<table>
<thead>
<tr>
<th>TO:</th>
<th>INIT.</th>
<th>TO:</th>
<th>INIT:</th>
<th>FOR:</th>
<th>PLEASE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAUER, G.</td>
<td></td>
<td>NAKAMA, L.</td>
<td></td>
<td>Approval</td>
<td>See Me</td>
</tr>
<tr>
<td>CHING, F.</td>
<td></td>
<td>NAKANO, D.</td>
<td></td>
<td>Signature</td>
<td>Review &amp; Comment</td>
</tr>
<tr>
<td>DANBARA, S.</td>
<td></td>
<td>OHYE, M.</td>
<td></td>
<td>Information</td>
<td>Take Action</td>
</tr>
<tr>
<td>FUJII, N.</td>
<td></td>
<td>SAKODA, E.</td>
<td></td>
<td></td>
<td>Type Draft</td>
</tr>
<tr>
<td>GOODING, K.</td>
<td></td>
<td>STAHL, K.</td>
<td></td>
<td></td>
<td>Type Final</td>
</tr>
<tr>
<td>HARDY, R.</td>
<td></td>
<td>SUBIA, S.</td>
<td></td>
<td></td>
<td>File</td>
</tr>
<tr>
<td>HIGA, D.</td>
<td></td>
<td>SWANSON, S.</td>
<td></td>
<td></td>
<td>Xerox ___ copies</td>
</tr>
<tr>
<td>ICE, C.</td>
<td></td>
<td>UYENO, D.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IMATA, R.</td>
<td></td>
<td>YODA, K.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IZU, Y.</td>
<td></td>
<td>YOSHINAGA, M.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KUNIMURA, I.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
NOTICE TO START DRILLING

DATE: 01/14/2005

This is to inform you that we would like to start well construction on GAPP WELL, Well No. 3786-01 and would like to use the test pump as the permanent pump prior to final pump installation permit issuance.

Fill free to call me at 808-987-8100 or home 808-966-6398.
Rod Diamond  Well Driller/ Contractor BC23379
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 Gapp Well (Well No. 3786-01) at 15-1014 Pilikai, HPP, Hawaii, TMK 1-5-060: 076, subject to the Hawaii Well Construction & Pump Installation Standards (February 2004) 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 §15-168-13, Hawaii Administrative Rules.

2. The well construction permit shall be for construction and testing of the well only. A minimum 1½-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 (February 18, 2004; 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: January 3, 2005
Expiration Date: January 3, 2007

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 $5000 per day starting from the permit date of approval.

Permittee's Signature: 

Printed Name: JOHN G. DIAMOND
Firm or Title: C-57 License # BC45579

Driller's Signature: RODNEY K. DIAMOND
Printed Name: RODNEY K. DIAMOND
Firm or Title: OWNER

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

Attachment: USGS Department of Health's Safe Drinking Water, Wastewater, and Clean Water Branches
Hawaii Department of Water Supply
Rod Diamond
COMMISSION ON WATER RESOURCE MANAGEMENT
ROUTE SLIP FOR PERMIT ISSUANCE

FROM: RYAN
DATE: __/___/___

TO: INIT.

BAUER, G. NAKAMA, L.
CHING, F. NAKANO, D.
DANBARA, S. OHYE, M.
FUJII, N. SAKODA, E.
GOODING, K. STAHL, K.
HARDY, R. SUBIA, S.
HIGA, D. SWANSON, S.
ICE, C. UYENO, D.
IMATA, R. YODA, K.
IZU, Y. YOSHINAGA, M.
KUNIMURA, I.

PLEASE:
See Me
1. Review & Comment
2. Take Action
3. Type Draft
4. File
5. Xerox __ copies

WELL NUMBER 3780-01 WELL NAME Gapp well

WELL CONSTRUCTION

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

TO BE SENT TO APPLICANT

App date = 1/3/05

FOR OFFICE USE ONLY

PUMP INSTALLATION

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

TO BE SENT TO APPLICANT

FOR OFFICE USE ONLY
January 6, 2005

Ref: 3786-01.wcp

Mr. John Gapp
P.O. Box 1128
Pahoa, HI 96778

Dear Mr. Gapp:

Well Construction Permit
Gapp Well (Well No. 3786-01)

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 (February 2004) 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.
Mr. John Gapp  
Page 2  
January 6, 2005

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 $5000 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 587-0255 or toll-free at 974-4000 (Hawaii), 274-3141 (Kauai), 984-2400 (Maui), or 1-800-468-4644 (Lanai & Molokai), extension 70255.

Sincerely,

Peter T. Young  
Chairperson

Enclosures

c: Rod Diamond
WELL CONSTRUCTION PERMIT

Gapp Well, Well No. 3786-01

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

In accordance with Department of Land and Natural Resources, Commission on Water Resource Management's Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", this document permits the construction and testing of Gapp Well (Well No. 3786-01) at 15-1014 Pilikai, HPP, Hawaii, TMK 1-5-060: 076, subject to the Hawaii Well Construction & Pump Installation Standards (February 2004) 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\_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 (February 18, 2004; 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: January 3, 2005
Expiration Date: January 3, 2007

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 $5000 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

C: USGS
Department of Health/ Safe Drinking Water, Wastewater, and Clean Water Branches
Hawaii Department of Water Supply
Rod Diamond
TO: Dede Mamiya, Administrator  
Land Division  

FROM: Yvonne Y. Izu, Deputy Director  
Commission on Water Resource Management  

SUBJECT: Well Construction/Pump Installation Permit Application  
Gapp Well (Well No. 3786-01)  

Transmitted for your review and comment is a copy of the captioned Well Construction/Pump Installation 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 January 3, 2005. 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 587-0255.

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: Original source of private title is Grant No. 1013 issued prior to statehood in 1959.

Contact Person: Gary Martin  
Phone: 587-0421

Signed: Gary Martin  
Date: DEC 2 2 2004
Source of contamination nearby
In reply, please refer to:
EMD/WB

As of January 8, 2003

Please find enclosed the application of the above subject project.
November 22, 2004

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

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

SUBJECT: Well Construction/Pump Installation Permit Application
Gapp Well (Well No. 3786-01)

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

We would appreciate your comments on the captioned application for any conflicts or inconsistencies with the programs, plans, and objectives specific to your department. Please respond by returning this cover memo form by January 3, 2005. 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:
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 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: Lori Kajiwara
Phone: 586-4204
Signed: Peter T. Young
Date: 11-27-04
A septic tank file has been found and the following information is provided. In general, the Department of Health has reviewed and approved of the plans based on the information submitted as verification that a treatment individual wastewater system (IWS) such as a septic tank was constructed and authorized to be used for wastewater disposal from a building/dwelling.

Tax Map Key number: 3 1 5 060 076
Address: 4PP
Septic Tank File #: 8 5373
Applicant Name: John Gapp
Submit Plan Date: 06-03-2004
Plan Approval Date: 07-08-2004
Inspection Date: 
System Approved for Use Date: 
BPA Date: 

System / Disposal Via: septic tank
Use For: Bed
3 Bedrooms
Designed By: 
septic design
Percolation Rate / Capacity: 1 min/inch, 1000 gallons

Wastewater Branch Engineer PD Section (Oahu) 

For further information, you may also call the Wastewater Branch neighbor island engineers:

- Mr. Dane Hiromasa at the Kealakekua Health Center, Kona at (808)322-1507
- Mr. Jerry Nunogawa at the Hawaii District Health Office, Hilo at (808)933-0401
- Mr. Joe Tateyama at the Kauai District Health Office at (808)241-3323
- Mr. Roland Tejano at the Maui District Health Office at (808)984-8232

cesspool faxes.wpd sam rev October 10, 2003
November 22, 2004

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

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

SUBJECT: Well Construction/Pump Installation Permit Application
Gapp Well (Well No. 3786-01)

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

We would appreciate your comments on the captioned application for any conflicts or inconsistencies with the programs, plans, and objectives specific to your department. Please respond by returning this cover memo form by January 3, 2005. 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.

LEGAL:
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, §§1-1-29.

[ ] 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 utilizing such water and routinely monitor the water quality thereafter. However, if future planned use from this source increases to meet the public water system definition then Director of Health approval is required prior to implementation.

[ ] 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: Bill Wong
Phone: 586-4258
Date: NOV 26 2004
November 22, 2004

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

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

SUBJECT: Well Construction/Pump Installation Permit Application
   Gapp Well (Well No. 3786-01)

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

We would appreciate your comments on the captioned application for any conflicts or inconsistencies with the programs, plans, and objectives specific to your department. Please respond by returning this cover memo form by January 3, 2005. 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.

R:\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, §11-2-25.

[ ] 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 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).

[ ] An NPDES permit is required.

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

[ ] No comments/objections

Contact: Person: William Wong Phone: 587-0255
Signed: William Wong Date: 11/5/04
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 (808) 586-4352.

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/ct
## Well Check Program

4/1/04 - Revised for update to Well Standards (February 2004)

### Data Input

<table>
<thead>
<tr>
<th>Data Input</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well Number</td>
<td>3786-01</td>
</tr>
<tr>
<td>Well Name</td>
<td>Gapp Well</td>
</tr>
<tr>
<td>Ground Elevation</td>
<td>41</td>
</tr>
<tr>
<td>Cement Grout</td>
<td>35</td>
</tr>
<tr>
<td>Grouting Method</td>
<td>other</td>
</tr>
<tr>
<td>Hole Diameter</td>
<td>12</td>
</tr>
<tr>
<td>Total Depth</td>
<td>45</td>
</tr>
<tr>
<td>Estimated Head</td>
<td>1</td>
</tr>
<tr>
<td>Public Water Supply Well?</td>
<td>no</td>
</tr>
<tr>
<td>Solid Casing Material</td>
<td>pvc plastic</td>
</tr>
<tr>
<td>Solid Casing Specification</td>
<td>Schedule 40</td>
</tr>
<tr>
<td>Solid Casing Length</td>
<td>40</td>
</tr>
<tr>
<td>Solid Casing Diameter</td>
<td>6</td>
</tr>
<tr>
<td>Solid Casing Wall Thickness</td>
<td>0.3125</td>
</tr>
<tr>
<td>Open Casing Length</td>
<td>5</td>
</tr>
</tbody>
</table>

### Results

<table>
<thead>
<tr>
<th>Results</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical Thickness of Aquifer</td>
<td>41</td>
</tr>
<tr>
<td>1/4 Aquifer Thickness</td>
<td>10.25</td>
</tr>
<tr>
<td>Depth of Well below Sea Level</td>
<td>-4 okay</td>
</tr>
<tr>
<td>Well Casing Minimum Wall Thickness</td>
<td>no requirement</td>
</tr>
<tr>
<td>Minimum Length of Solid Casing</td>
<td>36</td>
</tr>
<tr>
<td>90% of ground to top of aquifer</td>
<td></td>
</tr>
<tr>
<td>Length of solid casing Provided</td>
<td>40 okay</td>
</tr>
<tr>
<td>Casing Material</td>
<td>Schedule 40</td>
</tr>
<tr>
<td>(for pvc only - check for 200' limit)</td>
<td>okay</td>
</tr>
<tr>
<td>Annular Space</td>
<td></td>
</tr>
<tr>
<td>Depth of Grouting</td>
<td>28</td>
</tr>
<tr>
<td>Depth of Grouting provided</td>
<td>35 okay</td>
</tr>
<tr>
<td>Minimum Annular Space required</td>
<td>2</td>
</tr>
<tr>
<td>Thickness of Annular Space</td>
<td>3 okay</td>
</tr>
</tbody>
</table>
FROM: RYAN
DATE: 17-Nov-04
SUSPENSE DATE: 24-Nov-04

TO: BAUER, G.
    CHING, F.
    FUJI, N.
    HARDY, R.
    HIRANO, E.
    ICE, C.
    IMATA, R.
    IZU, Y.
    KUNIMURA, I.

INIT: TO: NAKAMA, L.
    NAKANO, D.
    NISHIOKA, L.
    OHYE, M.
    SAkODA, E.
    SUBIA, S.
    SWANSON, S.
    UYENO, D.
    YODA, K.
    YOSHINAGA, M.

FOR: 1 Approval
      1 Signature
      3 Information
      1 Review & Comment
      Take Action
      Type Draft acknow letter
      File
      Xerox copies

ATTACHMENTS FOR APPLICATION PROCESSING - Both applicant & staff generated
1 TRANS. LETTER
2 CWRM MAP
3 APPL. FORM (5 COPIES)
4 USGS MAPS (5 COPIES)
5 TAX MAPS (5 COPIES)
6 PARCEL OWNER VERIF.
7 CONTRACTOR VERIF.
8 ALL INFO FILLED IN
9 BACKGROUND CHECK
10 $25 FEE DEPOSIT SLIP
11 DHP & SMA check

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

INCOMPLETE ACTION DATES:

DATE ACTION

Need well owner name. = landowner per Rod Did.

11/17/04

[Signature]

Yakza Noth
Mr. John Gapp
P.O. Box 1128
Pahoa, HI 96778

Dear Mr. Gapp:

Well Construction/Pump Installation Permit Application for Well No. 3786-01

We acknowledge receipt, on November 8, 2004, of your completed Well Construction/Pump Installation permit application and filing fee for the Gapp Well (Well No. 3786-01). 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 (upon completed application) 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 Ryan Imata of the Commission staff at 587-0255 or toll-free at 974-4000 (Hawaii), 274-3141 (Kauai), 984-2400 (Maui), or 1-800-468-4644 (Lanai & Molokai) extension 70255.

Sincerely,

YVONNE Y. IZU
Deputy Director

RI:ss

c: Rod Diamond
November 22, 2004

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

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

SUBJECT: Well Construction/Pump Installation Permit Application
         Gapp Well (Well No. 3786-01)

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

We would appreciate your comments on the captioned application for any conflicts or inconsistencies with the programs, plans, and objectives specific to your department. Please respond by returning this cover memo form by January 3, 2005. 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.

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

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

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

[ ] An NPDES permit is required.

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

[ ] No comments/objections

Contact Person: __________________________ Phone: ____________

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

November 22, 2004

TO: Dede Mamiya, Administrator
   Land Division

FROM: Yvonne Y. Izu, Deputy Director
      Commission on Water Resource Management

SUBJECT: Well Construction/Pump Installation Permit Application
         Gapp Well (Well No. 3786-01)

Transmitted for your review and comment is a copy of the captioned Well
Construction/Pump Installation 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 January 3, 2005. 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 587-0255.

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: ________________
November 22, 2004

TO: Melanie Chinen, Administrator
    Historic Preservation
FROM: Yvonne Y. Izu, Deputy Director
    Commission on Water Resource Management
SUBJECT: Well Construction/Pump Installation Permit Application
          Gapp Well (Well No. 3786-01)

Transmitted for your review and comment is a copy of the captioned Well
Construction/Pump Installation 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 January 3, 2005. 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 587-0255.

RESPONSE:

[ ] Other relevant Historic Preservation rules/regulations, information, or recommendations are attached.
[ ] No objections
[ ] Other comments:

Contact Person: ______________________ Phone: ____________
Signed: _____________________________ Date: ____________
**LICENSE CLASS SCREEN**

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

There were 2 specific license classes on this licensee!

***** LICENSE CLASS FOR THIS LICENSEE *****

LIC: CT-23379  RODNEY K DIAMOND

<table>
<thead>
<tr>
<th>CLASS CODE</th>
<th>CLASS TYPE</th>
<th>EFFECTIVE</th>
<th>RESTRICTED</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>GENERAL BUILDING</td>
<td>10/12/01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C57</td>
<td>WELL</td>
<td>06/30/04</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<-Back  New Search->

EMPLOYEES LIST || EMPLOYERS LIST || INSURANCE/BOND || LICENSE CLASS

Copyight 2002 Professional and Vocational Licensing Division

Hawaii State homepage || DCCA || Professional and Vocational Licensing Division
<table>
<thead>
<tr>
<th>Taxkey</th>
<th>Subdiv/Condo</th>
<th>Tnr Address</th>
<th>Owner/Lessee</th>
<th>Bds</th>
<th>Bths</th>
<th>Land area</th>
<th>Liv area</th>
<th>Last Sale Instr</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-1-5-60-76</td>
<td>Hawaiian F</td>
<td>PILIKAI GAPP, Paradise Park</td>
<td>MAUREEN M</td>
<td>0</td>
<td>0</td>
<td>21,780 sqft</td>
<td>0</td>
<td>8/26/2003 DEED</td>
<td>$30,000</td>
</tr>
</tbody>
</table>

This information has been supplied by third parties and has not been independently verified by Hawaii Information Service and is, therefore, not guaranteed.
<table>
<thead>
<tr>
<th>SRC/ F YR</th>
<th>APP D</th>
<th>COST OBJ</th>
<th>PROJECT CTR</th>
<th>PH ACT</th>
<th>AMOUNT</th>
<th>NAME/DESCRIPTION (WANG INPUT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>S 05 326 C 1026 0752</td>
<td>(1)</td>
<td>$25.00</td>
<td>Donald S. Rullo</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot; &quot; &quot; &quot; &quot; &quot; &quot;</td>
<td>(2)</td>
<td>$25.00</td>
<td>Buddy L. &amp; Sons Construction, Inc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot; &quot; &quot; &quot; &quot; &quot; &quot;</td>
<td>(3)</td>
<td>$25.00</td>
<td>Michael Houston Robertson James Kurose</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot; &quot; &quot; &quot; &quot; &quot; &quot;</td>
<td>(4)</td>
<td>$25.00</td>
<td>Carolyn Hendershot</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot; &quot; &quot; &quot; &quot; &quot; &quot;</td>
<td>(5)</td>
<td>$25.00</td>
<td>Drainpipe Plumbing and Solar, LLC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot; &quot; &quot; &quot; &quot; &quot; &quot;</td>
<td>(6)</td>
<td>$25.00</td>
<td>Robert Duley</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot; &quot; &quot; &quot; &quot; &quot; &quot;</td>
<td>(7)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot; &quot; &quot; &quot; &quot; &quot; &quot;</td>
<td>(8)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot; &quot; &quot; &quot; &quot; &quot; &quot;</td>
<td>(9)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot; &quot; &quot; &quot; &quot; &quot; &quot;</td>
<td>(10)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>$150.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

REMARKS:
- LINE (1) Opihiale-Rullo Well, tmk: 8-7-13:6/89
- LINE (2) Kilohana Waena Sudvision, tmk: 3-9-004:015
- LINE (3) Keauhou-Roberton, tmk: 7-7-026:014
- LINE (4) Hendershot, tmk: 1-016:063
- LINE (5) GAPP, tmk: 1-5-060:76
- LINE (6) Duley Well, tmk: 1-5-53:11
- LINE (7)
- LINE (8)
- LINE (9)
- LINE (10)
State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources
APPLICATION FOR PERMIT

For Official Use Only:

RECEIVED
04 Nov 04 10:39

WELL CONSTRUCTION and/or Pump Installation

Instructions: Please print in ink or type and send completed application with attachments to the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96808. Application must be accompanied by 3 copies and a non-refundable filing fee of $35.00 payable to the Dept. of Land and Natural Resources. The Commission may not accept incomplete applications. For assistance, call the Regulation Branch at 587-4223. For further information and updates to this application form, visit http://www.state.hi.us/dlnr/wrm.

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

1. (a) [ ] WELL OWNER:
   Mailing Address: ____________________________
   Contact Person: ____________________________
   Phone: ____________________________
   Fax: ____________________________
   E-mail: ____________________________

2. (b) [ ] LAND OWNER:
   Mailing Address: ____________________________
   Contact Person: ____________________________
   Phone: ____________________________
   Fax: ____________________________
   E-mail: ____________________________

3. (c) [ ] CONTRACTOR:
   Mailing Address: ____________________________
   Contact Person: ____________________________
   Phone: ____________________________
   Fax: ____________________________
   E-mail: ____________________________

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

2. WELL NAME: GAPP
   Island: ______________ Island:
   Address ____________________________
   Tax Map Key: ______________

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

   *State Well No.: ____________________________
   (If unknown, please call Commission)

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

5. PROPOSED PUMPING RATE:
   ____________________________
   gallons per minute

6. PROPOSED USE:
   (check all that apply)
   [ ] Municipal (including hotels, stores, etc.)
   [ ] Domestic (individual, noncommercial water system)
   [ ] Industrial
   [ ] Military
   [ ] Other (explain): ____________________________

   Does this well serve 25 or more people at least 60 days per year or have 15 or more service connections? [ ] Yes [ ] No
   No. of Acres: ____________________________

7. (a) PROPOSED AMOUNT OF WITHDRAWAL:
   ____________________________
   gallons per day
   (b) METHOD OF FLOW MEASUREMENT:
   [ ] Flowmeter [ ] Open-pipe [ ] Weir [ ] Office [ ] Other (explain): ____________________________

OTHER IMPORTANT INFORMATION:

8. LEGAL REQUIREMENTS: (Required, these permits must be obtained before the Commission can legally issue a permit.
   Conservation District Use Permit (CDUP) To find out if a CDUP is necessary, call DLNR Land Division at 587-0414
   [ ] Not Required [ ] Required if approved
   Environmental Impact Statement (EIS) or Environmental Assessment (EA) To determine if an EIS or EA is necessary, call OECO at 586-4160
   [ ] Not Required [ ] Required if published in OECO bulletin
   Special Management Area Permit (SMAP) To determine if a SMAP is necessary: on Oahu, call 527-3478; on Maui, call 961-8285; for other counties, call 270-7235; on Kauai, call 241-6877.
   [ ] Not Required [ ] Required if approved

9. ARCHAEOLOGICAL REQUIREMENTS:
   To find out if an archeological study is required: on Oahu, call Ewa Institute at 692-8207; on Kauai, call Maryanne Malm at 327-3690, for other counties, call 692-8023; on Maui, call Nancy McMillan at 742-7033.
   [ ] Not Required [ ] Required if approved

10. REMARKS, EXPLANATIONS:

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

NOTE: Signing below indicates the signatory understands and agrees that the information provided on this application is accurate and true to the best of their knowledge. Further, the signatory understands that approval of this application attaches the following standard conditions: 1) the proposed work is to be completed within 2 years of the approval date; 2) the contractor shall submit to the Commission a well completion and/or abandonment report within 60 days after the completion date of the permitted work; 3) monthly water use data shall be submitted to the Commission; 4) such approval shall not constitute a determination of correlative water rights and shall not guarantee the pump capacity or future use up to the permitted pump capacity; 5) in the event that the application is not completed correctly, any permit may be suspended until the item is brought in compliance, and any work done while the permit is in suspension may result in fines of up to $10,000/day.

Well Owner (print legibly) ____________________________
Landowner (print legibly) ____________________________
Contractor (print legibly) ____________________________
Signature ____________________________
Signature ____________________________
Signature ____________________________
Date ____________________________
Date ____________________________
Date ____________________________

For official use only
Lataitude ____________________________
Aquifer System No. ____________________________
Longitude ____________________________
State Well No. ____________________________

WCPFA Form 7/17/03
10. PROPOSED WELL SECTION

(Please attach schematic if different from diagram provided below)

Elevation at top of casing: __ ft., msl

Hole Diameter: ___ ft.

Minimum of 2′ Radius & 4′ Thick Concrete Pad (to contain benchmark surveyed to nearest 0.01′)

Ground Elevation: ___ ft., msl

Cement Grout: 35 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″):

Total Depth: ____ ft.

Rock or Gravel Packing:

Material:

☐ Crushed Basalt
☐ Rounded Gravel

- Annulus space between hole and casing (min.3″): 3 in.

- Total Depth: 35 ft

- Material: Crushed Basalt

Estimated Water Level Elevation: ___ ft., msl

Solid Casing: ≥ 90% x (Ground Elevation - Water Level Elev.)

Total Length: ___ ft.

Nominal Diameter: ___ in.

Wall Thickness: __ in.

Bottom Elevation: ___ ft., msl

Open Casing:

Perforated Screen

Total Length: ___ ft.

Nominal Diameter: ___ in.

Wall Thickness: ____ in.

Bottom Elevation: ___ ft., msl

Note: Neither bentonite nor mud should be used in submersible motors division.

Open Hole:

Length: ___ ft.

Diameter: ___ in.

Bottom Elevation: ___ ft., msl

Solid Casing Material:

- Carbon Steel: compliant with (check one or more):
  - ANSI/AWWA C200
  - API Spec. 5L
  - ASTM A53
  - ASTM A139

- Stainless Steel: compliant with (check one or more):
  - ASTM A242
  - Type E
  - Type S
  - 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 D1765 or ASTM D2241): (check one)
  - Schedule 40
  - Schedule 80
  - Schedule 120

- Thermoset Plastic: (check one)
  - Filament Wound Resin Pipe conforming to ASTM D3296
  - Centrifugally Cast Resin Pipe conforming to ASTM D3297
  - 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: compliant with (check one or more):
  - ASTM A242
  - Type E
  - Type S
  - 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 D1765 or ASTM D2241): (check one)
  - Schedule 40
  - Schedule 80
  - Schedule 120

- Thermoset Plastic: (check one)
  - Filament Wound Resin Pipe conforming to ASTM D3296
  - Centrifugally Cast Resin Pipe conforming to ASTM D3297
  - 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

* 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 must not be deeper than 1/4 of aquifer thickness or, Bottom Elevation of Well Limit = \( \frac{\text{Water Elevation} - \text{Ground Elevation} \times 0.25}{\text{Ground Elevation}} \)

Example: Estimated + 2′ Water Level Elev. → Bottom Elevation of Well Limit = \( \left( 2 + \frac{0.25 \times 18.5}{18.5} \right) = 19.10′ \)

Solid Casing:

- Casing Material;
  - Carbon:
  - Stainless:

Open Casing:

- Casing Material;
  - Carbon:
  - Stainless:

Please refer to the CUSTOM WELL CONSTRUCTION AND PUMP INSTALLATION STANDARDS to ensure that your as-built is in compliance with applicable standards.

Hawaii Department of Health

Hole: #1

Drilled by: John Doe

Date: July 15, 2023

Note: Neither bentonite nor mud should be used in submersible motor division.
12' x 18' Absorption Bed
(See Pg. 18)

Distribution Box
(See Pg. 17)

JV-400 1,000 Gal. Septic Tank
(See Pg. 15)

Connect to Building Sewer Line. Provide C.O.T.G. at all bends.

FOR DEPT OF HEALTH USE ONLY

Notes:
1. Maintain 1/4'ft. slope on all sewer lines.
2. No planting of trees 4'' in diameter or larger within 10' of IWS.
3. All downspouts from the house gutter system shall be directed away from the IWS.
4. * denotes percolation test site.

Owner: John Gapp
Lot Area: 0.50 Ac.