PUMP INSTALLATION PERMIT

for

Laie-Zions Well
Well No. 3855-06
Laie, Oahu

TO: Zions Securities Corp.
55-510 Kamehameha Highway
Laie, HI 96762

In accordance with the Department of Land and Natural Resources Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", your application to replace a pump in Laie-Zions Well (Well No. 3855-06), for municipal use, is approved subject to the following conditions:

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

2. 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 the well shall not constitute a determination of correlative water rights. The permittee is notified and by this provision understands that the quantity of water taken from the well could be reduced by the Commission in the future. This permit is not a commitment that the pump capacity permitted here or even some lesser amount is guaranteed in the future.

3. The permit shall be for installation of a 240 gpm capacity pump in the well.

4. The applicant shall provide and maintain an approved meter or other appropriate device or means for measuring and reporting total water usage. Water usage shall be measured on a monthly basis and reported to the Commission.
5. The following shall be submitted to the Commission staff within 30 days after completion of the work:
   a. Well Completion Report.
   b. As-built sectional drawing of the installed pump.

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

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

WILLIAM W. PATY, Chairperson
Commission on Water Resource Management

JUL 10 1992
Date of Issuance

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: Lucky Fonoimoana Date: October 12, 1992
Printed Name: Lucky Fonoimoana
Firm or Title: Zions Securities Corporation

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

c: USGS
  Department of Health
    Safe Drinking Water Branch
    Ground Water Protection Program
  Honolulu Board of Water Supply
June 10, 1992

Department of Land and Natural Resources  
State of Hawaii  
Division of Water Resource Management  
P. O. Box 373  
Honolulu, HI  95809

Attention: Mr. Ed Sakoda

Dear Sirs:

The motor on our well No. 3855-06 (formerly No. 374) has burned out and we have purchased a new built-together pump and motor of the same pumping capacity as the existing equipment.

This well is located on the Brigham Young University campus and supplies the town of Laie in addition to the University and the Polynesian Cultural Center. Thus, it is most urgent that we get this well back into production as soon as possible. Accordingly, we seek approval at your earliest convenience as we proceed to do this with a licensed contractor.

Thank you very much.

ZIONS SECURITIES CORPORATION

Lucky Fomoimoana  
Manager

EF’mlg
APPLICATION FOR: □ Well Construction or □ Pump Installation PERMIT

Instructions: Please print or type and send completed application with attachments to the Div. of Water Resource Management, P.O. Box 373, Honolulu, Hawaii 96809. Application must be accompanied by a non-refundable filing fee of $25.00 payable to the Dept. of Land and Natural Resources. (Filing fee waived for government agencies.) If necessary, phone 448-3543, Hydrology/Geology Section for assistance.

1. WELL LOCATION: Island Oahu
   Tax Map Key 5-5-06-5
   Address 55-220 Kulanui, Laie, HI 96762
   (Attach a USGS map, scale 1"=2000", and a property tax map showing well location referenced to established property boundaries.)

2. (a) WELL OWNER:
   Firm Name Zions Securities Corp.
   Contact Person Lucky Fonoimoana
   Address 55-510 Kam Highway
   Laie, HI 96762 Ph: [Redacted]

   (b) LANDOWNER: Corp. of the President of The Church of Jesus Christ of Latter-day Saints (BYUH Campus)
   Firm Name Saints (BYUH Campus)
   Contact Person Lucky Fonoimoana
   Address 55-510 Kam Hwy
   Laie, HI 96762 Ph: [Redacted]

3. PROPOSED CONTRACTOR:
   Name Doonwood Engineering
   Address P.O. Box 184 Kailua, HI 96734
   Contractor's License No. AC 11764
   Ph: [Redacted]

4. PROPOSED WORK:
   □ Drill New Well □ Deepen □ Redrill
   □ Alter □ Seal □ Abandon
   □ Install New Pump □ Replace Pump □ Modify Pump
   (Briefly describe the proposed work and fill in the diagram on the back of this form.)

5. PROPOSED USE:
   □ Municipal (including hotels, stores, etc.) □ Military
   □ Domestic (individual, noncommercial water sys.) □ Industrial
   □ Irrigation (specify) □ Other (specify)

6. PROPOSED AMOUNT OF WITHDRAWAL: 345,000 gallons per day maximum.

7. PROPOSED PUMP INFORMATION:

   Pump Type:
   □ Vertical Turbine
   □ Submersible
   □ Centrifugal
   Motor:
   □ Diesel
   □ Gas
   □ Electric, at a rated horsepower of 10
   Rated Pump Capacity: Gallons per minute 240

Owner (print) Zions Securities Corp.
Signature Lucky Fonoimoana
Date 6-10-92

For Official Use Only:
Date Received [Redacted] Hydrologic Unit
Date Accepted [Redacted] Diversions Works No. LAIE-2/CI/(J~

Corp. of the President of The Church of Jesus Christ of Latter-day Saints (BYUH Campus)
Signature Lucky Fonoimoana
Date 6-10-92

State Well No. LAIE-ZIONS
Briefly describe the proposed work:

No changes will be made in the well itself nor the piping at the well head because the new pump has the same dimensions as the old one. The old pump with its burned-out motor will be replaced by a new Myers ES 2" x 3" x 9.5" end-suction, single-stage, centrifugal pump, close coupled to a 10 Hp, 1750 rpm, 215 JP Frame, U.S. Electric motor, capable of producing 240 gpm with a total lift of 75 feet.

**PROPOSED SECTION OF WELL**

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

Ground Elevation: _____ ft., msl*

Cement Grout: _____ ft.

Solid Casing:

Material

Length _____ ft.

Diameter _____ in.

Wall thickness _____ in.

Hole Diameter: _____ in.

Casing: □ Perforated □ Screen

Material

Length _____ ft.

Diameter _____ in.

Wall thickness _____ in.

Total Depth: _____ ft.

Openings _____ sq. in./L.F.

Rock Packing: _____ ft.

Open Hole:

Length

Diameter _____ in.

*Approximate elevation at time of filing application. Final elevation (msl) by a surveyor licensed by the State must be submitted at start of construction.
<table>
<thead>
<tr>
<th>SERIAL NUMBER</th>
<th>YEAR, MONTH, DAY</th>
<th>POST OFFICE</th>
<th>U.S. DOLLARS AND CENTS</th>
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<tbody>
<tr>
<td></td>
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<td></td>
<td>25000.00</td>
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</table>

PAY TO: Dept. of Land & Natural Resources
ADDRESS: P. O. Box 373
Honolulu, HI 96809

CHECKWRITER
IMPRINT AREA

FROM: Zion Securities Corp.
ADDRESS: 55-510 Kam Hwy, Laie, HI

CODE NO. OR USED FOR: Pump Installation Permit

96762
### State of Hawaii
**Commission on Water Resource Management**
Department of Land and Natural Resources

**WELL COMPLETION REPORT - PART II**

Pump Installation

**Instructions:** Please print in ink or type and send completed report (with attachments, if applicable) to the Commission on Water Resource Management, P.O. Box 521, Honolulu, Hawaii 96806. The Commission may not accept incomplete reports. This form shall be submitted within 90 days of the completion of work. For assistance, please consult the Hawaii Well Construction and Pump Installation Standards or call the Regulation Branch at 887-6926. For updates to this form or additional information, please visit our website at [http://www.state.hi.us/dlnr/cwrm/](http://www.state.hi.us/dlnr/cwrm/)

**1. State Well No.:** 3855-13  **Well Name:** CHAPMAN  **Island:** OAHU

**2. Address:** 55-220 KAMEHAMEHA HWY Mail Key: 5-5-01:47

**3. Pump Installation Company:** Ernie Doak Plumbing, Inc.

**4. Date Pump Installed:** 7-01-01

**5. PERMANENT PUMP INFORMATION**

<table>
<thead>
<tr>
<th>Pump Type, Make, Serial No.</th>
<th>381-16220, 2823008110</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated Capacity:</td>
<td>25 gpm</td>
</tr>
<tr>
<td>Motor Type, H.P., Voltage, rpm:</td>
<td>Fransen Submersible, 1.5 HP, 230V, 3400</td>
</tr>
</tbody>
</table>

**Type of flow meter:** FRansen Submersible

**Pump type (check one):**
- Deep Well Turbine
- Submersible
- Centrifugal
- Others

**Method of flow measurement:**
- Flowmeter
- Weir
- Open Pipe
- Orifice
- Others: attach schematic

**7. Fill in the as-built section on the other side of this sheet.**

**8. Other remarks/commants:**

---

**Pump Installation Contractor (print):** Ernie Doak  **Lic. No.** C-16507

**Signature:**

**Date:** 7-30-01

---

**Permittee (print):** ELIZABETH L. CHAPMAN

**Signature:**

**Date:** 7/20/01

---

*TIME IS 16.66 HRS FOR 25000 GALS.*
9. AS-BUILT PUMP SECTION

(Please attach as-built if different from diagram provided below)

Bench mark
Elevation surveyed to nearest 0.01 ft. =
17.26 ft. mean sea level

elevation of top of chase tube
17.95 ft. mean sea level

Pump intake depth = 80' ft.
(referenced to bench mark)

Chase tube depth = 77' ft.
(referenced to bench mark)

If airline installed, bottom of airline
elevation =
_____ ft. mean sea level

8-3855-13 CHAPMAN
**Quotation**

**DATE:** 12/4/03

**FAX:** 415.831.2240

---

**NAME:** LEE & LIZ

**COMPANY:**

**STREET:**

**CITY/ZIP:**

**TAX %:** 0.04160

---

**PRODUCT** | **QUANTITY** | **PRICE EA** | **TOTAL COST**
---|---|---|---
3ST15220: MYERS 4", 25'PM SUB 220V, 1PH, 1.5HP | 1 | $550.00 | $550.00
CJP152: FRANKLIN CONTROL BOX FOR ABOVE | 1 | 65.00 | 65.00
PS1029: SQUARE D SWITCH SET 60/70 | 1 | 29.00 | 29.00
8PD11.5: FLOMATIC 1.5" BRASS CHECK | 1 | 35.00 | 35.00
Q805: WINTERS 160PSI SS LIQ FILLED GAUGE | 1 | 15.00 | 15.00
PRV50: 1/2" PRESSURE RELIEF VALVE | 1 | 15.00 | 15.00
BAT120XL: 1.25" TANK TEE | 2 | 22.00 | 44.00
ST48C: TORQUE ARRESTER | 1 | 10.00 | 10.00
10/4: 10 GA, 4 WIRE SUBMERSIBLE CABLE (PER FT) | 100 | 0.79 | 79.00
SR119: STA-RITE 119 GAL FIBerglass BLADDER TANK | 2 | 525.00 | 1050.00 | 0.00
SPLL: INSTALLATION DRAWINGS (IF DESIRED) | 1 | 175.00 | 175.00 | 0.00 | 0.00 | 0.00 | 0.00

**SUB TOTAL:** 2058.00

**FREIGHT (EST):** 0.00

**TAX:** 85.81

**TOTAL:** 2143.81

---

**NOTES:** BASED UPON YOUR REQUIREMENTS, 220GPM AT A 50/70 PSI SET AT THE WELL HEAD SHOULD BE SUFFICIENT. PUMP MODEL BASED ON A SET DEPTH OF 75 AND 1.5" DROP PIPE. 2 EACH 119 GAL BLADDER TANKS WILL PROVIDE A MINIMUM OF 3 MINUTES, WORST CASE, RUN TIME. POOL FILL TIME IS 18-66 HRS FOR 25000 GAL.

---

**Signature:**

---

**From:** LEE & LIZ [Signature]

---

**Fax No.:** 415.961.0873

---

**From No.:** 20010321-16PM P1
PUMP INSTALLATION PERMIT

Chapman Well, Well No. 3855-13

In accordance with Department of Land and Natural Resources, Commission on Water Resource Management's Administrative Rules, Section 13-169, entitled "Water Use, Wells, and Stream Diversion Works", this document permits the pump installation for Chapman Well (Well No. 3855-13) at 55-282 Keawaianake Highway, Oahu, TKM 5-5-01: 47, subject to the Hawaii Well Construction & Pump Installation Standards (122/37) which include but are not limited to the following conditions:

1. The Chairperson to the Commission on Water Resource Management (Commission), P.O. Box 121, Honolulu, HI 96812, 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 §13-169-15, Hawaii Administrative Rules.

2. The pump installation permit shall be for installation of a 150 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 a monthly basis, on forms provided by ID 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 stream flow standards. This permit or the authorization to pump water from a well shall not constitute a determination of water rights. The permittee is advised and by this provision understands that the quantity of water taken from the well shall be reduced by the Commission in the future. This permit is not a confirmation 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 - (Preliminary) 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 (122/37). If the HWCPAS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result.

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

9. If the well is not to be used it must be properly capped. If the well is to be abandoned then the permittee must apply for a well abandonment permit in accordance with §13-169-12(1) prior to any well sealing or plugging work.

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

Date of Approval: December 14, 1998
Expiration Date: December 14, 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 and understand that I do not hold a valid permit until I and the pump installer have signed, dated, and returned the permit to the Commission. I also understand that non-compliance with any permit condition may be grounds for revocation and fines of up to $1000 per day.

Permittee's Signature: [Signature]
Date: 7-20-2001

Printed Name: ELIZABETH L. CHAPMAN
Firm or Title: LAKER

Installer's Signature: [Signature]
License # C-16887 Date: 7-20-2001
Printed Name: ERNIE DOWS
Firm or Title: ERNIE DOWS PUMPING

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

Attachments
USGS
Department of Health's Safe Drinking Water & Wastewater Branches
Honolulu Department of Water Supply
ATTN: Ryan -

From: Lee Caffeman -
Att: Ryan
From: Chapman Well
State of Hawaii  
COMMISSION ON WATER RESOURCE MANAGEMENT  
Department of Land and Natural Resources  
WELL COMPLETION REPORT - PART II  

Pump Installation  

1. State Well No. 3855-13  
   Well Name: CHAPMAN  
   Island: OAHU  

2. Address: 55-220 Kamehameha Hwy  
   Tax Map Key: 6-5-01-47  

3. Pump Installation Company: ERNIE DOAK PLUMBING  
4. Date Pump Installed: 7-25-01  

5. PERMANENT PUMP INFORMATION  
   Pump Type, Make, Serial No.: MEGAGEAR 3ST16220 28336AAD  
   Rated Capacity: 35 gpm  
   Motor Type, H.P., Voltage, rpm: Franklin Submersible, 1.5 HP, 230V, 3/4 HP  
   Type of Flow meter:  
   Pump type (check one):  
   [ ] Deep Well Turbine  
   [ ] Rotary  
   [ ] Propeller  
   [ ] Submersible  
   [ ] Rotary-Displacement  
   [ ] Reciprocating  
   [ ] Centrifugal  
   [ ] Rotary-Gear  
   [ ] Impeller  

6. Method of flow measurement:  
   [ ] Flowmeter  
   [ ] Manufacturer  
   [ ] Measure  
   [ ] weir or open pipe  
   [ ] No  
   [ ] Other, explain below  

7. Fill in the as-built section on the other side of this sheet.  

8. Other remarks/notes:  

   Pump Installation Contractor (print): ERNIE DOAK  
   C-57C-57A/A  Lic. No. C-57C-57A  
   Signature:  
   Date: 7-25-01  

   Permittee (print): ELIZABETH L. CHAPMAN  
   Signature:  
   Date: 7-25-01
Ryan Imata

Subject: Lee
Entry Type: Phone call
Start: Fri 7/20/2001 9:06 AM
End: Fri 7/20/2001 9:15 AM
Duration: 9 minutes

1998 Well on their property in Laie
Son-in-law Matthew
J. cornick
wcr 2 -
$12,000 for pump for roscoe moss
water test - quality was bad
3855-13
pacific liquid gas and air
pump installed in 1998
fax
## WELL COMPLETION REPORT - PART II

**Pump Installation**

**Instructions:** Please print in ink or type and send completed report (with attachments, if applicable) to the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809. The Commission may not accept incomplete reports. This form shall be submitted within 60 days of the completion of work. For assistance, please consult the Hawaii Well Construction and Pump Installation Standards or call the Regulation Branch at [phone number]. For updates to this form or additional information, please visit our website at [website link].

### 1. State Well No.: Well Name: Island:

### 2. Address: Tax Map Key:

### 3. Pump Installation Company:

### 4. Date Pump Installed: month/day/year

### 5. PERMANENT PUMP INFORMATION

- **Pump Type, Make, Serial No.:**
- **Rated Capacity:** gpm at head of: ft.
- **Motor Type, H.P., Voltage, rpm:**
- **Type of flow meter:** which measures in
- **Pump type (check one):**
  - [ ] Deep Well Turbine
  - [ ] Submersible
  - [ ] Centrifugal
- **Method of flow measurement:**
  - [ ] Flowmeter
  - [ ] Weir
  - [ ] Open Pipe
  - [ ] Orifice*
  - [ ] Other*, explain below

*attach schematic

### 6. Method of flow measurement:

- Manufacturer
- Make
- Size

### 7. Fill in the as-built section on the other side of this sheet.

### 8. Other remarks/comments:

---

**Pump Installation Contractor** (print) C-57/C-57a/A Lic. No. 

Signature Date

**Permittee** (print)

Signature Date
9. AS-BUILT PUMP SECTION (Please attach as-built if different from diagram provided below)

Bench mark elevation surveyed to nearest 0.01 ft. = _____ ft. mean sea level

Elevation of top of chase tube = _____ ft. mean sea level

Pump intake depth = _____ ft. (referenced to bench mark)

Chase tube depth = _____ ft. (referenced to bench mark)

If airline installed, bottom of airline elevation = _____ ft. mean sea level
FROM: RYAN
DATE: 2/18

TO: BAUER, G.
INIT. LUM, A.
FOR: 4 Approval
PLEASE: See Me

TO: CHING, F.
INIT. NAKAMA, L.
FOR: 4 Signature
PLEASE: Review & Comment

TO: FUJI, N.
INIT. NAKANO, D.
FOR: 5 Information
PLEASE: Take Action

TO: HARDY, R.
INIT. OHYE, M.
FOR: 2, 4, 9
PLEASE: Type Draft

TO: HIGA, D.
INIT. SAKODA, E.
FOR: 3 SUBIA, S.
PLEASE: Type Final

TO: HIRANO, E.
INIT. SWANSON, S.
FOR: 3
PLEASE: File

TO: ICE/C.
INIT. INNAI, R.
FOR: 5
PLEASE: Xerox copies

TO: JOHNS, T.
INIT. JOHNSTON, E.
FOR: 2
PLEASE: Xerox copies

TO: KUNIMURA, I.
INIT. YODA, K.
FOR: 1
PLEASE: Xerox copies

☐ WELL CONSTRUCTION  ☑ PUMP INSTALLATION PERMIT FOR: 3855-13 Chapman Well

ATTACHMENTS FOR WELL CONSTRUCTION PERMIT:
1 COVER LETTER
2 PERMIT (2x)
3 PUMP TEST
4 DOH COMMENTS
5 WCR FORM

ATTACHMENTS FOR PUMP INSTALLATION PERMIT:
1 COVER LETTER
2 PERMIT (2x)
3 DOH-COMMENTS
4 WCR FORM
5 WUR FORM

TO BE SENT TO APPLICANT
FOR OFFICE USE ONLY

PLEASE REVIEW & COMMENT
TAKE ACTION
TYPE DRAFT
TYPE FINAL
FILE
Ms. Elizabeth L. Chapman  
23 Kainani Place  
Kailua, Hawaii 96734  

Dear Ms. Chapman:  

Pump Installation Permit  
Chapman Well (Well No. 3855-13)  

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. No Special Conditions  

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

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 [Redacted].  

Aloha,  

[Signature]  
TIMOTHY E. JOHNS  
Chairperson  

Enclosures
PUMP INSTALLATION PERMIT

Chapman Well, Well No. 3855-13

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 Chapman Well (Well No. 3855-13) at 55-202 Kamehameha Highway, Oahu, TMK 5-5-01: 47, subject to the Hawaii Well Construction & Pump Installation Standards (12/3/97) 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 150 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 a monthly basis, on forms provided by the Chairperson (attached).

4. The proposed use shall not adversely affect existing or future legal uses of water in the area, including any surface water or established instream flow standards. This permit or the authorization to pump water from a well shall not constitute a determination of correlative water rights. The permittee is notified and by this provision understands that the quantity of water taken from the well could be reduced by the Commission in the future. This permit is not a commitment that the pump capacity permitted here or even some lesser amount is guaranteed in the future.

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

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

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

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

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

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

Date of Approval: December 14, 1998
Expiration Date: December 14, 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 and understand that I do not hold a valid permit until I and the pump installer have signed, dated, and returned the permit to the Commission. I also understand that non-compliance with any permit condition may be grounds for revocation and fines of up to $1000 per day.

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

Installer's Signature: ___________________________ License #: ________ Date: ________________
Printed Name: ___________________________ Firm or Title: ___________________________

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

Attachments:
USGS
Department of Health/ Safe Drinking Water & Wastewater Branches
Honolulu Department of Water Supply
STEP-DRAWDOWN ANALYSIS

By Glenn Bauer

NAME OF WELL: Chapman Well No. 3855-13
DATE OF ANALYSIS: 28-Dec-98

<table>
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<th>s(ft)</th>
<th>ds (ft)</th>
<th>GPM</th>
<th>s/Q</th>
</tr>
</thead>
<tbody>
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<td>0.2849</td>
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<td>0.3990</td>
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<td>99.29</td>
<td>325</td>
<td>0.4573</td>
</tr>
</tbody>
</table>

Regression Output:

- Constant: 0.254481 = b
- Std Err of Y Est: 0.004767
- R Squared: 0.996753
- No. of Observations: 4
- Degrees of Freedom: 2
- X Coefficient(s): 0.000834 = c
- Std Err of Coef.: 2.6E-05

Drawdown(tot) = Drawdown(aq.) + Drawdown(well)

\[ s = bQ + cQ^2 \]

if \( Q = 325 \text{ gpm} \)

\[ bQ = 82.706 \text{ calc. } s = 149.709 \text{ ft.} \]
\[ cQ^2 = 67.003 \]
\[ L = 55.24\% \text{ PERCENT OF HEAD LOSS = LAMINAR FLOW} \]

adjusted drawdown using \( L @ 325 \text{ gpm} \)

82.10 ft.

Polubarinova-Kochina Eq.

Adjusted "s" using constant 'b'

\[ K = \frac{Q}{1.6L/1/2piLs} = 1\text{ ft/d} \]
\[ L = \text{ length of open interval in well} = 806\text{ ft} \]
\[ r = \text{ radius of well in ft.} = 0.42\text{ ft} \]
\[ s = \text{ drawdown in well adjusted for well loss} = 82.71\text{ ft} \]
\[ Q = \text{ pumping rate in cu. ft./d} = 62,567\text{ cu. ft./d} \]
\[ h = \text{ water level} = 590\text{ ft} \]
\[ b = \text{ thickness of aquifer} (41^*h) = 916\text{ ft} \]
\[ T = \text{ transmissivity} = k*b = 1,099\text{ ft}^2/\text{d} \]

SPECIFIC CAPACITY \( Q/s = \)

\[ Q = 325\text{ gpm} \]
\[ Q/s = 3\text{ GAL/FT OF DD} \]

Notes: Thickness of aquifer is assumed to be: 916 ft.
## WCR 1 Check for Well No. 3855-13 (survey to regulation memo)

### 1. Pump Tests Check

**Glenn Bauer** *(initial)*

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<th></th>
<th>Yes</th>
<th>No</th>
<th>If no, describe deficiency</th>
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### 2. Construction Check

**Mitch Ohye** *(initial)*

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WELL COMPLETION REPORT

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

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 [phone number] or 1-800-468-4644 Extension 70225.

1. State Well No.: 3855-13  Well Name: Chapman  Island: Oahu

2. Location/Address: 55-202 Kamehameha Hwy. Tax Map Key: 5-5-01-47

PART I. WELL CONSTRUCTION REPORT

3. Drilling Company: Roscoe Moss Hawaii Inc

4. Name of driller who performed work: Ken Fales

5. Type of rig/construction: B-80 Mobile Drill

6. Date(s) Well Construction and pump tests (if any) completed: 10-23-98

7. GROUND ELEVATION (referenced to mean sea level, msl): 17.0 ft.
   Well Bench Mark (description/location): 17.26 s1 ab. 17.95 topca

8. DRILLER'S LOG: Please attach geologic log (available or required by permit)
   Depths (ft.)  Rock Description, Water Level, Dates, etc.
   Depths (ft.)  Rock Description, Water Level, Dates, etc.
   0 to 53'  Aluvium, Brownclay, round pebbles 120' to 139' Dense Weathered basalt 11ft
   53' to 120'  Layered weathered basalt W. 11ft 139' to 146' Dense fresh basalt W. 11ft
   (If more space is needed, continue on back)

9. Total depth of well below ground: 220 ft.

10. Hole size: 16 inch dia. from 0 ft. to 53 ft. below ground
    12 inch dia. from 53 ft. to 146 ft. below ground
    5.5 inch dia. from 146 ft. to 220 ft. below ground

11. Casing installed: 6 in. I.D. x .288 in. wall solid section to 146 ft. below ground
    in. I.D. x in. wall perforated section to ft. below ground
    Casing Material/Slot Size: Carbon steel, A-53, sch. 40

12. Annulus: Grouted from 0 ft. below ground to 146 ft. below ground
    Gravel packed from ft. below ground to ft. below ground

13. Initial water level: 66 ft. below ground. Date and time of measurement:

14. Initial chloride: ppm Date and time of sampling:

15. Initial temperature: °F Date and time of measurement:

16. PUMPING TESTS: Reference Point (R.P.) used: 6" casing flange, which elevation is ft.
    (1) Step-Drawdown Test Date
    Start water level ft. below R.P.
    End water level ft. below R.P.
    (2) Long-term Aquifer Test Date
    Start water level ft. below R.P.
    End water level ft. below R.P.

17. Aquifer Pump Test Procedures data & graphs (1/95 LTAT Form) attached?  _Yes _No

18. As-built drawings attached? _Yes _No

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

Well Drilling Contractor (print): Roscoe Moss Hawaii Inc  C-57 Lic. No. AC-16437

Signature  __________________________  Date 11/9/98

Surveyor (print)  James R. Thompson  Lic. No. 3627

Signature  __________________________  Date 11/3/98

Applicant (print)  Elizabeth L. Chapman

Signature  __________________________  Date 11/9/98
PART II.  
(PERMANENT) PUMP INSTALLATION REPORT

<table>
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<th>Pump Installation Company:</th>
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<tr>
<td>21.</td>
<td>Name of person performing work:</td>
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<td>22.</td>
<td>Date Pump Installation Completed:</td>
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<tr>
<td>23. PUMP INSTALLATION:</td>
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<tr>
<td>Pump Type, Make, Serial No.:</td>
<td>Capacity: gpm</td>
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<tr>
<td>Motor type, H.P., Voltage, rpm:</td>
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<tr>
<td>Depth of Pump Intake Setting: ft. below</td>
<td>which elevation is ft.</td>
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<tr>
<td>Depth to bottom of airline: ft. below</td>
<td>which elevation is ft.</td>
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<tr>
<td>Pumping Head is ft.</td>
<td>Type of flow meter: which measures in</td>
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<tr>
<td>24.</td>
<td>As-built drawings attached attached? Yes _ No</td>
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<tr>
<td>25. Other remarks/comments: (See below)</td>
<td></td>
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</table>

| Pump Installation Contractor (print) | C-57 Lic. No. |
| Signature | Date |
| Applicant (print) | |
| Signature | Date |

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

<table>
<thead>
<tr>
<th>Water Level</th>
<th>Depth (ft.)</th>
<th>Rock Description, Remarks,</th>
<th>Water Level</th>
<th>Depth (ft.)</th>
<th>Rock Description, Remarks,</th>
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<tr>
<td>Dates (ft.)</td>
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<td>Dates (ft.)</td>
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<tr>
<td>146 to 190</td>
<td>Dense basalt, some vesicle layers</td>
<td>to</td>
<td>190 to 220</td>
<td>Fractured basalt with some red cinder</td>
<td>to</td>
</tr>
<tr>
<td>to</td>
<td>W.L. .66ft</td>
<td>to</td>
<td>to</td>
<td>W.L. .66ft</td>
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</tbody>
</table>

19. & 25. Remarks: 0-53 ft was drilled via Watson Bucket rig to refusal at 53' a 12" steel conductor pipe set on rock with 10 bags neat cement pumped via grout plant in annulass, 2 yds 1:1 sand/cement was tremed following day to fill entire annulass. 11ft water level probably due to Laie Malo Stream saturation.
53-146 was drilled in one via 12" Down Hole Hammer Air Rotary in one day. Casing was set at 146' and grouted in place.
146-190 was drilled in one day, artesian head rose in casing but a short pump test showed 13gpm with 18ft drawdown and slow recovery.
190-220 was drilled via 4" ID line core. Cores cored showed good water potential and white-pasty mineralization. A short pump test showed 64gpm yield with about 6ft drawdown and drilling terminated.

After review of pumping test data we would ask your issuance of a pump installation permit for 80gpm capacity for owners domestic use.

Regarde,
Tracy Runnells
Chapman Well # 3055-13
As - Built 10/15/98

Elevations (MSL)
Top of 6" Blind Flange
Top of 2x2x6" slab

Water Levels (below 6" Flange)
Static (idle) 20"
Pumping (80gpm)

Concrete
Cement Grout
October 20, 1998

Roscoe Moss Hawaii Inc.
91-259A Olai Street
Kapolei, HI 96707

Attn: Mr. Mike Hopkins

Gentlemen:

This is to advise you that we have prepared a vertical survey of the well site located on Lot 8 of Land Court Application 1128 at Laie, Koolauloa, Oahu, Hawaii as shown on Tax Map Key: 5-5-01:47.

Attached is a map of the site with the final elevations.

Very truly yours,

WALTER P. THOMPSON, INC.

James R. Thompson
President
## CONSTANT-RATE PUMP TEST DATA

**Pumped Well No.**: 3855-13  
**Pumped Well Name**: Chapman  
**Target Q**: 80 gpm  
**Observation well no.**  
**Distance between Obs. & Pumped Well**: 80 ft.  
**Reference pt. for depth to water**: 17.95 ft. msl TOC  
**Static Water Level @ start of test**: 1.70 ft. msl  

Water level measurements by:  
- [ ] steel tape  
- [ ] pressure transducer  
- [ ] airline

**START TEST**  
**Date**: 10-23-98  
**Time of day**: 7:00 A.M.

**Flow Meter Reading Start**: 1249900 gals

<table>
<thead>
<tr>
<th>Time elapsed (min)</th>
<th>Actual depth to water (nearest 0.1 ft)</th>
<th>Drawdown (unadjusted to nearest 0.1 ft)</th>
<th>Pumping rate Q (gpm)</th>
<th>Field Hatch EC (µhos)</th>
<th>Cl⁻ (mg/l)</th>
<th>Temp. °F</th>
<th>Remarks</th>
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<td>Drawdown (unadjusted to nearest 0.1 ft)</td>
<td>Pumping rate Q (gpm)</td>
<td>EC (muhos)</td>
<td>Cl⁻ (mg/l)</td>
<td>Remarks</td>
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<tr>
<td>10000</td>
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<td></td>
<td>Max possible duration, water level or quality did not stabilize for any 24 period</td>
<td>Begin recovery data next page</td>
<td>Flow meter reading at end of pumped period:</td>
<td>1289200 gals</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
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END TEST Date: **10-23-98** Time of day: **5:00**

ADDITIONAL REMARKS:

Person in charge of pump test (print): **Tracy Rumpells**

Signature: **Tracy Rumpells**

The signature above indicates that the data reported on this form is accurate and true to the best of the person's knowledge who operated this pump test.
# Step-Drawdown Pump Test Data

Table 1 (SDPTD Form 12/17/97)

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

**START TEST** Date: 10/22/98 Time of day: NOON

Flow Meter Reading Start: 1240900 gals

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Chloride sample taken [sample]
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STEP-DRAWDOWN ANALYSIS

By Glenn Bauer

NAME OF WELL: Chapman Well No. 3855-13
DATE OF ANALYSIS: 09-Dec-98

<table>
<thead>
<tr>
<th>s(ft)</th>
<th>ds (ft)</th>
<th>GPM</th>
<th>s/Q</th>
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<td>2.73</td>
<td>2.73</td>
<td>39</td>
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<td>5.31</td>
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<td>9.94</td>
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Regression Output:
- Constant: 0.043024 = b
- Std Err of Y Est: 0.002745
- R Squared: 0.982465
- No. of Observations: 4
- Degrees of Freedom: 2
- X Coefficient(s): 0.000731 = c
- Std Err of Coef: 6.9E-05

Drawdown(tot) = Drawdown(aq.) + Drawdown(well)

$s = bQ + cQ^2$ if $Q = 92$ gpm

$bQ = 3.958$ calc. $s = 10.149$ ft.
$cQ^2 = 6.191$
$L = 39.00$ PERCENT OF HEAD LOSS = LAMINAR FLOW

adjusted drawdown using L @ 92 gpm
3.88 ft.

Polubarinova-Kochina Eq.

Adjusted "s" using constant "b"

| $K = Qln(1.6t/L)/2piLs$ = | 60 ft/d |
| $L = \text{length of open interval in well} = | 74 ft |
| $r = \text{radius of well in ft} = | 0.23 ft |
| $s = \text{drawdown in well adjusted for well loss} = | 3.96 ft |
| $Q = \text{pumping rate in cu. ft./d} = | 17,711 \text{ cu. ft./d} |
| $h = \text{water level} = | 16 |
| $b = \text{thickness of aquifer (41''h)} = | 665 \text{ ft} |
| $T = \text{transmissivity} = k^2b = | 39,963 \text{ ft}^2/\text{d} |

SPECIFIC CAPCITY $Q/s =$ FOR ANY Q

| $Q = 92 \text{ gpm}$ |
| $Q/s = 20 \text{ GAL/FT OF DD}$ |

Notes: Thickness of aquifer is assumed to be: 665 ft.
LOT 8
5.803 Acs.

MAP SHOWING
LOT 8, LAND COURT APPLICATION 112E
AT LAIE, KOOLAULOA, OAHU, HAWAII
SCALE: 1 IN. = 100 FT.
MARCH 17, 1998 WALTER P. THOMPSON, INC.
Ms. Elizabeth L. Chapman  
23 Kainani Place  
Kailua, HI 96734  

Dear Ms. Chapman:  

Exploratory Well Construction Permit Application for Well No. 3855-13  

Thank you for submitting your signed permit. We are returning one signed copy of your Well Construction Permit, which you should have kept for your records.  

If you have any questions about your permit, please contact Mr. Ryan Imata of the Commission staff at [Redacted].  

Sincerely,  

TIMOTHY E. JOHNS  
Deputy Director  

[Signature]  

RI:ss  
Enclosure
WELL CONSTRUCTION PERMIT

Chapman Well, Well No. 3855-13

In accordance with Department of Land and Natural Resources, Commission on Water Resource Management, its Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", this document permits the construction and testing of Chapman Well (Well No. 3855-13) at 55-202 Kamohalama Highway, Oahu, TMK 5-5-01:47, subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97) which include but are not limited to the following conditions:

1. The Chairperson of the Commission on Water Resource Management (Commission), P.O. Box 621, Honolulu, HI 96809, shall be notified, in writing, at least two (2) weeks before any work authorized by this permit commences.

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

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

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

5. In the event that subsurface cultural remains such as artifacts, burials or concentrations of shells or charcoal are encountered during construction, the permittee shall stop work and contact the Department's Historic Preservation Division (587-0045) immediately.

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

7. The following shall be submitted to the Chairperson within sixty (60) days after completion of work:
   b. Elevation (referenced to mean sea level, msl) survey by a Hawaii-licensed surveyor.
   c. As-built sectional drawing of the well.
   d. Plot plan and map showing the exact location of the well.
   e. Complete pumping test records, including time, pumping rate, drawdown, chloride content, and other data.

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

9. The well construction permit application is incorporated into this permit by reference and is subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97).

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

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

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

Date of Approval: May 21, 1998
Expiration Date: May 21, 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: Elizabeth Chapman-Vignaro Date: 6/6/98
Printed Name: Elizabeth Chapman-Vignaro
Driller's Signature: Tracy Runnels License #AC-16437 Date: 6/12/98
Printed Name: Tracy Runnels Firm or Title: Roxo-Moss Hawaii, Inc.

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

Attachment
C: USGS
Department of Health/ Safe Drinking Water, Wastewater, and Clean Water Branches
Honolulu Board of Water Supply
**Commission on Water Resource Management**

**FROM:** RYAN
**DATE:** 5/21/98
**SUSPENSE DATE:**

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**WELL CONSTRUCTION**

**PUMP INSTALLATION PERMIT FOR:**

**ATTACHMENTS FOR WELL CONSTRUCTION PERMIT:**
1. COVER LETTER
2. PERMIT (2x)
3. PUMP TEST
4. DOH COMMENTS
5. WCR FORM

**ATTACHMENTS FOR PUMP INSTALLATION PERMIT:**
1. COVER LETTER
2. PERMIT (2x)
3. DOH COMMENTS
4. WCR FORM
5. WUR FORM

**TO BE SENT TO APPLICANT**

**FOR OFFICE USE ONLY**

---

**Tim Johns**

---

Signatures:
- LOUI, R.
- NAKAMA, L.
- NAKANO, D.
- OHYE, M.
- SAKODA, E.
- SUBIA, S.
- SWANSON, S.
- UWAINE, J.
- YODA, K.
### COMMISSION ON WATER RESOURCE MANAGEMENT

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#### ATTACHMENTS FOR WELL CONSTRUCTION PERMIT:

- 1 COVER LETTER
- 2 PERMIT (2x)
- 3 PUMP TEST
- 4 DOH COMMENTS
- 5 WCR FORM

- TO BE SENT TO APPLICANT
- FOR OFFICE USE ONLY

#### ATTACHMENTS FOR PUMP INSTALLATION PERMIT:

- 1 COVER LETTER
- 2 PERMIT (2x)
- 3 DOH COMMENTS
- 4 WCR FORM
- 5 WUR FORM

- TO BE SENT TO APPLICANT
- FOR OFFICE USE ONLY

---

Please Review & Comment
Take Action
Type Draft
Type Final
File
Xerox copies

---
Mr. Lee Vignato
23 Kai Nani Place
Kailua, Hawaii 96734

Dear Mr. Vignato:

Well Construction Permit
Chapman Well (Well No. 3855-13)

Enclosed are two (2) copies of your approved Well Construction Permit for the captioned well(s) which authorizes well construction activities but excludes installation work for your permanent pump. As part of the Chairperson's approval, the following special condition was added and is part of your permit under Permit Condition 12:

Special Conditions

1. No special conditions

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

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

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

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

To validate your permit, please sign and have the contractor sign both permit originals and return one for our files. Also, copies of the aquifer pump test worksheet and the well completion report form are enclosed for your use. Please provide all the information in this packet to your well drilling contractor.
IMPORTANT - The well owner is responsible for all conditions of the permit. This includes ensuring that the well construction contractor, or other party who constructs the well(s), submits a completed Part I of the Well Completion Report form (enclosed) within sixty (60) days after the well construction work is completed. Be advised that you may be subject to fines of up to $1000 per day for any violations of your permit conditions.

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

Aloha,

[Signature]

for MICHAEL D. WILSON
Chairperson

Enclosures

c: Tracey Runnells, Roscoe Moss
WELL CONSTRUCTION PERMITS

Chapman Well, Well No. 3855-13

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 Chapman Well (Well No. 3855-13) at 55-202 Kamehameha Highway, Oahu, TMK 5-5-01:47, subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97) which include but are not limited to the following conditions:

1. The Chairperson of the Commission on Water Resource Management (Commission), P.O. Box 621, Honolulu, HI 96809, shall be notified, in writing, at least two (2) weeks before any work authorized by this permit commences.

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

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

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

5. In the event that subsurface cultural remains such as artifacts, burials or concentrations of shells or charcoal are encountered during construction, the permittee shall stop work and contact the Department's Historic Preservation Division (referenced to mean sea level) immediately.

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

7. The following shall be submitted to the Chairperson within sixty (60) days after completion of work:
   b. Elevation (referenced to mean sea level, msl) survey by a Hawaii-licensed surveyor.
   c. As-built sectional drawing of the well.
   d. Plot plan and map showing the exact location of the well.
   e. Complete pumping test records, including time, pumping rate, drawdown, chloride content, and other data.

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

9. The well construction permit application is incorporated into this permit by reference and is subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97).

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

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

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

Date of Approval: May 21, 1998
Expiration Date: May 21, 2000

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. I also understand that non-compliance with any permit condition may be grounds for revocation and fines of up to $1000 per day.

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

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

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

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

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

SUBJECT: Well Construction Permit Application
Chapman (Well No. 3855-13)

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 April 15, 1998.

Please find a map, attached, to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Mr. Ryan Imata of the Commission staff at [Contact Information].

RI: ss
Attachment(s)

RESPONSE:

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

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

If the well is used to supply both potable and non-potable purposes in a single system, the user shall eliminate cross-connections and backflow connections by physically separating potable and non-potable systems by an air gap or an approved backflow preventer, and by clearly labeling all non-potable spigots with warning signs to prevent inadvertent consumption of non-potable water. Backflow prevention devices should be routinely inspected and tested.

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

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

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

No comments/objections

Contact Person: Lori Kajiwara
Signed: [Signature]

Phone: [Redacted]
Date: 4-16-98
TO: Honorable Lawrence Miike, Director
Department of Health
Attention: Dennis Tulang, Wastewater Branch
William Wong, Safe Drinking Water Branch

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

SUBJECT: Well Construction Permit Application
Chapman (Well No. 3855-13)

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 April 15, 1998.

Please find a map, attached, to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Mr. Ryan Imata of the Commission staff at [Contact Information]

Attachment(s)

RESPONSE:

[ ] This well qualifies as a source which will serve as a source of potable water to a public water system (serving 25 or more people at least 60 days per year or has 15 or more service connections) and must receive Director of Health approval prior to its use to comply with Hawaii Administrative Rules (HAR), Title 11, Chapter 20, Rules Relating to Potable Water Systems, §11-19.

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

[ ] If the well is used to supply both potable and non-potable purposes in a single system, the user shall eliminate cross-connections and backflow connections by physically separating potable and non-potable systems by an air gap or an approved backflow preventer, and by clearly labeling all non-potable spigots with warning signs to prevent inadvertent consumption of non-potable water. Backflow prevention devices should be routinely inspected and tested.

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

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

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

[ ] No comments/objections

Contact Person: William Wong

Signed: William Wong

Phone: [Contact Information]

Date: 04/08/98
**SECTION 1: WELL LOCATION INFORMATION**

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**SECTION 2: WELL SECTION DATA**

(enter data in grey cells only)

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**SECTION 3: CHECKLIST**

(values to check are shaded)

**Well Depth**

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<th>Theoretical Thickness of Aquifer</th>
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<td>Depth of Well below Sea Level</td>
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okay (refer to HWCPIS Section 2.2)

**Well Casing**

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<td>Minimum Length of Solid Casing</td>
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okay (refer to HWCPIS Section 2.4 c)

**Casing Material**

| ASTM A-242 | #N/A |

(refer to HWCPIS Section 2.4 d)

**Annular Space**

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<th>Depth of Grouting</th>
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<td>Calculated Depth of Grouting</td>
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(Refer to HWCPIS Section 2.6 c)

**Thickness of Annular Space**

| 3 in. |

(Refer to HWCPIS Section 2.6 d)
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<th>Bottom Perf Casing</th>
<th>Bottom of Hole</th>
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Ms. Elizabeth L. Chapman  
23 Kainani Place  
Kailua, HI 96734

Dear Ms. Chapman:

Exploratory Well Construction Permit Application for Well No. 3855-13

We acknowledge receipt, on March 24, 1998, of your completed exploratory well construction permit application for the Chapman Well (Well No. 3855-13). You can expect your application to be processed within ninety (90) days from this date.

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

If you have any questions about your permit application, please contact Mr. Ryan Imata of the Commission staff at [Redacted].

Sincerely,

[Signature]

EDWIN T. SAKODA
Acting Deputy Director
TO: Honorable Lawrence Miike, Director Department of Health  
Attention: Dennis Tulang, Wastewater Branch  
William Wong, Safe Drinking Water Branch

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

SUBJECT: Well Construction Permit Application Chapman (Well No. 3855-13)

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 April 15, 1998.

Please find a map, attached, to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Mr. Ryan Imata of the Commission staff at [Contact Information]

RI: ss
Attachment(s)

RESPONSE:

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

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

[ ] If the well is used to supply both potable and non-potable purposes in a single system, the user shall eliminate cross-connections and backflow connections by physically separating potable and non-potable systems by an air gap or an approved backflow preventer, and by clearly labeling all non-potable spigots with warning signs to prevent inadvertent consumption of non-potable water. Backflow prevention devices should be routinely inspected and tested.

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

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

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

[ ] No comments/objections

Contact Person: ___________________________ Phone: ___________________________

Signed: ___________________________ Date: ___________________________
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**REMARKS:**
- LINE (1): Well No. 3855-13 (WCPA)
- LINE (2): 
- LINE (3): 
- LINE (4): 

**PAY TO THE ORDER OF:**
S.O.H. DEPT LAND/NAT RESOURCE
P.O. BOX 373
HONOLULU, HI 96809

**BANK OF HAWAII**
MAIN OFFICE
HONOLULU, HI 96814
58-102-1213

**CHECK 20022**

**DEPARTMENT OF LAND AND NATURAL RESOURCES**

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APPLICATION FOR PERMIT

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

APPLICATION FOR PERMIT

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

1. APPLICANT: (circle primary contact a, b, or c) Primary Fax: ____________________________
   (a) WELL OWNER
   Firm Name: Elizabeth L. Chapman
   Contact Person: Lee Vignato
   Address: 23 Kai Nani Place
   Kapolei, HI 96734
   (b) LANDOWNER
   Firm Name: Elizabeth L. Chapman
   Contact Person: Lee Vignato
   Address: 23 Kai Nani Place
   Kapolei, HI 96734
   (c) CONTRACTOR
   Firm Name: Roscoe Moss, HI, Inc.
   Contact Person: Tracy Runnels
   Address: 91-259 A Olai St., Kapolei, HI 96707

2. WELL LOCATION/NAME: Laie Island Oahu
   Address: 55-202 Kamehameha Hwy.
   Tax Map Key: 5-5-01:47
   (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
   (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: 150 gallons per minute
   Pump Type:
   ( ) Deep Well Turbine
   ( ) Rotary
   ( ) Submersible
   ( ) Centrifugal
   Motor:
   ( ) Diesel
   ( ) Gas
   ( ) Electric, rated horsepower 5 b.h.p.
   If Pump Replacement, Existing Pump Capacity: __________ gallons per minute

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

6. (a) PROPOSED AMOUNT OF WITHDRAWAL:
   ( ) 20,000 gallons per day
   (b) METHOD OF FLOW MEASUREMENT:
   ( ) Flow-meter
   ( ) Open-pipe
   ( ) Orifice Plate
   ( ) Weir

7. PENDING ACTIONS:
   ( ) COUA
   ( ) SMA
   ( ) EIS
   ( ) EA
   ( ) NONE
   ( ) Other (explain)
   Completion Date

8. REMARKS, EXPLANATIONS:
   Well is to accommodate domestic home to be built in future by owner’s children. No immediate use or pump installation is planned. Owner feels the need for water supply before building. Preliminary (more space is needed, continue on back)

Well Owner: Elizabeth L. Chapman
Signature: ____________________________
Date: 3/16/1998

Landowner: Elizabeth L. Chapman
Signature: ____________________________
Date: 3/16/1998

Contractor: Roscoe Moss, HI, Inc.
Signature: ____________________________
Date: 3/16/1998

For Official Use Only:
Date Received
Field Checked By
Date
Longitude
Aquifer System Name
Koolau/Airfield
Latitude
Koala/Windward
State Well No.
3855-15
1100/05 WCPH Fl
8. Remarks, Explanations (cont'd): Well design is based on well #3755-09 geological data.

Casing to be set and grouted in basalt prior to advancing open hole into artesian aquifer. Well casing will be 8" diameter or smaller based on field results.

9. PROPOSED WELL SECTION

Elevation at top of casing

Ground Elevation: 14 ft. m.s.l. approx.

Cement Grout: 140 ft.

Rock Packing: n/a.

Hole Diameter: 12 in.

Total Depth: 190 ft.

Solid Casing:
Material: carbon steel
Length: 140 ft.
Diameter: 6 in.
Wall thickness: 3/12 in.

Casing:
    □ Perforated    □ Screen
Material: n/a
Length: n/a
Diameter: n/a
Wall thickness: n/a
Openings: sq. in. A.F.

Open Hole:
Length: 50 ft.
Diameter: 6 in.

*Approximate elevation at time of filing application. Ground elevation above mean sea level (m.s.l.) by a surveyor licensed by the State must be submitted at start of construction. Final elevations of well components shall be submitted in the well completion/well abandonment reports.
Chapman Well, Laie (Proposed Design)

Class 150 Blind Flange
Approx. Grd. Elev +16 ft

140'
Cement Grouted annul.

6". 380 wall carbon steel blank pipe

190' -174 clev.
Open hole 50'

140' -124 clev.

12" Borehole 140' Total

Total Depth 190'
MAR-08-99 09:51 FROM WATER RESOURCE MGT

State Route
Maile 0.7 MI.
Kaneohe 20 MI.

HAWAIIAN ISLANDS
QUADRANGLE LOCATION

0-7

KAHUKU, HAWAII
N2137.5-W15754.7.5
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