ROUTE SLIP

✓ Well Construction  ✓ Pump Installation  ___ WUP Req’d

Well Name: Huelo Hipp  No. 5414-01 Island: Maui
Applicant: Gary Hipp  Landowner: same
Consultant: Mike Robertson  TMK: 2-9-4-14

Mapped Nov 96  Logcomp  Logbk
Acceptd: 28 Oct 96  +90 days  26 Jan 7 Bulletin: December
Ch 343 pau  __________ Tent CWRM Action 18 December
Fee Depos __________

Acknowledgment: __________  __________
DoH/Drink Water: __________  __________
Wastewater: __________  __________

Submittal mailed __________  Faxed..Appl: __________
CWRM ___ Appr  ___ Deny: __________  Consult: __________
Permit/Notice to Appl: __________  3rdP: __________
Cond.s routed to Survey: __________
Mr. Gary Hipp  
S.R.1 Box 162  
Haiku, HI 96708

Dear Mr. Hipp:  

Completing Permitting Process for Well No. 5414-01

We received the fully signed copy of the Well Completion Report for the captioned well on May 26, 2000. This completes the permitting process. Enclosed is a new original Water Use Report form.

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

Cc: Wailani Drilling Company
To: Charlie Ice  
For: Water Resource Commission

Dear Charlie:

Enclosed is: Peahi Wanner signed pump permit. WCR form part 2 was not received by us.

Mc Donald pump permit signed and WCR part 2 with as built.

Maui Central Park pump permit signed. You should already have a copy. I had one in my files.

Huelo Hipp WCR part 2 signed with as built.

Napili Park pump test data.

Thank You for your cooperation

Sincerely,  

Mike Robertson

Certified By The National Groundwater Association
State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources

WELL COMPLETION REPORT

1. Well Construction
2. (Permanent) Pump Installation

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 821, Honolulu, Hawaii 96820. An as-built drawing of the well and chemical analysis should also be submitted. For assistance call the Commission Regulation Branch at 867-0225, or 1-800-468-1944 Extension 70225.

10. State Well No.: 5414-01
11. Well Name: Hanilo-Hipia
   Island: Maui

12. Drilling Company: Wailani Drilling
13. Name of driller who performed work: Mike Hardman
14. Type of rig/construction: Air Spudded
15. Date(s) Well Construction and pump tests (if any) completed: 1/10/97
16. GROUND ELEVATION (referenced to mean sea level, msl): 347.53 ft.
   Well Bench Mark (description/location): Wall and 5.5' Elevation(msl): 345.53
17. DRILLER’S LOG: Please attach geologic log (if available or if required by permit)

18. Total depth of well below ground: 590 ft.
19. Hole size:
   - 12 in. dia. from 0 ft. to 110 ft. below ground
   - 10 in. dia. from 110 ft. to 570 ft. below ground
   - 9 in. dia. from 570 ft. to 160 ft. below ground
20. Casing installed:
   - 4 in. I.D. x 125 in. wall solid section to 110/545 ft. below ground
   - 4 in. I.D. x 125 in. wall perforated section to 545 ft. below ground
   Casing Material/Slot Size:
21. Annulus:
   - Gravel pack from 0 ft. below ground to 110 ft. below ground
   - 0 ft. below ground to 160 ft. below ground
22. Initial water level: 548 ft. below ground.
23. Initial chloride: 120 ppm
24. Initial temperature: 69°F
25. PUMPING TESTS: Reference Point (R.P.) used: Top of casing
   (1) Step-Drawdown Test Date: 1/10/97
   Start water level 548 ft. below R.P.
   End water level 548 ft. below R.P.
   (2) Long-term Aquifer Test Date: 1/10/97
   Start water level 548 ft. below R.P.
   End water level 548 ft. below R.P.
26. Aquifer Pump Test Procedures data & graphs (1/96 LTAT Form) attached? Yes No
27. As-built drawings attached attached? Yes No
28. Other remarks/comments: (On back of this form)

Well Drilling Contractor (print): Wailani Drilling
   C-37 Lic. No.: C-37-115
   Date: 6/10/97
Surveyor (print): Eloy V. Valera
   Lic. No.: 747/30222
   Date: 5/076-LS
Applicant (print): Gary Hipp
   Date: 
PART II. (PERMANENT) PUMP INSTALLATION REPORT


21. Name of person performing work: Mike Robertson

22. Date Pump Installation Completed: 5/20/00

23. PUMP INSTALLATION:
   - Pump Type, Make, Serial No.: Sub Grundfos 59708 EA 9442034
   - Capacity: 15 gpm
   - Motor type, H.P., Voltage, rpm: Sub 3 HP 230 V 2480 RPM
   - Depth of Pump Intake Setting: 569 ft. below wellhead, which elevation is 547.52 ft.
   - Depth to bottom of airline: 569 ft. below wellhead, which elevation is 547.52 ft.
   - Pumping Head: 700 ft. Type of flow meter: turbine, which measures in gal

24. As-built drawings attached? ✓ Yes  ❌ No

25. Other remarks/comments: (See below)

Pump Installation Contractor (print) Mike Robertson C-57 Lic. No. 2015

Applicant (print) GARY HIP Date 5/22/00

Signature

Date 5/22/00

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

<table>
<thead>
<tr>
<th>Water Level (ft)</th>
<th>Depth (ft)</th>
<th>Rock Description, Remarks</th>
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</thead>
<tbody>
<tr>
<td>0 to 90</td>
<td></td>
<td>Soft Tan Rock</td>
</tr>
<tr>
<td>91 to 110</td>
<td></td>
<td>Watercased Bluerock</td>
</tr>
<tr>
<td>111 to 120</td>
<td></td>
<td>Hard Basaltic Bluerock</td>
</tr>
<tr>
<td>121 to 130</td>
<td></td>
<td>Soft Tan Rock</td>
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<tr>
<td>131 to 200</td>
<td></td>
<td>Watercased Bluerock</td>
</tr>
<tr>
<td>201 to 242</td>
<td></td>
<td>Hard Bluerock</td>
</tr>
<tr>
<td>243 to 260</td>
<td></td>
<td>Open Dry Cave (few boulders)</td>
</tr>
<tr>
<td>261 to 268</td>
<td></td>
<td>Watercased Bluerock</td>
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</table>

19 & 25. Remarks: Well in Double可以 read 6" to 160 and cleaned with 4" to 590 with the bottom 15 feet leveled.

Wea 5414-01 HUELO-HIP
<table>
<thead>
<tr>
<th>TO:</th>
<th>INIT.</th>
<th>TO:</th>
<th>INIT.</th>
<th>FOR:</th>
<th>PLEASE:</th>
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<tbody>
<tr>
<td>BAUER, G.</td>
<td></td>
<td>LUM, A.</td>
<td></td>
<td>Approval</td>
<td>See Me</td>
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<tr>
<td>CHING, F.</td>
<td></td>
<td>NAKAMA, L.</td>
<td></td>
<td>Signature</td>
<td>Review &amp; Comment</td>
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<tr>
<td>DANBARA, S.</td>
<td></td>
<td>NAKANO, D.</td>
<td></td>
<td>Information</td>
<td>Take Action</td>
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<tr>
<td>FUJII, N.</td>
<td></td>
<td>NISHIOKA, L.</td>
<td></td>
<td></td>
<td>Type Draft</td>
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<tr>
<td>HARDY, R.</td>
<td>R</td>
<td>OHYE, M.</td>
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<td>HIGA, D.</td>
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<td>SAKODA, E.</td>
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<td>File</td>
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<tr>
<td>HIRANO, E.</td>
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<td>SUBIA, S.</td>
<td></td>
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<td>Xerox ___ copies</td>
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<tr>
<td>ICE, C.</td>
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<td>SWANSON, S.</td>
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<td></td>
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<tr>
<td>IMATA, R.</td>
<td></td>
<td>UYENO, D.</td>
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<tr>
<td>JINNAI, R.</td>
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<td>YODA, K.</td>
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<tr>
<td>KUNIMURA, I.</td>
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</table>

Note: The handwritten comments suggest a review and the detection of a potential mistake in the database.

NBC10 23 2000

SUSPENSE DATE

PLEASE:

See Me
Review & Comment
Take Action
Type Draft
Type Final
File
Xerox ___ copies
Mr. Linne T. Nishioka  
State of Hawaii  
Dept. of Land and Natural Resources  
Commission on Water Resource Management  
P.O. Box 621  
Honolulu, Hawaii 96809  

March 21, 2000  

Mr. Linne T. Nishioka  
State of Hawaii  
Dept. of Land and Natural Resources  
Commission on Water Resource Management  
P.O. Box 621  
Honolulu, Hawaii 96809  

Dear Mr. Nishioka:

Please excuse my delay in responding, but I have been out of the country until just recently. I am in receipt of your request to sign the well completion report and I inadvertently signed it before thoroughly reviewing it. Please note that the copy of the Well Completion Report refers to TMK 2-8-2:1. This is not my well and your office is apparently confused as to whose well belongs to who.

For your information, my TMK is 2-9-4-14. It is designated as the Huelo-Hipp (Well No. 5414-01). I also know Mr. Robertson to be very thorough and expect that he would have secured my required signature for your office. Please double check your records concerning my well and I will be happy to comply with your request for signature if I have failed to comply.

Sincerely,

[Signature]

Gary Hipp  

Cc: Mike Robertson
Mr. Gary Hipp  
S.R.1 Box 162  
Haiku, HI 96708

Dear Mr. Hipp:

Completing Permitting Process for Well No. 5414-01

On February 2, 2000, we received a copy of the Well Construction Permit with validating signatures. The only remaining uncompleted part of the permitting process is the signatures for the Well Completion Report; the form was submitted without signatures. We are notifying your driller, as well, for his assistance in this last item.

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  
c:  Wailani Drilling Inc.
Mr. Gary Hipp  
S.R.1 Box 162  
Haiku, HI 96708

Dear Mr. Hipp:

Completing Permitting Process for Well No. 5414-01

On February 2, 2000, we received a copy of the Well Construction Permit with validating signatures. The only remaining uncompleted part of the permitting process is the signatures for the Well Completion Report; the form was submitted without signatures. We are notifying your driller, as well, for his assistance in this last item.

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

Cl: ss  
Attachment  
c: Wailani Drilling Inc.
Wailani Drilling Inc. Lic.#567-20115

Mike Robertson 655 Kulike Road Haiku, Maui, Hawaii 96708
Ph.808 572-2673 Fax 572-0925 Cellular 283-8481
To: Charlie 
For: Water Resource Commission

Enclosed are signed well construction permits for Wanner, Edington, Hagar, Nicole.
Shoemaker and Hipp. 5/4 14 -1

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 Kamaele.

Phillis, 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 permits have chosen not to drill at this time: Harold, Boerner, Fisher, and 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 Kamaele 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
Mr. Gary Hipp  
S.R.1 Box 162  
Ha'ikü, Hawaii 96708  

Dear Mr. Hipp:

After-the-Fact Pump Installation Permit  
Huelo-Hipp Well (Well No. 5414-01)

Enclosed are two (2) originals of your approved Pump Installation Permit for the captioned well(s) which authorizes 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 10:

Special Conditions

1. None

The well owner 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.

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. 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 (Maui), extension 70251.

Aloha,

MICHAEL D. WILSON  
Chairperson

Enclosures  
c: Wailani Drilling Company
AFTER-THE-FACT PUMP INSTALLATION PERMIT

Huelo-Hipp Well, Well No. 5414-01

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 Huelo-Hipp Well (Well No. 5414-01) at Huelo, Makawao, Maui, TMK 2-9-4:14, subject to the Hawaii Well Construction & Pump Installation Standards (2/23/97) 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 20 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).

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

Date of Approval: March 18, 1998
Expiration Date: March 18, 2000

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: 3/31/98
Printed Name: ___________________________ Firm or Title: ____________
Installer's Signature: ___________________________ Date: 3/30/98
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 Branches
Maui Department of Water Supply
Wailani Drilling Company
AFTER-THE-FACT PUMP INSTALLATION PERMIT

Huelo-Hipp Well, Well No. 5414-01

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 Huelo-Hipp Well (Well No. 5414-01) at Huelo, Makawao, Maui, TMK 2-9-4:14, 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 20 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).

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.

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

Date of Approval: March 18, 1998  
Expiration Date: March 18, 2000

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: Gary Hipp  Firm or Title: Owner

Installer's Signature: _______________________________  Date: ___________
Printed Name: Michael Robertson  Firm or Title: Wailani Drilling (President)

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

Attachments:

USGS
Department of Health/ Safe Drinking Water & Wastewater Branches
Maui Department of Water Supply
Wailani Drilling Company
Mr. Mike Robertson  
Wailani Drilling Company  
655 Kilike Road  
Haiku, Hawaii 96708

Dear Mr. Robertson:

After-the-Fact Approval of Pump Installation Permits

At its March 18, 1998 meeting, the Commission on Water Resource Management (Commission) approved these staff recommendations:

1. Permittees and Wailani Drilling Company are in violation of HAR §13-168-12(a) for drilling and installing pumps without valid well construction and pump installation permits. Permit transmittal letters clearly state that the permits are not valid without the signatures of both permittee and driller, and two copies are sent to provide one for return with signatures;

2. Given the good faith efforts of the driller and minimal impacts associated with small domestic wells not in water management areas, fines for these violations are waived. This is a one-time waiver; the Commission cannot be expected to waive future violations.

3. The following pump installation permits are approved:

   - Waipi'o-Hagar (Well No. 5413-09)  pump capacity: 20 gpm
   - Huelo-Hipp (Well No. 5414-01)  pump capacity: 20 gpm
   - Papa'ula-Ruben (Well No. 5426-01)  pump capacity: 50 gpm

4. By Declaratory Ruling, drillers may install permanent pumps of 0-70 gpm capacity prior to pump testing and issuance of the pump installation permit for combined well construction and pump installation applications not in water management areas, 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.

We still require the signed permit documents for these wells for our files.

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

Sincerely,

EDWIN T. SAKODA  
Acting Deputy Director

Cl:ss  
c: Mr. Sam Hagar  
Mr. Gary Hipp  
Mr. Michael Ruben
STAFF SUBMITTAL

for the meeting of the
COMMISSION ON WATER RESOURCE MANAGEMENT

March 18, 1998
Honolulu, Oahu

APPLICANT AFTER-THE-FACT PUMP INSTALLATION PERMITS

<table>
<thead>
<tr>
<th>Applicants</th>
<th>Well Name (Well No.)</th>
<th>TMK</th>
<th>Capacity</th>
<th>Aquifer System</th>
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<tbody>
<tr>
<td>Sam Hagar</td>
<td>Waipiʻo-Hagar (5413-09)</td>
<td>2-9-5:50</td>
<td>20 gpm</td>
<td>Honopou</td>
</tr>
<tr>
<td>P.O. Box 5395</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Novato, CA 94948</td>
<td></td>
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</tr>
<tr>
<td>Gary Hipp</td>
<td>Huelo-Hipp (5414-01)</td>
<td>2-9-4:14</td>
<td>20 gpm</td>
<td>Honopou</td>
</tr>
<tr>
<td>SR1 Box 162</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Haʻikū, HI 96708</td>
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<tr>
<td>Michael Ruben</td>
<td>Papaʻula-Ruben (5426-01)</td>
<td>3-8-2:26</td>
<td>50 gpm</td>
<td>Kahului</td>
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<tr>
<td>314 Paʻani Pl.</td>
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<tr>
<td>Paʻia, HI 96779</td>
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</table>

Well Driller: Mike Robertson, dba Wailani Drilling, Inc.
655 Künlke Rd., Haʻikū, Maui

LOCATION: See Exhibit 1

BACKGROUND:

October 27, 1997
The well driller filed Well Completion Reports, Part 1 (Well Construction) with pump test results for the three wells indicated above, as is required to support action approving pump installation permit applications. The reports showed that pumps were already installed, in violation of standard condition #2 which clearly states that no permanent pump may be installed prior to issuance of the pump installation permit.

November 25, 1997
Staff review of the Well Completion Reports indicated that the accuracy of water-level measurements was inadequate and possibly erroneous.
APPLICANT AFTER-THE-FACT PUMP INSTALLATION PERMITS

Applicants: | Well Name (Well No.) | TMK | Capacity | Aquifer System |
---|---|---|---|---|
1. Sam Hagar | Waipi'o-Hagar (5413-09) | 2-9-5:50 | 20 gpm | Honopou |
   P.O. Box 5395 |
   Novato, CA  94948 |
2. Gary Hipp | Huelo-Hipp (5414-01) | 2-9-4:14 | 20 gpm | Honopou |
   SR1 Box 162 |
   Ha'ikū, HI  96708 |
3. Michael Ruben | Papa'ula-Ruben (5426-01) | 3-8-2:26 | 50 gpm | Kahului |
   314 Pa'ani Pl. |
   Pa'ia, HI  96779 |

Well Driller: Mike Robertson, dba Wailani Drilling, Inc.  
655 Kūlīke Rd., Ha'ikū, Maui

LOCATION: See Exhibit 1

BACKGROUND:

October 27, 1997  The well driller filed Well Completion Reports, Part 1 (Well Construction) with pump test results for the three wells indicated above, as is required to support action approving pump installation permit applications. The reports showed that pumps were already installed, in violation of standard condition #2 which clearly states that no permanent pump may be installed prior to issuance of the pump installation permit.

November 25, 1997  Staff review of the Well Completion Reports indicated that the accuracy of water-level measurements was inadequate and possibly erroneous.
ANALYSIS/ISSUES:

The Administrative Rules (HAR § 13-168-12(a)) provides that:

"No well shall be constructed, altered, or repaired and no pump or pumping equipment shall be
installed, replaced, or repaired without an appropriate permit from the Commission...The owner
of a well shall make an application or cause an application to be made by the driller..."

Standard Condition #2 of a Well Construction Permit states:

"The well construction permit shall be for construction and testing of the well only... No
permanent pump may be installed until a pump installation permit is approved and issued by the
Commission." (see Exhibit 2)

For all wells, two copies of the permits are sent to the applicant, with instructions to sign both and
return one. The transmittal letter states the owner’s responsibility for all conditions and is intended to
assure that the well driller is made aware of the conditions, particularly the transmittal of the required
well completion report. The driller’s signature is required to validate the permit. Therefore, staff
makes both the applicant and the driller responsible for the terms of the well construction permit.
None of the applicants nor the driller signed and returned the well construction permits identified in
this submittal. Therefore, drilling was performed without a valid permit from the Commission, in
violation of HAR 13-168-12(a).

Communications Experience

Despite the apparently clear language of these permits, the failure of these applicants to comply with
several permit conditions has been common. The experience with this particular driller has been
instructive. In frequent telephone conversations and subsequent performance, we have a record of the
driller’s good faith and conscientious efforts to follow the letter of Commission requirements and we
have learned to improve the means by which we make these conditions known. To the driller’s
credit, he has provided the most complete and comprehensive well completion reports (WCR) that
staff has reviewed.

The driller has indicated that efficient use of the drilling rig suggests very strongly that the pump
should be installed while the rig is still in place. Similarly, the driller’s practice has been to install
the permanent pump for the purpose of conducting the pump tests, eliminating an extra step of rigging
a temporary pump and also providing for a better pump test with a more controllable and quiet
electric pump rather than a variable and noisy diesel-powered pump. He has requested a speedy
review of pump test results to facilitate a minimal delay in final approval. His practice has been to
install variable-speed electric pumps, increasing the flexibility of appropriate pumpage rates. In most
cases, the pump tests do not show much, if any, drawdown, indicating that the proposed rates are
appropriate.

Risk of Permit Violation

The purpose of the two-phase well construction and pump installation approval is to assure valid
pump testing and acceptable well construction reporting prior to final pump installation approval. In
the case of small wells with small withdrawal, the risk of overpumpage is minimal except when
several wells are in close proximity. Speedy review of pump tests while rigging equipment is still in place is one way of addressing suspect results in a timely manner, correcting misinformation, and making adjustments to the final-approved capacity while the installer is still on-site.

To further highlight the minimal impacts from smaller wells, the Well Construction and Pump Installation Standards (January 13, 1997) specify that wells with pump capacities under 70 gpm do not require step-drawdown tests but only constant-rate tests.

Given these are relatively small wells, staff is requesting a declaratory ruling that pump installations for withdrawals of 70 gpm, or less, in non-ground water management areas be allowed prior to pump testing and pump installation permit issuance, subject to removal if the testing shows that a smaller pump is required to protect neighboring wells and reduce potential upconing at the applicant’s well site. The final or permanent pump installed will then be identified on the pump installation permit.

RECOMMENDATION:

That the Commission:

1. Find both the applicants and the driller under this submittal in violation of HAR 13-168-12(a) for drilling and installing permanent pumps without valid well construction and pump installation permits.

2. Given the good-faith efforts of the driller, waive fines for these violations in 1.

3. Approve the pump installation permits for the following wells, subject to the standard conditions shown in Exhibit 3:

   Waipi'o-Hagar (Well No. 5413-09) pump capacity: 20 gpm
   Huelo-Hipp (Well No. 5414-01) pump capacity: 20 gpm
   Papa'ula-Ruben (Well No. 5426-01) pump capacity: 50 gpm

4. Approve a Declaratory Ruling that permanent pump installation for combined well construction and pump installation applications for individual wells in non-groundwater management areas between 0-70 gpm capacity may be allowed prior to pump testing and pump installation permit issuance, 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.

Respectfully submitted,

EDWIN T. SAKODA
Acting Deputy Director

Exhibit(s): 1 (Location Map)
         2 (Sample Well Construction Permit)
         3 (Pump Installation Permits)
WCR 1 Check for Well No. 5944-01 (survey to regulation memo)

1. **Pump Tests Check** Glenn Baufer (initial)
   
   **Yes**  | **No**  | **If no, describe deficiency**
   --- | --- | ---
   
   **Step-Drawdown Test:**
   - acceptable  |  |  |
   - followed WCPI Stds  |  |  |
   - analysis attached  |  |  |
   - proposed pump cap o.k.  |  |  |
   
   **Aquifer Pump Test:**
   - acceptable  |  |  |
   - followed WCPI Stds  |  |  |
   - T & S analysis attached  |  |  |
   - pump test
   
   **Well Interference:**
   - estimated Steady-State drawdown at 1-mile radius is ______ ft.
   - analysis attached  |  |  |
   
   **Stream Surface Water Impacted:**  |  |  | If yes, identify most probable stream

2. **Construction Check** Mitch Ohye (initial)
   
   **Yes**  | **No**  | **If no, describe deficiency**
   --- | --- | ---
   
   data complete  |  |  |
   - followed WCPI Stds  |  |  |
   - wellphys.dbf updated  |  |  |
   - welapic.dbf updated  |  |  |
   
   **NOTE:** According to the Aspdinits, permanent pumps are installed in pipe.
   
   **WATER LEVEL MEASUREMENTS are SUBJECT!**

**REMARKS:**

- Driller requested shallow group (survey 1-17) - no response in file.
- Well ordered to only 160 ft. (110 carbonate)
WELL COMPLETION REPORT

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

WELL COMPLETION REPORT

(Check Appropriate Box) [ ] Well Construction [ ] (Permanent) Pump Installation

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 75228.

PART I. WELL CONSTRUCTION REPORT

10. State Well No.: 5414-01
Well Name: Island: Maui
11. Location/Address: Huelo, Makawao District Tax Map Key: 2-9-4-14

13. Name of driller who performed work: Mike Robertson
14. Type of rig/construction: Air Rotary
15. Date(s) Well Construction and pump tests (if any) completed: 7/10/97
16. GROUND ELEVATION (referred to mean sea level, msl): 547.5 ft.
Well Bench Mark (description/location): Well Head Slope
Elevation(msl): 547.5 ft.

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

Depths (ft.) Rock Description, Water Level, Dates, etc.

| 0 to 30    | Red Clay               |
| 30 to 38   | Gneiss from Base       |
| 39 to 60   | Soft brown rock        |

18. Total depth of well below ground: 590 ft.
19. Hole size: 11 inch dia. from 0 ft. to 160 ft. below ground

20. Casing installed: 6/4 in. I.D. x .25 in. wall solid section to 160/585 ft. below ground
Casing Material/Slot Size: 1/8 inch

21. Annulus: Grouted from 0 ft. below ground to 160 ft. below ground
Gravel packed from 0 ft. below ground to 160 ft. below ground

22. Initial water level: 548 ft. below ground.
Date and time of measurement: 6/5/97

23. Initial chloride: 120 ppm
Date and time of sampling: 6/5/97

24. Initial temperature: 69°F
Date and time of measurement: 6/5/97

25. PUMPING TESTS: Reference Point (R.P.) used: Top of Casing, which elevation is 548 ft.
(1) Step-Drawdown Test Date: 6/10/97
Start water level: 548 ft. below R.P.
End water level: 548.50 ft. below R.P.
(2) Long-term Aquifer Test Date: 6/10/97
Start water level: 548 ft. below R.P.
End water level: 548.50 ft. below R.P.

26. Aquifer Pump Test Procedures data & graphs (1/9/96 LTAT Form) attached? [ ] Yes [ ] No

27. As-built drawings attached? [ ] Yes [ ] No

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

Well Drilling Contractor (print) Wailani Drilling Co.
C-57 Lic. No. C-2015
Signature Mike Robertson
Date 7/10/97

Surveyor (print) Eduardo V. Valera
Lic. No. 0676
Signature
Date 7/24/97

Applicant (print)
Signature
Date
PART II. (PERMANENT) PUMP INSTALLATION REPORT

20. Pump Installation Company: ________________________________

21. Name of person performing work: ___________________________

22. Date Pump Installation Completed: __________________________

23. 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 ______

24. As-built drawings attached? __ Yes ___ No

25. Other remarks/comments: (See below)

Pump Installation Contractor (print) ____________________________ C-57 Lic. No. __________

Signature ___________________________________________ Date __________

Applicant (print) __________________________________________ Date __________

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,</th>
<th>Water Level Dates (ft.)</th>
<th>Depth (ft.)</th>
<th>Rock Description, Remarks,</th>
</tr>
</thead>
<tbody>
<tr>
<td>71 to 90</td>
<td>Soft Tan Rock</td>
<td>Sandwiched in C-57 rock</td>
<td>349 to 385</td>
<td>Layers of Soft Tan Bluestone</td>
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<td>81 to 110</td>
<td>Weathered Bluestone</td>
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<td>381 to 390</td>
<td>Soft Tan Bluestone</td>
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<tr>
<td>111 to 150</td>
<td>Hard Basaltic Bluestone</td>
<td></td>
<td>391 to 450</td>
<td>Hard Bluestone</td>
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<td>451 to 475</td>
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<td>476 to 525</td>
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<td>201 to 242</td>
<td>Hard Bluestone</td>
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<td>526 to 581</td>
<td>Soft Bluestone</td>
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<tr>
<td>243 to 260</td>
<td>Open Dry Cave (few boulders)</td>
<td></td>
<td>582 to 590</td>
<td>Pebble &amp; Water Level at 548</td>
<td></td>
</tr>
<tr>
<td>261 to 268</td>
<td>Weathered Bluestone</td>
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</tbody>
</table>

19. & 25. Remarks: Water in Double Cave w/6" to 160 and cleared w/4" to 590 until the bottom 15 feet settled

V61 5414-01 HUELO-HIPP
Charlie: I got Hipp & Hayes signatures & corrected elevations. Carter is signing Lowery with a power of attorney affidavit and sending it in herself. Ruben is in Spain and will be back in 2 or 3 weeks but he signed the fax copy I sent him. Hope this clears everything up. Good completion on Main Central and wells comming to you this week.

Thanks

Mike Robertson
**PART I. WELL CONSTRUCTION REPORT**

13. Name of driller who performed work: Mike Robertson
14. Type of rig/construction: Air Rotary
15. Date(s) Well Construction and pump tests (if any) completed: 6/10/97
16. GROUND ELEVATION (referenced to mean sea level, msl): 547.52 ft.
   Well Bench Mark (description/location): Makawao Hula Elevation (msl): 547.52 ft.
17. 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>
<th>Depth (ft.)</th>
<th>Rock Description, Water Level, Dates, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 30</td>
<td>Red Clay</td>
<td>39 to 60</td>
<td>Soft brown rock</td>
</tr>
<tr>
<td>30 to 38</td>
<td>Crackled tan rock</td>
<td>61 to 70</td>
<td>Soft blue creak</td>
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<tr>
<td>41</td>
<td></td>
<td>71 to 75</td>
<td></td>
</tr>
</tbody>
</table>

1. **Why did we spend** 10/23/97 doing nothing and applying paint? **Ask Mike.**
2. **Now meata and graphs (1/9/96 LTAT Form) attached? Yes No**
3. **This was one of those** cases where we did it all at once. **We're still waiting**
4. **I need a signature now that Hipo is back**

**Well E**

<table>
<thead>
<tr>
<th>Signature</th>
<th>Mike Robertson</th>
<th>C-57 Lic. No.</th>
<th>L-2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surveyor</td>
<td>Edgardo V. Valera</td>
<td>Lic. No.</td>
<td>4776</td>
</tr>
<tr>
<td>Applicant</td>
<td>Gary Hipp</td>
<td>Date</td>
<td>Sept. 26, 1997</td>
</tr>
</tbody>
</table>
Mr. Gary Hipp  
S.R.I Box 162  
Haiku, HI 96708

Dear Mr. Hipp:

Well Completion Report for Well No. 5414-01

We have received your Well Completion Report Parts I and II for the Huelo-Hipp Well (Well No. 5414-01). However, matters which must be addressed before we accept your report as complete are as follows:

1. The driller must correct the elevations indicated on the form to show the top of the well above ground.

2. You must sign the form. The form has been returned to the driller, who will forward it to you.

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

If you have any questions, please contact Charley Ice of the Commission staff at 587-0251 or toll-free at 984-2400 (Maui), extension 70251.

Sincerely,

[Signature]

RAE M. LOUI
Deputy Director

Cc: Mike Robertson, Wailani Drilling
Mr. Mike Robertson  
Wailani Drilling  
655 Kūliko Road  
Haiku, Hawaii 96708  

Dear Mr. Robertson:  

Well Completion Reports for  
Waipio-Hagar Well (Well No. 5413-09)  
Papaula-Ruben Well (Well No. 5426-01)  
Huelo-Lowen Well (Well No. 5413-08)  
Huelo-Hipp Well (Well No. 5414-01)  

We are returning Well Completion Reports (both Parts I & II) for the captioned wells, as we cannot accept them as complete without the applicants' signature. We appreciate your difficulty in getting signatures from clients who are often of-island and out-of-state while still submitting completion reports in timely fashion. We suggest sending us a copy of the completed form while you seek the applicants' signatures in the future.  

The pump data support installation of the permanent pumps, and we will issue the Pump Installation Permits upon receipt of the signed Well Completion reports. The applicants are being notified separately (copies enclosed).  

Thank you also for sending notice of commencing work on the Kaupakulua-Joachim Well (Well No. 5517-01), and the new applications for Kurt Ulmer and Naomi Brundage.  

Please also correct an item on the Well Completion Report form: the top of the well casing is the preferred bench mark for taking measurements; we would expect it to be about one foot above ground elevation. All four reports indicate that the bench mark is below ground. Further, in the case of the Hagar Well, the ground water level is indicated below sea level. Please verify this water level.  

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

Sincerely,  

RAE M. LOUI  
Deputy Director  

CC: ss  
Enclosures
**Table 1**

**LONG-TERM AQUIFER TEST DATA**

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<thead>
<tr>
<th>Pumped Well No.</th>
<th>5414-01</th>
<th>Observation well no.</th>
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<tbody>
<tr>
<td>Pumped Well Name</td>
<td>Huelo Hipp</td>
<td>Distance between Obs. &amp; Pumped Well</td>
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<tr>
<td>Target Q</td>
<td>15 gpm</td>
<td>Reference pt. for depth to water 548 ft. msl</td>
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<tr>
<td>Static Water Level @ start of test</td>
<td>548 ft. msl</td>
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Water level measurements by: ☐ steel tape ☐ pressure transducer ☐ airline

START TEST  Date: 12/10/97  Hour of day: 11:00 AM

Flow Meter Reading Start: 300 gals

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<tr>
<th>Suggested elapsed time (min)</th>
<th>Actual elapsed time (min)</th>
<th>Depth to water (nearest 0.01 ft)</th>
<th>Drawdown (unadjusted to nearest 0.01 ft)</th>
<th>Pumping rate Q (gpm)</th>
<th>EC (milliS)</th>
<th>Cl (mg/l)</th>
<th>Temp. °F or °C</th>
<th>Data in this table is for:</th>
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</table>
1/2" Drawdown at 1 minute and no more for ship.
Huelo-Hi Well State Well- # 5414-01 Elevation 547.52 ft above m.s.l. (conc. plan)

- 3 hp control box in house
- 1-1/4" flex conduit
- Water Meter
- Junction box

**Depth ft.**
- 0 ft: 6 in. well seal on 6 in. Tee
- 10 ft: 4'x3'x4" concrete slab
- 70 ft: Soft basalt
- 90 ft: Weathered blue rock
- 100 ft: Weathered blue rock
- 250 ft: Cave 242-260' (dry)
- 270 ft: Weathered blue rock
- 280 ft: Softer blue rock
- 300 ft: Softer blue rock
- 320 ft: Weathered blue rock
- 370 ft: Weathered blue rock
- 380 ft: Soft rock
- 400 ft: Soft rock
- 410 ft: Soft rock
- 420 ft: Soft rock
- 430 ft: Soft rock
- 440 ft: Soft rock
- 450 ft: Soft rock

**Additional Notes:**
- 0-575: 1-1/2" sch. 40 galvanized column pipe
- Lost return
Wailani Drilling Company

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

547.52 ft. m.s.l. Hipp Well State Well-5414-01 Page 2

540
470
480
490
500
510
520
530
540
550
560
570
580
590
600
610
620
630
640
650
660
670
680
690
700
710
720
730
740
750
760
770
780
790
800
810
820
830
840
850
860
870
880
890

depth-ft.

transition soft to hard basalt

6 in. borehole to 590 ft.

3 h.p. 15 gpm submersible pump set at 569 ft. intake

4" sced 40 pvc slotted casing

Total Well Depth = 590 ft.

*Note: not drawn to scale
Wailani Drilling Company

Mike Robertson  
655 Kulike Road  
Haiku, Maui, Hawaii 96708

Ph 808-572-2673  
Fax 572-0925  
Cellular 283-8481

6/10/97  Page 1

Huelo-Hipp Well  
State Well- # 5414-01  
Elevation 547.52 ft above m.s.l.

---

**Diagram Description:**
- **6 in. well seal on 6 in. Tee**
- **4 x 3' x 4' concrete slab**
- **3 hp control box in house**
- **1-1/4" flex conduit**
- **Water Meter Junction Box**
- **4 in. acid 40 piw casing**
- **0-675**
- **1-1/2" sched 40 galvanized column pipe**
- **Soft basalt**
- **Soft tan rock**
- **Weathered blue rock**
- **Weathered blue rock**
- **Softer blue rock**
- **Weathered blue rock**
- **Weathered blue rock**
- **Weathered blue rock**
- **Weathered blue rock**

**Depth-measurement:**
- **0**
- **10**
- **20**
- **30**
- **40**
- **50**
- **60**
- **70**
- **80**
- **90**

**Legend:**
- **Depth ft.**
- **Last return**
- **Cave 242-250 (dry)**

---

**Note:**
- The diagram includes detailed measurements and visual representations of the well's construction and materials used.
Total Well Depth = 590 ft.

*Note: not drawn to scale
Wailani Drilling Company

Mike Robertson  655 Kulike Road  Haiku, Maui, Hawaii  96708
Ph. 808 572-2673  Fax 572-0925  Cellular 283-8481  6/10/97  Page 1

Huelo-Hip Well  State Well # 5414-01  Elevation 547.52 ft above m.s.l.

---

3 hp control box in house
1-1/4" flex conduit
Water Meter
junction box

---

depth-ft.

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200

6 in well seal on 6 in. Tee

4"x3"x 4" concrete slab

---

200 210 220 230 240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390 400 410 420 430 440 450

Cave  242'-260' (dry)

---

1-1/2" sched 48 galvanized column pipe

---

lost return

---

Soft basalt

---

Weathered bluerock

---

Softer bluerock
Huelo-Hi Well  
State Well- # 5414-01  
Elevation 547.52 ft above m.s.l.

depth-ft.

0  6 in. well seal on 6 in. Tee
10  4'x3'x 4" concrete slab
20
30
40
50
soil basalt
60
70
80
weathered bluerock
90
100
110
120
130
140
150
160
170
180
190
weathered bluerock
200
210
220
230
240
250
Cave  242'-260' (dry)
260
270
weathered bluerock
280
290
softer bluerock
300
310
320
330
340
350
softer bluerock
360
370
weathered bluerock
380
390
400
410
420
430
440
450

- 3 hp control box in house
- 1-1/4" flex conduit
- Water Meter
- Junction box
- 0-575
- 1-1/2" sched 40 galvanized column pipe

lost return

6/10/97 Page 1
547.52 ft, m.s.l. Hipp Well  State Well-#5414-01  Page 2

*Note: not drawn to scale
TO WHOM IT MAY CONCERN:

This is to certify that the elevation of the concrete pad of the Well situated at the south west corner of the property, TMK: (2), 2-9-04:14 is 547.52 feet above mean sea level.

The elevation emanated from U.S.G.S. Triangulation Station "HUELO" by trigonometric leveling.

If you have any question, please give me a call.

Wailuku, Maui, Hawaii

Edgardo V. Valera
Licensed Professional Lands Surveyor
State of Hawaii Certificate No. 5076

EVV: asv
Enclosure: Plat Map.
Water Resource Commission

For Charlie Ice

Charlie: This fax is just to notify you of well work starting on the Huelo-Hipp Well, State Well #5414-01

This area is typical of the heavy clay and bluerock found in Haiku. In referring back to my previous letter dated 2/12/97, (attached), I am requesting a shallower grout depth if I can locate a thick Bluerock ledge below 100'.

Please fax or call to confirm if this is acceptable.

Thank You for your cooperation

Sincerely: Mike Robertson

1. bluerock/grouting
2. Kupuakalina - Joachim
3. benchmarks

14 Apr. 1st faxed 15 Apr 97
Mr. Gary Hipp
P.O. Box 677
Haiku, Hawaii 96708

Dear Mr. Hipp:

Well Construction Permit
Huelo-Hipp Well (Well No. 5414-01).

Enclosed are two (2) copies of your approved Well Construction Permit for the captioned well(s). As part of the Commission’s approval, the following special conditions were added and are part of your permit under Standard Permit Condition 10:

**Special Conditions**

1. No permanent monitor tube is required.
2. The long-term continuous test shall be at least 8 hours.
3. No step-drawdown test is required.
4. The well should not be used for drinking water unless it is properly tested and treated.
5. The Chairperson shall approve and issue a pump installation permit upon acceptance of aquifer pumping test results required in Condition Se.
6. Cement grout of the annular space shall seal at least 70% of the distance between the ground surface and the top of the aquifer.

Additionally, the Commission authorized the Chairperson to approve and issue a pump installation permit supported by information provided from aquifer pumping test results, required in Well Construction Standard Condition 6e, subject to the Standard Pump Installation Conditions which will be issued to you when we receive your aquifer pump test results and completed Well Construction Report (Part 1).

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, submits a completed Part I of the Well Completion Report form (enclosed) and all required testing data within thirty (30) days after the well construction and pump test 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.

Please sign both enclosed permit originals and return one for our files.

Also, copies of the aquifer pump test procedure and the well completion report form are enclosed for your use. Please provide copies of all the information in this packet to your well drilling contractor.

If you have any questions, please call Rae M. Loui, Deputy Director, at 587-0214 or toll-free at 984-2400, extension 70214.

Aloha,

MICHAEL D. WILSON
Chairperson

Enclosures
WELL CONSTRUCTION PERMIT
Huelo-Hipp Well, Well No. 5414-01

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 Huelo-Hipp Well (Well No. 5414-01) at Huelo, Makawao, Maui, TMK 2-9-4:14, subject to the following conditions:

STANDARD PERMIT CONDITIONS

1. 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 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 Commission, to accurately record water levels. The permittee shall coordinate with the Commission and conduct a pumping test in accordance with the attached Aquifer Pump Testing Procedure (attached). The permittee shall submit to the Commission 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 Commission.

3. 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.

4. 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.

5. 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.

6. The following shall be submitted to the Commission within thirty (30) days after completion of work:
   b. Elevation (referenced to mean sea level, msl) survey by a Hawai'i-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 water quality data.

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

8. The well construction permit application and staff submittal approved by the Commission at its December 18, 1996 meeting are incorporated into the permit by reference.

9. 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 Commission upon a showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Commission no later than three (3) months prior to the date the permit expires. If the commencement or completion 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.

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

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

Date of Approval: December 18, 1996
Expiration Date: December 18, 1998

MICHAEL D. WILSON, 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.

Applicant's Signature: _________________________ Date: __________

Printed Name: _________________________ Firm or Title: _________________________

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

Attachment

C: USGS
Department of Health/Safe Drinking Water & Wastewater Branches
Maui Department of Water Supply
WELL CONSTRUCTION PERMIT

Huelo-Hipp Well, Well No. 5414-01

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 Huelo-Hipp Well (Well No. 5414-01) at Huelo, Makawao, Maui, TMK 2-9-4:14, subject to the following conditions:

STANDARD PERMIT CONDITIONS

1. 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 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 Commission, to accurately record water levels. The permittee shall coordinate with the Commission and conduct a pumping test in accordance with the attached Aquifer Pump Testing Procedure (attached). The permittee shall submit to the Commission 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 Commission.

3. 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.

4. 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.

5. 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.

6. The following shall be submitted to the Commission within thirty (30) 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 water quality data.

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

8. The well construction permit application and staff submittal approved by the Commission at its December 18, 1996 meeting are incorporated into the permit by reference.

9. 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 Commission upon a showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Commission no later than three (3) months prior to the date the permit expires. If the commencement or completion 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.

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

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

Date of Approval: December 18, 1996
Expiration Date: December 18, 1998

MICHAEL D. WILSON, 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.

Applicant's Signature: [Signature]
Printed Name: Gary Hipp
Firm or Title: Owner
Date: 12/18/98

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

Attachment
C:
   USGS
   Department of Health/ Safe Drinking Water & Wastewater Branches
   Maui Department of Water Supply

...
WELL CONSTRUCTION PERMIT

Huelo-Hipp Well, Well No. 5414-01

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 Huelo-Hipp Well (Well No. 5414-01) at Huelo, Makawao, Maui, TMK 2-9-4:14, subject to the following conditions:

STANDARD PERMIT CONDITIONS

1. 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 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 Commission, to accurately record water levels. The permittee shall coordinate with the Commission and conduct a pumping test in accordance with the attached Aquifer Pump Testing Procedure (attached). The permittee shall submit to the Commission 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 Commission.

3. 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.

4. 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.

5. 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.

6. The following shall be submitted to the Commission within thirty (30) 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 water quality data.

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

8. The well construction permit application and staff submittal approved by the Commission at its December 18, 1996 meeting are incorporated into the permit by reference.

9. 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 Commission upon a showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Commission no later than three (3) months prior to the date the permit expires. If the commencement or completion 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.

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

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

Date of Approval: December 18, 1996
Expiration Date: December 18, 1998

I have read the conditions and terms of this permit and understand them. I accept and agree to meet these conditions as a prerequisite and underlying condition of my ability to proceed.

Applicant's Signature: Mike Robertson
Date: 12/18/96

Printed Name: Mike Robertson

Firm or Title: Wailani Drilling Inc

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

Attachment

c: USGS
Department of Health/ Safe Drinking Water & Wastewater Branches
Maui Department of Water Supply
STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P. O. BOX 621
HONOLULU, HAWAII 96809

STAFF SUBMITTAL
for the meeting of the
COMMISSION ON WATER RESOURCE MANAGEMENT
December 18, 1996
Honolulu, Oahu

Gary Hipp
APPLICATION FOR WELL PERMIT
Huelo-Hipp Well (Well No. 5414-01)
Well Construction: 10-inch diameter, 550-foot deep
Pump Installation: 20-gpm Pump
for domestic and agricultural use
Huelo, Makawao, Maui, TMK 2-9-4:14

APPLICANT: Gary Hipp
P.O. Box 677
Ha’iku, Hawai‘i 96708

LANDOWNER: Same

DESCRIPTION: Location: (See Exhibit 1) Dimensions: (See Exhibit 2)

WATER AVAILABILITY:
Existing Use: not available in WUDP; capacity appears <2 mgd.
Proposed Use: 1000 gpd for household and irrigating fruit trees on 1.9 acres.
Anticipated pump capacity: 20 gpm.

BACKGROUND:
The application for this well was accepted as complete on November 7, 1996.

ISSUES/ANALYSIS:
Agency Review: The application was published in the Commission’s Water Resource Bulletin in December 1996; review letters were sent to the Department of Health’s Safe Drinking Water and Wastewater Branches. The Safe Drinking Water Branch recommends that potable water wells such as this one not requiring Department of Health approval be tested for bacteriological and chemical presence and be routinely monitored thereafter. In similar situations, that Branch has also specified that potable and irrigation applications using the same source be equipped to prevent backflow from non-potable to potable systems, and labelled to prevent inadvertent consumption of non-potable water.

AGENDA 1
Item 9
Staff Submittal December 18, 1996

Staff review: The proposed well would tap fresh basal ground water. Proposed use is approximately 1000 gallons per day. There are two other wells within one mile, neither in the same watershed. No adverse impacts are expected.

RECOMMENDATION:

A. That the Commission approve the issuance of a well construction permit for the Huelo-Hipp Well, subject to the standard permit conditions in Exhibit 3 and the following special conditions:

1. No permanent monitor tube is required.
2. The long-term continuous test shall be at least 8 hours.
3. No step-drawdown test is required.
4. The well should not be used for drinking water unless it is properly tested and treated.
5. If potable water is used to supply both domestic and irrigation purposes in a single system, the permittee 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.

B. That the Commission authorize the Chairperson to approve and issue a pump installation permit for a pump capacity supported by information provided in the Well Completion Report (Exhibit 5) using acceptable aquifer pumping test results required in Condition 6e (Exhibit 3), subject to the standard permit conditions in Exhibit 4.

Respectfully submitted,

RAE M. LOUI
Deputy Director

Exhibits:

1. (Location Map)
2. (Well Cross-section)
3. (Standard Well Construction Conditions)
4. (Standard Pump Installation Conditions)
5. (Well Completion Report Form)
6. (Pump Test Procedures)
7. (Water Use Report Form)
9. PROPOSED WELL SECTION

Elevation at top of casing: 551 ft., msl.

Cement Grout: 150 ft.

Rock Packing: 0 ft.

Hole Diameter: 10 in. to 150 ft.
6 in. 150 to 550 ft.

Total Depth: 550 ft.

Ground Elevation: 550 ft., msl.

Solid Casing:
Material: P.V.C. Schedule 40
Length: 8 in. to 150 ft. Squealed with 4 in. to 150 ft.
Diameter
Wall thickness: 0.25 in.

Casing: X Perforated Screen
Material: P.V.C. Schedule 40
Length: 20 ft.
Diameter: 4 in.
Wall thickness: 0.25 in.
Openings: 2 sq. in./L.F.

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

EXHIBIT 2
STANDARD WELL CONSTRUCTION PERMIT CONDITIONS

1. The Commission on Water Resource Management, P.O. Box 621, Honolulu, HI 96809, shall be notified, in writing, before any work 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 Commission, to accurately record water levels. The permittee shall coordinate with the Commission and conduct a pumping test in accordance with the attached Aquifer Pump Testing Procedure (Exhibit 6). The permittee shall submit to the Commission 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 Commission.

3. 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.

4. 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.

5. 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.

6. The following shall be submitted to the Commission within thirty (30) days after completion of work:
   a. Well completion report (attached, Exhibit 5, Part I).
   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 water quality data.

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

8. The well construction permit application and staff submittal approved by the Commission at its December 18, 1996 meeting are incorporated into the permit by reference.

9. 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 Commission upon a showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Commission no later than three (3) months prior to the date the permit expires. If the commencement or completion 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.

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

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

EXHIBIT 3
STANDARD PUMP INSTALLATION PERMIT CONDITIONS

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

2. The pump installation permit shall be for installation of a 20 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 report to the Commission on a yearly basis, on forms provided by the Commission (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 Commission within thirty (30) days after completion of work.

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

7. The pump installation permit application and staff submittal approved by the Commission at its December 18, 1996 meeting are incorporated into the permit by reference.

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 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 Commission upon a showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Commission no later than three (3) months prior to the date the permit expires. If the commencement or completion 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 applicant must apply for a well abandonment permit in accordance with §13-168-12(f) prior to any well sealing or plugging work.

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

EXHIBIT 4
WELL COMPLETION REPORT

3/20/96 WCR Form

(Check Appropriate Box)  □ Well Construction  □ (Permanent) Pump Installation

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.

10. State Well No.: ~  Well Name: ~ Island: ~
11. Location/Address: ~  Tax Map Key: ~

PART I.  WELL CONSTRUCTION REPORT

12. Drilling Company: _______________________
13. Name of driller who performed work: _______________________
14. Type of rig/construction: _______________________
15. Date(s) Well Construction and pump tests (if any) completed: _______________________
16. GROUND ELEVATION (referenced to mean sea level, msl): ______________________ ft.
   Well Bench Mark (description/location): ______________________ ft.
   Elevation(msl): ______________________ ft.
17. DRILLER’S LOG:  Please attach geologic log (if available or if required by permit)

<table>
<thead>
<tr>
<th>Depths (ft.)</th>
<th>Rock Description, Water Level, Dates, etc.</th>
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(If more space is needed, continue on back.)

18. Total depth of well below ground: ______________________ ft.
19. Hole size: ______________________ inch dia. from ____________ ft. to ____________ ft. below ground
   ______________________ inch dia. from ____________ ft. to ____________ ft. below ground
   ______________________ inch dia. from ____________ ft. to ____________ ft. below ground
20. Casing installed: ______________________ in. I.D. x ____________ in. wall solid section to ____________ ft. below ground
    ______________________ in. I.D. x ____________ in. wall perforated section to ____________ ft. below ground
    Casing Material/Slot Size: ______________________
21. Annulus: Grouted from ____________ ft. below ground to ____________ ft. below ground
    Gravel packed from ____________ ft. below ground to ____________ ft. below ground
22. Initial water level: ____________ ft. below ground.  Date and time of measurement: ______________________
23. Initial chloride: ______________________ ppm  Date and time of sampling: ______________________
24. Initial temperature: ____________ °F  Date and time of measurement: ______________________
25. PUMPING TESTS: Reference Point (R.P.) used: ______________________, which elevation is ____________ ft.
   (1) Step-Drawdown Test Date ______________________  (2) Long-term Aquifer Test Date ______________________
   Start water level ____________ ft. below R.P.  Start water level ____________ ft. below R.P.
   End water level ____________ ft. below R.P.  End water level ____________ ft. below R.P.
26. Aquifer Pump Test Procedures data & graphs (1/9/96 LTAT Form) attached?  Yes  No
27. As-built drawings attached attached?  Yes  No
28. Other remarks/comments:  (On back of this form)

Well Drilling Contractor (print) ______________________ C-57 Lic. No. ______________________
Signature ________________ Date ______________________
Surveyor (print) ______________________ Lic. No. ______________________
Signature ________________ Date ______________________
Applicant (print) ______________________
Signature ________________ Date ______________________

EXHIBIT 5
PART II. (PERMANENT) PUMP INSTALLATION REPORT

29. Pump Installation Company: ________________________________
30. Name of person performing work: ____________________________
31. Date Pump Installation Completed: __________________________
32. PUMP INSTALLATION:
   Pump Type, Make, Serial No.: ________________________________    Capacity: _______ gpm
   Motor type, H.P., Voltage, rpm: ________________________________
   Depth of Pump Intake Setting _______ ft. below _______ ft., which elevation is _______ ft.
   Depth to bottom of airline _______ ft. below _______ ft., which elevation is _______ ft.
   Pumping Head is _______ ft.  Type of flow meter: _______ which measures in _______

33. As-built drawings attached attached?   __ Yes __ No
34. 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):

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AQUIFER (PUMP) TEST PROCEDURES

The pump test procedure for new wells shall consist of a step-drawdown test followed by a long-term continuous aquifer test. Testing the well and aquifer in the prescribed manner should result in the hydrologic information needed to determine: 1) the well's performance with regard to yield and water quality (chloride concentration), and 2) the nearby hydraulic properties of the aquifer.

General Recording Requirements

The records required for analysis and the tolerance in measurement acceptable for the step-drawdown and long-term continuous aquifer test are as follows:

1. Discharge from the well shall not fluctuate beyond ± 10 percent.
2. Depth to water measurements in the pumped well shall be accurate to 0.01 feet.
3. Time shall be accurate within ± 1 percent.
4. Water discharged from the well during the step-drawdown and long-term test shall be carried away from the well to a distance sufficient to preclude circulation of the discharge water downward to the ground-water table.
5. Recording of data should be on a form similar to Table 1. All information shown in Table 1 shall be provided. In addition, data shall be plotted on Graph 1 and provided.

Step-Drawdown Test

The purpose of the step-drawdown test is to establish the efficiency of the well and to provide preliminary information on the yield of the well, both from a quantity and quality standpoint.

1. Measurement of water level in the pumped well shall be made every 12 hours for a period of no less than two days prior to the initiation of the step-drawdown test in order to obtain the pretest trend in water levels.
2. The step-drawdown test will consist of continuously pumping the well for four hours at four different rates.
   a. The change from one pumping rate to the next must be sufficient to induce an observable change in water level in the well from the previous pumpage rate.
   b. If desired, the four different rates should represent the full range of pump capacity (if the yield can sustain this), but this is not necessary.
AQUIFER (PUMP) TEST PROCEDURES

3. Each pumping rate should be continued for one hour, after which the new rate should be instituted as rapidly as possible.

4. Pumping should begin at the lowest rate and conclude with the highest rate.

5. Pumping should be continuous through the entire step-drawdown test.

6. Measurement of chloride concentration and temperature of the discharge water shall be measured at least five times:
   a. at the end of each pumping rate during the step-drawdown test, and
   b. at the very beginning of the test.

7. A sufficient number of water level measurements shall be made in the pumped well following the termination of the step-drawdown test to establish that the water level fully recovers from each test to pretest levels.

Long-Term Continuous Test

The purpose of the long-term continuous test is to determine the hydraulic properties of the aquifer to explore for and identify nearby aquifer boundaries such as streams or dikes, and to observe the trend in chloride concentration of the discharge water.

1. The long-term test should not commence until the water level in the pumped well has fully recovered from the step-drawdown test. Generally, the time required for this recovery will be slightly greater than four hours. The water level in the pumped well should be measured immediately before initiation of the long-term test.

2. The pump rate for the long-term test should be sufficient to create an observable drawdown.

3. The test should be run 24 hours per day for at least seven days. If during the test, the water level remains the same for a period of 24 hours, the test can be terminated.

4. Measurement of chloride concentration and temperature of the discharge water during the long-term test shall be made at the beginning of the test and every six hours thereafter.

5. Depth to water in all wells shall be measured with sufficient frequency that each logarithmic cycle in time on the data plots (Graph 1) contains at least 10 data points spread through the cycle. Thus, depth to water should be made at t=0 (immediately prior to start of the test), and as close as possible at t=1, 1.5, 2, 2.5, 3, 4, 5, 6, 7, and 8 minutes for the first ten minutes and at all succeeding decimal multiples of these numbers to the end of the test (t=10, 15, 20, 25, 30, 40, 50, 60, 70, and 80 minutes for the log cycle 10 to 100 minutes, etc.)

6. A sufficient number of water level measurements shall be made in the pumped well following termination of the long-term continuous test to establish that the water level fully recovers from each test to pretest levels.

-2-
Table 1

LONG-TERM AQUIFER TEST DATA

Pumped Well No. Observation well no.
Pumped Well Name Observation Well Name
Target Q Distance between Obs. & Pumped Well
Target Q gpm Reference pt. for depth to water
Target Q gpm Reference pt. for depth to water

Distance between Obs. & Pumped Well
ft.
Reference pt. for depth to water
ft. msl

Static Water Level @ start of test
ft. msl

Water level measurements by:  □ steel tape  □ pressure transducer  □ airline

START TEST  Date: ___________ Hour of day: ___________

Flow Meter Reading Start: ___________ gals

<p>| Suggested | Actual   | Depth       | Drawdown   | Pumping rate | Temp. | Data in this table is for: |
| elapsed   | elapsed  | to water    | (unadjusted | (gpm)        |       | □ Pumped Well |
| time (min)| time (min)| (nearest   | to nearest | (gpm)        |       | □ Observation Well |
| 0         | 0        | 0.00        | 0.01 ft)   | 0.01 ft)     |       | Remarks            |
| 1         |          |             |            |              |       | Start test         |
| 1.5       |          |             |            |              |       |                    |
| 2         |          |             |            |              |       |                    |
| 2.5       |          |             |            |              |       |                    |
| 3         |          |             |            |              |       |                    |
| 4         |          |             |            |              |       |                    |
| 5         |          |             |            |              |       |                    |
| 6         |          |             |            |              |       |                    |
| 7         |          |             |            |              |       |                    |
| 8         |          |             |            |              |       |                    |
| 10        |          |             |            |              |       |                    |
| 15        |          |             |            |              |       |                    |
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| 25        |          |             |            |              |       |                    |
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| 50        |          |             |            |              |       |                    |
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| 70        |          |             |            |              |       |                    |
| 80        |          |             |            |              |       |                    |
| 90        |          |             |            |              |       |                    |
| 100       |          |             |            |              |       |                    |
| 150       |          |             |            |              |       |                    |
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<th>Drawdown $d$ (unadjusted to nearest 0.01 ft)</th>
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<th>EC (μhos)</th>
<th>Cl$^-$ (mg/l)</th>
<th>Temp. $^\circ$F or $^\circ$C</th>
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Max possible duration, water level or quality did not stabilize for any 24 period

Use same ending drawdown figure as start for recovery

Begin recovery data next page

Flow meter reading at end of pumped period: ____________________ gals
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<th>Actual elapsed time (min)</th>
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Start recovery

END TEST  Date: ___________  Hour of day: ___________

ADDITIONAL REMARKS:

Person in charge of pump test (print): ________________________________

Signature: __________________________________________________________

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

CWRM LTAT Form 1/9/96
# Annual Ground Water Use Report for Gary Hipp

**Address:** 677 Kulike Road, Hā'iku, Hawaii 96708

**Report Submitted for the Year 19**

**Measurement and Water Use Data**

<table>
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<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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* - 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) ____________________________

Title ____________________________

Signature ____________________________

Date ____________________________

EXHIBIT 7
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 Resources Management

SUBJECT: Well Construction/Pump Installation Permit Application for
    Huelo-Hipp Well (Well No. 5414-01)

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 November 29, 1996.

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 Charley Ice of the Commission staff at 587-0251.

Contact Person: Phone: 586-4256

Signed: Date: 12/19/96
December 16, 1996

To: Charley Ice, DLNR, Commission on Water Resource Management

From: William Wong, P.E., Chief Safe Drinking Water Branch

Subject: WELL CONSTRUCTION/PUMP INSTALLATION PERMIT APPLICATIONS

Thank you for the opportunity to review and comment on the Well Construction/Pump Installation Permit Applications for:

1) Kaupo Ranch Well #1 (Well No. 3806-02)
2) Kipahulu-Boerner Well (Well No. 3903-04)
3) Huelo-Baker Well (Well No. 5413-07)
4) Huelo-Lowen Well (Well No. 5413-08)
5) Huelo-Hipp Well (Well No. 5414-01)

Federal and state regulations define a public water system as a system that serves 25 or more individuals at least 60 days per year or has at least 15 service connections. All public water system owners and operators are required to comply with Hawaii Administrative Rules, Title 11, Chapter 20, Rules Relating to Potable Water Systems.

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

The permit application indicates that the source will be used for potable water. If the well doesn't provide water to a public water system, I recommend the private owner perform bacteriological and chemical analyses prior to usage as a drinking water source and thereafter perform routine analyses to monitor the water quality.

WW:la

Enclosures
To: Charley Ice, Staff  
Commission on Water Resources Management

From: Dennis Tulang, Chief  
Wastewater Branch

Subject: Well Construction Permit Application for  
Huelo - Hipp Well (Well No. 5414-01)  
TMK: (2) 2-9-4: 14

November 25, 1996

We have reviewed the well construction permit application for Well No. 5414-01 submitted by your office and our records show an treatment individual wastewater system (IWS), septic tank with absorption bed in the vicinity. Please find attached our "IWS Data Profile - County of Oahu" database worksheet stating the existence of an IWS on the property.

For details, please call Mr. Roland Tejano, Maui District Health Office - Wastewater Branch staff engineer on Maui at telephone 984-8232. Please refer to IWS File # 3249.

Attachments:  
IWS Data Profile - County of Maui File 3249  
TMK (2) 2-9-4: 14
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 Resources Management
SUBJECT: Well Construction/Pump Installation Permit Application for
         Huelo-Hipp Well (Well No. 5414-01)

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 November 29, 1996.

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 Charley Ice of the Commission staff at 587-0251.

RESPONSE: ( ) We have no comments
          (x) Comments attached

Contact Person:  Lori Kajiwara              Phone:  5864/294

Signed:  Lori Kajiwara                        Date:  11/25/96
IWS DATA PROFILE --- COUNTY OF MAUI

TMK #: 2-09-004:014  FILE #:3249-
OWNER: STOUT WEST
LOT LOCATION: HONOKALA ROAD HAIKU
REMARK:

********** DATES **********
SUBMIT DATE: 11/29/93  PLAN APPROVAL DATE: 12/02/93
REVIEWED BY: RT  INSPECTION DATE: 04/06/94
SYSTEM APP'D DATE: 10/19/94

***** TECHNICAL DATA *****
TREATMENT TYPE: SEPTIC TANK  DISPOSAL Via: ABSORPTION BED
USE FOR: 2 BEDROOMS  DESIGNED BY: PITT
PERCOLATION: 30 min/in  CAPACITY: 1000 gal.

PRESS ANY KEY TO CONTINUE.
Mr. Gary Hipp

Dear Mr. Hipp:

Well Construction/Pump Installation Permit Application for

Huelo-Hipp Well (Well No. 5414-01)

We accepted your application for the captioned well on October 28, 1996, and hereby acknowledge that it is complete. You can expect your application to be processed for action within ninety (90) days from that acceptance date.

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

Sincerely,

RAE M. LOUI
Deputy Director

Cl: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/Pump Installation Permit Application for Huelo-Hipp Well (Well No. 5414-01)

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 November 29, 1996.

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 Charley Ice of the Commission staff at 587-0251.

RESPONSE: ( ) We have no comments
 ( ) Comments attached

Contact Person: __________________________ Phone: __________________

Signed: __________________________ Date: __________________

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Attachment(s)
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MARKS:

LINE (1) Well No. 3687-01 (WCPA/PIP)
LINE (2) Well No. 3903-04 (WCPA/PIP)
LINE (3) Well No. 5414-01 (WCPA/PIP)
LINE (4) Well No. 5413-07 (WCPA/PIP)
LINE (5) Well No. 5413-08 (WCPA/PIP)

KATHRYN MAY
GARY HIPP

PAY TO THE ORDER OF

$25.00

FOR
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<th>FROM:</th>
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<td>UWaine, J.</td>
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<td>KUNIMURA, I.</td>
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<td>YODA, K.</td>
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**PLEASE:**
- ___ Approval
- ___ Signature
- ___ Information
- ___ See Me
- ___ Review & Comment
- ___ Take Action
- ___ Type Draft
- ___ Type Final
- ___ File
- ___ Xerox ___ copies

The above should be read as: See Me, Review & Comment, Take Action, Type Draft, Type Final, File, Xerox ___ copies.
# APPLICATION FOR PERMIT

**Type:** Well Construction and Pump Installation

---

**1. APPLICANT:**

- **(a) WELL OWNER**
  - Firm/Name: Gary Hipp
  - Contact Person: Gary Hipp
  - Address:

- **(b) LANDOWNER**
  - Firm/Name: Same
  - Contact Person: Ph: Address

- **(c) CONTRACTOR**
  - Firm/Name: Wailani Drilling Company
  - Phone: 572-2673
  - Contractor's C-57 License No.: C-20115
  - Contact Person: Mike Robertson
  - Address: 655 Kulike Rd, Haiku, Maui, Hawaii, 96708

---

**2. WELL LOCATION/NAME:**

- **Haiku - Hipp Well**
- Island: Maui
- Address: S.R. 1 Box 162 Haiku HI 96708
- Tax Map Key: 2-4-4-14

(Attach a USGS map, scale 1"=2000', and a property tax map showing well location referenced to established property boundaries.)

---

**3. (a) PROPOSED WORK:**

- Drill New Well
- Deepen
- Install New Pump
- Modify Existing Well
- Redrill
- Modify Pump
- Abandon/Seal *
- Replace Pump
- Be sure to complete and submit well abandonment report upon completion of work.

**3. (b) WELL TYPE:**

- Dug
- Bored
- Driven
- Drilled
- Radial

Is this well a part of a battery of wells? Yes / No

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

---

**4. PROPOSED PUMP INFORMATION:**

- Rated Pump Capacity: 20 gallons per minute

  **Pump Type:**
  - Deep Well Turbine
  - Rotary
  - Propeller
  - Submersible
  - Rotary-Displacement
  - Reciprocating
  - Centrifugal
  - Rotary-Gear
  - Impulse

- Motor:
  - Diesel
  - Gas
  - Electric, rated horsepower: 3

If Pump Replacement, Existing Pump Capacity: N.A. gallons per minute

---

**5. PROPOSED USE:**

- Municipal (including hotels, stores, etc.)
- Military
- Domestic (individual, noncommercial water use)
- Industrial
- Irrigation (crop)
- Fruit Trees
- Other (explain)

---

**6. (a) PROPOSED AMOUNT OF WITHDRAWAL:** 1000 gallons per day

**6. (b) METHOD OF FLOW MEASUREMENT:**

- Flow-meter
- Open-pipe
- Orifice Plate
- Weir

---

**7. PENDING ACTIONS:**

- CDUA
- SMA
- EIS
- EA
- NONE
- Other (explain)

---

**REMARKS, EXPLANATIONS:**

(if more space is needed, continue on back)

---

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; 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) any 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 imp capacity or future use up to the permitted pump capacity.

---

**Signature**

**Date**

---

For Official Use Only:

- Date Received
- Date Accepted
- Field Checked By
- Date

---

Aquifer System Name: Honolulu

State Well No: 110845 WCR Fm1

10/15/15
8. Remarks, Explanations (cont'd): All to be cased with 6 in. PVC and grout into first thick ledge of basalt, estimated depth, 150 ft. Then 4 in. PVC will be installed from ground level to bottom of hole, estimated depth, 550 ft.

9. PROPOSED WELL SECTION

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<tr>
<th>Elevation at top of casing</th>
<th>Ground Elevation: 881 ft., msl</th>
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<th>Cement Grout: 150 ft.</th>
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<th>Rock Packing: 0 ft.</th>
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<th>Hole Diameter: 10 in. to 150 ft.</th>
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<th>6 in. 150 to 550 ft.</th>
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<th>Total Depth: 550 ft.</th>
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<th>Length: 6 in. to 150 ft. Sleeved with 4 in. to 550 ft.</th>
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### Casing: X Perforated Screen

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### Open Hole:

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*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 the time of construction. Final elevations of well components shall be submitted in the well completion/well abandonment reports.*