

STATE WELL REPORT

133

County: Leflore, MS
 Permit #: _____
 Driller: Roland W Tollett (RMO-00009026)
 Date drilling completed: 04/02/2019

**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)

For Office Use Only:

Well #: G 175
 Aquifer: _____
 E-Log #: _____

USGS site name: OW-03

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.

<p style="text-align: center;">Well Owner Information (Landowner if borehole is not for a water well)</p> <p>Owner Name: (landowner) <u>Leflore County Schools</u></p> <p>Mailing Address: <u>USGS (driller - rtollett@usgs.gov)</u> <u>3095 W. California Ave</u></p> <table style="width: 100%; border: none;"> <tr> <td style="border: none;"><u>Ruston</u></td> <td style="border: none;"><u>LA</u></td> <td style="border: none;"><u>71270</u></td> </tr> <tr> <td style="border: none; font-size: small;">City</td> <td style="border: none; font-size: small;">State</td> <td style="border: none; font-size: small;">Zip Code</td> </tr> </table> <p>Telephone No. (<u>318</u>) <u>251-9630 (245-8639 cell)</u></p>	<u>Ruston</u>	<u>LA</u>	<u>71270</u>	City	State	Zip Code	<p style="text-align: center;"><input checked="" type="checkbox"/> Well or <input type="checkbox"/> Borehole Location</p> <p>Latitude: <u>33.59648</u> Longitude: <u>-90.30095</u></p> <p>Method of Lat/Long (check one): Conventional Survey _____, USGS quad _____, Hand-held GPS <input checked="" type="checkbox"/>, Survey-grade GPS _____</p> <p style="text-align: center;"><u>NW</u> <input checked="" type="checkbox"/> <u>SE</u> <input checked="" type="checkbox"/> <u>16</u> <input checked="" type="checkbox"/> T <u>20</u> <input checked="" type="checkbox"/> R <u>01</u> <input checked="" type="checkbox"/></p> <p style="text-align: center;"><u>1.9</u> Miles <u>West</u> of <u>Shellmound MS</u> (Distance) (Direction) (Nearest Town)</p>
<u>Ruston</u>	<u>LA</u>	<u>71270</u>					
City	State	Zip Code					

Well / Borehole Data

Date drilling started: 4/2/2019 Date drilling completed: 4/2/2019 Hole depth: 74 ft bls Hole diameter: 2.25 in
 Location of the source of any surface water used for drilling: none used
 Method of dosing and volume of Chlorine used in drilling and development: none used
 Logs run (check applicable): No log run Electric Gamma Ray Density Sonic Neutron Other: _____
 Name of organization running log(s): USGS, 3095 W. California Ave, Ruston, LA 71270 (318) 251-9630 x13
 Purpose of borehole (check 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 (check all applicable): Home Industrial Public Supply Irrigation Fish Culture other
 Other (describe): monitoring well
 If a flowing well, method of flow regulation: Valve _____ Other (describe) _____
 Static Water Level: 37.16 feet above or below land surface Date measured: 4/3/2019 @ 0715
 Method of measurement (check one) Steel tape Electric tape Air line Other (describe): _____
 Well depth: 73 Well grouted to a depth of: 30 feet Type of grout (check one): Neat Cement Bentonite Mix
 Casing length: 63 feet Casing diameter: 2 inches Type of casing: PVC
 Screen length: 10 feet Screen diameter: 2 inches Type of screen: PVC
 Screen slot size: 0.010 inches Setting depth: From 63 feet to 73 feet
 Type of completion (check all applicable): Gravel packed Underreamed Open hole Natural Development
 Other (describe): _____
 Top of lap pipe or reduction in casing: NA feet

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

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6175

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

Site number: <MDEQ no> Leflore OW-03

Drill date: 20190402 @1300

Plugged date: active monitoring well

Site type: USGS monitoring well

EC-log depth none (nearest EC-log SM-02-BH about 150 ft east of this well)

Rig Type: Geoprobe 7822DT

Lat/Long 33.59648 -90.30095 Sec Township Range: NW1/4,SE1/4,S16,T20N,R01W

Land surface elevation: 40.5 meters (133 feet; accuracy 1.6 ft) [data source: DEM]

Topo Map Name: Shellmound, MS

County/Parish: 083 Leflore County, MS (1:24,000)

HUC code: 080302070802 Lake Henry

MAPS site_no for NWIS: 333547090180401

Land owner: x



This well was drilled as part of a collaboration between USDA ARS (Oxford MS) and the USGS to study artificial groundwater recharge rates via injection in the MRVA aquifer.

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

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

Driller notes (ROP is rate of penetration; TOC is top of 2" PVC casing):

0-40 ft intervals pushed easily; likely high clay content; ROP was about 1 inch per 0.5 to 2.0 second

40-73 ft interval was very difficult to push; ROP was about 1 inch per 3 to 4 seconds

Blueish gray clay was seen on the wiper after pulling rods; Broke top threads of 3.25" rod; rods were very hot

Had to redrill this well because clay squeezed through 4 rod joints around 35 to 50 ft bls

Well construction: This 2" PVC monitoring well is ~75 ft from bottom of point to TOC with a 10 ft screen; screened interval is 63-73 ft bls; MP is 2.0 above land surface with aluminum protective riser and 1.5 ft radius concrete slab; about 3 inches of PVC casing was cut off TOC to remove the sharp female thread edge to protect e-tapes and a 4" point was added to btm of casing; about 15 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 likely bridged over around 30 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 30 ft bls to land surface.

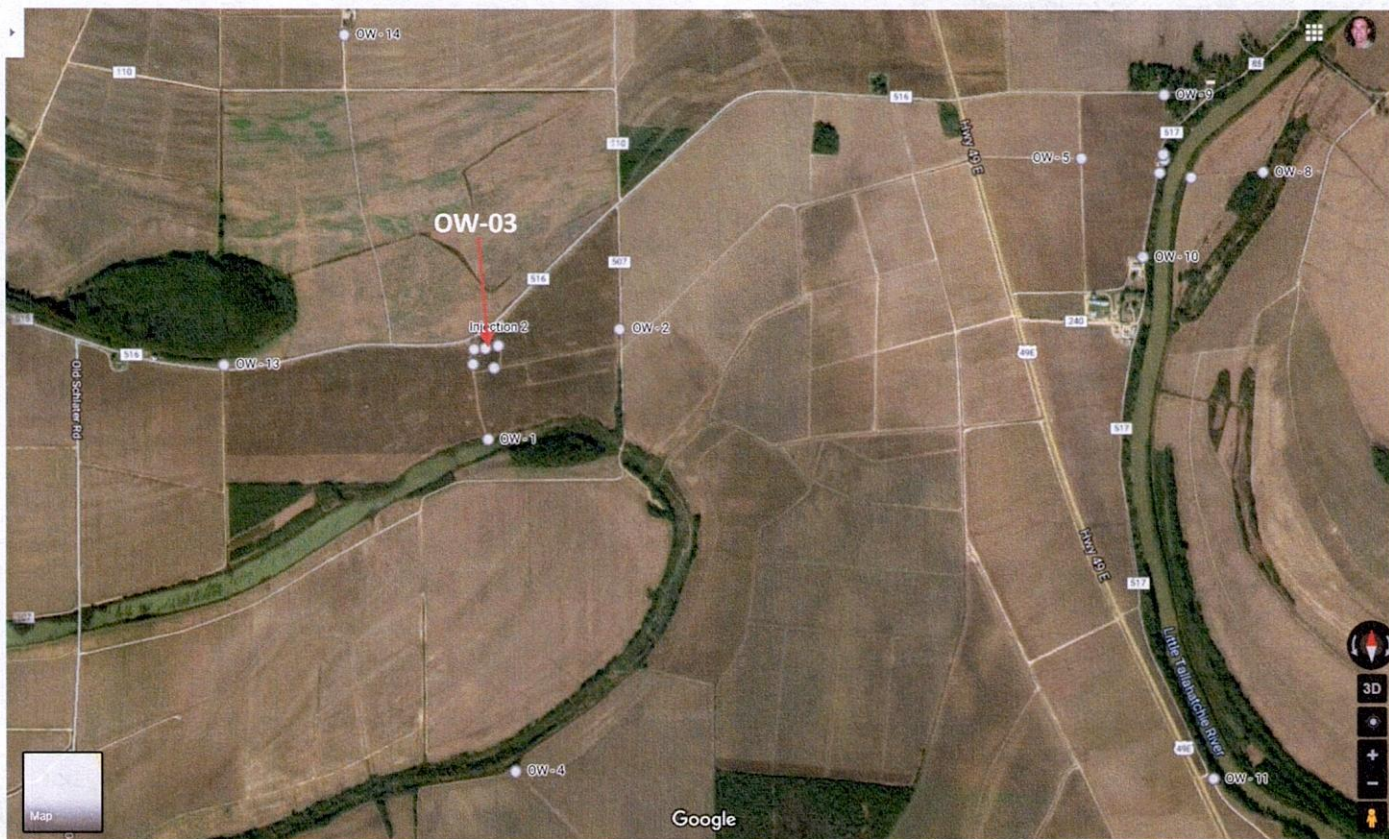
Water level:

4/3/19 @ 0715 = 39.16 – 2.00 = 37.16 (measured with an etape by Wesley Bolton of USDA ARS)

4/3/19 @ 0716 = 39.16 – 2.00 = 37.16

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Figure 1. Location of monitoring well OW-03.



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New Site Sheet Form - MAPS

File Tables Search Network Help

NEW SITE

- Site
- Datums
- Physical Characteristic
- Administrative
- Groundwater
- Other Data Available
- Miscellaneous Values
- Special Cases
- Spring

Site Record

Agency Code USGS - U.S. Geological Survey Site Number 333547090180301 Site Type Code GW

Station Name _____ Agency Use Code _____

Coordinate/Altitude Data

Latitude 333547.33 Longitude 0901803.42 Coordinate Accuracy H: Hndrth secon Coordinate Method G: GPS

Coordinate Datum NAD83: NA Datum of 1983 Latitude NAD83 in decimal degrees Longitude NAD83 in decimal degrees

Altitude in ft 133 Altitude Datum Code NAVD88: V Datum of 1988 Altitude Method Code N: DEM Altitude Accuracy Value in ft 1.6

Surface Water Data

Drainage Area in sq mi _____ Basin Code _____ Spatial Data

Contributing Drainage Area in sq mi _____ Land Net S16 T20N R01W 0 Topographic Code _____

Map Name SHELLMOUND, MS Map Scale 24000

Hydrologic Unit Code 080302070802: Lake Henry

Groundwater Data

Aquifer Code _____ National Aquifer Code _____ Aquifer Type Code _____

Well Depth in ft _____ Hole Depth in ft _____ Source of Depth _____

Administrative Data

Country Code US: United States State Fips Code 28: Mississippi County Fips Code 053: Leflore Co. Minor Civil Division 91854: District 3

District Code 28: MISSISSIPPI Time Zone Code CST: Central Standard Daylight Savings Time Flag Y: Yes

Use Data

Primary Use of Site _____ Secondary Use of Site _____ Tertiary Use of Site Code _____

Primary Use of Water Code _____ Secondary Use of Water Code _____ Tertiary Use of Water Code _____

National Water Use Code _____

Data Collection and Dates

Data Reliability Code _____ Site Establishment Date _____ First Construction Date _____

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