

STATE WELL REPORT

Part 1

Driller's Log

Mississippi Department of Environmental Quality
Office of Land and Water Resources
P.O. Box 2309
Jackson, MS 39225-2309
(601)961-5210
(601)360-0535 (fax)

For Office Use Only:

Well #: M 972
Aquifer: GRMFL
E-Log #: _____

County: HARRISON
Permit #: MS-GW-1701B
Driller: LAYNE CHRISTENSEN
Date drilling completed: _____

State Law requires that this report be prepared by the license holder responsible for the work and filed with the Department at the above address within 30 days of completion of drilling of the well or borehole.

Well Owner Information <small>(Landowner if borehole is not for a water well)</small>	Well or Borehole Location
Owner Name: <u>VETERANS ADMINISTRATION</u>	Latitude: <u>N 30 24.793</u> Longitude: <u>W 88 56.955</u>
Mailing Address: <u>RESIDENT ENGINEER</u>	<u>30° 24' 47.58"</u> <u>88° 56' 57.29"</u>
<u>400 VETERANS AVE</u>	Method of Lat/Long (check one): Conventional Survey _____
<u>BILOXI MS 39531</u>	USGS quad _____, Hand-held GPS <input checked="" type="checkbox"/> , Survey-grade GPS _____
City State Zip Code	<u>NW 1/4 NW 1/4, Sec 25 T. 7S R. 10W</u>
Telephone No. (____) _____	____ Miles of <u>BILOXI MS</u>
	(Distance) (Direction) (Nearest Town)

Well / Borehole Data

Date drilling started: 10/29/13 Date drilling completed: 1/28/14 Hole depth: 1030' Hole diameter: 12 1/4"

Location of the source of any surface water used for drilling: POTABLE SUPPLY FROM V.A.

Method of dosing and volume of Chlorine used in drilling and development: 5 PPM DRIP FEED

Logs run (circle all applicable): No log run Electric Gamma Ray Density Sonic Neutron Other: _____

Name of organization running log(s): LAYNE

Purpose of borehole (circle one) Water Well Geotechnical/Geological Investigation Ground Source Heat Pump

Seismic Survey Other (describe) _____

If drilling is not related to water well construction, skip the remainder of this block

Purpose of Well (circle all applicable): Home Industrial Public Supply Irrigation Fish Culture

Other (describe): _____

If a flowing well, method of flow regulation: Valve NA Other (describe) NA

Static Water Level: 47 feet ~~above~~ or below land surface (circle one) Date measured: JANUARY 2014

Method of measurement (circle one): Steel tape Electric tape Air line Other (describe): _____

Well depth: 997' Well grouted to a depth of: 927' feet Type of grout (circle one) Neat Cement Bentonite Mix

Casing length: 927 feet Casing diameter: 11 1/2 inches Type of casing: STEEL

Screen length: 65 feet Screen diameter: 10 inches Type of screen: 30/55 WW

Screen slot size: 0.030 inches Setting depth: From 932 feet to 997 feet

Type of completion (circle all applicable): Gravel packed Underreamed Open hole Natural Development

Other (describe): _____

Top of lap pipe or reduction in casing: 852 feet

If telescoped or more than one screen, describe on next page

Form: OLWR-SWR-1A (4/13)

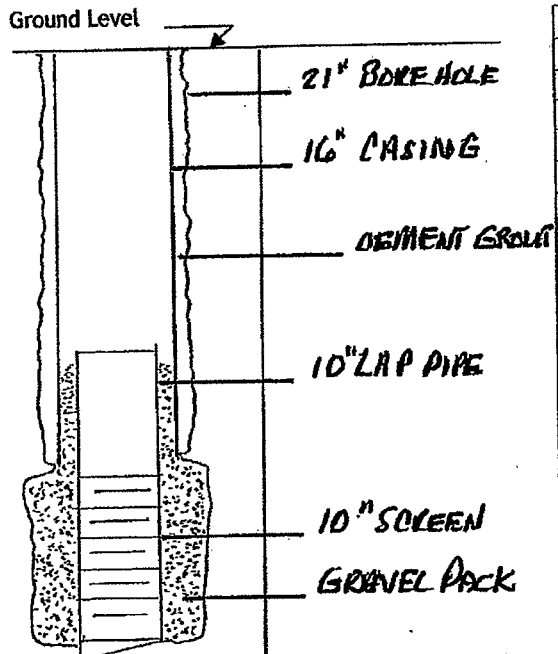
APR 18 2014

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BY: OLWR

County: HARRISON
Permit #: MS-SW-17018

For Office Use Only:
Well #: M 972

The sketch below only required for water wells
If well telescopes, show depths on sketch.



If more than one screen, show location of each on sketch

Description of formations encountered must be provided for all wells and boreholes, unless specifically exempted by regulations

Description of Formations Encountered	From (depth) Ground level	To (depth)

Sketch the property layout and include the following:
1) the well location
2) any permanent structures on the property that may aid in locating the well
3) any roads, power lines, or other items that may aid in locating the property and the well
4) north arrow

V.A. LAUNDRY AND DIETETICS FACILITY WELL LOCATED INSIDE PUMP HOUSE AND CHEMICAL FEEDER BUILDING.

1500 gpm pump, but I can't get part 2 for this well. Wm A Roberts @ the VA assures me at pumps 1500 gpm.

This well was drilled by Lague in Pensacola, FL. *SAM* 8-21-15

Landowner Name: **VETERANIC ADMINISTRATION**

I HEREBY CERTIFY that the well/borehole was drilled, constructed, and completed in accordance with all applicable requirements of the Mississippi Department of Environmental Quality and the Mississippi Department of Health regulations, if applicable, and state laws.

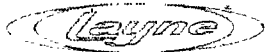
Jace A Rawls 0-4688 0-1-14-14
Print Name of Responsible Licensee and License No. Date

Jace A Rawls
Signature of Licensee

Form: OLWR-SWR-1A (4/13)

APR 18 2014

BY: OLWR



Layne Christensen Company
 3720 North Palafox St.
 Pensacola, FL 32505

GW 17018
 M972
 Harrison Co

Phone 1-850-432-5101

Toll Free 1-800-356-3824

Fax 1-850-432-2999

FORMATION LOG

CONTRACT: Roy Anderson VA Laundry Facility
 CITY: Biloxi
 LOCATION: N 30 24.793 W 88 56.955
 TEST HOLE NO: 1
 DATE BEGAN: 10/29/2013

CONTRACT NO: 26597
 COUNTY: Harrison
 WELL NUMBER: 1
 DATE COMPLETED: 11/6/2013

DATE: 11/6/2013
 STATE: MS
 ELEVATION:
 ELECTRIC LOG: YES
 SIZE SLUSH PIT:

SAMPLE NUMBER	VISCOSITY MUD	WEIGHT MUD	FORMATION	THICKNESS EA. STRATA	TOTAL DEPTH	NOTES
			SAND	30	30	
			CLAY	65	95	
			SAND	10	105	
			CLAY W/SAND STKS	70	175	
			SAND	20	195	
			CLAY W/SAND STKS	230	425	
			SAND	10	435	
			CLAY	130	565	
			SAND	30	595	
			CLAY	10	605	
			SAND	55	660	
			CLAY	90	750	
			SAND	10	760	
			CLAY	30	790	
			SAND W/CLAY STKS	50	840	
			CLAY	20	860	
			SAND W/CLAY STKS	60	920	
			SAND	75	995	
			CLAY	27	1022	

DISPOSITION OF FORMATION SAMPLES:
 PENSACOLA OFFICE

DATE:
 DATE: 11/8/2013

DRILLED BY: EDWIN STEPHENS

CHECKED BY: DG

RECEIVED
 APR 13 2014

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Deep Well Turbine Pump Design Criteria

Customer: Roy Anderson Corporation

Location : V A Laundry, Biloxi MS

Date : 2/4/2014

Well No.: 1

Project : Water Well for Laundry and Dietetics Facility

Design Conditions -

Static water level	47'
Drawdown	144'
Above ground	150'
Column friction	<u>10'</u>

TDH 351'

Pump Setting

Static level	47'
Drawdown	144' @ 1500 GPM
Submergence	30'
Submergence Contingency	<u>40'</u>

Pump Column Length 260'

GPM per
Wm A Roberts
© VA
SAM
8-21-15

Setting Weight

Column assembly 10 X 1-1/12"	11180 lbs
Bowl assembly	1254 lbs
Suction pipe	405 lbs
Head & base plate	<u>590 lbs</u>

Total Lifting Weight 13429 lbs

Bowl Length 71"

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Layne Christensen Company

3720 North Palafox Street • Pensacola, FL 32505 • Phone: (850) 432-5101 • Fax: (850) 432-2999

Roy Anderson Corporation
P O Box 2
Gulfport MS 39502

ATTN: Chris Gray

RE: V A Laundry and Dietetics Facility
Water Production Well
Report of 1500 Minute Pumping Test

Gentlemen,

Layne Christensen Co completed the required 1500 minute pumping test on 1/22/2014. Samples for MSBH chemical analysis were collected prior to shut down of the test pump. Recovery of the well was monitored to within 1.43 feet of measured static level.

The following data is included as a part of this report-

- 1500 minute pumping test and recovery Record of Test
- Pump Design Data Sheet
- Semi-log plot of pumped well drawdown
- Semi-log plot of pumped well recovery

Based on the estimated Transmissivity value calculated from the pumped well data the production well appears to be about 35% efficient. It should be noted however, that determination of Transmissivity using pump well drawdown, and / or recovery data without at least one observation well is notoriously inaccurate. In addition complete well development in cases with very high static water levels such as this can be very difficult or impractical.

The specific capacity of the completed well at the end of the 1500 minute test was 10.5 GPM per foot of drawdown.

As stated above the using a Transmissivity value of 64220 gal/day/ft. the estimated 100% efficiency would be 29.2 GPM per foot drawdown. The actual end of test specific capacity was 10.5 GPM per ft. drawdown resulting in a well efficiency of 35%.



An Equal Opportunity Employer

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RECORD OF TEST
LAYNE CHRISTENSEN COMPANY
PO BOX 10206, JACKSON, MS 39289

WELL NO. 1 PUMP NO. Test Pump DATE 01-21-2014
 FOR Roy Anderson V A Laundry 26597
 CITY BILOXI STATE MS
 LOCATION VA Laundry and Dietetics Facility

RUNNING PRESSURE _____ POUNDS GUARANTEED GPM _____ AT _____ FEET/POUNDS
 LENGTH OF AIR LINE _____ FEET STATIC LEVEL 47.30 FEET

TIME OF DAY	ELAPSED TIME IN MINUTES	TAPE READING (FEET)	PUMPING LEVEL (FEET)	DRAWDOWN (FEET)	PUMPING RATE (GPM)	REMARKS
6:00 A.M.	0		47.30	0		Static Level
6:01 A.M.	1		167.57	120.27	1507	
6:02 A.M.	2		171.87	124.57		
6:03 A.M.	3		172.56	125.26		
6:04 A.M.	4		173.51	126.21	1538	
6:05 A.M.	5		174.34	127.04		
6:07 A.M.	7		175.	127.70		
6:09 A.M.	9		176.50	129.20	1566	
6:11 A.M.	11		177.29	129.99		
6:15 A.M.	15		178.25	130.95		
6:20 A.M.	20		178.65	131.98	1522	
6:25 A.M.	25		179.38	132.08		
6:30 A.M.	30		180.35	133.05		
6:35 A.M.	35		180.83	133.53	1538	
6:40 A.M.	40		181.28	133.98		
6:45 A.M.	45		181.58	134.28		
6:50 A.M.	50		182.18	134.88	1507	
7:00 A.M.	60		182.10	134.80		
7:10 A.M.	70		183.65	135.85		
7:20 A.M.	80		183.11	135.81	1522	
7:30 A.M.	90		183.38	136.08		
7:40 A.M.	100		183.65	136.35		
8:00 A.M.	120		184.21	136.91	1538	
8:30 A.M.	150		184.81	137.51		

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TIME OF DAY	ELAPSED TIME IN MINUTES	TAPE READING (FEET)	PUMPING LEVEL (FEET)	DRAWDOWN (FEET)	PUMPING RATE (GPM)	REMARKS
9:00 A.M.	180	185.3	185.3	138.0	1502	
9:30 A.M.	210	185.64	185.64	138.34		
10:00 A.M.	240	186.00	186.00	138.70		
10:30 A.M.	270	186.83	186.83	139.03	1507	
11:00 A.M.	300	186.58	186.58	139.28		
11:30 A.M.	330	186.87	186.87	139.57		
12:00 P.M.	360	187.23	187.23	139.93	1507	
12:30 P.M.	390	187.33	187.33	140.03		
1:00 P.M.	420	187.64	187.64	140.34		
1:30 P.M.	450	187.64	187.64	140.34	1507	
2:00 P.M.	480	187.84	187.84	140.54	1507	
2:30 P.M.	510	187.90	187.9	140.60		
3:00 P.M.	540	188.00	188.0	140.70	1507	
4:00 P.M.	600	188.05	188.05	140.75		
5:00 P.M.	660	188.50	188.50	141.20	1507	
6:00 P.M.	720	188.53	188.53	141.23	1507	
7:00 P.M.	780	187.77	187.77	141.47	1507	
8:00 P.M.	840	189.00	189.0	141.70	1507	
9:00 P.M.	900	189.25	189.25	141.95	1507	
11:00 P.M.	1020	189.50	189.5	142.20	1507	
1:00 P.M.	1140	189.80	189.8	142.5	1507	
3:00 P.M.	1260	190.04	190.04	142.74	1507	
5:00 P.M.	1380	190.35	190.35	143.05	1507	
7:00 P.M.	1500	190.61	190.61	143.31	1507	End of test specific capacity 10.5 GPF

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RECOVERY

TIME OF DAY	ELAPSED TIME IN MINUTES	TAPE READING (FEET)	PUMPING LEVEL (FEET)	Residual DRAWDOWN (FEET)	PUMPING RATE (GPM)	REMARKS
7:15 P.M.	15					PUMP "OFF"
7:20 P.M.	20	56.09		8.79		
7:25 P.M.	25	56.09		8.79		
7:30 P.M.	30	56.09		8.79		
7:35 P.M.	35	55.88		8.58		
7:40 P.M.	40	55.30		8.0		
7:45 P.M.	45	55.00		7.7		
7:50 P.M.	50	54.85		7.55		
8:00 P.M.	60	54.53		7.23		
8:10 P.M.	70	53.85		6.55		
8:20 P.M.	80	53.60		6.3		
8:30 P.M.	90	53.20		5.0		
8:40 P.M.	100	52.85		5.55		
9:00 P.M.	120	52.45		5.15		
9:20 P.M.	150	51.83		4.53		
9:40 P.M.	180	51.40		4.1		
10:00 P.M.	210	51.30		4.0		
10:30 P.M.	240	50.95		3.65		
11:00 P.M.	270	50.70		3.4		
11:30 P.M.	300	50.27		2.97		
12:00 A.M.	330	50.11		2.81		
12:30 A.M.	360	49.90		2.6		
1:00 A.M.	390	49.60		2.3		
1:30 A.M.	420	49.20		1.9		
2:00 A.M.	450	48.95		1.65		STATIC LEVEL = 47.3'

REPRESENTATIVE FOR OWNER

REPRESENTATIVE FOR LAYNE CHRISTENSEN COMPANY