Waiaha Exploratory Well

DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAII
25 AUPUNI STREET • HILO, HAWAII 96720
TELEPHONE (808) 961-8660 • FAX (808) 961-8657

November 2, 1998

'98 NOV -5 P3:07

Mr. Gary Gill, Director
State of Hawaii
Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, HI 96813

FINDING OF NO SIGNIFICANT IMPACT (FONSI) FOR WAIAHA WELL
WAIAHA, NORTH KONA, HAWAII
TAX MAP KEY 7-5-015:015

The Department of Water Supply has reviewed the comments received during the 30-day public comment period which began on April 8, 1998. This agency has determined that this project will not have any significant environmental effects and has issued a FONSI. Please publish this notice in the November 23, 1998 OEQC Environmental Notice.

We have enclosed a complete OEQC Publication Form and four copies of the final environmental assessment. Please call Mr. William Atkins at 961-8660 if you have any questions.

Milton D. Pavao, P.E.
Manager

WA:gms

Enc.

... Water brings progress...

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1998-12-23-HI-FEA- Waiaha Exploratory Well

DEPARTMENT OF WATER SUPPLY
COUNTY OF HAWAII
HILO, HAWAII

FINAL ENVIRONMENTAL ASSESSMENT/FINDING OF NO SIGNIFICANT IMPACT (FONSI)

FOR THE

DRILLING OF THE WAIAHA EXPLORATORY WELL DRILLING

DISTRICT OF NORTH KONA

STATE OF HAWAII

PURSUANT TO CHAPTER 343
HAWAII REVISED STATUTES

October 27, 1998

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A

NOTICE OF DETERMINATION: FINDING OF NO SIGNIFICANT IMPACT (FONSI)

FOR: WAIAHA EXPLORATORY WELL

BY: DEPARTMENT OF WATER SUPPLY
COUNTY OF HAWAII

This 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, together with the supporting Environmental Assessment, is being filed as a Finding of No Significant Impact (FONSI).

B

ENVIRONMENTAL ASSESSMENT
FOR WAIAHA EXPLORATORY WELL
DEPARTMENT OF WATER SUPPLY
COUNTY OF HAWAII

I. PROJECT DESCRIPTION AND PURPOSE:

The project consists of drilling, casing, and testing a new 26-inch diameter exploratory well to replace the existing exploratory well (No. 3857-01) which was not completed. The new exploratory well will be constructed in accordance with the "Hawaii Well Construction and Pump Installation Standards" as revised on January 23, 1997.

Other site improvements subject to the test results may also include site grading for and installation of a reservoir, pump, and control buildings. A.C. paving will also be provided.

The project site is owned in fee by the Department of Water Supply (Tax Map Key 7-5-015:015).

Funding for the proposed project is by Department of Water Supply (DWS) funds. The estimated cost is $1.1 million.

II. PROJECT LOCATION:

The project site (Tax Map Key 3rd Div. 7-5-015:015) is located in the North Kona District of the Island of Hawaii, approximately 200 feet easterly of the Mamalahoa Highway and adjacent to the existing 1.0-M.G. Steel Reservoir. (Exhibit A).

The well is located on land owned in fee by DWS. The well site is surrounded by undeveloped lands, currently zoned agricultural, and unplanned by the County Planning Department.

The mean annual rainfall of the area is 40 to 60 inches.

The Soil Conservation Services' SOIL SURVEY OF THE ISLAND OF HAWAII, classified the soil at the project site as belonging to the Kona series, which consists of well-drained, thin, organic soils over pahoehoe lava bedrock. Kona extremely rocky muck 6 to 20 percent slopes (rKYD).

In a representative profile, the surface layer is very dark brown muck about 5 inches thick. It is underlain by pahoehoe lava bed rock. Permeability is rapid in the soil and water moves rapidly through the cracks of lava. Runoff is medium, and the erosion hazard is slight. Roots are matted over the bedrock or extend a few feet into the cracks. The soil is mostly used for pasture, although small areas are used for coffee and macadamia nuts.

According to the Federal Emergency Management Agency's FLOOD BOUNDARY AND FLOODWAY MAP FOR HAWAII COUNTY, MAY 1982, the well site and environs are located outside of flood boundaries.

III. POTENTIAL IMPACTS AND SIGNIFICANT CRITERIA

The project is to replace the existing exploratory well that is abandoned to supplement the existing water sources in North Kona.

Impacts from existing cesspools within 1,000 feet radius from the proposed well are minimal and will present a minimal risk to the water quality. The well will not be susceptible to contamination due to its construction (grouted annulus and depth of well), which inhibits surface water from breaching the well and allows only pristine basal water to enter the well. New dwellings constructed within a 1,000 feet radius of the well after it is drilled will be required to install septic tanks, unless otherwise directed by the State Department of Health to install aerobic wastewater treatment facilities.

Impacts from drilling the well and construction of the reservoir and supporting facilities will be minimal. The onsite construction noise resulting from this activity will not extend extensively beyond the property boundaries. The activity of drilling and construction of the reservoir, buildings, settings, and testing equipment will not be a nuisance factor. Construction will be limited to daylight hours and work will not be permitted on weekends and holidays unless approved by DWS. Noise from construction activities is subject to applicable regulations of the State of Hawaii, Department of Health.

Since most construction equipment emits noise in excess of 70 dba (see Exhibit C), the contractor is required to install and maintain mufflers and other noise suppressing devices on his equipment.
Inconvenience to nearby residence will be maintained at minimum from construction and noise.

SIGNIFICANT CRITERIA:

A. Involves an irrevocable commitment to loss or destruction of any natural or cultural resources.

The site proposed for drilling a second exploratory well was disturbed in the past for construction of the existing reservoir and recently for the drilling of an exploratory well that is to be abandoned. The existing site was designed following established engineering standards, and all proposed improvements will be subject to the latest standard engineering practices imposed by all concerned government agencies.

Therefore, pursuant to the above, no significant archaeological or historical sites are known to exist on the property. However, should any be uncovered during the construction phase of the project, treatment will be in strict compliance with the requirements of the Department of Land and Natural Resources.

B. Curtails the range of beneficial uses of the environment.

Although the project is environmentally benign, the North Kona water system and surrounding agricultural zoned land being used for agriculture will benefit from the additional water that will be available upon successful completion of the project into a production well. Not developing the site for additional water production would stress the Department's existing water system, and create an unwelcome economical situation that impact existing and future consumers.

C. Conflicts with the State's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS, and any revisions thereof and amendments thereto, court decisions, or executive orders.

The proposed development is consistent with the Environmental Policies established in Chapter 344, HRS, and the National Environmental Policies Act.

D. Substantially effects the social welfare of the community or State.

The proposed project will substantially contribute to the health and welfare of the inhabitants of the area including the flora and fauna. The proposed project is designed to support surrounding land use patterns, will not negatively, or significantly alter existing residential areas, nor will unplanned population growth or its distribution be stimulated. The project is being developed in response to existing water demand and projected population growth rather than contributing to new population growth by stimulating in-migration.

E. Substantially effects public health.

Impacts to public health may be effected by air and noise, however, will be insignificant due to controls imposed during the construction phase of the project. Overall, air and noise will be significantly positive in terms of public health upon completion of the construction phase of the project as compared to the "no action" alternative.

F. Involves substantial secondary impacts, such as population changes or effects on public facilities.

Existing and planned housing and commercial development projects within the Waiaha-North Kona area has and will contribute to a population growth rate that is requiring expansion of the Department's facilities and services. These improvements are part of the Department of Water Supply's ongoing source development program and necessary as North Kona's population grows.

G. Involves a substantial degradation of environmental quality.

The proposed development will utilize land that has been disturbed for the existing reservoirs. The existing and proposed landscaping will significantly mitigate the visual impact of the development as viewed from the outside and will compliment background vistas.

H. Is individually limited, but cumulatively, has considerable effect on the environment, or involves a commitment for larger actions.

The Department is attempting to address the existing and future needs of the North Kona area, and improvements of the water system is

consistent with the State of Hawaii and County of Hawaii water master plans.

I. Substantial affects a rare, threatened, or endangered species, or its habitat.

No endangered plant or animal species are located within the construction site.

J. Detrimentally affects air or water quality or ambient noise levels.

Some or all of the cuttings from the exploratory well may be disposed of onsite or offsite as the Department deems necessary and will be in accordance with standard engineering practices so the impact on the existing drainage patterns and environment will be mitigated.

Any possible noise emanating from the construction and testing phase will be minimized by the contractor installing mufflers and other noise suppressing devices on his equipment.

K. Affects or is likely to suffer damage by being located in an environmentally sensitive, tsunami zone area, such as a flood plane, beach erosion-prone area, geologically hazardous land, estuary, or coastal waters.

The property is not located within a coastal zoned area and is compatible with the remaining criteria since they are not environmental sensitive areas associated with the project as the physical character of the site has been disturbed in the past for the existing improvements. As such, the property no longer reflects a "natural environment." Drainage or geological hazardous areas will not be impacted.

L. Substantially affects scenic vistas and view planes identified in County or State plans or studies.

Due to the characteristic of the project, scenic vistas and view planes will not be affected.

M. Requires substantial energy consumption.

The project, upon completion, will not require excessive energy consumption and will be minimized through the Department's water conservation.

IV. SURROUNDING LAND USE:

The State land use designation for the subject property and surrounding land is agricultural and Ag-1a County zoning.

V. DETERMINATION:

The preceding Environmental Assessment has indicated that this action will have no significant long term adverse impact on the environment or the proposed well. The adverse impacts will be of short duration and can be minimized by corrective measures. It is therefore determined that an Environmental Impact Statement is not required and this assessment be filed as a Negative Declaration.

In addition, the Office of Environmental Quality Control Commission has classified this type of well under Exemption Class No. 5.

VI. <u>APPENDIX A:</u>

1. Aquifer or Hydrologic Unit Status Data (See Attached

2. North Kona Current Consumption (See Attached)

1.

Aquifer or Hydrologic Unit Status Data

Sustainable Yield = 38 mgd

Initial Head = Not Available. Exploratory well not drilled, or tested.

Equilibrium Head = Not Available. Exploratory well not drilled, or tested.

Table 1: Overall Aquiver or Hydrology unit status Data in Million Gallons Per day

Land Owner	Authorized Water Use (permitted by CRWM)	Existing (E)		Planned / Pending (P)		Potential Future(E+P)	
		Pump Capacity	Average Use **	Pump Capacity	Proposed Use	Pump Capacity	Proposed Use
A	38 mgd	0	0	1 mgd	1 mgd	N.A.	N.A.
B	N/A	N/A	N/A	N/A	N/A	N/A	N/A
C	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 2: Aquifer or Hydologic Unit Status Data for Landowner C in million Gallons Per Day. I

well site	Authorized Water Use (Permitted b CRWM)	Existing (E)		Planned/Pending (P)		Potential Future (E+P)	
		Pump Capacity	Average Use	Pump Capacity	Proposed Use	Pump Capacity	Proposed Use
Mauka	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Makai	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Central	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Note:

N.A. = Not Available.
N/A = Not Applicable

The proposed exploratory well has not been drilled.
Therefore, the capacity, or quality of water has not been determined.

The proposed well will be incorporated into the North Kona Water system.
See attached sheet for North Kona Water Usage.

NORTH KONA	CURRENT CONSUMPTION					COMMITMENTS		TOTAL
SUB SYSTEM	NO. OF SERVICES	AVERAGE DAY (MG)	AVERAGE DAY (GPM)	MAX DAY (MG)	MAX DAY (GPM)	NO. OF UNITS	MAX. DAY (MG)	MAX DAY CONSUMPTION/ COMMITMENTS
700 KAILUA	545	1,550	1,076	2.324	1,614	658	0.395	2.719
705 HONOKOHAU HARBOR	12	0.173	120	0.260	180	500	0.300	0.560
706 KALOKO LIGHT INDUSTR.	52	0.131	91	0.197	137	934	0.560	0.757
707 KEAHOLE AG PARK	33	0.095	66	0.143	99	835	0.501	0.644
708 KEAHOLE AIRPORT	33	0.182	126	0.273	189			0.273
710 ALII NORTH	395	0.415	288	0.622	432	1,048	0.629	1.251
712 ALII SOUTH	53	0 141	98	0.212	147	95	0.057	0.269
714 LAALOA	384	0.944	656	1 416	983	8	0.005	1.421
716 KEAUHOU	253	1.055	732	1.582	1,098	699	0.419	2.001
722 UPPER KUAKINI	390	0.168	117	0.252	175	1,600	0.960	1.212
725 LOWER KUAKINI	764	0.347	241	0.520	361	699	0.419	0.940
730 PALANI 590	16	0.101	70	0.151	105	97	0.058	0.209
732 KEALAKEHE	374	0.236	164	0.354	246	467	0.280	0.634
734 PALANI 1200	397	0.122	85	0.183	127	27	0.016	0 199
736 PALANI JUNCTION	131	0.053	37	0.080	55	1,500	0.900	0.980
738 KALOKO-KALAOA	737	0.254	176	0.381	264	236	0.142	0.522
743 HIGHLANDS	283	0.141	98	0.212	147			0.212
745 PALISADES II	216	0.067	46	0.100	69			0.100
747 PALISADES III	234	0.082	57	0.124	86			0.124
749 ACRES I	117	0.042	29	0.063	44	12	0.007	0.070
751 ACRES II	91	0.045	31	0.067	47			0.067
753 KALOKO MAUKA 2	29	0.009	6	0.013	9	14	0.008	0.022
754 KALOKO MAUKA 3	39	0.014	9	0.020	14	25	0.015	0.035
755 KALOKO MAUKA 4	12	0 001	1	0.002	1	20	0.012	0.014
756 KALOKO MAUKA 5	18	0.007	5	0.010	7	2	0.001	0.011
757 KALOKO MAUKA 6	11	0.002	1	0.002	2			0.002
758 KALOKO MAUKA 7	5	0.000	0	0.001	0			0.001
759 KALOKO MAUKA 8	14	0.012	8	0.018	13	1	0.001	0.019
764 MOEAUOA	114	0.084	58	0.126	87	1	0.001	0.127
766 PUAA	133	0.136	95	0.205	142	3	0.002	0.206
770 KAILUA VIEW	272	0.107	74	0.160	111			0.160
772 LOWER KAILUA VIEW	265	0.145	101	0.217	151	44	0.026	0.244
774 WAIAHA	173	0.109	76	0.164	114	14	0.008	0.172
776 HOLUALOA	124	0.064	44	0.095	66	17	0.010	0.106
778 UPPER HUALALAI	53	0.023	16	0.035	24	84	0.050	0.085
780 HUALALAI ORCHARD	77	0.066	46	0.099	69	268	0.161	0.260
782 LOWER HUALALAI	3	0.003	2	0.005	3	9	0.005	0.010
784 KAHALUU NORTH	73	0.035	24	0.053	37	5	0.003	0.056
786 KAHALUU SOUTH	87	0.050	35	0.076	52	1	0.001	0.076
788 KAHALUU MAKAI	30	0.019	13	0.029	20	4	0.002	0.031
790 KEAUHOU MAUKA	96	0.050	34	0.074	52	1	0.001	0.075
792 KAWAINUI	290	0.191	132	0.286	199	2	0.001	0.287
797 HALEKII	587	0.383	266	0.575	399	79	0.047	0.622
	8,015	8	5,454	11.780	8,180	10,009	6.005	17.785

3. List of Agencies Contacted

Mr. John Jeffredo, Soil Conservationist
Natural Resources Conservation Service
United States Department of Agriculture

Mr. Charles Ewart, Hydrology Engineer
U.S. Geological Survey
Water Resources Division

Real Property Tax Office
Hawaii County

Health Department, Environmental Management Section
State of Hawaii, Hilo Office

Department of Land and Natural Resources
Water Resources Management Section
State of Hawaii (copy of Sustainable Yield List for Hawaii attached)

Ms Irene North
State of Hawaii
Department of Education
Kailua-Kona Public Library

4. List of Adjacent Land Owners and Copies of Notification Letters

Ms. Freida Smith
75-5751 Mamalahoa Highway
Holualoa, HI 96725
(Tax Map Key: 7-5-014)

Mr. Stanley Gomes
P.O. Box 574
Holualoa, HI 96725
(Tax Map Key 7-5-014:009)

Mr. Andreas Gnauck
P.O. Box 5087
Kailua-Kona, HI 96725
(Tax Map Key 7-5-015:016)

Messrs. S. Peck and E. Baughman
75-5721 Mamalahoa Highway
Holualoa, HI 96825
(Tax Map Key 7-5-015:009)

Mr. Roger Forbes
P.O. Box 12353
Seattle, WA 98111
(Tax Map Key 7-5-016:050)

Mr. Teruko Yamanaka
75-5712 Mamalahoa Highway
Holualoa, HI 96725
(Tax Map Key 7-5-016:051)

Mr. Norman Nakamoto
P.O. Box 32
Kailua-Kona, HI 96745
(Tax Map Key 7-5-016:034)

Mr. Bennett K. Ohta
P.O. Box 43
Holualoa, HI 96725
(Tax Map Key 7-5-016:032)

5. Public Comment and Response Within the 30-Day Comment Period

Mr. Randall Ogata, Administrator
State of Hawaii
Office of Hawaiian Affairs

Mr. Gary Gill, Director
Office of Environmental Quality Control

These were the only public response received in this office during the 30-day comment period.

See attached copies of comment and response letters.

6. List and Copies of Required Permits and Status

Well Construction Permit to Abandon/Seal

Exploratory Well Drilling Permits

Processing applications is subject to approval of the final EA.

7. References:

a. Bulletin 9 - Geology and Groundwater Resources of the Island of Hawaii. H.T. Stearns and G.A. Mac Donald. October 1946.

b. Soil Survey of the Island of Hawaii - U.S. Soil Conservation Service. 1973.

c. Water Master Plan - Island of Hawaii - Department of Water Supply. December 1980.

STATE OF HAWAI'I
OFFICE OF HAWAIIAN AFFAIRS
711 KAPI'OLANI BOULEVARD, SUITE 500
HONOLULU, HAWAI'I 96813-5249
PHONE (808) 594-1888
FAX (808) 594-1865

April 08, 1998

Doc. No. EIS-163

Mr. Milton Pavao
Department of Water Supply
County of Hawaii
25 Aupuni St.
Hilo, HI 96817-4941

Subject: Draft Environmental Assessment (DEA)/Negative Declaration for the Drilling of the Waiaha Exploratory Well, North Kona, Island of Hawaii

Dear Mr. Pavao:

Thank you for the opportunity to review the Draft Environmental Assessment (DEA)/Negative Declaration for the Drilling of the Waiaha Exploratory Well, North Kona, Island of Hawaii. The County of Hawaii is proposing to drill, encase, and test a new well to replace an existing and incomplete exploratory well (No. 3857-01).

The Office of Hawaiian Affairs (OHA) has some concerns at this time to the proposed well development. The well apparently bears no adverse impacts on adjacent lands as it is surrounded by undeveloped lands. However, no information is given in the DEA on (i) flora, fauna, and archaeological resources, and (ii) potential impacts of the proposed volume rate of pumping (1 MGD) on either sustainable yield or quality of the local aquifer system. OHA urges the applicant to address the impacts of the well on natural and archaeological resources to substantiate the issuance of a negative declaration.

Please contact Colin Kippen (594-1938), LNR Officer, or Luis Manrique (594-1758), should you have any questions on this matter.

Sincerely yours,

Randall Ogata
Administrator

Colin Kippen
Officer,
Land and Natural
Resources Division

cc: Board of Trustees
CAC, Island of Hawaii

DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAII
25 AUPUNI STREET • HILO, HAWAII 96720
TELEPHONE (808) 961-8660 • FAX (808) 961-8657

July 17, 1998

Mr. Randall Ogata, Administrator
State of Hawaii
Office of Hawaiian Affairs
711 Kapiolani Boulevard, Suite 500
Honolulu, HI 96813-5249

DRAFT ENVIRONMENTAL ASSESSMENT (EA) FOR WAIAHA EXPLORATORY WELL
NORTH KONA, HAWAII
TAX MAP KEY 7-5-015:015

This letter is in response to your letter of April 8, 1998.

The concerns raised in your letter have been subsequently addressed under Item 3 of Significant Criteria in our Supplement to the subject EA. They are as follows:

ITEM:

3a. The site proposed for drilling a second exploratory well was disturbed in the past for construction of the existing reservoir and recently for the drilling of an exploratory well that is to be abandoned. The existing site was designed following established engineering standards, and all proposed improvements will be subject to the latest standard engineering practices imposed by all concerned government agencies.

Therefore, pursuant to the above, no significant archaeological or historical sites are known to exist on the property. However, should any be uncovered during the construction phase of the project, treatment will be in strict compliance with the requirements of the Department of Land and Natural Resources.

3i. No endangered plant or animal species are located within the construction site.

Further, according to information from the Commission of Water Resource Management (CWRM), the proposed Waiaha Well is in the Hualalai sector of the Keauhou Aquifer System that has a sustainable yield of thirty-eight (38) mgd. Therefore, the proposed pumping rate of 1.0 mgd at this well will have a negligible effect on this section.

Should there be any questions, please contact our Water Resources and Planning Branch at 961-8660.

Milton D. Pavao, P.E.
Manager

WA:gms

Enc.

copy - Office of Environmental Quality Control

DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAII
25 AUPUNI STREET • HILO, HAWAII 96720
TELEPHONE (808) 961-8660 • FAX (808) 961-8657

July 22, 1998

Mr. Gary Gill, Director
State of Hawaii
Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, HI 96813

DRAFT ENVIRONMENTAL ASSESSMENT FOR WAIAHA EXPLORATORY WELL, NORTH KONA
TAX MAP KEY 7-5-015:015

The following are responses to the items in your letter of April 13, 1998.

ITEMS

1. Contacts:

   a. Mr. John Jeffredo, Soil Conservationist
   Natural Resources Conservation Service
   United States Department of Agriculture
   P.O. Box 636
   Kealakekua, HI 96750-0636

   b. Mr. Charles Ewart, Hydrologist Engineer
   U. S. Department of the Interior
   U. S. Geological Survey
   Water Resources Division
   677 Ala Moana Boulevard, Suite 415
   Honolulu, HI 96813

   c. Real Property Tax Office, County of Hawaii
   865 Piilani Street
   Hilo, HI 96720

   d. State of Hawaii
   Department of Health
   Environmental Management Section
   1582 Kamehameha Avenue
   Hilo, HI 96720

e. State of Hawaii
Department of Land and Natural Resources
Commission on Water Resource Management
P.O. Box 621
Honolulu, HI 96809

2. Surrounding Land Use:

a. The State land use designation for the subject property and surrounding land use is agricultural and Ag-1a County zoning.

b. Further, the following residents, all within 300 feet of the project site, are being informed in writing that the EA for the Department's Waiaha Exploratory Well is available for review and comments are welcome:

- Ms. Freida Smith
75-5751 Mamalahoa Highway
Holualoa, HI 96725
(Tax Map Key 7-5-014:001)

- Mr. Stanley Gomes
P.O. Box 574
Holualoa, HI 96725
(Tax Map Key 7-5-014:009)

- Mr. Andreas Gnauck
P.O. Box 5087
Kailua-Kona, HI 96725
(Tax Map Key 7-5-015:016)

- Messrs. S. Peck and E. Baughman
75-5721 Mamalahoa Highway
Holualoa, HI 96825
(Tax Map Key 7-5-015:009)

- Mr. Roger Forbes
P.O. Box 12353
Seattle, WA 98111
(Tax Map Key 7-5-016:050)

- Mr. Teruko Yamanaka
  75-5712 Mamalahoa Highway
  Holualoa, HI 96725
  (Tax Map Key 7-5-016:051)

- Mr. Norman Nakamoto
  P.O. Box 32
  Kailua-Kona, HI 96745
  (Tax Map Key 7-5-016:034)

- Mr. Herbert Murata
  75-5726 Mamalahoa Highway
  Holualoa, HI 96725
  (Tax Map Key 7-5-016:033)

- Mr. Bennett K. Ohta
  P.O. Box 43
  Holualoa, HI 96725
  (Tax Map Key 7-5-016:032)

3. Significant Criteria (in accordance with HAR 11-200-12):

   a. *Involves an irrevocable commitment to loss or destruction of any natural or cultural resources.*

   The site proposed for drilling a second exploratory well was disturbed in the past for construction of the existing reservoir and recently for the drilling of an exploratory well that is to be abandoned. The existing site was designed following established engineering standards and all proposed improvements will be subject to the latest standard engineering practices imposed by all concerned government agencies.

   Therefore, pursuant to the above, no significant archaeological or historical sites are known to exist on the property. However, should any be uncovered during the construction phase of the project, treatment will be in strict compliance with the requirements of the Department of Land and Natural Resources.

   b. *Curtails the range of beneficial uses of the environment.*

   Although the project is environmentally benign, the North Kona water system and surrounding agricultural zoned land being used for agriculture will benefit from the additional water that will be available upon successful completion of the project into a production well. Not developing the site

for additional water production would have the Departments existing water system create an unwelcome economical situation that would impact existing and future consumers.

c. *Conflicts with the State's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS; and any revisions thereof and amendments thereto, court decisions, or executive orders.*

The proposed development is consistent with the Environmental Policies established in Chapter 344, HRS, and the National Environmental Policies Act.

d. *Substantially affects the social welfare of the community or State.*

The proposed project will substantially contribute to the health and welfare of the inhabitants of the area including the flora and fauna. The proposed project is designed to support surrounding land use patterns and will not negatively or significantly alter existing residential areas, nor will unplanned population growth or its distribution be stimulated. The project is being developed in response to existing water demand and projected population growth rather than contributing to new population growth by stimulating in-migration.

e. *Substantially affects public health.*

Impacts to public health may be temporarily affected by air and noise; however, will be insignificant due to controls imposed during the construction phase of the project. Overall, air and noise will be significantly positive in terms of public health upon completion of the construction phase of the project as compared to the "No Action" alternative.

f. *Involves substantial secondary impacts, such as population changes or effects on public facilities.*

Existing and planned housing and commercial development projects within the Waiaha, North-Kona area has and will contribute to a population growth rate that is requiring expansion of the Department's facilities and services. These improvements are part of the Department of Water Supply's ongoing source development program and necessary as North Kona's population grows.

g. *Involves a substantial degradation of environmental quality.*

The proposed development will utilize land that has been disturbed for the existing reservoirs. The existing and proposed landscaping will significantly mitigate the visual impact of the development as viewed from the outside and will complement background vistas.

h. *Is individually limited but cumulatively has considerable effect on the environment or involves a commitment for larger actions.*

The Department is attempting to address the existing and future needs of the North Kona area, and improvements of the water system is consistent with the State of Hawaii and County of Hawaii Water Master Plans.

i. *Substantial affects a rare, threatened or endangered species, or its habitat.*

No endangered plant or animal species are located within the construction site.

j. *Detrimentally affects air or water quality or ambient noise levels.*

Some or all of the cuttings from the exploratory well may be disposed of onsite or offsite as the Department deems necessary, and will be in accordance with standard engineering practices so the impact on the existing drainage patterns and environment will be mitigated.

Any possible noise emanating from the construction and testing phase will be minimized by the contractor installing mufflers and other noise suppressing devices on the equipment.

k. *Affects or is likely to suffer damage by being located in environmentally sensitive, tsunami zone areas, such as a flood plane, beach erosion-prone area, geologically hazardous land, estuary, or coastal waters.*

The property is not located within the coastal zone and is compatible with the remaining criteria since they are not environmental sensitive areas associated with the project; the physical character of the site has been disturbed in the past for the existing improvements. As such, the property no longer reflects a "natural environment." Drainage, or geological hazardous areas will not be impacted.

l. *Substantially affects scenic vistas and view planes identified in County, or State plans or studies.*

Due to the characteristic of the project, scenic vistas and view planes will not be affected.

m. *Requires substantial energy consumption.*

The project upon completion will not require excessive energy consumption and will be minimized through the Department's water conservation and the ongoing leak prevention programs.

Therefore, pursuant to the above items and our previous submittal, we are requesting a concurrence for a determination of Finding of No Significant Impact on this project.

Should there be any further questions, please contact our Water Resources and Planning Branch at 961-8660.

Milton D. Pavao, P.E.
Manager

WA:gms

BENJAMIN J. CAYETANO
GOVERNOR

GARY GILL
DIRECTOR

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
235 SOUTH BERETANIA STREET
SUITE 702
HONOLULU, HAWAII 96813
TELEPHONE (808) 586-4185
FACSIMILE (808) 586-4186

April 13, 1998

Milton Pavao
Department of Water Supply
25 Aupuni Street
Hilo, Hawaii 96720

Attention: William Atkins

Dear Mr. Pavao:

Subject: Draft Environmental Assessment (EA) for Waiaha Exploratory Well, North Kona; TMK 7-5-15:15

Please note that loose attachments to an EA are not permitted. Bind or staple all attachments to the final EA. In addition we have the following comments to offer:

1. Contacts: List state and county agencies contacted, and document all contacts in the final EA. Include copies of any correspondence.

2. Surrounding land use: What is the State land use designation for this parcel of land? The draft EA states that the site is on undeveloped agricultural land, but does not mention whether it is vacant or not. How close are the nearest neighbors? Notify the nearest neighbors or neighboring landowners of the proposed project, allowing them sufficient time to review the draft EA and submit comments.

3. Significance criteria: Include a discussion of findings and reasons, according to the significance criteria listed in HAR 11-200-12, that supports the anticipated (FONSI) determination. You may use the enclosed sample as a guideline.

4. Determination: A determination stating that an environmental impact statement will not be required is listed in the draft EA. The EIS law prohibits a determination of significant impact or lack of significant impact before the end of the 30-day public review period and prior to receipt, response and analysis of all

written comments. For a draft EA the proper determination is *anticipated FONSI* (Finding of No Significant Impact). Please also note that, as of April 1996, the term "negative declaration" has been replaced by Finding of No Significant Impact.

5. Exempt class of action: Section IV refers to the Environmental Quality Commission and its Exemption Class No. 5. Please note that the Commission was abolished in 1983, and that each state or county agency is now responsible for establishing its own list of exempt classes of activities. In general, exploratory wells are no longer exempt from the requirement of an environmental review.

In addition to the above, please include a discussion of all applicable items in the attachment entitled *Guidelines for Assessing Water Well Development Projects*.

If you have any questions call Nancy Heinrich at 586-4185.

Sincerely,

Gary Gill
Director

Enc.

BENJAMIN J. CAYETANO
GOVERNOR

GARY GILL
DIRECTOR

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
235 SOUTH BERETANIA STREET
SUITE 702
HONOLULU, HAWAII 96813
TELEPHONE (808) 586-4185
FACSIMILE (808) 586-4186

April 14, 1998

TO: WILLIAM ATKINS

FROM: Nancy Heinrich, Office of Environmental Quality Control
ph: 586-4185
fax: 586-4186
email: nancyh@pixi.com

RE: Waiaha Exploratory Well

I called today and found out that you will be out of the office until 4/29.

I sent a letter to you today that requested quite a lot of information. On the attachment on Assessing Wells Development, answer only those items that apply. On the second attachment regarding the significance criteria, try to answer each item. Contact me if you have any questions.

P.1

DRAFT
GUIDELINES FOR ASSESSING WATER WELL DEVELOPMENT PROJECTS

I. INTRODUCTION

Water is recognized as one of Hawaii's most important resources. Its quality and availability for a wide variety of purposes is essential to both humans and the natural environment. Hawaii's water supply, development and distribution is a critical environmental issue today and is likely to become even more sensitive in the future. The establishment of guidance protocols such as this will encourage understanding and careful planning of this important resource.

These guidelines are not new rules or law. The purpose of the guidelines is to provide preparers and reviewers a general standard of completeness to apply for any EA or EIS relating to well development.

Pursuant to HAR §11-200-8(a)(5), basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource may be exempt from preparing an environmental assessment. Accordingly, drilling of monitor wells as defined by the CWRM (provided the well shall not be capable of being used or intended to be used to withdraw groundwater for the purposes of exploring or developing ground water) may be exempt.

Environmental assessments for exploratory wells should not need to comply with all the information requirements below because some of the information will not be available until the well is tested. Should the exploratory well yield positive results and demonstrate production capability, a second environmental assessment for the production well should be prepared to comply with all the information requirements.

II. IMPACT ASSESSMENT CONTENT

In addition to the content requirements for environmental assessments and impact statements, which are set out in the EIS rules, any well development project should include the following information.

1. Orientation Maps

Maps with the appropriate scale and coverage (to analyze the aquifer or hydrologic unit) that show the following:

a) General information: location of proposed well, TMK or land ownership maps, location of existing and future wells in the affected aquifer or hydrologic unit, and general references such as roads, schools, etc.

b) Hydrologic information: Aquifer or hydrologic unit boundary, nearby streams and wetlands, known or assumed groundwater flowpaths, known or assumed water level contours.

c) Contamination information: Points or regions of known contamination, points of potential contamination (landfills, individual wastewater disposal systems (cesspools, septic tanks, aeration units), hazardous waste sites, dry wells and injection wells), known or assumed chloride levels at specified depths in relation to nearest or adjacent wells, likely wellhead protection area for the proposed well.

NOTE: New injection wells and dry wells are prohibited from within 1/4 mile of a drinking water well. New water wells should not be situated in areas that have a significant need for injection wells, drywells or on-site individual wastewater disposal systems.

2. **Aquifer or Hydrologic Unit Status**

A description of the aquifer or hydrologic unit status including the following:

* Sustainable yields or other measures of water availability
* Authorized water use by the Commission on Water Resource Management (for Water Management Areas only)
* Data table presenting the following information as appropriate

  - Current water use totals, including subtotals for individual users
  - Current installed capacity including subtotals for individual wells and/or groups of wells.
  - Pending installed capacity and/or use for the proposed well and subtotals for individual wells and/or groups of wells within the aquifer

NOTE: Format suggestions and sample data tables for aquifer status data are contained in appendix # 1.

3. **Contamination Analysis**

A record of contamination problems in the aquifer or hydrologic unit including but not limited to saltwater intrusion, turbidity, heavy metals, inorganic and organic chemicals, microbiological agents, water quality parameters (such as pH, alkalinity, calcium, conductivity and temperature), and radioactivity. If contamination exists, the sources and duration of the contamination should be listed. Water quality data from nearby wells should be presented as well as any anticipated need for treatment or filtering systems. Discuss past and existing land uses within the likely wellhead protection area and the potential for future contamination from those uses.

Any hazardous materials used and/or produced during drilling and treatment should be described. The method of handling these hazardous materials should also be disclosed.

4. **Hydrologic Impact Analysis**

A description of the associated watershed and recharge area and a discussion of the potential effects the well development may have on affiliated groundwater and surface water (e.g., streams and wetlands). Relevant hydrologic, physical, chemical, and biological data for potentially affected waters should be included. If potential impacts exist, a monitoring program for the surface waters should be included.

NOTE: See appendix #2 for sample description.

The EA should include pump test data on water level, extraction rates, and water quality. Similar data from nearby wells should also be included. The precise criteria used to determine if the well should be converted to production should be described. Any provisions for future use and monitoring of wells not placed into production should also be described.

5. **Biological Assessment**

A floral and faunal survey for sites in biologically sensitive areas.

6. **Archaeological and Cultural Impact Assessment**

A description of the archaeological and cultural significance of the region, including an on-site survey as well as consultations with Native Hawaiian groups such as DHHL, OHA and local community associations. (If applicable, the Environmental Council's Guidelines for Assessing Cultural Impacts could be used for this purpose.)

7. **Financial and Institutional Arrangements**

In some instances, a well is developed by private financing, the transfer of public lands to government or private developers, or in return for a water allocation credit to supply an urban development. The EA should include a full discussion of any institutional, financial or land use arrangements or commitments related to developing the well and delivering water to end users.

These arrangements may include the formation of public utility companies and subsequent rate-setting, the establishment of county water commitments, the co-funding of state or county water system development, an executive order or other set-aside of state lands, and purchase of land or easements by public entities.

Any or all of these arrangements and all permits or governmental approvals required to fulfill these commitments should be listed.

8. **Watershed and Land Use Analysis:**

A discussion of how waters from the well will be used, and an analysis of how the proposed well development may affect land and water uses on the island and in the region. The analysis should include a discussion of the following (published materials may be referenced):

* Hawaii State Water Plan and its component parts
* County General, Development, and/or Community Plans
* Plans for future water development within the aquifer
* Any related water, wastewater, drainage or erosion control plans
* Historical water supply and demand figures for the region
* How the well may affect existing water sources
* Any secondary or cumulative impacts caused by promoting land uses that alter the hydrology of the source and/or end-use area
* An assessment of the well's impact on the land owners, water users including farmers and kuleana residents in the region and a declaration if ceded lands are involved.

9. **Alternative Analysis**

A list of alternatives to new groundwater development and discussion of their related costs and benefits. The list should include but not be limited to wastewater reuse, rainfall catchment, conservation, and existing potable and nonpotable water supplies.

10. **Impacts of Accessory Facilities**

A description of impacts associated with the well's permanent production facilities including pumps, distribution pipelines, control devises, storage facilities, access roads and accessory structures.

The inclusion of this information will help make environmental assessments and environmental impact statements complete. If you have any questions, please call OEQC at 586-4185.

Appendix #1

FORMAT SUGGESTIONS AND SAMPLE TABLES AND CHARTS TO DISPLAY SUSTAINABLE YIELD DATA.

Sustainable Yield

Sustainable yield policies for basal aquifers involve trade-offs between groundwater extraction rates and aquifer water levels. The selected extraction rate implies acceptance of the affiliated equilibrium head (h_e), the water level at which the aquifer stabilizes under pumping at sustainable yield levels.

Equilibrium head is usually less than pre-development water levels or initial head (h_i). For comparative purposes, it is helpful to attach values of h_e and h_i to sustainable yield figures. Groundwater extraction can then be discussed in terms of its relationships with sustainable yields and water levels.

Data Subtotals and Grouping

To assure the clarity of information presented in the EA, tables for the following categories of data should be grouped by user/operator and landowner.

Categories for Data Tables in the EA

* Current water use totals
* Current installed capacity
* Pending installed capacity
* Authorized water use

To assist in spatial analysis, subtotals should also be grouped for aquifer sub areas and/or water quality regimes (such as zones of varying recharge of extraction intensity or chloride concentration).

A sample table for the display of this data is presented in the next page.

Aquifer or Hydrologic Unit Status Data
Sustainable Yield = 40 mgd
Initial head = 20 feet
Equilibrium head = 18 feet
Authorized Water Use (for water management areas only) = 36 mgd

Table 1: Overall Aquifer or Hydrologic Unit Status Data in million gallons per day

Land Owner	Authorized Water Use (Permitted by CWRM)	Existing (E)		Planned/Pending (P)		Potential Future (E + P)	
		Pump Capacity*	Average Use **	Pump Capacity	Proposed Use	Pump Capacity	Proposed Use
A	4	5	4	+5	+4	10	8
B	7	10	7	+3	+2	13	9
C	25	25	15	-10	-5	15	10
Total	36	40	26	-2	+1	38	27

Table 2: Aquifer or Hydrologic Unit Status Data for Landowner C in million gallons per day

Well Site	Authorized Water Use (Permitted by CWRM)	Existing (E)		Planned/Pending (P)		Potential Future (E + P)	
		Pump Capacity	Average Use	Pump Capacity	Proposed Use	Pump Capacity	Proposed Use
Mauka	10	10	8	0	0	10	8
Makai	5	5	0	-5	0	0	0
Central	10	10	7	-5	-5	5	2
Total	25	25	15	-10	-5	15	10

Notes:
** Total amount of water a well pump is capable of removing from the ground under ideal conditions in a 24-hour period. This number should be the same as the "rated pump capacity or installed pump capacity" as reported by the well owner to the CWRM.*
*** Average water use based upon water meter readings as reported by the well owner to the CWRM. The average should be based on the appropriate number of years of data.*

Appendix #2

SAMPLE DESCRIPTION LIST FOR THE AFFECTED SECTOR WITHIN A WATERSHED AND GROUNDWATER RECHARGE AREA

Below you will find a list of characteristics that should be discussed in the description of affected sector within a watershed and groundwater recharge area.

Watershed:

1. Drainage area boundaries
2. Drainage networks and patterns
3. Groundwater discharges as sources of surface water flows
4. Surface water flow and habitat characteristics
   a. timing, magnitude, duration, frequency of groundwater-source baseflows
   b. relationships between baseflows and aquatic and riparian habitats and communities,
   c. water quality
   d. water uses (e.g., ditch or `auwai systems)

Recharge Area:

1. Boundaries
2. Geologic structure
3. Groundwater flow patterns
4. Overlying land and water uses, and runoff patterns.
5. Relationships between recharge rates and patterns, and climatic variations
6. Relationships between proposed groundwater extraction and associated activities, and aquifer water levels
7. Storage volumes, other wells, discharges to surface and coastal waters, and water quality parameters

Appendix #3

SOURCES OF INFORMATION

1) Hydrologic information may be obtained from the Commission on Water Resources Management. These include:

a) location of existing wells;
b) CWRM aquifer boundary;
c) information on nearby streams;
d) sustainable yield for aquifer;
e) authorized water use by CWRM (for water management areas only);
f) current water use within aquifer;
g) current installed capacity within aquifer;
h) pending installed capacity and water use within aquifer;
i) Hawaii State Water Plan and its component parts;
j) water levels of nearby wells; and
k) salinity levels of nearby wells.

2) Contamination information may be obtained from the Department of Health. These include:

Safe Drinking Water Branch
a) results of water quality tests of nearby wells;
b) records of contamination problems in the aquifer; and
c) locations of drywell and injection wells.

Wastewater Branch
a) locations of individual wastewater systems.

Solid and Hazardous Waste Branch
a) location of hazardous waste sites; and
b) location of landfills.

3) Information about the well head protection area may be obtained from the Groundwater Protection Program, Environmental Planning Office, Department of Health.

4) Information about wetlands may be obtained from the U.S. Army Corps of Engineers.

5) County general, development and community plans may be obtained from the respective planning departments.

NA/JH

DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAII
25 AUPUNI STREET • HILO, HAWAII 96720
TELEPHONE (808) 961-8660 • FAX (808) 961-8657

August 7, 1998

Ms. Irene Horvath
State of Hawaii
Department of Education
Kailua-Kona Public Library
75-138 Hualalai Road
Kailua-Kona, HI 96740

DRAFT ENVIRONMENTAL ASSESSMENT (DEA) FOR WAIAHA EXPLORATORY WELL
TAX MAP KEY 7-5-015:015

Please be informed that the Office of Environmental Quality Control (OEQC) requires that the subject document be accessible for public review and comment.

Therefore, we are forwarding a copy of the DEA along with supplemental information requested by the OEQC to be placed in the library for public access.

Should there be any questions, please call our Water Resources and Planning Branch at 961-8660.

Milton D. Pavao, P.E.
Manager

WA:gms

Encs.

...Water brings progress...

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

FACSIMILE TRANSMITTAL

To: **Bill Atkins**

From: **Ryan Imata**

Company: **Department of Water Supply**

Date: **July 14, 1998**

Fax Number: **961-8657**

Pages Including Header: **3**

Phone Number: **961-8660**

Subject: **Sustainable Yield Listing for Hawaii**

Notes/Comments:

The Waiaha Well is located in the Keauhou Aquifer System of the Hualalai Sector. The sustainable yield is 38 mgd. Attached is a printout of all of the aquifer systems and their respective sustainable yields. Please feel free to call me at 587-0255 if you have any questions.

P. BOX 621, HONOLULU, HAWAII 96809 PHONE: (808) 587-0226 FAX: (808) 587-0219 EMAIL: dwrm@pixi.com

Aquifer Query

ISLAND HAWAII

SECTOR E. MAUNA KEA

AQU_CODE	SYSTEM	SUS_YLD
80201	HONOKAA	31
80202	PAAUILO	60
80203	HAKALAU	150
80204	ONOMEA	147

SECTOR HUALALAI

AQU_CODE	SYSTEM	SUS_YLD
80901	KEAUHOU	38
80902	KIHOLO	18

SECTOR KILAUEA

AQU_CODE	SYSTEM	SUS_YLD
80801	PAHOA	435
80802	KALAPANA	157
80803	HILINA	9
80804	KEAIWA	17

SECTOR KOHALA

AQU_CODE	SYSTEM	SUS_YLD
80101	HAWI	27
80102	WAIMANU	110
80103	MAHUKONA	17

SECTOR NE.MAUNA LOA

AQU_CODE	SYSTEM	SUS_YLD
80401	HILO	347
80402	KEAAU	393

SECTOR	NW.MAUNA LOA	
AQUI_CODE	SYSTEM	SUS_YLD
80701	ANAEHOOM	30

SECTOR	SE.MAUNA LOA	
AQUI_CODE	SYSTEM	SUS_YLD
80501	OLAA	124
80502	KAPAPALA	19
80503	NAALEHU	117
80504	KALAE	31

SECTOR	SW.MAUNA LOA	
AQUI_CODE	SYSTEM	SUS_YLD
80601	MANUKA	42
80602	KAAPUNA	50
80603	KEALAKEKU	38

SECTOR	W. MAUNA KEA	
AQUI_CODE	SYSTEM	SUS_YLD
80301	WAIMEA	24

ISLAND	OAHU

SECTOR	WINDWARD	
AQUI_CODE	SYSTEM	SUS_YLD
30601	KOOLAULO	35
30602	KAHANA	13
30603	KOOLAUPO	43
30604	WAIMANAL	8

BENJAMIN J CAYETANO
GOVERNOR OF HAWAII

MICHAEL D WILSON
CHAIRPERSON

ROBERT G GIRALD
DAVID A NOBRIGA
LAWRENCE H MIKE
RICHARD H COX
HERBERT M RICHARDS, JR

TIMOTHY E JOHNS
DEPUTY DIRECTOR

REF:CWRM-SS

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P. O. BOX 621
HONOLULU, HAWAII 96809

JUN 29 1998

Mr. Milton Pavao, Manager
County of Hawaii
Department of Water Supply
25 Aupuni Street
Hilo, Hawaii 96720

Dear Mr. Pavao:

Well Construction Permit to Abandon/Seal
Waiaha Well (Well No. 3857-01)

Enclosed are two (2) copies of your approved Well Construction Permit for the captioned well which authorizes well abandonment/sealing activities. As part of the Chairperson's approval, the following special condition was added and is part of your permit under Permit Condition 7:

Special Condition

1. Attached for your information is a copy of the Department of Health's review comments.

To validate your permit, please sign and have the contractor sign both permit originals and return one for our files.

IMPORTANT - The well owner is responsible for all conditions of the permit. This includes ensuring that the licensed contractor submits a completed Well Abandonment Report form (enclosed) within sixty (60) days after the well construction work is completed. Be advised that you may be subject to fines of up to $1000 per day for any violation of your permit condition.

If you have any questions, please call the Commission staff at 587-0255 or toll-free at 974-4000 (Hawaii), extension 70255.

Aloha,

for MICHAEL D. WILSON
Chairperson

Enclosures

WELL CONSTRUCTION PERMIT TO ABANDON/SEAL

Waiaha Well, Well No. 3857-01

In accordance with Department of Land and Natural Resources, Commission on Water Resource Management's Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", this document permits the abandonment/sealing of Waiaha Well (Well No. 3857-01) at Waiaha, Hawaii, TMK 7-5-15: 15, subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97) which include but are not limited to the following conditions:

1. The owner or operator of any well which has been determined by the department or voluntarily declared by the owner or operator to be abandoned as defined in §13-168-2, after written notification, shall be required, at owner's or operator's expense, to re-case, cement, plug back, cap, or otherwise repair the well or fill and seal the well with cement in a manner approved by the commission. This permit constitutes a written notification to fulfill §13-168-2.

2. The sealing of the well shall be in compliance with the requirements stated in Part 3 of the Hawaii Well Construction & Pump Installation Standards (1/23/97).

3. The Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809, shall be notified in writing before any work covered by this permit commences.

4. The Well Abandonment Report form (attached) shall be submitted to the Commission on Water Resource Management within sixty (60) days after completion of the work.

5. The permittee shall comply with all applicable laws, rules, and ordinances.

6. The work shall be started within six (6) months after the date of approval and the abandonment shall be completed within two (2) years from the date of permit approval, unless otherwise specified. The completion date may be extended by the Chairperson upon a showing of good cause and good-faith performance. A request to extend the completion date shall be submitted to the Chairperson no later than three (3) months prior to the date the work is required to be completed.

7. Special conditions in the attached cover transmittal letter are incorporated herein by reference.

Date of Approval: June 24, 1998
Expiration Date: When well is sealed in a manner acceptable to the Commission

for MICHAEL D. WILSON, Chairperson
Commission on Water Resource Management

I have read the conditions and terms of this permit and understand them. I accept and agree to meet these conditions as a prerequisite and underlying condition of my ability to proceed. I also understand that non-compliance with any permit condition may be grounds for revocation and fines of up to $1000 per day.

Permittee's Signature: _____ Date: _____

Printed Name: _____ Firm or Title: _____

Contractor's Signature: _____ License #: _____ Date: _____

Printed Name: _____ Firm or Title: _____

Please sign both copies of this permit, return one to the Chairperson, and retain the other for your records.

Attachment
c: USGS
Department of Health/ Safe Drinking Water, Wastewater, and Clean Water Branches
Hawaii Department of Water Supply

WELL CONSTRUCTION PERMIT TO ABANDON/SEAL

Waiaha Well, Well No. 3857-01

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Permittee's Signature: _____ Date: _____

Printed Name: _____ Firm or Title: _____

Contractor's Signature: _____ License #: _____ Date: _____

Printed Name: _____ Firm or Title: _____

Please sign both copies of this permit, return one to the Chairperson, and retain the other for your records.

Attachment
c: USGS
Department of Health/ Safe Drinking Water, Wastewater, and Clean Water Branches
Hawaii Department of Water Supply

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

RECEIVED
SAFE DRINKING WATER BRANCH
APR 2

MICHAEL D. WILSON
CHAIRPERSON

ROBERT G. GIRALD
DAVID A. NOBRIGA
LAWRENCE H. MIIKE
RICHARD H. COX
HERBERT M. RICHARDS, JR.

EDWIN T. SAKODA
ACTING DEPUTY DIRECTOR

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P. O. BOX 621
HONOLULU, HAWAII 96809
APR 21 1998

RECEIVED
98 APR 24 P3:37
CLEAN WATER BRANCH

TO: Honorable Lawrence Miike, Director
Department of Health
Attention: Dennis Tulang, Wastewater Branch
William Wong, Safe Drinking Water Branch

FROM: for Michael D. Wilson, Chairperson
Commission on Water Resource Management

SUBJECT: Well Construction Permit Application
Waiaha Well (Well No. 3857-01)

Transmitted for your review and comment is a copy of the captioned well application.

We would appreciate your comments on the captioned application for any conflicts or inconsistencies with the programs, plans, and objectives specific to your department. Please respond by returning this cover memo form by May 8, 1998.

Please find a map, attached, to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Mr. Ryan Imata of the Commission staff at 587-0255.

RI:ss
Attachment(s)

RESPONSE:

[X] This well qualifies as a source which will serve as a source of potable water to a public water system (serving 25 or more people at least 60 days per year or has 15 or more service connections) and must receive Director of Health approval prior to its use to comply with Hawaii Administrative Rules (HAR), Title 11, Chapter 20, Rules Relating to Potable Water Systems, §11-20-29.

[ ] This well does not qualify as a source serving a public water system (serves less than 25 people or more people at least 60 days per year or 15 service connections) and if the well water is used for drinking, the private owner should test for bacteriological and chemical presence before initiating such use and routinely monitor the water quality thereafter. However, if future planned use from this source increases to meet the public water system definition then Director of Health approval is required prior to implementation.

[ ] If the well is used to supply both potable and non-potable purposes in a single system, the user shall eliminate cross-connections and backflow connections by physically separating potable and non-potable systems by an air gap or an approved backflow preventer, and by clearly labeling all non-potable spigots with warning signs to prevent inadvertent consumption of non-potable water. Backflow prevention devices should be routinely inspected and tested.

[ ] It does not appear that this well will be used for consumptive purposes and is not subject to Safe Drinking Water Regulations.

[ ] For the applicant's information, a source of possible wastewater contamination [ ]is [ ] is not located near the proposed well site (information attached).

[ ] Other relevant DOH rules/regulations, information, or recommendations are attached.

[ ] No comments/objections

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

APR 22

MICHAEL D. WILSON
CHAIRPERSON

ROBERT G. GIRALD
DAVID A. NOBRIGA
LAWRENCE H. MIIKE
RICHARD H. COX
HERBERT M. RICHARDS, JR.

EDWIN T. SAKODA
ACTING DEPUTY DIRECTOR

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P. O. BOX 621
HONOLULU, HAWAII 96809

APR 21 1998

TO: Honorable Lawrence Miike, Director
Department of Health
Attention: Dennis Tulang, Wastewater Branch
William Wong, Safe Drinking Water Branch

FROM: for Michael D. Wilson, Chairperson
Commission on Water Resource Management

SUBJECT: Well Construction Permit Application
Waiaha Well (Well No. 3857-01)

Transmitted for your review and comment is a copy of the captioned well application.

We would appreciate your comments on the captioned application for any conflicts or inconsistencies with the programs, plans, and objectives specific to your department. **Please respond by returning this cover memo form by May 8, 1998.**

Please find a map, attached, to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Mr. Ryan Imata of the Commission staff at 587-0255.

RI:ss
Attachment(s)

RESPONSE:

[ ] This well qualifies as a source which will serve as a source of potable water to a public water system (serving 25 or more people at least 60 days per year or has 15 or more service connections) and must receive Director of Health approval prior to its use to comply with Hawaii Administrative Rules (HAR), Title 11, Chapter 20, Rules Relating to Potable Water Systems, §11-20-29.

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[ ] For the applicant's information, a source of possible wastewater contamination [ ]is [ ] is not located near the proposed well site (information attached).

[ ] Other relevant DOH rules/regulations, information, or recommendations are attached.

[X] No comments/objections

Contact Person: Lori Kajiwara

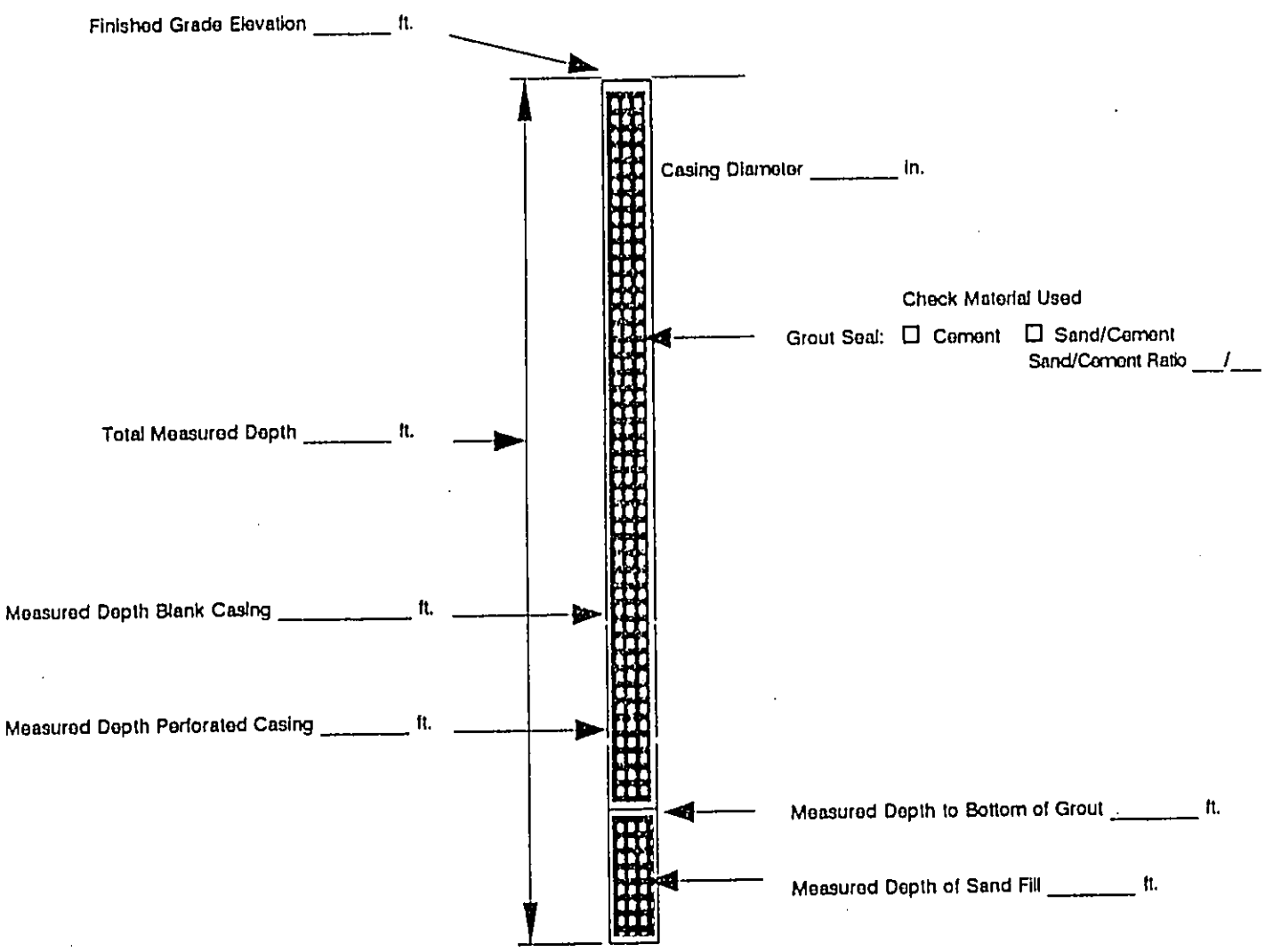
Phone: 5864284

State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources

WELL ABANDONMENT REPORT

Instructions: Please print or type and submit completed report within 30 days after sealing completion to the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809. An as-built drawing of the well and chemical analysis should also be submitted. For assistance call the Commission Regulation Branch at 587-0225.

1. STATE WELL NO. _____ WELL NAME _____ ISLAND _____
2. LOCATION: Address _____ Tax Map Key _____
3. DRILLING OR PUMP INSTALLATION CONTRACTOR _____
4. CONTRACTOR'S C-57 LICENSE NUMBER _____
5. NAME OF DRILLER WHO PERFORMED WORK _____
6. TYPE OF RIG/CONSTRUCTION _____
7. DATE OF WELL SEALING COMPLETION _____
   (NOTE: Report must be submitted within 30 days after this date)



Remarks: _____
(If more space is needed, continue on back.)

Contractor (print) _____ Title _____

Signature _____ Date _____

For Driller's Use:
Job Name _____ Job No. _____

For Official Use: Well No. _____
Longitude _____ Latitude _____

6/24/92 WAB Form

Remarks(cont'd):

State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources

APPLICATION FOR PERMIT

☑ Well Construction or ☐ Pump Installation

Instructions: Please print in ink or type, attach required maps, and send the completed application & two (2) copies to the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809. This application must be accompanied by a non-refundable filing fee of $25.00 payable to the Department of Land and Natural Resources. The Commission may not accept incomplete applications. For assistance in completing this application, please call the Commission's Regulation Branch at 587-0225.

1. APPLICANT: (circle primary contact a, b, or c) Primary Fax: (808) 961-8657

(a) WELL OWNER
Firm/Name County of Hawaii Department of Water Supply
Contact Person Milton Pavao Ph: (808) 961-8660
Address 25 Aupuni St. Hilo, Hawaii 96720

(b) LANDOWNER
Firm/Name County of Hawaii Department of Water Supply
Contact Person Milton Pavao Ph: (808) 961-8660
Address 25 Aupuni St. Hilo, Hawaii 96720

(c) CONTRACTOR
Firm/Name Not available presently Ph: _____
Contact Person _____
Address _____
Contractor's License No. _____
(Please circle type: C-57, or C-57a, Gen.'A')

2. WELL LOCATION/NAME: Waiaha, North Kona/Waiaha Well Island Hawaii
Address _____ Tax Map Key 7-5-15 : 15

Attach the relevant portion of (a) a 7.5-Minute Series USGS topographic map (scale 1"=24,000'), and (b) a property tax map, showing well location referenced to established property boundaries.

3. (a) PROPOSED WORK: ☒ Drill New Well ☐ Deepen ☐ Install New Pump
☐ Modify Existing Well ☐ Redrill ☐ Modify Pump
☐ Abandon/Seal * ☐ Replace Pump
* Be sure to complete and submit well abandonment report upon completion of work.

(b) WELL TYPE: ☐ Dug ☐ Bored ☐ Driven ☒ Drilled ☐ Radial
Is this well a part of a battery of wells? ☐ Yes ☒ No
(Briefly describe and fill in the diagram on the back of this form.)

4. PROPOSED PUMP INFORMATION: Rated Pump Capacity: _____ gallons per minute

Pump Type:
☐ Deep Well Turbine ☐ Rotary ☐ Propeller
☐ Submersible ☐ Rotary-Displacement ☐ Reciprocating
☐ Centrifugal ☐ Rotary-Gear ☐ Impulse

Motor:
☐ Diesel
☐ Gas
☐ Electric, rated horsepower: _____

If Pump Replacement, Existing Pump Capacity: _____ gallons per minute

5. PROPOSED USE: ☒ Municipal (including hotels, stores, etc.) ☐ Industrial
☐ Domestic (individual, noncommercial water sys.) # Dwelling Units _____
☐ Irrigation (crop) _____ # Acres _____
☐ Military ☐ Other: _____

6. (a) PROPOSED AMOUNT OF WITHDRAWAL: One million gallons per day
(b) METHOD OF FLOW MEASUREMENT: ☐ Flow-meter ☐ Open-pipe ☐ Orifice Plate ☐ Weir

7. PENDING ACTIONS: ☐ CDUA ☐ SMA ☐ EIS ☒ EA ☐ NONE ☐ Other(explain)
Completion Date: _____

8. REMARKS, EXPLANATIONS: This application is made for the drilling, casing, and testing of a new well to replace the existing exploratory well(No. 3857-01) which was not completed. The existing well will be abandoned per the Hawaii Well Con-
(if more space is needed, continue on back)

I understand that approval of this application attaches the following standard conditions: 1) the proposed work is to be completed within two (2) years of the approval date; 2) the contractor shall submit to the Commission a well completion/abandonment report within 30 days after the completion date of the permitted work; 3) monthly water use data shall be submitted to the Commission; 4) such approval shall not constitute a determination of correlative water rights and shall not guarantee the pump capacity or future use up to the permitted pump capacity.

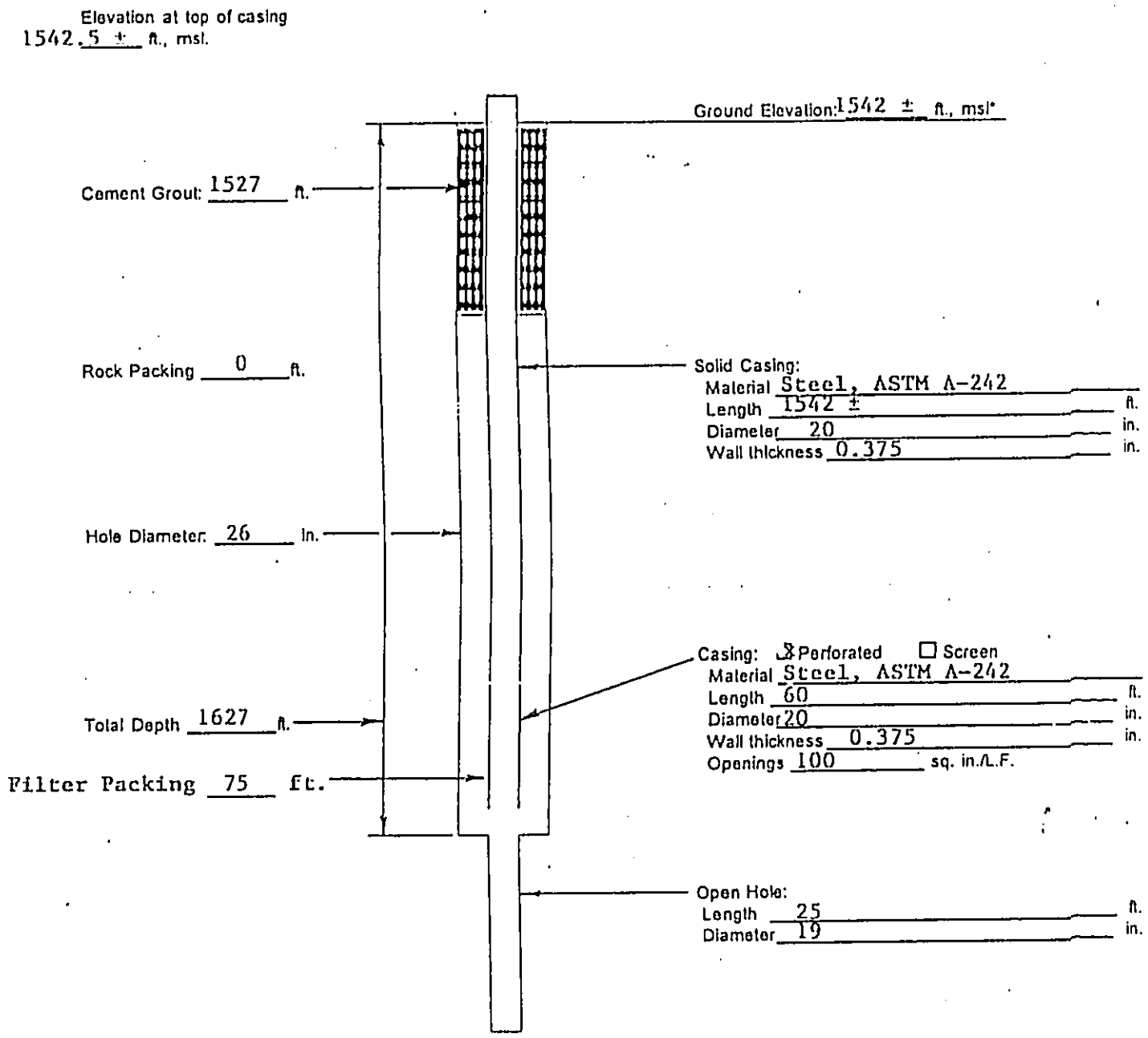
Well Owner	Landowner	Contractor
County of Hawaii Dept. of Water Supply	County of Hawaii Dept. of Water Supply	
Signature [signature]	Signature [signature]	Signature _____
Date January 28, 1998	Date January 28, 1998	Date _____

For Official Use Only:
Date Received _____
Date Accepted _____
Field Checked By _____
Date _____
Longitude _____
Latitude _____
Aquifer System Name _____
State Well No. _____

9/30/97 WCPIA Form

8. Remarks, Explanations (cont'd): struction and Pump Installation Standards.

9. PROPOSED WELL SECTION



*Approximate elevation at time of filing application. Ground elevation above mean sea level (msl) by a surveyor licensed by the State must be submitted at start of construction. Final elevations of well components shall be submitted in the well completion/well abandonment reports.

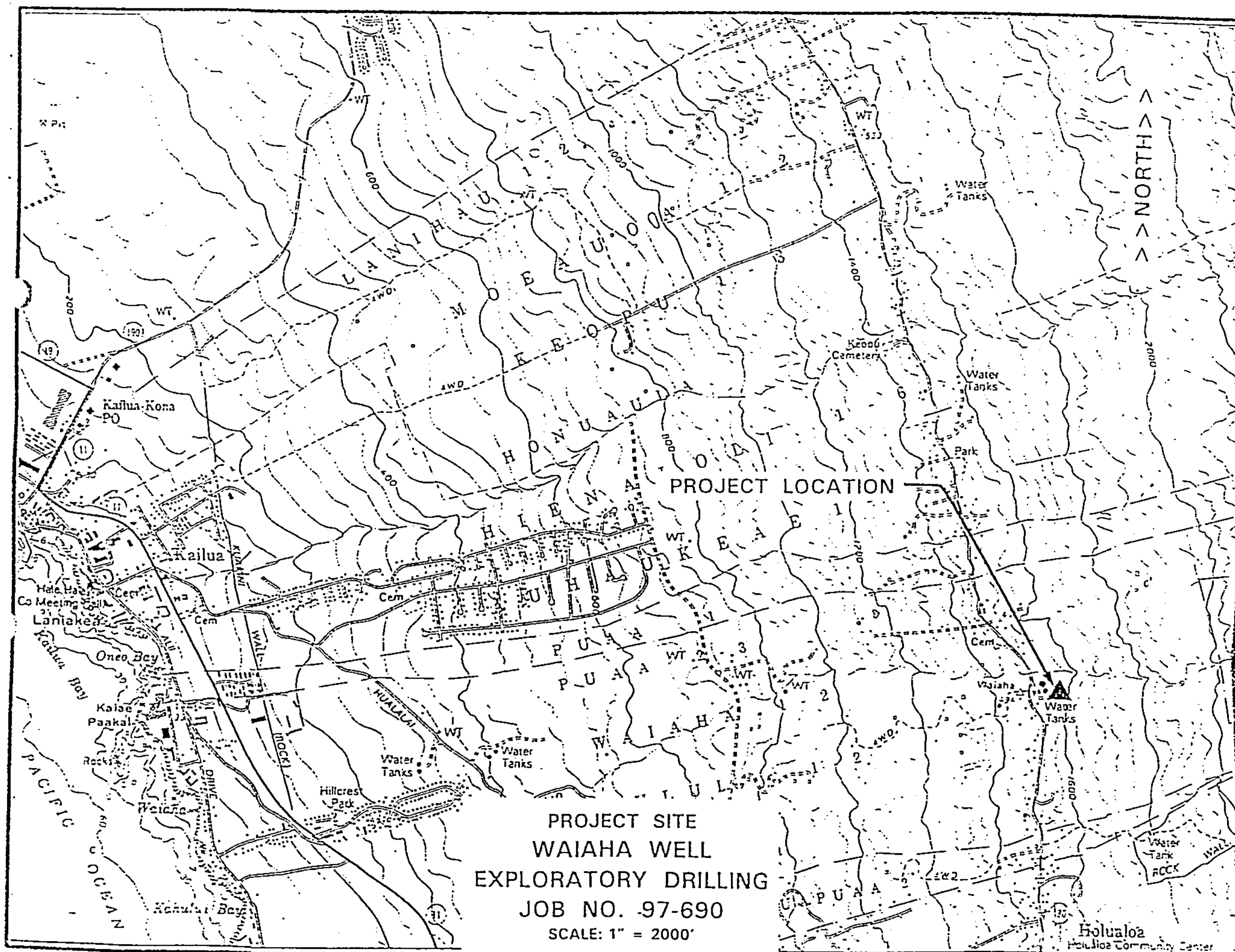
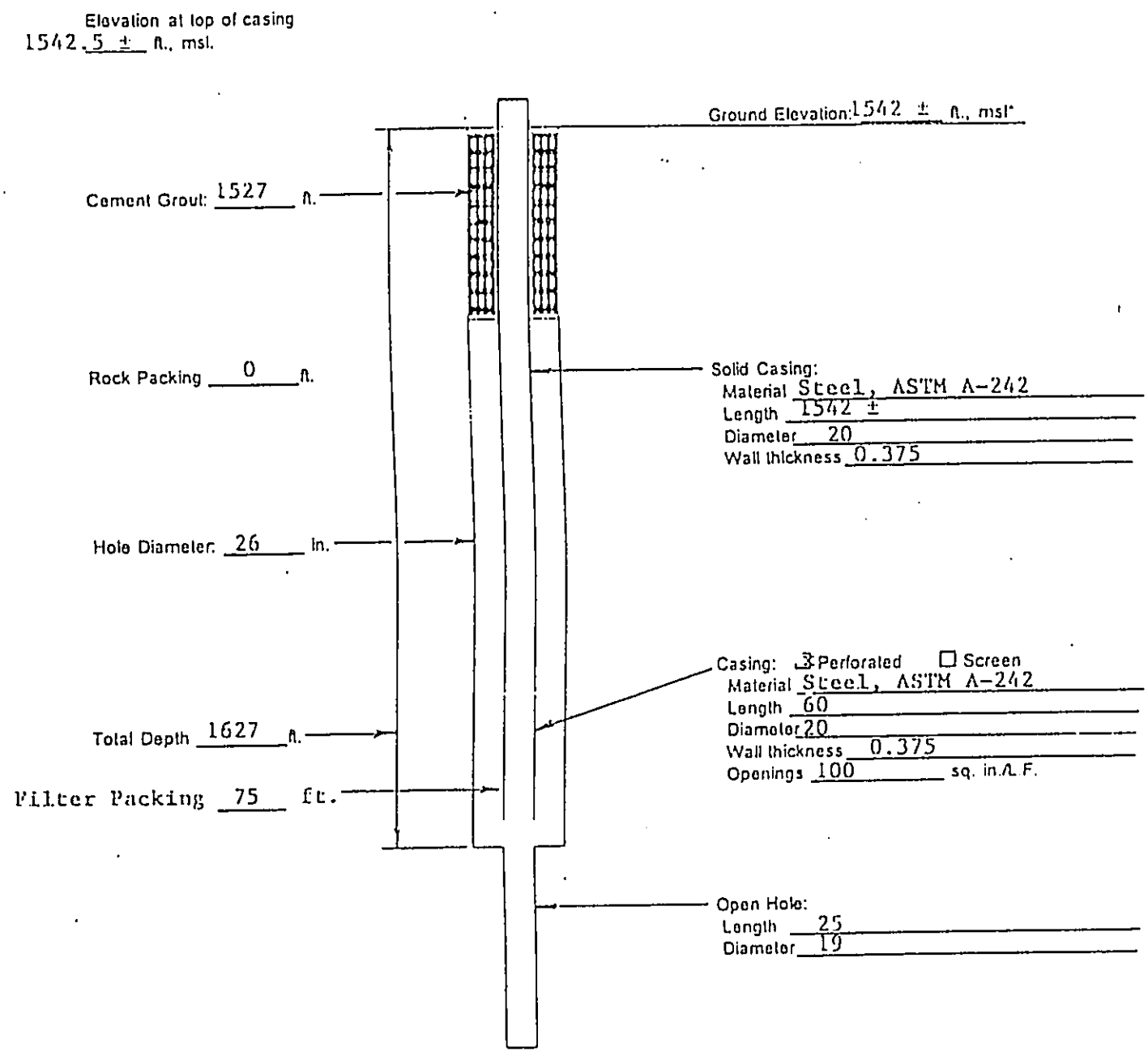

PROJECT LOCATION
>>NORTH>>
PROJECT SITE
WAIAHA WELL
EXPLORATORY DRILLING
JOB NO. 97-690
SCALE: 1" = 2000'
Kailua-Kona
PO
Kailua
Hale Halawai
Co Meeting Hall
Lanakea
Oneo Bay
Kailua Bay
Kalae
Paakai
Rocks
Waiaha
PACIFIC OCEAN
Kahului Bay
Hillcrest
Park
Water
Tanks
Cem
Keoou
Cemetery
Park
Waiaha
Holualoa
Holualoa Community Center
KUAKINI
HUALALAI
DRIVE
WT

EXHIBIT A

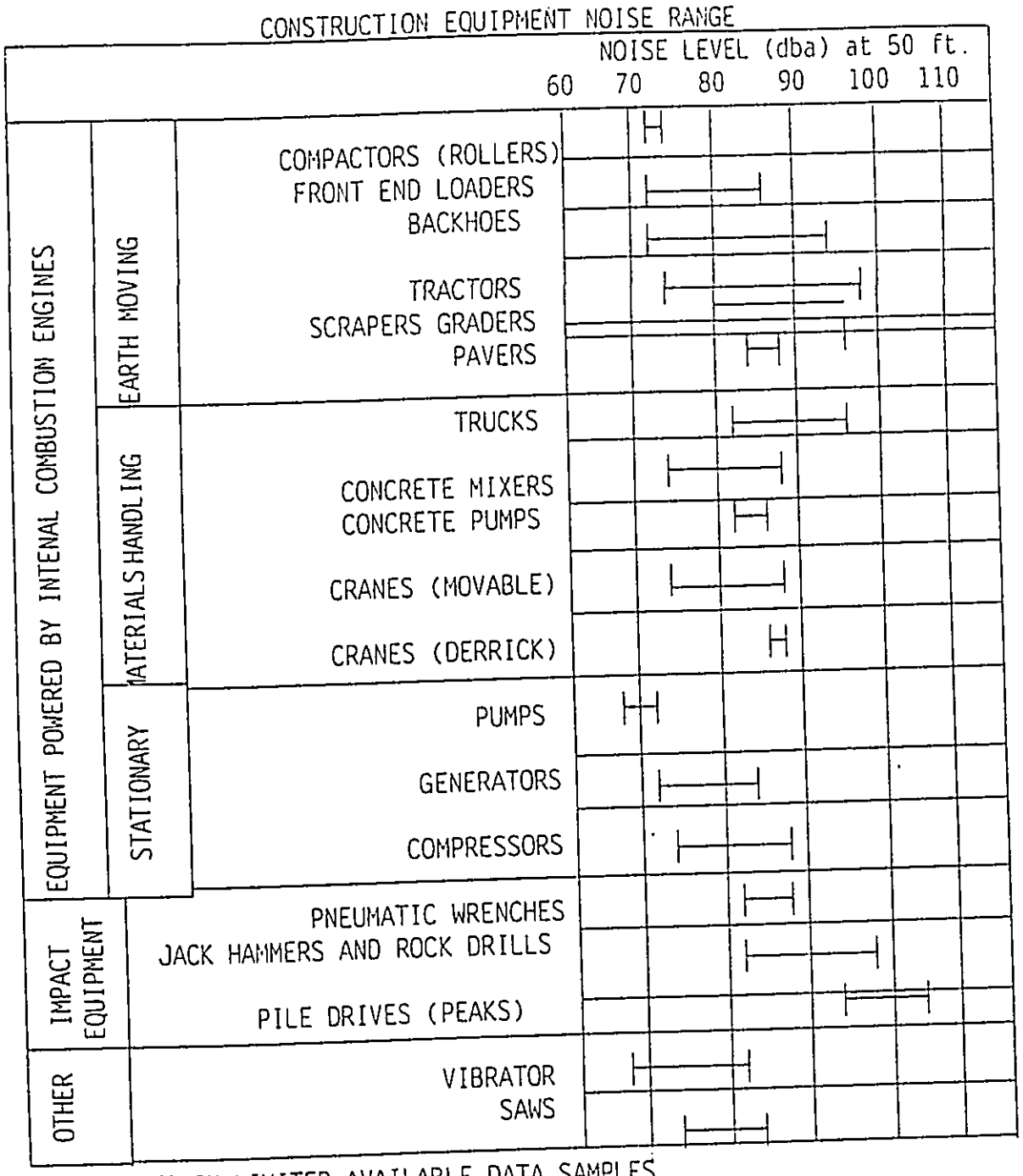
8. Remarks, Explanations (cont'd): struction and Pump Installation Standards.

9. PROPOSED WELL SECTION



*Approximate elevation at time of filing application. Ground elevation above mean sea level (msl) by a surveyor licensed by the State must be submit at start of construction. Final elevations of well components shall be submitted in the well completion/well abandonment reports.

EXHIBIT B



NOTE: BASED ON LIMITED AVAILABLE DATA SAMPLES
SOURCE: NOISE FROM CONSTRUCTION EQUIPMENT AND OPERATIONS BUILDING EQUIPMENT, AND HOME APPLIANCES, EPA, 19

EXHIBIT C