

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)961-5555
(601)961-5228 (fax)

County: Washington - MS
Permit #: _____
Driller: Roland W Tollett (RMO-00009026)
Date drilling completed: 08-07-2019

For Office Use Only:

Well #: **F213**
Aquifer: _____
E-Log #: _____

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USGS site name: BP-03b

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 (Landowner if borehole is not for a water well) Owner Name: <u>Bill Mayton (landowner)</u> Mailing Address: <u>USGS (driller - rtollett@usgs.gov)</u> <u>3095 W. California Ave</u> <u>Ruston</u> <u>LA</u> <u>71270</u> City State Zip Code Telephone No. (<u>318</u>) <u>251-9630</u> (245-8639 cell)	<input checked="" type="checkbox"/> Well or <input type="checkbox"/> Borehole Location Latitude: <u>33.42061</u> Longitude: <u>-090.83574</u> Method of Lat/Long (check one): Conventional Survey _____, USGS quad _____, Hand-held GPS <u>X</u> , Survey-grade GPS _____ <u>NE</u> <u>1/4</u> <u>SE</u> <u>1/4</u> , Sec <u>08</u> T <u>18N</u> R <u>06W</u> <u>4.5</u> Miles <u>East</u> of <u>Leland, MS</u> (Distance) (Direction) (Nearest Town)
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Well / Borehole Data	
Date drilling started: <u>08/07/19</u> Date drilling completed: <u>08/07/19</u> Hole depth: <u>48 ft bls</u> Hole diameter: <u>3.25 in</u>	
Location of the source of any surface water used for drilling: <u>none used</u>	
Method of dosing and volume of Chlorine used in drilling and development: <u>none used</u>	
Logs run (check applicable): <input checked="" type="checkbox"/> No log run <input type="checkbox"/> Electric <input type="checkbox"/> Gamma Ray <input type="checkbox"/> Density <input type="checkbox"/> Sonic <input type="checkbox"/> Neutron <input type="checkbox"/> Other: _____	
Name of organization running log(s): <u>USGS, 3095 W. California Ave, Ruston, LA 71270 (318) 251-9630 x13</u>	
Purpose of borehole (check one): <input type="checkbox"/> Water Well <input checked="" type="checkbox"/> Geotechnical/Geological Investigation <input type="checkbox"/> Ground Source Heat Pump <input type="checkbox"/> Seismic Survey <input type="checkbox"/> Other (describe) _____	
<i>If drilling is not related to water well construction, skip the remainder of this block</i>	
Purpose of Well (check all applicable): <input type="checkbox"/> Home <input type="checkbox"/> Industrial <input type="checkbox"/> Public Supply <input type="checkbox"/> Irrigation <input type="checkbox"/> Fish Culture <input checked="" type="checkbox"/> other	
Other (describe): <u>monitoring well with a 3.0 ft MP (protective cover) above land surface</u>	
If a flowing well, method of flow regulation: Valve _____ Other (describe) _____	
Static Water Level: <u>21.09</u> feet <input type="checkbox"/> above or <input checked="" type="checkbox"/> below land surface Date measured: <u>8/8/2019</u> (check one)	
Method of measurement (check one) <input type="checkbox"/> Steel tape <input type="checkbox"/> Electric tape <input type="checkbox"/> Air line <input type="checkbox"/> Other (describe): _____	
Well depth: <u>45.0</u> Well grouted to a depth of: <u>30</u> feet Type of grout (check one): <input checked="" type="checkbox"/> Neat Cement <input type="checkbox"/> Bentonite <input type="checkbox"/> Mix	
Casing length: <u>35.0</u> feet Casing diameter: <u>2</u> inches Type of casing: <u>PVC</u>	
Screen length: <u>10</u> feet Screen diameter: <u>2</u> inches Type of screen: <u>PVC</u>	
Screen slot size: <u>.010</u> inches Setting depth: From <u>35.0</u> feet to 80.5 <u>45</u> feet	
Type of completion (check all applicable): <input type="checkbox"/> Gravel packed <input type="checkbox"/> Underreamed <input type="checkbox"/> Open hole <input checked="" type="checkbox"/> Natural Development	
Other (describe): _____	
Top of lap pipe or reduction in casing: <u>NA</u> feet	
<i>If telescoped or more than one screen, describe on next page</i>	

Driller: Roland W Tollett, USGS, 3095 W California Ave, Ruston, LA 71270 [318-245-8639] (MS LIC RMO-00009026)

Site number: BP-03b

Drill date: 20190807

Plugged date: active monitoring well

Site type: USGS monitoring well

EC-log depth: see nearby BP-03a-EC for ECHPT log

Rig Type: Geoprobe 7822DT with EC-HPT probe

Lat/Long: 33.42061 -090.83574 +- 3ft

Sec Township Range: NE1/4,SE1/4,S08,T18N,R06W

Land surface elevation: 35.7 meters (117 feet) [data source: NED1]

Topo Map Name: Holly Ridge, MS

County/Parish: 151 Washington County, MS (1:24,000)

HUC code: 080302071305 Clark Bayou-Bogue

Associated well in USGS NWIS: 332514090500902

Land owner: Bill Mayton



***** USER NOTES *****

Drilled by Roland (USGS Ruston LA) and Wesley Bolton (USDA ARS Oxford MS).

Core Intervals: 10–15; 20–25; 30–35; 40–55. Grain-size analyses will be determined by USDA ARS in Oxford MS.

Hot, sunny conditions.

Well construction: This 2” PVC monitoring well is ~48.0 ft from bottom of point to TOC with a 10 ft screen; screened interval is ~35.0–45.0 ft bls; MP is 3.00 above land surface with aluminum protective riser and 2 ft radius concrete slab; a 4” point was added to btm of casing; about 5 gallons of tap water were poured into PVC casing prior to pulling rods; this technique was used to balance and equalize pressure.

About 2 cups of bentonite granules were poured into the annular space of the borehole and bridged over around 20 ft below land surface (bls). Portland cement at a tap water ratio of 5-6 gals per 92-lb bag was used to seal the borehole from about 25 ft bls to land surface.

Water level:

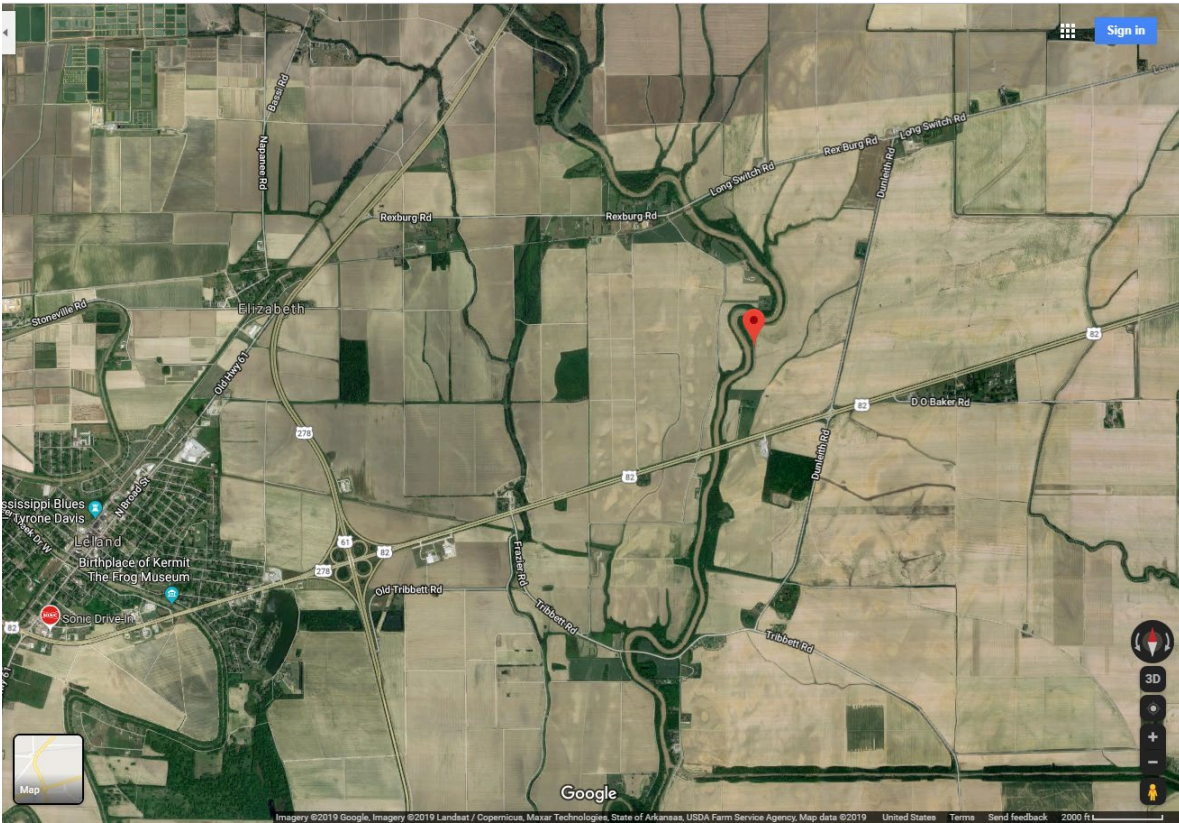
8/8/19 @ 1215 = 25.09 - 1.00 - 3.00 = 21.09 ft bls measured with e-tape by Roland W Tollett of the USGS

*Note that all water level tapes used by the USGS are calibrated by the HIF.

Note: Two monitoring wells are on-site: BP-03b is the northmost well; BP-03a-EC is the southmost well.

Notes from nearby BP-03a-EC: HPT log from BP-03a-EC showed clay unit near surface to about 30 ft bls. Nasty dark gray silty clayey soup on ECHPT probe after pulling rods. The bottom 50 feet of rods were clean indicating a higher sand/silt content. Note that the rods pushed very easily, indicating less medium to coarse sand than other wells, which is supported by EC log.

USGS Borehole BP-03b (continued) (Well access via on dirt farm roads; well is about ¾ mi west of Dunleith Rd.)



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USGS Borehole BP-03b (continued) [Note: BP-03b is the northmost well located under power lines; BP-03a-EC is the southmost well]



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USGS Borehole BP-03b (continued)

[located between corn fields to the east and the edge of Bogue Phalia River to the west]

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