



State of Hawaii
DEPARTMENT OF LAND & NATURAL RESOURCES
DIVISION OF WATER AND LAND DEVELOPMENT
DRILLER'S REPORT

STATE

DESCRIPTION

Date of report February 19, 1986 Person filing report C. J. Mason

- A. OWNER Barnwell Industries
B. GENERAL LOCATION Kona
C. DRILLING COMPANY Water Resources International, Inc.
D. TYPE OF RIG Rotary
E. ELEVATION, msl: 1354.4 ft.
F. HOLE SIZE: 1.7 1/2 inch dia.
G. CASING INSTALLED: 12.5 in. I.D. x .43 in. wall solid section
H. ANNULUS: Grouted 10 ft. to 210 ft.
I. PERMANENT PUMP INSTALLATION: Pump type, make, serial no. 10DKH, Peabody Floway, S. N. 86-01015

HYDROLOGY

J. INITIAL WATER LEVEL 1341.8 ft.
K. INITIAL CHLORIDE: ppm, total depth of well 1465 ft.

L. PUMPING TESTS: Reference point (R.P.) used: level, which elevation is 1344.4 ft.
Date February 10, 1986 Date February 13, 1986

Table with 4 columns: Elapsed Time (hours), Rate (gpm), Draw-down (ft.), Cl- (ppm), Temp. (F). Includes data for 10:20 to 12:00 and 24:00 to 10:30.

SUBSURFACE FORMATION

M. DRILLER'S LOG:

Table with 4 columns: Depth, ft., Rock Description & Remarks, Water Level, ft. Includes handwritten notes and a vertical stamp 'ARTESIAN WATER & ENT'.

N. REMARKS: Drilling blind-no returns to surface

FOR DRILLER'S USE
Job Name Kaupulehu Well #2
Job No. J-317

INSTRUCTIONS: Send three(3) copies to: Manager-Chief Engineer, Division of Water and Land Development, P. O. Box 373, Honolulu, Hawaii 96809.
REFERENCES: Chapter 178, entitled "Artesian Wells, Generally," HRS, as amended by Act 123 SLH 1970.

FOR OFFICIAL USE
Latitude 19 46 38
Longitude 155 58 11
Well No. 4658-02

PUMPING TEST RECORD  
for

KAUPULEHU

Well 4658-02

(Name)

(No.)

HAWAII Island

Project or Job No. 19

Description of Well--

1. Elevation: ground surface 1344 ft., top of casing \_\_\_\_\_ ft., rotary table \_\_\_\_\_ ft., referenced to \_\_\_\_\_ benchmark.
2. Total depth of well 1455 ft.; or -111 ft. elevation, msl
3. 13 3/8 in. solid casing to 1341 ft. depth, perforated to 1420 ft. depth
4. Static water level on 2-14-86 1986: 1341 ft. below ground surface, top of casing; or \_\_\_\_\_ ft. elevation msl measured AIRLINE method

Description of Pump and Pump Setting--

5. 10 DR4 type pump with 36 stage bowl assembly
6. Gasoline diesel, electric, power with \_\_\_\_\_ horsepower
7. Shaft speed: 1760 rpm at 580 gpm flow
8. Depth of pump intake: \_\_\_\_\_ ft. below \_\_\_\_\_; or -57.59 ft. elev. msl
9. Depth of airline bottom: \_\_\_\_\_ ft. below \_\_\_\_\_; or -52.5 ft. elev. msl
10. Center of gage: \_\_\_\_\_ ft. elev., msl. Flow measured with FLOWMETER
11. Test conducted by K. R. J.

Date & Time	Sample No.	Pumping rate (gpm)	Airline PSI ( <del>feet</del> )	Drawdown (feet)	Chlorides (ppm)	Temp. (°F)	Cond. (mmhos 25°C)	
2-10-86			23.80	= 54.98 FT.			METER	
1020			- START PUMPING -				103803000	
1030		584	15.53					
1100	1	584	16.17		40	21.0		
1130		581	16.21			ADJUST ENGINE		
1200		581	16.13	17.72				
1230		581	16.13	17.72				
1300		580	16.10	17.74				
1330		580	16.10	}				
1400		580	16.10					
1430		580	16.10					
1500		581	16.0	18.02				
1530		578	}	}				
1600		580						
1630		578						
1700		580						
1730		580						
1800	2	580					40	
1830		580						
1900		580						

**LABORATORY ANALYSIS REPORT**

TO: WATER RESOURCES INTERNATIONAL, INC. ATTN: MR. BILL CRAPDICK  
 ADDRESS: P. O. BOX 4398 PHONE: \_\_\_\_\_  
HILO, HAWAII 96720

SAMPLES OF: Well Water  
 SAMPLED BY: Bill Craddick SAMPLING DATE: 02-13-86 TIME: 1100 AM  
 RECEIPT DATE: 02-18-86 TIME: 0845

DATE SAMPLE ANALYZED				
TIME SAMPLE ANALYZED				
SAMPLE TYPE				
SAMPLE DESCRIPTION	UNITS	021386 Kaupulehu Well		Maximum Contaminant Levels
ARSENIC	mg/L	< 0.002		0.05
BARIUM	mg/L	< 0.1		1.0
CADMIUM	mg/L	< 0.005		0.010
CHROMIUM	mg/L	0.01		0.05
LEAD	mg/L	< 0.02		0.05
MERCURY	mg/L	< 0.0001		0.002
SELENIUM	mg/L	< 0.002		0.01
SILVER	mg/L	< 0.005		0.05
FLUORIDE	mg/L	1.57 *		
NITROGEN, NITRATE	mg/L	4.32		10.0
TURBIDITY	NTU	0.12		
Container Provided by client				

LABORATORY REMARKS: Samples analyzed according to "Methods for Chemical Analysis of Water and Wastes", U.S. Environmental Protection Agency, March, 1976. and/or "Microbiological Methods for Monitoring the Environment", U.S. Environmental Protection Agency, August, 1978.

\*Note: Fluoride results are average of 4 replicates.

*Bill Craddick*

PUMPING TFST RECORD  
for

Well \_\_\_\_\_

(name)

(No.)

Island \_\_\_\_\_

Project or Job No. \_\_\_\_\_

19 \_\_\_\_\_

Date & Time	Sample No.	Pumping rate (gpm)	Airline P.S.I (feet)	Drawdown (feet)	Chlorides (ppm)	Temp. (°F)	Cond. Discharge P.S.I. (mmhos 25°C)
19:30		575	16.0				10
20:00		574	15.95	17.16			10
20:30		574	15.95				10
21:00		576	15.95				10
21:30		571	15.95				10
22:00		571	15.85				10
22:30		573	15.85				10
23:00		573	15.80				10
23:30		573	15.80				10
24:00		573	15.80				10
24:30		573	15.80	18.48			10
01:00		571	15.85				10
01:30		571	15.85				10
02:00	#3	571	15.85		40		10
02:30		571	15.85				10
03:00		573	15.85				10
03:30		568	15.90				10
04:00		568	15.90				10
04:30		569	15.90				10
05:00		571	15.90				10
05:30		576	15.90				10
06:00		571	15.90				10
06:30		571	15.90				10
07:00		571	15.90				10
07:30		573	15.85				10
08:00		571	15.90				10
08:30		571	16.00				10
09:00	#4	571	16.10		40		10
09:30		568	16.12				10
10:00		565	16.15	ADJUST ENGINE R.p.m.			9
10:30		573	16.00	17.1 [METER READING]			10
11:00		573	16.05	[104643000]			10

PUMPING TEST RECORD  
for

Well \_\_\_\_\_  
(name) (No.)

Island \_\_\_\_\_ Project or Job No. \_\_\_\_\_ 19 \_\_\_\_\_

Date & Time	Sample No.	Pumping rate (gpm)	Airline (feet)	Drawdown (feet)	Chlorides (ppm)	Temp. (°F)	Cond. (mmhos 25°C)
11:30		572	16.00				10
12:00		573	16.05				10
12:30		573	16.05	17.88			10
13:00		574	16.00				10
13:30		573	16.00				10
14:00		578	15.95				9.5
14:30		574	15.95				10
15:00		572	15.95				10
15:30		575	15.90				10
16:00	#5	575	15.89		41		10
16:30		575	15.90				10
17:00		576	15.85				10
17:30		578	15.85				10
18:00		576	15.85				10
18:30		574	15.85				10
19:00		571	15.88				10
19:30		574	15.85				10
20:00		574	15.85				10
20:30		572	15.85				10
21:00		574	15.85				10
21:30		574	15.85				10
22:00		574	15.85				10
22:30		574	15.80				10
23:00	#6	574	15.80		41		10
23:30		572	15.85				10
24:00		572	15.85				10
24:30		572	15.85	18.37			10
01:00		572	15.85				10
01:30		572	15.85				10
02:00		572	15.85				10
02:30		572	15.85				10
03:00		574	15.80				10

PUMPING TFST RECORD  
forWell \_\_\_\_\_  
(name) (No.)

Island \_\_\_\_\_ Project or Job No. \_\_\_\_\_ 19 \_\_\_\_\_

Date & Time	Sample No.	Pumping rate (gpm)	Airline (feet)	Drawdown (feet)	Chlorides (ppm)	Temp. (°F)	Cond. (mmhos 25°C)
03:30		574	15.80				10
04:00		574	15.75				10
04:30		574	15.75				10
05:00		574	15.75				10
05:30		578	15.70				10
06:00	#7	578	15.70		42		10
06:30		578	15.68				10
07:00		582	15.65				10
07:30		582	15.65				10.1
08:00		581	15.67				10.1
08:30		582	15.65				10.1
09:00		581	15.75	18.60			10.1
09:30		585	15.75	18.60			10
10:00		585	15.75	18.60			10
10:30		589	15.70		[METER READING[		10
11:00		[RAINING TOO HARD TO GET	READING		[105473000]		10
11:30		580	15.65				10
12:00		578	15.80			70°F	10
12:30		578	15.80	18.48			10
13:00	#8	580	15.75		42		10
13:30		578	15.80				10
14:00		576	15.80				10
14:30		576	15.85				10
15:00		580	15.85				10
15:30		576	15.95				10
16:00		576	16.0				10
16:30		576	16.0				10
17:00		574	16.0				10
17:30		575	15.95				10
18:00		572	15.85				10
18:30		575	15.80				10
19:00		576	15.80				10

PUMPING TFST RECORD  
for

Well \_\_\_\_\_  
(name) (No.)

Island \_\_\_\_\_ Project or Job No. \_\_\_\_\_ 19 \_\_\_\_\_

Date & Time	Sample No.	Pumping rate (gpm)	Airline (feet)	Drawdown (feet)	Chlorides (ppm)	Temp. (°F)	Cond. (mmhos 25°C)	
19:30		574	15.80				10	
20:00	#9	574	15.80		42		10	
20:30		573	15.80				10	
21:00		573	15.80				10	
21:30		574	15.85				10	
22:00		573	15.85				10	
22:30		573	15.85				10	
23:00		575	15.85				10	
23:30		576	15.80				10	
24:00		575	15.80				10	
24:30		576	15.85				10	
01:00		574	15.80				10	
01:30		575	15.80				10	
02:00		574	15.80				10	
02:30		575	15.80				10	
03:00	#10	584	15.75		42		10	
03:30		581	15.70				10	
04:00		581	15.75				10	
04:30		581	15.70				10	
05:00		584	15.65				10	
05:30		584	15.65				10	
06:00		584	15.65				10	
06:30		584	15.65				10	
07:00		581	15.65				10	
07:30		581	15.70				10	
08:00		580	15.70				10	
08:30		580	15.89		ADJUST R.P.M.		10	
09:00		577	15.85				10	
09:30		578	15.81				10	
10:00		573	15.90				10	
10:30		573	15.90				10	
10:32		SHUT DOWN AND RECORD						





STEP TEST  
 PUMPING TEST RECORD  
 for

Barnwell Industries Inc. Well 2  
 (name) (No.)

Hawaii Island Kaupulehu J-317 Project or Job No. February 19 86

Date & Time	Sample No.	Pumping rate (gpm)	Airline PSI (feet)	Drawdown PSI (feet)	Chlorides (ppm)	Temp. (°F)	Cond. (mmhos 25°C)	
02/07/86		Static	23.9 ft.				Meter reading 103677000	
14:41pm		Start pump		1850 RPM				
14:55		700	13.85		38.72	Max. capacity		
15:01		691	13.95	9.95				
15:15		675	13.50					
15:30		675	13.50	74.3'	37.51			
15:45		674	13.55			21° C		
16:00		674	13.52					
		Reduced pump speed to 1800 RPM						
16:05		605	14.95					
16:15		599	15.01		37.51			
16:30		603	15.01					
16:45		602	15.00	8.90				
17:00		601	15.00					
		Reduced pump RPM to 1710						
17:05		495	17.20					
17:15		502	17.05		37.51			
17:30		503	17.08					
17:45		501	17.04	15.8				
		Reduced pump RPM to 1650						
17:50		396	18.91					
18:00		405	18.80					
18:15		408	18.80					
18:30		404	18.80	11.5'				
END OF STEP TEST								
							Meter reading 103803000	