CHECKLIST

☑ WELL CONSTRUCTION PERMIT  ☐ PUMP INSTALLATION PERMIT

WELL NAME or LOCATION: Lanai Irrigation Wells B-1, B-2

WELL NUMBER: 4552-01, 4553-01

OWNER or OPERATOR: Lanai Company, Inc.

ADDRESS: 650 Ipihi Rd, Hana, HI 96713

TELEPHONE (contact person): 648-2928

Date application received: 3-5-90
Date acknowledged receipt/request more info: 3-13-90
Date application accepted: 
Suspense date (90 days): 
Date filing fee deposited: 4-2-90

Application sent to following:

<table>
<thead>
<tr>
<th>Dept. of Health</th>
<th>Date sent</th>
<th>Comments received</th>
</tr>
</thead>
<tbody>
<tr>
<td>County water board/dept</td>
<td>3-20-90</td>
<td>4-19-90</td>
</tr>
<tr>
<td></td>
<td>3-15-90</td>
<td>4-4-90</td>
</tr>
</tbody>
</table>

Date agenda due: 
Date submittal due: 
Date submittal sent to applicant: 

Date application ☑ approved or ☐ disapproved: 5-16-90
Date applicant notified of decision/issued: 5-29-90

REMARKS: ________________________________________________

_____________________________________________________

_____________________________________________________

_____________________________________________________

_____________________________________________________
almost URGENT!!

DATE: September 15, 1992
TO: Mitchell Ohye / DLNR Commission on Water Resource Management
INFO: FROM: RICHARD WOOLVERTON
Phone #: (808) 565-8241

SUBJECT: Well Log / Completion Reports

Mitchell,

I just got the information on wells #12 and #13 in the mail today from Frandsen. Here is the info you need for your files. Let me know if there is anything else I need to do for you.

Another piece of information which your department requested is the list of equipment and layout in the pump/filter room at the reservoir at the Lodge at Ko'ele. The people in charge of that equipment seem to think it is proprietary information. Could you make a formal request so I can get some positive action?

Thank you,

[Signature]

Note: added signature clip.
## WELL LOG REPORT

**Well B-1 (#12) State No. 4552-01**

**Location:**
- Drilling Co.: Paul Franzen & Associates
- Customer: Lanai Company

### Formation Log:
- **0 - 150** Brown clay & boulders
- **150 - 170** Black lava
- **170 - 190** Black & red cinders
- **190 - 225** Black lava
- **225 - 260** Black & red cinders
- **260 - 315** Black lava
- **315 - 410** Red & black cinders
- **410 - 425** Black lava
- **425 - 480** Red & black cinders
- **480 - 495** Black lava
- **495 - 615** Brown, black, & red cinders
- **615 - 630** Black lava

### Test Pump Results:
- Static water level: 600'
- Pump set at: 517
- Pumping rate: 160 g.p.m.
- Draw down: 10 ft.

**Well Elevation:** 605'

**Notes:**
- The well was deepened 10 ft. after the test pumping was completed.
- The well was drilled 20' dia. to 620 ft. After which 12' dia. casing was installed to the bottom (520'). The last 10 ft. is open hole at 11' dia.
- All measurements or taken from ground level.
# WELL LOG REPORT

**Well D-2 (13) STATE NO. 4553-01**

*Location: Lanai Hi.*

*Well Drilling Co: Paul Frandsen & Associates*

*Customer: Lanai Company*

## Formation Log:

<table>
<thead>
<tr>
<th>Depth</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>0 - 50</td>
<td>Brown clay &amp; boulders</td>
</tr>
<tr>
<td>90 - 110</td>
<td>Red &amp; black cinders</td>
</tr>
<tr>
<td>110 - 140</td>
<td>Red cinders</td>
</tr>
<tr>
<td>140 - 142</td>
<td>Lava</td>
</tr>
<tr>
<td>142 - 171</td>
<td>Black lava</td>
</tr>
<tr>
<td>171 - 173</td>
<td>Lava tube</td>
</tr>
<tr>
<td>173 - 195</td>
<td>Black lava</td>
</tr>
<tr>
<td>195 - 215</td>
<td>Black &amp; red cinders (loose)</td>
</tr>
<tr>
<td>215 - 235</td>
<td>Black lava</td>
</tr>
<tr>
<td>235 - 320</td>
<td>Red &amp; black cinders (loose)</td>
</tr>
<tr>
<td>320 - 335</td>
<td>Red cinders (soft)</td>
</tr>
<tr>
<td>335 - 370</td>
<td>Red &amp; black cinders (broken)</td>
</tr>
<tr>
<td>370 - 390</td>
<td>Black lava</td>
</tr>
<tr>
<td>390 - 425</td>
<td>Red &amp; black cinders (broken)</td>
</tr>
<tr>
<td>425 - 435</td>
<td>Black lava</td>
</tr>
<tr>
<td>435 - 485</td>
<td>Red &amp; black cinders</td>
</tr>
<tr>
<td>485 - 525</td>
<td>Brown clay &amp; red &amp; black cinders</td>
</tr>
<tr>
<td>525 - 620</td>
<td>Red &amp; black cinders</td>
</tr>
<tr>
<td>620 - 640</td>
<td>Brown clay &amp; red &amp; black cinders</td>
</tr>
<tr>
<td>640 - 695</td>
<td>Red &amp; black cinders</td>
</tr>
<tr>
<td>695 - 700</td>
<td>Black lava</td>
</tr>
</tbody>
</table>

## Test Pump Results:

*Static water level: 675'*

*Pump set at: 595*

*Yield: 12 g.p.m.*

*Draw down: 2 ft.*

**Notes:** All depth measurements are taken from the ground level.

The well was drilled 20" dia. to 700 ft. with 12" dia. casing placed to bottom. The well elevation is approx. 675 ft.
WELL CONSTRUCTION PERMIT

for

Lanai Irrigation Well B-2
Well No. 4553-01
Lanai

TO: Lanai Company, Inc.
650 Iwilei Road
Honolulu, Hawaii 96817

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 construct and test Lanai Irrigation Well B-2 (Well No. 4553-01) within Tax Map Key: 4-9-02, for irrigation use, is approved subject to the following conditions:

1. The Division of Water and Land Development (DOWALD), Geology-Hydrology Section, shall be notified at 548-7543, before any work covered by this permit commences.

2. The permit shall be for construction and testing only. No permanent pump may be installed and no water used from the well without the necessary pump installation permit from the Commission.

3. The proposed use shall not adversely affect existing legal uses in the area.

4. The grouted annulus shall be a minimum of from 0 to 200 ft. The grouted annular space shall be at least 3 inches all around the casing.

5. The following shall be submitted to DOWALD, P.O. Box 373, Honolulu, Hawaii 96809, within 30 days after completion of the well:
a. Well Completion Report.

b. Elevation (referenced to mean sea level) 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 record, including time, pumping rate, drawdown, chloride content, and water quality data.

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 shall be completed within two years of the date of issuance.

\[\text{Signature}\]

WILLIAM W. PATY, Chairperson
Commission on Water Resource Management

MAY 29, 1990
Date of Issuance

cc: USGS
Department of Health
Drinking Water Branch
Ground Water Protection Program
Maui Department of Water Supply
Chairperson and Members  
Commission on Water Resource Management  
State of Hawaii  
Honolulu, Hawaii

Gentlemen:

Lanai Company, Inc.  
Application for Well Construction Permits  
Lanai Irrigation Wells B-1 and B-2, Lanai

Applicant:  
Lanai Company, Inc.  
650 Iwilei Road  
Honolulu, Hawaii 96817

Landowner:  
Castle & Cooke, Inc.  
650 Iwilei Road  
Honolulu, Hawaii 96817

Action Requested: Permission to construct and test two 16-inch diameter wells (Well Nos. 4552-01 and 4553-01) for irrigation use.

Well Location: The proposed well sites are near Manele Bay, Lanai at Tax Map Keys: 4-9-2 (see attached map).

Proposed Amount of Use: 240,000 gallons per day from each well.

Well Description:  

<table>
<thead>
<tr>
<th>Well B-1</th>
<th>Well B-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ground elevation:</td>
<td>605 ft.</td>
</tr>
<tr>
<td>Casing diameter:</td>
<td>16-inches</td>
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<tr>
<td>Solid casing depth:</td>
<td>545 ft.</td>
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<td>Perforated casing depth:</td>
<td>605 ft.</td>
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<tr>
<td>Open Hole:</td>
<td>As needed</td>
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<tr>
<td>Total depth:</td>
<td>605 ft.</td>
</tr>
<tr>
<td>Grouted Annulus:</td>
<td>To be determined</td>
</tr>
</tbody>
</table>

Agency Review: The application has been sent to the Maui Department of Water Supply and to the State Department of Health for review. There have been no objections to the project.

Analysis: The well is expected to develop water from a brackish basal aquifer. There are no other existing wells in the area which may be affected by the proposed wells.

Water Availability: The well is located in the Manele System of Lanai, according to the latest work in conjunction with the Hawaii Water Plan. There is no estimate of water availability since the water is expected to be brackish.
Chairperson and Members

RECOMMENDATION:

That the Commission approve the issuance of well construction permits for the wells, subject to the following conditions:

(1) The Division of Water and Land Development (DOWALD) shall be notified before work commences.

(2) The permits shall be for construction and testing only. No permanent pumps may be installed and no water used from the wells without the necessary pump installation permits.

(3) The proposed use shall not adversely affect existing legal uses in the area.

(4) The grouted annulus of each well shall be a minimum of from 0 to 200 ft. The grouted annular spaces shall be at least 3 inches all around the casings.

(5) The following shall be submitted to DOWALD within 30 days after completion of the wells:
   a. Well Completion Report.
   b. Elevation (referenced to mean sea level) survey by a Hawaii-licensed surveyor.
   c. As-built sectional drawings of the wells.
   d. Plot plan and map showing the exact locations of the wells.
   e. Complete pumping test record; including time, pumping rate, drawdown, chloride content, and water quality data.

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

(7) The permits 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 shall be completed within two years of the date of issuance.

Respectfully submitted,

MANABU TAGOMORI
Deputy Director

APPROVAL FOR SUBMITTAL:

WILLIAM W. PATY, Chairperson
Lanai Company, Inc.
650 Iwilei Road
Honolulu, Hawaii 96817

Gentlemen:

The Commission on Water Resource Management will be acting on your well construction permit application for Lanai Irrigation Wells B-1 and B-2 (Well Nos. 4552-01 and 4553-01) at its meeting on Wednesday, May 16, 1990, at 2:00 p.m. in the State Office Building, Conference Rooms B & C, 3060 Eiwa Street, Lihue, Kauai.

Your application will be included on the agenda as Item 9 (enclosed).

You or your representative are invited to attend the meeting.

Sincerely,

MANABU TAGOMORI
Deputy Director

ES:bm
Enc.
April 3, 1990

The Honorable William W. Paty, Chairperson
Commission on Water Resource Management
Department of Land and Natural Resources
State of Hawaii
P.O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Paty:

Subject: WELL CONSTRUCTION PERMIT APPLICATION
LANAI IRRIGATION WELLS B-1 AND B-2
STATE WELL NOS. 4552-01 AND 4553-01
LANAI

Thank you for the opportunity to review and comment on the subject application.

Since the proposed wells will be utilized for irrigation purposes, the Department's Administrative Rules, Title 11, Chapter 20, "Potable Water Systems," are not applicable. However, in the event that the proposed use were to change, please inform the Safe Drinking Water Branch.

If you should have any questions, please contact the Safe Drinking Water Branch at 543-8258.

Very truly yours,

John C. Lewin, M.D.
Director of Health

cc: Mr. James E. Pierce, President
Lanai Company, Inc.
650 Iwilei Road
Honolulu, Hawaii 96817
March 30, 1990

Mr. Manabu Tagomori
Deputy Director
Commission on Water Resource Management
State of Hawaii
P. O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Tagomori:

Re: Well Construction Permit Application
Lanai Irrigation Wells B-1 (No. 4552-01) & B-2 (No. 4553-01)

We have no objections if the subject well construction permit application is granted provided that the withdrawal from these wells will not threaten or impact potable groundwater sources.

Sincerely,

Vince G. Bagoya, Jr.
Director

"By Water All Things Find Life"
FILING FEES - LANAI WELLS B-1 AND B-2
(WELL NOS. 4552-01 AND 4553-01)
HONORABLE JOHN C. LEWIN, M.D.
DIRECTOR
DEPARTMENT OF HEALTH
STATE OF HAWAI'I
1250 PUNCHBOWL STREET
HONOLULU, HAWAI'I 96813

ATTN. MR. THOMAS ARIZUMI, DRINKING WATER BRANCH

DEAR DR. LEWIN:

WELL CONSTRUCTION PERMIT APPLICATIONS

In accordance with the Department of Land and Natural Resources Administrative Rules, Section 13-168-12(c), we are sending you a copy of the following permit applications for your review:

Lanai Irrigation Wells B-1 and B-2 (Well Nos. 4552-01 and 4553-01)

Please submit your comments to us, orally or in writing, within three weeks from the date of this letter.

If you have any questions, please contact Manabu Tagomori at 548-7533.

Very truly yours,

WILLIAM W. PATY

Enc.
March 15, 1990

Mr. Vince Bagoyo, Jr., Director
Department of Water Supply
County of Maui
200 S. High Street
Wailuku, Maui, Hawaii 96793

Dear Mr. Bagoyo:

Well Construction Permit Applications

We are sending you a copy of the following permit applications for your review:

Lanai Irrigation Wells B-1 and B-2 (Well Nos. 4552-01 and 4553-01)

Please submit your comments to us, orally or in writing, within three weeks from the date of this letter.

If you have any questions, please contact Ed Sakoda at 548-7543.

Sincerely,

[Signature]

Manabu Tagomori
Deputy Director

ES:fc
Enc.
March 13, 1990

Lanai Company, Inc.
650 Iwilei Road
Honolulu, Hawaii 96817

Gentlemen:

We acknowledge receipt of your applications for permits to construct two brackish water wells (Well Nos. 4552-01 and 4553-01) near Manele Bay, Lanai.

Administrative rules of the State Water Code require a $25 filing fee with each application for a well construction permit. Please send two $25 fees (total of $50), payable to the Department of Land and Natural Resources, to the Division of Water and Land Development, P.O. Box 373, Honolulu, Hawaii 96809.

We are presently reviewing your applications for completeness and will call you should we have any questions.

Sincerely,

MANABU TAGOMORI
Deputy Director
CASTLE & COOKE - LANAI COMPANY

FACSIMILE TRANSMITTAL SHEET
C-mail fax C96 - (808) 548-3793

To: Ed Sakoda
From: James Pierce
Pages: 2 (Including this transmittal page)
Date: 3/2/90 Time: 1:50 pm

If you do not receive all the pages, call (808) 548-4811

MESSAGE:
# DIVISION OF WATER RESOURCE MANAGEMENT

**FROM:** [Redacted]

**DATE:** 28

**FILE IN:** [Redacted]

**TO:** INITIAL:

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<tr>
<th>INITIAL</th>
<th>PLEASE:</th>
<th>REMARKS:</th>
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<tbody>
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<td>M. TAGOMORI</td>
<td>See Me</td>
<td>[Redacted]</td>
</tr>
<tr>
<td>G. Matsumoto</td>
<td>Take Action By</td>
<td>[Redacted]</td>
</tr>
<tr>
<td>G. Akita</td>
<td>Route to Your Branch</td>
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<tr>
<td>L. Chang</td>
<td>Review &amp; Comment</td>
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<td>Y. Shiroma</td>
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<td>D. Lee</td>
<td>L. Choo</td>
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<td>G. Miyashiro</td>
<td></td>
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</tbody>
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**FILE IN:** [Redacted]

**B-1 (4552-01)**

**B-2 (4553-01)**

[Redacted] by [Redacted], 3/12/4

[Redacted] [Redacted] [Redacted]
APPLICATION FOR (check one)

WELL DRILLING PERMIT  □ WELL MODIFICATION PERMIT

Instructions: Send completed application and attachments to Department of Land and Natural Resources, P.O. Box 373, Honolulu, Hawaii 96809.

Reference: Regulation 9, Dept. of Land & Natural Resources.

Is the well located in a Designated Ground Water Control Area?  Yes  □ No

If "yes", application must be accompanied by a Water Use and/or Water Supply Permit and a non-refundable filing fee of $100 payable to the Department of Land & Natural Resources. However, if application is for minor modification of well, filing fee may be waived. If "no", no filing fee is required. Filing fee is waived for federal, state, and county government agencies.

1. WELL LOCATION: Island Lanai Tax Map Key 4-9-02. Attach a plot plan showing well location referenced to established property boundaries.

2. WATER USER  LANAI COMPANY, INC.  Telephone 548-2928
   Address 650 Iwilei Road, Honolulu, Hawaii  Zip Code 96817

3. PROPOSED DRILLING COMPANY: Paul Frandsen and Associates

4. PROPOSED WORK: □ Drill new well □ Deepen □ Redrill □ Alter □ Seal
   □ Abandon □ Install new pump □ Replace pump □ Modify pump

Fill in the diagram and briefly describe the proposed work (use back of form if necessary):

After site preparation, a well will be drilled up to 20 inches. A well test will be performed. Annulus will be rock-packed and grouted as shown below. Water is expected to be brackish and suitable for irrigation.

PROPOSED SECTION OF WELL

Elevation at top of casing
Ground elevation ± 3 ft.

To be determined during drilling.
Grout

Hole max 20

Depth 625

Rock Packing

To be determined during drilling

Ground Elev. 625 ft. ms.

Solid casing

Material Steel

Length 565 ft.

Diameter max. 16 in.

Wall thickness 375 in.

Casing: □ Perforated □ Screened

Material Steel

Length 60 ft.

Diameter max. 16 in.

Wall thickness 312 in.

Openings full (flow) 111. in. L.F.

To be determined after pumping test.

Open Hole to be determined after pumping test. Diameter

Approximate elev. at filing. Final elev. (msl) by a surveyor licensed by the State must be submitted as well location referenced by start of construction.

5. PROPOSED USE: □ Municipal □ Military □ Agriculture □ Industrial
   □ Domestic □ Disposal □ Other (specify) irrigation

6. PROPOSED AMOUNT OF WITHDRAWAL: Check most appropriate box and fill in amount.
   □ Daily 240,000 gallons  □ Monthly □ Yearly

7. PROPOSED PUMP OR FLOW CAPACITY: To be determined after pump test

Signature:  LANAI COMPANY, INC.  Date: 3/1/90

Signature:  LANDOWNER OF WELL Site  Date: 3/1/90

For Official Use:
State Well No.  DLNR Permit No.
DLNR Application No.