**CHECKLIST**

<table>
<thead>
<tr>
<th>WELL CONSTRUCTION PERMIT</th>
<th>PUMP INSTALLATION PERMIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>WELL NAME or LOCATION: HUEHUE RANCH HR-2 ISLAND: HAWAII</td>
<td></td>
</tr>
<tr>
<td>WELL NUMBER: 4459-01</td>
<td>Tax Map Key: 7-2-06:09</td>
</tr>
</tbody>
</table>

**OWNER/OPERATOR:**
- Firm Name: HUEHUE RANCH ASSOC, L.P.
- Contact Person: ARLE CARLSON
- Address: 75-5722 KUKAKU HNK, #107
  KAILUA-KONA, HI 96740
- Phone: 329-4466

**LANDOWNER:**
- Firm Name: HUEHUE RANCH ASSOC, L.P.
- Contact Person: ARLE CARLSON
- Address: 75-5722 KUKAKU HNK, #107
  KAILUA-KONA, HI 96740
- Phone: 329-4466

**Date application received**: 2-6-91
**Date acknowledged receipt/request more info**: 2-19-91
**Date application accepted**: 
**Suspense date (90 days)**: 
**Date filing fee deposited**: 

**Application sent to following:**

<table>
<thead>
<tr>
<th>Department</th>
<th>Date sent</th>
<th>Comments received</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dept. of Health</td>
<td>2/21/91</td>
<td></td>
</tr>
<tr>
<td>Dept. of Hawn Home Lands</td>
<td>2/21/91</td>
<td></td>
</tr>
<tr>
<td>Dept/Bd of Water Supply</td>
<td>2/20/91</td>
<td></td>
</tr>
<tr>
<td>Historic Preserv. Prog.</td>
<td>2/19/91</td>
<td></td>
</tr>
<tr>
<td>Koolauloa NB #28 (Oahu)</td>
<td>2/19/91</td>
<td></td>
</tr>
<tr>
<td>Dept Pub. Wrks (Hawaii)</td>
<td>2/19/91</td>
<td></td>
</tr>
<tr>
<td>Office of Hawaiian Affairs</td>
<td>2/21/91</td>
<td></td>
</tr>
</tbody>
</table>

**Date agenda due**: 
**Date submittal due**: 
**Date submittal sent to applicant**: 

**Date application approved or disapproved**: 
**Date applicant notified of decision**: 

**REMARKS**: 
- 
- 
- 
-
October 15, 2003

Dear Mr. Ainslie:

Well Completion Report Part II for the HR-2 & HR-3 Wells (Well No. 4459-01 & 4558-01).

We have received your Well Completion Report Part II for the HR-2 & HR-3 Wells (Well No. 4459-01 & 4558-01). However, matters which must be addressed before we accept your report as complete are as follows:

1. Please submit the results of the pump tests for each well, which was required as described in Special Condition 3 of the cover letter of your Pump Installation Permit.

Please respond to the above item(s) within thirty (30) days of this letter's date. Failure to do so may result in fines of up to $1000 per day.

If you have any questions, please contact Ryan Imata of the Commission staff at [redacted] or toll-free at [redacted] (Hawaii), [redacted] (Kauai), [redacted] (Maui), or [redacted] (Lanai & Molokai), extension 70255.

Sincerely,

ERNEST Y.W. LAU
Deputy Director
MEMO and ROUTE SLIP

WCR 2 Check for Well No. 4459-01 (survey to regulation memo)

1. **Pump Tests Check** (special condition of PIP? Yes/No)  Glenn Bauer (initial if yes)
   - Yes  No  If no, describe deficiency
   - Step-Drawdown Test:
     - followed WCPI Stds
     - analysis attached
     - proposed pump cap o.k.
   - Aquifer Pump Test:
     - followed WCPI Stds
     - T & S analysis attached
   - Well Interference:
     - estimated Steady-State drawdown at 1-mile radius is _________ ft.
     - analysis attached
   - Stream Surface Water Impacted:  Yes  No  If yes, identify most probable stream
   - Geology Code for Well Index: ___________

2. **Pump Installation Check**  Mitch Ohye (initial)
   - Yes  No  If no, describe deficiency
   - data complete
   - followed Special Cond & Elev.
   - well database updated

3. Charley/Lenore/Ryan (initial) take action based on above analysis
4. Roy (initial) check
5. Subia (initial) finalize
6. Dean (initial) signature
7. Charley/Lenore/Ryan File
State of Hawaii  
COMMISSION ON WATER RESOURCE MANAGEMENT  
Department of Land and Natural Resources  
WELL COMPLETION REPORT - PART II  
Pump Installation

Instructions: Please print in ink or type and send completed report (with attachments, if applicable) to the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809. The Commission may not accept incomplete reports. This form shall be submitted within 60 days of the completion of work. For assistance, please consult the Hawaii Well Construction and Pump Installation Standards or call the Regulation Branch at For updates to this form or additional information, please visit our website at http://www.state.hi.us/dlnr/CMT/ RES .

1. State Well No.: 4459-01  
Well Name: HR. 2  
Island: Hawaii

2. Address: 72-3667 Mamalahoa Hwy.  
Tax Map Key: 7-2-6: 9

3. Pump Installation Company: Wai'eli Drilling

4. Date Pump Installed: 8/6/03

5. PERMANENT PUMP INFORMATION (Attach pump specifications and rating curve)

<table>
<thead>
<tr>
<th>Pump Type, Make, Serial No.:</th>
<th>Submersible, National, 78440HR2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated Capacity:</td>
<td>570 gpm at head of: 1668 ft.</td>
</tr>
<tr>
<td>Motor Type, H.P., Voltage, rpm:</td>
<td>Sub., 336HP, 2369V, 3540RPM</td>
</tr>
<tr>
<td>Type of flow meter:</td>
<td>Turbine which measures in GPM</td>
</tr>
<tr>
<td>Model Number</td>
<td>4438</td>
</tr>
<tr>
<td>Serial Number</td>
<td>70110819</td>
</tr>
</tbody>
</table>

6. Method of flow measurement:

- Flowmeter  
- Manufacturer: Neptune  
- Make:  
- Size: 4"

- Weir  
- Open Pipe  
- Orifice  
- Other*, explain below

*attach schematic

7. Fill in the as-built section on the other side of this sheet.

8. Attach photograph of well and concrete pad clearly showing benchmark on concrete pad.

9. Other remarks/comments:


Pump Installation Contractor (print): Wai'eli Drilling C-57/C-57a/A  
Lic. No. C-16543

Signature:  
Date: 8/15/03

Permittee (print):  
Date: 9/26/03
9. AS-BUILT PUCTION

(Please attach as-built if different from drawings provided below)

Bench mark elevation surveyed to nearest 0.01 ft. = 1534.4 ft.

Elevation of top of chase tube = 1550.04 ft.

Pump intake depth = ___ ft. (referenced to bench mark)

Chase tube depth = ___ ft. (referenced to bench mark)

If airline installed, bottom of airline elevation = ___ ft. mean sea level

H2O @ 1528', (+6.40)

Huehue Ranch

WCR2 Form 124401 Page 2 of 2
PUMP DATA SHEET
National Pump Company

Curve: CVM8M2P6CY

Design Point:
Flow: 570 US gpm
Head: 1668 ft

Pump: VERT. TURBINE - 3600
Size: M6M6 (15 stages)
Dia: 8.5208 in

Limits:
Temperature: 180 °F
Pressure: 415 psig

Specific Speed:
Ns: 2351
Nss: 8392

Dimensions:
Suction: 5 in
Discharge: 8 in

Motor: 300 hp
Speed: 3600
Frame: 449TS
NEMA Standard
TEFC Enclosure
sized for Max Power on Design Curve

— Data Point —
Flow: 570 US gpm
Head: 1673 ft
Eff: 82%
Power: 294 bhp
NPSHR: 24.3 ft

— Design Curve —
Shutoff Head: 2447 ft
Shutoff dP: 1060 psi
Min Flow: 56.7 US gpm
BEP: 92% eff
@ 567 US gpm
NOL Pwr: 294 bhp
@ 645 US gpm

— Max Curve —
Max Pwr: 319 bhp
@ 650 US gpm

Fluid: Water
Temperature: 60 °F
SG: 1
Viscosity: 1.122 cP
Vapor pressure: 0.2568 psi
Atm pressure: 14.7 psi

NPSHa: — ft
Piping:
System: —
Suction: — in
Discharge: — in

— PERFORMANCE EVALUATION —

<table>
<thead>
<tr>
<th>Flow US gpm</th>
<th>Speed rpm</th>
<th>Head ft</th>
<th>Pump %eff</th>
<th>Power bhp</th>
<th>NPSHr ft</th>
<th>Motor %eff</th>
<th>Motor kW</th>
<th>Hrs/yr</th>
<th>Cost/kWh</th>
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<td></td>
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</tbody>
</table>

TOTAL P.05

8-4459-01 Huehue Ranch
July 10, 2003

Mr. Sam Ainslie
WB Kukio Resort
P.O. Box 5349
Kailua-Kona, HI 96745

Dear Mr. Ainslie:

Pump Installation Permit
HR-2, HR-3 and HR-4 Wells (Well No. 4459-01, 4459-02 & 4558-01)

Enclosed are two (2) originals of your approved Pump Installation Permit for the captioned well(s) that authorize permanent pump installation work for your well(s). As part of the Chairperson's approval, the following special conditions were added and are part of your permit under Permit Condition 11:

Special Conditions

1. If the elevation benchmark needs to be altered, the permittee, well operator, and/or well owner shall ensure that the benchmark is transferred (or the well resurveyed) and documentation of the new benchmark shall be submitted to the Commission within sixty (60) days after the pump is installed.

2. Please enclose the pump specification and rating curve for the installed pump with the Well Completion Report.

3. Please conduct a pump test for each well in accordance with the Hawaii Well Construction and Pump Installation Standards and submit the results on the attached forms.

The permittee, well operator, and/or well owner are responsible for all conditions of the permit. This includes ensuring that the pump installation contractor submits a completed Part II of the Well Completion Report form (enclosed) within sixty (60) days after the pump installation work is completed. Be advised that you may be subject to fines of up to $1000 per day for any violations of your permit conditions starting from the permit approval date.

Please sign and have the contractor sign both permit originals and return one for our files. A copy of the Well Completion Report (Part II) and a copy of your water use report form are enclosed for your use.
IMPORTANT - Pump installation shall not commence until a fully signed permit is returned to the Commission. Except for the monthly water use report form, please provide copies of all the information in this packet to your pump installation contractor.

If you have any questions, please call Ryan Imata of the Commission staff at [phone number] or toll-free at [Hawaii], [Kauai], [Maui], or [Lanai & Molokai], extension 70255.

Sincerely,

Peter T. Young
Chairperson

Enclosure
LETTER OF TRANSMITTAL

03 JUL 23 10:38
July 22, 2003

To: Peter Young
Department of Land and Natural Resources
Commission on Water Resource Management

From: Noelani Laszlo for Milton Morinaga

Reference: HR-2, HR-3 and HR-4 Wells

Sending Via: Mail

ENCLOSED ARE THE FOLLOWING:

<table>
<thead>
<tr>
<th>Copies</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pump Installation Permit</td>
</tr>
</tbody>
</table>

TRANSMITTED HEREWTH FOR THE FOLLOWING REASON(S):

( ) For review and analysis
( ) For signature and return
( ) For signature & forwarding
( ) For approval & return
( ) As requested
( ) For your use
( ) See remark below

REMARKS:

As requested, enclosed you will find one of the two original Pump Installation Permits for you files. Please contact me should you have any questions.

Milton Morinaga
WB Kukio Resort

cc:
PUMP INSTALLATION PERMIT
HR-2, HR-3 and HR-4 Wells, Well No. 4459-01, 4459-02 & 4458-01

Note: This permit shall be prominently displayed at the site until the work is completed

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 pump installation for HR-2, HR-3 and HR-4 Wells (Well No. 4459-01, 4459-02 & 4458-01) at 72-3667 Mamalahoa Highway, Hawaii, TMK 7-2-006: 009, subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97) which include but are not limited to the following conditions:

1. The Chairperson to the Commission on Water Resource Management (Commission), P.O. Box 621, Honolulu, HI 96809, shall be notified, in writing, at least two (2) weeks before any work covered by this permit commences and staff shall be allowed to inspect installation activities in accordance with §13-168-15, Hawaii Administrative Rules.

2. The pump installation permit shall be for installation of a 570 gpm rated capacity or less, pump in the well.

3. The permittee, well operator, and/or well owner shall provide and maintain an approved meter or other appropriate means for measuring and reporting withdrawals and water levels, and appropriate devices or means for measuring chlorides and temperature. These data shall be measured monthly and reported to the Commission on a monthly basis, on forms provided by the Chairperson (attached).

4. The proposed use shall not adversely affect existing or future legal uses of water in the area, including any surface water or established instream flow standards. This permit or the authorization to pump water from a well shall not constitute a determination of correlative water rights. The permittee, well operator, and/or well owner are notified and by this provision understands that the quantity of water taken from the well could be reduced by the Commission in the future. This permit is not a commitment that the pump capacity permitted here or even some lesser amount is guaranteed in the future.

5. The permittee, well operator, and/or well owner shall complete and submit as-built drawings and Part II - (Permanent) Pump Installation Report of the Well Completion Report (attached) to the Chairperson within sixty (60) days after completion of work.

6. The permittee, well operator, and/or well owner shall comply with all applicable laws, rules, and ordinances, and non-compliance may be grounds for revocation of this permit.

7. The pump installation permit application and any related staff submittal approved by the Commission are incorporated into this permit by reference. This permit is also subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97). If the HWCIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result.

8. The permit may be revoked if work is not started within six (6) months after the date of approval or if work is suspended or abandoned for six (6) months, unless otherwise specified. The work proposed in the pump installation permit application shall be completed within two (2) years from the date of permit approval, unless otherwise specified. The permit may be extended by the Chairperson upon a showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Chairperson no later than three (3) months prior to the date the permit expires. If the commencement date is not met, the Commission may revoke the permit after giving the permittee, well operator, and/or well owner notice of the proposed action and an opportunity to be heard.

9. If the well is not to be used it must be properly capped. If the well is to be abandoned then the permittee, well operator, and/or well owner must apply for a well abandonment permit in accordance with §13-168-12(f) prior to any well sealing or plugging work.

10. The permittee, its successors, and assigns shall indemnify, defend, and hold the State of Hawaii harmless from and against any loss, liability, claim, or demand for property damage, personal injury, or death arising out of any act or omission of the applicant, assigns, officers, employees, contractors, and agents under this permit or relating to or connected with the granting of this permit.

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

Date of Approval: July 8, 2003
Expiration Date: July 8, 2005

PETER T. YOUNG, 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 and understand that I shall not commence work until I and the pump installer have signed, dated, and returned the permit to the Commission. I also understand that non-compliance with any permit condition may be grounds for revocation and fines of up to $1000 per day starting from the permit date of approval.

Permittee's Signature: __________________________ Date: 7/12/03
Printed Name: ________ Manufacturing Mgr.__________

Installer's Signature: __________________________ Date: 7/12/03
Printed Name: ________ C-57, C-57a, or A License #016543

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

Attachments

c
USGS
Department of Health/ Safe Drinking Water & Wastewater Branch
Hawaii Department of Water Supply
COMMISSION ON WATER RESOURCE MANAGEMENT
ROUTE SLIP FOR PERMIT ISSUANCE

FROM: RYAN
TO: ANAKALEA, P.
TO: BAUER, G.
TO: CHING, F.
TO: DANBARA, S.
TO: FUJII, N.
TO: GOODING, K.
TO: HARDY, R.
TO: HIGA, D.
TO: ICE, C.
TO: IMATA, R.
TO: KUNIMURA, I.

DATE: 1/9/03
SUSPENSE DATE: 

TO:
INIT.
TO:
INIT.
FOR:
PLEASE:

1. Approval
2. Signature
3. Information
See Me

1. Review & Comment
2. Type Draft
3. Take Action

1. Type Final
5. File

Xerox copies

WELL NUMBER 4459-01
WELL NAME HN-2, HN-3, HN-4

WELL CONSTRUCTION

ATTACHMENTS FOR WELL CONSTRUCTION PERMIT:
1. COVER LETTER
2. PERMIT (2x)
   COMMENTS:
3. SDWB
4. WWB
5. CBW
6. HEER
7. LD
8. HP
9. PUMP TEST
10. WCR I FORM
11. WELL CHECK PRINTOUT

FOR OFFICE USE ONLY

ATTACHMENTS FOR PUMP INSTALLATION PERMIT:
1. COVER LETTER
2. PERMIT (2x)
   COMMENTS:
3. SDWB
4. WWB
5. CBW
6. HEER
7. LD
8. HP
9. WCR II FORM
10. WUR FORM
11. GLENN'S WORKSHEET

FOR OFFICE USE ONLY

PUMP TEST FORMS
FOR HIGH WATER CAPACITY

fax to: 325-2511
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 pump installation for HR-2, HR-3 and HR-4 Wells (Well No. 4459-01, 4459-02 & 4558-01) at 72-3667 Mamalahoa Highway, Hawaii, TMK 7-2-006: 009, subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97) which include but are not limited to the following conditions:

1. The Chairperson to the Commission on Water Resource Management (Commission), P.O. Box 621, Honolulu, HI 96809, shall be notified, in writing, at least two (2) weeks before any work covered by this permit commences and staff shall be allowed to inspect installation activities in accordance with §13-168-15, Hawaii Administrative Rules.

2. The pump installation permit shall be for installation of a 570 gpm rated capacity or less, pump in the well.

3. The permittee, well operator, and/or well owner shall provide and maintain an approved meter or other appropriate means for measuring and reporting withdrawals and water levels, and appropriate devices or means for measuring chlorides and temperature. These data shall be measured monthly and reported to the Commission on a monthly basis, on forms provided by the Chairperson (attached).

4. The proposed use shall not adversely affect existing or future legal uses of water in the area, including any surface water or established instream flow standards. This permit or the authorization to pump water from a well shall not constitute a determination of correlative water rights. The permittee, well operator, and/or well owner are notified and by this provision understands that the quantity of water taken from the well could be reduced by the Commission in the future. This permit is not a commitment that the pump capacity permitted here or even some lesser amount is guaranteed in the future.

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6. The permittee, well operator, and/or well owner shall comply with all applicable laws, rules, and ordinances, and non-compliance may be grounds for revocation of this permit.

7. The pump installation permit application and any related staff submittal approved by the Commission are incorporated into this permit by reference. This permit is also subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97). If the HWCPIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result.

8. The permit may be revoked if work is not started within six (6) months after the date of approval or if work is suspended or abandoned for six (6) months, unless otherwise specified. The work proposed in the pump installation permit application shall be completed within two (2) years from the date of permit approval, unless otherwise specified. The permit may be extended by the Chairperson upon a showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Chairperson no later than three (3) months prior to the date the permit expires. If the commencement date is not met, the Commission may revoke the permit after giving the permittee, well operator, and/or well owner notice of the proposed action and an opportunity to be heard.

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

Date of Approval: July 8, 2003
Expiration Date: July 8, 2005

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 and understand that I shall not commence work until I and the pump installer have signed, dated, and returned the permit to the Commission. I also understand that non-compliance with any permit condition may be grounds for revocation and fines of up to $1000 per day starting from the permit date of approval.

Permittee’s Signature: _______________________________ Date: ____________

Printed Name: _______________________________ Firm or Title: _______________________________

Installer’s Signature: _______________________________ C-57, C-57a, or A 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.

Attachments

USGS
Department of Health/ Safe Drinking Water & Wastewater Branch
Hawaii Department of Water Supply
In reply, please refer to:
EMD/WB

Date: July 22

To: Commission on Water Resource Management
Department of Land & Natural Resources
State of Hawaii

Attn: Ryan Jimata

From: Lori Kajiwara
Planning & Design Section
Email: Lkajiwara@eha.health.state.hi.us

Ph [redacted] direct line
Fax [redacted]

Subject: Well Construction/Pump Installation Permit/Water Use Permit for

Well No. 4459-01 4459-02 4558-01
HR 2 HR 3 HR 4

Please find enclosed the application of the above subject project.
June 18, 2003

TO: 
Honorble Chiome L. Fukino, M.D., Director
Department of Health
Attention: Harold Yee, Wastewater Branch
William Wong, Safe Drinking Water Branch
Dr. Keith Kawaoka, Hazardous Evaluation and Emergency Response
Alec Wong, Clean Water Branch

FROM: Peter T. Young, Chairperson
Commission on Water Resource Management

SUBJECT: Pump Installation Permit Application
HR-2, HR-3 and HR-4 Wells (Well No. 4459-02 & 4558-01)

Transmitted for your review and comment is a copy of the captioned Pump Installation permit 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 July 3, 2003. If we do not receive comments or a request for additional review time by this date, we will assume that you have no comments.

Please find the attached maps to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Ryan Imata of the Commission staff at [Contact Person] Phone: [Phone]

Response:

[ ] This well qualifies as a source which will serve as a source of potable water to a public water system (defined as 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 not located near the proposed well site (information attached).

[ ] An NPDES permit is required.

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

[ ] No comments/objections No records

Contact Person: [Contact Person] Phone: [Phone]

Signed: [Signature] Date: 7-7-2003
June 18, 2003

TO: Honorable Chiyoue L. Fukino, M.D., Director
   Department of Health
   Attention: Harold Yee, Wastewater Branch
   William Wong, Safe Drinking Water Branch
   Dr. Keith Kawaoka, Hazardous Evaluation and Emergency Response
   Alec Wong, Clean Water Branch

FROM: Peter T. Young, Chairperson
   Commission on Water Resource Management

SUBJECT: Pump Installation Permit Application
   HR-2, HR-3 and HR-4 Wells (Well No. 4459-01, 4459-02 & 4558-01)

Transmitted for your review and comment is a copy of the captioned Pump Installation permit 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 July 3, 2003. If we do not receive comments or a request for additional review time by this date, we will assume that you have no comments.

Please find the attached maps to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Ryan Imata of the Commission staff at [redacted].

RESPONSE:

[ ] This well qualifies as a source which will serve as a source of potable water to a public water system (defined as at least 60 days per year or has 15 or more service connections) and must receive Director of Health approval prior to Hawaii Administrative Rules (HAR), Title 11, Chapter 20, Rules Relating to Potable Water Systems, §11-20-21.

[ ] This well does not qualify as a source serving a public water system (serves less than 25 people or more people a 15 or 15 service connections) and if the well water is used for drinking, the private owner should test for bacteriologic presence before initiating such use and routinely monitor the water quality thereafter. However, if future planned 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 backflow connections by physically separating potable and non-potable systems by an air gap or an approved backflow prevention device and clearly labeling all non-potable spigots with warning signs to prevent inadvertent consumption of non-potable water 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.

[ ] For the applicant's information, a source of possible wastewater contamination is located near the proposed well (information attached).

[ ] An NPDES permit is required.

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

No comments/objections.

Contact Person: [redacted]
Phone: [redacted]

Signed: [redacted]  Date: [redacted]
June 18, 2003

TO:                   Dede Mamiya, Administrator
                        Land Division
FROM:                Ernest Y.W. Lau, Deputy Director
                        Commission on Water Resource Management
SUBJECT:             Pump Installation Permit Application
                        HR-2, HR-3 and HR-4 Wells (Well No. 4459-01, 4459-02 & 4558-01)

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Please find the attached maps to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Ryan Imata of the Commission staff at [Phone]

RESPONSE:
[ ] A water lease/permit is required of this applicant and an application for such will be requested by our division.

Xx A water lease/permit is not required of this applicant.

[ ] A water lease/permit has been obtained by the applicant through lease no. __________________________

Xx This well project [ ] requires [ ] does not require a CDUP. If a CDUP is required it [ ] has [ ] has not been approved and [ ] is [ ] is not currently active.

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

[ ] No objections

Xx Other comments: Original source of private title is Grant 2022 issued prior to Statehood in 1959.

Contact Person: Gary Martin Phone: [Phone]

Signed: Gary Martin Date: JUN 26 2003
The Department of Health, Clean Water Branch has the following comments:

1. For Well-Drilling Activities

Any discharge to State waters of treated process wastewater effluent associated with well drilling activities is regulated by Hawaii Administrative Rules, Title 11, Chapter 55, Appendix I, effective September 22, 1997. Treated process wastewater effluent covered by this general permit includes well drilling slurries, lubricating fluids wastewaters, and well purge wastewaters. This general permit does not cover well pump testing. The applicable Notice of Intent Forms and filing fee shall be submitted at least thirty (30) days before the start of discharge to the Department of Health, Clean Water Branch at 919 Ala Moana Boulevard, Room 301, Honolulu, Hawaii 96814-4920 or P.O. Box 3378, Honolulu, Hawaii 96801-3378. Inquiries may be directed to the Clean Water Branch at [redacted] or by fax at [redacted].

2. For Well Pump Testing

The discharger shall take all measures necessary to prevent the discharge of pollutants from entering State waters. Such measures shall include, if necessary, containment of the initial discharge until the discharge is essentially free of pollutants. If the discharge is entering a stream or river bed, best management practices shall be implemented to prevent the discharge from disturbing the clarity of the receiving water. If the discharge is entering a storm drain, the discharger must obtain written permission from the owner of that storm drain prior to discharge. Furthermore, best management practices shall be implemented to prevent the discharge from collecting sediments and other pollutants prior to entering the storm drain.

JS/cr
June 18, 2003

TO: Honorable Chiyome L. Fukino, M.D., Director
Department of Health
Attention: Harold Yee, Wastewater Branch
William Wong, Safe Drinking Water Branch
Dr. Keith Kawaoka, Hazardous Evaluation and Emergency Response
Alec Wong, Clean Water Branch

FROM: Peter T. Young, Chairperson
Commission on Water Resource Management

SUBJECT: Pump Installation Permit Application
HR-2, HR-3 and HR-4 Wells (Well No. 4459-01, 4459-02 & 4558-01)

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Please find the attached maps to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Ryan Imata of the Commission staff at [contact information]

RESPONSE:

[1] This well qualifies as a source which will serve as a source of potable water to a public water system (defined as 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.

[1] 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 using such water 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.

[1] 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 systems with warning signs to prevent inadvertent consumption of non-potable water. Backflow prevention devices should be routinely inspected and tested.

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

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

[1] An NPDES permit is required.
[1] Other relevant DOH rules/regulations, information, or recommendations are attached.

[1] No comments/objections.

Contact Person: Alec Wong
Phone:
Signed: Alec Wong
Date: 6/26/03

03-319
June 18, 2003

TO: Honorable Chiyome L. Fukino, M.D., Director
   Department of Health
   Attention: Harold Yee, Wastewater Branch
   William Wong, Safe Drinking Water Branch
   Dr. Keith Kawaoka, Hazardous Evaluation and Emergency Response
   Alec Wong, Clean Water Branch

FROM: Peter T. Young, Chairperson
       Commission on Water Resource Management

SUBJECT: Pump Installation Permit Application
   HR-2, HR-3 and HR-4 Wells (Well No. 4459-01, 4459-02 & 4558-01)

Transmitted for your review and comment is a copy of the captioned Pump Installation permit 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 July 3, 2003. If we do not receive comments or a request for additional review time by this date, we will assume that you have no comments.

Please find the attached maps to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Ryan Imata of the Commission staff at [redacted].

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 (defined as 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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[ ] 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 located near the proposed well site (information attached).

[ ] An NPDES permit is required.

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

[ ] No comments/submissions regarding permit approval [ ] are attached.

Contact Person: [Bill Wong]

Signed: [Bill Wong]
Date: [redacted]
June 18, 2003

TO: Honorable Chiyome L. Fukino, M.D., Director
    Department of Health
Attention: Harold Yee, Wastewater Branch
           William Wong, Safe Drinking Water Branch
           Dr. Keith Kawaoka, Hazardous Evaluation and Emergency Response
           Alec Wong, Clean Water Branch

FROM: Peter T. Young, Chairperson
      Commission on Water Resource Management

SUBJECT: Pump Installation Permit Application
          HR-2, HR-3 and HR-4 Wells (Well No. 4458-01, 4459-02 & 4558-01)

Transmitted for your review and comment is a copy of the captioned Pump Installation permit 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 July 3, 2003. If we do not receive comments or a request for additional review time by this date, we will assume that you have no comments.

Please find the attached maps to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Ryan Imata of the Commission staff at [insert contact information].

RESPONSE:

This well qualifies as a source which will serve as a source of potable water to a public water system (defined as 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, §11-26-29.

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.

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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 located near the proposed well site (information attached).

An NPDES permit is required.

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

No comments/objections

Contact Person: Dr. Keith Kawaoka
Phone: 586-4249

Signed: [Signature]
Date: 6/19/03

Fax to: Commission on Water Resources Mgt.
June 18, 2003

Mr. Sam Ainslie
WB Kukio Resort
P.O. Box 5349
Kailua-Kona, HI 96745

Dear Mr. Ainslie:

Pump Installation Permit Application for Well No. 4459-01, 4459-02 & 4558-01

We acknowledge receipt, on June 3, 2003, of your completed Pump Installation permit application and filing fee for the HR-2, HR-3 and HR-4 Wells (Well No. 4459-01, 4459-02 & 4558-01). You can expect your application to be processed within ninety (90) days from this date.

Because the Commission acted on the after-the-fact Pump Installation Permit for the HR-5 Well (Well No 4558-02) on May 21, 2003, we are canceling your application for this permit.

If you have any questions about your permit application, please contact Ryan Imata of the Commission staff at [redacted] or toll-free at [redacted] (Hawaii), [redacted] (Kauai), [redacted] (Maui), or [redacted] (Lanai & Molokai) extension 70255.

Sincerely,

[Signature]

ERNEST Y.W. LAU
Deputy Director

RI:ss
June 18, 2003

TO: Honorable Chiyome L. Fukino, M.D., Director
   Department of Health
   Attention: Harold Yee, Wastewater Branch
              William Wong, Safe Drinking Water Branch
              Dr. Keith Kawaoka, Hazardous Evaluation and Emergency Response
              Alec Wong, Clean Water Branch

FROM: Peter T. Young, Chairperson
       Commission on Water Resource Management

SUBJECT: Pump Installation Permit Application
         HR-2, HR-3 and HR-4 Wells (Well No. 4459-01, 4459-02 & 4558-01)

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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 July 3, 2003. If we do not receive comments or a request for additional review time by this date, we will assume that you have no comments.

Please find the attached maps to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Ryan Imata of the Commission staff at [Contact Person]

RESPONSE:

[ ] This well qualifies as a source which will serve as a source of potable water to a public water system (defined as 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).

[ ] An NPDES permit is required.

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

[ ] No comments/objections

Contact Person: ____________________________ Phone: ______________

Signed: ____________________________ Date: ______________
June 18, 2003

TO: Dede Mamiya, Administrator
    Land Division

FROM: Ernest Y.W. Lau, Deputy Director
      Commission on Water Resource Management

SUBJECT: Pump Installation Permit Application
          HR-2, HR-3 and HR-4 Wells (Well No. 4459-01, 4459-02 & 4558-01)

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RESPONSE:

[ ] A water lease/permit is required of this applicant and an application for such will be requested by our division.

[ ] A water lease/permit is not required of this applicant.

[ ] A water lease/permit has been obtained by the applicant through lease no. ________________________

[ ] This well project [ ] requires [ ] does not require a CDUP. If a CDUP is required it [ ] has [ ] has not been approved and [ ] is [ ] is not currently active.

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

[ ] No objections

[ ] Other comments:

Contact Person: ___________________________ Phone: ___________________________

Signed: ___________________________ Date: ___________________________
June 18, 2003

TO: Holly McEldowney, Acting Administrator
     Historic Preservation

FROM: Ernest Y.W. Lau, Deputy Director
      Commission on Water Resource Management

SUBJECT: Pump Installation Permit Application
          HR-2, HR-3 and HR-4 Wells (Well No. 4459-01, 4459-02 & 4558-01)

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Please find the attached maps to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Ryan Imata of the Commission staff at [REDACTED].

RESPONSE:

[ ] There may be areas in the vicinity of the well site that contain subsurface cultural remains such as artifacts, burials or concentrations of shells or charcoal.

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

[ ] No objections

[ ] Other comments:

Contact Person: ___________________________ Phone: __________

Signed: ___________________________ Date: __________
DEPARTMENT OF LAND AND NATURAL RESOURCES

DATE: 6/18/03

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REMARKS: LINE (1) Well No. 4459-01, 4459-02 & 4558-01
LINE (2) Well No. 3687-06
LINE (3) 
LINE (4)

Waimea Water Services

MONICA A O'SULLIVAN 570-74-5987
JOSEPH O'SULLIVAN 576-47-0244
Hcr 2 Box 6262 Ph. ------
Keaau, HI 96749

Pay: One hundred dollars and no cents

CK# 5847 7-09-02 $100.00

Dept of Land & Nat'l Resources
TO THE c/o Commission on Water Resource
ORDER PO Box 621
OF Honolulu, HI 96809

First Hawaiian Bank

PAY TO THE ORDER OF Deut of Land and Natural Resources $250

Lilo Branch
1005 Kilauea Avenue
Hilo, Hawaii 96720

Joseph O'Sullivan
# Department of Land and Natural Resources

**Document No.**

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**Remarks:**

- **Line (1):** Fines for Well No. 4558-02 (5/21/03 GWRM Meeting)
- **Line (2):**
- **Line (3):**
- **Line (4):**

**Total:** **250.00**

---

**Payment:**

- **Pay To The Order Of:** WB KUKIO RESORTS, LLC
- **Address:** PO BOX 5349 KAILUA KONA, HI 96745
- **Amount:** **$250.00**
- **Date:** 6/2/2003

- **Firm:** FIRST HAWAIIAN BANK
  - **Branch:** KONA BRANCH
  - **Address:** KAILUA KONA, HAWAII 96740
  - **Account:** 58-101-1213

---

**Signature:**

[Handwritten signature]
To: Ryan Imata  
State of Hawaii  
Dept. of Land & Natural Resources  
Commission On Water Resources Mgmt.  
P.O. Box 621  
Honolulu, HI 96809  

From: Kainoa Lavea  

Sending Via: U.S. Mail  

Re: HR-5 Well Pump Permit Base Fine  

ENCLOSED ARE THE FOLLOWING:  

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TRANSMITTED HEREWITH FOR THE FOLLOWING REASON(S):  
( ) For review and comment  
( ) For approval and return  
( ) For signature & forwarding  
( ) For your information  

As requested  
For your use  
See remark below  

REMARKS:  
Check enclosed per letter dated May 21, 2003.  
Should you have any questions, I can be reached @ (808) Mahalo.

Cc: Randy Mori
FROM: RYAN BAUER, G. CHING, F. FUJII, N. HARDY, R. HIGA, D. HIRANO, E. ICE, C. IMATA, R. JINNAI, R. KUNIMURA, I. ...


DATE: 24-Jul-02 DATE: 33

SUSPENSE DATE: 

TO: SUSPENSE DATE: 33

FOR: 

PLEASE:

1 Review & Comment 2 Type Final, label new file folder 

3 Approval 5 Type Draft acknow letter 6 Xerox copies 

3 Signature 4 Information

33

WELL NUMBER 4458-01, 02 & 4458-01A02 WELL NAME HR-2, 3, 4 & 5

WELL CONSTRUCTION PUMP INSTALLATION BOTH

ATTACHMENTS FOR APPLICATION PROCESSING - Both applicant & staff generated

1 TRANS. LETTER 1 TRANS. LETTER

2 CWRM MAP 2 CWRM MAP

3 APPL. FORM (3X) 3 APPL. FORM (3X)

4 USGS MAPS (3X) 4 USGS MAPS (3X)

5 TAX MAPS (3X) 5 TAX MAPS (3X)

6 PARCEL OWNER VERIF. MLS PRINTOUT 6 PARCEL OWNER VERIF. MLS PRINTOUT

7 CONTRACTOR VERIF. DCDA LICENSE SCREEN PRINTOUT 7 CONTRACTOR VERIF. DCDA LICENSE SCREEN PRINTOUT

8 ALL INFO FILLED IN, 

9 BACKGROUND CHECK 9 BACKGROUND CHECK

FOLDER: MADE NEW FILE FOLDER, ATTACHED

FILE FOLDER ALREADY MADE, IN FILE CABINET

INCOMPLETE ACTION DATES:

DATE ACTION

8/14 E-mail to WWS to verify times.

8/20 E-mail response okay

9/14 E-mail to Subhut asking for deed & maps.

Accept After Commission Action

M HR-5

MAY 21, 2003?

June 3, 2003?
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Wednesday, July 24, 2002
## Well Background Check

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<th>Approved Well No.</th>
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<th>Applicant</th>
<th>Driller</th>
<th>Type</th>
<th>Well Construction</th>
<th>Pump Installation</th>
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<td>HR-2</td>
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<td>HR-5</td>
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<td>Hitherandthithering Waters LLC</td>
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LICENSE SCREEN

[Look up License Type Codes->]

Please click a link listed below to display the other screen.

***** GENERAL LICENSEE *****

LIC ID: CT-16543  Active/Inactive: ACTIVE
NAME: WAI'ELI DRILLING & DEVELOPMENT
TRADE NAME:  
STATUS: VALID THRU EXPIRATION DATE, RENEWAL NOTICE SENT
ENTITY: JOINT VENTURE  BUSINESS CODE:  
ORIG LIC DATE: 3/18/91  EXPIRE DATE: 9/30/02
CLASS PREFIX: C  SPECIAL PRIVILEGE:  
RESTRICTION:  EDUCATION CODE:  
BUSINESS ADDR:  
MAILING ADDR: P O BOX 5685  KAILUA-KONA HI 96745

Click here to enter search criteria for prior complaints history ->

For prior complaints and disciplinary history, contact licensing and business information center at (808)587-3295.

<-Back  New Search->

EMPLOYEES LIST || EMPLOYERS LIST  || INSURANCE/BOND  || LICENSE CLASS
### PUBLIC RECORD DATA

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<tr>
<th>Taxkey</th>
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<th>Beds</th>
<th>Baths</th>
<th>Land area</th>
<th>Living area</th>
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This information has been supplied by third parties and has not been independently verified by Hawaii Information Service and is, therefore, not guaranteed.
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This information has been supplied by third parties and has not been independently verified by Hawaii Information Service and is, therefore, not guaranteed.
## PUBLIC RECORD DATA

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This information has been supplied by third parties and has not been independently verified by Hawaii Information Service and is, therefore, not guaranteed.
State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources
APPLICATION FOR PERMIT

Instructions: Please print in ink or type and send completed application with attachments to the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809. Application must be accompanied by 5 copies and a non-refundable filing fee of $25.00 payable to the Dept. of Land and Natural Resources. The Commission may not accept incomplete applications. For assistance, call the Regulation Branch at 808-961-8376.

For further information and updates to this application form, visit http://www.state.hi.us/dlnr/cwrm.

APPLICANT INFORMATION: (Fill out all three, if applicable, and place a check next to the primary contact)

1. (a) WELL OWNER: WB Kukio Resort
Contact Person: Sam Ainslie
Mailing Address: PO Box 5349, Kailua-Kona, HI 96745
Fax: (808) 968-02

(b) LAND OWNER: WB Kukio Resort
Contact Person: Sam Ainslie
Mailing Address: PO Box 5349, Kailua-Kona, HI 96745
Fax: (808) 968-02

(c) CONTRACTOR: Wailei Drilling
Contact Person: Dale Stromquist
Mailing Address: PO Box 5685, Kailua-Kona, HI 96745
Fax: (808) 968-02

WELL & PUMP INFORMATION: (Please fill in the diagram on the back of this form.)

2. WELL NAME: HR-5
Island: Hawaii
Address: 72-3667 Mamalahoa Hwy
Tax Map Key: 7 2 06 09

Attach: (a) portion of a 7.5-Minute Series USGS topographic map (scale 1:24,000) with well location labeled and include the name of the quad map
(b) a property tax map, showing location referenced to established property boundaries

3. PROPOSED WORK: (check all that apply)
   - Construct New Well
   - Modify Existing Well
   - Abandon/Seal
   - Install New Pump
   - Modify Pump
   *State Well No.: 4558-02 (if unknown, please call Commission at 808-961-8376)

4. CONSTRUCTION:
   - Drilled
   - Dug
   - Shaft
   - Tunnel

5. PROPOSED PUMPING RATE: 570 gallons per minute

6. PROPOSED USE: (check all that apply)
   - Municipal (including hotels, stores, etc.)
   - Industrial
   - Domestic (individual, noncommercial water system)
   - Irrigation (crop)
   - Other (explain): 
   - No. of Acres:
   - Yes
   - No

7. (a) PROPOSED AMOUNT OF WITHDRAWAL: 720,000 gallons per day
(b) METHOD OF FLOW MEASUREMENT: Flowmeter

OTHER IMPORTANT INFORMATION:

8. LEGAL REQUIREMENTS: If required, these permits must be obtained before the Commission can legally issue a permit.
   - Conservation District Use Permit (CDUP): To find out if a CDUP is necessary, call DLNR Land Division at 808-961-8376
   - Environmental Impact Statement (EIS) or Environmental Assessment (EA): To determine if an EIS or EA is necessary, call OEQC at 808-586-4185
   - Special Management Area Permit (SMAP): To determine if a SMAP is necessary, call OEQC at 808-586-4185

9. REMARKS, EXPLANATIONS: Installing new pump due to increase in pumping rate of 570 gpm.

NOTE: Signing below indicates the signatories understand and swear that the information provided on this application is accurate and true to the best of their knowledge. Further, the signatories 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 60 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; 5) the event that the application is not completed correctly, any permit may be suspended until the item is brought in to compliance, and any work done while the permit is in suspension may result in fines up to $1000/day.

Well Owner: WB Kukio Resort
Landowner: WB Kukio Resort
Contractor: Wailei Drilling

Signature: ____________________________
Date: ____________________________

For official use only
Latitude: ____________________________
Longitude: ____________________________
State Well No. ____________________________

WCPPA Form 8216/1
State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources
APPLICATION FOR PERMIT
[Well Construction] and/or [Pump Installation]

Instructions: Please print in ink or type and send completed application with attachments to the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809. Application must be accompanied by 5 copies and a non-refundable filing fee of $25.00 payable to the Dept. of Land and Natural Resources. The Commission may not accept incomplete applications. For assistance, call the Regulation Branch at 587-0225. For further information and updates to this application form, visit http://wwwstate.hi.us/dlnr/wrm.

APPLICANT INFORMATION: (Fill out all three, if applicable, and place a check next to the primary contact)

1. (a) WELL OWNER: WB Kukio Resort
   Mailing Address: PO Box 5349, Kailua-Kona, HI 96745
   Phone: (808) 123-4567
   Fax: (808) 123-4567
   Contact Person: Sam Ainslie
   E-mail:

2. (b) LAND OWNER: WB Kukio Resort
   Mailing Address: PO Box 5349, Kailua-Kona, HI 96745
   Phone: (808) 123-4567
   Fax: (808) 123-4567
   Contact Person: Sam Ainslie
   E-mail:

3. (c) CONTRACTOR: Waieki Drilling & Development
   Mailing Address: PO Box 5685, Kailua-Kona, HI 96745
   Phone: (808) 123-4567
   Fax: (808) 123-4567
   Contact Person: Dale Stromquisine
   E-mail:

WELL & PUMP INFORMATION: (Please fill in the diagram on the back of this form.)

2. WELL NAME: HR-4
   Island: Hawaii
   Address: 72-3667 Mamalahoa Hwy
   Tax Map Key: 7-2-06-09
   Zone: __________ Sec: __________ Plat: __________ Parcel:

3. PROPOSED WORK:
   (check all that apply)
   ☐ Construct New Well
   ☐ Install New Pump*
   ☐ Modify Existing Well*
   ☐ Modify Pump*
   ☐ Abandon/Seal*

   *State Well No.: 4459-02
   (If unknown, please call Commission at 587-0225)

4. CONSTRUCTION:
   ☐ Drill
   ☐ Dug
   ☐ Shaft
   ☐ Tunnel

5. PROPOSED PUMPING RATE:
   570 gallons per minute

6. PROPOSED USE:
   ☐ Municipal (including hotels, stores, etc.)
   ☐ Industrial
   ☐ Domestic (individual, noncommercial water system)
   ☐ Irrigation (crop)
   ☐ Military
   ☐ Other (explain):

   Does this well serve 25 or more people at least 60 days per year or have 15 or more service connections? ☐ Yes ☐ No

   ☐ Yes ☐ No
   ☐ No. of Acres: __________
   ☐ Other (explain): __________

7. (a) PROPOSED AMOUNT OFWITHDRAWAL:
   720,000 gallons per day

   (b) METHOD OF FLOW MEASUREMENT:
   ☐ Flowmeter
   ☐ Open pipe
   ☐ Well
   ☐ Orifice
   ☐ Other (explain):

OTHER IMPORTANT INFORMATION:

8. LEGAL REQUIREMENTS: if required, these permits must be obtained before the Commission can legally issue a permit.
   Conservation District Use Permit (CDUP) To find out if a CDUP is necessary, call DLNR Land Division at 587-0414
   ☐ Not Required ☐ Required, data approved

   Environmental Impact Statement (EIS) or Environmental Assessment (EA) To determine if an EIS or EA is necessary, call OEGC at 586-4185
   ☐ Not Required ☐ Required, data published in OEGC bulletin

   Special Management Area Permit (SMAP) To determine if an SMAP is necessary on Oahu, call ☐ ☐ ☐ ☐ ☐ ☐ ☐ on Maui, call ☐ ☐ ☐ ☐ ☐ ☐
   ☐ Not Required ☐ Required, data approved

9. REMARKS, EXPLANATIONS: Installing new pump due to increase in pumping rate of 570 gpm (see attached letter from CWRM dated 02/10/07).
   (If more space is needed, please attach additional sheet)

NOTE: Signing below indicates the signatories understand and swear that the information provided on this application is accurate and true to the best of their knowledge. Further, the signatories 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 60 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 cumulative water rights and shall not guarantee the pump capacity or future use up to the permitted pump capacity; 5) in the event that the application is not completed correctly, any permit may be suspended until the form is brought to compliance, and any work done while the permit is in suspension may result in fines of up to $1000/day.

Well Owner: WB Kukio Resort
Landowner: WB Kukio Resort
Contractor: Waieki Drilling & Development

Signature: [Signature]
Date: [Date]

For official use only
Latitute: __________
Longitude: __________
Aquifer System No: __________
State Well No: __________

WCPIPA Form 6/21/01
State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources
APPLICATION FOR PERMIT

☐ Well Construction and/or ☐ Pump Installation

InSTRUCTIONS: Please print in ink or type and submit completed application with attachments to the Commission on Water Resource Management, 515 Kapahulu Ave, Honolulu, Hawaii 96815. Application must be accompanied by 3 copies and a non-refundable filing fee of $25.00 payable to the Dept. of Land and Natural Resources. The Commission may not accept incomplete applications. For assistance, contact the Regulation Branch at (808) 587-0225.

For further information and updates to this application form, visit http://www.state.hi.us/dlnr/cwm/wasm.

APPLICANT INFORMATION: (Fill out all three, if applicable, and place a check next to the primary contact)

1. ☐ WELL OWNER: N. W. Kukio Resort 
   Contact Person: Sam Ainslie  
   Mailing Address: PO Box 5349, Kailua-Kona, HI 96745  
   Phone: (808) 437-9200  
   Fax: (808) 437-9200 
   Email: 

2. ☐ LAND OWNER: N. W. Kukio Resort 
   Contact Person: Sam Ainslie  
   Mailing Address: PO Box 5349, Kailua-Kona, HI 96745  
   Phone: (808) 437-9200  
   Fax: (808) 437-9200 
   Email: 

3. ☐ CONTRACTOR: Waielei Drilling & Development 
   Contact Person: Dale Stromquist  
   Mailing Address: PO Box 5685, Kailua-Kona, HI 96745  
   Phone: (808) 324-1420  
   Fax: (808) 324-1420 
   Email: 

WELL & PUMP INFORMATION: (Please fill in the diagram on the back of this form)

2. WELL NAME: HR-3  
   Island: Hawaii  
   Address: 72-3667 Mamalahoa Hwy  
   Tax Map Key:  
   Zone:  
   Site:  
   Parcel:  

Attach: (a) portion of a 7.5-Minute Series USGS topographic map (scale 1:24,000) with well location labeled and include the name of the quadrangle map 
(b) a property survey map, showing well location referenced to established property boundaries

3. PROPOSED WORK: (check all that apply)
   ☐ Construct New Well  
   ☐ Modify Existing Well  
   ☐ Abandon/Seal  
   ☐ Install New Pump  
   ☐ Modify Pump  

   *State Well No.: 4558-01  
   (If unknown, please call Commission at 808-587-0225)

4. CONSTRUCTION:
   ☐ Drilled  
   ☐ Dig  
   ☐ Shaft  
   ☐ Tunnel

   Is this well part of a battery of wells? ☐ Yes ☐ No  
   (Please describe)

5. PROPOSED PUMPING RATE:
   570 gallons per minute

6. PROPOSED USE:
   ☐ Municipal (including hotels, stores, etc.)  
   ☐ Industrial  
   ☐ Domestic (individual, noncommercial water system)  
   ☐ Irrigation (crop)  
   ☐ Other (explain:)
   ☐ Military

7. ☐ PROPOSED AMOUNT OF WITHDRAWAL:
   720,000 gallons per day

   (b) METHOD OF FLOW MEASUREMENT:
   ☐ Flowmeter  
   ☐ Open Pipe  
   ☐ Well  
   ☐ Office  
   ☐ Other (explain:)

OTHER IMPORTANT INFORMATION:

8. LEGAL REQUIREMENTS: If required, these permits must be obtained before the Commission can legally issue a permit.

   Conservation District Use Permit (CDUP) To find out if a CDUP is necessary, call DLNR Land Division at 808-587-0414
   ☐ Not Required  
   ☐ If required, date approved

   Environmental Impact Statement (EIS) or Environmental Assessment (EA) To determine if an EIS or EA is necessary, call OECG at:  
   ☐ Not Required  
   ☐ If required, date published in OECG bulletin

   Special Management Area Permit (SMAP) To determine if an SMAP is necessary: on Oahu, call 808-587-0226; on Maui, call 808-587-0228; for Kauai, call 808-587-0290; for Molokai, call 808-587-0229; for Lanai, call 808-587-0230.
   ☐ Not Required  
   ☐ If required, date approved

9. REMARKS, EXPLANATIONS: 
   Installing new pump due to increase in pumping rate of 570 gpm (see attached letter from CWM dated 02/10/00).

   (If more space is needed, please attach additional sheet)

NOTE: Signing below indicates the signatories understand and swear that the information provided on this application is accurate and true to the best of their knowledge. Further, the signatories understand that approval of this application attaches the following standard conditions: 1) the proposed work is to be completed within 2 (two) years of the approval date; 2) the contractor shall submit to the Commission a well completion/abandonment report within 60 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 cumulative water rights and shall not guarantee the pump capacity or future use up to the permitted pump capacity; 5) in the event that the application is not completed correctly, any permit may be suspended until the item is brought in to compliance, and any work done while the permit is in suspension may result in fines of up to $1000/day.

Well Owner: ☐ N. W. Kukio Resort  
   (print legally)  
   Signature:  
   Date: 7/3/02

Landowner: ☐ N. W. Kukio Resort 
   (print legally)  
   Signature:  
   Date: 7/3/02

Contractor: Waielei Drilling & Development 
   (print legally)  
   Signature:  
   Date: 7/3/02

For official use only

Latitude:  
Longitude:  
Aquifer System No.:  
State Well No.:
**APPLICANT INFORMATION:**

1. **WELL OWNER:**
   - Name: Kukio Resort
   - Address: PO Box 5349, Kailua-Kona, HI 96745
   - Phone: (808)...
   - Fax: (808)...
   - Contact Person: Sam Ainslie

2. **LAND OWNER:**
   - Name: Kukio Resort
   - Address: PO Box 5349, Kailua-Kona, HI 96745
   - Phone: (808)...
   - Fax: (808)...
   - Contact Person: Sam Ainslie

3. **CONTRACTOR:**
   - Name: Waieli Drilling
   - Address: PO Box 5685, Kailua-Kona, HI 96745
   - Phone: (808)...
   - Fax: (808)...
   - Contact Person: Dale StromQUIST

**WELL & PUMP INFORMATION:**

2. **WELL NAME:** HR-2
   - Island: Hawaii
   - Address: 72-3667 Mamalahoa Hwy
   - Tax Map Key: 7-2-06-09
   - Zone: 7
   - Sec: 2
   - Plat: 06
   - Parcel: 09

   **Attach:** (a) portion of a 7.5-Minute Series USGS topographic map (scale 1:24,000) with well location labeled and include the name of the quad map: (b) a property tax map, showing well location referenced to established property boundaries.

3. **PROPOSED WORK:**
   - (check all that apply)
     - Construct New Well
     - Install New Pump
     - Modify Existing Well
     - Abandon/Seal

   **(State Well No.: 4459-01)**

4. **CONSTRUCTION:**
   - Drilled
   - Dug
   - Shaft
   - Tunnel

   Is this well part of a battery of wells? (Please describe)

5. **PROPOSED PUMPING RATE:**
   - 570 gallons per minute

6. **PROPOSED USE:**
   - (check all that apply)
     - Municipal (including hotels, stores, etc.)
     - Industrial
     - Domestic (individual, noncommercial water system)
     - Irrigation (crop)
     - No. of Acres:
     - OTHER (explain): Other (explain)

7. **PROPOSED AMOUNT OF WITHDRAWAL:**
   - 720,000 gallons per day

8. **METHOD OF FLOW MEASUREMENT:**
   - Flowmeter
   - Open pipe
   - Weir
   - Orifice
   - OTHER (explain)

**OTHER IMPORTANT INFORMATION:**

8. **LEGAL REQUIREMENTS:**
   - If required, these permits must be obtained before the Commission can legally issue a permit.
   - Conservation District Use Permit (CDUP) To find out if a CDUP is necessary, call DLNR Land Division at...
   - Environmental Impact Statement (EIS) or Environmental Assessment (EA) To determine if an EIS or EA is necessary, call OEQC at...
   - Special Management Area Permit (SMAP) To determine if an SMAP is necessary, call CWRM on Oahu, call 270-7235; on Maui, call 241-6677.

9. **REMARKS, EXPLANATIONS:**
   - Installing new pump due to increase in pumping rate of 570 gpm (see attached letter from CWRM dated 02/10/00).

**NOTE:** Signing below indicates the signatories understand and agree that the information provided on this application is accurate and true to the best of their knowledge. Further, the signatories attest 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 60 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 of future use up to the permitted pump capacity; 5) in the event that the application is not completed correctly, any permit may be suspended until the item is brought to compliance, and any work done while the permit is in suspension may result in fines of up to $1,000/day.

**For Official Use Only:**
- Aquifer System No.
- State Well No.
July 9, 2002

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Linnel T. Nishioka
Deputy Director
Commission on Water Resource Management
PO Box 621
Honolulu, Hawaii 96809

SUBJECT: Reapplication of Pump Installation Permits
Wells HR-2, HR-3, HR-4, and HR-5
Well No. 4459-01, 4558-01, 4459-02, and 4558-02
TMK: 3-7-2-06:09

Dear Ms. Nishioka:

Please find enclosed the Pump Installation Permit Applications for HR-2, HR-3, HR-4 and HR-5, (Well No. 4459-01, 4558-01, 4459-02, and 4558-02). Since we are reapplying, we have been advised by Ryan Imata that we can submit the first page of the permit applications without the well section drawings. Also, enclosed is a filing fee of $100.00 to expedite processing.

If you have any questions, please call me at [redacted]

Mahalo,

[Signature]

Stephen P. Bowles

SPB:mdc

Enclosures

cc: Sam Ainslie – WB Kukio Resorts, LLC
Sal Quitoriano – Akinaka & Associates, Ltd.
Dale Stromquist – Wai’eli Drilling & Development
Mr. John Stubbart  
Waimea Water Services, Inc.  
P.O. Box 326  
Kamuela, HI 96743  

Dear Mr. Stubbart:

**Huehue Ranch Well Field (State Well Nos. 4559-01, 4459-01 & -02, 4558-01 & -02)**

We have received your letter dated January 18, 2000 regarding the Huehue ranch wells. The plan to install pumps and conduct the pump tests sounds reasonable. However, specific instructions related to pump tests will be described in the cover letter for the pump installation permits, upon issuance. Please note that pumps of greater capacity shall not be installed prior to the issuance of pump installation permits.

If you have any questions, please contact Ryan Imata of the Commission staff at 587-0255 or toll-free at extension 70255.

Sincerely,

LINNEL T. NISHIOKA  
Deputy Director

cc: Bob Akinaka - A&A
April 29, 1994

Mr. Keith Ahue
Department of Land & Natural Resources
P.O. Box 621
Honolulu, HI 96809

Dear Mr. Ahue,

We have made corrections to the Well Completion Report for Huehue Ranch Well #2 that needed to be documented. Therefore, a copy of the Well Completion Report is being submitted for your review and files.

If you have any questions, please feel free to call me. Thank you.

Sincerely,

[Signature]

John M. Stubbert

JMS:skim

Enclosure

cc: Mr. Dustin Crimmins, Huehue Ranch Associates
**WELL COMPLETION REPORT**

**INSTRUCTIONS:** Please print or type and submit completed report within 30 days of well completion to the Division of Water & Land Development, P.O. Box 378, Honolulu, HI 96809. An as-built drawing of the well and chemical analysis, if available, should also be submitted. If necessary, phone 548-1543, Hydrology, Geology Section for assistance.

<table>
<thead>
<tr>
<th>A. STATE WELL NO.</th>
<th>4459-01</th>
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<tbody>
<tr>
<td>B. LOCATION</td>
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</tr>
<tr>
<td>C. WELL OWNER</td>
<td>HUEHUE RANCH ASSOCIATES</td>
</tr>
<tr>
<td>D. TYPE OF RIG</td>
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<tr>
<td>E. DATE OF WELL COMPLETION</td>
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</tr>
<tr>
<td>F. DATE OF PUMP INSTALLATION</td>
<td>3-15-91</td>
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<tr>
<td>G. GROUND ELEVATION (msl)</td>
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<tr>
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<tr>
<td>I. HOLE SIZE: 24 inch dia. from 0 ft. to 500 ft. below ground</td>
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<tr>
<td>J. CASING INSTALLED: 14 in. I.D. x 3/8 in. well solid section to 1536.5 ft. below ground</td>
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<tr>
<td>K. ANNULUS: Grouted from 0 ft. to 500 ft. below ground</td>
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</tr>
<tr>
<td>L. PERMANENT PUMP INSTALLATION: Capacity 500 gpm</td>
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<td>M. INITIAL WATER LEVEL</td>
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<td>N. INITIAL CHLORIDE</td>
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<td>O. PUMPING TESTS:</td>
<td>Date 3-23-91</td>
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<td>П. HOLE SIZE:</td>
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<tr>
<td>Q. ELSAPED TIME (hours)</td>
<td>Rate (gpm)</td>
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<td>R. DATE</td>
<td>Start water level</td>
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<tr>
<td>T.</td>
<td>1:05 to 1:10</td>
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<tr>
<td>U.</td>
<td>1:10 to 1:15</td>
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<tr>
<td>V.</td>
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**Submitted by** (print)  
[Signature]  
Date 5-14-91  

**Lat Long Well No.**  
Latitude 19 44 48  
Longitude 155 59 10  
Well No. 4459-01
WELL COMPLETION REPORTS

FOR

WELL HR-1: STATE WELL NO. 4559-01
WELL HR-2: STATE WELL NO. 4459-01
WELL HR-3: STATE WELL NO. 4558-01

AT

REGENT KONA COAST
RANCH DEVELOPMENT
KAILUA-KONA, HAWAII
TMK: 7-2-04, 06 & 07

PREPARED FOR:

HUEHUE RANCH ASSOCIATES, L.P.
75-5722 KUAKINI HIGHWAY, SUITE 107
KAILUA-KONA, HAWAII 96740

PREPARED BY:

WAIMEA WATER SERVICES
AND
AKINAKA & ASSOCIATES, LTD.

DECEMBER 1991
# TABLE OF CONTENTS

## I. WELL HR-1: STATE WELL NO. 4559-01

A. Well Construction Permit - August 29, 1988
   
B. Pump Installation Permit - April 2, 1991
   
C. General Plan
   
D. Site Plan
   
E. Drillers Report - June 12, 1985
   
F. Final Report - December 11, 1985
   
   1. As-Built Well Section - Figure 2
   
   2. Long Term Pump Test - Figure 3
   
   3. Laboratory Analysis Report - Table 3

G. Deepening and Testing Report - October 1988
   
   1. As-Built Well Section(9/88) - Figure 1
   
   2. As-Built Well Pump Section(9/88)Figure 2
   
   3. Pumping Test Charts - Figure 3
   
   4. Laboratory Analysis Report - 9/7/88

H. Well Pump Station HR-1 Pump Piping Details

## II. WELL HR-2: STATE WELL NO. 4459-01

A. Well Construction Permit - August 24, 1989
   
B. Pump Installation Permit - April 2, 1991
   
C. General Plan
   
D. Site Plan
   
E. Well Completion Summary
   
   1. As-Built Section - Figure 1
   
   2. Well Completion Report Figure 2
   
   3. As-Built Well Pump Section - Figure 3
   
   4. Pump Test Charts - Figure 4
   
   5. Laboratory Analysis Report - Figure 5

F. Well Pump Station HR-2 Pump Piping Details

## III. WELL HR-3: STATE WELL NO. 4558-01

A. Well Construction Permit - August 24, 1989
   
B. Pump Installation Permit - April 2, 1991
   
C. General Plan
   
D. Site Plan
   
E. Well Completion Report
   
F. Well Completion Summary
   
   1. As-Built Well Section - Figure 1
   
   2. As-Built Well Pump Section - Figure 3
   
   3. Pump Test Charts/Data - Figure 4
   
   4. Laboratory Analysis Report - 8/19/91
   
   5. Inorganics Analysis Report - 9/30/91

G. Well Pump Station HR-3 Pump Piping Details
I. WELL HR-1: STATE WELL NO. 4559-01
WELL CONSTRUCTION PERMIT

for

Huehue Ranch Well 1
State Well No. 4559-01
Kalaoa, North Kona, Hawaii

TO: Mr. Carl A. Carlson
Manager, Huehue Ranch
72-3687 Hawaii Belt Road
Kailua-Kona, Hawaii 96740

In accordance with the Department of Land and Natural Resources Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", your application to deepen and test State Well No. 4559-01 for domestic and agriculture use within Tax Map Key: 7-2-08 is approved subject to the following conditions:

1. The Division of Water and Land Development (DOWALD), Geology-Hydrology Section, shall be notified at [redacted] before any work covered by this permit commences.

2. The following shall be submitted to DOWALD, P.O. Box 373, Honolulu, Hawaii 96809, within 60 days after completion of the well:
   b. Elevation (referenced to mean sea level) survey by a Hawaii-licensed surveyor.
   c. As-built sectional drawing of the well.
   d. Plot plan and map showing the exact location of the well.
   e. Pumping test record, including time, pumping rate, drawdown, chloride content, and water quality.

3. The applicant shall comply with all applicable laws, rules, and ordinances.
4. This permit may be revoked if work is not started within six months of date of issuance or if work is suspended or abandoned for six months. The work shall be completed within two years of the date of issuance.

Date of Issuance
Aug 29

Enc. (Driller's Report form)
cc: USGS
Department of Health,
Drinking Water Program
Ground Water Protection Program
Hawaii Dept. of Water Supply

WILLIAM W. PATY, Chairperson
Commission on Water Resource Management
PUMP INSTALLATION PERMIT

for

Huehue Ranch Well 1
Well No. 4559-01
Kailua-Kona, Hawaii

TO: Huehue Ranch Associates, L.P.
75-5722 Kuakini Highway, #107
Kailua-Kona, HI 96740

In accordance with the Department of Land and Natural Resources Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", your application to install a pump in Huehue Ranch Well 1 (Well No. 4559-01) within Tax Map Key: 7-2-06:09, for municipal use, is approved subject to the following conditions:

1. The Division of Water Resource Management (DWRM), P.O. Box 373, Honolulu, HI 96809, shall be notified, in writing, before any work covered by this permit commences.

2. The permit shall be for installation of a 350 gallons per minute capacity pump in the well.

3. The proposed use shall not adversely affect existing or future legal uses of water in the area, including any surface water or established instream flow standards. This permit or the authorization to construct and pump water from a well shall not constitute a determination of correlative water rights. The permittee is notified and by this provision understands that the quantity of water taken from the well could be reduced by the Commission in the future. This permit is not a commitment that the pump capacity permitted here or even some lesser amount is guaranteed in the future.

4. The following shall be submitted to DWRM within 30 days after completion of the well:

   a. Well Completion Report.
b. As-built sectional drawing of the well.

5. The applicant shall provide and maintain an approved meter or other appropriate device or means for measuring and reporting total water usage on a monthly basis.

6. The applicant shall comply with all applicable laws, rules, and ordinances.

7. This permit may be revoked if work is not started within six months of the date of issuance or if work is suspended or abandoned for six months. The work proposed in the permit application shall be completed within 24 months from the date of permit issuance.

WILLIAM W. PATY, Chairperson
Commission on Water Resource Management

APR 2 1991
Date of Issuance

cc: USGS
Department of Health
   Drinking Water Branch
   Ground Water Protection Program
Hawaii Department of Water Supply
Akinaka & Associates, Ltd.
**State of Hawaii**
**DEPARTMENT OF LAND & NATURAL RESOURCES**
**DEPARTMENT OF WATER AND LAND DEVELOPMENT**

**DRILLER'S REPORT**

**DESCRIPTION**

- Date of report: 6/12/85
- Person filling report: CARL A. CARLSON, MGR. HUBERFARM
- **A. OWNER:** HUBERFARM
- **B. GENERAL LOCATION:** HUBERFARM
- **C. DRILLING COMPANY:** MASONIC DRILLING CO.
- **D. TYPE OF RIG:** C-48
- **E. ELEVATION, msl.:** Top of drilling platform: ft.
  - Bench mark and method used to determine:
  - Height of drilling platform above ground surface: ft.
  - Elevation: 1578.87 ft.
- **F. HOLE SIZE:**
  - 18 inch dia. to 6.00 ft. below drilling platform.
  - 13.4 inch dia. to 13.49 ft. below drilling platform.
  - 9.5 ft. below drilling platform.
- **G. CASING INSTALLED:**
  - In, I.D. x 15.1, in. wall solid section to 15.1 ft. below drilling platform.
  - In, I.D. x 15.1, in. wall solid section to 15.1 ft. below drilling platform.
  - Type of perforation: D.9. X 15.1, F.15.1, I.3.5, 15.1 ft. below drilling platform.
- **H. ANNULUS:**
  - Grouted below casing.
  - Gravel pack below casing.
- **I. PERMANENT PUMP INSTALLATION:**
  - N.A.
  - Capacity: g.p.m.
  - Motor type, make, serial no.
  - Depth of pump intake setting: ft.
  - Depth of bottom of airline: ft.
  - Which elevation is ft.

**HYDROLOGY**

- **J. INITIAL WATER LEVEL:** 15.78 ft. below drilling platform.
- **K. INITIAL CHLORIDE:** 0 ppm.
- Total depth of well: 13.56 ft. below drilling platform.
- **L. PUMPING TESTS:**
  - Reference point (R.P.) used: DRILLER.
  - Which elevation is 15.78 ft.
  - **Date:** 3/17/85
  - **Start water level:** 15.71 ft. below R.P.
  - **End water level:** 15.71 ft. below R.P.
  - **Depth of well:** 15.71 ft. below R.P.
  - **Exposed Time (hours):** 0
  - **Rate (g.p.m.):** 0.8
  - **Drawdown (ft.):** 0.7
  - **Cl (ppm):** 10
  - **Temp. (°F):** 32
- **M. DRILLER'S LOG:**
  - **Water Level:**
  - **Depth (ft.):**
  - **Rock Description & Remarks:**
  - **Water Level:**
  - **Depth (ft.):**
  - **Rock Description & Remarks:**

**SUBSURFACE FORMATION**

- **N. REMARKS:**

---

WELL HR-1 (WELL NO. 4559-01)

1-7

**INSTRUCTIONS:** Send this report to Manager, Chief Engineer Division FOR OFFICIAL USE.
HUEHUE RANCH WELL # 1
Final Report
WELL HR-1 (WELL NO. 4559-01)

December 11, 1985
As stated in the water system analysis by Akinaka and Associates dated 11/5/82 (page 6), the anticipated maximum day demand for the 183 lot subdivision at Huehue Ranch will be 115 gpm (gallons per minute) for 16 hours. The test results from Huehue Well #1 demonstrate that the as built well has a minimum sustainable capacity of 150 gpm. Construction of the well commenced in April 1984 and was completed in April 1985.

Figure 1 shows the well location and groundwater hydrology as interpreted in the 1981 report entitled, "Domestic Water Supply for the Proposed Subdivision at Huehue Ranch, North Kona, Hawaii" by S.P. Bowles. The water level and salinity of the well are consistent with the original analysis. Well yield, while adequate to meet the anticipated demand outlined above, was less than anticipated. Formations of very low yield were found at the water table (elevation 7' ± 1 foot). In fact, no water was struck until the bore entered beach sand (basaltic) at about 12 feet below sea level, at which point the water filled the bore and rose to the final elevation of about +7' (see Figure 2).

The well was drilled then to the design depth of 1609' (elevation -27) and the final screen and casing installed. A pumping test at this point indicated a yield of less than 25 gpm. Drilling continued to a depth of 1646' where a pahoehoe
lava of higher yield was struck. The final depth of the well in 1655' (elevation -76'). No previous well in Kona had been drilled to this depth below sea level. Test results at this depth (Figure 3) indicated that the domestic requirements could be met and the well was considered satisfactory.

Figure 4 is the original well design as contracted. Major changes in the final construction are noted as follows:

1) The final elevation at the well is 1578.84' versus 1600'.
2) Total depth is 1655' versus 1650'.
3) Total casing length is 1609' versus 1630'.
4) Total depth below sea level is -76' versus -50'.
5) Total length of 10" casing 1609' versus 1090'.
6) Total open hole was 46' versus 20'.
7) One additional pump round trip.

The water quality meets all primary drinking water requirements as called for in the Federal Drinking Water Standards of the EPA (listed as maximum contaminant levels in Table 1).

Because of the poor yield of the rocks, the pumping drawdown of the well (Figure 3) stabilized at about 17 feet, at a rate of 150 gpm. No pump design has yet been prepared and most probably would not exceed 150 gpm. Should it prove necessary to exceed 150 gpm, the well could be deepened to increase the yield.

The Huehue well is now the only fresh water source between the west rift zone of Hualalai and the new County well at the junction of Hualalai road and Mamalahoa highway. It represents a major step forward in ground water development and has underlined the high risk of ground water development in this area of Kona. The well has produced unique and previously unknown information.
Figure 1

Groundwater

Water level in feet above MSL

Approximate seepage boundary of well field is shown in dashed line.
WELL SKETCH
HUEHUE RANCH
KALUAU, HAWAII

14" THICK TEMPORARY STEEL PLATE TACK WELDED
BACKFILL, WASH PIPE (TO BE REMOVED)

GROUT SEAL
14" I.D. SECONDARY CASING
9/16 WALL THICKNESS

14" TO 10" ADAPTER (TO BE DESIGNED BY CONTRACTOR)

GROUT SEAL (10')
CASING SHOE

10" I.D. WELL CASING
9/16 WALL THICKNESS

5' GROUT SEAL, 3' ABOVE BASKET (IF FIELD CONDITIONS PERMIT)
EXPANDABLE BASKET @ ELEVATION +10'

4" WALL CORRUGATED CASING
WATER LEVEL @ ELEVATION +4'

EXPANDABLE BASKET @ ELEVATION 0'

4" WALL CORRUGATED SCREEN

ANNULUS BACKFILLED W/ FINE SAND
ANNULUS OPEN

POTOM OF WELL (ELEVATION -30)
Casing Shoe

20' MAXIMUM

9 3/4 DIAMETER OPEN HOLE (IF NEEDED)
LABORATORY ANALYSIS REPORT

HUEHUE RANCH

ATTN: MR. STEPHEN BOWLES

P. O. BOX 1656

KANUELA, HI 96753

PHONE:

SAMPLES OF: Potable Water  Well 01

SAMPLED BY: Mr. Stephen Bowles  SAMPLING DATE: 03-18-85  TIME: 0800

RECEIPT DATE: 03-19-85  TIME: 0830

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Commencing in July of 1988, Huehue Ranch began a program to deepen and re-test well Number 1. The well had originally been completed in 1985 as a first step to satisfy the needs for 183 lots to be located on the upper portions of the ranch.

The owners subsequently decided to proceed on plans for a resort development at Kukio Bay. Accordingly, the need for an expanded water development program was evident. The deepening and testing of Well #1 is a first step in the program. The original performance, as tested in 1985, was as follows:

1. Pumping Rate - 150 gpm (.22 mgd)
2. Drawdown - 17 feet
3. Chlorides (after 5 days pumping) - 94 MG/L

The recently completed tests included deepening the well an additional 45 feet (from 1,655' to 1,690'), designing, purchasing, and installing a pump, and conducting a test to verify the performance of the well and aquifer for both quality and yield. Figures 1 and 2 illustrate the as built description of the well and pump.

The pumping test was conducted for 3 days between 8/30/88 and 9/2/88. As noted in Figure 3, the well pumping rate and drawdown were constant (except for brief shutdowns to service the generator). There was a slight improvement in chlorides during the test; indicating that water quality will improve when the well is placed in production. A water sample was collected at the conclusion of the test on 9/2 at 10:30 AM, just prior to
stopping the test. The sample was then refrigerated and analyzed for organic and inorganic standards of the Federal Safe Drinking Water Act. The results are attached.

The revision of the well has demonstrated the following performance:

1. Pumping Rate - 339 gpm (.49 mgd)
2. Drawdown - 2.8 feet
3. Chlorides - 112 MG/L

It is concluded that the well and pump have performed satisfactorily and that its quality and quantity meet present standards for integration into a water system. To provide a reliable supply of .5 MGD, a second standby well will be required during the next phase of the development program.
Huehue Ranch Well #1
As Built 9/88

Figure 1
NOT TO SCALE
Huehue Ranch Well #1
Pump Column - As Built 9/88

Figure 2
NOT TO SCALE
**LABORATORY ANALYSIS REPORT**

**SITE:** HUEHUE RANCH  
**SAMPLED BY:** S. Bowles  
**RECEIVED DATE:** 09-01-88  
**SALE S TYPE:** Potable Water  
**SAMPLING DATE:** 09-02-88  
**TIME:** 1030  
**TIME SAMPLE ANALYZED:** 09-08-15-88

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<td>units</td>
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<td>mg/L CaCO₃</td>
<td>401</td>
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</table>

II. WELL HR-2: STATE WELL NO. 4459-01
TO: Huehue Ranch Associates
72-3667 Hawaii Belt Road
Kailua-Kona, Hawaii 96710

In accordance with the Department of Land and Natural Resources Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", your application to construct and test Well No. 4459-01 within Tax Map Key: 7-2-06:09, for municipal use, is approved subject to the following conditions:

1. The Division of Water and Land Development (DOWALD), Geology-Hydrology Section, shall be notified at 548-7619, before any work covered by this permit commences.

2. The permit shall be for construction and testing only. No permanent pump may be installed and no water used from the well without the necessary pump installation permit from the Commission.

3. The following shall be submitted to DOWALD within 30 days after completion of the well:

   a. Well Completion Report.

   b. Elevation (referenced to mean sea level) survey by a Hawaii-licensed surveyor.

   c. As-built sectional drawing of the well.

   d. Plot plan and map showing the exact location of the well.

   e. Complete pumping test record; including time, pumping rate, drawdown, chloride content, and water quality data.
4. The applicant shall comply with all applicable laws, rules, and ordinances.

5. This permit may be revoked if work is not started within six months of date of issuance or if work is suspended or abandoned for six months. The work shall be completed within two years of the date of issuance.

WILLIAM W. PATY, Chairperson
Commission on Water Resource Management

AUG 24 1989
Date of Issuance

cc: USGS
Department of Health,
Drinking Water Program
Ground Water Protection Program
Hawaii Department of Water Supply
TO: Huehue Ranch Associates, L.P.
75-5722 Kuakini Highway, #107
Kailua-Kona, HI 96740

In accordance with the Department of Land and Natural Resources Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", your application to install a pump in Huehue Ranch Well 2 (Well No. 4459-01) within Tax Map Key: 7-2-06:09, for municipal use, is approved subject to the following conditions:

1. The Division of Water Resource Management (DWRM), P.O. Box 373, Honolulu, HI 96809, shall be notified, in writing, before any work covered by this permit commences.

2. The permit shall be for installation of a 500 gallons per minute capacity pump in the well.

3. The proposed use shall not adversely affect existing or future legal uses of water in the area, including any surface water or established instream flow standards. This permit or the authorization to construct and pump water from a well shall not constitute a determination of correlative water rights. The permittee is notified and by this provision understands that the quantity of water taken from the well could be reduced by the Commission in the future. This permit is not a commitment that the pump capacity permitted here or even some lesser amount is guaranteed in the future.

4. The following shall be submitted to DWRM within 30 days after completion of the well:

a. Well Completion Report.
b. As-built sectional drawing of the well.

5. The applicant shall provide and maintain an approved meter or other appropriate device or means for measuring and reporting total water usage on a monthly basis.

6. The applicant shall comply with all applicable laws, rules, and ordinances.

7. This permit may be revoked if work is not started within six months of the date of issuance or if work is suspended or abandoned for six months. The work proposed in the permit application shall be completed within 24 months from the date of permit issuance.

WILLIAM W. PATY, Chairperson
Commission on Water Resource Management

APR 2 1991
Date of Issuance

cc: USGS
Department of Health
Drinking Water Branch
Ground Water Protection Program
Hawaii Department of Water Supply
Akinaka & Associates, Ltd.
HUEHUE RANCH WELL - HR2
STATE WELL NO. 4459-01
WELL COMPLETION SUMMARY

Construction of Well HR2 began on 6 Oct 90 and was completed on 29 Mar 91 using the cable tool method. The well was completed to the dimensions shown in Figure 1. Two major problems arose during construction causing significant delays in completion. A bit was lost at a depth of 980 feet. Fishing attempts were unsuccessful and the bit was finally cemented into the side wall and drilling proceeded past the bit. During the installation of the well casing a welding joint parted at a depth of 1510 feet. The failure was caused by an inadequate weld coupled with a slight dog leg or drift in alignment. The broken casing was drilled out, the well was straightened, a T.V. survey was made, and the final casing was installed. Open hole was then drilled below the casing to an elevation of minus 105 feet.

Based upon rock samples collected, T.V. logs from 0 to 500 feet and 500 feet to 1530 feet and drilling progress data, there were no unusual geologic features encountered until a depth of about 1300 feet was reached. From 0 to 1300 feet the lavas consisted of thin bedded pahoehoe flows, some clinkers and a few a'a type flows. There was no evidence of the presence of a significant trachite flow as encountered in the exploration well HR#1.
At a depth of about 1300 feet, evidenced in the T.V. log, a very dense, blocky series of massive a'a flows were encountered. These flows extended below sea level. Water was not struck until the well reached a depth of 12 feet below sea level, similar to the conditions found in HR#1. The water level rose to an elevation of about -7 feet where it remained. A completed drillers report is attached as Figure 2.

During the month of March 1991, the permanent pump was installed in the well and a pumping test was conducted. Final pump installation dimensions, air line depth, and pertinent specifications are contained in Figure 3. Power for the original pumping test was provided by an on-site 600 KW diesel generating plant. Pumpage tests were conducted between the hours of 6:00 am to 10:00 pm; as a result of noise complaints experienced during the drilling program.

A Summary of the pumping test results is contained in Figure 4. The flow was measured using a orifice plate and drawdown measurements (using an air line and pressure gage). Water quality was measured by means of a Cole Palmer Specific Conductance Bridge and Chloride analyses were performed on site with a Hach Chloride test kit.

Drawdown in the well was 8.79 feet at a pumping rate of 548 gpm resulting in a specific capacity of about 62 gallons per foot. By contrast the specific capacity of HR#1 is 112 g/ft/ld.
Water quality data collected indicated that HR#2 water quality is comparable to HR#1 and contains high dissolved solids when compared to total chlorides. The taste remains poor as a result of relatively high sulfates. Complete chemical analyses of the water are contained in Figure 5. The water quality meets as of the State Drinking Water Act (SDWA) Primary requirement of MCL (maximum contaminant level). Regardless, taste and clarity will be improved with planned treatment.

Water quality results for the testing indicate that HR#2 appears to produce water which has been chemically altered by contract with geothermal activity in the rift zone of Hualalai.
HR2 AS-BUILT WELL
WELL NO. 4459-01

GEOLOGY

ALTERNATING PANDEHOE AND A'A FLOWS
0' TO 1300'

BIT SET IN WELL AT 900'

DENSE BLOCK A'A FLOWS
1300' TO 1570'

PANDEHOE FLOWS
1570' TO 1642'

18" CASING TO 518'
14" CASING TO 1567'

GROUTED ANNULUS
GROUTED ANNULUS

24" HOLE

18" HOLE

GRAVEL PACK IN ANNULUS

WATER LEVEL

38' OF 14" SCREEN

83.25'

13.5" OPEN HOLE

TOP OF BOTTOM FLANGE PLATE

ELEVATION

1534.44
1534

FIGURE 1
**WELL COMPLETION REPORT**

**INSTRUCTIONS:** Please print or type and submit completed report within 30 days of well completion to the Division of Water & Land Development, P.O. Box 577, Honolulu, HI 96810. An as-built drawing of the well and chemical analysis, if available, should also be submitted. If necessary, phone 548-1543, Hydrology, Geology Section for assistance.

<table>
<thead>
<tr>
<th>A. STATE WELL NO.</th>
<th>WELL NAME</th>
<th>HUEHUE RANCH WELL #2</th>
<th>ISLAND: HAWAII</th>
</tr>
</thead>
<tbody>
<tr>
<td>B. LOCATION</td>
<td>TAX MAP KEY</td>
<td>7-2-06109</td>
<td></td>
</tr>
<tr>
<td>C. WELL OWNER</td>
<td>HUEHUE RANCH ASSOCIATES</td>
<td>Richardson Well Drilling</td>
<td></td>
</tr>
<tr>
<td>D. DRILLING OR PUMP INSTALLATION CONTRACTOR</td>
<td>DRILLER: LYN ENLOE/LEE ENLOE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E. TYPE OF RIG</td>
<td>36-I / 48-I</td>
<td>Driller Lyn Enloe/ Lee Enloe</td>
<td></td>
</tr>
<tr>
<td>F. DATE OF WELL COMPLETION</td>
<td>3-1-91</td>
<td>DATE OF PUMP INSTALLATION</td>
<td>3-15-91</td>
</tr>
<tr>
<td>G. GROUND ELEVATION (m)</td>
<td>1536.5 ft.</td>
<td>Top of Drilling Platform</td>
<td>(m) 1536.5 ft.</td>
</tr>
<tr>
<td>H. TOTAL DEPTH OF WELL BELOW GROUND</td>
<td>1620 ft.</td>
<td>Height of drilling platform above ground surface</td>
<td>5 ft.</td>
</tr>
<tr>
<td>I. HOLE SIZE:</td>
<td>24 in. dia. from 0 ft. to 500 ft. below ground</td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. CASING INSTALLED:</td>
<td>14 in. dia. x 3/8 in.</td>
<td>1536.5 ft. below ground</td>
<td></td>
</tr>
<tr>
<td>K. ANNULLUS:</td>
<td>Grouted from 0 ft. to 500 ft. below ground</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L. PERMANENT PUMP INSTALLATION:</td>
<td>Capacity 500 gpm</td>
<td></td>
<td></td>
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<tr>
<td>M. PROPOSED USE</td>
<td></td>
<td></td>
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<tr>
<td>N. INITIAL WATER LEVEL</td>
<td>+6.5 ft. below ground</td>
<td></td>
<td></td>
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<tr>
<td>O. INITIAL CHLORIDE</td>
<td>5 ppm</td>
<td></td>
<td></td>
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<tr>
<td>P. PUMPING TESTS: Reference point (R.P.) used: 8 ft. which elevation is 1536.5 ft.</td>
<td></td>
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</table>

**SUBMITTED BY** (print) Richardson Well Drilling

**SIGNATURE**

**DATE** 5-14-91
Huehue Ranch Well HRZ

TOP OF PLATE
EL. = 1534.44

Sub. Cable
600 MCM, 600 Voltage
14" Surface Plate with 150# R.P. ANSI
Discharge Flange, 3 Cable Openings.

Column Pipe - Group 4
6" I.D. - 26 Sections 20'
5'/4"

Check Valve - Simmons Ductile

Column Pipe - Group 3
6" I.D. - 25 Sections 26'

Column Pipe - Group 2
6" I.D. 25 Sections 22'

Check Valve

Column Pipe - Group 1
6" I.D. - 1 Section

Standard 58-528 Pump
19 Stages
Max. Bowl & Cable 15.1' Length
Guard OD - 8.5'

200 HP Hitachi Electric Motor
2600 RPM 460/60/3
Max. Motor OD - 10.59' 8' Length

Water Level
1528'

Air Line
1548'

Total Length
1559.1'

Pump & Motor - 23.1'

NOT TO SCALE

12/19/90 FIGURE 3
HUEHUE WELL HR2 PUMP TEST
MARCH 25-29 1991 AT 548 GPM

MINUTES AND DAYS

• DRAWDOWN - FEET

MINUTES AND DAYS

• FLOW RATE - GPM

MINUTES AND DAYS

• CONDUCTIVITY - EC

FIGURE 4
<table>
<thead>
<tr>
<th>SAMPLE TYPE</th>
<th>UNITS</th>
<th>SAMPLE DESCRIPTION</th>
<th>HR 2</th>
<th>Maximum Contaminant Level mg/L</th>
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<tr>
<td>ARSENIC</td>
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<td></td>
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<td>BARIUM</td>
<td>mg/L</td>
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<tr>
<td>CADMIUM</td>
<td>mg/L</td>
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<td>CHROMIUM</td>
<td>mg/L</td>
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<td>&lt;0.01</td>
<td>0.05</td>
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<tr>
<td>LEAD</td>
<td>mg/L</td>
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<td>MERCURY</td>
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<td>&lt;0.0003</td>
<td>0.0005</td>
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<tr>
<td>SELENIUM</td>
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<td>0.01</td>
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<td>2,4,5-TP (Silvex)</td>
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<td>&lt;0.0001</td>
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FIGURE 5
LABORATORY ANALYSIS REPORT (1)

TO: HUEHUE RANCH
ATTN: STEPHEN BOWLES
ADDRESS: 75-5722 KUAKINI HWY, SUITE 107
KAILUA-KONA, HAWAII 96740

SAMPLING DATE: 4-1-91
TIME: 1220

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<td>mg/L</td>
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<tr>
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<td>385</td>
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<td>mg/L</td>
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<tr>
<td>CONDUCTIVITY</td>
<td></td>
<td>umhos/cm</td>
<td>1220</td>
</tr>
</tbody>
</table>

MA lERIAL UST

DESCRIPTION

1/4" BEND, F.E. •• (W/STRAP, WHERE SHOWN)
6" FLANGED COUPLING ADAPTER, ROCKWELL R12
(Provide 4 FULLY threaded bolts, 16" long)
6" ADAPTER, F.E. ••, 12" LONG
6'' PIPE, F.E., 5'-0" LONG
6'' x 4'' TEE, F.E., W/2 STRAPS
6'' x 4'' REDUCER, F.E.
6'' BUTTERFLY VALVE, RUBBER SEATED WAFER T'YPE.
4'' 1/4 BEND, F.E.
4'' PIPE, CUT TO FIT (W/4'' UNIFANGEES)
4'' PIPE, F.E., 200 PSIG
4'' AIR RELEASE/VACUUM RELIEF CHECK VALVE, F.E.
4'' SCREEN FLANGE FITTING
4'' PUMP CONTROL VALVE, CLA-VAL 61-02, F.E., 125 PSIG
4'' SPool PIECE, F.E., 2-1/2'' LONG
5/4'' x 1/4'' BEND, F.E.
4'' PIPE, CUT TO FIT (W/4'' UNIFANGEES)
4'' SPool PIECE, F.E., 2-1/2'' LONG
4'' GATE VALVE, F.E., 200 PSIG
4'' SPool PIECE, 12'' LONG
4'' FLAP VALVE, F.E.

PRECAST DRYWELL
SEE TYPICAL DETAIL

SEE DETAIL

MATERIAL LIST

NOTE

1. ALL CLAYTON VALVES SHALL BE EPOXY COATED INTERIALLY AND SHALL BE COMPARED WITH 100 VALVE POSITION INDICATORS.
2. ALL FLANGES SHALL BE ANSI 125 LB. UNLESS OTHERWISE INDICATED.
3. ALL PIPE STRAP ASSEMBLIES SHALL BE HOT-DIPPED GALVANIZED.
4. NUTS AND BOLTS SHALL BE SUCUH BRONZE OR STAINLESS STEEL.
5. MECHANICAL CONTRACTOR SHALL VERIFY ELEVATION OF UNDERGROUND DUCTING AND DISCHARGE LINE COORDINATE WORK WITH CONTRACTOR.
6. PROVIDE FELT PAPER BETWEEN GALVANIZED STEEL PIPE, STRAP AND PIPE.
7. CONTRACTOR SHALL VERIFY MATERIAL LIST AND ALL DIMENSIONS.
8. SEE SHEETS 5-13 & 5-14 FOR CONCRETE AND REINFORCING PLAN.

SECTION "A-A"

SECTION "D-D"

SECTION "B-B"

SECTION "C-C"

DETAILS - WELL PUMP HR-2

SCALE: 1/2" = 1'-0"
III. WELL HR-3: STATE WELL NO. 4558-01
IN THE NAME OF THE GOVERNOR OF HAWAII

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

WELL CONSTRUCTION PERMIT
for
Huehue Ranch Well No. 3
Well No. 4558-01
Huehue Ranch, Hawaii

TO: Huehue Ranch Associates
72-3667 Hawaii Belt Road
Kailua-Kona, Hawaii 96710

In accordance with the Department of Land and Natural Resources Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", your application to construct and test Well No. 4558-01 within Tax Map Key: 7-2-04:07, for municipal use, is approved subject to the following conditions:

1. The Division of Water and Land Development (DOWALD), Geology-Hydrology Section, shall be notified at [date] before any work covered by this permit commences.

2. The permit shall be for construction and testing only. No permanent pump may be installed and no water used from the well without the necessary pump installation permit from the Commission.

3. The following shall be submitted to DOWALD within 30 days after completion of the well:
   a. Well Completion Report.
   b. Elevation (referenced to mean sea level) survey by a Hawaii-licensed surveyor.
   c. As-built sectional drawing of the well.
   d. Plot plan and map showing the exact location of the well.
   e. Complete pumping test record; including time, pumping rate, drawdown, chloride content, and water quality data.
WELL CONSTRUCTION PERMIT
Well No. 4558-01

4. The applicant shall comply with all applicable laws, rules, and ordinances.

5. This permit may be revoked if work is not started within six months of date of issuance or if work is suspended or abandoned for six months. The work shall be completed within two years of the date of issuance.

AUG 24 1989
Date of Issuance

WILLIAM W. PATY, Chairperson
Commission on Water Resource Management

cc: USGS
    Department of Health,
    Drinking Water Program
    Ground Water Protection Program
    Hawaii Department of Water Supply
TO: Huehue Ranch Associates, L.P.
75-5722 Kuakini Highway, #107
Kailua-Kona, HI 96740

In accordance with the Department of Land and Natural Resources Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", your application to install a pump in Huehue Ranch Well 3 (Well No. 4558-01) within Tax Map Key: 7-2-04:07, for municipal use, is approved subject to the following conditions:

1. The Division of Water Resource Management (DWRM), P.O. Box 373, Honolulu, HI 96809, shall be notified, in writing, before any work covered by this permit commences.

2. The permit shall be for installation of a 500 gallons per minute capacity pump in the well.

3. The proposed use shall not adversely affect existing or future legal uses of water in the area, including any surface water or established instream flow standards. This permit or the authorization to construct and pump water from a well shall not constitute a determination of correlative water rights. The permittee is notified and by this provision understands that the quantity of water taken from the well could be reduced by the Commission in the future. This permit is not a commitment that the pump capacity permitted here or even some lesser amount is guaranteed in the future.

4. The following shall be submitted to DWRM within 30 days after completion of the well:
PUMP INSTALLATION PERMIT
Well No. 4558-01

a. Well Completion Report.

b. As-built sectional drawing of the well.

5. The applicant shall provide and maintain an approved meter or other appropriate device or means for measuring and reporting total water usage on a monthly basis.

6. The applicant shall comply with all applicable laws, rules, and ordinances.

7. This permit may be revoked if work is not started within six months of the date of issuance or if work is suspended or abandoned for six months. The work proposed in the permit application shall be completed within 24 months from the date of permit issuance.

APR 2 1991
Date of Issuance

cc: USGS
Department of Health
Drinking Water Branch
Ground Water Protection Program
Hawaii Department of Water Supply
Akinaka & Associates, Ltd.

WILLIAM W. PATY, Chairperson
Commission on Water Resource Management
WELL COMPLETION REPORT

STATE WELL NO. 4558-01 WELL NAME Hushue Ranch Assoc #3 ISLAND HAWAII
LOCATION (Hushue Ranch - Kona, Hawaii) TAX MAP KEY 7-2-0A-6
WELL OWNER Hushue Ranch Associates

DRILLING OR PUMP INSTALLATION CONTRACTOR Richardson Well Drilling
TYPE OF RIG 36-L DRILLER Loss/ McAllister

DATE OF WELL COMPLETION 7-1-91 DATE OF PUMP INSTALLATION 7-10-91

GROUND ELEVATION (mea.) 1519.91 ft.
Top of Drilling Platform (half) 1518 ft.
Height of drilling platform above ground surface 2 ft.

Total depth of well below ground 78.1 ft.

HOLE 12:
- 24 inch dia. from 0 ft. to 500 ft. below ground
- 18 inch dia. from 500 ft. to 25.1 ft. below ground
- 13 inch dia. from 25.1 ft. to 78.1 ft. below ground

CASING INSTALLED:
- 14 in. I.D. x 3/8 in. well solid section to 1518 ft. below ground
- 14 in. I.D. x 3/8 in. well perforated section to 1548 ft. below ground

Type of perforation machine cut

ANNULETS:
- Grouted from 0 ft. to 500 ft. below ground
- Gravel packed from 500 ft. to 1510 ft. below ground

PERMANENT PUMP INSTALLATION:
- Pump type, make, serial No. sub-standard-102578 Capacity 500 gpm
- Motor type, H.P., voltage, r.p.m. canned-300-480-3600 Depth of pump intake setting -16.2 ft. below ground which elevation is __ ft.
- Depth of bottom of airlift 1527 ft. below ground which elevation is __ ft.

PROPOSED USE

INITIAL WATER LEVEL 1510 ft. below ground. Date and time of measurement __________

INITIAL CHLORIDE ppm Date and time of sampling __________

PUMPING TESTS: Reference point (R.P.) used B.P. which elevation is 1519.91 ft.

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<th>Depth of well</th>
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HUEHUE RANCH WELL - HR3
STATE WELL NO. 4558-01
WELL COMPLETION SUMMARY

Construction of Well HR3 began on 2 Mar 90 and was completed on 10 Jul 91 using the cable tool method. The well was completed to the dimensions shown in Figure 1.

Based upon rock samples collected, T.V. logs from 0 to 500 feet and 500 feet to 1580 feet and drilling progress data, there was one unusual geologic feature encountered at a depth of about 790 feet. From 0 to 790 feet the lavas consisted of thin bedded pahoehoe flows, some clinkers and a few a'a type flows. A massive Trachyte formation was encountered from 790 to 1370 feet. From 1370 feet to 1580 feet there were thin bedded pahoehoe flows.

During the month of July 1991, the permanent pump was installed in the well and a pumping test was conducted. Final pump installation dimensions, air line depth, and pertinent specifications are contained in Figure 3. Power for the original pumping test was provided by an on-site 600 KW diesel generating plant. Pumpage tests were conducted between the hours of 6:00 am to 10:00 pm; as a result of noise complaints experienced during the drilling program.

A Summary of the pumping test results is contained in Figure 4. The flow was measured using an orifice plate and drawdown measurements (using an air line and pressure gage). Water quality was measured by means of a Cole Palmer Specific Conductance Bridge and Chloride analyses were performed on site with a Hach Chloride test kit.
GEOLOGY

ALTERNATING PAHOEHOE AND A’A FLOWS 0’ TO 790’

TRACHYTE 790’ TO 1370’

PAHOEHOE FLOWS 1370’ TO 1590’

BENCH MARK TOP OF PLATE WELDED TO SIDE OF CASING EL. = 1518.29

18” CASING TO 498’ 14” CASING TO 1445’

24” HOLE 18” HOLE

GROUTED ANNULUS GROUTED ANNULUS

GRAVEL PACK IN ANNULUS BASKETS

WATER LEVEL 30’ OF 14” SCREEN

13.5” OPEN HOLE

1519’ 1518.5’ 1022’

1596’ 1511’ 1545’

53’

FIGURE 1
HUEHUE WELL HR3 PUMP TEST
JULY 29 - AUG 1, 1991 AT 580 GPM

TIME - DAYS OF TEST

DRAWDOWN - PSI

10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00

29 Jul 20 21 22 23 24 25 26 27 28 29 30 31 Aug

TEST SAMPLE TAKEN

DRAWDOWN

20.1'
14.78'

FIGURE 4
HUEHUE WELL HR3 PUMP TEST
JULY 29 - AUG 1, 1991 AT 580 GPM

FLOW RATE - GPM

TIME - DAYS OF TEST

FLOW RATE - GPM
HUEHUE WELL HR3 PUMP TEST
JULY 29 - AUG 1, 1991 AT 580 GPM

CONDUCTIVITY - EC

TIME - DAYS OF TEST

TEST SAMPLE TAKEN

--- CONDUCTIVITY - EC
## WELL HR3 WELL TEST DATA

Date 26 July, Clean and test  
Date 29 July to 1 Aug 91 for Continuous test

$8.7\text{PSI} \times 2.31 = 20.1' - 13.5 \text{SAIRLINE} = \text{WL at 6.6'}$

$0 = 6.6' \text{elev.} = 8.7 \text{psi}$

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</tbody>
</table>
TO: HUEHUE RANCH  
ADDRESS: 75-5722 KUAKINI HWY, SUITE 107  
KAILUA-KONA, HAWAII 96740  

SAMPLES OF: POTABLE WATER  
SAMPLED BY: CLIENT  
RECEIPT DATE: 08/02/91  

DATE SAMPLE ANALYZED: 08/05-09/11  
TIME SAMPLE ANALYZED:  
SAMPLE TYPE:  
SAMPLE DESCRIPTION: HR #3  
UNITS:  

<table>
<thead>
<tr>
<th>Sample Description</th>
<th>Units</th>
<th>HR #3</th>
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<tbody>
<tr>
<td>ARSENIC</td>
<td>mg/l</td>
<td>&lt;0.002</td>
</tr>
<tr>
<td>BARIUM</td>
<td>mg/l</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>CADMIUM</td>
<td>mg/l</td>
<td>&lt;0.005</td>
</tr>
<tr>
<td>CHROMIUM</td>
<td>mg/l</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>LEAD</td>
<td>mg/l</td>
<td>0.03</td>
</tr>
<tr>
<td>MERCURY</td>
<td>mg/l</td>
<td>&lt;0.0002</td>
</tr>
<tr>
<td>SELENIUM</td>
<td>mg/l</td>
<td>&lt;0.002</td>
</tr>
<tr>
<td>SILVER</td>
<td>mg/l</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>FLUORIDE</td>
<td>mg/l</td>
<td>9.8</td>
</tr>
<tr>
<td>NITROGEN NITRATE</td>
<td>mg/l</td>
<td>1.4</td>
</tr>
<tr>
<td>TURBIDITY</td>
<td>NTU</td>
<td>1.5</td>
</tr>
<tr>
<td>ENDRIN</td>
<td>ug/l</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>LINDANE</td>
<td>ug/l</td>
<td>&lt;0.04</td>
</tr>
<tr>
<td>METHOXYCHLOR</td>
<td>ug/l</td>
<td>&lt;10</td>
</tr>
<tr>
<td>TOXAPHENE</td>
<td>ug/l</td>
<td>&lt;0.5</td>
</tr>
<tr>
<td>2,4-D</td>
<td>ug/l</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>2,4,5-TP (SILVEX)</td>
<td>ug/l</td>
<td>&lt;0.05</td>
</tr>
</tbody>
</table>


SIGNED: [Signature]

PAGE 1 OF 2
LABORATORY ANALYSIS REPORT (1)

To: HUEHUE RANCH
Attn: MR. STEPHEN BOWLES
Address: 75-5722 KUAKINI HWY, SUITE 107
KAILUA-KONA, HAWAII 96740

Samples of: POTABLE WATER
Sampled by: CLIENT
Sampling date: ---
Time: ---
Receipt date: 08/02/91
Time: 0930

Sample Description: HR #3

<table>
<thead>
<tr>
<th>Units</th>
<th>Manganese (mg/l)</th>
<th>Iron (mg/l)</th>
<th>Sodium (mg/l)</th>
<th>Potassium (mg/l)</th>
<th>Calcium (mg/l)</th>
<th>Magnesium (mg/l)</th>
<th>Chlorides (mg/l)</th>
<th>Sulfates (mg/l)</th>
<th>Sulfides (mg/l)</th>
<th>Total Dissolved (mg/l)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.04</td>
<td>0.13</td>
<td>59.1</td>
<td>6.74</td>
<td>7.6</td>
<td>76.5</td>
<td>14</td>
<td>266</td>
<td>&lt;0.2</td>
<td>840</td>
</tr>
</tbody>
</table>

Total Dissolved solids: 840 mg/l

pH units: 8.1
Alkalinity (mg CaCO₃/l): 318
Total Hardness (mg CaCO₃/l): 334
Silica (mg/l): 64
Conductivity (μmhos/cm): 967

INORGANICS ANALYSIS

<table>
<thead>
<tr>
<th>Compound</th>
<th>Method</th>
<th>Date Analyzed</th>
</tr>
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<tbody>
<tr>
<td>Fluoride</td>
<td>340.2</td>
<td>09/30/91</td>
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</tbody>
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Client Sample ID 2
PNELI Sample ID 3590A-02
Sample Matrix Water
Date Sample Received 09/25/91
Units of Measure mg/t
**Material List**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3&quot; 1/4&quot; bend, F.E. (9/strap where shown)</td>
</tr>
<tr>
<td>2</td>
<td>6&quot; flanged coupling adapter, Rockwell 1038 (Provide 4 fully threaded bolts, 18&quot; long)</td>
</tr>
<tr>
<td>3</td>
<td>6&quot; adapter, F.E. + P.E., 36&quot; long</td>
</tr>
<tr>
<td>4</td>
<td>6&quot; pipe, F.E., 5'-0&quot; long</td>
</tr>
<tr>
<td>5</td>
<td>6&quot; x 6&quot; tee, F.E. + P.E., 12&quot; long</td>
</tr>
<tr>
<td>6</td>
<td>6&quot; x 4&quot; reducer, F.E.</td>
</tr>
<tr>
<td>7</td>
<td>6&quot; Butterfly Valve, rubber seated water type, see detail</td>
</tr>
<tr>
<td>8</td>
<td>6&quot; spool piece, 3'-11&quot; long w/ 1 1/2&quot; tap</td>
</tr>
<tr>
<td>9</td>
<td>4&quot; spool piece, 20&quot; long</td>
</tr>
<tr>
<td>10</td>
<td>4&quot; Center-guided check valve, water type</td>
</tr>
<tr>
<td>11</td>
<td>4&quot; spool piece, 12&quot; long, N/S service saddle for 1 1/2&quot; tap</td>
</tr>
<tr>
<td>12</td>
<td>4&quot; pipe, F.E., cut to fit</td>
</tr>
<tr>
<td>13</td>
<td>4&quot; adapter, F.E. + P.E., 12&quot; long</td>
</tr>
<tr>
<td>14</td>
<td>4&quot; gate valve, M.A., 200g</td>
</tr>
<tr>
<td>15</td>
<td>4&quot; x 4&quot; reducer, L.E.B.</td>
</tr>
<tr>
<td>16</td>
<td>4&quot; tel, F.E.</td>
</tr>
<tr>
<td>17</td>
<td>4&quot; air release/vacuum relief check valve, F.E.</td>
</tr>
<tr>
<td>18</td>
<td>4&quot; screen &amp; fitting</td>
</tr>
<tr>
<td>19</td>
<td>4&quot; pump control valve, Cla-Val 61-02, F.E., 125g</td>
</tr>
<tr>
<td>20</td>
<td>4&quot; pipe, F.E., 2'-0&quot; long</td>
</tr>
<tr>
<td>21</td>
<td>4&quot; x 1/4 bend, F.E.</td>
</tr>
<tr>
<td>22</td>
<td>2&quot; pipe, cut to fit (w/4&quot; unflanges)</td>
</tr>
<tr>
<td>23</td>
<td>4&quot; spool piece, 2'-5&quot; long</td>
</tr>
<tr>
<td>24</td>
<td>4&quot; gate valve, F.E., 200g</td>
</tr>
<tr>
<td>25</td>
<td>4&quot; spool piece, 12&quot; long</td>
</tr>
<tr>
<td>26</td>
<td>4&quot; flange valve, F.E.</td>
</tr>
</tbody>
</table>

**Section "A-A"**

- 6" I.D. pipe column
- Check valve (typ.)
- Existing 14" I.D. casing

**Section "B-B"**

- Water level:
  - EL. = (4) 7.2
- Bottom of air line:
  - EL. = (-1) 13.5
- Bottom of pump:
  - EL. = (-5) 13.2

**Notes:***

1. All clayton valves shall be epoxy coated internally and shall be trimmed with high valve position indicators.
2. All flanges shall be ANSI 18.1, 125 lb. unless otherwise indicated.
3. All pipe strap assemblies shall be hot-dipped galvanized.
4. Nuts and bolts shall be silicon bronze or stainless steel.
5. Mechanical contractor shall verify invert elevation of underground suction and discharge lines. Coordinate work with civil contractor.
6. Provide felt paper between galvanized steel pipe strap and pipe.
7. Contractor shall verify material list and all dimensions.
8. See sheets S-13 & S-14 for concrete and reinforcing plan.
TO: Huehue Ranch Associates, L.P.
75-5722 Kuakini Highway, #107
Kailua-Kona, HI 96740

In accordance with the Department of Land and Natural Resources Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", your application to install a pump in Huehue Ranch Well 2 (Well No. 4459-01) within Tax Map Key: 7-2-06:09, for municipal use, is approved subject to the following conditions:

1. The Division of Water Resource Management (DWRM), P.O. Box 373, Honolulu, HI 96809, shall be notified, in writing, before any work covered by this permit commences.

2. The permit shall be for installation of a 500 gallons per minute capacity pump in the well.

3. The proposed use shall not adversely affect existing or future legal uses of water in the area, including any surface water or established instream flow standards. This permit or the authorization to construct and pump water from a well shall not constitute a determination of correlative water rights. The permittee is notified and by this provision understands that the quantity of water taken from the well could be reduced by the Commission in the future. This permit is not a commitment that the pump capacity permitted here or even some lesser amount is guaranteed in the future.

4. The following shall be submitted to DWRM within 30 days after completion of the well:
   a. Well Completion Report.
b. As-built sectional drawing of the well.

5. The applicant shall provide and maintain an approved meter or other appropriate device or means for measuring and reporting total water usage on a monthly basis.

6. The applicant shall comply with all applicable laws, rules, and ordinances.

7. This permit may be revoked if work is not started within six months of the date of issuance or if work is suspended or abandoned for six months. The work proposed in the permit application shall be completed within 24 months from the date of permit issuance.

APR 2 1991
Date of Issuance

cc: USGS
    Department of Health
    Drinking Water Branch
    Ground Water Protection Program
    Hawaii Department of Water Supply
    Akinaka & Associates, Ltd.
DATE: 3/25/91

TO: 50 SAKADA

FAX #: 548 6052

FROM: 5755 BOWLES

FAX #: 808-885-7851

TOTAL PAGES INCL. COVER PAGE: 1

CALL 885-5941 SHOULD YOU HAVE PROBLEMS WITH THIS TRANSMISSION. MAHALO.

Re: Well HR2 Completion

Date: 25 Mar 91

On Saturday, 23 Mar 91, HR2 was successfully pumped.

The well was pumped at a rate of 548 gpm (discharge pressure) for 00 minutes. Drawdown remained constant at 8.1 feet indicating a specific capacity of 68 gpm per foot of drawdown.

The salinity was tested at 144 mg/l chlorides 15 minutes into the test. Chlorides improved to 126 mg/l by 110 minutes of pumping.

After 00 minutes of pumping the well was throttled down to 500 gpm (design) and the discharge pressure rose from 0 psi at 548 gpm to 70 psi at 500 gpm, indicating that the pump performed as designed.

Commencing at 9:00 am on Monday, 25 Mar 91, the well will be pumped daily up to 16 hours for about 5 days.

Should there be any questions, we will be available on site today.
March 15, 1991

MR MANABU TAGOMORI
DEPUTY DIRECTOR
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P O BOX 621
HONOLULU HI 96809

SUBJECT: WELL CONSTRUCTION PERMIT APPLICATION

We have reviewed the subject permit application and have no objections to the following proposed wells being constructed.

1. Palani-Lanihau, Well No. 4158-01
   TMK: 7-4-02: 8

2. Huehue Ranch "1", Well No. 4559-01
   TMK: 7-2-06: 09

3. Huehue Ranch "2", Well No. 4459-01
   TMK: 7-2-06: 09

4. Huehue Ranch "3", Well No. 4558-01
   TMK: 7-2-04: 07

5. Huehue Ranch "4", Well No. 4459-02
   TMK: 7-2-06: 09

   TMK: 7-2-4: 05

   TMK: 7-2-4: 05

   TMK: 7-2-04: 05

ROBERT K. YANABU, Division Chief
Engineering Division

CKY:byf
State Department of Land and Natural Resources
Commission on Water Resources Management
P.O. Box 621
Honolulu, HI 96809

WELL CONSTRUCTION AND PUMP INSTALLATION PERMIT APPLICATIONS
APPLICANTS: PALANI-LANIHAU, HUEHUE RANCH 1, 2, 3 AND 4
KUKIO RESORT IRRIGATION 1, 2, AND 3
TAX MAP KEY 7-4-2:8, 7-2-6:9, 7-2-4:7, 7-2-4:5

We have reviewed the subject applications and have no comments or requirements.

H. William Sewake
Manager
March 4, 1991

The Honorable William W. Paty
State of Hawaii
Department of Land and Natural Resources
Commission on Water Resource Management
P.O. Box 621
Honolulu, Hawaii 96809

Attn: Mr. Manabu Tagomori, Deputy

Dear Mr. Paty:

We have received the following water permit applications. Thank you for the opportunity to review these applications:

<table>
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<tr>
<th>Island</th>
<th>Well Name</th>
<th>Well No.</th>
<th>Application Type</th>
</tr>
</thead>
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<td>Hawaii</td>
<td>Palani-Lanihau</td>
<td>4158-01</td>
<td>Well and Pump</td>
</tr>
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<td>Hawaii</td>
<td>Huehue Ranch &quot;1&quot;</td>
<td>4559-01</td>
<td>Pump</td>
</tr>
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<td>Huehue Ranch &quot;2&quot;</td>
<td>4459-01</td>
<td>Pump</td>
</tr>
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<td>Pump</td>
</tr>
<tr>
<td>Hawaii</td>
<td>Huehue Ranch &quot;4&quot;</td>
<td>4459-02</td>
<td>Well and Pump</td>
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<tr>
<td>Hawaii</td>
<td>Kukio Resort Irr. &quot;1&quot;</td>
<td>4759-01</td>
<td>Pump</td>
</tr>
<tr>
<td>Hawaii</td>
<td>Kukio Resort Irr. &quot;2&quot;</td>
<td>4759-02</td>
<td>Pump</td>
</tr>
<tr>
<td>Hawaii</td>
<td>Kukio Resort Irr. &quot;3&quot;</td>
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<td>Well and Pump</td>
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<tr>
<td>Oahu</td>
<td>Makapuu-Sea Life Park &quot;3&quot;</td>
<td>1940-11</td>
<td>Pump</td>
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<tr>
<td>Molokai</td>
<td>Kawela-Salvido/Harper</td>
<td>0356-04</td>
<td>Well and Pump</td>
</tr>
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</table>

We have no specific concerns with the above-referenced water permit applications.

As you are aware, we have a continuing concern about the ratio of water that is allowed to be withdrawn for commercial and resort use. Specifically, we are concerned that the amount of water drawn for commercial and resort use be measured against and the present and future water needs for residential and agricultural use and that water the needs for residential and agriculture use be guaranteed.

We have no other comments or concerns at this time.

Sincerely,

Moses K. Keale, Sr
Chair, Board of Trustees
MEMORANDUM

TO:       Manabu Tagomori, Deputy Director
          Commission on Water Resource Management

FROM:    Don Hibbard, Administrator
          State Historic Preservation Division

SUBJECT: Well Construction and Pump Installation -- Drilling New
          Well and Pump Installation at Two Existing Well Sites
          (Huehue Ranch Assoc., L.P.)
          Puukala & Kaulana Homesteads, Mahaiula, North Kona,
          Hawaii
          TMK: 7-2-04: 07; 7-2-06: 09

HISTORIC PRESERVATION PROGRAM CONCERNS:

We believe that the installation of a pump at Well Nos. 1, 2 and 3
in this application will have "no effect" on historic sites.
Presumably these wells are already established, and pump
installation is unlikely to disturb any new ground surfaces which
could in turn destroy historic remains.

For Well No. 4, however, we will need more information before we
can determine if construction or drilling activities will have "no
effect" on historic sites. According to our records, no
archaeological survey has been conducted on this parcel so we
don't know if historic sites are present. Based on studies
further to the south, the probability of agricultural or
residential features is relatively high. It is also important to
know if the ground surface at the well site has been severely
altered by past land use or bulldozing. If it has, then the
probability of there being historic remains is slight. If it
hasn't been altered, then we may ask that the well site be
inspected by a professional archaeologist to determine if any
historic sites are present to assess their significance and to
propose mitigation measures, if necessary.

If you have any questions about this review, please contact Holly
McEldowney at [redacted]
Honorable John C. Lewin, M.D.
Director
Department of Health
State of Hawaii
1250 Punchbowl Street
Honolulu, Hawaii 96813

Attn: Mr. Thomas Arizumi, Drinking Water Branch

Dear Dr. Lewin:

Well Construction and Pump Installation Permit Application(s)

Transmitted for your review and comment is a copy of the following permit application(s):

<table>
<thead>
<tr>
<th>Island</th>
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<td>4459-02</td>
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<td>Kawela-Salvido/Harper</td>
<td>0356-04</td>
<td>Well and Pump</td>
</tr>
</tbody>
</table>
Please review the application(s) pursuant to your area of concern and submit your comments to us, orally or in writing, by March 4, 1991.

Should you have any questions, please contact Manabu Tagomori, Deputy Director at

Very truly yours,

WILLIAM W. PATY

DN: mh
Enc.
Honorable Hoaliku L. Drake
Director
Department of Hawaiian Home Lands
State of Hawaii
P.O. Box 1879
Honolulu, Hawaii 96805

Dear Mrs. Drake:

Well Construction and Pump Installation Permit Application(s)

Transmitted for your review and comment is a copy of the following permit application(s):

<table>
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<tr>
<th>Island</th>
<th>Well Name</th>
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Please review the application(s) pursuant to your area of concern and submit your comments to us, orally or in writing, by March 4, 1991.

Should you have any questions, please contact Manabu Tagomori, Deputy Director at [Redacted]

Very truly yours,

WILLIAM W. PATY

DN:mh
Enc.
Mr. Thomas K. Kaulukukui, Sr.
Chairman & Trustee-At-Large
Office of Hawaiian Affairs
1600 Kapiolani Blvd., Suite 1500
Honolulu, Hawaii 96814

Attn: Ms. Linda Delaney, Land & Natural Resources Division

Dear Mr. Kaulukukui:

Well Construction and Pump Installation Permit Application(s)

Transmitted for your review and comment is a copy of the following permit application(s):

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Please review the application(s) pursuant to your area of concern and submit your comments to us, orally or in writing, by March 4, 1991.

Should you have any questions, please contact Manabu Tagomori, Deputy Director at

Very truly yours,

WILLIAM W. PATY

DN: mh
Enc.
Mr. Carl Carlson
Huehue Ranch Assoc., L.P.
75-5722 Kuakini Hwy., Rm. 107
Kailua-Kona, Hawaii 96740

Dear Mr. Carlson:

We have received your applications and filing fees for the following well construction and pump installation permits:

<table>
<thead>
<tr>
<th>WELL NAME</th>
<th>WELL NO.</th>
<th>TMK</th>
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<tbody>
<tr>
<td>HR-1</td>
<td>4559-01</td>
<td>7-2-06:09</td>
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<tr>
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<td>4459-01</td>
<td>7-2-06:09</td>
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<tr>
<td>HR-3</td>
<td>4558-01</td>
<td>7-2-04:07</td>
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<tr>
<td>HR-4</td>
<td>4459-02</td>
<td>7-2-06:09</td>
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<tr>
<td>KI-1</td>
<td>4759-01</td>
<td>7-2-04:05</td>
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<tr>
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</tr>
<tr>
<td>KI-3</td>
<td>4459-03</td>
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We are reviewing these applications for completeness. The processing of the application for well HR-5 (Well No. 4558-02, TMK 7-2-04:14) is pending the receipt of a completed application, including the signature of the landowner.

Should you have questions, please call the Regulation Branch of the Division of Water Resource Management at [insert phone number].

Sincerely,

[Signature]

MANABU TAGOMORI
Deputy Director

NF: mh
MEMORANDUM

TO: Don Hibbard, Director
Historic Preservation Program

FROM: Manabu Tagomori, Deputy Director
Commission on Water Resource Management

SUBJECT: Well Construction and Pump Installation Permit Application(s)

Transmitted for your review and comment is a copy of the following permit application(s):

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Please review the application(s) pursuant to your area of concern and submit your comments to us, orally or in writing, by March 4, 1991.

Should you have any questions, please contact our Regulation Branch at [Contact Information]

DN: mh
Enc.
Mr. William Sewake, Manager  
Department of Water Supply  
County of Hawaii  
25 Aupuni Street  
Hilo, Hawaii 96720

Dear Mr. Sewake:

Well Construction and Pump Installation Permit Application(s)

Transmitted for your review and comment is a copy of the following permit application(s):

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Should you have any questions, please contact our Regulation Branch at [blank space].

Sincerely,

[Signature]

MANABU TAGOMORI
Deputy Director

DN:bm
Enc.
Mr. Bruce C. McClure  
Chief Engineer  
Department of Public Works  
County of Hawaii  
25 Aupuni Street  
Hilo, Hawaii  96720

Dear Mr. McClure:

Well Construction and Pump Installation Permit Application(s)

Transmitted for your review and comment is a copy of the following permit application(s):

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Should you have any questions, please contact our Regulation Branch at

Sincerely,

MANABU TAGOMORI
Deputy Director

DN:bm
Enc.
Memorandum

To: Manabu

2/14/01

Please review/comment/revise and we'll finalize minutes for circulation to attendees.

[Signature]

[Date: 2/14/01]

[Address: 250 North Beretania Street, Suite 300, Honolulu, Hawaii 96817-4716]

[Telephone: [Redacted]]
MINUTES OF MEETING

A&A JOB NO: HHRA 89-04A

PROJECT: HUEHUE RANCH DEVELOPMENT

PLACE: State Department of Land & Natural Resources,
Division of Water Resources Management

DATE: February 6, 1991

ATTENDANCE: Manabu Tagomori, Acting Deputy, State DLNR
Gordon Akita, Manager and Chief Engineer, State DWRM
Edwin Sakoda, Hydrologist/Geologist, State DWRM
Glenn Bauer, Geologist, State DWRM
Carl Carlson, Jr., Senior Project Manager, HRA, L.P.
Tadashi Yoshida, Project Manager, HRA, L.P.
Stephen P. Bowles, John Stubbart, Waimea Water
Services, Inc.
Dennis Hirota, Sam O. Hirota, Inc.
Robert Akinaka, Ronald Yama, Akinaka & Assoc, Ltd.

PURPOSE: Huehue Ranch Agricultural Subdivision and Kona Coast Resort
Development’s Well Drilling and Pump Installation Permit
Application

DISCUSSION:

1. Introduction and purpose by Robert Akinaka:

   Purpose: Discuss Huehue Ranch Associates, L.P.’s submittal of their
   Huehue Ranch Agricultural Subdivision and Kona Coast Resort
   Development’s well drilling and pump installation permit applications.

HHRA 89-04A/MMNO: 91/2/6
2. Presentation/update of project status by Carl Carlson, Jr.:

a. History:

1) Huehue Ranch has been an active cattle ranch since 1886 with a livestock inventory of about 1350 head of cattle and 25 horses.

2) Zoning for 183 one acre lots was obtained from the County in 1983 at the ranch.

3) Stephen P. Bowles was retained to develop and manage the water resource and to locate the first well.

4) Akinaka & Associates were retained to provide engineering services upon the advice of Bowles.

5) The first well was completed to serve the ranch lots in 1985.

6) It was determined in 1984 that there was potential for a resort at the ranch’s land at Kuki’o Beach.

7) The lands of Kuki’o were redistricted from Conservation to Urban by the Land Use Commission in 1986.

8) The County General Plan was amended in 1987 to allow for an Intermediate Resort.

9) Rezoning to allow for 1250 resort units and 1620 residential units was obtained in 1988.

10) A SMA to allow for the construction of a golf course and infrastructure was obtained in 1988.

11) A SMA to allow for the construction of a 350 unit Regent International Hotel was obtained on January 31, 1991.

b. Status

1) Potable Well Number 1 was deepened in 1988.

2) Construction of Potable Well Number 2 began in 1989 and this well is almost completed.

3) Construction of Potable Well Number 3 began in 1990 with completion expected within months.
4) Construction of 2 irrigation wells began in 1990, one has been completed and the other is nearing completion.

5) Construction of these wells shows a commitment to develop the water resource through an exploratory program.

6) The wells will be used to provide water to all of the ranch's projects.

7) There is a golf course presently under construction at the ranch. Construction began on October 3, 1990.

8) The program at the ranch includes an 18 hole golf course and club house, equestrian center, approximately 200 homes, tennis center, plant nursery as well as a marketing building and an office.

9) The program at the beach includes an 18 hole golf course and club house, tennis center, resort hotel, condominiums and single family residences.

10) The application for a grading permit for the beach golf course will be submitted next week.

3. Presentation/update of project well drilling program and hydrologic/geologic findings by Stephen P. Bowles:

a. Program and findings:

1) First report was done in 1981. At that time no other wells, except brackish wells were existing. The Palisades well, a brackish well was one of them.

2) No studies were available. Steve Bowles did a study for the whole area. The property straddles on the Hualalai rift zone.

3) Fresher water was found in the north side instead of the south side.

4) Studying the isohyetal zone, rainfall was the same on both sides of the rift but the south side had lighter, more consistent rains.

5) In HR-1, 300 feet thick, very dense trachite lava flow was discovered.

6) The water showed signs of being geo-thermal.
7) Initially HR-1 yielded only 150 gpm. In 1988 the well was deepened and the yield rose to 350 gpm. Being the deepest hole in Kona, it was a bold gamble.

8) The next two wells, HR-2 and HR-3 were upsized in anticipation of yielding 500 gpm each.

9) HR-1 has a 200 hp submersible pump. HR-2 and HR-3 will have 300 hp submersible pumps.

10) In August of 1990, portion of the HR-2 casing broke off at the 1400-feet depth below the ground. A drill bit was also lost.

11) HR-2 water quality was good.

12) About this time Nansay (neighbor south of Huehue Ranch) completed their first well. (Ed Sakoda mentioned that Nansay does not have a well use permit yet. No pump information is available.) Steve Bowles expressed concern of proper spacing and pump sizing to avoid well interference.

13) Trachite lava found in HR-3. Break-through of the hard trachite was at 1360 feet below the ground. Samples are available.

14) Asked by DWRM what is the total yield expected, Steve Bowles' reply: 2350 gpm (4-500 gpm, 1-350 gpm). Of the 2350 gpm, 500 gpm is standby. Therefore yield at any time will be not more than 1850 gpm.

15) Asked by DWRM "how long will it be before there will be the need for the 1850 gpm?". Steve Bowles referred question to Carl Carlson, Jr. Carl Carlson's answer: "hard to say."

DWRM: If actual need will be, say eight years hence, Commission may grant only two of the permits at this time. Steve Bowles noted that County connection will enable unused water to go to County system on an emergency basis.

DWRM: Funding available? No delays expected?

Carl Carlson assured that funding is available and project will be done immediately.
16) As for Kona Coast Resort makai lands, KI-1 completed and KI-2 almost completed. KI-2 test pumps shipped to Kona today.
Glenn Bauer: questioned transmissivity. 
Stephen Bowles' answer was that there are no gradients established yet. That is what he is doing now. Transmissivity data should be given. 
Robert Akinaka explained the Wailea Golf Course well study as an example.

17) Monitor wells will be constructed at Kukio. 
DWRM's Permit has been received by HRA.

More data needed for the anchialine pond. Will be monitoring and setting gradients in the area.

18) Proposed KI-3 is to spread draft to aquifer.

4. Presentation of submittals of project well drilling/well pump installation permit applications by Robert Akinaka:

a. HR-1, HR-2, HR-3: Well pump installation permit applications.

b. HR-4 & HR-5: Well drilling and well pump installation permit applications.

c. KI-1 & KI-2: Well pump installation permit applications.

d. KI-3: Well drilling and well pump installation permit applications.

e. In regards to potable wells and the Huehue Ranch mauka golf course, Tom Arizumi of State Department of Health was concerned about brackish water irrigation applied on potable water source areas.

f. Manabu Tagomori questioned the time schedule for the development construction. Carl Carlson's answer was that the construction will commence as soon as possible.

5. State presentation of existing wells in area/regional hydrology geology/State well development program in North Kona/South Kohala by Manabu Tagomori:

a. Mode of accommodating well drilling and pump installation permit together is acceptable, but submittal of several permits at once, such as this one, for one development is
unsual. Applicant should have good reasons for such a request. The Water Commission will be concerned of the intent and its potential scenarios.

b. Manabu Tagomori: Water use permits are not given in non-designated areas.

c. Ed Sakoda: The construction schedule for the total project is important since all well drilling and pump installation permits are being applied for at once. Pump installation permit applications are subject to Department of Health, Historical Preservation, Office of Hawaiian Affairs, etc. reviews.

d. Brackish water over fresh water zones is not permitted.

e. Processing of applications may take one and a half months to two months. The Commission meets only once a month.

f. If applications submitted to Commission by February 27, may be on agenda on March 13 meeting. Agenda must be confirmed by March 4.

g. Steve Bowles: Concerned about TV camera coverage of hearing. Manabu Tagomori stated that Mr. Penn who is working on his PhD is at all hearings and videoing all meetings.

7. Questions and answers:

a. Robert Akinaka asked whether it may be advisable to have informational meeting with the Commission members.

   Answer by Manabu Tagomori: Very difficult to get Commission members together other than at the scheduled monthly meeting. Therefore important to be prepared at the hearing.

b. Manabu Tagomori advised the following:

   1) Owners make sure that there will be no delay in construction, i.e. lack of funding.

   2) Anticipate inquiry why all applications submitted at once.

   3) Make sure that there is need for all of the wells now. Not 8-10 years later. Two wells may get approval easily but the remainder may not if sufficient evidence not given for their use.
c. On funding, Carl Carlson assured that funding is available. Robert Akinaka informed that for the agricultural subdivision mauka water system work, the owner posted a $7,000,000 bond.

d. Steve Bowles: The system will be interfaced with the County water system with provision for emergency water connections.

e. Robert Akinaka: A meeting was held with the Hawaii County Department of Water Supply (HCDWS) on the scope of work. HCDWS disclosed that in the vicinity of Huehue Ranch, water was being pumped from the south terminus of the system. During emergencies, it may take about up to two days to be back to normal operations. An emergency connection would help minimize any service disruptions.

f. Glenn Bauer: Interested in trachite layer. Studies show that it is about 95,000 years old. Studies show that a large fault exists.

g. Manabu Tagomori: Water commission may question the management and operation of the private water system. Who will manage and operate?

ACTION:

NOTE: IF OUR UNDERSTANDING OF THESE MINUTES OF MEETING DIFFERS, PLEASE NOTIFY US OF CORRECTION/ADDITIONS/DELETIONS.

By ____________________________
Ronald T. Yama                
Senior Vice-President

c.c. All Attendees

HHRA 89-04A/MMNO: 91/2/6
APPLICATION FOR

WELL CONSTRUCTION PERMIT
X PUMP INSTALLATION PERMIT

INSTRUCTIONS: Please print or type and send completed application with attachments to the Division of Water Resource Management, P.O. Box 375, Honolulu, Hawaii 96820. Application must be accompanied by a non-refundable filing fee of $25.00 payable to the Department of Land and Natural Resources. (Filing fee waived for government agencies.) If necessary, phone 586-1542, Hydrology/Geology Section for assistance.

1. WELL LOCATION

STATE WELL NO. 4459-01
WELL NO. HR-2
Island HAWAII Tax Map Key 7-2-06:09
Address 72-3667 HAWAII BELT ROAD
(Attach a USGS map (scale 1"=2000') and property tax map showing well location referenced to established property boundaries.)

2. WELL OWNER

Firm Name HUEHUE RANCH ASSOC., L.P.
Contact Person CARL A. CARLSON, JR.
Address 75-5722 KUAKINI HWY., #107 KAILUA-KONA, HI 96740
Phone 329-4466

LANDOWNER

Firm Name HUEHUE RANCH ASSOC., L.P.
Contact Person CARL A. CARLSON, JR.
Address 75-5722 KUAKINI HWY., #107 KAILUA-KONA, HI 96740
Phone 329-4466

3. PROPOSED CONTRACTOR FOR: ☑ Well Drilling ☑ Pump Installation

Name RICHARDSON WELL DRILLING
Address P.O. BOX 4477 KAILUA-KONA, HI 96745
Phone

Contractor's License No. C-12552

4. PROPOSED WORK

☐ Drill New Well ☐ Deepen ☐ Redrill
☐ Alter ☐ Seal ☐ Abandon
☐ Install New Pump ☐ Replace Pump ☐ Modify Pump

(Briefly describe the proposed work and fill in the diagram on the back of this form.)

5. PROPOSED USE

☐ Municipal (including hotels, stores, etc.) ☐ Military
☐ Domestic (individual, noncommercial water systems) ☐ Industrial
☐ Irrigation (specify) ☐ Other (specify)

6. PROPOSED AMOUNT OF WITHDRAWAL 720,000 gallons per day

7. PROPOSED PUMP INFORMATION

Pump Type: ☐ Vertical Turbine ☐ Submersible ☐ Centrifugal
Motor: ☐ Diesel ☐ Gas ☐ Electric: 300 Rated Horsepower
Rated Pump Capacity 500 gallons per minute (gpm)

Well Owner (print) HUEHUE RANCH ASSOC., L.P. Landowner (print) HUEHUE RANCH ASSOC., L.P.
Signature ____________________________ Date 2/1/91
At Induse/General Manager

For Official Use Only:
Field Checked By ____________________________ Date ____________________________
Latitude ____________________________ Longitude ____________________________
Hydrologic Unit ____________________________ State Well No. 4459-01
Quad Map H-7
Briefly describe the proposed work:
CONTRACTOR TO INSTALL SUBMERSIBLE PUMP AND MOTOR, PUMP CONTROLS, DISCHARGE PIPING AND APPURTEANCES

PROPOSED SECTION OF WELL

Elevation at top of casing __________ ft., msl.

Cement Grout 500 ft.

Hole Dia. 18 in.

Total Depth 1620 ft.

Rock Packing 1025 ft.

Ground Elev. 1536 ft., msl*

Solid Casing: Material STEEL
Length 1520 ft.
Diameter 14 in.
Wall thickness 0.375 in.

Casing: / Perforated / Screen Material CORTEN STEEL
Length 20 ft.
Diameter 14 in.
Wall thickness 0.315 in.
Openings 17.3 sq. in./L.F.

Open Hole:
Length ______ ft.
Diameter 13-3/4 in.

*Approximate elevation at time of filing application. Final elevation (msl) by a surveyor licensed by the State must be submitted at start of construction.
MATERIAL LIST

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<td>2</td>
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<td>6&quot; FLANGED COUPLING ADAPTER, ROCKWELL 912</td>
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<td>3</td>
<td>1</td>
<td>6&quot; SPOOL PIECE, F.E. x F.E., 12&quot; LONG</td>
</tr>
<tr>
<td>4</td>
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<td>6&quot; PIPE, F.E., 5'-0&quot; LONG</td>
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<tr>
<td>5</td>
<td>2</td>
<td>6&quot; x 4&quot; TEE, F.E., W/2 STRAPS</td>
</tr>
<tr>
<td>6</td>
<td>2</td>
<td>6&quot; x 4&quot; REDUCER, F.E.</td>
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<td>7</td>
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<td>4&quot; BUTTERFLY VALVE, RUBBER SEATED WATER TYPE</td>
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<td>8</td>
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<td>9</td>
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<td>4&quot; PLATE STRAINER, BADGER</td>
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<td>4&quot; TURBO-METER, BADGER RECORDALL II, F.E., W/2 STRAPS</td>
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<td>6&quot; CENTER-GUIDED CHECK VALVE, WATER TYPE</td>
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<tr>
<td>12</td>
<td>1</td>
<td>6&quot; NIPPLE, F.E. SERVICE SADDLE FOR 1 1/2&quot; TAP, 12&quot; LONG</td>
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<td>6&quot; PIPE, F.E., CUT TO FIT</td>
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<td>14</td>
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<td>6&quot; NIPPLE, F.E. x F.E., 12&quot; LONG</td>
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<tr>
<td>15</td>
<td>1</td>
<td>6&quot; GATE VALVE, W.A., 125g</td>
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<td>16</td>
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<td>6&quot; x 4&quot; REDUCER, L.E.B.</td>
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<td>4&quot; TEE, F.E.</td>
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<td>4&quot; AIR RELEASE/VACUUM RELEASE CHECK VALVE, F.E.</td>
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<td>4&quot; SCREEN &amp; FITTING</td>
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<td>4&quot; PUMP CONTROL VALVE, CLA-VAL, 61-02, F.E., 125g</td>
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<tr>
<td>21</td>
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<td>4&quot; PIPE, F.E., Z'-Z&quot; LONG</td>
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<td>3</td>
<td>4&quot; 1/4&quot; BEND, F.E.</td>
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<td>23</td>
<td>2</td>
<td>4&quot; PIPE, F.E., CUT TO FIT</td>
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<tr>
<td>24</td>
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<td>4&quot; PIPE, F.E., Z'-Z&quot; LONG</td>
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<td>25</td>
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<td>4&quot; GATE VALVE, F.E.</td>
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<tr>
<td>26</td>
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<td>4&quot; SPOOL PIECE, F.E., 12&quot; LONG</td>
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<tr>
<td>27</td>
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<td>4&quot; FLAP VALVE, F.E.</td>
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</table>
HUEHUE RANCH ASSOCIATES, L.P.
P.O. Box 4338
Hilo, Hawaii 96720-4338

PAY TO THE ORDER OF
Dept. of Land & Natural Resources

$75.00

THE SUM $75.00 DOLLARS

Well Permits for HR1, HR2, HR3

April 12

First Interstate Bank of Hawaii
WELL CONSTRUCTION PERMIT
for
Huehue Ranch Well No. 2
Well No. 4459-01
Huehue Ranch, Hawaii

TO: Huehue Ranch Associates
72-3667 Hawaii Belt Road
Kailua-Kona, Hawaii 96710

In accordance with the Department of Land and Natural Resources Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", your application to construct and test Well No. 4459-01 within Tax Map Key: 7-2-06:09, for municipal use, is approved subject to the following conditions:

1. The Division of Water and Land Development (DOWALD), Geology-Hydrology Section, shall be notified at [REDACTED] before any work covered by this permit commences.

2. The permit shall be for construction and testing only. No permanent pump may be installed and no water used from the well without the necessary pump installation permit from the Commission.

3. The following shall be submitted to DOWALD within 30 days after completion of the well:
   a. Well Completion Report.
   b. Elevation (referenced to mean sea level) survey by a Hawaii-licensed surveyor.
   c. As-built sectional drawing of the well.
   d. Plot plan and map showing the exact location of the well.
   e. Complete pumping test record; including time, pumping rate, drawdown, chloride content, and water quality data.
4. The applicant shall comply with all applicable laws, rules, and ordinances.

5. This permit may be revoked if work is not started within six months of date of issuance or if work is suspended or abandoned for six months. The work shall be completed within two years of the date of issuance.

WILLIAM W. PATY, Chairperson
Commission on Water Resource Management

AUG 24 1989

Date of Issuance

cc: USGS
Department of Health,
   Drinking Water Program
   Ground Water Protection Program
Hawaii Department of Water Supply
The Honorable William W. Paty, Chairperson
Commission on Water Resource Management
Department of Land and Natural Resources
State of Hawaii
P.O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Paty:

SUBJECT: WELL CONSTRUCTION PERMIT APPLICATION
HUEHUE RANCH WELL NOS. 2 AND 3
STATE WELL NOS. 4459-01 AND 4558-01
KAILUA-KONA, HAWAII

Thank you for the opportunity to review the subject document. We have reviewed the application and have the following comments to offer:

1. The application indicates that the wells will be for municipal and domestic use (Huehue Ranch/Kukio Resort). If either well is to serve 25 or more individuals at least 60 days per year or will have a minimum of 15 service connections, the applicant will be required to comply with the Department's Administrative Rules, Title 11, Chapter 20, "Potable Water Systems."

2. Section 11-20-29 of Chapter 20 requires that a new source of potable water serving a public water system be approved by the Director of Health prior to its use. Such an approval is based primarily upon the submission of a satisfactory engineering report which addresses the requirements set in Section 11-20-29.

3. According to our Underground Injection Control maps (1982 USGS quads), proposed well No. 3 appears to be located approximately 3,900 feet downgradient from an existing cemetery. It is important that this and any other potential sources of contamination be adequately addressed in the engineering report described above.
The Honorable William W. Paty  
Page 2  
August 15, 1989

If you should have any questions, please contact the Safe Drinking Water Branch.

Very truly yours,

[Signature]

JOHN C. LEWIN, M.D.  
Director of Health

cc: Mr. Carl Carlson  
Huehue Ranch Associates  
72-3667 Hawaii Belt Road  
Kailua-Kona, Hawaii 96710