

DEPARTMENT OF WATER

County of Kauai

"Water has no Substitute -- Conserve It!"

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February 20, 1997

'97 FEB 28 P3:00

OFFICE OF ENVIRONMENTAL
QUALITY CONTROL

Mr. Gary Gill, Director
State of Hawaii
Office of Environmental Quality Control
220 South King St., Fourth Floor
Honolulu, HI 96813

Dear Mr. Gill:

Subject: Finding of No-Significant Impact for Kilauea Well #3

This letter replaces the February 14, 1997 letter we sent to you. Please note that the thirty-day public review period began on April, 1994. The correction has been made below.

Having reviewed the comments received on the draft environmental assessment for Exploratory Drilling and Testing of Kilauea Well #3, located at Kilauea, Hanalei, Kauai, TMK: 5-2-02:11, during the thirty-day public review period which began on April, 1994, the Department of Water has determined that this project will have no significant environmental effect and with this letter, issues a finding of no-significant impact. We request that you publish notice of this determination in the next issue of the Environmental Notice.

Enclosed is a completed Bulletin publication form and four copies of the final environmental assessment. Please call Keith Fujimoto, at 245-5449 if there are any questions.

Sincerely,



Ernest Y.W. Lau
Manager and Chief Engineer

xc: Mink & Yuen Inc.

cc:3/gill2:dc

LA

1997-03-08-KA-FEA-Kilauea Exploratory
Well No. 3

MAR 8 1997

FILE COPY

ENVIRONMENTAL ASSESSMENT
EXPLORATORY DRILLING AND TESTING OF
KILAUEA WELL NO. 3
KILAUEA, KAUAI, HAWAII

Prepared for
Department of Water, County of Kauai
Lihue, Kauai, Hawaii

Prepared by
MINK & YUEN, INCORPORATED
100 North Beretania Street, Suite 303
Honolulu, Hawaii 96817

December, 1993
Amended March, 1994

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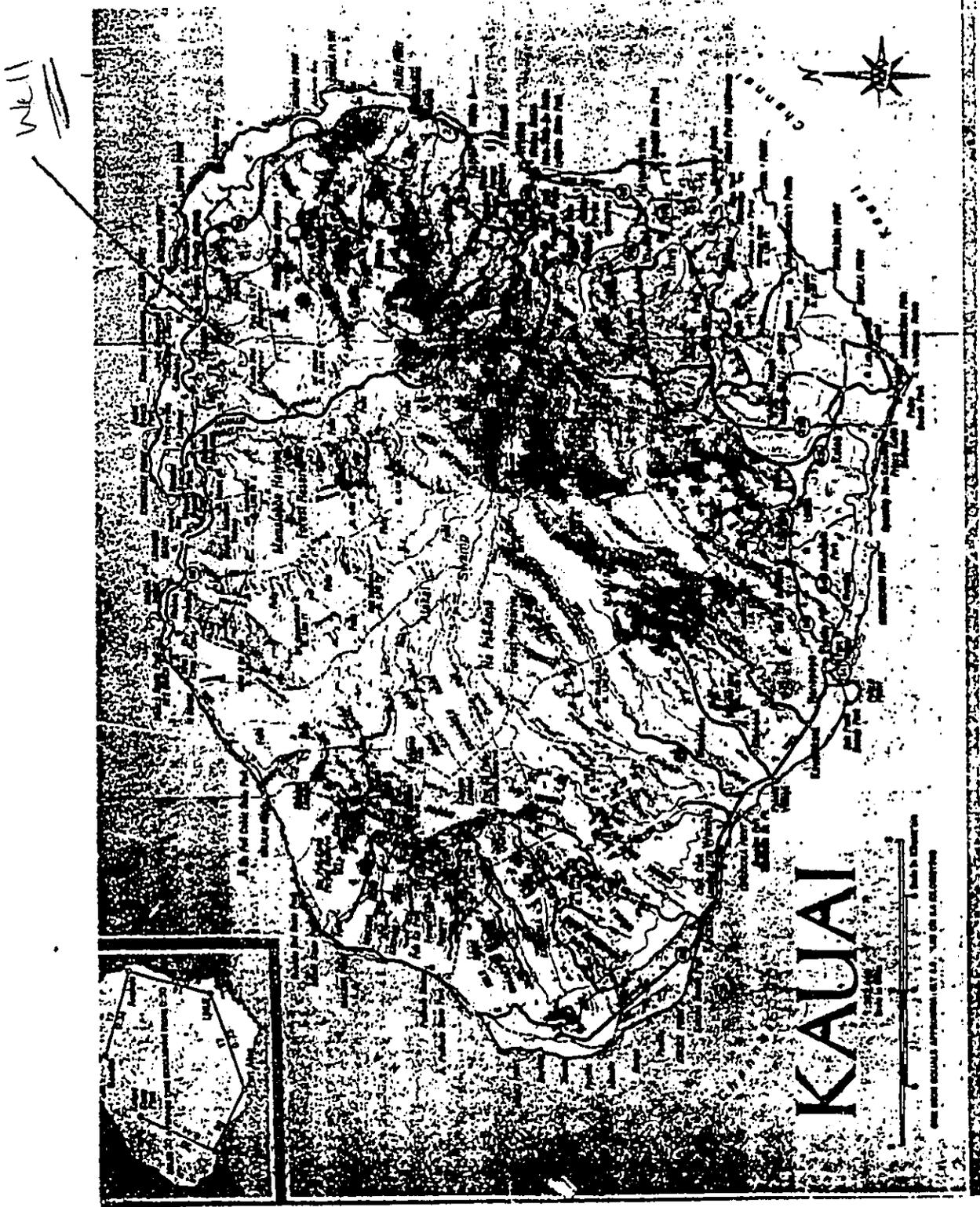
A. DESCRIPTION OF PROJECT

The proposed project consists of the design and preparation of final construction plans and specifications for the drilling and testing of a deep well in Kilauea, Kauai in the vicinity of the two existing Kauai County Department of Water wells no. 1125-01 and 1125-02. The attached map shows the sites of the existing wells and the proposed well.

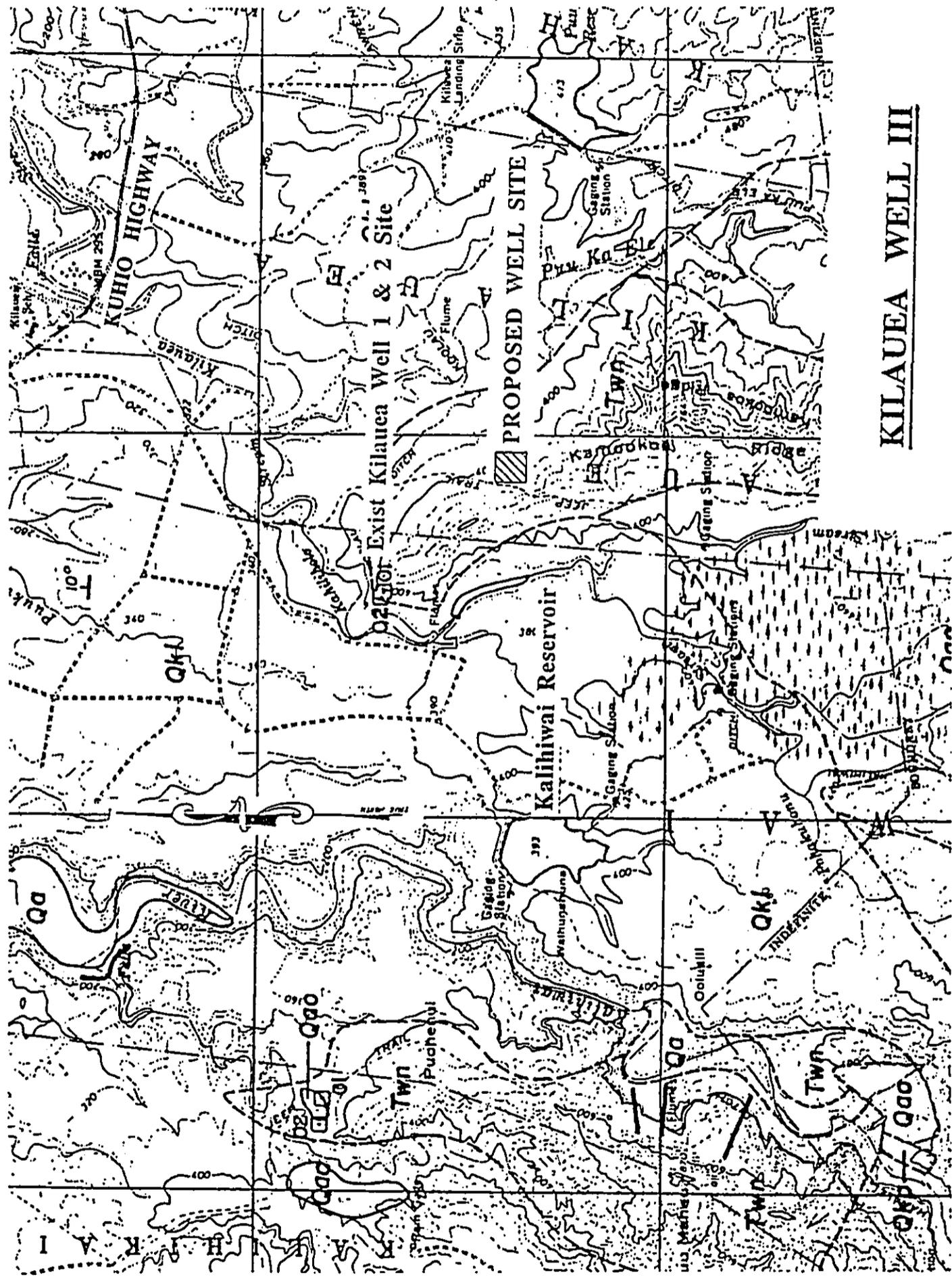
The well will be 12 inches in diameter or larger and will be drilled from an elevation of about 390 feet above mean sea level. The total depth of the well will be about 590 feet or deeper. The installed capacity of the pump will be 700 gpm pumping from a basal aquifer.

The proposed location of the well is about 2,000 feet southeastward of the existing Water Department well field on the lower slope of Kamookoa Ridge overlooking Puu Ka Ele Stream. The well site will have an area of about 10,000 square feet and is presently accessible by a dirt road. Its elevation will be compatible with the existing wells and storage tanks. The site itself will be completely fenced and landscaped.

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KILAUEA WELL III

B. PURPOSE OF PROJECT

The primary purpose of this project is to provide an additional source and pumping capacity to meet a growing water demand in the entire Kilauea area. This demand is most noticeable during:

1. High demand periods such as during the morning and evening hours, weekends, summer and drought conditions; and
2. Emergencies such as fire, mainbreaks, or disruptions in the pumping system

According to the County Water Department, it is difficult to maintain safe levels of water in the tanks. At times, water levels in the tanks have been found to be dangerously low. This condition is expected to worsen when development of the areas served by the tanks occurs in the near future.

C. DESCRIPTION OF THE AFFECTED ENVIRONMENT

The proposed well site has an area of about 10,000 square feet and possibly smaller. It is about 2,000 feet southeastward of the existing Kauai County Department of Water well field and is on the lower slope of Kamooka Ridge overlooking Puu Ka Ele Stream.

Assistant botanist with the National Tropical Botanical Garden in Lawai, Kauai, Timothy Flynn, states: "The area resembles an open meadow carpeted by a thick growth of an introduced and weedy species of the grass genus *Digitaria* (crabgrass) that forms a solid groundcover two to three feet thick that is only occasionally broken by solitary trees of strawberry guava, shoebutton ardisia, and downy myrtle." Flynn says there is an abundance of the native fern (uluhe) and hau trees on the site. Only a scattering of ohia and paperbark trees were seen. Flynn says all of the vegetation observed are "rather common and widespread and are not considered to be rare, threatened, or endangered by either the State of Hawaii or the U.S. Fish and Wildlife Service."

Somewhat less than a mile north of the proposed well site lies Kilauea town and the proposed Industrial-Commercial subdivision planned by the Kauai Professional Group. Roughly one-half mile west of the site is the Kalihiwai subdivision being developed by C. Brewer Company.

D. ARCHAEOLOGICAL CONSIDERATIONS

Several field surveys conducted recently by our botanist, hydrologist-geologist, and engineers failed to disclose any evidence of the existence of archaeological remains at the proposed well site. The only possible indication of past human activity in the area is limited agricultural pursuits, especially guava cultivation.

Nevertheless, it is proposed that the discovery of any archaeological item of significance during construction of the well will be reported to the State Division of Historic Sites. Construction will be suspended until the proper evaluations are made.

Early in 1994 a staff archaeologist with the State Historic Preservation Division inspected the proposed site for the well. In a letter dated February 11, 1994 to Mel Matsumura of the Kauai County Department of Water, Don Hibbard, administrator of the Division, stated, "As you know, no archaeological surveys have taken place in the parcel, so it was uncertain if significant historic sites are present. Based on field check, no archaeological sites were found. Therefore, we believe that your project will have "no effect" on historical sites." (See attached letter following page 13 of this report).

E. FLORA-FAUNA

1. Flora

A botanical survey of the well site area conducted on September 17, 1993 by Timothy Flynn concluded that the vegetation noted at the site are "rather common and widespread and are not considered to be rare, threatened, or endangered by either the State of Hawaii or the U.S. Fish and Wildlife Service." A copy of Mr. Flynn's report is attached as reference.

2. Fauna

During several field reconnaissances, no animals or birds were observed in the area. Available information states that there is a remote possibility that wild pigs may visit the area although none had been seen.

The State Division of Forestry and Wildlife notes that there is a possibility of Newell's Shearwater nesting in the area but this can only be confirmed from May to September when the birds are calling. The Hawaiian Bat may also be in the area. However, the State's Wildlife Biologist says that the negative impact on either species from the proposed development is unlikely.

The Department of Agriculture on Kauai states that insects and arthropods in the area consist predominantly of cockroaches, grasshoppers, crickets, stink bugs, ladybugs, certain types of weevils, oriental fruit flies, wasps, honeybees, ground beetles, ants, several species of spiders, garden snails, millipedes, and others. None is considered endangered.

Conclusions: No major disturbance to the flora and fauna at the project site is anticipated. Grasses and weeds will need to be removed, and insects and arthropods will need to relocate when the well is installed.

F. POTENTIAL ENVIRONMENTAL IMPACTS

1. Some grading will be necessary at the well site and for the access roadway to the site.
2. Grading will result in a minor and temporary dust problem.
3. There may be some traffic and noise problems during construction but they will be temporary. Residences are located far from the construction site and will not be disturbed. Construction activity will be governed by law and local regulations and ordinances.
4. Appropriate landscaping will greatly enhance the appearance of the well control station.

G. ALTERNATIVES TO PROPOSED PROJECT

The alternative would be not to construct the well. This would eliminate a badly-needed additional source to provide water for peak demands and emergencies. This source would also furnish water for future growth in the area. To not proceed with the project will affect the reliability of water service in the area and will eliminate any margin to provide for future demands.

II. SUMMARY AND RECOMMENDATIONS

It is recommended that the Kauai County Department of Water proceed with the construction of well no. 3 at Kilauea for the following reasons:

1. The Kilauea area is one of the fastest growing areas on the island of Kauai. In addition to residences, the construction of commercial and industrial establishments is also active.
2. An additional source of water is needed to meet demands for this growth.
3. The well site is fairly close to the Kauai County Department of Water's existing wells nos. 1 and 2 in Kilauea. It is also advantageous in terms of elevation and hydrology.
4. Negative environmental impacts would be minimal and temporary in most cases.

I. FINDINGS AND DETERMINATION

The purpose and description of the project, environmental considerations, and the reasons why the Kauai County Department of Water should proceed with the project have been described earlier in this report. After completing an environmental assessment and consulting with various agencies and individuals, it has been determined that the proposed project will not have a significant impact on the environment, and, accordingly, an Environmental Impact Statement would not be necessary.

This environmental assessment indicates that the proposed project will not:

1. destroy natural or cultural resources such as historic or archaeological sites;
2. affect any rare or endangered species of flora or fauna;
3. result in degradation of the environment;
4. negatively affect the economic or social welfare of the community;

5. curtail the beneficial uses of the environment;

6. have detrimental effects on the public's health.

The proposed project will result in substantial benefit to the people of Kauai, particularly those in the Kilauea area since it would provide an additional source to meet peak demands and emergencies. It would also be available to meet the needs of future residential, commercial, and industrial developments.

J. PERSONS AND AGENCIES CONTACTED

<u>Name</u>	<u>Agency</u>
Dr. Clinton Campbell	Department of Agriculture, Kauai
Timothy Flynn	National Tropical Botanical Garden, Lawai, Kauai
Don Hibbard	State of Hawaii, Department of Land and Natural Resources, Historic Sites Division
Wayne Hinazumi	Kauai County Department of Water
Mel Matsumura	Kauai County Department of Water
Ed Petteys	State of Hawaii, Department of Land and Natural Resources, Division of Forestry and Wildlife
Raymond Sato	Kauai County Department of Water
Donald Sugawa	Department of Agriculture, Kauai

JOHN WAIHEE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
STATE HISTORIC PRESERVATION DIVISION
33 SOUTH KING STREET, 6TH FLOOR
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HISTORIC PRESERVATION
DIVISION

LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT

February 11, 1994.

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

LOG NO: 10775
DOC NO: 9402NM02

Dear Mr. Matsumura:

**SUBJECT: Historic Preservation Review -- Exploratory Drilling and
Testing of Kilauea Well #3
Kalihiwai, Hanalei, Kauai**

Thank you for taking our staff archaeologist to inspect your proposed location for this project. As you know, no archaeological surveys have taken place in the parcel, so it was uncertain if significant historic sites are present. Based on field check, no surface archaeological sites were found. Therefore, we believe that your project will have "no effect" on significant historic sites.

If you have any questions, please call Nancy McMahon 587-0006.

Sincerely,

A handwritten signature in black ink, appearing to read "Don Hibbard".

DON HIBBARD, Administrator
State Historic Preservation Division

NM:amk



NATIONAL TROPICAL BOTANICAL GARDEN
CHARTERED BY CONGRESS TO CREATE A NATIONAL RESOURCE IN TROPICAL BOTANY

Botanical Survey of proposed
Kauai Water Department
Kilauea Well No. 3 Site

17 September 1993

Timothy Flynn
Assistant Botanist
National Tropical Botanical Garden
POBox 340
Lawai, Kauai, HI 96765
(808) 332-7324

Botanical Survey of Proposed Kauai Water Department
Kilauea Well No. 3 Site

A botanical survey of the vegetation found on the proposed site of the Kauai Water Department's Kilauea Well No. 3 was conducted on 17 September 1993. This parcel (TM no. not available), on land owned by C. Brewer, Inc., lies mauka (south) of Kilauea, adjacent to and SE of Kilauea Agronomics.

The proposed site, with its long side running in a north-south direction, is flat to gently sloping towards the east and bordered on the west by a more-or-less wooded ridge rising some 50 to 60 feet. The upper slope of the ridge is dominated by a thick cover of the common indigenous fern *Dicranopteris linearis* (uluhe). Near the bottom of the slope this gives way to a wooded thicket composed of the indigenous hibiscus species *Hibiscus tiliaceus* (hau), *Ardisia elliptica* (shoebuttan ardisia), *Psidium cattleianum* (waiawi or strawberry guava), *Rhodomyrtus tomentosa* (downy myrtle), and *Syzygium cumini* (java plum). These in turn are replaced by *Eucalyptus robusta* (swamp mahogany), *Melaleuca quinquenervia* (paperbark), and *Casuarina cf. cunninghamiana* (river-oak casuarina) along the north end of the ridge. The southern end of the ridge is dominated by hau and river-oak casuarina. Scattered individuals of the indigenous species *Pandanus tectorius* (hala) as well as single individuals of the endemic species *Metrosideros polymorpha* ('ohia) and *Wikstroemia oahuensis* ('akia) were also seen on the western slope.

From the base of the ridge the land area flattens abruptly along what appears to an old road and then gradually slopes downward towards the east. The area resembles an open meadow carpeted by a thick growth of an introduced and weedy species of the grass genus *Digitaria* (crabgrass) that forms a solid groundcover two to three feet thick that is only occasionally broken by solitary trees of strawberry guava, shoebuttan ardisia, and downy myrtle. The tree cover becomes progressively thicker as one heads east but the groundcover continues to be dominated by *Digitaria* and in fact it often grows up into the trees to a height of five or six feet. Shoebuttan ardisia and strawberry guava form infrequent thickets that shade out the *Digitaria* but harbor various weedy herbs such as *Elephantopus spicatus*, *Sacciolepis indica* (Glenwood grass), and *Nephrolepis multiflora* (Boston fern) along their margins. In addition, a single small colony of the indigenous fern *Odontosoria chinensis* was also seen along an animal track on the southern end of the site.

The vegetation of the site is dominated by alien or introduced species although six species that are either endemic or indigenous to the Hawaiian Islands were found. With the exception of the fern *Odontosoria chinensis* (Pala'a), all of the native species are confined to the ridge along the eastern side of the site. By far the most abundant native species are the common fern *Dicranopteris linearis* (uluhe) and the tree *Hibiscus tiliaceus* (hau). Scattered individuals of *Pandanus tectorius* (hala) and single individuals of *Metrosideros polymorpha* var. *glaberrima* ('ohia) and *Wikstroemia oahuensis* ('akia) were also seen. All are rather common and widespread and are not considered to be rare, threatened, or endangered by either the State of Hawaii or the U. S. Fish and Wildlife Service. A list of all of the species seen on the site has been included at the end of this report.

VASCULAR PLANT SPECIES LIST
 Kauai Water Department's Proposed Kilauea Well No. 3 Site
 * Native species are in **Bold Face**

FAMILY Scientific name	Common name
APIACEAE <i>Centella asiatica</i> (L.) Urb.	Asiatic pennywort
ARALIACEAE <i>Schefflera actinophylla</i> (Endl.) Harms	Octopus tree
ASTERACEAE <i>Ageratum houstonianum</i> Mill. <i>Elephantopus spicatus</i> Juss. ex Aubl.	Maile hohono
DRYOPTERIDACEAE <i>Nephrolepis multiflora</i> (Roxb.) Jarret ex Morton	Boston Fern
CASUARINACEAE <i>Casuarina</i> cf. <i>cunninghamiana</i> Miq.	River-oak casuarina
CECROPIACEAE <i>Cecropia obtusifolia</i> Bertol.	Guarumo
FABACEAE <i>Chamaecrista nictitans</i> (L.) Moench. subsp. <i>patellaria</i> (DC ex Collad.) H. Irwin & Barneby var. <i>glabrata</i> (Vogel) H. Irwin & Barneby <i>Desmodium incanum</i> DC <i>Mimosa pudica</i> L. var. <i>unijuga</i> (Duchass. & Walp.) Griseb.	Partridge pea Spanish clover Hilahila
GLEICHENIACEAE <i>Dicranopteris linearis</i> (N.L. Burm.) Underw.	Uluhe
LINDSAEACEAE <i>Odontosoria chinensis</i> (L.) J. Sm.	Pala'a

FAMILY	Scientific name	Common name
MALVACEAE	Hibiscus tiliaceus L.	Hau
MYRSINACEAE	Ardisia elliptica Thunb.	Shoebutton ardisia
MYRTACEAE	Eucalyptus robusta Sm.	Swamp mahogany
	Melaleuca quinquenervia (Cav.) S.T. Blake	Paperbark
	Metrosideros polymorpha Gaud. var. glaberrima (H. Lev.) St. John	'Ohia
	Psidium cattleianum Sabine	Strawberry guava
	Psidium guajava L.	Common guava
	Rhodomyrtus tomentosa (Aiton) Hassk.	Downy myrtle
	Syzygium cumini (L.) Skeels	Java plum
ORCHIDACEAE	Spathoglottis plicata Blume	Philippine ground orchid
PANDANACEAE	Pandanus tectorius S. Parkinson ex Z.	Hala
POACEAE	Digitaria sp.	Crabgrass
	Paspalum conjugatum Berguis	Hilo grass
	Pennisetum purpureum Schumach.	Elephant grass
	Sacciolepis Indica (L.) Chase	Glenwood grass
THELYPTERIDACEAE	Thelypteris dentata (Forsk.) E. St. John	Downy maiden fern
THYMELAEACEAE	Wikstroemia oahuensis (A. Gray) Rock	'Akia
VERBENACEAE	Stachytarpheta urticifolia (Salisb.) Sims	

GLOSSARY

Endemic: Plants native and confined to a particular geographic area. In this case it refers to the Hawaiian Islands.

Indigenous: Plants native to more than one geographical area, i.e. native to the Hawaiian Islands as well as other areas in the tropical Pacific.

Introduced: Plants that were brought to the Hawaiian Islands by man.

Native: Plants that arrived and/or became established in the Hawaiian Islands without the aid of man (they can be either endemic or indigenous). These species are generally regarded as having been in the islands before the arrival of the Polynesians.

REFERENCES

Wagner, W. H., Jr. and F. S. Wagner. 1993. **Revised Checklist of Hawaiian Pteridophytes.** (Unpublished).

Wagner, W. L., D. R. Herbst, and S. H. Sohmer. 1990. **Manual of the Flowering Plants of Hawaii.** 2 Vols. University of Hawaii Press and Bishop Museum Press. Honolulu.