<table>
<thead>
<tr>
<th>Well No.</th>
<th>5417-01</th>
<th>Date of Review</th>
<th>5/15/97</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well Name</td>
<td>Haiku Edington Well</td>
<td>Reviewer</td>
<td>RRI</td>
</tr>
<tr>
<td>Applicant</td>
<td>Anthony Edington</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SECTION 1: WELL LOCATION INFORMATION**

<table>
<thead>
<tr>
<th>Island</th>
<th>Maui</th>
<th>Proposed Use</th>
<th>Domestic/Irrigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquifer System</td>
<td>Maui</td>
<td>Proposed Withdrawal</td>
<td></td>
</tr>
<tr>
<td>Aquifer Sector</td>
<td>Maui</td>
<td>System Sustainable Yield</td>
<td>1500 gpd</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Elevation at top of casing</th>
<th>701 ft., m.s.l.</th>
<th>Solid Casing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ground Elevation</td>
<td>700 ft., m.s.l.</td>
<td>Material</td>
</tr>
<tr>
<td>Cement Grout</td>
<td>420 ft.</td>
<td>Designation</td>
</tr>
<tr>
<td>Rock Packing</td>
<td>0 ft.</td>
<td>Length</td>
</tr>
<tr>
<td>Hole Diameter</td>
<td>12 in.</td>
<td>Diameter</td>
</tr>
<tr>
<td>Total Depth</td>
<td>720 ft.</td>
<td>Wall Thickness</td>
</tr>
</tbody>
</table>

| Estimated Head | 7 ft., m.s.l. |
| Calculated Aquifer Thickness | 0 ft. |
| County Water Supply (Y/N ?) | N |

**SECTION 3: CHECKLIST** *(values to check are shaded)*

**Well Depth**

| Theoretical Thickness of Aquifer | 0 ft. |
| 1/4 Aquifer Thickness           | 0 ft. |
| Depth of Well below Sea Level   | 20 ft. |

**Well Casing**

| Minimum Wall Thickness Material | PVC |
| County or Non-County            | non-county |
| Minimum Thickness per standards | #N/A in. |
| Well Thickness Provided         | 0.250 in. |
| Minimum Length of Solid Casing  | 420 ft. |
| 90% of ground to top of aquifer| 630 ft. |
| Length of solid casing Provided | Sch. 40 |

**Casing Material**

| Casing Material | Sch. 40 |

**Annular Space**

| Depth of Grouting | 490 ft. |
| Depth of Grouting provided | 420 ft. |
| Thickness of Annular Space   | 3 in. okay |
| WELL NO  | Head | Dia-meter | Aquifer Thickness | Active Length | THEIS  | COOPER- JACOB | HARR 10^4 | HARR 10^6 | RECOVERY | ZANGAR  | POLUBARIN | THOMAS OVA | THOMAS SON | AVERAGE |
|---------|------|-----------|------------------|--------------|--------|---------------|-----------|-----------|-----------|---------|-----------|------------|-----------|----------|---------|
| 5320-02 | 0.9  | 0.15      | 5.8              | 8.6          | 1200   | 1200          | 700       | 580       | 140       | 1100    | 1200      | 1300       | 920       |         |
| 5327-10 | 5.2  | 0.36      | 12.5             | 29.9         |         |               |           |           |           |         |           |            | 370       |         |
| 5328-52 | 0.3  | 0.15      | 6.1              | 20.3         | 160    | 70            | 300       | 190       |           |         |           |            | 440       |         |
| 5329-15 | 4.9  | 0.15      | 6.1              | 14.0         |         |               |           |           |           |         |           |            | 360       |         |
| 5329-19 | 0.9  | 0.25      | 9.1              | 11.1         |         |               |           |           |           |         |           |            | 690       |         |
| 5329-20 | 0.6  | 0.25      | 9.1              | 12.6         |         |               |           |           |           |         |           |            | 230       |         |
| 5329-21 | 1.1  | 0.36      | 6.1              | 11.0         |         |               |           |           |           |         |           |            | 190       |         |
| 5330-03 | 9.3  | 0.05      | 15.4             | 15.4         | 9      | 6             | 3         |           |           |         |           |            | 9         |         |
| 5330-07 | 7.2  | 0.05      | 38.0             | 11.0         | 320    | 460           | 1900      |           |           |         |           |            | 890       |         |
| 5330-09 | 6.2  | 0.46      | 57.6             | 81.5         | 730    | 550           | 560       | 440       | 470       | 70      | 70         | 60         | 370       |         |
| 5330-10 | 6.6  | 0.46      | 54.3             | 81.8         | 420    | 580           | 320       | 260       | 300       |         |           |            | 370       |         |
| 5330-11 | 4.9  | 0.46      | 76.2             | 81.4         | 200    | 460           | 40        | 40        | 340       | 200     | 210        | 240        | 220       |         |
| 5332-05 | 206  | 0.36      | 42.1             | 80.3         | 6      | 20            | 4         | 4         | 8         | 4       | 5          | 3          | 6         |         |
| 5339-01 | 0.9  | 0.20      | 18.2             | 18.2         | 380    | 450           | 190       | 160       |           |         |           |            | 290       |         |
| 5339-02 | 0.5  | 0.30      | 17.4             | 17.8         | 900    | 620           | 620       | 430       | 1200      | 1300    | 1800       |            | 980       |         |
| 5339-03 | 0.8  | 0.30      | 16.2             | 16.6         |         |               |           |           | 490       |         |            |            | 490       |         |
| 5339-04 | 0.9  | 0.30      | 29.9             | 29.9         |         |               |           |           | 80        | 90      | 110        |            | 90        |         |
| 5341-02 | 0.9  | 0.15      | 3.0              | 7.0          |         |               |           |           | 80        | 90      | 50         |            | 60        |         |
| 5417-01 | 2.3  | 0.15      | 4.6              | 23.7         | 170    | 210           | 720       | 540       | 1400      | 1500    | 2100       |            | 1700      |         |
| 5419-01 | 1.3  | 0.30      | 12.2             | 13.8         |         |               |           |           | 2300      | 2600    |            |            | 2400      |         |
| 5420-01 | 1.0  | 0.20      | 6.4              | 7.7          |         |               |           |           | 830       | 930     | 1100       |            | 940       |         |
| 5420-02 | 4.3  | 0.30      | 10.4             | 14.7         | 40     | 50            | 30        | 20        | 20        |         |            |            | 30        |         |
| 5424-08 | 0.8  | 0.15      | 4.3              | 4.5          | 80     | 140           | 210       | 120       | 700       |         |            |            | 250       |         |
| 5424-09 | 0.6  | 0.15      | 6.1              | 7.2          | 40     | 50            | 30        | 20        | 20        |         |            |            | 30        |         |
| 5426-01 | 0.0  | 0.15      | 2.7              | 9.4          | 80     | 140           | 210       | 120       | 700       |         |            |            | 20        |         |
| 5427-01 | 4.1  | 0.51      | 36.3             | 67.2         |         |               |           |           | 340       | 370     | 290        |            | 330       |         |
| 5429-02 | 7.5  | 0.20      | 18.3             | 24.3         | 1      | 4             | 2         | 2         | 4         | 4       | 4          | 3          | 4         |         |
| 5430-01 | 4.6  | 0.36      | 103.0            | 107.6        |         |               |           |           | 40        | 50      | 50         |            | 50        |         |
| 5431-02 | 4.1  | 0.51      | 55.2             | 59.6         | 150    | 200           | 90        | 80        | 30        | 310     | 340        | 410        | 200       |         |
| 5431-03 | 4.1  | 0.51      | 47.2             | 50.8         |         |               |           |           | 280       | 220     | 240        | 310        | 260       |         |
| 5439-01 | 2.0  | 0.41      | 19.8             | 20.4         | 90     | 110           | 40        | 30        | 120       | 90      | 100        | 150        | 90        |         |
| 5439-02 | 2.2  | 0.36      | 20.1             | 22.0         | 200    | 250           | 210       | 330       | 540       | 590     | 790        |            | 470       |         |
| 5515-04 | 1.7  | 0.10      | 6.1              | 34.7         | 60     | 90            | 420       | 310       | 370       | 420     | 520        |            | 420       |         |
| 5515-06 | 1.9  | 0.15      | 6.7              | 9.2          | 370    | 420           | 150       | 140       | 120       |         |            |            | 220       |         |
| 5517-05 | 1.8  | 0.15      | 6.1              | 7.9          | 2600   | 1800          | 1100      | 920       | 270       |         |            |            | 1300      |         |
| 5523-01 | 1.5  | 0.15      | 2.7              | 13.7         | 70     | 70            | 260       | 180       | 80        |         |            |            | 130       |         |
| 5529-02 | 0.8  | 0.20      | 11.0             | 20.9         | 120    | 90            | 420       | 200       |           |         |            |            | 210       |         |
**INSTRUCTIONS:** Please TYPE OR PRINT CLEARLY. Complete this form to report total monthly ground water use, and, if required, other information from each of your well sources. Mail to: Commission on Water Resource Management, P.O. Box 621, Honolulu HI 96809. For assistance, please call 587-0265 (Oahu only) or 1-800-468-4644 (neighbor islands).

<table>
<thead>
<tr>
<th>State Well No.</th>
<th>Well Name</th>
<th>Measurement End Date (mm/dd/yy)</th>
<th>Quantity Pumped (gallons)</th>
<th>Method of Measurement*</th>
<th>Chloride (mg/l)**</th>
<th>Temp. (°F)</th>
<th>Lowest Pumping Water Level ft. above msl</th>
<th>Highest Non-Pumping Water Level ft. above msl</th>
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</thead>
<tbody>
<tr>
<td>5417-01</td>
<td>Ulumalu-Edington</td>
<td>Jan 01/1/00</td>
<td>19,693</td>
<td>METER</td>
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<td></td>
<td>Dec 12/26/00</td>
<td>Same Read 19,693</td>
<td></td>
<td></td>
<td></td>
<td>NO USE</td>
<td></td>
</tr>
</tbody>
</table>

* - flow meter, electrical consumption, weir of flume, not metered (estimated)

** - indicate how long pump was on or off when chloride sample taken

*** - minimum time between pump/well turned off and water level measurement must be at least 24 hours; if pumping schedule did not allow for at least 24 hour rest during the month please indicate amount of hours pump was off before this measurement

Other comments or additional information (e.g. - date and method of chloride measurement; how pumpage amounts are estimated; etc...):

Submitted by (print) **ANTHONY EDINGTON**

Signature

Title  **OWNER**

Date  **1/18/2001**
Ulama - Eddingston Well
5417-01
July 19, 2000
WELL COMPLETION REPORT

1. State Well No.: 5417-01
2. Well Name: Ulumalu-Edington
3. Island: Maui
4. Locale/District: Ulumalu, Makawao
5. Tax Map Key: 2-13-1

PART I: WELL CONSTRUCTION REPORT

7. Name of driller who performed work: Mike Robertson
8. Type of rig/construction: Air Rotation
9. Date(s) Well Construction and pump tests (if any) completed: 9/5/99
10. GROUND ELEVATION (referred to mean sea level, msl): 729.79 ft.

Well Bench Mark (description/location): Sounding Tube Nipple
Elevation (msl): 731.53 ft.

11. DRILLER'S LOG: Please attach geologic log (if available or if required by permit)

<table>
<thead>
<tr>
<th>Depth (ft.)</th>
<th>Rock Description, Water Level, Dates, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 45</td>
<td>Tappei's Brown Clay</td>
</tr>
<tr>
<td>45 to 57</td>
<td>Tan Clay Tan Rock</td>
</tr>
<tr>
<td>58 to 130</td>
<td>Soft Tan Rock</td>
</tr>
</tbody>
</table>

12. Total depth of well below ground: 800 ft.

13. Hole size:
   - 12 inch dia. from 0 ft. to 800 ft. below ground
   - 12 inch dia. from 800 ft. to 800 ft. below ground

14. Casing installed:
   - 6 in. I.D. x .25 in. wall solid section to 785 ft. below ground
   - 6 in. I.D. x .25 in. wall perforated section to 800 ft. below ground

15. Annulus:
   - Grouted from 4 ft. below ground to 515 ft. below ground
   - Gravel packed from 515 ft. below ground to 800 ft. below ground

16. Initial water level: 723.51 ft. below ground. Date and time of measurement: 9/1/99
17. Initial chloride: 30 ppm Date and time of sampling: 9/1/99
18. Initial temperature: 79 °F Date and time of measurement: 9/1/99

19. PUMPING TESTS: Reference Point (R.P.) used: Soundings taken, which elevation is 731.53 ft.
   (a) Step-Drawdown Test Date: N/A
      Start water level 723.85 ft. below R.P. End water level 723.85 ft. below R.P.
   (b) Long-term Aquifer Test Date: 9/1/99
      Start water level 723.85 ft. below R.P. End water level 723.85 ft. below R.P.

20. Attach: (a) As-built drawings.
    (b) Surveyed Location
    (c) Long-Term Continuous Aquifer Pump Test Data & graphs.

21. Other remarks/comments: (On back of this form)

Well Drilling Contractor (print): Wailani Drilling Inc. C-57 Lic. No. 20115
Signature: Mike Robertson Date: 9/7/99

Surveyor (print): 
Signature: 
Lic. No.
Date:

Applicant (print): ANTHONY EDINGTON
Signature: 
Date: 2/8/00
### PART II. (PERMANENT) PUMP INSTALLATION REPORT

23. Name of person performing work: Mike Robertson
24. Date Pump Installation Completed: 2/16/00
25. PUMP INSTALLATION:
   - Pump Type, Make, Serial No.: Grundfos Sub. 25875-3905
   - Capacity: 25 gpm
   - Motor type, H.P., Voltage, rpm: Sub 7.5 HP 230V 1PH 2950 RPM
   - Depth of Pump Intake Setting: 737 ft. below wellhead, which elevation is 739.95 ft.
   - Depth to bottom of airline: 737 ft. below wellhead, which elevation is 739.95 ft.
   - Pumping Head is 775 ft. Type of flow meter: turbine which measures in gal

26. As-built drawings attached attached? Yes No
27. Other remarks/comments: (See below)

<table>
<thead>
<tr>
<th>Pump Installation Contractor (print)</th>
<th>Mike Robertson</th>
<th>C-57 Lic. No.</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signature</td>
<td>Mike Robertson</td>
<td>Date</td>
<td>6/16/00</td>
</tr>
<tr>
<td>Applicant (print)</td>
<td>Anthony Edington</td>
<td>Signature</td>
<td>Date</td>
</tr>
</tbody>
</table>

### DRILLER'S LOG (cont'd):

<table>
<thead>
<tr>
<th>Water Level</th>
<th>Depth (ft.)</th>
<th>Rock Description, Remarks, Dates</th>
<th>Water Level</th>
<th>Depth (ft.)</th>
<th>Rock Description, Remarks, Dates</th>
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<tbody>
<tr>
<td>to</td>
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</tbody>
</table>

19. & 25. Remarks:
   - Well 5417-01 Edington
Wailani Drilling Company

Mike Robertson  655 Kulike Road  Haiku, Maui, Hawaii  96708
Ph. 808-572-2673  Fax 572-0925  Cellular 283-8481

Ulumalu-Eddington Well  State Well- # S417-01  Elevation 731.53 ft above m.s.l.

| depth-ft. | 6 in. well seal on 6 in .25 wall steel pipe
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>3/4&quot;x10&quot; concrete slab</td>
</tr>
<tr>
<td>10</td>
<td>topsoil and brown clay 1 boulder from 5-8ft.</td>
</tr>
<tr>
<td>20</td>
<td>brown soil and clay</td>
</tr>
<tr>
<td>30</td>
<td>soft tan rock</td>
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<tr>
<td>40</td>
<td>hard tan rock</td>
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<tr>
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<td>263-271 hard tan rock</td>
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</tbody>
</table>
729.95 ft, m.s.l. Ulumalu-Eddington Well State Well-5417-01 Page 2

*Note: not drawn to scale
Thank you for transmitting the signed Well Construction Permit for Kiniha-Smith Well (5518-04); your request to install the permanent pump at the time of construction, pending approval based on pump test results, is approved.

Another way to handle that is to request it on line 9 of the application form, and it can be confirmed in our acknowledgement letter.

We still do not have the Well Completion Report Part 2 (wcr 2) from Maui Beach Hotel—everything else for Well 5328-52 is complete.

We're also watching for wcr2s from the Edington, Bock, Young, and Hale Kamaole wells, and understand that they are held up for lack of survey. If it gets close to 60 days after permit expiration, please send what you have and get the surveyor's work later.

Roy emphasized that the more serious "loose end" in permitting is getting applicant signatures on the permits. We have some old one that never got validated the way they should.
Wailani Drilling Company

Mike Robertson 655 Kulike Road Haiku, Maui, Hawaii 96708
Ph. 808/572-2673 Fax 572-0925 Cellular 264-7079

FAX MEMO

TO: Charlie

FROM: MIKE ROBERTSON
WAILANI DRILLING INC.

Enclosed are WCR part 2 for:

Edlinton
Maui Beach Hotel
Hale Kamala, which you requested.

Book is waiting for surveyor.

Let me know whose signatures on permits you need and I'll try to find them,

Hand copies on the way in mail

Thanks

Mike Robertson
Wailani Drilling Inc.
Mr. Anthony Edington

Dear Mr. Edington:

Pump Installation Permit
Ulumalu-Edington Well (Well No. 5417-01))

Enclosed are two (2) originals of your approved Pump Installation Permit, in accordance with DEC-ADM98-G5, for the captioned well(s) that authorize permanent pump installation work for your well(s). As part of the Chairperson's approval, the following special conditions were added and are part of your permit under Permit Condition 11:

Special Conditions

1. If the elevation benchmark needs to be altered, the permittee 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.

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

To validate your pump installation permit, please sign and have the contractor sign both permit originals and return one for our files. A copy of the Well Completion Report (Part II) and a copy of your water use report form are enclosed for your use.

IMPORTANT - Unless specifically exempted, pump installation may not proceed without a fully signed permit returned to the Commission. Except for the monthly water use report form, please provide copies of all the information in this packet to your pump installation contractor.

Finally, this letter is notice that we have accepted your Well Completion Report - Part I as complete.

If you have any questions, please call the Commission staff at 587-0251 or toll-free at 984-2400, extension 70251.

Aloha,

TIMOTHY E. JOHNS
Chairperson

Enclosure
PUMP INSTALLATION PERMIT
Ulumalu-Edington Well (Well No. 5417-01)

In accordance with Department of Land and Natural Resources, Commission on Water Resource Management's Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", this document permits the pump installation for Ulumalu-Edington Well (Well No. 5417-01) at, Ulumalu, Makawao, Maui, TMK 2-8-2:1, subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97) which include but are not limited to the following conditions:

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

2. The pump installation permit shall be for installation of a 25 gpm capacity, or less, pump in the well.

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

4. The proposed use shall not adversely affect existing or future legal uses of water in the area, including any surface water or established instream flow standards. This permit or the authorization to pump water from a well shall not constitute a determination of correlative water rights. The permittee 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.

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

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

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

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

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

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

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

Date of Approval: February 11, 2000
Expiration Date: February 11, 2002

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

Permittee's Signature: ____________________________ Date: __________

Printed Name: ________________________________ Firm or Title: ________________________________

Installer's Signature: __________________________ C-57, C-57a, or A License #: __________________________ Date: __________

Printed Name: ________________________________ Firm or Title: ________________________________

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

Attachments

C: USGS
Department of Health/ Safe Drinking Water & Wastewater Branch
Maui Department of Water Supply
Survey done by Martina Sale, signed WCR 9/27/99, for Austin Tsutsumi — survey paperwork lost
State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources

WELL COMPLETION REPORT

1. State Well No.: 8447-R1
2. Well Name: Ulumalu-Edington
3. Island: Maui
4. Locale/District: Ulumalu, Makena
5. Tax Map Key: 2-8-2-1

WELL CONSTRUCTION REPORT

7. Name of driller(s) who performed work: Mike Robertson
8. Type of rig/constuction: Air Rotary
9. Date(s) Well Construction and pump tests (if any) completed: 9/3/99
10. GROUND ELEVATION (referenced to mean sea level, msl): 731.53 ft.
   Well Bench Mark (description/locations): Sounding Tubing nipples
11. DRILLER'S LOG: Please attach geologic log (if available) or if required by permit
   0 to 45 ft. Tension A A Armora Clay      45 to 50 ft. Tension Clay
   45 to 50 ft. Tension Clay & Tens Rock
   (if more space is needed, continue on back)
12. Total depth of well below ground: 800 ft.
13. Hole size:
   12
   12
   12
   12
   12
14. Casing installed:
   6 in. I.D. x 25 in. solid section to 78.5 ft. below ground
   6 in. I.D. x 25 in. perforated section to 800 ft. below ground
   Casing Material/Slot Size: Full Screen
15. Annulus:
   Grouted from +12 ft. below ground to 515 ft. below ground
   Gravel packed from 515 ft. below ground to 800 ft. below ground
16. Initial water level: 723 ft. below ground
   Date and time of measurement: 9/3/99
17. Initial chloride: 30 ppm
   Date and time of sampling: 9/3/99
18. PUMPING TESTS: Reference Point (R.P.) used: 731.53 ft.
   Date and time of measurement: 9/3/99
   (a) Step-Drawdown test Date: N.A.
   Start water level: N.A. ft. below R.P.
   End water level: N.A. ft. below R.P.
   (b) Long-term Aquifer Test Date: 9/3/99
   Start water level: 723.85 ft. below R.P.
   End water level: 723.8 ft. below R.P.
20. Attach: (c) As-built drawings.
   (d) Surveyed Location
   (e) Surveyed Elevation
21. Other remarks/comments: (On back of this form)

Well Drilling Contractor (print) Wailani Drilling Inc. C-57 Lic. No. 20115

Signature
Date 9/3/99

Surveyor (print)
Lic. No. 000000
Date

Applicant (print) Anthony Edington

Signature
Date 9/3/99
PART I.

WELL CONSTRUCTION REPORT

7. Name of driller who performed work: Mike Robertson
8. Type of rig/construction: Air Rotary
9. Date(s) Well Construction and pump tests (if any) completed: 9/15/99
10. GROUND ELEVATION (referenced to mean sea level, msl): 729.19 ft.
11. DRILLER'S LOG: Please attach geologic log (if available or if required by permit)
    Depths (ft.) Rock Description, Water Level, Dates, etc. Depths (ft.) Rock Description, Water Level, Dates, etc.
    0 to 45 Topsoil & Brown Clay 56 to 64 Brown Clay
    45 to 56 Tan Clay & Tan Rock 64 to 130 Soft Tan Rock
    (If more space is needed, continue on back.)
12. Total depth of well below ground: 800 ft.
13. Hole size:
    - 12 inch dia. from 0 ft. to 800 ft. below ground
    - 12 inch dia. from __ ft. to ___ ft. below ground
    - 12 inch dia. from ___ ft. to ___ ft. below ground
14. Casing installed:
    - 6 in. I.D. x .25 in. wall solid section to 785 ft. below ground
    - 6 in. I.D. x .25 in. wall perforated section to 800 ft. below ground
    Casing Material/Slot Size: Full Flow Lauvers
15. Annulus:
    - Grouted from +12 ft. below ground to 515 ft. below ground
    - Gravel packed from ___ ft. below ground to ___ ft. below ground
16. Initial water level: 723.8 ft. below ground.
17. Initial chloride: 30 ppm
18. Initial temperature: 73 °F
19. PUMPING TESTS: Reference Point (R.P.) used: Sounding tube top, which elevation is 731.53 ft.
    (a) Step-Drawdown Test Date: N.A.
    Start water level N/A ft. below R.P.
    End water level N/A ft. below R.P.
    (b) Long-term Aquifer Test Date: 9/15/99
    Start water level 723.85 ft. below R.P.
    End water level 723.8 ft. below R.P.
20. Attach: (a) As-built drawings. (b) Surveyed Location (c) Long-Term Continuous Aquifer Pump Test Data & graphs. (d) Surveyed Elevation
21. Other remarks/comments: (On back of this form)

Well Drilling Contractor (print) Wailani Drilling Inc. C-57 Lic. No. 20115
Signature Mike Robertson Date 9/15/99
Surveyor (print) MARTINA W. JALE Lic. No. 931
Signature Date 9/21/99
Applicant (print) Date 3/1/2004
I

Wailani Drilling Inc. Lic. #857-2015

Mike Robertson 655 Kulike Road Haiku, Maui, Hawaii 96708
Ph 808 572-2673 Fax 572-0925 Cellular 283-8481

To: Charlie Ice
For: Water Resource Commission

Dear Charlie:

Enclosed are signed well construction permits for Wanner, Edington, Hagar, Nicole, Shoemaker and Hipp.

Wanner, Edington and Hagar were all previously sent, and as far as I knew so was Nicole. The Hipp and Shoemaker well construction permits were in my files which was my oversight.

Enclosed also are signed well completion reports for Clark and Naditch.

I have in my file for Hagar an approved pump permit. How did we get the pump permit if the pump installation permit application was not signed by the owner? They told me, it was signed and sent in. If it isn't in your files anywhere please send another copy to us and I will see that it is taken care of.

Enclosed also is the step draw down test info for Hale Kamaole.

Phillips, Wilson, Wanner, Gould and Rubin were all exempted from surveyed elevations and given amnesty from this requirement by the Commission, and are at least five years old.

Edington’s survey signature was sent in. If this is still required for him I will have to have the surveyor sign another copy.

Lowen’s well construction permit was sent to him to sign, and I was told that he sent it to you. Let me know if you need me to follow up on this if you didn’t receive it, and I’ll ask them to send it again.

Peter Martin is very diligent about paper work. According to my files, his signed well construction permit was sent in. At the time I was not retaining copies, so I don’t have another copy of it. Also his step draw-down test should be N/A because it’s less than 70 gpm.

The following owners have chosen not to drill at this time: Harold, Boerner, Fisher, and L. Robertson.

The following wells are on hold until the owners get their funds together: Englehart and Douglas.

The Wark well #5424-08 was not my application.

Other well completion reports will be forthcoming as soon as the surveyor completes and signs the reports.

Hale Kamaole Step Draw Down somehow didn’t get put in the envelope to you. It is included now.

Thorsen well # 5522-02 Construction Permit was signed by me and he says he sent it to you. I did not retain a copy so if you can’t find it please send another copy and let us try again.

Hope this helps clear things up. I would like to start the new year on an even keel.

Mahalo for your cooperation.

Sincerely,

Mike Robertson

Certified By The National Groundwater Association
PUMP INSTALLATION PERMIT
Ulumalu-Edington Well (Well No. 5417-01)

In accordance with Department of Land and Natural Resources, Commission on Water Resource Management's Administrative Rules, Section 13-166, entitled "Water Use, Wells, and Stream Diversion Works", this document permits the pump installation for Ulumalu-Edington Well (Well No. 5417-01) at, Ulumalu, Makawao, Maui, TMK 2-8-2-1, subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97) which include but are not limited to the following conditions:

1. The Chairperson to the Commission on Water Resource Management (Commission), P.O. Box 621, Honolulu, HI 96809, shall be notified, in writing, at least two (2) weeks before any work covered by this permit commences and staff shall be allowed to inspect installation activities in accordance with §13-168-15, Hawaii Administrative Rules.
2. The pump installation permit shall be for installation of a 25 gpm capacity, or less, pump in the well.
3. The permittee shall provide and maintain an approved meter or other appropriate means for measuring and reporting withdrawals and water levels, and appropriate devices or means for measuring chlorides and temperature. These data shall be measured monthly and reported to the Commission on an annual basis, on forms provided by the Chairperson (attached).
4. The proposed use shall not adversely affect existing or future legal uses of water in the area, including any surface water or established instream flow standards. This permit or the authorization to pump water from a well shall not constitute a determination of correlative water rights. The permittee 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.
5. The permittee shall complete and submit as-built drawings and Part II - (Permanent) Pump Installation Report of the Well Completion Report (attached) to the Chairperson within sixty (60) days after completion of work.
6. The permittee shall comply with all applicable laws, rules, and ordinances, and non-compliance may be grounds for revocation of this permit.
7. The pump installation permit application is incorporated into this permit by reference and is subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97). If the HWCPIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result.
8. The permit may be revoked if work is not started within six (6) months after the date of approval or if work is suspended or abandoned for six (6) months, unless otherwise specified. The work proposed in the pump installation permit application shall be completed within two (2) years from the date of permit approval, unless otherwise specified. The permit may be extended by the Chairperson upon a showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Chairperson no later than three (3) months prior to the date the permit expires. If the commencement date is not met, the Commission may revoke the permit after giving the permittee notice of the proposed action and an opportunity to be heard.
9. If the well is not to be used it must be properly capped. If the well is to be abandoned then the permittee must apply for a well abandonment permit in accordance with §13-168-12(f) prior to any well sealing or plugging work.
10. The permittee, its successors, and assigns shall indemnify, defend, and hold the State of Hawaii harmless from and against any loss, liability, claim, or demand for property damage, personal injury, or death arising out of any act or omission of the applicant, assigns, officers, employees, contractors, and agents under this permit or relating to or connected with the granting of this permit.
11. Special conditions in the attached cover transmittal letter are incorporated here~n by reference.

Date of Approval: February 11, 2000
Expiration Date: February 11, 2002

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

Permittee's Signature: ANTHONY EDINGTON Firm or Title: Owner
Printed Name: Anthony Edington
Date: 3/29/2000

Installer's Signature: Mike Robertson, License #: 0115
Printed Name: Mike Robertson

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

Attachments
C: USGS
Department of Health/ Safe Drinking Water & Wastewater Branch
Maul Department of Water Supply
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<th>INIT</th>
<th>TO</th>
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ON WORKPLAN:
WCR1 DATE IS
10/4/99 - NO SUCH WORK IN FILE!

NEED: DATE OF PUMP INSTALLATION

1. S417-01 EDINGTON
2. ELEVATION SURVEY
3. PIP
4. 5L (16-02)

NEED applicant signature on WCR1 then will issue - fines could be monitored
Mr. Mike Robertson  
Wailani Drilling Company  
655 Kulike Road  
Haiku, HI 96708

Dear Mr. Robertson:

**Permit Procedures**

Thank you for faxing copies of well completion reports (Part 1) for Well Nos. 5616-03 (Heaaula Clark Well) and 5417-01 (Ulumalu-Edington Well).

a. The process for Well No. 5616-03 is complete except that we did not get a signed copy of the Well Completion Report Part 1 (WCR1) from the applicant and we cannot issue a Pump Installation Permit, although pre-permit installation was approved pending an acceptable WCR1 by request for the parties’ convenience.

b. We understand that the surveyor sent a signed copy of the WCR1 for 5417-01, also containing the permittee’s signature, but it is evidently lost. We have only his stamped copy of the subdivision survey, which suggests a ground elevation of about 692 feet at the well site, not the "731.53" feet reported on the WCR1. We have never received a validated signed copy of the permit itself from you or the permittee.

We are still awaiting your signature on a copy of the Pump Installation Permit for Well No. 5413-05 (Huelo-Gould). When we receive it, we will accept as complete and process two new applications, for Eric Golting at Papaula and Shaune O’Neill at Huelo.

There remain loose ends regarding several of your clients’ permits; outstanding items from your clients are attached.

This is your notice, however, that in the future, no applications will be accepted as complete until all previous permit requirements, from driller and client, are up-to-date and complete. We anticipate this will require a more assertive role for you, the driller.

As a licensed driller, you will appreciate our need to follow permitting procedures closely to protect the liabilities of land and well owners, well drillers, and the State as trustee for future generations. Our procedure requires a well owner signature on permits to acknowledge compliance conditions and information. We have a lengthening list of your clients who have not signed, acknowledged, or validated proper documents.
Requirements for a driller include an exchange of documentation in a regular sequence to assure that the standards are met. We appreciate your efforts to complete your own portion of the documentation, but must underline the need to impress upon your clients their responsibilities. Because we have so often had to request further completion of standard documentation, we are taking this opportunity to review the procedure for your information. The sequence we observe follows:

1. Application is submitted, with topographic and TMK maps and fee. Well Construction and Pump Installation Permits may be requested simultaneously, although approval is separate and sequential. If the proposed well will produce less than 70 gpm, the applicant may request immediate pump installation pending final Pump Installation Permit approval; well owner must sign.

2. Application is reviewed for completeness and acknowledged accordingly.

3. Completed application is forwarded by staff to the Department of Health (DOH) Safe Drinking Water and Wastewater Branches and to DLNR Land Division for their review.

4. Staff compares proposed section for compliance with Hawaii Well Construction and Pump Installation Standards (HWCPIS).

5. Positive comments from DOH and Land Division plus okay with HWCPIS support issuance of Well Construction Permit (WCP), with any special conditions and a blank copy of the Well Completion Report (WCR); copies go to both owner and driller.

6. Owner and driller must sign WCP and return one copy to Commission to validate it. Drilling may not start without a validated permit.

7. Driller submits notification of starting work.

8. Following completion of well drilling, driller submits
   a. well Completion Report Part 1 (WCR1),
   b. as-built well section,
   c. pump test data,
   d. surveyed elevation of reference point on wellhead marked on the as-built drawings. The well owner, driller, and surveyor must sign. If Pump Installation Permit Application has not yet been submitted, now is the time.

9. WCR1 is reviewed for completeness, well section reviewed to verify compliance with standards, and pump test data are reviewed for aquifer support of pump size.
10. Pump Installation Permit Application, if newly submitted, is reviewed for completeness and acknowledged accordingly. In an older well, if pump tests are not current, staff may require new pump tests. Copy of application is sent to DOH/Safe Drinking Water and Wastewater Branches for review.

11. If the staff review of WCR1/new application is positive, a completed Pump Installation Permit Application will be processed, and Permit issued and transmitted with a blank Well Completion Report Part 2 (WCR2) and Water Use Report form.

12. Following completion of pump installation, installer submits WCR2 with as-built drawing including depth below ground of pump intake. The pump installer and owner must sign, as must the surveyor if the benchmark is relocated.

13. WCR2 is reviewed for completeness, and completion of permitting requirements acknowledged accordingly.

If extensions are needed for start dates or permit expiration, these must be requested in writing (preferably by the owner). Some clarifications can be handled by telephone, but steps in the procedures should be made in writing for the file. This is to track the process for hundreds of applications accurately and protect the legal liability of owner and driller.

If you have any questions, please call Charley Ice at 587-0251 or toll-free at 984-2400, extension 70251.

Sincerely,

LINNEL T. NISHIOKA
Deputy Director

CI:ss
Attachment
For: Charlie Ice  
From: Mike Robertson  
Re: Well Completion Forms

Dear Charlie,

Following are the well completion reports you requested for Clark and Edington. They aren’t signed by the owners since these are my copies.

Sincerely,

Mike

Thank you:

Mike Robertson
WELL COMPLETION REPORT

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

WELL CONSTRUCTION REPORT

1. State Well No.: 5417-01
2. Well Name: Ulumalu-Edington
3. Island: Maui
4. Locale/District: Ulumalu, Makawao
5. Tax Map Key: 2-8-2:1

PART I.

7. Name of driller who performed work: Mike Robertson
8. Type of rig/construction: Air Bater
9. Date(s) Well Construction and pump tests (if any) completed: 9/15/99
10. GROUND ELEVATION (referenced to mean sea level, msl): 729.79 ft.
    Well Bench Mark (description/location): Sounding Tube Nipple
    Elevation(msl): 731.58 ft.
11. DRILLER'S LOG: Please attach geologic log (if available) or if required by permit

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<th>Depth (ft.)</th>
<th>Rock Description, Water Level, Dates, etc.</th>
<th>Depth (ft.)</th>
<th>Rock Description, Water Level, Dates, etc.</th>
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<td>51 to 64</td>
<td>Brown Clay</td>
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<td>45 to 51</td>
<td>Tar Clay x Tar Rock</td>
<td>64 to 130</td>
<td>Salt Tar Blends</td>
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12. Total depth of well below ground: 800 ft.
13. Hole size:
   - 12 in. dia. from 0 ft. to 800 ft. below ground
   - 12 in. dia. from 800 ft. to 800 ft. below ground
14. Casing installed:
   - 6 in. I.D. x 0.25 in. wall solid section to 785 ft. below ground
   - 6 in. I.D. x 0.25 in. wall perforated section to 800 ft. below ground
   - Casing Material/Slot Size: Full Flow Layers
15. Annulus:
   - Grouted from 0 ft. below ground to 515 ft. below ground
   - Gravel packed from 515 ft. below ground to 800 ft. below ground
16. Initial water level: 728.11 ft. below ground.
   Date and time of measurement: 9/15/99
17. Initial chloride: 30 ppm
   Date and time of sampling: 9/15/99
18. Initial temperature: 79 °F
   Date and time of measurement: 9/15/99
19. PUMPING TESTS: Reference Point (R.P.) used: Sounding Tube Nipple, which elevation is 731.58 ft.
   (a) Step-Drawdown Test Date: 9/15/99
   Start water level NA ft. below R.P.
   End water level NA ft. below R.P.
   (b) Long-term Aquifer Test Date: 9/15/99
   Start water level 728.11 ft. below R.P.
   End water level 728.11 ft. below R.P.
20. Attach: (a) As-built drawings.
    (c) Long-Term Continuous Aquifer Pump Test Data & graphs.
21. Other remarks/comments: (On back of this form)

Well Drilling Contractor (print) Wailani Drilling Inc. C-57 Lic. No. 20115
Signature Mike Robertson Date 9/17/99

Surveyor (print) Austin Tatsunami
Signature
Applicant (print)
Signature
### PART II (PERMANENT) PUMP INSTALLATION REPORT

22. Pump Installation Company: Wailani Drilling Inc

23. Name of person performing work: Make Redaction

24. Date Pump Installation Completed: from as-built:

25. PUMP INSTALLATION:

<table>
<thead>
<tr>
<th>Pump Type, Make, Serial No.</th>
<th>Capacity: 25 gpm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor type, H.P., Voltage, rpm:</td>
<td>Submersible 75hp</td>
</tr>
</tbody>
</table>

- Depth of Pump Intake Setting: 23.7 ft. below
- Depth to bottom of airplane: 23.7 ft. below
- Pumping Head is: 23.7 ft.
- Type of flow meter: ________ which measures in ________

26. As-built drawings attached? (Yes) No

27. Other remarks/comments: (See below)

Pump installation Contractor (print) C-57 Lic. No.

<table>
<thead>
<tr>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
</table>

Applicant (print)

<table>
<thead>
<tr>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
</table>

### 8. (cont'd) DRILLER'S LOG (cont'd):

<table>
<thead>
<tr>
<th>Water Level</th>
<th>Depth (ft.)</th>
<th>Rock Description, Remarks,</th>
<th>Water Level</th>
<th>Depth (ft.)</th>
<th>Rock Description, Remarks,</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dates (ft.)</td>
<td></td>
<td></td>
<td>Dates (ft.)</td>
<td></td>
<td></td>
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<tr>
<td>130 to 138</td>
<td></td>
<td>Hard tan rock</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>138 to 139</td>
<td></td>
<td>Hard Basalt (blue rock)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>139 to 140</td>
<td></td>
<td>Softer Weathered blue rock</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>220 to 225</td>
<td></td>
<td>Blue rock &amp; near vertical fractures</td>
<td>250 to 270</td>
<td></td>
<td>Hard tan rock</td>
</tr>
<tr>
<td>250 to 260</td>
<td></td>
<td>Blue rock (hard)</td>
<td></td>
<td>270 to 280</td>
<td>Blue rock (hard)</td>
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<tr>
<td>385 to 390</td>
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<td></td>
<td>395 to 398</td>
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<td>398 to 399</td>
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<td>399 to 403</td>
<td>Medium bluerock</td>
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<td>406 to 409</td>
<td>Medium bluerock</td>
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<td>539 to 540</td>
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<td>Dense bluerock</td>
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</tr>
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</table>

19. & 25. Remarks:

5417-01 EDINGTON
Pumping Test

Time-Drawdown-method after
COOPER & JACOB
Confined aquifer

Date: 16.11.1999

Project: Ulumalu-Edington
Evaluated by: Glenn Bauer

Pumping Test No. Long-Term Test Test conducted on: September 3, 1999
5417-01
Discharge 4812.50 ft³/d

Transmissivity [ft²/d]: 3.30 x 10⁴
## Pumping Test Analysis

*Time-Drawdown-method after COOPER & JACOB Confined aquifer*

**Date:** 16.11.1999  
**Page:** 2  
**Project:** Ulumalu-Edington  
**Evaluated by:** Glenn Bauer

### Test Conducted on:
- **September 3, 1999**
- **Ulumalu-Edington**

### Discharge
- **4812.50 ft³/d**
- **Distance from the pumping well 1.00 ft**

### Static Water Level:
- **723.85 ft below datum**

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</thead>
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<td>0.05</td>
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<td>2</td>
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<td>10</td>
<td>723.94</td>
<td>0.09</td>
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</table>
### 1. Pump Tests Check

**Glenn Bauer** *(initial)*

<table>
<thead>
<tr>
<th>Step-Drawdown Test:</th>
<th>Yes</th>
<th>No</th>
<th>If no, describe deficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>acceptable</td>
<td>☑</td>
<td></td>
<td></td>
</tr>
<tr>
<td>followed WCPI Stds</td>
<td>☐</td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td>analysis attached</td>
<td>☐</td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td>proposed pump cap o.k.</td>
<td>☐</td>
<td>☐</td>
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</table>

<table>
<thead>
<tr>
<th>Aquifer Pump Test:</th>
<th>Yes</th>
<th>No</th>
<th>If no, describe deficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>acceptable</td>
<td>☑</td>
<td></td>
<td></td>
</tr>
<tr>
<td>followed WCPI Stds</td>
<td>☑</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T &amp; S analysis attached</td>
<td>☑</td>
<td>☐</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Well Interference:</th>
<th>Yes</th>
<th>No</th>
<th>If no, describe deficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>estimated Steady-State drawdown at 1-mile radius is ___ ft.</td>
<td>☑</td>
<td>☐</td>
<td>Q &lt; 70 ppm</td>
</tr>
<tr>
<td>analysis attached</td>
<td>☐</td>
<td>☐</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stream Surface Water Impacted:</th>
<th>Yes</th>
<th>No</th>
<th>If yes, identify most probable stream</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>☐</td>
<td>☑</td>
<td></td>
</tr>
</tbody>
</table>

**10/15/99**

### 2. Construction Check

**Mitch Ohye** *(initial)*

<table>
<thead>
<tr>
<th>data complete</th>
<th>Yes</th>
<th>No</th>
<th>If no, describe deficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>followed WCPI Stds</td>
<td>☐</td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td>wellphys.dbf updated</td>
<td>☐</td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td>welaplic.dbf updated</td>
<td>☐</td>
<td>☐</td>
<td></td>
</tr>
</tbody>
</table>
State of Hawaii  
COMMISSION ON WATER RESOURCE MANAGEMENT  
Department of Land and Natural Resources

WELL COMPLETION REPORT  
4/25/97 WCR Form

Instructions: Please print or type and submit completed report within 30 days after well completion to the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809. An as-built drawing of the well and chemical analysis should also be submitted. For assistance call the Commission Regulation Branch at 587-0225, or 1-800-468-4644 Extension 70225.

<table>
<thead>
<tr>
<th>Part I. WELL CONSTRUCTION REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. Name of driller who performed work: Mike Roberson</td>
</tr>
<tr>
<td>8. Type of rig/construction: Air Rotary</td>
</tr>
<tr>
<td>9. Date(s) Well Construction and pump tests (if any) completed: 4/25/97 ft.</td>
</tr>
</tbody>
</table>
| 10. GROUND ELEVATION (referenced to mean sea level, msl): 729.79 ft.  
   Well Bench Mark (description/location): Sounding Tube Nipple  
   Elevation(msl): 731.53 ft. |
| 11. DRILLER’S LOG: Please attach geologic log (if available or if required by permit)  
   Depths (ft.) Rock Description, Water Level, Dates, etc.  
   Depth  
   Rock Description, Water Level, Dates, etc.  
   0 to 45  
   Topsoil + Brown Clay  
   45 to 51  
   Tan Clay + Tan Rock  
   51 to 64  
   Brown Clay  
   64 to 130  
   Soft Tan Rock  
   (If more space is needed, continue on back.) |
| 12. Total depth of well below ground: 800 ft. |
| 13. Hole size:  
   12 inch dia. from 0 ft. to 800 ft. below ground  
   12 inch dia. from 800 ft. to 130 ft. below ground  
   6 in. I.D. x .25 in. wall solid section to 785 ft. below ground  
   6 in. I.D. x .25 in. wall perforated section to 800 ft. below ground  
   Casing Material/Slot Size: full flow liners |
| 14. Casing installed:  
   Grouted from 12" ft. below ground to 515 ft. below ground  
   Gravel packed from 12" ft. below ground to 515 ft. below ground |
| 15. Annulus:  
   Grouted from 12" ft. below ground to 515 ft. below ground  
   Gravel packed from 12" ft. below ground to 515 ft. below ground |
| 16. Initial water level: 729.11 ft. below ground.  
   Date and time of measurement: 4/25/97 |
| 17. Initial chloride: 30 ppm  
   Date and time of sampling: 4/25/97 |
| 18. Initial temperature: 79 °F  
   Date and time of measurement: 4/25/97 |
| 19. PUMPING TESTS: Reference Point (R.P.) used: Sounding Tube Top, which elevation is 731.53 ft.  
   (a) Step-Drawdown Test Date: N.A.  
   Start water level 729.11 ft. below R.P.  
   End water level 729.11 ft. below R.P.  
   (b) Long-term Aquifer Test Date 4/25/97  
   Start water level 723.85 ft. below R.P.  
   End water level 723.85 ft. below R.P.  
   (c) Long-Term Continuous Aquifer Pump Test Data & graphs  
   (d) Surveyed Location  
   (e) Surveyed Elevation |
| 20. Attach:  
   (c) Long-Term Continuous Aquifer Pump Test Data & graphs  
   (d) Surveyed Location  
   (e) Surveyed Elevation  
   (f) Surveyed Elevation |
| 21. Other remarks/comments: (On back of this form) |

Well Drilling Contractor (print) WAIHILI DRILLING INC. C-57 Lic. No. 20115  
Signature  
Date 4/25/97  
Surveyor (print) MARTINA W. JALE  
License No. 9311  
Signature  
Date 4/25/97  
Applicant (print)  
Signature  
Date
PART II. (PERMANENT) PUMP INSTALLATION REPORT

22. Pump Installation Company: ______________________

23. Name of person performing work: ______________________

24. Date Pump Installation Completed: ______________________

25. PUMP INSTALLATION:
   Pump Type, Make, Serial No.: ______________________
   Capacity: ____ gpm
   Motor type, H.P., Voltage, rpm: ______________________
   Depth of Pump Intake Setting _________ ft. below _________, which elevation is _________ ft.
   Depth to bottom of airline _________ ft. below _________, which elevation is _________ ft.
   Pumping Head is _________ ft. Type of flow meter: _________ which measures in _________

26. As-built drawings attached? _ Yes _ No

27. Other remarks/comments: (See below)

Pump Installation Contractor (print) ______________________

C-57 Lic. No. ______________________

Signature ______________________ Date ______________________

Applicant (print) ______________________

Signature ______________________ Date ______________________

8. (cont'd) DRILLER'S LOG (cont'd):

<table>
<thead>
<tr>
<th>Water Level Dates (ft.)</th>
<th>Depth (ft.)</th>
<th>Rock Description, Remarks, Water Level Dates (ft.)</th>
<th>Depth (ft.)</th>
<th>Rock Description, Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>130 to 159</td>
<td>hard tan rock</td>
<td>to</td>
<td>to</td>
<td>to</td>
</tr>
<tr>
<td>138 to 155</td>
<td>hard basalt (bluerock)</td>
<td>to</td>
<td>to</td>
<td>to</td>
</tr>
<tr>
<td>155 to 220</td>
<td>softer weathered bluerock</td>
<td>to</td>
<td>to</td>
<td>to</td>
</tr>
<tr>
<td>220 to 258</td>
<td>bluerock + near vertical fractures</td>
<td>to</td>
<td>to</td>
<td>to</td>
</tr>
<tr>
<td>258 to 270</td>
<td>hard tan rock</td>
<td>to</td>
<td>to</td>
<td>to</td>
</tr>
<tr>
<td>270 to 282</td>
<td>bluerock (hard)</td>
<td>to</td>
<td>to</td>
<td>to</td>
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<td>285 to 352</td>
<td>medium density bluerock</td>
<td>to</td>
<td>to</td>
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<td>352 to 361</td>
<td>hard bluerock</td>
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<td>to</td>
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<td>361 to 423</td>
<td>weathered bluerock</td>
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<td>to</td>
<td>to</td>
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<td>420 to 450</td>
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<td>soft basalt</td>
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<td>to</td>
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19. & 25. Remarks:

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________
### CONSTANT-RATE PUMP TEST DATA

**Table 2 (CRPTD Form 12/17/87)**

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<th>Pumped Well No.</th>
<th>Observation well no.</th>
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<tr>
<td><strong>S417-O1</strong></td>
<td><strong>Ulimalu-Edington</strong></td>
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</table>

**Distance between Obs. & Pumped Well**: 731.53 ft.

**Reference pt. for depth to water**: 723.85 ft.

**Static Water Level @ start of test**: 723.85 ft.

**Target Q**: 2 gpm

**Flow Meter Reading Start**: gals

<table>
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**Remarks**

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**Flow start test** at 2:30 pm.

**Start pump/Cl- taken** at 2:30 pm.
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<th>Actual elapsed time (min)</th>
<th>Depth to water (nearest 0.1 ft)</th>
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<th>Pumping rate Q (gpm)</th>
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Max possible duration, water level or quality did not stabilize for any 24 period possible.

Begin recovery data next page.

Flow meter reading at end of pumped period: 12,680 gallons

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1 Chloride sampling required
2 Use same ending drawdown figure as start for recovery
### Table 2 (CRPTD Form 12/17/97)

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<th>Actual elapsed time (min)</th>
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<th>Recovery Drawdown (unadjusted to nearest 0.1 ft)</th>
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**END TEST**  Date: 9/4/99  Time of day: 12:25 am

**ADDITIONAL REMARKS:**

Person in charge of pump test (print): **Mike Robertson**

Signature: **Mike Robertson**

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.
Tony Edington  Constant Rate Pump Test
Ulamalu-Eddington Well  State Well- # 5417-01  Elevation 731.53 ft above m.s.l.

**Depth:**

- **0 ft:** 6 in. well seal on 6 in. 25 wall steel pipe
- **6 ft:** 3x3x10" concrete slab
- **10 ft:** Topsoil and brown clay
- **15 ft:** 1 boulder from 5-8 ft
- **20 ft:** Tan clay and tan rock
- **25 ft:** Brown soil and clay
- **30 ft:** Weathered blue rock
- **35 ft:** Medium density blue rock
- **40 ft:** 328-339 lost return
- **45 ft:** Weathered blue rock
- **50 ft:** 2 in ductile iron check valve set at 330 ft

**Materials:**

- 7.5 h.p. control box by tank
- 1-1/4" flex conduit
- Water Meter
- Junction box

**Notes:**

- Drilled 40 ft; sounding tube (1") reached to 738 ft.
- Ductile iron check valve 200 ft.
729.95 ft. m.s.l. Ulumalu-Eddington Well  State Well- #5417-01  Page 2

*Note: not drawn to scale
Mr. Anthony Edington

Dear Mr. Edington:

Well Construction Permit
Ulumalu-Edington Well (Well No. 5417-01)

Thank you for your letter of March 12, 1999, requesting an extension of the captioned permit to accommodate a start date late in 1999, noting that the permit expires June 3, 1999. We appreciate the timeliness of your request. We understand that your desired zoning change to allow development is now completed, and that you have negotiated a new start date with your contractor, Wailani Drilling Company.

While we normally expect that land use approval would be completed before applications for development permits, we see no obstacle to extending the existing permit as requested. We can extend the permit once, after which a new application would be required. We note that work should be completed within the time frame of the permit, and therefore, we have consulted with your driller to determine a workable duration for the extension.

By this letter, your permit is extended eight months, to expire February 3, 2000. All other conditions of your original permit remain the same.

If you have any questions, please call Charley Ice at 587-0251 or toll-free at 984-2400, extension 70251.

Aloha,

[Signature]

For: TIMOTHY E. JOHNS
Chairperson
March 12, 1999

To: Michael D. Wilson, Chairperson
   Commission on Water Resources Management
   Dept. Of Land and Natural Resources
   State of Hawaii

From: Anthony Edington
   235 Halenani Dr.
   Wailuku, Maui, Hawaii 96793

Re: Well Construction Permit No. 5417-01

Dear Sir,

I am requesting an extension of the permit, copy attached, issued to me on June 3, 1997 and due to expire on June 3, 1999. The construction and drilling for Ulumalu-Edington Well No. 5417-01 has not begun. I do not anticipate that work can begin before the expiration date of the current permit and request and extension. I intend to drill the well but have waited for the Maui County Council to rezone the land from Interim to Agricultural. Now that the land is Agricultural by State and County Designation we are proceeding with plans for Development. The Contractor, Wailani Drilling Co. Lic#C20115 has agreed to a new time frame and we anticipate a start date in late 1999. I thank you for your time and consideration of this matter. Please contact me if you have further questions or requirements.

Sincerely,

Anthony Edington
Mr. Anthony Edington

Dear Mr. Edington:

Well Construction Permit
Ulumalu-Edington Well (Well No. 5417-00)

Enclosed are two (2) copies of your approved Well Construction Permit for the captioned well(s) which authorizes 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 12:

**Special Conditions**

1. The depth shall not exceed one-quarter the theoretical thickness of the aquifer.
2. The solid casing shall extend to 90% of the distance from ground elevation to the top of the aquifer.
3. Grouting shall extend to 70% of the distance from the ground elevation to the top of the aquifer.
4. 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. (see Department of Health comments, attached).

This permit does not authorize work for your permanent pump installation. Approval and issuance of your pump installation permit is contingent upon information provided to and accepted by Commission staff, as required in Well Construction & Pump Installation Standards (1/23/97) and any special conditions performed under this permit. Please note that special conditions may simply highlight application deviations from the Standards.

The well owner is 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.

To validate your 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. Please provide all the information in this packet to your well drilling contractor.

Also attached for your information is a copy of the Department of Health's review comments.

If you have any questions, please call Charley Ice at 587-0251 or toll-free at 984-2400, extension 70251.

Aloha,

Michael D. Wilson
Chairperson

Enclosures
Mr. Anthony Edington

Dear Mr. Edington:

Well Construction Permit
Ulumalu-Edington Well (Well No. 5417-01)

Enclosed are two (2) copies of your approved Well Construction Permit for the captioned well(s) which authorizes 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 12:

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1. The depth shall not exceed one-quarter the theoretical thickness of the aquifer.
2. The solid casing shall extend to 90% of the distance from ground elevation to the top of the aquifer.
3. Grouting shall extend to 70% of the distance from the ground elevation to the top of the aquifer.
4. 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. (see Department of Health comments, attached).

This permit does not authorize work for your permanent pump installation. Approval and issuance of your pump installation permit is contingent upon information provided to and accepted by Commission staff, as required in Well Construction & Pump Installation Standards (1/23/97) and any special conditions performed under this permit. Please note that special conditions may simply highlight application deviations from the Standards.

The well owner is 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.

To validate your 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. Please provide all the information in this packet to your well drilling contractor.

Also attached for your information is a copy of the Department of Health's review comments.

If you have any questions, please call Charley Ice at 587-0251 or toll-free at 984-2400, extension 70251.

Aloha,

MICHAEL D. WILSON
Chairperson

Enclosures
WELL CONSTRUCTION PERMIT

Ullumalu-Edington Well, Well No. 5417-01

In accordance with Department of Land and Natural Resources, Commission on Water Resource Management's Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works"; this document permits the construction and testing of Ullumalu-Edington Well (Well No. 5417-01) at Ullumalu, Makawao, Maui, TMK 2-8-2:1 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.

2. The well construction permit shall be for construction and testing of the well only. A minimum one-inch diameter monitor tube shall be permanently installed, in a manner acceptable to the Chairperson, to accurately record water levels. The permittee shall coordinate with the Chairperson and conduct a pumping test in accordance with the Standards (a pump testing worksheet is attached). The permittee 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 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 shall stop work and contact the Department's Historic Preservation Division (587-0045) 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 shall comply with all applicable laws, rules, and ordinances, and 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 (1/23/97).

10. The permit may be revoked if work is not started within six (6) months after the date of approval or if work is suspended or abandoned for six (6) months, unless otherwise specified. The work proposed in the 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 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 must apply for a well abandonment permit in accordance with §13-168-12(f) prior to any well sealing or plugging work.

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

Date of Approval: June 3, 1997
Expiration Date: June 3, 1999

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

Permittee's Signature: ___________________________ Date: _______________
Printed Name: ___________________________ Firm or Title: ___________________________

Driller's Signature: ___________________________ License #: _______________
Printed Name: ___________________________ Firm or Title: ___________________________

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

Attachment c:  USGS
Department of Health / Safe Drinking Water, Wastewater & Clean Water Branches
Maui Department of Water Supply
WELL CONSTRUCTION PERMIT

Ulumalu-Edington Well, Well No. 5417-01

In accordance with Department of Land and Natural Resources, Commission on Water Resource Management's Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", this document permits the construction and testing of Ulumalu-Edington Well (Well No. 5417-01) at Ulumalu, Makawao, Maui, TMK 2-8-21 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.

2. The well construction permit shall be for construction and testing of the well only. A minimum one-inch diameter monitor tube shall be permanently installed, in a manner acceptable to the Chairperson, to accurately record water levels. The permittee shall coordinate with the Chairperson and conduct a pumping test in accordance with the Standards (a pump testing worksheet is attached). The permittee 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.

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4. The permittee 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 shall stop work and contact the Department’s Historic Preservation Division (587-0045) 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.
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   e. Complete pumping test records, including time, pumping rate, drawdown, chloride content, and other data.

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Expiration Date: June 3, 1999

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

Permittee's Signature: __________________________ Date: 6/8/97
Printed Name: Anthony Edington Firm or Title: Owner

Driller's Signature: __________________________ License #: 5572015 Date: 6/8/97
Printed Name: Mike Robertson Firm or Title: Wailani Drilling Inc.

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

Attachment c: USGS Department of Health / Safe Drinking Water, Wastewater & Clean Water Branches Maui Department of Water Supply
TO: Honorable Lawrence Miike, Director  
Department of Health  
Attention: Dennis Tulang, Wastewater Branch  
William Wong, Safe Drinking Water Branch

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

SUBJECT: Well Construction Permit Application  
Ulimalu-Edington Well (Well No. 5417-01)

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

We would appreciate your comments on the captioned application for any conflicts or inconsistencies with the programs, plans, and objectives specific to your department. Please respond by returning this cover memo form by May 23, 1997.

Please find a map, attached, to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Mr. Charley Ice of the Commission staff at 587-0251.

Cl: ss  
Attachment(s)

RESPONSE:

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

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 located near the proposed well site (information attached).

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

No comments/objections

Contact Person: Lori N. Kaiwara  
Phone: 586-4794

Signed: John M. Kaiwara  
Date: 5-18-97
TO: Honorable Lawrence Miike, Director  
Department of Health  
Attention: Dennis Tulang, Wastewater Branch  
William Wong, Safe Drinking Water Branch

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

SUBJECT: Well Construction Permit Application  
Uulumalu-Edington Well (Well No. 5417-01)

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CI:ss  
Attachment(s)

RESPONSE:

[ ] This well qualifies as a source which will serve as a source of potable water to a public water system (serving 25 or more people at least 60 days per year or has 15 or more service connections) and must receive Director of Health approval prior to its use to comply with Hawaii Administrative Rules (HAR), Title 11, Chapter 20, Rules Relating to Potable Water Systems, §11-20-9.

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

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

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

[ ] No comments/objections

Contact Person: Bill Wong  
Phone: 5864258

Signed: Bill Wong  
Date: 5/24/97
Mr. Anthony Edington

Dear Mr. Edington:

Well Construction/Pump Installation Permit Application
Ulumalu-Edington Well (Well No. 5417-01)

We acknowledge receipt, on April 4, 1997, of your completed well construction/pump installation permit application for the Ulumalu-Edington Well (Well No. 5417-01). You can expect your application to be processed within ninety (90) days from this date.

For your information, the process of constructing a well is normally regulated and permitted in two (2) steps. First, a well construction permit is issued for drilling and testing purposes only. Based upon information provided by you through a Well Completion Report Part 1 (Well Construction), a pump installation permit may then be issued to authorize pump work. If a pump is installed then a Well Completion Report Part 2 (Pump Installation) is required.

If you have any questions about your permit application, please contact Charley Ice of the Commission staff at 587-0251, or toll-free from Maui at 984-2400, extension 70251.

Sincerely,

RAE M. LOUI
Deputy Director

CI:ss
TO: Honorable Lawrence Miike, Director
   Department of Health
   Attention: Dennis Tulang, Wastewater Branch
   William Wong, Safe Drinking Water Branch
   
FROM: Michael D. Wilson, Chairperson
       Commission on Water Resource Management
   
SUBJECT: Well Construction Permit Application
   Ulumalu-Edington Well (Well No. 5417-01)

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

We would appreciate your comments on the captioned application for any conflicts or inconsistencies with the programs, plans, and objectives specific to your department. Please respond by returning this cover memo form by May 23, 1997.

Please find a map, attached, to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Mr. Charley Ice of the Commission staff at 587-0251.

RESPONSE:

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

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

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

[ ] No comments/objections

Contact Person: ___________________________ Phone: _________________

Signed: ___________________________ Date: _________________
## Department of Land and Natural Resources

**UAC or Attached Worksheet**

**DATE:** May 9, 1997

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**REMARKS:**
- **LINE (1):** Well No. 5417 (WCPA/PIPA)
- **LINE (2):**
- **LINE (3):**
- **LINE (4):**

**ANTHONY L. EDINGTON**

**690**

**Day to the Order of:**

**Dept of Land and Natural Resources**

**$2500**

**Twenty-Five Hundred Dollars**

**First Hawaiian Bank**

First Hawaiian Bank
215 Papalaua Street
Lahaina, Hawaii 96761

MEMO: Well Permit Fee

Memo: 21301015:0690 075h 422946
APPLICATION FOR PERMIT
X Well Construction and X Pump Installation

Instructions: Please print in ink or type and send completed application with attachments to the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809. Application must be accompanied by a non-refundable filing fee of $25.00 payable to the Dept. of Land and Natural Resources. The Commission may not accept incomplete applications. For assistance, call the Regulation Branch at 808-587-0225.

1. APPLICANT: (circle primary contact a, b, or c) Primary Fax: [Redacted]
(a) WELL OWNER
   Firm/Name: Anthony Edington
   Contact Person: Anthony Edington
   Address: [Redacted]
(b) LANDOWNER
   Firm/Name: Same
   Contact Person: Ph: [Redacted]
(c) CONTRACTOR
   Firm/Name: Wainani Drilling Company Ph: 572-2673
   Contact Person: Mike Robertson
   Address: 655 Kulike Rd. Haiku, Maui, Hawaii, 96708

2. WELL LOCATION/NAME: Haiku-Edington Well
   Island: Maui
   Address: [Redacted]

3. (a) PROPOSED WORK
   X Drill New Well
   Deepen
   X Install New Pump
   Modify Existing Well
   Redrill
   * Be sure to complete and submit well abandonment report upon completion of work.

   (b) WELL TYPE:
   Dug
   Bored
   Driven
   X Drilled
   Radial

4. PROPOSED PUMP INFORMATION:
   Rated Pump Capacity: 15 gallons per minute
   Pump Type: Deep Well Turbine
   Rotary
   Submersible
   Centrifugal
   Motor: Diesel
   Propeller
   Reciprocating
   Impulse
   X Electric, rated horsepower: 7.5

5. PROPOSED USE:
   X Municipal (including hotels, stores, etc.)
   Military
   X Domestic (individual, noncommercial water sys.)
   Industrial
   X Irrigation (crop) Fruit Trees
   Other (explain)

6. (a) PROPOSED AMOUNT OF WITHDRAWAL: 1500 gallons per day
   (b) METHOD OF FLOW MEASUREMENT: X Flow-meter Open-pipe Orifice Plate Weir

7. PENDING ACTIONS: CDUA SMA EIS Others (explain)
   Completion Date: N.A.

REMARKS, EXPLANATIONS:

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

Anthony Edington
Well Owner
Signature: [Redacted]
Date: [Redacted]

Anthony Edington
Landowner
Signature: [Redacted]
Date: [Redacted]

Mike Robertson
Contractor
Signature: [Redacted]
Date: [Redacted]

For Official Use Only:
Date Received: [Redacted]
Date Accepted: [Redacted]
Field Checked By: [Redacted]
Date: [Redacted]
8. Remarks, Explanations (cont'd): **Well to be cased with 6 in. PVC and grouted into ledge of basalt at estimated depth of 450 ft. Then 4 in. PVC will be installed from ground level to bottom of hole, estimated depth, 720 ft.**

9. PROPOSED WELL SECTION

Elevation at top of casing: 791 ft., msl.

Cement Grout: 420 ft.

Rock Packing: 0 ft.

Hole Diameter: 12 in. to 420 ft. 6 in. 420 to 720 ft.

Total Dept: 720 ft.

Ground Elevation: 700 ft., msl

Solid Casing:
- Material: P.V.C. Schedule 40
- Length: 6 in. to 420 ft. Sealed with 4 in. to 720 ft.
- Diameter: 3" in.
- Wall thickness: .25 in.

Casing: X Perforated Screen
- Material: P.V.C. Schedule 40
- Length: 20 ft.
- Diameter: 4 in.
- Wall thickness: .25 in.
- Openings: 2 sq. in./L.F.

Open Hole:
- Length: 0 ft.
- Diameter: N.A. 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.