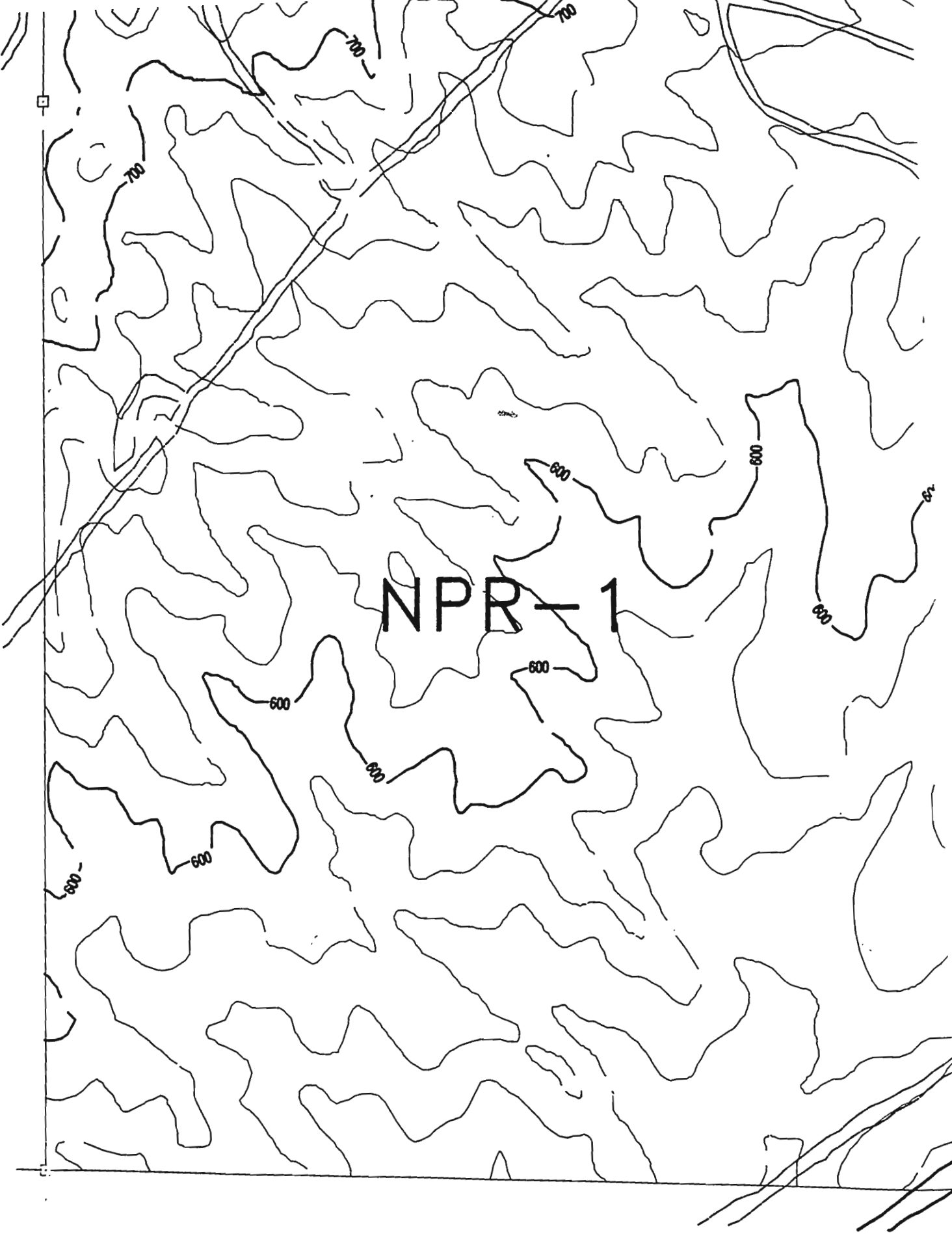
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MAIN RD.

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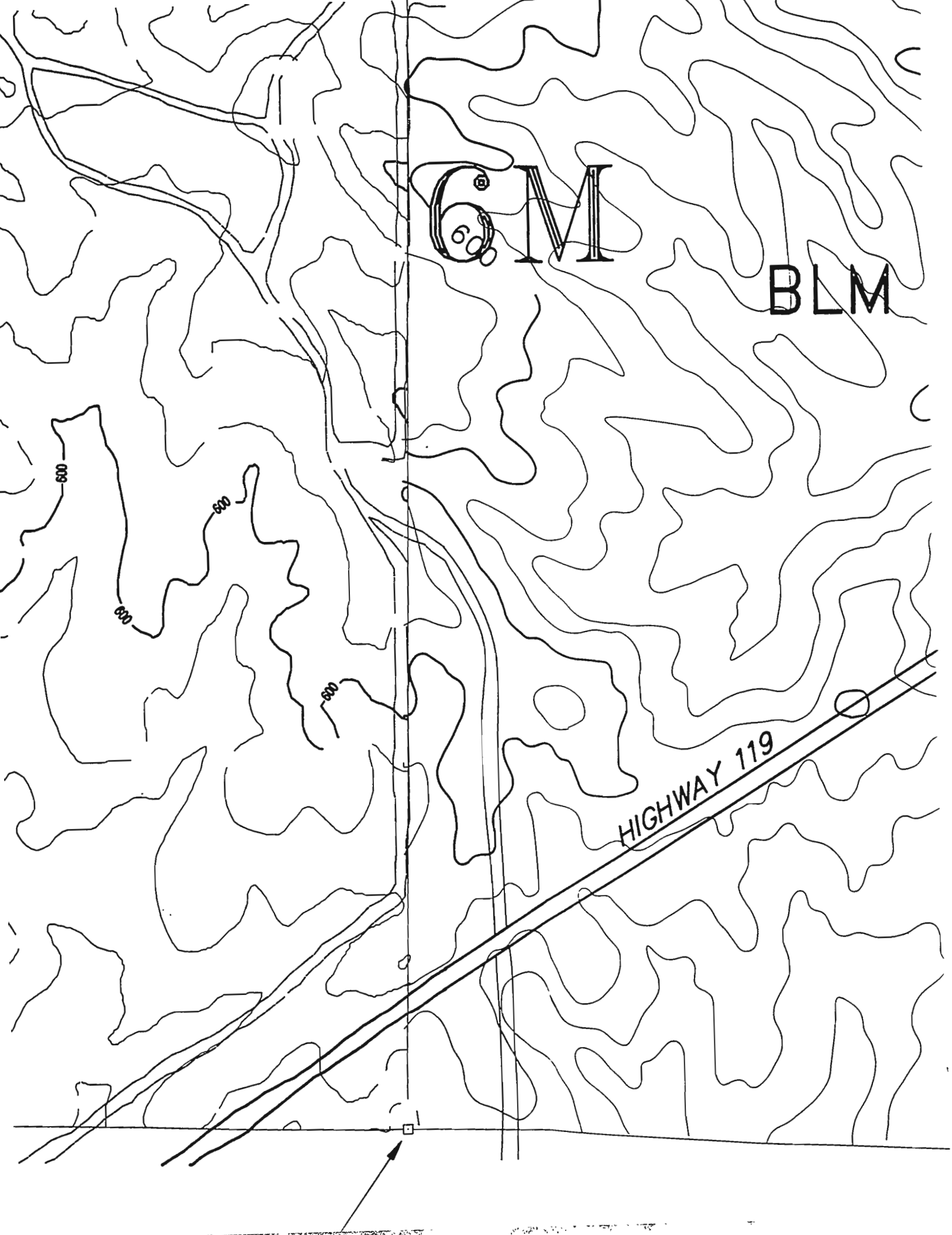
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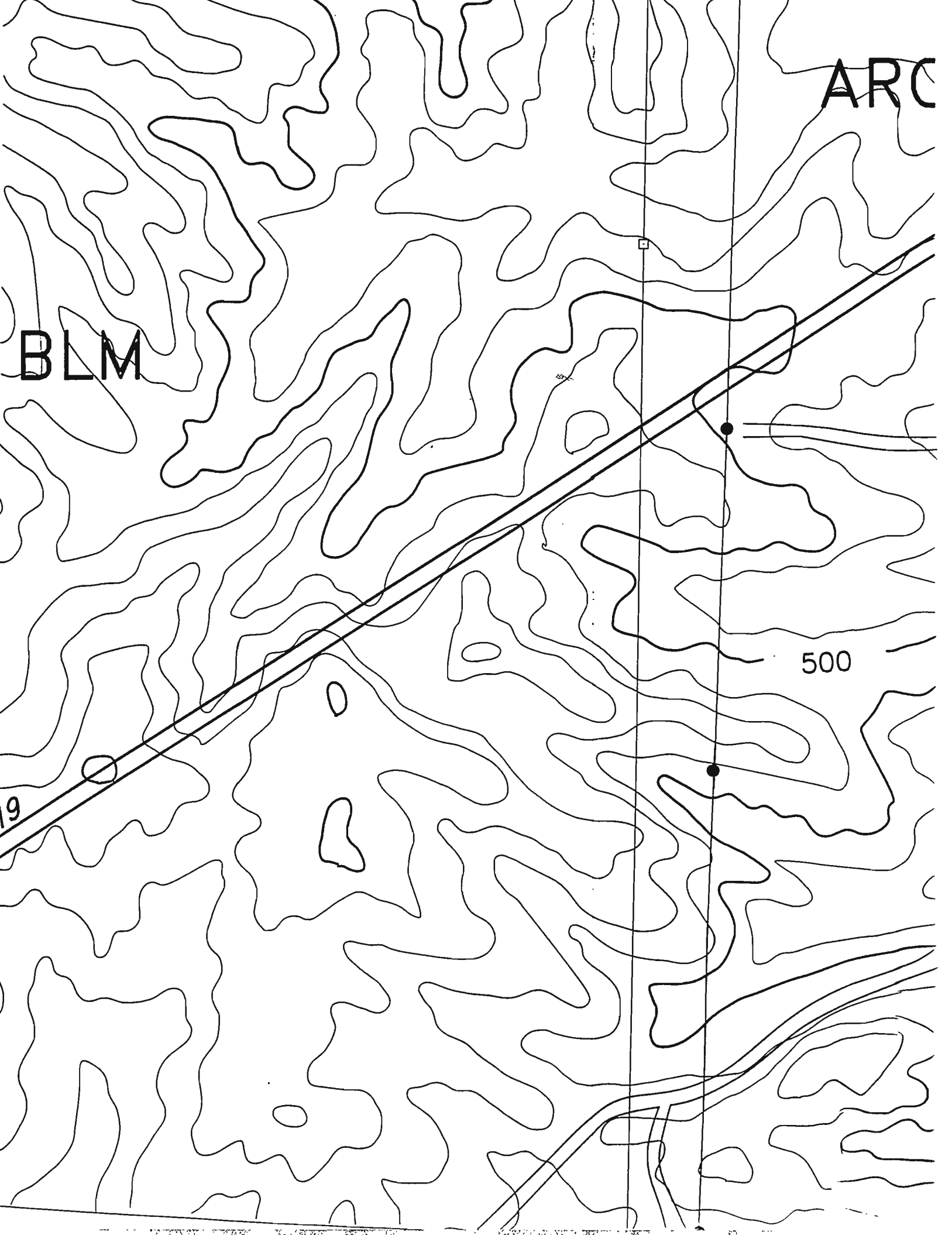
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ARC

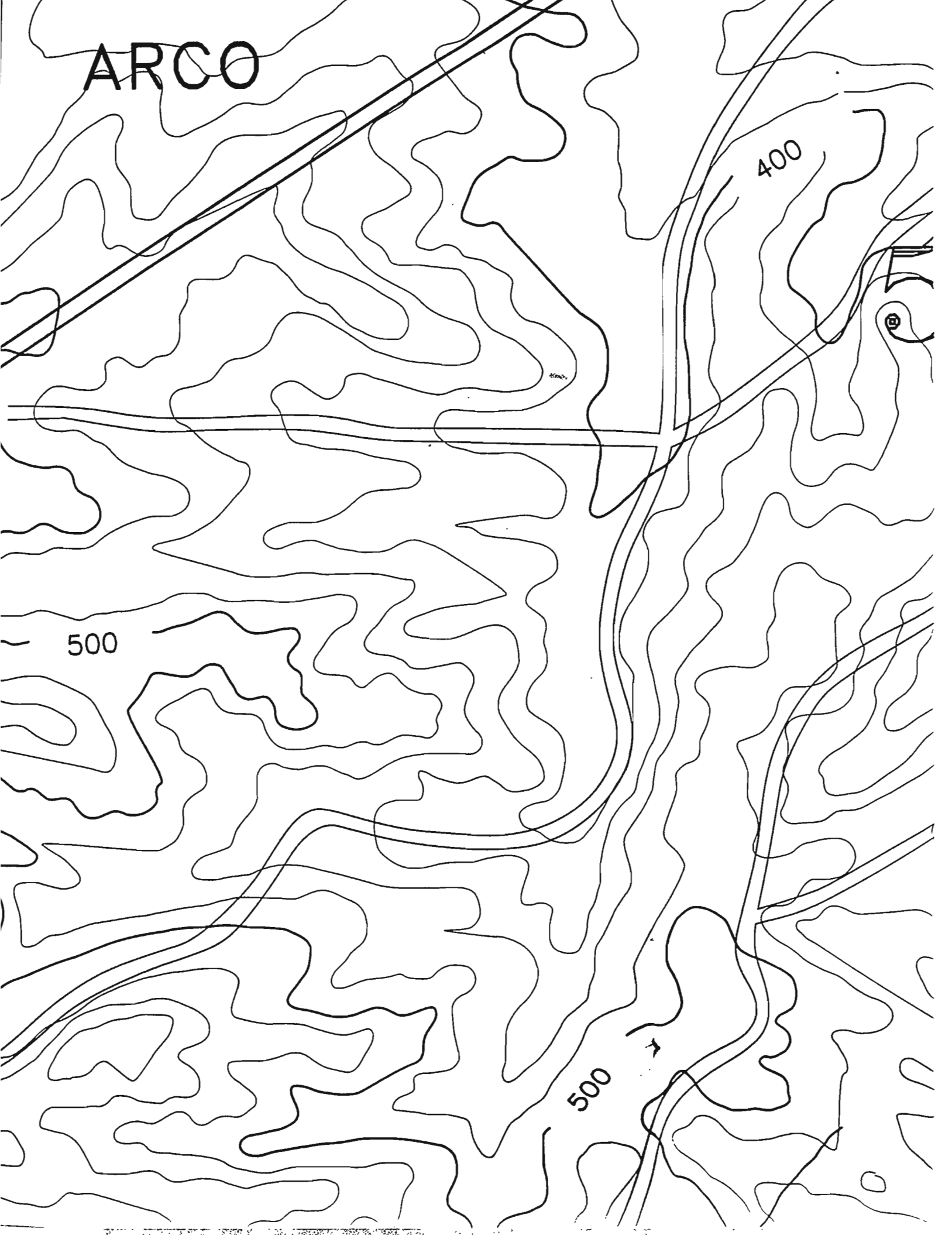
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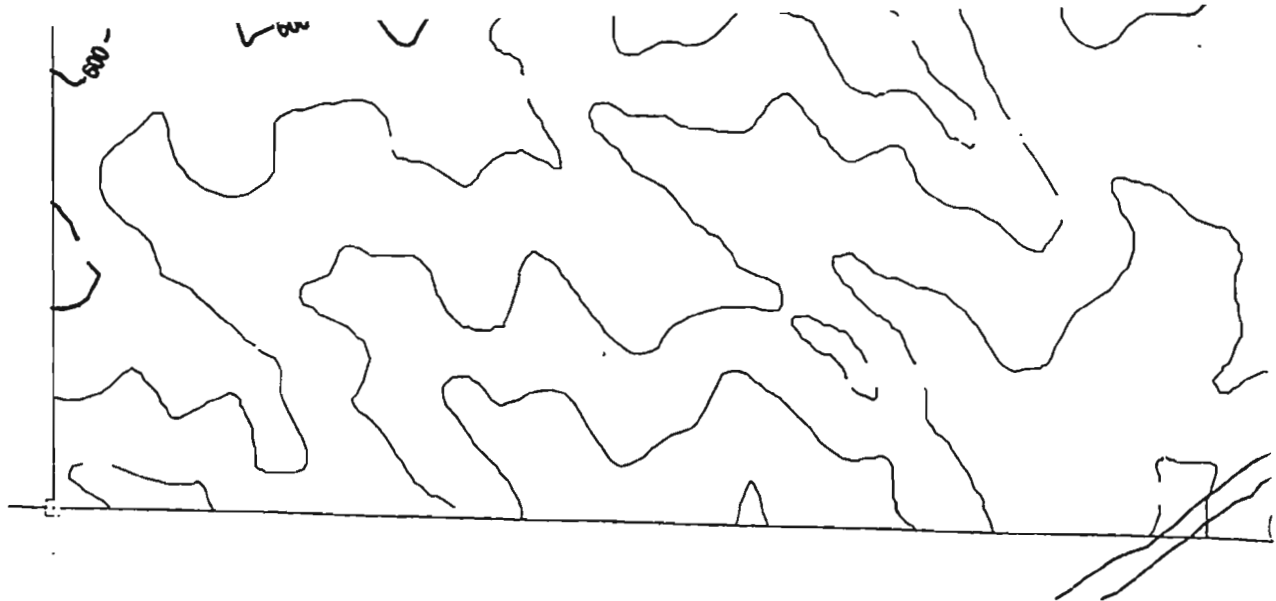
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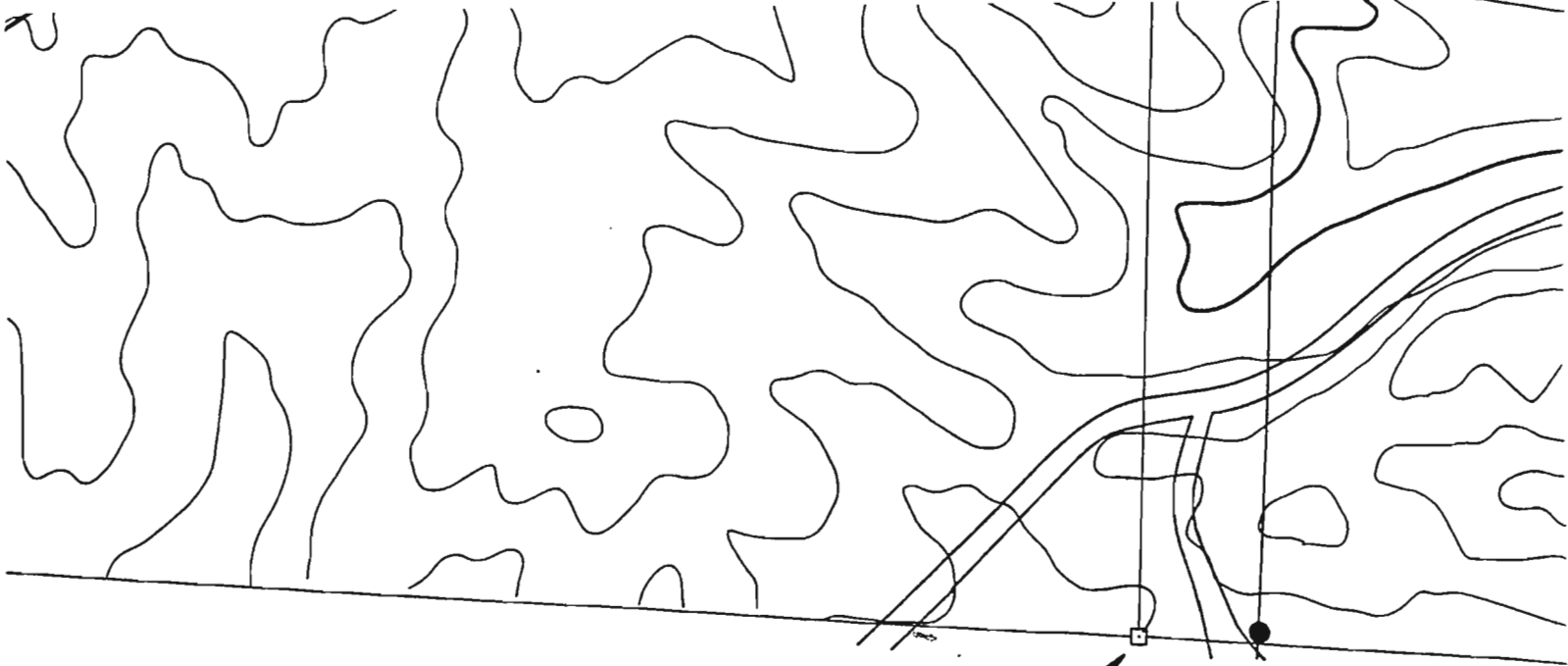


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R-1/BLM BOUNDARY

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BLM/ARCO BOUNDARY
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OF HIGHWAY 119)

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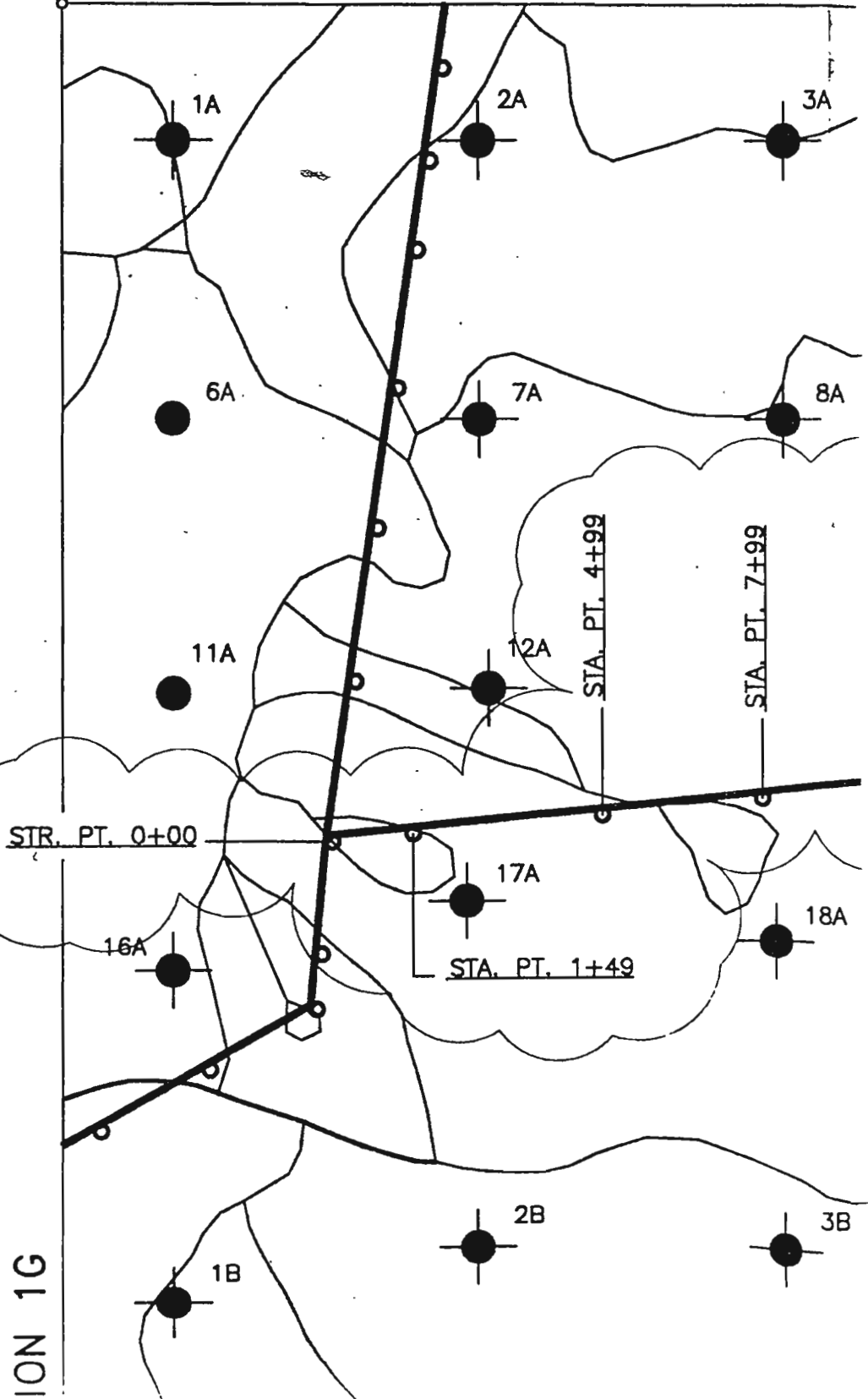
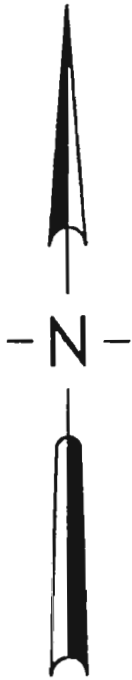
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CUSA			
REVISIONS			
		NPR-1 POWER IMPROVEMENTS SECTIONS 6M AND 5M OVERHEAD POWER LINE TOPOGRAPHY MAP	
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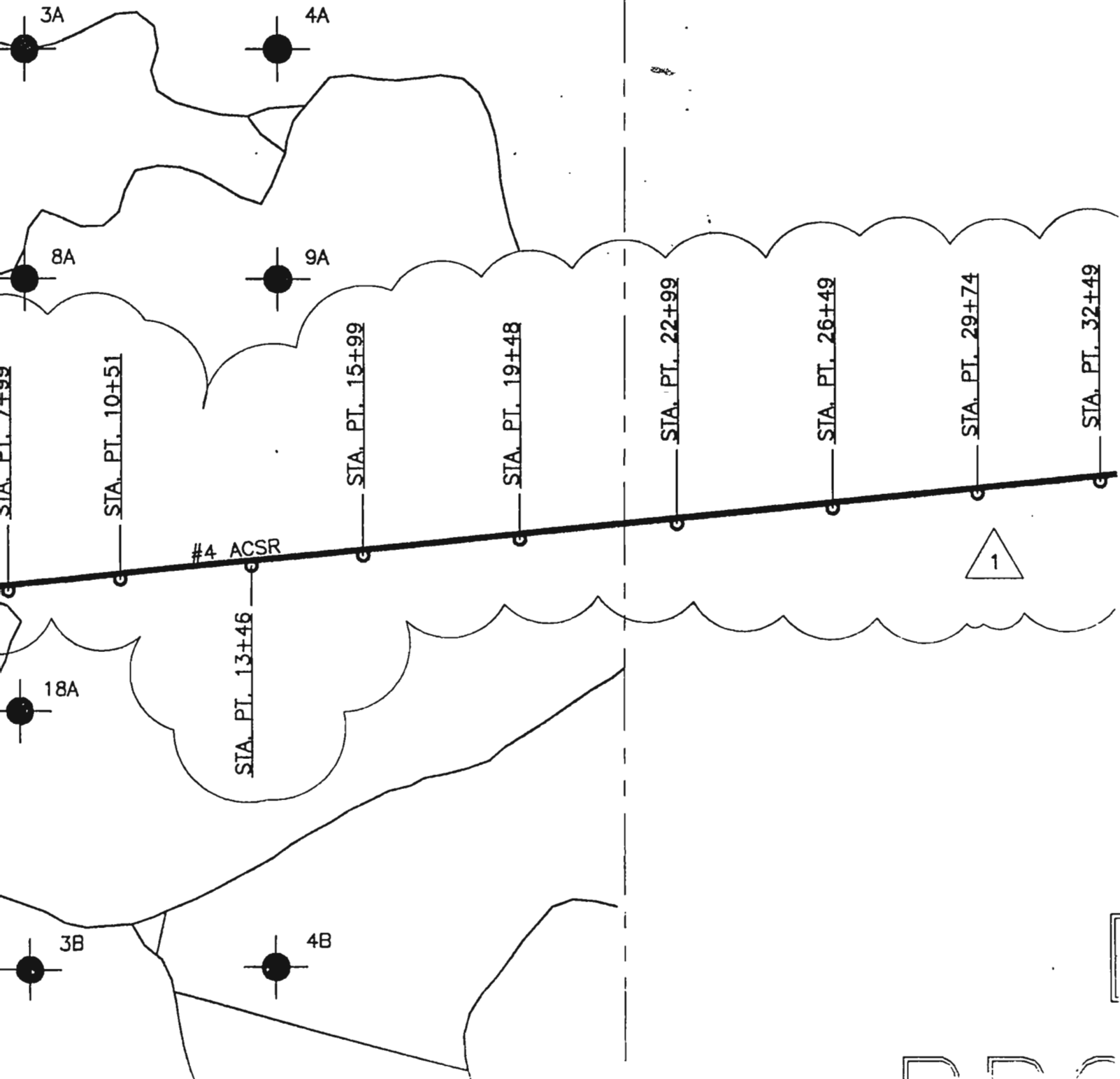
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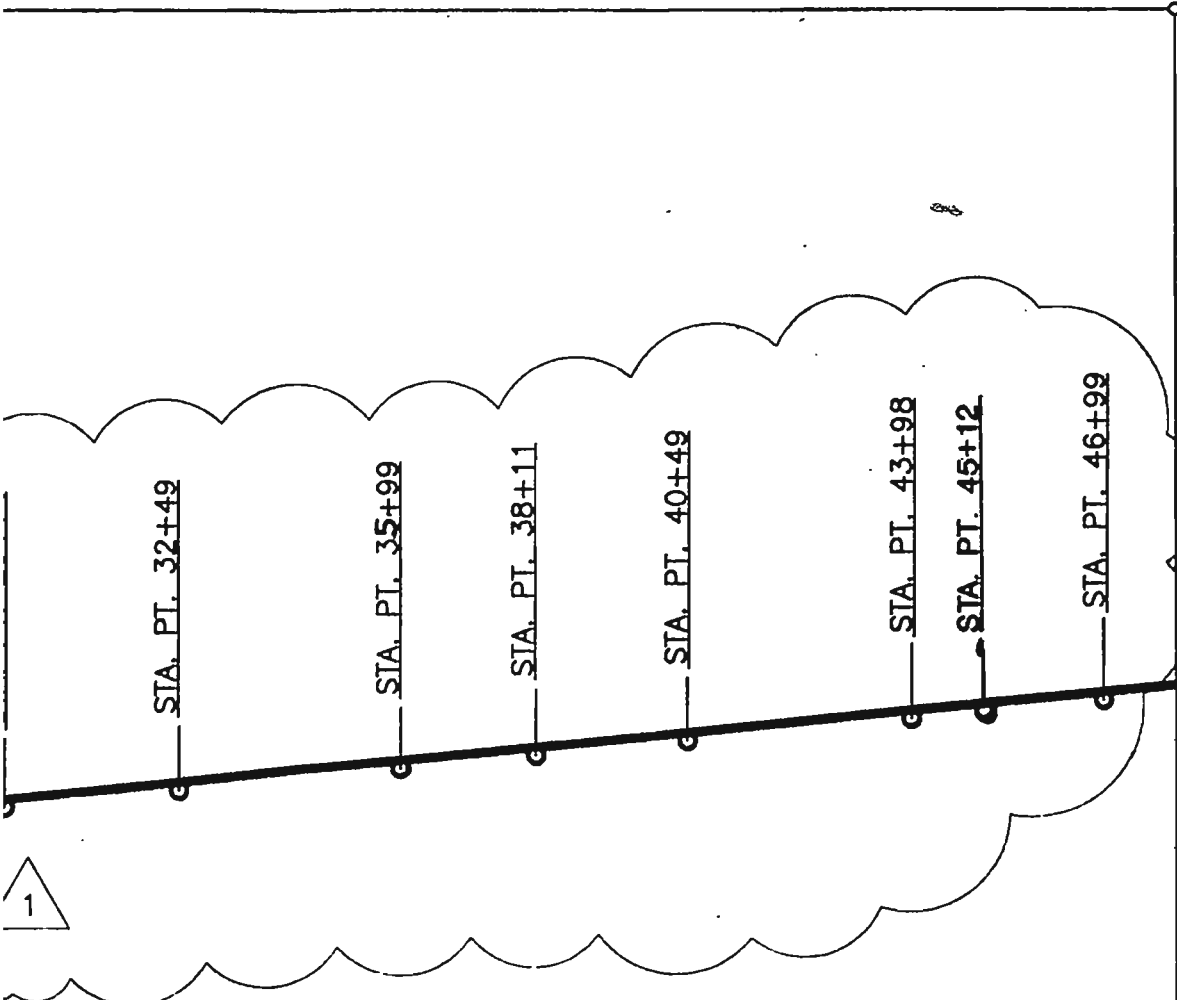
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SECTION 31T

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BLM

TION 5M

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 3 PHASE 115KV


 3 PHASE 12KV

 1 PHASE 12KV

 3 PHASE 480V


 1 PHASE 480V

 DC DRAIN LINE


 115KV PG&E LINE


 12KV PG&E LINE


 POWER POLE (POLE)

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KVA RATING

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TRANSFORMERS AND K

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NUMBER OF DRAIN
SECTION NUMBER

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AS#1-11G

LEGEND:

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 1 PHASE 12KV

 3 PHASE 480V


 1 PHASE 480V

 DC DRAIN LINE

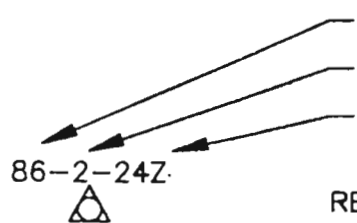
 115KV PG&E LINE


 12KV PG&E LINE

 POWER POLE (POLE)

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KVA RATING

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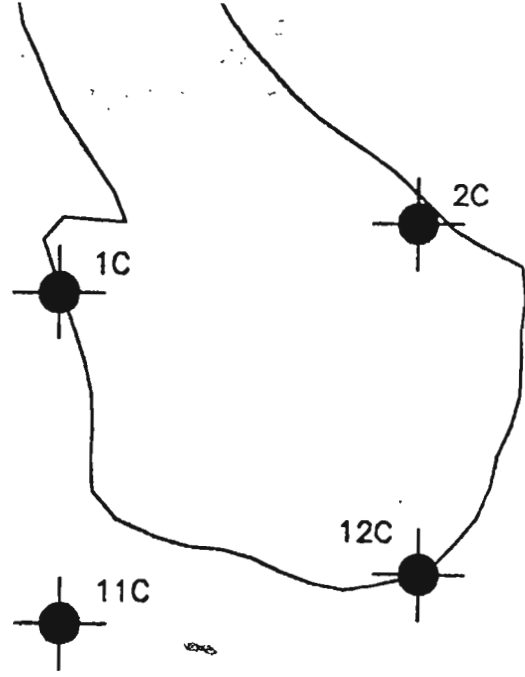
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SECTION NUMBER

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 SECTIONALIZER WITH AIR SWITCH

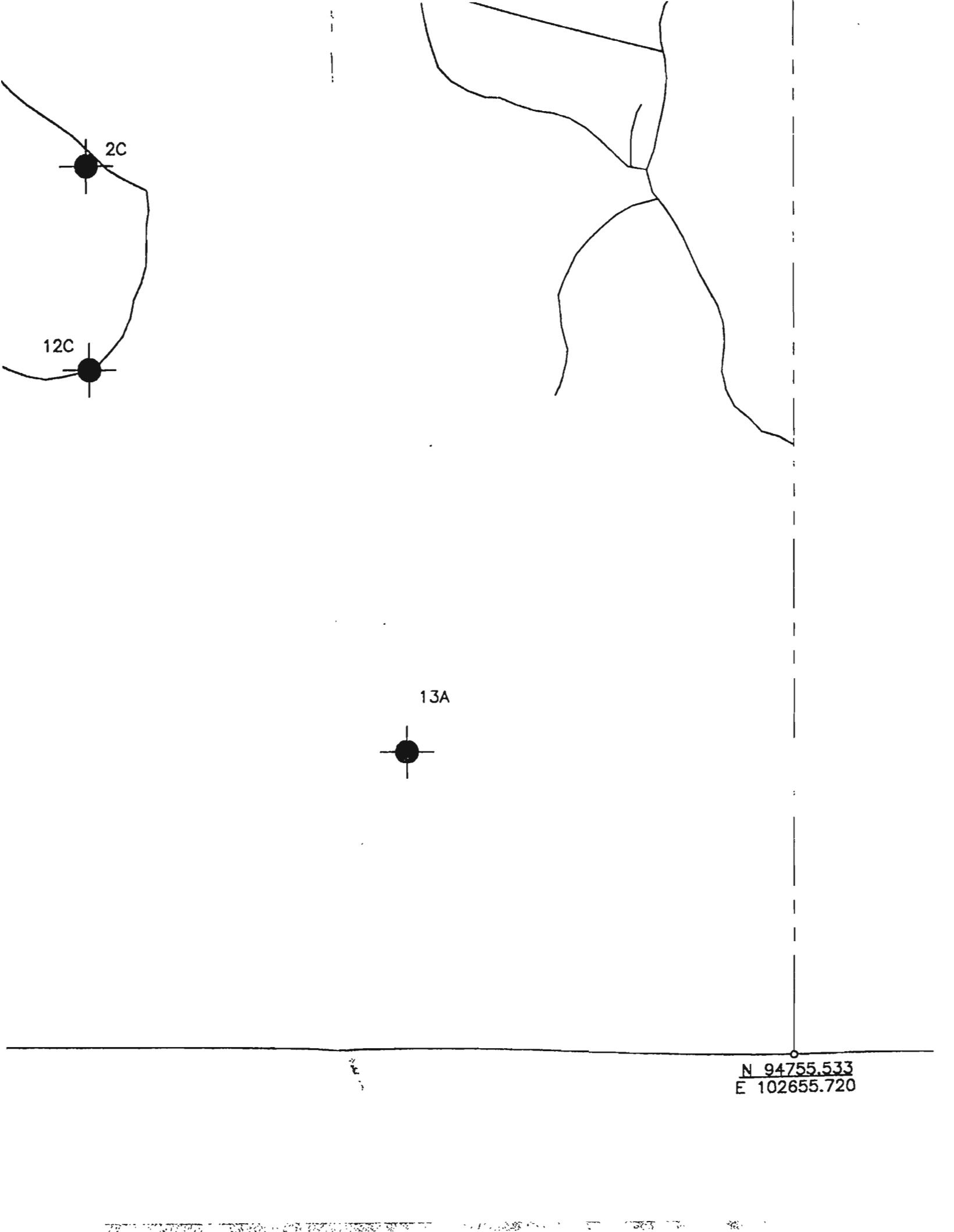
 RECLOSER WITH AIR SWITCH

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SEE
SECTION
12G

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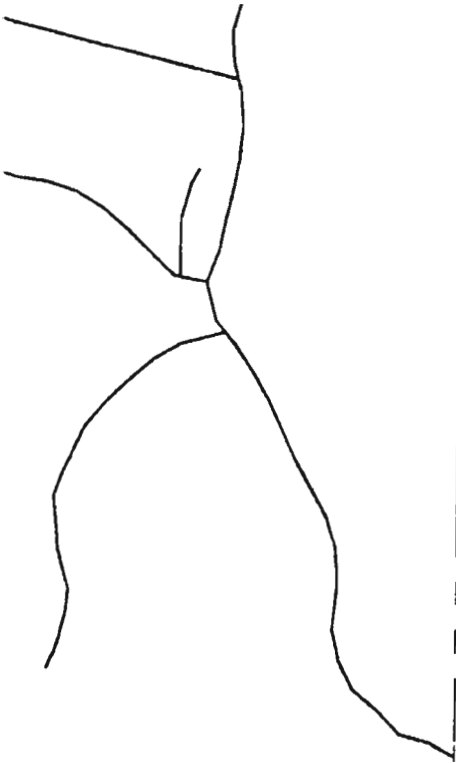
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AIR SWITCH DESIGNATION

ABBREVIATIONS

- AS - AIR SWITCH
- R - RECLOSER
- S - SECTIONALIZER
- QBAS - QUICK BREAK AIR SWITCH
- XFMRS - TRANSFORMERS
- UG - UNDERGROUND SERVICE
- PD - PAD MOUNTED TRANSFORMERS

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DEPARTMENT OF ENERGY												
BECHTEL PETROLEUM OPERATIONS, INC.												
UNIT OPERATOR												
ELECTRICAL FACILITY MAP												
SECTION 6M												

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SCALE


ABBREVIATIONS

- AS - AIR SWITCH
- R - RECLOSER
- S - SECTIONALIZER
- QBAS - QUICK BREAK AIR SWITCH
- XFMRS - TRANSFORMERS
- UG - UNDERGROUND SERVICE
- PD - PAD MOUNTED TRANSFORMERS

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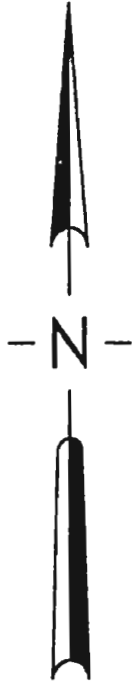
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230kV
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POWER
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STA. PT. 60+49

N 84'

#4 ACSR

NEW 12kV
POWER
LINE

STA. PT. 49+99

STA. PT. 53+63

STA. PT. 55+49

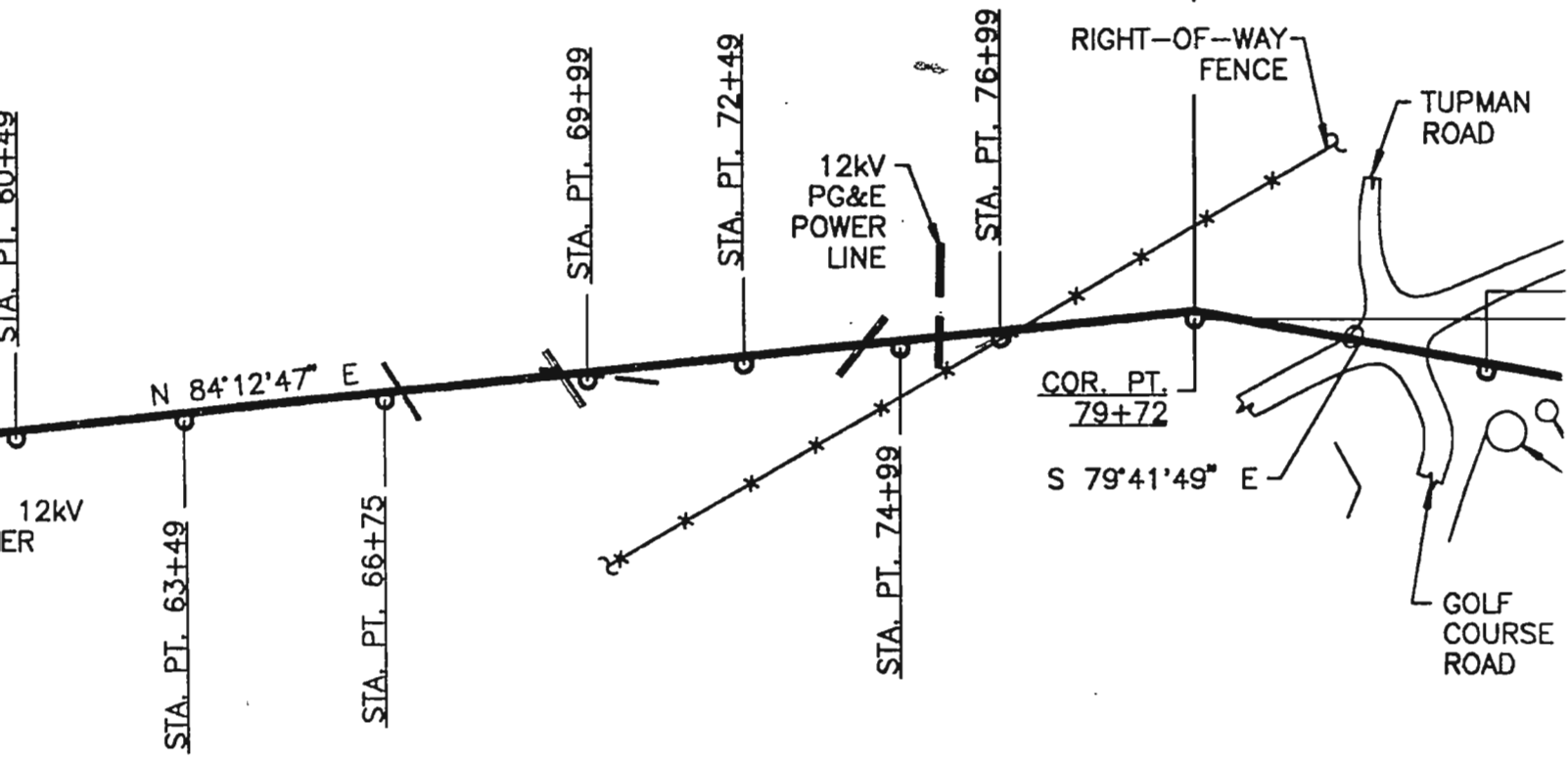
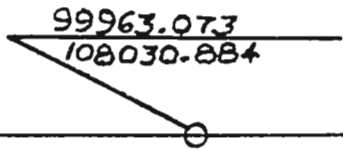
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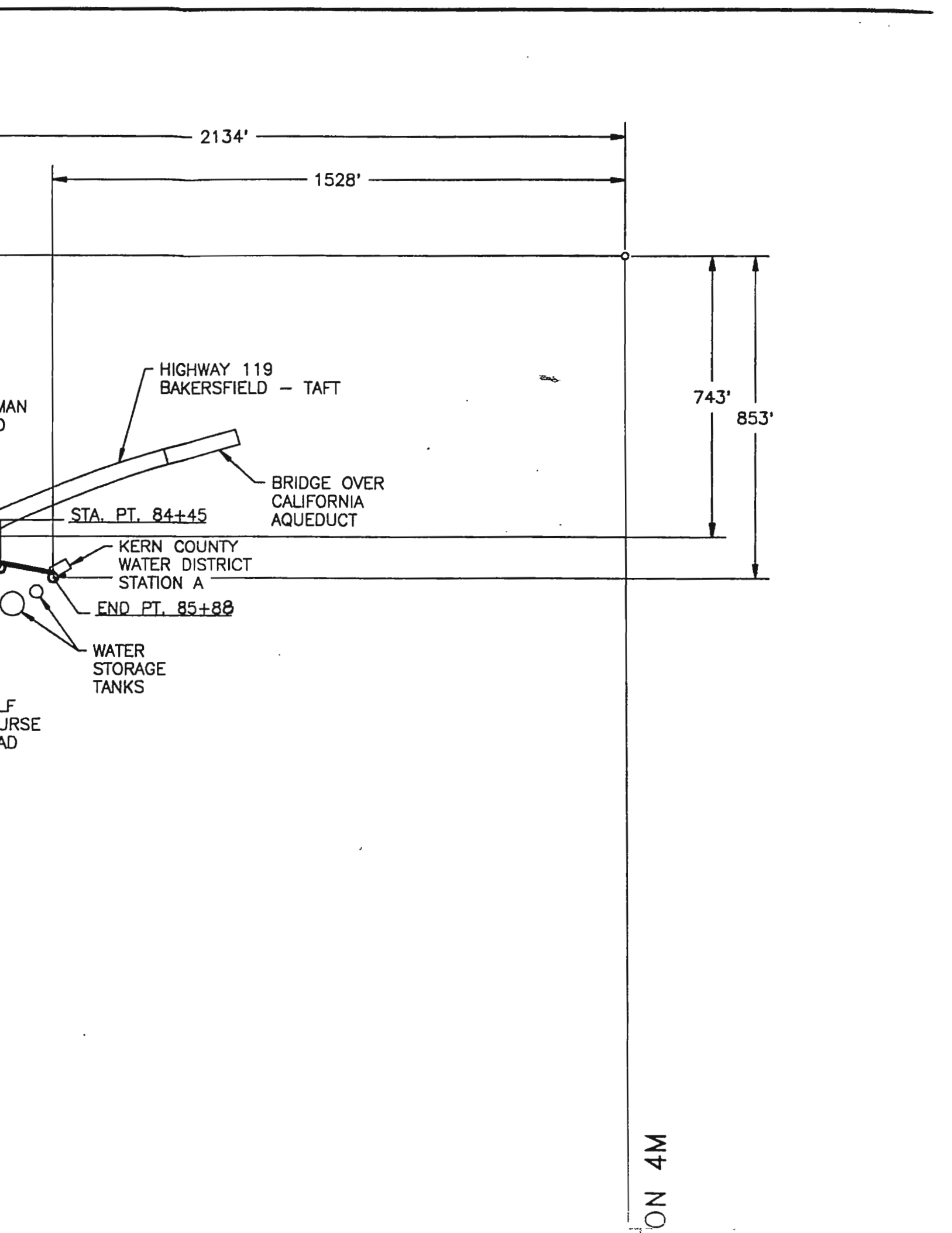
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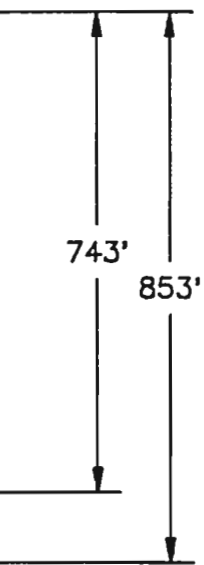
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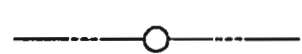
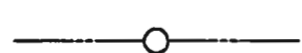








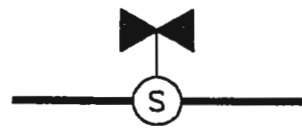
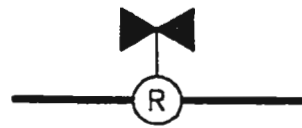
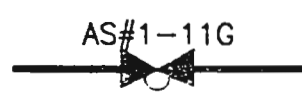
1S., R.25E., M.D.B. & M.







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3 PHASE
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1 PHASE
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230kV PG.
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115kV PG.
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12kV PG&
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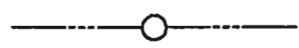
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 3 PHASE 12kV

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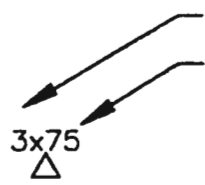
 1 PHASE 480V

 230kV PG&E LINE

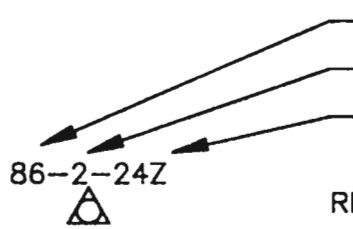
 115kV PG&E LINE

 12kV PG&E LINE


 POWER POLE (POLE)

 No. TRANSFORMERS
kVA RATING

TRANSFORMER BANK WITH NUMBER OF TRANSFORMERS AND KVA RATING (XFMR-M)

 WELL NUMBER
NUMBER OF DRAIN LINES
SECTION NUMBER

RECTIFIER (RECT-M)

 SECTIONALIZER WITH AIR SWITCH

 RECLOSER WITH AIR SWITCH

 AIR SWITCH DESIGNATION

SEE SECTION

8

SECTION 8M

SECTION 8M

SECTION 4

NOTES:

1. SECTION 5M IS NOT PART OF NPR-C.



RECLOSER WITH AIR SWITCH



AIR SWITCH DESIGNATION

ABBREVIATIONS

- AS - AIR SWITCH
- R - RECLOSER
- S - SECTIONALIZER
- QBAS - QUICK BREAK AIR SWITCH
- XFMRs - TRANSFORMERS
- UG - UNDERGROUND SERVICE
- PD - PAD MOUNTED TRANSFORMERS

PR-C.

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REVISIONS	BPOI APPROVALS	DOE REVIEW
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NAVAL PETROLEUM RESERVES IN CALIFORNIA

DEPARTMENT OF ENERGY

BECHTEL PETROLEUM OPERATIONS, INC.

UNIT OPERATOR

ELECTRICAL FACILITY MAP

SECTION 5M

ABBREVIATIONS

- AS - AIR SWITCH
- R - RECLOSER
- S - SECTIONALIZER
- QBAS - QUICK BREAK AIR SWITCH
- XFMRS - TRANSFORMERS
- UG - UNDERGROUND SERVICE
- PD - PAD MOUNTED TRANSFORMERS

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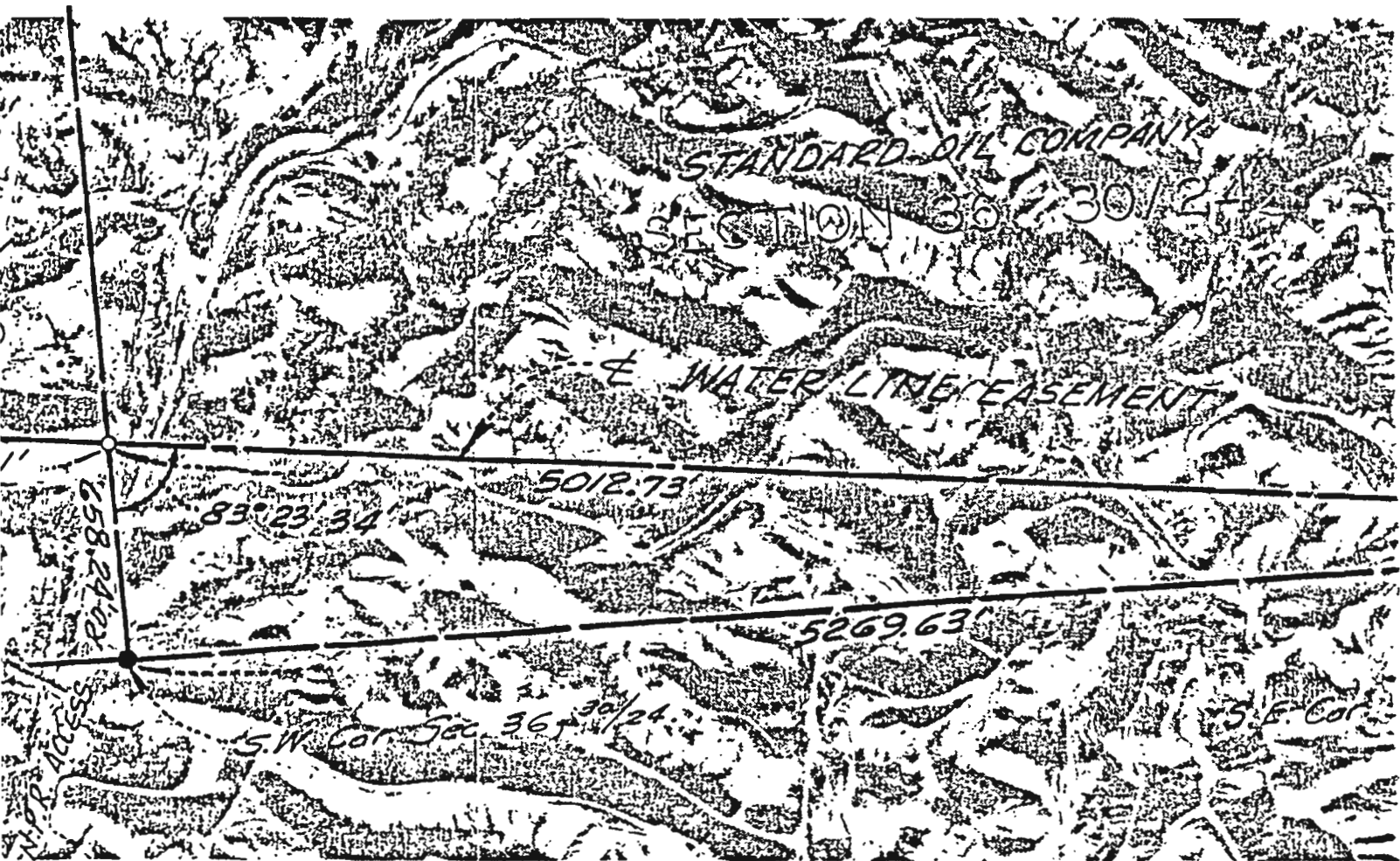
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NAVAL PETROLEUM RESERVES IN CALIFORNIA										
DEPARTMENT OF ENERGY										
BECHTEL PETROLEUM OPERATIONS, INC. UNIT OPERATOR										
ELECTRICAL FACILITY MAP SECTION 5M										
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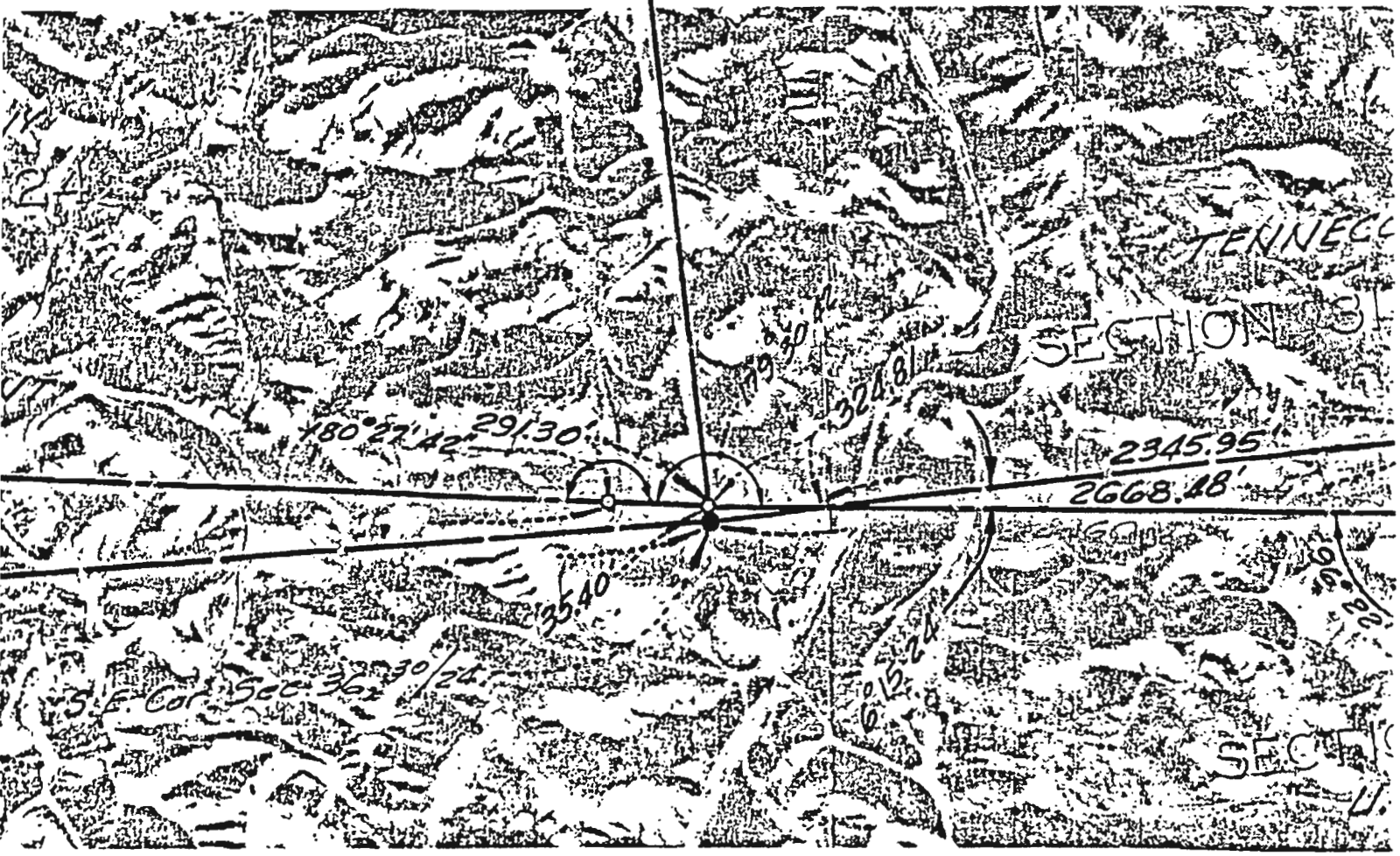
APPENDIX B

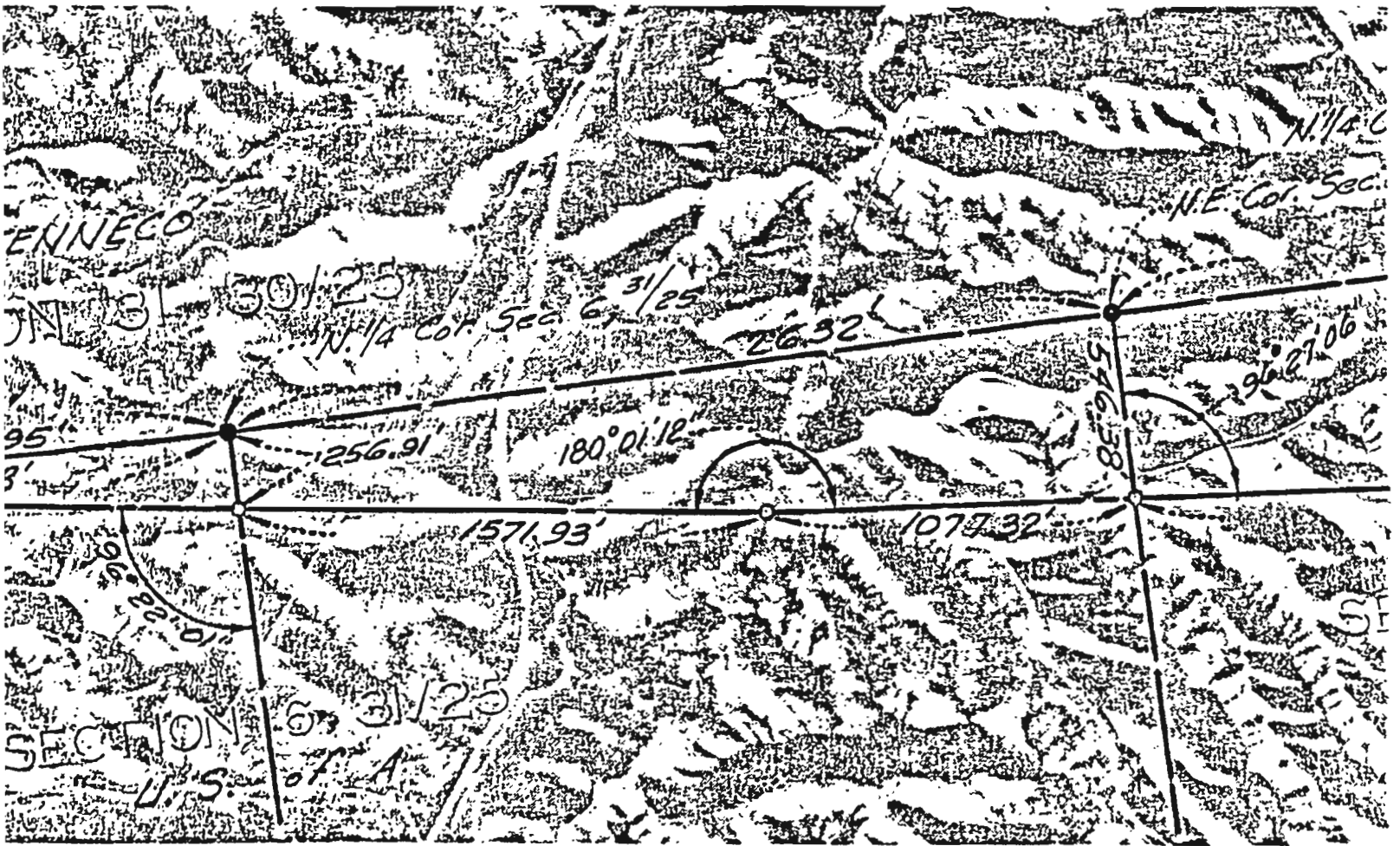
**RIGHT-OF-WAY LOCATION MAP FOR 10-INCH
AND 8-INCH FRESH WATER PIPELINE
RIGHT-OF-WAY**

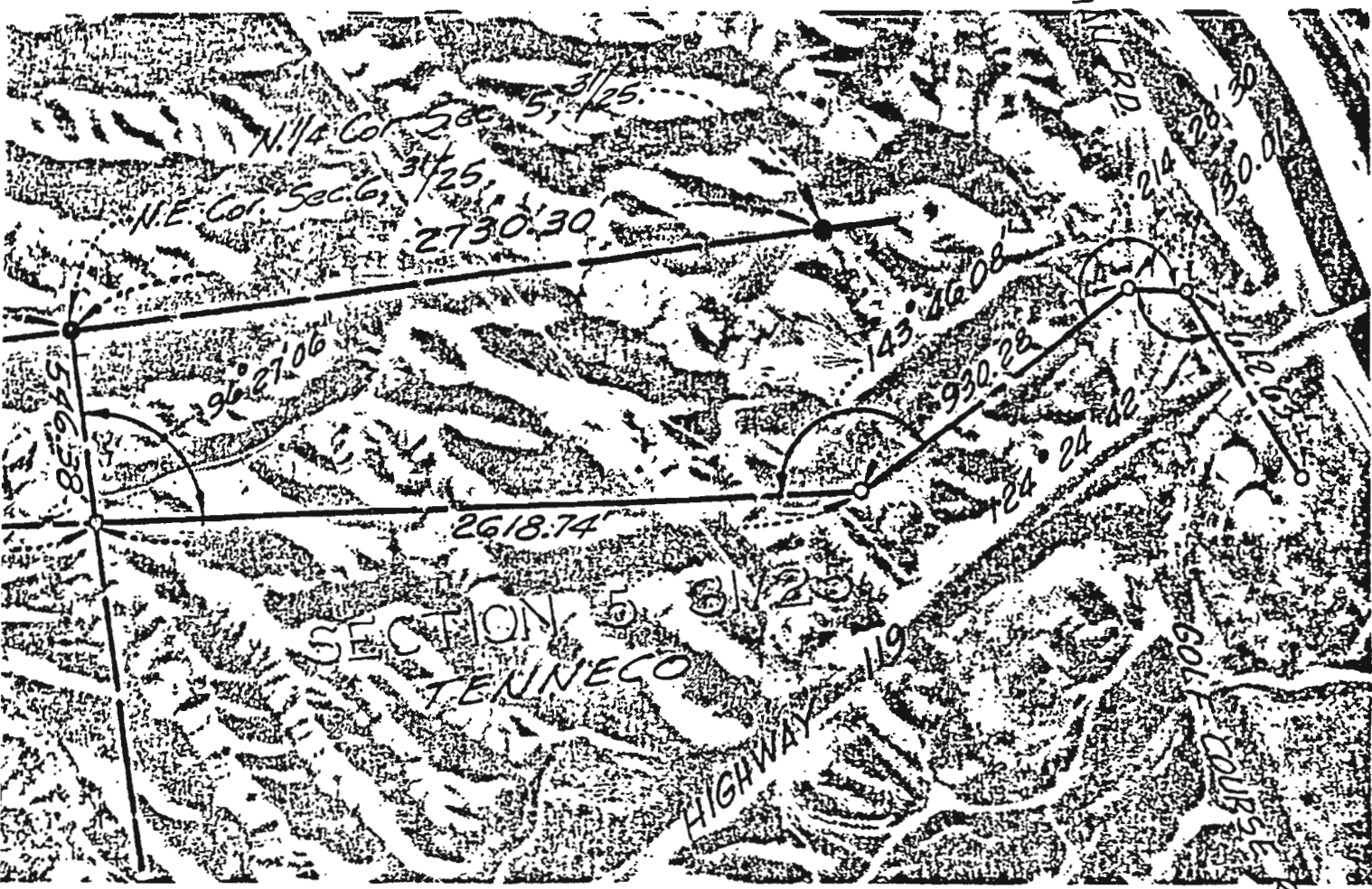
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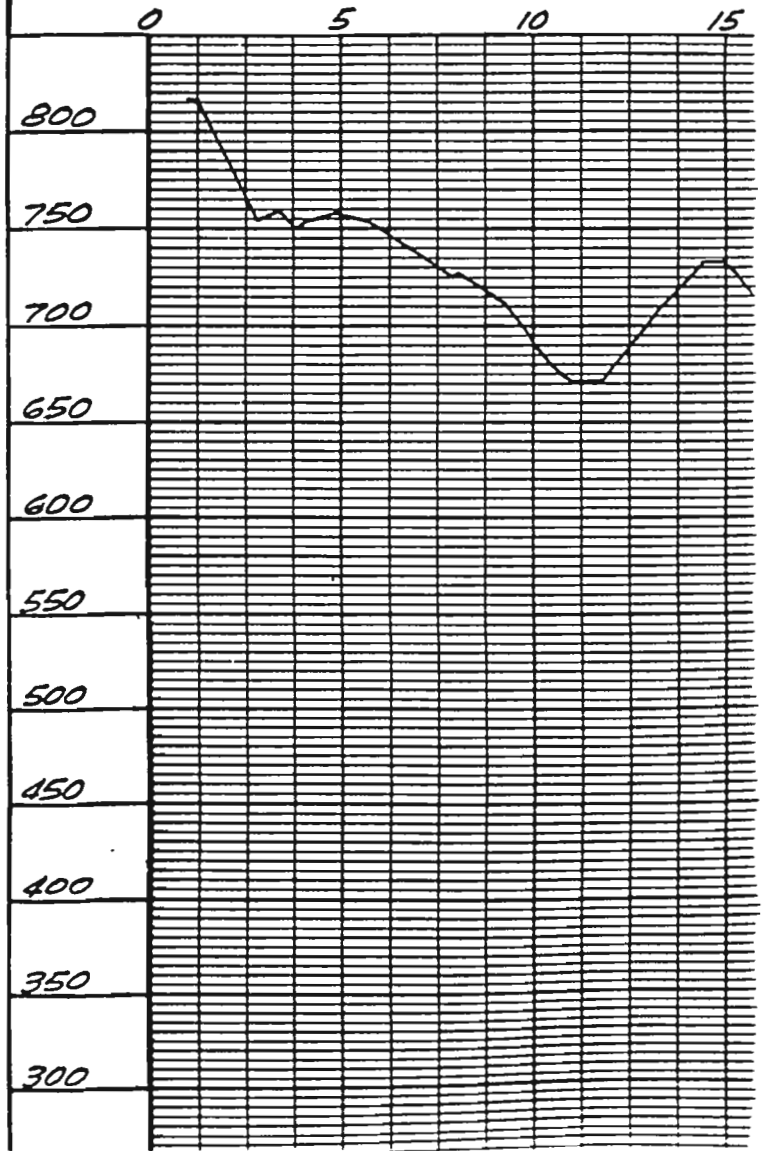
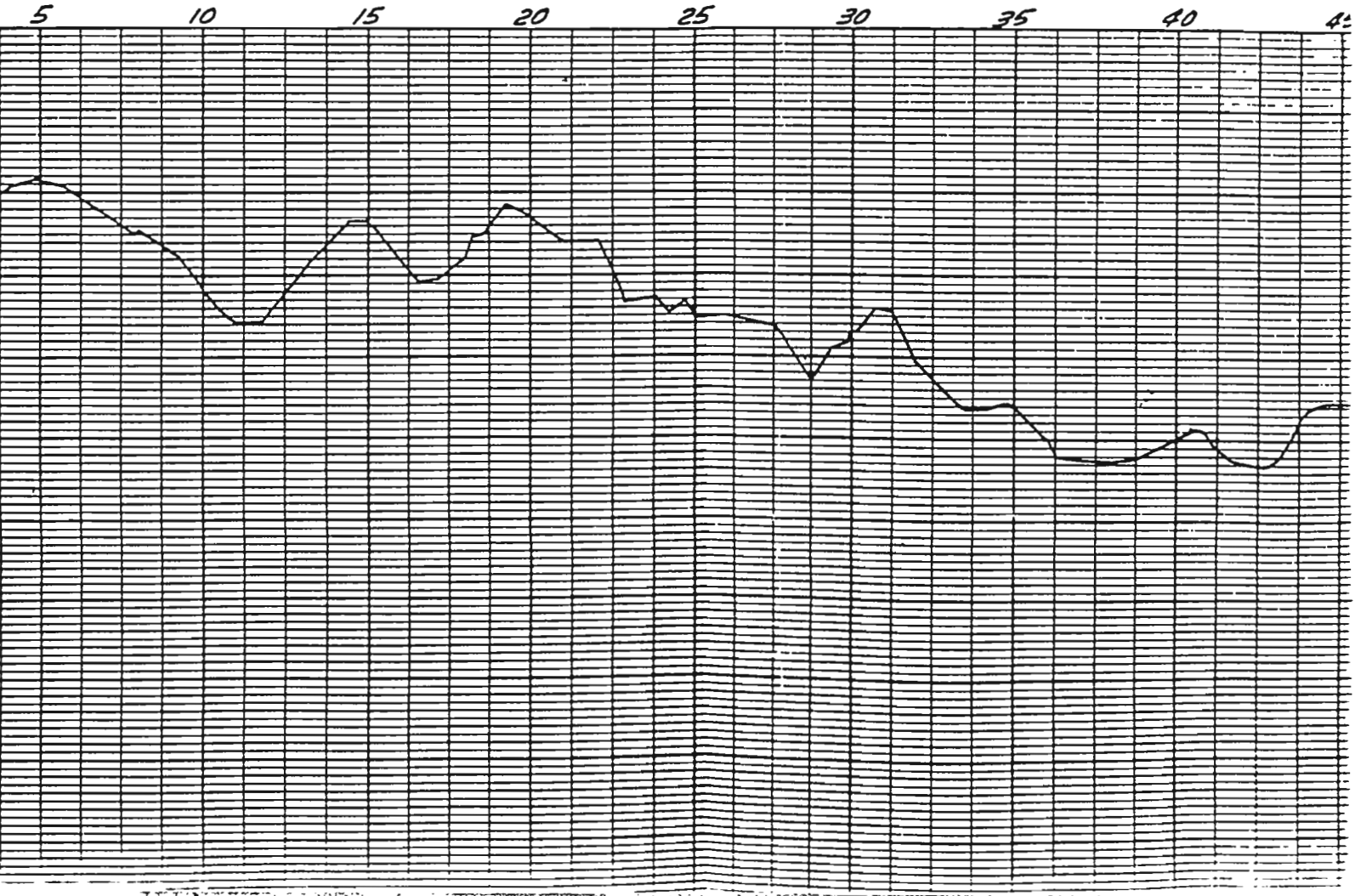
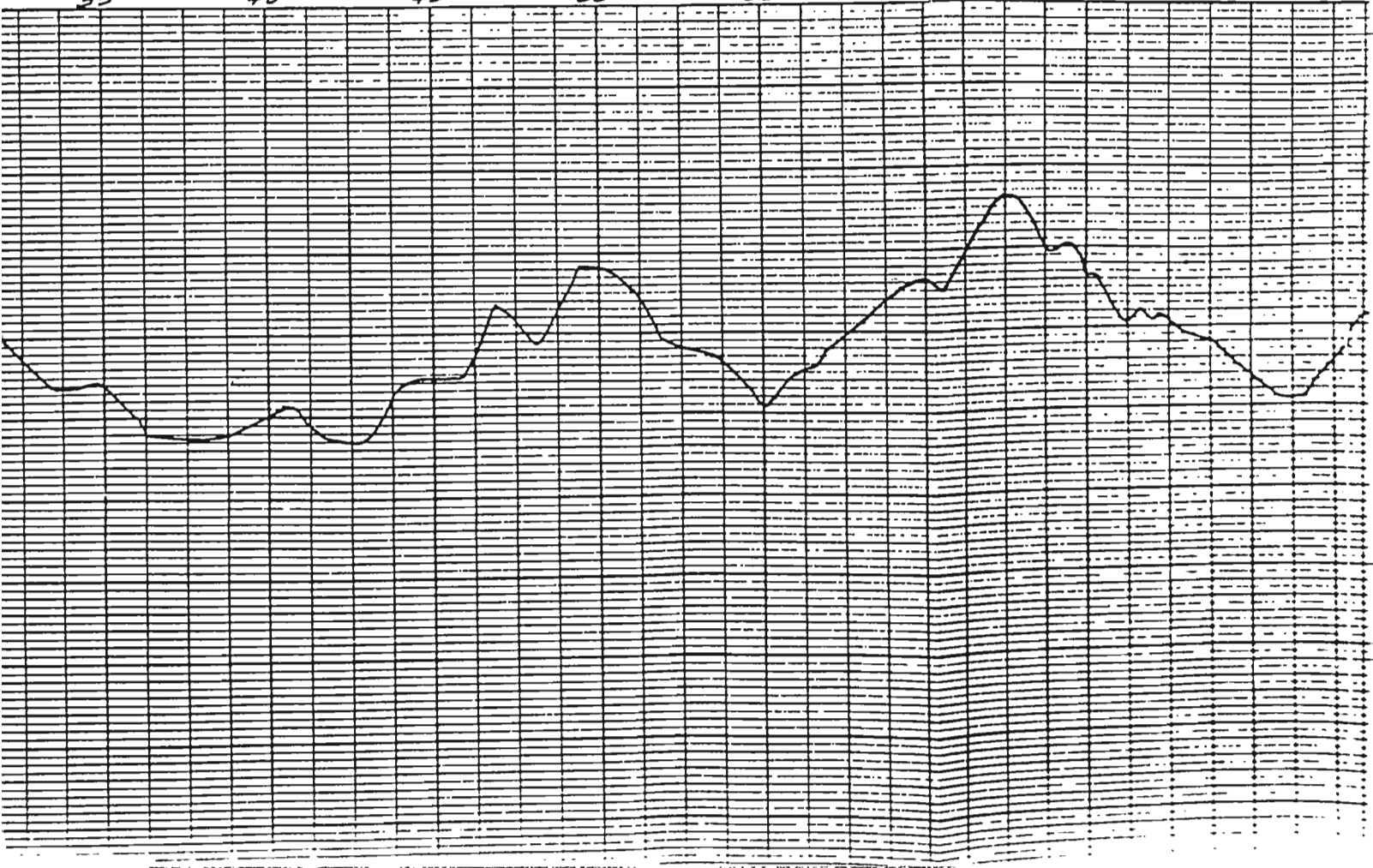


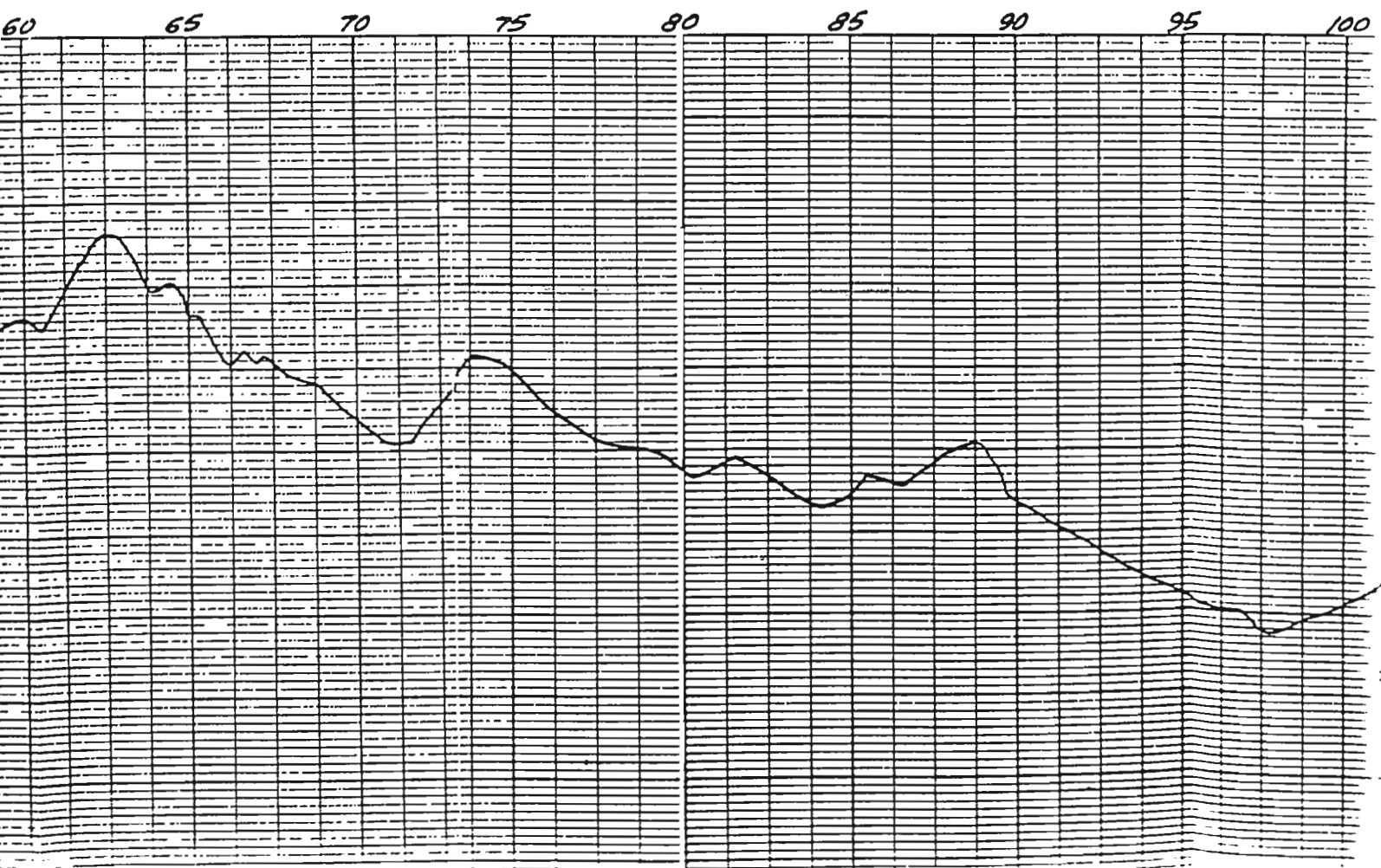


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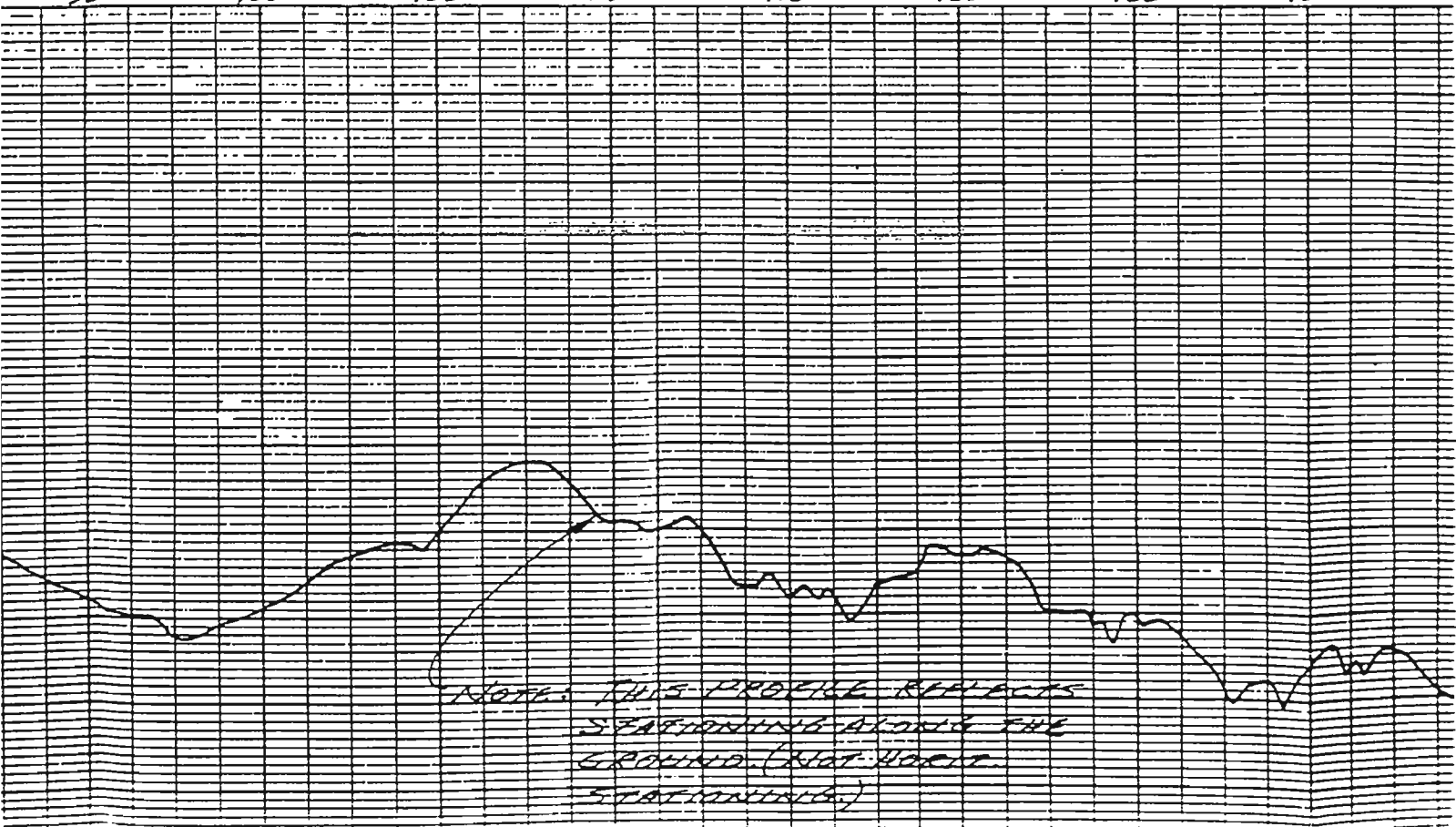
DRAWN
W.H. -
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DATE
3/26,

Prepared under my supervision.

Jerry Vanceuren
Jerry Vanceuren
L.S. 3707

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NOTE: THIS PROFILE REFLECTS
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STATIONING.)

MASON
VANCURAN
& WA



CIVIL ENGINEERING
SURVEYING

2200 'F' ST.
PHONE (805) 325-1251

BAKERSFIELD, CALIFORNIA
93301

WATER LINE EASEMENT SURVEY FOR WILLIAMS
BROTHERS IN SEC.'S 35 & 36, 30/24, SEC. 31, 30/25,
SEC.'S 5 & 6, 31/25, M.D.M.

DRAWN BY
W.H. - A.K.

REVISION

DATE

JOB No. 5-76-22

CHECKED BY

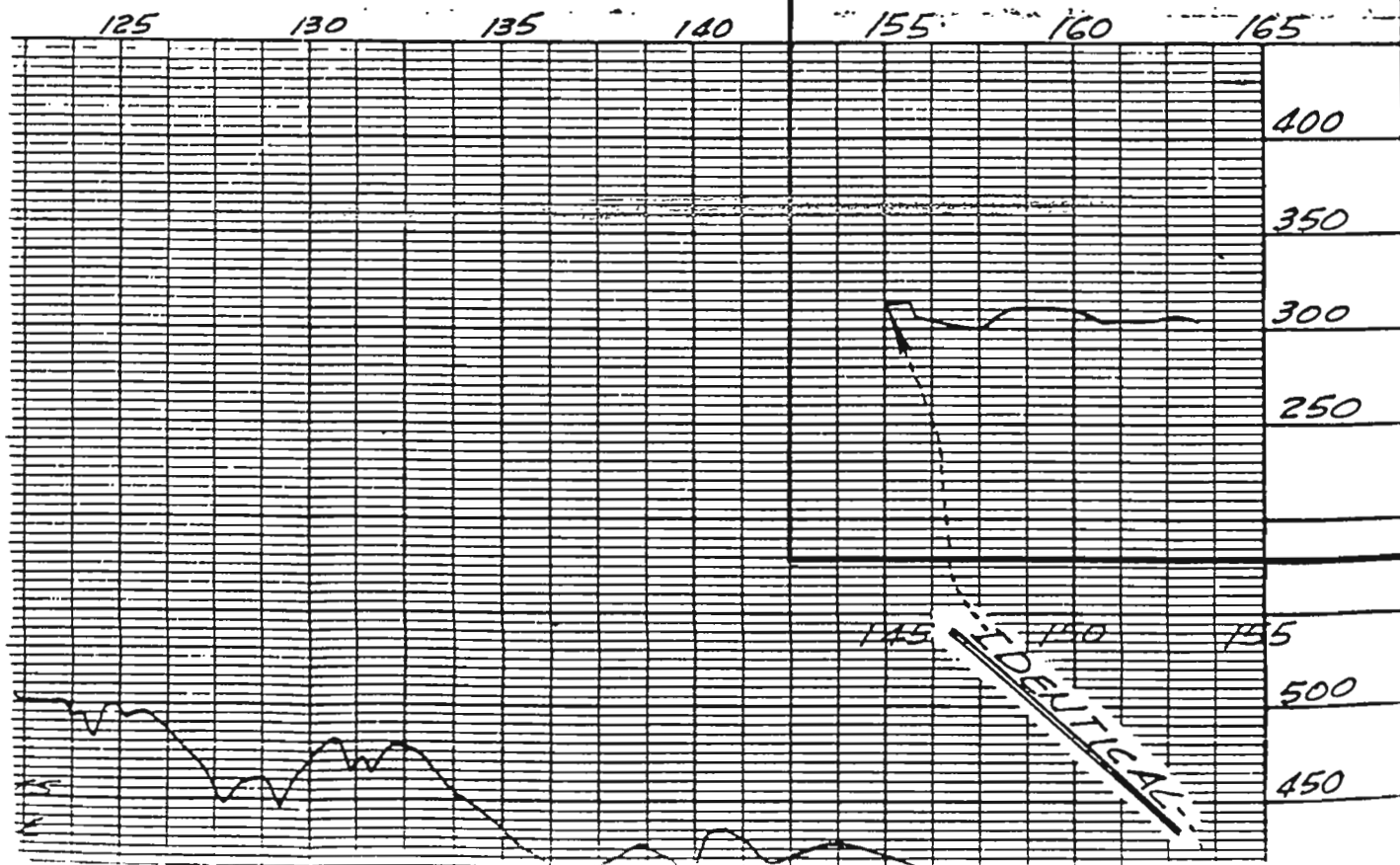
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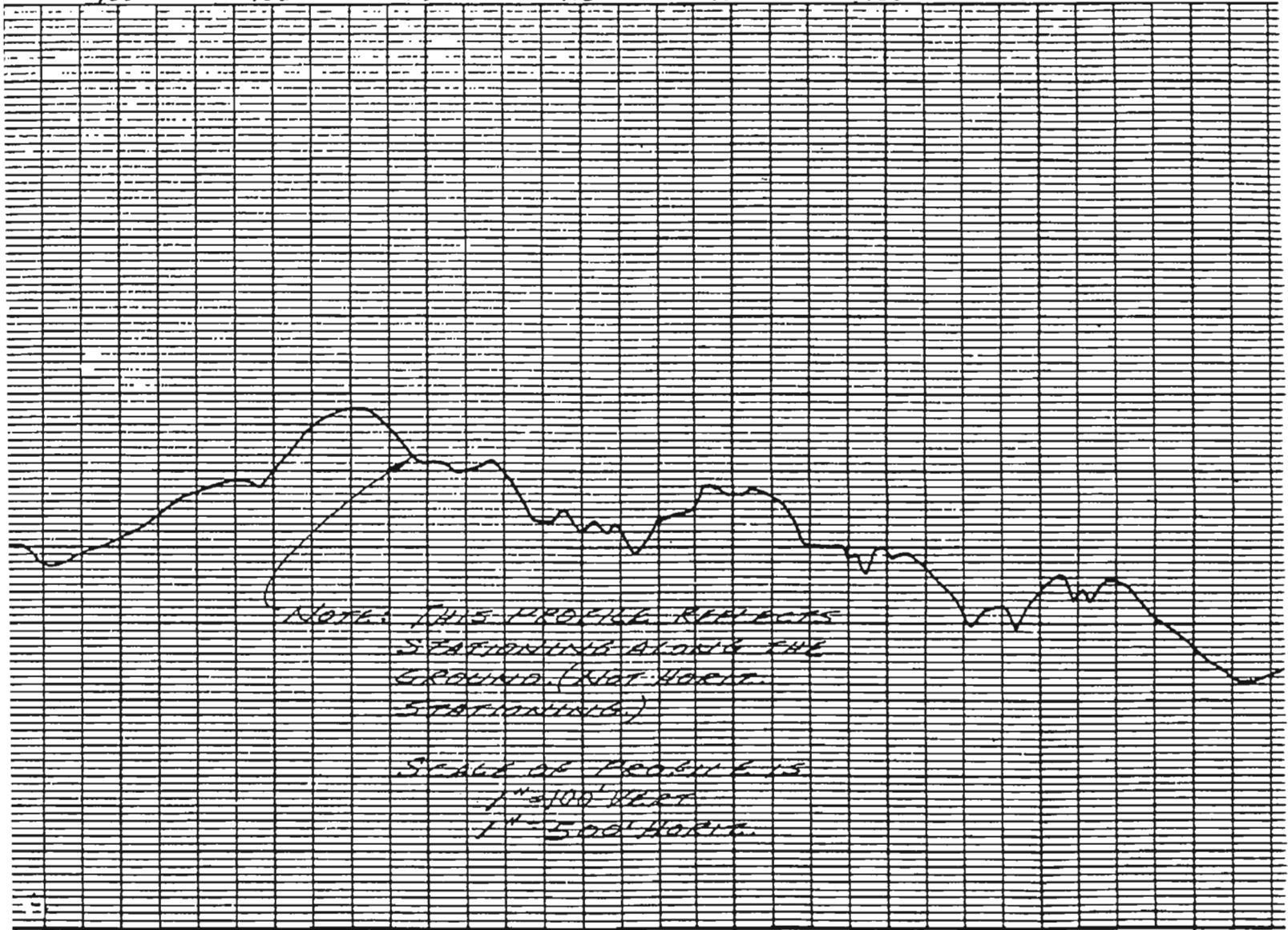


Prepared under my supervision.

Jerry Vancuren
Jerry Vancuren
L.S. 3707

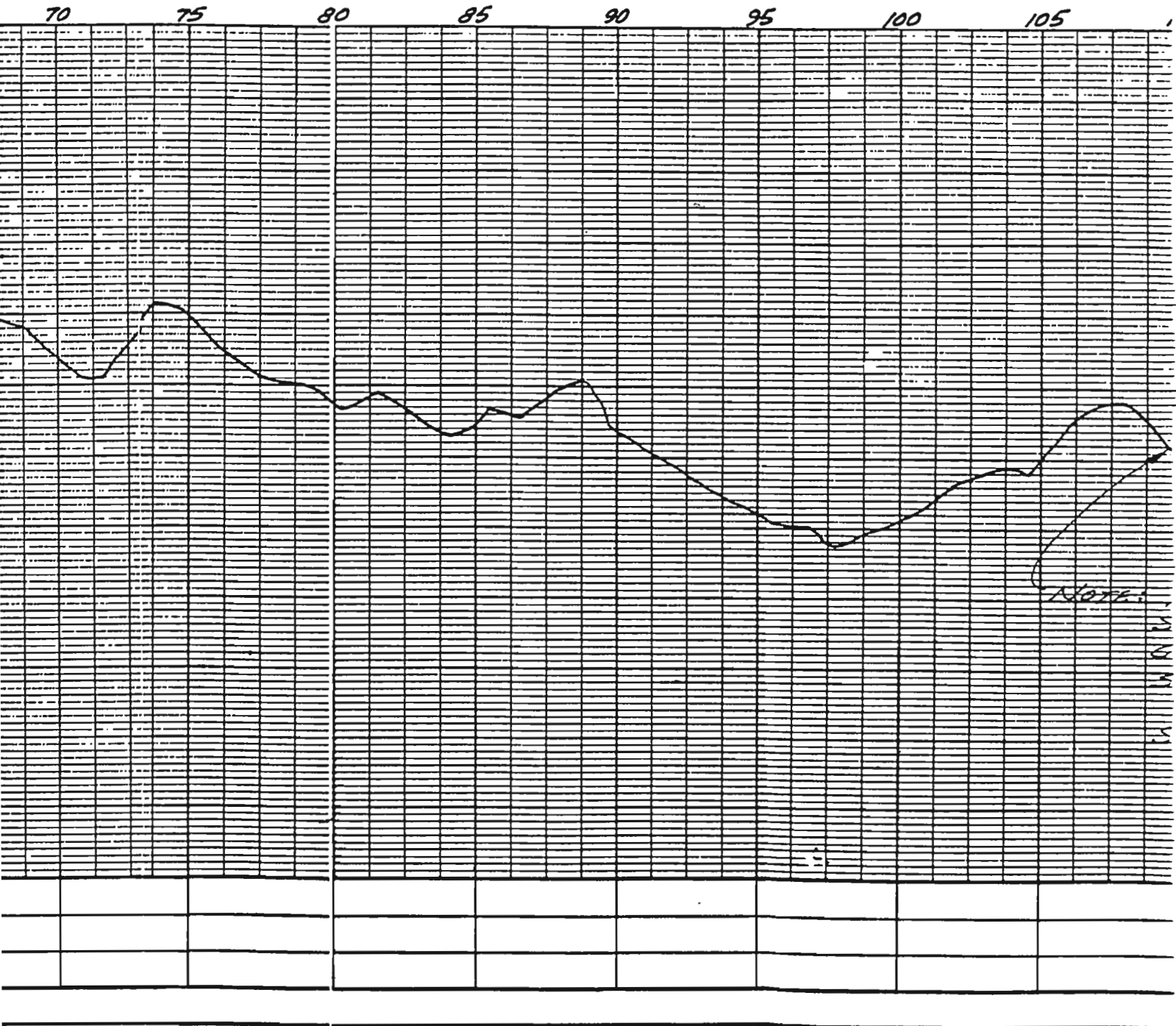
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NOTE: THIS PROFILE REFLECTS
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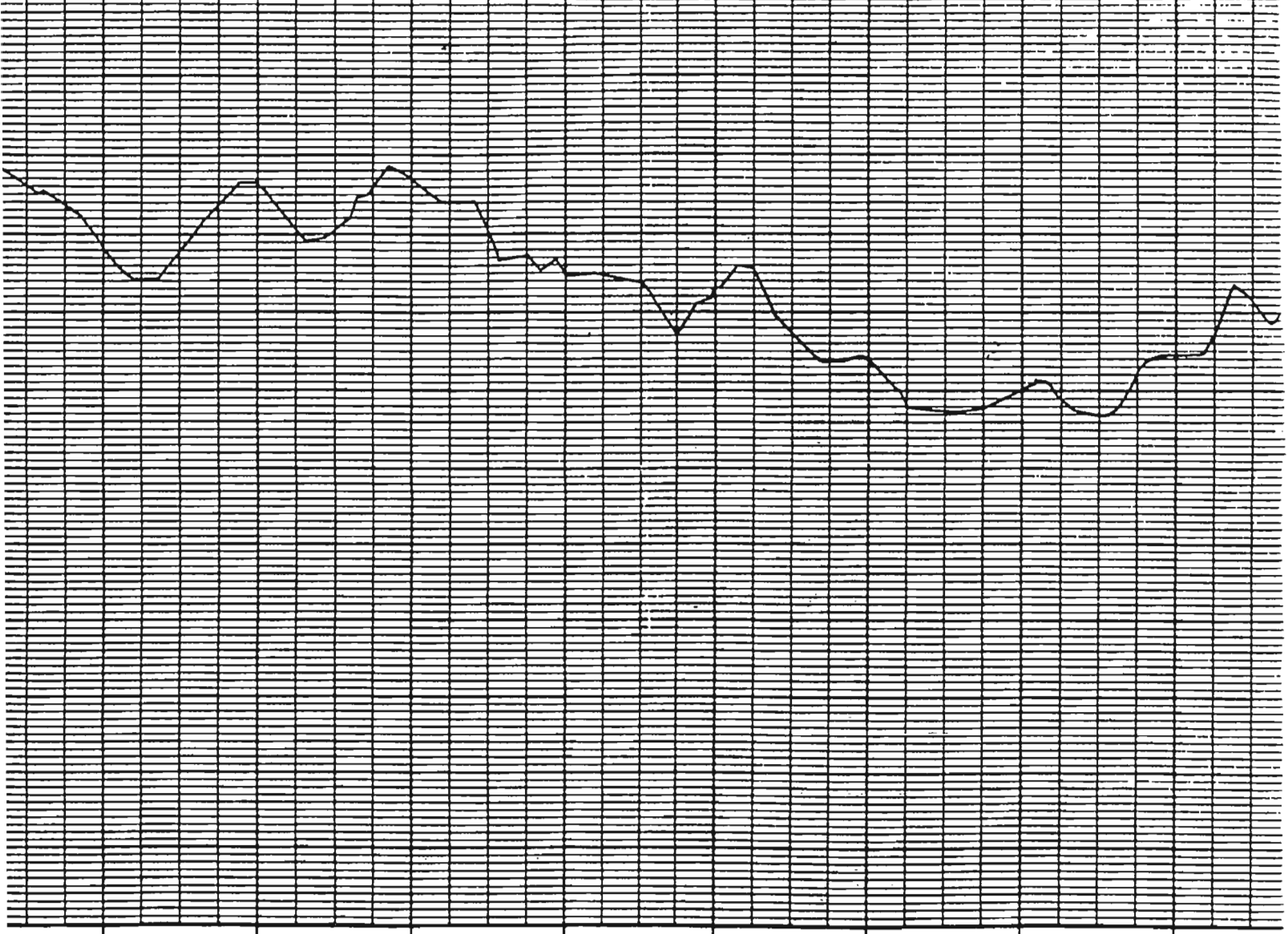
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1" = 100' VERT
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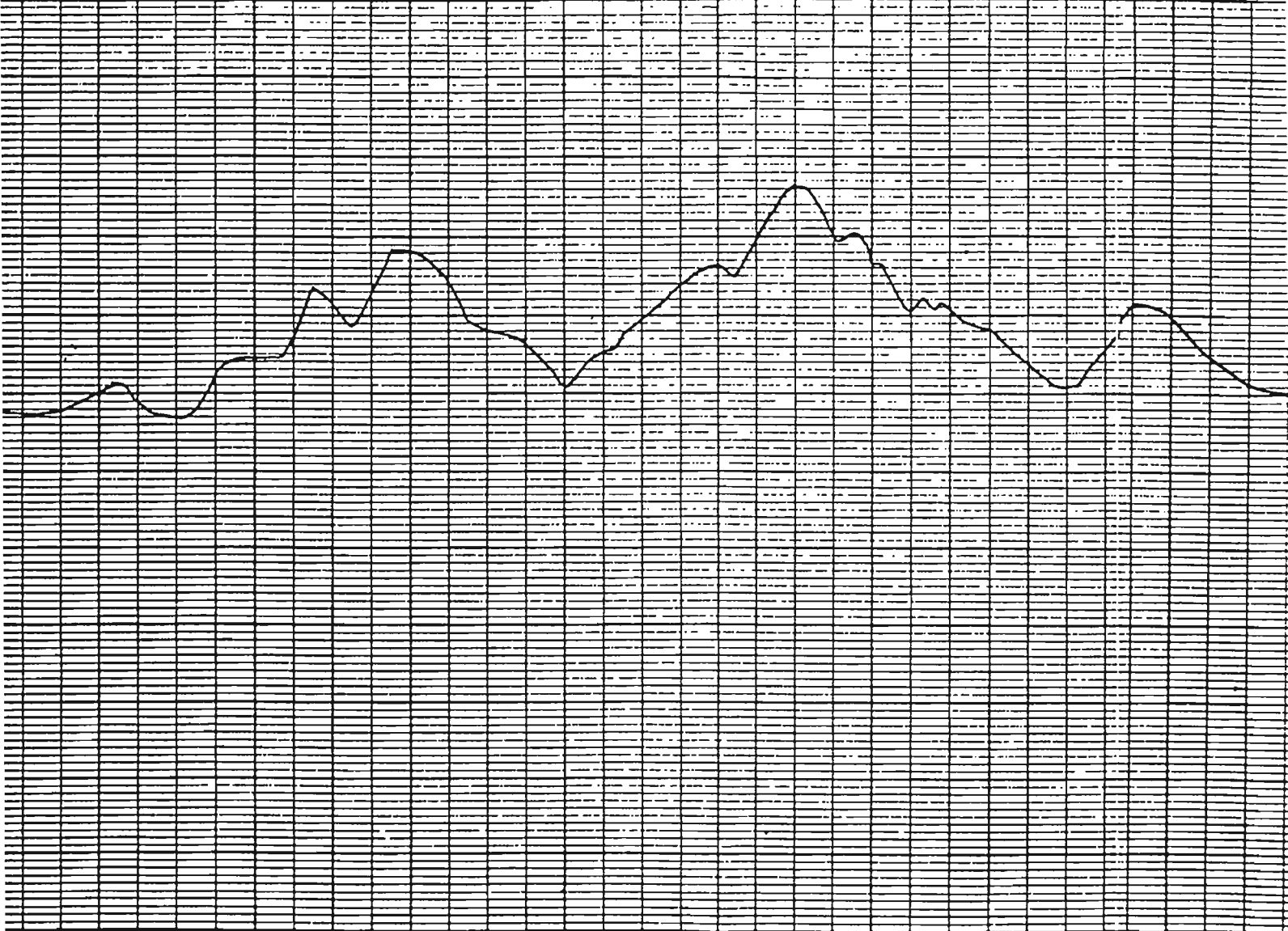
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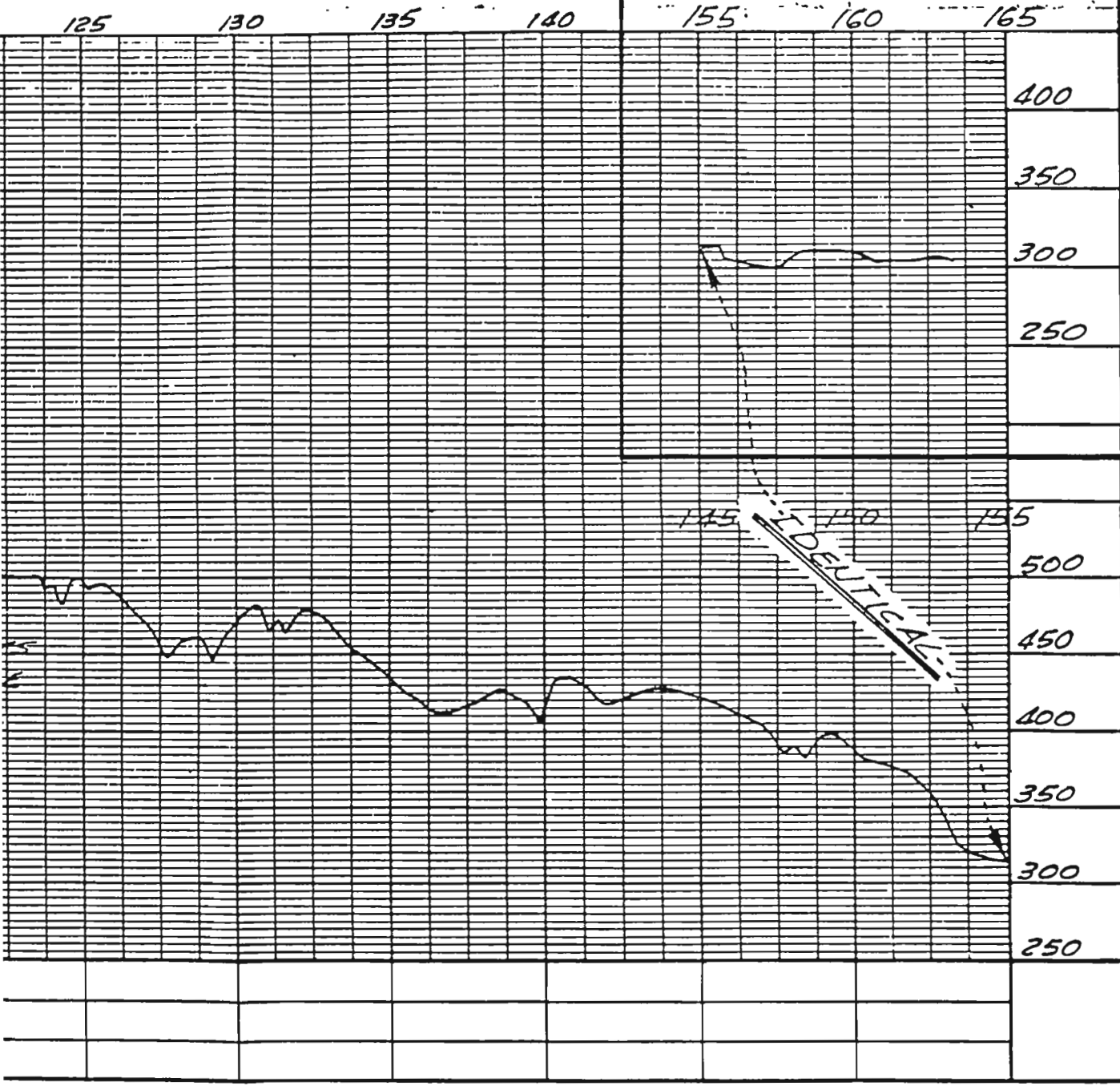


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 SEC.'S 5 & 6, 3/25, M.D.M.

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APPENDIX C

**MITIGATION MEASURES/
RIGHT-OF-WAY STIPULATIONS**

MITIGATION MEASURES/RIGHT-OF-WAY STIPULATIONS

The proposed construction and routine operation of the powerline would be conducted pursuant to an extensive set of standard plans and procedures established by the Department of Energy (DOE), Bureau of Land Management (BLM), Atlantic Richfield Company (ARCO), California Department of Transportation (CALTRANS), West Kern Water District (WKWD), United States Fish and Wildlife Service (FWS), and California Department of Fish and Game (CDFG) to minimize the environmental impacts of activities undertaken on and adjacent to the Naval Petroleum Reserves in California. These include, but are not limited to:

1. All BLM, FWS, and CDFG mitigations/stipulations shall be reviewed and incorporated into the final design by DOE and the Unit Operator. This includes all environmental protection measures.
2. A pre-performance meeting prior to construction activities to review all environmental, safety, and operations requirements for employees and subcontractors.
3. An employee education program shall be conducted by persons experienced with the biology of all endangered species in question. The program shall address the potential occurrence of endangered species in the area, their legal status under the Endangered Species Act, specific measures being taken to reduce impacts to species on the proposed project site, and the implications of non-compliance with required endangered species protection measures.
4. Positioning of power poles shall be altered if unforeseen impacts to State and Federally listed threatened, endangered, and/or candidate plants and animals are identified in the final Environmental Preactivity Survey (EPAS).
5. Reclamation of all peripheral construction disturbances. Reclamation of the entire site and associated disturbances shall occur upon abandonment of the proposed powerline.
6. An EPAS will be conducted 14 days (minimum) prior to construction; immediate halting of construction will be required if previously unidentified biological resources, cultural resources or contaminated soils are encountered.
7. Biological monitors shall be present at all times when activities occur in or adjacent to endangered species habitats and other sensitive areas.
8. Erosion and dust control measures shall be implemented for any road rights-of-way (existing) utilized for the proposed action (if applicable).
9. The proposed construction area shall be limited to the minimum area necessary to develop the powerline.
10. Avoidance of any staked den, burrow, or plant habitat by a minimum of 30 feet (if applicable), or as designated in the environmental preactivity survey report and informal consultation with FWS. The following buffer zones have been established for the Coles Levee Ecosystem Preserve for state and federal listed species and their habitat and shall be complied with for the proposed action. If a standard buffer zone cannot be maintained, a

biologist, or other suitably trained DOE personnel, or other individual designated or approved by CDFG, shall be present during activities inside the buffer zones.

Type of Sensitive Area	Radius of Buffer Zone in Feet
Occupied kit fox den	100
Known kit fox den	100
Known kit fox natal den	150
Occupied kit fox natal den	200
Potential kit fox den	50
Tipton/giant kangaroo rat burrows	50
San Joaquin antelope squirrel dens	30
Known blunt-nosed leopard lizard burrows	30
Flat-bottom drainages	30-50
Badger dens	30
Burrowing owl burrows	50
Other raptor nests	Varies
Eagle nests	2500
Listed Plants	50

11. All vehicular access to the site shall occur via existing roads or within the approved ROW. Except in the case of an emergency, DOE shall not conduct off-road driving and driving on trails without an EPAS and implementation of appropriate measures to prevent injury to wildlife, habitat degradation, erosion, and fires. All other off-road driving will be restricted, and reduced speeds will be required on the access roads (15 mph or less, except on county roads).
12. Proper containment and disposal of solid wastes, including food stuffs, will be required. Feeding of native wildlife, use of firearms, and pets are specifically prohibited. Firearms and pets are prohibited within the Coles Levee Ecosystem Preserve to minimize harassment or killing of wildlife and to prevent the introduction of destructive domestic animal diseases to native wildlife populations.
13. Fire-fighting equipment (fire extinguishers, shovels, etc.) is required in all vehicles; all welding and grinding activities will utilize appropriate fire protection measures.
14. Material Safety Data Sheets (MSDS) for all chemicals utilized during construction shall be made available to employees.

15. Reporting of spills shall be in accordance with the NPR-1 Spill Control and Countermeasure (SPCC) plan, and contaminated material shall be properly cleaned-up and disposed of in accordance with all applicable local, State and Federal laws and regulations.
16. Habitat compensation for the loss of approximately 0.01 acre (direct/permanent), and 3.9 acres (indirect/temporary) of habitat shall be accomplished in accordance with FWS and CDFG recommendations. This compensation shall be negotiated with FWS, CDFG, and ARCO (to be determined through CDFG for the Coles Levee portion of the ROW).
17. During construction, all power lines shall be spaced to prevent the electrocution of large birds of prey (raptors). All bird electrocutions shall be reported to the CDFG and ARCO.
18. All construction activities shall be confined to daylight hours.
19. A post-construction compliance report shall be submitted to FWS and CDFG within 45 calendar days of project completion.
20. All excavated, steep-walled holes or trenches in excess of two feet in depth shall be covered when construction activities are not in progress at that location.
21. With the exception of cultural resource sites and isolates previously identified in the environmental analysis, any other cultural and/or paleontological resource (historic or prehistoric site or object) inadvertently discovered by the DOE or its representative, on public or Federal land shall be immediately reported to the DOE and the authorized officer for the BLM. DOE shall suspend all operations in the immediate area of the discovery until within authorization to proceed is issued.
22. A State of California Department of Transportation "Standard Encroachment Permit" application will be obtained prior to commencement of the proposed action. Engineering drawings of all work shall be submitted with the application for an encroachment permit. Work planned within the state ROW will be performed to state standards and specifications at no cost to the State of California.
23. Poles, wires, cables and overhead structures within the state ROW would be installed in accordance with the applicable portions of CALTRANS Standard Specifications, January 1988, and Sections OH1 through OH11, CALTRANS booklet entitled Encroachment Permit Utility Provisions For Work On State Highways in California, July 1987. Stringing of cables over Highway 119 shall be installed on Sunday morning, in daylight, during minimum traffic period. The minimum visibility sight distance would be 1500 feet.

BLM RIGHT-OF-WAY STIPULATIONS
[(2800) CA 31330, EXHIBIT B]

- The right-of-way is subject to all valid existing rights.
- The holder shall coordinate all construction, maintenance, and termination activities with the grazing leaseholder (GR 1015), Underground Service Alert, and holders of rights-of-way numbers S 045681, S 074017, S 2397, S 036489 on the subject lands, in order to avoid conflicts with existing operations. The name, address, and phone number of the holder(s) are available from the authorized officer.
- The holder shall erect a metal sign over the centerline of the pipeline(s) near the entry and exit points of the public land, for identification purposes. The signs will be a minimum of four feet tall and will be stamped or engraved with the BLM serial number of this grant. The characters shall be no smaller than one inch high. If the pipeline(s) is at grade or above-ground, the sign may be attached directly to the pipe or pipe hanger.
- The holder shall attach a marker to the subject pole line(s) on each of the poles nearest the entry and exit points of the public land. These markers shall be of stamped or engraved metal, and shall state the BLM serial number of this grant in characters no smaller than one inch high.
- The holder shall designate a representative(s) who shall have the authority to act upon and to implement instructions from the authorized officer. The holder's representative shall be available for communication with the authorized officer within a reasonable time when construction or other surface disturbing activities are underway.
- The holder shall meet Federal, State, and local emission standards for air quality.
- The holder shall furnish and apply water or use other means satisfactory to the authorized officer for dust control.
- Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. The holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder shall be responsible for the cost of evaluation and any decision as to proper mitigation measures shall be made by the authorized officer after consulting with the holder.
- The holder shall conduct all activities associated with the construction, operation, and termination of the right-of-way within the authorized limits of the right-of-way.
- Powerline right-of-way clearing shall be limited to 10 feet on each side of the centerline.

- Construction-related traffic shall be restricted to routes approved by the authorized officer. New access roads or cross-country vehicle travel shall not be permitted unless prior written approval is given by the authorized officer. Authorized roads used by the holder shall be rehabilitated or maintained when construction activities are complete as approved by the authorized officer.
- Except rights-of-way expressly authorizing a road after construction of the facility is completed, the holder shall not use the right-of-way as a road for purposes other than routine maintenance as determined necessary by the authorized officer in consultation with the holder.
- Holder shall maintain the right-of-way in a safe, usable condition, as directed by the authorized officer.
- Construction sites shall be maintained in a sanitary condition at all times; waste materials at those sites shall be disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment.
- The holder(s) shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder(s) shall comply with the Toxic Substances Control Act of 1976, as amended (15 U.S.C. 2601, et.seq.) with regard to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant (see 40 CFR, Part 702-799 and especially, provisions on polychlorinated byphenyls, 40 CFR 761.1-761.193). Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act of 1980, Section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.
- The holder of Right-of-Way No. CA 31330 agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et.seq, or the Resource Conservation and Recovery Act of 1976, 42 U.S.C. 6901, et. seq.) on the right-of-way (unless the release or threatened release is wholly unrelated to the right-of-way holder's activity on the right-of-way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.
- Prior to termination of the right-of-way, the holder shall contact the authorized officer to arrange a pretermination conference. This conference will be held to review the termination provisions of the grant.
- If during any phase of the construction, operation, or termination of the pipeline or related facilities any oil or other pollutant should be discharged from the pipeline system, or from containers or vehicles impacting Federal lands, the control and total removal, disposal, and cleanup of such oil or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of holder to control, cleanup or dispose of such

discharge on or affecting Federal lands, or to repair all damages to Federal lands resulting therefrom, the authorized officer may take such measures as he deems necessary to control and cleanup the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the authorized officer shall not relieve the holder of any liability or responsibility.

- Unless otherwise agreed to by the authorized officer in writing, powerlines shall be constructed in accordance to standards outlined in "Suggested Practices for Raptor Protection on Powerlines," Raptor Research Foundation, Inc., 1981. The holder shall assume the burden and expense of proving that pole designs not shown in the above publication are "eagle safe." Such proof shall be provided by a raptor expert approved by the authorized officer. The BLM reserves the right to require modifications or additions to all powerline structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the United States.
- The holder shall coordinate with the authorized officer on the design and color of the poles and transmission lines to achieve the minimum practicable visual impacts.
- Use of pesticides shall comply with the applicable Federal and state laws. Pesticides shall be used only in accordance with their registered uses and within limitations imposed by the Secretary of the Interior. Prior to the use of pesticides, the holder shall obtain from the authorized officer written approval of a plan showing the type and quantity of material to be used, pest(s) to be controlled, method of application, location of storage and disposal of containers, and any other information deemed necessary by the authorized officer. Emergency use of pesticides shall be approved in writing by the authorized officer prior to such use.
- During construction, operation, maintenance, and termination of the right-of-way, during the period from May to October, vehicles, gas-powered equipment, and flues shall be equipped with spark arresters approved by the authorized officer.
- During conditions of extreme fire danger, operations shall be limited or suspended in specific areas, or additional measures may be required by the authorized officer.

APPENDIX D

**U.S. FISH AND WILDLIFE SERVICE/
CALIFORNIA DEPARTMENT OF FISH AND
GAME CONSULTATION AND
BIOLOGICAL OPINION**



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Ecological Services
Sacramento Field Office
2800 Cottage Way, Room E-1803
Sacramento, California 95825-1846

In Reply Refer To:
1-1-94-F-30

June 7, 1994

Mr. James C. Killen
Director, Planning Analysis and Program Support Division
U.S. Department of Energy
P.O. Box 11
Tupman, California 93276

Subject: Formal Section 7 Consultation Concerning the Installation and Operation of a 12-Kilovolt Power Line within Kern County, California

Dear Mr. Killen:

This responds to your March 29, 1994, request for formal consultation pursuant to section 7(a) of the Endangered Species Act of 1973, as amended (Act), on a proposal to construct and operate a 1.6 mile, overhead, 12-kilovolt (kV) powerline within lands administered by Department of Energy (DOE), Bureau of Land Management (Bureau), Atlantic Richfield Company (ARCO), California Department of Transportation (Caltrans), and West Kern Water District (WKWD) in Kern County, California. At issue are the effects of the proposed project on the federally endangered San Joaquin kit fox (*Vulpes macrotis mutica*), blunt-nosed leopard lizard (*Gambelia silus*), Kern mallow (*Eremalche kernensis*), and the threatened Hoover's woolly-star (*Eriastrum hooveri*). DOE has been designated as the lead agency for this consultation.

The findings and recommendations in this consultation are based on the biological assessment prepared by EG&G Energy Measurements Incorporated (EG&G) dated March 1993; the pre-activity survey summary dated August 10, 1992; the draft joint environmental assessment prepared by EG&G and BLM dated November 1993; the mitigation measures proposed for the project by EG&G dated April 21, 1994; and the re-survey results prepared by EG&G dated April 21, 1994.

Biological Opinion

It is our biological opinion that the proposed installation, operations and maintenance of the 12-kV powerline is not likely to jeopardize the continued existence of the San Joaquin kit fox, blunt-nosed leopard lizard, Kern mallow, or Hoover's woolly-star. Critical habitat has not been determined for these species; therefore, none will be adversely modified or destroyed.

Description of the Proposed Action

The proposed project involves a 20-foot wide Right-of-Way (ROW) to support the

placement of the overhead powerline. Approximately 33 powerline poles will be installed within the proposed ROW. Under the proposed action, the powerline will extend about 2,175 feet across Naval Petroleum Reserve 1 (NPR-1), about 2,651 feet across Bureau property, about 2,868 feet across property owned by ARCO and occupied by the Coles Levee Ecosystem Preserve, about 880 feet across an ROW operated by Caltrans, and 40 feet across property owned by the WKWD. Total length of the proposed powerline route is about 8,588 feet.

Powerline construction will consist of the installation of powerline poles, requiring an area of about 5 square feet each, and cross-country vehicular travel for power pole installation. Permanent habitat loss, due to power pole installation, will take place in small, discontinuous patches where the poles are placed. Temporary habitat disturbance will occur from vehicular travel during installation activities, routine maintenance activities conducted about every five years, and emergencies. No permanent road will be constructed or maintained along the easement.

DOE is concurrently requesting approval from the Bureau for a 2.85 mile, 10-foot-wide Right-of-Way (ROW) for a 10-inch water pipeline that crossed land administered by the same parties listed above. The pipeline was installed by the Department of the Navy in the mid 1970's. ROW approval for the off-site portion of the pipeline, however, was never finalized.

DOE has proposed the following mitigation measures to minimize the impacts of this project on federally listed species.

1. An endangered species preactivity survey will be conducted by qualified biologists no more than 60 days prior to the beginning of powerline installation operations.
2. A qualified biologist shall be present during construction and maintenance activities near potential kit fox dens, Kern mallow locations, and Hoover's wooly-star locations.
3. A buffer zone of 50 feet will be maintained around all locations of Kern mallow and Hoover's wooly-star already identified or located during the preactivity survey. Locations of all observed listed species and their habitats will be plotted on maps and provided to construction crews. Dens which cannot be avoided during construction activities will be excavated by qualified biologists in compliance with methodologies established by the U.S. Fish and Wildlife Service (Service). Locations of Kern mallow and Hoover's wooly-star will be avoided by slightly altering power pole placements and routing vehicles around exclusion zones as necessary. Similar avoidance measures will be implemented during subsequent maintenance activities.
4. Traffic will be restricted to a 20 foot right-of-way corridor for essential vehicle equipment. All non-essential vehicles will travel only on existing roads.
5. Vehicle speeds will be restricted to 15 miles per hour or less except on Federal, state, and county highways and roads.

6. The position of power poles will be altered to avoid impacts to state and federally listed endangered, threatened, or candidate plants and animals or their habitats.
7. Firearms or pets shall be prohibited on the project.
8. Food and solid wastes shall be contained and removed from the project site.
9. All vehicles on the project site shall be equipped with fire extinguishers, and shovels to prevent and/or minimize the impact of fire.
10. An employee education program will be conducted for all field personnel by experienced wildlife biologists. The program will address occurrence of endangered species in the area, their legal status, including implication of non-compliance, and specific measures that must be taken to reduce impacts not only to endangered species but to wildlife and wildlife habitat in general.
11. Reclamation of temporary disturbances will occur upon completion of the project. Permanent disturbances will be reclaimed upon abandonment of the powerline.

Species Accounts/Environmental Baseline

Biological information on the San Joaquin kit fox and blunt-nosed leopard lizard is available in the Recovery Plans for these species (O'Farrell 1983, USFWS 1985).

San Joaquin Kit Fox. The endangered San Joaquin kit fox historically was distributed within an 8,700-square mile area in central California from the vicinity of Tracy in the upper San Joaquin Valley south to the general vicinity of Bakersfield. Intensive agriculture, urbanization, and other land-modifying actions have eliminated extensive portions of habitat and are the most significant causes of this species' endangerment. The coyote and the introduced red fox compete for food resources with the smaller kit fox, and are suspected of preying upon kit foxes as well. Predation, competition, poisoning, and road kills contribute substantially to the vulnerability of this species. Kit foxes currently are limited to remaining grassland, saltbush, open woodland, and alkali sink valley floor habitats, and similar habitats located along bordering foothills and adjacent valleys and plains. Although in the southern San Joaquin Valley, they appear to make extensive use of habitat fragments in an urbanizing environment.

Blunt-Nosed Leopard Lizard. The blunt-nosed leopard lizard was distributed historically throughout the San Joaquin Valley and adjacent interior foothills and plains, extending from central Stanislaus County south to extreme northeastern Santa Barbara County. The blunt-nose leopard lizard prefers open, sparsely vegetated areas of low relief and inhabits valley sink scrub, valley saltbush scrub, valley/plain grasslands, and foothill grassland

vegetational communities.

Adult lizards often seek safety in burrows, while immature lizards use rock piles, trash piles, and brush. The lizards use burrows constructed by mammals, such as kangaroo rats, for overwintering and aestivation. The habitat of the lizard has been significantly reduced, degraded, and fragmented by agricultural development, petroleum and mineral extraction, livestock grazing, pesticide application, and off-road vehicle use. Its current distribution is limited to scattered parcels of undeveloped land, with the greatest concentrations occurring on the west side of the valley floor and in the foothills of the Coast Range.

EG&G records indicate that within approximately one mile of the proposed powerline route, 118 individual dens have been used by radiocollared kit foxes since the start of endangered species monitoring by EG&G in 1979. Den locations occurred primarily in sections within NPR-1 boundary and in Section 8M, south of the proposed powerline route. It is not known how many potential kit fox dens exist or have existed in sections north and east of 6M.

Endangered species surveys were conducted along the powerline route on January 20, 22, 27, August 10, 1993 and April 12, 1994. The results are as follows: No San Joaquin kit foxes or their dens were observed. No blunt-nosed leopard lizards, or washes representing potential blunt-nosed lizard habitat, were observed. No giant kangaroo rat burrow systems were observed (EG&G 1993). Even though direct evidence of listed animal species were not observed during the surveys, the Service, along with the California Department of Fish and Game considers this area potential habitat for the San Joaquin kit fox, blunt-nosed leopard lizard as well as the San Joaquin antelope squirrel (*Ammospermophilus nelsoni*), a Federal candidate species.

The San Joaquin kit fox and blunt-nosed leopard lizard continue to experience a loss of habitat within the San Joaquin Valley. Kit foxes currently are limited to remaining grassland, saltbush, open woodland, and alkali sink valley floor habitats, and similar habitats located along bordering foothills and adjacent valleys and plains. Although in the southern San Joaquin Valley, they appear to make extensive use of habitat fragments in an urbanizing environment. Today the distribution of the blunt-nosed leopard lizard is limited to scattered parcels of undeveloped land, with the greatest concentrations occurring on the west side of the valley floor and in the foothills of the Coast Range.

Kern Mallow. The endangered Kern mallow is a small annual herb of the mallow family 2 to 4-inches in height with white to rose-pink or lavender flowers (USFWS 1989). Kern mallow is restricted to the eastern base of the Temblor Range, occurring from the vicinity of McKittrick to near Buttonwillow within valley saltbush scrub in Kern County (Taylor and Davilla 1986). The species is threatened by oil and gas development, transmission line maintenance or expansion, agricultural land conversion, overgrazing by livestock, exotic plant competition, and off-road vehicle use. A recovery plan has not yet been developed for Kern mallow. A plant survey for this project was originally performed on August 10, 1993 by EG&G personnel. The timing of this survey was

too late in the year to adequately detect annual plant species. The project was re-surveyed on April 12, 1994 by EG&G personnel. Eleven populations of Kern mallow were found.

Hoover's Woolly-star. The threatened Hoover's woolly-star is a small annual herb of the phlox family. It produces 1/4-inch wide white flowers and is densely hairy on the stems, leaves, and some flowering parts. Field surveys conducted throughout the southern San Joaquin Valley by Federal agencies and private consultants in 1992 and 1993 have documented numerous previously unknown occurrences of Hoover's woolly-star. Hoover's woolly-star is now known from Fresno, Kings, San Luis Obispo, and Santa Barbara Counties at scattered locations spanning a distance of 100 miles in the Inner Southern Coast Range of central California. The species is now documented from over 600 sites that cover some 2,200 acres (BLM 1993). Hoover's woolly-star appears to prefer slightly sandy, sometimes silty soils that often exhibit cryptogamic crusts and is found on ridgetops, hillsides, benches, alluvial fans, and level areas at elevations from 280 to 2,770 feet (BLM 1993). It continues to be threatened throughout parts of its range by oil and gas development, cattle and sheep grazing, agricultural-land conversion, urbanization, and other surface-disturbing activities. The majority of known locations of Hoover's woolly-star are on BLM-managed lands or combinations of BLM/split-estate/private (BLM 1993). (A split estate is where the private landowner holds the surface rights, and the federal agency holds the mineral rights). Hoover's woolly-star has been documented at over 250 locations on or adjacent to NPR-1, over approximately 2,170 acres (EG&G 1993). A plant survey for this project was originally performed on August 10, 1993, by EG&G personnel. The timing of this survey was too late in the year to adequately detect annual plant species. The project was re-surveyed on April 12, 1994 by EG&G personnel. One population of Hoover's woolly-star was found.

Effects of the Proposed Action on Listed Species

The extent of impacts and potential loss of habitat that may result from the construction and operation of the 12-kV powerline is minor. The installation of approximately 33 power poles will be the primary impact, resulting in the permanent loss of less than 0.01 acres of habitat. Temporary disturbance will be limited to the 20-foot ROW along the entire powerline route. Temporary habitat disturbance will be about 1.0 acre on NPR-1, 1.2 acres on BLM land, 1.3 acres on ARCO land, 0.4 acres on Caltrans land, and 0.02 acres on WKWD land, for a total of 3.9 acres.

Adverse effects of the proposed powerline installation to San Joaquin kit foxes and blunt-nosed leopard lizards may result from several sources. Individual animals may be directly injured or killed by (1) vehicle strikes resulting from increased project related traffic and (2) through inadvertent entrapment in collapsed dens or burrows during use of heavy construction equipment.

Individual kit foxes and leopard lizards also may be subject to harassment resulting from increased level of human disturbance, vehicle use, and through implementation of certain mitigation measures, such as excavation of kit fox

dens to prevent inadvertent entombment of foxes.

Potential effects of the proposed action on certain species will be somewhat greater or lesser depending on the time of year the project is conducted. Blunt-nosed leopard lizards will be subject to a greater risk of vehicle strikes during their activity period (about April 15 to September 30), when they are active above ground. Conversely, leopard lizards will be subject to a greater risk of entombment in burrows during their inactivity period (October 1 to April 14), when they are aestivating underground. In general, the Service prefers that surface-disturbing activities be conducted during the leopard lizard activity period when air temperatures are between 77 and 95 degrees Fahrenheit. During such times, leopard lizards are often active on the ground surface and can flee the path of vehicles, or can be observed and avoided by vehicle operators. On the other hand, project effects on the San Joaquin kit foxes may be greater during the den selection, pregnancy, and early pup dependency periods of the breeding cycle (about December through April) than at other times of the year. Kit foxes may exhibit increased sensitivity to disturbance factors during this period. Ideally, to minimize project effects on both species, surface disturbing activities should occur between May 1 and September 30. If this is not possible, the Service anticipates that surface-disturbing activities and other actions likely to result in harassment will be minimized in the vicinity of kit fox natal dens. The Service also anticipates that small mammal burrows likely to harbor aestivating leopard lizards will be avoided to the maximum extent possible.

San Joaquin kit foxes and blunt-nosed leopard lizards also may be adversely affected by proposed project actions through temporary loss or degradation of their habitats. Intentional or inadvertent destruction of dens or burrows could result in a net reduction of denning habitat used by these animals for shelter, reproduction, and escape cover. Furthermore, some kit foxes and leopard lizards may escape direct injury if dens and burrows are destroyed, but become displaced into adjacent areas. These animals may be vulnerable to increased predation, exposure, or stress through disorientation and loss of shelter.

The proposed action is not likely to adversely affect Kern Mallow and Hoover's woolly-star due to DOE's proposed mitigation. All the populations will be avoided.

Based on our analysis of the proposed project, including project mitigation as proposed by DOE, the Service concludes that construction and operation of the 12kV powerline will not appreciably reduce the likelihood of survival and recovery of the San Joaquin kit fox, blunt-nosed leopard lizard, Kern mallow and Hoover's woolly-star.

Cumulative Effects

Cumulative effects are those impacts of future State, county, local agency and private actions that are reasonably certain to occur. Future Federal actions are subject to the consultation requirements established in section 7 of the Act and, therefore, are not considered cumulative to the proposed action.

Our agency is aware of other projects currently under review by State, county, and local authorities where biological surveys have documented the occurrence of the San Joaquin kit fox, blunt-nosed leopard lizard, Kern mallow, and Hoover's wooly-star. These projects include urban development, mineral development, wind energy development, and flood control and reservoir construction. The cumulative effects of these known actions pose a significant threat to the eventual recovery of these species.

However, we do not anticipate that the project under evaluation in this biological opinion, considered together with other non-Federal actions, would appreciably reduce the likelihood of survival and recovery of the San Joaquin kit fox, blunt-nosed leopard lizard, Kern mallow and Hoover's wooly-star.

Incidental Take Statement

Section 9 of the Endangered Species Act prohibits the taking (i.e., to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct) of federally listed fish and wildlife species without special exemption. Under the terms of sections 7(b)(4) and 7(o)(2) of the Act, taking that is incidental to and not a purpose of the agency action is not considered prohibited taking within the bounds of the Act, provided that such taking is in compliance with this Incidental Take Statement. The reasonable and prudent measures described below are non-discretionary and must be undertaken by the agency, the applicant, or made a binding condition of any grant or permit issued to the applicant, as appropriate.

San Joaquin kit foxes and blunt-nosed leopard lizards may be taken incidentally during the proposed powerline project. Project actions that may result in mortality, harm, or harassment of these species have been previously discussed in this biological opinion. Mitigation measures proposed by the project consultant (EG&G 1993) will substantially reduce but not eliminate the potential for incidental taking of these species during the project.

No estimates of kit fox or leopard lizard numbers in the project vicinity were provided in the biological assessment. However, in previous studies, kit fox density on Elk Hills Naval Petroleum Reserve was estimated at 0.6 foxes per square mile in summer 1986 (Harris et al. 1987), and blunt-nosed leopard lizard density in the project vicinity was estimated at 0.16 lizard per acre (Kato et al. 1987).

Based on the foregoing, the Service anticipates and authorizes that during the proposed project, zero (0) San Joaquin kit fox, and one (1) blunt-nosed leopard lizard will be subject to harm or mortality resulting from project activities, or from den or burrow excavations if such measures become necessary.

The Service considers the number of animals subject to harassment from noise, vibrations, and from den or burrow collapse within the project area to be impractical to estimate because of their cryptic nature. Therefore, we authorize harassment of all federally listed species inhabiting specified project areas, provided that (1) any such harassment is a result of activities strictly related to project activities addressed in this biological opinion;

(2) any such harassment is inadvertent; (3) all terms and conditions specified below are fully implemented. The Service specifies that these incidental take limits shall apply to all land and activities within the project area.

The Service states that the following reasonable and prudent measures are necessary or appropriate to minimize the potential for incidental take of the San Joaquin kit fox and blunt-nosed leopard lizard:

- (1) The potential for harm or mortality to San Joaquin kit foxes and blunt-nosed leopard lizards shall be minimized.
- (2) The potential for inadvertent entrapment of San Joaquin kit foxes and blunt-nosed leopard lizards in dens and burrows shall be minimized.

To be exempt from the prohibitions of section 9 of the Act, DOE is responsible for compliance with the following terms and conditions, which implement the reasonable and prudent measures described above.

- (1) The potential for harm or mortality to San Joaquin kit foxes and blunt-nosed leopard lizards shall be minimized by implementing the following procedures:
 - (a) All mitigation measures as proposed by the Department of Energy as detailed on pages 2 and 3 of this biological opinion shall be fully implemented.
 - (b) Within 14 days prior to commencement of powerline installation, or maintenance activity requiring off-road travel, a qualified biologist shall re-survey the proposed project area. During this survey, the status of kit fox dens and other burrows previously identified shall be reviewed; the project area shall be searched for additional endangered species concerns, if any; and all dens and burrows shall be flagged for avoidance as described below.
 - (c) Avoidance zones shall be established around kit fox dens and other burrows likely to harbor endangered species as follows:

For all dens and burrows within 300 feet where construction activities occur, and for known or occupied kit fox dens in all project areas, avoidance zones shall consist of wooden or metal stakes connected by flagging or similar material and placed in a circular pattern around each den or burrow. Avoidance zone distances shall be:

potential kit fox den:	50 feet
known kit fox den:	100 feet
known kit fox natal den:	150 feet
occupied kit fox natal den:	200 feet
giant kangaroo rat burrow:	50 feet

For potential kit fox dens within the project area but outside the vicinities of powerline poles, avoidance zones may consist of six

to eight flagged stakes placed at equidistant points about 30 feet from the subject den or burrow. Any small mammal burrow that represents potential refugia for blunt-nosed leopard lizards and that is within 50 feet of a powerline pole shall be marked by one flagged stake at least 18 inches in height above the ground. All stakes and flagging shall be removed immediately upon completion of the project.

If these avoidance zones cannot be observed for any reason, the Sacramento Field Office shall be contacted for further guidance prior to initiation of any project activity within the prescribed avoidance distance for the subject den or burrow.

- (d) No known San Joaquin kit fox pipe dens shall be removed or otherwise disturbed during project activities.
- (e) All construction activities shall be confined to daylight hours.
- (f) During construction activities, DOE shall provide a qualified wildlife biologist to monitor all activities that may result in incidental take of federally listed species or destruction of habitat. This person shall ensure that all measures for the protection of endangered species and their habitats are implemented.
- (g) Within 45 calendar days of completion of the project, DOE shall submit to the Service a brief post-project compliance report that details (i) dates that powerline construction occurred; (ii) pertinent data concerning DOE's success in meeting project mitigation measures, and an explanation of failure to meet such measures, if any; (iii) known occurrences of incidental take of federally listed species, if any; (iv) known project effects on endangered species habitat, including specific number of habitat acres disturbed and specific number of dens and burrows destroyed, if any; and (v) any other pertinent information.
- (h) All project related vehicles shall be confined to existing roads and trails, except within actual powerline work areas or as follows. If off-road travel is necessary for any reason, the monitoring project biologist shall survey the proposed travel route or work area for endangered species occurrence and shall flag the route or work area so that all occurrences of endangered species or their habitats will be avoided. No off-road travel is permitted until surveys and flagging have been completed.
- (i) To the maximum extent practicable, project impacts at powerline installation sites shall be confined to those areas previously disturbed by oil production activities. If necessary, work areas at these sites shall be clearly demarcated by flagged stakes or other appropriate means to avoid inadvertent encroachment by project vehicles onto adjacent undisturbed habitats.

- (j) All construction equipment, staging areas, materials and personnel shall be restricted to the surveyed project site or previously disturbed off-site areas that are not habitat for listed species.
- (2) To reduce the chance of inadvertent entrapment of San Joaquin kit foxes and blunt-nosed leopard lizards in dens and burrows, the following procedures shall be implemented:
 - (a) If avoidance of any kit fox den within the project area is not practicable, and the den may be unavoidably damaged or destroyed by project actions, the following procedure shall be implemented. Prior to surface disturbing activities, any such potential kit fox den shall be completely excavated, and then shall be backfilled and compacted to preclude later use by kit foxes during the construction period. Any kit fox(es) found inside a den during excavation shall be allowed to escape unharmed before backfilling. Potential kit fox dens may be excavated without further notification to the Service, provided that (i) the den classification (whether it is a known or potential den) is determined by a qualified wildlife biologist; and (ii) that any such excavation is conducted by or under the direct supervision of a qualified wildlife biologist.

However, prior to excavation of a known kit fox den, DOE or it's designated non-Federal representative shall contact the Service's Sacramento Field Office to discuss the reasons that avoidance is not possible. Depending on the circumstances, the Service may require alternate avoidance actions, or may authorize the den excavation. A known kit fox den may be excavated only upon verbal or written concurrence from the Service and following the procedures outlined above. This requirement for authorization prior to excavation of known kit fox dens also shall apply to known, suspected, or potential kit fox natal dens. For purposes of this requirement, any den with three or more entrances shall be considered a potential kit fox natal den.

- (b) To prevent entrapment of endangered species or other animals during the construction phase of the project, all excavated, steep-walled holes or trenches in excess of two feet in depth shall be covered with close-fitting covers when construction activities are not in progress at that location. Also, drilled pole holes that are left for any period of time, must be covered.

It has been requested by DOE that the issue of habitat compensation be deferred and addressed later as part of the overall NPR-1 section 7 consultation currently in progress with the Service. The Service concurs with this request stipulating that the standard mitigation ratios within the San Joaquin Valley (3:1 for permanent impacts, and 1.1:1 for temporary impacts) be implemented. Therefore, 4.3 acres of habitat compensation to be acquired or dedicated to and managed for endangered species in perpetuity shall be added to the compensation requirements of this future consultation.

If, during the course of the proposed action, the established limits of

incidental take of the San Joaquin kit fox or blunt-nosed leopard lizard is exceeded, formal consultation shall be reinitiated immediately to avoid violation of Section 9 of the Act. Project actions responsible for the taking or likely to result in additional taking must cease in the interim period between reinitiation or consultation and completion of a revised biological opinion.

The Service is to be notified in writing within three working days of the accidental death or injury of a San Joaquin kit fox or blunt-nosed leopard lizard or of the finding of any dead or injured kit fox or leopard lizard during the proposed project. Notification must include the date, time and location of the incident or of the finding of a dead or injured animal, and any other pertinent information. The Service contacts for this information are the Assistant Field Supervisor or Central Valley Branch Chief (916-978-4866). Any dead or injured kit foxes, leopard lizards or kangaroo rats must be turned over to the California Department of Fish and Game for care or analysis. The Department contact is Dr. Larry Eng (916-445-1383).

Conservation Recommendations

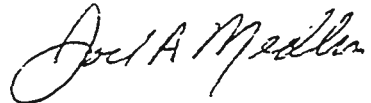
Sections 2(c) and 7(a)(1) of the Act direct Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species and the ecosystems upon which they depend. Conservation recommendations have been defined as Service suggestions regarding discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, or regarding development of information. Therefore, the Service recommends the following additional action to protect kit foxes, leopard lizards and their habitat:

- (1) Ground disturbing activities that may result in destruction of dens and burrows likely to harbor blunt-nosed leopard lizards preferably should occur during leopard lizard activity periods, between April 15 and September 30 and when air temperatures are between 77 and 95 degrees Fahrenheit. This will maximize the leopard lizards' ability to escape from slow-moving vehicles and minimize the risk of accidental entombment in burrows.

This concludes formal consultation on the proposed 12kV powerline installation project. Reinitiation of formal consultation is required (1) if the amount or extent of incidental take is exceeded; (2) if new information reveals effects of the action that may affect the San Joaquin kit fox, blunt-nosed leopard lizard, Kern mallow, and Hoover's woolly-star in a manner or to an extent not considered in this opinion; (3) if the project is substantially modified in a manner that causes an effect to listed species that was not considered in this opinion; and/or (4) if a new species is listed or critical habitat determined that may be affected by the proposed action.

We appreciate the cooperation of the U.S. Department of Energy, and its designated non-Federal representative, EG&G Measurements, Inc. throughout this consultation process. Please contact Jody Brown about listed vertebrates, or Kirsten Tarp about listed plants at (916) 978-4866 if you have questions or comments on this biological opinion or further information concerning this project.

Sincerely,



Joel A. Medlin
Field Supervisor

cc: ARD-ES, Portland, OR
Chief, ES, Washington, D.C.
Mr. George Nokes, CDFG, Fresno, CA
Dr. Larry Eng, CDFG, Sacramento, CA
Dr. Daniel F. Williams, SJVESRPP, Fresno, CA
Mr. Thom Kato, EG&G Energy Measurements, Inc., Tupman, CA

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Department of Energy
Naval Petroleum Reserves in California
P.O. Box 11
Tupman, California 93276

MAR 29 1994

Mr. Wayne White
Field Supervisor
U.S. Department of the Interior
Fish and Wildlife Service
2800 Cottage Way, Room E-1823
Sacramento, CA 95825-1846

Dear Mr. White:

This is to request a formal consultation for a proposed project for Naval Petroleum Reserve No. 1 (NPR-1) to construct and operate a 1.6 mile, overhead, 12-kilovolt power line. The easement for the proposed power line would be 20-feet wide. In addition to NPR-1 lands, the power line would cross the ARCO Coles Levee Ecosystem Preserve, and lands under the control of the Bureau of Land Management (BLM), the California Department of Transportation, and the West Kern Water District.

The project consists primarily of installing approximately 28 power poles and stringing and hanging associated power lines. The principal benefit of the project would be a power cost savings to NPR-1 of up to \$15,000 per month. Approximately \$12,000 of this savings would accrue to taxpayers, based on the government's approximate 80 percent interest in NPR-1. (Chevron U.S.A. Production Company owns the remaining 20 percent.)

The project also includes Department of Energy (DOE) and BLM execution of an appropriate right-of-way agreement for existing fresh water pipelines that were installed on BLM land by NPR-1 in the mid-1970's. A right-of-way agreement for these pipelines, inadvertently, was never put in place and BLM is now requesting that this be accomplished. In response, it was decided to combine the fresh water pipeline right-of-way issue with the proposed power line project, which also requires a DOE/BLM right-of-way, making it possible to address both right-of-way issues concurrently.

DOE will be the lead Federal agency for the consultation, and BLM will be a cooperating agency. Separate consultations are in progress with ARCO and the California Department of Fish and Game (CDFG), as needed to address their requirements for

crossing ARCO's Preserve. The staffs of ARCO, CDFG, NPR-1, and the Service have been in regular contact, as needed to keep one another informed of their organization's respective requirements and project status.

The Biological Assessment for the project was submitted to you on July 23, 1993, by EG&G Energy Measurements, Inc. (EG&G/EM), DOE's Endangered Species Contractor at NPR-1, together with a request for an informal consultation (EG&G/EM LAF-93-154). In the time that has elapsed since then, there have been numerous formal and informal communications in an attempt to complete the informal consultation. A request for a formal consultation is being made at this time because it has not been possible to conclude the informal consultation in a timely manner.

As explained in the Assessment, the proposed project does not have significant adverse impacts. Only a few square feet of habitat would be permanently disturbed, as needed for the power poles themselves. During construction, vegetation in the project area would be compacted as the result of vehicle traffic. This temporary affect also could occur occasionally following construction at small sites within the project area, as needed to conduct ongoing operations and maintenance activities. All kit fox dens, giant kangaroo rat burrows, and washes that might be used by blunt-nosed leopard lizards would be avoided to the maximum extent practical. It is requested that the issue of habitat compensation be deferred and addressed later as part of the overall NPR-1 section 7 consultation currently in progress with your agency. (As part of the consultation with CDFG, CDFG has requested 1.45 acres of compensation for 1.32 acres of disturbance on the portion of the project crossing the ARCO Preserve. I anticipate that NPR-1 will agree to this request in a way yet to be determined. Assuming NPR-1 does agree, appropriate compensation credit is requested within the overall NPR-1 consultation. We will keep your staff informed as the CDFG consultation progresses.)

The nature of the proposed project is time critical: i.e., every day of delay results in the irretrievable loss of project benefits. As previously indicated, irretrievable taxpayer losses amount to approximately \$12,000 per month, which have accumulated to approximately \$100,000 since July 1993.

In view of the circumstances, I respectfully request the Service to act expeditiously to complete their action on the proposed project in a timely manner. Based on the small scope of the project, the significant period of time that already has elapsed, and the significant effort that already has been

expended, we feel the consultation should be completed in 30 days, or less, which is our request.

The proposed project is very high priority, and anything more NPR-1 can do to support the Service will be acted on immediately. If additional support is needed, please give me a call at (805) 763-6038, or contact Mr. Thom Kato with EG&G/EM at (805) 763-6038.

Sincerely,

A handwritten signature in cursive script, appearing to read "James C. Killen".

James C. Killen
Director, Planning, Analysis
and Program Support Division

cc:
Mr. Peter Cross
U.S. Department of the Interior
Sacramento Field Office
Fish and Wildlife Enhancement
2800 Cottage Way, Room E-1823
Sacramento, CA 95825-1846



Department of Energy
Naval Petroleum Reserves in California
P.O. Box 11
Tupman, California 93276

MAR 29 1994

Mr. James W. Abbott
Area Manager
Bureau of Land Management
Caliente Resource Area
3801 Pegasus Drive
Bakersfield, CA 93308-6837

Dear Mr. Abbott:

This is to confirm recent conversations between our staffs concerning a proposed project for Naval Petroleum Reserve No. 1 (NPR-1) to construct and operate a 1.6 mile, overhead, 12-kilovolt power line. In addition to NPR-1 land, the power line would cross Bureau of Land Management (BLM) land. The project also includes putting in place an appropriate right-of-way agreement for fresh water pipelines installed by NPR-1 on BLM property in the mid-1970's. A right-of-way agreement for these pipelines inadvertently has never been completed.

NPR-1 has prepared an Environmental Assessment and a Biological Assessment for the project, and both documents have been reviewed and concurred with by your staff. Our staffs agreed that the Department of Energy (DOE) would initiate a section 7 consultation with the U.S. Fish and Wildlife Service (FWS) for the project, with DOE being the lead Federal agency for the consultation and BLM being a cooperating agency. Copies of relevant correspondence from DOE to FWS have been provided to your staff. When the consultation has been completed, plans are for BLM to issue a Finding of No Significant Impact, if appropriate, as needed to satisfy National Environmental Policy Act requirements. Then BLM and DOE would take appropriate steps to finalize right-of-way agreements for the fresh water pipelines and the power line.

If you have any questions or require additional information, please call Gary Walker of my staff at (805) 763-6021, or

Robb Fishman with Bechtel Petroleum Operations, Inc., the
NPR-1 Management and Operations Contractor, at (805) 763-6861.

Sincerely,

A handwritten signature in black ink, appearing to read "James C. Killen". The signature is fluid and cursive, with a large initial "J" and "K".

James C. Killen
Director, Planning, Analysis
and Program Support Division

cc:
Mr. Peter Cross
U.S. Department of the Interior
Sacramento Field Office
Fish and Wildlife Enhancement
2800 Cottage Way, Room E-1823
Sacramento, CA 95825-1846

Ms. Linda Estrada
Bureau of Land Management
Caliente Resource Area
3801 Pegasus Drive
Bakersfield, CA 93308-6837

Bechtel Petroleum Operations, Inc.

28590 Highway 119
Tupman, California
Mail Address: P.O. Box 127, Tupman, CA 93276
Telephone: (805) 763-6000

bcc: Originator's Copy
R. H. Fishman
General Manager

September 28, 1994

~~Group Manager~~

~~Department Manager~~

J. C. Nelson
C. D. Ellison
Central Files ✓

H. E. Ordway
INFO

COPY

TO (3) T. Lell

Mr. Craig Manson
General Council
California Department of Fish and Game
1416 9th Street, 12th Floor
Sacramento, CA 95814

Subject: CESA CONSERVATION AGREEMENT BECHTEL PETROLEUM
OPERATIONS, INC./DEPARTMENT OF ENERGY REF. NO. 2081-
1994-020-4.

Dear Mr. Manson:

Per your request of August 9, 1994, enclosed please find two signed copies of the above referenced agreements (Attachment 1). All changes as negotiated have been incorporated and are agreeable to Bechtel Petroleum Operations, Inc. (BPOI), the Unit Operator for Naval Petroleum Reserve No. 1. A check has been enclosed for the amount of \$545.00 to cover "Fee for Services - Habitat Conservation Rights Operations, Management and Protection," (Attachment 2).

As previously stated in the May 12, 1994 correspondence between the Department of Energy and your office, the proposed project is time critical: i.e., every day of delay results in the irretrievable loss of project benefits. Project benefits have been estimated to be \$15,000.00 per month in power cost savings. It would be appreciated if your office could process the documents as expeditiously as possible.

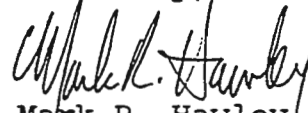
BPOI appreciates the cooperative effort provided by the California Department of Fish and Game (DFG) regarding construction of the 12-kV powerline. In order to maintain a record of any additional communications that may occur between BPOI and the DFG, please submit all future requests in writing to

Mr. Craig Manson
CESA CONSERVATION AGREEMENT BECHTEL PETROLEUM OPERATIONS,
INC./DEPARTMENT OF ENERGY REF. NO. 2081-1994-020-4

Page 2

Mark Hawley, Manager of the BPOI Environment, Safety, and Health Services Department. If you have any further questions, please contact Robb Fishman of my staff at (805) 763-6861.

Sincerely,



Mark R. Hawley
Manager, Environment, Safety,
and Health Services



RTA/RHF:th
Attachments

cc: DNPRC
Operating Committee

Attachment 1

**CALIFORNIA ENDANGERED SPECIES ACT
CONSERVATION EASEMENT CROSSING AGREEMENT (AGREEMENT)**

by and between

**Bechtel Petroleum Operations, Inc. (BPOI), a Nevada Corporation
Management and Operating Contractor for
United States Department of Energy
- Naval Petroleum Reserves in California (DOE)**

and

CALIFORNIA DEPARTMENT OF FISH AND GAME (DEPARTMENT)

REGARDING

**5M/6M Overhead Transmission Line
On Coles Levee Ecosystem Preserve
(Ref. No. 2081-1994-020-4)**

This AGREEMENT is made and entered into by and between BPOI and the DEPARTMENT.

The purpose of this AGREEMENT, governing the management of the **San Joaquin antelope squirrel** (*Ammospermophilus nelsoni*), **San Joaquin kit fox** (*Vulpes macrotis mutica*), **blunt-nosed leopard lizard** (*Gambelia silus*), **Kern mallow** (*Eremalche kernensis*), and **Hoover's wooly star** (*Eriastrum hooveri*), is to provide authority to "take" the identified state-listed threatened and endangered species under authority of Section 2081 of the California Fish and Game Code. The permitted activities include the project as described in the attached California Endangered Species Act Management Authorization ("MA") (Exhibit 1). The described actions are to be undertaken as management activities for the benefit of the listed threatened and endangered species in order that the proposed project does not result individually or cumulatively in the destruction or adverse modification of habitat essential to the continued existence of the listed species. BPOI's obligations are as specified in this AGREEMENT and as further set forth in the California Endangered Species Act Management Authorization, attached hereto as Exhibit 1 and which shall be executed contemporaneously with this AGREEMENT.

WHEREAS, BPOI proposes to manage habitat of **San Joaquin antelope squirrel** (*Ammospermophilus nelsoni*), **San Joaquin kit fox** (*Vulpes macrotis mutica*), **blunt-nosed leopard lizard** (*Gambelia silus*), **Hoover's wooly star** (*Eriastrum hooveri*), and the **Kern**

mallow (*Eremalche kernensis*) all of which are known to occur at the project site, and desires to minimize impacts to these species.

WHEREAS, pursuant to California Fish and Game Code Section 1802, the DEPARTMENT has jurisdiction over the conservation and protection of fish, wildlife, and native plants and their habitat and holds those resources in trust for the people of California.

WHEREAS, the DEPARTMENT desires, consistent with the policies of the California Endangered Species Act, that there is permanent protection for the above-named state-listed species and their habitat to assure the conservation protection, restoration, enhancement, and management of such listed species.

AND, WHEREAS, BPOI agrees to undertake the management activities contained in this AGREEMENT and all exhibits attached hereto.

NOW THEREFORE, the parties agree as follows:

I. DEFINITIONS

The following definitions shall govern this AGREEMENT:

Wildlife - Wildlife shall be defined consistent with the definition found in California Fish and Game Code Section 711.2 to mean all wild animals, birds, plants, fish, amphibians, reptiles, and related ecological communities, including the habitat upon which the wildlife depends for its continued viability.

Take - Take shall be defined to include any act without regard to intent which results in the destruction of individuals, populations of individuals, or habitat upon which these individuals or populations rely for the continued viability of the species. (See Pailia v. Hawaii Dept. of Land and Natural Resources, D. Hawaii 2986, 649 F. Supp. 1070, affd. 852 F.2d 1106.)

Operation, management, and protection - These terms shall mean those actions required, in the discretion of the DEPARTMENT, to permit the species to function within a natural ecological system. Such actions may include management actions of a legal, biological, or administrative nature.

II. DUTIES

A. Acquisition and Designation of Habitat Conservation Rights

1. BPOI covenants and agrees to acquire 1.45 acres of habitat conservation rights (HCR) (1.50 acres of actual rights) from ARCO Oil and Gas Company, a division of Atlantic Richfield Company (ARCO), the DEPARTMENT's designated agent. The parties estimate the cost of acquiring 1.45 acres of HCR (1.50 acres of actual rights) will be \$1,050.00 (\$700.00/acre). The required HCR acreage is based upon a biological assessment of the project's impact on listed species and an estimated acreage required to provide for enhanced biological carrying capacity at a replacement location. Management of the species has been determined by the facts of this application to require 1.45 acres of HCR to replace the biological carrying capacity of 1.32 acres subject to temporary and/or permanent impact at the project site. Such replacement habitat will offset the permanent loss and/or temporary disturbance resulting from the construction, installation, and operation and routine maintenance of the powerline facility. Notwithstanding the above HCR acreage estimate (1.45 acre), in the event that the actual amount of habitat acreage disturbed exceeds the projected amount (1.32 acre), based on a post-construction compliance survey report provided for in Exhibit 1, BPOI shall take appropriate action to acquire any additional HCR acreage required to offset any deficit in previously acquired HCR acreage.

2. BPOI covenants and agrees to acquire 1.45 acres of HCR (1.50 acres of actual rights) with a conservation easement interest acceptable to the DEPARTMENT. If BPOI fails to complete the duties identified in this AGREEMENT within 12 months of execution of this AGREEMENT, the DEPARTMENT, at its option, may demand that BPOI cure its breach forthwith. If, after 12 months from the date of execution of this AGREEMENT, any of the acquisition duties detailed in this AGREEMENT, including Exhibit 1, are not completed, the DEPARTMENT may draw upon the security to complete the task. Additionally or in the alternative the DEPARTMENT may seek all legal remedies available at law or in equity.

3. All HCR shall be approved by the DEPARTMENT for biological suitability. The documents conveying such HCR conservation easement interest shall be approved prior to acceptance by either the Fish and Game Commission or the DEPARTMENT acting through the Wildlife Conservation Board. No approval shall be final until the HCR are inspected and evaluated by the DEPARTMENT or its designated agent. The Department of General Services shall review, and the DEPARTMENT shall review and approve documents designating habitat compensation rights for BPOI's account. The designation of the HCR shall be subject only to those conditions of title approved by the DEPARTMENT.

B. Project Mitigation Measures for Species Protection

4. BPOI covenants and agrees to comply with the project related mitigation measures set forth in Exhibit 1 attached hereto.

C. Security

5. BPOI covenants and agrees to secure, as provided in section IV of this AGREEMENT, its covenant to acquire 1.45 acres of approved HCR.

D. Fee for Services - HCR Operations, Management and Protection

6. BPOI shall pay to the DEPARTMENT upon execution of this AGREEMENT the sum of Five Hundred Forty-Five Dollars (\$545.00) to be used for operations, management, and protection of those HCR acquired under this AGREEMENT. The DEPARTMENT shall deposit the fee for services in a special deposit account established pursuant to Government Code section 16370 and the principal shall not be drawn upon unless the DEPARTMENT finds such expenditure of principal is essential to protect the continued existence of the species. Operation, management, and protection activities shall include, but shall not be limited to, costs of attorneys, reasonable administrative overhead, biological monitoring, improvements to carrying capacity, and law enforcement, as necessary to maintain the HCR in conditions suitable for the protection of the listed species.

E. Fee for Services - Associated Project-Induced Expenses

7. BPOI covenants and agrees to reimburse the DEPARTMENT for reasonable expenses incurred as a result of the approval and implementation of the project, including costs of HCR acquisition and designation and documentation review, expenses incurred from other state agency reviews, attorney expenses, and overhead. The parties estimate that this project will create an additional cost to the DEPARTMENT of \$200.00, which will be billed and payable by BPOI as incurred.

Notwithstanding the above estimates, in the event that costs exceed the projected amounts, BPOI shall not be released from performance of the duties contained herein. In the event that costs of performance of acquisition and protection duties are less than estimated, BPOI shall retain title to any funds not expended.

III. DEFAULT

In the event of a default, the DEPARTMENT shall have all rights with respect to the security and all remedies available at law or equity including specific

performance, injunction, and without limitation of all rights of a secured party pursuant to the California Uniform Commercial Code.

The following non-exclusive list of actions shall constitute an event of default under this AGREEMENT;

1. BPOI has not acquired HCR acceptable to the DEPARTMENT as provided in this AGREEMENT.

2. BPOI has not complied with the terms and conditions of the California Endangered Species Act Management Authorization (Exhibit 1).

IV. DEPARTMENT COVENANTS, WARRANTIES, AND REPRESENTATIONS

The DEPARTMENT hereby covenants, warrants and represents as follows:

1. The DEPARTMENT, its designee, or successor shall hold an interest in the California Endangered Species Act Conservation Easement and protect all HCR conveyed under this AGREEMENT solely for the purposes of conservation, protection, restoration, and enhancement of those species adversely impacted by the Project. This covenant shall run with the HCR and no use of such HCR shall be permitted by the DEPARTMENT or any subsequent titleholder or assignee which is in conflict with the stated conservation purposes of this AGREEMENT. If at any time in the future the DEPARTMENT or any subsequent transferee uses or threatens to use such HCR for purposes not in conformance with the stated conservation purposes contained herein, the California Attorney General, California residents, or private entities shall have standing as interested beneficiaries to challenge such nonconforming uses of HCR acquired and designated herein; and

2. The DEPARTMENT, its designee, or successor shall record on each California Endangered Species Act Habitat Compensation Rights Designation a statement that the HCR described in the California Endangered Species Act Habitat Compensation Rights Designation have had an interest conveyed to the DEPARTMENT, its designee, or its successor for purposes of conservation, protection, restoration and enhancement of those species adversely impacted by the Project. Such statement shall be substantially as provided in Exhibit 2.

V. MISCELLANEOUS PROVISIONS

A. Notices

All notices and other communications required or permitted to be given or delivered pursuant to this AGREEMENT shall be in writing. Such writing shall be delivered personally, by courier, by telecopy, or sent by first-class or certified mail, return receipt requested. All default notices shall be sent certified mail, return receipt requested. All such notices or transmittals shall be deemed delivered upon the earlier of actual receipt or three days after posting by certified mail.

(APPLICANT) Mr. Christopher M. Valentino, Manager
Environmental Services Department
Bechtel Petroleum Operations, Inc.
P.O. Box 127
Tupman, CA 93276

DEPARTMENT California Department of Fish and Game
Legal Affairs Division
1416 Ninth Street
Post Office Box 944209
Sacramento, CA 94244-2090

and

REGION Dr. Jeffrey R. Single
Regional Representative
California Department of Fish and Game
1234 E. Shaw Avenue
Fresno, CA 93710

B. ASSIGNMENT

No sale or assignment of this AGREEMENT or any of the rights or obligations thereunder shall be made by any party hereto unless there first shall have been obtained the written consent thereto of the parties; provided, however, that no consent shall be required for assignment or pledge made by BPOI (a) to any company which shall succeed by purchase, merger or consolidation to the properties of BPOI; (b) to any parent, affiliate or wholly-owned subsidiary (or governmental equivalent) of BPOI; (c) as security for a debt under the provision of any mortgage, deed of trust, indenture, bank credit agreement, or similar instrument. Notwithstanding the above, BPOI shall have the right at any time, upon written notice to ARCO and DEPARTMENT, to execute a novation agreement assigning all rights and delegating all of its duties and obligations under this AGREEMENT to the United States Department of Energy or to any contractor which might succeed BPOI as the Management and Operating Contractor at the Naval Petroleum Reserves in California. BPOI shall not be liable or responsible for the performance of any duties or obligations to the DEPARTMENT or ARCO under the terms and conditions of this AGREEMENT after the effective date of such novation agreement.

C. ENTIRE AGREEMENT

This AGREEMENT, along with the Exhibits attached hereto, constitutes the entire agreement and understanding between the DEPARTMENT and BPOI for the Project. This AGREEMENT supersedes all prior and contemporaneous agreements, representation or understandings, if any, where oral or written.

D. GOVERNING LAW

This AGREEMENT shall be governed by the laws of the State of California and the United States of America, as appropriate. Actual or threatened breach of this AGREEMENT may be prohibited or restrained by a court of competent jurisdiction.

E. BENEFIT OF AGREEMENT

This AGREEMENT is solely for the benefit of the People of the State of California by and through the DEPARTMENT or its designated representative.

F. FURTHER ACTIONS

From time to time hereafter, BPOI and the DEPARTMENT shall execute such instruments and other documents and take such other actions, upon the request of

the other, as may be reasonably necessary to carry out the terms of this AGREEMENT. This AGREEMENT cannot be amended or modified in any way except by a written instrument duly executed by BPOI and the DEPARTMENT. Any proposal for amendment or modification must be duly delivered for review and approval by the Director of the Department of Fish and Game, 1416 9th Street, 12th Floor, Sacramento, California 95814.

G. TERMINATION

This AGREEMENT shall terminate within 20 years from the date of execution or upon completion of the terms and conditions contained herein. In the event the AGREEMENT terminates by law or judicial action prior to the performance of acquisition duties herein, title to the security shall be transferred to the DEPARTMENT by operation of law at the date of the AGREEMENT expiration. The DEPARTMENT shall then complete the HCR lands acquisition and enhancement duties to the degree security is available.

H. EFFECTIVE DATE

This AGREEMENT shall be immediately effective upon execution by both BPOI and the DEPARTMENT.

This AGREEMENT Includes and Incorporates the Following:

1. EXHIBIT 1, the CALIFORNIA ENDANGERED SPECIES ACT MANAGEMENT AUTHORIZATION.
 - a. Attachment A to EXHIBIT 1, the PROPOSED LANDS FOR ACQUISITION FORM ("PLFAF").
 - b. Attachment B to EXHIBIT 1, the ACQUISITION OF HABITAT COMPENSATION RIGHTS procedures.
2. Exhibit 2, Model CALIFORNIA ENDANGERED SPECIES ACT HABITAT COMPENSATION RIGHTS DESIGNATION STATEMENT.

IN WITNESS WHEREOF, THE PARTIES HERETO have executed this AGREEMENT to be in effect as of the date last signed below.

By: Donald A. Trybul

By: _____

Date: 9-19-94

Date: _____

Mr. D. G. Trybul
Assistant General Manager
Bechtel Petroleum Operations, Inc.
P.O. Box 127
Tupman, California 93276

Boyd Gibbons, Director
California Department of
Fish and Game
Sacramento, California 95814

Approved as to form:

Craig Manson
Craig Manson
General Counsel
California Department of Fish and Game

Date: 8-8-94

EXHIBIT 1

CALIFORNIA ENDANGERED SPECIES ACT MANAGEMENT AUTHORIZATION

FOR CONSTRUCTION OF

5M/6M Powerline Project on Coles Levee Ecosystem Preserve
Bechtel Petroleum Operations, Inc. (BPOI), a Nevada Corporation
Management and Operating Contractor for
U.S. Department of Energy
Naval Petroleum Reserves in California (DOE)
Kern County

(Ref. No. 2081-1994-020-4)

SUMMARY

Bechtel Petroleum Operations, Inc. (BPOI), a Nevada Corporation, has requested Authorization for Management of endangered species pursuant to California Fish and Game Code Section 2081 for the proposed powerline located on S5, T31S, R25E, MDB&M on the Coles Levee Ecosystem Preserve. The powerline will temporarily modify 1.32 acres of potential habitat for three state- and four federally-listed threatened and endangered species. These species are the *San Joaquin kit fox*, *San Joaquin antelope squirrel*, *blunt-nosed leopard lizard*, *Hoover's wooly star* and *Kern mallow*. It is the determination of the California Department of Fish and Game (hereinafter referred to as "DEPARTMENT") that the acquisition, enhancement, and long-term management of 1.45 acres of habitat compensation rights for these species at a location on the Coles Levee Ecosystem Preserve acceptable to the DEPARTMENT will offset the impacts of the powerline and result in preserving core areas for the species which may help achieve sustainable populations.

ACTIVITY DESCRIPTION

The 5M/6M Powerline is a 12 kV above ground, wooden-pole transmission line. Standard designs to reduce electrocution hazard to raptors are incorporated. The portion of this project on the Coles Levee Ecosystem Preserve will be constructed so as to minimize impacts of equipment access, pole placement, and line stringing. Regular inspection will be conducted from existing roads. Any emergency maintenance and repair will be conducted with impact reduction measures similar to those employed for project construction. The utility distribution system is self-contained and will require minimal maintenance over its expected life span. Thus, the powerline right-of-way should not be subject to reoccurring temporary disturbance.

The portions of the project covered by this AGREEMENT and Management Authorization are located on the Coles Levee Ecosystem Preserve, in southwestern Kern County, in section 5 of T31S, R25E, MDB&M.

Habitat of the project area is disturbed grassland with sparse shrub cover. Site topography is low, steep hills, and gullies, soils have high erosion potential.

LISTED SPECIES

Based on biological studies of the project site and adjacent areas, three state- and four federally-listed threatened and endangered species may use the project area. These species are the **threatened San Joaquin kit fox (*Vulpes macrotis mutica*)**, **endangered blunt-nosed leopard lizard (*Gambelia silus*)**, **threatened San Joaquin antelope squirrel (*Ammospermophilus nelsoni*)**, **threatened Hoover's woolly star (*Eriastrum hooveri*)**, and **endangered Kern mallow (*Eremalche kernensis*)**. A summary of the life history information each species follows.

Blunt-nosed Leopard Lizard

The blunt-nosed leopard lizard is a relatively robust species with a large blunt head. It historically was distributed over the San Joaquin Valley and adjacent foothills, plains, and valleys. Adults are approximately 3.5 to 5 inches in snout-vent length and may be up to 13 inches in total length. Coloration consists of a light gray, tan, or brown background with a conspicuous pattern of dark overlaying spots and pale cross-bars. During the courtship season (spring) males develop a light pinkish coloration and females develop bright orange spots on their sides and +/- solid orange on ventral surfaces of the hind legs and tail. From two to three eggs are laid in excavated chambers at the end of rodent burrows. Hatchlings emerge in early August.

Blunt-nosed leopard lizards are active during the day, usually when air temperatures are between 75 and 95 degrees Fahrenheit. Most activity occurs between the months of April and early October; animals will overwinter underground in rodent burrows. Food consists primarily of insects such as grasshoppers, although smaller lizards may also be consumed.

Leopard lizards occur on "sparsely vegetated" plains, lower canyon slopes, on valley floors, and in washes. Vegetation may include a variety of grasses, saltbush (*Atriplex* spp.), goldenbush (*Happlopappus* sp.), iodine bush (*Allenrolfea occidentalis*), and seep-weed (*suaeda fruticosa*). Results of several systematic inventories for the species on Federal lands in the San Joaquin Valley region have demonstrated an affinity for open habitats, wash systems, and relatively level topography.

Population densities of blunt-nosed leopard lizards are highly variable. At two sites near Taft (Kern County), estimated densities were between 0.1 and 0.5 lizards per acre. Densities of

blunt-nosed leopard lizards obtained from analyses of several survey plots at Pixley National Wildlife Refuge (Tulare County) ranged from 0.12 to 4.14 lizards per acre.

Habitat loss is the principal reason for both State and Federal listing. Much of the historical habitat of this species has been altered as a result of agricultural production. Data generated by the DEPARTMENT show that approximately 93 percent of wildlands present in the San Joaquin Valley were lost by 1979; remaining habitats (exclusive of those receiving current protection) will be lost under present rates of development by 1996. In addition to agricultural development, other factors influencing this species include mineral development, livestock grazing, and application of some pesticides.

San Joaquin Kit Fox

The San Joaquin kit fox is one of eight recognized subspecies of kit fox. It resembles a small lanky dog in appearance, with proportionately large ears that have an abundance of large white inner guard hairs. Total length is about 32 inches, including a 12 inch black-tipped tail. Coloration ranges from light buff to grayish along the back and tail; gray, rust, or yellowish along the sides; and white along the belly.

San Joaquin kit foxes hunt for rodents, rabbits, and other prey at night. They use dens that are typically excavated in loose soil. Individual animals may utilize from three to 24 separate dens. Individual den entrances may range from one to 36 and may extend into several tunnels and chambers reaching depths of up to 10 feet. Man-made structures such as culverts and pipes may also be utilized as dens. Den entrances are characteristically higher than wide, and are sufficiently small to prevent access by larger carnivores such as coyotes. Den entrance hole dimensions are generally about 8-10 inches in height and less than 8 inches in width, but may be small as 4 inches in width.

Burrows of other animals, particularly California ground squirrels (*Spermophilus beecheyi*), may also be opportunistically enlarged and utilized as den sites by San Joaquin kit foxes. Although occupied dens may show freshly excavated soil, scats, and prey remains, such obvious sign may also be inconspicuous or absent.

San Joaquin kit foxes forage and live in an area of 1-2 square miles. Mating occurs in December-January. Pups are born in February-March, and begin to disperse at around five months of age. Survival rates of kit fox pups are low; about 75 percent of such animals die before the age of eight months. Mortality for this species has been documented from attacks by coyotes, road kills, conversion of habitat, shooting, drowning, entombment, pneumonia, and starvation. Additionally, widespread use of rodenticides may result in mortality, since kit fox are extremely vulnerable to secondary poisoning through consumption of poisoned ground squirrels or other scavenged rodents.

The San Joaquin kit fox historically was distributed over a large portion of central California, extending roughly from southeastern Contra Costa County south along the eastern edge of the Interior Coast Range to the southern San Joaquin Valley, including major portions of western Kern County and Tulare County. San Joaquin kit fox were also distributed through adjacent valleys, foothills, and plains, including portions of San Luis Obispo County, Monterey County, and the Santa Clara Valley on the western side of the Interior Coast Range.

Habitat conversion has been the principal reason for both State listing and Federal listing of the San Joaquin kit fox. Agricultural development is the principal contributing factor to this decline of available kit fox habitat. Approximately 42 percent of "suitable" kit fox habitat has been lost as a result of such developments.

San Joaquin antelope squirrel

The San Joaquin antelope squirrel (*Ammospermophilus nelsoni*), a State-threatened species, is a rodent that once occupied portions of the San Joaquin Valley from Merced County south to Kern County and parts of the Carrizo Plain in San Luis Obispo County and Cuyama Valley in San Luis Obispo and Santa Barbara counties. Currently, San Joaquin antelope squirrels are restricted to areas in the extreme southwestern portion of the San Joaquin Valley and the Carrizo basin.

The pelage of San Joaquin antelope squirrels is pinkish to yellowish-brown with a narrow white line on each side of the back. The back is buffy, and the tail has a white underside. The total length is 10 inches, of which 4 inches is tail length.

They inhabit Valley Grassland and saltbush scrub communities on loam and sandy loam soils, avoiding cultivated fields. They use giant kangaroo rat burrows and construct their own burrows in road berms and wash cuts. Principal foods are filaree and red-brome, plus occasional insects and carrion.

Habitat loss as a result of agricultural development is a chief reason for the State-threatened listing for this rodent. Other factors contributing to its decline include habitat loss associated with urban development, poisoning, and possible pesticide and rodenticide use.

Kern mallow

The federally endangered Kern mallow (*Eremalche kernensis*) is a small annual herb of the mallow family, 2 to 4-inches in height, with white to rose-pink or lavender flowers (USFWS 1989). Kern mallow is restricted to the eastern base of the Temblor Range, occurring from the vicinity of McKittrick to near Buttonwillow within valley saltbush scrub in Kern County (Taylor and Davilla 1986). The species is threatened by oil and gas development, transmission line maintenance or expansion, ag-land conversion, overgrazing by livestock, exotic plant

competition, and off-road vehicle use. A recovery plan has not yet been developed for Kern mallow.

Hoover's wooly star

The federally threatened Hoover's wooly star (*Eriastrum hooveri*) is a small annual herb of the phlox family. It produces 1/4-inch wide white flowers and is densely hairy on the stems, leaves, and some flowering parts. Field surveys conducted throughout the southern San Joaquin Valley by Federal agencies and private consultants in 1992 and 1993 have documented numerous previously unknown occurrences of Hoover's wooly star. Hoover's wooly star is now known from Fresno, Kings, San Luis Obispo, and Santa Barbara Counties at scattered locations spanning a distance of 100 miles in the Inner Southern Coast Range of central California. The species is now documented from over 600 sites that cover some 2,200 acres (BLM 1993). Hoover's wooly star appears to prefer slightly sandy, sometimes silty soils that often exhibit cryptogamic crusts and is found on ridgetops, hillsides, benches, alluvial fans, and level areas at elevations from 280 to 2,770 feet (BLM 1993). It continues to be threatened throughout parts of its range by oil and gas development, cattle and sheep grazing, agricultural land conversion, urbanization, and other surface-disturbing activities. The majority of known locations of Hoover's wooly star are on BLM lands or combinations of BLM/split-estate/private (BLM 1993). Hoover's wooly star has been documented at over 250 locations on or adjacent to NPR-1, over approximately 2,170 acres (EG&G 1993).

EFFECTS ON LISTED SPECIES

San Joaquin kit fox, blunt-nosed leopard lizards, San Joaquin antelope squirrel, Hoover's wooly star, and Kern mallow may be subject to direct and indirect adverse impacts associated with the construction and any potential emergency maintenance of the project. The project area where impacts to these species may occur encompasses about 1.32 acres.

During powerline installation individual animals may be injured or killed as a result of crushing or striking by vehicles and equipment or through entombment when burrows are collapsed. Animals which are displaced by the project may escape direct injury but would have to compete for food and living space with animals in adjacent areas. This would increase these animals' vulnerability to disease, predation, and accidental death due to increased stress levels and unfamiliarity with the relocation area. Additionally, the modification of the existing habitat will temporarily reduce the prey base for San Joaquin kit fox residing in the general project vicinity. However, the potential project effects will not likely be as significant as described above due to the small size of the project and implementation of the specific conditions of the Management Authorization. The proposed project is not likely to adversely affect Kern mallow and Hoover's wooly star because all the populations will be avoided.

In association with this project, BPOI is acquiring 1.45 acres of habitat compensation rights (HCR) on the Coles Levee Ecosystem Preserve for the above species. In addition, BPOI is providing the DEPARTMENT with fee for services for the long-term management of HCR in the amount of \$545 (\$375/acre).

The acquisition, improvement, and maintenance of the HCR will allow for its management for threatened and endangered species in perpetuity. The acquired HCR in combination with past and future acquisitions will provide core areas for the management of the species of concern.

SPECIFIC CONDITIONS REQUIRED BY THE MANAGEMENT AUTHORIZATION

1. Prior to project construction BPOI (or its agent) shall acquire 1.45 acres of HCR on the Coles Levee Ecosystem Preserve for the affected species in a location acceptable to the DEPARTMENT. In addition, Applicant shall transfer to the DEPARTMENT \$545.00 as fee for services to provide for the long-term management of the HCR.
2. Within 60 days prior to initiation of construction, a qualified biologist shall be provided to conduct a pre-activity survey to re-inventory the lands (including a 150 foot-wide buffer zone around the modification areas) that will be subject to modification (vegetation clearance and grading) for the occurrence of endangered species. The inventory shall be conducted by a qualified biologist with prior inventory experience for the **San Joaquin kit fox, blunt-nosed leopard lizard, San Joaquin antelope squirrel, Hoover's wooly star, and Kern mallow**. This is necessary to implement protection measures described below.

Fenced exclusion zones shall be established at that time by a qualified biologist around all **kit fox dens** within the project that may be inadvertently impacted by construction activities. Exclusion zone fencing shall consist of either large flagged stakes connected by rope or cord, or survey laths or wooden stakes prominently flagged with survey ribbon. Each exclusion zone shall be roughly circular in configuration with a radius of the following distance measured outward from the **den or burrow entrances**:

potential kit fox den: 50 feet
known kit fox den: 100 feet
known kit fox pupping den: 150 feet
occupied kit fox pupping den: 200 feet

An exclusion zone of 50 feet will be maintained around all locations of **Kern mallow and Hoover's wooly star**. Locations of **Kern mallow and Hoover's wooly star** will be avoided by slightly altering power pole placements and routing vehicles around exclusion zones as necessary.

In addition, to the greatest extent practicable, small mammal and burrowing owl (*Athene cuniculara*) burrows should be avoided by marking exclusion zones or clear work areas.

Exclusion zones shall be maintained until all construction is completed, and then shall be removed. If specified exclusion zones cannot be maintained around a known or pupping kit fox den for any reason, USFWS and the DEPARTMENT shall be contacted for guidance prior to ground disturbing activities on or near the subject den. In the cases of potential kit fox dens, the USFWS guidance for monitoring and then excavating dens, if necessary, shall be followed.

If dens are located outside of, but within 50 to 200 feet of (depending on the buffer designated for the den type as listed above) the construction zone, the boundary of the buffer will be drawn to include all areas within the radius stated above, except those falling within the construction zone. Dens falling within the buffer area will not be excavated. After these dens are determined to be empty in accordance with procedures outlined below, they shall be covered with plywood which is firmly secured to prevent access by kit fox. The covers shall not be installed more than 14 days prior to the start of construction. The cover shall remain in place for the duration of construction, after which time it will be removed.

3. Known and potential **San Joaquin Kit fox dens** within the specified project areas which cannot be avoided so they will not be damaged shall be excavated by a qualified biologist pursuant to conditions described below prior to the onset of construction activities. Excavation of **kit fox dens** within the project areas shall be authorized by the DEPARTMENT and USFWS.

Destruction of a potential kit fox den may proceed without prior notification to the DEPARTMENT and USFWS if no current or previous use of the den by kit foxes is known, as determined by a qualified biologist. However, if during excavation any potential den is determined to be a currently or previously used kit fox den (e.g., if kit fox sign is found inside), the DEPARTMENT and USFWS will be notified immediately of the change in status.

4. As close to the beginning of construction as possible, but not more than 14 days prior to the onset of construction, a qualified biologist shall conduct a final pre-construction survey of the construction zone to insure that no endangered species have either reoccupied existing known kit fox dens or kit fox pupping dens, or constructed new dens. If any occupied dens are found, the procedures detailed above shall be followed.
5. In the event that the DEPARTMENT and USFWS concur that an occupied San Joaquin kit fox den will be unavoidably destroyed by planned project action, the procedures detailed in the USFWS "Standardized Recommendations for Protection of the San

Joaquin Kit Fox, April 1989" (Appendix 1) shall be implemented, except as they are modified by the measures set forth in this plan.

If, after following all procedures detailed in the standardized recommendations (Appendix 1), the qualified biologist is unable to successfully ensure protection of individual kit foxes, s/he shall contact BPOI. BPOI shall take necessary actions to ensure protection or shall contact USFWS and DEPARTMENT for further guidance.

6. Access ways to power pole locations from existing roads shall be clearly delineated by stakes or flagging to minimize inadvertent degradation or loss of adjacent wildlife habitats during facility construction.
7. All equipment storage and parking during site development and operation shall be confined to the project area or to previously disturbed off-site areas that are not habitat for listed species.
8. BPOI shall designate a specific individual as a contact representative between BPOI, USFWS, and the DEPARTMENT to oversee compliance with protection measures detailed in this Mitigation Plan. BPOI shall provide written notification of the contact representative to the DEPARTMENT and USFWS within 30 days of permit issuance. Written notification shall also be provided by BPOI to the DEPARTMENT and USFWS during any future times that the designee is changed due to position transfer or other reasons.
9. The BPOI project representative will take appropriate actions to minimize temporary construction traffic disturbances. All project-related vehicle traffic will be restricted to established roads, construction areas, storage areas, and staging and parking areas. Off-road traffic outside of designated project areas will be prohibited. Project-related vehicles shall observe a 20 MPH speed limit in all project areas except on county roads and State and Federal highways.
10. An employee orientation program for construction crews shall be conducted and will consist of a brief consultation in which persons knowledgeable in endangered species biology and legislative protection explain endangered species concerns. The education program will include a discussion of San Joaquin kit fox, blunt-nosed leopard lizard, San Joaquin antelope squirrel, Hoover's woolly star, and Kern mallow biology, the habitat needs of these species, their status under the State and Federal Endangered Species Acts, and measures being taken for the protection of these species and their habitats as a part of the project. A fact sheet conveying this information will also be prepared for distribution to all employees. Upon completion of the orientation, employees shall sign a form stating that they attended the program and understand all protection measures.

These forms shall be filed at Applicant's offices and shall be accessible to the DEPARTMENT and USFWS.

11. All construction activities shall be confined to daylight hours.
12. To prevent entrapment of endangered species or other animals during the construction phase of the project, all excavated, steep-walled holes or trenches in excess of two feet in depth shall be covered with close-fitting covers when construction activities are not in progress at that location.
13. All food-related trash items such as wrappers, cans, bottles, and food scraps generated both during construction and during subsequent facility operation shall be disposed of in closed containers only and regularly removed from the site. Food items may attract kit foxes onto a project site, consequently exposing such animals to increased risk of injury or mortality. No deliberate feeding of wildlife shall be allowed.
14. To prevent harassment, mortality, or destruction of kit fox dens or predation on this species by domestic dogs and cats, project employees shall be prohibited from bringing pets on the project area.
15. Any BPOI or BPOI subcontractor employee who inadvertently kills or injures a San Joaquin kit fox, San Joaquin antelope squirrel or blunt-nosed leopard lizard, or who finds any such animal either dead, injured, or entrapped shall be required to report the incident immediately to the BPOI contact representative. In the case of entrapped animals, escape ramps or structures shall be installed immediately if possible to allow the subject animal(s) to escape unimpeded. In the event that such observations are of injured or dead animals, the BPOI contact representative shall notify the USFWS and the DEPARTMENT in writing within three working days of the finding of any such animal(s). Notification shall include the date, time, location, and circumstances of the incident. Any kit fox, leopard lizard, or San Joaquin antelope squirrel found dead or injured shall be turned over immediately to the DEPARTMENT for care, analysis, or disposition. The DEPARTMENT contact shall be Dr. Jeffrey Single, ([209] 445-6152). USFWS contact for this information will be Mr. Wayne White ([916] 978-4866).
16. Compliance inspections shall be conducted once per week during the construction phase and a monthly compliance report during the course of construction will be provided to the Sacramento Field Office, USFWS and Fresno Regional Office, DEPARTMENT. Inspections shall check for compliance with all of the mitigation avoidance measures outlined above and the exclusion zones shall be checked to ensure that any required signs or stakes are still intact and that human activities have been restricted in these protective zones. A post-construction compliance report shall be provided to the Sacramento Field Office and Fresno Regional Office within 45 calendar days following project completion.

The report will also include an estimation of actual habitat acreage disturbed (both temporary and permanent habitat acreage disturbed will be calculated and provided in the report.) This will be used to determine if any adjustment will be required in the amount of habitat compensation rights acquired.

DEPARTMENT FINDINGS

If the above-written conditions of this Management Authorization are implemented, the DEPARTMENT finds that the BPOI 5M/6M Powerline Project on the Coles Levee Ecosystem Preserve will not result in jeopardy to the continued existence of the listed species and may through the acquisition of habitat compensation rights, protect the species from further degradation.

CALIFORNIA DEPARTMENT OF FISH AND GAME

BY: _____

TITLE: _____

DATED: _____

Attachment 2

Bechtel Petroleum Operations Inc.

73182

VENDOR NO. 90719

NAVAL PETROLEUM RESERVE NO. 1, TUPMAN, CALIFORNIA 93276

CHECK NO. 73182

VOUCHER	INVOICE NO.	GROSS AMOUNT	DISCOUNT	PREVIOUS PAYMENTS/ADJ.	NET AMOUNT
4095129	095129	545.00			545.00
	12-KV	POWERLINE, REF.	#2081-1994-020-4.		
				TOTAL	545.00

DETACH BEFORE DEPOSITING

ENDORSEMENT OF THIS CHECK IS AN ACKNOWLEDGEMENT OF FULL SETTLEMENT OF ACCOUNT AS PER ATTACHED STATEMENT.

BECHTEL
 Bechtel Petroleum Operations Inc.
 P.O. BOX 116
 TUPMAN, CA 93276-0116

BANK OF AMERICA
 COMMUNITY DEVELOPMENT BANK
 1500 NEWELL AVENUE, SUITE 200
 WALNUT CREEK, CA 94596

90-4182
1211

73182

CHECK NO. 73182

DATE AMOUNT

PAY *****545 DOLLARS 00 CENTS 09/28/94 \$545.00

Bechtel Petroleum Operations Inc.
General Account

TO THE ORDER OF

CALIF. DEPT. OF FISH & GAME
 1416 9TH ST.
 SACRAMENTO, CA. 95814

Paul S. Salant
Donald A. Taylor

⑈073182⑈ ⑆121141822⑆ 73131⑈00019⑈



EG&G ENERGY MEASUREMENTS

Santa Barbara Operations

EG&G ENERGY MEASUREMENTS, INC., P. O. BOX 127, TUPMAN, CALIFORNIA 93276 • TEL: (805) 763-6138

June 13, 1994

EH/94-678

Mr. Craig Manson
General Counsel
State of California
Department of Fish and Game
1416 9th Street, 12th Floor
Sacramento, CA 95814

REVISED 2081 DOCUMENTS (MANAGEMENT AUTHORIZATION AND "CROSSING AGREEMENT")

Attached are two clean copies (and an electronic copy) of revised 2081 documents (a Management Authorization and a "Crossing Agreement") for DOE's proposed 12kV powerline project that crosses over a portion of the Coles Levee Ecosystem Preserve. These versions contain some minor changes resulting from a recently concluded Section 7 consultation with FWS. A copy of FWS' biological opinion is also attached for your information.

If these documents are acceptable to CDFG, then we can send a signed signature page to your office in the next few days. If you have any questions, please call me at (805) 763-6811, or Mr. Ron Dixon (DOE General Counsel) at (805) 763-6015.

Thomas T. Kato, Manager
Elk Hills Project
Environmental Sciences Division

cb

enclosures

cc: Mr. David Showers, CDFG

bcc: R. Dixon, DOE (w/attachments)
M. Phillips, EASI (w/attachments)
R. Fishman, BPOI (w/attachments)



EG&G ENERGY MEASUREMENTS

Santa Barbara Operations

EG&G ENERGY MEASUREMENTS, INC., P. O. BOX 127, TUPMAN, CALIFORNIA 93276 • TEL: (805) 763-6138

May 10, 1994
EH/94-652

Ms. Jody Brown
U.S. Department of the Interior
Fish & Wildlife Service
2800 Cottage Way, Room E-1823
Sacramento, CA 95825-1846

5M/6M 12kV POWERLINE PROJECT

Attached for your information and reference are copies of Section 2081 documents that the Naval Petroleum Reserves in California (NPRC) and California Department of Fish and Game (CDFG) are currently working on for the portion of the 5M/6M 12kV powerline project that crosses the Coles Levee Ecosystem Preserve. One of our objectives is to ensure, to the degree possible, that CDFG's mitigation measures are consistent with terms and conditions and any other requirements that may be contained in the Biological Opinion for this project. I would appreciate it if you or the appropriate person at U.S. Fish and Wildlife Service (FWS) would compare the CDFG documents with what the Service has written into the opinion. If there are points where FWS and CDFG requirements differ, please let me know. If at all possible, please work directly with David Showers or Jeff Single at CDFG to resolve any differences. Also, I would like to reiterate that any compensation for this project required by FWS should not overlap with compensation agreements reached with CDFG for the portion of the project crossing Coles Levee.

NPRC also requests an opportunity to review the opinion before it is issued, but would like to accomplish this review without risking significant additional time. Therefore, if you could FAX a draft to me, I will review and respond immediately. If there are any issues in the draft opinion, or coordination issues between FWS and CDFG, I will be available to meet with you and CDFG at your convenience.

Thank you for your assistance on this project. If you have any questions, please call me at (805) 763-6811.

Thomas T. Kato, Manager
Elk Hills Project
Environmental Sciences Division

Attachments

cc: J. Killen, DOE (w/o attachments)
M. Phillips, EASI (w/o attachments)



Department of Energy
Naval Petroleum Reserves in California
P.O. Box 11
Tupman, California 93276

MAY 12 1994

Mr. Craig Manson
General Counsel
California Department of Fish and Game
1416 9th. Street, 12th Floor
Sacramento, CA 95814

Dear ~~Mr. Manson~~ ^{Craig}:

In response to Dr. Jeffrey Single's February 22, 1994 letter (Attachment 1), concerning the Naval Petroleum Reserve No. 1 (NPR-1) proposed 12-kilovolt power line project, and the April 28, 1994 meeting on this subject, the draft California Endangered Species Act (CESA) agreements between the Department of Energy (DOE) and California Department of Fish and Game (CDFG) have been revised and are attached for your consideration and final action (Attachments 2 and 3). Suggested changes discussed at the April 28 meeting have been incorporated into the two CESA agreements. These changes are briefly described below.

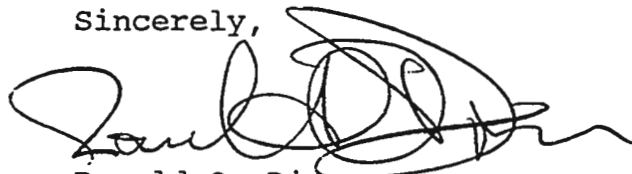
The signatory for these CESA agreements will be Bechtel Petroleum Operations, Inc., (BPOI). Novation language has been included in the assignment clause in paragraph V.B. on pages 7 and 8 of the Conservation Easement Crossing Agreement. The language regarding maintenance provisions for the powerline has been revised in the Management Authorization Agreement on pages 1, 2, and 5. Protective language regarding avoidance of any burrowing owl burrows that may occur in the project vicinity has been added to paragraph 2 on page 6 of the Management Authorization Agreement. Language has been added to Condition 16 on page 9 of the Management Authorization Agreement regarding confirmation of the actual habitat acreage disturbed by project construction as part of the post-construction compliance survey. Finally, if actual disturbance should be found to have exceeded project estimates, accommodation will be made by BPOI to make up for any deficit in acquired habitat compensation rights. This language has been added to paragraph II.A.1. on page 3 of the Conservation Easement Crossing Agreement. Copies of the agreements are also provided on the attached 3-1/2" disk in Wordperfect 5.2 for Windows for your convenience (Attachment 4).

As we understand from the April 28, 1994 meeting, you will confirm the habitat disturbance and compensation acreage estimates with Dr. Single as well as the estimated costs for CDFG overhead as detailed on paragraph II.E.7. on page 5 of the Conservation Easement Crossing Agreement and make any necessary updates to the text. Also I understand you will review the revisions to the draft ARCO agreements provided to you at the April 28, 1994 meeting, and you will notify us if changes are needed. In accordance with your desires, we have requested the Sacramento U.S. Fish and Wildlife Service (FWS) staff to forward copies of the draft/final Biological Opinions for this project to you and your staff as soon as they are available so that you may review the information and finalize the CESA agreements.

The proposed project is time critical: i.e., every day of delay results in the irretrievable loss of project benefits. Project benefits have been estimated to be \$15,000.00 per month in power cost savings. Given the government's approximate 78 percent interest in NPR-1, approximately \$11,700.00 of this accrues to taxpayers. It is very important, therefore, to give this project a high priority. If at all possible, we would appreciate receiving the final documents for BPOI's execution within 2 weeks of receiving the FWS documents previously mentioned. We are hoping the FWS documents will be made available to you within the next 2 weeks.

The courtesy and cooperation extended to the NPR-1 staff is appreciated. If you have any questions, please give me a call at (805) 763-6015, or call Thom Kato at (805) 763-6811.

Sincerely,



Ronald O. Dixon
Legal Counsel
Naval Petroleum Reserves
in California

4 Attachments

cc:

Mr. David W. Showers
Endangered Species Consultation Coordinator
Environmental Services Division
Department of Fish and Game
1416 9th Street
Sacramento, CA 95814

Jeffrey R. Single, Ph.D.
Environmental Specialist III
Department of Fish and Game
Region 4
1234 E. Shaw Avenue
Fresno, CA 93710

Mr. Rick Alltag
Attention: Land Department
Atlantic Richfield Company
P.O. Box 147
Bakersfield, CA 93302

Mr. Peter Cross
U.S. Department of the Interior
Fish and Wildlife Service
2800 Cottage Way, Room E-1823
Sacramento, CA 95825-1846

DEPARTMENT OF FISH AND GAME
REGION 4
234 E. Shaw Avenue
Fresno, CA 93710
(209) 445-6152

FEB 28



February 22, 1994

Mr. Thom Kato
EG&G Energy Measurements
P.O. Box 11
Tupman, California 93276

Dear Mr. Kato:

Attached is the draft CESA MOU for the 5M/6M Powerline project. We have dealt with only potential take on the Coles Levee portion of the project.

This draft has been sent to Sacramento, for simultaneous review. Please advise me of any errata or desired revisions.

Sincerely,

Jeffrey R. Single, Ph.D.
Environmental Specialist III

Attachments

cc: Mr. Peter Cross
US Fish and Wildlife Service

Subject	Correspondence								

STATE OF CALIFORNIA—THE RESOURCES AGENCY

DEPARTMENT OF FISH AND GAME

REGION 4

1234 E. Shaw Avenue

Fresno, CA 93710

(209) 445-6152

Post-It™ brand fax transmittal mem. 171 - of pages > 3

To	Robb Fishman	From	S. Kato
Co.		Co.	
Dept.		Phone #	
Fax #		Fax #	

USON, Governor



September 13, 1993

Mr. Thom Kato
 EG&E Energy Measurements, Inc.
 P.O. Box 127
 Tupman, California 93276

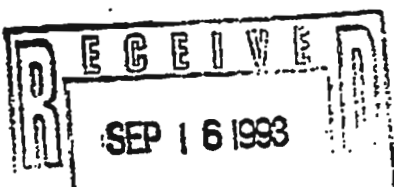
Dear Mr. Kato:

State Section 2081/ Federal Section 7 Coordination
 Proposed 12kv Power Line, and Existing 10-inch Water Line
 Naval Petroleum Reserve-1, Kern County

We have reviewed the Biological Assessment and other information transmitted by Mr. James Killen in his letter of August 25 1993. From this material, it appears that the powerline project will result in the temporary disturbance of known or likely habitat for threatened or endangered species, and has the potential to cause the direct take of state and federally listed species. Based on the information provided, authorization to take state listed species under section 2081 of the Fish and Game Code would be highly advisable. If mitigation in the form of Habitat Management lands, credits or endowments is to be transferred to the state, the section 2081 authorization process provides the preferred method for tracking obligations and performance. In addition, an access or easement agreement with the Department will likely be required for that portion of the route that lies on the Coles Levee Ecosystem Reserve, unless the powerline easement was executed prior to the Department's conservation easement on the Ecosystem Reserve.

Some particular comments on the Biological Assessment follow:

1. **Water Line.** We will not address impacts associated with the installation of the existing water pipeline (even though it is likely that take of currently listed species occurred; and we would normally dispute the mitigation value of unassisted revegetation of disturbed endangered species habitat). However, we do have concerns regarding inspection, maintenance, improvements, and other potential activities that could result in habitat disturbance or direct take of listed species. Such activities have not been addressed in the Biological Assessment.



Mr. Tom Kato
September 13, 1993
Page Two

2. **Surveys.** The results of surveys conducted in January along the pipeline and power line corridors should be discussed in terms of the normal seasonal activity patterns of the species of concern. Reports of "not observed" are misleading when applied to animals like blunt-nosed leopard lizards that normally below-ground and inactive at this time of year, or plants that normally do not persist in identifiable condition until January. In addition, survey methods did not conform to standard survey methodologies for some of the target species (promulgated by the Department and U.S. Fish and Wildlife Service).

Therefore, in most cases, the survey results and additional local information from NPR-1 inventories do not support the conclusion of likely absence of species of concern.

3. **Anticipated Impacts.** We concur with some of the evaluation of potential impacts and significance. However, it should be noted that this assessment is based on a very limited survey effort; and that there is definitely the potential for indirect impacts (habitat degradation) and direct take of state and federally listed species from both past and proposed actions.

4. **Mitigation Measures.** The proposed mitigation measures represent a generally acceptable approach, but require additional conditions to be equivalent to measures generally required by the Department for similar activities in southwest Kern County. For example, there should be a biological monitor present at all times that activities take place in or near endangered species habitat or other sensitive area. This monitor should have the power to stop activities that are in violation of work plans or could result in take. The construction corridor and access roads should be marked. The potential inconsistency between the intent that dens and burrows will be marked and avoided, and the earlier conclusion that small burrows will be collapsed by vehicular traffic should be resolved. Enhancement and maintenance of habitat for the species affected is generally required to mitigate impacts; in this case, approximately 4.2 acres. Revegetation methods and evaluation standards should be specified. Notice of start-work dates, reporting schedules, and contact persons should be specified. An implementation agreement between NPR-1 or DOE, and the Department, defining commitments and obligations, should be executed.

It is certainly our intent to coordinate the state section 2081 process with the federal Section 7 consultation. This type of coordination has been accomplished successfully many times in the past, and is becoming more and more common. However, based

Mr. Tom Kato
September 13, 1993
Page Three

on the information at hand, there still is a need for authorization for take under the state code (section 2081), as well as refinement of measures to reduce or avoid take, and other mitigation.

Please contact me for further discussions regarding this project, the information base, coordination of state and federal consultations, and related matters. I am prepared to provide a draft 2081 authorization for your review.

Sincerely,



Jeffrey R. Single, Ph.D.
Environmental Specialist III

SINGLE:le

cc: Ms. Marcia Wolfe
ARCO

Mr. Peter Cross
US Fish and Wildlife Services

AED	Action	Info
B. Anderson		
L. Francis		
L. Hocker		
T. O'Farrell		
J. Serhner		
D. Watson		
Correspondence		
Subject		



Department of Energy
Naval Petroleum Reserves in California
P.O. Box 11
Tupman, California 93276

AUG 25 1993

Dr. Jeff Single
California Department of Fish and Game
1234 E. Shaw
Fresno, CA 93710

Dear Dr. Single:

This confirms conversations that have taken place between the staffs of the Naval Petroleum Reserves in California (NPRC) and California Department of Fish and Game (CDFG) with regard to a 1.6 mile, 12-kilovolt powerline proposed to be constructed and operated by NPR-1 across the ARCO Ecosystem Preserve and lands under the jurisdiction of NPR-1, Bureau of Land Management, California Department of Transportation, and the West Kern Water District (see Attachment 1). The project consists primarily of installing approximately 33 power poles and overhead powerlines.

As an NPR-1 participant and a Federal agency, the U.S. Department of Energy (DOE) is required to comply with requirements in Section 7 of the Federal Endangered Species Act to consult with the U.S. Fish and Wildlife Service (FWS) with regard to project impacts. To satisfy these requirements a Biological Assessment was completed by EG&G Energy Measurements, Inc. (EG&G/EM), NPRC's endangered species contractor, and this Assessment concluded that the project would have no significant adverse impacts on Federal or state protected species. These results were discussed with Mr. Peter Cross with FWS, and an informal Section 7 consultation was initiated on July 13, 1993. This consultation is still in progress.

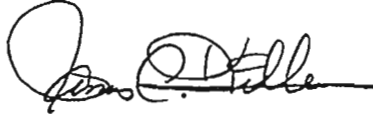
Given that CDFG has an interest in the ARCO Ecosystem Preserve, it is my understanding that NPR-1 might also need to consult with CDFG pursuant to the California Endangered Species Act, as set out under Article 3, Section 2081 of the CDFG Code. Of the 33 power poles to be installed, approximately 11 are planned for the Preserve.

We have reviewed Sections 7 and 2081 and have concluded that with proper coordination between DOE, CDFG, and FWS, it should be possible to appropriately address 2081 within the ongoing Section 7 process. Accordingly, it is our desire to

proceed in this manner in the interest of overall government and project efficiency. It would be appreciated if CDFG would review this matter, and give either Thom Kato with EG&G/EM or me a call to discuss your findings. Mr. Kato's telephone number is (805) 763-6811, and I can be reached at (805) 763-6038. To facilitate CDFG's review, a Biological Assessment of the project is enclosed (see Attachment 2). If possible, it would be appreciated if we could hear from you within the next 2-3 weeks.

Your personal cooperation and assistance in this project has been appreciated, and we look forward to continuing to work with you and CDFG to resolve all issues.

Sincerely,



James C. Killen
Director, Planning, Analysis
and Program Support Division

2 Attachments

cc: (w/o attachments)
Ms. Marcia Wolfe
Atlantic Richfield Company
P.O. Box 147
Bakersfield, CA 93302

Mr. Paul Lingland
Engineer
Atlantic Richfield Company
P.O. Box 147
Bakersfield, CA 93302

Mr. Thom Kato
EG&G Energy Measurements, Inc.
P.O. Box 127
Tupman, CA 93276

Mr. Peter Cross
U.S. Department of the Interior
Fish and Wildlife Service
Sacramento Field Office
2800 Cottage Way, Room E-1823
Sacramento, CA 95825-1846

APPENDIX E

**STATE HISTORIC PRESERVATION
DETERMINATION**

OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
P.O. BOX 942896
SACRAMENTO 94296-0001
(916) 653-6624
FAX: (916) 653-9824



6 December 1993

Reply to: DOE 931112A

James Killen
Department of Energy
Naval Petroleum Reserves in California
Post Office Box 11
Tupman, CA 93276

Subject: POWERLINE #1 AND #3 ROUTE ALTERNATIVES

Dear Killen:

Thank you for requesting my review of the undertaking noted above and for including the documentation which justifies your decision.

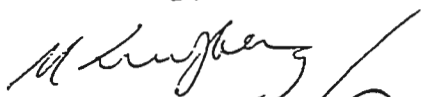
I do not object to your determination that this undertaking will not affect historic properties. Accordingly, you have fulfilled federal agency responsibilities pursuant to 36 CFR 800, regulations implementing Section 106 of the National Historic Preservation Act. Please note that your agency may have additional responsibilities under 36 CFR 800 under any of the following circumstances;

- (1) If any person requests that the Advisory Council on Historic Preservation review your findings in accordance with 36 CFR 800.6(e);
- (2) If this undertaking changes in ways that could affect historic properties [36 CFR 800.5(c)];
- (3) If previously undocumented properties are discovered during the implementation of this undertaking or if a known historic property will be affected in an unanticipated manner [36 CFR 800.11];
- (4) If a property that was to be avoided has been inadvertently or otherwise affected [36 CFR 800.4(c);800.5]; or
- (5) If any condition of the undertaking, such as a delay in implementation or implementation in phases over time, may justify reconsideration of the current National Register status of properties within the undertaking's Area of Potential Effects [36 CFR 800.4(c)].

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Thank you for considering historic properties during project planning. If you have any questions, please call staff archaeologist Nicholas Del Cioppo at (916) 653-9696.

Sincerely,

A handwritten signature in cursive script, appearing to read "Stead R. Craig". The signature is written in black ink and is positioned above the typed name.

Steade R. Craig, AIA, Acting
State Historic Preservation Officer