Ms. Linnel T. Nishioka  
Deputy Director  
Hawaii Department of Land and Natural Resources  
Commission on Water Resource Management  
P.O. Box 621  
Honolulu, Hawaii 96809  

Dear Ms. Nishioka:  

As discussed in a telephone conversation with Roy Hardy, we are providing copies of the level notes for the following wells drilled by the U.S. Geological Survey on the island of Hawaii:  

8-3155-01 Kealakekua  
8-3255-01 Kainaliu  
8-3957-02 Kailua  
8-4708-02 Kaieie Mauka  
8-6141-01 Waiaka Tank  
8-6240-01 Waimea  

If you would like further information or if you have any questions, please contact Jill Torikai at 587-2426.  

Sincerely,  

Gordon W. Tribble  
District Chief  

enclosures
<table>
<thead>
<tr>
<th>STATION</th>
<th>B. S.</th>
<th>Ht. Inst.</th>
<th>F. S.</th>
<th>ELEVATION</th>
<th>REMARKS</th>
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<td>BM</td>
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<td>Brass table, bottom step, chlorine, for 6ldg.</td>
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**Remarks:**

*Weather - windy w/ showers*
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<th>STATION</th>
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<tr>
<td>BM-1</td>
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STREAM: S-6 240-01
LOCALITY: Wimmin Treatment Plant
PARTY: C.W. R. C.B. B
DATE: March 23, 1920

No. 2 of 3 sheets
Comp. by C.W. B
OK. by D. W. C.
### Level Notes

**Stream**: WeJ 8-0240-01  
**Locality**: Waimea Treatment Plant  
**Party**: CJE X, CB &  
**Date**: March 22, 1900

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<td>3054.211</td>
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<td>Closure + 0.006</td>
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**BM Survey** established by Ronald B. Arakio -  
**Licensed Land Surveyor No. 7504 State of Hawaii - Employed by OWI, Hilo, Hawaii

**No. 3 of 3 Sheets**  
**Comp. by CJE**  
**Chk. by D. J. Watts**
Board & Fuel

Note: from bus, this time:

* Motion GP @ Chinonfer #1


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<td>Temp</td>
<td>3.79</td>
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Setting of brass plate
Volvo's Treatment Plant Africa
FROM: Linnel
DATE: 8/16/79

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<th>TO:</th>
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<th>TO:</th>
<th>INIT.</th>
<th>FOR:</th>
<th>PLEASE:</th>
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<td>BAUER, G.</td>
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<td></td>
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<td>SAKODA, E.</td>
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<td>JINNAI, R.</td>
<td></td>
<td>UYENO, D.</td>
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<td>KUNIMURA, I.</td>
<td></td>
<td>YODA, K.</td>
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</table>

FYI: Then please return to file
This letter came out of my meetup with Gordon Tribe. The

USGS had pulled the lagger and I'll need to go see

re-nickel it
August 5, 1999
99/428 (99-17)

Mr. Gordon Tribble
Acting District Chief
Water Resources Division
U.S. Geological Survey - Honolulu
677 Ala Moana Boulevard - Suite 415
Honolulu, Hawaii 96813

Dear Mr. Tribble:

Access to the USGS Waimea Test Well.  
State No. 6240-01

In response to your letter of July 12, 1999, I apologize for having accessed the USGS' Waimea test well to install a water level recorder without prior written permission. As you are aware, we are trying to get a record of the high level aquifer's water level variations before, during and following the pump test of the nearby production well (State No. 6140-01). Access without prior permission occurred as a misunderstanding of the proper protocol. It will not happen again. I can foresee several occasions in the near future where we will want to use other USGS test wells for monitoring purposes during production well pump testing. Written permission will be sought in advance of such tests.

If you'll take this letter as a written request for the use of Well 6240-01, I would like to reinstall the water level recorder as soon as practical. Any assistance you can provide in expediting this request would be greatly appreciated.

Sincerely,

Tom Nance

cc: Hiram Young - Engineering Branch, 
Land Division, DLNR
Mr. William Meyer
U.S. Geological Survey
Water Resources Division
677 Ala Moana Blvd., Ste 417
Honolulu, HI 96813

Dear Mr. Meyer:

Well Completion Report Forms

Upon reviewing our files we have found that we are missing well completion reports for the following observation wells issued on January 11, 1991:

1. Well No. 3155-01 Kealakekua Observation
2. Well No. 3255-01 Kainaliu Observation
3. Well No. 3957-02 Kailua Observation
4. Well No. 6240-01 Waimea Observation

We have enclosed the latest well completion report forms for your use. Please complete and submit these forms to our office at your earliest convenience to meet the conditions of your permit.

If you have any questions, please contact Roy Hardy at 587-0274.

Sincerely,

[Signature]
RAE M. LOUI
Deputy Director

RH:ss
Enclosure
To Glenn Towel  
From Steve Bowles  
Subj: Benchmark USGS

143.98

Well #2
Elevation - Top 8" Pipe = 2671.84
Elevation - Box Cul-de-Sac = 2670.84
USGS Observation

Waimea Water Systems...  
ATT. Steve

(1) USGS
Water level 3/16/93 = 1255.27' MSL
7/19/94 = 1259.54' MSL

(2) Parker Ranch Well #1
BM 2827.86' TDC
Water level 7/19/94 = 1234.38' MSL

TOTAL P.01
MEMORANDUM

TO: Manabu Tagomori  
FROM: Glenn Bauer

SUBJECT: U.S. Geological Survey's Big Island Drilling Program

Per your request to find out about the joint County and USGS drilling program, I called Todd Presley today for preliminary results. I will see him next week for more detailed elevations, casing depths, and well depths. He did provide some interesting water level data and other information.

He indicated that all wells are six inches in diameter and have four-inch diameter screw joint casing not grouted in place. The reason is that the casing can be removed and the wells reamed out to accommodate a pump for testing.

The use of the air hammer drilling rig and foam did not yield a good return of rock cuttings. In the Kona area, for example, Todd did not know whether they had encountered trachyte at depth as other recent wells in Kona had done. Rock cuttings were only retrieved in the top few hundred feet of drilling.

Four Well Construction Permits were issued to the U.S. Geological Survey and the County DWS on January 11, 1991. The four observation wells that were permitted, plus three additional failures at Kealakekua, are drilled.

Kealakekua Observation Well 3155-01

There are four wells at this site. Three of them are failures, and the USGS is aware that they will need to be sealed. The elevation at the site is approximately 1760 feet msl.

Well 1: Well 1 was drilled to a depth of approximately 1350 feet. At this point they experienced some caving, their tremie pipe became stuck and the well was abandoned. The hole was later plugged at a depth of 400 feet. When the well is sealed it will be grouted from this depth to the surface.

Well 2: Well 2 is 25 feet away from Well 1. At a depth of 900 feet the bit and drill pipe became stuck due to persistent cave-ins. Their drill rig does not have enough torque or lifting power to pull the bit and drill pipe. They will attempt to remove the drill pipe with someone else's drill rig. They may even try to dynamite the bit off while twisting from above. Dynamiting may cause contamination problems. We should approve any
method they decide to use.

**Well 3:** Well 3 is between Wells 1 and 2. At a depth of 500 feet, Well 3 reentered Well 1. At this point drilling ceased and the well was abandoned. When they seal Well 1, they will use Well 3 to fill up the lower portion with gravel and then grout seal above a depth 500 feet.

**Well 4:** Well 4 is 40 feet away from the existing wells. The well is 1540 feet deep with casing set at a depth of 1520 feet. Depth to water is 1261 feet which gives a water level of 500+ feet msl.

**Kainaliu Observation Well 3255-01**

This well was drilled on the Paris Ranch at an elevation of 1660± feet msl. The well is about 1540 feet deep and encountered ground water with a head at elevation 365 feet msl. Chloride concentration is 18 parts per million.

**Kailua Observation Well 3957-02**

This well is located near Komo Store at Holualoa. Elevation of the well is 1600± feet msl. A tremendous amount of perched water cascaded down the well bore from a zone at a depth of 1000-1100 feet. Due to the strong flow of perched water, an accurate measurement of the high-level water table was difficult. Estimated head is 40 feet msl. Solid casing is installed to 1460 feet, with perforated casing below it to the bottom of the well. Total depth of the well is 1600± feet.

**Waimea Observation Well 6240-01**

This well is located near the Puu Ki Reservoirs. Ground elevation at the site is 3100 feet msl. The well is 2020 feet deep and encountered water at an elevation of 1400± feet msl. Todd thinks that the rocks are tight and that yield from wells in this area might be limited. They need to install the casing. Presently the rig is idle with a cover over the well. Small perched water flow at a depth of 160 feet was encountered during drilling.

**Other Data**

The USGS also measured the water levels in Nansay's Kau Wells on September 6, 1991. Kau Well 1 had a head of 9.85 feet msl, while Kau 2 had a water level of 10.19 feet msl.
WELL CONSTRUCTION PERMIT
for
Waimea Observation Well
Well No. 6240-01
Waimea, Hawaii

TO: United States Geological Survey
677 Ala Moana Blvd., Suite 415
Honolulu, HI 96813

In accordance with Department of Land and Natural Resources Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", your application to construct Waimea Observation Well (Well No. 6240-01) is approved, subject to the following conditions:

1. The Division of Water Resource Management (DWRM), P.O. Box 373, Honolulu, HI 96809, shall be notified, in writing, before any work by this permit commences.

2. The well shall be used for observation purposes only.

3. The grouted annular space shall be at least 3 inches all around the casing.

4. The following shall be submitted to DWRM within 30 days after completion of the well:
   b. As-built sectional drawing of the well.
   c. Plot plan and map showing the exact location of the well.
   d. Periodic reports of observation results.
5. The applicant shall comply with all applicable laws, rules, and ordinances.

6. The work proposed in the permit application shall be completed within 24 months from the date of permit issuance.

JAN 1 1 1991

Date of Issuance

WILLIAM W. PATY

Enc. (Well Completion Report form)
cc: USGS
    Department of Health
        Drinking Water Branch
        Ground Water Protection Program
    Hawaii Department of Water Supply
State of Hawaii  
COMMISSION ON WATER RESOURCE MANAGEMENT  
Department of Land and Natural Resources  
Division of Water Resource Management

APPLICATION FOR

[ ] WELL CONSTRUCTION PERMIT  
[ ] PUMP INSTALLATION PERMIT

INSTRUCTIONS: Please print or type and send completed application with attachments to the Division of Water and Land Development. P.O. Box 373, Honolulu, Hawaii 96809. Application must be accompanied by a non-refundable filing fee of $25.00 payable to the Department of Land and Natural Resources. (Filing fee waived for government agencies.) If necessary, phone 548-7742, Hydrology/Geology Section for assistance.

1. WELL LOCATION

Island [ ] Hawaii  
Tax Map Key 6-5-01 parcel 3
Address

(Attach a USGS map (scale 1"=2000') and property tax map showing well location referenced to established property boundaries.)

2. WELL OWNER

Firm Name  
Contact Person  
Address  
Phone

LANDOWNER:

Firm Name  
Contact Person  
Address  
Phone

3. PROPOSED CONTRACTOR FOR:  
[ ] Well Drilling  
[ ] Pump Installation

Name  
Address

Contractor's License No.

4. PROPOSED WORK

[ ] Drill New Well  
[ ] Alter  
[ ] Install New Pump  
[ ] Deepen  
[ ] Seal  
[ ] Replace Pump  
[ ] Redrill  
[ ] Abandon  
[ ] 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 systems)  
[ ] Industrial  
[ ] Irrigation (specify)  
[ ] Other (specify)  

6. PROPOSED AMOUNT OF WITHDRAWAL  

7. PROPOSED PUMP INFORMATION

Pump Type:  
Motor:  
[ ] Diesel  
[ ] Gas  
[ ] Electric:  
Rated Pump Capacity  
Rated Horsepower

<table>
<thead>
<tr>
<th>Well Owner (print)</th>
<th>Landowner (print)</th>
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<tbody>
<tr>
<td>Signature</td>
<td>Signature</td>
</tr>
<tr>
<td>Date</td>
<td>Date</td>
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</table>

For Official Use Only:

Field Checked By  
Latitude

Date  
Longitude  
State Well No.  
Hydrologic Unit

WAIHEE OBS
Briefly describe the proposed work:
Observation hole into deep unconfined aquifer.

PROPOSED SECTION OF WELL

Elevation at top of casing
3002 ft., msl.

Ground Elev. 3000 ft., msl

Solid Casing: Material

Length 200 2000 ft.
Diameter 8 4 in.
Wall thickness 0.25 0.25 in.

Casing: Perforated Screen

Material steel
Length 200 ft.
Diameter 4 in.
Wall thickness 0.25 in.
Openings 6 sq. in./L.F.

Open Hole:
Length
Diameter

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