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Chapter 343, Hawaii Revised Statutes (HRS)
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Environmental Assessment

***EAST MAUI SOURCE
DEVELOPMENT PROJECT
DRILLING, CASING, & TESTING
PAIA EXPLORATORY WELLS 1 & 2 ***

June, 1991

Prepared for:

Department of Water Supply
County of Maui

Prepared by:

Norman Saito Engineering Consultants, Inc.
and
Environmental Communications, Inc.

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I. SUMMARY

Chapter 343, Hawaii Revised Statutes (HRS)

**Environmental Assessment
For
Department of Water Supply
County of Maui**

June, 1991

APPLICANT: Department of Water Supply
County of Maui

APPROVING AGENCY: Department of Water Supply
County of Maui

PROJECT NAME: East Maui Well Sites Exploratory Drilling

PROJECT LOCATION: East Maui, near Maliko Gulch
above Paia Town
Tax Map Key: 2-5-4: 39

**STATE LAND USE
DESIGNATION:** Agriculture

**COUNTY DEVELOPMENT
PLAN DESIGNATION:** Agriculture

COUNTY ZONING: None

LANDOWNER: Alexander & Baldwin;
Hawaiian Commercial & Sugar Company

AGENCIES CONSULTED: **State of Hawaii**
Department of Land and Natural Resources
Division of Water Resource
Management
Division of Historic Preservation
Private
Alexander & Baldwin/Hawaiian
Commercial Sugar Company

II. GENERAL DESCRIPTION OF THE ACTION'S CHARACTERISTICS

A. INTRODUCTION

The Department of Water Supply, County of Maui ("Department") is conducting exploratory water source development above Paia Town near the Maliko Gulch. (See Figure 1) The source development will consist of drilling up to two exploratory wells on Alexander & Baldwin (A & B) sugar cane lands to determine if adequate yield is available for future potable water requirements. (See Figure 2) A well yield of 1.0 million gallons per day (mgd) will be the objective of the exploratory drilling. If the wells provide the desired volume of water, the next phase of storage and transmission lines will be planned and designed.

B. TECHNICAL CHARACTERISTICS

The "Department" will be drilling up to two exploratory wells for potable water on A & B sugar cane lands. The wells will be drilled to an average depth of 700 feet, with varying differences in depth based on terrain features and underground geological strata. The drilling will be put out to bid and the successful drilling contractor will employ the drilling method most suitable for the project. These wells will provide data on average yield and an initial chemical analysis of the water samples to determine compliance with applicable potable water quality standards. The drilling sites are at the 700' elevation and the well casing will be 12" inches in diameter, with an open hole below the casing 11" in diameter. (See Figure 3) Anticipated depth of drilling is expected to be approximately 700 feet. The well sites are approximately 50' x 50' and will require a minimum of clearing and grubbing. There will be no onsite excavation or other extensive site preparation to setup the drilling rigs.

C. SOCIO-ECONOMIC CHARACTERISTICS

The need to comply with this section is considered premature due to the fact that the project involves the drilling of exploratory wells to determine adequate yield and quality only. Upon final determination of acceptable quality and yield, the next phase of design engineering for mechanical, storage, and transmission can more accurately state the relationship to County Development Plans and those sections of the Central Maui Community Development Plans that discuss urban development with adequate utilities, i.e. water, sewerage, drainage, etc.

D. ENVIRONMENTAL CHARACTERISTICS

The proposed drilling sites are presently in sugar cane cultivation on A & B /HC&S lands. For this initial phase of exploratory work, the sites will be temporarily disturbed in the actual pre-drilling construction site preparation process. Short-term impacts to the existing or ambient Air and Noise standards may be experienced. This is not considered significant since there are no adjacent residential areas that would be affected. The actual work will take place in a site specific areas of approximately 50' x 50', with drilling to take place with a minimum of clearing and grubbing. One proposed site near an unnamed gulch may require some clearing of Guava, Christmas Berry, and Java Plum, but this is not considered significant in terms of impacts on the gulch. The other proposed site will not significantly impact the cane acreage. Access to the two potential well sites is available from existing cane haul roads, thus eliminating the need to cut in access roads. At the conclusion of the exploratory drilling, the Department will determine whether the well sites need to be further developed.

E. FUNDING AND PHASING

This project is planned for three phases and the well exploratory drilling is the initial phase. Future increments will consist of storage (reservoir design and construction), and transmission lines. Government costs will be primarily for the overall potable water development program and will be funded by County funds.

III. THE AFFECTED ENVIRONMENT

A. GEOGRAPHICAL CHARACTERISTICS

The project site is located in the Paia-Haiku region along the island of Maui's northern shore, east of Wailuku, the County seat. The major population center is the town of Paia, in the northwest corner of the region, which includes the communities of Lower Paia, Upper Paia, and Kuau. A secondary center is the community of Pauwela located a few miles to the northeast, and other scattered settlements dot the landscape.

The Soils associated in the area are classified as Haliimaile (HhB) and Hamakuapoko (HIB) according to the "Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii" produced in 1972 by the U.S. Department of Agriculture, Soil Conservation Service. These soils are rated Good to Fair up to a depth of 40" for topsoil. Primary use is Agriculture. They consist of well drained soils on uplands on the island of Maui. They are gently to strongly sloping and elevations range from 500 to 1,200 feet. Annual rainfall amounts to 40 to 60 inches.

The primary economic activity is agriculture, predominantly sugar cane production and some pineapple production. The area surrounding the Hawaiian Commercial and Sugar Company (HC&S) mill in Upper Paia was once a large community comprised of several distinct "Camps" populated by plantation workers of various national origins. However, plantation camp families moved to Lower Paia and Wailuku-Kahului several years ago, and HC&S returned most of this area to sugar cultivation. Population levels have not declined however, because the Paia area serves as a "bedroom community" to the Wailuku-Kahului employment center. In addition, the Haiku-Makawao area has been growing as a popular residential area for people seeking the attractions of a rural, less dense setting.

B. HYDROLOGICAL CHARACTERISTICS

The project site is entirely in sugar cultivation, and the Flood Hazard Zone designation is "C", area of minimal flooding. The proposed drilling sites will be approximately 50' x 50' and should not generate onsite flooding. The balance of the area is in active cane cultivation and as such, mitigates runoff due to the dense vegetation of the sugar cane plant.

C. BIOLOGICAL CHARACTERISTICS

There is no indigenous species of flora or fauna on the site; this is due to the historic use of the lands for agriculture. Any flora or fauna species found on the property are exotic or introduced species.

D. SERVICE FACILITIES

At the present time, due to the use of the lands for agriculture, there is no demand for urban services, i.e. water, sewer, police, fire protection, electrical and telephone services.

E. ARCHAEOLOGICAL SITES

According to the State Historic Preservation Division, there are no known historical or archaeological sites on the project drilling sites. Because the proposed well sites are located in or adjacent to actively cultivated sugar cane fields, it is unlikely that historic sites are present. In the event that the minimal site clearing required reveal any sites, the Historic Preservation Division of the Department of Land and Natural Resources will be notified and all construction work will be halted until a determination has been made of the site's value.

F. AESTHETICS AND VISUAL CHARACTERISTICS

There will be no visual or aesthetic impacts since the well drilling will be done without structural improvements.

G. RELATIONSHIP TO EXISTING LAND USE, POLICIES, PLANS, AND CONTROLS

1. All drilling is taking place within the Agricultural District as indicated on the State Land Use Boundary maps.
2. The Maui County Zoning is None.
3. The Paia-Haiku Community Plan designation is Agriculture.

IV. SUMMARY OF MAJOR IMPACTS AND MITIGATION MEASURES

The proposed action is not expected to have any significant environmental impacts. Any impacts resulting from the subject action will be temporary and related to the actual drilling practices. The proposed action is to explore the availability of adequate sources of potable quality water and the initial phase of well drilling will not create adverse environmental impacts on the respective sites.

V. ALTERNATIVES CONSIDERED

A. DO-NOTHING ALTERNATIVE

The County has experienced phenomenal urban growth in the past decade and consequently, the demands for potable quality water will soon reach present capacity of the County to provide potable water . This project is to determine availability of potable water in terms of yield and quality only; as such, it is designed to provide needed data to make decisions on future water availability.

VI. DETERMINATION, FINDINGS AND REASONS SUPPORTING DETERMINATION

After completing an assessment of the potential environmental effects of the proposed exploratory well drilling and consulting with other governmental agencies, it has been determined that an Environmental Impact Statement (EIS) is not required. Therefore, this document constitutes a Notice of Negative Declaration.

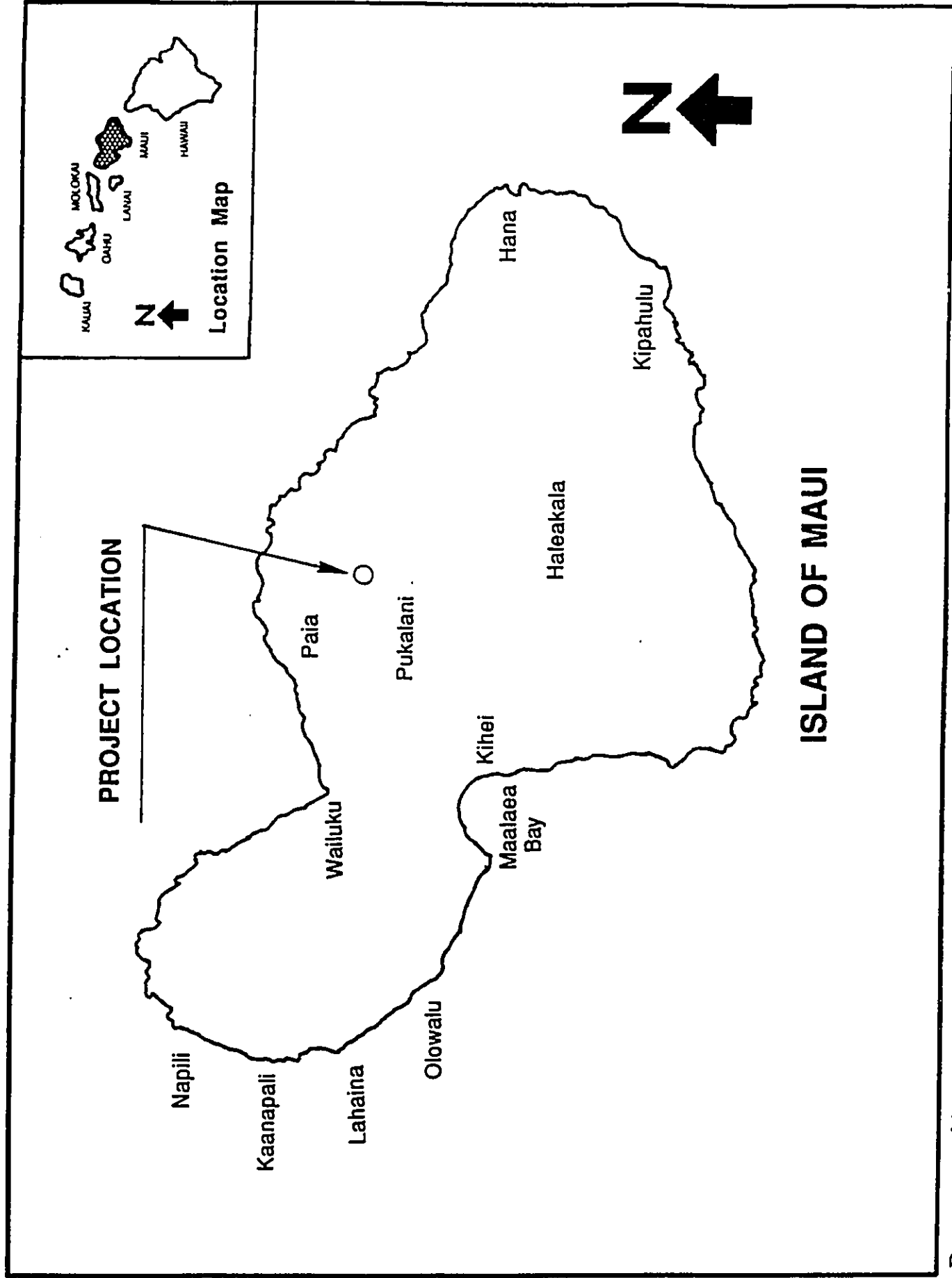
1. The proposed action consists primarily of drilling up to two exploratory wells to determine adequate yield and quality for future demand.
2. There will be no permanent degradation of existing ambient air and noise quality levels. During the actual drilling, there will be minor air pollution and noise resulting from the actual drilling, but these will not be permanent and will be within the cane fields, away from urban areas.
3. There are no known endangered species of animal or plants within the project drilling sites.
4. There are no natural, historic, or archaeological sites within the project drilling sites.
5. The project is consistent with Central Maui Community Plans and the Department's plans for water development. Exploratory well development by the Department is a permitted use by the County's interim and Agricultural zoning designations.
6. This project, if successful as planned, will provide the County with the necessary data to continue development of this potential source of potable water. Any adverse impacts of the proposed project have been determined to be insignificant. The applicant will comply with applicable statutes, ordinances, and rules of the Federal, State, and County governments during the implementation of the actual drilling phase. Exploratory drilling is consistent with County Zoning Ordinances.

VII. LIST OF PREPARERS

Norman Saito Engineering Consultants, Inc.
Project Management

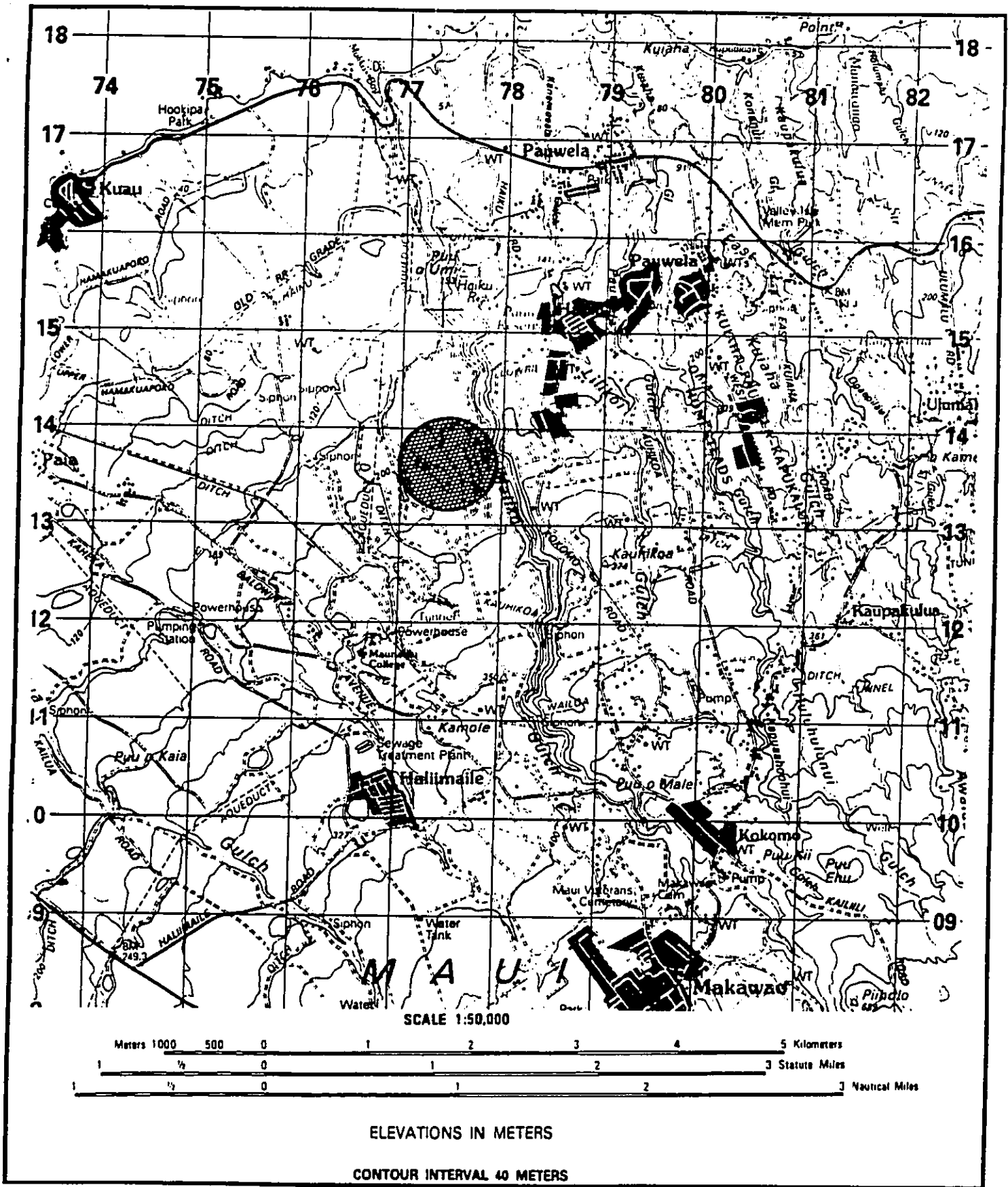
Water Resources Associates
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Environmental Communications, Inc.
Environmental Assessment Preparers



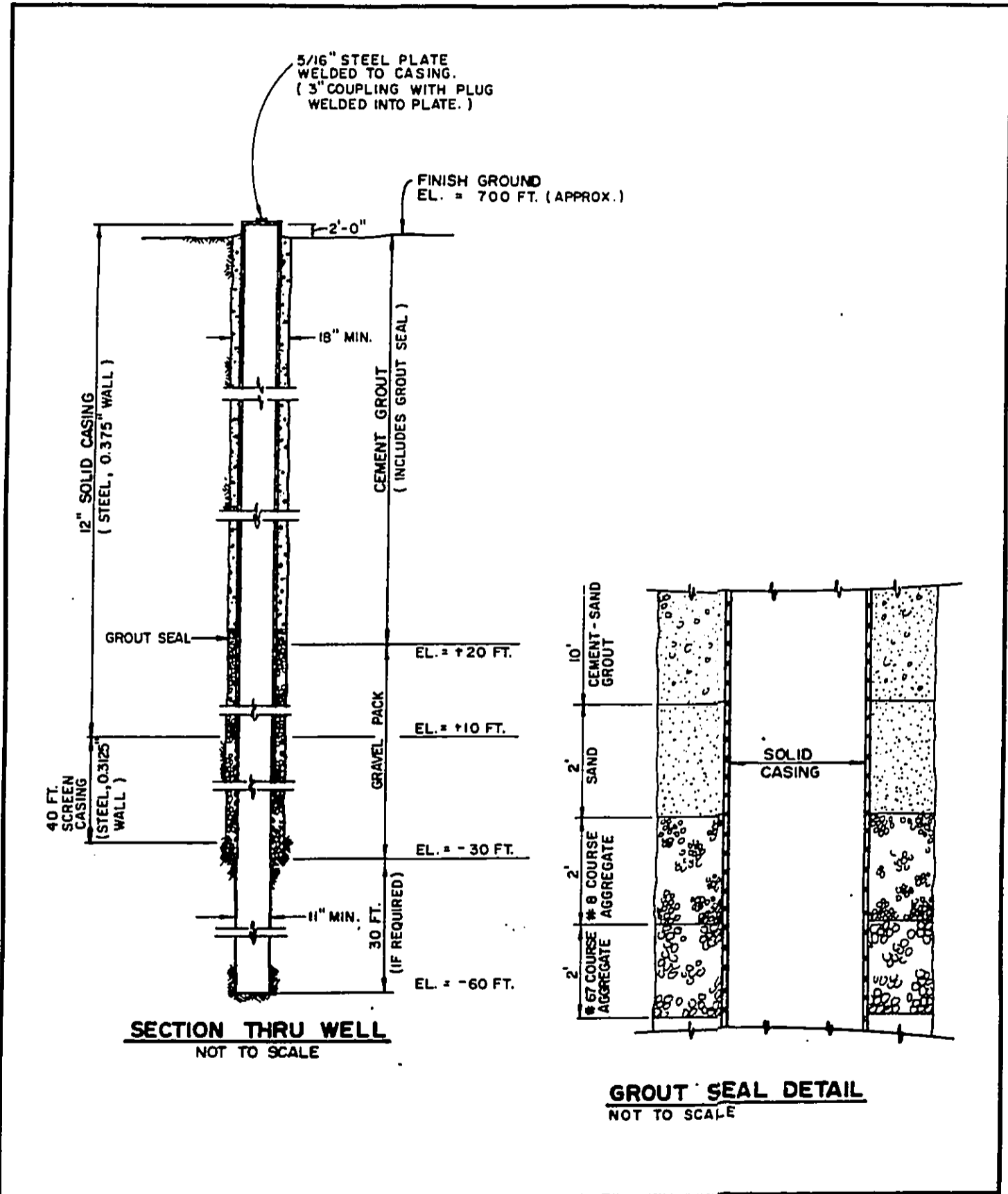
Department of Water Supply
 County of Maui

LOCATION MAP
 FIGURE 1



Department of Water Supply
County of Maui

PROJECT SITE
FIGURE 2



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County of Maui

TYPICAL WELL SECTION
FIGURE 3