Report of Findings: WRGS 21-020

Report of Findings
Loma Vista Subdivision (Phase III)
Groundwater Availability Certification for Platting: Gillespie County, Texas

For:
Southerland Communities
110 River Crossing Blvd.
Spring Branch, Texas 78070

Wet Rock Groundwater Services, L.L.C.
Groundwater Specialists
TBPG Firm No: 50038
317 Ranch Road 620 South, Suite 203
Austin, TX 78734 Ph: 512.773.3226
www.wetrockgs.com

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November 2021

WRGS Project No. 131-002-21

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The seal appearing on this document was authorized by Kaveh Khorzad, P.G. 1126 on November 11, 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 Loma Vista Subdivision (Phase III) (Loma Vista) 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.

Loma Vista is located along South Ranch Road 783, approximately 8 miles northwest of the City of Kerrville in southwestern Gillespie County (Figure 1). The proposed subdivision is documented within the Gillespie County Tax Assessor as Property IDs: 180674, 53720, 57650, 89349, 96069, 96072, 96070, 96071 and 36370. Southerland Communities, LLC (110 River Crossing Blvd. Spring Branch, Texas 78070) is the plat applicant.

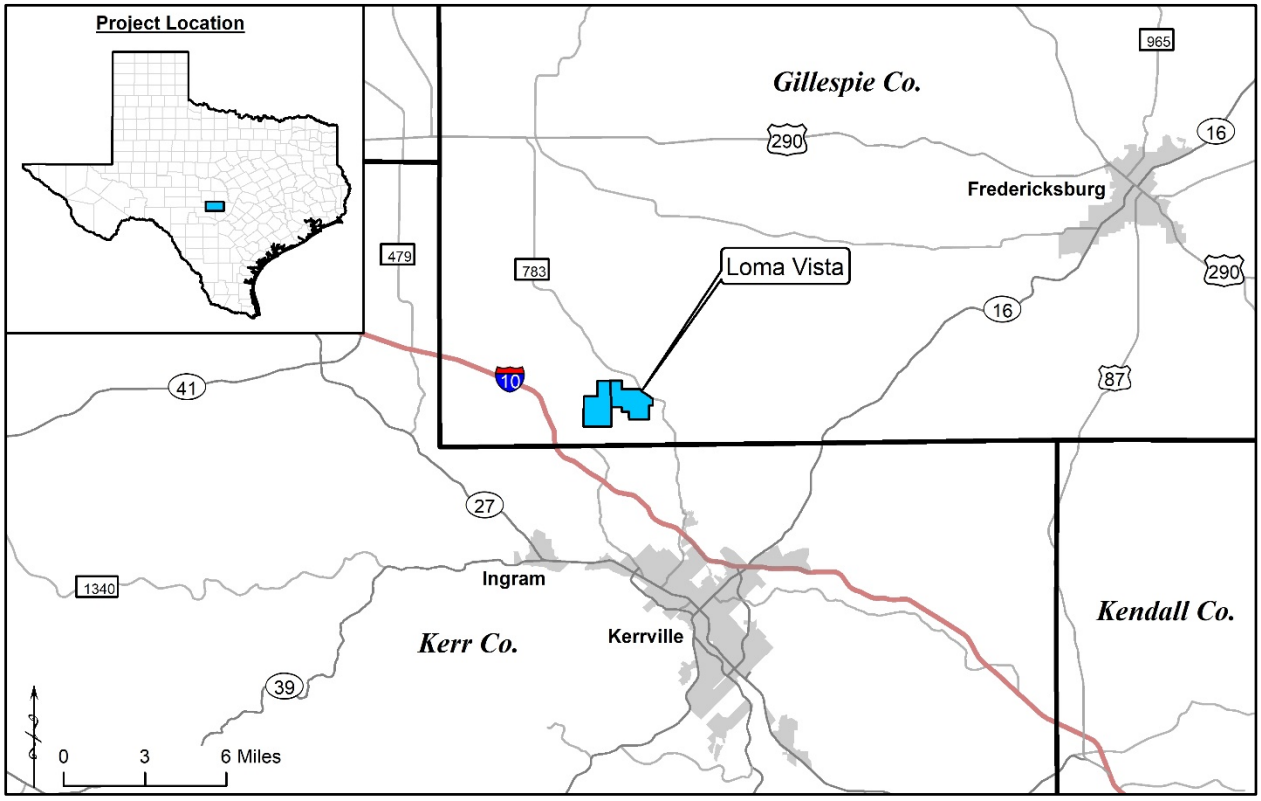


Figure 1: Location map

Southerland Communities, LLC proposes to develop the third phase of the approximately 1,817 acre Loma Vista Subdivision. Phase III consists of approximately 905 acres including 159 single family residential lots. The average lot size is 5.69 acres which will be served by individual water wells. The subdivision is located within the jurisdiction of the Hill Country Underground Water Conservation District (HCUWCD). Figure 2 provides a map showing the general location of the subdivision with the county and groundwater district boundaries.

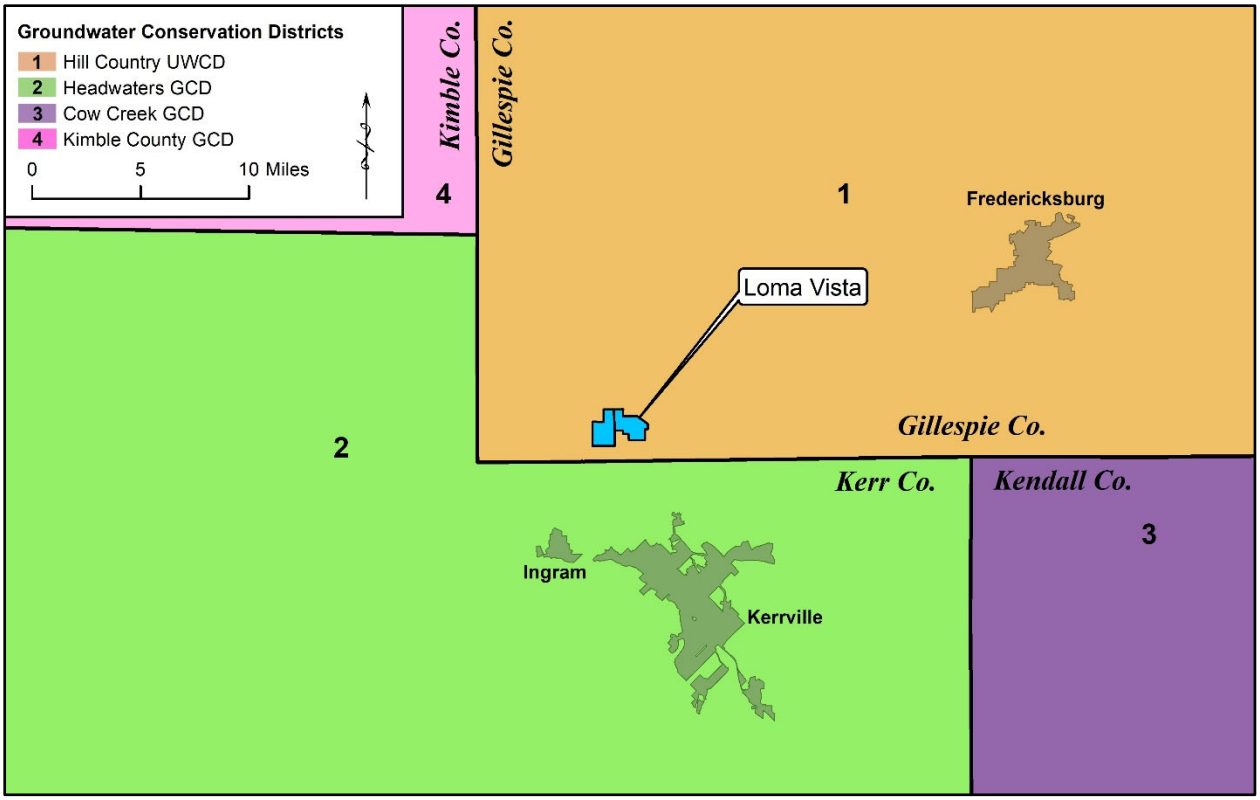


Figure 2: Groundwater Conservation District map

Section II: Projected Water Demand Estimate

To estimate the total annual water demand for the subdivision, we utilized an average number of persons per household for Gillespie County from U.S. Census data (2.5 persons) and a per capita usage per day (75 gallons per person per day; gpd) from discussions with HCUWCD. The following formulae were used to calculate the projected water demand for the subdivision:

Equation 1: Total Water Demand

$$Q_s = n \times 2.5 \times 75 \times 365 \text{ days} = 10{,}881{,}563 \text{ gallons/year or } 33.39 \text{ acre-feet/year}$$

Where:

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

n = Number of connections (159 lots);

2.5 = Average number of persons per household; and

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

Equation 2: Water Demand per Housing Unit

$$Q_h = 2.5 \times 75 \times 365 \text{ days} = 68{,}438 \text{ gallons/year or } 0.21 \text{ acre-feet/year}$$

Where:

Q_h = Total Water Demand per house per year

Equation 1 assumes 2.5 persons per household using 75 gallons per person per day which results in a total water demand for the subdivision of 33.39 acre-feet/year. Equation 2 results in a water demand per housing unit of 0.21 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 are two (2) major aquifers (Edwards-Trinity and Trinity) and two (2) minor aquifers (Ellenburger-San Saba and Hickory) 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. These aquifers are regionally extensive aquifer systems made up of Cretaceous and Paleozoic carbonates and sandstones that were deposited throughout central Texas. Facies changes within in the entire Cretaceous system are also noteworthy and were strongly influenced by the underlying Paleozoic surface throughout the Texas Hill Country (Ashworth, 1983; Wilson, 2008).

III.2. Stratigraphy and Geologic History

The subdivision overlies the Cretaceous-aged sedimentary rocks comprising the Edwards-Trinity Aquifer. The Segovia and Fort Terrett Limestone Formations cover the vast majority of the subdivision's surface. The sediments that comprise these groups were deposited 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 (Toll et. al, 2018). Figure 3 provides a general geologic map and stratigraphic column illustrating the hydrogeologic units in the vicinity of Loma Vista; however, the details of the stratigraphic column are far more complex than what are shown. Some of the units merge into others from east to west. The Llano Uplift expelled large quantities of sand and gravel into the advancing shallow water lagoonal Cretaceous seas through a series of braided streams. This depositional sequence pushed the lagoonal carbonates to the south into broad distributary lobes (Wilson, 2008).

Making up the geologic base of the study area, lies the Cambrian aged Moore Hollow Group which is made up of the Riley and Wilberns Formations. The oldest member of the Riley Formation is the Hickory Sandstone consisting of cross bedded terrestrial and marine quartz sandstones, siltstones, and mudstones which make up the Hickory Aquifer. In certain areas, the Cap Mountain limestone overlies the Hickory, acting as a confining unit. The youngest member of the Riley Formation, the Lion Mountain Sandstone, is intermittently found overlying the Cap Mountain Limestone. The Welge Sandstone, the oldest member of the Wilberns Group, is hydraulically connected to the Lion Mountain forming the Mid-Cambrian Aquifer. The Morgan Creek Limestone and the Point Peak Shale are found directly above the Welge Sandstone and act as a confining unit between the Mid-Cambrian and the Ellenburger-San Saba aquifers. Completing the Wilberns Group is the San Saba Limestone which is the stratigraphically lowest part of the Ellenburger-San Saba Aquifer (Figure 3; Barnes and Bell, 1977; Preston et. al, 1996).

On top of the Moore Hollow Group is the Ordovician aged Ellenburger Group, which consists of the Tanyard, Gorman, and Honeycut Formations and generally encircles the Llano Uplift. The Tanyard Formation is divided into two members: the basal dolostone Threadgill Member, and the overlying limestone Staendebach Member. Above the Tanyard, the Gorman and Honeycut Formations are comprised of dolostones and limestones which complete the Ellenburger Group and the Ellenburger-San Saba Aquifer (Figure 3; Preston et. al, 1996).

Scattered discontinuously throughout the Llano Uplift area are Devonian and Mississippian aged formations consisting of thin remnants of dark shales, petroliferous limestones, crinoidal limestone, chert

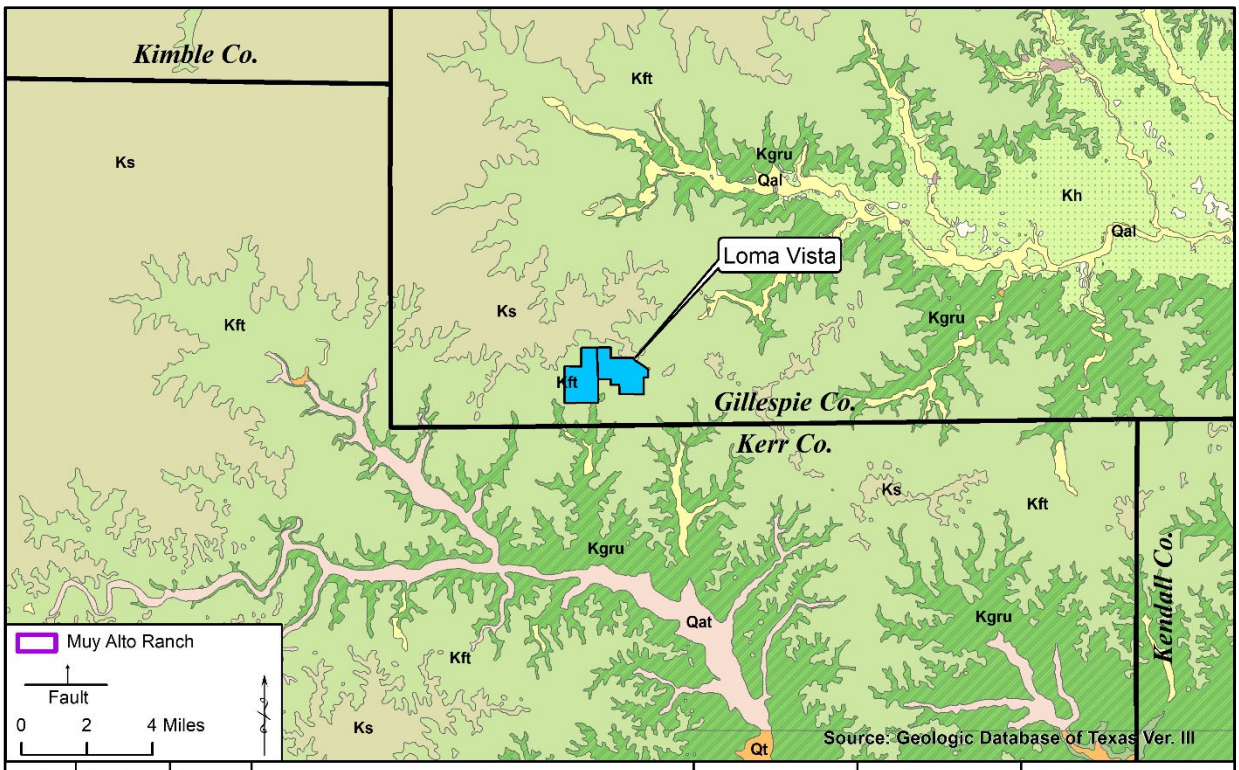
breccias, fractured cherts, and microgranular limestones with bedded chert (Standen and Ruggiero, 2007; Preston et. al, 1996). Where present, the formations act as confining layers between the Ellenburger-San Saba Aquifer and the Marble Falls Aquifer (Figure 3; Preston et. al, 1996).

Pennsylvanian-aged rocks unconformably overlie either the Ellenburger Group or the Devonian-Mississippian Formations. Groups making up this system include the Bend, Canyon, and Strawn Groups. The oldest member of the Bend Group is the Marble Falls Limestone, which is locally divided and makes up the Marble Falls Aquifer. The lower unit consists of massive limestone and reef deposits and the upper unit consists of fine grained bedded limestone with chert nodules and beds. The overlying Smithwick Formation consists of interbedded claystone, siltstone, and sandstone. Above the Bend Group are the Strawn and Canyon Groups comprised of limestones, shales, and fine-grained sandstones. Together with the Smithwick Formation, these groups act as confining units above the Marble Falls Aquifer (Figure 3; Preston et. al, 1996).

Cretaceous-aged rocks overlie the Pennsylvanian system. The Cretaceous sediments comprising the Trinity and Edwards Groups were deposited by a shallow Cretaceous sea and once covered the entire region, but have since been eroded away completely in some areas. The Trinity Group is divided into three aquifers from oldest to youngest: 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. Updip in some parts of the outcrop, the equivalent rocks of the Hosston and Sligo are called the Sycamore Sand. Above the Lower Trinity Aquifer is a confining unit separating the Lower Trinity Aquifer from the Middle Trinity Aquifer called the Hammett Shale. The Middle Trinity Aquifer is composed of from oldest to youngest, the Cow Creek Limestone, the Bexar Shale, and the Hensell Sand Members of the Travis Peak Formation and the Lower Glen Rose Formation. Above the Middle Trinity Aquifer is the Upper Trinity Aquifer composed of the Upper Glen Rose Formation, which completes the Trinity Group. Above the Trinity Group, lies the Edwards Group, which consists of the Walnut, Fort Terrett, and Segovia Formations (collectively known as Edwards Limestone).

III.3 Site-Specific Stratigraphy

The Fort Terrett Limestone of the Edwards Group is present at the surface over the majority of the property. In the subsurface, the Glen Rose, Hensell, and Ellenburger units are encountered. The Upper Glen Rose Member is a thick sequence of marl and thin discontinuous biomicrite beds, which serves as an aquitard to groundwater and surface water from penetrating vertically into the underlying units. The Lower Glen Rose Member has a sandy facies at the subdivision, and is age-equivalent to the Hensell Sand. The Hensell Sand Member is composed of fine to coarse, generally uncemented loose sand. Graveliferous sand and poor sorting increase near the base of the unit. The sand is derived from the erosion of the clastic units that once surrounded the Llano Uplift (Wilson, 2008). The Hensell Sand Member overlies the Paleozoic-aged Ellenburger surface at Loma Vista.



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 (Travis Peak Equivalent)	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

There are four accessible aquifers located beneath the subdivision which are the Edwards-Trinity, Trinity, Ellenburger-San Saba, and Hickory aquifers. The most suitable aquifer at the subdivision is the Trinity Group within the Edwards-Trinity Aquifer, which is capable of producing moderate quantities of good-quality groundwater. The deeper Ellenburger-San Saba and Hickory aquifers may yield acceptable quantities of groundwater; however, those options were not explored for this study. Figure 4 provides a map of the aquifers in the area.

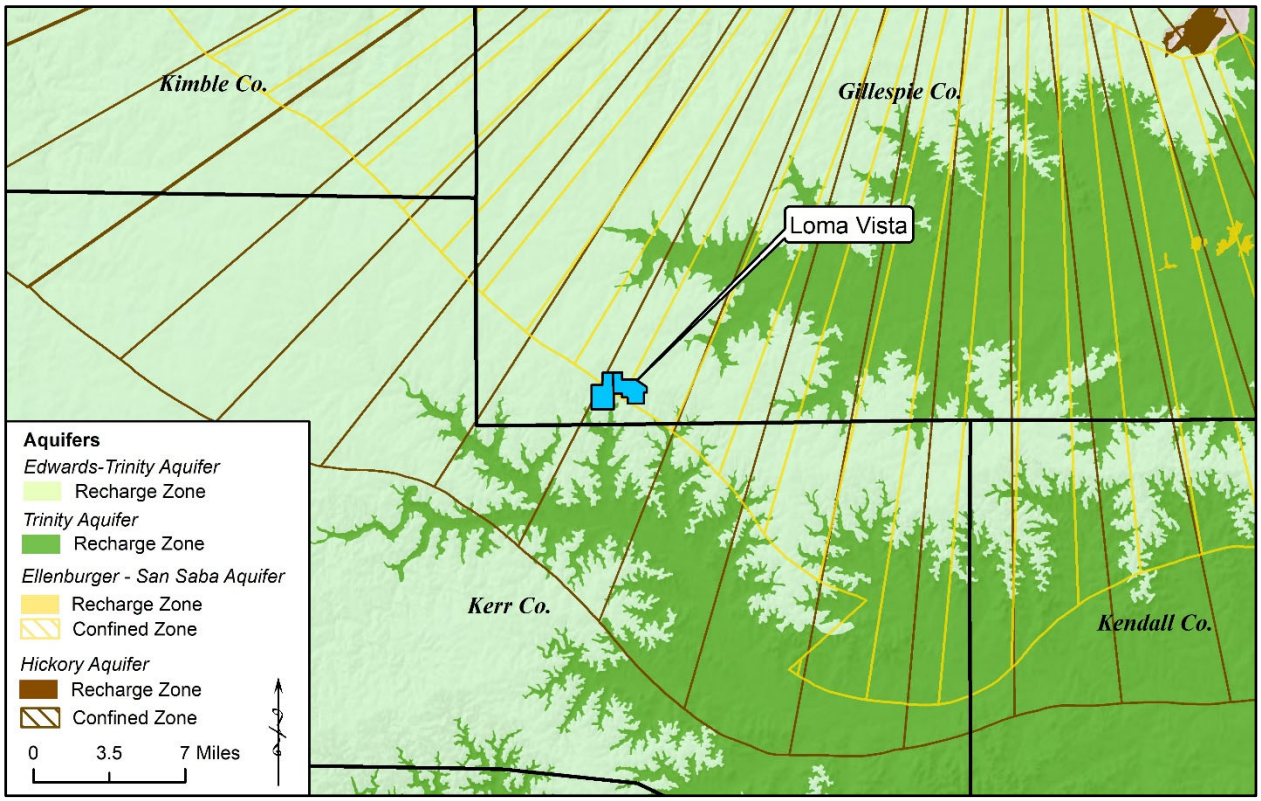


Figure 4: Aquifer map

The Trinity Aquifer in the Hill Country area spans as far north as Gillespie County and as far south as Medina, Bexar, and Comal counties where fresh water can be produced. As the name suggests, the Trinity is composed of three aquifers, Upper, Middle and Lower Trinity aquifers. In the area near Loma Vista, the Middle and Lower Trinity aquifers are difficult to differentiate due to the sandy facies of the units, therefore they are commonly grouped together. The Upper Trinity Aquifer typically produces little to no water due to the its marly facies and the presence of gypsum and anhydrite layers within the Upper Glen Rose Formation (Wilson, 2008).

Beneath the Trinity Aquifer, the dolostones and limestones of the Ellenburger-San Saba aquifer and the sandstones of the Hickory Aquifer generally encircle the Llano Uplift extending radially outward from the uplift (Figure 4). The aquifers dip downwards away from the center of the uplift and can range in thickness from 0 up to 3,000 feet. Faults have caused portions of aquifers to become compartmentalized which restricts groundwater flow in some areas and increased production in other portions of the aquifer. Restricted flow or

communication within an aquifer can result in wells that will produce varying amounts of water within a relatively small distance. Within the Ellenburger-San Saba Aquifer, the well production is dependent upon fractures, with the greatest producers generally intersecting solution cavities formed along fractures.

Water levels within the Trinity Aquifer follow a short term cycle of decreasing water level during times of low precipitation and higher well production followed by a recovery of water level during precipitation events. The water quality of a well depends upon several factors, including the degree of fracturing, sand thickness and permeability, the amount of time the groundwater is in contact with the rock formation 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 (CaSO4), will typically contain elevated levels of sulfate (Ashworth, 1983). Additionally, groundwater that had traveled a longer distance and has had longer contact time with the 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 fourteen (14) wells located within Phase III of the proposed subdivision, two (2) of which existed prior to this study. Existing wells include Well E3, and Well E4; Phase III Wells No. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12 were constructed by NextGen Water Well Service in September and October of 2021. Figure 5 provides a map showing the location of the Loma Vista wells along with all documented wells within one mile of the property boundary. Phase III Wells No. 1, 3, 6, 8, 10 and 11 were utilized as pumping wells during this study; Phase III Wells No. 2, 4, 5, 7, 9, and 12 were used for observation during aquifer testing.

Figures 6 through 11 provide well profiles showing well construction and formation depths picked from drill cuttings; Appendix B provides available state well reports. Table 1 provides the details of the thirty-nine (39) existing wells within 1-mile of the property not used for testing; Table 2 provides a well construction summary for wells used in the testing.

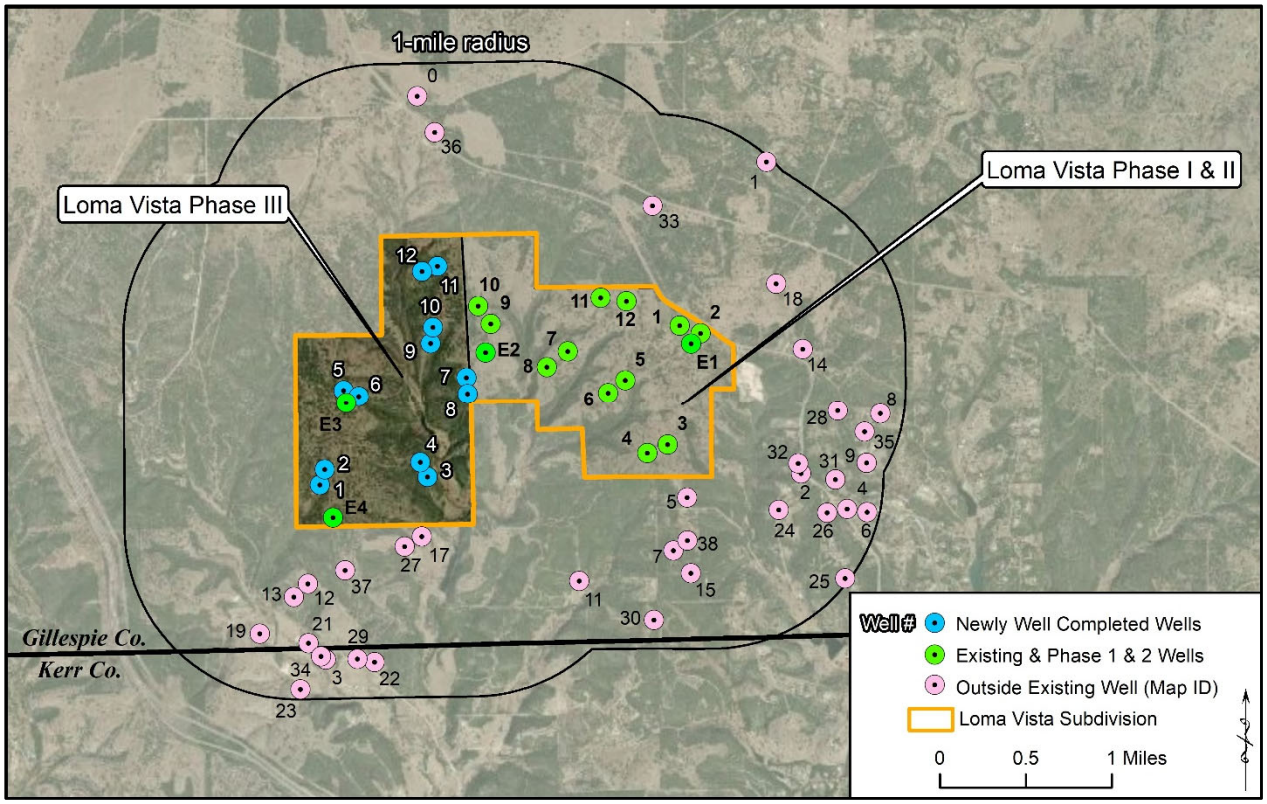


Figure 5: Well location map

Table 1: Summary of wells within 1-mile

Map ID	State Well ID	Owner	Well Depth (ft.)	Well Type
0	5655501	Edwin Dittmar	138	Unused
1	5655609	Cottonwood Spring	N/A	N/A
2	5655906	Charley Branon	540	Domestic
3	5655701	Mrs.G. Lindquist	300	Domestic
4	5655905	Clint Myers	520	Domestic
5	646	Ed Boatright	580	Domestic
6	7041	Jean Whitman	200	Domestic
7	9668	Geeorge Boatright	580	Domestic
8	27716	Steve Leyendecker	180	Domestic
9	34273	William T. Browne, Jr.	520	Domestic
10	34285	William T. Browne, Jr.	580	Domestic
11	54007	Walter Oggoian	410	Domestic
12	61495	J.W. Smith/Pharma Conference	720	Domestic
13	76767	J.W. Smith	620	Domestic
14	99952	Russell Rogers	200	Domestic
15	110008	Sammy Moore	180	Domestic
16	160636	Mike McGinnis	200	Domestic
17	164047	John Windlinger	460	Domestic
18	190789	Rancho Trinidad (Philip Riviera)	300	Stock
19	213965	Olson, Randy	420	Domestic
20	213966	Olson, Randy	420	Domestic
21	213976	Olson, Randy	420	Domestic
22	217236	Randy Olson	420	Domestic
23	217275	Randy Olson	420	Domestic
24	231470	Norman Belcik	480	Domestic
25	231472	Norman Belcik	500	Domestic
26	245380	Pfiester, Carl	495	Domestic
27	250892	George Martin	520	Domestic
28	252660	Stephen Morris	540	Domestic
29	257116	Don Markmann	660	Domestic
30	299986	Michael Natale	620	Domestic
31	333831	Dennis Conn	580	Domestic
32	358561	James Engelmann	160	Domestic
33	358768	Russell Rogers	144	Domestic
34	419973	Mustangs Forever Inc.	400	Domestic
35	452034	Morgan & Barbara Harvey	620	Domestic

36	479805	Ross Smith	225	Domestic
37	524340	William Fahey	620	Domestic
38	548779	Darlene Moore	200	Domestic

To meet the guidelines for the Gillespie County development rules and regulations and to adequately assess the availability of groundwater within the vicinity of the proposed subdivision, six (6) aquifer tests were conducted utilizing the newly completed wells. Each aquifer test 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. This is in accordance with the testing procedures of the Texas Administrative Code (TAC) Title 30 Part 1 Chapter 230.8. Based on the state well reports and drill cuttings, all wells used in the aquifer testing are completed in the Trinity Group of the Edwards-Trinity Aquifer. The following provides a summary of the well construction for the wells on the property:

Well No. 1

According to the State Well Report (Tracking No. 588048), drilling of Well No. 1 was completed by NextGen Water Well Service on October 8, 2021. The well was drilled to a depth of 530 ft. below ground level (bgl) with a 13 1/2-inch borehole from 0 to 20 ft. bgl. and a 8 3/4-inch borehole from 20 to 530 ft. bgl; back filled to 500. The well was completed with 5-inch PVC casing set from +2 to 440 ft. bgl and 5-inch screen from 440 to 500 ft. bgl. Drill cuttings collected by NextGen indicates that the well was completed in the Hensell Member of the Edwards-Trinity Aquifer.

Well No. 2

According to the State Well Report (Tracking No. 588049), drilling of Well No. 2 was completed by NextGen Water Well Service on October 13, 2021. The well was drilled to a depth of 560 ft. bgl with a 13 1/2-inch borehole from 0 to 20 ft. bgl. and a 8 3/4-inch borehole from 20 to 560 ft. bgl and back filled to 530. The well was completed with 5-inch PVC casing set from +2 to 470 ft. bgl and 5-inch screen from 470 to 530 ft. bgl. Drill cuttings collected by NextGen indicates that the well was completed in the Hensell Member of the Edwards-Trinity Aquifer.

Well No. 3

According to the State Well Report (Tracking No. 588078), drilling of Well No. 3 was completed by NextGen Water Well Service on October 20, 2021. The well was drilled to a depth of 560 ft. bgl with a 13 1/2-inch borehole from 0 to 20 ft. bgl. and a 8 3/4-inch borehole from 20 to 560 ft. bgl and back filled to 540. The well was completed with 5-inch PVC casing set from +2 to 480 ft. bgl and 5-inch screen from 480 to 540 ft. bgl. Drill cuttings collected by NextGen indicates that the well was completed in the Hensell Member of the Edwards-Trinity Aquifer.

Well No. 4

According to the State Well Report (Tracking No. 588079), drilling of Well No. 4 was completed by NextGen Water Well Service on October 22, 2021. The well was drilled to a depth of 560 ft. bgl with a 13 1/2-inch borehole from 0 to 20 ft. bgl. and a 8 3/4-inch borehole from 20 to 560 ft. bgl and back filled to 540. The well was completed with 5-inch PVC casing set from +2 to 480 ft. bgl and 5-inch screen from 480 to 540 ft. bgl. Drill cuttings collected by NextGen indicates that the well was completed in the Hensell Member of the Edwards-Trinity Aquifer.

Well No. 5

According to the State Well Report (Tracking No. 588055), drilling of Well No. 5 was completed by NextGen Water Well Service on October 19, 2021. The well was drilled to a depth of 610 ft. bgl with a 13 1/2-inch borehole from 0 to 20 ft. bgl. and a 8 3/4-inch borehole from 20 to 610 ft. bgl and back filled to 580. The well was completed with 5-inch PVC casing set from +2 to 500 ft. bgl and 5-inch screen from 500 to 580 ft. bgl. Drill cuttings collected by NextGen indicates that the well was completed in the Hensell Member of the Edwards-Trinity Aquifer.

Well No. 6

According to the State Well Report (Tracking No. 588052), drilling of Well No. 6 was completed by NextGen Water Well Service on October 18, 2021. The well was drilled to a depth of 580 ft. bgl with a 13 1/2-inch borehole from 0 to 20 ft. bgl. and a 8 3/4-inch borehole from 20 to 580 ft. bgl and back filled to 540. The well was completed with 5-inch PVC casing set from +2 to 480 ft. bgl and 5-inch screen from 480 to 540 ft. bgl. Drill cuttings collected by NextGen indicates that the well was completed in the Hensell Member of the Edwards-Trinity Aquifer.

Well No. 7

According to the State Well Report (Tracking No. 585264), drilling of Well No. 7 was completed by NextGen Water Well Service on September 12, 2021. The well was drilled to a depth of 590 ft. bgl with a 13 1/2-inch borehole from 0 to 20 ft. bgl. and a 8 3/4-inch borehole from 20 to 590 ft. bgl. The well was completed with 5-inch PVC casing set from +2 to 500 ft. bgl and 5-inch screen from 500 to 560 ft. bgl. Drill cuttings collected by NextGen indicates that the well was completed in the Hensell Member of the Edwards-Trinity Aquifer.

Well No. 8

According to the State Well Report (Tracking No. 585272), drilling of Well No. 8 was completed by NextGen Water Well Service on September 9, 2021. The well was drilled to a depth of 600 ft. bgl with a 13 1/2-inch borehole from 0 to 20 ft. bgl. and a 8 3/4-inch borehole from 20 to 600 ft. bgl and back filled to 490. The well was completed with 5-inch PVC casing set from +2 to 430 ft. bgl and 5-inch screen from 430 to 490 ft. bgl. Drill cuttings collected by NextGen indicates that the well was completed in the Hensell Member of the Edwards-Trinity Aquifer.

Well No. 9

According to the State Well Report (Tracking No. 588067), drilling of Well No. 9 was completed by NextGen Water Well Service on October 6, 2021. The well was drilled to a depth of 600 ft. bgl with a 13 1/2-inch borehole from 0 to 20 ft. bgl. and a 8 3/4-inch borehole from 20 to 600 ft. bgl and back filled to 580. The well was completed with 5-inch PVC casing set from +2 to 500 ft. bgl and 5-inch screen from 500 to 580 ft. bgl. Drill cuttings collected by NextGen indicates that the well was completed in the Hensell Member of the Edwards-Trinity Aquifer.

Well No. 10

According to the State Well Report (Tracking No. 588069), drilling of Well No. 10 was completed by NextGen Water Well Service on September 17, 2021. The well was drilled to a depth of 600 ft. bgl with a 13 1/2-inch borehole from 0 to 20 ft. bgl. and a 8 3/4-inch borehole from 20 to 600 ft. bgl and back filled to 580. The well was completed with 5-inch PVC casing set from +2 to 500 ft. bgl and 5-inch screen from 500 to 580 ft. bgl. Drill cuttings collected by NextGen indicates that the well was completed in the Hensell Member of the Edwards-Trinity Aquifer.

Well No. 11

According to the State Well Report (Tracking No. 585279), drilling of Well No. 11 was completed by NextGen Water Well Service on September 17, 2021. The well was drilled to a depth of 590 ft. bgl with a 13 1/2-inch borehole from 0 to 20 ft. bgl. and a 8 3/4-inch borehole from 20 to 590 ft. bgl and back filled to 560. The well was completed with 5-inch PVC casing set from +2 to 500 ft. bgl and 5-inch screen from 500 to 560 ft. bgl. Drill cuttings collected by NextGen indicates that the well was completed in the Hensell Member of the Edwards-Trinity Aquifer.

Well No. 12

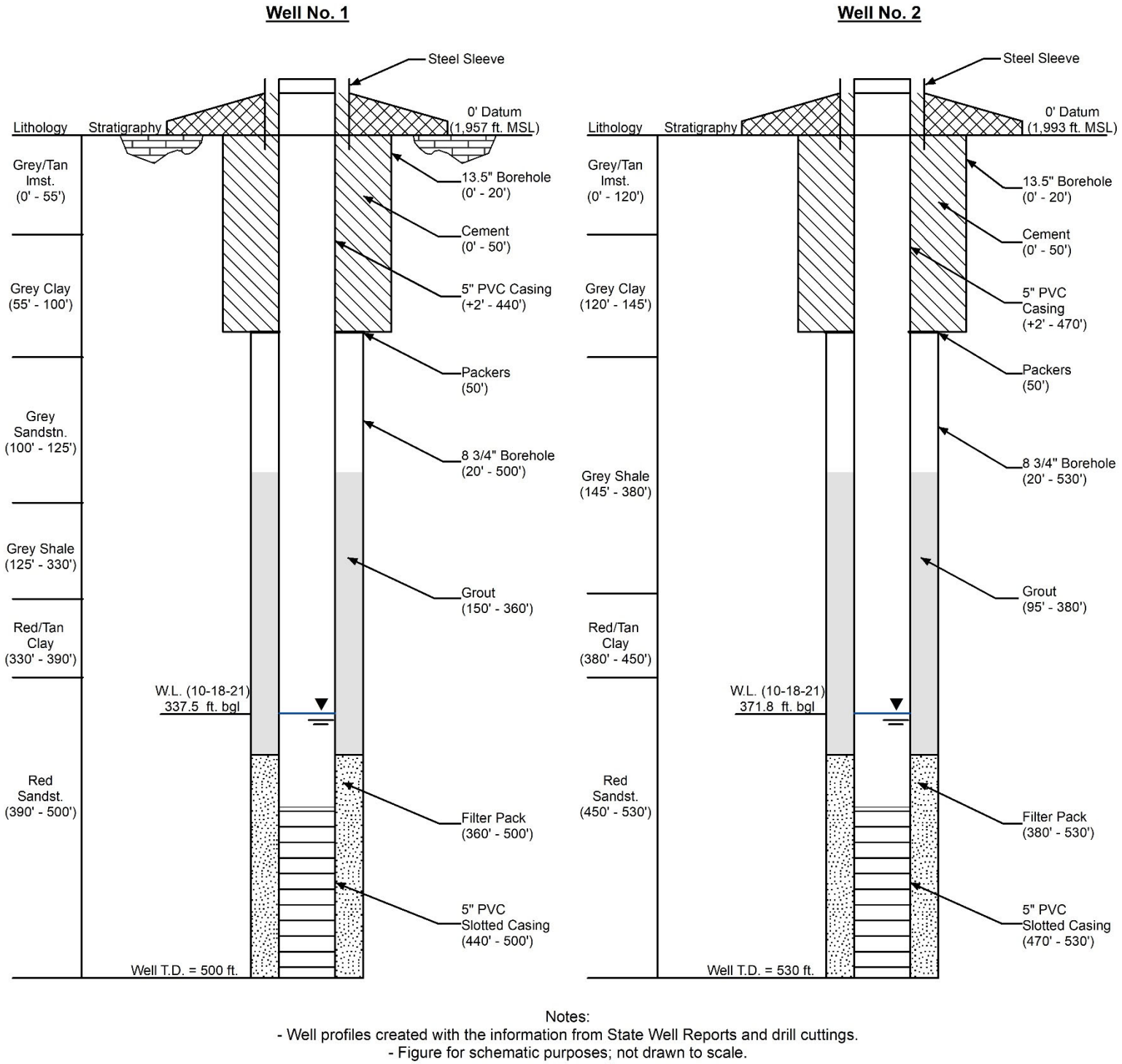
According to the State Well Report (Tracking No. 588047), drilling of Well No. 12 was completed by NextGen Water Well Service on September 27, 2021. The well was drilled to a depth of 590 ft. bgl with a 13 1/2-inch borehole from 0 to 20 ft. bgl. and a 8 3/4-inch borehole from 20 to 590 ft. bgl and back filled to 565. The well was completed with 5-inch PVC casing set from +2 to 500 ft. bgl and 5-inch screen from 500 to 560 ft. bgl. Drill cuttings collected by NextGen indicates that the well was completed in the Hensell Member of the Edwards-Trinity Aquifer.

Table 2: Summary of Loma Vista (Phase III) 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)
Well No. 1	588048	30° 08' 56.03" N	99° 12' 36.53" W	1,957	10/8/2021	Edwards -Trinity	500	337.5' (10/18/21) 1,619.5'	13 1/2" (0-20) 8 3/4" (20-530)	5" PVC (+2-440)	5" PVC Screen (440-500)
Well No. 2	588049	30° 09' 00.67" N	99° 12' 34.72" W	1,993	10/13/2021	Edwards -Trinity	530	371.8' (10/18/21) 1,621.2'	13 1/2" (0-20) 8 3/4" (20-560)	5" PVC (+2-470)	5" PVC Screen (470-530)
Well No. 3	588078	30° 08' 58.13" N	99° 11' 58.76" W	1,980	10/20/2021	Edwards -Trinity	540	353.0' (10/26/21) 1,627.0'	13 1/2" (0-20) 8 3/4" (20-560)	5" PVC (+2-480)	5" PVC Screen (480-540)
Well No. 4	588079	30° 09' 2.54" N	99° 12' 1.2" W	2,001	10/22/2021	Edwards -Trinity	540	371.2' (10/26/21) 1,629.8'	13 1/2" (0-20) 8 3/4" (20-560)	5" PVC (+2-480)	5" PVC Screen (480-540)
Well No. 5	588055	30° 09' 24.82" N	99° 12' 27.85" W	2,070	10/19/2021	Edwards -Trinity	580	434.5' (10/26/21) 1,635.5'	13 1/2" (0-20) 8 3/4" (20-610)	5" PVC (+2-500)	5" PVC Screen (500-580)
Well No. 6	588052	30° 09' 22.93" N	99° 12' 22.59" W	2,045	10/18/2021	Edwards -Trinity	540	413.1' (10/26/21) 1,631.9'	13 1/2" (0-20) 8 3/4" (20-580)	5" PVC (+2-480)	5" PVC Screen (480-540)
Well No. 7	585264	30° 09' 28.34" N	99° 11' 44.78" W	2,052	9/12/2021	Edwards -Trinity	560	319.8' (9/15/21) 1,732.2'	13 1/2" (0-20) 8 3/4" (20-590)	5" PVC (+2-500)	5" PVC Screen (500-560)
Well No. 8	585272	30° 09' 23.41" N	99° 11' 44.51" W	2,050	9/9/2021	Edwards -Trinity	490	402.3' (9/15/21) 1,647.7'	13 1/2" (0-20) 8 3/4" (20-600)	5" PVC (+2-430)	5" PVC Screen (430-490)
Well No. 9	588067	30° 09' 38.97" N	99° 11' 57.26" W	2,018	10/6/2021	Edwards -Trinity	580	376.0' (10/8/21) 1,642.0'	13 1/2" (0-20) 8 3/4" (20-600)	5" PVC (+2-500)	5" PVC Screen (500-580)

Well No. 10	588069	30° 09' 43.85" N	99° 11' 56.37" W	2,046	9/17/2021	Edwards -Trinity	580	397.0' (10/8/21) 1,649.0'	13 1/2" (0-20) 8 3/4" (20-600)	5" PVC (+2-500)	5" PVC Screen (500-580)
Well No. 11	585279	30° 10' 2.4" N	99° 11' 54.6" W	2,067	9/17/2021	Edwards -Trinity	560	413.7' (10/4/21) 1,653.3'	13 1/2" (0-20) 8 3/4" (20-590)	5" PVC (+2-500)	5" PVC Screen (500-560)
Well No. 12	588047	30° 10' 0.83" N	99° 11' 59.96" W	2,072	9/27/2021	Edwards -Trinity	560	414.2' (10/4/21) 1,657.8'	13 1/2" (0-20) 8 3/4" (20-590)	5" PVC (+2-500)	5" PVC Screen (500-560)

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 and drill cuttings.
- Figure for schematic purposes; not drawn to scale.

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

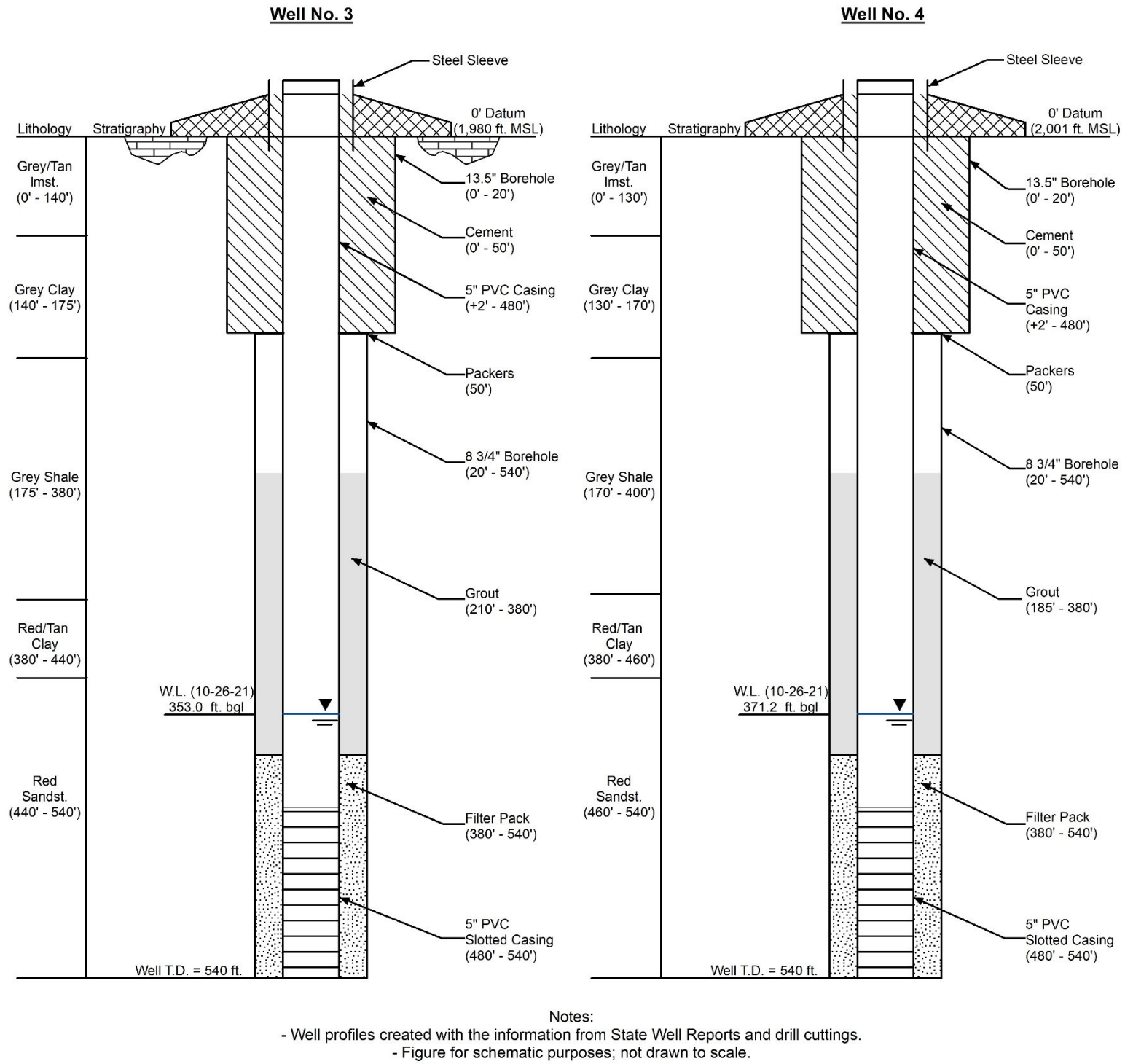


Figure 7: Well construction profiles of Wells No. 3 and No. 4

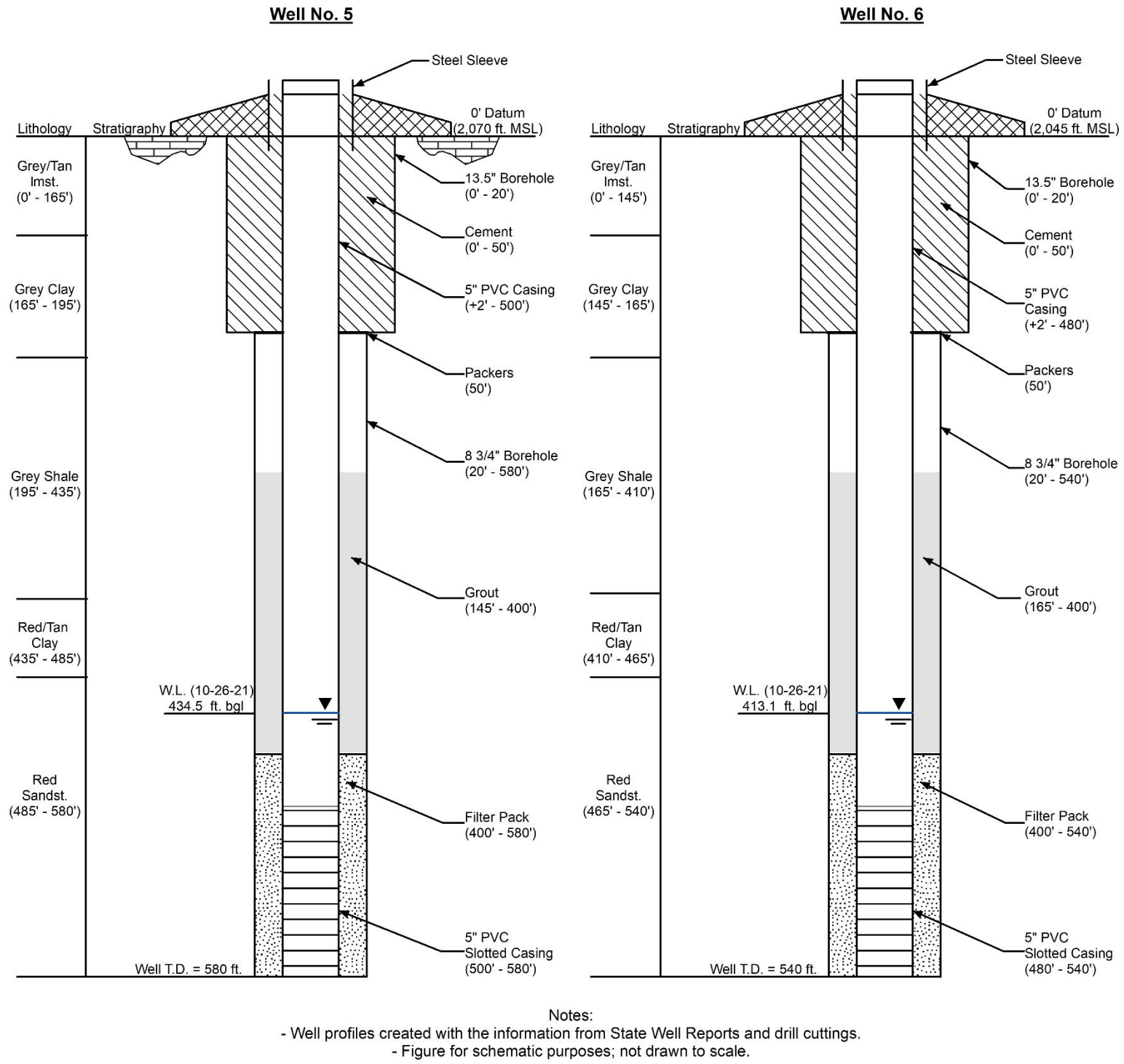
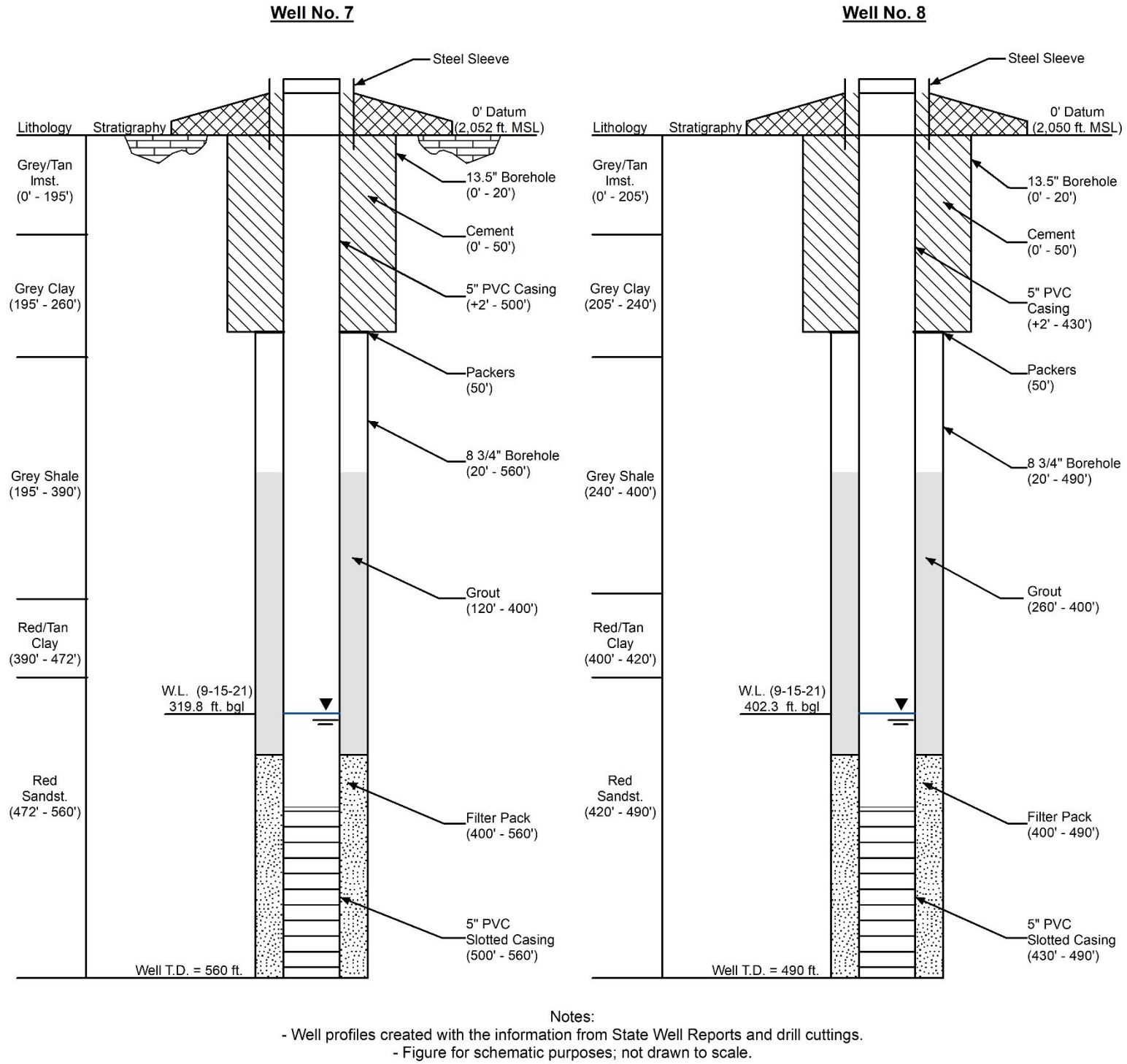


Figure 8: Well construction profile of Wells No. 5 and No. 6



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

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

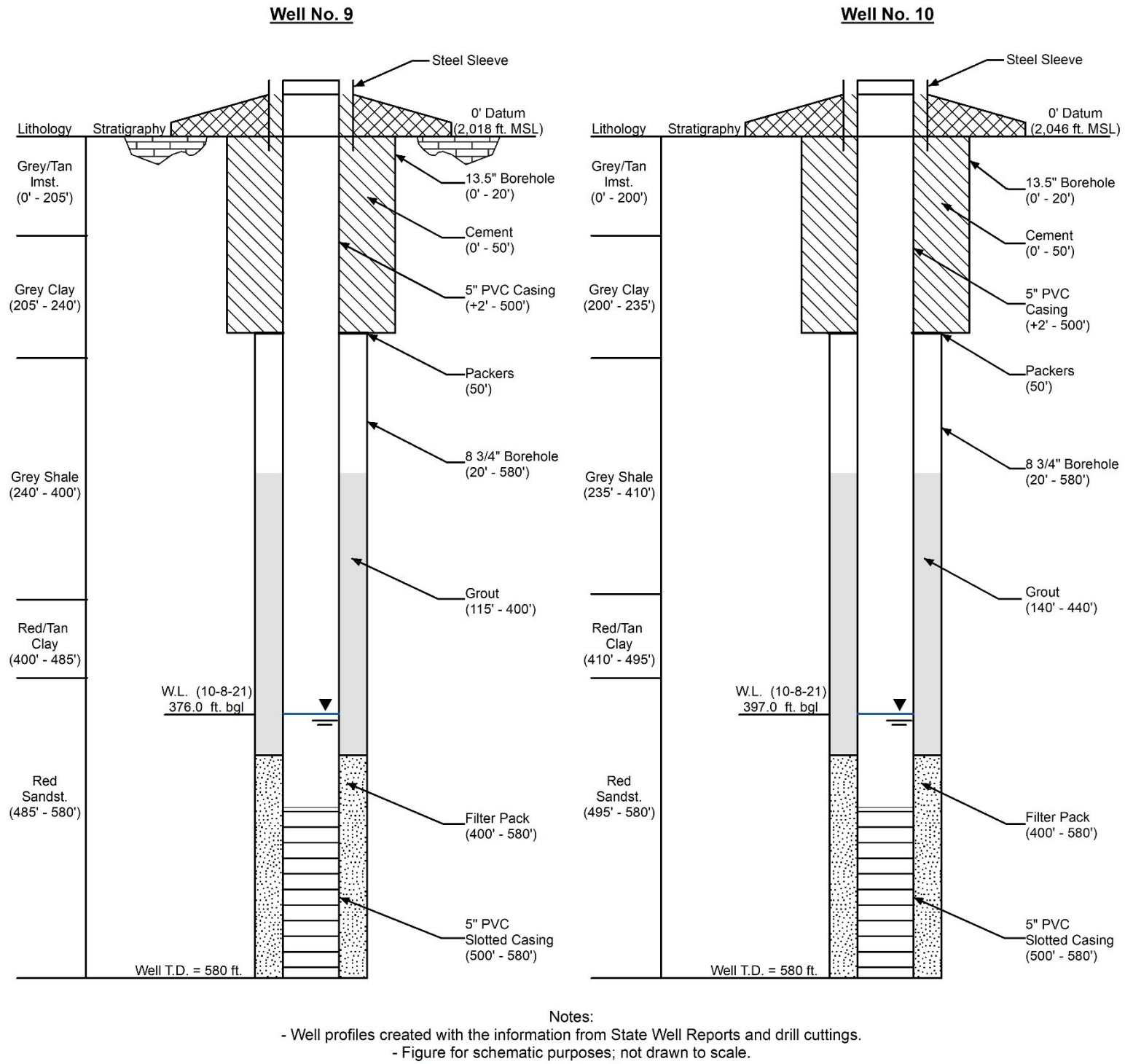
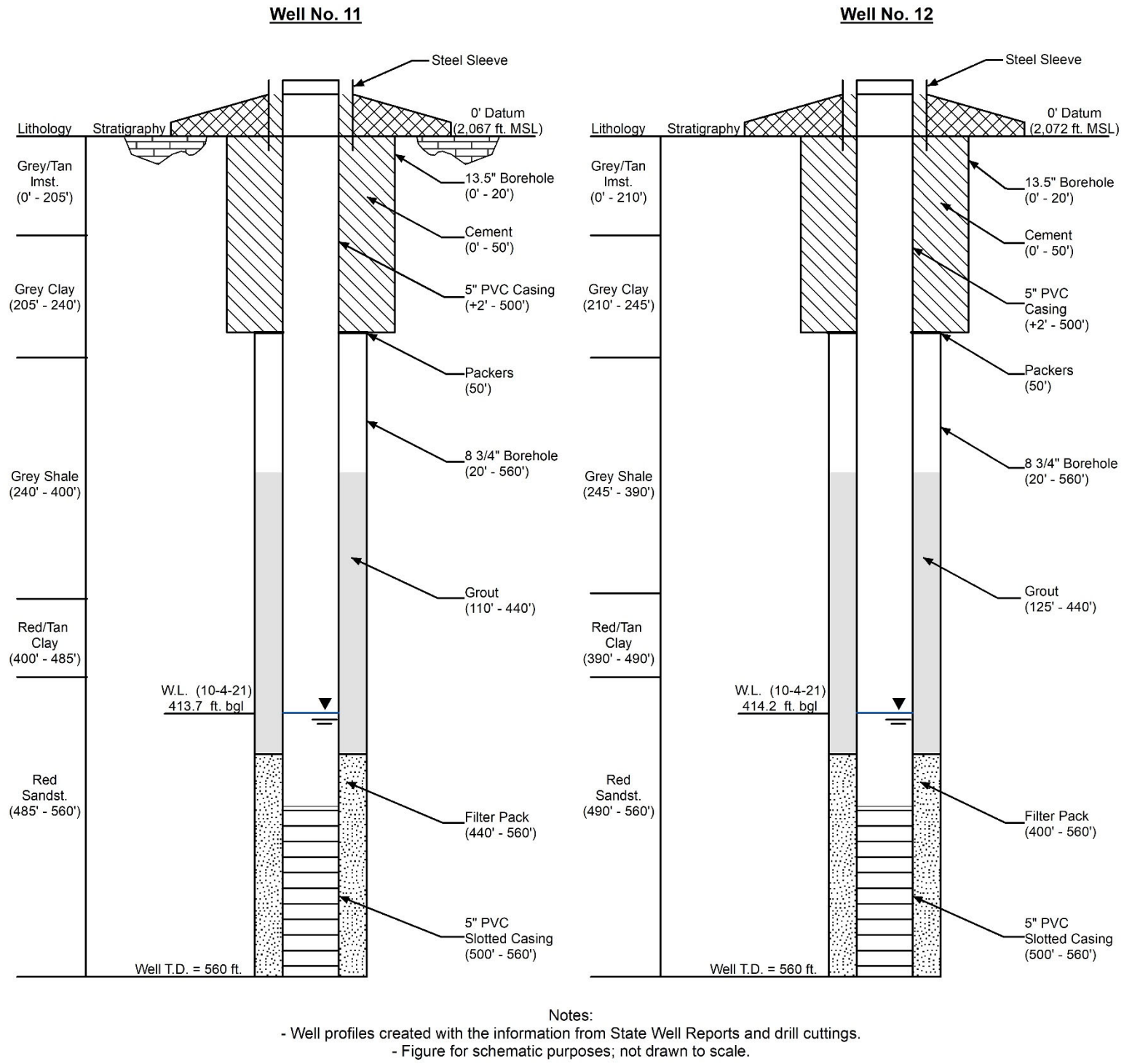


Figure 10: Well construction profile of Wells No. 9 and No. 10



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

Figure 11: Well construction profile of Wells No. 11 and No. 12

IV.2 Aquifer Testing

Six (6) aquifer tests were performed to assess the hydrogeologic properties of the Edwards-Trinity Aquifer within the subdivision. For each aquifer test, NextGen Water Well Service 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 and Jacob (1946) solution in the Aqtesolv software suite (Duffield, 2007). Table 3 provides a summary of the aquifer testing results; Appendix C provides the results of the aquifer analysis; and Appendix D provides well efficiency calculations for each well.

IV.2.1. Aquifer Test of Well No. 8 (September 15, 2021):

The aquifer test of Well No. 8 was conducted on September 15, 2021 with Well No. 7 as the observation well approximately 498 feet away from the pumping well. The pumping phase started at 11:09 A.M. on September 15, 2021; the water level was monitored for 24.1 hours of pumping and for 23.0 hours of recovery. Prior to the pumping phase of the aquifer test, the static water level in Well No. 8 was measured at 402.3 ft. bgl (1,647.7 ft. MSL) and 319.8 ft. bgl (1,732.2 ft. MSL) in Well No. 7.

Well No. 8 was pumped at an average rate of 23 gpm with a final measured pumping rate of 23 gpm with 24.0 feet of drawdown, resulting in a specific capacity of 0.96 gpm/ft. The Cooper-Jacob analysis resulted in a transmissivity of 135.2 ft^2/day, and a hydraulic conductivity of 0.9 ft./day. The water level fluctuations in the observation well do not indicate a hydraulic connection between the two wells, therefore a storativity value could not be calculated. Figure 12 provides a hydrograph of the pumping well and temperature over the duration of the aquifer test; Figure 13 provides a hydrograph of both the pumping and observation well over the duration of the test.

After an initial drawdown, the water level slowly decreased for the remainder of the pumping phase reaching a stable pumping level prior to shutting off the pump. The water level in the observation well did not show a direct response related to starting and stopping the pump in Well No. 8. The driller reported the observation well was cemented shortly before the start of the pumping phase. As the well was open to multiple aquifer this may be the cause of the elevated static water level (Figure 13). After the pump was shut off, recovery was measured in the pumping well; the water level in the pumping well recovered 90% in approximately 6 hours. There were no aquifer boundary conditions observed during the testing.

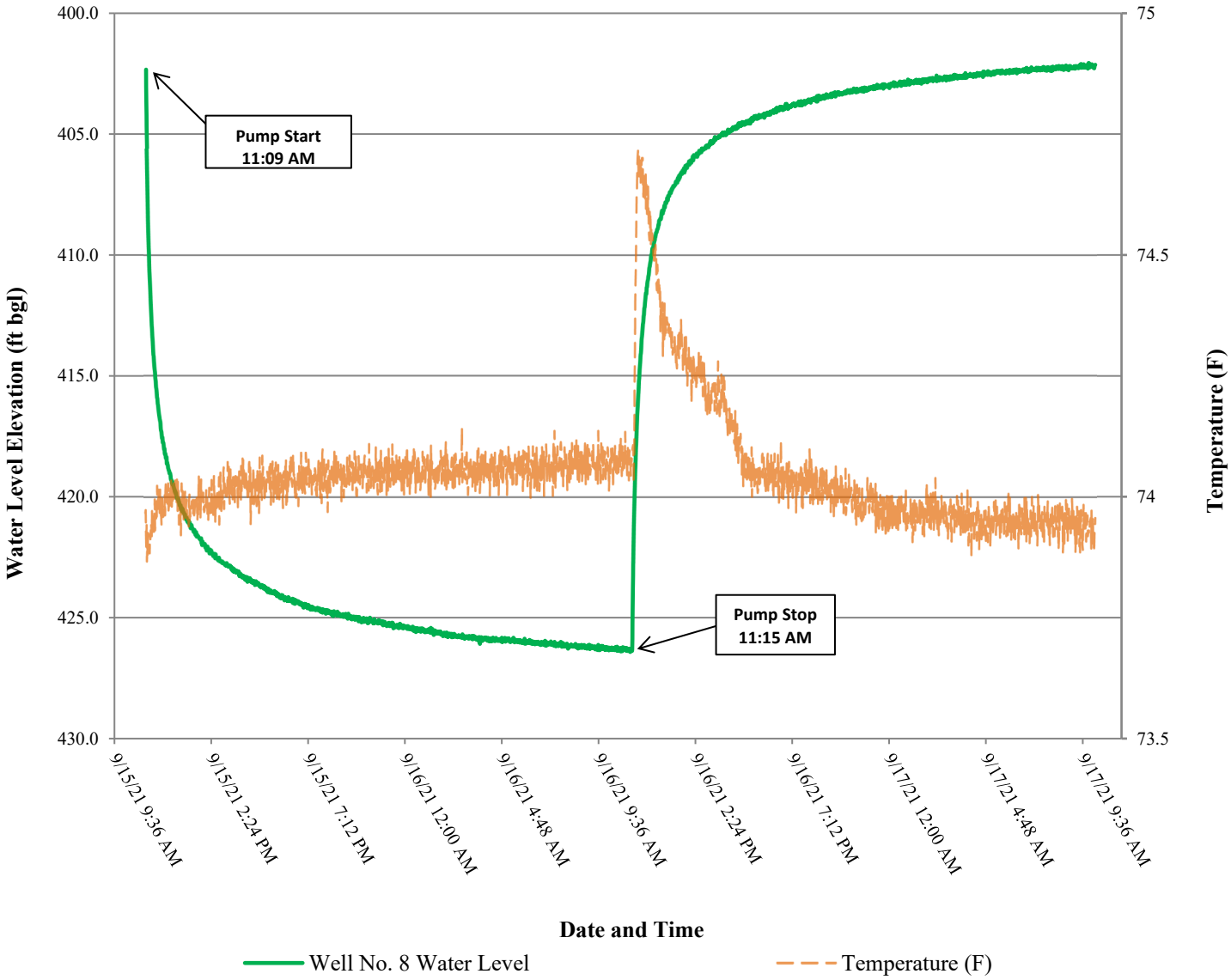


Figure 12: Aquifer test hydrograph of Well No. 8 (September 15, 2021)

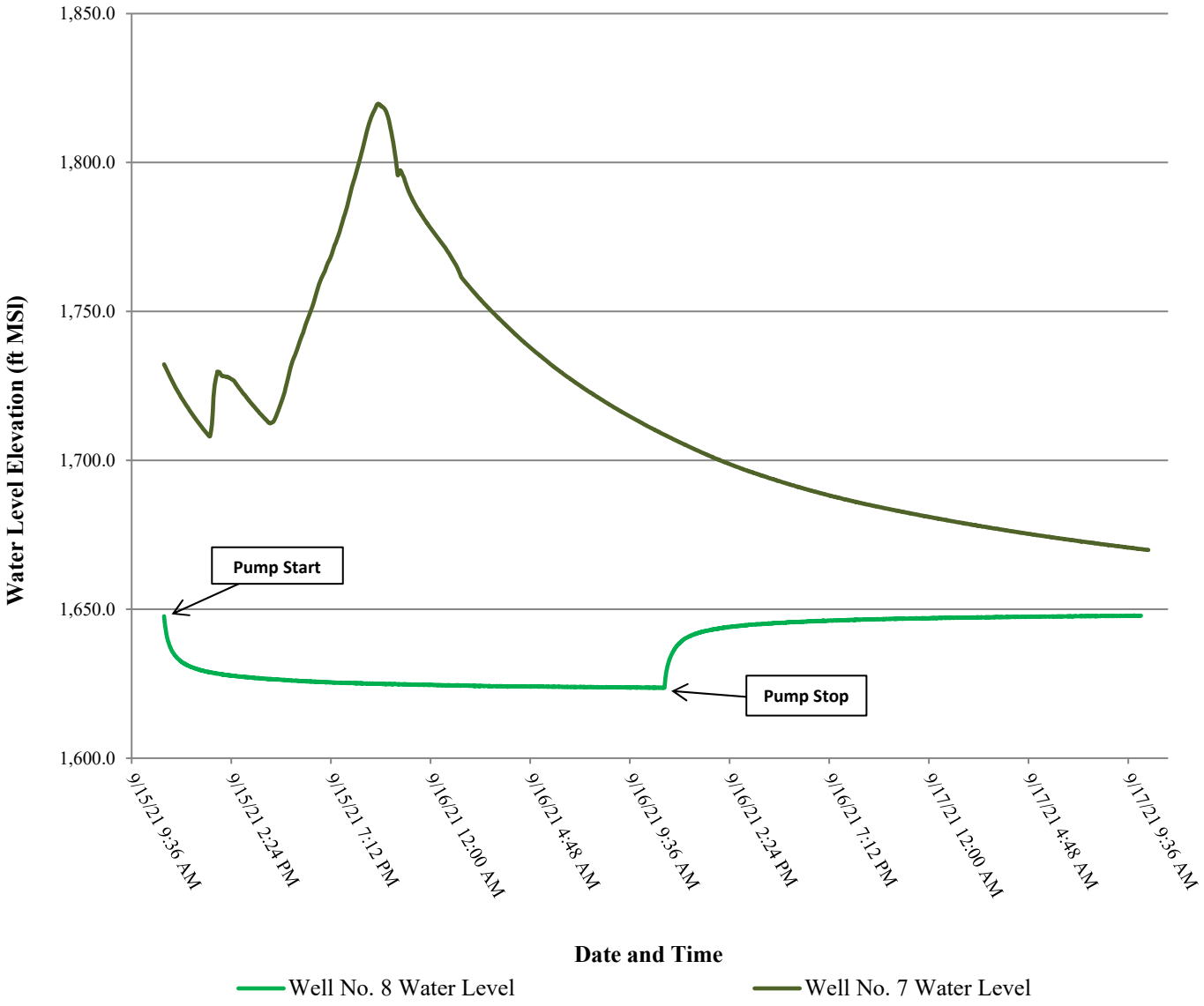


Figure 13: Aquifer test hydrograph of Well No. 8 and Observation Well No. 7 (September 15, 2021)

IV.2.2. Aquifer Test of Well No. 11 (October 4, 2021):

The aquifer test of Well No. 11 was conducted on October 4, 2021 with Well No. 12 as the observation well approximately 499 feet away from the pumping well. The pumping phase started at 11:17 A.M. on October 4, 2021; the water level was monitored for 24.2 hours of pumping and for 69.9 hours of recovery. Prior to the pumping phase of the aquifer test, the static water level in Well No. 11 was measured at 413.7 ft. bgl (1,653.3 ft. MSL) and 414.2 ft. bgl (1,657.8 ft. MSL) in Well No. 12.

Well No. 11 was pumped at an average rate of 22 gpm with a final measured pumping rate of 22 gpm with 64.6 feet of drawdown, resulting in a specific capacity of 0.34 gpm/ft. The Cooper-Jacob analysis resulted in a transmissivity of 216.4 ft^2/day, and a hydraulic conductivity of 2.3 ft./day. A maximum drawdown of 1.4 feet was observed in Well No. 12 indicating a hydraulic connection between the two wells. Due to the observed hydraulic connection, we calculated a storativity value for Well No. 12 of 1.7×10^{-4}. Figure 14 provides a hydrograph of the pumping well and temperature over the duration of the aquifer test; Figure 15 provides a hydrograph of both the pumping and observation well over the duration of the test.

After an initial drawdown, the water level stabilized for approximately 7 hours before encountering a possible no flow boundary condition. After drawing down for approximately 3.5 hours the water level encountered a possible recharge boundary and stabilized towards the end of the pumping phase. The water level in the observation well showed a noticeable response directly related to starting the pump before recovering and remaining stable for the remainder of the test (Figure 15). After the pump was shut off, recovery was measured in the pumping well; the water level in the pumping well recovered 90% in approximately 25 minutes.

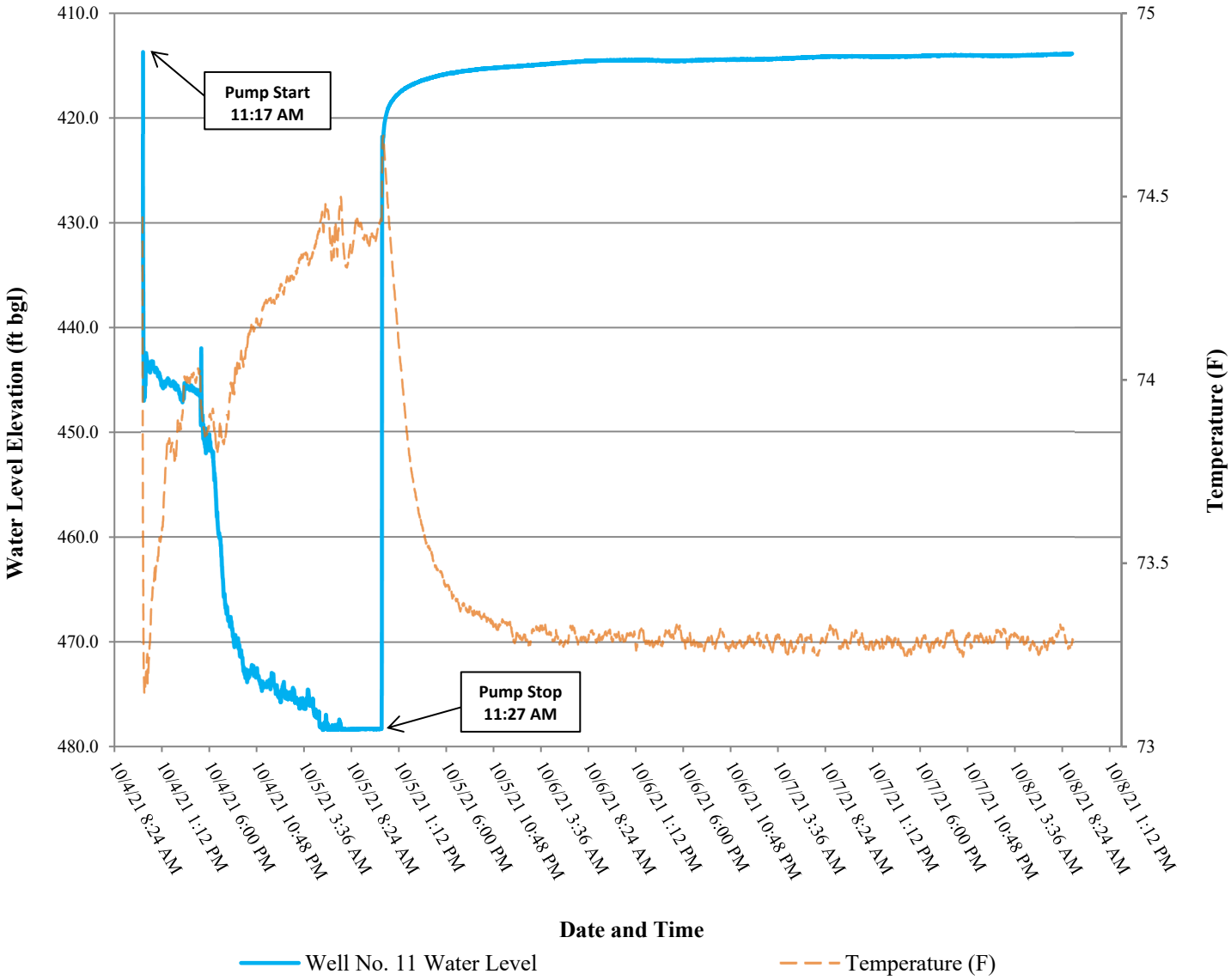


Figure 14: Aquifer test hydrograph of Well No. 11 (October 4, 2021)

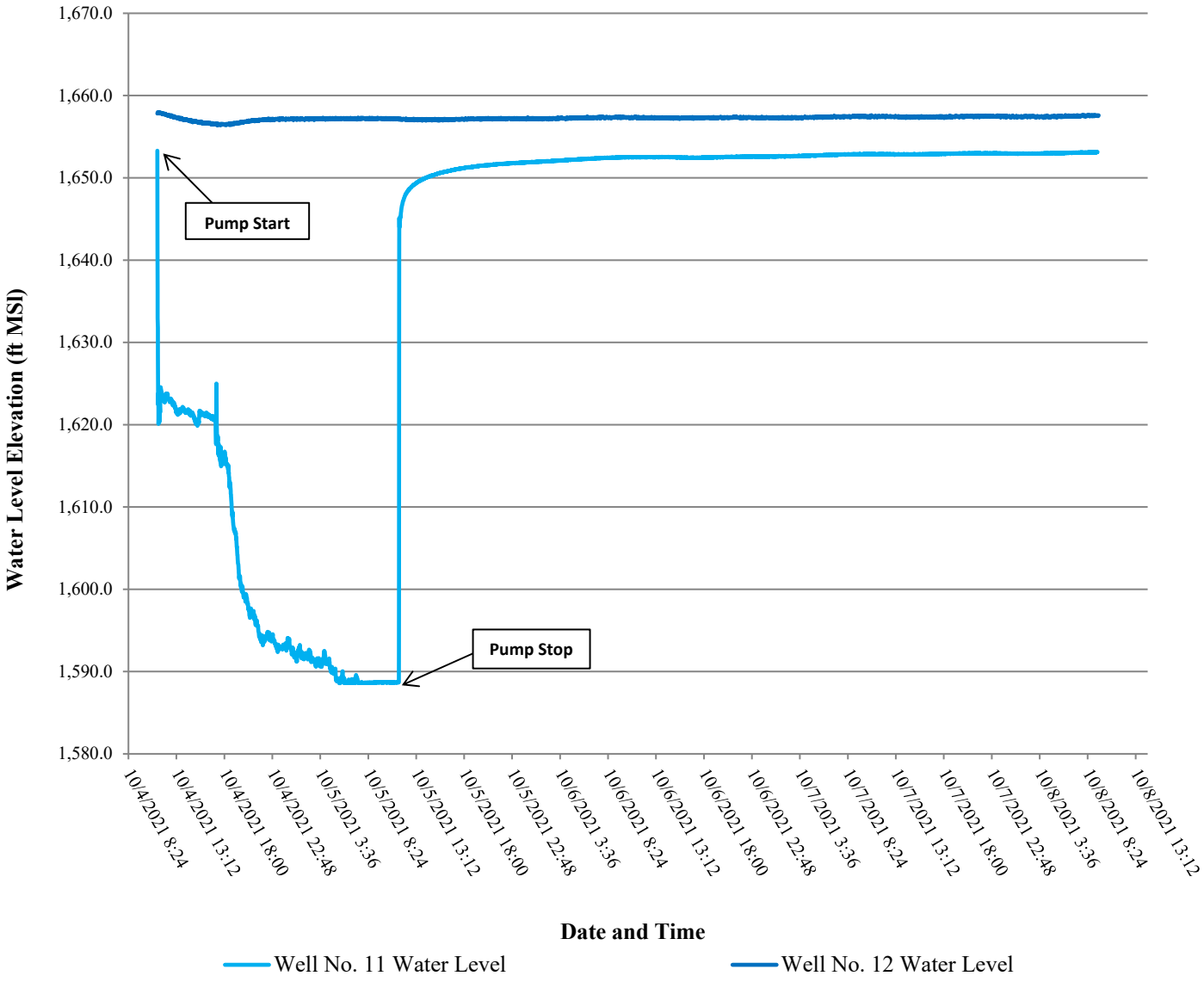


Figure 15: Aquifer test hydrograph of Well No. 11 and Observation Well No. 12 (October 4, 2021)

IV.2.3. Aquifer Test of Well No. 10 (October 8, 2021):

The aquifer test of Well No. 10 was conducted on October 8, 2021 with Well No. 9 as the observation well approximately 498 feet away from the pumping well. The pumping phase started at 11:43 A.M. on October 8 2021; the water level was monitored for 24.3 hours of pumping and for 142 hours of recovery. Prior to the pumping phase of the aquifer test, the static water level in Well No. 10 was measured at 397.0 ft. bgl (1,649.0 ft. MSL) and 376.0 ft. bgl (1,642.0 ft. MSL) in Well No. 9.

Well No. 10 was pumped at an average rate of 22 gpm with a final measured pumping rate of 22 gpm with 30.3 feet of drawdown, resulting in a specific capacity of 0.73 gpm/ft. The Cooper-Jacob analysis resulted in a transmissivity of 101.4 ft^2/day, and a hydraulic conductivity of 1.1 ft./day. A maximum drawdown of 10.7 feet was observed in Well No. 9 indicating a hydraulic connection between the two wells. Due to the observed hydraulic connection, we calculated a storativity value for Well No. 9 of 1.4×10^{-5}. Figure 16 provides a hydrograph of the pumping well and temperature over the duration of the aquifer test; Figure 17 provides a hydrograph of both the pumping and observation well over the duration of the test.

After an initial drawdown, the water level slowly decreased before 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. 10 (Figure 17). After the pump was shut off, recovery was measured in both wells; the water level in the pumping well recovered 90% in approximately 5 hours. There were no aquifer boundary conditions observed during the testing.

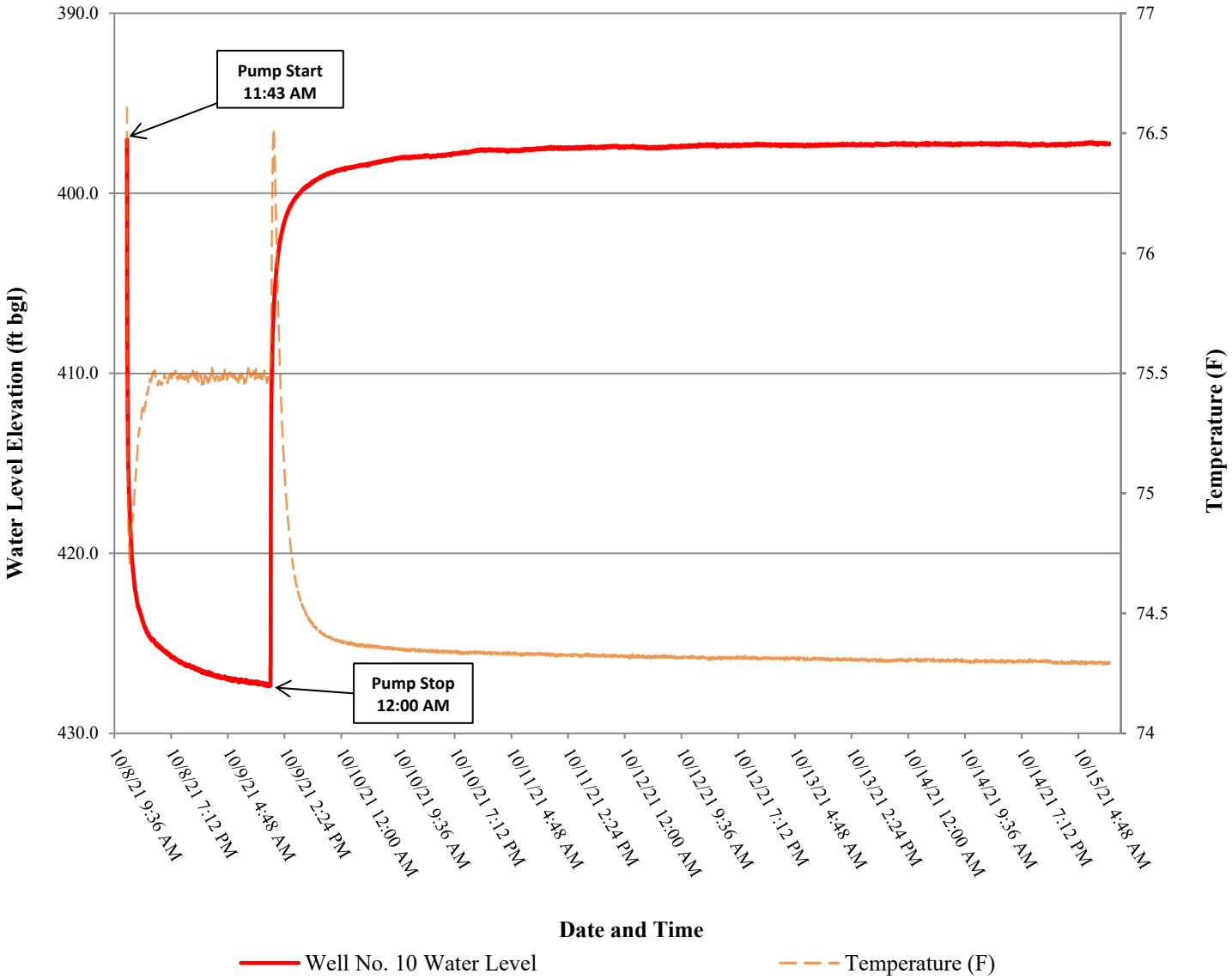


Figure 16: Aquifer test hydrograph of Well No. 10 (October 8, 2021)

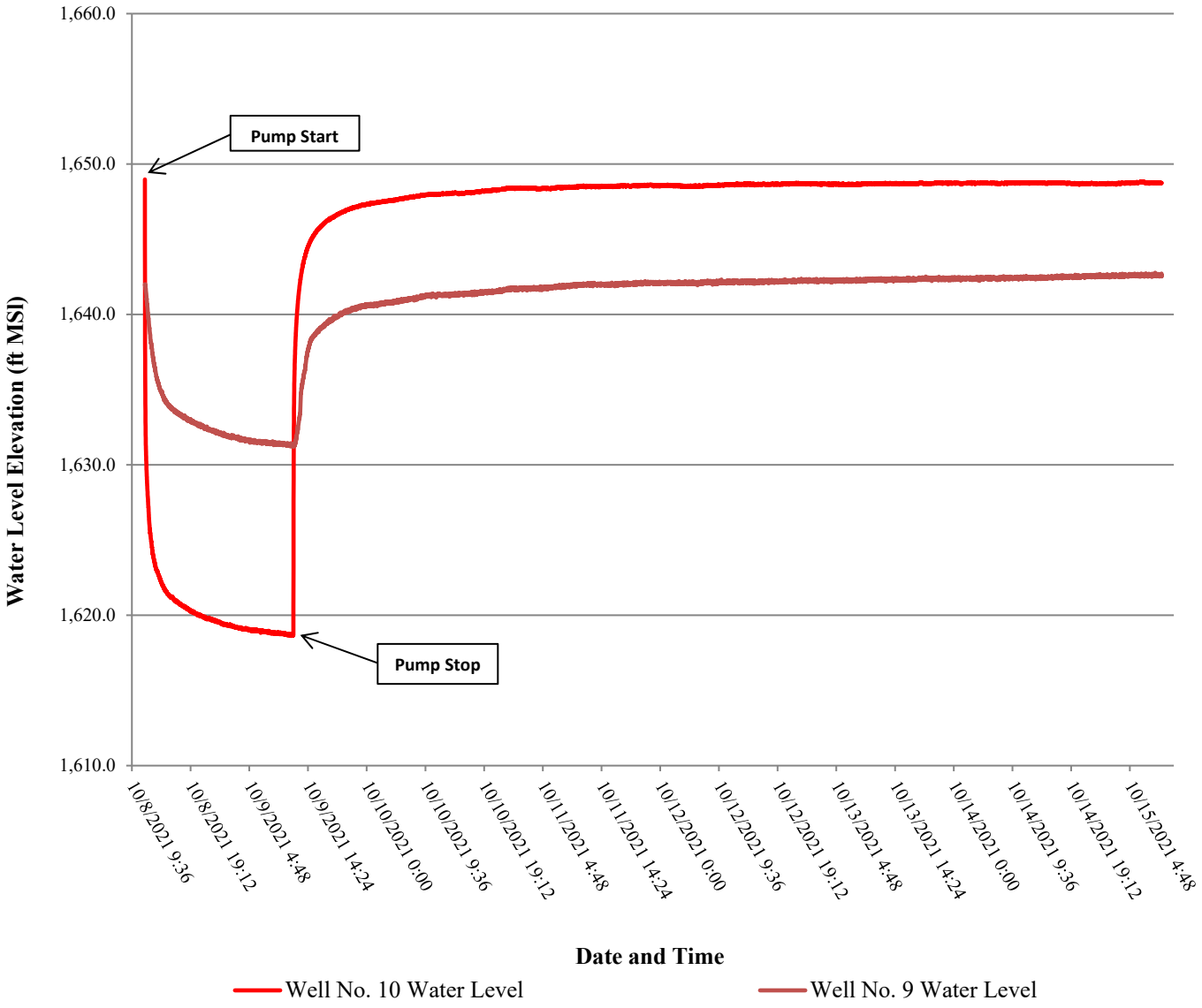


Figure 17: Aquifer test hydrograph of Well No. 10 and Observation Well No. 9 (October 8, 2021)

IV.2.4. Aquifer Test of Well No. 1 (October 18, 2021):

The aquifer test of Well No. 1 was conducted on October 18, 2021 with Well No. 2 as the observation well approximately 497 feet away from the pumping well. The pumping phase started at 11:38 A.M. on October 18, 2021; the water level was monitored for 24.6 hours of pumping and for 22.7 hours of recovery. Prior to the pumping phase of the aquifer test, the static water level in Well No. 1 was measured at 337.5 ft. bgl (1,619.5 ft. MSL) and 371.8 ft. bgl (1,621.2 ft. MSL) in Well No.2.

Well No. 1 was pumped at an average rate of 25 gpm with a final measured pumping rate of 24 gpm with 39.9 feet of drawdown, resulting in a specific capacity of 0.60 gpm/ft. The Cooper-Jacob analysis resulted in a transmissivity of 156.7 ft^2/day, and a hydraulic conductivity of 1.3 ft./day. The water level in the observation well did not indicate a hydraulic connection between the two wells, therefore a storativity value could not be calculated. Figure 18 provides a hydrograph of the pumping well and temperature over the duration of the aquifer test; Figure 19 provides a hydrograph of both the pumping and observation well over the duration of the test.

After an initial drawdown, the water level stabilized for the remainder of the pumping phase. The water level in the observation well remained stable for the duration of the test (Figure 19). After the pump was shut off, recovery was measured in the pumping well; the water level in the pumping well recovered 90% in approximately 2.5 hours. There were no aquifer boundary conditions observed during the testing.

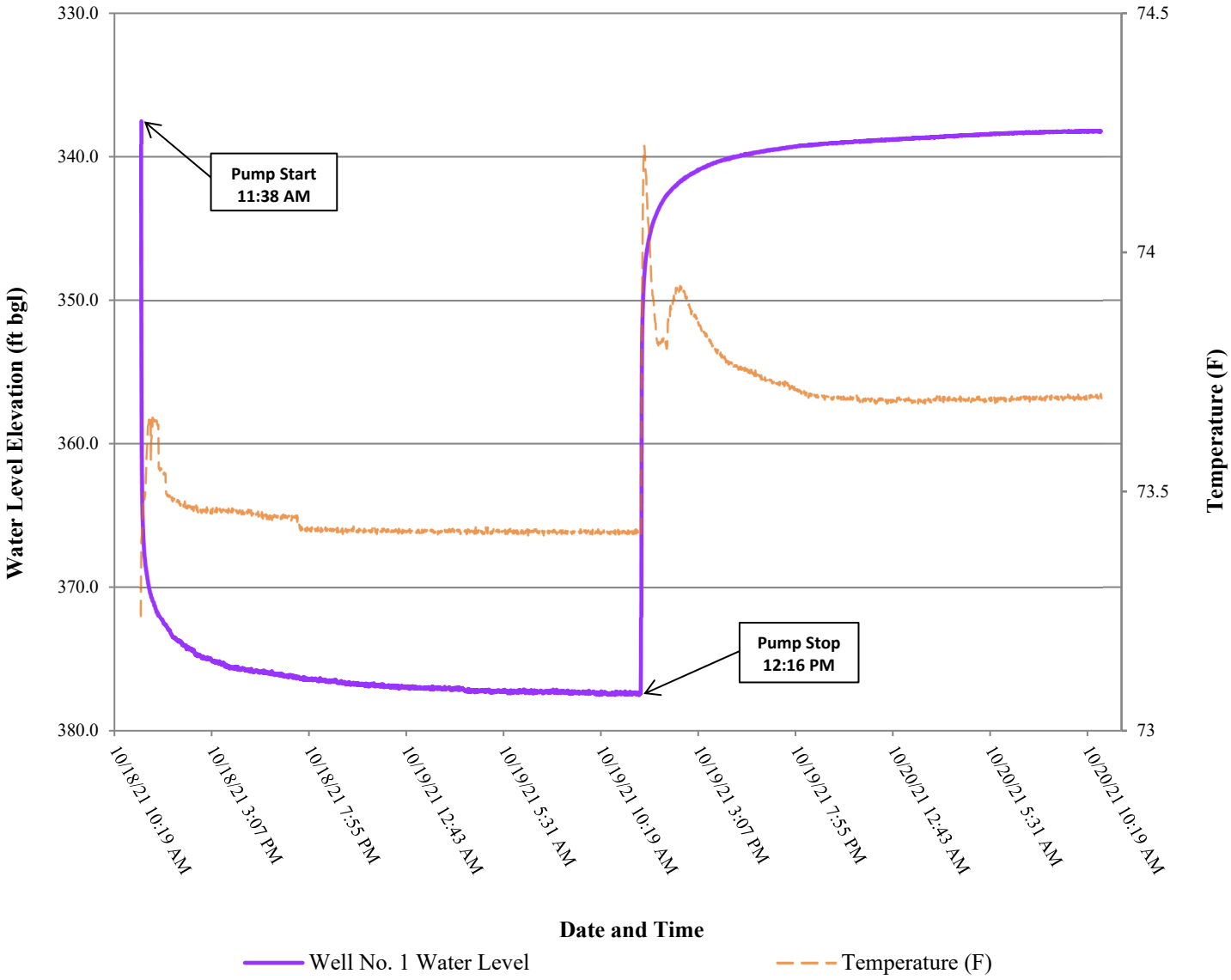


Figure 18: Aquifer test hydrograph of Well No. 1 (October 18, 2021)

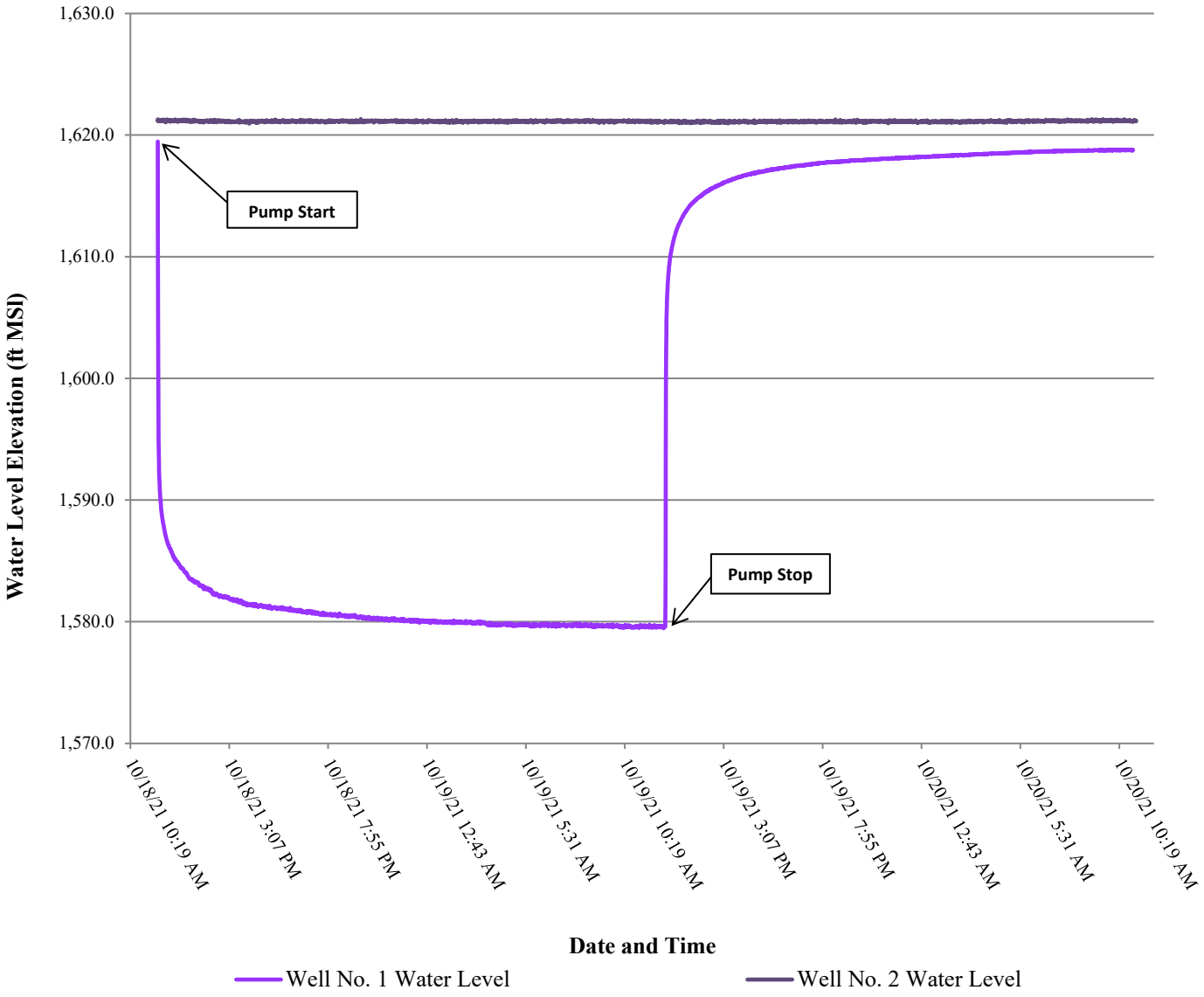


Figure 19: Aquifer test hydrograph of Well No. 1 and Observation Well No. 2 (October 18, 2021)

IV.2.5. Aquifer Test of Well No. 6 (October 20, 2021):

The aquifer test of Well No. 6 was conducted on October 20, 2021 with Well No. 5 as the observation well approximately 498 feet away from the pumping well. The pumping phase started at 11:48 A.M. on October 20, 2021; the water level was monitored for 24.4 hours of pumping and for 48.1 hours of recovery. Prior to the pumping phase of the aquifer test, the static water level in Well No. 6 was measured at 413.1 ft. bgl (1,631.9 ft. MSL) and 434.5 ft. bgl (1,635.5 ft. MSL) in Well No. 5.

Well No. 6 was pumped at an average rate of 21 gpm with a final measured pumping rate of 21 gpm with 29.2 feet of drawdown, resulting in a specific capacity of 0.72 gpm/ft. The Cooper-Jacob analysis resulted in a transmissivity of 167.2 ft^2/day, and a hydraulic conductivity of 1.6 ft./day. A maximum drawdown of 6.6 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 2.7×10^{-5}. Figure 20 provides a hydrograph of the pumping well and temperature over the duration of the aquifer test; Figure 21 provides a hydrograph of both the pumping and observation well over the duration of the test.

After an initial drawdown, the water level slowly decreased 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 21). After the pump was shut off, recovery was measured in both wells; the water level in the pumping well recovered 90% in approximately 3.5 hours. There were no aquifer boundary conditions observed during the testing.

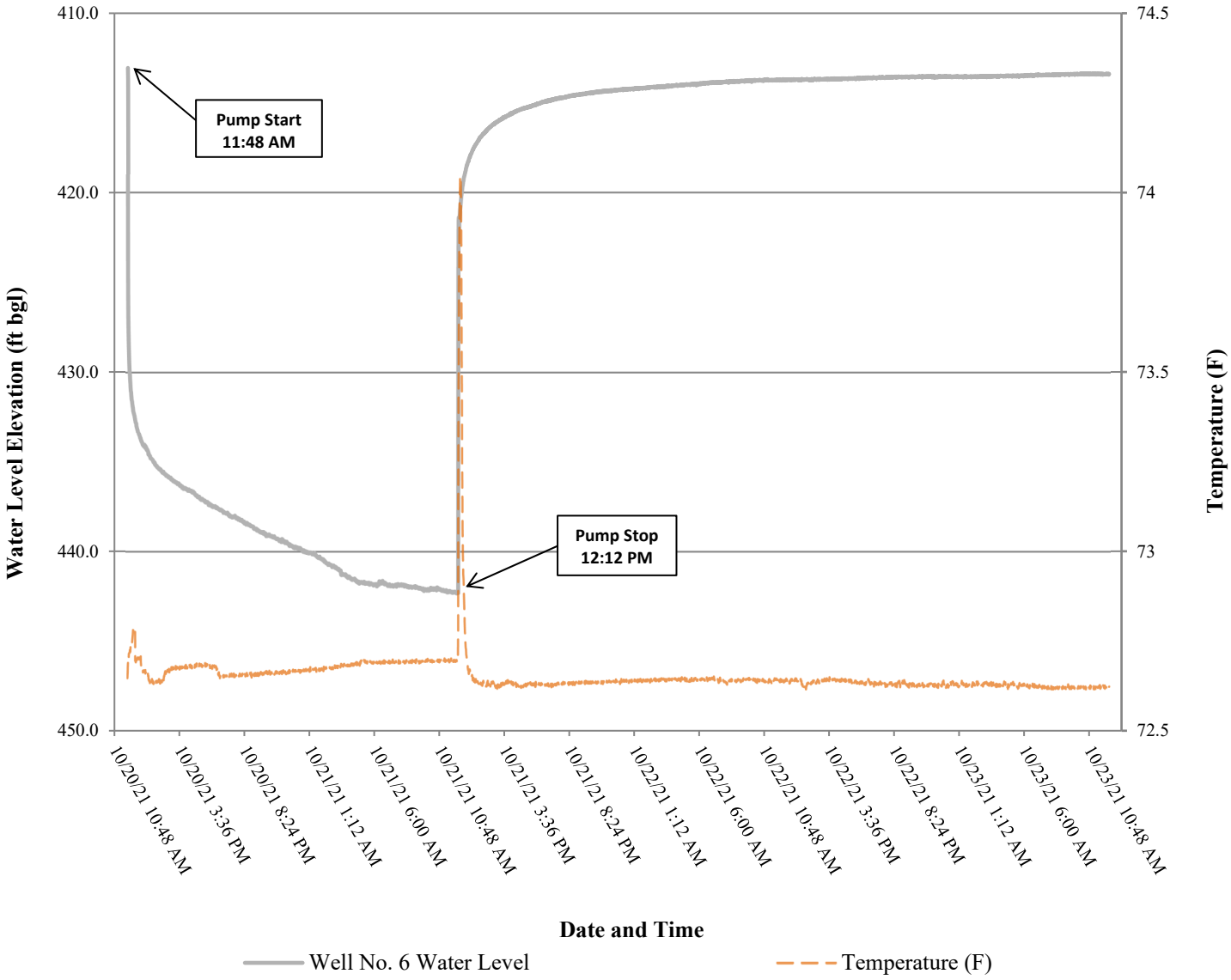


Figure 20: Aquifer test hydrograph of Well No. 6 (October 20, 2021)

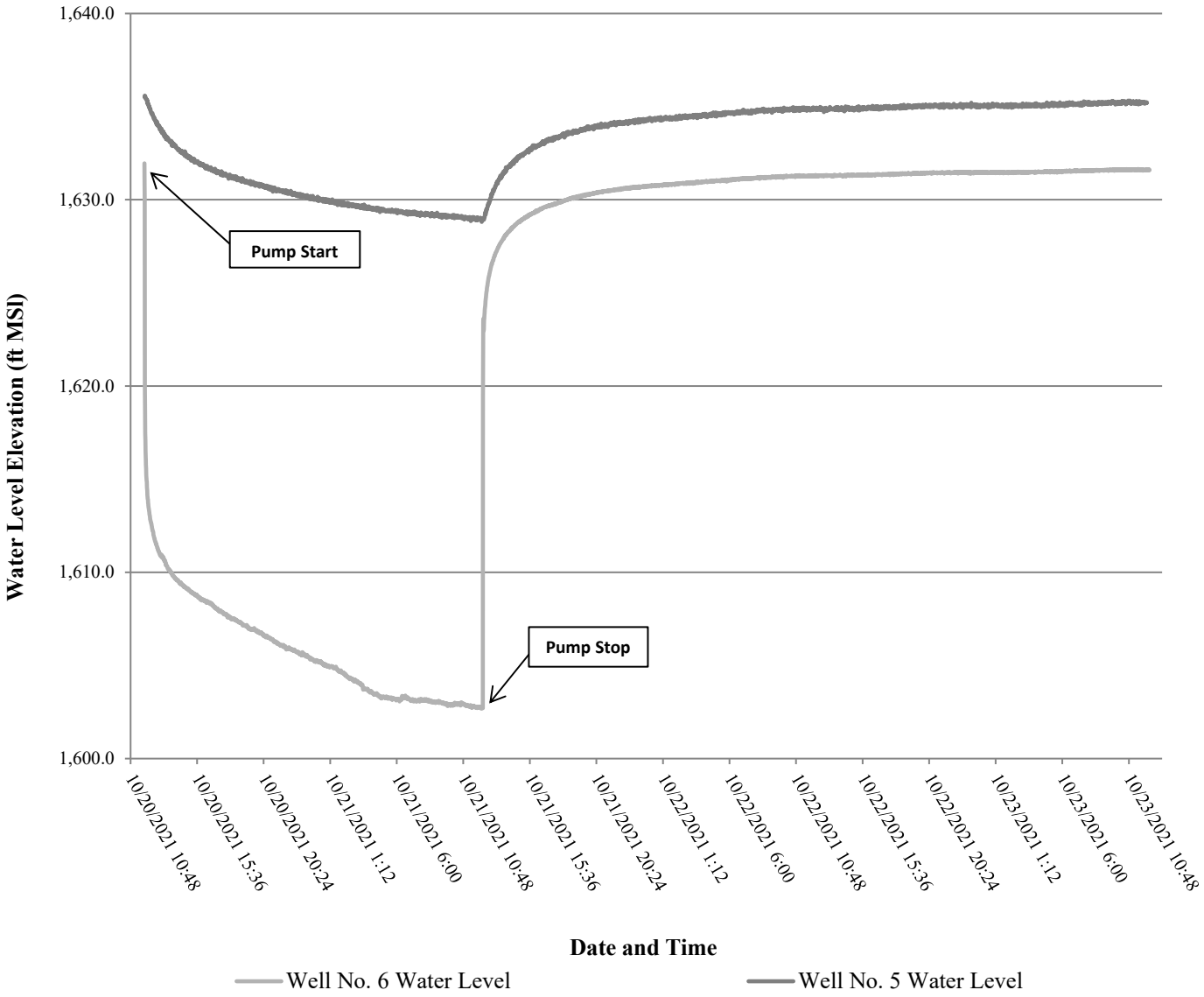


Figure 21: Aquifer test hydrograph of Well No. 6 and Observation Well No. 5 (October 20, 2021)

IV.2.6. Aquifer Test of Well No. 3 (October 26, 2021):

The aquifer test of Well No. 3 was conducted on October 26, 2021 with Well No. 4 as the observation well approximately 495 feet away from the pumping well. The pumping phase started at 12:02 P.M. on October 26, 2021; the water level was monitored for 24.3 hours of pumping and for 24.0 hours of recovery. Prior to the pumping phase of the aquifer test, the static water level in Well No. 3 was measured at 353.0 ft. bgl (1,627.0 ft. MSL) and 371.2 ft. bgl (1,629.8 ft. MSL) in Well No. 4.

Well No. 3 was pumped at an average rate of 24 gpm with a final measured pumping rate of 24 gpm with 8.5 feet of drawdown, resulting in a specific capacity of 2.83 gpm/ft. The Cooper-Jacob analysis resulted in a calculated transmissivity of 854.4 ft^2/day, and a hydraulic conductivity of 7.8 ft./day. A maximum drawdown of 2.4 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 1.2×10^{-4}. Figure 22 provides a hydrograph of the pumping well and temperature over the duration of the aquifer test; Figure 23 provides a hydrograph of both the pumping and observation well over the duration of the test.

After an initial drawdown, the water level slowly decreased 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. 3 (Figure 23). After the pump was shut off, recovery was measured in both wells; the water level in the pumping well recovered 90% in approximately 11 hours. There were no aquifer boundary conditions observed during the testing.

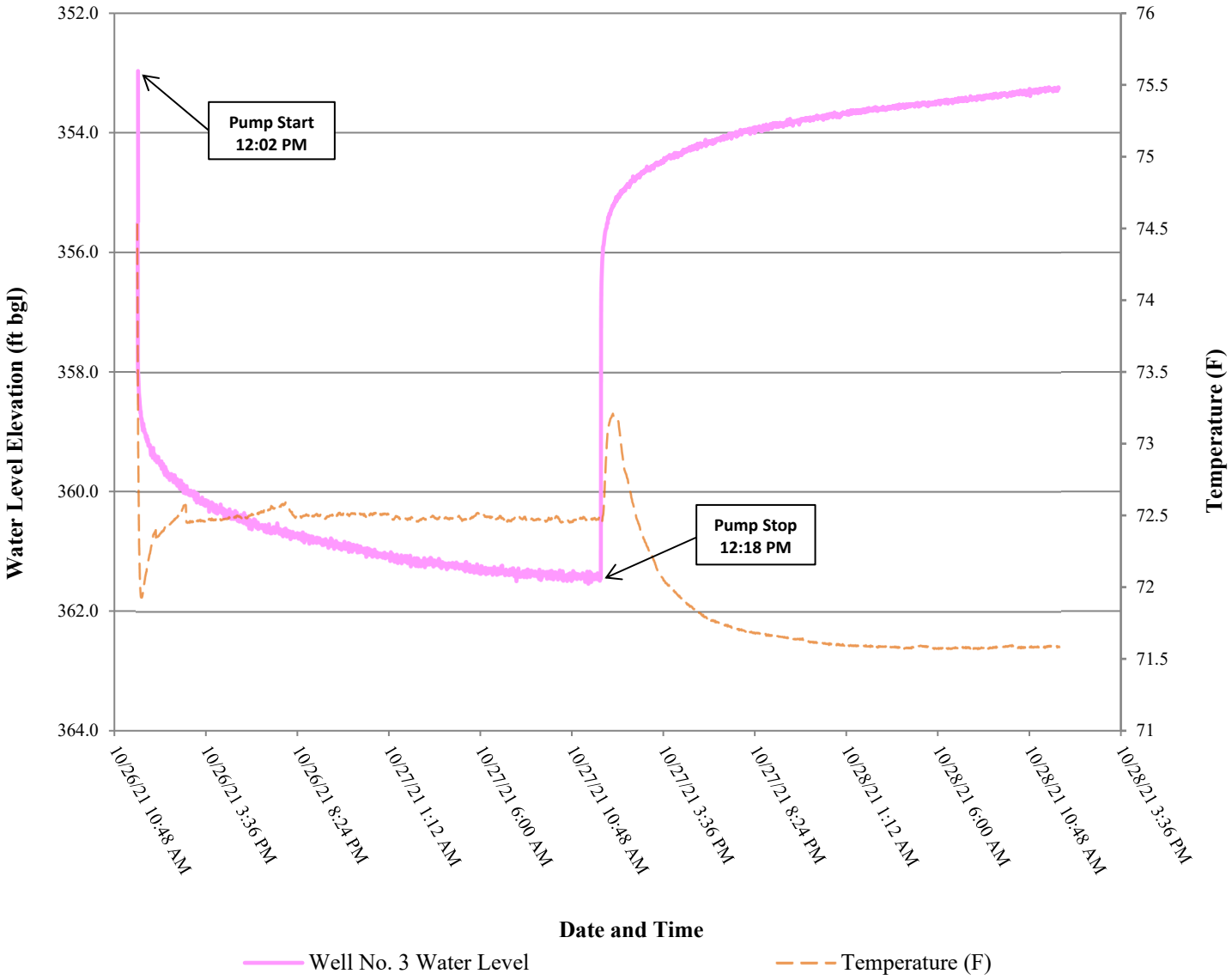


Figure 22: Aquifer test hydrograph of Well No. 3 (October 26, 2021)

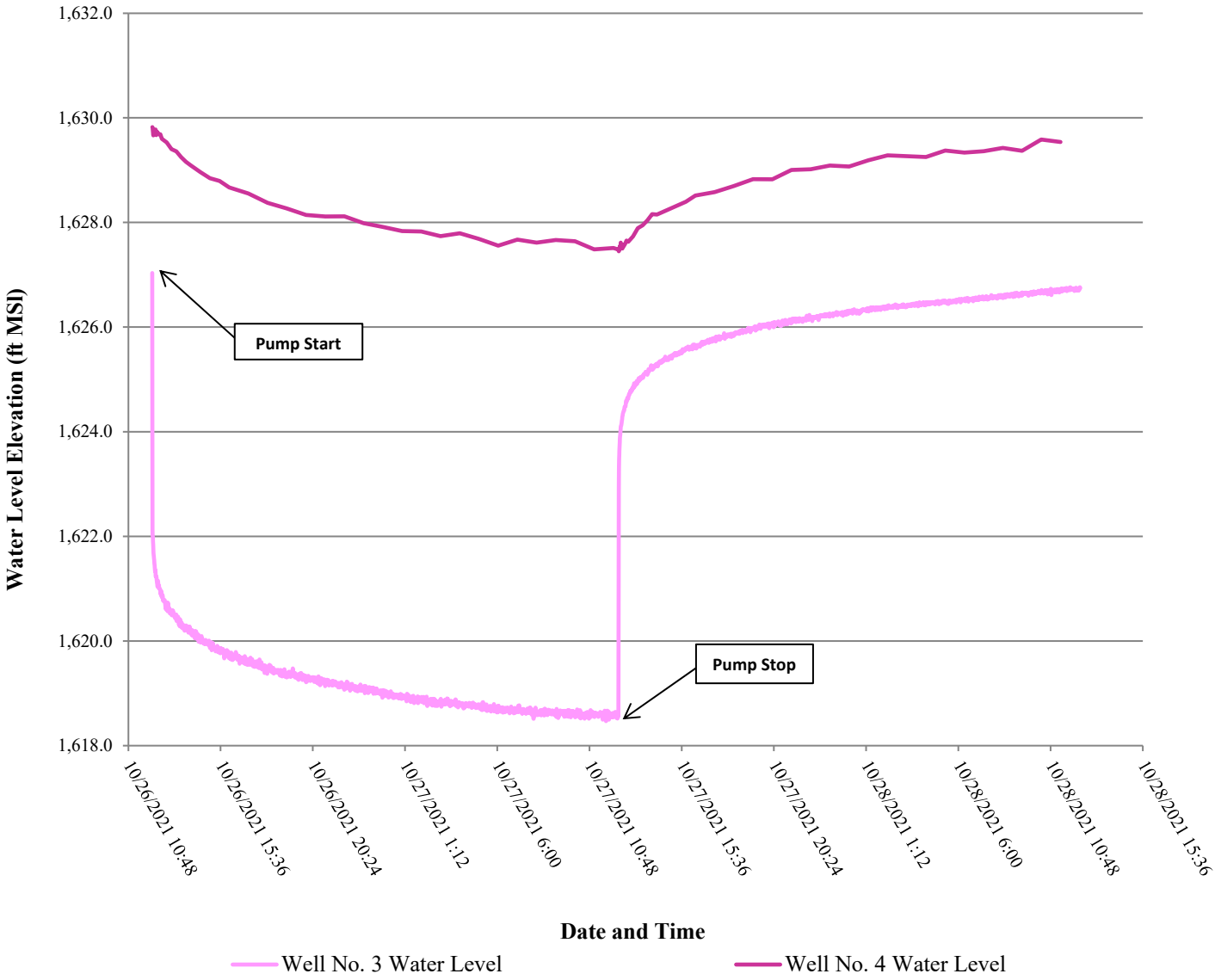


Figure 23: Aquifer test hydrograph of Well No. 3 and Observation Well No. 4 (October 26, 2021)

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
Sep. 15, 2021	No. 8	23	23	24.0	0.96	135.2	-	0.9	155	200%
	No. 7	-	-	N/A	-	N/A	N/A	N/A	108	-
Oct. 4, 2021	No. 11	22	22	64.6	0.34	216.4	-	2.3	95	44%
	No. 12	-	-	1.4	-	483.6	$1.7x10^{-4}$	5.7	85	-
Oct. 8, 2021	No. 10	22	22	30.3	0.73	101.4	-	1.1	95	221%
	No. 9	-	-	10.7	-	276.7	$1.4x10^{-5}$	3.1	90	-
Oct. 18, 2021	No. 1	25	24	39.9	0.60	156.7	-	1.3	120	110%
	No. 2	-	-	N/A	-	N/A	N/A	N/A	100	-
Oct. 20, 2021	No. 6	21	21	29.2	0.72	167.2	-	1.6	105	131%
	No. 5	-	-	6.6	-	343.4	$2.7x10^{-5}$	3.0	115	-
Oct. 26, 2021	No. 3	24	24	8.5	2.83	854.4	-	7.8	110	101%
	No. 4	-	-	2.4	-	754.8	$1.2x10^{-4}$	8.9	85	-

Note: ft. = feet; gpm = gallons per minute; d = day; pumping wells are highlighted in green; aquifer thickness were based upon drill cuttings.

IV.3. Water Quality

A water quality sample was collected from each of the pumping wells. The samples were collected by NexGen Water Well Services staff in a sealed container and stored on ice in a cooler. The samples were transported after collection to Martin Water Labs and tested in accordance with Texas Administrative Code 230.9 (Determination of Groundwater Quality). Appendix E 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 and SCLs excluding pH in Well No. 8. The laboratory pH value for Well No. 8 is anomalous and did not correspond to field pH values taken during the aquifer test of Well No. 8. The field pH value for Well No. 8 was 7.5 matching the other wells within Loma Vista.

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
No. 1	10/11/21	37	608	0.521	<0.010	1.7	<0.010	8.08	38	334	399	Absent/Absent
No. 3	10/24/21	39	641	0.538	0.171	0.80	0.012	7.88	29	347	384	Absent/Absent
No. 6	10/24/21	21	593	0.792	0.043	0.52	0.011	7.90	34	303	374	Absent/Absent
No. 8	10/11/21	19	604	0.757	<0.010	0.97	0.013	5.9	37	315	199	Absent/Absent
No. 10	10/11/21	29	636	0.576	0.011	0.46	0.012	7.70	26	338	196	Absent/Absent
No. 11	10/11/21	30	619	0.477	0.109	0.71	0.014	7.69	24	315	184	Absent/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 analyses of the aquifer tests, drawdown estimates were calculated after 10 years and 30 years of continuous production. Figure 25 provides a distance-drawdown plot for a single pumping well producing at a rate of 15 gpm for 0.21 hours per day (187.5 gallons per day). This pumping volume represents the total water demand at full build out of the subdivision per housing unit (0.21 acre-feet/year for each housing unit).

Assumptions used in the drawdown calculations and overall groundwater availability to 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/or,
- Future impacts to usable groundwater due to unforeseen or unpredictable contamination.

Drawdown estimates were calculated using the Theis equation (Theis, 1935). The Theis Equation has several assumptions used to derive the formula which include (Driscoll, 1986):

1. The water-bearing formation is uniform in character and the hydraulic conductivity is the same in all directions;
2. The aquifer is uniform in thickness and infinite in areal extent;
3. The aquifer receives no recharge from any source;
4. The well penetrates, and receives water from the full thickness of the aquifer;
5. The water from storage is discharged 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 through 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 Edwards-Trinity Aquifer. These include assumptions 1, 3 and 7. 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 can lead 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).

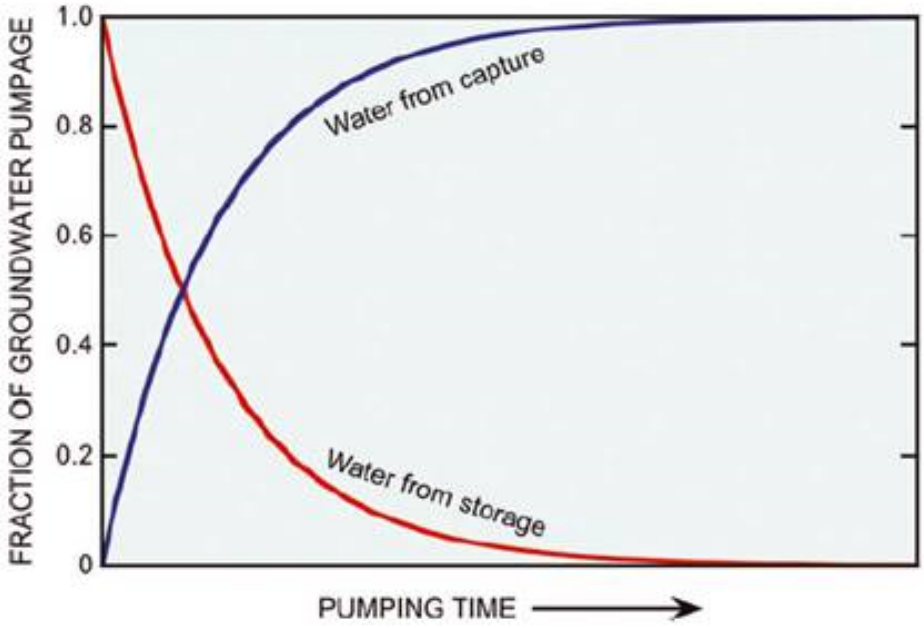


Figure 24: Water sources to a pumping well over time (from Konikow and Leake (2014)

Since the Theis equation (Theis, 1935) assumes (i) that all water is derived from storage and (ii) that the aquifer receives no recharge, the Theis equation may overestimate drawdown within a well that is located in an aquifer that receives recharge rapidly.

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

- Total water demand (entire subdivision) = 33.39 acre-feet/year;
- Total water demand (per housing unit) = 0.21 acre-feet/year = 187.5 gpd;
- The individual well will be pumped at 15 gpm for 0.21 hours per day (Table 5); and
- Median pumping well transmissivity (162.0 ft^2/day) and storativity ($7.4x10^{-5}$) values calculated from aquifer testing were 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. Well Spacing

Based upon the drawdown calculated from the distance-drawdown projection, the drawdown after 10 years of production at 15 gpm and a well spacing of 100 feet results in 2.41 feet. At a spacing of 250 feet, the drawdown reduces to 0.59 feet. At a spacing of 500 feet, the drawdown reduces further to 0.14 feet.

Based upon the drawdown calculated from the distance-drawdown projection, the drawdown after 30 years of production at 15 gpm and a well spacing of 100 feet results in 2.42 feet. At a spacing of 250 feet, the drawdown reduces to 0.60 feet. At a spacing of 500 feet, the drawdown reduces further to 0.15 feet.

From the distance drawdown calculations, we recommend that Loma Vista Phase III Subdivision wells be spaced a minimum distance of 250 feet for wells pumped at rates up to 15 gpm. If landowners are able, we recommend spacing wells as far as possible to limit drawdown from 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.

Table 5: Summary of distance-drawdown calculation (15 gpm)

Well	Drawdown at Pumped Well After 10-Years of Pumping (ft)	Drawdown at Pumped Well After 30-Years of Pumping (ft)	Dist. to Outer Edges of Cone of Depression - 10 years (feet)	Dist. to Outer Edges of Cone of Depression - 30 years (feet)
Pumping Well	19.23	19.24	250	250

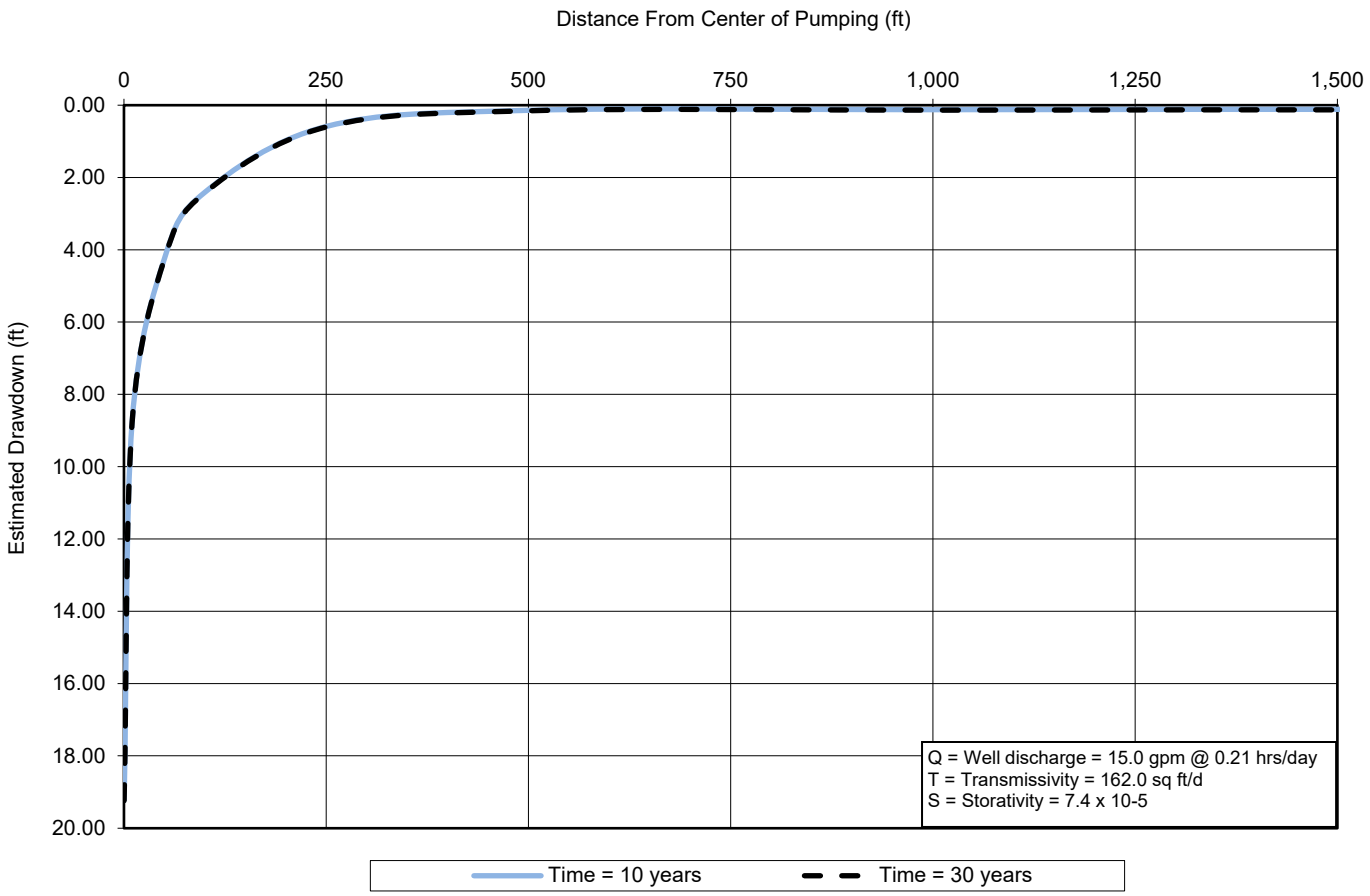


Figure 25: Distance drawdown plot (15 gpm)

IV.4.2. Groundwater Model

A groundwater model was utilized to determine the projected impacts from production at the proposed subdivision at full build out. In order to estimate future groundwater conditions, a one-layer groundwater model, consisting of 370 rows and 370 columns for a total of 136,900 cells, was created to estimate drawdown under a normal production scenario for Loma Vista (Phase III). Each cell has dimensions of 100 feet by 100 feet; the entire grid represents an approximately 49.0 square mile portion of the Edwards-Trinity Aquifer. The boundaries of the grid extend approximately 3.5 miles beyond the center of the proposed subdivision in order to evaluate the potential regional impacts from pumping (Figure 26).

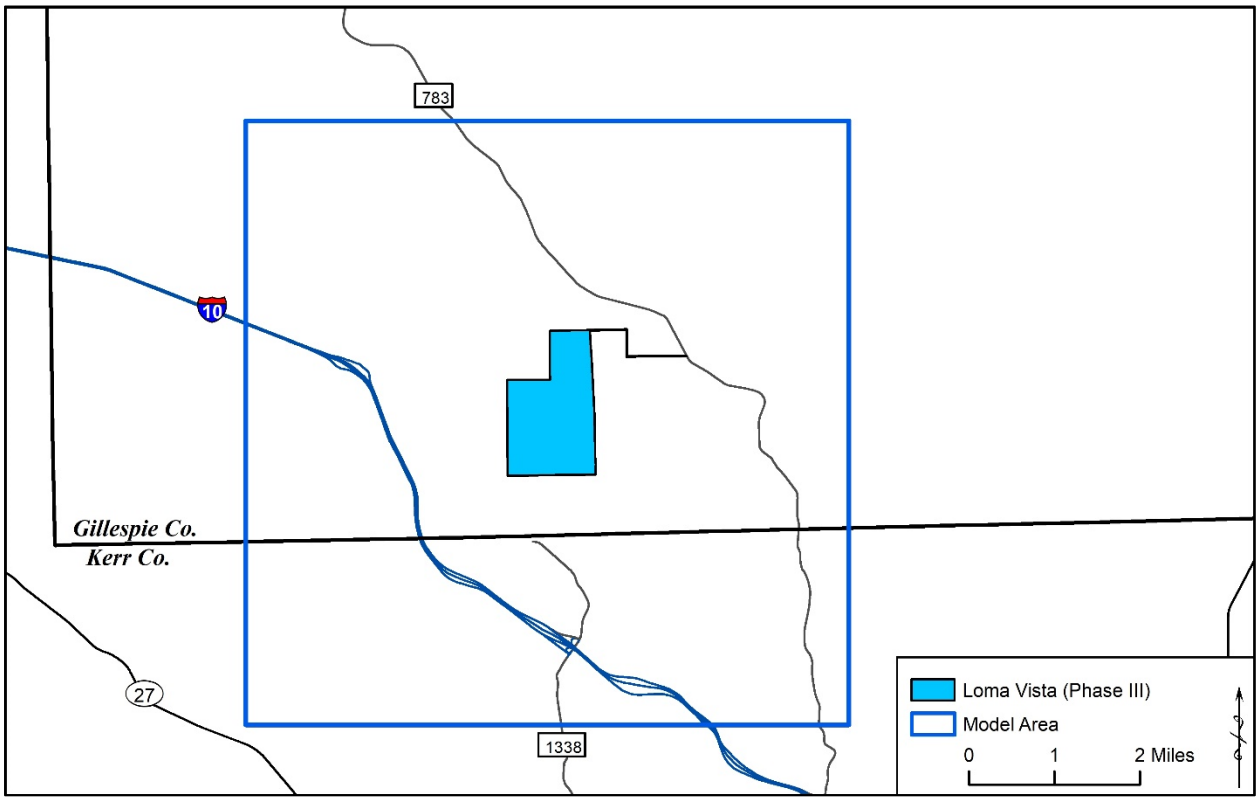


Figure 26: Map showing extent of groundwater model

The model calculates drawdown at each cell using the Theis Equation (Theis, 1935),

$$s = \frac{Q}{4\pi T} W(u) \qquad \textit{(Equation 1)}$$

where:

s = drawdown (feet);

Q = discharge (gallons per minute; gpm);

T = transmissivity (ft.^{2}/day); and

W(u) = well function.

The well function W(u) is estimated by:

$$W(u) = -0.5772 - \ln u + u - \frac{u^2}{2\times 2!} + \frac{u^3}{3\times 3!} - \frac{u^4}{4\times 4} + \ldots \qquad \textit{(Equation 2)}$$

where:

$$u = \frac{r^2 S}{4Tt} \qquad \textit{(Equation 3)}$$

r = the radius at which drawdown is estimated (feet); and

S = storativity (dimensionless).

IV.4.3. Drawdown Analysis – Loma Vista (Phase III) Subdivision (159 Lots)

A groundwater model was utilized to determine the projected impacts from the proposed production solely from the subdivision. The groundwater model was designed to estimate drawdown at full buildout (159 lots) after 10 and 30 years of continuous production at a rate of 187.5 gallons per day (0.13 gpm) per well; the total production rate from the Edwards-Trinity Aquifer equates to approximately 20.67 gpm. The groundwater model was simplified by concentrating pumping to one (1) central locality within the proposed subdivision continuously pumping 20.67 gpm in order to provide a simple solution for estimating long-term effects from pumping multiple wells that are spaced closely together (Figure 27).

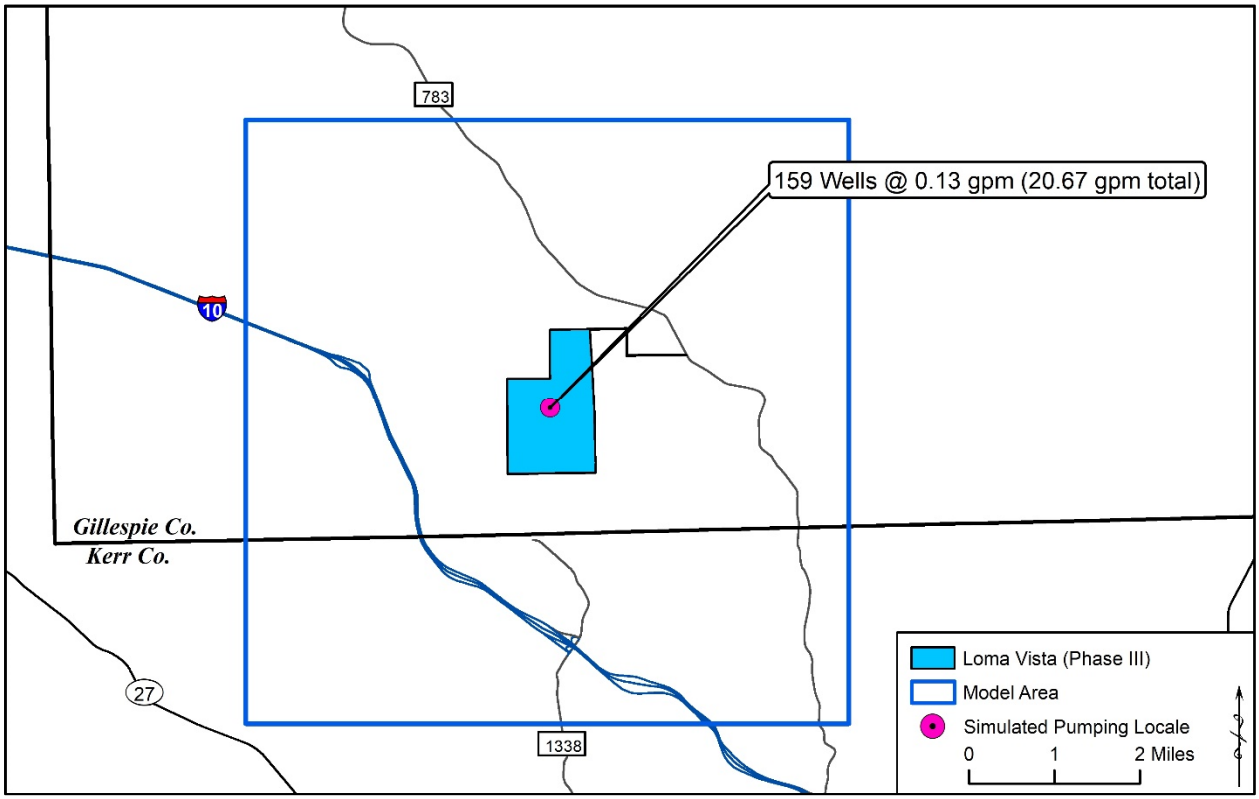


Figure 27: Map showing location of simulated pumping well

In an effort to model the aquifer impacts from the proposed pumping in accordance with site-specific data, the following values calculated from Loma Vista (Phase III) aquifer testing were utilized:

- Transmissivity: 162.0 ft.^{2}/day (median value); and,
- Storativity: 7.4x10^{-5} (median value).

Model Results - 10 Years

The results of the model run after 10 years of continuous pumping are summarized in Figure 28, with tabulated results in Table 6. The static water level, modeled water level, projected water level pumping at 187.5 gallons per day and projected water level above each pump are shown in Table 6. Projected water level above the pump assumes a pump setting at a depth of 10 feet above the bottom of each respective well.

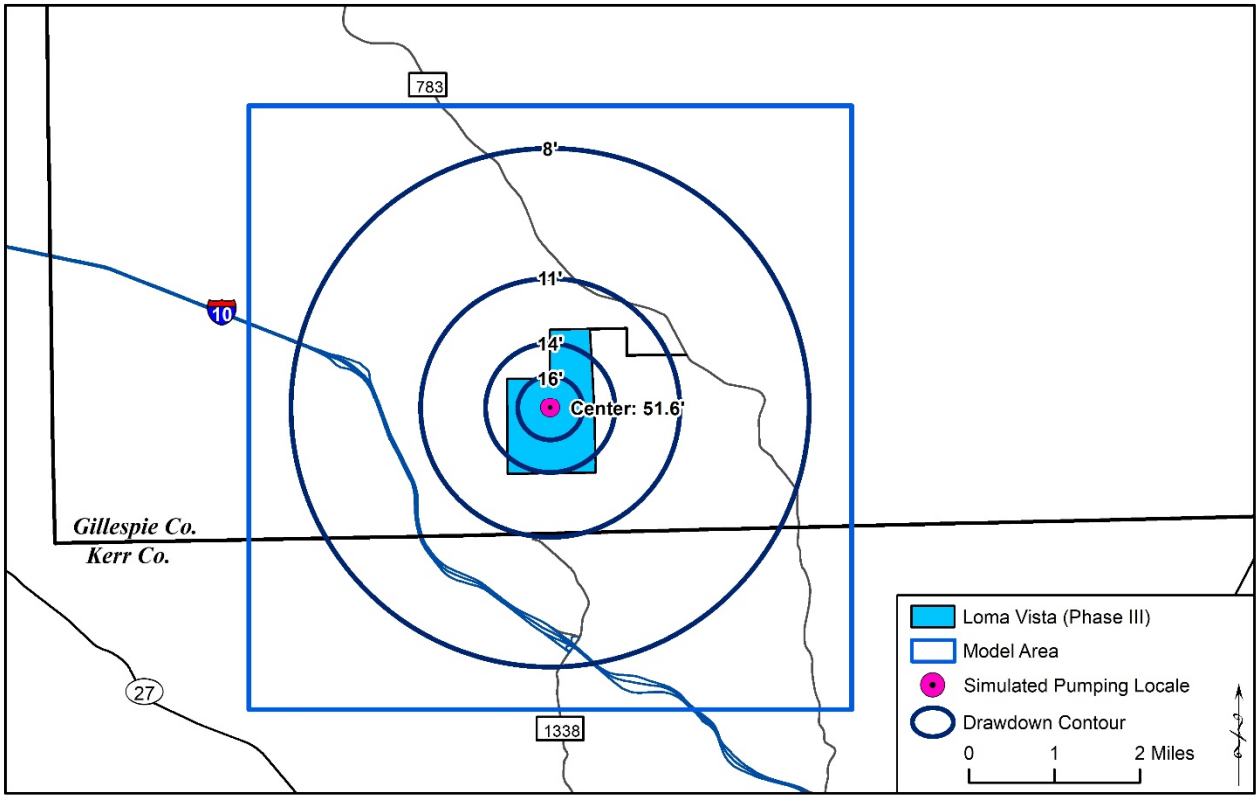


Figure 28: Modeled drawdown after 10 years from production at Loma Vista (Phase III)

The drawdown calculated after 10 years of production at 187.5 gallons per day per well results in approximately 16.7 feet of drawdown at the nearest subdivision boundary (1,850 feet away) and 51.6 feet of drawdown at the simulated pumping locale (Figure 28). To determine the pumping level at each individual well after 10 years of pumping, the modeling results were coupled with the aquifer test data. The drawdown at each well was modeled using the Theis equation utilizing the transmissivity from each aquifer test and a median storativity (7.4x10^{-5}) value pumping at 187.5 gallons per day. Table 6 provides a summary of the calculations.

Table 6: Summary of 10-year drawdown calculations

Pumping Well	Static Water Level (ft. bgl)	Modeled Water Level (ft. bgl; After 10 years)	Drawdown During Pumping Cycle @ 187.5 gpd (feet)	Pumping Water Level (ft. bgl)	Projected Water Level above Pump (ft)
No. 1	337.5	351.9	19.7	371.6	118.4
No. 3	353.0	368.0	4.1	372.1	157.9
No. 6	413.1	433.5	18.5	452.0	78.0
No. 8	402.3	417.7	22.5	440.2	39.8
No. 10	397.0	412.5	29.4	441.9	128.1
No. 11	413.7	427.2	14.6	441.8	108.2
Notes: Static water level recorded during the aquifer test; ft. = feet; bgl = below ground level; gpm = gallons per minute.					

Model Results - 30 Years

The results of the model run after 30 years of continuous pumping are summarized in Figure 29, with tabulated results in Table 7. The static water level, modeled water level, projected water level pumping at 187.5 gallons per day and projected water level above each pump are shown in Table 7. Projected water level above the pump assumes a pump setting at a depth of 10 feet above the bottom of each respective well.

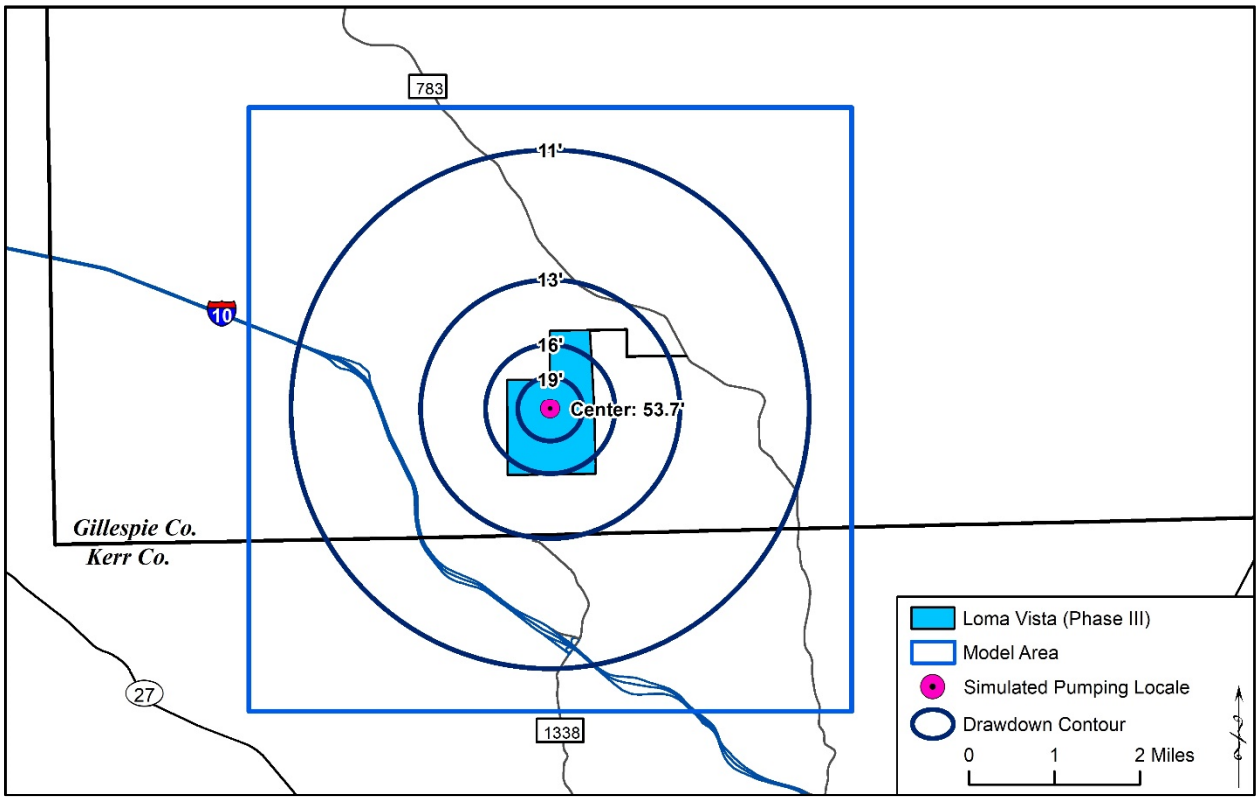


Figure 29: Modeled drawdown after 30 years from production at Loma Vista (Phase III)

The drawdown calculated after 30 years of production at 187.5 gallons per day per well results in approximately 18.9 feet of drawdown at the nearest subdivision boundary (1,850 feet away) and 53.7 feet of drawdown at the simulated pumping locale (Figure 29). To determine the pumping level at each individual well after 30 years of pumping, the modeling results were coupled with the aquifer test data. The drawdown at each well was modeled using the Theis equation utilizing the transmissivity from each aquifer test and a median storativity ($7.4x10^{-5}$) value pumping 187.5 gallons per day. Table 7 provides a summary of the calculations.

Table 7: Summary of 30-year drawdown calculations

Pumping Well	Static Water Level (ft. bgl; present)	Modeled Water Level (ft. bgl; After 30 years)	Drawdown During Pumping Cycle @ 187.5 gpd (feet)	Pumping Water Level (ft. bgl)	Projected Water Level above Pump (ft)
No. 1	337.5	354.0	19.7	373.7	116.3
No. 3	353.0	370.1	4.1	374.2	155.8
No. 6	413.1	435.7	18.5	454.2	75.8
No. 8	402.3	419.8	22.5	442.3	37.7
No. 10	397.0	414.6	29.4	444.0	126.0
No. 11	413.7	429.3	14.6	443.9	106.1
Notes: Static water level recorded during the aquifer test; ft. = feet; bgl = below ground level; gpm = gallons per minute					

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.

Modeled water levels decline near the top of the production zone of the Edwards-Trinity Aquifer which may result in decreased transmissivity and/or specific capacity. Those reductions were not considered in this study. If decreased transmissivity and/or specific capacity is experienced, wells may be susceptible to reduced pumping capabilities and increased drawdown.

The Trinity Aquifer at the Loma Vista Subdivision exhibits variable yield and water quality and is susceptible to reduction in yield during prolonged drought. For these reasons we recommend that each homeowner construct their well and 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 Texas Local Government Code, §212.0101, or a county authority pursuant to §232.0032, 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, TAC, 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 Texas Local Government Code, §212.004 and §232.001.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 Texas Water Code, §35.019 or Chapter 36.

Administrative Information (30 TAC §230.4)
1. Name of Proposed Subdivision: Loma Vista (Phase III)

Texas Commission on Environmental Quality
Chapter 230 - Groundwater Availability Certification for Platting

2. Any Previous Name Which Identifies the Tract of Land:
3. Property Owner's Name(s): Southerland Communities
Address: 110 River Crossing Blvd., Spring Branch, TX 78070
Phone: 830-228-5263
Fax:
4. Plat Applicant's Name: Southerland Communities
Address: 110 River Crossing Blvd., Spring Branch, TX 78070
Phone: 830-228-5263
Fax:
5. Licensed Professional Engineer or Geoscientist:
Name: Kaveh Khorzad, P.G.
Address: 317 Ranch Road 620 S., Suite 203, Lakeway, Texas 78734
Phone: 512-773-3226
Fax:
Certificate Number: TBPG License No.: 1126
6. Location and Property Description of Proposed Subdivision: approximately 8 miles northwest of the City of Kerrville along RR 783.
7. Tax Assessor Parcel Number(s).
Book:
Map:
Parcel: Blanco County: 180674, 53720, 57650, 89349, 96069, 96072, 96070, 96071 & 36370

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): 905
10. Number of Proposed Lots: 159
11. Average Size of Proposed Lots (acres): 5.69
12. Anticipated Method of Water Distribution. Individual wells to serve individual lots.

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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 1/2-mile radius should be attached to this form (30 TAC §230.5(f) of this title).

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): 159 single family housing units
Average Number of Persons per Housing Unit: 2.5
Gallons of Water Required per Person per Day: 75
Water Demand per Housing Unit per Year (acre feet/year): 0.21
Total Expected Residential Water Demand per Year (acre feet/year): 33.39
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):
16. Total Water Demand Estimate at Full Build Out (acre feet/year): 33.39
17. Sources of Information Used for Demand Estimates: U.S. Census and discussions with HCUWCD

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: Edwards-Trinity Aquifer.

Note: Users may refer to the most recent State Water Plan to obtain general information pertaining to the state's aquifers. The State Water Plan is available on the Texas Water Development Board's Internet website at: www.twdb.state.tx.us

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) of this title?	(Yes)	No
20. Were the geologic and groundwater resource factors identified under §230.7(b) of this title considered in planning and designing the aquifer test required under §230.8(c) of this title?	(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) - (4) of this title?	(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) of this title)?	(Yes)	No
23. Has an aquifer test been conducted which meets the requirements of §230.8(c)(1) and (6) of this title?	(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) of this title?	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 of this title (relating 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) of this title.

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Determination of Groundwater Quality (30 TAC §230.9)		
27. Have water quality samples been collected as required by §230.9 of this title?	(Yes)	No
28. Has a water quality analysis been performed which meets the requirements of §230.9 of this title?	(Yes)	No

Determination of Groundwater Availability (30 TAC §230.10)		
29. Have the aquifer parameters required by §230.10(c) of this title 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 C)		
Efficiency of the pumped well: (See attached Table 3 & Appendix D)		
Transmissivity: (See attached Table 3 & Appendix C)		
Coefficient of storage: (See attached Table 3)		
Hydraulic conductivity: (See attached Table 3 & Appendix C)		
Were any recharge or barrier boundaries detected?	(Yes)	No
If yes, please describe: Possible no flow and recharge boundary during testing of Well No. 11.		
Thickness of aquifer(s): 243 – 377 ft.		
31. Have time-drawdown determinations been calculated as required under §230.10(d)(1) of this title?	(Yes)	No
32. Have distance-drawdown determinations been calculated as required under §230.10(d)(2) of this title?	(Yes)	No
33. Have well interference determinations been made as required under §230.10(d)(3) of this title?	(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 of this title been compared to primary and secondary public drinking water standards as required under §230.10(e) of	(Yes)	No

this title?		
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: pH (SCL) in Well No. 8; See Section IV.3. Field pH of Well No. 8 was 7.5.		

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 & 7)**
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 Section IV.4.3 and Tables 6 & 7)**
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 Table 5)**
39. The recommended minimum spacing limit between wells is___250___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, and V)**

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 judgment, 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.

Texas Commission on Environmental Quality
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Date: 11-11-21

Adopted July 9, 2008

Effective July 31, 2008

Appendix B

State Well Reports

Well Report

Well No. 1

STATE OF TEXAS WELL REPORT for Tracking #588048

Owner:	**Edward and Lori Parma**	Owner Well #:	**1**
Address:	**PO Box 294687 Kerrville, TX 78028**	Grid #:	**56-55-7**
Well Location:	**11442 S Ranch Road 783 Harper, TX 78631**	Latitude:	**30° 08' 56.03" N**
		Longitude:	**099° 12' 36.53" W**
Well County:	**Gillespie**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **10/6/2021** Drilling End Date: **10/8/2021**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
13.5	**0**	**20**
8.75	**20**	**530**

Drilling Method: **Air Rotary**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
360	**500**	**Gravel**	**.375**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**50**	**Cement 22 Bags/Sacks**
150	**360**	**Quikgrout 12 Bags/Sacks**

Seal Method: **Pumped**

Sealed By: **Driller**

Distance to Property Line (ft.): **150**

Distance to Septic Field or other concentrated contamination (ft.): **300+**

Distance to Septic Tank (ft.): **300+**

Method of Verification: **Map**

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

Water Level: **398 ft.** below land surface on **2021-10-26**

Packers: **Rubber at 50 ft.**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Plug Information:

Description (number of sacks & material)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Hole filled with formation sand	**500**	**530**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

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: **NextGen Water Well Service**

11911 West County Road 56
Midland, TX 79707

Driller Name: **Cody Myers** License Number: **60303**

Comments: **HCUWCD Well Registration # R-05837**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**3**	**Clay**
3	**35**	**Tan Limestone**
35	**55**	**Gray Limestone**
55	**100**	**Gray Clay**
100	**125**	**Gray Sandstone**
125	**330**	**Gray Shale with Clay and LS Stringers**
330	**350**	**Red Clay**
350	**365**	**Gray Limestone**
365	**390**	**Tan Clay**
390	**420**	**Red Sandstone**
420	**485**	**Course sand and Sand Stone**
485	**510**	**Red Limestone**
510	**530**	**Pink Dolomite**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
10	**Blank**	**New Steel**	**40**	**0**	**20**
5	**Blank**	**New Plastic (PVC)**	**SDR 17**	**0**	**440**
5	**Screen**	**New Plastic (PVC)**	**SDR 17 0.020**	**440**	**500**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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(512) 334-5540

Well Report

Well No. 2

STATE OF TEXAS WELL REPORT for Tracking #588049

Owner:	**Edward and Lori Parma**	Owner Well #:	**2**
Address:	**PO Box 294687 Kerrville, TX 78028**	Grid #:	**56-55-7**
Well Location:	**11442 S Ranch Road 783 Harper, TX 78631**	Latitude:	**30° 09' 00.67" N**
		Longitude:	**099° 12' 34.72" W**
Well County:	**Gillespie**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **10/8/2021** Drilling End Date: **10/13/2021**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
13.5	**0**	**20**
8.75	**20**	**560**

Drilling Method: **Air Rotary**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
380	**530**	**Gravel**	**.375**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**50**	**Cement 22 Bags/Sacks**
95	**380**	**Quikgrout 12 Bags/Sacks**

Seal Method: **Pumped**

Sealed By: **Driller**

Distance to Property Line (ft.): **300+**

Distance to Septic Field or other concentrated contamination (ft.): **300+**

Distance to Septic Tank (ft.): **300+**

Method of Verification: **Map**

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

Water Level: **345 ft.** below land surface on **2021-10-18**

Packers: **Rubber at 50 ft.**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Plug Information:

Description (number of sacks & material)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Hole filled with formation sand	**530**	**560**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

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: **NextGen Water Well Service**

11911 West County Road 56
Midland, TX 79707

Driller Name: **Cody Myers** License Number: **60303**

Comments: **HCUWCD Well Registration # R-05827**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1**	**Clay**
1	**25**	**Fractured Limestone/Gravel**
25	**105**	**Tan Limestone with Quartz Stringers**
105	**120**	**Gray Limestone**
120	**145**	**Gray CLay**
145	**380**	**Gray Shale with Clay and LS Stringers**
380	**400**	**Red Clay**
400	**420**	**Gray Limestone**
420	**450**	**Tan Clay**
450	**460**	**Red Sandstone**
460	**520**	**Course sand and Sand Stone**
520	**550**	**Red Limestone**
550	**560**	**Pink Dolomite**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
10	**Blank**	**New Steel**	**40**	**0**	**20**
5	**Blank**	**New Plastic (PVC)**	**SDR 17**	**0**	**470**
5	**Screen**	**New Plastic (PVC)**	**SDR 17 0.020**	**470**	**530**

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(512) 334-5540

Well Report

Well No. 3

STATE OF TEXAS WELL REPORT for Tracking #588078

Owner:	**Arrowhead Hill Country Investments**	Owner Well #:	**3**
Address:	**2805 E Plano PKWY Ste 300 Plano, TX 75074**	Grid #:	**56-55-8**
Well Location:	**11442 S Ranch Road 783 Harper, TX 78631**	Latitude:	**30° 08' 58.13" N**
		Longitude:	**099° 11' 58.76" W**
Well County:	**Gillespie**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **10/19/2021** Drilling End Date: **10/20/2021**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
13.5	**0**	**20**
8.75	**20**	**560**

Drilling Method: **Air Rotary**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
380	**540**	**Gravel**	**.375**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**50**	**Cement 15 Bags/Sacks**
210	**380**	**Quikgrout 15 Bags/Sacks**

Seal Method: **Pumped**

Sealed By: **Driller**

Distance to Property Line (ft.): **300+**

Distance to Septic Field or other concentrated contamination (ft.): **300+**

Distance to Septic Tank (ft.): **300+**

Method of Verification: **Map**

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

Water Level: **353 ft.** below land surface on **2021-10-26**

Packers: **Rubber at 50 ft.**

Type of Pump: **No Data**

Well Tests: **Pump** **Yield: 24.5 GPM with 10 ft. drawdown after 24 hours**

Plug Information:

Description (number of sacks & material)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Hole filled with formation sand	**540**	**560**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **Yes**

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: **NextGen Water Well Service**

11911 West County Road 56
Midland, TX 79707

Driller Name: **Cody Myers** License Number: **60303**

Comments: **HCUWCD Well Registration # R-05828**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**40**	**Tan Limestone**
40	**125**	**Limestone with Quartz Stringers**
125	**140**	**Gray Sanstone**
140	**175**	**Gray clay**
175	**380**	**Gray Shale and Clay with LS stringers**
380	**440**	**Red/ Tan Clay with Limestone Stringers**
440	**520**	**Course sand and sandstone**
520	**550**	**Red Limestone**
550	**560**	**Pink Dolomite**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
10	**Blank**	**New Plastic (PVC)**	**40**	**0**	**20**
5	**Blank**	**New Plastic (PVC)**	**SDR 17**	**0**	**480**
5	**Screen**	**New Plastic (PVC)**	**SDR 17 0.020**	**480**	**540**

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(512) 334-5540

Well Report

Well No. 4

STATE OF TEXAS WELL REPORT for Tracking #588079

Owner:	**Arrowhead Hill Country Investments**	Owner Well #:	**4**
Address:	**2805 E Plano PKWY Ste 300 Plano, TX 75074**	Grid #:	**56-55-8**
Well Location:	**11442 S Ranch Road 783 Harper, TX 78631**	Latitude:	**30° 09' 02.54" N**
		Longitude:	**099° 12' 01.2" W**
Well County:	**Gillespie**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **10/21/2021** Drilling End Date: **10/22/2021**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
13.5	**0**	**20**
8.75	**20**	**560**

Drilling Method: **Air Rotary**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
380	**540**	**Gravel**	**.375**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**50**	**Cement 20 Bags/Sacks**
185	**380**	**Quikgrout 15 Bags/Sacks**

Seal Method: **Pumped**

Sealed By: **Driller**

Distance to Property Line (ft.): **300+**

Distance to Septic Field or other concentrated contamination (ft.): **300+**

Distance to Septic Tank (ft.): **300+**

Method of Verification: **Map**

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

Water Level: **360 ft.** below land surface on **2021-10-26** Measurement Method: **Electric Line**

Packers: **Rubber at 50 ft.**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Plug Information:

Description (number of sacks & material)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Hole filled with formation sand	**540**	**560**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **Yes**

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: **NextGen Water Well Service**

11911 West County Road 56
Midland, TX 79707

Driller Name: **Cody Myers** License Number: **60303**

Comments: **HCUWCD Well Registration # R-05829**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**40**	**Tan Limestone**
40	**110**	**Limestone with Quartz Stringers**
110	**130**	**Gray Sanstone**
130	**170**	**Gray clay**
170	**400**	**Gray Shale and Clay with LS stringers**
380	**460**	**Red/ Tan Clay with Limestone Stringers**
460	**530**	**Course sand and sandstone**
530	**545**	**Red Limestone**
545	**560**	**Pink Dolomite**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
10	**Blank**	**New Plastic (PVC)**	**40**	**0**	**20**
5	**Blank**	**New Plastic (PVC)**	**SDR 17**	**0**	**480**
5	**Screen**	**New Plastic (PVC)**	**SDR 17 0.020**	**480**	**540**

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(512) 334-5540

Well Report

Well No. 5

STATE OF TEXAS WELL REPORT for Tracking #588055

Owner:	**Edward and Lori Parma**	Owner Well #:	**5**
Address:	**PO Box 294687 Kerrville, TX 78028**	Grid #:	**56-55-8**
Well Location:	**11442 S Ranch Road 783 Harper, TX 78631**	Latitude:	**30° 09' 24.82" N**
		Longitude:	**099° 12' 27.85" W**
Well County:	**Gillespie**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **10/18/2021** Drilling End Date: **10/19/2021**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
13.5	**0**	**20**
8.75	**20**	**610**

Drilling Method: **Air Rotary**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
400	**580**	**Gravel**	**.375**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**50**	**Cement 20 Bags/Sacks**
145	**400**	**Quikgrout 20 Bags/Sacks**

Seal Method: **Pumped**

Sealed By: **Driller**

Distance to Property Line (ft.): **300+**

Distance to Septic Field or other concentrated contamination (ft.): **300+**

Distance to Septic Tank (ft.): **300+**

Method of Verification: **Map**

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

Water Level: **425 ft.** below land surface on **2021-10-20**

Packers: **Rubber at 50 ft.**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Plug Information:

Description (number of sacks & material)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Hole filled with formation sand	**580**	**610**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

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: **NextGen Water Well Service**

11911 West County Road 56
Midland, TX 79707

Driller Name: **Cody Myers** License Number: **60303**

Comments: **HCUWCD Well Registration # R-05830**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1**	**Clay**
1	**45**	**Limestone**
45	**145**	**Tan Limestone with Quartz Stringers**
145	**165**	**Gray Limestone**
165	**195**	**Gray CLay**
195	**435**	**Gray Shale with Clay and LS Stringers**
435	**450**	**Red Clay**
450	**460**	**Gray Limestone**
460	**485**	**Tan Clay**
485	**500**	**Red Sandstone**
500	**570**	**Course sand and Sand Stone**
570	**600**	**Red Limestone**
600	**610**	**Pink Dolomite**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
10	**Blank**	**New Steel**	**40**	**0**	**20**
5	**Blank**	**New Plastic (PVC)**	**SDR 17**	**0**	**500**
5	**Screen**	**New Plastic (PVC)**	**SDR 17 0.020**	**500**	**580**

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Well Report

Well No. 6

STATE OF TEXAS WELL REPORT for Tracking #588052

Owner:	**Edward and Lori Parma**	Owner Well #:	**6**
Address:	**PO Box 294687 Kerrville, TX 78028**	Grid #:	**56-55-8**
Well Location:	**11442 S Ranch Road 783 Harper, TX 78631**	Latitude:	**30° 09' 22.93" N**
		Longitude:	**099° 12' 22.59" W**
Well County:	**Gillespie**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **10/16/2021** Drilling End Date: **10/18/2021**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
13.5	**0**	**20**
8.75	**20**	**580**

Drilling Method: **Air Rotary**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
400	**540**	**Gravel**	**.375**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**50**	**Cement 25 Bags/Sacks**
165	**400**	**Quikgrout 15 Bags/Sacks**

Seal Method: **Pumped**

Sealed By: **Driller**

Distance to Property Line (ft.): **300+**

Distance to Septic Field or other concentrated contamination (ft.): **300+**

Distance to Septic Tank (ft.): **300+**

Method of Verification: **Map**

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

Water Level: **414 ft.** below land surface on **2021-10-20**

Packers: **Rubber at 50 ft.**

Type of Pump: **No Data**

Well Tests: **Pump** **Yield: 23 GPM with 30 ft. drawdown after 24 hours**

Plug Information:

Description (number of sacks & material)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Hole filled with formation sand	**540**	**580**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **Yes**

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: **NextGen Water Well Service**

11911 West County Road 56
Midland, TX 79707

Driller Name: **Cody Myers** License Number: **60303**

Comments: **HCUWCD Well Registration # R-05831**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1**	**Clay**
1	**45**	**White Limestone**
45	**130**	**Tan Limestone with Quartz Stringers**
130	**145**	**Gray Limestone Fractured**
145	**165**	**Gray CLay**
165	**410**	**Gray Shale with Clay and LS Stringers**
410	**435**	**Red Clay**
435	**450**	**Gray Limestone**
450	**465**	**Tan Clay**
465	**480**	**Red Sandstone**
480	**540**	**Course sand and Sand Stone**
540	**570**	**Red Limestone**
570	**580**	**Pink Dolomite**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
10	**Blank**	**New Steel**	**40**	**0**	**20**
5	**Blank**	**New Plastic (PVC)**	**SDR 17**	**0**	**480**
5	**Screen**	**New Plastic (PVC)**	**SDR 17 0.020**	**480**	**540**

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(512) 334-5540

Well Report

Well No. 7

STATE OF TEXAS WELL REPORT for Tracking #585264

Owner:	**Arrowhead Hill Country Investments**	Owner Well #:	**7**
Address:	**2805 E Plano PKWY Ste 300 Plano, TX 75074**	Grid #:	**56-55-8**
Well Location:	**11442 S Ranch Road 783 Harper, TX 78631**	Latitude:	**30° 09' 28.34" N**
		Longitude:	**099° 11' 44.78" W**
Well County:	**Gillespie**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **9/10/2021** Drilling End Date: **9/12/2021**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
13.5	**0**	**20**
8.75	**20**	**590**

Drilling Method: **Air Rotary**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
400	**560**	**Gravel**	**.375**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**50**	**Cement 10 Bags/Sacks**
120	**400**	**Quikgrout 30 Bags/Sacks**

Seal Method: **Pumped**

Sealed By: **Driller**

Distance to Property Line (ft.): **90**

Distance to Septic Field or other concentrated contamination (ft.): **300+**

Distance to Septic Tank (ft.): **300+**

Method of Verification: **Tape**

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

Water Level: **No Data**

Packers: **Rubber at 50 ft.**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

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: **NextGen Water Well Service**

11911 West County Road 56
Midland, TX 79707

Driller Name: **Cody Myers** License Number: **60303**

Comments: **HCUWCD Well Registration # R-05832**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**10**	**Fractured Limestone**
10	**60**	**White Limestone with Quartz Stringers**
60	**175**	**Tan Limestone**
175	**195**	**Gray Limestone**
195	**260**	**Gray clay**
260	**390**	**Gray shale and clay**
390	**425**	**Red clay**
425	**460**	**gray sandstone**
460	**472**	**tan clay**
472	**505**	**Tan limestone**
505	**560**	**Course sand with sandstone stringers**
560	**580**	**Red clay**
580	**590**	**Pink dolomite**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
10	**Blank**	**New Steel**	**40**	**0**	**20**
5	**Blank**	**New Plastic (PVC)**	**SDR 17**	**0**	**500**
5	**Screen**	**New Plastic (PVC)**	**SDR 17 0.020**	**500**	**560**

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Well Report

Well No. 8

STATE OF TEXAS WELL REPORT for Tracking #585272

Owner:	**Arrowhead Hill Country Investments**	Owner Well #:	**8**
Address:	**2805 E Plano PKWY Ste 300 Plano, TX 75074**	Grid #:	**56-55-8**
Well Location:	**11442 S Ranch Road 783 Harper, TX 78631**	Latitude:	**30° 09' 23.41" N**
		Longitude:	**099° 11' 44.51" W**
Well County:	**Gillespie**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **9/5/2021** Drilling End Date: **9/9/2021**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
13.5	**0**	**20**
8.75	**20**	**600**

Drilling Method: **Air Rotary**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
400	**490**	**Gravel**	**.375**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**50**	**Cement 10 Bags/Sacks**
260	**400**	**Quikgrout 30 Bags/Sacks**

Seal Method: **Pumped**

Sealed By: **Driller**

Distance to Property Line (ft.): **90**

Distance to Septic Field or other concentrated contamination (ft.): **300+**

Distance to Septic Tank (ft.): **300+**

Method of Verification: **Tape**

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

Water Level: **390 ft.** below land surface on **2021-09-09**

Packers: **Rubber at 50 ft.**

Type of Pump: **Submersible** Pump Depth (ft.): **480**

Well Tests: **Pump** **Yield: 23 GPM with 22 ft. drawdown after 24 hours**

Plug Information:

Description (number of sacks & material)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Hole filled with formation sand	**490**	**590**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **Yes**

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: **NextGen Water Well Service**

11911 West County Road 56
Midland, TX 79707

Driller Name: **Cody Myers** License Number: **60303**

Comments: **HCUWCD Well Registration # R-05833**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**25**	**Tam Limestone**
25	**110**	**White Limestone with Quartz Stringers**
110	**185**	**Tan Limestone**
185	**205**	**Gray Sanstone**
205	**240**	**Gray clay**
240	**265**	**Gray limestone**
265	**400**	**Gray Shale and Clay with LS stringers**
400	**420**	**red clay**
420	**445**	**Course sand stone/sand**
445	**465**	**Tan Limestone**
465	**485**	**Gray Clay/Limestone**
485	**500**	**Red sandstone**
500	**560**	**Course sand and sandstone**
560	**575**	**Red Limestone**
575	**600**	**Pink Dolomite**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
10	**Blank**	**New Steel**	**40**	**0**	**20**
5	**Blank**	**New Plastic (PVC)**	**SDR 17**	**0**	**430**
5	**Screen**	**New Plastic (PVC)**	**SDR 17 0.020**	**430**	**490**

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Well Report

Well No. 9

STATE OF TEXAS WELL REPORT for Tracking #588067

Owner:	**Arrowhead Hill Country Investments**	Owner Well #:	**9**
Address:	**2805 E Plano PKWY Ste 300 Plano, TX 75074**	Grid #:	**56-55-8**
Well Location:	**11442 S Ranch Road 783 Harper, TX 78631**	Latitude:	**30° 09' 38.97" N**
		Longitude:	**099° 11' 57.26" W**
Well County:	**Gillespie**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **10/4/2021** Drilling End Date: **10/6/2021**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
13.5	**0**	**20**
8.75	**20**	**600**

Drilling Method: **Air Rotary**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
400	**580**	**Gravel**	**.375**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**50**	**Cement 10 Bags/Sacks**
115	**400**	**Quikgrout 30 Bags/Sacks**

Seal Method: **Pumped**

Sealed By: **Driller**

Distance to Property Line (ft.): **300+**

Distance to Septic Field or other concentrated contamination (ft.): **300+**

Distance to Septic Tank (ft.): **300+**

Method of Verification: **Map**

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

Water Level: **415 ft.** below land surface on **2021-10-11**

Packers: **Rubber at 50 ft.**

Type of Pump: **No Data**

Well Tests: **Pump** **Yield: 22 GPM with 40 ft. drawdown after 24 hours**

Plug Information:

Description (number of sacks & material)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Hole filled with formation sand	**580**	**600**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **Yes**

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: **NextGen Water Well Service**

11911 West County Road 56
Midland, TX 79707

Driller Name: **Cody Myers** License Number: **60303**

Comments: **HCUWCD Well Registration # R-05834**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**30**	**Tan Limestone**
30	**110**	**Limestone with Quartz Stringers**
110	**175**	**Tan Limestone**
175	**205**	**Gray Sanstone**
205	**240**	**Gray clay**
240	**265**	**Gray limestone**
265	**400**	**Gray Shale and Clay with LS stringers**
400	**420**	**red clay**
420	**445**	**Course sand stone/sand**
445	**465**	**Tan Limestone**
465	**485**	**Gray Clay/Limestone**
485	**500**	**Red sandstone**
500	**560**	**Course sand and sandstone**
560	**575**	**Red Limestone**
575	**600**	**Pink Dolomite**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
10	**Blank**	**New Steel**	**40**	**0**	**20**
5	**Blank**	**New Plastic (PVC)**	**SDR 17**	**0**	**500**
5	**Screen**	**New Plastic (PVC)**	**SDR 17 0.020**	**500**	**580**

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Well Report

Well No. 10

STATE OF TEXAS WELL REPORT for Tracking #588069

Owner:	**Edward and Lori Parma**	Owner Well #:	**10**
Address:	**PO Box 294687 Kerrville, TX 78028**	Grid #:	**56-55-8**
Well Location:	**11442 S Ranch Road 783 Harper, TX 78631**	Latitude:	**30° 09' 43.85" N**
		Longitude:	**099° 11' 56.37" W**
Well County:	**Gillespie**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **9/15/2021** Drilling End Date: **9/17/2021**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
13.5	**0**	**20**
8.75	**20**	**600**

Drilling Method: **Air Rotary**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
400	**580**	**Gravel**	**.375**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**50**	**Cement 20 Bags/Sacks**
140	**440**	**Quikgrout 25 Bags/Sacks**

Seal Method: **Pumped**

Sealed By: **Driller**

Distance to Property Line (ft.): **300+**

Distance to Septic Field or other concentrated contamination (ft.): **300+**

Distance to Septic Tank (ft.): **300+**

Method of Verification: **Map**

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

Water Level: **410 ft.** below land surface on **2021-10-11** Measurement Method: **Electric Line**

Packers: **Rubber at 50 ft.**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Plug Information:

Description (number of sacks & material)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Hole filled with formation sand	**580**	**600**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **Yes**

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: **NextGen Water Well Service**

11911 West County Road 56
Midland, TX 79707

Driller Name: **Cody Myers** License Number: **60303**

Comments: **HCUWCD Well Registration # R-05835**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1**	**Clay**
1	**105**	**White Limestone w/ Quartz Stringers**
105	**185**	**Tan Limestone**
185	**200**	**Gray Sanstone**
200	**235**	**Gray Clay**
235	**275**	**Gray Limestone**
275	**410**	**Gray Shale and Clay with LS stringers**
410	**430**	**Red Clay**
430	**455**	**Course Sandstone/sand**
455	**475**	**Tan Limestone**
475	**495**	**Gray Clay/Limestone**
495	**510**	**Red Sandstone**
510	**580**	**Sand and Sandstone**
580	**590**	**Red Limestone**
590	**600**	**Pink Dolomite**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
10	**Blank**	**New Steel**	**40**	**0**	**20**
5	**Blank**	**New Plastic (PVC)**	**SDR 17**	**0**	**500**
5	**Screen**	**New Plastic (PVC)**	**SDR 17 0.020**	**500**	**580**

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Well Report

Well No. 11

STATE OF TEXAS WELL REPORT for Tracking #585279

Owner:	**Edward and Lori Parma**	Owner Well #:	**11**
Address:	**PO Box 294687 Kerrville, TX 78028**	Grid #:	**56-55-5**
Well Location:	**11442 S Ranch Road 783 Harper, TX 78631**	Latitude:	**30° 10' 02.4" N**
		Longitude:	**099° 11' 54.6" W**
Well County:	**Gillespie**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **9/15/2021** Drilling End Date: **9/17/2021**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
13.5	**0**	**20**
8.75	**20**	**590**

Drilling Method: **Air Rotary**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
440	**560**	**Gravel**	**.375**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**50**	**Cement 10 Bags/Sacks**
110	**440**	**Quikgrout 30 Bags/Sacks**

Seal Method: **Pumped**

Sealed By: **Driller**

Distance to Property Line (ft.): **80**

Distance to Septic Field or other concentrated contamination (ft.): **300+**

Distance to Septic Tank (ft.): **300+**

Method of Verification: **Tape**

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

Water Level: **405 ft.** below land surface on **2021-09-16**

Packers: **Rubber at 50 ft.**

Type of Pump: **Submersible** Pump Depth (ft.): **480**

Well Tests: **Pump** **Yield: 27 GPM with 19 ft. drawdown after 24 hours**

Plug Information:

Description (number of sacks & material)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Hole filled with formation sand	**560**	**590**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **Yes**

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: **NextGen Water Well Service**

11911 West County Road 56
Midland, TX 79707

Driller Name: **Cody Myers** License Number: **60303**

Comments: **HCUWCD Well Registration # R-05836**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**1**	**Clay**
1	**105**	**White Limestone w/ Quartz Stringers**
105	**185**	**Tan Limestone**
185	**205**	**Gray Sanstone**
205	**240**	**Gray Clay**
240	**265**	**Gray Limestone**
265	**400**	**Gray Shale and Clay with LS stringers**
400	**420**	**Red Clay**
420	**445**	**Course Sandstone/sand**
445	**465**	**Tan Limestone**
465	**485**	**Gray Clay/Limestone**
485	**500**	**Red Sandstone**
500	**570**	**Sand and Sandstone**
570	**580**	**Red Limestone**
580	**590**	**Pink Dolomite**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
10	**Blank**	**New Steel**	**40**	**0**	**20**
5	**Blank**	**New Plastic (PVC)**	**SDR 17**	**0**	**500**
5	**Screen**	**New Plastic (PVC)**	**SDR 17 0.020**	**500**	**560**

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Well Report

Well No. 12

STATE OF TEXAS WELL REPORT for Tracking #588047

Owner:	**Edward and Lori Parma**	Owner Well #:	**12**
Address:	**PO Box 294687 Kerrville, TX 78028**	Grid #:	**56-55-5**
Well Location:	**11442 S Ranch Road 783 Harper, TX 78631**	Latitude:	**30° 10' 00.83" N**
		Longitude:	**099° 11' 59.96" W**
Well County:	**Gillespie**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **9/18/2021** Drilling End Date: **9/27/2021**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
13.5	**0**	**20**
8.75	**20**	**590**

Drilling Method: **Air Rotary**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
400	**560**	**Gravel**	**.375**

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**50**	**Cement 10 Bags/Sacks**
125	**440**	**Quikgrout 35 Bags/Sacks**

Seal Method: **Pumped**

Sealed By: **Driller**

Distance to Property Line (ft.): **300+**

Distance to Septic Field or other concentrated contamination (ft.): **300+**

Distance to Septic Tank (ft.): **300+**

Method of Verification: **Map**

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

Water Level: **398 ft.** below land surface on **2021-10-26**

Packers: **Rubber at 50 ft.**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Plug Information:

Description (number of sacks & material)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Hole filled with formation sand	**565**	**590**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

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: **NextGen Water Well Service**

11911 West County Road 56
Midland, TX 79707

Driller Name: **Cody Myers** License Number: **60303**

Comments: **HCUWCD Well Registration # R-05837**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**2**	**Clay**
2	**110**	**White Limestone w/ Quartz Stringers**
110	**190**	**Tan Limestone**
190	**210**	**Gray Sanstone**
210	**245**	**Gray Clay**
245	**270**	**Gray Limestone**
270	**390**	**Gray Shale and Clay with LS stringers**
390	**410**	**Red Clay**
410	**440**	**Course Sandstone/sand**
440	**466**	**Tan Limestone and Tan Clay**
466	**490**	**Gray Clay/Limestone**
490	**505**	**Red Sandstone**
505	**565**	**Sand and Sandstone**
565	**575**	**Red Limestone**
575	**590**	**Pink Dolomite**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
10	**Blank**	**New Steel**	**40**	**0**	**20**
5	**Blank**	**New Plastic (PVC)**	**SDR 17**	**0**	**500**
5	**Screen**	**New Plastic (PVC)**	**SDR 17 0.020**	**500**	**560**

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Appendix C

Aquifer Test Data and Analysis

Aquifer Test

Well No. 1

Loma Vista (Phase III) Well No. 1 - Aquifer Test (October 18, 2021)

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)
10/18/21 11:38 AM	0		73.24	337.53	1,619.47	0.00			Pump Start	1,621.18	0.00
10/18/21 11:39 AM	1		73.34	351.49	1,605.51	13.96	24.5	1.76	Meter: 146,287.4 gallons	1,621.29	-0.12
10/18/21 11:40 AM	2		73.40	360.05	1,596.95	22.52				1,621.15	0.03
10/18/21 11:41 AM	3		73.41	363.04	1,593.96	25.51				1,621.23	-0.05
10/18/21 11:42 AM	4		73.42	364.58	1,592.42	27.06				1,621.20	-0.03
10/18/21 11:43 AM	5		73.43	365.46	1,591.54	27.93				1,621.16	0.01
10/18/21 11:44 AM	6		73.45	366.04	1,590.96	28.51				1,621.17	0.01
10/18/21 11:45 AM	7		73.47	366.63	1,590.37	29.10				1,621.21	-0.04
10/18/21 11:46 AM	8		73.49	366.98	1,590.02	29.45				1,621.14	0.04
10/18/21 11:47 AM	9		73.50	367.35	1,589.65	29.82				1,621.18	-0.01
10/18/21 11:48 AM	10		73.50	367.75	1,589.25	30.22				1,621.20	-0.02
10/18/21 11:49 AM	11		73.48	367.96	1,589.04	30.43				1,621.24	-0.07
10/18/21 11:50 AM	12		73.49	368.20	1,588.80	30.67				1,621.22	-0.04
10/18/21 11:51 AM	13		73.49	368.47	1,588.53	30.94				1,621.19	-0.02
10/18/21 11:52 AM	14		73.51	368.57	1,588.43	31.04				1,621.15	0.03
10/18/21 11:53 AM	15		73.53	368.79	1,588.21	31.26				1,621.22	-0.04
10/18/21 11:58 AM	20		73.62	369.51	1,587.49	31.98				1,621.20	-0.03
10/18/21 12:03 PM	25		73.65	370.15	1,586.85	32.62				1,621.17	0.00
10/18/21 12:08 PM	30		73.57	370.68	1,586.32	33.15				1,621.16	0.02
10/18/21 12:23 PM	45		73.65	371.61	1,585.39	34.08				1,621.13	0.05
10/18/21 12:38 PM	60		73.55	372.19	1,584.81	34.66				1,621.21	-0.03
10/18/21 12:53 PM	75		73.50	372.74	1,584.26	35.21				1,621.15	0.02
10/18/21 1:08 PM	90		73.49	373.37	1,583.63	35.84				1,621.16	0.01
10/18/21 1:23 PM	105		73.48	373.66	1,583.35	36.13				1,621.09	0.08
10/18/21 1:38 PM	120		73.47	373.87	1,583.13	36.34	24.5	0.67	pH: 7.6 / EC: 0.8	1,621.15	0.02
10/18/21 2:08 PM	150		73.46	374.44	1,582.56	36.91				1,621.17	0.01
10/18/21 2:38 PM	180		73.46	374.97	1,582.03	37.44				1,621.12	0.06
10/18/21 3:08 PM	210		73.46	375.19	1,581.81	37.66				1,621.10	0.08
10/18/21 3:38 PM	240		73.46	375.37	1,581.63	37.84				1,621.04	0.14
10/18/21 4:38 PM	300		73.46	375.62	1,581.38	38.09				1,621.11	0.06
10/18/21 5:38 PM	360		73.45	375.92	1,581.08	38.39				1,621.14	0.04
10/18/21 6:38 PM	420		73.45	376.20	1,580.80	38.67				1,621.09	0.09
10/18/21 7:38 PM	480		73.42	376.44	1,580.56	38.91				1,621.12	0.06
10/18/21 8:38 PM	540		73.42	376.49	1,580.51	38.96				1,621.17	0.00
10/18/21 9:38 PM	600		73.42	376.72	1,580.29	39.19				1,621.06	0.12

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 2 HP
MSL = Mean Sea Level Pump Setting = 462 ft EC=Electrical conductivity (mS/cm)

Loma Vista (Phase III) Well No. 1 - Aquifer Test (October 18, 2021)

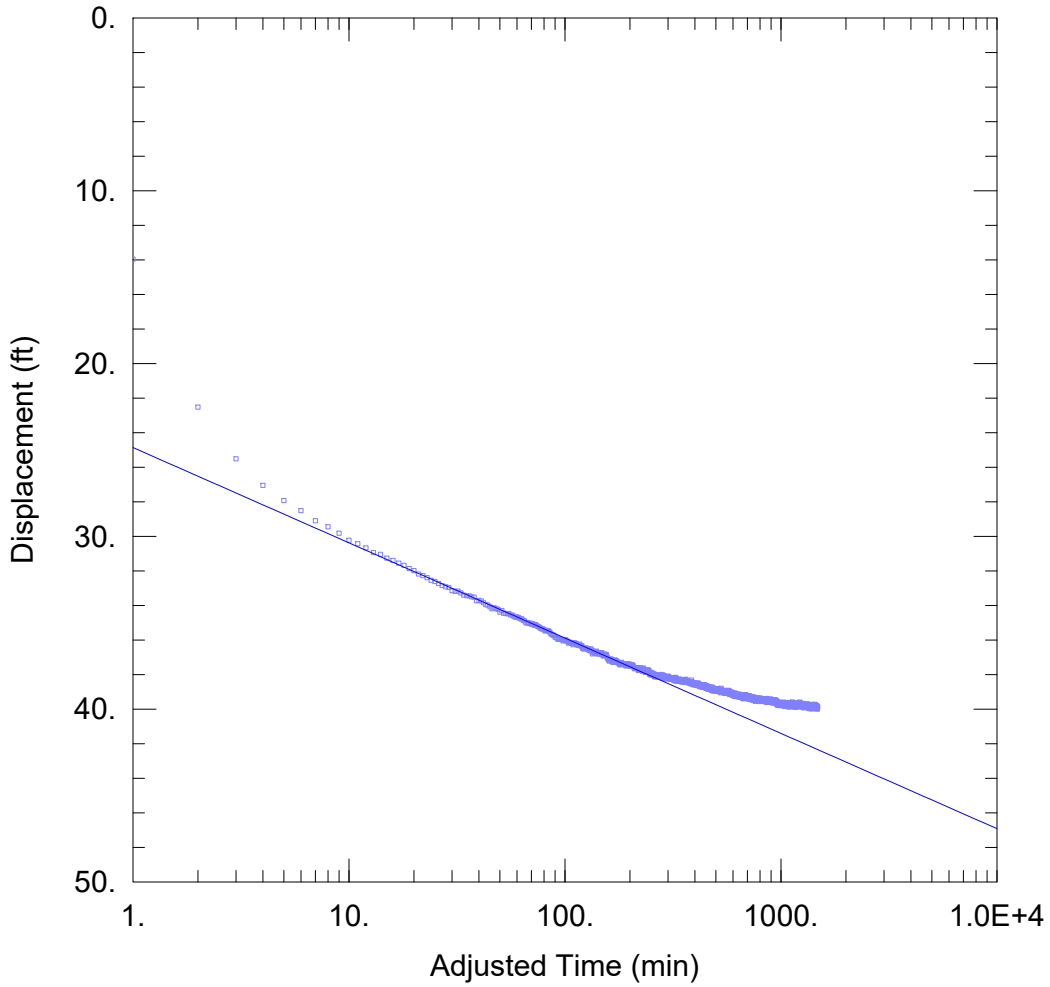
Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 1 Temperature (F)	PW Well No. 1 Water Level (ft bgs)	PW Well No. 1 Water Level (ft MSL)	PW Well No. 1 Drawdown (ft)	PW Well No. 1 Pump Rate (gpm)	PW Well No. 1 Specific Capacity (gpm/ft)	Comments	OW Well No. 2 Water Level (ft MSL)	OW Well No. 2 Drawdown (ft)
10/18/21 10:38 PM	660		73.41	376.75	1,580.25	39.22				1,621.07	0.11
10/18/21 11:38 PM	720		73.42	376.87	1,580.13	39.35				1,621.12	0.06
10/19/21 12:38 AM	780		73.42	376.91	1,580.09	39.38				1,621.09	0.09
10/19/21 1:38 AM	840		73.42	377.01	1,579.99	39.48				1,621.04	0.14
10/19/21 2:38 AM	900		73.42	377.05	1,579.95	39.52				1,621.08	0.09
10/19/21 3:38 AM	960		73.42	377.23	1,579.77	39.70				1,621.15	0.02
10/19/21 4:38 AM	1,020		73.43	377.29	1,579.71	39.76				1,621.11	0.06
10/19/21 5:38 AM	1,080		73.42	377.21	1,579.79	39.68				1,621.15	0.03
10/19/21 6:38 AM	1,140		73.42	377.23	1,579.77	39.70				1,621.18	0.00
10/19/21 7:38 AM	1,200		73.42	377.25	1,579.75	39.72				1,621.14	0.04
10/19/21 8:38 AM	1,260		73.41	377.27	1,579.73	39.74				1,621.19	-0.01
10/19/21 9:38 AM	1,320		73.42	377.28	1,579.72	39.75				1,621.21	-0.04
10/19/21 10:38 AM	1,380		73.42	377.39	1,579.61	39.86				1,621.09	0.09
10/19/21 11:38 AM	1,440		73.41	377.43	1,579.58	39.90				1,621.06	0.11
10/19/21 12:16 PM	1,478	0	73.41	377.40	1,579.60	39.87	24.0	0.60	Pump Stop	1,621.17	0.00
10/19/21 12:17 PM	1,479	1	73.42	371.39	1,585.62	33.86			Meter: 183,015.1 gallons	1,621.07	0.10
10/19/21 12:18 PM	1,480	2	73.59	357.20	1,599.80	19.67			Avg. Pump Rate: 24.8 gpm	1,621.11	0.06
10/19/21 12:19 PM	1,481	3	73.76	353.36	1,603.64	15.83				1,621.12	0.05
10/19/21 12:20 PM	1,482	4	73.89	351.63	1,605.37	14.10				1,621.14	0.03
10/19/21 12:21 PM	1,483	5	73.99	350.64	1,606.36	13.11				1,621.08	0.10
10/19/21 12:22 PM	1,484	6	74.07	349.88	1,607.12	12.35				1,621.10	0.08
10/19/21 12:23 PM	1,485	7	74.14	349.35	1,607.65	11.82				1,621.07	0.10
10/19/21 12:24 PM	1,486	8	74.19	348.87	1,608.13	11.34				1,621.07	0.11
10/19/21 12:25 PM	1,487	9	74.21	348.49	1,608.51	10.96				1,621.04	0.13
10/19/21 12:26 PM	1,488	10	74.22	348.18	1,608.82	10.65				1,621.07	0.11
10/19/21 12:27 PM	1,489	11	74.22	347.84	1,609.16	10.31				1,621.12	0.06
10/19/21 12:28 PM	1,490	12	74.21	347.61	1,609.39	10.08				1,621.12	0.06
10/19/21 12:29 PM	1,491	13	74.20	347.34	1,609.66	9.81				1,621.13	0.04
10/19/21 12:30 PM	1,492	14	74.17	347.11	1,609.89	9.58				1,621.04	0.14
10/19/21 12:31 PM	1,493	15	74.17	346.92	1,610.08	9.39				1,621.18	-0.01
10/19/21 12:36 PM	1,498	20	74.08	346.15	1,610.85	8.62				1,621.04	0.13
10/19/21 12:41 PM	1,503	25	74.03	345.53	1,611.47	8.00				1,621.05	0.13
10/19/21 12:46 PM	1,508	30	73.97	345.04	1,611.96	7.51				1,621.05	0.12
10/19/21 1:01 PM	1,523	45	73.83	344.01	1,612.99	6.48				1,621.07	0.11
10/19/21 1:16 PM	1,538	60	73.81	343.24	1,613.76	5.71				1,621.06	0.12

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 2 HP
MSL = Mean Sea Level Pump Setting = 462 ft EC=Electrical conductivity (mS/cm)

Loma Vista (Phase III) Well No. 1 - Aquifer Test (October 18, 2021)

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)
10/19/21 1:31 PM	1,553	75	73.81	342.73	1,614.27	5.20				1,621.00	0.17
10/19/21 1:46 PM	1,568	90	73.88	342.30	1,614.71	4.77				1,621.01	0.16
10/19/21 2:01 PM	1,583	105	73.92	341.94	1,615.06	4.41				1,621.05	0.13
10/19/21 2:16 PM	1,598	120	73.93	341.69	1,615.31	4.16				1,621.06	0.11
10/19/21 2:46 PM	1,628	150	73.87	341.16	1,615.84	3.63				1,621.14	0.04
10/19/21 3:16 PM	1,658	180	73.84	340.79	1,616.21	3.26				1,621.09	0.09
10/19/21 3:46 PM	1,688	210	73.81	340.48	1,616.52	2.95				1,621.11	0.07
10/19/21 4:16 PM	1,718	240	73.78	340.26	1,616.74	2.73				1,621.14	0.04
10/19/21 5:16 PM	1,778	300	73.76	339.91	1,617.09	2.38				1,621.14	0.04
10/19/21 6:16 PM	1,838	360	73.74	339.64	1,617.36	2.11				1,621.14	0.03
10/19/21 7:16 PM	1,898	420	73.73	339.39	1,617.61	1.86				1,621.15	0.02
10/19/21 8:16 PM	1,958	480	73.71	339.22	1,617.78	1.69				1,621.16	0.02
10/19/21 9:16 PM	2,018	540	73.70	339.11	1,617.89	1.58				1,621.17	0.00
10/19/21 10:16 PM	2,078	600	73.69	339.02	1,617.98	1.49				1,621.16	0.02
10/19/21 11:16 PM	2,138	660	73.69	338.96	1,618.04	1.43				1,621.06	0.11
10/20/21 12:16 AM	2,198	720	73.69	338.82	1,618.18	1.29				1,621.12	0.06
10/20/21 1:16 AM	2,258	780	73.69	338.74	1,618.26	1.21				1,621.16	0.02
10/20/21 2:16 AM	2,318	840	73.68	338.66	1,618.35	1.13				1,621.05	0.12
10/20/21 3:16 AM	2,378	900	73.69	338.58	1,618.42	1.05				1,621.03	0.15
10/20/21 4:16 AM	2,438	960	73.69	338.52	1,618.48	0.99				1,621.09	0.09
10/20/21 5:16 AM	2,498	1020	73.69	338.44	1,618.56	0.91				1,621.07	0.10
10/20/21 6:16 AM	2,558	1080	73.69	338.38	1,618.62	0.85				1,621.16	0.01
10/20/21 7:16 AM	2,618	1140	73.70	338.28	1,618.72	0.75				1,621.14	0.04
10/20/21 8:16 AM	2,678	1200	73.70	338.26	1,618.74	0.73				1,621.10	0.07
10/20/21 9:16 AM	2,738	1260	73.69	338.25	1,618.75	0.72				1,621.12	0.05
10/20/21 10:16 AM	2,798	1320	73.70	338.24	1,618.76	0.71				1,621.21	-0.04
10/20/21 10:58 AM	2,840	1362	73.69	338.21	1,618.79	0.68				1,621.07	0.10

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 2 HP
MSL = Mean Sea Level Pump Setting = 462 ft EC=Electrical conductivity (mS/cm)



WELL TEST ANALYSIS

Data Set: \...\PW 1.aqt
Date: 11/03/21 Time: 09:32:59

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Location: Gillespie County
Test Well: Well No. 1
Test Date: 10-18-21

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 = 156.7 ft^2/day

Aquifer Test

Well No. 3

Loma Vista (Phase III) Well No. 3 - Aquifer Test (October 26, 2021)

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. 4 Water Level (ft MSL)	OW Well No. 4 Drawdown (ft)
10/26/21 12:02 PM	0		74.53	352.97	1,627.04	0.00			Pump Start	1,629.82	0.00
10/26/21 12:03 PM	1		73.86	357.87	1,622.13	4.90	24.5	4.99	Meter: 220437.0 gallons	1,629.81	0.01
10/26/21 12:04 PM	2		73.34	358.02	1,621.98	5.06				1,629.75	0.08
10/26/21 12:05 PM	3		72.96	358.16	1,621.84	5.20				1,629.66	0.16
10/26/21 12:06 PM	4		72.68	358.31	1,621.69	5.35				1,629.74	0.08
10/26/21 12:07 PM	5		72.47	358.39	1,621.61	5.43				1,629.75	0.07
10/26/21 12:08 PM	6		72.30	358.44	1,621.56	5.48				1,629.75	0.07
10/26/21 12:09 PM	7		72.17	358.53	1,621.47	5.56				1,629.72	0.11
10/26/21 12:10 PM	8		72.08	358.58	1,621.42	5.61				1,629.76	0.07
10/26/21 12:11 PM	9		72.02	358.67	1,621.33	5.71				1,629.73	0.09
10/26/21 12:12 PM	10		71.97	358.64	1,621.36	5.68				1,629.78	0.05
10/26/21 12:13 PM	11		71.94	358.77	1,621.23	5.80				1,629.69	0.13
10/26/21 12:14 PM	12		71.93	358.75	1,621.25	5.79				1,629.67	0.15
10/26/21 12:15 PM	13		71.93	358.77	1,621.23	5.81				1,629.74	0.08
10/26/21 12:16 PM	14		71.93	358.82	1,621.18	5.85				1,629.73	0.09
10/26/21 12:17 PM	15		71.93	358.89	1,621.11	5.93				1,629.73	0.09
10/26/21 12:22 PM	20		72.00	358.98	1,621.02	6.01				1,629.68	0.14
10/26/21 12:27 PM	25		72.07	359.02	1,620.98	6.06				1,629.69	0.14
10/26/21 12:32 PM	30		72.14	359.16	1,620.84	6.20				1,629.60	0.23
10/26/21 12:47 PM	45		72.30	359.38	1,620.62	6.42				1,629.53	0.29
10/26/21 1:02 PM	60		72.33	359.47	1,620.53	6.50				1,629.40	0.42
10/26/21 1:17 PM	75		72.38	359.49	1,620.51	6.53				1,629.36	0.47
10/26/21 1:32 PM	90		72.42	359.71	1,620.29	6.74				1,629.25	0.58
10/26/21 1:47 PM	105		72.44	359.72	1,620.28	6.75				1,629.16	0.67
10/26/21 2:02 PM	120		72.48	359.83	1,620.17	6.86	24.5	3.57	pH: 7.4 / EC: 0.82	1,629.09	0.73
10/26/21 2:32 PM	150		72.57	359.98	1,620.02	7.02				1,628.96	0.86
10/26/21 3:02 PM	180		72.46	360.13	1,619.87	7.17				1,628.85	0.98
10/26/21 3:32 PM	210		72.46	360.15	1,619.85	7.19				1,628.79	1.03
10/26/21 4:02 PM	240		72.47	360.26	1,619.74	7.30				1,628.67	1.15
10/26/21 5:02 PM	300		72.49	360.42	1,619.58	7.45				1,628.55	1.27
10/26/21 6:02 PM	360		72.50	360.49	1,619.51	7.52				1,628.38	1.45
10/26/21 7:02 PM	420		72.55	360.61	1,619.39	7.64				1,628.27	1.56
10/26/21 8:02 PM	480		72.53	360.78	1,619.23	7.81				1,628.14	1.68
10/26/21 9:02 PM	540		72.50	360.86	1,619.14	7.90				1,628.11	1.71
10/26/21 10:02 PM	600		72.49	360.93	1,619.07	7.97				1,628.12	1.71

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 2 HP
MSL = Mean Sea Level Pump Setting = 462 ft EC=Electrical conductivity (mS/cm)

Loma Vista (Phase III) Well No. 3 - Aquifer Test (October 26, 2021)

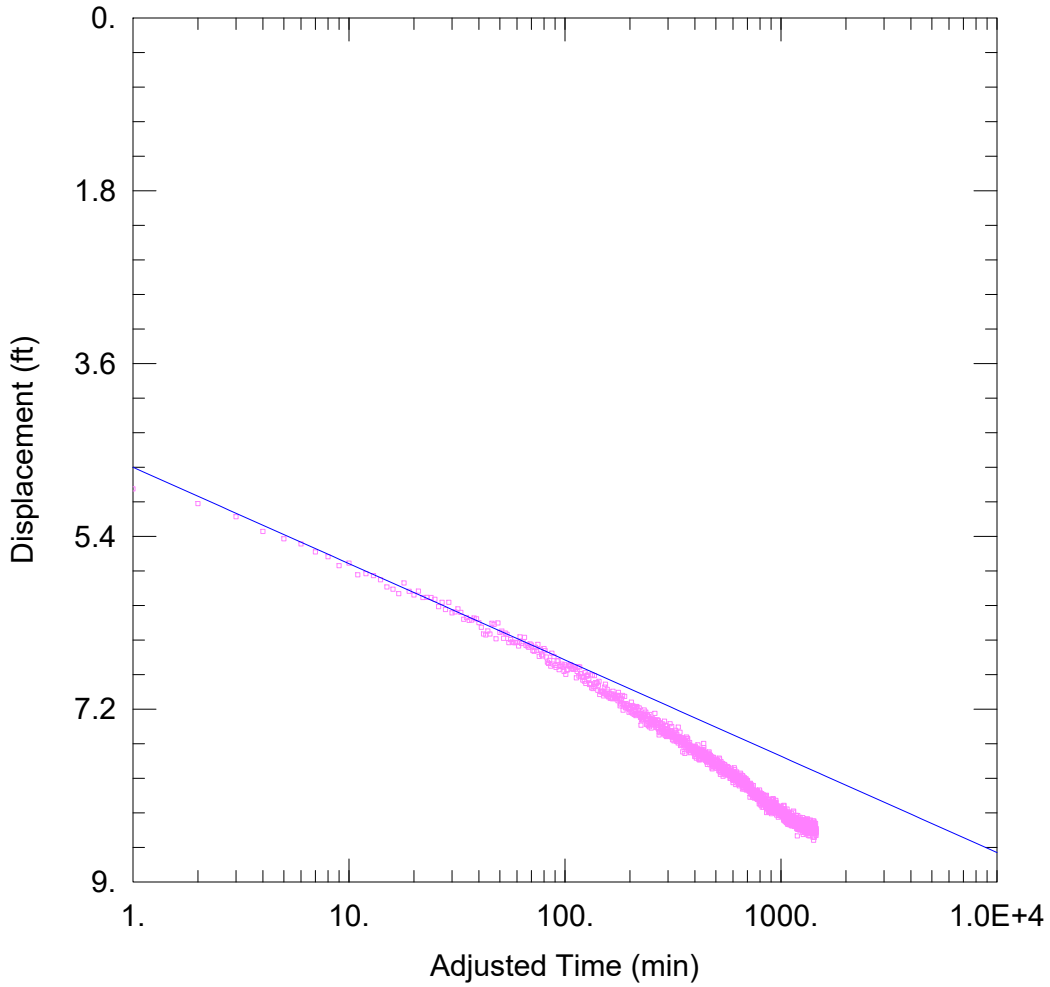
Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 3 Temperature (F)	PW Well No. 3 Water Level (ft bgs)	PW Well No. 3 Water Level (ft MSL)	PW Well No. 3 Drawdown (ft)	PW Well No. 3 Pump Rate (gpm)	PW Well No. 3 Specific Capacity (gpm/ft)	Comments	OW Well No. 4 Water Level (ft MSL)	OW Well No. 4 Drawdown (ft)
10/26/21 11:02 PM	660		72.51	360.90	1,619.10	7.94				1,627.99	1.84
10/27/21 12:02 AM	720		72.49	360.96	1,619.04	8.00				1,627.92	1.91
10/27/21 1:02 AM	780		72.51	361.04	1,618.96	8.07				1,627.84	1.99
10/27/21 2:02 AM	840		72.47	361.12	1,618.88	8.16				1,627.83	2.00
10/27/21 3:02 AM	900		72.48	361.20	1,618.80	8.24				1,627.74	2.09
10/27/21 4:02 AM	960		72.49	361.18	1,618.82	8.21				1,627.79	2.03
10/27/21 5:02 AM	1,020		72.47	361.22	1,618.78	8.25				1,627.69	2.14
10/27/21 6:02 AM	1,080		72.51	361.24	1,618.76	8.27				1,627.56	2.27
10/27/21 7:02 AM	1,140		72.50	361.33	1,618.67	8.36				1,627.67	2.15
10/27/21 8:02 AM	1,200		72.49	361.36	1,618.64	8.40				1,627.61	2.21
10/27/21 9:02 AM	1,260		72.48	361.41	1,618.59	8.45				1,627.67	2.16
10/27/21 10:02 AM	1,320		72.49	361.36	1,618.65	8.39				1,627.64	2.18
10/27/21 11:02 AM	1,380		72.47	361.37	1,618.63	8.40				1,627.49	2.34
10/27/21 12:02 PM	1,440		72.48	361.44	1,618.56	8.47				1,627.51	2.31
10/27/21 12:18 PM	1,456	0	72.48	361.45	1,618.56	8.48	24.0	2.83	Pump Stop	1,627.48	2.35
10/27/21 12:19 PM	1,457	1	72.46	357.09	1,622.92	4.12			Meter: 255,841.9 gallons	1,627.45	2.38
10/27/21 12:20 PM	1,458	2	72.46	356.55	1,623.45	3.58			Avg. Pump Rate: 24.3 gpm	1,627.47	2.35
10/27/21 12:21 PM	1,459	3	72.46	356.37	1,623.64	3.40				1,627.52	2.30
10/27/21 12:22 PM	1,460	4	72.46	356.20	1,623.80	3.23				1,627.51	2.31
10/27/21 12:23 PM	1,461	5	72.46	356.09	1,623.92	3.12				1,627.56	2.27
10/27/21 12:24 PM	1,462	6	72.47	356.03	1,623.97	3.07				1,627.50	2.33
10/27/21 12:25 PM	1,463	7	72.49	355.91	1,624.09	2.95				1,627.61	2.21
10/27/21 12:26 PM	1,464	8	72.50	355.89	1,624.11	2.92				1,627.58	2.24
10/27/21 12:27 PM	1,465	9	72.51	355.87	1,624.13	2.91				1,627.55	2.28
10/27/21 12:28 PM	1,466	10	72.54	355.82	1,624.18	2.85				1,627.53	2.29
10/27/21 12:29 PM	1,467	11	72.58	355.78	1,624.22	2.81				1,627.55	2.27
10/27/21 12:30 PM	1,468	12	72.63	355.72	1,624.28	2.76				1,627.50	2.32
10/27/21 12:31 PM	1,469	13	72.68	355.69	1,624.32	2.72				1,627.56	2.27
10/27/21 12:32 PM	1,470	14	72.74	355.65	1,624.35	2.68				1,627.57	2.26
10/27/21 12:33 PM	1,471	15	72.78	355.63	1,624.37	2.67				1,627.54	2.29
10/27/21 12:38 PM	1,476	20	73.00	355.52	1,624.48	2.56				1,627.59	2.24
10/27/21 12:43 PM	1,481	25	73.13	355.43	1,624.57	2.46				1,627.66	2.17
10/27/21 12:48 PM	1,486	30	73.17	355.37	1,624.63	2.40				1,627.63	2.20
10/27/21 1:03 PM	1,501	45	73.20	355.15	1,624.85	2.18				1,627.73	2.09
10/27/21 1:18 PM	1,516	60	73.09	355.06	1,624.94	2.09				1,627.89	1.93

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 2 HP
MSL = Mean Sea Level Pump Setting = 462 ft EC=Electrical conductivity (mS/cm)

Loma Vista (Phase III) Well No. 3 - Aquifer Test (October 26, 2021)

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. 4 Water Level (ft MSL)	OW Well No. 4 Drawdown (ft)
10/27/21 1:33 PM	1,531	75	72.82	354.95	1,625.06	1.98				1,627.95	1.88
10/27/21 1:48 PM	1,546	90	72.70	354.91	1,625.09	1.95				1,628.04	1.79
10/27/21 2:03 PM	1,561	105	72.56	354.80	1,625.20	1.84				1,628.16	1.66
10/27/21 2:18 PM	1,576	120	72.44	354.75	1,625.25	1.78				1,628.15	1.67
10/27/21 2:48 PM	1,606	150	72.27	354.61	1,625.39	1.65				1,628.23	1.59
10/27/21 3:18 PM	1,636	180	72.12	354.50	1,625.50	1.54				1,628.32	1.51
10/27/21 3:48 PM	1,666	210	72.02	354.42	1,625.58	1.46				1,628.40	1.43
10/27/21 4:18 PM	1,696	240	71.96	354.38	1,625.62	1.42				1,628.52	1.31
10/27/21 5:18 PM	1,756	300	71.84	354.21	1,625.79	1.25				1,628.58	1.25
10/27/21 6:18 PM	1,816	360	71.77	354.17	1,625.83	1.20				1,628.70	1.13
10/27/21 7:18 PM	1,876	420	71.72	354.05	1,625.95	1.08				1,628.83	1.00
10/27/21 8:18 PM	1,936	480	71.68	353.92	1,626.09	0.95				1,628.83	1.00
10/27/21 9:18 PM	1,996	540	71.66	353.90	1,626.10	0.94				1,629.01	0.82
10/27/21 10:18 PM	2,056	600	71.65	353.84	1,626.16	0.88				1,629.02	0.81
10/27/21 11:18 PM	2,116	660	71.62	353.80	1,626.20	0.84				1,629.09	0.74
10/28/21 12:18 AM	2,176	720	71.61	353.71	1,626.29	0.75				1,629.07	0.76
10/28/21 1:18 AM	2,236	780	71.60	353.67	1,626.33	0.71				1,629.19	0.64
10/28/21 2:18 AM	2,296	840	71.59	353.63	1,626.37	0.66				1,629.28	0.54
10/28/21 3:18 AM	2,356	900	71.59	353.59	1,626.41	0.62				1,629.27	0.56
10/28/21 4:18 AM	2,416	960	71.58	353.53	1,626.47	0.56				1,629.25	0.57
10/28/21 5:18 AM	2,476	1020	71.59	353.53	1,626.47	0.56				1,629.38	0.45
10/28/21 6:18 AM	2,536	1080	71.58	353.49	1,626.51	0.53				1,629.34	0.49
10/28/21 7:18 AM	2,596	1140	71.58	353.47	1,626.53	0.51				1,629.36	0.46
10/28/21 8:18 AM	2,656	1200	71.58	353.44	1,626.56	0.48				1,629.43	0.40
10/28/21 9:18 AM	2,716	1260	71.59	353.36	1,626.65	0.39				1,629.37	0.45
10/28/21 10:18 AM	2,776	1320	71.58	353.34	1,626.66	0.37				1,629.59	0.24
10/28/21 11:18 AM	2,836	1380	71.59	353.28	1,626.72	0.32				1,629.54	0.29
10/28/21 12:18 PM	2,896	1440	71.59	353.27	1,626.73	0.31				1,634.82	0.69
10/28/21 12:20 PM	2,898	1442	71.59	353.26	1,626.74	0.29				1,634.84	0.67

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 2 HP
MSL = Mean Sea Level Pump Setting = 462 ft EC=Electrical conductivity (mS/cm)



WELL TEST ANALYSIS

Data Set: \...\PW 3.aqt
Date: 11/03/21 Time: 09:29:37

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Location: Gillespie County
Test Well: Well No. 3
Test Date: 10-26-21

AQUIFER DATA

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

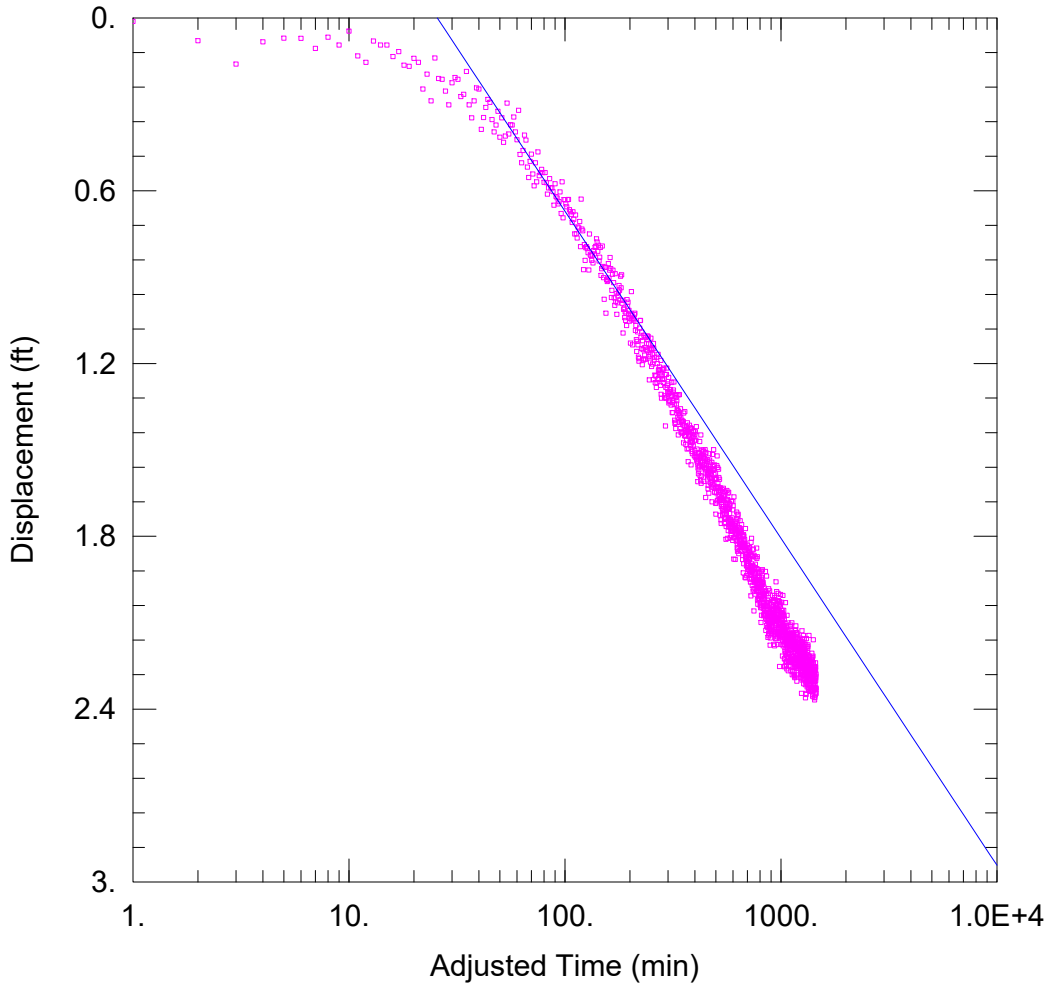
Pumping Wells

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

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 854.4 ft^2/day



WELL TEST ANALYSIS

Data Set: \...\OW 4.aqt
Date: 11/03/21 Time: 09:29:05

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Location: Gillespie County
Test Well: Well No. 3
Test Date: 10-26-21

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. 4	494	0

SOLUTION

Aquifer Model: Confined
Solution Method: Cooper-Jacob
T = 754.8 ft^2/day
S = 0.0001238

Aquifer Test

Well No. 6

Loma Vista (Phase III) Well No. 6 - Aquifer Test (October 20, 2021)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 6 Temperature (F)	PW Well No. 6 Water Level (ft bgs)	PW Well No. 6 Water Level (ft MSL)	PW Well No. 6 Drawdown (ft)	PW Well No. 6 Pump Rate (gpm)	PW Well No. 6 Specific Capacity (gpm/ft)	Comments	OW Well No. 5 Water Level (ft MSL)	OW Well No. 5 Drawdown (ft)
10/20/21 11:48 AM	0		72.65	413.05	1,631.95	0.00			Pump Start	1,635.51	0.00
10/20/21 11:49 AM	1		72.66	415.06	1,629.94	2.01	23.0	11.43	Meter: 183,021.4 gallons	1,635.59	-0.08
10/20/21 11:50 AM	2		72.68	425.00	1,620.00	11.95				1,635.50	0.01
10/20/21 11:51 AM	3		72.70	426.99	1,618.01	13.94				1,635.55	-0.05
10/20/21 11:52 AM	4		72.70	427.91	1,617.09	14.87				1,635.51	0.00
10/20/21 11:53 AM	5		72.71	428.52	1,616.48	15.47				1,635.43	0.08
10/20/21 11:54 AM	6		72.71	428.99	1,616.01	15.95				1,635.41	0.10
10/20/21 11:55 AM	7		72.72	429.44	1,615.56	16.39				1,635.42	0.09
10/20/21 11:56 AM	8		72.72	429.79	1,615.21	16.74				1,635.39	0.12
10/20/21 11:57 AM	9		72.72	430.00	1,615.00	16.96				1,635.36	0.15
10/20/21 11:58 AM	10		72.72	430.15	1,614.85	17.11				1,635.38	0.13
10/20/21 11:59 AM	11		72.73	430.43	1,614.57	17.39				1,635.33	0.18
10/20/21 12:00 PM	12		72.72	430.61	1,614.39	17.56				1,635.17	0.33
10/20/21 12:01 PM	13		72.72	430.87	1,614.13	17.83				1,635.31	0.20
10/20/21 12:02 PM	14		72.74	431.04	1,613.96	18.00				1,635.17	0.34
10/20/21 12:03 PM	15		72.74	431.08	1,613.92	18.03				1,635.17	0.34
10/20/21 12:08 PM	20		72.74	431.68	1,613.32	18.63				1,635.03	0.48
10/20/21 12:13 PM	25		72.78	432.17	1,612.83	19.13				1,634.87	0.64
10/20/21 12:18 PM	30		72.78	432.39	1,612.61	19.34				1,634.64	0.87
10/20/21 12:33 PM	45		72.71	433.28	1,611.72	20.23				1,634.28	1.23
10/20/21 12:48 PM	60		72.69	433.83	1,611.17	20.78				1,633.96	1.55
10/20/21 1:03 PM	75		72.67	434.11	1,610.89	21.06				1,633.63	1.88
10/20/21 1:18 PM	90		72.66	434.43	1,610.57	21.38				1,633.38	2.13
10/20/21 1:33 PM	105		72.63	434.83	1,610.17	21.78				1,633.20	2.31
10/20/21 1:48 PM	120		72.64	435.13	1,609.87	22.08	23.0	1.04	pH: 7.5 / EC: 0.79	1,633.08	2.43
10/20/21 2:18 PM	150		72.64	435.55	1,609.46	22.50				1,632.70	2.81
10/20/21 2:48 PM	180		72.67	435.81	1,609.19	22.76				1,632.34	3.17
10/20/21 3:18 PM	210		72.67	436.12	1,608.88	23.07				1,632.17	3.34
10/20/21 3:48 PM	240		72.68	436.37	1,608.63	23.32				1,631.96	3.55
10/20/21 4:48 PM	300		72.68	436.84	1,608.16	23.79				1,631.62	3.89
10/20/21 5:48 PM	360		72.68	437.37	1,607.63	24.33				1,631.29	4.22
10/20/21 6:48 PM	420		72.65	437.73	1,607.27	24.68				1,630.96	4.55
10/20/21 7:48 PM	480		72.65	438.10	1,606.90	25.05				1,630.75	4.76
10/20/21 8:48 PM	540		72.66	438.51	1,606.49	25.46				1,630.61	4.90
10/20/21 9:48 PM	600		72.66	438.92	1,606.08	25.87				1,630.43	5.08

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 2 HP
MSL = Mean Sea Level Pump Setting = 504 ft EC=Electrical conductivity (mS/cm)

Loma Vista (Phase III) Well No. 6 - Aquifer Test (October 20, 2021)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 6 Temperature (F)	PW Well No. 6 Water Level (ft bgs)	PW Well No. 6 Water Level (ft MSL)	PW Well No. 6 Drawdown (ft)	PW Well No. 6 Pump Rate (gpm)	PW Well No. 6 Specific Capacity (gpm/ft)	Comments	OW Well No. 5 Water Level (ft MSL)	OW Well No. 5 Drawdown (ft)
10/20/21 10:48 PM	660		72.66	439.30	1,605.70	26.25				1,630.25	5.26
10/20/21 11:48 PM	720		72.67	439.64	1,605.36	26.59				1,630.04	5.47
10/21/21 12:48 AM	780		72.67	439.91	1,605.09	26.87				1,629.95	5.56
10/21/21 1:48 AM	840		72.67	440.30	1,604.70	27.25				1,629.82	5.69
10/21/21 2:48 AM	900		72.68	440.72	1,604.28	27.68				1,629.68	5.83
10/21/21 3:48 AM	960		72.69	441.28	1,603.72	28.24				1,629.60	5.91
10/21/21 4:48 AM	1,020		72.69	441.66	1,603.34	28.61				1,629.52	5.99
10/21/21 5:48 AM	1,080		72.69	441.80	1,603.20	28.75				1,629.37	6.14
10/21/21 6:48 AM	1,140		72.69	441.71	1,603.29	28.67				1,629.30	6.20
10/21/21 7:48 AM	1,200		72.69	441.84	1,603.16	28.79				1,629.19	6.31
10/21/21 8:48 AM	1,260		72.69	442.01	1,602.99	28.96				1,629.19	6.32
10/21/21 9:48 AM	1,320		72.70	442.08	1,602.92	29.03				1,629.07	6.44
10/21/21 10:48 AM	1,380		72.70	442.08	1,602.92	29.03				1,629.03	6.48
10/21/21 11:48 AM	1,440		72.70	442.29	1,602.71	29.24				1,629.05	6.46
10/21/21 12:12 PM	1,464	0	72.70	442.29	1,602.71	29.24	21.0	0.72	Pump Stop	1,628.98	6.53
10/21/21 12:13 PM	1,465	1	72.78	425.58	1,619.42	12.53			Meter: 183,015.1 gallons	1,628.95	6.56
10/21/21 12:14 PM	1,466	2	73.16	421.54	1,623.46	8.50			Avg. Pump Rate: 21 gpm	1,628.94	6.57
10/21/21 12:15 PM	1,467	3	73.44	421.39	1,623.61	8.34				1,628.94	6.56
10/21/21 12:16 PM	1,468	4	73.62	422.02	1,622.98	8.97				1,628.92	6.59
10/21/21 12:17 PM	1,469	5	73.74	421.72	1,623.28	8.67				1,628.94	6.57
10/21/21 12:18 PM	1,470	6	73.85	421.46	1,623.54	8.41				1,629.03	6.48
10/21/21 12:19 PM	1,471	7	73.93	421.26	1,623.74	8.21				1,629.04	6.46
10/21/21 12:20 PM	1,472	8	73.98	421.05	1,623.95	8.00				1,629.08	6.43
10/21/21 12:21 PM	1,473	9	74.01	420.88	1,624.12	7.83				1,629.22	6.29
10/21/21 12:22 PM	1,474	10	74.04	420.76	1,624.24	7.71				1,629.25	6.25
10/21/21 12:23 PM	1,475	11	74.05	420.62	1,624.38	7.57				1,629.33	6.18
10/21/21 12:24 PM	1,476	12	74.04	420.46	1,624.54	7.41				1,629.21	6.30
10/21/21 12:25 PM	1,477	13	74.02	420.32	1,624.68	7.27				1,629.30	6.21
10/21/21 12:26 PM	1,478	14	73.97	420.19	1,624.81	7.14				1,629.35	6.16
10/21/21 12:27 PM	1,479	15	73.86	420.09	1,624.91	7.04				1,629.49	6.02
10/21/21 12:32 PM	1,484	20	73.15	419.62	1,625.38	6.57				1,629.59	5.92
10/21/21 12:37 PM	1,489	25	72.92	419.19	1,625.81	6.14				1,629.81	5.69
10/21/21 12:42 PM	1,494	30	72.80	418.92	1,626.08	5.88				1,629.93	5.58
10/21/21 12:57 PM	1,509	45	72.67	418.25	1,626.75	5.20				1,630.53	4.97
10/21/21 1:12 PM	1,524	60	72.65	417.76	1,627.24	4.71				1,630.89	4.61

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 2 HP
MSL = Mean Sea Level Pump Setting = 504 ft EC=Electrical conductivity (mS/cm)

Loma Vista (Phase III) Well No. 6 - Aquifer Test (October 20, 2021)

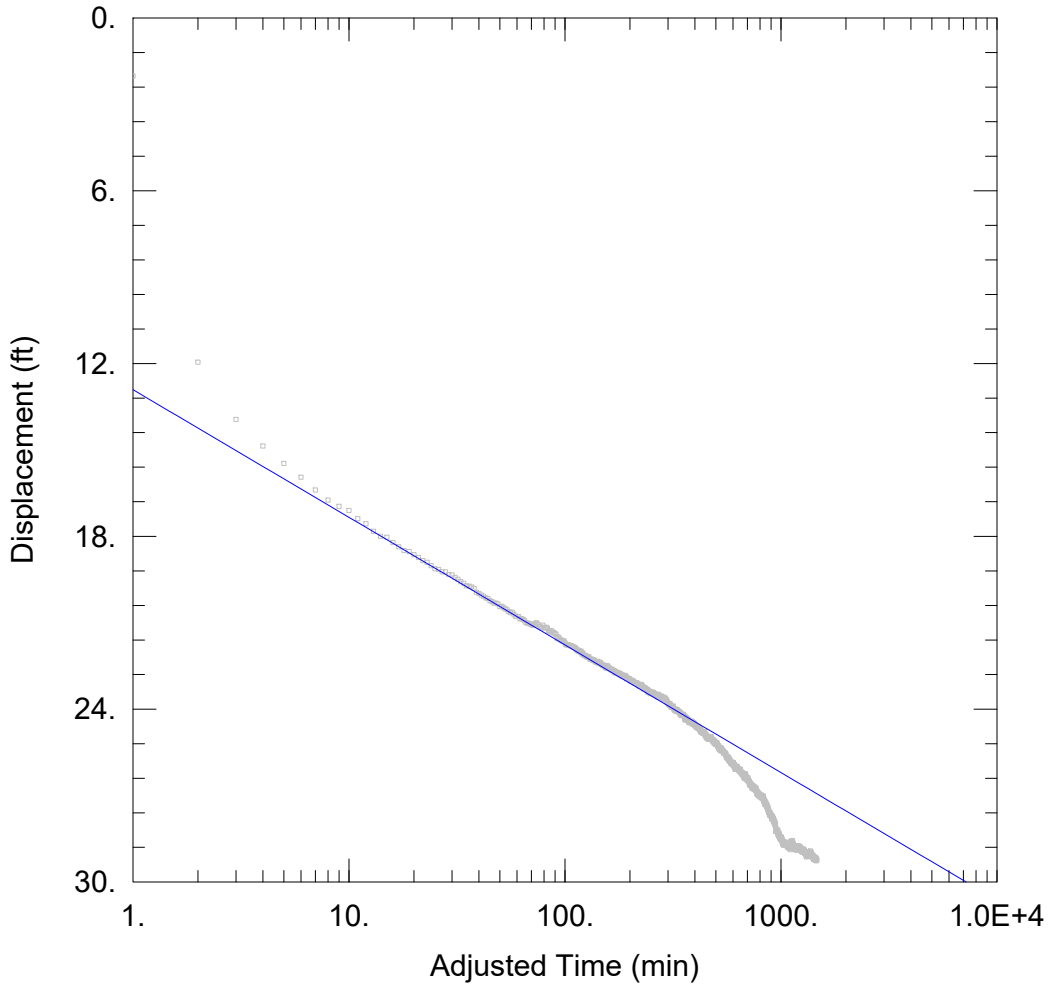
Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 6 Temperature (F)	PW Well No. 6 Water Level (ft bgs)	PW Well No. 6 Water Level (ft MSL)	PW Well No. 6 Drawdown (ft)	PW Well No. 6 Pump Rate (gpm)	PW Well No. 6 Specific Capacity (gpm/ft)	Comments	OW Well No. 5 Water Level (ft MSL)	OW Well No. 5 Drawdown (ft)
10/21/21 1:27 PM	1,539	75	72.64	417.38	1,627.62	4.33				1,631.19	4.31
10/21/21 1:42 PM	1,554	90	72.63	417.05	1,627.95	4.00				1,631.52	3.99
10/21/21 1:57 PM	1,569	105	72.63	416.82	1,628.18	3.77				1,631.70	3.80
10/21/21 2:12 PM	1,584	120	72.63	416.60	1,628.40	3.55				1,631.78	3.73
10/21/21 2:42 PM	1,614	150	72.63	416.24	1,628.76	3.19				1,632.21	3.30
10/21/21 3:12 PM	1,644	180	72.62	415.99	1,629.01	2.94				1,632.46	3.05
10/21/21 3:42 PM	1,674	210	72.63	415.75	1,629.25	2.70				1,632.74	2.77
10/21/21 4:12 PM	1,704	240	72.64	415.56	1,629.44	2.51				1,632.87	2.63
10/21/21 5:12 PM	1,764	300	72.63	415.27	1,629.73	2.22				1,633.16	2.35
10/21/21 6:12 PM	1,824	360	72.63	415.02	1,629.98	1.97				1,633.53	1.98
10/21/21 7:12 PM	1,884	420	72.63	414.82	1,630.18	1.77				1,633.69	1.82
10/21/21 8:12 PM	1,944	480	72.63	414.67	1,630.33	1.62				1,633.88	1.63
10/21/21 9:12 PM	2,004	540	72.63	414.51	1,630.49	1.47				1,634.05	1.46
10/21/21 10:12 PM	2,064	600	72.64	414.39	1,630.61	1.34				1,634.14	1.37
10/21/21 11:12 PM	2,124	660	72.64	414.36	1,630.65	1.31				1,634.16	1.34
10/22/21 12:12 AM	2,184	720	72.64	414.25	1,630.75	1.20				1,634.33	1.18
10/22/21 1:12 AM	2,244	780	72.64	414.20	1,630.80	1.15				1,634.36	1.14
10/22/21 2:12 AM	2,304	840	72.65	414.14	1,630.86	1.10				1,634.40	1.11
10/22/21 3:12 AM	2,364	900	72.64	414.08	1,630.92	1.03				1,634.44	1.07
10/22/21 4:12 AM	2,424	960	72.65	414.03	1,630.98	0.98				1,634.54	0.97
10/22/21 5:12 AM	2,484	1020	72.63	413.98	1,631.02	0.93				1,634.56	0.95
10/22/21 6:12 AM	2,544	1080	72.65	413.94	1,631.06	0.89				1,634.71	0.80
10/22/21 7:12 AM	2,604	1140	72.65	413.86	1,631.15	0.81				1,634.73	0.78
10/22/21 8:12 AM	2,664	1200	72.64	413.79	1,631.22	0.74				1,634.80	0.70
10/22/21 9:12 AM	2,724	1260	72.64	413.77	1,631.23	0.73				1,634.80	0.70
10/22/21 10:12 AM	2,784	1320	72.64	413.75	1,631.25	0.70				1,634.85	0.66
10/22/21 11:12 AM	2,844	1380	72.64	413.73	1,631.27	0.68				1,634.81	0.70
10/22/21 12:12 PM	2,904	1440	72.64	413.67	1,631.33	0.63				1,634.82	0.69
10/22/21 1:12 PM	2,964	1500	72.65	413.70	1,631.30	0.65				1,634.84	0.67
10/22/21 2:12 PM	3,024	1560	72.63	413.75	1,631.25	0.70				1,634.79	0.72
10/22/21 3:12 PM	3,084	1620	72.64	413.68	1,631.32	0.63				1,634.84	0.66
10/22/21 4:12 PM	3,144	1680	72.65	413.70	1,631.30	0.65				1,634.93	0.58
10/22/21 5:12 PM	3,204	1740	72.64	413.62	1,631.38	0.58				1,634.97	0.53

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 2 HP
MSL = Mean Sea Level Pump Setting = 504 ft EC=Electrical conductivity (mS/cm)

Loma Vista (Phase III) Well No. 6 - Aquifer Test (October 20, 2021)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 6 Temperature (F)	PW Well No. 6 Water Level (ft bgs)	PW Well No. 6 Water Level (ft MSL)	PW Well No. 6 Drawdown (ft)	PW Well No. 6 Pump Rate (gpm)	PW Well No. 6 Specific Capacity (gpm/ft)	Comments	OW Well No. 5 Water Level (ft MSL)	OW Well No. 5 Drawdown (ft)
10/22/21 6:12 PM	3,264	1800	72.63	413.61	1,631.39	0.56				1,634.96	0.55
10/22/21 7:12 PM	3,324	1860	72.64	413.60	1,631.40	0.55				1,635.04	0.46
10/22/21 8:12 PM	3,384	1920	72.64	413.57	1,631.43	0.52				1,635.01	0.50
10/22/21 9:12 PM	3,444	1980	72.64	413.58	1,631.42	0.53				1,634.97	0.54
10/22/21 10:12 PM	3,504	2040	72.63	413.53	1,631.47	0.49				1,635.05	0.46
10/22/21 11:12 PM	3,564	2100	72.63	413.53	1,631.47	0.48				1,635.05	0.46
10/23/21 12:12 AM	3,624	2160	72.63	413.55	1,631.45	0.50				1,635.03	0.48
10/23/21 1:12 AM	3,684	2220	72.63	413.57	1,631.43	0.52				1,635.07	0.44
10/23/21 2:12 AM	3,744	2280	72.63	413.54	1,631.46	0.49				1,635.04	0.47
10/23/21 3:12 AM	3,804	2340	72.64	413.54	1,631.46	0.49				1,635.04	0.46
10/23/21 4:12 AM	3,864	2400	72.63	413.52	1,631.48	0.48				1,635.10	0.41
10/23/21 5:12 AM	3,924	2460	72.63	413.49	1,631.51	0.44				1,635.10	0.41
10/23/21 6:12 AM	3,984	2520	72.63	413.50	1,631.50	0.45				1,635.09	0.42
10/23/21 7:12 AM	4,044	2580	72.62	413.45	1,631.55	0.40				1,635.13	0.37
10/23/21 8:12 AM	4,104	2640	72.62	413.47	1,631.53	0.42				1,635.14	0.37
10/23/21 9:12 AM	4,164	2700	72.62	413.40	1,631.60	0.35				1,635.24	0.26
10/23/21 10:12 AM	4,224	2760	72.63	413.38	1,631.63	0.33				1,635.22	0.29
10/23/21 11:12 AM	4,284	2820	72.62	413.39	1,631.61	0.34				1,635.24	0.27
10/23/21 12:12 PM	4,344	2880	72.63	413.39	1,631.61	0.34					
10/23/21 12:17 PM	4,349	2885	72.63	413.40	1,631.60	0.35					

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 2 HP
MSL = Mean Sea Level Pump Setting = 504 ft EC=Electrical conductivity (mS/cm)



WELL TEST ANALYSIS

Data Set: \...\PW 6.aqt
Date: 11/03/21 Time: 09:30:58

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Location: Gillespie County
Test Well: Well No. 6
Test Date: 10-20-21

AQUIFER DATA

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

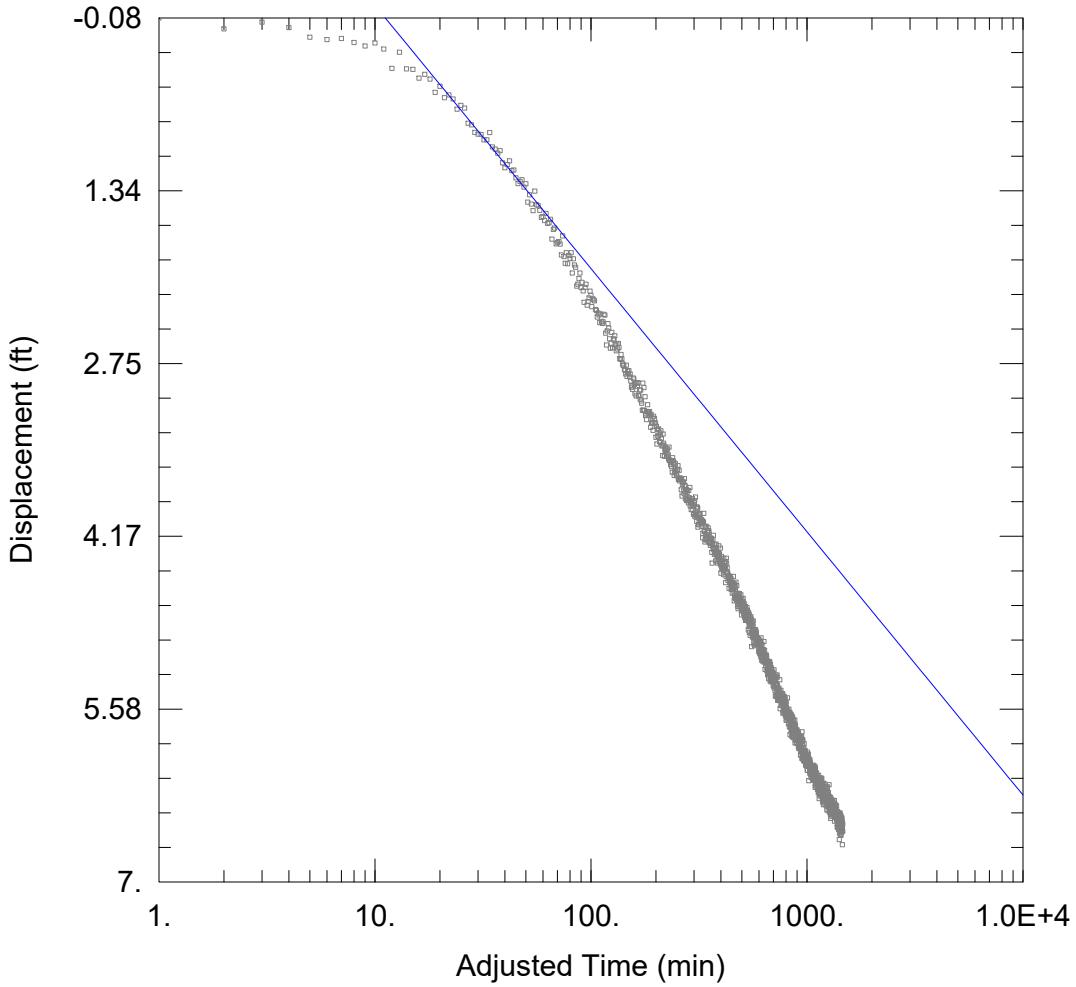
Pumping Wells

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

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 167.2 ft^2/day



WELL TEST ANALYSIS

Data Set: \...\OW 5.aqt
Date: 11/03/21 Time: 09:31:57

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Location: Gillespie County
Test Well: Well No. 6
Test Date: 10-20-21

AQUIFER DATA

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Pumping Wells

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

Observation Wells

Well Name	X (ft)	Y (ft)
Well No. 5	489	0

SOLUTION

Aquifer Model: Confined
Solution Method: Cooper-Jacob
T = 343.4 ft^2/day
S = 2.724E-5

Aquifer Test

Well No. 8

Loma Vista (Phase III) Well No. 8 - Aquifer Test (September 15, 2021)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 8 Temperature (F)	PW Well No. 8 Water Level (ft bgs)	PW Well No. 8 Water Level (ft MSL)	PW Well No. 8 Drawdown (ft)	PW Well No. 8 Pump Rate (gpm)	PW Well No. 8 Specific Capacity (gpm/ft)	Comments	OW Well No. 7 Water Level (ft MSL)	OW Well No. 7 Drawdown (ft)
9/15/21 11:09 AM	0		73.97	402.33	1,647.67	0.00			Pump Start	1,732.23	0.00
9/15/21 11:10 AM	1		73.97	403.70	1,646.30	1.37	24.0	17.58	Meter: 6,888.1 gallons	1,731.96	0.27
9/15/21 11:11 AM	2		73.93	404.67	1,645.33	2.34				1,731.77	0.46
9/15/21 11:12 AM	3		73.90	405.57	1,644.44	3.23				1,731.56	0.67
9/15/21 11:13 AM	4		73.94	406.26	1,643.74	3.93				1,731.31	0.92
9/15/21 11:14 AM	5		73.87	407.06	1,642.95	4.72				1,731.07	1.17
9/15/21 11:15 AM	6		73.91	407.80	1,642.20	5.47				1,730.84	1.39
9/15/21 11:16 AM	7		73.88	408.55	1,641.45	6.22				1,730.63	1.60
9/15/21 11:17 AM	8		73.93	409.11	1,640.89	6.78				1,730.36	1.87
9/15/21 11:18 AM	9		73.89	409.62	1,640.38	7.29				1,730.13	2.10
9/15/21 11:19 AM	10		73.89	410.01	1,639.99	7.68				1,729.92	2.32
9/15/21 11:20 AM	11		73.91	410.57	1,639.43	8.24				1,729.66	2.57
9/15/21 11:21 AM	12		73.89	410.86	1,639.14	8.53				1,729.37	2.87
9/15/21 11:22 AM	13		73.88	411.17	1,638.83	8.83				1,729.10	3.13
9/15/21 11:23 AM	14		73.92	411.50	1,638.50	9.17				1,728.89	3.34
9/15/21 11:24 AM	15		73.91	411.91	1,638.09	9.58				1,728.58	3.65
9/15/21 11:29 AM	20		73.97	413.36	1,636.64	11.03				1,727.38	4.85
9/15/21 11:34 AM	25		73.95	414.45	1,635.55	12.12				1,726.32	5.91
9/15/21 11:39 AM	30		73.95	415.21	1,634.79	12.88				1,725.13	7.10
9/15/21 11:54 AM	45		73.99	417.18	1,632.83	14.84				1,722.07	10.16
9/15/21 12:09 PM	60		74.01	418.37	1,631.63	16.04	24.0	1.50	pH: 7.5 / EC: 0.78	1,719.22	13.01
9/15/21 12:24 PM	75		74.02	419.25	1,630.75	16.92				1,716.57	15.66
9/15/21 12:39 PM	90		74.00	419.81	1,630.19	17.47				1,714.09	18.14
9/15/21 12:54 PM	105		73.94	420.47	1,629.53	18.14				1,711.72	20.51
9/15/21 1:09 PM	120		73.96	420.87	1,629.13	18.53				1,709.54	22.69
9/15/21 1:39 PM	150		73.98	421.43	1,628.57	19.10				1,727.82	4.41
9/15/21 2:09 PM	180		73.98	422.01	1,627.99	19.68				1,728.11	4.13
9/15/21 2:39 PM	210		73.98	422.49	1,627.51	20.16				1,725.38	6.85
9/15/21 3:09 PM	240		74.00	422.85	1,627.15	20.52				1,720.88	11.35
9/15/21 4:09 PM	300		74.04	423.45	1,626.55	21.12				1,712.89	19.34
9/15/21 5:09 PM	360		74.05	423.81	1,626.19	21.48				1,728.51	3.73
9/15/21 6:09 PM	420		74.03	424.25	1,625.76	21.91				1,748.93	-16.70
9/15/21 7:09 PM	480		74.03	424.61	1,625.39	22.28				1,767.79	-35.56
9/15/21 8:09 PM	540		74.03	424.80	1,625.20	22.47				1,790.40	-58.17
9/15/21 9:09 PM	600		74.08	425.04	1,624.96	22.71				1,815.61	-83.38

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 2 HP
MSL = Mean Sea Level Pump Setting = 483 ft EC=Electrical conductivity (mS/cm)

Loma Vista (Phase III) Well No. 8 - Aquifer Test (September 15, 2021)

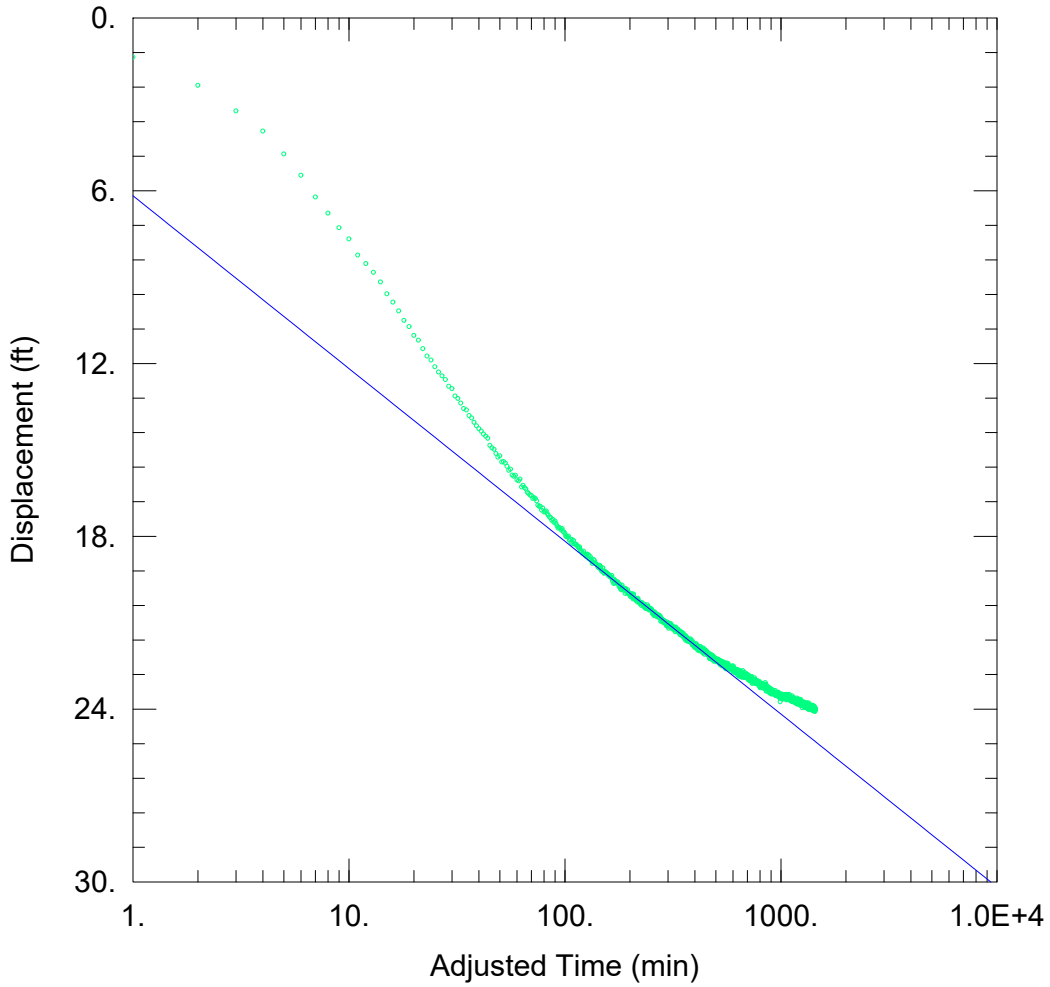
Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 8 Temperature (F)	PW Well No. 8 Water Level (ft bgs)	PW Well No. 8 Water Level (ft MSL)	PW Well No. 8 Drawdown (ft)	PW Well No. 8 Pump Rate (gpm)	PW Well No. 8 Specific Capacity (gpm/ft)	Comments	OW Well No. 7 Water Level (ft MSL)	OW Well No. 7 Drawdown (ft)
9/15/21 10:09 PM	660		74.05	425.23	1,624.77	22.90				1,808.37	-76.14
9/15/21 11:09 PM	720		74.05	425.24	1,624.77	22.90				1,787.04	-54.81
9/16/21 12:09 AM	780		74.06	425.41	1,624.59	23.08				1,776.45	-44.22
9/16/21 1:09 AM	840		74.04	425.52	1,624.48	23.19				1,766.26	-34.03
9/16/21 2:09 AM	900		74.03	425.77	1,624.24	23.43				1,755.85	-23.62
9/16/21 3:09 AM	960		74.03	425.84	1,624.16	23.51				1,748.46	-16.23
9/16/21 4:09 AM	1,020		74.05	425.88	1,624.12	23.55				1,741.80	-9.57
9/16/21 5:09 AM	1,080		74.06	425.96	1,624.04	23.63				1,735.78	-3.55
9/16/21 6:09 AM	1,140		74.09	426.05	1,623.95	23.72				1,730.19	2.04
9/16/21 7:09 AM	1,200		74.09	426.06	1,623.94	23.73				1,725.27	6.96
9/16/21 8:09 AM	1,260		74.03	426.19	1,623.81	23.85				1,720.69	11.55
9/16/21 9:09 AM	1,320		74.09	426.30	1,623.70	23.97				1,716.44	15.80
9/16/21 10:09 AM	1,380		74.06	426.33	1,623.67	24.00				1,712.51	19.73
9/16/21 11:09 AM	1,440		74.09	426.42	1,623.58	24.09				1,708.90	23.33
9/16/21 11:15 AM	1,446	0	74.08	426.31	1,623.69	23.98	23.0	0.96	Pump Stop	1,708.58	23.66
9/16/21 11:16 AM	1,447	1	74.09	425.22	1,624.78	22.89			Meter: 40,201.8 gallons	1,708.50	23.73
9/16/21 11:17 AM	1,448	2	74.10	423.79	1,626.21	21.46			Avg. Pump Rate: 23 gpm	1,708.45	23.78
9/16/21 11:18 AM	1,449	3	74.11	422.82	1,627.18	20.49				1,708.41	23.82
9/16/21 11:19 AM	1,450	4	74.11	421.95	1,628.05	19.62				1,708.35	23.88
9/16/21 11:20 AM	1,451	5	74.03	421.19	1,628.81	18.86				1,708.23	24.00
9/16/21 11:21 AM	1,452	6	74.08	420.57	1,629.43	18.24				1,708.22	24.01
9/16/21 11:22 AM	1,453	7	74.09	420.01	1,629.99	17.68				1,708.13	24.10
9/16/21 11:23 AM	1,454	8	74.23	419.48	1,630.52	17.15				1,708.11	24.12
9/16/21 11:24 AM	1,455	9	74.30	418.92	1,631.08	16.59				1,708.03	24.20
9/16/21 11:25 AM	1,456	10	74.41	418.57	1,631.43	16.24				1,707.99	24.24
9/16/21 11:26 AM	1,457	11	74.44	418.07	1,631.93	15.74				1,707.93	24.31
9/16/21 11:27 AM	1,458	12	74.49	417.73	1,632.27	15.40				1,707.87	24.36
9/16/21 11:28 AM	1,459	13	74.54	417.38	1,632.63	15.04				1,707.82	24.41
9/16/21 11:29 AM	1,460	14	74.62	416.97	1,633.03	14.64				1,707.76	24.47
9/16/21 11:30 AM	1,461	15	74.63	416.64	1,633.36	14.31				1,707.70	24.53
9/16/21 11:35 AM	1,466	20	74.66	415.24	1,634.76	12.91				1,707.44	24.79
9/16/21 11:40 AM	1,471	25	74.70	414.12	1,635.88	11.79				1,707.11	25.12
9/16/21 11:45 AM	1,476	30	74.70	413.19	1,636.81	10.86				1,706.84	25.39
9/16/21 12:00 PM	1,491	45	74.58	411.15	1,638.85	8.82				1,706.01	26.23
9/16/21 12:15 PM	1,506	60	74.55	409.72	1,640.28	7.39				1,705.21	27.02

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 2 HP
MSL = Mean Sea Level Pump Setting = 483 ft EC=Electrical conductivity (mS/cm)

Loma Vista (Phase III) Well No. 8 - Aquifer Test (September 15, 2021)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 8 Temperature (F)	PW Well No. 8 Water Level (ft bgs)	PW Well No. 8 Water Level (ft MSL)	PW Well No. 8 Drawdown (ft)	PW Well No. 8 Pump Rate (gpm)	PW Well No. 8 Specific Capacity (gpm/ft)	Comments	OW Well No. 7 Water Level (ft MSL)	OW Well No. 7 Drawdown (ft)
9/16/21 12:30 PM	1,521	75	74.46	408.95	1,641.06	6.61				1,704.38	27.85
9/16/21 12:45 PM	1,536	90	74.38	408.21	1,641.79	5.87				1,703.57	28.66
9/16/21 1:00 PM	1,551	105	74.36	407.74	1,642.26	5.41				1,702.77	29.46
9/16/21 1:15 PM	1,566	120	74.31	407.23	1,642.77	4.90				1,701.98	30.25
9/16/21 1:45 PM	1,596	150	74.30	406.51	1,643.49	4.17				1,700.51	31.72
9/16/21 2:15 PM	1,626	180	74.24	405.93	1,644.07	3.60				1,699.10	33.13
9/16/21 2:45 PM	1,656	210	74.27	405.63	1,644.38	3.29				1,697.77	34.46
9/16/21 3:15 PM	1,686	240	74.23	405.30	1,644.70	2.97				1,696.53	35.70
9/16/21 4:15 PM	1,746	300	74.15	404.79	1,645.21	2.45				1,694.14	38.10
9/16/21 5:15 PM	1,806	360	74.05	404.39	1,645.61	2.06				1,691.96	40.27
9/16/21 6:15 PM	1,866	420	74.07	404.01	1,645.99	1.68				1,689.96	42.27
9/16/21 7:15 PM	1,926	480	74.05	403.73	1,646.27	1.40				1,688.06	44.17
9/16/21 8:15 PM	1,986	540	74.04	403.53	1,646.47	1.20				1,686.38	45.86
9/16/21 9:15 PM	2,046	600	73.96	403.38	1,646.62	1.04				1,684.78	47.45
9/16/21 10:15 PM	2,106	660	74.00	403.19	1,646.81	0.86				1,683.34	48.89
9/16/21 11:15 PM	2,166	720	74.01	403.02	1,646.98	0.69				1,682.00	50.23
9/17/21 12:15 AM	2,226	780	73.98	403.02	1,646.98	0.69				1,680.65	51.58
9/17/21 1:15 AM	2,286	840	73.99	402.85	1,647.15	0.52				1,679.39	52.84
9/17/21 2:15 AM	2,346	900	73.96	402.74	1,647.26	0.41				1,678.18	54.05
9/17/21 3:15 AM	2,406	960	73.97	402.62	1,647.38	0.29				1,677.00	55.23
9/17/21 4:15 AM	2,466	1020	73.95	402.56	1,647.44	0.23				1,675.91	56.32
9/17/21 5:15 AM	2,526	1080	73.95	402.50	1,647.50	0.17				1,674.84	57.39
9/17/21 6:15 AM	2,586	1140	73.95	402.38	1,647.62	0.04				1,673.83	58.41
9/17/21 7:15 AM	2,646	1200	73.95	402.31	1,647.69	-0.02				1,672.81	59.42
9/17/21 8:15 AM	2,706	1260	73.95	402.32	1,647.68	-0.01				1,671.84	60.39
9/17/21 9:15 AM	2,766	1320	73.95	402.20	1,647.80	-0.13				1,671.04	61.20
9/17/21 10:12 AM	2,823	1377	73.96	402.14	1,647.87	-0.20				1,670.17	62.06

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 2 HP
MSL = Mean Sea Level Pump Setting = 483 ft EC=Electrical conductivity (mS/cm)



WELL TEST ANALYSIS

Data Set: \...\PW 8.aqt
Date: 11/03/21 Time: 09:38:32

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Location: Gillespie County
Test Well: Well No. 8
Test Date: 9-15-21

AQUIFER DATA

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

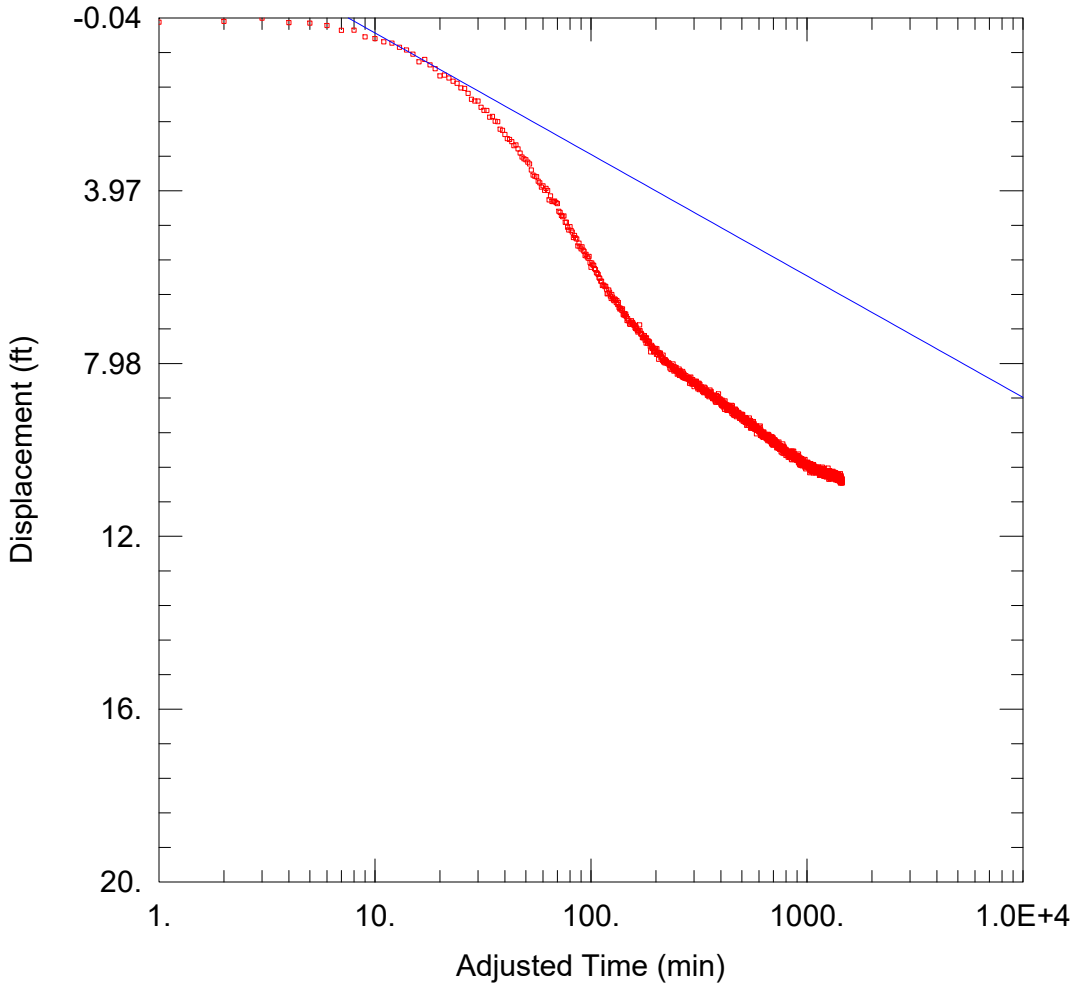
Pumping Wells

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

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 135.2 ft^2/day



WELL TEST ANALYSIS

Data Set: \...\OW 9.aqt
Date: 11/03/21 Time: 09:34:58

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Location: Gillespie County
Test Well: Well No. 10
Test Date: 10-8-21

AQUIFER DATA

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Well No. 10	0	0

Observation Wells

Well Name	X (ft)	Y (ft)
Well No. 9	498	0

SOLUTION

Aquifer Model: Confined
Solution Method: Cooper-Jacob
T = 276.7 ft^2/day
S = 1.353E-5

Aquifer Test

Well No. 10

Loma Vista (Phase III) Well No. 10 - Aquifer Test (October 8, 2021)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 10 Temperature (F)	PW Well No. 10 Water Level (ft bgs)	PW Well No. 10 Water Level (ft MSL)	PW Well No. 10 Drawdown (ft)	PW Well No. 10 Pump Rate (gpm)	PW Well No. 10 Specific Capacity (gpm/ft)	Comments	OW Well No. 9 Water Level (ft MSL)	OW Well No. 9 Drawdown (ft)
10/8/21 11:43 AM	0		76.61	397.03	1,648.98	0.00			Pump Start	1,641.97	0.00
10/8/21 11:44 AM	1		76.29	404.47	1,641.53	7.45	22.5	3.02	Meter: 101,927.5 gallons	1,641.91	0.06
10/8/21 11:45 AM	2		76.01	407.91	1,638.09	10.89				1,641.93	0.04
10/8/21 11:46 AM	3		75.80	409.88	1,636.12	12.85				1,642.01	-0.04
10/8/21 11:47 AM	4		75.63	411.33	1,634.67	14.31				1,641.90	0.07
10/8/21 11:48 AM	5		75.49	412.41	1,633.59	15.38				1,641.89	0.08
10/8/21 11:49 AM	6		75.38	413.16	1,632.84	16.14				1,641.83	0.14
10/8/21 11:50 AM	7		75.29	413.73	1,632.27	16.70				1,641.72	0.25
10/8/21 11:51 AM	8		75.22	414.22	1,631.78	17.19				1,641.73	0.24
10/8/21 11:52 AM	9		75.15	414.64	1,631.36	17.61				1,641.57	0.40
10/8/21 11:53 AM	10		75.09	414.91	1,631.09	17.89				1,641.53	0.44
10/8/21 11:54 AM	11		75.04	415.15	1,630.85	18.13				1,641.46	0.52
10/8/21 11:55 AM	12		74.99	415.47	1,630.53	18.45				1,641.43	0.54
10/8/21 11:56 AM	13		74.95	415.70	1,630.30	18.67				1,641.33	0.64
10/8/21 11:57 AM	14		74.91	415.88	1,630.12	18.86				1,641.27	0.70
10/8/21 11:58 AM	15		74.88	416.08	1,629.92	19.05				1,641.17	0.80
10/8/21 12:03 PM	20		74.80	416.96	1,629.04	19.93				1,640.67	1.31
10/8/21 12:08 PM	25		74.71	417.69	1,628.31	20.66				1,640.39	1.58
10/8/21 12:13 PM	30		74.73	418.29	1,627.71	21.27				1,640.08	1.89
10/8/21 12:28 PM	45		74.86	419.99	1,626.02	22.96				1,639.07	2.91
10/8/21 12:43 PM	60		74.90	420.96	1,625.04	23.94				1,638.12	3.86
10/8/21 12:58 PM	75		74.98	421.81	1,624.20	24.78				1,637.42	4.55
10/8/21 1:13 PM	90		75.07	422.30	1,623.70	25.27				1,636.65	5.32
10/8/21 1:28 PM	105		75.16	422.76	1,623.25	25.73				1,636.17	5.80
10/8/21 1:43 PM	120		75.25	423.06	1,622.94	26.04	22.5	0.86	pH: 7.5 / EC: 0.79	1,635.62	6.35
10/8/21 2:13 PM	150		75.33	423.68	1,622.32	26.66				1,634.99	6.98
10/8/21 2:43 PM	180		75.36	424.06	1,621.94	27.03				1,634.47	7.50
10/8/21 3:13 PM	210		75.42	424.42	1,621.58	27.39				1,634.24	7.73
10/8/21 3:43 PM	240		75.48	424.74	1,621.26	27.71				1,633.99	7.99
10/8/21 4:43 PM	300		75.47	425.11	1,620.89	28.08				1,633.46	8.51
10/8/21 5:43 PM	360		75.46	425.37	1,620.63	28.34				1,633.35	8.63
10/8/21 6:43 PM	420		75.48	425.57	1,620.43	28.55				1,633.04	8.93
10/8/21 7:43 PM	480		75.49	425.80	1,620.20	28.77				1,632.78	9.19
10/8/21 8:43 PM	540		75.49	425.99	1,620.01	28.96				1,632.69	9.29
10/8/21 9:43 PM	600		75.47	426.16	1,619.84	29.14				1,632.41	9.56

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 2 HP
MSL = Mean Sea Level Pump Setting = 480 ft EC=Electrical conductivity (mS/cm)

Loma Vista (Phase III) Well No. 10 - Aquifer Test (October 8, 2021)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 10 Temperature (F)	PW Well No. 10 Water Level (ft bgs)	PW Well No. 10 Water Level (ft MSL)	PW Well No. 10 Drawdown (ft)	PW Well No. 10 Pump Rate (gpm)	PW Well No. 10 Specific Capacity (gpm/ft)	Comments	OW Well No. 9 Water Level (ft MSL)	OW Well No. 9 Drawdown (ft)
10/8/21 10:43 PM	660		75.49	426.33	1,619.67	29.30				1,632.31	9.66
10/8/21 11:43 PM	720		75.48	426.49	1,619.51	29.46				1,632.19	9.78
10/9/21 12:43 AM	780		75.46	426.59	1,619.41	29.57				1,632.06	9.92
10/9/21 1:43 AM	840		75.47	426.61	1,619.39	29.59				1,631.85	10.13
10/9/21 2:43 AM	900		75.48	426.83	1,619.17	29.80				1,631.85	10.12
10/9/21 3:43 AM	960		75.49	426.93	1,619.07	29.90				1,631.72	10.26
10/9/21 4:43 AM	1,020		75.48	426.99	1,619.01	29.97				1,631.60	10.38
10/9/21 5:43 AM	1,080		75.49	427.02	1,618.99	29.99				1,631.59	10.38
10/9/21 6:43 AM	1,140		75.48	427.09	1,618.91	30.06				1,631.51	10.47
10/9/21 7:43 AM	1,200		75.46	427.12	1,618.88	30.10				1,631.56	10.41
10/9/21 8:43 AM	1,260		75.50	427.12	1,618.88	30.10				1,631.44	10.54
10/9/21 9:43 AM	1,320		75.49	427.22	1,618.78	30.20				1,631.39	10.58
10/9/21 10:43 AM	1,380		75.51	427.29	1,618.71	30.26				1,631.30	10.68
10/9/21 11:43 AM	1,440		75.48	427.31	1,618.70	30.28				1,631.39	10.58
10/9/21 12:00 PM	1,457	0	75.49	427.33	1,618.67	30.31	22.0	0.73	Pump Stop	1,631.31	10.66
10/9/21 12:01 PM	1,458	1	75.48	422.83	1,623.17	25.81			Meter: 134,171.8 gallons	1,631.26	10.71
10/9/21 12:02 PM	1,459	2	75.51	418.41	1,627.59	21.39			Avg. Pump Rate: 22.1 gpm	1,631.30	10.67
10/9/21 12:03 PM	1,460	3	75.54	415.89	1,630.11	18.87				1,631.29	10.68
10/9/21 12:04 PM	1,461	4	75.57	414.26	1,631.74	17.23				1,631.23	10.74
10/9/21 12:05 PM	1,462	5	75.60	413.17	1,632.83	16.14				1,631.33	10.64
10/9/21 12:06 PM	1,463	6	75.62	412.24	1,633.76	15.21				1,631.24	10.73
10/9/21 12:07 PM	1,464	7	75.65	411.62	1,634.38	14.59				1,631.34	10.64
10/9/21 12:08 PM	1,465	8	75.70	411.04	1,634.96	14.02				1,631.28	10.69
10/9/21 12:09 PM	1,466	9	75.74	410.61	1,635.39	13.59				1,631.33	10.64
10/9/21 12:10 PM	1,467	10	75.78	410.23	1,635.77	13.20				1,631.24	10.73
10/9/21 12:11 PM	1,468	11	75.84	409.92	1,636.08	12.90				1,631.30	10.67
10/9/21 12:12 PM	1,469	12	75.88	409.62	1,636.38	12.59				1,631.32	10.65
10/9/21 12:13 PM	1,470	13	75.94	409.31	1,636.69	12.28				1,631.27	10.70
10/9/21 12:14 PM	1,471	14	75.98	409.05	1,636.95	12.03				1,631.44	10.53
10/9/21 12:15 PM	1,472	15	76.02	408.87	1,637.13	11.84				1,631.42	10.56
10/9/21 12:20 PM	1,477	20	76.25	407.86	1,638.15	10.83				1,631.52	10.46
10/9/21 12:25 PM	1,482	25	76.42	407.13	1,638.87	10.11				1,631.62	10.35
10/9/21 12:30 PM	1,487	30	76.51	406.52	1,639.49	9.49				1,631.94	10.04
10/9/21 12:45 PM	1,502	45	76.37	405.12	1,640.88	8.09				1,632.49	9.49
10/9/21 1:00 PM	1,517	60	76.10	404.13	1,641.87	7.10				1,633.20	8.77

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 2 HP
MSL = Mean Sea Level Pump Setting = 480 ft EC=Electrical conductivity (mS/cm)

Loma Vista (Phase III) Well No. 10 - Aquifer Test (October 8, 2021)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 10 Temperature (F)	PW Well No. 10 Water Level (ft bgs)	PW Well No. 10 Water Level (ft MSL)	PW Well No. 10 Drawdown (ft)	PW Well No. 10 Pump Rate (gpm)	PW Well No. 10 Specific Capacity (gpm/ft)	Comments	OW Well No. 9 Water Level (ft MSL)	OW Well No. 9 Drawdown (ft)
10/9/21 1:15 PM	1,532	75	75.84	403.41	1,642.60	6.38				1,634.77	7.20
10/9/21 1:30 PM	1,547	90	75.62	402.83	1,643.17	5.80				1,635.51	6.46
10/9/21 1:45 PM	1,562	105	75.43	402.35	1,643.65	5.32				1,636.06	5.91
10/9/21 2:00 PM	1,577	120	75.27	401.98	1,644.02	4.95				1,636.67	5.30
10/9/21 2:30 PM	1,607	150	75.04	401.40	1,644.60	4.37				1,637.85	4.13
10/9/21 3:00 PM	1,637	180	74.88	400.99	1,645.01	3.97				1,638.39	3.58
10/9/21 3:30 PM	1,667	210	74.76	400.62	1,645.38	3.59				1,638.60	3.37
10/9/21 4:00 PM	1,697	240	74.67	400.37	1,645.63	3.34				1,638.96	3.02
10/9/21 5:00 PM	1,757	300	74.56	399.94	1,646.06	2.92				1,639.25	2.72
10/9/21 6:00 PM	1,817	360	74.50	399.62	1,646.38	2.59				1,639.60	2.37
10/9/21 7:00 PM	1,877	420	74.47	399.43	1,646.57	2.40				1,639.77	2.20
10/9/21 8:00 PM	1,937	480	74.43	399.18	1,646.82	2.16				1,640.11	1.86
10/9/21 9:00 PM	1,997	540	74.41	399.03	1,646.97	2.01				1,640.27	1.70
10/9/21 10:00 PM	2,057	600	74.40	398.87	1,647.13	1.84				1,640.40	1.58
10/9/21 11:00 PM	2,117	660	74.39	398.76	1,647.24	1.74				1,640.52	1.46
10/10/21 12:00 AM	2,177	720	74.38	398.70	1,647.30	1.67				1,640.53	1.45
10/10/21 1:00 AM	2,237	780	74.38	398.57	1,647.43	1.55				1,640.60	1.37
10/10/21 2:00 AM	2,297	840	74.38	398.54	1,647.46	1.51				1,640.69	1.28
10/10/21 3:00 AM	2,357	900	74.37	398.47	1,647.53	1.45				1,640.73	1.24
10/10/21 4:00 AM	2,417	960	74.37	398.40	1,647.60	1.38				1,640.86	1.11
10/10/21 5:00 AM	2,477	1020	74.37	398.38	1,647.62	1.36				1,640.96	1.02
10/10/21 6:00 AM	2,537	1080	74.36	398.32	1,647.68	1.30				1,640.96	1.01
10/10/21 7:00 AM	2,597	1140	74.36	398.22	1,647.78	1.19				1,640.99	0.98
10/10/21 8:00 AM	2,657	1200	74.35	398.14	1,647.86	1.12				1,641.06	0.91
10/10/21 9:00 AM	2,717	1260	74.35	398.08	1,647.92	1.06				1,641.18	0.79
10/10/21 10:00 AM	2,777	1320	74.36	398.07	1,647.93	1.04				1,641.24	0.73
10/10/21 11:00 AM	2,837	1380	74.35	398.03	1,647.97	1.00				1,641.33	0.64
10/10/21 12:00 PM	2,897	1440	74.35	398.00	1,648.00	0.98				1,641.33	0.64
10/10/21 1:00 PM	2,957	1500	74.34	397.97	1,648.04	0.94				1,641.23	0.74
10/10/21 2:00 PM	3,017	1560	74.35	397.90	1,648.10	0.87				1,641.28	0.69
10/10/21 3:00 PM	3,077	1620	74.35	397.95	1,648.05	0.93				1,641.33	0.64
10/10/21 4:00 PM	3,137	1680	74.35	397.94	1,648.06	0.92				1,641.35	0.63
10/10/21 5:00 PM	3,197	1740	74.34	397.89	1,648.11	0.87				1,641.35	0.63

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 2 HP
MSL = Mean Sea Level Pump Setting = 480 ft EC=Electrical conductivity (mS/cm)

Loma Vista (Phase III) Well No. 10 - Aquifer Test (October 8, 2021)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 10 Temperature (F)	PW Well No. 10 Water Level (ft bgs)	PW Well No. 10 Water Level (ft MSL)	PW Well No. 10 Drawdown (ft)	PW Well No. 10 Pump Rate (gpm)	PW Well No. 10 Specific Capacity (gpm/ft)	Comments	OW Well No. 9 Water Level (ft MSL)	OW Well No. 9 Drawdown (ft)
10/10/21 6:00 PM	3,257	1800	74.34	397.85	1,648.15	0.82				1,641.44	0.54
10/10/21 7:00 PM	3,317	1860	74.34	397.83	1,648.17	0.80				1,641.48	0.49
10/10/21 8:00 PM	3,377	1920	74.33	397.76	1,648.24	0.74				1,641.52	0.45
10/10/21 9:00 PM	3,437	1980	74.34	397.73	1,648.27	0.70				1,641.56	0.42
10/10/21 10:00 PM	3,497	2040	74.34	397.68	1,648.32	0.66				1,641.61	0.36
10/10/21 11:00 PM	3,557	2100	74.34	397.65	1,648.35	0.62				1,641.64	0.33
10/11/21 12:00 AM	3,617	2160	74.34	397.63	1,648.38	0.60				1,641.70	0.27
10/11/21 1:00 AM	3,677	2220	74.34	397.57	1,648.43	0.55				1,641.71	0.27
10/11/21 2:00 AM	3,737	2280	74.34	397.62	1,648.39	0.59				1,641.73	0.24
10/11/21 3:00 AM	3,797	2340	74.33	397.59	1,648.41	0.57				1,641.72	0.25
10/11/21 4:00 AM	3,857	2400	74.34	397.66	1,648.34	0.63				1,641.81	0.16
10/11/21 5:00 AM	3,917	2460	74.33	397.62	1,648.38	0.60				1,641.84	0.13
10/11/21 6:00 AM	3,977	2520	74.33	397.66	1,648.34	0.64				1,641.77	0.21
10/11/21 7:00 AM	4,037	2580	74.33	397.58	1,648.42	0.55				1,641.81	0.16
10/11/21 8:00 AM	4,097	2640	74.33	397.55	1,648.46	0.52				1,641.85	0.12
10/11/21 9:00 AM	4,157	2700	74.33	397.54	1,648.46	0.51				1,641.86	0.11
10/11/21 10:00 AM	4,217	2760	74.34	397.49	1,648.51	0.46				1,641.91	0.07
10/11/21 11:00 AM	4,277	2820	74.33	397.50	1,648.50	0.47				1,641.98	-0.01
10/11/21 12:00 PM	4,337	2880	74.32	397.46	1,648.54	0.43				1,641.95	0.02
10/11/21 1:00 PM	4,397	2940	74.33	397.47	1,648.53	0.44				1,642.07	-0.09
10/11/21 2:00 PM	4,457	3000	74.33	397.52	1,648.48	0.49				1,641.99	-0.01
10/11/21 3:00 PM	4,517	3060	74.33	397.52	1,648.49	0.49				1,642.04	-0.07
10/11/21 4:00 PM	4,577	3120	74.33	397.45	1,648.55	0.43				1,642.02	-0.04
10/11/21 5:00 PM	4,637	3180	74.33	397.44	1,648.56	0.42				1,641.89	0.09
10/11/21 6:00 PM	4,697	3240	74.33	397.45	1,648.55	0.43				1,642.09	-0.12
10/11/21 7:00 PM	4,757	3300	74.33	397.51	1,648.49	0.49				1,641.98	-0.01
10/11/21 8:00 PM	4,817	3360	74.32	397.47	1,648.53	0.44				1,642.04	-0.07
10/11/21 9:00 PM	4,877	3420	74.32	397.43	1,648.57	0.40				1,642.06	-0.09
10/11/21 10:00 PM	4,937	3480	74.32	397.38	1,648.62	0.36				1,642.10	-0.12
10/11/21 11:00 PM	4,997	3540	74.32	397.46	1,648.54	0.43				1,642.11	-0.14

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 2 HP
MSL = Mean Sea Level Pump Setting = 480 ft EC=Electrical conductivity (mS/cm)

Loma Vista (Phase III) Well No. 10 - Aquifer Test (October 8, 2021)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 10 Temperature (F)	PW Well No. 10 Water Level (ft bgs)	PW Well No. 10 Water Level (ft MSL)	PW Well No. 10 Drawdown (ft)	PW Well No. 10 Pump Rate (gpm)	PW Well No. 10 Specific Capacity (gpm/ft)	Comments	OW Well No. 9 Water Level (ft MSL)	OW Well No. 9 Drawdown (ft)
10/12/21 12:00 AM	5,057	3600	74.32	397.48	1,648.52	0.46				1,642.11	-0.13
10/12/21 1:00 AM	5,117	3660	74.32	397.46	1,648.54	0.43				1,642.11	-0.13
10/12/21 2:00 AM	5,177	3720	74.32	397.46	1,648.54	0.44				1,642.10	-0.12
10/12/21 3:00 AM	5,237	3780	74.32	397.42	1,648.58	0.39				1,642.15	-0.18
10/12/21 4:00 AM	5,297	3840	74.32	397.49	1,648.51	0.46				1,642.03	-0.05
10/12/21 5:00 AM	5,357	3900	74.32	397.48	1,648.52	0.46				1,642.10	-0.13
10/12/21 6:00 AM	5,417	3960	74.32	397.50	1,648.50	0.47				1,642.08	-0.11
10/12/21 7:00 AM	5,477	4020	74.32	397.41	1,648.59	0.38				1,642.14	-0.17
10/12/21 8:00 AM	5,537	4080	74.32	397.43	1,648.57	0.40				1,642.07	-0.10
10/12/21 9:00 AM	5,597	4140	74.31	397.40	1,648.60	0.37				1,642.11	-0.14
10/12/21 10:00 AM	5,657	4200	74.31	397.39	1,648.62	0.36				1,642.32	-0.35
10/12/21 11:00 AM	5,717	4260	74.32	397.39	1,648.61	0.37				1,642.09	-0.11
10/12/21 12:00 PM	5,777	4320	74.32	397.40	1,648.60	0.38				1,642.28	-0.31
10/12/21 1:00 PM	5,837	4380	74.32	397.36	1,648.64	0.34				1,642.22	-0.25
10/12/21 2:00 PM	5,897	4440	74.31	397.36	1,648.64	0.33				1,642.16	-0.19
10/12/21 3:00 PM	5,957	4500	74.32	397.35	1,648.65	0.32				1,642.19	-0.22
10/12/21 4:00 PM	6,017	4560	74.31	397.36	1,648.64	0.34				1,642.21	-0.23
10/12/21 5:00 PM	6,077	4620	74.32	397.37	1,648.63	0.35				1,642.10	-0.13
10/12/21 6:00 PM	6,137	4680	74.31	397.36	1,648.64	0.33				1,642.10	-0.13
10/12/21 7:00 PM	6,197	4740	74.32	397.33	1,648.67	0.31				1,642.20	-0.23
10/12/21 8:00 PM	6,257	4800	74.32	397.38	1,648.62	0.35				1,642.25	-0.28
10/12/21 9:00 PM	6,317	4860	74.31	397.35	1,648.65	0.33				1,642.18	-0.21
10/12/21 10:00 PM	6,377	4920	74.32	397.33	1,648.67	0.31				1,642.15	-0.17
10/12/21 11:00 PM	6,437	4980	74.31	397.31	1,648.69	0.28				1,642.26	-0.29
10/13/21 12:00 AM	6,497	5040	74.32	397.29	1,648.71	0.27				1,642.20	-0.22
10/13/21 1:00 AM	6,557	5100	74.31	397.31	1,648.69	0.28				1,642.26	-0.29
10/13/21 2:00 AM	6,617	5160	74.31	397.35	1,648.65	0.32				1,642.19	-0.22
10/13/21 3:00 AM	6,677	5220	74.31	397.29	1,648.71	0.27				1,642.26	-0.29
10/13/21 4:00 AM	6,737	5280	74.32	397.30	1,648.70	0.27				1,642.23	-0.26
10/13/21 5:00 AM	6,797	5340	74.31	397.35	1,648.65	0.32				1,642.24	-0.27

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 2 HP
MSL = Mean Sea Level Pump Setting = 480 ft EC=Electrical conductivity (mS/cm)

Loma Vista (Phase III) Well No. 10 - Aquifer Test (October 8, 2021)

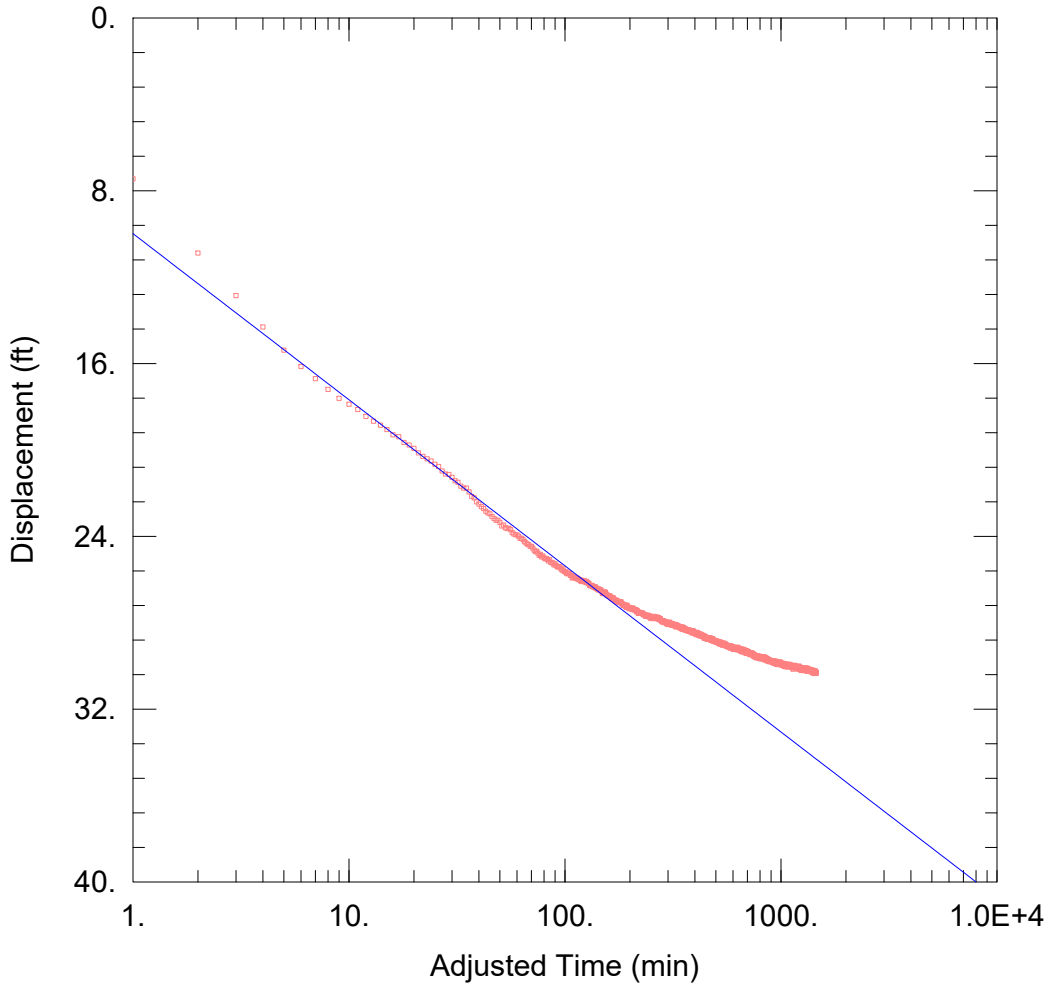
Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 10 Temperature (F)	PW Well No. 10 Water Level (ft bgs)	PW Well No. 10 Water Level (ft MSL)	PW Well No. 10 Drawdown (ft)	PW Well No. 10 Pump Rate (gpm)	PW Well No. 10 Specific Capacity (gpm/ft)	Comments	OW Well No. 9 Water Level (ft MSL)	OW Well No. 9 Drawdown (ft)
10/13/21 6:00 AM	6,857	5400	74.31	397.32	1,648.68	0.30				1,642.24	-0.26
10/13/21 7:00 AM	6,917	5460	74.31	397.38	1,648.62	0.35				1,642.20	-0.23
10/13/21 8:00 AM	6,977	5520	74.32	397.34	1,648.66	0.31				1,642.24	-0.26
10/13/21 9:00 AM	7,037	5580	74.31	397.35	1,648.65	0.32				1,642.26	-0.29
10/13/21 10:00 AM	7,097	5640	74.31	397.28	1,648.72	0.25				1,642.32	-0.35
10/13/21 11:00 AM	7,157	5700	74.31	397.32	1,648.68	0.30				1,642.26	-0.29
10/13/21 12:00 PM	7,217	5760	74.31	397.34	1,648.66	0.32				1,642.31	-0.34
10/13/21 1:00 PM	7,277	5820	74.31	397.34	1,648.66	0.32				1,642.37	-0.39
10/13/21 2:00 PM	7,337	5880	74.31	397.29	1,648.71	0.27				1,642.34	-0.37
10/13/21 3:00 PM	7,397	5940	74.31	397.30	1,648.70	0.27				1,642.32	-0.35
10/13/21 4:00 PM	7,457	6000	74.31	397.31	1,648.69	0.28				1,642.34	-0.37
10/13/21 5:00 PM	7,517	6060	74.30	397.30	1,648.70	0.28				1,642.35	-0.38
10/13/21 6:00 PM	7,577	6120	74.31	397.34	1,648.66	0.31				1,642.27	-0.30
10/13/21 7:00 PM	7,637	6180	74.30	397.30	1,648.71	0.27				1,642.33	-0.35
10/13/21 8:00 PM	7,697	6240	74.31	397.32	1,648.68	0.29				1,642.38	-0.41
10/13/21 9:00 PM	7,757	6300	74.30	397.27	1,648.73	0.24				1,642.33	-0.35
10/13/21 10:00 PM	7,817	6360	74.31	397.28	1,648.72	0.26				1,642.29	-0.32
10/13/21 11:00 PM	7,877	6420	74.30	397.28	1,648.72	0.25				1,642.40	-0.42
10/14/21 12:00 AM	7,937	6480	74.31	397.28	1,648.72	0.26				1,642.42	-0.45
10/14/21 1:00 AM	7,997	6540	74.31	397.27	1,648.73	0.24				1,642.40	-0.42
10/14/21 2:00 AM	8,057	6600	74.30	397.28	1,648.72	0.26				1,642.42	-0.45
10/14/21 3:00 AM	8,117	6660	74.31	397.24	1,648.76	0.21				1,642.37	-0.40
10/14/21 4:00 AM	8,177	6720	74.31	397.26	1,648.74	0.24				1,642.42	-0.44
10/14/21 5:00 AM	8,237	6780	74.31	397.24	1,648.77	0.21				1,642.35	-0.38
10/14/21 6:00 AM	8,297	6840	74.31	397.26	1,648.74	0.24				1,642.47	-0.50
10/14/21 7:00 AM	8,357	6900	74.30	397.29	1,648.71	0.26				1,642.42	-0.45
10/14/21 8:00 AM	8,417	6960	74.31	397.30	1,648.70	0.27				1,642.38	-0.41
10/14/21 9:00 AM	8,477	7020	74.31	397.26	1,648.75	0.23				1,642.42	-0.45
10/14/21 10:00 AM	8,537	7080	74.30	397.30	1,648.70	0.27				1,642.51	-0.54
10/14/21 11:00 AM	8,597	7140	74.30	397.27	1,648.73	0.25				1,642.47	-0.50

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 2 HP
MSL = Mean Sea Level Pump Setting = 480 ft EC=Electrical conductivity (mS/cm)

Loma Vista (Phase III) Well No. 10 - Aquifer Test (October 8, 2021)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 10 Temperature (F)	PW Well No. 10 Water Level (ft bgs)	PW Well No. 10 Water Level (ft MSL)	PW Well No. 10 Drawdown (ft)	PW Well No. 10 Pump Rate (gpm)	PW Well No. 10 Specific Capacity (gpm/ft)	Comments	OW Well No. 9 Water Level (ft MSL)	OW Well No. 9 Drawdown (ft)
10/14/21 12:00 PM	8,657	7200	74.30	397.27	1,648.73	0.24				1,642.51	-0.54
10/14/21 1:00 PM	8,717	7260	74.30	397.26	1,648.74	0.23				1,642.42	-0.45
10/14/21 2:00 PM	8,777	7320	74.30	397.26	1,648.74	0.24				1,642.36	-0.39
10/14/21 3:00 PM	8,837	7380	74.30	397.25	1,648.75	0.23				1,642.47	-0.49
10/14/21 4:00 PM	8,897	7440	74.30	397.25	1,648.75	0.22				1,642.40	-0.43
10/14/21 5:00 PM	8,957	7500	74.30	397.26	1,648.74	0.24				1,642.48	-0.51
10/14/21 6:00 PM	9,017	7560	74.30	397.26	1,648.74	0.24				1,642.52	-0.55
10/14/21 7:00 PM	9,077	7620	74.30	397.27	1,648.73	0.25				1,642.55	-0.58
10/14/21 8:00 PM	9,137	7680	74.30	397.30	1,648.70	0.28				1,642.51	-0.54
10/14/21 9:00 PM	9,197	7740	74.30	397.29	1,648.71	0.27				1,642.55	-0.58
10/14/21 10:00 PM	9,257	7800	74.30	397.31	1,648.69	0.28				1,642.57	-0.60
10/14/21 11:00 PM	9,317	7860	74.30	397.32	1,648.68	0.29				1,642.53	-0.56
10/15/21 12:00 AM	9,377	7920	74.30	397.31	1,648.69	0.29				1,642.59	-0.62
10/15/21 1:00 AM	9,437	7980	74.30	397.30	1,648.71	0.27				1,642.55	-0.57
10/15/21 2:00 AM	9,497	8040	74.30	397.27	1,648.73	0.25				1,642.56	-0.59
10/15/21 3:00 AM	9,557	8100	74.30	397.27	1,648.73	0.24				1,642.62	-0.64
10/15/21 4:00 AM	9,617	8160	74.30	397.29	1,648.71	0.26				1,642.53	-0.56
10/15/21 5:00 AM	9,677	8220	74.29	397.22	1,648.78	0.20				1,642.58	-0.61
10/15/21 6:00 AM	9,737	8280	74.30	397.24	1,648.76	0.21				1,642.60	-0.63
10/15/21 7:00 AM	9,797	8340	74.30	397.15	1,648.85	0.13				1,642.61	-0.64
10/15/21 8:00 AM	9,857	8400	74.30	397.26	1,648.74	0.24				1,642.63	-0.65
10/15/21 9:00 AM	9,917	8460	74.30	397.24	1,648.76	0.21				1,642.65	-0.67
10/15/21 10:00 AM	9,977	8520	74.30	397.27	1,648.74	0.24				1,642.58	-0.61

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 2 HP
MSL = Mean Sea Level Pump Setting = 480 ft EC=Electrical conductivity (mS/cm)



WELL TEST ANALYSIS

Data Set: \...\PW 10.aqt
Date: 11/03/21 Time: 09:34:31

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Location: Gillespie County
Test Well: Well No. 10
Test Date: 10-8-21

AQUIFER DATA

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Well No. 10	0	0

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 101.4 ft^2/day

Aquifer Test

Well No. 11

Loma Vista (Phase III) Well No. 11 - Aquifer Test (October 4, 2021)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 11 Temperature (F)	PW Well No. 11 Water Level (ft bgs)	PW Well No. 11 Water Level (ft MSL)	PW Well No. 11 Drawdown (ft)	PW Well No. 11 Pump Rate (gpm)	PW Well No. 11 Specific Capacity (gpm/ft)	Comments	OW Well No. 12 Water Level (ft MSL)	OW Well No. 12 Drawdown (ft)
10/4/21 11:17 AM	0		74.44	413.70	1,653.30	0.00			Pump Start	1,657.82	0.00
10/4/21 11:18 AM	1		74.09	425.23	1,641.77	11.53	23.0	1.99	Meter: 69,911.3 gallons	1,657.87	-0.05
10/4/21 11:19 AM	2		73.81	434.02	1,632.98	20.31				1,657.89	-0.07
10/4/21 11:20 AM	3		73.62	435.21	1,631.79	21.51				1,657.98	-0.16
10/4/21 11:21 AM	4		73.47	441.82	1,625.18	28.11				1,657.88	-0.06
10/4/21 11:22 AM	5		73.36	444.56	1,622.44	30.86				1,657.88	-0.06
10/4/21 11:23 AM	6		73.30	443.20	1,623.80	29.49				1,657.90	-0.08
10/4/21 11:24 AM	7		73.24	446.91	1,620.09	33.21				1,657.85	-0.02
10/4/21 11:25 AM	8		73.20	445.46	1,621.54	31.76				1,657.90	-0.08
10/4/21 11:26 AM	9		73.18	443.43	1,623.57	29.73				1,657.93	-0.11
10/4/21 11:27 AM	10		73.16	444.46	1,622.54	30.76				1,657.90	-0.08
10/4/21 11:28 AM	11		73.15	444.35	1,622.65	30.64				1,657.82	0.00
10/4/21 11:29 AM	12		73.14	444.97	1,622.03	31.27				1,657.82	0.01
10/4/21 11:30 AM	13		73.14	446.66	1,620.34	32.96				1,657.84	-0.02
10/4/21 11:31 AM	14		73.15	444.24	1,622.76	30.53				1,657.93	-0.11
10/4/21 11:32 AM	15		73.15	444.89	1,622.11	31.19				1,657.97	-0.15
10/4/21 11:37 AM	20		73.19	442.44	1,624.56	28.73				1,657.82	0.00
10/4/21 11:42 AM	25		73.22	443.13	1,623.87	29.43				1,657.85	-0.02
10/4/21 11:47 AM	30		73.25	443.75	1,623.25	30.05				1,657.83	-0.01
10/4/21 12:02 PM	45		73.29	444.30	1,622.70	30.59				1,657.77	0.06
10/4/21 12:17 PM	60		73.42	443.49	1,623.51	29.79				1,657.64	0.19
10/4/21 12:32 PM	75		73.49	444.27	1,622.73	30.57				1,657.50	0.32
10/4/21 12:47 PM	90		73.51	444.40	1,622.60	30.70				1,657.49	0.33
10/4/21 1:02 PM	105		73.56	444.62	1,622.38	30.92				1,657.38	0.44
10/4/21 1:17 PM	120		73.60	445.46	1,621.54	31.76	23.0	0.72	pH: 7.4 / EC: 0.8	1,657.26	0.56
10/4/21 1:47 PM	150		73.82	444.99	1,622.01	31.29				1,657.18	0.64
10/4/21 2:17 PM	180		73.82	445.49	1,621.51	31.79				1,657.01	0.81
10/4/21 2:47 PM	210		73.85	445.81	1,621.19	32.11				1,656.88	0.94
10/4/21 3:17 PM	240		73.90	446.92	1,620.08	33.22				1,656.84	0.99
10/4/21 4:17 PM	300		74.02	445.63	1,621.37	31.93				1,656.59	1.23
10/4/21 5:17 PM	360		73.91	448.36	1,618.64	34.65				1,656.46	1.36
10/4/21 6:17 PM	420		73.90	451.95	1,615.05	38.24				1,656.48	1.34
10/4/21 7:17 PM	480		73.84	462.80	1,604.20	49.10				1,656.64	1.18
10/4/21 8:17 PM	540		73.98	468.62	1,598.38	54.91				1,656.80	1.03
10/4/21 9:17 PM	600		74.07	471.48	1,595.52	57.78				1,656.99	0.84

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 2 HP
MSL = Mean Sea Level Pump Setting = 483 ft EC=Electrical conductivity (mS/cm)

Loma Vista (Phase III) Well No. 11 - Aquifer Test (October 4, 2021)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 11 Temperature (F)	PW Well No. 11 Water Level (ft bgs)	PW Well No. 11 Water Level (ft MSL)	PW Well No. 11 Drawdown (ft)	PW Well No. 11 Pump Rate (gpm)	PW Well No. 11 Specific Capacity (gpm/ft)	Comments	OW Well No. 12 Water Level (ft MSL)	OW Well No. 12 Drawdown (ft)
10/4/21 10:17 PM	660		74.15	472.37	1,594.63	58.67				1,657.02	0.80
10/4/21 11:17 PM	720		74.16	474.04	1,592.96	60.34				1,657.16	0.66
10/5/21 12:17 AM	780		74.22	473.61	1,593.39	59.90				1,657.16	0.67
10/5/21 1:17 AM	840		74.26	475.06	1,591.94	61.36				1,657.19	0.64
10/5/21 2:17 AM	900		74.28	475.33	1,591.67	61.63				1,657.15	0.67
10/5/21 3:17 AM	960		74.33	475.80	1,591.21	62.09				1,657.15	0.67
10/5/21 4:17 AM	1,020		74.33	475.66	1,591.34	61.96				1,657.22	0.61
10/5/21 5:17 AM	1,080		74.43	478.20	1,588.80	64.49				1,657.16	0.66
10/5/21 6:17 AM	1,140		74.38	478.38	1,588.62	64.68				1,657.22	0.60
10/5/21 7:17 AM	1,200		74.48	477.78	1,589.22	64.07				1,657.25	0.57
10/5/21 8:17 AM	1,260		74.36	478.38	1,588.63	64.67				1,657.28	0.54
10/5/21 9:17 AM	1,320		74.42	478.31	1,588.70	64.60				1,657.24	0.58
10/5/21 10:17 AM	1,380		74.38	478.31	1,588.69	64.61				1,657.20	0.62
10/5/21 11:17 AM	1,440		74.43	478.30	1,588.70	64.60				1,657.11	0.72
10/5/21 11:27 AM	1,450	0	74.44	478.32	1,588.69	64.61	22.0	0.34	Pump Stop	1,657.21	0.61
10/5/21 11:28 AM	1,451	1	74.44	465.74	1,601.26	52.03			Meter: 101,927.55 gallons	1,657.06	0.76
10/5/21 11:29 AM	1,452	2	74.42	432.85	1,634.15	19.14			Avg. Pump Rate: 22 gpm	1,657.14	0.68
10/5/21 11:30 AM	1,453	3	74.51	421.88	1,645.12	8.18				1,657.16	0.67
10/5/21 11:31 AM	1,454	4	74.57	423.00	1,644.00	9.30				1,657.12	0.70
10/5/21 11:32 AM	1,455	5	74.61	422.88	1,644.12	9.18				1,657.11	0.72
10/5/21 11:33 AM	1,456	6	74.63	422.47	1,644.53	8.77				1,657.19	0.63
10/5/21 11:34 AM	1,457	7	74.65	422.21	1,644.79	8.50				1,657.13	0.69
10/5/21 11:35 AM	1,458	8	74.66	421.91	1,645.09	8.21				1,657.15	0.67
10/5/21 11:36 AM	1,459	9	74.66	421.70	1,645.30	8.00				1,657.08	0.74
10/5/21 11:37 AM	1,460	10	74.66	421.83	1,645.17	8.13				1,657.19	0.63
10/5/21 11:38 AM	1,461	11	74.66	421.64	1,645.36	7.94				1,657.07	0.75
10/5/21 11:39 AM	1,462	12	74.67	421.38	1,645.62	7.67				1,657.16	0.66
10/5/21 11:40 AM	1,463	13	74.66	421.21	1,645.79	7.51				1,657.13	0.69
10/5/21 11:41 AM	1,464	14	74.65	421.03	1,645.97	7.32				1,657.18	0.64
10/5/21 11:42 AM	1,465	15	74.64	420.84	1,646.16	7.14				1,657.15	0.67
10/5/21 11:47 AM	1,470	20	74.61	420.30	1,646.70	6.60				1,657.15	0.67
10/5/21 11:52 AM	1,475	25	74.57	419.87	1,647.13	6.16				1,657.18	0.64
10/5/21 11:57 AM	1,480	30	74.54	419.54	1,647.46	5.84				1,657.14	0.69
10/5/21 12:12 PM	1,495	45	74.44	418.87	1,648.13	5.16				1,657.09	0.74
10/5/21 12:27 PM	1,510	60	74.35	418.40	1,648.60	4.70				1,657.11	0.71

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 2 HP
MSL = Mean Sea Level Pump Setting = 483 ft EC=Electrical conductivity (mS/cm)

Loma Vista (Phase III) Well No. 11 - Aquifer Test (October 4, 2021)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 11 Temperature (F)	PW Well No. 11 Water Level (ft bgs)	PW Well No. 11 Water Level (ft MSL)	PW Well No. 11 Drawdown (ft)	PW Well No. 11 Pump Rate (gpm)	PW Well No. 11 Specific Capacity (gpm/ft)	Comments	OW Well No. 12 Water Level (ft MSL)	OW Well No. 12 Drawdown (ft)
10/5/21 12:42 PM	1,525	75	74.27	418.12	1,648.88	4.42				1,657.09	0.73
10/5/21 12:57 PM	1,540	90	74.18	417.88	1,649.12	4.17				1,657.05	0.77
10/5/21 1:12 PM	1,555	105	74.10	417.68	1,649.32	3.97				1,657.07	0.75
10/5/21 1:27 PM	1,570	120	74.03	417.44	1,649.56	3.74				1,657.05	0.77
10/5/21 1:57 PM	1,600	150	73.87	417.11	1,649.89	3.41				1,657.02	0.80
10/5/21 2:27 PM	1,630	180	73.76	416.84	1,650.16	3.13				1,657.06	0.77
10/5/21 2:57 PM	1,660	210	73.68	416.68	1,650.32	2.98				1,657.06	0.76
10/5/21 3:27 PM	1,690	240	73.61	416.45	1,650.55	2.75				1,657.11	0.71
10/5/21 4:27 PM	1,750	300	73.53	416.16	1,650.84	2.46				1,657.12	0.71
10/5/21 5:27 PM	1,810	360	73.48	415.94	1,651.06	2.24				1,657.11	0.72
10/5/21 6:27 PM	1,870	420	73.42	415.70	1,651.30	2.00				1,657.23	0.60
10/5/21 7:27 PM	1,930	480	73.37	415.55	1,651.45	1.85				1,657.20	0.63
10/5/21 8:27 PM	1,990	540	73.37	415.42	1,651.58	1.72				1,657.20	0.63
10/5/21 9:27 PM	2,050	600	73.35	415.33	1,651.67	1.62				1,657.20	0.62
10/5/21 10:27 PM	2,110	660	73.34	415.26	1,651.74	1.55				1,657.29	0.54
10/5/21 11:27 PM	2,170	720	73.33	415.18	1,651.82	1.48				1,657.12	0.70
10/6/21 12:27 AM	2,230	780	73.34	415.14	1,651.86	1.44				1,657.22	0.60
10/6/21 1:27 AM	2,290	840	73.30	415.06	1,651.94	1.35				1,657.25	0.58
10/6/21 2:27 AM	2,350	900	73.28	414.99	1,652.01	1.29				1,657.26	0.56
10/6/21 3:27 AM	2,410	960	73.32	414.88	1,652.12	1.17				1,657.23	0.60
10/6/21 4:27 AM	2,470	1020	73.31	414.82	1,652.19	1.11				1,657.22	0.60
10/6/21 5:27 AM	2,530	1080	73.28	414.75	1,652.25	1.04				1,657.28	0.54
10/6/21 6:27 AM	2,590	1140	73.31	414.71	1,652.29	1.01				1,657.33	0.49
10/6/21 7:27 AM	2,650	1200	73.29	414.61	1,652.39	0.91				1,657.31	0.51
10/6/21 8:27 AM	2,710	1260	73.30	414.56	1,652.44	0.85				1,657.33	0.50
10/6/21 9:27 AM	2,770	1320	73.30	414.53	1,652.47	0.83				1,657.35	0.48
10/6/21 10:27 AM	2,830	1380	73.31	414.50	1,652.50	0.79				1,657.32	0.50
10/6/21 11:27 AM	2,890	1440	73.31	414.47	1,652.53	0.77				1,657.29	0.53
10/6/21 12:27 PM	2,950	1500	73.30	414.48	1,652.52	0.78				1,657.27	0.55
10/6/21 1:27 PM	3,010	1560	73.29	414.54	1,652.46	0.84				1,657.27	0.55
10/6/21 2:27 PM	3,070	1620	73.28	414.47	1,652.53	0.77				1,657.33	0.49
10/6/21 3:27 PM	3,130	1680	73.29	414.47	1,652.53	0.77				1,657.33	0.50
10/6/21 4:27 PM	3,190	1740	73.31	414.56	1,652.44	0.86				1,657.29	0.53

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 2 HP
MSL = Mean Sea Level Pump Setting = 483 ft EC=Electrical conductivity (mS/cm)

Loma Vista (Phase III) Well No. 11 - Aquifer Test (October 4, 2021)

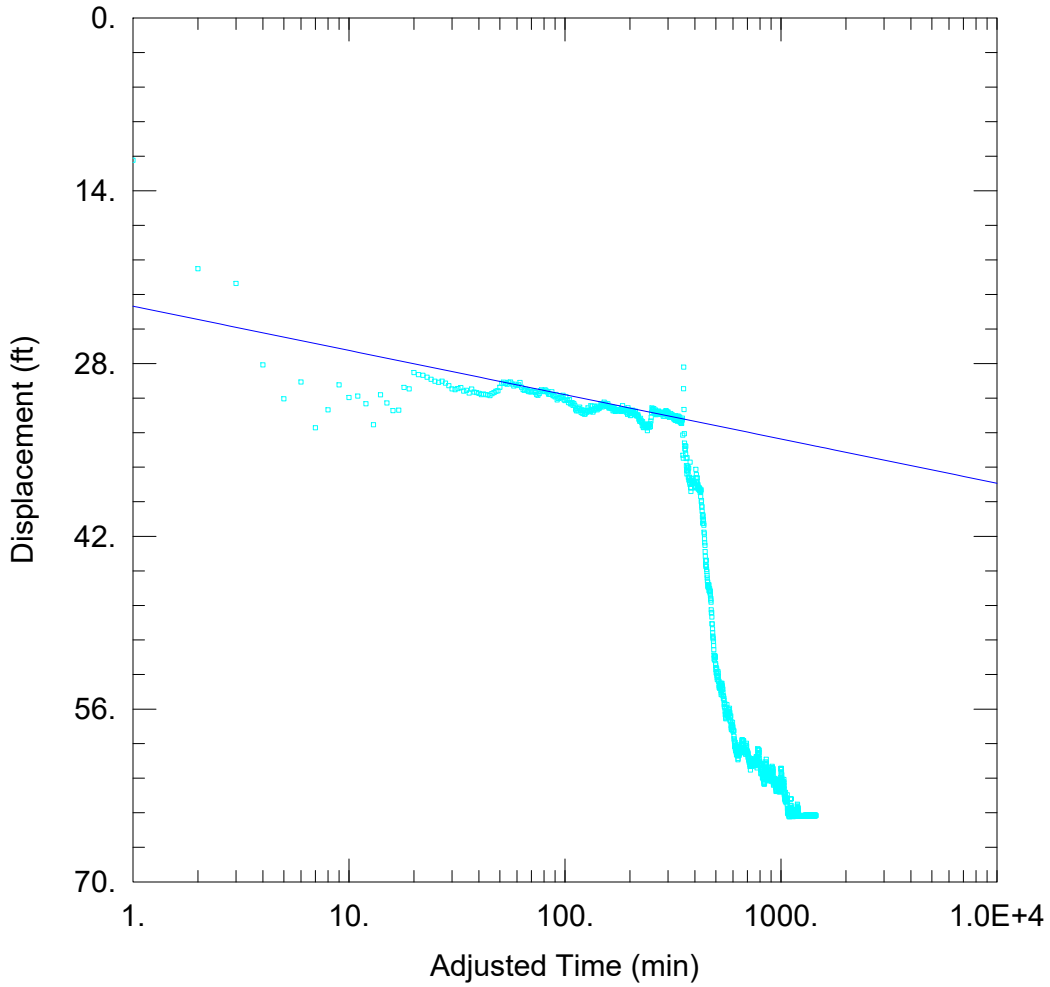
Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 11 Temperature (F)	PW Well No. 11 Water Level (ft bgs)	PW Well No. 11 Water Level (ft MSL)	PW Well No. 11 Drawdown (ft)	PW Well No. 11 Pump Rate (gpm)	PW Well No. 11 Specific Capacity (gpm/ft)	Comments	OW Well No. 12 Water Level (ft MSL)	OW Well No. 12 Drawdown (ft)
10/6/21 5:27 PM	3,250	1800	73.33	414.57	1,652.43	0.87				1,657.32	0.50
10/6/21 6:27 PM	3,310	1860	73.29	414.51	1,652.49	0.81				1,657.29	0.53
10/6/21 7:27 PM	3,370	1920	73.27	414.46	1,652.54	0.75				1,657.31	0.51
10/6/21 8:27 PM	3,430	1980	73.29	414.45	1,652.55	0.74				1,657.34	0.48
10/6/21 9:27 PM	3,490	2040	73.29	414.42	1,652.58	0.72				1,657.35	0.47
10/6/21 10:27 PM	3,550	2100	73.27	414.41	1,652.59	0.70				1,657.35	0.47
10/6/21 11:27 PM	3,610	2160	73.28	414.43	1,652.57	0.72				1,657.28	0.55
10/7/21 12:27 AM	3,670	2220	73.29	414.44	1,652.57	0.73				1,657.32	0.51
10/7/21 1:27 AM	3,730	2280	73.30	414.40	1,652.60	0.69				1,657.28	0.55
10/7/21 2:27 AM	3,790	2340	73.30	414.40	1,652.60	0.70				1,657.31	0.51
10/7/21 3:27 AM	3,850	2400	73.30	414.35	1,652.65	0.65				1,657.30	0.52
10/7/21 4:27 AM	3,910	2460	73.26	414.30	1,652.70	0.60				1,657.28	0.55
10/7/21 5:27 AM	3,970	2520	73.29	414.26	1,652.74	0.56				1,657.46	0.37
10/7/21 6:27 AM	4,030	2580	73.29	414.25	1,652.75	0.55				1,657.33	0.49
10/7/21 7:27 AM	4,090	2640	73.25	414.21	1,652.80	0.50				1,657.49	0.33
10/7/21 8:27 AM	4,150	2700	73.29	414.14	1,652.87	0.43				1,657.46	0.37
10/7/21 9:27 AM	4,210	2760	73.32	414.14	1,652.86	0.44				1,657.50	0.33
10/7/21 10:27 AM	4,270	2820	73.29	414.12	1,652.88	0.42				1,657.45	0.38
10/7/21 11:27 AM	4,330	2880	73.32	414.11	1,652.90	0.40				1,657.54	0.29
10/7/21 12:27 PM	4,390	2940	73.27	414.14	1,652.86	0.43				1,657.44	0.38
10/7/21 1:27 PM	4,450	3000	73.28	414.09	1,652.91	0.39				1,657.44	0.38
10/7/21 2:27 PM	4,510	3060	73.28	414.14	1,652.86	0.43				1,657.40	0.42
10/7/21 3:27 PM	4,570	3120	73.29	414.13	1,652.87	0.43				1,657.40	0.42
10/7/21 4:27 PM	4,630	3180	73.25	414.16	1,652.84	0.46				1,657.33	0.49
10/7/21 5:27 PM	4,690	3240	73.27	414.11	1,652.89	0.41				1,657.44	0.38
10/7/21 6:27 PM	4,750	3300	73.30	414.06	1,652.95	0.35				1,657.45	0.37
10/7/21 7:27 PM	4,810	3360	73.28	414.03	1,652.97	0.33				1,657.43	0.39
10/7/21 8:27 PM	4,870	3420	73.29	414.00	1,653.00	0.29				1,657.46	0.37
10/7/21 9:27 PM	4,930	3480	73.29	414.01	1,652.99	0.30				1,657.57	0.25
10/7/21 10:27 PM	4,990	3540	73.29	414.01	1,652.99	0.31				1,657.48	0.34

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 2 HP
MSL = Mean Sea Level Pump Setting = 483 ft EC=Electrical conductivity (mS/cm)

Loma Vista (Phase III) Well No. 11 - Aquifer Test (October 4, 2021)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 11 Temperature (F)	PW Well No. 11 Water Level (ft bgs)	PW Well No. 11 Water Level (ft MSL)	PW Well No. 11 Drawdown (ft)	PW Well No. 11 Pump Rate (gpm)	PW Well No. 11 Specific Capacity (gpm/ft)	Comments	OW Well No. 12 Water Level (ft MSL)	OW Well No. 12 Drawdown (ft)
10/7/21 11:27 PM	5,050	3600	73.30	414.02	1,652.99	0.31				1,657.47	0.36
10/8/21 12:27 AM	5,110	3660	73.29	414.05	1,652.95	0.35				1,657.42	0.40
10/8/21 1:27 AM	5,170	3720	73.29	414.08	1,652.92	0.37				1,657.46	0.36
10/8/21 2:27 AM	5,230	3780	73.32	414.05	1,652.95	0.35				1,657.43	0.39
10/8/21 3:27 AM	5,290	3840	73.30	414.07	1,652.93	0.36				1,657.46	0.36
10/8/21 4:27 AM	5,350	3900	73.28	414.05	1,652.95	0.34				1,657.34	0.49
10/8/21 5:27 AM	5,410	3960	73.28	413.99	1,653.01	0.29				1,657.52	0.30
10/8/21 6:27 AM	5,470	4020	73.29	413.96	1,653.04	0.26				1,657.54	0.28
10/8/21 7:27 AM	5,530	4080	73.28	413.95	1,653.05	0.24				1,657.53	0.29
10/8/21 8:27 AM	5,590	4140	73.32	413.94	1,653.06	0.24				1,657.54	0.28
10/8/21 9:23 AM	5,646	4196	73.29	413.86	1,653.14	0.16				1,657.58	0.24

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 2 HP
MSL = Mean Sea Level Pump Setting = 483 ft EC=Electrical conductivity (mS/cm)



WELL TEST ANALYSIS

Data Set: \...\PW 11.aqt
Date: 11/03/21 Time: 09:36:50

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Location: Gillespie County
Test Well: Well No. 11
Test Date: 10-4-21

AQUIFER DATA

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

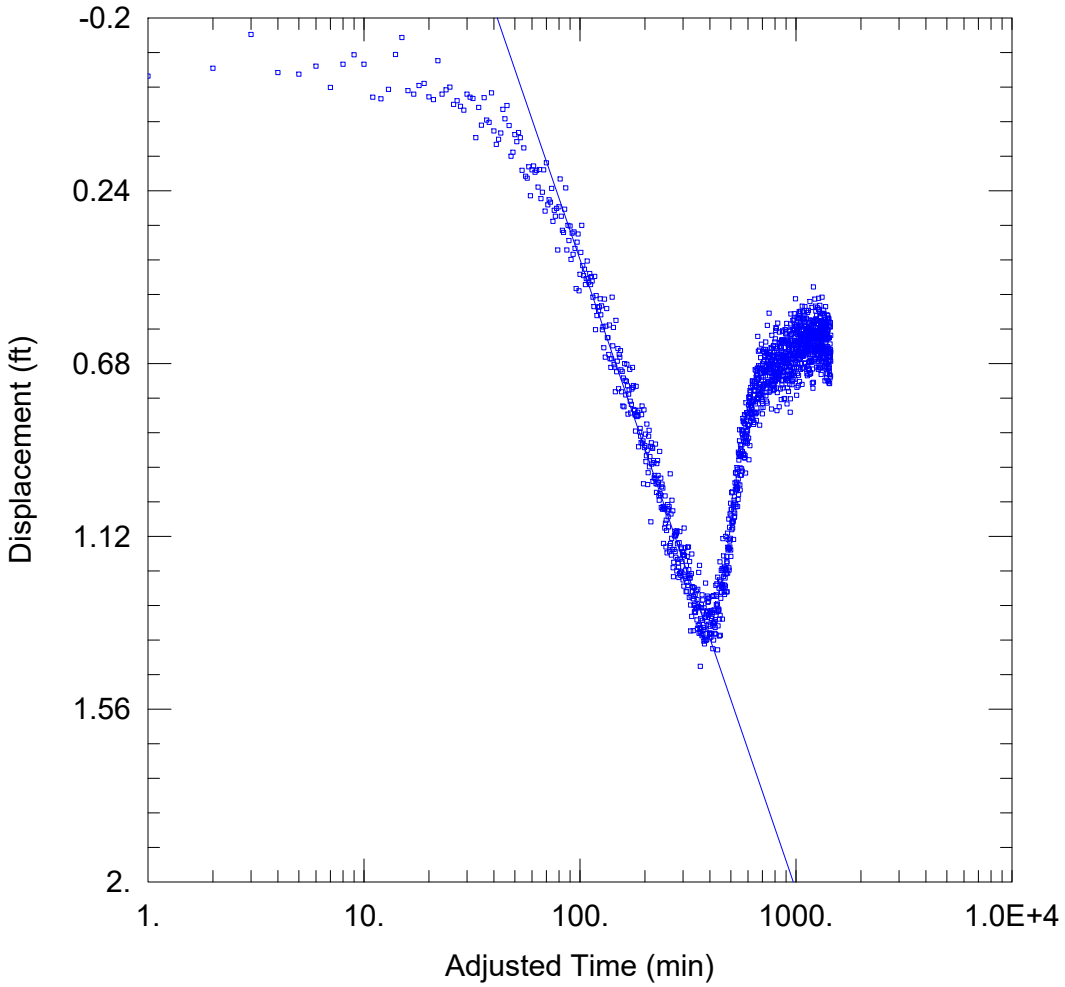
Pumping Wells

Well Name	X (ft)	Y (ft)
Well No. 11	0	0

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 216.4 ft^2/day



WELL TEST ANALYSIS

Data Set: \...\OW 12.aqt
Date: 11/03/21 Time: 09:37:41

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Location: Gillespie County
Test Well: Well No. 11
Test Date: 10-4-21

AQUIFER DATA

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Well No. 11	0	0

Observation Wells

Well Name	X (ft)	Y (ft)
Well No. 12	498	0

SOLUTION

Aquifer Model: Confined
Solution Method: Cooper-Jacob
T = 483.6 ft^2/day
S = 0.0001678

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 = 24 gpm / 39.9 ft. = 0.6 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, = 7.4 X 10^{-5}
r = radius of well, in ft.

Theoretical Specific Capacity: $\frac{1{,}172.5}{264 \log \frac{(0.3)*(1172.5)*(1)}{(0.1875)2\ (0.000074)}}$ **= 0.55**

Efficiency = Actual Specific Capacity / Theoretical Specific Capacity = 0.6 / 0.55 **= 110%**

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 = 24 gpm / 8.5 ft. = 2.83 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, = 1.2 X 10^{-4}
r = radius of well, in ft.

Theoretical Specific Capacity: $\frac{6{,}391.7}{264 \log \frac{(0.3)*(6391.7)*(1)}{(0.1875)2\ (0.00012)}}$ **= 2.8**

Efficiency = Actual Specific Capacity / Theoretical Specific Capacity = 2.83 / 2.8 = **101%**

Well Efficiency

Well No. 6

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. 6

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 = 21 gpm / 29.2 ft. = 0.72 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, = 2.7 X 10^{-5}
r = radius of well, in ft.

Theoretical Specific Capacity: $\frac{1{,}250.6}{264 \log \frac{(0.3)*(1250.6)*(1)}{(0.1875)2\ (0.000027)}}$ **= 0.55**

Efficiency = Actual Specific Capacity / Theoretical Specific Capacity = 0.72 / 0.55 = **131%**

Well Efficiency

Well No. 8

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. 8

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 = 23 gpm / 24 ft. = 0.96 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, = 7.4 X 10^{-5}
r = radius of well, in ft.

Theoretical Specific Capacity: $\frac{1{,}011.7}{264 \log \frac{(0.3)*(1011.7)*(1)}{(0.1875)2\ (0.000074)}}$ **= 0.48**

Efficiency = Actual Specific Capacity / Theoretical Specific Capacity = 0.96 / 0.48 = **200%**

Well Efficiency

Well No. 10

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. 10

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 = 22 gpm / 30.3 ft. = 0.73 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, = 1.4 X 10^{-5}
r = radius of well, in ft.

Theoretical Specific Capacity: $\frac{758.2}{264 \log \frac{(0.3)*(758.2)*(1)}{(0.1875)2\ (0.000014)}}$ **= 0.33**

Efficiency = Actual Specific Capacity / Theoretical Specific Capacity = 0.73 / 0.33 = **221%**

Well Efficiency

Well No. 11

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. 11

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 = 22 gpm / 64.6 ft. = 0.34 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, = 1.7 X 10^{-4}
r = radius of well, in ft.

Theoretical Specific Capacity: $\frac{1{,}618.7}{264 \log \frac{(0.3)*(1618.7)*(1)}{(0.1875)2\ (0.00017)}}$ **= 0.78**

Efficiency = Actual Specific Capacity / Theoretical Specific Capacity = 0.34 / 0.78 = **44%**

Appendix E

Water Quality Report

Water Quality

Well No. 1

MARTIN WATER 79707

Water Analysts and Consultants since 1953

To	Cody Myers	**Project/Lease**	Loma Vista
Company	Nextgen Water Well Sercives	**Location**	#1
Address	11911 WCR 56, Midland, TX 79707	**Sample Point**	
Lab #	21-10-144	**Date Sampled**	10/24/2021
Date Reported	11/8/2021	**Date Received**	10/25/2021

EPA Water Analysis

Parameters: mg/L	
pH:	**8.08**
Bicarbonate:	**239**
Carbonate:	**0**
Hydroxide:	**0**
Temperature (°F):	**75**

Texas Department of Health Limits for Drinking Water	
Chloride	**300 mg/L**
Sulfate	**300 mg/L**
Iron	**.30 mg/L**
Total Dissolved Solids	**1000 mg/L**
Nitrate	**10 mg/L**

Cations mg/L	
Arsenic:	**<.010**
Calcium:	**62**
Chromium	**<.010**
Iron:	**<.010**
Lead:	**<.010**
Magnesium:	**43**
Manganese	**<.010**
Potassium:	**5**
Sodium:	**12**

EPA Limits for Drinking Water	
Chloride	**250 mg/L**
Sulfate	**250 mg/L**
Iron	**.30 mg/L**
Total Dissolved Solids	**500 mg/L**
Nitrate	**10 mg/L**
Nitrite	**1.0 mg/L**
Lead	**.015 mg/L**
Arsenic	**.010 mg/L**
Chromium	**.10 mg/L**

Anions mg/L	
Chloride	**37**
Sulfate	**38**

Other mg/L	
Conductivity, µmhos/cm @ 77ºF	**608**
Fluoride	**0.521**
Total Hardness as CaCO3	**334**
Total Dissolved Solids:	**399**
Nitrate	**1.70**
Nitrite	**<0.010**

Bryan Ogden

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Bryan R. Ogden, B.S.

MARTIN WATER LABS

Water Analysts and Consultants since 1953

Total Coliform/E-Coli Analysis

To:	Cody Myers	**Lease/Project:**	Loma Vista
Company:	Nextgen Water Well Services	**Location:**	
Address:	11911 WCR 56, Midland, Tx 79707	**Sample Point:**	#1
Lab #	21-10-144	**Sample Date:**	10/24/2021
Date Reported:	11/8/2021	**Sample Received:**	10/25/2021

Sample Analysis

Coliform Bacteria

Found (Present)	Not Found (Absent)
	✓

E. Coliform Bacteria

Found (Present)	Not Found (Absent)
	✓

Method: USEPA Equivalent Presence/ Absence Method 9223 B
100 m. of sample is combined with premeasured and packaged media broth, incubated 24 hours at 35°C, and examined for yellow color, which indicates the presence of coliforms, and/or fluorescence, which indicates the presence of E-Coli. If the sample remains clear, it indicates no coliform bacteria.

REMARKS: No Coliform or E. Coli were found in this submitted water sample.

Bryan Ogden

Bryan R. Ogden, B.S.

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Water Quality

Well No. 3

MARTIN WATER LABS

Water Analysts and Consultants since 1953

To	Cody Myers	**Project/Lease**	Loma Vista
Company	Nextgen Water Well Sercives	**Location**	#4
Address	11911 WCR 56 , Midland, TX 79707	**Sample Point**	
Lab #	21-10-144	**Date Sampled**	10/24/2021
Date Reported	11/8/2021	**Date Received**	10/25/2021

EPA Water Analysis

Parameters: mg/L		**Texas Department of Health Limits for Drinking Water**	
pH:	**7.88**	Chloride	**300 mg/L**
Bicarbonate:	**234**	Sulfate	**300 mg/L**
Carbonate:	**0**	Iron	**.30 mg/L**
Hydroxide:	**0**	Total Dissolved Solids	**1000 mg/L**
Temperature (°F):	**75**	Nitrate	**10 mg/L**

Cations mg/L		**EPA Limits for Drinking Water**	
Arsenic:	**<.010**	Chloride	**250 mg/L**
Calcium:	**70**	Sulfate	**250 mg/L**
Chromium	**<.010**	Iron	**.30 mg/L**
Iron:	**0.171**	Total Dissolved Solids	**500 mg/L**
Lead:	**<.010**	Nitrate	**10 mg/L**
Magnesium:	**42**	Nitrite	**1.0 mg/L**
Manganese:	**0.012**	Lead	**.015 mg/L**
Potassium:	**5**	Arsenic	**.010 mg/L**
Sodium:	**14**	Chromium	**.10 mg/L**

Anions mg/L	
Chloride	**39**
Sulfate	**29**

Other mg/L	
Conductivity, µmhos/cm @ 77ºF	**641**
Fluoride	**0.538**
Total Hardness as CaCO3	**347**
Total Dissolved Solids:	**384**
Nitrate	**0.80**
Nitrite	**<0.010**

Bryan Ogden

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Bryan R. Ogden, B.S.

MARTIN WATER LABS

Water Analysts and Consultants since 1953

Total Coliform/E-Coli Analysis

To:	Cody Myers	**Lease/Project:**	Loma Vista
Company:	Nextgen Water Well Services	**Location:**	
Address:	11911 WCR 56, Midland, Tx 79707	**Sample Point:**	#4
Lab #	21-10-144	**Sample Date:**	10/24/2021
Date Reported:	11/8/2021	**Sample Received:**	10/25/2021

Sample Analysis

Coliform Bacteria

Found (Present)	Not Found (Absent)
	✓

E. Coliform Bacteria

Found (Present)	Not Found (Absent)
	✓

Method: USEPA Equivalent Presence/ Absence Method 9223 B
100 m. of sample is combined with premeasured and packaged media broth, incubated 24 hours at 35°C, and examined for yellow color, which indicates the presence of coliforms, and/or fluorescence, which indicates the presence of E-Coli. If the sample remains clear, it indicates no coliform bacteria.

REMARKS: No Coliform or E.Coli were found in this submitted water sample.

Bryan Ogden

Bryan R. Ogden, B.S.

709 W Indiana Ave Midland, Tx 79701 office@martinwaterlabs.com (432) 683-4521

Water Quality

Well No. 6

MARTIN WATER LABS

Water Analysts and Consultants since 1953

To	Cody Myers	**Project/Lease**	Loma Vista
Company	Nextgen Water Well Sercives	**Location**	#6
Address	11911 WCR 56, Midland, TX 79707	**Sample Point**	
Lab #	21-10-144	**Date Sampled**	10/24/2021
Date Reported	11/8/2021	**Date Received**	10/25/2021

EPA Water Analysis

Parameters: mg/L	
pH:	**7.90**
Bicarbonate:	**239**
Carbonate:	**0**
Hydroxide:	**0**
Temperature (°F):	**75**

Texas Department of Health Limits for Drinking Water	
Chloride	**300 mg/L**
Sulfate	**300 mg/L**
Iron	**.30 mg/L**
Total Dissolved Solids	**1000 mg/L**
Nitrate	**10 mg/L**

Cations mg/L	
Arsenic:	**<.010**
Calcium:	**55**
Chromium	**<.010**
Iron:	**0.043**
Lead:	**<.010**
Magnesium:	**40**
Manganese	**0.011**
Potassium:	**3**
Sodium:	**13**

EPA Limits for Drinking Water	
Chloride	**250 mg/L**
Sulfate	**250 mg/L**
Iron	**.30 mg/L**
Total Dissolved Solids	**500 mg/L**
Nitrate	**10 mg/L**
Nitrite	**1.0 mg/L**
Lead	**.015 mg/L**
Arsenic	**.010 mg/L**
Chromium	**.10 mg/L**

Anions mg/L	
Chloride	**21**
Sulfate	**34**

Other mg/L	
Conductivity, .µmhos/cm @ 77º F	**593**
Fluoride	**0.792**
Total Hardness as CaCO3	**303**
Total Dissolved Solids:	**374**
Nitrate	**0.52**
Nitrite	**<0.010**

Bryan Ogden

709 W Indiana Ave Midland, Tx 79701 Office@martinwaterlabs.com (432)683-4521

Bryan R. Ogden, B.S.

MARTIN WATER LABS

Water Analysts and Consultants since 1953

Total Coliform/E-Coli Analysis

To:	Cody Myers	**Lease/Project:**	Loma Vista
Company:	Nextgen Water Well Services	**Location:**	
Address:	11911 WCR 56, Midland, Tx 79707	**Sample Point:**	#6
Lab #	21-10-144	**Sample Date:**	10/24/2021
Date Reported:	11/8/2021	**Sample Received:**	10/25/2021

Sample Analysis

Coliform Bacteria

Found (Present)	Not Found (Absent)
	✓

E. Coliform Bacteria

Found (Present)	Not Found (Absent)
	✓

Method: USEPA Equivalent Presence/ Absence Method 9223 B
100 m. of sample is combined with premeasured and packaged media broth, incubated 24 hours at 35°C, and examined for yellow color, which indicates the presence of coliforms, and/or fluorescence, which indicates the presence of E-Coli. If the sample remains clear, it indicates no coliform bacteria.

REMARKS: No Coliform or E. Coli were found in this submitted water sample

Bryan Ogden

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Water Quality

Well No. 8

MARTIN WATER LABS

Water Analysts and Consultants since 1953

To	Cody Myers	**Project/Lease**	LomaVista
Company	Nextgen Water Well Services	**Location**	
Address	11911 WCR 56, Midland, TX 79707	**Sample Point**	Well #8
Lab #	21-10-62.1	**Date Sampled**	10/11/2021
Date Reported	10/28/2021	**Date Received**	10/12/2021

EPA Water Analysis

Parameters: mg/L	
pH:	**5.90**
Bicarbonate:	**112**
Carbonate:	**0**
Hydroxide:	**0**
Temperature (°F):	**75**

Texas Department of Health Limits for Drinking Water	
Chloride	**300 mg/L**
Sulfate	**300 mg/L**
Iron	**.30 mg/L**
Total Dissolved Solids	**1000 mg/L**
Nitrate	**10 mg/L**

Cations mg/L	
Arsenic:	**<.010**
Calcium:	**58**
Chromium	**<.010**
Iron:	**<.010**
Lead:	**<.010**
Magnesium:	**41**
Manganese	**.013**
Potassium:	**3**
Sodium:	**5**

EPA Limits for Drinking Water	
Chloride	**250 mg/L**
Sulfate	**250 mg/L**
Iron	**.30 mg/L**
Total Dissolved Solids	**500 mg/L**
Nitrate	**10 mg/L**
Nitrite	**1.0 mg/L**
Lead	**.015 mg/L**
Arsenic	**.010 mg/L**
Chromium	**.10 mg/L**

Anions mg/L	
Chloride	**19**
Sulfate	**37**

Other mg/L	
Conductivity,.µumhos/cm@77ºF	**604**
Fluoride	**0.757**
Total Hardness as CaCO3	**315**
Total Dissolved Solids:	**199**
Nitrate	**0.97**
Nitrite	**0.38**

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MARTIN WATER LABS

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Total Coliform/E-Coli Analysis

To:	Cody Myers	**Lease/Project:**	LomaVista
Company:	Nextgen Water Well Services	**Location:**	
Address:	11911 WCR 56, Midland, TX 79707	**Sample Point:**	Well #8
Lab #	21-10-62.1	**Sample Date:**	10/11/2021
Date Reported:	10/28/2021	**Sample Received:**	10/12/2021

Sample Analysis

Coliform Bacteria

Found (Present)	Not Found (Absent)
	✓

E. Coliform Bacteria

Found (Present)	Not Found (Absent)
	✓

Method: USEPA Equivalent Presence/ Absence Method 9223 B
100 m. of sample is combined with premeasured and packaged media broth, incubated 24 hours at 35°C, and examined for yellow color, which indicates the presence of coliforms, and/or fluorescence, which indicates the presence of E-Coli. If the sample remains clear, it indicates no coliform bacteria.

REMARKS: No Coliform Bacteria or E. Coli were found in this submitted water sample

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Water Quality

Well No. 10

MARTIN WATER LABS

Water Analysts and Consultants since 1953

To	Cody Myers	**Project/Lease**	LomaVista
Company	Nextgen Water Well Services	**Location**	
Address	11911 WCR 56, Midland, TX 79707	**Sample Point**	Well #10
Lab #	21-10-62.2	**Date Sampled**	10/11/2021
Date Reported	10/28/2021	**Date Received**	10/12/2021

EPA Water Analysis

Parameters: mg/L	
pH:	**7.70**
Bicarbonate:	**112**
Carbonate:	**0**
Hydroxide:	**0**
Temperature (°F):	**75**

Texas Department of Health Limits for Drinking Water	
Chloride	**300 mg/L**
Sulfate	**300 mg/L**
Iron	**.30 mg/L**
Total Dissolved Solids	**1000 mg/L**
Nitrate	**10 mg/L**

Cations mg/L	
Arsenic:	**<.010**
Calcium:	**64**
Chromium	**<.010**
Iron:	**0.011**
Lead:	**<.010**
Magnesium:	**43**
Manganese	**0.012**
Potassium:	**5**
Sodium:	**20**

EPA Limits for Drinking Water	
Chloride	**250 mg/L**
Sulfate	**250 mg/L**
Iron	**.30 mg/L**
Total Dissolved Solids	**500 mg/L**
Nitrate	**10 mg/L**
Nitrite	**1.0 mg/L**
Lead	**.015 mg/L**
Arsenic	**.010 mg/L**
Chromium	**.10 mg/L**

Anions mg/L	
Chloride	**29**
Sulfate	**26**

Other mg/L	
Conductivity, µmhos/cm @ 77°F	**636**
Fluoride	**0.576**
Total Hardness as CaCO3	**338**
Total Dissolved Solids:	**196**
Nitrate	**0.46**
Nitrite	**0.16**

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MARTIN WATER LABS

Water Analysts and Consultants since 1953

Total Coliform/E-Coli Analysis

To:	Cody Myers	**Lease/Project:**	LomaVista
Company:	Nextgen Water Well Services	**Location:**	
Address:	11911 WCR 56, Midland, TX 79707	**Sample Point:**	Well #10
Lab #	21-10-62.2	**Sample Date:**	10/11/2021
Date Reported:	10/28/2021	**Sample Received:**	10/12/2021

Sample Analysis

Coliform Bacteria

Found (Present)	Not Found (Absent)
	✓

E. Coliform Bacteria

Found (Present)	Not Found (Absent)
	✓

Method: USEPA Equivalent Presence/ Absence Method 9223 B
100 m. of sample is combined with premeasured and packaged media broth, incubated 24 hours at 35°C, and examined for yellow color, which indicates the presence of coliforms, and/or fluorescence, which indicates the presence of E-Coli. If the sample remains clear, it indicates no coliform bacteria.

REMARKS: No Coliform Bacteria or E. Coli were found in this submitted water sample.

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Water Quality

Well No. 11

MARTIN WATER LABS

Water Analysts and Consultants since 1953

To	Cody Myers	**Project/Lease**	LomaVista
Company	Nextgen Water Well Services	**Location**	
Address	11911 WCR 56, Midland, TX 79707	**Sample Point**	Well #11
Lab #	21-10-62.3	**Date Sampled**	10/11/2021
Date Reported	10/28/2021	**Date Received**	10/12/2021

EPA Water Analysis

Parameters: mg/L	
pH:	**7.69**
Bicarbonate:	**102**
Carbonate:	**0**
Hydroxide:	**0**
Temperature (°F):	**75**

Texas Department of Health Limits for Drinking Water	
Chloride	**300 mg/L**
Sulfate	**300 mg/L**
Iron	**.30 mg/L**
Total Dissolved Solids	**1000 mg/L**
Nitrate	**10 mg/L**

Cations mg/L	
Arsenic:	**<.010**
Calcium:	**62**
Chromium	**<.010**
Iron:	**0.109**
Lead:	**<.010**
Magnesium:	**39**
Manganese:	**0.014**
Potassium:	**4**
Sodium:	**19**

EPA Limits for Drinking Water	
Chloride	**250 mg/L**
Sulfate	**250 mg/L**
Iron	**.30 mg/L**
Total Dissolved Solids	**500 mg/L**
Nitrate	**10 mg/L**
Nitrite	**1.0 mg/L**
Lead	**.015 mg/L**
Arsenic	**.010 mg/L**
Chromium	**.10 mg/L**

Anions mg/L	
Chloride	**30**
Sulfate	**24**

Other mg/L	
Conductivity, µmhos/cm @ 77ºF	**619**
Fluoride	**0.477**
Total Hardness as CaCO3	**315**
Total Dissolved Solids:	**184**
Nitrate	**0.71**
Nitrite	**0.15**

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MARTIN WATER LABS

Water Analysts and Consultants since 1953

Total Coliform/E-Coli Analysis

To:	Cody Myers	**Lease/Project:**	LomaVista
Company:	Nextgen Water Well Services	**Location:**	
Address:	11911 WCR 56, Midland, TX 79707	**Sample Point:**	Well #11
Lab #	21-10-62.3	**Sample Date:**	10/11/2021
Date Reported:	10/26/2021	**Sample Received:**	10/12/2021

Sample Analysis

Coliform Bacteria

Found (Present)	Not Found (Absent)
	✓

E. Coliform Bacteria

Found (Present)	Not Found (Absent)
	✓

Method: USEPA Equivalent Presence/ Absence Method 9223 B
100 m. of sample is combined with premeasured and packaged media broth, incubated 24 hours at 35°C, and examined for yellow color, which indicates the presence of coliforms, and/or fluorescence, which indicates the presence of E-Coli. If the sample remains clear, it indicates no coliform bacteria.

REMARKS: No Coliform or E.Coli were found in this submitted water sample.

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