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ENVIRONMENTAL ASSESSMENT

AND

NEGATIVE DECLARATION

Job No. 17-MW-M1

* Wahikuli Exploratory Well No. 2

Well No. 5439-02

Lahaina, Maui *

State of Hawaii
Department of Budget and Finance
Housing Finance and Development Corporation
May 1991

NOTICE OF DETERMINATION: Negative Declaration

**FOR: Job No. 17-MW-M1
Wahikuli Exploratory Well No. 2 (Well No. 5439-02)
Lahaina, Maui**

**BY: Housing Finance and Development Corporation
Department of Budget and Finance**

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. 17-MW-M1
Wahikuli Exploratory Well No. 2
Well No. 5439-02
Lahaina, Maui

I. Proposing Agency

Housing Finance & Development Corporation (HFDC)
Department of Budget and Finance

II. Agencies Consulted

County of Maui

Planning Department
Department of Water Supply

State of Hawaii

Historic Preservation Division, DLNR
Division of Forestry, DLNR

III. Project Description

This project involves the drilling, casing and testing of a 16-inch diameter well approximately 1100 feet deep on the slopes of the West Maui Mountains, in the district of Lahaina, island of Maui. The proposed well site is located on TMK: 4-5-21: 2, which is owned by the State of Hawaii and is under the jurisdiction of the Department of Land and Natural Resources. The site is at an elevation of approximately 1,050 feet and is about one mile north of Lahainaluna High School and two miles inland from the coast. See Figures 1 and 2.

Funds for this project are available under Act 316, SLH 1989, Item D-21.

This exploratory well drilling is part of HFDC's Lahaina Master Planned Project, which will provide between 3,800 and 4,800 new residences in the Lahaina area over the next decade. A total of eight wells will ultimately be drilled in order to provide water to the new homes without having to rely on the existing system. Should this well exploration prove successful, it will be developed as a domestic water source for the proposed project. A separate environmental assessment for the well development will be prepared at that time.

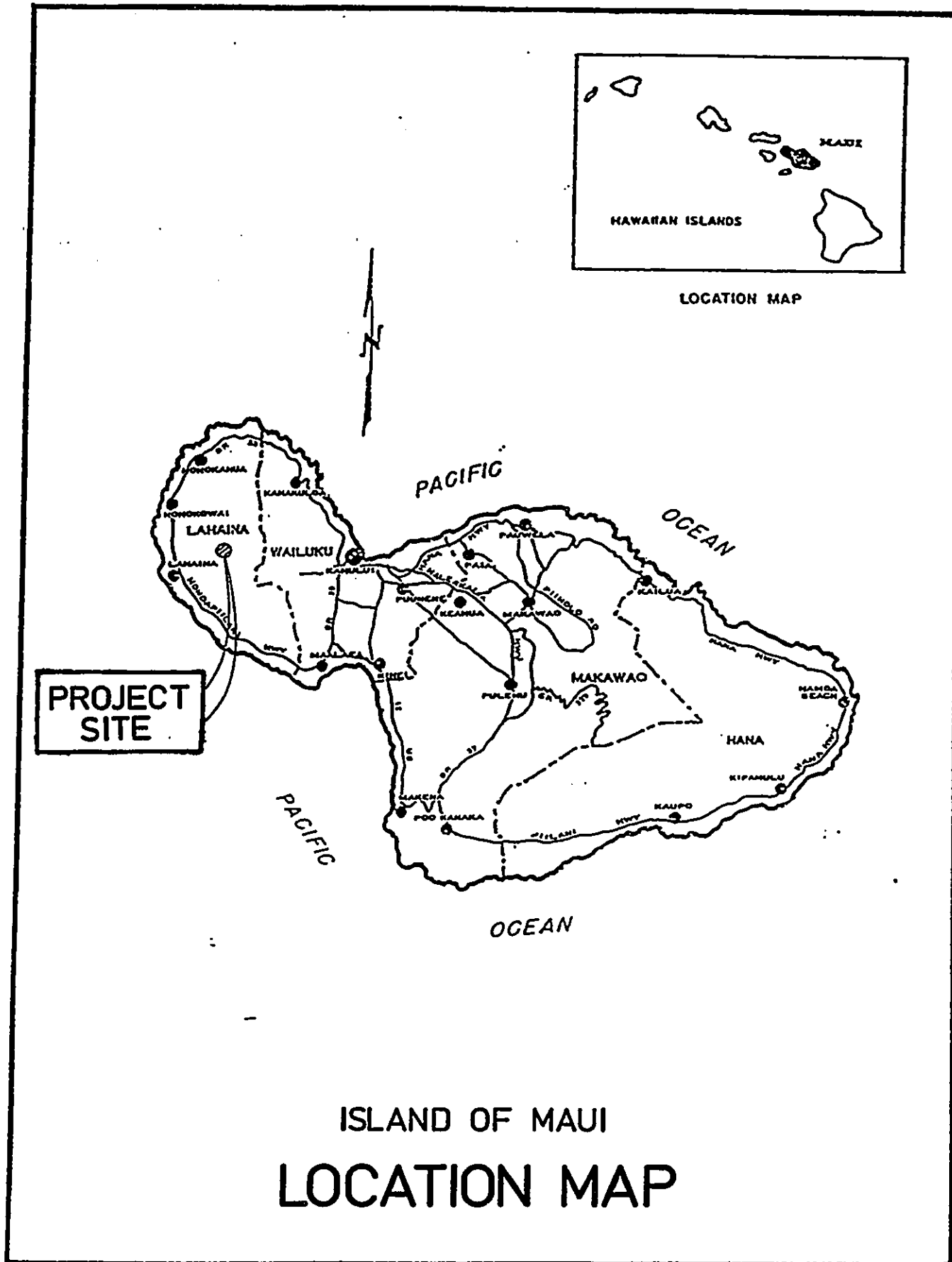


FIGURE 1

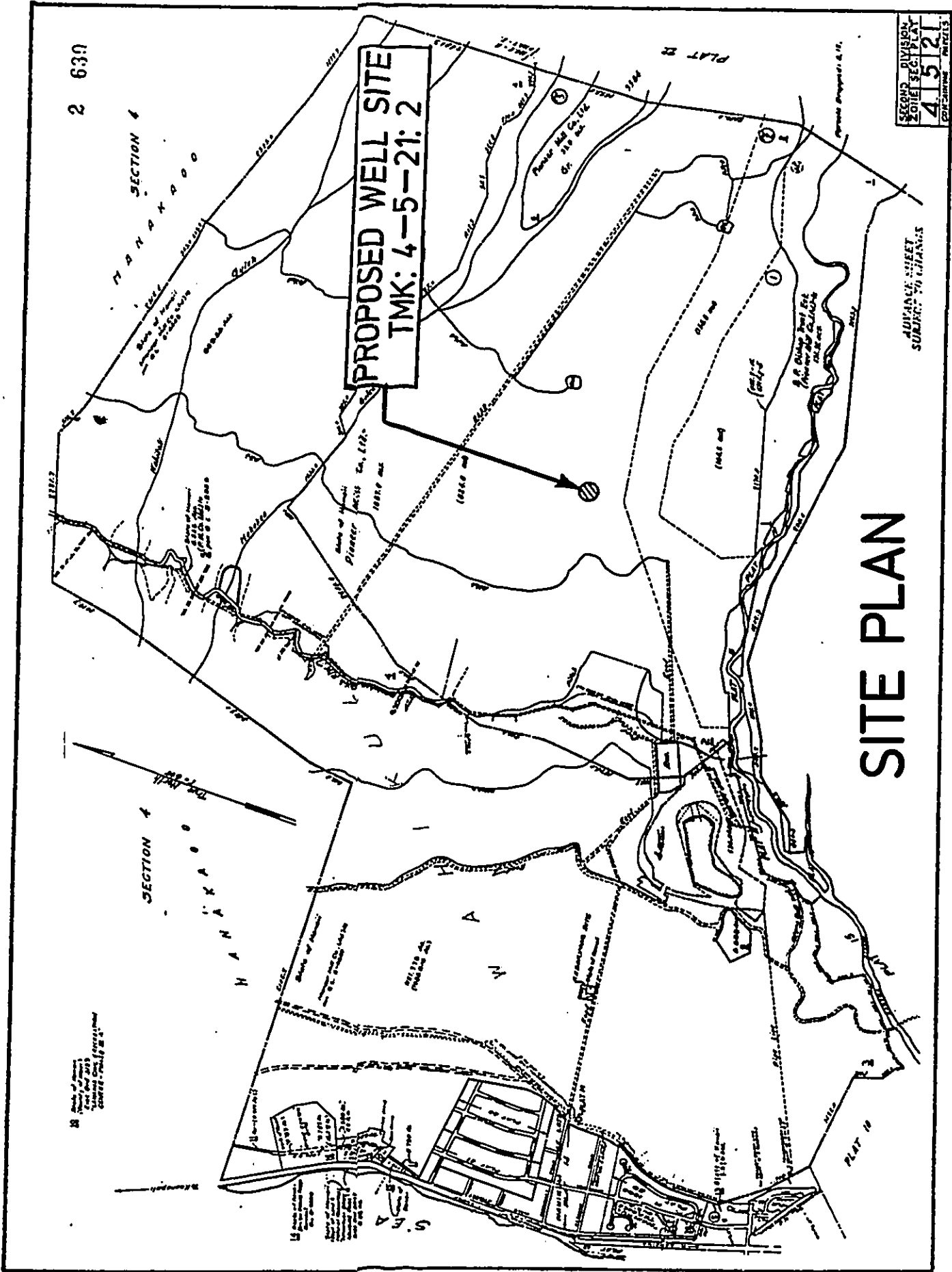


FIGURE 2

In the event that the exploration is not successful, the well will be sealed and the area restored, as much as practical, to its natural condition.

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

Ground Elevation:	1050 feet
Casing Diameter:	16 inches inside diameter
Length of Solid Casing:	1050 feet
Length of Screen Casing:	20 feet
Length of Open Hole:	30 feet
Total Depth:	1100 feet
Duration of Pump Test:	72 to 150 hours
Proposed Pump Test Range:	300 to 500 gallons per minute
Length of Project:	6 months
Estimated Construction Cost:	\$ 870,000

IV. The Assessment Process

A geo-hydrologic study of the Lahaina area was conducted to identify the potential areas for groundwater exploration. This was followed by engineering analysis to determine the improvement requirements and costs of various alternate 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 Lahaina District on the northwest side of the island of Maui, just above the sugar cane fields of Lahaina town. The access to the site at the 1,050 foot elevation is through a short dirt road from the cane field roads.

The Lahaina District population as of 1988 was about 14,000 residents, an increase of nearly 40% from 1980. This is a result of the growth in tourism more than offsetting the slight decline in sugar and pineapple activities. The urban growth has been mostly along the coastal areas below the Honoapiilani Highway.

The average annual rainfall ranges from 15 inches at the coast to 20 inches at the site, with a rapid increase to 380 inches at Puu Kukui, the summit of the West Maui Mountains. The average annual temperature is 75 degrees F at the coast and about 72 degrees F at the site, decreasing to about 60 degrees F at Puu Kukui.

The higher elevations with their attendant high rainfall make up the watershed for the Lahaina groundwater aquifer that this well will be tapping. Geologically, the aquifer is expected to be composed of highly permeable basalt lava flows of the Wailuku Volcanic Series. The exploratory well will determine the area's groundwater quality and quantity and also provide geologic data.

The site is zoned by the State Land Use Commission as agricultural land. Wells are a permitted use under this designation. The State has leased the parcel on which the site is located to Pioneer Mill Company, Ltd., under a larger parcel of 1087 acres. The portion needed for the well site is about 5,000 square feet. It is currently unused and can be withdrawn from the lease. No endangered species of flora or fauna are expected to be found at this site.

VI. Probable Impacts and Mitigative Measures

The anticipated impacts of the project will be from the construction work which involves site preparation, drilling and well testing.

An area of about 5,000 square feet will be used to set the drilling equipment and store the necessary materials. Although nothing of archaeological value is anticipated at the site, the State Historic Preservation Division of DLNR will be contacted at least 30 days prior to drilling the well to conduct a field inspection of the proposed well site. If anything of historic significance is found, the well location will be shifted so as not to have an adverse effect on the site. Also, the contractor must adhere to the dust and erosion control provisions of the contract.

Drilling equipment to be used include a drilling rig, drilling bits and rods, generators and pipe racks. The contractor is allowed 180 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. The pump motor will generate a droning sound and the noise may at times be heard during the night. 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 alternate well site.

The "no action" alternative would preclude the investigation of groundwater sources and the possibility of developing a new water source for the area. This alternative would not meet the objectives of the project.

Alternate sites were considered for the proposed well. However, based on geo-hydrologic and topographic conditions, cost, risk and environmental and social impacts, the selected site was considered to be superior to the alternative sites.

VIII. Determination

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 impacts resulting from the drilling and testing of the Wahikuli Exploratory Well No. 2 should be insignificant and temporary. Based on the findings of this environmental assessment, an Environmental Impact Statement is not required and this Environmental Assessment is hereby being filed as a Negative Declaration.

REFERENCES

1. State of Hawaii, Department of Business and Economic Development, The State of Hawaii Data Book, 1989.
2. State of Hawaii, Department of Land and Natural Resources, Division of Water and Land Development, Rainfall Atlas of Hawaii, 1986.
3. Stearns, H.T., Geology and Groundwater of the Island of Maui, 1942.