State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources
WELL COMPLETION REPORT - PART II
Pump Installation

Instructions: Please print in ink or type and send completed report (with attachments, if applicable) to the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809. The Commission may not accept incomplete reports. This form shall be submitted within 60 days of the completion of work. For assistance, please consult the Hawaii Well Construction and Pump Installation Standards or call the Regulation Branch at 587-0225. For updates to this form or additional information, please visit our website at http://www.hawaii.gov/dlnr/cwrm/

1. State Well No.: 6528-03 Well Name: Enserch #2 (HEP B) Island: Hawaii
2. Address: 45-300 Lehua St, Honokaa, HI 96727 Tax Map Key: 45-002:056
3. Pump Installation Company: Puna Rental Inc.
4. Date Pump Installed: 3-6-03 x 9-19-05
5. PERMANENT PUMP INFORMATION
   Pump Type, Make, Serial No.: Submersible/Gould 9RCLC
   Rated Capacity: 700 gpm at head of: 588 ft.
   Motor Type, H.P., Voltage, rpm: Franklin-150 HP-480VAC-3540 RPM
   Pump type (check one):
   □ Deep Well Turbine □ Rotary
   □ Submersible □ Rotary-Displacement □ Propeller
   □ Centrifugal □ Rotary-Gear □ Reciprocating
   □ Impulse
   *attach schematic
6. Method of flow measurement:
   □ Flowmeter Manufacturer Water/ Model no. LP32 Size 10"
   □ Weir □ Open Pipe □ Orifice* □ Other*, explain below
7. Fill in the as-built section on the other side of this sheet.
8. Attach the rating curve for the installed pump.
9. Attach photograph of well clearly showing the benchmark on the concrete pad, the well head, and the method of flow measurement.
10. Other remarks/comments:
   Pump failed 7/23/05. Replaced old motor and pump with exact replacement items. Pump placed in service 9/19/05.

Pump Installation Contractor (print) Lunnar Construction INC Lic. No. ABC-23496
Signature

Date 10/26/05
Bench mark elevation surveyed to nearest 0.01 ft. = 451.01 ft. mean sea level

Elevation of top of chase tube ft. mean sea level = 453.93

Pump intake depth = ________ ft. (referenced to bench mark)

Chase tube depth = ________ ft. (referenced to bench mark)

If airline installed, bottom of airline elevation = N/A ________ ft. mean sea level

Flow Shroud 10½" o.d.
1. State Well No.: 6528-03  
   Well Name: Enserch Well #2  
   Island: Hawaii
2. Address: 45-300 Lehua St, Honokaa, HI 96727  
   Tax Map Key: 4-5-002:056
4. Date Pump Installed: 4-15-02
5. PERMANENT PUMP INFORMATION (Attach pump specifications and rating curve)
   Pump Type, Make, Serial No.: Submersible / Gould / 9RCLC
   Rated Capacity: 700 gpm at head of: 588 ft
   Motor Type, H.P., Voltage, rpm: Franklin - 150HP - 480VAC - 3540 RPM
   Type of flow meter: Propeller which measures in GPM
   Model Number LP32  
   Serial Number 994114-10
6. Method of flow measurement:
   - Flowmeter
   - Manufacturer: Specialty
   - Water Make: Saddle
   - Size: 10"
   - Weir
   - Open Pipe
   - Orifice
   - Other, explain below
   *attach schematic
7. Fill in the as-built section on the other side of this sheet.
8. Attach photograph of well and concrete pad clearly showing benchmark on concrete pad.
9. Other remarks/comments:
   Original motor failed and entire pump/motor assembly replaced

Pump Installation Contractor (print) HERMAN LUDWIG  
C-57/C-57a/A Lic. No. ABL-23175
Signature
Date 6/29/02

Permittee (print) LARRY F. KATCHMISKI
Signature
Date 7/1/02
Bench mark elevation surveyed to nearest 0.01 ft. = 451.01 ft. mean sea level

Elevation of top of chase tube = 453.66 ft. mean sea level

Pump intake depth = 464.25 ft.
(referenced to bench mark)

Chase tube depth = 460 ft.
(referenced to bench mark)

If airline installed, bottom of airline elevation = N/A ft. mean sea level
March 5, 2002

Re: 

The wells can handle 700 gpm pumps at least a year. However, the relatively rapid rise in the chlorides during the pump tests are a concern. If they can live with high chlorides over time, then it is ok. At the long term, the wells may create an area of upper conjunct that would affect any future well that may be drilled in the area. Therefore, it is Regulation Brand's call.

[Signature]
**DEPARTMENT OF LAND AND NATURAL RESOURCES**

**UAC OR ATTACHED WORKSHEET**

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**TOTAL** 32,000.00

**REMARKS:**

LINE (1) Well Nos. 6528-02 & 6528-03

LINE (2) ________________

LINE (3) ________________

LINE (4) ________________

10/30/01 *0048* CHECK 32000.00

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**Hawaii Energy Partners**

J.M. James Place
Charlotte, NC 28207

**PAY** THIRTY TWO THOUSAND AND 00/100

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**COMMISSION ON WATER RESOURCE MANAGEMENT**

P.O. BOX 521
HONOLULU, HI 96809

**AUTHORIZED SIGNATURE**

---

**CHECKING ENDORSEMENT - LOOK FOR A REFLECTIVE WATERMARK - HOLD AT AN ANGLE TO VIEW!**

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PLEASE MAKE CORRECTION AS NOTED - THANK YOU! (KATHY 587-3868) 

**NOV. 14 2001**
AFFIDAVIT OF PAUL CARPINONE

STATE OF FLORIDA

COUNTY OF Hillsborough

PAUL CARPINONE, being first duly sworn on oath deposes and says that:

1. I am a resident of Tampa, Florida and an employee of TECO Power Services Corporation (TPS), the primary shareholder of TPS Hamakua, Inc., which is a general partner of the Hamakua Energy Partners, LP (HEP).

2. I have personal knowledge of the following matters since I was the designated contact for consultants conducting reviews of regulatory permits secured or required for HEP's electrical cogeneration project at Honokaa, Hawaii.

3. One of these consultants was Environmental Consulting & Technology, Inc. (ECT) which provided due diligence on HEP's water well construction and pump installation permits.

4. On February 9, 2000, I received the attached e-mail message and table from Sam Patterson of ECT documenting his confirmation of HEP's pump installation permit for well no. 1 which he understood was valid until March 29, 2001.

5. It was our understanding that no other permits were required to install the pump in HEP's water well no. 1.
6. ECT also confirmed that the pump installation permit for well no. 2 was submitted and would be processed within 90 days of the December 14, 1999 submission date of the application.

7. TPS has used ECT to assist it in regulatory reviews for other projects and has found the company to be a reliable and responsible consultant.

8. It is my understanding that Sam Patterson has left ECT in the intervening time. However, his former supervisor, Vilma Brueggemeyer, is still at ECT and would be available to corroborate information and confirmation provided by her company to HEP relative to the pump installation permits for the subject wells.

FURTHER YOUR AFFIANT SAYETH NAUGHT.

[Signature]

Paul L. Carpinone
PAUL L. CARPINONE

Subscribed and sworn to before me this 19th day of September, 2001.

[Signature]

Marilyn G. Clark
Notary Public, State of Florida

My commission expires: 12/16/01
From: <spatterson@ectinc.com>
To: <plcarpinone@tecoenergy.com>
Date: 2/9/00 9:53AM
Subject: Hamakua well permits

Paul:

I spoke with Ryan Imata at the Hawaii Commission on Water Resources Management. The applications for permits you have submitted went to Ryan.

Well No. 1
Ryan said that the pump installation permit for well number 1 is valid until March 29, 2001, so you are in good shape for well number 1 from a permit stand point. No other permits concerning the well are required. The attached Table 1 summarizes the permit status.

Well No. 2
Ryan said he had received the well construction permit and everything was in order. I asked him about the pump installation permit. All information for the pump installation permit is contained in the well construction permit, so I asked him if we really needed to submit another permit application for pump installation. He said no that he would simply check the appropriate box on the construction permit and it would then be an application for both construction and pump installation. In addition, you do not need a water use permit because there are no water management areas on the Big Island of Hawaii. You do not need to file well registrations because Ryan said that the registration process was intended for wells that were installed prior to the establishment of the water commission. Therefore, you are in good shape from a permit standpoint on both wells. Ryan said the construction and pump installation permit application should be processed within 90 days of the December 1999 submittal date. The submittal dates for installation reports and water quality reports must be closely watched to make sure they go in on time. The due dates may be set in the permit approval letter or otherwise the dates are as per the regulations (see attached table).

Please contact Vilma or me if you have any questions concerning the attached table.

Sam Patterson

CC: <vbrueggemeyer@ectinc.com>
<table>
<thead>
<tr>
<th>HAMAKUA</th>
<th>Well No. 1 (state No. 6628-02)</th>
<th>Well 1 Comments</th>
<th>Well No. 2</th>
<th>Well 2 Comments</th>
<th>Action Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well Construction Permit</td>
<td>YES</td>
<td>APPROVED June 1996</td>
<td>SUBMITTED</td>
<td>Submitted December 14, 1999</td>
<td>Ryan Imiata reports that the maps arrived on January 19, 2000 but that should not hold up the permit. The usual time is 90 days.</td>
</tr>
<tr>
<td>Install well</td>
<td>YES</td>
<td>Completed August 1999</td>
<td>Not yet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquifer Test</td>
<td>YES</td>
<td>August 1998 Step down; October 1998 Continuous</td>
<td>Not yet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Well Completion Report</td>
<td>YES</td>
<td>Submitted November 1998</td>
<td>Not yet</td>
<td></td>
<td>Must be submitted within 30 days of well completion. A special condition was granted for well No. 1 that gave 60 days to complete the report.</td>
</tr>
<tr>
<td>Pump Installation Permit</td>
<td>YES</td>
<td>The permit to install the pump is good until March 28, 2001</td>
<td>SUBMITTED</td>
<td>Submitted with the well construction permit</td>
<td>Reference Hawaii Well Construction and Pump Installation Standards</td>
</tr>
<tr>
<td>Pump Installation report</td>
<td>Not yet</td>
<td>Must be submitted within 60 days of pump installation</td>
<td>Not yet</td>
<td>Must be submitted within 60 days of pump installation</td>
<td>Chapter 174C-83 State Water Code</td>
</tr>
<tr>
<td>Water Quality Report</td>
<td>YES</td>
<td>Submitted November 1998</td>
<td>Not yet</td>
<td>Must be submitted within 60 days of sampling during pump test</td>
<td></td>
</tr>
<tr>
<td>Well Registration</td>
<td>NA</td>
<td>RE Chapter 174C-83 State Water Code. Any person owning operating a well shall register the well with the commission.</td>
<td>NA</td>
<td>RE Chapter 174C-83 State Water Code. Any person owning operating a well shall register the well with the commission.</td>
<td>Ryan Imiata at Water Commission said this did not apply. This was for wells installed before the commission was established.</td>
</tr>
<tr>
<td>Water Use Permit</td>
<td>NA</td>
<td></td>
<td>NA</td>
<td>According to Ryan Imiata (Commission on Water Resources management) there are no water management areas on the Big Island of Hawaii.</td>
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Hamakua Energy Partners
AFTER-THE-FACT PUMP INSTALLATION PERMIT APPLICATION
Enserch 2 Well (Well No. 6528-03)
Honokaa, Hawaii

APPLICANT/LANDOWNER:
Hamakua Energy Partners
P.O. Box 40
Honokaa, HI 96727

DESCRIPTION:
Location: (See Exhibit 1)

BACKGROUND:
Refer to Exhibit 3 for the timeline.

ISSUES/ANALYSIS:
Violation

HAR §13-168-12(a) states that:

   No well shall be constructed, altered, or repaired and no pump or pumping equipment shall be installed, replaced, or repaired without an appropriate permit from the commission.

Unlike the Enserch 1 Well (6528-02), the applicant, driller and consultant (Hamakua Energy Partners, Beylik and Tom Nance, respectively) remained the same for the duration of the process.

An application for both Well Construction and Pump Installation was acknowledged as complete by staff on January 19, 2000.
A Well Construction Permit was issued to Hamakua Energy Partners on March 7, 2000. In the Well Construction Permit, the applicant was specifically informed under Well Construction Permit standard condition #2 and two reminders in the permit cover letter that the permit does not authorize work for a permanent pump installation. (Refer to Exhibit 10).

A test pump was installed sometime during December of 2000, and pump tests were done in accordance with the Hawaii Well Construction and Pump Installation Standards. The pump test began on December 11 and was completed on December 13, after which the test pump was removed. The resulting data for this first pump test was submitted to CWRM on January 10, 2001 along with the Well Completion Report Part I.

The after-the-fact pump installation permit application for Enserch 1 (6528-02) was sent in on October 25, 2000. Therefore, at the time of the pump installation for Enserch 2 (December 20, 2000), it was clear that all parties involved knew that a pump installation permit was required prior to installing the pump. Additionally, both the driller and the consultant have had prior permits through the Commission and should have known that a permit was required. Therefore, this violation constitutes a repeat violation and is subject to daily fines.

On August 15, 2001, the Commission found the pump installer, Beylik Drilling, in violation of installing the pump and a fine of $6944 was assessed. At the same meeting, Hamakua Energy Partners requested a Contested Case Hearing. Because of this request, the Commission did not take action on Hamakua Energy Partner’s portion of the violation.

On August 27, 2001, the applicant withdrew the request for Contested Case Hearing, which is why the application is being brought back before the Commission.

Discussion

Despite much communication, there are many unresolved inconsistencies and confusing correspondence from the applicant subsequent to this first pump test.

After the test pump was pulled out of the Enserch 2 well in December 2000, the permanent pump was installed without first acquiring a pump installation permit. The applicant stated that the lender’s engineer required a longer pump test to be done, in conjunction with the first well (Enserch 1), at the same time. Staff met with the Hamakua Energy Partners, Tom Nance, Beylik Drilling and Carlsmith Ball, and requested that Carlsmith Ball provide documentation from the lender to substantiate the requirement to do this further testing. This information was provided by the applicant and is shown as Exhibit 5.

There are discrepancies between two letters sent in to the Commission regarding why the permanent pump was installed for the pump test. In the letter dated March 16, 2001 from Beylik to the Commission (refer to Exhibit 4), Beylik states that “there was a rush on the part of the lender to perform a successful long-term test using the permanent pump”. However, in the letter dated August 2, 2001 from Carlsmith Ball to the Commission (refer to Exhibit 5), Carlsmith Ball states that “The temporary pump which had been employed in the earlier testing was currently crated on the dock at Kawaihae and unavailable for further use at the Hamakua site. The only pump available on such short notice was the pump purchased to become the permanent pump for Well No. 2.” Further, the Beylik letter states that “The pump was set on December 20, 2000.”. The Carlsmith Ball letter states that “On December 22, 2000, the permanent pump was installed for testing which ran 12 days until January 3, 2001, due to continuing changed and additions to Stone & Webster’s request”. Therefore, from the correspondence it is unclear whether the permanent pump was installed as the result of an
emergency beyond the control of the applicant as stated in the applicant attorney’s August 2, 2001 letter or because of a failure to have adequate time to obtain a permit and satisfy the lender’s requirement to test the well with the permanent pump because of the tight construction schedule as stated in Beylik’s March 1999 letter.

Penalty calculations

Staff feels that the December 20, 2000 date is the actual date of the installation because Beylik stated this on March 16, 2001 and it is the date in the Well Completion Report Part II. This date is closer to the actual date of installation than the Carlsmith Ball statement (August 2, 2001), and the actual pump installer provided this date. Therefore, the installation of the pump on December 20, 2000 would indicate the start of the penalty period because it is the initial date that the violation occurred.

A second pump installation permit application was submitted on January 11, 2001 for this well. Unlike the Enserch 1 well application, this application did not indicate it was an after-the-fact application. In fact, the application stated the pumps had not been installed. It was not until February 14, 2001 when the Well Completion Report Part II (WCR 2) came in did staff realize the pump had already been installed. However, the Pump Installation Permit application for this well was submitted and accepted a year earlier on January 19, 2000. On January 10, 2001, staff received a Well Completion Report Part I. On February 14, 2001, staff received a Well Completion Report Part II indicating that a permanent pump had been installed. These Well Completion Reports can be found in Exhibit 2.

As part of standard procedure, staff waits for a complete Well Completion Report Part I (WCR 1) with pump test results to be submitted and analyzed prior to issuing the pump installation permit. No pump test results or WCR 1 had been sent in prior to the installation of the pump. Therefore, while there was an application for a pump installation permit, staff didn’t issue the permit because the documentation required under the Well Construction Permit wasn’t received. WCR 1 was received on January 11, 2001 and WCR 2 was received on February 14, 2001. Normally, staff will issue a pump installation permit after an acceptably complete WCR 1 is submitted. However, because this case is an after-the-fact situation, staff needs the submittal of both WCR 1 and 2 because the pump had already been installed.

Therefore, staff finds that the duration for the violation is between the date the pump was installed (December 20, 2000) and the date the Well Completion Report Part II was received by the Commission (February 14, 2001). This is consistent with staff analysis for the Enserch 1 Well on what constitutes a complete after-the-fact application. This total duration amounts to 56 days.

Under the Administrative and Civil Penalty Guideline (G01-01), the total duration may be reduced to a single day fine if compliance falls within 30 days. Additionally, due to the fact that the pump was installed in Enserch 1 Well without a permit and it was noted to the applicant prior to the installation of the Enserch 2 pump, staff feels that the 56 day violation period is warranted.

Based on the Administrative and Civil Penalty Guideline (G01-01), the total recommended fine is $21,000 for the applicant (refer to Exhibit 6).

The fine is based on a finding of violation of $250/day and a repeat violation of $250/day for a total of $500/day. Staff feels that because the applicant sent the application on their own volition a mitigative component of $125/day can be incorporated, which is consistent with the recommendation for the fine for the Enserch 1 well. Therefore, staff is recommending a total daily fine of $375/day, for 56 days, for a total of $21,000.
Potential maximum fine

Carlsmith Ball is contending that there is no published requirement for turning in the well completion report as a condition of accepting the After-the-Fact application as complete.

However, if Carlsmith Ball's contention that there are no published requirements for acceptance of After-the-Fact applications, it can also be reasoned that there are no published allowances for correction of a violation via an After-the-Fact application.

Therefore, a maximum potential violation can be calculated based on the date of the installation of the pump, to the date of the Commission meeting, since the pump remains installed. HAR §13-169-3(s) states that:

Any person who violates any provision of this chapter or any permit condition or who fails to comply with any order of the commission may be subject to a fine imposed by the commission. Such fine shall not exceed $1000 per violation. For a continuing offense, each day's continuance is a separate violation.

§13-168-12(a) states that:

No well shall be constructed, altered, or repaired and no pump or pumping equipment shall be installed, replaced, or repaired without an appropriate permit from the commission.

The date after which the pump was installed to the Commission meeting can constitute a period of non reporting according to HAR §13-168-7(b), which states that:

The owner or operator of any well of stream diversion works or battery of such water sources shall file a report of total water usage on a regular monthly (calendar or work schedule) basis to the commission on forms provided by the commission on or before the end of the month following the month for which water usage is to be reported.

Therefore, according to Exhibit 11, the maximum allowable fine provided for under HAR is $546,000.

Lastly, at this time, staff is not recommending any alternative to the fines. The applicant and/or driller or the Commission is free to suggest any alternative in accordance with the G-01-01 Guideline.

RECOMMENDATION:

That the Commission:


B. Impose a fine of $21,000 on Hamakua Energy Partners as summarized in Exhibit 6, payable within 30 days.

C. Approve the issuance of an after-the-fact Pump Installation Permit for the Enserch 2 Well (Well No. 6528-03) after the fine is paid, subject to standard conditions in Exhibit 7, and the following special conditions:

1. The well should not be used for drinking water unless it is properly tested and treated.
2. If potable water is used to supply both domestic and irrigation purposes in a single system, the permittee shall eliminate cross-connections and backflow connections by physically separating potable and non-potable systems by an air gap or an approved backflow preventer, and by clearly labeling all non-potable spigots with warning signs to prevent inadvertent consumption of non-potable water.

D. Suspend any current, pending or future applications by the applicant until the fines are paid and the applicant completes the permit process for this well.

Respectfully submitted,

[Signature]
LINNEL T. NISHIOKA
Deputy Director

Exhibit(s):

1. (Location Map)
2. (Well Completion Report)
3. (Timeline)
4. (Letter from Beylik dated March 16, 2001)
5. (Applicant letter dated August 2, 2001)
6. (Fine Schedule)
7. (Standard Pump Installation Permit Conditions)
8. (Pump Test Procedures)
9. (Water Use Report Form)
10. (Well Construction Permit and cover letter)
11. (Fine Schedule for maximum)
12. (Letter from Carlsmith Ball dated August 30, 2001)
1. State Well No.: 6256-03  
   Well Name: Encogen Well No. 2  
   Island: Hawaii
2. Address: P.O. Box 40, Honokaa, HI 96727  
   Tax Map Key: 4502:56  
   4-5-002:056
4. If drilled, type of Rig:  
   ☑ Rotary  ☐ Percussion
5. Date Well Construction (drilled, cased, grouted) completed: 10/30/00  
   Attach Driller's Log (7/26/99 DL Form)
6. Initial water-level encountered 453.25 ft. below ground  
   Date and time of measurement: 9/23/00 0700  
   See attached report.
7. Step-Drawdown Test completed?  
   ☑ Yes  ☐ No
   Attach Step-Drawdown Test form (12/17/97 SDPTD Form)
8. Constant Rate Aquifer Test completed?  
   ☑ Yes  ☐ No
   Attach Constant Rate Aquifer Test form (12/17/97 CRPTD Form)
9. Water-level: 2.71 ft. above msl  
   Date and time of measurement: 12/11/00 0700  
   Date and time of sampling: 12/11/00 1900
10. Chloride: 85 ppm  
   Date and time of measurement: 12/11/00 0700  
   Date and time of measurement: 12/11/00 1900
11. Temperature: 67.6°F
12. Fill in the as-built section on the other side of this sheet.
13. Attach plot plan and surveyor's stamped elevation report.
14. If a pump is not planned to be installed, please describe (below in the remarks section) how well is secured to prevent unauthorized access (example: lockable cover, threaded coupling, etc.)
15. Remarks:

Licensed Driller (print):  BEYLIK DRILLING, INC.  
Signature: WILLIAM C. MOORE, VICE PRESIDENT  
C-57 Lic. No. AC-22214  
Date: 12-26-00

Surveyor (print): ROBERT T. SHIRAI  
Signature:  
L.P.L.S. Lic. No. 5985  
Date: 01/10/01

Permittee (print): LARRY F. KAFCHINSKI  
Signature:  
Date: 12/15/00

WCR1 Form 5/2/00
13. AS-BUILT WELL SECTION (Please attach as-built if different from diagram provided below)

Elevation at top of casing: 451.80 ft, msl
(to nearest 0.01 ft.)

Hole Diameter: 19 in.

Minimum of 2' Radius & 4" Thick Concrete Pad

Ground Elevation: 451.01 ft, msl

Bench mark elevation:
451.61 ft, msl
(Survey to nearest 0.01 ft.)

Cement Grout: 330 ft.
(min. 70% of distance from ground elevation to top of water surface or 500 ft., whichever is less.)

Annular space between hole and casing (min. 3):
3 in.

Rock or Gravel Packing:
NA ft.
Material:
☐ Crushed Basalt
☐ Rounded Gravel

Water Level Elevation:
2.71 ft, msl*

≥ 90% x (Ground Elev. - Water Level Elev)

Solid Casing: (≥ 90% x (Ground Elev.-Water Level Elev))
Length: 451 ft.
Nominal Diameter: 12 in.
Wall Thickness: 3/8 in.
Bottom Elevation: 0.01 ft, msl

Open Casing: ☐ Perforated ☑ Screen
Length: 40 ft.
Nominal Diameter: 12 in.
Wall Thickness: 5/16 in.
Bottom Elevation: -39.99 ft, msl

Open Hole:
Length: NA ft.
Diameter: NA in.
Bottom Elevation: NA ft, msl

*msl = mean sea level

Solid Casing Material:
Carbon Steel: compliant with (check one or more):
☐ ANSI/AWWA C200
☐ API Spec. 5L
☐ ASTM A53
☒ ASTM A139

And compliant with (check one or more):
☐ ASTM A242
☐ Type E
☐ Type S
☐ Grade B
☒ Other

Stainless Steel: (check one):
☐ ASTM A409 (production wells)
☐ ASTM A312 (monitor wells)

ABS Plastic conforming to ASTM F490 and ASTM D1527: (check one)
☐ Schedule 40
☐ Schedule 80

PVC Plastic conforming to ASTM F490 and (ASTM D1785 or ASTM D2241): (check one)
☐ Schedule 40
☐ Schedule 80
☐ Schedule 120

Thermoset Plastic: (check one)
☐ Filament Wound Resin Pipe conforming to ASTM D2996
☐ Centrifugally Cast Resin Pipe conforming to ASTM D2997
☐ Reinforced Plastic Mortar Pressure Pipe conforming to ASTM D3517
☐ Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C950
☐ PTFE Fluorocarbon Tubing conforming to ASTM D3296
☐ FEP Fluorocarbon Tubing conforming to ASTM D3296

Open Casing Material:
Carbon Steel: compliant with (check one or more):
☐ ANSI/AWWA C200
☐ API Spec. 5L
☐ ASTM A53
☒ ASTM A139

And compliant with (check one or more):
☐ ASTM A242
☐ Type E
☐ Type S
☒ Grade B
☐ Other

Stainless Steel: (check one):
☐ ASTM A409 (production wells)
☐ ASTM A312 (monitor wells)

ABS Plastic conforming to ASTM F490 and ASTM D1527: (check one)
☐ Schedule 40
☐ Schedule 80

PVC Plastic conforming to ASTM F490 and (ASTM D1785 or ASTM D2241): (check one)
☐ Schedule 40
☐ Schedule 80
☐ Schedule 120

Thermoset Plastic: (check one)
☐ Filament Wound Resin Pipe conforming to ASTM D2996
☐ Centrifugally Cast Resin Pipe conforming to ASTM D2997
☐ Reinforced Plastic Mortar Pressure Pipe conforming to ASTM D3517
☐ Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C950
☐ PTFE Fluorocarbon Tubing conforming to ASTM D3296
☐ FEP Fluorocarbon Tubing conforming to ASTM D3296

EXHIBIT 2

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

WELL COMPLETION REPORT - PART II
Pump Installation

Instructions: Please print in ink or type and send completed report (with attachments, if applicable) to the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809. The Commission may not accept incomplete reports. This form shall be submitted within 60 days of the completion of work. For assistance, please consult the Hawaii Well Construction and Pump Installation Standards or call the Regulation Branch at 587-0225. For updates to this form or additional information, please visit our website at http://www.state.hi.us/dlnr/cwrm/

1. State Well No.: 6928-03  Well Name: Enserch #2 Well  Island: Hawaii
2. Address: 45-300 Lehua St., Honokaa, HI 96727 Tax Map Key: 45-002:056
4. Date Pump Installed: 1/27/00
5. PERMANENT PUMP INFORMATION
   Pump Type, Make, Serial No.: Submersible/Goulds/PO 14310  Rated Capacity: 700 gpm
   Motor Type, H.P., Voltage, rpm: Franklin - 125 - 3540
   Type of flow meter: Propeller which measures in GPM
6. Method of flow measurement:
   - Flowmeter Manufacturer Specialties Make Saddle Size 10"
   - Weir  Open Pipe  Orifice  Other*, explain below
*attach schematic
7. Fill in the as-built section on the other side of this sheet.
8. Other remarks/comments:
   Enserch 9-6928-03 Enserch 2

Pump Installation Contractor (print)  Beylik Drilling, Inc.  C-57/C-57a/A Lic. No. AC-22214
Signature  [Signature]  Date January 29, 2001
Permittee (print)  [Signature]  Date 01/29/01

EXHIBIT 2
9. AS-BUILT PUMP SECTION (Please attach as-built if different from diagram provided below)

8-6328-03 ENGRECH 2

Bench mark elevation surveyed to nearest 0.01 ft. = 451.01 ft. mean sea level

identify reference point elevation for water level measurements through chase tube 451.70 ft. mean sea level

describe reference point:
Top of Flange

Pump intake depth = 464.25 ft. (referenced to bench mark)

Chase tube depth = 460.00 ft. (referenced to bench mark)

If airline installed, bottom of airline elevation = NA ft. mean sea level
<table>
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<tr>
<th>Table 1: Timeline</th>
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**EXHIBIT 3: Timeline**
March 16, 2001

Ms. Linnel T. Nishioaka
Department of Land and Natural Resources
Commission on Water Resource Management
P.O. Box 621
Honolulu, HI 96809

Subject: Well Completion Report for Well No. 6528-03

Dear Ms. Nishioaka:

I am writing pursuant your letter dated March 5, 2001 addressed to Mr. Larry Kačchinski of Hamakua Energy Partners. I would like to clarify the three issues stated in your letter so that the reports can be accepted as complete.

1. The correct depth to water is 448.30’ (Item 6) and the water-level is in fact 2.71’ above msl (Item 9).

2. The pump was set on December 20, 2000 (Item 4).

3. Due to the lengthy time it took to complete this job and the power plant's tight construction schedule, the permanent pump was installed immediately following the pump test because we were required to remove our equipment from the site as soon as possible to allow for the power plant’s final phases of construction to be completed. Additionally, there was a rush on the part of the lender to perform a successful long-term test using the permanent pump. This test lasted 14 days and was performed as a requirement to complete financing of the project.

Should you require any other information or have any questions please do no hesitate to call.

Sincerely,

Robert A. Glascott
Project Manager

Cc: Mr. Larry Kačchinski, Hamakua Energy Partners
August 2, 2001

BY FAX AND U.S. MAIL

Linnel T. Nishioka
Deputy Director
Commission on Water Resource Management
P.O. Box 621
Honolulu, Hawaii 96809

Re: HEP Well No. 2, State No. 6528-03: Pump Installation Permit Application

Dear Linnel:

At our meeting on July 26, 2001, you requested that I provide you with a letter detailing the facts and circumstances of the events of December 2000 and January 2001 surrounding the pump testing of Hamakua Energy Partners L.P.’s ("H.E.P.") Well No. 2, State No. 6528-03. I am writing to provide you and your staff with the information you requested in order that you may make your recommendation to the Commissioners.

According to our records, the pump testing required as a condition to the Well Construction Permit was conducted using an engine-driven test pump from December 11 to 13, 2000, which data was reported to the Commission in Well Completion Report Part I for Well No. 2. Following the testing, the test pump was removed and prepared for shipping to another job site where the drilling contractor needed to utilize it. Believing there was no imminent need to utilize Well No. 2, Tom Nance, the well and pump consultant, did not immediately submit a pump installation permit application.
On or about December 13 or 14, H.E.P. was contacted about a request for additional pump testing from Stone & Webster, an engineering firm employed by the lender involved in the ongoing refinancing of the project. During this time period, there was a very concerted effort by all involved to complete the refinancing transaction by an imminent deadline. Stone & Webster required that an extended pump test, running both Well Nos. 1 and 2 concurrently, be conducted immediately. Stone & Webster insisted that the extended pump test run for a minimum of five days in duration, include various water quality testing and that this testing be completed by December 31st. Mr. Nance proposed that the testing begin December 22. See email correspondence dated from December 14 to 20, 2000, by and between H.E.P., Stone & Webster and Tom Nance discussing Stone & Webster’s request for extended testing attached hereto as Exhibit A.

The temporary pump which had been employed in the earlier testing was currently crated on the dock at Kawaihae and unavailable for further use at the Hamakua site. The only pump available on such short notice was the pump purchased to become the permanent pump for Well No. 2. Mr. Nance was able to retrieve the meter from the temporary pump for use with the permanent pump for the extended testing.

On December 22, 2000, the permanent pump was installed for testing which ran 12 days until January 3, 2001, due to continuing changes and additions to Stone & Webster’s request. All of the water from this testing was pumped to waste as the pump was not hooked up to the system at the time. See letter dated January 5, 2001, from Tom Nance reporting results of extended testing attached hereto as Exhibit B. As soon as the extended testing was completed, the now-pending pump installation permit application was submitted to the Water Commission on January 9, 2001. The permanent pump was not used again until approximately the first week of March at which point it was attached to the system for permanent use.
If I can provide any further information to answer questions you may have, please contact me. Thank you for your assistance and cooperation in this matter.

Very truly yours,

Tim Lui-Kwan

cc: Tom Nance, Tom Nance Water Resource Engineering
    William Moore, Roscoe Moss/Beylik Drilling, Inc.
    Larry Kafchinsky, Hamakua Energy Partners, LP
From: Larry Kafchinski <lkafchinski@hialoha.net>
To: <tnwre@aloa.net>
Sent: Thursday, December 14, 2000 2:03 PM
Subject: FW: Salinity Testing

Tom,
Do you have the 1999 report mentioned below? We need to discuss your availability, capability and price to conduct this test ASAP.
Thanks

-----Original Message-----
From: Hickman, Herb [mailto:ghickman@ajones.com]
Sent: Thursday, December 14, 2000 10:30 AM
To: Kafchinski, Larry
Cc: DeMars, Claude; Sanders, Ian; 'dgiel@hialoha.net'
Subject: FW: Salinity Testing

Larry,
Here is the Stone & Webster testing requirements. Please forward to the appropriate testing group. We need a price and expected schedule for completing the tests. The current testing does not appear to be sufficient since we are not running both wells at full capacity.
Herb

-----Original Message-----
From: Brian.Gilbertson@swec.com [mailto:Brian.Gilbertson@swec.com]
Sent: Wednesday, December 13, 2000 3:23 PM
To: Hickman, Herb
Cc: linda.cangiano@us.socgen.com; Edwin.Johnson@swec.com
Subject: Re: Salinity Testing

We suggest that the testing procedures should be consistent with those used by Waimea Water Services as summarized in their February 10, 1999 Well Completion Report. The duration of the test was five days (7200 minutes). Water quality and drawdown were sampled with maximum permitted flow (approximately 1150 gpm) at the following intervals (minutes after commencement): 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 2000, 3000, 4000, 5000, 6000, 7000, and 7200. Water samples were analyzed by AECOS Laboratory of Hawaii for chlorides as well as a number of other parameters. I can fax you a copy of the report and laboratory analyses, if necessary.
Water quality samples from each well should be obtained at the intervals discussed above. Our intent is to compare the results of the Waimea Water Services Well Completion Report with corresponding results from the planned test of the two wells, operating simultaneously for the test duration, to determine if there are comparable trends related to concentrations of chlorides and other parameters that are indicative of increasing salinity. If chloride levels increase throughout the test, we suggest that the sampling frequency be increased and the test be extended until the levels reach a steady state condition.
From: TNWRE <tnwre@flex.com>
To: <brian.gilbertson@swec.com>
Sent: Tuesday, December 19, 2000 11:23 AM
Subject: Salinity Testing

Your Dec. 13 email to Herb Hickman regarding pump testing both wells concurrently was forwarded to me. Please call me to discuss. I can also provide information on the recently completed test of Well 2. (608-537-1141).

Sincerely,
Tom Nance
Fax To: Lomy Kofelnicki (715-1801)
From: Tom Aube

Tom Gilbertson, who keeps driving his mind. We can have the test run longer, but your staff will need to continue the 12-hour sample and remote monitoring. Please call (537-1141) to discuss.

TNWRE

From: <Brian.Gilbertson@swec.com>
To: TNWRE <tnwre@flex.com>
Cc: Sanders, Ian <isanders@ajones.com>; <linda.cangiano@us.socgen.com>; <Edwin.Johnson@swec.com>
Sent: Friday, December 22, 2000 7:10 AM
Subject: Re: Salinity Testing

Your fax of December 20th proposes that the salinity test commence on December 22nd and run for a one week period until December 29th. The duration was determined in order to provide data regarding the water resource prior to planned financial closing on December 31st. Since it now appears unlikely that testing and other prerequisites to closing by December 31st will be completed, I suggest that the salinity test may be extended beyond December 29th, if necessary, to obtain more conclusive results.
MEMORANDUM

TO: Larry Katchinski - Hamakua Energy Partners
FROM: Tom Nance
SUBJECT: Extended Pump Test of Well Nos. 1 and 2

At the request of the Stone & Webster, an extended pump test with Well Nos. 1 and 2 running concurrently was conducted. As identified herein, Well 1 refers to the first well completed and Well 2 is the recently completed second well. The test was run for 12 days, starting at 10:35 a.m. on December 22, 2000 and ending at 10:45 a.m. on January 3, 2001. To accommodate the power plant's operating requirements, the test was run in the following manner:

- Well No. 1 had already been running and continued to provide the plant's supply requirements throughout the test.
- Using its permanent pump, Well No. 2 was run for 12 days with its discharge directed into a perimeter drainage ditch.
- Water level and conductivity recorders were installed on both wells to provide a continuous record of trends in salinity.
- At 12-hour intervals, plant operating personnel collected samples and recorded the instantaneous pumping rates and flowmeter totalizer values at each well.

Pumping Rates. Over the 12-day test, the flowrate on Well No. 1 varied in abrupt steps from 225 to 250 GPM on the low end and at 450 GPM on the high end. Over the 12-day period, it averaged 373 GPM. Well No. 2 ran at an essentially constant rate of 890 to 900 GPM against the modest above-ground head of its discharge hose. Its 12-day average flowrate was 893 GPM.

Recorded Water Level. Unvented pressure transducer-data loggers were inserted in both wells shortly before the start of the pump test on December 22nd and retrieved shortly following the end of the test on January 3rd. Water level was recorded at 5-minute intervals. The level in Well No. 1 (on Figure 1) shows abrupt changes in water level in response to the abrupt changes in pumping rates. These changes are superimposed over the tidal variation of the basal lens the well taps. There is also a "noise" in the recorded level due to downhole vibration of the pump.
Memo to: Larry Katchinski  
January 5, 2001 -- 00/010  
Page two

The recorded water level for Well 2 is shown on Figure 2. With its essentially constant pumping rate, a "smoother" water level record with a clearer depiction of the tidal influence was obtained. At about 900 GPM, drawdown in the well was about 1.7 feet.

**Conductivity of the Pumped Water.** Conductivity of both wells was recorded at 5-minute intervals and was also measured for discrete samples taken at 12-hour intervals. Both measures of conductivity for Well 1 are shown on Figure 3 (the discrete sample results are also listed in Exhibit 1). This particular conductivity recorder behaved somewhat erratically through the first six days of the test and somewhat better thereafter. For this well, conductivity of the discrete samples provide a more reliable record. These show a slight rise from about 735 μmhos at the start of the test to about 790 μmhos at the end. This well had been operated continuously for several months prior to the test, presumably achieving a stable salinity. Based on this, it appears that the modest increase during the 12-day test is attributable to the concurrent operation of Well No. 2.

Recorded and discrete sample conductivity of the water pumped by Well No. 2 is shown on Figure 4. There was a significant increase through the test, starting at about 440 μmhos and ending at about 990 μmhos. On this linear presentation of the data, it appears that the conductivity was asymptotically approaching a level of about 1100 μmhos. On a semi-log plot (Figure 5), it appears that 1100 μmhos might be reached in about 45,000 to 50,000 minutes (30 to 35 days) of continuous pumping at about 900 GPM.

**Chloride Concentrations.** Chloride concentrations of the samples taken at 12-hour intervals are compiled in Exhibit 1. Since saltwater intrusion into the basal lens is the reason for the salinity rise during the pump test, the trends in chlorides are essentially identical to the trends in conductivity discussed above.

cc: Brian Gilbertson - Stone & Webster  
    John Pierce - Jones/Burns & McDonnell

Attachments
### EXHIBIT 6: Fine Schedule

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<th>Fines (in $)</th>
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**Total Fines:** $1,000

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**NOTES:**

- Subtotal for each incident - per incident fees.
- Alternate settlement of fees in the case of the fine was charged.
- Subtotal fees - for each incident.
- Subtotal fees: calculated by multiplying (per incident fees) x (no. of incidents).

---

**Fines Calculation:**

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**Alternate Settlement:**

- The alternate settlement of fees in the case of the fine was charged.
- Subtotal fees: calculated by multiplying (per incident fees) x (no. of incidents).

---

**Total Fines:** $1,000

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**Description:**

- For violations of the Water Management Act, where there is a violation, there is a minimum daily fine of $200.
- Where there is a violation, there is a minimum daily fine of $200, which is a minimum additional daily fine of $200.
- Where there is a violation, there is a minimum additional daily fine of $200.

---

**Notes:**

- Where there is a violation, there is a minimum daily fine of $200.
- Where there is a violation, there is a minimum daily fine of $200.
- Where there is a violation, there is a minimum daily fine of $200.
STANDARD PUMP INSTALLATION PERMIT CONDITIONS

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 Enserch 2 Well
(Well No. 6528-03) at 45-500 Lehua Street, Hawaii, TMK 4-5-2: 56, subject to the Hawaii
Well Construction & Pump Installation Standards (1/23/97) which include but are not limited to
the following conditions:

1. The Commission on Water Resource Management (Commission), 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 and staff shall be allowed to inspect
installation activities in accordance with §13-168-15, Hawaii Administrative Rules.

2. The pump installation permit shall be for installation of a 600 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 monthly basis, on forms
provided by the Commission (attached).

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. This permit
or the authorization to pump water from a well shall not constitute a determination of
correlative water rights. 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 sixty (60) days after completion of work.

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

7. The pump installation permit application and staff submittal approved by the
Commission at its September 19, 2001 meeting are 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 pump installation 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.

9. 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.

EXHIBIT 7: Pump Installation Permit Conditions
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Table 1 (SPRD Form 121187)

- **Flow Meter Reading Start:** 
- **Date:** 
- **Time of Day:** 
- **START TEST Date:** 
- **Water level measurements:**
  - □ Steel tape
  - □ Steel level
  - □ Pressure transducer

- **Stale Water Level:** 
- **Start of Test:** 
- **Ref. Pl. for depth to water:** 
- **H. msl:**

- **Pumped Well:** 
- **Distance between Obs. & Pumped Well:**
- **H. msl:**

- **Observation well:**
- **Pumped Well No.**
- **Target:**
- **Gpm:**

Note: (not required for wells producing > 100,000 gpd or 70 gpm)
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<th>Actual Elapsed Time (min)</th>
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<th>Drawdown S (unadjusted to nearest 0.1 ft)</th>
<th>Pumping Rate Q (at least 3 steps) (gpm)</th>
<th>EC (millis)</th>
<th>Cl (mg/l)</th>
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<td>Pumped Well or Observation Well</td>
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<tr>
<td>Suggested Elapsed Time (min)</td>
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Max possible duration, water level or quality did not stabilize for any 24 period

Begin recovery data next page
Flow meter reading at end of pumped period:

1 starting pumping rate Q
2 minimum length of step period of constant pumping rate
3 minimum mandatory Chloride (Cl⁻) measurement/sampling at end of every step
4 Use same ending drawdown figure as start for recovery
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**END TEST** Date: _____________ Time of day: _____________

**ADDITIONAL REMARKS:** ____________________________________________

Person in charge of pump test (print): ________________________________

Signature: ________________________________________________________

The signature above indicates that the data reported on this form is accurate and true to the best of the person's knowledge who operated this pump test.

**Exhibit Q**
### CONSTANT-RATE PUMP TEST DATA

**Pumped Well No.**

**Pumped Well Name**

**Target Q** gpm

**Observation well no.**

**Distance between Obs. & Pumped Well** ft.

**Reference pt. for depth to water** ft. msl

**Static Water Level @ start of test** ft. msl

**Water level measurements by:**
- [ ] steel tape
- [ ] pressure transducer
- [ ] airline

**START TEST**

**Date:**

**Time of day:**

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**Flow Test**

**Flow Meter Reading Start:**

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**END TEST**  Date:  Time of day:  

**ADDITIONAL REMARKS:**  

Person in charge of pump test (print):  

Signature:  

The signature above indicates that the data reported on this form is accurate and true to the best of the person's knowledge who operated this pump test.
STATE OF HAWA'I
COMMISSION ON WATER RESOURCE MANAGEMENT
DEPARTMENT OF LAND AND NATURAL RESOURCES

MONTHLY GROUND WATER USE REPORT

Report Month __________________ Year __________________

INSTRUCTIONS: Please TYPE OR PRINT CLEARLY. Complete this form to report total monthly ground water use, and, if required, other information from each of your well sources. Mail to: Commission on Water Resource Management, P.O. Box 621, Honolulu, HI 96809. For assistance, please call (808) 587-0264.

<table>
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<th>State Well No.</th>
<th>Well Name</th>
<th>Period Begin Date (mm/dd/yy)</th>
<th>Period End Date (mm/dd/yy)</th>
<th>Quantity Pumped (gallons)</th>
<th>Method* of Measurement</th>
<th>Chloride (mg/l)</th>
<th>Temp. (°F)</th>
<th>Non-Pumping Water Level (ft, above msl)**</th>
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* Flow meter, electrical consumption, weir of flume, not metered (estimated).
** Measurement should be taken while pump is NOT running just prior to a pumping cycle; if measurement is taken while pump is running, please indicate so.

Other comments or additional information (e.g. - date and method of chloride measurement; how pumpage amounts are estimated; etc...):

Submitted by (print) __________________________ Title __________________________

Signature __________________________ Date __________ Telephone No. __________________________

EXHIBIT 9: Water Use Report Forms
# Monthly Ground Water Delivery Report

*INSTRUCTIONS:* Please TYPE OR PRINT CLEARLY. Complete this form to report total monthly ground water use and other information from each of your well sources. Mail to: Commission on Water Resource Management, P.O. Box 621, Honolulu HI 96809. For assistance, please call (808) 587-0264.

<table>
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<tr>
<th>State Well No.</th>
<th>Delivery Begin Date (mm/dd/yy)</th>
<th>Delivery End Date (mm/dd/yy)</th>
<th>Quantity Delivered (gallons)</th>
<th>Type of Use*</th>
<th>Field No(s)</th>
<th>Acres Irrigated</th>
<th>Crop Type</th>
<th>Method of Measurement**</th>
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* Use of water code:

AQ: Aquaculture  
C: Commercial  
D: Domestic  
ID: Irrigation - Drip  
IF: Irrigation - Furrow  
IS: Irrigation - Sprinkle

** For estimated values use code:

P: Power consumption  
T: Total time of operation  
D: Comparison with past data  
X: Other means - (indicate method)

Other comments or additional information:

Submitted by (print) _______________________________  Title _______________________________

Signature _______________________________  Date ___________________  Phone No. _______________________________
Mr. Claude DeMars  
Hamakua Energy Partners, LP  
P.O. Box 40  
Honokaa, HI 96727  

Dear Mr. DeMars:

Well Construction Permit  
Enserch #2 Well (Well No. 6528-03)

Enclosed are two (2) copies of your approved Well Construction Permit for the captioned well(s) that authorize well construction activities but excludes installation work for your permanent pump. As part of the Chairperson's approval, the following special conditions were added and are part of your permit under Permit Condition 13:

**Special Conditions**

1. Attached for your information is a copy of the Department of Health's (DOH) review comments. Please note DOH's requirements related to discharge of effluent from well drilling and testing activities.

This permit **does not** authorize work for your permanent pump installation. Approval and issuance of your pump installation permit is contingent upon completed application and information provided to and accepted by Commission staff as required in the Well Construction & Pump Installation Standards (1/23/97) and any special conditions performed under this permit. However, a permanent pump may be installed prior to the permanent pump installation permit issuance in accordance with the Commission's April 15, 1998 Declaratory Ruling No. DEC-ADM98-G5, which states that:

"Permanent pump installation for capacities between 0-70 gpm and where the proposed use is for private individual needs in non-ground-water management areas may be allowed prior to the final pump installation permit issuance. When required as a condition of the well construction permit, subsequent pumping tests shall validate the acceptability of the permanent pump. The permanent pump installed prior to final pump installation permit issuance is subject to removal if the testing shows that a smaller pump is required to reduce the potential of affecting neighboring wells and localized upconing at the applicant's well."

EXHIBIT 10
If you qualify and wish to take advantage of this ruling, please include a written request to install the permanent pump prior to final pump installation permit issuance when you return to us your signed well construction permit.

Please sign and have the contractor sign both permit originals and return one for our files. Also, copies of the aquifer pump test worksheet and the well completion report form are enclosed for your use.

**IMPORTANT** - Drilling work shall not commence until a fully signed permit is returned to the Commission. Please provide all the information in this packet to your well drilling contractor. The permittee, well operator, and/or well owner are responsible for all conditions of the permit. This includes ensuring that the well construction contractor, or other party who constructs the well(s), submits a completed Part I of the Well Completion Report form (enclosed) within sixty (60) days after the well construction work is completed. Be advised that you may be subject to fines of up to $1000 per day for any violations of your permit conditions starting from the permit approval date.

If you have any questions, please call Ryan Imata of the Commission staff at 587-0255 or toll-free at 974-4000, extension 70255.

Aloha,

TIMOTHY E. JOHNS
Chairperson

Enclosures

c: Tom Nance
## FINE CALCULATION

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<tr>
<th>Item No</th>
<th>Description</th>
<th>Finding of violation (min $250)</th>
<th>Occurring in WMA (min $250)</th>
<th>Repeat violation (min $250)</th>
<th>Gravity component</th>
<th>Mitigative component</th>
<th>TOTAL DAILY FINES</th>
<th>Start date</th>
<th>End date</th>
<th>No. of days</th>
<th>Compliance within 30 days (yes/no)</th>
<th>Total duration of violation</th>
<th>Alternate settlement</th>
<th>Subtotal fine for one incident</th>
<th>No. of incidents</th>
<th>Subtotal fines</th>
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### TOTAL FINES

$546,000

### NOTES

- **Item No**: Item No
- **Description**: Description - description of the violation, see submitted text for specific rules violated
- **Finding of violation (min $250)**: Value where there is a violation, there is a minimum daily fine of $250
- **Occurring in WMA (min $250)**: Value where the violation is in a designated WMA, there is a minimum daily fine of $250
- **Repeat violation (min $250)**: Value where the violation is in a designated WMA, there is a minimum daily fine of $250
- **Gravity component**: Value allows for the increase of the daily fine
- **Mitigative component**: Value allows for the decrease of the daily fine
- **TOTAL DAILY FINES**: Sum of columns C through G
- **Start date**: Date calculation of daily fines begins (date of notice of violation, permit approval, or permit fully signed, or violation occurred, or CWRM order)
- **End date**: Date calculation of daily fines ends (date of notice of violation, permit approval, or permit fully signed, or violation occurred, or CWRM order)
- **No. of days**: Date calculation of daily fines
- **Compliance within 30 days (yes/no)**: Compliance of the Commission's notice of violation requirements within 30 days
- **Total duration of violation**: Maximum duration of the violation
- **Alternate settlement (yes/no)**: Alternate settlement in lieu of the daily fine was recommended
- **Subtotal fine for one incident**: Subtotal fine for one incident - per incident fine
- **No. of incidents**: Number of violations that occurred for this investigation
- **Subtotal fines**: Subtotal of fines calculated by multiplying (per incident fine) * (no. of incidents)

**Exhibit 11: Fine Schedule (maximum)**
August 30, 2001

VIA FACSIMILE
AND U.S. MAIL

Linnel T. Nishioka, Deputy Director
Commission on Water Resource Management
P.O. Box 621
Honolulu, Hawaii 96809

Re: Enserch Well Nos. 1 & 2, State Well Nos. 6528-02 & 6528-03

Dear Linnel:

Thank you for your email message last week. I assume that you did receive my written withdrawal of our prior request for contested hearing on Monday which will allow the Commission to consider this matter at its next meeting on September 19. However, I was disappointed that the Department has chosen to stand by its August 15, 2001 recommendations to the Commission but I appreciate your invitation to describe some of our concerns on the statements contained in the staff submittals.

For the record, our firm represents Hamakua Energy Partners L.P. ("HEP") which is the owner of the subject wells and the applicant herein. We do not represent the drilling/pump installation contractors (either Waieli Drilling or Beylik Drilling) for these wells or the general contractor (Jones/Burns & McDonnell Hamakua JV) that was responsible for building the electrical cogeneration facility in Honokaa.
This letter is a brief outline of some of the inaccuracies I referred to in my August 15, 2001 letter. We can provide a more detailed presentation of these points to the Commission at its September 19, 2001 meeting.

Enserch Well No. 1, State Well No. 6528-02:

1. HEP did not contract with Tom Nance and/or Beylik Drilling ("Beylik"). Jones/Burns McDonnell Hamakua Joint Venture ("JBMH"), the general contractor for the project, is the party which actually contracted with the pump installation contractor, Beylik and the other consultants for this well. JBMH was contracted by HEP to design and build the turnkey facility for electrical cogeneration at Honokaa on the Island of Hawai’i, including the development of the two wells to supply water to the power plant, and is a separate entity completely independent from the applicant, HEP. In Beylik’s August 10, 2001 letter to you, Bill Moore is referring to the general contractor, Jones/Burns or JBMH, and not to the owner/applicant, HEP, which played no part in the construction of the plant nor provided any direction to Beylik or the other subcontractors in the development of the wells.

2. There was no transfer in the ownership of the well in December of 1999 to a new permittee. As we earlier described this to you and your staff during our meeting on July 26, 2001, there was a transfer of a general partnership interest within the limited partnership (Encogen Hawaii LP) on or about November of 1999 which resulted in a change of managing partners and the introduction of a new general partner (a subsidiary of TECO Power Services, which is an unregulated subsidiary of TECO, the Tampa Electric Company of Florida). There was a change in the name of the partnership (Hamakua Energy Partners LP) and amendment of the partnership agreement, however, there is no new permittee.

3. We disagree with your staff’s position that HEP was not diligent in carrying out due diligence. Staff appears to have misunderstood the due diligence process we participated in fall of 2000 and further described in our meetings with you. As we stated then, the due diligence begun by Carlsmith Ball in September of 2000 was done in conjunction with post-construction refinancing by the lender John Hancock Group, totally unrelated to changes within the partnership or the management. Permit-related due diligence was, in fact, done by Environmental Consulting & Technologies, Inc. ("ECT"),
a consulting firm brought in by TECO Power Services to review the project permits in late November of 1999, at the time of the change within the partnership. We believe that there was contact between CWRM staff Ryan Imata and ECT in early February of 2000 during which Mr. Imata told ECT that the pump installation permit for Well No. 1 had been issued and was valid until March 29, 2001 and that no other permits were necessary. This "misinformation" was communicated to the general contractor which had only been selected in December of 1999. The permanent pump was installed in June of 2000 by Beylik under the direction of JBHM, the project’s general contractor, in apparent reliance on the ECT confirmation secured from its contact with CWRM staff in February of 2000. Additionally, Mr. John Pierce, the JBHM project director, also recalls a telephone confirmation from CWRM staff that there was a pump installation permit for this well prior to Beylik’s installation of the permanent pump in June of 2000. Therefore, we take exception to the staff’s representation that the applicant failed to take reasonable steps to determine if any additional permits were needed prior to installation of the permanent pump.

4. Your staff appears to take the position that the September 19, 2001 date is the first instance that they "misinformed" anyone as to issuance of the pump installation permit. As set out in the prior section, it is our strong belief that the staff’s representation to Jean Campbell of my office on September 19, 2000 was only one in a series of communications going back to February of 2000.

5. The person who spoke with "Ryan Yamada" was not an employee of the previous applicant. John Pierce, the person who misunderstood Mr. Imata’s name, was an employee of JBHM, the project general contractor. Our evidence confirms their conversation. We dispute the staff’s belief that there were no representations that a pump installation permit was issued. Both the general contractor, JBHM, and the consultant, ECT, received the same incorrect information prior to installation of the permanent pump. Contrary to your statement that your staff’s error has no bearing on why the pump was installed without a permit, we believe that the representations on the existence of a pump installation permit by your staff to the general contractor and the environmental consultant, ECT, was reasonable under the circumstances. Given the magnitude of this project, there is absolutely no reason why the general contractor would not have applied for a pump installation permit had he known one had not been issued prior to the installation of the permanent pump in June of 2000.
6. In the September 22, 2000 phone call, Ryan Imata did not "verify" that no permit had been issued nor did he state that an after-the-fact permit application "was necessary" at that time. In the September 22, 2000 phone call, Mr. Imata stated that he suspected that no permit had been issued but qualified this suspicion with the statement that, had a permit been issued, it would have been sent to the prior representative for the applicant at her Costa Mesa, California address. While I don't know when Tom Nance was retained by JBKH to prepare the application for the after-the-fact pump permit for this well, we spent at least another week to 10 days after Jean Campbell's telephone conference with Ryan Imata on September 22, 2000, trying to track down any documents that may have been sent to or received by the applicant's prior managing partner in Texas, its representative, Jody Allione in California, or to the current partners in North Carolina or Florida, as well as the project engineers/general contractors in Kansas City. We do not believe that the parties have been dilatory in submitting the subject application on October 25, 2000 where this well was drilled and developed by contractors and consultants no longer attached to the project and none of the background information was readily available. There is another discrepancy in your calculation of when the application was deemed complete (December 1, 2000). You note that the submission of part 2 of the Well Completion Report is required before an application is considered complete, however, I could find no published requirement for this. I was concerned that this may be a practice of the agency that has not been adopted pursuant to HAPA, and thus subject to arbitrary application and interpretation. We disagree with your conclusion that we have not acted in good faith in seeking compliance in this matter.

Enserch Well No. 2, State Well No. 6528-03:

1. The alleged violation of Well No. 2 cannot be a repeat violation because the Commission has not yet found HEP in violation for any other permit applications.

2. The pump installed in late December of 2000 was not installed at that time as the permanent pump. The pump, which would later become the permanent pump, was installed strictly for testing purposes.

3. The staff's failure to acknowledge the lender's demands for extended pump testing is unreasonable. Most of the conversations regarding this last-minute
demand for extended pump testing were conducted by telephone with Stone & Webster, the lender’s engineering firm, with only minimal email documentation of these conversations. The email correspondence submitted to the staff represents the minimal documentation that was made of this process. In addition, the staff’s unwillingness to acknowledge Stone & Webster because it is a representative of the lender is equivalent of refusing to acknowledge Carlsmith Ball or Tom Nance as representatives of the applicant or the general contractor, a position the staff has never taken. The staff has never requested that HEP identify the lender itself. The applicant submitted the results of the extended pump testing promptly upon the request of the staff.

4. There is no published requirement for the submittal of both Well Completion Report parts 1 & 2 for an after-the-fact pump installation permit application. In fact, our review of past Commission actions on after-the-fact permit applications suggests that the requirement that both Well Completion Reports parts 1 & 2 be submitted for an after-the-fact application is not standard agency procedure.

If you have any questions, please contact me.

Sincerely,

Tim Lui-Kwan

1426620.1.052656-00004

cc: Yvonne Izu, Deputy Attorney General
Larry Kafchinski, Hamakua Energy Partners L.P.
Larry Fulton, J.A. Jones Ventures
Paul Carpinone, TECO Power Services
Mr. Robert A. Glascott, Jr.
Project Manager
Beylik Drilling, Inc.
91-259A Olai Street
Kapolei, Hawaii 96707

Dear Mr. Glascott,

Re: Enserch Well No. 2

This letter is in response to your letter dated August 21, 2001 offering certain clarifications of Beylik/Roscoe Moss Hawaii's involvement in Enserch Well No. 2. In your letter you state that Beylik only installed the permanent pump and did not hook up the well head, electrical service or discharge piping that Beylik claims was done by others after Beylik left the job site.

Although we appreciate your clarification, from the documentation we have in the file including well construction report, part II received February 14, 2001 and the letter from you dated March 16, 2001, it does appears that Beylik at that time considered itself the pump installation contractor. At no time prior to your letter dated August 21, 2001 was any mention made of another entity finishing the installation of the pump. Also, staff considers the installation of a pump into the casing pump installation work rather than the connection of appurtenances, such as connection to well head, electrical service, discharge pipe, etc. Otherwise, changes in such appurtenances to the operation of the pump would require additional reports/permits, etc. Therefore, we do not believe the Commission erred in considering Beylik the pump installation contractor for Enserch Well No. 2 and assessing Beylik a fine for failure to obtain a pump installation permit prior to the installation of the permanent pump.

In closing, thank you for your letter dated August 21, 2001. As per the Commission's order, please remit a check in the amount of $6,944 by September 14, 2001. If you have any questions or wish to discuss this matter further, please contact the undersigned at 587-0214.

Very truly yours,

LINNEL T. NISHIOKA
Deputy Director

LTN:fc
FACSIMILE TRANSMITTAL

To: Mr. Robert Glascott, Jr.  
Company: Beylik Drilling Inc.  
Fax Number: 682-5866  
Phone Number: 682-5554

From: Linnel Nishioka  
Date: September 6, 2001  
Pages Including Header: 2  
Subject: Enserch Well No. 2

Notes/Comments:  
The attached hard copy original letter will be mailed to you also.
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<th>IDENTIFICATION</th>
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COMMISSION ON WATER RESOURCE MANAGEMENT

FROM: LINNEL
DATE: AUG 23 2001
SUSPENSE DATE: ____________

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Since they have 30 days

why didn't they say this at work?
why?
- They were confused - that's what Bob Smolenki told me.

please give me the file to help draft the response.

- Judi

maybe advise them to pay, if they haven't already
August 21, 2001

Dept. of Land & Natural Resources
Commission on Water Resource Mgmt.
P.O. Box 621
Honolulu, HI 96809

Attn: Ms. Linnel T. Nishioka

Subj: Enserch Well No. 2

Dear Ms. Nishioka:

Pursuant to our meeting on August 15, 2001 with the Water Commission and post meeting conversations with our Counsel Bob Smolenski, we offer these clarifications regarding Beylik Drilling’s involvement with the testing of Enserch Well No. 2.

BDI was responsible by contract for performing the original test pump procedures for Well No. 2 during a period beginning December 11, 2000 and ending two days later on December 13, 2000.

To do this we installed a lineshaft engine driven test pump in the well to develop the well and to acquire the required hydraulic information. After this was completed BDI removed all of its equipment and personnel from the site.

When an additional 14-day pump test was called for we were directed to install as a test pump, the pump furnished by J.A. Jones. Our scope of work was limited to installing the J.A. Jones supplied pump and associated column equipment in the well for the additional test period for that purpose. The pump discharge head was subsequently landed on an existing sole plate. BDI then demobilized all of its equipment and personnel from the site. This occurred on December 20, 2000. It must be noted that BDI did not hook up at the well head, electrical service or discharge piping. This work, if done, was done by others after BDI had moved off the Site. (See notes on Page 2)

Clarification: After the completion of the original test on December 13, 2000 BDI did not participate in or provide labor or subsequent services other than installing the Owner supplied pump on December 20, 2000 for the purpose of the additional 14-day test which was performed by other parties, not BDI.
We felt that this distinction as well as that described above had not been clearly stated at the August 15th meeting. Thank you for your cooperation and patience in this matter. If you should require further information or have any questions regarding the above, please do not hesitate to call.

Sincerely,

Robert A. Glascott, Jr.
Project Manager

RAG:Jaf

Note: 1. J.A. Jones/Hamakua Joint Venture - Site Contractor.
2. The circumstances regarding the availability of the customer supplied pump are adequately described in previous correspondence.
August 30, 2001

VIA FACSIMILE
AND U.S. MAIL

Linnel T. Nishioka, Deputy Director
Commission on Water Resource Management
P.O. Box 621
Honolulu, Hawaii 96809

Re: Enserch Well Nos. 1 & 2, State Well Nos. 6528-02 & 6528-03

Dear Linnel:

Thank you for your email message last week. I assume that you did receive my written withdrawal of our prior request for contested hearing on Monday which will allow the Commission to consider this matter at its next meeting on September 19. However, I was disappointed that the Department has chosen to stand by its August 15, 2001 recommendations to the Commission but I appreciate your invitation to describe some of our concerns on the statements contained in the staff submittaIs.

For the record, our firm represents Hamakua Energy Partners L.P. ("HEP") which is the owner of the subject wells and the applicant herein. We do not represent the drilling/pump installation contractors (either Waieli Drilling or Beylik Drilling) for these wells or the general contractor (Jones/Burns & McDonnell Hamakua JV) that was responsible for building the electrical cogeneration facility in Honokaa.
This letter is a brief outline of some of the inaccuracies I referred to in my August 15, 2001 letter. We can provide a more detailed presentation of these points to the Commission at its September 19, 2001 meeting.

Enserch Well No. 1, State Well No. 6528-02:

1. HEP did not contract with Tom Nance and/or Beylik Drilling ("Beylik"). Jones/Burns McDonnell Hamakua Joint Venture ("JBMH"), the general contractor for the project, is the party which actually contracted with the pump installation contractor, Beylik and the other consultants for this well. JBMH was contracted by HEP to design and build the turnkey facility for electrical cogeneration at Honokaa on the Island of Hawai‘i, including the development of the two wells to supply water to the power plant, and is a separate entity completely independent from the applicant, HEP. In Beylik’s August 10, 2001 letter to you, Bill Moore is referring to the general contractor, Jones/Burns or JBMH, and not to the owner/applicant, HEP, which played no part in the construction of the plant nor provided any direction to Beylik or the other subcontractors in the development of the wells.

2. There was no transfer in the ownership of the well in December of 1999 to a new permittee. As we earlier described this to you and your staff during our meeting on July 26, 2001, there was a transfer of a general partnership interest within the limited partnership (Encogen Hawaii LP) on or about November of 1999 which resulted in a change of managing partners and the introduction of a new general partner (a subsidiary of TECO Power Services, which is an unregulated subsidiary of TECO, the Tampa Electric Company of Florida). There was a change in the name of the partnership (Hamakua Energy Partners LP) and amendment of the partnership agreement, however, there is no new permittee.

3. We disagree with your staff’s position that HEP was not diligent in carrying out due diligence. Staff appears to have misunderstood the due diligence process we participated in fall of 2000 and further described in our meetings with you. As we stated then, the due diligence begun by Carlsmith Ball in September of 2000 was done in conjunction with post-construction refinancing by the lender John Hancock Group, totally unrelated to changes within the partnership or the management. Permit-related due diligence was, in fact, done by Environmental Consulting & Technologies, Inc. ("ECT"),
a consulting firm brought in by TECO Power Services to review the project permits in late November of 1999, at the time of the change within the partnership. We believe that there was contact between CWRM staff Ryan Imata and ECT in early February of 2000 during which Mr. Imata told ECT that the pump installation permit for Well No. 1 had been issued and was valid until March 29, 2001 and that no other permits were necessary. This "misinformation" was communicated to the general contractor which had only been selected in December of 1999. The permanent pump was installed in June of 2000 by Beylik under the direction of JBMH, the project’s general contractor, in apparent reliance on the ECT confirmation secured from its contact with CWRM staff in February of 2000. Additionally, Mr. John Pierce, the JBMH project director, also recalls a telephone confirmation from CWRM staff that there was a pump installation permit for this well prior to Beylik's installation of the permanent pump in June of 2000. Therefore, we take exception to the staff’s representation that the applicant failed to take reasonable steps to determine if any additional permits were needed prior to installation of the permanent pump.

4. Your staff appears to take the position that the September 19, 2001 date is the first instance that they "misinformed" anyone as to issuance of the pump installation permit. As set out in the prior section, it is our strong belief that the staff’s representation to Jean Campbell of my office on September 19, 2000 was only one in a series of communications going back to February of 2000.

5. The person who spoke with "Ryan Yamada" was not an employee of the previous applicant. John Pierce, the person who misunderstood Mr. Imata’s name, was an employee of JBMH, the project general contractor. Our evidence confirms their conversation. We dispute the staff’s belief that there were no representations that a pump installation permit was issued. Both the general contractor, JBMH, and the consultant, ECT, received the same incorrect information prior to installation of the permanent pump. Contrary to your statement that your staff’s error has no bearing on why the pump was installed without a permit, we believe that the representations on the existence of a pump installation permit by your staff to the general contractor and the environmental consultant, ECT, was reasonable under the circumstances. Given the magnitude of this project, there is absolutely no reason why the general contractor would not have applied for a pump installation permit had he known one had not been issued prior to the installation of the permanent pump in June of 2000.
6. In the September 22, 2000 phone call, Ryan Imata did not "verify" that no permit had been issued nor did he state that an after-the-fact permit application "was necessary" at that time. In the September 22, 2000 phone call, Mr. Imata stated that he suspected that no permit had been issued but qualified this suspicion with the statement that, had a permit been issued, it would have been sent to the prior representative for the applicant at her Costa Mesa, California address. While I don't know when Tom Nance was retained by JBMH to prepare the application for the after-the-fact pump permit for this well, we spent at least another week to 10 days after Jean Campbell's telephone conference with Ryan Imata on September 22, 2000, trying to track down any documents that may have been sent to or received by the applicant's prior managing partner in Texas, its representative, Jody Allione in California, or to the current partners in North Carolina or Florida, as well as the project engineers/general contractors in Kansas City. We do not believe that the parties have been dilatory in submitting the subject application on October 25, 2000 where this well was drilled and developed by contractors and consultants no longer attached to the project and none of the background information was readily available. There is another discrepancy in your calculation of when the application was deemed complete (December 1, 2000). You note that the submission of part 2 of the Well Completion Report is required before an application is considered complete, however, I could find no published requirement for this. I was concerned that this may be a practice of the agency that has not been adopted pursuant to HAPA, and thus subject to arbitrary application and interpretation. We disagree with your conclusion that we have not acted in good faith in seeking compliance in this matter.

Enserch Well No. 2, State Well No. 6528-03:

1. The alleged violation of Well No. 2 cannot be a repeat violation because the Commission has not yet found HEP in violation for any other permit applications.

2. The pump installed in late December of 2000 was not installed at that time as the permanent pump. The pump, which would later become the permanent pump, was installed strictly for testing purposes.

3. The staff's failure to acknowledge the lender's demands for extended pump testing is unreasonable. Most of the conversations regarding this last-minute
demand for extended pump testing were conducted by telephone with Stone & Webster, the lender’s engineering firm, with only minimal email documentation of these conversations. The email correspondence submitted to the staff represents the minimal documentation that was made of this process. In addition, the staff’s unwillingness to acknowledge Stone & Webster because it is a representative of the lender is the equivalent of refusing to acknowledge Carlsmith Ball or Tom Nance as representatives of the applicant or the general contractor, a position the staff has never taken. The staff has never requested that HEP identify the lender itself. The applicant submitted the results of the extended pump testing promptly upon the request of the staff.

4. There is no published requirement for the submittal of both Well Completion Report parts 1 & 2 for an after-the-fact pump installation permit application. In fact, our review of past Commission actions on after-the-fact permit applications suggests that the requirement that both Well Completion Reports parts 1 & 2 be submitted for an after-the-fact application is not standard agency procedure.

If you have any questions, please contact me.

Sincerely,

Tim Lui-Kwan

cc: Yvonne Izu, Deputy Attorney General
Larry Kachinski, Hamakua Energy Partners L.P.
Larry Fulton, J.A. Jones Ventures
Paul Carpinone, TECO Power Services
FACSIMILE TRANSMITTAL

To: Jean Campbell
Company: Carlsmith Ball
Fax Number: 523-0842
Phone Number:

From: Ryan Imata
Date: August 16, 2001
Pages Including Header: 5
Subject: Contested Case Hearing Request

Notes/Comments:

Disregard Last Fax
PETITION REQUESTING A CONTESTED CASE HEARING BEFORE THE
COMMISSION ON WATER RESOURCE MANAGEMENT

NOTE: THIS PETITION IS TO BE FILED IN PERSON OR MAILED AND
POSTMARKED WITHIN 10 DAYS OF THE PUBLIC HEARING OR
COMMISSION MEETING AT WHICH THE REQUEST FOR A CONTESTED
CASE HEARING WAS MADE.

(Please submit an original and 3 copies, pursuant to HAR 13-167-25(c)).

IF MAILED, SEND TO: Commission on Water Resource Management
P.O. Box 621
Honolulu, Hawaii 96809
Phone: 587-0225 Toll Free No.: 1-800-468-4644 Fax: 587-0219

IF DELIVERED:
Commission on Water Resource Management
1151 Punchbowl St., Rm. 227, Kalanimoku Bldg.
Honolulu, HI 96813

Please provide the following information:
(If there is not sufficient space to fully answer any of the items noted below, please use additional sheets of paper)

1. NAME: ____________________________________________
   (If you are representing an organization, please attach the resolution, meeting minutes, or other
evidence that provides your authority.)

2. ADDRESS: _________________________________________
   PHONE: _____________________  FAX: ___________________

3. ATTORNEY OR CONTACT PERSON: _______________________

4. ADDRESS: _________________________________________
   PHONE: _____________________  FAX: ___________________

5. SUBJECT MATTER: ____________________________________

6. DATE OF PUBLIC HEARING/COMMISSION MEETING: ________________

7. WHAT IS THE LEGAL AUTHORITY UNDER WHICH THE PROCEEDING, HEARING
OR ACTION IS TO BE HELD OR MADE (CITE APPLICABLE SECTION OF
CONSTITUTION, STATUTES, OR ADMINISTRATIVE RULES):

   ______________________________________________________
   ______________________________________________________
   ______________________________________________________
   ______________________________________________________

8. ARE YOU HAWAIIAN?_________________________________

5/21/96
PETITION REQUESTING A CONTESTED CASE HEARING BEFORE
THE COMMISSION ON WATER RESOURCE MANAGEMENT

9. WHAT IS THE TAX MAP KEY OF THE PROPERTY ON WHICH YOU RESIDE?

10. WHAT IS THE TAX MAP KEY OF THE PROPERTY CONSIDERED IN THIS ISSUE?

11. WHAT IS THE TAX MAP KEY OF THE PROPERTY OR PROPERTIES WHICH YOU
OWN IN THE VICINITY OF THE PROPERTY CONSIDERED IN THIS ISSUE?

12. WHAT, IF ANY, ACTIVITIES HAVE YOU ENGAGED IN ON THE PROPERTY
CONSIDERED IN THIS ISSUE?

13. WHAT IS THE NATURE AND EXTENT OF YOUR INTEREST THAT MAY BE
AFFECTED?
PETITION REQUESTING A CONTESTED CASE HEARING BEFORE
THE COMMISSION ON WATER RESOURCE MANAGEMENT

14. WHAT IS THE DISAGREEMENT, DENIAL, OR GRIEVANCE WHICH YOU ARE
CONTESTING?

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15. WHAT ARE THE BASIC FACTS AND ISSUES?

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5/21/96
PETITION REQUESTING A CONTESTED CASE HEARING BEFORE
THE COMMISSION ON WATER RESOURCE MANAGEMENT

16. WHAT IS THE RELIEF THAT YOU SEEK OR THAT YOU DEEM YOURSELF
ENTITLED?

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17. IDENTIFY ANY AND ALL OTHER PERSONS WHO MAY OR WILL BE AFFECTED
BY THE RELIEF WHICH YOU SEEK:

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The above-named person hereby requests and petitions the Commission on Water Resource Management for a Contested Case Hearing in the matter described above.

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Name (Print)                  Signature                 Date

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August 15, 2001

BY HAND DELIVERY

Gilbert Coloma-Agaran  
Chairperson  
Commission on Water Resource Management  
P.O. Box 621  
Honolulu, Hawaii 96809

Re: Request for Contested Case Hearing Regarding After-the-Fact Pump Installation Permits for Enserch Well Nos. 1 & 2, State Well Nos. 6528-02 & 6528-03 by Permitee: Hamakua Energy Partners, LP

Dear Mr. Coloma-Agaran:

Permitee Hamakua Energy Partners, LP ("HEP") respectfully requests that the Commission on Water Resource Management (the "Commission") grant HEP’s request for a contested case hearing in the matter of the After-the-Fact Pump Installation Permits for two pumps: Enserch Well No. 1, State Well No 6528-02 and Enserch Well No. 2, State Well No. 6528-03. These matters are currently scheduled for action on the Commission’s agenda for August 15, 2001 although we have only received the Staff Submittals ("submittals") regarding the subject applications late last week by fax.

These submittals, which include the Department’s recommendations for the imposition of fines pursuant to the penalty guidelines (G01-01) adopted by the Commission on April 18, 2001, contain factual and legal inaccuracies. The subject
applications have been improperly delayed and further made subject to agency policies which are either not promulgated pursuant to the Hawaii Administrative Procedures Act ("HAPA"), or are, otherwise, not consistent with the applicable state law.

HEP’s request is brought pursuant to Section 13-167-52 of the Rules of Practice and Procedure for the Commission on Water Resource Management. HEP is entitled to a contested case hearing under the State Water Code, Haw. Rev. Stat. § 174C-12. HEP asks that the Commission provide, by way of a contested case hearing, an opportunity to be heard and present evidence on the matter of its applications for pump installation permits prior to the findings of violation and imposition of civil penalties recommended by the Department.

The Department has recommended similar findings of violation and imposition of fines against the pump installation contractors, Beylik Drilling/Roscoe Moss ("Beylik"). However, Beylik is represented by independent counsel and is proceeding separately of HEP’s request for a contested case in these matters.

For the foregoing reasons, HEP respectfully requests that the Commission grant this request for a contested case hearing.

Thank you for your time and attention in this matter.

Very truly yours,

Tim Lui-Kwan

cc: Larry Kaschinsky, Hamakua Energy Partners  
William Moore, Beylik Drilling/Roscoe Moss  
Robert J. Smolenski, Esq., Attorney for Beylik Drilling
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**TOTAL FINES**

$15,872

**NOTES**

- **Item No.**
- **Description**: description of the violation, see submittal text for specific rules violated
- **Finding of violation (min. $250)**: where there is a violation, there is a minimum daily fine of $250
- **Occurring in WMA (min. $250)**: When the violation is in a designated Water Management Area, there is a minimum additional daily fine of $250
- **Repeat violation (min. $250)**: When the violator has committed violations in the past, there is a minimum additional daily fine of $250
- **Gravity component**: allows for the increase of the daily fine
- **Mitigative component**: allows for the decrease of the daily fine
- **TOTAL DAILY FINES**: the sum of the values in columns C through G
- **Start date**: the date where calculation of daily fines begins (date of notice of violation, or permit approval, or permit fully signed, or violation occurred, or CWRM order)
- **End date**: the date of the end of the violation or latest CWRM meeting or completed permit application
- **Days tolled**: the amount of days that are tolled, to be subtracted from the total duration of the violation
- **No. of days**: calculated between start and end dates and subtracting the tolled days
- **Compliance within 30 days (yes/no)**: if the applicant complies with the Commission staff's notice of violation requirements within 30 days
- **Total duration of violation**: if there was compliance with staff notice of violation within 30 days, the duration shall be one (1) day. If there was no compliance with staff notice of violation within 30 days, the duration shall be the total days of the violation. However, gravity circumstances can increase the total days even if the 30 day compliance is met.
- **Alternate settlement (yes / no)**: an alternate settlement in lieu of the daily fine was recommended
- **Subtotal fine for one incident**: per incident fine
- **No. of incidents**: total of violations that occurred for this investigation
- **Subtotal fines**: the subtotal of fines, calculated by multiplying (per incident fine) * (no. of incidents)

Bevlik Fine Recalculation
August 10, 2001

Ms. Linnel T. Nishioka
Deputy Director
Commission on Water Resource Mgmt.
P.O. Box 621
Honolulu, HI 96809

Ref: Enserch Well No. 6528-02
Pump Installation Permit Application

Dear Ms. Nishioka:

This letter is written pursuant to our meeting on July 26, 2001 to summarize recollection of the events and circumstances which lead to our firm providing pump services for the installation of a customer supplied pump in Well No. 1 herein described as Enserch Well No. 6528-02.

Beylik Drilling, Inc.'s involvement in this matter actually began in late 1999 when Jones/Burns and McDonnell Hamakua Joint Venture Partners Site Representative Dennis Sturdavant requested Beylik Drilling to submit a quotation to drill Enserch Well No. 6528-02. No. 2

These negotiations began as a turnkey project with Beylik Drilling, Inc. providing consulting services. However, in subsequent conversations Jones/Burns & McDonnell personnel decided to manage that aspect of the job internally subsequently Beylik Drilling, Inc. was provided a set of plans and specifications with which to prepare its proposal and then submitted.

Subsequently Jones/Burns & McDonnell Hamakua Joint Venture notified Beylik Drilling, Inc. that it intended to award the well drilling work to Beylik Drilling, Inc., thereafter a number of telephone and fax messages were exchanged. Eventually Jones/Burns & McDonnell issued a contract as well as a tentative notice to proceed to Beylik Drilling, Inc.

It is important to note at this time that the submitted contract was designed among other things to link its subcontractors and to some extent materialman to the contract which Jones/Burns & McDonnell Hamakua Joint Venture had with its client Hawaiian Electric Company.
However the contract contained many unacceptable provisions among them were extensive liquidated damage language, subcontractor responsibilities, performance payments as well as edited standard contract boiler plate.

Through direct negotiation said contract was subsequently modified to accommodate Beylik Drilling, Inc.'s concerns, these negotiations were handled largely by phone, fax messages with Jones/Burns & McDonnell Hamakua Joint Venture personnel located at their South Carolina Office. These negotiations were facilitated by its local construction representative Dennis Sturdivant. This concluded the business arrangements, the contract was executed after which insurance and indemnification matters were satisfied as well as the contract bonding provisions. About this same time Beylik Drilling, Inc. was asked by Jones/Burns & McDonnell Hamakua Joint Venture to prepare and submit a proposal to supply and outfit Enserch Wells No. 6528-02, 03 with pumps and pertinent equipment based on specifications provided by Beylik Drilling, Inc.

A proposal was prepared and submitted. However, after submitting this proposal to the Jones/Burns South Carolina office, Beylik Drilling, Inc. was notified that this proposal was “over budget” and that Jones/Burns after some price shopping and specification modification decided to purchase a specification modified pump from a mainland supplier. Subsequently Beylik Drilling, Inc. withdrew its design/supply and install proposal thus concluding proposal responsibilities including matters pertaining to permitting. In due time beginning in January 2001 Beylik Drilling, Inc. was asked by Jones/Burns Civil Superintendent Dennis Sturdivant to submit a quotation to install the contractor furnished submersible pumps in Enserch Wells No. 1 and 2. It was noted by Jones/Burns personnel that time and budget were of the essence, subsequently a plan was developed to coordinate the pump installation to coincide with the completion of the drilling of Enserch Well No. 2, there of course is no question in anyone’s mind that Jones/Burns & McDonnell Hamakua Joint Venture intended to outfit both wells with the specified pumps.

It was Beylik Drilling, Inc.’s understanding at that time and continuing throughout the duration of its involvement which included prior contract negotiations that all permit preparations and costs thereof would be handled by Jones/Burns who I understood at that time had specific assigned personnel for this purpose.

Herein lies the base of the problem, in the case of Enserch Well No. 2 which was drilled by others, it was assumed by others as well as myself that a pump installation permit had been applied for by that entity and that permit thus granted was still valid. However, it must be noted that this premise to be effective required verification. These conversations began in January 2000 and more or less ended by March 2000, Beylik Drilling was very active constructing
Enserch Well No. 6528-03, Jones/Burns & McDonnell Hamakua Joint Venture proceeded to design and construct the power plant, it was presumed by Beylik Drilling, Inc. that all administrative matters were being processed through its administrative unit with local consultants.

By May 2000 it became apparent that the drilling of Enserch Well No. 6528-03 would not be completed as previously scheduled and Beylik Drilling, Inc. was notified by Jones/Burns personnel to mobilize labor and equipment to install its pump in the Enserch Well No. 6528-02. Installation of the submersible pump in Enserch No. 6528-03 was scheduled at a later date and the work was subsequently done using nearly the same dialog which is herein described and supplied in correspondence and explanations submitted by Hamakua Partners thru its Agent Carlsmith Ball.

Conclusions:

It is our testimony that at no time during this period of construction and negotiation did Jones/Burns & McDonnell Hamakua Joint Venture personnel suggest in any way that any rules, regulations, laws, procedures or protocol be omitted, violated or ignored.

Additionally, my role with Beylik Drilling, Inc. as its RME, having held a Contractor’s license with various “C” specialties for a period in excess of 30 years was not unaware of established permitting process established by the Commission on Water Resource Management. This administrative error developed pretty much as described in this report as well as the reports submitted by Hamakua Joint Venture, that is Beylik Drilling, Inc. proceeded with its work based on the understanding and assumptions which are outlined in this report. Likewise Hamakua Joint Ventures proceeded administratively as described in their letters of explanation. Each of the entities relying on communication and information which in the end analysis was misunderstood.

All of the above matters were brought to Beylik Drilling’s attention when it became necessary to file an “after the fact” Pump Installation for Enserch Well No. 6528-03 which the Commission on Water Resource Management is aware and has all documents, explanations and justifications. However the matter of pump installation permit for Enserch Well No. 6528-02 came to light when Hamakua Joint Venture’s legal team in the process of concluding construction closeout matters were unable to locate in its files the required permit documentation and subsequently brought that to the attention of the Commission on Water Resource Management. The process to date has been an involved process and I might add and expensive process to bring this matter to a fair and reasonable conclusion. The matter of pump installation permits were inadvertently overlooked for all of the reasons supplied in this report as well as the report supplied by Hamakua Joint Venture
Ms. Linnel T. Nishioka  
August 10, 2001  
Page 4

Beylik Drilling is particularly chagrined and disappointed to be caught up in this administrative tangle, as its RME, I am equally disappointed that the system resulted in the muted communications herein described. It goes without saying we are sorry for the inconvenience, trouble and expense this matter has caused all involved and ask the Commission in its deliberations to treat this as an administrative error which has subsequently been corrected and to accept Beylik Drilling, Inc.’s testimony that proper steps have been taken to bring Beylik Drilling’s organization administrative procedures in compliance with any matter regarding the Commission and Water Resource Management Rules and Regulations.

Sincerely,

William C. Moore  
Vice President

WCM:laf
State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources
APPLICATION FOR PERMIT
10-20-00
99-92

APPLICANT INFORMATION: (Fill out all areas, if applicable, and place a check next to the primary contact)

1. (a) WELL OWNER: Homalux Energy Partners
   Contact Person: Larry Kachinski
   Address: P.O. Box 40
   Honolulu, Hawaii 96827
   Phone: 808-775-1711
   Fax: 808-775-1414

   (b) LAND OWNER: Homalux Energy Partners
   Contact Person: Larry Kachinski
   Address: P.O. Box 40
   Honolulu, Hawaii 96827
   Phone: 808-775-1711
   Fax: 808-775-1414

   (c) CONTRACTOR: Homalux Energy Partners
   Contact Person: Larry Kachinski
   Address: P.O. Box 40
   Honolulu, Hawaii 96827
   Phone: 808-775-1711
   Fax: 808-775-1414

WELL & PUMP INFORMATION: (Please fill in the diagram on the back of this form.)

2. WELL NAME: Homalux Energy Partners
   Address: 65-300 Kealakehe Pl, Kailua, HI 96734
   Tax Map Key: R-9-A-02-06
   Zoning: -
   Permit No.: 6528-02

   ATTACH THE RELEVANT PORTION OF (a) A 7.5-MINUTE SERIES UGS TOPOGRAPHIC MAP (JAVA ISLAND 1:24,000) AND INCLUDE THE NAME OF THE GRANDEE, AND (b) A PROPERTY TAX MAP SHOWING WELL LOCATION REFERENCED TO ESTABLISHED PROPERTY BOUNDARIES.

3. PROPOSED WORK:
   (check all that apply)
   - Construct New Well
   - Modify Existing Well
   - Install New Pump
   - Modify Pump
   - Abandon/Seal
   - State Well No.: 6528-02

   CONSTRUCTION:
   - Drilled
   - Dug
   - Shaft
   - Tunnel
   - Is this well part of a battery of wells? Yes No
   - (Please describe: See Remarks Below)

5. PROPOSED PUMP INFORMATION:
   Rated Pump Capacity: 600 gal/min

   Pump Type (check one):
   - Deep Well Turbine
   - Submersible (100 HP)
   - Centrifugal

   Motor Type (check one):
   - Propeller
   - Reciprocating
   - Treadmill
   - Industrial (Power Plant/Cooling)

   Location of Water Intake:
   - Domestic (individual, noncommercial water system)
   - Irrigation (crop)
   - Military

   Legal Requirements:
   - CDIP
   - SMAP
   - DEC
   - EA
   - None
   - Other (explain):

   Other Important Information:

6. REMARKS, EXPLANATIONS:

   Wells 1 and 2 (Nos. 6528-02 & 05) will be utilized with 600 GPM pumps and operated concurrently to supply the power plant.

   I understand that approval of this application connotes the following conditions: 1) the proposed work is to be completed within 2 years of the approval date; 2) the contractor shall submit to the Commission a well completion/satisfaction report within 60 days after the completion date of the proposed work; 3) the owner-user of the water shall be liable to the Commission, at any time, for such compliance and the Commission reserves the right to demonstrate that the well is in compliance with the standards established for its operation.
State of Hawaii  
COMMISSION ON WATER RESOURCE MANAGEMENT  
Department of Land and Natural Resources  
APPLICATION FOR PERMIT  
1-9-01  
99-92

**WELL CONSTRUCTION and/or**  
**PUMP INSTALLATION**

**APPLICANT INFORMATION:**  
(Please fill out and sign below, and place a check next to the primary contact)

1. **WELL OWNER:**  
Hula Energy Partners  
Contact Person: Larry Kachinski  
Phone: 808-775-1711

   - **Mailing Address:**  
     P.O. Box 40, Honolulu, Hawaii 96827
   - **Fax:** 808-775-1414
   - **Phone:** 808-775-1711

2. **Contractor:**  
Roscoe Moss Hawaii  
Contact Person: Bill Moore  
Phone: 682-5554

   - **Mailing Address:**  
     31-259-A Alii Street, Kapolei, Hawaii 96707
   - **Fax:** 682-5858
   - **Phone:** 682-5554

**WELL & PUMP INFORMATION:**  
(please fill in the diagram on the back of this form)

2. **WELL NAME:**  
ENSRCH Well No. 2  
Island:  
Hawaii

   - **Address:**  
     45-300 Lihue St., Honolulu 96827
   - **Tax Map Key:**  
     4 5 02 56

3. **PROPOSED WORK:**  
- Construct New Well
- Install New Pump
- Modify Existing Well
- Modify Pump
- Abandon/Seal

   - **State Well No.:**  
     6528-03

4. **CONSTRUCTION:**  
- Drilled
- Cased
- Lined
- Drilled

   - **Is this well part of a battery of wells?** Yes/No  
     (Please describe)

5. **PROPOSED PUMP INFORMATION:**  
   - **Rated Pump Capacity:** 600 gallons per minute

6. **PROPOSED USE:**  
- Municipal (including retail, service, etc.)  
- Industrial
- Domestic (individual, non-commercial water system)  
- Irrigation  
- Military

7. **PROPOSED MOUNT OR WITHDRAWAL:**  
- Up to 864,000 gallons per day

8. **METHOD OF FLOW MEASUREMENT:**  
- Pitotmeter
- End-tape
- Discharge
- Onsite
- Other:

9. **LEGAL REQUIREMENTS:**  
- COE  
- SNAP  
- EIS  
- EA

   - **Remarks, Explanations:**  
     Wells 1 and 2 (Nos. 6528-02 & 03) will be outfitted with 600 GPM pumps and operated concurrently to supply the power plant.

   - **Well Owner:**  
     Hula Energy Partners  
     Contact Person: Larry Kachinski  
     Phone: 808-775-1711

   - **Contractor:**  
     Roscoe Moss Hawaii  
     Contact Person: Bill Moore  
     Phone: 682-5554

   - **Date:** 12/26/10

For official use only  
Latitude  
Longitude  
State Well No.
Fax

To: Bob Glascott
From: Derrick Billena

Fax: 808-682-5866
Pages: 6 (including cover)

Phone: 808-682-5554
Date: 03/12/01

Re: Well Completion Reports
CC: Lanny Herrel

☐ Urgent ☐ For Review ☐ Please Comment ☐ Please Reply ☐ Please Recycle

Aloha Bob:

Pursuant to our telecon this morning, following is the letter our Owner received regarding the well completion reports that were submitted. Please review the issues that are being addressed by the Water Commission as soon as possible and contact me here at the job site at (808) 775-9585.

Sincerely,

Derrick Billena
Receiving
March 5, 2001

Mr. Larry Kafchinski
Hamakua Energy Partners
P.O. Box 40
Honokaa, HI 96727

Dear Mr. Kafchinski:

Well Completion Report for Well No. 6528-03

We received your Well Completion Report Part I for the Enserch #2 Well (Well No. 6528-03) on January 11, 2001. We also received your Well Completion Report Part II on February 14, 2001. Several issues, which must be addressed before we accept your reports as complete, are as follows:

1. Please clarify the water level as described on Items 6. and 9. on your Well Completion Report Part I. A ground elevation of 451.01 and a depth of 453.25 would indicate a negative water level.

2. Please inform us of the date the pump was installed in Item 4. of your Well Completion Report Part II.

3. Please explain to us why a pump was installed prior to our issuance of a permanent Pump Installation Permit.

Please respond to the above item(s) within sixty (60) days of this letter's date. Failure to do so may result in fines of up to $1000 per day.

We are returning your application to your consultant to complete the application.

If you have any questions, please contact Ryan Imata of the Commission staff at 587-0255 or toll-free at 974-4000 (Hawaii), 274-3141 (Kauai), 984-2400 (Maui), or 1-800-468-4644 (Lanai & Molokai).

Sincerely,

[Signature]
LINNEL T. NISHIOKA
Deputy Director

Rt:ky
c. Tom Nance Water Resource Engineering
State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources
WELL COMPLETION REPORT - PART II
Pump Installation

Instructions: Please print in ink or type and send completed report (with attachments, if applicable) to the Commission on Water Resource Management, P.O. Box 521, Honolulu, Hawaii 96809. The Commission
may not accept incomplete reports. This form shall be submitted within 60 days of the completion of work.
For assistance, please consult the Hawaii Well Construction and Pump Installation Standards or call the
Regulation Branch at 808-683-3225. For updates to this form or additional information, please visit our website at
http://www.state.hi.us/dmr/cwmw/

1. State Well No.: 32-6298-03
   Well Name: Enseck #2 Well
   Island: Hawaii
2. Address: 45-300 Lehua St., Honoakaa, HI 96727
   Tax Map Key: 45-002:056
4. Date Pump Installed: 1/22/01
5. PERMANENT PUMP INFORMATION
   Pump Type, Make, Serial No.: Submersible/Goulds/PD 14310
   Rated Capacity: 700 gpm
   Motor Type, H.P., Voltage, rpm: Franklin - 125 - 3540
   Type of flow meter: Propeller
   which measures in CPM
6. Method of flow measurement:
   Water: Flowmeter Manufacturer Specialties Make Saddle Size 10"
   □ Weir □ Open Pipe □ Orifice □ Other, explain below
   "attach schematic
7. Fill in the as-built section on the other side of this sheet.
8. Other remarks/comments:
   1/22/03 Eshner 2

Pump Installation Contractor (print) Beylik Drilling, Inc. C-57/C-57a/A Lic. No. AC-22214
Signature
Date
Permittee (print)
Signature

William C. Moore, Vice President
January 29, 2001
01/22/01
March 16, 2001

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

Subject: Well Completion Report for Well No. 6528-03

Dear Ms. Nishioka:

I am writing pursuant your letter dated March 5, 2001 addressed to Mr. Larry Kajchinski of Hamakua Energy Partners. I would like to clarify the three issues stated in your letter so that the reports can be accepted as complete.

1. The correct depth to water is 448.30’ (Item 6) and the water-level is in fact 2.71’ above msl (Item 9).

2. The pump was set on December 20, 2000 (Item 4).

3. Due to the lengthy time it took to complete this job and the power plant’s tight construction schedule, the permanent pump was installed immediately following the pump test because we were required to remove our equipment from the site as soon as possible to allow for the power plant’s final phases of construction to be completed. Additionally, there was a rush on the part of the lender to perform a successful long-term test using the permanent pump. This test lasted 14 days and was performed as a requirement to complete financing of the project.

Should you require any other information or have any questions please do not hesitate to call.

Sincerely,

Robert A. Glaeser
Project Manager

rag:lf
Cc: Mr. Larry Kajchinski, Hamakua Energy Partners

EXHIBIT 4
STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
HONOLULU, HAWAI'I 96813

AGENDA

FOR THE MEETING OF THE
COMMISSION ON WATER RESOURCE MANAGEMENT

DATE: August 15, 2001
TIME: 9:00 a.m.
PLACE: DLNR Board Room
Kalanikukou Building

1. Minutes of the July 18, 2001 meeting
2. Old Business/Announcements
3. Honolulu Board of Water Supply Briefing on the Status of its System
6. Hamakua Energy Partners / Beylik Drilling, AFTER-THE-FACT PUMP INSTALLATION PERMIT APPLICATION, Enserch 1 Well (Well No. 6528-02), Honokaa, Hawaii
8. Ms. Ardythe Harms, RECONSIDERATION OF FINES, Vacationland #1 through #4 Wells (Well No. 2979-02 through -05), Kapoho, Hawaii
9. Other Business

Materials related to items on this agenda are available for review at our office at 1151 Punchbowl Street, Room 227, and also will be available at the meeting.

Any person may testify or present information on any meeting agenda item, unless the item involves a proceeding in an existing contested case. In addition, if you have a legal interest that may be adversely affected by the proposed action, you may have a right to an administrative contested case hearing. You must make the request for such a hearing either orally or in writing at the public hearing or meeting for which this notice is given. Hawaii Administrative Rules (H.A.R.) Section 13-167-52(a). If you request a contested case hearing, you will have the opportunity to present to the Commission oral or written evidence or testimony or both to establish your standing. You may present your testimony or evidence on standing at the meeting or public hearing described above or, alternatively, at a hearing set by the Commission at a later date. If you request a contested case hearing either orally or in writing, you must also complete and file (or mail and postmark) a written petition for a contested case with the Commission within ten days after the date of the public hearing or meeting noticed here. Petition forms are available from the Commission. H.A.R. Section 13-167-52(e). If you do not make such a request or fail to file a timely written petition with the Commission, the consequence is that you will be precluded from later obtaining a contested case hearing and seeking a judicial review of any adverse decision. H.A.R. Chapter 13-167. Disabled individuals planning to attend the public hearing or meeting are asked to contact the Commission at the above address or phone (Kauai) 274-3141 ext. 70214, (Maui) 984-2400 ext. 70214, (Hawaii) 974-4000 ext. 70214, (Molokai or Lanai) 1-800-GOV-6714 ext. 70214 or 587-0214 at least three days in advance of the public hearing or meeting to indicate if they have special needs which require accommodation.
STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HAWAII 96809

STAFF SUBMITTAL

for the meeting of the
COMMISSION ON WATER RESOURCE MANAGEMENT

August 15, 2001
Honolulu, Oahu

Hamakua Energy Partners / Beylik Drilling
AFTER-THE-FACT PUMP INSTALLATION PERMIT APPLICATION
Enserch 2 Well (Well No. 6528-03)
Honokaa, Hawaii

APPLICANT/LANDOWNER:  DRILLER:
Hamakua Energy Partners  Beylik Drilling (Roscoe Moss)
P.O. Box 40  91-259-A Olai Street
Honokaa, HI 96727  Kapolei, Hawaii 96707

DESCRIPTION:
Location: (See Exhibit 1)

BACKGROUND:
Refer to Exhibit 3 for the timeline.

ISSUES/ANALYSIS:
Violation

HAR §13-168-12(a) states that:

*No well shall be constructed, altered, or repaired and no pump or pumping equipment shall be installed, replaced, or repaired without an appropriate permit from the commission.*

Unlike the Enserch 1 Well (6528-02), the applicant, driller and consultant (Hamakua Energy Partners, Beylik and Tom Nance, respectively) remained the same for the duration of the process.

An application for both Well Construction and Pump Installation was acknowledged as complete by staff on January 19, 2000.
A Well Construction Permit was issued to Hamakua Energy Partners on March 7, 2000. In the Well Construction Permit, the applicant was specifically informed under Well Construction Permit standard condition #2 and two reminders in the permit cover letter that the permit does not authorize work for a permanent pump installation. (refer to Exhibit 10).

A test pump was installed sometime during December of 2000, and pump tests were done in accordance with the Hawaii Well Construction and Pump Installation Standards. The pump test began on December 11 and was completed on December 13, after which the test pump was removed. The resulting data for this first pump test was submitted to CWRM on January 10, 2001 along with the Well Completion Report Part I.

The after-the-fact pump installation permit application for Enserch 1 (6528-02) was sent in on October 25, 2000. Therefore, at the time of the pump installation for Enserch 2 (December 20, 2000), it was clear that all parties involved knew that a pump installation permit was required prior to installing the pump. Additionally, both the driller and the consultant have had prior permits through the Commission and should have known that a permit was required. Therefore, this violation constitutes a repeat violation and is subject to daily fines.

Discussion

Despite much communication, there are many unresolved inconsistencies and confusing correspondence from the applicant subsequent to this first pump test.

After the test pump was pulled out of the Enserch 2 well in December 2000, the permanent pump was installed without first acquiring a pump installation permit. The applicant stated that the lender’s engineer required a longer pump test to be done, in conjunction with the first well (Enserch 1), at the same time. Staff met with the Hamakua Energy Partners, Tom Nance, Beylik Drilling and Carlsmith Ball, and requested that Carlsmith Ball provide documentation from the lender to substantiate the requirement to do this further testing. Exhibit 5 is the response but it shows no direct documentation that the (still unknown) lender required further testing, rather the engineering firm (Stone & Webster) representing the lender.

There are discrepancies between two letters sent in to the Commission regarding why the permanent pump was installed for the pump test. In the letter dated March 16, 2001 from Beylik to the Commission (refer to Exhibit 4), Beylik states that “there was a rush on the part of the lender to perform a successful long-term test using the permanent pump”. However, in the letter dated August 2, 2001 from Carlsmith Ball to the Commission (refer to Exhibit 5), Carlsmith Ball states that “The temporary pump which had been employed in the earlier testing was currently crated on the dock at Kawaihae and unavailable for further use at the Hamakua site. The only pump available on such short notice was the pump purchased to become the permanent pump for Well No. 2.” Further, the Beylik letter states that “The pump was set on December 20, 2000.” The Carlsmith Ball letter states that “On December 22, 2000, the permanent pump was installed for testing which ran 12 days until January 3, 2001, due to continuing changed and additions to Stone & Webster’s request”. Therefore, from the correspondence it is unclear whether the permanent pump was installed as the result of an emergency beyond the control of the applicant as stated in the applicant attorney’s August 2, 2001 letter or because of a failure to have adequate time to obtain a permit and satisfy the lender’s requirement to test the well with the permanent pump because of the tight construction schedule as stated in Beylik’s March 1999 letter.
Penalty calculations

Staff feels that the December 20, 2000 date is the actual date of the installation because Beylik stated this on March 16, 2001 and it is the date in the Well Completion Report Part II. This date is closer to the actual date of installation than the Carsmith Ball statement (August 2, 2001), and the actual pump installer provided this date. Therefore, the installation of the pump on December 20, 2000 would indicate the start of the penalty period because it is the initial date that the violation occurred.

A second pump installation permit application was submitted on January 11, 2001 for this well. Unlike the Enserch 1 well application, this application did not indicate it was an after-the-fact application. In fact, the application stated the pumps had not been installed. It was not until February 14, 2001 when the Well Completion Report Part II (WCR 2) came in did staff realize the pump had already been installed. However, the Pump Installation Permit application for this well was submitted and accepted a year earlier on January 19, 2000. On January 10, 2001, staff received a Well Completion Report Part I. On February 14, 2001, staff received a Well Completion Report Part II indicating that a permanent pump had been installed. These Well Completion Reports can be found in Exhibit 2.

As part of standard procedure, staff waits for a complete Well Completion Report Part I (WCR 1) with pump test results to be submitted and analyzed prior to issuing the pump installation permit. No pump test results or WCR 1 had been sent in prior to the installation of the pump. Therefore, while there was an application for a pump installation permit, staff didn’t issue the permit because the documentation required under the Well Construction Permit wasn’t received. WCR 1 was received on January 11, 2001 and WCR 2 was received on February 14, 2001. Normally, staff will issue a pump installation permit after an acceptably complete WCR 1 is submitted. However, because this case is an after-the-fact situation, staff needs the submittal of both WCR 1 and 2 because the pump had already been installed.

Therefore, staff finds that the duration for the violation is between the date the pump was installed (December 20, 2000) and the date the Well Completion Report Part II was received by the Commission (February 14, 2001). This is consistent with staff analysis for the Enserch 1 Well on what constitutes a complete after-the-fact application. This total duration amounts to 56 days.

Under the Administrative and Civil Penalty Guideline (G01-01), the total duration may be reduced to a single day fine if compliance falls within 30 days. Additionally, due to the fact that the pump was installed in Enserch 1 Well without a permit, it was noted to the applicant prior to the installation of the Enserch 2 pump, and no results from the second pump test nor documentation from the lender requiring the second pump test and the permanent pump must be used was submitted (the only documentation came from the consultants), staff feels that the 56 day violation period is warranted.

Based on the Administrative and Civil Penalty Guideline (G01-01), the total recommended fine is $21,000 for the applicant and $21,000 for the driller (refer to Exhibit 6).

The fine is based on a finding of violation of $250/day and a repeat violation of $250/day for a total of $500/day. Staff feels that because the applicant sent the application on their own volition a mitigative component of $125/day can be incorporated, which is consistent with the recommendation for the fine for the Enserch 1 well. Therefore, staff is recommending a total daily fine of $375/day, for 56 days, for a total of $21,000.
Lastly, at this time, staff is not recommending any alternative to the fines. The applicant and/or driller or the Commission is free to suggest any alternative in accordance with the G-01-01 Guideline.

**RECOMMENDATION:**

That the Commission:


B. Impose a fine of $21,000 on Hamakua Energy Partners, and $21,000 on Beylik Drilling as summarized in Exhibit 6, payable within 30 days.

C. Approve the issuance of an after-the-fact Pump Installation Permit for the Enserch 2 Well (Well No. 6528-03) after the fine is paid, subject to standard conditions in Exhibit 7, and the following special conditions:

1. The well should not be used for drinking water unless it is properly tested and treated.
2. If potable water is used to supply both domestic and irrigation purposes in a single system, the permittee shall eliminate cross-connections and backflow connections by physically separating potable and non-potable systems by an air gap or an approved backflow preventer, and by clearly labeling all non-potable spigots with warning signs to prevent inadvertent consumption of non-potable water.

D. Suspend any current, pending or future applications by both the applicant and the driller until the fines are paid and the applicant/driller completes the permit process for this well.

Respectfully submitted,

[Signature]

LINNEL T. NISHIOKA
Deputy Director

Exhibit(s):

1. (Location Map)
2. (Well Completion Report)
3. (Timeline)
4. (Letter from Beylik dated March 16, 2001)
5. (Applicant letter dated August 2, 2001)
6. (Fine Schedule)
7. (Standard Pump Installation Permit Conditions)
8. (Pump Test Procedures)
9. (Water Use Report Form)
10. (Well Construction Permit and cover letter)
**State of Hawaii**  
**COMMISSION ON WATER RESOURCE MANAGEMENT**  
**Department of Land and Natural Resources**  

**WELL COMPLETION REPORT - PART I**  
**Well Construction**

**Instructions:** Please print in ink or type and send completed report (with attachments, if applicable) to the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809. The Commission may not accept incomplete reports. This form shall be submitted within 60 days of the completion of work. For assistance, please consult the Hawaii Well Construction and Pump Installation Standards or call the Regulation Branch at 587-0225. For updates to this form or additional information, please visit our website at [http://www.state.hi.us/dlnr/cwm/](http://www.state.hi.us/dlnr/cwm/)

<table>
<thead>
<tr>
<th>1. State Well No.:</th>
<th>Encogen Well No. 2</th>
<th>Island:</th>
<th>Hawaii</th>
</tr>
</thead>
<tbody>
<tr>
<td>6258-03</td>
<td></td>
<td></td>
<td></td>
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<td>6258-03</td>
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</tbody>
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<tr>
<th>2. Address:</th>
<th>P.O. Box 40, Honokaa, HI 96727</th>
<th>Tax Map Key:</th>
<th>4502:56</th>
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<tbody>
<tr>
<td></td>
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<td>-4-5-002:056</td>
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|---------------------|------------------------|

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<thead>
<tr>
<th>4. If drilled, type of Rig:</th>
<th>☐ Rotary  ☑ Percussion</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>5. Date Well Construction (drilled,cased,grouted) completed:</th>
<th>10/30/00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attach Driller's Log (7/26/99 DL Form)</td>
<td>7/26/99 DL Form</td>
</tr>
</tbody>
</table>

**In addition to the driller's log, if a geologic log was prepared, please submit with this form.**

<table>
<thead>
<tr>
<th>6. Initial water-level encountered:</th>
<th>453.25 ft. below ground</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date and time of measurement:</td>
<td>9/23/00 0700</td>
</tr>
<tr>
<td></td>
<td>month/day/year time</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7. Step-Drawdown Test completed?</th>
<th>☑ Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attach Step-Drawdown Test form (12/17/97 SDPTD Form)</td>
<td>12/17/97 SDPTD Form</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>8. Constant Rate Aquifer Test completed?</th>
<th>☑ Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attach Constant Rate Aquifer Test form (12/17/97 CRPTD Form)</td>
<td>12/17/97 CRPTD Form</td>
</tr>
</tbody>
</table>

**Parameters prior to pump test:**

<table>
<thead>
<tr>
<th>9. Water-level:</th>
<th>2.71 ft. above msl</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date and time of measurement:</td>
<td>12/11/00 0700</td>
</tr>
<tr>
<td>month/day/year time</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>10. Chloride:</th>
<th>85 ppm</th>
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</thead>
<tbody>
<tr>
<td>Date and time of sampling:</td>
<td>12/11/00 1900</td>
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<tr>
<td>month/day/year time</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>11. Temperature:</th>
<th>67.6°F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date and time of measurement:</td>
<td>12/11/00 1900</td>
</tr>
<tr>
<td>month/day/year time</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>12. Fill in the as-built section on the other side of this sheet.</th>
</tr>
</thead>
</table>

<table>
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<tr>
<th>13. Attach plot plan and surveyor's stamped elevation report.</th>
</tr>
</thead>
</table>

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<tr>
<th>14. If a pump is not planned to be installed, please describe (below in the remarks section) how well is secured to prevent unauthorized access (example: lockable cover, threaded coupling, etc.)</th>
</tr>
</thead>
</table>

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<tr>
<th>15. Remarks:</th>
</tr>
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<tbody>
<tr>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
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</table>

---

**Licensed Driller (print):**  
**BEYLIK DRILLING, INC.**

**Signature:**  
**WILLIAM C. MOORE, VICE PRESIDENT**

**C-57 Lic. No.:**  
**AC-22214**

**Date:**  
**12-26-00**

**Surveyor (print):**  
**ROBERT T. SHIRAI**

**Signature:**  
**Date:**  
**01/10/01**

**Permittee (print):**  
**LARRY F. KACHEINSKI**

**Signature:**  
**Date:**  
**12/15/00**

**EXHIBIT 2**

---

**WCR1 Form 5/2000**
13. AS-BUILT WELL SECTION (Please attach as-built if different from diagram provided below)

Elevation at top of casing (to nearest 0.01 ft.): 451.80 ft., msl

Hole Diameter: 19 in.

Minimum of 2' Radius & 4" Thick Concrete Pad

Ground Elevation: 451.01 ft., msl

Bench mark elevation: 451.61 ft., msl*
(Survey to nearest 0.01 ft.)

Cement Grout: 330 ft.
(min. 70% of distance from ground elevation to top of water surface or 500 ft., whichever is less.)

Annular space between hole and casing (min.3"):
3 in.

Rock or Gravel Packing:
NA ft.

Material:
☐ Crushed Basalt
☐ Rounded Gravel

Water Level Elevation:
2.71 ft., msl*

≥ 90% x (Ground Elevation - Water Level Elev)

Solid Casing (≥ 90% x (Ground Elev. - Water Level Elev))

Length: 451 ft.

Nominal Diameter: 12 in.

Wall Thickness: 3/8 in.

Bottom Elevation: 0.01 ft., msl

Open Casing:
☐ Perforated
☒ Screen

Length: 40 ft.

Nominal Diameter: 12 in.

Wall Thickness: 5/16 in.

Bottom Elevation: −39.99 ft., msl

Total Depth 491 ft.

Open Hole:

Length: NA ft.

Diameter: NA in.

Bottom Elevation: NA ft., msl

Solid Casing Material:
Carbon Steel: compliant with (check one or more):
☐ ANSI/AWWA C200
☐ API Spec. 5L
☐ ASTM A53
☒ ASTM A139

And compliant with (check one or more):
☐ ASTM A242
☐ Type E
☐ Type S
☐ Grade B
☐ Other

Stainless Steel: (check one):
☐ ASTM A409 (production wells)
☒ ASTM A312 (monitor wells)

ABS Plastic conforming to ASTM F480 and ASTM D1527: (check one):
☐ Schedule 40
☐ Schedule 80

PVC Plastic conforming to ASTM F480 and (ASTM D1785 or ASTM D2241): (check one):
☐ Schedule 40
☐ Schedule 80
☐ Schedule 120

Thermoset Plastic: (check one)
☐ Filament Wound Resin Pipe conforming to ASTM D2996
☐ Centrifugally Cast Resin Pipe conforming to ASTM D2997
☐ Reinforced Plastic Mortar Pressure Pipe conforming to ASTM D3517
☐ Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C950
☐ PTFE Fluorocarbon Tubing conforming to ASTM D3296
☐ FEP Fluorocarbon Tubing conforming to ASTM D3296

Open Casing Material:
Carbon Steel: compliant with (check one or more):
☐ ANSI/AWWA C200
☐ API Spec. 5L
☐ ASTM A53
☒ ASTM A139

And compliant with (check one or more):
☐ ASTM A242
☐ Type E
☐ Type S
☐ Grade B
☐ Other

Stainless Steel: (check one):
☐ ASTM A409 (production wells)
☒ ASTM A312 (monitor wells)

ABS Plastic conforming to ASTM F480 and ASTM D1527: (check one):
☐ Schedule 40
☐ Schedule 80

PVC Plastic conforming to ASTM F480 and (ASTM D1785 or ASTM D2241): (check one):
☐ Schedule 40
☐ Schedule 80
☐ Schedule 120

Thermoset Plastic: (check one)
☐ Filament Wound Resin Pipe conforming to ASTM D2996
☐ Centrifugally Cast Resin Pipe conforming to ASTM D2997
☐ Reinforced Plastic Mortar Pressure Pipe conforming to ASTM D3517
☐ Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C950
☐ PTFE Fluorocarbon Tubing conforming to ASTM D3296
☐ FEP Fluorocarbon Tubing conforming to ASTM D3296

EXHIBIT 2

COPY
State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources
WELL COMPLETION REPORT - PART II
Pump Installation

Instructions: Please print in ink or type and send completed report (with attachments, if applicable) to the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809. The Commission may not accept incomplete reports. This form shall be submitted within 90 days of the completion of work. For assistance, please consult the Hawaii Well Construction and Pump Installation Standards or call the Regulation Branch at 587-0225. For updates to this form or additional information, please visit our website at http://www.state.hi.us/dlnr/cwrm/

1. State Well No.: 6258-03 Well Name: Enserch #2 Well Island: Hawaii
2. Address: 45-300 Lehua St., Honokaa, HI 96727 Tax Map Key: 45-002:056
4. Date Pump Installed: 12-20-2000
5. PERMANENT PUMP INFORMATION
   Pump Type, Make, Serial No.: Submersible/Goulds/PO 14310 Rated Capacity: 700 gpm
   Motor Type, H.P., Voltage, rpm: Franklin - 125 - 3540
   Type of flow meter: Propeller which measures in GPM
6. Method of flow measurement:
   ☑ Flowmeter Manufacturer Specialties Make Saddle Size 10"
   ☐ Weir* ☐ Open Pipe* ☐ Orifice* ☐ Other*, explain below
   *attach schematic
7. Fill in the as-built section on the other side of this sheet.
8. Other remarks/comments:

Pump Installation Contractor (print) Beylik Drilling, Inc. C-57/C-57a/A Lic. No. AC-22214
Signature William C. Moore, Vice President
Date January 29, 2001
Permittee (print) Larry Kupukahi
Signature
Date 01/29/01

EXHIBIT 2
9. AS-BUILT PUMP SECTION (Please attach as-built if different from diagram provided below)

Bench mark elevation surveyed to nearest 0.01 ft. = 451.01 ft. mean sea level

identify reference point elevation for water level measurements through chase tube 451.70 ft. mean sea level

describe reference point:
Top of Flange

Pump intake depth = 464.25 ft. (referenced to bench mark)

Chase tube depth = 460.00 ft. (referenced to bench mark)

if airline installed, bottom of airline elevation = NA ft. mean sea level
<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
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<tbody>
<tr>
<td>8/14/97</td>
<td>CWRM extends start date to 5/1/98, but completion 3/4/99 same</td>
</tr>
<tr>
<td>4/23/98</td>
<td>Applicant requests extension to start date</td>
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<tr>
<td>6/19/98</td>
<td>CWRM extends start date to 11/1/98, but completion 3/4/99 same</td>
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<tr>
<td>12/30/98</td>
<td>Applicant sends in signed permit (Jody Allione/Dale Stromquist)</td>
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<td>2/3/99</td>
<td>CWRM sends letter to Encogen Hawaii stating we need elev survey</td>
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<tr>
<td>3/29/99</td>
<td>Applicant sends in revised Well Completion Report Part I</td>
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<td>6/1/99</td>
<td>approx. Project transferral begins from Encogen Hawaii to Hamakua Energy Partners</td>
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<tr>
<td>12/30/99</td>
<td>Well Construction and Pump Installation Permit application received</td>
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<tr>
<td>1/19/00</td>
<td>WC and PI Permit application acknowledged as complete by CWRM</td>
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<td>3/7/00</td>
<td>Well Construction Permit issued</td>
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<td>6/15/00</td>
<td>Pump installed</td>
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<td>6/21/00</td>
<td>Well Construction Permit signed and returned to CWRM</td>
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<td>9/12/00</td>
<td>J. Campbell receives due diligence docs indicating application made for PIP</td>
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<td>9/19/00</td>
<td>CWRM tells Jean Campbell PIP issued (from database) - no hard copy found</td>
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<tr>
<td>9/22/00</td>
<td>Staff informs applicant that PIP not issued, and they should apply for ATF PIP</td>
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<tr>
<td>10/25/00</td>
<td>Tom Nance sends application in to CWRM for ATF Pump Installation</td>
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<td>11/16/00</td>
<td>Staff sends out letter to applicant pointing out deficiencies in ATF PIP</td>
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<td>12/1/00</td>
<td>WCR II submitted, ATF PIP application is acknowledged as complete</td>
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<td>12/11/00</td>
<td>1st pump test commences</td>
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<td>12/13/00</td>
<td>1st pump test completed and test pump pulled from well</td>
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<tr>
<td>12/14/00</td>
<td>Stone &amp; Webster requires HEP to conduct longer test</td>
</tr>
<tr>
<td>12/20/00</td>
<td>Permanent pump installed and 2nd test begins</td>
</tr>
<tr>
<td>1/3/00</td>
<td>Second pump test completed</td>
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<tr>
<td>1/10/01</td>
<td>Applicant sends in 2nd PIP application - not necessary</td>
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<td>1/16/01</td>
<td>Well Completion Report I received by Commission</td>
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<tr>
<td>2/14/01</td>
<td>Well Completion Report II received by Commission</td>
</tr>
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<td>3/5/01</td>
<td>Response sent to applicant re: PIP violation asking clarification</td>
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<td>3/5/01</td>
<td>Pump hooked up to system for permanent use</td>
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<tr>
<td>3/19/01</td>
<td>Beylk responds to Commission inquiry of 3/5/01 (see Exhibit)</td>
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<tr>
<td>8/15/01</td>
<td>Commission Action</td>
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EXHIBIT 3: Timeline
March 16, 2001

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

Subject: Well Completion Report for Well No. 6528-03

Dear Ms. Nishioka:

I am writing pursuant your letter dated March 5, 2001 addressed to Mr. Larry Kajchinski of Hamakua Energy Partners. I would like to clarify the three issues stated in your letter so that the reports can be accepted as complete.

1. The correct depth to water is 448.30' (Item 6) and the water-level is in fact 2.71' above msl (Item 9).

2. The pump was set on December 20, 2000 (Item 4).

3. Due to the lengthy time it took to complete this job and the power plant's tight construction schedule, the permanent pump was installed immediately following the pump test because we were required to remove our equipment from the site as soon as possible to allow for the power plant's final phases of construction to be completed. Additionally, there was a rush on the part of the lender to perform a successful long-term test using the permanent pump. This test lasted 14 days and was performed as a requirement to complete financing of the project.

Should you require any other information or have any questions please do not hesitate to call.

Sincerely,

Robert A. Glascott  
Project Manager

Cc: Mr. Larry Kajchinski, Hamakua Energy Partners
CARLSMITH BALL LLP
A LIMITED LIABILITY LAW PARTNERSHIP

PACIFIC TOWER, SUITE 2200
1001 BISHOP STREET
HONOLULU, HAWAII 96813
TELEPHONE (808) 523-2500 FAX (808) 523-0842
WWW.CARLSMITH.COM

DIRECT DIAL NO.
(808) 523-2511

August 2, 2001

BY FAX AND U.S. MAIL

Linnel T. Nishioka
Deputy Director
Commission on Water Resource
Management
P.O. Box 621
Honolulu, Hawaii 96809

Re: HEP Well No. 2, State No. 6528-03: Pump Installation Permit Application

Dear Linnel:

At our meeting on July 26, 2001, you requested that I provide you with a letter detailing the facts and circumstances of the events of December 2000 and January 2001 surrounding the pump testing of Hamakua Energy Partners L.P.’s ("H.E.P.") Well No. 2, State No. 6528-03. I am writing to provide you and your staff with the information you requested in order that you may make your recommendation to the Commissioners.

According to our records, the pump testing required as a condition to the Well Construction Permit was conducted using an engine-driven test pump from December 11 to 13, 2000, which data was reported to the Commission in Well Completion Report Part I for Well No. 2. Following the testing, the test pump was removed and prepared for shipping to another job site where the drilling contractor needed to utilize it. Believing there was no imminent need to utilize Well No. 2, Tom Nance, the well and pump consultant, did not immediately submit a pump installation permit application.
On or about December 13 or 14, H.E.P. was contacted about a request for additional pump testing from Stone & Webster, an engineering firm employed by the lender involved in the ongoing refinancing of the project. During this time period, there was a very concerted effort by all involved to complete the refinancing transaction by an imminent deadline. Stone & Webster required that an extended pump test, running both Well Nos. 1 and 2 concurrently, be conducted immediately. Stone & Webster insisted that the extended pump test run for a minimum of five days in duration, include various water quality testing and that this testing be completed by December 31st. Mr. Nance proposed that the testing begin December 22. See email correspondence dated from December 14 to 20, 2000, by and between H.E.P., Stone & Webster and Tom Nance discussing Stone & Webster’s request for extended testing attached hereto as Exhibit A.

The temporary pump which had been employed in the earlier testing was currently crated on the dock at Kawaihae and unavailable for further use at the Hamakua site. The only pump available on such short notice was the pump purchased to become the permanent pump for Well No. 2. Mr. Nance was able to retrieve the meter from the temporary pump for use with the permanent pump for the extended testing.

On December 22, 2000, the permanent pump was installed for testing which ran 12 days until January 3, 2001, due to continuing changes and additions to Stone & Webster’s request. All of the water from this testing was pumped to waste as the pump was not hooked up to the system at the time. See letter dated January 5, 2001, from Tom Nance reporting results of extended testing attached hereto as Exhibit B. As soon as the extended testing was completed, the now-pending pump installation permit application was submitted to the Water Commission on January 9, 2001. The permanent pump was not used again until approximately the first week of March at which point it was attached to the system for permanent use.
If I can provide any further information to answer questions you may have, please contact me. Thank you for your assistance and cooperation in this matter.

Very truly yours,

Tim Lui-Kwan

cc: Tom Nance, Tom Nance Water Resource Engineering
William Moore, Roscoe Moss/Beylik Drilling, Inc.
Larry Kafchinsky, Hamakua Energy Partners, LP
EXHIBIT A

TWNRE

From: Larry Kafchinski <lkafchinski@hialoha.net>
To: <tnwre@aloha.net>
Sent: Thursday, December 14, 2000 2:03 PM
Subject: FW: Salinity Testing

Tom,
Do you have the 1999 report mentioned below? We need to discuss your availability, capability and price to conduct this test ASAP.
Thanks

-----Original Message-----
From: Hickman, Herb [mailto:ghickman@ajones.com]
Sent: Thursday, December 14, 2000 10:30 AM
To: Kafchinski, Larry
Cc: DeMars, Claude; Sanders, Ian; 'dgiel@hialoha.net'
Subject: FW: Salinity Testing

Larry,
Here is the Stone & Webster testing requirements. Please forward to the appropriate testing group. We need a price and expected schedule for completing the tests. The current testing does not appear to be sufficient since we are not running both wells at full capacity.
Herb

-----Original Message-----
From: Brian.Gilbertson@swec.com [mailto:Brian.Gilbertson@swec.com]
Sent: Wednesday, December 13, 2000 3:23 PM
To: Hickman, Herb
Cc: linda.cangiano@us.socgen.com; Edwin.Johnson@swec.com
Subject: Re: Salinity Testing

We suggest that the testing procedures should be consistent with those used by Waimea Water Services as summarized in their February 10, 1999 Well Completion Report. The duration of the test was five days (7200 minutes). Water quality and drawdown were sampled with maximum permitted flow (approximately 1150 gpm) at the following intervals (minutes after commencement): 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 2000, 3000, 4000, 5000, 6000, 7000, and 7200. Water samples were analyzed by AECOS Laboratory of Hawaii for chlorides as well as a number of other parameters. I can fax you a copy of the report and laboratory analyses, if necessary.
Water quality samples from each well should be obtained at the intervals discussed above. Our intent is to compare the results of the Waimea Water Services Well Completion Report with corresponding results from the planned test of the two wells, operating simultaneously for the test duration, to determine if there are comparable trends related to concentrations of chlorides and other parameters that are indicative of increasing salinity. If chloride levels increase throughout the test, we suggest that the sampling frequency be increased and the test be extended until the levels reach a steady state condition.
Your Dec. 13 email to Herb Hickman regarding pump testing both wells concurrently was forwarded to me. Please call me to discuss. I can also provide information on the recently completed test of Well 2. (808-537-1141).

Sincerely,
Tom Nance
By To: Larry Katschni (715-1801)
From: Tom Morre

Latest from Brian Gilbertson, who keeps changing his mind. We can have the test run longer, but your staff will need to continue the 12-hour sample and frequency monitoring. Please call (537-1141) to discuss.

Page 1 of 1

TNWRE

From: <Brian.Gilbertson@swec.com>
To: TNWRE <tnwre@flex.com>
Cc: Sanders, Ian <isanders@ajones.com>; <linda.cangiano@us.socgen.com>
      <Edwin.Johnson@swec.com>
Sent: Friday, December 22, 2000 7:10 AM
Subject: Re: Salinity Testing

Your fax of December 20th proposes that the salinity test commence on December 22nd and run for a one week period until December 29th. The duration was determined in order to provide data regarding the water resource prior to planned financial closing on December 31st. Since it now appears unlikely that testing and other prerequisites to closing by December 31st will be completed, I suggest that the salinity test may be extended beyond December 29th, if necessary, to obtain more conclusive results.
MEMORANDUM

TO: Larry Ketchinski - Hamakua Energy Partners
FROM: Tom Nance
SUBJECT: Extended Pump Test of Well Nos. 1 and 2

At the request of the Stone & Webster, an extended pump test with Well Nos. 1 and 2 running concurrently was conducted. As identified herein, Well 1 refers to the first well completed and Well 2 is the recently completed second well. The test was run for 12 days, starting at 10:35 a.m. on December 22, 2000 and ending at 10:45 a.m. on January 3, 2001. To accommodate the power plant's operating requirements, the test was run in the following manner:

- Well No. 1 had already been running and continued to provide the plant's supply requirements throughout the test.
- Using its permanent pump, Well No. 2 was run for 12 days with its discharge directed into a perimeter drainage ditch.
- Water level and conductivity recorders were installed on both wells to provide a continuous record of trends in salinity.
- At 12-hour intervals, plant operating personnel collected samples and recorded the instantaneous pumping rates and flowmeter totalizer values at each well.

**Pumping Rates.** Over the 12-day test, the flowrate on Well No. 1 varied in abrupt steps from 225 to 250 GPM on the low end and at 450 GPM on the high end. Over the 12-day period, it averaged 373 GPM. Well No. 2 ran at an essentially constant rate of 890 to 900 GPM against the modest above-ground head of its discharge hose. Its 12-day average flowrate was 893 GPM.

**Recorded Water Level.** Unvented pressure transducer-data loggers were inserted in both wells shortly before the start of the pump test on December 22nd and retrieved shortly following the end of the test on January 3rd. Water level was recorded at 5-minute intervals. The level in Well No. 1 (on Figure 1) shows abrupt changes in water level in response to the abrupt changes in pumping rates. These changes are superimposed over the tidal variation of the basal lens the well taps. There is also a "noise" in the recorded level due to downhole vibration of the pump.
Memo to: Larry Katchinski  
January 5, 2001 -- 00/010  
Page two

The recorded water level for Well 2 is shown on Figure 2. With its essentially constant pumping rate, a "smoother" water level record with a clearer depiction of the tidal influence was obtained. At about 900 GPM, drawdown in the well was about 1.7 feet.

Conductivity of the Pumped Water. Conductivity of both wells was recorded at 5-minute intervals and was also measured for discrete samples taken at 12-hour intervals. Both measures of conductivity for Well 1 are shown on Figure 3 (the discrete sample results are also listed in Exhibit 1). This particular conductivity recorder behaved somewhat erratically through the first six days of the test and somewhat better thereafter. For this well, conductivity of the discrete samples provide a more reliable record. These show a slight rise from about 735 μmhos at the start of the test to about 790 μmhos at the end. This well had been operated continuously for several months prior to the test, presumably achieving a stable salinity. Based on this, it appears that the modest increase during the 12-day test is attributable to the concurrent operation of Well No. 2.

Recorded and discrete sample conductivity of the water pumped by Well No. 2 is shown on Figure 4. There was a significant increase through the test, starting at about 440 μmhos and ending at about 990 μmhos. On this linear presentation of the data, it appears that the conductivity was asymptotically approaching a level of about 1100 μmhos. On a semi-log plot (Figure 5), it appears that 1100 μmhos might be reached in about 45,000 to 50,000 minutes (30 to 35 days) of continuous pumping at about 900 GPM.

Chloride Concentrations. Chloride concentrations of the samples taken at 12-hour intervals are compiled in Exhibit 1. Since saltwater intrusion into the basal lens is the reason for the salinity rise during the pump test, the trends in chlorides are essentially identical to the trends in conductivity discussed above.

cc: Brian Gilbertson - Stone & Webster  
John Pierce - Jones/Burns & McDonnell

Attachments
## FINE CALCULATION

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<tr>
<th>Item No.</th>
<th>Description</th>
<th>Finding of violation (min $250)</th>
<th>Occurring in WMA (min $250)</th>
<th>Repeat violation (min $250)</th>
<th>Gravity component</th>
<th>Mitigative component</th>
<th>TOTAL DAILY FINES</th>
<th>Start date</th>
<th>End date</th>
<th>No. of days</th>
<th>Compliance within 30 days (yes/no)</th>
<th>Total duration of violation</th>
<th>Alternate settlement</th>
<th>Subtotal fine for one incident</th>
<th>No. of incidents</th>
<th>Subtotal fines</th>
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### TOTAL FINES

$21,000

### NOTES

- **Description** - description of the violation, see submittal text for specific rules violated
- **Finding of violation** (min. $250) - where there is a violation, there is a minimum daily fine of $250
- **Occurring in WMA (min. $250)** - When the violation is in a designated Water Management Area, there is a minimum additional daily fine of $250
- **Repeat violation (min. $250)** - When the violator has committed violations in the past, there is a minimum additional daily fine of $250
- **Gravity component** - allows for the increase of the daily fine
- **Mitigative component** - allows for the decrease of the daily fine
- **TOTAL DAILY FINES** - the sum of the values in columns C through G
- **Start date** - the date where calculation of daily fines begins (date of notice of violation, or permit approval, or permit fully signed, or violation occurred, or CWRM order)
- **End date** - the date of the end of the violation or latest CWRM meeting or completed permit application
- **No. of days** - calculated between start and end dates
- **Compliance within 30 days (yes/no)** - if the applicant complies with the Commission staff’s notice of violation requirements within 30 days
- **Total duration of violation** - if there was compliance with staff notice of violation within 30 days, the duration shall be the total days of the violation.
- **Alternate settlement (yes / no)** - an alternate settlement in lieu of the daily fine was recommended
- **Subtotal fine for one incident** - per incident fine
- **No. of incidents** - of violation that occurred for this investigation
- **Subtotal fines** - the subtotal of fines, calculated by multiplying (per incident fine) * (no. of incidents)

### EXHIBIT 6: Fine Schedule
STANDARD PUMP INSTALLATION PERMIT CONDITIONS

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 Enserch 2 Well (Well No. 6528-03) at 45-300 Lehua Street, Hawaii, TMK 4-5-2: 56, subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97) which include but are not limited to the following conditions:

1. The Commission on Water Resource Management (Commission), 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 and staff shall be allowed to inspect installation activities in accordance with §13-168-15, Hawaii Administrative Rules.

2. The pump installation permit shall be for installation of a 600 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 monthly basis, on forms provided by the Commission (attached).

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. This permit or the authorization to pump water from a well shall not constitute a determination of correlative water rights. 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 sixty (60) days after completion of work.

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

7. The pump installation permit application and staff submittal approved by the Commission at its July 18, 2001 meeting are 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 pump installation 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.

9. 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.

EXHIBIT 7: Pump Installation Permit Conditions
# STEPDRAWDOWN PUMP TEST DATA

(not required for wells producing < 100,000 gpd or 70 gpm)

- **Pumped Well No.**
- **Pumped Well Name**
- **Target Q** gpm
- **Observation well no.**
- **Distance between Obs. & Pumped Well** ft.
- **Reference pt. for depth to water** ft. msl
- **Static Water Level @ start of test** ft. msl
- **Water level measurements by:**
  - ☐ steel tape
  - ☐ pressure transducer
  - ☐ airline

**START TEST Date:**

**Time of day:**

**Flow Meter Reading Start:** gals

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<th>Actual Elapsed Time (min)</th>
<th>Depth to water (nearest 0.1 ft)</th>
<th>Drawdown S (unadjusted to nearest 0.1 ft)</th>
<th>Pumping rate Q (at least 5 steps) (gpm)</th>
<th>EC (umhos)</th>
<th>Cl (mg/l)</th>
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- Chloride sample taken
- Step 2 begin?

**Data in this table is for:**
- ☐ Pumped Well
- ☐ Observation Well

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<th>Drawdown S (unadjusted to nearest 0.1 ft)</th>
<th>Pumping Rate Q (at least 3 steps gpm)</th>
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EXHIBIT 9
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1. Starting pumping rate Q
2. Minimum length of step period of constant pumping rate
3. Minimum mandatory Chloride (Cl⁻) measurement/sampling at end of every step
4. Use same ending drawdown figure as start for recovery
## Table 1 (SDPTD Form 12/17/97)

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**END TEST**  Date: ____________  Time of day: ____________

**ADDITIONAL REMARKS:** ____________________________________________________________

Person in charge of pump test (print): ____________________________________________

Signature: _______________________________________________________________________

The signature above indicates that the data reported on this form is accurate and true to the best of the person's knowledge who operated this pump test.

**EXHIBIT Ω**
CONCURRENT-RATE PUMP TEST DATA

Pumped Well No.  
Pumped Well Name  
Target Q  gpm  

Observation well no.  
Distance between Obs. & Pumped Well  ft.  
Reference pt. for depth to water  ft. msl  
Static Water Level @ start of test  ft. msl  

Water level measurements by:  
  ☐ steel tape  
  ☐ pressure transducer  
  ☐ airline  

START TEST  Date:  Time of day:  

Flow Meter Reading Start:  gals  

| Suggested elapsed time (min) | Actual elapsed time (min) | Depth to water (nearest 0.1 ft) | Drawdown S (unadjusted to nearest 0.1 ft) | Pumping rate Q (gpm) | EC (μmhos) | Cl⁻ (mg/l) | Temp. °F or °C | Data in this table is for:  
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Max possible duration, water level or quality did not stabilize for any 24 period

Begin recovery data next page
Flow meter reading at end of pumped period: 

1 Chloride sampling required
2 Use same ending drawdown figure as start for recovery

EXHIBIT 9
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<th>Actual elapsed time (min)</th>
<th>Depth to water (nearest 0.1 ft)</th>
<th>Recovery Drawdown (unadjusted to nearest 0.1 ft)</th>
<th>Pumping rate Q (gpm)</th>
<th>EC (units)</th>
<th>Cl- (mg/l)</th>
<th>Temp. F or °C</th>
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**END TEST**  Date: ____________  Time of day: ____________

**ADDITIONAL REMARKS:** ____________________________________________________________

Person in charge of pump test (print): ____________________________________________

Signature: __________________________  
The signature above indicates that the data reported on this form is accurate and true to the best of the person's knowledge who operated this pump test.

**EXHIBIT 9**
### MONTHLY GROUND WATER USE REPORT

**INSTRUCTIONS:** Please TYPE OR PRINT CLEARLY. Complete this form to report total monthly ground water use, and, if required, other information from each of your well sources. Mail to: Commission on Water Resource Management, P.O. Box 627, Honolulu HI 96809. For assistance, please call (808) 587-0264.

<table>
<thead>
<tr>
<th>State Well No.</th>
<th>Well Name</th>
<th>Period Begin Date (mm/dd/yy)</th>
<th>Period End Date (mm/dd/yy)</th>
<th>Quantity Pumped (gallons)</th>
<th>Method of Measurement</th>
<th>Chloride (mg/l)</th>
<th>Temp. (°F)</th>
<th>Non-Pumping Water Level (ft. above msl)**</th>
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* Flow meter, electrical consumption, weir of flume, not metered (estimated).
** Measurement should be taken while pump is NOT running just prior to a pumping cycle; if measurement is taken while pump is running, please indicate so.

Other comments or additional information (e.g., date and method of chloride measurement; how pumpage amounts are estimated; etc...): 

Submitted by (print) ____________________________

Signature ____________________________

Title ____________________________

Date ____________________________  Telephone No. ____________________________

**EXHIBIT A: Water Use Report Forms**
## Monthly Ground Water Delivery Report

### Instructions:
Please TYPE OR PRINT CLEARLY. Complete this form to report total monthly ground water use and other information from each of your well sources. Mail to: Commission on Water Resource Management, P.O. Box 521, Honolulu HI 96809. For assistance, please call (808) 587-0264.

### Table

<table>
<thead>
<tr>
<th>State Well No.</th>
<th>Delivery Begin Date (mm/dd/yy)</th>
<th>Delivery End Date (mm/dd/yy)</th>
<th>Quantity Delivered (gallons)</th>
<th>Type of Use*</th>
<th>Field No(s)</th>
<th>Acres Irrigated</th>
<th>Crop Type</th>
<th>Method of Measurement**</th>
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* Use of water code:

- **A**: Aquaculture
- **C**: Commercial
- **D**: Domestic
- **I**: Irrigation - Drip
- **IF**: Irrigation - Furrow
- **IS**: Irrigation - Sprinkle

** For estimated values use code:

- **P**: Power consumption
- **T**: Total time of operation
- **D**: Comparison with past data
- **X**: Other means - (indicate method)

### Other comments or additional information:

Submitted by (print) ___________________________  Title ___________________________

Signature ___________________________  Date ___________________________  Phone No. ___________________________
Mr. Claude DeMars
Hamakua Energy Partners, LP
P.O. Box 40
Honokaa, HI 96727

Dear Mr. DeMars:

Well Construction Permit
Enserch #2 Well (Well No. 6528-03)

Enclosed are two (2) copies of your approved Well Construction Permit for the captioned well(s) that authorize well construction activities but excludes installation work for your permanent pump. As part of the Chairperson's approval, the following special conditions were added and are part of your permit under Permit Condition 13:

Special Conditions

1. Attached for your information is a copy of the Department of Health's (DOH) review comments. Please note DOH's requirements related to discharge of effluent from well drilling and testing activities.

This permit does not authorize work for your permanent pump installation. Approval and issuance of your pump installation permit is contingent upon completed application and information provided to and accepted by Commission staff as required in the Well Construction & Pump Installation Standards (1/23/97) and any special conditions performed under this permit. However, a permanent pump may be installed prior to the permanent pump installation permit issuance in accordance with the Commission's April 15, 1998 Declaratory Ruling No. DEC-ADM98-G5, which states that:

"Permanent pump installation for capacities between 0-70 gpm and where the proposed use is for private individual needs in non-ground-water management areas may be allowed prior to the final pump installation permit issuance. When required as a condition of the well construction permit, subsequent pumping tests shall validate the acceptability of the permanent pump. The permanent pump installed prior to final pump installation permit issuance is subject to removal if the testing shows that a smaller pump is required to reduce the potential of affecting neighboring wells and localized upconing at the applicant's well."
If you qualify and wish to take advantage of this ruling, please include a written request to install the permanent pump prior to final pump installation permit issuance when you return to us your signed well construction permit.

Please sign and have the contractor sign both permit originals and return one for our files. Also, copies of the aquifer pump test worksheet and the well completion report form are enclosed for your use.

**IMPORTANT** - Drilling work shall not commence until a fully signed permit is returned to the Commission. Please provide all the information in this packet to your well drilling contractor. The permittee, well operator, and/or well owner are responsible for all conditions of the permit. This includes ensuring that the well construction contractor, or other party who constructs the well(s), submits a completed Part I of the Well Completion Report form (enclosed) within sixty (60) days after the well construction work is completed. Be advised that you may be subject to fines of up to $1000 per day for any violations of your permit conditions starting from the permit approval date.

If you have any questions, please call Ryan Imata of the Commission staff at 587-0255 or toll-free at 974-4000, extension 70255.

Aloha,

TIMOTHY E. JOHNS
Chairperson

Enclosures

c: Tom Nance
FACSIMILE TRANSMITTAL

Date: August 10, 2001

To: CWRM

Fax#: 587-0219

From: Bill Moore

Subj: Enserch Well No. 6528-02

No. of Pages (including coversheet): 5

Attn: Ryan Imata
August 10, 2001

Ms. Linnel T. Nishioka
Deputy Director
Commission on Water Resource Mgmt.
P.O. Box 621
Honolulu, HI 96809

Ref: Enserch Well No. 6528-02
Pump Installation Permit Application

Dear Ms. Nishioka:

This letter is written pursuant to our meeting on July 26, 2001 to summarize recollection of the events and circumstances which lead to our firm providing pump services for the installation of a customer supplied pump in Well No. 1 herein described as Enserch Well No. 6528-02 and 03.

Beylik Drilling, Inc.'s involvement in this matter actually began in late 1999 when Jones/Burns and McDonnell Hamakua Joint Venture Partners Site Representative Dennis Sturdavant requested Beylik Drilling to submit a quotation to drill Enserch Well No. 6528-02.

These negotiations began as a turnkey project with Beylik Drilling, Inc. providing consulting services. However, in subsequent conversations Jones/Burns & McDonnell personnel decided to manage that aspect of the job internally subsequently Beylik Drilling, Inc. was provided a set of plans and specifications with which to prepare its proposal and then submitted.

Subsequently Jones/Burns & McDonnell Hamakua Joint Venture notified Beylik Drilling, Inc. that it intended to award the well drilling work to Beylik Drilling, Inc., thereafter a number of telephone and fax messages were exchanged. Eventually Jones/Burns & McDonnell issued a contract as well as a tentative notice to proceed to Beylik Drilling, Inc.

It is important to note at this time that the submitted contract was designed among other things to link its subcontractors and to some extent materialman to the contract which Jones/Burns & McDonnell Hamakua Joint Venture had with its client Hawaiian Electric Company.
However the contract contained many unacceptable provisions among them were extensive liquidated damage language, subcontractor responsibilities, performance payments as well as edited standard contract boiler plate.

Through direct negotiation said contract was subsequently modified to accommodate Beylik Drilling, Inc.’s concerns, these negotiations were handled largely by phone, fax messages with Jones/Burns & McDonnell Hamakua Joint Venture personnel located at their South Carolina Office. These negotiations were facilitated by its local construction representative Dennis Sturdevant. This concluded the business arrangements, the contract was executed after which insurance and indemnification matters were satisfied as well as the contract bonding provisions. About this same time Beylik Drilling, Inc. was asked by Jones/Burns & McDonnell Hamakua Joint Venture to prepare and submit a proposal to supply and outfit Enserch Wells No. 6528-02, 03 with pumps and pertinent equipment based on specifications provided by Beylik Drilling, Inc.

A proposal was prepared and submitted. However, after submitting this proposal to the Jones/Burns South Carolina office, Beylik Drilling, Inc. was notified that this proposal was “over budget” and that Jones/Burns after some price shopping and specification modification decided to purchase a specification modified pump from a mainland supplier. Subsequently Beylik Drilling, Inc. withdrew its design/supply and install proposal thus concluding proposal responsibilities including matters pertaining to permitting. In due time beginning in January 2001 Beylik Drilling, Inc. was asked by Jones/Burns Civil Superintendent Dennis Sturdevant to submit a quotation to install the contractor furnished submersible pumps in Enserch Wells No. 1 and 2. It was noted by Jones/Burns personnel that time and budget were of the essence, subsequently a plan was developed to coordinate the pump installation to coincide with the completion of the drilling of Enserch Well No. 3, there of course is no question in anyone’s mind that Jones/Burns & McDonnell Hamakua Joint Venture intended to outfit both wells with the specified pumps.

It was Beylik Drilling, Inc.'s understanding at that time and continuing throughout the duration of its involvement which included prior contract negotiations that all permit preparations and costs thereof would be handled by Jones/Burns who I understood at that time had specific assigned personnel for this purpose.

Herein lies the base of the problem, in the case of Enserch Well No. 2 which was drilled by others, it was assumed by others as well as myself that a pump installation permit had been applied for by that entity and that permit thus granted was still valid. However, it must be noted that this premise to be effective required verification. These conversations began in January 2000 and more or less ended by March 2000, Beylik Drilling was very active constructing
Enserch Well No. 6528-03, Jones/Burns & McDonnell Hamakua Joint Venture proceeded to design and construct the power plant, it was presumed by Beylik Drilling, Inc. that all administrative matters were being processed through its administrative unit with local consultants.

By May 2000 it became apparent that the drilling of Enserch Well No. 6528-03 would not be completed as previously scheduled and Beylik Drilling, Inc. was notified by Jones/Burns personnel to mobilize labor and equipment to install its pump in the Enserch Well No. 6528-02. Installation of the submersible pump in Enserch No. 6528-03 was scheduled at a later date and the work was subsequently done using nearly the same dialog which is herein described and supplied in correspondence and explanations submitted by Hamakua Partners thru its Agent Carlsmith Ball.

Conclusions:

It is our testimony that at no time during this period of construction and negotiation did Jones/Burns & McDonnell Hamakua Joint Venture personnel suggest in any way that any rules, regulations, laws, procedures or protocol be omitted, violated or ignored.

Additionally, my role with Beylik Drilling, Inc. as its RME, having held a Contractor’s license with various “C” specialties for a period in excess of 30 years was not unaware of established permitting process established by the Commission on Water Resource Management. This administrative error developed pretty much as described in this report as well as the reports submitted by Hamakua Joint Venture, that is Beylik Drilling, Inc. proceeded with its work based on the understanding and assumptions which are outlined in this report. Likewise Hamakua Joint Ventures proceeded administratively as described in their letters of explanation. Each of the entities relying on communication and information which in the end analysis was misunderstood.

All of the above matters were brought to Beylik Drilling’s attention when it became necessary to file an “after the fact” Pump Installation for Enserch Well No. 6528-03 which the Commission on Water Resource Management is aware and has all documents, explanations and justifications. However the matter of pump installation permit for Enserch Well No. 6528-02 came to light when Hamakua Joint Venture’s legal team in the process of concluding construction closeout matters were unable to locate in its files the required permit documentation and subsequently brought that to the attention of the Commission on Water Resource Management. The process to date has been an involved process and I might add and expensive process to bring this matter to a fair and reasonable conclusion. The matter of pump installation permits were inadvertently overlooked for all of the reasons supplied in this report as well as the report supplied by Hamakua Joint Venture.
Beylik Drilling is particularly chagrined and disappointed to be caught up in this administrative tangle, as its RME, I am equally disappointed that the system resulted in the muted communications herein described. It goes without saying we are sorry for the inconvenience, trouble and expense this matter has caused all involved and ask the Commission in its deliberations to treat this as an administrative error which has subsequently been corrected and to accept Beylik Drilling, Inc.’s testimony that proper steps have been taken to bring Beylik Drilling’s organization administrative procedures in compliance with any matter regarding the Commission and Water Resource Management Rules and Regulations.

Sincerely,

William C. Moore
Vice President

WCM:1af
### FACSIMILE TRANSMITTAL

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<th>August 10, 2001</th>
<th>No. of Pages (including covers): 5</th>
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August 10, 2001

Ms. Linnel T. Nishioka  
Deputy Director  
Commission on Water Resource Mgmt.  
P.O. Box 621  
Honolulu, HI 96809

Ref: Enserch Well No. 6528-02  
Pump Installation Permit Application

Dear Ms. Nishioka:

This letter is written pursuant to our meeting on July 26, 2001 to summarize recollection of the events and circumstances which lead to our firm providing pump services for the installation of a customer supplied pump in Well No. 1 herein described as Enserch Well No. 6528-02 and 03.

Beylik Drilling, Inc.'s involvement in this matter actually began in late 1999 when Jones/Burns and McDonnell Hamakua Joint Venture Partners Site Representative Dennis Sturdavant requested Beylik Drilling to submit a quotation to drill Enserch Well No. 6528-02.

These negotiations began as a turnkey project with Beylik Drilling, Inc. providing consulting services. However, in subsequent conversations Jones/Burns & McDonnell personnel decided to manage that aspect of the job internally subsequently Beylik Drilling, Inc. was provided a set of plans and specifications with which to prepare its proposal and then submitted.

Subsequently Jones/Burns & McDonnell Hamakua Joint Venture notified Beylik Drilling, Inc. that it intended to award the well drilling work to Beylik Drilling, Inc., thereafter a number of telephone and fax messages were exchanged. Eventually Jones/Burns & McDonnell issued a contract as well as a tentative notice to proceed to Beylik Drilling, Inc.

It is important to note at this time that the submitted contract was designed among other things to link its subcontractors and to some extent materialman to the contract which Jones/Burns & McDonnell Hamakua Joint Venture had with its client Hawaiian Electric Company.
Ms. Linnel T. Nishioka  
August 10, 2001  
Page 2

However the contract contained many unacceptable provisions among them were extensive liquidated damage language, subcontractor responsibilities, performance payments as well as edited standard contract boiler plate.

Through direct negotiation said contract was subsequently modified to accommodate Beylik Drilling, Inc.’s concerns, these negotiations were handled largely by phone, fax messages with Jones/Burns & McDonnell Hamakua Joint Venture personnel located at their South Carolina Office. These negotiations were facilitated by its local construction representative Dennis Sturdavant. This concluded the business arrangements, the contract was executed after which insurance and indemnification matters were satisfied as well as the contract bonding provisions. About this same time Beylik Drilling, Inc. was asked by Jones/Burns & McDonnell Hamakua Joint Venture to prepare and submit a proposal to supply and outfit Enserch Wells No. 6528-02, 03 with pumps and pertinent equipment based on specifications provided by Beylik Drilling, Inc.

A proposal was prepared and submitted. However, after submitting this proposal to the Jones/Burns South Carolina office, Beylik Drilling, Inc. was notified that this proposal was “over budget” and that Jones/Burns after some price shopping and specification modification decided to purchase a specification modified pump from a mainland supplier. Subsequently Beylik Drilling, Inc. withdrew its design/supply and install proposal thus concluding proposal responsibilities including matters pertaining to permitting. In due time beginning in January 2001 Beylik Drilling, Inc. was asked by Jones/Burns Civil Superintendent Dennis Sturdavant to submit a quotation to install the contractor furnished submersible pumps in Enserch Wells No. 1 and 2. It was noted by Jones/Burns personnel that time and budget were of the essence, subsequently a plan was developed to coordinate the pump installation to coincide with the completion of the drilling of Enserch Well No. 3, there of course is no question in anyone’s mind that Jones/Burns & McDonnell Hamakua Joint Venture intended to outfit both wells with the specified pumps.

It was Beylik Drilling, Inc.’s understanding at that time and continuing throughout the duration of its involvement which included prior contract negotiations that all permit preparations and costs thereof would be handled by Jones/Burns who I understood at that time had specific assigned personnel for this purpose.

Herein lies the base of the problem, in the case of Enserch Well No. 2 which was drilled by others, it was assumed by others as well as myself that a pump installation permit had been applied for by that entity and that permit thus granted was still valid. However, it must be noted that this premise be effective required verification. These conversations began in January 2000 and more or less ended by March 2000, Beylik Drilling was very active constructing.
Ms. Lionel T. Nishioka
August 10, 2001
Page 3

Enserrch Well No. 6528-03, Jones/Burns & McDonnell Hamakua Joint Venture proceeded to design and construct the power plant, it was presumed by Beylik Drilling, Inc. that all administrative matters were being processed through its administrative unit with local consultants.

By May 2000 it became apparent that the drilling of Enserrch Well No. 6528-03 would not be completed as previously scheduled and Beylik Drilling, Inc. was notified by Jones/Burns personnel to mobilize labor and equipment to install its pump in the Enserrch Well No. 6528-02. Installation of the submersible pump in Enserrch No. 6528-03 was scheduled at a later date and the work was subsequently done using nearly the same dialog which is herein described and supplied in correspondence and explanations submitted by Hamakua Partners thru its Agent Carlsmith Ball.

Conclusions:

It is our testimony that at no time during this period of construction and negotiation did Jones/Burns & McDonnell Hamakua Joint Venture personnel suggest in any way that any rules, regulations, laws, procedures or protocol be omitted, violated or ignored.

Additionally, my role with Beylik Drilling, Inc. as its RME, having held a Contractor's license with various "C" specialties for a period in excess of 30 years was not unaware of established permitting processes established by the Commission on Water Resource Management. This administrative error developed pretty much as described in this report as well as the reports submitted by Hamakua Joint Venture, that is Beylik Drilling, Inc. proceeded with its work based on the understanding and assumptions which are outlined in this report. Likewise Hamakua Joint Ventures proceeded administratively as described in their letters of explanation. Each of the entities relying on communication and information which in the end analysis was misunderstood.

All of the above matters were brought to Beylik Drilling's attention when it became necessary to file an "after the fact" Pump Installation for Enserrch Well No. 6528-03 which the Commission on Water Resource Management is aware and has all documents, explanations and justifications. However the matter of pump installation permit for Enserrch Well No. 6528-02 came to light when Hamakua Joint Venture's legal team in the process of concluding construction closeout matters were unable to locate in its files the required permit documentation and subsequently brought that to the attention of the Commission on Water Resource Management. The process to date has been an involved process and I might add and expensive process to bring this matter to a fair and reasonable conclusion. The matter of pump installation permits were inadvertently overlooked for all of the reasons supplied in this report as well as the report supplied by Hamakua Joint Venture.
Ms. Limel T. Nishioka  
August 10, 2001  
Page 4

Beylik Drilling is particularly chagrined and disappointed to be caught up in this administrative tangle, as its RME, I am equally disappointed that the system resulted in the muted communications herein described. It goes without saying we are sorry for the inconvenience, trouble and expense this matter has caused all involved and ask the Commission in its deliberations to treat this as an administrative error which has subsequently been corrected and to accept Beylik Drilling, Inc.'s testimony that proper steps have been taken to bring Beylik Drilling's organization administrative procedures in compliance with any matter regarding the Commission and Water Resource Management Rules and Regulations.

Sincerely,

William C. Moore  
Vice President

WCM: laf
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Weren't they going to submit the 2nd test data as well with the explanation? Don't see the lender order or correspondence of engineers saying must do before stories transferred. What is inadequate about 1st well test? This is of greater concern to us, I think.
August 2, 2001

BY FAX AND U.S. MAIL

Linnel T. Nishioka
Deputy Director
Commission on Water Resource Management
P.O. Box 621
Honolulu, Hawaii 96809

Re: HEP Well No. 2, State No. 6528-03: Pump Installation Permit Application

Dear Linnel:

At our meeting on July 26, 2001, you requested that I provide you with a letter detailing the facts and circumstances of the events of December 2000 and January 2001 surrounding the pump testing of Hamakua Energy Partners L.P.'s ("H.E.P.") Well No. 2, State No. 6528-03. I am writing to provide you and your staff with the information you requested in order that you may make your recommendation to the Commissioners.

According to our records, the pump testing required as a condition to the Well Construction Permit was conducted using an engine-driven test pump from December 11 to 13, 2000, which data was reported to the Commission in Well Completion Report Part I for Well No. 2. Following the testing, the test pump was removed and prepared for shipping to another job site where the drilling contractor needed to utilize it. Believing there was no imminent need to utilize Well No. 2, Tom Nance, the well and pump consultant, did not immediately submit a pump installation permit application.
On or about December 13 or 14, H.E.P. was contacted about a request for additional pump testing from Stone & Webster, an engineering firm employed by the lender involved in the ongoing refinancing of the project. During this time period, there was a very concerted effort by all involved to complete the refinancing transaction by an imminent deadline. Stone & Webster required that an extended pump test, running both Well Nos. 1 and 2 concurrently, be conducted immediately. Stone & Webster insisted that the extended pump test run for a minimum of five days in duration, include various water quality testing and that this testing be completed by December 31st. Mr. Nance proposed that the testing begin December 22. See email correspondence dated from December 14 to 20, 2000, by and between H.E.P., Stone & Webster and Tom Nance discussing Stone & Webster’s request for extended testing attached hereto as Exhibit A.

The temporary pump which had been employed in the earlier testing was currently crated on the dock at Kawaihae and unavailable for further use at the Hamakua site. The only pump available on such short notice was the pump purchased to become the permanent pump for Well No. 2. Mr. Nance was able to retrieve the meter from the temporary pump for use with the permanent pump for the extended testing.

On December 22, 2000, the permanent pump was installed for testing which ran 12 days until January 3, 2001, due to continuing changes and additions to Stone & Webster’s request. All of the water from this testing was pumped to waste as the pump was not hooked up to the system at the time. See letter dated January 5, 2001, from Tom Nance reporting results of extended testing attached hereto as Exhibit B. As soon as the extended testing was completed, the now-pending pump installation permit application was submitted to the Water Commission on January 9, 2001. The permanent pump was not used again until approximately the first week of March at which point it was attached to the system for permanent use.
If I can provide any further information to answer questions you may have, please contact me. Thank you for your assistance and cooperation in this matter.

Very truly yours,

[Signature]

Tim Lui-Kwan

cc: Tom Nance, Tom Nance Water Resource Engineering
    William Moore, Roscoe Moss/Beylik Drilling, Inc.
    Larry Kafchinsky, Hamakua Energy Partners, LP
Tom,
Do you have the 1999 report mentioned below? We need to discuss your availability, capability and price to conduct this test ASAP
Thanks

-----Original Message-----
From: Hickman, Herb [mailto:ghickman@ajones.com]
Sent: Thursday, December 14, 2000 10:30 AM
To: Kafchinski, Larry
Cc: DeMars, Claude; Sanders, Ian; 'dgiel@hialoha.net'
Subject: FW: Salinity Testing

Larry,
Here is the Stone & Webster testing requirements. Please forward to the appropriate testing group. We need a price and expected schedule for completing the tests. The current testing does not appear to be sufficient since we are not running both wells at full capacity.
Herb

-----Original Message-----
From: Brian.Gilbertson@swec.com [mailto:Brian.Gilbertson@swec.com]
Sent: Wednesday, December 13, 2000 3:23 PM
To: Hickman, Herb
Cc: linda.cangiaco@us.socgen.com; Edwin.Johnson@swec.com
Subject: Re: Salinity Testing

We suggest that the testing procedures should be consistent with those used by Waimea Water Services as summarized in their February 10, 1999 Well Completion Report. The duration of the test was five days (7200 minutes). Water quality and drawdown were sampled with maximum permitted flow (approximately 1150 gpm) at the following intervals (minutes after commencement): 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 2000, 3000, 4000, 5000, 6000, 7000, and 7200. Water samples were analyzed by AECOS Laboratory of Hawaii for chlorides as well as a number of other parameters. I can fax you a copy of the report and laboratory analyses, if necessary.
Water quality samples from each well should be obtained at the intervals discussed above. Our intent is to compare the results of the Waimea Water Services Well Completion Report with corresponding results from the planned test of the two wells, operating simultaneously for the test duration, to determine if there are comparable trends related to concentrations of chlorides and other parameters that are indicative of increasing salinity. If chloride levels increase throughout the test, we suggest that the sampling frequency be increased and the test be extended until the levels reach a steady state condition.
From: TNWRE <tnwre@flex.com>
To: <brian.gilbertson@swec.com>
Sent: Tuesday, December 19, 2000 11:23 AM
Subject: Salinity Testing

Your Dec. 13 email to Herb Hickman regarding pump testing both wells concurrently was forwarded to me. Please call me to discuss. I can also provide information on the recently completed test of Well 2. (808-537-1141).

Sincerely,
Tom Nance
Pay to: Larry Kafehinski (775-1801)
From: Tom Moore

Latest from Brian Gilbertson, he keeps changing his mind. We can have the test run longer, but your staff will need to continue the 12-hour sample and农副te monitoring. Please call (537-1141) to discuss.

TNWRE
From: <Brian.Gilbertson@swec.com>
To: TNWRE <tnwre@iex.com>
Cc: Sanders, lan <lsanders@ajones.com>; <linda.cangiano@us.socgen.com>
<Edwin.Johnson@swec.com>
Sent: Friday, December 22, 2000 7:10 AM
Subject: Re: Salinity Testing

Your fax of December 20th proposes that the salinity test commence on December 22nd and run for a one week period until December 29th. The duration was determined in order to provide data regarding the water resource prior to planned financial closing on December 31st. Since it now appears unlikely that testing and other prerequisites to closing by December 31st will be completed, I suggest that the salinity test may be extended beyond December 29th, if necessary, to obtain more conclusive results.
MEMORANDUM

TO: Larry Katchinski - Hamakua Energy Partners

FROM: Tom Nance

SUBJECT: Extended Pump Test of Well Nos. 1 and 2

At the request of the Stone & Webster, an extended pump test with Well Nos. 1 and 2 running concurrently was conducted. As identified herein, Well 1 refers to the first well completed and Well 2 is the recently completed second well. The test was run for 12 days, starting at 10:35 a.m. on December 22, 2000 and ending at 10:45 a.m. on January 3, 2001. To accommodate the power plant's operating requirements, the test was run in the following manner:

- Well No. 1 had already been running and continued to provide the plant's supply requirements throughout the test.
- Using its permanent pump, Well No. 2 was run for 12 days with its discharge directed into a perimeter drainage ditch.
- Water level and conductivity recorders were installed on both wells to provide a continuous record of trends in salinity.
- At 12-hour intervals, plant operating personnel collected samples and recorded the instantaneous pumping rates and flowmeter totalizer values at each well.

Pumping Rates. Over the 12-day test, the flowrate on Well No. 1 varied in abrupt steps from 225 to 250 GPM on the low end and at 450 GPM on the high end. Over the 12-day period, it averaged 373 GPM. Well No. 2 ran at an essentially constant rate of 890 to 900 GPM against the modest above-ground head of its discharge hose. Its 12-day average flowrate was 893 GPM.

Recorded Water Level. Unventilated pressure transducer-data loggers were inserted in both wells shortly before the start of the pump test on December 22nd and retrieved shortly following the end of the test on January 3rd. Water level was recorded at 5-minute intervals. The level in Well No. 1 (on Figure 1) shows abrupt changes in water level in response to the abrupt changes in pumping rates. These changes are superimposed over the tidal variation of the basal lens the well taps. There is also a "noise" in the recorded level due to downhole vibration of the pump.
Memo to: Larry Katchinski
January 5, 2001 -- 00/010
Page two

The recorded water level for Well 2 is shown on Figure 2. With its essentially constant pumping rate, a "smoother" water level record with a clearer depiction of the tidal influence was obtained. At about 900 GPM, drawdown in the well was about 1.7 feet.

Conductivity of the Pumped Water. Conductivity of both wells was recorded at 5-minute intervals and was also measured for discrete samples taken at 12-hour intervals. Both measures of conductivity for Well 1 are shown on Figure 3 (the discrete sample results are also listed in Exhibit 1). This particular conductivity recorder behaved somewhat erratically through the first six days of the test and somewhat better thereafter. For this well, conductivity of the discrete samples provide a more reliable record. These show a slight rise from about 735 µmhos at the start of the test to about 790 µmhos at the end. This well had been operated continuously for several months prior to the test, presumably achieving a stable salinity. Based on this, it appears that the modest increase during the 12-day test is attributable to the concurrent operation of Well No. 2.

Recorded and discrete sample conductivity of the water pumped by Well No. 2 is shown on Figure 4. There was a significant increase through the test, starting at about 440 µmhos and ending at about 890 µmhos. On this linear presentation of the data, it appears that the conductivity was asymptotically approaching a level of about 1100 µmhos. On a semi-log plot (Figure 5), it appears that 1100 µmhos might be reached in about 45,000 to 50,000 minutes (30 to 35 days) of continuous pumping at about 900 GPM.

Chloride Concentrations. Chloride concentrations of the samples taken at 12-hour intervals are compiled in Exhibit 1. Since saltwater intrusion into the basal lens is the reason for the salinity rise during the pump test, the trends in chlorides are essentially identical to the trends in conductivity discussed above.

cc: Brian Gilbertson - Stone & Webster
John Pierce - Jones/Burns & McDonnell

Attachments
LETTER OF TRANSMITTAL

TO

COMMISSION ON WATER RESOURCE MGMT.

P.O. BOX 621

HONOLULU, HI 96809

WE ARE SENDING YOU ☑ Attached ☐ Under separate cover via
☐ Shop drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications
☐ Copy of letter ☐ Change order ☐

COPIES | DATE | NO. | DESCRIPTION
--- | --- | --- | ---
1 | | | WELL CONSTRUCTION PERMIT

THESE ARE TRANSMITTED as checked below:

☐ For approval ☐ Approved as submitted ☐ Resubmit ______ copies for approval
☐ For your use ☐ Approved as noted ☐ Submit ______ copies for distribution
☐ As requested ☐ Returned for corrections ☐ Return ______ corrected prints
☐ For review and comment ☐ __________________________

☐ FOR BIDS DUE __________________________

REMARKS PLEASE NOTE THAT EQUIPMENT HAS BEEN MOBILIZED TO THE SITE AND DRILLING

ACTIVITIES ARE TO BEGIN ON JUNE 19, 2000.

COPY TO 9330G/C FILE

SIGNED: ____________

If enclosures are not as noted, kindly notify us at once. ____________

BOB GLASCOtt
CARLSMITH BALL LLP
A LIMITED LIABILITY LAW PARTNERSHIP

PACIFIC TOWER, SUITE 2200
1001 BISHOP STREET
HONOLULU, HAWAII 96813
TELEPHONE (808) 523-2500  FAX (808) 523-0842
WWW.CARLSMITH.COM

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DATE: May 2, 2001

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<td>Roy Hardy</td>
<td>587-0219</td>
<td>587-0222</td>
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FROM: Jean K. Campbell

NUMBER OF PAGES INCLUDING THIS COVER SHEET: 11

CASE NAME: Hamakua Energy Partners

CASE NUMBER: 052656-4

☑ ORIGINAL/COPY WILL BE MAILED  ☒ ORIGINAL/COPY WILL NOT BE MAILED

MESSAGE:

Roy,

Here are (1) the Well Completion Part II for Well no. 1; (2) the Jan. 16, 2001 letter acknowledging receipt of the same; (3) Well Completion Report Parts I & II for Well no. 2; and (4) the March 5 letter asking for clarification of 3 issues.

Please note there is a typo on the Well Completion Report Part II for Well no. 1. I pointed it out to Ryan earlier and he said he took note of it and should have changed it on his copy. The State well no. is listed as 6528-03 when it should be 6528-02.

If problems occur, please call our facsimile operator at (808) 523-2500, or Jean at 523-2519.
State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources
WELL COMPLETION REPORT - PART II
Pump Installation

Instructions: Please print in ink or type and send completed report (with attachments, if applicable) to the
Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809. The Commission
may not accept incomplete reports. This form shall be submitted within 60 days of the completion of work.
For assistance, please contact the Hawaii Well Construction and Pump Installation Standards or call the
Regulation Branch at 587-2225. For updates to this form or additional information, please visit our website at
http://www.state.hi.us/dlnr/cwrm/

1. State Well No.: 6328-03
   Well Name: Enseurch #2 Well
   Island: Hawaii

2. Address: 45-300 Lehua St., Honokaa, HI 96727
   Tax Map Key: 45-002:056


4. Date Pump Installed: 12-30-2000

5. PERMANENT PUMP INFORMATION
   Pump Type, Make, Serial No.: Submersible/Goulds/PO 14310
   Rated Capacity: 700 gpm
   Motor Type, H.P., Voltage, rpm: Franklin – 125 – 3540
   Type of flow meter: Propeller
   which measures in GPM

6. Method of flow measurement:
   □ Flowmeter
   Manufacturer Specialties Make
   Size
   □ Weir* □ Open Pipe* □ Orifice* □ Other*, explain below
   *attach schematic

7. Fill in the as-built section on the other side of this sheet.

8. Other remarks/comments:
   Enseurch No. 6-6928-03 Enseurch 2

Pump Installation Contractor (print): Beylik Drilling, Inc. C-57/C-57a/A Lic. No. AC-22214

Signature

William G. Moore, Vice President

Date January 29, 2001

Permittee (print): Larry Kachinski

Signature

Date 01/29/01
9. AS-BUILT PUMP SECTION (Please attach as-built if different from diagram provided below)

**Section 2**

**Bench mark elevation surveyed to nearest 0.01 ft. = 451.01 ft. mean sea level**

**Identify reference point elevation for water level measurements through chase tube**: 451.70 ft. mean sea level

**Describe reference point**: Top of Flange

**Pump intake depth = 464.25 ft.**
(referenced to bench mark)

**Chase tube depth = 460.00 ft.**
(referenced to bench mark)

**If airline installed, bottom of airline elevation = NA** ft. mean sea level
March 5, 2001

Mr. Larry Kafchinski
Hamakua Energy Partners
P.O. Box 40
Honokaa, HI 96727.

Dear Mr. Kafchinski:

Well Completion Report for Well No. 6528-03

We received your Well Completion Report Part I for the Enserch #2 Well (Well No. 6528-03) on January 11, 2001. We also received your Well Completion Report Part II on February 14, 2001. Several issues, which must be addressed before we accept your reports as complete, are as follows:

1. Please clarify the water level as described on items 6. and 9. on your Well Completion Report Part I. A ground elevation of 451.01 and a depth of 453.25 would indicate a negative water level.

2. Please inform us of the date the pump was installed in item 4. of your Well Completion Report Part II.

3. Please explain to us why a pump was installed prior to our issuance of a permanent Pump Installation Permit.

Please respond to the above item(s) within sixty (60) days of this letter's date. Failure to do so may result in fines of up to $1000 per day.

We are returning your application to your consultant to complete the application.

If you have any questions, please contact Ryan Imata of the Commission staff at 587-0255 or toll-free at 974-4000 (Hawaii), 274-3141 (Kauai), 984-2400 (Maui), or 1-800-468-4644 (Lanai & Molokai).

Sincerely,

[Signature]
LINNEL T. NISHIOKA
Deputy Director

Ricky
c. Tom Nance Water Resource Engineering
March 16, 2001

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

Subject: Well Completion Report for Well No. 6528-03

Dear Ms. Nishioka:

I am writing pursuant to your letter dated March 5, 2001 addressed to Mr. Larry Kafchinski of Hamakua Energy Partners. I would like to clarify the three issues stated in your letter so that the reports can be accepted as complete.

1. The correct depth to water is 448.30’ (Item 6) and the water-level is in fact 2.71’ above msl (Item 9).

2. The pump was set on December 20, 2000 (Item 4).

3. Due to the lengthy time it took to complete this job and the power plant’s tight construction schedule, the permanent pump was installed immediately following the pump test because we were required to remove our equipment from the site as soon as possible to allow for the power plant’s final phases of construction to be completed. Additionally, there was a rush on the part of the lender to perform a successful long-term test using the permanent pump. This test lasted 14 days and was performed as a requirement to complete financing of the project.

Should you require any other information or have any questions please do not hesitate to call.

Sincerely,

Robert A. Glasscott
Project Manager

Cc: Mr. Larry Kafchinski, Hamakua Energy Partners
State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources
WELL COMPLETION REPORT - PART I
Well Construction

Instructions: Please print in ink or type and send completed report (with attachments, if applicable) to the
Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96806. The Commission may
not accept incomplete reports. This form shall be submitted within 60 days of the completion of work. For
assistance, please consult the Hawaii Well Construction and Pump Installation Standards or call the Regulation
Branch at 587-3226. For updates to this form or additional information, please visit our website at
http://www.state.hi.us/dir/cwm/

1. State Well No.: 6256-03  Encugen Well No. 2
2. Address: P.O. Box 40, Honokaa, HI 96727
4. If drilled, type of Rig: □ Rotary □ Percussion
5. Date Well Construction (drilled,cased,grouted) completed: 10/30/00
6. Initial water-level encountered 453.25 ft. below ground Date and time of measurement: 9/23/00 0700
7. Step-Drawdown Test completed? □ No □ Yes
   Parameters prior to pump test:
   Water-level: 122.75 ft. above msl Date and time of measurement: 12/11/00 0700
   Chloride: 85 ppm Date and time of sampling: 12/11/00 1900
   Temperature: 67.6 °F Date and time of measurement: 12/11/00 1900
8. Constant Rate Aquifer Test completed? □ No □ Yes
   Attach Constant Rate Aquifer Test form (1211787 CRPTD Form).
9. Fill in the as-built section on the other side of this sheet.
10. Attach plot plan and surveyor's stamped elevation report.
11. If a pump is not planned to be installed, please describe (below in the remarks section) how well is secured to
    prevent unauthorized access (example: lockable cover, threaded coupling, etc.)
12. Remarks:

Licensed Driller (print) BETLIK DRILLING, INC.
Signature

Surveyor (print) ROBERT T. SHIRAI L.P.L.S. Lic. No. 5985
Signature

Permittee (print) LARRY F. KAFCHINSKI
Signature

Date 12-26-00
Date 01/10/01
Date 12/16/00

WCR1 Form 9/2000
13. AS-BUILT WELL SECTION

(Please attach as-built if different from diagram provided below)

Elevation at top of casing
451.80 ft., msl*

(to nearest 0.01 ft.)

Hole Diameter: 19 in.

Minimum of 2' Radius & 4" Thick Concrete Pad

Ground Elevation, 451.01 ft., msl

Bench mark elevation:
451.61 ft., msl*
(Survey to nearest 0.01 ft.)

Cement Grout: 330 ft.
(min. 70% of distance from
ground elevation to top of
water surface or 500 ft.,
whichever is less.)

Annular space between
hole and casing (min.3):
3 in.

Rock or Gravel Packing:
NA ft.

Material:
- Crushed Basalt
- Rounded Gravel

Water Level Elevation:
2.71 ft., msl*

Total Depth
49.1 ft.

Please refer to the
HAWAII WELl CONSTRUCTION AND
PUMP INSTALLATION STANDARDS
to ensure that your as-built is in compliance
with applicable standards.

Solid Casing: (≥ 90% x (Ground Elev-Water Level Elev))

Length: 451 ft.
Nominal Diameter: 12 in.
Wall Thickness: 3/8 in.
Bottom Elevation: 0.01 ft., msl

Open Casing:

Perforated Screen

Length: 40 ft.
Nominal Diameter: 12 in.
Wall Thickness: 5/16 in.
Bottom Elevation: -39.99 ft., msl

Open Hole:

Length: NA ft.
Diameter: NA in.
Bottom Elevation: NA ft., msl

*msl = mean sea level

Solid Casing Material:
Carbon Steel: compliant with (check one or more):
- ANSI/AWWA C200
- API Spec. 5L
- ASTM A53
- ASTM A139

And compliant with (check one or more):
- ASTM A242
- Type E
- Type S
- Grade B
- Other

Stainless Steel: (check one):
- ASTM A409 (production wells)
- ASTM A312 (monitor wells)

ABS Plastic conforming to ASTM F480 and ASTM D1527: (check one)
- Schedule 40
- Schedule 80

PVC Plastic conforming to ASTM F480 and (ASTM D1785 or ASTM D2241): (check one)
- Schedule 40
- Schedule 80
- Schedule 120

Thermoset Plastic: (check one)
- Filament Wound Resin Pipe conforming to ASTM D2996
- Centrifugally Cast Resin Pipe conforming to ASTM D2997
- Reinforced Plastic Mortar Pressure Pipe conforming to ASTM D3517
- Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C950
- PTFE Fluorocarbon Tubing conforming to ASTM D3296
- FEP Fluorocarbon Tubing conforming to ASTM D3296

Open Casing Material:
Carbon Steel: compliant with (check one or more):
- ANSI/AWWA C200
- API Spec. 5L
- ASTM A53
- ASTM A139

And compliant with (check one or more):
- ASTM A242
- Type E
- Type S
- Grade B
- Other

Stainless Steel: (check one):
- ASTM A409 (production wells)
- ASTM A312 (monitor wells)

ABS Plastic conforming to ASTM F480 and ASTM D1527: (check one)
- Schedule 40
- Schedule 80

PVC Plastic conforming to ASTM F480 and (ASTM D1785 or ASTM D2241): (check one)
- Schedule 40
- Schedule 80
- Schedule 120

Thermoset Plastic: (check one)
- Filament Wound Resin Pipe conforming to ASTM D2996
- Centrifugally Cast Resin Pipe conforming to ASTM D2997
- Reinforced Plastic Mortar Pressure Pipe conforming to ASTM D3517
- Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C950
- PTFE Fluorocarbon Tubing conforming to ASTM D3296
- FEP Fluorocarbon Tubing conforming to ASTM D3296
March 16, 2001

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

Subject: Well Completion Report for Well No. 633-08

Dear Ms. Nishioka:

I am writing pursuant your letter dated March 5, 2001 addressed to Mr. Larry Kafchinski of Hamakua Energy Partners. I would like to clarify the three issues stated in your letter so that the reports can be accepted as complete.

1. The correct depth to water is 448.30’ (Item 6) and the water-level is in fact 2.71’ above msl (Item 9).

2. The pump was set on December 20, 2000 (Item 4).

3. Due to the lengthy time it took to complete this job and the power plant’s tight construction schedule, the permanent pump was installed immediately following the pump test because we were required to remove our equipment from the site as soon as possible to allow for the power plant’s final phases of construction to be completed. Additionally, there was a rush on the part of the lender to perform a successful long-term test using the permanent pump. This test lasted 14 days and was performed as a requirement to complete financing of the project.

Should you require any other information or have any questions please do no hesitate to call.

Sincerely,

Robert A. Glascott
Project Manager

Cc: Mr. Larry Kafchinski, Hamakua Energy Partners
Mr. Claude DeMars  
Hamakua Energy Partners, LP  
P.O. Box 40  
Honokaa, HI 96727  

Dear Mr. DeMars:

Well Construction Permit  
Enserch #2 Well (Well No. 6528-03)

Enclosed are two (2) copies of your approved Well Construction Permit for the captioned well(s) that authorize well construction activities but excludes installation work for your permanent pump. As part of the Chairperson's approval, the following special conditions were added and are part of your permit under Permit Condition 13:

Special Conditions

1. Attached for your information is a copy of the Department of Health's (DOH) review comments. Please note DOH's requirements related to discharge of effluent from well drilling and testing activities.

This permit does not authorize work for your permanent pump installation. Approval and issuance of your pump installation permit is contingent upon completed application and information provided to and accepted by Commission staff as required in the Well Construction & Pump Installation Standards (1/23/97) and any special conditions performed under this permit. However, a permanent pump may be installed prior to the permanent pump installation permit issuance in accordance with the Commission's April 15, 1998 Declaratory Ruling No. DEC-ADM98-G5, which states that:

"Permanent pump installation for capacities between 0-70 gpm and where the proposed use is for private individual needs in non-ground-water management areas may be allowed prior to the final pump installation permit issuance. When required as a condition of the well construction permit, subsequent pumping tests shall validate the acceptability of the permanent pump. The permanent pump installed prior to final pump installation permit issuance is subject to removal if the testing shows that a smaller pump is required to reduce the potential of affecting neighboring wells and localized upconing at the applicant's well."
If you qualify and wish to take advantage of this ruling, please include a written request to install the permanent pump prior to final pump installation permit issuance when you return to us your signed well construction permit.

Please sign and have the contractor sign both permit originals and return one for our files. Also, copies of the aquifer pump test worksheet and the well completion report form are enclosed for your use.

**IMPORTANT** - Drilling work shall not commence until a fully signed permit is returned to the Commission. Please provide all the information in this packet to your well drilling contractor. The permittee, well operator, and/or well owner are responsible for all conditions of the permit. This includes ensuring that the well construction contractor, or other party who constructs the well(s), submits a completed Part I of the Well Completion Report form (enclosed) within sixty (60) days after the well construction work is completed. Be advised that you may be subject to fines of up to $1000 per day for any violations of your permit conditions starting from the permit approval date.

If you have any questions, please call Ryan Imata of the Commission staff at 587-0255 or toll-free at 974-4000, extension 70255.

Aloha,

TIMOTHY E. JOHNS
Chairperson

Enclosures

c: Tom Nance
WELL CONSTRUCTION PERMIT
Enserch #2 Well, Well No. 6528-03

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 Enserch #2 Well (Well No. 6528-03) at 45-300 Lehua Street, Hawaii, TMK 4-5-2:096, subject to the Hawaii Well Construction & Pump Installation Standards (12/3657) which include but are not limited to the following conditions:

1. The Chairperson of the Commission on Water Resource Management (Commission), P.O. Box 621, Honolulu, HI 96809, shall be notified, in writing, at least two (2) weeks before any work authorized by this permit commences and staff shall be allowed to inspect installation activities in accordance with §13-168-15, Hawaii Administrative Rules.

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 Chairperson, to accurately record water levels. The permittee, well operator, and/or well owner shall coordinate with the Chairperson and conduct a pumping test in accordance with the Standards (a pump testing worksheet is attached). The permittee, well operator, and/or well owner shall submit 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 Chairperson.

3. In basal ground water, the depth of the well may not exceed one-fourth (1/4) of the theoretical thickness (41 times initial head) of the basal ground water unless otherwise authorized by the Chairperson.

4. The permittee, well operator, and/or well owner 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.

5. In the event that subsurface cultural remains such as artifacts, burials or concentrations of shells or charcoal are encountered during construction, the permittee, well operator, and/or well owner shall stop work and contact the Department’s Historic Preservation immediately.

6. 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.

7. The following shall be submitted to the Chairperson within sixty (60) days after completion of work:
   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 data.

8. The permittee, well operator, and/or well owner shall comply with all applicable laws, rules, and ordinances; non-compliance may be grounds for revocation of this permit.

9. The well construction permit application is incorporated by reference and is subject to the Hawaii Well Construction & Pump Installation Standards (January 23, 1997, HWCPIS). If the HWCPIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result.

10. The permit may be revoked by the Commission 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 Chairperson upon a showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Chairperson no later than three (3) months prior to the date the permit expires. If the commencement date is not met, the Commission may revoke the permit after giving the permittee, well operator, and/or well owner notice of the proposed action and an opportunity to be heard.

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

12. The permittee, its successors, and assigns shall indemnify, defend, and hold the State of Hawaii harmless from and against any loss, liability, claim, or demand for property damage, personal injury, or death arising out of any act or omission of the applicant, assigns, officers, employees, contractors, and agents under this permit or relating to or connected with the granting of this permit.

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

Date of Approval: March 7, 2000
Expiration Date: March 7, 2002

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 and understand that I shall not commence work until I and the driller have signed, dated, and returned the permit to the Commission. I also understand that non-compliance with any permit condition may be grounds for revocation and fines of up to $1000 per day starting from the permit date of approval.

Permittee’s Signature: _____________________________ Date: ________________
Printed Name: ________________________________ Firm or Title: ________________________________
Driller’s Signature: _____________________________ C-57 License #: ________________ Date: ________________
Printed Name: ________________________________ Firm or Title: ________________________________

Please sign both copies of this permit, return one to the Chairperson, and retain the other for your records.

TIMOTHY E. JOHNS, Chairperson
Commission on Water Resource Management

Attachment
C: USGS
Department of Health/ Safe Drinking Water, Wastewater, and Clean Water Branches
Hawaii Department of Water Supply
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 Enserch 
Well (Well No. 6528-03) at 45-300 Lehua Street, Hawaii, TMK 4-5-2:056, subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97) which include but are not limited to the following conditions:

1. The Chairperson of the Commission on Water Resource Management (Commission), P.O. Box 621, Honolulu, HI 96809, shall be notified, in writing, at least two (2) weeks before any work authorized by this permit commences and staff shall be allowed to inspect installation activities in accordance with §13-168-15, Hawaii Administrative Rules.

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 Chairperson, to accurately record water levels. The permittee, well operator, and/or well owner shall coordinate with the Chairperson and conduct a pumping test in accordance with the Standards (a pump testing worksheet is attached). The Chairperson, well operator, and/or well owner shall submit to the Chairperson 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 Chairperson.

3. In basal ground water, the depth of the well may not exceed one-fourth (1/4) of the theoretical thickness (41.7 times initial head) of the basal ground water unless otherwise authorized by the Chairperson.

4. The permittee, well operator, and/or well owner 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.

5. In the event that subsurface cultural remains such as artifacts, burials or concentrations of shells or charcoal are encountered during construction, the permittee, well operator, and/or well owner shall stop work and contact the Department's Historic Preservation immediately.

6. 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.

7. The following shall be submitted to the Chairperson within sixty (60) days after completion of work:
   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 data.

8. The permittee, well operator, and/or well owner shall comply with all applicable laws, rules, and ordinances; non-compliance may be grounds for revocation of this permit.

9. The well construction permit application is incorporated into this permit by reference and is subject to the Hawaii Well Construction & Pump Installation Standards (January 23, 1997: HWCPIS). If the HWCPIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result.

10. The permit may be revoked by the Commission 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 Chairperson upon a showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Chairperson no later than three (3) months prior to the date the permit expires. If the commencement date is not met, the Commission may revoke the permit after giving the permittee, well operator, and/or well owner notice of the proposed action and an opportunity to be heard.

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

12. The permittee, its successors, and assigns shall indemnify, defend, and hold the State of Hawaii harmless from and against any loss, liability, claim, or demand for property damage, personal injury, or death arising out of any act or omission of the applicant, assigns, officers, employees, contractors, and agents under this permit or relating to or connected with the granting of this permit.

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

Date of Approval: March 7, 2000
Expiration Date: March 7, 2002

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 and understand that I shall not commence work until I the driller have signed dated, and returned the permit to the Commission. I also understand that non-compliance with any permit condition may be grounds for revocation and fines of up to $1000 per day starting from the permit date of approval.

Permittee's Signature: [Signature]
Printed Name: LARRY L. KAYABE
Firm or Title: General Manager
Driller's Signature: WIIIAM C. MURR, C-57 License # C28996
Printed Name: WILLIAM C. MURR
Firm or Title: VP

Please sign both copies of this permit, return one to the Chairperson, and retain the other for your records.

Attachment
C: USGS
Department of Health Safe Drinking Water, Wastewater, and Clean Water Branches
Hawaii Department of Water Supply

TIMOTHY E. JOHN, Chairperson
Commission on Water Resource Management
March 16, 2001

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

Subject: Well Completion Report for Well No. 6528-03

Dear Ms. Nishioka:

I am writing pursuant your letter dated March 5, 2001 addressed to Mr. Larry Kafchinski of Hamakua Energy Partners. I would like to clarify the three issues stated in your letter so that the reports can be accepted as complete.

1. The correct depth to water is 448.30' (Item 6) and the water-level is in fact 2.71' above msl (Item 9).

2. The pump was set on December 20, 2000 (Item 4).

3. Due to the lengthy time it took to complete this job and the power plant's tight construction schedule, the permanent pump was installed immediately following the pump test because we were required to remove our equipment from the site as soon as possible to allow for the power plant's final phases of construction to be completed.

   Additionally, there was a rush on the part of the lender to perform a successful long-term test using the permanent pump. This test lasted 14 days and was performed as a requirement to complete financing of the project.

Should you require any other information or have any questions please do not hesitate to call.

Sincerely,

Robert A. Glascott
Project Manager

Cc: Mr. Larry Kafchinski, Hamakua Energy Partners
March 5, 2001

Mr. Larry Kafchinski
Hamakua Energy Partners
P.O. Box 40
Honokaa, HI 96727

Dear Mr. Kafchinski:

Well Completion Report for Well No. 6528-03

We received your Well Completion Report Part I for the Enserch #2 Well (Well No. 6528-03) on January 11, 2001. We also received your Well Completion Report Part II on February 14, 2001. Several issues, which must be addressed before we accept your reports as complete, are as follows:

1. Please clarify the water level as described on items 6. and 9. on your Well Completion Report Part I. A ground elevation of 451.01 and a depth of 453.25 would indicate a negative water level.

2. Please inform us of the date the pump was installed in item 4. of your Well Completion Report Part II.

3. Please explain to us why a pump was installed prior to our issuance of a permanent Pump Installation Permit.

Please respond to the above item(s) within sixty (60) days of this letter's date. Failure to do so may result in fines of up to $1000 per day.

We are returning your application to your consultant to complete the application.

If you have any questions, please contact Ryan Imata of the Commission staff at 587-0255 or toll-free at 974-4000 (Hawaii), 274-3141 (Kauai), 984-2400 (Maui), or 1-800-468-4644 (Lanai & Molokai).

Sincerely,

[Signature]

LINNEL T. NISHIOKA
Deputy Director

Rf:ky
c. Tom Nance Water Resource Engineering
March 5, 2001

Mr. Tom Nance
Tom Nance Water Resource Engineering
680 Ala Moana Boulevard Suite 406
Honolulu, HI 96813

Dear Mr. Nance:

Well Completion Report for Well No. 6528-03

We received your application for a Pump Installation Permit for the Enserch #2 Well on January 10, 2001. However, you have previously applied for both a Well Construction and Pump Installation Permit, as verified by Ryan Imata via telephone sometime around your initial application date of December 30, 1999. Therefore we are returning your application and filing fee.

We also note a couple of reminders as follows:

1. The attached application you have submitted is on our old form. You can check for updated forms on our website at http://www.state.hi.us/dlnr/cwrm/

2. We have noticed that you are submitting graphs in lieu of the aquifer pump test worksheets. For future pump tests, please submit the pump test worksheets as required by Standard Condition 7e of the current Well Construction Permit.

3. We have also noted that for the Enserch #2 Well, a pump was installed prior to obtaining a pump installation permit. You are reminded that the standard language in our Well Construction Permit cover letter reads:

   This permit does not authorize work for your permanent pump installation. Approval and issuance of your pump installation permit is contingent upon completed application and information provided to and accepted by Commission staff as required in the Well Construction & Pump Installation Standards (1/23/97) and any special conditions performed under this permit. However, a permanent pump may be installed prior to the permanent pump installation permit issuance in accordance with the Commission's April 15, 1998 Declaratory Ruling No. DEC-ADM98-G5, which states that:

   "Permanent pump installation for capacities between 0-70 gpm and where the proposed use is for private individual needs in non-ground-water management areas may be allowed prior to the final pump installation permit issuance. When required as a condition of the well construction..."
permit, subsequent pumping tests shall validate the acceptability of the permanent pump. The permanent pump installed prior to final pump installation permit issuance is subject to removal if the testing shows that a smaller pump is required to reduce the potential of affecting neighboring wells and localized upconing at the applicant's well."

If you qualify and wish to take advantage of this ruling, please include a written request to install the permanent pump prior to final pump installation permit issuance when you return to us your signed well construction permit.

If you have any questions, please contact Ryan Imata of the Commission staff at 587-0255 or toll-free at 974-4000 (Hawaii), 274-3141 (Kauai), 984-2400 (Maui), or 1-800-468-4644 (Lanai & Molokai).

Sincerely,

LINNEL T. NISHIOKA
Deputy Director

Re:ky

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

Dear Ms. Nishioka:

Well Completion Report - Part II (Pump Installation) for  
ENSERCH Well No. 2 - State Well No. 6258-03  
Honokaa, Hawaii

Attached is the Well Completion Report - Part II (Pump Installation) for ENSERCH Well No. 2, State Well No. 6258-03. Also included is an as-built pump and well section drawing prepared by the Contractor. If you need any other information, please feel free to call.

Sincerely,

Tom Nance

Attachments

cc:  John Pierce - Jones/Burns & McDonnell  
     Bob Glascott - Beylik Drilling
State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources
WELL COMPLETION REPORT - PART II
Pump Installation

Instructions: Please print in ink or type and send completed report (with attachments, if applicable) to the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809. The Commission may not accept incomplete reports. This form shall be submitted within 60 days of the completion of work. For assistance, please consult the Hawaii Well Construction and Pump Installation Standards or call the Regulation Branch at 587-0225. For updates to this form or additional information, please visit our website at http://www.state.hi.us/dlnr/cwrm/

1. State Well No.: 6258-03  Well Name: Enserch #2 Well  Island: Hawaii
2. Address: 45-300 Lehua St., Honokaa, HI 96727  Tax Map Key: 45-002:056
4. Date Pump Installed: 12-70-2000
5. PERMANENT PUMP INFORMATION
   Pump Type, Make, Serial No.: Submersible/Goulds/PO 14310  Rated Capacity: 700 gpm
   Motor Type, H.P., Voltage, rpm: Franklin - 125 - 3540
   Type of flow meter: Propeller which measures in GPM
6. Method of flow measurement: Water
   ☑ Flowmeter  Manufacturer Specialties Make Saddle Size 10"
   ☑ Weir*  ☑ Open Pipe*  ☑ Orifice*  ☑ Other*, explain below
   *attach schematic
7. Fill in the as-built section on the other side of this sheet.
8. Other remarks/comments:
  вел. № 8-6928-03  Enserch 2

Pump Installation Contractor (print)  Beylik Drilling, Inc.  C-57/C-57a/A Lic. No.  AC-22214
Signature  William C. Moore, Vice President  Date  January 29, 2001
Permittee (print)  Larry Katynski
Signature  Date  01/29/01
Bench mark elevation surveyed to nearest 0.01 ft. = 451.01 ft. mean sea level

identify reference point elevation for water level measurements through chase tube
451.70 ft. mean sea level

describe reference point:
Top of Flange

Pump intake depth = 464.25 ft.
(referenced to bench mark)

Chase tube depth = 460.00 ft.
(referenced to bench mark)

if airline installed, bottom of airline elevation = NA ft. mean sea level
Ms. Linnel T. Nishioka - Deputy Director
Commission on Water Resource Management
Department of Land and Natural Resources
State of Hawaii
P. O. Box 621
Honolulu, Hawaii 96809

Dear Ms. Nishioka:

Pump Installation Permit Application for
ENSERCH Well No. 2 (No. 6528-03)
Honokaa, Hawaii

On behalf of Hamakua Energy Partners, I am pleased to submit the accompanying Pump Installation Permit Application and $25.00 filing fee for ENSERCH Well No. 2 (No. 6528-03) located at 45-300 Lehua Street on TMK 4-5-02:56 in Honokaa, Hawaii. If you have any questions or need additional information, please call John Pierce (808-775-1711) or me. Thank you for your attention to this matter.

Sincerely,

Tom Nance

cc: John Pierce - Jones/Burns & McDonnell
Larry Katchinski - Hamakua Energy Partners

Attachments
# WELL COMPLETION REPORT - PART I

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

**WELL CONSTRUCTION**

Instructions: Please print in ink or type and send completed report (with attachments, if applicable) to the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809. The Commission may not accept incomplete reports. This form shall be submitted within 60 days of the completion of work. For assistance, please consult the Hawaii Well Construction and Pump Installation Standards or call the Regulation Branch at 587-0225. For updates to this form or additional information, please visit our website at http://www.state.hi.us/dlnr/cwm/

<table>
<thead>
<tr>
<th>1. State Well No.</th>
<th>Encogen Well No. 2</th>
<th>Island:</th>
<th>Hawaii</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Address</td>
<td>P.O. Box 40, Honokaa, HI 96727</td>
<td>Tax Map Key:</td>
<td>4502156</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Island:</td>
<td>Hawaii</td>
</tr>
<tr>
<td>3. Drilling Company</td>
<td>Beylik Drilling, Inc.</td>
<td>Tax Map Key:</td>
<td>4502156</td>
</tr>
<tr>
<td>4. If drilled, type of Rig:</td>
<td>Rotary</td>
<td>Percussion</td>
<td></td>
</tr>
<tr>
<td>5. Date Well Construction (drilled,cased,grouted) completed:</td>
<td>10/30/00</td>
<td>Attach Driller's Log (7/26/99 DL Form)</td>
<td></td>
</tr>
<tr>
<td>6. Initial water-level encountered</td>
<td>453.25 ft. below ground</td>
<td>Date and time of measurement:</td>
<td>9/23/00 0700</td>
</tr>
<tr>
<td>7. Step-Drawdown Test completed?</td>
<td>No</td>
<td>Yes</td>
<td>Attach Step-Drawdown Test form (12/17/97 SDPTD Form)</td>
</tr>
<tr>
<td>8. Constant Rate Aquifer Test completed?</td>
<td>No</td>
<td>Yes</td>
<td>Attach Constant Rate Aquifer Test form (12/17/97 CRPTD Form)</td>
</tr>
<tr>
<td>9. Water-level:</td>
<td>2.71 ft. above msl</td>
<td>Date and time of measurement:</td>
<td>12/11/00 0700</td>
</tr>
<tr>
<td>10. Chloride:</td>
<td>85 ppm</td>
<td>Date and time of sampling:</td>
<td>12/11/00 1900</td>
</tr>
<tr>
<td>11. Temperature:</td>
<td>67.6 °F</td>
<td>Date and time of measurement:</td>
<td>12/11/00 1900</td>
</tr>
</tbody>
</table>

12. Fill in the as-built section on the other side of this sheet.

13. Attach plot plan and surveyor's stamped elevation report.

14. If a pump is not planned to be installed, please describe (below in the remarks section) how well is secured to prevent unauthorized access (example: lockable cover, threaded coupling, etc.)

15. Remarks:

---

**Licensed Driller** (print) BEYLIK DRILLING, INC.  
C-57 Lic. No. AC-22214  
Signature W. C. MOORE, VICE PRESIDENT  
Date 12-26-00

**Surveyor** (print) ROBERT T. SHIRAI  
L.P.L.S. Lic. No. 5985  
Signature  
Date 01/10/01

**Permittee** (print) LARRY F. HAFINCKI  
Signature  
Date 12/30/00

-WCR1 Form 5/2/00
13. AS-BUILT WELL SECTION (Please attach as-built if different from diagram provided below)

Elevation at top of casing: 451.80 ft., msl* (to nearest 0.01 ft.)

Bench mark elevation: 451.61 ft., msl* (Survey to nearest 0.01 ft.)

Cement Grout: 330 ft. (min. 70% of distance from ground elevation to top of water surface or 500 ft., whichever is less.)

Annular space between hole and casing (min.3.0):
- 3 in.

Rock or Gravel Packing: NA ft.
- Material: Crushed Basalt
- Rounded Gravel

Water Level Elevation: 2.71 ft., msl*

Minimum of 24” Radius & 4” Thick Concrete Pad

Ground Elevation: 451.01 ft., msl

HOLE DIAMETER: 19 in.

Solid Casing: (≥ 90% x (Ground Elev.-Water Level Elev))
- Length: 451 ft.
- Nominal Diameter: 12 in.
- Wall Thickness: 3/8 in.
- Bottom Elevation: 0.01 ft., msl

Open Casing: Perforated Screen
- Length: 40 ft.
- Nominal Diameter: 12 in.
- Wall Thickness: 5/16 in.
- Bottom Elevation: -39.99 ft., msl

Open Hole:
- Length: NA ft.
- Diameter: NA in.
- Bottom Elevation: NA ft., msl

*msl = mean sea level

Solid Casing Material:
- Carbon Steel: compliant with (check one or more): ANSI/AWWA C200
- API Spec. 5L
- ASTM A53
- ASTM A139
- And compliant with (check one or more): ASTM A242
- Type E
- Type S
- Grade B
- Other
- Stainless Steel: (check one): ASTM A409 (production wells)
- ASTM A310 (monitor wells)
- ABS Plastic conforming to ASTM F480 and ASTM D1527: (check one)
- Schedule 40
- Schedule 80
- PVC Plastic conforming to ASTM F480 and (ASTM D1785 or ASTM D2241): (check one)
- Schedule 40
- Schedule 80
- Schedule 120
- Thermoset Plastic: (check one)
- Filament Wound Resin Pipe conforming to ASTM D2996
- Centrifugally Cast Resin Pipe conforming to ASTM D2997
- Reinforced Plastic Mortar Pressure Pipe conforming to ASTM D3517
- Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C950
- PTFE Fluorocarbon Tubing conforming to ASTM D3296
- FEP Fluorocarbon Tubing conforming to ASTM D3296

Open Casing Material:
- Carbon Steel: compliant with (check one or more): ANSI/AWWA C200
- API Spec. 5L
- ASTM A53
- ASTM A139
- And compliant with (check one or more): ASTM A242
- Type E
- Type S
- Grade B
- Other
- Stainless Steel: (check one): ASTM A409 (production wells)
- ASTM A310 (monitor wells)
- ABS Plastic conforming to ASTM F480 and ASTM D1527: (check one)
- Schedule 40
- Schedule 80
- PVC Plastic conforming to ASTM F480 and (ASTM D1785 or ASTM D2241): (check one)
- Schedule 40
- Schedule 80
- Schedule 120
- Thermoset Plastic: (check one)
- Filament Wound Resin Pipe conforming to ASTM D2996
- Centrifugally Cast Resin Pipe conforming to ASTM D2997
- Reinforced Plastic Mortar Pressure Pipe conforming to ASTM D3517
- Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C950
- PTFE Fluorocarbon Tubing conforming to ASTM D3296
- FEP Fluorocarbon Tubing conforming to ASTM D3296
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<th>DEPTH (IN FEET)</th>
<th>LITHOLOGY</th>
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<tr>
<td>0 – 9</td>
<td>BLUE BASALT, SOME BROWN CLAY, HARD</td>
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<td>9 – 12</td>
<td>BLUE BASALT, HARD</td>
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<tr>
<td>12 – 20</td>
<td>HARD BASALT AND BROWN DIRT</td>
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<tr>
<td>20 – 35</td>
<td>BASALT, MED. HARD</td>
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<td>35 – 45</td>
<td>BASALT, SOFT-MED. HARD</td>
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<td>45 – 50</td>
<td>HARD BASALT, BLUE</td>
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<tr>
<td>50 – 65</td>
<td>RED BLUE CINDER, SOFT</td>
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<tr>
<td>65 – 70</td>
<td>BLUE BASALT, HARD</td>
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<td>70 – 75</td>
<td>BLUE BASALT, VERY HARD</td>
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<td>75 – 80</td>
<td>BLUE BASALT AND RED CINDERS, HARD</td>
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<td>80 – 85</td>
<td>BLUE BASALT MIX, SOFT</td>
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<td>BLUE BASALT, HARD</td>
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<tr>
<td>90 – 95</td>
<td>BLUE BASALT &amp; RED CINDERS, MED. HARD</td>
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<td>95 – 100</td>
<td>BLUE BASALT, MIXED WITH CINDERS, SOFT</td>
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<td>100 – 107</td>
<td>REDISH BROWN SOFT CINDERS</td>
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<td>107 – 114</td>
<td>HARD BLUE BASALT</td>
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<tr>
<td>114 – 116</td>
<td>LOOSE ROCK, BINDING UP</td>
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<tr>
<td>116 – 120</td>
<td>HARD BLUE BASALT</td>
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<tr>
<td>120 – 130</td>
<td>IN AND OUT BASALT AND CINDERS</td>
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<td>BLUE GREY BASALT, HARD</td>
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<td>140 – 152</td>
<td>BLUE BASALT, HARD</td>
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<td>152 – 165</td>
<td>BLUE GREY SOFT CINDER</td>
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<td>165 – 172</td>
<td>REDISH GREY CINDER</td>
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<td>172 – 195</td>
<td>BLUE GREY BASALT, MED. HARD</td>
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<td>Range</td>
<td>Description</td>
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<td>-----------</td>
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<td>195 - 200</td>
<td>GREY BLUE BASALT, MED. HARD</td>
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<td>200 - 205</td>
<td>RED CINDER, SOFT</td>
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<td>205 - 245</td>
<td>NO RETURNS, SOFT DRILLING</td>
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<td>245 - 295</td>
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<td>320 - 345</td>
<td>SOFT IN &amp; OUT, BASALT AND CINDERS</td>
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<td>BLUE, GREY, RED BASALT, MED. HARD</td>
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<td>352 - 372</td>
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<td>372 - 392</td>
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<td>392 - 433</td>
<td>IN AND OUT OF BLUE GREY BASALT</td>
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<td>433 - 453</td>
<td>RED CINDERS AND GREY BASALT</td>
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<tr>
<td>453 - 486</td>
<td>RED CINDERS, SOFT</td>
</tr>
<tr>
<td>486 - 490</td>
<td>IN OUT OF RED CINDERS, SOFT</td>
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INPUT PARAMETERS GREEN VALUES

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
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<tr>
<td>Transmissivity</td>
<td>T = 294,402 ft^2/day</td>
</tr>
<tr>
<td>Storage Coeff.</td>
<td>S = 0.200 dimensionless</td>
</tr>
<tr>
<td>Time</td>
<td>t = 200,000 days</td>
</tr>
<tr>
<td>Pumping Rate</td>
<td>Q = 115,508.02 cubic ft/day</td>
</tr>
<tr>
<td>Aquifer thickness</td>
<td>b = 152 ft.</td>
</tr>
<tr>
<td>Hydraulic Conductivity</td>
<td>K = 1,936.9 ft./day</td>
</tr>
<tr>
<td>Pumping rate</td>
<td>Q = 0.864 mgd</td>
</tr>
<tr>
<td></td>
<td>1.337 cfs</td>
</tr>
</tbody>
</table>

Radial distance from well r ft. | W(u) | Drawdown s ft. |
--------------------------------|------|----------------|
1                               | 0.000000 27.217 0.850 |
10                              | 0.000000 21.572 0.674 |
50                              | 0.000000 18.353 0.573 |
100                             | 0.000000 16.966 0.530 |
250                             | 0.000000 15.134 0.473 |
500                             | 0.000000 13.748 0.429 |
1000                            | 0.000001 12.361 0.386 |
1500                            | 0.000002 11.550 0.361 |
2000                            | 0.000003 10.975 0.343 |
2500                            | 0.000005 10.529 0.329 |
3000                            | 0.000008 10.164 0.317 |
5000                            | 0.000021 9.142 0.285 |
10000                           | 0.000085 7.756 0.242 |

OBSERVATION WELL
Radial distance r from pumping well | 5280 ft.

Time, t (days, years) | Drawdown s ft. |
----------------------|----------------|
0.1 0.00 | 47.347504 0.000 0.000 |
1    0.00 | 4.734750 0.002 0.000 |
2    0.01 | 2.367375 0.030 0.001 |
3    0.01 | 1.578250 0.089 0.003 |
4    0.01 | 1.183688 0.163 0.005 |
5    0.01 | 0.946950 0.240 0.007 |
6    0.02 | 0.79125 0.317 0.010 |
7    0.02 | 0.676393 0.391 0.012 |
8    0.02 | 0.591844 0.462 0.014 |
10   0.03 | 0.473475 0.593 0.019 |
36   0.10 | 0.13521 1.579 0.049 |
200  0.55 | 0.023674 3.190 0.100 |
500  1.37 | 0.009470 4.092 0.128 |
1,000 2.74 | 0.004735 4.780 0.149 |
2,000 5.48 | 0.002367 5.471 0.171 |
5,000 13.70 | 0.000947 6.386 0.199 |
10,000 27.40 | 0.000473 7.079 0.221 |
20,000 54.79 | 0.000237 7.772 0.243 |
50,000 136.99 | 0.000095 8.688 0.271 |
100,000 273.97 | 0.000047 9.381 0.293 |

Theoretical drawdown a mile (5,280 ft) from the pumping well when u <= 0.01

T = 294,402 ft^2/d
Sp. yield = 0.2
s = 365 days
0.118 ft.
Alternative way for determining T from step-drawdown data (Mink, per. comm)

Q = ft^3/d
s = ft.

\[ Q_1 \ (\text{gpm}) = 1105 = 212713 \ ft^3/d \]
\[ Q_2 \ (\text{gpm}) = 415 = 79888 \ ft^3/d \]

Set up two equations:

\[ s_1 = jQ_1 + nQ_1^2 \]
\[ s_2 = jQ_2 + nQ_2^2 \]

\[ Q_2 = 79888 \ s_2 = 0.48 \]
\[ Q_1 = 212713 \ s_1 = 2.31 \]

Well Depth below sea level = 38
Radius of well (ft) = 0.5 = r

\[ n = s_1 - (Q_1/Q_2)s_2/Q_1(Q_1-Q_2) = 3.7E-11 \]
\[ j = s/Q - nQ = 3.1E-06 \]

Laminar flow equation:

\[ s = jQ = 0.65742 \quad 28.46\% \ Head \ loss \ due \ to \ laminar \ flow \]

Thiem Eq.

\[ T = 1/2\pi(j\ln(re/r)) \]
\[ re = \text{Well Depth BSL} \times 1.6 = 152 \]
Therefore:

\[ T = 1/2\pi(j\ln(re/r)) = 294402 \ ft^4/d \]
MEMORANDUM

TO: John Pierce - Jones/Burns & McDonnell
   Larry Katchinski - Hamakua Energy Partners

FROM: Tom Nance

SUBJECT: Results of the Pump Test of Encogen Well No. 2, State No. 6256-03

This memo and its attachments summarize results of the December 11 to 13, 2000 pump tests of Well No. 2. Two tests were conducted, a step-drawdown test to define the well’s hydraulic capacity and a constant rate test to demonstrate trends in pumped water salinity.

Step-Drawdown of Hydraulic Performance Test

This relatively short term test was conducted in the morning of December 11th. It consisted of measuring the stabilized drawdown in the well at four different pumping rates. Stabilization of the drawdown at each change in pumping rate is almost instantaneous, a typical response for wells which tap basal groundwater in permeable volcanic formations in Hawaii. Drawdown at the four pumping rates are listed in the table below and presented graphically on Figure 1. The well’s hydraulic performance is excellent (and slightly better than Well No. 1). At the 600 GPM nominal capacity of the permanent pump, drawdown will be less than one foot.

<table>
<thead>
<tr>
<th>FLOW RATE (GPM)</th>
<th>DRAWDOWN (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>415</td>
<td>0.48</td>
</tr>
<tr>
<td>613</td>
<td>0.92</td>
</tr>
<tr>
<td>836</td>
<td>1.50</td>
</tr>
<tr>
<td>1105</td>
<td>2.31</td>
</tr>
</tbody>
</table>

FITTED CURVE ON FIGURE 1

\[ S = 1.34 \times 10^{-6} Q^2 + 6.407 \times 10^{-4} Q \]

where: \( S \) = Drawdown in feet
\( Q \) = Flowrate in GPM
\( r^2 = 0.99 \)
Constant Rate Pump Test (6928-03)

The constant rate pump test was run for 50.7 hours at an average of 710 GPM. It was started at 1:00 pm on December 11th and ended at 3:42 pm on December 13th. Over this period, the following parameters were measured: water level; pumping rate; water temperature; and water salinity (as conductivity and chlorides). At the end of the test, a set of samples were collected and delivered to the Food Quality Laboratory in Honolulu for analyses of requested constituents. Results of the pump test are discussed in the paragraphs following.

Water Level. It was originally intended to record the water level with a pressure transducer, but the Contractor had not installed a sounding tube and we were not able to get the 7/8-inch diameter transducer all the way to water in the annular space between the pump column and well casing. As a result, all water level measurements were made with an airline and pressure gage. However, this relatively less accurate method was able to produce satisfactory results. As shown on Figure 2, drawdown at the start of the test and recovery at the end were essentially instantaneous. During the 50.7 hours of pumping, the drawdown relative to the initial static level varied between 0.8 and 1.7 feet, the variation being attributable to the influence of the ocean tide on groundwater level.

Pumping Rate. The pumping rate was monitored hourly in two ways: using a stopwatch to measure the time to pump 1000 gallons; and reading the totalizer on the flowmeter. The first method gave an instantaneous discharge rate and the second provided an average of the discharge rate over the previous hour. Both results are depicted on Figure 3. The different methods are reasonably correlated. Flowrate varied between 690 and 720 GPM and averaged 710 GPM over the 50.7 hours of pumping.

Water Temperature. The temperature was measured and recorded at the end of each hour using a precision digital thermometer with a resolution of 0.01°F and an accuracy of better than 0.1°F. Results are presented on Figure 4. The temperature varied between 67.0 and 67.9°F and showed a definite semi-diurnal pattern: highs around noon and near midnight and lows at around 6:00 am and 6:00 pm. The relatively cool water suggests that groundwater recharge is primarily occurring in the higher elevation areas inland of the power plant site.

Pumped Water Salinity. Samples were collected at the start and end of the test and at 6-hour intervals in between. These were analyzed for chloride content and conductivity. In addition, a recording conductivity meter was installed on the pump discharge line to record conductivity at more frequent (5-minute) intervals. Chlorides and conductivity of the discrete samples are shown on Figure 5. Both parameters show a rise in salinity with some tapering off over the last eight hours of the test. This result is generally consistent with the trend of increasing salinity during the pump test of Well No. 1.

Figure 6 compares the conductivity of the discrete samples (which are converted to the equivalent conductivity at 25°C) with the conductivity recorded at 5-minute intervals. Other than a scale factor (the recorded conductivity is not converted to 25°C), the portrayal of a slow rise in salinity is essentially the same by both methods.
Impact of Operating Well No. 2 on Well No. 1

The power plant's operating requirements dictated that Well No. 1 be operated continuously before, during, and following the pump testing of Well No. 2. Three recorders were installed on Well No. 1 to determine if an effect due to the pumping of Well No. 2 could be detected. The three recorders on Well No. 1 were: a pressure transducer in the well's chase tube to record water level; a conductivity probe on the pump's discharge to track salinity; and a pressure recorder on the discharge line. To meet the plant's operating requirements, the well was observed to be producing 450 GPM at times and 250 GPM at other times. The pressure recorder on the pump's discharge line was used to indicate when these changes in pumping rate occurred. Results of the recordings are discussed in the paragraphs following.

Recorded Water Level, Pump Discharge Pressure and Pumping Rate of Well No. 1. Recordings of water level and pump discharge pressure are depicted on Figure 7. Both recordings show discrete jumps in the pump's discharge rate superimposed over the natural tidal variation in the basal aquifer. Times when the well was delivering 250 GPM are indicated by the higher water level and discharge pressure. Times when the delivery was 450 GPM correspond to the well's lower water level and lower pressure on the pump's discharge line. On Figure 8, these changes of the pump's discharge pressure have been converted to approximate pumping rates.

The drawdown in Well No. 2 at the 710 GPM pumping rate during the constant rate test was about 1.13 feet (refer to Figure 1), of which 0.45 feet was actual aquifer drawdown (derived from the fitted curve; the balance of the drawdown was turbulent loss in the well itself). At the distance of 348 feet between the two wells, it is unlikely that a drawdown in Well No. 1 due to pumping Well No. 2 would be detectable with such high formation permeability, particularly with the other ongoing interfering factors of tidal variation, changes in pumping rate of Well No. 1, and the "noise" in the pressure transducer data due to pump and motor vibration. This was in fact, the case. No change in water level in Well No. 1 due to the operation of Well No. 2 can be detected in the data presented on Figures 7 and 8.

Recorded Conductivity in Well No. 1. Figure 9 illustrates the conductivity of water discharged by Well No. 1 during and following the pump test of Well No. 2. As with the water level, no change due to the operation of Well No. 2 is detectable, either as a short or longer term change in conductivity. The modest irregularities in the record appear to be more related to the fluctuating pumping rate of Well No. 1 rather than the operation of Well No. 2.

Water Level Response in Well No. 2 Due to the Operation of Well No. 1

Following removal of the test pump from Well No. 2, a water level recorder was installed to see if level fluctuations due to the changing pumping rate of Well No. 1 could be detected. These data are presented on Figures 10 and 11. Within the accuracy of the recorders and 5-minute time interval of the data collection, no water level response in Well No. 2 is discernible over the 2-day (December 15th to 17th) period of recording.
Plumbness and Alignment Test

A plumbness and alignment test in conformance with the methods specified in AWWA A-100 was conducted on December 15, 2000. Results are presented on Exhibit A. The well shows a slight drift to the southeast, but it reasonably conforms with the tolerances allowed by AWWA A-100 and it should pose no problem for the installation and operation of the permanent submersible pump and motor.

Remaining Items of Work

1. You may have noticed that all water levels in this report are given to an "Arbitrary Datum", since neither well has a measuring point elevation relative to mean sea level. To file the Well Completion Report-Part I for Well No. 2, its elevation must be established to an accuracy of 0.01 feet by a licensed surveyor. Since the Pump Installation Permit will not be issued without this information, it should be done as soon as practical. The elevation of Well No. 1 should also be surveyed at the same time, since a change occurred when the concrete pad and permanent pump were installed.

2. Based on my phone conversation with Brian Gilbertson of Stone and Webster, a pump test of both wells operating concurrently could be done in either of the following two ways:

   a. Both pumps discharging into the plant's common manifold with the excess being discharged to the ponds below the power plant. Separate taps on both discharge lines would have to be installed so that individual well water salinity could be monitored (rather than combined salinity from a tap on the common manifold). Also, a flow meter would have to be installed on one or the other discharge line so that individual well pumping rates could be monitored (there is just a single flowmeter on the common manifold at present).

   b. Allow Well No. 1 to operate as is (supplying the plant at 250 and 450 GPM) and run Well No. 2 to waste (using the same drain as used for the just completed 50 hour test). Well No. 2 would produce in excess of 600 GPM, with its flowrate monitored with the Contractor's flow meter. This test could be set up quicker because fewer plumbing changes and other plant modifications would be required. I can arrange to have Roscoe Moss make the appropriate installations if a decision to do the test in this way is made in a timely manner.

cc: Brian Gilbertson - Stone & Webster

Attachments
FIGURE 1: STEP DRAWDOWN PUMP TEST RESULTS FOR WELL NO. 2, DEC. 11, 2000

FLOWRATE (GPM)

DRAWDOWN (FEET)
FIGURE 2. WATER LEVEL IN WELL NO. 2 DURING THE CONSTANT RATE PUMP TEST

50.7 HOUR CONSTANT RATE PUMP TEST OF WELL NO. 2

TIME OF DAY IN DECEMBER 2000
FIGURE 3. INSTANTANEOUS AND AVERAGED FLOWRATE DURING THE CONSTANT RATE TEST

DAY IN DECEMBER 2000

FLOW RATE (GPM)
FIGURE 4. TEMPERATURE OF PUMPED WATER DURING THE CONSTANT RATE PUMP TEST

TEMPERATURE (DEG F)

WATER LEVEL (FEET - ARBITRARY DATUM)

DAY IN DECEMBER 2000

- TEMPERATURE  - WATER LEVEL
FIGURE 6. RECORDED AND DISCRETE SAMPLE CONDUCTIVITY, DECEMBER 11 TO 13, 2000

CONDUCTIVITY (MICROMHOS)

DAY IN DECEMBER 2000

- RECORDING
- DISCRETE SAMPLES
FIGURE 8. WATER LEVEL AND APPROXIMATE PUMPING RATE OF WELL NO. 1 6528-02

CONSTANT RATE PUMP TEST OF WELL NO. 2

WATER LEVEL (FEET-ARBITRARY DATUM)

APPROXIMATE PUMPING RATE (GPM)

DAY IN DECEMBER 2000

WATER LEVEL  PUMPING RATE
FIGURE 9. CONDUCTIVITY AND PUMPING RATE OF WELL NO. 1, DEC. 11 TO 15, 2000

CONDUCTIVITY (MICROMOS @ 25 DEG C)  

APPROXIMATE PUMPING RATE (GPM)

DAY IN DECEMBER 2000

- CONDUCTIVITY  
- PUMPING RATE
FIGURE 10. WATER LEVELS IN WELL NOS. 1 (CS25-02) AND 2, DECEMBER 15 TO 17, 2000

WATER LEVEL (FEET-ARBITRARY DATUM)

DAY IN DECEMBER 2000

WELL NO. 1 ——- WELL NO. 2
FIGURE 11. WATER LEVEL IN WELL NO. 2
COMPAARED TO VARIABLE PUMPING OF WELL 1

DAY IN DECEMBER 2000

WELL NO. 2 WATER LEVEL (FEET)  WELL NO. 1 PUMPING RATE (GPM)

- WELL 2 WATER LEVEL  - WELL 1 PUMPING RATE
EXHIBIT A
PLUMBNESS AND ALIGNMENT TEST OF WELL NO. 2
DECEMBER 15, 2000

ALL DATA AND COMPUTATIONS IN FEET
HEIGHT OF PULLEY = 8.583

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<th>WEST DATA</th>
<th>SOUTH DATA</th>
<th>WEST DEVIATION</th>
<th>SOUTH DEVIATION</th>
<th>TOTAL DEVIATION</th>
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<td>0.49</td>
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<td>--</td>
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**TOTAL GALLONS PUMPED:** 2,157,550

**MINUTES PUMPED:** 9041

**AVG GPM:** 709.5
State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources
APPLICATION FOR PERMIT
1-9-01
99-920

Applicant Information: (Fill out all three, if applicable, and place a check next to the primary contact)
1. (a) **WELL OWNER:** Hanakua Energy Partners
   Mailing Address: P.O. Box 40 Honokaa, Hawaii 96727
   Phone: 808-775-1711
   Contact Person: Larry Katchinski
   Fax: 808-775-1414
   E-mail: ENSERCH@HANAKUA LAND
   (b) **LAND OWNER:** Partnership LP
   Mailing Address: P.O. Box 40 Honokaa, Hawaii 96727
   Phone: 808-775-1711
   Contact Person: Larry Katchinski
   Fax: 808-775-1414
   E-mail: ENSERCH@HANAKUA LAND
   (c) **CONTRACTOR:** Roscoe Moss Hawaii
   Mailing Address: 91-259-A Olai Street Kapolei, Hawaii 96707
   Phone: 682-5564
   Contact Person: Bill Moore
   Fax: 682-5886
   E-mail: ENSERCH@HANAKUA LAND
   Lic #: AC-71896
   (circle one: C-57, C-57a, or A)

2. **WELL NAME:** ENSERCH Well No. 2
   Address 45-300 Lehua St., Honokaa 96727
   Island: Hawaii
   Tax Map Key: 4-5-02-56
   Attach the relevant portion of (a) a 7.5-Minute Series USGS topographic map (scale 1:24,000) and include the name of the quad map, and (b) a property tax map, showing well location referenced to established property boundaries.

3. **PROPOSED WORK:** (check all that apply)
   - Construct New Well
   - Modify Existing Well*
   - Abandon/Seal*
   [State Well No.: 6528-03 (if unknown, please call Commission at 587-0225)]

4. **CONSTRUCTION:**
   - Drilled
   - Dug
   - Shaft
   - Tunnel
   Is this well part of a battery of wells? Yes No (Please describe)

5. **PROPOSED PUMP INFORMATION:**
   Rate: 600 gallons per minute
   Pump Type (Check one):
   - Deep Well Turbine
   - Rotary
   - Submersible
   - Rotary-Displacement
   - Centrifugal
   - Rotary-Gear
   - Propeller
   - Reciprocating
   - Impulse

6. **PROPOSED USE:** (check all that apply)
   - Municipal (including hotels, stores, etc.)
   - Industrial
   - Domestic (individual, noncommercial water system)
   - No. of Dwelling Units:
   - No. of Acres:
   - Irrigation (crop)
   - Other (explain):
   - Military
   - Other explain:
   - Other (explain):

7. **PROPOSED AMOUNT OF WITHDRAWAL:**
   Up to 864,000 gallons per day

   **METHOD OF FLOW MEASUREMENT:**
   - Pictometer
   - Open-pipe
   - Weir
   - Orifice
   - Other:

8. **LEGAL REQUIREMENTS:**
   - CDUP
   - SMAP
   - EIS
   - EA
   - None
   - Other (explain)

9. **REMARKS, EXPLANATIONS:**
   Wells 1 and 2 (Nos. 6528-02 & 03) will be outfitted with 600 GPM pumps and operated concurrently to supply the power plant.

(MORE SPACE NEEDED, PLEASE ATTACH ADDITIONAL SHEET)

(for official use only)
Latitude: Aquifer System No.
Longitude: State Well No.

WCP1PA Form 5/2000
10. PROPOSED WELL SECTION (Please attach schematic if different from diagram provided below)

Elevation at top of casing: 453.4 ft
(Being Surveyed)

Hole Diameter: 20 in.

Minimum of 2" Radius & 4" Thick Concrete Pad (to contain benchmark surveyed to nearest 0.01 ft). Ground Elevation: 451.9 ft

Cement Grout: 330 ft (min. 70% of distance from ground elevation to top of water surface or 500 ft, whichever is less.)

Annular space between hole and casing (min.3 ft): 3 in.

Rock or Gravel Packing: None ft. Material:
- Crushed Basalt
- Round Gravel

Estimated Water Level: 3.5 ft
Varies with the

Solid Casing: (≥ 90% x (Ground Elev.-Water Level Elev))
- Total Length: 451 ft.
- Nominal Diameter: 12 in.
- Wall Thickness: 0.375 in.
- Bottom Elevation: +2 ft, ml

Open Casing: Perforated Screen
- Total Length: 40 ft.
- Nominal Diameter: 12 in.
- Wall Thickness: 0.3125 in.
- Bottom Elevation: -38 ft, ml

Note: Neither bentonite nor mud should be used in saturated zone during drilling.

Open Hole:
- Length: None ft.
- Diameter: None in.
- Bottom Elevation: None ft, ml

* The approximate elevation must be referenced to mean sea level (msl) at the time of application filing. Final elevations of well components shall be submitted in the well completion/Well Abandonment reports and referenced to a benchmark which has been established by a surveyor licensed by the State.

For non-salt water Basal Wells - bottom elevation of well should not be deeper than 1/4 of aquifer thickness or,

Bottom Elevation of Well Limit = \( \frac{(\text{Water Elevation} - \text{Ground Elevation})}{4} \)

Example: Estimated Water Level Elevation = 1.5 ft, Water Elevation = 469 ft

Solid Casing Material:
- Carbon Steel: compliant with (check one or more): ANSI/WWA C200, API Spec. 5L, ASTM A53, ASTM A139
  - And compliant with (check one or more): ASTM A242, Type E, Type S, Grade B, Other
- Stainless Steel: (check one):
  - ASTM A409 (production wells)
  - ASTM A312 (monitor wells)
- ABS Plastic: conforming to ASTM F490 and ASTM D1527 (check one):
  - Schedule 120
- Thermoset Plastic: (check one):
  - Filament Wound Resin Pipe conforming to ASTM D2996
  - Centrifugally Cast Resin Pipe conforming to ASTM D2997
  - Reinforced Plastic Mortar Pressure Pipe conforming to ASTM D3517
  - Glassfiber Reinforced Resin Pressure Pipe conforming to WWA C950
  - PTFE Fluorocarbon Tubing conforming to ASTM D3296
  - FEP Fluorocarbon Tubing conforming to ASTM D3296

Open Casing Material:
- Carbon Steel: compliant with (check one or more): ANSI/WWA C200, API Spec. 5L, ASTM A53, ASTM A139
  - And compliant with (check one or more): ASTM A242, Type E, Type S, Grade B, Other
- Stainless Steel: (check one):
  - ASTM A409 (production wells)
  - ASTM A312 (monitor wells)
- ABS Plastic: conforming to ASTM F490 and ASTM D1527 (check one):
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  - Reinforced Plastic Mortar Pressure Pipe conforming to ASTM D3517
  - Glassfiber Reinforced Resin Pressure Pipe conforming to WWA C950
  - PTFE Fluorocarbon Tubing conforming to ASTM D3296
  - FEP Fluorocarbon Tubing conforming to ASTM D3296
TWNRE INC.
DBA TOM NANCE WATER RESOURCE ENGINEERING
680 ALA MOANA BLVD.,STE. 406
HONOLULU, HI 96813

DATE January 9, 2001

** Twenty-five and 00/100 **

DOLLARS $25.00

TO THE ORDER OF Department of Land and Natural Resources

DETACH AND RETAIN THIS STATEMENT

THE ATTACHED CHECK IS IN PAYMENT OF ITEMS DESCRIBED BELOW.
IF NOT CORRECT, PLEASE NOTIFY US PROMPTLY. NO RECEIPT DESIRED

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RECEIVED
01, JAN 10 P1: 59
TO:  Dean Y. Uchida, Administrator  
Land Division  

FROM:  Linnel T. Nishioka, Deputy Director  
Commission on Water Resource Management  

SUBJECT:  Well Construction/Pump Installation Permit Application  
Enserch #2 Well (Well No. 6528-03)  

Transmitted for your review and comment is a copy of the captioned well application which includes a request for a pump installation permit.

We would appreciate your comments on the captioned with regard to the programs, plans, and objectives specific to your division. Specifically, Item 9 on the application has been added per your request concerning water lease/permits administered by your division. Please respond by returning this cover memo form by February 25, 2000.

Please find the attached maps to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Ryan Imata of the Commission staff at 587-0255.

RI: ss  
Attachment(s)

RESPONSE:

[ ] A water lease/permit is required of this applicant and an application for such will be requested by our division.

XX A water lease/permit is not required of this applicant.

[ ] A water lease/permit has been obtained by the applicant through lease no. ________

[ ] Other relevant Land Division rules/regulations, information, or recommendations are attached.

[ ] No objections

XX Other comments: Original source of title is Grant 2160 issued on October 29, 1853.

Contact Person:  Gary Martin  
Phone:  70421  

Signed:  
Date:  FEB 28 2000
TO: Honorable Bruce S. Anderson, Director
Department of Health
Attention: Dennis Tulang, Wastewater Branch
William Wong, Safe Drinking Water Branch

FROM: Timothy E. Johns, Chairperson
Commission on Water Resource Management

SUBJECT: Well Construction/Pump Installation Permit Application
Ensrch #2 Well (Well No. 6528-03)

Transmitted for your review and comment is a copy of the captioned well application.

We would appreciate your comments on the captioned application for any conflicts or inconsistencies with the programs, plans, and objectives specific to your department. Please respond by returning this cover memo form by February 25, 2000.

Please find the attached maps to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Ryan Imata of the Commission staff at 587-0255.

RI: ss
Attachment(s)

RESPONSE:

1) This well qualifies as a source which will serve as a source of potable water to a public water system (serving 25 or more people at least 90 days per year or has 15 or more service connections) and must receive Director of Health approval prior to its use to comply with Hawaii Administrative Rules (HAR), Title 11, Chapter 20, Rules Relating to Potable Water Systems, §11-20-29.

2) This well does not qualify as a source serving a public water system (serves less than 25 people or more people at least 90 days per year or 15 service connections) and if the well water is used for drinking, the private owner should test for bacteriological and chemical presence before initiating such use and routinely monitor the water quality thereafter. However, if future planned use from this source increases to meet the public water system definition then Director of Health approval is required prior to implementation.

3) If the well is used to supply both potable and non-potable purposes in a single system, the user shall eliminate cross-connections and backflow connections by physically separating potable and non-potable systems by an air gap or an approved backflow preventer, and by clearly labeling all non-potable spigots with warning signs to prevent inadvertent consumption of non-potable water. Backflow prevention devices should be routinely inspected and tested.

4) It does not appear that this well will be used for consumptive purposes and is not subject to Safe Drinking Water Regulations.

5) For the applicant's information, a source of possible wastewater contamination [Jils] is not located near the proposed well site (information attached).

6) Other relevant DOH rules/regulations, information, or recommendations are attached.

7) No comments/objections

Contact Person: William Wong

Phone: 586-7426

Signed: William Wong

Date: 02/25/00
The Department of Health, Clean Water Branch has the following comments:

1. For Well-Drilling Activities

Any discharge to State waters of treated process wastewater effluent associated with well drilling activities is regulated by Hawaii Administrative Rules, Chapter 11-55, Appendix I, effective September 22, 1997. Treated process wastewater effluent covered by this general permit includes well drilling slurries, lubricating fluids wastewaters, and well purge wastewaters. This general permit does not cover well pump testing. The applicable Notice of Intent Forms and filing fee shall be submitted at least thirty (30) days before the start of discharge to the Department of Health, Clean Water Branch at 919 Ala Moana Boulevard, Room 301, Honolulu, Hawaii 96814-4920 or P.O. Box 3378, Honolulu, Hawaii 96801-3378. Inquiries may be directed to the Clean Water Branch at (808) 586-4309 or by fax at (808) 586-4352.

2. For Well Pump Testing

The discharger shall take all measures necessary to prevent the discharge of pollutants from entering state waters. Such measures shall include, if necessary, containment of the initial discharge until the discharge is essentially free of pollutants. If the discharge is entering a stream or river bed, best management practices shall be implemented to prevent the discharge from disturbing the clarity of the receiving water. If the discharge is entering a storm drain, the discharger must obtain written permission from the owner of that storm drain prior to discharge. Furthermore, best management practices shall be implemented to prevent the discharge from collecting sediments and other pollutants prior to entering the storm drain.

JS/cr
TO:         Honorable Bruce S. Anderson, Director  
            Department of Health  
            Attention: Dennis Tulang, Wastewater Branch  
                                         William Wong, Safe Drinking Water Branch

FROM:      Timothy E. Johns, Chairperson  
            Commission on Water Resource Management

SUBJECT:   Well Construction/Pump Installation Permit Application  
            Enserch #2 Well (Well No. 6528-03)

Transmitted for your review and comment is a copy of the captioned well application.

We would appreciate your comments on the captioned application for any conflicts or inconsistencies with the programs, plans, and objectives specific to your department. Please respond by returning this cover memo form by February 25, 2000.

Please find the attached maps to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Ryan Imata of the Commission staff at 587-0255.

RI:ss  
Attachment(s)

RESPONSE:
[ ] This well qualifies as a source which will serve as a source of potable water to a public water system (serving 25 or more people at least 60 days per year or has 15 or more service connections) and must receive Director of Health approval prior to its use to comply with Hawaii Administrative Rules (HAR), Title 11, Chapter 29, Rules Relating to Potable Water Systems, §11-20-29.

[ ] This well does not qualify as a source serving a public water system (serves less than 25 people or more people at least 60 days per year or 15 service connections) and if the well water is used for drinking, the private owner should test for bacteriological and chemical presence before initiating such use and routinely monitor the water quality thereafter. However, if future planned use from this source increases to meet the public water system definition then Director of Health approval is required prior to implementation.

[ ] If the well is used to supply both potable and non-potable purposes in a single system, the user shall eliminate cross-connections and backflow connections by physically separating potable and non-potable systems by an air gap or an approved backflow preventer, and by clearly labeling all non-potable spigots with warning signs to prevent inadvertent consumption of non-potable water. Backflow prevention devices should be routinely inspected and tested.

[ ] It does not appear that this well will be used for consumptive purposes and is not subject to Safe Drinking Water Regulations.

[ ] For the applicant's information, a source of possible wastewater contamination [I]s [I]s not located near the proposed well site (information attached).

[ ] Other relevant DOH rules/regulations, information, or recommendations are attached.

X  No comments/objections /no records or files

Contact Person: Lon N. Kajiwara  
                Phone: 586-2491

Signed: Lon N. Kajiwara  
        Date: 2/23/2000
Mr. Claude DeMars  
Hamakua Energy Partners, LP  
P.O. Box 40  
Honokaa, HI  96727

Dear Mr. DeMars:

Well Construction / Pump Installation Permit Application for Well No. 6528-03

We acknowledge receipt, on January 19, 2000, of your completed well construction/pump installation permit application for the Enserch #2 Well (Well No. 6528-03). You can expect your application to be processed within ninety (90) days from this date.

For your information, the process of constructing a well is normally regulated and permitted in two (2) steps. First, a well construction permit is issued for drilling and testing purposes only. Based upon information provided by you through a Well Completion Report Part 1 (Well Construction), a pump installation permit (upon completed application) may then be issued to authorize pump work. If a pump is installed then a Well Completion Report Part 2 (Pump Installation) is required.

If you have any questions about your permit application, please contact Ryan Imata of the Commission staff at 587-0255 or toll-free at 974-4000, extension 70255.

Sincerely,

[Signature]

LINNEL T. NISHIOKA  
Deputy Director

RI: ss
TO: Honorable Bruce S. Anderson, Director  
Department of Health  
Attention: Dennis Tulang, Wastewater Branch  
William Wong, Safe Drinking Water Branch

FROM: Timothy E. Johns, Chairperson  
Commission on Water Resource Management

SUBJECT: Well Construction/Pump Installation Permit Application  
Enserch #2 Well (Well No. 6528-03)

Transmitted for your review and comment is a copy of the captioned well application.

We would appreciate your comments on the captioned application for any conflicts or inconsistencies with the programs, plans, and objectives specific to your department. Please respond by returning this cover memo form by February 25, 2000.

Please find the attached maps to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Ryan Imata of the Commission staff at 587-0255.

RI: ss  
Attachment(s)

RESPONSE:

[ ] This well qualifies as a source which will serve as a source of potable water to a public water system (serving 25 or more people at least 60 days per year or has 15 or more service connections) and must receive Director of Health approval prior to its use to comply with Hawaii Administrative Rules (HAR), Title 11, Chapter 20, Rules Relating to Potable Water Systems, §11-20-28.

[ ] This well does not qualify as a source serving a public water system (serves less than 25 people or more people at least 60 days per year or 15 service connections) and if the well water is used for drinking, the private owner should test for bacteriological and chemical presence before initiating such use and routinely monitor the water quality thereafter. However, if future planned use from this source increases to meet the public water system definition then Director of Health approval is required prior to implementation.

[ ] If the well is used to supply both potable and non-potable purposes in a single system, the user shall eliminate cross-connections and backflow connections by physically separating potable and non-potable systems by an air gap or an approved backflow preventer, and by clearly labeling all non-potable spigots with warning signs to prevent inadvertent consumption of non-potable water. Backflow prevention devices should be routinely inspected and tested.

[ ] It does not appear that this well will be used for consumptive purposes and is not subject to Safe Drinking Water Regulations.

[ ] For the applicant's information, a source of possible wastewater contamination [ ] is [ ] not located near the proposed well site (information attached).

[ ] Other relevant DOH rules/regulations, information, or recommendations are attached.

[ ] No comments/objections

Contact Person: ___________________________ Phone: ___________________________
Signed: ___________________________ Date: ___________________________
TO:      Dean Y. Uchida, Administrator  
         Land Division  
FROM:   Linnel T. Nishioka, Deputy Director  
         Commission on Water Resource Management  
SUBJECT: Well Construction/Pump Installation Permit Application  
         Enserch #2 Well (Well No. 6528-03)  

Transmitted for your review and comment is a copy of the captioned well application  
which includes a request for a pump installation permit.  

We would appreciate your comments on the captioned with regard to the programs,  
plans, and objectives specific to your division. Specifically, Item 9 on the application has  
been added per your request concerning water lease/permits administered by your division. Please  
respond by returning this cover memo form by February 25, 2000.  

Please find the attached maps to locate the proposed well. If you have any questions  
about this permit application, request additional information, or request additional review time,  
please contact Ryan Imata of the Commission staff at 587-0255.  

RESPONSE:  
[ ] A water lease/permit is required of this applicant and an application for such will be requested by our  
division.  
[ ] A water lease/permit is not required of this applicant.  
[ ] A water lease/permit has been obtained by the applicant through lease no. _________________.  
[ ] Other relevant Land Division rules/regulations, information, or recommendations are attached.  
[ ] No objections  
[ ] Other comments:

Contact Person: ____________________________  Phone: ____________________________  
Signed: ____________________________  Date: ____________________________
**Remarks:**

1. Well No. 6528-03 (WCPA/PIPA)
2. 
3. 
4. 

Total: 25.00

**Amount:**

- Line (1): 25.00
- Line (2): 
- Line (3): 
- Line (4): 

**Enserch Jones Hamakua**
Land Partnership
J.A. Jones Drive
Charlotte, N.C. 28287

Pay Twenty Five and 00/100

**Commission on Water Resource Management**

Authorized Signature: [Signature]

**Date:** 12/28/99

**Amount:** 25.00
**PUBLIC RECORD DATA**

**TMK # 3-4-5-2-56**

**Lessor:** SOCIETE GENERALE FINANCIAL  
**Lessee:** HAMAKUA ENERGY PARTNERS L P  
**Tax Payer:** HAMAKUA ENERGY PARTNERS L P  
**Tenure:** Leasehold  
**Tax Bill:** 6060 J A JONES DR , CHARLOTTE, NC 28287 USA  
**Semi-Annual Tax:** $12.50  
**Assessed Value (99/00):** Land: $1,700  
**Exemption:** $0  
**Size:** 8.86 ac  
**Total Building:** $0  
**Semi-Annual Tax:** $0  
**Buildings:** 0  
**Dwellings:** 0  
**PITT Code:** 500  
**Zoning:** A-40A  
**Land Use:** 0  
**Nbhood Code:** 4571

**SALES**

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This information has been supplied by third parties and has not been independently verified by Hawaii Information Service and is, therefore, not guaranteed.
Enclosed please find three copies of the attachments for the ENSERCH Well No. 2 well construction permit application.
State of Hawai‘i
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources
APPLICATION FOR PERMIT
99-92

AGGR 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 621, Honolulu, Hawai‘i 96839. Application must be accompanied by 3 copies and 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 587-0225. (Also, please check our website at: http://www.hawaii.gov/dlnr/wrmw.html)

APPLICANT INFORMATION: (Fill out all three, if applicable, and place a check next to the primary contact)

1. (a) WELL OWNER
Hakauka Energy Partners, LP
Contact Person: Claude DeMars
Phone: 704-553-3213
Mailing Address: P.O. Box 40, Honokaa, Hawaii 96727
Fax: 704-553-3037
E-mail: cdemars@alajones.com

(b) LAND OWNER
*SEE BELOW
Contact Person: Claude DeMars
Phone: 704-553-3213
Mailing Address: P.O. Box 40, Honokaa, Hawaii 96727
Fax: 704-553-3037
E-mail: cdemars@alajones.com

(c) CONTRACTOR
Roscio Moss Hawaii
Contact Person: Bill Moore
Phone: 682-5554
Mailing Address: 91-259-A Olai Street, Kapolei, Hawaii 96707
Fax: 682-5866
E-mail: AC-21896
Lic #: (circle one: C-57, C-57a, or A)

WELL & PUMP INFORMATION: (Please fill in the diagram on the back of this form.)

2. WELL LOCATION NAME: ENSERCH Well No. 2
Address: 45-300 Lehua Street, Honokaa, Hawaii 96727
Island: Hawaii
Tax Map Key: 4-5-02:56

Attach the relevant portion of (a) a 7.5-Minute Series USGS topographic map (scale 1"=24,000'), and (b) a property tax map, showing well location referenced to established property boundaries.

3. PROPOSED WORK:
( Check all that apply)

- Drill New Well
- Modify Existing Well
- Abandon/Seal*
- Deepen
- Redrill
- Install New Pump
- Modify Pump
- Replace Pump

* Well No.: Be sure to complete and submit well abandonment report upon completion of work.

4. CONSTRUCTION:
- Dug
- Bored
- Driven
- Drilled
- Radial

Is this well a part of a battery of wells? Yes
No (Please describe.) (See Remarks)

5. PROPOSED PUMP INFORMATION:
Rated Pump Capacity: 600
 gallons per minute

Pump Type (Check one):
- Deep Well Turbine
- Submersible
- Centrifugal
- Rotary
- Rotary-Displacement
- Rotary-Gear
- Propeller
- Reciprocating
- Impulse
- Propeller
- Reciprocating
- Impulse

Powered by:
- Diesel
- Gas
- Electric, rated horsepower: 125
- Industrial

6. PROPOSED USE:
( Check all that apply)

- Municipal (including hotels, stores, etc.)
- Domestic (individual, noncommercial water system)
- Irrigation (crop)
- Military
- Other: (explain)

No. of Dwelling Units:
No. of Acres:

7. (a) PROPOSED AMOUNT OF WITHDRAWAL: 864,000
 gallons per day

(b) METHOD OF FLOW MEASUREMENT:
- Flowmeter
- Open-pipe
- Weir
- Office
- Other (explain)

OTHER IMPORTANT INFORMATION:
8. PENDING ACTIONS:
- CDUA
- SMA
- EIS
- EA
- NONE
- Other (explain)

9. REMARKS, EXPLANATIONS:
ENSCRICH Well No. 1 (State No. 6528-02) was completed and pumped tested in October 1998. Both wells will be outfitted with 600 GPM and operated concurrently to supply the power plant that is under construction by Hakauka Energy Partners, LP to Encogen Hawai‘i, LP.

Well Owner
Hakauka Energy Partners, LP
Signature: [Signed]
Date: 12-22-99

Landowner
Foncher/Jones Hakauka Land Partnership, LLP
Signature: [Signed]
Date: 12-22-99

Contractor
Roscio Moss Hawaii, A Division of Beylik Drilling, Inc.
Signature: [Signed]
Date: 12-14-99

*Enserch/Jones Hakauka Land Partnership, LLP is the Land Owner.

WCPiform (9/13/99)
11. PROPOSED WELL SECTION

Elevation at top of casing (Survey to nearest 0.01 ft.)
Hole Diameter: 19 in.

Minimum of 2' Radius & 4" Thick Concrete Pad
Ground Elevation: 445 ft., msl

Cement Grout: 365 ft.
(min. 70% of distance from ground elevation to top of water surface or 500 ft., whichever is less)

Total Depth 400 ft.
Minimum annular space between hole and casing ≥ 3"

Rock or Gravel Packing: None
Material:
- Crushed Basalt
- Rounded Gravel

Water Level Elevation: 4.3 ft., msl

For non-salt water Basal Wells - bottom elevation of well should not be deeper than 1/4 of aquifer thickness or,
Bottom Elevation of Well Limit = (Water Elevation - 1/4 Water Level Elevation)

Example: Estimated + 2 ft. Water Level Elev. — Bottom Elevation of Well Limit = (2 - 4.3/4) = -1.8 ft.

* The approximate elevation must be referenced to mean sea level (msl) at the time of application filing. Final elevations of well components shall be submitted in the Well Completion/Well Abandonment reports and referenced to a benchmark which has been established by a surveyor licensed by the State.

Solid Casing Material:
- Steel: compliant with (check one or more):
  - ANSI/WWA C200
  - API Spec. 5L
  - ASTM A53
  - ASTM A139
- Stainless Steel: compliant with (check one or more):
  - ASTM A409
  - ASTM A512
- ABS Plastic conforming to ASTM F480 and ASTM D1527: (check one)
  - Schedule 40
  - Schedule 80
- PVC Plastic conforming to ASTM F490 and (ASTM D1785 or ASTM D2241): (check one)
  - Schedule 40
  - Schedule 80
- Thermoset Plastic: (check one)
  - Filament Wound Resin Pipe conforming to ASTM D2996
  - Centrifugally Cast Resin Pipe conforming to ASTM D2997
  - Reinforced Plastic Mortar Pressure Pipe conforming to ASTM D3517
  - Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C950
  - PTFE Fluorocarbon Tubing conforming to ASTM D3296
  - FEP Fluorocarbon Tubing conforming to ASTM D3296

Open Casing Material:
- Steel: compliant with (check one or more):
  - ANSI/WWA C200
  - API Spec. 5L
  - ASTM A53
  - ASTM A139
- Stainless Steel: compliant with (check one or more):
  - ASTM A409
  - ASTM A512
- ABS Plastic conforming to ASTM F480 and ASTM D1527: (check one)
  - Schedule 40
  - Schedule 80
- PVC Plastic conforming to ASTM F490 and (ASTM D1785 or ASTM D2241): (check one)
  - Schedule 40
  - Schedule 80
- Thermoset Plastic: (check one)
  - Filament Wound Resin Pipe conforming to ASTM D2996
  - Centrifugally Cast Resin Pipe conforming to ASTM D2997
  - Reinforced Plastic Mortar Pressure Pipe conforming to ASTM D3517
  - Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C950
  - PTFE Fluorocarbon Tubing conforming to ASTM D3296
  - FEP Fluorocarbon Tubing conforming to ASTM D3296
State of Hawai‘i
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources
APPLICATION FOR PERMIT
12-14-99
99-92

APPLICATION INFORMATION:
(Fill out all three, if applicable, and place a check next to the primary contact)

1. (a) WELL OWNER:  Hāmakua Energy Partners, L.P.
   Address:  P.O. Box 40, Honokaa, Hawaii 96727
   Fax: 704-553-3037
   E-mail: cdemars@hawai.com
   Contact:  Claude DeMars
   Phone: 704-553-3213

2. LAND OWNER:  "ER WATLOW"
   Address:  P.O. Box 40, Honokaa, Hawaii 96727
   Fax: 704-553-3037
   E-mail: cdemars@hawaii.com
   Contact:  Bill Moore
   Phone: 682-5554

3. CONTRACTOR:  Roscoe Moss Hawaii
   Address:  91-259-A Olai Street, Kapolei, Hawaii 96707
   Fax: 682-5866
   E-mail: Ac-21896
   License #: AC-21896 (circle one: C-57, C-57a, or A)

WELL & PUMP INFORMATION:
(Attach the well location diagram on the back of this form)

2. WELL LOCATION NAME:
   Address:  45-300 Lehua Street, Honokaa, Hawaii 96727
   Island:  Hawaii
   Tax Map Key:  4-5-02-56

3. PROPOSED WORK:
   (Check all that apply)
   - New Drill
   - Deepen
   - Modify Existing Well
   - Replace Pump
   - Abandon/Gasket
   - Redrill

   * Well No.: __________________________ Be sure to complete and submit well abandonment report upon completion of work.

4. CONSTRUCTION:
   Is this well a part of a battery of wells?  Yes No (Please describe.) (See Remarks)

5. PROPOSED PUMP INFORMATION:
   Rated Pump Capacity:  600 gallons per minute
   Pump Type (Check one):
   - Rotary
   - Propeller
   - Centrifugal
   - Reciprocating
   - Impulse
   - Municipal (including hotels, stores, etc.)
   - Domestic (individual, noncommercial water system)
   - Irrigation (crop)
   - Military
   - Diesel
   - Gas
   - Electric, rated horsepower: 125
   - Industrial
   - No. of Dwelling Units: ________________
   - No. of Acres: ________________
   - Other (explain):

6. PROPOSED USE:
   (Check all that apply)
   - Water supply: 684,000 gallons per day

7. (a) PROPOSED AMOUNT OF WITHDRAWAL:
   - Flowmeter
   - Open Pipe
   - Well
   - Other (explain)

8. PENDING ACTIONS:
   - CDUA
   - LPA
   - ES
   - EA
   - NONE
   - Other (explain)

9. REMARKS, EXPLANATIONS:
   Both wells will be outfitted with 600 GPM and operate to increase the power plant that is under construction by Hāmakua Energy to Enchanted Hawai‘i, LP (more space needed, please attach additional sheet)

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

Landowner:  Hāmakua Energy Partners, L.P.
Signature:  Claude DeMars
Date:  12-14-99

Well Owner:  Hāmakua Energy Partners, L.P.
Signature:  Claude DeMars
Date:  12-14-99

Field Checked By:  ________________
Longitude:  ________________
Latitude:  ________________
Date:  ________________
Aqaufer System Name:  ________________
State Well No.:  ________________
Wasser/Johns Hāmakua Land Partnership, LLP is the Land Owner.
11. PROPOSED WELL SECTION

Hole Diameter: 19 in.

Minimum annular space between hole and casing ≥ 3" (min. 70% of distance from ground elevation to top of water surface or 50 ft, whichever is less.)

Total Depth: 500 ft.

Minimum annular space between hole and casing ≥ 3"

Rock or Gravel Packing: None

Material: □ Crushed Basalt
□ Rounded Gravel

Water Level Elevation: 4.3 ft. mas* 

For non-salt water Basal Wells - bottom elevation of well should not be deeper than 1/2 of aquifer thickness or.

Bottom Elevation of Well Limit = (Water Level - 41 x Water Level Elevation) / 2

Example: Estimated + 2 ft. Water Level. Bottom Elevation of Well Limit = (41 x 2) / 4 = 18.5 ft.

* The approximate elevation must be referenced to mean sea level (msl) at the time of application filing. Final elevations of well components shall be submitted in the Completion/Abandonment report and referenced to a benchmark which has been established by a surveyor licensed by the State.

Solid Casing Material:
Steel: compliant with (check one or more):
□ ANSI/AWWA C200
□ API Spec. 5L
□ ASTM A53
□ ASTM A139
Stainless Steel: (check one):
□ ASTM A424
□ Type E
□ Type S
□ Grade B
□ Other
ARS Plastic conforming to ASTM F480 and ASTM D1527: (check one)
□ Schedule 40
□ Schedule 80
PVC Plastic conforming to ASTM F480 and (ASTM D1785 or ASTM D2241): (check one): (check one):
□ Schedule 40
□ Schedule 80
Centrifugally Cast Resin Pipe conforming to ASTM D2996
Reinforced Plastic Mortar Pressure Pipe conforming to ASTM D2987
Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C950
PTFE Fluorocarbon Tubing conforming to ASTM D3296
FEP Fluorocarbon Tubing conforming to ASTM D3296

Open Casing Material:
Steel: compliant with (check one or more):
□ ANSI/AWWA C200
□ API Spec. 5L
□ ASTM A53
□ ASTM A139
Stainless Steel: (check one):
□ ASTM A424
□ Type E
□ Type S
□ Grade B
□ Other
ARS Plastic conforming to ASTM F480 and ASTM D1527: (check one)
□ Schedule 40
□ Schedule 80
PVC Plastic conforming to ASTM F480 and (ASTM D1785 or ASTM D2241): (check one): (check one):
□ Schedule 40
□ Schedule 80
Centrifugally Cast Resin Pipe conforming to ASTM D2996
Reinforced Plastic Mortar Pressure Pipe conforming to ASTM D2987
Glass Fiber Reinforced Resin Pressure Pipe conforming to AWWA C950
PTFE Fluorocarbon Tubing conforming to ASTM D3296
FEP Fluorocarbon Tubing conforming to ASTM D3296
ENSERCH WELL #1
WELL COMPLETION REPORT

State Well No. 6528-02

November 1998
Revised on 9 Feb 99
Revised on 15 March 99

Prepared by Waimea Water Services Inc.
for
Encogen Hawaii, LP
An As-built section drawing of the well is attached.

Plumbness and alignment tests were conducted on 22 Oct 98 (see attached report). A 40-foot long dummy having an outside diameter of 13.5 inches passed freely down the cased well. A cage traverse of the cased well was also performed. The results of the two tests showed that the well met the specifications for each 100' and did not vary in excess of more than two-thirds the smallest inside diameter for any 100-foot interval (data attached).

PUMPING TEST - SPECIFIC CAPACITY

The series of tests conducted were considered adequate to project the specific capacity of the well, even though they were performed in the uncased well. The open hole tests resulted in the following drawdowns. The graph below shows the data and results.
### PUMPING TEST - LONG TERM TEST

A long-term aquifer-pumping test at an average rate of 1043 gpm commenced at 9:16 am on 14 Oct 98. Water levels were continuously recorded at the pumping well using an air line system. In addition, a down hole recording system was operated. The pumping water level data after 5 days (7,200 minutes) resulted in a final drawdown in the pumping well of 2.8 feet. The data and graphical representations are attached. Following a recovery period of 3.0 minutes the water level at the Enserch well returned to a static level of +4.27".

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### Final Pumping Test – Average Rate was 1043 Ave. gpm

**Water Level and Chlorides**

**Pumping Test Data and Graphs**

Waimea Water Services Inc established benchmarks on the well head (measuring points).
QUALITY TESTING

Water quality samples were taken from the pumping well at the end of the pumping test (Monday, 19 Oct 96) by AECOS Laboratories. Preliminary water quality analyses were performed covering critical parameters as required by the owner.

Analyzed for: Color, TSS, pH, hardness, turbidity, Carbon Dioxide, Nitrogen as Nitrate, Nitrogen as Nitrite, Residual Chlorine, Alkalinity, Total Metals, Sulfate, Total and Dissolved Silica, Total Phosphorous, Chemical Oxygen Demand, Total Organic Carbon, Calcium, Mg, Na, Sulfate, Chloride as CACO3, Cation Sum and Anion Sum, aluminum, barium, calcium, iron, magnesium, potassium, sodium, and strontium (data attached).
DATA SUMMARY

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<td>440.94'</td>
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<tr>
<td>Ground Elevation</td>
<td>446'</td>
</tr>
<tr>
<td>Drawdown - Water Level</td>
<td>+1.5'</td>
</tr>
<tr>
<td>Pumping Rate (average)</td>
<td>1043 gpm</td>
</tr>
<tr>
<td>Temperature</td>
<td>20.9 Fahrenheit</td>
</tr>
<tr>
<td>Chlorides</td>
<td>160 mg/l (field)</td>
</tr>
<tr>
<td>Electrical Conductance</td>
<td>703 microsiemens</td>
</tr>
<tr>
<td>Total pumpage as of 5 days</td>
<td>7,515,000 gallons</td>
</tr>
<tr>
<td>(7,200 minutes)</td>
<td></td>
</tr>
</tbody>
</table>

Draw down at the end of 7,200 minutes of pumping.
Pumping Test Data and Graphs

Water Volume and Chlorides

Chlorides vs Gallons Pumped

Ensearch Well Pumping Test Oct. 98

Galons

1,000,000
1,000,000
100,000
10,000

Chlorides mg/l

1,000
100
10
0

Known at this time how the well will actually be pumped. As an increase in the volume pumped under constant pumping, it is not
behaviour, a graphic analysis (below) was prepared. As can be seen, the salinity
pumping is causing a significant disturbance of the baseline. To illustrate this
rising salinity at a constant pumping rate of 1,43 gm indicates that this rate of

- The Ensearch Well #1 is capable of reliably producing at the design rate of 1,550 gpm
- The aquifer system is capable of producing and sustaining the water requirements
- Based on the data obtained from the pumping tests, it appears that

Conclusions
5. Assuming an average water level head of 4', it is calculated that sea water salinity (about 20,000 mg/l chlorides) will be found at a depth below sea level of about 160 feet. The calculation assumes that the lens is in dynamic equilibrium and that, for every 1 foot of head above sea level, there will be 40 feet of fresh water below sea level. The record showing the extent of tidal influence (attached, page 13) indicated that the daily range of tide fluctuation is about 0.7 feet in double amplitude. This will likely cause a transition zone, between fresh (less than 250 mg/l chlorides) and salt water, of about 28 feet (0.7 fluctuation x 40').

It is reasonable to also assume that the seasonal variation in recharge will be on the order of 1 foot, thus expanding the transition zone by an additional 40', making a total transition zone thickness of about 70' (28' + 40').

Assuming the theoretical lens thickness is 164' (40' x 4' + 4'), the distance between the bottom of the well (-46') and the top of the transition zone (250 mg/l chlorides or greater) will be about 50' (164' total thickness, less 70 feet of transition zone, less 44' (4' of head + 40' of bore below sea level)) under non-pumping conditions. This may result in rapid salt-water encroachment at a sustained pumping rate of 1150 gpm, as implied by the pumping test.

There is no absolute way of predicting the rate of salt-water encroachment, which may result short of actual operating experience. A projection of the salinity increase during the testing indicates that critical levels of salinity might occur within a year or so. Regardless, it is recommended that the supply of 1150 gpm be provided from 2 wells at 575 gpm each. This would provide a more reliable supply in terms of quality.
Enserch Well #1
Section of As-Built Well
not to scale  Nov 98

WELL CROSS SECTION DIAGRAM
WELL PERMITS
(Attached)
WATER LEVEL AND TIDE INFORMATION

August 1998
Tide Chart

14  15  16  17

Levelogger dataprocessing v3.2 (c) 1996 Solinst
Location: Enserch #1  Instr.nr: 001-03730 1... f15  Date/time: 21 Aug 1998 16:23:2
Ch 1: open hole-depth 486  Master level: -6.00 [ft]  Min: 3.00 [ft]  Max: 8.40 [ft]

Record of Water Levels on 14 Aug – 17 Aug 98 and Tides

Enserch Well Report Page # 13
PLUMBNESS AND ALIGNMENT TEST
(Attached)
## WELL ALIGNMENT DATA

Drift = Deflection*(height+depth)/height

**CASING TO PULLEY =**

Open Hole =

CAGE USED

### 26.42 FEET

<table>
<thead>
<tr>
<th>DEPTH FEET</th>
<th>NORTH</th>
<th>EAST</th>
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<td>Change</td>
<td>DRIFT</td>
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<td>320</td>
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<td>340</td>
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<td>360</td>
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<td>380</td>
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<tr>
<td>480</td>
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<td>0.2500</td>
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</table>
WATER QUALITY DATA
(Attached)
CLIENT: Steve Bowles  
Waimea Water Service  
Kamuela, Hawaii

SAMPLE LOCATION: ENERCH POWER PLANT

DATE SAMPLED: 10/19/98

Aloha Steve,

Following are the results of the 10/19/98 sampling at Honakaa-Enserch Power Plant:

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Result</th>
<th>Unit</th>
<th>Method</th>
<th>Mntr</th>
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</thead>
<tbody>
<tr>
<td>Aluminum</td>
<td>ND</td>
<td>mg/L</td>
<td>6010/200.7</td>
<td>0.050</td>
</tr>
<tr>
<td>Alkalinity</td>
<td>83</td>
<td>mg/L</td>
<td>S2320B</td>
<td>2.0</td>
</tr>
<tr>
<td>Anion Sum</td>
<td>7.26</td>
<td>meq/L</td>
<td>SM1040</td>
<td>0.0010</td>
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<tr>
<td>Barium, Total, ICAP</td>
<td>ND</td>
<td>mg/L</td>
<td>200.7</td>
<td>0.020</td>
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<tr>
<td>Calcium, Total, ICAP</td>
<td>17.1</td>
<td>mg/L</td>
<td>200.7</td>
<td>1.0</td>
</tr>
<tr>
<td>Cation Sum</td>
<td>7.25</td>
<td>meq/L</td>
<td>SM1040</td>
<td>0.0010</td>
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<tr>
<td>Free Chlorine Residual</td>
<td>ND</td>
<td>mg/L</td>
<td>HACH</td>
<td>0.50</td>
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<tr>
<td>Chloride</td>
<td>18.0</td>
<td>mg/L</td>
<td>EPA 300</td>
<td>2.0</td>
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<tr>
<td>Free CO2 (25C)</td>
<td>2.5</td>
<td>mg/L</td>
<td>S2320B</td>
<td>0.0010</td>
</tr>
<tr>
<td>COD</td>
<td>ND</td>
<td>mg/L</td>
<td>EPA410.4</td>
<td>10</td>
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<tr>
<td>Color-Apparent</td>
<td>ND</td>
<td>ACU</td>
<td>S2510B</td>
<td>3.0</td>
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<tr>
<td>Specific Conductance</td>
<td>775</td>
<td>umhos/cm</td>
<td>S2510B</td>
<td>4.0</td>
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<tr>
<td>Iron, Total, ICAP</td>
<td>ND</td>
<td>mg/L</td>
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<td>0.10</td>
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<tr>
<td>Total, Hardnessas CaCO3</td>
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<td>mg/L</td>
<td>SM2340B</td>
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<td>Potassium, Total, ICAP</td>
<td>8.15</td>
<td>mg/L</td>
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<td>Magnesium, Total, ICAP</td>
<td>20.8</td>
<td>mg/L</td>
<td>200.7</td>
<td>0.10</td>
</tr>
<tr>
<td>Sodium, Total, ICAP</td>
<td>103</td>
<td>mg/L</td>
<td>200.7</td>
<td>1.0</td>
</tr>
<tr>
<td>Nitrite-N, IC</td>
<td>ND</td>
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<td>EPA 300</td>
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<td>Nitrate-N, IC</td>
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<td>Lab pH</td>
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<td>Unit</td>
<td>SM</td>
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<td>Silica</td>
<td>44</td>
<td>mg/L</td>
<td>200.7</td>
<td>1.0</td>
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<tr>
<td>Sulfate</td>
<td>23</td>
<td>mg/L</td>
<td>EPA 300</td>
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<td>Strontium</td>
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<td>T. Phosphorus</td>
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<tr>
<td>TDS</td>
<td>450</td>
<td>mg/L</td>
<td>S2540C</td>
<td>10</td>
</tr>
<tr>
<td>Total Organic Carbon</td>
<td>ND</td>
<td>mg/L</td>
<td>SM5310C</td>
<td>0.50</td>
</tr>
<tr>
<td>TSS</td>
<td>ND</td>
<td>mg/L</td>
<td>EPA 160.2</td>
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<tr>
<td>Turbidity</td>
<td>0.05</td>
<td>NTU</td>
<td>EPA 180.1</td>
<td>0.050</td>
</tr>
</tbody>
</table>
CLIENT: Waimea Water Services
Location: Honokaa-Enserch Power Plant

CALCULATIONS TO REPORT DATA AS CACO3

<table>
<thead>
<tr>
<th>Compound</th>
<th>Result, mg/L</th>
<th>Result, mg/L CaCO3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium</td>
<td>17.1</td>
<td>43</td>
</tr>
<tr>
<td>Magnesium</td>
<td>20.8</td>
<td>85.6</td>
</tr>
<tr>
<td>Sodium</td>
<td>103</td>
<td>448</td>
</tr>
<tr>
<td>Alkalinity</td>
<td>83</td>
<td>83</td>
</tr>
<tr>
<td>Sulfate</td>
<td>23</td>
<td>24</td>
</tr>
<tr>
<td>Chloride</td>
<td>180</td>
<td>509</td>
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</tbody>
</table>

ADDITIONAL ANALYTES

<table>
<thead>
<tr>
<th>Compound, as SiO2</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silica, as SiO2</td>
<td>44 mg/L</td>
</tr>
<tr>
<td>Cation Sum</td>
<td>7.25 meq/L</td>
</tr>
<tr>
<td>Anion Sum</td>
<td>7.26 meq/L</td>
</tr>
</tbody>
</table>

Karen Klein, Director
WELL DRILLING CONTRACTORS COMPLETION REPORT
(Attached)
WELL COMPLETION REPORT

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

WELL COMPLETION REPORT

(Check Appropriate Box) □ Well Construction □ (Permanent) Pump Installation

Instructions: Please print or type and submit completed report within 30 days after well completion to the Commission on Water Resource Management, P.O. Box 631, Honolulu, Hawaii 96809. An as-built drawing of the well and chemical analysis should also be submitted. For assistance call the Commission Regulation Branch at 587-0225, or 1-800-468-4644 Extension 70225.

1. State Well No.: 6528-02 Well Name: Enserch Well #1 Island: Hawaii
2. Location/Address: HONOKAA, HAWAII Tax Map Key: 3-4-5-02:23

PART I. WELL CONSTRUCTION REPORT

3. Drilling Company: PAL'ELI DRILLING & DEVELOPMENT
4. Name of driller who performed work: TOM HELFREICH
5. Type of rig/construction: ROTARY
6. Date(s) Well Construction and pump tests (if any) completed: 11/30/98
7. GROUND ELV. in ft. (referenced to mean sea level, msf): 445.5
   Well Bench in ft. (description/location): punch mark on casing
   Elevation (msl): 445.5 ft.
8. DRILLER'S LOG: [please attach geologic log (if available or if required by permit)
   Depths (ft.) Rock Description, Water Level, Dates, etc.
   Deviations (ft.) Rock Description, Water Level, Dates, etc.
   0 to 65 Hard
   66 to 180 Mixed soft layers
   180 to 362 Cinder
   362 to 486 Hard
   (If more space is needed, continue on back)
9. Total depth of well below ground: 486 ft.
10. Hole size:
    20 inch dia. from 0 ft. to 486 ft. below ground
    — inch dia. from — ft. to — ft. below ground
    — inch dia. from — ft. to — ft. below ground

11. Casing installed: 14 in. I.D. x 0.375 in. wall solid section to 446 ft. below ground
    14 in. I.D. x 0.312 in. wall perforated section to 486 ft. below ground
    Casing Material/Slot Size: 1/4" 120 per ft.

12. Annulus:
    Grouted from 0 ft. below ground to 392 ft. below ground
    Gravel packed from 392 ft. below ground to 402 ft. below ground
13. Initial water level: 442.04 ft. below ground.
15. Initial temperature: 69.6°F
16. PUMPING TESTS: Reference Point (R.P.) used: punch mark on casing which elevation is 445.5 ft.
   (1) Step-Drawdown Test Date: 9/15/98
   Start water level 442 ft. below R.P.
   End water level 442 ft. below R.P.
   (2) Long-term Aquifer Test Date: 10/14/98
   Start water level 442 ft. below R.P.
   End water level 442 ft. below R.P.
17. Aquifer Pump Test Procedures data & graphs (12/96 LTAT Form) attached? X Yes _ No
18. As-built drawings attached? X Yes _ No
19. Other remarks/comments: (Or back of this form)

Well Drilling Contractor: PAL'ELI DRILLING C-57 Lic. No. C-16543
Signature Date 12/15/98

Surveyor (print) DONALD JAMES MURRAY
Signature Date 1/13/77
Lic. No. 51247

Applicant (print) Enserch Development Corp. Hawaii, Inc.
Signature Date 2/5/99
Allen V. Smith Vice President
ENSERCH WELL #1
WELL COMPLETION REPORT

State Well No. 6528-02

November 1998
Revised on 9 Feb 99
Revised on 15 March 99

Prepared by Waimea Water Services Inc.
for
Encogen Hawaii, LP
WELL CONSTRUCTION, PERMITS

The Enserch Well #1 (State Well No. 6528-02) was permitted by the State of Hawaii, Commission on Water Resource Management in March 97 (copy attached).

WELL CONSTRUCTION, PLANS

Plans and specifications were reviewed and approved by Jody Allione of Encogen, Hawaii, Inc. The well location was determined in conjunction with the Encogen engineering staff. The location maps showing the well location and siting are included along with an overall map showing the relationship to the surrounding area.

WELL CONSTRUCTION, SUMMARY

The Well construction contracts were signed 23 June 98 with Wai’elei Drilling and Development. The Notice to Proceed was effective 23 June 98. Well work began on 25 June 98. The first hole was abandoned and grouted due to lost tools in the hole. A new hole was started on 28 July 98, 10’ east of the first hole. The pilot hole (12.75") was completed on 4 Aug 98 to a depth of 486 feet. The water level stood at 3.53’ above msl.

The pilot hole was reamed to 18’ diameter and was completed on 13 Aug 98.

A pumping test of the well was done in two stages. The first test was conducted at a flow rate of 700 gpm, resulting in a drawdown of 1.2’ with a chloride content of 145 to 155 mg/l. The open hole was then tested at 500 gpm and 850 gpm. The drawdown at 500 gpm was 0.8’, with the chloride content rising from 115 mg/l to stabilize at about 150 mg/l. At 850 gpm, the chlorides rose to 150 mg/l and the drawdown was 1.6’.

A larger pump was installed and a pumping test was run at an average rate of 1043 gpm with a drawdown of 2.8 feet (9-12 Sep 98). The chlorides reached 160 mg/l and the TDS was 335 mg/l. A total of 4,568,340 gallons were pumped. The data and graphs from this
Based on the pumping tests, the well was reamed to 22" to accept a 14" casing. Casing and grouting of the annular space around the well casing section was completed by October 1998.

A final pumping test was run from 14 Oct 98 to 19 Oct 98. Water quality samples were taken on Monday morning, 19 Oct 98.
An As-built section drawing of the well is attached.

Plumbness and alignment tests were conducted on 22 Oct 98 (see attached report). A 40-foot long dummy having an outside diameter of 13.5 inches passed freely down the cased well. A cage traverse of the cased well was also performed. The results of the two tests showed that the well met the specifications for each 100' and did not vary in excess of more than two-thirds the smallest inside diameter for any 100-foot interval (data attached).

PUMPING TEST - SPECIFIC CAPACITY

The series of tests conducted were considered adequate to project the specific capacity of the well, even though they were performed in the uncased well. The open hole tests resulted in the following drawdowns. The graph below shows the data and results.
PUMPING TEST - LONG TERM TEST

A long-term aquifer-pumping test at an average rate of 1043 gpm commenced at 9:16 am on 14 Oct 98. Water levels were continuously recorded at the pumping well using an air line system. In addition, a down hole recording system was operated. The pumping water level data after 5 days (7,200 minutes) resulted in a final drawdown in the pumping well of 2.8 feet. The data and graphical representations are attached. Following a recovery period of 3.0 minutes the water level at the Enserch well returned to a static level of +4.27'.