

MINUTE ITEM

This Calendar Item No. 29
was approved as Minute Item
No. 29 by the State Lands
Commission by a vote of 3
to 0 at its 12/17/81
meeting.

CALENDAR ITEM

29

12/17/81
W 40232
Hoagland
PRC 6095

GEOHERMAL PROSPECTING PERMIT

APPLICANT: Phillips Petroleum Company
Minerals Group
655 East 4500 South
Salt Lake City, Utah 84107
Attention: Mr. Charles E. Lee

AREA, TYPE LAND AND LOCATION:
600 acres of reserve mineral lands, Imperial
County.

LAND USE: Geophysical, geological and geochemical
exploration to target drillsites for exploration
drilling to assess geothermal potential
of area. When drill sites are located,
site specific environmental review will
be done by the County of Imperial as provided
by law.

TERMS OF PROPOSED PERMIT:

Initial period: Two years.

Renewal options: One period for two years.

Surety bond: \$50,000.

Special: Staff recommends that
the Commission provide
as a term of the permit
upon discovery of geothermal
resources in commercial
quantities, permittee
will be entitled to a
preferential lease upon
notice of intention to
exercise this right;
subject, however, to
the discretion of the
Commission and review
of environmental documentation
pertaining to deep exploratory
drilling and full field
development of the resources.

A 75

S 38

-1-

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CONSIDERATION: Rental of \$1 per acre per annum during first year; \$5 per acre per annum during the second year; and \$25 per acre per annum during any 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 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: January 8, 1982.

OTHER PERTINENT INFORMATION:

1. Phillips Petroleum Company has applied for a Geothermal Prospecting Permit to explore for geothermal resources on the west side of Salton Sea in Imperial 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 surface owners were notified of Phillips application. Pursuant to PRC Section 6912(a) the surface owners had six months to submit a preferential application. The surface owners have not submitted an application within the statutory period.

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3. In addition to the lands applied for by Phillips Petroleum Company within the Truckhaven prospect area the State owns a total of 9,760± acres, of fee land and 4,300± acres, of reserved mineral land with the geothermal resources owned by the State. The Truckhaven prospect area includes T9S, R9E, and R10E; T10S, R9E, R10E, and R11E; T11S, R9E, R10E, and R11E; and T12S, R9E, R10E, and R11E; SBM. Except for those lands which Holly Energy Inc., as the surface owner, has applied for a prospecting permit under PRC 6912(a), no applications have been received on the remaining State-owned lands or mineral interests. Staff recommends that all fee and reserved mineral lands within the Truckhaven prospect area, as specified above, and not applied for by Phillips Petroleum Company or Holly Energy Inc., be withdrawn by the Commission and made unavailable for geothermal prospecting permits pending a further evaluation of the geothermal resources within the area.

ENVIRONMENTAL INFORMATION:

1. A Negative Declaration (No. 291) was prepared by Commission staff pursuant to the provisions of CEQA.

Mitigation measures addressing comments received in response to the Initial Study regarding the use of existing roadways, and the potential for pollution of surface waters if a blowout should occur were included in the Negative Declaration and have been made a part of the permit.

2. This project is situated on lands not identified as possessing significant environmental values. A staff review of available environmental information indicates no reason to identify the subject parcels as having such values at this time.

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APPROVALS REQUIRED:

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

EXHIBITS:

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

IT IS RECOMMENDED THAT THE COMMISSION:

1. CERTIFY A NEGATIVE DECLARATION (NO. 291) WAS PREPARED BY THE STATE LANDS COMMISSION PURSUANT TO THE PROVISIONS OF CEQA AND SUCH DOCUMENT WAS REVIEWED AND CONSIDERED (CALIFORNIA ADMINISTRATION CODE 15083 AND 15085).
2. FIND THAT CHANGES OR ALTERATIONS HAVE BEEN REQUIRED IN, 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 PHILLIPS PETROLEUM COMPANY OF A TWO-YEAR GEOTHERMAL PROSPECTING PERMIT WITH LESSEE'S OPTION TO RENEW FOR ONE PERIOD OF TWO YEARS AND WITH THE RIGHT TO REQUEST A PREFERENTIAL LEASE IN THE EVENT GEOTHERMAL RESOURCES ARE DISCOVERED IN COMMERCIAL QUANTITIES; 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 RENEWAL PERIOD UNLESS A WELL HAS BEEN DRILLED, FOR THE DETERMINATION OF THE EXISTENCE, QUALITY AND QUANTITY OF GEOTHERMAL RESOURCES IN IMPERIAL COUNTY ON 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 IF A PREFERENTIAL LEASE IS REQUESTED, IT WILL PROVIDE FOR RENTAL OF \$1 PER ACRE PER ANNUM, AND 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 FORM PERMIT TO BE USED IS THE FORM ON FILE IN THE OFFICE OF THE COMMISSION.
4. THE COMMISSION WITHDRAWS FROM AVAILABILITY FOR GEOTHERMAL PROSPECTING PERMITS ALL STATE-OWNED FEE AND MINERAL RESERVED LANDS WITHIN THE TRUCKHAVEN PROSPECT AREA, DEFINED AS T9S, R9E, AND R10E; T10S, R9E, R10E, AND R11E; T11S, R9E, R10E, AND R11E; AND T12S, R9E, R10E,

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AND R11E; SBM WHICH HAS NOT BEEN APPLIED FOR BY HOLLY ENERGY INC. PURSUANT TO PRC SECTION 6912.(a) OR FOR WHICH PROSPECTING PERMITS HAVE BEEN ISSUED TO PHILLIPS PETROLEUM COMPANY PENDING A FURTHER EVALUATION OF THE GEOTHERMAL RESOURCES WITHIN THE AREA.

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EXHIBIT "A"

LAND DESCRIPTION

W 40232

A parcel of California State school land in Imperial County, California,
described as follows:

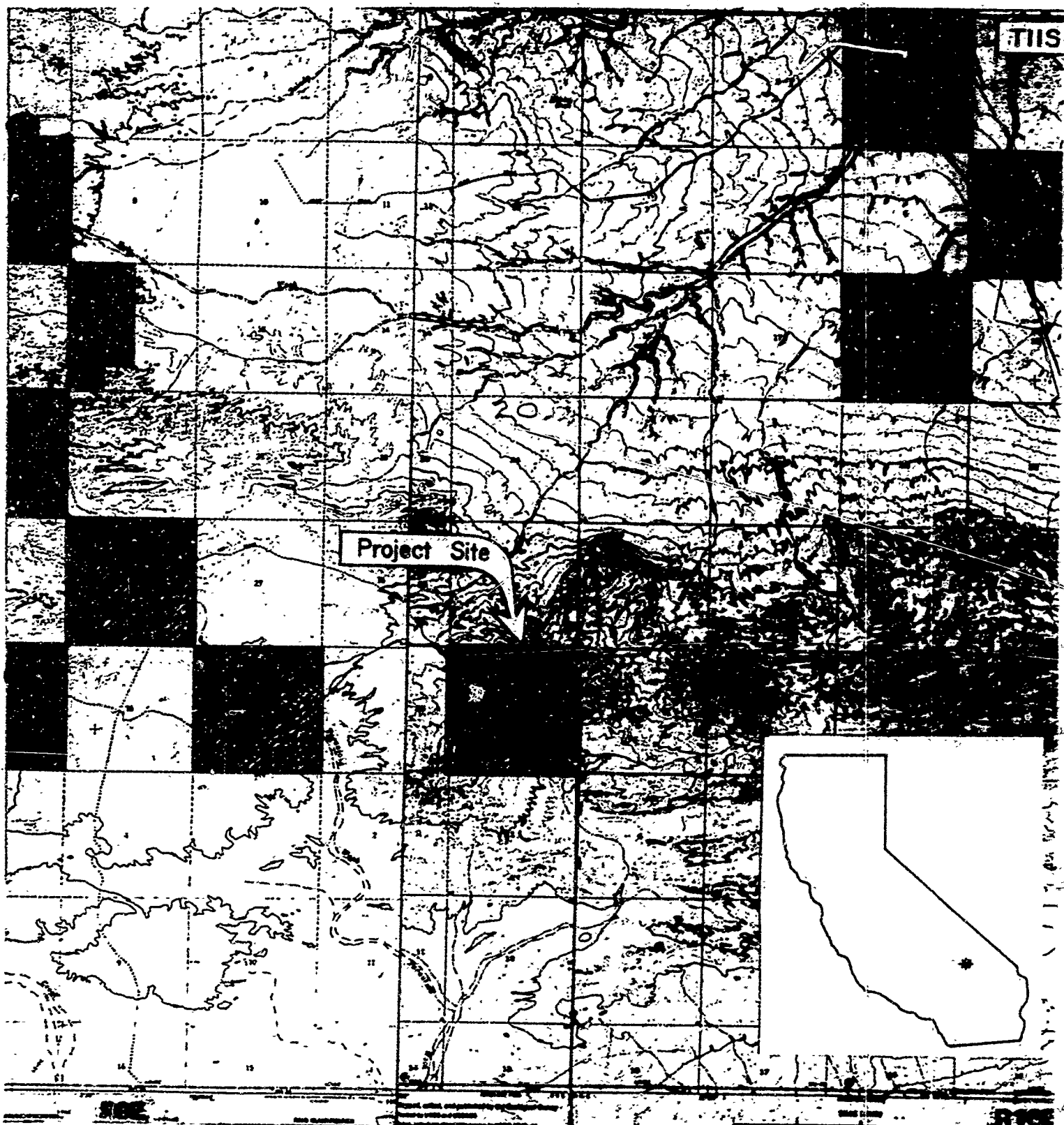
Section 36, T11S, R9E, SBM; W-1/2, SE-1/4, N-1/2 of NE-1/4
and SW-1/4 of NE-1/4.

END OF DESCRIPTION

PREPARED NOVEMBER 20, 1981 BY TECHNICAL SERVICES UNIT, ROY MINNICK, SUPERVISOR.

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TIIS



- Fee (Vacant State Land)
- Fee Minus Portion of Minerals
- Rent with 100% Mineral Restoration
- Rent with Portion of Mineral Reservation to US
- Fee & 1/16% Minerals Reserved to State



GEOHERMAL PROSPECTING
 PERMIT APPLICATION
 BY PHILLIPS

PETROLEUM CO.
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 IMPERIAL COUNTY
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EXHIBIT "B"

STATE LANDS COMMISSION

1807 13TH STREET
SACRAMENTO, CALIFORNIA 95814

EXHIBIT "C"

 Draft FinalNEGATIVE DECLARATION

EIR NO 291

File Ref.: W 40232

SCH#:

Project Title: GEOTHERMAL PROSPECTING PERMIT -- TRUCKHAVEN PROSPECT

Project Location: On the west side of Salton Sea about 10 miles south of
Truckhaven, Imperial County. (See attached site map.)Project Description: Issuance of a permit to prospect for geothermal resources to
allow surficial exploration to target sites for deep exploration
drilling to determine the existence, quality and quantity of
geothermal resources for electrical generation. If and when
sites are selected for deep exploratory drilling the site
specific impacts will be assessed in a separate study.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. the attached mitigation measures will avoid potentially significant effects.Contact Person: Ted Fukushima
1807 13th Street
Sacramento, CA 95814
(916) 322-7813

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INITIAL STUDY CHECKLIST

Form 13.20 (7/80)

File Ref: W 40232

I. BACKGROUND INFORMATION

- A. Applicant: Phillips Petroleum Company
Minerals Group
P.O. Box 239
Salt Lake City, Utah 84110
- B. Checklist Date: 9 / 1 / 81
- C. Contact Person: Donald L. Hoagland
 Telephone: (916) 322-7804
- D. Purpose: Issuance of a permit to prospect for geothermal resources.
- E. Location: West side of the Salton Sea approximately 10 miles south of Truckhaven, Imperial County, Sec. 36, T11S, R9E, S8BM, approximately 600 acres
- F. Description: Applicant proposes to perform geological and geophysical exploration including the drilling of a limited number of temperature gradient holes to target drill sites for deep exploration drilling to determine the existence, quality and quantity of geothermal resources for electrical power generation. Under this permit, permittee could not produce but could test wells to establish the existence of a commercial resource. During the initial exploration phase, activities will be restricted to existing roads and trails. Site specific impacts of deep exploratory drilling would be assessed by the County of Imperial under application for a use permit. No lease would be issued until the impacts of full field development had been assessed.
- G. Persons Contacted: Doug Stockton, Geothermal Officer, Division of Oil and Gas; Ronald Powell, Department of Fish and Game, Blythe; Jay Von Werlhof, Director Imperial Valley Museum, El Centro.

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

- | A. Earth. Will the proposal result in: | Yes | Maybe | No |
|--|-------------------------------------|--------------------------|-------------------------------------|
| 1. Unstable earth conditions or changes in geologic substructures? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Disruptions, displacements, compaction, or overcovering of the soil? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Change in topography or ground surface relief features? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. The destruction, covering, or modification of any unique geologic or physical features? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Any increase in wind or water erosion of soils, either on or off the site? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 7. Exposure of all people or property to geologic hazards such as earthquakes, landslides, mudslides, ground failure, or similar hazards? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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B. *Air.* Will the proposal result in:

- | | Yes | Maybe | No |
|---|--------------------------|-------------------------------------|-------------------------------------|
| 1. Substantial air emissions or deterioration of ambient air quality? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. The creation of objectionable odors? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Alteration of air movement, moisture or temperature, or any change in climate, either locally or regionally? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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? .. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Changes in absorption rates, drainage patterns, or the rate and amount of surface water runoff? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Alterations to the course or flow of flood waters? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4. Change in the amount of surface water in any water body? .. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Discharge into surface waters, or in any alteration of surface water quality, including but not limited to temperature, dissolved oxygen or turbidity? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 6. Alteration of the direction or rate of flow of ground waters? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 7. Change in the quantity of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 8. Substantial reduction in the amount of water otherwise available for public water supplies? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 9. Exposure of people or property to water-related hazards such as flooding or tidal waves? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 10. Significant changes in the temperature, flow or chemical content of surface thermal springs? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

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)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Reduction of the numbers of any unique, rare or endangered species of plants? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Introduction of new species of plants into an area, or in a barrier to the normal replenishment of existing species? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4. Reduction in acreage of any agricultural crop? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Reduction of the numbers of any unique, rare or endangered species of animals? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Introduction of new species of animals into an area, or result in a barrier to the migration or movement of animals? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4. Deterioration to existing fish or wildlife habitat? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

F. *Noise.* Will the proposal result in:

- | | | | |
|---|-------------------------------------|--------------------------|-------------------------------------|
| 1. Increase in existing noise levels? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Exposure of people to severe noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

G. *Light and Glare.* Will the proposal result in:

- | | | | |
|--|--------------------------|-------------------------------------|--------------------------|
| 1. The production of new light or glare? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|-------------------------------------|--------------------------|

H. *Land Use.* Will the proposal result in:

- | | | | |
|--|--------------------------|-------------------------------------|--------------------------|
| 1. A substantial alteration of the present or planned land use of an area? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|-------------------------------------|--------------------------|

I. *Natural Resources.* Will the proposal result in:

- | | | | |
|--|-------------------------------------|--------------------------|--------------------------|
| 1. Increase in the rate of use of any natural resources? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Substantial depletion of any nonrenewable resources? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

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

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 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)

- A2,3. Each drill site may require some leveling and construction of a 100 x 175 foot sump for drilling mud. The sites will not exceed 3.7 acres and the proposed permit will require restoration and reseeding upon conclusion of drilling.
- B2. There is a possibility of temporary venting of H₂S during drilling. The permit will require an H₂S 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.
- C7. The proposal, if a commercial resource is discovered, 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 deep geothermal wells and a reduction in temperature, flow or chemical content of surface thermal springs, this is a remote possibility and therefore a spring monitoring program would be required if exploratory wells are proposed for drilling near springs.
- F1. There will be an increase in noise levels during drilling, which is expected to take no more than 4-5 weeks per well; the permit will allow a maximum noise level of 65 dba at 1/4 mile from the site.

(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 required.

Date: 11 / 10 / 81

Donald L. Hesse
 For the State Lands Commission
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(Attachment)

- G1. If night drilling is permitted, there will be a localized temporary increase in light and glare; however, the area is sparsely populated and this will be a short term problem.
- H1. While the exploratory phase will create minor alteration of the present or planned land use, which is currently desert recreation, a commercial discovery could lead to drilling of additional wells, construction of pipelines and sites of 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 and utilize geothermal brines and/or steam 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 a depletable resource, but because of the geologic conditions within the project area, all or most of the geothermal fluids withdrawn would have to be reinjected to prevent subsidence. A properly engineered and managed injection program should assist in extending the life of the reservoir thus reducing rate of depletion.
- J1. The permit will require a blowout contingency plan 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 inhabited 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 deep 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 solid waste disposal. Drilling wastes will either be dried on the site and covered or removed and trucked to an approved II-1 site.
- Q1. There may be some emissions of hydrogen sulfide gas (H₂S) during exploratory drilling and testing but the permit will require H₂S monitoring, a reporting system and the applicant will be required to meet all local and state air standards which will keep H₂S emissions well below the level where they would become health hazards.
- R1. Temporary siting of a drill rig may be aesthetically offensive; however, the proposed drill sites are located in relatively remote and sparsely populated areas.
- S1. A portion of the proposed permit area is located in an area being contemplated as an addition to the Octillio Wells Vehicle recreation area and some of the area contemplated for ORV use could be restricted for safety reasons during the short time exploratory drilling is occurring.

(Attachment)

T1. There will be little or no surface disturbance during the initial exploration phase, but earth movement for site and sump preparation would occur at the exploratory drilling phase and possible impacts to prehistoric archeological sites would have to be assessed during the county's use permit hearings before specific drill sites are approved. During the initial exploratory phase activities will be restricted to existing roads and trails to prevent possible damage to cultural resources.

COMMENTS RECEIVED FROM REVIEW OF INITIAL STUDY CHECKLIST AND PROPOSED MITIGATION

1. The Resources Agency
Department of Fish and Game

COMMENT:

It does not appear that there are any rare or endangered flora or fauna in the project area, with the possible exception of the flat-tailed horned lizard. Because of this possibility, and the fact that some rare and endangered plant species are often found in a sandy or dune environment, vehicular activity during initial exploration should be restricted to existing roads and trails whenever possible.

RESPONSE:

A provision for restricting vehicular activity to existing roads and trails during the initial exploratory phase will be made a part of the permit.

2. Jay Von Werlhof, Director
Imperial Valley College Museum

COMMENT:

While it does not appear archeological values are present within the project area, archeological or prehistoric sites are known to exist in the area. The extent and exact location of these sites is unknown at this time. Therefore, to avoid damage to potential sites, cross country driving during the exploratory stage should be limited.

RESPONSE:

See response to #1.

3. County of Imperial
Phillip Shafer, Geothermal Planner

COMMENT:

Will the applicant be required to obtain a use permit from the county for the drilling of temperature gradient holes and deep exploratory wells?

RESPONSE:

Once surficial exploration to target drill sites or locations for temperature gradient holes is completed, the applicant will be required to obtain a permit from the county and an assessment of site specific impacts will be made.

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(2) of Comments received from Review of Initial Study Checklist

COMMENTS:

The availability of water for drilling may be a problem and should be addressed in the initial study.

RESPONSE:

The applicant plans to purchase water from the Coachella Valley Water District. Water to some of the sites can probably be taken from a hydrant on Air Park Drive which is supplied from the "County Line Aquifer". Water will be piped or trucked to the other sites. Water requirements for drilling represents a small fraction of the total annual water needs for the west side of the Salton Sea.

COMMENTS:

Protections for shallow groundwater and surface water contamination from possible blowouts described in the Environmental Impact Report prepared for Imperial County by Westec Services, Inc. titled "Truckhaven Prospect Geothermal Exploratory Wells" should be made a part of the study and the suggested mitigation measures made a part of the permit.

RESPONSE:

The portions of the Truckhaven EIR dealing with potential pollution of ground-water and surface water, and proposed mitigation measures contained in Sections 2.2.2.2 through 2.2.3.2 on pages 2-16 and 2-17 are, by reference, made a part of this study and the proposed mitigation measures will be made a part of the permit.

4. The Resources Agency
Maurice H. Getty, Chief
Resource Protection Division
Department of Parks and Recreation

COMMENTS:

Mitigation measures for the following potential environmental impacts should be detailed.

-Rare or endangered plants and animals: Dunes and sandy areas are potential sites for rare plants (e.g., Astragalus magdalenae var. poirsonii and Astragalus lentiginosus borregainis) and sensitive animals (the flat-tailed horned lizard and the Colorado Desert fringe-toed lizard). If these species are present on the property, disturbance of dunes and sandy areas by prospecting activities could be harmful to them.

(3) of Comments received from Review of Initial Study Checklist

-Prehistoric cultural resources: prospecting activities, such as drilling temperature gradient holes, could damage or destroy evidence of prehistoric human occupation.

RESPONSE:

See response comments 1, 2 and 3 dealing with impacts on rare or endangered flora and fauna.

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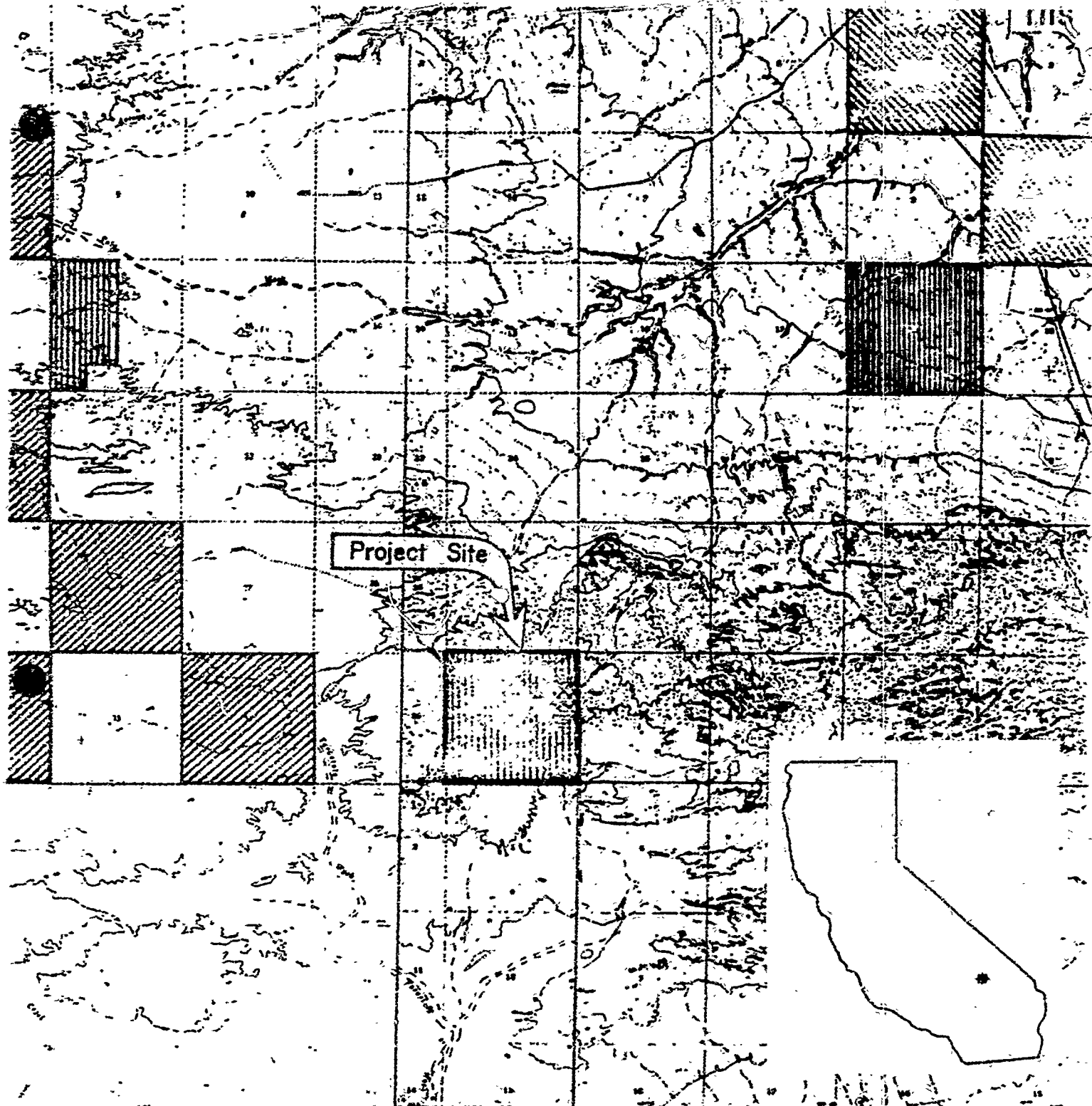
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ATTN: Mr. J.F. Ragan






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Project Site

R9E

R10E

-  Fee (Vacant State Land)
-  Fee Minus Portion of Minerals
-  Patent with 100% Mineral Reservation
-  Patent with Portion of Mineral Reservation to U.S.
-  Patent 1/16% Minerals Reserved to State



GEOHERMAL PROSPECTING
 PERMIT APPLICATION
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