MINUTE ITEM

This Calendar Item No. 41 was approved as Minute Item No. 41 by the State Lands Commission by a vote of 3 to 0 at its 5/27/82 meeting.

CALENDAR ITEM

41

5/27/82
W 40265
Priddy
PRC 6155

GEOTHERMAL PROSPECTING PERMIT

APPLICANT: E. B. Towne, Jr.
582 Market Street, Suite 716
San Francisco, California 94104

AREA, TYPE LAND AND LOCATION:
Approximately 2,280 acres of proprietary land in Latour State Forest, Shasta County.

LAND USE: Geophysical, geological and geochemical exploration to target drillsites for exploration drilling to assess geothermal potential.

TERMS OF PROPOSED PERMIT:

Initial period: Two years.

Renewal options: One period of two years.

Surety bond: $50,000.

Special: Upon discovery of geothermal resources in commercial quantities within permit area, permittee will be entitled to preferential leases upon notice of intention to exercise this right; subject, however, to the discretion of the Commission and review of environmental documentation pertaining to full field development of the resources.

CONSIDERATION: Rental of $1 per acre during the first year; $5 per acre during the second year and $25 per acre per annum during renewal period, unless a well has been drilled.

In case a preferential lease is executed, it will provide for rental of $1 per acre per annum, and a royalty of 12.5 percent of gross revenues received from the sale

A 1

S 1

of steam and ten percent from the sale of mineral products or chemical compounds, with a minimum royalty of $2 per acre per annum.

PREREQUISITE TERMS, FEES AND EXPENSES:
Filing fee and processing costs have been received.

STATUTORY AND OTHER REFERENCES:
A. P.R.C.: Div. 6, Parts 1 and 2; Div. 13; Div. 20.

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

AB 884: 6/10/82.

OTHER PERTINENT INFORMATION:
1. E. B. Towne, Jr. has applied for a Geothermal Prospecting Permit to explore for geothermal resources on Latour State Forest in Shasta County, to determine the availability, quantity, and quality of geothermal resources underlying the State lands. The use to be made of any resources discovered will depend upon its temperature, pressure, volume and mineral content; but the applicant is seeking a resource suitable for the generation of electricity.

2. The application was originally submitted covering the entire State Forest, approximately 9,033 acres. The applicant was informed that it was not Commission policy to issue permits covering the entire area and the application was reduced to 3,945 acres leaving approximately 5,000 acres of land for future competitive leasing. The applicant was then informed that it was not Commission policy to issue a permit covering such a large area even though the maximum permit size specified in the P.R.C. is 5,760 acres. It was suggested that the application be amended for a number of permits. The applicant considers the 3,945 acres as a minimum since the prospect is

a rank wildcat located 200 miles from its nearest production and that a large block of acreage is needed to justify the $2,000,000 cost of geophysics and a deep test well. The applicant also has other geothermal prospects within this area on federal lands that vary in size from 7,400 acres to 25,000 acres. It is his opinion that it will be difficult to attract financing for parcels that are considerably smaller than 4,000 acres. However, the applicant revised his application down to 2,280 acres when informed that the staff would recommend that the parcel be offered for lease by competition bid.

3. The Department of Forestry reviewed the proposed project and offered no objection subject to certain conditions to protect the primary purpose of the forest that will be included in the permit.

ENVIRONMENTAL INFORMATION:

1. A Negative Declaration (No. 307) was prepared by Commission staff pursuant to the provisions of CEQA.

   Mitigation measures addressing comments received in response to the Initial Study regarding meadow protection were included in the Negative Declaration and have been made a part of the permit.

APPROVALS REQUIRED:

Division of Oil and Gas, Regional Water Quality Control Board, and County of Shasta Planning Department.

EXHIBITS:

A. Land Description.
B. Location Map.
C. Negative Declaration.

IT IS RECOMMENDED THAT THE COMMISSION:

1. CERTIFY A NEGATIVE DECLARATION (NO. 307) WAS PREPARED BY THE STATE LANDS COMMISSION PURSUANT TO THE PROVISIONS OF CEQA AND SUCH DOCUMENT WAS REVIEWED AND CONSIDERED (CALIFORNIA ADMINISTRATIVE CODE 15083 AND 15085).

2. FIND THAT CHANGES OR ALTERATIONS HAVE BEEN REQUIRED ON, OR INCORPORATED INTO THE PROPOSED PROJECT WHICH MITIGATE OR AVOID THE SIGNIFICANT ENVIRONMENTAL EFFECTS THEREOF AS IDENTIFIED IN THE COMPLETED NEGATIVE DECLARATION.

3. AUTHORIZE ISSUANCE TO E. B. TOWNE, JR. OF A TWO-YEAR GEOTHERMAL PROSPECTING PERMIT WITH THE RIGHT TO REQUEST A PREFERENTIAL LEASE IN THE EVENT GEOTHERMAL RESOURCES ARE DISCOVERED IN COMMERCIAL QUANTITIES ON THE PERMIT; THE COMMISSION MAY EXTEND THE PERMIT TERM FOR TWO YEARS; IN CONSIDERATION OF ANNUAL RENTS IN THE AMOUNT OF $1 PER ACRE FOR THE FIRST YEAR, ESCALATING TO $5 PER ACRE FOR THE SECOND YEAR, AND $25 PER ACRE DURING ANY EXTENSION UNLESS A WELL HAS BEEN DRILLED, IN THE LAND DESCRIBED ON EXHIBIT "A" ATTACHED HERETO AND BY THIS REFERENCE MADE A PART HEREOF. THE PERMIT WILL AUTHORIZE GEOTHERMAL EXPLORATION INCLUDING THE DRILLING OF GEOTHERMAL WELLS. THE PERMIT WILL FURTHER PROVIDE THAT ANY PREFERENTIAL LEASE WILL HAVE A RENTAL OF $1 PER ACRE PER ANNUM, A ROYALTY OF 12.5 PERCENT OF GROSS REVENUES FROM THE SALE OF STEAM, TEN PERCENT FROM THE SALE OF MINERAL PRODUCTS OR CHEMICAL COMPOUNDS, WITH A MINIMUM ANNUAL ROYALTY OF $2 PER ACRE. THE PERMIT TO BE USED IS THE FORM ON FILE IN THE OFFICE OF THE COMMISSION.

EXHIBIT "A"

LAND DESCRIPTION W 40265

T32N, R2E, MDM, Shasta County

Section 2: E-1/2 Lot 8, W-1/2 Lot 9, W-1/2 Lot 12, S-1/2 SW-1/4, NE-1/4 SW-1/4, S-1/2 SE-1/4, and NE-1/4 SE-1/4

Section 3: Lot 5, Lot 8, Lot 9, E-1/2 Lot 10, Lot 12, SW-1/4, NE-1/4 SE-1/4, and S-1/2 SE-1/4

Section 10: All

Section 11: All

Containing 2280 acres more or less.

END OF DESCRIPTION

REVIEWED MAY 11, 1982 BY TECHNICAL SERVICES UNIT, ROY MINNICK, SUPERVISOR.

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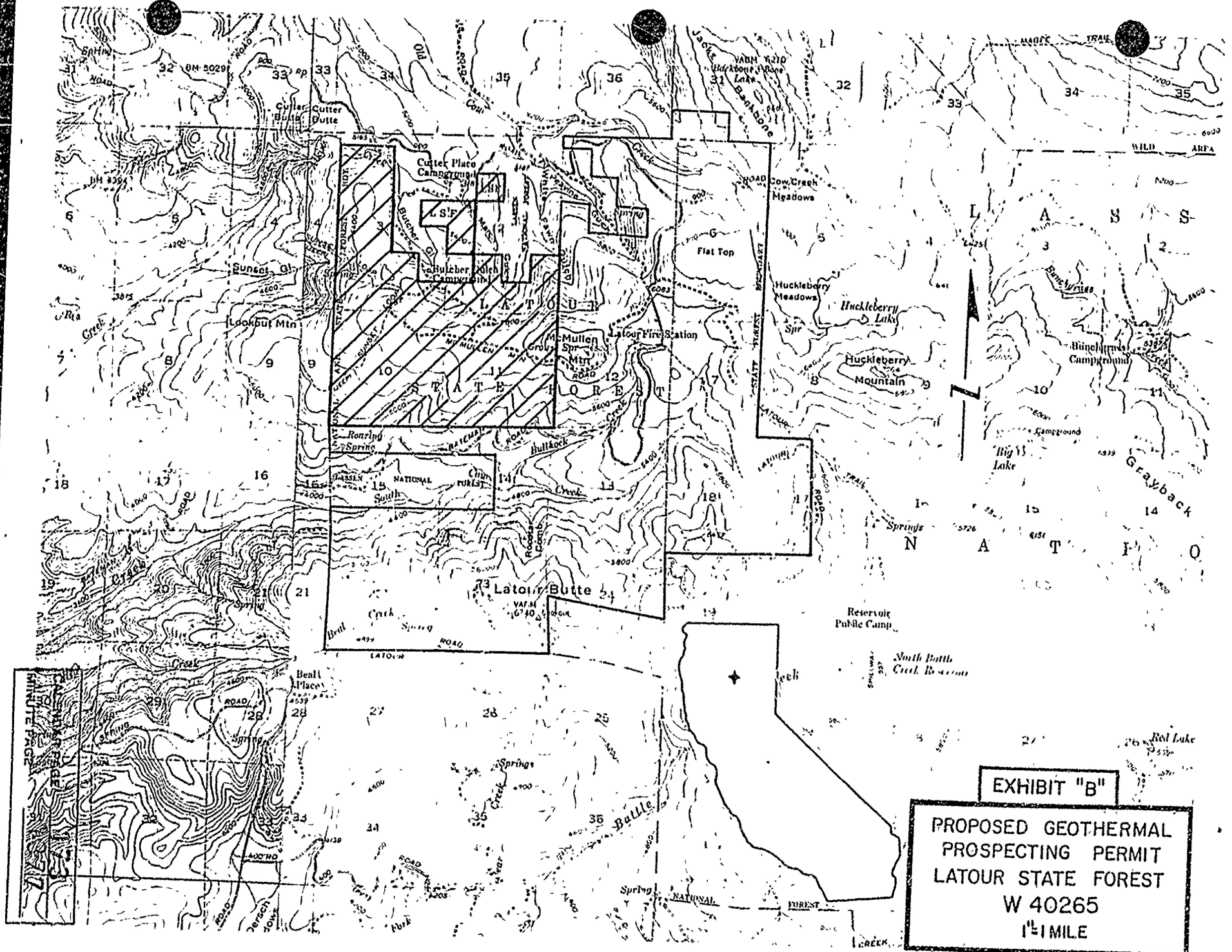

EXHIBIT "B"

PROPOSED GEOTHERMAL PROSPECTING PERMIT
LATOUR STATE FOREST
W 40265
1" = 1 MILE

EXHIBIT "C"

STATE OF CALIFORNIA—STATE LANDS COMMISSION

EDMUND G. BROWN JR., Governor

STATE LANDS COMMISSION
1807 13TH STREET
SACRAMENTO, CALIFORNIA 95814

[x] Draft
[ ] Final

NEGATIVE DECLARATION

EIR ND 307

File Ref.: W 40265

SCH#: 82032402

Project Title: Geothermal Prospecting Permit - Latour State Forest

Project Location: Latour State Forest, Shasta County, approximately 15 miles south of the Town of Burney, California.

Project Description: Surficial exploration for geothermal resources which will include geological, geophysical, and temperature surveys.

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

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

[ ] the project will not have a significant effect on the environment.

[x] the attached mitigation measures will avoid potentially significant effects.

Contact Person: Ted T. Fukushima
1807 13th Street
Sacramento, CA 95814
(916) 322-7813

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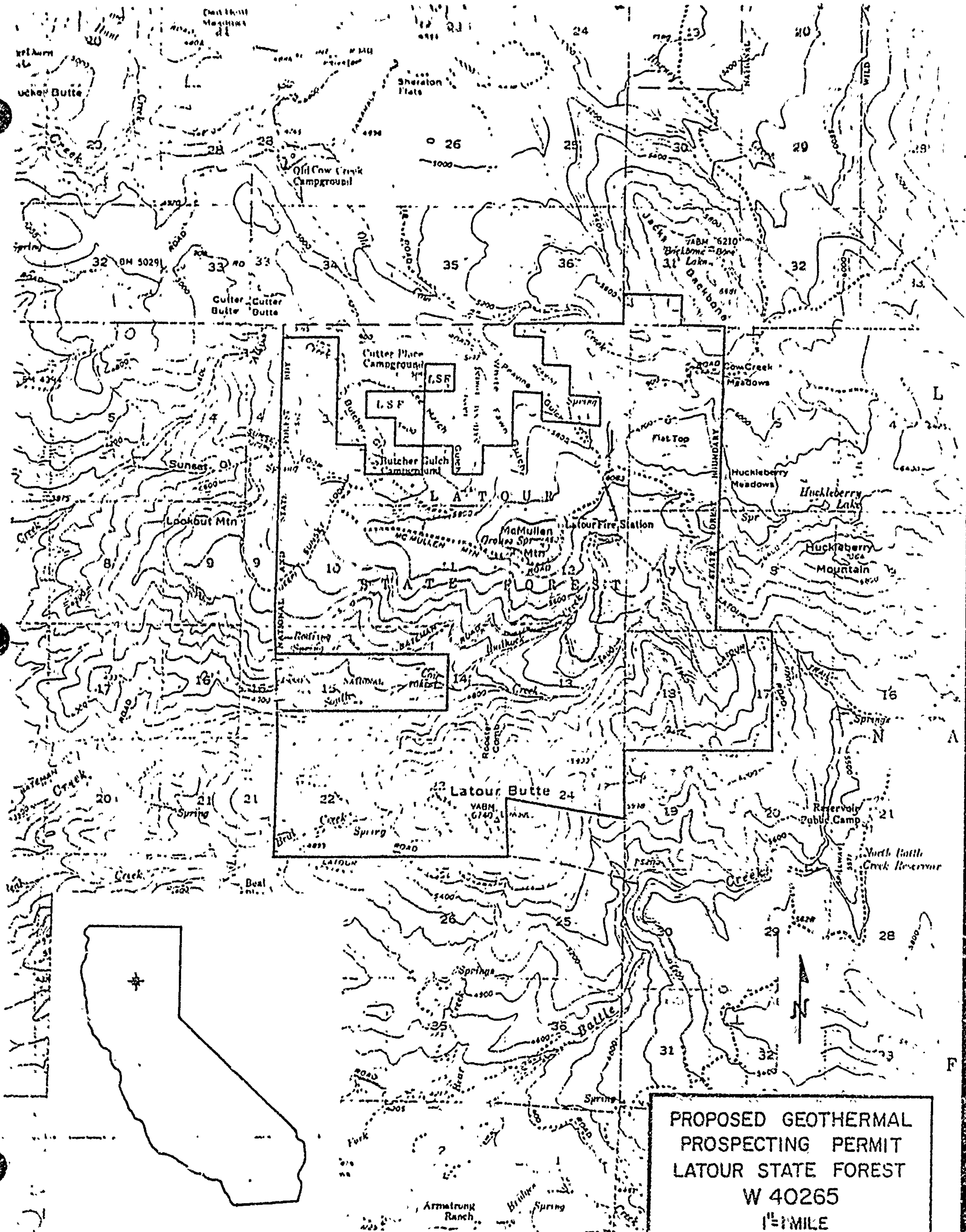
Form 13.17 (9/81)

MITIGATION MEASURES

In order to protect the meadows, drilling operations will be prohibited within 500 feet of meadows.

Added May 25, 1982



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STATE LANDS COMMISSION

INITIAL STUDY CHECKLIST

Form 13.20 (7/80)

File Ref.: W 40265

I. BACKGROUND INFORMATION

A. Applicant: E. B. Towne
582 Market Street, #716
San Francisco, CA 94104

B. Checklist Date: 11 / 25 /81 .

C. Contact Person: Charles Priddy

Telephone: (916) 323-7210

D. Purpose: Issuance of a permit to prospect for geothermal resources.

E. Location: Latour State Forest, Shasta County
(Approximately 15 miles south of Burney, CA)

F. Description: Initially, the project will include geological mapping, geophysical surveying, heat flow studies and core drilling. If results of the initial exploration program are favorable, the applicant proposes to drill one to three deep wells to determine the existance, quality and quantity of naturally occuring hot fluids. Potential use of a resource will depend upon the nature of the discovery, but due to the location of Latour State Forest, the only economic use of the resource is the generation of electricity. While the issuance of a prospecting permit by the State Lands Commission carries with it the right to drill a specified number of deep exploratory wells and a preferential right to a lease upon discovery of geothermal resources in commercial quantities, for the purposes of assessment of environmental impacts pursuant to provisions of the California Environmental Quality Act, this study deals only with the issuance of the permit and the initial surficial exploration to target drillsites. Temperature gradient holes would require a separate environmental review by the Division of Oil and Gas. During the initial exploratory phase, wherever possible, activities will be limited to existing roads and trails. After the initial exploration activities covered by this study to target a drill site, site specific impacts of deep exploratory drilling will be assessed by the Division of Oil and Gas. Under the permit proposed to be issued, permittee could not produce, but could only test to establish the existence of a commercial resource. No lease will be issued by the Commission under the preferential rights provisions of the permit until the impacts of full field development have been assessed in a separate environmental review.

G. Contacted: Cliff Fago, Dept. of Forestry; Jim Woodward, Archaeologist, Dept. of Parks and Recreation; Doug Stockton, Div. of Oil and Gas; and Dennis Wilson, Dept. of Fish and Game.

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II. ENVIRONMENTAL IMPACTS. *(Explain all "yes" and "maybe" answers)*

	Yes	Maybe	No
A. *Earth.* Will the proposal result in:			
1. Unstable earth conditions or changes in geologic substructures?	☐	☒	☐
2. Disruptions, displacements, compaction, or overcovering of the soil?	☒	☐	☐
3. Change in topography or ground surface relief features?	☒	☐	☐
4. The destruction, covering or modification of any unique geologic or physical features?	☐	☐	☒
5. Any increase in wind or water erosion of soils, either on or off the site?	☒	☐	☐
6. Changes in deposition or erosion of beach sands, or changes in siltation, deposition or erosion which may modify the channel of a river or stream or the bed of the ocean or any bay inlet, or lake?	☐	☐	☒
7. Exposure of all people or property to geologic hazards such as earthquakes, landslides, mudslides, ground failure, or similar hazards?	☐	☐	☒
B. *Air.* Will the proposal result in:			
1. Substantial air emissions or deterioration of ambient air quality?	☒	☐	☐
2. The creation of objectionable odors?	☐	☒	☐
3. Alteration of air movement, moisture or temperature, or any change in climate, either locally or regionally?	☐	☐	☒
C. *Water.* Will the proposal result in:			
1. Changes in the currents, or the course or direction of water movements, in either marine or fresh waters.	☐	☐	☒
2. Changes in absorption rates, drainage patterns, or the rate and amount of surface water runoff?	☒	☐	☐
3. Alterations to the course or flow of flood waters?	☐	☐	☒
4. Change in the amount of surface water in any water body?	☐	☐	☒
5. Discharge into surface waters, or in any alteration of surface water quality, including but not limited to temperature, dissolved oxygen or turbidity?	☐	☒	☐
6. Alteration of the direction or rate of flow of ground waters?	☐	☐	☒
7. Change in the quantity of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations?	☐	☒	☐
8. Substantial reduction in the amount of water otherwise available for public water supplies?	☐	☐	☒
9. Exposure of people or property to water-related hazards such as flooding or tidal waves?	☐	☐	☒
10. Significant changes in the temperature, flow or chemical content of surface thermal springs?	☐	☒	☐
D. *Plant Life.* Will the proposal result in:			
1. Change in the diversity of species, or number of any species of plants (including trees, shrubs, grass, crops, and aquatic plants)?	☐	☐	☒
2. Reduction of the numbers of any unique, rare or endangered species of plants?	☐	☐	☒
3. Introduction of new species of plants into an area, or in a barrier to the normal replenishment of existing species?	☐	☐	☒
4. Reduction in acreage of any agricultural crop?	☒	☐	☐
E. *Animal Life.* Will the proposal result in:			
1. Change in the diversity of species, or numbers of any species of animals (birds, land animals including reptiles, fish and shellfish, benthic organisms, or insects)?	☐	☐	☒
2. Reduction of the numbers of any unique, rare or endangered species of animals?	☐	☐	☒
3. Introduction of new species of animals into an area, or result in a barrier to the migration or movement of animals?	☐	☐	☒
4. Deterioration to existing fish or wildlife habitat?	☒	☐	☐
F. *Noise.* Will the proposal result in:			
1. Increase in existing noise levels?	☒	☐	☐
2. Exposure of people to severe noise levels?	☒	☐	☐

	Yes	Maybe	No
G. *Light and Glare.* Will the proposal result in:			
1. The production of new light or glare?	☐	☒	☐
H. *Land Use* Will the proposal result in:			
1. A substantial alteration of the present or planned land use of an area?	☒	☐	☐
I. *Natural Resources.* Will the proposal result in:			
1. Increase in the rate of use of any natural resources?	☒	☐	☐
2. Substantial depletion of any nonrenewable resources?	☐	☒	☐
J. *Risk of Upset.* Does the proposal result in:			
1. A risk of an explosion or the release of hazardous substances (including, but not limited to, oil, pesticides, chemicals, or radiation) in the event of an accident or upset conditions?	☐	☒	☐
2. Possible interference with emergency response plan or an emergency evacuation plan?	☐	☐	☒
K. *Population.* Will the proposal result in:			
1. The alteration, distribution, density, or growth rate of the human population of the area?	☐	☐	☒
L. *Housing.* Will the proposal result in:			
1. Affecting existing housing, or create a demand for additional housing?	☐	☐	☒
M. *Transportation/Circulation.* Will the proposal result in:			
1. Generation of substantial additional vehicular movement?	☒	☐	☐
2. Affecting existing parking facilities, or create a demand for new parking?	☐	☐	☒
3. Substantial impact upon existing transportation systems?	☐	☐	☒
4. Alterations to present patterns of circulation or movement of people and/or goods?	☐	☐	☒
5. Alterations to waterborne, rail, or air traffic?	☐	☐	☒
6. Increase in traffic hazards to motor vehicles, bicyclists, or pedestrians?	☐	☐	☒
N. *Public Services.* Will the proposal have an effect upon, or result in a need for new or altered governmental services in any of the following areas:			
1. Fire protection?	☐	☐	☒
2. Police protection?	☐	☐	☒
3. Schools?	☐	☐	☒
4. Parks and other recreational facilities?	☐	☐	☒
5. Maintenance of public facilities, including roads?	☒	☐	☐
6. Other governmental services?	☐	☐	☒
O. *Energy* Will the proposal result in:			
1. Use of substantial amounts of fuel or energy?	☐	☐	☒
2. Substantial increase in demand upon existing sources of energy, or require the development of new sources?	☐	☐	☒
P. *Utilities.* Will the proposal result in a need for new systems, or substantial alterations to the following utilities:			
1. Power or natural gas?	☐	☐	☒
2. Communication systems?	☐	☐	☒
3. Water?	☐	☐	☒
4. Sewer or septic tanks?	☐	☐	☒
5. Storm water drainage?	☐	☐	☒
6. Solid waste and disposal?	☒	☐	☐
O. *Human Health.* Will the proposal result in:			
1. Creation of any health hazard or potential health hazard (excluding mental health)?	☐	☒	☐
2. Exposure of people to potential health hazards?	☐	☐	☒

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R. *Aesthetics.* Will the proposal result in:

	Yes	Maybe	No
1 The obstruction of any scenic vista or view open to the public, or will the proposal result in the creation of an aesthetically offensive site open to public view?	☐	☒	☐

S. *Recreation.* Will the proposal result in:

1. An impact upon the quality or quantity of existing recreational opportunities?	☐	☐	☐

T. *Cultural Resources.*

	Yes	Maybe	No
1. Will the proposal result in the alteration of or the destruction of a prehistoric or historic archeological site?	☐	☐	☒
2. Will the proposal result in adverse physical or aesthetic effects to a prehistoric or historic building, structure, or object?	☐	☐	☒
3. Does the proposal have the potential to cause a physical change which would affect unique ethnic cultural values?	☐	☐	☒
4 Will the proposal restrict existing religious or sacred uses within the potential impact area?	☐	☐	☒

U. *Mandatory Findings of Significance.*

1. Does the project have the potential to degrade the quality of the environment, reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☒
2. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?	☐	☐	☒
3. Does the project have impacts which are individually limited, but cumulatively considerable?	☐	☐	☒
4. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒

III. DISCUSSION OF ENVIRONMENTAL EVALUATION *(See Comments Attached)*

A1. Unstable earth conditions could result from cutting and filling slopes in drill site construction. Drillsite will be selected in relatively level areas and constructed in conformance with good engineering practices.

A2,3. Each drill site will require leveling and construction of a sump for drilling mud. Each site will need two acres of land and the proposed permit will require restoration and reseeding upon conclusion of drilling. Existing roads will be used for access.

A5. Exposing soil by removing vegetation will make soils susceptable to erosion. Prospecting activities will be restricted to existing roads where possible. Drillsites will be confined to the most level areas and will be constructed in accordance with good engineering practices to reduce erosion to a miminum.

B1. Deterioration of ambient air quality could be created by equipment and vehicular traffic over dry dusty roads. This will be a short-term effect.

(See Attachment)

IV. DETERMINATION

On the basis of this initial evaluation:

☐ I find the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on an attached sheet have been added to the project. A NEGATIVE DECLARATION will be prepared.

☐ I find the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is requied.

Date: __/__/__

For the State Lands Commission

(Attachment)

B2. There is a possibility of temporary venting of H_2S during drilling. The permit will require an H_2S contingency plan, continuous monitoring of effluent gases at the wellhead, reporting gas analyses, and compliance with regulations and orders of all governmental agencies having jurisdiction.

C2. Removal of vegetation and construction of drillsites could affect the absorption rate, increase the surface flow of water and alter surface drainage patterns. Drillsites will be selected away from stream beds and will be designed for proper drainage. The sites will be replanted with approved vegetation.

C5. Drilling mud could accidently be discharged into surface waters. However the probability of this happening will be reduced to a miminum by requiring that drilling activities be restricted to areas at least 500 feet from streams. The probability of spills occuring will also be reduced by requiring the operator to use experienced crews & requiring the operator to use prudent geothermal drilling practices.

C7. The project contemplates the removal of geothermal ground waters; depending on the nature of the resource, such waters may be reinjected after the extraction of heat. Potable ground waters will be protected by casing and cementing, as required by the permit as well as requirements of the Division of Oil and Gas.

C10. Although there has been no direct correlation drawn between the drilling of geothermal wells and a reduction in temperature, flow or chemical content of thermal springs, this is a remote possibility and therefore a spring monitoring program might be required if exploratory wells are roposed near springs.

E. Timberland acreage will be reduced. Areas that have poor soils or that have been cleared as log landings will be used for drillsites wherever possible.

E4. Removal of vegetation will reduce habitat required by certain wildlife species.

F1. There will be an increase in noise levels during drilling, which is expected to be no more than 6 weeks per well; the permit will allow a maximum noise level of 65 dba at a mile from each site. Vegetation and land forms will provide some shielding. However, there is only one improved camp site in the State Forest so drilling operations will be kept at a distance that will preclude disturbance of the campers.

F2. During the testing phase, people at the site could be exposed to severe noise levels for intermittent periods of time. The duration of the testing phase will be kept as short as possible and should be finished within several days. People in the area will be required to wear hearing protectors.

G1. Drilling will be continuous so at night there will be a localized temporary increase in light and glare; however, drilling operations will not be permitted near the one improved camp site.

H1. While the exploratory phase will create minor alteration of the present or planned land use, a commercial discovery could lead to drilling of additional wells, construction of pipelines and sites for a powerplant and transmission lines. Failure to make a discovery during the initial exploratory stage will end all activity and any potential for land use alteration.

I1. The purpose of the proposal is to explore for geothermal resources for generation of electricity. During the initial exploratory phase there would be no increase in use of natural resources, but a commercial discovery could lead to a substantial use of geothermal resources for electrical generation as a replacement for fossil fuels presently being used for that purpose.

I2. Geothermal resources are considered by some to be a depletable resource. Depending on geologic conditions within the project area, geothermal fluids withdrawn could be reinjected to assist in extending the life of the reservior thus reducing rate of depletion.

J1. During drilling a highpressure zone could be encountered causing geothermal fluids to blowout. The permit will require a blowout contingency pla.. to contain any hazardous materials at the drill site.

M1. While the increase in traffic during the initial exploration phase will be slight and caused by crew and equipment traffic for brief periods, the area is sparsely inhabitated thus any increase in traffic might be considered a substantial increase when measured against the normal traffic count.

N5. The initial exploratory phase will generate only light service truck and crew traffic and should cause little road maintenance problems. Movement of drilling rigs and equipment over local roads has potential for creating some road maintenance problems and this potential will increase if a discovery, leading to full field development, is made. Lack of a discovery during the initial exploratory phase will eliminate all possibilities of road maintenance problems because the exploration activity will terminate.

P6. Drilling wastes will be contained in the sump approved by all appropriate state and local agencies having jurisdiction over waste disposal. Drilling wastes will either be dried on the site and covered or removed and trucked to an approved site.

Q1. There could be some emissions of hydrogen sulfide gas (H_2S) during exploratory drilling and testing the permit will require H_2S monitoring and a reporting system. The applicant will be required to meet all local and state air standards which will keep H_2S emissions well below the level where they would become health hazards.

R1. Temporary siting of a drill rig may be aesthetically offensive; however, every effort will be made to shield drill sites from public view using land forms and vegetation.

S1. Although the primary purpose of the State Forest is the production and harvesting of trees experimentally, the Forest is used for recreation. Each well site will, on a temporary basis, eliminate from recreational use two acres of land. If a resource is discovered additional acreage would be utilized on a more permanent basis. However, wells and other facilities will be sited so as to have a minimum impact on recreation.

COMMENTS RECEIVED FROM REVIEW OF INITIAL STUDY

CHECKLIST AND PROPOSED MITIGATION

1. Loyd Forrest, Deputy Director
Department of Forestry

Comment:

According to the project description, this initial study is for issuance of the permit and surficial exploration only. Yet much of Part III, Discussion of Environmental Evaluation, deals with deep well drilling. A Negative Declaration with appropriate mitigation measures would be acceptable for all surface prospecting activities. If the project progresses to the deep well drilling stage, it may have a significant effect on the environment and an Environmental Impact Report should be prepared.

Response:

Deep well drilling was included in the Discussion of Environmental Evaluation to provide background for the project. If prospecting results warrent a geothermal well, an Environmental Impact Report will be prepared to cover potential impacts.

2. Ronald A. Friesen, Chief, Project Engineering Branch
Air Resources Board

Comment:

If the results of the initial exploration program are favorable, the applicant (E. B. Towne, San Francisco, CA) proposes to drill one to three deep exploratory wells to determine the existence, quality, and quantity of the geothermal resource. It is our understanding that, while the issuance of a prospecting permit by SLC carries with it the right to drill a specified number (six) of deep exploratory wells, for the purpose of assessment of environmental impacts pursuant to provisions of the California Environmental Quality Act, this study deals only with the issuance of the permit and the initial surficial exploration to locate potential drill sites. Once this exploratory activity is complete, the drilling of temperature gradient holes and deep exploratory wells will require a separate environmental assessment and review by both the Division of Oil and Gas (DOG) and SLC.

If our understanding of the proposed action as described above is correct, we have no specific comments at this time. We believe that a negative declaration would be adequate to assess the potential impacts of the initial exploratory activities, but suggest that the additional environmental

assessment requirements (associated with drilling operations) be made quite clear in the negative declaration. Our main concerns deal with the potential impacts which could result from drilling operations. We would, therefore, like to review any future environmental documents prepared concerning drilling operations associated with this project.

Response:

If the projects lead to geothermal well drilling an additional environmental document will be required to cover potential impacts that could result from drilling operations. Future environmental documents will be referred to the Air Resources Board for review and comment.

3. A. E. Naylor, Regional Manager, Region 1
Department of Fish and Game

Comment:

We believe some form of meadow protection should be incorporated into the proposed permit. Latour State Forest contains several meadows scattered throughout the forest that are extremely valuable to a wide variety of wildlife species. They are particularly valuable to black-tailed deer for fawning habitat.

Meadows are very susceptible to damage from use of heavy equipment due to soil compaction and changes in hydrologic structure. Drilling rigs and tractors used in building drill pads could result in such damage. Inadvertent escape of caustic drilling fluids could also adversely impact the vegetation in meadows.

We believe these potential impacts could be satisfactorily avoided by prohibiting drilling operations within 500 feet of meadows.

Response:

In order to protect the meadows, drilling operations will be prohibited within 500 feet of meadows.

4. Joe Hunter, Director
Planning Department
County of Shasta

Comment:

It should be noted that according to the Shasta County's Zoning Ordinance, a permit from the County is not required for the exploration of geothermal resources. However, if a discovery of geothermal resources is made, a use permit from the County would be required prior to the extraction of this resource.

Response:

If the project leads to the drilling of geothermal wells or the discovery of geothermal resources, the permittee will be required to obtain the appropriate use permits.