

1991-12-23- KA- FEA

## FILE COPY

ENVIRONMENTAL IMPACT ASSESSMENT

\* PUMP, CONTROLS, PUMPHOUSE & PIPELINE

FOR

KOLOA WELL "E"  
WELL NO. 5427-03

KOLOA WATER SYSTEM \*  
DOW JOB NO 86-8

Koloa, Kauai, Hawaii  
Tax Map Key: 2-8-02:1

Proposing Agency:

Department of Water  
County of Kauai  
P.O. Box 1706  
Lihue, Hawaii 96766

Responsible Official:

Raymond H. Sato  
Raymond H. Sato  
Manager & Chief Engineer

Date 12-2-91

Prepared By:

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November 1991

I. Description of the Project

A. Purpose of the Project

The main objective of this project is to improve the capability and reliability of the Koloa water system to meet the growing needs of the area. The proposed project was preceded by a successful exploratory drilling and testing project by the Department of Water, County of Kauai in July, 1989.

B. Existing Koloa Water System

The community of Koloa is served by the Koloa water system which is owned and operated by the County of Kauai, Department of Water. Major components of the existing water system include Koloa Wells 16A & 16B, a 250,000 gallon water storage tank in Koloa Town and a 200,000 gallon water storage tank along Omao Road. Presently, a 1,000,000 gallon water storage tank is being constructed along Koloa Road, approximately 3/4 mile from Koloa Town.

The existing Koloa Wells No. 16A & 16B are located 100 feet and 170 feet, respectively from the proposed project. The rated capacity of Koloa Well 16A is 800 gpm at 356 feet TDH and 600 gpm at 450 feet TDH and that of Koloa Well 16B is 700 gpm at 315 feet TDH and 560 gpm at 410 feet TDH. The overflow elevation and floor elevation of the water storage tanks are as follows:

Tank	Overflow Elev.	Floor Elev.
200,000 gal.	366.0	358.5
250,000 gal.	245.0	230.0
1,000,000 gal.	366.0	346.0

#### C. New Koloa Well "E"

The new well, to be developed as part of this project, was designated as State Well No. 5427-03 and is referred to as Koloa Well "E". The well was constructed in 1989 by the County of Kauai, Department of Water and tested in July, 1989. Based on the test data, the well appears to be a good water source in terms of both capacity and quality. The well was tested at 1,000 gpm and the drawdown was measured to be 9.0 feet.

#### D. Proposed Project

The proposed project involves the installation of a new 700 gpm vertical open line shaft pump and the construction of a control building, pump controls and appurtenances and chlorination facilities. Site improvements include grading, retaining walls, asphalt concrete pavement and grassing, for site plan, see Figure 3.

## II. Description of the Environment

### A. Project Location

The proposed Koloa Well "E" is situated about 3500 feet northeast of Koloa Town, as shown in Figures 1 and 2.

### B. Land Ownership

The project site is within an easement granted to the County of Kauai, Department of Water, by Grove Farm Company for the purpose of drilling and operating deep wells. This easement is within the parcel designated as TMK: 2-8-03:1.

### C. Land Classification and Zoning

The project site is situated in land designated for agricultural use by the State Land Use Commission. The land is zoned open in the County of Kauai General Plan. There are no nearby commercial or residential structures. The closest residence is about 400 feet away and the nearest commercial establishment is about 2,000 feet away. The closest parcel designated urban in both the land use and zoning map is about 400 feet away.

### D. Physical Features

The project site is situated on a slope, approximately 2 horizontal to 1 vertical at elevation 245 feet MSL. Part of the site was graded for the well drilling and

testing project.

Soils in the area are classified as Lihue gravelly silty clay and Pahakupu silty clay.

E. Climate

Average temperature in the project area ranges between 75°F to 79°F, and the average annual rainfall is about 72 inches.

F. Flora and Fauna

There are no endangered species of vegetation or wildlife in the project area.

G. Archaeological Features

There are no archaeological or historical sites that will be endangered by the proposed project.

III. Approvals Required

A. State of Hawaii, Department of Health

Approval for new source of raw water for public water system.

B. County of Kauai, Department of Public Works

Approval for proposed construction, grading and building permits.

#### IV. Possible Impacts and Mitigative Measures

##### A. Short Term Impacts

The major short term impacts which can be expected for this project are associated with the construction activity required to install the proposed improvements. Increased traffic, construction noise, dust and vehicular and equipment emissions can be anticipated. These impacts will be minimized by enforcement of specified environmental protection provisions by the inspection and construction management team.

The construction effects will be temporary and will be confined to the immediate vicinity of the project site. Also, because of the distance, there should be no adverse noise, dust and emission impacts on existing residence and commercial establishments.

##### B. Long Term Impacts

The major long term impact resulting from the proposed project will be the result of the improved capability and reliability of the Koloa Water System. The improved water system may be a factor in encouraging future development of the area. However, future development is more likely to be influenced and directed by County zoning actions.

The proposed project will involve the commitment of County funds, electrical energy and materials. However,

the proposed improvements will reduce the equipment wear at Koloa Wells 16A & 16B, permit better maintenance services to be performed and provide another reliable source of water to the Koloa Community.

The proposed improvements will not be highly visible nor create loud annoying noise.

#### C. Alternatives

Alternatives to the proposed project is limited to a "no-action" proposal. No feasible alternate is available since the well site was determined by a previous project. The existing Koloa Well "E" was tested and appears to be an excellent potable water source.

No-action plan will deter the planned growth of Koloa area.

#### V. Determination

The proposed project will not have any significant adverse impacts on the environment.

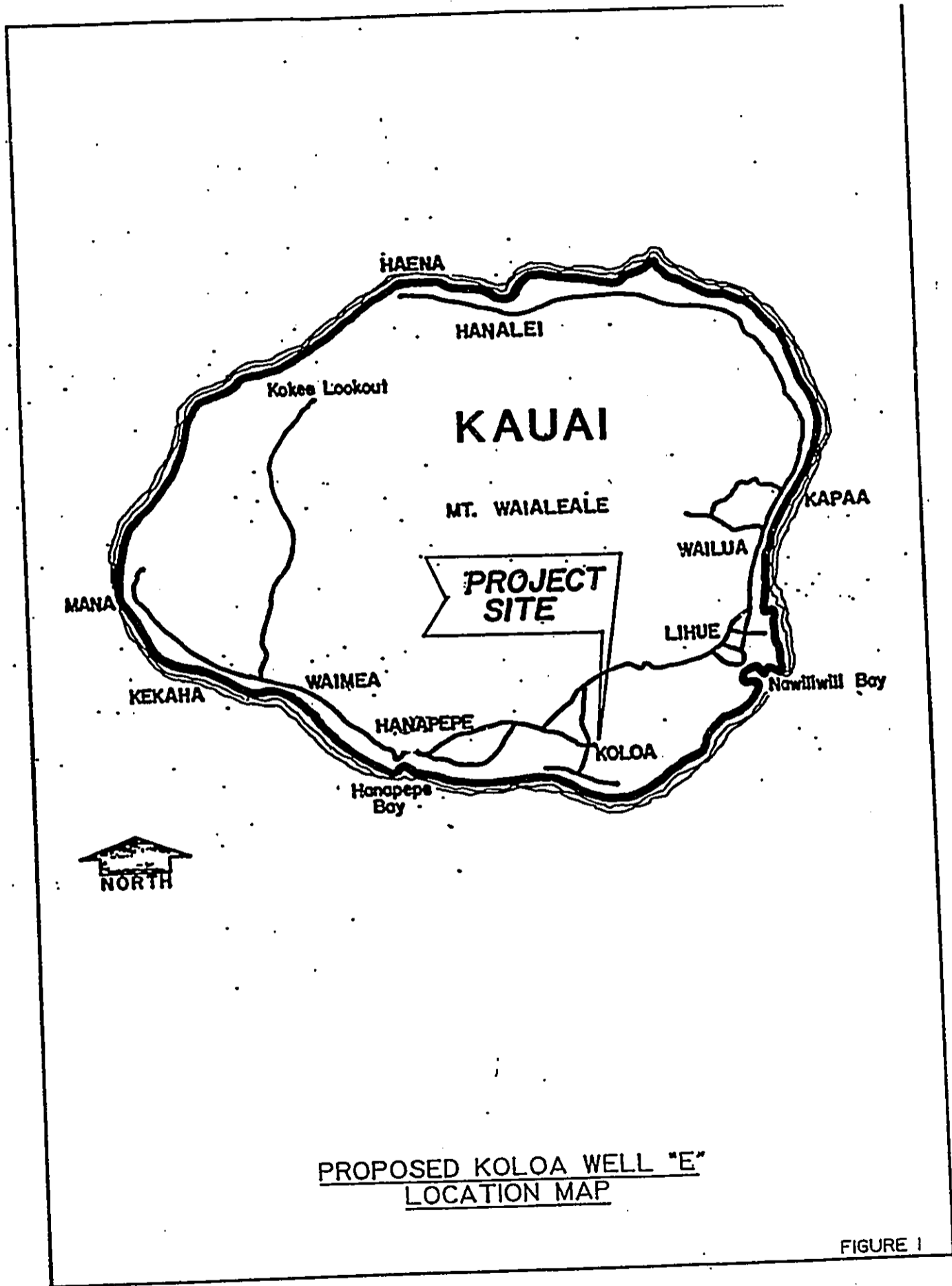
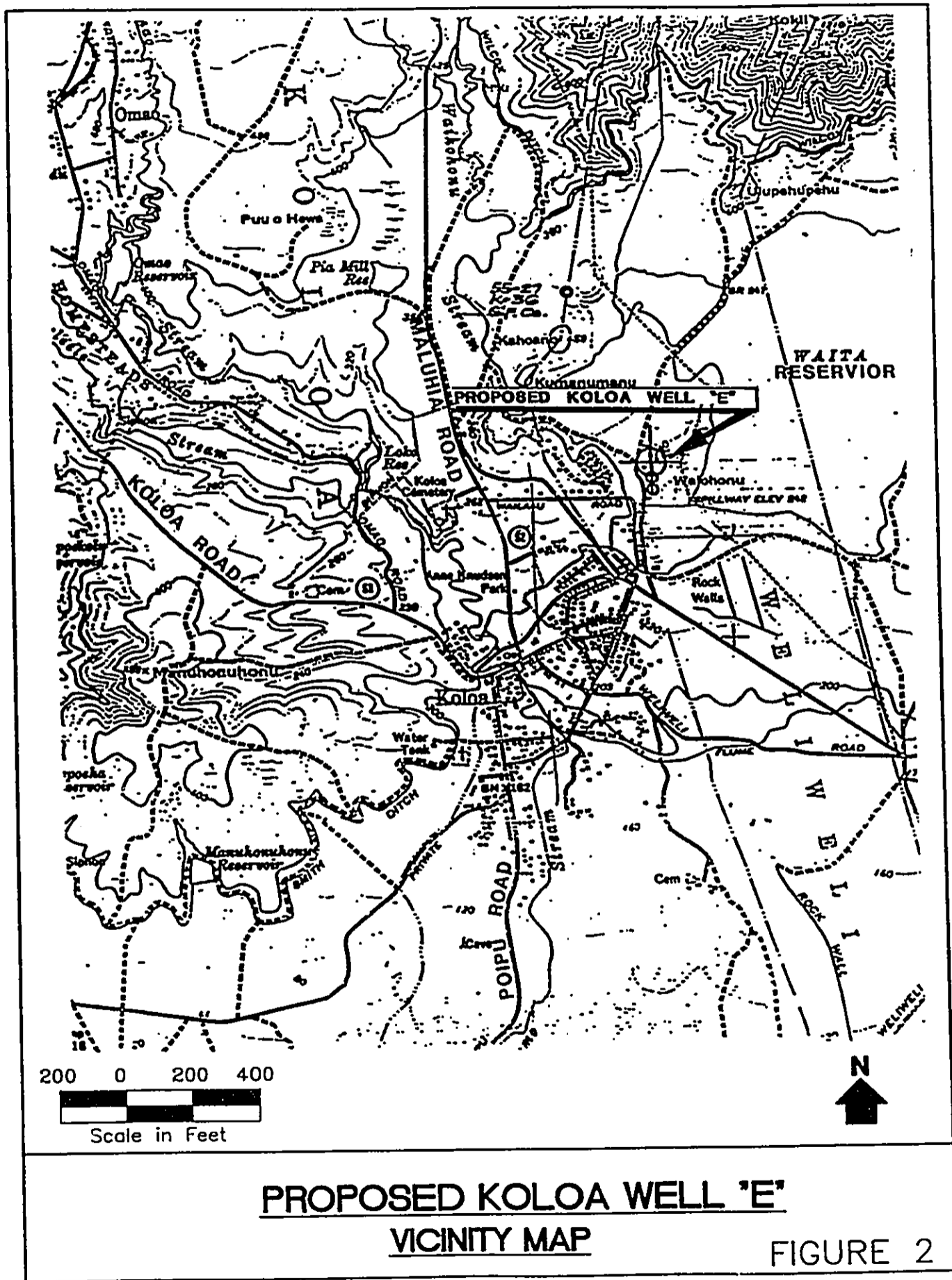


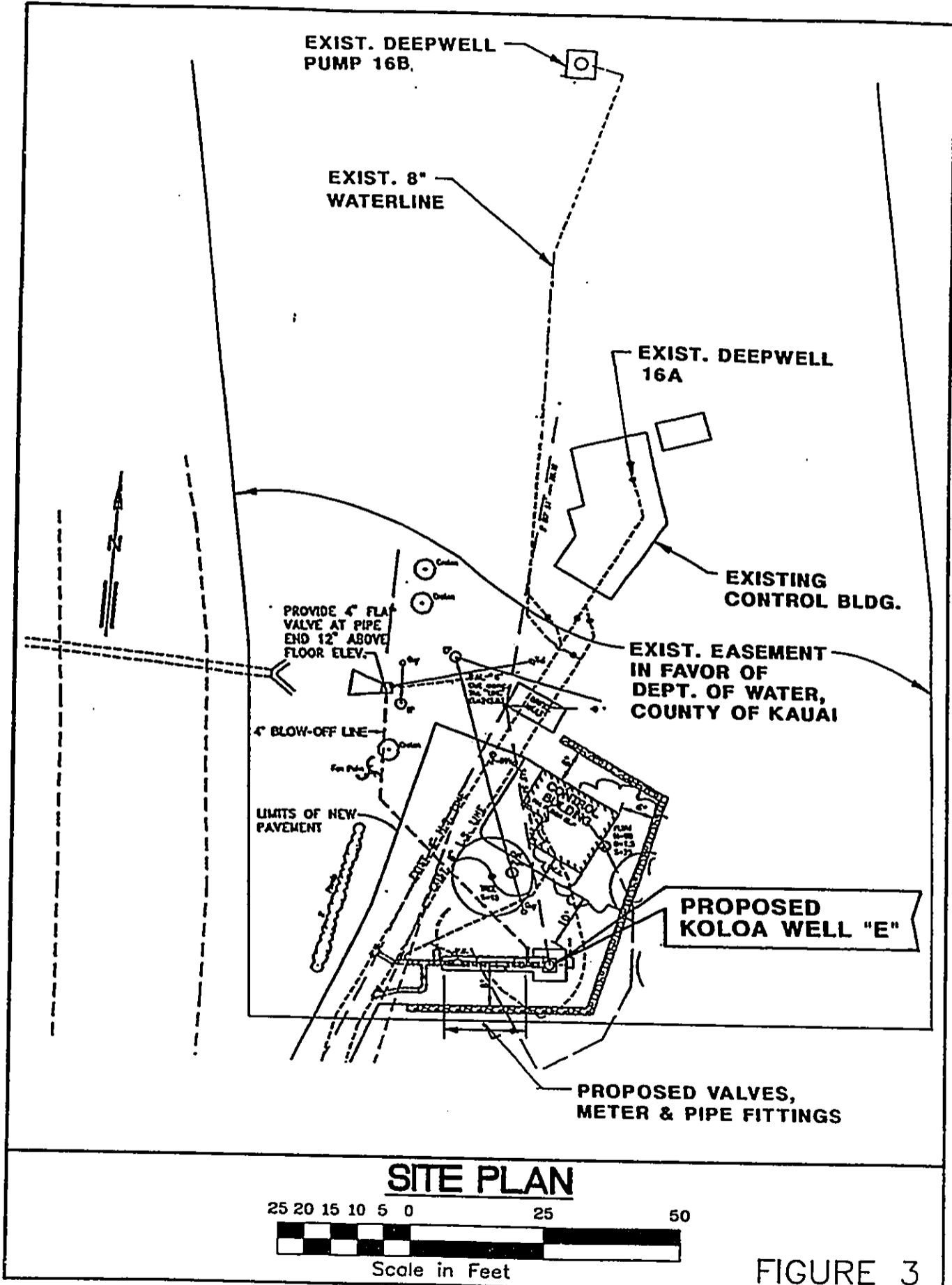
FIGURE 1

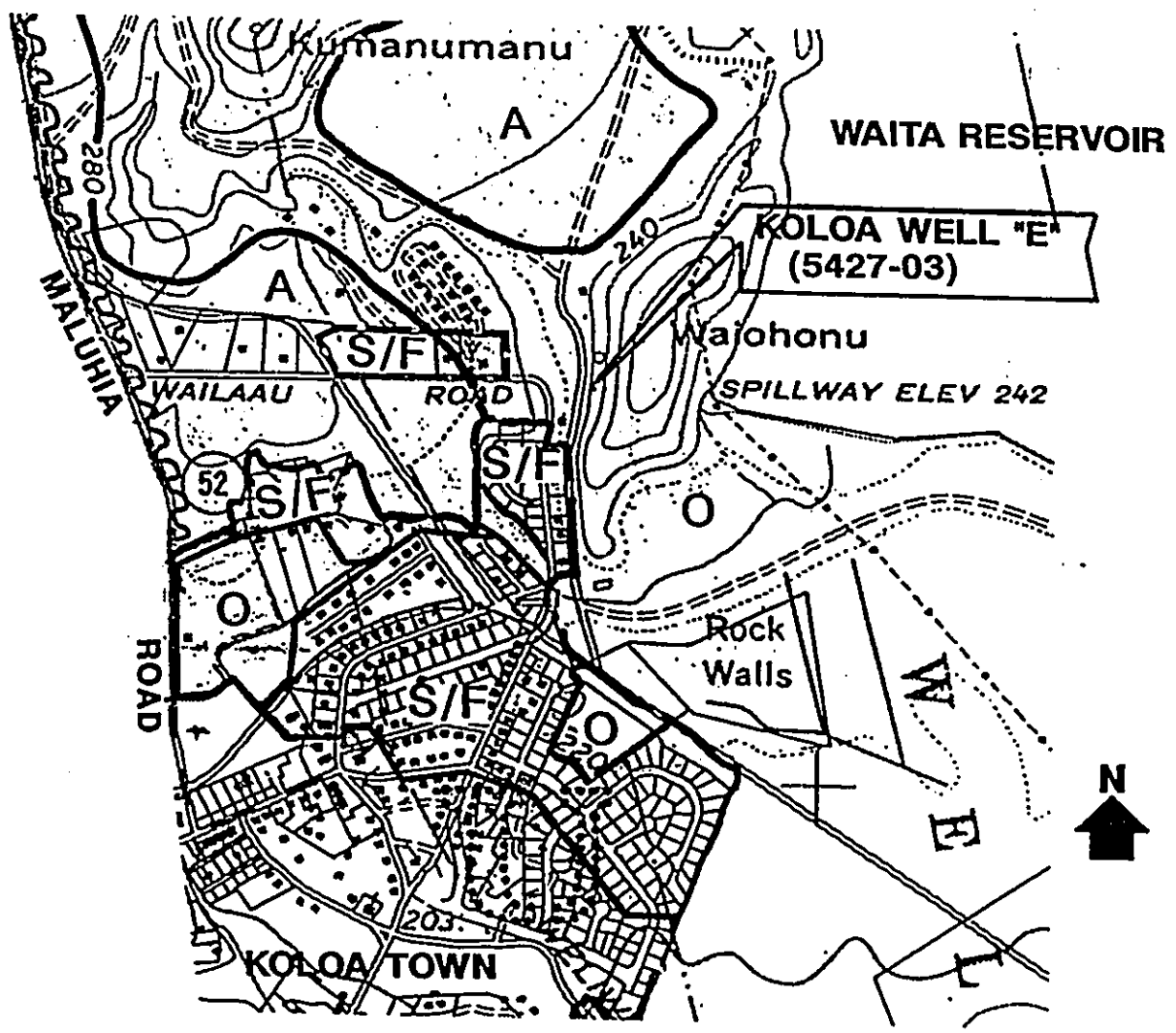




**PROPOSED KOLOA WELL 'E'**  
**VICINITY MAP**

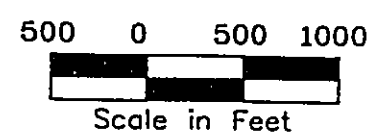
FIGURE 2





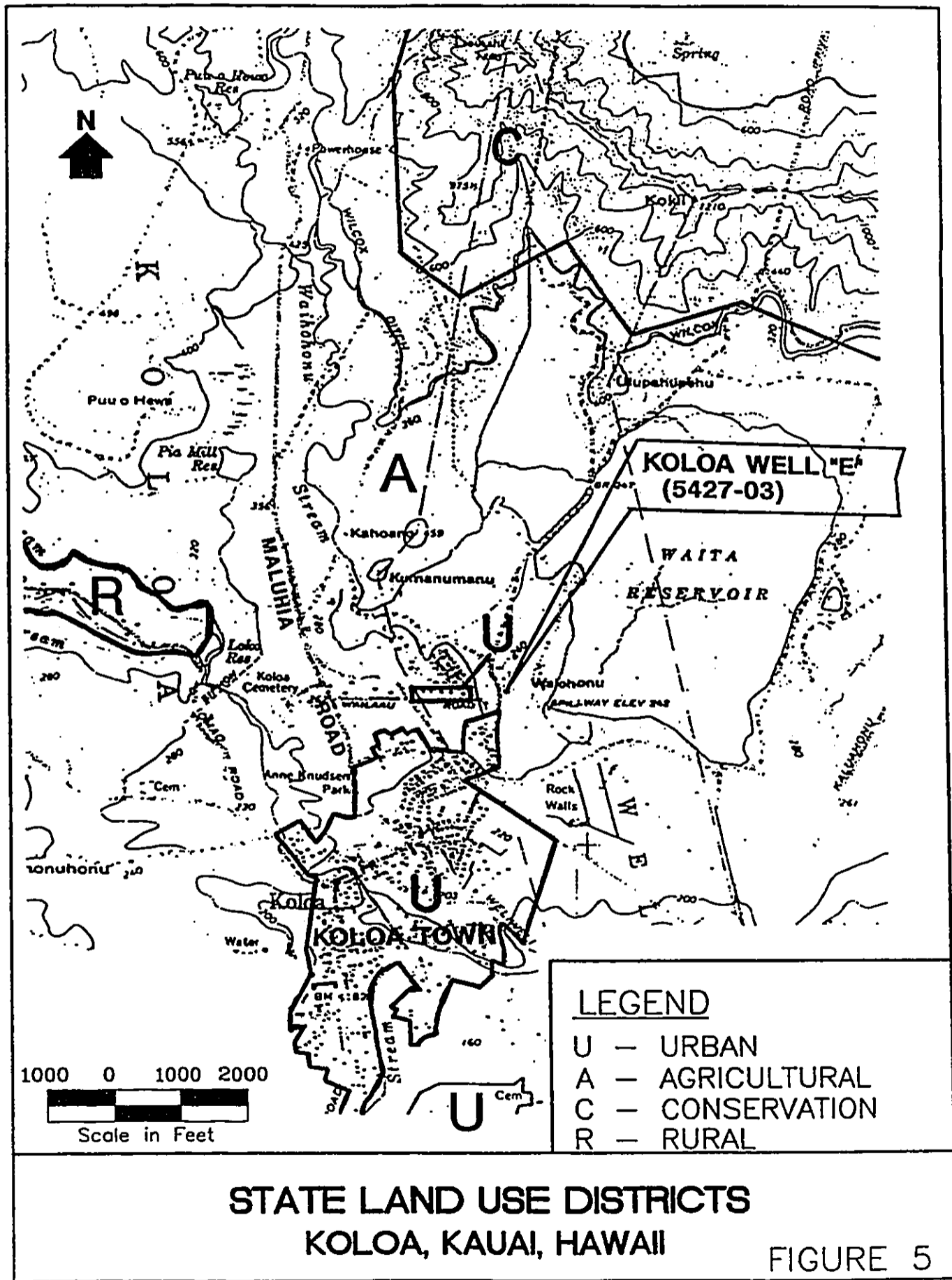
LEGEND

- A - AGRICULTURAL
- O - OPEN
- S/F - SINGLE FAMILY RESIDENTIAL



**ZONING MAP-KAUAI COUNTY  
KOLOA, KAUAI, HAWAII**

FIGURE 4



#### REFERENCES

1. County of Kauai, KAUAI GENERAL PLAN
2. ENVIRONMENTAL IMPACT ASSESSMENT FOR KOLOA WELL "E" - DRILLING  
KOLOA WELL "E", 5427-03, KOLOA, KAUAI, State of Hawaii,  
Department of Water, County of Kauai.
3. State of Hawaii, STATE LAND USE DISTRICT, MAP K-8
4. U.S. Department of Agriculture, Soil Conservation Service,  
U.H. Agricultural Experiment Station, SOIL SURVEY OF ISLANDS  
OF KAUAI, OAHU, MAUI, MOLOKAI, AND LANAI, STATE OF HAWAII,  
1972.