Re: Fw: Letter to Chairman Aila - Access across state land at Upolu. North Kohala

Kevin E Moore to: Roy Hardy

05/07/2012 04:44 PM

Co: Ryan R Imata, William M Tam, Gordon C Heit, Wesley T Matsunaga

Hi Roy,

I recall the inquiry about the well from a year or two ago, but have not heard anything since. I am copying the Hawaii District Land Office to see if Boteilho or Bowles has contacted the land agents directly.

Kevin

Kevin E. Moore State Lands Assistant Administrator Department of Land and Natural Resources, Land Division 1151 Punchbowl Street, #220 Honolulu, HI 96813 Tel. (808) 587-0426

Roy Hardy

Hi Kevin, You might have seen this already and...

05/07/2012 04:21:09 PM

From:

Roy Hardy/DLNR/StateHiUS

To:

Kevin E Moore/DLNR/StateHiUS@StateHiUS

Cc:

Ryan R Imata/DLNR/StateHiUS@StateHiUS, William M Tam/DLNR/StateHiUS@StateHiUS

Date:

05/07/2012 04:21 PM

Subject:

Fw: Letter to Chairman Aila - Access across state land at Upolu. North Kohala

Hi Kevin,

You might have seen this already and may recall our discussion from a couple years ago on the water license issues for Cloverleaf Dairy Inc. use of this well 7451-02 (TMK (3) 5-5-006:003). Did Mr. Boteilho or Bowles contact land division regarding the use of this well located on state land?

Roy Hardy, P.E. State of Hawaii Commission on Water Resource Management 1151 Punchbowl St. Room 227 Honolulu, HI 96813 Phone: 808-587-0274

Phone: 808-587-0274 Fax: 808-587-0219

Web Page: www.hawaii.gov/dlnr/cwrm

---- Forwarded by Roy Hardy/DLNR/StateHiUS on 05/07/2012 04:16 PM -----

From:

Stephen S Anthony <santhony@usgs.gov>

To: Date: roy.hardy@hawaii.gov 05/07/2012 10:10 AM

Subject:

Fw. Letter to Chairman Aila - Access across state land at Upolu. North Kohala

Hi Roy,

Do you have anything that shows that USGS is owner of this well?

Thanks, Steve

.....

Stephen S. Anthony, Director USGS Pacific Islands Water Science Center 677 Ala Moana Blvd., Suite 415 Honolulu, HI 96813

Tel. 808-587-2406 Fax. 808-587-2401

---- Forwarded by Stephen S Anthony/WRD/USGS/DOI on 05/07/2012 10:09 AM -----

From:

"Stephen Bowles" <iresources@wws-ius.com>

To:

<William.Tam@hawaii.gov>

Cc:

<santhony@usgs.gov>

Date:

05/07/2012 09:46 AM

Subject:

RE: Letter to Chairman Aila - Access across state land at Upolu. North Kohala

Bill, Attached is the letter I sent on behalf of Hawi Ag and Energy Corp. John Richards mentioned this to Bill Aila last week so here it is.

FYI, the land is under lease to Cloverleaf Dairy(Ed Botelho) and we just want a formal letter giving HA & E the right to access, install and operate a pump in to make water available via pipeline across the land. Water access will be made for Cloverleaf at the well head. The well is intended as a back up should the Kohala Ditch have prolonged outage. Steve

From: William.Tam@hawaii.gov [mailto:William.Tam@hawaii.gov]

Sent: Sunday, May 06, 2012 10:32 AM

To: Stephen Bowles

Subject: Letter to Chairman Aila - Access across state land at Upolu. North Kohala

5/6/12 Steve.

Re: Letter to Chairman Aila -

Access across state land at Upolu. North Kohala

Could you PDF letter to me.

Thanks Bill From: "Stephen Bowles" <iresources@wws-ius.com>

To: <William.Tam@hawaii.gov>,
Date: 04/30/2012 05:56 AM

Subject: Letter to Chairman Aila

Bill

I copied you on the request for access across state lands @ Upolu and am hoping you might follow up on status with William Aila.

I know the Leg. has interfered with normal business activities.

Just checking to see if you could help bring it to his attention. Mahalo, Steve [attachment "Aila Combined (5-7-12).pdf" deleted by Kevin E Moore/DLNR/StateHiUS]



Fw: Letter to Chairman Aila - Access across state land at Upolu. North Kohala

Stephen S Anthony to: roy.hardy

05/07/2012 10:10 AM

History:

This message has been replied to and forwarded.

1 attachment



Aila Combined (5-7-12).pdf

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Thanks, Steve

Stephen S. Anthony, Director USGS Pacific Islands Water Science Center 677 Ala Moana Blvd., Suite 415 Honolulu, HI 96813 Tel. 808-587-2406

Tel. 808-587-2406 Fax. 808-587-2401

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From:

"Stephen Bowles" <iresources@wws-ius.com>

To:

<William.Tam@hawaii.gov>

Cc:

<santhony@usgs.gov>

Date:

05/07/2012 09:46 AM

Subject:

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Sent: Sunday, May 06, 2012 10:32 AM

To: Stephen Bowles

Subject: Letter to Chairman Aila - Access across state land at Upolu. North Kohala

5/6/12

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To: Date: <William.Tam@hawaii.gov>,

Subject:

04/30/2012 05:56 AM

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April 16, 2012



P.O. Box 326, Kamuela, HI 96743 Phone (808) 885-5941 Fax (808) 885-7851 e-mail <u>waiono@wws-ius.com</u>

Mr. William Aila Chairman Board of Land and Natural Resources Kalanimoku Building 1151 Punchbowl Street Honolulu, HI 96813

SUBJECT: Access to State Well #7451

Dear Chairman Aila,

We are requesting your agreement to allow access to the Hawi Agricultural and Energy Corporation (HAECo) to furnish, install a pump and operate State Well #7451-02 located on State land TMK 5-5-06-02 (see attached map) as an emergency water supply. The well was drilled as part of USGS groundwater study of the Hawi aquifer in a cooperative agreement between the USGS and the Hawaii DWS.

HAECo and Hualua Land, LLC are developing adjacent lands as part of an agricultural park to include aquaculture and livestock activities which will be normally supplied by the Kohala Ditch. The well is located on State of Hawaii land leased by Cloverleaf Dairy and the function of the well will be to furnish emergency water to the dairy cattle, the aquaculture and other livestock in the event of shutdown of flows from the Kohala Ditch.

HAECo intends to refurbish the well and equip it will back up power with a routine service operation to be sure it is available for emergencies. The County Department of Water Supply and Civil Defense Agency have issued letters of support of this effort. (See attached letters). The USGS has previously allowed access to the well to investigate it and, in recent conversation with Mr. Stephen Anthony, he indicated agreement with a request to remove a lost cable in neighboring observation well #7451-01.

We are requesting a letter authorizing the Hawi Agricultural and Energy Corporation to routinely enter onto the land for the purpose of refurbishing and operating well #7451-02. It will also need a pipeline easement to get from the well to the neighboring land TMK 5-5-07-39. Access to that pipeline will be made available at the well for Clover leaf Dairy usage in the event of failure of the Kohala Ditch

We respectfully request a letter of support of the effort followed by authorization for the land access and appropriate easements.

Please feel free to contact myself, Steve Bowles or John Richards @ (808) 885-5941. WWS is acting as consultants to HAECo, Hualua Land LLC and Michael and Jeanette Saalfeld, Owners of HAECo and Hualua land LLC.

Sincerely

Stephen P. Bowles

CC: William Tam, Michael Saalfeld



DEPARTMENT OF WATER SUPPLY . COUNTY OF HAWAI'I

345 KEKŪANAŌ'A STREET, SUITE 20 • HILO, HAWAI'I 96720 TELEPHONE (808) 961-8050 • FAX (808) 961-8657

April 10, 2012

Mr. Stephen S. Anthony US Geological Survey Pacific Islands Water Science Center 677 Ala Moana Boulevard Honolulu, HI 96813

EMERGENCY PUMP INSTALLATION IN 'UPOLU STATE WELL # 7451-02

The County of Hawai'i (CoH), Department of Water Supply (DWS) has been notified that the Hāwī Agricultural and Energy Corporation (HAEC) wishes to install a pump with generator power in State Well # 7451-02 located in the 'Upolu Area of North Kohala. The intent of HAEC would be to provide emergency water service to nearby agricultural operations when needed. The CoH, DWS is in support of this effort as the operation could provide an immediate supply of water to farm animals and operations in the area during emergencies.

The 2006 Kiholo earthquake increased awareness of the importance of emergency sources of water in the event of a major loss of service from the Kohala Ditch. Additionally, hurricanes or high winds could damage the North Kohala region's electrical power infrastructure, potentially resulting in a loss of water supply from pumped well sources. DWS recognizes the value of having an additional source of water with independent power during an emergency, and we endorse this effort. DWS could still draw upon the well if needed in the future. DWS understands that HAEC has been operating in the area since 1983 and has the ability to properly install a pump and generator system and operate the well under emergency conditions.

Please contact Mr. Lawrence Beck of our Water Resources and Planning branch at (808) 961-8070 ext. 260 or by email at lbeck@hawaiidws.org should you have any questions. Thank you for your consideration.

Sincerely yours,

Quirino Antonio, Jr., P.E. Manager-Chief Engineer

LEB:dfg

William P. Kenoi Mayor

William T. Takaba Managing Director

April 12, 2012



Benedict L. Fuata
Civil Defense Administrator

County of Hawaii

CIVIL DEFENSE AGENCY

920 Ululani Street • Hilo, Hawai'i 96720-3958 (808) 935-0031 • Fax (808) 935-6460

Stephen S. Anthony Director U.S. Geological Survey Pacific Islands Water Science Center 677 Ala Moana Boulevard Honolulu, Hawai'i 96813

Dear Mr. Anthony,

SUBJECT: Emergency Pump Installation in State Well #7451-02

My office has been informed by the Hawi Agricultural and Energy Corporation ("HAEC") of their intentions to install a pump and power system in well #7451-02. HAEC's initiative is predicated on their intent to provide emergency service to nearby agricultural operations as an alternative in the event of a serious drought situation and/or emergency due to a water shortage impact by a breach in the Kohala ditch system. The Hawai'i County Civil Defense Agency is in general support of all efforts to provide the community an immediate supply of much needed water to farm animals and operations in the area during emergency situations as a result of water shortages.

The impact of the 2006 Kiholo earthquake made us all realize of the importance of having an emergency source of water supply. We want to avoid having to experience another major crisis brought on from the impact to the Kohala Ditch, which resulted in loss of water services, and availability and revenues. We also realize that a significant loss of electrical power due to natural disasters from hurricanes and/or high winds can cause significant damages which could also result in a loss of water supply. Therefore, we fully support efforts such as HAEC's initiative because of the value that they present in providing the community in the Hawi/North Kohala area an independent source of water for their agriculture, animals and fish during emergency situations and water shortages.

The Hawi Agricultural and Energy Corporation have operated in this area since 1983 and we are hopeful that their abilities to safely install and effectively operate a pump and well unit will meet with the community's emergency needs and requirements.

The County of Hawai'i Civil Defense Agency endorses this initiative and looks forward to using this asset in the future during emergency operations.

Sincerely,

Civil Defense Administrator

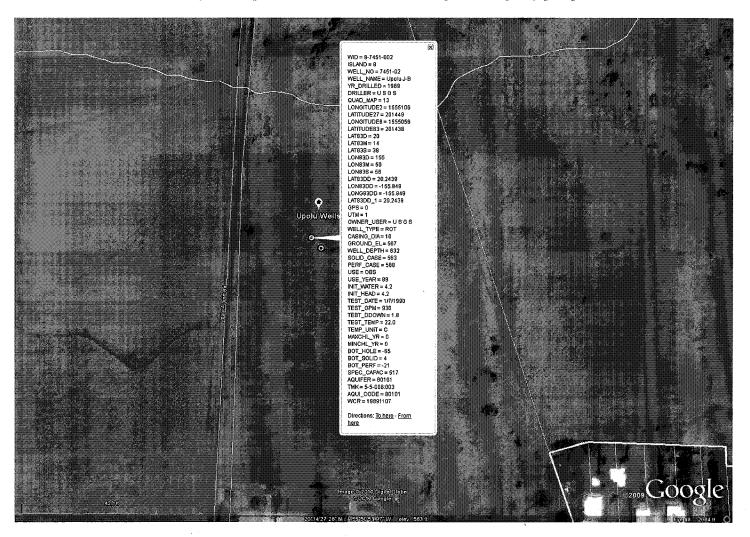




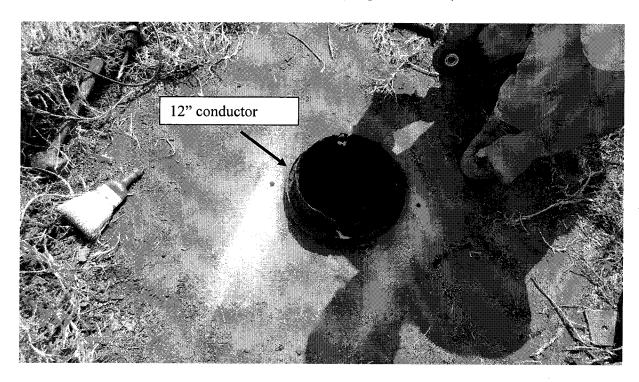
P.O. Box 326, Kamuela, HI 96743 Phone (808) 885-5941 Fax (808) 885-7851 e-mail <u>waiono@wws-ius.com</u>

Investigation of USGS Upolu Well # 8-7451-02 April 2010

At the request of Hoe'a Agricultural Park, Waimea Water Services, Inc., investigated the condition of the USGS Test well # 7451-02. The purpose of the investigation was to determine the condition of the well casing for the potential future use of installing an emergency pump



An initial investigation indicated that the well riser pipe was rusted through allowing direct access of runoff into the well. Accordingly a 2' long 12 "diameter riser was welded to the 12" conductor pipe on the outside of the 10" diameter well casing (see photos below).





Following the addition of new riser, a television traverse was made of the well. The casing shows considerable corrosion bubbles due to the humidity of the many years of non-use. There was no evidence of any obstructions or severe damage.

A request was made to the USGS regarding external grouting of the annular space outside the 10"casing and there has been no reply to date. Regardless, it is recommended that if a pump is placed in the well that the diameters not exceed 6". If a submersible or line shaft pump is installed, the outside diameters should not exceed more than of 6" nominal to allow for installation of pump cables and /or tubing required for water level measuring devices as required by the Commission on Water Resource Management well and pump standards.

As noted in the statistical description of the well, the well has been pump tested at 900 gpm with a 1.8'. A water sample was collected on April 21, 2010. The total chlorides were measured as 40 mg/L and a total dissolved solids of 118 mg/L. This is very fresh water and can be considered as potable or drinking water quality.

The pump test by the USGS indicates that a capacity of 1 MGD can be safely produced. The only concern might be the integrity of the 10" casing if it has not been grouted. This is yet to be determined.

If the well casing is suspect, a casing liner of 8" would be needed which may cause some restriction as to the size of pump which can be installed.

Because there is potential for use of this well to supply the Hoe'a Ag Park, a request was made to the USGS Staff. The reply to that request follows:

From: Stephen S Anthony [mailto:santhony@usgs.gov]

Sent: Monday, March 29, 2010 12:00 PM

To: Stephen Bowles **Cc:** Gordon W Tribble **Subject:** Re: Upolu well

Hi Steve,

Thanks for securing the wells. Hopefully there is a reference mark near the well so that we can recover the water level measuring point elevation now that you have added a riser to the well casing. We can explore transferring ownership of the main well to the State for Ag use (given that it is on State land) provided the County Water Department agrees and the nearby observation well is refurbished (cable removed) to allow water level measurements. We need at least one of the wells for making water level measurements. Finally, I appreciate your intentions but without a signed agreement in place you should not be accessing our wells. I will be on the mainland until April 5th. In the meantime, please feel free to contract Gordon if you wish to pursue this further.

Thanks, Steve Stephen S. Anthony Acting Director 677 Ala Moana Blvd., Suite 415 Honolulu, HI 96813 Tel. 808-587-2406

Fax. 808-587-2401

USGS Pacific Islands Water Science Center

From: Stephen Bowles

Sent: Tuesday, March 30, 2010 5:56 AM

To: 'Stephen S Anthony' Subject: RE: Upolu well

Steve, I thought we signed the agreement but I will look into it. Steve Bowles

From: Stephen S Anthony [mailto:santhony@usgs.gov]

Sent: Monday, March 29, 2010 12:00 PM

To: Stephen Bowles **Cc:** Gordon W Tribble **Subject:** Re: Upolu well

Hi Steve,

Thanks for securing the wells. Hopefully there is a reference mark near the well so that we can recover the water level measuring point elevation now that you have added a riser to the well casing. We can explore transferring ownership of the main well to the State for Ag use (given that it is on State land) provided the County Water Department agrees and the nearby observation well is refurbished (cable removed) to allow water level measurements. We need at least one of the wells for making water level measurements. Finally, I appreciate your intentions but without a signed agreement in place you should not be accessing our wells. I will be on the mainland until April 5th. In the meantime, please feel free to contract Gordon if you wish to pursue this further.

Thanks, Steve

Stephen S. Anthony Acting Director USGS Pacific Islands Water Science Center 677 Ala Moana Blvd., Suite 415 Honolulu, HI 96813 Tel. 808-587-2406 Fax. 808-587-2401

From:

"Stephen Bowles" <iresources@wws-ius.com>

To:

"Stephen S Anthony" <santhony@usgs.gov>

Date:

03/24/2010 03:13 PM

Subject:

Upolu well

Steve, We did the TV (no copy yet). Note that we found the main well with pukas (photo 2) through the casing and we welded a 12 " riser to the 12" conductor and put a ¼ " plate cover on it (photo 3). Photo 4 shows the puka through the 8" observation well cover. We closed the main well with the USGS lock. If we had permission for use in the ag park, we would want to insert an 8 inch liner to protect the long term integrity of the well. Steve [attachment "Upolu wells 002.jpg" deleted by Stephen S Anthony/WRD/USGS/DOI] [attachment "Upolu wells 003.jpg" deleted by Stephen S Anthony/WRD/USGS/DOI] [attachment "Upolu wells 004.jpg" deleted by Stephen S Anthony/WRD/USGS/DOI]



Stephen S Anthony <santhony@usgs.gov> 03/08/2010 09:24 AM

To "Roy Hardy" <Roy.Hardy@hawaii.gov>

CC

bcc

Subject Re: Fw: Agreement for access to USGS Well 8-7451-02 (Upolu Point, Hawaii)

No.

From: Roy. Hardy

Sent: 03/08/2010 07:21 AM HST

To: Stephen Anthony

Subject: Re: Fw: Agreement for access to USGS Well 8-7451-02 (Upolu Point, Hawaii)

Hi Steve, so did Steve submit a signed agreement with you folks yet? -Roy

Stephen S Anthony <santhony@usgs.gov>

To Roy.Hardy@hawaii.gov

03/05/2010 11:14 AM

Subject Fw: Agreement for access to USGS Well 8-7451-02 (Upolu Point, Hawaii)

Hi Roy, Below is most recent communication from Steve Bowles regarding subject well... Steve

---- Forwarded by Stephen S Anthony/WRD/USGS/DOI on 03/05/2010 11:07 AM -----

From:

Stephen S Anthony/WRD/USGS/DOI

To:

"Stephen Bowles" <iresources@wws-ius.com>

Date:

02/16/2010 02:52 PM

Subject:

Re: FW: Agreement for access to USGS Well 8-7451-02 (Upolu Point, Hawaii)

Attached is from our well files. Hope it helps...Steve

From:

"Stephen Bowles" <iresources@wws-ius.com>

To:

"Stephen S Anthony" <santhony@usgs.gov>

Date:

02/16/2010 01:54 PM

Subject:

FW: Agreement for access to USGS Well 8-7451-02 (Upolu Point, Hawaii)

Steve, Just an up date and a request. We are still waiting for \$ for the TV but I expect is to happen. Also, We have pipe donate so we can distribute memergency water once there is a pump. Will keep you informed. My request is to see if in the files there is any field or other map or photos which might show the location of the Alaalae Test hole # 7 in Kohala (#7549-02). I worked on it for the USGS in 1965 and there maybe some info on it in the USGS files. I have exhausted CWRM but can't find it. Mahalo, Steve Bowles

From: Stephen S Anthony [mailto:santhony@usgs.gov]

Sent: Wednesday, December 16, 2009 4:15 PM

To: Stephen Bowles

Subject: RE: Agreement for access to USGS Well 8-7451-02 (Upolu Point, Hawaii)

Thanks for the update!

Happy Holidays....Steve

From: "Stephen Bowles" <iresources@wws-ius.com>

To: "Stephen S Anthony" <santhony@usgs.gov>

"Marc Kinoshita" <mk@hoeaagpark.com>, <EdBoCLD@NetZero.com>, "Marc Kinoshita" <mk@hoeaagpark.com>, "Gary

Greenly" <GGreenly@scd.hawaii.gov>, <roy.hardy@hawaii.gov>

Date: 12/16/2009 03:41 PM

Subje RE: Agreement for access to USGS Well 8-7451-02 (Upolu Point, Hawaii)

ct

Steve, Sorry for the delay. We will follow up with the details. I had hoped we would proceed earlier but we are waiting for Hoe'a decisions. Have a Merry Christmas and Mahalo for all your help. Steve Bowles

From: Stephen S Anthony [mailto:santhony@usgs.gov]

Sent: Monday, December 07, 2009 11:42 AM

To: Stephen Bowles

Subject: Fw: Agreement for access to USGS Well 8-7451-02 (Upolu Point, Hawaii)

Hi Steve,

Just checking to make sure that you received the message below sent on Saturday. We need to have a signed agreement in place to allow you access to our well.

Thanks, Steve

ŧ:

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Frowarded by Stephen S Anthony/WRD/USGS/DOI on 12/07/2009 11:31 AM -----

Stephen S Anthony/WRD/USGS/DOI

irresources@wws-ius.com

C <GGreenly@scd.hawaii.gov>, "Jeannette Saalfeld " <js@saalfeldholding.com>, "Ken Kawahara (E-mail)" c <Ken.C.Kawahara@hawaii.gov>, <mk@hoeaagpark.com>, <MPavao@hawaiidws.org>, "Stephen S Anthony" c <santhony@usgs.gov>, "Michael V Shulters" c shulters@usgs.gov>, "Jeffrey A Keay" c jkeay@usgs.gov>, "William L Cunningham" c c wcunning@usgs.gov>, Gordon W Tribble/WRD/USGS/DOI@USGS, Roy.Hardy@hawaii.gov

D 12/05/2009 01:09 PM

e:

Agreement for access to USGS Well 8-7451-02 (Upolu Point, Hawaii)

bj
ec
```

Dear Mr. Bowles,

Attached for your review is a draft agreement in response to your emergency request to access and temporarily install a pump in the USGS well (State Well No. 08-7451-02) on the road to Upolu Point, Island of Hawaii. Please make any necessary changes in the attached word document and return me. If you are in agreement, print, sign, and return to me via email or fax. I will be available on Monday morning to sign, scan and email an executed agreement back to you so that you can be on your way to help those in need of water during this emergency. I'm glad that we are able to grant you access to this well. Thanks to Gordon for helping to facilitate this request.

Cheers, Steve

Stephen S. Anthony Acting Director USGS Pacific Islands Water Science Center 677 Ala Moana Blvd., Suite 415 Honolulu, HI 96813 Tel. 808-587-2406 Fax. 808-587-2401

DRAFT

The U.S. Geological Survey (USGS) agrees that Waimea Water Services, Inc. may access the USGS well (State Well No. 08-7451-02) on the road to Upolu Point, Island of Hawaii, for the purposes of installing a pump, measuring water level, collecting water samples, and/or making borehole measurements and a video log. This agreement to temporarily allow the installation a pump for water supply is based on the ongoing Disaster Declaration following the earthquake of October 15, 2007, which heavily damaged water infrastructure. Although short-term repairs to the water infrastructure were made, floodwaters from recent rain have again damaged the water intakes and resulted in a severe water shortage in the area.

This agreement is contingent on the following conditions:

- 1. Waimea Water Services, Inc. will be responsible for obtaining Right-of-entry from property owners, and all other permits that may be required.
- 2. Waimea Water Services, Inc. will accept responsibility for any damages to the well and make appropriate repairs.
- 3. A copy of all data and video recordings will be provided at no cost to the USGS.
- 4. USGS assumes no liability for any loss that may result from this work.

This agreement shall become effective when fully executed and shall continue in force for one year unless terminated by either the USGS or Waimea Water Services, Inc. upon 60 days written notice to the other party.

[attachment "Binder1.pdf" deleted by Roy Hardy/DLNR/StateHiUS]

FROM:	ROY		DATE:	JAN 20	2010	SUSPENS	E DATE:		
CH DA EN FU. HAI HO. ICE 3 IMA	ENG, C. ONG, R. NBARA, S. GLAND, D. JII, N. RDY, R. AGBIN, S. , C. , TA, R.	INIT.	OHYE OSHI UYEN YODA	RA, J. MURA. I. E, L. RO, K.	INIT:	FOR 2 3		PLE	See Me Review & Comment Take Action Type Draft Type Final File wee Adder. Xerox copies
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LINDA LINGLE GOVERNOR OF HAWAII





STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621 HONOLULU, HAWAII 96809

March 10, 2010

LAURA H. THIELEN
CHARPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

RUSSELL Y. TSUJI FIRST DEPUTY

KEN C. KAWAHARA DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION

Mr. Edward Boteilho P.O. Box 190 Hawi, HI 96719

Dear Mr. Boteilho:

Activating USGS Observation Wells on TMK 5-5-006:003 for Cloverleaf Dairy, Inc.

Thank you for your January 14, 2010 letter requesting our advice on how to proceed with using one of two U.S. Geological Survey (USGS) observation wells as a backup water supply for your agricultural irrigation needs. We appreciate the concern as these wells reside on state land.

I understand that during early December 2009, your normal source of water, the Kohala Ditch, suffered damage at its Honokane intake, which triggered a request to the USGS to use one of their observation wells on an emergency basis to serve as an alternative backup source to the ditch. The USGS and Waimea Water Services, Inc. (WWSI) have been working on an agreement to allow access to the USGS Upolu J-B Well (State well no. 8-7451-02) for purposes of installing a pump, measuring water levels, collecting water samples, and/or making borehole measurements and video logging. However, to date there is no formal agreement.

Staff from the department's Commission on Water Resource Management (Commission) had followed up with WWSI to inform them that a pump installation permit and possibly a water lease agreement, through our Land Division, would be part of implementing this solution. We understand that project may be funded, in part, by Civil Defense as the continuing Kohala Ditch problems can be linked to the October 15, 2006 Kiholo earthquake disaster and subsequent emergency proclamation from the governor. Though repairs to the existing ditch may be properly linked to the governor's emergency proclamation, we do not believe the new backup well also qualifies under the proclamation; hence, the pump installation permits and water leases from our department need to be processed. Additionally, an environmental assessment may be necessary as part of the water lease.

WWSI has informed us that they are planning to have the pumps in place by the spring, which is soon. We also understand that Hoea Agricultural Park, a privately owned non-profit organization, will be operating the well. We highly recommend that these entities work with us on meeting their legal obligations towards using the public trust ground water resource from this well.

Please feel free to call the Commission staff at 587-0225 regarding pump permitting questions and the Land Division staff at 974-6203 regarding water lease questions.

Sincerely.

LAURA H. THIELEN Chairperson

c: Land Division

{In Archive} Re: Draft Cloverleaf Dairy letter response.

Kevin E Moore to: Roy Hardy

Gc: Ryan R Imata

03/08/2010 02:49 PM

History:

This message has been replied to.

Archive:

This message is being viewed in an archive.

Hi Roy,

The letter looks good. You can name me as the contact, 974-6203. Don't know whether you want to mention that the proposed action might also trigger environmental assessment requirements. Minor possible typo at the end of the third paragraph: "the pump installation permits and water leases from our department <u>are</u> need to be processed." Delete "are"? Thanks.

Kevin

Kevin E. Moore
Hawaii District Land Agent
Department of Land and Natural Resources, Land Division
75 Aupuni Street, Room 204
Hilo, HI 96720
Tel. (808) 974-6203
Roy Hardy/DLNR/StateHiUS

Roy Hardy/DLNR/StateHiUS

03/08/2010 09:58 AM

To Kevin E Moore/DLNR/StateHiUS@StateHiUS

cc Ryan R Imata/DLNR/StateHiUS@StateHiUS

Subject Draft Cloverleaf Dairy letter response.

Hi Kevin.

Received this request [attachment "Cloverleaf Dairy.PDF" deleted by Kevin E Moore/DLNR/StateHiUS] from Ed Boteilho for DLNR help with moving the activation of this well forward from the chair's office. I've also attached the last email string when we discussed this for your info.

Had been holding off responding until a formal agreement had been reached between USGS and Waimea Water Services/Hoea Ag Park, but confirmed with USGS that nothing has been signed to date. Also, Steve Bowles said he met with Mr. Boteilho last week and they were still discussing other issues regarding the well. At this point, seems like we should respond for DLNR's perspective and I've attached a draft response[attachment "Boteilho and USGS 7451-02.doc" deleted by Kevin E Moore/DLNR/StateHiUS], which includes the water lease issue administered by your office. Let me know if this is ok with you and who should be the contact for your office. Thanks.

-Roy

---- Forwarded by Roy Hardy/DLNR/StateHiUS on 03/08/2010 09:40 AM ----



Roy Hardy/DLNR/StateHiUS

12/07/2009 10:50 AM

To Edwin T Sakoda/DLNR/StateHiUS@StateHiUS, Ken C Kawahara/DLNR/StateHiUS@StateHiUS, Kevin E Moore/DLNR/StateHiUS@StateHiUS, Ryan R Imata/DLNR/StateHiUS@StateHiUS



Subject Re: Fw: Agreement for access to USGS Well 8-7451-02 (Upolu Point, Hawaii)

fyi2-

Steve Bowles summarized situation as follows:

- Recent heavy rains caused earthquake land slide debris (boulders) flow damage to Honokane ditch intake. Should be able to repair the intake within a week.
- Bowles state that Ed Texiera of Civil Defense is willing to help in any way as he too believes the situation is linked to the earthquake.
- Emergency Proclamation has been extended.
- The well is for 'backup' purposes only as they anticipate more of these Kohala Ditch failures in the
 future as these boulders are going to be a long-term problem everytime there is a big rain like they
 just had last week.
- Hoea Agricultural Park (privately owned nonprofit organization) is going to be operating the well.
- Thinks around spring time the pump can be operational.

I informed Steve about the pump permit and possible water licenses and he said he is aware of the paper work but didn't want to start until he's got more assurances that this backup solution is actually going to happen. He will keep us in the loop on updates.

Roy Hardy/DLNR/StateHiUS



Roy Hardy/DLNR/StateHiUS

12/07/2009 09:10 AM

- To Ryan R Imata/DLNR/StateHiUS, Ken C Kawahara/DLNR/StateHiUS, Edwin T Sakoda/DLNR/StateHiUS
- cc Kevin E Moore/DLNR/StateHiUS@StateHiUS

Subject Fw: Agreement for access to USGS Well 8-7451-02 (Upolu Point, Hawaii)

fyi. Things continue to move forward to address the Kohala ditch intake failure emergency. Steve Bowles has not returned my call yet on this. I let land division know and their big island agent, Kevin Moore, wasn't aware of the emergency situation & well solution but is familiar with the area, issues with the Kohala Ditch, and agrees that a water license would be needed at some point. However, the dairy lessee where the well is located is a business and Kevin said this complicates things since the 'public auction' part of the license would kick in. Tying this to gov's earthquake emergency sounds like a bit of a stretch, and we might have another Pomeroy like after-the-fact pump installation violation.

----- Forwarded by Roy Hardy/DLNR/StateHiUS on 12/07/2009 08:57 AM -----



Stephen S Anthony <santhony@usgs.gov>

12/05/2009 01:11 PM

- To iresources@wws-ius.com

Subject Agreement for access to USGS Well 8-7451-02 (Upolu

Point, Hawaii)



Dear Mr. Bowles.

Attached for your review is a draft agreement in response to your emergency request to access and temporarily install a pump in the USGS well (State Well No. 08-7451-02) on the road to Upolu Point, Island of Hawaii. Please make any necessary changes in the attached word document and return me. If you are in agreement, print, sign, and return to me via email or fax. I will be available on Monday morning to sign, scan and email an executed agreement back to you so that you can be on your way to help those in need of water during this emergency. I'm glad that we are able to grant you access to this well. Thanks to Gordon for helping to facilitate this request.

Cheers, Steve

Stephen S. Anthony Acting Director USGS Pacific Islands Water Science Center 677 Ala Moana Blvd., Suite 415 Honolulu, HI 96813 Tel. 808-587-2406 Fax. 808-587-2401

DRAFT

The U.S. Geological Survey (USGS) agrees that Waimea Water Services, Inc. may access the USGS well (State Well No. 08-7451-02) on the road to Upolu Point, Island of Hawaii, for the purposes of installing a pump, measuring water level, collecting water samples, and/or making borehole measurements and a video log. This agreement to temporarily allow the installation a pump for water supply is based on the ongoing Disaster Declaration following the earthquake of October 15, 2007, which heavily damaged water infrastructure. Although short-term repairs to the water infrastructure were made, floodwaters from recent rain have again damaged the water intakes and resulted in a severe water shortage in the area.

This agreement is contingent on the following conditions:

- 1. Waimea Water Services, Inc. will be responsible for obtaining Right-of-entry from property owners, and all other permits that may be required.
- 2. Waimea Water Services, Inc. will accept responsibility for any damages to the well and make appropriate repairs.
- 3. A copy of all data and video recordings will be provided at no cost to the USGS.
- 4. USGS assumes no liability for any loss that may result from this work.

This agreement shall become effective when fully executed and shall continue in force for one year unless terminated by either the USGS or Waimea Water Services, Inc. upon 60 days written notice to the other party.

[attachment "Agreement_bowles_08-7451-02.docx" deleted by Roy

DLNR - CHAIRPERSON'S OFFICE DEPARTMENT ROUTESLIP

DATE: 1/19/10 TO: 1/2/20	TPY .	TRACK (if circled) ACTION APPROVED BY: SEE SEE LT RT KEE SEE
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CHAIRPERSON	_ DOFAW	Draft reply for my signature* \$\frac{1}{2} \frac{1}{2} \frac{1}{2}
DEPUTY DIRECTOR X	_ ENG.	Direct reply - copy to me*
DEPUTY WATER	FISCAL	Investigate - reply to me* 🙁 🖫
ATG/LAND TRANS.	_ KIRC	Update/comment - reply to He* = 20
BOC . X	LAND	For your information/files
CWRM	_ OCCL	Distribute to office staff
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Date: 1/14/10

BECEIVED

Ms. Laura H. Thielen Chair, Dept. of Land and Natural Resources Kalanimoku Building 1151 Punchbowl St. Honolulu, HI 96813 10 JAN 19 ATT :51

DEPT OF LAND NATURAL RESOURCES STATE OF HAWAII

Aloha Director Thielen:

Ref.: Activating the well at Cloverleaf Dairy (Boteilho Hawaii Enterprises, Inc. for the purpose of irrigation, north Kohala, TMK (3) 5-5-6-2,3,4,15.

For more than 26 years, our dairy operation, Cloverleaf Dairy Inc. (a division of Boteilho Hawaii Enterprises, Inc.) have been operating at the site. We have consistently produced above our quota and supplied fresh local milk to Big Island residents.

The earthquake of October 2006 cut off our water supply. As we await for the repairs to the Kohala ditch, we toiled hard to make it possible to remain farming. We had to dig deep into our operations and it helped us realized that we need to have a back water supply for the farm. Without water, we cannot operate. Without water, all the feed we need in our dairy has to be imported. The shipping is not always reliable and the costs keep going up. (Only today Matson Inc. is raising fuel charges by another 27%). Although the water flow from the Kohala ditch has resumed, we had experienced several set backs which interrupted the water supply.

Hence, we are requesting your cooperation to allow us to proceed to evaluate USGS Well 8-7451-02. Water drawn form this well will be used for irrigation of agriculture activities; especially in times when water supply is interrupted.

Please advise us as to how best we can begin the exploration of the water supply.

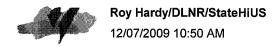
Thank you,

Elward Boteilho

address Po Box 190 Howi, Hi. 96719

tel. 808 889-6838

e mail. edbocld e net zero. com



To Edwin T Sakoda/DLNR/StateHiUS@StateHiUS, Ken C Kawahara/DLNR/StateHiUS@StateHiUS, Kevin E Moore/DLNR/StateHiUS@StateHiUS, Ryan R

CC

bcc

Subject Re: Fw: Agreement for access to USGS Well 8-7451-02 (Upolu Point, Hawaii)

	Who	Date	Time	Subject
딜	Ryan R Imata	夕 12/07/2009	09:10 AM 🛭 🕖	Fw: Agreement for access to USGS Well 8-745
	Edwin T Sakoda	12/07/2009	10:50 AM	Re: Fw: Agreement for access to USGS V

fyi2-

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Roy Hardy/DLNR/StateHiUS



Roy Hardy/DLNR/StateHiUS

12/07/2009 09:10 AM

- To Ryan R Imata/DLNR/StateHiUS, Ken C Kawahara/DLNR/StateHiUS, Edwin T Sakoda/DLNR/StateHiUS
- cc Kevin E Moore/DLNR/StateHiUS@StateHiUS

Subject Fw: Agreement for access to USGS Well 8-7451-02 (Upolu Point, Hawaii)

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and we might have another Pomeroy like after-the-fact pump installation violation. ---- Forwarded by Roy Hardy/DLNR/StateHiUS on 12/07/2009 08:57 AM -----



Stephen S Anthony <santhony@usgs.gov> 12/05/2009 01:11 PM

To iresources@wws-ius.com

cc <GGreenly@scd.hawaii.gov>, "Jeannette Saalfeld "
<js@saalfeldholding.com>, "Ken Kawahara (E-mail)"
<Ken.C.Kawahara@hawaii.gov>, <mk@hoeaagpark.com>,
<MPavao@hawaiidws.org>, "Stephen S Anthony"
<santhony@usgs.gov>, "Michael V Shulters"
<shulters@usgs.gov>, "Jeffrey A Keay" <jkeay@usgs.gov>,
"William L Cunningham" <wcunning@usgs.gov>, Gordon W
Tribble <gtribble@usgs.gov>, Roy.Hardy@hawaii.gov
Subject Agreement for access to USGS Well 8-7451-02 (Upolu

Point, Hawaii)

Dear Mr. Bowles,

Attached for your review is a draft agreement in response to your emergency request to access and temporarily install a pump in the USGS well (State Well No. 08-7451-02) on the road to Upolu Point, Island of Hawaii. Please make any necessary changes in the attached word document and return me. If you are in agreement, print, sign, and return to me via email or fax. I will be available on Monday morning to sign, scan and email an executed agreement back to you so that you can be on your way to help those in need of water during this emergency. I'm glad that we are able to grant you access to this well. Thanks to Gordon for helping to facilitate this request.

Cheers, Steve

Stephen S. Anthony Acting Director USGS Pacific Islands Water Science Center 677 Ala Moana Blvd., Suite 415 Honolulu, HI 96813 Tel. 808-587-2406 Fax. 808-587-2401

DRAFT

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[attachment "Agreement_bowles_08-7451-02.docx" deleted by Roy Hardy/DLNR/StateHiUS]

Agreement for access to U.S. Geological Survey well

The U.S. Geological Survey (USGS) agrees that Waimea Water Services, Inc. may access the USGS well (State Well No. 08-7451-02) on the road to Upolu Point, Island of Hawaii, for the purposes of installing a pump, measuring water level, collecting water samples, and/or making borehole measurements and a video log. This agreement to temporarily allow the installation a pump for water supply is based on the ongoing Disaster Declaration following the earthquake of October 15, 2007, which heavily damaged water infrastructure. Although short-term repairs to the water infrastructure were made, floodwaters from recent rain have again damaged the water intakes and resulted in a severe water shortage in the area.

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U.S. Geological Survey Pacific Islands Water Science Center	Waimea Water Services, Inc				
Stephen S. Anthony Acting Director Date	Stephen Bowles President	Date			



Roy Hardy/DLNR/StateHiUS

12/04/2009 10:00 AM

To Kevin E Moore/DLNR/StateHiUS@StateHiUS

CC

bcc

Subject Fw: USGS WEII next ro Upolu Road

Who	Date	Time	Subject
Kevin E Moore	12/04/2009	10:00 AM	Fw: USGS WEll next ro Upolu Road
	Section 1		

Hi Kevin,

This is the email string I discussed with you so far. Will keep you in the loop on our side and please let me know if you find out anything too. Thanks.

---- Forwarded by Roy Hardy/DLNR/StateHiUS on 12/04/2009 09:56 AM -----



Roy Hardy/DLNR/StateHiUS

12/04/2009 09:41 AM

- To Ken C Kawahara/DLNR/StateHiUS, Ryan R Imata/DLNR/StateHiUS
- CC Edwin T Sakoda/DLNR/StateHiUS@StateHiUS, Lenore N Ohye/DLNR/StateHiUS@StateHiUS

Subject Re: Fw: USGS WEll next ro Upolu Road

Sounds like they are talking about 7451-01&02 Ulupo J-A and J-B wells for USGS. These would be ATF permits from us as there are no provisions in the code or rules for emergency well construction or pump installation and there is no emergency declaration from the Gov on this. Also, land division would need to know about to deal with water license issues with Botelho Hawaii Enterprises. Will follow-up with LD and Steve on this and any emergency work for the Honokane stream diversion intake. Ken C Kawahara/DLNR/StateHiUS

Ken C Kawahara/DLNR/StateHiUS

12/04/2009 09:05 AM

To Roy Hardy/DLNR/StateHiUS@StateHiUS, Edwin T Sakoda/DLNR/StateHiUS@StateHiUS, Lenore N Ohye/DLNR/StateHiUS@StateHiUS

CC

Subject Fw: USGS WEII next ro Upolu Road

FYI

---- Forwarded by Ken C Kawahara/DLNR/StateHiUS on 12/04/2009 09:03 AM -----



Gordon W Tribble <gtribble@usgs.gov> 12/04/2009 09:03 AM

- To "Stephen Bowles" <iresources@wws-ius.com>
- cc GGreenly@scd.hawaii.gov, "Jeannette Saalfeld "



<js@saalfeldholding.com>, "Ken Kawahara (E-mail)"
<Ken.C.Kawahara@hawaii.gov>, mk@hoeaagpark.com,
MPavao@hawaiidws.org, "Stephen S Anthony"
<santhony@usgs.gov>, Michael V Shulters
<shulters@usgs.gov>, Jeffrey A Keay <jkeay@usgs.gov>,
William L Cunningham <wcunning@usgs.gov>

Subject RE: USGS WEll next ro Upolu Road

Steve,

Sounds like the fastest way to proceed is with an emergency pump installation. It will take a bit of work (and time). I have a call into our HQ because I think they hold the authority to approve those (but that may have changed). Also, the request for an emergency pump installation will require some sort of official declaration of a disaster (as was done with the drought many years ago, and more recently after the earthquake). Steve Anthony and I will check to see if this can be done at the County level or needs a higher-level declaration.

Turning the well over the landowner also requires higher approval, and make also take a while for the paperwork to get set with the DLNR-Lessee end (I'm guessing the State AG office will have to review). I'd also want to hear Milton's view on this. We can consider this because we have two wells at this site, and the second well will remain USGS property for use as a monitoring well.

If you want to access the well for a measurement or videolog, let me know. That is something we can approve at the local level but will also need a paper trail. The request should specify well name, number, dates, purpose of access and agreement to provide a copy of all collected information and be responsible for any damage to the well ... Gordon

Gordon Tribble
Acting Director, USGS Pacific Island Ecosystems Research Center
808-587-2405

Fro "Stephen Bowles" <iresources@wws-ius.com>

To: "Gordon W Tribble" <gtribble@usgs.gov>

Cc: <GGreenly@scd.hawaii.gov>, "Ken Kawahara (E-mail)" <Ken.C.Kawahara@hawaii.gov>, <MPavao@hawaiidws.org>, "Stephen S Anthony" <santhony@usgs.gov>, <mk@hoeaagpark.com>, "Jeannette Saalfeld " <js@saalfeldholding.com>

Dat 12/04/2009 06:11 AM

e:

m:

Subj RE: USGS WEll next ro Upolu Road

ect:

Gordon, This is serious and appears to be an ongoing problem as a result of severe intake damage in Honokane. I can be reached on my cell @ (808) 937-2826. I've included the Hoe'a Ag Park folks in the reply so that everyone is informed. I am working on a possible pump solution but need to keep the dialog

going. The well sits on DLNR land leased to Ed Boteilho (Cloverleaf Dairy). May be Steve could give me a call this AM to keep the issue moving forward. Thanks for the supportive and prompt assistance. Steve Bowles

From: Gordon W Tribble [mailto:gtribble@usgs.gov]

Sent: Thursday, December 03, 2009 7:21 PM

To: Stephen Bowles

Cc: GGreenly@scd.hawaii.gov; Ken Kawahara (E-mail); MPavao@hawaiidws.org; Stephen S Anthony

Subject: Re: USGS WEll next ro Upolu Road

Hi Steve,

I'm out of the water office for a while and Steve Anthony is in charge there for now. We'll look into this tomorrow and get back to you pretty soon. My recollection is that we have two wells at that site. The smaller diameter well needs to remain within USGS as an observation well. The larger diameter (8 or 10 inches) can be turned over to the landowner if (to cut through a lot of stuff) it makes sense. The other option is that we can permit a pump installation if there is an "emergency declaration" but that's a temporary measure.

In any event, it seems your immediate request is to run a videolog of the well. This is also Steve Anthony's kuleana, and (again) we'll get back to you soon but this should not be a problem. We'll want a copy of the video and some other manini/sensible things.

Raining steady in S. Oahu ... Gordon

Gordon Tribble

Acting Director, USGS Pacific Island Ecosystems Research Center 808-587-2405

From: "Stephen Bowles" <iresources@wws-ius.com>

To: "Gordon W Tribble" <gtribble@usgs.gov>

Cc: <GGreenly@scd.hawaii.gov>, <MPavao@hawaiidws.org>, "Ken Kawahara (E-mail)" <Ken.C.Kawahara@hawaii.gov>

Date: 12/03/2009 04:44 PM

Subject: USGS WEII next ro Upolu Road

Gordon, We just suffered major damage to the intake of the KOhala Ditch in Honokane again. We feel this will be an on going crises. We are in the process of creating a non-profit ag park @ Hoea and we would like to see if there is any way the well could be leased. Rented or other means to provide emergency source for the farming community. It is on state land and I spoke with Milton to see how they felt and he indicated no problem. I'd like to access it and run a TV to see its condition. We have a source

of Civil Defense \$ available (we think) and could do an emergency pump installation. I would like to have some indication from you as to the ability or methods to access the test well. That area is without ag water and includes the Clover leaf Dairy. Any thoughts or ideas will be welcome. It would be best if it could be leased for emergency uses. Steve Bowles



United States Department of the Interior



GEOLOGICAL SURVEY
WATER RESOURCES DIVISION
677 Ala Moana Boulevard, Súite 415 () 3
Honolulu, Hawaii 96813

May 31, 1990 GW OF WATER & TAND SEVELUPMENT

Edwin T. Sakoda Geologist State of Hawaii Department of Land and Natural Resources P.O. Box 621 Honolulu, HI 96809

Dear Mr. Sakoda:

We have finally compiled all of the information from the drilling and test pumping in North Kohala, and I am now presenting it to your office along with the well construction forms. This data will also be presented in the Water Resources Investigation report which is now in review.

In addition to the hydrologic data that is presented, there are other data from the program: caliper and natural gamma logs were taken from each well; salinity and temperature logs were taken from wells 7445-01 and 7549-03 during the time of drilling, in October, 1989 and February, 1990; and rock samples were collected at about 5 ft. intervals for most of the holes. There has been no effort to describe the rock samples on account of a shortage of time. Additionally, for most of the deeper intervals of the wells, i.e. below 300 ft, circulation was lost to the formation, and there are only scattered intervals from the water-bearing formations.

If there are any questions about the project or need for further information, please feel free to contact Mark Underwood of my staff at 541-2653.

Sincerely,

William Meyer District Chief

Enclosures

cc: Mark Underwood, Hydrolgist, USGS, WRD, Honolulu, HI

State of Hawaii COMMISSION ON WATER RESOURCE MANAGEMENT Department of Land and Natural Resources Division of Water Resource Management

WELL COMPLETION REPORT

INSTRUCTIONS: Please print or type and submit completed report within 30 days of well completion to the Division of Water & Land Development, P.O. Box 373, Honolulu, HI 96809. An as-built drawing of the well and chemical analysis, if available, should also be submitted. If necessary, phone 548-7543, Hydrology, Geology Section for assistance. 8-7451-0/ WELL NAME Observation ISLAND Hawa! LOCATION Upolu Awpt Rd, V. Kohala Hawaii TAX MAP KEY WELL OWNER WS65 c. D. DRILLING OR PUMP INSTALLATION CONTRACTOR 456 TYPE OF RIG ROTON - AW E. DRILLER F. 1/-01-89 DATE OF PUMP INSTALLATION DATE OF WELL COMPLETION GROUND ELEVATION (msl) 5666 ft.

Top of Drilling Platform (msl) ft.

Height of drilling platform above ground surface

Bench mark and method used to determine ground elevation G. H. TOTAL DEPTH OF WELL BELOW GROUND 632 HOLE SIZE: I. inch dia. from ft. below ground 632 ft. below ground inch dia. from ft. to inch dia. from ft. to ft. below ground CASING INSTALLED: in. wall perforated section to _____ ft. below ground in. I.D. x 0.25 in. wall solid section to in. I.D. x ___ft. below ground Type of perforation ANNULUS: ft. to /Do ft. below ground ft. below ground Grouted from Gravel packed from ____ ft. below ground PERMANENT PUMP INSTALLATION: L. Pump type, make, serial No.

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

Depth of pump intake setting Capacity gpm ft. below which elevation is Depth of bottom of airline It. below which elevation is observation PROPOSED USE INITIAL WATER LEVEL 562. Yft. below ground. Date and time of measurement 11-02 189 ο. INITIAL CHLORIDE Date and time of sampling PUMPING TESTS: Reference point (R.P.) used: which elevation is Date Date Start water levelft. below R. P. End water levelft. below R. P. End water levelft. below R. P. Depth of wellft. below R. P. Depth of wellft. below R. P. Elapsed Rate Draw-CI-Rate Temp. Elapsed Draw-CI-Temp. (gpm) down (ft.) (ppm) (gpm) down (ft.) (ppm) to to to to Q. DRILLER'S LOG: Water Level Water Level Rock Description & Remarks Rock Description & Remarks Depth. ft. Depth. ft. to to to to to to toto to to to to to to 51 06" WELL UD. 7451-01 REMARKS: LM. 20 14 Title Hydrologust - USGS Submitted by (print) MARK UNDERWOOD

Mark R Unlevarord

State of Hawaii COMMISSION ON WATER RESOURCE MANAGEMENT Department of Land and Natural Resources Division of Water Resource Management

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В.	LOCATION U	poly Airpt R	d NI	Cohola.	Hang is TA	MAP KEY		110001
C.	WELL OWNER			,				
D.	DRILLING OR	PUMP INSTALLA	TION CON	TRACTOR	U361		· · · · · · · · · · · · · · · · · · ·	
E.	TYPE OF RIG	~ `	A *	_	DRILLER U	160		
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Γ,	Data /-	07-90	omt (R.P.	nsea: gr	which elevation			
	Start water lev	el 762,6		ow P P	Date Start water level			
		l			End water level			
					Depth of well			
	Elapsed Time (hours) to	Rate Draw- (gpm) down (ft.	CI-) (ppm)	Temp. °F	Elapsed Time (hours)	Rate (gpm)	Draw- down (ft.)	CI- Temp.
••••	O to 12	930 1,8		22	to to			
					to			
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	10		• ••••••	***********	to	••••		
Q.	DRILLER'S LC	XG: Rock Description	& Remarks	Water Level	Depth, ft.	Rock Desi	cription & Re	Water Leve emarks ft.
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	mitted by (print	_	UNDF	ewoob	Title		9.07	_

Summary of Wells Drilled During North Kohala Project Table 2

	Pumping	Interval	uedo	steel/open*1	uado	steel perf/open*2	:	uado	uado	steel perf/open*3	uado	:	oben	steel perf/open*4
Water-Table	Head	(ft)	10.2	10.2	11.4	11.4	7.5	9.8	8.0	8.0	7.0	2.2	4.2	4.2
Water-Table	Depth	(ft)	385.1	385.6	619.0	616.8	101.3	330.7	403.6	406.7	534.2	297.2	562.4	562
Depth	Drilled	(ft)	077	495	730	730	7460	405	077	459	585	436	632	632
Surface Casing	Depth	(ft)	220	140	100	2	182	80	123	100	06	130	100	103
Datum	ms ((ft)	395.30	395.87	630.43	628.24	108.5	340.54	411.62	414.76	541.17	299.48	29,995	566.83
	Well			pumping								salinity	observation	pumping
	Well	Number	7345-03	7345-8304	7347-04	7347-05	7445-01	7347-03	7448-06	7448-07	7449-03	7549-03	7451-01	7451-02
	Site		¥	V	8	8	۵	ш	ıŁ	ıŁ	Ŧ		7	7

Explanation:

perf = perforated

*2 Well was cased with solid steel down to water table, perforated steel to 36 ft below water table, and open for lower 74 ft.

*3 Well was cased with solid steel down to water table, perforated steel to 38 ft below water table, and open for lower 40 ft. *1 Well was cased with solid steel down to 55 feet below water table and open hole for lower 55 feet of aquifer.

Table 3 Summary of Test-Pumping Results and Analyses

									DRAM	DRAWDOWN AT STEADY Q:	4DY Q:	
	Pumping	Pumping	Obs Well	STEP	STEP DRAWDOWN ANALYSIS:	YSIS:	Steady	Time	measured	calculated	neasured calculated measured	Bennett
Site	Well	Interval	L	**	Well	¥	œ	at Q	pumping	aquî fer	observation	¥
	Number	(ft)	(ft)	Steps	Efficiency	(ft/d)	(mdb)	(hrs)	(ft)	(ft)	(ft)	(ft/d)
4	7345-04	55	20	9	31		906	7	14.5	4.5	0.29	240
89	7347-04	110	45	•	:	•	906	22	Ī	1.5**	0.26	820
ш	7347-02	150	40	70	21	810	1240	14	7.5	1.6	0.31	280
Ŀ	7448-07	22	20	4	•	006	475	16	Ī	1.6	0.13	970
I	7449-02	55	55	++	32	2500	495	22	3.1	1.0	0.13	1900
7	7451-02	78	41	٠	;	•	930	15	1.8	1.5**	0.22	1200
UNION MILL 1*	4 7448-04	100	ይ	м	36	1400	2000	365	8.7	3.2	0.8	1400
											Kav	Kave=1090

* Union Mill 1 pumping test was done in 1965-66; data used in analysis reported in Akinaka and others, 1975.

** Estimation of value was based on measured or calculated values from other tests.

+ Hawi step-drawdown test was done at time of completion of well construction in 1975; data reported by Hawaii Co. DWS, 1975.

Definition of Terms:

ft/d = feet per dayobs = observation K = hydraulic conductivity of aquifer gpm = gallons per minute r = radius from center of pumping well Q = pumping discharge rate

Kave = arithmetic average value of hydraulic conductivity from above seven analyses

JOHN WAIHEE GOVERNOR OF HAWAII



6/2/89

WILLIAM W. PATY CHAIRPERSON

JOHN C. LEWIN, M.D.
MICHAEL J. CHUN, Ph.D.
ROBERT S. NAKATA
RICHARD H. COX
GUY K. FUJIMURA

MANABU TAGOMORI

STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

P. O. BOX 621 HONOLULU, HAWAII 96809

WELL CONSTRUCTION PERMIT

for

North Kohala Observation Well (Site J, Well A) State Well No. 7451-01M North Kohala, Hawaii

TO: United States Geological Survey Water Resources Division 677 Ala Moana Blvd., Suite 415 Honolulu, Hawaii 96813

In accordance with the Department of Land and Natural Resources Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", your application to construct and test Well No. 7451-01M within Tax Map Key: 5-5-06 is approved subject to the following conditions:

- 1. The Division of Water and Land Development (DOWALD), Geology-Hydrology Section, shall be notified at 548-7619, before any work covered by this permit commences.
- 2. The well shall be used for monitoring and testing only.
- 3. The following shall be submitted to DOWALD, P.O. Box 373, Honolulu, Hawaii 96809 within 30 days after completion of the well:
 - a. Well Completion Report.
 - b. Elevation (referenced to mean sea level) 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. Driller's log, geologic log, and salinity log.
 - f. Periodic reports of monitoring and testing results.

Page 2

- 4. The applicant shall comply with all applicable laws, rules, and ordinances.
- 5. 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. The work shall be completed within two years of the date of issuance.
- 6. Upon discontinuance of use, the applicant shall seal the well with cement grout by permit from the Commission.

WILLIAM W. PAT

JUN 22 1989

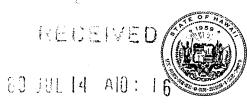
Date of Issuance

cc: Department of Health
Drinking Water Program
Ground Water Protection Program
Hawaii Department of Water Supply

h W-

ZO 1685

JOHN WAIHEE



7/14/89

JOHN C. LEWIN, M.D.

STATE OF HAWAII

DIV. OF VIA DEPARTMENT OF HEALTH

June 26, 1989

In reply, please refer to:

The Honorable William W. Paty, Chairperson Commission on Water Resource Management Department of Land and Natural Resources State of Hawaii P.O. Box 621 Honolulu, Hawaii 96809

Dear Mr. Paty:

SUBJECT:

WELL CONSTRUCTION PERMIT APPLICATIONS

NORTH KOHALA EXPLORATORY AND OBSERVATION WELLS STATE WELL NOS. 7451-01M and 02M, and 7445-02M

NORTH KOHALA, HAWAII

(United States Geological Survey, Water Resources Division)

Thank you for the opportunity to review the subject documents. We have reviewed the applications and have the following comments to offer:

- 1. The permit applications indicate that the wells will be for pumping tests and/or observation purposes in a groundwater availability study. However, if any of the wells should be converted to domestic use and serve a public water system, they will be subject to the Department's Administrative Rules, Title 11, Chapter 20, "Potable Water Systems." Chapter 20 defines a public water system as a system which serves 25 or more individuals at least 60 days per year or has a minimum of 15 service connections.
- 2. Section 11-20-29 of Chapter 20 requires that a new source of potable water serving a public water system be approved by the Director of Health prior to its use. Such an approval is based primarily upon the submission of a satisfactory engineering report which addresses the requirements set in Section 11-20-29.
- 3. The state well number designations appear to be inconsistent with those assigned to the previous set of North Kohala Exploratory and Observation well construction permit applications (State Well Nos. 7345-03, 7345-01M & 2M, 7347-01M & 2M, 7445-01M, 7448-06, 7448-01M to 03M, 7449-01M, and 7549-01M). In the previous applications,

The Honorable William W. Paty, Chairperson Page 2 June 26, 1989

only wells designated solely for observation purposes were identified by the letter "M." Wells which were designated for pumping tests and long-term observation were not given well numbers ending with an "M."

If you should have any questions, please contact the Drinking Water Program at 548-2235.

Very truly yours,

For JOHN C. LEWIN, M.D.

Director of Health

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

June 14, 1989

Chairperson and Members Commission on Water Resource Management State of Hawaii Honolulu, Hawaii Gentlemen:

United States Geological Survey
Application for Well Construction Permit
North Kohala Observation Wells, North Kohala, Hawaii

Applicant: United States Geological Survey

Water Resources Division

677 Ala Moana Blvd., Suite 415

Honolulu, Hawaii 96813

Mark Underwood?

Action Requested: Permission to construct and test three 10-inch diameter observation wells (State Well Nos. 7445-02M, 7451-01M, 7451-02M).

Well Locations: The proposed wells are located in the Hawi area of North Kohala (see attached map).

Proposed Use of Wells: To construct and test three observation wells to determine the extent and character of the North Kohala aquifer.

Well Descriptions:	Chalm Futh	Slale of Hawaii	Slate
	Site D-Coastal (Well 7445-02M)	Site J, Well A (Well 7451-01M)	Site J, Well B (Well 7451-02M)
Ground elevation Casing diameter	90±'	518±' 8" I.D.	518±' 10" I.D. 10" I.D.
Solid casing depth	10±' (80', msl)		
Screen casing depth	100' (-10', msl)	570' (-52', msl)	None
Open hole	None	None	520'
Open hole diameter	None	None	6-7/8"
Total depth	100' (-10', msl)	570' (-52', msl)	570' (-52', msl)
Grouted annulus	0-10'	0-100'	0-50'

Agency Review: The application has been sent to the County Departments of Water Supply and Public Works, and to the State Department of Health for review. There have been no objections to the project.

Analysis: The three observation wells are part of a cooperative project between the United States Geological Survey (USGS) and the Hawaii Department of Water Supply (DWS) to determine aquifer characteristics and potable ground water availability in the Hawi area of North Kohala. The observation wells will be drilled by the USGS-Water Resources Division. The observation wells will be added to the present monitoring program of the USGS. There is only one well in use in the project area at this time. The DWS Hawi Well (7449-02) is used intermittently and will not be adversely affected.

Commission of April 19th mtg. approved permits for:

3 10-inch expl. wells

10 10-inch obs. wells

ITEM 2

RECOMMENDATION:

That the Commission approve the issuance of a well construction permit for construction and testing of the North Kohala Observation Wells, subject to the following conditions:

- (1) The Division of Water and Land Development (DOWALD) shall be notified before work commences.
- (2) The permit shall be for construction and testing only. No permanent pump may be installed and no water used from the well without the necessary pump installation permit.
- (3) The following shall be submitted to DOWALD within 30 days after completion of the well:
 - a. Well Completion Report form.
 - b. Elevation (referenced to mean sea level) 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 record; including time, pumping rate, drawdown, chloride content, and water quality data.
- (4) The applicant shall comply with all applicable laws, rules, and ordinances.
- (5) The 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. The work shall be completed within two years of the date of issuance.

(6) Upon discontinuance of use, the applicant shall seal the wells with cement grout by permit from the Commission.

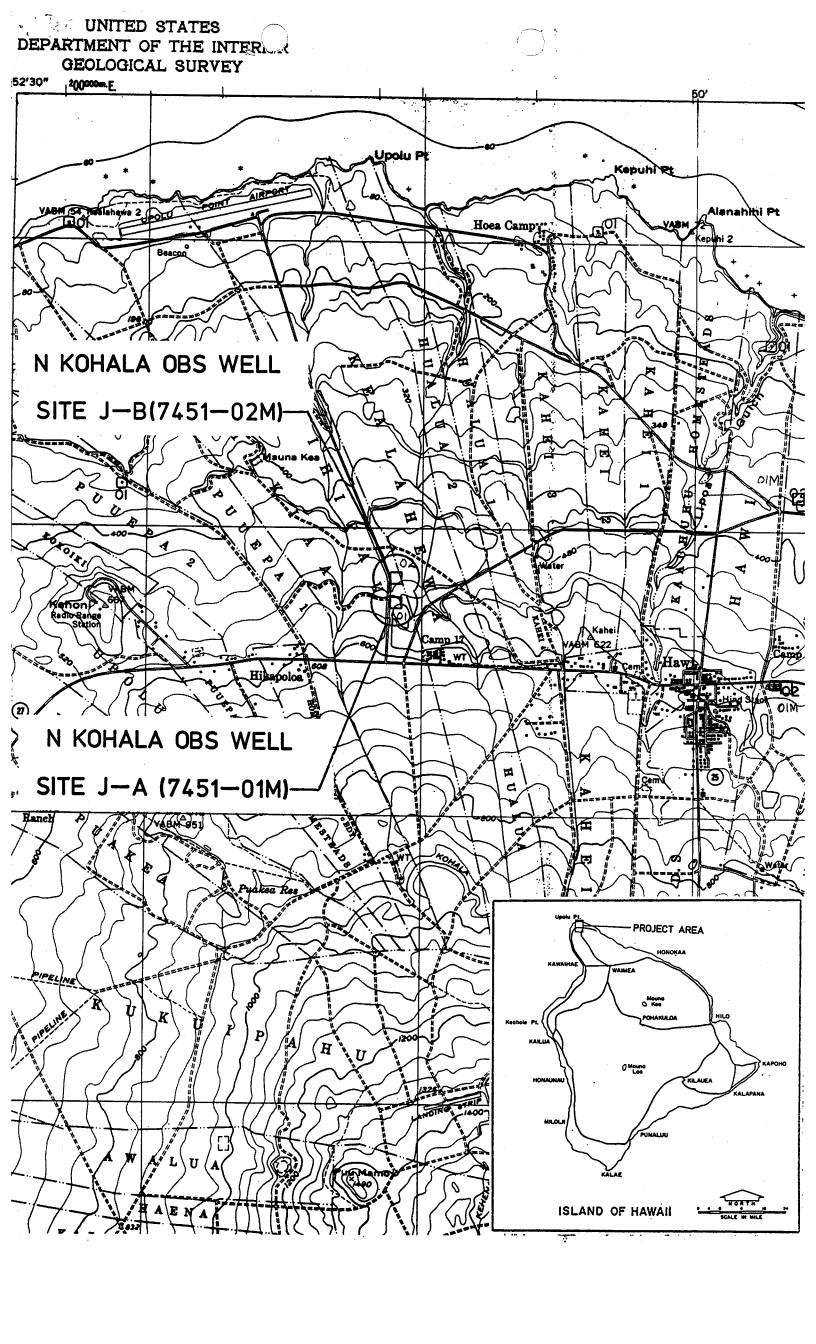
Respectfully submitted,

MANABU TAGOMORI Deputy Director

Attach.

APPROVAL FOR SUBMITTAL:

WILLIAM W. PATY, Chairperson



United States Geological Survey Water Resources Division 677 Ala Moana Blvd., Suite 415 Honolulu, Hawaii 96813

Gentlemen:

The Commission on Water Resource Management will be acting upon your application for well construction permit for North Kohala Observation Wells at its meeting on June 14, 1989, at 2:00 p.m. in the Board Room 132, 1151 Punchbowl Street, Honolulu. Your application will be included on the agenda as Item 2 (attached).

You, or your representative, are invited to attend the meeting.

Sincerely,

MANABU TAGOMORI Deputy Director

ED:bm Enc.



RECEIVED

DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAII

June 2, 1989

DIV. OF WATER & LAND DEVELOPMENT

Mr. Manabu Tagomori Deputy Director Department of Land and Natural Resources Commission on Water Resource Management P.O. Box 621 Honolulu, HI 96809

WELL CONSTRUCTION PERMIT APPLICATIONS
NORTH KOHALA OBSERVATION WELL, SITE J, WELL A (7451-01M)
NORTH KOHALA OBSERVATION WELL, SITE J, WELL B (7451-02M)
NORTH KOHALA OBSERVATION WELL, SITE D, COASTAL (7445-02M)

We have no objections to the permit applications for the observation wells. We believe that the data obtained will assist in the determination of the extent of the ground water aquifer.

H. William Sewake Manager

GK

REF: WL-KC

Honorable John C. Lewin, M.D. Director of Health Department of Health 1250 Punchbowl Street Honolulu, Hawaii 96813

Attention: Mr. Thomas Arizumi, Drinking Water Program

Dear Dr. Lewin:

Well Construction Permit Applications

In accordance with the Department of Land and Natural Resources Administrative Rules, Section 13-168-12(c), we are sending you a copy of the following permit applications:

Kaanapali Wells P-1 and P-2 (5539-01,02)

N. Kohala Observation Well, Site J, Well A (7451-01M)

N. Kohala Observation Well, Site J, Well B (7451-02M)

N. Kohala Observation Well, Site D, Coastal (7445-02M)

Please submit your comments to us, orally or in writing, within three weeks from the date of this letter.

If you have any questions, please contact Hanabu Tagemori at 548-7533.

Very truly yours,

WILLIAM W. PATW

Enc.

May 26, 1989

Mr. William Sewake, Manager Department of Water Supply County of Hawaii 25 Aupuni Street Hilo, Hawaii 96720

Dear Mr. Sewake:

Well Construction Permit Applications

We are sending you a copy of the following permit applications for your review and comments.

North Kohala Observation Well, Site J, Well A (7451-01M) North Kohala Observation Well, Site J, Well B (7451-02M) North Kohala Observation Well, Site D, Coastal (7445-02M)

Please submit your comments to us, orally or in writing, within three weeks from the date of this letter.

If you have any questions, please contact Dan Lum at 548-7643.

Sincerely,

MANABU TAGOMORI Deputy Director

ES:ko Enc. May 26, 1989

USGS-WRD 677 Ala Moana Blvd., Suite 415 Honolulu, Hawaii 96813

Gentlemen:

We acknowledge receipt of your applications to construct three observation wells in North Kohala.

My staff is processing the applications and will contact your staff should there be any questions.

Sincerely,

MANABU TAGOMORI Deputy Director

ES:ko

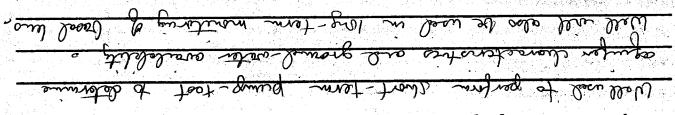
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APPLICATION FOR

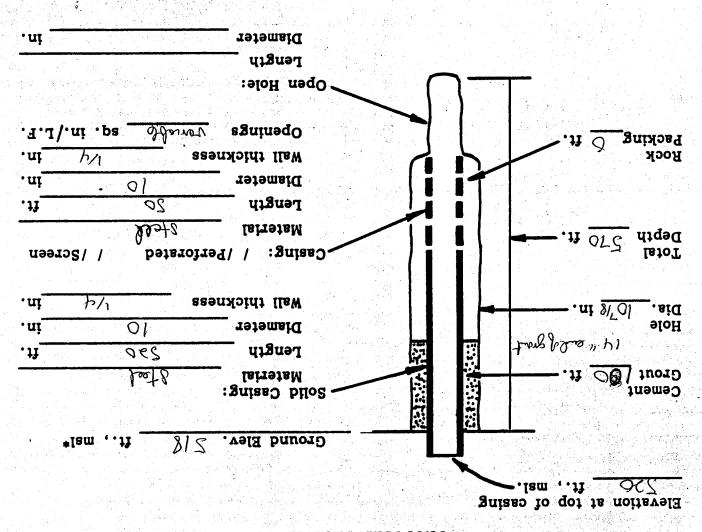
WELL CONSTRUCTION PERMIT	89 MAY 22 A 8: 11
PUMP INSTALLATION PERMIT	
	DIV. OF WATER &
Jevelopment. P.O. Box 373. Honolulu. Hawaii 96809. Anolicat	application with attachments to the Division of Water and Land ion must be accompanied by a non-refundable filing fee of \$25.00 Piling fee waived for government agencies.) If necessary, phone
. WELL LOCATION	N. Kohala Obs. Well
Island Hawaii Tax Map Key Zn	5 Sec J Plat 06 Site J WellA
Address Upola Airport Rd, North	
(Attach a USGS map (scale 1"=2000') and referenced to established property bound	
. WELL OWNER	LANDOWNER
Firm Name US68-WRD	Firm Name
Contact Person Mark RUludenwood	Contact Person
Address 677 Alamoana Brud Switch	Address
Haroluly, HI 96813	
Phone <u>541-3655</u>	Phone
. PROPOSED CONTRACTOR FOR:	Drilling Pump Installation Phone
Address	Contractor's License No.
. PROPOSED WORK	in an Armandia de Armande de Martin de Martin de Martin de Martin de Martin de Martin de la compansión de Mart La compansión de Martin de Mar
Drill New Well Deeper	n
	fill in the diagram on the back of this form.)
and the configuration of the first the control of the	
. PROPOSED USEMunicipal (including hotels, store	s, etc.)
Domestic (individual, noncommerci	Wither (specify) Short-term
. PROPOSED AMOUNT OF WITHDRAWAL	gallons per day pumpwell, long term monitoring well
PROPOSED PUMP INFORMATION	
Pump Type:	Electric: Rated Horsepower

ell Owner (print) US6S-WRD	Landowner (print) State of Howaii
gnature (1000 11565 1565	Signature Date
r Official Use Only:	
ield Checked ByLatitude_	Hydrologic Unit

Briefly describe the proposed work:



PROPOSED SECTION OF WELL



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

Department of Land and Natural Resources Division of Water Resource Management ECEIVED

APPLICATION FOR 38 MAY 22 A 8: 11 WELL CONSTRUCTION PERMIT PUMP INSTALLATION PERMIT DIV OF WATER & LAND DEVELOPMENT 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 98809. 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 548-7543, Hydrology/Geology Section for assistance. N. Kobala Obs. Well WELL LOCATION Island Howan Tax Map Key En 5 Sec 5 Plat 06 fits J well B Upola Auport Rd, North Kohala (Attach a USGS map (scale 1"=2000') and property tax map showing well location referenced to established property boundaries.) WELL OWNER LANDOWNER Firm Name USGS - WRD Firm Name Contact Person Mark R Un Danwood Contact Person Address 677 Ala Morna Blod. Honolule, HI 968/3 Phone 541-2655 Phone PROPOSED CONTRACTOR FOR: Address Contractor's License No. PROPOSED WORK 🔼 Drill New Well Deepen Redrill Alter Seal Abandon 7 Install New Pump Replace Pump Modify Pump (Briefly describe the proposed work and fill in the diagram on the back of this form.) PROPOSED USE Municipal (including hotels, stores, etc.) ☐ Military Domestic (individual, noncommercial water systems) ☐ Industrial ☐ Irrigation (specify) ☑Other (specify) longtern hunterry well PROPOSED AMOUNT OF WITHDRAWAL gallons per day 7. PROPOSED PUMP INFORMATION ☐ Submersible ☐ Centrifugal Rated Horsepower Motor: ☐ Diesel 🊅 🔲 Gas ☐ Electric: Rated Pump Capacity gallons per minute (gpm) Well Owner (print) Landowner (print) Signature Signature Date 5/16/ Date For Official Use Only:

Latitude

Longitude

Hydrologic Unit

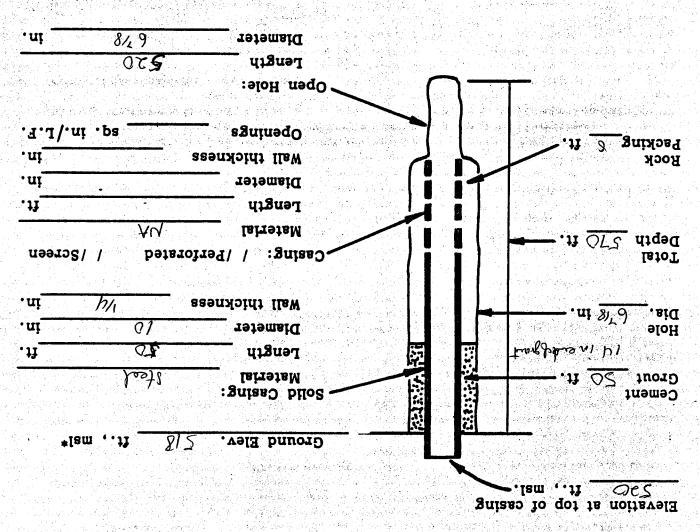
State Well No. 745/-02 M (J-B)

Field Checked By

Briefly describe the proposed work:

Usel will be used in description of about pumper descriptions and grand about the world will also be used in I hay-term

PROPOSED SECTION OF WELL



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