Report of Findings: WRGS 21-001

Report of Findings
Legacy Hills Subdivision
Groundwater Availability Certification for Platting: Blanco County, Texas

For:
Lone Star Land Partners, LLC.
704 Main Street
Blanco, TX 78606

Wet Rock Groundwater Services, L.L.C.
Groundwater Specialists
TBPG Firm No: 50038
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WRGS 21-001

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704 Main Street

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January 2021

WRGS Project No. 083-003-20

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The seal appearing on this document was authorized by Kaveh Khorzad, P.G. 1126 on January 19, 2021:

Kaveh Khorzad, P.G.
License No. 1126

Wet Rock Groundwater Services, LLC
TBPG Firm Registration No. 50038

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Section I: Introduction

This report details the results of a groundwater availability study for the proposed Legacy Hills Subdivision (the subdivision) to meet the requirements of the Certification of Groundwater Availability for Platting Form *(Title 30, Texas Administrative Code, Chapter 230, Sections 230.2 through and including 230.11)*. Appendix A provides the completed Certification of Groundwater Availability for Platting Form.

The subdivision is located on Highway 290, approximately 7.2 miles west of the City of Dripping Springs in eastern Blanco County (Figure 1). The proposed subdivision is documented within the Blanco County Tax Assessor as Property IDs: 8323, 8319 and 8320. Lone Star Land Partners, LLC (704 Main Street Blanco, Tx 78606) is the plat applicant.

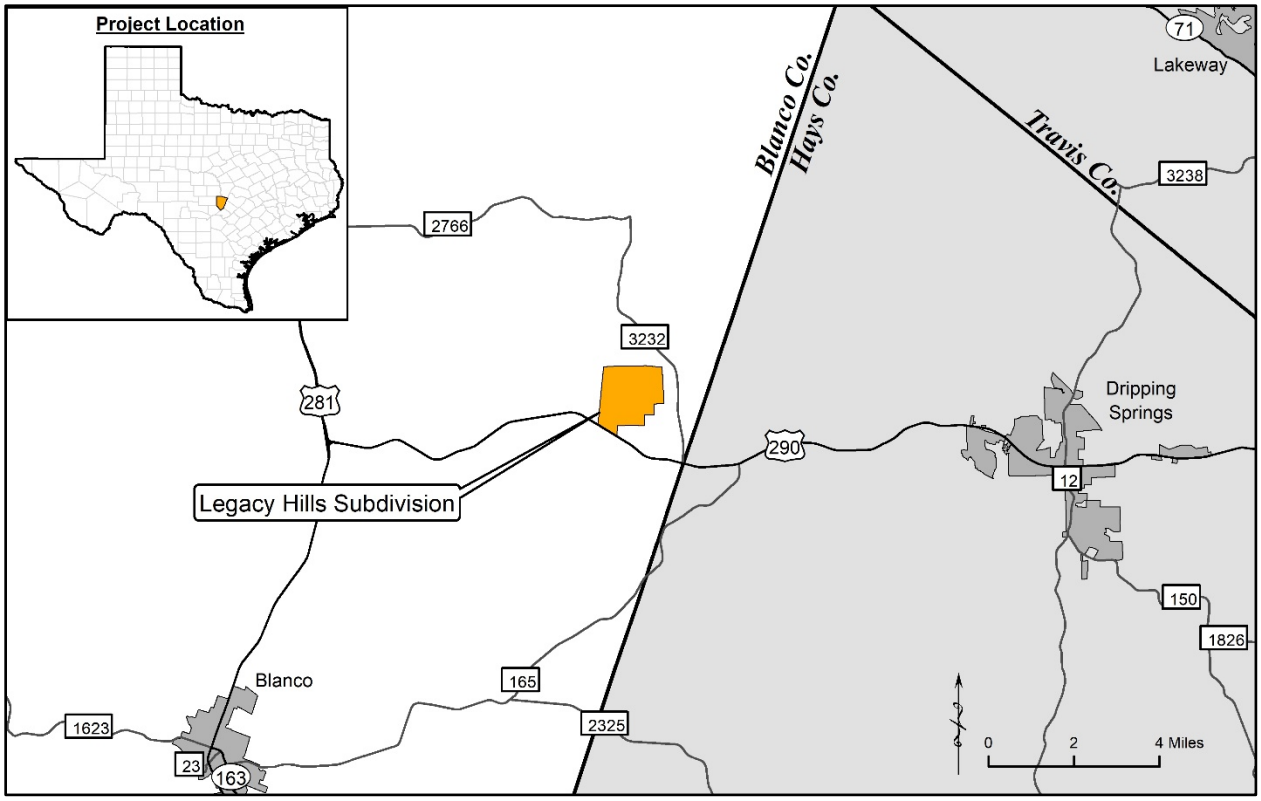


Figure 1: Location map

Lone Star Land Partners, LLC proposes to develop the first phase of the approximately 1,211.85 acre Legacy Hills Subdivision. Phase I consists of approximately 643 acres including 109 single family residential lots. The average lot size is 5.90 acres which will be served by individual water wells. The subdivision is located within the jurisdiction of the Blanco Pedernales Groundwater Conservation District (BPGCD). Figure 2 provides a map showing the general location of the subdivision with the county and groundwater district boundaries.

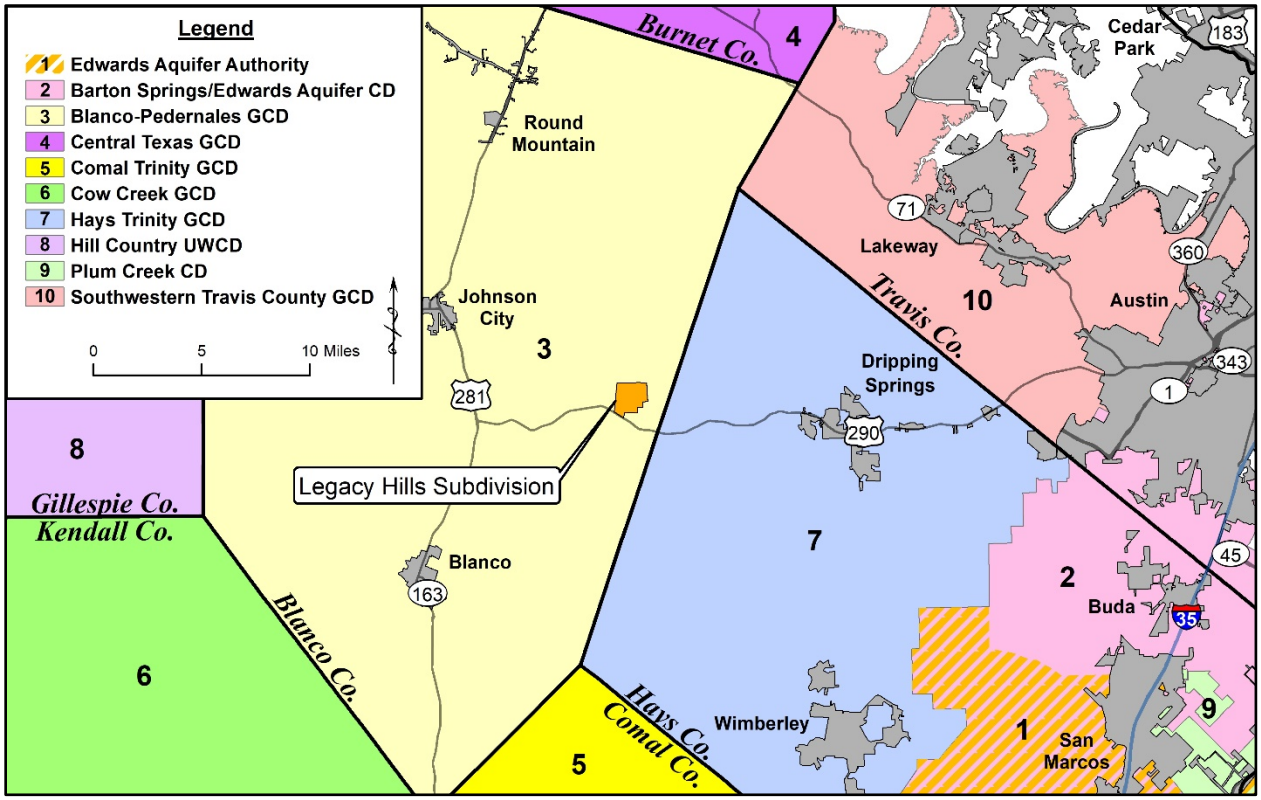


Figure 2: Groundwater Conservation District map

Section II: Projected Water Demand Estimate

The Blanco County development rules and regulations require applicants to use the following formula when calculating demand for a subdivision:

Equation 1: Total Water Demand

$$Q_s = n \times 3.5 \times 100 \times 365 \text{ days} = 13{,}924{,}750 \text{ gallons/year or } 42.73 \text{ acre-feet/year}$$

Where:

Q_s = Total Water Demand at full build out for the subdivision;

n = Number of connections (109 lots);

3.5 = Average number of persons per household; and

100 = The average per capita usage of water per day in gallons.

Equation 2: Water Demand per Housing Unit

$$Q_h = 3.5 \times 100 \times 365 \text{ days} = 127{,}750 \text{ gallons/year or } 0.39 \text{ acre-feet/year}$$

Where:

Q_h = Total Water Demand per house per year

Equation 1 assumes 3.5 persons per household using 100 gallons per person per day which results in a total water demand for the subdivision of 42.73 acre-feet/year. Equation 2 results in a water demand per housing unit of 0.39 acre-feet/year. There are no planned non-residential water demands.

Section III: General Groundwater Resource Information

III.1. Introduction

According to the Texas Water Development Board (TWDB), there is one (1) major aquifer (Trinity Aquifer) and two (2) minor aquifers (Hickory and Ellenburger-San Saba) that supply groundwater within the study area. The TWDB classifies major aquifers as aquifers that produce large amounts of water over large areas, and minor aquifers as aquifers that produce minor amounts of water over large areas or large amounts of water over small areas. The Trinity Aquifer is the major groundwater resource in the area and is a regionally extensive aquifer system made up of Cretaceous carbonates and Paleozoic carbonates and sandstones that were deposited throughout central Texas. The Trinity is affected by geologic structures which include the Llano Uplift, the San Marcos Arch, and the Balcones fault system (Ashworth, 1983).

III.2. Stratigraphy and Geologic History

The subdivision overlies the Cretaceous aged sedimentary rocks comprising the Trinity Aquifer. The Upper Member of the Glen Rose Formation covers the majority of the subdivision's surface, while the Lower Member of the Glen Rose Formation crops out over small areas in the north and northeastern portions of the property (Figure 3). The sediments that comprise these groups were deposited approximately 140 million years ago by a Cretaceous aged sea that once dominated the interior of North America and the Gulf Coast region. For approximately 79 million years this shallow sea deposited the sediments that now make up the property and its surrounding area. Figure 3 provides a geologic map and stratigraphic column illustrating the geology surrounding the subdivision.

The Trinity Aquifer as its name implies is divided into three aquifers from oldest to youngest: the Lower, Middle and Upper Trinity Aquifers. Formations comprising the Lower Trinity Aquifer include, from oldest to youngest, the Hosston Sand Member and Sligo Limestone Member of the Travis Peak Formation (Figure 3). The Hosston consists of a conglomerate of gravel, sand and clay cemented by both calcite and quartz. The Hosston also contains sections of sandstone, siltstone, claystone, dolomite, limestone and shale. The Sligo Limestone consists of clastic sediment near the property, and becomes dominantly limestone and dolomite to the east. Surface outcrops are referred to in the literature as Sycamore; Hosston and Sligo are the subsurface equivalents.

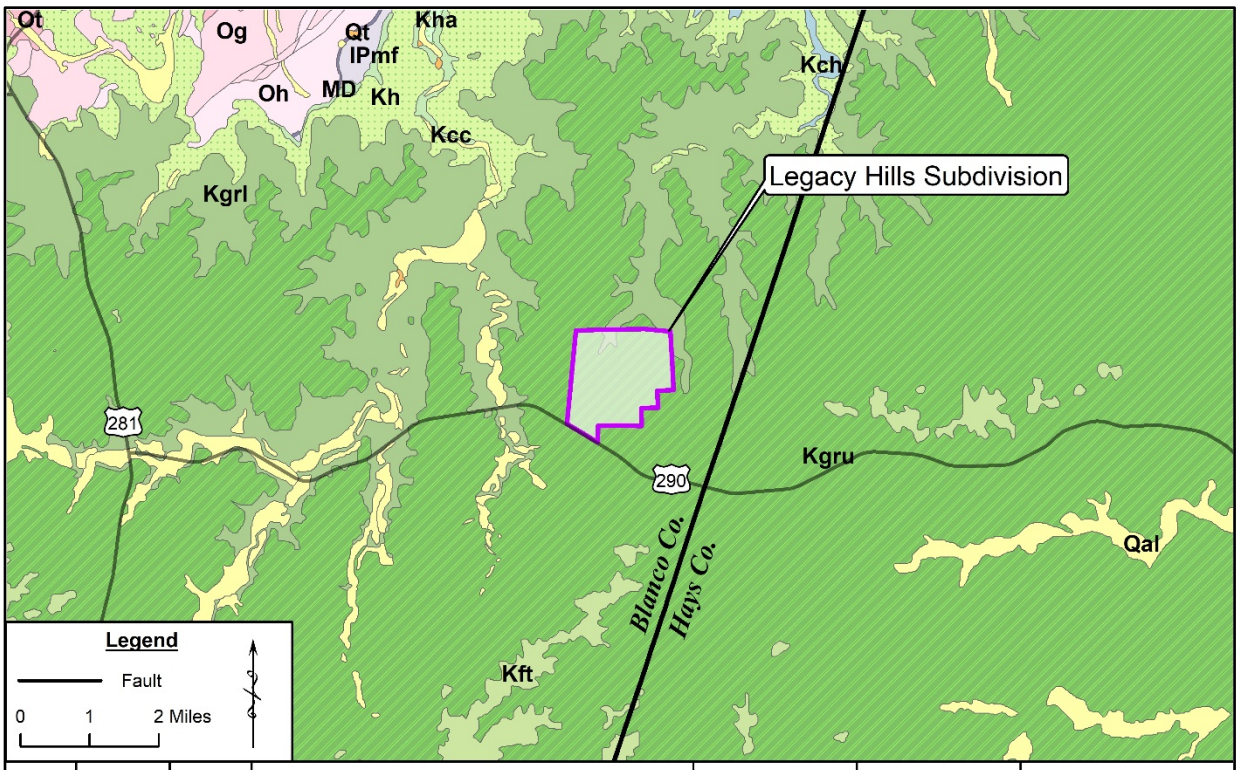
Located stratigraphically above the Hosston Sand is the Hammett Shale Member also known as the Pine Island Shale. The Hammett is a transgressive "shale" deposit that onlaps Lower Trinity Sligo and Hosston formations. The interval averages 40 feet in thickness in the central Texas area (Wierman et al., 2010). The unit is primarily a clay rich, gray-green sticky, dolomitic shale/claystone with siltstone and dolomite lenses. Color can be dark gray to black, blue, greenish gray and gray. The Hammett is a confining bed separating the Lower Trinity Aquifer from the Middle Trinity Aquifer (Figure 3).

Above the Hammett Clay lies the Middle Trinity Aquifer composed of the Cow Creek Limestone and the Bexar Shale members of the Travis Peak Formation and the Lower Glen Rose Limestone member of the Glen Rose Formation (Figure 3). The Cow Creek Limestone is a massive, fossiliferous limestone and dolomite ranging up to 100 feet in thickness and may contain some interbedded sand, clay, and evaporite minerals such as gypsum and anhydrite (Ashworth, 1983; Preston et. al, 1996; Wierman et al., 2010). The formation was subaerially exposed and subjected to meteoric water infiltration during early Hensell time, which resulted in widespread vuggy porosity (Loucks, 1977). In some areas, the Cow Creek is heavily fractured and capable of producing large well yields.

Overlying the Cow Creek is the Hensell Sand Member (Figure 3), which in the outcrop, is composed of loose sand and grades into thick continental deposits of red clay, silt, sand, and conglomerate with limestone beds in the subsurface. The Hensell is sand rich in the northern portions of the aquifer. Downdip, the Hensell grades into marine deposits of silty dolomite, marl, calcareous shale, and shaley limestone known as the Bexar Shale Member (Ashworth, 1983). Downdip, the Bexar Shale acts as a confining unit for the Cow Creek (Wierman et al., 2010).

Stratigraphically above the Hensell Sand/Bexar Shale, the Glen Rose Limestone Formation is divided into a Lower and Upper Member (Figure 3). The Glen Rose along with the Hensell Sand represents a wedge of sediments deposited in a transgressing sea. George (1952) separated the Glen Rose into upper and lower members. The boundary between the two members is identified by a thin, heavily fossfiliferous limestone bed containing *Corbula martinae* that persists throughout the study area except where erosion has lowered the land surface below the bed (Whitney, 1952; Ashworth, 1983). The separation between the two units is also distinguishable on geophysical logs where two distinct evaporite zones are found within the Upper Glen Rose; one midway through the Upper Glen Rose and another near the base shown by resistivity spikes on a geophysical log. The lower member of the Glen Rose Limestone consists of a massive, fossiliferous limestone at the base grading upward into thin beds of limestone, dolomite, marl, and shale. The top 15 to 20 feet of the lower member, designated the *Salenia texana* zone, is a highly fossiliferous, nodular marl and limestone which is capped by the Corbula bed (Ashworth, 1983). Near the top of the Lower Glen Rose, in some locations, is a reef deposit that is cavernous, heavily fractured, and can range in thickness. Where the reef deposit is encountered, the Lower Glen Rose can provide high yielding wells.

The Upper Member of the Glen Rose Formation, comprising the Upper Trinity Aquifer, consists of alternating beds of limestone and dolomite with marly sections that act as aquitards and restrict downward migration of groundwater to the Middle and Lower Trinity Aquifers (Wierman et al., 2010). The Upper Glen Rose also contains two distinct evaporite beds of gypsum or anhydrite that are easily distinguishable on geophysical logs due to high resistivity values. The lower evaporite zone occurs at the base of the Upper Glen Rose, which Ashworth (1983) describes as a "convenient correlation marker" between the Upper and Lower Glen Rose. The evaporite beds in some cases are the source of elevated sulfate concentrations in groundwater. Where present, the Upper Trinity Aquifer can yield small amounts of water to shallow wells which are often utilized for livestock and domestic use.



ERA	System	Group	Formation	Legend	Member	Hydrogeologic Unit
Cenozoic	Quaternary		Pleistocene to Recent floodplain (alluvium and fluviatile terrace deposits)	Qal / Qat / Qt, Qc, Qcf		localized alluvial aquifers
Mesozoic	Cretaceous	Edwards	Segovia	Ks		Edwards Plateau Aquifer (Edwards-Trinity Aquifer)
			Fort Terrett	Kft, Ked	Kirchburg evaporite / Dolomite Mbr. / Burrowed Mbr.	
			Walnut Formation	Kwa		confining bed
		Trinity	Glen Rose Lmst.	Kgr, Kgru, Kgrl	Upper Mbr. / Lower Mbr.	Upper Trinity Aquifer / Middle Trinity Aquifer
			Hensell Sand / Bexar Shale (Travis Peak Equivalent)	Kh		
			Cow Creek Lmst. (Travis Peak Equivalent)	Kcc, Kch		
			Hammett Shale (Travis Peak Equivalent)	Kha		confining bed
			Sycamore Sand / Sligo / Hosston	Ksy		Lower Trinity Aquifer
Paleozoic	Pennsylvanian	Canyon	Undivided	IPcn	Undivided	confining beds
		Strawn	Undivided	IPst		
		Bend	Smithwick	IPsw		
			Marble Falls Lmst.	IPmf		Marble Falls Aquifer
	Missippian and Devonian		Mississippian and Devonian Undivided rocks	MD		usually confining beds
	Ordovician	Ellenburger	Honeycut	Oh	Undivided	Ellenburger-San Saba Aquifer
			Gorman	Og	Undivided	
			Tanyard	Ot	Staendebach Mbr. / Threadgill Mbr.	
	Cambrian	Moore Hollow	Wilberns	Cws	San Saba Mbr.	
				Cwp	Point Peak Mbr.	confining beds
				Cwm	Morgan Creek Lmst. / Welge Sndst. Mbr.	Mid-Cambrian Aquifer
			Riley	Crc	Lion Mtn. Sndst. / Cap Mtn. Lmst.	confining beds
				Crh	Hickory Sandstone	Hickory Aquifer

Figure 3: Geologic map and stratigraphic column (modified from McGeehee, 1979; Preston et. al, 1996)

III.3. Hydrogeology

The major aquifer located within the subdivision is the Trinity Aquifer which encompasses the majority of Blanco County. The Trinity Aquifer spans as far north as Montague County and as far south as Uvalde County where fresh water can be produced. Figure 4 provides a map of the major aquifers within the area surrounding the subdivision. The solid dark blue portion reflects the unconfined zone of the Edwards Aquifer where recharge occurs; the hatched dark blue portion reflects the confined zone of the Edwards Aquifer. The solid green portion reflects the unconfined zone of the Trinity Aquifer where recharge occurs; the hatched green portion reflects the confined zone of the Trinity Aquifer. The solid yellow portion reflects the unconfined zone of the Ellenburger-San Saba Aquifer where recharge occurs; the hatched yellow portion reflects the confined zone of the Ellenburger-San Saba Aquifer. The solid light green portion reflects the unconfined zone of the Edwards-Trinity (Plateau) Aquifer where recharge occurs. The solid light blue portion reflects the unconfined zone of the Marble Falls Aquifer where recharge occurs. The solid brown portion reflects the unconfined zone of the Hickory Aquifer where recharge occurs; the hatched brown portion reflects the confined zone of the Hickory Aquifer.

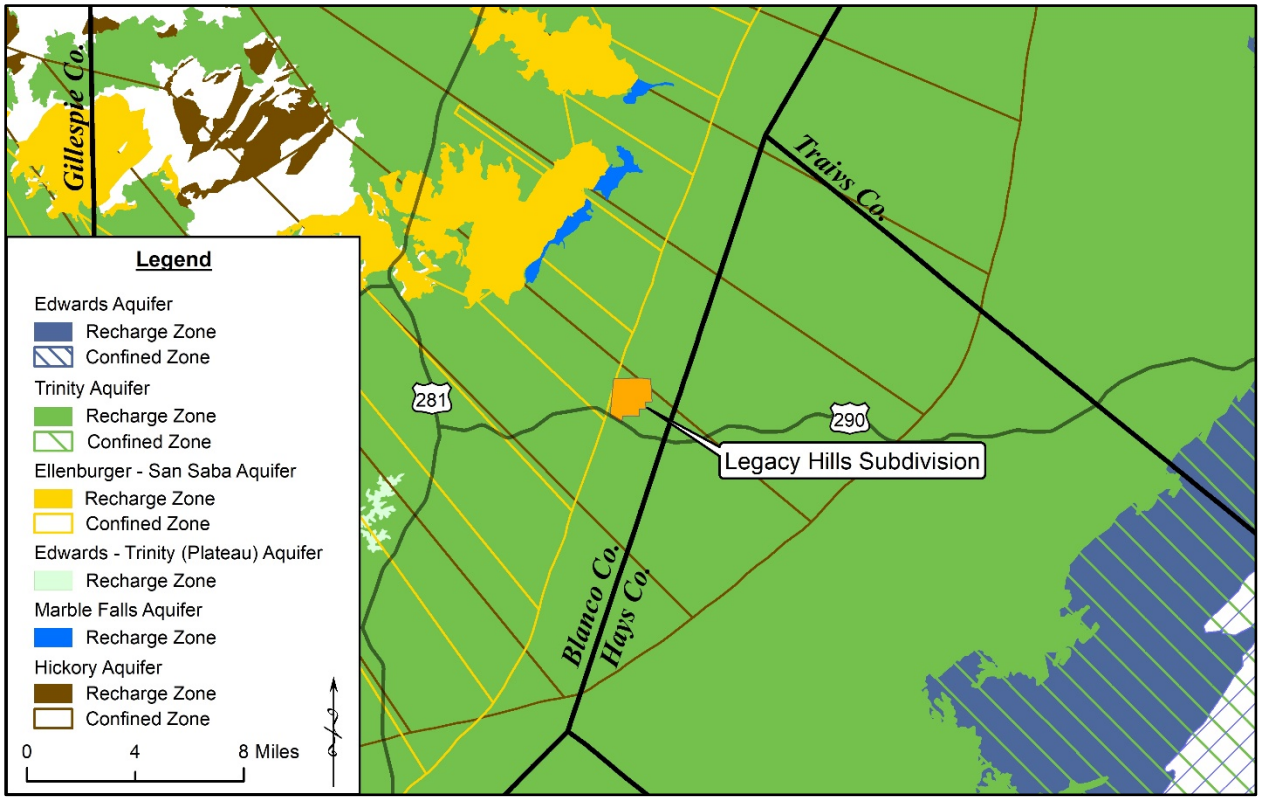


Figure 4: Aquifer map

The Upper Trinity Aquifer typically produces poor quality water due to the presence of gypsum and anhydrite layers within the Upper Glen Rose Formation and typically produces lower quantities of water. The Middle Trinity Aquifer contains the Lower Glen Rose Limestone, Hensall Sand, and Cow Creek Limestone and is separated from the Upper Trinity Aquifer by the presence of a fossil marker bed called the Corbula Bed.

The Corbula bed is a heavily fossiliferous layer that contains the small fossil clam called *Corbula martinae*. Typically, the highest yielding portion of the Trinity Aquifer is the Middle Trinity Aquifer, specifically the Lower Glen Rose Formation and the Cow Creek Limestone Member of the Travis Peak Formation. These formations are, in some localities, heavily fractured limestone, making them more productive because of their enhanced ability to transmit groundwater. In some areas, the Lower Glen Rose Formation contains the presence of a reef deposit which greatly increases the yield of a well due to its high permeability. Well yield may be increased through acidization, with increases of two or three fold obtained in some instances. The Lower Trinity Aquifer is composed of conglomerates and sandstones that are, in some instances, heavily cemented. The degree of cementing of these sediments controls the ability of water to move through the aquifer, thereby limiting the ability to produce large yielding wells. In localized areas, wells in the Lower Trinity Aquifer may produce moderate yields, although regionally the Middle Trinity Aquifer produces higher yielding wells with better quality water as compared to the Lower Trinity Aquifer.

The water quality of a well completed within the Middle Trinity Aquifer depends upon several factors, including the degree of fracturing, the amount of time the groundwater is in contact with the rock it is flowing through, and the minerals that compose the rock. For example, groundwater that flows through gypsum and anhydrite beds, which are composed of calcium sulfate ($CaSO_4$), will typically contain elevated levels of sulfate. Additionally, groundwater that has traveled a longer distance and has had longer contact time with aquifer sediments will also typically contain higher Total Dissolved Solids (TDS) than groundwater that has been in contact with the same rock for a shorter amount of time.

Section IV: Aquifer Testing

IV.1. Well Details

There are a total of ten (10) wells located within the subdivision that were used to perform aquifer tests. Wells No. 1 to No. 9 were recently constructed and completed in the Middle Trinity Aquifer. Existing (Ex) Wells No. 1 and No. 2 were constructed prior to the commencement of this study. Ex Well No. 1 is completed in the Middle Trinity Aquifer and Ex. Well No. 2 is completed shallower. Ex. Well No. 2 was not used in the aquifer testing. Figure 5 provides a map displaying the location of the wells on the property and within 1-mile of the property boundary. Figures 6 to 10 provide well profiles displaying well construction and formation depths that were determined from the geophysical logs and discussions with BPGCD staff; Appendix B provides geophysical logs performed by BPGCD on Ex. Well No. 1 and Wells No. 2, No. 5, No. 8 and No. 9; Appendix C provides available state well reports. Table 1 provides a summary of the existing wells according to state well data within 1-mile of the first phase of the subdivision not used in testing; Table 2 provides a well construction summary for wells used in the testing.

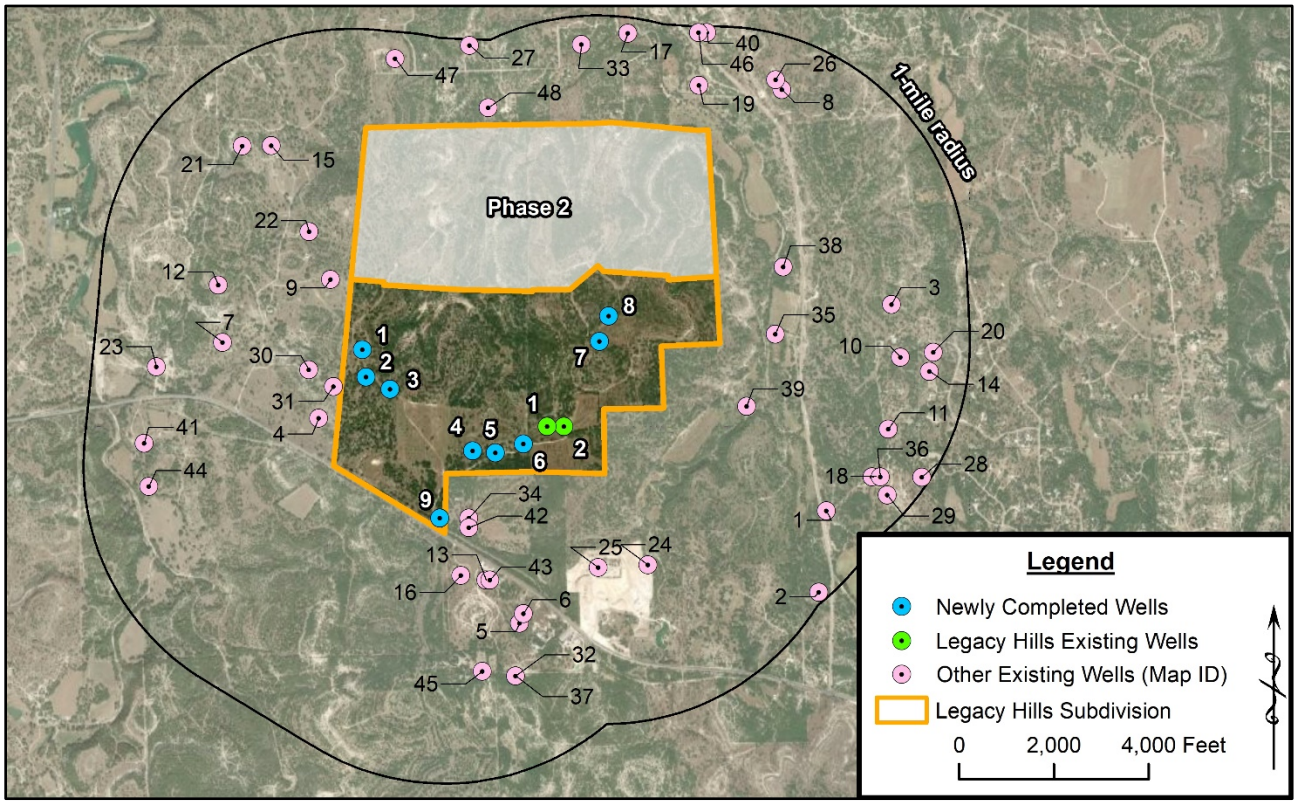


Figure 5: Well location map

Table 1: Summary of wells within 1-mile

Map ID	State Well ID	Owner	Well Depth (ft.)	Well Type
1	34768	Doug Jernigan	480	Domestic
2	34771	James Spencer	440	Domestic
3	36561	Glen Portie	440	Domestic
4	51188	Tierra Manana, LLC	370	Domestic
5	67857	Jared Bows	424	Domestic
6	67859	Jared Bows	444	Domestic
7	110099	Kelly Kaatz	340	Domestic
8	113162	Joe & Kristina Kernick	405	Domestic
9	138484	Russell Rehmann	425	Domestic
10	145098	Granduer Homes for Brenda Mason	400	Domestic
11	146485	Roger Estes	420	Domestic
12	170803	Ryan, Dewey	400	Domestic
13	222759	Friday's	490	Domestic
14	267971	Paul Judkins	390	Domestic
15	277289	Mike Baringer	350	Domestic
16	282955	Mitchell White	470	Domestic
17	316414	Randy Voorheis	205	Domestic
18	336042	Storm Field	440	Domestic
19	352930	Mike Yerington/Hillside Acres	265	Domestic
20	357280	Dave Williams	370	Domestic
21	377270	Lisa Sutphin	385	Domestic
22	381260	Craig Van Engelen	410	Domestic
23	387506	Sunset Canyon Pit Management	280	Domestic
24	429392	Austin Ready Mix	450	Other
25	429401	West Henly Materials	450	Other
26	448730	Joell Ebbert	380	Domestic
27	493622	James Wright/Aart's Job	350	Domestic
28	497315	Darin Duvall	450	Domestic
29	521917	Storm Field	465	Stock
30	521514	Jack Corbell	410	Domestic
31	534089	Alexander Adamovich	425	Domestic
32	317489	Jim Stewart	510	Domestic
33	549071	Angela Smith	258	Domestic
34	5754602	L.W. Prochnow	130	Unused
35	5755102	Hodges Ranch	40	Plugged or Destroyed
36	5755404	Ty Storm Field	N/A	Domestic

Table 1: Continued

Map ID	State Well ID	Owner	Well Depth (ft.)	Well Type
37	5754610	Jim Stewart	510	Domestic
38	5755101	K.M. Hodges	145	Unused
39	5755103	Hodges Ranch	N/A	Unused
40	5755108	Cabello Creek Ranch	N/A	Domestic
41	5754604	L.M. Murphy	169	Domestic
42	5754603	L.W. Prochnow	371	Domestic
43	5754609	Friday's General Store Vasu Neerumonda	490	Commercial
44	5754608	Mrs. Leonard Murphy Mgr. Sonny Smith	228	Domestic
45	5754606	Fred Nolan	160	Stock
46	5755106	E.E. Fine	170	Domestic
47	5754309	Ross Vincent	425	Irrigation
48	5754310	John & Amy Kachimski	N/A	Domestic

To meet the guidelines for the Blanco County development rules and regulations and to adequately assess the availability of groundwater within the vicinity of the proposed subdivision, seven (7) aquifer tests were conducted utilizing Ex Well No. 1 and the newly completed Middle Trinity wells. The aquifer tests consisted of pumping one well for at least 24 hours followed by a recovery phase while measuring water levels in both the pumping and observation wells throughout both phases. This is in accordance with the testing procedures of the Texas Administrative Code (TAC) Title 30 Part 1 Chapter 230.8. Based on geophysical logs conducted by BPGCD on Ex. Well No. 1 and Wells No. 2, No. 5, No. 8 and No. 9 and drill cuttings collected by Apex Drilling, Inc., the wells used in the tests are completed in the Middle Trinity Aquifer. The following provides a summary of the well construction for the wells used in the tests:

Existing Well No. 1

A State Well Report could not be located for Existing (Ex) Well No. 1. A geophysical log performed by BPGCD, indicates the well is completed within the Cow Creek Limestone Member of the Middle Trinity Aquifer with 4 1/2-inch casing to a total depth of 419 ft. below ground level (bgl).

Well No. 1

According to the State Well Report (Tracking No. 561449), drilling of Well No. 1 was completed by Apex Drilling, Inc. on December 2, 2020. The well was drilled to a depth of 375 ft. bgl with a 8 1/2-inch borehole from 0 to 50 ft. bgl. and a 6 1/2-inch borehole from 50 to 425 ft. bgl. The well was completed with 4 1/2-inch PVC casing set from +2 to 315 ft. bgl and 4 1/2-inch screen from 315 to 375 ft. bgl. Drill cuttings collected by Apex indicates that the well was completed in the Cow Creek Limestone Member of the Middle Trinity Aquifer.

Well No. 2

According to the State Well Report (Tracking No. 561450), drilling of Well No. 2 was completed by Apex Drilling, Inc. on December 3, 2020. The well was drilled to a depth of 425 ft. bgl with a 8 1/2-inch borehole from 0 to 50 ft. bgl. and a 6 1/2-inch borehole from 50 to 425 ft. bgl. The well was completed with 4 1/2-inch PVC casing set from +2 to 365 ft. bgl and 4 1/2-inch screen from 365 to 425 ft. bgl. A geophysical log performed by BPGCD, indicates the well is completed within the Cow Creek Limestone Member of the Middle Trinity Aquifer.

Well No. 3

According to the State Well Report (Tracking No. 561451), drilling of Well No. 3 was completed by Apex Drilling, Inc. on December 4, 2020. The well was drilled to a depth of 420 ft. bgl with a 8 1/2-inch borehole from 0 to 50 ft. bgl. and a 6 1/2-inch borehole from 50 to 420 ft. bgl. The well was completed with 4 1/2-inch PVC casing set from +2 to 360 ft. bgl and 4 1/2-inch screen from 360 to 420 ft. bgl. Drill cuttings collected by Apex indicates that the well was completed in the Cow Creek Limestone Member of the Middle Trinity Aquifer.

Well No. 4

According to the State Well Report (Tracking No. 561452), drilling of Well No. 4 was completed by Apex Drilling, Inc. on December 7, 2020. The well was drilled to a depth of 420 ft. bgl with a 8 1/2-inch borehole from 0 to 50 ft. bgl. and a 6 1/2-inch borehole from 50 to 420 ft. bgl. The well was completed with 4 1/2-inch PVC casing set from 0 to 360 ft. bgl and 4 1/2-inch screen from 360 to 420 ft. bgl. Drill cuttings collected by Apex indicates that the well was completed in the Cow Creek Limestone Member of the Middle Trinity Aquifer.

Well No. 5

According to the State Well Report (Tracking No. 561453), drilling of Well No. 5 was completed by Apex Drilling, Inc. on December 7, 2020. The well was drilled to a depth of 425 ft. bgl with a 8 1/2-inch borehole from 0 to 50 ft. bgl. and a 6 1/2-inch borehole from 50 to 425 ft. bgl. The well was completed with 4 1/2-inch PVC casing set from +2 to 365 ft. bgl and 4 1/2-inch screen from 365 to 425 ft. bgl. A geophysical log performed by BPGCD, indicates the well is completed within the Cow Creek Limestone Member of the Middle Trinity Aquifer.

Well No. 6

According to the State Well Report (Tracking No. 561726), drilling of Well No. 6 was completed by Apex Drilling, Inc. on December 9, 2020. The well was drilled to a depth of 425 ft. bgl with a 8 1/2-inch borehole from 0 to 50 ft. bgl. and a 6 1/2-inch borehole from 50 to 425 ft. bgl. The well was completed with 4 1/2-inch PVC casing set from +2 to 365 ft. bgl and 4 1/2-inch screen from 365 to 425 ft. bgl. Drill cuttings collected by Apex indicates that the well was completed in the Cow Creek Limestone Member of the Middle Trinity Aquifer.

Well No. 7

According to the State Well Report (Tracking No. 561735), drilling of Well No. 7 was completed by Apex Drilling, Inc. on December 10, 2020. The well was drilled to a depth of 455 ft. bgl with a 8 1/2-inch borehole from 0 to 50 ft. bgl. and a 6 1/2-inch borehole from 50 to 455 ft. bgl. The well was completed with 4 1/2-inch PVC casing set from +2 to 395 ft. bgl and 4 1/2-inch screen from 395 to 455 ft. bgl. Drill cuttings collected by Apex indicates that the well was completed in the Cow Creek Limestone Member of the Middle Trinity Aquifer.

Well No. 8

According to the State Well Report (Tracking No. 561736), drilling of Well No. 8 was completed by Apex Drilling, Inc. on December 11, 2020. The well was drilled to a depth of 460 ft. bgl with a 8 1/2-inch borehole from 0 to 50 ft. bgl. and a 6 1/2-inch borehole from 50 to 460 ft. bgl. The well was completed with 4 1/2-inch PVC casing set from +2 to 400 ft. bgl and 4 1/2-inch screen from 400 to 460 ft. bgl. A geophysical log performed by BPGCD, indicates the well is completed within the Cow Creek Limestone Member of the Middle Trinity Aquifer.

Well No. 9

According to the State Well Report (Tracking No. 561739), drilling of Well No. 9 was completed by Apex Drilling, Inc. on December 14, 2020. The well was drilled to a depth of 445 ft. bgl with a 8 1/2-inch borehole from 0 to 50 ft. bgl. and a 6 1/2-inch borehole from 50 to 445 ft. bgl. The well was completed with 4 1/2-inch PVC casing set from +2 to 385 ft. bgl and 4 1/2-inch screen from 385 to 445 ft. bgl. A geophysical log performed by BPGCD, indicates the well is completed within the Cow Creek Limestone Member of the Middle Trinity Aquifer.

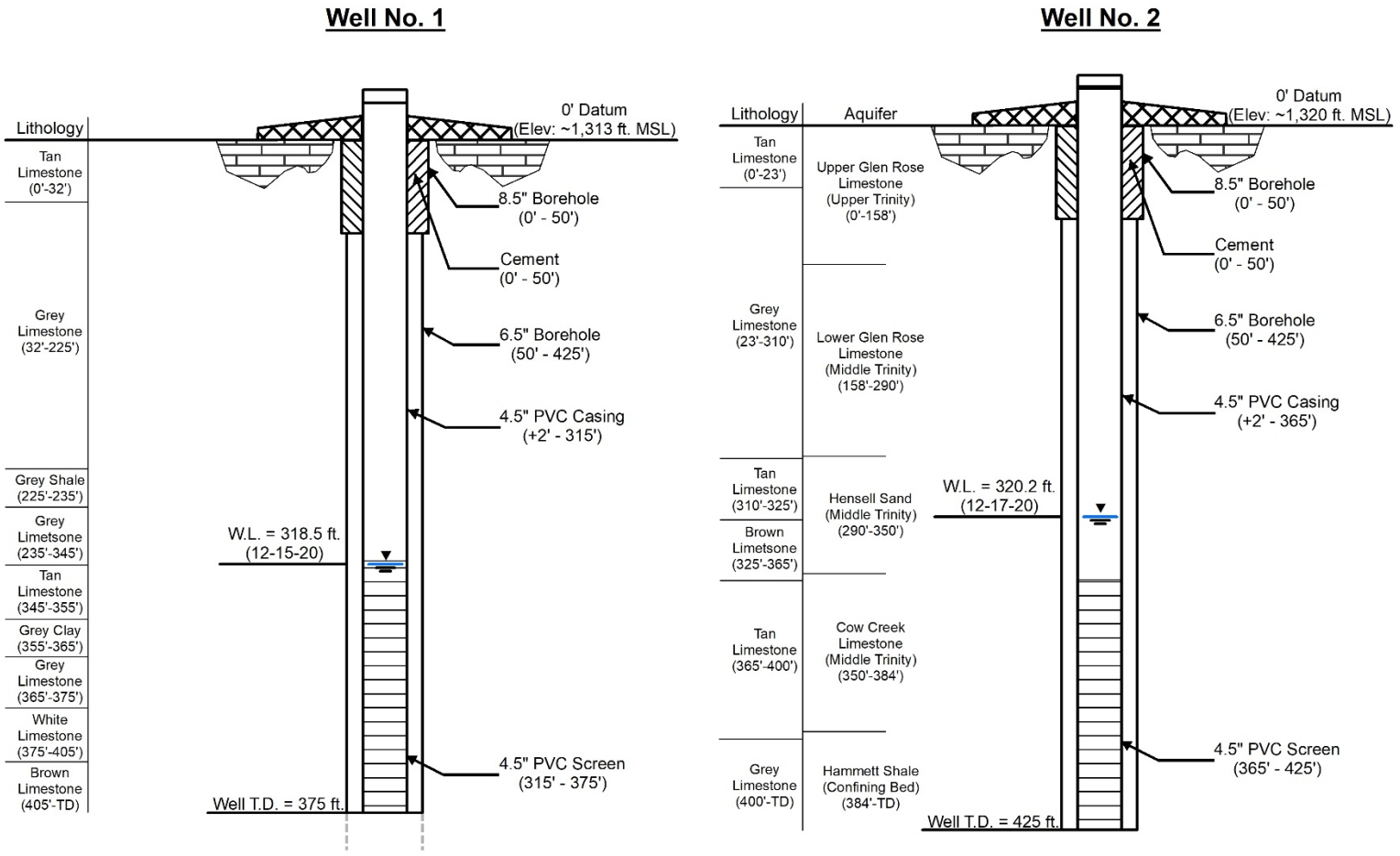
Table 2: Summary of Legacy Hills well construction

Well	Tracking No.	Latitude	Longitude	Elevation (ft. MSL)	Date Completed	Aquifer	Well Depth (ft. bgs)	Static Water Level (ft. bgs; date; ft. MSL)	Borehole (diameter; ft. bgs)	Casing (diameter; material; ft. bgs)	Screen (diameter; material; ft. bgs)
Ex Well No. 1	N/A	30° 12' 13" N	98° 15' 21" W	1,317	N/A	Middle Trinity	419	329.3' (12/28/20) 987.7'	N/A	4 1/2" PVC (0-N/A)	N/A
Well No. 1	561449	30° 12' 49" N	98° 16' 05" W	1,313	12/2/2020	Middle Trinity	375	318.5' (12/15/20) 994.5'	8 1/2" (0-50) 6 1/2" (50-425)	4 1/2" PVC (+2-315)	4 1/2" PVC Screen (315-375)
Well No. 2	561450	30° 12' 44" N	98° 16' 05" W	1,320	12/3/2020	Middle Trinity	425	320.2' (12/17/20) 1,004.8'	8 1/2" (0-50) 6 1/2" (50-425)	4 1/2" PVC (+2-365)	4 1/2" PVC Screen (365-425)
Well No. 3	561451	30° 12' 41" N	98° 15' 59" W	1,317	12/4/2020	Middle Trinity	420	321.7' (12/17/20) 991.4'	8 1/2" (0-50) 6 1/2" (50-420)	4 1/2" PVC (+2-360)	4 1/2" PVC Screen (360-420)
Well No. 4	561452	30° 12' 29" N	98° 15' 39" W	1,316	12/7/2020	Middle Trinity	420	324.0' (1/4/21) 992.0'	8 1/2" (0-50) 6 1/2" (50-420)	4 1/2" PVC (0-360)	4 1/2" PVC Screen (360-420)
Well No. 5	561453	30° 12' 27" N	98° 15' 34" W	1,326	12/7/2020	Middle Trinity	425	334.4' (12/23/20) 991.6'	8 1/2" (0-50) 6 1/2" (50-425)	4 1/2" PVC (+2-365)	4 1/2" PVC Screen (365-425)
Well No. 6	561726	30° 12' 29" N	98° 15' 27" W	1,323	12/9/2020	Middle Trinity	425	333.0' (12/28/20) 990.0'	8 1/2" (0-50) 6 1/2" (50-425)	4 1/2" PVC (+2-365)	4 1/2" PVC Screen (365-425)
Well No. 7	561735	30° 12' 51" N	98° 15' 08" W	1,332	12/10/2020	Middle Trinity	455	350.5' (1/6/21) 981.5'	8 1/2" (0-50) 6 1/2" (50-455)	4 1/2" PVC (+2-395)	4 1/2" PVC Screen (395-455)
Well No. 8	561736	30° 12' 56" N	98° 15' 06" W	1,335	12/11/2020	Middle Trinity	460	351.5' (1/6/21) 983.5'	8 1/2" (0-50) 6 1/2" (50-460)	4 1/2" PVC (+2-400)	4 1/2" PVC Screen (400-460)

Table 2: Continued

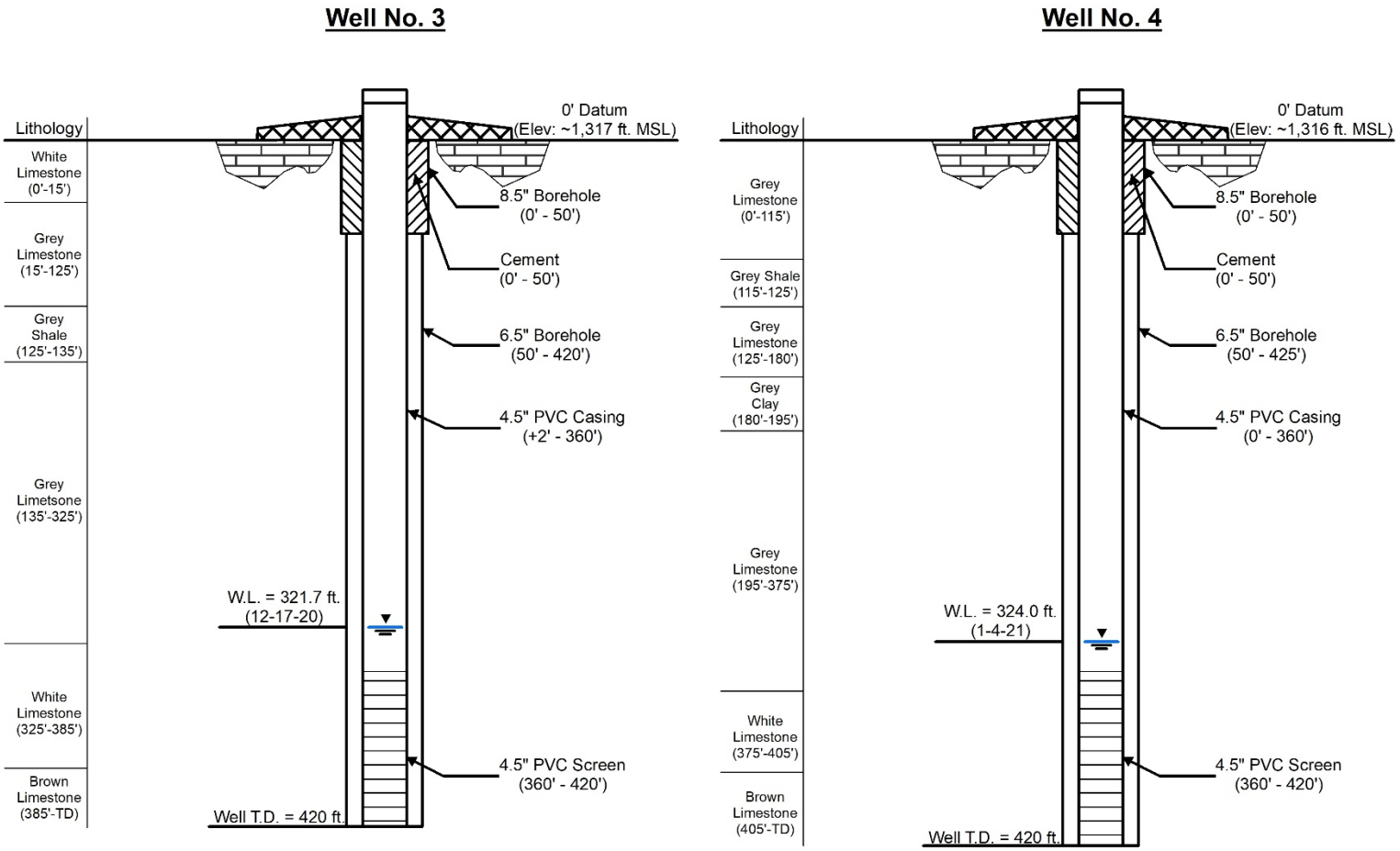
Well	Tracking No.	Latitude	Longitude	Elevation (ft. MSL)	Date Completed	Aquifer	Well Depth (ft. bgs)	Static Water Level (ft. bgs; date; ft. MSL)	Borehole (diameter; ft. bgs)	Casing (diameter; material; ft. bgs)	Screen (diameter; material; ft. bgs)
Well No. 9	561739	30° 12' 14" N	98° 15' 47" W	1,341	12/14/2020	Middle Trinity	445	350.2' (1/4/21) 990.8'	8 1/2" (0-50) 6 1/2" (50-445)	4 1/2" PVC (+2-385)	4 1/2" PVC Screen (385-445)

Note: ft. = feet; bgl = below ground level; MSL = Mean Sea Level; N/A = not available.



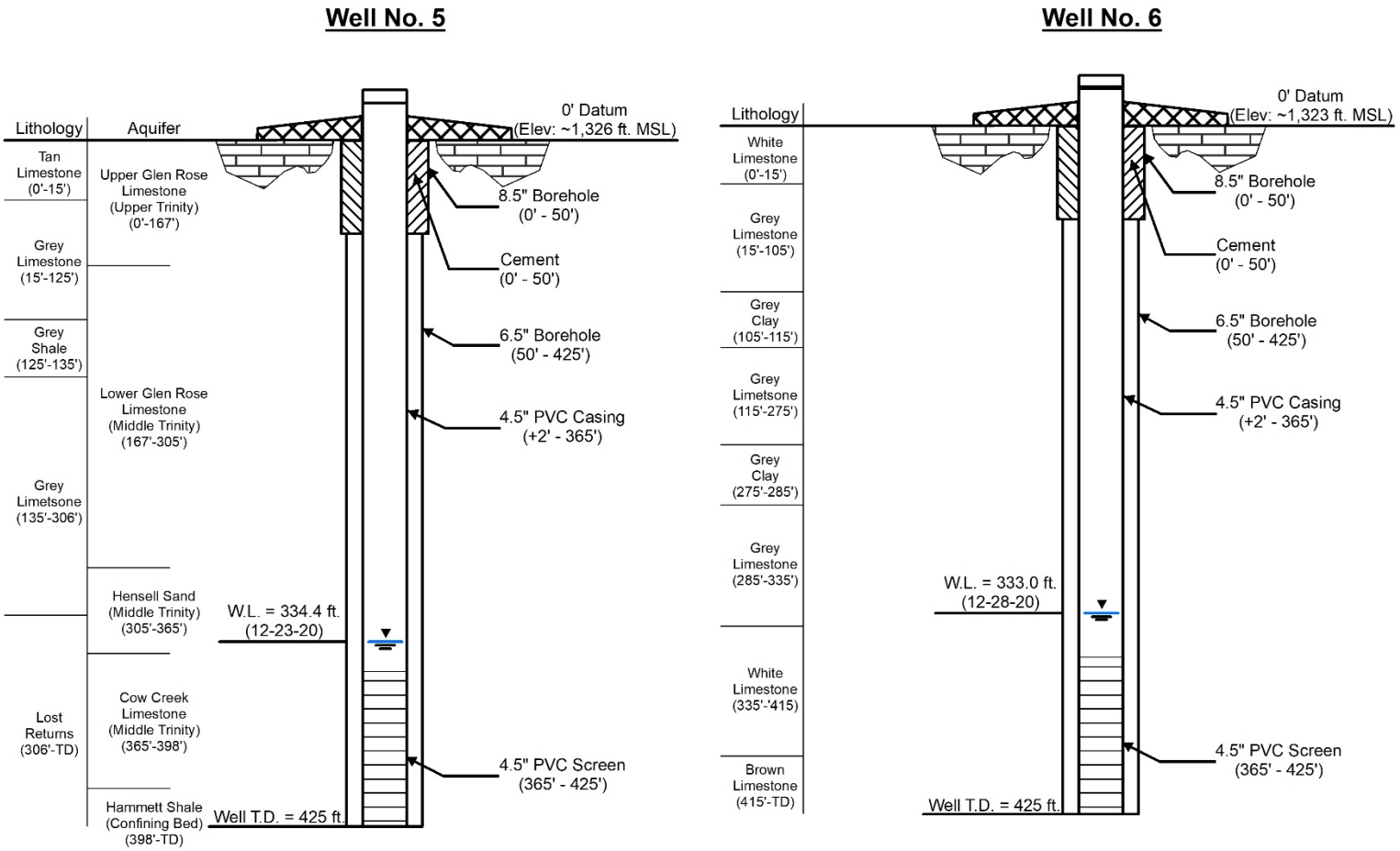
Notes:
- Well profiles created with the information from State Well Reports, drill cuttings and downhole geophysical logs.
- Figure for schematic purposes; not drawn to scale.

Figure 6: Well construction profiles of Wells No. 1 and No. 2



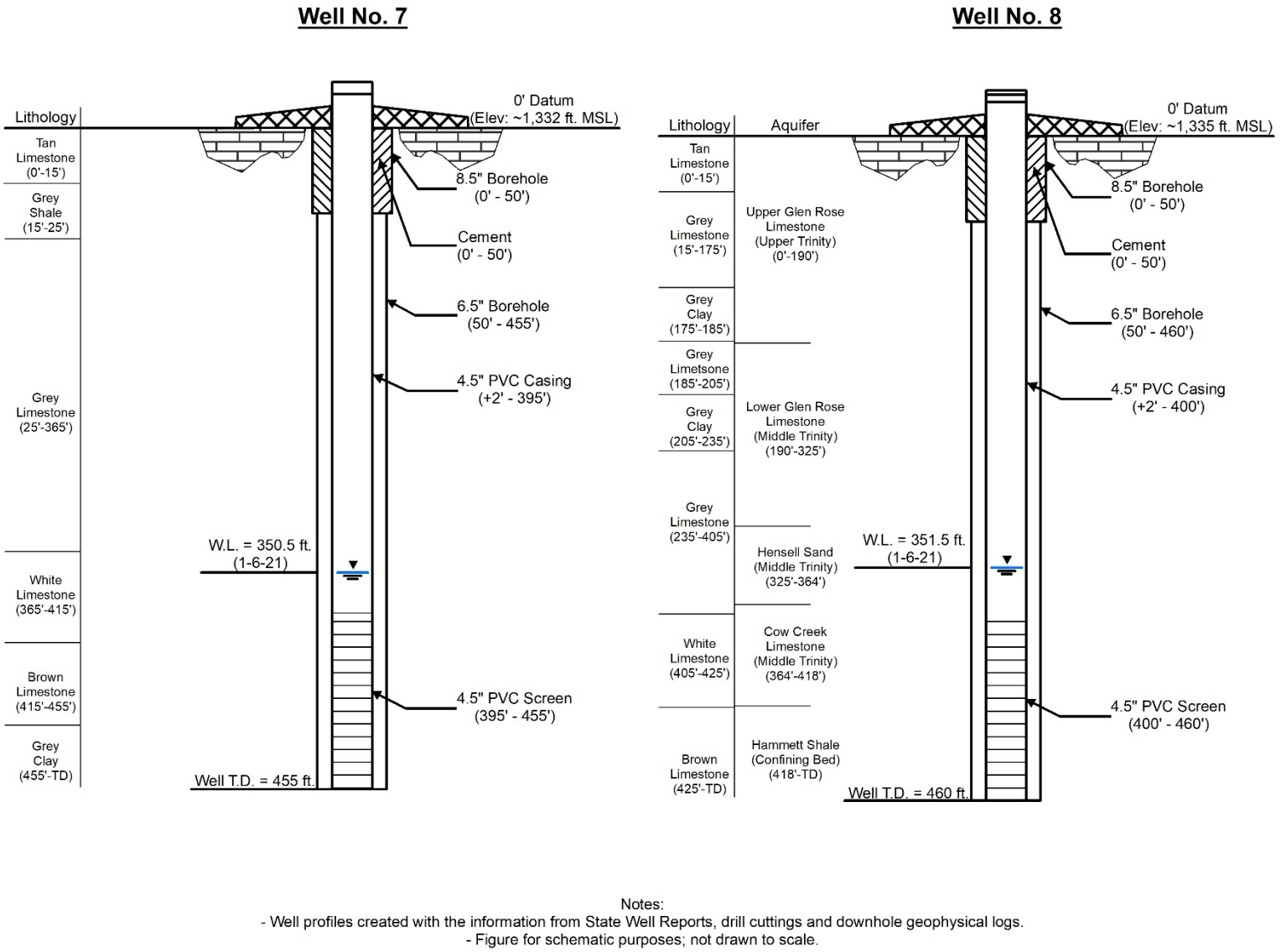
Notes:
- Well profiles created with the information from State Well Reports, drill cuttings and downhole geophysical logs.
- Figure for schematic purposes; not drawn to scale.

Figure 7: Well construction profiles of Wells No. 3 and No. 4



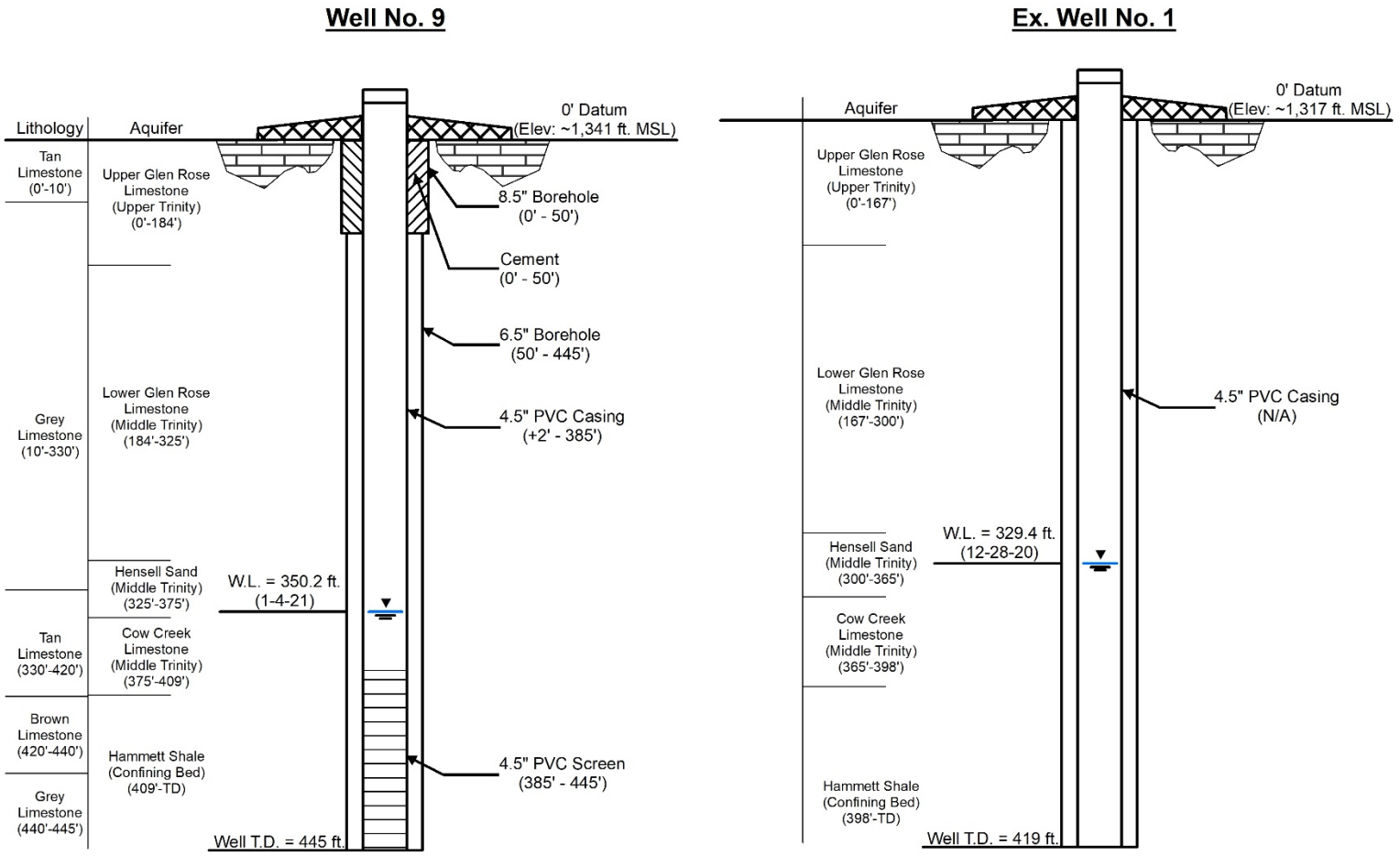
Notes:
- Well profiles created with the information from State Well Reports, drill cuttings and downhole geophysical logs.
- Figure for schematic purposes; not drawn to scale.

Figure 8: Well construction profile of Wells No. 5 and No. 6



Notes:
- Well profiles created with the information from State Well Reports, drill cuttings and downhole geophysical logs.
- Figure for schematic purposes; not drawn to scale.

Figure 9: Well construction profile of Wells No. 7 and No. 8



Notes:
- Well profiles created with the information from State Well Reports and downhole geophysical logs.
- Figure for schematic purposes; not drawn to scale.

Figure 10: Well construction profile of Wells No. 9 and Ex. No. 1

IV.2 Aquifer Testing

Seven (7) aquifer tests were performed to assess the hydrogeologic properties of the Middle Trinity Aquifer within the subdivision. For each aquifer test, Apex Drilling, Inc. set a submersible pump within the pumping well that was capable of varying its discharge rate. Prior to the start of the aquifer test, a pressure transducer capable of measuring the water level and temperature at one minute intervals was placed in the pumping well to gather data for the duration of each test. Meter readings and water levels were taken prior to, during, and at the conclusion of the tests. Each aquifer test had at least a 24-hour pumping phase followed by a recovery phase. The data from the aquifer test was analyzed using the Cooper-Jacob method. Table 3 provides a summary of the aquifer testing results; Appendix D provides the results of the aquifer analysis; and Appendix E provides well efficiency calculations for each well.

IV.2.1. Aquifer Test of Well No. 1 (December 15, 2020):

The aquifer test of Well No. 1 was conducted on December 15, 2020 with Well No. 2 as the observation well approximately 580 feet away from the pumping well. The pumping phase started at 9:58 A.M. on December 15, 2020; the water level was monitored for 24.8 hours of pumping and for 22.3 hours of recovery. Prior to the pumping phase of the aquifer test, the static water level in Well No. 1 was measured at 318.5 ft. bgl (994.5 ft. MSL) and 320.0 ft. bgl (1,000.0 ft. MSL) in Well No. 2.

Well No. 1 was pumped at an average rate of 12 gpm with a final measured pumping rate of 12 gpm with 0.85 feet of drawdown, resulting in a specific capacity of 13.93 gpm/ft. The Cooper-Jacob analysis resulted in a calculated transmissivity of 3,310.1 ft^2/day, and a hydraulic conductivity of 14.6 ft./day. A maximum drawdown of 0.57 feet was observed in Well No. 2 indicating a hydraulic connection between the two wells. Due to the observed hydraulic connection, we calculated a storativity value for Well No. 2 of 1.99×10^{-4}. Figure 11 provides a hydrograph of the pumping well and temperature over the duration of the aquifer test; Figure 12 provides a hydrograph of both the pumping and observation well over the duration of the test.

After an initial drawdown, the water level remained stable while moderately fluctuating for the remainder of the pumping phase. The water level in the observation well showed a noticeable response directly related to starting and stopping the pump in Well No. 1 (Figure 12). After the pump was shut off, recovery was measured in both wells; the water level in the pumping well recovered 88% in approximately 20 hours. There were no aquifer boundary conditions observed during the testing.

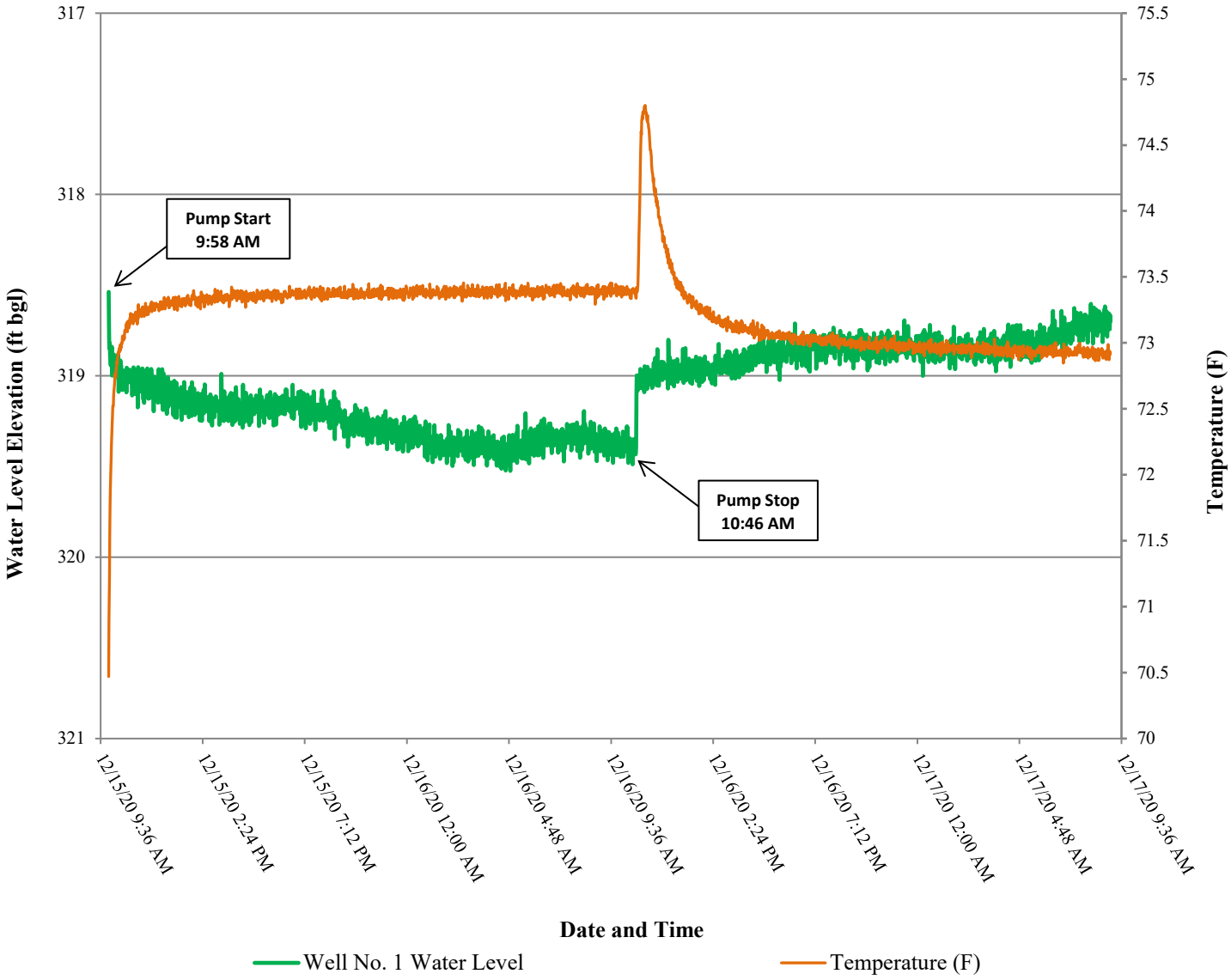


Figure 11: Aquifer test hydrograph of Well No. 1 (December 15, 2020)

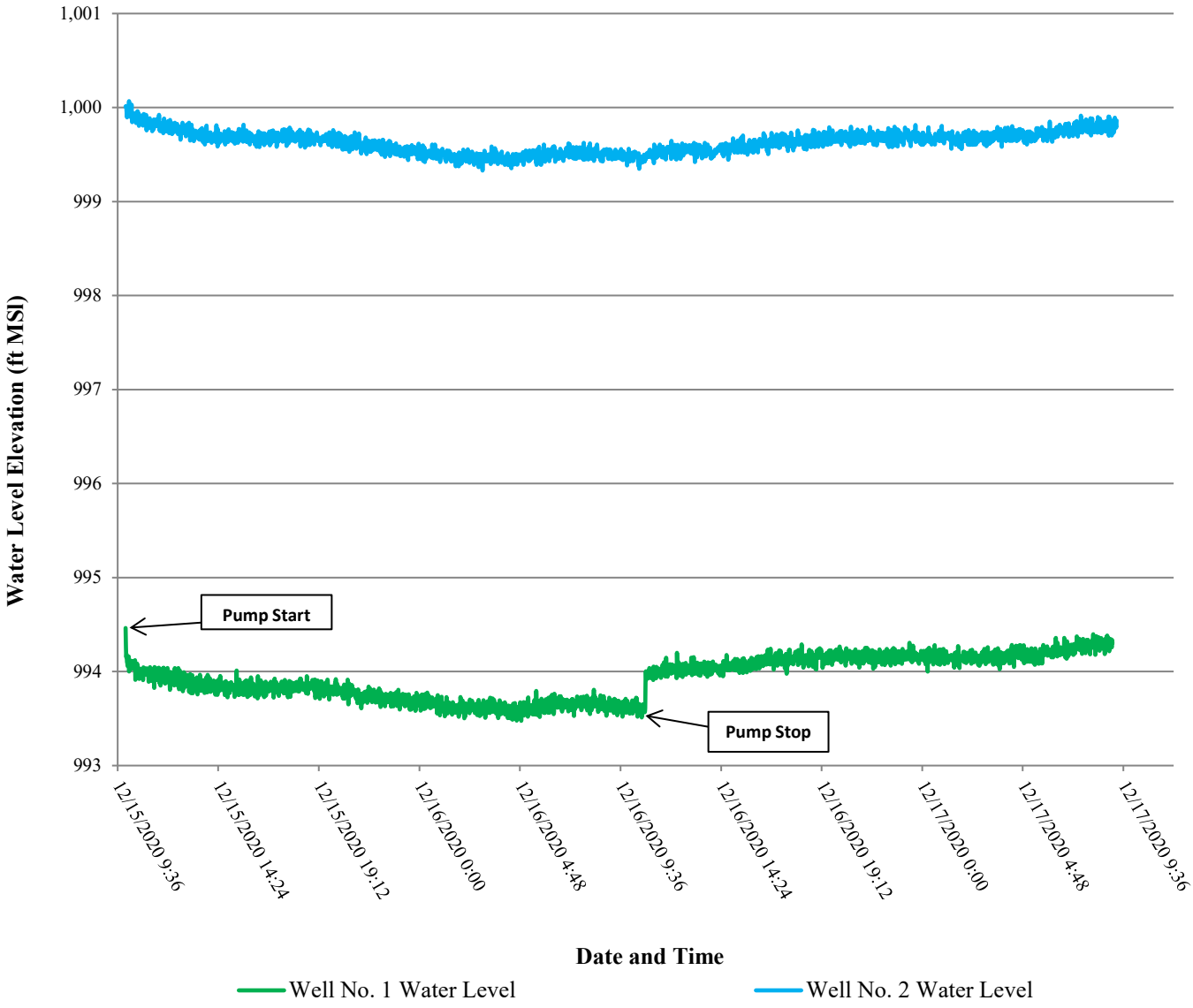


Figure 12: Aquifer test hydrograph of Well No. 1 and Observation Well No. 2 (December 15, 2020)

IV.2.2. Aquifer Test of Well No. 3 (December 17, 2020):

The aquifer test of Well No. 3 was conducted on December 17, 2020 with Well No. 2 as the observation well approximately 565 feet away from the pumping well. The pumping phase started at 9:57 A.M. on December 17, 2020; the water level was monitored for 26.1 hours of pumping and for 69.2 hours of recovery. Prior to the pumping phase of the aquifer test, the static water level in Well No. 3 was measured at 321.7 ft. bgl (991.4 ft. MSL) and 320.2 ft. bgl (1,004.8 ft. MSL) in Well No. 2.

Well No. 3 was pumped at an average rate of 14 gpm with a final measured pumping rate of 12 gpm with 1.01 feet of drawdown, resulting in a specific capacity of 11.75 gpm/ft. The Cooper-Jacob analysis resulted in a calculated transmissivity of 2,771.6 ft^2/day, and a hydraulic conductivity of 12.3 ft./day. A maximum drawdown of 0.87 feet was observed in Well No. 2 indicating a hydraulic connection between the two wells. Due to the observed hydraulic connection, we calculated a storativity value for Well No. 2 of 2.42×10^{-4}. Figure 13 provides a hydrograph of the pumping well and temperature over the duration of the aquifer test; Figure 14 provides a hydrograph of both the pumping and observation well over the duration of the test.

After an initial drawdown, the water level remained stable for the remainder of the pumping phase. The water level in the observation well showed a noticeable response directly related to starting and stopping the pump in Well No. 3 (Figure 14). After the pump was shut off, recovery was measured in both wells; the water level in the pumping well recovered 95% in approximately 43 hours. There were no aquifer boundary conditions observed during the testing.

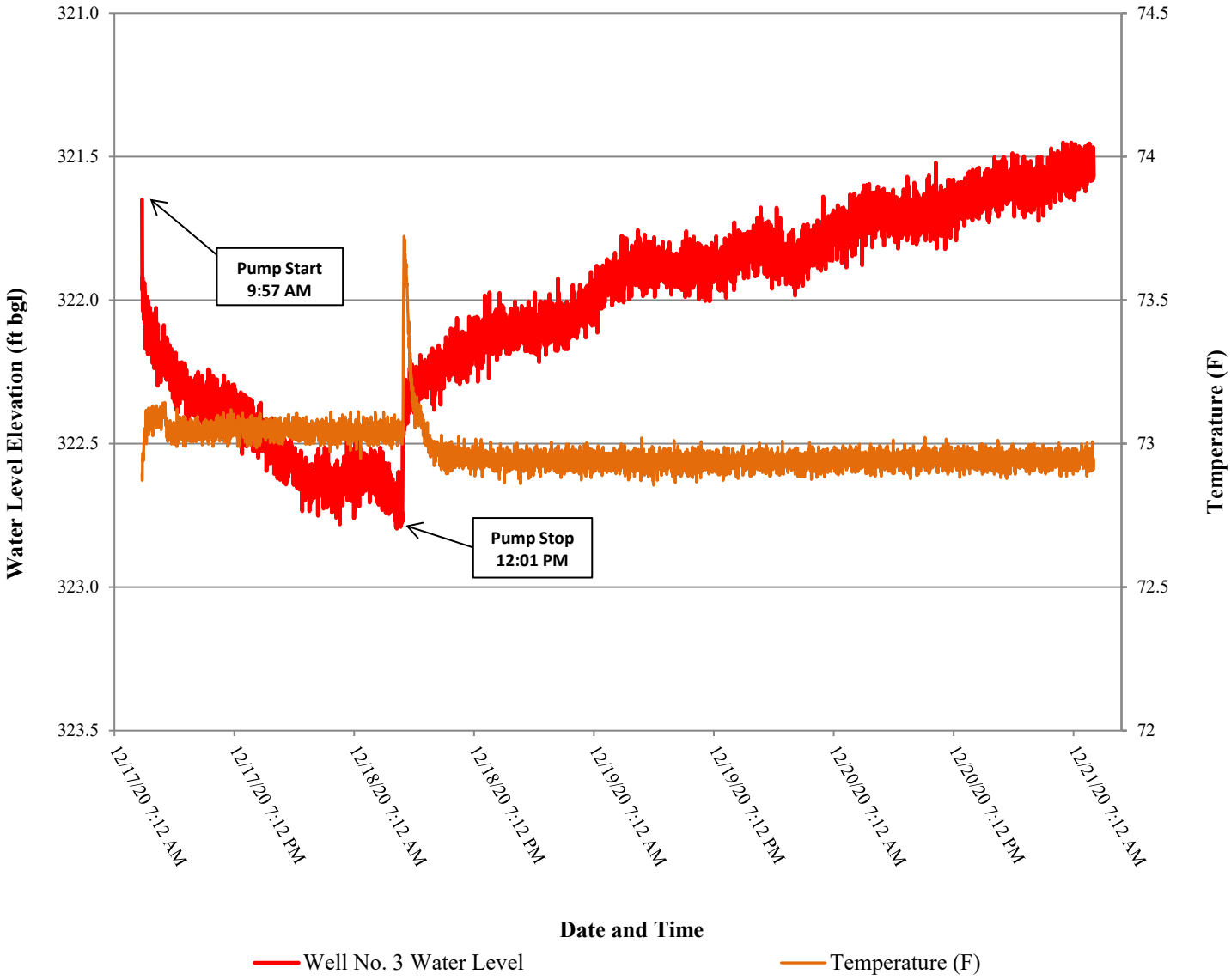


Figure 13: Aquifer test hydrograph of Well No. 3 (December 17, 2020)

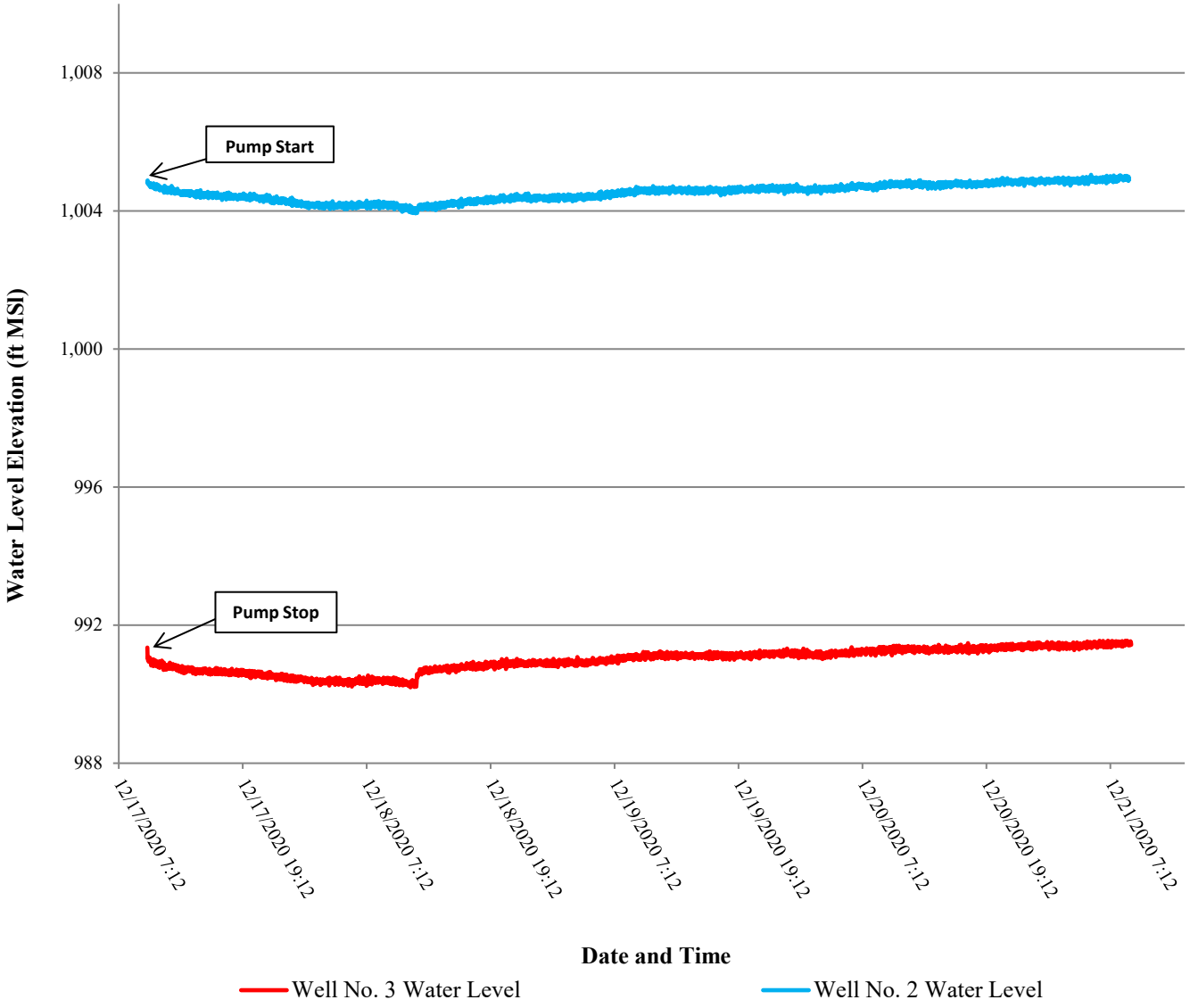


Figure 14: Aquifer test hydrograph of Well No. 3 and Observation Well No. 2 (December 17, 2020)

IV.2.3. Aquifer Test of Well No. 4 (December 21, 2020):

The aquifer test of Well No. 4 was conducted on December 21, 2020 with Well No. 4 as the observation well approximately 483 feet away from the pumping well. The pumping phase started at 10:01 A.M. on December 21, 2020; the water level was monitored for 24.1 hours of pumping and for 22.8 hours of recovery. Prior to the pumping phase of the aquifer test, the static water level in Well No. 4 was measured at 324.7 ft. bgl (991.3 ft. MSL) and 333.4 ft. bgl (992.6 ft. MSL) in Well No. 5.

Well No. 4 was pumped at an average rate of 12 gpm with a final measured pumping rate of 12 gpm with 6.12 feet of drawdown, resulting in a specific capacity of 1.94 gpm/ft. The Cooper-Jacob analysis resulted in a calculated transmissivity of 510.7 ft^2/day, and a hydraulic conductivity of 2.2 ft./day. A maximum drawdown of 1.14 feet was observed in Well No. 5 indicating a hydraulic connection between the two wells. Due to the observed hydraulic connection, we calculated a storativity value for Well No. 5 of 4.09×10^{-4}. Figure 15 provides a hydrograph of the pumping well and temperature over the duration of the aquifer test; Figure 16 provides a hydrograph of both the pumping and observation well over the duration of the test.

After an initial drawdown, the water level slowly declined reaching a stable pumping level near the end of the pumping phase. The water level in the observation well showed a noticeable response directly related to starting and stopping the pump in Well No. 4 (Figure 16). After the pump was shut off, recovery was measured in both wells; the water level in the pumping well recovered 90% in approximately 17 hours. There were no aquifer boundary conditions observed during the testing.

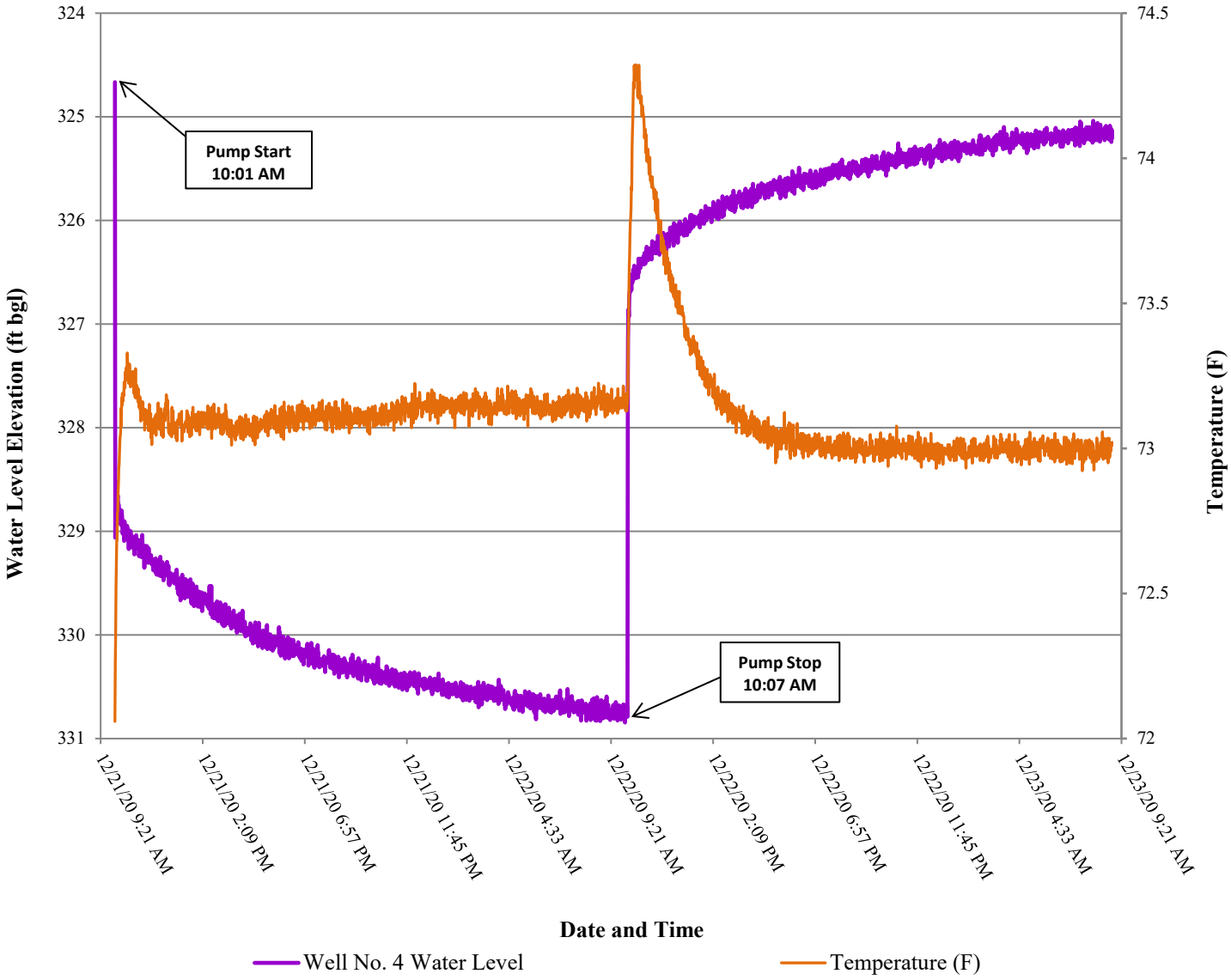


Figure 15: Aquifer test hydrograph of Well No. 4 (December 21, 2020)

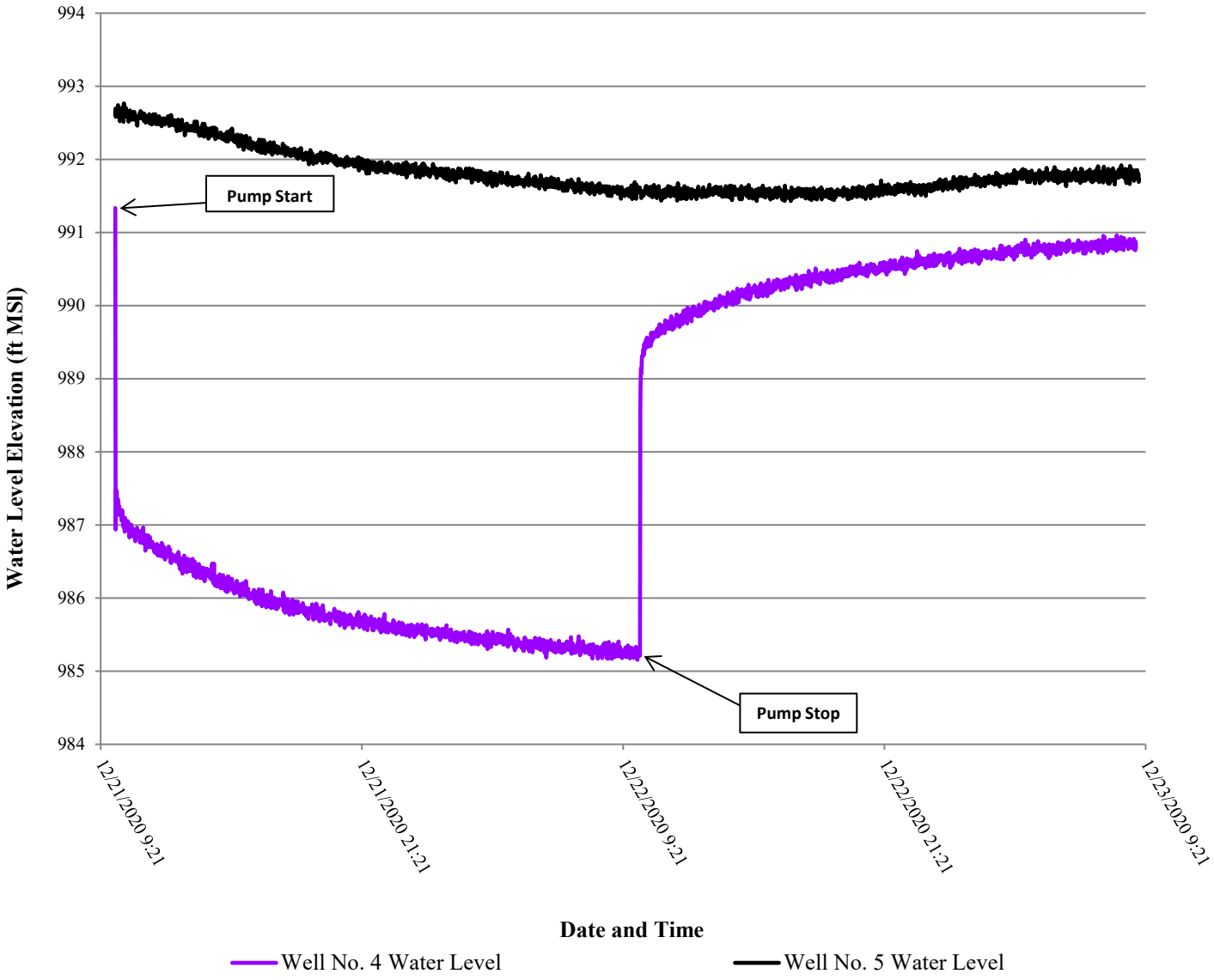


Figure 16: Aquifer test hydrograph of Well No. 4 and Observation Well No. 5 (December 21, 2020)

IV.2.4. Aquifer Test of Well No. 5 (December 23, 2020):

The aquifer test of Well No. 5 was conducted on December 23, 2020 with Well No. 5 as the observation well approximately 619 feet away from the pumping well. The pumping phase started at 9:56 A.M. on December 23, 2020; the water level was monitored for 24.2 hours of pumping and for 95.6 hours of recovery. Prior to the pumping phase of the aquifer test, the static water level in Well No. 5 was measured at 334.4 ft. bgl (991.6 ft. MSL) and 334.4 ft. bgl (988.6 ft. MSL) in Well No. 6.

Well No. 5 was pumped at an average rate of 12 gpm with a final measured pumping rate of 12 gpm with 5.95 feet of drawdown, resulting in a specific capacity of 2.00 gpm/ft. The Cooper-Jacob analysis resulted in a calculated transmissivity of 607.7 ft^2/day, and a hydraulic conductivity of 2.6 ft./day. A maximum drawdown of 2.96 feet was observed in Well No. 6 indicating a hydraulic connection between the two wells. Due to the observed hydraulic connection, we calculated a storativity value for Well No. 6 of 5.73×10^{-5}. Figure 17 provides a hydrograph of the pumping well and temperature over the duration of the aquifer test; Figure 18 provides a hydrograph of both the pumping and observation well over the duration of the test.

After an initial drawdown, the water level slowly declined reaching a stable pumping level near the end of the pumping phase. The water level in the observation well showed a noticeable response directly related to starting and stopping the pump in Well No. 6 (Figure 18). After the pump was shut off, recovery was measured in both wells; the water level in the pumping well recovered 90% in approximately 14 hours. There were no aquifer boundary conditions observed during the testing.

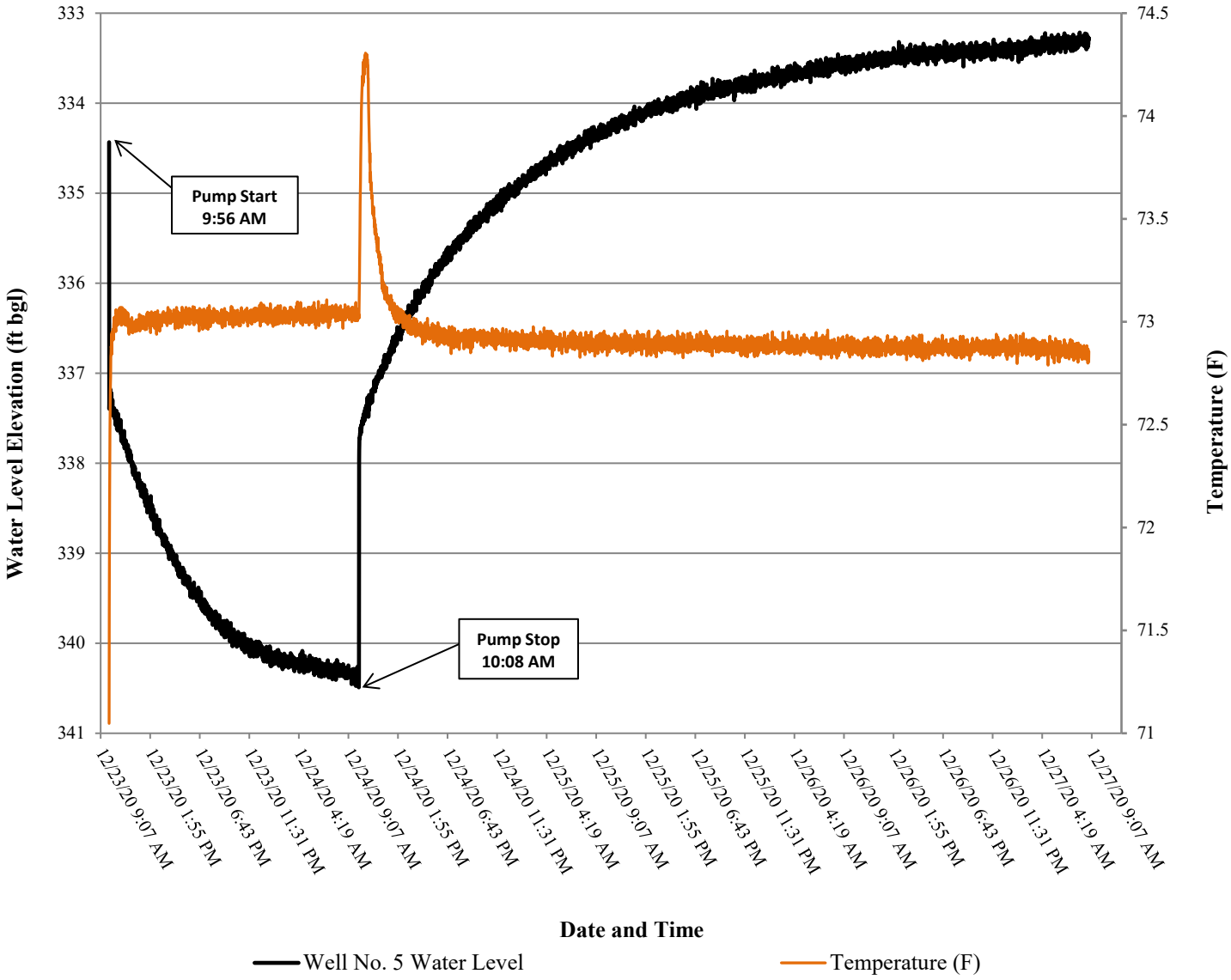


Figure 17: Aquifer test hydrograph of Well No. 5 (December 23, 2020)

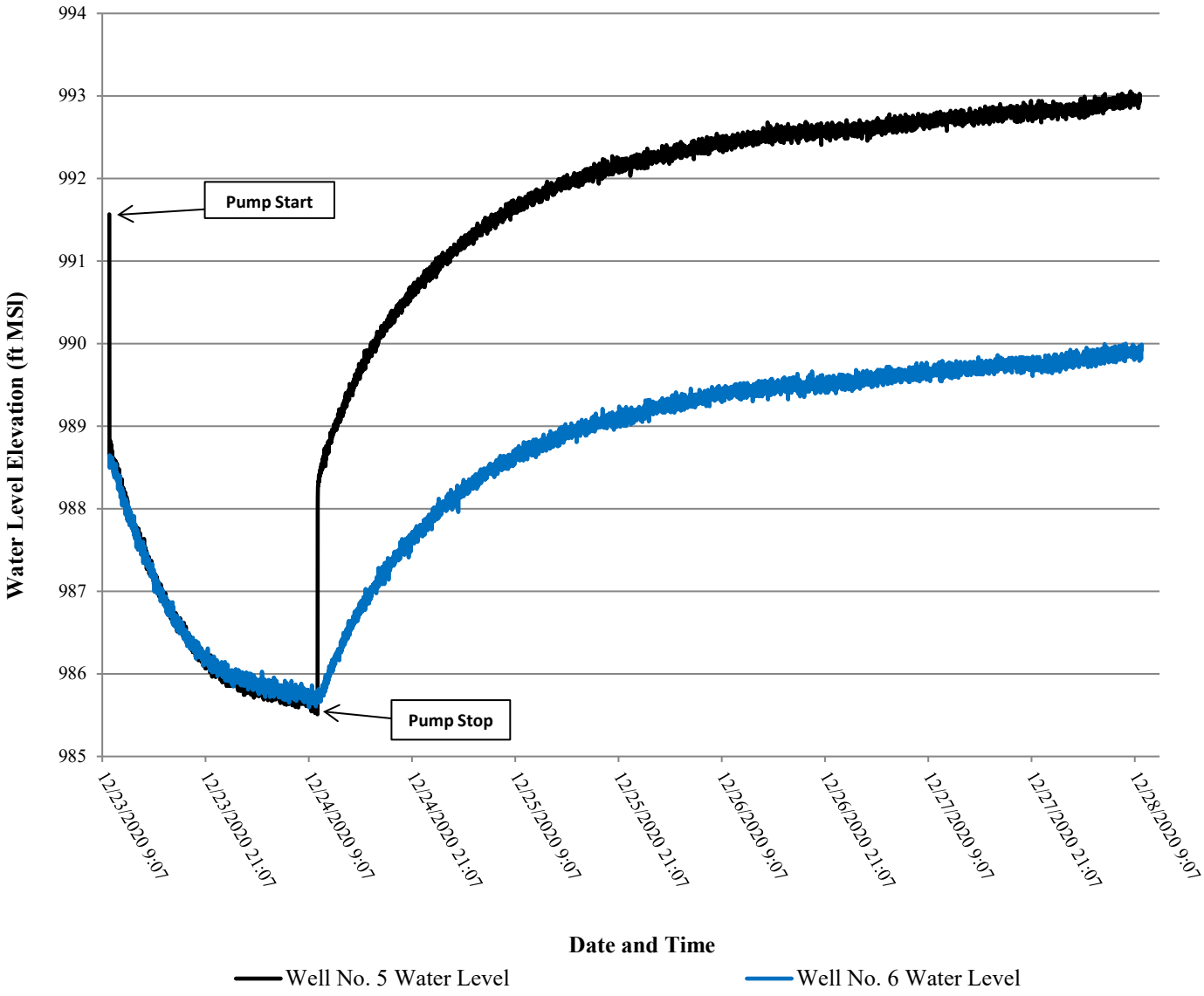


Figure 18: Aquifer test hydrograph of Well No. 5 and Observation Well No. 6 (December 23, 2020)

IV.2.5. Aquifer Test of Well No. 7 (January 6, 2021):

The aquifer test of Well No. 7 was conducted on January 6, 2021 with Well No. 8 as the observation well approximately 566 feet away from the pumping well. The pumping phase started at 9:51 A.M. on January 6, 2021; the water level was monitored for 24.3 hours of pumping and for 23.5 hours of recovery. Prior to the pumping phase of the aquifer test, the static water level in Well No. 7 was measured at 350.5 ft. bgl (981.5 ft. MSL) and 351.5 ft. bgl (983.5 ft. MSL) in Well No. 8.

Well No. 7 was pumped at an average rate of 13 gpm with a final measured pumping rate of 13 gpm with 4.50 feet of drawdown, resulting in a specific capacity of 2.98 gpm/ft. The Cooper-Jacob analysis resulted in a calculated transmissivity of 756.4 ft^2/day, and a hydraulic conductivity of 3.3 ft./day. A maximum drawdown of 2.44 feet was observed in Well No. 8 indicating a hydraulic connection between the two wells. Due to the observed hydraulic connection, we calculated a storativity value for Well No. 8 of 2.54×10^{-5}. Figure 19 provides a hydrograph of the pumping well and temperature over the duration of the aquifer test; Figure 20 provides a hydrograph of both the pumping and observation well over the duration of the test.

After an initial drawdown, the water level slowly declined reaching a stable pumping level near the end of the pumping phase. The water level in the observation well showed a noticeable response directly related to starting and stopping the pump in Well No. 8 (Figure 20). After the pump was shut off, recovery was measured in both wells; the water level in the pumping well recovered 90% in approximately 17 hours. There were no aquifer boundary conditions observed during the testing.

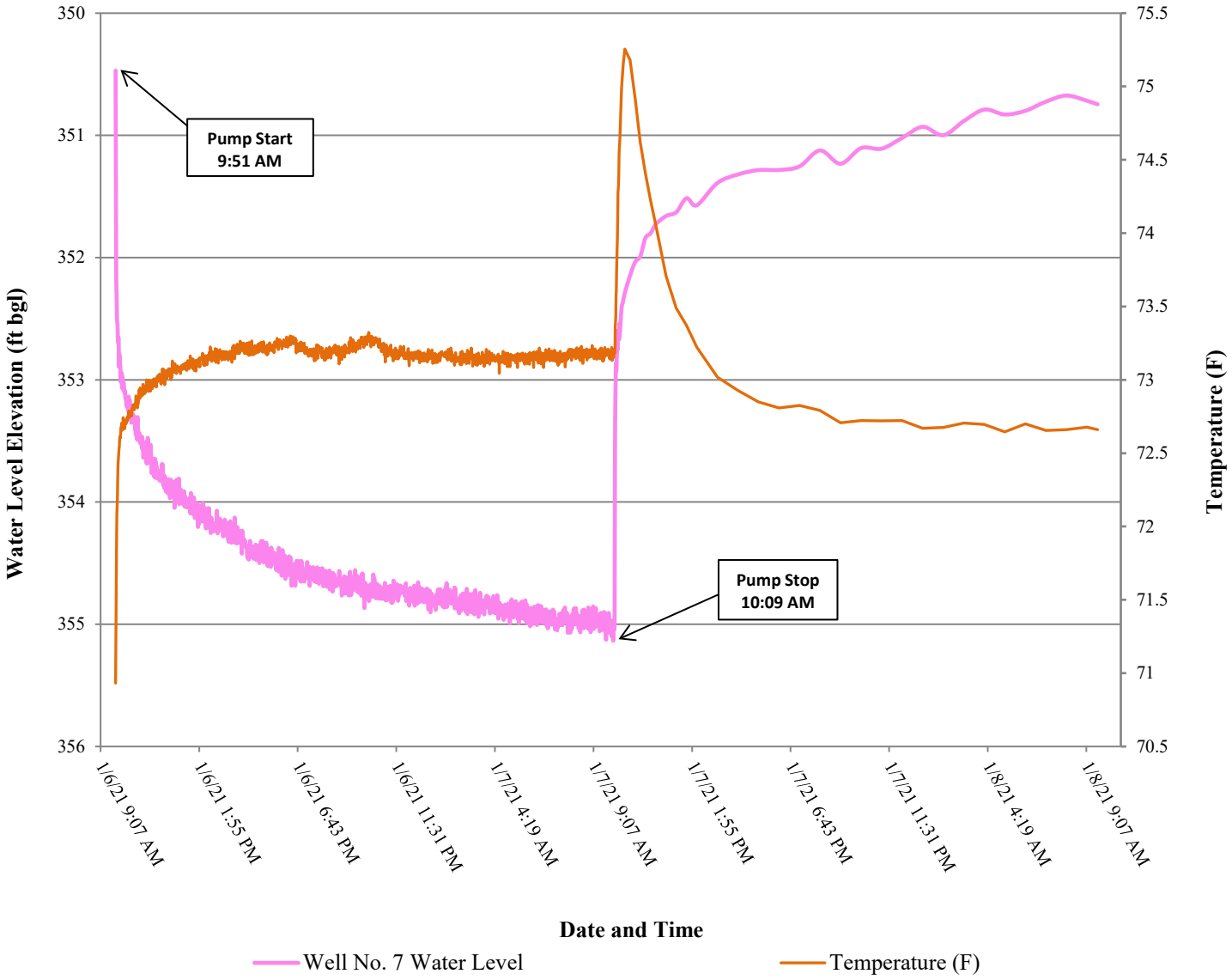


Figure 19: Aquifer test hydrograph of Well No. 7 (January 6, 2021)

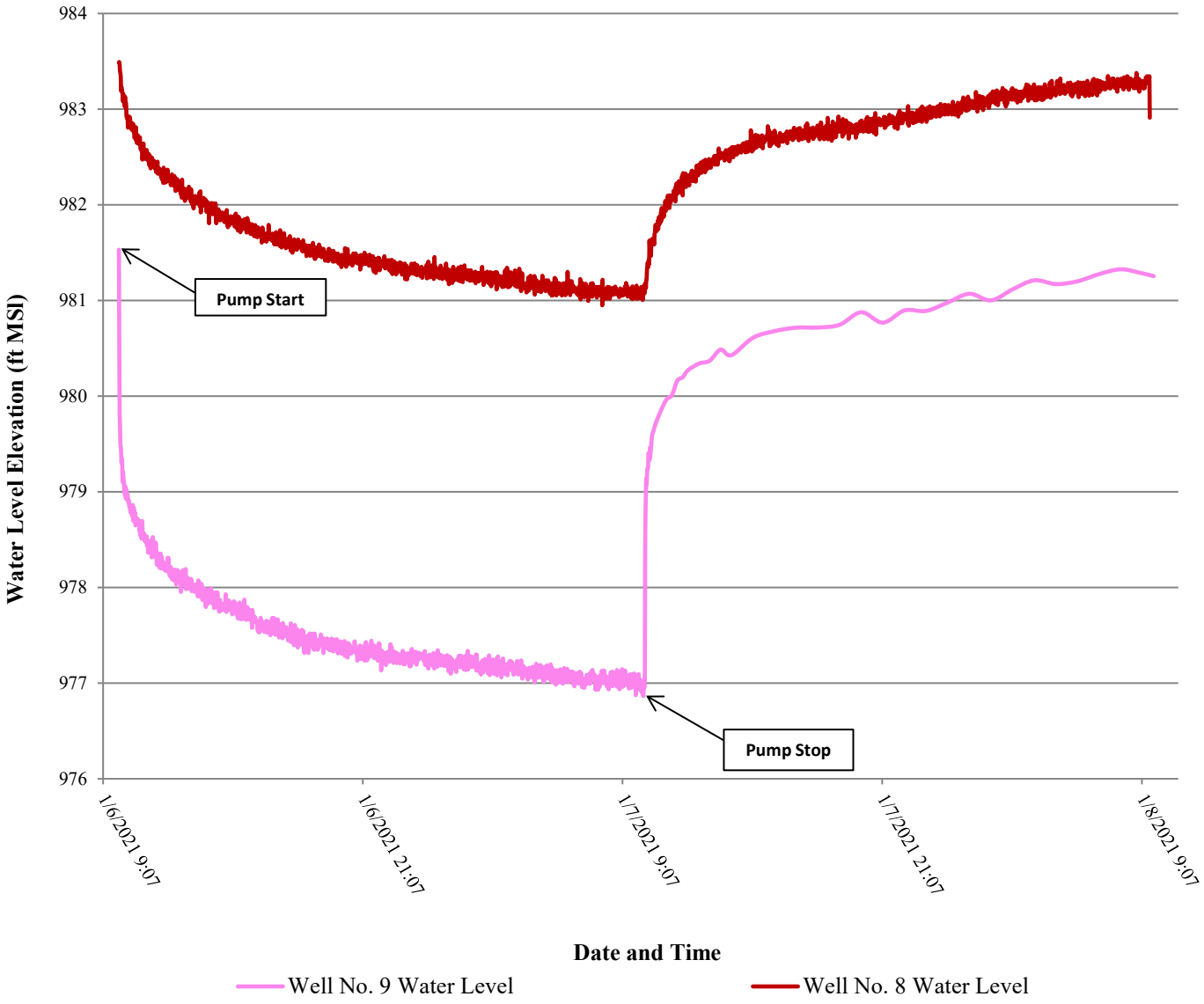


Figure 20: Aquifer test hydrograph of Well No. 7 and Observation Well No. 8 (January 6, 2021)

IV.2.6. Aquifer Test of Well No. 9 (January 4, 2021):

The aquifer test of Well No. 9 was conducted on January 4, 2021 with Well No. 4 as the observation well approximately 1,580 feet away from the pumping well. The pumping phase started at 10:20 A.M. on January 4, 2021; the water level was monitored for 24.0 hours of pumping and for 22.6 hours of recovery. Prior to the pumping phase of the aquifer test, the static water level in Well No. 9 was measured at 350.2 ft. bgl (990.8 ft. MSL) and 324.0 ft. bgl (992.0 ft. MSL) in Well No. 4.

Well No. 9 was pumped at an average rate of 9 gpm with a final measured pumping rate of 9 gpm with 3.40 feet of drawdown, resulting in a specific capacity of 2.65 gpm/ft. The Cooper-Jacob analysis resulted in a calculated transmissivity of 542.8 ft^2/day, and a hydraulic conductivity of 2.4 ft./day. A maximum drawdown of 0.69 feet was observed in Well No. 4 indicating a hydraulic connection between the two wells. Due to the observed hydraulic connection, we calculated a storativity value for Well No. 4 of 6.51×10^{-5}. Figure 21 provides a hydrograph of the pumping well and temperature over the duration of the aquifer test; Figure 22 provides a hydrograph of both the pumping and observation well over the duration of the test.

After an initial drawdown, the pumping rate was reduced to prevent the pumping level from reaching the pump. After the rate was reduced, the water level remained stable while moderately fluctuating for the remainder of the pumping phase. The water level in the observation well showed a noticeable response directly related to starting and stopping the pump in Well No. 4 (Figure 22). After the pump was shut off, recovery was measured in both wells; the water level in the pumping well recovered 90% in approximately 19 hours. There were no aquifer boundary conditions observed during the testing.

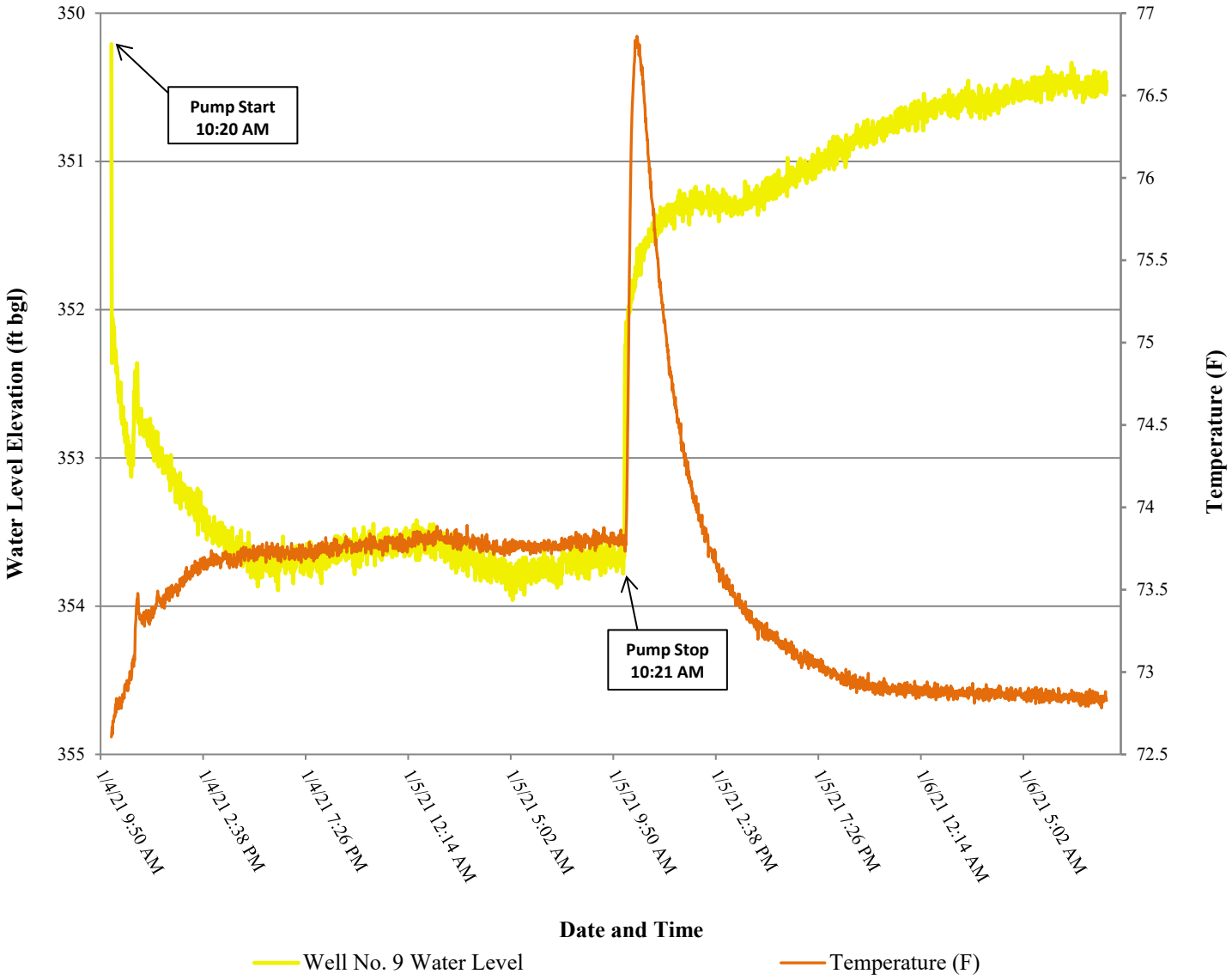


Figure 21: Aquifer test hydrograph of Well No. 9 (January 4, 2021)

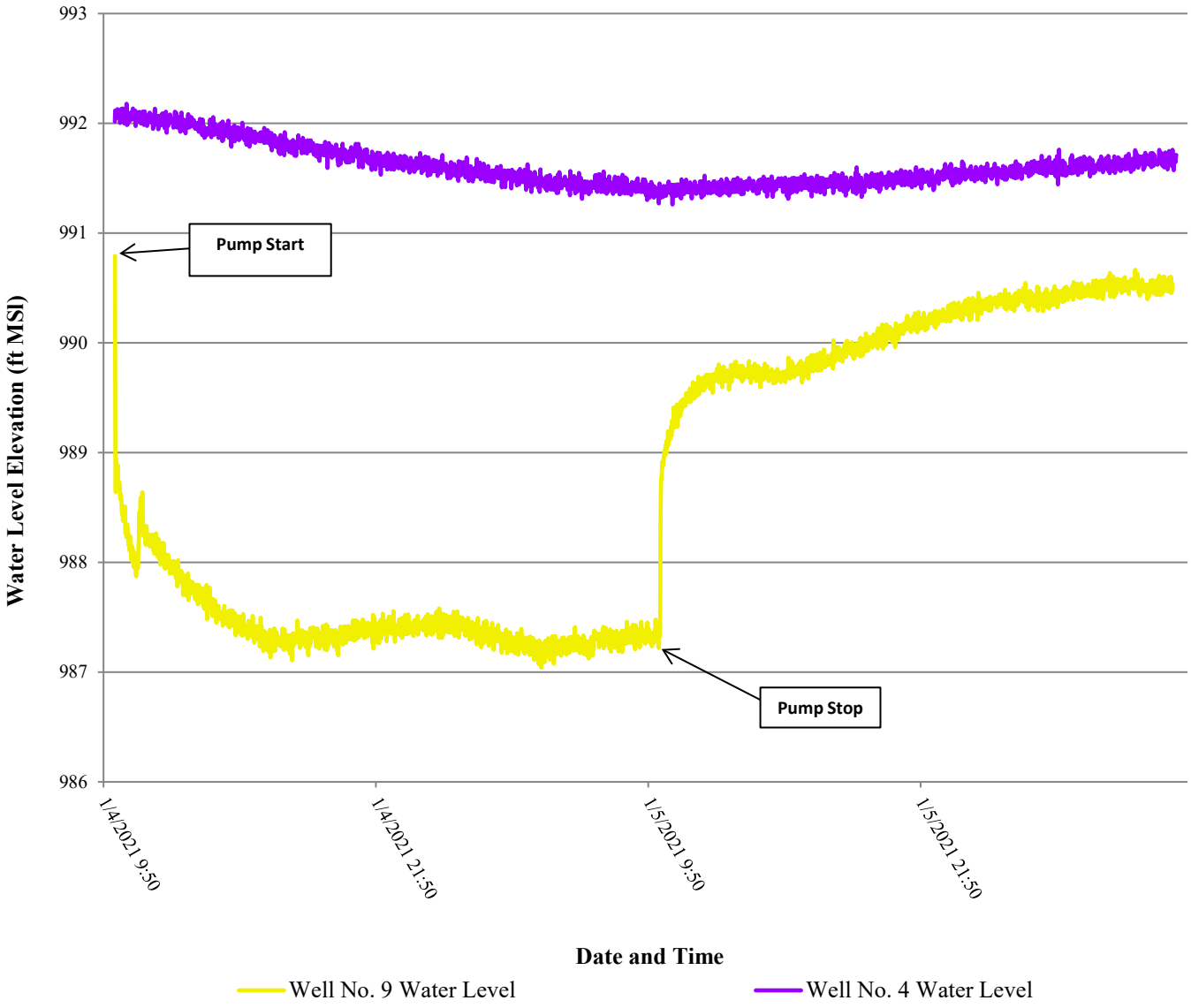


Figure 22: Aquifer test hydrograph of Well No. 9 and Observation Well No. 4 (January 4, 2021)

IV.2.7. Aquifer Test of Existing Well No. 1 (December 28, 2020):

The aquifer test of Ex. Well No. 1 was conducted on December 28, 2020 with Well No. 6 as the observation well approximately 622 feet away from the pumping well. The pumping phase started at 10:18 A.M. on December 28, 2020; the water level was monitored for 24.1 hours of pumping and for 24.0 hours of recovery. Prior to the pumping phase of the aquifer test, the static water level in Ex. Well No. 1 was measured at 329.3 ft. bgl (987.7 ft. MSL) and 333.0 ft. bgl (990.0 ft. MSL) in Well No. 6.

Ex. Well No. 1 was pumped at an average rate of 12 gpm with a final measured pumping rate of 12 gpm with 9.03 feet of drawdown, resulting in a specific capacity of 1.37 gpm/ft. The Cooper-Jacob analysis resulted in a calculated transmissivity of 293.5 ft^2/day, and a hydraulic conductivity of 1.3 ft./day. A maximum drawdown of 3.47 feet was observed in Well No. 6 indicating a hydraulic connection between the two wells. Due to the observed hydraulic connection, we calculated a storativity value for Well No. 6 of 8.91×10^{-6}. Figure 23 provides a hydrograph of the pumping well and temperature over the duration of the aquifer test; Figure 24 provides a hydrograph of both the pumping and observation well over the duration of the test.

After an initial drawdown, the water level slowly declined reaching a stable pumping level near the end of the pumping phase. The water level in the observation well showed a noticeable response directly related to starting and stopping the pump in Well No. 6 (Figure 24). After the pump was shut off, recovery was measured in both wells; the water level in the pumping well recovered 90% in approximately 15 hours. There were no aquifer boundary conditions observed during the testing.

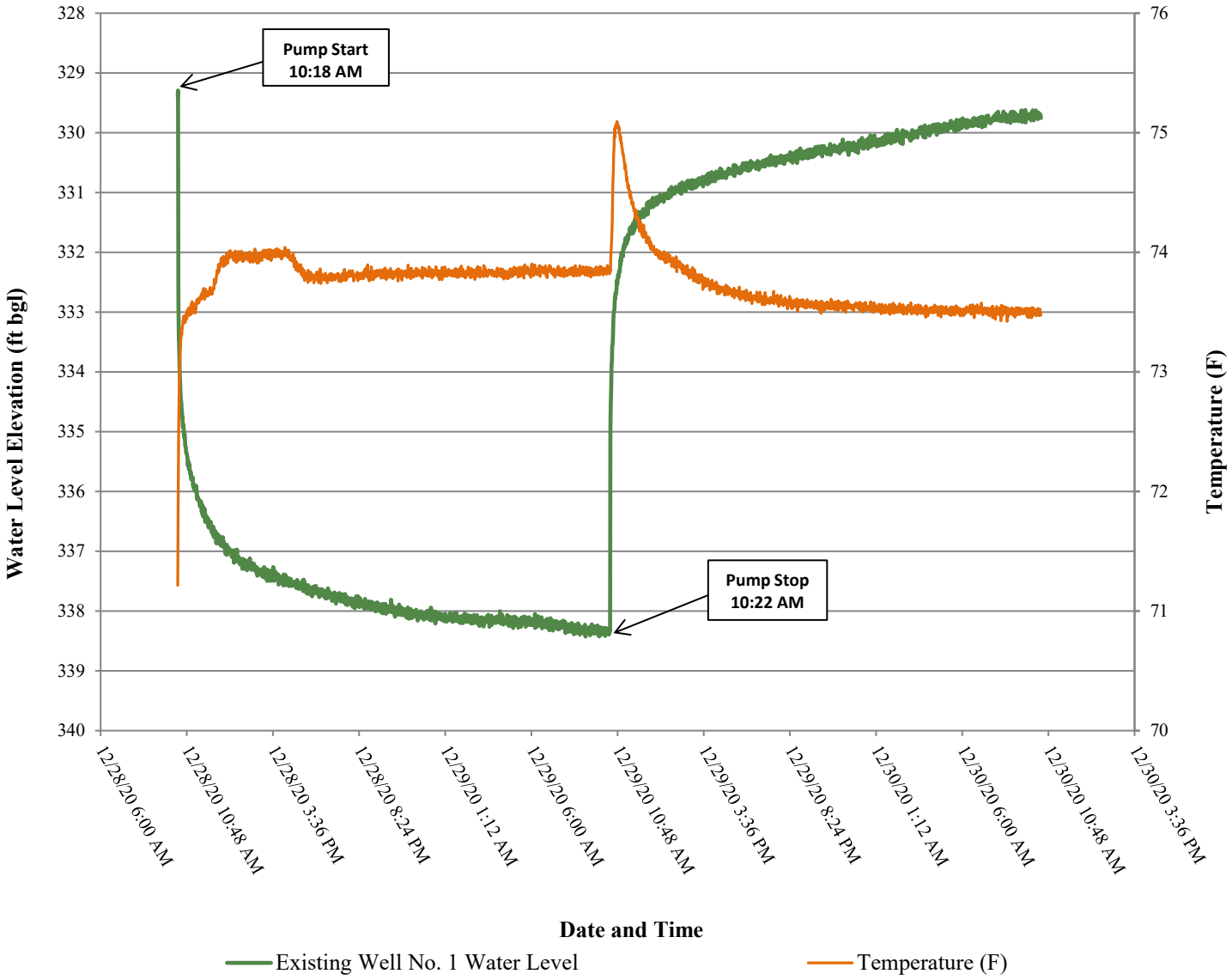


Figure 23: Aquifer test hydrograph of Existing Well No. 1 (December 28, 2020)

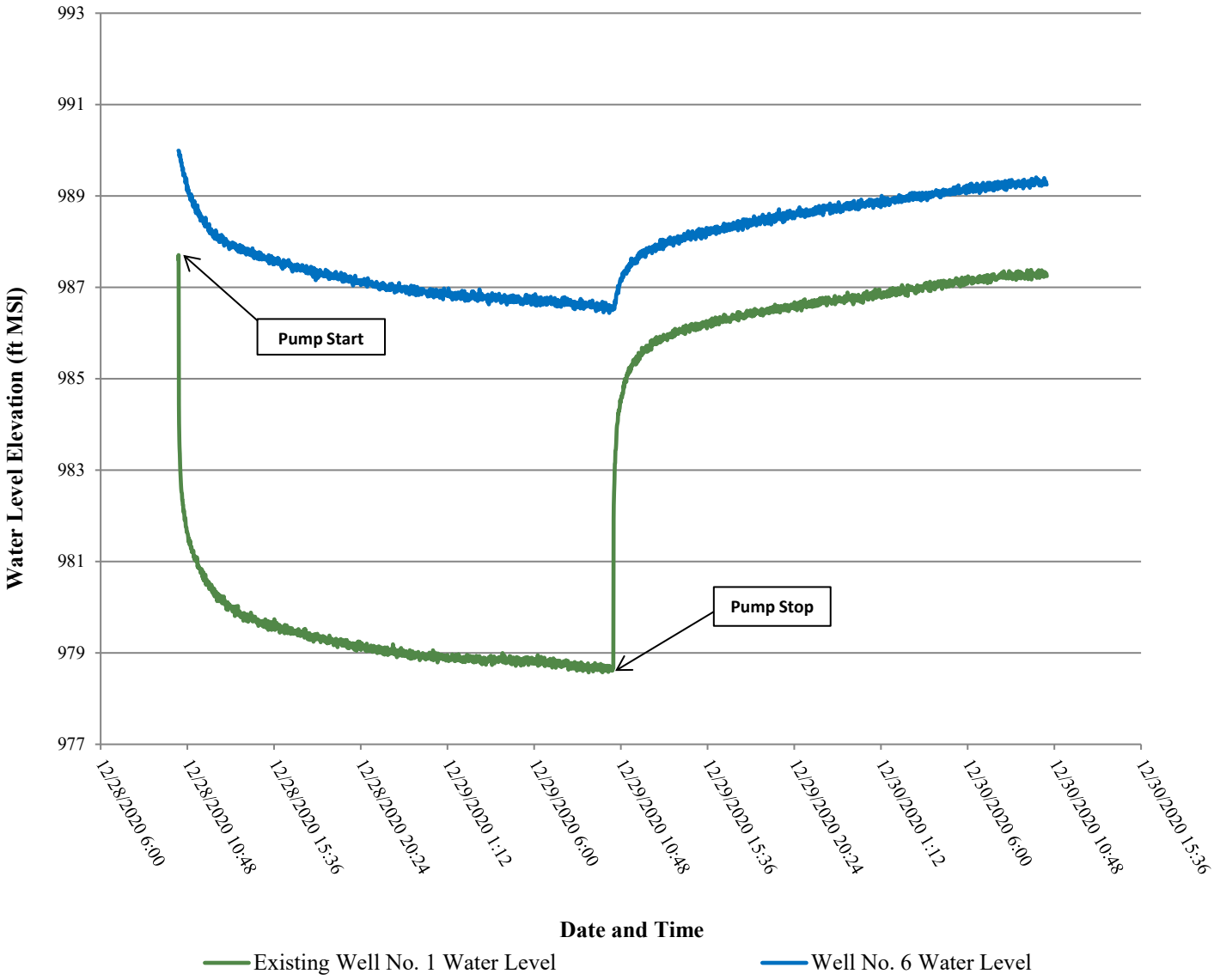


Figure 24: Aquifer test hydrograph of Existing Well No. 1 and Observation Well No. 6 (December 28, 2020)

Table 3: Summary of aquifer test results

Test Date	Well	Average Pump Rate (gpm)	Final Pump Rate (gpm)	Drawdown (ft.)	Specific Capacity (gpm/ft.)	Transmissivity (ft^2/d)	Storativity	Hydraulic Conductivity (ft./d)	Aquifer Thickness (ft.)	Well Efficiency
Dec. 15, 2020	No. 1	12	12	0.85	13.93	3,310.1	-	14.6	226	134%
	No. 2	-	-	0.57	-	1,544.2	$1.99x10^{-4}$	6.8	226	-
Dec. 17, 2020	No. 3	14	12	1.01	11.75	2,771.6	-	12.3	226	133%
	No. 2	-	-	0.87	-	1,393.5	$2.42x10^{-4}$	6.2	226	-
Dec. 21, 2020	No. 4	12	12	6.12	1.94	510.7	-	2.2	231	106%
	No. 5	-	-	1.14	-	421.2	$4.09x10^{-4}$	1.8	231	-
Dec. 23, 2020	No. 5	12	12	5.95	2.00	607.7	-	2.6	231	103%
	No. 6	-	-	2.96	-	155.9	$5.73x10^{-5}$	0.7	231	-
Jan. 6, 2021	No. 7	13	13	4.50	2.98	756.4	-	3.3	228	129%
	No. 8	-	-	2.44	-	399.7	$2.54x10^{-5}$	1.8	228	-
Jan. 4, 2021	No. 9	9	9	3.40	2.65	542.8	-	2.4	225	151%
	No. 4	-	-	0.69	-	477.4	$6.51x10^{-5}$	2.1	231	-
Dec. 28, 2020	Ex. 1	12	12	9.03	1.37	293.5	-	1.3	231	154%
	No. 6	-	-	3.47	-	437.5	$8.91x10^{-6}$	1.9	231	-

Note: ft. = feet; gpm = gallons per minute; d = day, pumping wells are highlighted in green, aquifer thickness for Wells 1, 3, 4, 6 and were valued based upon geophysical logs of nearby wells.

IV.3. Water Quality

A water quality sample was collected from each of the pumping wells at the end of the pumping phase. The samples were collected by Apex Drilling staff in a sealed container and stored on ice in a cooler. The samples were transported after collection to Aqua-Tech Laboratories, Inc. and tested in accordance with Texas Administrative Code 230.9 (Determination of Groundwater Quality). Appendix F provides a copy of the water quality reports.

Table 4 provides the water quality summary of the samples. The results were compared to Texas Commission on Environmental Quality (TCEQ) Maximum Contaminant Levels (MCL) and Secondary Contaminant Levels (SCL). The results show all samples met the TCEQ MCLs. In various combinations, the concentrations of fluoride, iron, sulfate, or TDS surpassed the TCEQ SCLs in each tested well (Table 4). The elevated sulfate and TDS concentrations observed in the wells are not uncommon for the area. Groundwater flowing through gypsum and anhydrite layers found within the aquifer account for the elevated sulfate and TDS. According to TWDB report 174 "Ground-Water Resources of Blanco County, Texas," elevated levels of iron and fluoride are also not uncommon for the area. Concentrations above the SCL standards are not considered health risks but may affect the taste and odor of the water.

Table 4: Summary of the water quality analysis results

Well	Sample Data	Cl	Conductivity (umhos/cm)	F	Fe	NO3	Mn	pH	SO4	Hardness (as CaCO3)	TDS	TC/E. coli
		TCEQ MCLs & SCLs										
		300[2]		4[1] & 2[2]	0.3[2]	10[1]	0.05[2]	≥7[2]	300[2]		1000[2]	Presence
Ex. No. 1	12/28/20	48.0	3.990	1.99	0.300	<0.0200	0.006	7.5	1,630	2,090	3,060	Absent/Present
No. 1	12/16/20	35.0	3.420	2.22	0.095	0.0356	0.00582	7.3	1,590	1,830	2,620	Absent
No. 3	12/16/20	42.4	3.830	2.06	0.117	<0.02	0.00698	7.5	2,060	1,980	2,890	Absent
No. 4	12/21/20	42.2	3.580	2.21	0.249	<0.02	0.00548	7.3	1,810	1,730	2,590	Absent
No. 5	12/28/20	44.0	3.600	2.15	0.340	<0.0200	0.005	7.5	1,830	1,870	2,670	Absent
No. 7	1/04/21	41.9	1.830	2.13	0.393	<0.0200	0.008	7.7	1,660	1,360	2,680	Absent
No. 9	1/05/21	43.6	3.460	2.03	0.046	<0.0200	0.007	7.6	2,010	2,050	2,880	Absent

Note: 1 = TCEQ Maximum Containment Level; 2 = TCEQ Secondary Constituent Level; Concentrations in red are above TCEQ SCLs; All units expressed in mg/L (except pH & E.C.).

IV.4. Groundwater Availability

Based upon the analysis of the aquifer tests, drawdown estimates were made at various distances from the pumping well after 10 years and 30 years. Figures 25 to 38 provide distance-drawdown plots for a single pumping well producing at a rate of 5 gpm for 1.17 hours a day (350 gallons per day) as well as distance-drawdown plots for a single pumping well producing at a rate of 15 gpm for 0.39 hours a day (350 gallons per day) to represent the well owners that may pump at a higher rate for a shorter duration. This represents the total water demand at full build out of the subdivision per housing unit (0.39 acre-feet/year for each housing unit).

Assumptions used in the drawdown calculations and overall groundwater availability for the proposed subdivision include inherent uncertainties such as:

- Future pumpage from the aquifer or from interconnected aquifers from area wells outside of the subdivision or any other factor that cannot be predicted that will affect the storage of water in the aquifer;
- Long-term impacts to the aquifer based on climatic variations; and
- Future impacts to usable groundwater due to unforeseen or unpredictable contamination.

Drawdown estimates were calculated using the Theis equation. The Theis equation employs the following assumptions:

1. The water bearing formation is uniform in character and the hydraulic conductivity is the same in all directions;
2. The formation is uniform in thickness and infinite in areal extent;
3. The formation receives no recharge from any source;
4. The pumped well penetrates, and receives water from, the full thickness of the water bearing formation;
5. The water removed from storage is discharges instantaneously when the head is lowered;
6. The pumping well is 100% efficient;
7. All water removed from the well comes from aquifer storage;
8. Laminar flow exists throughout the well and aquifer; and
9. The water table or potentiometric surface has no slope.

It is important to note that several of the assumptions used to derive the Theis equation are not necessarily appropriate for the Middle Trinity Aquifer. These include assumptions 1, 3, 7 and 8. The Middle Trinity Aquifer is a karst aquifer and is fractured, not uniform or homogenous in character or in its hydrogeologic properties (transmissivity and storativity). In addition, the Theis assumptions that (i) the formation receives no recharge from any source and (ii) that all water removed from the well comes from aquifer storage leads to inaccuracies in estimating drawdown. Driscoll (1986) states, "The assumption that an aquifer receives no recharge during the pumping period is one of the six fundamental conditions upon which the non-equilibrium formulas (Theis) are based. Therefore, all water discharged from a well is assumed to be taken from storage within the aquifer. It is known, however that most formations receive recharge. Hydrographs from long-term observation wells monitored by the US Geological Survey, various

state agencies, and similar data-gathering agencies in other parts of the world show that most water-bearing formations receive continual or intermittent recharge."

Furthermore, contrary to the Theis assumptions, Konikow and Leake (2014) note that with increased pumping time, (i) the fraction of pumpage derived from storage tends to decrease, and (ii) the fraction derived from capture (recharge) increases. Eventually a new equilibrium will be achieved when no more water is derived from storage and heads, or water levels, in the aquifer stabilize. This result is achieved when the initial cone of depression formed by discharge reaches a new source of water, typically the recharge zone of the aquifer. The actual response time for an aquifer system to reach a new equilibrium is a function of the dimensions, hydraulic properties, and boundary conditions for each specific aquifer. For example, the response time will decrease as the hydraulic diffusivity of the aquifer increases (Theis 1940; Barlow and Leake 2012). The response time can range from days to millennia (Bredehoeft and Durbin 2009; Walton 2011).

Since the Theis equation assumes (i) that all water is derived from storage and (ii) that the aquifer receives no recharge, the Theis equation overestimates drawdown within a well that is located in an aquifer that receives recharge rapidly. For this reason, using the Theis equation to calculate drawdown over periods of time greater than when water from capture exceeds water from storage leads to an exaggerated estimate of drawdown.

Table 5 and Table 6 provides a summary of the results from the distance-drawdown calculations. Estimates of drawdown are based on the following assumptions:

- Total daily water demand (entire subdivision) = 42.73 acre-feet/year
- Total daily water demand (per housing unit) = 0.39 acre-feet/year = 350 gpd;
- The individual well will first be pumped at 5 gpm for 1.17 hours per day for Table 5 and again at 15 gpm for 0.39 hours per day for Table 6; and
- Transmissivity values calculated from each respective pumping well were used in the drawdown estimates; and
- The storativity value calculated from each respective aquifer test was used in the drawdown estimates.

The edge of the cone of depression was estimated by taking the distance from the pumped well where the drawdown flattened out or was minimal.

IV.4.1. 5 gpm Production

Based upon the average drawdown calculated from distance-drawdown projections, the drawdown after 10 years of production at 5 gpm and a well spacing of 100 feet results in 0.64 feet of well interference. At a spacing of 250 feet the well interference reduces to 0.43 feet (drawdown) and at a spacing of 500 feet the well interference goes to 0.28 feet (drawdown).

The drawdown after 30 years of production at 5 gpm and a well spacing of 100 feet results in 0.64 feet of well interference. At a spacing of 250 feet the well interference reduces to 0.43 feet (drawdown) and at a spacing of 500 feet the well interference goes to 0.29 feet (drawdown).

Table 5: Summary of distance-drawdown calculations (5 gpm)

	Drawdown at Pumped Well After 10-Years of Pumping	Drawdown at Pumped Well After 30-Years of Pumping	Drawdown at Nearest Property Boundary After 10-Years of Pumping		Drawdown at Nearest Property Boundary After 30-Years of Pumping		Dist. to Outer Edges of Cone of Depression - 10 years	Dist. to Outer Edges of Cone of Depression - 30 years
Well	**(ft)**	**(ft)**	**Property Boundary Distance (ft)**	**Drawdown (ft)**	**Property Boundary Distance (ft)**	**Drawdown (ft)**	**(feet)**	**(feet)**
No. 1	0.41	0.41	380	0.09	380	0.09	100	100
No. 3	0.04	0.04	1,035	0.03	1,035	0.03	100	100
No. 4	2.27	2.28	466	0.48	466	0.49	100	100
No. 5	2.18	2.19	411	0.44	411	0.45	100	100
No. 7	1.85	1.86	1,304	0.19	1,304	0.20	100	100
No. 9	2.41	2.41	106	0.71	106	0.72	100	100
Ex. No. 1	4.81	4.82	1,193	0.51	1,193	0.53	100	100

IV.4.2. 15 gpm Production

Based upon the average drawdown calculated from distance-drawdown projections, the drawdown after 10 years of production at 15 gpm and a well spacing of 100 feet results in 1.41 feet of well interference. At a spacing of 250 feet the well interference reduces to 0.80 feet (drawdown) and at a spacing of 500 feet the well interference goes to 0.43 feet (drawdown).

The drawdown after 30 years of production at 15 gpm and a well spacing of 100 feet results in 1.41 feet of well interference. At a spacing of 250 feet the well interference reduces to 0.81 feet (drawdown) and at a spacing of 500 feet the well interference goes to 0.43 feet (drawdown).

Table 6: Summary of distance-drawdown calculations (15 gpm)

	Drawdown at Pumped Well After 10-Years of Pumping	Drawdown at Pumped Well After 30-Years of Pumping	Drawdown at Nearest Property Boundary After 10-Years of Pumping		Drawdown at Nearest Property Boundary After 30-Years of Pumping		Dist. to Outer Edges of Cone of Depression - 10 years	Dist. to Outer Edges of Cone of Depression - 30 years
Well	**(ft)**	**(ft)**	**Property Boundary Distance (ft)**	**Drawdown (ft)**	**Property Boundary Distance (ft)**	**Drawdown (ft)**	**(feet)**	**(feet)**
No. 1	1.13	1.13	380	1.18	380	1.18	100	100
No. 3	1.32	1.32	1,035	0.03	1,035	0.03	100	100
No. 4	6.16	6.17	466	0.23	466	0.24	100	100
No. 5	5.99	6.00	411	0.80	411	0.80	100	100
No. 7	5.13	5.13	1,304	0.22	1,304	0.23	100	100
No. 9	6.60	6.61	106	1.54	106	1.55	100	100
Ex. No. 1	13.29	13.30	1,193	0.62	1,193	0.64	100	100

IV.4.3. Summary of Distance Drawdown and Well Spacing

We recommend that the Legacy Hills Subdivision wells be spaced a minimum distance of 100 feet for wells pumped at rates up to 15 gpm. If possible, we recommend landowners spacing their wells as far as possible to minimize well interference. Some well interference may be more pronounced in areas of the subdivision where the aquifer units are more strongly connected; conversely, well interference may not occur in some areas where the aquifer is either disconnected or where there is high permeability.

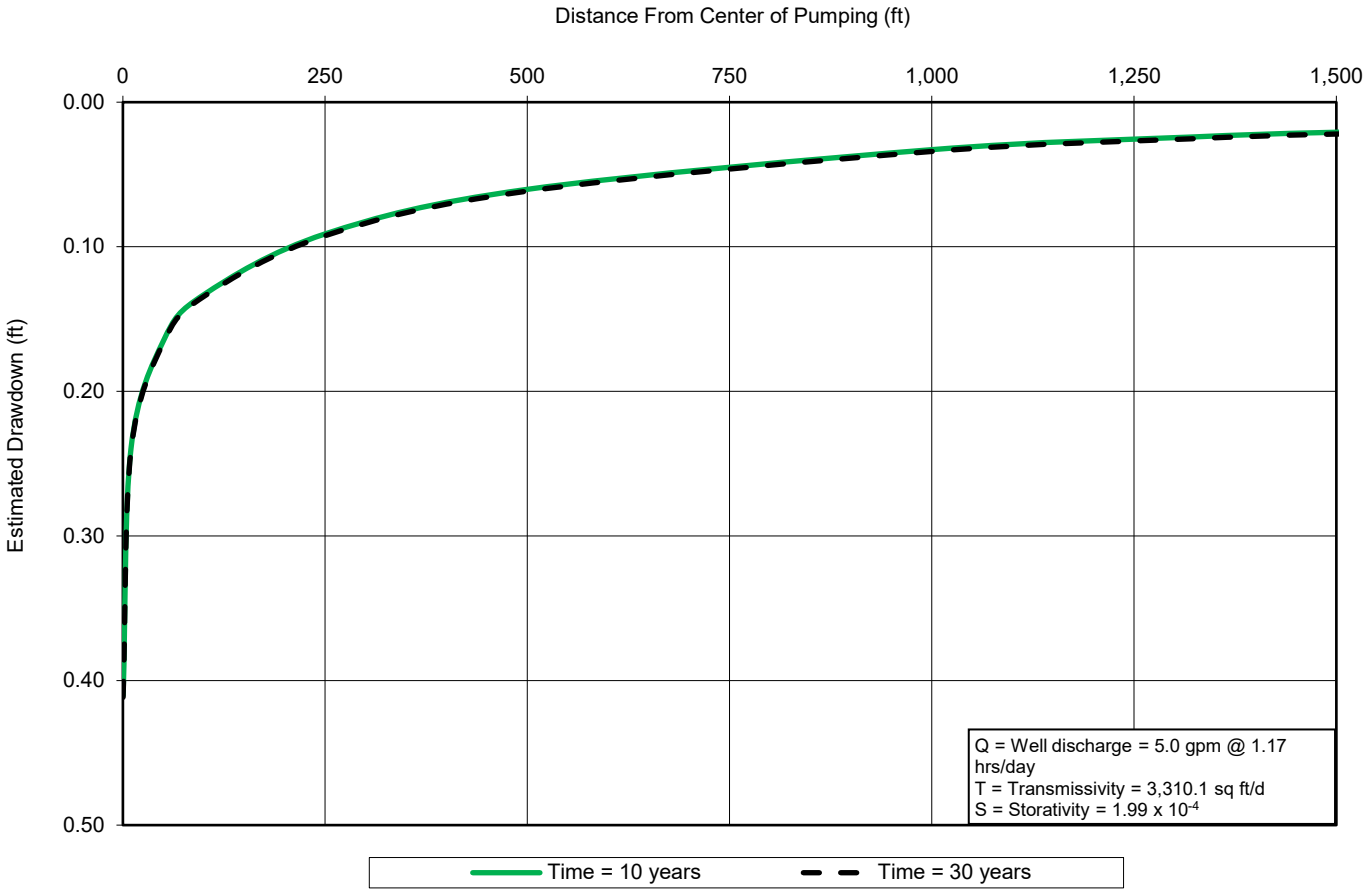


Figure 25: Distance drawdown plot for Well No. 1 (5 gpm)

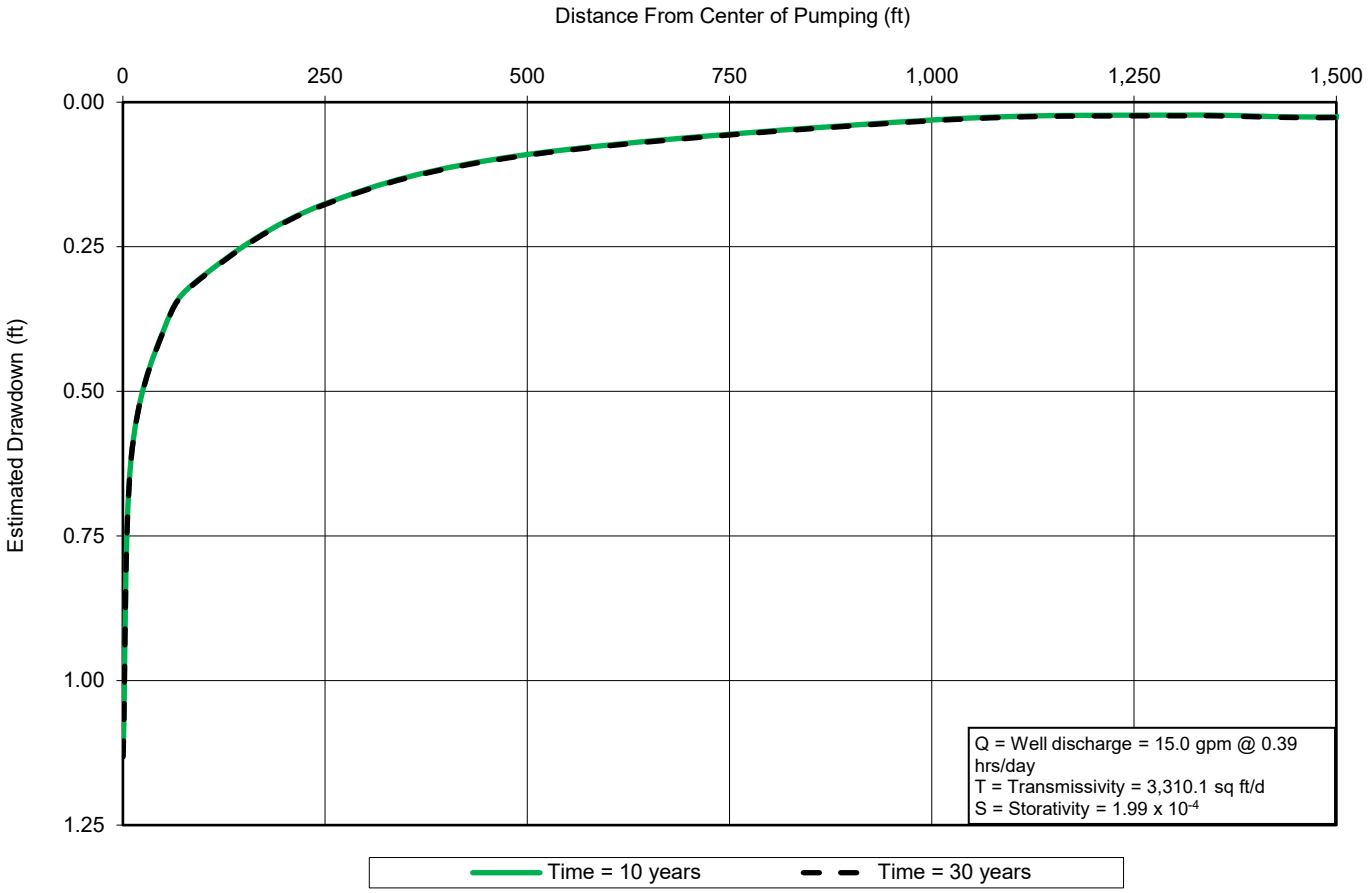


Figure 26: Distance drawdown plot for Well No. 1 (15 gpm)

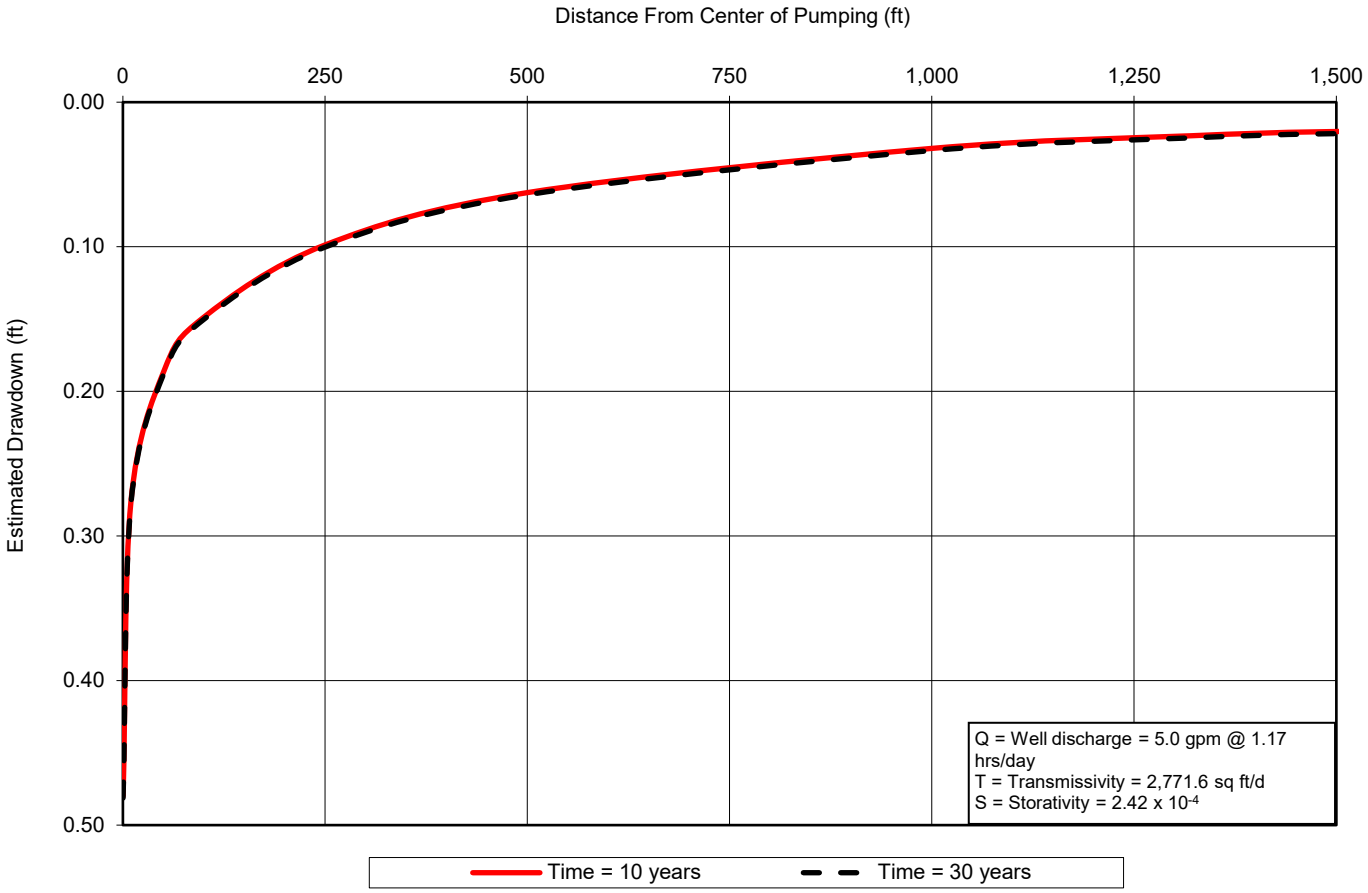


Figure 27: Distance drawdown plot for Well No. 3 (5 gpm)

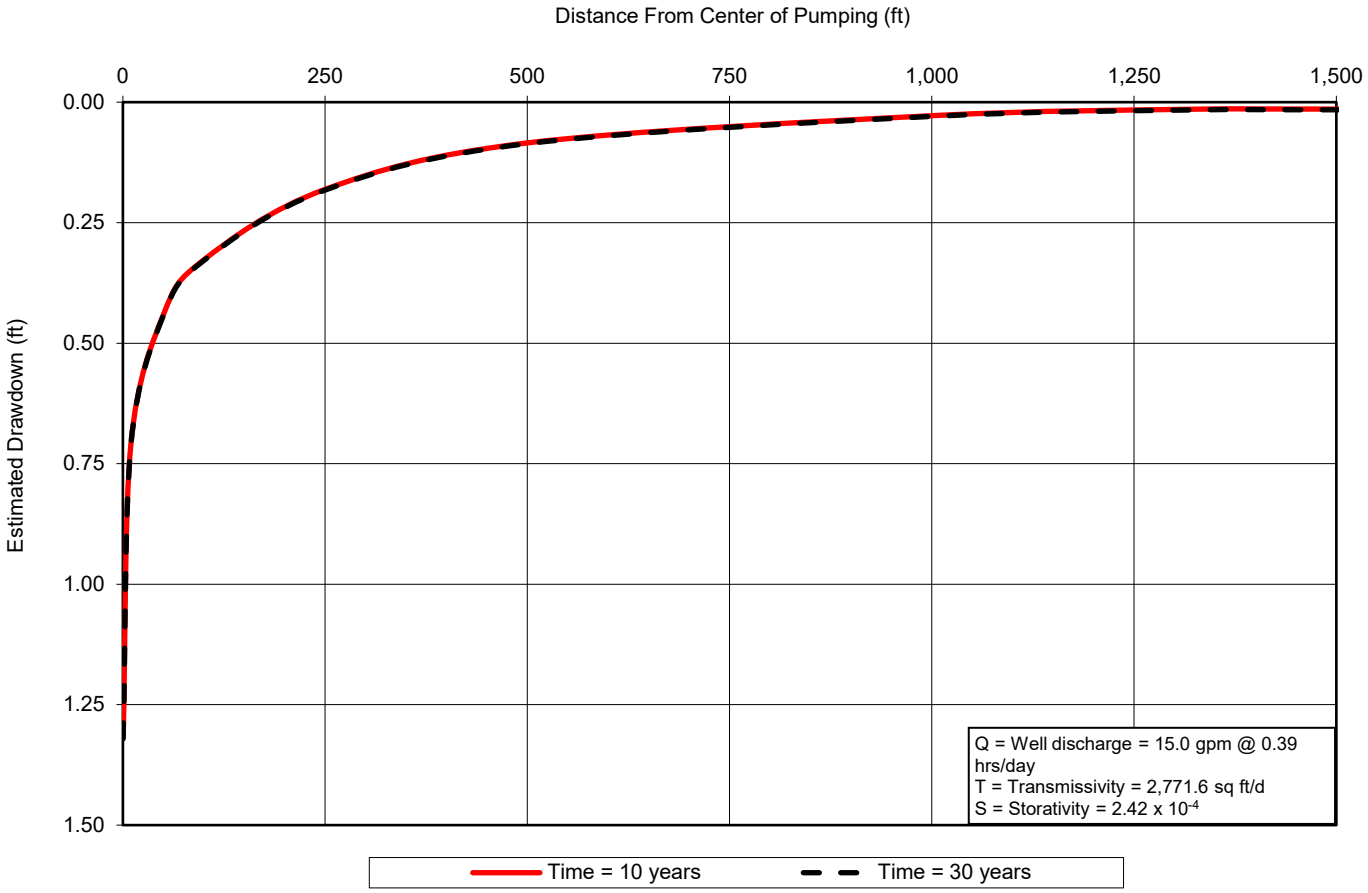


Figure 28: Distance drawdown plot for Well No. 3 (15 gpm)

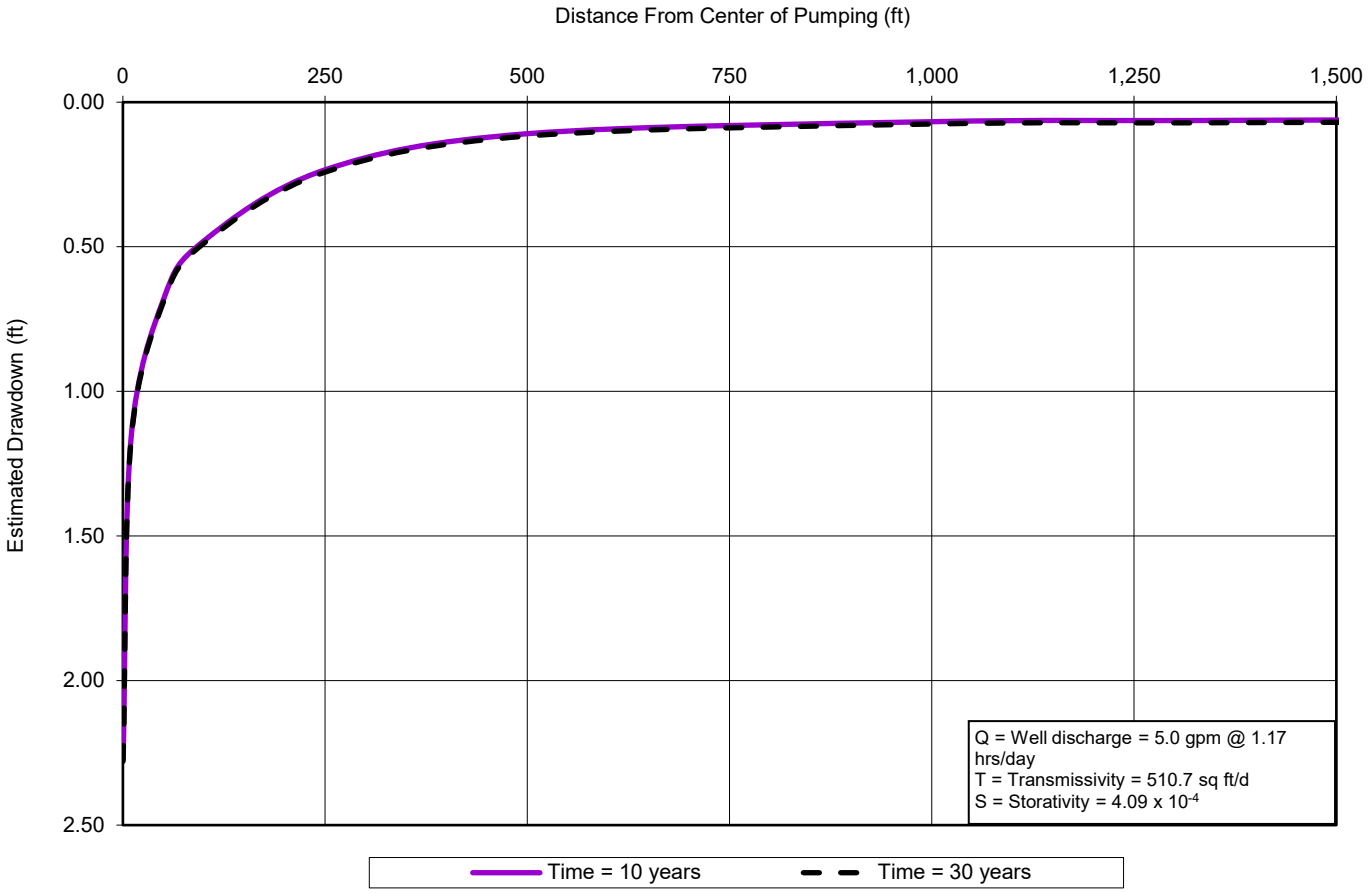


Figure 29: Distance drawdown plot for Well No. 4 (5 gpm)

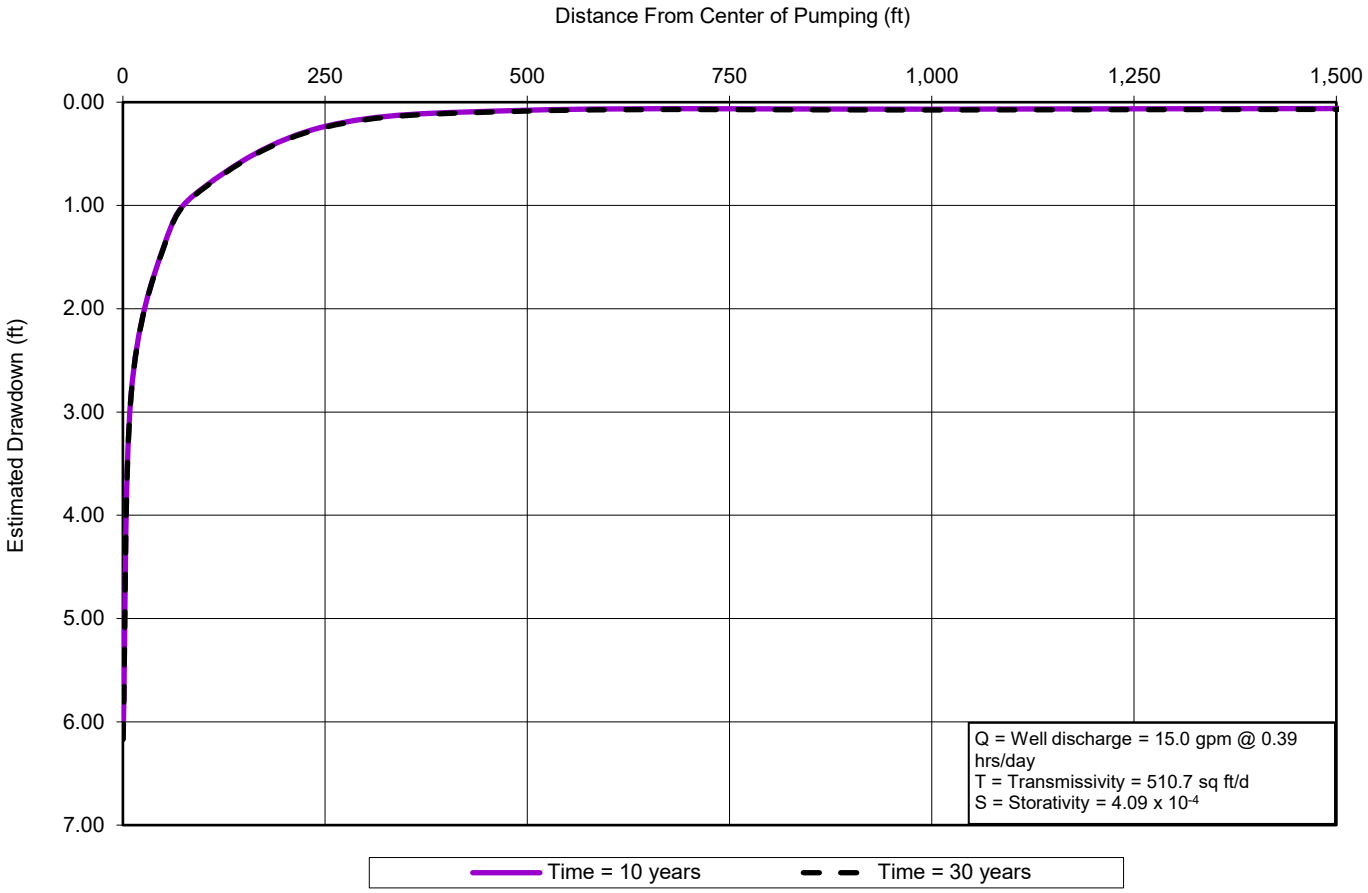


Figure 30: Distance drawdown plot for Well No. 4 (15 gpm)

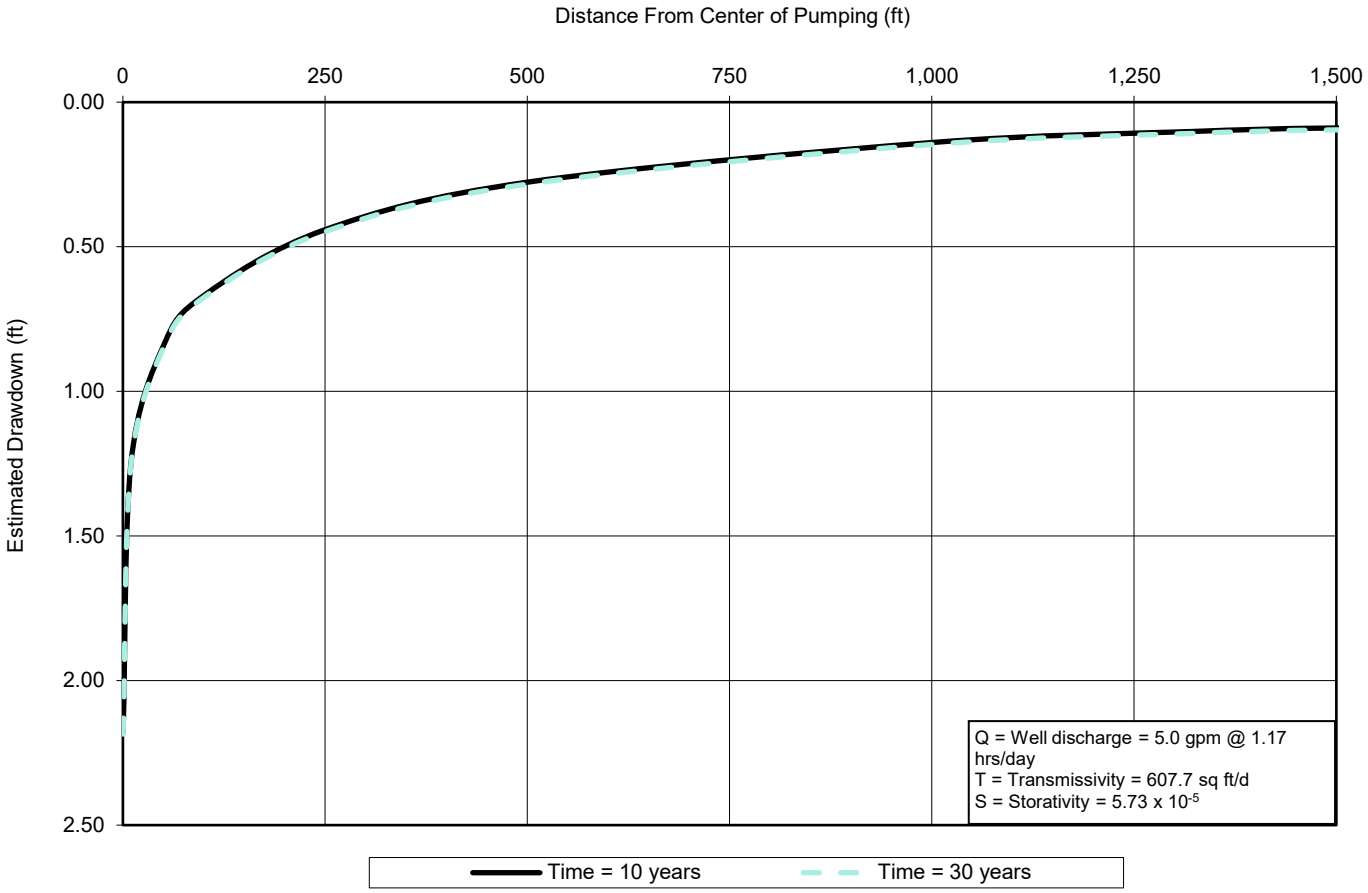


Figure 31: Distance drawdown plot for Well No. 5 (5 gpm)

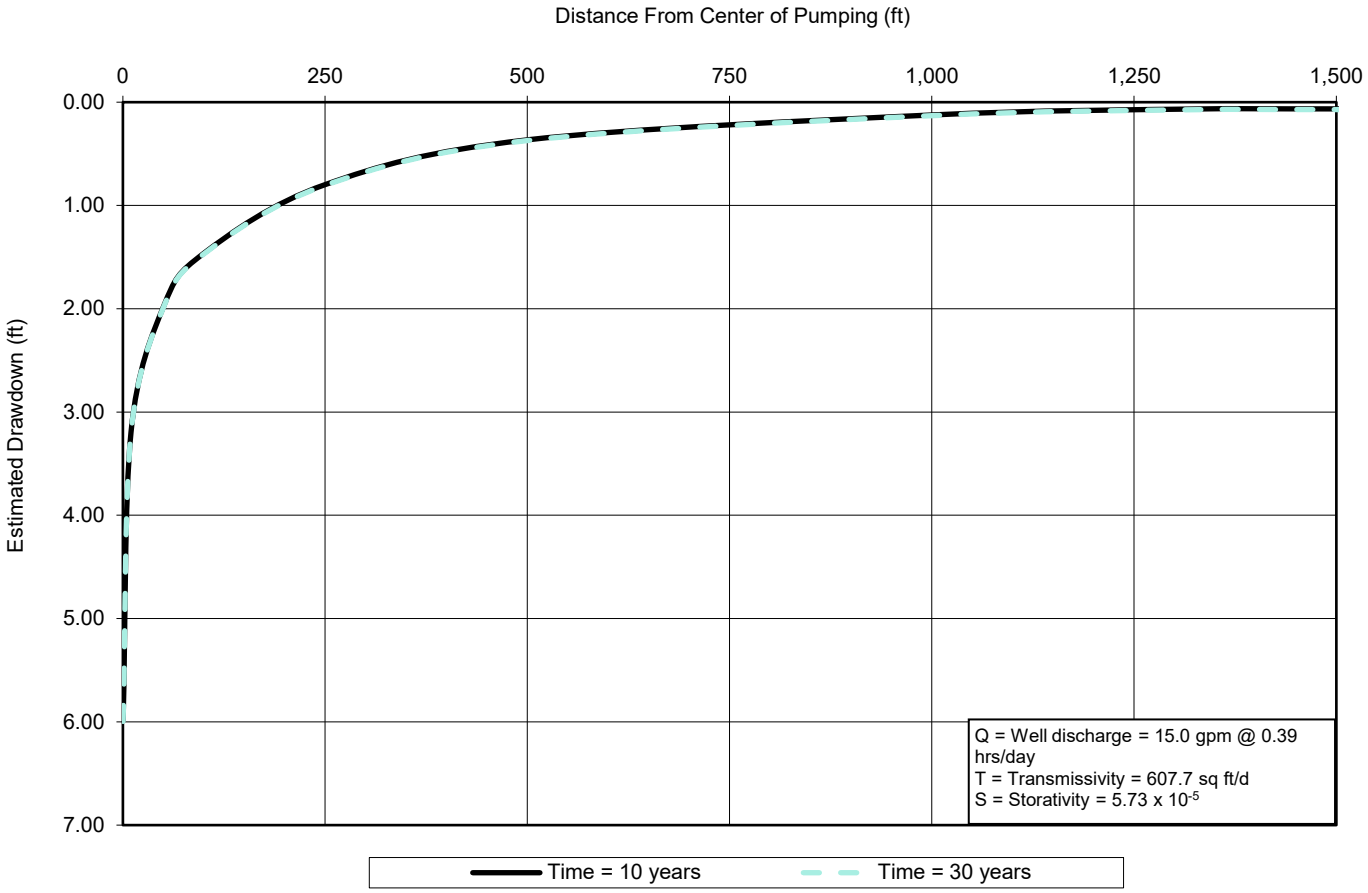


Figure 32: Distance drawdown plot for Well No. 5 (15 gpm)

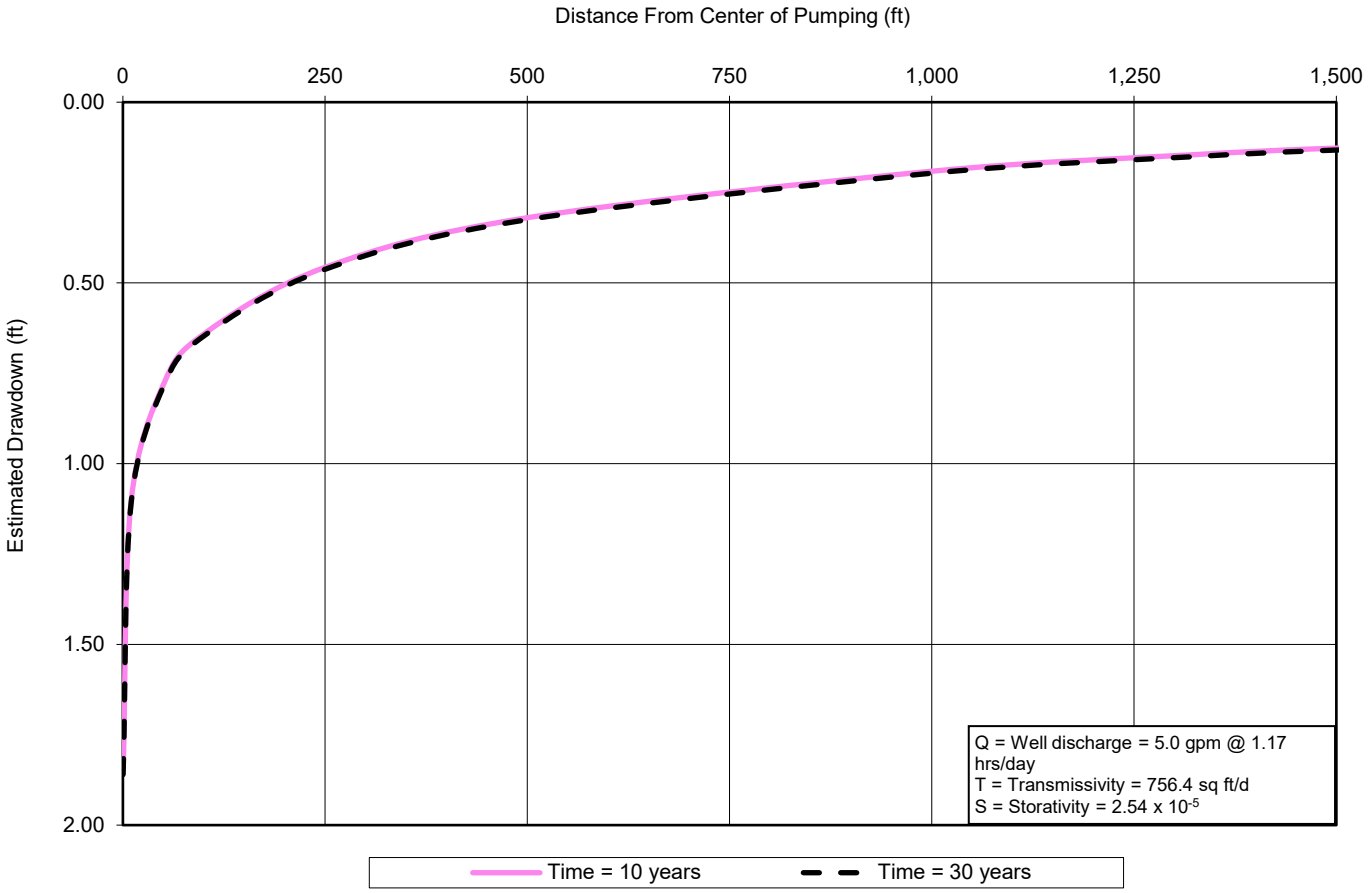


Figure 33: Distance drawdown plot for Well No. 7 (5 gpm)

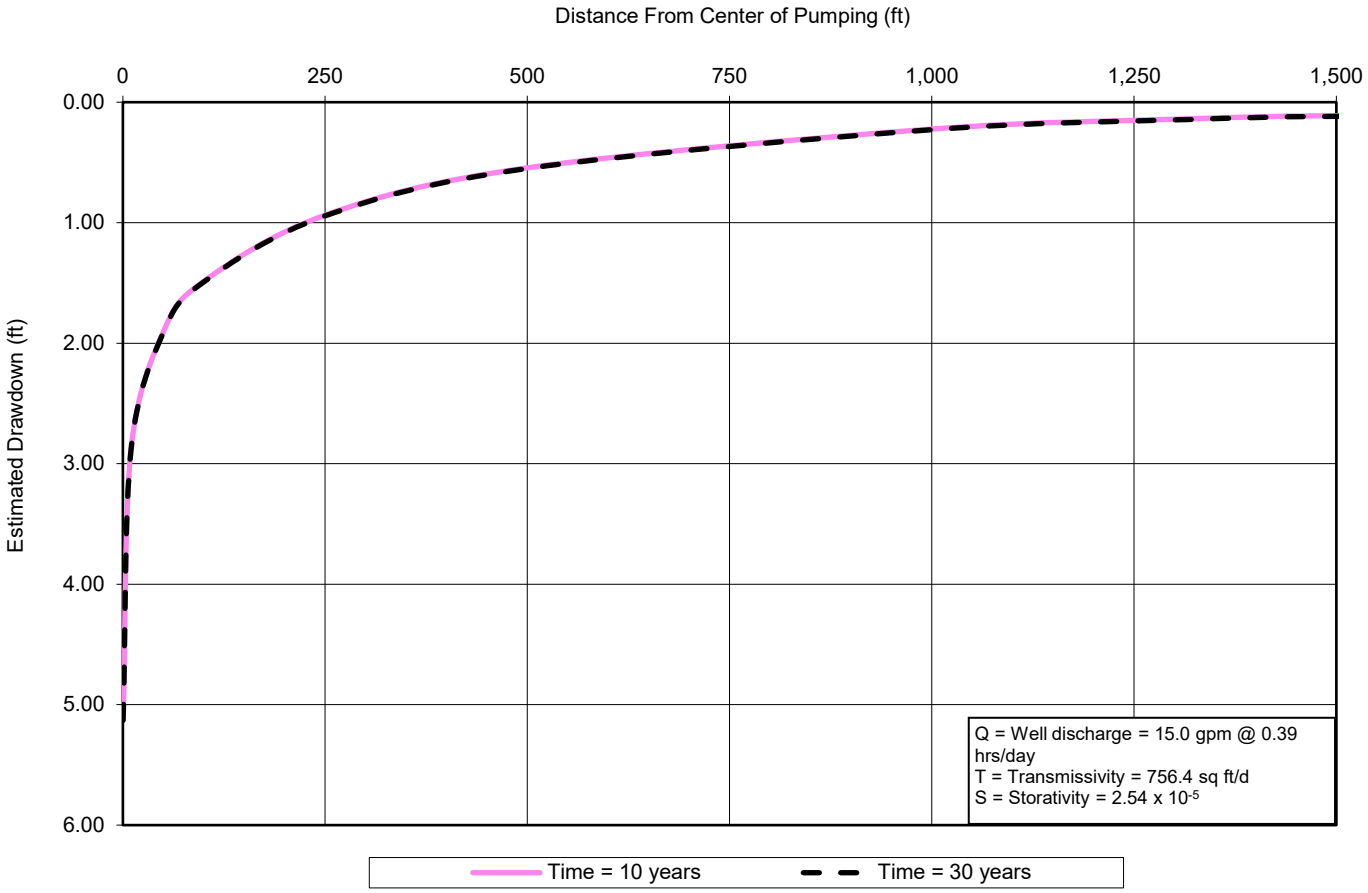


Figure 34: Distance drawdown plot for Well No. 7 (15 gpm)

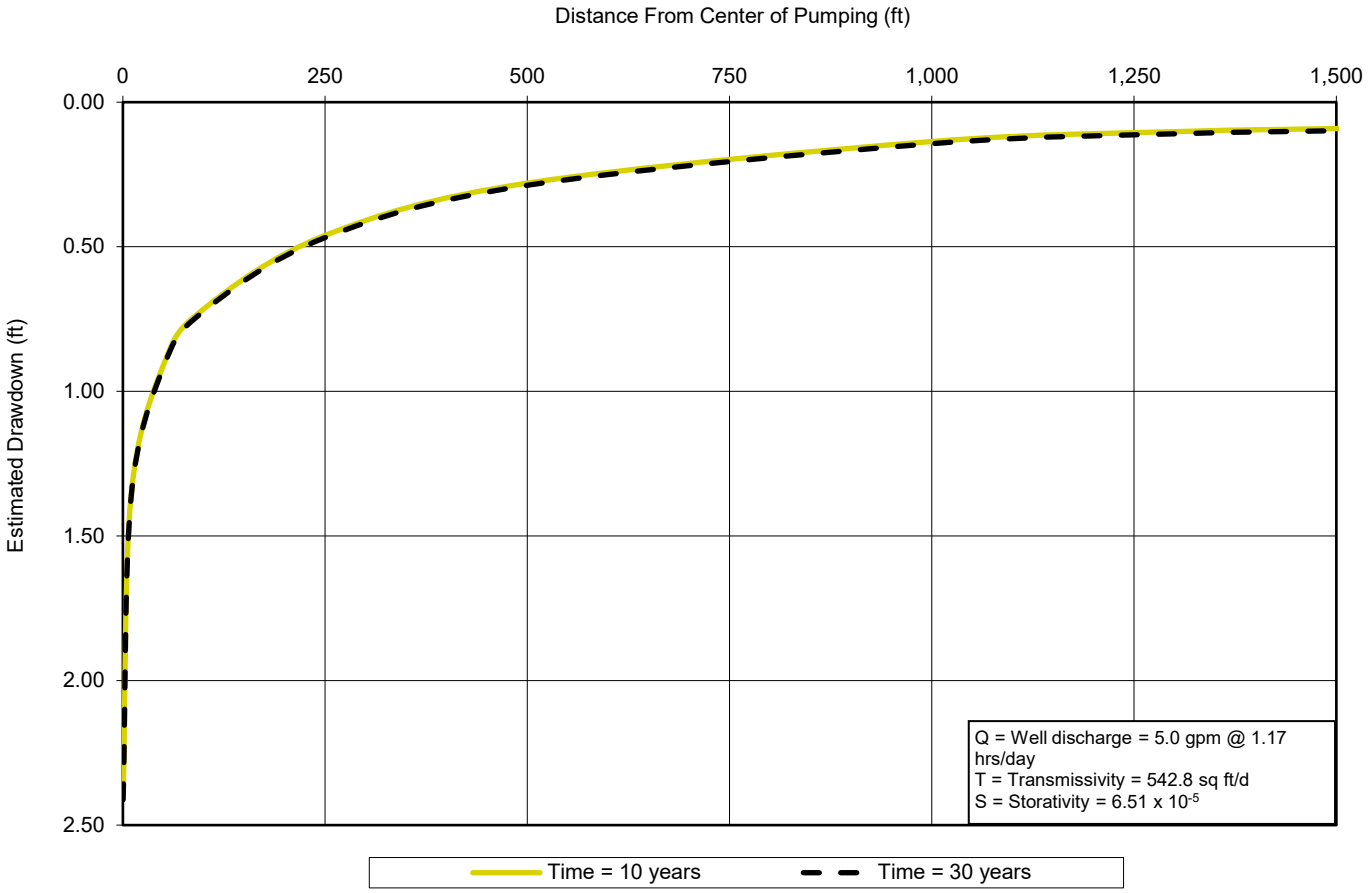


Figure 35: Distance drawdown plot for Well No. 9 (5 gpm)

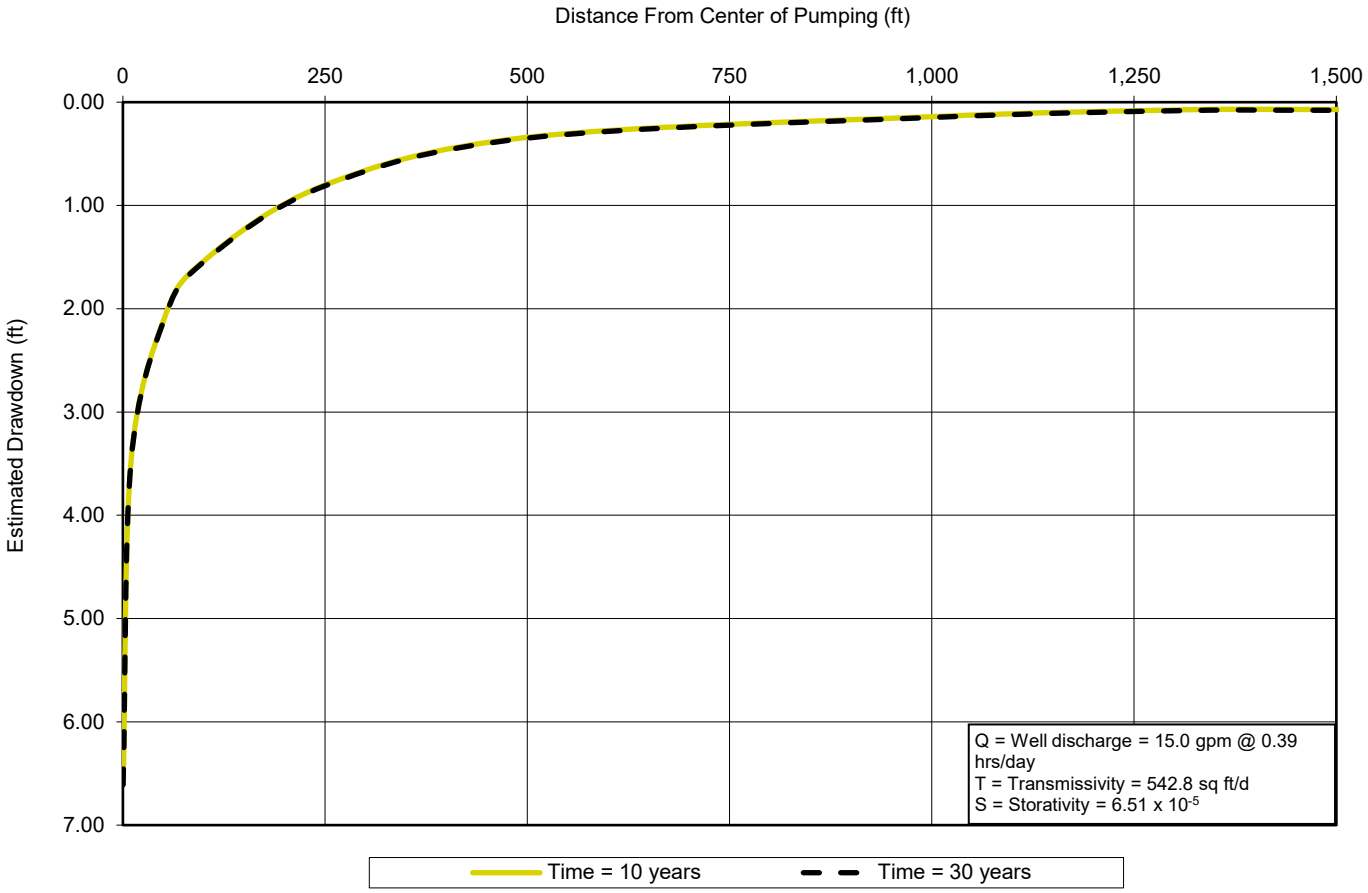


Figure 36: Distance drawdown plot for Well No. 9 (15 gpm)

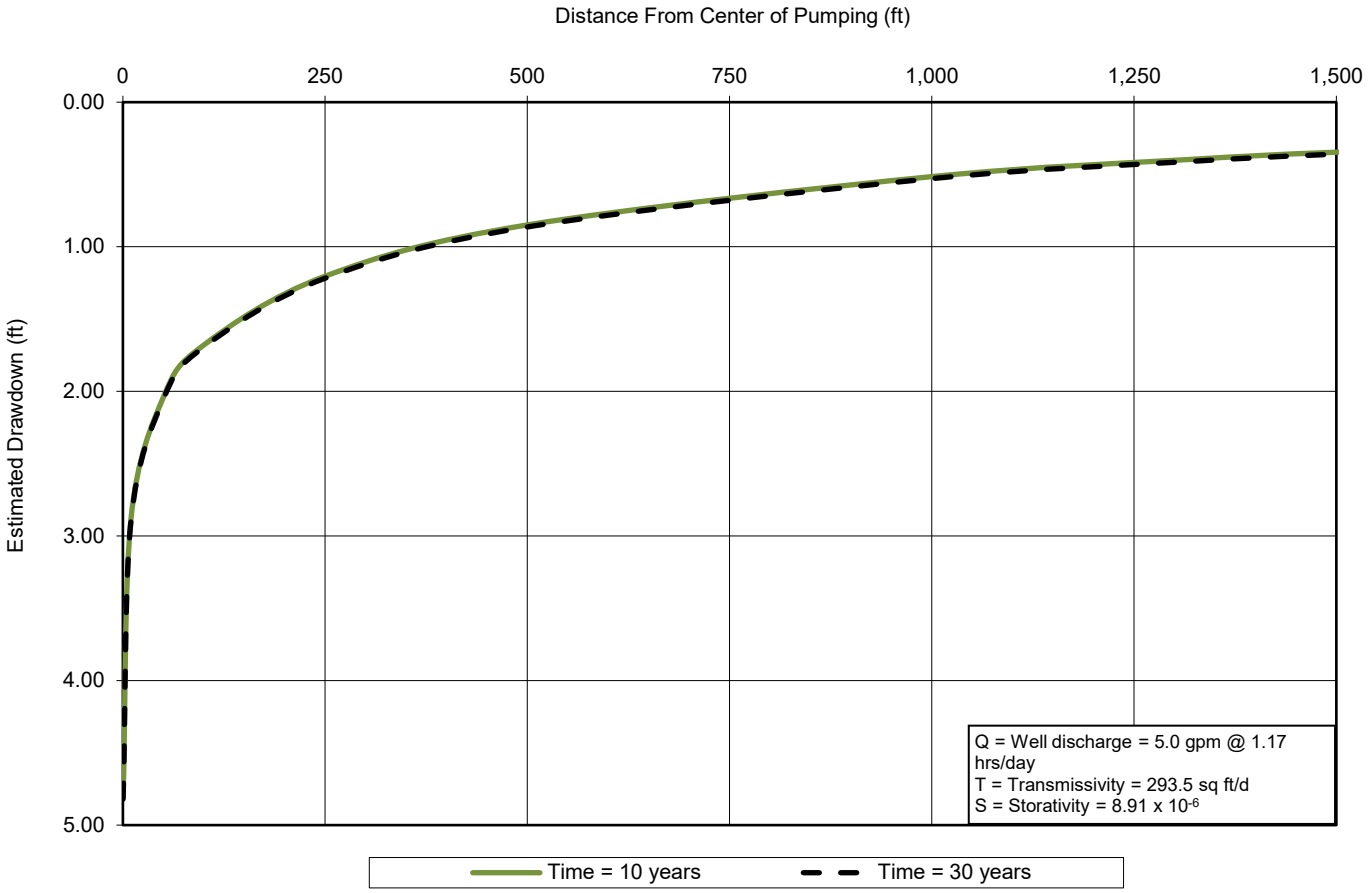


Figure 37: Distance drawdown plot for Ex. Well No. 1 (5 gpm)

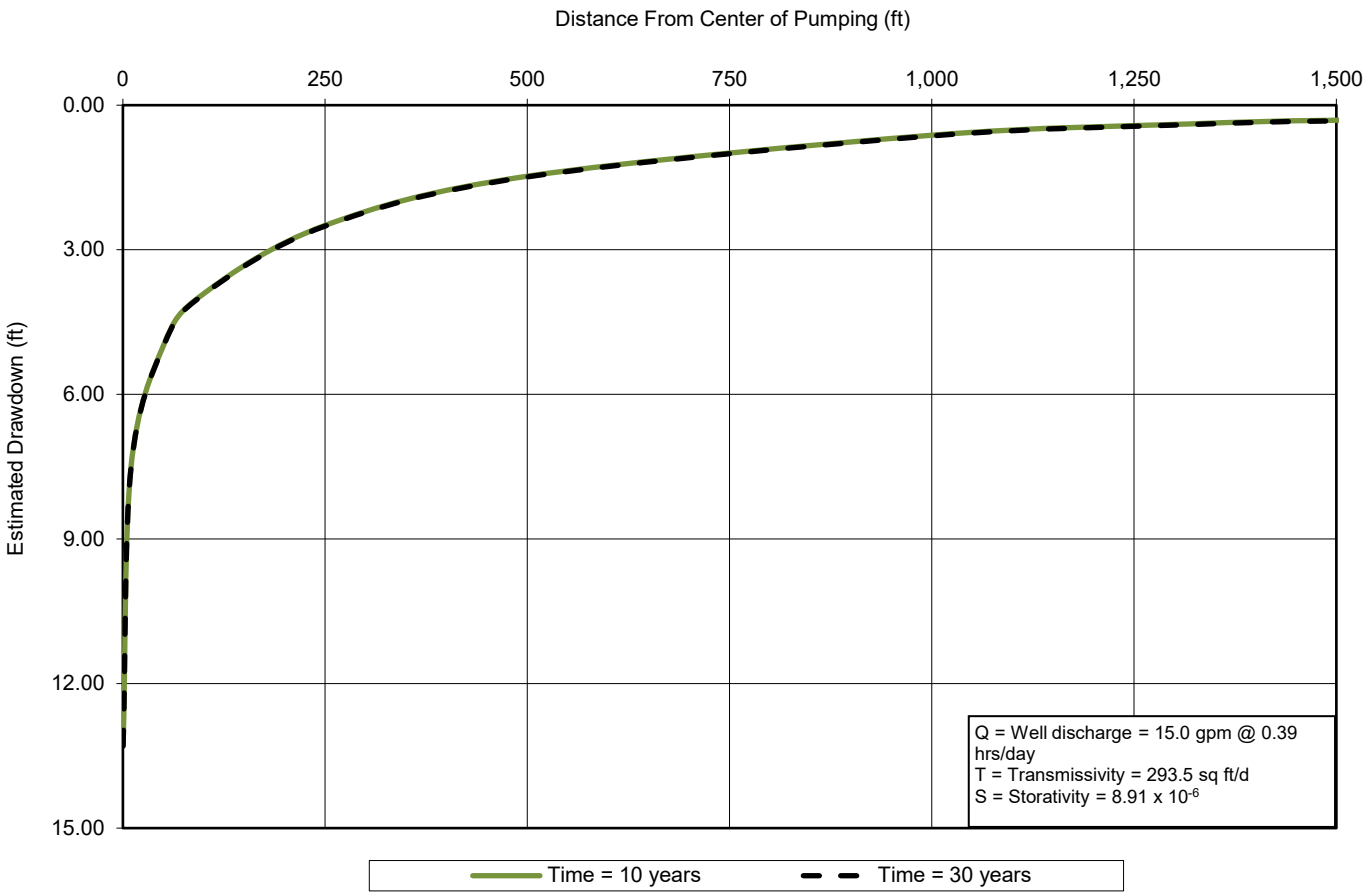


Figure 38: Distance drawdown plot for Ex. Well No. 1 (15 gpm)

Section V: Certification

I, Kaveh Khorzad, Texas Licensed Professional Geoscientist, certificate number 1126, based on best judgment, current groundwater conditions, and the information developed and presented in this form, certify that adequate groundwater is available from the underlying aquifer to supply the anticipated use of the proposed subdivision.

The Middle Trinity Aquifer at the Legacy Hills Subdivision is under unconfined conditions, exhibits variable yield and water quality and is susceptible to reduction in yield during prolonged drought. For these reasons we recommend that i) each homeowner construct their well as deep as practical to the base of the Cow Creek Limestone Member within the Middle Trinity Aquifer to provide the maximum possible yield and; ii) set their pumps as deep as practical to protect from lowering water levels during drought.

Section VI: References

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Appendix A

Certification of Groundwater Availability for Platting Form

CERTIFICATION OF GROUNDWATER AVAILABILITY FOR PLATTING FORM

Use of this form: If required by a municipal authority pursuant to §212.0101, Texas Local Government Code or a county authority pursuant to §232.0031, Texas Local Government Code, the plat applicant and the Texas licensed professional engineer or Texas licensed professional geoscientist shall use this form based upon the requirements of Title 30, Texas Administrative Code, Chapter 230 to certify that adequate groundwater is available under the land to be subdivided (if the source of water for the subdivision is groundwater under the subdivision) for any subdivision subject to platting under §§212.004 and 232.001, Texas Local Government Code. The form and Chapter 230 do not replace state requirements applicable to public drinking water supply systems or the authority of counties or groundwater conservation districts under either §35.019 or Chapter 36 of the Texas Water Code.

Administrative Information (30 TAC, §230.4).

1. Name of Proposed Subdivision: Legacy Hills Subdivision
2. Any Previous Name Which Identifies the Tract of Land: _____
3. Property Owner's Name(s): Lone Star Land Partners, LLC
   Address: 704 Main Street Blanco, TX 78606
   Phone: 800-511-2430
   Fax: _____
4. Plat Applicant's Name: Lone Star Land Partners, LLC
   Address: 704 Main Street Blanco, TX 78606
   Phone: 800-511-2430
   Fax: _____
5. Licensed Professional Engineer or Geoscientist
   Name: Kaveh Khorzad, P.G.
   Address: 317 Ranch Road 620 S., Suite 203, Lakeway, TX 78734
   Phone: 512-773-3226
   Fax: _____
   Certificate Number: TBPG License No: 1126
6. Location and Property Description of Proposed Subdivision: ~7.2 miles west of the City of Dripping Springs, TX on Highway 290.
7. Tax Assessor Parcel Number(s).
   Book: _____
   Map: _____
   Parcel: Blanco County: 8323, 8319 & 8320

Proposed Subdivision Information (30 TAC, §230.5).

8. Purpose of Proposed Subdivision (single family/multi-family residential, non-residential, commercial): single family
9. Size of Proposed Subdivision (acres): Phase I: 643
10. Number of Proposed Lots: 109
11. Average Size of Proposed Lots (acres): 5.90
12. Anticipated Method of Water Distribution.
    Expansion of Existing Public Water Supply System: Yes No
    New (Proposed) Public Water Supply System: Yes No
    Individual Water Wells to Serve Individual Lots: Yes No
    Combination of Methods: Yes No
    Description (if needed): _____
13. Additional Information (if required by the municipal or county authority): _____

Note: If public water supply system is anticipated, written application for service to existing water providers within a ½-mile radius should be attached to this form (30 TAC §230.5(f)).

Projected Water Demand Estimate (30 TAC, §230.6).

14. Residential Water Demand Estimate at Full Build Out (includes both single family and multi-family residential).
    Number of Proposed Housing Units (single and multi-family): 109 single family housing units

Average Number of Persons per Housing Unit: 3.5 persons

Gallons of Water Required per Person per Day: 100 gallons per capita per day (gpcd)

Water Demand per Housing Unit per year (acre feet/year): 0.39 acre-ft (assuming 350 gpcd)

Total Expected Residential Water Demand per Year (acre feet/year): 42.73 acre-ft

15. Non-residential Water Demand Estimate at Full Build Out.

Type(s) of Non-residential Water Uses: N/A

Water Demand per Type per Year (acre feet/year): 42.73

16. Total Water Demand Estimate at Full Build Out (acre feet/year): 42.73 acre-ft

17. Sources of Information Used for Demand Estimates: Blanco County development rules and regulations

General Groundwater Resource Information (30 TAC, §230.7).

18. Identify and describe, using Texas Water Development Board names, the aquifer(s) which underlies the proposed subdivision:

Note: Users may refer to Aquifers of Texas *(Texas Water Development Board Report 345, 1995) to obtain general information pertaining to the state's aquifers. This reference is available via the Internet (www.twdb.state.tx.us).* Trinity Aquifer

Obtaining Site-Specific Groundwater Data (30 TAC, §230.8).

19. Have all known existing, abandoned, and inoperative wells within the proposed subdivision been located, identified, and shown on the plat as required under §230.8(b)? Yes No

20. Were the geologic and groundwater resource factors identified under §230.7(b) considered in planning and designing the aquifer test required under §230.8(c)? Yes No

21. Have test and observation wells been located, drilled, logged, completed, developed, and shown on the plat as required by §230.8(c)(1 though 4)? Yes No

22. Have all reasonable precautions been taken to ensure that contaminants do not reach the subsurface environment and that undesirable groundwater has been confined to the zone(s) of origin (§230.8(c)(5))? Yes No

23. Has an aquifer test been conducted which meets the requirements of §§230.8(c)(1 and 6)? Yes No

24. Were existing wells or previous aquifer test data used? Yes No

25. If yes, did they meet the requirements of §230.8(c)(7)? Yes No

26. Were additional observation wells or aquifer testing utilized? Yes No

Note: If expansion of an existing public water supply system or a new public water supply system is the anticipated method of water distribution for the proposed subdivision, site-specific groundwater data shall be developed under the requirements of 30 TAC, Chapter 290, Subchapter D (related to Rules and Regulations for Public Water Systems) and the applicable information and correspondence developed in meeting those requirements shall be attached to this form pursuant to §230.8(a).

Determination of Groundwater Quality (30 TAC, §230.9).

27. Have water quality samples been collected as required by §230.9? Yes No

28. Has a water quality analysis been performed which meets the requirements of §230.9? Yes No

Determination of Groundwater Availability (30 TAC, §230.10).

29. Have the aquifer parameters required by §230.10(c) been determined? Yes No

30. If so, provide the aquifer parameters as determined.

Rate of yield and drawdown: **(See attached Table 3)**

Specific capacity: **(See attached Table 3 & Appendix D)**

Efficiency of the pumped well: **(See attached Table 3 & Appendix E)**

Transmissivity: **(See attached Table 3 & Appendix D)**

Coefficient of storage: **(See attached Table 3 & Appendix D)**

Hydraulic conductivity: **(See attached Table 3)**

Were any recharge or barrier boundaries detected? Yes No

If yes, please describe:

Thickness of aquifer(s): **(See attached Table 3)**

31. Have time-drawdown determinations been calculated as required under §230.10(d)(1) Yes No

32. Have distance-drawdown determinations been calculated as required under §230.10(d)(2)? Yes No

33. Have well interference determinations been made as required under §230.10(d)(3)? Yes No

34. Has the anticipated method of water delivery, the annual groundwater demand estimates at full build out, and geologic and groundwater information been taken into account in making these determinations? Yes No

35. Has the water quality analysis required under §230.9 been compared to primary and secondary public drinking water standards as required under §230.10(e)? Yes No

Does the concentration of any analyzed constituent exceed the standards? (Yes) No

If yes, please list the constituent(s) and concentration measure(s) which exceed standards: **See Section IV.3**

Groundwater Availability and Usability Statements (30 TAC, §230.11(a)and (b)).

36. Drawdown of the aquifer at the pumped well(s) is estimated to be _____ feet over a 10-year period and _____ feet over a 30-year period. **See Attached Tables 5 & 6**

37. Drawdown of the aquifer at the property boundary is estimated to be _____ feet over a 10-year period and _____ feet over a 30-year period. **See Attached Tables 5 & 6**

38. The distance from the pumped well(s) to the outer edges of the cone(s)-of-depression is estimated to be _____ feet over a 10-year period and _____ feet over a 30-year period. **See Attached Tables 5 & 6**

39. The recommended minimum spacing limit between wells is 100 feet with a recommended well yield of <15 gallons per minute per well.

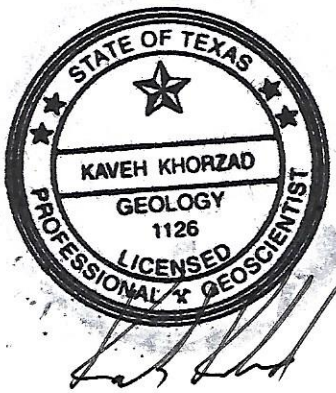
40. Available groundwater is / is not (circle one) of sufficient quality to meet the intended use of the platted subdivision.

41. The groundwater availability determination does not consider the following conditions (identify any assumptions or uncertainties that are inherent in the groundwater availability determination): See Section IV.4.

Certification of Groundwater Availability (30 TAC, §230.11(c)). Must be signed by a Texas Licensed Professional Engineer or a Texas Licensed Professional Geoscientist.

42. I, Kaveh Khorzad, Texas Licensed Professional Engineer or Texas Licensed Professional Geoscientist (circle which applies), certificate number 1126, based on best professional judgement, current groundwater conditions, and the information developed and presented in this form, certify that adequate groundwater is available from the underlying aquifer(s) to supply the anticipated use of the proposed subdivision.

Date: 1/19/2021 (affix seal)



1-25-21

Adopted January 23, 2003

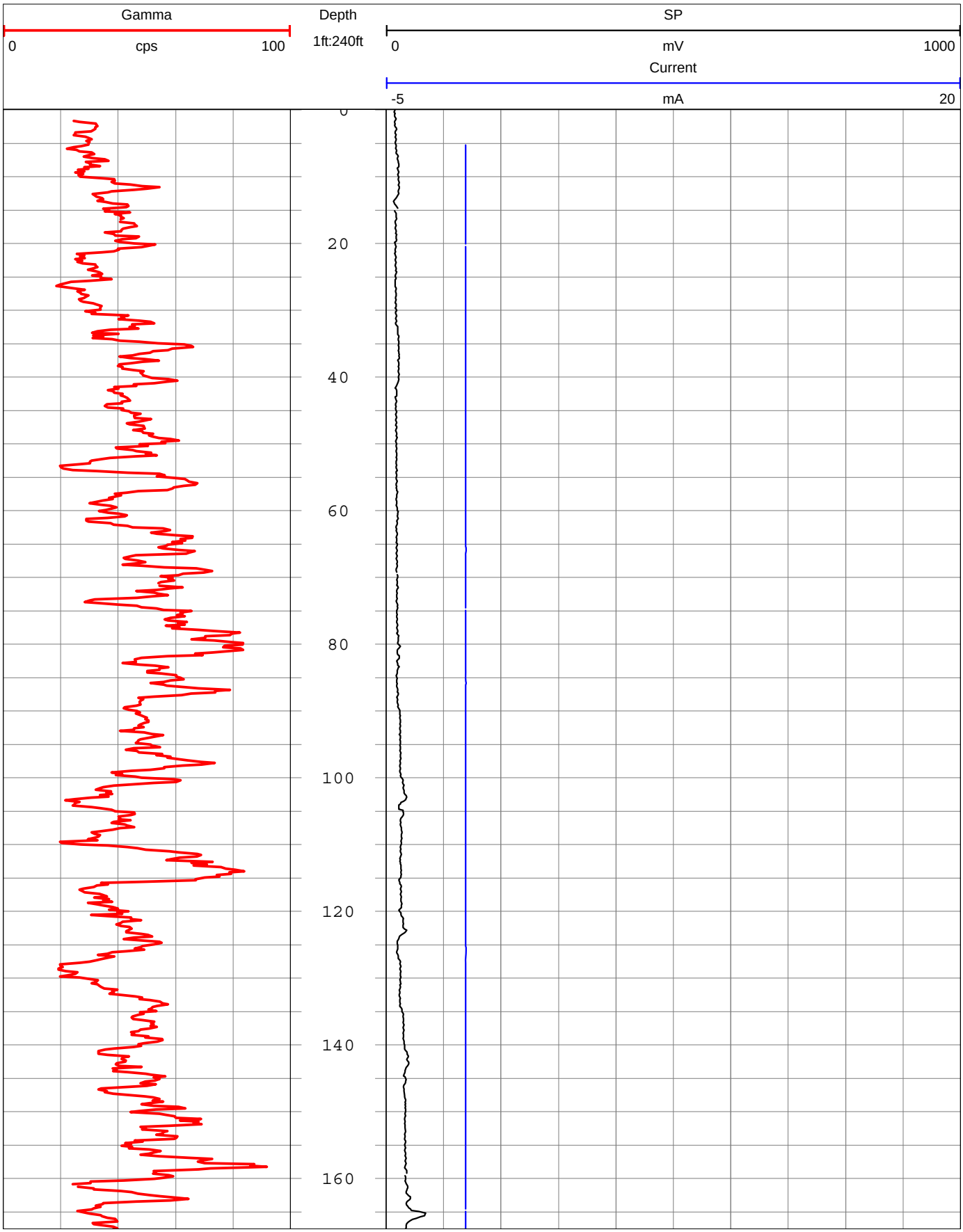
Effective February 13, 2003

Appendix B

Geophysical Logs

Geophysical Log

Well No. 2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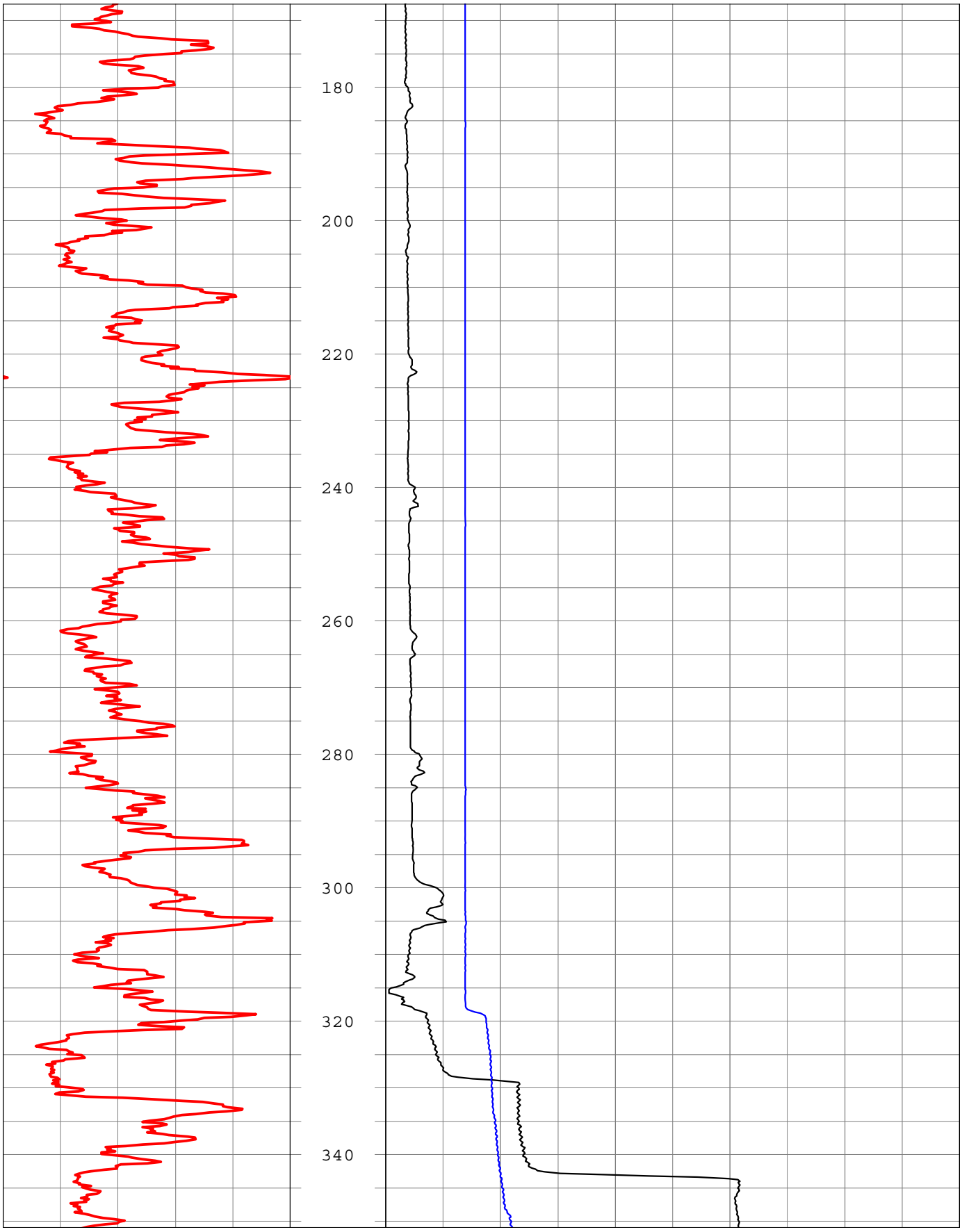
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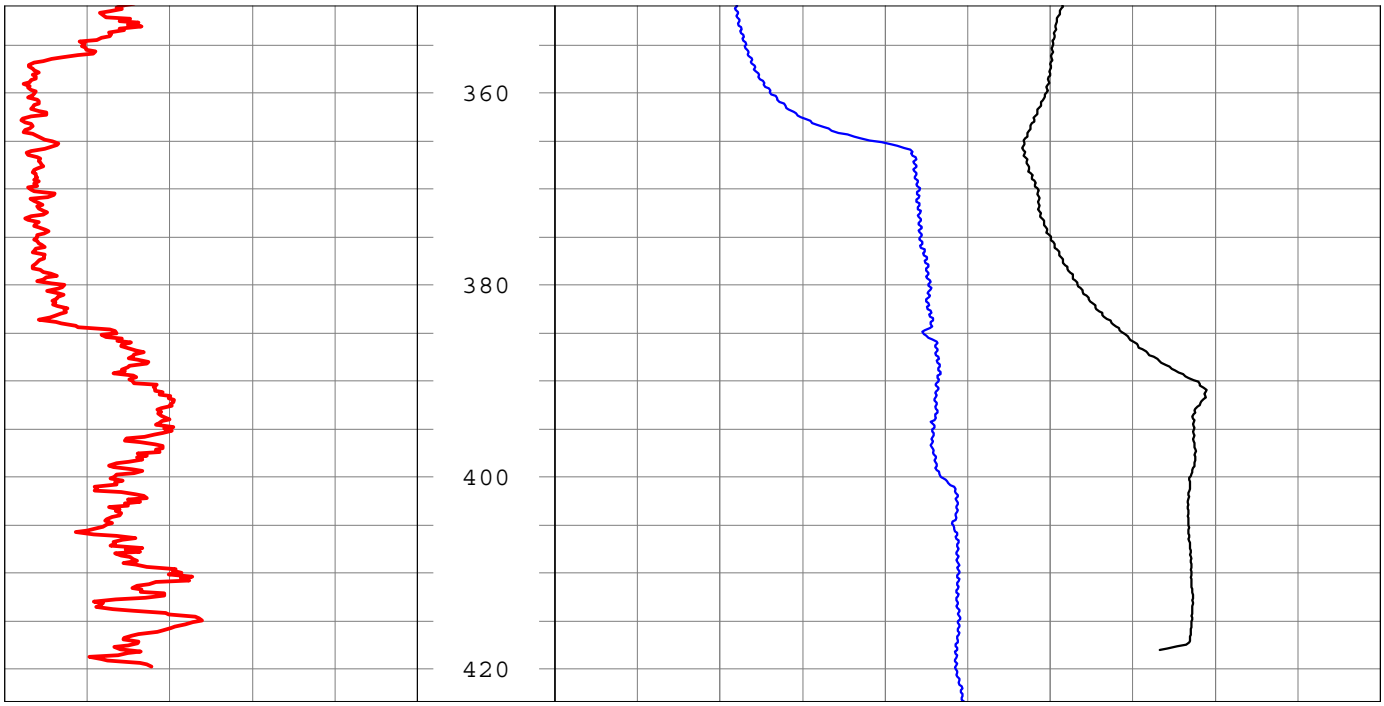

360
380
400
420

Geophysical Log

Well No. 5

Blanco-Pedernales Groundwater Conservation District

Borehole Name or #: **Legacy Hills Subdivision New Well #5**

Logs: **GR RES**

Logging Dates: **12/17/2020**

601 West Main, P. O. Box 1516, Johnson City, TX 78636 - - - (830) 868-9196 - - - manager@blancogw.org

Well Owner: **Legacy Hills Subdivision**

Well Regist. #: **20200183**

Latitude: **30* 12' 26.4"** Longitude: **98* 15' 33.2"**

Blanco County, Texas

Elevation MSL: **Topo: 1310** **GPS:** **Google Earth:**

GPS Datum: **NAD 27**

Borehole Data

Drilling Contractor: **Apex Drilling**

Date Drilled: **12/7/2020**

Measuring Point: **2.0** **Feet Above Ground Level**

Driller TD: **425**

Depth Reference: **Ground Level**

Logger TD: **424.5**

Water Level: **333.6** **Feet Below Measuring Point**

Bit Record				Casing Record			
Run	Bit Size	From	To	PVC / Steel	Size	From	To
1	8.5	0	50	PVC	4.5	+ 2.0	425
2	6.5	50	425				
3							

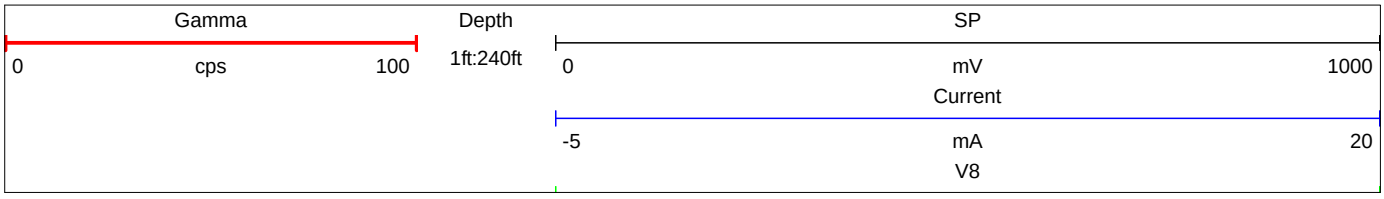
Logging Data

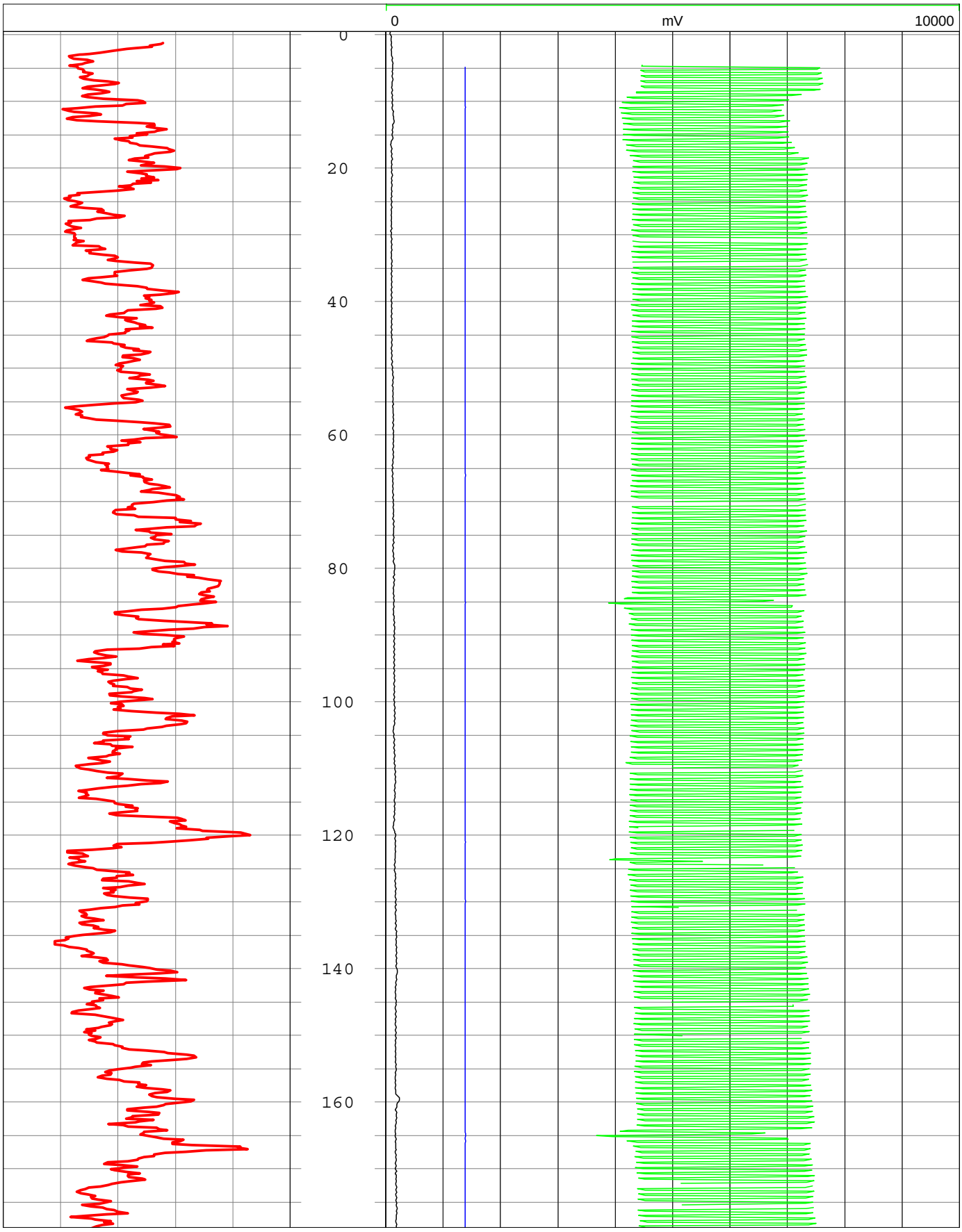
Logged By: **R. Fieseler**

Witness: **None**

Log Type	Run #	Up / Down	From	To	Feet / Min.
GR RES	1	UP	424	0	15
	2				15
	3				
	4				

Comments:

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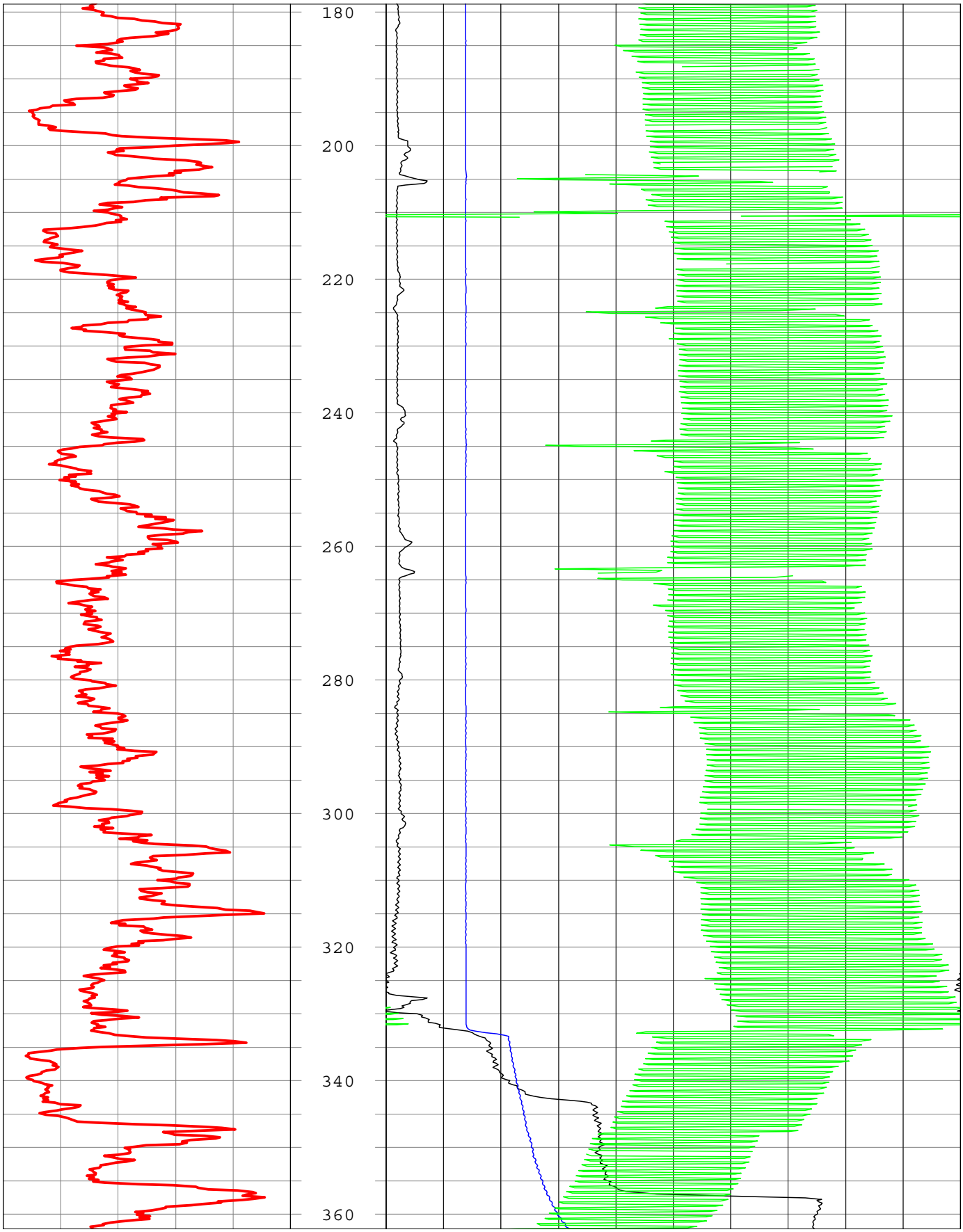
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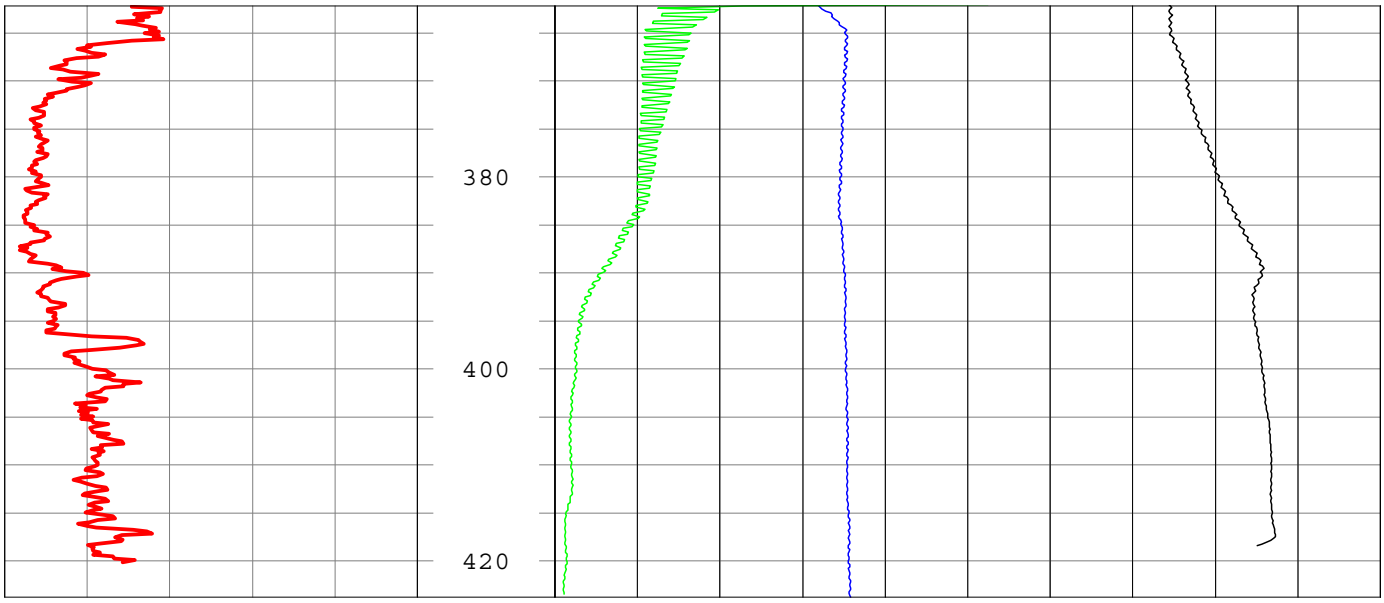

380
400
420

Geophysical Log

Well No. 8

Blanco-Pedernales Groundwater Conservation District

Borehole Name or #: **Legacy Hills Subdivision New Well #8**

Logs: **GR RES**

Logging Dates: **12/17/2020**

601 West Main, P. O. Box 1516, Johnson City, TX 78636 - - - (830) 868-9196 - - - manager@blancogw.org

Well Owner: **Legacy Hills Subdivision**

Well Regist. #: **20200186**

Latitude: **30* 12' 55.1"** Longitude: **98* 15' 05.2"**

Blanco County, Texas

Elevation MSL: **Topo: 1335** **GPS:** **Google Earth:**

GPS Datum: **NAD 27**

Borehole Data

Drilling Contractor: **Apex Drilling**

Date Drilled: **12/11/2020**

Measuring Point: **2.0** **Feet Above Ground Level**

Driller TD: **460**

Depth Reference: **Ground Level**

Logger TD: **458**

Water Level: **354** **Feet Below Measuring Point**

Bit Record				Casing Record			
Run	Bit Size	From	To	PVC / Steel	Size	From	To
1	8.5	0	50	PVC	4.5	+2	460
2	6.5	50	460				
3							

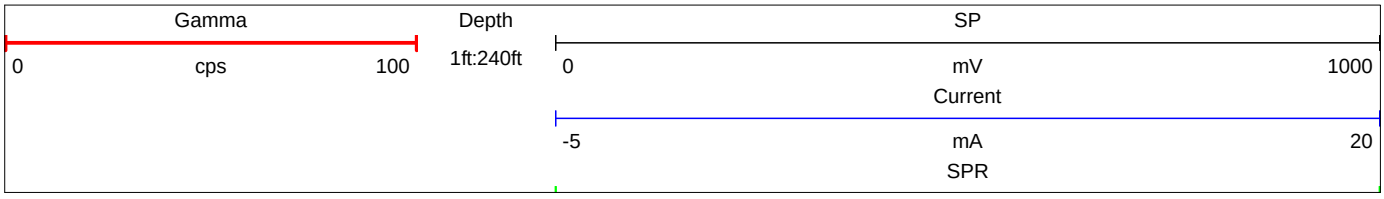
Logging Data

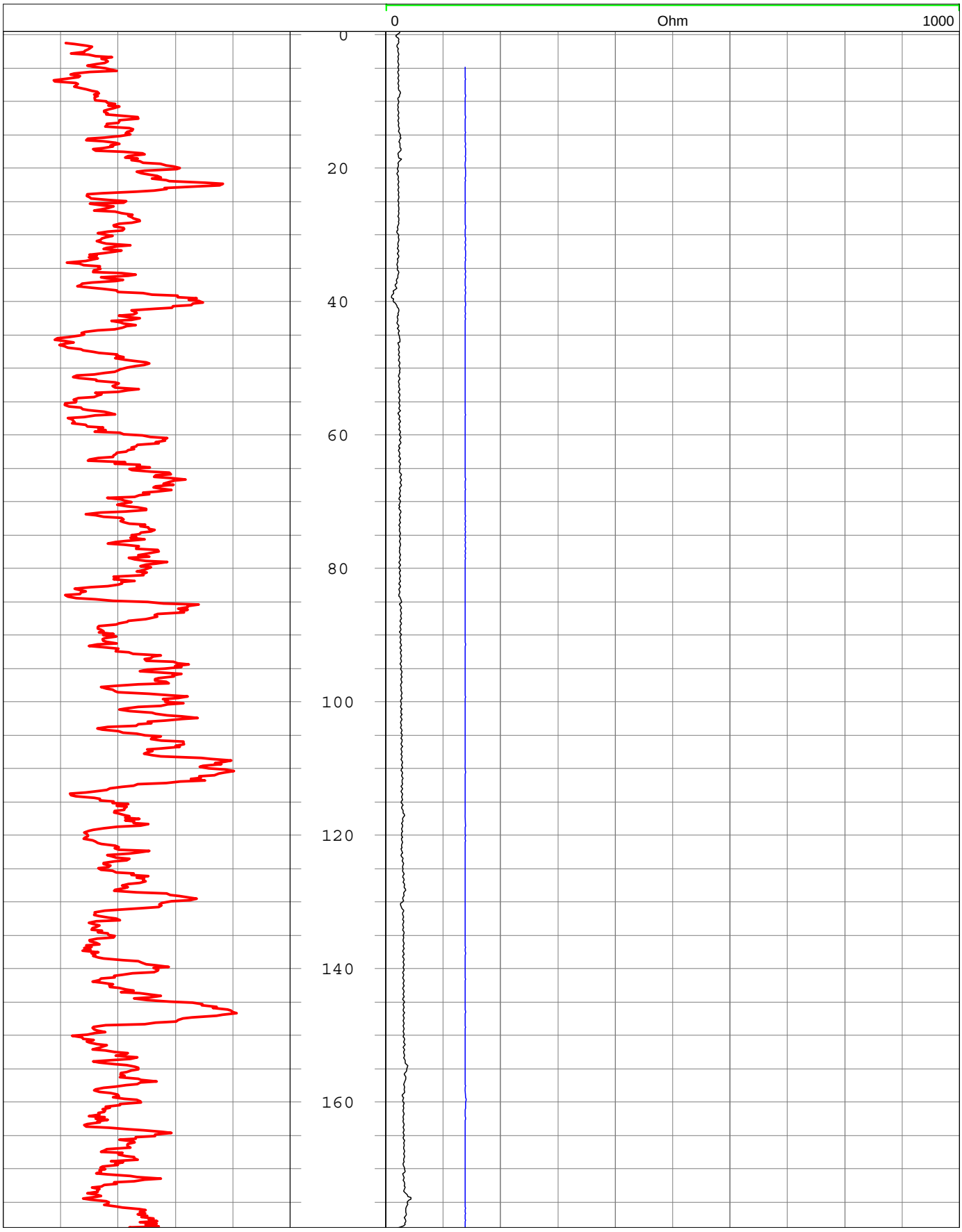
Logged By: **R. Fieseler**

Witness: **None**

Log Type	Run #	Up / Down	From	To	Feet / Min.
GR RES	1	UP	458	0	15
	2				15
	3				
	4				

Comments:

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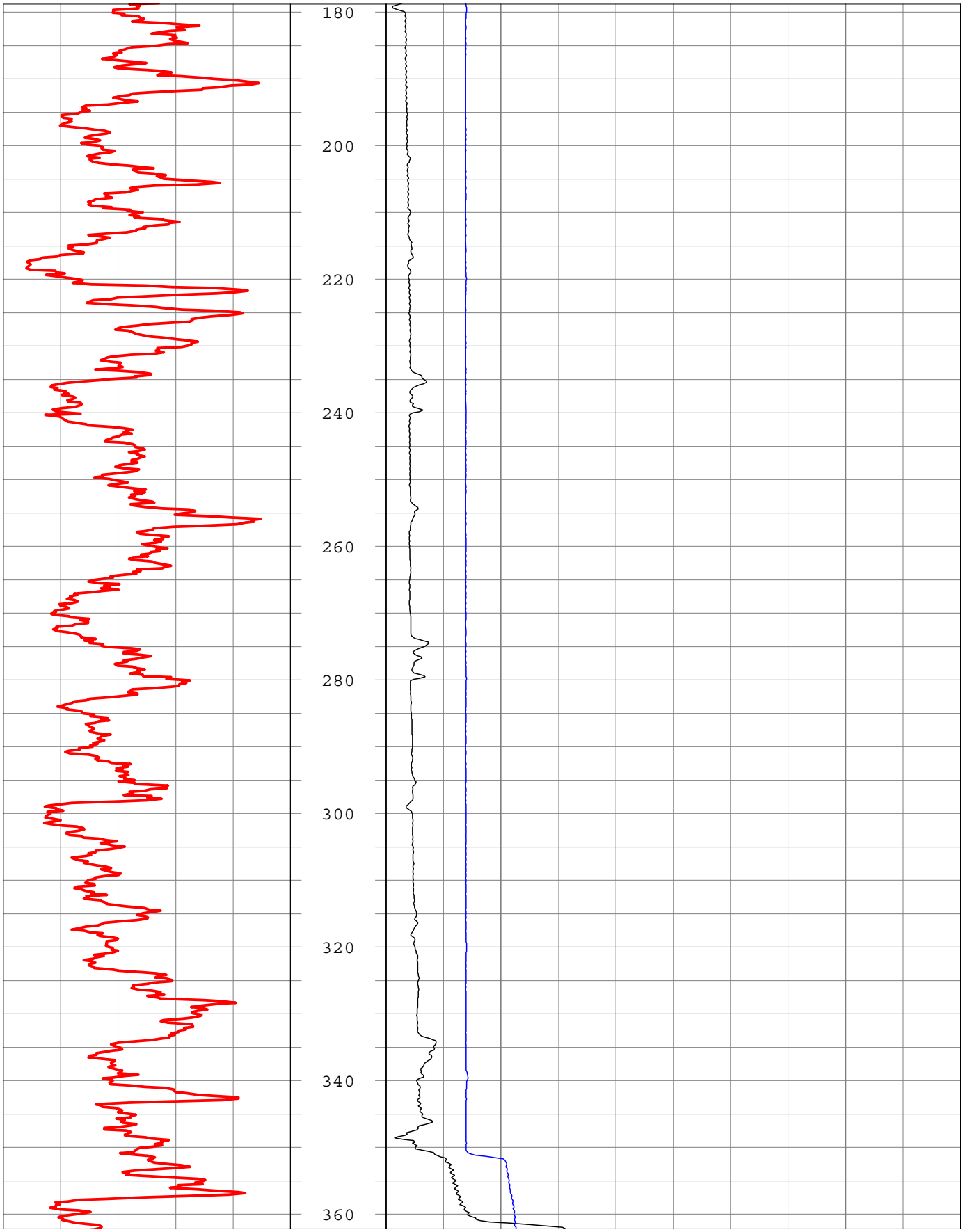
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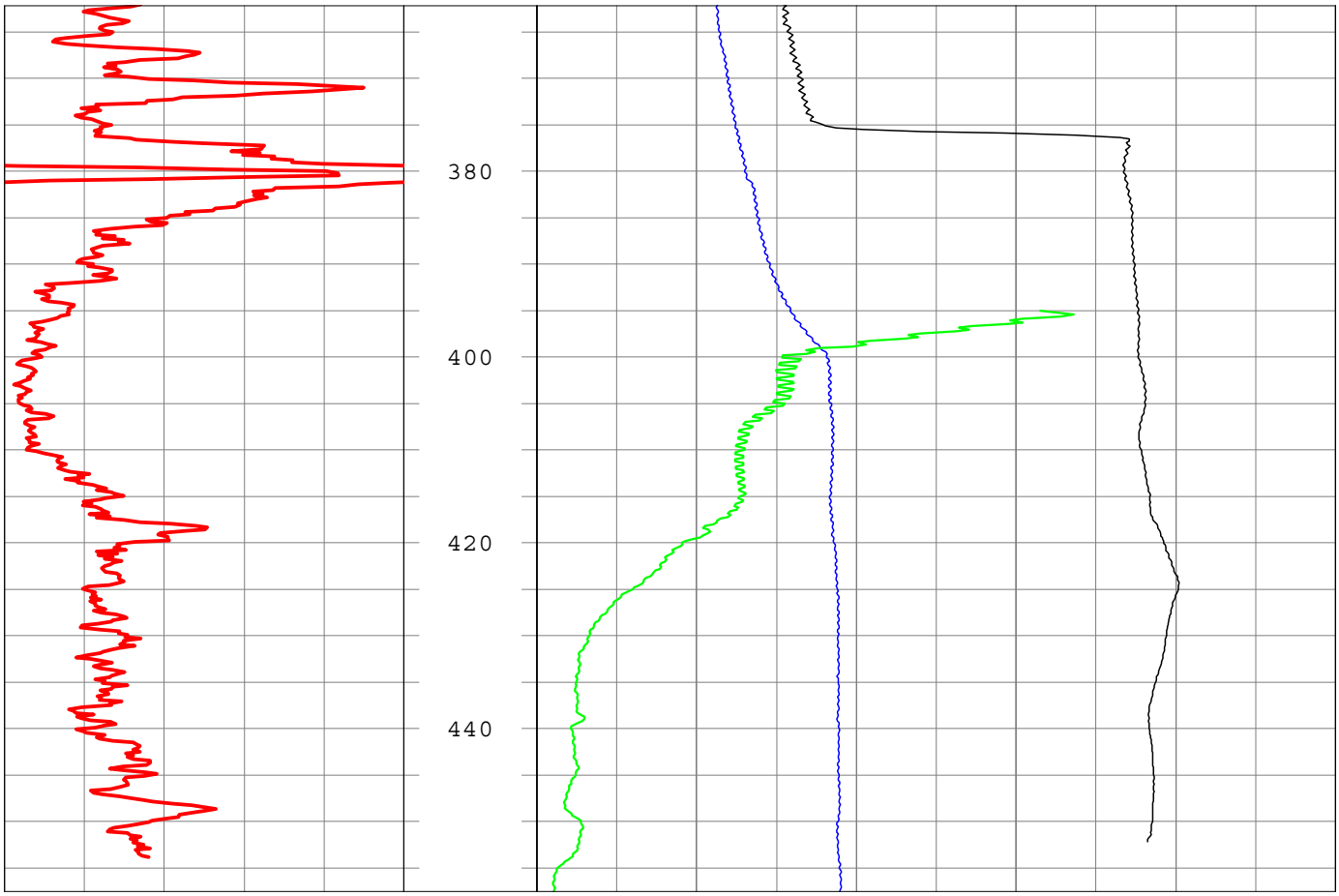

380
400
420
440

Geophysical Log

Well No. 9

Blanco-Pedernales Groundwater Conservation District

Borehole Name or #: **Legacy Hills Subdivision New Well #9**

Logs: **GR RES**

Logging Dates: **12/17/2020**

601 West Main, P. O. Box 1516, Johnson City, TX 78636 - - - (830) 868-9196 - - - manager@blancocountygroundwater.org

Well Owner: **Lone Star Land Partners**

Well Regist. #: **20200187**

Latitude: **30* 12' 13.2"** Longitude: **98* 15' 46.0"**

Blanco County, Texas

Elevation MSL: **Topo: 1339** **GPS:** **Google Earth:**

GPS Datum: **NAD 27**

Borehole Data

Drilling Contractor: **Apex Drilling**

Date Drilled: **12/14/2020**

Measuring Point: **2.0** **Feet Above Ground Level**

Driller TD: **445**

Depth Reference: **Ground Level**

Logger TD: **435**

Water Level: **352.8** **Feet Below Measuring Point**

Bit Record				Casing Record			
Run	Bit Size	From	To	PVC / Steel	Size	From	To
1	8.5	0	50	PVC	4.5	+2	445
2	6.5	50	445				
3							

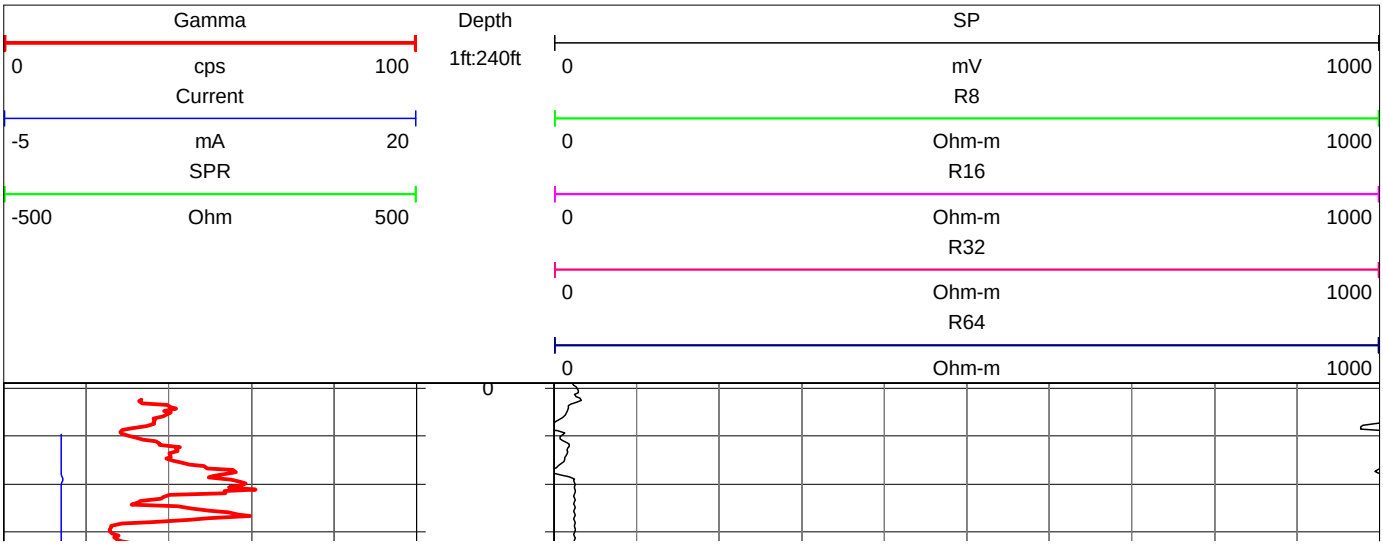
Logging Data

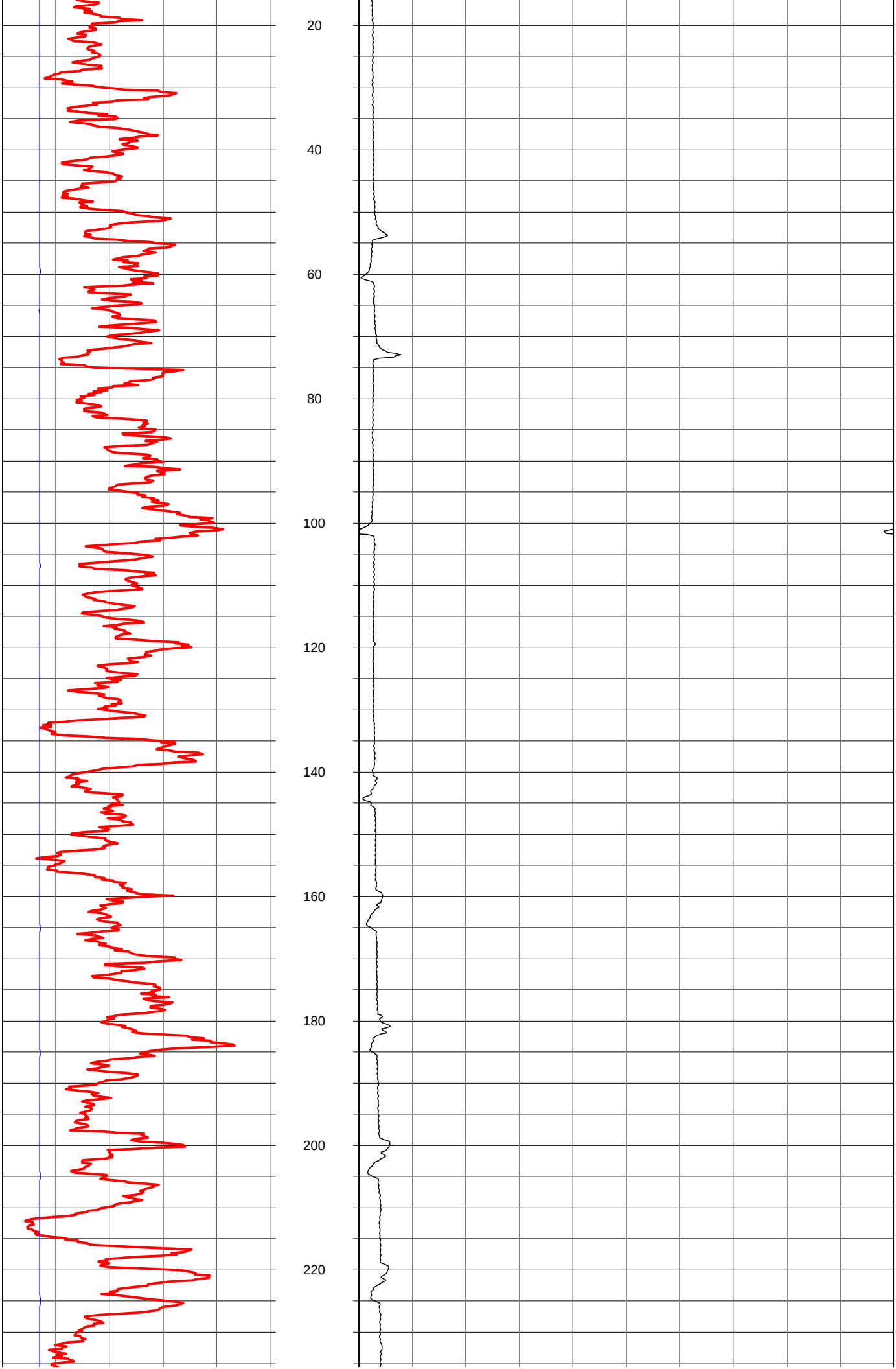
Logged By: **R. Fieseler**

Witness: **Nione**

Log Type	Run #	Up / Down	From	To	Feet / Min.
GR RES	1	UP	435	0	15
	2				15
	3				
	4				

Comments:

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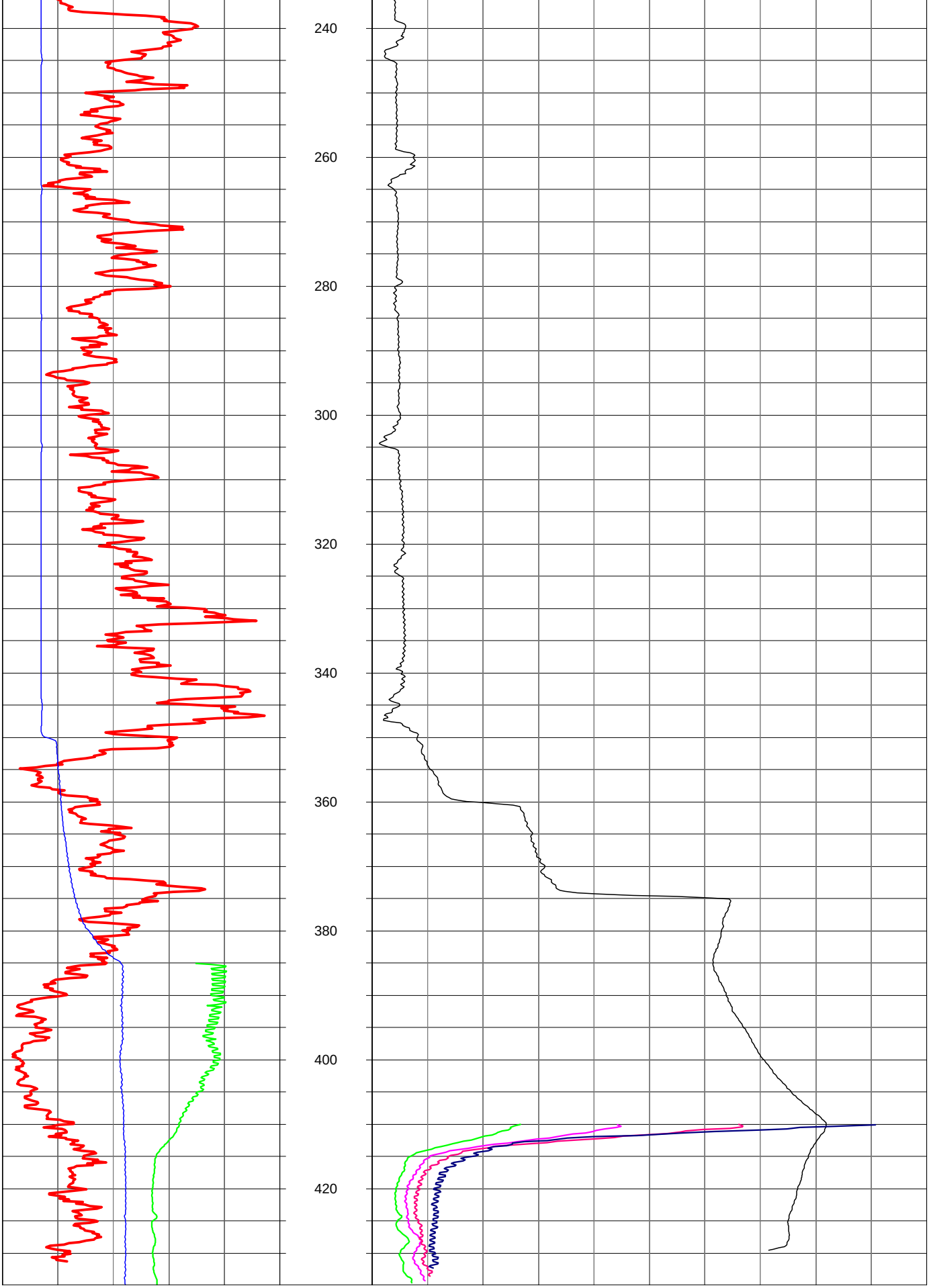
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300
320
340
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380
400
420

Geophysical Log

Ex. Well No. 1

Blanco-Pedernales Groundwater Conservation District

Borehole Name or #: **Legacy Hills Subdivision Existing Well #1**

Logs: **GR/RES**

Logging Dates: **12/10/2020**

601 West Main, P. O. Box 1516, Johnson City, TX 78636 - - - (830) 868-9196 - - - manager@blancocountygroundwater.org

Well Owner: **Lone Star Land Partners** Well Regist. #:

Latitude: **30* 12' 33.0"** Longitude: **098* 15' 20.1"** Blanco County, Texas

Elevation MSL: **Topo: 1308** **GPS:** **Google Earth:** GPS Datum: **NAD 27**

Borehole Data

Drilling Contractor: Date Drilled:

Measuring Point: **1.6** **Feet Above Ground Level** Driller TD:

Depth Reference: **Ground Level** Logger TD: **419**

Water Level: **329.2** **Feet Below Measuring Point**

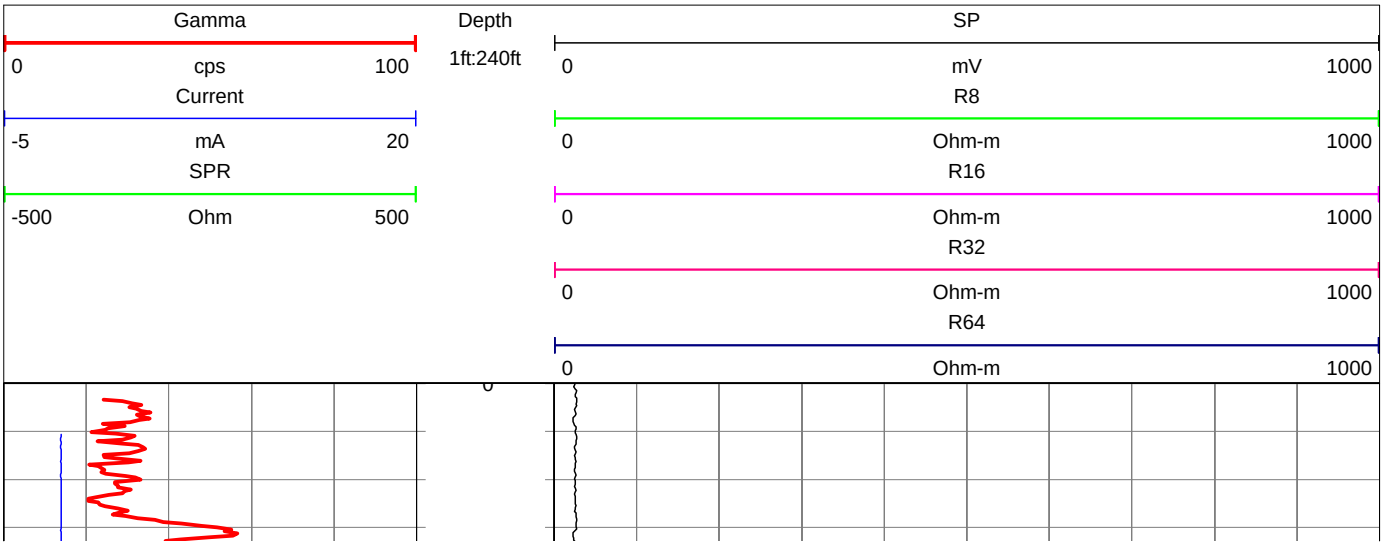
Bit Record				Casing Record			
Run	Bit Size	From	To	PVC / Steel	Size	From	To
1		0		PVC	4.5	+1.6	419
2							
3							

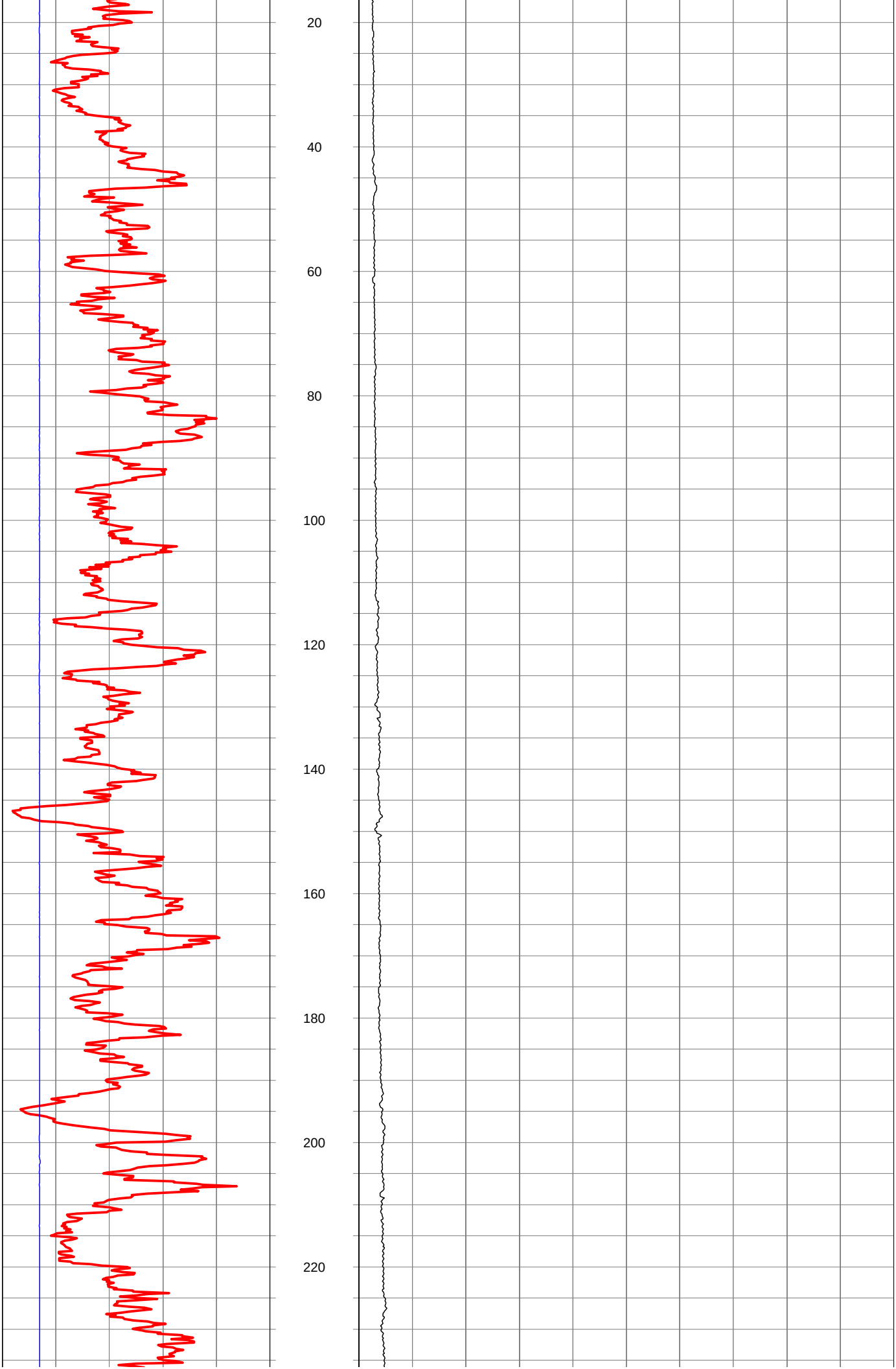
Logging Data

Logged By: **R. Fieseler** Witness: **None**

Log Type	Run #	Up / Down	From	To	Feet / Min.
GR RES	1	UP	419	0	15
	2				15
	3				
	4				

Comments:

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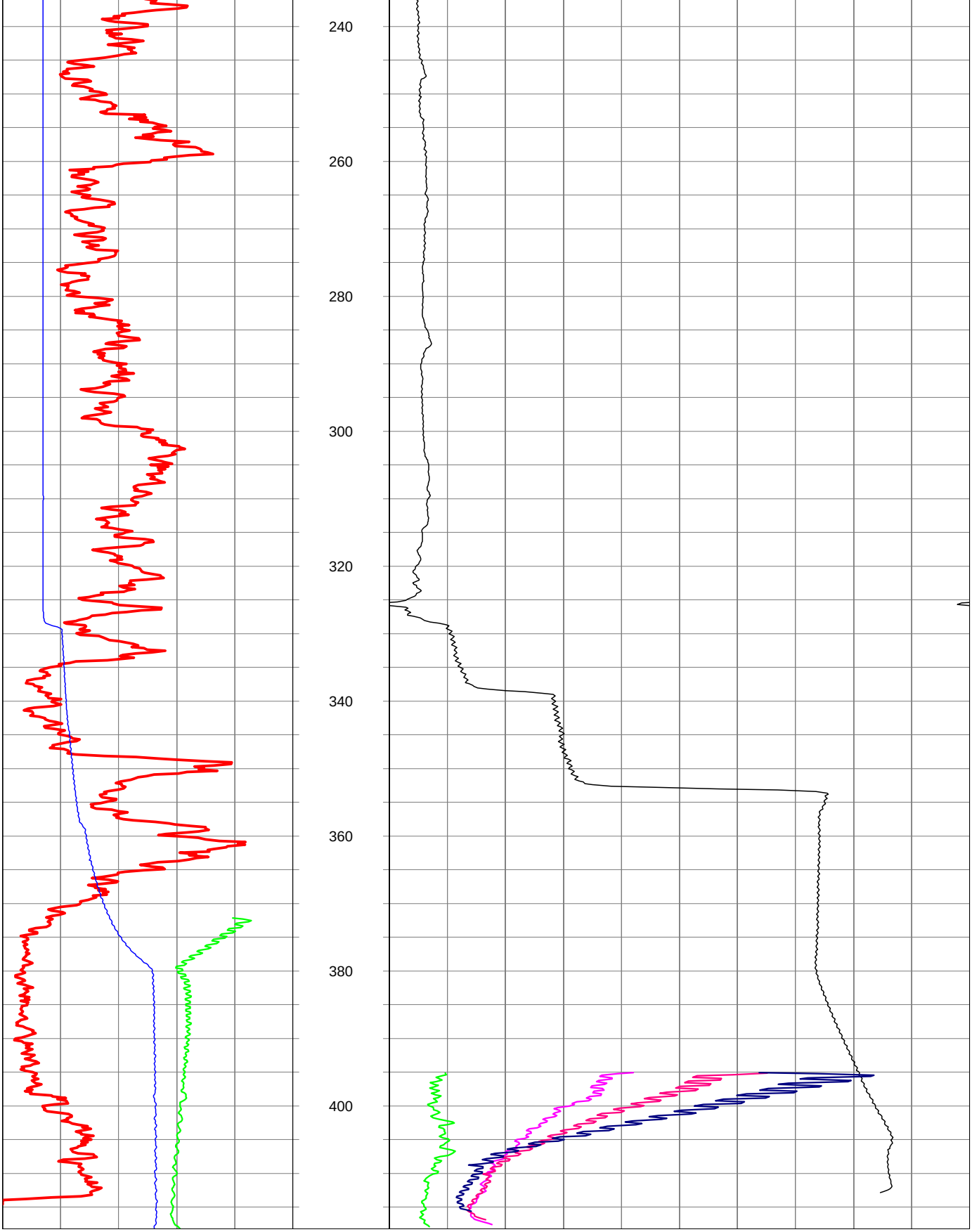
240
260
280
300
320
340
360
380
400

Appendix C

State Well Reports

Well Report

Well No. 1

STATE OF TEXAS WELL REPORT for Tracking #561449

Owner:	**Bohls Interest LTD.**	Owner Well #:	**1**
Address:	**3303 Northand Dr. Suite # 212 Austin , TX 78731**	Grid #:	**57-54-3**
		Latitude:	**30° 12' 49" N**
Well Location:	**Legacy # 1 Johnson City, TX 78636**	Longitude:	**098° 16' 05" W**
		Elevation:	**No Data**
Well County:	**Blanco**		
Number of Wells Drilled:	**9**		
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **12/2/2020** Drilling End Date: **12/2/2020**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
8.5	**0**	**50**
6.5	**50**	**425**

Drilling Method: **Air Rotary**

Borehole Completion: **Straight Wall**

Annular Seal Data: **No Data**

Seal Method: **Slurry**

Sealed By: **Driller**

Distance to Property Line (ft.): **50**

Distance to Septic Field or other concentrated contamination (ft.): **100**

Distance to Septic Tank (ft.): **50**

Method of Verification: **Land Owner**

Surface Completion: **Surface Sleeve Installed** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **Burlap/Neoprene at 50 ft.**
Burlap/Neoprene at 55 ft.
Burlap/Neoprene at 235 ft.
Burlap/Neoprene at 240 ft.

Type of Pump: **No Data**

Well Tests: **Jetted** **Yield: 60 GPM**

Water Quality:

Strata Depth (ft.)	Water Type
240 - 380	**M. Trinity TDS 1400**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Apex Drilling, Inc.**

P.O. Box 867
Marble Falls, TX 78654

Driller Name: **Andrew Jackson Johnson** License Number: **54989**

Comments: **BPGCD # 20200179**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1**	**Top Soil**
1	**18**	**Tan LS Broken w/ Sandy Loam**
18	**32**	**Tan LS**
32	**125**	**Gray LS**
125	**140**	**Tan Gray LS**
140	**175**	**Gray LS**
175	**232**	**Gray Tan LS**
232	**240**	**Light Tan LS**
240	**327**	**Tan Gray LS**
327	**335**	**White LS**
335	**347**	**Tan LS**
347	**365**	**Broken Gray Tan LS**
365	**380**	**Broken Gray Tan Brown LS w/ Stripes of Turquoise Clay**
380	**400**	**Gray Tan LS**
400	**425**	**Gray LS**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
4.5	**Blank**	**New Plastic (PVC)**	**SDR17**	**2**	**315**
4.5	**Screen**	**New Plastic (PVC)**	**.035**	**315**	**375**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking Number on your written request.

Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

Well Report

Well No. 2

STATE OF TEXAS WELL REPORT for Tracking #561450

Owner:	**Bohls Interest LTD.**	Owner Well #:	**2**
Address:	**3303 Northland Dr Suite # 212 Austin, TX 78731**	Grid #:	**57-54-3**
		Latitude:	**30° 12' 44" N**
Well Location:	**Legacy # 2 Johnson City, TX 78636**	Longitude:	**098° 16' 05" W**
Well County:	**Blanco**	Elevation:	**No Data**
Number of Wells Drilled:	**9**		

Type of Work: **New Well** Proposed Use: **Domestic**

Drilling Start Date: **12/3/2020** Drilling End Date: **12/3/2020**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
8.5	**0**	**50**
6.5	**50**	**425**

Drilling Method: **Air Rotary**

Borehole Completion: **Straight Wall**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**50**	**3 Benseal 3 Portland 6 Bags/Sacks**

Seal Method: **Slurry**

Sealed By: **Driller**

Distance to Property Line (ft.): **50**

Distance to Septic Field or other concentrated contamination (ft.): **100**

Distance to Septic Tank (ft.): **50**

Method of Verification: **Land Owner**

Surface Completion: **Surface Sleeve Installed** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **Burlap/Neoprene at 50 ft.**
Burlap/Neoprene at 55 ft.
Burlap/Neoprene at 300 ft.
Burlap/Neoprene at 325 ft.

Type of Pump: **No Data**

Well Tests: **Jetted** **Yield: 60 GPM**

Water Quality:

Strata Depth (ft.)	Water Type
325 - 424	**M. Trinity - TDS 1400**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Apex Drilling, Inc.**

P.O. Box 867
Marble Falls, TX 78654

Driller Name: **Andrew Jackson Johnson** License Number: **54989**

Comments: **BPGCD # 20200180**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1**	**Top SOil**
1	**23**	**Broken Tan LS**
23	**85**	**Gray LS**
85	**295**	**Gray Tan LS**
295	**310**	**Gray LS**
310	**315**	**White LS**
315	**325**	**Tan Gray LS**
325	**340**	**Brown LS**
340	**352**	**Brown Tan LS**
352	**365**	**Brown Tan Gray LS**
365	**387**	**Tan LS**
387	**400**	**Broken Tan Gray LS**
400	**424**	**Gray LS**
424	**425**	**Gray Clay**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
4.5	**Blank**	**New Plastic (PVC)**	**SDR17**	**2**	**365**
4.5	**Screen**	**New Plastic (PVC)**	**.035**	**365**	**425**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking Number on your written request.

Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

Well Report

Well No. 3

STATE OF TEXAS WELL REPORT for Tracking #561451

Owner:	**Bohls Interest LTD.**	Owner Well #:	**3**
Address:	**3303 Northand Dr. Suite # 212 Austin, TX 78731**	Grid #:	**57-54-3**
		Latitude:	**30° 12' 41" N**
Well Location:	**Legacy # 3 Johnson City, TX 78636**	Longitude:	**098° 15' 59" W**
Well County:	**Blanco**	Elevation:	**No Data**
Number of Wells Drilled:	**9**		

Type of Work: **New Well** Proposed Use: **Domestic**

Drilling Start Date: **12/4/2020** Drilling End Date: **12/4/2020**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
8.5	**0**	**50**
6.5	**50**	**420**

Drilling Method: **Air Rotary**

Borehole Completion: **Straight Wall**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**50**	**3 Benseal 3 Portland 6 Bags/Sacks**

Seal Method: **Slurry**

Sealed By: **Driller**

Distance to Property Line (ft.): **50**

Distance to Septic Field or other concentrated contamination (ft.): **100**

Distance to Septic Tank (ft.): **50**

Method of Verification: **Land Owner**

Surface Completion: **Surface Sleeve Installed** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **Burlap/Neoprene at 50 ft.**
Burlap/Neoprene at 55 ft.
Burlap/Neoprene at 315 ft.
Burlap/Neoprene at 320 ft.

Type of Pump: **No Data**

Well Tests: **Jetted** **Yield: 60 GPM**

Water Quality:

Strata Depth (ft.)	Water Type
320 - 418	**M. Trinity - TDS 1500**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Apex Drilling, Inc.**

P.O. Box 867
Marble Falls, TX 78654

Driller Name: **Andrew Jackson Johnson** License Number: **54989**

Comments: **BPGCD # 20200181**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1**	**Top Soil**
1	**19**	**Tan LS**
19	**75**	**Gray LS**
75	**250**	**Gray Tan LS**
250	**270**	**Gray Tan Brown LS**
270	**308**	**Gray Tan LS**
308	**320**	**Blue Tan LS**
320	**338**	**Light Tan LS**
338	**380**	**Broken Gray Tan LS**
380	**410**	**Brown LS**
410	**418**	**Gray LS**
418	**420**	**Gray Clay**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
4.5	**Blank**	**New Plastic (PVC)**	**SDR17**	**2**	**360**
4.5	**Screen**	**New Plastic (PVC)**	**.035**	**360**	**420**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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P.O. Box 12157
Austin, TX 78711
(512) 334-5540

Well Report

Well No. 4

STATE OF TEXAS WELL REPORT for Tracking #561452

Owner:	**Bohls Interest LTD.**	Owner Well #:	**4**
Address:	**3303 Northand Dr. Suite # 212 Austin, TX 78731**	Grid #:	**57-54-6**
		Latitude:	**30° 12' 29" N**
Well Location:	**Legacy # 4 Johnson City, TX 78636**	Longitude:	**098° 15' 39" W**
Well County:	**Blanco**	Elevation:	**No Data**
Number of Wells Drilled:	**9**		

Type of Work: **New Well** Proposed Use: **Domestic**

Drilling Start Date: **12/7/2020** Drilling End Date: **12/7/2020**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
8.5	**0**	**50**
6.5	**50**	**420**

Drilling Method: **Air Rotary**

Borehole Completion: **Straight Wall**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**50**	**3 Benseal 3 Portland 6 Bags/Sacks**

Seal Method: **Slurry**

Sealed By: **Driller**

Distance to Property Line (ft.): **50**

Distance to Septic Field or other concentrated contamination (ft.): **100**

Distance to Septic Tank (ft.): **50**

Method of Verification: **Land Owner**

Surface Completion: **Surface Sleeve Installed** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **Burlap/Neoprene at 50 ft.**
Burlap/Neoprene at 55 ft.
Burlap/Neoprene at 320 ft.
Burlap/Neoprene at 325 ft.

Type of Pump: **No Data**

Well Tests: **Jetted** **Yield: 35 GPM**

Water Quality:

Strata Depth (ft.)	Water Type
325 - 408	**M. Trinity TDS 1500**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Apex Drilling, Inc.**

P.O. Box 867
Marble Falls, TX 78654

Driller Name: **Andrew Jackson Johnson** License Number: **54989**

Comments: **BPGCD # 20200182**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1**	**Top Soil**
1	**13**	**Tan LS**
13	**70**	**Gray LS**
70	**285**	**Gray Tan LS**
285	**290**	**Tan LS w Blue LS**
290	**325**	**Gray LS**
325	**340**	**Light Tan LS**
340	**360**	**Gray Tan Brown LS**
360	**398**	**Brown Gray Tan LS**
398	**408**	**Brown LS**
408	**420**	**Gray LS**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
4.5	**Blank**	**New Plastic (PVC)**	**SDR17**	**0**	**360**
4.5	**Screen**	**New Plastic (PVC)**	**.035**	**360**	**420**

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(512) 334-5540

Well Report

Well No. 5

STATE OF TEXAS WELL REPORT for Tracking #561453

Owner:	**Bohls Interest LDT.**	Owner Well #:	**5**
Address:	**3303 Northand Dr. Suite # 212 Austin, TX 78731**	Grid #:	**57-54-6**
Well Location:	**Legacy # 5 Johnson City, TX 78636**	Latitude:	**30° 12' 27" N**
		Longitude:	**098° 15' 34" W**
Well County:	**Blanco**	Elevation:	**No Data**
Number of Wells Drilled:	**9**		

Type of Work: **New Well** Proposed Use: **Domestic**

Drilling Start Date: **12/7/2020** Drilling End Date: **12/7/2020**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
8.5	**0**	**50**
6.5	**50**	**425**

Drilling Method: **Air Rotary**

Borehole Completion: **Straight Wall**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**50**	**3 Benseal 3 Portland 6 Bags/Sacks**

Seal Method: **Slurry**

Sealed By: **Driller**

Distance to Property Line (ft.): **50**

Distance to Septic Field or other concentrated contamination (ft.): **100**

Distance to Septic Tank (ft.): **50**

Method of Verification: **Land Owner**

Surface Completion: **Surface Sleeve Installed** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **Burlap/Neoprene at 50 ft.**
Burlap/Neoprene at 55 ft.
Burlap/Neoprene at 320 ft.
Burlap/Neoprene at 325 ft.

Type of Pump: **No Data**

Well Tests: **Jetted** **Yield: Lost Retur GPM**

Water Quality:

Strata Depth (ft.)	Water Type
325 - 425	**M. Trinity**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Apex Drilling, Inc.**

P.O. Box 867
Marble Falls, TX 78654

Driller Name: **Andrew Jackson Johnson** License Number: **54989**

Comments: **BPGCD # 20200183**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1**	**Top SOil**
1	**16**	**Tan LS**
16	**25**	**Gray LS**
25	**30**	**Tan LS**
30	**160**	**Gray LS**
160	**305**	**Gray Tan LS**
305	**320**	**Soft**
320	**330**	**Choppy**
330	**340**	**Soft**
340	**360**	**Soft**
360	**425**	**Choppy**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
4.5	**Blank**	**New Plastic (PVC)**	**SDR17**	**2**	**365**
4.5	**Screen**	**New Plastic (PVC)**	**.035**	**365**	**425**

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Well Report

Well No. 6

STATE OF TEXAS WELL REPORT for Tracking #561726

Owner:	**Bohls Interest LTD.**	Owner Well #:	**6**
Address:	**3303 Northand Dr. Suite # 212 Austin, TX 78731**	Grid #:	**57-54-6**
		Latitude:	**30° 12' 29" N**
Well Location:	**Legacy # 6 Johnson City, TX 78636**	Longitude:	**098° 15' 27" W**
Well County:	**Blanco**	Elevation:	**No Data**
Number of Wells Drilled:	**9**		

Type of Work: **New Well** Proposed Use: **Domestic**

Drilling Start Date: **12/9/2020** Drilling End Date: **12/9/2020**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
8.5	**0**	**50**
6.5	**50**	**425**

Drilling Method: **Air Rotary**

Borehole Completion: **Straight Wall**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**50**	**3 Benseal 3 Portland 6 Bags/Sacks**

Seal Method: **Slurry**

Sealed By: **Driller**

Distance to Property Line (ft.): **50**

Distance to Septic Field or other concentrated contamination (ft.): **100**

Distance to Septic Tank (ft.): **50**

Method of Verification: **Land Owner**

Surface Completion: **Surface Sleeve Installed** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **Burlap/Neoprene at 50 ft.**
Burlap/Neoprene at 55 ft.
Burlap/Neoprene at 335 ft.
Burlap/Neoprene at 340 ft.

Type of Pump: **No Data**

Well Tests: **Jetted** **Yield: 50 GPM**

Water Quality:

Strata Depth (ft.)	Water Type
340 - 470	**M. Trinity - TDS 1500**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Apex Drilling, Inc.**

P.O. Box 867
Marble Falls, TX 78654

Driller Name: **Andrew Jackson Johnson** License Number: **54989**

Comments: **BPGCD # 20200184**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1**	**Top Soil**
1	**20**	**Tan LS**
20	**50**	**Gray LS**
50	**147**	**Gray Tan LS**
147	**152**	**Gray LS w/ Calcite**
152	**200**	**Gray Tan LS**
200	**265**	**Tan LS**
265	**320**	**Gray Tan LS**
320	**340**	**Gray LS**
340	**355**	**Light Tan LS**
355	**404**	**Gray Tan LS**
404	**420**	**Brown LS**
420	**425**	**Gray LS**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
4.5	**Blank**	**New Plastic (PVC)**	**SDR17**	**2**	**365**
4.5	**Screen**	**New Plastic (PVC)**	**.035**	**365**	**425**

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(512) 334-5540

Well Report

Well No. 7

STATE OF TEXAS WELL REPORT for Tracking #561735

Owner:	**Bohls Interest LTD.**	Owner Well #:	**7**
Address:	**3303 Northland Dr. Suite #212 Austin, TX 78731**	Grid #:	**57-54-3**
		Latitude:	**30° 12' 51" N**
Well Location:	**Legacy # 7 Johnson City, TX 78636**	Longitude:	**098° 15' 08" W**
Well County:	**Blanco**	Elevation:	**No Data**
Number of Wells Drilled:	**9**		

Type of Work: **New Well** Proposed Use: **Domestic**

Drilling Start Date: **12/10/2020** Drilling End Date: **12/10/2020**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
8.5	**0**	**50**
6.5	**50**	**455**

Drilling Method: **Air Rotary**

Borehole Completion: **Straight Wall**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**50**	**3 Benseal 3 Portland 6 Bags/Sacks**

Seal Method: **Slurry**

Sealed By: **Driller**

Distance to Property Line (ft.): **50**

Distance to Septic Field or other concentrated contamination (ft.): **100**

Distance to Septic Tank (ft.): **50**

Method of Verification: **Land Owner**

Surface Completion: **Surface Sleeve Installed** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **Burlap/Neoprene at 50 ft.**
Burlap/Neoprene at 55 ft.
Burlap/Neoprene at 360 ft.
Burlap/Neoprene at 365 ft.

Type of Pump: **No Data**

Well Tests: **Jetted** **Yield: 42 GPM**

Water Quality:

Strata Depth (ft.)	Water Type
360 - 445	**M. Trinity - TDS 1500**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Apex Drilling, Inc.**

P.O. Box 867
Marble Falls, TX 78654

Driller Name: **Andrew Jackson Johnson** License Number: **54989**

Comments: **BPGCD # 20200185**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1**	**Top Soil**
1	**16**	**Caliche**
16	**105**	**Gray LS**
105	**330**	**Gray Tan LS**
330	**350**	**Gray LS**
350	**365**	**Tan LS**
365	**390**	**Gray Tan LS**
390	**419**	**Gray Tan**
419	**445**	**Brown LS**
445	**454**	**Gray LS**
454	**455**	**Gray Clay**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
4.5	**Blank**	**New Plastic (PVC)**	**SDR17**	**2**	**395**
4.5	**Screen**	**New Plastic (PVC)**	**.035**	**395**	**455**

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(512) 334-5540

Well Report

Well No. 8

STATE OF TEXAS WELL REPORT for Tracking #561736

Owner:	**Bohls Interest LTD.**	Owner Well #:	**8**
Address:	**3303 Northland Dr. Suite # 212 Austin , TX 78731**	Grid #:	**57-54-3**
		Latitude:	**30° 12' 56" N**
Well Location:	**Legacy # 8 Johnson City, TX 78636**	Longitude:	**098° 15' 06" W**
Well County:	**Blanco**	Elevation:	**No Data**
Number of Wells Drilled:	**9**		

Type of Work: **New Well** Proposed Use: **Domestic**

Drilling Start Date: **12/11/2020** Drilling End Date: **12/11/2020**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
8.5	**0**	**50**
6.5	**50**	**460**

Drilling Method: **Air Rotary**

Borehole Completion: **Straight Wall**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**50**	**3 Benseal 3 Portland 6 Bags/Sacks**

Seal Method: **Slurry**

Sealed By: **Driller**

Distance to Property Line (ft.): **50**

Distance to Septic Field or other concentrated contamination (ft.): **100**

Distance to Septic Tank (ft.): **50**

Method of Verification: **Land Owner**

Surface Completion: **Surface Sleeve Installed** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **Burlap/Neoprene at 50 ft.**
Burlap/Neoprene at 55 ft.
Burlap/Neoprene at 350 ft.
Burlap/Neoprene at 360 ft.

Type of Pump: **No Data**

Well Tests: **Jetted** **Yield: 50 GPM**

Water Quality:

Strata Depth (ft.)	Water Type
360 - 457	**M. Trinity - TDS 1500**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Apex Drilling, Inc.**

P.O. Box 867
Marble Falls, TX 78654

Driller Name: **Andrew Jackson Johnson** License Number: **54989**

Comments: **BPGCD # 20200186**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1**	**Top Soil**
1	**10**	**Tan LS**
10	**25**	**Gray LS**
25	**173**	**Gray Tan LS**
173	**175**	**Gray LS**
175	**197**	**Gray LS w/ Clay**
197	**210**	**Tan LS**
210	**240**	**Tan LS w/ Clay**
240	**295**	**Gray Tan LS**
295	**310**	**Gray LS**
310	**330**	**Gray Tan LS**
330	**360**	**Gray LS w/ Clay**
360	**385**	**Tan Gray LS (Soft)**
385	**419**	**Gray Tan LS (Hard)**
419	**442**	**Brown LS (Broken)**
442	**457**	**Gray LS**
457	**460**	**Gray Clay**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
4.5	**Blank**	**New Plastic (PVC)**	**SDR17**	**2**	**400**
4.5	**Screen**	**New Plastic (PVC)**	**.035**	**400**	**460**

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(512) 334-5540

Well Report

Well No. 9

STATE OF TEXAS WELL REPORT for Tracking #561739

Owner:	**Bohls Interest LTD.**	Owner Well #:	**9**
Address:	**3303 Northland Dr. Suite # 121 Austin , TX 78731**	Grid #:	**57-54-6**
Well Location:	**Legacy # 9 Johnson City, TX 78636**	Latitude:	**30° 12' 14" N**
		Longitude:	**098° 15' 47" W**
Well County:	**Blanco**	Elevation:	**No Data**
Number of Wells Drilled:	**9**		

Type of Work: **New Well** Proposed Use: **Domestic**

Drilling Start Date: **12/14/2020** Drilling End Date: **12/14/2020**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
8.5	**0**	**50**
6.5	**50**	**445**

Drilling Method: **Air Rotary**

Borehole Completion: **Straight Wall**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**50**	**3 Benseal 3 Portland 6 Bags/Sacks**

Seal Method: **Slurry**

Sealed By: **Driller**

Distance to Property Line (ft.): **50**

Distance to Septic Field or other concentrated contamination (ft.): **100**

Distance to Septic Tank (ft.): **50**

Method of Verification: **Land Owner**

Surface Completion: **Surface Sleeve Installed** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **Burlap/Neoprene at 50 ft.**
Burlap/Neoprene at 55 ft.
Burlap/Neoprene at 355 ft.
Burlap/Neoprene at 360 ft.

Type of Pump: **No Data**

Well Tests: **Jetted** **Yield: 25 GPM**

Water Quality:

Strata Depth (ft.)	Water Type
363 - 440	**M. Trinity - TDS 1500**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Apex Drilling, Inc.**

P.O. Box 867
Marble Falls, TX 78654

Driller Name: **Andrew Jackson Johnson** License Number: **54989**

Comments: **BPGCD # 20200187**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1**	**Top SOil**
1	**10**	**Caliche**
10	**25**	**Gray LS**
25	**185**	**Gray Tan LS**
185	**195**	**Gray LS**
195	**300**	**Gray Tan LS**
300	**330**	**Gray LS**
330	**363**	**Gray Tan LS**
363	**383**	**Gray Tan LS (Hard)**
383	**420**	**Gray Tan LS (Choppy)**
420	**440**	**Brown LS**
440	**445**	**Gray LS**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
4.5	**Blank**	**New Plastic (PVC)**	**SDR17**	**2**	**385**
4.5	**Screen**	**New Plastic (PVC)**	**.035**	**385**	**445**

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Appendix C

Aquifer Test Data and Analysis

Aquifer Test

Well No. 1

Legacy Hills Well No. 1 - Aquifer Test (December 15, 2020)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 1 Temperature (F)	PW Well No. 1 Water Level (ft bgs)	PW Well No. 1 Water Level (ft MSL)	PW Well No. 1 Drawdown (ft)	PW Well No. 1 Pump Rate (gpm)	PW Well No. 1 Specific Capacity (gpm/ft)	Comments	OW Well No. 2 Water Level (ft MSL)	OW Well No. 2 Drawdown (ft)
12/15/20 9:58 AM	0		70.47	318.54	994.46	0.00			Pump Start	1,000.01	0.00
12/15/20 9:59 AM	1		70.90	318.74	994.26	0.21			Meter: 549,994 gallons	1,000.01	0.00
12/15/20 10:00 AM	2		71.23	318.85	994.15	0.31	11.9	38.39		1,000.02	0.00
12/15/20 10:01 AM	3		71.57	318.82	994.18	0.28				999.97	0.04
12/15/20 10:02 AM	4		71.76	318.90	994.10	0.36				999.90	0.12
12/15/20 10:03 AM	5		71.89	318.91	994.09	0.37				999.96	0.06
12/15/20 10:04 AM	6		72.05	318.94	994.06	0.41				999.94	0.07
12/15/20 10:05 AM	7		72.12	318.85	994.15	0.31				1,000.00	0.01
12/15/20 10:06 AM	8		72.23	318.89	994.11	0.36				999.94	0.07
12/15/20 10:07 AM	9		72.34	318.84	994.16	0.30				999.99	0.02
12/15/20 10:08 AM	10		72.40	319.00	994.00	0.46				1,000.07	-0.06
12/15/20 10:09 AM	11		72.46	318.90	994.10	0.36				999.99	0.02
12/15/20 10:10 AM	12		72.52	318.88	994.12	0.34				999.96	0.05
12/15/20 10:11 AM	13		72.52	318.98	994.02	0.44				999.90	0.11
12/15/20 10:12 AM	14		72.60	318.97	994.03	0.43				1,000.01	0.00
12/15/20 10:13 AM	15		72.63	318.97	994.03	0.44	11.9	27.29		999.96	0.05
12/15/20 10:18 AM	20		72.75	318.96	994.05	0.42				999.90	0.11
12/15/20 10:23 AM	25		72.89	318.91	994.09	0.37				999.94	0.08
12/15/20 10:28 AM	30		72.96	318.99	994.01	0.45				999.83	0.18
12/15/20 10:43 AM	45		73.08	318.99	994.01	0.45				999.87	0.14
12/15/20 10:58 AM	60		73.19	318.97	994.03	0.44	11.9	27.23	pH: 6.87/ EC: 2.65	999.76	0.25
12/15/20 11:13 AM	75		73.22	319.10	993.90	0.56				999.80	0.21
12/15/20 11:28 AM	90		73.23	318.97	994.03	0.43	11.9	27.61	pH: 7.02/ EC: 2.67	999.88	0.13
12/15/20 11:43 AM	105		73.27	319.05	993.95	0.51				999.75	0.26
12/15/20 11:58 AM	120		73.28	318.96	994.04	0.42				999.80	0.21
12/15/20 12:28 PM	150		73.30	319.09	993.91	0.55				999.72	0.29
12/15/20 12:58 PM	180		73.30	319.07	993.93	0.53				999.73	0.28
12/15/20 1:28 PM	210		73.31	319.13	993.87	0.60				999.73	0.28
12/15/20 1:58 PM	240		73.40	319.20	993.80	0.66				999.71	0.30
12/15/20 2:58 PM	300		73.41	319.16	993.84	0.63				999.71	0.30
12/15/20 3:58 PM	360		73.36	319.13	993.87	0.60				999.72	0.29
12/15/20 4:58 PM	420		73.35	319.18	993.82	0.64				999.68	0.33
12/15/20 5:58 PM	480		73.36	319.19	993.81	0.65				999.73	0.28
12/15/20 6:58 PM	540		73.41	319.11	993.89	0.57				999.61	0.40
12/15/20 7:58 PM	600		73.39	319.12	993.88	0.58				999.61	0.40

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 1.5 HP
MSL = Mean Sea Level Pump Setting = 360 ft EC=Electrical conductivity (mS/cm)

Legacy Hills Well No. 1 - Aquifer Test (December 15, 2020)

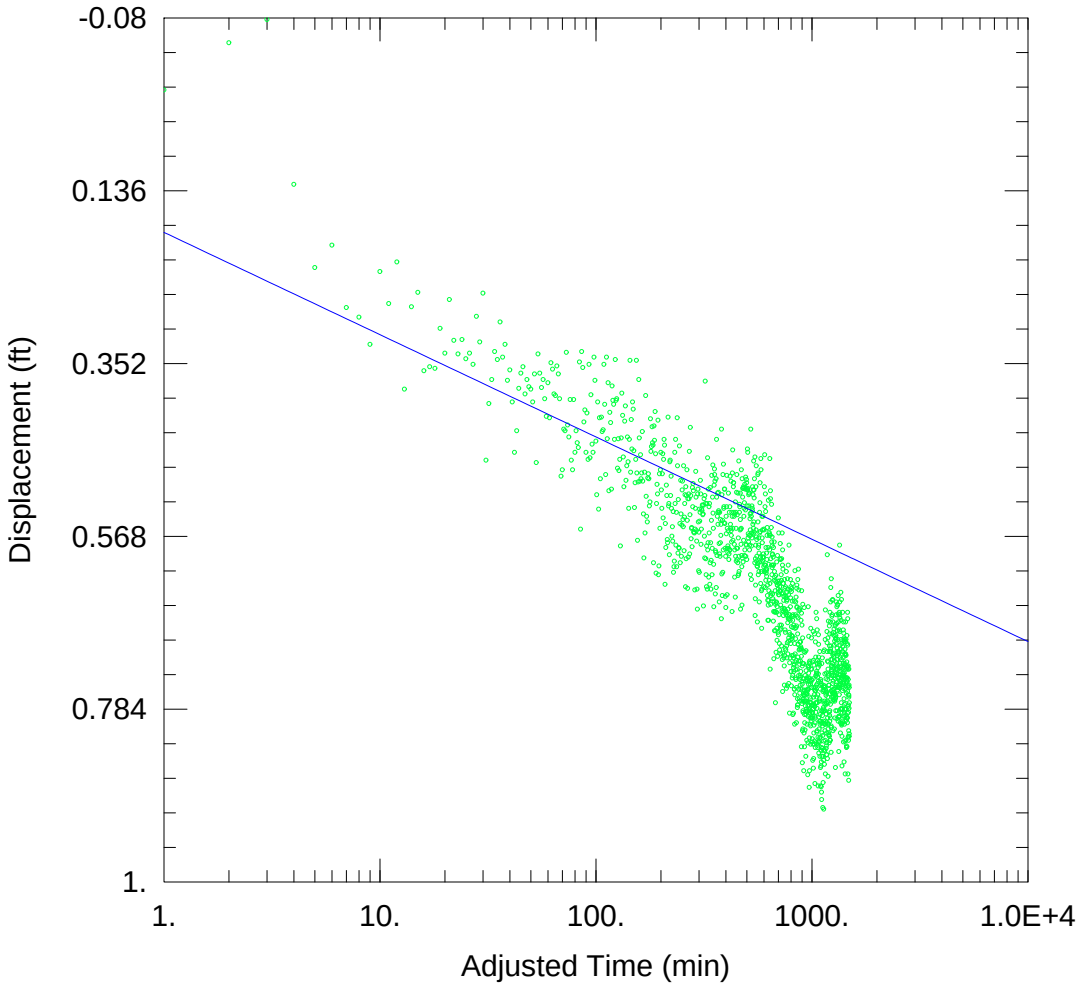
Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 1 Temperature (F)	PW Well No. 1 Water Level (ft bgs)	PW Well No. 1 Water Level (ft MSL)	PW Well No. 1 Drawdown (ft)	PW Well No. 1 Pump Rate (gpm)	PW Well No. 1 Specific Capacity (gpm/ft)	Comments	OW Well No. 2 Water Level (ft MSL)	OW Well No. 2 Drawdown (ft)
12/15/20 8:58 PM	660		73.36	319.29	993.71	0.75				999.65	0.37
12/15/20 9:58 PM	720		73.36	319.24	993.76	0.70				999.62	0.39
12/15/20 10:58 PM	780		73.37	319.29	993.71	0.75				999.51	0.51
12/15/20 11:58 PM	840		73.41	319.27	993.74	0.73				999.52	0.49
12/16/20 12:58 AM	900		73.38	319.47	993.53	0.93				999.53	0.48
12/16/20 1:58 AM	960		73.40	319.36	993.64	0.82				999.40	0.61
12/16/20 2:58 AM	1,020		73.36	319.42	993.58	0.88				999.46	0.55
12/16/20 3:58 AM	1,080		73.35	319.44	993.56	0.90				999.42	0.59
12/16/20 4:58 AM	1,140		73.35	319.33	993.68	0.79				999.39	0.62
12/16/20 5:58 AM	1,200		73.38	319.44	993.56	0.90				999.51	0.50
12/16/20 6:58 AM	1,260		73.43	319.38	993.62	0.84				999.54	0.48
12/16/20 7:58 AM	1,320		73.35	319.33	993.67	0.79				999.46	0.56
12/16/20 8:58 AM	1,380		73.36	319.33	993.67	0.79				999.53	0.48
12/16/20 9:58 AM	1,440		73.41	319.35	993.66	0.81				999.44	0.57
12/16/20 10:46 AM	1,488	0	73.34	319.39	993.61	0.85	11.9	13.93	Pump Stop	999.46	0.55
12/16/20 10:47 AM	1,489	1	73.42	319.10	993.91	0.56			Meter: 567,507 gallons	999.45	0.57
12/16/20 10:48 AM	1,490	2	73.39	319.00	994.00	0.46			Avg. Pump Rate: 12 gpm	999.46	0.56
12/16/20 10:49 AM	1,491	3	73.39	319.08	993.93	0.54				999.50	0.51
12/16/20 10:50 AM	1,492	4	73.40	319.08	993.92	0.55				999.47	0.54
12/16/20 10:51 AM	1,493	5	73.43	319.03	993.97	0.49				999.51	0.50
12/16/20 10:52 AM	1,494	6	73.50	319.03	993.97	0.49				999.51	0.50
12/16/20 10:53 AM	1,495	7	73.69	319.07	993.93	0.53				999.51	0.50
12/16/20 10:54 AM	1,496	8	73.81	319.06	993.94	0.53				999.50	0.51
12/16/20 10:55 AM	1,497	9	73.89	318.99	994.01	0.46				999.47	0.54
12/16/20 10:56 AM	1,498	10	74.06	319.01	993.99	0.47				999.49	0.52
12/16/20 10:57 AM	1,499	11	74.18	319.07	993.93	0.53				999.47	0.54
12/16/20 10:58 AM	1,500	12	74.34	318.96	994.04	0.42				999.54	0.47
12/16/20 10:59 AM	1,501	13	74.45	319.00	994.01	0.46				999.50	0.51
12/16/20 11:00 AM	1,502	14	74.60	318.99	994.01	0.45				999.55	0.46
12/16/20 11:01 AM	1,503	15	74.58	319.02	993.98	0.48				999.51	0.50
12/16/20 11:06 AM	1,508	20	74.75	319.05	993.95	0.52				999.47	0.54
12/16/20 11:11 AM	1,513	25	74.79	319.04	993.96	0.50				999.41	0.60
12/16/20 11:16 AM	1,518	30	74.71	318.97	994.03	0.43				999.51	0.50
12/16/20 11:31 AM	1,533	45	74.30	319.07	993.93	0.53				999.55	0.46
12/16/20 11:46 AM	1,548	60	74.08	318.85	994.15	0.32				999.51	0.50

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 1.5 HP
MSL = Mean Sea Level Pump Setting = 360 ft EC=Electrical conductivity (mS/cm)

Legacy Hills Well No. 1 - Aquifer Test (December 15, 2020)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 1 Temperature (F)	PW Well No. 1 Water Level (ft bgs)	PW Well No. 1 Water Level (ft MSL)	PW Well No. 1 Drawdown (ft)	PW Well No. 1 Pump Rate (gpm)	PW Well No. 1 Specific Capacity (gpm/ft)	Comments	OW Well No. 2 Water Level (ft MSL)	OW Well No. 2 Drawdown (ft)
12/16/20 12:01 PM	1,563	75	73.78	318.93	994.07	0.40				999.65	0.37
12/16/20 12:16 PM	1,578	90	73.68	319.07	993.93	0.53				999.45	0.56
12/16/20 12:31 PM	1,593	105	73.54	318.94	994.06	0.41				999.52	0.49
12/16/20 12:46 PM	1,608	120	73.41	318.95	994.05	0.41				999.56	0.46
12/16/20 1:16 PM	1,638	150	73.37	318.98	994.02	0.44				999.51	0.50
12/16/20 1:46 PM	1,668	180	73.25	318.90	994.10	0.37				999.52	0.49
12/16/20 2:16 PM	1,698	210	73.20	318.94	994.06	0.40				999.56	0.45
12/16/20 2:46 PM	1,728	240	73.17	318.91	994.09	0.37				999.61	0.40
12/16/20 3:46 PM	1,788	300	73.08	318.94	994.06	0.41				999.58	0.43
12/16/20 4:46 PM	1,848	360	73.12	318.88	994.12	0.34				999.61	0.40
12/16/20 5:46 PM	1,908	420	73.04	318.84	994.16	0.31				999.65	0.36
12/16/20 6:46 PM	1,968	480	73.04	318.95	994.05	0.41				999.64	0.37
12/16/20 7:46 PM	2,028	540	73.01	318.87	994.13	0.34				999.64	0.37
12/16/20 8:46 PM	2,088	600	73.01	318.88	994.12	0.34				999.70	0.31
12/16/20 9:46 PM	2,148	660	72.99	318.82	994.18	0.28				999.67	0.34
12/16/20 10:46 PM	2,208	720	73.03	318.87	994.13	0.34				999.68	0.34
12/16/20 11:46 PM	2,268	780	72.97	318.83	994.17	0.29				999.65	0.37
12/17/20 12:46 AM	2,328	840	72.93	318.83	994.17	0.29				999.70	0.31
12/17/20 1:46 AM	2,388	900	72.94	318.96	994.04	0.43				999.58	0.43
12/17/20 2:46 AM	2,448	960	72.99	318.83	994.17	0.29				999.68	0.34
12/17/20 3:46 AM	2,508	1020	72.92	318.87	994.13	0.34				999.71	0.30
12/17/20 4:46 AM	2,568	1080	72.94	318.83	994.17	0.29				999.73	0.28
12/17/20 5:46 AM	2,628	1140	72.97	318.72	994.28	0.18				999.65	0.37
12/17/20 6:46 AM	2,688	1200	72.90	318.64	994.36	0.11				999.77	0.24
12/17/20 7:46 AM	2,748	1260	72.94	318.76	994.24	0.22				999.78	0.23
12/17/20 8:46 AM	2,808	1320	72.90	318.76	994.25	0.22				999.84	0.17
12/17/20 9:04 AM	2,826	1338	72.93	318.70	994.30	0.16				999.78	0.23

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 1.5 HP
MSL = Mean Sea Level Pump Setting = 360 ft EC=Electrical conductivity (mS/cm)



WELL TEST ANALYSIS

Data Set: \...\PW 1.aqt
Date: 01/15/21 Time: 13:39:44

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Lonestar Land Partners
Location: Blanco County
Test Well: Well No. 1
Test Date: 12-15-20

AQUIFER DATA

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

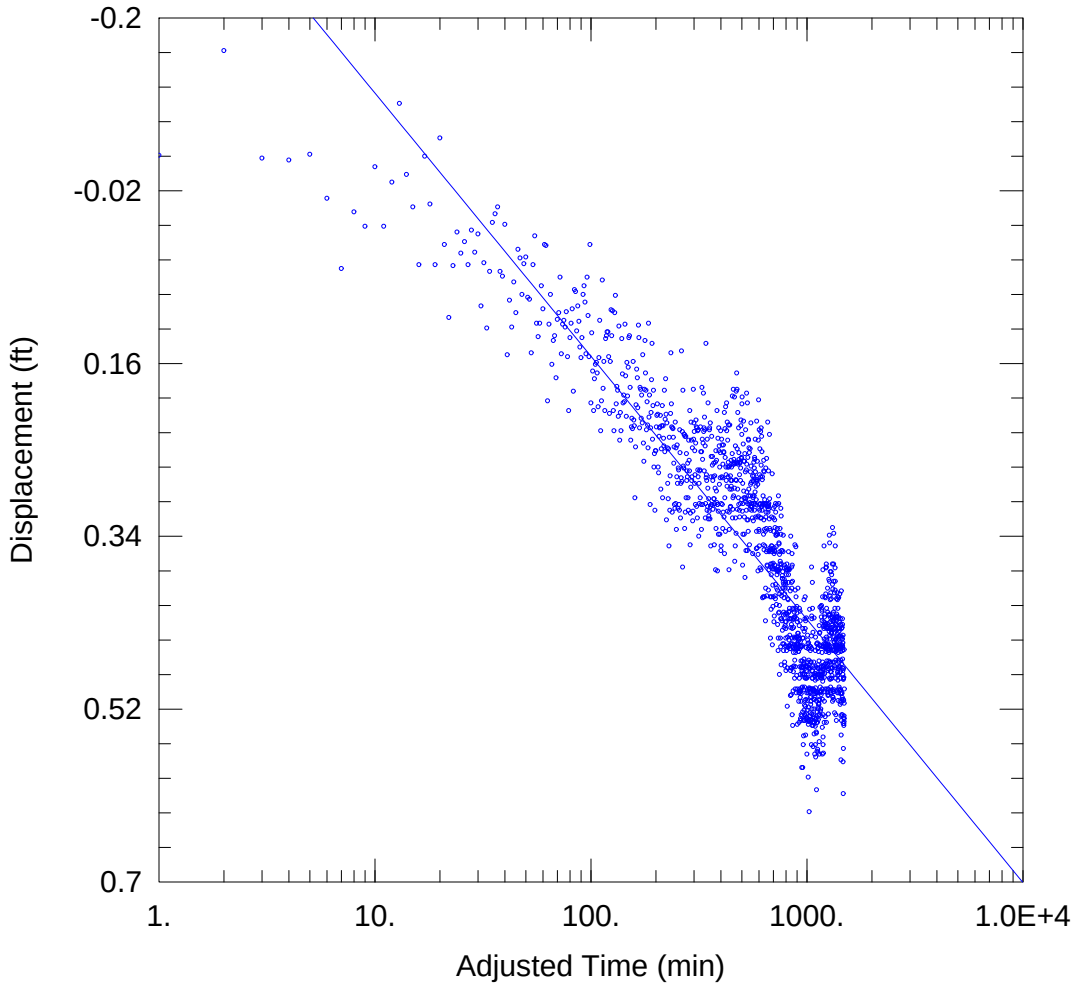
Pumping Wells

Well Name	X (ft)	Y (ft)
Well No. 1	0	0

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 3310.1 ft^2/day



WELL TEST ANALYSIS

Data Set: \...\OW 2.aqt
Date: 01/15/21 Time: 13:36:45

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Lonestar Land Partners
Location: Blanco County
Test Well: Well No. 1
Test Date: 12-15-20

AQUIFER DATA

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Well No. 1	0	0

Observation Wells

Well Name	X (ft)	Y (ft)
◦ Well No. 2	580	0

SOLUTION

Aquifer Model: Confined
Solution Method: Cooper-Jacob
T = 1544.2 ft^2/day
S = 0.0001991

Aquifer Test

Well No. 3

Legacy Hills Well No. 3 - Aquifer Test (December 17, 2020)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 3 Temperature (F)	PW Well No. 3 Water Level (ft bgs)	PW Well No. 3 Water Level (ft MSL)	PW Well No. 3 Drawdown (ft)	PW Well No. 3 Pump Rate (gpm)	PW Well No. 3 Specific Capacity (gpm/ft)	Comments	OW Well No. 2 Water Level (ft MSL)	OW Well No. 2 Drawdown (ft)
12/17/20 9:57 AM	0		72.90	321.65	991.35	0.00			Pump Start	1,004.81	0.00
12/17/20 9:58 AM	1		72.87	321.85	991.16	0.20			Meter: 567,507 gallons	1,004.88	-0.07
12/17/20 9:59 AM	2		72.89	321.97	991.04	0.31				1,004.88	-0.07
12/17/20 10:00 AM	3		72.95	321.92	991.08	0.27			pH: 7.95/ EC: 0.84	1,004.84	-0.02
12/17/20 10:01 AM	4		72.94	321.94	991.06	0.29				1,004.80	0.02
12/17/20 10:02 AM	5		72.97	322.04	990.96	0.39	14.2	36.69		1,004.81	0.01
12/17/20 10:03 AM	6		72.95	321.99	991.01	0.34				1,004.82	0.00
12/17/20 10:04 AM	7		72.97	321.98	991.03	0.33				1,004.79	0.02
12/17/20 10:05 AM	8		72.94	321.94	991.06	0.29				1,004.80	0.02
12/17/20 10:06 AM	9		72.97	321.98	991.02	0.33				1,004.75	0.06
12/17/20 10:07 AM	10		72.98	322.06	990.94	0.41				1,004.81	0.00
12/17/20 10:08 AM	11		73.00	322.02	990.98	0.37				1,004.77	0.05
12/17/20 10:09 AM	12		73.00	321.98	991.02	0.33				1,004.76	0.06
12/17/20 10:10 AM	13		73.05	322.07	990.93	0.42				1,004.73	0.08
12/17/20 10:11 AM	14		73.04	321.94	991.06	0.29				1,004.78	0.03
12/17/20 10:12 AM	15		73.01	322.03	990.98	0.38				1,004.78	0.03
12/17/20 10:17 AM	20		73.04	322.02	990.98	0.37	14.0	37.63	pH: 6.84/ EC: 2.82	1,004.74	0.08
12/17/20 10:22 AM	25		73.12	322.04	990.96	0.39				1,004.73	0.08
12/17/20 10:27 AM	30		73.09	322.10	990.90	0.45				1,004.69	0.12
12/17/20 10:42 AM	45		73.05	322.13	990.87	0.48				1,004.66	0.16
12/17/20 10:57 AM	60		73.10	322.16	990.84	0.51	14.0	27.29	pH: 6.98/ EC: 2.88	1,004.67	0.15
12/17/20 11:12 AM	75		73.09	322.15	990.85	0.50				1,004.60	0.22
12/17/20 11:27 AM	90		73.08	322.18	990.82	0.53				1,004.65	0.16
12/17/20 11:42 AM	105		73.12	322.15	990.85	0.50				1,004.64	0.18
12/17/20 11:57 AM	120		73.09	322.22	990.78	0.57	14.0	24.43	pH: 6.78/ EC: 2.88	1,004.53	0.29
12/17/20 12:27 PM	150		73.05	322.22	990.78	0.57				1,004.64	0.17
12/17/20 12:57 PM	180		73.05	322.22	990.78	0.57	14.0	24.65	pH: 6.88/ EC: 2.85	1,004.53	0.28
12/17/20 1:27 PM	210		73.05	322.31	990.69	0.66				1,004.52	0.30
12/17/20 1:57 PM	240		73.02	322.29	990.71	0.64				1,004.53	0.28
12/17/20 2:57 PM	300		73.05	322.34	990.66	0.69				1,004.47	0.34
12/17/20 3:57 PM	360		73.04	322.36	990.64	0.71				1,004.50	0.32
12/17/20 4:57 PM	420		73.02	322.32	990.68	0.67				1,004.45	0.36
12/17/20 5:57 PM	480		73.03	322.39	990.61	0.74				1,004.50	0.32
12/17/20 6:57 PM	540		73.08	322.33	990.67	0.68				1,004.35	0.47
12/17/20 7:57 PM	600		73.07	322.44	990.56	0.79				1,004.39	0.42

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 1.5 HP
MSL = Mean Sea Level Pump Setting = 380 ft EC=Electrical conductivity (mS/cm)

Legacy Hills Well No. 3 - Aquifer Test (December 17, 2020)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 3 Temperature (F)	PW Well No. 3 Water Level (ft bgs)	PW Well No. 3 Water Level (ft MSL)	PW Well No. 3 Drawdown (ft)	PW Well No. 3 Pump Rate (gpm)	PW Well No. 3 Specific Capacity (gpm/ft)	Comments	OW Well No. 2 Water Level (ft MSL)	OW Well No. 2 Drawdown (ft)
12/17/20 8:57 PM	660		73.04	322.38	990.62	0.73				1,004.30	0.51
12/17/20 9:57 PM	720		73.06	322.43	990.57	0.78				1,004.37	0.45
12/17/20 10:57 PM	780		73.07	322.53	990.48	0.88				1,004.22	0.59
12/17/20 11:57 PM	840		73.05	322.60	990.40	0.95				1,004.39	0.43
12/18/20 12:57 AM	900		73.03	322.52	990.48	0.87				1,004.22	0.59
12/18/20 1:57 AM	960		73.04	322.59	990.42	0.94				1,004.15	0.67
12/18/20 2:57 AM	1,020		73.03	322.67	990.33	1.02				1,004.13	0.69
12/18/20 3:57 AM	1,080		73.08	322.67	990.33	1.02				1,004.12	0.69
12/18/20 4:57 AM	1,140		73.06	322.67	990.33	1.02				1,004.14	0.67
12/18/20 5:57 AM	1,200		73.05	322.67	990.33	1.02				1,004.13	0.69
12/18/20 6:57 AM	1,260		73.06	322.70	990.30	1.05				1,004.14	0.67
12/18/20 7:57 AM	1,320		73.01	322.57	990.44	0.92				1,004.20	0.62
12/18/20 8:57 AM	1,380		73.05	322.66	990.34	1.01				1,004.14	0.67
12/18/20 9:57 AM	1,440		73.06	322.60	990.40	0.95				1,004.18	0.64
12/18/20 10:57 AM	1,500		73.03	322.70	990.30	1.05				1,004.02	0.80
12/18/20 11:57 AM	1,560		73.02	322.78	990.22	1.13				1,004.04	0.78
12/18/20 12:01 PM	1,564	0	73.04	322.66	990.34	1.01	11.9	11.75	Pump Stop	1,004.07	0.74
12/18/20 12:02 PM	1,565	1	73.07	322.53	990.47	0.88			Meter: 589,417 gallons	1,003.99	0.82
12/18/20 12:03 PM	1,566	2	73.02	322.42	990.58	0.77			Avg. Pump Rate: 14 gpm	1,003.95	0.86
12/18/20 12:04 PM	1,567	3	73.07	322.42	990.58	0.77				1,003.94	0.87
12/18/20 12:05 PM	1,568	4	73.22	322.43	990.57	0.78				1,003.98	0.84
12/18/20 12:06 PM	1,569	5	73.40	322.52	990.48	0.87				1,004.04	0.78
12/18/20 12:07 PM	1,570	6	73.47	322.45	990.55	0.80				1,004.03	0.79
12/18/20 12:08 PM	1,571	7	73.57	322.47	990.53	0.82				1,004.08	0.73
12/18/20 12:09 PM	1,572	8	73.64	322.43	990.57	0.78				1,004.02	0.79
12/18/20 12:10 PM	1,573	9	73.69	322.45	990.55	0.80				1,004.02	0.80
12/18/20 12:11 PM	1,574	10	73.72	322.40	990.60	0.75				1,004.10	0.71
12/18/20 12:12 PM	1,575	11	73.67	322.43	990.57	0.78				1,004.13	0.69
12/18/20 12:13 PM	1,576	12	73.71	322.40	990.61	0.75				1,004.09	0.72
12/18/20 12:14 PM	1,577	13	73.70	322.39	990.61	0.74				1,004.16	0.65
12/18/20 12:15 PM	1,578	14	73.64	322.44	990.56	0.79				1,004.09	0.73
12/18/20 12:16 PM	1,579	15	73.66	322.41	990.60	0.75				1,004.07	0.74
12/18/20 12:21 PM	1,584	20	73.63	322.33	990.67	0.68				1,004.15	0.67
12/18/20 12:26 PM	1,589	25	73.58	322.30	990.70	0.65				1,004.18	0.64
12/18/20 12:31 PM	1,594	30	73.51	322.32	990.68	0.67				1,004.05	0.77

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 1.5 HP
MSL = Mean Sea Level Pump Setting = 380 ft EC=Electrical conductivity (mS/cm)

Legacy Hills Well No. 3 - Aquifer Test (December 17, 2020)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 3 Temperature (F)	PW Well No. 3 Water Level (ft bgs)	PW Well No. 3 Water Level (ft MSL)	PW Well No. 3 Drawdown (ft)	PW Well No. 3 Pump Rate (gpm)	PW Well No. 3 Specific Capacity (gpm/ft)	Comments	OW Well No. 2 Water Level (ft MSL)	OW Well No. 2 Drawdown (ft)
12/18/20 12:46 PM	1,609	45	73.28	322.31	990.69	0.66				1,004.12	0.69
12/18/20 1:01 PM	1,624	60	73.19	322.27	990.73	0.62				1,004.12	0.69
12/18/20 1:16 PM	1,639	75	73.07	322.28	990.72	0.63				1,004.11	0.70
12/18/20 1:31 PM	1,654	90	73.09	322.34	990.66	0.69				1,004.20	0.61
12/18/20 1:46 PM	1,669	105	73.11	322.23	990.77	0.58				1,004.19	0.63
12/18/20 2:01 PM	1,684	120	73.06	322.33	990.67	0.68				1,004.12	0.70
12/18/20 2:31 PM	1,714	150	73.07	322.24	990.76	0.59				1,004.12	0.69
12/18/20 3:01 PM	1,744	180	72.97	322.36	990.64	0.71				1,004.26	0.56
12/18/20 3:31 PM	1,774	210	72.98	322.27	990.73	0.62				1,004.17	0.65
12/18/20 4:01 PM	1,804	240	72.98	322.23	990.77	0.58				1,004.27	0.54
12/18/20 5:01 PM	1,864	300	72.99	322.23	990.78	0.58				1,004.23	0.58
12/18/20 6:01 PM	1,924	360	72.93	322.11	990.89	0.46				1,004.28	0.53
12/18/20 7:01 PM	1,984	420	72.93	322.12	990.88	0.47				1,004.31	0.50
12/18/20 8:01 PM	2,044	480	72.97	322.15	990.85	0.50				1,004.35	0.47
12/18/20 9:01 PM	2,104	540	72.93	322.06	990.94	0.41				1,004.43	0.39
12/18/20 10:01 PM	2,164	600	72.95	322.15	990.86	0.50				1,004.39	0.42
12/18/20 11:01 PM	2,224	660	72.91	322.07	990.93	0.42				1,004.36	0.45
12/19/20 12:01 AM	2,284	720	72.93	322.12	990.88	0.47				1,004.40	0.42
12/19/20 1:01 AM	2,344	780	72.97	322.14	990.87	0.49				1,004.40	0.41
12/19/20 2:01 AM	2,404	840	72.93	322.09	990.91	0.44				1,004.39	0.42
12/19/20 3:01 AM	2,464	900	72.96	322.10	990.90	0.45				1,004.32	0.49
12/19/20 4:01 AM	2,524	960	72.95	322.16	990.84	0.51				1,004.37	0.44
12/19/20 5:01 AM	2,584	1020	72.92	322.10	990.90	0.45				1,004.41	0.40
12/19/20 6:01 AM	2,644	1080	72.91	322.03	990.97	0.38				1,004.42	0.39
12/19/20 7:01 AM	2,704	1140	72.95	322.01	990.99	0.36				1,004.45	0.37
12/19/20 8:01 AM	2,764	1200	72.93	322.03	990.97	0.38				1,004.55	0.26
12/19/20 9:01 AM	2,824	1260	72.91	322.00	991.00	0.35				1,004.58	0.24
12/19/20 10:01 AM	2,884	1320	72.92	321.90	991.10	0.25				1,004.53	0.29
12/19/20 11:01 AM	2,944	1380	72.95	321.92	991.08	0.27				1,004.64	0.17
12/19/20 12:01 PM	3,004	1440	72.90	321.81	991.19	0.16				1,004.65	0.16
12/19/20 1:01 PM	3,064	1500	72.99	321.95	991.05	0.30				1,004.64	0.18
12/19/20 2:01 PM	3,124	1560	72.96	321.87	991.13	0.22				1,004.60	0.21
12/19/20 3:01 PM	3,184	1620	72.94	321.86	991.14	0.21				1,004.67	0.14

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 1.5 HP
MSL = Mean Sea Level Pump Setting = 380 ft EC=Electrical conductivity (mS/cm)

Legacy Hills Well No. 3 - Aquifer Test (December 17, 2020)

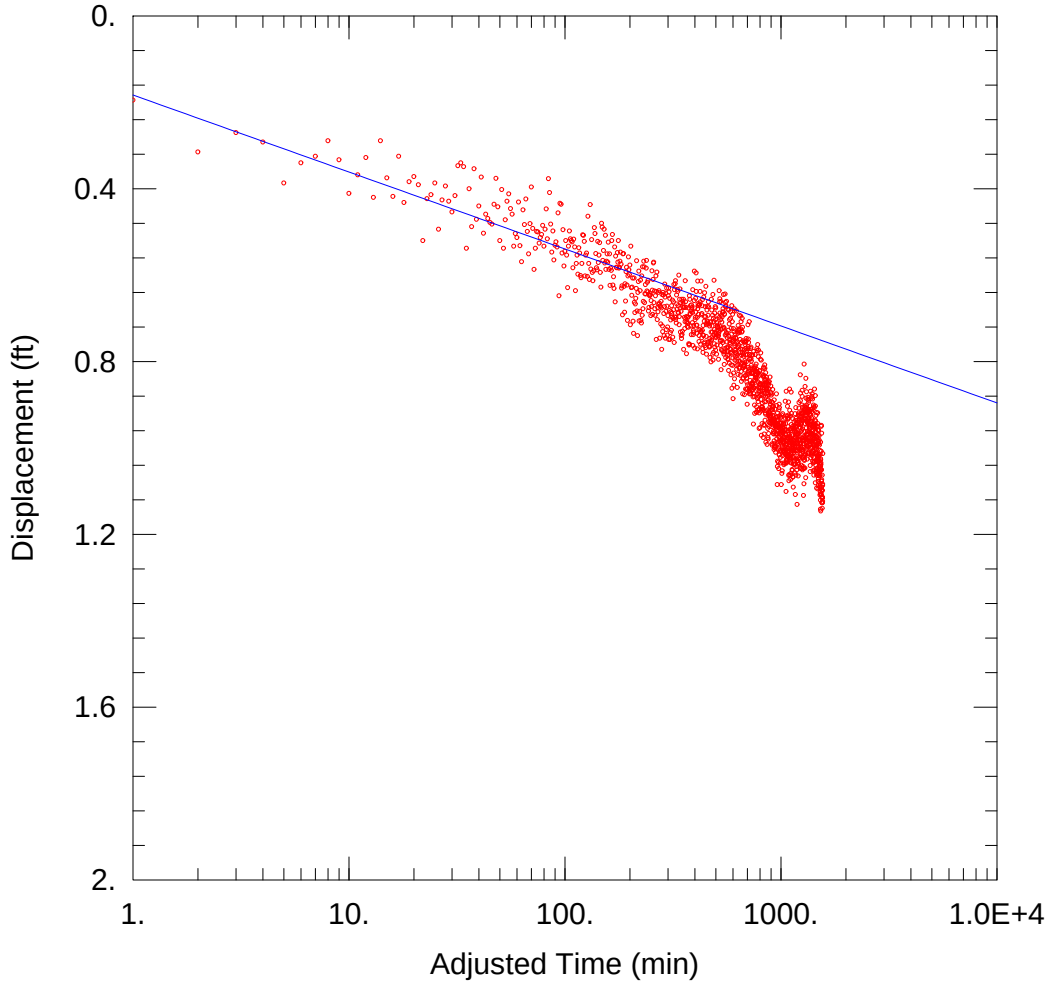
Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 3 Temperature (F)	PW Well No. 3 Water Level (ft bgs)	PW Well No. 3 Water Level (ft MSL)	PW Well No. 3 Drawdown (ft)	PW Well No. 3 Pump Rate (gpm)	PW Well No. 3 Specific Capacity (gpm/ft)	Comments	OW Well No. 2 Water Level (ft MSL)	OW Well No. 2 Drawdown (ft)
12/19/20 4:01 PM	3,244	1680	72.96	321.84	991.16	0.19				1,004.58	0.23
12/19/20 5:01 PM	3,304	1740	72.95	321.92	991.09	0.26				1,004.60	0.21
12/19/20 6:01 PM	3,364	1800	72.94	321.85	991.15	0.20				1,004.60	0.21
12/19/20 7:01 PM	3,424	1860	72.93	321.83	991.17	0.18				1,004.63	0.18
12/19/20 8:01 PM	3,484	1920	72.93	321.90	991.10	0.25				1,004.67	0.15
12/19/20 9:01 PM	3,544	1980	72.93	321.79	991.21	0.14				1,004.73	0.09
12/19/20 10:01 PM	3,604	2040	72.95	321.78	991.22	0.13				1,004.62	0.19
12/19/20 11:01 PM	3,664	2100	72.97	321.80	991.20	0.15				1,004.65	0.17
12/20/20 12:01 AM	3,724	2160	72.98	321.81	991.19	0.16				1,004.64	0.17
12/20/20 1:01 AM	3,784	2220	72.93	321.80	991.20	0.15				1,004.64	0.18
12/20/20 2:01 AM	3,844	2280	72.92	321.76	991.24	0.11				1,004.64	0.17
12/20/20 3:01 AM	3,904	2340	72.93	321.85	991.15	0.20				1,004.71	0.11
12/20/20 4:01 AM	3,964	2400	72.97	321.76	991.25	0.11				1,004.69	0.13
12/20/20 5:01 AM	4,024	2460	72.99	321.86	991.14	0.21				1,004.67	0.14
12/20/20 6:01 AM	4,084	2520	72.93	321.82	991.18	0.17				1,004.69	0.13
12/20/20 7:01 AM	4,144	2580	72.93	321.70	991.30	0.05				1,004.75	0.07
12/20/20 8:01 AM	4,204	2640	72.93	321.80	991.20	0.15				1,004.71	0.10
12/20/20 9:01 AM	4,264	2700	72.93	321.64	991.36	-0.01				1,004.70	0.11
12/20/20 10:01 AM	4,324	2760	72.97	321.78	991.22	0.13				1,004.80	0.01
12/20/20 11:01 AM	4,384	2820	72.95	321.73	991.28	0.08				1,004.76	0.06
12/20/20 12:01 PM	4,444	2880	72.96	321.78	991.22	0.13				1,004.71	0.10
12/20/20 1:01 PM	4,504	2940	72.96	321.71	991.29	0.06				1,004.78	0.03
12/20/20 2:01 PM	4,564	3000	72.92	321.68	991.32	0.03				1,004.74	0.08
12/20/20 3:01 PM	4,624	3060	72.97	321.68	991.32	0.03				1,004.67	0.15
12/20/20 4:01 PM	4,684	3120	72.97	321.70	991.30	0.05				1,004.79	0.03
12/20/20 5:01 PM	4,744	3180	72.95	321.64	991.36	-0.01				1,004.83	-0.02
12/20/20 6:01 PM	4,804	3240	72.93	321.62	991.38	-0.03				1,004.76	0.06
12/20/20 7:01 PM	4,864	3300	72.96	321.67	991.33	0.02				1,004.78	0.04
12/20/20 8:01 PM	4,924	3360	72.93	321.72	991.28	0.07				1,004.82	0.00
12/20/20 9:01 PM	4,984	3420	72.93	321.64	991.36	-0.01				1,004.84	-0.03

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 1.5 HP
MSL = Mean Sea Level Pump Setting = 380 ft EC=Electrical conductivity (mS/cm)

Legacy Hills Well No. 3 - Aquifer Test (December 17, 2020)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 3 Temperature (F)	PW Well No. 3 Water Level (ft bgs)	PW Well No. 3 Water Level (ft MSL)	PW Well No. 3 Drawdown (ft)	PW Well No. 3 Pump Rate (gpm)	PW Well No. 3 Specific Capacity (gpm/ft)	Comments	OW Well No. 2 Water Level (ft MSL)	OW Well No. 2 Drawdown (ft)
12/20/20 10:01 PM	5,044	3480	72.94	321.66	991.34	0.01				1,004.81	0.01
12/20/20 11:01 PM	5,104	3540	72.91	321.64	991.36	-0.01				1,004.82	0.00
12/21/20 12:01 AM	5,164	3600	72.94	321.63	991.37	-0.02				1,004.84	-0.03
12/21/20 1:01 AM	5,224	3660	72.93	321.62	991.38	-0.03				1,004.91	-0.09
12/21/20 2:01 AM	5,284	3720	72.96	321.65	991.35	0.00				1,004.87	-0.05
12/21/20 3:01 AM	5,344	3780	73.00	321.63	991.37	-0.02				1,004.83	-0.01
12/21/20 4:01 AM	5,404	3840	72.94	321.60	991.40	-0.05				1,004.84	-0.03
12/21/20 5:01 AM	5,464	3900	72.98	321.58	991.42	-0.07				1,004.86	-0.04
12/21/20 6:01 AM	5,524	3960	72.95	321.56	991.44	-0.09				1,004.90	-0.08
12/21/20 7:01 AM	5,584	4020	72.95	321.60	991.40	-0.05				1,004.98	-0.16
12/21/20 8:01 AM	5,644	4080	72.94	321.52	991.48	-0.13				1,004.92	-0.11
12/21/20 9:01 AM	5,704	4140	72.96	321.57	991.43	-0.08					
12/21/20 9:12 AM	5,715	4151	72.95	321.57	991.43	-0.08					

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 1.5 HP
MSL = Mean Sea Level Pump Setting = 380 ft EC=Electrical conductivity (mS/cm)



WELL TEST ANALYSIS

Data Set: \...\PW 3.aqt
Date: 01/15/21 Time: 13:44:16

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Lonestar Land Partners
Location: Blanco County
Test Well: Well No. 3
Test Date: 12-17-20

AQUIFER DATA

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

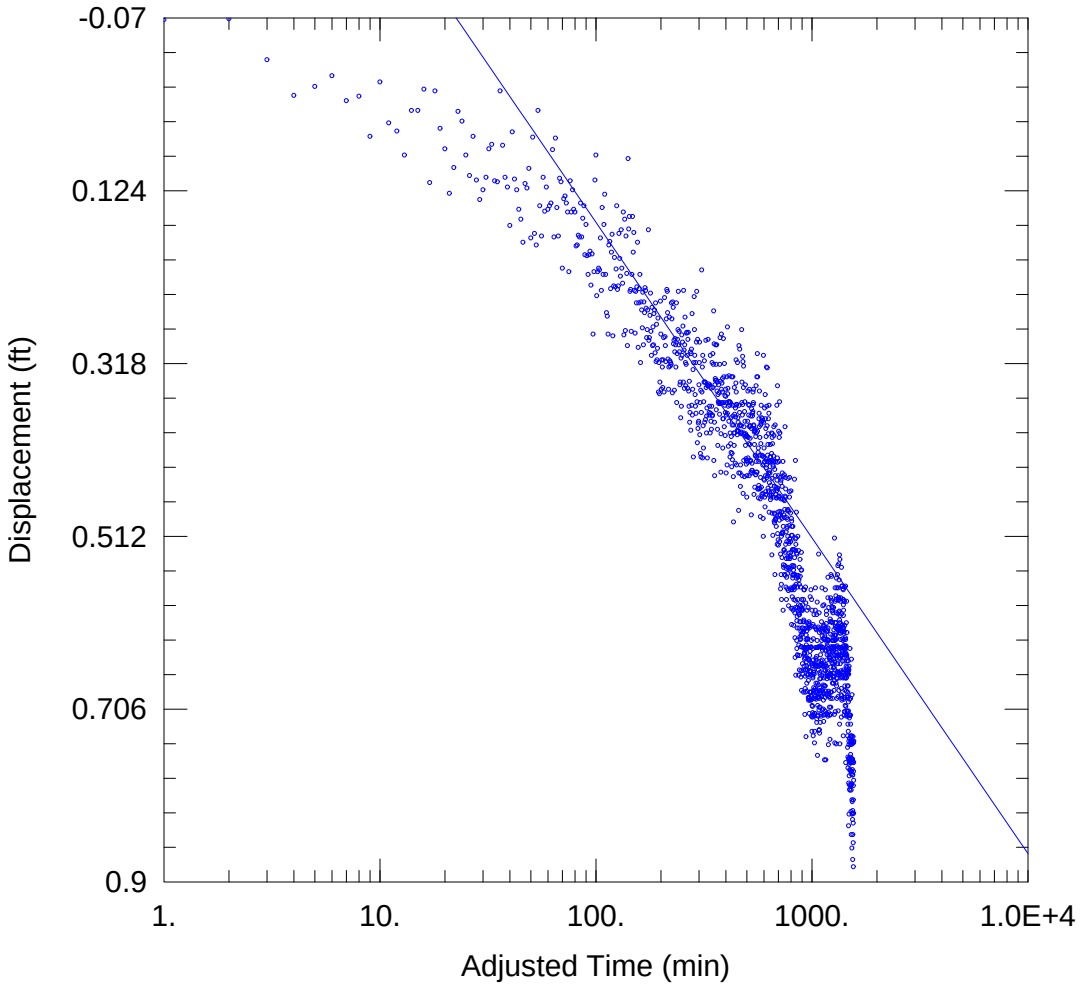
Pumping Wells

Well Name	X (ft)	Y (ft)
Well No. 3	0	0

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 2771.6 ft^2/day



WELL TEST ANALYSIS

Data Set: \...\OW 2.aqt
Date: 01/15/21 Time: 13:43:09

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Lonestar Land Partners
Location: Blanco County
Test Well: Well No. 3
Test Date: 12-17-20

AQUIFER DATA

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Well No. 3	0	0

Observation Wells

Well Name	X (ft)	Y (ft)
◦ Well No. 2	565	0

SOLUTION

Aquifer Model: Confined
Solution Method: Cooper-Jacob
T = 1393.5 ft^2/day
S = 0.0002418

Aquifer Test

Well No. 4

Legacy Hills Well No. 4 - Aquifer Test (December 21, 2020)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 4 Temperature (F)	PW Well No. 4 Water Level (ft bgs)	PW Well No. 4 Water Level (ft MSL)	PW Well No. 4 Drawdown (ft)	PW Well No. 4 Pump Rate (gpm)	PW Well No. 4 Specific Capacity (gpm/ft)	Comments	OW Well No. 5 Water Level (ft MSL)	OW Well No. 5 Drawdown (ft)
12/21/20 10:01 AM	0		72.06	324.67	991.33	0.00			Pump Start	992.62	0.00
12/21/20 10:02 AM	1		72.26	329.06	986.94	4.40			Meter: 589,417.02 gallons	992.70	-0.08
12/21/20 10:03 AM	2		72.35	328.52	987.48	3.86				992.58	0.03
12/21/20 10:04 AM	3		72.52	328.60	987.40	3.93				992.67	-0.05
12/21/20 10:05 AM	4		72.60	328.54	987.46	3.87				992.64	-0.02
12/21/20 10:06 AM	5		72.68	328.68	987.32	4.01	11.9	2.97	pH: 7.18/ EC: 2.79	992.65	-0.03
12/21/20 10:07 AM	6		72.68	328.68	987.32	4.01				992.67	-0.05
12/21/20 10:08 AM	7		72.78	328.69	987.31	4.03				992.69	-0.07
12/21/20 10:09 AM	8		72.78	328.65	987.35	3.99				992.74	-0.13
12/21/20 10:10 AM	9		72.85	328.74	987.26	4.07				992.59	0.03
12/21/20 10:11 AM	10		72.88	328.74	987.26	4.08				992.68	-0.07
12/21/20 10:12 AM	11		72.94	328.75	987.25	4.08				992.69	-0.07
12/21/20 10:13 AM	12		72.95	328.87	987.14	4.20				992.60	0.02
12/21/20 10:14 AM	13		72.99	328.79	987.21	4.13				992.52	0.09
12/21/20 10:15 AM	14		73.03	328.84	987.16	4.18				992.63	-0.02
12/21/20 10:16 AM	15		73.04	328.85	987.15	4.18				992.61	0.01
12/21/20 10:21 AM	20		73.15	328.85	987.15	4.19				992.71	-0.10
12/21/20 10:26 AM	25		73.18	328.98	987.02	4.31				992.68	-0.06
12/21/20 10:31 AM	30		73.27	329.05	986.95	4.38				992.60	0.01
12/21/20 10:46 AM	45		73.26	329.09	986.91	4.43				992.58	0.03
12/21/20 11:01 AM	60		73.20	329.04	986.96	4.37				992.56	0.06
12/21/20 11:16 AM	75		73.11	329.25	986.75	4.58				992.58	0.03
12/21/20 11:31 AM	90		73.13	329.14	986.86	4.48	11.9	2.66	pH: 7.11/ EC: 2.76	992.54	0.08
12/21/20 11:46 AM	105		73.09	329.32	986.68	4.65				992.62	0.00
12/21/20 12:01 PM	120		73.11	329.37	986.63	4.71				992.49	0.13
12/21/20 12:31 PM	150		73.13	329.39	986.61	4.73	11.9	2.52	pH: 6.98/ EC: 2.74	992.47	0.15
12/21/20 1:01 PM	180		73.08	329.61	986.39	4.94				992.49	0.13
12/21/20 1:31 PM	210		73.10	329.60	986.40	4.94				992.40	0.21
12/21/20 2:01 PM	240		73.07	329.72	986.29	5.05				992.41	0.21
12/21/20 3:01 PM	300		73.09	329.87	986.13	5.20				992.32	0.30
12/21/20 4:01 PM	360		73.08	329.77	986.23	5.10				992.23	0.38
12/21/20 5:01 PM	420		73.08	330.11	985.89	5.44				992.21	0.40
12/21/20 6:01 PM	480		73.08	330.23	985.77	5.56				992.06	0.56
12/21/20 7:01 PM	540		73.11	330.16	985.84	5.50				992.08	0.54
12/21/20 8:01 PM	600		73.12	330.23	985.77	5.56				991.98	0.63

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 1.5 HP
MSL = Mean Sea Level Pump Setting = 360 ft EC=Electrical conductivity (mS/cm)

Legacy Hills Well No. 4 - Aquifer Test (December 21, 2020)

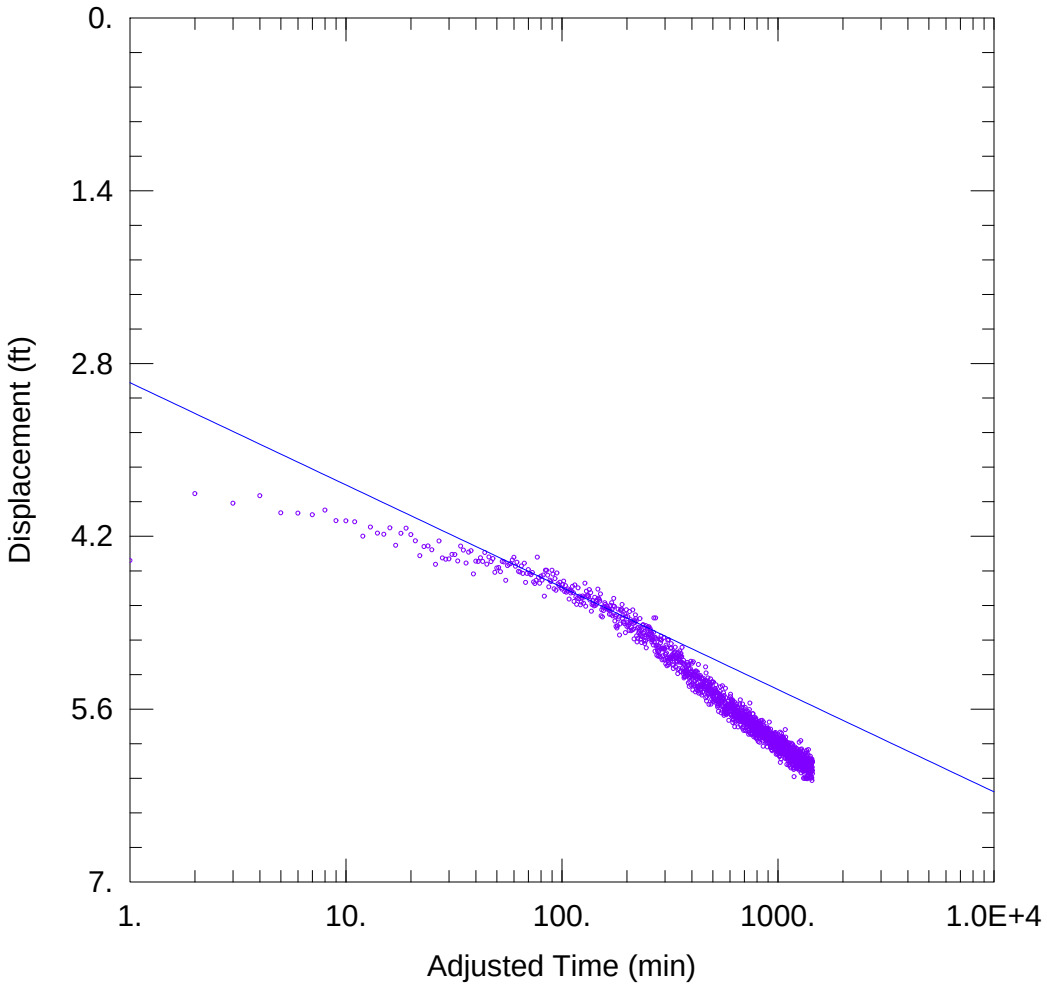
Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 4 Temperature (F)	PW Well No. 4 Water Level (ft bgs)	PW Well No. 4 Water Level (ft MSL)	PW Well No. 4 Drawdown (ft)	PW Well No. 4 Pump Rate (gpm)	PW Well No. 4 Specific Capacity (gpm/ft)	Comments	OW Well No. 5 Water Level (ft MSL)	OW Well No. 5 Drawdown (ft)
12/21/20 9:01 PM	660		73.09	330.36	985.64	5.70				991.92	0.70
12/21/20 10:01 PM	720		73.13	330.38	985.62	5.71				991.93	0.69
12/21/20 11:01 PM	780		73.11	330.43	985.57	5.77				991.87	0.75
12/22/20 12:01 AM	840		73.16	330.46	985.54	5.79				991.75	0.86
12/22/20 1:01 AM	900		73.18	330.45	985.55	5.79				991.79	0.82
12/22/20 2:01 AM	960		73.15	330.49	985.51	5.83				991.76	0.85
12/22/20 3:01 AM	1,020		73.19	330.65	985.35	5.99				991.79	0.83
12/22/20 4:01 AM	1,080		73.21	330.53	985.47	5.86				991.67	0.94
12/22/20 5:01 AM	1,140		73.17	330.63	985.37	5.97				991.64	0.97
12/22/20 6:01 AM	1,200		73.16	330.57	985.43	5.91				991.69	0.92
12/22/20 7:01 AM	1,260		73.11	330.64	985.36	5.97				991.67	0.95
12/22/20 8:01 AM	1,320		73.16	330.70	985.31	6.03				991.63	0.98
12/22/20 9:01 AM	1,380		73.18	330.80	985.20	6.13				991.56	1.05
12/22/20 10:01 AM	1,440		73.15	330.76	985.24	6.09				991.55	1.07
12/22/20 10:07 AM	1,446	0	73.15	330.79	985.21	6.12	11.9	1.94	Pump Stop	991.62	1.00
12/22/20 10:08 AM	1,447	1	73.18	327.48	988.52	2.82			Meter: 606,786.88 gallons	991.55	1.07
12/22/20 10:09 AM	1,448	2	73.37	327.02	988.98	2.35			Avg. Pump Rate: 12 gpm	991.57	1.05
12/22/20 10:10 AM	1,449	3	73.43	326.86	989.14	2.19				991.54	1.08
12/22/20 10:11 AM	1,450	4	73.54	326.93	989.07	2.26				991.47	1.14
12/22/20 10:12 AM	1,451	5	73.63	326.76	989.24	2.09				991.54	1.07
12/22/20 10:13 AM	1,452	6	73.67	326.69	989.31	2.02				991.52	1.10
12/22/20 10:14 AM	1,453	7	73.74	326.68	989.32	2.02				991.52	1.10
12/22/20 10:15 AM	1,454	8	73.78	326.69	989.31	2.03				991.53	1.09
12/22/20 10:16 AM	1,455	9	73.79	326.61	989.39	1.95				991.56	1.05
12/22/20 10:17 AM	1,456	10	73.83	326.59	989.41	1.93				991.52	1.10
12/22/20 10:18 AM	1,457	11	73.90	326.67	989.33	2.01				991.51	1.11
12/22/20 10:19 AM	1,458	12	73.89	326.52	989.48	1.86				991.54	1.08
12/22/20 10:20 AM	1,459	13	74.04	326.60	989.40	1.93				991.56	1.05
12/22/20 10:21 AM	1,460	14	74.09	326.60	989.40	1.93				991.55	1.07
12/22/20 10:22 AM	1,461	15	74.13	326.57	989.43	1.91				991.60	1.02
12/22/20 10:27 AM	1,466	20	74.29	326.47	989.53	1.80				991.55	1.07
12/22/20 10:32 AM	1,471	25	74.32	326.48	989.52	1.82				991.51	1.10
12/22/20 10:37 AM	1,476	30	74.28	326.55	989.45	1.88				991.63	0.99
12/22/20 10:52 AM	1,491	45	74.15	326.35	989.66	1.68				991.57	1.05
12/22/20 11:07 AM	1,506	60	73.98	326.27	989.73	1.61				991.57	1.05

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 1.5 HP
MSL = Mean Sea Level Pump Setting = 360 ft EC=Electrical conductivity (mS/cm)

Legacy Hills Well No. 4 - Aquifer Test (December 21, 2020)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 4 Temperature (F)	PW Well No. 4 Water Level (ft bgs)	PW Well No. 4 Water Level (ft MSL)	PW Well No. 4 Drawdown (ft)	PW Well No. 4 Pump Rate (gpm)	PW Well No. 4 Specific Capacity (gpm/ft)	Comments	OW Well No. 5 Water Level (ft MSL)	OW Well No. 5 Drawdown (ft)
12/22/20 11:22 AM	1,521	75	73.86	326.24	989.76	1.58				991.52	1.10
12/22/20 11:37 AM	1,536	90	73.76	326.33	989.67	1.67				991.53	1.09
12/22/20 11:52 AM	1,551	105	73.69	326.19	989.81	1.52				991.67	0.94
12/22/20 12:07 PM	1,566	120	73.61	326.07	989.93	1.41				991.53	1.09
12/22/20 12:37 PM	1,596	150	73.47	326.07	989.93	1.41				991.54	1.08
12/22/20 1:07 PM	1,626	180	73.37	326.08	989.92	1.41				991.55	1.07
12/22/20 1:37 PM	1,656	210	73.28	325.96	990.04	1.30				991.63	0.99
12/22/20 2:07 PM	1,686	240	73.18	325.88	990.12	1.22				991.49	1.13
12/22/20 3:07 PM	1,746	300	73.11	325.76	990.24	1.10				991.65	0.97
12/22/20 4:07 PM	1,806	360	73.06	325.80	990.20	1.13				991.45	1.16
12/22/20 5:07 PM	1,866	420	73.03	325.68	990.32	1.01				991.52	1.10
12/22/20 6:07 PM	1,926	480	73.05	325.67	990.33	1.00				991.60	1.02
12/22/20 7:07 PM	1,986	540	73.05	325.58	990.42	0.92				991.48	1.13
12/22/20 8:07 PM	2,046	600	73.02	325.56	990.44	0.90				991.52	1.10
12/22/20 9:07 PM	2,106	660	73.01	325.47	990.53	0.80				991.55	1.07
12/22/20 10:07 PM	2,166	720	72.96	325.40	990.60	0.74				991.65	0.96
12/22/20 11:07 PM	2,226	780	72.99	325.37	990.63	0.71				991.65	0.97
12/23/20 12:07 AM	2,286	840	72.98	325.32	990.68	0.65				991.62	1.00
12/23/20 1:07 AM	2,346	900	72.99	325.32	990.68	0.65				991.71	0.91
12/23/20 2:07 AM	2,406	960	72.97	325.32	990.68	0.65				991.76	0.85
12/23/20 3:07 AM	2,466	1020	73.01	325.25	990.75	0.58				991.68	0.94
12/23/20 4:07 AM	2,526	1080	72.99	325.30	990.70	0.63				991.85	0.77
12/23/20 5:07 AM	2,586	1140	72.98	325.21	990.79	0.54				991.85	0.76
12/23/20 6:07 AM	2,646	1200	72.99	325.17	990.83	0.50				991.87	0.74
12/23/20 7:07 AM	2,706	1260	73.01	325.12	990.88	0.46				991.72	0.90
12/23/20 8:07 AM	2,766	1320	72.96	325.16	990.84	0.49				991.84	0.77
12/23/20 8:54 AM	2,813	1367	73.02	325.21	990.79	0.54				991.85	0.76

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 1.5 HP
MSL = Mean Sea Level Pump Setting = 360 ft EC=Electrical conductivity (mS/cm)



WELL TEST ANALYSIS

Data Set: \...\PW 4.aqt
Date: 01/15/21 Time: 13:47:50

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Lonestar Land Partners
Location: Blanco County
Test Well: Well No. 4
Test Date: 12-21-20

AQUIFER DATA

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

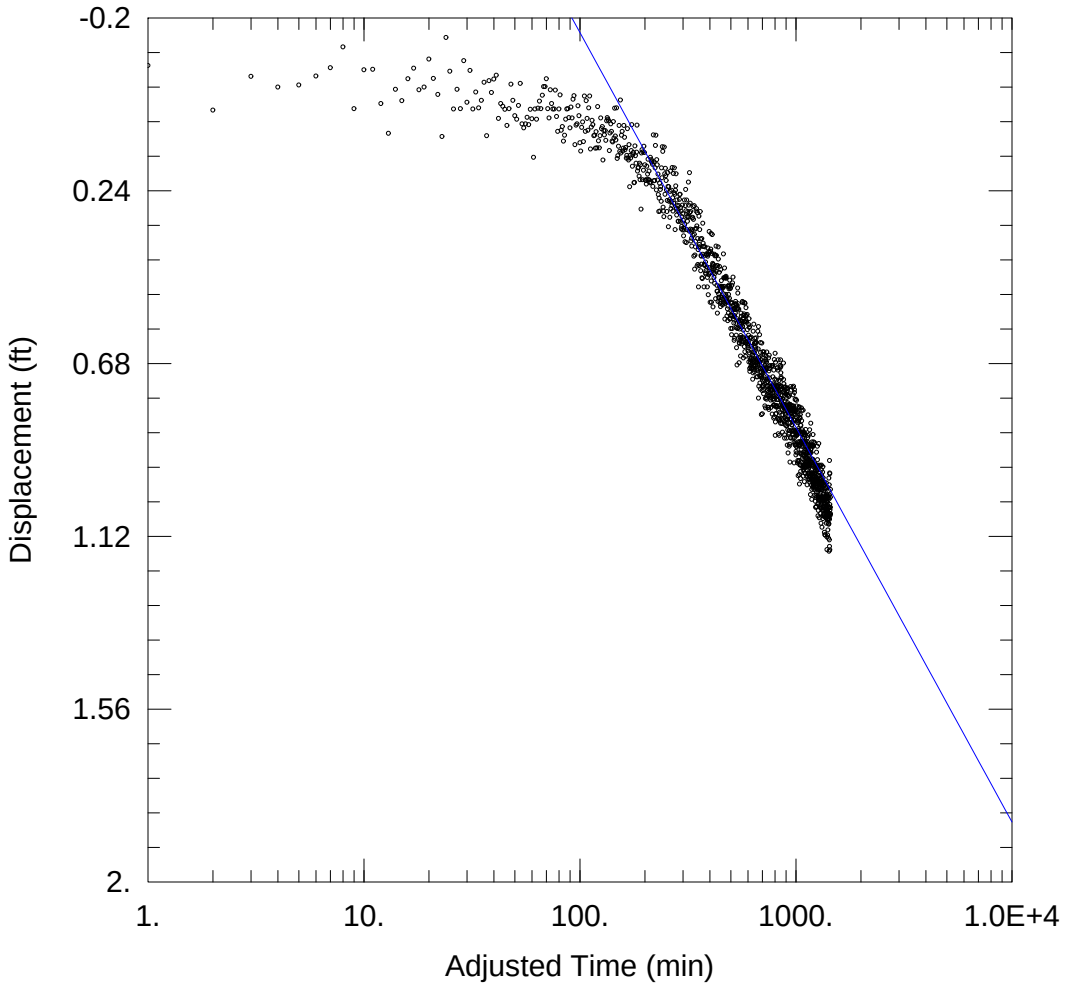
Pumping Wells

Well Name	X (ft)	Y (ft)
Well No. 4	0	0

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 510.7 ft^2/day



WELL TEST ANALYSIS

Data Set: \...\OW 5.aqt
Date: 01/15/21 Time: 13:46:57

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Lonestar Land Partners
Location: Blanco County
Test Well: Well No. 4
Test Date: 12-21-20

AQUIFER DATA

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Well No. 4	0	0

Observation Wells

Well Name	X (ft)	Y (ft)
◦ Well No. 5	483	0

SOLUTION

Aquifer Model: Confined
Solution Method: Cooper-Jacob
T = 421.2 ft^2/day
S = 0.0004088

Aquifer Test

Well No. 5

Legacy Hills Well No. 5 - Aquifer Test (December 23, 2020)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 5 Temperature (F)	PW Well No. 5 Water Level (ft bgs)	PW Well No. 5 Water Level (ft MSL)	PW Well No. 5 Drawdown (ft)	PW Well No. 5 Pump Rate (gpm)	PW Well No. 5 Specific Capacity (gpm/ft)	Comments	OW Well No. 6 Water Level (ft MSL)	OW Well No. 6 Drawdown (ft)
12/23/20 9:56 AM	0		71.05	334.43	991.57	0.00			Pump Start	988.56	0.00
12/23/20 9:57 AM	1		71.61	337.40	988.60	2.96			Meter: 1,008,779.32 gallons	988.65	-0.08
12/23/20 9:58 AM	2		71.90	337.18	988.82	2.75				988.50	0.07
12/23/20 9:59 AM	3		72.14	337.23	988.77	2.79				988.64	-0.08
12/23/20 10:00 AM	4		72.31	337.25	988.75	2.81				988.61	-0.05
12/23/20 10:01 AM	5		72.48	337.22	988.78	2.79	12.9	4.63		988.58	-0.01
12/23/20 10:02 AM	6		72.57	337.30	988.70	2.87				988.59	-0.03
12/23/20 10:03 AM	7		72.66	337.18	988.82	2.74				988.62	-0.05
12/23/20 10:04 AM	8		72.70	337.24	988.76	2.80				988.57	-0.01
12/23/20 10:05 AM	9		72.73	337.27	988.73	2.83				988.59	-0.02
12/23/20 10:06 AM	10		72.83	337.24	988.76	2.80	11.9	4.24		988.54	0.02
12/23/20 10:07 AM	11		72.84	337.23	988.77	2.80				988.57	-0.01
12/23/20 10:08 AM	12		72.88	337.29	988.71	2.86				988.55	0.02
12/23/20 10:09 AM	13		72.87	337.22	988.78	2.78				988.56	0.01
12/23/20 10:10 AM	14		72.94	337.28	988.72	2.85				988.63	-0.06
12/23/20 10:11 AM	15		72.84	337.34	988.66	2.90	11.9	4.10	pH: 7.05/ EC: 2.78	988.53	0.04
12/23/20 10:16 AM	20		72.95	337.30	988.70	2.86				988.62	-0.05
12/23/20 10:21 AM	25		72.95	337.42	988.58	2.99				988.57	0.00
12/23/20 10:26 AM	30		73.02	337.39	988.61	2.96				988.47	0.09
12/23/20 10:41 AM	45		73.04	337.54	988.46	3.10				988.38	0.18
12/23/20 10:56 AM	60		73.07	337.62	988.38	3.18				988.24	0.33
12/23/20 11:11 AM	75		73.05	337.70	988.30	3.27				988.40	0.17
12/23/20 11:26 AM	90		73.01	337.84	988.16	3.40				988.24	0.33
12/23/20 11:41 AM	105		73.00	337.87	988.13	3.43				988.05	0.52
12/23/20 11:56 AM	120		73.00	337.86	988.14	3.42	12.0	3.51	pH: 7.06/ EC: 2.73	988.10	0.46
12/23/20 12:26 PM	150		72.96	338.05	987.95	3.61				987.86	0.71
12/23/20 12:56 PM	180		72.98	338.26	987.74	3.83				987.72	0.85
12/23/20 1:26 PM	210		73.00	338.45	987.55	4.02				987.57	1.00
12/23/20 1:56 PM	240		73.02	338.50	987.50	4.06				987.45	1.11
12/23/20 2:56 PM	300		73.00	338.75	987.25	4.31				987.33	1.23
12/23/20 3:56 PM	360		73.01	339.01	986.99	4.58				986.96	1.60
12/23/20 4:56 PM	420		73.03	339.18	986.82	4.75				986.87	1.70
12/23/20 5:56 PM	480		73.02	339.43	986.57	5.00				986.58	1.99
12/23/20 6:56 PM	540		73.00	339.63	986.37	5.19				986.49	2.08
12/23/20 7:56 PM	600		73.03	339.67	986.33	5.24				986.29	2.28

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 1.5 HP
MSL = Mean Sea Level Pump Setting = 380 ft EC=Electrical conductivity (mS/cm)

Legacy Hills Well No. 5 - Aquifer Test (December 23, 2020)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 5 Temperature (F)	PW Well No. 5 Water Level (ft bgs)	PW Well No. 5 Water Level (ft MSL)	PW Well No. 5 Drawdown (ft)	PW Well No. 5 Pump Rate (gpm)	PW Well No. 5 Specific Capacity (gpm/ft)	Comments	OW Well No. 6 Water Level (ft MSL)	OW Well No. 6 Drawdown (ft)
12/23/20 8:56 PM	660		73.01	339.76	986.24	5.32				986.18	2.38
12/23/20 9:56 PM	720		72.97	339.87	986.13	5.44				986.10	2.46
12/23/20 10:56 PM	780		73.04	339.95	986.05	5.52				986.08	2.49
12/23/20 11:56 PM	840		73.04	340.00	986.01	5.56				985.95	2.62
12/24/20 12:56 AM	900		73.07	340.05	985.95	5.62				985.94	2.62
12/24/20 1:56 AM	960		73.00	340.11	985.89	5.67				985.93	2.63
12/24/20 2:56 AM	1,020		73.02	340.18	985.82	5.74				985.88	2.69
12/24/20 3:56 AM	1,080		73.04	340.23	985.77	5.80				985.76	2.80
12/24/20 4:56 AM	1,140		73.05	340.26	985.75	5.82				985.84	2.72
12/24/20 5:56 AM	1,200		73.01	340.27	985.73	5.84				985.83	2.74
12/24/20 6:56 AM	1,260		73.00	340.30	985.71	5.86				985.75	2.81
12/24/20 7:56 AM	1,320		73.05	340.33	985.67	5.90				985.77	2.79
12/24/20 8:56 AM	1,380		73.06	340.28	985.72	5.85				985.67	2.90
12/24/20 9:56 AM	1,440		73.06	340.29	985.72	5.85				985.61	2.96
12/24/20 10:08 AM	1,452	0	73.02	340.39	985.62	5.95	11.9	2.00	Pump Stop	985.70	2.87
12/24/20 10:09 AM	1,453	1	73.08	337.98	988.03	3.54			Meter: 1,026,081.63 gallons	985.76	2.81
12/24/20 10:10 AM	1,454	2	73.15	337.81	988.19	3.38			Avg. Pump Rate: 12 gpm	985.66	2.91
12/24/20 10:11 AM	1,455	3	73.20	337.72	988.28	3.29				985.77	2.79
12/24/20 10:12 AM	1,456	4	73.30	337.73	988.28	3.29				985.68	2.88
12/24/20 10:13 AM	1,457	5	73.38	337.70	988.30	3.26				985.73	2.84
12/24/20 10:14 AM	1,458	6	73.47	337.69	988.31	3.25				985.82	2.75
12/24/20 10:15 AM	1,459	7	73.57	337.66	988.34	3.23				985.66	2.91
12/24/20 10:16 AM	1,460	8	73.63	337.68	988.32	3.25				985.68	2.88
12/24/20 10:17 AM	1,461	9	73.68	337.61	988.40	3.17				985.76	2.80
12/24/20 10:18 AM	1,462	10	73.77	337.60	988.40	3.17				985.67	2.90
12/24/20 10:19 AM	1,463	11	73.83	337.63	988.37	3.20				985.73	2.84
12/24/20 10:20 AM	1,464	12	73.90	337.67	988.34	3.23				985.71	2.85
12/24/20 10:21 AM	1,465	13	73.93	337.58	988.42	3.14				985.76	2.80
12/24/20 10:22 AM	1,466	14	74.02	337.60	988.40	3.17				985.75	2.82
12/24/20 10:23 AM	1,467	15	74.06	337.61	988.39	3.18				985.75	2.81
12/24/20 10:28 AM	1,472	20	74.19	337.57	988.43	3.14				985.72	2.84
12/24/20 10:33 AM	1,477	25	74.19	337.52	988.48	3.08				985.73	2.84
12/24/20 10:38 AM	1,482	30	74.27	337.49	988.51	3.05				985.79	2.78
12/24/20 10:53 AM	1,497	45	74.27	337.37	988.63	2.94				985.85	2.71
12/24/20 11:08 AM	1,512	60	73.88	337.32	988.68	2.88				985.96	2.61

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 1.5 HP
MSL = Mean Sea Level Pump Setting = 380 ft EC=Electrical conductivity (mS/cm)

Legacy Hills Well No. 5 - Aquifer Test (December 23, 2020)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 5 Temperature (F)	PW Well No. 5 Water Level (ft bgs)	PW Well No. 5 Water Level (ft MSL)	PW Well No. 5 Drawdown (ft)	PW Well No. 5 Pump Rate (gpm)	PW Well No. 5 Specific Capacity (gpm/ft)	Comments	OW Well No. 6 Water Level (ft MSL)	OW Well No. 6 Drawdown (ft)
12/24/20 11:23 AM	1,527	75	73.60	337.24	988.76	2.81				985.91	2.65
12/24/20 11:38 AM	1,542	90	73.46	337.12	988.88	2.69				986.02	2.55
12/24/20 11:53 AM	1,557	105	73.36	337.09	988.91	2.66				986.14	2.43
12/24/20 12:08 PM	1,572	120	73.33	336.99	989.01	2.56				986.13	2.43
12/24/20 12:38 PM	1,602	150	73.11	336.80	989.20	2.36				986.18	2.38
12/24/20 1:08 PM	1,632	180	73.06	336.75	989.25	2.31				986.37	2.19
12/24/20 1:38 PM	1,662	210	73.03	336.58	989.42	2.15				986.43	2.14
12/24/20 2:08 PM	1,692	240	73.06	336.50	989.50	2.07				986.58	1.99
12/24/20 3:08 PM	1,752	300	72.99	336.37	989.63	1.93				986.82	1.74
12/24/20 4:08 PM	1,812	360	72.96	336.10	989.90	1.66				986.95	1.61
12/24/20 5:08 PM	1,872	420	72.97	336.02	989.98	1.58				987.05	1.52
12/24/20 6:08 PM	1,932	480	72.93	335.83	990.17	1.40				987.28	1.28
12/24/20 7:08 PM	1,992	540	72.96	335.65	990.35	1.22				987.40	1.16
12/24/20 8:08 PM	2,052	600	72.92	335.48	990.52	1.05				987.55	1.01
12/24/20 9:08 PM	2,112	660	72.88	335.36	990.64	0.93				987.60	0.97
12/24/20 10:08 PM	2,172	720	72.92	335.31	990.69	0.88				987.72	0.84
12/24/20 11:08 PM	2,232	780	72.92	335.24	990.76	0.80				987.83	0.73
12/25/20 12:08 AM	2,292	840	72.90	335.02	990.98	0.59				987.91	0.65
12/25/20 1:08 AM	2,352	900	72.92	335.03	990.98	0.59				988.15	0.41
12/25/20 2:08 AM	2,412	960	72.92	334.85	991.15	0.41				988.11	0.45
12/25/20 3:08 AM	2,472	1020	72.90	334.76	991.25	0.32				988.19	0.38
12/25/20 4:08 AM	2,532	1080	72.92	334.62	991.39	0.18				988.28	0.29
12/25/20 5:08 AM	2,592	1140	72.93	334.68	991.32	0.25				988.31	0.25
12/25/20 6:08 AM	2,652	1200	72.89	334.54	991.46	0.11				988.47	0.09
12/25/20 7:08 AM	2,712	1260	72.89	334.45	991.55	0.02				988.51	0.06
12/25/20 8:08 AM	2,772	1320	72.91	334.44	991.56	0.01				988.57	0.00
12/25/20 9:08 AM	2,832	1380	72.93	334.35	991.65	-0.08				988.68	-0.11
12/25/20 10:08 AM	2,892	1440	72.88	334.29	991.71	-0.14				988.77	-0.20
12/25/20 11:08 AM	2,952	1500	72.86	334.26	991.74	-0.17				988.77	-0.20
12/25/20 12:08 PM	3,012	1560	72.91	334.20	991.81	-0.24				988.80	-0.23
12/25/20 1:08 PM	3,072	1620	72.94	334.09	991.91	-0.35				988.73	-0.16
12/25/20 2:08 PM	3,132	1680	72.95	334.05	991.95	-0.39				988.80	-0.24
12/25/20 3:08 PM	3,192	1740	72.93	333.96	992.04	-0.48				988.87	-0.31

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 1.5 HP
MSL = Mean Sea Level Pump Setting = 380 ft EC=Electrical conductivity (mS/cm)

Legacy Hills Well No. 5 - Aquifer Test (December 23, 2020)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 5 Temperature (F)	PW Well No. 5 Water Level (ft bgs)	PW Well No. 5 Water Level (ft MSL)	PW Well No. 5 Drawdown (ft)	PW Well No. 5 Pump Rate (gpm)	PW Well No. 5 Specific Capacity (gpm/ft)	Comments	OW Well No. 6 Water Level (ft MSL)	OW Well No. 6 Drawdown (ft)
12/25/20 4:08 PM	3,252	1800	72.87	333.95	992.05	-0.48				988.93	-0.36
12/25/20 5:08 PM	3,312	1860	72.89	334.01	991.99	-0.43				988.98	-0.41
12/25/20 6:08 PM	3,372	1920	72.89	334.04	991.96	-0.39				989.04	-0.47
12/25/20 7:08 PM	3,432	1980	72.88	333.91	992.10	-0.53				989.02	-0.46
12/25/20 8:08 PM	3,492	2040	72.86	333.91	992.09	-0.53				989.06	-0.50
12/25/20 9:08 PM	3,552	2100	72.86	333.85	992.15	-0.58				989.15	-0.58
12/25/20 10:08 PM	3,612	2160	72.89	333.82	992.18	-0.62				989.06	-0.50
12/25/20 11:08 PM	3,672	2220	72.91	333.81	992.19	-0.62				989.13	-0.56
12/26/20 12:08 AM	3,732	2280	72.93	333.76	992.24	-0.67				989.25	-0.69
12/26/20 1:08 AM	3,792	2340	72.87	333.71	992.29	-0.72				989.14	-0.58
12/26/20 2:08 AM	3,852	2400	72.88	333.74	992.26	-0.69				989.20	-0.63
12/26/20 3:08 AM	3,912	2460	72.88	333.71	992.29	-0.72				989.30	-0.74
12/26/20 4:08 AM	3,972	2520	72.88	333.66	992.34	-0.77				989.21	-0.64
12/26/20 5:08 AM	4,032	2580	72.87	333.68	992.33	-0.76				989.29	-0.73
12/26/20 6:08 AM	4,092	2640	72.88	333.65	992.35	-0.78				989.37	-0.80
12/26/20 7:08 AM	4,152	2700	72.88	333.63	992.37	-0.80				989.33	-0.76
12/26/20 8:08 AM	4,212	2760	72.90	333.57	992.43	-0.87				989.42	-0.86
12/26/20 9:08 AM	4,272	2820	72.87	333.56	992.44	-0.88				989.40	-0.83
12/26/20 10:08 AM	4,332	2880	72.89	333.58	992.42	-0.86				989.44	-0.88
12/26/20 11:08 AM	4,392	2940	72.87	333.56	992.44	-0.87				989.49	-0.92
12/26/20 12:08 PM	4,452	3000	72.93	333.43	992.57	-1.00				989.46	-0.89
12/26/20 1:08 PM	4,512	3060	72.89	333.48	992.52	-0.95				989.42	-0.85
12/26/20 2:08 PM	4,572	3120	72.87	333.47	992.53	-0.96				989.55	-0.99
12/26/20 3:08 PM	4,632	3180	72.91	333.55	992.45	-0.88				989.50	-0.93
12/26/20 4:08 PM	4,692	3240	72.89	333.43	992.58	-1.01				989.56	-0.99
12/26/20 5:08 PM	4,752	3300	72.87	333.44	992.56	-0.99				989.53	-0.96
12/26/20 6:08 PM	4,812	3360	72.87	333.35	992.65	-1.08				989.51	-0.94
12/26/20 7:08 PM	4,872	3420	72.89	333.45	992.55	-0.98				989.42	-0.86
12/26/20 8:08 PM	4,932	3480	72.90	333.42	992.58	-1.02				989.56	-0.99
12/26/20 9:08 PM	4,992	3540	72.85	333.42	992.58	-1.02				989.48	-0.92

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 1.5 HP
MSL = Mean Sea Level Pump Setting = 380 ft EC=Electrical conductivity (mS/cm)

Legacy Hills Well No. 5 - Aquifer Test (December 23, 2020)

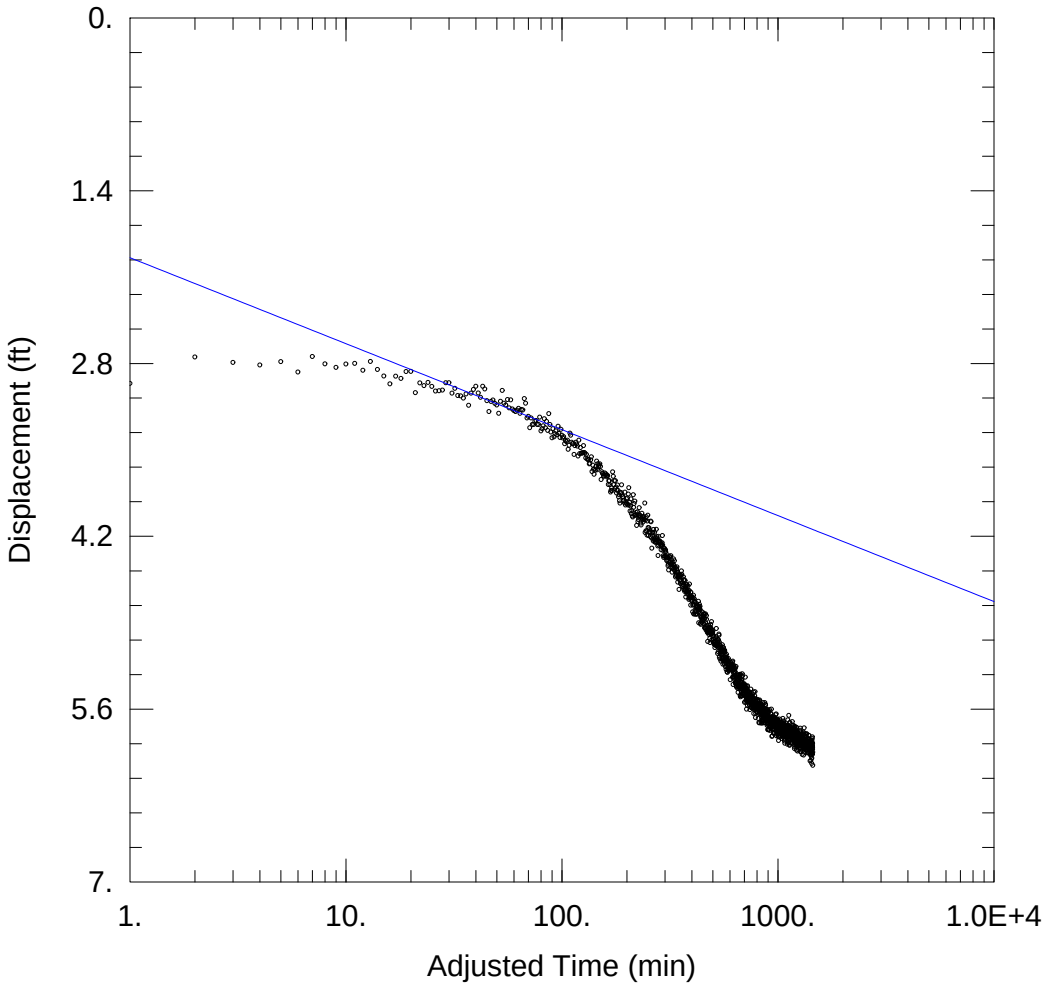
Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 5 Temperature (F)	PW Well No. 5 Water Level (ft bgs)	PW Well No. 5 Water Level (ft MSL)	PW Well No. 5 Drawdown (ft)	PW Well No. 5 Pump Rate (gpm)	PW Well No. 5 Specific Capacity (gpm/ft)	Comments	OW Well No. 6 Water Level (ft MSL)	OW Well No. 6 Drawdown (ft)
12/26/20 10:08 PM	5,052	3600	72.86	333.49	992.51	-0.95				989.55	-0.99
12/26/20 11:08 PM	5,112	3660	72.88	333.41	992.59	-1.02				989.53	-0.96
12/27/20 12:08 AM	5,172	3720	72.89	333.40	992.60	-1.03				989.57	-1.00
12/27/20 1:08 AM	5,232	3780	72.87	333.29	992.71	-1.14				989.54	-0.98
12/27/20 2:08 AM	5,292	3840	72.86	333.32	992.68	-1.11				989.61	-1.05
12/27/20 3:08 AM	5,352	3900	72.86	333.31	992.70	-1.13				989.56	-0.99
12/27/20 4:08 AM	5,412	3960	72.90	333.46	992.54	-0.98				989.66	-1.09
12/27/20 5:08 AM	5,472	4020	72.89	333.35	992.65	-1.08				989.55	-0.98
12/27/20 6:08 AM	5,532	4080	72.84	333.31	992.69	-1.13				989.61	-1.05
12/27/20 7:08 AM	5,592	4140	72.85	333.33	992.67	-1.10				989.60	-1.04
12/27/20 8:08 AM	5,652	4200	72.82	333.34	992.66	-1.10				989.65	-1.08
12/27/20 9:08 AM	5,712	4260	72.88	333.27	992.73	-1.16				989.65	-1.08
12/27/20 10:08 AM	5,772	4320	72.85	333.30	992.70	-1.14				989.75	-1.18
12/27/20 11:08 AM	5,832	4380	72.85	333.29	992.71	-1.15				989.66	-1.10
12/27/20 12:08 PM	5,892	4440	72.88	333.26	992.74	-1.18				989.64	-1.07
12/27/20 1:08 PM	5,952	4500	72.90	333.31	992.69	-1.13				989.66	-1.10
12/27/20 2:08 PM	6,012	4560	72.87	333.20	992.80	-1.23				989.75	-1.18
12/27/20 3:08 PM	6,072	4620	72.85	333.28	992.72	-1.15				989.72	-1.15
12/27/20 4:08 PM	6,132	4680	72.86	333.26	992.74	-1.18				989.69	-1.13
12/27/20 5:08 PM	6,192	4740	72.82	333.28	992.72	-1.16				989.66	-1.10
12/27/20 6:08 PM	6,252	4800	72.86	333.26	992.74	-1.18				989.75	-1.18
12/27/20 7:08 PM	6,312	4860	72.85	333.18	992.82	-1.26				989.80	-1.24
12/27/20 8:08 PM	6,372	4920	72.92	333.30	992.70	-1.14				989.72	-1.15
12/27/20 9:08 PM	6,432	4980	72.90	333.24	992.76	-1.20				989.77	-1.21
12/27/20 10:08 PM	6,492	5040	72.88	333.24	992.76	-1.19				989.77	-1.21
12/27/20 11:08 PM	6,552	5100	72.85	333.13	992.87	-1.30				989.66	-1.09
12/28/20 12:08 AM	6,612	5160	72.87	333.26	992.74	-1.17				989.70	-1.13
12/28/20 1:08 AM	6,672	5220	72.87	333.20	992.80	-1.23				989.75	-1.18
12/28/20 2:08 AM	6,732	5280	72.90	333.20	992.80	-1.23				989.85	-1.29
12/28/20 3:08 AM	6,792	5340	72.87	333.10	992.90	-1.34				989.76	-1.20

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 1.5 HP
MSL = Mean Sea Level Pump Setting = 380 ft EC=Electrical conductivity (mS/cm)

Legacy Hills Well No. 5 - Aquifer Test (December 23, 2020)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 5 Temperature (F)	PW Well No. 5 Water Level (ft bgs)	PW Well No. 5 Water Level (ft MSL)	PW Well No. 5 Drawdown (ft)	PW Well No. 5 Pump Rate (gpm)	PW Well No. 5 Specific Capacity (gpm/ft)	Comments	OW Well No. 6 Water Level (ft MSL)	OW Well No. 6 Drawdown (ft)
12/28/20 4:08 AM	6,852	5400	72.83	333.11	992.89	-1.33				989.82	-1.26
12/28/20 5:08 AM	6,912	5460	72.88	333.10	992.90	-1.33				989.79	-1.23
12/28/20 6:08 AM	6,972	5520	72.88	333.04	992.97	-1.40				989.81	-1.24
12/28/20 7:08 AM	7,032	5580	72.84	333.09	992.91	-1.34				989.85	-1.29
12/28/20 8:08 AM	7,092	5640	72.86	333.07	992.93	-1.37				989.91	-1.34
12/28/20 9:08 AM	7,152	5700	72.86	333.06	992.95	-1.38				989.85	-1.28
12/28/20 9:43 AM	7,187	5735	72.83	333.05	992.95	-1.38				989.86	-1.30

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 1.5 HP
MSL = Mean Sea Level Pump Setting = 380 ft EC=Electrical conductivity (mS/cm)



WELL TEST ANALYSIS

Data Set: \...\PW 5.aqt
Date: 01/15/21 Time: 13:54:28

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Lonestar Land Partners
Location: Blanco County
Test Well: Well No. 5
Test Date: 12-23-20

AQUIFER DATA

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

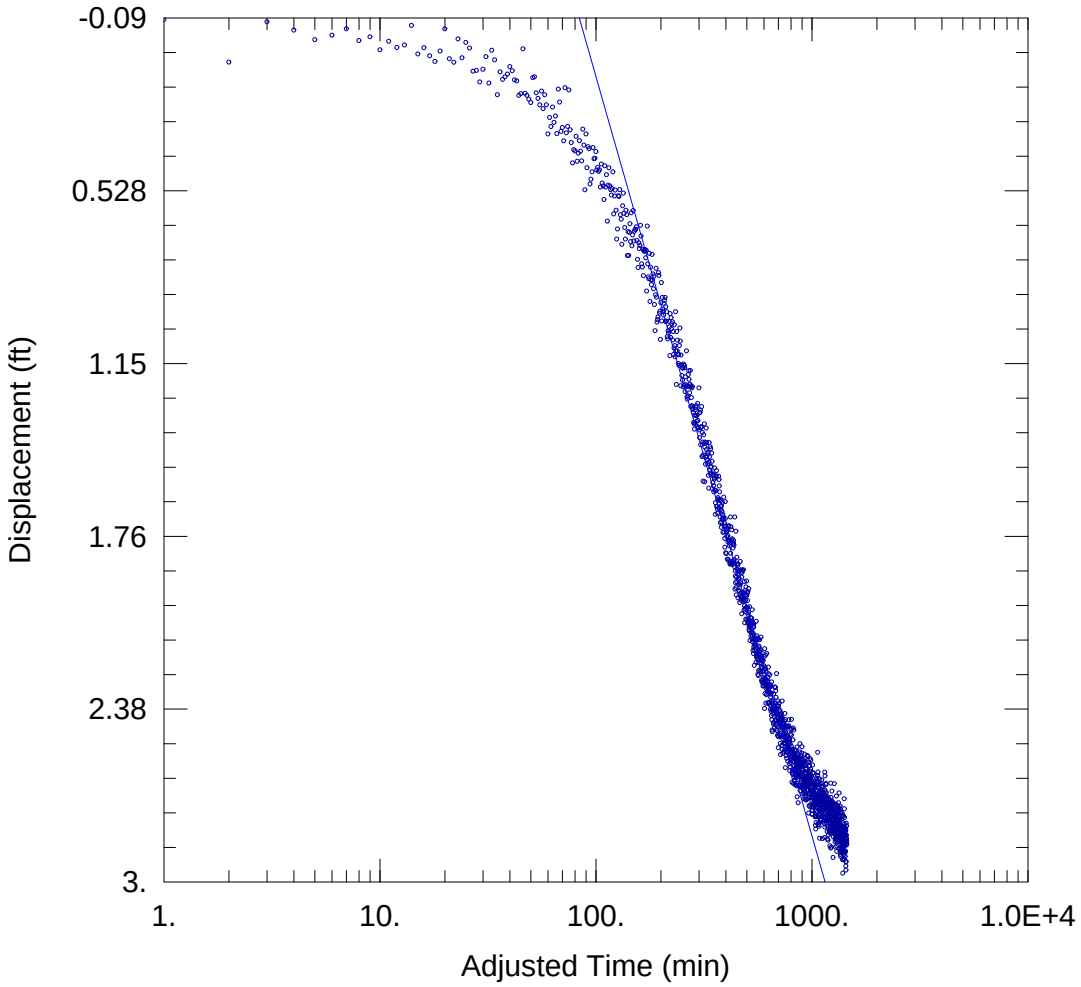
Pumping Wells

Well Name	X (ft)	Y (ft)
Well No. 5	0	0

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 607.7 ft^2/day



WELL TEST ANALYSIS

Data Set: \...\OW 6.aqt
Date: 01/15/21 Time: 13:51:39

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Lonestar Land Partners
Location: Blanco County
Test Well: Well No. 5
Test Date: 12-23-20

AQUIFER DATA

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Well No. 5	0	0

Observation Wells

Well Name	X (ft)	Y (ft)
◦ Well No. 6	619	0

SOLUTION

Aquifer Model: Confined
Solution Method: Cooper-Jacob
T = 155.9 ft^2/day
S = 5.734E-5

Aquifer Test

Well No. 7

Legacy Hills Well No. 7 - Aquifer Test (January 6, 2021)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 7 Temperature (F)	PW Well No. 7 Water Level (ft bgs)	PW Well No. 7 Water Level (ft MSL)	PW Well No. 7 Drawdown (ft)	PW Well No. 7 Pump Rate (gpm)	PW Well No. 7 Specific Capacity (gpm/ft)	Comments	OW Well No. 8 Water Level (ft MSL)	OW Well No. 8 Drawdown (ft)
1/6/21 9:51 AM	0		70.93	350.47	981.53	0.00			Pump Start	983.49	0.00
1/6/21 9:52 AM	1		71.36	351.41	980.59	0.94	13.8	14.67	Meter: 637,626.28 gallons	983.49	0.00
1/6/21 9:53 AM	2		71.66	352.19	979.81	1.72				983.47	0.02
1/6/21 9:54 AM	3		71.91	352.31	979.70	1.84				983.40	0.09
1/6/21 9:55 AM	4		72.09	352.49	979.51	2.02				983.38	0.11
1/6/21 9:56 AM	5		72.19	352.53	979.47	2.06	13.8	6.69		983.35	0.14
1/6/21 9:57 AM	6		72.32	352.58	979.42	2.11				983.19	0.30
1/6/21 9:58 AM	7		72.41	352.69	979.31	2.22				983.23	0.26
1/6/21 9:59 AM	8		72.44	352.65	979.35	2.18				983.19	0.30
1/6/21 10:00 AM	9		72.51	352.67	979.33	2.20				983.20	0.29
1/6/21 10:01 AM	10		72.53	352.90	979.11	2.42	13.8	5.69	pH: 7.10/ EC: 2.70	983.16	0.33
1/6/21 10:02 AM	11		72.54	352.79	979.21	2.32				983.08	0.41
1/6/21 10:03 AM	12		72.59	352.84	979.16	2.37				983.16	0.33
1/6/21 10:04 AM	13		72.62	352.88	979.12	2.41				983.10	0.38
1/6/21 10:05 AM	14		72.61	352.90	979.10	2.43				983.10	0.39
1/6/21 10:06 AM	15		72.64	353.02	978.98	2.55				983.05	0.44
1/6/21 10:11 AM	20		72.66	352.97	979.03	2.50				983.04	0.45
1/6/21 10:16 AM	25		72.68	353.07	978.93	2.60				982.81	0.68
1/6/21 10:21 AM	30		72.73	353.14	978.86	2.67				982.92	0.57
1/6/21 10:36 AM	45		72.78	353.28	978.72	2.81				982.74	0.75
1/6/21 10:51 AM	60		72.89	353.38	978.62	2.91	13.8	4.74	pH: 7.21/ EC: 2.84	982.58	0.91
1/6/21 11:06 AM	75		72.90	353.52	978.49	3.04				982.54	0.95
1/6/21 11:21 AM	90		73.00	353.64	978.36	3.17				982.42	1.07
1/6/21 11:36 AM	105		72.99	353.76	978.24	3.29				982.38	1.11
1/6/21 11:51 AM	120		73.02	353.71	978.29	3.24	13.6	4.20	pH: 7.20/ EC: 2.84	982.26	1.23
1/6/21 12:21 PM	150		73.02	353.84	978.16	3.37				982.25	1.24
1/6/21 12:51 PM	180		73.09	353.93	978.07	3.46				982.17	1.32
1/6/21 1:21 PM	210		73.11	354.04	977.96	3.57				982.09	1.40
1/6/21 1:51 PM	240		73.09	354.12	977.88	3.65				982.06	1.43
1/6/21 2:51 PM	300		73.11	354.23	977.77	3.76				981.81	1.68
1/6/21 3:51 PM	360		73.19	354.33	977.67	3.86				981.80	1.69
1/6/21 4:51 PM	420		73.19	354.50	977.50	4.03				981.64	1.85
1/6/21 5:51 PM	480		73.27	354.50	977.50	4.03				981.60	1.89
1/6/21 6:51 PM	540		73.20	354.65	977.35	4.18				981.48	2.01
1/6/21 7:51 PM	600		73.22	354.58	977.43	4.11				981.49	2.00

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 1.5 HP
MSL = Mean Sea Level Pump Setting = 380 ft EC=Electrical conductivity (mS/cm)

Legacy Hills Well No. 7 - Aquifer Test (January 6, 2021)

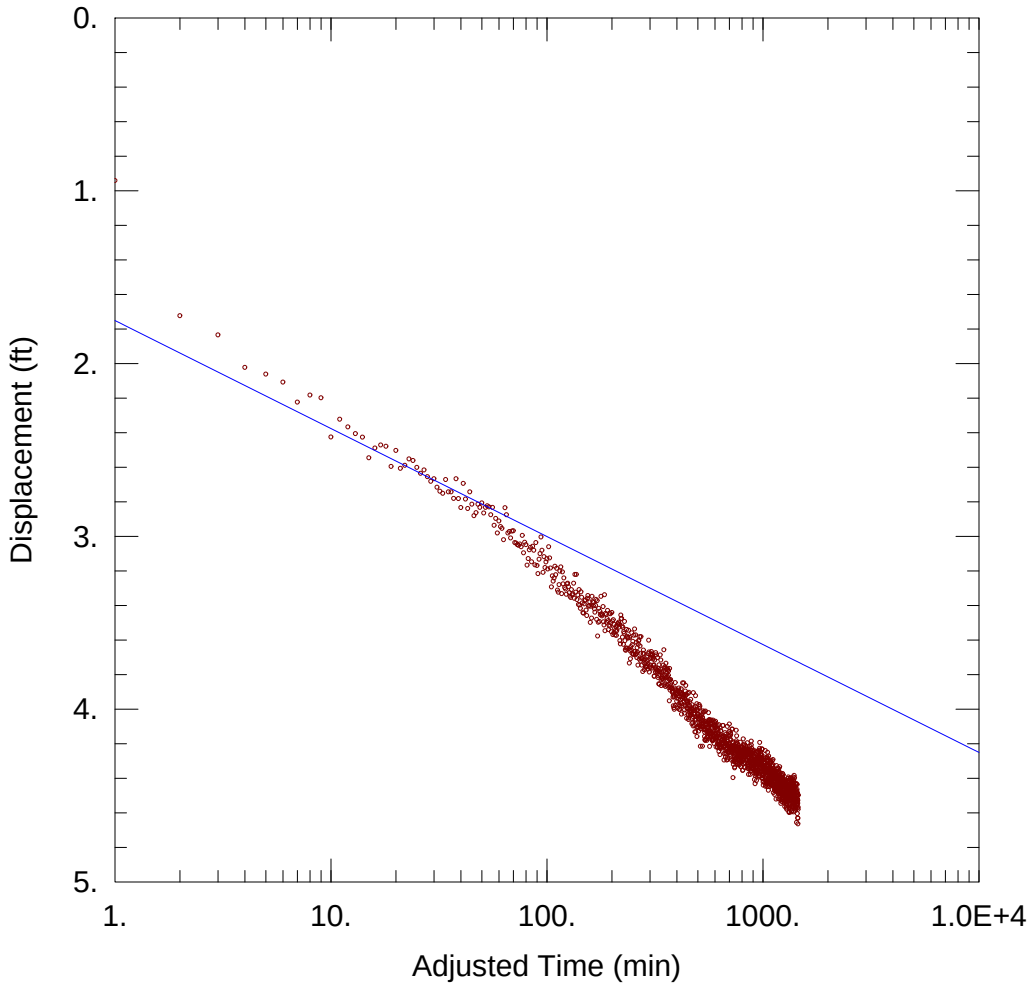
Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 7 Temperature (F)	PW Well No. 7 Water Level (ft bgs)	PW Well No. 7 Water Level (ft MSL)	PW Well No. 7 Drawdown (ft)	PW Well No. 7 Pump Rate (gpm)	PW Well No. 7 Specific Capacity (gpm/ft)	Comments	OW Well No. 8 Water Level (ft MSL)	OW Well No. 8 Drawdown (ft)
1/6/21 8:51 PM	660		73.22	354.69	977.31	4.22				981.39	2.10
1/6/21 9:51 PM	720		73.25	354.59	977.41	4.12				981.42	2.07
1/6/21 10:51 PM	780		73.19	354.76	977.24	4.29				981.30	2.19
1/6/21 11:51 PM	840		73.17	354.73	977.27	4.26				981.30	2.19
1/7/21 12:51 AM	900		73.18	354.82	977.18	4.35				981.27	2.22
1/7/21 1:51 AM	960		73.16	354.75	977.25	4.28				981.28	2.21
1/7/21 2:51 AM	1,020		73.17	354.80	977.20	4.33				981.25	2.24
1/7/21 3:51 AM	1,080		73.12	354.82	977.18	4.35				981.20	2.29
1/7/21 4:51 AM	1,140		73.12	354.89	977.11	4.42				981.13	2.36
1/7/21 5:51 AM	1,200		73.16	354.98	977.02	4.51				981.05	2.44
1/7/21 6:51 AM	1,260		73.18	355.02	976.98	4.55				981.11	2.38
1/7/21 7:51 AM	1,320		73.18	354.92	977.08	4.45				981.11	2.38
1/7/21 8:51 AM	1,380		73.18	355.04	976.97	4.57				981.09	2.40
1/7/21 9:51 AM	1,440		73.20	354.93	977.07	4.46				981.05	2.44
1/7/21 10:09 AM	1,458	0	73.18	354.97	977.03	4.50	13.4	2.98	Pump Stop	981.11	2.38
1/7/21 10:10 AM	1,459	1	73.19	353.62	978.38	3.15			Meter: 657,213.82 gallons	981.16	2.33
1/7/21 10:11 AM	1,460	2	73.36	353.21	978.79	2.74			Avg. Pump Rate: 13.4 gpm	981.18	2.31
1/7/21 10:12 AM	1,461	3	73.43	353.01	978.99	2.54				981.13	2.36
1/7/21 10:13 AM	1,462	4	73.57	352.86	979.14	2.39				981.21	2.28
1/7/21 10:14 AM	1,463	5	73.61	352.93	979.07	2.46				981.22	2.27
1/7/21 10:15 AM	1,464	6	73.74	352.83	979.17	2.36				981.32	2.17
1/7/21 10:16 AM	1,465	7	73.90	352.76	979.24	2.29				981.36	2.13
1/7/21 10:17 AM	1,466	8	73.97	352.75	979.25	2.28				981.40	2.09
1/7/21 10:18 AM	1,467	9	74.09	352.76	979.24	2.29				981.37	2.12
1/7/21 10:19 AM	1,468	10	74.28	352.60	979.40	2.13				981.35	2.14
1/7/21 10:20 AM	1,469	11	74.33	352.61	979.39	2.14				981.42	2.07
1/7/21 10:21 AM	1,470	12	74.40	352.61	979.39	2.14				981.38	2.11
1/7/21 10:22 AM	1,471	13	74.54	352.67	979.33	2.20				981.63	1.86
1/7/21 10:23 AM	1,472	14	74.58	352.54	979.46	2.07				981.54	1.95
1/7/21 10:24 AM	1,473	15	74.64	352.64	979.36	2.17				981.54	1.95
1/7/21 10:29 AM	1,478	20	74.99	352.42	979.58	1.95				981.64	1.85
1/7/21 10:34 AM	1,483	25	75.15	352.35	979.65	1.88				981.61	1.88
1/7/21 10:39 AM	1,488	30	75.26	352.29	979.71	1.82				981.79	1.70
1/7/21 10:54 AM	1,503	45	75.18	352.15	979.85	1.68				981.92	1.57
1/7/21 11:09 AM	1,518	60	74.91	352.04	979.97	1.57				981.95	1.54

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 1.5 HP
MSL = Mean Sea Level Pump Setting = 380 ft EC=Electrical conductivity (mS/cm)

Legacy Hills Well No. 7 - Aquifer Test (January 6, 2021)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 7 Temperature (F)	PW Well No. 7 Water Level (ft bgs)	PW Well No. 7 Water Level (ft MSL)	PW Well No. 7 Drawdown (ft)	PW Well No. 7 Pump Rate (gpm)	PW Well No. 7 Specific Capacity (gpm/ft)	Comments	OW Well No. 8 Water Level (ft MSL)	OW Well No. 8 Drawdown (ft)
1/7/21 11:24 AM	1,533	75	74.62	351.99	980.01	1.52				982.09	1.39
1/7/21 11:39 AM	1,548	90	74.41	351.84	980.16	1.37				982.13	1.36
1/7/21 11:54 AM	1,563	105	74.22	351.80	980.20	1.33				982.10	1.39
1/7/21 12:09 PM	1,578	120	74.06	351.73	980.27	1.26				982.30	1.19
1/7/21 12:39 PM	1,608	150	73.71	351.66	980.34	1.19				982.33	1.16
1/7/21 1:09 PM	1,638	180	73.49	351.63	980.37	1.16				982.45	1.04
1/7/21 1:39 PM	1,668	210	73.37	351.51	980.49	1.04				982.51	0.98
1/7/21 2:09 PM	1,698	240	73.22	351.57	980.43	1.10				982.56	0.93
1/7/21 3:09 PM	1,758	300	73.02	351.39	980.61	0.92				982.57	0.92
1/7/21 4:09 PM	1,818	360	72.93	351.32	980.68	0.85				982.78	0.71
1/7/21 5:09 PM	1,878	420	72.85	351.28	980.72	0.81				982.75	0.74
1/7/21 6:09 PM	1,938	480	72.81	351.28	980.72	0.81				982.72	0.77
1/7/21 7:09 PM	1,998	540	72.83	351.25	980.75	0.78				982.80	0.69
1/7/21 8:09 PM	2,058	600	72.79	351.12	980.88	0.65				982.85	0.64
1/7/21 9:09 PM	2,118	660	72.71	351.23	980.77	0.76				982.85	0.63
1/7/21 10:09 PM	2,178	720	72.72	351.10	980.90	0.63				982.95	0.54
1/7/21 11:09 PM	2,238	780	72.72	351.11	980.89	0.64				982.96	0.53
1/8/21 12:09 AM	2,298	840	72.72	351.02	980.98	0.55				982.99	0.50
1/8/21 1:09 AM	2,358	900	72.67	350.93	981.07	0.46				983.00	0.49
1/8/21 2:09 AM	2,418	960	72.68	351.00	981.00	0.53				983.08	0.40
1/8/21 3:09 AM	2,478	1020	72.71	350.88	981.12	0.41				983.16	0.33
1/8/21 4:09 AM	2,538	1080	72.70	350.79	981.21	0.32				983.23	0.26
1/8/21 5:09 AM	2,598	1140	72.65	350.83	981.17	0.36				983.21	0.28
1/8/21 6:09 AM	2,658	1200	72.70	350.80	981.20	0.33				983.22	0.27
1/8/21 7:09 AM	2,718	1260	72.65	350.72	981.28	0.25				983.18	0.31
1/8/21 8:09 AM	2,778	1320	72.66	350.67	981.33	0.20				983.30	0.19
1/8/21 9:09 AM	2,838	1380	72.68	350.72	981.28	0.25				983.29	0.20
1/8/21 9:40 AM	2,869	1411	72.66	350.75	981.25	0.28					

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 1.5 HP
MSL = Mean Sea Level Pump Setting = 380 ft EC=Electrical conductivity (mS/cm)



WELL TEST ANALYSIS

Data Set: \...\PW 7.aqt
Date: 01/15/21 Time: 14:00:52

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Lonestar Land Partners
Location: Blanco County
Test Well: Well No. 7
Test Date: 1-6-20

AQUIFER DATA

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

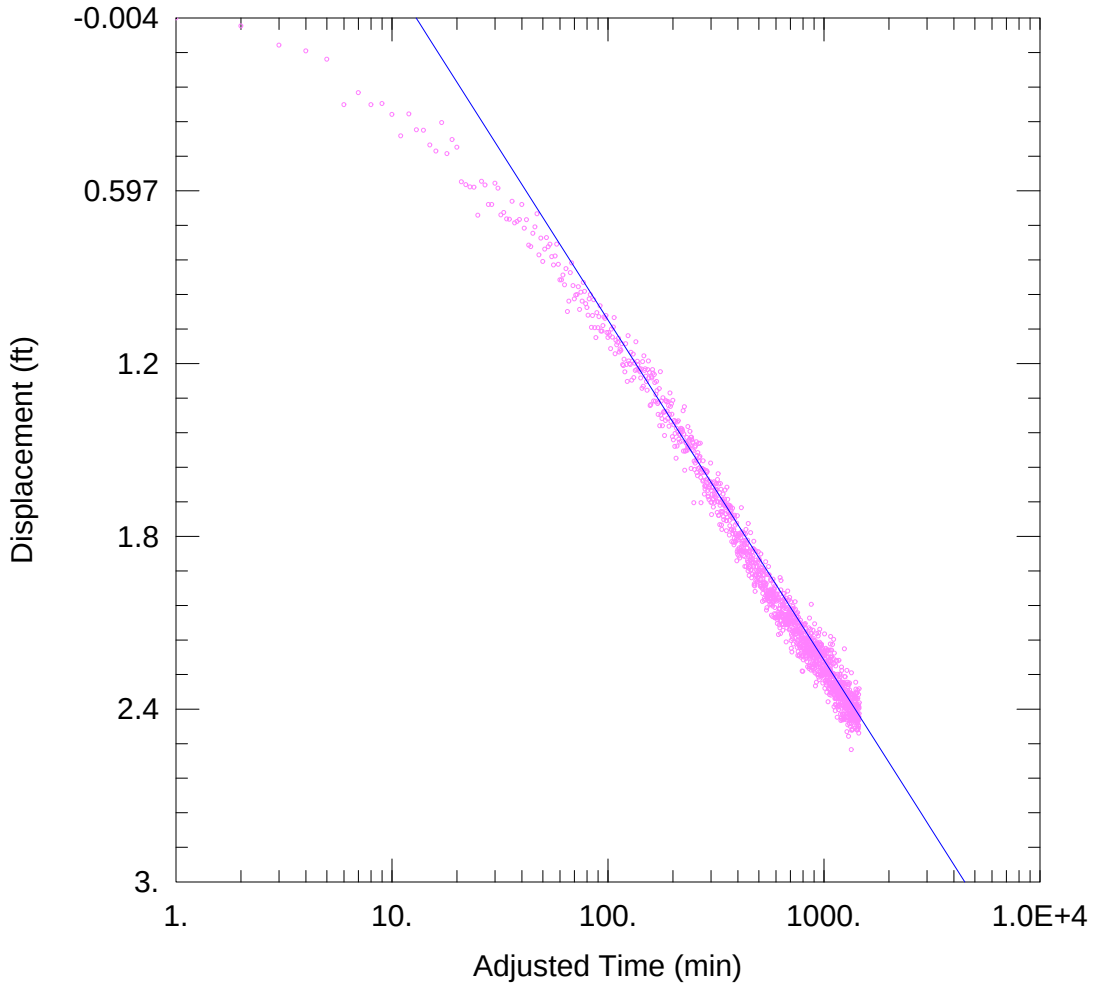
Pumping Wells

Well Name	X (ft)	Y (ft)
Well No. 7	0	0

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 756.4 ft^2/day



WELL TEST ANALYSIS

Data Set: \...\OW 8.aqt
Date: 01/15/21 Time: 13:56:52

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Lonestar Land Partners
Location: Blanco County
Test Well: Well No. 7
Test Date: 1-6-20

AQUIFER DATA

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Well No. 7	0	0

Observation Wells

Well Name	X (ft)	Y (ft)
Well No. 8	566	0

SOLUTION

Aquifer Model: Confined
Solution Method: Cooper-Jacob
T = 399.7 ft^2/day
S = 2.539E-5

Aquifer Test

Well No. 9

Legacy Hills Well No. 9 - Aquifer Test (January 4, 2021)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 9 Temperature (F)	PW Well No. 9 Water Level (ft bgs)	PW Well No. 9 Water Level (ft MSL)	PW Well No. 9 Drawdown (ft)	PW Well No. 9 Pump Rate (gpm)	PW Well No. 9 Specific Capacity (gpm/ft)	Comments	OW Well No. 4 Water Level (ft MSL)	OW Well No. 4 Drawdown (ft)
1/4/21 10:20 AM	0		72.61	350.21	990.79	0.00			Pump Start	992.02	0.00
1/4/21 10:21 AM	1		72.63	352.05	988.95	1.84	11.4	6.20	Meter: 624,651.5 gallons	992.12	-0.10
1/4/21 10:22 AM	2		72.67	352.36	988.64	2.15				992.06	-0.04
1/4/21 10:23 AM	3		72.62	352.06	988.95	1.85				992.06	-0.05
1/4/21 10:24 AM	4		72.70	352.17	988.83	1.96				992.05	-0.03
1/4/21 10:25 AM	5		72.70	352.12	988.88	1.91	11.4	5.96	pH: 6.99/ EC: 1.17	992.07	-0.05
1/4/21 10:26 AM	6		72.70	352.18	988.82	1.97				992.11	-0.09
1/4/21 10:27 AM	7		72.72	352.11	988.89	1.90				992.13	-0.11
1/4/21 10:28 AM	8		72.74	352.20	988.80	1.99				992.12	-0.10
1/4/21 10:29 AM	9		72.73	352.28	988.72	2.07				992.05	-0.04
1/4/21 10:30 AM	10		72.73	352.29	988.71	2.08				992.06	-0.05
1/4/21 10:31 AM	11		72.78	352.27	988.73	2.06				992.06	-0.05
1/4/21 10:32 AM	12		72.80	352.28	988.72	2.07				992.10	-0.08
1/4/21 10:33 AM	13		72.75	352.33	988.67	2.12				992.11	-0.09
1/4/21 10:34 AM	14		72.84	352.43	988.57	2.22				992.00	0.01
1/4/21 10:35 AM	15		72.78	352.38	988.62	2.17	11.4	5.25	pH: 7.00/ EC: 1.58	992.09	-0.07
1/4/21 10:40 AM	20		72.82	352.53	988.47	2.32				992.11	-0.09
1/4/21 10:45 AM	25		72.83	352.61	988.39	2.40				992.00	0.02
1/4/21 10:50 AM	30		72.83	352.73	988.27	2.52				992.03	-0.02
1/4/21 11:05 AM	45		72.93	352.85	988.15	2.64				992.06	-0.04
1/4/21 11:20 AM	60		73.04	353.05	987.95	2.84				992.04	-0.02
1/4/21 11:35 AM	75		73.47	352.73	988.27	2.52				992.10	-0.09
1/4/21 11:50 AM	90		73.36	352.79	988.21	2.58	9.2	3.56	pH: 7.07/ EC: 2.25	992.03	-0.02
1/4/21 12:05 PM	105		73.38	352.79	988.21	2.58				992.11	-0.09
1/4/21 12:20 PM	120		73.36	353.02	987.98	2.81				991.98	0.04
1/4/21 12:50 PM	150		73.47	353.03	987.97	2.82				992.04	-0.02
1/4/21 1:20 PM	180		73.50	353.30	987.70	3.09				992.01	0.00
1/4/21 1:50 PM	210		73.55	353.27	987.73	3.06				992.01	0.00
1/4/21 2:20 PM	240		73.62	353.40	987.60	3.19				991.88	0.13
1/4/21 3:20 PM	300		73.67	353.48	987.52	3.27				992.03	-0.01
1/4/21 4:20 PM	360		73.69	353.67	987.33	3.46				991.92	0.10
1/4/21 5:20 PM	420		73.74	353.67	987.33	3.46				991.79	0.23
1/4/21 6:20 PM	480		73.76	353.70	987.30	3.49				991.75	0.26
1/4/21 7:20 PM	540		73.72	353.79	987.21	3.58				991.72	0.29
1/4/21 8:20 PM	600		73.78	353.67	987.33	3.46				991.73	0.29

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 1.5 HP
MSL = Mean Sea Level Pump Setting = 360 ft EC=Electrical conductivity (mS/cm)

Legacy Hills Well No. 9 - Aquifer Test (January 4, 2021)

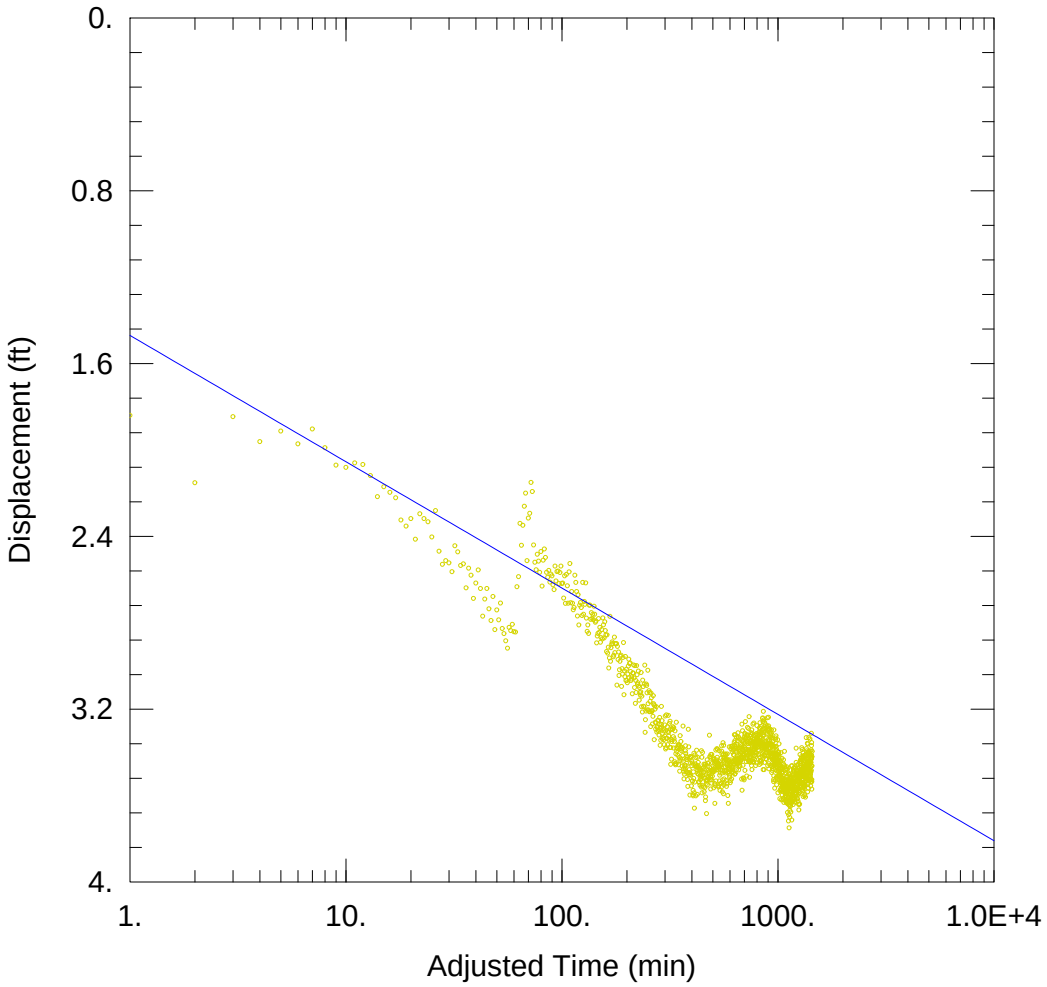
Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 9 Temperature (F)	PW Well No. 9 Water Level (ft bgs)	PW Well No. 9 Water Level (ft MSL)	PW Well No. 9 Drawdown (ft)	PW Well No. 9 Pump Rate (gpm)	PW Well No. 9 Specific Capacity (gpm/ft)	Comments	OW Well No. 4 Water Level (ft MSL)	OW Well No. 4 Drawdown (ft)
1/4/21 9:20 PM	660		73.80	353.64	987.37	3.43				991.76	0.26
1/4/21 10:20 PM	720		73.80	353.53	987.47	3.32				991.58	0.44
1/4/21 11:20 PM	780		73.82	353.64	987.36	3.43				991.65	0.36
1/5/21 12:20 AM	840		73.79	353.65	987.35	3.44				991.61	0.41
1/5/21 1:20 AM	900		73.79	353.55	987.45	3.34				991.57	0.45
1/5/21 2:20 AM	960		73.75	353.64	987.36	3.43				991.55	0.47
1/5/21 3:20 AM	1,020		73.82	353.70	987.30	3.49				991.61	0.40
1/5/21 4:20 AM	1,080		73.79	353.82	987.18	3.61				991.47	0.55
1/5/21 5:20 AM	1,140		73.75	353.72	987.28	3.51				991.47	0.55
1/5/21 6:20 AM	1,200		73.77	353.68	987.32	3.47				991.39	0.62
1/5/21 7:20 AM	1,260		73.74	353.73	987.27	3.52				991.41	0.60
1/5/21 8:20 AM	1,320		73.81	353.77	987.23	3.56				991.41	0.61
1/5/21 9:20 AM	1,380		73.84	353.74	987.26	3.53				991.48	0.53
1/5/21 10:20 AM	1,440		73.83	353.67	987.33	3.46				991.45	0.56
1/5/21 10:21 AM	1,441	0	73.82	353.61	987.40	3.40	9.0	2.65	Pump Stop	991.38	0.64
1/5/21 10:22 AM	1,442	1	73.82	352.64	988.36	2.43			Meter: 637,626.62 gallons	991.38	0.64
1/5/21 10:23 AM	1,443	2	73.73	352.35	988.65	2.14			Avg. Pump Rate: 9 gpm	991.33	0.69
1/5/21 10:24 AM	1,444	3	73.80	352.24	988.77	2.03				991.33	0.69
1/5/21 10:25 AM	1,445	4	73.77	352.24	988.76	2.03				991.32	0.69
1/5/21 10:26 AM	1,446	5	73.87	352.12	988.88	1.91				991.42	0.60
1/5/21 10:27 AM	1,447	6	73.95	352.08	988.92	1.87				991.41	0.61
1/5/21 10:28 AM	1,448	7	74.09	352.13	988.87	1.92				991.40	0.62
1/5/21 10:29 AM	1,449	8	74.25	352.09	988.92	1.88				991.36	0.66
1/5/21 10:30 AM	1,450	9	74.47	352.09	988.91	1.88				991.33	0.69
1/5/21 10:31 AM	1,451	10	74.61	352.01	988.99	1.80				991.43	0.59
1/5/21 10:32 AM	1,452	11	74.82	352.04	988.96	1.83				991.36	0.66
1/5/21 10:33 AM	1,453	12	75.02	351.99	989.01	1.78				991.36	0.65
1/5/21 10:34 AM	1,454	13	75.26	351.97	989.03	1.76				991.41	0.61
1/5/21 10:35 AM	1,455	14	75.45	352.02	988.98	1.81				991.37	0.64
1/5/21 10:36 AM	1,456	15	75.59	351.93	989.07	1.72				991.37	0.64
1/5/21 10:41 AM	1,461	20	76.29	351.90	989.10	1.69				991.39	0.63
1/5/21 10:46 AM	1,466	25	76.58	351.81	989.20	1.60				991.37	0.64
1/5/21 10:51 AM	1,471	30	76.84	351.85	989.15	1.64				991.43	0.59
1/5/21 11:06 AM	1,486	45	76.72	351.56	989.44	1.35				991.34	0.67
1/5/21 11:21 AM	1,501	60	76.36	351.52	989.49	1.31				991.39	0.62

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 1.5 HP
MSL = Mean Sea Level Pump Setting = 360 ft EC=Electrical conductivity (mS/cm)

Legacy Hills Well No. 9 - Aquifer Test (January 4, 2021)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 9 Temperature (F)	PW Well No. 9 Water Level (ft bgs)	PW Well No. 9 Water Level (ft MSL)	PW Well No. 9 Drawdown (ft)	PW Well No. 9 Pump Rate (gpm)	PW Well No. 9 Specific Capacity (gpm/ft)	Comments	OW Well No. 4 Water Level (ft MSL)	OW Well No. 4 Drawdown (ft)
1/5/21 11:36 AM	1,516	75	75.92	351.54	989.46	1.33				991.39	0.63
1/5/21 11:51 AM	1,531	90	75.56	351.41	989.59	1.20				991.42	0.60
1/5/21 12:06 PM	1,546	105	75.24	351.41	989.60	1.20				991.42	0.60
1/5/21 12:21 PM	1,561	120	74.99	351.38	989.62	1.17				991.38	0.63
1/5/21 12:51 PM	1,591	150	74.52	351.34	989.67	1.13				991.38	0.63
1/5/21 1:21 PM	1,621	180	74.17	351.36	989.64	1.15				991.47	0.55
1/5/21 1:51 PM	1,651	210	73.93	351.25	989.75	1.04				991.41	0.61
1/5/21 2:21 PM	1,681	240	73.76	351.37	989.64	1.16				991.44	0.58
1/5/21 3:21 PM	1,741	300	73.49	351.32	989.68	1.11				991.37	0.64
1/5/21 4:21 PM	1,801	360	73.31	351.22	989.78	1.01				991.42	0.60
1/5/21 5:21 PM	1,861	420	73.23	351.23	989.77	1.02				991.43	0.59
1/5/21 6:21 PM	1,921	480	73.13	351.14	989.86	0.93				991.40	0.62
1/5/21 7:21 PM	1,981	540	73.04	350.96	990.04	0.75				991.37	0.64
1/5/21 8:21 PM	2,041	600	72.98	350.97	990.03	0.76				991.42	0.60
1/5/21 9:21 PM	2,101	660	72.92	350.85	990.15	0.64				991.46	0.56
1/5/21 10:21 PM	2,161	720	72.89	350.80	990.20	0.59				991.47	0.55
1/5/21 11:21 PM	2,221	780	72.87	350.69	990.31	0.48				991.53	0.49
1/6/21 12:21 AM	2,281	840	72.88	350.69	990.31	0.48				991.49	0.53
1/6/21 1:21 AM	2,341	900	72.91	350.62	990.38	0.41				991.58	0.44
1/6/21 2:21 AM	2,401	960	72.86	350.50	990.50	0.29				991.56	0.46
1/6/21 3:21 AM	2,461	1020	72.86	350.59	990.41	0.38				991.52	0.49
1/6/21 4:21 AM	2,521	1080	72.83	350.57	990.43	0.36				991.55	0.47
1/6/21 5:21 AM	2,581	1140	72.83	350.52	990.48	0.31				991.64	0.38
1/6/21 6:21 AM	2,641	1200	72.87	350.59	990.42	0.38				991.56	0.45
1/6/21 7:21 AM	2,701	1260	72.87	350.49	990.51	0.28				991.65	0.37
1/6/21 8:21 AM	2,761	1320	72.84	350.44	990.56	0.23				991.76	0.26
1/6/21 8:55 AM	2,795	1354	72.83	350.46	990.54	0.25				991.70	0.31

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 1.5 HP
MSL = Mean Sea Level Pump Setting = 360 ft EC=Electrical conductivity (mS/cm)



WELL TEST ANALYSIS

Data Set: \...\PW 9.aqt
Date: 01/15/21 Time: 14:04:31

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Lonestar Land Partners
Location: Blanco County
Test Well: Well No. 9
Test Date: 1-4-20

AQUIFER DATA

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

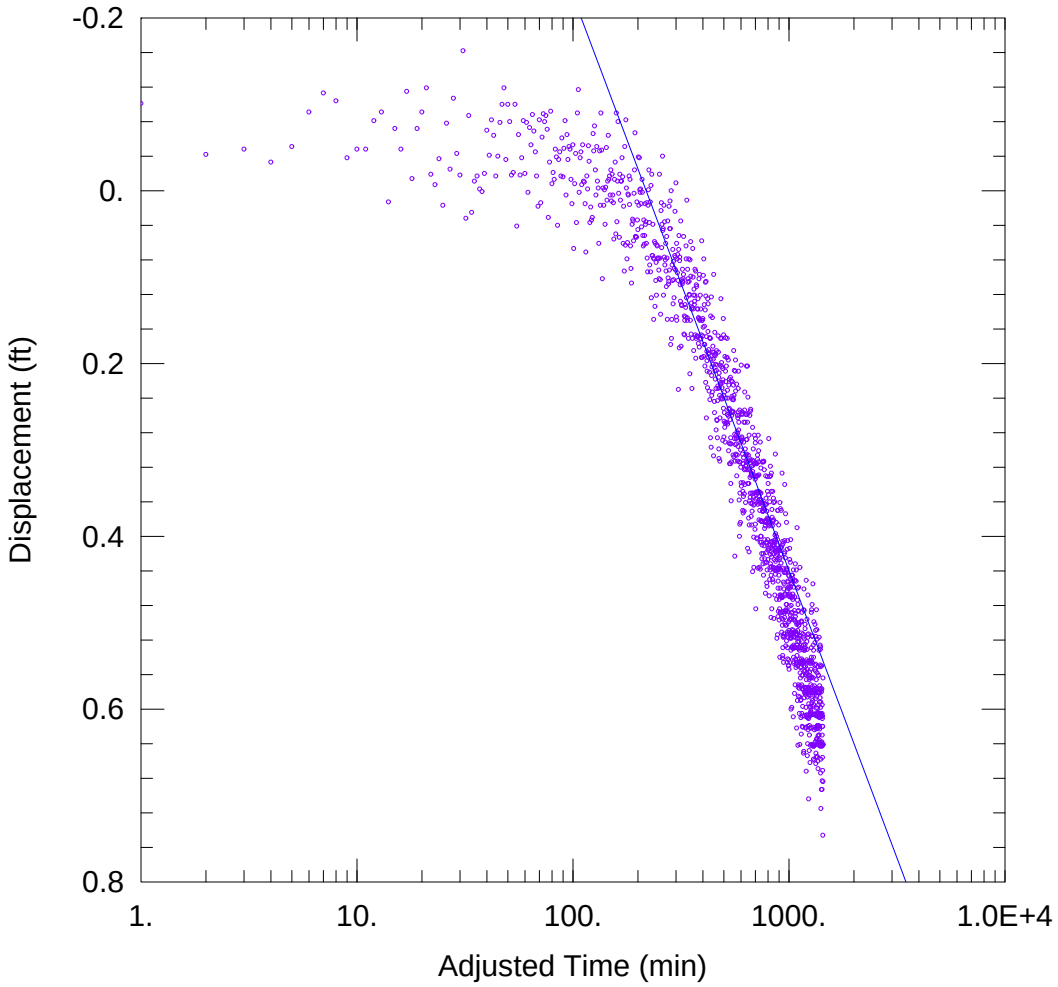
Pumping Wells

Well Name	X (ft)	Y (ft)
Well No. 9	0	0

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 542.8 ft^2/day



WELL TEST ANALYSIS

Data Set: \...\OW 4.aqt
Date: 01/15/21 Time: 14:02:58

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Lonestar Land Partners
Location: Blanco County
Test Well: Well No. 9
Test Date: 1-4-20

AQUIFER DATA

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Well No. 9	0	0

Observation Wells

Well Name	X (ft)	Y (ft)
◦ Well No. 4	1580	0

SOLUTION

Aquifer Model: Confined
Solution Method: Cooper-Jacob
T = 477.4 ft^2/day
S = 6.511E-5

Aquifer Test

Ex. Well No. 1

Legacy Hills Existing Well No. 1 - Aquifer Test (December 28, 2020)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 1 Temperature (F)	PW Well No. 1 Water Level (ft bgs)	PW Well No. 1 Water Level (ft MSL)	PW Well No. 1 Drawdown (ft)	PW Well No. 1 Pump Rate (gpm)	PW Well No. 1 Specific Capacity (gpm/ft)	Comments	OW Well No. 6 Water Level (ft MSL)	OW Well No. 6 Drawdown (ft)
12/28/20 10:18 AM	0		71.71	329.29	987.71	0.00			Pump Start	989.99	0.00
12/28/20 10:19 AM	1		72.14	332.56	984.44	3.27	11.8	3.61	Meter: 606,686 gallons	989.99	0.00
12/28/20 10:20 AM	2		72.51	333.16	983.84	3.87	12.5	3.23		989.97	0.02
12/28/20 10:21 AM	3		72.70	333.49	983.51	4.20	12.5	2.98		989.87	0.12
12/28/20 10:22 AM	4		72.88	333.64	983.36	4.35	12.7	2.92		989.90	0.09
12/28/20 10:23 AM	5		72.98	333.89	983.11	4.60	12.6	2.74		989.88	0.11
12/28/20 10:24 AM	6		73.07	334.05	982.95	4.76	12.5	2.63		989.90	0.10
12/28/20 10:25 AM	7		73.17	334.19	982.81	4.90	12.5	2.55		989.77	0.22
12/28/20 10:26 AM	8		73.19	334.33	982.67	5.04	12.6	2.50		989.79	0.20
12/28/20 10:27 AM	9		73.27	334.44	982.56	5.14	12.5	2.43		989.72	0.27
12/28/20 10:28 AM	10		73.28	334.49	982.51	5.20	12.6	2.42		989.74	0.25
12/28/20 10:29 AM	11		73.36	334.51	982.49	5.22	12.5	2.40		989.65	0.34
12/28/20 10:30 AM	12		73.31	334.66	982.35	5.36	12.5	2.33		989.63	0.36
12/28/20 10:31 AM	13		73.34	334.66	982.34	5.36	12.5	2.33		989.63	0.36
12/28/20 10:32 AM	14		73.37	334.76	982.24	5.47	12.5	2.29		989.56	0.43
12/28/20 10:33 AM	15		73.39	334.76	982.24	5.47	12.5	2.29	pH: 6.78/ EC: 2.96	989.61	0.39
12/28/20 10:38 AM	20		73.45	335.10	981.91	5.80	12.5	2.15		989.48	0.51
12/28/20 10:43 AM	25		73.46	335.25	981.75	5.96	12.6	2.12	pH: 6.75/ EC: 2.95	989.34	0.65
12/28/20 10:48 AM	30		73.45	335.39	981.61	6.10	12.5	2.05		989.22	0.77
12/28/20 10:53 AM	35		73.50	335.58	981.42	6.29	12.5	1.99		989.03	0.96
12/28/20 10:58 AM	40		73.50	335.65	981.35	6.36	12.5	1.97		989.03	0.96
12/28/20 11:03 AM	45		73.57	335.76	981.24	6.46	12.5	1.93	pH: 6.80/ EC: 2.96	988.92	1.07
12/28/20 11:18 AM	60		73.57	335.92	981.08	6.63	12.5	1.89	pH: 6.80/ EC: 2.95	988.78	1.21
12/28/20 11:33 AM	75		73.62	336.16	980.84	6.87	12.5	1.82	pH: 6.77/ EC: 2.96	988.50	1.49
12/28/20 11:48 AM	90		73.66	336.41	980.59	7.12	12.6	1.77		988.52	1.47
12/28/20 12:03 PM	105		73.67	336.60	980.40	7.30	12.5	1.71		988.26	1.73
12/28/20 12:18 PM	120		73.70	336.77	980.24	7.47	12.5	1.67	pH: 6.80/ EC: 2.95	988.06	1.93
12/28/20 12:48 PM	150		73.92	336.77	980.24	7.47	12.5	1.67		988.05	1.94
12/28/20 1:18 PM	180		73.98	337.09	979.91	7.80	12.5	1.60	pH: 6.93/ EC: 2.96	987.98	2.01
12/28/20 1:48 PM	210		73.96	337.16	979.84	7.87	12.5	1.59		987.77	2.22
12/28/20 2:18 PM	240		74.00	337.12	979.88	7.82	12.5	1.60	pH: 6.86/ EC: 2.94	987.78	2.21
12/28/20 3:18 PM	300		73.99	337.39	979.61	8.09				987.71	2.29
12/28/20 4:18 PM	360		74.03	337.52	979.48	8.22				987.50	2.49
12/28/20 5:18 PM	420		73.79	337.47	979.53	8.18				987.43	2.56
12/28/20 6:18 PM	480		73.82	337.63	979.37	8.34				987.27	2.72

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 1.5 HP
MSL = Mean Sea Level Pump Setting = 380 ft EC=Electrical conductivity (mS/cm)

Legacy Hills Existing Well No. 1 - Aquifer Test (December 28, 2020)

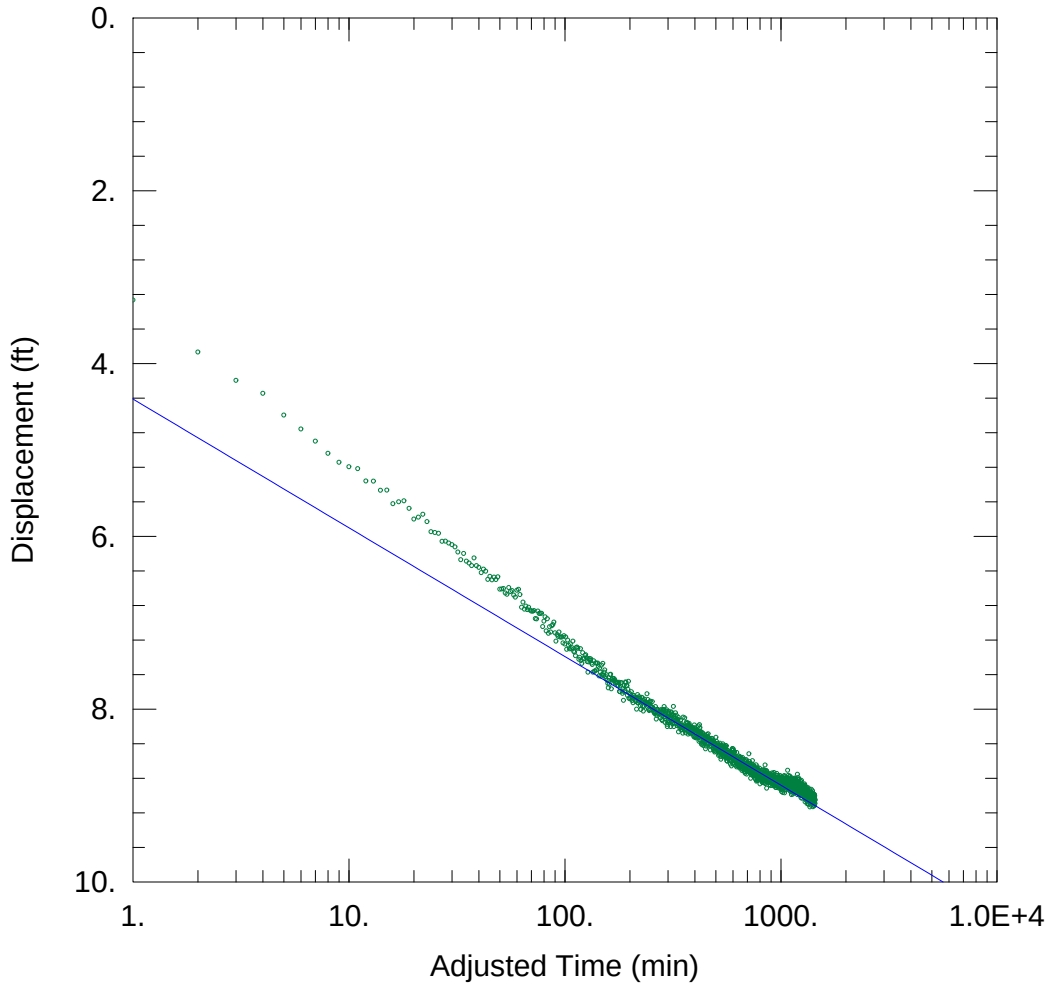
Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 1 Temperature (F)	PW Well No. 1 Water Level (ft bgs)	PW Well No. 1 Water Level (ft MSL)	PW Well No. 1 Drawdown (ft)	PW Well No. 1 Pump Rate (gpm)	PW Well No. 1 Specific Capacity (gpm/ft)	Comments	OW Well No. 6 Water Level (ft MSL)	OW Well No. 6 Drawdown (ft)
12/28/20 7:18 PM	540		73.77	337.77	979.23	8.48				987.32	2.67
12/28/20 8:18 PM	600		73.80	337.88	979.12	8.58				987.13	2.86
12/28/20 9:18 PM	660		73.79	338.01	979.00	8.71				987.08	2.91
12/28/20 10:18 PM	720		73.83	338.03	978.97	8.74				986.93	3.06
12/28/20 11:18 PM	780		73.87	338.11	978.90	8.81				986.97	3.02
12/29/20 12:18 AM	840		73.87	338.14	978.86	8.85				986.96	3.04
12/29/20 1:18 AM	900		73.80	338.11	978.90	8.81				986.80	3.19
12/29/20 2:18 AM	960		73.81	338.06	978.94	8.77				986.79	3.20
12/29/20 3:18 AM	1,020		73.81	338.14	978.86	8.85				986.75	3.24
12/29/20 4:18 AM	1,080		73.84	338.19	978.81	8.90				986.69	3.30
12/29/20 5:18 AM	1,140		73.85	338.17	978.83	8.88				986.73	3.26
12/29/20 6:18 AM	1,200		73.86	338.26	978.74	8.97				986.66	3.33
12/29/20 7:18 AM	1,260		73.79	338.18	978.82	8.89				986.71	3.28
12/29/20 8:18 AM	1,320		73.83	338.23	978.77	8.93				986.63	3.36
12/29/20 9:18 AM	1,380		73.82	338.35	978.65	9.06				986.56	3.43
12/29/20 10:18 AM	1,440		73.86	338.35	978.65	9.06				986.52	3.47
12/29/20 10:22 AM	1,444	0	73.86	338.33	978.67	9.03	12.4	1.37	Pump Stop	986.53	3.46
12/29/20 10:23 AM	1,445	1	73.84	335.08	981.92	5.78			Meter: 624,651 gallons	986.54	3.45
12/29/20 10:24 AM	1,446	2	73.93	334.63	982.37	5.34			Avg. Pump Rate: 12.4 gpm	986.54	3.45
12/29/20 10:25 AM	1,447	3	73.99	334.41	982.59	5.11				986.54	3.45
12/29/20 10:26 AM	1,448	4	74.04	334.20	982.80	4.90				986.53	3.47
12/29/20 10:27 AM	1,449	5	74.09	333.86	983.14	4.57				986.59	3.40
12/29/20 10:28 AM	1,450	6	74.17	333.85	983.15	4.55				986.71	3.29
12/29/20 10:29 AM	1,451	7	74.23	333.58	983.42	4.28				986.64	3.36
12/29/20 10:30 AM	1,452	8	74.36	333.56	983.44	4.27				986.68	3.31
12/29/20 10:31 AM	1,453	9	74.53	333.48	983.52	4.19				986.71	3.28
12/29/20 10:32 AM	1,454	10	74.63	333.34	983.66	4.04				986.82	3.18
12/29/20 10:33 AM	1,455	11	74.70	333.14	983.86	3.85				986.86	3.13
12/29/20 10:34 AM	1,456	12	74.82	333.04	983.97	3.74				986.87	3.12
12/29/20 10:35 AM	1,457	13	74.87	333.00	984.00	3.70				986.90	3.09
12/29/20 10:36 AM	1,458	14	74.95	332.96	984.04	3.67				986.92	3.07
12/29/20 10:37 AM	1,459	15	75.04	332.92	984.08	3.62				986.94	3.05
12/29/20 10:42 AM	1,464	20	75.06	332.67	984.33	3.38				987.03	2.97
12/29/20 10:47 AM	1,469	25	75.06	332.45	984.55	3.16				987.19	2.80
12/29/20 10:52 AM	1,474	30	75.05	332.31	984.69	3.02				987.25	2.74

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 1.5 HP
MSL = Mean Sea Level Pump Setting = 380 ft EC=Electrical conductivity (mS/cm)

Legacy Hills Existing Well No. 1 - Aquifer Test (December 28, 2020)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 1 Temperature (F)	PW Well No. 1 Water Level (ft bgs)	PW Well No. 1 Water Level (ft MSL)	PW Well No. 1 Drawdown (ft)	PW Well No. 1 Pump Rate (gpm)	PW Well No. 1 Specific Capacity (gpm/ft)	Comments	OW Well No. 6 Water Level (ft MSL)	OW Well No. 6 Drawdown (ft)
12/29/20 10:57 AM	1,479	35	74.97	332.21	984.79	2.91				987.30	2.69
12/29/20 11:02 AM	1,484	40	74.87	332.05	984.95	2.76				987.36	2.63
12/29/20 11:07 AM	1,489	45	74.80	331.94	985.07	2.64				987.42	2.57
12/29/20 11:22 AM	1,504	60	74.54	331.70	985.30	2.41				987.63	2.36
12/29/20 11:37 AM	1,519	75	74.40	331.56	985.44	2.27				987.63	2.36
12/29/20 11:52 AM	1,534	90	74.30	331.46	985.55	2.16				987.74	2.25
12/29/20 12:07 PM	1,549	105	74.20	331.32	985.68	2.03				987.68	2.31
12/29/20 12:22 PM	1,564	120	74.16	331.32	985.68	2.03				987.88	2.11
12/29/20 12:52 PM	1,594	150	74.00	331.10	985.90	1.81				987.86	2.13
12/29/20 1:22 PM	1,624	180	74.01	331.03	985.97	1.73				987.94	2.05
12/29/20 1:52 PM	1,654	210	73.95	331.01	985.99	1.72				987.98	2.01
12/29/20 2:22 PM	1,684	240	73.89	330.91	986.09	1.62				988.08	1.92
12/29/20 3:22 PM	1,744	300	73.78	330.79	986.21	1.49				988.15	1.84
12/29/20 4:22 PM	1,804	360	73.71	330.74	986.26	1.45				988.29	1.70
12/29/20 5:22 PM	1,864	420	73.64	330.66	986.34	1.37				988.33	1.66
12/29/20 6:22 PM	1,924	480	73.64	330.55	986.45	1.25				988.45	1.54
12/29/20 7:22 PM	1,984	540	73.58	330.43	986.57	1.13				988.45	1.54
12/29/20 8:22 PM	2,044	600	73.63	330.36	986.64	1.06				988.61	1.38
12/29/20 9:22 PM	2,104	660	73.58	330.29	986.71	0.99				988.65	1.35
12/29/20 10:22 PM	2,164	720	73.54	330.33	986.67	1.03				988.84	1.16
12/29/20 11:22 PM	2,224	780	73.56	330.23	986.77	0.94				988.73	1.26
12/30/20 12:22 AM	2,284	840	73.52	330.23	986.77	0.94				988.81	1.18
12/30/20 1:22 AM	2,344	900	73.54	330.12	986.88	0.83				988.83	1.16
12/30/20 2:22 AM	2,404	960	73.50	330.05	986.95	0.75				988.94	1.05
12/30/20 3:22 AM	2,464	1020	73.56	329.98	987.02	0.69				988.93	1.06
12/30/20 4:22 AM	2,524	1080	73.53	329.98	987.02	0.68				989.10	0.89
12/30/20 5:22 AM	2,584	1140	73.47	329.80	987.20	0.51				989.07	0.92
12/30/20 6:22 AM	2,644	1200	73.51	329.88	987.12	0.58				989.16	0.83
12/30/20 7:22 AM	2,704	1260	73.52	329.79	987.22	0.49				989.14	0.85
12/30/20 8:22 AM	2,764	1320	73.50	329.74	987.26	0.45				989.19	0.80
12/30/20 9:22 AM	2,824	1380	73.51	329.78	987.22	0.49				989.33	0.66
12/30/20 10:22 AM	2,884	1440	73.49	329.75	987.25	0.46				989.25	0.74

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 1.5 HP
MSL = Mean Sea Level Pump Setting = 380 ft EC=Electrical conductivity (mS/cm)



WELL TEST ANALYSIS

Data Set: \...\Ex PW 1.aqt
Date: 01/19/21 Time: 14:14:06

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Lonestar Land Partners
Location: Blanco County
Test Well: Ex. Well No. 1
Test Date: 12-28-20

AQUIFER DATA

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

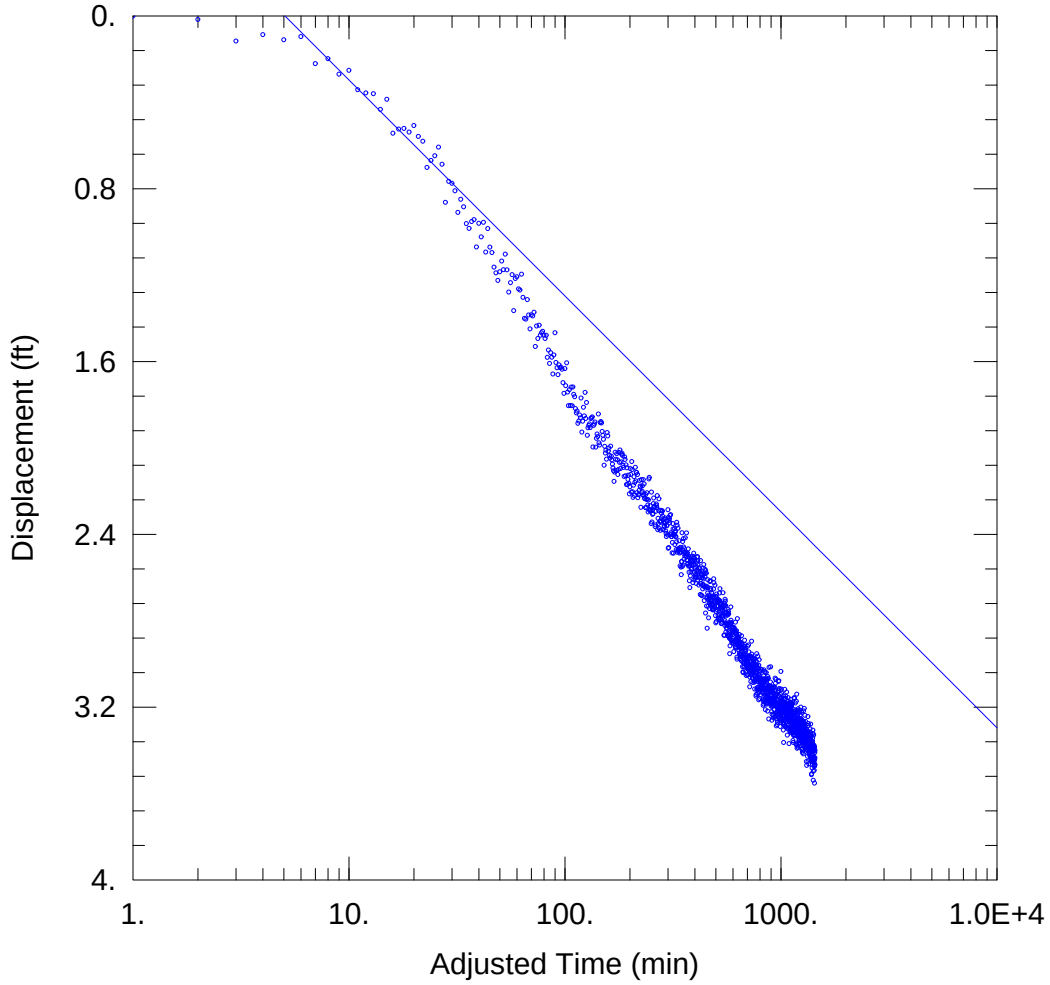
Pumping Wells

Well Name	X (ft)	Y (ft)
Ex Well 1	0	0

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 293.5 ft^2/day



WELL TEST ANALYSIS

Data Set: \...\OW 6.aqt
Date: 01/15/21 Time: 14:28:33

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Lonestar Land Partners
Location: Blanco County
Test Well: Ex. Well No. 1
Test Date: 12-28-20

AQUIFER DATA

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Ex Well 1	0	0

Observation Wells

Well Name	X (ft)	Y (ft)
◦ Well No. 6	622	0

SOLUTION

Aquifer Model: Confined
Solution Method: Cooper-Jacob
T = 437.5 ft^2/day
S = 8.914E-6

Appendix D

Well Efficiency Calculation

Well Efficiency

Well No. 1

Wet Rock Groundwater Services, L.L.C.
Groundwater Specialists
TBPG Firm No: 50038
317 Ranch Road 620 South, Suite 203
Austin, Texas 78734 • Ph: 512-773-3226
www.wetrockgs.com

Well Efficiency Calculations
Well No. 1

From: *Driscoll, F.G., 1986: Groundwater and Wells: second Ed. Pp.575-579*

Well Efficiency = (Actual specific capacity / Theoretical specific capacity)

Actual Specific Capacity = Q/s

Where: Q = Discharge of well, in gpm; and
s = drawdown, in feet

Actual Specific Capacity = 11.9 gpm / 0.85 ft. = 13.93 gpm/ft.

Theoretical Specific Capacity = $\frac{Q}{s} = \frac{T}{264 \log \frac{0.3Tt}{r^2 S}} = \frac{T}{2000}$

Where: T = Transmissivity, in gpd/ft
t = Time of pumping, in days
S = Storage Coefficient, = 1.99 X 10^{-4}
r = radius of well, in ft.

Theoretical Specific Capacity: $\frac{24{,}760}{264 \log \frac{(0.3)(24{,}760)(1.03)}{(0.1875)^2 (0.000199)}}$ **= 10.38**

Efficiency = Actual Specific Capacity / Theoretical Specific Capacity = 13.93 / 10.38 **= 134.2%**

Well Efficiency

Well No. 3

Wet Rock Groundwater Services, L.L.C.
Groundwater Specialists
TBPG Firm No: 50038
317 Ranch Road 620 South, Suite 203
Austin, Texas 78734 • Ph: 512-773-3226
www.wetrockgs.com

Well Efficiency Calculations
Well No. 3

From: *Driscoll, F.G., 1986: Groundwater and Wells: second Ed. Pp.575-579*

Well Efficiency = (Actual specific capacity / Theoretical specific capacity)

Actual Specific Capacity = Q/s

Where: Q = Discharge of well, in gpm; and
s = drawdown, in feet

Actual Specific Capacity = 11.9 gpm / 1.01 ft. = 11.75 gpm/ft.

Theoretical Specific Capacity = $\frac{Q}{s} = \frac{T}{264 \log \frac{0.3Tt}{r^2 S}} = \frac{T}{2000}$

Where: T = Transmissivity, in gpd/ft
t = Time of pumping, in days
S = Storage Coefficient, = 2.42 X 10^{-4}
r = radius of well, in ft.

Theoretical Specific Capacity: $\frac{20{,}730}{264 \log \frac{(0.3)(20{,}730)(1.09)}{(0.1875)^2 (0.000242)}}$ **= 8.82**

Efficiency = Actual Specific Capacity / Theoretical Specific Capacity = 11.75 / 8.82 = **133.22%**

Well Efficiency

Well No. 4

Wet Rock Groundwater Services, L.L.C.
Groundwater Specialists
TBPG Firm No: 50038
317 Ranch Road 620 South, Suite 203
Austin, Texas 78734 • Ph: 512-773-3226
www.wetrockgs.com

Well Efficiency Calculations
Well No. 4

From: *Driscoll, F.G., 1986: Groundwater and Wells: second Ed. Pp.575-579*

Well Efficiency = (Actual specific capacity / Theoretical specific capacity)

Actual Specific Capacity = Q/s

Where: Q = Discharge of well, in gpm; and
s = drawdown, in feet

Actual Specific Capacity = 11.9 gpm / 6.12 ft. = 1.94 gpm/ft.

Theoretical Specific Capacity = $\frac{Q}{s} = \frac{T}{264 \log \frac{0.3Tt}{r^2 S}} = \frac{T}{2000}$

Where: T = Transmissivity, in gpd/ft
t = Time of pumping, in days
S = Storage Coefficient, = 4.09 X 10^{-4}
r = radius of well, in ft.

Theoretical Specific Capacity: $\frac{3{,}820.6}{264 \log \frac{(0.3)(3{,}820.6)(1.00)}{(0.1875)^2 (0.000409)}}$ **= 1.83**

Efficiency = Actual Specific Capacity / Theoretical Specific Capacity = 1.94 / 1.83 = **106.01%**

Well Efficiency

Well No. 5

Wet Rock Groundwater Services, L.L.C.
Groundwater Specialists
TBPG Firm No: 50038
317 Ranch Road 620 South, Suite 203
Austin, Texas 78734 • Ph: 512-773-3226
www.wetrockgs.com

Well Efficiency Calculations
Well No. 5

From: *Driscoll, F.G., 1986: Groundwater and Wells: second Ed. Pp.575-579*

Well Efficiency = (Actual specific capacity / Theoretical specific capacity)

Actual Specific Capacity = Q/s

Where: Q = Discharge of well, in gpm; and
s = drawdown, in feet

Actual Specific Capacity = 11.9 gpm / 5.95 ft. = 2.00 gpm/ft.

Theoretical Specific Capacity = $\frac{Q}{s} = \frac{T}{264 \log \frac{0.3Tt}{r^2 S}} = \frac{T}{2000}$

Where: T = Transmissivity, in gpd/ft
t = Time of pumping, in days
S = Storage Coefficient, = 5.73 X 10^{-5}
r = radius of well, in ft.

Theoretical Specific Capacity: $\frac{4{,}546}{264 \log \frac{(0.3)(4{,}546)(1.01)}{(0.1875)^2 (0.0000573)}}$ **= 1.95**

Efficiency = Actual Specific Capacity / Theoretical Specific Capacity = 2.00 / 1.95 = **102.56%**

Well Efficiency

Well No. 7

Wet Rock Groundwater Services, L.L.C.
Groundwater Specialists
TBPG Firm No: 50038
317 Ranch Road 620 South, Suite 203
Austin, Texas 78734 • Ph: 512-773-3226
www.wetrockgs.com

Well Efficiency Calculations
Well No. 7

From: *Driscoll, F.G., 1986: Groundwater and Wells: second Ed. Pp.575-579*

Well Efficiency = (Actual specific capacity / Theoretical specific capacity)

Actual Specific Capacity = Q/s

Where: Q = Discharge of well, in gpm; and
s = drawdown, in feet

Actual Specific Capacity = 13.4 gpm / 4.5 ft. = 2.98 gpm/ft.

Theoretical Specific Capacity = $\frac{Q}{s} = \frac{T}{264 \log \frac{0.3Tt}{r^2 S}} = \frac{T}{2000}$

Where: T = Transmissivity, in gpd/ft
t = Time of pumping, in days
S = Storage Coefficient, = 2.54 X 10^{-5}
r = radius of well, in ft.

Theoretical Specific Capacity: $\frac{5{,}658.4}{264 \log \frac{(0.3)(5{,}658.4)(1.01)}{(0.1875)^2 (0.0000254)}}$ **= 2.31**

Efficiency = Actual Specific Capacity / Theoretical Specific Capacity = 2.98 / 2.31 = **129.00%**

Well Efficiency

Well No. 9

Wet Rock Groundwater Services, L.L.C.
Groundwater Specialists
TBPG Firm No: 50038
317 Ranch Road 620 South, Suite 203
Austin, Texas 78734 • Ph: 512-773-3226
www.wetrockgs.com

Well Efficiency Calculations
Well No. 9

From: *Driscoll, F.G., 1986: Groundwater and Wells: second Ed. Pp.575-579*

Well Efficiency = (Actual specific capacity / Theoretical specific capacity)

Actual Specific Capacity = Q/s

Where: Q = Discharge of well, in gpm; and
s = drawdown, in feet

Actual Specific Capacity = 9.0 gpm / 3.4 ft. = 2.65 gpm/ft.

Theoretical Specific Capacity = $\frac{Q}{s} = \frac{T}{264 \log \frac{0.3Tt}{r^2 S}} = \frac{T}{2000}$

Where: T = Transmissivity, in gpd/ft
t = Time of pumping, in days
S = Storage Coefficient, = 5.61 X 10^{-5}
r = radius of well, in ft.

Theoretical Specific Capacity: $\frac{4{,}061.0}{264 \log \frac{(0.3)(4{,}061)(1.00)}{(0.1875)^2\,(0.0000561)}}$ **= 1.75**

Efficiency = Actual Specific Capacity / Theoretical Specific Capacity = 2.65 / 1.75 = **151.43%**

Well Efficiency

Ex. Well No. 1

Wet Rock Groundwater Services, L.L.C.
Groundwater Specialists
TBPG Firm No: 50038
317 Ranch Road 620 South, Suite 203
Austin, Texas 78734 • Ph: 512-773-3226
www.wetrockgs.com

Well Efficiency Calculations
Ex. Well No. 1

From: *Driscoll, F.G., 1986: Groundwater and Wells: second Ed. Pp.575-579*

Well Efficiency = (Actual specific capacity / Theoretical specific capacity)

Actual Specific Capacity = Q/s

Where: Q = Discharge of well, in gpm; and
s = drawdown, in feet

Actual Specific Capacity = 12.4 gpm / 9.03 ft. = 1.37 gpm/ft.

Theoretical Specific Capacity = $\frac{Q}{s} = \frac{T}{264 \log \frac{0.3Tt}{r^2 S}} = \frac{T}{2000}$

Where: T = Transmissivity, in gpd/ft
t = Time of pumping, in days
S = Storage Coefficient, = 8.91 X 10^{-6}
r = radius of well, in ft.

Theoretical Specific Capacity: $\frac{2{,}195.8}{264 \log \frac{(0.3)(2{,}195.8)(1.00)}{(0.1875)^2\,(0.00000891)}}$ **= 0.89**

Efficiency = Actual Specific Capacity / Theoretical Specific Capacity = 1.37 / 0.89 = **153.93%**

Appendix E

Water Quality Report

Water Quality

Well No. 1

Email information for report date:

12/23/20 10:08

D040547

Apex Drilling

Attn: Michael Becker

apexdrilling.becker@yahoo.com

PO Box 867

Marble Falls, TX 78654

******Attention Austin Laboratory Clients******
Aqua-Tech is excited to announce that our Austin Laboratory is expanding and moving to a new location!

We will close our current Austin Laboratory location on Friday, October 23, 2020 at 12:00 p.m. to begin the moving process and will re-open at our new location on Monday, October 26 at 8:00 a.m.

Austin Laboratory address as of October 26, 2020:
3512 Montopolis Drive
Austin, TX 78744

Thank you for your business,
June M. Brien
Executive Technical Director

CORPORATE OFFICE
635 Phil Gramm Boulevard
Bryan, TX 77807
Phone: (979) 778-3707
Fax: (979) 778-3193

AQUA-TECH LABORATORIES, INC.

AUSTIN OFFICE
3512 Montopolis Dr. Suite A
Austin, TX 78744
Phone: (512) 301-9559
Fax: (512) 301-9552

The analyses summarized in this report were performed by Aqua-Tech Laboratories, Inc. unless otherwise noted. Aqua-Tech Laboratories, Inc. holds accreditation from the State of Texas in accordance with TNI and/or through the TCEQ Drinking Water Commercial Laboratory Approval Program.

The following abbreviations indicate certification status:

NEL	TNI accredited parameter.
ANR	Accreditation not required by the State of Texas.
DWP	Accreditation through the TCEQ Drinking Water Commercial Laboratory Approval Program.
INF	Aqua-Tech Laboratories, Inc. is not accredited for this parameter. It is reported on an informational basis only.

Subcontracted data summarized in this report is indicated by "Sub" in the Lab column.

TCEQ DW Lab ID TX 239

General Definitions:

NR	Not Reported.
RPD	Relative Percent Difference.
% R	Percent Recovery.
dry	Results with the "dry" unit designation are reported on a "dry weight" basis.
SQL	The Sample Quantitation Limit is the value below which the parameter cannot reliably be detected. The SQL includes all sample preparations, dilutions and / or concentrations.
Adj MDL	The Adjusted Method Detection Limit is the MDL value adjusted for any sample dilutions or concentrations .
MDL	The Method Detection Limit is the lowest theoretical value that is statistically different from zero for a specific method, taking into account all preparation steps and instrument settings.

All samples are reported on an "as received" basis unless the designation "dry" is added to the reported unit.

Copies of Aqua-Tech Laboratories, Inc. procedures and individual sampling plans are available upon request. Note that samples are collected by Aqua-Tech Laboratories, Inc. personnel unless otherwise noted in the "Sample Collected" field of this report as "Client" or "CLT".

Samples included in this report were received in acceptable condition according to Aqua-Tech Laboratories, Inc. procedures and 40 CFR, Chapter I, Subchapter D, Part 136.3, TABLE II. - *Required containers, preservation techniques, and holding times*, unless otherwise noted in this report.

Record Retention:

All reports, raw data, and associated quality control data are kept on file for 10 years before being destroyed. Any client that would like copies of records must contact Aqua-Tech Laboratories, Inc. no later than six months prior to the scheduled disposal. An administrative fee for retrieval and distribution will apply.

This report was approved by:

June M. Brien, Technical Director

corp@aqua-techlabs.com www.aqua-techlabs.com

CORPORATE OFFICE
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Bryan, TX 77807
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Fax: (979) 778-3193

AQUA-TECH LABORATORIES, INC.

AUSTIN OFFICE
3512 Montopolis Dr. Suite A
Austin, TX 78744
Phone: (512) 301-9559
Fax: (512) 301-9552

Analytical Report

Apex Drilling

Report Printed: **12/23/20** **10:08**

D040547

LEGACY HILLS NO1

Collected: 12/16/20 12:00 by CLIENT
Received: 12/16/20 15:00 by Christie Tonnu

Type: Grab
Matrix: Drinking Water
C-O-C #: 40547-8

Lab ID# D040547-01

	Result	Units	Notes	MDL	Adj MDL	SQL	Lab	Analyzed	Method	Batch	
Microbiological Analyses											
Total Coliforms	**Absent**	N/A		N/A	**N/A**	N/A	*Austin*	12/16/20 17:15 KT	SM9223 B 2004	M122559	NEL
Escherichia coli (E.coli)	**Absent**	N/A		N/A	**N/A**	N/A	*Austin*	12/16/20 17:15 KT	SM9223 B 2004	M122559	NEL

Microbiological Analyses - Quality Control

	Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	Log10 Comparison Range	Log10 Comparison Control Limit	Batch	
Escherichia coli (E.coli) - SM9223 B 2004														*Austin*
Blank	Absent	N/A		N/A	N/A	12/16/20 17:15 KT							M122559	
Total Coliforms - SM9223 B 2004														*Austin*
Blank	Absent	N/A		N/A	N/A	12/16/20 17:15 KT							M122559	

Sample Preparation Summary

Sample	Method	Prepared	Lab	Bottle	Initial	Units	Final	Units	External Dilution Factor	Batch
D040547-01										
Escherichia coli (E.coli)	SM9223 B 2004	12/16/20 17:04 KT	Austin	A	100	mL	100	mL	1	M122559
Total Coliforms	SM9223 B 2004	12/16/20 17:04 KT	Austin	A	100	mL	100	mL	1	M122559

AQUA-TECH LABORATORIES, INC.

Chain-of-Custody and Analysis Request

Aqua-Tech Laboratories, Inc.
Austin: 3512 Montopolis Drive, Austin, TX 78744, 512-301-9559
Bryan: 635 Phil Gramm Blvd., Bryan, TX 77807, 979.778.3707

NELAP ACCREDITED LABORATORY TNI
T104704371
TX239

Test results meet all accreditation/certification requirements unless stated otherwise.

Work Order / C-O-C: 40547-8
Page 1 of 2
V-0023 R03

Client /Project:

Contact Info
- Name: Apex Drilling
- Address: ~~100 Spanish Oak Trail~~
- City: Spicewood State: TX Zip: 78669
- Phone / Email: 830-693-6770

Definitions
- DW - Drinking Water
- NP - Non-Potable Water
- S - Solid
- CM - Custody Maintained
- CTU - Custody Transfer Unbroken
- CT - Corrected Temperature
- SUB - Subcontracted Analysis

(+) Container Type
- P - Plastic
- G - Glass
- T - Teflon©

By relinquishing the samples listed below to Aqua-Tech, the client agrees to the following terms. Samples will be analyzed by a method that is within Aqua-Tech Laboratories' NELAC fields of accreditation. Analytes requiring a certified method that is not within Aqua-Tech's fields of accreditation will be subcontracted to a NELAC certified lab that is certified for that method. Clients will be notified of the subcontract lab's details. Other analytes not requiring accreditation will be analyzed by a compendial method. If a specific method is required, the client will note the method in the "Analysis Requested" column. The client approves all method modifications documented by Aqua-Tech or the subcontract lab. A current list of Aqua-Tech's NELAC fields of accreditation and other methods are available on request.

Sample Custody

	Signature	Type	Date / Time	Condition
Relinquished by (print & sign)	[signature]	☑ Sampler ☐ Client ☐ ATL Field	Date 12-16-20 Time 15:00	☐ Iced / Refrig ☐ Custody Sealed
Received by (print & sign)		☐ Client ☐ ATL Field	Date Time	☐ Iced / Refrig ☐ CM / CTU
Relinquished by (print & sign)	NFECCT?	☐ Client ☐ ATL Field	Date Time	☐ Iced / Refrig ☐ CM / CTU
Received by (print & sign)		☐ Client ☐ ATL Field	Date Time	☐ Iced / Refrig ☐ CM / CTU
Relinquished by (print & sign)		☐ Client ☐ ATL Field	Date Time	☐ Iced / Refrig ☐ CM / CTU / sealed
Received by (print & sign)	Christie Tonnu [signature]	☑ Lab	Date 12/16/20 Time 1500	☑ Cond Good ☑ Iced / Refrig ☑ CM / CTU

Client Comments:

* Preservatives	
1	< 6 °C (unfrozen)
2	H2SO4
3	HCl
4	HNO3
5	Na2S2O3
6	NaOH
7	

Receipt in Lab		
Cooler ID :	clt	
Temperature (°C) : read / CT	3.9 / 3.9	NA CCT?
Preservation Correct ?	YES (NO)	YES NO
Post Preservatives ?	(YES) NO	YES NO
Thermometer ID :	0764480	
pH Paper ID :	0755987	

Lab Comments: 0756704

Field Sample ID	Start Date	Start Time	End Date	End Time	Composite Type	Sample Matrix	Bottle Count	Volume (Size in L)	Type (+)	Preserv-ative(s) *	Cooler ID	pH Check	SUB	WORK ORDER (initials CTT) see below
Legacy Hills #1	12-16-20	12:00			Grab	DW	1	0.12	StP	1, 5	clt	—	—	Sample A 16
Analysis Requested & Comments: Total Coliform P/A											D0 40547 - 01			
Legacy Hills #1	12-16-20	12:00	————		G	DW	1	2	P	1	clt	—	—	Sample ~~A~~ F wrong container identifier SR 12-22-20
Analysis Requested & Comments: See Attached. Cl, Cond, F, Fe, NO3 NO2 Mn, pH SO4, Hardness, TDS											D0 40548 - 01			
														Sample
Analysis Requested & Comments:														
														Sample
Analysis Requested & Comments: NFECCT?														
														Sample
Analysis Requested & Comments:														

No. 8 No. 7

40547-8
2/2

Well numbers correspond to Attachment 1

The water quality from each well will need to be assessed by Aquifer to provide adequate drinking water. Upon cor sample will need to be collected and analyzed for the follo

- Chloride
- Conductivity
- Fluoride
- Iron
- Nitrate (as nitrogen)
- Manganese
- pH
- Sulfate
- Total hardness
- Total Dissolved Solids (TDS)
- Presence/absence of total coliform bacteria

have any questions please feel free to call me at 512-773-

Email information for report date:
1/11/21 16:11

D040548

Apex Drilling

Attn: Michael Becker
apexdrilling.becker@yahoo.com

PO Box 867
Marble Falls, TX 78654

******Attention Austin Laboratory Clients******
Aqua-Tech is excited to announce that our Austin Laboratory is expanding and moving to a new location!

We will close our current Austin Laboratory location on Friday, October 23, 2020 at 12:00 p.m. to begin the moving process and will re-open at our new location on Monday, October 26 at 8:00 a.m.

Austin Laboratory address as of October 26, 2020:
3512 Montopolis Drive
Austin, TX 78744

Thank you for your business,
June M. Brien
Executive Technical Director

CORPORATE OFFICE
635 Phil Gramm Boulevard
Bryan, TX 77807
Phone: (979) 778-3707
Fax: (979) 778-3193

AQUA-TECH LABORATORIES, INC.

AUSTIN OFFICE
3512 Montopolis Dr. Suite A
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Phone: (512) 301-9559
Fax: (512) 301-9552

The analyses summarized in this report were performed by Aqua-Tech Laboratories, Inc. unless otherwise noted. Aqua-Tech Laboratories, Inc. holds accreditation from the State of Texas in accordance with TNI and/or through the TCEQ Drinking Water Commercial Laboratory Approval Program.

The following abbreviations indicate certification status:

NEL	TNI accredited parameter.
ANR	Accreditation not required by the State of Texas.
DWP	Accreditation through the TCEQ Drinking Water Commercial Laboratory Approval Program.
INF	Aqua-Tech Laboratories, Inc. is not accredited for this parameter. It is reported on an informational basis only.

Subcontracted data summarized in this report is indicated by "Sub" in the Lab column.

NELAP ACCREDITED TNI LABORATORY

TCEQ DW Lab ID TX 239

General Definitions:

NR	Not Reported.
RPD	Relative Percent Difference.
% R	Percent Recovery.
dry	Results with the "dry" unit designation are reported on a "dry weight" basis.
SQL	The Sample Quantitation Limit is the value below which the parameter cannot reliably be detected. The SQL includes all sample preparations, dilutions and / or concentrations.
Adj MDL	The Adjusted Method Detection Limit is the MDL value adjusted for any sample dilutions or concentrations .
MDL	The Method Detection Limit is the lowest theoretical value that is statistically different from zero for a specific method, taking into account all preparation steps and instrument settings.

All samples are reported on an "as received" basis unless the designation "dry" is added to the reported unit.

Copies of Aqua-Tech Laboratories, Inc. procedures and individual sampling plans are available upon request. Note that samples are collected by Aqua-Tech Laboratories, Inc. personnel unless otherwise noted in the "Sample Collected" field of this report as "Client" or "CLT".

Samples included in this report were received in acceptable condition according to Aqua-Tech Laboratories, Inc. procedures and 40 CFR, Chapter I, Subchapter D, Part 136.3, TABLE II. - *Required containers, preservation techniques, and holding times*, unless otherwise noted in this report.

Record Retention:

All reports, raw data, and associated quality control data are kept on file for 10 years before being destroyed. Any client that would like copies of records must contact Aqua-Tech Laboratories, Inc. no later than six months prior to the scheduled disposal. An administrative fee for retrieval and distribution will apply.

This report was approved by:

June M. Brien, Technical Director

corp@aqua-techlabs.com www.aqua-techlabs.com

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Analytical Report

Apex Drilling

Report Printed: **1/11/21** **16:11**

D040548

LEGACY HILLS #1

Collected: 12/16/20 12:00 by CLIENT
Received: 12/16/20 15:00 by Christie Tonnu

Type: Grab
Matrix: Drinking Water
C-O-C #: 40547-8

Lab ID# D040548-01

	Result	Units	Notes	MDL	Adj MDL	SQL	Lab	Analyzed	Method	Batch	
General Chemistry											
Total Dissolved Solids	**2620**	mg/L		25.0	100	100	*Bryan*	12/18/20 18:55 MRH	SM2540 C 2011	M122657	NEL
Nitrate as N (NO3N)	**0.0356**	mg/L			0.0200	0.0200	*Calc*	12/21/20 11:31 JLL	SM4500-NO3-F 2011	[CALC]	NEL
Nitrite as N	**<0.01**	mg/L	MS-01	0.002	0.002	0.01	*Austin*	12/18/20 11:00 JLL	SM4500 NO2- B 2011	M122640	NEL
Nitrate/Nitrite as N	**0.04**	mg/L		0.02	0.02	0.02	*Bryan*	12/21/20 11:31 EMT	SM4500-NO3-F 2011	M122701	ANR
Total Hardness (EDTA) as CaCO3	**1830**	mg/L		1.00	25.0	25.0	*Bryan*	12/21/20 18:45 MRH	SM2340 C 2011	M122748	NEL
Fluoride	**2.22**	mg/L		0.04	0.04	0.10	*Bryan*	12/17/20 19:30 MRH	SM4500-F C 2011	M122508	NEL
pH, Lab	**7.3**	S.U.	Hold-03		N/A	N/A	*Austin*	12/21/20 08:50 KT	SM4500-H+ B 2011	M122698	DWP
Temperature @ pH Analysis	**20.3**	Deg. C			N/A	N/A	*Austin*	12/21/20 08:50 KT	SM4500-H+ B 2011	M122698	DWP
Specific Conductance (adjusted to 25.0°C)	**3420**	uS/cm		2.00	5.00	5.00	*Bryan*	01/05/21 14:30 CJO	SM2510 B 2011	M123224	DWP,NEL
Metals (Total)											
Iron	**0.095**	mg/L		0.002	0.002	0.010	*Bryan*	12/23/20 16:24 PNS	EPA 200.7 R4.4	M122737	NEL

Please see the attached subcontract report for subcontracted data.

Explanation of Notes

Hold-03	This parameter was outside of EPA holding at the time the sample was received in the laboratory.
J	Analyte detected below the SQL but above the MDL.
MS-01	The MS and/or MSD recovery was outside acceptance limits. Investigation concludes it is a sample- specific matrix effect and the batch was accepted based on acceptable LCS and /or LCSD recovery.
RPD-02	RPD was not calculated in LIMS due to one or both of the sample / duplicate pair being less than the MRL.

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Analytical Report

Apex Drilling

Report Printed: **1/11/21** **16:11**

D040548

General Chemistry - Quality Control

	Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch	
Fluoride - SM4500-F C 2011														*Bryan*
Initial Cal Check	0.43	mg/L				12/17/20 19:30 MRH	0.428		101	90 - 110			2012178	
Blank	<0.10	mg/L		0.04	0.10	12/17/20 19:30 MRH							M122508	
LCS	0.81	mg/L		0.04	0.10	12/17/20 19:30 MRH	0.799		101	90 - 110			M122508	
LCS Dup	0.82	mg/L		0.04	0.10	12/17/20 19:30 MRH	0.799		102	90 - 110	0.739	6.23	M122508	
Matrix Spike	2.69	mg/L		0.04	0.10	12/17/20 19:30 MRH	0.799	1.92	96.3	78.1 - 125			M122508	
Matrix Spike Dup	2.72	mg/L		0.04	0.10	12/17/20 19:30 MRH	0.799	1.92	100	78.1 - 125	3.82	5.72	M122508	
MRL Check	0.10	mg/L		0.04	0.10	12/17/20 19:30 MRH	0.0999		98.4	73.4 - 118			M122508	
Nitrate/Nitrite as N - SM4500-NO3-F 2011														*Bryan*
Initial Cal Check	1.40	mg/L				12/21/20 11:31 EMT	1.40		100	90 - 110			2012230	
Low Cal Check	0.02	mg/L				12/21/20 11:31 EMT	0.0200		110	70 - 130			2012230	
Blank	<0.02	mg/L		0.02	0.02	12/21/20 11:31 EMT							M122701	
LCS	0.49	mg/L		0.02	0.02	12/21/20 11:31 EMT	0.500		98.8	91.3 - 109			M122701	
LCS Dup	0.50	mg/L		0.02	0.02	12/21/20 11:31 EMT	0.500		100	91.3 - 109	1.30	6.8	M122701	
Matrix Spike	1.97	mg/L		0.02	0.02	12/21/20 11:31 EMT	0.500	1.45	105	94.7 - 117			M122701	
Matrix Spike Dup	1.96	mg/L		0.02	0.02	12/21/20 11:31 EMT	0.500	1.45	102	94.7 - 117	3.01	8.65	M122701	
Nitrite as N - SM4500 NO2- B 2011														*Austin*
Blank	<0.01	mg/L		0.002	0.01	12/18/20 11:00 JLL							M122640	
LCS	0.08	mg/L		0.002	0.01	12/18/20 11:00 JLL	0.0800		103	90 - 110			M122640	
LCS Dup	0.08	mg/L		0.002	0.01	12/18/20 11:00 JLL	0.0800		103	90 - 110	0.00	8.12	M122640	
Matrix Spike	<0.01	mg/L	*J, MS-01 (0.005)*	0.002	0.01	12/18/20 11:00 JLL	0.0800	<0.01	*6.06*	70.6 - 117			M122640	
Matrix Spike	0.18	mg/L	*MS-01*	0.007	0.03	12/18/20 11:00 JLL	0.267	<0.03	*67.7*	70.6 - 117			M122640	
Matrix Spike	0.58	mg/L	*MS-01*	0.02	0.08	12/18/20 11:00 JLL	0.667	<0.08	86.6	70.6 - 117			M122640	
Matrix Spike Dup	<0.01	mg/L	*J, MS-01 (0.005)*	0.002	0.01	12/18/20 11:00 JLL	0.0800	<0.01	*6.06*	70.6 - 117	0.00	8.18	M122640	
Matrix Spike Dup	0.18	mg/L	*MS-01*	0.007	0.03	12/18/20 11:00 JLL	0.267	<0.03	*66.3*	70.6 - 117	1.97	8.18	M122640	
Matrix Spike Dup	0.57	mg/L	*MS-01*	0.02	0.08	12/18/20 11:00 JLL	0.667	<0.08	86.1	70.6 - 117	0.510	8.18	M122640	
pH, Lab - SM4500-H+ B 2011														*Austin*
Duplicate	7.5	Std Units				12/21/20 08:50 KT		7.4			1.07	1.18	M122698	
Reference	6.9	Std Units				12/21/20 08:50 KT	6.86		101	95 - 105			M122698	
Reference	9.2	Std Units				12/21/20 08:50 KT	9.18		100	95 - 105			M122698	
Reference	6.9	Std Units				12/21/20 08:50 KT	6.86		101	95 - 105			M122698	
Reference	9.3	Std Units				12/21/20 08:50 KT	9.18		101	95 - 105			M122698	

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Analytical Report

Apex Drilling

Report Printed: 1/11/21 16:11

D040548

General Chemistry - Quality Control

	Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch	
Specific Conductance (adjusted to 25.0°C) - SM2510 B 2011														*Bryan*
Initial Cal Check	513	uS/cm				01/05/21 14:30 CJO	484		106	90 - 110			2101024	
Blank	<2.00	uS/cm		2.00	2.00	01/05/21 14:30 CJO							M123224	
Duplicate	829	uS/cm		2.00	2.00	01/05/21 14:30 CJO		824			0.605	2	M123224	
LCS	1360	uS/cm		2.00	2.00	01/05/21 14:30 CJO	1410		96.1	90 - 110			M123224	
Total Dissolved Solids - SM2540 C 2011														*Bryan*
Blank	<25.0	mg/L		25.0	25.0	12/18/20 18:55 MRH							M122657	
Duplicate	596	mg/L		100	100	12/18/20 18:55 MRH		596			0.00	9.13	M122657	
Reference	440	mg/L		100	100	12/18/20 18:55 MRH	500		88.0	81 - 121			M122657	
Total Hardness (EDTA) as CaCO3 - SM2340 C 2011														*Bryan*
Initial Cal Check	53.5	mg/L				12/21/20 18:45 MRH	54.4		98.3	85 - 115			2012237	
Blank	<1.00	mg/L		1.00	1.00	12/21/20 18:45 MRH							M122748	
Duplicate	10.9	mg/L		1.00	1.00	12/21/20 18:45 MRH		11.9			8.70	9.52	M122748	
LCS	102	mg/L		1.00	1.00	12/21/20 18:45 MRH	100		102	90 - 110			M122748	
LCS Dup	99.0	mg/L		1.00	1.00	12/21/20 18:45 MRH	100		99.0	90 - 110	2.96	6.47	M122748	
Matrix Spike	110	mg/L		1.00	1.00	12/21/20 18:45 MRH	100	11.9	98.0	87.6 - 111			M122748	
MRL Check	4.95	mg/L		1.00	1.00	12/21/20 18:45 MRH	4.00		124	70 - 130			M122748	

Metals (Total) - Quality Control

	Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch	
Iron - EPA 200.7 R4.4														*Bryan*
Blank	<0.010	mg/L		0.002	0.010	12/23/20 15:28 PNS							M122737	
LCS	0.947	mg/L		0.002	0.010	12/23/20 15:31 PNS	1.00		94.7	84.5 - 115.4			M122737	
LCS Dup	0.967	mg/L		0.002	0.010	12/23/20 15:34 PNS	1.00		96.7	84.5 - 115.4	2.10	20	M122737	
Duplicate	<0.010	mg/L	*J, RPD-02 (0.003)*	0.002	0.010	12/23/20 15:38 PNS		<0.010				20	M122737	
Matrix Spike	0.940	mg/L		0.002	0.010	12/23/20 15:41 PNS	1.00	0.002	94.0	69.5 - 130.4			M122737	

Preparation Procedures - Quality Control

	Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch	
Turbidity - SM2130 B 2011														*Bryan*

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Analytical Report

Apex Drilling

Report Printed: **1/11/21** **16:11**

D040548

Sample Preparation Summary

Sample	Method	Prepared	Lab	Bottle	Initial	Units	Final	Units	External Dilution Factor	Batch
D040548-01										
Fluoride	SM4500-F C 2011	12/17/20 19:30 MRH	Bryan	A	25.0	mL	25.0	mL	1	M122508
Iron	EPA 200.7 R4.4	12/21/20 14:50 BLC	Bryan	C	10.0	mL	10.2	mL	1	M122737
Nitrate/Nitrite as N	SM4500-NO3-F 2011	12/21/20 9:23 EMT	Bryan	D	10.0	mL	10.0	mL	1	M122701
Nitrite as N	SM4500 NO2- B 2011	12/18/20 11:00 JLL	Austin	E	25.0	mL	25.0	mL	1	M122640
pH, Lab	SM4500-H+ B 2011	12/21/20 8:50 KT	Austin	E	50.0	mL	50.0	mL	1	M122698
Sample Acidified to pH<2 in Lab	N/A	12/16/20 15:38 CTT	Bryan	D	1.00	mL	1.00	mL	1	M122537
Specific Conductance (adjusted to 25.0°C)	SM2510 B 2011	1/5/21 14:30 CJO	Bryan	A	20.0	mL	50.0	mL	1	M123224
Temperature @ pH Analysis	SM4500-H+ B 2011	12/21/20 8:50 KT	Austin	E	50.0	mL	50.0	mL	1	M122698
Total Dissolved Solids	SM2540 C 2011	12/18/20 18:55 MRH	Bryan	A	25.0	mL	100	mL	1	M122657
Total Hardness (EDTA) as CaCO3	SM2340 C 2011	12/21/20 18:45 MRH	Bryan	C	2.00	mL	50.0	mL	1	M122748
Turbidity	SM2130 B 2011	12/21/20 12:58 BLC	Bryan	C	10.0	mL	10.0	mL	1	M122722
D040548-01RE1										
Sample Acidified to pH<2 in Lab	N/A	12/16/20 15:38 CTT	Bryan	C	100	mL	100	mL	1	M122536

AQUA-TECH LABORATORIES, INC.

Chain-of-Custody and Analysis Request

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T104704371
TX239
Test results meet all accreditation/certification requirements unless stated otherwise.

Work Order / C-O-C: 40547-8
Page 1 of 2
V-0023 R03

Client /Project:

Contact Info
- Name: Apex Drilling
- Address: ~~100 Spanish Oak Trail~~
- City: Spicewood State: TX Zip: 78669
- Phone / Email: 830-693-6770

Definitions
- DW - Drinking Water
- NP - Non-Potable Water
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- CTU - Custody Transfer Unbroken
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- SUB - Subcontracted Analysis

(+) Container Type
- P - Plastic
- G - Glass
- T - Teflon©

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Sample Custody

	Signature	Type	Date / Time	Conditions
Relinquished by (print & sign)	[signature]	☑ Sampler ☐ Client ☐ ATL Field	Date 12-16-20 Time 15:00	☐ Iced / Refrig ☐ Custody Sealed
Received by (print & sign)		☐ Client ☐ ATL Field	Date Time	☐ Iced / Refrig ☐ CM / CTU
Relinquished by (print & sign)	NFECCT?	☐ Client ☐ ATL Field	Date Time	☐ Iced / Refrig ☐ CM / CTU
Received by (print & sign)		☐ Client ☐ ATL Field	Date Time	☐ Iced / Refrig ☐ CM / CTU
Relinquished by (print & sign)		☐ Client ☐ ATL Field	Date Time	☐ Iced / Refrig ☐ CM / CTU / sealed
Received by (print & sign)	[signature] Christie Tonnu	☑ Lab	Date 12/16/20 Time 1500	☑ Cond Good ☑ Iced / Refrig ☑ CM / CTU

Client Comments:

* Preservatives	
1	< 6 °C (unfrozen)
2	H2SO4
3	HCl
4	HNO3
5	Na2S2O3
6	NaOH
7	

Receipt in Lab		
Cooler ID :	clt	
Temperature (°C) : read / CT	3.9/3.9	NA CLT?
Preservation Correct ?	YES (NO)	YES NO
Post Preservatives ?	(YES) NO	YES NO
Thermometer ID :	0764480	
pH Paper ID :	0755987	

Lab Comments: 0756704

LAB USE ONLY BELOW (initials CTT)

Field Sample ID	Start Date	Start Time	End Date	End Time	Composite Type	Sample Matrix	Bottle Count	Volume (Size in L)	Type (+)	Preservative(s) *	Cooler ID	pH Check	SUB	WORK ORDER (see below)
Legacy Hills #1	12-16-20	12:00			Grab	DW	1	0.12	StP	1, 5	clt	—	—	Sample A 16
Analysis Requested & Comments: Total Coliform P/A											DU40547 - 01			
Legacy Hills #1	12-16-20	12:00			G	DW	1	2	P	1	clt	—	—	Sample ~~A~~ F
Analysis Requested & Comments: See Attached. Cl, Cond, F, Fe, NO3 NO2 Mn, pH SO4, Hardness, TDS											DU40548 - 01			wrong container identifier SR 12-22-20
														Sample
Analysis Requested & Comments:														
														Sample
Analysis Requested & Comments: NFECCT?														
														Sample
Analysis Requested & Comments:														

No. 8 No. 7

40547-8
2/2

Well numbers correspond to Attachment 1

The water quality from each well will need to be assessed by Aquifer to provide adequate drinking water. Upon cor sample will need to be collected and analyzed for the follo

- Chloride
- Conductivity
- Fluoride
- Iron
- Nitrate (as nitrogen)
- Manganese
- pH
- Sulfate
- Total hardness
- Total Dissolved Solids (TDS)
- Presence/absence of total coliform bacteria

have any questions please feel free to call me at 512-773-

Ana-Lab Corp.
2600 Dudley Rd. Kilgore, Texas 75662
P.O. Box 9000 Kilgore, Texas 75663
*Office: 903-984-0551 * Fax: 903-984-5914*

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AQU1-G

Aqua-Tech Laboratories
John Brien
635 Phil Gramm Blvd.
Bryan, TX 77807-9104

Printed 01/08/2021 13:19

TABLE OF CONTENTS

947924

This report consists of this Table of Contents and the following pages:

NELAP-accredited #T104704201-20-17

Ana-Lab Corp.
2600 Dudley Rd. Kilgore, Texas 75662
P.O. Box 9000 Kilgore, Texas 75663
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Aqua-Tech Laboratories
John Brien
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Bryan, TX 77807-9104

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Printed: 01/08/2021

947924

Results

Sample Results

1950856 **D040548-01** Received: 12/18/2020

Drinking Water Collected by: Client Aqua-Tech Laboratori PO:
Taken: 12/16/2020 12:00:00

Supplement to Test Report 1948833

Prepared: 12/16/2020 12:00:00 Analyzed 12/16/2020 12:00:00 CLI

	Parameter	Results	Units	RL	Flags	CAS	Bottle
z	**Turbidity analyzed by client**	**<1**	**NTU**				

EPA 200.8 5.4 Prepared: 932626 01/06/2021 11:15:00 Analyzed 932626 01/06/2021 11:15:00 SAM

	Parameter	Results	Units	RL	Flags	CAS	Bottle
NELAC	**Manganese, Total**	**0.00582**	**mg/L**	0.001		**7439-96-5**	02

EPA 300.0 2.1 Prepared: 931087 12/21/2020 21:43:00 Analyzed 931087 12/21/2020 21:43:00 ATN

	Parameter	Results	Units	RL	Flags	CAS	Bottle
NELAC	**Sulfate**	**1590**	**mg/L**	10.0			01

EPA 300.0 2.1 Prepared: 931096 12/21/2020 14:38:00 Analyzed 931096 12/21/2020 14:38:00 ATN

	Parameter	Results	Units	RL	Flags	CAS	Bottle
NELAC	**Chloride**	**35.0**	**mg/L**	1.00			01

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Qualifiers:

We report results on an As Received or wet basis unless marked Dry Weight. Unless otherwise noted, testing was performed at Ana-labs corporate laboratory that holds the following Federal and State certificates: EPA Lab Number TX00063, US Department of Agriculture Soil Import Permit P330-17-00117, Texas Commission on Environmental Quality Commercial Drinking Water Lab Approval (Lab ID: TX219), Texas Commission on Environmental Quality NELAP T104704201-20-17, Louisiana Department of Environmental Quality Laboratory Certification (NELAP, LELAP) #02008, Louisiana Department of Health and Hospitals Drinking Water (NELAP) Certificate No LA026, Oklahoma Department of Environmental Quality TNI Laboratory Accreditation Program Certificate No. 2018-126, Arkansas Department of Environmental Quality Certification #18-068-0. The Accredited column designates accreditation by N -- NELAC, or z -- not covered under NELAC scope of accreditation.
These analytical results relate to the sample tested. This report may NOT be reproduced EXCEPT in FULL without written approval of Ana-Lab Corp. Unless otherwise specified, these test results meet the requirements of NELAC.
RL is the Reporting Limit (sample specific quantitation limit) and is at or above the Method Detection Limit (MDL). CAS is Chemical Abstract Service number. RL is our Reporting Limit, or Minimum Quantitation Level. The RL takes into account the Instrument Detection Limit (IDL), Method Detection Limit (MDL), and Practical Quantitation Limit (PQL), and any dilutions and/or concentrations performed during sample preparation (EQL). Our analytical result must be above this RL before we report a value in the 'Results' column of our report (without a 'J' flag). Otherwise, we report ND (Not Detected above RL), because the result is "<" (less than) the number in the RL column. MAL is Minimum Analytical Level and is typically from regulatory agencies. Unless we report a result in the result column, or interferences prevent it, we work to have our RL at or below the MAL.

Trey Peery, MA, Project Manager

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CAS	Parameter	Results	MDL	SDL	MQL	MQLAdj	Flag	Units	Target	Bottle	Dilute
Drinking Water	**Administrative**										
1950856	D040548-01										
		Collection:	12/16/2020	12:00:00	Client				*Received:*	12/18/2020	
Supplement to Test Report 1948833											
	Prepared:										
				Analyzed:				12/16/20	12:00:00		
	Turbidity analyzed by client	**<1**						**NTU**			1.00

MDL is Method Detection Limit (40 CFR 136 Appendix B)
MQL is the Method Quantitation Limit and corresponds to a low standard
SDL is Sample Detection Limit and is the adjusted MDL (sample specific dilutions, dry weight)
MQLADJ is the Adjusted Method Quantitation Limit (dilutions, dry weight)
Qualifiers:

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CAS	Parameter	Results	MDL	SDL	MQL	MQLAdj	Flag	Units	Target	Bottle	Dilute
Drinking Water	**Ion Chromatography**										**EPA 300.0 2.1**
1950856	**D040548-01**										
		Collection:	12/16/2020		12:00:00	Client			*Received:*	12/18/2020	
Supplement to Test Report 1948833											
	Prepared: ***931087***										
				Analyzed:	***931087***			12/21/20	21:43:00		
	Sulfate	**1590**	0.0871	8.71	0.100	10.0		**mg/L**	250 Secondary Standard	01	100.00
	Prepared: ***931096***										
				Analyzed:	***931096***			12/21/20	14:38:00		
	Chloride	**35.0**	0.0612	0.612	0.100	1.00		**mg/L**	250 Secondary Standard	01	10.00

MDL is Method Detection Limit (40 CFR 136 Appendix B)
SDL is Sample Detection Limit and is the adjusted MDL (sample specific dilutions, dry weight)
MQL is the Method Quantitation Limit and corresponds to a low standard
MQLADJ is the Adjusted Method Quantitation Limit (dilutions, dry weight)

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Trey Peery, MA, Project Manager

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CAS	Parameter	Results	MDL	SDL	MQL	MQLAdj	Flag	Units	Target	Bottle	Dilute
Drinking Water	**Metals**										**EPA 200.8 5.4**
1950856	**D040548-01**										
		Collection:	12/16/2020		12:00:00	Client			*Received:*	12/18/2020	
Supplement to Test Report 1948833											
	Prepared: ***932626***			*Analyzed:*	***932626***			1/6/21	11:15:00		
7439-96-5	**Manganese, Total**	**0.00582**	0.000168	0.000168	0.001	0.001		**mg/L**	0.050 Secondary Standard	02	1.00

MDL is Method Detection Limit (40 CFR 136 Appendix B)
SDL is Sample Detection Limit and is the adjusted MDL (sample specific dilutions, dry weight)
MQL is the Method Quantitation Limit and corresponds to a low standard
MQLADJ is the Adjusted Method Quantitation Limit (dilutions, dry weight)
Qualifiers:

We report results on an As Received or wet basis unless marked Dry Weight. Unless otherwise noted, testing was performed at Ana-labs corporate laboratory that holds the following Federal and State certificates: EPA Lab Number TX00063, US Department of Agriculture Soil Import Permit P330-17-00117, Texas Commission on Environmental Quality Commercial Drinking Water Lab Approval (Lab ID: TX219), Texas Commission on Environmental Quality NELAP T104704201-20-17, Louisiana Department of Environmental Quality Laboratory Certification (NELAP, LELAP) #02008, Louisiana Department of Health and Hospitals Drinking Water (NELAP) Certificate No LA026, Oklahoma Department of Environmental Quality TNI Laboratory Accreditation Program Certificate No. 2018-126, Arkansas Department of Environmental Quality Certification #18-068-0. The Accredited column designates accreditation by N -- NELAC, or z -- not covered under NELAC scope of accreditation.
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Quality Control

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Analytical Set 931087 — EPA 300.0 2.1

Blank

Parameter	PrepSet	Reading	MDL	MQL	Units	File
Sulfate	931087	ND	0.0871	0.100	mg/L	121890572

CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Sulfate	10.3	10.0	mg/L	103	90.0 - 110	121890568
Sulfate	9.06	10.0	mg/L	90.6	90.0 - 110	121890578
Sulfate	10.0	10.0	mg/L	100	90.0 - 110	121890585

LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Sulfate	931087	5.04	5.02	5.00	88.0 - 110	101	100	mg/L	0.398	20.0

MSD

Parameter	Sample	MS	MSD	UNK	Known	Limits	MS%	MSD%	Units	RPD	Limit%
Sulfate	1948530	10.6	11.0	0.510	10.0	80.0 - 120	101	105	mg/L	3.89	20.0

Analytical Set 931096 — EPA 300.0 2.1

Blank

Parameter	PrepSet	Reading	MDL	MQL	Units	File
Chloride	931096	ND	0.0612	0.100	mg/L	121890733

CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Chloride	10.6	10.0	mg/L	106	90.0 - 110	121890730
Chloride	10.3	10.0	mg/L	103	90.0 - 110	121890746

LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Chloride	931096	4.84	4.75	5.00	85.0 - 110	96.8	95.0	mg/L	1.88	20.0

MSD

Parameter	Sample	MS	MSD	UNK	Known	Limits	MS%	MSD%	Units	RPD	Limit%
Chloride	1949008	223	230	157	50.0	80.0 - 120	132 *	146 *	mg/L	10.1	20.0

Analytical Set 932626 — EPA 200.8 5.4

CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Manganese, Total	0.0518	0.05	mg/L	104	90.0 - 110	121917958
Manganese, Total	0.0515	0.05	mg/L	103	90.0 - 110	121917969
Manganese, Total	0.051	0.05	mg/L	102	90.0 - 110	121917979

ICV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Manganese, Total	0.0512	0.05	mg/L	102	90.0 - 110	121917952

NELAP-accredited #T104704201-20-17

Quality Control

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LDR

Parameter	Reading	Known	Units	Recover%	Limits%	File
Manganese, Total	1.02	1	mg/L	102	90.0 - 110	121917957

MRL Check

Parameter	Reading	Known	Units	Recover%	Limits%	File
Manganese, Total	0.00102	0.001	mg/L	102	25.0 - 175	121917953

* Out RPD is Relative Percent Difference: abs(r1-r2) / mean(r1,r2) * 100%

Recover% is Recovery Percent: result / known * 100%

Blank - Method Blank; CCV - Continuing Calibration Verification; ICV - Initial Calibration Verification; LDR - Linear Dynamic Range Standard; MRL Check - Minimum Reporting Limit Check Std

AQUA-TECH LABORATORIES, INC.

ATL - Bryan Facility:
635 Phil Gramm Blvd.
Bryan, TX 77807
(979) 778-3707
Fax (979) 778-3193

ATL - Austin Facility:
3512 Montopolis Drive
Austin, TX 78744
(512) 301-9559
Fax (512) 301-9552

Chain-of-Custody & Analysis Request

T104704371

SHIPPED TO:
Ana-Lab Corp. (NELAP Cert. T104704201)
2600 Dudley Road
Kilgore, TX 75662
Phone: (903) 984-0551
Fax: (903) 984-5914

C-O-C #

515 - D040548

Page 1 of 1

All analyses must be performed by a TNI approved method certified by the TCEQ. Contact ATL's sample custodian via voice and email if your methods do not meet this criteria.

Analysis Request for: **Sample ID: D040548-01** Sampled: 12/16/20 12:00 Matrix: Drinking Water **Laboratory ID >>** 948833

Chloride - EPA 300.0 SO4 DW - EPA 300.0

CONTAINERS SUPPLIED: (ATL indicates cooler number in parentheses for each container - only required if more than one cooler listed below.)

( ) D040548-01 [B] - U 0.125LP

See Attached for Tracking # and Temp

Relinquished by: (print & sign) [X] ATL-Austin [ ] ATL - Bryan [ ] Sampler Kelly Kukowski			Date 12/17/20	Time 16:11	[ ] Iced [ ] Custody Sealed [ ] Not Chilled	**Abbreviations:** DW - Drinking Water; NP - Non-Potable Water; S - Solid; CTU - Custody Transfer Unbroken; StP - Sterile Plastic; LP - Liter Plastic; LG - Liter Glass
Carrier & Tracking Number: Lone Star	Cooler 1: aqu1 - z1000juu				Sample Info "X" all that apply	**Aqua-Tech Comments and Special Instructions**
Received by: (print & sign) [✓] Received in Lab Royshawn Thompson Ana-Lab			Date 12/18/20	Time 0920	[✓] Received Iced [✓] CTU [✓] Condition Good [ ] Not Rec'd Iced	5 DAY TAT
Line below documents condition at receipt in lab (shipped to) listed above.					Please email reports to: reporting@aqua-techlabs.com	
Cooler Temperature (°C)	Temp. Read (TR)	Corrected Temp. (CT)	Thermometer ID		Please return cooler(s) to:	
Cooler 1					Austin Facility	
N/A	N/A	N/A				BRET

948946 CoC Print Group 001 of 001

12/17/2020 https://www2.lso.com/weblabels/?labelsize=0&combinedlabel=1&sessionkey=%7BD58CABE5-BBAE-4117-9ACB-C4950E31B6FB%7D

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9039840551

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AQUA TECH LABS
3512 MONTOPOLIS DR
STE A
AUSTIN, TX 78744
5123019559

G GGG **LSO ECONOMY NEXT DAY**
3:00 IN MOST AREAS
LATER IN REMOTE AREAS

PRINT DATE: 12/17/2020 REF 3:
QUICKCODE: WEIGHT: 30.00LBS
REF 1: 1D00V.0000 REF 2:

12/18 0936 RT
Date Time Tech
Temp: 8.2 / 10.2 C
Therm#: 6443 Corr Fact: 0.0 C

Fold on above line and place shipping label in pouch on package. Please be sure the barcodes and a[illegible] read and scanned. Shipping Instructions

1. Fold this page along the horizontal line above.
2. Place this Airbill in the shipping label pouch on the package you are shipping. Please be sure the barcodes and addresses can be read and scanned.
3. To locate a drop box near you, click on **Find A Drop Box** from the home page main menu.
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Bryan, TX 77807
(979) 778-3707
Fax (979) 778-3193

ATL - Austin Facility:
3512 Montopolis Drive
Austin, TX 78744
(512) 301-9559
Fax (512) 301-9552

Chain-of-Custody & Analysis Request

SHIPPED TO:
Ana-Lab Corp. (NELAP Cert. T104704201)
2600 Dudley Road
Kilgore, TX 75662
Phone: (903) 984-0551
Fax: (903) 984-5914

C-O-C #

405 - D040548

T104704371

Page 1 of 1

All analyses must be performed by a TNI approved method certified by the TCEQ. Contact ATL's sample custodian via voice and email if your methods do not meet this criteria.

Analysis Request for: **Sample ID: D040548-01** Sampled: 12/16/20 12:00 Matrix: Drinking Water **Laboratory ID >>** 1948833

Mn - EPA 200.8 R5.4

CONTAINERS SUPPLIED: (ATL indicates cooler number in parentheses for each container - only required if more than one cooler listed below.)

( ) ~~D040548-01 [B] - U 0.125LP~~
N1 <mrl>

( ) D040548-01 [G] - [SUB] ANA 0.25LP HNO3
[Split from -01C]

Turb scan <1 NTU (0.4 NTU)
Add to project 947924

Relinquished by: (print & sign) ☐ ATL-Austin ☒ ATL - Bryan ☐ Sampler Marianne R. Guzman				Date 12/29/20	Time 1630	☐ Iced ☒ Custody Sealed ☒ Not Chilled
Carrier & Tracking Number: Lone Star			Cooler 1 AQU5 2Y03E0Y2			Sample Info "X" all that apply
Received by: (print & sign) ☐ Received In Lab ~~Kathy Tarver Ana-Lab~~				Date 12/30/20	Time 0940	☐ Received Iced ☐ CTU ☐ Condition Good ☐ Not Rec'd Iced
Line below documents condition at receipt in lab (shipped to) listed above.				Please email reports to: reporting@aqua-techlabs.com		
Cooler Temperature (°C)	Temp. Read (TR)	Corrected Temp. (CT)	Thermometer ID	Please return cooler(s) to: Austin Facility		
Cooler 1						
N/A	N/A	N/A				

Abbreviations: DW - Drinking Water; NP - Non-Potable Water; S - Solid; CTU - Custody Transfer Unbroken; StP - Sterile Plastic; LP - Liter Plastic; LG - Liter Glass

Aqua-Tech Comments and Special Instructions

5 DAY TAT
Need New 2010 MALs
Contact Aqua-Tech Sample Custodian before running sample

See Attached for Tracking # and Temp

BRET

948946 CoC Print Group 001 of 001

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BRYAN, TX 77807
9797783707

WGGG **LSO GROUND**
END OF BUSINESS DAY DELIVERY

PRINT DATE: 12/28/2020 REF 3:
QUICKCODE: WEIGHT: 12.00LBS
REF 1: 1D00V.0000 REF 2:

12/30 0924 KT
Date Time Tech
Temp: 18.2/18.2 C

Therm#: 6443 Corr Fact: 0.0 C

Fold on above line and place shipping label in pouch on package. Please be sure the barcodes and addresses can be read and scanned. Shipping Instructions

1. Fold this page along the horizontal line above.
2. Place this Airbill in the shipping label pouch on the package you are shipping. Please be sure the barcodes and addresses can be read and scanned.
3. To locate a drop box near you, click on **Find A Drop Box** from the home page main menu.
4. To schedule a pickup, click on **Request Pickup**.

WARNING: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your Lone Star Overnight account number.

This label is valid for use for 3 months from the date printed. Use of expired labels may result in delayed billing and / or additional research charges. LIMIT OF LIABILITY: We are not responsible for claims in excess of $100 for any reason unless you: 1) declare a greater value (not to exceed $25,000); 2) pay an additional fee; 3) and document your actual loss in a timely manner. We will not pay any claim in excess of the actual loss. We are not liable for any special or consequential damages. Additional limitations of liability are contained in our current Service Guide. If you ask us to deliver a package without obtaining a delivery signature, you release us of all liability for claims resulting from such service. NO DELIVERY SIGNATURE WILL BE OBTAINED FOR 8:30 AM DELIVERIES OR RESIDENTIAL DELIVERIES.

AQUA-TECH LABORATORIES, INC.

ATL - Bryan Facility:
635 Phil Gramm Blvd.
Bryan, TX 77807
(979) 778-3707
Fax (979) 778-3193

ATL - Austin Facility:
3512 Montopolis Drive
Austin, TX 78744
(512) 301-9559
Fax (512) 301-9552

Chain-of-Custody & Analysis Request

T104704371

SHIPPED TO:
Ana-Lab Corp. (NELAP Cert. T104704201)
2600 Dudley Road
Kilgore, TX 75662
Phone: (903) 984-0551
Fax: (903) 984-5914

C-O-C #
405 - D040548

Page 1 of 1

All analyses must be performed by a TNI approved method certified by the TCEQ. Contact ATL's sample custodian via voice and email if your methods do not meet this criteria.

Analysis Request for: **Sample ID: D040548-01** Sampled: 12/16/20 12:00 Matrix: Drinking Water **Laboratory ID >>** 1948833

Mn - EPA 200.8 R5.4

CONTAINERS SUPPLIED: (ATL indicates cooler number in parentheses for each container - only required if more than one cooler listed below.)

(~~) D040548-01 [B] - U 0.125LP~~ NA <Mn24>)
( ) D040548-01 [G] - [SUB] ANA 0.25LP HNO3 *[Split from -01C]*

Turb scan <1 NTU (0.4 NTU)
Add to project 947924

Relinquished by: (print & sign) ☐ ATL-Austin ☒ ATL-Bryan ☐ Sampler	Date	Time	Sample Info "X" all that apply
Marianne R. Guzman [signature]	12/29/20	1630	☐ Iced ☒ Custody Sealed ☒ Not Chilled
Carrier & Tracking Number: Lone Star Cooler 1 AQU5 2Y03E0Y2			
Received by: (print & sign) ☑ Received in Lab — Kathy Tarver Ana-Lab [signature]	12/30/20	0940	☐ Received Iced ☑ CTU ☑ Condition Good ☑ Not Rec'd Iced

Line below documents condition at receipt in lab (shipped to) listed above.

Cooler Temperature (°C)	Temp. Read (TR)	Corrected Temp. (CT)	Thermometer ID
Cooler 1			
N/A	N/A	N/A	

Please email reports to: reporting@aqua-techlabs.com

Please return cooler(s) to: Austin Facility

Abbreviations: DW - Drinking Water; NP - Non-Potable Water; S - Solid; CTU - Custody Transfer Unbroken; StP - Sterile Plastic; LP - Liter Plastic; LG - Liter Glass

Aqua-Tech Comments and Special Instructions

5 DAY TAT
Need New 2010 MALs
Contact Aqua-Tech Sample Custodian before running sample

See Attached for Tracking # and Temp

BRET

Water Quality

Well No. 3

Email information for report date:
12/23/20 10:53

D040816

Apex Drilling

Attn: Michael Becker
apexdrilling.becker@yahoo.com

PO Box 867
Marble Falls, TX 78654

******Attention Austin Laboratory Clients******
Aqua-Tech is excited to announce that our Austin Laboratory is expanding and moving to a new location!

We will close our current Austin Laboratory location on Friday, October 23, 2020 at 12:00 p.m. to begin the moving process and will re-open at our new location on Monday, October 26 at 8:00 a.m.

Austin Laboratory address as of October 26, 2020:
3512 Montopolis Drive
Austin, TX 78744

Thank you for your business,
June M. Brien
Executive Technical Director

CORPORATE OFFICE
635 Phil Gramm Boulevard
Bryan, TX 77807
Phone: (979) 778-3707
Fax: (979) 778-3193

AQUA-TECH LABORATORIES, INC.

AUSTIN OFFICE
3512 Montopolis Dr. Suite A
Austin, TX 78744
Phone: (512) 301-9559
Fax: (512) 301-9552

The analyses summarized in this report were performed by Aqua-Tech Laboratories, Inc. unless otherwise noted. Aqua-Tech Laboratories, Inc. holds accreditation from the State of Texas in accordance with TNI and/or through the TCEQ Drinking Water Commercial Laboratory Approval Program.

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INF	Aqua-Tech Laboratories, Inc. is not accredited for this parameter. It is reported on an informational basis only.

Subcontracted data summarized in this report is indicated by "Sub" in the Lab column.

NELAP ACCREDITED TNI LABORATORY

TCEQ DW Lab ID TX 239

General Definitions:

NR	Not Reported.
RPD	Relative Percent Difference.
% R	Percent Recovery.
dry	Results with the "dry" unit designation are reported on a "dry weight" basis.
SQL	The Sample Quantitation Limit is the value below which the parameter cannot reliably be detected. The SQL includes all sample preparations, dilutions and / or concentrations.
Adj MDL	The Adjusted Method Detection Limit is the MDL value adjusted for any sample dilutions or concentrations .
MDL	The Method Detection Limit is the lowest theoretical value that is statistically different from zero for a specific method, taking into account all preparation steps and instrument settings.

All samples are reported on an "as received" basis unless the designation "dry" is added to the reported unit.

Copies of Aqua-Tech Laboratories, Inc. procedures and individual sampling plans are available upon request. Note that samples are collected by Aqua-Tech Laboratories, Inc. personnel unless otherwise noted in the "Sample Collected" field of this report as "Client" or "CLT".

Samples included in this report were received in acceptable condition according to Aqua-Tech Laboratories, Inc. procedures and 40 CFR, Chapter I, Subchapter D, Part 136.3, TABLE II. - *Required containers, preservation techniques, and holding times*, unless otherwise noted in this report.

Record Retention:

All reports, raw data, and associated quality control data are kept on file for 10 years before being destroyed. Any client that would like copies of records must contact Aqua-Tech Laboratories, Inc. no later than six months prior to the scheduled disposal. An administrative fee for retrieval and distribution will apply.

This report was approved by:

June M. Brien, Technical Director

corp@aqua-techlabs.com www.aqua-techlabs.com

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3512 Montopolis Dr. Suite A
Austin, TX 78744
Phone: (512) 301-9559
Fax: (512) 301-9552

Analytical Report

Apex Drilling

Report Printed: **12/23/20** **10:53**

D040816

LEGACY HILLS NO3

Collected: 12/16/20 15:00 by CLIENT
Received: 12/17/20 11:36 by Kelly Kukowski

Type: Grab
Matrix: Drinking Water
C-O-C #: 40816/40818

Lab ID# D040816-01

	Result	Units	Notes	MDL	Adj MDL	SQL	Lab	Analyzed	Method	Batch	
Microbiological Analyses											
Total Coliforms	**Absent**	N/A		N/A	**N/A**	N/A	*Austin*	12/17/20 17:14 JLL	SM9223 B 2004	M122600	NEL
Escherichia coli (E.coli)	**Absent**	N/A		N/A	**N/A**	N/A	*Austin*	12/17/20 17:14 JLL	SM9223 B 2004	M122600	NEL

Microbiological Analyses - Quality Control

	Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	Log10 Comparison Range	Log10 Comparison Control Limit	Batch	
Escherichia coli (E.coli) - SM9223 B 2004														*Austin*
Blank	Absent	N/A		N/A	N/A	12/17/20 17:14 JLL							M122600	
Total Coliforms - SM9223 B 2004														*Austin*
Blank	Absent	N/A		N/A	N/A	12/17/20 17:14 JLL							M122600	

Sample Preparation Summary

Sample	Method	Prepared	Lab	Bottle	Initial	Units	Final	Units	External Dilution Factor	Batch
D040816-01										
Escherichia coli (E.coli)	SM9223 B 2004	12/17/20 17:06 JLL	Austin	A	100	mL	100	mL	1	M122600
Total Coliforms	SM9223 B 2004	12/17/20 17:06 JLL	Austin	A	100	mL	100	mL	1	M122600

AQUA-TECH LABORATORIES, INC.

Chain-of-Custody and Analysis Request

Aqua-Tech Laboratories, Inc.

T104704371
TX239

Austin	Bryan
3512 Montopolis Dr. Austin, TX 78744 512.301.9559	635 Phil Gramm Blvd. Bryan, TX 77807 979.778.3707

Test results meet all accreditation/certification requirements unless stated otherwise.

Work Order / C-O-C: 40816 / 40818
Page 1 of 1
V-0023 R03

Client /Project:

Contact Info
Name: APEX DRILLING
Address
City State ZIP
Phone / Email

Definitions
DW - Drinking Water
NP - Non-Potable Water
S - Solid
CM - Custody Maintained
CTU - Custody Transfer Unbroken
CT - Corrected Temperature
SUB - Subcontracted Analysis

(+) Container Type
P - Plastic
G - Glass
T - Teflon©

By relinquishing the samples listed below to Aqua-Tech, the client agrees to the following terms.
Samples will be analyzed by a method that is within Aqua-Tech Laboratories' NELAC fields of accreditation. Analytes requiring a certified method that is not within Aqua-Tech's fields of accreditation will be subcontracted to a NELAC certified lab that is certified for that method. Clients will be notified of the subcontract lab's details. Other analytes not requiring accreditation will be analyzed by a compendial method. If a specific method is required, the client will note the method in the "Analysis Requested" column. The client approves all method modifications documented by Aqua-Tech or the subcontract lab. A current list of Aqua-Tech's NELAC fields of accreditation and other methods are available on request.

Sample Custody

			Date / Time	
Relinquished by (print & sign)	W Becker	☑ Sampler ☐ Client ☐ ATL Field	Date 12.17.20 Time 11:36	☐ Iced / Refrig ☐ Custody Sealed
Received by (print & sign)		☐ Client ☐ ATL Field	Date Time	☐ Iced / Refrig ☐ CM / CTU
Relinquished by (print & sign)	NFE 12/KK	☐ Client ☐ ATL Field	Date Time	☐ Iced / Refrig ☐ CM / CTU
Received by (print & sign)		☐ Client ☐ ATL Field	Date Time	☐ Iced / Refrig ☐ CM / CTU
Relinquished by (print & sign)		☐ Client ☐ ATL Field	Date Time	☐ Iced / Refrig ☐ CM / CTU / sealed
Received by (print & sign)	Kelly Kukowski [signature]	☑ Lab	Date 12/17/20 Time 1136	☑ Cond Good ☑ Iced / Refrig ☑ CM / CTU

Client Comments:

* Preservatives		Receipt in Lab		
1	< 6 °C (unfrozen)	Cooler ID :	Clt	
2	H2SO4	Temperature (°C) : read / CT	3.1 / 3.1 CT	NA KK
3	HCl			
4	HNO3	Preservation Correct ?	YES (NO)	YES NO
5	Na2S2O3 0156704	Post Preservatives ?	(YES) NO	YES NO
6	NaOH	Thermometer ID :	0764480	
7		pH Paper ID :	—	

Lab Comments

Field Sample ID (record field data for each sample in space below)	Start Date	Start Time	End Date	End Time	Composite Type	Sample Matrix	Bottle Count	Volume (Size in L)	Type (+)	Preserv-ative(s) *	Cooler ID	pH Check	SUB	WORK ORDER (LAB USE ONLY BELOW, initials KK) See Below
Legacy Hills #3	12.16.20	15:00	—		G	DW	1	0.12	SP	1,5	Clt	—	—	Sample 816-01A (~~D040716-01A~~ wrong#KK)
Analysis Requested & Comments: P/A BACTI														
Legacy Hills #3	12.16.20	15:48	—		G	DW	1	2	P	1	Clt	Am (~~Am~~ wrong box KK)		Sample 818-01A (~~D0407..-01A~~ wrong#KK)
Analysis Requested & Comments: See ATTACHED — Cl Cond F Fe NO3 NO2 Mn SO4 pH Hardness TDS														
														Sample
Analysis Requested & Comments:														
					NFE 12/KK									Sample
Analysis Requested & Comments:														
														Sample
Analysis Requested & Comments:														

No. 8 No. 7

Well numbers correspond to Attachment 1

The water quality from each well will need to be assessed
y Aquifer to provide adequate drinking water. Upon com
sample will need to be collected and analyzed for the follov

- Chloride
- Conductivity
- Fluoride
- Iron
- Nitrate (as nitrogen)
- Manganese
- pH
- Sulfate
- Total hardness
- Total Dissolved Solids (TDS)
- Presence/absence of total coliform bacteria

have any questions please feel free to call me at 512-773-3

Email information for report date:

1/8/21 15:59

D040818

Apex Drilling

Attn: Michael Becker

apexdrilling.becker@yahoo.com

PO Box 867

Marble Falls, TX 78654

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Thank you for your business,
June M. Brien
Executive Technical Director

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TCEQ DW Lab ID TX 239

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This report was approved by:

June M. Brien, Technical Director

corp@aqua-techlabs.com www.aqua-techlabs.com

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Fax: (512) 301-9552

Analytical Report

Apex Drilling

Report Printed: **1/8/21** **15:59**

D040818

LEGACY HILLS NO3

Collected: 12/16/20 15:00 by CLIENT
Received: 12/17/20 11:36 by Kelly Kukowski

Type: Grab
Matrix: Drinking Water
C-O-C #: 40816/40818

Lab ID# D040818-01

	Result	Units	Notes	MDL	Adj MDL	SQL	Lab	Analyzed	Method	Batch	
General Chemistry											
Total Dissolved Solids	**2890**	mg/L		25.0	100	100	*Bryan*	12/18/20 18:55 MRH	SM2540 C 2011	M122657	NEL
Nitrate as N (NO3N)	**<0.0200**	mg/L			0.0200	0.0200	*Calc*	12/21/20 11:31 JLL	SM4500-NO3-F 2011	[CALC]	NEL
Nitrite as N	**<0.01**	mg/L	MS-01	0.002	0.002	0.01	*Austin*	12/18/20 11:00 JLL	SM4500 NO2- B 2011	M122640	NEL
Nitrate/Nitrite as N	**0.02**	mg/L		0.02	0.02	0.02	*Bryan*	12/21/20 11:31 EMT	SM4500-NO3-F 2011	M122701	ANR
Total Hardness (EDTA) as CaCO3	**1980**	mg/L		1.00	25.0	25.0	*Bryan*	12/21/20 18:45 MRH	SM2340 C 2011	M122748	NEL
Fluoride	**2.06**	mg/L		0.04	0.04	0.10	*Bryan*	12/28/20 19:00 MRH	SM4500-F C 2011	M122948	NEL
pH, Lab	**7.5**	S.U.	Hold-03		N/A	N/A	*Austin*	12/21/20 08:50 KT	SM4500-H+ B 2011	M122698	DWP
Temperature @ pH Analysis	**20.2**	Deg. C			N/A	N/A	*Austin*	12/21/20 08:50 KT	SM4500-H+ B 2011	M122698	DWP
Specific Conductance (adjusted to 25.0°C)	**3830**	uS/cm		2.00	6.67	6.67	*Bryan*	01/05/21 14:30 CJO	SM2510 B 2011	M123224	DWP,NEL
Metals (Total)											
Iron	**0.117**	mg/L		0.002	0.002	0.010	*Bryan*	12/23/20 16:27 PNS	EPA 200.7 R4.4	M122737	NEL

Please see the attached subcontract report for subcontracted data.

Explanation of Notes

Hold-03	This parameter was outside of EPA holding at the time the sample was received in the laboratory.
J	Analyte detected below the SQL but above the MDL.
MS-01	The MS and/or MSD recovery was outside acceptance limits. Investigation concludes it is a sample- specific matrix effect and the batch was accepted based on acceptable LCS and /or LCSD recovery.
RPD-02	RPD was not calculated in LIMS due to one or both of the sample / duplicate pair being less than the MRL.

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Phone: (512) 301-9559
Fax: (512) 301-9552

Analytical Report

Apex Drilling

Report Printed: **1/8/21** **15:59**

D040818

General Chemistry - Quality Control

	Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch	
Fluoride - SM4500-F C 2011														*Bryan*
Initial Cal Check	0.43	mg/L				12/28/20 19:00 MRH	0.428		100	90 - 110			2012295	
Blank	<0.10	mg/L		0.04	0.10	12/28/20 19:00 MRH							M122948	
LCS	0.83	mg/L		0.04	0.10	12/28/20 19:00 MRH	0.799		104	90 - 110			M122948	
LCS Dup	0.85	mg/L		0.04	0.10	12/28/20 19:00 MRH	0.799		106	90 - 110	2.38	6.23	M122948	
Matrix Spike	0.99	mg/L		0.04	0.10	12/28/20 19:00 MRH	0.799	0.16	104	78.1 - 125			M122948	
Matrix Spike Dup	1.00	mg/L		0.04	0.10	12/28/20 19:00 MRH	0.799	0.16	105	78.1 - 125	0.957	5.72	M122948	
MRL Check	0.10	mg/L		0.04	0.10	12/28/20 19:00 MRH	0.0999		98.8	73.4 - 118			M122948	
Nitrate/Nitrite as N - SM4500-NO3-F 2011														*Bryan*
Initial Cal Check	1.40	mg/L				12/21/20 11:31 EMT	1.40		100	90 - 110			2012230	
Low Cal Check	0.02	mg/L				12/21/20 11:31 EMT	0.0200		110	70 - 130			2012230	
Blank	<0.02	mg/L		0.02	0.02	12/21/20 11:31 EMT							M122701	
LCS	0.49	mg/L		0.02	0.02	12/21/20 11:31 EMT	0.500		98.8	91.3 - 109			M122701	
LCS Dup	0.50	mg/L		0.02	0.02	12/21/20 11:31 EMT	0.500		100	91.3 - 109	1.30	6.8	M122701	
Matrix Spike	1.97	mg/L		0.02	0.02	12/21/20 11:31 EMT	0.500	1.45	105	94.7 - 117			M122701	
Matrix Spike Dup	1.96	mg/L		0.02	0.02	12/21/20 11:31 EMT	0.500	1.45	102	94.7 - 117	3.01	8.65	M122701	
Nitrite as N - SM4500 NO2- B 2011														*Austin*
Blank	<0.01	mg/L		0.002	0.01	12/18/20 11:00 JLL							M122640	
LCS	0.08	mg/L		0.002	0.01	12/18/20 11:00 JLL	0.0800		103	90 - 110			M122640	
LCS Dup	0.08	mg/L		0.002	0.01	12/18/20 11:00 JLL	0.0800		103	90 - 110	0.00	8.12	M122640	
Matrix Spike	<0.01	mg/L	*J, MS-01 (0.005)*	0.002	0.01	12/18/20 11:00 JLL	0.0800	<0.01	*6.06*	70.6 - 117			M122640	
Matrix Spike	0.18	mg/L	*MS-01*	0.007	0.03	12/18/20 11:00 JLL	0.267	<0.03	*67.7*	70.6 - 117			M122640	
Matrix Spike	0.58	mg/L	*MS-01*	0.02	0.08	12/18/20 11:00 JLL	0.667	<0.08	86.6	70.6 - 117			M122640	
Matrix Spike Dup	<0.01	mg/L	*J, MS-01 (0.005)*	0.002	0.01	12/18/20 11:00 JLL	0.0800	<0.01	*6.06*	70.6 - 117	0.00	8.18	M122640	
Matrix Spike Dup	0.18	mg/L	*MS-01*	0.007	0.03	12/18/20 11:00 JLL	0.267	<0.03	*66.3*	70.6 - 117	1.97	8.18	M122640	
Matrix Spike Dup	0.57	mg/L	*MS-01*	0.02	0.08	12/18/20 11:00 JLL	0.667	<0.08	86.1	70.6 - 117	0.510	8.18	M122640	
pH, Lab - SM4500-H+ B 2011														*Austin*
Duplicate	7.5	Std Units				12/21/20 08:50 KT		7.4			1.07	1.18	M122698	
Reference	6.9	Std Units				12/21/20 08:50 KT	6.86		101	95 - 105			M122698	
Reference	9.2	Std Units				12/21/20 08:50 KT	9.18		100	95 - 105			M122698	
Reference	6.9	Std Units				12/21/20 08:50 KT	6.86		101	95 - 105			M122698	
Reference	9.3	Std Units				12/21/20 08:50 KT	9.18		101	95 - 105			M122698	

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Analytical Report

Apex Drilling

Report Printed: 1/8/21 15:59

D040818

General Chemistry - Quality Control

	Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch	
Specific Conductance (adjusted to 25.0°C) - SM2510 B 2011														*Bryan*
Initial Cal Check	513	uS/cm				01/05/21 14:30 CJO	484		106	90 - 110			2101024	
Blank	<2.00	uS/cm		2.00	2.00	01/05/21 14:30 CJO							M123224	
Duplicate	829	uS/cm		2.00	2.00	01/05/21 14:30 CJO		824			0.605	2	M123224	
LCS	1360	uS/cm		2.00	2.00	01/05/21 14:30 CJO	1410		96.1	90 - 110			M123224	
Total Dissolved Solids - SM2540 C 2011														*Bryan*
Blank	<25.0	mg/L		25.0	25.0	12/18/20 18:55 MRH							M122657	
Duplicate	596	mg/L		100	100	12/18/20 18:55 MRH		596			0.00	9.13	M122657	
Reference	440	mg/L		100	100	12/18/20 18:55 MRH	500		88.0	81 - 121			M122657	
Total Hardness (EDTA) as CaCO3 - SM2340 C 2011														*Bryan*
Initial Cal Check	53.5	mg/L				12/21/20 18:45 MRH	54.4		98.3	85 - 115			2012237	
Blank	<1.00	mg/L		1.00	1.00	12/21/20 18:45 MRH							M122748	
Duplicate	10.9	mg/L		1.00	1.00	12/21/20 18:45 MRH		11.9			8.70	9.52	M122748	
LCS	102	mg/L		1.00	1.00	12/21/20 18:45 MRH	100		102	90 - 110			M122748	
LCS Dup	99.0	mg/L		1.00	1.00	12/21/20 18:45 MRH	100		99.0	90 - 110	2.96	6.47	M122748	
Matrix Spike	110	mg/L		1.00	1.00	12/21/20 18:45 MRH	100	11.9	98.0	87.6 - 111			M122748	
MRL Check	4.95	mg/L		1.00	1.00	12/21/20 18:45 MRH	4.00		124	70 - 130			M122748	

Metals (Total) - Quality Control

	Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch	
Iron - EPA 200.7 R4.4														*Bryan*
Blank	<0.010	mg/L		0.002	0.010	12/23/20 15:28 PNS							M122737	
LCS	0.947	mg/L		0.002	0.010	12/23/20 15:31 PNS	1.00		94.7	84.5 - 115.4			M122737	
LCS Dup	0.967	mg/L		0.002	0.010	12/23/20 15:34 PNS	1.00		96.7	84.5 - 115.4	2.10	20	M122737	
Duplicate	<0.010	mg/L	*J, RPD-02 (0.003)*	0.002	0.010	12/23/20 15:38 PNS		<0.010				20	M122737	
Matrix Spike	0.940	mg/L		0.002	0.010	12/23/20 15:41 PNS	1.00	0.002	94.0	69.5 - 130.4			M122737	

Preparation Procedures - Quality Control

	Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch	
Turbidity - SM2130 B 2011														*Bryan*

CORPORATE OFFICE
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AQUA-TECH LABORATORIES, INC.

AUSTIN OFFICE
3512 Montopolis Dr. Suite A
Austin, TX 78744
Phone: (512) 301-9559
Fax: (512) 301-9552

Analytical Report

Apex Drilling

Report Printed: **1/8/21** **15:59**

D040818

Sample Preparation Summary

Sample	Method	Prepared	Lab	Bottle	Initial	Units	Final	Units	External Dilution Factor	Batch
D040818-01										
Fluoride	SM4500-F C 2011	12/28/20 19:00 MRH	Bryan	C	25.0	mL	25.0	mL	1	M122948
Iron	EPA 200.7 R4.4	12/21/20 14:50 BLC	Bryan	B	10.0	mL	10.2	mL	1	M122737
Nitrate/Nitrite as N	SM4500-NO3-F 2011	12/21/20 9:23 EMT	Bryan	D	10.0	mL	10.0	mL	1	M122701
Nitrite as N	SM4500 NO2- B 2011	12/18/20 11:00 JLL	Austin	A	25.0	mL	25.0	mL	1	M122640
pH, Lab	SM4500-H+ B 2011	12/21/20 8:50 KT	Austin	A	50.0	mL	50.0	mL	1	M122698
Sample Acidified to pH<2 in Lab	N/A	12/17/20 12:44 KK	Bryan	D	1.00	mL	1.00	mL	1	M122573
Specific Conductance (adjusted to 25.0°C)	SM2510 B 2011	1/5/21 14:30 CJO	Bryan	C	15.0	mL	50.0	mL	1	M123224
Temperature @ pH Analysis	SM4500-H+ B 2011	12/21/20 8:50 KT	Austin	A	50.0	mL	50.0	mL	1	M122698
Total Dissolved Solids	SM2540 C 2011	12/18/20 18:55 MRH	Bryan	C	25.0	mL	100	mL	1	M122657
Total Hardness (EDTA) as CaCO3	SM2340 C 2011	12/21/20 18:45 MRH	Bryan	B	2.00	mL	50.0	mL	1	M122748
Turbidity	SM2130 B 2011	12/21/20 12:58 BLC	Bryan	B	10.0	mL	10.0	mL	1	M122722
D040818-01RE1										
Sample Acidified to pH<2 in Lab	N/A	12/17/20 12:45 KK	Bryan	B	100	mL	100	mL	1	M122574

AQUA-TECH LABORATORIES, INC.

Chain-of-Custody and Analysis Request

Aqua-Tech Laboratories, Inc.
Austin: 3512 Montopolis Dr., Austin, TX 78744, 512.301.9559
Bryan: 635 Phil Gramm Blvd., Bryan, TX 77807, 979.778.3707

T104704371
TX239

Test results meet all accreditation/certification requirements unless stated otherwise.

Work Order / C-O-C: 40816/ 40818
Page 1 of 1
V-0023 R03

Client /Project:

Contact Info
Name: APEX DRILLING
Address
City / State / ZIP
Phone / Email

Definitions
DW - Drinking Water
NP - Non-Potable Water
S - Solid
CM - Custody Maintained
CTU - Custody Transfer Unbroken
CT - Corrected Temperature
SUB - Subcontracted Analysis

(+) Container Type
P - Plastic
G - Glass
T - Teflon©

By relinquishing the samples listed below to Aqua-Tech, the client agrees to the following terms. Samples will be analyzed by a method that is within Aqua-Tech Laboratories' NELAC fields of accreditation. Analytes requiring a certified method that is not within Aqua-Tech's fields of accreditation will be subcontracted to a NELAC certified lab that is certified for that method. Clients will be notified of the subcontract lab's details. Other analytes not requiring accreditation will be analyzed by a compendial method. If a specific method is required, the client will note the method in the "Analysis Requested" column. The client approves all method modifications documented by Aqua-Tech or the subcontract lab. A current list of Aqua-Tech's NELAC fields of accreditation and other methods are available on request.

Client Comments:

* Preservatives	
1	< 6 °C (unfrozen)
2	H2SO4
3	HCl
4	HNO3
5	Na2S2O3 0156704
6	NaOH
7	

Receipt in Lab		
Cooler ID :	Clt	
Temperature (°C) : read / CT	3.1 / 3.1 CT	NA KK
Preservation Correct ?	YES (NO)	YES NO
Post Preservatives ?	(YES) NO	YES NO
Thermometer ID :	0764480	
pH Paper ID :	—	

Lab Comments

Sample Custody

	Name (print & sign)		Date / Time	
Relinquished by (print & sign)	W Becker	☑ Sampler ☐ Client ☐ ATL Field	Date 12.17.20 Time 11:36	☐ Iced / Refrig ☐ Custody Sealed
Received by (print & sign)		☐ Client ☐ ATL Field	Date Time	☐ Iced / Refrig ☐ CM / CTU
Relinquished by (print & sign)	NFE KK	☐ Client ☐ ATL Field	Date Time	☐ Iced / Refrig ☐ CM / CTU
Received by (print & sign)		☐ Client ☐ ATL Field	Date Time	☐ Iced / Refrig ☐ CM / CTU
Relinquished by (print & sign)		☐ Client ☐ ATL Field	Date Time	☐ Iced / Refrig ☐ CM / CTU / sealed
Received by (print & sign)	Kelly Kukowski	☑ Lab	Date 12/17/20 Time 1136	☑ Cond Good ☑ Iced / Refrig ☑ CM / CTU

LAB USE ONLY BELOW (initials KK)

Field Sample ID (record field data for each sample in space below)	Start Date	Start Time	End Date	End Time	Composite Type	Sample Matrix	Bottle Count	Volume (Size in L)	Type (+)	Preserv-ative(s) *	Cooler ID	pH Check	SUB	WORK ORDER See Below
Legacy Hills # 3	12.16.20	15:40	—		G	DW	1	0.12	SP	1,5	Clt	—	—	Sample 816-01A (D040716-01A wrong# KK)
Analysis Requested & Comments: P/A BACTI														
Legacy Hills # 3	12.16.20	15:48	—		G	DW	1	2	P	1	Clt	Amb (Am wrong box KK)		Sample 818-01A (D040716-01A wrong# KK)
Analysis Requested & Comments: See ATTACHED — Cl Cond F Fe NO3 NO2 Mn SO4 pH Hardness TDS														
														Sample
Analysis Requested & Comments:														
					NFE KK									Sample
Analysis Requested & Comments:														
														Sample
Analysis Requested & Comments:														

Page 6 of 23 D040818_1 ATL 110720 FIN_ls 01 08 21 1559

No. 8 No. 7

Well numbers correspond to Attachment 1

The water quality from each well will need to be assessed y Aquifer to provide adequate drinking water. Upon com sample will need to be collected and analyzed for the follov

- Chloride
- Conductivity
- Fluoride
- Iron
- Nitrate (as nitrogen)
- Manganese
- pH
- Sulfate
- Total hardness
- Total Dissolved Solids (TDS)
- Presence/absence of total coliform bacteria

have any questions please feel free to call me at 512-773-3

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Testing the Limits of Science and Service

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AQU1-G

Aqua-Tech Laboratories
John Brien
635 Phil Gramm Blvd.
Bryan, TX 77807-9104

Printed 01/08/2021 13:19

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This report consists of this Table of Contents and the following pages:

NELAP-accredited #T104704201-20-17

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Aqua-Tech Laboratories
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Printed: 01/08/2021

947923

Results

Sample Results

1950857 **D040818-01** Received: 12/18/2020

Drinking Water Collected by: Client Aqua-Tech Laboratori PO:
Taken: 12/16/2020 15:00:00

Supplement to Test Report 1948832

Prepared: 12/16/2020 15:00:00 Analyzed 12/16/2020 15:00:00 CLI

	Parameter	Results	Units	RL	Flags	CAS	Bottle
z	**Turbidity analyzed by client**	**<1**	**NTU**				

EPA 200.8 5.4 Prepared: 932626 01/06/2021 11:11:00 Analyzed 932626 01/06/2021 11:11:00 SAM

	Parameter	Results	Units	RL	Flags	CAS	Bottle
NELAC	**Manganese, Total**	**0.00698**	**mg/L**	0.001		**7439-96-5**	02

EPA 300.0 2.1 Prepared: 931087 12/21/2020 14:43:00 Analyzed 931087 12/21/2020 14:43:00 ATN

	Parameter	Results	Units	RL	Flags	CAS	Bottle
NELAC	**Chloride**	**42.4**	**mg/L**	3.00			01

EPA 300.0 2.1 Prepared: 931087 12/21/2020 20:28:00 Analyzed 931087 12/21/2020 20:28:00 ATN

	Parameter	Results	Units	RL	Flags	CAS	Bottle
NELAC	**Sulfate**	**2060**	**mg/L**	10.0			01

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Printed: 01/08/2021

Qualifiers:

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These analytical results relate to the sample tested. This report may NOT be reproduced EXCEPT in FULL without written approval of Ana-Lab Corp. Unless otherwise specified, these test results meet the requirements of NELAC.
RL is the Reporting Limit (sample specific quantitation limit) and is at or above the Method Detection Limit (MDL). CAS is Chemical Abstract Service number. RL is our Reporting Limit, or Minimum Quantitation Level. The RL takes into account the Instrument Detection Limit (IDL), Method Detection Limit (MDL), and Practical Quantitation Limit (PQL), and any dilutions and/or concentrations performed during sample preparation (EQL). Our analytical result must be above this RL before we report a value in the 'Results' column of our report (without a 'J' flag). Otherwise, we report ND (Not Detected above RL), because the result is "<" (less than) the number in the RL column. MAL is Minimum Analytical Level and is typically from regulatory agencies. Unless we report a result in the result column, or interferences prevent it, we work to have our RL at or below the MAL.

Trey Peery, MA, Project Manager

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CAS	Parameter	Results	MDL	SDL	MQL	MQLAdj	Flag	Units	Target	Bottle	Dilute
Drinking Water	**Administrative**										
1950857	D040818-01										
		Collection:	12/16/2020	15:00:00	Client				*Received:*	12/18/2020	
Supplement to Test Report 1948832											
	Prepared:										
				Analyzed:			12/16/20		15:00:00		
	Turbidity analyzed by client	**<1**						**NTU**			1.00

MDL is Method Detection Limit (40 CFR 136 Appendix B)
SDL is Sample Detection Limit and is the adjusted MDL (sample specific dilutions, dry weight)
MQL is the Method Quantitation Limit and corresponds to a low standard
MQLADJ is the Adjusted Method Quantitation Limit (dilutions, dry weight)
Qualifiers:

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CAS	Parameter	Results	MDL	SDL	MQL	MQLAdj	Flag	Units	Target	Bottle	Dilute
Drinking Water	**Ion Chromatography**										**EPA 300.0 2.1**
1950857	D040818-01										
		Collection:	12/16/2020	15:00:00	Client				*Received:*	12/18/2020	
Supplement to Test Report 1948832											
Prepared:	*931087*			*Analyzed:*	*931087*			12/21/20	14:43:00		
	Chloride	**42.4**	0.0385	0.385	0.300	3.00		**mg/L**	250 Secondary Standard	01	10.00
	Sulfate	**2060**	0.0871	8.71	0.100	10.0		**mg/L**	250 Secondary Standard	01	100.00

MDL is Method Detection Limit (40 CFR 136 Appendix B)
SDL is Sample Detection Limit and is the adjusted MDL (sample specific dilutions, dry weight)
MQL is the Method Quantitation Limit and corresponds to a low standard
MQLADJ is the Adjusted Method Quantitation Limit (dilutions, dry weight)
Qualifiers:

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CAS	Parameter	Results	MDL	SDL	MQL	MQLAdj	Flag	Units	Target	Bottle	Dilute
Drinking Water	**Metals**										**EPA 200.8 5.4**
1950857	**D040818-01**										
		Collection:	12/16/2020		15:00:00	Client			*Received:*	12/18/2020	
Supplement to Test Report 1948832											
	Prepared: ***932626***			*Analyzed:*	***932626***			1/6/21	11:11:00		
7439-96-5	**Manganese, Total**	**0.00698**	0.000168	0.000168	0.001	0.001		**mg/L**	0.050 Secondary Standard	02	1.00

MDL is Method Detection Limit (40 CFR 136 Appendix B)

SDL is Sample Detection Limit and is the adjusted MDL (sample specific dilutions, dry weight)

MQL is the Method Quantitation Limit and corresponds to a low standard

MQLADJ is the Adjusted Method Quantitation Limit (dilutions, dry weight)

Qualifiers:

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Quality Control

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Analytical Set 931087 — EPA 300.0 2.1

Blank

Parameter	PrepSet	Reading	MDL	MQL	Units	File
Chloride	931087	ND	0.0385	0.300	mg/L	121890572
Sulfate	931087	ND	0.0871	0.100	mg/L	121890572

CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Chloride	10.4	10.0	mg/L	104	90.0 - 110	121890568
Chloride	9.76	10.0	mg/L	97.6	90.0 - 110	121890578
Chloride	10.2	10.0	mg/L	102	90.0 - 110	121890585
Sulfate	10.3	10.0	mg/L	103	90.0 - 110	121890568
Sulfate	9.06	10.0	mg/L	90.6	90.0 - 110	121890578
Sulfate	10.0	10.0	mg/L	100	90.0 - 110	121890585

LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Chloride	931087	4.96	4.95	5.00	85.0 - 110	99.2	99.0	mg/L	0.202	20.0
Sulfate	931087	5.04	5.02	5.00	88.0 - 110	101	100	mg/L	0.398	20.0

MSD

Parameter	Sample	MS	MSD	UNK	Known	Limits	MS%	MSD%	Units	RPD	Limit%
Chloride	1948530	63.1	64.8	53.8	10.0	80.0 - 120	93.0	110	mg/L	16.7	20.0
Sulfate	1948530	10.6	11.0	0.510	10.0	80.0 - 120	101	105	mg/L	3.89	20.0

Analytical Set 932626 — EPA 200.8 5.4

CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Manganese, Total	0.0518	0.05	mg/L	104	90.0 - 110	121917958
Manganese, Total	0.0515	0.05	mg/L	103	90.0 - 110	121917969
Manganese, Total	0.051	0.05	mg/L	102	90.0 - 110	121917979

ICV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Manganese, Total	0.0512	0.05	mg/L	102	90.0 - 110	121917952

LDR

Parameter	Reading	Known	Units	Recover%	Limits%	File
Manganese, Total	1.02	1	mg/L	102	90.0 - 110	121917957

MRL Check

Parameter	Reading	Known	Units	Recover%	Limits%	File
Manganese, Total	0.00102	0.001	mg/L	102	25.0 - 175	121917953

* Out RPD is Relative Percent Difference: abs(r1-r2) / mean(r1,r2) * 100%

Recover% is Recovery Percent: result / known * 100%

Blank - Method Blank; CCV - Continuing Calibration Verification; ICV - Initial Calibration Verification; LDR - Linear Dynamic Range Standard; MRL Check - Minimum Reporting Limit Check Std

NELAP-accredited #T104704201-20-17

AQUA-TECH LABORATORIES, INC.

ATL - Bryan Facility:
635 Phil Gramm Blvd.
Bryan, TX 77807
(979) 778-3707
Fax (979) 778-3193

ATL - Austin Facility:
3512 Montopolis Drive
Austin, TX 78744
(512) 301-9559
Fax (512) 301-9552

Chain-of-Custody & Analysis Request

T104704371

SHIPPED TO:
Ana-Lab Corp. (NELAP Cert. T104704201)
2600 Dudley Road
Kilgore, TX 75662
Phone: (903) 984-0551
Fax: (903) 984-5914

C-O-C #

511 - D040818

All analyses must be performed by a TNI approved method certified by the TCEQ. Contact ATL's sample custodian via voice and email if your methods do not meet this criteria.

Analysis Request for: **Sample ID: D040818-01** Sampled: 12/16/20 15:00 Matrix: Drinking Water **Laboratory ID >>** 948832

Chloride - EPA 300.0 SO4 DW - EPA 300.0

CONTAINERS SUPPLIED: (ATL indicates cooler number in parentheses for each container - only required if more than one cooler listed below.)

( ) D040818-01 [E] - [SUB] ANA Cl SO4 0.25LP

See Attached for Tracking # and Temp

Relinquished by: (print & sign)	ATL-Austin	ATL - Bryan	Sampler	Date	Time	Iced / Custody Sealed / Not Chilled
Kelly Kukowski	X		✓	12/17/20	16:11	✓

Carrier & Tracking Number: Lone Star — Cooler 1 aqu1 - z1000juu

Received by: (print & sign)	Received in Lab	Date	Time	Sample Info "X" all that apply
Raychawn Thompson Ana-Lab / Raychawn Thompson	✓	12/18/20	0920	✓ Received Iced, ✓ CTU, ✓ Condition Good, Not Rec'd Iced

Line below documents condition at receipt in lab (shipped to) listed above.

Cooler Temperature (°C)	Temp. Read (TR)	Corrected Temp. (CT)	Thermometer ID
Cooler 1			
N/A	N/A	N/A	

Please email reports to: reporting@aqua-techlabs.com

Please return cooler(s) to: Austin Facility

Abbreviations: DW - Drinking Water; NP - Non-Potable Water; S - Solid; CTU - Custody Transfer Unbroken; StP - Sterile Plastic; LP - Liter Plastic; LG - Liter Glass

Aqua-Tech Comments and Special Instructions

5 DAY TAT

BRET

LSO
It's all in the delivery

Airbill No. Z1000JUU

LSO
1-800-800-8984
www.lso.com

SHIP TO:
RECEIVING
ANA LAB CORP
2600 DUDLEY RD
KILGORE, TX 75662
9039840551

From:
KELLY KUKOWSKI
AQUA TECH LABS
3512 MONTOPOLIS DR
STE A
AUSTIN, TX 78744
5123019559

G GGG **LSO ECONOMY NEXT DAY**
3:00 IN MOST AREAS
LATER IN REMOTE AREAS

PRINT DATE: 12/17/2020 REF 3:
QUICKCODE: WEIGHT: 30.00LBS
REF 1: 1D00V.0000 REF 2:

12/18 0936 RT
Date Time Tech
Temp: 8.2 / 10.2 C
Therm#: 6443 Corr Fact: 0.0 C

Fold on above line and place shipping label in pouch on package. Please be sure the barcodes and a[illegible]read and scanned. Shipping Instructions

1. Fold this page along the horizontal line above.
2. Place this Airbill in the shipping label pouch on the package you are shipping. Please be sure the barcodes and addresses can be read and scanned.
3. To locate a drop box near you, click on **Find A Drop Box** from the home page main menu.
4. To schedule a pickup, click on **Request Pickup**.

WARNING: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your Lone Star Overnight account number.

This label is valid for use for 3 months from the date printed. Use of expired labels may result in delayed billing and / or additional research charges. LIMIT OF

LIABILITY: We are not responsible for claims in excess of $100 for any reason unless you: 1) declare a greater value (not to exceed $25,000); 2) pay an additional fee; 3) and document your actual loss in a timely manner. We will not pay any claim in excess of the actual loss. We are not liable for any special or consequential damages. Additional limitations of liability are contained in our current Service Guide. If you ask us to deliver a package without obtaining a delivery signature, you release us of all liability for claims resulting from such service. NO DELIVERY SIGNATURE WILL BE OBTAINED FOR 8:30 AM DELIVERIES OR RESIDENTIAL DELIVERIES.

AQUA-TECH LABORATORIES, INC.

ATL - Bryan Facility:
635 Phil Gramm Blvd.
Bryan, TX 77807
(979) 778-3707
Fax (979) 778-3193

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Austin, TX 78744
(512) 301-9559
Fax (512) 301-9552

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2600 Dudley Road
Kilgore, TX 75662
Phone: (903) 984-0551
Fax: (903) 984-5914

C-O-C #

944 - D040818

T104704371

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Analysis Request for: **Sample ID: D040818-01** Sampled: 12/16/20 15:00 Matrix: Drinking Water **Laboratory ID >>** 1948832

Mn - EPA 200.8 R5.4

CONTAINERS SUPPLIED: (ATL indicates cooler number in parentheses for each container - only required if more than one cooler listed below.)

(—) ~~D040818-01 [E] - [SUB] ANA Cl SO4 0.25LP~~ NA <MRL

( ) D040818-01 [F] - [SUB] ANA 0.25LP HNO3 *[Split from -01B]*

Turb Scan <1 NTU (0.6)
Add to project 947923

Relinquished by: (print & sign) ☐ ATL-Austin ☒ ATL - Bryan ☐ Sampler Marianne R. Guzman			Date 12/29/20	Time 1630	☐ Iced ☒ Custody Sealed ☒ Not Chilled	**Abbreviations:** DW - Drinking Water; NP - Non-Potable Water; S - Solid; CTU - Custody Transfer Unbroken; StP - Sterile Plastic; LP - Liter Plastic; LG - Liter Glass
Carrier & Tracking Number: Lone Star	Cooler 1: AQU5	2403 E042			Sample Info "X" all that apply	**Aqua-Tech Comments and Special Instructions**
Received by: (print & sign) ☐ Received in Lab Kathy Tarver Ana-Lab			Date 12/30/20	Time 0920	☐ Received Iced ☐ eTU ☐ Condition Good ☐ Not Rec'd Iced	5 DAY TAT Need New 2010 MALs Contact Aqua-Tech Sample Custodian before running sample
Line below documents condition at receipt in lab (shipped to) listed above.			Please email reports to: reporting@aqua-techlabs.com			See Attached for Tracking # and Temp
Cooler Temperature (°C)	Temp. Read (TR)	Corrected Temp. (CT)	Thermometer ID	Please return cooler(s) to: Austin Facility		BRET
Cooler 1						
N/A	N/A	N/A				

LSO
It's all in the delivery.

Airbill No. ZY03E0Y2

LSO
1-800-800-8984
www.lso.com

SHIP TO:
S/R
ANA-LAB
2600
DUDLEY RD
KILGORE, TX 75662
9039840551

From:
NULL
AQUA-TECH
635 PHIL GRAMM BLVD
BRYAN, TX 77807
9797783707

WGGG **LSO GROUND**
END OF BUSINESS DAY DELIVERY

PRINT DATE: 12/28/2020 REF 3:
QUICKCODE: WEIGHT: 12.00LBS
REF 1: 1D00V.0000 REF 2:

12/30 0924 KT
Date Time Tech
Temp: 18.2/18.2 C

Therm#: 6443 Corr Fact: 0.0 C

Fold on above line and place shipping label in pouch on package. Please be sure the barcodes and addresses can be read and scanned. Shipping Instructions

1. Fold this page along the horizontal line above.
2. Place this Airbill in the shipping label pouch on the package you are shipping. Please be sure the barcodes and addresses can be read and scanned.
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T104704371

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C-O-C #

944 - D040818

Page 1 of 1

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Mn - EPA 200.8 R5.4

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( ) D040818-01 [F] - [SUB] ANA 0.25LP HNO3
[Split from -01B]

Turb Scan <1 NTU (0.6)
Add to project 947923

Relinquished by: (print & sign) ☐ ATL-Austin ☒ ATL - Bryan ☐ Sampler Marianne R. Guzman				Date 12/29/20	Time 1630	☐ Iced ☒ Custody Sealed ☒ Not Chilled
Carrier & Tracking Number: Lone Star			Cooler 1: AQU5 ZY03 E0YZ			Sample Info "X" all that apply
Received by: (print & sign) ☐ Received in Lab Kathy Tarver Ana-Lab				Date 12/30/20	Time 0920	☐ Received Iced ☐ eTU ☐ Condition Good ☐ Not Rec'd Iced
Line below documents condition at receipt in lab (shipped to) listed above.				Please email reports to: reporting@aqua-techlabs.com		
Cooler Temperature (°C)	Temp. Read (TR)	Corrected Temp. (CT)	Thermometer ID	Please return cooler(s) to: Austin Facility		
Cooler 1						
N/A	N/A	N/A				

Abbreviations: DW - Drinking Water; NP - Non-Potable Water; S - Solid; CTU - Custody Transfer Unbroken; StP - Sterile Plastic; LP - Liter Plastic; LG - Liter Glass

Aqua-Tech Comments and Special Instructions

5 DAY TAT
Need New 2010 MALs
Contact Aqua-Tech Sample Custodian before running sample

See Attached for
Tracking # and Temp

BRET

AQUA-TECH LABORATORIES, INC.

ATL - Bryan Facility:
835 Phil Gramm Blvd.
Bryan, TX 77807
(979) 778-3707
Fax (979) 778-3183

ATL - Austin Facility:
3512 Montopolis Drive
Austin, TX 78744
(512) 301-9559
Fax (512) 301-9552

Chain-of-Custody & Analysis Request

SHIPPED TO:
Ana-Lab Corp. (NELAP Cert. T104704201)
2600 Dudley Road
Kilgore, TX 75662
Phone: (903) 984-0551
Fax: (903) 984-5914

C-O-C #
944 - D040818

T104704371

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Analysis Request for: **Sample ID: D040818-01** Sampled: 12/16/20 15:00 Matrix: Drinking Water **Laboratory ID >>** 1948832

Mn - EPA 200.8 R5.4

CONTAINERS SUPPLIED: (ATL indicates cooler number in parentheses for each container - only required if more than one cooler listed below.)

(—) ~~D040818-01 [E] - [SUB] ANA Cl SO4 0.25LP~~ NA <MMD?

( ) D040818-01 [F] - [SUB] ANA 0.25LP HNO3
[Split from -01B]

Turb Scan <1 NTU (0.6)
Add to project 947923

Relinquished by: (print & sign) ☐ ATL-Austin ☒ ATL-Bryan ☐ Sampler Marianne R. Guzman			Date 12/29/20	Time 1630	☐ Iced ☒ Custody Sealed ☒ Not Chilled	**Abbreviations:** DW - Drinking Water; NP - Non-Potable Water; S - Solid; CTU - Custody Transfer Unbroken; STP - Sterile Plastic; LP - Liter Plastic; LG - Liter Glass
Carrier & Tracking Number: Lone Star	Cooler 1: AQU5	2Y03 E0Y2			Sample Info "X" all that apply	**Aqua-Tech Comments and Special Instructions**
Received by: (print & sign) ☐ Received in Lab Kathy Tarver Ana-Lab			Date 12/30/20	Time 0920	☐ Received Iced ☐ eTU ☐ Condition Good ☐ Not Rec'd Iced	5 DAY TAT Need New 2010 MALs Contact Aqua-Tech Sample Custodian before running sample

Line below documents condition at receipt in lab (shipped to) listed above.

Cooler Temperature (°C)	Temp. Read (TR)	Corrected Temp. (CT)	Thermometer ID
Cooler 1			
N/A	N/A	N/A	

Please email reports to: reporting@aqua-techlabs.com

Please return cooler(s) to: Austin Facility

See Attached for Tracking # and Temp

BRET

Water Quality

Well No. 4

Email information for report date:
12/23/20 16:21

D040965

Apex Drilling

Attn: Michael Becker
apexdrilling.becker@yahoo.com

PO Box 867
Marble Falls, TX 78654

******Attention Austin Laboratory Clients******
Aqua-Tech is excited to announce that our Austin Laboratory is expanding and moving to a new location!

We will close our current Austin Laboratory location on Friday, October 23, 2020 at 12:00 p.m. to begin the moving process and will re-open at our new location on Monday, October 26 at 8:00 a.m.

Austin Laboratory address as of October 26, 2020:
3512 Montopolis Drive
Austin, TX 78744

Thank you for your business,
June M. Brien
Executive Technical Director

CORPORATE OFFICE
635 Phil Gramm Boulevard
Bryan, TX 77807
Phone: (979) 778-3707
Fax: (979) 778-3193

AQUA-TECH LABORATORIES, INC.

AUSTIN OFFICE
3512 Montopolis Dr. Suite A
Austin, TX 78744
Phone: (512) 301-9559
Fax: (512) 301-9552

The analyses summarized in this report were performed by Aqua-Tech Laboratories, Inc. unless otherwise noted. Aqua-Tech Laboratories, Inc. holds accreditation from the State of Texas in accordance with TNI and/or through the TCEQ Drinking Water Commercial Laboratory Approval Program.

The following abbreviations indicate certification status:

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ANR	Accreditation not required by the State of Texas.
DWP	Accreditation through the TCEQ Drinking Water Commercial Laboratory Approval Program.
INF	Aqua-Tech Laboratories, Inc. is not accredited for this parameter. It is reported on an informational basis only.

Subcontracted data summarized in this report is indicated by "Sub" in the Lab column.

NELAP ACCREDITED TNI LABORATORY

TCEQ DW Lab ID TX 239

General Definitions:

NR	Not Reported.
RPD	Relative Percent Difference.
% R	Percent Recovery.
dry	Results with the "dry" unit designation are reported on a "dry weight" basis.
SQL	The Sample Quantitation Limit is the value below which the parameter cannot reliably be detected. The SQL includes all sample preparations, dilutions and / or concentrations.
Adj MDL	The Adjusted Method Detection Limit is the MDL value adjusted for any sample dilutions or concentrations .
MDL	The Method Detection Limit is the lowest theoretical value that is statistically different from zero for a specific method, taking into account all preparation steps and instrument settings.

All samples are reported on an "as received" basis unless the designation "dry" is added to the reported unit.

Copies of Aqua-Tech Laboratories, Inc. procedures and individual sampling plans are available upon request. Note that samples are collected by Aqua-Tech Laboratories, Inc. personnel unless otherwise noted in the "Sample Collected" field of this report as "Client" or "CLT".

Samples included in this report were received in acceptable condition according to Aqua-Tech Laboratories, Inc. procedures and 40 CFR, Chapter I, Subchapter D, Part 136.3, TABLE II. - *Required containers, preservation techniques, and holding times*, unless otherwise noted in this report.

Record Retention:

All reports, raw data, and associated quality control data are kept on file for 10 years before being destroyed. Any client that would like copies of records must contact Aqua-Tech Laboratories, Inc. no later than six months prior to the scheduled disposal. An administrative fee for retrieval and distribution will apply.

This report was approved by:

June M. Brien, Technical Director

corp@aqua-techlabs.com www.aqua-techlabs.com

CORPORATE OFFICE
635 Phil Gramm Boulevard
Bryan, TX 77807
Phone: (979) 778-3707
Fax: (979) 778-3193

AQUA-TECH LABORATORIES, INC.

AUSTIN OFFICE
3512 Montopolis Dr. Suite A
Austin, TX 78744
Phone: (512) 301-9559
Fax: (512) 301-9552

Analytical Report

Apex Drilling

Report Printed: **12/23/20** **16:21**

D040965

LEGACY HILLS NO4

Collected: 12/21/20 11:00 by CLIENT
Received: 12/21/20 14:00 by Suzanne Rudd

Type: Grab
Matrix: Drinking Water
C-O-C #: 40965-6

Lab ID# D040965-01

	Result	Units	Notes	MDL	Adj MDL	SQL	Lab	Analyzed	Method	Batch	
Microbiological Analyses											
Total Coliforms	**Absent**	N/A		N/A	**N/A**	N/A	*Austin*	12/21/20 16:25 KT	SM9223 B 2004	M122739	NEL
Escherichia coli (E.coli)	**Absent**	N/A		N/A	**N/A**	N/A	*Austin*	12/21/20 16:25 KT	SM9223 B 2004	M122739	NEL

Microbiological Analyses - Quality Control

	Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	Log10 Comparison Range	Log10 Comparison Control Limit	Batch	
Escherichia coli (E.coli) - SM9223 B 2004														*Austin*
Blank	Absent	N/A		N/A	N/A	12/21/20 16:25 KT							M122739	
Total Coliforms - SM9223 B 2004														*Austin*
Blank	Absent	N/A		N/A	N/A	12/21/20 16:25 KT							M122739	

Sample Preparation Summary

Sample	Method	Prepared	Lab	Bottle	Initial	Units	Final	Units	External Dilution Factor	Batch
D040965-01										
Escherichia coli (E.coli)	SM9223 B 2004	12/21/20 16:17 KT	Austin	A	100	mL	100	mL	1	M122739
Total Coliforms	SM9223 B 2004	12/21/20 16:17 KT	Austin	A	100	mL	100	mL	1	M122739

AQUA-TECH LABORATORIES, INC.

Chain-of-Custody and Analysis Request

Aqua-Tech Laboratories, Inc.

T104704371
TX239

Austin	Bryan
3512 Montopolis Dr.	635 Phil Gramm Blvd.
Austin, TX 78744	Bryan, TX 77807
512.301.9559	979.778.3707

Test results meet all accreditation/certification requirements unless stated otherwise.

Work Order / C-O-C: ~~D0~~409656 NA(K)
Page 1 of 2
V-0023 R03

Client /Project:

Contact Info
- Name: APEX DRILLING
- Address
- City / State / ZIP
- Phone / Email

Definitions
- DW - Drinking Water
- NP - Non-Potable Water
- S - Solid
- CM - Custody Maintained
- CTU - Custody Transfer Unbroken
- CT - Corrected Temperature
- SUB - Subcontracted Analysis

(+) Container Type
- P - Plastic
- G - Glass
- T - Teflon©

By relinquishing the samples listed below to Aqua-Tech, the client agrees to the following terms.
Samples will be analyzed by a method that is within Aqua-Tech Laboratories' NELAC fields of accreditation. Analytes requiring a certified method that is not within Aqua-Tech's fields of accreditation will be subcontracted to a NELAC certified lab that is certified for that method. Clients will be notified of the subcontract lab's details. Other analytes not requiring accreditation will be analyzed by a compendial method. If a specific method is required, the client will note the method in the "Analysis Requested" column. The client approves all method modifications documented by Aqua-Tech or the subcontract lab. A current list of Aqua-Tech's NELAC fields of accreditation and other methods are available on request.

Sample Custody

	Signature	Type	Date / Time	Status
Relinquished by (print & sign)	[signature]	☑ Sampler ☐ Client ☐ ATL Field	Date 12·21·20 Time 14:00	☐ Iced / Refrig ☐ Custody Sealed
Received by (print & sign)		☐ Client ☐ ATL Field	Date Time	☐ Iced / Refrig ☐ CM / CTU
Relinquished by (print & sign)	NA(K) 12-21-20	☐ Client ☐ ATL Field	Date Time	☐ Iced / Refrig ☐ CM / CTU
Received by (print & sign)		☐ Client ☐ ATL Field	Date Time	☐ Iced / Refrig ☐ CM / CTU
Relinquished by (print & sign)		☐ Client ☐ ATL Field	Date Time	☐ Iced / Refrig ☐ CM / CTU / sealed
Received by (print & sign)	Suzanne Rudd / Suzanne Rudd	☒ Lab	Date 12·21·20 Time 1400	☒ Cond Good ☒ Iced / Refrig ☒ CM / CTU

Client Comments:

* Preservatives		Receipt in Lab		
1	< 6 °C (unfrozen)	Cooler ID :	CUT	
2	H2SO4	Temperature (°C) : read / CT	12.6 / 12.6 CT	NA(K)
3	HCl			
4	HNO3	Preservation Correct ?	YES (NO)	YES NO
5	Na2S2O3 0765068	Post Preservatives ?	(YES) NO	YES NO
6	NaOH	Thermometer ID :	0764480	
7		pH Paper ID :	0755987	

Lab Comments

Field Sample ID (record field data for each sample in space below)	Start Date	Start Time	End Date	End Time	Composite Type	Sample Matrix	Bottle Count	Volume (Size in L)	Type (+)	Preserv-ative(s) *	Cooler ID	pH Check	SUB	WORK ORDER (LAB USE ONLY BELOW (initials KK) — See Below)
Legacy Hills #4	12·21·20	11:00	—		Grab	DW	1	0.15	SP	1,5	CUT	—	—	Sample D040965-01 A
Analysis Requested & Comments: P/A 30CT														
Legacy Hills #4	12·21·20	11:00	—		Grab	DW	1	1L	P	1	CUT	—	Auto	Sample D0409656-01 AE using container ID SR 12-22-20
Analysis Requested & Comments: SEE ATTACHED														
														Sample
Analysis Requested & Comments:														
														Sample
Analysis Requested & Comments:														
														Sample
Analysis Requested & Comments:														

NA(K) 12-21-20

DD40765-b
pg 2 of 2

No. 8 No. 7

Well numbers correspond to Attachment 1

The water quality from each well will need to be assessed
y Aquifer to provide adequate drinking water. Upon com
sample will need to be collected and analyzed for the follov

- Chloride
- Conductivity
- Fluoride
- Iron
- Nitrate (as nitrogen)
- Manganese
- pH
- Sulfate
- Total hardness
- Total Dissolved Solids (TDS)
- Presence/absence of total coliform bacteria

have any questions please feel free to call me at 512-773-3

Email information for report date:
1/18/21 12:40

D040966

Apex Drilling

Attn: Michael Becker
apexdrilling.becker@yahoo.com

PO Box 867
Marble Falls, TX 78654

******Attention Austin Laboratory Clients******
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We will close our current Austin Laboratory location on Friday, October 23, 2020 at 12:00 p.m. to begin the moving process and will re-open at our new location on Monday, October 26 at 8:00 a.m.

Austin Laboratory address as of October 26, 2020:
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Austin, TX 78744

Thank you for your business,
June M. Brien
Executive Technical Director

CORPORATE OFFICE
635 Phil Gramm Boulevard
Bryan, TX 77807
Phone: (979) 778-3707
Fax: (979) 778-3193

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TCEQ DW Lab ID TX 239

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This report was approved by:

June M. Brien, Technical Director

corp@aqua-techlabs.com www.aqua-techlabs.com

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AQUA-TECH LABORATORIES, INC.

AUSTIN OFFICE
3512 Montopolis Dr. Suite A
Austin, TX 78744
Phone: (512) 301-9559
Fax: (512) 301-9552

Analytical Report

Apex Drilling

Report Printed: **1/18/21** **12:40**

D040966

LEGACY HILLS #4

Collected: 12/21/20 11:00 by CLIENT
Received: 12/21/20 14:00 by Suzanne Rudd

Type: Grab
Matrix: Drinking Water
C-O-C #: 40965-6

Lab ID# D040966-01

	Result	Units	Notes	MDL	Adj MDL	SQL	Lab	Analyzed	Method	Batch	
General Chemistry											
Total Dissolved Solids	**2590**	mg/L	C-02	25.0	100	100	*Bryan*	12/23/20 19:13 MRH	SM2540 C 2011	M122866	NEL
Nitrate as N (NO3N)	**<0.0200**	mg/L			0.0200	0.0200	*Calc*	12/30/20 11:19 KT	SM4500-NO3-F 2011	[CALC]	NEL
Nitrite as N	**<0.01**	mg/L		0.002	0.002	0.01	*Austin*	12/22/20 09:09 KT	SM4500 NO2- B 2011	M122765	NEL
Nitrate/Nitrite as N	**<0.02**	mg/L		0.02	0.02	0.02	*Bryan*	12/30/20 11:19 EMT	SM4500-NO3-F 2011	M123061	ANR
Total Hardness (EDTA) as CaCO3	**1730**	mg/L		1.00	10.0	10.0	*Bryan*	01/04/21 18:30 MRH	SM2340 C 2011	M123189	NEL
Fluoride	**2.21**	mg/L		0.04	0.04	0.10	*Bryan*	12/28/20 19:00 MRH	SM4500-F C 2011	M122948	NEL
pH, Lab	**7.3**	S.U.	Hold-03		N/A	N/A	*Austin*	12/23/20 11:19 KT	SM4500-H+ B 2011	M122863	DWP
Temperature @ pH Analysis	**23.2**	Deg. C			N/A	N/A	*Austin*	12/23/20 11:19 KT	SM4500-H+ B 2011	M122863	DWP
Specific Conductance (adjusted to 25.0°C)	**3580**	uS/cm		2.00	6.67	6.67	*Bryan*	01/05/21 14:30 CJO	SM2510 B 2011	M123224	DWP,NEL
Metals (Total)											
Iron	**0.249**	mg/L		0.002	0.002	0.010	*Bryan*	01/07/21 17:13 PNS	EPA 200.7 R4.4	M123187	NEL

Please see the attached subcontract report for subcontracted data.

Explanation of Notes

C-02	Result confirmed by re-analysis.
Hold-03	This parameter was outside of EPA holding at the time the sample was received in the laboratory.
J	Analyte detected below the SQL but above the MDL.

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Analytical Report

Apex Drilling

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D040966

General Chemistry - Quality Control

	Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch	
Fluoride - SM4500-F C 2011														*Bryan*
Initial Cal Check	0.43	mg/L				12/28/20 19:00 MRH	0.428		100	90 - 110			2012295	
Blank	<0.10	mg/L		0.04	0.10	12/28/20 19:00 MRH							M122948	
LCS	0.83	mg/L		0.04	0.10	12/28/20 19:00 MRH	0.799		104	90 - 110			M122948	
LCS Dup	0.85	mg/L		0.04	0.10	12/28/20 19:00 MRH	0.799		106	90 - 110	2.38	6.23	M122948	
Matrix Spike	0.99	mg/L		0.04	0.10	12/28/20 19:00 MRH	0.799	0.16	104	78.1 - 125			M122948	
Matrix Spike Dup	1.00	mg/L		0.04	0.10	12/28/20 19:00 MRH	0.799	0.16	105	78.1 - 125	0.957	5.72	M122948	
MRL Check	0.10	mg/L		0.04	0.10	12/28/20 19:00 MRH	0.0999		98.8	73.4 - 118			M122948	
Nitrate/Nitrite as N - SM4500-NO3-F 2011														*Bryan*
Initial Cal Check	1.37	mg/L				12/30/20 11:19 EMT	1.40		98.2	90 - 110			2012322	
Low Cal Check	0.02	mg/L				12/30/20 11:19 EMT	0.0200		120	70 - 130			2012322	
Blank	<0.02	mg/L		0.02	0.02	12/30/20 11:19 EMT							M123061	
LCS	0.50	mg/L		0.02	0.02	12/30/20 11:19 EMT	0.500		99.2	91.3 - 109			M123061	
LCS Dup	0.50	mg/L		0.02	0.02	12/30/20 11:19 EMT	0.500		101	91.3 - 109	1.70	6.8	M123061	
Matrix Spike	0.52	mg/L		0.02	0.02	12/30/20 11:19 EMT	0.500	0.02	99.0	94.7 - 117			M123061	
Matrix Spike Dup	0.52	mg/L		0.02	0.02	12/30/20 11:19 EMT	0.500	0.02	99.7	94.7 - 117	0.700	8.65	M123061	
MRL Check	0.02	mg/L		0.02	0.02	12/30/20 11:19 EMT	0.0200		120	70 - 130			M123061	
Nitrite as N - SM4500 NO2- B 2011														*Austin*
Blank	<0.01	mg/L		0.002	0.01	12/22/20 09:09 KT							M122765	
LCS	0.08	mg/L		0.002	0.01	12/22/20 09:09 KT	0.0800		102	90 - 110			M122765	
LCS Dup	0.08	mg/L		0.002	0.01	12/22/20 09:09 KT	0.0800		102	90 - 110	0.431	8.12	M122765	
Matrix Spike	0.08	mg/L		0.002	0.01	12/22/20 09:09 KT	0.0800	<0.01	95.8	70.6 - 117			M122765	
Matrix Spike Dup	0.08	mg/L		0.002	0.01	12/22/20 09:09 KT	0.0800	<0.01	94.9	70.6 - 117	0.923	8.18	M122765	
MRL Check	0.01	mg/L		0.002	0.01	12/22/20 09:09 KT	0.0100		101	70 - 130			M122765	
pH, Lab - SM4500-H+ B 2011														*Austin*
Duplicate	7.3	Std Units				12/23/20 11:19 KT		7.3			0.274	1.18	M122863	
Reference	6.9	Std Units				12/23/20 11:19 KT	6.86		100	95 - 105			M122863	
Reference	9.2	Std Units				12/23/20 11:19 KT	9.18		99.7	95 - 105			M122863	
Reference	6.9	Std Units				12/23/20 11:19 KT	6.86		101	95 - 105			M122863	
Reference	9.2	Std Units				12/23/20 11:19 KT	9.18		100	95 - 105			M122863	

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Analytical Report

Apex Drilling

Report Printed: 1/18/21 12:40

D040966

General Chemistry - Quality Control

	Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch	
Specific Conductance (adjusted to 25.0°C) - SM2510 B 2011														*Bryan*
Initial Cal Check	513	uS/cm				01/05/21 14:30 CJO	484		106	90 - 110			2101024	
Blank	<2.00	uS/cm		2.00	2.00	01/05/21 14:30 CJO							M123224	
Duplicate	829	uS/cm		2.00	2.00	01/05/21 14:30 CJO		824			0.605	2	M123224	
LCS	1360	uS/cm		2.00	2.00	01/05/21 14:30 CJO	1410		96.1	90 - 110			M123224	
Total Dissolved Solids - SM2540 C 2011														*Bryan*
Blank	<25.0	mg/L		25.0	25.0	12/23/20 19:13 MRH							M122866	
Duplicate	2600	mg/L		100	100	12/23/20 19:13 MRH		2590			0.154	9.13	M122866	
Reference	420	mg/L		100	100	12/23/20 19:13 MRH	500		84.0	81 - 121			M122866	
Total Hardness (EDTA) as CaCO3 - SM2340 C 2011														*Bryan*
Initial Cal Check	53.5	mg/L				01/04/21 18:30 MRH	54.4		98.4	85 - 115			2101013	
Blank	<1.00	mg/L		1.00	1.00	01/04/21 18:30 MRH							M123189	
Duplicate	11.1	mg/L		1.00	1.00	01/04/21 18:30 MRH		11.1			0.00	9.52	M123189	
LCS	102	mg/L		1.00	1.00	01/04/21 18:30 MRH	100		102	90 - 110			M123189	
LCS Dup	100	mg/L		1.00	1.00	01/04/21 18:30 MRH	100		100	90 - 110	2.00	6.47	M123189	
Matrix Spike	110	mg/L		1.00	1.00	01/04/21 18:30 MRH	100	11.1	99.0	87.6 - 111			M123189	
MRL Check	4.04	mg/L		1.00	1.00	01/04/21 18:30 MRH	4.00		101	70 - 130			M123189	

Metals (Total) - Quality Control

	Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch	
Iron - EPA 200.7 R4.4														*Bryan*
Blank	<0.010	mg/L		0.002	0.010	01/07/21 16:36 PNS							M123187	
LCS	0.946	mg/L		0.002	0.010	01/07/21 16:39 PNS	1.00		94.6	84.5 - 115.4			M123187	
LCS Dup	0.955	mg/L		0.002	0.010	01/07/21 16:42 PNS	1.00		95.5	84.5 - 115.4	1.04	20	M123187	
Duplicate	<0.010	mg/L	*J (0.008)*	0.002	0.010	01/07/21 16:46 PNS		<0.010			2.56	20	M123187	
Matrix Spike	0.968	mg/L		0.002	0.010	01/07/21 16:49 PNS	1.00	0.008	96.0	69.5 - 130.4			M123187	

Preparation Procedures - Quality Control

	Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch	
Turbidity - SM2130 B 2011														*Bryan*

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Analytical Report

Apex Drilling

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D040966

Sample Preparation Summary

Sample	Method	Prepared	Lab	Bottle	Initial	Units	Final	Units	External Dilution Factor	Batch
D040966-01										
Fluoride	SM4500-F C 2011	12/28/20 19:00 MRH	Bryan	A	25.0	mL	25.0	mL	1	M122948
Iron	EPA 200.7 R4.4	1/7/21 12:30 BLC	Bryan	C	10.0	mL	10.2	mL	1	M123187
Nitrate/Nitrite as N	SM4500-NO3-F 2011	12/30/20 9:21 EMT	Bryan	D	10.0	mL	10.0	mL	1	M123061
Nitrite as N	SM4500 NO2- B 2011	12/22/20 9:09 KT	Austin	E	25.0	mL	25.0	mL	1	M122765
pH, Lab	SM4500-H+ B 2011	12/23/20 11:19 KT	Austin	B	50.0	mL	50.0	mL	1	M122863
Sample Acidified to pH<2 in Lab	N/A	12/22/20 4:51 SR	Bryan	C	100	mL	100	mL	1	M122743
Specific Conductance (adjusted to 25.0°C)	SM2510 B 2011	1/5/21 14:30 CJO	Bryan	A	15.0	mL	50.0	mL	1	M123224
Temperature @ pH Analysis	SM4500-H+ B 2011	12/23/20 11:19 KT	Austin	B	50.0	mL	50.0	mL	1	M122863
Total Dissolved Solids	SM2540 C 2011	12/23/20 19:13 MRH	Bryan	A	25.0	mL	100	mL	1	M122866
Total Hardness (EDTA) as CaCO3	SM2340 C 2011	1/4/21 18:30 MRH	Bryan	C	5.00	mL	50.0	mL	1	M123189
Turbidity	SM2130 B 2011	1/4/21 13:30 BLC	Bryan	C	10.0	mL	10.0	mL	1	M123183
D040966-01RE1										
Sample Acidified to pH<2 in Lab	N/A	12/22/20 4:51 SR	Bryan	D	1.00	mL	1.00	mL	1	M122742

Chain-of-Custody and Analysis Request

AQUA-TECH LABORATORIES, INC.

Aqua-Tech Laboratories, Inc.

Austin	Bryan
3512 Montopolis Dr.	635 Phil Gramm Blvd.
Austin, TX 78744	Bryan, TX 77807
512.301.9559	979.778.3707

T104704371
TX239

Test results meet all accreditation/certification requirements unless stated otherwise.

Work Order / C-O-C: ~~D0~~ 409656 NA12/21
Page 1 of 2
V-0023 R03

Client /Project:

Contact Info
Name: APEX DRILLING
Address
City State ZIP
Phone / Email

Definitions
DW - Drinking Water
NP - Non-Potable Water
S - Solid
CM - Custody Maintained
CTU - Custody Transfer Unbroken
CT - Corrected Temperature
SUB - Subcontracted Analysis

(+) Container Type
P - Plastic
G - Glass
T - Teflon©

By relinquishing the samples listed below to Aqua-Tech, the client agrees to the following terms.
Samples will be analyzed by a method that is within Aqua-Tech Laboratories' NELAC fields of accreditation. Analytes requiring a certified method that is not within Aqua-Tech's fields of accreditation will be subcontracted to a NELAC certified lab that is certified for that method. Clients will be notified of the subcontract lab's details. Other analytes not requiring accreditation will be analyzed by a compendial method. If a specific method is required, the client will note the method in the "Analysis Requested" column. The client approves all method modifications documented by Aqua-Tech or the subcontract lab. A current list of Aqua-Tech's NELAC fields of accreditation and other methods are available on request.

Sample Custody

		Checkboxes	Date / Time	Conditions
Relinquished by (print & sign)	(signature)	[x] Sampler / [ ] Client / [ ] ATL Field	Date 12·21·20 Time 14:00	[ ] Iced / Refrig [ ] Custody Sealed
Received by (print & sign)		[ ] Client / [ ] ATL Field	Date Time	[ ] Iced / Refrig [ ] CM / CTU
Relinquished by (print & sign)	NA12/21	[ ] Client / [ ] ATL Field	Date Time	[ ] Iced / Refrig [ ] CM / CTU
Received by (print & sign)		[ ] Client / [ ] ATL Field	Date Time	[ ] Iced / Refrig [ ] CM / CTU
Relinquished by (print & sign)		[ ] Client / [ ] ATL Field	Date Time	[ ] Iced / Refrig [ ] CM / CTU / sealed
Received by (print & sign)	Suzanne Rudd (signature)	[x] Lab	Date 12·21·20 Time 1400	[x] Cond Good [x] Iced / Refrig [x] CM / CTU

Client Comments:

* Preservatives	
1	< 6 °C (unfrozen)
2	H2SO4
3	HCl
4	HNO3
5	Na2S2O3 0765068
6	NaOH
7	

Receipt in Lab		
Cooler ID :	CUT	
Temperature (°C) : read / CT	12.6 / 12.6CT	NA12/21
Preservation Correct ?	YES (NO)	YES NO
Post Preservatives ?	(YES) NO	YES NO
Thermometer ID :	0764480	
pH Paper ID :	0755987	

Lab Comments

LAB USE ONLY BELOW (initials KK)

Field Sample ID (record field data for each sample in space below)	Start Date	Start Time	End Date	End Time	Composite Type	Sample Matrix	Bottle Count	Volume (Size in L)	Type (+)	Preserv-ative(s) *	Cooler ID	pH Check	SUB	WORK ORDER (See Below)
Legacy Hills #4	12·21·20	11:00	—		Grab	DW	1	0.15	SP	1,5	CUT	—	—	Sample D040965-01 A
Analysis Requested & Comments: P/A 30LT														
Legacy Hills #4	12·21·20	11:00	—		Grab	DW	1	1L	P	1	CUT	—	Awb	Sample D040966-01AE using container ID SR 12-22-20
Analysis Requested & Comments: SEE ATTACHED														
														Sample
Analysis Requested & Comments:														
														Sample
Analysis Requested & Comments: NA12/21														
														Sample
Analysis Requested & Comments:														

DD040765-b
pg 2 of 2

No. 8 No. 7

Well numbers correspond to Attachment 1

The water quality from each well will need to be assessed
y Aquifer to provide adequate drinking water. Upon com
sample will need to be collected and analyzed for the follov

- Chloride
- Conductivity
- Fluoride
- Iron
- Nitrate (as nitrogen)
- Manganese
- pH
- Sulfate
- Total hardness
- Total Dissolved Solids (TDS)
- Presence/absence of total coliform bacteria

have any questions please feel free to call me at 512-773-3

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P.O. Box 9000 Kilgore, Texas 75663
*Office: 903-984-0551 * Fax: 903-984-5914*

ANA LAB
Testing the Limits of Science and Service

Project
948948

AQU1-G

Aqua-Tech Laboratories
John Brien
635 Phil Gramm Blvd.
Bryan, TX 77807-9104

Printed 01/07/2021 15:33

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This report consists of this Table of Contents and the following pages:

NELAP-accredited #T104704201-20-17

Ana-Lab Corp.
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AQU1-G

Aqua-Tech Laboratories
John Brien
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Bryan, TX 77807-9104

Project
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Printed: 01/07/2021

948410

Results

Sample Results

1950858 **D040966-01** Received: 12/23/2020

Drinking Water Collected by: Client Aqua-Tech Laboratori PO:
Taken: 12/21/2020 11:00:00

Supplement to Test Report 1949829

EPA 200.8 5.4 Prepared: 932626 01/06/2021 10:54:00 Analyzed 932626 01/06/2021 10:54:00 SAM

	Parameter	Results	Units	RL	Flags	CAS	Bottle
NELAC	**Manganese, Total**	**0.00548**	**mg/L**	0.001		**7439-96-5**	02

EPA 300.0 2.1 Prepared: 931521 12/23/2020 16:02:00 Analyzed 931521 12/23/2020 16:02:00 ATN

	Parameter	Results	Units	RL	Flags	CAS	Bottle
NELAC	**Chloride**	**42.2**	**mg/L**	3.00			01

EPA 300.0 2.1 Prepared: 931693 12/28/2020 12:51:00 Analyzed 931693 12/28/2020 12:51:00 ATN

	Parameter	Results	Units	RL	Flags	CAS	Bottle
NELAC	**Sulfate**	**1810**	**mg/L**	10.0			01

Sample Preparation

1950858 **D040966-01** Received: 12/23/2020

12/21/2020

Prepared: 12/28/2020 12:04:56 Calculated 12/28/2020 12:04:56 CAL

z	**Environmental Fee (per Project)**	**Verified**

Cooler Return Prepared: 12/29/2020 15:00:00 Analyzed 12/29/2020 15:00:00 MG3

z	**Return Cooler/No bottles Require**	**Returned**

NELAP-accredited #T104704201-20-17

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AQU1-G

Aqua-Tech Laboratories
John Brien
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Project
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Printed: 01/07/2021

Qualifiers:

We report results on an As Received or wet basis unless marked Dry Weight. Unless otherwise noted, testing was performed at Ana-labs corporate laboratory that holds the following Federal and State certificates: EPA Lab Number TX00063, US Department of Agriculture Soil Import Permit P330-17-00117, Texas Commission on Environmental Quality Commercial Drinking Water Lab Approval (Lab ID: TX219), Texas Commission on Environmental Quality NELAP T104704201-20-17, Louisiana Department of Environmental Quality Laboratory Certification (NELAP, LELAP) #02008, Louisiana Department of Health and Hospitals Drinking Water (NELAP) Certificate No LA026, Oklahoma Department of Environmental Quality TNI Laboratory Accreditation Program Certificate No. 2018-126, Arkansas Department of Environmental Quality Certification #18-068-0. The Accredited column designates accreditation by N -- NELAC, or z -- not covered under NELAC scope of accreditation.
These analytical results relate to the sample tested. This report may NOT be reproduced EXCEPT in FULL without written approval of Ana-Lab Corp. Unless otherwise specified, these test results meet the requirements of NELAC.
RL is the Reporting Limit (sample specific quantitation limit) and is at or above the Method Detection Limit (MDL). CAS is Chemical Abstract Service number. RL is our Reporting Limit, or Minimum Quantitation Level. The RL takes into account the Instrument Detection Limit (IDL), Method Detection Limit (MDL), and Practical Quantitation Limit (PQL), and any dilutions and/or concentrations performed during sample preparation (EQL). Our analytical result must be above this RL before we report a value in the 'Results' column of our report (without a 'J' flag). Otherwise, we report ND (Not Detected above RL), because the result is "<" (less than) the number in the RL column. MAL is Minimum Analytical Level and is typically from regulatory agencies. Unless we report a result in the result column, or interferences prevent it, we work to have our RL at or below the MAL.

Trey Peery, MA, Project Manager

NELAP-accredited #T104704201-20-17

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RESULTS

Project
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AQU1

Printed 01/07/2021

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Aqua-Tech Laboratories
John Brien
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Bryan, TX 77807-9104

CAS	Parameter	Results	MDL	SDL	MQL	MQLAdj	Flag	Units	Target	Bottle	Dilute
Drinking Water	**Ion Chromatography**										**EPA 300.0 2.1**
1950858	D040966-01										
		Collection:	12/21/2020	11:00:00	Client				*Received:*	12/23/2020	
Supplement to Test Report 1949829											
	Prepared: 931521			*Analyzed:*	931521			12/23/20	16:02:00		
	Chloride	**42.2**	0.0211	0.211	0.300	3.00		**mg/L**	250 Secondary Standard	01	10.00
	Prepared: 931693			*Analyzed:*	931693			12/28/20	12:51:00		
	Sulfate	**1810**	0.0871	8.71	0.100	10.0		**mg/L**	250 Secondary Standard	01	100.00

MDL is Method Detection Limit (40 CFR 136 Appendix B)
SDL is Sample Detection Limit and is the adjusted MDL (sample specific dilutions, dry weight)
MQL is the Method Quantitation Limit and corresponds to a low standard
MQLADJ is the Adjusted Method Quantitation Limit (dilutions, dry weight)

NELAP-accredited #T104704201-20-17

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RESULTS

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Bryan, TX 77807-9104

Qualifiers:

We report results on an As Received or wet basis unless marked Dry Weight. Unless otherwise noted, testing was performed at Ana-labs corporate laboratory that holds the following Federal and State certificates: EPA Lab Number TX00063, US Department of Agriculture Soil Import Permit P330-17-00117, Texas Commission on Environmental Quality Commercial Drinking Water Lab Approval (Lab ID: TX219), Texas Commission on Environmental Quality NELAP T104704201-20-17, Louisiana Department of Environmental Quality Laboratory Certification (NELAP, LELAP) #02008, Louisiana Department of Health and Hospitals Drinking Water (NELAP) Certificate No LA026, Oklahoma Department of Environmental Quality TNI Laboratory Accreditation Program Certificate No. 2018-126, Arkansas Department of Environmental Quality Certification #18-068-0. The Accredited column designates accreditation by N -- NELAC, or z -- not covered under NELAC scope of accreditation.
These analytical results relate to the sample tested. This report may NOT be reproduced EXCEPT in FULL without written approval of Ana-Lab Corp. Unless otherwise specified, these test results meet the requirements of NELAC.

Trey Peery, MA, Project Manager

NELAP-accredited #T104704201-20-17

2600 Dudley Rd. Kilgore, Texas 75662
P.O. Box 9000 Kilgore, Texas 75663
Office: 903-984-0551 * Fax: 903-984-5914

ANA LAB
Testing the Limits of Science and Service

RESULTS

Project
948948

Printed 01/07/2021

948410

AQU1

Aqua-Tech Laboratories
John Brien
635 Phil Gramm Blvd.
Bryan, TX 77807-9104

CAS	Parameter	Results	MDL	SDL	MQL	MQLAdj	Flag	Units	Target	Bottle	Dilute
Drinking Water	**Metals**										**EPA 200.8 5.4**
1950858	**D040966-01**										
		Collection:	12/21/2020		11:00:00	Client			*Received:*	12/23/2020	
Supplement to Test Report 1949829											
Prepared:	***932626***										
				Analyzed:	***932626***			1/6/21	10:54:00		
7439-96-5	**Manganese, Total**	**0.00548**	0.000168	0.000168	0.001	0.001		**mg/L**	0.050 Secondary Standard	02	1.00

MDL is Method Detection Limit (40 CFR 136 Appendix B)
SDL is Sample Detection Limit and is the adjusted MDL (sample specific dilutions, dry weight)
MQL is the Method Quantitation Limit and corresponds to a low standard
MQLADJ is the Adjusted Method Quantitation Limit (dilutions, dry weight)
Qualifiers:

We report results on an As Received or wet basis unless marked Dry Weight. Unless otherwise noted, testing was performed at Ana-labs corporate laboratory that holds the following Federal and State certificates: EPA Lab Number TX00063, US Department of Agriculture Soil Import Permit P330-17-00117, Texas Commission on Environmental Quality Commercial Drinking Water Lab Approval (Lab ID: TX219), Texas Commission on Environmental Quality NELAP T104704201-20-17, Louisiana Department of Environmental Quality Laboratory Certification (NELAP, LELAP) #02008, Louisiana Department of Health and Hospitals Drinking Water (NELAP) Certificate No LA026, Oklahoma Department of Environmental Quality TNI Laboratory Accreditation Program Certificate No. 2018-126, Arkansas Department of Environmental Quality Certification #18-068-0. The Accredited column designates accreditation by N -- NELAC, or z -- not covered under NELAC scope of accreditation.
These analytical results relate to the sample tested. This report may NOT be reproduced EXCEPT in FULL without written approval of Ana-Lab Corp. Unless otherwise specified, these test results meet the requirements of NELAC.

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Trey Peery, MA, Project Manager

NELAP-accredited #T104704201-20-17

Quality Control

ANALAB
Testing the Limits of Science and Service

AQU1-G

Aqua-Tech Laboratories
John Brien
635 Phil Gramm Blvd.
Bryan, TX 77807-9104

Project
948948

Printed 01/07/2021

Analytical Set 931521 — EPA 300.0 2.1

Blank

Parameter	PrepSet	Reading	MDL	MQL	Units	File
Chloride	931521	0.0267	0.0211	0.100	mg/L	121898508

CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Chloride	10.2	10.0	mg/L	102	90.0 - 110	121898505
Chloride	10.4	10.0	mg/L	104	90.0 - 110	121898522

LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Chloride	931521	4.98	4.97	5.00	85.0 - 110	99.6	99.4	mg/L	0.201	20.0

MSD

Parameter	Sample	MS	MSD	UNK	Known	Limits	MS%	MSD%	Units	RPD	Limit%
Chloride	1949752	216	216	165	50.0	80.0 - 120	102	102	mg/L	0	20.0

Analytical Set 931693 — EPA 300.0 2.1

Blank

Parameter	PrepSet	Reading	MDL	MQL	Units	File
Sulfate	931693	ND	0.0871	0.100	mg/L	121901916

CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Sulfate	10.1	10.0	mg/L	101	90.0 - 110	121901912
Sulfate	9.27	10.0	mg/L	92.7	90.0 - 110	121901924

LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Sulfate	931693	5.08	5.13	5.00	88.0 - 110	102	103	mg/L	0.979	20.0

MSD

Parameter	Sample	MS	MSD	UNK	Known	Limits	MS%	MSD%	Units	RPD	Limit%
Sulfate	1949968	15.2	15.1	7.42	10.0	80.0 - 120	77.8 *	76.8 *	mg/L	1.29	20.0

Analytical Set 932626 — EPA 200.8 5.4

CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Manganese, Total	0.0518	0.05	mg/L	104	90.0 - 110	121917958
Manganese, Total	0.0515	0.05	mg/L	103	90.0 - 110	121917969
Manganese, Total	0.051	0.05	mg/L	102	90.0 - 110	121917979

ICV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Manganese, Total	0.0512	0.05	mg/L	102	90.0 - 110	121917952

NELAP-accredited #T104704201-20-17

Quality Control

ANALAB
Testing the Limits of Science and Service

AQU1-G

Aqua-Tech Laboratories
John Brien
635 Phil Gramm Blvd.
Bryan, TX 77807-9104

Project
948948

Printed 01/07/2021

LDR

Parameter	Reading	Known	Units	Recover%	Limits%	File
Manganese, Total	1.02	1	mg/L	102	90.0 - 110	121917957

MRL Check

Parameter	Reading	Known	Units	Recover%	Limits%	File
Manganese, Total	0.00102	0.001	mg/L	102	25.0 - 175	121917953

* Out RPD is Relative Percent Difference: abs(r1-r2) / mean(r1,r2) * 100%

Recover% is Recovery Percent: result / known * 100%

Blank - Method Blank; CCV - Continuing Calibration Verification; ICV - Initial Calibration Verification; LDR - Linear Dynamic Range Standard; MRL Check - Minimum Reporting Limit Check Std

AQUA-TECH LABORATORIES, INC.

ATL - Bryan Facility:
635 Phil Gramm Blvd.
Bryan, TX 77807
(979) 778-3707
Fax (979) 778-3193

ATL - Austin Facility:
3512 Montopolis Drive
Austin, TX 78744
(512) 301-9559
Fax (512) 301-9552

Chain-of-Custody & Analysis Request

T104704371

SHIPPED TO:
Ana-Lab Corp. (NELAP Cert. T104704201)
2600 Dudley Road
Kilgore, TX 75662
Phone: (903) 984-0551
Fax: (903) 984-5914

C-O-C #

499 - D040966

All analyses must be performed by a TNI approved method certified by the TCEQ. Contact ATL's sample custodian via voice and email if your methods do not meet this criteria.

Analysis Request for: **Sample ID: D040966-01** Sampled: 12/21/20 11:00 Matrix: Drinking Water **Laboratory ID >>** 449829

Chloride - EPA 300.0 SO4 DW - EPA 300.0

CONTAINERS SUPPLIED: (ATL indicates cooler number in parentheses for each container - only required if more than one cooler listed below.)

( ) D040966-01 [B] - U 0.125LP
[Split from -01A]

See Attached for Tracking # and Temp

Relinquished by: (print & sign) Christie Tonnu	[X] ATL-Austin [ ] ATL - Bryan [ ] Sampler		Date 12/22/20	Time 8:33	[✓] Iced [✓] Custody Sealed [ ] Not Chilled	**Abbreviations:** DW - Drinking Water; NP - Non-Potable Water; S - Solid; CTU - Custody Transfer Unbroken; StP - Sterile Plastic; LP - Liter Plastic; LG - Liter Glass
Carrier & Tracking Number: Lone Star	Cooler 1: AQU1 - Z1000MSS				Sample Info "X" all that apply	**Aqua-Tech Comments and Special Instructions**
Received by: (print & sign) Rayshawn Thompson Ana-Lab	[✓] Received in Lab		Date 12/23/20	Time 0900	[✓] Received Iced [ ] CTU [✓] Condition Good [ ] Not Rec'd Iced	5 DAY TAT
Line below documents condition at receipt in lab (shipped to) listed above.					Please email reports to: reporting@aqua-techlabs.com	
Cooler Temperature (°C)	Temp. Read (TR)	Corrected Temp. (CT)	Thermometer ID		Please return cooler(s) to:	
Cooler 1					Austin Facility	
N/A	N/A	N/A				BRET

LSO
It's all in the delivery

Airbill No. Z1000MSS

LSO
1-800-800-8984
www.lso.com

SHIP TO:
RECEIVING
ANA LAB CORP
2600 DUDLEY RD
KILGORE, TX 75662
9039840551

From:
CHRISTIE TONNU
AQUA TECH LABS
3512 MONTOPOLIS DRIVE
AUSTIN, TX 78744
5123019559

G GGG **LSO ECONOMY NEXT DAY**
3:00 IN MOST AREAS
LATER IN REMOTE AREAS

PRINT DATE: 12/22/2020 REF 3:
QUICKCODE: WEIGHT: 20.00LBS
REF 1: 1D00V.0000 REF 2:

12-23-20 0930 AMB
Date Time Tech
Temp: 0.2 / 0.2 C

Therm#: 6443 Corr Fact: 0.0 C

Fold on above line and place shipping label in pouch on package. Please be sure the barcodes and addresses can be read and scanned. Shipping Instructions

1. Fold this page along the horizontal line above.
2. Place this Airbill in the shipping label pouch on the package you are shipping. Please be sure the barcodes and addresses can be read and scanned.
3. To locate a drop box near you, click on **Find A Drop Box** from the home page main menu.
4. To schedule a pickup, click on **Request Pickup**.

WARNING: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your Lone Star Overnight account number.

This label is valid for use for 3 months from the date printed. Use of expired labels may result in delayed billing and / or additional research charges. LIMIT OF LIABILITY: We are not responsible for claims in excess of $100 for any reason unless you: 1) declare a greater value (not to exceed $25,000); 2) pay an additional fee; 3) and document your actual loss in a timely manner. We will not pay any claim in excess of the actual loss. We are not liable for any special or consequential damages. Additional limitations of liability are contained in our current Service Guide. If you ask us to deliver a package without obtaining a delivery signature, you release us of all liability for claims resulting from such service. NO DELIVERY SIGNATURE WILL BE OBTAINED FOR 8:30 AM DELIVERIES OR RESIDENTIAL DELIVERIES.

AQUA-TECH LABORATORIES, INC.

ATL - Bryan Facility:
635 Phil Gramm Blvd.
Bryan, TX 77807
(979) 778-3707
Fax (979) 778-3193

ATL - Austin Facility:
3512 Montopolis Drive
Austin, TX 78744
(512) 301-9559
Fax (512) 301-9552

Chain-of-Custody & Analysis Request

SHIPPED TO:
Ana-Lab Corp. (NELAP Cert. T104704201)
2600 Dudley Road
Kilgore, TX 75662
Phone: (903) 984-0551
Fax: (903) 984-5914

C-O-C #

418 - D040966

T104704371

Page 1 of 1

All analyses must be performed by a TNI approved method certified by the TCEQ. Contact ATL's sample custodian via voice and email if your methods do not meet this criteria.

Analysis Request for: **Sample ID: D040966-01** Sampled: 12/21/20 11:00 Matrix: Drinking Water **Laboratory ID >>** 1949829

Mn - EPA 200.8 R5.4

CONTAINERS SUPPLIED: (ATL indicates cooler number in parentheses for each container - only required if more than one cooler listed below.)

( ) D040966-01 [B] - U 0.125LP ~~[Split from -01A]~~ NA 12/29

( ) D040966-01 [F] - [SUB] ANA 0.25LP HNO3 *[Split from -01A]*

Turb scan not done
Add to project 948410

Relinquished by: (print & sign) ☐ ATL-Austin ☒ ATL - Bryan ☐ Sampler Marianne R. Guzman			Date 12/29/20	Time 1630	☐ Iced ☒ Custody Sealed ☒ Not Chilled
Carrier & Tracking Number: Lone Star	Cooler 1: AQU5	ZY03E0YZ			Sample Info "X" all that apply
Received by: (print & sign) ☑ Received in Lab Kathy Tarver Ana-Lab			Date 12/30/20	Time 0920	☐ Received Iced ☐ CTU ☑ Condition Good ☐ Not Rec'd Iced

Line below documents condition at receipt in lab (shipped to) listed above.

Cooler Temperature (°C)	Temp. Read (TR)	Corrected Temp. (CT)	Thermometer ID
Cooler 1			
N/A	N/A	N/A	

Please email reports to: reporting@aqua-techlabs.com

Please return cooler(s) to: Austin Facility

Abbreviations: DW - Drinking Water; NP - Non-Potable Water; S - Solid; CTU - Custody Transfer Unbroken; StP - Sterile Plastic; LP - Liter Plastic; LG - Liter Glass

Aqua-Tech Comments and Special Instructions

5 DAY TAT
Need New 2010 MALs
Contact Aqua-Tech Sample Custodian before running sample

See Attached for Tracking # and Temp

BRET

LSO
It's all in the delivery.

Airbill No. ZY03E0Y2

LSO
1-800-800-8984
www.lso.com

SHIP TO:
S/R
ANA-LAB
2600
DUDLEY RD
KILGORE, TX 75662
9039840551

From:
NULL
AQUA-TECH
635 PHIL GRAMM BLVD
BRYAN, TX 77807
9797783707

WGGG **LSO GROUND**
END OF BUSINESS DAY DELIVERY

PRINT DATE: 12/28/2020 REF 3:
QUICKCODE: WEIGHT: 12.00LBS
REF 1: 1D00V.0000 REF 2:

12/30 0924 KT
Date Time Tech
Temp: 18.2/18.2 C

Therm#: 6443 Corr Fact: 0.0 C

Fold on above line and place shipping label in pouch on package. Please be sure the barcodes and addresses can be read and scanned. Shipping Instructions

1. Fold this page along the horizontal line above.
2. Place this Airbill in the shipping label pouch on the package you are shipping. Please be sure the barcodes and addresses can be read and scanned.
3. To locate a drop box near you, click on **Find A Drop Box** from the home page main menu.
4. To schedule a pickup, click on **Request Pickup**.

WARNING: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your Lone Star Overnight account number.

This label is valid for use for 3 months from the date printed. Use of expired labels may result in delayed billing and / or additional research charges. LIMIT

OF LIABILITY: We are not responsible for claims in excess of $100 for any reason unless you: 1) declare a greater value (not to exceed $25,000); 2) pay an additional fee; 3) and document your actual loss in a timely manner. We will not pay any claim in excess of the actual loss. We are not liable for any special or consequential damages. Additional limitations of liability are contained in our current Service Guide. If you ask us to deliver a package without obtaining a delivery signature, you release us of all liability for claims resulting from such service. NO DELIVERY SIGNATURE WILL BE OBTAINED FOR 8:30 AM DELIVERIES OR RESIDENTIAL DELIVERIES.

AQUA-TECH LABORATORIES, INC.

ATL - Bryan Facility:
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Bryan, TX 77807
(979) 778-3707
Fax (979) 778-3193

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Austin, TX 78744
(512) 301-9559
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C-O-C #
418 - D040966

T104704371

All analyses must be performed by a TNI approved method certified by the TCEQ. Contact ATL's sample custodian via voice and email if your methods do not meet this criteria.

Analysis Request for: **Sample ID: D040966-01** Sampled: 12/21/20 11:00 Matrix: Drinking Water **Laboratory ID >>** 1949829

Mn - EPA 200.8 R5.4

CONTAINERS SUPPLIED: (ATL indicates cooler number in parentheses for each container - only required if more than one cooler listed below.)

( ) D040966-01 [B] - U 0.125LP ~~[Split from -01A]~~ NA<NR?

( ) D040966-01 [F] - [SUB] ANA 0.25LP HNO3 *[Split from -01A]*

Turb scan not done
Add to project 948410

Relinquished by: (print & sign) ☐ ATL-Austin ☒ ATL - Bryan ☐ Sampler Marianne R. Guzman				Date 12/29/20	Time 1630	☐ Iced ☒ Custody Sealed ☒ Not Chilled
Carrier & Tracking Number: Lone Star	Cooler 1: CAQU5 Z Y03E0YZ					Sample Info "X" all that apply
Received by: (print & sign) ☑ Received In Lab Kathy Tarver Ana-Lab				Date 12/30/20	Time 0920	☑ Received Iced ☐ CTU ☑ Condition Good ☐ Not Rec'd Iced
Line below documents condition at receipt in lab (shipped to) listed above.				Please email reports to: reporting@aqua-techlabs.com		
Cooler Temperature (°C)	Temp. Read (TR)	Corrected Temp. (CT)	Thermometer ID	Please return cooler(s) to: Austin Facility		
Cooler 1						
N/A	N/A	N/A				

Abbreviations: DW - Drinking Water; NP - Non-Potable Water; S - Solid; CTU - Custody Transfer Unbroken; StP - Sterile Plastic; LP - Liter Plastic; LG - Liter Glass

Aqua-Tech Comments and Special Instructions

5 DAY TAT
Need New 2010 MALs
Contact Aqua-Tech Sample Custodian before running sample

See Attached for
Tracking # and Temp

BRET

Chain-of-Custody & Analysis Request

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Bryan, TX 77807
(979) 778-3707
Fax (979) 778-3193

ATL - Austin Facility:
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(512) 301-9559
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2600 Dudley Road
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Phone: (903) 984-0551
Fax: (903) 984-5914

C-O-C #
418 - D040966

T104704371

Page 1 of 1

All analyses must be performed by a TNI approved method certified by the TCEQ. Contact ATL's sample custodian via voice and email if your methods do not meet this criteria.

Analysis Request for:	Sample ID: D040966-01	Sampled: 12/21/20 11:00	Matrix: Drinking Water	Laboratory ID >> 1949829

Mn - EPA 200.8 R5.4

CONTAINERS SUPPLIED: (ATL indicates cooler number in parentheses for each container - only required if more than one cooler listed below.)

( ) D040966-01 [B] - U 0.125LP ~~[Split from -01A]~~ MA 12/29

( ) D040966-01 [F] - [SUB] ANA 0.25LP HNO3 *[Split from -01A]*

Turb scan not done
Add to project 948410

Relinquished by: (print & sign)	ATL-Austin / ATL - Bryan / Sampler	Date	Time	Iced / Custody Sealed / Not Chilled
Marianne R. Guzman	ATL - Bryan	12/29/20	1630	Custody Sealed, Not Chilled

Carrier & Tracking Number: Lone Star — Cooler 1: AQUS ZY03E0YZ

Received by: (print & sign): Kathy Tarver Ana-Lab — Received in Lab — Date: 12/30/20 — Time: 0920 — Received Iced / CTU / Condition Good / Not Rec'd Iced

Sample Info "X" all that apply

Abbreviations: DW - Drinking Water; NP - Non-Potable Water; S - Solid; CTU - Custody Transfer Unbroken; StP - Sterile Plastic; LP - Liter Plastic; LG - Liter Glass

Aqua-Tech Comments and Special Instructions

5 DAY TAT
Need New 2010 MALs
Contact Aqua-Tech Sample Custodian before running sample

See Attached for Tracking # and Temp

BRET

Line below documents condition at receipt in lab (shipped to) listed above.

Cooler Temperature (°C)	Temp. Read (TR)	Corrected Temp. (CT)	Thermometer ID
Cooler 1			
N/A	N/A	N/A	

Please email reports to: reporting@aqua-techlabs.com

Please return cooler(s) to: Austin Facility

Water Quality

Well No. 5

Email information for report date:
12/30/20 15:46

D041249

Apex Drilling

Attn: Michael Becker
apexdrilling.becker@yahoo.com

PO Box 867
Marble Falls, TX 78654

******Attention Austin Laboratory Clients******
Aqua-Tech is excited to announce that our Austin Laboratory is expanding and moving to a new location!

We will close our current Austin Laboratory location on Friday, October 23, 2020 at 12:00 p.m. to begin the moving process and will re-open at our new location on Monday, October 26 at 8:00 a.m.

Austin Laboratory address as of October 26, 2020:
3512 Montopolis Drive
Austin, TX 78744

Thank you for your business,
June M. Brien
Executive Technical Director

CORPORATE OFFICE
635 Phil Gramm Boulevard
Bryan, TX 77807
Phone: (979) 778-3707
Fax: (979) 778-3193

AQUA-TECH LABORATORIES, INC.

AUSTIN OFFICE
3512 Montopolis Dr. Suite A
Austin, TX 78744
Phone: (512) 301-9559
Fax: (512) 301-9552

The analyses summarized in this report were performed by Aqua-Tech Laboratories, Inc. unless otherwise noted. Aqua-Tech Laboratories, Inc. holds accreditation from the State of Texas in accordance with TNI and/or through the TCEQ Drinking Water Commercial Laboratory Approval Program.

The following abbreviations indicate certification status:

NEL	TNI accredited parameter.
ANR	Accreditation not required by the State of Texas.
DWP	Accreditation through the TCEQ Drinking Water Commercial Laboratory Approval Program.
INF	Aqua-Tech Laboratories, Inc. is not accredited for this parameter. It is reported on an informational basis only.

Subcontracted data summarized in this report is indicated by "Sub" in the Lab column.

NELAP ACCREDITED TNI LABORATORY

TCEQ DW Lab ID TX 239

General Definitions:

NR	Not Reported.
RPD	Relative Percent Difference.
% R	Percent Recovery.
dry	Results with the "dry" unit designation are reported on a "dry weight" basis.
SQL	The Sample Quantitation Limit is the value below which the parameter cannot reliably be detected. The SQL includes all sample preparations, dilutions and / or concentrations.
Adj MDL	The Adjusted Method Detection Limit is the MDL value adjusted for any sample dilutions or concentrations .
MDL	The Method Detection Limit is the lowest theoretical value that is statistically different from zero for a specific method, taking into account all preparation steps and instrument settings.

All samples are reported on an "as received" basis unless the designation "dry" is added to the reported unit.

Copies of Aqua-Tech Laboratories, Inc. procedures and individual sampling plans are available upon request. Note that samples are collected by Aqua-Tech Laboratories, Inc. personnel unless otherwise noted in the "Sample Collected" field of this report as "Client" or "CLT".

Samples included in this report were received in acceptable condition according to Aqua-Tech Laboratories, Inc. procedures and 40 CFR, Chapter I, Subchapter D, Part 136.3, TABLE II. - *Required containers, preservation techniques, and holding times*, unless otherwise noted in this report.

Record Retention:

All reports, raw data, and associated quality control data are kept on file for 10 years before being destroyed. Any client that would like copies of records must contact Aqua-Tech Laboratories, Inc. no later than six months prior to the scheduled disposal. An administrative fee for retrieval and distribution will apply.

This report was approved by:

June M. Brien, Technical Director

corp@aqua-techlabs.com www.aqua-techlabs.com

CORPORATE OFFICE
635 Phil Gramm Boulevard
Bryan, TX 77807
Phone: (979) 778-3707
Fax: (979) 778-3193

AQUA-TECH LABORATORIES, INC.

AUSTIN OFFICE
3512 Montopolis Dr. Suite A
Austin, TX 78744
Phone: (512) 301-9559
Fax: (512) 301-9552

Analytical Report

Apex Drilling

Report Printed: **12/30/20** **15:46**

D041249

LEGACY HILLS NO5

Collected: 12/28/20 12:00 by CLIENT
Received: 12/28/20 14:00 by Christie Tonnu

Type: Grab
Matrix: Drinking Water
C-O-C #: 41249-52

Lab ID# D041249-01

	Result	Units	Notes	MDL	Adj MDL	SQL	Lab	Analyzed	Method	Batch	
Microbiological Analyses											
Total Coliforms	**Absent**	N/A		N/A	**N/A**	N/A	*Austin*	12/28/20 16:52 KT	SM9223 B 2004	M122959	NEL
Escherichia coli (E.coli)	**Absent**	N/A		N/A	**N/A**	N/A	*Austin*	12/28/20 16:52 KT	SM9223 B 2004	M122959	NEL

Microbiological Analyses - Quality Control

	Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	Log10 Comparison Range	Log10 Comparison Control Limit	Batch	
Escherichia coli (E.coli) - SM9223 B 2004														*Austin*
Blank	Absent	N/A		N/A	N/A	12/28/20 16:52 KT							M122959	
Total Coliforms - SM9223 B 2004														*Austin*
Blank	Absent	N/A		N/A	N/A	12/28/20 16:52 KT							M122959	

Sample Preparation Summary

Sample	Method	Prepared	Lab	Bottle	Initial	Units	Final	Units	External Dilution Factor	Batch
D041249-01										
Escherichia coli (E.coli)	SM9223 B 2004	12/28/20 16:46 KT	Austin	A	100	mL	100	mL	1	M122959
Total Coliforms	SM9223 B 2004	12/28/20 16:46 KT	Austin	A	100	mL	100	mL	1	M122959

Chain-of-Custody and Analysis Request

AQUA-TECH LABORATORIES, INC.

Client /Project:

Contact Info
Name: APEX DRILLING
Address:
City: State: ZIP:
Phone / Email:

Definitions
DW - Drinking Water; NP - Non-Potable Water; S - Solid
CM - Custody Maintained; CTU - Custody Transfer Unbroken; CT - Corrected Temperature; SUB - Subcontracted Analysis
(+) Container Type: P - Plastic; G - Glass; T - Teflon©

T104704371
TX239

Aqua-Tech Laboratories, Inc.

Austin	Bryan
3512 Montopolis Dr.	635 Phil Gramm Blvd.
Austin, TX 78744	Bryan, TX 77807
512.301.9559	979.778.3707

Test results meet all accreditation/certification requirements unless stated otherwise.

Work Order / C-O-C: 41249-52
Page 1 of 2
V-0023 R03

By relinquishing the samples listed below to Aqua-Tech, the client agrees to the following terms.
Samples will be analyzed by a method that is within Aqua-Tech Laboratories' NELAC fields of accreditation. Analytes requiring a certified method that is not within Aqua-Tech's fields of accreditation will be subcontracted to a NELAC certified lab that is certified for that method. Clients will be notified of the subcontract lab's details. Other analytes not requiring accreditation will be analyzed by a compendial method. If a specific method is required, the client will note the method in the "Analysis Requested" column. The client approves all method modifications documented by Aqua-Tech or the subcontract lab. A current list of Aqua-Tech's NELAC fields of accreditation and other methods are available on request.

Sample Custody

Relinquished by (print & sign): MBeckett	☑ Sampler ☐ Client ☐ ATL Field	Date: 12-28-20 Time: 14:00	☐ Iced / Refrig ☐ Custody Sealed
Received by (print & sign):	☐ Client ☐ ATL Field	Date: Time:	☐ Iced / Refrig ☐ CM / CTU
Relinquished by (print & sign):	☐ Client ☐ ATL Field	Date: Time:	☐ Iced / Refrig ☐ CM / CTU
Received by (print & sign):	☐ Client ☐ ATL Field	Date: Time:	☐ Iced / Refrig ☐ CM / CTU
Relinquished by (print & sign):	☐ Client ☐ ATL Field	Date: Time:	☐ Iced / Refrig ☐ CM / CTU / sealed
Received by (print & sign): ChristieTonnu	☑ Lab	Date: 12/28/20 Time: 1400	☑ Cond Good ☑ Iced / Refrig ☑ CM / CTU

NFE2CTT?

Client Comments:

* Preservatives		Receipt in Lab		
1	< 6 °C (unfrozen)	Cooler ID:	clt	
2	H2SO4 0764386	Temperature (°C): read / CT	9.3 / 9.3	NA/CTT?
3	HCl			
4	HNO3 0753274	Preservation Correct?	YES (NO)	YES NO
5	Na2S2O3 0765068	Lost Preservatives?	(YES) NO	YES NO
6	NaOH	Thermometer ID:	0764480	
7		pH Paper ID:	0755987	

Lab Comments:

Field Sample ID (record field data for each sample in space below)	Start Date	Start Time	End Date	End Time	Composite Type	Sample Matrix	Container(s) Bottle Count	Volume (Size in L)	Type (+)	Preserv-ative(s) *	LAB USE ONLY BELOW (initials CTT) Cooler ID	pH Check	SUB	WORK ORDER	Sample
Legacy Hills #5	12-28-20	12:00	—		G	DW	1	0.15	STP	1.5	clt	—	—		"
Analysis Requested & Comments: BACT P/A												D041249-01A			
Legacy Hills #5	12-28-20	12:46	—		G	DW	1	2	P	1	clt	—	ANA		
Analysis Requested & Comments: See attached: Cl, cond, F, Fe, NO2/3, Mn, pH, SO4, hardness, TDS												D041250-01A			
LEGACY Hills #EX1	12-28-20	12:30	—		G	DW	1	0.15	STP	1.5	clt	—	—		"
Analysis Requested & Comments: BACT P/A												D041251-01A			
Legacy Hills #EX1	12-28-20	12:30	—		G	DW	1	2	P	1	clt	—	ANA		
Analysis Requested & Comments: See attached: Cl, cond, F, Fe, NO2/3, Mn, pH, SO4, hardness, TDS												D041252-01A			
															Sample: NFE2CTT?
Analysis Requested & Comments:															

see below

Page 3 of 4 D041249_1 ATL 110720 FIN_ls 12 30 20 1546

41249-52
212

No. 8 No. 7

Well numbers correspond to Attachment 1

The water quality from each well will need to be assessed
y Aquifer to provide adequate drinking water. Upon cor
sample will need to be collected and analyzed for the follo

- Chloride
- Conductivity
- Fluoride
- Iron
- Nitrate (as nitrogen)
- Manganese
- pH
- Sulfate
- Total hardness
- Total Dissolved Solids (TDS)
- Presence/absence of total coliform bacteria

have any questions please feel free to call me at 512-773-

Email information for report date:
1/19/21 17:17

D041250

Apex Drilling

Attn: Michael Becker
apexdrilling.becker@yahoo.com

PO Box 867
Marble Falls, TX 78654

******Attention Austin Laboratory Clients******
Aqua-Tech is excited to announce that our Austin Laboratory is expanding and moving to a new location!

We will close our current Austin Laboratory location on Friday, October 23, 2020 at 12:00 p.m. to begin the moving process and will re-open at our new location on Monday, October 26 at 8:00 a.m.

Austin Laboratory address as of October 26, 2020:
3512 Montopolis Drive
Austin, TX 78744

Thank you for your business,
June M. Brien
Executive Technical Director

CORPORATE OFFICE
635 Phil Gramm Boulevard
Bryan, TX 77807
Phone: (979) 778-3707
Fax: (979) 778-3193

AQUA-TECH LABORATORIES, INC.

AUSTIN OFFICE
3512 Montopolis Dr. Suite A
Austin, TX 78744
Phone: (512) 301-9559
Fax: (512) 301-9552

The analyses summarized in this report were performed by Aqua-Tech Laboratories, Inc. unless otherwise noted. Aqua-Tech Laboratories, Inc. holds accreditation from the State of Texas in accordance with TNI and/or through the TCEQ Drinking Water Commercial Laboratory Approval Program.

The following abbreviations indicate certification status:

NEL	TNI accredited parameter.
ANR	Accreditation not required by the State of Texas.
DWP	Accreditation through the TCEQ Drinking Water Commercial Laboratory Approval Program.
INF	Aqua-Tech Laboratories, Inc. is not accredited for this parameter. It is reported on an informational basis only.

Subcontracted data summarized in this report is indicated by "Sub" in the Lab column.

NELAP ACCREDITED TNI LABORATORY

TCEQ DW Lab ID TX 239

General Definitions:

NR	Not Reported.
RPD	Relative Percent Difference.
% R	Percent Recovery.
dry	Results with the "dry" unit designation are reported on a "dry weight" basis.
SQL	The Sample Quantitation Limit is the value below which the parameter cannot reliably be detected. The SQL includes all sample preparations, dilutions and / or concentrations.
Adj MDL	The Adjusted Method Detection Limit is the MDL value adjusted for any sample dilutions or concentrations .
MDL	The Method Detection Limit is the lowest theoretical value that is statistically different from zero for a specific method, taking into account all preparation steps and instrument settings.

All samples are reported on an "as received" basis unless the designation "dry" is added to the reported unit.

Copies of Aqua-Tech Laboratories, Inc. procedures and individual sampling plans are available upon request. Note that samples are collected by Aqua-Tech Laboratories, Inc. personnel unless otherwise noted in the "Sample Collected" field of this report as "Client" or "CLT".

Samples included in this report were received in acceptable condition according to Aqua-Tech Laboratories, Inc. procedures and 40 CFR, Chapter I, Subchapter D, Part 136.3, TABLE II. - *Required containers, preservation techniques, and holding times*, unless otherwise noted in this report.

Record Retention:

All reports, raw data, and associated quality control data are kept on file for 10 years before being destroyed. Any client that would like copies of records must contact Aqua-Tech Laboratories, Inc. no later than six months prior to the scheduled disposal. An administrative fee for retrieval and distribution will apply.

This report was approved by:

June M. Brien, Technical Director

corp@aqua-techlabs.com www.aqua-techlabs.com

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Fax: (512) 301-9552

Analytical Report

Apex Drilling

Report Printed: **1/19/21** **17:17**

D041250

Legacy Hills #5

Collected: 12/28/20 12:00 by CLIENT
Received: 12/28/20 14:00 by Christie Tonnu

Type: Grab
Matrix: Drinking Water
C-O-C #: 41249-52

Lab ID# D041250-01

	Result	Units	Notes	MDL	Adj MDL	SQL	Lab	Analyzed	Method	Batch	
General Chemistry											
Total Dissolved Solids	**2670**	mg/L		25.0	100	100	*Bryan*	12/29/20 19:35 MRH	SM2540 C 2011	M123012	NEL
Nitrate as N (NO3N)	**<0.0200**	mg/L			0.0200	0.0200	*Calc*	01/01/21 12:24 KT	SM4500-NO3-F 2011	[CALC]	NEL
Nitrite as N	**<0.01**	mg/L	J (0.002)	0.002	0.002	0.01	*Austin*	12/29/20 13:50 KT	SM4500 NO2- B 2011	M123010	NEL
Nitrate/Nitrite as N	**<0.02**	mg/L		0.02	0.02	0.02	*Bryan*	01/01/21 12:24 PEC	SM4500-NO3-F 2011	M123154	ANR
Total Hardness (EDTA) as CaCO3	**1870**	mg/L		1.00	10.0	10.0	*Bryan*	01/04/21 18:30 MRH	SM2340 C 2011	M123189	NEL
Fluoride	**2.15**	mg/L		0.04	0.04	0.10	*Bryan*	01/19/21 08:08 MRH	SM4500-F C 2011	M123792	NEL
pH, Lab	**7.5**	S.U.	Hold-03		N/A	N/A	*Austin*	12/31/20 12:33 KT	SM4500-H+ B 2011	M123136	DWP
Temperature @ pH Analysis	**19.6**	Deg. C			N/A	N/A	*Austin*	12/31/20 12:33 KT	SM4500-H+ B 2011	M123136	DWP
Specific Conductance (adjusted to 25.0°C)	**3600**	uS/cm		2.00	6.67	6.67	*Bryan*	01/05/21 14:30 CJO	SM2510 B 2011	M123226	DWP,NEL
Metals (Total)											
Iron	**0.340**	mg/L		0.002	0.002	0.010	*Bryan*	01/07/21 17:20 PNS	EPA 200.7 R4.4	M123187	NEL
Manganese	**0.005**	mg/L		0.002	0.002	0.005	*Bryan*	01/07/21 17:20 PNS	EPA 200.7 R4.4	M123187	NEL

Please see the attached subcontract report for subcontracted data.

Explanation of Notes

Hold-03	This parameter was outside of EPA holding at the time the sample was received in the laboratory.
J	Analyte detected below the SQL but above the MDL.

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3512 Montopolis Dr. Suite A
Austin, TX 78744
Phone: (512) 301-9559
Fax: (512) 301-9552

Analytical Report

Apex Drilling

Report Printed: **1/19/21** **17:17**

D041250

General Chemistry - Quality Control

	Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch	
Fluoride - SM4500-F C 2011														*Bryan*
Initial Cal Check	0.42	mg/L				01/19/21 08:08 MRH	0.428		97.4	90 - 110			2101170	
Low Cal Check	0.10	mg/L				01/19/21 08:08 MRH	0.0999		98.9	70 - 130			2101170	
Blank	<0.10	mg/L		0.04	0.10	01/19/21 08:08 MRH							M123792	
LCS	0.79	mg/L		0.04	0.10	01/19/21 08:08 MRH	0.799		98.6	90 - 110			M123792	
LCS Dup	0.77	mg/L		0.04	0.10	01/19/21 08:08 MRH	0.799		96.6	90 - 110	2.05	6.23	M123792	
Matrix Spike	3.05	mg/L		0.04	0.10	01/19/21 08:08 MRH	0.799	2.15	113	78.1 - 125			M123792	
Matrix Spike Dup	3.06	mg/L		0.04	0.10	01/19/21 08:08 MRH	0.799	2.15	114	78.1 - 125	1.10	5.72	M123792	
Nitrate/Nitrite as N - SM4500-NO3-F 2011														*Bryan*
Initial Cal Check	1.40	mg/L				01/01/21 12:24 PEC	1.40		99.9	90 - 110			2101003	
Blank	<0.02	mg/L		0.02	0.02	01/01/21 12:24 PEC							M123154	
LCS	0.49	mg/L		0.02	0.02	01/01/21 12:24 PEC	0.500		97.2	91.3 - 109			M123154	
LCS Dup	0.49	mg/L		0.02	0.02	01/01/21 12:24 PEC	0.500		97.8	91.3 - 109	0.615	6.8	M123154	
Matrix Spike	0.55	mg/L		0.02	0.02	01/01/21 12:24 PEC	0.500	0.06	98.4	94.7 - 117			M123154	
Matrix Spike Dup	0.55	mg/L		0.02	0.02	01/01/21 12:24 PEC	0.500	0.06	98.8	94.7 - 117	0.406	8.65	M123154	
MRL Check	0.02	mg/L		0.00	0.02	01/01/21 12:24 PEC	0.0200		75.0	70 - 130			M123154	
Nitrite as N - SM4500 NO2- B 2011														*Austin*
Blank	<0.01	mg/L		0.002	0.01	12/29/20 13:50 KT							M123010	
LCS	0.08	mg/L		0.002	0.01	12/29/20 13:50 KT	0.0800		103	90 - 110			M123010	
LCS Dup	0.08	mg/L		0.002	0.01	12/29/20 13:50 KT	0.0800		103	90 - 110	0.00	8.12	M123010	
Matrix Spike	0.08	mg/L		0.002	0.01	12/29/20 13:50 KT	0.0800	<0.01	97.1	70.6 - 117			M123010	
Matrix Spike Dup	0.08	mg/L		0.002	0.01	12/29/20 13:50 KT	0.0800	<0.01	102	70.6 - 117	4.86	8.18	M123010	
MRL Check	0.01	mg/L		0.002	0.01	12/29/20 13:50 KT	0.0100		101	70 - 130			M123010	
pH, Lab - SM4500-H+ B 2011														*Austin*
Duplicate	7.6	Std Units				12/31/20 12:33 KT		7.5			0.398	1.18	M123136	
Reference	6.9	Std Units				12/31/20 12:33 KT	6.86		100	95 - 105			M123136	
Reference	9.2	Std Units				12/31/20 12:33 KT	9.18		99.9	95 - 105			M123136	
Reference	6.9	Std Units				12/31/20 12:33 KT	6.86		101	95 - 105			M123136	
Reference	9.2	Std Units				12/31/20 12:33 KT	9.18		99.9	95 - 105			M123136	
Specific Conductance (adjusted to 25.0°C) - SM2510 B 2011														*Bryan*
Initial Cal Check	513	uS/cm				01/05/21 14:30 CJO	484		106	90 - 110			2101024	
Blank	<2.00	uS/cm		2.00	2.00	01/05/21 14:30 CJO							M123226	
Duplicate	3950	uS/cm		6.67	6.67	01/05/21 14:30 CJO		3990			0.924	2	M123226	
LCS	1460	uS/cm		2.00	2.00	01/05/21 14:30 CJO	1410		104	90 - 110			M123226	

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Austin, TX 78744
Phone: (512) 301-9559
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Analytical Report

Apex Drilling

Report Printed: **1/19/21** **17:17**

D041250

General Chemistry - Quality Control

	Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch	
Total Dissolved Solids - SM2540 C 2011														*Bryan*
Blank	<25.0	mg/L		25.0	25.0	12/29/20 19:35 MRH							M123012	
Duplicate	312	mg/L		100	100	12/29/20 19:35 MRH		308			1.29	9.13	M123012	
Reference	440	mg/L		100	100	12/29/20 19:35 MRH	500		88.0	81 - 121			M123012	
Total Hardness (EDTA) as CaCO3 - SM2340 C 2011														*Bryan*
Initial Cal Check	53.5	mg/L				01/04/21 18:30 MRH	54.4		98.4	85 - 115			2101013	
Blank	<1.00	mg/L		1.00	1.00	01/04/21 18:30 MRH							M123189	
Duplicate	11.1	mg/L		1.00	1.00	01/04/21 18:30 MRH		11.1			0.00	9.52	M123189	
LCS	102	mg/L		1.00	1.00	01/04/21 18:30 MRH	100		102	90 - 110			M123189	
LCS Dup	100	mg/L		1.00	1.00	01/04/21 18:30 MRH	100		100	90 - 110	2.00	6.47	M123189	
Matrix Spike	110	mg/L		1.00	1.00	01/04/21 18:30 MRH	100	11.1	99.0	87.6 - 111			M123189	
MRL Check	4.04	mg/L		1.00	1.00	01/04/21 18:30 MRH	4.00		101	70 - 130			M123189	

Metals (Total) - Quality Control

	Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch	
Iron - EPA 200.7 R4.4														*Bryan*
Blank	<0.010	mg/L		0.002	0.010	01/07/21 16:36 PNS							M123187	
LCS	0.946	mg/L		0.002	0.010	01/07/21 16:39 PNS	1.00		94.6	84.5 - 115.4			M123187	
LCS Dup	0.955	mg/L		0.002	0.010	01/07/21 16:42 PNS	1.00		95.5	84.5 - 115.4	1.04	20	M123187	
Duplicate	<0.010	mg/L	*J (0.008)*	0.002	0.010	01/07/21 16:46 PNS		<0.010			2.56	20	M123187	
Matrix Spike	0.968	mg/L		0.002	0.010	01/07/21 16:49 PNS	1.00	0.008	96.0	69.5 - 130.4			M123187	
Manganese - EPA 200.7 R4.4														*Bryan*
Blank	<0.005	mg/L		0.002	0.005	01/07/21 16:36 PNS							M123187	
LCS	1.01	mg/L		0.002	0.005	01/07/21 16:39 PNS	1.00		101	84.5 - 115.4			M123187	
LCS Dup	1.02	mg/L		0.002	0.005	01/07/21 16:42 PNS	1.00		102	84.5 - 115.4	1.20	20	M123187	
Duplicate	0.016	mg/L		0.002	0.005	01/07/21 16:46 PNS		0.015			5.70	20	M123187	
Matrix Spike	1.04	mg/L		0.002	0.005	01/07/21 16:49 PNS	1.00	0.015	102	69.5 - 130.4			M123187	

Preparation Procedures - Quality Control

	Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch	
Turbidity - SM2130 B 2011														*Bryan*

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Fax: (512) 301-9552

Analytical Report

Apex Drilling

Report Printed: **1/19/21** **17:17**

D041250

Sample Preparation Summary

Sample	Method	Prepared	Lab	Bottle	Initial	Units	Final	Units	External Dilution Factor	Batch
D041250-01										
Fluoride	SM4500-F C 2011	1/19/21 8:08 MRH	Bryan	C	25.0	mL	25.0	mL	1	M123792
Iron	EPA 200.7 R4.4	1/7/21 12:30 BLC	Bryan	B	10.0	mL	10.2	mL	1	M123187
Manganese	EPA 200.7 R4.4	1/7/21 12:30 BLC	Bryan	B	10.0	mL	10.2	mL	1	M123187
Nitrate/Nitrite as N	SM4500-NO3-F 2011	1/1/21 11:12 PEC	Bryan	D	10.0	mL	10.0	mL	1	M123154
Nitrite as N	SM4500 NO2- B 2011	12/29/20 13:50 KT	Austin	A	25.0	mL	25.0	mL	1	M123010
pH, Lab	SM4500-H+ B 2011	12/31/20 12:33 KT	Austin	A	50.0	mL	50.0	mL	1	M123136
Sample Acidified to pH<2 in Lab	N/A	12/28/20 15:00 CTT	Bryan	D	1.00	mL	1.00	mL	1	M122954
Specific Conductance (adjusted to 25.0°C)	SM2510 B 2011	1/5/21 14:30 CJO	Bryan	C	15.0	mL	50.0	mL	1	M123226
Temperature @ pH Analysis	SM4500-H+ B 2011	12/31/20 12:33 KT	Austin	A	50.0	mL	50.0	mL	1	M123136
Total Dissolved Solids	SM2540 C 2011	12/29/20 19:35 MRH	Bryan	C	25.0	mL	100	mL	1	M123012
Total Hardness (EDTA) as CaCO3	SM2340 C 2011	1/4/21 18:30 MRH	Bryan	B	5.00	mL	50.0	mL	1	M123189
Turbidity	SM2130 B 2011	1/4/21 13:30 BLC	Bryan	B	10.0	mL	10.0	mL	1	M123183
D041250-01RE1										
Sample Acidified to pH<2 in Lab	N/A	12/28/20 15:00 CTT	Bryan	B	100	mL	100	mL	1	M122936

AQUA-TECH LABORATORIES INC.

Chain-of-Custody and Analysis Request

Aqua-Tech Laboratories, Inc.

Austin	Bryan
3512 Montopolis Dr.	635 Phil Gramm Blvd.
Austin, TX 78744	Bryan, TX 77807
512.301.9559	979.778.3707

T104704371
TX239

Test results meet all accreditation/certification requirements unless stated otherwise.

Work Order / C-O-C: 41249-52
Page 1 of 2
V-0023 R03

Client /Project:

Contact Info
Name: APEX DRILLING
Address
City State ZIP
Phone / Email

Definitions
DW - Drinking Water
NP - Non-Potable Water
S - Solid
CM - Custody Maintained
CTU - Custody Transfer Unbroken
CT - Corrected Temperature
SUB - Subcontracted Analysis

(+) Container Type
P - Plastic
G - Glass
T - Teflon©

By relinquishing the samples listed below to Aqua-Tech, the client agrees to the following terms. Samples will be analyzed by a method that is within Aqua-Tech Laboratories' NELAC fields of accreditation. Analytes requiring a certified method that is not within Aqua-Tech's fields of accreditation will be subcontracted to a NELAC certified lab that is certified for that method. Clients will be notified of the subcontract lab's details. Other analytes not requiring accreditation will be analyzed by a compendial method. If a specific method is required, the client will note the method in the "Analysis Requested" column. The client approves all method modifications documented by Aqua-Tech or the subcontract lab. A current list of Aqua-Tech's NELAC fields of accreditation and other methods are available on request.

Sample Custody

	Name	Type	Date / Time	Condition
Relinquished by (print & sign)	M Becker	☑ Sampler ☐ Client ☐ ATL Field	Date 12-28-20 Time 14:00	☐ Iced / Refrig ☐ Custody Sealed
Received by (print & sign)		☐ Client ☐ ATL Field	Date Time	☐ Iced / Refrig ☐ CM / CTU
Relinquished by (print & sign)	NFEZCTT?	☐ Client ☐ ATL Field	Date Time	☐ Iced / Refrig ☐ CM / CTU
Received by (print & sign)		☐ Client ☐ ATL Field	Date Time	☐ Iced / Refrig ☐ CM / CTU
Relinquished by (print & sign)		☐ Client ☐ ATL Field	Date Time	☐ Iced / Refrig ☐ CM / CTU / sealed
Received by (print & sign)	Christie Tonnu	☑ Lab	Date 12/28/20 Time 1400	☑ Cond Good ☑ Iced / Refrig ☑ CM / CTU

Client Comments:

* Preservatives		Receipt in Lab		
1	< 6 °C (unfrozen)	Cooler ID :	clt	NA CTT?
2	H_2SO_4 0764386	Temperature (°C) : read / CT	9.3 / 9.3	
3	HCl			
4	HNO_3 0753274	Preservation Correct ?	YES (NO)	YES NO
5	$Na_2S_2O_3$ 0765068	Post Preservatives ?	(YES) NO	YES NO
6	NaOH	Thermometer ID :	0764480	
7		pH Paper ID :	0755987	

Lab Comments

LAB USE ONLY BELOW (initials CTT)

Field Sample ID (record field data for each sample in space below)	Start Date	Start Time	End Date	End Time	Composite Type	Sample Matrix	Bottle Count	Volume (Size in L)	Type (+)	Preserv-ative(s) *	Cooler ID	pH Check	SUB	WORK ORDER see below
Legacy Hill #5	12-28-20	12:00	——		G	DW	1	0.15	STP	1,5	clt	—	—	Sample
Analysis Requested & Comments: BACT P/A												D04	1249-01A	
Legacy Hills #5	12-28-20	12:00	——		G	DW	1	2	P	1	clt	—	ANA	Sample
Analysis Requested & Comments: See Attached: Cl, cond, F, Fe, NO2/3, Mn, pH, SO4, hardness, TDS												D04	1250-01A	
LEGACY Hills #EX1	12-28-20	12:30	——		G	DW	1	0.15	STP	1,5	clt	—	—	Sample
Analysis Requested & Comments: BACT P/A												D04	1251-01A	
Legacy Hills #EX1	12-28-20	12:30	——		G	DW	1	2	P	1	clt	—	ANA	Sample
Analysis Requested & Comments: See Attached: Cl, cond, F, Fe, NO2/3, Mn, pH, SO4, hardness, TDS												D04	1252-01A	
														Sample NFEZCTT?
Analysis Requested & Comments:														

41249-52
212

No. 8 No. 7

Well numbers correspond to Attachment 1

The water quality from each well will need to be assessed y Aquifer to provide adequate drinking water. Upon cor sample will need to be collected and analyzed for the follo

- Chloride
- Conductivity
- Fluoride
- Iron
- Nitrate (as nitrogen)
- Manganese
- pH
- Sulfate
- Total hardness
- Total Dissolved Solids (TDS)
- Presence/absence of total coliform bacteria

have any questions please feel free to call me at 512-773-

Ana-Lab Corp.
2600 Dudley Rd. Kilgore, Texas 75662
P.O. Box 9000 Kilgore, Texas 75663
*Office: 903-984-0551 * Fax: 903-984-5914*

ANA LAB
Testing the Limits of Science and Service

Project
948694

AQU1-G

Aqua-Tech Laboratories
John Brien
635 Phil Gramm Blvd.
Bryan, TX 77807-9104

Printed 12/31/2020 11:48

TABLE OF CONTENTS

This report consists of this Table of Contents and the following pages:

NELAP-accredited #T104704201-20-17

Ana-Lab Corp.
2600 Dudley Rd. Kilgore, Texas 75662
P.O. Box 9000 Kilgore, Texas 75663
*Office: 903-984-0551 * Fax: 903-984-5914*

ANA LAB
Testing the Limits of Science and Service

AQU1-G

Aqua-Tech Laboratories
John Brien
635 Phil Gramm Blvd.
Bryan, TX 77807-9104

Project
948694

Printed: 12/31/2020

Results

Sample Results

1950355 **D041250-01** *Received:* 12/29/2020

Drinking Water *Collected by:* Client Aqua-Tech Laboratori *PO:*
Taken: 12/28/2020 12:00:00

EPA 300.0 2.1 *Prepared:* 931895 12/29/2020 16:23:00 *Analyzed* 931895 12/29/2020 16:23:00 *ATN*

	Parameter	*Results*	*Units*	*RL*	*Flags*	*CAS*	*Bottle*
NELAC	**Chloride**	**44.0**	**mg/L**	3.00			01

EPA 300.0 2.1 *Prepared:* 932053 12/30/2020 19:53:00 *Analyzed* 932053 12/30/2020 19:53:00 *ATN*

	Parameter	*Results*	*Units*	*RL*	*Flags*	*CAS*	*Bottle*
NELAC	**Sulfate**	**1830**	**mg/L**	10.0			01

Qualifiers:

We report results on an As Received or wet basis unless marked Dry Weight. Unless otherwise noted, testing was performed at Ana-labs corporate laboratory that holds the following Federal and State certificates: EPA Lab Number TX00063, US Department of Agriculture Soil Import Permit P330-17-00117, Texas Commission on Environmental Quality Commercial Drinking Water Lab Approval (Lab ID: TX219), Texas Commission on Environmental Quality NELAP T104704201-20-17, Louisiana Department of Environmental Quality Laboratory Certification (NELAP, LELAP) #02008, Louisiana Department of Health and Hospitals Drinking Water (NELAP) Certificate No LA026, Oklahoma Department of Environmental Quality TNI Laboratory Accreditation Program Certificate No. 2018-126, Arkansas Department of Environmental Quality Certification #18-068-0. The Accredited column designates accreditation by N -- NELAC, or z -- not covered under NELAC scope of accreditation.
These analytical results relate to the sample tested. This report may NOT be reproduced EXCEPT in FULL without written approval of Ana-Lab Corp. Unless otherwise specified, these test results meet the requirements of NELAC.
RL is the Reporting Limit (sample specific quantitation limit) and is at or above the Method Detection Limit (MDL). CAS is Chemical Abstract Service number. RL is our Reporting Limit, or Minimum Quantitation Level. The RL takes into account the Instrument Detection Limit (IDL), Method Detection Limit (MDL), and Practical Quantitation Limit (PQL), and any dilutions and/or concentrations performed during sample preparation (EQL). Our analytical result must be above this RL before we report a value in the 'Results' column of our report (without a 'J' flag). Otherwise, we report ND (Not Detected above RL), because the result is "<" (less than) the number in the RL column. MAL is Minimum Analytical Level and is typically from regulatory agencies. Unless we report a result in the result column, or interferences prevent it, we work to have our RL at or below the MAL.

Trey Peery, MA, Project Manager

NELAP-accredited #T104704201-20-17

2600 Dudley Rd. Kilgore, Texas 75662
P.O. Box 9000 Kilgore, Texas 75663
Office: 903-984-0551 * Fax: 903-984-5914

ANALAB
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RESULTS

Project
948694

Printed 12/31/2020

DW

AQU1

Aqua-Tech Laboratories
John Brien
635 Phil Gramm Blvd.
Bryan, TX 77807-9104

CAS	Parameter	Results	MDL	SDL	MQL	MQLAdj	Flag	Units	Target	Bottle	Dilute
Drinking Water	**Ion Chromatography**									**EPA 300.0 2.1**	
1950355	D041250-01										
		Collection:	12/28/2020	12:00:00	Client				*Received:*	12/29/2020	
	Prepared: ***931895***										
				Analyzed:	***931895***			12/29/20	16:23:00		
	Chloride	**44.0**	0.0211	0.211	0.300	3.00		**mg/L**	250 Secondary Standard	01	10.00
	Prepared: ***932053***										
				Analyzed:	***932053***			12/30/20	19:53:00		
	Sulfate	**1830**	0.0871	8.71	0.100	10.0		**mg/L**	250 Secondary Standard	01	100.00

MDL is Method Detection Limit (40 CFR 136 Appendix B)
SDL is Sample Detection Limit and is the adjusted MDL (sample specific dilutions, dry weight)
MQL is the Method Quantitation Limit and corresponds to a low standard
MQLADJ is the Adjusted Method Quantitation Limit (dilutions, dry weight)

NELAP-accredited #T104704201-20-17

2600 Dudley Rd. Kilgore, Texas 75662
P.O. Box 9000 Kilgore, Texas 75663
Office: 903-984-0551 * Fax: 903-984-5914

ANA LAB
Testing the Limits of Science and Service

RESULTS

Project
948694

AQU1

Printed 12/31/2020

DW

Aqua-Tech Laboratories
John Brien
635 Phil Gramm Blvd.
Bryan, TX 77807-9104

Qualifiers:

We report results on an As Received or wet basis unless marked Dry Weight. Unless otherwise noted, testing was performed at Ana-labs corporate laboratory that holds the following Federal and State certificates: EPA Lab Number TX00063, US Department of Agriculture Soil Import Permit P330-17-00117, Texas Commission on Environmental Quality Commercial Drinking Water Lab Approval (Lab ID: TX219), Texas Commission on Environmental Quality NELAP T104704201-20-17, Louisiana Department of Environmental Quality Laboratory Certification (NELAP, LELAP) #02008, Louisiana Department of Health and Hospitals Drinking Water (NELAP) Certificate No LA026, Oklahoma Department of Environmental Quality TNI Laboratory Accreditation Program Certificate No. 2018-126, Arkansas Department of Environmental Quality Certification #18-068-0. The Accredited column designates accreditation by N -- NELAC, or z -- not covered under NELAC scope of accreditation.
These analytical results relate to the sample tested. This report may NOT be reproduced EXCEPT in FULL without written approval of Ana-Lab Corp. Unless otherwise specified, these test results meet the requirements of NELAC.

Trey Peery, MA, Project Manager

NELAP-accredited #T104704201-20-17

Quality Control

ANALAB
Testing the Limits of Science and Service

AQU1-G

Aqua-Tech Laboratories
John Brien
635 Phil Gramm Blvd.
Bryan, TX 77807-9104

Project
948694

Printed 12/31/2020

Analytical Set 931895 — EPA 300.0 2.1

Blank

Parameter	PrepSet	Reading	MDL	MQL	Units	File
Chloride	931895	0.0316	0.0211	0.100	mg/L	121905530

CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Chloride	9.64	10.0	mg/L	96.4	90.0 - 110	121905526
Chloride	10.7	10.0	mg/L	107	90.0 - 110	121905542

LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Chloride	931895	5.18	5.16	5.00	85.0 - 110	104	103	mg/L	0.387	20.0

MSD

Parameter	Sample	MS	MSD	UNK	Known	Limits	MS%	MSD%	Units	RPD	Limit%
Chloride	1950206	298	298	186	100	80.0 - 120	112	112	mg/L	0	20.0

Analytical Set 932053 — EPA 300.0 2.1

Blank

Parameter	PrepSet	Reading	MDL	MQL	Units	File
Sulfate	932053	ND	0.0871	0.100	mg/L	121908878

CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Sulfate	10.1	10.0	mg/L	101	90.0 - 110	121908874
Sulfate	10.1	10.0	mg/L	101	90.0 - 110	121908890
Sulfate	10.0	10.0	mg/L	100	90.0 - 110	121908902

LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Sulfate	932053	5.08	5.12	5.00	88.0 - 110	102	102	mg/L	0.784	20.0

MSD

Parameter	Sample	MS	MSD	UNK	Known	Limits	MS%	MSD%	Units	RPD	Limit%
Sulfate	1950523	141	139	92.0	50.0	80.0 - 120	98.0	94.0	mg/L	4.17	20.0
Sulfate	1950685	131	131	98.8	50.0	80.0 - 120	64.4 *	64.4 *	mg/L	0	20.0

* Out RPD is Relative Percent Difference: abs(r1-r2) / mean(r1,r2) * 100%

Recover% is Recovery Percent: result / known * 100%

Blank - Method Blank; CCV - Continuing Calibration Verification

NELAP-accredited #T104704201-20-17

AQUA-TECH LABORATORIES, INC.

ATL - Bryan Facility:
635 Phil Gramm Blvd.
Bryan, TX 77807
(979) 778-3707
Fax (979) 778-3193

ATL - Austin Facility:
3512 Montopolis Drive
Austin, TX 78744
(512) 301-9559
Fax (512) 301-9552

Chain-of-Custody & Analysis Request

T104704371

SHIPPED TO:
Ana-Lab Corp. (NELAP Cert. T104704201)
2600 Dudley Road
Kilgore, TX 75662
Phone: (903) 984-0551
Fax: (903) 984-5914

C-O-C #

708 - D041250

Page 1 of 1

All analyses must be performed by a TNI approved method certified by the TCEQ. Contact ATL's sample custodian via voice and email if your methods do not meet this criteria.

Analysis Request for: **Sample ID: D041250-01** Sampled: 12/28/20 12:00 Matrix: Drinking Water **Laboratory ID >>** 1950355

Chloride - EPA 300.0 SO4 DW - EPA 300.0

CONTAINERS SUPPLIED: (ATL indicates cooler number in parentheses for each container - only required if more than one cooler listed below.)

( ) D041250-01 [E] - [SUB] ANA Cl SO4 0.25LP
[Split from -01 A]

wrong time <CT>

Relinquished by: (print & sign) [X] ATL-Austin [ ] ATL - Bryan [ ] Sampler Christie Tonnu			Date 12/28/20	Time ~~14:54~~ 1615	[✓] Iced [✓] Custody Sealed [ ] Not Chilled
Carrier & Tracking Number: Lone Star	Cooler 1: AQU1 - Z1000QA3				Sample Info "X" all that apply
Received by: (print & sign) [ ] Received in Lab Kathy Tarver Ana-Lab			Date 12/29/20	Time 0900	[✓] Received Iced [✓] CTU [✓] Condition Good [ ] Not Rec'd Iced
Line below documents condition at receipt in lab (shipped to) listed above.					Please email reports to: reporting@aqua-techlabs.com
Cooler Temperature (°C)	Temp. Read (TR)	Corrected Temp. (CT)	Thermometer ID		Please return cooler(s) to: Austin Facility
Cooler 1					
N/A	N/A	N/A			

Abbreviations: DW - Drinking Water; NP - Non-Potable Water; S - Solid; CTU - Custody Transfer Unbroken; StP - Sterile Plastic; LP - Liter Plastic; LG - Liter Glass

Aqua-Tech Comments and Special Instructions

5 DAY TAT

See Attached for Tracking # and Temp

BRET

948694 CoC Print Group 001 of 001

LSO
It's all in the delivery.

Airbill No. Z1000QA3

LSO
1-800-800-8984
www.lso.com

SHIP TO:
RECEIVING
ANA LAB CORP
2600 DUDLEY ROAD RD
KILGORE, TX 75662
9039840551

From:
CHRISTIE TONNU
AQUA TECH LABS
3512 MONTOPOLIS DR
AUSTIN, TX 78744
5123019559

G GGG **LSO ECONOMY NEXT DAY**
3:00 IN MOST AREAS
LATER IN REMOTE AREAS

PRINT DATE: 12/28/2020 REF 3:
QUICKCODE: WEIGHT: 15.00LBS
REF 1: 1D00V.0000 REF 2:

12/29 0925 cp
Date Time Tech
Temp: 0.5 / 0.5 C

Therm#: 6443 Corr Fact: 0.0 C

Fold on above line and place shipping label in pouch on package. Please be sure the barcodes and addresses can be read and scanned. Shipping Instructions

1. Fold this page along the horizontal line above.
2. Place this Airbill in the shipping label pouch on the package you are shipping. Please be sure the barcodes and addresses can be read and scanned.
3. To locate a drop box near you, click on **Find A Drop Box** from the home page main menu.
4. To schedule a pickup, click on **Request Pickup**.

WARNING: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your Lone Star Overnight account number.

This label is valid for use for 3 months from the date printed. Use of expired labels may result in delayed billing and / or additional research charges. LIMIT OF LIABILITY: We are not responsible for claims in excess of $100 for any reason unless you: 1) declare a greater value (not to exceed $25,000); 2) pay an additional fee; 3) and document your actual loss in a timely manner. We will not pay any claim in excess of the actual loss. We are not liable for any special or consequential damages. Additional limitations of liability are contained in our current Service Guide. If you ask us to deliver a package without obtaining a delivery signature, you release us of all liability for claims resulting from such service. NO DELIVERY SIGNATURE WILL BE OBTAINED FOR 8:30 AM DELIVERIES OR RESIDENTIAL DELIVERIES.

Water Quality

Well No. 7

Email information for report date:
1/8/21 17:08

E001054

Apex Drilling

Attn: Michael Becker
apexdrilling.becker@yahoo.com

PO Box 867
Marble Falls, TX 78654

******Attention Austin Laboratory Clients******
Aqua-Tech is excited to announce that our Austin Laboratory is expanding and moving to a new location!

We will close our current Austin Laboratory location on Friday, October 23, 2020 at 12:00 p.m. to begin the moving process and will re-open at our new location on Monday, October 26 at 8:00 a.m.

Austin Laboratory address as of October 26, 2020:
3512 Montopolis Drive
Austin, TX 78744

Thank you for your business,
June M. Brien
Executive Technical Director

CORPORATE OFFICE
635 Phil Gramm Boulevard
Bryan, TX 77807
Phone: (979) 778-3707
Fax: (979) 778-3193

AQUA-TECH LABORATORIES, INC.

AUSTIN OFFICE
3512 Montopolis Dr. Suite A
Austin, TX 78744
Phone: (512) 301-9559
Fax: (512) 301-9552

The analyses summarized in this report were performed by Aqua-Tech Laboratories, Inc. unless otherwise noted. Aqua-Tech Laboratories, Inc. holds accreditation from the State of Texas in accordance with TNI and/or through the TCEQ Drinking Water Commercial Laboratory Approval Program.

The following abbreviations indicate certification status:

NEL	TNI accredited parameter.
ANR	Accreditation not required by the State of Texas.
DWP	Accreditation through the TCEQ Drinking Water Commercial Laboratory Approval Program.
INF	Aqua-Tech Laboratories, Inc. is not accredited for this parameter. It is reported on an informational basis only.

Subcontracted data summarized in this report is indicated by "Sub" in the Lab column.

TCEQ DW Lab ID TX 239

General Definitions:

NR	Not Reported.
RPD	Relative Percent Difference.
% R	Percent Recovery.
dry	Results with the "dry" unit designation are reported on a "dry weight" basis.
SQL	The Sample Quantitation Limit is the value below which the parameter cannot reliably be detected. The SQL includes all sample preparations, dilutions and / or concentrations.
Adj MDL	The Adjusted Method Detection Limit is the MDL value adjusted for any sample dilutions or concentrations .
MDL	The Method Detection Limit is the lowest theoretical value that is statistically different from zero for a specific method, taking into account all preparation steps and instrument settings.

All samples are reported on an "as received" basis unless the designation "dry" is added to the reported unit.

Copies of Aqua-Tech Laboratories, Inc. procedures and individual sampling plans are available upon request. Note that samples are collected by Aqua-Tech Laboratories, Inc. personnel unless otherwise noted in the "Sample Collected" field of this report as "Client" or "CLT".

Samples included in this report were received in acceptable condition according to Aqua-Tech Laboratories, Inc. procedures and 40 CFR, Chapter I, Subchapter D, Part 136.3, TABLE II. - *Required containers, preservation techniques, and holding times*, unless otherwise noted in this report.

Record Retention:

All reports, raw data, and associated quality control data are kept on file for 10 years before being destroyed. Any client that would like copies of records must contact Aqua-Tech Laboratories, Inc. no later than six months prior to the scheduled disposal. An administrative fee for retrieval and distribution will apply.

This report was approved by:

June M. Brien, Technical Director

corp@aqua-techlabs.com www.aqua-techlabs.com

CORPORATE OFFICE
635 Phil Gramm Boulevard
Bryan, TX 77807
Phone: (979) 778-3707
Fax: (979) 778-3193

AQUA-TECH LABORATORIES, INC.

AUSTIN OFFICE
3512 Montopolis Dr. Suite A
Austin, TX 78744
Phone: (512) 301-9559
Fax: (512) 301-9552

Analytical Report

Apex Drilling

Report Printed: **1/8/21** **17:08**

E001054

LEGACY HILLS NO7

Collected: 01/05/21 11:00 by CLIENT
Received: 01/05/21 12:41 by Christie Tonnu

Type: Grab
Matrix: Drinking Water
C-O-C #: 1054-7

Lab ID# E001054-01

	Result	Units	Notes	MDL	Adj MDL	SQL	Lab	Analyzed	Method	Batch	
Microbiological Analyses											
Total Coliforms	**Absent**	N/A		N/A	**N/A**	N/A	*Austin*	01/05/21 15:21 KT	SM9223 B 2004	M123260	NEL
Escherichia coli (E.coli)	**Absent**	N/A		N/A	**N/A**	N/A	*Austin*	01/05/21 15:21 KT	SM9223 B 2004	M123260	NEL

Jon and Tami Shake
W 411 Old Red Ranch Rd
Dripping Springs TX 78620

Microbiological Analyses - Quality Control

	Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	Log10 Comparison Range	Control Limit	Batch	
Escherichia coli (E.coli) - SM9223 B 2004														*Austin*
Duplicate	Absent	N/A		N/A	N/A	01/05/21 15:11 KT		Absent				200	M123260	
Blank	Absent	N/A		N/A	N/A	01/05/21 15:21 KT							M123260	
Total Coliforms - SM9223 B 2004														*Austin*
Duplicate	Absent	N/A		N/A	N/A	01/05/21 15:11 KT		Absent				200	M123260	
Blank	Absent	N/A		N/A	N/A	01/05/21 15:21 KT							M123260	

Sample Preparation Summary

Sample	Method	Prepared	Lab	Bottle	Initial	Units	Final	Units	External Dilution Factor	Batch
E001054-01										
Escherichia coli (E.coli)	SM9223 B 2004	1/5/21 15:05 KT	Austin	A	100	mL	100	mL	1	M123260
Total Coliforms	SM9223 B 2004	1/5/21 15:05 KT	Austin	A	100	mL	100	mL	1	M123260

Chain-of-Custody and Analysis Request

AQUA-TECH LABORATORIES INC.

Aqua-Tech Laboratories, Inc.

Austin	Bryan
3512 Montopolis Drive Austin, TX 78744 512.301.9559	635 Phil Gramm Blvd. Bryan, TX 77807 979.778.3707

Test results meet all accreditation/certification requirements unless stated otherwise.

NELAP ACCREDITED LABORATORY
T104704371
TX239

Work Order / C-O-C: 1054-7

Page 1 of 2

V-0023 R03

Client /Project:

Contact Info
Name: APEX DRILLING
Address:
City: State: ZIP:
Phone / Email:

Definitions
DW - Drinking Water; NP - Non-Potable Water; S - Solid
(+) Container Type: P - Plastic; G - Glass; T - Teflon©
CM - Custody Maintained
CTU - Custody Transfer Unbroken
CT - Corrected Temperature
SUB - Subcontracted Analysis

By relinquishing the samples listed below to Aqua-Tech, the client agrees to the following terms.
Samples will be analyzed by a method that is within Aqua-Tech Laboratories' NELAC fields of accreditation. Analytes requiring a certified method that is not within Aqua-Tech's fields of accreditation will be subcontracted to a NELAC certified lab that is certified for that method. Clients will be notified of the subcontract lab's details. Other analytes not requiring accreditation will be analyzed by a compendial method. If a specific method is required, the client will note the method in the "Analysis Requested" column. The client approves all method modifications documented by Aqua-Tech or the subcontract lab. A current list of Aqua-Tech's NELAC fields of accreditation and other methods are available on request.

Sample Custody

Relinquished by (print & sign): X	☑ Sampler ☐ Client ☐ ATL Field	Date: 1-5-21 Time: X 12:41	☐ Iced / Refrig ☐ Custody Sealed
Received by (print & sign):	☐ Client ☐ ATL Field	Date: Time:	☐ Iced / Refrig ☐ CM / CTU
Relinquished by (print & sign):	☐ Client ☐ ATL Field	Date: Time:	☐ Iced / Refrig ☐ CM / CTU
Received by (print & sign):	☐ Client ☐ ATL Field	Date: Time:	☐ Iced / Refrig ☐ CM / CTU
Relinquished by (print & sign):	☐ Client ☐ ATL Field	Date: Time:	☐ Iced / Refrig ☐ CM / CTU / sealed
Received by (print & sign): Christie Tonnu	☑ Lab	Date: 1/5/21 Time: 1241	☑ Cond Good ☑ Iced / Refrig ☑ CM / CTU

Client Comments:

*** Preservatives**
1 < 6 °C (unfrozen)
2 H2SO4
3 HCl
4 HNO3
5 Na2S2O3 0765068
6 NaOH
7

Receipt in Lab

Cooler ID:	clt	
Temperature (°C): read / CT	16.4 / 16.4	NA / CTT
Preservation Correct ?	YES (NO)	YES NO
Post Preservatives ?	(YES) NO	YES NO
Thermometer ID:	0764480	
pH Paper ID:	0755987	

NFE <CTT>

Lab Comments:

Field Sample ID (record field data for each sample in space below)	Start Date	Start Time	End Date	End Time	Composite Type	Sample Matrix	Container(s): Bottle Count	Volume (Size in L)	Type (+)	Preservative(s) *	LAB USE ONLY BELOW (initials CTT): Cooler ID	pH Check	SUB	WORK ORDER
Legacy Hills #7	1-5-21	11:00			Grab	DW	1	~~0.12~~ 0.15	StP	1, 5	clt	—	—	Sample: EQ01054-01A
Analysis Requested & Comments: Bact-PA Total Coliform P/A								wrong volume <CTT>						
Legacy Hills #7	1-5-21	11:00			G	DW	1	2	P	1	clt	—	ANA	Sample: EQ01055-01A
Analysis Requested & Comments: SEE ATTACHED • Cl, cond, F, Fe, NO2, NO3, Mn, pH, • SO4, hardness, TDS														
Legacy Hills #9	1-5-21	10:00			G	DW	1	0.15	StP	1,5	clt	—	—	Sample: EQ01056-01A
Analysis Requested & Comments: Bact-PA														
Legacy Hills #9	1-5-21	10:00			G	DW	1	2	P	1	clt	—	ANA	Sample: EQ01057-01A
Analysis Requested & Comments: SEE ATTACHED see above <CTT>														
														Sample: NFE <CTT>
Analysis Requested & Comments:														

Page 3 of 4 E001054_1 ATL 110720 FIN_ls 01 08 21 1708

No. 8 No. 7

Well numbers correspond to Attachment 1

The water quality from each well will need to be assesse
y Aquifer to provide adequate drinking water. Upon cor
sample will need to be collected and analyzed for the follo

- Chloride
- Conductivity
- Fluoride
- Iron
- Nitrate (as nitrogen)
- Manganese
- pH
- Sulfate
- Total hardness
- Total Dissolved Solids (TDS)
- Presence/absence of total coliform bacteria

have any questions please feel free to call me at 512-773-

Email information for report date:
1/25/21 09:53

E001055

Apex Drilling

Attn: Michael Becker
apexdrilling.becker@yahoo.com

PO Box 867
Marble Falls, TX 78654

******Attention Austin Laboratory Clients******
Aqua-Tech is excited to announce that our Austin Laboratory is expanding and moving to a new location!

We will close our current Austin Laboratory location on Friday, October 23, 2020 at 12:00 p.m. to begin the moving process and will re-open at our new location on Monday, October 26 at 8:00 a.m.

Austin Laboratory address as of October 26, 2020:
3512 Montopolis Drive
Austin, TX 78744

Thank you for your business,
June M. Brien
Executive Technical Director

CORPORATE OFFICE
635 Phil Gramm Boulevard
Bryan, TX 77807
Phone: (979) 778-3707
Fax: (979) 778-3193

AQUA-TECH LABORATORIES, INC.

AUSTIN OFFICE
3512 Montopolis Dr. Suite A
Austin, TX 78744
Phone: (512) 301-9559
Fax: (512) 301-9552

The analyses summarized in this report were performed by Aqua-Tech Laboratories, Inc. unless otherwise noted. Aqua-Tech Laboratories, Inc. holds accreditation from the State of Texas in accordance with TNI and/or through the TCEQ Drinking Water Commercial Laboratory Approval Program.

The following abbreviations indicate certification status:

NEL	TNI accredited parameter.
ANR	Accreditation not required by the State of Texas.
DWP	Accreditation through the TCEQ Drinking Water Commercial Laboratory Approval Program.
INF	Aqua-Tech Laboratories, Inc. is not accredited for this parameter. It is reported on an informational basis only.

Subcontracted data summarized in this report is indicated by "Sub" in the Lab column.

NELAP ACCREDITED TNI LABORATORY

TCEQ DW Lab ID TX 239

General Definitions:

NR	Not Reported.
RPD	Relative Percent Difference.
% R	Percent Recovery.
dry	Results with the "dry" unit designation are reported on a "dry weight" basis.
SQL	The Sample Quantitation Limit is the value below which the parameter cannot reliably be detected. The SQL includes all sample preparations, dilutions and / or concentrations.
Adj MDL	The Adjusted Method Detection Limit is the MDL value adjusted for any sample dilutions or concentrations .
MDL	The Method Detection Limit is the lowest theoretical value that is statistically different from zero for a specific method, taking into account all preparation steps and instrument settings.

All samples are reported on an "as received" basis unless the designation "dry" is added to the reported unit.

Copies of Aqua-Tech Laboratories, Inc. procedures and individual sampling plans are available upon request. Note that samples are collected by Aqua-Tech Laboratories, Inc. personnel unless otherwise noted in the "Sample Collected" field of this report as "Client" or "CLT".

Samples included in this report were received in acceptable condition according to Aqua-Tech Laboratories, Inc. procedures and 40 CFR, Chapter I, Subchapter D, Part 136.3, TABLE II. - *Required containers, preservation techniques, and holding times*, unless otherwise noted in this report.

Record Retention:

All reports, raw data, and associated quality control data are kept on file for 10 years before being destroyed. Any client that would like copies of records must contact Aqua-Tech Laboratories, Inc. no later than six months prior to the scheduled disposal. An administrative fee for retrieval and distribution will apply.

This report was approved by:

June M. Brien, Technical Director

corp@aqua-techlabs.com www.aqua-techlabs.com

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Analytical Report

Apex Drilling

Report Printed: **1/25/21** **9:53**

E001055

Legacy Hills #7

Collected: 01/04/21 11:00 by CLIENT
Received: 01/05/21 12:41 by Christie Tonnu

Type: Grab
Matrix: Drinking Water
C-O-C #: 1054-7

Lab ID# E001055-01

	Result	Units	Notes	MDL	Adj MDL	SQL	Lab	Analyzed	Method	Batch	
General Chemistry											
Total Dissolved Solids	**2680**	mg/L		25.0	100	100	*Bryan*	01/06/21 13:10 MRH	SM2540 C 2011	M123261	NEL
Nitrate as N (NO3N)	**<0.0200**	mg/L			0.0200	0.0200	*Calc*	01/07/21 13:06 KT	SM4500-NO3-F 2011	[CALC]	NEL
Nitrite as N	**<0.01**	mg/L		0.002	0.002	0.01	*Austin*	01/06/21 10:38 KT	SM4500 NO2- B 2011	M123280	NEL
Nitrate/Nitrite as N	**<0.02**	mg/L		0.02	0.02	0.02	*Bryan*	01/07/21 13:06 EMT	SM4500-NO3-F 2011	M123327	ANR
Total Hardness (EDTA) as CaCO3	**1360**	mg/L		1.00	20.0	20.0	*Bryan*	01/21/21 13:30 MRH	SM2340 C 2011	M123427	NEL
Fluoride	**2.13**	mg/L		0.04	0.04	0.10	*Bryan*	01/19/21 08:08 MRH	SM4500-F C 2011	M123792	NEL
pH, Lab	**7.7**	S.U.	Hold-03		N/A	N/A	*Austin*	01/06/21 14:59 KT	SM4500-H+ B 2011	M123288	DWP
Temperature @ pH Analysis	**23.8**	Deg. C			N/A	N/A	*Austin*	01/06/21 14:59 KT	SM4500-H+ B 2011	M123288	DWP
Specific Conductance (adjusted to 25.0°C)	**1830**	uS/cm		2.00	4.00	4.00	*Bryan*	01/22/21 11:06 MRH	SM2510 B 2011	M123973	DWP,NEL
Metals (Total)											
Iron	**0.393**	mg/L		0.002	0.001	0.005	*Bryan*	01/12/21 12:11 PNS	EPA 200.7 R4.4	M123453	NEL
Manganese	**0.008**	mg/L		0.002	0.001	0.002	*Bryan*	01/12/21 12:11 PNS	EPA 200.7 R4.4	M123453	NEL

Please see the attached subcontract report for subcontracted data.

Explanation of Notes

Hold-03	This parameter was outside of EPA holding at the time the sample was received in the laboratory.
J	Analyte detected below the SQL but above the MDL.

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Analytical Report

Apex Drilling

Report Printed: **1/25/21** **9:53**

E001055

General Chemistry - Quality Control

	Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch	
Fluoride - SM4500-F C 2011														*Bryan*
Initial Cal Check	0.42	mg/L				01/19/21 08:08 MRH	0.428		97.4	90 - 110			2101170	
Low Cal Check	0.10	mg/L				01/19/21 08:08 MRH	0.0999		98.9	70 - 130			2101170	
Blank	<0.10	mg/L		0.04	0.10	01/19/21 08:08 MRH							M123792	
LCS	0.79	mg/L		0.04	0.10	01/19/21 08:08 MRH	0.799		98.6	90 - 110			M123792	
LCS Dup	0.77	mg/L		0.04	0.10	01/19/21 08:08 MRH	0.799		96.6	90 - 110	2.05	6.23	M123792	
Matrix Spike	3.05	mg/L		0.04	0.10	01/19/21 08:08 MRH	0.799	2.15	113	78.1 - 125			M123792	
Matrix Spike Dup	3.06	mg/L		0.04	0.10	01/19/21 08:08 MRH	0.799	2.15	114	78.1 - 125	1.10	5.72	M123792	
Nitrate/Nitrite as N - SM4500-NO3-F 2011														*Bryan*
Initial Cal Check	1.39	mg/L				01/07/21 13:06 EMT	1.40		99.4	90 - 110			2101055	
Blank	<0.02	mg/L		0.02	0.02	01/07/21 13:06 EMT							M123327	
LCS	0.46	mg/L		0.02	0.02	01/07/21 13:06 EMT	0.500		93.0	91.3 - 109			M123327	
LCS Dup	0.47	mg/L		0.02	0.02	01/07/21 13:06 EMT	0.500		94.2	91.3 - 109	1.28	6.8	M123327	
Matrix Spike	0.63	mg/L		0.02	0.02	01/07/21 13:06 EMT	0.500	0.13	99.8	94.7 - 117			M123327	
Matrix Spike Dup	0.62	mg/L		0.02	0.02	01/07/21 13:06 EMT	0.500	0.13	98.8	94.7 - 117	1.01	8.65	M123327	
MRL Check	0.02	mg/L		0.02	0.02	01/07/21 13:06 EMT	0.0200		110	70 - 130			M123327	
Nitrite as N - SM4500 NO2- B 2011														*Austin*
Blank	<0.01	mg/L		0.002	0.01	01/06/21 10:38 KT							M123280	
LCS	0.08	mg/L		0.002	0.01	01/06/21 10:38 KT	0.0800		99.3	90 - 110			M123280	
LCS Dup	0.08	mg/L		0.002	0.01	01/06/21 10:38 KT	0.0800		103	90 - 110	3.91	8.12	M123280	
Matrix Spike	0.08	mg/L		0.002	0.01	01/06/21 10:38 KT	0.0800	<0.01	96.3	70.6 - 117			M123280	
Matrix Spike Dup	0.08	mg/L		0.002	0.01	01/06/21 10:38 KT	0.0800	<0.01	97.6	70.6 - 117	1.36	8.18	M123280	
MRL Check	<0.01	mg/L	*J (0.009)*	0.002	0.01	01/06/21 10:38 KT	0.0100		94.2	70 - 130			M123280	
pH, Lab - SM4500-H+ B 2011														*Austin*
Duplicate	7.6	Std Units				01/06/21 14:59 KT		7.6			0.657	1.18	M123288	
Reference	6.8	Std Units				01/06/21 14:59 KT	6.86		99.7	95 - 105			M123288	
Reference	9.1	Std Units				01/06/21 14:59 KT	9.18		99.3	95 - 105			M123288	
Reference	6.9	Std Units				01/06/21 14:59 KT	6.86		100	95 - 105			M123288	
Reference	9.1	Std Units				01/06/21 14:59 KT	9.18		99.6	95 - 105			M123288	

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Analytical Report

Apex Drilling

Report Printed: **1/25/21** **9:53**

E001055

General Chemistry - Quality Control

	Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch	
Specific Conductance (adjusted to 25.0°C) - SM2510 B 2011														*Bryan*
Initial Cal Check	513	uS/cm				01/21/21 09:41 MRH	484		106	90 - 110			2101215	
Blank	<2.00	uS/cm		2.00	2.00	01/22/21 11:06 MRH							M123973	
Duplicate	804	uS/cm		2.00	2.00	01/22/21 11:06 MRH		803			0.124	2	M123973	
LCS	1440	uS/cm		2.00	2.00	01/22/21 11:06 MRH	1410		102	90 - 110			M123973	
LCS Dup	1370	uS/cm		2.00	2.00	01/22/21 11:06 MRH	1410		97.0	90 - 110	5.41	7.82	M123973	
Total Dissolved Solids - SM2540 C 2011														*Bryan*
Blank	<25.0	mg/L		25.0	25.0	01/06/21 13:10 MRH							M123261	
Duplicate	240	mg/L		100	100	01/06/21 13:10 MRH		232			3.39	9.13	M123261	
Reference	460	mg/L		100	100	01/06/21 13:10 MRH	501		91.8	81 - 121			M123261	
Total Hardness (EDTA) as CaCO3 - SM2340 C 2011														*Bryan*
Initial Cal Check	55.7	mg/L				01/21/21 13:30 MRH	54.4		102	85 - 115			2101202	
Blank	<1.00	mg/L		1.00	1.00	01/21/21 13:30 MRH							M123427	
Duplicate	1480	mg/L		20.0	20.0	01/21/21 13:30 MRH		1360			8.65	9.52	M123427	
LCS	99.0	mg/L		1.00	1.00	01/21/21 13:30 MRH	100		99.0	90 - 110			M123427	
LCS Dup	101	mg/L		1.00	1.00	01/21/21 13:30 MRH	100		101	90 - 110	2.06	6.47	M123427	
Matrix Spike	3500	mg/L		20.0	20.0	01/21/21 13:30 MRH	2000	1360	107	87.6 - 111			M123427	
MRL Check	4.12	mg/L		1.00	1.00	01/21/21 13:30 MRH	4.00		103	70 - 130			M123427	

Metals (Total) - Quality Control

	Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch	
Iron - EPA 200.7 R4.4														*Bryan*
Blank	<0.005	mg/L		0.001	0.005	01/12/21 11:51 PNS							M123453	
LCS	0.467	mg/L		0.001	0.005	01/12/21 11:54 PNS	0.500		93.5	84.5 - 115.4			M123453	
LCS Dup	0.463	mg/L		0.001	0.005	01/12/21 11:58 PNS	0.500		92.6	84.5 - 115.4	0.936	20	M123453	
Duplicate	0.392	mg/L		0.001	0.005	01/12/21 12:01 PNS		0.393			0.311	20	M123453	
Matrix Spike	0.853	mg/L		0.001	0.005	01/12/21 12:04 PNS	0.500	0.393	92.1	69.5 - 130.4			M123453	
Manganese - EPA 200.7 R4.4														*Bryan*
Blank	<0.002	mg/L		0.001	0.002	01/12/21 11:51 PNS							M123453	
LCS	0.481	mg/L		0.001	0.002	01/12/21 11:54 PNS	0.500		96.2	84.5 - 115.4			M123453	
LCS Dup	0.476	mg/L		0.001	0.002	01/12/21 11:58 PNS	0.500		95.2	84.5 - 115.4	1.07	20	M123453	
Duplicate	0.008	mg/L		0.001	0.002	01/12/21 12:01 PNS		0.008			1.23	20	M123453	
Matrix Spike	0.483	mg/L		0.001	0.002	01/12/21 12:04 PNS	0.500	0.008	95.0	69.5 - 130.4			M123453	

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Analytical Report

Apex Drilling

Report Printed: **1/25/21** **9:53**

E001055

Preparation Procedures - Quality Control

Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch
Turbidity - SM2130 B 2011												*Bryan*

Sample Preparation Summary

Sample	Method	Prepared	Lab	Bottle	Initial	Units	Final	Units	External Dilution Factor	Batch
E001055-01										
Fluoride	SM4500-F C 2011	1/19/21 8:08 MRH	Bryan	C	25.0	mL	25.0	mL	1	M123792
Iron	EPA 200.7 R4.4	1/11/21 11:28 BLC	Bryan	B	50.0	mL	25.0	mL	1	M123453
Manganese	EPA 200.7 R4.4	1/11/21 11:28 BLC	Bryan	B	50.0	mL	25.0	mL	1	M123453
Nitrate/Nitrite as N	SM4500-NO3-F 2011	1/7/21 9:20 EMT	Bryan	D	10.0	mL	10.0	mL	1	M123327
Nitrite as N	SM4500 NO2- B 2011	1/6/21 10:38 KT	Austin	A	25.0	mL	25.0	mL	1	M123280
pH, Lab	SM4500-H+ B 2011	1/6/21 14:59 KT	Austin	A	50.0	mL	50.0	mL	1	M123288
Sample Acidified to pH<2 in Lab	N/A	1/5/21 13:00 CTT	Bryan	B	100	mL	100	mL	1	M123213
Specific Conductance (adjusted to 25.0°C)	SM2510 B 2011	1/22/21 11:06 MRH	Bryan	C	25.0	mL	50.0	mL	1	M123973
Temperature @ pH Analysis	SM4500-H+ B 2011	1/6/21 14:59 KT	Austin	A	50.0	mL	50.0	mL	1	M123288
Total Dissolved Solids	SM2540 C 2011	1/6/21 13:10 MRH	Bryan	C	25.0	mL	100	mL	1	M123261
Total Hardness (EDTA) as CaCO3	SM2340 C 2011	1/20/21 14:59 BLC	Bryan	B	2.50	mL	50.0	mL	1	M123427
Turbidity	SM2130 B 2011	1/7/21 13:24 BLC	Bryan	B	10.0	mL	10.0	mL	1	M123367
E001055-01RE2										
Sample Acidified to pH<2 in Lab	N/A	1/5/21 13:00 CTT	Bryan	E	100	mL	100	mL	1	M123236

Chain-of-Custody and Analysis Request

AQUA-TECH LABORATORIES INC.

Client /Project:

Contact Info
Name: APEX DRILLING
Address:
City: State: ZIP:
Phone / Email:

Definitions
DW - Drinking Water; NP - Non-Potable Water; S - Solid
(+) Container Type: P - Plastic; G - Glass; T - Teflon©
CM - Custody Maintained; CTU - Custody Transfer Unbroken; CT - Corrected Temperature; SUB - Subcontracted Analysis

NELAP ACCREDITED LABORATORY
T104704371
TX239

Aqua-Tech Laboratories, Inc.

Austin	Bryan
3512 Montopolis Drive Austin, TX 78744 512.301.9559	635 Phil Gramm Blvd. Bryan, TX 77807 979.778.3707

Test results meet all accreditation/certification requirements unless stated otherwise.

Work Order / C-O-C: 1054-7
Page 1 of 2
V-0023 R03

By relinquishing the samples listed below to Aqua-Tech, the client agrees to the following terms.
Samples will be analyzed by a method that is within Aqua-Tech Laboratories' NELAC fields of accreditation. Analytes requiring a certified method that is not within Aqua-Tech's fields of accreditation will be subcontracted to a NELAC certified lab that is certified for that method. Clients will be notified of the subcontract lab's details. Other analytes not requiring accreditation will be analyzed by a compendial method. If a specific method is required, the client will note the method in the "Analysis Requested" column. The client approves all method modifications documented by Aqua-Tech or the subcontract lab. A current list of Aqua-Tech's NELAC fields of accreditation and other methods are available on request.

Sample Custody

Relinquished by (print & sign): X	☑ Sampler ☐ Client ☐ ATL Field	Date: 1-5-21 Time: X12:41	☐ Iced / Refrig ☐ Custody Sealed
Received by (print & sign):	☐ Client ☐ ATL Field	Date: Time:	☐ Iced / Refrig ☐ CM / CTU
Relinquished by (print & sign):	☐ Client ☐ ATL Field	Date: Time:	☐ Iced / Refrig ☐ CM / CTU
Received by (print & sign):	☐ Client ☐ ATL Field	Date: Time:	☐ Iced / Refrig ☐ CM / CTU
Relinquished by (print & sign):	☐ Client ☐ ATL Field	Date: Time:	☐ Iced / Refrig ☐ CM / CTU / sealed
Received by (print & sign): Christie Tonnu	☑ Lab	Date: 1/5/21 Time: 1241	☑ Cond Good ☑ Iced / Refrig ☑ CM / CTU

NFE<CTT?

Client Comments:

*** Preservatives**
1 < 6 °C (unfrozen)
2 H2SO4
3 HCl
4 HNO3
5 Na2S2O3 0765068
6 NaOH
7

Receipt in Lab

Cooler ID:	clt	
Temperature (°C): read / CT	16.4 / 16.4	NA CTT?
Preservation Correct?	YES (NO)	YES NO
Post Preservatives?	(YES) NO	YES NO
Thermometer ID:	07644480	
pH Paper ID:	07559871	

Lab Comments:

Field Sample ID (record field data for each sample in space below)	Start Date	Start Time	End Date	End Time	Composite Type	Sample Matrix	Container(s): Bottle Count	Volume (Size in L)	Type (+)	Preservative(s) *	LAB USE ONLY BELOW (initials CTT): Cooler ID	pH Check	SUB	WORK ORDER: see below
Legacy Hills #7	1-5-21	11:00	—		Grab	DW	1	~~0.12~~ 0.15	StP	1, 5	clt	—	—	Sample: EDD1054-01A
Analysis Requested & Comments: Bact-PA; Total Coliform P/A; wrong volume <CTT>														
Legacy Hills #7	1-5-21	11:00	—		G	DW	1	2	P	1	clt	—	ANA	Sample: EDD1055-01A
Analysis Requested & Comments: SEE ATTACHED: Cl, cond, F, Fe, NO2, NO3, Mn, pH, SO4, hardness, TDS														
Legacy Hills #9	1-5-21	10:00	—		G	DW	1	0.15	StP	1,5	clt	—	—	Sample: EDD1056-01A
Analysis Requested & Comments: Bact-PA														
Legacy Hills #9	1-5-21	10:00	—		G	DW	1	2	P	1	clt	—	ANA	Sample: EDD1057-01A
Analysis Requested & Comments: SEE ATTACHED; see above <CTT>														
														Sample: NFE<CTT>
Analysis Requested & Comments:														

Page 6 of 15 E001055_1 ATL 110720 FIN_ls 01 25 21 0953

No. 8 No. 7

Well numbers correspond to Attachment 1

The water quality from each well will need to be assesse
y Aquifer to provide adequate drinking water. Upon cor
sample will need to be collected and analyzed for the follo

- Chloride
- Conductivity
- Fluoride
- Iron
- Nitrate (as nitrogen)
- Manganese
- pH
- Sulfate
- Total hardness
- Total Dissolved Solids (TDS)
- Presence/absence of total coliform bacteria

have any questions please feel free to call me at 512-773-

Ana-Lab Corp.
2600 Dudley Rd. Kilgore, Texas 75662
P.O. Box 9000 Kilgore, Texas 75663
*Office: 903-984-0551 * Fax: 903-984-5914*

ANA LAB
Testing the Limits of Science and Service

Project
949480

AQU1-G

Aqua-Tech Laboratories
John Brien
635 Phil Gramm Blvd.
Bryan, TX 77807-9104

Printed 01/07/2021 15:33

TABLE OF CONTENTS

This report consists of this Table of Contents and the following pages:

NELAP-accredited #T104704201-20-17

Ana-Lab Corp.
2600 Dudley Rd. Kilgore, Texas 75662
P.O. Box 9000 Kilgore, Texas 75663
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ANA LAB
Testing the Limits of Science and Service

AQU1-G

Aqua-Tech Laboratories
John Brien
635 Phil Gramm Blvd.
Bryan, TX 77807-9104

Project
949480

Printed: 01/07/2021

Results

Sample Results

1952111 **E001055-01** Received: 01/06/2021

Drinking Water | Collected by: Client | Aqua-Tech Laboratori | PO:
Taken: 01/04/2021 11:00:00

EPA 300.0 2.1 Prepared: 932770 01/06/2021 15:14:00 Analyzed 932770 01/06/2021 15:14:00 ATN

	Parameter	Results	Units	RL	Flags	CAS	Bottle
NELAC	**Chloride**	**41.9**	**mg/L**	3.00			01

EPA 300.0 2.1 Prepared: 932770 01/06/2021 18:07:00 Analyzed 932770 01/06/2021 18:07:00 ATN

	Parameter	Results	Units	RL	Flags	CAS	Bottle
NELAC	**Sulfate**	**1660**	**mg/L**	10.0			01

Sample Preparation

1952111 **E001055-01** Received: 01/06/2021

01/04/2021

Prepared: 01/07/2021 09:27:45 Calculated 01/07/2021 09:27:45 CAL

z	**Environmental Fee (per Project)**	**Verified**

Cooler Return Prepared: 01/07/2021 15:00:00 Analyzed 01/07/2021 15:00:00 MG3

z	**Return Cooler/No bottles Require**	**Returned**

NELAP-accredited #T104704201-20-17

Ana-Lab Corp.
2600 Dudley Rd. Kilgore, Texas 75662
P.O. Box 9000 Kilgore, Texas 75663
*Office: 903-984-0551 * Fax: 903-984-5914*

ANA LAB
Testing the Limits of Science and Service

AQU1-G

Aqua-Tech Laboratories
John Brien
635 Phil Gramm Blvd.
Bryan, TX 77807-9104

Project
949480

Printed: 01/07/2021

Qualifiers:

We report results on an As Received or wet basis unless marked Dry Weight. Unless otherwise noted, testing was performed at Ana-labs corporate laboratory that holds the following Federal and State certificates: EPA Lab Number TX00063, US Department of Agriculture Soil Import Permit P330-17-00117, Texas Commission on Environmental Quality Commercial Drinking Water Lab Approval (Lab ID: TX219), Texas Commission on Environmental Quality NELAP T104704201-20-17, Louisiana Department of Environmental Quality Laboratory Certification (NELAP, LELAP) #02008, Louisiana Department of Health and Hospitals Drinking Water (NELAP) Certificate No LA026, Oklahoma Department of Environmental Quality TNI Laboratory Accreditation Program Certificate No. 2018-126, Arkansas Department of Environmental Quality Certification #18-068-0. The Accredited column designates accreditation by N -- NELAC, or z -- not covered under NELAC scope of accreditation.
These analytical results relate to the sample tested. This report may NOT be reproduced EXCEPT in FULL without written approval of Ana-Lab Corp. Unless otherwise specified, these test results meet the requirements of NELAC.
RL is the Reporting Limit (sample specific quantitation limit) and is at or above the Method Detection Limit (MDL). CAS is Chemical Abstract Service number. RL is our Reporting Limit, or Minimum Quantitation Level. The RL takes into account the Instrument Detection Limit (IDL), Method Detection Limit (MDL), and Practical Quantitation Limit (PQL), and any dilutions and/or concentrations performed during sample preparation (EQL). Our analytical result must be above this RL before we report a value in the 'Results' column of our report (without a 'J' flag). Otherwise, we report ND (Not Detected above RL), because the result is "<" (less than) the number in the RL column. MAL is Minimum Analytical Level and is typically from regulatory agencies. Unless we report a result in the result column, or interferences prevent it, we work to have our RL at or below the MAL.

Trey Peery, MA, Project Manager

NELAP-accredited #T104704201-20-17

2600 Dudley Rd. Kilgore, Texas 75662
P.O. Box 9000 Kilgore, Texas 75663
Office: 903-984-0551 * Fax: 903-984-5914

ANA LAB
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RESULTS

Project
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Printed 01/07/2021

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Aqua-Tech Laboratories
John Brien
635 Phil Gramm Blvd.
Bryan, TX 77807-9104

CAS	Parameter	Results	MDL	SDL	MQL	MQLAdj	Flag	Units	Target	Bottle	Dilute
Drinking Water	**Ion Chromatography**										**EPA 300.0 2.1**
1952111	E001055-01										
		Collection:	01/04/2021	11:00:00	Client				*Received:*	01/06/2021	
	Prepared: 932770			*Analyzed:*	932770			1/6/21	15:14:00		
	Chloride	**41.9**	0.0385	0.385	0.300	3.00		**mg/L**	250 Secondary Standard	01	10.00
	Sulfate	**1660**	0.0871	8.71	0.100	10.0		**mg/L**	250 Secondary Standard	01	100.00

MDL is Method Detection Limit (40 CFR 136 Appendix B)
SDL is Sample Detection Limit and is the adjusted MDL (sample specific dilutions, dry weight)
MQL is the Method Quantitation Limit and corresponds to a low standard
MQLADJ is the Adjusted Method Quantitation Limit (dilutions, dry weight)
Qualifiers:

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P.O. Box 9000 Kilgore, Texas 75663
Office: 903-984-0551 * Fax: 903-984-5914

ANALAB
Testing the Limits of Science and Service

RESULTS

Project
949480

Printed 01/07/2021

DW

AQU1

Aqua-Tech Laboratories
John Brien
635 Phil Gramm Blvd.
Bryan, TX 77807-9104

Trey Peery, MA, Project Manager

NELAP-accredited #T104704201-20-17

Quality Control

ANALAB
Testing the Limits of Science and Service

AQU1-G

Aqua-Tech Laboratories
John Brien
635 Phil Gramm Blvd.
Bryan, TX 77807-9104

Project
949480

Printed 01/07/2021

Analytical Set 932770 EPA 300.0 2.1

Blank

Parameter	PrepSet	Reading	MDL	MQL	Units	File
Chloride	932770	0.043	0.0385	0.300	mg/L	121920307
Sulfate	932770	0.092	0.0871	0.100	mg/L	121920307

CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Chloride	9.97	10.0	mg/L	99.7	90.0 - 110	121920305
Chloride	10.0	10.0	mg/L	100	90.0 - 110	121920313
Chloride	9.85	10.0	mg/L	98.5	90.0 - 110	121920323
Chloride	9.96	10.0	mg/L	99.6	90.0 - 110	121920334
Sulfate	9.90	10.0	mg/L	99.0	90.0 - 110	121920305
Sulfate	9.92	10.0	mg/L	99.2	90.0 - 110	121920313
Sulfate	9.79	10.0	mg/L	97.9	90.0 - 110	121920323
Sulfate	9.76	10.0	mg/L	97.6	90.0 - 110	121920334

LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Chloride	932770	4.72	4.73	5.00	85.0 - 110	94.4	94.6	mg/L	0.212	20.0
Sulfate	932770	4.86	4.89	5.00	88.0 - 110	97.2	97.8	mg/L	0.615	20.0

MS

Parameter	Sample	MS	MSD	UNK	Known	Limits	MS%	MSD%	Units	RPD	Limit%
Chloride	1951388	201		135	50.0	80.0 - 120	132 *		mg/L		20.0
Chloride	1951388	196		135	50.0	80.0 - 120	122 *		mg/L		20.0
Sulfate	1951388	148		86.0	50.0	80.0 - 120	124 *		mg/L		20.0
Sulfate	1951388	144		86.0	50.0	80.0 - 120	116		mg/L		20.0

MSD

Parameter	Sample	MS	MSD	UNK	Known	Limits	MS%	MSD%	Units	RPD	Limit%
Chloride	1951863	38.2	37.7	28.2	10.0	80.0 - 120	100	95.0	mg/L	5.13	20.0
Sulfate	1951863	41.1	40.7	31.3	10.0	80.0 - 120	98.0	94.0	mg/L	4.17	20.0

* Out RPD is Relative Percent Difference: abs(r1-r2) / mean(r1,r2) * 100% Recover% is Recovery Percent: result / known * 100%

Blank - Method Blank; CCV - Continuing Calibration Verification; MS - Matrix Spike

NELAP-accredited #T104704201-20-17

AQUA-TECH LABORATORIES, INC.

ATL - Bryan Facility:
635 Phil Gramm Blvd.
Bryan, TX 77807
(979) 778-3707
Fax (979) 778-3193

ATL - Austin Facility:
3512 Montopolis Drive
Austin, TX 78744
(512) 301-9559
Fax (512) 301-9552

Chain-of-Custody & Analysis Request

SHIPPED TO:
Ana-Lab Corp. (NELAP Cert. T104704201)
2600 Dudley Road
Kilgore, TX 75662
Phone: (903) 984-0551
Fax: (903) 984-5914

C-O-C #

903 - E001055

T104704371

Page 1 of 1

All analyses must be performed by a TNI approved method certified by the TCEQ. Contact ATL's sample custodian via voice and email if your methods do not meet this criteria.

Analysis Request for: **Sample ID: E001055-01** Sampled: 01/04/21 ~~00:00~~ 1100 Matrix: Drinking Water **Laboratory ID >>** 1952111

Chloride - EPA 300.0 SO4 DW - EPA 300.0 wrong sample time <CTT>

CONTAINERS SUPPLIED: (ATL indicates cooler number in parentheses for each container - only required if more than one cooler listed below.)

( ) E001055-01 [E] - [SUB] ANA CI SO4 0.25LP
[Split from -01 A]

See Attached for Tracking # and Temp

wrong time <CTT>

Relinquished by: (print & sign) ☒ ATL-Austin ☐ ATL - Bryan ☐ Sampler Christie Tonnu	Date 1/5/21	Time ~~13:20~~ 1600	☑ Iced ☑ Custody Sealed ☐ Not Chilled	**Abbreviations:** DW - Drinking Water; NP - Non-Potable Water; S - Solid; CTU - Custody Transfer Unbroken; StP - Sterile Plastic; LP - Liter Plastic; LG - Liter Glass	
Carrier & Tracking Number: Lone Star	Cooler 1: AQU1 - Z1000QS~~5~~C wrong ID <CTT>		Sample Info "X" all that apply	**Aqua-Tech Comments and Special Instructions**	
Received by: (print & sign) ☑ Received in Lab Rayshawn Thompson Ana-Lab	Date 1/6/20	Time 0910	☑ Received Iced ☑ CTU ☑ Condition Good ☐ Not Rec'd Iced	5 DAY TAT	

Line below documents condition at receipt in lab (shipped to) listed above.

Cooler Temperature (°C)	Temp. Read (TR)	Corrected Temp. (CT)	Thermometer ID
Cooler 1			
N/A	N/A	N/A	

Please email reports to:
reporting@aqua-techlabs.com

Please return cooler(s) to:
Austin Facility

BRET

949480 CoC Print Group 001 of 001

LSO
It's all in the delivery.

Airbill No. Z1000QSC

LSO
1-800-800-8984
www.lso.com

SHIP TO:
RECEIVING
ANA LAB CORP
2600 DUDLEY RD
KILGORE, TX 75662
9039840551

From:
CHRISTIE TONNU
AQUA TECH LABS
3512 MONTOPOLIS DR
AUSTIN, TX 78744
5123019559

G GGG **LSO ECONOMY NEXT DAY**
3:00 IN MOST AREAS
LATER IN REMOTE AREAS

PRINT DATE: 12/29/2020 REF 3:
QUICKCODE: WEIGHT: 20.00LBS
REF 1: 1D00V.0000 REF 2:

1/6 0925 IG
Date Time Tech
Temp: 2.1/2.1 C
Therm#: 6443 Corr Fact: 0.0 C

Fold on above line and place shipping label in pouch on package. Please be sure the barcodes and addresses can be read and scanned. Shipping Instructions

1. Fold this page along the horizontal line above.
2. Place this Airbill in the shipping label pouch on the package you are shipping. Please be sure the barcodes and addresses can be read and scanned.
3. To locate a drop box near you, click on **Find A Drop Box** from the home page main menu.
4. To schedule a pickup, click on **Request Pickup**.

WARNING: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your Lone Star Overnight account number.

This label is valid for use for 3 months from the date printed. Use of expired labels may result in delayed billing and / or additional research charges. LIMIT OF LIABILITY: We are not responsible for claims in excess of $100 for any reason unless you: 1) declare a greater value (not to exceed $25,000); 2) pay an additional fee; 3) and document your actual loss in a timely manner. We will not pay any claim in excess of the actual loss. We are not liable for any special or consequential damages. Additional limitations of liability are contained in our current Service Guide. If you ask us to deliver a package without obtaining a delivery signature, you release us of all liability for claims resulting from such service. NO DELIVERY SIGNATURE WILL BE OBTAINED FOR 8:30 AM DELIVERIES OR RESIDENTIAL DELIVERIES.

Water Quality

Well No. 9

Email information for report date:
1/8/21 17:08

E001056

Apex Drilling

Attn: Michael Becker
apexdrilling.becker@yahoo.com

PO Box 867
Marble Falls, TX 78654

******Attention Austin Laboratory Clients******
Aqua-Tech is excited to announce that our Austin Laboratory is expanding and moving to a new location!

We will close our current Austin Laboratory location on Friday, October 23, 2020 at 12:00 p.m. to begin the moving process and will re-open at our new location on Monday, October 26 at 8:00 a.m.

Austin Laboratory address as of October 26, 2020:
3512 Montopolis Drive
Austin, TX 78744

Thank you for your business,
June M. Brien
Executive Technical Director

CORPORATE OFFICE
635 Phil Gramm Boulevard
Bryan, TX 77807
Phone: (979) 778-3707
Fax: (979) 778-3193

AQUA-TECH LABORATORIES, INC.

AUSTIN OFFICE
3512 Montopolis Dr. Suite A
Austin, TX 78744
Phone: (512) 301-9559
Fax: (512) 301-9552

The analyses summarized in this report were performed by Aqua-Tech Laboratories, Inc. unless otherwise noted. Aqua-Tech Laboratories, Inc. holds accreditation from the State of Texas in accordance with TNI and/or through the TCEQ Drinking Water Commercial Laboratory Approval Program.

The following abbreviations indicate certification status:

NEL	TNI accredited parameter.
ANR	Accreditation not required by the State of Texas.
DWP	Accreditation through the TCEQ Drinking Water Commercial Laboratory Approval Program.
INF	Aqua-Tech Laboratories, Inc. is not accredited for this parameter. It is reported on an informational basis only.

Subcontracted data summarized in this report is indicated by "Sub" in the Lab column.

TCEQ DW Lab ID TX 239

General Definitions:

NR	Not Reported.
RPD	Relative Percent Difference.
% R	Percent Recovery.
dry	Results with the "dry" unit designation are reported on a "dry weight" basis.
SQL	The Sample Quantitation Limit is the value below which the parameter cannot reliably be detected. The SQL includes all sample preparations, dilutions and / or concentrations.
Adj MDL	The Adjusted Method Detection Limit is the MDL value adjusted for any sample dilutions or concentrations .
MDL	The Method Detection Limit is the lowest theoretical value that is statistically different from zero for a specific method, taking into account all preparation steps and instrument settings.

All samples are reported on an "as received" basis unless the designation "dry" is added to the reported unit.

Copies of Aqua-Tech Laboratories, Inc. procedures and individual sampling plans are available upon request. Note that samples are collected by Aqua-Tech Laboratories, Inc. personnel unless otherwise noted in the "Sample Collected" field of this report as "Client" or "CLT".

Samples included in this report were received in acceptable condition according to Aqua-Tech Laboratories, Inc. procedures and 40 CFR, Chapter I, Subchapter D, Part 136.3, TABLE II. - *Required containers, preservation techniques, and holding times*, unless otherwise noted in this report.

Record Retention:

All reports, raw data, and associated quality control data are kept on file for 10 years before being destroyed. Any client that would like copies of records must contact Aqua-Tech Laboratories, Inc. no later than six months prior to the scheduled disposal. An administrative fee for retrieval and distribution will apply.

This report was approved by:

June M. Brien, Technical Director

corp@aqua-techlabs.com www.aqua-techlabs.com

CORPORATE OFFICE
635 Phil Gramm Boulevard
Bryan, TX 77807
Phone: (979) 778-3707
Fax: (979) 778-3193

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AUSTIN OFFICE
3512 Montopolis Dr. Suite A
Austin, TX 78744
Phone: (512) 301-9559
Fax: (512) 301-9552

Analytical Report

Apex Drilling

Report Printed: **1/8/21** **17:08**

E001056

LEGACY HILLS NO9

Collected: 01/05/21 10:00 by CLIENT
Received: 01/05/21 12:41 by Christie Tonnu

Type: Grab
Matrix: Drinking Water
C-O-C #: 1054-7

Lab ID# E001056-01

	Result	Units	Notes	MDL	Adj MDL	SQL	Lab	Analyzed	Method	Batch	
Microbiological Analyses											
Total Coliforms	**Absent**	N/A		N/A	**N/A**	N/A	*Austin*	01/05/21 15:21 KT	SM9223 B 2004	M123260	NEL
Escherichia coli (E.coli)	**Absent**	N/A		N/A	**N/A**	N/A	*Austin*	01/05/21 15:21 KT	SM9223 B 2004	M123260	NEL

Jon and Tami Shake
W 411 Old Red Ranch Rd
Dripping Springs TX 78620

Microbiological Analyses - Quality Control

	Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	Log10 Comparison Range	Control Limit	Batch	
Escherichia coli (E.coli) - SM9223 B 2004														*Austin*
Duplicate	Absent	N/A		N/A	N/A	01/05/21 15:11 KT		Absent				200	M123260	
Blank	Absent	N/A		N/A	N/A	01/05/21 15:21 KT							M123260	
Total Coliforms - SM9223 B 2004														*Austin*
Duplicate	Absent	N/A		N/A	N/A	01/05/21 15:11 KT		Absent				200	M123260	
Blank	Absent	N/A		N/A	N/A	01/05/21 15:21 KT							M123260	

Sample Preparation Summary

Sample	Method	Prepared	Lab	Bottle	Initial	Units	Final	Units	External Dilution Factor	Batch
E001056-01										
Escherichia coli (E.coli)	SM9223 B 2004	1/5/21 15:05 KT	Austin	A	100	mL	100	mL	1	M123260
Total Coliforms	SM9223 B 2004	1/5/21 15:05 KT	Austin	A	100	mL	100	mL	1	M123260

Chain-of-Custody and Analysis Request

AQUA-TECH LABORATORIES INC.

Client /Project:

Contact Info
Name: APEX DRILLING
Address:
City: State: ZIP:
Phone / Email:

Definitions
DW - Drinking Water; NP - Non-Potable Water; S - Solid
(+) Container Type: P - Plastic; G - Glass; T - Teflon©
CM - Custody Maintained; CTU - Custody Transfer Unbroken; CT - Corrected Temperature; SUB - Subcontracted Analysis

NELAP ACCREDITED LABORATORY
T104704371
TX239

Aqua-Tech Laboratories, Inc.

Austin	Bryan
3512 Montopolis Drive Austin, TX 78744 512.301.9559	635 Phil Gramm Blvd. Bryan, TX 77807 979.778.3707

Test results meet all accreditation/certification requirements unless stated otherwise.

Work Order / C-O-C: 1054-7
Page 1 of 2
V-0023 R03

By relinquishing the samples listed below to Aqua-Tech, the client agrees to the following terms.
Samples will be analyzed by a method that is within Aqua-Tech Laboratories' NELAC fields of accreditation. Analytes requiring a certified method that is not within Aqua-Tech's fields of accreditation will be subcontracted to a NELAC certified lab that is certified for that method. Clients will be notified of the subcontract lab's details. Other analytes not requiring accreditation will be analyzed by a compendial method. If a specific method is required, the client will note the method in the "Analysis Requested" column. The client approves all method modifications documented by Aqua-Tech or the subcontract lab. A current list of Aqua-Tech's NELAC fields of accreditation and other methods are available on request.

Sample Custody

Relinquished by (print & sign): X	☑ Sampler ☐ Client ☐ ATL Field	Date: 1-5-21 Time: 12:41	☐ Iced / Refrig ☐ Custody Sealed
Received by (print & sign):	☐ Client ☐ ATL Field	Date: Time:	☐ Iced / Refrig ☐ CM / CTU
Relinquished by (print & sign):	☐ Client ☐ ATL Field	Date: Time:	☐ Iced / Refrig ☐ CM / CTU
Received by (print & sign):	☐ Client ☐ ATL Field	Date: Time:	☐ Iced / Refrig ☐ CM / CTU
Relinquished by (print & sign):	☐ Client ☐ ATL Field	Date: Time:	☐ Iced / Refrig ☐ CM / CTU / sealed
Received by (print & sign): Christie Tonnu	☑ Lab	Date: 1/5/21 Time: 1241	☑ Cond Good ☑ Iced / Refrig ☑ CM / CTU

NFE<CTT?

Client Comments:

*** Preservatives**
1 < 6 °C (unfrozen)
2 H2SO4
3 HCl
4 HNO3
5 Na2S2O3 0765068
6 NaOH
7

Receipt in Lab

Cooler ID:	clt	
Temperature (°C): read / CT	16.4 / 16.4	NA CTT?
Preservation Correct ?	YES (NO)	YES NO
Post Preservatives ?	(YES) NO	YES NO
Thermometer ID:	07644480	
pH Paper ID:	0755987	

Lab Comments:

Field Sample ID (record field data for each sample in space below)	Start Date	Start Time	End Date	End Time	Composite Type	Sample Matrix	Container(s) Bottle Count	Volume (Size in L)	Type (+)	Preservative(s) *	LAB USE ONLY BELOW (initials CTT) Cooler ID	pH Check	SUB	WORK ORDER: see below
Legacy Hills #7	1-5-21	11:00	—		Grab	DW	1	~~0.12~~ 0.15	StP	1, 5	clt	—	—	Sample: EQ01054-01A
Analysis Requested & Comments: Bact-PA — Total Coliform P/A								wrong volume <CTT>						
Legacy Hills #7	1-5-21	11:00	—		G	DW	1	2	P	1	clt	—	ANA	Sample: EQ01055-01A
Analysis Requested & Comments: SEE ATTACHED • Cl, cond, F, Fe, NO2, NO3, Mn, pH, • SO4, hardness, TDS														
Legacy Hills #9	1-5-21	10:00	—		G	DW	1	0.15	StP	1,5	clt	—	—	Sample: EQ01056-01A
Analysis Requested & Comments: Bact-PA														
Legacy Hills #9	1-5-21	10:00	—		G	DW	1	2	P	1	clt	—	ANA	Sample: EQ01057-01A
Analysis Requested & Comments: SEE ATTACHED — see above <CTT>														
														Sample: NFE<CTT>
Analysis Requested & Comments:														

No. 8 No. 7

Well numbers correspond to Attachment 1

The water quality from each well will need to be assesse
y Aquifer to provide adequate drinking water. Upon cor
sample will need to be collected and analyzed for the follo

- Chloride
- Conductivity
- Fluoride
- Iron
- Nitrate (as nitrogen)
- Manganese
- pH
- Sulfate
- Total hardness
- Total Dissolved Solids (TDS)
- Presence/absence of total coliform bacteria

have any questions please feel free to call me at 512-773-

Email information for report date:
1/25/21 14:36

E001057

Apex Drilling

Attn: Michael Becker
apexdrilling.becker@yahoo.com

PO Box 867
Marble Falls, TX 78654

******Attention Austin Laboratory Clients******
Aqua-Tech is excited to announce that our Austin Laboratory is expanding and moving to a new location!

We will close our current Austin Laboratory location on Friday, October 23, 2020 at 12:00 p.m. to begin the moving process and will re-open at our new location on Monday, October 26 at 8:00 a.m.

Austin Laboratory address as of October 26, 2020:
3512 Montopolis Drive
Austin, TX 78744

Thank you for your business,
June M. Brien
Executive Technical Director

CORPORATE OFFICE
635 Phil Gramm Boulevard
Bryan, TX 77807
Phone: (979) 778-3707
Fax: (979) 778-3193

AQUA-TECH LABORATORIES, INC.

AUSTIN OFFICE
3512 Montopolis Dr. Suite A
Austin, TX 78744
Phone: (512) 301-9559
Fax: (512) 301-9552

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TCEQ DW Lab ID TX 239

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% R	Percent Recovery.
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Samples included in this report were received in acceptable condition according to Aqua-Tech Laboratories, Inc. procedures and 40 CFR, Chapter I, Subchapter D, Part 136.3, TABLE II. - *Required containers, preservation techniques, and holding times*, unless otherwise noted in this report.

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This report was approved by:

June M. Brien, Technical Director

corp@aqua-techlabs.com www.aqua-techlabs.com

CORPORATE OFFICE
635 Phil Gramm Boulevard
Bryan, TX 77807
Phone: (979) 778-3707
Fax: (979) 778-3193

AQUA-TECH LABORATORIES, INC.

AUSTIN OFFICE
3512 Montopolis Dr. Suite A
Austin, TX 78744
Phone: (512) 301-9559
Fax: (512) 301-9552

Analytical Report

Apex Drilling

Report Printed: **1/25/21** **14:36**

E001057

Legacy Hills #9

Collected: 01/05/21 10:00 by CLIENT
Received: 01/05/21 12:41 by Christie Tonnu

Type: Grab
Matrix: Drinking Water
C-O-C #: 1054-7

Lab ID# E001057-01

	Result	Units	Notes	MDL	Adj MDL	SQL	Lab	Analyzed	Method	Batch	
General Chemistry											
Total Dissolved Solids	**2880**	mg/L		25.0	100	100	*Bryan*	01/06/21 13:10 MRH	SM2540 C 2011	M123261	NEL
Nitrate as N (NO3N)	**<0.0200**	mg/L			0.0200	0.0200	*Calc*	01/07/21 13:06 KT	SM4500-NO3-F 2011	[CALC]	NEL
Nitrite as N	**<0.01**	mg/L	J (0.002)	0.002	0.002	0.01	*Austin*	01/06/21 10:38 KT	SM4500 NO2- B 2011	M123280	NEL
Nitrate/Nitrite as N	**<0.02**	mg/L		0.02	0.02	0.02	*Bryan*	01/07/21 13:06 EMT	SM4500-NO3-F 2011	M123327	ANR
Total Hardness (EDTA) as CaCO3	**2050**	mg/L		1.00	25.0	25.0	*Bryan*	01/20/21 08:15 MRH	SM2340 C 2011	M123865	NEL
Fluoride	**2.03**	mg/L		0.04	0.04	0.10	*Bryan*	01/19/21 08:08 MRH	SM4500-F C 2011	M123792	NEL
pH, Lab	**7.6**	S.U.	Hold-03		N/A	N/A	*Austin*	01/06/21 14:59 KT	SM4500-H+ B 2011	M123288	DWP
Temperature @ pH Analysis	**23.9**	Deg. C			N/A	N/A	*Austin*	01/06/21 14:59 KT	SM4500-H+ B 2011	M123288	DWP
Specific Conductance (adjusted to 25.0°C)	**3460**	uS/cm		2.00	5.00	5.00	*Bryan*	01/22/21 11:06 MRH	SM2510 B 2011	M123973	DWP,NEL
Metals (Total)											
Iron	**0.046**	mg/L		0.002	0.002	0.010	*Bryan*	01/07/21 18:23 PNS	EPA 200.7 R4.4	M123370	NEL
Manganese	**0.007**	mg/L		0.002	0.002	0.005	*Bryan*	01/07/21 18:23 PNS	EPA 200.7 R4.4	M123370	NEL

Please see the attached subcontract report for subcontracted data.

Explanation of Notes

Hold-03	This parameter was outside of EPA holding at the time the sample was received in the laboratory.
J	Analyte detected below the SQL but above the MDL.

CORPORATE OFFICE
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Fax: (512) 301-9552

Analytical Report

Apex Drilling

Report Printed: **1/25/21** **14:36**

E001057

General Chemistry - Quality Control

	Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch	
Fluoride - SM4500-F C 2011														*Bryan*
Initial Cal Check	0.42	mg/L				01/19/21 08:08 MRH	0.428		97.4	90 - 110			2101170	
Low Cal Check	0.10	mg/L				01/19/21 08:08 MRH	0.0999		98.9	70 - 130			2101170	
Blank	<0.10	mg/L		0.04	0.10	01/19/21 08:08 MRH							M123792	
LCS	0.79	mg/L		0.04	0.10	01/19/21 08:08 MRH	0.799		98.6	90 - 110			M123792	
LCS Dup	0.77	mg/L		0.04	0.10	01/19/21 08:08 MRH	0.799		96.6	90 - 110	2.05	6.23	M123792	
Matrix Spike	3.05	mg/L		0.04	0.10	01/19/21 08:08 MRH	0.799	2.15	113	78.1 - 125			M123792	
Matrix Spike Dup	3.06	mg/L		0.04	0.10	01/19/21 08:08 MRH	0.799	2.15	114	78.1 - 125	1.10	5.72	M123792	
Nitrate/Nitrite as N - SM4500-NO3-F 2011														*Bryan*
Initial Cal Check	1.39	mg/L				01/07/21 13:06 EMT	1.40		99.4	90 - 110			2101055	
Blank	<0.02	mg/L		0.02	0.02	01/07/21 13:06 EMT							M123327	
LCS	0.46	mg/L		0.02	0.02	01/07/21 13:06 EMT	0.500		93.0	91.3 - 109			M123327	
LCS Dup	0.47	mg/L		0.02	0.02	01/07/21 13:06 EMT	0.500		94.2	91.3 - 109	1.28	6.8	M123327	
Matrix Spike	0.63	mg/L		0.02	0.02	01/07/21 13:06 EMT	0.500	0.13	99.8	94.7 - 117			M123327	
Matrix Spike Dup	0.62	mg/L		0.02	0.02	01/07/21 13:06 EMT	0.500	0.13	98.8	94.7 - 117	1.01	8.65	M123327	
MRL Check	0.02	mg/L		0.02	0.02	01/07/21 13:06 EMT	0.0200		110	70 - 130			M123327	
Nitrite as N - SM4500 NO2- B 2011														*Austin*
Blank	<0.01	mg/L		0.002	0.01	01/06/21 10:38 KT							M123280	
LCS	0.08	mg/L		0.002	0.01	01/06/21 10:38 KT	0.0800		99.3	90 - 110			M123280	
LCS Dup	0.08	mg/L		0.002	0.01	01/06/21 10:38 KT	0.0800		103	90 - 110	3.91	8.12	M123280	
Matrix Spike	0.08	mg/L		0.002	0.01	01/06/21 10:38 KT	0.0800	<0.01	96.3	70.6 - 117			M123280	
Matrix Spike Dup	0.08	mg/L		0.002	0.01	01/06/21 10:38 KT	0.0800	<0.01	97.6	70.6 - 117	1.36	8.18	M123280	
MRL Check	<0.01	mg/L	*J (0.009)*	0.002	0.01	01/06/21 10:38 KT	0.0100		94.2	70 - 130			M123280	
pH, Lab - SM4500-H+ B 2011														*Austin*
Duplicate	7.6	Std Units				01/06/21 14:59 KT		7.6			0.657	1.18	M123288	
Reference	6.8	Std Units				01/06/21 14:59 KT	6.86		99.7	95 - 105			M123288	
Reference	9.1	Std Units				01/06/21 14:59 KT	9.18		99.3	95 - 105			M123288	
Reference	6.9	Std Units				01/06/21 14:59 KT	6.86		100	95 - 105			M123288	
Reference	9.1	Std Units				01/06/21 14:59 KT	9.18		99.6	95 - 105			M123288	

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Analytical Report

Apex Drilling

Report Printed: **1/25/21** **14:36**

E001057

General Chemistry - Quality Control

	Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch	
Specific Conductance (adjusted to 25.0°C) - SM2510 B 2011														*Bryan*
Initial Cal Check	513	uS/cm				01/21/21 09:41 MRH	484		106	90 - 110			2101215	
Blank	<2.00	uS/cm		2.00	2.00	01/22/21 11:06 MRH							M123973	
Duplicate	804	uS/cm		2.00	2.00	01/22/21 11:06 MRH		803			0.124	2	M123973	
LCS	1440	uS/cm		2.00	2.00	01/22/21 11:06 MRH	1410		102	90 - 110			M123973	
LCS Dup	1370	uS/cm		2.00	2.00	01/22/21 11:06 MRH	1410		97.0	90 - 110	5.41	7.82	M123973	
Total Dissolved Solids - SM2540 C 2011														*Bryan*
Blank	<25.0	mg/L		25.0	25.0	01/06/21 13:10 MRH							M123261	
Duplicate	240	mg/L		100	100	01/06/21 13:10 MRH		232			3.39	9.13	M123261	
Reference	460	mg/L		100	100	01/06/21 13:10 MRH	501		91.8	81 - 121			M123261	
Total Hardness (EDTA) as CaCO3 - SM2340 C 2011														*Bryan*
Initial Cal Check	52.0	mg/L				01/20/21 08:15 MRH	54.4		95.6	85 - 115			2101193	
Blank	<1.00	mg/L		1.00	1.00	01/20/21 08:15 MRH							M123865	
Duplicate	11.0	mg/L		1.00	1.00	01/20/21 08:15 MRH		10.0			9.52	9.52	M123865	
LCS	100	mg/L		1.00	1.00	01/20/21 08:15 MRH	100		100	90 - 110			M123865	
LCS Dup	104	mg/L		1.00	1.00	01/20/21 08:15 MRH	100		104	90 - 110	3.92	6.47	M123865	
Matrix Spike	110	mg/L		1.00	1.00	01/20/21 08:15 MRH	100	10.0	100	87.6 - 111			M123865	
MRL Check	5.00	mg/L		1.00	1.00	01/20/21 08:15 MRH	4.00		125	70 - 130			M123865	

Metals (Total) - Quality Control

	Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch	
Iron - EPA 200.7 R4.4														*Bryan*
Blank	<0.010	mg/L		0.002	0.010	01/07/21 17:41 PNS							M123370	
LCS	1.12	mg/L		0.002	0.010	01/07/21 17:44 PNS	1.00		112	84.5 - 115.4			M123370	
LCS Dup	0.969	mg/L		0.002	0.010	01/07/21 18:05 PNS	1.00		96.9	84.5 - 115.4	14.3	20	M123370	
Duplicate	0.045	mg/L		0.002	0.010	01/07/21 18:09 PNS		0.046			2.05	20	M123370	
Matrix Spike	0.922	mg/L		0.002	0.010	01/07/21 18:12 PNS	1.00	0.046	87.7	69.5 - 130.4			M123370	
Manganese - EPA 200.7 R4.4														*Bryan*
Blank	<0.005	mg/L		0.002	0.005	01/07/21 17:41 PNS							M123370	
LCS	1.13	mg/L		0.002	0.005	01/07/21 17:44 PNS	1.00		113	84.5 - 115.4			M123370	
LCS Dup	1.05	mg/L		0.002	0.005	01/07/21 18:05 PNS	1.00		105	84.5 - 115.4	7.58	20	M123370	
Duplicate	0.007	mg/L		0.002	0.005	01/07/21 18:09 PNS		0.007			0.804	20	M123370	
Matrix Spike	0.968	mg/L		0.002	0.005	01/07/21 18:12 PNS	1.00	0.007	96.2	69.5 - 130.4			M123370	

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Analytical Report

Apex Drilling

Report Printed: **1/25/21** **14:36**

E001057

Preparation Procedures - Quality Control

	Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch
Turbidity - SM2130 B 2011													*Bryan*

Sample Preparation Summary

Sample	Method	Prepared	Lab	Bottle	Initial	Units	Final	Units	External Dilution Factor	Batch
E001057-01										
Fluoride	SM4500-F C 2011	1/19/21 8:08 MRH	Bryan	C	25.0	mL	25.0	mL	1	M123792
Iron	EPA 200.7 R4.4	1/7/21 13:54 BLC	Bryan	B	10.0	mL	10.2	mL	1	M123370
Manganese	EPA 200.7 R4.4	1/7/21 13:54 BLC	Bryan	B	10.0	mL	10.2	mL	1	M123370
Nitrate/Nitrite as N	SM4500-NO3-F 2011	1/7/21 9:20 EMT	Bryan	D	10.0	mL	10.0	mL	1	M123327
Nitrite as N	SM4500 NO2- B 2011	1/6/21 10:38 KT	Austin	A	25.0	mL	25.0	mL	1	M123280
pH, Lab	SM4500-H+ B 2011	1/6/21 14:59 KT	Austin	A	50.0	mL	50.0	mL	1	M123288
Sample Acidified to pH<2 in Lab	N/A	1/5/21 13:00 CTT	Bryan	B	100	mL	100	mL	1	M123213
Specific Conductance (adjusted to 25.0°C)	SM2510 B 2011	1/22/21 11:06 MRH	Bryan	C	20.0	mL	50.0	mL	1	M123973
Temperature @ pH Analysis	SM4500-H+ B 2011	1/6/21 14:59 KT	Austin	A	50.0	mL	50.0	mL	1	M123288
Total Dissolved Solids	SM2540 C 2011	1/6/21 13:10 MRH	Bryan	C	25.0	mL	100	mL	1	M123261
Total Hardness (EDTA) as CaCO3	SM2340 C 2011	1/20/21 8:15 MRH	Bryan	B	2.00	mL	50.0	mL	1	M123865
Turbidity	SM2130 B 2011	1/7/21 13:24 BLC	Bryan	B	10.0	mL	10.0	mL	1	M123367
E001057-01RE1										
Sample Acidified to pH<2 in Lab	N/A	1/5/21 13:00 CTT	Bryan	E	100	mL	100	mL	1	M123236

Chain-of-Custody and Analysis Request

Aqua-Tech Laboratories, Inc.

Austin	Bryan
3512 Montopolis Drive Austin, TX 78744 512.301.9559	635 Phil Gramm Blvd. Bryan, TX 77807 979.778.3707

T104704371
TX239

Test results meet all accreditation/certification requirements unless stated otherwise.

Work Order / C-O-C: 1054-7
Page 1 of 2
V-0023 R03

Client /Project:

Contact Info
Name: APEX DRILLING
Address:
City: State: ZIP:
Phone / Email:

Definitions
DW - Drinking Water; NP - Non-Potable Water; S - Solid
(+) Container Type: P - Plastic; G - Glass; T - Teflon©
CM - Custody Maintained
CTU - Custody Transfer Unbroken
CT - Corrected Temperature
SUB - Subcontracted Analysis

By relinquishing the samples listed below to Aqua-Tech, the client agrees to the following terms.
Samples will be analyzed by a method that is within Aqua-Tech Laboratories' NELAC fields of accreditation. Analytes requiring a certified method that is not within Aqua-Tech's fields of accreditation will be subcontracted to a NELAC certified lab that is certified for that method. Clients will be notified of the subcontract lab's details. Other analytes not requiring accreditation will be analyzed by a compendial method. If a specific method is required, the client will note the method in the "Analysis Requested" column. The client approves all method modifications documented by Aqua-Tech or the subcontract lab. A current list of Aqua-Tech's NELAC fields of accreditation and other methods are available on request.

Sample Custody

Relinquished by (print & sign): X	☑ Sampler ☐ Client ☐ ATL Field	Date: 1-5-21 Time: X 12:41	☐ Iced / Refrig ☐ Custody Sealed
Received by (print & sign):	☐ Client ☐ ATL Field	Date: Time:	☐ Iced / Refrig ☐ CM / CTU
Relinquished by (print & sign):	☐ Client ☐ ATL Field	Date: Time:	☐ Iced / Refrig ☐ CM / CTU
Received by (print & sign):	☐ Client ☐ ATL Field	Date: Time:	☐ Iced / Refrig ☐ CM / CTU
Relinquished by (print & sign):	☐ Client ☐ ATL Field	Date: Time:	☐ Iced / Refrig ☐ CM / CTU / sealed
Received by (print & sign): Christie Tonnu	☑ Lab	Date: 1/5/21 Time: 1241	☑ Cond Good ☑ Iced / Refrig ☑ CM / CTU

NFE<CTT?

Client Comments:

*** Preservatives**
1 < 6 °C (unfrozen)
2 H2SO4
3 HCl
4 HNO3
5 Na2S2O3 0765068
6 NaOH
7

Receipt in Lab

Cooler ID:	clt	
Temperature (°C): read / CT	16.4 / 16.4	NA CTT?
Preservation Correct?	YES (NO)	YES NO
Post Preservatives?	(YES) NO	YES NO
Thermometer ID:	07644480	
pH Paper ID:	07559871	

Lab Comments:

Field Sample ID (record field data for each sample in space below)	Start Date	Start Time	End Date	End Time	Composite Type	Sample Matrix	Container(s) Bottle Count	Volume (Size in L)	Type (+)	Preservative(s) *	LAB USE ONLY BELOW (initials CTT) Cooler ID	pH Check	SUB	WORK ORDER
Legacy Hills #7	1-5-21	11:00			Grab	DW	1	~~0.12~~ 0.15	StP	1, 5	clt	—	—	Sample: EDD1054-01A
Analysis Requested & Comments: Bact-PA — Total Coliform P/A								wrong volume <CTT>						
Legacy Hills #7	1-5-21	11:00			G	DW	1	2	P	1	clt	—	ANA	Sample: EDD1055-01A
Analysis Requested & Comments: SEE ATTACHED • Cl, cond, F, Fe, NO2, NO3, Mn, pH, • SO4, hardness, TDS														
Legacy Hills #9	1-5-21	10:00			G	DW	1	0.15	StP	1,5	clt	—	—	Sample: EDD1056-01A
Analysis Requested & Comments: Bact-PA														
Legacy Hills #9	1-5-21	10:00			G	DW	1	2	P	1	clt	—	ANA	Sample: EDD1057-01A
Analysis Requested & Comments: SEE ATTACHED — see above <CTT>														
														Sample: NFE<CTT>
Analysis Requested & Comments:														

No. 8 No. 7

Well numbers correspond to Attachment 1

The water quality from each well will need to be assesse
y Aquifer to provide adequate drinking water. Upon cor
sample will need to be collected and analyzed for the follo

- Chloride
- Conductivity
- Fluoride
- Iron
- Nitrate (as nitrogen)
- Manganese
- pH
- Sulfate
- Total hardness
- Total Dissolved Solids (TDS)
- Presence/absence of total coliform bacteria

have any questions please feel free to call me at 512-773-

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P.O. Box 9000 Kilgore, Texas 75663
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ANA LAB
Testing the Limits of Science and Service

Project
949481

AQU1-G

Aqua-Tech Laboratories
John Brien
635 Phil Gramm Blvd.
Bryan, TX 77807-9104

Printed 01/07/2021 15:33

TABLE OF CONTENTS

This report consists of this Table of Contents and the following pages:

NELAP-accredited #T104704201-20-17

Ana-Lab Corp.
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P.O. Box 9000 Kilgore, Texas 75663
*Office: 903-984-0551 * Fax: 903-984-5914*

ANA LAB
Testing the Limits of Science and Service

AQU1-G

Aqua-Tech Laboratories
John Brien
635 Phil Gramm Blvd.
Bryan, TX 77807-9104

Project
949481

Printed: 01/07/2021

Results

Sample Results

1952112 **E001057-01** *Received:* 01/06/2021

Drinking Water *Collected by:* Client Aqua-Tech Laboratori *PO:*
Taken: 01/05/2021 10:00:00

EPA 300.0 2.1 *Prepared:* 932770 01/06/2021 16:03:00 *Analyzed* 932770 01/06/2021 16:03:00 *ATN*

	Parameter	*Results*	*Units*	*RL*	*Flags*	*CAS*	*Bottle*
NELAC	**Chloride**	**43.6**	**mg/L**	3.00			01

EPA 300.0 2.1 *Prepared:* 932770 01/06/2021 18:32:00 *Analyzed* 932770 01/06/2021 18:32:00 *ATN*

	Parameter	*Results*	*Units*	*RL*	*Flags*	*CAS*	*Bottle*
NELAC	**Sulfate**	**2010**	**mg/L**	10.0			01

Qualifiers:

We report results on an As Received or wet basis unless marked Dry Weight. Unless otherwise noted, testing was performed at Ana-labs corporate laboratory that holds the following Federal and State certificates: EPA Lab Number TX00063, US Department of Agriculture Soil Import Permit P330-17-00117, Texas Commission on Environmental Quality Commercial Drinking Water Lab Approval (Lab ID: TX219), Texas Commission on Environmental Quality NELAP T104704201-20-17, Louisiana Department of Environmental Quality Laboratory Certification (NELAP, LELAP) #02008, Louisiana Department of Health and Hospitals Drinking Water (NELAP) Certificate No LA026, Oklahoma Department of Environmental Quality TNI Laboratory Accreditation Program Certificate No. 2018-126, Arkansas Department of Environmental Quality Certification #18-068-0. The Accredited column designates accreditation by N -- NELAC, or z -- not covered under NELAC scope of accreditation.
These analytical results relate to the sample tested. This report may NOT be reproduced EXCEPT in FULL without written approval of Ana-Lab Corp. Unless otherwise specified, these test results meet the requirements of NELAC.
RL is the Reporting Limit (sample specific quantitation limit) and is at or above the Method Detection Limit (MDL). CAS is Chemical Abstract Service number. RL is our Reporting Limit, or Minimum Quantitation Level. The RL takes into account the Instrument Detection Limit (IDL), Method Detection Limit (MDL), and Practical Quantitation Limit (PQL), and any dilutions and/or concentrations performed during sample preparation (EQL). Our analytical result must be above this RL before we report a value in the 'Results' column of our report (without a 'J' flag). Otherwise, we report ND (Not Detected above RL), because the result is "<" (less than) the number in the RL column. MAL is Minimum Analytical Level and is typically from regulatory agencies. Unless we report a result in the result column, or interferences prevent it, we work to have our RL at or below the MAL.

Trey Peery, MA, Project Manager

NELAP-accredited #T104704201-20-17

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ANA LAB
Testing the Limits of Science and Service

RESULTS

Project
949481

Printed 01/07/2021

DW

AQU1

Aqua-Tech Laboratories
John Brien
635 Phil Gramm Blvd.
Bryan, TX 77807-9104

CAS	Parameter	Results	MDL	SDL	MQL	MQLAdj	Flag	Units	Target	Bottle	Dilute
Drinking Water	**Ion Chromatography**										**EPA 300.0 2.1**
1952112	**E001057-01**										
		Collection:	01/05/2021	10:00:00	Client				*Received:*	01/06/2021	
Prepared:	***932770***			*Analyzed:*	***932770***			1/6/21	16:03:00		
	Chloride	**43.6**	0.0385	0.385	0.300	3.00		**mg/L**	250 Secondary Standard	01	10.00
	Sulfate	**2010**	0.0871	8.71	0.100	10.0		**mg/L**	250 Secondary Standard	01	100.00

MDL is Method Detection Limit (40 CFR 136 Appendix B)
SDL is Sample Detection Limit and is the adjusted MDL (sample specific dilutions, dry weight)
MQL is the Method Quantitation Limit and corresponds to a low standard
MQLADJ is the Adjusted Method Quantitation Limit (dilutions, dry weight)
Qualifiers:

We report results on an As Received or wet basis unless marked Dry Weight. Unless otherwise noted, testing was performed at Ana-labs corporate laboratory that holds the following Federal and State certificates: EPA Lab Number TX00063, US Department of Agriculture Soil Import Permit P330-17-00117, Texas Commission on Environmental Quality Commercial Drinking Water Lab Approval (Lab ID: TX219), Texas Commission on Environmental Quality NELAP T104704201-20-17, Louisiana Department of Environmental Quality Laboratory Certification (NELAP, LELAP) #02008, Louisiana Department of Health and Hospitals Drinking Water (NELAP) Certificate No LA026, Oklahoma Department of Environmental Quality TNI Laboratory Accreditation Program Certificate No. 2018-126, Arkansas Department of Environmental Quality Certification #18-068-0. The Accredited column designates accreditation by N -- NELAC, or z -- not covered under NELAC scope of accreditation.
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NELAP-accredited #T104704201-20-17

2600 Dudley Rd. Kilgore, Texas 75662
P.O. Box 9000 Kilgore, Texas 75663
Office: 903-984-0551 * Fax: 903-984-5914

ANALAB
Testing the Limits of Science and Service

RESULTS

Project
949481

Printed 01/07/2021

DW

AQU1

Aqua-Tech Laboratories
John Brien
635 Phil Gramm Blvd.
Bryan, TX 77807-9104

Trey Peery, MA, Project Manager

NELAP-accredited #T104704201-20-17

Quality Control

ANALAB
Testing the Limits of Science and Service

AQU1-G

Aqua-Tech Laboratories
John Brien
635 Phil Gramm Blvd.
Bryan, TX 77807-9104

Project
949481

Printed 01/07/2021

Analytical Set 932770 EPA 300.0 2.1

Blank

Parameter	PrepSet	Reading	MDL	MQL	Units	File
Chloride	932770	0.043	0.0385	0.300	mg/L	121920307
Sulfate	932770	0.092	0.0871	0.100	mg/L	121920307

CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Chloride	9.97	10.0	mg/L	99.7	90.0 - 110	121920305
Chloride	10.0	10.0	mg/L	100	90.0 - 110	121920313
Chloride	9.85	10.0	mg/L	98.5	90.0 - 110	121920323
Chloride	9.96	10.0	mg/L	99.6	90.0 - 110	121920334
Sulfate	9.90	10.0	mg/L	99.0	90.0 - 110	121920305
Sulfate	9.92	10.0	mg/L	99.2	90.0 - 110	121920313
Sulfate	9.79	10.0	mg/L	97.9	90.0 - 110	121920323
Sulfate	9.76	10.0	mg/L	97.6	90.0 - 110	121920334

LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Chloride	932770	4.72	4.73	5.00	85.0 - 110	94.4	94.6	mg/L	0.212	20.0
Sulfate	932770	4.86	4.89	5.00	88.0 - 110	97.2	97.8	mg/L	0.615	20.0

MS

Parameter	Sample	MS	MSD	UNK	Known	Limits	MS%	MSD%	Units	RPD	Limit%
Chloride	1951388	201		135	50.0	80.0 - 120	132 *		mg/L		20.0
Chloride	1951388	196		135	50.0	80.0 - 120	122 *		mg/L		20.0
Sulfate	1951388	148		86.0	50.0	80.0 - 120	124 *		mg/L		20.0
Sulfate	1951388	144		86.0	50.0	80.0 - 120	116		mg/L		20.0

MSD

Parameter	Sample	MS	MSD	UNK	Known	Limits	MS%	MSD%	Units	RPD	Limit%
Chloride	1951863	38.2	37.7	28.2	10.0	80.0 - 120	100	95.0	mg/L	5.13	20.0
Sulfate	1951863	41.1	40.7	31.3	10.0	80.0 - 120	98.0	94.0	mg/L	4.17	20.0

* Out RPD is Relative Percent Difference: abs(r1-r2) / mean(r1,r2) * 100% Recover% is Recovery Percent: result / known * 100%

Blank - Method Blank; CCV - Continuing Calibration Verification; MS - Matrix Spike

NELAP-accredited #T104704201-20-17

AQUA-TECH LABORATORIES, INC.

ATL - Bryan Facility:
635 Phil Gramm Blvd.
Bryan, TX 77807
(979) 778-3707
Fax (979) 778-3193

ATL - Austin Facility:
3512 Montopolis Drive
Austin, TX 78744
(512) 301-9559
Fax (512) 301-9552

Chain-of-Custody & Analysis Request

SHIPPED TO:
Ana-Lab Corp. (NELAP Cert. T104704201)
2600 Dudley Road
Kilgore, TX 75662
Phone: (903) 984-0551
Fax: (903) 984-5914

C-O-C #
733 - E001057

T104704371

Page 1 of 1

All analyses must be performed by a TNI approved method certified by the TCEQ. Contact ATL's sample custodian via voice and email if your methods do not meet this criteria.

Analysis Request for: **Sample ID: E001057-01** Sampled: 01/05/21 10:00 Matrix: Drinking Water **Laboratory ID >>** 1952112

Chloride - EPA 300.0 SO4 DW - EPA 300.0

CONTAINERS SUPPLIED: (ATL indicates cooler number in parentheses for each container - only required if more than one cooler listed below.)

( ) E001057-01 [E] - [SUB] ANA Cl SO4 0.25LP
[Split from -01 A]

See Attached for Tracking # and Temp

wrong time <CTT>

Relinquished by: (print & sign)	☒ ATL-Austin	☐ ATL - Bryan	☐ Sampler	Date	Time	☑ Iced / ☑ Custody Sealed / ☐ Not Chilled
Christie Tomm				1/5/21	~~13:19~~ 1600	

Carrier & Tracking Number: Lone Star

Cooler 1: AQU1 - Z1000QS5i

wrong ID <CTT>

Received by: (print & sign)	☑ Received in Lab	Date	Time	Sample Info "X" all that apply
Raystown Thompson Anchor		1/6/21	0910	☑ Received Iced / ☐ CTU / ☐ Condition Good / ☐ Not Rec'd Iced

Line below documents condition of sample in lab (shipped to) listed above.

Cooler Temperature (°C)	Temp. Read (TR)	Corrected Temp. (CT)	Thermometer ID
Cooler 1			
N/A	N/A	N/A	

Please email reports to:
reporting@aqua-techlabs.com

Please return cooler(s) to:
Austin Facility

Abbreviations: DW - Drinking Water; NP - Non-Potable Water; S - Solid; CTU - Custody Transfer Unbroken; StP - Sterile Plastic; LP - Liter Plastic; LG - Liter Glass

Aqua-Tech Comments and Special Instructions

5 DAY TAT

BRET

949481 CoC Print Group 001 of 001

LSO
It's all in the delivery.

Airbill No. Z1000QSC

LSO
1-800-800-8984
www.lso.com

SHIP TO:
RECEIVING
ANA LAB CORP
2600 DUDLEY RD
KILGORE, TX 75662
9039840551

From:
CHRISTIE TONNU
AQUA TECH LABS
3512 MONTOPOLIS DR
AUSTIN, TX 78744
5123019559

G GGG **LSO ECONOMY NEXT DAY**
3:00 IN MOST AREAS
LATER IN REMOTE AREAS

PRINT DATE: 12/29/2020 REF 3:
QUICKCODE: WEIGHT: 20.00LBS
REF 1: 1D00V.0000 REF 2:

1/6 0925 IG
Date Time Tech
Temp: 2.1/2.1 C
Therm#: 6443 Corr Fact: 0.0 C

Fold on above line and place shipping label in pouch on package. Please be sure the barcodes and addresses can be read and scanned. Shipping Instructions

1. Fold this page along the horizontal line above.
2. Place this Airbill in the shipping label pouch on the package you are shipping. Please be sure the barcodes and addresses can be read and scanned.
3. To locate a drop box near you, click on **Find A Drop Box** from the home page main menu.
4. To schedule a pickup, click on **Request Pickup**.

WARNING: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your Lone Star Overnight account number.

This label is valid for use for 3 months from the date printed. Use of expired labels may result in delayed billing and / or additional research charges. LIMIT OF LIABILITY: We are not responsible for claims in excess of $100 for any reason unless you: 1) declare a greater value (not to exceed $25,000); 2) pay an additional fee; 3) and document your actual loss in a timely manner. We will not pay any claim in excess of the actual loss. We are not liable for any special or consequential damages. Additional limitations of liability are contained in our current Service Guide. If you ask us to deliver a package without obtaining a delivery signature, you release us of all liability for claims resulting from such service. NO DELIVERY SIGNATURE WILL BE OBTAINED FOR 8:30 AM DELIVERIES OR RESIDENTIAL DELIVERIES.

Water Quality

Ex. Well No. 1

Email information for report date:
12/30/20 15:46

D041251

Apex Drilling

Attn: Michael Becker
apexdrilling.becker@yahoo.com

PO Box 867
Marble Falls, TX 78654

******Attention Austin Laboratory Clients******
Aqua-Tech is excited to announce that our Austin Laboratory is expanding and moving to a new location!

We will close our current Austin Laboratory location on Friday, October 23, 2020 at 12:00 p.m. to begin the moving process and will re-open at our new location on Monday, October 26 at 8:00 a.m.

Austin Laboratory address as of October 26, 2020:
3512 Montopolis Drive
Austin, TX 78744

Thank you for your business,
June M. Brien
Executive Technical Director

CORPORATE OFFICE
635 Phil Gramm Boulevard
Bryan, TX 77807
Phone: (979) 778-3707
Fax: (979) 778-3193

AQUA-TECH LABORATORIES, INC.

AUSTIN OFFICE
3512 Montopolis Dr. Suite A
Austin, TX 78744
Phone: (512) 301-9559
Fax: (512) 301-9552

The analyses summarized in this report were performed by Aqua-Tech Laboratories, Inc. unless otherwise noted. Aqua-Tech Laboratories, Inc. holds accreditation from the State of Texas in accordance with TNI and/or through the TCEQ Drinking Water Commercial Laboratory Approval Program.

The following abbreviations indicate certification status:

NEL	TNI accredited parameter.
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DWP	Accreditation through the TCEQ Drinking Water Commercial Laboratory Approval Program.
INF	Aqua-Tech Laboratories, Inc. is not accredited for this parameter. It is reported on an informational basis only.

Subcontracted data summarized in this report is indicated by "Sub" in the Lab column.

TCEQ DW Lab ID TX 239

General Definitions:

NR	Not Reported.
RPD	Relative Percent Difference.
% R	Percent Recovery.
dry	Results with the "dry" unit designation are reported on a "dry weight" basis.
SQL	The Sample Quantitation Limit is the value below which the parameter cannot reliably be detected. The SQL includes all sample preparations, dilutions and / or concentrations.
Adj MDL	The Adjusted Method Detection Limit is the MDL value adjusted for any sample dilutions or concentrations .
MDL	The Method Detection Limit is the lowest theoretical value that is statistically different from zero for a specific method, taking into account all preparation steps and instrument settings.

All samples are reported on an "as received" basis unless the designation "dry" is added to the reported unit.

Copies of Aqua-Tech Laboratories, Inc. procedures and individual sampling plans are available upon request. Note that samples are collected by Aqua-Tech Laboratories, Inc. personnel unless otherwise noted in the "Sample Collected" field of this report as "Client" or "CLT".

Samples included in this report were received in acceptable condition according to Aqua-Tech Laboratories, Inc. procedures and 40 CFR, Chapter I, Subchapter D, Part 136.3, TABLE II. - *Required containers, preservation techniques, and holding times*, unless otherwise noted in this report.

Record Retention:

All reports, raw data, and associated quality control data are kept on file for 10 years before being destroyed. Any client that would like copies of records must contact Aqua-Tech Laboratories, Inc. no later than six months prior to the scheduled disposal. An administrative fee for retrieval and distribution will apply.

This report was approved by:

June M. Brien, Technical Director

corp@aqua-techlabs.com www.aqua-techlabs.com

CORPORATE OFFICE
635 Phil Gramm Boulevard
Bryan, TX 77807
Phone: (979) 778-3707
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AUSTIN OFFICE
3512 Montopolis Dr. Suite A
Austin, TX 78744
Phone: (512) 301-9559
Fax: (512) 301-9552

Analytical Report

Apex Drilling

Report Printed: **12/30/20** **15:46**

D041251

LEGACY HILLS NOEX1

Collected: 12/28/20 12:30 by CLIENT
Received: 12/28/20 14:00 by Christie Tonnu

Type: Grab
Matrix: Drinking Water
C-O-C #: 41249-52

Lab ID# D041251-01

	Result	Units	Notes	MDL	Adj MDL	SQL	Lab	Analyzed	Method	Batch	
Microbiological Analyses											
Total Coliforms	**Present**	N/A		N/A	**N/A**	N/A	*Austin*	12/28/20 16:52 KT	SM9223 B 2004	M122959	NEL
Escherichia coli (E.coli)	**Absent**	N/A		N/A	**N/A**	N/A	*Austin*	12/28/20 16:52 KT	SM9223 B 2004	M122959	NEL

Microbiological Analyses - Quality Control

	Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	Log10 Comparison Range	Log10 Comparison Control Limit	Batch	
Escherichia coli (E.coli) - SM9223 B 2004														*Austin*
Blank	Absent	N/A		N/A	N/A	12/28/20 16:52 KT							M122959	
Total Coliforms - SM9223 B 2004														*Austin*
Blank	Absent	N/A		N/A	N/A	12/28/20 16:52 KT							M122959	

Sample Preparation Summary

Sample	Method	Prepared	Lab	Bottle	Initial	Units	Final	Units	External Dilution Factor	Batch
D041251-01										
Escherichia coli (E.coli)	SM9223 B 2004	12/28/20 16:46 KT	Austin	A	100	mL	100	mL	1	M122959
Total Coliforms	SM9223 B 2004	12/28/20 16:46 KT	Austin	A	100	mL	100	mL	1	M122959

Chain-of-Custody and Analysis Request

AQUA-TECH LABORATORIES INC.

Client /Project:

Contact Info
Name: APEX DRILLING
Address:
City: State: ZIP:
Phone / Email:

Definitions
DW - Drinking Water; NP - Non-Potable Water; S - Solid
(+) Container Type: P - Plastic; G - Glass; T - Teflon©
CM - Custody Maintained; CTU - Custody Transfer Unbroken; CT - Corrected Temperature; SUB - Subcontracted Analysis

NELAP ACCREDITED LABORATORY
T104704371
TX239

Aqua-Tech Laboratories, Inc.

Austin	Bryan
3512 Montopolis Dr. Austin, TX 78744	635 Phil Gramm Blvd. Bryan, TX 77807
512.301.9559	979.778.3707

Test results meet all accreditation/certification requirements unless stated otherwise.

Work Order / C-O-C: 41249-52
Page 1 of 2
V-0023 R03

By relinquishing the samples listed below to Aqua-Tech, the client agrees to the following terms.
Samples will be analyzed by a method that is within Aqua-Tech Laboratories' NELAC fields of accreditation. Analytes requiring a certified method that is not within Aqua-Tech's fields of accreditation will be subcontracted to a NELAC certified lab that is certified for that method. Clients will be notified of the subcontract lab's details. Other analytes not requiring accreditation will be analyzed by a compendial method. If a specific method is required, the client will note the method in the "Analysis Requested" column. The client approves all method modifications documented by Aqua-Tech or the subcontract lab. A current list of Aqua-Tech's NELAC fields of accreditation and other methods are available on request.

Sample Custody

Relinquished by (print & sign): MBeckl	☑ Sampler ☐ Client ☐ ATL Field	Date: 12.28.20 Time: 14:00	☐ Iced / Refrig ☐ Custody Sealed
Received by (print & sign):	☐ Client ☐ ATL Field	Date: Time:	☐ Iced / Refrig ☐ CM / CTU
Relinquished by (print & sign):	☐ Client ☐ ATL Field	Date: Time:	☐ Iced / Refrig ☐ CM / CTU
Received by (print & sign):	☐ Client ☐ ATL Field	Date: Time:	☐ Iced / Refrig ☐ CM / CTU
Relinquished by (print & sign):	☐ Client ☐ ATL Field	Date: Time:	☐ Iced / Refrig ☐ CM / CTU / sealed
Received by (print & sign): christie Tonnu	☑ Lab	Date: 12/28/20 Time: 1400	☑ Cond Good ☑ Iced / Refrig ☑ CM / CTU

NFE2CTT?

Client Comments:

*** Preservatives**

1	< 6 °C (unfrozen)
2	H2SO4 0764386
3	HCl
4	HNO3 0753274
5	Na2S2O3 0765068
6	NaOH
7	

Receipt in Lab

Cooler ID :	clt	
Temperature (°C) : read / CT	9.3 / 9.3	NA / CTT?
Preservation Correct ?	YES (NO)	YES NO
Lost Preservatives ?	(YES) NO	YES NO
Thermometer ID :	0764480	
pH Paper ID :	0755987	

Lab Comments:

Field Sample ID (record field data for each sample in space below)	Start Date	Start Time	End Date	End Time	Composite Type	Sample Matrix	Container(s) Bottle Count	Volume (Size in L)	Type (+)	Preserv-ative(s) *	LAB USE ONLY BELOW (initials CTT) Cooler ID	pH Check	SUB	WORK ORDER	Sample
Legacy Hills #5	12.28.20	12:00	—		G	DW	1	0.15	STP	1.5	clt	—	—		"
Analysis Requested & Comments: BACT P/A												D041249-01A			
Legacy Hills #5	12.28.20	12:46	—		G	DW	1	2	P	1	clt	—	ANA		
Analysis Requested & Comments: See attached: Cl, cond, F, Fe, NO2/3, Mn, pH, SO4, hardness, TDS												D041250-01A			
LEGACY Hills #EX1	12.28.20	12:30	—		G	DW	1	0.15	STP	1.5	clt	—	—		"
Analysis Requested & Comments: BACT P/A												D041251-01A			
Legacy Hills #EX1	12.28.20	12:30	—		G	DW	1	2	P	1	clt	—	ANA		
Analysis Requested & Comments: See attached: Cl, cond, F, Fe, NO2/3, Mn, pH, SO4, hardness, TDS												D041252-01A			
															Sample: NFE2CTT?
Analysis Requested & Comments:															

see below

Page 3 of 4 D041251_1 ATL 110720 FIN_ls 12 30 20 1546

41249-52
212

No. 8 No. 7

Well numbers correspond to Attachment 1

The water quality from each well will need to be assessed
y Aquifer to provide adequate drinking water. Upon cor
sample will need to be collected and analyzed for the follo

- Chloride
- Conductivity
- Fluoride
- Iron
- Nitrate (as nitrogen)
- Manganese
- pH
- Sulfate
- Total hardness
- Total Dissolved Solids (TDS)
- Presence/absence of total coliform bacteria

have any questions please feel free to call me at 512-773-

Email information for report date:
1/19/21 17:19

D041252

Apex Drilling

Attn: Michael Becker
apexdrilling.becker@yahoo.com

PO Box 867
Marble Falls, TX 78654

******Attention Austin Laboratory Clients******
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Austin Laboratory address as of October 26, 2020:
3512 Montopolis Drive
Austin, TX 78744

Thank you for your business,
June M. Brien
Executive Technical Director

CORPORATE OFFICE
635 Phil Gramm Boulevard
Bryan, TX 77807
Phone: (979) 778-3707
Fax: (979) 778-3193

AQUA-TECH LABORATORIES, INC.

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3512 Montopolis Dr. Suite A
Austin, TX 78744
Phone: (512) 301-9559
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NELAP ACCREDITED TNI LABORATORY

TCEQ DW Lab ID TX 239

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June M. Brien, Technical Director

corp@aqua-techlabs.com www.aqua-techlabs.com

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AUSTIN OFFICE
3512 Montopolis Dr. Suite A
Austin, TX 78744
Phone: (512) 301-9559
Fax: (512) 301-9552

Analytical Report

Apex Drilling

Report Printed: **1/19/21** **17:19**

D041252

Legacy Hills #Ex1

Collected: 12/28/20 12:30 by CLIENT
Received: 12/28/20 14:00 by Christie Tonnu

Type: Grab
Matrix: Drinking Water
C-O-C #: 41249-52

Lab ID# D041252-01

	Result	Units	Notes	MDL	Adj MDL	SQL	Lab	Analyzed	Method	Batch	
General Chemistry											
Total Dissolved Solids	**3060**	mg/L		25.0	100	100	*Bryan*	12/29/20 19:35 MRH	SM2540 C 2011	M123012	NEL
Nitrate as N (NO3N)	**<0.0200**	mg/L			0.0200	0.0200	*Calc*	12/30/20 11:19 KT	SM4500-NO3-F 2011	[CALC]	NEL
Nitrite as N	**<0.01**	mg/L	J (0.003)	0.002	0.002	0.01	*Austin*	12/29/20 13:50 KT	SM4500 NO2- B 2011	M123010	NEL
Nitrate/Nitrite as N	**0.02**	mg/L		0.02	0.02	0.02	*Bryan*	12/30/20 11:19 EMT	SM4500-NO3-F 2011	M123061	ANR
Total Hardness (EDTA) as CaCO3	**2090**	mg/L		1.00	10.0	10.0	*Bryan*	01/04/21 18:30 MRH	SM2340 C 2011	M123189	NEL
Fluoride	**1.99**	mg/L		0.04	0.04	0.10	*Bryan*	01/19/21 08:08 MRH	SM4500-F C 2011	M123793	NEL
pH, Lab	**7.5**	S.U.	Hold-03		N/A	N/A	*Austin*	12/31/20 12:33 KT	SM4500-H+ B 2011	M123136	DWP
Temperature @ pH Analysis	**19.4**	Deg. C			N/A	N/A	*Austin*	12/31/20 12:33 KT	SM4500-H+ B 2011	M123136	DWP
Specific Conductance (adjusted to 25.0°C)	**3990**	uS/cm		2.00	6.67	6.67	*Bryan*	01/05/21 14:30 CJO	SM2510 B 2011	M123226	DWP,NEL
Metals (Total)											
Iron	**0.300**	mg/L		0.002	0.002	0.010	*Bryan*	01/07/21 17:24 PNS	EPA 200.7 R4.4	M123187	NEL
Manganese	**0.006**	mg/L		0.002	0.002	0.005	*Bryan*	01/07/21 17:24 PNS	EPA 200.7 R4.4	M123187	NEL

Please see the attached subcontract report for subcontracted data.

Explanation of Notes

Hold-03	This parameter was outside of EPA holding at the time the sample was received in the laboratory.
J	Analyte detected below the SQL but above the MDL.

CORPORATE OFFICE
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Bryan, TX 77807
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AUSTIN OFFICE
3512 Montopolis Dr. Suite A
Austin, TX 78744
Phone: (512) 301-9559
Fax: (512) 301-9552

Analytical Report

Apex Drilling

Report Printed: **1/19/21** **17:19**

D041252

General Chemistry - Quality Control

	Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch	
Fluoride - SM4500-F C 2011														*Bryan*
Initial Cal Check	0.42	mg/L				01/19/21 08:08 MRH	0.428		97.4	90 - 110			2101170	
Low Cal Check	0.10	mg/L				01/19/21 08:08 MRH	0.0999		98.9	70 - 130			2101170	
Blank	<0.10	mg/L		0.04	0.10	01/19/21 08:08 MRH							M123793	
LCS	0.77	mg/L		0.04	0.10	01/19/21 08:08 MRH	0.799		96.6	90 - 110			M123793	
LCS Dup	0.79	mg/L		0.04	0.10	01/19/21 08:08 MRH	0.799		98.5	90 - 110	1.92	6.23	M123793	
Matrix Spike	2.85	mg/L		0.04	0.10	01/19/21 08:08 MRH	0.799	1.99	108	78.1 - 125			M123793	
Matrix Spike Dup	2.87	mg/L		0.04	0.10	01/19/21 08:08 MRH	0.799	1.99	110	78.1 - 125	2.30	5.72	M123793	
Nitrate/Nitrite as N - SM4500-NO3-F 2011														*Bryan*
Initial Cal Check	1.37	mg/L				12/30/20 11:19 EMT	1.40		98.2	90 - 110			2012322	
Low Cal Check	0.02	mg/L				12/30/20 11:19 EMT	0.0200		120	70 - 130			2012322	
Blank	<0.02	mg/L		0.02	0.02	12/30/20 11:19 EMT							M123061	
LCS	0.50	mg/L		0.02	0.02	12/30/20 11:19 EMT	0.500		99.2	91.3 - 109			M123061	
LCS Dup	0.50	mg/L		0.02	0.02	12/30/20 11:19 EMT	0.500		101	91.3 - 109	1.70	6.8	M123061	
Matrix Spike	0.52	mg/L		0.02	0.02	12/30/20 11:19 EMT	0.500	0.02	99.0	94.7 - 117			M123061	
Matrix Spike Dup	0.52	mg/L		0.02	0.02	12/30/20 11:19 EMT	0.500	0.02	99.7	94.7 - 117	0.700	8.65	M123061	
MRL Check	0.02	mg/L		0.02	0.02	12/30/20 11:19 EMT	0.0200		120	70 - 130			M123061	
Nitrite as N - SM4500 NO2- B 2011														*Austin*
Blank	<0.01	mg/L		0.002	0.01	12/29/20 13:50 KT							M123010	
LCS	0.08	mg/L		0.002	0.01	12/29/20 13:50 KT	0.0800		103	90 - 110			M123010	
LCS Dup	0.08	mg/L		0.002	0.01	12/29/20 13:50 KT	0.0800		103	90 - 110	0.00	8.12	M123010	
Matrix Spike	0.08	mg/L		0.002	0.01	12/29/20 13:50 KT	0.0800	<0.01	97.1	70.6 - 117			M123010	
Matrix Spike Dup	0.08	mg/L		0.002	0.01	12/29/20 13:50 KT	0.0800	<0.01	102	70.6 - 117	4.86	8.18	M123010	
MRL Check	0.01	mg/L		0.002	0.01	12/29/20 13:50 KT	0.0100		101	70 - 130			M123010	
pH, Lab - SM4500-H+ B 2011														*Austin*
Duplicate	7.6	Std Units				12/31/20 12:33 KT		7.5			0.398	1.18	M123136	
Reference	6.9	Std Units				12/31/20 12:33 KT	6.86		100	95 - 105			M123136	
Reference	9.2	Std Units				12/31/20 12:33 KT	9.18		99.9	95 - 105			M123136	
Reference	6.9	Std Units				12/31/20 12:33 KT	6.86		101	95 - 105			M123136	
Reference	9.2	Std Units				12/31/20 12:33 KT	9.18		99.9	95 - 105			M123136	

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AQUA-TECH LABORATORIES, INC.

AUSTIN OFFICE
3512 Montopolis Dr. Suite A
Austin, TX 78744
Phone: (512) 301-9559
Fax: (512) 301-9552

Analytical Report

Apex Drilling

Report Printed: 1/19/21 17:19

D041252

General Chemistry - Quality Control

	Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch	
Specific Conductance (adjusted to 25.0°C) - SM2510 B 2011														*Bryan*
Initial Cal Check	513	uS/cm				01/05/21 14:30 CJO	484		106	90 - 110			2101024	
Blank	<2.00	uS/cm		2.00	2.00	01/05/21 14:30 CJO							M123226	
Duplicate	3950	uS/cm		6.67	6.67	01/05/21 14:30 CJO		3990			0.924	2	M123226	
LCS	1460	uS/cm		2.00	2.00	01/05/21 14:30 CJO	1410		104	90 - 110			M123226	
Total Dissolved Solids - SM2540 C 2011														*Bryan*
Blank	<25.0	mg/L		25.0	25.0	12/29/20 19:35 MRH							M123012	
Duplicate	312	mg/L		100	100	12/29/20 19:35 MRH		308			1.29	9.13	M123012	
Reference	440	mg/L		100	100	12/29/20 19:35 MRH	500		88.0	81 - 121			M123012	
Total Hardness (EDTA) as CaCO3 - SM2340 C 2011														*Bryan*
Initial Cal Check	53.5	mg/L				01/04/21 18:30 MRH	54.4		98.4	85 - 115			2101013	
Blank	<1.00	mg/L		1.00	1.00	01/04/21 18:30 MRH							M123189	
Duplicate	11.1	mg/L		1.00	1.00	01/04/21 18:30 MRH		11.1			0.00	9.52	M123189	
LCS	102	mg/L		1.00	1.00	01/04/21 18:30 MRH	100		102	90 - 110			M123189	
LCS Dup	100	mg/L		1.00	1.00	01/04/21 18:30 MRH	100		100	90 - 110	2.00	6.47	M123189	
Matrix Spike	110	mg/L		1.00	1.00	01/04/21 18:30 MRH	100	11.1	99.0	87.6 - 111			M123189	
MRL Check	4.04	mg/L		1.00	1.00	01/04/21 18:30 MRH	4.00		101	70 - 130			M123189	

Metals (Total) - Quality Control

	Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch	
Iron - EPA 200.7 R4.4														*Bryan*
Blank	<0.010	mg/L		0.002	0.010	01/07/21 16:36 PNS							M123187	
LCS	0.946	mg/L		0.002	0.010	01/07/21 16:39 PNS	1.00		94.6	84.5 - 115.4			M123187	
LCS Dup	0.955	mg/L		0.002	0.010	01/07/21 16:42 PNS	1.00		95.5	84.5 - 115.4	1.04	20	M123187	
Duplicate	<0.010	mg/L	*J (0.008)*	0.002	0.010	01/07/21 16:46 PNS		<0.010			2.56	20	M123187	
Matrix Spike	0.968	mg/L		0.002	0.010	01/07/21 16:49 PNS	1.00	0.008	96.0	69.5 - 130.4			M123187	
Manganese - EPA 200.7 R4.4														*Bryan*
Blank	<0.005	mg/L		0.002	0.005	01/07/21 16:36 PNS							M123187	
LCS	1.01	mg/L		0.002	0.005	01/07/21 16:39 PNS	1.00		101	84.5 - 115.4			M123187	
LCS Dup	1.02	mg/L		0.002	0.005	01/07/21 16:42 PNS	1.00		102	84.5 - 115.4	1.20	20	M123187	
Duplicate	0.016	mg/L		0.002	0.005	01/07/21 16:46 PNS		0.015			5.70	20	M123187	
Matrix Spike	1.04	mg/L		0.002	0.005	01/07/21 16:49 PNS	1.00	0.015	102	69.5 - 130.4			M123187	

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Fax: (512) 301-9552

Analytical Report

Apex Drilling

Report Printed: **1/19/21** **17:19**

D041252

Preparation Procedures - Quality Control

Result	Units	Notes	MDL	SQL	Analyzed	Spike Amount	Source Result	%R	%R Limits	RPD	RPD Limit	Batch
Turbidity - SM2130 B 2011												*Bryan*

Sample Preparation Summary

Sample	Method	Prepared	Lab	Bottle	Initial	Units	Final	Units	External Dilution Factor	Batch
D041252-01										
Fluoride	SM4500-F C 2011	1/19/21 8:08 MRH	Bryan	C	25.0	mL	25.0	mL	1	M123793
Iron	EPA 200.7 R4.4	1/7/21 12:30 BLC	Bryan	B	10.0	mL	10.2	mL	1	M123187
Manganese	EPA 200.7 R4.4	1/7/21 12:30 BLC	Bryan	B	10.0	mL	10.2	mL	1	M123187
Nitrate/Nitrite as N	SM4500-NO3-F 2011	12/30/20 9:21 EMT	Bryan	D	10.0	mL	10.0	mL	1	M123061
Nitrite as N	SM4500 NO2- B 2011	12/29/20 13:50 KT	Austin	A	25.0	mL	25.0	mL	1	M123010
pH, Lab	SM4500-H+ B 2011	12/31/20 12:33 KT	Austin	A	50.0	mL	50.0	mL	1	M123136
Sample Acidified to pH<2 in Lab	N/A	12/28/20 15:00 CTT	Bryan	D	1.00	mL	1.00	mL	1	M122954
Specific Conductance (adjusted to 25.0°C)	SM2510 B 2011	1/5/21 14:30 CJO	Bryan	C	15.0	mL	50.0	mL	1	M123226
Temperature @ pH Analysis	SM4500-H+ B 2011	12/31/20 12:33 KT	Austin	A	50.0	mL	50.0	mL	1	M123136
Total Dissolved Solids	SM2540 C 2011	12/29/20 19:35 MRH	Bryan	C	25.0	mL	100	mL	1	M123012
Total Hardness (EDTA) as CaCO3	SM2340 C 2011	1/4/21 18:30 MRH	Bryan	B	5.00	mL	50.0	mL	1	M123189
Turbidity	SM2130 B 2011	1/4/21 13:30 BLC	Bryan	B	10.0	mL	10.0	mL	1	M123183
D041252-01RE1										
Sample Acidified to pH<2 in Lab	N/A	12/28/20 15:00 CTT	Bryan	B	100	mL	100	mL	1	M122936

AQUA-TECH LABORATORIES INC.

Chain-of-Custody and Analysis Request

Aqua-Tech Laboratories, Inc.

T104704371
TX239

Austin	Bryan
3512 Montopolis Dr.	635 Phil Gramm Blvd.
Austin, TX 78744	Bryan, TX 77807
512.301.9559	979.778.3707

Test results meet all accreditation/certification requirements unless stated otherwise.

Work Order / C-O-C: 41249-52
Page 1 of 2
V-0023 R03

Client /Project:

Contact Info
Name: APEX DRILLING
Address
City State ZIP
Phone / Email

Definitions
DW - Drinking Water
NP - Non-Potable Water
S - Solid
CM - Custody Maintained
CTU - Custody Transfer Unbroken
CT - Corrected Temperature
SUB - Subcontracted Analysis

(+) Container Type
P - Plastic
G - Glass
T - Teflon©

By relinquishing the samples listed below to Aqua-Tech, the client agrees to the following terms.
Samples will be analyzed by a method that is within Aqua-Tech Laboratories' NELAC fields of accreditation. Analytes requiring a certified method that is not within Aqua-Tech's fields of accreditation will be subcontracted to a NELAC certified lab that is certified for that method. Clients will be notified of the subcontract lab's details. Other analytes not requiring accreditation will be analyzed by a compendial method. If a specific method is required, the client will note the method in the "Analysis Requested" column. The client approves all method modifications documented by Aqua-Tech or the subcontract lab. A current list of Aqua-Tech's NELAC fields of accreditation and other methods are available on request.

Sample Custody

	Name (print & sign)		Date / Time	
Relinquished by (print & sign)	M Becker	☑ Sampler ☐ Client ☐ ATL Field	Date 12-28-20 Time 14:00	☐ Iced / Refrig ☐ Custody Sealed
Received by (print & sign)		☐ Client ☐ ATL Field	Date Time	☐ Iced / Refrig ☐ CM / CTU
Relinquished by (print & sign)	NFEZCTT 7	☐ Client ☐ ATL Field	Date Time	☐ Iced / Refrig ☐ CM / CTU
Received by (print & sign)		☐ Client ☐ ATL Field	Date Time	☐ Iced / Refrig ☐ CM / CTU
Relinquished by (print & sign)		☐ Client ☐ ATL Field	Date Time	☐ CM / CTU / sealed
Received by (print & sign)	Christie Tonnu	☑ Lab	Date 12/28/20 Time 1400	☑ Cond Good ☑ Iced / Refrig ☑ CM / CTU

Client Comments:

* Preservatives		Receipt in Lab		NA CTT 7
1	< 6 °C (unfrozen)	Cooler ID :	clt	
2	H2SO4 0764386	Temperature (°C) : read / CT	9.3 / 9.3	
3	HCl			
4	HNO3 0753274	Preservation Correct ?	YES (NO)	YES NO
5	Na2S2O3 0765068	Post Preservatives ?	(YES) NO	YES NO
6	NaOH	Thermometer ID :	0764480	
7		pH Paper ID :	0755987	

Lab Comments

Field Sample ID (record field data for each sample in space below)	Start Date	Start Time	End Date	End Time	Composite Type	Sample Matrix	Bottle Count	Volume (Size in L)	Type (+)	Preservative(s) *	Cooler ID	pH Check	SUB	WORK ORDER (LAB USE ONLY BELOW (initials CTT) see below)
Legacy Hill #5	12-28-20	12:00	—		G	DW	1	0.15	STP	1,5	clt	—	—	Sample
Analysis Requested & Comments: BACT P/A												D041249-01A		
Legacy Hills #5	12-28-20	12:00	—		G	DW	1	2	P	1	clt	—	ANA	Sample
Analysis Requested & Comments: See attached: Cl, cond, F, Fe, NO2/3, Mn, pH, SO4, hardness, TDS												D041250-01A		
LEGACY Hills #EX1	12-28-20	12:30	—		G	DW	1	0.15	STP	1,5	clt	—	—	Sample
Analysis Requested & Comments: BACT P/A												D041251-01A		
Legacy Hills #EX1	12-28-20	12:30	—		G	DW	1	2	P	1	clt	—	ANA	Sample
Analysis Requested & Comments: See attached: Cl, cond, F, Fe, NO2/3, Mn, pH, SO4, hardness, TDS												D041252-01A		
														Sample NFEZCTT 7
Analysis Requested & Comments:														

Page 6 of 14 D041252_1 ATL 110720 FIN_ls 01 19 21 1719

41249-52
212

No. 8 No. 7

Well numbers correspond to Attachment 1

The water quality from each well will need to be assessed y Aquifer to provide adequate drinking water. Upon cor sample will need to be collected and analyzed for the follo

- Chloride
- Conductivity
- Fluoride
- Iron
- Nitrate (as nitrogen)
- Manganese
- pH
- Sulfate
- Total hardness
- Total Dissolved Solids (TDS)
- Presence/absence of total coliform bacteria

have any questions please feel free to call me at 512-773-

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ANA LAB
Testing the Limits of Science and Service

Project
948695

AQU1-G

Aqua-Tech Laboratories
John Brien
635 Phil Gramm Blvd.
Bryan, TX 77807-9104

Printed 12/31/2020 11:49

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NELAP-accredited #T104704201-20-17

Ana-Lab Corp.
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AQU1-G

Aqua-Tech Laboratories
John Brien
635 Phil Gramm Blvd.
Bryan, TX 77807-9104

Project
948695

Printed: 12/31/2020

Results

Sample Results

1950356 **D041252-01** Received: 12/29/2020

Drinking Water | Collected by: Client | Aqua-Tech Laboratori | PO:
Taken: 12/28/2020 12:30:00

EPA 300.0 2.1 Prepared: 931895 12/29/2020 15:53:00 Analyzed 931895 12/29/2020 15:53:00 ATN

	Parameter	Results	Units	RL	Flags	CAS	Bottle
NELAC	**Chloride**	**48.0**	**mg/L**	3.00			01

EPA 300.0 2.1 Prepared: 932053 12/30/2020 19:28:00 Analyzed 932053 12/30/2020 19:28:00 ATN

	Parameter	Results	Units	RL	Flags	CAS	Bottle
NELAC	**Sulfate**	**1630**	**mg/L**	10.0			01

Qualifiers:

We report results on an As Received or wet basis unless marked Dry Weight. Unless otherwise noted, testing was performed at Ana-labs corporate laboratory that holds the following Federal and State certificates: EPA Lab Number TX00063, US Department of Agriculture Soil Import Permit P330-17-00117, Texas Commission on Environmental Quality Commercial Drinking Water Lab Approval (Lab ID: TX219), Texas Commission on Environmental Quality NELAP T104704201-20-17, Louisiana Department of Environmental Quality Laboratory Certification (NELAP, LELAP) #02008, Louisiana Department of Health and Hospitals Drinking Water (NELAP) Certificate No LA026, Oklahoma Department of Environmental Quality TNI Laboratory Accreditation Program Certificate No. 2018-126, Arkansas Department of Environmental Quality Certification #18-068-0. The Accredited column designates accreditation by N -- NELAC, or z -- not covered under NELAC scope of accreditation.
These analytical results relate to the sample tested. This report may NOT be reproduced EXCEPT in FULL without written approval of Ana-Lab Corp. Unless otherwise specified, these test results meet the requirements of NELAC.
RL is the Reporting Limit (sample specific quantitation limit) and is at or above the Method Detection Limit (MDL). CAS is Chemical Abstract Service number. RL is our Reporting Limit, or Minimum Quantitation Level. The RL takes into account the Instrument Detection Limit (IDL), Method Detection Limit (MDL), and Practical Quantitation Limit (PQL), and any dilutions and/or concentrations performed during sample preparation (EQL). Our analytical result must be above this RL before we report a value in the 'Results' column of our report (without a 'J' flag). Otherwise, we report ND (Not Detected above RL), because the result is "<" (less than) the number in the RL column. MAL is Minimum Analytical Level and is typically from regulatory agencies. Unless we report a result in the result column, or interferences prevent it, we work to have our RL at or below the MAL.

Trey Peery, MA, Project Manager

NELAP-accredited #T104704201-20-17

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RESULTS

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Printed 12/31/2020

DW

AQU1

Aqua-Tech Laboratories
John Brien
635 Phil Gramm Blvd.
Bryan, TX 77807-9104

CAS	Parameter	Results	MDL	SDL	MQL	MQLAdj	Flag	Units	Target	Bottle	Dilute
Drinking Water	**Ion Chromatography**									**EPA 300.0 2.1**	
1950356	D041252-01										
		Collection:	12/28/2020	12:30:00	Client				*Received:*	12/29/2020	
	Prepared: ***931895***										
				Analyzed:	***931895***			12/29/20	15:53:00		
	Chloride	**48.0**	0.0211	0.211	0.300	3.00		**mg/L**	250 Secondary Standard	01	10.00
	Prepared: ***932053***										
				Analyzed:	***932053***			12/30/20	19:28:00		
	Sulfate	**1630**	0.0871	8.71	0.100	10.0		**mg/L**	250 Secondary Standard	01	100.00

MDL is Method Detection Limit (40 CFR 136 Appendix B)
SDL is Sample Detection Limit and is the adjusted MDL (sample specific dilutions, dry weight)
MQL is the Method Quantitation Limit and corresponds to a low standard
MQLADJ is the Adjusted Method Quantitation Limit (dilutions, dry weight)

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RESULTS

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Bryan, TX 77807-9104

Qualifiers:

We report results on an As Received or wet basis unless marked Dry Weight. Unless otherwise noted, testing was performed at Ana-labs corporate laboratory that holds the following Federal and State certificates: EPA Lab Number TX00063, US Department of Agriculture Soil Import Permit P330-17-00117, Texas Commission on Environmental Quality Commercial Drinking Water Lab Approval (Lab ID: TX219), Texas Commission on Environmental Quality NELAP T104704201-20-17, Louisiana Department of Environmental Quality Laboratory Certification (NELAP, LELAP) #02008, Louisiana Department of Health and Hospitals Drinking Water (NELAP) Certificate No LA026, Oklahoma Department of Environmental Quality TNI Laboratory Accreditation Program Certificate No. 2018-126, Arkansas Department of Environmental Quality Certification #18-068-0. The Accredited column designates accreditation by N -- NELAC, or z -- not covered under NELAC scope of accreditation.
These analytical results relate to the sample tested. This report may NOT be reproduced EXCEPT in FULL without written approval of Ana-Lab Corp. Unless otherwise specified, these test results meet the requirements of NELAC.

Trey Peery, MA, Project Manager

NELAP-accredited #T104704201-20-17

Quality Control

ANALAB
Testing the Limits of Science and Service

AQU1-G

Aqua-Tech Laboratories
John Brien
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Bryan, TX 77807-9104

Project
948695

Printed 12/31/2020

Analytical Set 931895 — EPA 300.0 2.1

Blank

Parameter	PrepSet	Reading	MDL	MQL	Units	File
Chloride	931895	0.0316	0.0211	0.100	mg/L	121905530

CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Chloride	9.64	10.0	mg/L	96.4	90.0 - 110	121905526
Chloride	10.7	10.0	mg/L	107	90.0 - 110	121905542

LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Chloride	931895	5.18	5.16	5.00	85.0 - 110	104	103	mg/L	0.387	20.0

MSD

Parameter	Sample	MS	MSD	UNK	Known	Limits	MS%	MSD%	Units	RPD	Limit%
Chloride	1950206	298	298	186	100	80.0 - 120	112	112	mg/L	0	20.0

Analytical Set 932053 — EPA 300.0 2.1

Blank

Parameter	PrepSet	Reading	MDL	MQL	Units	File
Sulfate	932053	ND	0.0871	0.100	mg/L	121908878

CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Sulfate	10.1	10.0	mg/L	101	90.0 - 110	121908874
Sulfate	10.1	10.0	mg/L	101	90.0 - 110	121908890
Sulfate	10.0	10.0	mg/L	100	90.0 - 110	121908902

LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Sulfate	932053	5.08	5.12	5.00	88.0 - 110	102	102	mg/L	0.784	20.0

MSD

Parameter	Sample	MS	MSD	UNK	Known	Limits	MS%	MSD%	Units	RPD	Limit%
Sulfate	1950523	141	139	92.0	50.0	80.0 - 120	98.0	94.0	mg/L	4.17	20.0
Sulfate	1950685	131	131	98.8	50.0	80.0 - 120	64.4 *	64.4 *	mg/L	0	20.0

* Out RPD is Relative Percent Difference: abs(r1-r2) / mean(r1,r2) * 100%

Recover% is Recovery Percent: result / known * 100%

Blank - Method Blank; CCV - Continuing Calibration Verification

NELAP-accredited #T104704201-20-17

AQUA-TECH LABORATORIES, INC.

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635 Phil Gramm Blvd.
Bryan, TX 77807
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Fax (979) 778-3193

ATL - Austin Facility:
3512 Montopolis Drive
Austin, TX 78744
(512) 301-9559
Fax (512) 301-9552

Chain-of-Custody & Analysis Request

SHIPPED TO:
Ana-Lab Corp. (NELAP Cert. T104704201)
2600 Dudley Road
Kilgore, TX 75662
Phone: (903) 984-0551
Fax: (903) 984-5914

C-O-C #

494 - D041252

T104704371

Page 1 of 1

All analyses must be performed by a TNI approved method certified by the TCEQ. Contact ATL's sample custodian via voice and email if your methods do not meet this criteria.

Analysis Request for: **Sample ID: D041252-01** Sampled: 12/28/20 12:30 Matrix: Drinking Water **Laboratory ID >>** 95035-26

Chloride - EPA 300.0 SO4 DW - EPA 300.0

CONTAINERS SUPPLIED: (ATL indicates cooler number in parentheses for each container - only required if more than one cooler listed below.)

( ) D041252-01 [E] - [SUB] ANA Cl SO4 0.25LP
[Split from -01 A]

wrong time, CDT?

Relinquished by: (print & sign)	ATL-Austin	ATL - Bryan	Sampler	Date	Time	Iced / Custody Sealed / Not Chilled
Christie Tonnu	X			12/28/20	~~14:55~~ 1615	✓ / ✓

Carrier & Tracking Number: Lone Star — Cooler 1: AQU1 - Z1000QA3

Received by: (print & sign)	Received in Lab	Date	Time	Received Iced / CPU / Condition Good / Not Rec'd Iced
Kathy Tarver Ana-Lab	✓	12/29/20	0900	✓

Line below documents condition at receipt in lab (shipped to) listed above.

Cooler Temperature (°C)	Temp. Read (TR)	Corrected Temp. (CT)	Thermometer ID
Cooler 1			
N/A	N/A	N/A	

Please email reports to: reporting@aqua-techlabs.com

Please return cooler(s) to: Austin Facility

Sample Info "X" all that apply

Abbreviations: DW - Drinking Water; NP - Non-Potable Water; S - Solid; CTU - Custody Transfer Unbroken; StP - Sterile Plastic; LP - Liter Plastic; LG - Liter Glass

Aqua-Tech Comments and Special Instructions

5 DAY TAT

See Attached for Tracking # and Temp

BRET

948695 CoC Print Group 001 of 001

LSO
It's all in the delivery.

Airbill No. Z1000QA3

LSO
1-800-800-8984
www.lso.com

SHIP TO:
RECEIVING
ANA LAB CORP
2600 DUDLEY ROAD RD
KILGORE, TX 75662
9039840551

From:
CHRISTIE TONNU
AQUA TECH LABS
3512 MONTOPOLIS DR
AUSTIN, TX 78744
5123019559

GGGG LSO ECONOMY NEXT DAY
3:00 IN MOST AREAS
LATER IN REMOTE AREAS

PRINT DATE: 12/28/2020 REF 3:
QUICKCODE: WEIGHT: 15.00LBS
REF 1: 1D00V.0000 REF 2:

12/29 0925 cp
Date Time Tech
Temp: 0.5 / 0.5 C

Therm#: 6443 Corr Fact: 0.0 C

Fold on above line and place shipping label in pouch on package Please be sure the barcodes and addresses can be read and scanned. Shipping Instructions

1. Fold this page along the horizontal line above.
2. Place this Airbill in the shipping label pouch on the package you are shipping. Please be sure the barcodes and addresses can be read and scanned.
3. To locate a drop box near you, click on **Find A Drop Box** from the home page main menu.
4. To schedule a pickup, click on **Request Pickup**.

WARNING: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your Lone Star Overnight account number.

This label is valid for use for 3 months from the date printed. Use of expired labels may result in delayed billing and / or additional research charges. LIMIT OF LIABILITY: We are not responsible for claims in excess of $100 for any reason unless you: 1) declare a greater value (not to exceed $25,000); 2) pay an additional fee; 3) and document your actual loss in a timely manner. We will not pay any claim in excess of the actual loss. We are not liable for any special or consequential damages. Additional limitations of liability are contained in our current Service Guide. If you ask us to deliver a package without obtaining a delivery signature, you release us of all liability for claims resulting from such service. NO DELIVERY SIGNATURE WILL BE OBTAINED FOR 8:30 AM DELIVERIES OR RESIDENTIAL DELIVERIES.