Ms. Lenore Nakama
State of Hawaii, Department of Land and Natural Resources
Commission on Water Resource Management
P.O. Box 621
Honolulu, Hawaii 96809

Dear Ms. Nakama:

As discussed during our telephone conversation on August 21, 1996, we have enclosed a copy of a USGS topographic map showing the locations of 12 monitoring wells installed for this project. The monitoring wells are identified on the map by their Army identification numbers. When we received your letter dated April 11, 1996, there seemed to be some confusion over which state well identification numbers were assigned to which of our monitoring wells. Your letter indicated that Wells 4-2 and 4-4 were assigned state well identification numbers 3-2900-01 and 3-3004-03, respectively. The actual geographic location of Well 4-2 does not correspond to well identification number 3-2900-01. Based on our records, the state well identification numbers should be assigned as follows:

<table>
<thead>
<tr>
<th>Project Well Number</th>
<th>Hawaii State Well ID Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1</td>
<td>3-2901-13</td>
</tr>
<tr>
<td>2-1</td>
<td>3-2900-02</td>
</tr>
<tr>
<td>2-2</td>
<td>3-2903-01</td>
</tr>
<tr>
<td>2-3</td>
<td>3-2902-03</td>
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<tr>
<td>2-4</td>
<td>3-2801-02</td>
</tr>
<tr>
<td>2-5</td>
<td>3-2959-01</td>
</tr>
<tr>
<td>2-6</td>
<td>3-2802-01</td>
</tr>
<tr>
<td>4-2A</td>
<td>3-3004-02</td>
</tr>
<tr>
<td>4-3</td>
<td>3-3004-05</td>
</tr>
<tr>
<td>4-4</td>
<td>3-3004-03</td>
</tr>
</tbody>
</table>

We hope this table and the map will help clear up the confusion regarding the well numbers and locations.

As requested in your April 11, 1996 letter, we have enclosed the following information:

1. Well 1-1 (State Well ID No. 3-2901-13)
   a. After-the-fact application for a well construction/pump installation permit
   b. Well completion report
October 14, 1996
28339.06.01.12
0225AR
Ms. Lenore Nakama
State of Hawaii, DLNR
Page 2

2. Well 4-2 (State Well ID No. 3-3004-02)
   a. Well completion report
   b. Well completion diagram

Although 12 monitoring wells were installed over the lifetime of the project, only 11 are functioning with submersible pumps. There were problems during the installation of Well 4-2. The cable used to pull the pump out of the well broke. After numerous unsuccessful attempts to retrieve the pump, the pump was abandoned and is not functional. Thereafter, Well 4-2 was used only to measure groundwater levels. Thus, a pump installation report and diagram were never included in the original permit application. Because Well 4-2 could not be used as a monitoring well, a new well was drilled within 15 feet of the old well. We gave the new well the name 4-2A, and this may have led to additional confusion.

Your April 11 letter also requested information on State Wells 3-2900-01 and 3-3004-03. From our records, State Well 3-3004-03 refers to Well 4-3 instead of 4-4, as listed in your letter. But we are uncertain which wells are referred to by State Wells 3-2900-01 and 3-2900-02. At one time, we did propose to install a monitoring well in a part of the East Range, but that idea was rejected. It is possible, perhaps, that someone such as the drilling company may have submitted a permit application in advance. If that is the case, that particular permit should be withdrawn, as that well was never drilled. Because of the confusion, we have enclosed copies of the well completion reports for both Wells 4-3 and 4-4.

In addition, we have enclosed survey data for all the wells, and the well completion report for Well 2-6 with supporting boring log and well completion diagram information.

We hope that this information will help clarify the confusion between the two well identification systems. I will be available to discuss these wells with you personally if you so desire. If you have any questions, please feel free to call.

Sincerely yours,

HARDING LAWSON ASSOCIATES

Bruce S. Wedgeworth
Associate Geologist

Enclosures

cc: Mr. Jon Fukuda / U.S. Army, Department of Public Works
July 16, 1996

Harding Lawson Associates
235 Pearlridge Center, Phase I
98-1005 Moanalua Road
Aiea, Hawaii 96701

Atttn: Mr. Bruce S. Wedgeworth

Subject: FIELD LOCATION OF MW 2-6
At Wheeler Army Airfield
Oahu, Hawaii

<table>
<thead>
<tr>
<th>Northing</th>
<th>Easting</th>
<th>Elevation</th>
<th>Latitude</th>
<th>Longitude</th>
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</thead>
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<tr>
<td>MW 2-6</td>
<td>111702.132</td>
<td>484685.053</td>
<td>691.57</td>
<td>\begin{align*}21^\circ27'27.04''\quad158^\circ02'42.147''\end{align*}\phantom{0000} (Top of Sounding Tube)</td>
</tr>
<tr>
<td>BM#1</td>
<td></td>
<td></td>
<td>689.50</td>
<td></td>
</tr>
<tr>
<td>BM#2</td>
<td></td>
<td></td>
<td>689.55</td>
<td></td>
</tr>
<tr>
<td>BM#3</td>
<td></td>
<td></td>
<td>689.46</td>
<td></td>
</tr>
</tbody>
</table>

Coordinates referred to Hawaii State Plane Coordinate System - Zone 3
Elevation Datum = Mean Sea Level (MSL)
ELEVATION OF MONITORING WELLS AS SURVEYED
ON 7/15/95 (W/ BRUCE & MARK OF HARDING
AND LAWSON)

MW-4-2A = 946.87 feet — black mark on top of tube
MW-4-2 = 947.11 feet — black mark on top of tube
"+" cut near casing of MW-4-2A = 945.91 feet

MW-4-1 = 853.47 feet (as surveyed on 3/16/95)
"+" cut = 851.12 feet
Diff. = 2.35 feet (Bruce need diff. in elev. only)

MW-4-3 = 884.15 feet (as surveyed on 3/16/95)
"+" cut = 882.52 feet
Diff. = 1.43 feet (Bruce need diff. in elev. only)

MW-4-4 = 829.88 feet — black mark

MW-2-2 = 864.34 feet — black mark on top of tube
"+" cut = 862.90 feet

MW-2-3 = 828.81 feet — black mark on top of tube
"+" cut = 827.20 feet

MW-2-4 = 829.70 feet — black mark on top of tube
"+" cut = 828.00 feet

MW-2-1 = 903.75 feet — black mark on top of tube
Wednesday January 10, 1996 12:54 PM

Coordinate File Name: HARDING.CO

Lowest point #: 1  Highest point #: 6
Job #: 110

Description:

<table>
<thead>
<tr>
<th>Point</th>
<th>Northing</th>
<th>Easting</th>
<th>Elev</th>
<th>Descr</th>
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<td>5.p. - 1</td>
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<tr>
<td>21-29-59.344</td>
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<td>5.p. - 3</td>
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<td>474675.9900</td>
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<tr>
<td>5.p. - 4</td>
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<td></td>
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<td>5.p. - 5</td>
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<td>474006.8800</td>
<td>884.1500 MW 4-3</td>
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<td>5.p. - 6</td>
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<td>503505.7809</td>
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</tr>
</tbody>
</table>

0-00-13.601 CONVERGENCE
0.9999900 SCALE FACTOR
0.9999464 GRID FACTOR

SP - HAWAII STATE PLANE COORDINATE SYSTEM, ZONE 3 (NAD 27)
Mr. Jon Fukuda
United States Army
DPW, Attn: APVG-GWV, U.S. Army Garrison
Schofield Barracks, HI 96857-5000

Dear Mr. Fukuda:

After-the-Fact Well Construction Permit
MW 2-2 (Well No. 2903-01)

Enclosed are two (2) copies of your approved Well Construction Permit for the captioned well(s). As part of the Commission's approval, the following special conditions were added and are part of your permit under Standard Permit Condition 11:

Special Conditions

1. Standard Conditions 1, 2, and 9 are waived.

Please sign the permit copies and return one for our files.

If you have any questions, please call Rae M. Loui, Deputy Director, at 587-0214 or 1-800-468-4644 extension 70214.

Aloha,

[Signature]

MICHAEL D. WILSON
Chairperson

Enclosures
MW 2-2 Well, Well No. 2903-01

In accordance with Department of Land and Natural Resources, Commission on Water Resource Management's Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", this document permits the construction and testing of MW 2-2 Well (Well No. 2903-01) at Schofield Barracks, Oahu, TMK 7-7-01, subject to the following conditions:

STANDARD PERMIT CONDITIONS

1. The Commission on Water Resource Management, P.O. Box 621, Honolulu, HI 96809, shall be notified, in writing, at least two (2) weeks before any work by this permit commences.

2. The well construction permit shall be for construction and testing of the well only. A minimum one-inch diameter monitor tube shall be permanently installed, in a manner acceptable to the Commission, to accurately record water levels. The permittee shall coordinate with the Commission and conduct a pumping test in accordance with the attached Aquifer Pump Testing Procedure (attached). The permittee shall submit to the Commission the test results as a basis for supporting an application to install a permanent pump and withdraw water for use. No permanent pump may be installed until a pump installation permit is approved and issued by the Commission.

3. The permittee shall incorporate mitigation measures to prevent construction debris from entering the aquatic environment, to schedule work to avoid periods of high rainfall, and to revegetate any cleared areas as soon as possible.

4. In the event that subsurface cultural remains such as artifacts, burials or concentrations of shells or charcoal are encountered during construction, the permittee shall stop work and contact the Department's Historic Preservation Division (587-0045) immediately.

5. The proposed well construction shall not adversely affect existing or future legal uses of water in the area, including any surface water or established instream flow standards. This permit or the authorization to construct the well shall not constitute a determination of correlative water rights.

6. The following shall be submitted to the Commission within thirty (30) days from the date of approval:

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

7. The permittee shall comply with all applicable laws, rules, and ordinances.

8. The well construction permit application is incorporated into the permit by reference.

9. The permit may be revoked if work is not started within six (6) months after the date of approval or if work is suspended or abandoned for six (6) months, unless otherwise specified. The work proposed in the well construction permit application shall be completed within two (2) years from the date of permit approval, unless otherwise specified. The permit may be extended by the Commission upon a showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Commission no later than three (3) months prior to the date the permit expires. If the commencement or completion date is not met, the Commission may revoke the permit after giving the permittee notice of the proposed action and an opportunity to be heard.

10. If the well is not to be used it must be properly capped. If the well is to be abandoned then the applicant must apply for a well abandonment permit in accordance with §13-168-12(f) prior to any well sealing or plugging work.

11. Special conditions in the attached cover transmittal letter are incorporated herein by reference.

Date of Approval: 5/9/96
Expiration Date: 5/9/98

I have read the conditions and terms of this permit and understand them. I accept and agree to meet these conditions as a prerequisite and underlying condition of my ability to proceed.

Applicant's Signature: ___________________________ Date: ______________

Printed Name: ___________________________ Firm or Title: ___________________________

Please sign both copies and return one copy of this permit to the Commission and retain a copy for your record.

Attachment
cc: USGS
Department of Health/ Safe Drinking Water & Wastewater Branches
Honolulu Board of Water Supply
Mr. Jon Fukuda  
United States Army  
DPW, Attn: APVG-GWV, U.S. Army Garrison  
Schofield Barracks, Hawaii  06857-5000

Dear Mr. Fukuda:

After-the-Fact Pump Installation Permit  
MW 2-2 (Well No. 2903-01)

Enclosed are two (2) copies of your approved Pump Installation Permit for the captioned well(s). As part of the Commission's approval, the following special conditions were added and are part of your permit under Standard Permit Condition 10:

Special Conditions

1. Standard Conditions 1 and 8 are waived.
2. The requirement to install a flowmeter (Standard Condition 3) is waived.

Please sign the permit copies and return one for our files.

If you have any questions, please call Rae M. Loui, Deputy Director, at 587-0214 or 1-800-468-4644 extension 70214.

Aloha,

[Signature]

MICHAEL D. WILSON  
Chairperson

Enclosures
AFTHE-FACT PUMP INSTALLATION PERMIT

MW 2-2 Well, Well No. 2903-01

In accordance with Department of Land and Natural Resources, Commission on Water Resource Management’s Administrative Rules, Section 13-168, entitled “Water Use, Wells, and Stream Diversion Works”, this document permits the pump installation for MW 2-2 Well (Well No. 2903-01) at Schofield Barracks, Oahu, TMK 7-7-01, subject to the following conditions:

STANDARD PERMIT CONDITIONS

1. The Commission on Water Resource Management, P.O. Box 621, Honolulu, HI 96809, shall be notified, in writing, at least two (2) weeks before any work covered by this permit commences.

2. The pump installation permit shall be for installation of a 25 gpm capacity, or less, pump in the well.

3. The permittee shall provide and maintain an approved meter or other appropriate means for measuring and reporting withdrawals and water levels, and appropriate devices or means for measuring chlorides and temperature. These data shall be measured monthly and reported to the Commission on a monthly basis.

4. The proposed use shall not adversely affect existing or future legal uses of water in the area, including any surface water or established instream flow standards. The permittee is notified and by this provision understands that the quantity of water taken from the well could be reduced by the Commission in the future. This permit is not a commitment that the pump capacity permitted here or even some lesser amount is guaranteed in the future.

5. The applicant shall complete and submit as-built drawings and Part II - (Permanent) Pump Installation Report of the Well Completion Report (attached) to the Commission within thirty (30) days from the date of approval.

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

7. The pump installation permit application is incorporated into the permit by reference.

8. The permit may be revoked if work is not started within six (6) months after the date of approval or if work is suspended or abandoned for six (6) months, unless otherwise specified. The work proposed in the well construction permit application shall be completed within two (2) years from the date of permit approval, unless otherwise specified. The permit may be extended by the Commission upon a showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Commission no later than three (3) months prior to the date the permit expires. If the commencement or completion date is not met, the Commission may revoke the permit after giving the permittee notice of the proposed action and an opportunity to be heard.

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Applicant’s Signature: ____________________________ Date: __________
Printed Name: ____________________________ Firm or Title: ____________________________

Please sign both copies and return one copy of this permit to the Commission and retain a copy for your record.

Attachment

cc: USGS
Department of Health/ Safe Drinking Water & Wastewater Branches
Honolulu Board of Water Supply
TO: Honorable Lawrence Milke, Director
   Department of Health
   Attention: Dennis Tulang, Wastewater Branch
   William Wong, Safe Drinking Water Branch

FROM: Michael D. Wilson, Chairperson
   Commission on Water Resources Management

SUBJECT: After-the-Fact Applications for Well Construction/Pump Installation Permits
         MW2-1 through 2-5, MW4-2A, & MW4-4 Wells
         Well Nos. 2900-02, 2903-01, 2902-03, 2801-02, 2959-01, 3004-05, & 3004-04

Transmitted for your review and comment are copies of after-the-fact applications for well construction/pump installation permits.

We would appreciate your comments on the captioned applications for any conflicts or inconsistencies with the programs, plans, and objectives specific to your department. Please respond by returning this cover memo form by April 29, 1996.

Please find a map, attached, to locate the wells. If you have any questions about these permit applications, request additional information, or request additional review time, please contact Lenore Nakama at 587-0218.

CONTACT PERSON: Bill Dong
PHONE: 5869258

RECEIVED
TO: Honorable Lawrence Miike, Director  
Department of Health  
Attention: Dennis Tulang, Wastewater Branch  
William Wong, Safe Drinking Water Branch  

FROM: Michael D. Wilson, Chairperson  
Commission on Water Resources Management  

SUBJECT: After-the-Fact Applications for Well Construction/Pump Installation Permits  
MW2-1 through 2-5, MW4-2A, & MW4-4 Wells  
Well Nos. 2900-02, 2903-01, 2902-03, 2801-02, 2959-01, 3004-05, & 3004-04  

Transmitted for your review and comment are copies of after-the-fact applications for well construction/pump installation permits.

We would appreciate your comments on the captioned applications for any conflicts or inconsistencies with the programs, plans, and objectives specific to your department. Please respond by returning this cover memo form by April 29, 1996.

Please find a map, attached, to locate the wells. If you have any questions about these permit applications, request additional information, or request additional review time, please contact Lenore Nakama at 587-0218.

LN:ss  
Attachment(s)  

RESPONSE: ☐ We have no comments  
☐ Comments attached  

Contact Person: Lori N. Kajiwara  
Phone: 587-2077  

Signed: Lori N. Kajiwara  
Date: 4-7-96
Mr. Jon Fukuda  
U.S. Army  
DPW, Attn: APVG-GWV, U.S. Army Garrison  
Schofield Barracks, HI 96857-5000  

Dear Mr. Fukuda:  

Permit Applications for MW2-1 through 2-5, MW4-2A, & MW4-4  
(Well Nos. 2900-02, 2903-01, 2902-03, 2801-02, 2959-01, 3004-05, & 3004-04)  

We accepted your after-the-fact well construction/pump installation permit applications on February 27, 1996, and hereby acknowledge that they are complete. You can expect your applications to be processed for action within ninety (90) days from that acceptance date.  

We are returning your check for $175.00 because government agencies are not subject to the payment of any fees (§13-171-12(c) HAR).  

Thank you for submitting the boring logs and well completion diagrams for Wells MW1-1, MW4-1, and MW4-3. We have reviewed the record for each of the monitor wells shown on your map. Listed below are the items that should be submitted to complete the record for the following wells:  

1. MW1-1 (Well No. 2901-13)  
   a. After-the-fact application for a well construction/pump installation permit.  
   b. Well completion report (Parts I and II, attached)  

2. MW4-2 (Well No. 3004-02)  
   a. Well completion report (Parts I and II, attached)  
   b. As-built sectional drawing of the well  
   c. As-built sectional drawing of the pump  

3. MW4-2 (Well No. 2900-01)  
   a. As-built sectional drawing of the pump  

4. MW4-4 (Well No. 3004-03)  
   a. Well completion report (Parts I and II, attached)  

In addition, documentation from a Hawaii-licensed surveyor should be submitted for all of your monitor wells.  

If you have any questions, please contact Lenore Nakama at 587-0218.  

Sincerely,  

[Signature]  
RAE M. LOUI  
Deputy Director  

LN:ss  
Enclosure
TO: Honorable Lawrence Muike, Director  
Department of Health  
Attention: Dennis Tulang, Wastewater Branch  
William Wong, Safe Drinking Water Branch

FROM: Michael D. Wilson, Chairperson  
Commission on Water Resources Management

SUBJECT: After-the-Fact Applications for Well Construction/Pump Installation Permits  
MW2-1 through 2-5, MW4-2A, & MW4-4 Wells  
Well Nos. 2900-02, 2903-01, 2902-03, 2801-02, 2959-01, 3004-05, & 3004-04

Transmitted for your review and comment are copies of after-the-fact applications for well construction/pump installation permits.

We would appreciate your comments on the captioned applications for any conflicts or inconsistencies with the programs, plans, and objectives specific to your department. Please respond by returning this cover memo form by April 29, 1996.

Please find a map, attached, to locate the wells. If you have any questions about these permit applications, request additional information, or request additional review time, please contact Lenore Nakama at 587-0218.

LN:ss  
Attachment(s)

RESPONSE: ( ) We have no comments  
( ) Comments attached

Contact Person: ___________________________ Phone: ___________________________

Signed: ___________________________ Date: ___________________________
Submitted for your review and approval are seven Applications for Permits and seven Well Completion Reports for monitoring wells MWs 2-1 through 2-5, MW4-2A, and MW4-4 that were installed for the Schofield Barracks Remedial Investigation/Feasibility Study (RI/FS) project. Also enclosed are boring logs and well completion diagrams for Wells MW1-1, MW4-1, and MW4-3, though they were previously permitted. We are conducting this project on behalf of the U.S. Army. Groundwater chemistry data for each of the wells are pending but will be published by the Army in the Final OU 2 RI Report. If requested, this data can be sent to you after release by the Army.

Also enclosed is a check for $175 (for seven well applications at $25 each).

If you have any questions, please contact me.

BSW/MWC/rmf

Enclosures: Applications for Permit, Wells MW2-1 through MW2-5, MW4-2A, and MW4-4
Well Completion Reports, Wells MW2-1 through MW2-5, MW4-2A, and MW4-4
Monitoring Well Location Map, USGS Quadrangles
Tax Map Key
Table 1. Water-Level Data
Table 2. Location Coordinates of Wells Drilled at Schofield Barracks
Boring Logs and Well Completion Diagrams (also includes MWs 4-1, 4-3, and 1-1)
$175 Check Payment, Harding Lawson Associates

Harding Lawson Associates
235 Pearlridge Center, Phase 1
Aiea, Hawaii 96701
(1)-808 486 6009

0209ARP
WELL COMPLETION REPORT

State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources

WELL NAME: MW2-2
STATE WELL NO: 2903-01
LOCATION: Address 1615 Leilahus Ave. and Morris Rd., HI 96787

Driller's Note:

Job Name ___________________________ Job No. ___________________________

Remarks:

Job Name ___________________________ Job No. ___________________________

1. STATE WELL NO. 2903-01
2. WELL NAME: MW2-2
   Barracks, Island of Oahu
3. LOCATION: Address 1615 Leilahus Ave. and Morris Rd., HI 96787
   Map Key 7-1-01
4. CONTRACTOR'S C-67 LICENSE NUMBER: C-16437
5. NAME OF DRILLER WHO PERFORMED WORK: Elmo Shephard
6. TYPE OF RIG/CONSTRUCTION: Air Rotary/Star 150K
7. DATE OF WELL DRILLING COMPLETION: 12/9/94
8. GROUND ELEVATION (msl): 862 ft.
12. TOTAL DEPTH OF WELL BELOW GROUND: 743 ft.
13. HOLE SIZE:
   - 18 in. dia. from 0 ft. to 29 ft. below ground
   - 13 in. dia. from 29 ft. to 743 ft. below ground
   - 6 in. I.D. x 0.28 in. wall solid section from 743 ft. to 529 ft. below ground
   - 6 in. I.D. x 0.25 in. wall perforated section from 529 ft. to 729 ft. below ground
14. CASING INSTALLED:
   - Grouted from 0 ft. below ground to 544 ft. below ground
   - Gravel packed from 556 ft. below ground to 743 ft. below ground
15. INITIAL WATER LEVEL: 589.62 ft. below ground
16. INITIAL CHLORIDE: 17 ppm
17. INITIAL TEMPERATURE: 72.5°F
18. AQUIFER PUMP TEST PROCEDURES DATA & GRAPHS ATTACHED? X No

PUMP INSTALLATION REPORT

DATE OF PUMP INSTALLATION: 5/17/95

PUMP INSTALLATION:
- Submersible, Meyers, Make: 3JF7543-258
- Franklin Electric, 7.5 HP, 460V, 1760 RPM
- Capacity 25 gpm
- Depth of Pump Intake Setting: 604 ft. below R.P., which elevation is 258 ft.
- Depth of bottom of airline: N/A ft. below ground, which elevation is __________ ft.
- Pumping Head is: 593 ft.

Remarks:

Contractor (print): Roscoe Moss Hawaii, Inc.
Title: Manager
Signature: ___________________________
Date: 2/15/95

For Driller's Use: ___________________________
Job Name: ___________________________

For Official Use: ___________________________
Well No.: 2903-01
Longitude: 158 03 19
Latitude: 21 29 59

12/12/95 WCR Form
### Table 1. Schofield Water-Level Data

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<th>Permit Number</th>
<th>HLA Well Name</th>
<th>Date Measured</th>
<th>Time Measured</th>
<th>Top of Sounding Tube Elevation (ft)</th>
<th>Depth to Water (ft)</th>
<th>Vertical Displacement (ft)</th>
<th>Corrected Depth (ft)</th>
<th>Groundwater Elevation (ft)</th>
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Table 2. Location Coordinates of Wells Drilled at Schofield Barracks, Island of Oahu, Hawaii

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<thead>
<tr>
<th>NLA Well No.</th>
<th>Hawaii State Well L.D. No.</th>
<th>Hawaii State Plane (ft)</th>
<th>Top of Sounding Tube Elevation (ft)</th>
<th>UTM Coordinates (meters)</th>
<th>Latitude</th>
<th>Longitude</th>
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<td>Northing</td>
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<td>Northing</td>
<td>Easting</td>
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<tr>
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</tr>
</tbody>
</table>

NA = Not assigned yet by the DLNR.
3.5" DIAMETER STEEL PICKET FILLED WITH CEMENT

DEPTH (FT)  ELEVATION (FT)*
29        833

GROUN D SURFACE EL. = 862 FT.

24" DIA. STEEL WELL MONUMENT

TOP OF SOUNDING TUBE EL. = 864.34 FT.

GROUND SURFACE EL. = 862 FT.

18" DIAMETER AUGERED HOLE

14" DIAMETER STEEL SURFACE CASING

CEMENT BENTONITE INNER SEAL

6" DIAMETER CARBON STEEL BLANK CASING

1.3" DIAMETER HOLE DRILLED WITH AIR ROTARY

CEMENT BENTONITE INNER SEAL

BENTONITE PELLETS

FINE SAND

1" PVC SOUNDER TUBE

SILICA SAND FILTER PACK (#4 STANDARD SIEVE SIZE)

6" DIA. STAINLESS STEEL LOUVERED SCREEN (0.060" SLOT SIZE)

597 265
593.20 271.14 (10/10/95)
(ELEVATION OF GROUNDWATER)
579 283
556 306
544 316

NOT TO SCALE

*DATUM: MEAN SEA LEVEL

Harding Lawson Associates
Engineering and Environmental Services

Monitoring Well 2-2
Schofield Barracks
Island of Oahu, Hawaii

-2909-01

FIGURE
<table>
<thead>
<tr>
<th>Depth (ft)</th>
<th>Elevation (ft)</th>
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</thead>
<tbody>
<tr>
<td>569</td>
<td>293</td>
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<tr>
<td>593.20</td>
<td>271.14 (10/10/95)</td>
</tr>
<tr>
<td>597</td>
<td>265</td>
</tr>
<tr>
<td>598</td>
<td>264</td>
</tr>
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<tr>
<td>729</td>
<td>133</td>
</tr>
<tr>
<td>743</td>
<td>119</td>
</tr>
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</table>

*Datum: Mean Sea Level* (Not to Scale)
<table>
<thead>
<tr>
<th>Sample Interval (feet)</th>
<th>Drilling Rate (min./3 feet)</th>
<th>Breathing Space Measurement (ppm)</th>
<th>Sample Number</th>
</tr>
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<tr>
<td>0-2</td>
<td>-</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>0-5</td>
<td>-</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>5-12</td>
<td>-</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>12-17</td>
<td>-</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>20-40</td>
<td>2</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40-50</td>
<td>3</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>4</td>
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<td></td>
</tr>
<tr>
<td>50-60</td>
<td>1</td>
<td>0</td>
<td>7</td>
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</table>

**Equipment**
- Air Rotary/Star 150K

**Ground Elevation**
- 862 ft

**Date**
- 12/09/94

**Description of Samples**

1. VERY DARK REDDISH BROWN ELASTIC SILT (MH) (2.5YR,2.5/2), dry, firm.
2. Dark red (2.5YR,3/4), moist below 5 feet.
3. Less elastic below 25 feet.
4. (Driller switched from Kelley bar and auger to air rotary at 30 feet. Set 18-inch surface casing to 30 feet.)
5. Dark reddish brown (2.5YR,3/4) and yellowish red (5YR,4/6), moist below 40 feet.
6. Brown (7.5YR,5/4) below 50 feet.
7. Reddish brown (5YR,4/3), with fine decomposed (basalt) gravel below 60 feet.
<table>
<thead>
<tr>
<th>Sample Interval (feet)</th>
<th>Drilling Rate (min./3 feet)</th>
<th>Breaking Space Measurement (ppm)</th>
<th>Sample Number</th>
<th>Depth (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>60-70</td>
<td>2</td>
<td>0</td>
<td>8</td>
<td>70</td>
</tr>
<tr>
<td>70-80</td>
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<td>0</td>
<td>9</td>
<td>80</td>
</tr>
<tr>
<td>80-90</td>
<td>2</td>
<td>0</td>
<td>10</td>
<td>90</td>
</tr>
<tr>
<td>90-100</td>
<td>2</td>
<td>0</td>
<td>11</td>
<td>100</td>
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<tr>
<td>100-110</td>
<td>2</td>
<td>0</td>
<td>12</td>
<td>110</td>
</tr>
<tr>
<td>110-120</td>
<td>3</td>
<td>0</td>
<td>13</td>
<td>120</td>
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</table>

Mottled dusky red (10R,3/4), yellowish red (5YR,5/8) and dark grey (N4) below 70 feet.

Mottled reddish yellow (7.5YR,6/6) and reddish brown (2.5YR,5/4) below 80 feet.

Mottled red (10R,4/8), strong brown (7.5YR,5/1), weak red (10YR,4/2) and yellowish red (5YR,4/6) below 100 feet.

Mottled yellowish red (5YR,5/8), dusty red (10R,3/4) and red (10R,4/6) below 110 feet.

Red (10R,3/4), grey (N5) and yellow (10YR,8/8), hard, (saprolite) below 120 feet. Increased drilling resistance at 122 feet.
<table>
<thead>
<tr>
<th>Sample Interval (feet)</th>
<th>Drilling Rate (min./5 feet)</th>
<th>Breathing Space Measurement (ppm)</th>
<th>Sample Number</th>
<th>Depth (ft)</th>
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<td>6</td>
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<td>14</td>
<td>130</td>
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<tr>
<td></td>
<td>11</td>
<td></td>
<td></td>
<td>135</td>
</tr>
<tr>
<td>130-140</td>
<td>11</td>
<td>0</td>
<td>15</td>
<td>140</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td></td>
<td></td>
<td>145</td>
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<td>140-150</td>
<td>6</td>
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<td>16</td>
<td>150</td>
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<td></td>
<td>155</td>
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<tr>
<td>150-160</td>
<td>8</td>
<td>0</td>
<td>17</td>
<td>160</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td>165</td>
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<td>160-170</td>
<td>2</td>
<td>0</td>
<td>18</td>
<td>170</td>
</tr>
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<td>9</td>
<td></td>
<td></td>
<td>175</td>
</tr>
<tr>
<td>170-180</td>
<td>4</td>
<td>0</td>
<td>19</td>
<td>180</td>
</tr>
<tr>
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<td></td>
<td>185</td>
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<tr>
<td>180-190</td>
<td>2</td>
<td>0</td>
<td>20</td>
<td>190</td>
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**Equipment**

**Air Rotary/Star 150K**

<table>
<thead>
<tr>
<th>Depth (Sample)</th>
<th>Equipment (Ground Elevation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>862 ft</td>
<td>Date 12/09/94</td>
</tr>
</tbody>
</table>

- **Red (10R,5/8), weak red (10R,4/2), yellow (10YR,7/8) and very dark gray (10YR,3/1) below 130 feet.**
  - Increased drilling resistance from 131 to 137 feet.

- **Mottled brownish yellow (10YR,6/8) and red (10R,4/6) below 140 feet.**

- **Mottled red (10R,5/8), brownish yellow (10YR,6/8) and dusky red (10YR,3/3) below 150 feet.**

- **Red (10R,4/8), dusky red (10R,3/3) and dark reddish gray (10R,3/1) below 170 feet.**
  - Increased drilling resistance at 173 feet.

- **OLIVE GRAY (5Y,4/1), DARK REDDISSH BROWN (10R,3/4) AND MODERATE YELLOWISH BROWN (10YR,5/4) BASALT, low hardness, weak, deeply weathered.**

- **Grayish black (N2), moderate reddish brown (10R,4/6) and dusky yellow green (5GY,5/2), low to moderate hardness, weak to moderately strong below 180 feet.**
### Sample Inlierai Drilling Rates

<table>
<thead>
<tr>
<th>Sample Interval (feet)</th>
<th>Drilling Rate (min./5 feet)</th>
<th>Breathing Space Measurement (ppm)</th>
<th>Sample Number</th>
<th>Equipment (Ground) Elevation</th>
<th>Air Rotary/Star 150K</th>
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<tbody>
<tr>
<td>190-200</td>
<td>3</td>
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<td>21</td>
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<td>862 ft 12/09/94</td>
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<tr>
<td>200-210</td>
<td>2</td>
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<td>22</td>
<td>210 ft</td>
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<tr>
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<td>23</td>
<td>220 ft</td>
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<tr>
<td>220-230</td>
<td>32</td>
<td>0</td>
<td>24</td>
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<td>0</td>
<td>25</td>
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</tr>
<tr>
<td>240-250</td>
<td>35</td>
<td>0</td>
<td>26</td>
<td>250 ft</td>
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</table>

**Olive black (SY.2/1) and brownish gray (SYR.4/1), moderate to deeply weathered, vesicular, iron oxide staining below 200 feet.**

**Olive black (SY.2/1), dark yellowish brown (10YR.4/2) and grayish red (5R.4/2) below 210 feet.**

**Increased drilling resistance from 219 to 229 feet. Olive gray (5Y.4/1), olive black (5Y.2/1) and black (N1), moderately hard to hard, moderately strong; with inclusions of red (10R.4/8) and reddish brown (SYR.4/3) elastic silt below 220 feet.**

**Dark gray (N3), hard to very hard, strong, fresh to little weathering, many olivine crystals below 230 feet. Decreased drilling resistance from 230 to 235 feet.**

**Decreased drilling resistance from 237 to 242 feet. Medium dark gray (N4), moderate red (5R.4/6) and dusky red (5R.3/6), low to moderate hardness, weak to moderately strong, moderate to deep weathering, vesicular below 240 feet.**

**Increased drilling resistance from 247 to 257 feet. Olive black (SY.2/1), moderate brown (SYR.4/4) and dark reddish brown (10R.3/4), trace olivine crystals below 250 feet.**
<table>
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<th>Sample Interval (feet)</th>
<th>Drilling Rate (min./15 feet)</th>
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<td>28</td>
<td>265</td>
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<td>270-280</td>
<td>8</td>
<td>0</td>
<td>29</td>
<td>270</td>
</tr>
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<td>280-290</td>
<td>11</td>
<td>0</td>
<td>30</td>
<td>275</td>
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<tr>
<td>290-300</td>
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<td>0</td>
<td>31</td>
<td>280</td>
</tr>
<tr>
<td>300-310</td>
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<td>0</td>
<td>32</td>
<td>285</td>
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<tr>
<td>310-320</td>
<td>7</td>
<td>0</td>
<td>33</td>
<td>290</td>
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</tbody>
</table>

**Equipment**

Air Rotary/Star 150K

**Ground Elevation**

862 ft  Date  12/09/94

---

Olive black (5Y,2/1) and olive gray (5Y,4/1), moderately hard to hard, moderately strong, vesicles are becoming smaller below 260 feet.

Dusky brown (5YR,2/2), olive black (5Y,2/1) and moderate reddish brown (10R,4/6), low to moderate hardness, moderately strong to weak, highly vesicular, trace olivine crystals below 270 feet.

Increased drilling resistance at 278.

Dark gray (N3), dark greenish gray (5GY,4/1) and dusky yellowish brown (10YR,2/2), moderately hard to hard, moderately strong below 280 feet.

Increased drilling resistance at 281 feet.

Greenish black (5GY,2/1) and moderate brown (5YR,4/4), hard below 290 feet.

Olive black (5Y,3/1) and moderate brown (5YR,4/4), moderately hard to hard below 300 feet.

Greenish black (5GY,2/1) and brownish black (5YR,2/1), trace olivine crystals below 320 feet.
<table>
<thead>
<tr>
<th>Sample Interval (feet)</th>
<th>Drilling Rate (min./5 feet)</th>
<th>Breathing Space Measurement (ppm)</th>
<th>Sample Number</th>
<th>Deph (ft)</th>
<th>Equipment (Ground) Elevation</th>
<th>Date</th>
<th>Sample Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>320-340</td>
<td>10</td>
<td>0</td>
<td>35</td>
<td>340</td>
<td>Dark greenish gray (5GY,4/1), olive black (5Y,2/1) and moderate reddish brown (10R,4/6), low moderate hardness, weak to moderately strong below 340 feet.</td>
<td>12/09/94</td>
<td>330</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>0</td>
<td>34</td>
<td>335</td>
<td>Increased drilling resistance at 345 feet.</td>
<td>12/09/94</td>
<td>335</td>
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<tr>
<td>340-350</td>
<td>27</td>
<td>0</td>
<td>36</td>
<td>350</td>
<td>Grayish black (N2), hard, weak below 350 feet.</td>
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<tr>
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<td>17</td>
<td>0</td>
<td>37</td>
<td>360</td>
<td>Grayish black (N2) and dark gray (N3), moderately strong to strong, trace olivine crystals.</td>
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<td>360</td>
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<tr>
<td>350-360</td>
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<td>0</td>
<td>38</td>
<td>370</td>
<td>Increased drilling resistance from 361 to 363 feet.</td>
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<tr>
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<td>14</td>
<td>0</td>
<td>39</td>
<td>380</td>
<td>Olive gray (5Y,4/1) below 370 feet.</td>
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<tr>
<td>370-380</td>
<td>21</td>
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<td>30</td>
<td>390</td>
<td>Increased drilling resistance from 377 to 383 feet.</td>
<td>12/09/94</td>
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<tr>
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<td>29</td>
<td>0</td>
<td>31</td>
<td>385</td>
<td>Olive black (5Y,2/1) and greenish black (5GY,2/1), moderately hard to hard, moderately weathered, vesicular.</td>
<td>12/09/94</td>
<td>385</td>
</tr>
</tbody>
</table>

Harding Lawson Associates

Log of Monitoring Well 2-2 (Sheet 6 of 12)

Schofield DA03
Schofield Barracks
Island of Oahu, Hawaii

DRAWN: kar
JOB NUMBER: 28339.06.01.12
APPROVED: SDA03
FILE: 4/95
DATE: 12/09/94
REVISED DATE: 12/09/94
<table>
<thead>
<tr>
<th>Sample Interval (feet)</th>
<th>Drilling Rate (min./5 feet)</th>
<th>Breathing Space Measurement (ppm)</th>
<th>Sample Number</th>
<th>(Ground) Elevation</th>
<th>Date</th>
</tr>
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<tbody>
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<td>380-390</td>
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<td></td>
</tr>
</tbody>
</table>

- **Equipment**: Air Rotary/Star 150K
- **Log of Monitoring Well 2-2 (Sheet 7 of 12)**

**Sample Interval (feet)**
- Greenish black (5Gy,2/1) and olive gray (5Y,4/1), low to moderate hardness, weak to moderately strong, moderate to deeply weathered below 390 feet.
- Decreased drilling resistance from 393 to 398 feet.
- Decreased drilling resistance from 399 to 406 feet.
- Olive black (5Y,2/1), olive gray (5Y,4/1) and moderate red (5R,4/6), inclusions of dusky red (10R,3/4) elastic silt below 400 feet.
- Decreased drilling resistance from 407 to 429 feet.
- Olive black (5Y,2/1), dusky red (5R,3/4) and dark gray (5Y,3/4), moderately hard, highly vesicular, trace olivine crystals below 410 feet.
- Olive black (5Y,2/1) and brownish black (5YR,2/1), moderately hard, moderately strong, with inclusions of dark brown elastic silt, vesicular below 420 feet.
- Olive black (5Y,2/1) and dark reddish brown (10R,3/4), trace olivine crystals below 430 feet.
- (Loss of drilling foam circulation from 436 to 440 feet.)
- No olivine crystals at 440 feet.
- Decreased drilling resistance from 447 to 458 feet.
- Brownish black (5YR,2/1), grayish brown (5YR,3/2) and dark reddish brown (10R,3/4), low to moderate hardness, weak to moderately strong, some crystals (zeolites) below 450 feet.

**Harding Lawson Associates**
**Schofield DA03**
**Schofield Barracks**
**Island of Oahu, Hawaii**

**DRAWN**: kar  **JOB NUMBER**: 28339.06.01.12  **APPROVED**:  **FILE**: SDA03  **DATE**: 4/95  **REVISED DATE**: 3•903•01
<table>
<thead>
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<th>Drilling Rate (min./5 feet)</th>
<th>Breathing Space Measurement (ppm)</th>
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<th>Depth (ft)</th>
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<tbody>
<tr>
<td>450-460</td>
<td>13</td>
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<td>47</td>
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<td>460-470</td>
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<td>470-480</td>
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</tr>
</tbody>
</table>

Brownish black (5YR,2/1), dusky brown (5YR,2/2) and moderate reddish brown (10R,4/8), many zeolite crystals below 460 feet.

Increased drilling resistance at 464 feet.

Brownish black (5YR,2/1) and moderately reddish brown (10R,4/8) below 470 feet.

Greenish black (5GY,2/1), hard, moderately strong, little to moderately weathered below 480 feet.

Increased drilling resistance from 485 to 492 feet.

Greenish black (5GY,2/1) and olive black (5Y,2/1), moderately hard, weak to moderately strong, slightly vesicular below 490 feet.

Increased drilling resistance from 497 to 510 feet.

Greenish black (5GY,2/1), moderately hard to hard, moderately strong below 500 feet.

(Driller notes void or cinder zone between 510 and 512 feet.)

Greenish black (5GY,2/1) and dark reddish brown (10R,3/4), low to moderate hardness, moderately strong to weak below 510 feet.

(Loss of drilling foam circulation from 510 to 523 feet.)

Decreased drilling resistance from 518 to 520 feet.
<table>
<thead>
<tr>
<th>Sample Interval (feet)</th>
<th>Drilling Rate (min./3 feet)</th>
<th>Breathing Space Measurement (ppm)</th>
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</tbody>
</table>

**Equipment**

- **Air Rotary/Star 150K**

**Ground Elevation**

- **862 ft**

**Date**

- **12/09/94**

---

- Decreased drilling resistance from 523 to 541 feet.

Greenish black (5GY,2/1) and grayish brown (5YR,3/2), moderately hard, moderately strong, moderately vesicular below 540 feet.

- Decreased drilling resistance from 547 to 550 feet.

Greenish black (5GY,2/1) and moderate reddish brown (10R,4/8), slightly vesicular below 550 feet.

Decreased drilling resistance from 553 to 565 feet.

Greenish black (5GY,2/1) and moderate reddish brown (10R,4/8), low to moderate hardness, weak to moderately strong, trace olivine below 560 feet.

- No olivine crystals at 570 feet.

Decreased drilling resistance from 571 to 575 feet.
<table>
<thead>
<tr>
<th>Sample Interval (feet)</th>
<th>Drilling Rate (min./5 feet)</th>
<th>Breathing Space Measurement (ppm)</th>
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**Equipment**

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<td>Ground Elevation</td>
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<tr>
<td>862 ft</td>
</tr>
<tr>
<td>Date</td>
</tr>
<tr>
<td>12/09/94</td>
</tr>
</tbody>
</table>

**Increased drilling resistance from 584 to 590 feet.**

Water table measured 589.62 feet below ground surface December 12, 1994, 08:23. Olive black (5Y,2/1) and dark reddish brown (10R,3/4), moderately hard to hard, moderately strong, trace olivine crystals, moderately vesicular below 590 feet.

**Increased drilling resistance from 598 to 614 feet.**

Olive black (5Y,2/1) and moderate reddish brown (10R,3/4), hard below 610 feet.

**Increased drilling resistance from 621 to 623 feet.**

Olive black (5Y,2/1) and dark reddish brown (10R,9/4), hard to moderately hard below 620 feet.

**Decreased drilling resistance at 629 feet.**

Olive black (5Y,2/1) and moderate reddish brown (10R,3/4), hard below 610 feet.
<table>
<thead>
<tr>
<th>Depth (ft)</th>
<th>Sample Number</th>
<th>Breathing Space Measurement (ppm)</th>
<th>Drilling Rate (min./5 feet)</th>
<th>Sample Interval (feet)</th>
<th>Equipment</th>
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</tr>
</tbody>
</table>

**Log of Monitoring Well 2-2 (Sheet 11 of 12)**

Dark reddish brown (10R,3/4) and greenish black (5GY,2/1) below 650 feet.

(Loss of drilling foam circulation from 660 feet to bottom of boring at 742 feet.)

Increased drilling resistance from 676 to 681 feet.

Decreased drilling resistance from 686 to 696 feet.
<table>
<thead>
<tr>
<th>Sample Interval (feet)</th>
<th>Drilling Rate (min./5 feet)</th>
<th>Breathing Space Measurement (ppm)</th>
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<th>Depth (ft)</th>
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<tbody>
<tr>
<td>710-720</td>
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<td>730-740</td>
<td>6</td>
<td></td>
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<td>730</td>
</tr>
</tbody>
</table>

(Possible void or cinder zone from 734 to 734.75 feet.)

Decreased drilling resistance at 738 feet.

Total depth = 742 feet.

Water table was measured at 589.62 feet below ground surface, 12/12/94, 08:23.
APPLICATION FOR PERMIT

[Well Construction or Pump Installation]

Instructions: Please print in ink or type and send completed application with attachments to the Commission on Water Resource Management, P.O. Box 821, Honolulu, Hawaii 96809. Application must be accompanied by a non-refundable filing fee of $25.00 payable to the Dept. of Land and Natural Resources. The Commission may not accept incomplete applications. For assistance, call the Regulation Branch at 587-0226.

1. APPLICANT: (circle primary contact (a), (b), or (c))

   (a) WELL OWNER
   FirmName: U.S. Army
   Contact Person: Jon Fukuda
   Address: DPW, Attn: APVG-GWV, U.S. Army Schofield Barracks, Garrison Hawaii 96857-3000
   (b) LANDOWNER
   FirmName: SAME AS WELL OWNER
   Contact Person: Ph:
   Address:
   (c) CONTRACTOR
   FirmName: Roscoe Moss Hawaii, Inc.
   Contact Person: Tracy Runnels
   Address: 92-159A Olai St., Kapolei, Hawaii 96707

2. WELL LOCATION/NAME: Schofield Barracks-Main Post/MW2-2 Island
   Address: Leiheua Avenue and Morris Road, Tax Map Key 7-7-01
   Schofield Barracks, Hawaii 96786
   (Attach a USGS map, scale 1"=2000", and a property tax map showing well location referenced to established property boundaries.)

3. (a) PROPOSED WORK:
   - Drill New Well
   - Modify Existing Well
   - Reconstruct Well
   - Install New Pump
   - Modify Pump
   - Replace Pump
   "Be sure to complete and submit well abandonment report upon completion of work.

(b) WELL TYPE:
   - Dug
   - Bored
   - Driven
   - Drilled
   - Radial
   Is this well a part of a battery of wells? Yes [X] No
   (Briefly describe and fill in the diagram on the back of this form.)

4. PROPOSED PUMP INFORMATION: Rated Pump Capacity: 25 gallons per minute
   Pump Type:
   - Deep Well Turbine
   - Rotary
   - Submersible
   - Rotary-Displacement
   - Centrifugal
   Motor:
   - Propeller
   - Reciprocating
   - Impulse
   - Electric, rated horsepower: 7.5
   If Pump Replacement, Existing Pump Capacity: __________ gallons per minute

5. PROPOSED USE:
   - Municipal (including hotels, stores, etc.)
   - Military
   - Domestic (individual, noncommercial water sys.)
   - Industrial
   - Irrigation (crop)
   - Other (explain)

6. (a) PROPOSED AMOUNT OF WITHDRAWAL:
   - 6 gallons per day
   (b) METHOD OF FLOW MEASUREMENT:
   - Flow-meter
   - Open-pipe
   - Orifice Plate
   - Weir

7. PENDING ACTIONS:
   - CDUA
   - SMA
   - EIS
   - EA
   - NONE
   - Other (explain)
   Completion Date: __________

8. REMARKS, EXPLANATIONS:
   - Well shall be used for monitoring of groundwater quality and for collecting groundwater elevation data.

I understand that approval of this application attaches the following standard conditions: 1) the proposed work is to be completed within two (2) years of the approval date; 2) the contractor shall submit to the Commission a well completion/abandonment report within 30 days after the completion date; 3) monthly water use data shall be submitted to the Commission; 4) such approval shall not constitute a determination of correlating water rights and shall not guarantee the pump capacity or future use up to the permitted pump capacity.

Well Owner: [Signature] [Date]
Landowner: [Signature] [Date]
Contractor: [Signature] [Date]

For Official Use Only:
Date Received: __________
Date Accepted: __________
Field Checked By: [Signature] [Date]
Longitude: __________
Latitude: __________
Aquifer System Name: [Regulation Branch]
State Well No: 967-0290-5878-6

11/28/91 WCP Form
9. PROPOSED WELL SECTION

Elevation at top of casing
864 ft., msl.

Cement Grout: 544 ft.

Bentonite Seal
12 ft.

Rock Packing: 187 ft.

Hole Diameter: 13 in.

Total Depth: 743 ft.

Ground Elevation: 862 ft., msl

Solid Casing:
- Material: Carbon Steel
- Length: 581 ft.
- Diameter: 6 in.
- Wall thickness: 0.28 in.

Casing: ☐ Perforated ☒ Screen (louvered)
- Material: Stainless Steel
- Length: 150 ft.
- Diameter: 6 in.
- Wall thickness: 0.25 in.
- Openings: 2.4 sq. in./A.F.

Open Hole:
- Length: 0 ft.
- Diameter:

*Approximate elevation at time of filing application. Ground elevation above mean sea level (msl) by a surveyor licensed by the State must be submitted at start of construction. Final elevations of well components shall be submitted in the well completion/well abandonment reports.