

MINUTE ITEM

This Calendar Item No. 15.  
was approved as Minute Item  
No. 15 by the State Lands  
Commission by a vote of 3  
to 0 at its 11-30-79  
meeting.

MINUTE ITEM

11/79  
Priddy

15. PROPOSED SELECTION OF LANDS FOR GEOTHERMAL RESOURCES  
LEASE OF RESERVED MINERAL INTERESTS - W 9973.

During consideration of Calendar Item 15 attached, Mr. Martin  
McDonough, General Counsel for Northern California Power  
Agency, appeared.

Mr. McDonough noted NCPA's appreciation for the 60-day extension  
granted by the Commission at its September 1979 meeting. He  
stated that in the interval, NCPA has:

1. received a preliminary report from the consulting geologist,  
which they have not had time to review;
2. proceeded with further negotiations with the trustee in  
bankruptcy for their former partner, Resource Funding  
Limited;
3. been unable to finalize an agreement with the trustee;
4. not determined whether or not to drill a second well or  
reenter the first one.

Mr. McDonough urged that the Commission's leasing program be  
fashioned so that a prospecting permit can be issued to them, with  
a provision for a reasonable rental if the prospect proves to  
be good. He stated that the preliminary drilling tests did not  
produce sufficient steam per hour when compared with those in  
other portions of The Geysers area, and they were unsure  
whether or not to pursue the program to develop the steam. However,  
issuance of a permit to them would encourage the continuation  
of their exploration program.

After further discussion, it was the Commission's opinion that  
this item was similar to Calendar Item 14 on this agenda and  
that it would be in the State's best interest to let the area by  
competitive bid rather than issuing a prospecting permit.

Upon motion duly made and carried, the resolution as presented  
in Calendar Item 15 was approved by a vote of 3-0.

Attachment:  
Calendar Item 15

CALENDAR ITEM

11/79  
W 9973  
Priddy

15.

PROPOSED SELECTION OF LANDS FOR GEOTHERMAL RESOURCES  
LEASE OF RESERVED MINERAL INTERESTS

At the September Commission meeting, it was recommended to the Commission that the application of Northern California Power Agency (NCPA) for a geothermal prospecting permit for certain land (see Exhibit "A") in Lake County be denied and the land be offered for lease by competitive public bid. A representative of the applicant appeared before the Commission and requested that this action be postponed. The Commission granted a delay of 2 months, so that NCPA could review the matter and provide the staff with additional data. No additional data has been submitted to date.

The Commission staff proposes that the Commission select, pursuant to the P.R.C. Section 6911(a), a parcel of land, located in Lake county in which the State has reserved mineral interests, for geothermal resources lease by competitive bid.

The parcel, containing 120 acres, consists of the east and west ridges and summit of a low mountain underlain by Franciscan chert and graywacke, and lies about 3 miles N-NE of the Geysers of steam field. One-quarter mile to the south of the parcel an exploratory geothermal well "Cobb Valley" No. 1 drilled on private land by Northern California Power Agency/Resource Funding Ltd. is reported to be capable of producing 50,000 pounds of steam per hour. An application for a geothermal prospecting permit on the State land by Resource Funding Ltd./ NCPA is pending.

The Commission staff feels, because of the geothermal potential of the parcel which is situated within the Geysers area, that it is in the best interest of the State to offer this parcel for geothermal resources lease by competitive bid, rather than to issue a prospecting permit. Section 6910(a) of the P.R.C. provides, in part, that an application for a permit shall be denied if, prior to the issuance of the permit, the lands are selected by the Commission for lease by competitive public bid.

Section 6911(a) of the P.R.C. states that selected lands may be leased by competitive bid on the basis of a cash bonus, net profit, or other single biddable factor. In accordance with the Commission's view that the bidding

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procedure should be that which provides the greatest competition and assurance that the resources are developed in a timely and orderly manner, the staff recommends that the biddable factor should be net profit. The net profits bidding procedure does not require large amounts of up-front capital in the form of cash bonuses and allows the small developer to enter the marketplace using his funds for field exploration and development.

Section 6912(b) of the P.R.C. provides that the surface landowner may within 10 days after notification by the Commission, submit a bid identical to the highest acceptable bid, in which case the Commission shall issue a lease to such surface landowner, subject to applicable provisions of law. If the surface landowner does not file such a bid or is unable to comply with the applicable law, the Commission may proceed with the award of the bid.

By their certificate of acceptance issued March 30, 1978, the Lake County Planning Commission certified that the EIR has been prepared pursuant to the provisions of the CEQA of 1970, as amended. Site specific impacts will be addressed upon selection of potential well sites before any drilling can begin.

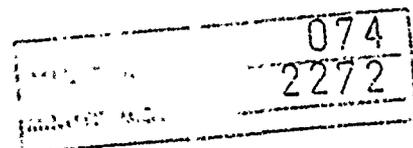
The Commission staff is presently preparing a lease form for the extraction of geothermal resources. The staff has submitted that form for the review and approval of the Office of the Attorney General.

The environmental documents have been reviewed by the Commission staff, and it is staff's opinion that the provisions of CEQA have been satisfied.

EXHIBITS:           A. Location Map.  
                      B. EIR Summary - Cobb Valley Geothermal Project.

IT IS RECOMMENDED THAT THE COMMISSION:

1. DETERMINE THAT AN EIR HAS BEEN PREPARED FOR THIS PROJECT BY THE LAKE COUNTY PLANNING COMMISSION.



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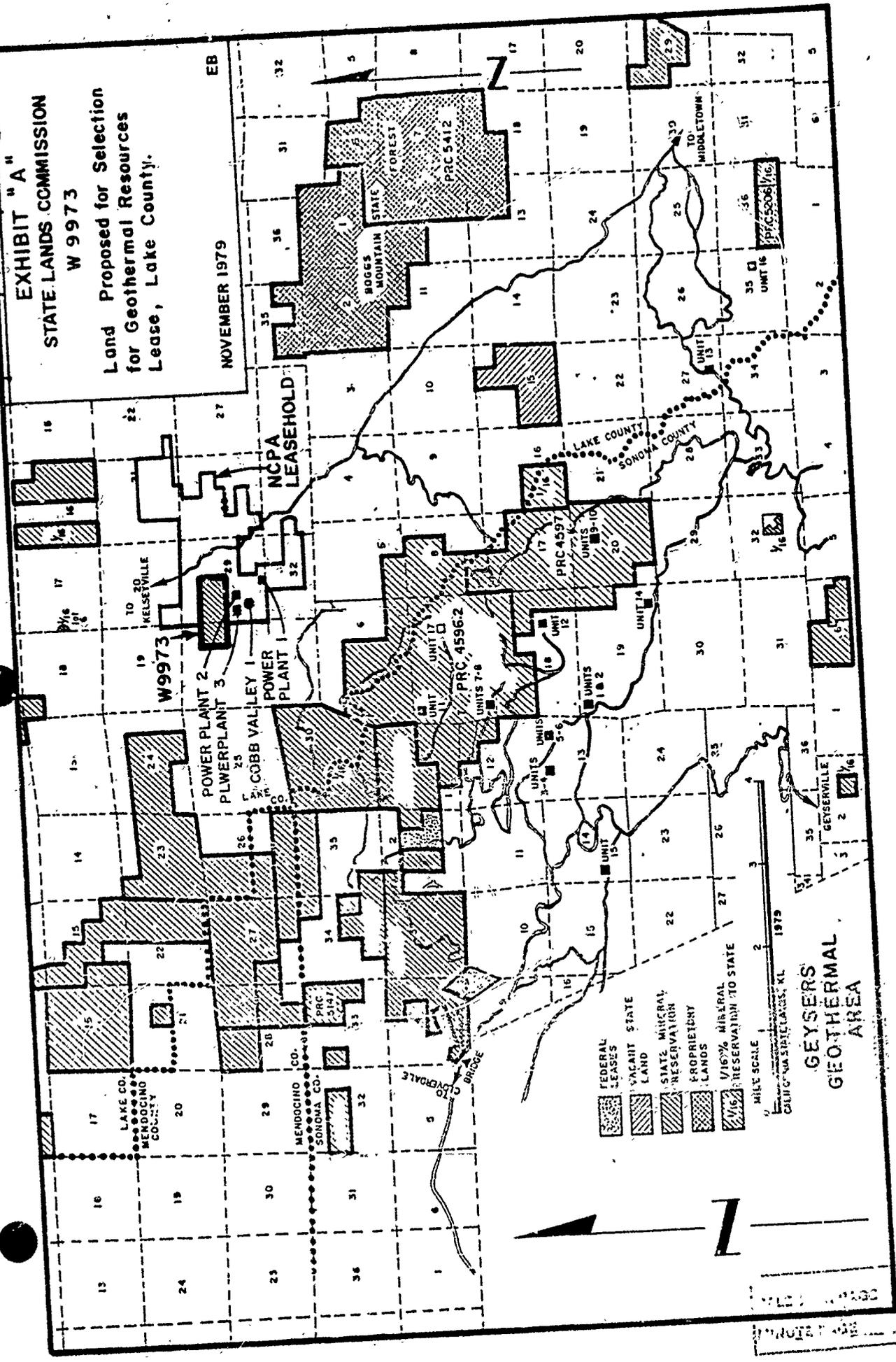
2. CERTIFY THAT THE INFORMATION CONTAINED IN THE EIR OF THE LAKE COUNTY PLANNING COMMISSION HAS COMPLIED WITH CEQA AS AMENDED, AND THE STATE GUIDELINES AND HAS BEEN REVIEWED AND CONSIDERED BY THE STATE LANDS COMMISSION.
3. DETERMINE THAT THE PROJECT WILL NOT HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT.
4. DENY THE APPLICATION OF NORTHERN CALIFORNIA POWER AGENCY FOR A GEOTHERMAL PROSPECTING PERMIT ON THE LAND DESCRIBED IN W 9973 AND OFFER, PURSUANT TO DIVISION 6 OF P.R.C. AND DIV. 3, CHAPTER 1 OF THE CAL. ADM. CODE, BY COMPETITIVE BID, THE BIDDABLE FACTOR BEING NET PROFITS; FOR THE EXTRACTION OF GEOTHERMAL RESOURCES ON THE FOLLOWING DESCRIBED PARCEL: MINERAL INTERESTS RESERVED TO THE STATE IN T12N, R8W, MDM, LAKE COUNTY, CALIFORNIA. THE S $\frac{1}{2}$  OF THE NW $\frac{1}{2}$  OF SECTION 29, AND THE SE $\frac{1}{2}$  OF THE NW $\frac{1}{2}$  OF SECTION 30, CONTAINING 120 ACRES, MORE OR LESS.

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**EXHIBIT "A"**  
**STATE LANDS COMMISSION**  
**W 9973**  
**Land Proposed for Selection**  
**for Geothermal Resources**  
**Lease, Lake County.**

NOVEMBER 1979

EB



- FEDERAL LEASES
- VACANT STATE LAND
- STATE MINERAL RESERVATION
- PROPRIETARY LANDS
- 1/16% MINERAL RESERVATION TO STATE

1 MILE SCALE  
 CALIFORNIA STATE LANDS, KL 1979

**GEYSERS**  
**GEOTHERMAL**  
**AREA**

076  
 2274

SUMMARY

ENVIRONMENTAL IMPACT REPORT FOR NORTHERN CALIFORNIA POWER AGENCY'S  
COBB VALLEY GEOTHERMAL PROJECT

I. Description of the Project

An environmental report has been prepared to cover a geothermal energy project proposed by NCPA in conjunction with Resources Funding, Ltd. in the Cobb Valley area of Lake County. NCPA is an agency formed for the purpose of exercising jointly the power of its 12 publicly owned member electric utilities. Both the exploratory and development phases are described below.

II. Project Location

The study area consists of approximately 1,400 acres in Lake County, which constitutes the NCPA/RFL Geothermal Leasehold, and includes the parcel in which the State has reserved mineral interests. The area is irregularly shaped, and includes portions of Sections 20, 21, 28, 29, 30, 32, and 33 of Township 12 North, Range 8 West, M.D.B.&M.

III. Project Action

The objectives of the project can be thought of as two-phased. The first phase, or exploratory phase, is concerned with the assessment of the geothermal resource within the leasehold boundaries. The present state of the art in resource assessment for geothermal energy necessitates full scale exploratory drilling to evaluate the resource. The first phase of the project will consist of three exploratory wells on two pad sites. By drilling these wells into the fractured or steam zone, the applicant can measure the rate of flow and, through other evaluation techniques, establish the extent of the resource.

The exploration phase will be comprised of the preparation of two level pad areas designed to accommodate the equipment necessary to drill the deep geothermal exploratory wells. In addition to pad preparation, the applicant is planning to improve and extend access roads necessary to move drilling equipment onto the pad.

111. Project Action (Contd.)

The E.I.R. describes the location of drill pads, drilling procedure, resource testing, and pipelines.

If the applicant is successful in finding a commercially viable steam zone, the second phase objective would be to develop this steam resource into an electrical generating capacity. Based on past experience in other Geysers fields, the applicant has established an immediate goal of two 33-megawatt power plants to be run from the steam resource of the leasehold. The objective here would be to provide the Northern California Power Agency with electrical energy, thereby reducing its dependence on electricity generated by other sources, including fossil fuel plants. The E.I.R. also describes the power plant design, the H<sub>2</sub>S abatement system, and power transmission lines.

IV. Present Environmental Setting:

- a. Climate:  Cool  Moderate  Hot
- b. Air Quality:  Poor  Fair  Good
- c. Water Quality:  Poor  Fair  Good
- d. Noise Quality:  Poor  Fair  Good
- e. Transportation Systems:  Poor  Fair  Good
- f. Public Utilities:  Poor  Adequate  Good
- g. Public Services:  Poor  Adequate  Good

h. Other Values:  
 Two basic aquatic habitats are found in the project area. Nineteen archaeological sites are located here. Much of the project area lies within a Scenic Highway Corridor (Bottle Rock Road).

i. Present Land Use:  
 Low density, single family housing; private recreation; stock grazing; open space; sightseeing.

V. Environmental Impacts:

- a. Adverse:
  - a. Air Quality:  Low  Mod.  High  Short-Term  Long-Term



V. Environmental Impacts: (Contd.)

d. Transportation Systems:  Low  Mod.  High  Short-Term  Long-Term

Comment: Development of this and other geothermal fields in the area will probably bring pressure to widen and improve roads to the area. Which roads and the extent of the impact such transportation improvements will be determined by the direction in which the field is developed.

e. Public Utilities:  Low  Mod.  High  Short-Term  Long-Term

Comment: The growth induced impacts are almost nonexistent.

f. Public Services:  Low  Mod.  High  Short-Term  Long-Term

Comment: The same growth induced impacts as described in Item (e).

g. Energy Consumption:  Low  Mod.  High  Short-Term  Long-Term

Comment: Drilling rigs are self-contained and provide their own energy. Consumption of fuels is limited to the drilling period.

h. Growth Inducing:  Low  Mod.  High  Short-Term  Long-Term

Comment: The only induced growth will be in the nearby towns, such as Glenbrook or Cobb, rather than at the field site itself. There may be a slight increase in the number of persons living in the area due to permanent employment.

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V. Environmental Impacts (Contd.)

Adverse Environmental Effects Which Cannot Be Avoided:

- modification of existing topography;
- loss of habitat;
- increased traffic;
- increased level of noise;
- visual impact of steam plumes; and,
- disruption of viewshed in scenic corridors.

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## MITIGATION MEASURES

The present state-of-the-art should be employed to control H<sub>2</sub>S emissions during air drilling and production testing. Conditions for the use of the abatement system should be established in concert with the Air Pollution Control Officer through the Authority to Construct process. Additional studies will be required to develop full field development H<sub>2</sub>S abatement strategies.

The measures outlined in Chapter 70 of the Uniform Building Code (adopted by Lake County) should be carefully followed during design and construction of drill sites, earthen sumps, access roads, and, in the event that production is developed, the distribution pipeline routes and power plant sites.

It is imperative that the mitigation measures outlined in California Division of Mines and Geology, Special Report 122, be considered.

Use existing road alignments as much as possible and keep pad sizes to a minimum so as to disturb the least area of vegetation. Revegetation should be done by professionals on all exposed surfaces at the completion of road and pad construction, prior to the first winter rains.

To minimize fire hazards, fuel tanks should be located a safe distance from the drill rig and provided with a fire guard of base mineral soil. Burnable refuse should be placed in appropriate receptacles. A person should be designated as responsible for fire control measures, including a prearranged system of contacting fire control units.

Provision for venting the plant through a rock equivalent muffler must be made. To meet standards, the air drilling rig will probably require an acoustical enclosure. Well testing muffler performance must be improved by 5 dB over the Aminoil system if flows of 150,000 lbs/hr are encountered.

Traffic control in the vicinity of Camp Beaverbrook should be imposed during the summer months to reduce hazards. Other means of reducing conflicts should be explored.

Power plant and steam pipeline systems should be designed to blend into the surrounding area to the extent possible. Consideration should be given to camouflaging the pipeline if it is to cross Kelsey Creek. A type of covered bridge should be considered to provide a visual barrier.

Where the pipeline could interfere with the Scenic Corridor viewshed, a visual barrier should be established by methods such as a vegetation screen, placing the pipeline in a trench and/or constructing an earthen berm, or, if distances are not great, running the pipeline underground.

## ALTERNATIVES TO THE PROPOSED ACTION

In terms of the geologic and seismic environment, alternative uses of the land would probably involve as much or more of an environmental impact as geothermal development. Alternative uses such as residential development or development of further recreational activities would involve significant amounts of grading for access roads, building sites and necessary related facilities. This grading would generate similar impacts to the grading involved in the proposed geothermal development and would be subject to similar mitigation measures. Additionally, residential development would be energy consuming as opposed to energy generating and resources such as water supplies would be irretrievably committed.

Alternate uses could be made of steam produced in this area, if the resource does indeed exist. However, the impact of the geologic environment would remain the same as graded well sites, access roads and distribution pipelines would still be necessary.

As there are no mines or recognized localities of economically valuable mineral reserves, mining is not a viable alternative for this area.

The "No Project" alternative would mean the geothermal resource in the area, if it exists, could not be utilized. Geothermal areas are of very limited areal extent in California and throughout the world. Geothermal energy can only be developed where very hot rocks and associated steam and/or hot water exist close to the ground surface. The project site apparently is one such area. The alternative of "No Project" would ultimately mean that alternative sources of energy would be necessary.

RELATION BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE  
MAINTAINANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

It is incumbent upon Lake County to carefully balance the positive and negative aspects of this project. It is important to compare the benefits associated with the project to the burdens that such development may impose upon those within the development area and those responsible for it.

Any analysis of the impacts must be made with the full realization that it is very difficult to estimate certain outcomes. For example, the percentage of employees hired locally and the amount of local expenditures resulting from this project will be difficult to estimate with any reliability. Adding to the difficulty of project evaluation and rendering the analysis more complex is the fact that the geothermal project is placed within a small county which is experiencing expanding economic activity and that numerous other potential projects of varying magnitudes and size also appear to be developing concurrently as this project unfolds and takes place (if permit approval is forthcoming).

The long run costs associated with the proposed project relating to the redevelopment and land reclamation are yet unknown. It is possible that burdens might remain upon County government as a result of the environmental conditions existing after the steam runs out and the plants are abandoned. The estimated time and life of a geothermal plant development is 30 to 35 years. After 30 to 35 years of operation, an increase of sediment in the well site area may be significant and may require additional county service expenditures.

LIST OF PERSONS, ORGANIZATIONS, AND PUBLIC  
AGENCIES COMMENTING ON THE DRAFT EIR

Lake County Environmental Assessment Committee  
Lake County Air Pollution Control Director  
Lake County Planning Commission  
U.S. Fish and Wildlife Service  
Division of Oil and Gas  
Energy Resources Conservation and Development Commission  
State Water Resources Control Board  
Air Resources Board  
Department of Fish and Game  
Department of Parks and Recreation  
Sierra Club  
The Lake County Energy Council  
Clyde E. Kuhn  
Mary-Dean Anderson  
Muriel Jordan  
Fannie Lamorte

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