Max Sherrod Well
Kohala Estates N. Kohala

0 ft.

Grout

50 ft.

Annular space void

650 ft.

Gravel pack

676 ft.

Perforations

686 ft.

Lost hole

700 ft.

Depth to water

Total depth 700 ft.

670.9 ft. static

Available water

Lost drill bit

Pipe debris

9/25/59
DOWALD Form 7/11

STATE OF HAWAII
DEPARTMENT OF LAND & NATURAL RESOURCES
DIVISION OF WATER AND LAND DEVELOPMENT

DRILLER’S REPORT

DESCRIPTION
Date of report Sept 15 1986 Person filing report Paul Bergstedt

A. OWNER Max Sherrod
WELL NAME Agricultural ISLAND Hawaii
B. GENERAL LOCATION Kohala Estates, North Kohala
C. DRILLING COMPANY Big Island Drilling
D. TYPE OF RIG 36I DRILLING COMPLETED 7/2/86 DRILLER Paul Bergstedt

E. ELEVATION, msl: Top of drilling platform 674.6 ft. Bench mark and method used to determine Height of drilling platform above ground surface 182 ft. elevation:

F. HOLE SIZE: 18” inch dia. to 700 ft. below drilling platform.

G. CASING INSTALLED: 8” in. D.I.D x 3/4” in. wall solid section to 660 ft. below drilling platform.

H. ANNULUS: Grouted 0 ft. to 501 ft. below drilling platform.

I. PERMANENT PUMP INSTALLATION:
- Pump type, make, serial no. Pioneer Sub_a10 375a_a1034n Capacity 12 g.p.m.
- Motor type, H.P., voltage, r.p.m. Franklin 3hp 230 vac 3hp 3550
- Depth of pump intake setting 686 ft. below drilling platform which elevation is 674.6 ft.
- Depth of bottom of airline 570 ft. below drilling platform which elevation is 674.6 ft.

HYDROLOGY
J. INITIAL WATER LEVEL 670.9 ft. below drilling platform. Date of measurement 7/16/86
K. INITIAL CHLORIDE: 7.0 ppm, total depth of well ft. below drilling platform

L. PUMPING TESTS:

<table>
<thead>
<tr>
<th>Date</th>
<th>Start water level</th>
<th>End water level</th>
<th>Depth of well</th>
<th>Rate (gpm)</th>
<th>Draw-down (ft.)</th>
<th>Cl (ppm)</th>
<th>Temp. °F</th>
<th>Elapsed Time (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7/19/86</td>
<td>670.9 ft. below R.P.</td>
<td>670.9 ft. below R.P.</td>
<td>700 ft. below R.P.</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>24 hour test</td>
<td>7:00 to 7:30</td>
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</tbody>
</table>

SUBSURFACE FORMATION

<table>
<thead>
<tr>
<th>Depth, ft.</th>
<th>Water Level</th>
<th>Rock Description &amp; Remarks</th>
<th>Water Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 10</td>
<td>584 to 580</td>
<td>Caving Cemented</td>
<td></td>
</tr>
<tr>
<td>13 to 40</td>
<td>580 to 630</td>
<td>Hard grey lava</td>
<td></td>
</tr>
<tr>
<td>40 to 73</td>
<td>630 to 680</td>
<td>Hard grey lava</td>
<td></td>
</tr>
<tr>
<td>73 to 95</td>
<td>680 to 695</td>
<td>Boulder Blast 100# Dynamite</td>
<td></td>
</tr>
<tr>
<td>96 to 103</td>
<td>700</td>
<td></td>
<td></td>
</tr>
<tr>
<td>103 to 105</td>
<td>700</td>
<td></td>
<td></td>
</tr>
<tr>
<td>115 to 280</td>
<td>700</td>
<td></td>
<td></td>
</tr>
<tr>
<td>280 to 283</td>
<td>700</td>
<td></td>
<td></td>
</tr>
<tr>
<td>283 to 524</td>
<td>700</td>
<td></td>
<td></td>
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<tr>
<td>524 to 570</td>
<td>700</td>
<td></td>
<td></td>
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</tbody>
</table>

N. REMARKS:

INSTRUCTIONS: Send three(3) copies to: Manager-Chief Engineer, Division of Water and Land Development, P. O. Box 378, Honolulu, Hawaii 96809.

FOR OFFICIAL USE

Latitude 19°28.5'N
Longitude 155°47'13"W
Well No. 650-01
Ed Sakan

Dear Sir:

Enclosed is well log and as built of Max Sherrods well in Kohala Estates.

Paul Bergstadt

O's are our business!
WELL DRILLING PERMIT
for
State Well No. 6550-01
Kahua, North Kohala, Hawaii

TO: Mr. Max Sherrod
P.O. Box 4301
Kamuela, HI 96743

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. 6550-01 at Tax Map Key: 5-9-08:6 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. An "as-built" drawing of the well and a map showing the exact location of the well shall be submitted within 60 days after completion of the well.

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

6. Fifty feet of cement grout instead of the 10 feet shall be installed as indicated in red on the attached copy of your application.

4/8/86
Date of Issuance

Enc: Driller's Well Completion Report
Application

cc: USGS w/App.
Dept. of Health,
Drinking Water Program w/App.
Hawaii DWS w/App.
Big Island Drilling w/App.
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 [HAWAI] Tax Map Key 3rd 54-03-06. Attach a plot plan showing well location referenced to established property boundaries.

2. WATER USER: Max Sherrard  Ed. Al.  Telephone 889-7734
Address P.O. Box 4301 Waiakea Na Kona, HI 96743
Zip Code 96743

3. PROPOSED DRILLING COMPANY: [Big Island Drilling]

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

<table>
<thead>
<tr>
<th>Elevation at top of casing</th>
<th>Ground Elev. 650 ft., msl*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cement Grout</td>
<td></td>
</tr>
<tr>
<td>Hole</td>
<td></td>
</tr>
<tr>
<td>Hole Dia. 18”</td>
<td></td>
</tr>
<tr>
<td>Total Depth</td>
<td>670 ft.</td>
</tr>
<tr>
<td>Rock Packing</td>
<td>60” ft.</td>
</tr>
</tbody>
</table>

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

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 25,000 gallons  [ ] Monthly 1,000,000 gallons  [ ] Yearly 2,000,000 gallons

7. PROPOSED PUMP OR FLOW CAPACITY: 20 GPM gallons per minute

Signature: Max Sherrard  May 17, 1986
Water User

Signature: Max Sherrard  et al.
Landowner of Well Site
Date: Jun 27, 86

For Official Use:
State Well No. 6550-01
DLNR Permit No.
DLNR Application No.
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 ☐ 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 3_59-08-06. Attach a plot plan showing well location referenced to established property boundaries.

2. WATER USER Max Sheerod F.t. 2l. Telephone 829-7734
Address P.O. Box 4761 Kauai 96763-4761 Kauai, Hi Zip Code 96743

3. PROPOSED DRILLING COMPANY: Big Island Drilling

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):

DRILL NEW WELL

PROPOSED SECTION OF WELL

Elevation at top of casing ft., msl.

Cement
Grout 10 ft.

Hole
Dia. 18 in.

Total
Depth 690 ft.

Rock
Packing 60 ft.

Ground Elev. 650 ft., msl*

Solid casing:
Material
Length 50 ft.
Diameter 6 in.
Wall thickness .025 in.

Casing:
Material
Length 40 ft.
Diameter 6 in.
Wall thickness .025 in.
Openings 10 sq.in./L.F.

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

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 28.600 gallons ☐ Monthly ___ gallons ☐ Yearly ___ gallons

7. PROPOSED PUMP OR FLOW CAPACITY: 20 GPM gallons per minute

Signature: MAX SHEEROD Max Sheerod ET AL
Water User
Date: Jan 27, 86

Signature: Max Sheerod ET AL
Landowner of Well Site
Date: Jan 27, 86

For Official Use:
State Well No. 6550-01
DLNR Permit No.
DLNR Application No.