Well No. 3306-02
Olaa No. 6
Exploratory Well

1 MILE RADIUS
COMMISSION ON WATER RESOURCE MANAGEMENT
ROUTE SLIP FOR PERMIT ISSUANCE 3/9/11

FROM: RYAN
DATE: 9/21/11
SUSPENSE DATE: __________

TO: CHONG, R. INIT: KIMURA, J. APPROVAL
TO: DANBARA, S. INIT: OHYE, L. SIGNATURE
TO: FUJII, N. INIT: TAM, B. INFORMATION
TO: HARDY, R. INIT: UYENO, D. FOR:
TO: HOAGGIN, S. INIT: YODA, K. SEE ME
TO: ICE, C. INIT: YOSHINAGA, M. PLEASE: 1 REVIEW & COMMENT
TO: IMATA, R. INIT: 

WELL NUMBER 3306-02 WELL NAME Olaa No. 6

<table>
<thead>
<tr>
<th>Application Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 WCP COVER LETTER</td>
<td>pump only, not necessary</td>
</tr>
<tr>
<td>2 WCP</td>
<td>pump only, not necessary</td>
</tr>
<tr>
<td>3 WELL CHECK PRINTOUT</td>
<td>pump only, not necessary</td>
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PROPOSED WELL SECTION ISSUES?

<table>
<thead>
<tr>
<th>Comments</th>
<th>Date Rec'd</th>
<th>Issues?</th>
<th>If Checked, Send To Applicant</th>
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<tbody>
<tr>
<td>SDWB</td>
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<td>WWB</td>
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<td>HP</td>
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<tr>
<td>LUC</td>
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<td>OCCL</td>
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<tr>
<td>SMA</td>
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<td>X</td>
<td></td>
</tr>
<tr>
<td>BWS(Oahu)</td>
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</tbody>
</table>

NOTES:

DRILLER: Beylik
Beylik Drilling and Pump Service, Inc.
21896
91-259A Olai Street
Kapolei, HI 96707

PHONE: 
FAX: 
CELL: 

TMK: 1-8-001

PUMP CAPACITY

WELL OWNER: Hawaii DWS
LAND OWNER: Hawaii DWS

COMMENT DEADLINE: 1/0/00
90-DAY DEADLINE: 3/30/00

PLEASE:

SEE ME
REVIEW & COMMENT
PREPARE TYPE DRAFT
PREPARE FINAL
FILE
XEROX COPIES

LUC not in CD X
OCCL not in CD X
SMA not in SMA X

PIP app. sent e-mail
9/21/11
Pump Installation Permit
Olaa 6 Well (Well No. 3306-02)

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 14:

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. Attached for your information are copies of the Department of Health’s (DOH) review comments. Please note DOH’s requirements related to discharge of effluent from well drilling and testing activities. Also, please contact the Noise Radiation and Indoor Air Quality Branch at [number] to check compliance with construction noise permit requirements for this project.

3. The permittee shall conduct aquifer pump tests in accordance with the Hawaii Well Construction and Pump Installation Standards (revised February 2004) on the latest aquifer pump test data forms, which are available by contacting staff or on the web at www.hawaii.gov/dlnr/cwrm/forms.htm. The latest pump test was only up to 1250 gpm and needs to go up to the requested 1400 gpm.

The permittee is responsible for all conditions of the permit. This includes ensuring the submission of a completed Well Completion Report Part II form within sixty (60) days after the pump installation work is completed. Be advised that you may be subject to fines of up to $5,000 per day for any violations of your permit conditions starting from the permit approval date.

Please sign both permit originals and return one copy to the Commission office for our files.

IMPORTANT - Pump installation shall not commence until a fully signed permit is returned to the Commission.

If you have any questions, please call Ryan Imata of the Commission staff at [number] or toll-free at [number] (Hawaii), extension 70255.

Sincerely,

WILLIAM J. AILA, JR.
Chairperson

Enclosure

c: Hawaii DWS (with applicable comments – DOH CWB)
PUMP INSTALLATION PERMIT
Olaa 6 Well, Well No. 3306-02

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 Olaa 6 Well (Well No. 3306-02) at TMK 1-8-001:050, Hawaii, subject to the Hawaii Well Construction & Pump Installation Standards (HWCPIS - February 2004) 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 (HAR).

2. No withdrawal of water shall be made other than for testing until a Certificate of Pump Installation Completion has been issued by the Commission.

3. This permit shall be prominently displayed, or made available, at the site of construction work until work is completed.

4. The pump installation permit shall be for installation of a 1400 gpm rated capacity, or less, pump in the well. This permanent capacity may be reduced in the event that the pump test data does not support the capacity.

5. A water-level measurement access shall be permanently installed, in a manner acceptable to the Chairperson, to accurately record water levels.

6. The permittee shall install an approved meter or other appropriate means for measuring and reporting withdrawals and appropriate devices or means for measuring chlorides and temperature at the well head.

7. Well Completion Report Part II shall be submitted to the Chairperson within sixty (60) days after completion of work (please contact staff or visit www.hawaii.gov/dlnr/cwrm/resources_permits.htm for current form).

8. 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.

9. The pump installation permit application and, if relevant, any related staff submittal approved by the Commission are incorporated into this permit by reference.

10. If the HWCPIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result.

11. Any variances from the HWCPIS shall be approved by the Chairperson prior to invoking the variance.

12. 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 the date the permit expires.

13. 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.

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

Date of Approval: September 21, 2011 WILLIAM J. AILA, JR., Chairperson
Expiration Date: September 21, 2013 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 understand that this permit is not to be transferred to any other entity. I also understand that non-compliance with any permit condition may be grounds for revocation and fines of up to $5,000 per day starting from the permit date of approval.

Installer's Signature: Fred Camero C-57, C-57a, or A License #: AC-21896 Date: 
Printed Name: Firm or Title: Beylik Drilling and Pump Service

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

Attachments
October 3, 2011

Mr. Milton Pavao
County of Hawaii
Department of Water Supply
345 Kekuanaoa Street
Hilo, HI 96720

Dear Mr. Pavao:

Certificate of Well Construction Completion for Well No. 3306-02 (TMK 1-8-001:050)

We are pleased to inform you that the Well Construction work permitted for the Olaa 6 Well (Well No. 3306-02) is complete and acceptable and welcome you as a new member to the community of well owners and ground water users in Hawaii.

To protect Hawaii's natural ground water resources for the benefit of all, the following requirements apply to the use of your well:

1. Before this well can be pumped on a regular basis, a certificate of pump installation completion must be obtained.

2. If the well is not in use it must be properly capped.

3. If the well is to be abandoned then the landowner must cause a licensed contractor to apply for a well abandonment permit in accordance with §13-168-12(f), HAR, prior to any well sealing or plugging work.

4. In the event that the well operator and/or landowner changes, the Commission shall be notified prior to the change.

5. In the event the benchmark in the concrete base of the well is altered in any way, an updated version of the Well Elevation page of the Well Completion Report Part I shall be submitted to the Commission. If a licensed surveyor had estimated the original benchmark elevation then a licensed surveyor must establish the new benchmark elevation. The Well Elevation portion of the Well Completion Report Part I can be obtained by contacting Commission staff or at our website at www.hawaii.gov/dlnr/cwrm/resources_permits.htm.

Because ground water in Hawaii is a public trust, and adverse effects at one well may affect other water resources, any violation of the above conditions or any other provision of the Hawaii Administrative Rules may be subject to fines of up to $5,000 per day. The Commission needs your help and asks that you to do your part in utilizing this shared resource. We prefer to work with you in meeting the goal of protecting our ground water resources together.

If you have any questions, please contact Ryan Imata of the Commission staff at 808-687-0255 or toll-free at 1-800-995-3920, extension 70255.

Sincerely,

WILLIAM M. TAM
Deputy Director

RI:ss

Water Resources International
October 3, 2011

Mr. Blaise Clay  
Water Resources International  
P.O. Box 44520  
Kamuela, HI 96743

Dear Mr. Clay:

Well Completion Report Part I for Well No. 3306-02

We received your Well Completion Report Part I for the Olaa 6 Well (Well No. 3306-02) on October 4, 2005 and acknowledge that it is complete. Although proper chlorides were not submitted as part of your well completion report, we will be requesting a new pump test from Beylik Well Drilling and Pump Service, Inc., who is installing the pump. This will meet the chloride reporting requirement.

This completes your obligation under the well construction permit. A certificate of well construction completion will be issued to the well operator/landowner and you will receive a copy. This certificate transfers responsibility of specific aspects of well usage and maintenance from you to the well operator/landowner.

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

Sincerely,

WILLIAM M. TAM  
Deputy Director

RI:ss  
c: Hawaii DWS
Well Check Program
4/1/04 - Revised for update to Well Standards (February 2004)

<table>
<thead>
<tr>
<th>Data Input</th>
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<tbody>
<tr>
<td><strong>Well Number</strong></td>
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<tr>
<td><strong>Well Name</strong></td>
</tr>
<tr>
<td><strong>Ground Elevation</strong></td>
</tr>
<tr>
<td><strong>Cement Grout</strong></td>
</tr>
<tr>
<td><strong>Grouting Method</strong></td>
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<tr>
<td><strong>Hole Diameter</strong></td>
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<tr>
<td><strong>Total Depth</strong></td>
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<tr>
<td><strong>Water Level</strong></td>
</tr>
<tr>
<td><strong>Public Water Supply Well?</strong></td>
</tr>
<tr>
<td><strong>Solid Casing Material</strong></td>
</tr>
<tr>
<td><strong>Solid Casing Specification</strong></td>
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<tr>
<td><strong>Solid Casing Length</strong></td>
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<tr>
<td><strong>Solid Casing Diameter</strong></td>
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<tr>
<td><strong>Solid Casing Wall Thickness</strong></td>
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<tr>
<td><strong>Open Casing Length</strong></td>
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<thead>
<tr>
<th>Results</th>
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</thead>
<tbody>
<tr>
<td><strong>Well Depth</strong></td>
</tr>
<tr>
<td>Theoretical Thickness of Aquifer</td>
</tr>
<tr>
<td>1/4 Aquifer Thickness</td>
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<tr>
<td>Depth of Well below Sea Level</td>
</tr>
<tr>
<td><strong>Well Casing</strong></td>
</tr>
<tr>
<td>Minimum Wall Thickness Material</td>
</tr>
<tr>
<td>Minimum Thickness per standards</td>
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<tr>
<td>Wall Thickness Provided</td>
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<tr>
<td>Minimum Length of Solid Casing</td>
</tr>
<tr>
<td>90% of ground to top of aquifer</td>
</tr>
<tr>
<td>Length of solid casing Provided</td>
</tr>
<tr>
<td>Casing Material</td>
</tr>
<tr>
<td>(for pvc only - check for 200' limit)</td>
</tr>
<tr>
<td><strong>Annular Space</strong></td>
</tr>
<tr>
<td>Depth of Grouting</td>
</tr>
<tr>
<td>Calculated Depth of Grouting</td>
</tr>
<tr>
<td>Depth of Grouting provided</td>
</tr>
<tr>
<td>Minimum Annular Space required</td>
</tr>
<tr>
<td>Thickness of Annular Space</td>
</tr>
</tbody>
</table>
STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
APPLICATION FOR A WELL CONSTRUCTION / PUMP INSTALLATION PERMIT

Instructions: Please print in Ink or type and send completed application with attachments to the Commission on Water Resource Management, P.O. Box 821, Honolulu, Hawaii 96808. Application must be accompanied by 10 copies and a non-refundable 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 808-586-2225. For further information and updates to this application form, visit http://www.hawaii.gov/cwrm.

WELL LOCATION INFORMATION
1. STATE WELL NO. (if already assigned) Class & Exculoratory Well 02

WELL NAME
2. WELL NAME

ISLAND
3. ISLAND Hawaii

4. TOWN

5. WELL OPERATOR'S NAME

Company
Department of Water Supply
Kawika Uyehara
County of Hawaii
345 Kekuanaoa Street - Suite 20
Hilo, Hawaii 96720

GEOLOGIC INFORMATION

PROPOSED WELL CONSTRUCTION
7. Proposed Work
[ ] Construct New Well
[ ] Modify Existing Well
[ ] Amend/Alter Well

8. Construction Type
[ ] Drilled
[ ] Dig
[ ] Shaft
[ ] Tunnel

PROPOSED PUMP INSTALLATION
11. Proposed Work
[ ] Install New Pump
[ ] Replace Pump

13. Methods of flow measurement
[ ] Flowmeter
[ ] Other (explain)

12. Proposed Amount of Withdrawal, gpd (gallons per day)
1,000,000

OTHER LEGAL REQUIREMENTS
If required, items 21 and 22 must be obtained before the Commission can legally issue a permit:

21. Conservation District Use Permit (CDUP)
[ ] Well is in Conservation District Required, CDUP # __________________ date approved ___
[ ] Not Required, CDUP # __________________ date approved ___
[ ] Not Required (attach documentation from applicable County agency)

22. Special Management Area Permit (SAMAP)
[ ] Required, SAMAP # __________________ date approved ___
[ ] Not Required (attach documentation from applicable County agency)

NOTE: Sign here indicates that the signatures understand and agree that the information provided is accurate and true to the best of their knowledge. Further, the signatures understand that upon permit approval 1) the proposed work is to be completed within 2 (two) years of the date of approval, 2) the contractor shall submit to the Commission a well completion/abandonment report within 90 days after the completion date of the permitted work, 3) 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 $500/day.

WCP Application Form 02/26/2007
Good Morning Ryan –

YUP – nothing new for (3) 1-8-001: 050.

Hope you had a great weekend (although it was a short 2 days). Have a nice calm and yet, fun week!

Aloha, Lori Morikami

---

From: Ryan R Imata/DLNR/StateHiUS@STATEHIUS@DOHMAIL On Behalf Of Ryan R Imata/DLNR/StateHiUS@DOHMAIL
Sent: Monday, September 19, 2011 6:29 AM
To: Morikami, Lori N
Subject: RE: Another one

Whoops! Sorry, it's (3).

Thanks!!

Ryan

---

Hi Ryan –

Sorry – need an island number for the TMK (1) – Oahu, (2) – Maui, (3) – Hawaii, (4) – Kauai
But it looks like I don’t have anything new. But will await for your Island number before offering a “fo’ real” answer.

Thanks for your patience.

Aloha, Lori @WWB

From: Ryan R Imata/DLNR/StateHiUS@STATEHIUS@DOHMAIL On Behalf Of Ryan R Imata/DLNR/StateHiUS@DOHMAIL

Sent: Friday, September 16, 2011 2:29 PM

To: Morikami, Lori N

Subject: Another one

Hi Lori,

Sorry, another one - well no. 3306-02, tmk 1-8-001:050. Anything change since your last comments?

Thanks again!

Ryan
MEMO and ROUTE SLIP (ver. 5/25/05) 10/11/05

WCR 1 Check for Well No. 3306-02 (survey to regulation memo)

1. **Pump Tests Check** Glenn Bauer [ ] (initial)
   - **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: [ ] [ ]
     - If yes, identify most probable stream
   - Geology Code for Well Index: QKL

2. **Construction Check** Mitch Ohye [ ] (initial)
   - **Yes**  |  **No**  |  **If no, describe deficiency**
   - data complete [ ] [ ]
   - followed Special Cord & elevations [ ] [ ]
   - well database updated [ ] [ ]
   - Latitude [ ] [ ]
   - Longitude [ ] [ ]
   - NAD27 [ ] [ ]
   - NAD83 [ ] [ ]

3. Charley/Lenore/Ryan [ ] (initial) take action based on above analysis

ATTACHMENTS FOR PUMP INSTALLATION PERMIT (2x):
1. COVER LETTER
2. COUNTY COMMENTS (DWS/SMA)
3. DOH COMMENTS
4. DLNR COMMENTS (LD/OCC/IDHP)
5. WCR 1 Accept
6. WELL CONST. COMPLETION CERTIFICATE
7. USGS MAP UPDATED
8. PARCEL CHECK
9. WELL DATABASE INPUT CHECK
10. GLENN'S PUMP TEST WORKSHEET
11. WELL As-Built CHECK PRINT

not necessary – only WCP or BOTH.

To be sent to driller/pump installer

<= To Landowner

Staff internal checks

4. Roy [ ] (initial) check (Entered WCR 1/WCCC accept date into database)
5. Subia [ ] (initial) finalize
6. Mitch [ ] (initial) signature (Entered PIP issue date if required)
7. Charley/Lenore/Ryan [ ]
State of Hawai‘i
Department of Land and Natural Resources
Commission on Water Resource Management
P.O. Box 621
Honolulu, HI 96809

OLAA NO. 6 WELL (STATE WELL NO. 3306-02)
WELL COMPLETION REPORT

We are submitting an executed well completion report as required.

If you have any questions, please contact Mr. Keith Okamoto of our Engineering Division at extension 260.

Sincerely yours,

Milton D. Pavao, P.E.
Manager

KKO:sco

Enc.

copy - (w/ enc.) Mr. Blaise Clay, Water Resources International, Inc.

... Water brings progress...
State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources
WELL COMPLETION REPORT - PART I
Well Construction

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 821, 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 [Phone Number]. For updates to this form or additional information, please visit our website at [Website].

1. State Well No.: 3306-02  Well Name: Olaa 6 Exploratory Well  Island: Hawaii
2. Address: Mountain View  Tax Map Key: 1-8-1: 050
4. Drilling method used during construction: ☑ Rotary  ☐ Percussion  ☐ Other (describe)
5. Date Well Construction (drilled, cased, grouted) completed: 5-13-2005  Fill out attached Driller's Log

In addition to the driller's log, if a geologic log was prepared, please submit with this form.

6. Was the subject well cored? ☐ Yes ☑ No
7. Initial water-level encountered 1,250' ft. below ground  Date and time of measurement: 7:00 a.m., 10/22/2004
8. Step-Drawdown Test completed? ☐ No ☑ Yes  Attach Step-Drawdown Test form (12/17/97 SDPTD Form)
9. Constant Rate Aquifer Test completed? ☐ No ☑ Yes  Attach Constant Rate Aquifer Test form (12/17/97 CRPTD Form)

Parameters prior to pump test:
10. Water-level: 121.22 ft. above msl  Date and time of measurement: 4/19/2005 3:38 p.m.
11. Chloride: EC 94.6/TDS 50.1 ppm  Date and time of sampling: 4/19/2005 3:43 p.m.
12. Temperature: 67.10°F  Date and time of measurement: 4/19/2005 8:30 p.m.

13. Fill in the as-built section on the other side of this sheet.
14. Fill in attached surveyor's report.
15. If a pump is not planned to be installed, please describe (below in the remarks section) how well is secured to prevent unauthorized access (example: lockable cover, threaded coupling, etc.)
16. The proposed manufacturer's rated pump capacity is n/a gpm at a head of ft.
   (Attach pump specifications and rating curve)
17. Remarks: Lockable cover with threaded coupling

Licensed Driller (print) Blaise Clay  C-57 Lic. No. 17737
Signature ___________________________ Date 8/22/05

Permittee (print) Milton D. Pavao, Manager - Dept. of Water Supply, County of Hawaii
Signature ___________________________ Date 9/29/05
13. AS-BUILT WELD SECTION (Please attach as-built if different from diagram provided below)

Elevation at top of casing: 1384.28 ft
(Survey elevation: 1381.20 ft)
(to nearest 0.01 ft.)

Bench mark elevation:
1381.20 ft
(Survey to nearest 0.01 ft.)

Cement Grout: 822 ft
(min. 70% of distance from ground elevation to top of water surface or 500 ft., whichever is less.)

Annular space between hole and casing (min. 3):
3.125 in.

Rock or Gravel Packing:
\( \text{n/a} \) ft.
Material:
- Crushed Basalt
- Rounded Gravel

Total Depth:
1,453 ft
Bottom of casing

Water Level Elevation:
121.22 ft

Ground Elevation:
1380.08 ft

Solid Casing: (\( \geq 90\% \times (\text{Ground Elev.} - \text{Water Level Elev}) \))
Length: 1,352 ft
Nominal Diameter: 20 in.
Wall Thickness: 0.375 in.
Bottom Elevation: 27.08 ft

Open Casing:
<table>
<thead>
<tr>
<th>Material</th>
<th>Length</th>
<th>Diameter</th>
<th>Bottom Elevation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perforated</td>
<td>100 ft</td>
<td>in.</td>
<td>ft.</td>
</tr>
<tr>
<td>Screen</td>
<td></td>
<td></td>
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</tbody>
</table>

Open Hole:
<table>
<thead>
<tr>
<th>Length</th>
<th>Diameter</th>
<th>Bottom Elevation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>ft.</td>
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</tbody>
</table>

Solid Casing Material:
- Carbon Steel: compliant with (check one or more):
  - ANSI/AWWA C200
  - API Spec. 5L
  - ASTM A53
  - Grade B
  - Other
- Stainless Steel: (check one):
  - ASTM A409 (production wells)
  - ASTM A312 (monitor wells)
  - Grade B
  - Other
- ABS Plastic: conforming to ASTM F480 and ASTM D1527: (check one)
  - Schedule 40
  - Schedule 80
- PVC Plastic: conforming to ASTM F480 and (ASTM D1785 or ASTM D2241): (check one)
  - Schedule 40
  - Schedule 80
  - Schedule 120
- Thermoset Plastic: (check one)
  - Filament Wound Resin Pipe conforming to ASTM D2996
  - Centrifugally Cast Resin Pipe conforming to ASTM D2997
  - Reinforced Plastic Mortar Pressure Pipe conforming to ASTM D3517
  - Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C950
  - PTFE Fluorocarbon Tubing conforming to ASTM D3296
  - FEP Fluorocarbon Tubing conforming to ASTM D3296

Open Casing Material:
- Carbon Steel: compliant with (check one or more):
  - ANSI/AWWA C200
  - API Spec. 5L
  - ASTM A53
  - ASTM A139
- Stainless Steel: (check one):
  - ASTM A409 (production wells)
  - ASTM A312 (monitor wells)
  - Grade B
  - Other
- ABS Plastic: conforming to ASTM F480 and ASTM D1527: (check one)
  - Schedule 40
  - Schedule 80
- PVC Plastic: conforming to ASTM F480 and (ASTM D1785 or ASTM D2241): (check one)
  - Schedule 40
  - Schedule 80
  - Schedule 120
- Thermoset Plastic: (check one)
  - Filament Wound Resin Pipe conforming to ASTM D2996
  - Centrifugally Cast Resin Pipe conforming to ASTM D2997
  - Reinforced Plastic Mortar Pressure Pipe conforming to ASTM D3517
  - Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C950
  - PTFE Fluorocarbon Tubing conforming to ASTM D3296
  - FEP Fluorocarbon Tubing conforming to ASTM D3296

WCR1 Form 11/12/02 Page 2 of 4
<table>
<thead>
<tr>
<th>Depths (ft.)</th>
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<th>Depths (ft.)</th>
<th>Rock Description, Water Level, etc.</th>
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<td>15' to 20'</td>
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<td>126' to 127'</td>
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<td>30' to 40'</td>
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<td>127' to 131'</td>
<td>Ex-Hard</td>
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<td>59' to 64'</td>
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<td>146' to 154'</td>
<td>Hrd (regain circulation -150 ft.)</td>
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<td>HARD</td>
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<td>212 to 295</td>
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<tr>
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Remarks:
## DRILLER'S LOG

**WELL NUMBER:**

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<th>Depths (ft.)</th>
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<th>Dates</th>
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<tr>
<td>715 to 723</td>
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*Remarks:*
### DRILLER'S LOG

**WELL NUMBER:**

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<th>Depths (ft.)</th>
<th>Rock Description, Water Level, etc.</th>
<th>Dates</th>
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<tbody>
<tr>
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<td>med (ELK Bm)</td>
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<tr>
<td>129 to 141</td>
<td>hard and soft (MLB Mm)</td>
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<td>141 to 178</td>
<td>med</td>
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<td>178 to 182</td>
<td>hard (780-170)</td>
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<td>182 to 183</td>
<td>soft (ELK Bm)</td>
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<td>183 to 191</td>
<td>hard (ELK Bm)</td>
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<td>191 to 195</td>
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<td>448 to 454</td>
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<td>454 to 470</td>
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<td>478 to 484</td>
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**Remarks:**

[Handwritten notes]
### DRILLER'S LOG

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<th>Depths (ft.)</th>
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<th>Dates</th>
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<tbody>
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<td>276 to 297</td>
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<td>770 to 800</td>
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**Remarks:**
## DRILLER'S LOG

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<th>Depths (ft.)</th>
<th>Rock Description, Water Level, etc.</th>
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<td>810 Rd Grn</td>
<td>10-19</td>
<td>1252 to 1385</td>
<td>Blk Rd Grn</td>
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<td>Hard</td>
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<td>10-19</td>
<td>1387 to 1387</td>
<td>Hard</td>
<td>10-21</td>
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</table>

**Remarks:**

- 1300 - 1330 Rd Blk Grn
- 1330 - 1340 Rd Blk
- 1340 - 1350 Rd Blk
WELL GEOGRAPHIC POSITION
LAT. 19° 33' 37" N
LONG. 155° 06' 18" W

PLOT PLAN
(Provide Latitude and Longitude of well referenced to HAD2T to nearest second)

8-3306-02 OLAA A

BENCHMARK ELEVATION
1381.20 FT.
(0.01 ft. above MSL)

SURVEYOR'S STAMP AND SIGNATURE

This work was prepared by me or under my direct supervision.

License Professional Land Surveyor
Certificate Number 7564
Expires April 30, 2006

AUGUST 4, 2005
**STEP DRAWDOWN PUMP TEST DATA**

(Commonly used for wells producing >100,000 gpd or >70 gpm)

<table>
<thead>
<tr>
<th>Suggested Elapsed Time</th>
<th>Actual Elapsed Time</th>
<th>Depth to Water (nearest 0.01 ft)</th>
<th>Drawdown S (unadjusted to nearest 0.1 ft)</th>
<th>Pumping Rate Q (approximate in gpm)</th>
<th>EC</th>
<th>CI</th>
<th>Temp. °F or °C</th>
<th>Remarks</th>
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</table>

**Notes:**
- Pumped Well No: 6
- Observation Well No: __________
- Pumped Well Name: Olaa Expl. Well
- Target Q: 750,900,1050,1200 gpm
- Distance between Obs. & Pumped Well: __________ ft
- Reference pt. for depth to water: __________ ft
- Static Water Level @ start of test: __________ ft
- Water level measurements by: Dam electrical sounder, pressure transducer, incl airhose
- START TEST Date: __________ 2005
- Time of day: __________
- Flow Meter Reading Start: __________ gallons

**Table Data:**

- Data in this table is for:
  - Pumped Well
  - Observation Well
- Remarks:
  - Start test/Step 1
  - Chloride sample taken
  - Step 2 begins

8-3306-02 OLAA 6
<table>
<thead>
<tr>
<th>Time (hr)</th>
<th>Suggested Elapsed Time (min)</th>
<th>Actual Elapsed Time (min)</th>
<th>Depth to water (feet)</th>
<th>Drawdown S (unadjusted to rest 9.1 ft)</th>
<th>Pumping rate Q (at least 300 gpm)</th>
<th>EC</th>
<th>Temp</th>
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Stop SDPTD
Water meter @ 38981800

Max possible duration, water level or quality did not stabilize for any 24 period.
Begin recovery data next page
Flow meter reading at end of pumped period:

38981800

1 starting pumping rate Q
2 minimum length of step period of constant pumping rate
3 minimum mandatory Chloride (CI) measurement/sampling at end of every step
4 Use same ending drawdown figure as start for recovery
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END TEST Date: April 2005 Time of day: 3:12p

ADDITIONAL REMARKS

Person in charge of pump test (print): Steve Bowles (Waimea Water Co.)

Signature:

The signature above indicates that the data reported on this form is accurate and true to the best of the person's knowledge who operated the pump test.
CONSTANT-RATE PUMP TEST DATA
(not required for wells producing < 50 gpm)

Pumped Well No  6  Observation Well No
Pumped Well Name Olal expl. well  Distance between Obs & Pumped Well ft.
Target Q 1150/1200 gpm  Reference pt. for depth to water Elev. 1390.89 RT ft msl
Water level measurements by:  □ electrical sounder  □ pressure transducer  X airline
START TEST Date: 19 April 2005  Time of day: 3:38p
Flow Meter Reading Start: 38981800 gallons

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1 Chloride sampling required
2 Use same ending drawdown figure as start for recovery
### Pumped Well Observation Data

**Date:** 22 April 2005  
**Time of day:** 4:40p

**ADDIONAL REMARKS:** None

**Person in charge of pump test (print):** Steve Bowles (Waimea Water Co.)

**Signature:**

The signature above indicates that the data reported on this form is accurate and true to the best of the person's knowledge who operated this pump test.

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**PLEASE:**
- Approval
- Signature
- Information
- See Me
- Review & Comment
- Take Action
- Type Draft
- Type Final
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**INIT:**

**FOR:**

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May 11, 2004

Mr. Peter Young, Chairperson
State of Hawai‘i
Commission on Water Resource Management
P.O. Box 621
Honolulu, HI 96809

OLA‘A NO. 6 EXPLORATORY WELL (STATE WELL NO. 3306-02)
DWS JOB NO. 2000-767
WELL CONSTRUCTION PERMIT

We are forwarding the well construction permit as required.

If you have any questions, please contact Mr. Keith Okamoto of our Engineering Division at extension 260.

Sincerely yours,

Milton D. Pavao, P.E.
Manager

KKO:sco

Enc.
COMMISSION ON WATER RESOURCE MANAGEMENT
ROUTE SLIP FOR PERMIT ISSUANCE

FROM: RYAN
DATE: 9/4/03
SUSPENSE DATE: __________

TO: ANAKALEA, P.  INIT:  TO: LAU, E.  INIT:  FOR:  Approval
Bauer, G. NAKAMA, L. Signature
Ching, F. NAKANO, D. Information
DANBARA, S. OHYE, M. "See Me"
Fujii, N. SAOKDA, E.
GODGING, K.
HARDY, R.
HIGA, D.
ICE, C.
IMATA, R.
KUNIMURA, I.

DATE: __/__/__ SUSPENSE DATE: __/__/__

PLEASE:

1. Review & Comment
2. Type Draft
3. File
4. Xerox ______ copies

WELL NUMBER 3306-02
WELL NAME Olaan #6 Expl. Well

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

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

TO BE SENT TO APPLICANT
FOR OFFICE USE ONLY

Steve Bowles
Phone call
9/4/03

 Hopefully, conditions haven't changed over the past 1½ years since comments made on this application. We're waiting for EA (343 Hrs) before taking action but processed anyway to expedite under 60 page.
Well No. 3306-02
Well Name Olaa 6 Exploratory Well
Applicant DWS
Date of Review 9/4/2003
Reviewer RRI

SECTION 1: WELL LOCATION INFORMATION

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SECTION 2: WELL SECTION DATA  (enter data in grey cells only)

| Elevation at top of casing | 1371 ft., m.s.l. |
| Ground Elevation | 1370 ft., m.s.l. |
| Cement Grout | 1270 ft. |
| Rock Packing | 0 ft. |
| Hole Diameter | 27 in. |
| Total Depth | 1370 ft. |
| Estimated Head | 500 ft., m.s.l. |
| Calculated Aquifer Thickness | 20500 ft. |
| County Water Supply (Y/N ?) | YES |

| Solid Casing |
| Material | Steel |
| Designation | ASTM A53 |
| Length | 1270 ft. |
| Diameter | 20 in. |
| Wall Thickness | 0.375 in. |

| Casing |
| Material | Steel |
| Designation | ASTM A53 |
| Length | 100 ft. |
| Diameter | 20 in. |
| Wall Thickness | 0.375 in. |
| Openings | 0 sq.in./l.f. |
| Open Hole |
| Length | 100 ft. |
| Diameter | 18 in. |

SECTION 3: CHECKLIST  (values to check are shaded)

| Well Depth |
| Theoretical Thickness of Aquifer | 20500 ft. |
| 1/4 Aquifer Thickness | 5125 ft. |
| Depth of Well below Sea Level | 0 ft. okay (refer to HWCPIS Section 2.2) |

| Well Casing |
| Minimum Wall Thickness |
| Material | Steel |
| County or Non-County | county |
| Minimum Thickness per standards | 0.375 in. okay (refer to HWCPIS Section 2.4 c) |
| Wall Thickness Provided | 0.375 in. (disregard this if this is a non-county well) |
| Minimum Length of Solid Casing |
| 90% of ground to top of aquifer | 783 ft. |
| Length of solid casing Provided | 1270 ft. okay (refer to HWCPIS Section 2.4 d) |
| Casing Material | ASTM A53 okay (refer to HWCPIS Section 2.4 e) |

| Annular Space |
| Depth of Grouting |
| Calculated Depth of Grouting | 500 ft. |
| Depth of Grouting provided | 1270 ft. okay (refer to HWCPIS Section 2.6 c) |
| Thickness of Annular Space | 3.5 in. okay (refer to HWCPIS Section 2.6 d) |

Page 1
September 8, 2003

Ref: 3306-02.wcp

Mr. Milton Pavao
Department of Water Supply
County of Hawaii
345 Kekuanoea St.
Hilo, HI 96720

Dear Mr. Pavao:

Well Construction Permit

Olaa 6 Exploratory Well (Well No. 3306-02)

We understand through a discussion between Steve Bowles of Waimea Water Services and Ryan Imata of Commission staff on September 4, 2003 that the Draft EA for this project was published in the July 8, 2002 Office of Environmental Quality Control Bulletin. Therefore, we accept your application as complete on September 4, 2003. To expedite your permit, we routed the application for comments when we received it on February 8, 2002. Therefore, your permit has been reviewed and is approved.

Enclosed are two (2) copies of your approved Well Construction Permit for the captioned well(s) that authorize well construction activities but excludes installation work for your permanent pump. As part of the Chairperson's approval, the following special conditions were added and are part of your permit under Permit Condition 13:

**Special Conditions**

1. Attached for your information is a copy of the Department of Health's (DOH) review comments. Please note DOH's requirements related to discharge of effluent from well drilling and testing activities.

This permit **does not** authorize work for your permanent pump installation. Approval and issuance of your pump installation permit is contingent upon completed application and information provided to and accepted by Commission staff as required in the Well Construction & Pump Installation Standards (1/23/97) and any special conditions performed under this permit. However, a permanent pump may be installed prior to the permanent pump installation permit issuance in accordance with the Commission's April 15, 1998 Declaratory Ruling No. DEC-ADM98-G5, which states that:

"Permanent pump installation for capacities between 0-70 gpm and where the proposed use is for private individual needs in non-ground-water management areas may be allowed prior to the final pump installation permit issuance. When required as a condition of the well construction permit, subsequent pumping tests shall validate the acceptability of the permanent pump. The permanent..."
pump installed prior to final pump installation permit issuance is subject to removal if the testing shows that a smaller pump is required to reduce the potential of affecting neighboring wells and localized upconing at the applicant's well."

If you qualify and wish to take advantage of this ruling, please include a written request to install the permanent pump prior to final pump installation permit issuance when you return to us your signed well construction permit.

Please sign and have the contractor sign both permit originals and return one for our files. Also, copies of the aquifer pump test worksheet and the well completion report form are enclosed for your use.

IMPORTANT - Drilling work shall not commence until a fully signed permit is returned to the Commission. Please provide all the information in this packet to your well drilling contractor. The permittee, well operator, and/or well owner are responsible for all conditions of the permit. This includes ensuring that the well construction contractor, or other party who constructs the well(s), submits a completed Part I of the Well Completion Report form (enclosed) within sixty (60) days after the well construction work is completed. Be advised that you may be subject to fines of up to $1000 per day for any violations of your permit conditions starting from the permit approval date.

If you have any questions, please call 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]
Peter T. Young
Chairperson

Enclosures

c: Waimea Water Services
VELL CONSTRUCTION PERMIT

Olaa 6 Exploratory Well, Well No. 3306-02

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 construction and testing of Olaa 6 Exploratory Well (Well No. 3306-02) at Mountain View, Hawaii, TMK 1-8-1: 050, 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 of 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 authorized by this permit commences and staff shall be allowed to inspect installation activities in accordance with §13-168-15, Hawaii Administrative Rules.

2. The well construction permit shall be for construction and testing of the well only. A minimum 1 1/4-inch diameter monitor tube shall be permanently installed, in a manner acceptable to the Chairperson, to accurately record water levels. The permittee, well operator, and/or well owner shall coordinate with the Chairperson and conduct a pumping test in accordance with the Standards (a pump testing worksheet is attached). The permittee, well operator, and/or well owner shall submit to the Chairperson the test results as a basis for supporting an application to install a permanent pump and withdraw water for use. No permanent pump may be installed until a pump installation permit is approved and issued by the Chairperson.

3. In basal ground water, the depth of the well may not exceed one-fourth (1/4) of the theoretical thickness (41 times initial head) of the basal ground water unless otherwise authorized by the Chairperson.

4. The permittee, well operator, and/or well owner shall incorporate mitigation measures to prevent construction debris from entering the aquatic environment, to schedule work to avoid periods of high rainfall, and to revegetate any cleared areas as soon as possible.

5. In the event that subsurface cultural remains such as artifacts, burials or concentrations of shells or charcoal are encountered during construction, the permittee, well operator, and/or well owner shall stop work and contact the Department's Historic Preservation immediately.

6. The proposed well construction 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 the well shall not constitute a determination of correlative water rights.

7. The following shall be submitted to the Chairperson within sixty (60) days after completion of work:
   b. Elevation (referenced to mean sea level, msl) 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 records, including time, pumping rate, drawdown, chloride content, and other data.

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

9. The well construction permit application is incorporated into this permit by reference and is subject to the Hawaii Well Construction & Pump Installation Standards (January 23, 1997; HWCPIS). If the HWCPIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result.

10. The permit may be revoked by the Commission 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 well construction 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.

11. 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.

12. 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.

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

Date of Approval: September 4, 2003
Expiration Date: September 4, 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 driller 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: ____________________________

Driller's Signature: ____________________________ C-57 License # : ________________ Date: ________________
Printed Name: ____________________________ Firm or Title: ____________________________

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

Attachment

USGS
Department of Healthy Safe Drinking Water, Wastewater, and Clean Water Branches
Hawaii Department of Water Supply
Waimea Water Services
When published in this bulletin we can accept.
June 5, 2002

Mr. Gordon Heit  
Land Agent - Land Division  
Department of Land & Natural Resources  
PO Box 936  
Hilo, HI 96721-0836

Subject:  Draft Environmental Assessment for Olaa #6 Exploratory Well

Dear Mr. Heit:

We have enclosed five (5) copies of our Draft Environmental Assessment: one copy for your office and four copies for distribution to the State of Hawaii Office of Environmental Quality Control. Also enclosed is a completed OEQC Publication Form and diskette with the project summary.

If you have any questions, please feel free to call John Stubbart at [redacted].

Sincerely,

[Signature]

John Stubbart

Enclosures

Copy of letter and EA: Head Librarian - Mountain View School/Public Library – State of Hawaii
Copy of letter only: Gilbert Coloma-Agaran, Chairperson - CWRM-DLNR – State of Hawaii  
Don Hibbard, Administrator – State Historic Preservation Division – State of Hawaii  
Milton Pavao, P.E., Manager - Department of Water Supply - County of Hawaii  
William Wong, P.E., Chief – Department of Health – State of Hawaii  
Christopher J. Yuen, Planning Director - Planning Department – County of Hawaii
STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. BOX 3378
HONOLULU, HAWAII 96801

STATE MESSENGER

Date: FEB 28, 2002

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

Attention: Ryan Imata
Commission Staff Member

From: Wastewater Branch
Department of Health
State of Hawaii

Attention: Lori Kajiwara
Planner, Planning/Design Section
Phone [redacted] Fax [redacted]
Email: lkajiwara@eha.health.state.hi.us

Subject: Well Construction/Pump Installation Permit Application Response

STATE MESSENGER

statemessengerroute.wpd wp1 4/26/2001
February 19, 2002

TO: Honorable Bruce S. Anderson, Director
Department of Health
Attention: Dennis Tulang, Wastewater Branch
William Wong, Safe Drinking Water Branch
Dr. Keith Kawakòta, Hazardous Evaluation and Emergency Response
Alec Wong, Clean Water Branch

FROM: Gilbert S. Coloma-Agaran, Chairperson
Commission on Water Resource Management

SUBJECT: Well Construction Permit Application
Oiaa No. 6 Exploratory Well (Well No. 3306-02)

Transmitted for your review and comment is a copy of the captioned Well Construction 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 March 22, 2002. 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.

[ ] 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 supplies 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

Contact Person: Bill Wong
Phone: [Redacted]

Signed: Bill Wong
Date: 3/4/02
The Department of Health, Safe Drinking Water Branch has the following additional comments for the Well Construction Permit Application for the Olaa No. 6 Exploratory Well (Well No. 8-3306-02 Hawaii):

Please be advised that the Department of Health has experienced drinking water and groundwater contamination by submersible pumps containing mercury. Specifically, the failure of the seals of the pumps allowed mercury to leak out into the well shaft resulting in contamination of the well and the water served by the well. If you intend to install a submersible pump, please review your pump specifications to be sure that the submersible pump(s) you propose to use does not contain materials which could result in either groundwater contamination or drinking water contamination.
February 19, 2002

TO: Honorable Bruce S. Anderson, Director
   Department of Health
   Attention: Dennis Tulang, Wastewater Branch
            William Wong, Safe Drinking Water Branch
            Dr. Keith Kawaoka, Hazardous Evaluation and Emergency Response
            Alec Wong, Clean Water Branch

FROM: Gilbert S. Coloma-Agaran, Chairperson
   Commission on Water Resource Management

SUBJECT: Well Construction Permit Application
   Oia No. 6 Exploratory Well (Well No. 3306-02)

Transmitted for your review and comment is a copy of the captioned Well Construction 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 March 22, 2002. 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 587-0255.

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, §11-20-20.

2. 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.

3. 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 supplies with warning signs to prevent inadvertent consumption of non-potable water. Backflow prevention devices should be routinely inspected and tested.

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

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

6. An NPDES permit is required. 

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

7. No comments/objections

Contact Person: Alec Wong
Phone: 587-4309

Signed: Alec Wong
Date: 2/25/02

[Signature]
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 (808) 586-4309 or by fax at [FAX NUMBER].

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
February 19, 2002

TO: Honorable Bruce S. Anderson, Director
   Department of Health
   Attention: Dennis Tulang, Wastewater Branch
   William Wong, Safe Drinking Water Branch
   Dr. Keith Kawaoka, Hazardous Evaluation and Emergency Response
   Alec Wong, Clean Water Branch

FROM: Gilbert S. Coloma-Agaran, Chairperson
       Commission on Water Resource Management

SUBJECT: Well Construction Permit Application
   Olaa No. 6 Exploratory Well (Well No. 3306-02)

Transmitted for your review and comment is a copy of the captioned Well Construction 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 March 22, 2002.** 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

**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 connection(s)) 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

Contact Person: [Redacted]

Signed: [Redacted]

Date: 2-28-2002
February 19, 2002

TO: Harry Yada, Acting Administrator
    Land Division

FROM: Linnel T. Nishioka, Deputy Director
      Commission on Water Resource Management

SUBJECT: Well Construction Permit Application
          Olaa No. 6 Exploratory Well (Well No. 3306-02)

Transmitted for your review and comment is a copy of the captioned Well Construction permit application.

We would appreciate your comments on the captioned application with regard to the programs, plans, and objectives specific to your division. Please respond by returning this cover memo form by March 22, 2002. If we do not receive comments or a request for additional review time by this date, we will assume 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:

[ ] 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. [redacted].

☒ 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: Original source of private title is Grant No. 4167 issued prior Statehood in 1959.

Contact Person: Gary Martin

Signed: Gary Martin

Date: MAR 3, 2002
COMMISSION ON WATER RESOURCE MANAGEMENT

FROM: LINNEL                  DATE: FEB 20 2002                  SUSPENSE DATE:____________

TO:                         INIT. TO: INIT. FOR: PLEASE:
____ BAUER, G. ____ KUNIMURA, I.  ____ Approval ____ See Me
____ CHING, F. ____ NAKAMA, L.  ____ Signature ____ Review & Comment
____ DANBARA, S. ____ NAKANO, D.  ____ Information ____ Take Action
____ FUJII, N. ____ NISHIOKA, L.  ____ ____ Type Draft
____ HARDY, R.  ____ OHYE, M.  ____ ____ Type Final
____ HIGA, D.  ____ SAKODA, E.  ____ ____ File
____ HIRANO, E. ____ SUBIA, S.  ____ ____ Xerox ___ copies
____ ICE, C.  ____ SWANSON, S.  ____ ____ Last person - trash
____ IMATA, R.  ____ UYENO, D.  ____
____ JINNAI, R.  ____ YODA, K.  ____

Good work Ryan!
Ms. Linnel Nishioka, Deputy Director  
Commission on Water Resource Management  
Department of Land and Natural Resources  
P.O. Box 621  
Honolulu, HI 96809  

WELL CONSTRUCTION PERMIT APPLICATION NO. 3306-02  
OLAA NO. 6 EXPLORATORY WELL  

We have received your February 8, 2002, letter informing us that the processing of this application cannot proceed until written notification is received by your Commission that the environmental review, in conformance with Chapter 343, HRS, is completed for the subject project.

As proposed, this procedure would further prolong the application approval for projects that are much needed to comply with the Surface Water Treatment Rules of the Safe Drinking Water Act or could critically compromise our aging water systems. Therefore, in order to expedite this procedure and based on a February 14, 2002, teleconference with Mr. Ryan Imata, it was agreed that this application, along with any future applications, would be processed concurrently with the Chapter 343 environmental review process. However, the effective date of the application would be contingent on the completion of the Chapter 343 environmental review process.

Finally, we would like to commend Mr. Imata on his prompt response and understanding in this critical issue. If you have any questions, please contact our Engineering Division at [contact information redacted].

Sincerely yours,

Milton D. Pavao, P.E.  
Manager

GGA: jkh  

...Water brings progress...
February 19, 2002

Mr. Milton Pavao  
County of Hawaii  
Department of Water Supply  
345 Kekuanaoa Street, Suite 20  
Hilo, HI 96720

Dear Mr. Pavao:

Well Construction Permit Application for Well No. 3306-02

We have received your Well Construction permit application for the Olaa No. 6 Exploratory Well (Well No. 3306-02). However, we understand that an environmental review under Chapter 343, HRS is required.

Per phone discussion between Ryan Imata of Commission Staff and Glenn Ahuna of County of Hawaii, Department of Water Supply, we will begin processing your permit application, but will not accept your application as complete until the Chapter 343 process is complete and information is provided to the Commission of the completion.

If you have any questions about your permit application, please contact Ryan Imata of the Commission staff at XXXXXXXX or toll-free at XXXXXXXX (Hawaii), extension 70255.

Sincerely,

[Signature]

LINNEL T. NISHIOKA  
Deputy Director
February 19, 2002

TO: Honorable Bruce S. Anderson, Director
Department of Health
Attention: Dennis Tulang, Wastewater Branch
William Wong, Safe Drinking Water Branch
Dr. Keith Kawaoka, Hazardous Evaluation and Emergency Response
Alec Wong, Clean Water Branch

FROM: Gilbert S. Coloma-Agaran, Chairperson
Commission on Water Resource Management

SUBJECT: Well Construction Permit Application
Olaa No. 6 Exploratory Well (Well No. 3306-02)

Transmitted for your review and comment is a copy of the captioned Well Construction 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 March 22, 2002. 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 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, §11-20-29.

[ ] 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

Contact Person: ____________________ Phone: ____________

Signed: ____________________ Date: ____________
Transmitted for your review and comment is a copy of the captioned Well Construction permit application.

We would appreciate your comments on the captioned application with regard to the programs, plans, and objectives specific to your division. Please respond by returning this cover memo form by March 22, 2002. If we do not receive comments or a request for additional review time by this date, we will assume 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 Information].

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: ________________
February 19, 2002

TO: Don Hibbard, Administrator  
Historic Preservation

FROM: Linnel T. Nishioka, Deputy Director  
Commission on Water Resource Management

SUBJECT: Well Construction Permit Application  
Olaa No. 6 Exploratory Well (Well No. 3306-02)

Transmitted for your review and comment is a copy of the captioned Well Construction permit application.

We would appreciate your comments on the captioned application with regard to the programs, plans, and objectives specific to your division. Please respond by returning this cover memo form by March 22, 2002. If we do not receive comments or a request for additional review time by this date, we will assume 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 Information]

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: _____________________________
COMMISSION ON WATER RESOURCE MANAGEMENT
ROUTE SLIP FOR NEW APPLICATIONS

FROM: RYAN INIT: ____________________________ DATE: 2/14/02 SUSPENSE DATE: ____________________________

TO: BAUER, G. ___________ CHING, F. ___________ FUJII, N. ___________ HARDY, R. ___________ HIGA, D. ___________ HIRANO, E. ___________ ICE, C. ___________ IMATA, R. ___________ JINNAI, R. ___________ KUNIMURA, I. ___________

TO: JUM, A. ___________ NAKAMA, L. ___________ NAKANO, D. ___________ NISHIOKA, L. ___________ OHIYE, M. ___________ SAKODA, E. ___________ SUBIA, S. ___________ SWANSON, S. ___________ UYENO, D. ___________ YODA, K. ___________

PLEASE: 3 Approval ___________ 3 Signature ___________ 4 Information ___________

See Me 1 Review & Comment ___________ Take Action ___________ Type Draft ___________

2 Type Final ___________ 5 File ___________ Xerox ______ copies

WELL NUMBER 2906-02 WELL NAME 01aa No. 6

☐ WELL CONSTRUCTION ☐ PUMP INSTALLATION

1 TRANS. LETTER ☑
2 CWRM MAP ☑
3 APPL. FORM (3X) ☑
4 USGS MAPS (3X) ☑
5 TAX MAPS (3X) ☑
6 OWNER VERIF. ☑
7 CONTRACTOR VERIF. ☑

FOLDER: ☑ MAKE NEW FOLDER ☑ FOLDER ALREADY MADE

INCOMPLETE APPLICATION DATES:

DATE ACTION

__________________________ just route for comments, pending 3/43 ____________

__________________________

__________________________

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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.
February 8, 2002

Mr. Milton Pavao
County of Hawaii
Department of Water Supply
345 Kekuanaoa Street, Suite 20
Hilo, HI 96720

Dear Mr. Pavao:

Well Construction Permit Application for Well No. 3306-02

We have received your Well Construction permit application for the Olaa No. 6 Exploratory Well (Well No. 3306-02). However, we understand that an environmental review under Chapter 343, HRS is required. We will commence processing your application upon written notification that the Chapter 343 process is complete.

If you have any questions about your permit application, please contact Ryan Imata of the Commission staff at [redacted] or toll-free at 974-4000, extension 70255.

Sincerely,

LINNEL T. NISHIOKA
Deputy Director
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FROM: RYAN
TO: BAUER, G.

DATE: 31-Jan-02

ROUTE SLIP FOR NEW APPLICATIONS

SUSPENSE DATE: __________

PLEASE:

BAUER, G.
CHING, F.
FUJII, N.
HARDY, R.
HIGA, D.
HIRANO, E.
ICE, C.
IMATA, R.
JINNAI, R.
KUNIMURA, I.
NAKAMA, L.
NAKANO, D.
NISHIOKA, L.
OHYE, M.
SAKODA, E.
SUBIA, S.
SWANSON, S.
UYENO, D.
YODA, K.

WELL NUMBER 3306-02

WELL NAME
Olaa 6 Exploratory

WELL CONSTRUCTION

PUMP INSTALLATION

ATTACHMENTS FOR APPLICATION PROCESSING - Both applicant & staff generated

1. TRANS. LETTER
2. CWRM MAP
3. APPL. FORM (3X)
4. USGS MAPS (3X)
5. TAX MAPS (3X)
6. PARCEL OWNER VERIF.
7. CONTRACTOR VERIF.
8. ALL INFO FILLED IN
9. BACKGROUND CHECK

FOLDER:

MADE NEW FILE FOLDER, ATTACHED
FILE FOLDER ALREADY MADE, IN FILE CABINET

INCOMPLETE ACTION DATES:

DATE ACTION

EIS pending - can accept when done.
no accept.
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 a filing fee of $25.00 payable to the State of Hawaii. The Commission may not accept incomplete applications. For assistance, call the Regulation Branch at (808) 587-0225.

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: Hawaii-Dept. Water Supply
   Mailing Address: 345 Kekuanaoa St., Suite 20, Hilo, HI 96720
   Phone: (808) 961-8050
   Fax: (808) 961-8050
   E-mail: dws@hawaiidws.org

   (b) LAND OWNER: Hawaii-Dept. Water Supply
   Mailing Address: 345 Kekuanaoa St., Suite 20, Hilo, HI 96720
   Phone: (808) 961-8050
   Fax: (808) 961-8050
   E-mail: dws@hawaiidws.org

   (c) CONTRACTOR: to be determined
   Contact Person: Phone: 
   Fax: 
   E-mail: 
   Lic #: 
   (circle one: C-57, C-57a, or A)

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

2. WELL NAME: Olaa No. 6 Exploratory Well
   Island: Hawaii
   Address: Mountain View, Hawaii
   Tax Map Key: 1 - 8 - 1 - 50
   Zone: Sec: Plat: Parcel
   Attack: (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) 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*
   ☐ Modify Pump*
   ☐ Abandon/Seal*
   *State Well No.: (unknown, please call Commission at 808-587-0225)

4. CONSTRUCTION:
   ☐ Drilled
   ☐ Dug
   ☐ Shaft
   ☐ Tunnel
   Is this well part of a battery of wells? ☐ Yes ☐ No (Please describe)

5. PROPOSED PUMPING RATE:
   1400 gallons per minute

6. PROPOSED USE:
   ☐ Municipal (including hotels, stores, etc.)
   ☐ Industrial
   ☐ Domestic (individual, noncommercial water system)
   ☐ Irrigation (crop)
   ☐ No. of Acres: 
   ☐ No. of connections?
   ☐ Other (explain): DWS Hawaii-Olal Mt. View system

7. (a) PROPOSED AMOUNT OF WITHDRAWAL:
   2,016,000 gallons per day
   (b) METHOD OF FLOW MEASUREMENT:
   ☐ Flowmeter ☐ Open-pipe ☐ Weir ☐ 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 
   (explanation)
   Environmental Impact Statement (EIS) or Environmental Assessment (EA) To determine if an EIS or EA is necessary, call OEQC at 
   (explanation)
   Special Management Area Permit (SMAP) To determine if a SMAP is necessary, call DLNR Land Division at 
   (explanation)
   County: 

9. REMARKS, EXPLANATIONS:

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 standards: 1) the proposed work is to be completed within the 2 (years) of the approval date; 2) the contractor shall submit to the Commission a well completion/abandonment report within 90 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 an authorization of correlative water rights and shall not guarantee the pump capacity or future use up to the permitted pump capacity; 5) in the event that an 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 $1000/day.

Well Owner: Hawaii-Dept. Water Supply
Landowner: Hawaii-Dept. Water Supply
Contractor: Hawaii-Dept. Water Supply

Signature: Date: 
Signature: Date: 
Signature: Date: 

For official use only
Latitude: 
Longitude: 
Aquifer System No.: State Well No.: 

WCRPA Form 82101
10. PROPOSED WELL SECTION (Please attach schematic if different from diagram provided below)

**Hole Diameter:** 2.5 in.

Minimum of 2" Radius & 4" Thick Concrete Pad (to contain benchmark surveyed to nearest 0.01 ft. at time of application filing).

**Solid Casing:** (90% x [Ground Elev. - Water Level Elev.])
- **Total Length:** 1270 ft.
- **Nominal Diameter:** 16 in.
- **Wall Thickness:** 375 in.
- **Bottom Elevation:** 100 ft., msl*

**Open Casing:** □ Perforated Screen
- **Total Length:** 100 ft.
- **Nominal Diameter:** 16 in.
- **Wall Thickness:** 375 in.
- **Bottom Elevation:** 0 ft., msl*

**Open Hole:**
- **Length:** 100 ft.
- **Diameter:** 15 in.
- **Bottom Elevation:** -100 ft., msl*

---

*The approximate elevation must be referenced to mean sea level (msl) at the time of application filing. Final elevations of well components shall be submitted in the Well Completion/Well Abandonment reports and referenced to a benchmark which has been established by a surveyor licensed by the State.

For non-salt water Basal Wells - bottom elevation of well should not be deeper than 1/4 of aquifer thickness or,

Bottom Elevation of Well Limit = \( \left( \frac{\text{Water Elevation} - \text{Ground Elev.}}{2} \right) \)

Example: Estimated Water Elev. = 100 ft., msl

Bottom Elevation of Well Limit = \( \left( \frac{\text{Ground Elev.} - 100 \text{ ft.}}{2} \right) = -5 \text{ ft.} \)

**Solid Casing Material:**
- Carbon Steel: compliant with (check one or more):
  - ANSI/AWWA C200
  - API Spec. 5L
  - ASTM A53
  - ASTM A139
  - And compliant with (check one or more):
    - ASTM A242
    - Type E
    - Type S
    - Grade 8
    - Other

Stainless Steel: (check one):
- ASTM A409 (production wells)
- ASTM A312 (monitor wells)

ABS Plastic conforming to ASTM F480 and ASTM D1527: (check one)
- Schedule 40
- Schedule 80

PVC Plastic conforming to ASTM F480 and (ASTM D1785 or ASTM D2241): (check one)
- Schedule 40
- Schedule 60
- Schedule 120

Thermoset Plastic: (check one)
- Filament Wound Resin Pipe conforming to ASTM D3296
- Centrifugally Cast Resin Pipe conforming to ASTM D2997
- Reinforced Plastic Mortar Pressure Pipe conforming to ASTM D3517
- Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C950
- PTFE Fluorocarbon Tubing conforming to ASTM D3298
- FEP Fluorocarbon Tubing conforming to ASTM D3298

**Open Casing Material:**
- Carbon Steel: compliant with (check one or more):
  - ANSI/AWWA C200
  - API Spec. 5L
  - ASTM A53
  - ASTM A139
  - And compliant with (check one or more):
    - ASTM A242
    - Type E
    - Type S
    - Grade 8
    - Other

Stainless Steel: (check one):
- ASTM A409 (production wells)
- ASTM A312 (monitor wells)

ABS Plastic conforming to ASTM F480 and ASTM D1527: (check one)
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- PTFE Fluorocarbon Tubing conforming to ASTM D3298
- FEP Fluorocarbon Tubing conforming to ASTM D3298
Keehofe AirpOrt
Honokeheu
Pacific
Ocean

HUALALAI (8,271 ft.)

Mauna Kea (13,796 ft.)

Observatory Complex

Kailua-Kona

Ka'upu Desert

Pacific Ocean

Olaa Well

Hawaii
The Big Island

Map 1
Location Map Olaa Well No. 6

Map by JOHN PENWITEN
Topo Map of Olaa Well No. 6
Ms. Linnel Nishioka  
ATTENTION: MR. RYAN IMATA  
State of Hawaii  
Department of Land and Natural Resources  
Commission on Water Resource Management  
P.O. Box 621  
Honolulu, HI 96809

APPLICATION FOR PERMIT FOR WELL CONSTRUCTION OF  
OLAA NO. 6 EXPLORATORY WELL  
TAX MAP KEY: (3) 1-8-001:050

Enclosed are the original and four (4) copies of the application for the subject well. Since this is a County project, the $25.00 filing fee is not applicable.

If you have any questions, please contact Mr. Bruce McClure of our Water Resources and Planning Branch at extension 255.

Sincerely yours,

Milton D. Pavao, P.E.  
Manager

BCM:cuf

Enc. (5)

copy - (w/enc.) Waimea Water Services, Inc.

...Water brings progress...
## Well Background Check

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<th>Well Name</th>
<th>Applicant</th>
<th>Driller</th>
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Thursday, January 31, 2002

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