Date of report: SEP'T. 30, 1986

Person filing report: DENNIS O' Shea

A. OWNER: MICHAEL REARDEN

B. GENERAL LOCATION: LUPAKAHI, NORTH KONA, HAWAII

C. DRILLING COMPANY: RICHARDSON WELL DRILLING CO., INC.

D. TYPE OF RIG: SPEEDSTAR 72

E. ELEVATION, masl: Top of drilling platform 37 ft. Bench mark and method used to determine

Height of drilling platform above ground surface: 12 ft. elevation: SURVEY, TOP OF CASING

F. HOLE SIZE: 12 in. dia. to 39.1 ft. below drilling platform.

G. CASING INSTALLED: 6 in. i.d. x 3/16 in. wall solid section to 3.5 ft. below drilling platform. Type of perforation: 1/2 DRILLED PVC CASING

H. ANNULUS: Grouted ft. to ft. below drilling platform. Gravel packed ft. to ft. below drilling platform.

I. PERMANENT PUMP INSTALLATION:

II. PERMANENT PUMP INSTALLATION:

J. INITIAL WATER LEVEL: 36 ft. below drilling platform, Date of measurement: 7/28/86

K. INITIAL CHLORIDE: 5600 ppm, total depth of well: 39 ft. below drilling platform.

L. PUMPING TESTS:

Reference point (R.P.) used: LACUNZI SUBM. CN8CC-R. Capacity: 25 g.p.m.

Motor type, H.P., voltage, r.p.m.

Depth of pump intake setting: 33.5 ft. below TOP OF CASING which elevation is 37 ft.

Depth of bottom of airline: 37 ft. below TOP OF CASING which elevation is 37 ft.

HYDROLOGY

M. DRILLER'S LOG:

N. REMARKS:

FOR DRILLER'S USE

FOR OFFICIAL USE

INSTRUCTIONS: Send three(3) copies to: Manager-Chief Engineer, Division of Water and Land Development, P. O. Box 373, Honolulu, Hawaii 96809.


State of Hawaii

DEPARTMENT OF LAND & NATURAL RESOURCES

DIVISION OF WATER AND LAND DEVELOPMENT

DRILLER'S REPORT

DOWARD FORM 71(1)
**DRILLER'S REPORT**

**DESCRIPTION**

Date of report: **SEPT 30, 1986**  
Person filing report: **DENNIS O'SEACH**

A. OWNER: **MICHAEL REARDEN**  
NAME: **WELL**  
ISLAND: **HAWAII**

B. GENERAL LOCATION: **LAPAKAHI, NORTH KOHALA**

C. DRILLING COMPANY: **RICHARDSON WELL DRILLING CO., INC.**

D. TYPE OF RIG: **CABLE TOOL**, DRILLING COMPLETED: **7/86**  
DRILLER: **DANIEL BOWES**

E. ELEVATION, msl: Top of drilling platform: **37** ft.  
Height of drilling platform above ground surface: **0** ft.  
Bench mark and method used to determine elevation: **SURVEY, TOP OF CASING**

F. HOLE SIZE: **12**" inch dia. to **39**" ft. below drilling platform.  
**12**" inch dia. to **39**" ft. below drilling platform.  
**12**" inch dia. to **39**" ft. below drilling platform.

G. CASING INSTALLED: **6** in. I.D. x **3/4** in. wall solid section to **39** ft. below drilling platform.  
**6** in. I.D. x **3/4** in. wall perforated section to **39** ft. below drilling platform.  
Type of perforation: **12" DRILLED PVC CASING**

H. ANNULUS: Grouted **0** ft. to **10** ft. below drilling platform.  
Gravel packed **10** ft. to **29 1/2** ft. below drilling platform.

I. PERMANENT PUMP INSTALLATION:
- Pump type, make, serial no.: **JACUZZI SUBM. CN85C-RE**  
- Capacity: **25** g.p.m.  
- Motor type, H.P., voltage, r.p.m.: **ELECTRIC LWP 220V 1HP**
- Depth of pump intake setting: **38 3/4** ft. below **TOP OF CASING** which elevation is **37** ft.  
- Depth of bottom of airline: **37 1/4** ft. below **TOP OF CASING** which elevation is **37** ft.

**HYDROLOGY**

J. INITIAL WATER LEVEL: **36 10** ft. below drilling platform, Date of measurement: **7/26/86**

K. INITIAL CHLORIDE: **3600** ppm, total depth of well **39 1/2** ft. below drilling platform.

L. PUMPING TESTS:
- Date: **7/30/86**  
- Reference point (R.P.) used: **CASING** which elevation is **37** ft.

<table>
<thead>
<tr>
<th>Time (hours)</th>
<th>Rate (gpm)</th>
<th>Draw-down (ft.)</th>
<th>Temp. °F</th>
<th>Elapsed Time (hours)</th>
<th>Rate (gpm)</th>
<th>Draw-down (ft.)</th>
<th>Temp. °F</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 to 11:00</td>
<td>25</td>
<td>500</td>
<td>50</td>
<td>to</td>
<td>to</td>
<td>to</td>
<td>to</td>
</tr>
<tr>
<td></td>
<td>to</td>
<td>to</td>
<td>to</td>
<td>to</td>
<td>to</td>
<td>to</td>
<td>to</td>
</tr>
<tr>
<td></td>
<td>to</td>
<td>to</td>
<td>to</td>
<td>to</td>
<td>to</td>
<td>to</td>
<td>to</td>
</tr>
<tr>
<td></td>
<td>to</td>
<td>to</td>
<td>to</td>
<td>to</td>
<td>to</td>
<td>to</td>
<td>to</td>
</tr>
<tr>
<td></td>
<td>to</td>
<td>to</td>
<td>to</td>
<td>to</td>
<td>to</td>
<td>to</td>
<td>to</td>
</tr>
<tr>
<td></td>
<td>to</td>
<td>to</td>
<td>to</td>
<td>to</td>
<td>to</td>
<td>to</td>
<td>to</td>
</tr>
<tr>
<td></td>
<td>to</td>
<td>to</td>
<td>to</td>
<td>to</td>
<td>to</td>
<td>to</td>
<td>to</td>
</tr>
</tbody>
</table>

**SUBSURFACE FORMATION**

<table>
<thead>
<tr>
<th>Depth ft.</th>
<th>Rock Description &amp; Remarks</th>
<th>Water Level</th>
<th>Depth ft.</th>
<th>Rock Description &amp; Remarks</th>
<th>Water Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 2</td>
<td>SOIL W/ROCK</td>
<td>0</td>
<td>34 to 36</td>
<td>HARD BASALT</td>
<td>0</td>
</tr>
<tr>
<td>2 to 6.5</td>
<td>WEATHERED ROCK</td>
<td>0</td>
<td>36 to 40</td>
<td>WEATHERED ROCK</td>
<td>0</td>
</tr>
<tr>
<td>6.5 to 10</td>
<td>CLINKERS</td>
<td>0</td>
<td>36 to 40</td>
<td>WEATHERED ROCK</td>
<td>0</td>
</tr>
<tr>
<td>10 to 13</td>
<td>HARD BASALT</td>
<td>0</td>
<td>36 to 40</td>
<td>WEATHERED ROCK</td>
<td>0</td>
</tr>
<tr>
<td>13 to 15</td>
<td>CLINKERS</td>
<td>0</td>
<td>36 to 40</td>
<td>WEATHERED ROCK</td>
<td>0</td>
</tr>
<tr>
<td>15 to 17</td>
<td>HARD BASALT</td>
<td>0</td>
<td>36 to 40</td>
<td>WEATHERED ROCK</td>
<td>0</td>
</tr>
<tr>
<td>17 to 20</td>
<td>CLINKERS</td>
<td>0</td>
<td>36 to 40</td>
<td>WEATHERED ROCK</td>
<td>0</td>
</tr>
<tr>
<td>20 to 23</td>
<td>HARD BASALT</td>
<td>0</td>
<td>36 to 40</td>
<td>WEATHERED ROCK</td>
<td>0</td>
</tr>
<tr>
<td>23 to 27</td>
<td>CLINKERS</td>
<td>0</td>
<td>36 to 40</td>
<td>WEATHERED ROCK</td>
<td>0</td>
</tr>
<tr>
<td>27 to 30</td>
<td>HARD BASALT</td>
<td>0</td>
<td>36 to 40</td>
<td>WEATHERED ROCK</td>
<td>0</td>
</tr>
<tr>
<td>30 to 34</td>
<td>CLINKERS</td>
<td>0</td>
<td>36 to 40</td>
<td>WEATHERED ROCK</td>
<td>0</td>
</tr>
<tr>
<td>34 to 36</td>
<td>HARD BASALT</td>
<td>0</td>
<td>36 to 40</td>
<td>WEATHERED ROCK</td>
<td>0</td>
</tr>
</tbody>
</table>

**FOR OFFICIAL USE**

- **Latitude:**
- **Longitude:**
- **Well No.:**

**INSTRUCTIONS:** Send three copies to: Manager-Chief Engineer, Division of Water and Land Development, P. O. Box 373, Honolulu, Hawaii 96809.


**FOR DRILLER’S USE**

- **Job Name:** **REARDEN**
- **Job No.:** **1004**
WELL DRILLING PERMIT
for
State Well No. 6953-01
Paoo, N. Kohala, Hawaii

TO: Mr. Michael Rearden
P.O. Box 4361
Kailua-Kona, HI 96745-4361

In accordance with Chapter 166 of Title 13, "Rules for the Control of Ground Water Use in the State of Hawaii," your application to drill State Well No. 6953-01 is approved subject to the following conditions:

1. A Driller's Well Completion Report (enclosed) shall be submitted to the Division of Water and Land Development within 60 days after completion of the well.
2. Pumping test data shall be submitted to the Division of Water and Land Development within 60 days after testing of the well.
3. Monthly reports of pumpage shall be submitted after the well is put into production.
4. Upon completion of the well, submit an "as-built" drawing of the well and a map showing the exact location of the well.
5. The applicant comply with all applicable laws, rules and ordinances.
6. Ten feet of cement grout instead of the 1 foot shall be installed as indicated in red on the attached copy of your application.

Date of Issuance
7/3/94

Enc. Driller's Report Form & Application
cc: USGS
Dept. of Health, Drinking Water Program
Hawaii DWS

Chairperson of the Board
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?  
If "yes", application must be accompanied by a Water Use and/or Water Supply Permit and a non-returnable 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 Hawaii Tax Map Key 3rd: 5-7-1-5. Attach a plot plan showing well location referenced to established property boundaries.

2. WATER USER Michael Rearden Telephone 885-4825
   Address P.O. Box 4361, Kailua-Kona, HI Zip Code 96745-4361

3. PROPOSED DRILLING COMPANY: Richardson Well Drilling, Co. Inc.

4. PROPOSED WORK: [X] 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):

Drill well approximately 40' (Up to 50' if necessary)

PVC Casing, Cement grout

PROPOSED SECTION OF WELL

Elevation at top of casing 36' 8" ft., msl.

Solid casing: Material PVC
   Length 36 ft.
   Diameter 6 in.
   Wall thickness 5/16 in.

Casing: [ ] Perforated [ ] Screen Material PVC
   Length 6 ft.
   Diameter 5/16 in.
   Wall thickness 5/16 in.
   Openings 6 sq. in./L.F.

Open Hole:
   Length 0 ft.
   Diameter in.

PROPOSED USE: [X] Municipal [ ] Military [ ] Agriculture [ ] Industrial
   [ ] Domestic [ ] Disposal [ ] Other (specify)

PROPOSED AMOUNT OF WITHDRAWAL: Check most appropriate box and fill in amount.
   [ ] Daily ______ gallons [ ] Monthly 20,000 gallons [ ] Yearly ______ gallons

PROPOSED PUMP OR FLOW CAPACITY: Up to 25 gallons per minute

Signature: Michael Rearden Date: 6/3/86
   Water User

Signature: Michael Rearden Date: 6/3/86
   Landowner of Well Site

For Official Use:
   State Well No. __________
   DLNR Permit No. __________
   DLNR Application No. __________
OWNER:
MICHAEL REARDEN

TMK:
3rd: 5-7-1-5

DRILLING CO.:
RICHARDSON WELL
KONA, HAWAII
329-2678

TMK # 3rd: 5-7-1-5
155 69 51
2e 79 e1

H-4

Sincerely,

for your cooperation,

to our office. Thank you very much
well accurately and return the map
area. Please mark the location of the
Enclosed is a map of the project

TM 5-7-1 15, Hawaii
Location map of Paoo Well 93901

Dear Mr. Rearden:

Kailua, Kona, Hi 96745-4361
P.O. Box 4361
Mr. Michael Rearden