State of Hawaii
DIVISION OF WATER AND LAND DEVELOPMENT
DRILLER'S REPORT

DESCRIPTION

Date of report: Dec. 22, 1987
Person filing report: Loran H. Runnells

A. OWNER: Hawaiian Host
WELL NAME: Marker
ISLAND: Hawaii

B. GENERAL LOCATION:

C. DRILLING COMPANY: Roscoe Moss Co.

D. TYPE OF RIG: cable tool
DRILLING COMPLETED: 12/87
DRILLER: Richardson

E. ELEVATION:
Height of drilling platform above ground surface: 0 ft.
Bench mark and method used to determine elevation: 80'9"

F. HOLE SIZE:
12 inch dia. to 100 ft. below drilling platform.
8 inch dia. to 130 ft. below drilling platform.

G. CASING INSTALLED:
8 in. I.D. x 250 in. wall solid section to 80 ft. below drilling platform.
8 in. I.D. x 250 in. wall perforated section to 100 ft. below drilling platform.
Type of perforation: Louver

H. ANNULUS:
Grouted 0 ft. to 50 ft. below drilling platform.
Gravel packed 50 ft. to 100 ft. below drilling platform.

I. PERMANENT PUMP INSTALLATION:
- Pump type, make, serial no.
- Capacity: g.p.m.
- Motor type, H.P., voltage, r.p.m.
- Depth of pump intake setting: ft. below
- Depth of bottom of airborne: ft. below
- Which elevation is: ft.

HYDROLOGY

J. INITIAL WATER LEVEL:
72 ft. below drilling platform.
Date of measurement: Dec. 11, 1987

K. INITIAL CHLORIDE:
21 ppm, total depth of well: 130 ft. below drilling platform

L. PUMPING TESTS:
Reference point (R.P.) used: Date which elevation is: ft.

<table>
<thead>
<tr>
<th>Date</th>
<th>Start water level</th>
<th>End water level</th>
<th>Depth of well</th>
<th>Elapsed Time (hours)</th>
<th>Rate (gpm)</th>
<th>Draw-down (ft.)</th>
<th>Cl- (ppm)</th>
<th>Temp. °F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec. 11, 1987</td>
<td>72</td>
<td>72</td>
<td>130</td>
<td>9:00 to 12:30</td>
<td>150</td>
<td>0</td>
<td>2.1</td>
<td>67</td>
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</tr>
</tbody>
</table>

SUBSURFACE FORMATION

M. DRILLER'S LOG:

<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 14</td>
<td>Loose Cinder &amp; Rock</td>
<td>to</td>
<td></td>
<td>to</td>
<td></td>
</tr>
<tr>
<td>14 to 42</td>
<td>Hard blue rock</td>
<td>to</td>
<td></td>
<td>to</td>
<td></td>
</tr>
<tr>
<td>42 to 56</td>
<td>Hard Red Rock</td>
<td>to</td>
<td></td>
<td>to</td>
<td></td>
</tr>
<tr>
<td>62 to 72</td>
<td>Hard black rock</td>
<td>to</td>
<td></td>
<td>to</td>
<td></td>
</tr>
<tr>
<td>72 to 82</td>
<td>Colored cinders</td>
<td>to</td>
<td></td>
<td>to</td>
<td></td>
</tr>
<tr>
<td>82 to 104</td>
<td>Hard rock with cinder</td>
<td>to</td>
<td></td>
<td>to</td>
<td></td>
</tr>
<tr>
<td>104 to 120</td>
<td>Hard grey rock</td>
<td>to</td>
<td></td>
<td>to</td>
<td></td>
</tr>
<tr>
<td>120 to 125</td>
<td>Loose Red Cinders</td>
<td>to</td>
<td></td>
<td>to</td>
<td></td>
</tr>
<tr>
<td>125 to 130</td>
<td>Hard blue rock</td>
<td>to</td>
<td></td>
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<td>to</td>
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</tr>
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INSTRUCTIONS: Send three (3) copies to: Manager-Chief Engineer, Division of Water and Land Development, P. O. Box 373, Honolulu, Hawaii 96809.
**DESCRIPTION**

Date of report: Dec. 22, 1987  
Person filing report: Loran H. Runnells

A. **OWNER**  
Hawaiian Host  
WELL NAME: MAKUA  
ISLAND: Hawaii

B. **GENERAL LOCATION**  

C. **DRILLING COMPANY**  
ROSCOE MOSS CO.

D. **TYPE OF RIG**  
Cable tool  
DRILLING COMPLETED: 12 87  
DRILLER: Richardson

E. **ELEVATION**  
Top of drilling platform: 80x9"  
Bench mark and method used to determine  
Height of drilling platform above ground surface: 0 ft.  
Bench mark and method used to determine  
Height of drilling platform above ground surface: 80 ft.

F. **HOLE SIZE**  
12 inch dia. to 100 ft. below drilling platform.  
8 inch dia. to 130 ft. below drilling platform.

G. **CASING INSTALLED**  
8 in. I.D. x 250 in. wall solid section to 80 ft. below drilling platform.  
8 in. I.D. x 250 in. wall perforated section to 100 ft. below drilling platform.

H. **ANNULUS**  
Grouted: 0 ft.  
Gravel packed: 50 ft. to 100 ft. below drilling platform.

I. **PERMANENT PUMP INSTALLATION**

- Pump type, make, serial no.  
- Motor type, H.P., voltage, r.p.m.  
- Depth of pump intake setting ft. below drilling platform.  
- Depth of bottom of airliner ft. below drilling platform.

**HYDROLOGY**

J. **INITIAL WATER LEVEL**  
72 ft. below drilling platform.  
Date of measurement: Dec. 11, 1987

K. **INITIAL CHLORIDE**  
21 ppm, total depth of well: 130 ft. below drilling platform

L. **PUMPING TESTS**

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<tr>
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<th>End water level</th>
<th>Depth of well</th>
<th>Elapsed Time (hours)</th>
<th>Rate Draw-Down (ft.)</th>
<th>Chloride (ppm)</th>
<th>Temperature</th>
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<tr>
<td>Dec. 11, 1987</td>
<td>72 ft. below R.P.</td>
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<td>130 ft. below R.P.</td>
<td>9:00 to 12:30</td>
<td>150</td>
<td>25</td>
<td>67</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>12:30 to 1:00</td>
<td>250</td>
<td>21</td>
<td>67</td>
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<td></td>
<td></td>
<td></td>
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<td>13:00 to 14:00</td>
<td>80</td>
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<td></td>
<td></td>
<td></td>
<td>14:00 to 15:00</td>
<td>60</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>15:00 to 16:00</td>
<td>40</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>16:00 to 17:00</td>
<td>20</td>
<td></td>
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**N. REMARKS**

**FOR OFFICIAL USE**

Latitude 19° 42' 16"  
Longitude 155° 03' 36"

**FOR DRILLER'S USE**

Job Name:  
Job No.:  

**INSTRUCTIONS**

Send three (3) copies to: Manager-Chief Engineer, Division of Water and Land Development, P. O. Box 375, Honolulu, Hawaii 96809.

**REFERENCES**

TO: Hawaiian Host, Inc.
215-D Railroad Ave.
Hilo, Hawaii 96720

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. 4203-15 for industrial use at Tax Map Key 2-1-25:137 is approved subject to the following conditions:

1. 50 feet of cement grout shall be used instead of the 20 feet indicated on the proposed section of well.
2. A Driller's Well Completion Report (enclosed) shall be submitted to the Division of Water and Land Development, P.O. Box 373, Honolulu, Hawaii 96809, within 60 days after completion of the well.
3. Water level elevation, salinity and pumping test data shall be submitted within 60 days after testing of the well.
4. Reports of pumpage shall be submitted monthly after the well is put into production.
5. An "as-built" drawing of the well and a map showing the exact location of the well shall be submitted upon completion of the well.
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 date of issuance or if work is suspended or abandoned for six months.

JUL 28 1987

Date of Issuance

Enc. (Driller's Report Form)

cc: USGS
Dept. of Health,
  Drinking Water Program
  Ground Water Protection Program
Hawaii Dept. of Water Supply
Roscoe Moss Company
Mr. Loran H. Runnells  
Roscoe Moss Company  
830 Ahua Street  
Honolulu, Hawaii 96819

Dear Mr. Runnells:

SUBJECT: Well Drilling Application for Hawaiian Host, Inc., Panaewa, Hawaii

At its meeting on June 23, 1987, the Hawaiian Homes Commission consented to the Application for Well Drilling Permit by Hawaiian Host, Inc., sublessee of General Lease No. 156 to Laupahoehoe Transportation Company, Inc. Consent is subject to the following conditions: receipt by sublessee of all required State and County permits; that the water withdrawn is to be for the sole use of the sublessee and not to be sold.

We are returning the Application for Well Drilling Permit for further processing by you.

Please provide us a copy of the well drilling permit for our files and notify us when the drilling commences and is complete.

If you have any questions, please contact Darrell Ing of our Income Property Division at 548-3261.

Sincerely,

Ilima A. Piianaia, Chairman  
Hawaiian Homes Commission

IAP:DI:rmk

cc: Commissioner Eleanor Ahuna  
Hawaii Host, Inc.  
2411 South King Street  
Honolulu, Hawaii 96826

Laupahoehoe Transportation Co.  
35 Holomua Street  
Hilo, Hawaii 96720
STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

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  x 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 Hawaii Tax Map Key 2-1-25: 135-117. Attach a plot plan showing well location referenced to established property boundaries.
2. WATER USER Hawaiian Host lessee Telephone 935-3594
   Address 215-D Railroad Ave.
   Zip Code 96720

3. PROPOSED DRILLING COMPANY: ROSCOE MOSS COMPANY

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):

PROPOSED SECTION OF WELL

- Elevation at top of casing 89 ft. msl
- Ground Elev. 87 ft. msl
- Solid casing: Steel
  - Length 90 ft.
  - Diameter 8 in.
  - Wall thickness .250 in.
- Casing: ☐ Perforated ☐ Screen
  - Material Steel
  - Length 40 ft.
  - Diameter 8 in.
  - Wall thickness .250 in.
  - Openings 24 sq.in./L.F.
- Open Hole: Length None ft.
- Diameter __________ in.

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

6. PROPOSED AMOUNT OF WITHDRAWAL: Check most appropriate box and fill in amount.
   ☐ Daily 16000 gallons ☐ Monthly ________ gallons ☐ Yearly ________ gallons

7. PROPOSED PUMP OR FLOW CAPACITY: 140 gallons per minute

Signature: [Signature]  Date: 3-16-87
Water User

Signature: [Signature]  Date: July 8, 1987
Landowner of Well Site

For Official Use:
State Well No. _______________________
DLNR Permit No. ____________________
DLNR Application No. ________________
EXISTING WASHDOWN DISCHARGE LINE TO GRAVEL PIT

WELL DISCHARGE LINE TO PROCESS

PROPOSED WELL SITE

EXIST BUILDING LOCATION

SITE PLAN

60: 1" = 200'

T.M.K.: 2-1-25: 134, 136
PROPOSED WELL SITE

EXISTING WASHDOWN DISCHARGE LINE TO GRAVEL PIT

EXISTING BUILDING

WELL DISCHARGE LINE TO PROCESS

BUILDING PLAN

SCALE: 1" = 60'


TRUE NORTH