CHECKLIST

☑ Well Construction Permit
☐ Pump Installation Permit
☐ Water Use Permit Required Also

Well Name & Number: Onomea - Lutkenhouse
Island: Hawaii

Applicant: Dan J. Lutkenhouse
Rev. Town: Landowner: Same
Consultant:

Date application received: 5/27/93
☑ Date acknowledged receipt/request more info: 7/13
☑ Date filing fee deposited: 

☑ Application sent to following:
  Dept. of Health Safe Drinking Water Branch
  Dept. of Hawaiian Affairs Office of Hawaiian Affairs
  Dept. of Hawaiian Home Lands
  State Historic Preservation Div.
  Sierra Club Legal Defense Fund
  Honolulu Board of Water Supply
  Maui Dept. of Water Supply
  Kauai Dept. of Water Supply
  Hawaii Dept. of Water Supply 7/17
  Hawaii Dept. of Public Works 7/13
  Koolau NBD #38 (Oahu)
  Additional List (Molokai)
  Eric Hirano/ Lyann Mizuno

Date agenda due: 7/14/93
Date submittal due: 7/14/93
Date submittal sent to applicant: 
Date application approved OR disapproved: 7/28/93
Date applicant notified of decision: 

Remarks: 

__________________________________________________________________________
MEMORANDUM

TO: Rae M. Loui, Deputy Director
Commission on Water Resource Management

FROM: Don Hibbard, Administrator
State Historic Preservation Division

SUBJECT: Well Construction Permit Application—Well No. 4905-02, Dan Lutkenhouse
Onomea, South Hilo, Island of Hawaii
TMK: 2-7-10: 001

HISTORIC PRESERVATION PROGRAM CONCERNS:

The location of the well lies along the banks of Onomea Stream. Significant historic sites consisting of prehistoric taro loi system and possible habitation features are known to be present in the area. Hence, we recommend that no action be taken on the subject application until an archaeological inventory survey has been undertaken to determine if significant historic sites are present. The findings of the survey should be submitted in report format to our office for adequacy review. If significant historic sites are present, then a mitigation plan must also be submitted to our office for review and concurrence. Construction of the well should not commence until the mitigation plan's field portions have been executed. Successful completion of the mitigation plan should be verified in writing by our office.

For further assistance, please contact Kanalei Shun at 587-0007.

KS: amk
August 2, 1993

The Honorable Keith W. Ahue, Chairperson
Commission on Water Resource Management
Department of Land and Natural Resources
P. O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Ahue:

Well Construction and Pump Installation Permits

Thank you for the opportunity to respond to this application for the following well construction and pump installation permits:

O'ahu
Kalaeloa PW 7-9 Wells (1805-10,11,12)
Makaha IV (3010-12)

Hawaii
Keopu Mauka (3957-01)
Onomea-Lutkenhouse (4905-02)
Big Island Country Club (4950-01)

The Department of Hawaiian Home Lands has no objections to these projects. We are unable to evaluate the Kalaeloa applications, however, without additional information. The application does not explain why existing wells are being replaced. Also, we understand that a Caprock Aquifer Study was intended to establish a better understanding of proper management of this resource; we are unaware how these wells might be affected by the findings of this study.

Please direct any questions to Ben Henderson in our Planning Office, 586-3836.

Warmest aloha,

[Signature]
Hoaliku L. Drake, Chairman
Hawaiian Homes Commission
WELL CONSTRUCTION AND PUMP INSTALLATION PERMIT

for

Onomea-Lutkenhouse Well
Well No. 4905-02
Onomea, South Hilo, Hawaii

TO: Dan J. Lutkenhouse
248 Kahoa Road
Hilo, HI 96720

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, test, and install a pump in Onomea-Lutkenhouse Well (Well No. 4905-02), for irrigation use, is approved subject to the following conditions:

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

2. The permit shall be for construction, testing, and installation of a 20 gpm 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 the 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 applicant shall provide and maintain an approved meter or other appropriate device or means for measuring and reporting total water usage on a quarterly basis.

5. The following shall be submitted to the Commission within 30 days after completion of the work:
   a. Well Completion Report.
   b. As-built sectional drawing of the well.
c. Plot plan and map showing the exact location of the well.

d. Complete pumping test record; including time, pumping rate, drawdown, chloride content, and water quality data.

6. The permit application and staff submittal approved by the Commission at its meeting on August 4, 1993 shall be incorporated herein by reference.

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

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

9. Water from the well shall not be used for drinking water unless properly tested and treated.

KEITH W. AHUE, Chairperson
Commission on Water Resource Management

8/5/93
Date of Approval

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.

Applicant's Signature: __________________ Date: __________

Printed Name: _______________________________________

Firm or Title: _______________________________________

Please sign and return one copy of this permit to the Commission and retain a copy for your record.

c: USGS
    Department of Health
        Safe Drinking Water Branch
        Ground Water Protection Program
        Wastewater Branch
    Hawaii Department of Water Supply
Ms. Donna Fay K. Kiyosaki
Chief Engineer
Department of Public Works
County of Hawaii
25 Aupuni Street
Hilo, Hawaii 96720

Dear Ms. Kiyosaki:

Well Construction and Pump Installation Permit Application

Please review the following permit applications pursuant to your area of concern and submit your comments to us by AUG - 2 1993

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Should you have any questions, please contact the Commission on Water Resource Management staff at 587-0225.

Sincerely,

RAE M. LOUI
Deputy Director

Response:
( ) We have no comments
( ) We have no objections
( ) Comments attached
( ) Additional information requested
( ) Extended review period requested

Contact Person: Ed Yoshida
Phone: 961-8327
Signed: Ed Yoshida
Date: 7/10/93
Ms. Donna Fay K. Kiyosaki  
Chief Engineer  
Department of Public Works  
County of Hawaii  
25 Aupuni Street  
Hilo, Hawaii 96720

Dear Ms. Kiyosaki:

Well Construction and Pump Installation Permit Application

Please review the following permit applications pursuant to your area of concern and submit your comments to us by Aug 2, 1993.

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Should you have any questions, please contact the Commission on Water Resource Management staff at 587-0225.

Sincerely,

[Signature]

RAE M. LOUI  
Deputy Director

Response:

( ) We have no comments  
( ) We have no objections  
( ) Comments attached  
( ) Additional information requested  
( ) Extended review period requested

Contact Person: ___________________________   Phone: ___________________________
Signed: ___________________________   Date: ___________________________
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

Please review the following permit applications pursuant to your area of concern and submit your comments to us by AUG - 2 1993

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Should you have any questions, please contact the Commission on Water Resource Management staff at 587-0225.

Sincerely,

[Signature]

RAE M. LOUI  
Deputy Director

Response:
( ) We have no comments
( ) We have no objections
( ) Comments attached
( ) Additional information requested
( ) Extended review period requested

Contact Person: ___________________________ Phone: ___________________________  
Signed: ___________________________ Date: ___________________________
Mr. Dan J. Lutkenhouse
248 Kahoa Road
Hilo, Hawaii 96720

Dear Mr. Lutkenhouse:

We have received your application and filing fee for a permit to construct Onomea-Lutkenhouse Well (Well No. 4905-02) in South Hilo, Hawaii, (TMK 2-7-10:01). We are reviewing the application for completeness.

Should you have questions, please call the Commission on Water Resource Management staff at 587-0225.

Sincerely,

[Signature]

RAE M. LOUI
Deputy Director

JZ:ky
Ms. Marjorie Ziegler  
Sierra Club Legal Defense Fund, Inc.  
212 Merchant Street, Room 202  
Honolulu, Hawaii 96813  

Dear Ms. Ziegler:

Well Construction and Pump Installation Permit Application

Please review the following permit applications pursuant to your area of concern and submit your comments to us by AUG-2 1993

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Sincerely,

RAE M. LOUI  
Deputy Director

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Response:
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( ) Extended review period requested

Contact Person: ___________________________  
Signed: ___________________________  
Phone: ___________________________  
Date: ___________________________
MEMORANDUM

TO: Don Hibbard, Director
    Historic Preservation Program

FROM: Rae M. Loui, Deputy Director
       Commission on Water Resource Management

SUBJECT: Well Construction & Pump Installation Permit Applications

Please review the following permit applications and submit your comments to us by AUG - 2 1993

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JZ:ky
Enc.

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Contact Person: __________________________ Phone: __________________________
Signed: _______________________________ Date: __________________________
MEMORANDUM

TO: Honorable Hoalikau L. Drake, Director
Department of Hawaiian Home Lands

Mr. Clayton H.W. Hee, Chairman & Trustee At Large
Office of Hawaiian Affairs

FROM: Keith W. Ahue, Chairperson

SUBJECT: Well Construction & Pump Installation Permit Applications

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JZ:ky
Enc.

Response:
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( ) Additional information requested
( ) Extended review period requested

Contact Person: ___________________________ Phone: ______________
Signed: ___________________________ Date: ______________
Mr. Thomas Arizumi, Chief
Environmental Management Division
State Department of Health
Five Waterfront Plaza
500 Ala Moana Blvd., Suite 250
Honolulu, Hawaii 96813

Attn: Mr. Dennis Tulang

Dear Mr. Tulang:

Well Construction and Pump Installation Permit Application

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Sincerely,

RAE M. LOUI
Deputy Director

JZ:ky
Enc.

Response:
( ) We have no comments
( ) We have no objections
( ) Comments attached
( ) Additional information requested
( ) Extended review period requested

Contact Person: ___________________________ Phone: ___________________

Signed: ________________________________ Date: ___________________
Mr. Thomas Arizumi, Chief  
Environmental Management Division  
State Department of Health  
Five Waterfront Plaza  
500 Ala Moana Blvd., Suite 250  
Honolulu, Hawaii 96813

Attn: Mr. William Wong

Dear Mr. Arizumi:

Well Construction and Pump Installation Permit Application

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Sincerely,

[Signature]

RAE M. LOUI  
Deputy Director

JZ:ky  
Enc.

Response:
( ) We have no comments  
( ) We have no objections  
( ) Comments attached  
( ) Additional information requested  
( ) Extended review period requested

Contact Person: ____________________________  Phone: ____________________________

Signed: ____________________________  Date: ____________________________
1. STATE WELL NO. 4905-02 WELL NAME: LUKWĀHUI 1  ISLAND: HAWAII

2. LOCATION: Address:  Tax Map Key: 3-2-7-011-

3. DRILLING OR PUMP INSTALLATION CONTRACTOR: FRED PAGE DRILLING INT.

4. CONTRACTOR'S C-57 LICENSE NUMBER: 16673

5. NAME OF DRILLER WHO PERFORMED WORK: GEOFFY FERMAN

6. TYPE OF RIG/CONSTRUCTION: C-57 ROTARY AIR

7. DATE OF WELL DRILLING COMPLETION: 6-23-93

8. GROUND ELEVATION (msl): 152 - 21 ft.
   Top of Drilling Platform (msl): 6 - 1 ft.
   Height of Drilling Platform above Ground surface: 85 ft.
   Bench Mark and Method Used to Determine Ground Elevation: survey

9. DRILLER'S LOG:

<table>
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<th>Rock Description, Remarks, Dates</th>
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(If more space is needed, continue on back.)

10. TOTAL DEPTH OF WELL BELOW GROUND: 162 ft.
11. HOLE SIZE: 9 1/2 inch dia. from 0 ft. to 162 ft. below ground
     9 1/2 inch dia. from 0 ft. to 162 ft. below ground
     9 1/2 inch dia. from 0 ft. to 162 ft. below ground

12. CASING INSTALLED: 5 1/2 in. I.D. x 3/8 in. wall solid section to 1 ft. below ground
     5 1/2 in. I.D. x 1/2 in. wall perforated section to 1 ft. below ground

Type of Perforation: 300 feet, length unknown

13. ANNULUS: Grouted from 0 ft. below ground to 160 ft. below ground
     Gravel packed from 160 ft. below ground to 160 ft. below ground

14. INITIAL WATER LEVEL: 126 ft. below ground. Date and time of measurement: 6-23-93
15. INITIAL CHLORIDE: 19.5 ppm Date and time of sampling: 6-23-93
16. INITIAL TEMPERATURE: 67°F Date and time of sampling: 6-23-93
17. DATE OF PUMP INSTALLATION: 6-23-93

18. PUMP INSTALLATION:
    Pump Type, Make, Serial No.: JACOB 1, 155418-14
    Motor type, H.P., Voltage, rpm: 1SP
    Depth of Pump Intake Setting: 0 ft. below 0.5-LCD, which elevation is 162 ft.
    Depth of bottom of airlift: 0 ft., which elevation is 162 ft.
    Pumping Head is: 162 ft.

19. PUMPING TESTS:
    Reference Point (R.P.) used: Field level, which elevation is 155 ft.

<table>
<thead>
<tr>
<th>Date 6-23-93</th>
<th>Start water level 126 ft. below R.P.</th>
<th>Start water level 126 ft. below R.P.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time (hours)</td>
<td>Rate (gpm)</td>
<td>Drawdown (ft.)</td>
</tr>
<tr>
<td>4:15 to 5:30</td>
<td>20.2</td>
<td>5.5</td>
</tr>
<tr>
<td>to</td>
<td>to</td>
<td>to</td>
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<tr>
<td>to</td>
<td>to</td>
<td>to</td>
</tr>
</tbody>
</table>

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

Remarks:

Well has total drawdown at 15:50 P.M.

Contractor (print): FRED PAGE
Title: PRESIDENT
Signature: Date: 6-23-93

For Driller's Use:
Job Name: LUKWĀHUI Job No. 1

For Official Use:
Well No.: 4905-02
Longitude: 155 05 39
Latitude: 19 49 02
### Drilling Log

**Date:** 6/22 93  
**Job No.:** 1  
**Hole No.:** 1  
**Elevation:** 165 ft.  
**Customer:** Dan Lutenhoase  
**Location:** Orono 3-2-710; 1

**Driller:** Marty Feloman  
**Hours:**  
**Rig:** CP650  
**Helper:** Fred Page  
**Gas:**  
**Oil:**  
**Reparis:**  
**Arv. Job:**  
**Lv. Job:**  
**Or. No.:**

**Bit-Size:** 7/8  
**Type:**

**Casing-Size:** 5  
**In., Length in hole:** 157 ft.  
**In., Amt. Perforated:** 40 ft.  
**Depth Start:** 0 ft.  
**Depth Stop:** 164 ft.  
**Feet Drilled:** 164

**Water Levels, Time:** 1000 AM, 126 ft., Time  
**Water Level:**

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Top Soil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Brown Dirt</td>
<td>Gavel Pack to 103'</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Med- Brown</td>
<td>Groot Hxed to Top</td>
<td></td>
</tr>
<tr>
<td>54</td>
<td>Med- Hard</td>
<td>15 HP Domp Set at 153's</td>
<td></td>
</tr>
<tr>
<td>60</td>
<td>Med- Hard</td>
<td>27' Drawn down at 18.60'4</td>
<td></td>
</tr>
<tr>
<td>99</td>
<td>Red Med- Soft</td>
<td></td>
<td></td>
</tr>
<tr>
<td>99</td>
<td>Med- Hard</td>
<td></td>
<td></td>
</tr>
<tr>
<td>140</td>
<td>Med- Hard</td>
<td></td>
<td></td>
</tr>
<tr>
<td>140</td>
<td>Med- Soft</td>
<td></td>
<td></td>
</tr>
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<td>163</td>
<td>Hard</td>
<td></td>
<td></td>
</tr>
<tr>
<td>164</td>
<td>Hard</td>
<td></td>
<td></td>
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</table>

**Remarks:**

**Signed:** Fred Page  
**Date:** 6/23 93  
**19 93**
APPLICATION FOR PERMIT

1. APPLICANT: (may be a, b, or c, but all must be filled in)
   (a) WELL OWNER: Name: DAN J. JUHCHENHOUSE
      Firm/Name: Reversible Trust
      Contact Person: ABOVE
      Address: 543 WAHAA E. #, Hilo, HI 96720
   (b) LANDOWNER: Name: DAN J. JUHCHENHOUSE
      Firm/Name: Reversible Trust
      Contact Person: ABOVE
      Address: 254 PANAIO RD. #, Hilo, HI 96720
   (c) CONTRACTOR: NAME: PAPA, ROUB.
      Firm/Name: PAPA, ROUB.
      Contact Person: 925-322
      Address: P.O. BOX 1920, Hilo, HI 96720

2. WELL LOCATION/NAMES:
   Island: HAWAII
   Location: OLD MAHALOA HIGHWAY
   (Attach a USGS map, scale 1" = 2000', and a property tax map showing well location referred to the established property boundaries)

3. (a) PROPOSED WORK:
   (a) Dig New Well
   (b) Modify Existing Well
   (c) Drill
   (d) Deepen
   (e) * Abandon/Seal
   (f) Install New Pump
   (g) Replace Pump
   (h) Modify Pump
   * Be sure to complete and submit well abandonment reports upon completion of work.

(b) WELL TYPE:
   (a) Well Type:
      (a) Drilled
      (b) Radial
      (c) Dug

Is this well a part of a battery of wells?
   (a) Yes
   (b) No
   (c) (Briefly describe and fill in the diagram on the back of this form)

4. PROPOSED PUMP INFORMATION:
   Rated Pump Capacity: 30.00 gallons per minute
   Pump Type:
      (a) Deep Well Turbine
      (b) Rotary
      (c) Submersible
      (d) Propeller
      (e) Piston-Displacement
      (f) Gear
      (g) Impulse
      (h) (Briefly describe, rated horsepower of 10 HP)

5. PROPOSED USE:
   (a) Municipal (including hotels, stores, etc.)
   (b) Military
   (c) Domestic (individual, non-commercial water supply)
   (d) Industrial
   (e) Burgage (crop)
   (f) Other (explain)
   (g) State Land Use District: Urban, Agriculture, Rural, Conservation
   (h) County Zoning (describe)

   (If more space is needed, continue below under remarks, explanations)

6. (a) PROPOSED AMOUNT OF WITHDRAWAL:
   (b) METHOD OF FLOW MEASUREMENT:
      (a) Flow-meter
      (b) Open-pipe
      (c) Office Plate
      (d) Weir

7. PENDING ACTIONS:
   (a) CDUA
   (b) SMA
   (c) EIS
   (d) EA
   (e) NONE
   (f) Other (explain)

8. REMARKS; EXPLANATIONS:
   (If more space is needed, continue on back)

NOTE: Signing below indicates that the applicant understands the requirements set forth by the Commission on Water Resource Management, the proposed work is to be completed within 30 days of the approval date. In the event that the proposed work is not completed within the specified time frame, the permit will be revoked and any necessary work not completed. The applicant further undertakes that approval of this permit will not constitute a determination of competitive water rights and shall not guarantee the pump capacity or future use to the permittee pump capacity.

Well Owner: DAN J. JUHCHENHOUSE
Landowner: DAN J. JUHCHENHOUSE
Contractor: FRED J. JUHCHENHOUSE

Signature: DAN J. JUHCHENHOUSE
Signature: DAN J. JUHCHENHOUSE
Signature: FRED J. JUHCHENHOUSE
Date: 7-23-1983
Date: 7-23-1983
Date: 7-23-1983

For Official Use Only:
Date Received
Date Accepted
Field Checked By
Date
Longitude
Latitude
Aquifer System Name
State Well No.
Conserv. Dist?
30.00
9. PROPOSED WELL SECTION

Elevation at top of casing: 1460 ft, msl.

Cement Group: 130 ft.

Rock Pooling

Hole Diameter: 4 in.

Total Depth 130 ft.

Ground Elevation: 145 ft, msl.

Solid Casing: PLASTIC
Material: ____________
Length: ____________ ft.
Diameter: ____________ in.
Wall thickness: ____________ in.

Casing: ☐ Perforated ☐ Screen
Material: ____________
Length: ____________ ft.
Diameter: ____________ in.
Wall thickness: ____________ in.
Openings ____________ sq. in./L.P.

Open Hole:
Length: ____________ ft.
Diameter: ____________ in.

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


☐ Well Construction Permit
☐ Pump Installation Permit
☐ Water Use Permit Required Also

Well Name & Number: ʻOnohea-Lutkenhauser
Island: Hawai‘i

Applicant: Dam J. Lutkenhauser
Rev. Toul. Landowner: Same

Consultant:

Date application received: 5/27/93
Date acknowledged receipt/request more info: 7/13
Date filing fee deposited:

Application sent to following:

dept. of health
office of hawaiian affairs
department of hawaiian home lands
state historic preservation division
sierra club legal defense fund
honolulu board of water supply
maui department of water supply
kauai department of water supply
honolulu department of water supply
hawaii department of water supply
hawaii department of public works
koolau area board #38 (oahu)
additional list (molokai)

Eric Hirano/Lyann Mizuno

Date agenda due: 7/14/93
Date submittal due: 7/14/93
Date submittal sent to applicant:
Date application approved or disapproved: 7/28/93
Date applicant notified of decision:

Remarks:

MEMORANDUM

TO: Rae M. Loui, Deputy Director
Commission on Water Resource Management

FROM: Don Hibbard, Administrator
State Historic Preservation Division

SUBJECT: Well Construction Permit Application—Well No. 4905-02, Dan Lutkenhouse
Onomea, South Hilo, Island of Hawaii
TMK: 2-7-10: 001

HISTORIC PRESERVATION PROGRAM CONCERNS:

The location of the well lies along the banks of Onomea Stream. Significant historic sites
consisting of prehistoric taro loi system and possible habitation features are known to be present
in the area. Hence, we recommend that no action be taken on the subject application until an
archaeological inventory survey has been undertaken to determine if significant historic sites are
present. The findings of the survey should be submitted in report format to our office for
adequacy review. If significant historic sites are present, then a mitigation plan must also be
submitted to our office for review and concurrence. Construction of the well should not
commence until the mitigation plan's field portions have been executed. Successful completion of
the mitigation plan should be verified in writing by our office.

For further assistance, please contact Kanalei Shun at 587-0007.

KS: ank
The Honorable Keith W. Ahue, Chairperson
Commission on Water Resource Management
Department of Land and Natural Resources
P. O. Box 621
Honolulu, Hawaii, 96809

Dear Mr. Ahue:

Well Construction and
Pump Installation Permits

Thank you for the opportunity to respond to this application for the following well construction and pump installation permits:

O'ahu
Kalaeloa PW 7-9 Wells (1805-10,11,12)
Makaha IV (3010-12)

Hawaii
Keopu Mauka (3957-01)
Onomea-Lutkenhouse (4905-02)
Big Island Country Club (4950-01)

The Department of Hawaiian Home Lands has no objections to these projects. We are unable to evaluate the Kalaeloa applications, however, without additional information. The application does not explain why existing wells are being replaced. Also, we understand that a Caprock Aquifer Study was intended to establish a better understanding of proper management of this resource; we are unaware how these wells might be affected by the findings of this study.

Please direct any questions to Ben Henderson in our Planning Office, 586-3836.

Warmest aloha,

Hoaliku L, Drake, Chairman
Hawaiian Homes Commission
WELL CONSTRUCTION AND PUMP INSTALLATION PERMIT

for
Onomea-Lutkenhouse Well
Well No. 4905-02
Onomea, South Hilo, Hawaii

TO: Dan J. Lutkenhouse
248 Kahoa Road
Hilo, HI 96720

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, test, and install a pump in Onomea-Lutkenhouse Well (Well No. 4905-02), for irrigation use, is approved subject to the following conditions:

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

2. The permit shall be for construction, testing, and installation of a 20 gpm 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 the 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 applicant shall provide and maintain an approved meter or other appropriate device or means for measuring and reporting total water usage on a quarterly basis.

5. The following shall be submitted to the Commission within 30 days after completion of the work:
   a. Well Completion Report.
   b. As-built sectional drawing of the well.
c. Plot plan and map showing the exact location of the well.

d. Complete pumping test record; including time, pumping rate, drawdown, chloride content, and water quality data.

6. The permit application and staff submittal approved by the Commission at its meeting on August 4, 1993 shall be incorporated herein by reference.

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

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

9. Water from the well shall not be used for drinking water unless properly tested and treated.

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.

Applicant's Signature: ___________________________ Date: ____________

Printed Name: ____________________________

Firm or Title: ____________________________

Please sign and return one copy of this permit to the Commission and retain a copy for your record.

c: USGS
   Department of Health
   Safe Drinking Water Branch
   Ground Water Protection Program
   Wastewater Branch
   Hawaii Department of Water Supply
Ms. Donna Fay K. Kiyosaki  
Chief Engineer  
Department of Public Works  
County of Hawaii  
25 Aupuni Street  
Hilo, Hawaii 96720

Dear Ms. Kiyosaki:

Well Construction and Pump Installation Permit Application

Please review the following permit applications pursuant to your area of concern and submit your comments to us by AUG - 2 1993

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Should you have any questions, please contact the Commission on Water Resource Management staff at 587-0225.

Sincerely,

[Signature]

RAE M. LOUI  
Deputy Director

Response:
( ) We have no comments
( ) We have no objections
( ) Comments attached
( ) Additional information requested
( ) Extended review period requested

Contact Person: Ed Yoshida  
Phone: 961-8327  
Signed: [Signature]  
Date: 7/16/93
Ms. Donna Fay K. Kiyosaki  
Chief Engineer  
Department of Public Works  
County of Hawaii  
25 Aupuni Street  
Hilo, Hawaii 96720  

Dear Ms. Kiyosaki:

Well Construction and Pump Installation Permit Application

Please review the following permit applications pursuant to your area of concern and submit your comments to us by AUG 2 1993

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Should you have any questions, please contact the Commission on Water Resource Management staff at 587-0225.

Sincerely,

RAE M. LOUI  
Deputy Director

JZ:ky  
Enc.

Response:  
(  ) We have no comments  
(  ) We have no objections  
(  ) Comments attached  
(  ) Additional information requested  
(  ) Extended review period requested

Contact Person: ___________________________ Phone: ___________________________

Signed: ___________________________ Date: ___________________________
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**

Please review the following permit applications pursuant to your area of concern and submit your comments to us by AUG - 2 1993.

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Should you have any questions, please contact the Commission on Water Resource Management staff at 587-0225.

Sincerely,

[Signature]

RAE M. LOUI  
Deputy Director

---

Response:
( ) We have no comments
( ) We have no objections
( ) Comments attached
( ) Additional information requested
( ) Extended review period requested

Contact Person: ___________________________  
Phone: ___________________________

Signed: ___________________________  
Date: ___________________________
Mr. Dan J. Lutkenhouse  
248 Kahoa Road  
Hilo, Hawaii 96720  

Dear Mr. Lutkenhouse:  

We have received your application and filing fee for a permit to construct Onomea-Lutkenhouse Well (Well No. 4905-02) in South Hilo, Hawaii, (TMK 2-7-10:01). We are reviewing the application for completeness.  

Should you have questions, please call the Commission on Water Resource Management staff at 587-0225.  

Sincerely,  

[Signature]  

RAE M. LOUI  
Deputy Director  

JZ:ky
Ms. Marjorie Ziegler  
Sierra Club Legal Defense Fund, Inc.  
212 Merchant Street, Room 202  
Honolulu, Hawaii 96813  

Dear Ms. Ziegler:

**Well Construction and Pump Installation Permit Application**

Please review the following permit applications pursuant to your area of concern and submit your comments to us by **AUG - 2 1993**

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Should you have any questions, please contact the Commission on Water Resource Management staff at 587-0225.

Sincerely,

[Signature]  
RAE M. LOUI  
Deputy Director

Response:  
( ) We have no comments  
( ) We have no objections  
( ) Comments attached  
( ) Additional information requested  
( ) Extended review period requested

Contact Person: ___________________________ Phone: ________________

Signed: ___________________________ Date: ________________
MEMORANDUM

TO: Don Hibbard, Director
    Historic Preservation Program

FROM: Rae M. Loui, Deputy Director
      Commission on Water Resource Management

SUBJECT: Well Construction & Pump Installation Permit Applications

Please review the following permit applications and submit your comments to us by AUG 2 1993.

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Should you have any questions, please contact the Commission on Water Resource Management staff at 587-0225.

JZ:ky
Enc.

Response:
( ) We have no comments
( ) We have no objections
( ) Comments attached
( ) Additional information requested
( ) Extended review period requested

Contact Person: ___________________________ Phone: ___________

Signed: ___________________________ Date: ___________
MEMORANDUM

TO: Honorable Hoaliku L. Drake, Director
   Department of Hawaiian Home Lands

   Mr. Clayton H.W. Hee, Chairman & Trustee At Large
   Office of Hawaiian Affairs

FROM: Keith W. Ahue, Chairperson

SUBJECT: Well Construction & Pump Installation Permit Applications

Please review the following permit applications and submit your comments to us by AUG-2 1993.

<table>
<thead>
<tr>
<th>Island</th>
<th>Well Name</th>
<th>Well No.</th>
<th>Application Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oahu</td>
<td>Kalaeloa PW-7</td>
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<td>Keopu Mauka/Puuhonua</td>
<td>3957-01</td>
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</tr>
<tr>
<td>Hawaii</td>
<td>Onomea-Lutkenhouse</td>
<td>4905-02</td>
<td>Well Construction</td>
</tr>
<tr>
<td>Hawaii</td>
<td>Big Island Country Club Well 1</td>
<td>4950-01</td>
<td>Pump Installation</td>
</tr>
</tbody>
</table>

Should you have any questions, please contact the Commission on Water Resource Management staff at 587-0225.

JZ:ky
Enc.

Response:
( ) We have no comments
( ) We have no objections
( ) Comments attached
( ) Additional information requested
( ) Extended review period requested

Contact Person: _________________________ Phone: ___________
Signed: _____________________________ Date: ___________
JUL 13 1993

Mr. Thomas Arizumi, Chief
Environmental Management Division
State Department of Health
Five Waterfront Plaza
500 Ala Moana Blvd., Suite 250
Honolulu, Hawaii 96813

Attn: Mr. Dennis Tulang

Dear Mr. Tulang:

Well Construction and Pump Installation Permit Application

Please review the following permit applications pursuant to your area of concern and submit your comments to us by AUG - 2 1993

<table>
<thead>
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Should you have any questions, please contact the Commission on Water Resource Management staff at 587-0225.

Sincerely,

RAE M. LOUI
Deputy Director

JZ:ky
Enc.

Response:
( ) We have no comments
( ) We have no objections
( ) Comments attached
( ) Additional information requested
( ) Extended review period requested

Contact Person: ___________________________ Phone: ___________________________

Signed: ___________________________ Date: ___________________________
Mr. Thomas Arizumi, Chief  
Environmental Management Division  
State Department of Health  
Five Waterfront Plaza  
500 Ala Moana Blvd., Suite 250  
Honolulu, Hawaii 96813  

Attn: Mr. William Wong  

Dear Mr. Arizumi:  

Well Construction and Pump Installation Permit Application  

Please review the following permit applications pursuant to your area of concern and submit your comments to us by AUG-2 1993  

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Should you have any questions, please contact the Commission on Water Resource Management staff at 587-0225.

Sincerely,  

[Signature]  

RAE M. LOUI  
Deputy Director  

---  

Response:  
( ) We have no comments  
( ) We have no objections  
( ) Comments attached  
( ) Additional information requested  
( ) Extended review period requested

Contact Person: __________________________  
Phone: __________________________  

Signed: __________________________  
Date: __________________________
State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources

WELL COMPLETION

Instructions: Please print or type and submit completed report within 30 days after completion to the Commission on Water Resource Management, P.O. Box 821, Honolulu, Hawaii 96801. An as-built drawing of the well and chemical analysis should also be submitted. For assistance call the Commission Regulation Branch at 567-0205.

1. STATE WELL NO. 4905-02 WELL NAME: LUKIHI TROPICAL ISLAND HAWAII
2. LOCATION: Address: Tax Map Key: 3-2-10-01
3. DRILLING OR PUMP INSTALLATION CONTRACTOR: FRED PAGE DRILLING INC.
4. CONTRACTOR'S C-67 LICENSE NUMBER: C-66-53
5. NAME OF DRILLER WHO PERFORMED WORK: GEOFF FRANKEL.
6. TYPE OF RIG/CONSTRUCTION: C-66-53 ROTARY AIR.
7. DATE OF WELL DRILLING COMPLETION: 6-23-93.

8. GROUND ELEVATION (msl): 952.21 ft.
   Top of Drilling Platform (msl): 549.37 ft.
   Height of Drilling Platform above Ground surface: 392.84 ft.
   Bench Mark and Method Used to Determine Ground Elevation: Surveyed.

9. DRILLER'S LOG:

<table>
<thead>
<tr>
<th>Water Level</th>
<th>Rock Description, Remarks, Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 0</td>
<td></td>
</tr>
<tr>
<td>0 to 0</td>
<td></td>
</tr>
<tr>
<td>0 to 0</td>
<td></td>
</tr>
<tr>
<td>0 to 0</td>
<td></td>
</tr>
</tbody>
</table>

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

10. TOTAL DEPTH OF WELL BELOW GROUND: 168 ft.
11. HOLE SIZE:
    - 7" inch dia. from 0 ft. to 162 ft. below ground
    - 6" inch dia. from 0 ft. to 162 ft. below ground

12. CASING INSTALLED:
    - 5½ in. I.D. x 3/8 in. wall solid section to 1 ft. below ground
    - 5 in. I.D. x 3/8 in. wall perforated section to 1 ft. below ground

   Type of Perforation: Slotted, Length: 10 ft. 6 in.

13. ANNULUS:
   - Grouted from 0 ft. below ground to 163.5 ft. below ground
   - Gravel packed from 118 ft. below ground to 168 ft. below ground

14. INITIAL WATER LEVEL: 12.6 ft. below ground. Date and time of measurement: 6-24-93.
15. INITIAL CHLORIDE: 19.8 ppm. Date and time of sampling: 6-24-93.
16. INITIAL TEMPERATURE: 67°F. Date and time of sampling: 6-24-93.
17. DATE OF PUMP INSTALLATION: 6-23-93.
18. PUMP INSTALLATION:
   - Pump Type, Make, Serial No.: Jacuzzi: 155418-14 Capacity: 20 gpm
   - Motor Type, H.P., Voltage, rpm: Franklin: 15HP
   - Depth of Pump Intake Setting: 15 ft. below R.P., which elevation is 492.57 ft.
   - Depth of bottom of airline: 14 1/2 ft. below ground, which elevation is 492.57 ft.
   - Pumping Head is: 150 ft.

19. PUMPING TESTS:
   - Reference Point (R.P.) used: R.P. (the well), which elevation is 492.57 ft.

<table>
<thead>
<tr>
<th>Date</th>
<th>Start water level</th>
<th>Start water level</th>
<th>Depth of well</th>
<th>Drawdown (ft.)</th>
<th>Cl Temp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-29-93</td>
<td>126 ft. below R.P.</td>
<td>126 ft. below R.P.</td>
<td>158 ft. below R.P.</td>
<td>16 1/2 ft. below R.P.</td>
<td>8 1/8 ft.</td>
</tr>
<tr>
<td>6-26-93</td>
<td>126 ft. below R.P.</td>
<td>126 ft. below R.P.</td>
<td>158 ft. below R.P.</td>
<td>16 1/2 ft. below R.P.</td>
<td>8 1/8 ft.</td>
</tr>
</tbody>
</table>

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

Remarks: Well has total drawdown at 15.5 gpm.

Contractor (print): FRED PAGE
Title: PRESIDENT
Signature: FRED PAGE
Date: 6-23-93.

For Driller's Use:
Job Name: LUKIHI TROPICAL ISLAND
Job No.

For Official Use:
Well No.: 4905-02
Longitude: 155 05 39
Latitude: 19 49 02.
### DRILLING LOG

**Date:** 6/22/1993  
**Job No.:** 1  
**Hole No.:** 1  
**Elevation:** 165 ft.

**Customer:** Don Luhkenboone  
**Location:** Oakes

**Driller:** Marty Feldman  
**Rig:** CP650

**Helper:** Fred Page  
**Gas:** Oil

**Helper:**  
**Hrs.:**  
**Oil:**  
**Repairs:**

**Arr. Job:**  
**Lv. Job:**  
**Or. No.:**

**Bit-Size:** 7  
**Type:**

**Casing-Size:** 6 in.  
**Length in hole:** 157 ft.  
**Amt. Perforated:** 40 ft.  
**in.**

**Depth Start:** 0 ft.  
**Depth Stop:** 164 ft.  
**Feet Drilled:** 164 ft.

**Water Levels, Time:** 10:00 AM  
**Level 1:** 126 ft.  
**Time:** M ft.

### Measurements

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Top Soil</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Brown Dirt</td>
<td>Gravel Pack to 103'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Med-Brown</td>
<td>Grout 1 yd to Top</td>
<td></td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>Med-Hard</td>
<td>15 HP Pump Set at 153.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>54</td>
<td>Med-Hard</td>
<td>Drawn down at 18 GPM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>60</td>
<td>Red Med-Soft</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>99</td>
<td>Med-Hard</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>140</td>
<td>Med-Hard</td>
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<tr>
<td>140</td>
<td>Med-Soft</td>
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</tr>
<tr>
<td>163</td>
<td>Hard</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>164</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:**

**Signed:**  
**Date:** 6/23/93  
**1993**
APPLICATION FOR PERMIT

1. APPLICANT: (may be a, b, or c, but all must be filled in)
   (a) WELL OWNER: Reversible Trust
   Firm/Name: Reversible Trust
   Contact Person: Above
   Address: 748 Kalua Rd.
   Hilo, Hawaii 96720

   (b) LANDOWNER: Reversible Trust
   Firm/Name: Reversible Trust
   Contact Person: Above
   Address: 748 Kalua Rd.
   Hilo, Hawaii 96720

   (c) CONTRACTOR: Fred Park, DPL.
   Firm/Name: Fred Park, DPL.
   Contact Person: 925322
   Address: 84-6051 Pauoa Rd.
   Hilo, Hawaii 96720

2. WELL LOCATION/NAME: ONOMEA
   Address: OLD MAKILOA HIGHWAY
   (Attach a USGS map, scale 1:2000, and a property tax map showing well location referenced to established property boundaries.)

3. (a) PROPOSED WORK:
   • Drill New Well
   • Alter Location
   • Modify Existing Well
   • Redecide Up
   • Drill New Pump
   • Deepen
   • Abandon/Seal
   • Be sure to complete and submit well abandonment report upon completion of work.
   • Pump

   (b) WELL TYPE:
   • Dug
   • Board
   • Driven
   • Dilled
   • Radial
   • Is this well a part of a battery of wells? Yes
   • Briefly describe and fill in the diagram on the back of this form.

4. PROPOSED PUMP INFORMATION:
   • Rated Pump Capacity: 30 gallons per minute
   • Propeller
   • Gas
   • Centrifugal
   • Impulse

5. PROPOSED USE:
   • Municipal (including hotels, stores, etc.)
   • Military
   • Domestic (individual, non-commercial water use)
   • Industrial
   • Conservation
   • State Land Use District: Review
   • County Zoning (describe)
   • Urban
   • Agriculture
   • Rural

6. (a) PROPOSED AMOUNT OF WITHDRAWAL: 1,000 gallons per day
   (b) METHOD OF FLOW MEASUREMENT: Flow-meter

7. PENDING ACTIONS: CDUA
   • SMA
   • EIS
   • EA
   • NONE
   • Other (explain)

8. REMARKS, EXPLANATIONS:

   (If more space is needed, continue on back)

NOTE: Signing below indicates that the applicant understands that, if the permit is granted, the work is subject to completion within five (5) years of the approval date. In addition, the contractor shall submit to the Commission a well completion report, well abandonment report, or both, within 30 days after the completion date of the permitted work. The applicant must include their monthly water use data to the permit application. The applicant understands that approval of the proposed permit shall not constitute a determination of cumulative water rights and shall not guarantee the permanent or future use of the permitted pump capacity.

Well Owner: Reversible Trust
Signature: (Signature)
Date: 5-23-99

Landowner: Reversible Trust
Signature: (Signature)
Date: 5-23-99

Contractor: Reversible Trust
Signature: (Signature)
Date: 5-23-99

For Official Use Only:
Date Issued
Date Accepted
Field Checked By
Date
Longitude
Aqull System Name
State Well No:
Conserv. Dist?
30.00

Latitude
8. PROPOSED WELL SECTION

Elevation at top of casing: 1466 ft, nwl.

Ground Elevation: 145 ft, nwl.

Cement Group: 130 ft.

Rock Packing: 12 ft.

Solid Casing: PLASTIC.

Material: Plastic
Length: 12 ft.
Diameter: 12 in.
Wall thickness: 1/4 in.

Total Depth: 130 ft.

Casing: No Perforated

Material: Plastic

Length: 12 ft.
Diameter: 12 in.
Wall thickness: 1/4 in.

Openings: 0 sq. in./L.P.

Hole Diameter: 9 in.

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

**State of Hawaii**

**COMMISSION ON WATER RESOURCE MANAGEMENT**

**Department of Land and Natural Resources**

**6128199**

### Instructions:
Please print or type and submit completed reports within 30 days after well completion to the Commission on Water Resource Management, P.O. Box 821, Honolulu, Hawaii 96809. An as-built drawing of the well and chemical analysis should also be submitted. For assistance call the Commission Regulation Branch at 808-652-3232.

### 1. STATE WELL NO. 4905-02 WELL NAME LAtJf"a~Ue lU ISLAND HAWAII

### 2. LOCATION: Address Tax Map Key 3-2-7-011

### 3. DRILLING OR PUMP INSTALLATION CONTRACTOR FRED PAGE DRILLING INT.

### 4. CONTRACTOR'S C-57 LICENSE NUMBER 1683

### 5. NAME OF DRILLER WHO PERFORMED WORK FRED PAGE

### 6. TYPE OF RIG/CONSTRUCTION ROTARY DRILL

### 7. DATE OF WELL DRILLING COMPLETION

**6-23-93**

(NOTE: Report must be submitted within 30 days after this date)

### 8. GROUND ELEVATION (msl) 152-21 ft.

- Top of Drilling Platform (msl) _G-L ft.

- Height of Drilling Platform above Ground surface 5 ft.

- Bench Mark and Method Used to Determine Ground Level Surveyed

### 9. DRILLER'S LOG:

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<th>Depth (ft.)</th>
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</tr>
</tbody>
</table>

(if more space is needed, continue on back.)

### 10. TOTAL DEPTH OF WELL BELOW GROUND 162 ft.

### 11. HOLE SIZE:

- 4" inch dia. from _0_ ft. to _162_ ft. below ground

- 9" inch dia. from _0_ ft. to _162_ ft. below ground

### 12. CASING INSTALLED:

- 5½ in. I.D. x 3/8 in. wall solid section to _1_ ft. below ground

- 5½ in. I.D. x 3/8 in. wall perforated section to _1_ ft. below ground

- Type of Perforation 30° HEAT EXCH./BETWEEN

### 13. ANNULUS:

- Grouted from _0_ ft. below ground to _162_ ft. below ground

- Gravel packed from _162_ ft. below ground to _160_ ft. below ground

### 14. INITIAL WATER LEVEL 126 ft. below ground. Date and time of measurement **6-24-93**

### 15. INITIAL CHLORIDE _10.5_ ppm Date and time of sampling **6-24-93**

### 16. INITIAL TEMPERATURE _67°_ °F Date and time of sampling **6-24-93**

### 17. DATE OF PUMP INSTALLATION **6-23-93**

### 18. PUMP INSTALLATION:

- Pump Type, Make, Serial No. _JACOBI 40 L 155418-14_ Capacity _20_ gpm

- Motor type, H.P., Voltage, rpm _FRANKLIN INDUSTRIAL 15 HP_ 230/460 3 PH

- Depth of Pump Intake Setting _158 ft. below OC-Level which elevation is _158-53_ ft.

- Depth of bottom of airline _158 ft. below OC-Level, which elevation is _158-53_ ft.

- Pumping Head is _158_ ft.

### 19. PUMPING TESTS:

<table>
<thead>
<tr>
<th>Date 6-23-93</th>
<th>Start water level 126 ft. below R.P.</th>
<th>End water level 158 ft. below R.P.</th>
<th>Depth of well 158 ft. below R.P.</th>
<th>Elapsed Time (hours)</th>
<th>Rate (gpm)</th>
<th>Drop (ft.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6 to 5:30</td>
<td>126 ft. below R.P.</td>
<td>158 ft. below R.P.</td>
<td>158 ft. below R.P.</td>
<td>0 to 0:5</td>
<td>30</td>
</tr>
<tr>
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<td>158 ft. below R.P.</td>
<td>0 to 0:5</td>
<td>30</td>
</tr>
</tbody>
</table>

(if more space is needed, continue on back.)

**Remarks:** **Well has total drawdown at 15.5 ft.**

**Contractor (print)** FRED PAGE **Title** RESIDENT

**Signature**

**Date** 6-23-93

For Official Use:

- **Well No.** 4905-02
- **State of Hawaii**
- **Longitude** 155 05 39
- **Latitude** 19 49 02

For Driller's Use:

- **Job Name** LAtJf"a~Ue Job No. _1_
**DRILLING LOG**

**Date:** 6/22/93  **Job No.:** 1  **Hole No.:** 1  **Elevation:** 115 ft.

**Customer:** Don Lufenhouse  **Location:** Oassen  **Rig:** CP650

**Driller:** MARTY FELDRIAN  **Hrs.:**

**Helper:** FRED PAGE  **Hrs.:**

**Helper:**

**Arv. Job:**  **Lvl. Job:**  **Hrs.:**

**Bit-Size:** 7  **Type:**

**Casing-Size:** 5 in., Length in hole: 157 ft.  **In., Amt. Perforated:** 40 ft.  **in.
**

**Depth Start:** 0 ft., Depth Stop: 164 ft., Feet Drilled: 164

**Water Levels, Time:** 10:00 AM 126 ft., Time: M 1 ft.

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<td>6</td>
<td>Brown Dirt</td>
<td>Gravel Pack to 103'</td>
</tr>
<tr>
<td>11</td>
<td>Med. Brown</td>
<td>Grout Uplift to Top</td>
</tr>
<tr>
<td>11</td>
<td>Med. Brown</td>
<td>1.5 HP Pump Set at 153.5</td>
</tr>
<tr>
<td>54</td>
<td>Med. Hard</td>
<td>27' Drawn down at 18 GPH</td>
</tr>
<tr>
<td>60</td>
<td>Med. Soft</td>
<td></td>
</tr>
<tr>
<td>60</td>
<td>Red Med. Soft</td>
<td></td>
</tr>
<tr>
<td>99</td>
<td>Med. Hard</td>
<td></td>
</tr>
<tr>
<td>99</td>
<td>Med. Hard</td>
<td></td>
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<tr>
<td>140</td>
<td>Med. Soft</td>
<td></td>
</tr>
<tr>
<td>140</td>
<td>Hard</td>
<td></td>
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</tbody>
</table>

**Remarks:**

**Signed:** Fred Page  **Date:** 6/23/93
APPLICATION FOR PERMIT

1. APPLICANT: (may be a, b, or c, but all must be filled in)
   (a) WELL OWNER PAN J. STUHLENHAUSEN
      Firm/Name: Revocable Trust
      Contact Person: Above
      Address: 48 Makaha Pkwy. Hill #4777
      Mililani, Honolulu, HI 96793
   (b) LANDOWNER PAN J. STUHLENHAUSEN
      Firm/Name: Revocable Trust
      Contact Person: Above
      Address: 48 Makaha Pkwy. Hill #4777
      Mililani, Honolulu, HI 96793
   (c) CONTRACTOR P.O. Box. Mililani, Honolulu, HI 96793
      Firm/Name: TCO, Inc.
      Contact Person: Above
      Address: 808 9th Ave.
      Honolulu, HI 96814

2. WELL LOCATION/NAME: ONOMEA
   Island: HAWAII
   Address: OLD HANIALOA HIGHWAY
   (Attach a UGSB map, scale 1" = 2000, and a property tax map showing well location referenced to established property boundaries.)

3. (a) PROPOSED WORK:
   (b) WELL TYPE:

4. PROPOSED PUMP INFORMATION:
   (a) PROPOSED AMOUNT OF WITHDRAWAL: 1000 gallons per day
   (b) METHOD OF FLOW MEASUREMENT:

5. PROPOSED USE:

6. PENDING ACTIONS:

7. REMARKS; EXPLANATIONS:

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NOTE: Signing below indicates that the applicant understands that if the permit application is granted by the Commission on Water Resource Management, the proposed work is to be completed within 30 days of the approval date. In addition, the contractor shall submit to the Commission a well completion report, well abandonment report, or both, within 30 days after the completion date of the permit work. The applicant further understands that approval of the proposed work shall constitute a determination of water rights and shall not guarantee the pumping capacity or future use to the permitting permit holder.

PAN J. STUHLENHAUSEN
Landowner
Signature: 5-25-92
Date: 5-25-92

CONSERV. DIST.?
9. PROPOSED WELL SECTION

Elevation at top of casing: 146 ft, mal.

Ground Elevation: 145 ft, mal.

Cement Group: 130 ft.

Rock Packing:

Solid Casing: PLASTIC.

Material:
Length: 1380 ft.
Diameter:
Wall thickness: 1/4 in.

Hole Diameter: 4 1/2 in.

Total Depth: 130 ft.

Casing: □ Perforated □ Screen
Material:
Length:
Diameter:
Wall thickness:
Openings: sq. in./LF.

Open Hole:
Length: 10 - 10 1/2 ft.
Diameter: 7 1/8 in.

Remarks, Explanations (cont'd):

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