

MINUTE ITEM

This Calendar Item No. C28
was approved as Minute Item
No. 28 by the State Lands
Commission by a vote of 2
to 0 at its 6/23/83
meeting.

CALENDAR ITEM

C 2 8

6/23/83
W 40383
Gonzalez
PRC 6449

CORE DRILLING PERMIT

APPLICANT: Southern California Edison Company
2244 Walnut Grove Avenue
Rosemead, California 91770

PERMIT LANDS: Approximately 18,000 acres in 32 parcels
of sovereign and State school lands, located
in the Owens Lake area, Inyo County and
Danby Lake area, San Bernardino County,
as described in Exhibit "A" and shown in
Exhibits "B" and "C" attached hereto.

PROPOSED PROJECT:

Drill a maximum of eight rotary drill holes,
four to ten inches in diameter, up to 700
feet deep and a maximum of twenty auger
holes, eight to thirty-six inches in diameter,
to a maximum depth of 100 feet, to obtain
geophysical, geologic and hydrologic infor-
mation concerning water and brine resources
at Owens Lake and Danby Lake. Six of the
rotary drill holes will be drilled on State
parcels along the western margin of Owens
Lake to test for water availability, quantity
and quality while the shallower auger holes
will be drilled within the bed of Owens
Lake to obtain soils engineering data
and to assess the brine resources. The
exact location of these research holes

A 34, 61

S 25

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CALENDAR ITEM NO. C 28. ¹ (CONTD)

at Owens Lake will depend on information obtained during the course of geophysical studies and the first holes in the drilling campaign. Two deep rotary drill holes are planned at Danby Lake. Both surface and down-hole geophysical studies will be conducted before and during the drilling. Each hole when the drilling and testing thereof has been completed, shall be properly abandoned according to acceptable industry practice and procedures.

The purpose of the geologic information collection program is to determine the availability and suitability of water and brine resources, as well pond foundation, lining and dike construction materials for use in a proposed solar salt pond electric power generation facility, capable of generating up to 20 megawatts of power, which may be constructed at the more advantageous of these sites. Copies of all geologic, geophysical and hydrologic data, logs and reports will be furnished to the State Lands Commission within 90 days of termination of drilling activities.

Terms: The core drilling permit term shall be for one year. The term will commence on Commission approval and filing of the Notice of Determination.

Consideration: The public benefit in obtaining water and other resource data from Owens and Danby Lakes. All geologic information from this core drilling program will be made public information.

PREREQUISITE ITEM:

1. Statutory filing fee and expense deposit have been submitted by the applicant.

AB 884:

5/26/84.

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OTHER PERTINENT INFORMATION:

1. A Negative Declaration was prepared by Commission staff pursuant to CEQA and implementing regulations.
2. This project is situated on State school and sovereign lands not identified as possessing significant environmental values. A staff review of available environmental information indicates no reason to identify the subject land parcels as having such values at this time.

EXHIBITS:

- A. Legal Description.
- B. Location Map Owens Lake.
- C. Location Map Danby Lake.
- D. Negative Declaration.

IT IS RECOMMENDED THAT THE COMMISSION:

1. CERTIFY THAT A NEGATIVE DECLARATION, (ND 337) HAS BEEN COMPLETED IN COMPLIANCE WITH CEQA, THE STATE CEQA GUIDELINES, AND THE COMMISSION'S ADMINISTRATIVE REGULATIONS, AND THAT THE COMMISSION HAS REVIEWED AND CONSIDERED THE INFORMATION CONTAINED THEREIN PRIOR TO THE APPROVAL OF THE PROJECT.
2. DETERMINE THAT THE PROJECT WILL NOT HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT.
3. AUTHORIZE THE ISSUANCE TO SOUTHERN CALIFORNIA EDISON COMPANY OF A CORE DRILLING PERMIT FOR THE PERIOD JULY 1, 1983 THROUGH JUNE 30, 1984, ON SOVEREIGN AND STATE SCHOOL LANDS IN INYO AND SAN BERNARDINO COUNTIES DESCRIBED IN EXHIBIT "A" ATTACHED AND BY REFERENCE MADE A PART HEREOF AS PART OF A GEOLOGIC DATA COLLECTION ACTIVITY.

EXHIBIT "A"

LAND DESCRIPTION

W 40383

Those portions of California State lakebed lands in Owens Lake, Inyo County, California (Parcel 1), and California State School lands in San Bernardino County, California (Parcel 2), located within the following described lands:

PARCEL 1

T16S, R36E, MDM; Sections 25 and 36.
T16S, R37E, MDM; Sections 29, 30, 31, 32.
T17S, R36E, MDM; SE $\frac{1}{2}$ of Section 1, Sections 12 and 13.
T17S, R37E, MDM; Sections 4, 5, 6, 7, 18, 19, and the
W $\frac{1}{2}$ SW $\frac{1}{4}$ of Section 32.
T18S, R37E, MDM; S $\frac{1}{2}$ of Section 2,
S $\frac{1}{2}$ of Section 15, S $\frac{1}{2}$ of Section 16, S $\frac{1}{2}$ of Section
17, Sections 19, 20, 21, 22, 27, 28, 29, 30, 31,
32 and 33.

EXCEPTING THEREFROM Lakeland Locations 62, 2159, 2164, 2168,
2173, 2218.

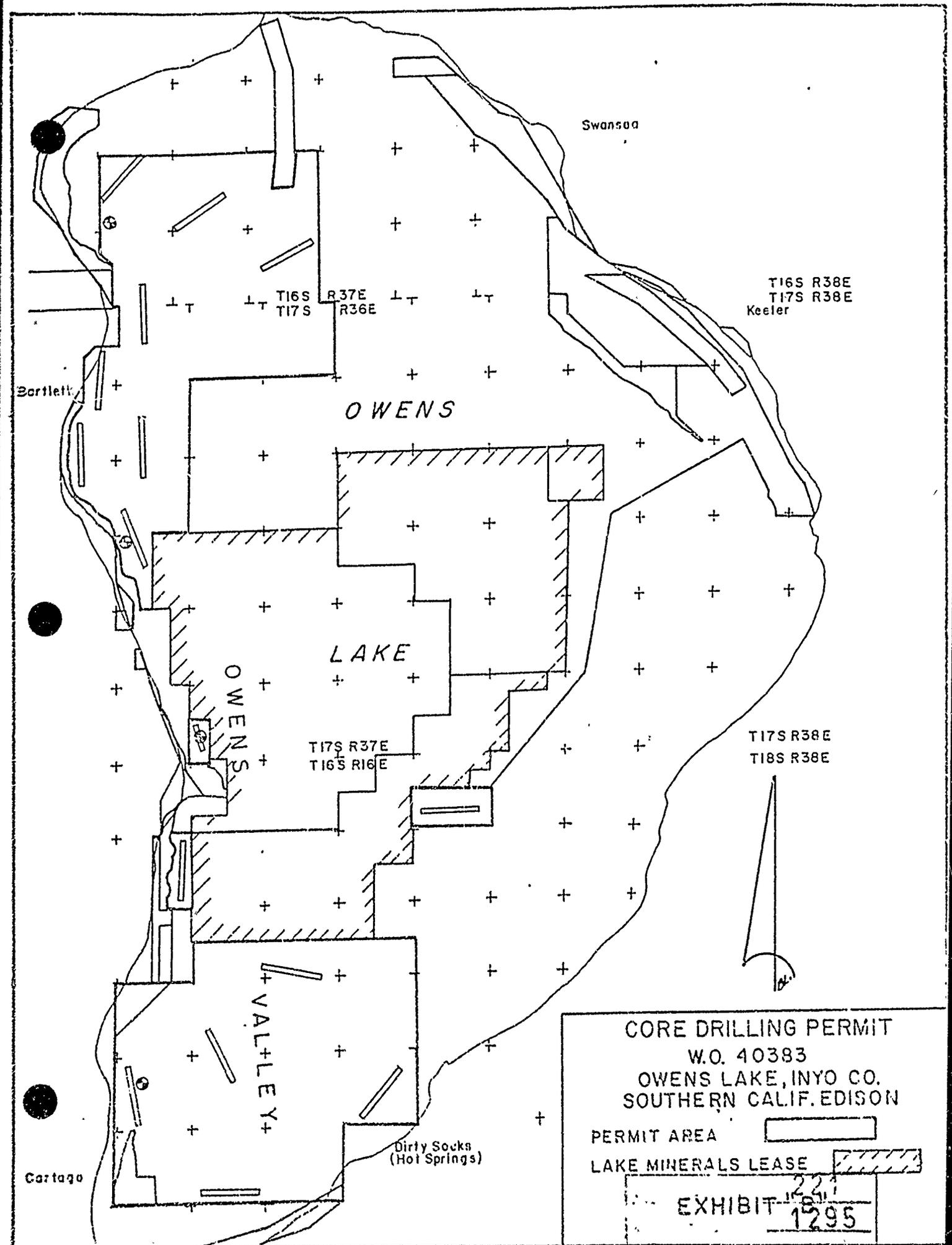
PARCEL 2

T2N, R17E, SBM; Section 36.

END OF DESCRIPTION

PREPARED MAY 25, 1983 BY BOUNDARY AND TITLE UNIT, LEROY WEED, SUPERVISOR.

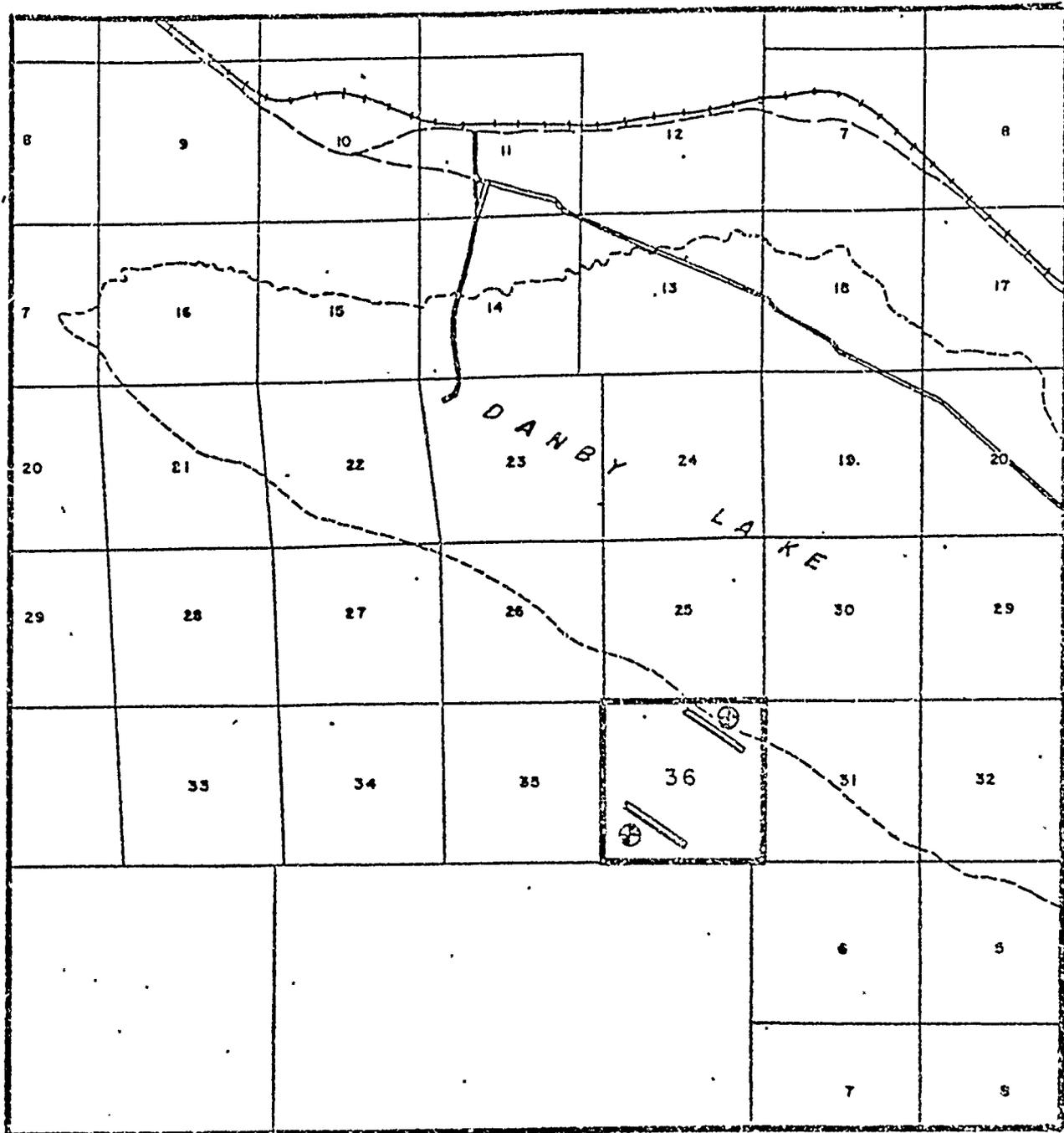
CALIFORNIA	227
MINUTE-PA 15	1294



CORE DRILLING PERMIT
 W.O. 40383
 OWENS LAKE, INYO CO.
 SOUTHERN CALIF. EDISON

PERMIT AREA
 LAKE MINERALS LEASE

EXHIBIT ²²¹ 1295



NORTH



0 1/2 1 MILE
SCALE: 1:62,500

LEGEND

— D.C. RESISTIVITY SOUNDING

⊕ ROTARY WASH BORING

EXHIBIT "C"
 DANBY LAKE
 CORE DRILLING
 PERMIT APPLICATION

W-40383-222
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EXHIBIT "D"

STATE OF CALIFORNIA
STATE LANDS COMMISSION

KATH CORY, *Controller*
LEONARD J. McCARTHY, *Lieutenant Governor*
MICHAEL FRANCHETTI, *Director of Finance*

GEORGE DEUKMEJIAN, *Governor*

EXECUTIVE OFFICE
1807 - 13th Street
Sacramento, California 95814

CLAIRE T. DEBRICK
Executive Officer

File Reference: W 40383

May 25, 1983

NOTICE OF INTENT TO ADOPT NEGATIVE DECLARATION
CAC 15083(d)

An application for the following project is currently being processed by the staff of the State Lands Commission:

Project Title: Geophysical Survey and Well Testing - Owens and Danby Lakes

Project Location: Owens Lake area, Inyo County, and Danby Lake, San Bernardino County.

Project Description: To conduct geophysical survey and test well drillings and development to assess the areas' groundwater and brine resources. This data will be used in an investigation to assess the feasibility of constructing a nonconvective salt-gradient type solar pond electric power generating facility.

Contact Person: Daniel Gorfain Telephone: 916/322-7829

In compliance with the California Environmental Quality Act, a Negative Declaration identified as EIR ND 337, State Clearinghouse Number 83052706, has been prepared.

The above described document prepared for the proposed project will be considered at a regular meeting of the State Lands Commission scheduled for June 23, 1983, at 10:00 a.m., in Room 447 of the State Capitol, Sacramento, California. Anyone interested in this matter is invited to comment on the document by written response prior to the meeting or by personal appearance at the meeting. Persons wishing to appear at the meeting should call 916/322-4107 so that time can be allotted for such appearance.

CLAIRE T. DEBRICK
Executive Officer

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1297

cc: A. Gonzalez, L. Martinez, R. Faber

PROPOSED NEGATIVE DECLARATION

EIR ND 337

File Ref.: W 40383

SCH#: 83052706

Project Title: Geophysical Survey and Well Testing-Owens and Danby Lakes

Project Location: Owens Lake area, Inyo County and Danby Lake area, San Bernardino County

Project Description: To conduct a geophysical survey and test well drillings and development to assess the areas groundwater and brine resources. This data will be used in an investigation to assess the feasibility of constructing a nonconvective salt-gradient type solar pond electric power generating facility.

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 CEQA 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 Study, it has been found that:

- the project will not have a significant effect on the environment.
- the attached mitigation measures will avoid potentially significant effects.

Contact Person: Daniel Gorfain
1807-13th Street
Sacramento, CA 95814
Telephone: (916)322-7829

224
1298

ENVIRONMENTAL IMPACT ASSESSMENT CHECKLIST - PART II

File Ref.: W 40383

Form 13.20 (7/82)

I. BACKGROUND INFORMATION

A. Applicant: Southern California Edison Company
2244 Walnut Grove Avenue
Rosemead, CA 91770

B. Checklist Date: May 23, 1983

C. Contact Person: Alexander E. Gonzalez
Telephone: (213) 590-5201

D. Purpose: Core Drilling and Geophysical Survey Permit.
Geologic Information Collection.

E. Location: Owens Lake area, Inyo County, Danby Lake area, San Bernardino County

F. Description: Drill 8 rotary and 20 auger holes and conduct geophysical survey test water and brine resources. Conduct soils engineer ig tests.

G. Persons Contacted: See attached mailing list.

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

- B. Air.** Will the proposal result in:
1. Substantial air emissions or deterioration of ambient air quality?
 2. The creation of objectionable odors?
 - 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?
- 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:
- | | Yes | Maybe | No |
|---|--------------------------|--------------------------|-------------------------------------|
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Possible interference with emergency response plan or an emergency evacuation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
- K. *Population.* Will the proposal result in:
- | | | | |
|---|--------------------------|--------------------------|-------------------------------------|
| 1. The alteration, distribution, density, or growth rate of the human population of the area? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|
- L. *Housing.* Will the proposal result in:
- | | | | |
|---|--------------------------|--------------------------|-------------------------------------|
| 1. Affecting existing housing, or create a demand for additional housing? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|
- M. *Transportation/Circulation.* Will the proposal result in:
- | | | | |
|---|--------------------------|--------------------------|-------------------------------------|
| 1. Generation of substantial additional vehicular movement? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Affecting existing parking facilities, or create a demand for new parking? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Substantial impact upon existing transportation systems? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4. Alterations to present patterns of circulation or movement of people and/or goods? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Alterations to waterborne, rail, or air traffic? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 6. Increase in traffic hazards to motor vehicles, bicyclists, or pedestrians? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
- 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Police protection? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Schools? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4. Parks and other recreational facilities? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Maintenance of public facilities, including roads? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 6. Other governmental services? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
- O. *Energy.* Will the proposal result in:
- | | | | |
|---|--------------------------|--------------------------|-------------------------------------|
| 1. Use of substantial amounts of fuel or energy? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Substantial increase in demand upon existing sources of energy, or require the development of new sources? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
- P. *Utilities.* Will the proposal result in a need for new systems, or substantial alterations to the following utilities.
- | | | | |
|--|--------------------------|--------------------------|-------------------------------------|
| 1. Power or natural gas? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Communication systems? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Water? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4. Sewer or septic tanks? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Storm water drainage? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 6. Solid waste and disposal? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
- Q. *Human Health.* Will the proposal result in:
- | | | | |
|--|--------------------------|--------------------------|-------------------------------------|
| 1. Creation of any health hazard or potential health hazard (excluding mental health)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Exposure of people to potential health hazards? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
- R. *Aesthetics.* Will the proposal result in:
- | | | | |
|--|--------------------------|--------------------------|-------------------------------------|
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|
- S. *Recreation.* Will the proposal result in:
- | | | | |
|---|--------------------------|--------------------------|-------------------------------------|
| 1. An impact upon the quality or quantity of existing recreational opportunities? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|

Yes May No

T. Cultural Resources.

- 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?

II. DISCUSSION OF ENVIRONMENTAL EVALUATION (See Comments Attached)

See attached project description, Discussion of Environmental Evaluation.

IV. PRELIMINARY 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 required.

Date: May 1 23 1983

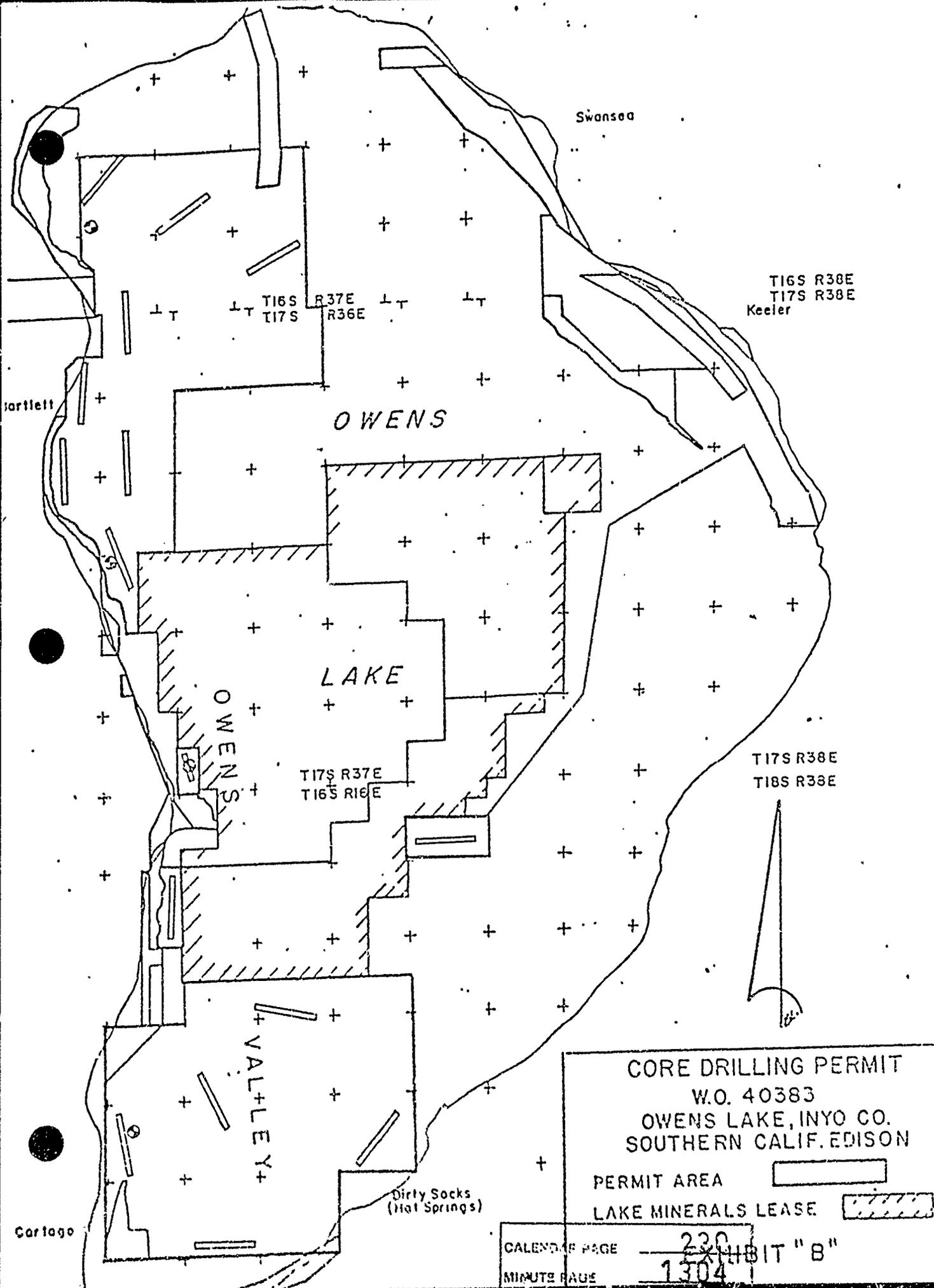
228
1302

Alexander E. Gonzalez
for the State Lands Commission
ALEXANDER E. GONZALEZ

W 40583

DISCUSSION OF ENVIRONMENTAL EVALUATION

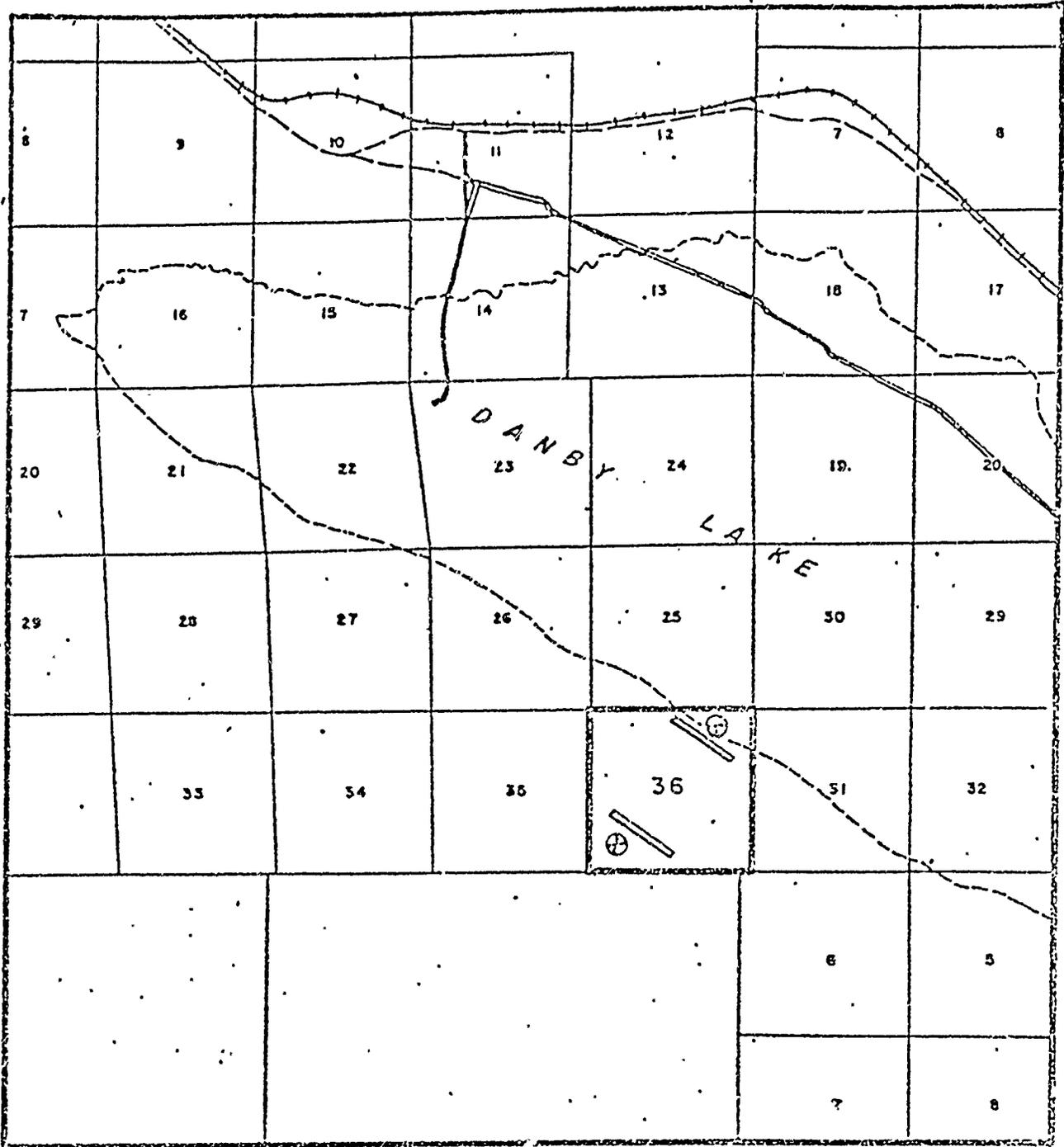
- A-2 Local disruption and compaction of soil will occur in the immediate vicinity of the drill rig when it is moved on and off a drillsite. A minimal amount of earthmoving to construct drillsites might be required at some locations.
- A-3 Some drilling sites might involve constructing level drillsites in hilly terrain.
- A-5 Some increase of wind and water erosion of any soil at newly constructed drillsites, especially in hilly terrain, will occur during rain and windstorms.
- B-1 Temporary dust emissions may occur during drilling and possible construction of drillsites.
- C-6 Drilling may penetrate one or more aquifers with a subsequent flow path through the drill hole. However, it is anticipated no water bearing formations will be penetrated. If ground water is encountered, the drill hole will be plugged with cement upon abandonment.
- F-1. The operating drill rig and service vehicle activities will temporarily increase the existing noise levels in the relatively quiet desert environment.



CORE DRILLING PERMIT
 W.O. 40383
 OWENS LAKE, INYO CO.
 SOUTHERN CALIF. EDISON

PERMIT AREA
 LAKE MINERALS LEASE

CALENDAR PAGE 230
 MINUTE PAGE 1304 EXHIBIT "B"



NORTH



LEGEND

— D.C. RESISTIVITY SOUNDING

⊗ ROTARY WASH BORING

0 1/2 1 MILE
SCALE: 1:62,500

EXHIBIT B-2
DANBY LAKE
CORE DRILLING
PERMIT APPLICATION
237
1305 W-40383

E. LOCATION OF STATE LANDS

OWENS LAKE PERMIT AREAS (See Map)

Inyo County

- 1. T16S, R37E; Sections 29, 30, 31, 32
- 2. T16S, R36E; Sections 25, 36
- 3. T17S, R37E; Sections 4, 5, 6, 7, 18, 19, 32 (W 1/2 of the SW 1/4)
- 4. T17S, R36E; Sections 1 (SE1/4), 12, 13
- 5. T18S, R37E; Sections 2 (S 1/2), 7 (W 1/2 of the W 1/2), 15 (S 1/2), 16 (S 1/2), 17 (s 1/2), 19, 20, 21, 22, 27, 28, 29, 30, 31, 32, 33

Reference: 4th Standard Parallel

Danby Lake Permit Area (See Map).

San Bernardino County

Section 36 in T2N, R17E

VU-40000

PROJECT DESCRIPTION

The purpose of this project is to conduct a geophysical survey and exploratory test well drillings and development to assess the areas groundwater and brine resources. This data will be used in an investigation to assess the feasibility of constructing a nonconvective salt-gradient type solar pond electric power generatic facility in California.

The purposed facility would be constructed in stages starting with a 5 MWe module and may be expanded to a maximum total capacity of 20 MWe. Each module would have a 60 to 100 acre pond with depth of 15 to 20 feet.

The investigation will be conducted under the directions of the Geotechnical Engineering Section of the Southern California Edison Company. Drilling Operations will be sub-contracted but directed by SCE. The study will be conducted over a six month period. The actual time on site will be approximately 20 days.

1. Show how the proposed project will be carried out, including initial construction equipment, techniques, time schedules and operational requirements.

The exploration activities are summarized below:

Geophysical Survey

This would be a non-destructive test. D.C. resistivity soundings will be used for reconnaissance level interrogation of the brine and ground water resources at the Owens Lake and Danby Lake sites. A maximum of 20 soundings would be made at Owens, and a maximum of two soundings would be made at Danby. Proposed locations for the soundings are shown on the attached maps.

The soundings are made by applying a D.C. current to the ground surface with several electrode separations that range from 20 to 4000 feet. As the electrode spacing is increased, the cumulative resistance of deeper and deeper strata can be measured. The resulting model, which consists of layered resistances, can be used to estimate the thickness and total dissolved solids content of the subsurface aquifers. The equipment used for the work consists of a 10 KW motor-generator set. The work will be conducted by SCE personnel.

Test Well Drilling

Test wells will be constructed for the purpose of the brine and fresh water aquifer testing. The locations of the wells will in large part be determined by the results of the D.C. soundings, and the conditions encountered by the previous test wells.

At Owens Lake, the brine source is rather well known, so emphasis will be placed on groundwater exploration. At Danby Lake, both brine and groundwater aquifers need to be proven by test wells. The equipment used will be a truck-mounted rotary water well drill. However, if access is difficult, a lighter drill mounted on a four-wheel drive carrier with flotation implement tires will be used. This equipment would be used to drill up to six test wells at Owens Lake and two wells at Danby Lake, depending upon the conditions encountered. The drill holes would be 4 to 10 inches in diameter with a maximum depth of 700 feet. Drilling fluid will be water with a brine compatible clay. The exact depth of the drill holes will depend upon the distribution of the fresh water and brine aquifers. This distribution will be determined by an examination of all available data.

Upon completion of drilling, the holes will be E-logged. If the E-log and cuttings log indicates the formations encountered are favorable, the holes will be cased. The casing will be 4-inch, 6-inch, or 8-inch ID steel pipe with a gravel pack, if possible. The wells will then be developed and pumped by either an engine driven turbine or electric submersible pump. A 20-foot sanitary grout seal will be provided.

If undesirable conditions are encountered by the wells, such as a brine aquifer under artesian pressure which might pollute a fresh water zone, the well will be pumped full of grout after testing. An exploration hole which is not cased will be abandoned by pumping it full of a sanded grout. Specific conditions encountered may require other methods of abandonment as discussed in the EPA Manual of Water Well Construction Practices.

If no undesirable conditions are encountered by a test well, and it is agreeable to State Lands, a lockable steel cap or welded steel plate will be attached to the top of the casing upon completion of testing. A reinforced 6 by 6 ft. concrete pad will be constructed around the casing.

Auger Drilling

Equipment used for auger holes will be a truck mounted flite auger, hollow stem auger, or bucket auger. This equipment will be used to obtain engineering data soil samples. A maximum of twenty auger holes, 8 to 36 inches in diameter to a maximum depth of 100 feet, will be drilled. The holes will be backfilled with cuttings upon completion of testing. The purpose of the auger holes would be to obtain soils engineering data and samples for pond design, or to investigate shallow brine deposits.

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1310

All drilling equipment described above will be provided by water well or exploration drilling contractors. Inspection, supervision, and data recording will be done by Edison.

Brine and Water Chemistry

During test pumping of the exploration wells, water samples will be taken for chemical analysis. Electrical conductivity of the discharge water will be checked frequently, and extra water samples will be taken if significant changes occur.

- 2. Show the project's future phases or extensions, if any.

If either Owens or Danby Dry Lake is selected as the site, future phases of the project will include soils engineering work to provide earthwork design parameters, and if technically and economically feasible full development of the proposed generating facility.

- 3. Detail other proposed projects that will be dependent upon this project or will be directly influenced by this project.

None

- 4. Describe existing development in the vicinity which will directly (or indirectly) influence or be influenced by this project.

The existing development at Owens Lake is By Lake Minerals Company. Presently Lake Minerals Company mine dry Trona on an 18,000 acre lease and pay California State Lands a royalty of \$100,000 - \$300,000 per year, depending on production.

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1311

Their present mining area is on the southeast edge of the main crystal body shown in the shaded portion of the map. Lake Minerals is a subsidiary of Cominco of America Corp., and is planning a major expansion of their operation. This expansion includes a chemical processing plant which will use several thousand acre-feet of water per year.

5. Enable the Commission to determine if the project:

a.) is in the best interest of the state;

The ultimate objective of the project is to develop a renewable energy resource. This is in line with our national energy policy and the state's energy policy to become energy sufficient and reduce the nation's dependency on foreign oil imports.

b.) conflicts with the various trusts under which State lands are held;

This project plan to use water from the same reservoir that Lake Minerals plan to use in their expansion program. The first phase of this project will be an investigate to determine whether adequate resources are available for both projects.

c.) is a viable use of State lands.

Yes, the project would promote the development of a renewable energy resource, help in dust abatement in the Owens Lake Area, and produce some state revenue.

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	1312