MINUTE ITEM

This Calendar Item No. 30 was approved as Minute Item No. 30 by the State Lands Commission by a vote of 3 0 at its 10/30/81 meeting.

CALENDAR ITEM

30

10/30/81
W 40188
Martinez

GEOTHERMAL RESOURCES LEASING ACTIVITY

BACKGROUND: In November, 1978 Commission authorization was given to classify 349 acres of land in Sonoma County shown in Exhibit "A" and described in Exhibit "B" as being part of a known Geothermal Resources area (KGRA), and to proceed with leasing by competitive bid pursuant to PRC Section 6912(a).

ENVIRONMENTAL INFORMATION:
At the October, 1980 Commission meeting, authorization was given for the preparation of a programmatic EIR for the proposed Geysers Geothermal Resource Leasing Program on the subject parcel.

An EIR (SLC EIR No. 286) which discusses and evaluates general types of environmental impacts associated with geothermal activities has been prepared by Ecoview Environmental Consultants and circulated pursuant to CEQA and the State EIR Guidelines. A public hearing on the draft report was held on August 10, 1981, in the Sonoma County Administration Building. No significant adverse comments were received. If and when subsequent site-specific operations occur, a site-specific environmental document will be prepared by the Division of Oil and Gas pursuant to the provisions of AB 884 (Chapter 1271, Statutes of 1978) that will address all subsequent site-specific activities associated with exploratory drilling.

IMPLEMENTATION: Staff requests authorization to lease the designated parcel by competitive bidding.

AB 884: N/A

A 2

S 2

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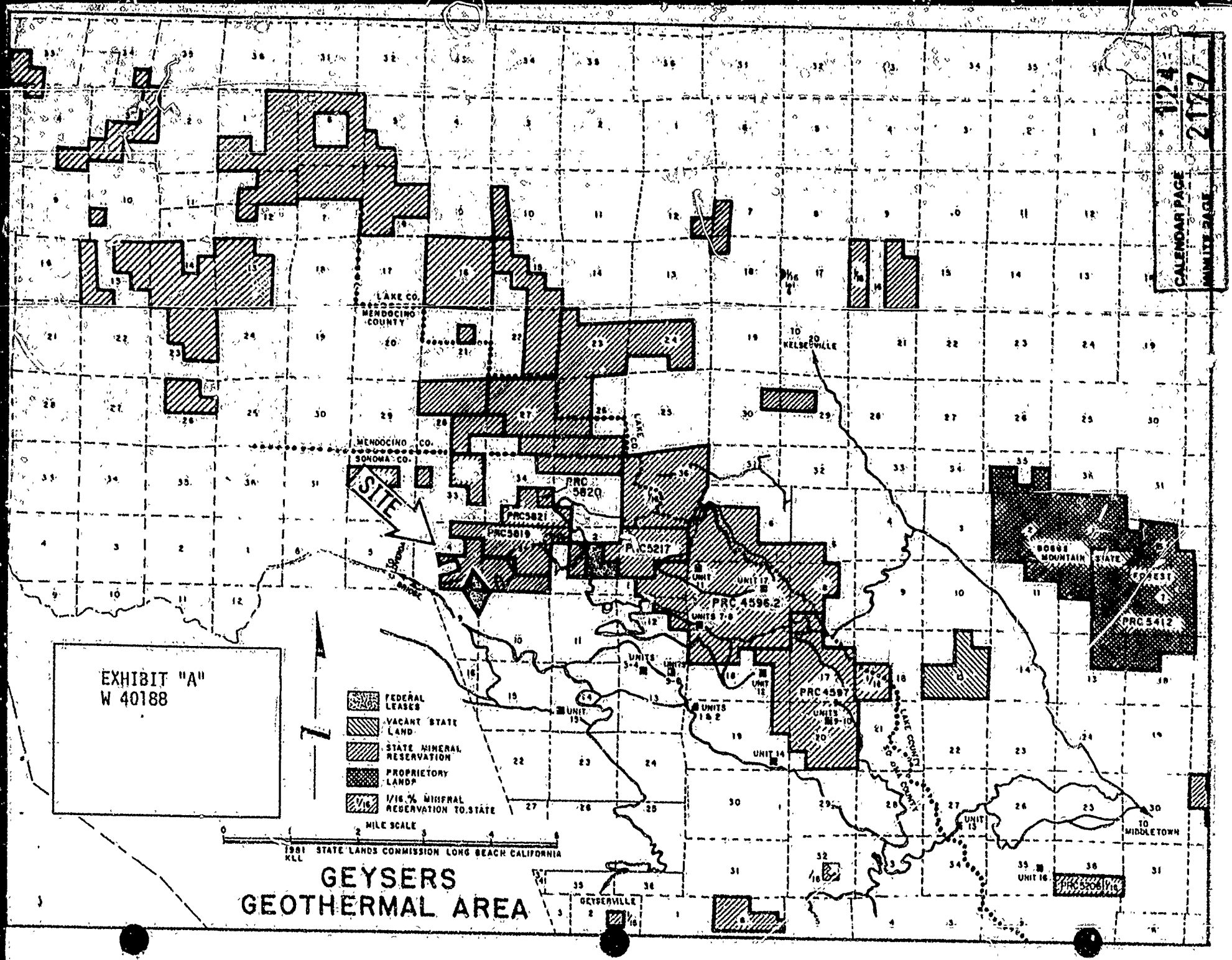
EXHIBITS:
A. Location Map.
B. Land Description.
C. EIR Summary.

IT IS RECOMMENDED THAT THE COMMISSION:

1. AUTHORIZE THE COMPETITIVE BID LEASING OF THE LANDS SHOWN IN EXHIBIT "A" AND DESCRIBED IN EXHIBIT "B".

2. CERTIFY THAT A FINAL EIR (SLC EIR NO. 286) HAS BEEN PREPARED FOR THE STATE LANDS COMMISSION BY ECOVIEW ENVIRONMENTAL CONSULTANTS FOR PROPOSED GEOTHERMAL EXPLORATION ON THE LANDS REFERRED TO IN EXHIBIT "B" PURSUANT TO THE PROVISIONS OF CEQA, AND THAT SUCH DOCUMENT WAS REVIEWED AND CONSIDERED PRIOR TO THE APPROVAL OF THE PROJECT (SEE CAC SECTION 15085(g)).

3. FIND THAT CHANGES OR ALTERATIONS HAVE BEEN INCORPORATED INTO THE PROPOSED PROJECT WHICH WILL MITIGATE OR AVOID THE SIGNIFICANT ENVIRONMENTAL EFFECTS IDENTIFIED IN THE FINAL EIR.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LAKE CO.
MENDOCINO COUNTY
MENDOCINO CO.
SONOMA CO.
LAKE CO.
KELSEYVILLE
SITE
PRC 5820
PRC5821
PRC5819
PRC5217
PRC 4596.2
PRC 4597
PRC 5412
BOGGS MOUNTAIN STATE FOREST
UNIT 11
UNIT 17
UNITS 7-8
UNITS 3-4
UNITS 5-6
UNIT 18
UNIT 15
UNITS 1 & 2
UNITS 9-10
UNIT 14
UNIT 13
UNIT 16
PRC5206.1
LAKE COUNTY
SONOMA COUNTY
TO MIDDLETOWN
GEYSERVILLE
EXHIBIT "A"
W 40188
FEDERAL LEASES
VACANT STATE LAND
STATE MINERAL RESERVATION
PROPRIETORY LANDS
1/16 % MINERAL RESERVATION TO STATE
MILE SCALE
1981 STATE LANDS COMMISSION LONG BEACH CALIFORNIA
GEYSERS
GEOTHERMAL AREA

EXHIBIT "B"

LAND DESCRIPTION W 40188

All the State-owned mineral interests lying within a parcel of land in Sonoma County, California, described as follows:

Lots 1 and 2, E-1/2 of SW-1/4, and S-1/2 of SE-1/4 of Section 3; Lots 6,7,8,9 and SE-1/4 of NE-1/4 of Section 4, all in T11N, R9W, MDM.

END OF DESCRIPTION

PREPARED AUGUST 21, 1981 BY TECHNICAL SERVICES UNIT, ROY MINNICK, SUPERVISOR.

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EXHIBIT C

SUMMARY

SLC proposes to offer for lease State mineral reserves for geothermal development on about 349 acres in portions of Section 4, T11N, R9W, MDB & M, which lie nine miles northeast of Cloverdale and three miles northwest of The Geysers, Sonoma County, California. The discretion and permit authority lie in the Public Resources Code, Division 6, Public Lands, Part 1, Chapter 5, Section 6401(c).

This environmental assessment includes considerations of pertinent aspects of geothermal development, including leasing, surface and shallow exploration, exploratory drilling, field development, construction and operation of a resource utilization system, field maintenance and ultimate field abandonment. All these aspects are considered in relation to other geothermal developments in The Geysers-Calistoga KGRA.

FINDINGS

- The mineral rights offered for lease with surface rights necessary to extract the resource are surrounded by lease land which is in various stages of development, including exploratory wells, field development, and operating electrical generation units within a radius of 2.5 miles.

- Land sensitivity analysis of the lease area indicates some portions of the project to have oversteepened slopes, some areas of unstable slopes and old landslides, readily erodible soils, and some riparian vegetation. There is, however, a considerable portion, particularly in the eastern section, which has moderate constraints (cf. Figure III-1). Only a single archaeological artifact was identified in the 1976 survey, and that was without archaeological context and therefore without significance.

- The lease's access route has several important areas of sensitivity and environmental concern.
  (a) The bridge crossing over Big Sulphur Creek: The existing bridge was built to provide all-weather access to the mines in the vicinity. It is a one-way, steel girder bridge without guard rails approximately 40 ft above Big Sulphur Creek. This bridge is structurally capable of carrying the weight of drill equipment.

(b) Approach of 7 Mile Road to Cloverdale-Geyser Road: The approach to Cloverdale-Geyser Road is one-way from the west; 7 Mile Road enters it at an acute angle with insufficient turning radius, even for cars, to the east. It is essentially a blind entrance for traffic approaching from the east, because of the sharp downhill grade for the first 100 feet of 7 Mile Road.

(c) 7 Mile Road: This road has sharp curves, steep grades, passes through or near several archaeological and historical sites, crosses several large areas subject to landsliding, and is built mostly on soils which are highly erodible.

(d) Importance of 7 Mile Road: 7 Mile Road will serve the majority of geothermal developments as they are built on the north side of Big Sulphur Creek, probably well into Mendocino County. It will continue to be used for range management, hunting and fire control access. Hence, it is a key road for the whole area, and increasing amounts of traffic can be expected.

(e) Streambed Crossing: Construction activity and/or manipulation of the streambed for equipment access, such as was done for Wildhorse 1, 2 and 5, will impact the fishery and increase sedimentation in Big Sulphur Creek.

(f) Current Road Status: Economic and engineering appraisals of the bridge and 7 Mile Road are currently being considered by Geothermal Resource International Corp. It may be necessary for any lessee to commit a proportional share of bridge and road construction and maintenance [illegible] as a condition of access to the leased lands.

a. There is no natural [illegible] of unusual importance in the area to be leased, except for a small amount of riparian vegetation which passes across one small portion of the northwest corner. No rare or endangered species, plant or animal, have been encountered in the area over the last five years of observations at all seasons of the year.

There is one small spring by the access road near the southern boundary of the lease; however, that area has already sustained considerable impact from mining and road construction, and it still continues to flow. Further jeopardy to its continued flow and drainage should be avoided.

- Over its life, geothermal development will enjoin unavoidable impacts on visual aesthetics, topographic modifications, erosion and sedimentation increases, some degree of air quality impairment, minor amounts of vegetation and wildlife habitat loss, and possibly further deterioration of cultural resources. These impacts can be reasonably mitigated, as detailed in subject sections of this report.

PRINCIPAL ENVIRONMENTAL CONCERNS

In the absence of a specific project proposal, only general environmental concerns have been stated.

- The area is proximal to Big Sulphur and Squaw Creeks, which support steelhead spawning and nursery grounds, as well as riparian habitat. Riparian zones readily reflect any environmental disturbance. They also support the greatest diversity of both flora and fauna species. Eight archaeological sites were discovered within the area's riparian corridors. This mainly pertains to the access route rather than the lease itself.

- Soils throughout the area are highly erosive. Two of the soil series, Atwell and Suther, are subject to solifluction. Previous activities, mining and road construction, have accelerated erosion/sedimentation processes. Factors influencing the degree of acceleration are poor road alignment selection; poor design and construction; and very poor maintenance of excavated areas. Along the access route, erosion is also being accelerated due to improperly placed culverts, clogging of culverts and lack of energy dissipators at outfalls.

- Nearly all hillside areas are highly susceptible to landsliding and gullying.

- The existing road through the lease needs urgent maintenance and repair. Major improvements and some realignment will be necessary to safely accommodate all-weather use.

- At least three concentrations of abandoned and caved mine shafts, many of which are either unrecorded or only vaguely recorded, occur immediately south of the lease area.

- Potential impacts of concern are:
  - increased soil and bedrock instability
  - loss of soil cover
  - loss of plant cover
  - disruption of surface and subsurface drainage
  - blockage or partial blockage of streams and drainage channels
  - degradation of water quality due to siltation
  - adverse effects on wildlife and fish due to habitat loss, stream channel disturbance and siltation
  - destruction of archaeological sites
  - increased wildlife hazard
  - visual scarring of the landscape
  - safety hazard due to presence of abandoned mine shafts