

JOHN WAIHEE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER AND LAND DEVELOPMENT

P. O. BOX 373
HONOLULU, HAWAII 96809

JAN 25 1993

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'93 JAN 26 A9:39

OFFICE OF ENVIRONMENTAL
QUALITY CONTROL

Mr. Brian J.J. Choy
Director
Office of Environmental
Quality Control
220 South King Street, Fourth Floor
Honolulu, Hawaii 96813

Dear Mr. Choy:

Job No. 8-HW-F, Kainaliu Test Well
(Well No. 3255-02), Kainaliu, North Kona, Hawaii

Pursuant to Section 11 of the Environmental Impact Statement Rules, transmitted for processing are four (4) copies of the Final Environmental Assessment and Notice of Determination (Negative Declaration) for the subject project. Also attached is a completed OEQC Bulletin Publication Form.

If there are any questions on this matter, please have your staff contact Mr. Edward Lau of the Project Development Branch at Extension 70227.

Sincerely,

A handwritten signature in black ink, appearing to read "Manabu Tagomori".

MANABU TAGOMORI
Manager-Chief Engineer

SL:lc

Enc.

13

FEB - 8 1993

1993-02-08-H1-PEA- Kainaliu Test Well, Job No 8-HW-F

ENVIRONMENTAL ASSESSMENT

AND

NEGATIVE DECLARATION

Job No. 8-HW-F

Kainaliu Test Well

(Well No. 3255-02)

Kainaliu, North Kona, Hawaii

State of Hawaii
Department of Land and Natural Resources
Division of Water and Land Development
February 1993

NOTICE OF DETERMINATION: Negative Declaration

FOR: Job No. 8-HW-F
Kainaliu Test Well (Well No. 3255-02)
Kainaliu, North Kona, Hawaii

BY: Division of Water and Land Development
Department of Land and Natural Resources

The proposed action will have no significant effect on the environment and therefore does not require the preparation of an Environmental Impact Statement. This Notice of Determination and Environmental Assessment are being filed as a Negative Declaration.

ENVIRONMENTAL ASSESSMENT
For
Job No. 8-HW-F
Kainaliu Test Well
Well No. 3255-02
Kainaliu, North Kona, Hawaii

I. PROPOSING AGENCY

Division of Water and Land Development
Department of Land and Natural Resources

II. AGENCIES CONSULTED

County of Hawaii

Planning Department
Department of Water Supply

State of Hawaii

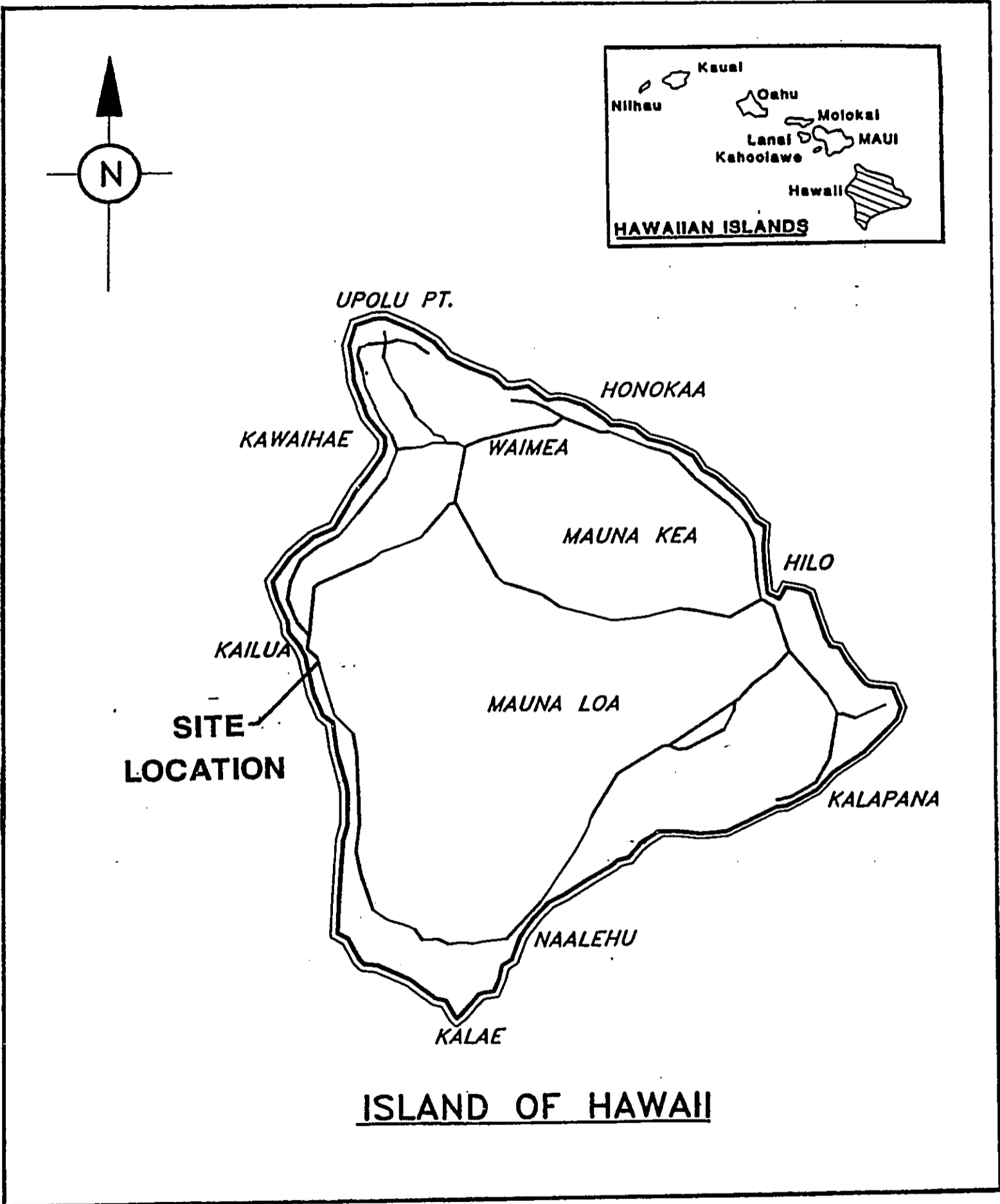
Commission on Water Resource Management, DLNR
Historic Preservation Division, DLNR
Division of Forestry and Wildlife, DLNR
University of Hawaii

III. PROJECT DESCRIPTION

This project involves the drilling, casing and testing of a 16-inch diameter well approximately 1520 feet deep on the western slope of Mt. Hualalai in North Kona, Hawaii. The proposed well site is located within the Kona Branch, University of Hawaii Agricultural Experiment Station, TMK: 7-9-09:10. See Figures 1 and 2.

Funds for this project are available through Act 316, SLH 1989, Item D-18.

This exploratory well drilling is part of a larger project to determine the feasibility of constructing a water shaft in the Kainaliu area. It will provide valuable hydrogeologic data on the quality and quantity of groundwater resources. This well exploration is for information purposes only. Once sufficient data is obtained from the well, it will be turned into a monitor well.



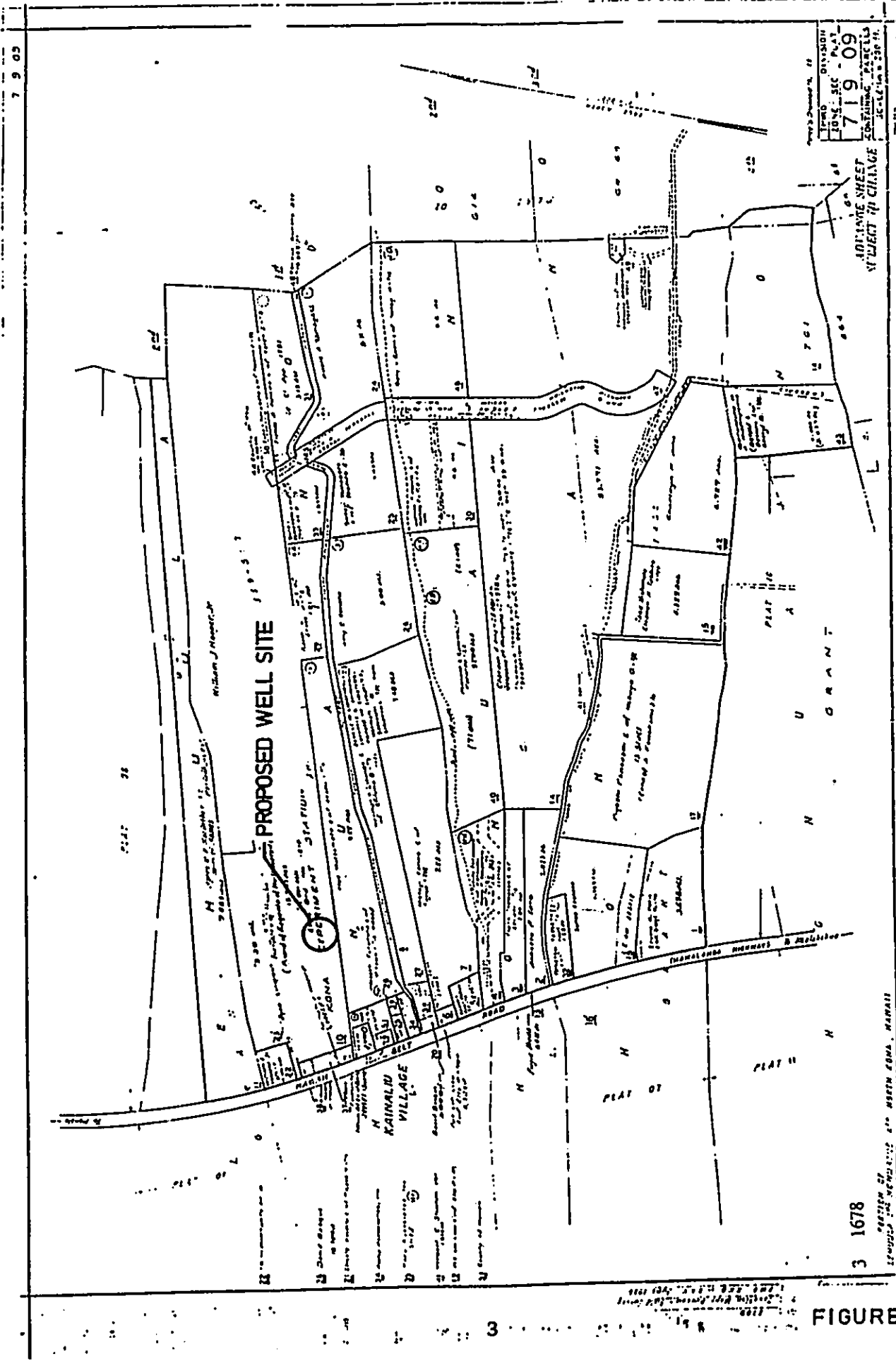


FIGURE 2

The technical characteristics of the proposed exploratory well are as follows:

Ground Elevation:	±1520 feet
Casing Diameter:	16 inches
Depth of Solid Casing:	1360 feet
Depth of Full Flo Shutter Screen:	160 feet
Depth of Open Hole:	1520 feet (as required)
Total Maximum Depth:	to be determined
Duration of Pump Test:	72-150 hours
Proposed Pump Test Range:	700-1400 gpm
Length of Project:	360 days
Estimated Construction Cost:	\$857,000

IV. ASSESSMENT PROCESS

An informal hydrogeologic study of the North Kona area was conducted to identify the potential areas for a water shaft. This was followed by engineering analysis to determine the improvement requirements and costs of various alternate test well sites and associated environmental and social impacts. A field reconnaissance of the project site was conducted to investigate the physical environment and confirm the earlier conclusions made from researching reference materials.

V. DESCRIPTION OF THE ENVIRONMENT

The project site is located in the North Kona district on the west side of the island of Hawaii. This region is the fastest growing area on the island, a growth spurred primarily by an expanding visitor industry. The resident population of the district increased by 67 percent from 13,748 in 1980 to 23,000 in 1989.

The proposed well site is located within a currently unused lot at the University of Hawaii Agricultural Experiment Station in Kainaliu.

The well site lies on the western slopes of Hualalai Volcano. The rocks of Hualalai consist of prehistoric and historic basaltic lava flows, intrusive rocks, and pyroclastic materials. Cinder cones are scattered in the summit area and along three rift zones extending northwest, northeast, and southeast from the summit. Ash beds ranging from a few inches to a few feet thick mantle part of the mountain. Many unexposed dikes probably cut the lava flows along the rift zones.

The State Land Use designation of the project site is Agriculture (A) and does not require a Conservation District Use Permit. The character of the area is a mix of rural and agricultural, with an emphasis on agriculture.

It is unlikely that any endangered or threatened species will be adversely affected by this project, since the area has been used previously by the University of Hawaii to plant experimental crops.

Similarly, no archaeological or historic sites are expected within the project area. However, if anything of possible significance is found during construction, work will be halted and the Historic Preservation Division will be contacted.

VI. PROBABLE IMPACTS AND MITIGATIVE MEASURES

The anticipated impacts of the project will be from the construction work involved in the site preparation, drilling, and pump testing of the exploratory well.

A working pad, approximately 5,000 square feet in area, will be needed for the drilling equipment and materials storage. Dust, erosion and sediment control provisions will be included in the contract specifications.

Drilling equipment to be used include a drilling rig, drilling bits and rods, generators and pipe racks. The contractor is allowed 360 days to complete the work.

Noise generated during the drilling work may at times be in excess of 95 decibels. Therefore, drilling work will be restricted to eight hours during the day and as specified in Chapter 44B, Public Health Regulations. No work will be permitted during weekends and holidays without prior consent of the department.

After the well has been drilled to the specified depth and cased, a temporary pump will be installed in the well to test the groundwater aquifer for yield and water quality. The pump test will be conducted over a continuous 72 to 150 hour period. An unabated pump motor and generator can generate a droning sound and the noise may at times be heard during the night. Therefore, the contractor will be required to use mufflers or other sound attenuating devices as needed to meet applicable noise restriction regulations of the Department of Health.

VII. ALTERNATIVES

There are two possible alternatives to the proposed project: taking no action or finding an alternative well site.

The "no action" alternative would preclude the investigation of groundwater sources and the possibility of eventually developing a new shaft type water source

for the area. This alternative would not meet the objectives of the Hawaii County Water Use and Development Plan, which identifies the development of new water sources in North Kona as a priority item.

Alternate sites were considered for the proposed well. However, based on the hydrogeologic and topographic conditions, cost, risk and environmental and social impacts studied as part of the engineering analysis, the selected site was considered to be superior to the alternative sites.

VIII. DETERMINATION

Findings and Reasons Supporting Determination

1. The proposed project will not involve an irrevocable commitment to loss or destruction to any natural or cultural resources.
2. The proposed project will not curtail the range of beneficial uses of the environment.
3. The proposed project will not conflict with the State's long-term environmental policies.
4. The proposed project will not substantially affect the economic or social welfare of the community or State.
5. The proposed test well will not involve substantial secondary impacts, such as population changes or effects on public facilities.
6. The proposed project will not involve a substantial degradation of environmental quality.
7. The proposed test well will not substantially affect any rare, threatened or endangered species of flora or fauna or habitat. No endangered species of flora or fauna are known to exist in the project site.
8. The proposed project will not detrimentally affect air or water quality or ambient noise levels.
9. The proposed test well will not be located in any environmentally sensitive area, such as flood plain, tsunami zone, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters.

In accordance with Chapter 343, Hawaii Revised Statutes, it is determined that the proposed project would not have any significant adverse effects on the environment. Any potentially negative effects have been identified along with suggested mitigative measures. Consequently, an Environmental Impact Statement is not required and this Environmental Assessment is hereby being filed as a Negative Declaration.

REFERENCES

- State of Hawaii, Commission on Water Resource Management, Hawaii County Water Use and Development Plan, Review Draft, February 1992.
- State of Hawaii, Department of Business and Economic Development, The State of Hawaii Data Book, 1989.
- Sterns, H.T. and G.A. MacDonald, Geology and Ground-Water Resources of the Island of Hawaii, Bulletin 9, Hawaii Division of Hydrography, 1946.

DOCUMENT CAPTURED AS RECEIVED

JOHN WAIHEE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER AND LAND DEVELOPMENT
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JAN 19 1993

Div of Water & Land

WILLIAM W. PATY, CHAIRPERSON
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WATER AND LAND DEVELOPMENT

RECEIVED
JAN 20 8:16

TO: Mr. Michael Buck, Administrator
Division of Forestry and Wildlife

FROM: Manabu Tagomori, Manager-Chief Engineer

SUBJECT: Environmental Assessment for Job No. 8-HWAF, Kainaliu Test Well, North Kona, Hawaii

Enclosed for your review and comments is a copy of the Draft Environmental Assessment for the subject project.

In order to meet the project schedule, it is requested that any comments on the subject Assessment be forwarded to us by January 22, 1993. For your convenience, comments may also be faxed to us at Extension 70219.

If we can be of any assistance while you are reviewing the Assessment, please have your staff contact Mr. Edward Lau of the Project Development Branch at Extension 70227.

SL:lc

Enc.

ENDORSEMENT:

January 20, 1993

We have no objections to the proposed request.

MICHAEL G. BUCK
Administrator

cc: Hawaii District