Report of Findings: WRGS 21-027

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Maverick Subdivision
Groundwater Availability Certification for Platting:
Gillespie County, Texas

For:
MTX 960, LLC
P.O. Box 661
Murphy, NC 28906

Wet Rock Groundwater Services, L.L.C.
Groundwater Specialists
TBPG Firm No: 50038
317 Ranch Road 620 South, Suite 303
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The seal appearing on this document was authorized by Kaveh Khorzad, P.G. 1126 on August 1, 2022:

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 Maverick Subdivision (Maverick) 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.

Maverick is located along Ranch Road (RR) 783 approximately 5.5 miles south of Harper, TX in southwest Gillespie County (Figure 1). The proposed subdivision is documented within the Gillespie County Tax Assessor as Property IDs: 38452, 38454, 38455, 5823, 6345 and 11302. MTX 960, LLC, P.O. Box 661, Murphy, NC 28906) is the plat applicant.

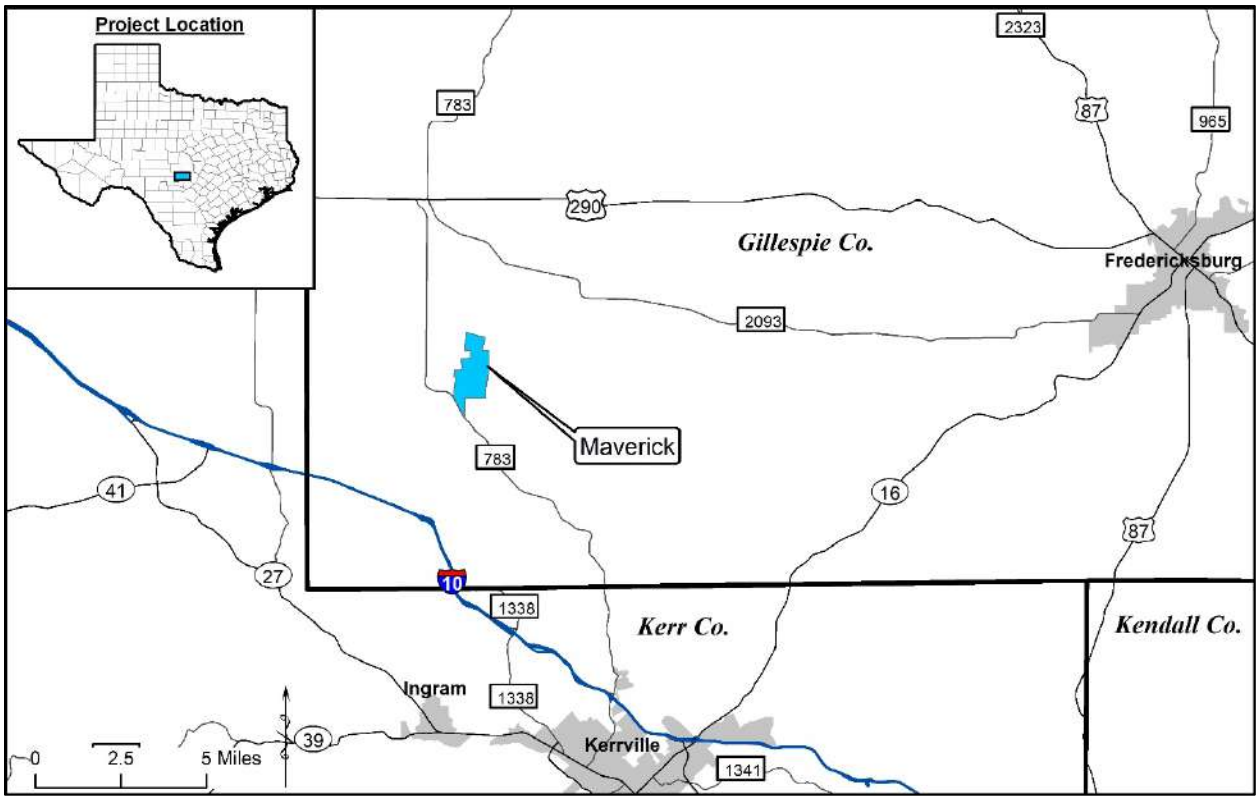


Figure 1: Location map

MTX 960, LLC proposes to develop the approximately 960.417 acre property as a subdivision including 150 single family residential lots. The average lot size is 6.40 acres; each lot will be served by an individual water well. 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.

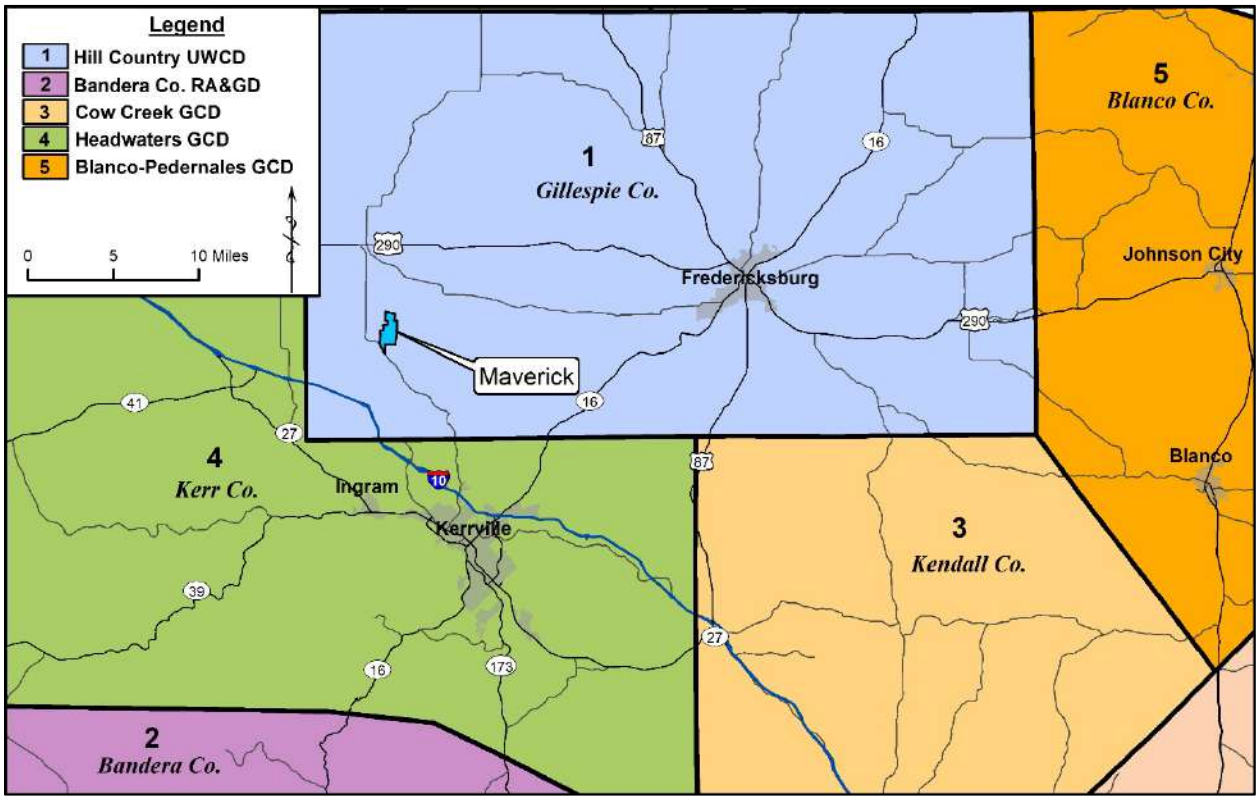


Figure 2: Groundwater Conservation District map

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 (123 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

$$Q_s = n \times 2.5 \times 123 \times 365 \text{ days} = 16{,}835{,}625 \text{ gallons/year or } 51.67 \text{ acre-feet/year}$$

Where:

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

n = Number of lots (150 lots); and

2.5 = Average number of persons per household; and

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

Equation 2: Water Demand per Housing Unit

$$Q_h = 2.5 \times 123 \times 365 \text{ days} = 112{,}238 \text{ gallons/year or } 0.34 \text{ acre-feet/year}$$

Where:

Q_h = Total Water Demand per house per year

Equation 1 assumes 2.5 persons per household using 123 gallons per person per day which results in a total water demand for the subdivision of 51.67 acre-feet/year. Equation 2 results in a water demand per housing unit of 0.34 acre-feet/year. There are no planned non-residential water demands.

Section III: General Groundwater Resource Information

III.1. Introduction

According to the Texas Water Development Board (TWDB), there is one (1) major aquifer (Edwards-Trinity Plateau Aquifer) and two (2) minor aquifers (Ellenburger-San Saba and Hickory aquifers) that supply groundwater within the study area. The TWDB classifies major aquifers as aquifers that produce large amounts of water over large areas, and minor aquifers as aquifers that produce minor amounts of water over large areas or large amounts of water over small areas. The Hickory and Ellenburger-San Saba aquifers are minor aquifers composed of Paleozoic rock that extend laterally across a major geologic feature known as the Llano Uplift, which is centered across Llano and Mason Counties. The Edwards-Trinity (Plateau) Aquifer is part of a thick and regionally extensive aquifer system composed of Cretaceous carbonates that were deposited throughout central and west Texas and is classified as a major aquifer.

III.2. Stratigraphy and Geologic History

The property overlies the Cretaceous-aged sedimentary rocks comprising the Edwards-Trinity (Plateau) Aquifer as well as the Ordovician aged Ellenburger-San Saba Aquifer and Cambrian aged Hickory Aquifer. For the purposes of this report, the Hickory Aquifer will not be investigated due to prohibitively expensive well construction.

The subdivision is located southwest of the Llano Uplift. The uplift is a structural high dome consisting of Precambrian rock, much of which are igneous granites and other metamorphics aging up to over 1.36 billion years (Reese et. al, 2000). Metamorphosis including compression and folding occurred approximately 1.2 billion years ago with multi-directional fracturing (Johnson, 2004). Figure 3 provides a geologic map and stratigraphic column showing the geology surrounding the subdivision.

The complex Precambrian formations which make up the structural base in the study area are composed of a sequence of meta-sedimentary and meta-igneous rock, with scattered intrusive igneous rock. Major meta-sedimentary units include the Packsaddle Schist and the Valley Spring Gniess; meta-igneous units include the Coal Creek Serpentine, the Big Spring Gneiss, and the Red Mountain Gneiss. Igneous rocks include the Llanite Quartz Porphyry, the Sixmile Granite, the Oatman Creek Granite, and the Town Mountain Granite (Figure 3; Preston et. al, 1996). In general, these rocks crop out in the center of the uplift and act as confining units to overlying aquifers. Rocks overlying the Precambrian Base dip radially away from the dome structure with high variability in magnitude, ranging from a few feet (ft.) to over 100 ft. per mile (Barnes and Bell, 1977).

Stratigraphically above the Precambrian base lies the Cambrian aged Moore Hollow Group which consists 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).

Overlying the Moore Hollow Group is the Ordovician aged Ellenburger Group which consists of the Tanyard, Gorman, and Honeycut Formations and generally encircle 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).

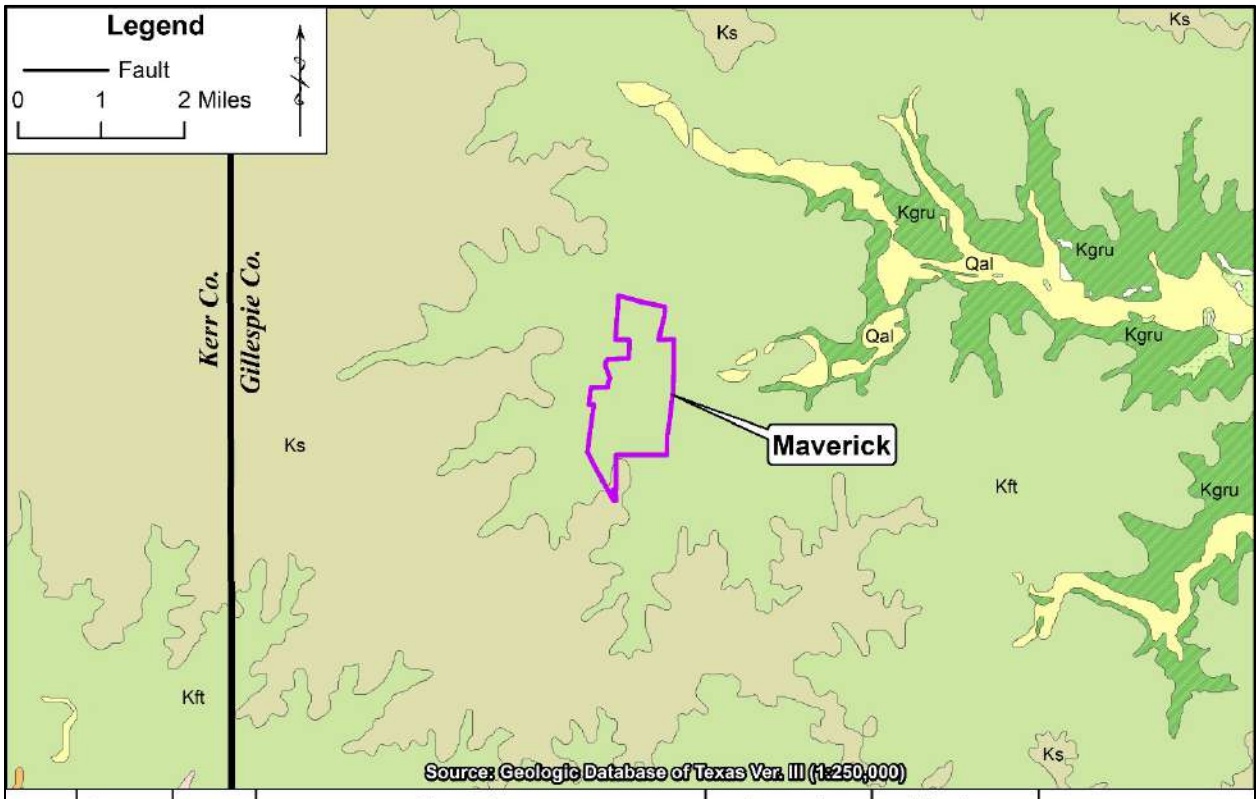
Scattered discontinuously throughout the study area, Devonian and Mississippian aged formations consist of thin remnants of dark shales, petroliferous limestones, crinoidal limestone, chert breccias, fractured cherts, and microgranular limestones with bedded chert (Standen and Ruggiero, 2007; Preston 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 Group 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: the Lower, Middle and Upper Trinity Aquifers. Formations comprising the Lower Trinity Aquifer include, from oldest to youngest, the Hosston Sand Member and Sligo Limestone Member of the Travis Peak Formation. 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 Fort Terrett and Segovia Formations (collectively known as Edwards Limestone). In the study area, the Edwards Limestone is comprised of gray, cherty, fossiliferous limestone and dolomite members. The Basal Nodular Bed makes up the oldest member of the Edwards, and acts as a confining layer between the Upper Trinity Aquifer and the Edwards Aquifer.

At the subdivision, the Fort Terrett Formation of the Edwards Group is exposed at the surface. 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, 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).



ERA	System	Group	Formation	Legend	Member	Hydrogeologic Unit
Cenozoic	Quaternary		Pleistocene to Recent floodplain (alluvium and fluviatile terrace deposits)	Qa / Qt Qc Qcf		localized alluvial aquifers
Mesozoic	Cretaceous	Edwards	Segovia	Ks		Edwards Plateau Aquifer
			Fort Terrett	Kft / Ked	Kirchburg evaporite Dolomite Mbr. Burrowed Mbr.	
			Walnut Clay	Kwa		confining bed
		Trinity	Glen Rose Lmst.	Kgr / Kgru / Kgrl	Upper Mbr. Lower Mbr.	Upper Trinity Aquifer
		Trinity / Travis Peak	Hensell Sand / Bexar Shale	Kh		Middle Trinity Aquifer
			Cow Creek Lmst.	Kcc / Kch		
			Hammett Shale	Kha		confining bed
			Sycamore Sand / Sligo / Hosston	Ksy		Lower Trinity Aquifer
Paleozoic	Pennsylvanian	Canyon	Undivided	IPcn	Undivided	confining beds
		Strawn	Undivided	IPst		
		Bend	Smithwick	IPsw		
			Marble Falls Lmst.	IPmf		Marble Falls Aquifer
	Missippian and Devonian		Mississippian and Devonian Undivided rocks	MD		Typically 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 (modified from Preston et. al, 1996)

III.3. Hydrogeology

There are two accessible aquifers located beneath the property which include the Edwards-Trinity (Plateau) and Ellenburger-San Saba aquifers. The Hickory Aquifer is encountered at greater depths, with no wells completed within the aquifer in the immediate vicinity.

The Edwards-Trinity (Plateau) Aquifer consists of early Cretaceous age clastic sediments and limestone of the Travis Peak Formation and limestone of the Glen Rose Formation making up of the Trinity Group and limestones of the Edwards Group. The Fort Terrett and Segovia formations form the upper aquifer unit and are typically referred to as the Edwards Group. The aquifer extends throughout all or part of 38 counties of central and western Texas (Anaya 2009).

The period of subaerial exposure at the end of the of the Late Cretaceous created significant karst features within the Trinity and Edwards-Trinity (Plateau) aquifers. These features were enhanced through subsequent fracturing and continuous development of conduits throughout the life of the aquifer as groundwater under-saturated with respect to calcium carbonate has caused dissolution of the limestone and dolomite beds. Groundwater production within the aquifer is largely a function of the saturated thickness of the aquifer (Ashworth and Hopkins, 1995).

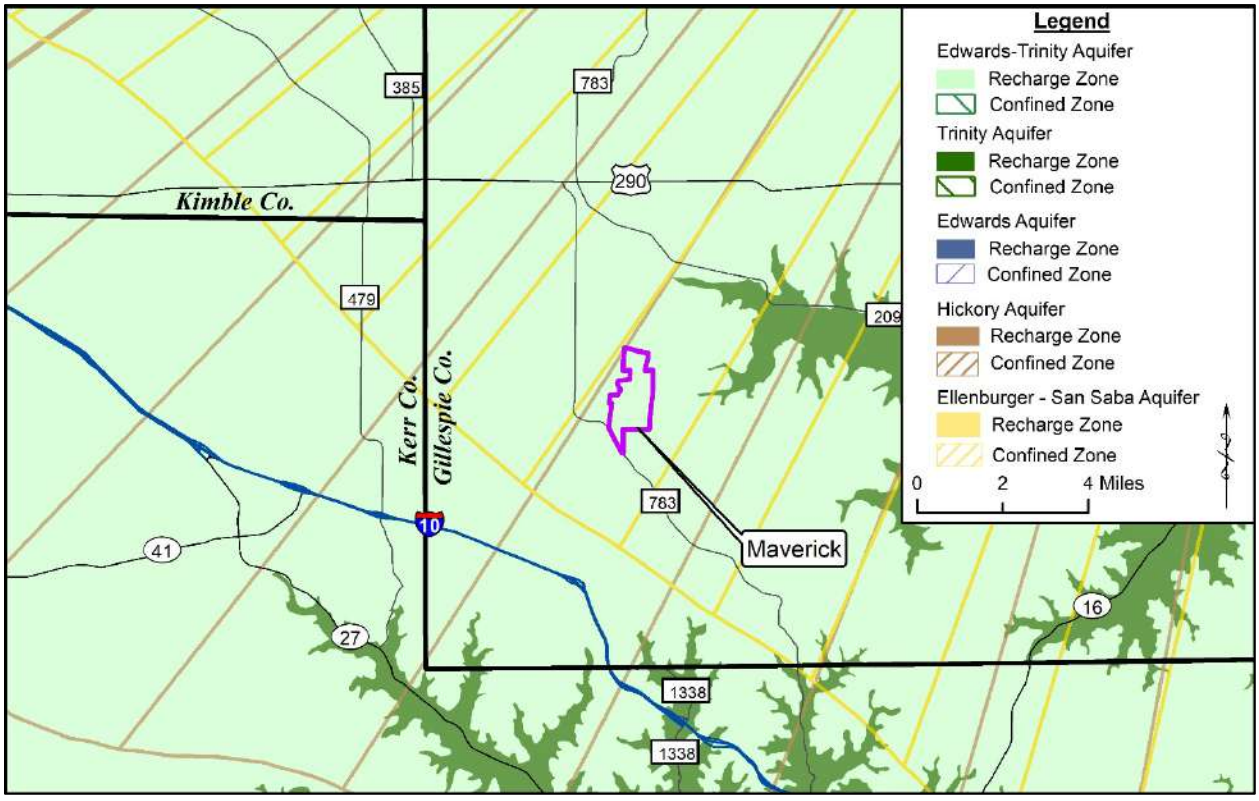


Figure 4: Aquifer map

Figure 4 shows the location of the Edwards-Trinity (Plateau) Aquifer with respect to other aquifers in the area, including the minor Llano Uplift area aquifers (Ellenburger-San Saba and Hickory aquifers). The solid light green portion (Edwards-Trinity (Plateau) Aquifer) reflects the unconfined zone where recharge occurs; the hatched light green portion reflects the confined zone of the aquifer.

The Edwards Group contains from oldest to youngest: the Fort Terrett and Segovia formations (Figure 3). Both formations are composed of limestone and in the vicinity of the proposed subdivision are located at shallow depths (generally less than 200 ft.). Wells completed in the Edwards Group are shallow and generally low yielding with variances in water level tied to the amount of precipitation received. Most wells completed within the Edwards Group are stock or domestic wells. We do not recommend completing wells solely within the Edwards Group at the proposed subdivision.

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

Located stratigraphically above the Hosston Sand is the Hammett Clay also known as the Pine Island Shale. The Hammett is a transgressive "shale" deposit that onlaps Lower Trinity Sligo and Hosston formations. The interval averages 40 feet in thickness in the central Texas area (Wierman et al., 2010). The unit is primarily a clay rich, gray-green sticky, dolomitic shale/claystone with siltstone and dolomite lenses. Color can be dark gray to black, blue, greenish gray and gray. The Hammett is a confining bed separating the Lower Trinity Aquifer from the Middle Trinity Aquifer (Figure 3). In the area of the proposed subdivision, the Hammett Clay may not be present.

Above the Hammett Clay lies the Middle Trinity Aquifer composed of the Cow Creek Limestone and the Hensell/Bexar Shale members of the Travis Peak Formation and the Lower Glen Rose Limestone member of the Glen Rose Formation (Figure 3). The Cow Creek Limestone is a massive, fossiliferous limestone and dolomite ranging up to 100 feet in thickness and may contain some interbedded sand, clay, and evaporite minerals such as gypsum and anhydrite (Ashworth, 1983; Preston et. al, 1996; Wierman et al., 2010). The formation was subaerially exposed and subjected to meteoric water infiltration which resulted in widespread vuggy porosity (Loucks, 1977). In some areas, the Cow Creek is heavily fractured and capable of producing large well yields. In the area of the proposed subdivision, the Cow Creek may not be present.

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

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

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

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

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 solid yellow portion reflects the unconfined zone of the Ellenburger-San Saba where recharge occurs; the hatched yellow portion reflects the confined zone of the Ellenburger-San Saba Aquifer. The solid brown portion reflects the unconfined zone of the Hickory where recharge occurs; the hatched brown portion reflects the confined zone of the Hickory Aquifer. The aquifers dip downwards away from the center of the uplift and can range in thickness from 0 up to 3,000 feet (ft). 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. These cavities are often found in the confined portions of the aquifer.

The entirety of the proposed subdivision overlies the unconfined portion of the Edwards-Trinity (Plateau) Aquifer and the confined portion of the Ellenburger-San Saba and Hickory aquifers.

Section IV: Aquifer Testing

IV.1. Well Details

There are a total of eleven (11) wells located within the proposed subdivision that were used in this study. Well Nos. 1 through 11 are newly constructed wells by Texan Water within the Middle Trinity Aquifer. Figure 5 provides a map showing the location of Maverick's wells along with all documented wells within one mile of the property boundary. Map ID numbers in Figure 5 correlate to Table 1. Figures 6 through 11 provide well profiles displaying well construction and formation depths that were determined from the drill cuttings collected by Texan Water, state well reports and geophysical logs; Appendix C provides available state well reports. Table 1 provides a summary of the existing wells according to TWDB well data within 1-mile of the subdivision not used in testing; Table 2 provides a well construction summary for wells used in the testing.

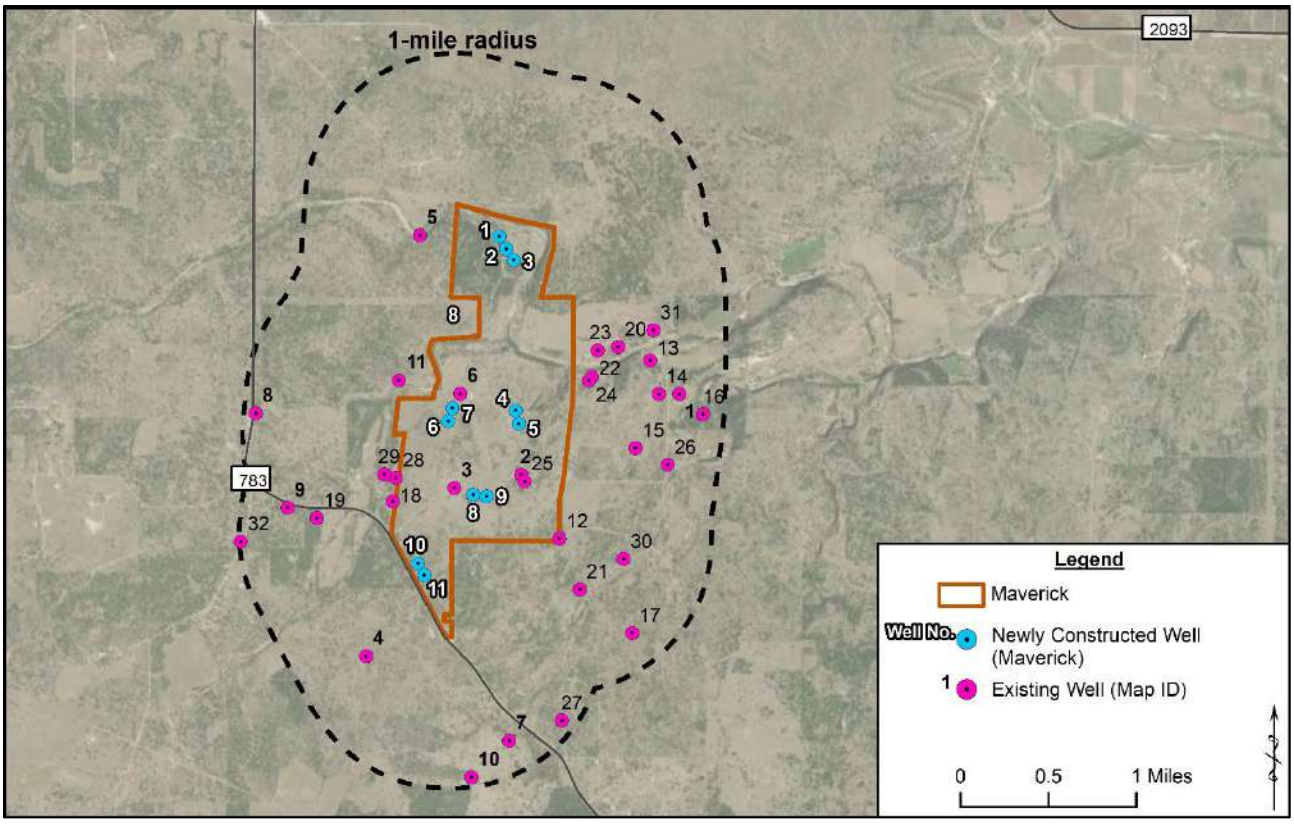


Figure 5: Well location map

Table 1: Summary of wells within 1-mile of the subdivision

Map ID	State Well ID	Owner	Well Depth (ft.)	Well Type
1	5655202	Clayton Feller	101	Domestic
2	5655102	G.C. Stevens	34	Unused
3	5655104	G.C. Stevens	93	Domestic
4	5655405	Edwin Dittmar	108	Stock
5	5655101	Elgin Pape	0	Stock
6	5655103	Mart Stevens	110	Domestic
7	5655402	Edwin Dittmar	68	Domestic
8	5655105	Mrs. Louis Stevens	75	Domestic
9	5655107	G.C. Stevens	73	Stock
10	5655401	Edwin Dittmar	91	Stock
11	5655109	W.H. Stevens	98	Domestic
12	1900	Martha Myers	560	Domestic
13	20822	Darrel Kothe	360	Domestic
14	20824	Timothy Dartez	415	Domestic
15	20828	Joyce Jenschke	420	Domestic
16	21941	Bill Gossett	340	Domestic
17	31664	Ranch Enterprises	300	Domestic
18	61483	Joe Spencer	60	Domestic
19	69297	Ron Vidas	130	Domestic
20	95495	Timothy Dartez	362	Domestic
21	134418	McIntosh, David	680	Domestic
22	144809	Taylor, Brett G.	520	Domestic
23	144813	Taylor, Brett G.	480	Domestic
24	149305	Taylor, Bret G.	110	Stock
25	160303	Brown Ranch	60	Stock
26	245975	H 4 Harper LP/Wade Hilty	415	Domestic
27	250780	Terry R. Morgan	220	Domestic
28	345952	Joe Spencer	120	Domestic
29	358765	Russell Rogers	60	Domestic
30	392971	Jeff Fiedler	118	Domestic
31	412019	Dustin Kothe	360	Domestic
32	555595	Matthew Walden	185	Domestic

To meet the guidelines for the Gillespie County's 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. The aquifer tests consisted of pumping one well for at least 24 hours followed by a recovery phase while measuring water levels in both the pumping and observation wells. 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, drillers' lithology logs, and geophysical logs conducted by GeoCam, Inc. on Well Nos. 1, 4, 6, 8 and 10, all wells used in the aquifer testing are completed in the Hensell Sand Member of the Middle Trinity Aquifer. The following provides a summary of the well construction for the wells used in the aquifer tests.

Well No. 1

According to the State Well Report (Tracking No. 610412; Appendix C), Well No. 1 was completed by Texan Water on May 26, 2022. The well was drilled to a total depth of 540 ft. bgl with a 9-inch borehole from 0 to 540 ft. bgl. The well was completed with 4 1/2-inch PVC casing set from +2 to 420 ft. bgl and a 4 1/2-inch slotted PVC screen from 420 to 540 ft. bgl. According to the geophysical log, the well was completed in the Middle Trinity Aquifer (Figure 6; Appendix C).

Well No. 2

According to the State Well Report (Tracking No. 610413; Appendix C), Well No. 2 was completed by Texan Water on June 15, 2022. The well was drilled to a total depth of 540 ft. bgl with a 9-inch borehole from 0 to 540 ft. bgl. The well was completed with 4 1/2-inch PVC casing set from +2 to 420 ft. bgl and a 4 1/2-inch slotted PVC screen from 420 to 540 ft. bgl. According to the driller's lithology log and geophysical logs, the well was completed in the Middle Trinity Aquifer (Figure 6; Appendix C).

Well No. 3

According to the State Well Report (Tracking No. 610468; Appendix C), Well No. 3 was completed by Texan Water on June 23, 2022. The well was drilled to a total depth of 535 ft. bgl with a 9-inch borehole from 0 to 535 ft. bgl. The well was completed with 4 1/2-inch PVC casing set from +2 to 410 ft. bgl, and a 4 1/2-inch slotted PVC screen from 410 to 535 ft. bgl. According to the driller's lithology log and geophysical logs, the well was completed in the Middle Trinity Aquifer (Figure 7; Appendix C).

Well No. 4

According to the State Well Report (Tracking No. 611030; Appendix C), Well No. 4 was completed by Texan Water on June 29, 2022. The well was drilled to a total depth of 550 ft. bgl with a 9-inch borehole from 0 to 550 ft. bgl. The well was completed with 4 1/2-inch PVC casing set from +2 to 430 ft. bgl and a 4 1/2-inch slotted PVC screen from 430 to 550 ft. bgl. According to the geophysical log, the well was completed in the Middle Trinity Aquifer (Figure 7; Appendix C).

Well No. 5

According to the State Well Report (Tracking No. 611031; Appendix C), Well No. 5 was completed by Texan Water on July 6, 2022. The well was drilled to a total depth of 530 ft. bgl with a 9-inch borehole from 0 to 530 ft. bgl. The well was completed with 4 1/2-inch PVC casing set from +2 to 410 ft. bgl, and a 4 1/2-inch slotted PVC screen from 410 to 530 ft. bgl. According to the driller's lithology log and geophysical logs, the well was completed in the Middle Trinity Aquifer (Figure 8; Appendix C).

Well No. 6

According to the State Well Report (Tracking No. 610666; Appendix C), Well No. 6 was completed by Texan Water on May 10, 2022. The well was drilled to a total depth of 600 ft. bgl with a 9-inch borehole from 0 to 600 ft. bgl. The well was completed with 4 1/2-inch PVC casing set from +2 to 460 ft. bgl and a 4 1/2-inch slotted PVC screen from 460 to 600 ft. bgl. According to the geophysical log, the well was completed in the Middle Trinity Aquifer (Figure 8; Appendix C).

Well No. 7

According to the State Well Report (Tracking No. 610916; Appendix C), Well No. 7 was completed by Texan Water on May 18, 2022. The well was drilled to a total depth of 560 ft. bgl with a 9-inch borehole from 0 to 560 ft. bgl. The well was completed with 4 1/2-inch PVC casing set from +2 to 440 ft. bgl and a 4 1/2-inch slotted PVC screen from 440 to 560 ft. bgl. According to the driller's lithology log and geophysical logs, the well was completed in the Middle Trinity Aquifer (Figure 9; Appendix C).

Well No. 8

According to the State Well Report (Tracking No. 611032; Appendix C), Well No. 8 was completed by Texan Water on July 9, 2022. The well was drilled to a total depth of 540 ft. bgl with a 9-inch borehole from 0 to 540 ft. bgl. The well was completed with 4 1/2-inch PVC casing set from +2 to 420 ft. bgl and a 4 1/2-inch slotted PVC screen from 420 to 540 ft. bgl. According to the geophysical log, the well was completed in the Middle Trinity Aquifer (Figure 9; Appendix C).

Well No. 9

According to the State Well Report (Tracking No. 611034; Appendix C), Well No. 9 was completed by Texan Water on July 11, 2022. The well was drilled to a total depth of 560 ft. bgl with a 9-inch borehole from 0 to 560 ft. bgl. The well was completed with 4 1/2-inch PVC casing set from +2 to 440 ft. bgl and a 4 1/2-inch slotted PVC screen from 440 to 560 ft. bgl. According to the driller's lithology log and geophysical logs, the well was completed in the Middle Trinity Aquifer (Figure 10; Appendix C).

Well No. 10

According to the State Well Report (Tracking No. 611035; Appendix C), Well No. 10 was completed by Texan Water on July 14, 2022. The well was drilled to a total depth of 565 ft. bgl with a 9-inch borehole from 0 to 565 ft. bgl. The well was completed with 4 1/2-inch PVC casing set from +2 to 445 ft. bgl and a 4 1/2-inch slotted PVC screen from 445 to 565 ft. bgl. According to the geophysical log, the well was completed in the Middle Trinity Aquifer (Figure 10; Appendix C).

Well No. 11

According to the State Well Report (Tracking No. 611037; Appendix C), Well No. 11 was completed by Texan Water on July 16, 2022. The well was drilled to a total depth of 560 ft. bgl with a 9-inch borehole from 0 to 560 ft. bgl. The well was completed with 4 1/2-inch PVC casing set from +2 to 440 ft. bgl and a 4 1/2-inch slotted PVC screen from 440 to 560 ft. bgl. According to the driller's lithology log and geophysical logs, the well was completed in the Middle Trinity Aquifer (Figure 11; Appendix C).

Table 2: Summary of Maverick well construction

Well	Tracking No.	Latitude	Longitude	Elevation (ft. MSL)	Date Completed	Aquifer	Well Depth (ft. bgl)	Static Water Level (ft. bgs; date; ft. MSL)	Borehole (diameter ; ft. bgl)	Casing (diameter; material; ft. bgl)	Screen (diameter; material; ft. bgs)
Well No. 1	610412	30° 14' 27.7" N	99° 13' 10.8" W	1,997	5-26-22	Middle Trinity	540	319.3 (6-27-22) 1,677.7	9" (0-540)	4 1/2" PVC (+2 - 420)	4 1/2" PVC (420 - 540)
Well No. 2	610413	30° 14' 24.1" N	99° 13' 8.4" W	1,995	6-15-22	Middle Trinity	540	318.1 (6-27-22) 1,676.9	9" (0-540)	4 1/2" PVC (+2 - 420)	4 1/2" PVC (420 - 540)
Well No. 3	610468	30° 14' 20.8" N	99° 13' 5.8" W	1,985	6-23-22	Middle Trinity	535	311.0 (7-12-22) 1,674.0	9" (0-535)	4 1/2" PVC (+2 - 410)	4 1/2" PVC (410 - 535)
Well No. 4	611030	30° 13' 36.1" N	99° 13' 5.0" W	2,019	6-29-22	Middle Trinity	550	351.5 (7-12-22) 1,667.5	9" (0-550)	4 1/2" PVC (+2 - 430)	4 1/2" PVC (430 - 550)
Well No. 5	611031	30° 13' 32.1" N	99° 13' 4.0" W	2,012	7-6-22	Middle Trinity	530	344.5 (7-12-22) 1,667.5	9" (0-530)	4 1/2" PVC (+2 - 410)	4 1/2" PVC (410 - 530)
Well No. 6	610666	30° 13' 32.9" N	99° 13' 28.2" W	2,022	5-10-22	Middle Trinity	600	353.1 (6-7-22) 1,668.9	9" (0-600)	4 1/2" PVC (+2 - 460)	4 1/2" PVC (460 - 600)
Well No. 7	610916	30° 13' 36.0" N	99° 13' 26.7" W	2,026	5-18-22	Middle Trinity	560	357.0 (6-7-22) 1,669.0	9" (0-560)	4 1/2" PVC (+2 - 440)	4 1/2" PVC (440 - 560)
Well No. 8	611032	30° 13' 10.9" N	99° 13' 19.6" W	2,054	7-9-22	Middle Trinity	540	382.9 (7-14-22) 1,671.1	9" (0-540)	4 1/2" PVC (+2 - 420)	4 1/2" PVC (420 - 540)
Well No. 9	611034	30° 13' 10.6" N	99° 13' 14.9" W	2,043	7-12-22	Middle Trinity	560	372.6 (7-14-22) 1,670.4	9" (0-560)	4 1/2" PVC (+2 - 440)	4 1/2" PVC (440 - 560)
Well No. 10	611035	30° 12' 50.8" N	99° 13' 38.3" W	2,066	7-14-22	Middle Trinity	565	394.5 (7-19-22) 1,671.5	9" (0-565)	4 1/2" PVC (+2 - 445)	4 1/2" PVC (445 - 565)
Well No. 11	611037	30° 12' 47.2" N	99° 13' 36.1" W	2,075	7-16-22	Middle Trinity	560	405.6 (7-19-22) 1,669.4	9" (0-560)	4 1/2" PVC (+2 - 440)	4 1/2" PVC (440 - 560)

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

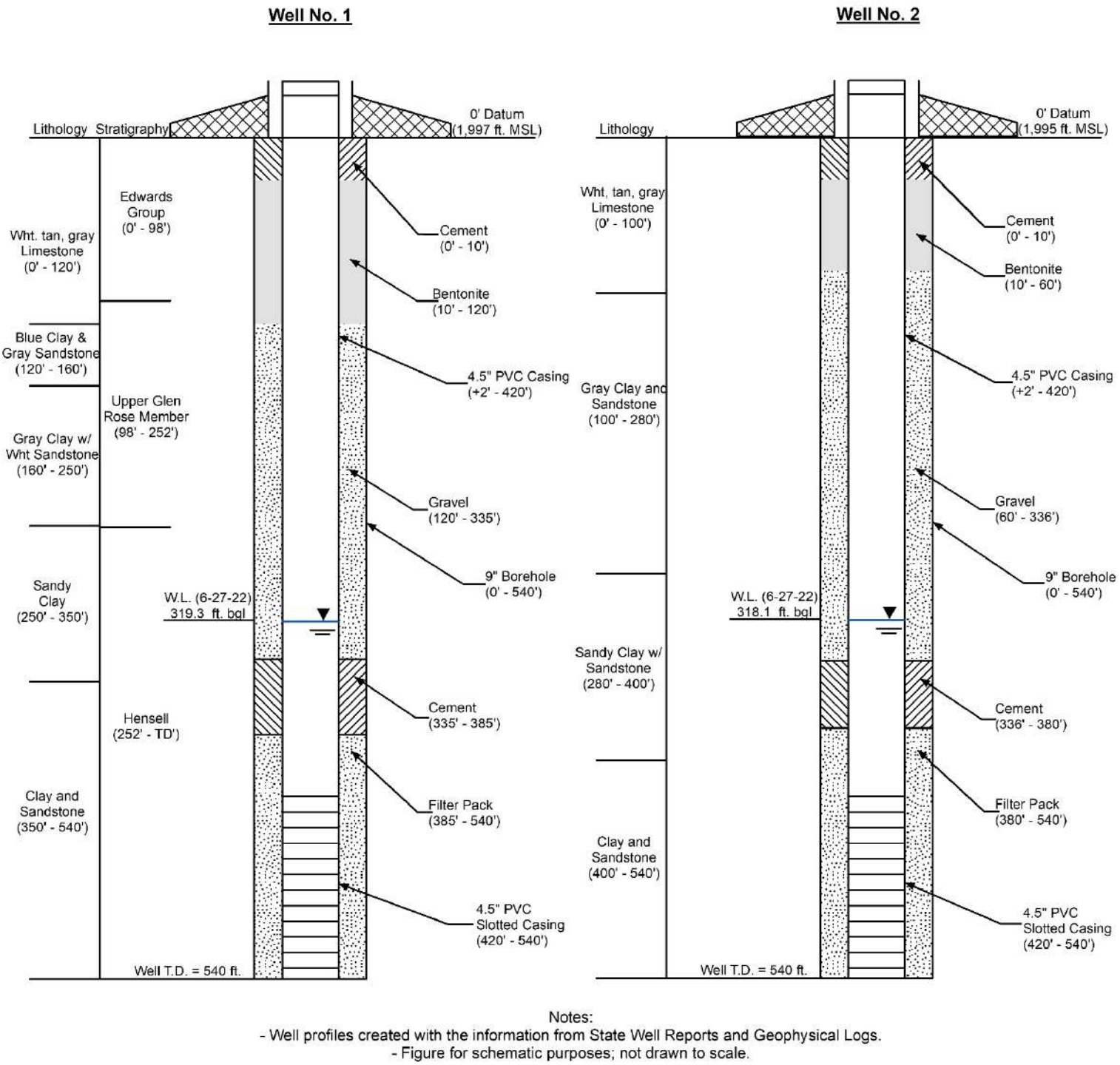


Figure 6: Well construction profiles of Wells No. 1 and No. 2

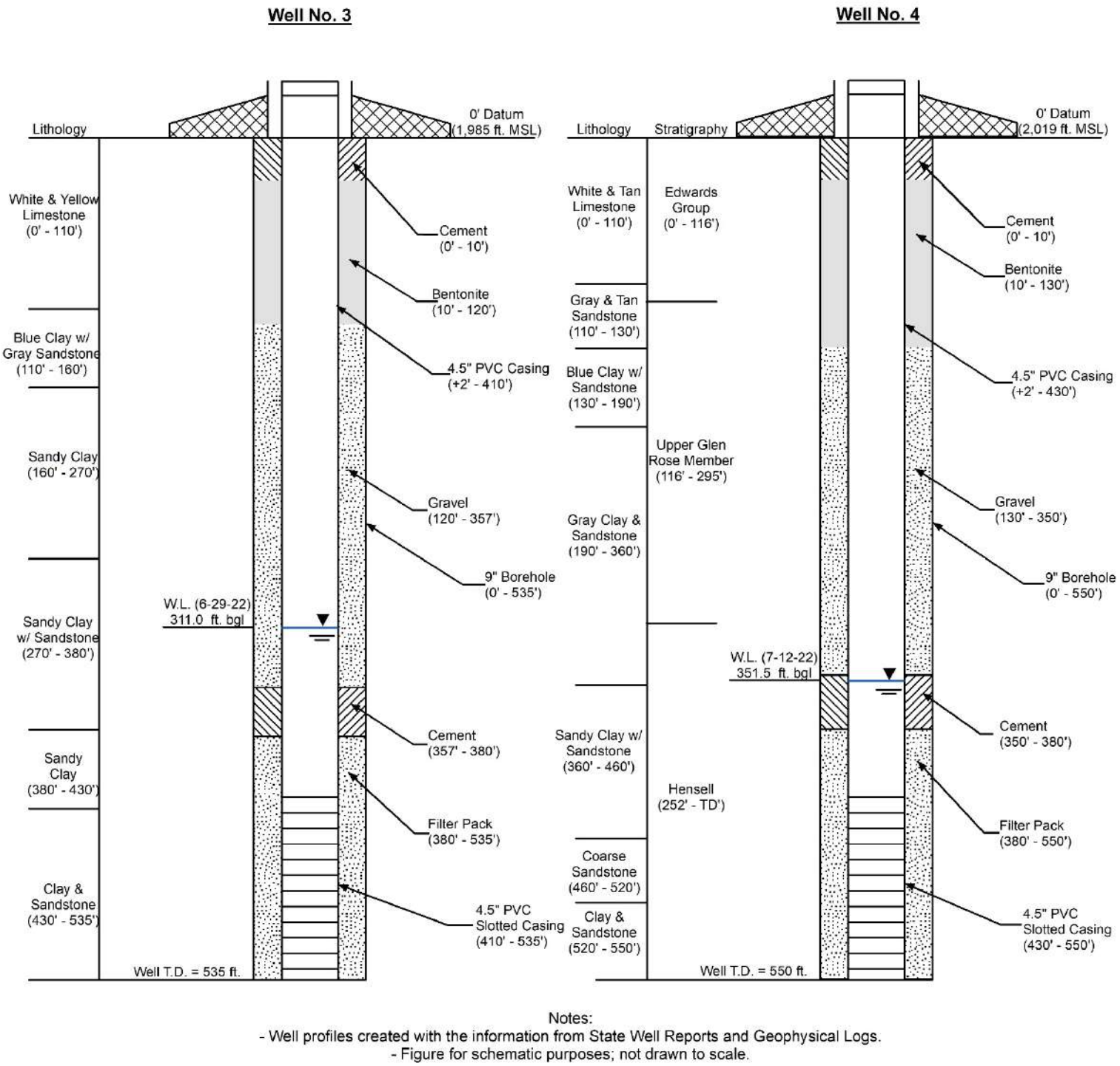


Figure 7: Well construction profiles of Wells No. 3 and No. 4

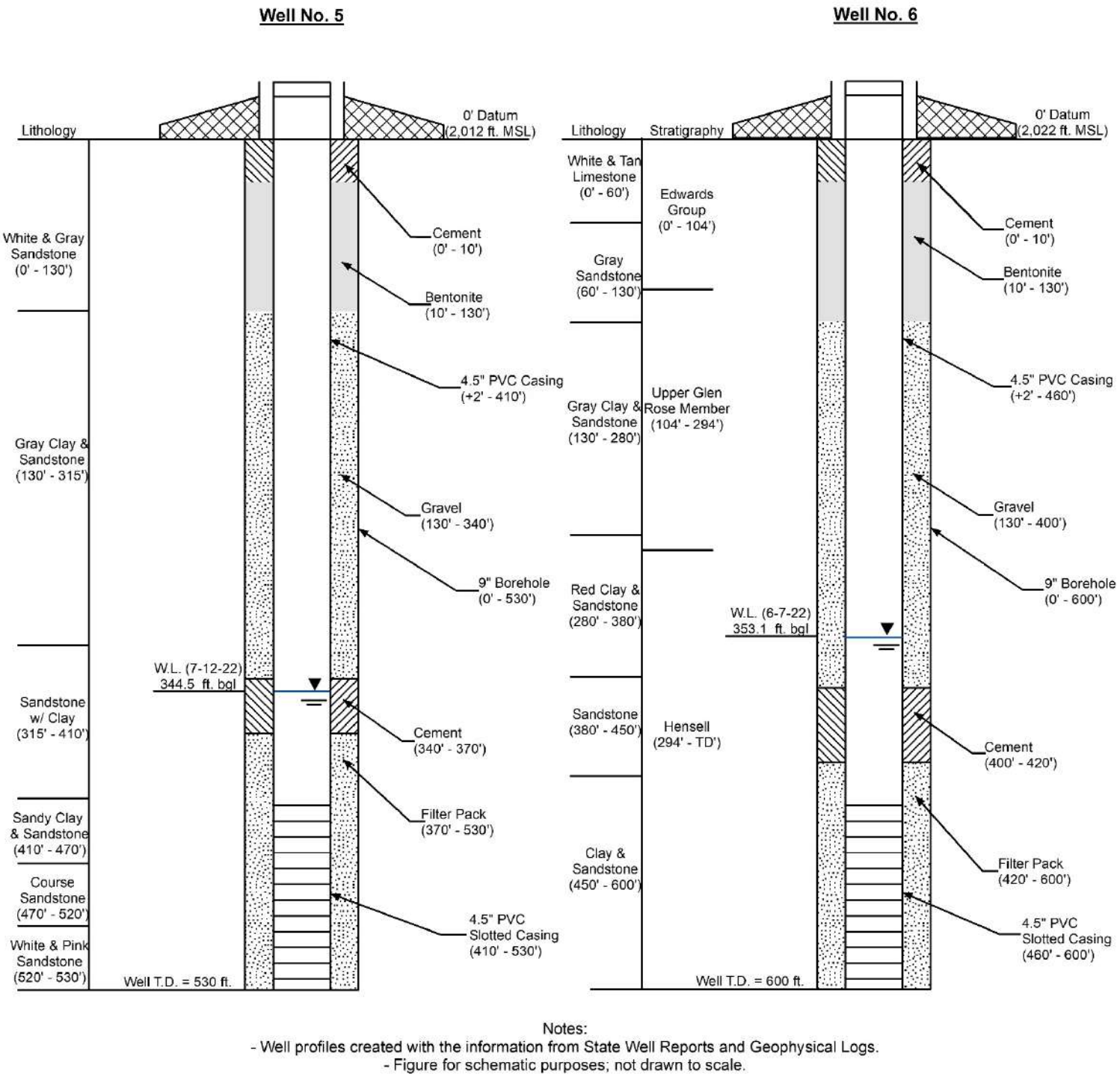


Figure 8: Well construction profiles of Wells No. 5 and No. 6

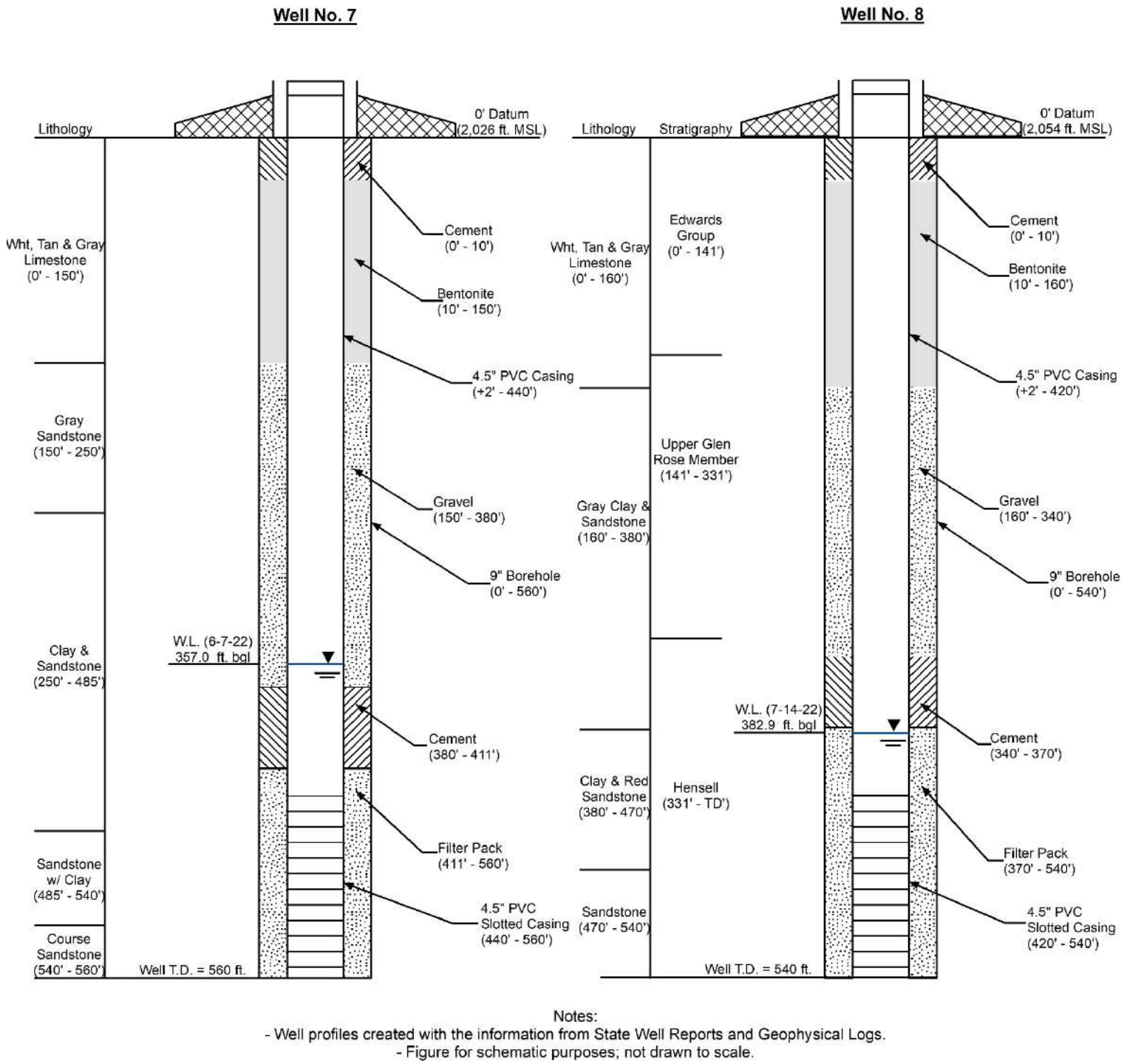


Figure 9: Well construction profiles of Wells No. 7 and No. 8

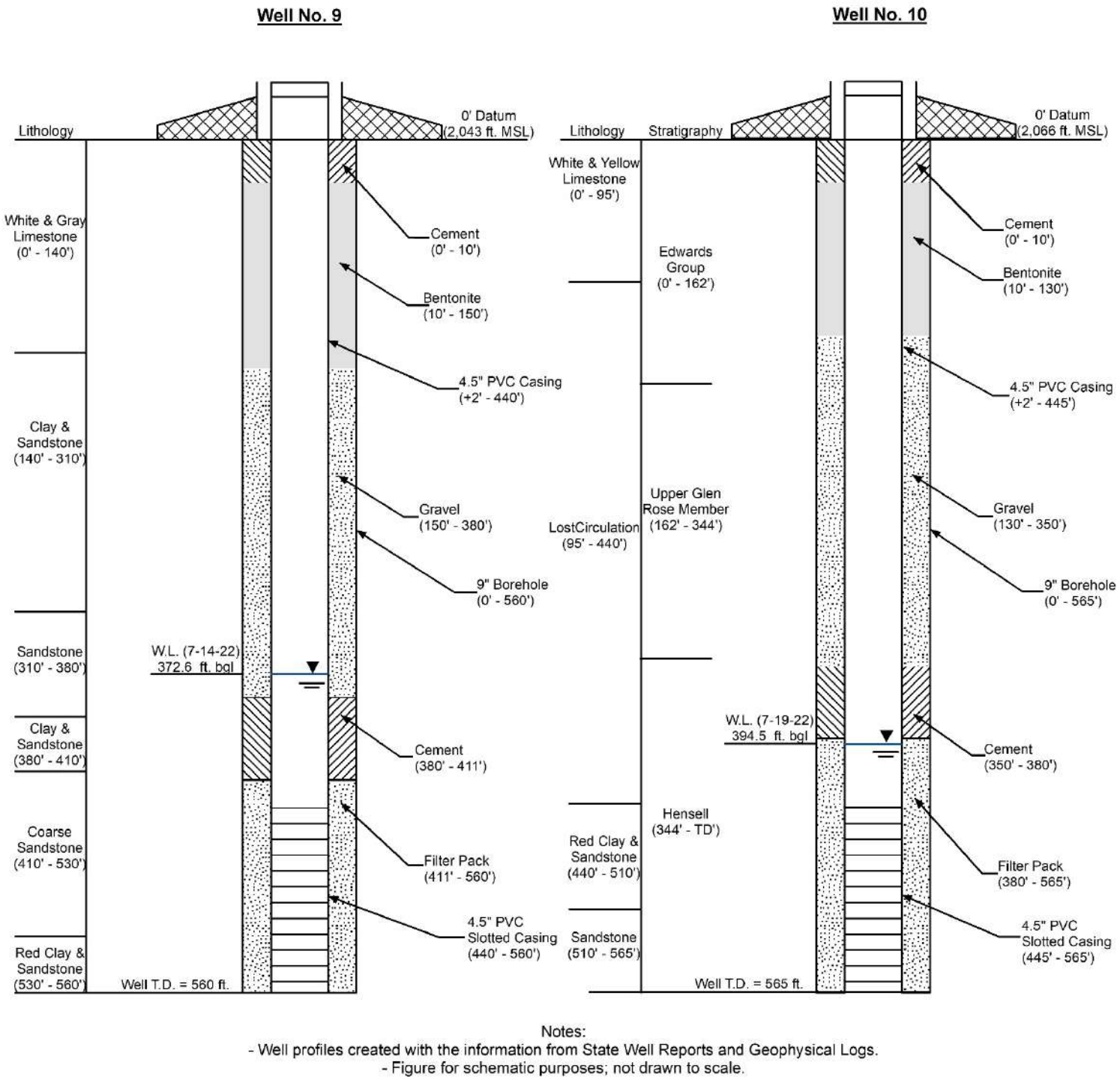


Figure 10: Well construction profiles of Wells No. 9 and No. 10

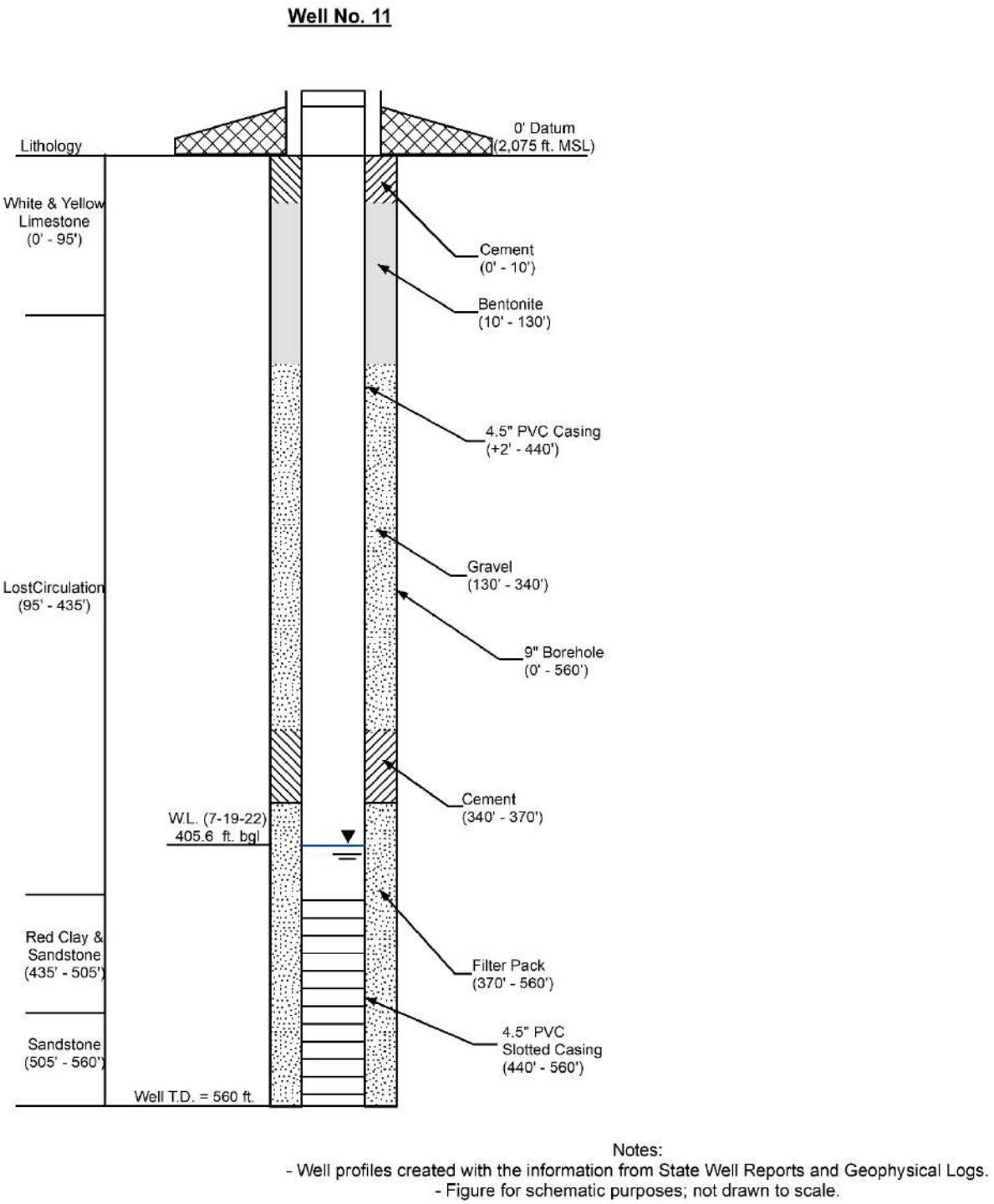


Figure 11: Well construction profile of Well No. 11

IV.2. Aquifer Testing

Six (6) aquifer tests were performed utilizing eleven (11) wells to assess the hydrogeologic properties of the Middle Trinity Aquifer within the proposed subdivision. The objective was to perform each aquifer test with a 24-hour pumping phase followed by a recovery phase in which the pumping well achieved 90% recovery. For each aquifer test, Texan Water set a submersible pump within the pumping well that was capable of varying its discharge rate. Prior to the start of the aquifer test, pressure transducers capable of measuring the water level and temperature at one-minute intervals were placed in the pumping and observation wells to gather data for the duration of each test. Flow meter readings and water levels were taken prior to, during, and at the conclusion of the tests. Each aquifer test had at least a 24-hour pumping phase followed by a recovery phase. The data from the aquifer test was analyzed using the Cooper-Jacob method. Table 3 provides a summary of the aquifer testing results; Appendix D provides the results of the aquifer analysis; and Appendix E provides well efficiency calculations for each well.

IV.2.1. Aquifer Test of Well No. 1 (June 27, 2022)

The aquifer test of Well No. 1 was conducted on June 27, 2022 with Well No. 1 as the observation well approximately 421 feet away from the pumping well. The pumping phase started at 10:54 A.M. on June 27 2022; 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. 1 was measured at 319.3 ft. bgl (1,677.7 ft. MSL) and 318.1 ft. bgl (1,676.9 ft. MSL) in Well No. 2.

Well No. 1 was pumped at an average rate of 14.4 gpm with a final measured pumping rate of 14.0 gpm with 29.9 feet of drawdown, resulting in a specific capacity of 0.47 gpm/ft. The Cooper-Jacob (1946) solution resulted in a calculated transmissivity of 149.9 ft^2/day, and a hydraulic conductivity of 0.7 ft./day. Due to the observed hydraulic connection between the two wells, we calculated a storativity value for Well No. 2 of 5.8×10^{-5} using the Cooper-Jacob solution. 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 pumping level slowly drew down reaching a stable pumping level prior to the conclusion of the pumping phase. The water level in the observation well showed a noticeable response directly related to starting and stopping the pump in Well No. 1 (Figure 13). After the pump was shut off, recovery was measured in both wells; the water level in the pumping well recovered 90% in approximately 4 hours. There were no aquifer boundary conditions observed during the testing.

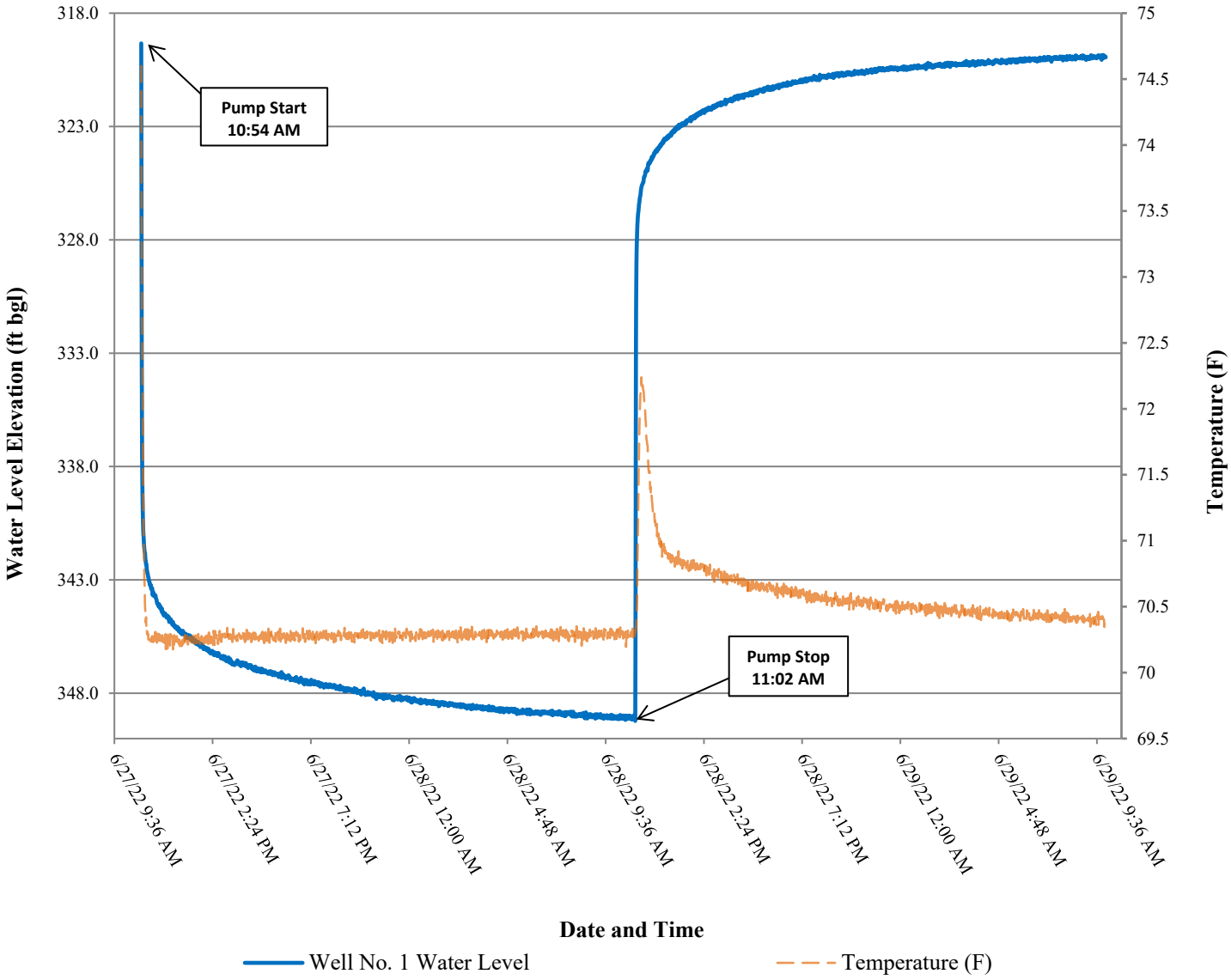


Figure 12: Aquifer test hydrograph of Well No. 1 (June 27, 2022)

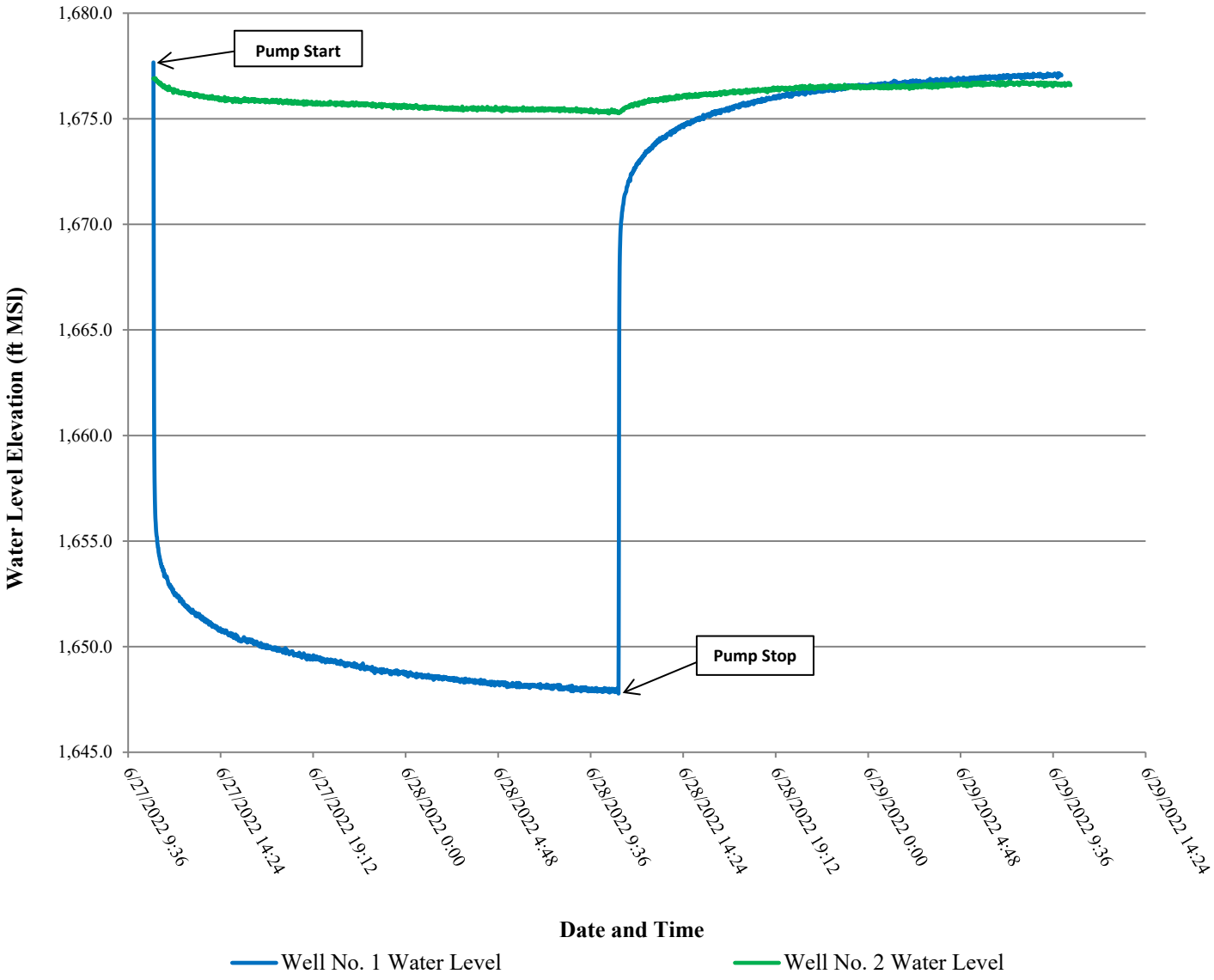


Figure 13: Aquifer test hydrograph of Well No. 1 and Observation Well No. 2 (June 27, 2022)

IV.2.2. Aquifer Test of Well No. 3 (June 29, 2022)

The aquifer test of Well No. 3 was conducted on June 29, 2022 with Well No. 2 as the observation well approximately 404 feet away from the pumping well. The pumping phase started at 11:04 A.M. on June 29 2022; the water level was monitored for 24.1 hours of pumping and for 47.5 hours of recovery. Prior to the pumping phase of the aquifer test, the static water level in Well No. 3 was measured at 311.0 ft. bgl (1,674.0 ft. MSL) and 318.4 ft. bgl (1,676.7 ft. MSL) in Well No. 2.

Well No. 3 was pumped at an average rate of 15 gpm with a final measured pumping rate of 14.5 gpm with 23.83 feet of drawdown, resulting in a specific capacity of 0.61 gpm/ft. The Cooper-Jacob (1946) solution resulted in a calculated transmissivity of 229.3 ft^2/day, and a hydraulic conductivity of 1.0 ft./day. Due to the observed hydraulic connection between the two wells, we calculated a storativity value for Well No. 2 of 4.1×10^{-5} using the Cooper-Jacob solution. 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 pumping level slowly drew down reaching a stable pumping level prior to the conclusion of the pumping phase. A small fluctuation was measured approximately 6 hours into 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 15). After the pump was shut off, recovery was measured in both wells; the water level in the pumping well recovered 90% in approximately 4 hours. There were no aquifer boundary conditions observed during the testing.

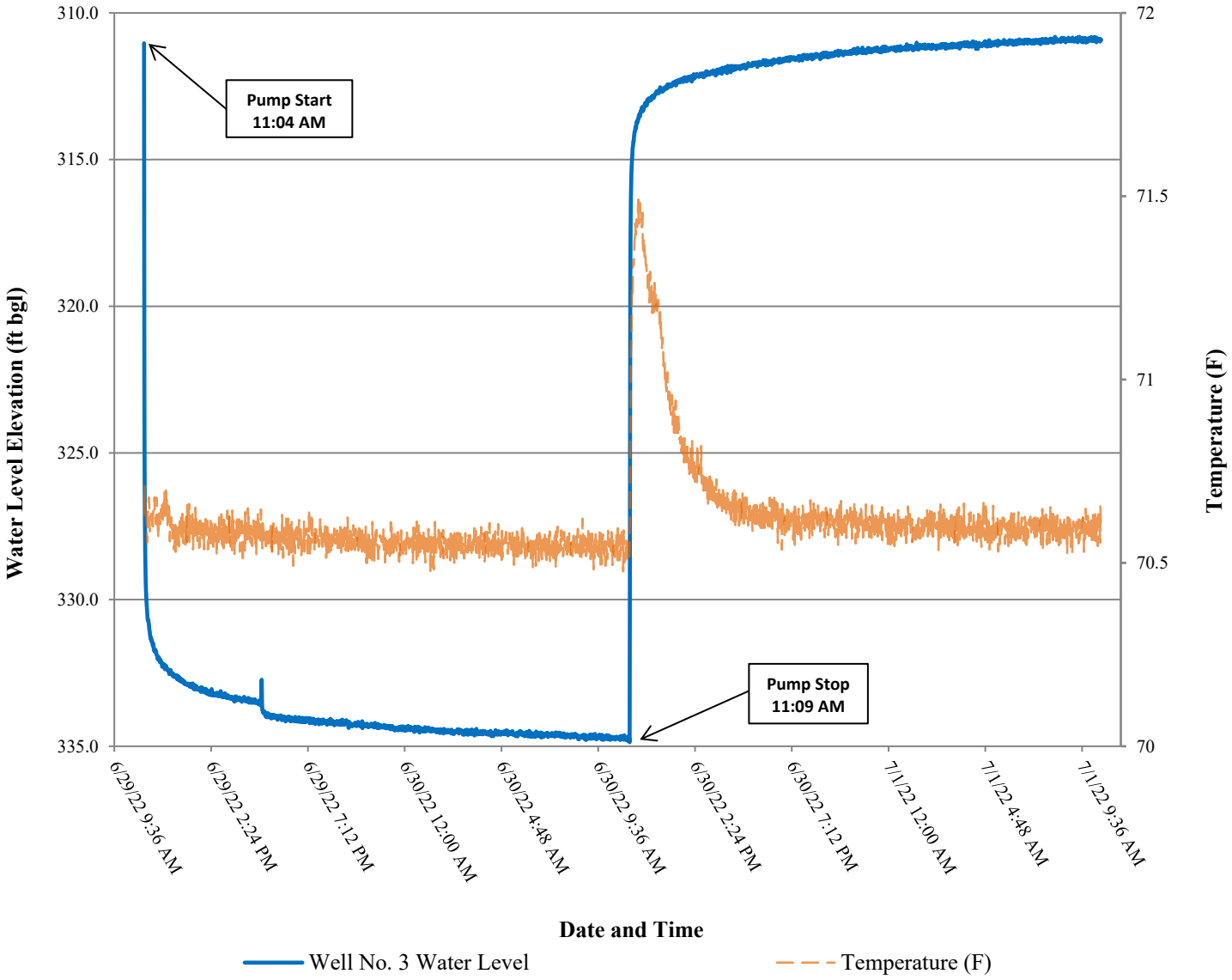


Figure 14: Aquifer test hydrograph of Well No. 3 (June 29, 2022)

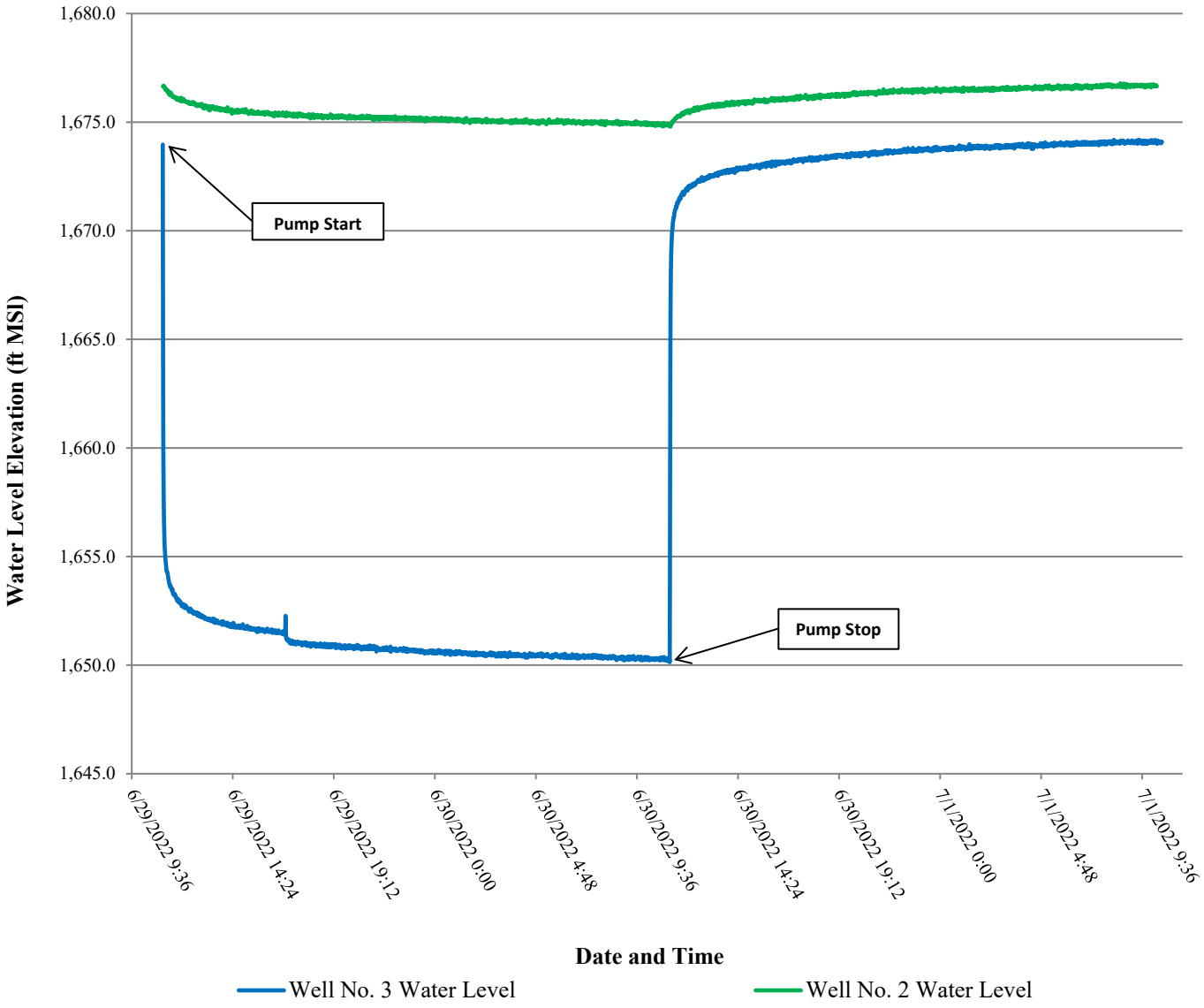


Figure 15: Aquifer test hydrograph of Well No. 3 and Observation Well No. 2 (June 29, 2022)

IV.2.3. Aquifer Test of Well No. 4 (July 12, 2022)

The aquifer test of Well No. 4 was conducted on July 12, 2022 with Well No. 5 as the observation well approximately 410 feet away from the pumping well. The pumping phase started at 10:51 A.M. on July 12, 2022; the water level was monitored for 24.2 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. 4 was measured at 351.5 ft. bgl (1,667.5 ft. MSL) and 344.5 ft. bgl (1,667.5 ft. MSL) in Well No. 5.

Well No. 4 was pumped at an average rate of 14.1 gpm with a final measured pumping rate of 14.0 gpm with 6.41 feet of drawdown, resulting in a specific capacity of 2.18 gpm/ft. The Cooper-Jacob (1946) solution resulted in a calculated transmissivity of 611.9 ft^2/day, and a hydraulic conductivity of 3.1 ft./day. Due to the observed hydraulic connection between the two wells, we calculated a storativity value for Well No. 5 of 2.1 x 10^{-5} using the Cooper-Jacob solution. 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 pumping level remained steady for the remainder of the pumping phase. A small fluctuation was measured approximately 4 hours into the pumping phase. The water level in the observation well showed a noticeable response directly related to starting and stopping the pump in Well No. 4 (Figure 17). After the pump was shut off, recovery was measured in both wells; the water level in the pumping well recovered 90% in approximately 2.5 hours. There were no aquifer boundary conditions observed during the testing.

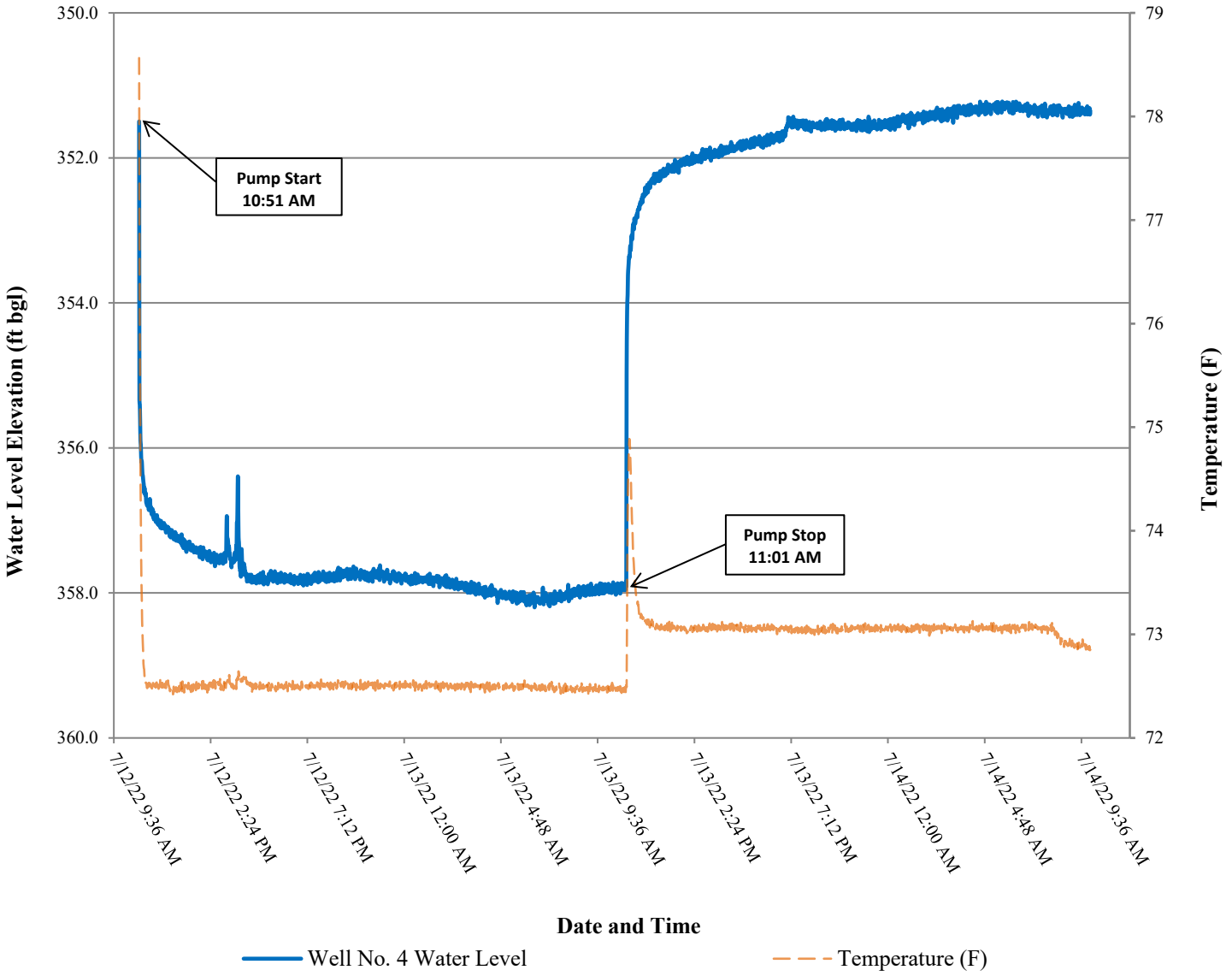


Figure 16: Aquifer test hydrograph of Well No. 4 (July 12, 2022)

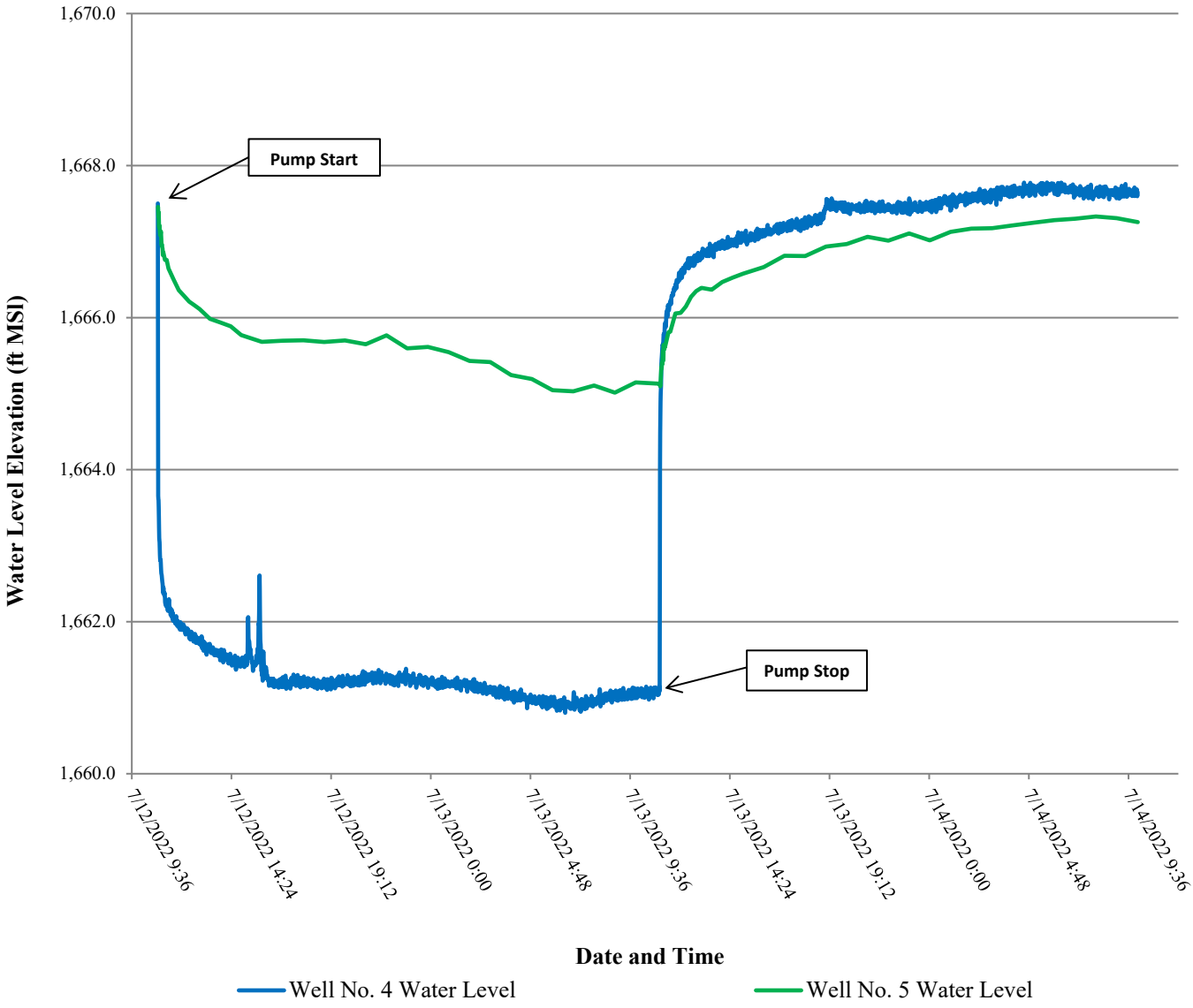


Figure 17: Aquifer test hydrograph of Well No. 4 and Observation Well No. 5 (July 12, 2022)

IV.2.4. Aquifer Test of Well No. 6 (June 7, 2022)

The aquifer test of Well No. 6 was conducted on June 7, 2022 with Well No. 7 as the observation well approximately 374 feet away from the pumping well. The pumping phase started at 10:45 A.M. on June 7, 2022; the water level was monitored for 24.0 hours of pumping and for 24.2 hours of recovery. Prior to the pumping phase of the aquifer test, the static water level in Well No. 6 was measured at 353.1 ft. bgl (1,669.0 ft. MSL) and 357.0 ft. bgl (1,669.0 ft. MSL) in Well No. 7.

Well No. 6 was pumped at an average rate of 14.75 gpm with a final measured pumping rate of 14.5 gpm with 4.44 feet of drawdown, resulting in a specific capacity of 3.26 gpm/ft. The Cooper-Jacob (1946) solution resulted in a calculated transmissivity of 791.9 ft^2/day, and a hydraulic conductivity of 3.2 ft./day. Due to the observed hydraulic connection between the two wells, we calculated a storativity value for Well No. 7 of 6.7 x 10^{-5} using the Cooper-Jacob solution. 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 pumping level remained steady for the remainder of the pumping phase. The water level in the observation well showed a noticeable response directly related to starting and stopping the pump in Well No. 6 (Figure 19). After the pump was shut off, recovery was measured in both wells; the water level in the pumping well recovered 90% in approximately 13 hours. There were no aquifer boundary conditions observed during the testing.

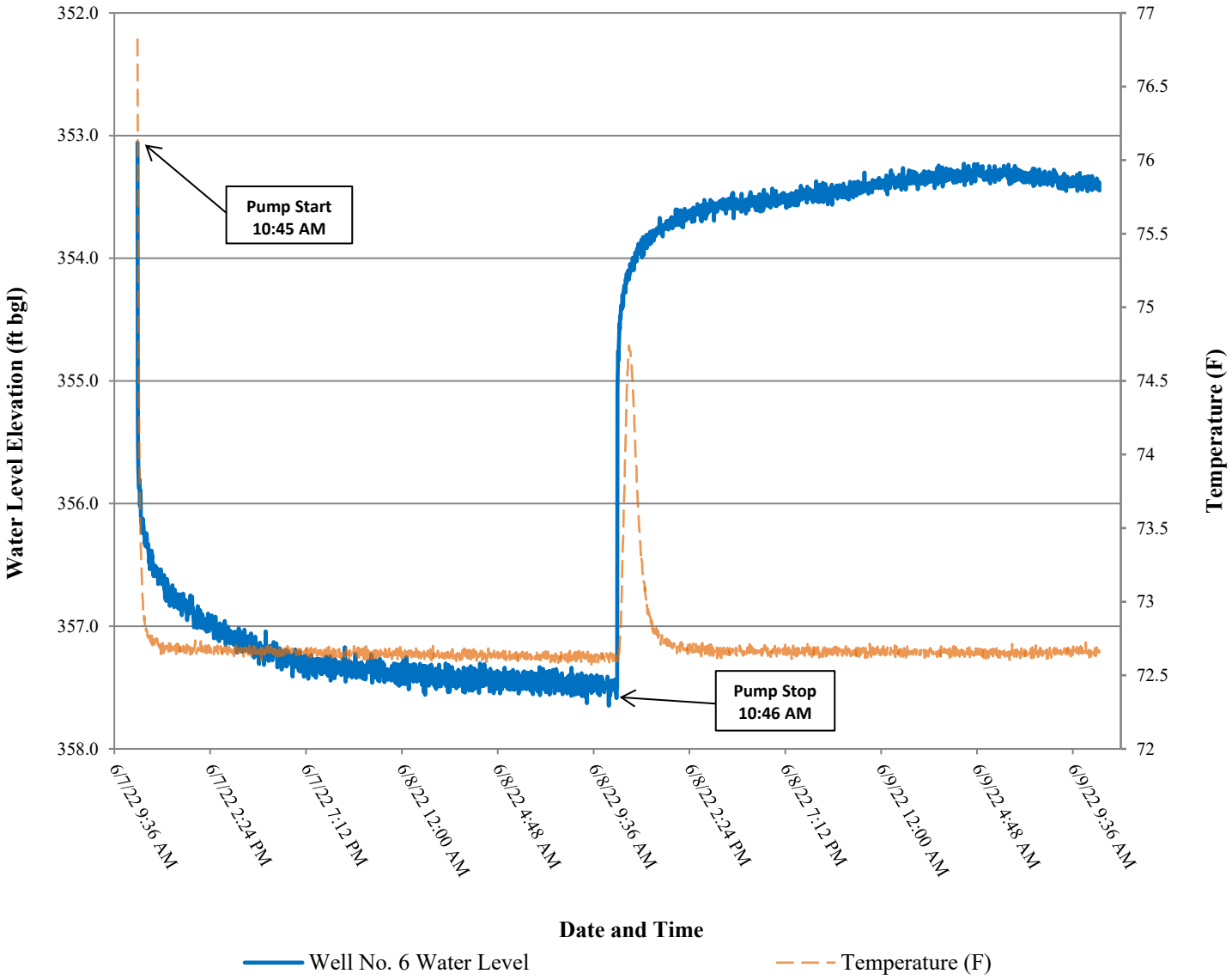


Figure 18: Aquifer test hydrograph of Well No. 6 (June 7, 2022)

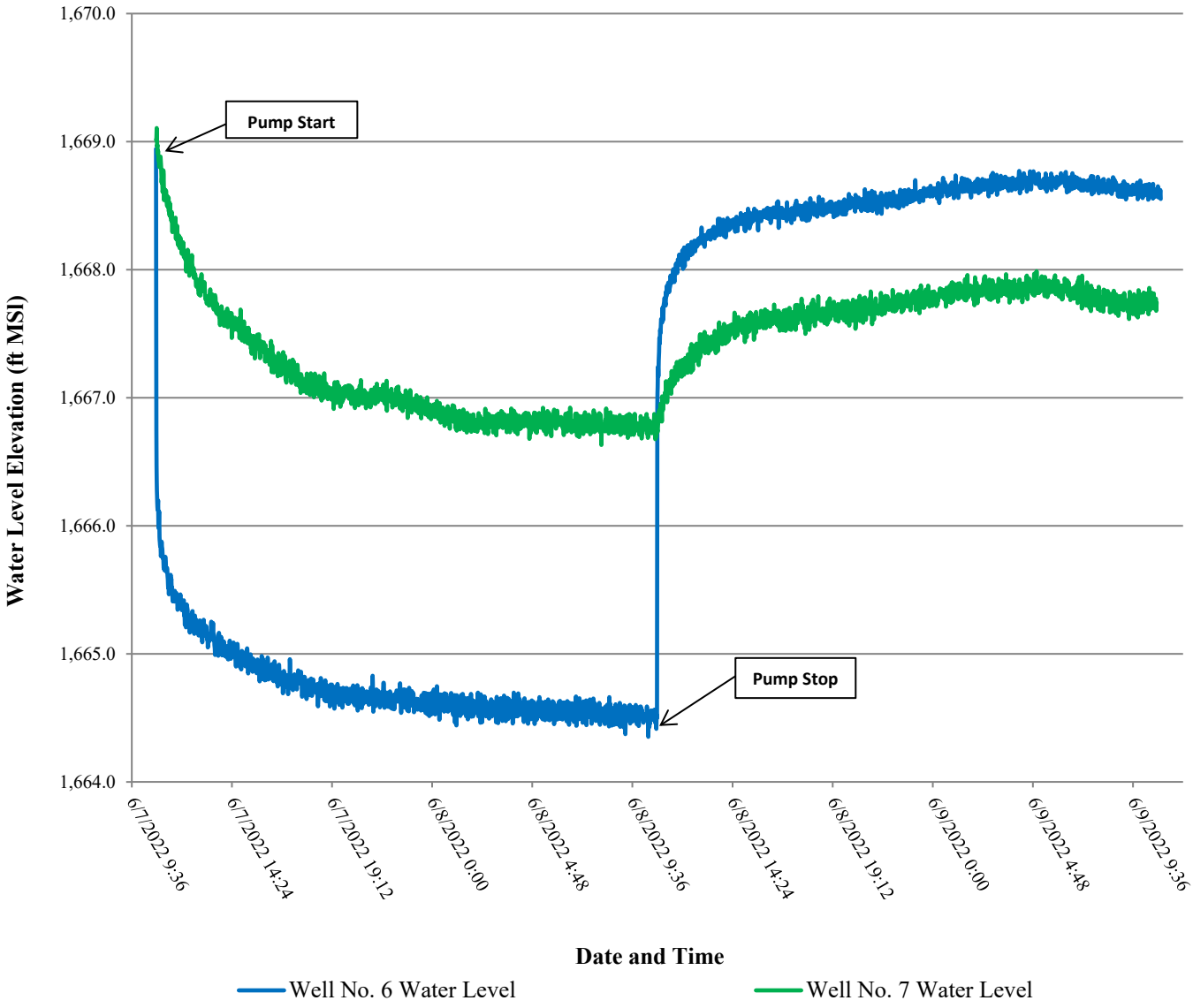


Figure 19: Aquifer test hydrograph of Well No. 6 and Observation Well No. 7 (June 7, 2022)

IV.2.5. Aquifer Test of Well No. 8 (July 14, 2022)

The aquifer test of Well No. 8 was conducted on July 14, 2022 with Well No. 9 as the observation well approximately 405 feet away from the pumping well. The pumping phase started at 11:04 A.M. on July 14, 2022; the water level was monitored for 24.1 hours of pumping and for 70.2 hours of recovery. Prior to the pumping phase of the aquifer test, the static water level in Well No. 8 was measured at 382.9 ft. bgl (1,671.1 ft. MSL) and 372.6 ft. bgl (1,670.4 ft. MSL) in Well No. 9.

Well No. 8 was pumped at an average rate of 13.9 gpm with a final measured pumping rate of 13.5 gpm with 55.01 feet of drawdown, resulting in a specific capacity of 0.25 gpm/ft. The Cooper-Jacob (1946) solution resulted in a calculated transmissivity of 114.4 ft^2/day, and a hydraulic conductivity of 0.7 ft./day. Due to the observed hydraulic connection between the two wells, we calculated a storativity value for Well No. 9 of 3.4×10^{-5} using the Cooper-Jacob solution. 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 pumping rate was reduced to keep the water level from reaching the pump. After the pumping rate was reduced, the water level quickly recovered and remained stable for the remainder of the pumping phase. The water level in the observation well showed a noticeable response directly related to starting and stopping the pump in Well No. 8 (Figure 21). After the pump was shut off, recovery was measured in the pumping well. The water level in the observation well remained steady once the pumping phase was completed and did not recover to the static water level measured prior to the start of the pumping phase. The water level in the pumping well recovered 90% in approximately 6 minutes. There were no aquifer boundary conditions observed during the testing.

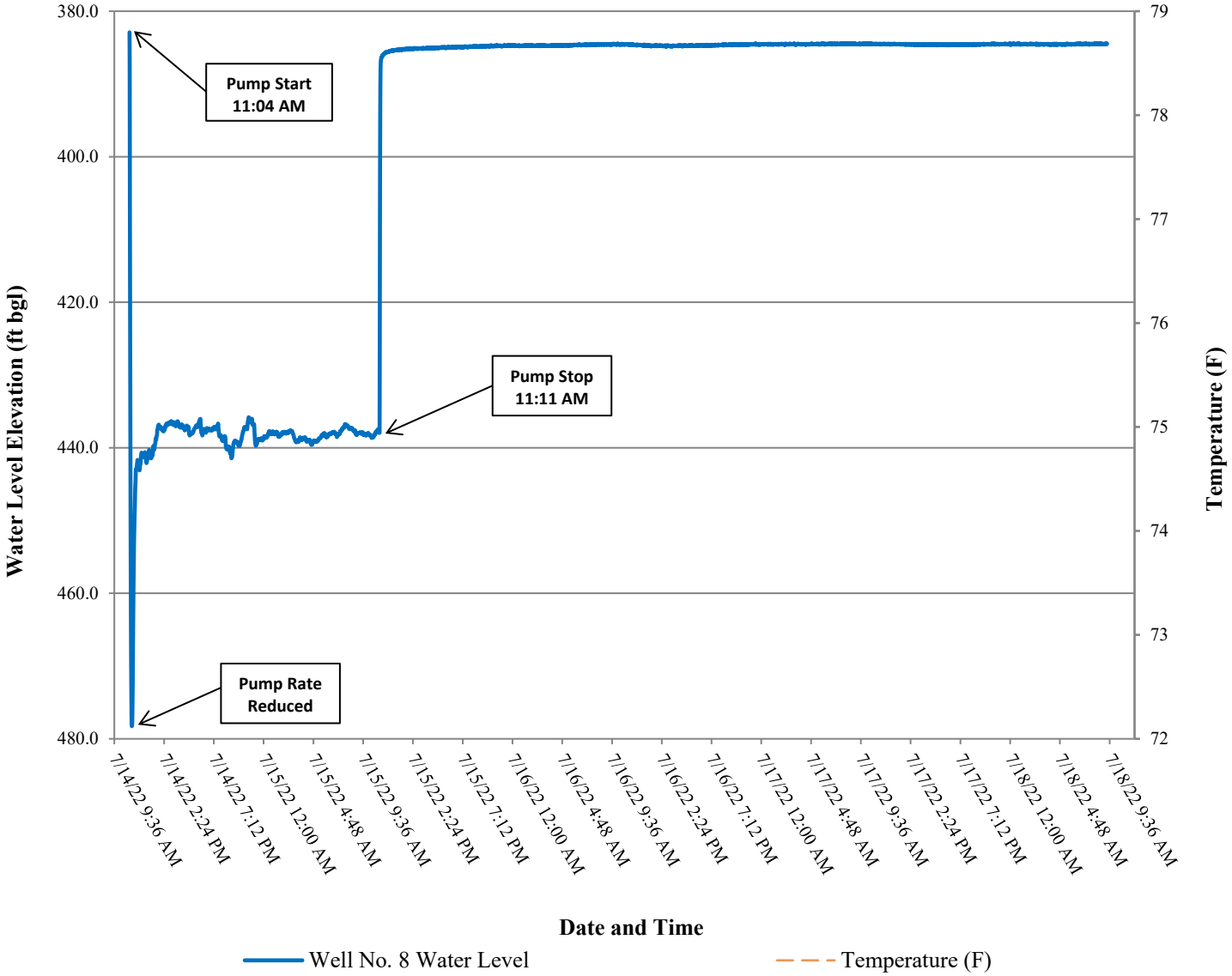


Figure 20: Aquifer test hydrograph of Well No. 8 (July 14, 2022)

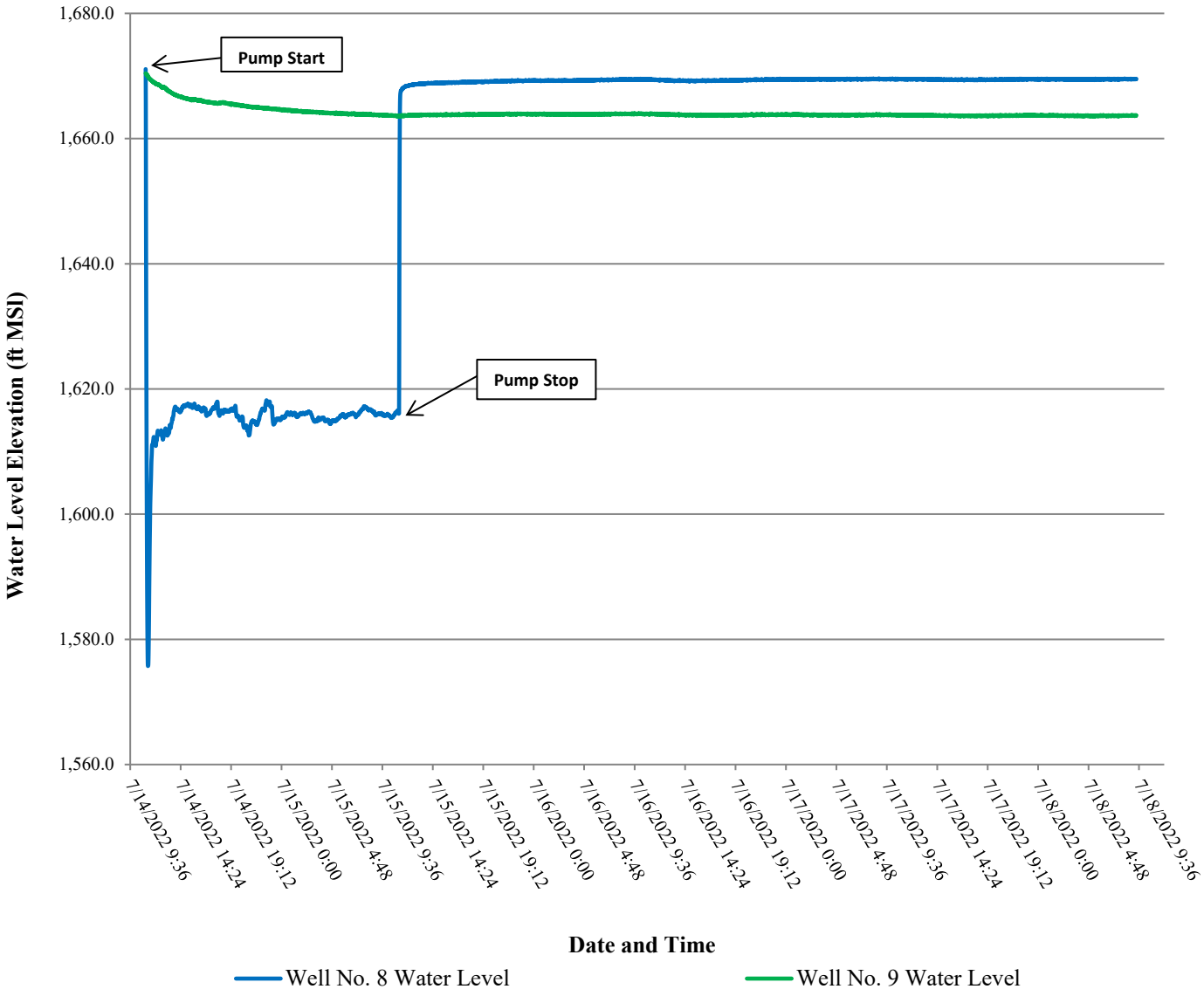


Figure 21: Aquifer test hydrograph of Well No. 8 and Observation Well No. 9 (July 14, 2022)

IV.2.6. Aquifer Test of Well No. 10 (July 19, 2022)

The aquifer test of Well No. 10 was conducted on July 19, 2022 with Well No. 11 as the observation well approximately 405 feet away from the pumping well. The pumping phase started at 10:49 A.M. on July 19, 2022; the water level was monitored for 24.4 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. 10 was measured at 394.5 ft. bgl (1,671.5 ft. MSL) and 405.6 ft. bgl (1,669.4 ft. MSL) in Well No. 11.

Well No. 10 was pumped at an average rate of 14.1 gpm with a final measured pumping rate of 14.0 gpm with 12.38 feet of drawdown, resulting in a specific capacity of 1.13 gpm/ft. The Cooper-Jacob (1946) solution resulted in a calculated transmissivity of 441.5 ft^2/day, and a hydraulic conductivity of 2.6 ft./day. Due to the observed hydraulic connection between the two wells, we calculated a storativity value for Well No. 11 of 2.8 x 10^{-5} using the Cooper-Jacob solution. 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 pumping level remained steady for the remainder of the pumping phase. The water level in the observation well showed a noticeable response directly related to starting and stopping the pump in Well No. 10 (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 4 hours. There were no aquifer boundary conditions observed during the testing.

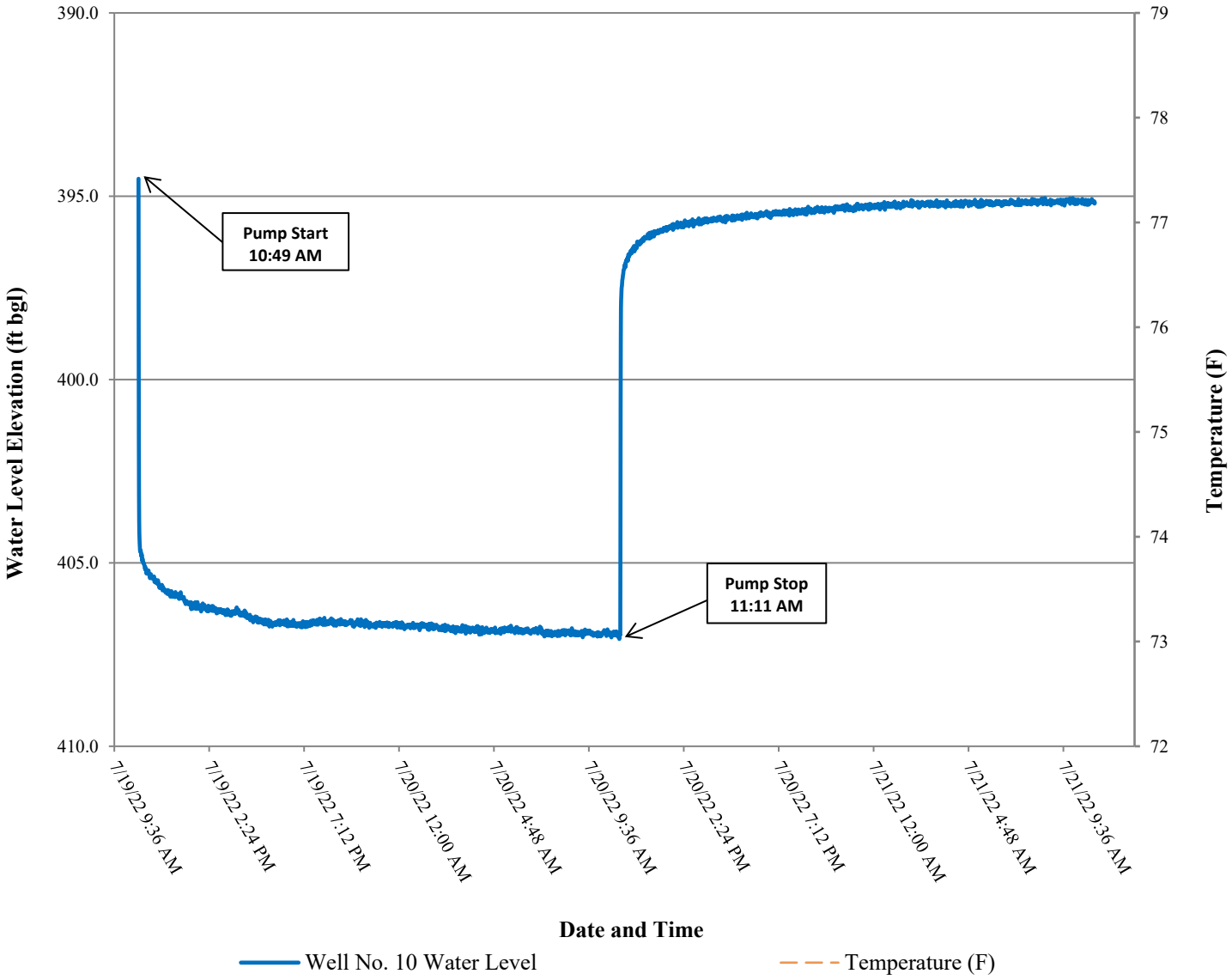


Figure 22: Aquifer test hydrograph of Well No. 10 (July 19, 2022)

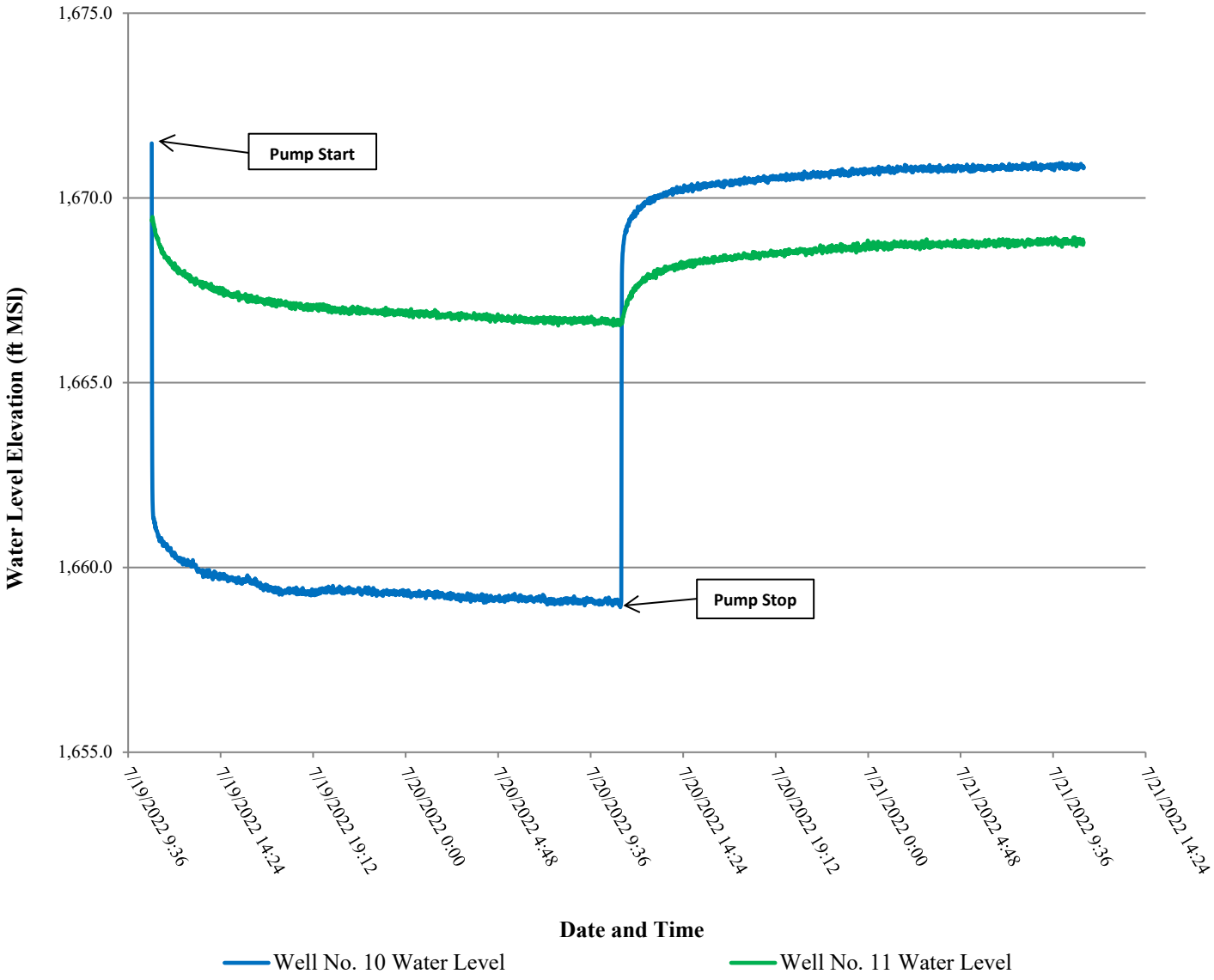


Figure 23: Aquifer test hydrograph of Well No. 10 and Observation Well No. 11 (July 19, 2022)

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
Jun. 7, 2022	No. 6	14.75	14.5	4.44	3.26	791.9	-	3.2	246.9	129%
	No. 7	-	-	2.28	-	461.9	6.7 x 10-5	2.3	203.0	-
Jun. 27, 2022	No. 1	14.4	14.0	29.89	0.47	149.9	-	0.7	220.7	91%
	No. 2	-	-	1.65	-	742.7	5.8 x 10-5	3.4	221.9	-
Jun. 29, 2022	No. 3	15.0	14.5	23.83	0.61	229.3	-	1.0	224.0	80%
	No. 2	-	-	1.86	-	731.6	4.1 x 10-5	3.3	221.9	-
Jul. 12, 2022	No. 4	14.1	14.0	6.41	2.18	611.9	-	3.1	198.5	117%
	No. 5	-	-	2.36	-	552.0	2.1 x 10-5	3.0	185.5	-
Jul. 14, 2022	No. 8	13.5	13.9	55.01	0.25	114.4	-	0.7	157.1	64%
	No. 9	-	-	6.80	-	89.98	3.4 x 10-5	0.5	187.4	-
Jul. 19, 2022	No. 10	14.1	14.0	12.38	1.13	441.5	-	2.6	170.5	81%
	No. 11	-	-	2.81	-	366.3	2.8 x 10-5	2.4	154.4	-

Note: ft. = feet; gpm = gallons per minute; d = day, observation wells are highlighted in blue, aquifer thickness were based upon State Well Reports.

IV.3. Water Quality

A water quality sample was collected from each of the pumping wells at the end of the pumping phase. The samples were collected by Texan Water staff in a sealed container and stored on ice in a cooler. The samples were transported after collection to Pollution Control Services (PCS) and tested in accordance with Texas Administrative Code 230.9 (Determination of Groundwater Quality). Appendix F provides a copy of the water quality reports.

Table 4 provides the water quality summary of the samples. The results were compared to Texas Commission on Environmental Quality (TCEQ) Maximum Contaminant Levels (MCL) and Secondary Contaminant Levels (SCL). The results show all samples met the TCEQ MCLs and SCLs excluding the SCL for iron in Wells No. 4 and 6 and pH in Well No. 3. Concentrations above the SCL standards are not considered health risks but may affect the aesthetic quality of the water.

The water samples were also tested for the presence or absence of total coliform and E. coli. Total coliform bacteria were found to be present in Well Nos. 1, 4, 6, 8 and 10; E. coli was not present in the well. Presence of total coliform bacteria within a well that has recently been drilled is not uncommon. With additional proper chlorination of the wells, we anticipate that future samples will indicate the absence of total coliform bacteria.

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	6/28/22	21	724	1.39	0.028	<0.2	<0.01	7.1	55	340	432	**Present**/Absent
No. 3	6/30/22	22	714	1.15	0.012	0.3	<0.01	6.8	48	330	464	Absent/Absent
No. 4	7/13/22	14	708	1.02	0.9	0.3	0.013	7.1	49	360	368	**Present**/Absent
No. 6	6/7/22	16	695	0.92	0.89	0.3	0.018	7.5	40	350	292	**Present**/Absent
No. 8	7/15/22	18	765	1.24	0.085	<0.2	<0.01	7.4	72	370	452	**Present**/Absent
No. 10	7/20/22	14	714	0.98	0.098	<0.2	<0.01	7.2	54	350	408	**Present**/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 & conductivity).

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 0.342 hours per day (307.8 gallons per day). This pumping volume represents the total water demand at full build out of the subdivision per housing unit (0.34 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 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 may 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).

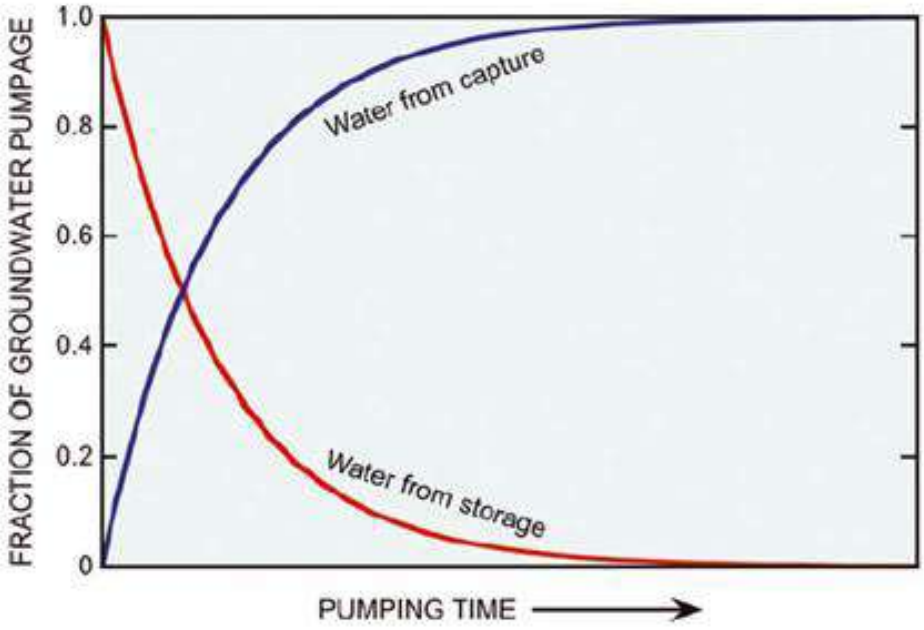


Figure 24: Water sources to a pumping well over time (from Konikow and Leake (2014)

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.

IV.4.1. Well Spacing

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) = 51.67 acre-feet/year;
- Total water demand (per housing unit) = 0.34 acre-feet/year = 307.8 gpd;
- The individual well will be pumped at 15 gpm for 0.342 hours per day (Table 5); and
- Median transmissivity (335.4 ft^2/day) and storativity ($3.75x10^{-5}$) 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.

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 2.43 feet. At a spacing of 250 feet, the well interference reduces to 1.24 feet. At a spacing of 500 feet, the well interference reduces further to 0.51 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 2.44 feet. At a spacing of 250 feet, the well interference reduces to 1.26 feet. At a spacing of 500 feet, the well interference reduces further to 0.52 feet.

From the distance drawdown calculations, we recommend that the Maverick 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	10.63	10.64	500	500

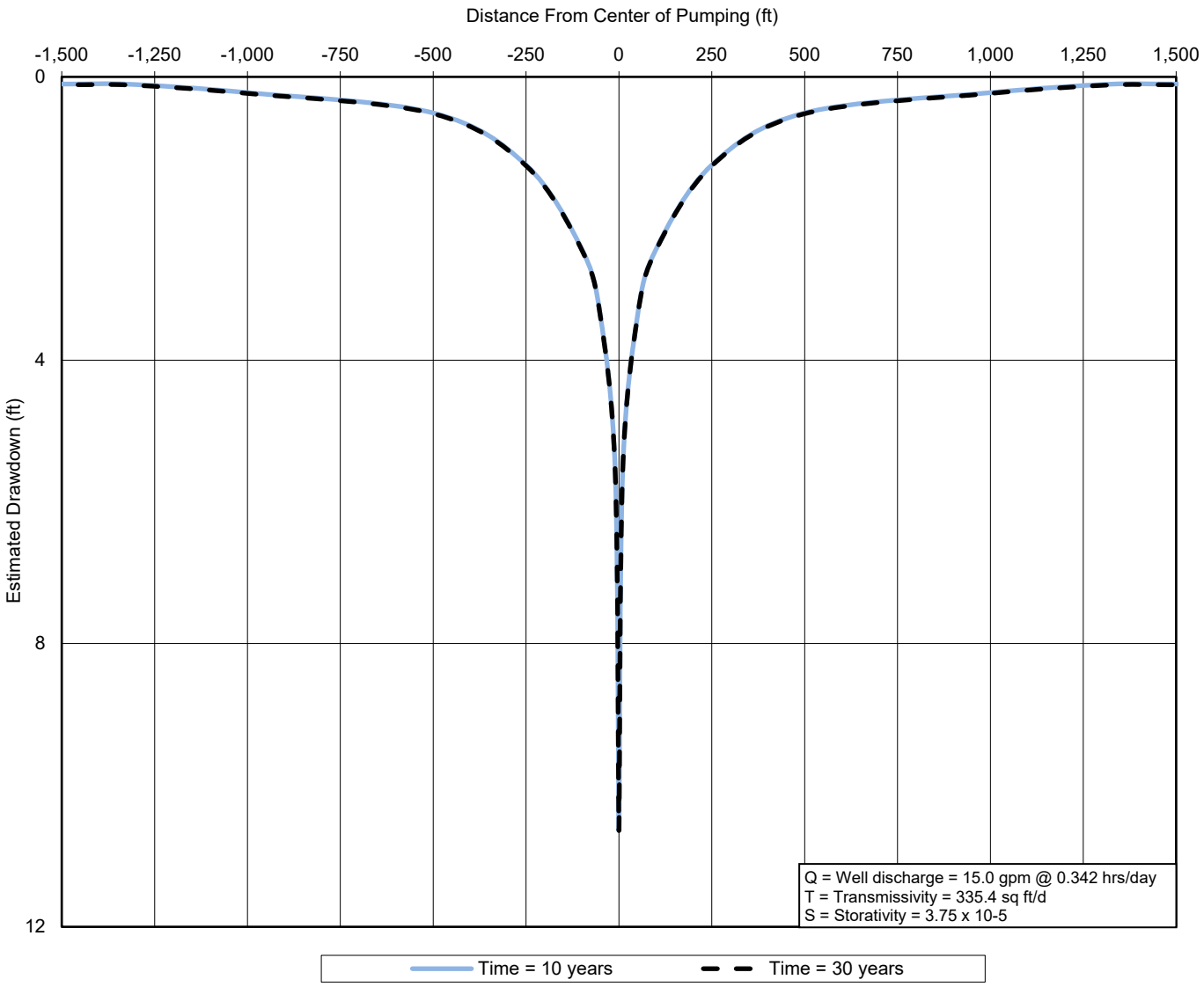


Figure 25: Distance drawdown plot (15 gpm)

V.4.2. Groundwater Model

A groundwater model was constructed using Aqtesolv (Version 4.5) with the Theis (1935)/Hantush (1961) solution to determine projected impacts from pumping at the proposed subdivision at full build out.

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

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

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).

V.4.3. Drawdown Analysis – Maverick Subdivision (150 Lots)

The groundwater model was utilized to determine the projected impacts from pumping solely from the subdivision. The groundwater model was designed to estimate drawdown at full buildout (150 lots) after 10 and 30 years of continuous production at a rate of 307.8 gallons per day (0.214 gpm) per well; the total production rate from the Middle Trinity Aquifer equates to approximately 32.1 gpm. The groundwater model was simplified by concentrating pumping to one (1) central locality within the proposed subdivision continuously pumping 32.1 gpm in order to provide a simple solution for estimating long-term effects from pumping multiple wells within the proposed subdivision (Figure 26).

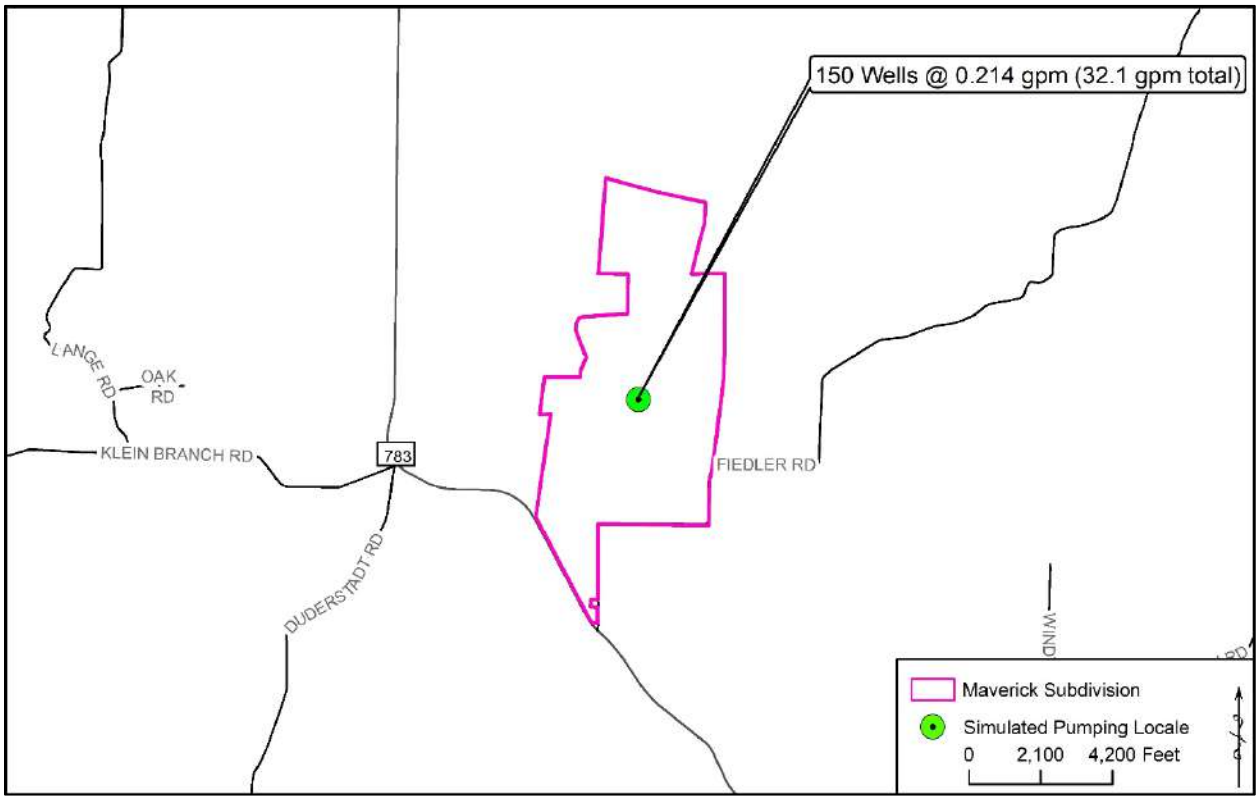


Figure 26: Map showing location of simulated pumping well

In an effort to model the aquifer impacts from the proposed pumping in accordance with site-specific data, the following values calculated from the Maverick aquifer testing were utilized:

- Transmissivity: 335.4 ft.^{2}/day (median transmissivity from the pumping wells); and,
- Storativity: 3.75 x 10^{-5} (median storativity).

Model Results - 10 Years

The results of the model run after 10 years of continuous pumping are summarized in Figure 27, with tabulated results in Table 6. The static water level, modeled water level, projected water level pumping at 307.8 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.

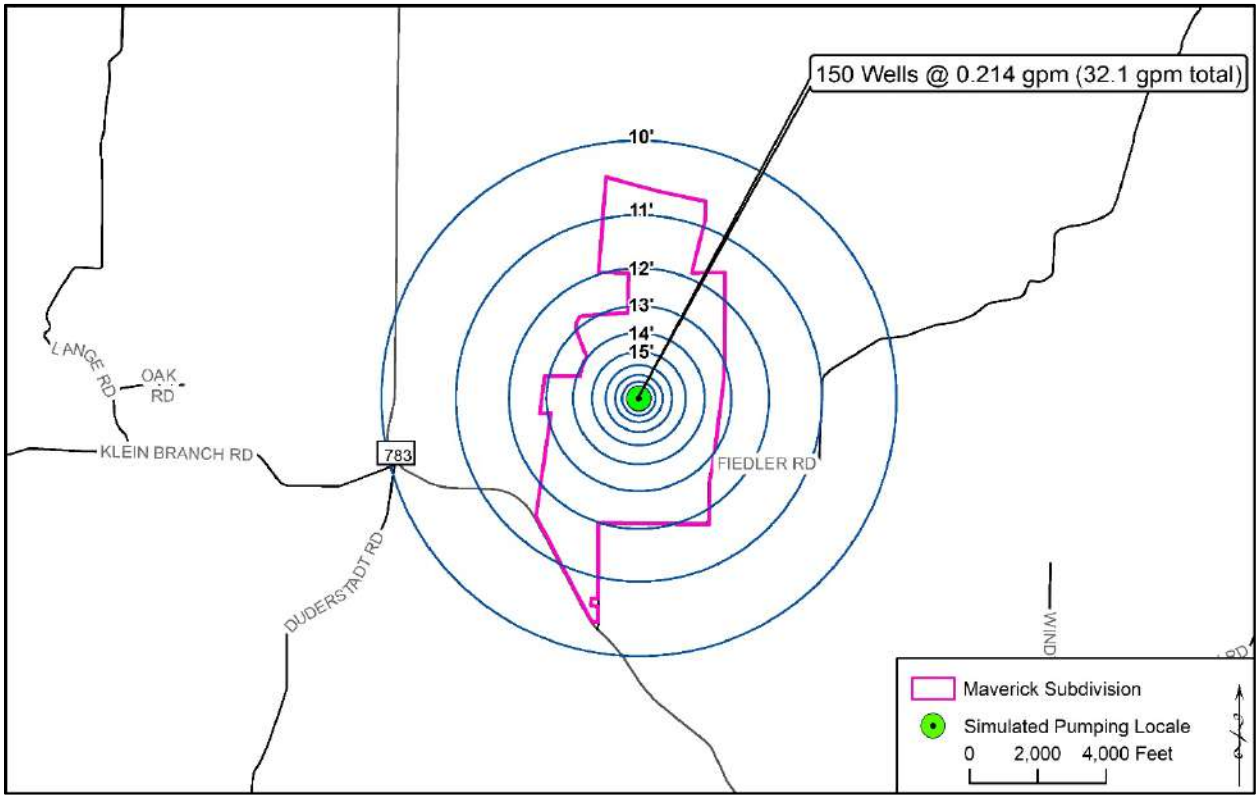


Figure 27: Modeled drawdown after 10 years of production at Maverick

The drawdown calculated after 10 years of production at 307.8 gallons per day per well results in approximately 14 feet of drawdown at the nearest subdivision boundary (1,826 feet away) (Figure 27). 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 the aquifer test and a median storativity value (3.75x10^{-5}) pumping at 307.8 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 @ 307.8 gpd (feet)	Pumping Water Level (ft. bgl)	Projected Water Level above Pump (ft)
No. 1	319.3	330.8	22.3	353.1	176.9
No. 3	311.0	322.7	15.0	337.7	187.3
No. 4	351.5	368.4	6.0	374.4	165.6
No. 6	353.1	368.9	4.7	373.6	216.4
No. 8	382.9	396.8	28.7	425.5	104.5
No. 10	394.5	406.3	8.1	414.4	140.6

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 28, with tabulated results in Table 7. The static water level, modeled water level, projected water level pumping at 307.8 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.

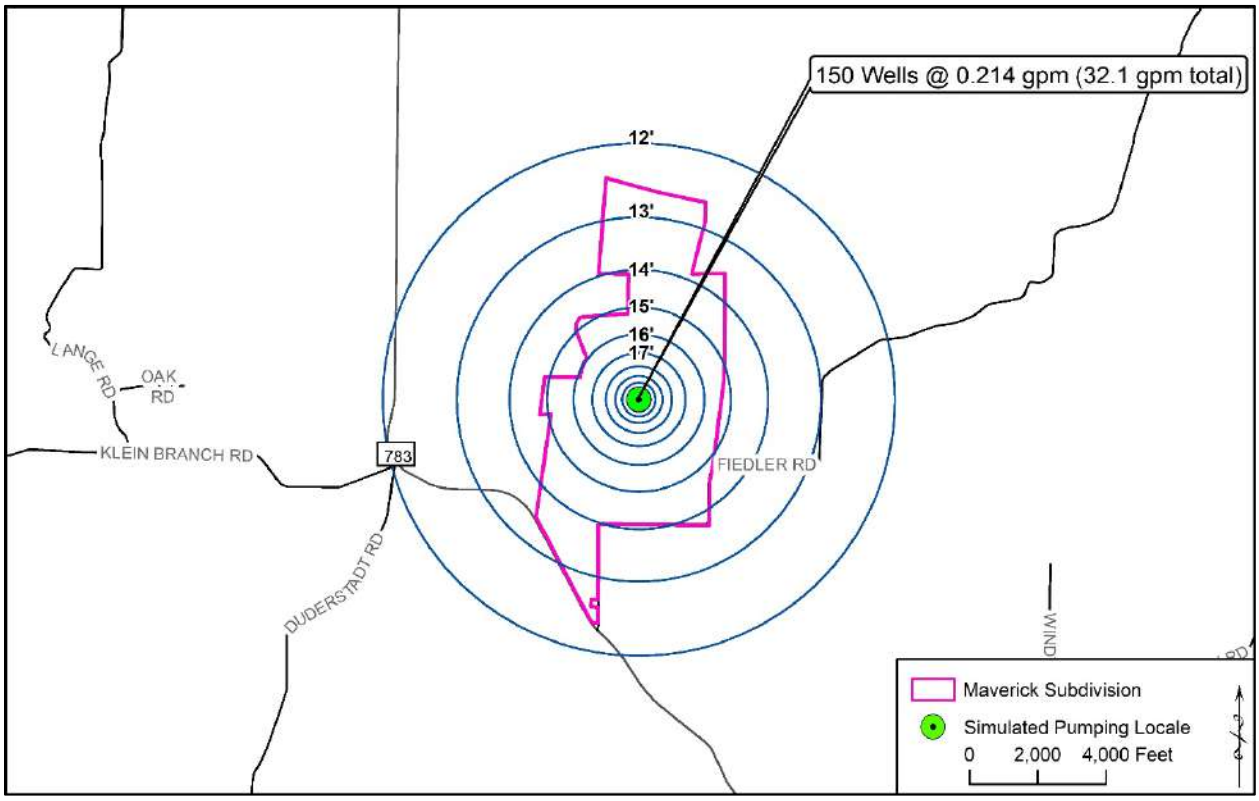


Figure 28: Modeled drawdown after 30 years of production at Maverick

The drawdown calculated after 30 years of production at 307.8 gallons per day per well results in approximately 16 feet of drawdown at the nearest subdivision boundary (1,826 feet away) (Figure 28). 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 ($3.75x10^{-5}$) value pumping at 307.8 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)	Modeled Water Level (ft. bgl; After 30 years)	Drawdown During Pumping Cycle @ 400 gpd (feet)	Pumping Water Level (ft. bgl)	Projected Water Level above Pump (ft)
No. 1	319.3	332.4	22.3	354.7	175.3
No. 3	311.0	324.4	15.0	339.4	185.6
No. 4	351.5	370.1	6.0	376.1	163.9
No. 6	353.1	370.5	4.7	375.2	214.8
No. 8	382.9	398.5	28.7	427.2	102.8
No. 10	394.5	408.0	8.1	416.1	138.9

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 Trinity Aquifer (Hensell Sand), 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 Maverick Subdivision exhibits variable yield and water quality and is susceptible to reduction in yield during prolonged drought. For these reasons we recommend that i) each homeowner construct their well as deep as practical to the base of the Hensell Sand Member within the Trinity Aquifer to provide the maximum possible yield and; ii) set their pumps as deep as practical to protect from lowering water levels during drought.

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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: Maverick Subdivision

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2. Any Previous Name Which Identifies the Tract of Land:
3. Property Owner's Name(s): HSW Land, LLC
Address: P.O. Box 661 Murphy, NC 28906
Phone:
Fax:
4. Plat Applicant's Name: MTX 960, LLC
Address: P.O. Box 661 Murphy, NC 28906
Phone:
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 5.5 miles south of Harper, TX located along Ranch Road (RR) 783.
7. Tax Assessor Parcel Number(s).
Book:
Map:
Parcel: Gillespie County: 38452, 38454, 38455, 5823, 6345 and 11302

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): 960.417
10. Number of Proposed Lots: 150
11. Average Size of Proposed Lots (acres): 6.40
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): 150 single family housing units
Average Number of Persons per Housing Unit: 2.5
Gallons of Water Required per Person per Day: 123
Water Demand per Housing Unit per Year (acre feet/year): 0.34
Total Expected Residential Water Demand per Year (acre feet/year): 51.67
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): 51.67
17. Sources of Information Used for Demand Estimates: Persons per household for Gillespie County from U.S. Census data and per capita usage per day from discussions with HCUWCD.

General Groundwater Resource Information (30 TAC §230.7)

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18. Identify and describe, using Texas Water Development Board names, the aquifer(s) which underlies the proposed subdivision: Middle Trintiy, Ellenburger-San Saba and Hickory Aquifers.

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 D)		
Efficiency of the pumped well: (See attached Table 3 & Appendix E)		
Transmissivity: (See attached Table 3 & Appendix D)		
Coefficient of storage: (See attached Table 3)		
Hydraulic conductivity: (See attached Table 3 & Appendix D)		
Were any recharge or barrier boundaries detected?	Yes	(No)
If yes, please describe:		
Thickness of aquifer(s): 154 – 247 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: SCLs for iron in Wells No. 4 and 6 and pH in Well No. 3.		

Groundwater Availability and Usability Statements (30 TAC §230.11(a) and (b))
36. Drawdown of the aquifer at the pumped well(s) is estimated to be 10.63 feet over a 10-year period and 10.64 feet over a 30-year period. **(See attached Tables 5)**
37. Drawdown of the aquifer at the property boundary is estimated to be 14 feet over a 10-year period and 16 feet over a 30-year period. **(See attached Section IV.4.3)**
38. The distance from the pumped well(s) to the outer edges of the cone(s)-of-depression is estimated to be 500 feet over a 10-year period and 500 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
Chapter 230 - Groundwater Availability Certification for Platting

Date: 8-1-22

Adopted July 9, 2008

Effective July 31, 2008

Appendix B

Geophysical Log

Geophysical Log

Well No. 1

GEO CAM

Borehole: WELL No.1

Logs: GAMMA, SPR

Water Well Logging & Video Recording Services

Geo Cam, Inc. 17118 Classen Rd, San Antonio, TX 78247 877-495-9121

Project: MAVERICK PROJECT
Client: **TEXAN WATER**
Location: N 30 14 26.89 W 99 13 05.15

Date: 7/5/2022
County: GILLESPIE
State: TX

BOREHOLE DATA

Drilling Contractor: TEXAN WATER
Elevation: 1949' GPS
Depth Ref: TC

Driller T.D. (ft) : 540'
Logger T.D. (ft) : 539'
Date Drilled: N/A

BIT RECORD				CASING RECORD		
RUN	BIT SIZE (in)	FROM (ft)	TO (ft)	SIZE/WGT/THK	FROM (ft)	TO (ft)
1	N/A			4.5" PVC	+2.1'	TD
2						
3						

Drill Method: AIR ROTARY
Hole Medium:
Viscosity:

Weight:
Mud Type:
Rm: at: Deg C

Fluid Level (ft) : 320'
Time Since Circ:

GENERAL DATA

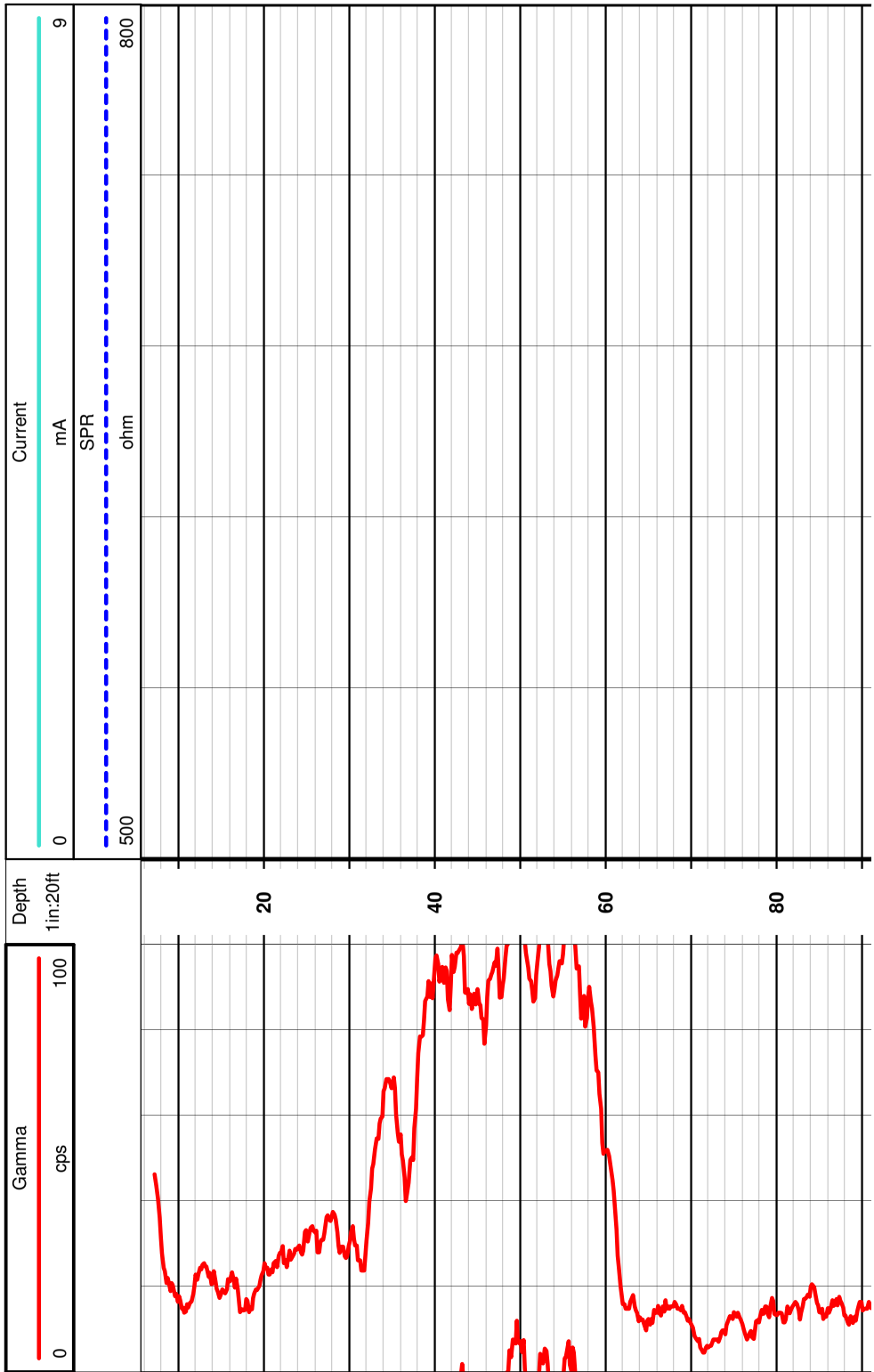
Logged By: Aaron A
Witness:

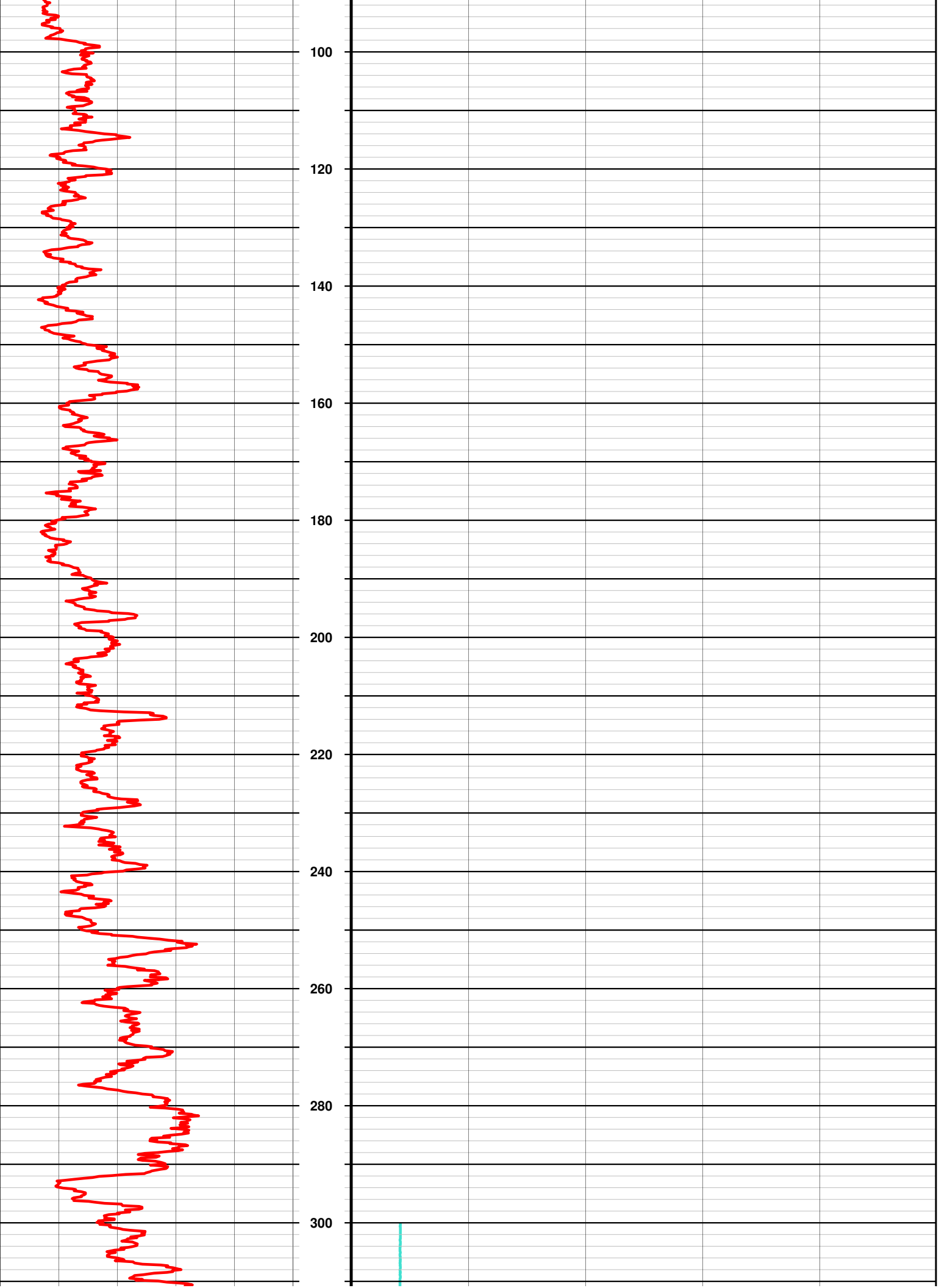
Unit/Truck: 11

LOG TYPE	RUN NO	SPEED (ft/min)	FROM (ft)	TO (ft)	FT./ IN.
GAMMA	1	35	539'	7'	20
SPR	1	35	320'	538'	20
					20

ALL MEASUREMENTS WERE TAKEN AT TC + 2.1'

Comments:

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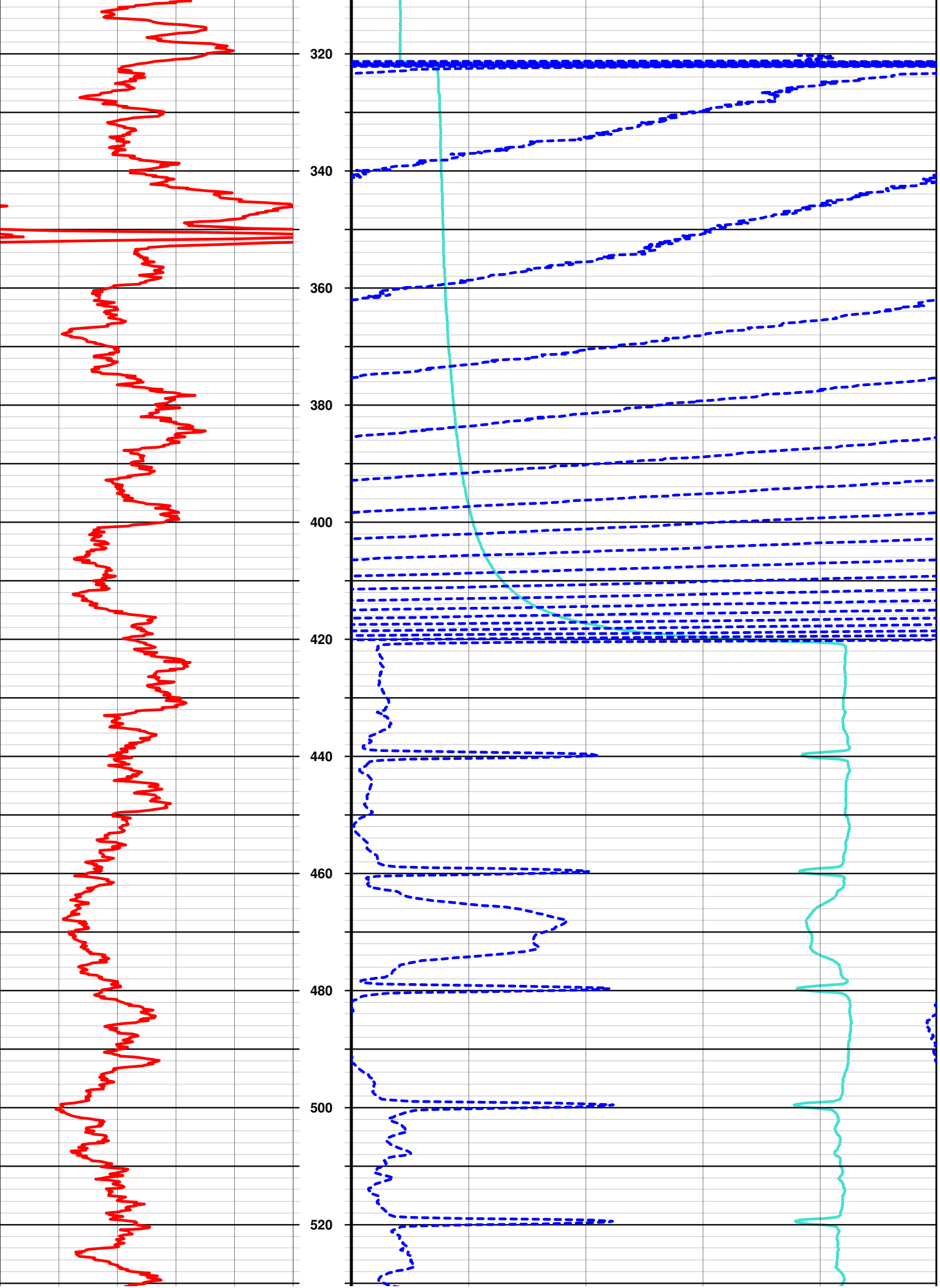
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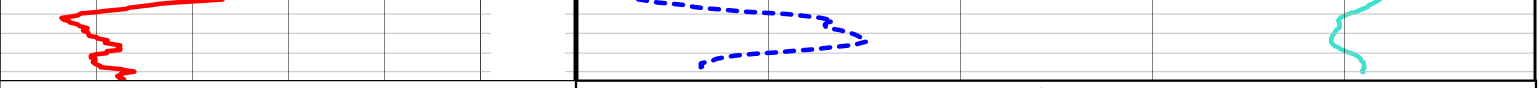


Gamma	Depth	SPR	Current
0 cps 100	1in:20ft	500 ohm 800	0 mA 9

Geophysical Log

Well No. 4

GEO CAM

Borehole: WELL No.4

Logs: GAMMA, SPR

Water Well Logging & Video Recording Services

Geo Cam, Inc. 17118 Classen Rd, San Antonio, TX 78247 877-495-9121

Project: MAVERICK
Client: **TEXAN WATER**
Location: N 30 13 36.08 W 99 13 05.15

Date: 7/15/2022
County: GILLESPIE
State: TX

BOREHOLE DATA

Drilling Contractor: TEXAN WATER
Elevation: 2026' GPS
Depth Ref: TC

Driller T.D. (ft) : 570'
Logger T.D. (ft) : 569'
Date Drilled: N/A

BIT RECORD				CASING RECORD		
RUN	BIT SIZE (in)	FROM (ft)	TO (ft)	SIZE/WGT/THK	FROM (ft)	TO (ft)
1	N/A			4.5" PVC	+2.8	TD
2						
3						

Drill Method: AIR ROTARY
Hole Medium:
Viscosity:

Weight:
Mud Type:
Rm: at: Deg C

Fluid Level (ft) : 355'
Time Since Circ:

GENERAL DATA

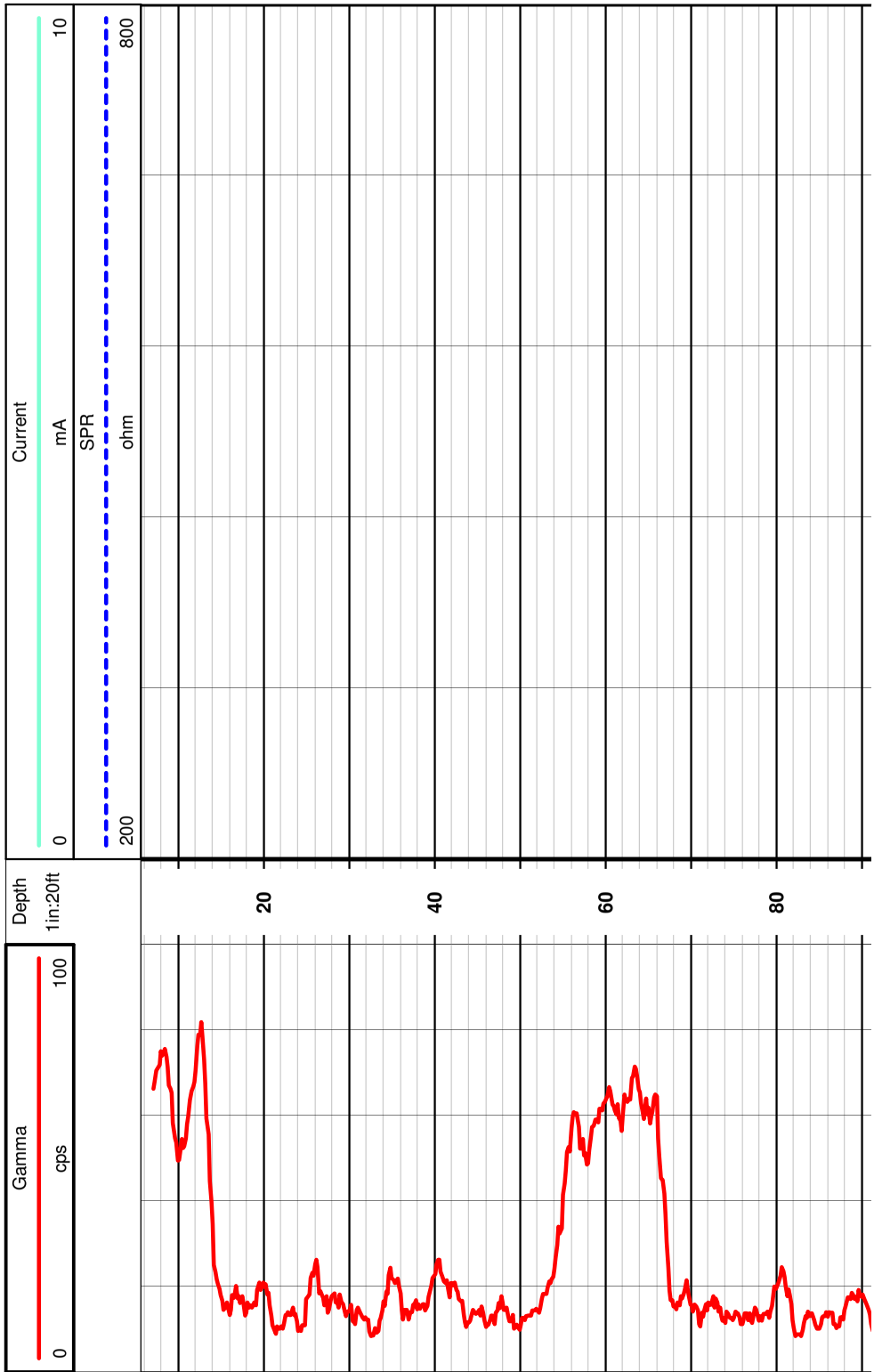
Logged By: Aaron A
Witness:

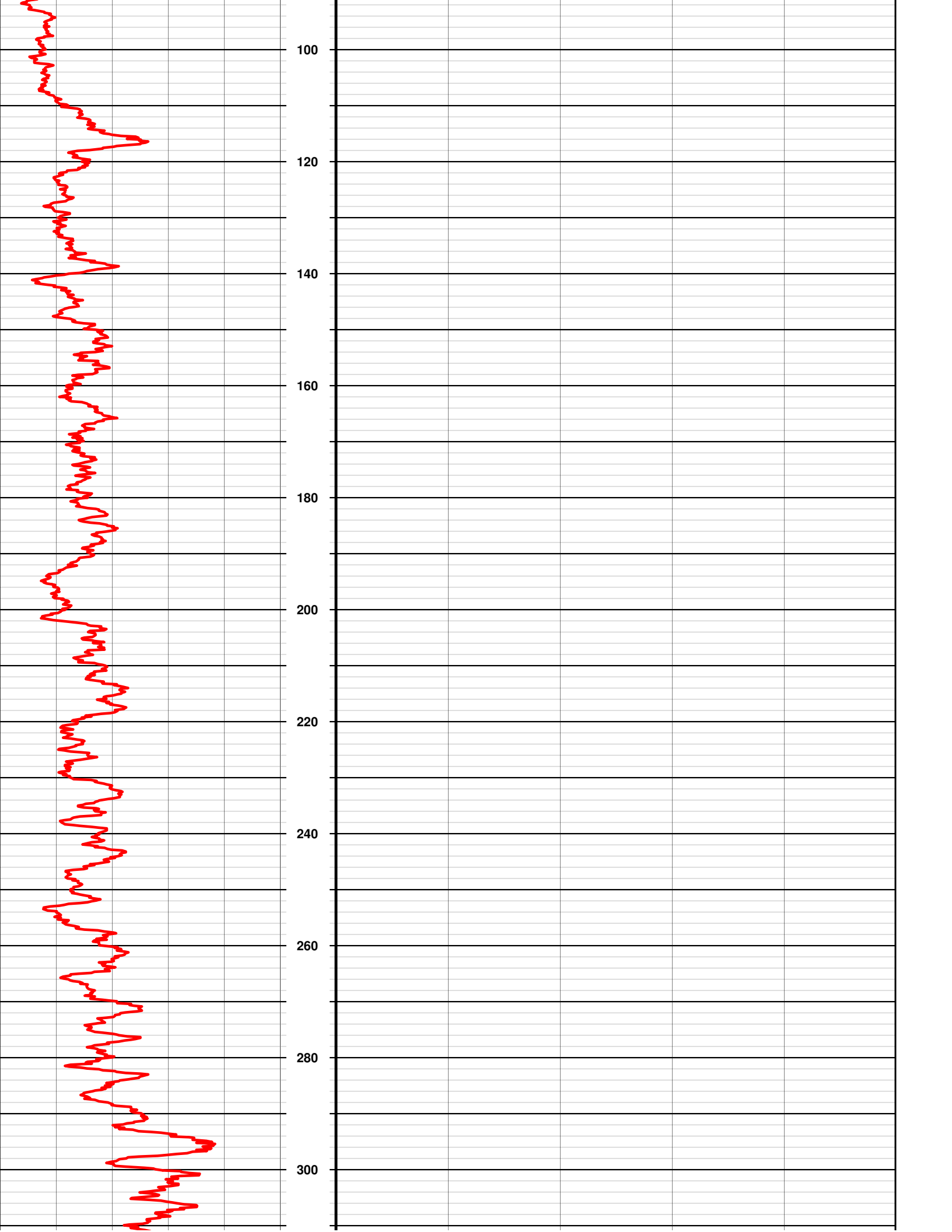
Unit/Truck: 11

LOG TYPE	RUN NO	SPEED (ft/min)	FROM (ft)	TO (ft)	FT./ IN.
GAMMA	1	35	568"	7'	20
SPR	1	35	355'	569'	20
					20

ALL MEASUREMENTS WERE TAKEN AT TC +2.8'

Comments:

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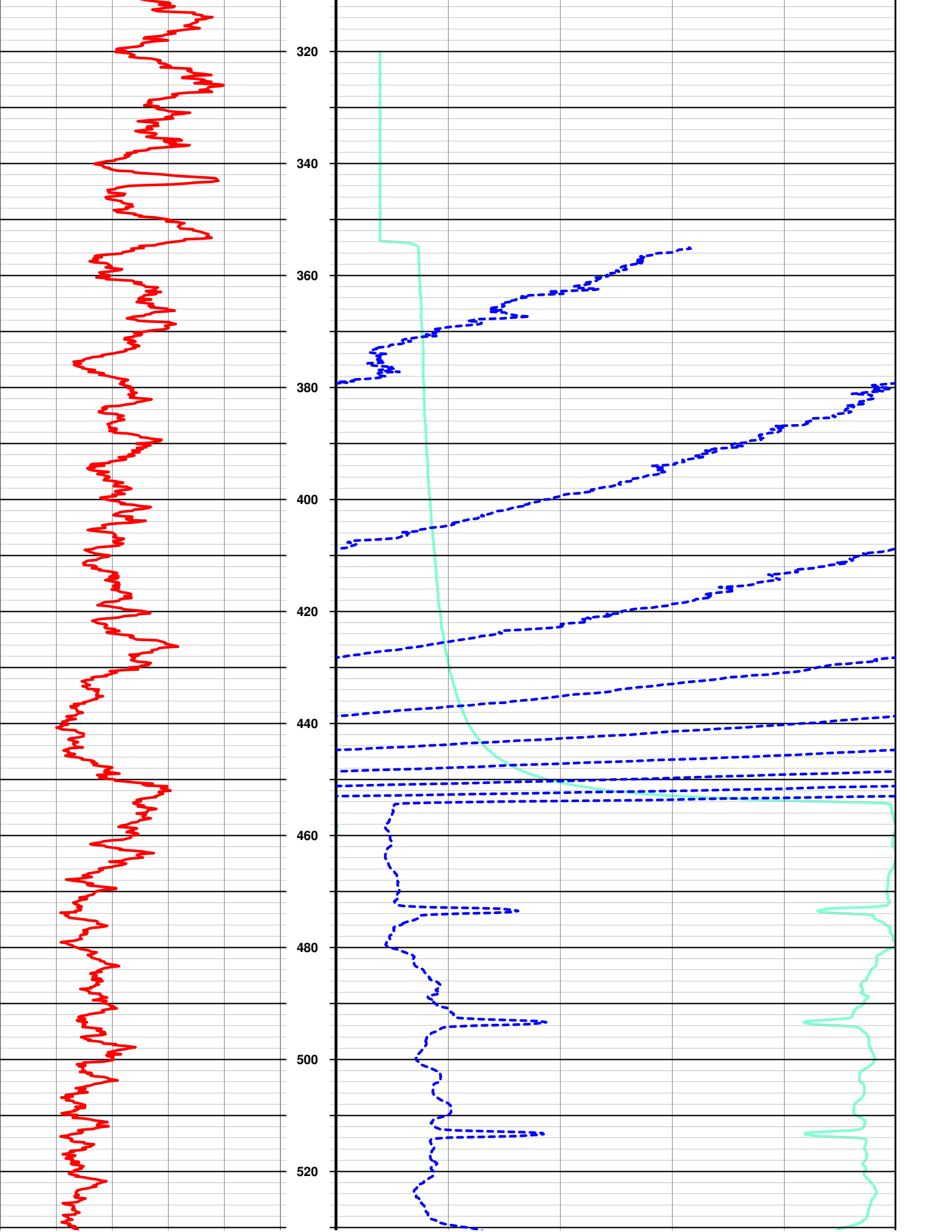
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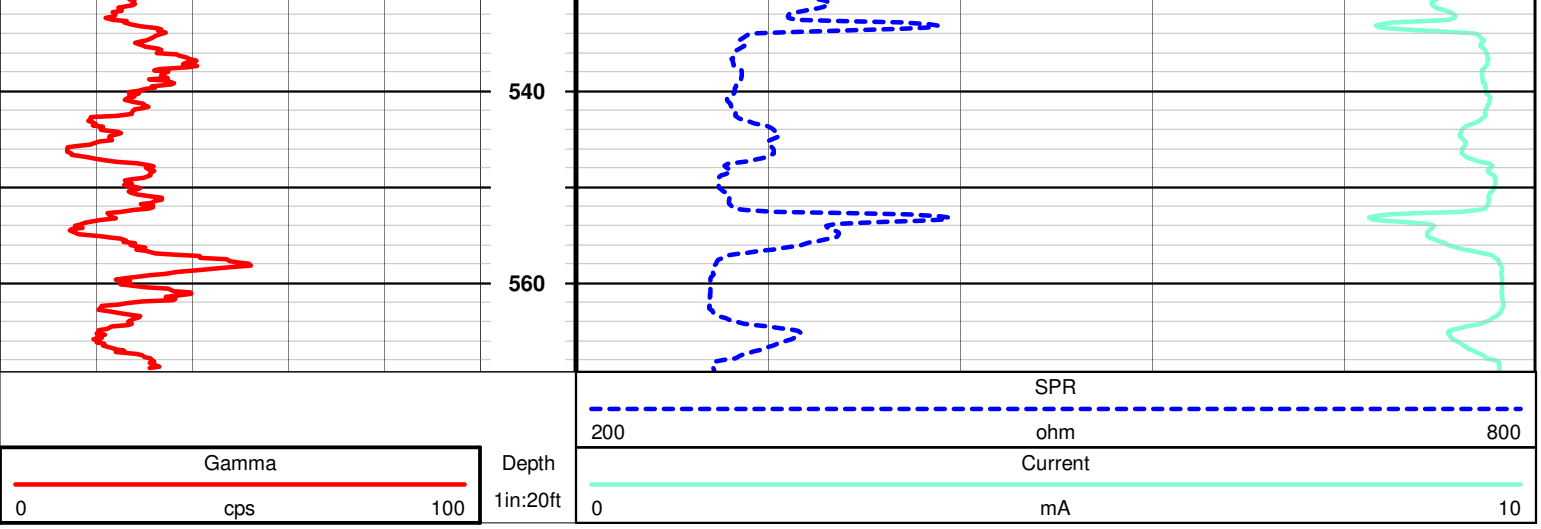

540
560
SPR
200
ohm
800
Gamma
0
cps
100
Depth
1in:20ft
Current
0
mA
10

Geophysical Log

Well No. 6

GEO CAM

Borehole: WELL No.6

Logs: GAMMA, SPR

Water Well Logging & Video Recording Services

Geo Cam, Inc. 17118 Classen Rd, San Antonio, TX 78247 877-495-9121

Project: MAVERICK
Client: **TEXAN WATER**
Location: N 30 13 32.97 W 99 13 31.18

Date: 7/15/2022
County: GILLESPIE
State: TX

BOREHOLE DATA

Drilling Contractor: TEXAN WATER
Elevation: 2034' GPS
Depth Ref: TC

Driller T.D. (ft) : 600'
Logger T.D. (ft) : 600'
Date Drilled: N/A

BIT RECORD				CASING RECORD		
RUN	BIT SIZE (in)	FROM (ft)	TO (ft)	SIZE/WGT/THK	FROM (ft)	TO (ft)
1	N/A			4.5" PVC	+2.4'	TD
2						
3						

Drill Method: AIR ROTARY
Hole Medium:
Viscosity:

Weight:
Mud Type:
Rm: at: Deg C

Fluid Level (ft) : 356'
Time Since Circ:

GENERAL DATA

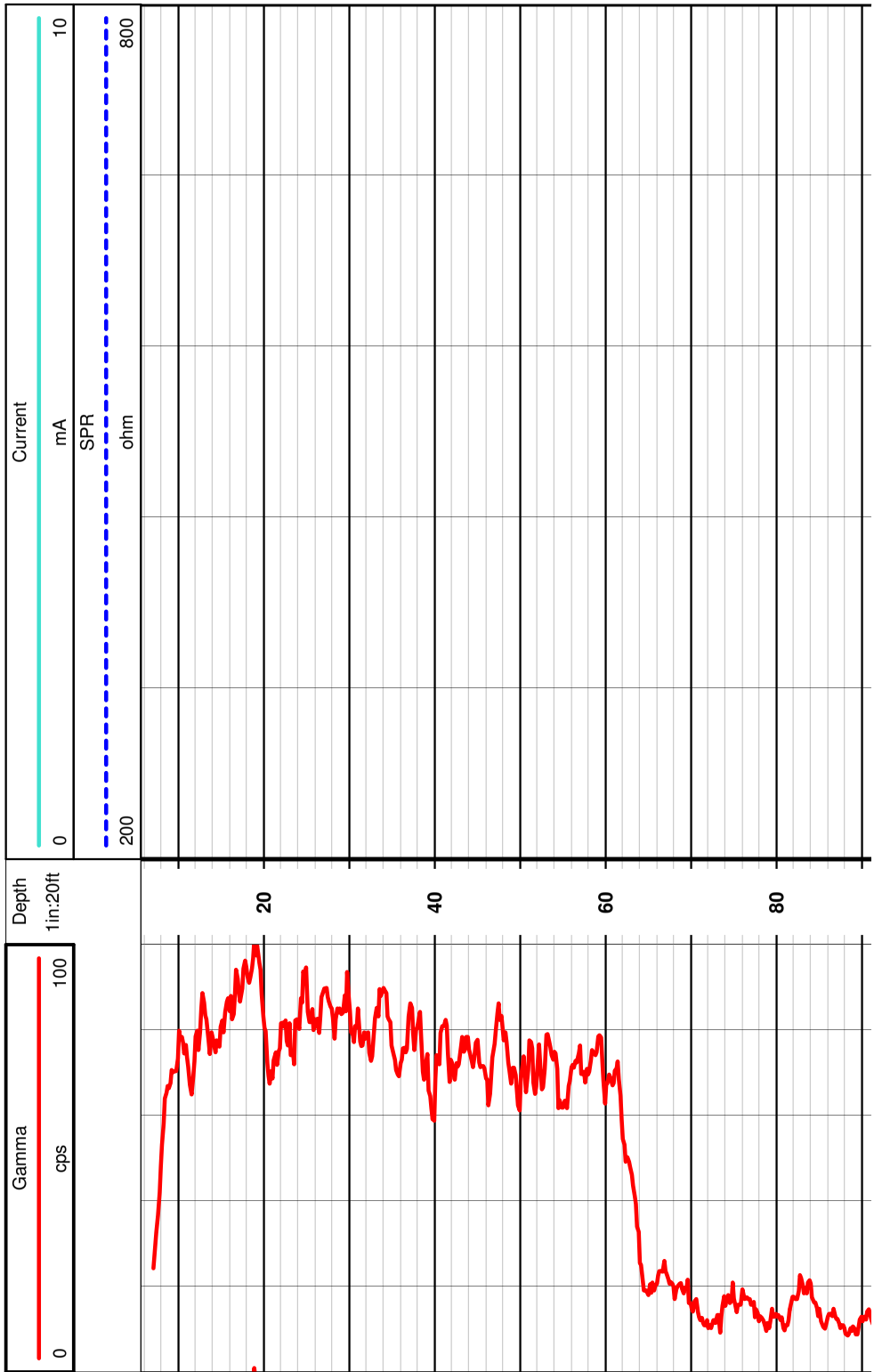
Logged By: Aaron A
Witness:

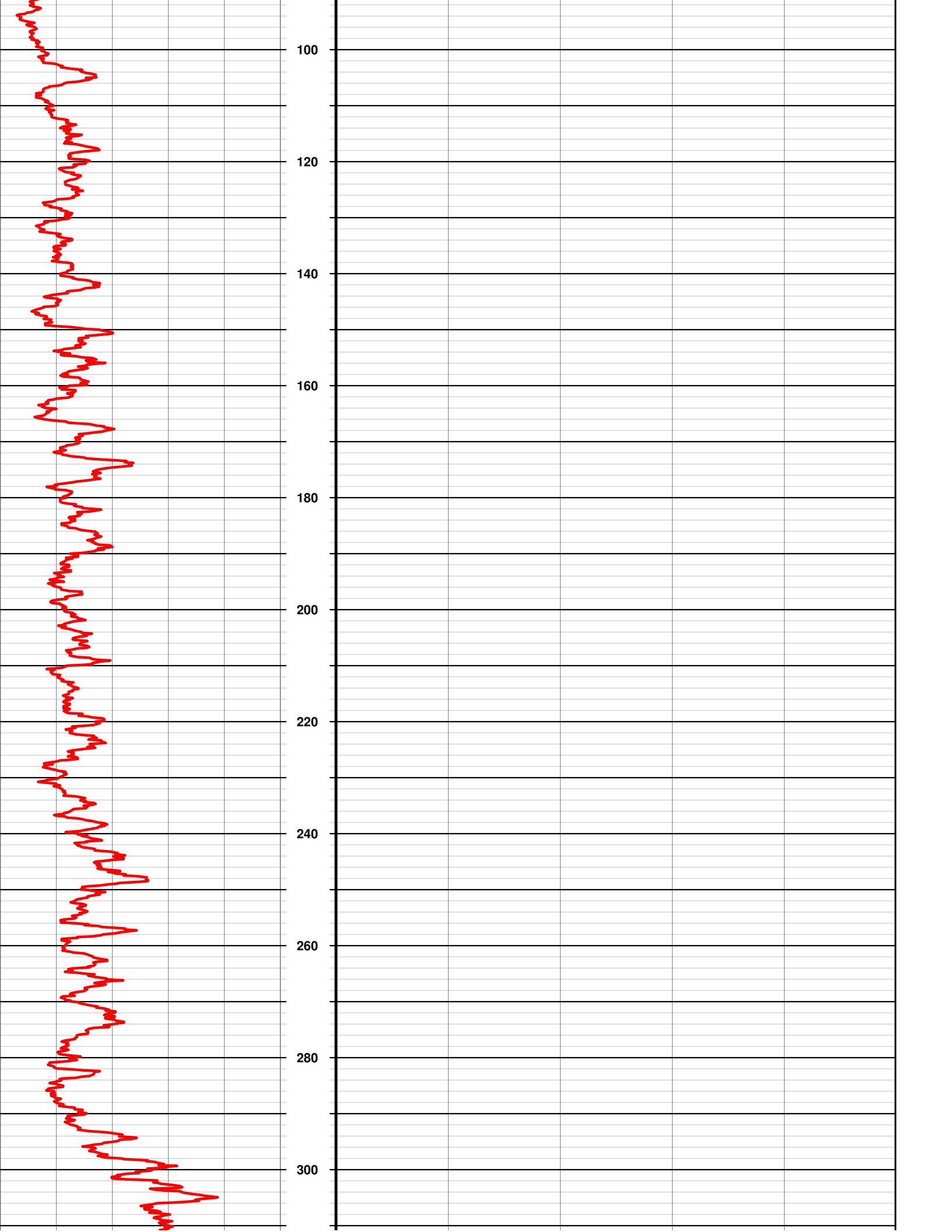
Unit/Truck: 11

LOG TYPE	RUN NO	SPEED (ft/min)	FROM (ft)	TO (ft)	FT./ IN.
GAMMA	1	35	600'	7'	20
SPR	1	35	365'	600'	20
					20

ALL MEASURMENTS WERE TAKEN AT TC + 2.4'

Comments:

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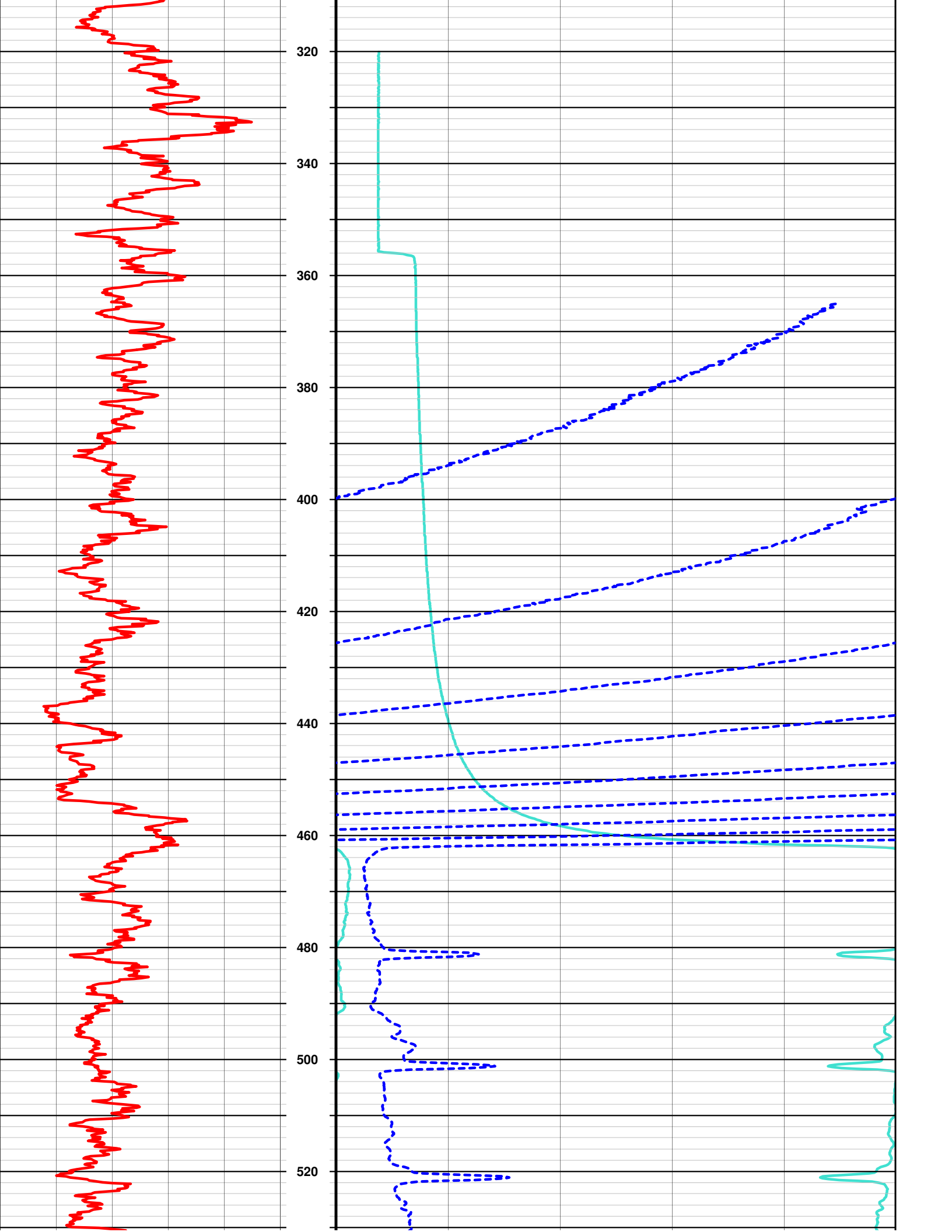
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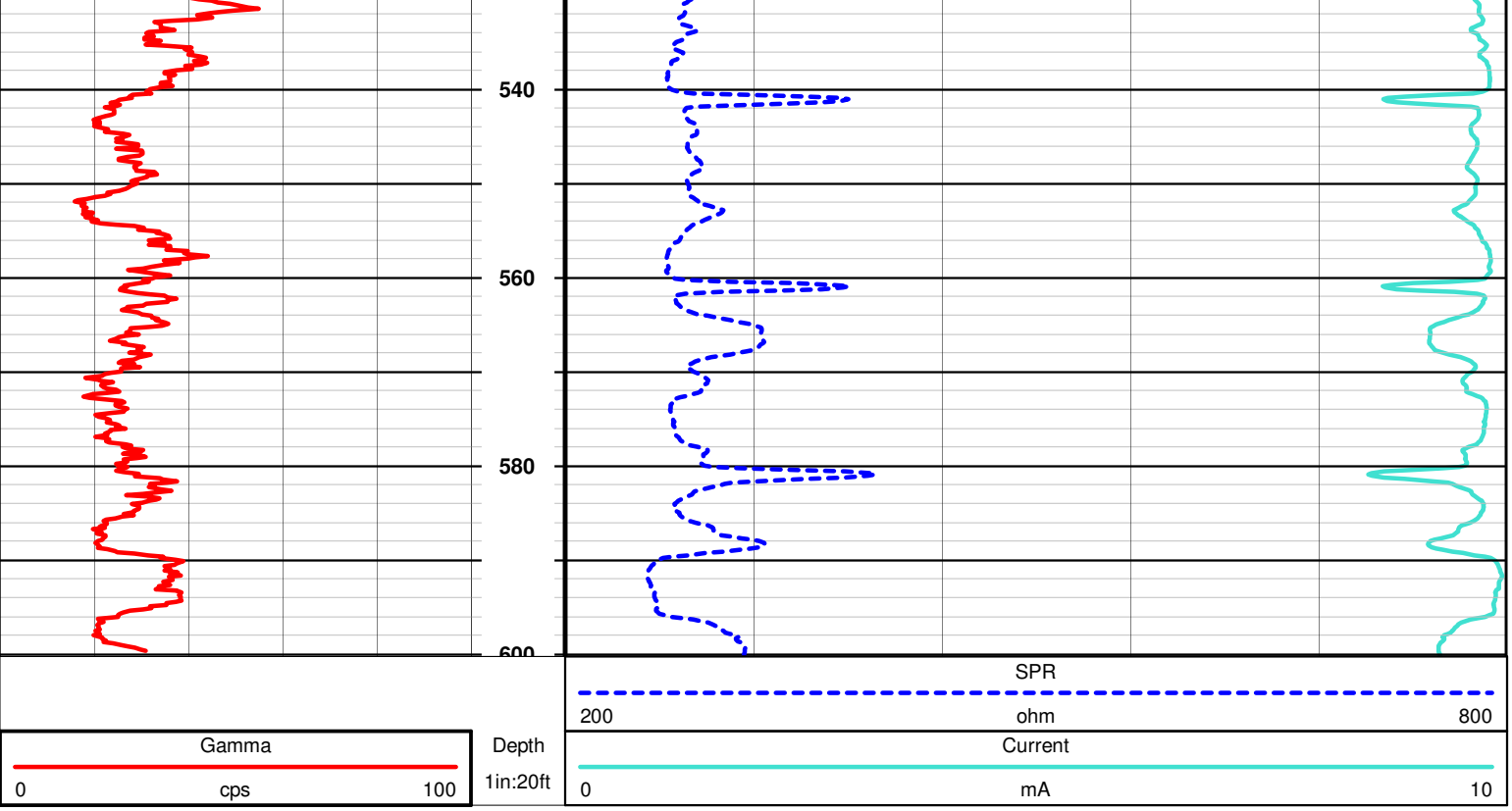
540
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SPR
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Gamma
0
cps
100
Depth
1in:20ft
Current
0
mA
10

Geophysical Log

Well No. 8

GEO CAM

Borehole: WELL No. 8

Logs: GAMMA, SPR

Water Well Logging & Video Recording Services

Geo Cam, Inc. 17118 Classen Rd. San Antonio, TX 78247 877-495-9121

Project: MAVERICK
Client: **TEXAN WW**
Location: **N 30 13 11.00 W 99 13 19.49**

Date: 7/18/2022
County: GILLESPIE
State: TX

BOREHOLE DATA

Drilling Contractor: TEXAN WW
Elevation: 2067' GPS
Depth Ref: TC

Driller T.D. (ft) : 540'
Logger T.D. (ft) : 544'
Date Drilled: N/A

BIT RECORD				CASING RECORD		
RUN	BIT SIZE (in)	FROM (ft)	TO (ft)	SIZE/WGT/THK	FROM (ft)	TO (ft)
1	N/A			4.5" PVC	+2'	TD
2						
3						

Drill Method: AIR ROTARY
Hole Medium:
Viscosity:

Weight:
Mud Type:
Rm: at: Deg C

Fluid Level (ft) : 391'
Time Since Circ:

GENERAL DATA

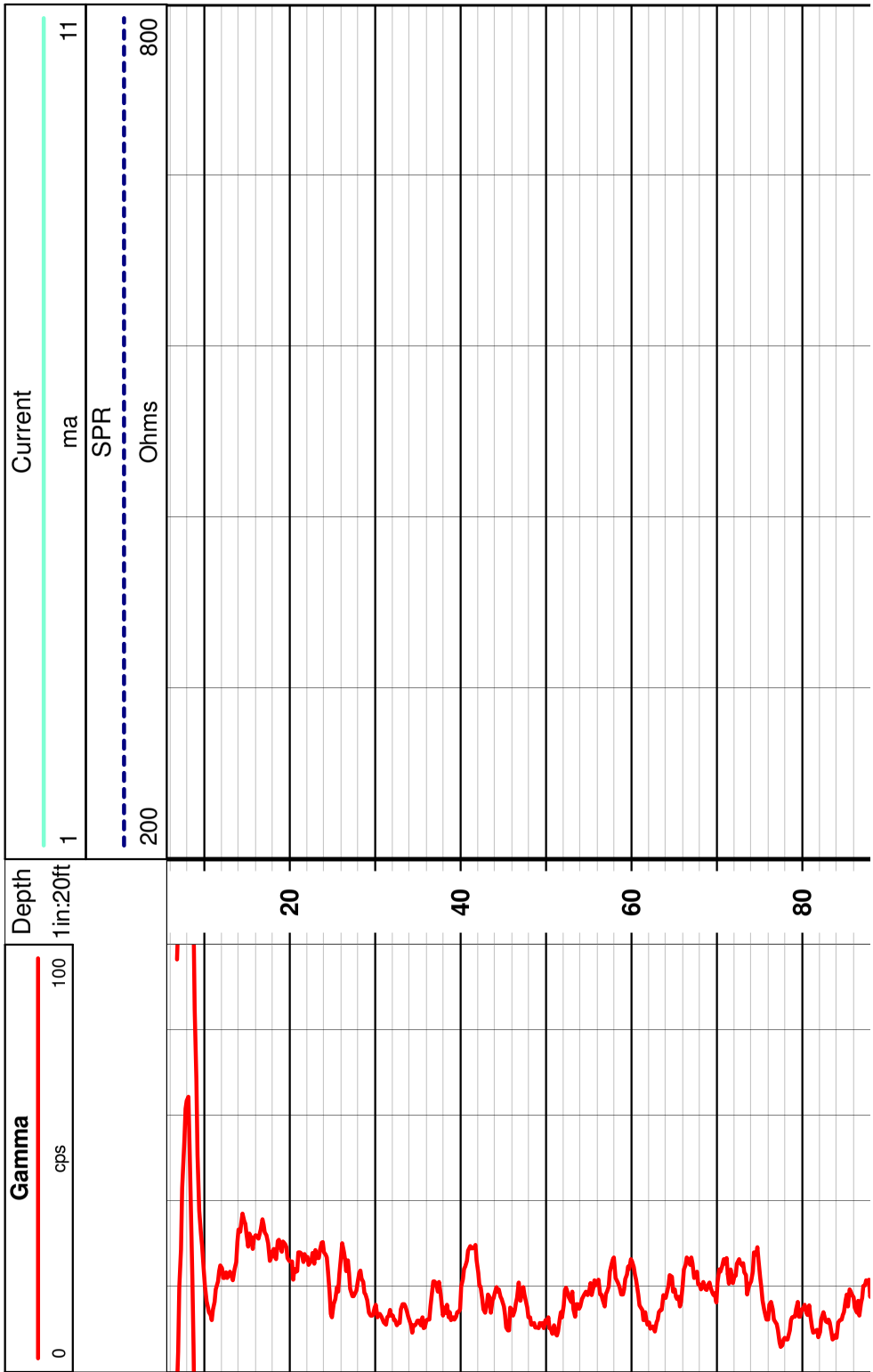
Logged by: Aaron A
Witness:

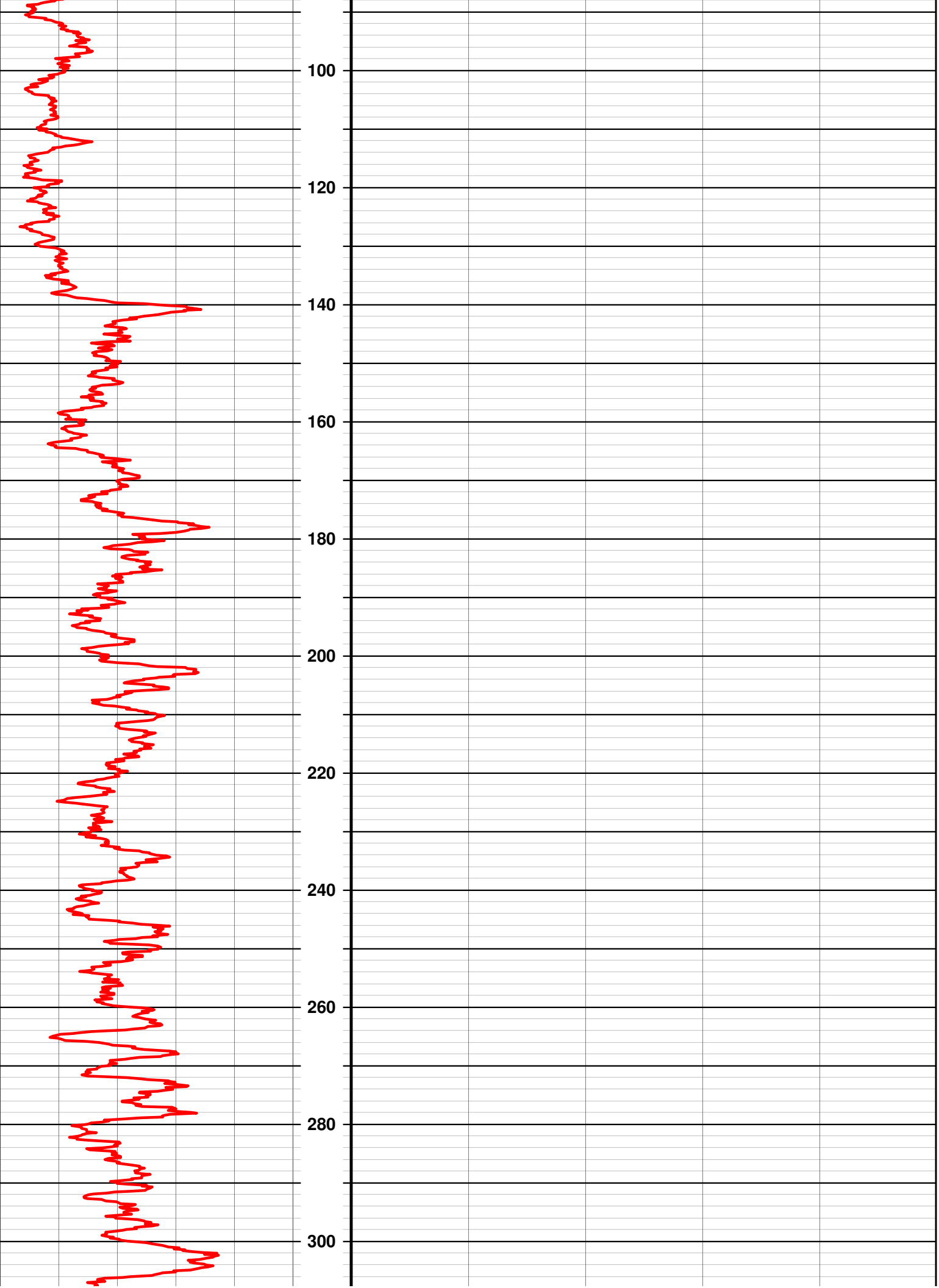
Unit/Truck: 06

LOG TYPE	RUN NO	SPEED (ft/min)	FROM (ft)	TO (ft)	FT./ IN.
GAMMA	1	35	544'	7'	20
SPR	1	35	391'	546'	20

ALL MEASUREMENTS WERE TAKEN AT TC + 2'

Comments:

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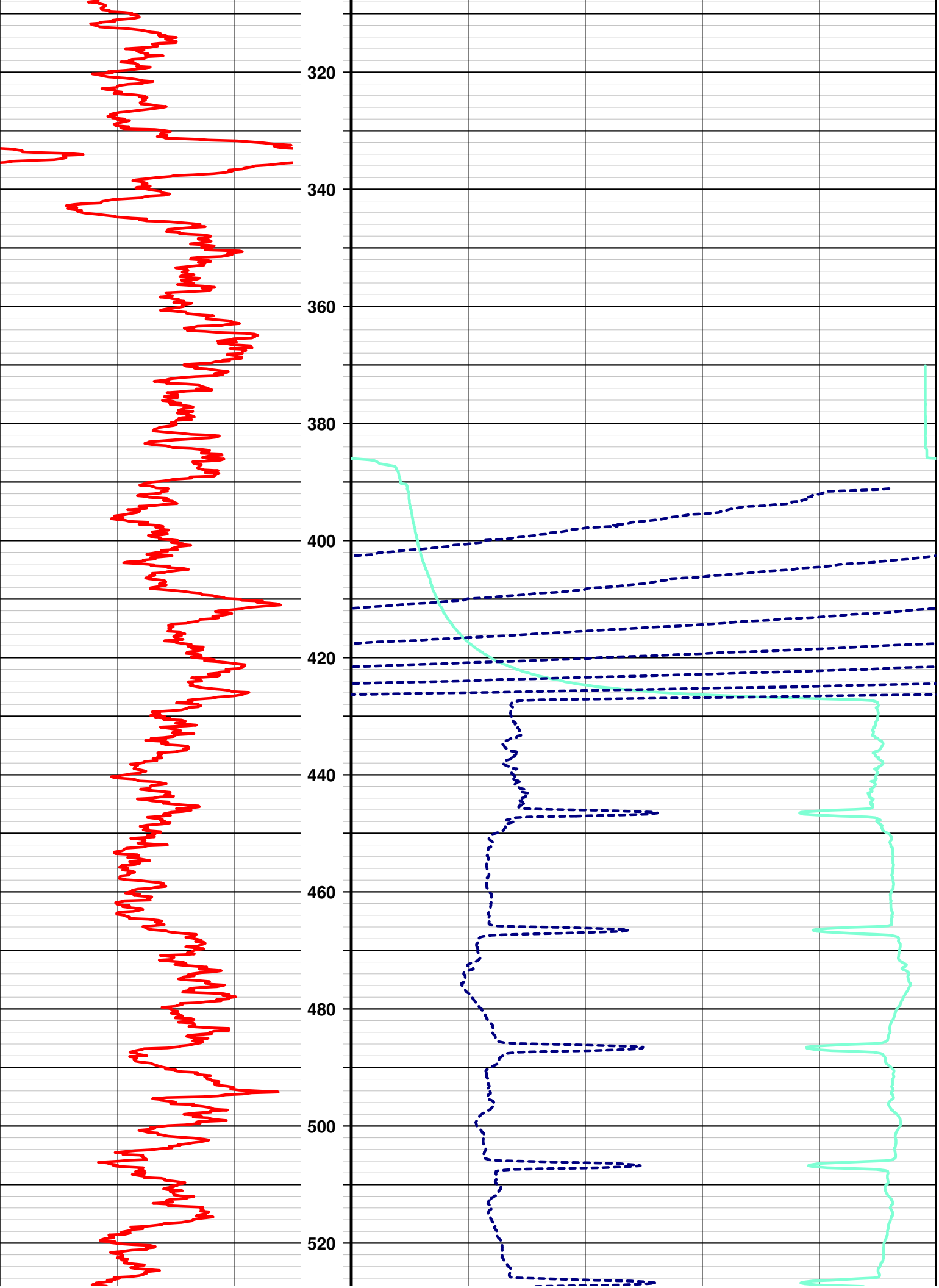
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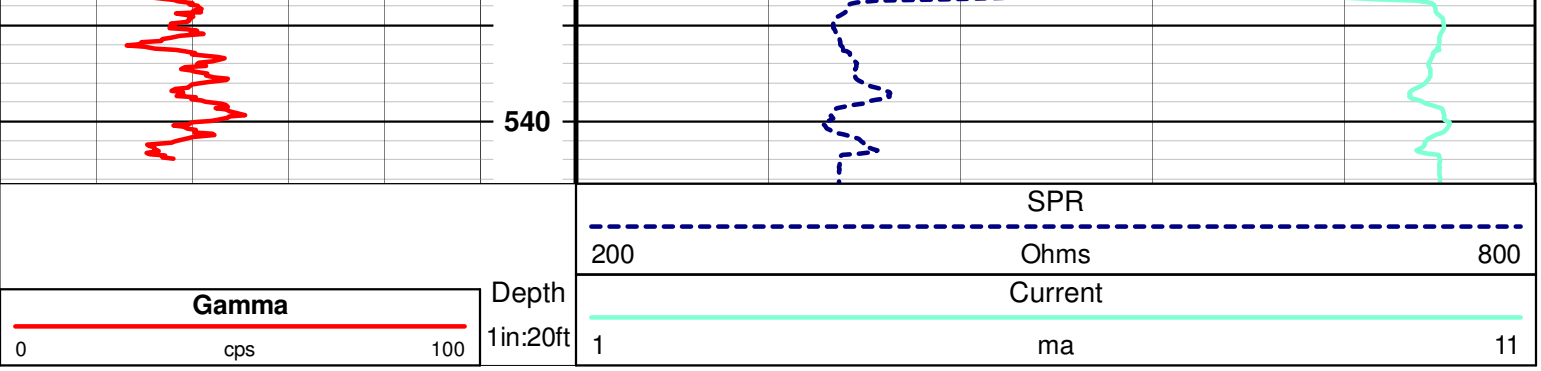


Gamma

0 cps 100

Depth

1in:20ft

Geophysical Log

Well No. 10

GEO CAM

Borehole: WELL No.10

Logs: GAMMA, SPR

Water Well Logging & Video Recording Services

Geo Cam, Inc. 17118 Classen Rd. San Antonio, TX 78247 877-495-9121

Project: MAVERICK
Client: **TEXAN WW**
Location: **N 30 12 50.65 W 99 13 38.41**

Date: 7/18/2022
County: GILLESPIE
State: TX

BOREHOLE DATA

Drilling Contractor: TEXAN WW
Elevation: 2038' GPS
Depth Ref: TC

Driller T.D. (ft) : 560'
Logger T.D. (ft) : 566'
Date Drilled: N/A

BIT RECORD				CASING RECORD		
RUN	BIT SIZE (in)	FROM (ft)	TO (ft)	SIZE/WGT/THK	FROM (ft)	TO (ft)
1	N/A			4.5" PVC	+ 3.2'	TD
2						
3						

Drill Method: AIR ROTARY
Hole Medium:
Viscosity:

Weight:
Mud Type:
Rm: at: Deg C

Fluid Level (ft) : 398'
Time Since Circ:

GENERAL DATA

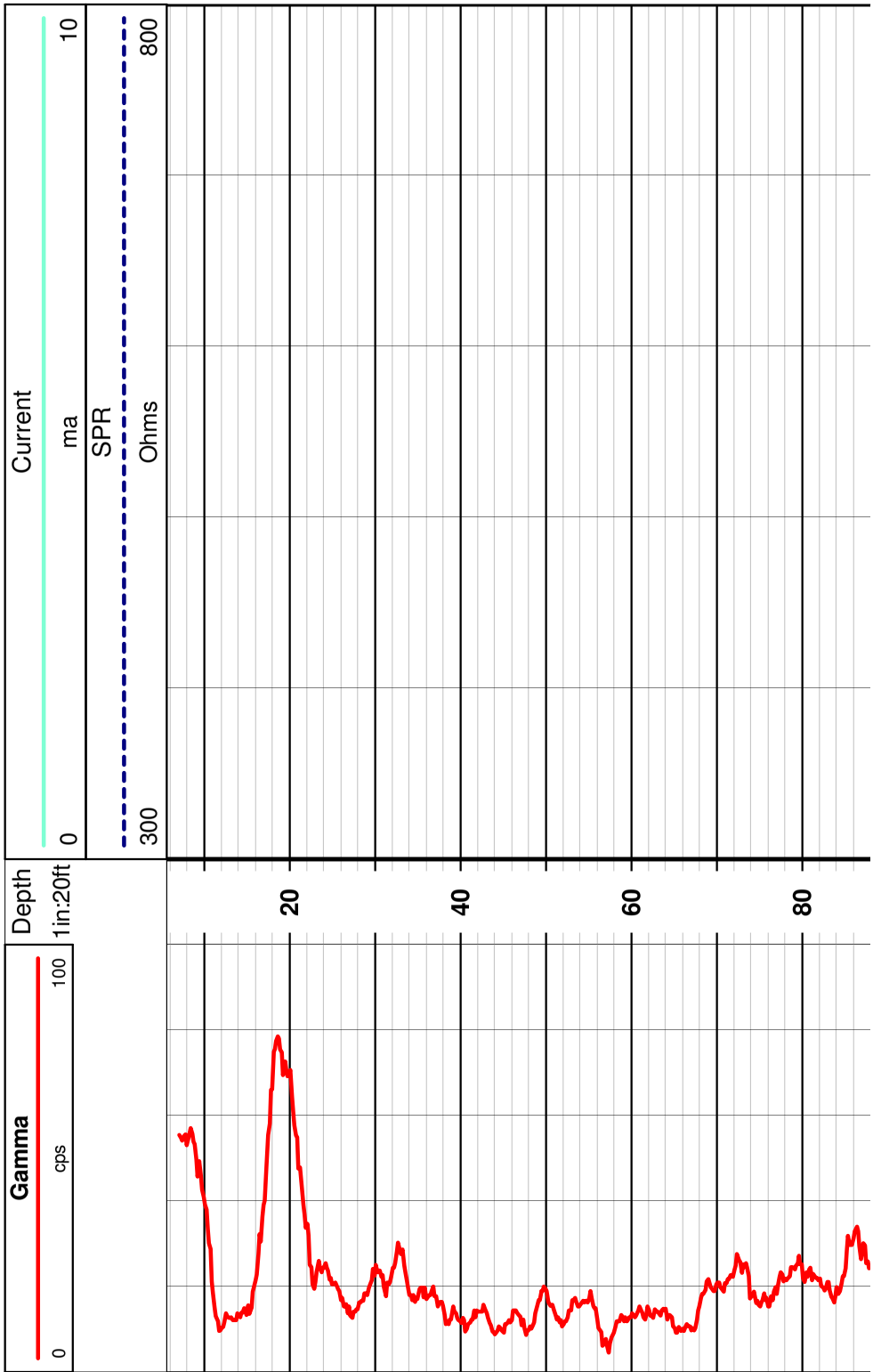
Logged by: Aaron A
Witness:

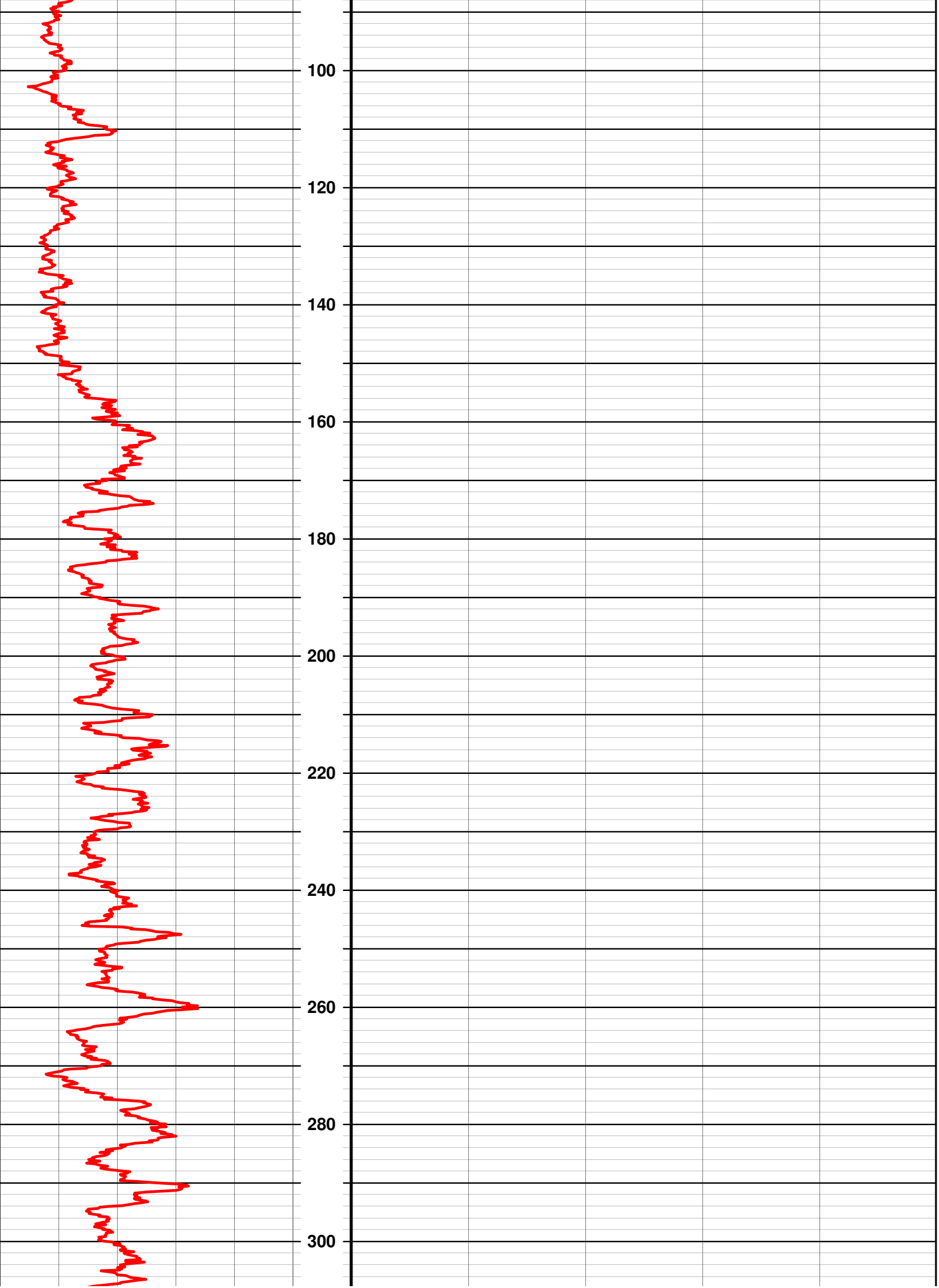
Unit/Truck: 06

LOG TYPE	RUN NO	SPEED (ft/min)	FROM (ft)	TO (ft)	FT./ IN.
GAMMA	1	35	565'	7'	20
SPR	1	35	398'	568'	20

ALL MEASUREMENTS WERE TAKEN AT TC + 3.2'

Comments:

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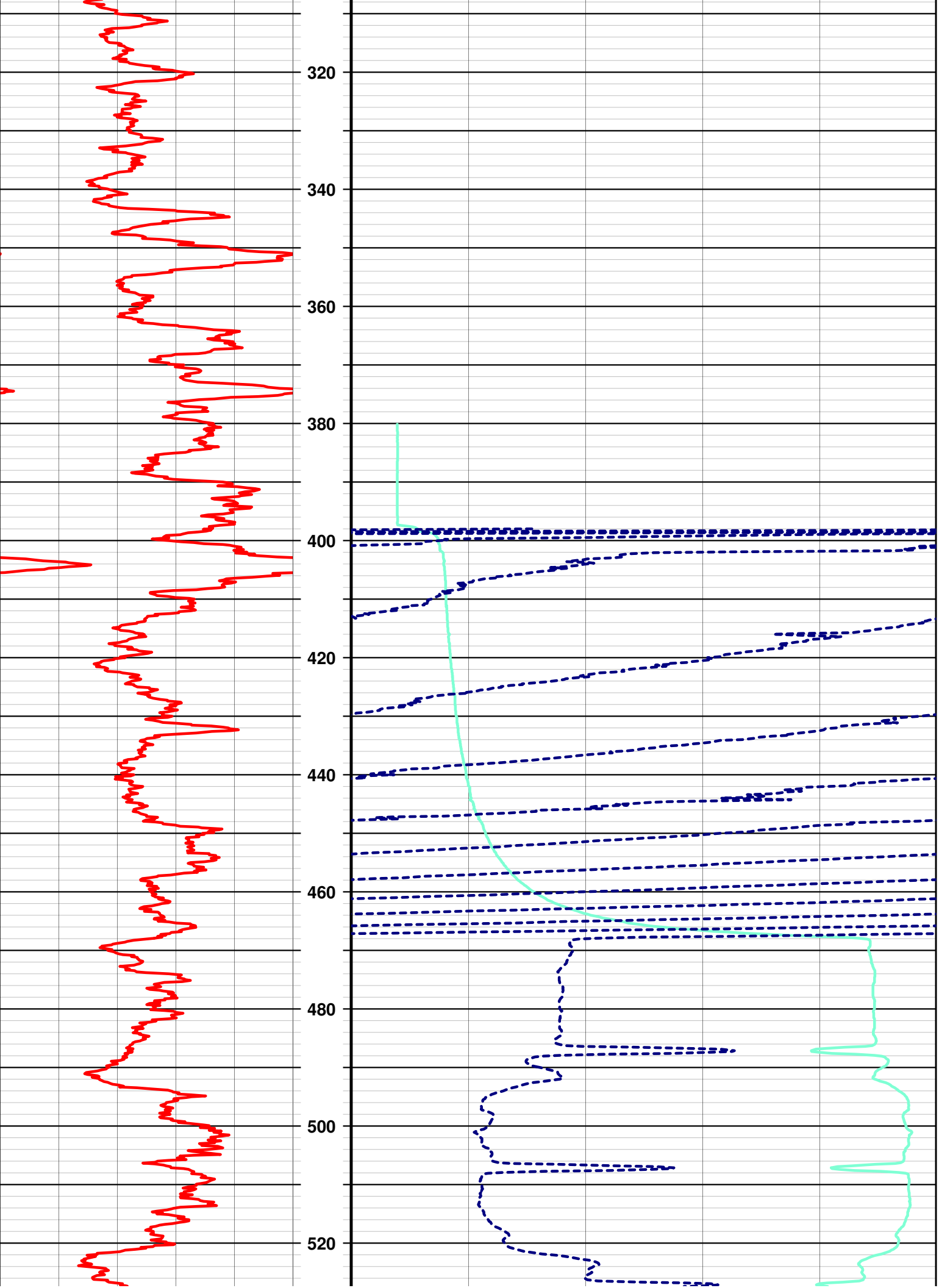
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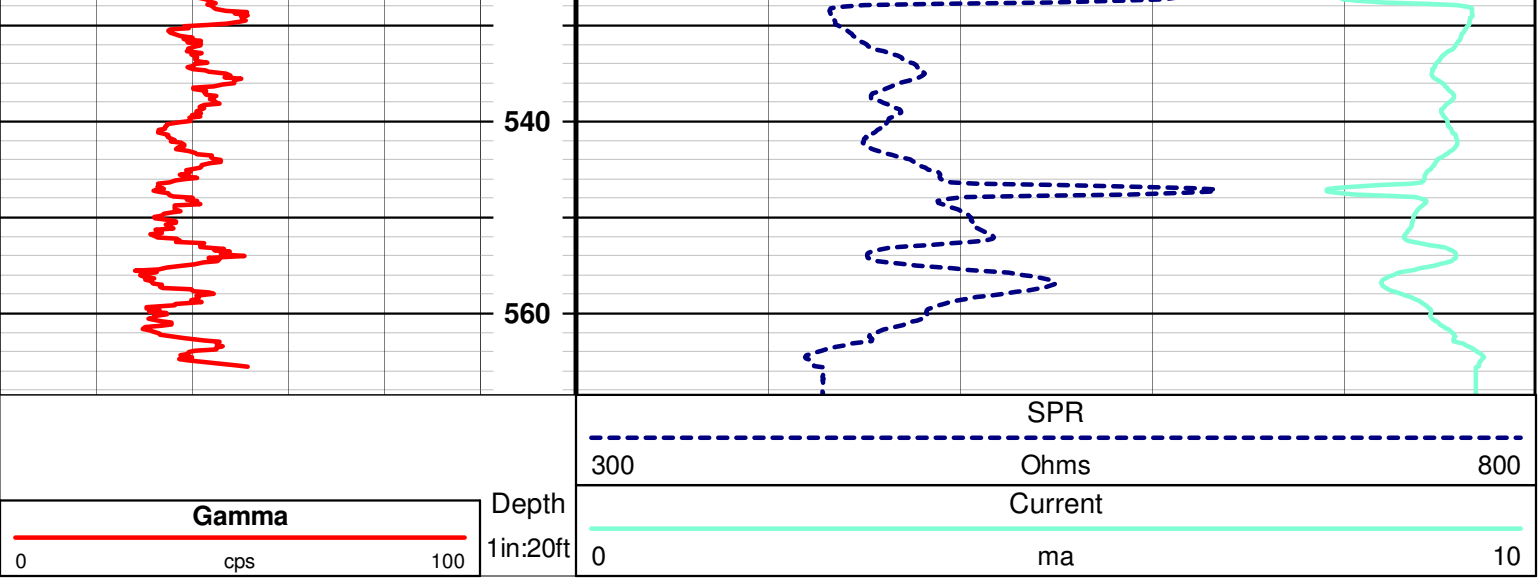
540
560
SPR
300
Ohms
800
Current
0
ma
10
Gamma
0
cps
100
Depth
1in:20ft

Appendix C

State Well Reports

Well Report

Well No. 1

STATE OF TEXAS WELL REPORT for Tracking #610412

Owner:	**MTX960, LLC**	Owner Well #:	**1**
Address:	**PO Box 661 Murphy, NC 28906**	Grid #:	**56-55-1**
Well Location:	**6477 South Ranch Road 783 Harper, TX 78631**	Latitude:	**30° 14' 27.66" N**
		Longitude:	**099° 13' 10.79" W**
Well County:	**Gillespie**	Elevation:	**No Data**
Number of Wells Drilled:	**11**		
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **5/20/2022** Drilling End Date: **5/26/2022**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
9	**0**	**540**

Drilling Method: **Mud (Hydraulic) Rotary**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
385	**540**	**Gravel**	

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**10**	**Cement 6 Bags/Sacks**
10	**120**	**Bentonite 34 Bags/Sacks**
120	**335**	**Gravel 2 Yards**
335	**385**	**Cement 8 Bags/Sacks**

Seal Method: **Pressure**

Sealed By: **Driller**

Distance to Property Line (ft.): **75+**

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

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

Method of Verification: **Owner**

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

Water Level: **319 ft.** below land surface on **2022-06-27**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **Estimated** **Yield: 15-20 GPM**

Water Quality:

Strata Depth (ft.)	Water Type
400 - 540	**Good**

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: **Texan Water**

161 Industrial Loop
Fredericksburg, TX 78624

Driller Name: **Brice Bormann** License Number: **54855**

Apprentice Name: **Elias Abrego** Apprentice Number: **60547**

Comments: **No Data**

Report Amended on 7/14/2022 by Request #36964

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**120**	**White, grey, and tan limestone**
120	**160**	**Blue clay and grey sandstone**
160	**250**	**Grey clay w/ streaks of white sandstone**
250	**350**	**White, red, and yellow sandy clay**
350	**540**	**Red sandy clay and white, tan, yellow, and brown sandstone**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
4.5	**Blank**	**New Plastic (PVC)**	**SDR17**	**0**	**420**
4.5	**Screen**	**New Plastic (PVC)**	**SDR17 0.032**	**420**	**540**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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

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

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

Well Report

Well No. 2

STATE OF TEXAS WELL REPORT for Tracking #610413

Owner:	**MTX960, LLC**	Owner Well #:	**2**
Address:	**PO Box 661 Murphy, NC 28906**	Grid #:	**56-55-1**
Well Location:	**6477 South Ranch Road 783 Harper, TX 78631**	Latitude:	**30° 14' 24.07" N**
		Longitude:	**099° 13' 08.38" W**
Well County:	**Gillespie**	Elevation:	**No Data**
Number of Wells Drilled:	**11**		
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **5/31/2022** Drilling End Date: **6/15/2022**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
9	**0**	**540**

Drilling Method: **Mud (Hydraulic) Rotary**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

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

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**10**	**Cement 5 Bags/Sacks**
10	**60**	**Bentonite 23 Bags/Sacks**
60	**336**	**Gravel 2 Yards**
336	**380**	**Cement 8 Bags/Sacks**

Seal Method: **Pressure**

Sealed By: **Driller**

Distance to Property Line (ft.): **75+**

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

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

Method of Verification: **Owner**

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

Water Level: **318 ft.** below land surface on **2022-06-29**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **Estimated** **Yield: 15-20 GPM**

Water Quality:

Strata Depth (ft.)	Water Type
400 - 540	**Good**

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: **Texan Water**

161 Industrial Loop
Fredericksburg, TX 78624

Driller Name: **Brice Bormann** License Number: **54855**

Apprentice Name: **Elias Abrego** Apprentice Number: **60547**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**100**	**White, tan, and grey sandstone**
100	**280**	**Dark grey clay and sandstone**
280	**400**	**Red sandy clay w/ streaks of yellow, red, and white sandstone**
400	**540**	**Pink sandy clay and tan sandstone**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
4.5	**Blank**	**New Plastic (PVC)**	**SDR17**	**0**	**420**
4.5	**Screen**	**New Plastic (PVC)**	**SDR17 0.032**	**420**	**540**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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

Well Report

Well No. 3

STATE OF TEXAS WELL REPORT for Tracking #610468

Owner:	**MTX960, LLC**	Owner Well #:	**3**
Address:	**PO Box 661 Murphy, NC 28906**	Grid #:	**56-55-1**
Well Location:	**6477 South Ranch Road 783 Harper, TX 78631**	Latitude:	**30° 14' 20.77" N**
		Longitude:	**099° 13' 05.77" W**
Well County:	**Gillespie**	Elevation:	**No Data**
Number of Wells Drilled:	**11**		
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **6/16/2022** Drilling End Date: **6/23/2022**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
9	**0**	**535**

Drilling Method: **Mud (Hydraulic) Rotary**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
380	**535**	**Gravel**	

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**10**	**Cement 7 Bags/Sacks**
10	**120**	**Bentonite 41 Bags/Sacks**
120	**357**	**Gravel 2 Yards**
357	**380**	**Cement 8 Bags/Sacks**

Seal Method: **Pressure**

Sealed By: **Driller**

Distance to Property Line (ft.): **75+**

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

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

Method of Verification: **Owner**

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

Water Level: **311 ft.** below land surface on **2022-06-29**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **Estimated** **Yield: 15-20 GPM**

Water Quality:

Strata Depth (ft.)	Water Type
430 - 540	**Good**

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: **Texan Water**

161 Industrial Loop
Fredericksburg, TX 78624

Driller Name: **Brice Bormann** License Number: **54855**

Apprentice Name: **Elias Abrego** Apprentice Number: **60547**

Comments: **No Data**

Report Amended on 7/15/2022 by Request #36966

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**110**	**White and yellow limestone, and grey sandstone**
110	**160**	**Blue and grey clay w/ streaks of sandstone**
160	**270**	**Grey, red, and tan sandy clay**
270	**380**	**Red, white, tan, and yellow sandy clay w/ steaks of sandstone**
380	**430**	**Corse pink sand and grey sandy clay**
430	**535**	**Pink sandy clay and tan sandstone**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
4.5	**Blank**	**New Plastic (PVC)**	**SDR17**	**0**	**410**
4.5	**Screen**	**New Plastic (PVC)**	**SDR17 0.032**	**410**	**535**

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Well Report

Well No. 4

STATE OF TEXAS WELL REPORT for Tracking #611030

Owner:	**MTX960, LLC**	Owner Well #:	**4**
Address:	**PO Box 661 Murphy, NC 28906**	Grid #:	**56-55-1**
Well Location:	**6477 South Ranch Road 783 Harper, TX 78631**	Latitude:	**30° 13' 36.07" N**
		Longitude:	**099° 13' 05.03" W**
Well County:	**Gillespie**	Elevation:	**No Data**
Number of Wells Drilled:	**11**		
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **6/25/2022** Drilling End Date: **6/29/2022**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
9	**0**	**550**

Drilling Method: **Mud (Hydraulic) Rotary**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
380	**550**	**Gravel**	

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**10**	**Cement 8 Bags/Sacks**
10	**130**	**Bentonite 54 Bags/Sacks**
130	**350**	**Gravel 3 Yards**
350	**380**	**Cement 8 Bags/Sacks**

Seal Method: **Pressure**

Sealed By: **Driller**

Distance to Property Line (ft.): **75+**

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

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

Method of Verification: **Owner**

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

Water Level: **351 ft.** below land surface on **2022-07-13**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **Estimated** **Yield: 15-20 GPM**

Water Quality:

Strata Depth (ft.)	Water Type
360 - 550	**Good**

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: **Texan Water**

161 Industrial Loop
Fredericksburg, TX 78624

Driller Name: **Brice Bormann** License Number: **54855**

Apprentice Name: **Elias Abrego** Apprentice Number: **60547**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**110**	**White and tan limestone**
110	**130**	**Grey and tan sandstone**
130	**190**	**Blue clay w/ sandstone streaks**
190	**210**	**Grey sandstone and clay**
210	**300**	**Grey clay w/ sandstone streaks**
300	**360**	**Sand, grey clay, and sandstone**
360	**460**	**Brown and red sandy clay w/ streaks of sandstone**
460	**490**	**Coarse sand**
490	**520**	**Coarse sand w/ sandstone streaks**
520	**550**	**Grey and red clay w/ sandstone streaks**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
4.5	**Blank**	**New Plastic (PVC)**	**SDR17**	**0**	**430**
4.5	**Screen**	**New Plastic (PVC)**	**SDR17 0.032**	**430**	**550**

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Well Report

Well No. 5

STATE OF TEXAS WELL REPORT for Tracking #611031

Owner:	**MTX960, LLC**	Owner Well #:	**5**
Address:	**PO Box 661** **Murphy, NC 28906**	Grid #:	**56-55-1**
Well Location:	**6477 South Ranch Road 783** **Harper, TX 78631**	Latitude:	**30° 13' 32.13" N**
		Longitude:	**099° 13' 03.95" W**
Well County:	**Gillespie**	Elevation:	**No Data**
Number of Wells Drilled:	**11**		

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

Drilling Start Date: **7/5/2022** Drilling End Date: **7/6/2022**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
9	**0**	**530**

Drilling Method: **Mud (Hydraulic) Rotary**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
370	**530**	**Gravel**	

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**10**	**Cement 9 Bags/Sacks**
10	**130**	**Bentonite 39 Bags/Sacks**
130	**340**	**Gravel 2 Yards**
340	**370**	**Cement 8 Bags/Sacks**

Seal Method: **Pressure**

Sealed By: **Driller**

Distance to Property Line (ft.): **75+**

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

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

Method of Verification: **Owner**

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

Water Level: **No Data** on **2022-07-13**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **Estimated** **Yield: 15-20 GPM**

Water Quality:

Strata Depth (ft.)	Water Type
390 - 530	**Good**

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: **Texan Water**

161 Industrial Loop
Fredericksburg, TX 78624

Driller Name: **Brice Bormann** License Number: **54855**

Apprentice Name: **Elias Abrego** Apprentice Number: **60547**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**130**	**White and grey sandstone**
130	**315**	**Grey clay and sandstone**
315	**390**	**Sandstone w/ clay streaks**
390	**410**	**Coarse sand**
410	**470**	**Red and grey sandy clay w/ sandstone streaks**
470	**520**	**Coarse sand w/ clay and sandstone streaks**
520	**530**	**White and pink sandstone**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
4.5	**Blank**	**New Plastic (PVC)**	**SDR17**	**0**	**410**
4.5	**Screen**	**New Plastic (PVC)**	**SDR17 0.032**	**410**	**530**

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Well Report

Well No. 6

STATE OF TEXAS WELL REPORT for Tracking #610666

Owner:	**MTX960, LLC**	Owner Well #:	**6**
Address:	**PO Box 661** **Murphy, NC 28906**	Grid #:	**56-55-1**
Well Location:	**6477 South Ranch Road 783** **Harper, TX 78631**	Latitude:	**30° 13' 32.88" N**
		Longitude:	**099° 13' 28.18" W**
Well County:	**Gillespie**	Elevation:	**No Data**
Number of Wells Drilled:	**11**		
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **5/4/2022** Drilling End Date: **5/10/2022**

	Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Borehole:	**9**	**0**	**600**

Drilling Method: **Mud (Hydraulic) Rotary**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
420	**600**	**Gravel**	

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**10**	**Cement 6 Bags/Sacks**
10	**130**	**Bentonite 47 Bags/Sacks**
130	**400**	**Gravel 3 Yards**
400	**420**	**Cement 8 Bags/Sacks**

Seal Method: **Pressure**

Sealed By: **Driller**

Distance to Property Line (ft.): **75+**

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

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

Method of Verification: **Owner**

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

Water Level: **353 ft.** below land surface on **2022-06-07**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **Estimated** **Yield: 15-20 GPM**

Water Quality:

Strata Depth (ft.)	Water Type
420 - 600	Good

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: **Texan Water**

161 Industrial Loop
Fredericksburg, TX 78624

Driller Name: **Brice Bormann** License Number: **54855**

Apprentice Name: **Elias Abrego** Apprentice Number: **60547**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	60	White and tan limestone
60	130	Light grey sandstone
130	280	Grey and blue sandy clay w/ streaks of sandstone
280	380	Red yellow sandy clay w/ red and tan sandstone
380	450	Pink, yellow, and tan sandstone
450	600	Red sandy clay, coarse sand and pink sandstone

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
4.5	Blank	New Plastic (PVC)	SDR17	0	460
4.5	Screen	New Plastic (PVC)	SDR17 0.032	460	600

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Well Report

Well No. 7

STATE OF TEXAS WELL REPORT for Tracking #610916

Owner:	**MTX960, LLC**	Owner Well #:	**7**
Address:	**PO Box 661** **Murphy, NC 28906**	Grid #:	**56-55-1**
Well Location:	**6477 South Ranch Road 783** **Harper, TX 78631**	Latitude:	**30° 13' 36.03" N**
		Longitude:	**099° 13' 26.7" W**
Well County:	**Gillespie**	Elevation:	**No Data**
Number of Wells Drilled:	**11**		

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

Drilling Start Date: **5/11/2022** Drilling End Date: **5/18/2022**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
9	**0**	**560**

Drilling Method: **Mud (Hydraulic) Rotary**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
411	**560**	**Gravel**	

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**10**	**Cement 9 Bags/Sacks**
10	**150**	**Bentonite 55 Bags/Sacks**
150	**380**	**Gravel 3 Yards**
380	**411**	**Cement 8 Bags/Sacks**

Seal Method: **Pressure**

Sealed By: **Driller**

Distance to Property Line (ft.): **75+**

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

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

Method of Verification: **Owner**

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

Water Level: **356 ft.** below land surface on **2022-06-07**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **Estimated** **Yield: 15-20 GPM**

Water Quality:

Strata Depth (ft.)	Water Type
430 - 560	**Good**

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: **Texan Water**

161 Industrial Loop
Fredericksburg, TX 78624

Driller Name: **Brice Bormann** License Number: **54855**

Apprentice Name: **Elias Abrego** Apprentice Number: **60547**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**70**	**White, grey, and tan limestone**
70	**150**	**White and grey limestone w/ grey clay**
150	**250**	**Grey sandstone**
250	**330**	**Dark sandstone and grey clay**
330	**400**	**Brown clay and sandstone**
400	**430**	**Red, pink, and yellow sandstone w/ clay streaks**
430	**485**	**Red sandy clay w/ sandstone**
485	**510**	**Coarse sand**
510	**540**	**Sandy clay w/ sandstone streaks**
540	**560**	**Coarse sand and sandstone**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
4.5	**Blank**	**New Plastic (PVC)**	**SDR17**	**0**	**440**
4.5	**Screen**	**New Plastic (PVC)**	**SDR17 0.032**	**440**	**560**

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Well Report

Well No. 8

STATE OF TEXAS WELL REPORT for Tracking #611032

Owner:	**MTX960, LLC**	Owner Well #:	**8**
Address:	**PO Box 661 Murphy, NC 28906**	Grid #:	**56-55-1**
Well Location:	**6477 South Ranch Road 783 Harper, TX 78631**	Latitude:	**30° 13' 10.92" N**
		Longitude:	**099° 13' 19.56" W**
Well County:	**Gillespie**	Elevation:	**No Data**
Number of Wells Drilled:	**11**		
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **7/7/2022** Drilling End Date: **7/9/2022**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
9	**0**	**540**

Drilling Method: **Mud (Hydraulic) Rotary**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
370	**540**	**Gravel**	

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**10**	**Cement 9 Bags/Sacks**
10	**160**	**Bentonite 55 Bags/Sacks**
160	**340**	**Gravel 3 Yards**
340	**370**	**Cement 8 Bags/Sacks**

Seal Method: **Pressure**

Sealed By: **Driller**

Distance to Property Line (ft.): **75+**

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

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

Method of Verification: **Owner**

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

Water Level: **382 ft.** below land surface on **2022-07-14**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **Estimated** **Yield: 15-20 GPM**

Water Quality:

Strata Depth (ft.)	Water Type
430 - 540	**Good**

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: **Texan Water**

161 Industrial Loop
Fredericksburg, TX 78624

Driller Name: **Brice Bormann** License Number: **54855**

Apprentice Name: **Elias Abrego** Apprentice Number: **60547**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**160**	**White, grey, and tan limestone**
160	**270**	**Grey clay and sandstone**
270	**310**	**Grey clay and sand**
310	**350**	**Dark sandstone and grey clay**
350	**380**	**Brown clay and sandstone**
380	**430**	**Red, pink, and yellow sandstone w/ clay streaks**
430	**470**	**Red sandy clay w/ sandstone**
470	**520**	**Coarse sand**
520	**540**	**Coarse sand and sandstone**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
4.5	**Blank**	**New Plastic (PVC)**	**SDR17**	**0**	**420**
4.5	**Screen**	**New Plastic (PVC)**	**SDR17 0.032**	**420**	**540**

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Well Report

Well No. 9

STATE OF TEXAS WELL REPORT for Tracking #611034

Owner:	**MTX960, LLC**	Owner Well #:	**9**
Address:	**PO Box 661 Murphy, NC 28906**	Grid #:	**56-55-1**
Well Location:	**6477 South Ranch Road 783 Harper, TX 78631**	Latitude:	**30° 13' 10.56" N**
		Longitude:	**099° 13' 14.88" W**
Well County:	**Gillespie**	Elevation:	**No Data**
Number of Wells Drilled:	**11**		
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **7/11/2022** Drilling End Date: **7/12/2022**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
9	**0**	**560**

Drilling Method: **Mud (Hydraulic) Rotary**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
380	**560**	**Gravel**	

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**10**	**Cement 9 Bags/Sacks**
10	**160**	**Bentonite 40 Bags/Sacks**
150	**380**	**Gravel 3 Yards**
380	**411**	**Cement 8 Bags/Sacks**

Seal Method: **Pressure**

Sealed By: **Driller**

Distance to Property Line (ft.): **75+**

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

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

Method of Verification: **Owner**

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

Water Level: **371 ft.** below land surface on **2022-07-14**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **Estimated** **Yield: 15-20 GPM**

Water Quality:

Strata Depth (ft.)	Water Type
380 - 560	**Good**

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: **Texan Water**

161 Industrial Loop
Fredericksburg, TX 78624

Driller Name: **Brice Bormann** License Number: **54855**

Apprentice Name: **Elias Abrego** Apprentice Number: **60547**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**140**	**White and grey limestone**
140	**160**	**Grey sandstone**
160	**310**	**Blue and grey clay w/ sandstone streaks**
310	**350**	**White and grey sandstone**
350	**380**	**Red sand and sandstone**
380	**410**	**Red sandy clay w/ red and grey sandstone**
410	**430**	**Coarse sand and sandstone**
430	**510**	**Red sandy clay w/ sandstone**
510	**530**	**Coarse sand and sandstone**
530	**560**	**Red clay and sandstone**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
4.5	**Blank**	**New Plastic (PVC)**	**SDR17**	**0**	**440**
4.5	**Screen**	**New Plastic (PVC)**	**SDR17 0.032**	**440**	**560**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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

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

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

Well Report

Well No. 10

STATE OF TEXAS WELL REPORT for Tracking #611035

Owner:	**MTX960, LLC**	Owner Well #:	**10**
Address:	**PO Box 661** **Murphy, NC 28906**	Grid #:	**56-55-1**
Well Location:	**6477 South Ranch Road 783** **Harper, TX 78631**	Latitude:	**30° 12' 50.76" N**
		Longitude:	**099° 13' 38.28" W**
Well County:	**Gillespie**	Elevation:	**No Data**
Number of Wells Drilled:	**11**		
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **7/13/2022** Drilling End Date: **7/14/2022**

	Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
Borehole:	**9**	**0**	**565**

Drilling Method: **Mud (Hydraulic) Rotary**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
380	**565**	**Gravel**	

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**10**	**Cement 9 Bags/Sacks**
10	**130**	**Bentonite 43 Bags/Sacks**
130	**350**	**Gravel 3 Yards**
350	**380**	**Cement 8 Bags/Sacks**

Seal Method: **Pressure**

Sealed By: **Driller**

Distance to Property Line (ft.): **75+**

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

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

Method of Verification: **Owner**

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

Water Level: **394 ft.** below land surface on **2022-07-19**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **Estimated** **Yield: 15-20 GPM**

Water Quality:

Strata Depth (ft.)	Water Type
380 - 565	**Good**

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: **Texan Water**

161 Industrial Loop
Fredericksburg, TX 78624

Driller Name: **Brice Bormann** License Number: **54855**

Apprentice Name: **Elias Abrego** Apprentice Number: **60547**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**95**	**White and yellow limestone**
95	**440**	**Lost circulation**
440	**510**	**Red sandy clay w/ sandstone streaks**
510	**530**	**Grey sandstone**
530	**550**	**Coarse sand**
550	**565**	**Pink sandy clay and sandstone**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
4.5	**Blank**	**New Plastic (PVC)**	**SDR17**	**0**	**445**
4.5	**Screen**	**New Plastic (PVC)**	**SDR17 0.032**	**445**	**565**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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

Well Report

Well No. 11

STATE OF TEXAS WELL REPORT for Tracking #611037

Owner:	**MTX960, LLC**	Owner Well #:	**11**
Address:	**PO Box 661 Murphy, NC 28906**	Grid #:	**56-55-1**
Well Location:	**6477 South Ranch Road 783 Harper, TX 78631**	Latitude:	**30° 12' 47.16" N**
		Longitude:	**099° 13' 36.12" W**
Well County:	**Gillespie**	Elevation:	**No Data**
Number of Wells Drilled:	**11**		
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **7/15/2022** Drilling End Date: **7/16/2022**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
9	**0**	**560**

Drilling Method: **Mud (Hydraulic) Rotary**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
380	**560**	**Gravel**	

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**10**	**Cement 7 Bags/Sacks**
10	**130**	**Bentonite 47 Bags/Sacks**
130	**340**	**Gravel 3 Yards**
340	**370**	**Cement 8 Bags/Sacks**

Seal Method: **Pressure**

Sealed By: **Driller**

Distance to Property Line (ft.): **75+**

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

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

Method of Verification: **Owner**

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

Water Level: **394 ft.** below land surface on **2022-07-19**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **Estimated** **Yield: 15-20 GPM**

Water Quality:

Strata Depth (ft.)	Water Type
380 - 565	**Good**

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: **Texan Water**

161 Industrial Loop
Fredericksburg, TX 78624

Driller Name: **Brice Bormann** License Number: **54855**

Apprentice Name: **Elias Abrego** Apprentice Number: **60547**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**95**	**White and yellow limestone**
95	**435**	**Lost circulation**
435	**505**	**Red sandy clay w/ sandstone streaks**
505	**525**	**Sandstone**
525	**545**	**Coarse sand**
545	**560**	**Red, pink, and yellow sandstone w/ clay streaks**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
4.5	**Blank**	**New Plastic (PVC)**	**SDR17**	**0**	**440**
4.5	**Screen**	**New Plastic (PVC)**	**SDR17 0.032**	**440**	**560**

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Appendix D

Aquifer Test Data and Analysis

Aquifer Test

Well No. 1

Maverick Well No. 1 - Aquifer Test (June 27, 2022)

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)
6/27/22 10:54 AM	0		74.60	319.33	1,677.67	0.00			Pump Start	1,676.90	0.00
6/27/22 10:55 AM	1		73.70	329.32	1,667.68	9.99	15.0	1.50	Meter: 194,684.788 gallons	1,676.91	-0.01
6/27/22 10:56 AM	2		73.04	335.86	1,661.14	16.53	15.0	0.91		1,676.89	0.01
6/27/22 10:57 AM	3		72.45	338.40	1,658.60	19.06	15.0	0.79		1,676.90	0.01
6/27/22 10:58 AM	4		72.00	339.61	1,657.40	20.27	15.0	0.74	pH: 7.8 / EC: 0.85	1,676.91	0.00
6/27/22 10:59 AM	5		71.64	340.38	1,656.62	21.05	15.0	0.71		1,676.92	-0.02
6/27/22 11:00 AM	6		71.34	340.90	1,656.10	21.57	15.0	0.70		1,676.82	0.08
6/27/22 11:01 AM	7		71.12	341.13	1,655.87	21.80	15.0	0.69		1,676.92	-0.01
6/27/22 11:02 AM	8		70.90	341.44	1,655.56	22.11	15.0	0.68		1,676.88	0.02
6/27/22 11:03 AM	9		70.73	341.64	1,655.37	22.30	15.0	0.67		1,676.85	0.05
6/27/22 11:04 AM	10		70.65	341.77	1,655.23	22.43	15.0	0.67		1,676.83	0.07
6/27/22 11:05 AM	11		70.51	341.82	1,655.18	22.49	15.0	0.67		1,676.81	0.10
6/27/22 11:06 AM	12		70.46	342.07	1,654.93	22.74	15.0	0.66		1,676.80	0.10
6/27/22 11:07 AM	13		70.38	342.16	1,654.84	22.83	15.0	0.66		1,676.73	0.17
6/27/22 11:08 AM	14		70.42	342.31	1,654.69	22.98	15.0	0.65		1,676.75	0.16
6/27/22 11:09 AM	15		70.33	342.31	1,654.69	22.98	15.0	0.65	pH: 7.78 / EC: 0.85	1,676.69	0.21
6/27/22 11:14 AM	20		70.29	342.86	1,654.15	23.52	15.0	0.64		1,676.63	0.28
6/27/22 11:19 AM	25		70.24	343.21	1,653.80	23.87	15.0	0.63		1,676.65	0.26
6/27/22 11:24 AM	30		70.27	343.39	1,653.61	24.06	14.5	0.60	pH: 7.74 / EC: 0.86	1,676.53	0.37
6/27/22 11:39 AM	45		70.27	343.89	1,653.11	24.55	14.5	0.59	pH: 7.72 / EC: 0.86	1,676.35	0.55
6/27/22 11:54 AM	60		70.27	344.38	1,652.62	25.05	14.5	0.58	pH: 7.58 / EC: 0.86	1,676.36	0.55
6/27/22 12:09 PM	75		70.26	344.62	1,652.38	25.29	14.5	0.57		1,676.32	0.58
6/27/22 12:24 PM	90		70.27	344.89	1,652.11	25.56	14.4	0.56	pH: 7.49 / EC: 0.84	1,676.28	0.63
6/27/22 12:39 PM	105		70.26	345.17	1,651.83	25.83				1,676.19	0.72
6/27/22 12:54 PM	120		70.21	345.33	1,651.67	26.00				1,676.18	0.73
6/27/22 1:24 PM	150		70.22	345.70	1,651.30	26.37				1,676.03	0.88
6/27/22 1:54 PM	180		70.25	345.94	1,651.06	26.60				1,675.99	0.92
6/27/22 2:24 PM	210		70.26	346.26	1,650.74	26.93				1,675.96	0.95
6/27/22 2:54 PM	240		70.28	346.35	1,650.65	27.02				1,675.90	1.01
6/27/22 3:54 PM	300		70.28	346.65	1,650.35	27.32				1,675.84	1.07
6/27/22 4:54 PM	360		70.22	347.04	1,649.96	27.71				1,675.82	1.09
6/27/22 5:54 PM	420		70.26	347.25	1,649.75	27.92				1,675.72	1.18
6/27/22 6:54 PM	480		70.23	347.49	1,649.51	28.16				1,675.74	1.16
6/27/22 7:54 PM	540		70.31	347.65	1,649.35	28.32				1,675.73	1.17
6/27/22 8:54 PM	600		70.27	347.79	1,649.21	28.46				1,675.69	1.21

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 5 HP
MSL = Mean Sea Level Pump Setting = 520 ft EC=Electrical conductivity (mS/cm)

Maverick Well No. 1 - Aquifer Test (June 27, 2022)

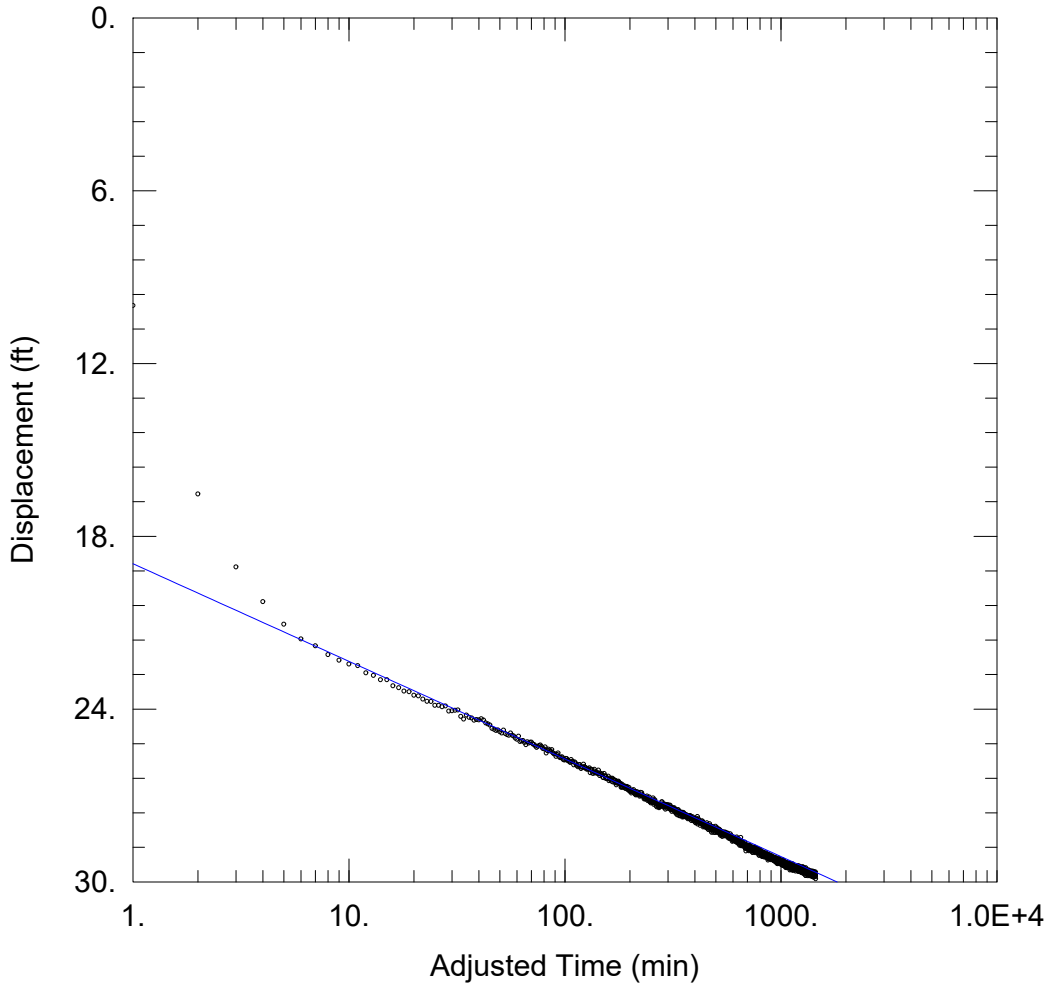
Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 1 Temperature (F)	PW Well No. 1 Water Level (ft bgs)	PW Well No. 1 Water Level (ft MSL)	PW Well No. 1 Drawdown (ft)	PW Well No. 1 Pump Rate (gpm)	PW Well No. 1 Specific Capacity (gpm/ft)	Comments	OW Well No. 2 Water Level (ft MSL)	OW Well No. 2 Drawdown (ft)
6/27/22 9:54 PM	660		70.29	348.00	1,649.00	28.67				1,675.71	1.19
6/27/22 10:54 PM	720		70.29	348.22	1,648.78	28.89				1,675.69	1.21
6/27/22 11:54 PM	780		70.29	348.31	1,648.69	28.98				1,675.64	1.26
6/28/22 12:54 AM	840		70.28	348.45	1,648.55	29.12				1,675.53	1.37
6/28/22 1:54 AM	900		70.30	348.56	1,648.44	29.23				1,675.48	1.43
6/28/22 2:54 AM	960		70.30	348.54	1,648.46	29.20				1,675.50	1.41
6/28/22 3:54 AM	1,020		70.33	348.72	1,648.28	29.39				1,675.48	1.43
6/28/22 4:54 AM	1,080		70.28	348.76	1,648.24	29.43				1,675.45	1.45
6/28/22 5:54 AM	1,140		70.28	348.92	1,648.08	29.58				1,675.49	1.42
6/28/22 6:54 AM	1,200		70.26	348.86	1,648.14	29.53				1,675.37	1.53
6/28/22 7:54 AM	1,260		70.32	348.88	1,648.13	29.54				1,675.45	1.46
6/28/22 8:54 AM	1,320		70.27	349.00	1,648.00	29.67				1,675.37	1.53
6/28/22 9:54 AM	1,380		70.31	349.10	1,647.90	29.77				1,675.43	1.47
6/28/22 10:54 AM	1,440		70.33	349.08	1,647.92	29.75				1,675.34	1.56
6/28/22 11:02 AM	1,448	0	70.30	349.22	1,647.78	29.89	14.0	0.47	Pump Stop	1,675.28	1.62
6/28/22 11:03 AM	1,449	1	70.31	342.54	1,654.46	23.21			Meter: 215,520.86 gallons	1,675.26	1.65
6/28/22 11:04 AM	1,450	2	70.35	333.07	1,663.93	13.74			Avg. Pump Rate: 14.4 gpm	1,675.28	1.62
6/28/22 11:05 AM	1,451	3	70.35	329.91	1,667.09	10.57				1,675.31	1.59
6/28/22 11:06 AM	1,452	4	70.45	328.54	1,668.46	9.21				1,675.28	1.62
6/28/22 11:07 AM	1,453	5	70.53	327.93	1,669.08	8.59				1,675.30	1.60
6/28/22 11:08 AM	1,454	6	70.77	327.42	1,669.58	8.09				1,675.33	1.58
6/28/22 11:09 AM	1,455	7	70.97	327.14	1,669.86	7.80				1,675.31	1.59
6/28/22 11:10 AM	1,456	8	71.12	326.90	1,670.10	7.57				1,675.39	1.51
6/28/22 11:11 AM	1,457	9	71.34	326.77	1,670.23	7.43				1,675.40	1.51
6/28/22 11:12 AM	1,458	10	71.54	326.63	1,670.37	7.29				1,675.36	1.54
6/28/22 11:13 AM	1,459	11	71.64	326.42	1,670.58	7.09				1,675.37	1.53
6/28/22 11:14 AM	1,460	12	71.84	326.36	1,670.64	7.02				1,675.43	1.47
6/28/22 11:15 AM	1,461	13	71.93	326.20	1,670.80	6.86				1,675.45	1.45
6/28/22 11:16 AM	1,462	14	72.04	326.11	1,670.89	6.77				1,675.41	1.49
6/28/22 11:17 AM	1,463	15	72.10	326.04	1,670.96	6.71				1,675.39	1.51
6/28/22 11:22 AM	1,468	20	72.20	325.57	1,671.43	6.23				1,675.48	1.42
6/28/22 11:27 AM	1,473	25	72.12	325.30	1,671.70	5.96				1,675.53	1.38
6/28/22 11:32 AM	1,478	30	71.91	324.99	1,672.01	5.66				1,675.55	1.35
6/28/22 11:47 AM	1,493	45	71.41	324.52	1,672.48	5.19				1,675.57	1.33
6/28/22 12:02 PM	1,508	60	71.09	324.12	1,672.88	4.79				1,675.74	1.17

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 5 HP
MSL = Mean Sea Level Pump Setting = 520 ft EC=Electrical conductivity (mS/cm)

Maverick Well No. 1 - Aquifer Test (June 27, 2022)

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)
6/28/22 12:17 PM	1,523	75	70.97	323.78	1,673.22	4.45				1,675.72	1.19
6/28/22 12:32 PM	1,538	90	70.91	323.52	1,673.48	4.19				1,675.84	1.07
6/28/22 12:47 PM	1,553	105	70.90	323.41	1,673.59	4.08				1,675.93	0.97
6/28/22 1:02 PM	1,568	120	70.88	323.14	1,673.86	3.81				1,675.94	0.96
6/28/22 1:32 PM	1,598	150	70.79	322.76	1,674.24	3.43				1,676.00	0.90
6/28/22 2:02 PM	1,628	180	70.78	322.50	1,674.50	3.17				1,675.96	0.94
6/28/22 2:32 PM	1,658	210	70.81	322.30	1,674.70	2.97				1,676.08	0.83
6/28/22 3:02 PM	1,688	240	70.77	322.02	1,674.98	2.69				1,676.18	0.72
6/28/22 4:02 PM	1,748	300	70.75	321.71	1,675.29	2.38				1,676.23	0.68
6/28/22 5:02 PM	1,808	360	70.69	321.41	1,675.59	2.08				1,676.33	0.58
6/28/22 6:02 PM	1,868	420	70.64	321.16	1,675.84	1.83				1,676.29	0.61
6/28/22 7:02 PM	1,928	480	70.62	321.03	1,675.97	1.70				1,676.35	0.56
6/28/22 8:02 PM	1,988	540	70.58	320.92	1,676.08	1.59				1,676.45	0.45
6/28/22 9:02 PM	2,048	600	70.56	320.72	1,676.28	1.39				1,676.51	0.40
6/28/22 10:02 PM	2,108	660	70.52	320.59	1,676.41	1.26				1,676.60	0.30
6/28/22 11:02 PM	2,168	720	70.49	320.48	1,676.52	1.15				1,676.49	0.41
6/29/22 12:02 AM	2,228	780	70.48	320.45	1,676.55	1.12				1,676.53	0.37
6/29/22 1:02 AM	2,288	840	70.51	320.35	1,676.65	1.02				1,676.55	0.36
6/29/22 2:02 AM	2,348	900	70.46	320.36	1,676.64	1.03				1,676.52	0.38
6/29/22 3:02 AM	2,408	960	70.51	320.26	1,676.74	0.93				1,676.49	0.41
6/29/22 4:02 AM	2,468	1020	70.46	320.21	1,676.79	0.88				1,676.63	0.27
6/29/22 5:02 AM	2,528	1080	70.46	320.16	1,676.84	0.83				1,676.60	0.30
6/29/22 6:02 AM	2,588	1140	70.40	320.12	1,676.88	0.79				1,676.64	0.27
6/29/22 7:02 AM	2,648	1200	70.41	320.02	1,676.98	0.68				1,676.62	0.28
6/29/22 8:02 AM	2,708	1260	70.43	319.98	1,677.02	0.65				1,676.65	0.26
6/29/22 9:02 AM	2,768	1320	70.40	319.96	1,677.04	0.63				1,676.69	0.22
6/29/22 10:01 AM	2,827	1379	70.41	319.95	1,677.05	0.62				1,676.67	0.23

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 5 HP
MSL = Mean Sea Level Pump Setting = 520 ft EC=Electrical conductivity (mS/cm)



WELL TEST ANALYSIS

Data Set: \...\PW 1.aqt
Date: 08/01/22 Time: 16:06:51

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: HH7
Test Well: Well No 1
Test Date: 6-27-22

AQUIFER DATA

Saturated Thickness: 220.7 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

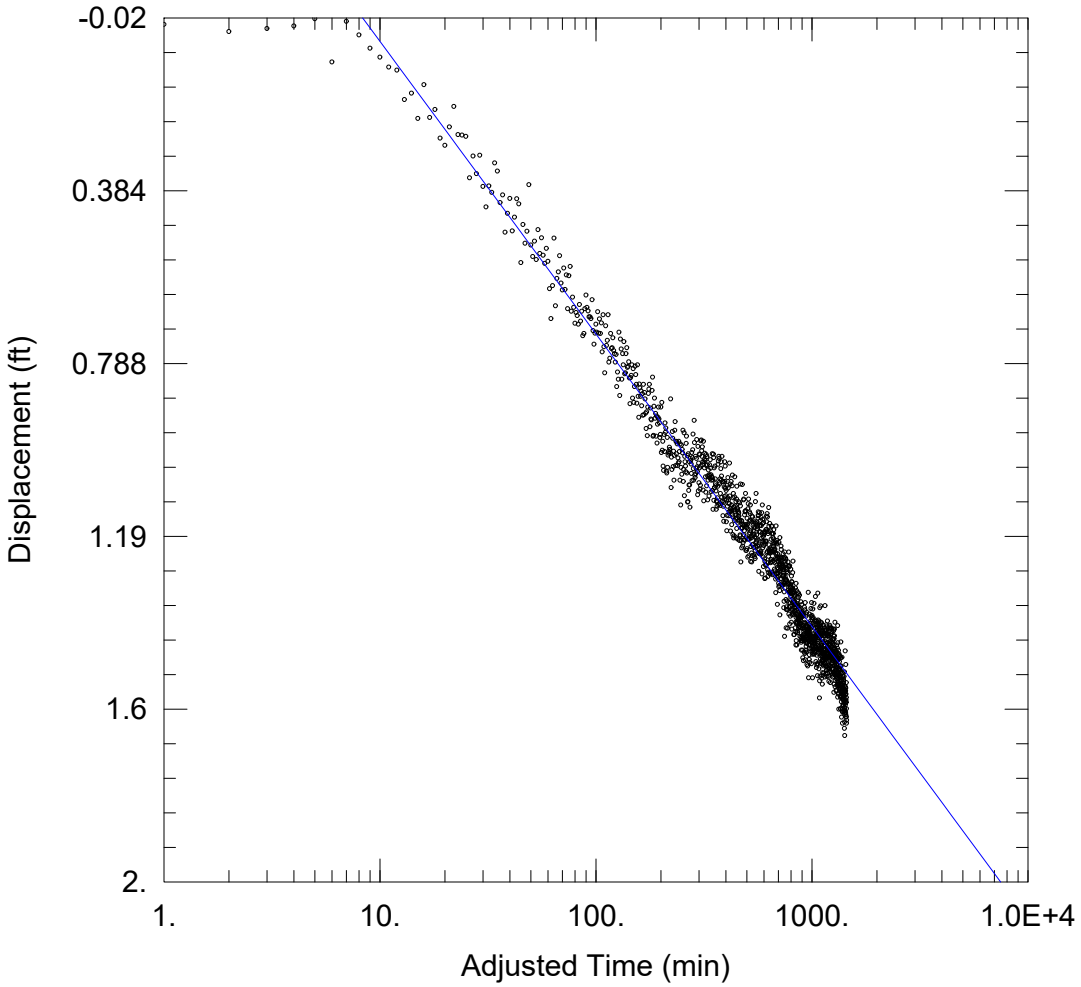
Pumping Wells

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

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 149.9 ft^2/day



WELL TEST ANALYSIS

Data Set: \...\OW 2.aqt
Date: 08/01/22 Time: 16:07:20

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: HH7
Test Well: Well No 1
Test Date: 6-27-22

AQUIFER DATA

Saturated Thickness: 221.9 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Pumping Wells

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

Observation Wells

Well Name	X (ft)	Y (ft)
◦ Well No 2	421	0

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 742.7 ft^2/day S = 5.814E-5

Aquifer Test

Well No. 3

Maverick Well No. 3 - Aquifer Test (June 29, 2022)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 3 Temperature (F)	PW Well No. 3 Water Level (ft bgs)	PW Well No. 3 Water Level (ft MSL)	PW Well No. 3 Drawdown (ft)	PW Well No. 3 Pump Rate (gpm)	PW Well No. 3 Specific Capacity (gpm/ft)	Comments	OW Well No. 2 Water Level (ft MSL)	OW Well No. 2 Drawdown (ft)
6/29/22 11:04 AM	0		70.64	311.03	1,673.97	0.00			Pump Start	1,676.65	0.00
6/29/22 11:05 AM	1		70.67	322.52	1,662.48	11.49	15.0	1.31	Meter: 215,520.851 gallons	1,676.67	-0.02
6/29/22 11:06 AM	2		70.71	326.18	1,658.82	15.14	15.0	0.99	pH: 7.81 / EC: 0.96	1,676.68	-0.04
6/29/22 11:07 AM	3		70.63	327.89	1,657.11	16.86	15.0	0.89		1,676.65	-0.01
6/29/22 11:08 AM	4		70.67	328.73	1,656.27	17.69	15.0	0.85	pH: 7.8 / EC: 0.85	1,676.61	0.03
6/29/22 11:09 AM	5		70.63	329.41	1,655.59	18.38	15.0	0.82		1,676.62	0.03
6/29/22 11:10 AM	6		70.63	329.74	1,655.26	18.71	15.0	0.80		1,676.57	0.08
6/29/22 11:11 AM	7		70.63	330.00	1,655.00	18.97	15.0	0.79		1,676.50	0.15
6/29/22 11:12 AM	8		70.59	330.19	1,654.81	19.16	15.0	0.78		1,676.49	0.15
6/29/22 11:13 AM	9		70.56	330.36	1,654.64	19.33	15.0	0.78		1,676.53	0.12
6/29/22 11:14 AM	10		70.62	330.54	1,654.46	19.51	15.0	0.77	pH: 7.65 / EC: 0.96	1,676.49	0.16
6/29/22 11:15 AM	11		70.63	330.69	1,654.31	19.66	15.0	0.76		1,676.49	0.15
6/29/22 11:16 AM	12		70.64	330.69	1,654.31	19.66	15.0	0.76		1,676.41	0.24
6/29/22 11:17 AM	13		70.66	330.73	1,654.27	19.70	15.0	0.76		1,676.40	0.25
6/29/22 11:18 AM	14		70.68	330.82	1,654.18	19.79	15.0	0.76		1,676.39	0.26
6/29/22 11:19 AM	15		70.67	330.91	1,654.10	19.87	14.5	0.73	pH: 7.67 / EC: 0.93	1,676.45	0.20
6/29/22 11:24 AM	20		70.62	331.35	1,653.65	20.31	14.5	0.71	pH: 7.65 / EC: 0.94	1,676.24	0.41
6/29/22 11:29 AM	25		70.63	331.47	1,653.53	20.43	14.5	0.71		1,676.22	0.43
6/29/22 11:34 AM	30		70.65	331.72	1,653.28	20.68	14.5	0.70	pH: 7.61 / EC: 0.94	1,676.20	0.45
6/29/22 11:49 AM	45		70.64	332.01	1,653.00	20.97	14.5	0.69		1,676.05	0.60
6/29/22 12:04 PM	60		70.64	332.21	1,652.79	21.18	14.5	0.68	pH: 7.54 / EC: 0.90	1,675.98	0.67
6/29/22 12:19 PM	75		70.64	332.54	1,652.46	21.51	14.5	0.67		1,675.84	0.80
6/29/22 12:34 PM	90		70.54	332.59	1,652.41	21.55	14.5	0.67	pH: 7.47 / EC: 0.88	1,675.84	0.81
6/29/22 12:49 PM	105		70.57	332.75	1,652.25	21.72				1,675.77	0.88
6/29/22 1:04 PM	120		70.58	332.85	1,652.15	21.81				1,675.75	0.90
6/29/22 1:34 PM	150		70.59	332.91	1,652.09	21.88				1,675.65	1.00
6/29/22 2:04 PM	180		70.60	333.12	1,651.88	22.09				1,675.52	1.13
6/29/22 2:34 PM	210		70.56	333.23	1,651.77	22.20				1,675.53	1.12
6/29/22 3:04 PM	240		70.56	333.29	1,651.71	22.26				1,675.45	1.20
6/29/22 4:04 PM	300		70.53	333.42	1,651.58	22.39				1,675.46	1.18
6/29/22 5:04 PM	360		70.58	333.90	1,651.10	22.87				1,675.37	1.27
6/29/22 6:04 PM	420		70.60	334.02	1,650.98	22.99				1,675.26	1.39
6/29/22 7:04 PM	480		70.59	334.05	1,650.95	23.02				1,675.23	1.42
6/29/22 8:04 PM	540		70.55	334.13	1,650.87	23.10				1,675.19	1.46
6/29/22 9:04 PM	600		70.53	334.18	1,650.82	23.15				1,675.17	1.47

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 5 HP
MSL = Mean Sea Level Pump Setting = 500 ft EC=Electrical conductivity (mS/cm)

Maverick Well No. 3 - Aquifer Test (June 29, 2022)

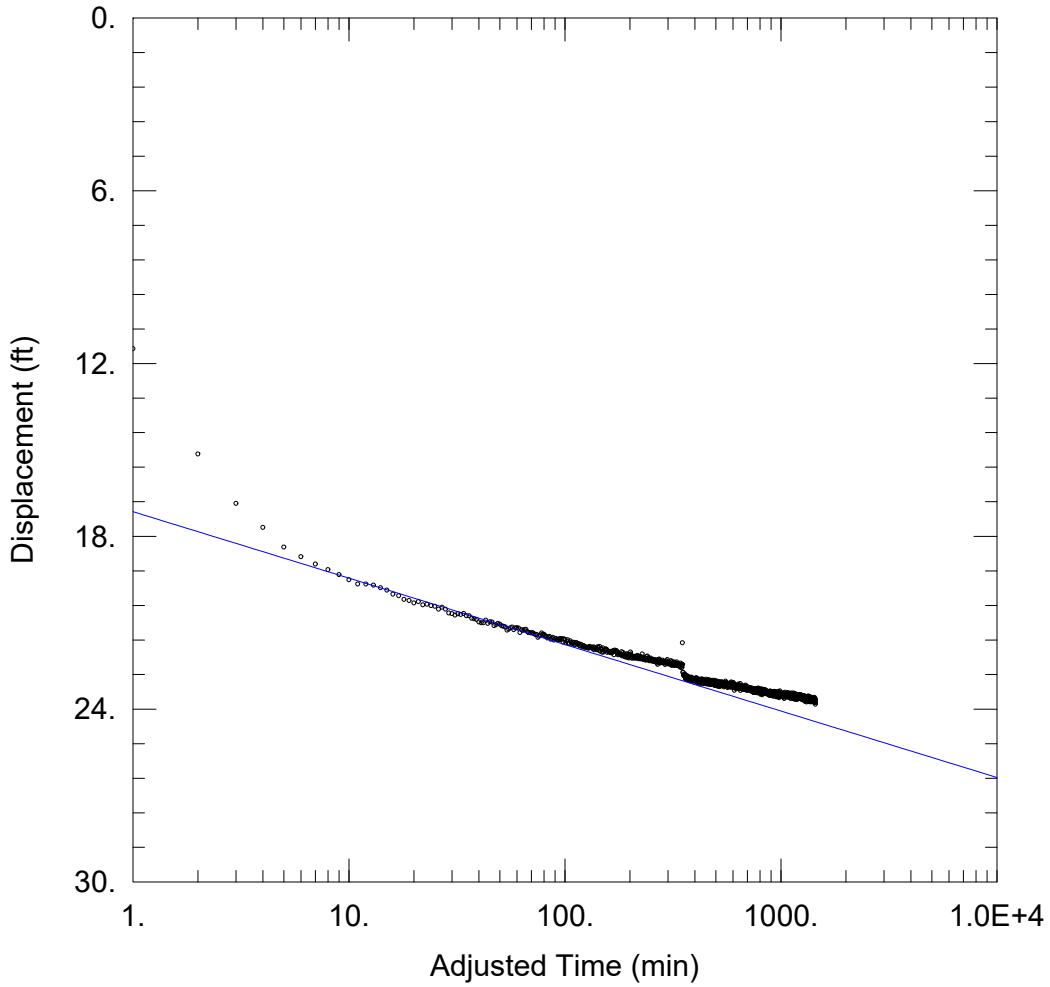
Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 3 Temperature (F)	PW Well No. 3 Water Level (ft bgs)	PW Well No. 3 Water Level (ft MSL)	PW Well No. 3 Drawdown (ft)	PW Well No. 3 Pump Rate (gpm)	PW Well No. 3 Specific Capacity (gpm/ft)	Comments	OW Well No. 2 Water Level (ft MSL)	OW Well No. 2 Drawdown (ft)
6/29/22 10:04 PM	660		70.60	334.30	1,650.70	23.27				1,675.18	1.47
6/29/22 11:04 PM	720		70.52	334.32	1,650.68	23.29				1,675.10	1.55
6/30/22 12:04 AM	780		70.54	334.35	1,650.65	23.32				1,675.15	1.49
6/30/22 1:04 AM	840		70.54	334.48	1,650.52	23.44				1,675.08	1.56
6/30/22 2:04 AM	900		70.53	334.51	1,650.49	23.47				1,675.09	1.56
6/30/22 3:04 AM	960		70.55	334.59	1,650.41	23.56				1,674.97	1.67
6/30/22 4:04 AM	1,020		70.54	334.58	1,650.43	23.54				1,675.03	1.62
6/30/22 5:04 AM	1,080		70.54	334.59	1,650.41	23.56				1,675.09	1.55
6/30/22 6:04 AM	1,140		70.53	334.60	1,650.40	23.57				1,675.03	1.62
6/30/22 7:04 AM	1,200		70.55	334.60	1,650.40	23.57				1,675.01	1.64
6/30/22 8:04 AM	1,260		70.57	334.66	1,650.34	23.63				1,674.85	1.80
6/30/22 9:04 AM	1,320		70.54	334.75	1,650.25	23.71				1,674.93	1.71
6/30/22 10:04 AM	1,380		70.55	334.77	1,650.24	23.73				1,674.98	1.67
6/30/22 11:04 AM	1,440		70.55	334.67	1,650.33	23.64				1,674.88	1.76
6/30/22 11:09 AM	1,445	0	70.53	334.86	1,650.14	23.83	14.5	0.61	Pump Stop	1,674.84	1.81
6/30/22 11:10 AM	1,446	1	70.58	326.52	1,658.48	15.49			Meter: 237,424.503 gallons	1,674.80	1.85
6/30/22 11:11 AM	1,447	2	70.83	319.50	1,665.51	8.46			Avg. Pump Rate: 15 gpm	1,674.79	1.86
6/30/22 11:12 AM	1,448	3	71.06	317.19	1,667.81	6.16				1,674.88	1.76
6/30/22 11:13 AM	1,449	4	71.09	316.15	1,668.85	5.12				1,674.90	1.75
6/30/22 11:14 AM	1,450	5	71.12	315.64	1,669.36	4.61				1,674.97	1.67
6/30/22 11:15 AM	1,451	6	71.20	315.23	1,669.77	4.20				1,674.95	1.70
6/30/22 11:16 AM	1,452	7	71.24	315.01	1,669.99	3.98				1,675.03	1.62
6/30/22 11:17 AM	1,453	8	71.25	314.85	1,670.15	3.82				1,675.02	1.63
6/30/22 11:18 AM	1,454	9	71.23	314.59	1,670.41	3.55				1,675.00	1.64
6/30/22 11:19 AM	1,455	10	71.32	314.55	1,670.45	3.51				1,675.08	1.57
6/30/22 11:20 AM	1,456	11	71.32	314.38	1,670.62	3.35				1,675.07	1.57
6/30/22 11:21 AM	1,457	12	71.31	314.39	1,670.61	3.36				1,675.10	1.55
6/30/22 11:22 AM	1,458	13	71.34	314.22	1,670.78	3.19				1,675.10	1.55
6/30/22 11:23 AM	1,459	14	71.36	314.13	1,670.87	3.10				1,675.15	1.49
6/30/22 11:24 AM	1,460	15	71.39	314.04	1,670.96	3.01				1,675.18	1.47
6/30/22 11:29 AM	1,465	20	71.42	313.79	1,671.21	2.76				1,675.20	1.45
6/30/22 11:34 AM	1,470	25	71.47	313.62	1,671.38	2.58				1,675.26	1.39
6/30/22 11:39 AM	1,475	30	71.48	313.45	1,671.55	2.42				1,675.25	1.40
6/30/22 11:54 AM	1,490	45	71.33	313.18	1,671.82	2.15				1,675.49	1.16
6/30/22 12:09 PM	1,505	60	71.26	312.95	1,672.05	1.92				1,675.48	1.16

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 5 HP
MSL = Mean Sea Level Pump Setting = 500 ft EC=Electrical conductivity (mS/cm)

Maverick Well No. 3 - Aquifer Test (June 29, 2022)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 3 Temperature (F)	PW Well No. 3 Water Level (ft bgs)	PW Well No. 3 Water Level (ft MSL)	PW Well No. 3 Drawdown (ft)	PW Well No. 3 Pump Rate (gpm)	PW Well No. 3 Specific Capacity (gpm/ft)	Comments	OW Well No. 2 Water Level (ft MSL)	OW Well No. 2 Drawdown (ft)
6/30/22 12:24 PM	1,520	75	71.21	312.79	1,672.21	1.76				1,675.63	1.02
6/30/22 12:39 PM	1,535	90	71.18	312.60	1,672.40	1.56				1,675.67	0.98
6/30/22 12:54 PM	1,550	105	71.00	312.56	1,672.45	1.52				1,675.73	0.92
6/30/22 1:09 PM	1,565	120	70.91	312.45	1,672.55	1.42				1,675.72	0.93
6/30/22 1:39 PM	1,595	150	70.83	312.37	1,672.63	1.33				1,675.78	0.87
6/30/22 2:09 PM	1,625	180	70.76	312.24	1,672.76	1.21				1,675.82	0.83
6/30/22 2:39 PM	1,655	210	70.75	312.15	1,672.85	1.12				1,675.93	0.72
6/30/22 3:09 PM	1,685	240	70.67	312.07	1,672.93	1.04				1,675.94	0.71
6/30/22 4:09 PM	1,745	300	70.64	311.90	1,673.10	0.87				1,676.03	0.62
6/30/22 5:09 PM	1,805	360	70.63	311.79	1,673.21	0.76				1,676.06	0.59
6/30/22 6:09 PM	1,865	420	70.64	311.71	1,673.29	0.68				1,676.12	0.53
6/30/22 7:09 PM	1,925	480	70.64	311.55	1,673.45	0.52				1,676.24	0.41
6/30/22 8:09 PM	1,985	540	70.61	311.53	1,673.47	0.50				1,676.32	0.32
6/30/22 9:09 PM	2,045	600	70.60	311.39	1,673.61	0.35				1,676.40	0.25
6/30/22 10:09 PM	2,105	660	70.60	311.31	1,673.69	0.28				1,676.46	0.19
6/30/22 11:09 PM	2,165	720	70.57	311.34	1,673.66	0.31				1,676.55	0.10
7/1/22 12:09 AM	2,225	780	70.60	311.20	1,673.80	0.17				1,676.55	0.09
7/1/22 1:09 AM	2,285	840	70.62	311.13	1,673.87	0.10				1,676.51	0.14
7/1/22 2:09 AM	2,345	900	70.64	311.08	1,673.92	0.05				1,676.50	0.14
7/1/22 3:09 AM	2,405	960	70.58	311.05	1,673.95	0.01				1,676.50	0.15
7/1/22 4:09 AM	2,465	1020	70.58	311.14	1,673.86	0.11				1,676.61	0.03
7/1/22 5:09 AM	2,525	1080	70.58	311.06	1,673.94	0.02				1,676.57	0.07
7/1/22 6:09 AM	2,585	1140	70.59	311.01	1,673.99	-0.02				1,676.65	0.00
7/1/22 7:09 AM	2,645	1200	70.61	311.00	1,674.00	-0.03				1,676.62	0.02
7/1/22 8:09 AM	2,705	1260	70.63	311.00	1,674.00	-0.03				1,676.69	-0.05
7/1/22 9:09 AM	2,765	1320	70.61	310.97	1,674.04	-0.07				1,676.66	-0.01
7/1/22 10:09 AM	2,825	1380	70.61	310.96	1,674.04	-0.07				1,676.65	0.00
7/1/22 10:32 AM	2,848	1403	70.61	310.91	1,674.09	-0.12				1,454.67	221.98

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 5 HP
MSL = Mean Sea Level Pump Setting = 500 ft EC=Electrical conductivity (mS/cm)



WELL TEST ANALYSIS

Data Set: \...\PW 3.aqt
Date: 08/01/22 Time: 16:08:17

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: HH7
Test Well: Well No 3
Test Date: 6-29-22

AQUIFER DATA

Saturated Thickness: 224. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

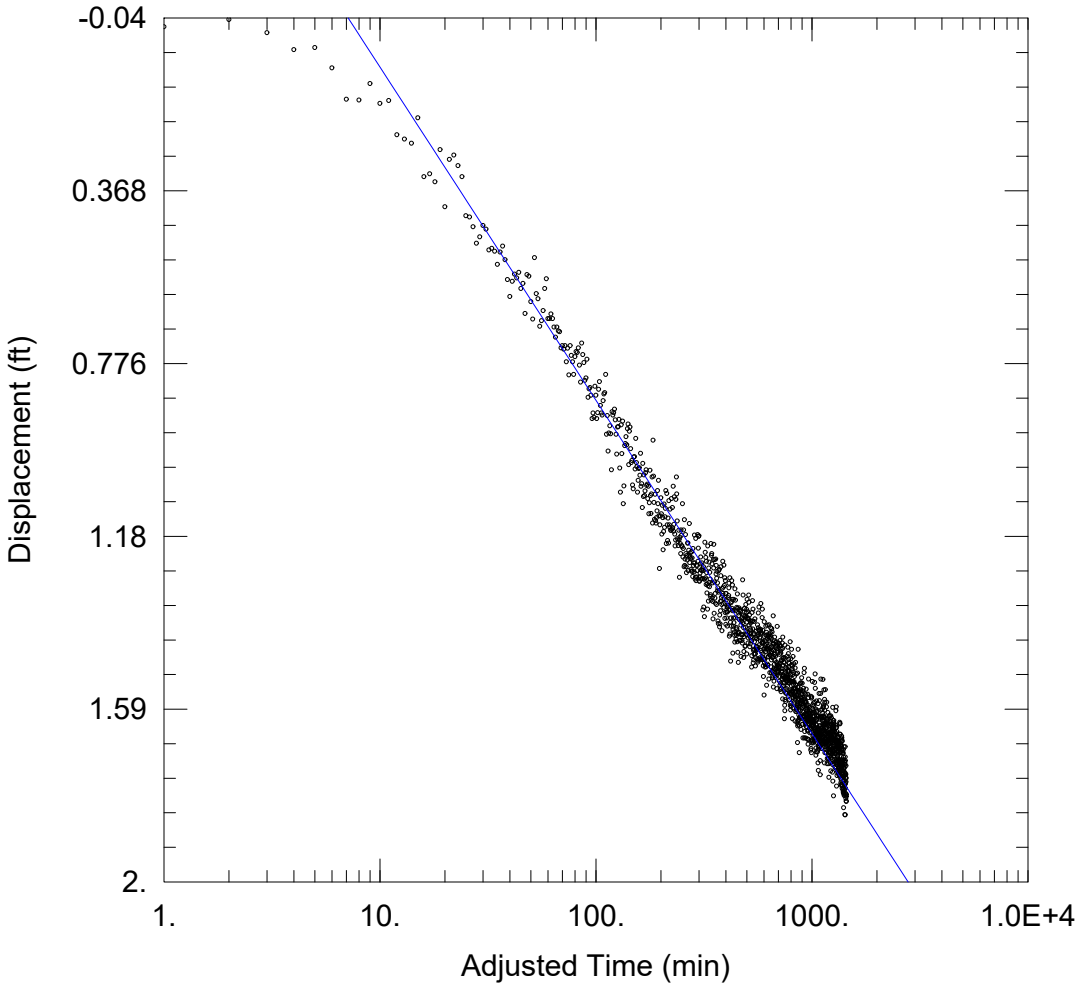
Pumping Wells

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

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 229.3 ft^2/day



WELL TEST ANALYSIS

Data Set: \...\OW 2.aqt
Date: 08/01/22 Time: 16:08:46

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: HH7
Test Well: Well No 3
Test Date: 6-29-22

AQUIFER DATA

Saturated Thickness: 221.9 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Pumping Wells

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

Observation Wells

Well Name	X (ft)	Y (ft)
◦ Well No 2	404	0

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 672.4 ft^2/day S = 5.145E-5

Aquifer Test

Well No. 4

Maverick Well No. 4 - Aquifer Test (July 12, 2022)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 4 Temperature (F)	PW Well No. 4 Water Level (ft bgs)	PW Well No. 4 Water Level (ft MSL)	PW Well No. 4 Drawdown (ft)	PW Well No. 4 Pump Rate (gpm)	PW Well No. 4 Specific Capacity (gpm/ft)	Comments	OW Well No. 5 Water Level (ft MSL)	OW Well No. 5 Drawdown (ft)
7/12/22 10:51 AM	0		78.56	351.50	1,667.50	0.00			Pump Start	1,667.46	0.00
7/12/22 10:52 AM	1		77.15	355.35	1,663.65	3.85	15.0	3.90	Meter: 237,451.638 gallons	1,667.33	0.13
7/12/22 10:53 AM	2		76.02	355.40	1,663.60	3.90	15.0	3.84		1,667.38	0.08
7/12/22 10:54 AM	3		75.20	355.62	1,663.38	4.12	15.0	3.64		1,667.19	0.26
7/12/22 10:55 AM	4		74.57	355.90	1,663.10	4.40	15.0	3.41		1,667.21	0.24
7/12/22 10:56 AM	5		74.11	355.96	1,663.04	4.46	14.0	3.14	pH: 7.58 / EC: 0.63	1,667.16	0.30
7/12/22 10:57 AM	6		73.77	356.12	1,662.88	4.62	14.0	3.03		1,667.09	0.37
7/12/22 10:58 AM	7		73.53	356.19	1,662.81	4.69	14.0	2.98		1,667.08	0.38
7/12/22 10:59 AM	8		73.33	356.19	1,662.82	4.69	14.0	2.99		1,667.13	0.32
7/12/22 11:00 AM	9		73.14	356.28	1,662.72	4.78	14.0	2.93		1,667.07	0.39
7/12/22 11:01 AM	10		73.00	356.36	1,662.64	4.86	14.0	2.88		1,666.95	0.50
7/12/22 11:02 AM	11		72.92	356.38	1,662.62	4.88	14.0	2.87		1,666.96	0.49
7/12/22 11:03 AM	12		72.82	356.43	1,662.57	4.93	14.0	2.84		1,666.92	0.53
7/12/22 11:04 AM	13		72.72	356.48	1,662.52	4.98	14.0	2.81		1,666.91	0.55
7/12/22 11:05 AM	14		72.67	356.52	1,662.48	5.02	14.0	2.79		1,666.82	0.63
7/12/22 11:06 AM	15		72.66	356.62	1,662.38	5.12	14.0	2.73	pH: 7.52 / EC: 0.67	1,666.86	0.60
7/12/22 11:11 AM	20		72.54	356.64	1,662.37	5.14	14.0	2.73		1,666.76	0.70
7/12/22 11:16 AM	25		72.51	356.75	1,662.25	5.26	14.0	2.66		1,666.76	0.70
7/12/22 11:21 AM	30		72.49	356.78	1,662.22	5.28	14.0	2.65	pH: 7.52 / EC: 0.68	1,666.65	0.81
7/12/22 11:36 AM	45		72.48	356.94	1,662.06	5.44	14.0	2.57	pH: 7.49 / EC: 0.68	1,666.50	0.96
7/12/22 11:51 AM	60		72.49	357.00	1,662.00	5.51	14.0	2.54	pH: 7.47 / EC: 0.68	1,666.36	1.10
7/12/22 12:06 PM	75		72.54	357.07	1,661.93	5.58	14.0	2.51		1,666.29	1.17
7/12/22 12:21 PM	90		72.48	357.19	1,661.82	5.69	14.0	2.46	pH: 7.54 / EC: 0.67	1,666.21	1.25
7/12/22 12:36 PM	105		72.47	357.21	1,661.79	5.71	14.0	2.45		1,666.16	1.29
7/12/22 12:51 PM	120		72.45	357.28	1,661.72	5.78	14.0	2.42		1,666.11	1.34
7/12/22 1:21 PM	150		72.51	357.29	1,661.71	5.79				1,665.98	1.47
7/12/22 1:51 PM	180		72.51	357.51	1,661.49	6.01				1,665.94	1.52
7/12/22 2:21 PM	210		72.53	357.51	1,661.49	6.01				1,665.89	1.57
7/12/22 2:51 PM	240		72.52	357.54	1,661.46	6.04				1,665.77	1.69
7/12/22 3:51 PM	300		72.62	357.64	1,661.36	6.14				1,665.68	1.77
7/12/22 4:51 PM	360		72.54	357.83	1,661.17	6.34				1,665.70	1.76
7/12/22 5:51 PM	420		72.49	357.74	1,661.26	6.25				1,665.70	1.75
7/12/22 6:51 PM	480		72.51	357.75	1,661.25	6.25				1,665.68	1.78
7/12/22 7:51 PM	540		72.52	357.79	1,661.21	6.29				1,665.70	1.76
7/12/22 8:51 PM	600		72.52	357.68	1,661.32	6.18				1,665.65	1.81

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 5 HP
MSL = Mean Sea Level Pump Setting = 520 ft EC=Electrical conductivity (mS/cm)

Maverick Well No. 4 - Aquifer Test (July 12, 2022)

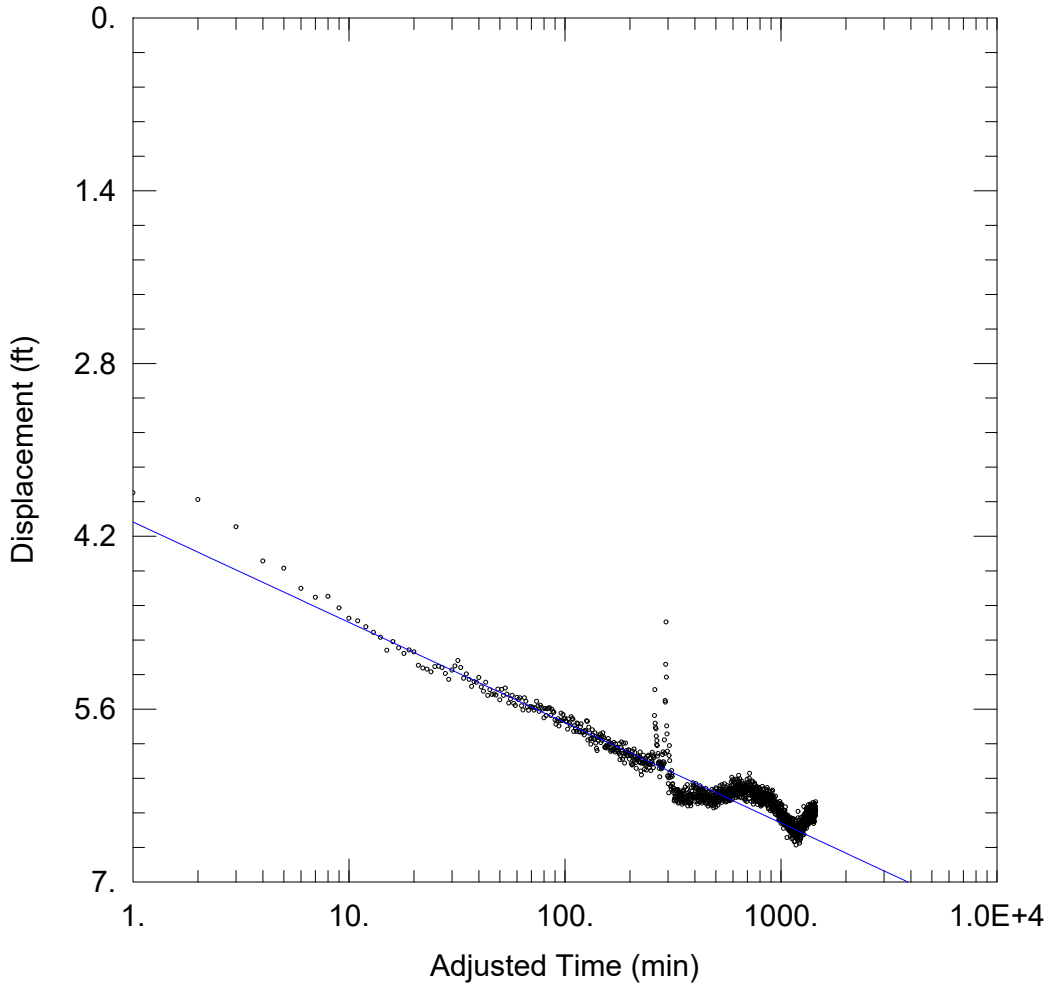
Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 4 Temperature (F)	PW Well No. 4 Water Level (ft bgs)	PW Well No. 4 Water Level (ft MSL)	PW Well No. 4 Drawdown (ft)	PW Well No. 4 Pump Rate (gpm)	PW Well No. 4 Specific Capacity (gpm/ft)	Comments	OW Well No. 5 Water Level (ft MSL)	OW Well No. 5 Drawdown (ft)
7/12/22 9:51 PM	660		72.49	357.68	1,661.32	6.18				1,665.77	1.69
7/12/22 10:51 PM	720		72.51	357.71	1,661.29	6.21				1,665.60	1.86
7/12/22 11:51 PM	780		72.49	357.85	1,661.15	6.35				1,665.61	1.84
7/13/22 12:51 AM	840		72.49	357.79	1,661.21	6.29				1,665.55	1.91
7/13/22 1:51 AM	900		72.50	357.80	1,661.20	6.30				1,665.43	2.03
7/13/22 2:51 AM	960		72.53	357.86	1,661.15	6.36				1,665.42	2.04
7/13/22 3:51 AM	1,020		72.49	357.93	1,661.07	6.44				1,665.25	2.21
7/13/22 4:51 AM	1,080		72.49	358.03	1,660.97	6.53				1,665.19	2.26
7/13/22 5:51 AM	1,140		72.48	357.99	1,661.01	6.49				1,665.05	2.41
7/13/22 6:51 AM	1,200		72.52	358.10	1,660.90	6.60				1,665.03	2.43
7/13/22 7:51 AM	1,260		72.46	358.09	1,660.91	6.59				1,665.11	2.35
7/13/22 8:51 AM	1,320		72.44	357.93	1,661.07	6.44				1,665.01	2.44
7/13/22 9:51 AM	1,380		72.49	357.95	1,661.05	6.45				1,665.15	2.31
7/13/22 10:51 AM	1,440		72.48	357.94	1,661.06	6.44				1,665.13	2.32
7/13/22 11:01 AM	1,450	0	72.51	357.91	1,661.09	6.41	14.0	2.18	Pump Stop	1,665.13	2.33
7/13/22 11:02 AM	1,451	1	72.49	354.99	1,664.01	3.49			Meter: 257,981.868 gallons	1,665.10	2.36
7/13/22 11:03 AM	1,452	2	73.14	354.31	1,664.69	2.81			Avg. Pump Rate: 14.1 gpm	1,665.14	2.32
7/13/22 11:04 AM	1,453	3	73.62	354.00	1,665.00	2.50				1,665.26	2.19
7/13/22 11:05 AM	1,454	4	74.03	353.89	1,665.11	2.39				1,665.34	2.11
7/13/22 11:06 AM	1,455	5	74.45	353.61	1,665.39	2.12				1,665.33	2.12
7/13/22 11:07 AM	1,456	6	74.53	353.53	1,665.47	2.03				1,665.40	2.06
7/13/22 11:08 AM	1,457	7	74.70	353.46	1,665.54	1.96				1,665.39	2.07
7/13/22 11:09 AM	1,458	8	74.83	353.37	1,665.63	1.87				1,665.47	1.99
7/13/22 11:10 AM	1,459	9	74.89	353.35	1,665.65	1.85				1,665.56	1.90
7/13/22 11:11 AM	1,460	10	74.87	353.38	1,665.62	1.88				1,665.44	2.02
7/13/22 11:12 AM	1,461	11	74.80	353.26	1,665.74	1.76				1,665.64	1.81
7/13/22 11:13 AM	1,462	12	74.70	353.21	1,665.79	1.72				1,665.59	1.87
7/13/22 11:14 AM	1,463	13	74.57	353.28	1,665.73	1.78				1,665.59	1.87
7/13/22 11:15 AM	1,464	14	74.47	353.20	1,665.80	1.70				1,665.62	1.83
7/13/22 11:16 AM	1,465	15	74.30	353.08	1,665.92	1.59				1,665.62	1.84
7/13/22 11:21 AM	1,470	20	73.79	352.93	1,666.07	1.43				1,665.71	1.74
7/13/22 11:26 AM	1,475	25	73.50	352.88	1,666.12	1.38				1,665.81	1.65
7/13/22 11:31 AM	1,480	30	73.36	352.83	1,666.18	1.33				1,665.82	1.64
7/13/22 11:46 AM	1,495	45	73.17	352.59	1,666.41	1.09				1,666.06	1.40
7/13/22 12:01 PM	1,510	60	73.12	352.42	1,666.58	0.92				1,666.06	1.39

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 5 HP
MSL = Mean Sea Level Pump Setting = 520 ft EC=Electrical conductivity (mS/cm)

Maverick Well No. 4 - Aquifer Test (July 12, 2022)

Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 4 Temperature (F)	PW Well No. 4 Water Level (ft bgs)	PW Well No. 4 Water Level (ft MSL)	PW Well No. 4 Drawdown (ft)	PW Well No. 4 Pump Rate (gpm)	PW Well No. 4 Specific Capacity (gpm/ft)	Comments	OW Well No. 5 Water Level (ft MSL)	OW Well No. 5 Drawdown (ft)
7/13/22 12:16 PM	1,525	75	73.10	352.30	1,666.70	0.80				1,666.15	1.31
7/13/22 12:31 PM	1,540	90	73.10	352.22	1,666.79	0.72				1,666.28	1.18
7/13/22 12:46 PM	1,555	105	73.05	352.23	1,666.77	0.74				1,666.35	1.11
7/13/22 1:01 PM	1,570	120	73.09	352.22	1,666.78	0.72				1,666.39	1.07
7/13/22 1:31 PM	1,600	150	73.03	352.08	1,666.92	0.58				1,666.37	1.09
7/13/22 2:01 PM	1,630	180	73.01	352.02	1,666.98	0.52				1,666.47	0.99
7/13/22 2:31 PM	1,660	210	73.07	351.98	1,667.02	0.48				1,666.53	0.93
7/13/22 3:01 PM	1,690	240	73.05	351.95	1,667.05	0.45				1,666.58	0.88
7/13/22 4:01 PM	1,750	300	73.05	351.90	1,667.10	0.40				1,666.67	0.79
7/13/22 5:01 PM	1,810	360	73.07	351.82	1,667.18	0.32				1,666.81	0.64
7/13/22 6:01 PM	1,870	420	73.08	351.68	1,667.32	0.18				1,666.81	0.65
7/13/22 7:01 PM	1,930	480	73.07	351.53	1,667.47	0.03				1,666.94	0.52
7/13/22 8:01 PM	1,990	540	73.04	351.53	1,667.47	0.03				1,666.97	0.49
7/13/22 9:01 PM	2,050	600	73.06	351.56	1,667.44	0.06				1,667.06	0.39
7/13/22 10:01 PM	2,110	660	73.08	351.51	1,667.49	0.01				1,667.01	0.44
7/13/22 11:01 PM	2,170	720	73.07	351.55	1,667.45	0.05				1,667.11	0.35
7/14/22 12:01 AM	2,230	780	73.08	351.59	1,667.41	0.10				1,667.02	0.44
7/14/22 1:01 AM	2,290	840	73.03	351.59	1,667.41	0.10				1,667.13	0.33
7/14/22 2:01 AM	2,350	900	73.05	351.45	1,667.55	-0.05				1,667.17	0.29
7/14/22 3:01 AM	2,410	960	73.05	351.34	1,667.66	-0.16				1,667.18	0.28
7/14/22 4:01 AM	2,470	1020	73.02	351.41	1,667.59	-0.09				1,667.21	0.24
7/14/22 5:01 AM	2,530	1080	73.08	351.35	1,667.65	-0.15				1,667.25	0.21
7/14/22 6:01 AM	2,590	1140	73.04	351.34	1,667.66	-0.16				1,667.28	0.17
7/14/22 7:01 AM	2,650	1200	73.09	351.33	1,667.67	-0.17				1,667.30	0.16
7/14/22 8:01 AM	2,710	1260	73.04	351.37	1,667.63	-0.13				1,667.33	0.13
7/14/22 9:01 AM	2,770	1320	72.96	351.43	1,667.57	-0.07				1,667.31	0.15
7/14/22 10:02 AM	2,831	1381	72.85	351.35	1,667.65	-0.15				1,667.26	0.20

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 5 HP
MSL = Mean Sea Level Pump Setting = 520 ft EC=Electrical conductivity (mS/cm)



WELL TEST ANALYSIS

Data Set: \...\PW 4.aqt
Date: 08/01/22 Time: 16:09:14

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: HH7
Test Well: Well No 4
Test Date: 7-12-22

AQUIFER DATA

Saturated Thickness: 198.5 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

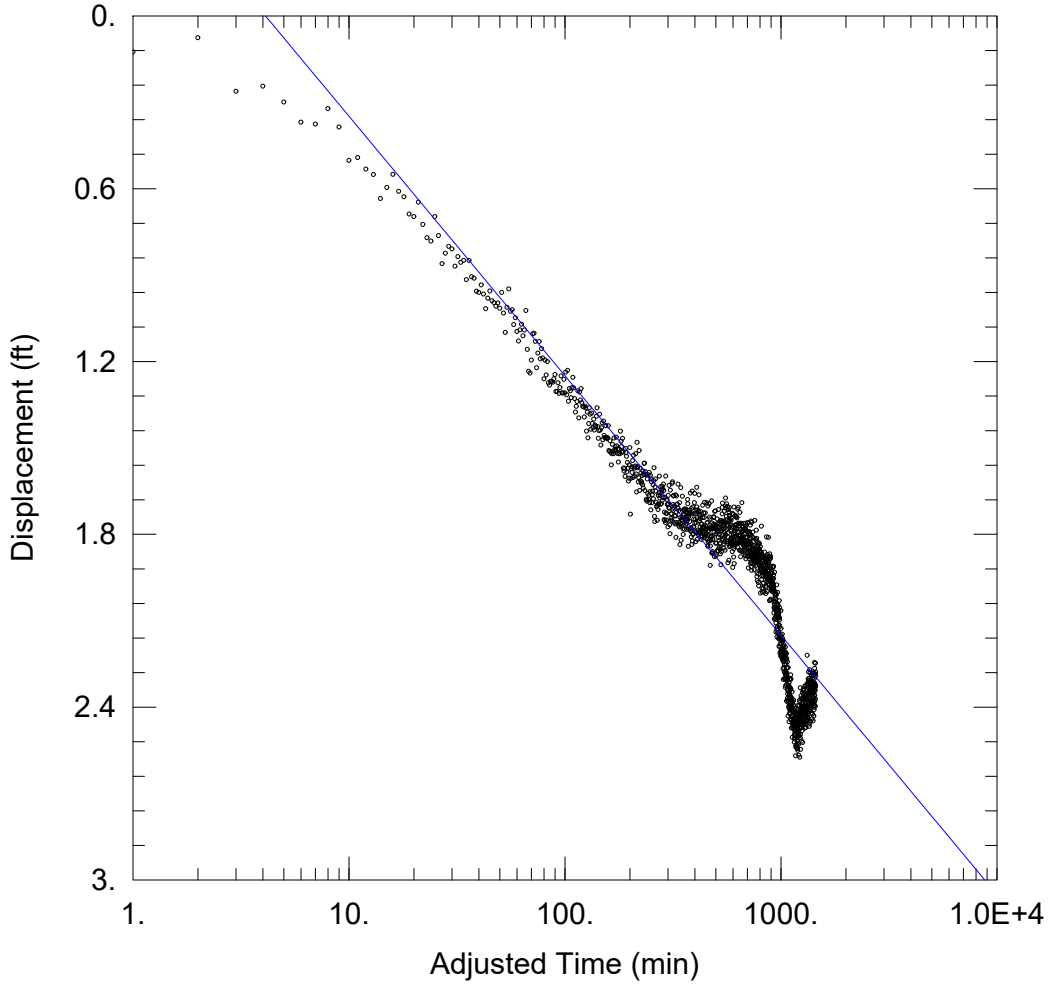
Pumping Wells

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

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 611.9 ft^2/day



WELL TEST ANALYSIS

Data Set: \...\OW 5.aqt
Date: 08/01/22 Time: 16:09:29

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: HH7
Test Well: Well No 4
Test Date: 7-12-22

AQUIFER DATA

Saturated Thickness: 185.5 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Pumping Wells

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

Observation Wells

Well Name	X (ft)	Y (ft)
◦ Well No 5	410	0

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 552. ft^2/day S = 2.105E-5

Aquifer Test

Well No. 6

Maverick Well No. 6 - Aquifer Test (June 7, 2022)

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. 7 Water Level (ft MSL)	OW Well No. 7 Drawdown (ft)
6/7/22 10:45 AM	0		76.82	353.06	1,668.94	0.00			Pump Start	1,669.01	0.00
6/7/22 10:46 AM	1		75.92	355.26	1,666.74	2.20		0.00	Meter: 173,232.622 gallons	1,669.03	-0.01
6/7/22 10:47 AM	2		75.30	355.65	1,666.35	2.59	15.0	5.79	pH: 7.6 / EC: 0.61	1,669.11	-0.09
6/7/22 10:48 AM	3		74.82	355.77	1,666.23	2.71		0.00		1,668.96	0.05
6/7/22 10:49 AM	4		74.47	355.85	1,666.15	2.80		0.00		1,668.98	0.04
6/7/22 10:50 AM	5		74.19	355.88	1,666.12	2.82		0.00		1,668.91	0.11
6/7/22 10:51 AM	6		73.96	355.80	1,666.20	2.75		0.00		1,668.93	0.09
6/7/22 10:52 AM	7		73.78	356.02	1,665.98	2.96		0.00		1,668.85	0.16
6/7/22 10:53 AM	8		73.59	355.97	1,666.03	2.91		0.00		1,668.86	0.16
6/7/22 10:54 AM	9		73.45	355.89	1,666.11	2.83		0.00		1,668.80	0.21
6/7/22 10:55 AM	10		73.35	356.09	1,665.91	3.03		0.00		1,668.86	0.16
6/7/22 10:56 AM	11		73.30	356.13	1,665.87	3.07		0.00		1,668.87	0.15
6/7/22 10:57 AM	12		73.23	356.16	1,665.84	3.10		0.00		1,668.80	0.22
6/7/22 10:58 AM	13		73.17	356.14	1,665.86	3.09		0.00		1,668.88	0.13
6/7/22 10:59 AM	14		73.08	356.24	1,665.76	3.18		0.00		1,668.83	0.19
6/7/22 11:00 AM	15		73.03	356.19	1,665.81	3.13		0.00		1,668.79	0.23
6/7/22 11:05 AM	20		72.87	356.26	1,665.75	3.20	15.0	4.69	pH: 7.6 / EC: 0.63	1,668.64	0.38
6/7/22 11:10 AM	25		72.80	356.31	1,665.70	3.25		0.00		1,668.60	0.41
6/7/22 11:15 AM	30		72.77	356.33	1,665.67	3.28	15.0	4.58	pH: 7.6 / EC: 0.62	1,668.53	0.48
6/7/22 11:30 AM	45		72.73	356.50	1,665.50	3.44	15.0	4.36	pH: 7.7 / EC: 0.63	1,668.45	0.56
6/7/22 11:45 AM	60		72.72	356.56	1,665.44	3.50	15.0	4.28	pH: 7.6 / EC: 0.63	1,668.24	0.78
6/7/22 12:00 PM	75		72.68	356.62	1,665.38	3.56		0.00		1,668.18	0.83
6/7/22 12:15 PM	90		72.67	356.64	1,665.36	3.59	15.0	4.18	pH: 7.7 / EC: 0.63	1,668.03	0.98
6/7/22 12:30 PM	105		72.67	356.67	1,665.33	3.61		0.00		1,668.01	1.00
6/7/22 12:45 PM	120		72.67	356.80	1,665.20	3.75		0.00		1,667.91	1.10
6/7/22 1:15 PM	150		72.69	356.88	1,665.12	3.83				1,667.76	1.26
6/7/22 1:45 PM	180		72.67	356.92	1,665.08	3.87				1,667.70	1.31
6/7/22 2:15 PM	210		72.67	357.01	1,664.99	3.95				1,667.63	1.39
6/7/22 2:45 PM	240		72.70	357.08	1,664.92	4.02				1,667.47	1.55
6/7/22 3:45 PM	300		72.66	357.11	1,664.89	4.05				1,667.42	1.59
6/7/22 4:45 PM	360		72.66	357.16	1,664.84	4.10				1,667.33	1.69
6/7/22 5:45 PM	420		72.65	357.34	1,664.67	4.28				1,667.14	1.88
6/7/22 6:45 PM	480		72.64	357.33	1,664.67	4.27				1,667.07	1.95
6/7/22 7:45 PM	540		72.65	357.32	1,664.68	4.26				1,667.02	2.00
6/7/22 8:45 PM	600		72.64	357.35	1,664.65	4.29				1,667.02	2.00

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 3 HP
MSL = Mean Sea Level Pump Setting = 483 ft EC=Electrical conductivity (mS/cm)

Maverick Well No. 6 - Aquifer Test (June 7, 2022)

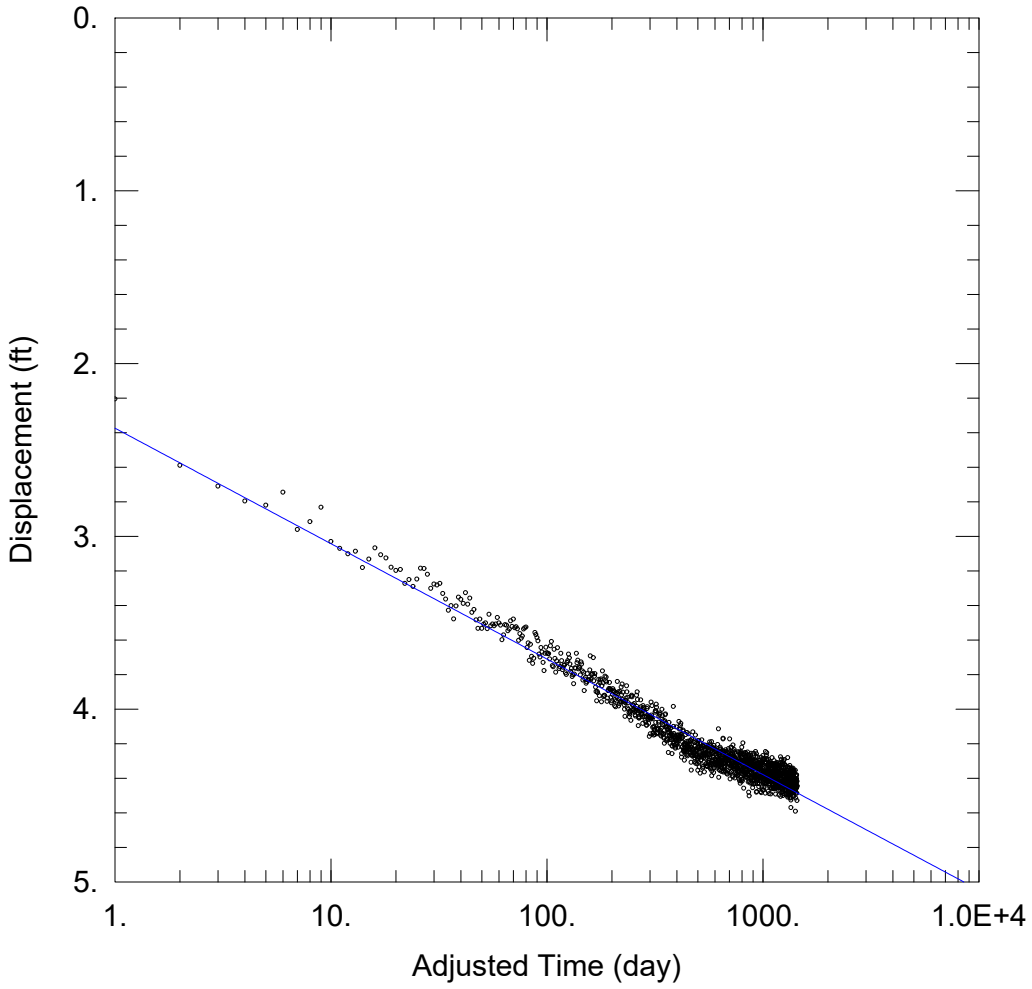
Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 6 Temperature (F)	PW Well No. 6 Water Level (ft bgs)	PW Well No. 6 Water Level (ft MSL)	PW Well No. 6 Drawdown (ft)	PW Well No. 6 Pump Rate (gpm)	PW Well No. 6 Specific Capacity (gpm/ft)	Comments	OW Well No. 7 Water Level (ft MSL)	OW Well No. 7 Drawdown (ft)
6/7/22 9:45 PM	660		72.68	357.30	1,664.70	4.24				1,666.95	2.07
6/7/22 10:45 PM	720		72.68	357.34	1,664.66	4.28				1,667.01	2.01
6/7/22 11:45 PM	780		72.68	357.47	1,664.53	4.41				1,667.00	2.01
6/8/22 12:45 AM	840		72.61	357.45	1,664.55	4.39				1,666.92	2.10
6/8/22 1:45 AM	900		72.65	357.38	1,664.62	4.32				1,666.83	2.18
6/8/22 2:45 AM	960		72.65	357.39	1,664.61	4.33				1,666.86	2.16
6/8/22 3:45 AM	1,020		72.64	357.42	1,664.58	4.36				1,666.80	2.22
6/8/22 4:45 AM	1,080		72.65	357.37	1,664.63	4.31				1,666.78	2.24
6/8/22 5:45 AM	1,140		72.64	357.40	1,664.60	4.35				1,666.82	2.20
6/8/22 6:45 AM	1,200		72.67	357.42	1,664.58	4.37				1,666.82	2.19
6/8/22 7:45 AM	1,260		72.64	357.38	1,664.62	4.32				1,666.86	2.16
6/8/22 8:45 AM	1,320		72.61	357.43	1,664.57	4.37				1,666.82	2.20
6/8/22 9:45 AM	1,380		72.64	357.40	1,664.60	4.34				1,666.79	2.22
6/8/22 10:45 AM	1,440		72.63	357.48	1,664.52	4.42				1,666.73	2.28
6/8/22 10:46 AM	1,441	0	72.63	357.50	1,664.50	4.44	14.5	3.26	Pump Stop	1,666.76	2.26
6/8/22 10:47 AM	1,442	1	72.61	355.08	1,666.92	2.02			Meter: 194,501 gallons	1,666.75	2.27
6/8/22 10:48 AM	1,443	2	72.62	354.92	1,667.08	1.86			Avg. Pump Rate: 14.75 gpm	1,666.73	2.28
6/8/22 10:49 AM	1,444	3	72.60	354.76	1,667.24	1.70				1,666.80	2.22
6/8/22 10:50 AM	1,445	4	72.64	354.83	1,667.17	1.78				1,666.80	2.21
6/8/22 10:51 AM	1,446	5	72.68	354.71	1,667.29	1.65				1,666.87	2.14
6/8/22 10:52 AM	1,447	6	72.63	354.65	1,667.36	1.59				1,666.90	2.12
6/8/22 10:53 AM	1,448	7	72.67	354.53	1,667.47	1.48				1,666.87	2.14
6/8/22 10:54 AM	1,449	8	72.73	354.58	1,667.42	1.52				1,666.91	2.11
6/8/22 10:55 AM	1,450	9	72.76	354.47	1,667.53	1.41				1,666.87	2.14
6/8/22 10:56 AM	1,451	10	72.80	354.50	1,667.51	1.44				1,666.93	2.09
6/8/22 10:57 AM	1,452	11	72.83	354.44	1,667.56	1.39				1,666.95	2.06
6/8/22 10:58 AM	1,453	12	72.92	354.39	1,667.62	1.33				1,666.89	2.12
6/8/22 10:59 AM	1,454	13	72.98	354.42	1,667.58	1.36				1,666.95	2.06
6/8/22 11:00 AM	1,455	14	73.06	354.41	1,667.59	1.35				1,666.81	2.20
6/8/22 11:01 AM	1,456	15	73.19	354.41	1,667.59	1.35				1,667.01	2.00
6/8/22 11:06 AM	1,461	20	73.63	354.26	1,667.74	1.21				1,666.96	2.05
6/8/22 11:11 AM	1,466	25	74.08	354.28	1,667.72	1.22				1,666.97	2.04
6/8/22 11:16 AM	1,471	30	74.48	354.18	1,667.82	1.13				1,667.00	2.01
6/8/22 11:31 AM	1,486	45	74.54	354.04	1,667.96	0.98				1,667.09	1.93
6/8/22 11:46 AM	1,501	60	73.80	353.92	1,668.08	0.86				1,667.16	1.86

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 3 HP
MSL = Mean Sea Level Pump Setting = 483 ft EC=Electrical conductivity (mS/cm)

Maverick Well No. 6 - Aquifer Test (June 7, 2022)

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. 7 Water Level (ft MSL)	OW Well No. 7 Drawdown (ft)
6/8/22 12:01 PM	1,516	75	73.27	353.99	1,668.01	0.94				1,667.19	1.83
6/8/22 12:16 PM	1,531	90	72.98	353.85	1,668.16	0.79				1,667.29	1.72
6/8/22 12:31 PM	1,546	105	72.87	353.81	1,668.19	0.75				1,667.34	1.68
6/8/22 12:46 PM	1,561	120	72.80	353.79	1,668.22	0.73				1,667.26	1.76
6/8/22 1:16 PM	1,591	150	72.75	353.75	1,668.25	0.69				1,667.36	1.65
6/8/22 1:46 PM	1,621	180	72.65	353.67	1,668.33	0.61				1,667.47	1.55
6/8/22 2:16 PM	1,651	210	72.68	353.65	1,668.35	0.59				1,667.55	1.47
6/8/22 2:46 PM	1,681	240	72.67	353.63	1,668.37	0.57				1,667.60	1.42
6/8/22 3:46 PM	1,741	300	72.69	353.62	1,668.38	0.56				1,667.67	1.34
6/8/22 4:46 PM	1,801	360	72.67	353.55	1,668.46	0.49				1,667.53	1.48
6/8/22 5:46 PM	1,861	420	72.67	353.50	1,668.50	0.44				1,667.58	1.43
6/8/22 6:46 PM	1,921	480	72.66	353.54	1,668.46	0.49				1,667.67	1.34
6/8/22 7:46 PM	1,981	540	72.65	353.51	1,668.49	0.45				1,667.64	1.38
6/8/22 8:46 PM	2,041	600	72.64	353.48	1,668.52	0.42				1,667.70	1.31
6/8/22 9:46 PM	2,101	660	72.65	353.43	1,668.57	0.38				1,667.73	1.29
6/8/22 10:46 PM	2,161	720	72.66	353.47	1,668.53	0.41				1,667.71	1.30
6/8/22 11:46 PM	2,221	780	72.66	353.37	1,668.63	0.31				1,667.88	1.14
6/9/22 12:46 AM	2,281	840	72.70	353.38	1,668.63	0.32				1,667.81	1.20
6/9/22 1:46 AM	2,341	900	72.67	353.33	1,668.67	0.27				1,667.83	1.19
6/9/22 2:46 AM	2,401	960	72.65	353.29	1,668.71	0.24				1,667.76	1.25
6/9/22 3:46 AM	2,461	1020	72.65	353.38	1,668.62	0.33				1,667.79	1.22
6/9/22 4:46 AM	2,521	1080	72.64	353.27	1,668.73	0.21				1,667.87	1.15
6/9/22 5:46 AM	2,581	1140	72.69	353.32	1,668.68	0.27				1,667.83	1.18
6/9/22 6:46 AM	2,641	1200	72.67	353.28	1,668.73	0.22				1,667.78	1.24
6/9/22 7:46 AM	2,701	1260	72.63	353.38	1,668.63	0.32				1,667.83	1.18
6/9/22 8:46 AM	2,761	1320	72.68	353.37	1,668.63	0.31				1,667.66	1.36
6/9/22 9:46 AM	2,821	1380	72.68	353.41	1,668.59	0.35				1,667.66	1.35
6/9/22 10:46 AM	2,881	1440	72.68	353.41	1,668.59	0.36				1,667.74	1.27
6/9/22 10:55 AM	2,890	1449	72.67	353.45	1,668.55	0.39					

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 3 HP
MSL = Mean Sea Level Pump Setting = 483 ft EC=Electrical conductivity (mS/cm)



WELL TEST ANALYSIS

Data Set: \...\PW 6.aqt
Date: 08/01/22 Time: 16:10:15

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Location: Gillespie County
Test Well: Well No. 6

AQUIFER DATA

Saturated Thickness: 246.9 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

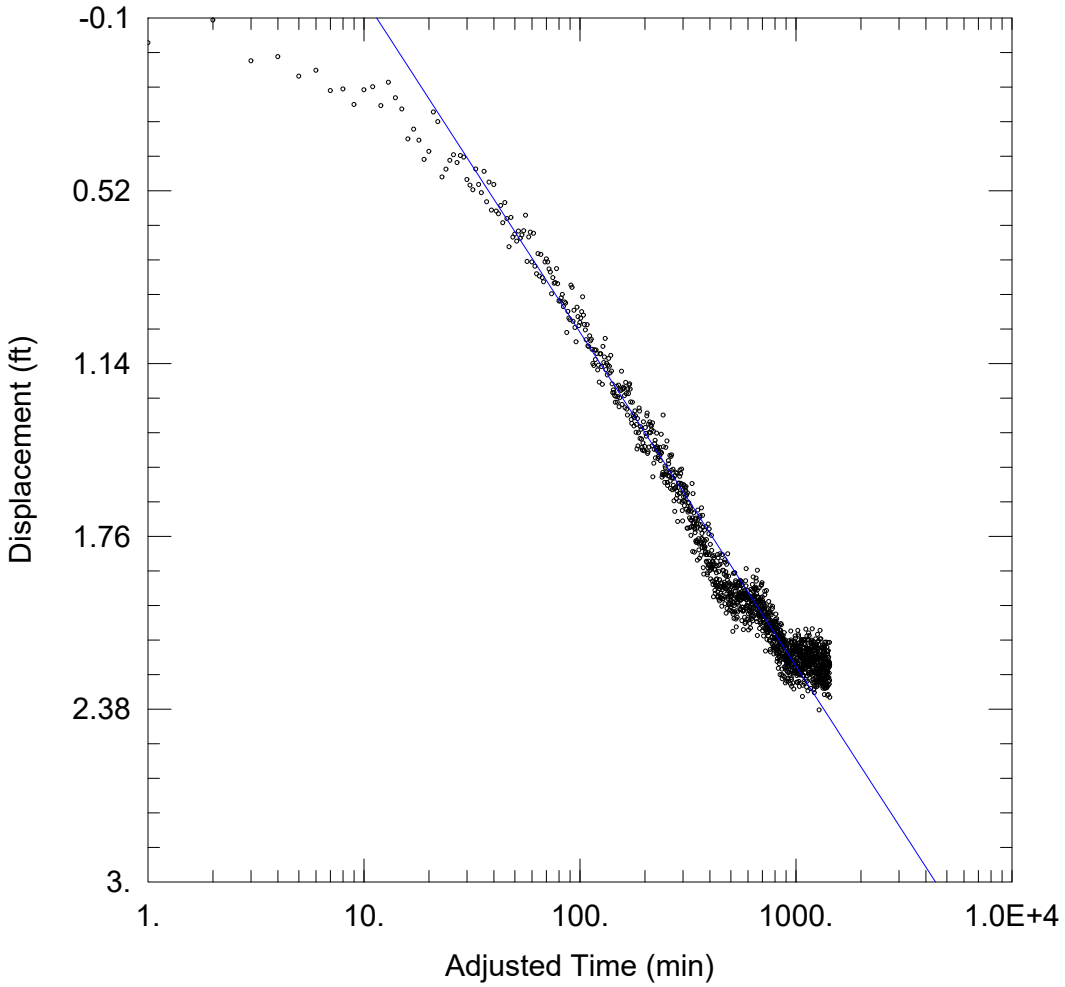
Pumping Wells

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

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 791.9 ft^2/day



WELL TEST ANALYSIS

Data Set: \...\OW 7.aqt
Date: 08/01/22 Time: 16:09:56

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: HH7
Test Well: Well No. 6

AQUIFER DATA

Saturated Thickness: 203. ft 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. 7	374	0

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 434.2 ft^2/day S = 6.718E-5

Aquifer Test

Well No. 8

Maverick Well No. 8 - Aquifer Test (July 14, 2022)

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. 9 Water Level (ft MSL)	OW Well No. 9 Drawdown (ft)
7/14/22 11:04 AM	0		83.01	382.91	1,671.09	0.00			Pump Start	1,670.43	0.00
7/14/22 11:05 AM	1		80.97	388.51	1,665.49	5.60			Meter: 258,152.074 gallons	1,670.38	0.05
7/14/22 11:06 AM	2		79.55	405.52	1,648.48	22.62	14.0	0.62	pH: 7.77 / EC: 0.73	1,670.36	0.07
7/14/22 11:07 AM	3		78.56	418.23	1,635.77	35.33	14.0	0.40		1,670.22	0.21
7/14/22 11:08 AM	4		77.73	429.25	1,624.75	46.34	14.0	0.30		1,670.29	0.14
7/14/22 11:09 AM	5		77.06	439.71	1,614.29	56.80	14.0	0.25		1,670.28	0.15
7/14/22 11:10 AM	6		76.56	449.03	1,604.97	66.13	14.0	0.21		1,670.16	0.27
7/14/22 11:11 AM	7		76.21	456.92	1,597.08	74.02	14.0	0.19		1,670.19	0.24
7/14/22 11:12 AM	8		75.82	463.41	1,590.59	80.50	14.0	0.17		1,670.10	0.33
7/14/22 11:13 AM	9		75.55	468.34	1,585.66	85.44	14.0	0.16		1,670.09	0.34
7/14/22 11:14 AM	10		75.34	472.34	1,581.66	89.44	14.0	0.16		1,670.15	0.28
7/14/22 11:15 AM	11		75.16	475.36	1,578.64	92.46	14.0	0.15		1,669.93	0.50
7/14/22 11:16 AM	12		75.01	477.64	1,576.36	94.73	14.0	0.15		1,670.02	0.41
7/14/22 11:17 AM	13		74.85	478.26	1,575.74	95.35	14.0	0.15		1,669.93	0.50
7/14/22 11:18 AM	14		74.75	478.23	1,575.77	95.33	14.0	0.15		1,669.96	0.47
7/14/22 11:19 AM	15		74.63	478.10	1,575.90	95.19	13.5	0.14		1,669.81	0.62
7/14/22 11:24 AM	20		74.27	467.43	1,586.57	84.52	13.5	0.16	pH: 7.73 / EC: 0.75	1,669.63	0.80
7/14/22 11:29 AM	25		74.12	454.93	1,599.07	72.02	13.5	0.19		1,669.53	0.90
7/14/22 11:34 AM	30		74.02	448.73	1,605.27	65.82	13.5	0.21	pH: 7.59 / EC: 0.73	1,669.32	1.11
7/14/22 11:49 AM	45		73.85	442.03	1,611.97	59.12	13.5	0.23	pH: 7.60 / EC: 0.72	1,668.99	1.44
7/14/22 12:04 PM	60		73.85	442.50	1,611.50	59.59	13.5	0.23	pH: 7.63 / EC: 0.73	1,668.77	1.66
7/14/22 12:19 PM	75		73.82	441.02	1,612.98	58.12	13.5	0.23		1,668.61	1.82
7/14/22 12:34 PM	90		73.80	440.76	1,613.24	57.85	13.5	0.23	pH: 7.58 / EC: 0.73	1,668.22	2.21
7/14/22 12:49 PM	105		73.81	441.14	1,612.86	58.24				1,668.25	2.18
7/14/22 1:04 PM	120		73.73	440.79	1,613.21	57.88	13.5	0.23	pH: 7.47 / EC: 0.73	1,667.81	2.62
7/14/22 1:34 PM	150		73.68	439.17	1,614.83	56.26				1,667.30	3.13
7/14/22 2:04 PM	180		73.71	437.18	1,616.82	54.28				1,666.86	3.57
7/14/22 2:34 PM	210		73.65	437.03	1,616.98	54.12				1,666.59	3.84
7/14/22 3:04 PM	240		73.64	436.38	1,617.62	53.48				1,666.35	4.08
7/14/22 4:04 PM	300		73.63	437.10	1,616.90	54.19				1,666.18	4.25
7/14/22 5:04 PM	360		73.58	438.04	1,615.96	55.14				1,665.77	4.66
7/14/22 6:04 PM	420		73.58	438.11	1,615.89	55.20				1,665.70	4.73
7/14/22 7:04 PM	480		73.55	437.47	1,616.54	54.56				1,665.62	4.81
7/14/22 8:04 PM	540		73.51	439.05	1,614.95	56.15				1,665.29	5.14
7/14/22 9:04 PM	600		73.54	439.73	1,614.27	56.82				1,665.10	5.33

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 5 HP
MSL = Mean Sea Level Pump Setting = 500 ft EC=Electrical conductivity (mS/cm)

Maverick Well No. 8 - Aquifer Test (July 14, 2022)

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. 9 Water Level (ft MSL)	OW Well No. 9 Drawdown (ft)
7/14/22 10:04 PM	660		73.49	437.58	1,616.43	54.67				1,664.90	5.53
7/14/22 11:04 PM	720		73.49	436.86	1,617.14	53.95				1,664.79	5.64
7/15/22 12:04 AM	780		73.43	438.44	1,615.57	55.53				1,664.62	5.81
7/15/22 1:04 AM	840		73.48	438.15	1,615.85	55.24				1,664.40	6.03
7/15/22 2:04 AM	900		73.45	437.85	1,616.16	54.94				1,664.30	6.13
7/15/22 3:04 AM	960		73.46	439.11	1,614.89	56.20				1,664.22	6.21
7/15/22 4:04 AM	1,020		73.43	438.81	1,615.19	55.90				1,664.13	6.30
7/15/22 5:04 AM	1,080		73.41	439.16	1,614.84	56.25				1,664.07	6.36
7/15/22 6:04 AM	1,140		73.39	438.53	1,615.47	55.62				1,663.96	6.47
7/15/22 7:04 AM	1,200		73.39	438.53	1,615.47	55.62				1,663.88	6.55
7/15/22 8:04 AM	1,260		73.36	436.98	1,617.02	54.08				1,663.89	6.54
7/15/22 9:04 AM	1,320		73.35	438.06	1,615.94	55.15				1,663.79	6.64
7/15/22 10:04 AM	1,380		73.32	438.03	1,615.97	55.12				1,663.72	6.71
7/15/22 11:04 AM	1,440		73.33	437.53	1,616.47	54.63				1,663.68	6.75
7/15/22 11:11 AM	1,447	0	73.37	437.91	1,616.09	55.01	13.5	0.25	Pump Stop	1,663.63	6.80
7/15/22 11:12 AM	1,448	1	73.33	426.05	1,627.95	43.15			Meter: 278,298.618 gallons	1,663.64	6.79
7/15/22 11:13 AM	1,449	2	73.34	409.58	1,644.42	26.67			Avg. Pump Rate: 13.9 gpm	1,663.62	6.81
7/15/22 11:14 AM	1,450	3	73.34	398.96	1,655.04	16.05				1,663.67	6.76
7/15/22 11:15 AM	1,451	4	73.41	392.62	1,661.38	9.71				1,663.68	6.75
7/15/22 11:16 AM	1,452	5	73.50	389.16	1,664.84	6.25				1,663.63	6.80
7/15/22 11:17 AM	1,453	6	73.54	387.56	1,666.44	4.65				1,663.53	6.90
7/15/22 11:18 AM	1,454	7	73.61	386.90	1,667.10	4.00				1,663.52	6.91
7/15/22 11:19 AM	1,455	8	73.73	386.69	1,667.31	3.78				1,663.65	6.78
7/15/22 11:20 AM	1,456	9	73.78	386.51	1,667.49	3.60				1,663.55	6.88
7/15/22 11:21 AM	1,457	10	73.86	386.36	1,667.64	3.46				1,663.70	6.73
7/15/22 11:22 AM	1,458	11	73.90	386.41	1,667.59	3.50				1,663.64	6.79
7/15/22 11:23 AM	1,459	12	73.95	386.34	1,667.66	3.44				1,663.69	6.74
7/15/22 11:24 AM	1,460	13	73.99	386.29	1,667.71	3.38				1,663.64	6.79
7/15/22 11:25 AM	1,461	14	74.00	386.24	1,667.76	3.33				1,663.70	6.73
7/15/22 11:26 AM	1,462	15	74.07	386.13	1,667.87	3.22				1,663.68	6.75
7/15/22 11:31 AM	1,467	20	74.09	386.03	1,667.97	3.12				1,663.63	6.80
7/15/22 11:36 AM	1,472	25	74.07	385.92	1,668.08	3.01				1,663.65	6.78
7/15/22 11:41 AM	1,477	30	74.03	385.79	1,668.21	2.88				1,663.66	6.77
7/15/22 11:56 AM	1,492	45	73.87	385.61	1,668.39	2.70				1,663.64	6.79
7/15/22 12:11 PM	1,507	60	73.66	385.46	1,668.54	2.56				1,663.70	6.73

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 5 HP
MSL = Mean Sea Level Pump Setting = 500 ft EC=Electrical conductivity (mS/cm)

Maverick Well No. 8 - Aquifer Test (July 14, 2022)

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. 9 Water Level (ft MSL)	OW Well No. 9 Drawdown (ft)
7/15/22 12:26 PM	1,522	75	73.54	385.37	1,668.63	2.46				1,663.67	6.76
7/15/22 12:41 PM	1,537	90	73.44	385.32	1,668.69	2.41				1,663.74	6.69
7/15/22 12:56 PM	1,552	105	73.35	385.30	1,668.70	2.40				1,663.71	6.72
7/15/22 1:11 PM	1,567	120	73.30	385.26	1,668.74	2.35				1,663.82	6.61
7/15/22 1:41 PM	1,597	150	73.18	385.23	1,668.78	2.32				1,663.75	6.68
7/15/22 2:11 PM	1,627	180	73.13	385.14	1,668.87	2.23				1,663.73	6.70
7/15/22 2:41 PM	1,657	210	73.12	385.18	1,668.83	2.27				1,663.77	6.66
7/15/22 3:11 PM	1,687	240	73.12	385.07	1,668.93	2.17				1,663.84	6.59
7/15/22 4:11 PM	1,747	300	73.09	385.07	1,668.93	2.16				1,663.79	6.64
7/15/22 5:11 PM	1,807	360	73.10	385.00	1,669.00	2.10				1,663.76	6.67
7/15/22 6:11 PM	1,867	420	73.05	384.99	1,669.01	2.08				1,663.77	6.66
7/15/22 7:11 PM	1,927	480	73.08	384.92	1,669.08	2.01				1,663.87	6.56
7/15/22 8:11 PM	1,987	540	73.05	384.86	1,669.15	1.95				1,663.91	6.52
7/15/22 9:11 PM	2,047	600	73.03	384.77	1,669.23	1.86				1,663.93	6.50
7/15/22 10:11 PM	2,107	660	73.03	384.79	1,669.21	1.88				1,663.84	6.59
7/15/22 11:11 PM	2,167	720	73.03	384.76	1,669.25	1.85				1,663.95	6.48
7/16/22 12:11 AM	2,227	780	73.00	384.74	1,669.26	1.83				1,663.87	6.56
7/16/22 1:11 AM	2,287	840	73.05	384.71	1,669.29	1.81				1,663.85	6.58
7/16/22 2:11 AM	2,347	900	73.04	384.73	1,669.27	1.83				1,663.86	6.57
7/16/22 3:11 AM	2,407	960	73.04	384.68	1,669.32	1.78				1,663.84	6.59
7/16/22 4:11 AM	2,467	1020	73.03	384.75	1,669.25	1.84				1,663.87	6.56
7/16/22 5:11 AM	2,527	1080	73.04	384.69	1,669.31	1.79				1,663.82	6.61
7/16/22 6:11 AM	2,587	1140	73.02	384.63	1,669.37	1.73				1,663.93	6.50
7/16/22 7:11 AM	2,647	1200	72.99	384.56	1,669.44	1.65				1,663.87	6.56
7/16/22 8:11 AM	2,707	1260	73.03	384.53	1,669.47	1.63				1,663.98	6.45
7/16/22 9:11 AM	2,767	1320	72.99	384.57	1,669.43	1.66				1,663.90	6.53
7/16/22 10:11 AM	2,827	1380	73.02	384.52	1,669.49	1.61				1,663.91	6.52
7/16/22 11:11 AM	2,887	1440	73.03	384.50	1,669.50	1.59				1,663.93	6.50
7/16/22 12:11 PM	2,947	1500	73.01	384.64	1,669.37	1.73				1,663.88	6.55
7/16/22 1:11 PM	3,007	1560	73.03	384.77	1,669.23	1.86				1,663.88	6.55
7/16/22 2:11 PM	3,067	1620	73.00	384.66	1,669.34	1.75				1,663.73	6.70
7/16/22 3:11 PM	3,127	1680	73.02	384.83	1,669.17	1.92				1,663.80	6.63
7/16/22 4:11 PM	3,187	1740	72.98	384.75	1,669.26	1.84				1,663.67	6.76

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 5 HP
MSL = Mean Sea Level Pump Setting = 500 ft EC=Electrical conductivity (mS/cm)

Maverick Well No. 8 - Aquifer Test (July 14, 2022)

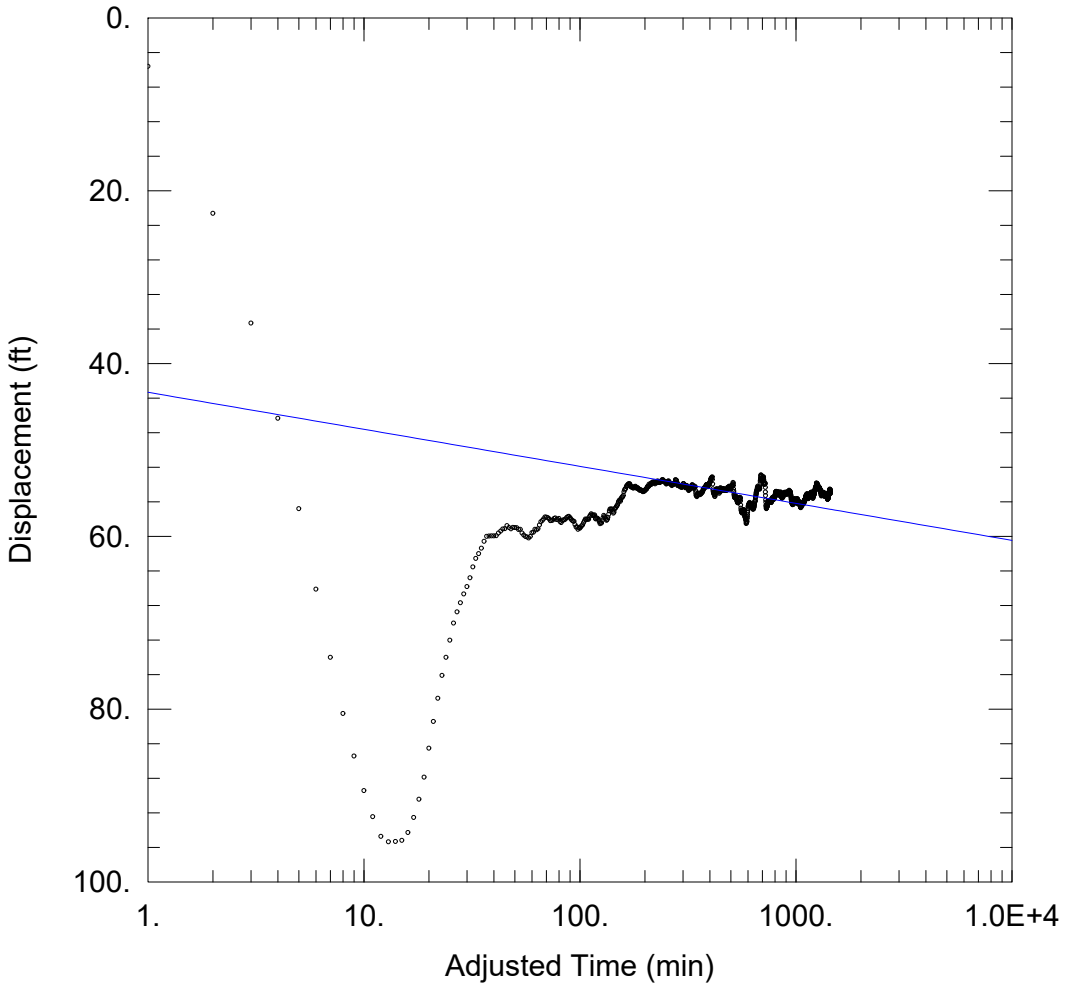
Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 8 Temperature (F)	PW Well No. 8 Water Level (ft bgs)	PW Well No. 8 Water Level (ft MSL)	PW Well No. 8 Drawdown (ft)	PW Well No. 8 Pump Rate (gpm)	PW Well No. 8 Specific Capacity (gpm/ft)	Comments	OW Well No. 9 Water Level (ft MSL)	OW Well No. 9 Drawdown (ft)
7/16/22 5:11 PM	3,247	1800	72.99	384.69	1,669.31	1.79				1,663.75	6.68
7/16/22 6:11 PM	3,307	1860	73.00	384.74	1,669.26	1.83				1,663.70	6.73
7/16/22 7:11 PM	3,367	1920	72.99	384.73	1,669.27	1.83				1,663.80	6.63
7/16/22 8:11 PM	3,427	1980	73.01	384.63	1,669.37	1.72				1,663.76	6.67
7/16/22 9:11 PM	3,487	2040	73.02	384.70	1,669.30	1.80				1,663.74	6.69
7/16/22 10:11 PM	3,547	2100	72.99	384.58	1,669.42	1.67				1,663.85	6.58
7/16/22 11:11 PM	3,607	2160	72.94	384.55	1,669.45	1.64				1,663.76	6.67
7/17/22 12:11 AM	3,667	2220	73.02	384.54	1,669.47	1.63				1,663.77	6.66
7/17/22 1:11 AM	3,727	2280	72.98	384.54	1,669.46	1.63				1,663.93	6.50
7/17/22 2:11 AM	3,787	2340	73.00	384.57	1,669.43	1.67				1,663.77	6.66
7/17/22 3:11 AM	3,847	2400	72.97	384.46	1,669.54	1.56				1,663.74	6.69
7/17/22 4:11 AM	3,907	2460	73.00	384.53	1,669.47	1.62				1,663.75	6.68
7/17/22 5:11 AM	3,967	2520	72.98	384.55	1,669.45	1.64				1,663.66	6.77
7/17/22 6:11 AM	4,027	2580	72.98	384.56	1,669.44	1.66				1,663.76	6.67
7/17/22 7:11 AM	4,087	2640	72.96	384.58	1,669.42	1.67				1,663.82	6.61
7/17/22 8:11 AM	4,147	2700	72.99	384.45	1,669.56	1.54				1,663.77	6.66
7/17/22 9:11 AM	4,207	2760	72.99	384.54	1,669.46	1.64				1,663.82	6.61
7/17/22 10:11 AM	4,267	2820	72.97	384.50	1,669.50	1.59				1,663.77	6.66
7/17/22 11:11 AM	4,327	2880	72.96	384.56	1,669.44	1.65				1,663.65	6.78
7/17/22 12:11 PM	4,387	2940	73.00	384.52	1,669.48	1.61				1,663.71	6.72
7/17/22 1:11 PM	4,447	3000	72.96	384.57	1,669.43	1.66				1,663.75	6.68
7/17/22 2:11 PM	4,507	3060	72.98	384.55	1,669.45	1.64				1,663.68	6.75
7/17/22 3:11 PM	4,567	3120	72.95	384.57	1,669.43	1.66				1,663.63	6.80
7/17/22 4:11 PM	4,627	3180	72.93	384.55	1,669.46	1.64				1,663.60	6.83
7/17/22 5:11 PM	4,687	3240	72.92	384.55	1,669.45	1.64				1,663.60	6.83
7/17/22 6:11 PM	4,747	3300	72.96	384.59	1,669.41	1.68				1,663.70	6.73
7/17/22 7:11 PM	4,807	3360	72.95	384.53	1,669.47	1.63				1,663.61	6.82
7/17/22 8:11 PM	4,867	3420	72.95	384.60	1,669.40	1.69				1,663.71	6.72
7/17/22 9:11 PM	4,927	3480	72.94	384.53	1,669.47	1.62				1,663.67	6.76
7/17/22 10:11 PM	4,987	3540	72.96	384.48	1,669.52	1.57				1,663.63	6.80

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 5 HP
MSL = Mean Sea Level Pump Setting = 500 ft EC=Electrical conductivity (mS/cm)

Maverick Well No. 8 - Aquifer Test (July 14, 2022)

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. 9 Water Level (ft MSL)	OW Well No. 9 Drawdown (ft)
7/17/22 11:11 PM	5,047	3600	72.94	384.54	1,669.46	1.64				1,663.68	6.75
7/18/22 12:11 AM	5,107	3660	72.96	384.60	1,669.40	1.69				1,663.71	6.72
7/18/22 1:11 AM	5,167	3720	72.94	384.52	1,669.48	1.62				1,663.72	6.71
7/18/22 2:11 AM	5,227	3780	72.90	384.57	1,669.43	1.66				1,663.66	6.77
7/18/22 3:11 AM	5,287	3840	72.90	384.56	1,669.44	1.65				1,663.66	6.77
7/18/22 4:11 AM	5,347	3900	72.98	384.62	1,669.38	1.71				1,663.66	6.77
7/18/22 5:11 AM	5,407	3960	72.96	384.52	1,669.48	1.62				1,663.59	6.84
7/18/22 6:11 AM	5,467	4020	72.95	384.54	1,669.46	1.64				1,663.58	6.85
7/18/22 7:11 AM	5,527	4080	72.97	384.51	1,669.49	1.61				1,663.67	6.76
7/18/22 8:11 AM	5,587	4140	72.94	384.47	1,669.53	1.56				1,663.64	6.79
7/18/22 9:11 AM	5,647	4200	72.91	384.46	1,669.54	1.56				1,663.72	6.71
7/18/22 9:21 AM	5,657	4210	72.92	384.49	1,669.51	1.59				1,663.69	6.74

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 5 HP
MSL = Mean Sea Level Pump Setting = 500 ft EC=Electrical conductivity (mS/cm)



WELL TEST ANALYSIS

Data Set: \...\PW 8.aqt
Date: 08/01/22 Time: 16:10:59

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: HH7
Test Well: Well No 8
Test Date: 7-14-22

AQUIFER DATA

Saturated Thickness: 157.1 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

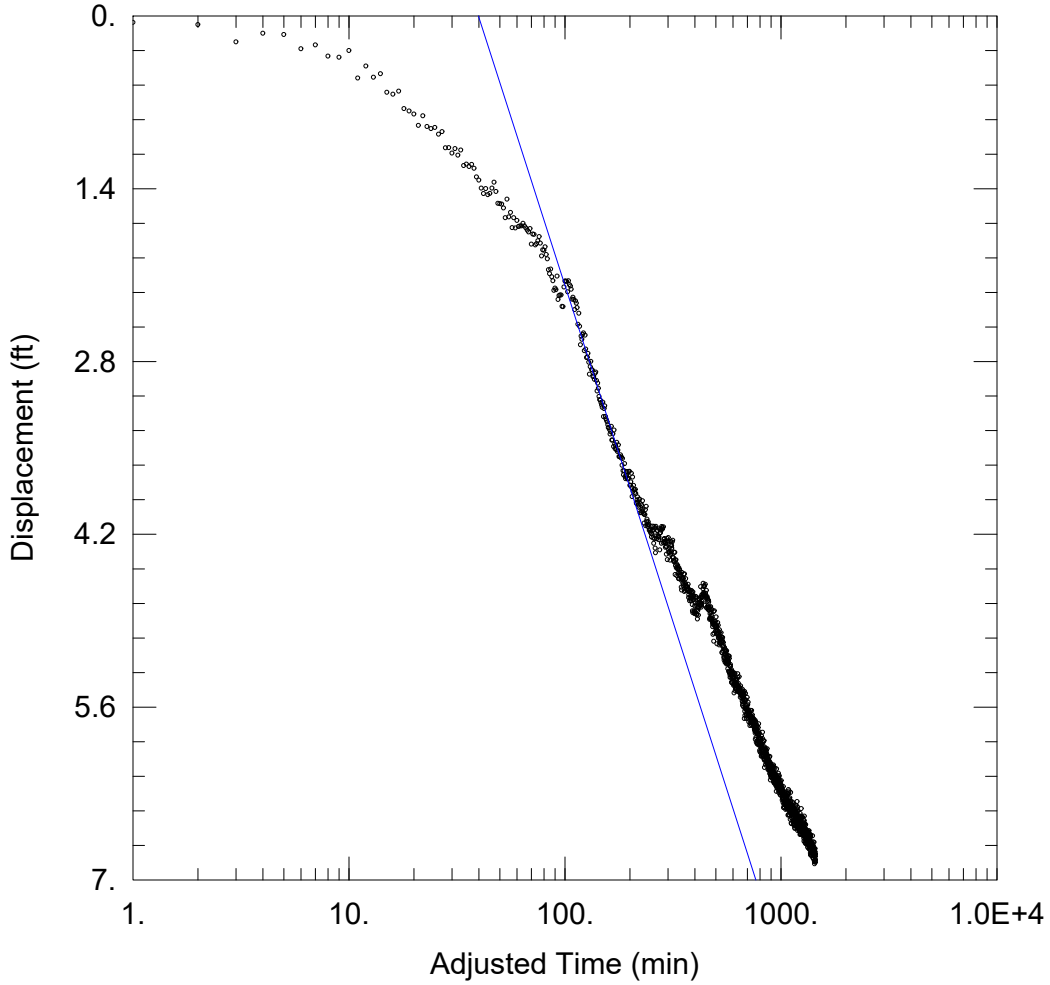
Pumping Wells

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

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 114.4 ft^2/day



WELL TEST ANALYSIS

Data Set: \...\OW 9.aqt
Date: 08/01/22 Time: 16:10:44

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: HH7
Test Well: Well No 8
Test Date: 7-14-22

AQUIFER DATA

Saturated Thickness: 187.4 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Pumping Wells

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

Observation Wells

Well Name	X (ft)	Y (ft)
◦ Well No 9	405	0

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 89.98 ft^2/day S = 3.403E-5

Aquifer Test

Well No. 10

Maverick Well No. 10 - Aquifer Test (July 19, 2022)

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. 11 Water Level (ft MSL)	OW Well No. 11 Drawdown (ft)
7/19/22 10:49 AM	0		88.45	394.52	1,671.48	0.00			Pump Start	1,669.40	0.00
7/19/22 10:50 AM	1		84.87	401.58	1,664.42	7.05			Meter: 278,977.364 gallons	1,669.37	0.03
7/19/22 10:51 AM	2		81.90	403.86	1,662.14	9.33	15.0	1.61		1,669.48	-0.08
7/19/22 10:52 AM	3		79.76	404.34	1,661.67	9.81	15.0	1.53		1,669.49	-0.09
7/19/22 10:53 AM	4		78.19	404.55	1,661.46	10.02	15.0	1.50		1,669.40	0.00
7/19/22 10:54 AM	5		76.98	404.69	1,661.31	10.17	15.0	1.48	pH: 7.77 / EC: 0.73	1,669.36	0.04
7/19/22 10:55 AM	6		76.13	404.66	1,661.34	10.13	15.0	1.48		1,669.27	0.13
7/19/22 10:56 AM	7		75.39	404.68	1,661.32	10.16	15.0	1.48		1,669.29	0.11
7/19/22 10:57 AM	8		74.88	404.79	1,661.21	10.27	15.0	1.46		1,669.22	0.18
7/19/22 10:58 AM	9		74.43	404.82	1,661.18	10.30	15.0	1.46		1,669.21	0.19
7/19/22 10:59 AM	10		74.17	404.77	1,661.23	10.24	15.0	1.46	pH: 7.79 / EC: 0.72	1,669.11	0.29
7/19/22 11:00 AM	11		73.91	404.94	1,661.06	10.42	15.0	1.44		1,669.14	0.26
7/19/22 11:01 AM	12		73.72	404.89	1,661.12	10.36	15.0	1.45		1,669.05	0.35
7/19/22 11:02 AM	13		73.61	404.92	1,661.08	10.40	15.0	1.44		1,669.00	0.40
7/19/22 11:03 AM	14		73.45	405.00	1,661.00	10.48	15.0	1.43		1,668.95	0.45
7/19/22 11:04 AM	15		73.38	404.99	1,661.01	10.47	15.0	1.43	pH: 7.79 / EC: 0.72	1,668.99	0.41
7/19/22 11:09 AM	20		73.07	405.17	1,660.83	10.65	15.0	1.41		1,668.91	0.49
7/19/22 11:14 AM	25		72.99	405.19	1,660.81	10.67	15.0	1.41		1,668.74	0.66
7/19/22 11:19 AM	30		73.00	405.20	1,660.80	10.68	14.5	1.36		1,668.62	0.78
7/19/22 11:34 AM	45		72.99	405.40	1,660.60	10.88	14.5	1.33		1,668.40	1.00
7/19/22 11:49 AM	60		72.92	405.58	1,660.42	11.06	14.5	1.31	pH: 7.85 / EC: 0.67	1,668.28	1.12
7/19/22 12:04 PM	75		72.97	405.69	1,660.31	11.17				1,668.10	1.30
7/19/22 12:19 PM	90		72.95	405.84	1,660.16	11.32				1,668.00	1.40
7/19/22 12:34 PM	105		72.97	405.90	1,660.11	11.37				1,667.93	1.47
7/19/22 12:49 PM	120		72.96	405.85	1,660.15	11.33	14.5	1.28	pH: 7.84 / EC: 0.67	1,667.74	1.66
7/19/22 1:19 PM	150		72.99	406.09	1,659.91	11.57				1,667.74	1.66
7/19/22 1:49 PM	180		72.96	406.20	1,659.80	11.67				1,667.55	1.85
7/19/22 2:19 PM	210		72.98	406.24	1,659.76	11.72				1,667.42	1.98
7/19/22 2:49 PM	240		72.95	406.34	1,659.66	11.81				1,667.38	2.02
7/19/22 3:49 PM	300		72.96	406.30	1,659.70	11.77				1,667.33	2.07
7/19/22 4:49 PM	360		72.91	406.48	1,659.52	11.95				1,667.19	2.21
7/19/22 5:49 PM	420		72.96	406.68	1,659.32	12.16				1,667.12	2.28
7/19/22 6:49 PM	480		72.94	406.69	1,659.31	12.17				1,667.03	2.36
7/19/22 7:49 PM	540		72.92	406.68	1,659.32	12.16				1,666.98	2.42
7/19/22 8:49 PM	600		72.97	406.71	1,659.29	12.19				1,666.88	2.52

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 5 HP
MSL = Mean Sea Level Pump Setting = 500 ft EC=Electrical conductivity (mS/cm)

Maverick Well No. 10 - Aquifer Test (July 19, 2022)

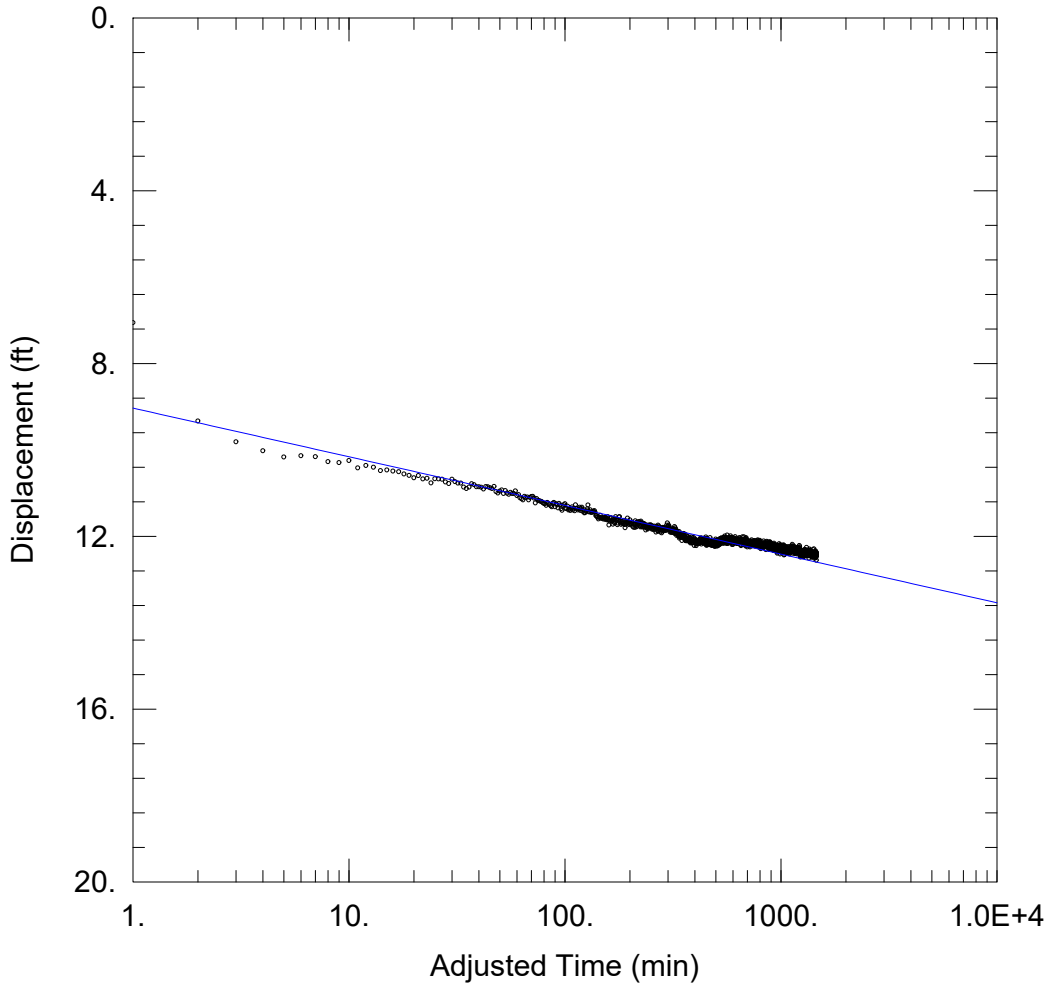
Date and Time	Time Since Pump Start (min)	Time Since Pump Stop (min)	PW Well No. 10 Temperature (F)	PW Well No. 10 Water Level (ft bgs)	PW Well No. 10 Water Level (ft MSL)	PW Well No. 10 Drawdown (ft)	PW Well No. 10 Pump Rate (gpm)	PW Well No. 10 Specific Capacity (gpm/ft)	Comments	OW Well No. 11 Water Level (ft MSL)	OW Well No. 11 Drawdown (ft)
7/19/22 9:49 PM	660		72.93	406.62	1,659.39	12.09				1,666.91	2.49
7/19/22 10:49 PM	720		72.93	406.77	1,659.23	12.25				1,666.90	2.50
7/19/22 11:49 PM	780		72.93	406.61	1,659.39	12.09				1,666.85	2.55
7/20/22 12:49 AM	840		72.90	406.77	1,659.23	12.25				1,666.89	2.51
7/20/22 1:49 AM	900		72.92	406.73	1,659.28	12.20				1,666.81	2.59
7/20/22 2:49 AM	960		72.92	406.84	1,659.16	12.31				1,666.84	2.56
7/20/22 3:49 AM	1,020		72.94	406.89	1,659.11	12.36				1,666.79	2.61
7/20/22 4:49 AM	1,080		72.90	406.88	1,659.13	12.35				1,666.72	2.68
7/20/22 5:49 AM	1,140		72.93	406.86	1,659.14	12.34				1,666.71	2.68
7/20/22 6:49 AM	1,200		72.90	406.87	1,659.13	12.35				1,666.70	2.69
7/20/22 7:49 AM	1,260		72.93	406.90	1,659.10	12.38				1,666.75	2.65
7/20/22 8:49 AM	1,320		72.92	406.96	1,659.04	12.44				1,666.74	2.66
7/20/22 9:49 AM	1,380		72.92	406.99	1,659.01	12.46				1,666.59	2.81
7/20/22 10:49 AM	1,440		72.89	406.98	1,659.02	12.46				1,666.64	2.76
7/20/22 11:11 AM	1,462	0	72.91	406.90	1,659.10	12.38	14.0	1.13	Pump Stop	1,666.60	2.80
7/20/22 11:12 AM	1,463	1	72.91	400.75	1,665.25	6.23			Meter: 299,632.782 gallons	1,666.63	2.77
7/20/22 11:13 AM	1,464	2	72.93	398.06	1,667.95	3.53			Avg. Pump Rate: 14.1 gpm	1,666.62	2.78
7/20/22 11:14 AM	1,465	3	72.94	397.72	1,668.28	3.20				1,666.61	2.79
7/20/22 11:15 AM	1,466	4	72.97	397.50	1,668.50	2.98				1,666.65	2.75
7/20/22 11:16 AM	1,467	5	72.98	397.44	1,668.56	2.91				1,666.79	2.61
7/20/22 11:17 AM	1,468	6	73.04	397.29	1,668.71	2.77				1,666.77	2.63
7/20/22 11:18 AM	1,469	7	73.11	397.25	1,668.75	2.72				1,666.80	2.60
7/20/22 11:19 AM	1,470	8	73.12	397.16	1,668.84	2.63				1,666.87	2.53
7/20/22 11:20 AM	1,471	9	73.15	397.11	1,668.89	2.58				1,666.88	2.52
7/20/22 11:21 AM	1,472	10	73.15	397.01	1,668.99	2.49				1,666.94	2.46
7/20/22 11:22 AM	1,473	11	73.11	397.00	1,669.00	2.47				1,666.94	2.45
7/20/22 11:23 AM	1,474	12	73.09	396.96	1,669.04	2.44				1,667.02	2.38
7/20/22 11:24 AM	1,475	13	73.06	396.88	1,669.12	2.36				1,667.00	2.40
7/20/22 11:25 AM	1,476	14	73.07	396.94	1,669.06	2.42				1,667.04	2.36
7/20/22 11:26 AM	1,477	15	73.04	396.84	1,669.16	2.31				1,667.08	2.32
7/20/22 11:31 AM	1,482	20	73.06	396.73	1,669.27	2.20				1,667.20	2.20
7/20/22 11:36 AM	1,487	25	73.02	396.58	1,669.42	2.06				1,667.34	2.06
7/20/22 11:41 AM	1,492	30	73.03	396.55	1,669.45	2.03				1,667.40	2.00
7/20/22 11:56 AM	1,507	45	72.93	396.38	1,669.63	1.85				1,667.51	1.89
7/20/22 12:11 PM	1,522	60	72.89	396.25	1,669.75	1.72				1,667.69	1.71

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 5 HP
MSL = Mean Sea Level Pump Setting = 500 ft EC=Electrical conductivity (mS/cm)

Maverick Well No. 10 - Aquifer Test (July 19, 2022)

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. 11 Water Level (ft MSL)	OW Well No. 11 Drawdown (ft)
7/20/22 12:26 PM	1,537	75	72.87	396.14	1,669.86	1.62				1,667.79	1.61
7/20/22 12:41 PM	1,552	90	72.85	396.15	1,669.85	1.62				1,667.83	1.57
7/20/22 12:56 PM	1,567	105	72.84	396.01	1,669.99	1.48				1,667.90	1.50
7/20/22 1:11 PM	1,582	120	72.84	395.96	1,670.04	1.44				1,668.07	1.33
7/20/22 1:41 PM	1,612	150	72.83	395.81	1,670.19	1.29				1,668.13	1.27
7/20/22 2:11 PM	1,642	180	72.78	395.79	1,670.21	1.26				1,668.10	1.30
7/20/22 2:41 PM	1,672	210	72.82	395.74	1,670.26	1.22				1,668.28	1.12
7/20/22 3:11 PM	1,702	240	72.85	395.73	1,670.27	1.21				1,668.31	1.09
7/20/22 4:11 PM	1,762	300	72.82	395.62	1,670.38	1.10				1,668.32	1.08
7/20/22 5:11 PM	1,822	360	72.80	395.56	1,670.44	1.04				1,668.41	0.99
7/20/22 6:11 PM	1,882	420	72.80	395.49	1,670.51	0.97				1,668.47	0.93
7/20/22 7:11 PM	1,942	480	72.79	395.50	1,670.50	0.97				1,668.51	0.89
7/20/22 8:11 PM	2,002	540	72.80	395.38	1,670.62	0.86				1,668.51	0.89
7/20/22 9:11 PM	2,062	600	72.85	395.34	1,670.66	0.82				1,668.61	0.79
7/20/22 10:11 PM	2,122	660	72.81	395.35	1,670.65	0.82				1,668.58	0.82
7/20/22 11:11 PM	2,182	720	72.79	395.32	1,670.68	0.80				1,668.66	0.74
7/21/22 12:11 AM	2,242	780	72.81	395.25	1,670.75	0.73				1,668.62	0.78
7/21/22 1:11 AM	2,302	840	72.83	395.21	1,670.79	0.69				1,668.65	0.75
7/21/22 2:11 AM	2,362	900	72.83	395.25	1,670.75	0.73				1,668.78	0.62
7/21/22 3:11 AM	2,422	960	72.79	395.11	1,670.89	0.58				1,668.71	0.69
7/21/22 4:11 AM	2,482	1020	72.81	395.22	1,670.78	0.70				1,668.72	0.68
7/21/22 5:11 AM	2,542	1080	72.81	395.18	1,670.82	0.66				1,668.69	0.71
7/21/22 6:11 AM	2,602	1140	72.80	395.18	1,670.82	0.66				1,668.80	0.60
7/21/22 7:11 AM	2,662	1200	72.78	395.17	1,670.83	0.64				1,668.88	0.52
7/21/22 8:11 AM	2,722	1260	72.80	395.11	1,670.89	0.58				1,668.78	0.62
7/21/22 9:11 AM	2,782	1320	72.81	395.13	1,670.87	0.61				1,668.83	0.57
7/21/22 10:11 AM	2,842	1380	72.79	395.22	1,670.78	0.69				1,668.89	0.51
7/21/22 11:11 AM	2,902	1440	72.79	395.17	1,670.83	0.64				1,668.80	0.60

Note: bgs = below ground surface Column Pipe Diameter = 1 1/4 inches Horsepower = 5 HP
MSL = Mean Sea Level Pump Setting = 500 ft EC=Electrical conductivity (mS/cm)



WELL TEST ANALYSIS

Data Set: \...\PW 10.aqt
Date: 08/01/22 Time: 16:11:27

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: HH7
Test Well: Well No 10
Test Date: 7-19-22

AQUIFER DATA

Saturated Thickness: 170.5 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

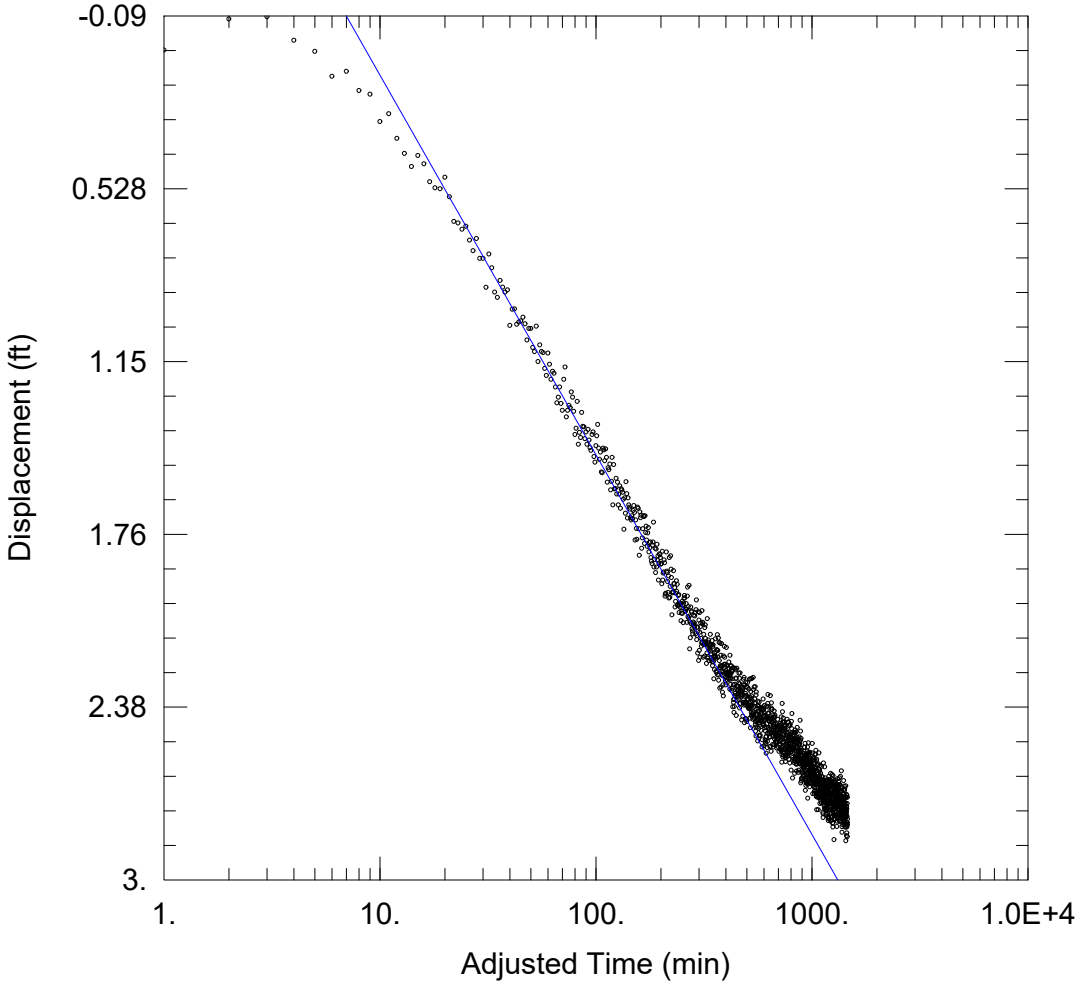
Pumping Wells

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

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 441.5 ft^2/day



WELL TEST ANALYSIS

Data Set: \...\OW 11.aqt
Date: 08/01/22 Time: 16:11:41

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: HH7
Test Well: Well No 10
Test Date: 7-19-22

AQUIFER DATA

Saturated Thickness: 154.4 ft 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 11	405	0

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 366.3 ft^2/day S = 2.834E-5

Appendix E

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 = 14 gpm / 29.89 ft. = 0.47 gpm/ft.

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

Where: T = Transmissivity, in gpd/ft
t = Time of pumping, in days
S = Storage Coefficient, = 5.8 X 10^{-5}
r = radius of well, in ft.

Theoretical Specific Capacity: $\frac{1{,}121.1}{264 \log \frac{(0.3)*(1121.1)*(1)}{(0.1875)2\ (0.000058)}}$ **= 0.52**

Efficiency = Actual Specific Capacity / Theoretical Specific Capacity = 0.47 / 0.52 = **91%**

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 = 14.5 gpm / 23.83 ft. = 0.61 gpm/ft.

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

Where: T = Transmissivity, in gpd/ft
t = Time of pumping, in days
S = Storage Coefficient, = 4.1 X 10^{-5}
r = radius of well, in ft.

Theoretical Specific Capacity: $\frac{1{,}715.5}{264 \log \frac{(0.3)*(1715.5)*(1)}{(0.1875)2\ (0.000041)}}$ **= 0.76**

Efficiency = Actual Specific Capacity / Theoretical Specific Capacity = 0.61 / 0.76 = **80%**

Well Efficiency

Well No. 4

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

Well Efficiency Calculations
Well No. 4

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

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

Actual Specific Capacity = Q/s

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

Actual Specific Capacity = 14 gpm / 6.41 ft. = 2.18 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, = 2.1 X 10^{-5}
r = radius of well, in ft.

Theoretical Specific Capacity: $\frac{4{,}577.3}{264 \log \frac{(0.3)*(4577.3)*(1)}{(0.1875)2\ (0.000021)}}$ **= 1.87**

Efficiency = Actual Specific Capacity / Theoretical Specific Capacity = 2.18 / 1.87 = **117%**

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 = 14.5 gpm / 4.44 ft. = 3.26 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, = 6.7 X 10^{-5}
r = radius of well, in ft.

Theoretical Specific Capacity: $\frac{5{,}924.5}{264 \log \frac{(0.3)*(5924.5)*(1)}{(0.1875)2\ (0.000067)}}$ **= 2.53**

Efficiency = Actual Specific Capacity / Theoretical Specific Capacity = 3.26 / 2.53 = **129%**

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 = 13.9 gpm / 55.01 ft. = 0.25 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, = 3.4 X 10^{-5}
r = radius of well, in ft.

Theoretical Specific Capacity: $\frac{856.0}{264 \log \frac{(0.3)*(856)*(1)}{(0.1875)2\ (0.000034)}}$ **= 0.39**

Efficiency = Actual Specific Capacity / Theoretical Specific Capacity = 0.25 / 0.39 = **64%**

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 = 14.0 gpm / 12.38 ft. = 1.13 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, = 2.8 X 10^{-5}
r = radius of well, in ft.

Theoretical Specific Capacity: $\frac{3{,}302.6}{264 \log \frac{(0.3)*(3302.6)*(1)}{(0.1875)2\ (0.000028)}}$ **= 1.39**

Efficiency = Actual Specific Capacity / Theoretical Specific Capacity = 1.13 / 1.39 = **81%**

Appendix F

Water Quality Report

Water Quality

Well No. 1

POLLUTION CONTROL SERVICES

Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Brice Bormann **Texan Water** **161 Industrial Loop** **Fredericksburg, TX 78624**	**Project Name: Maverick #1** **Sample ID: Maverick #1** **Matrix: Drinking Water** **Date/Time Taken: 06/28/2022 1116**	**PCS Sample #: 682588 Page 1 of 2** **Date/Time Received: 06/28/2022 15:45** **Report Date: 07/06/2022** **Approved by:** Chuck Wallgren, President

Test Description	Flag	Result	Units	RL	Analysis Date/Time	Method	Analyst
pH	!, I	7.1	S.U.	N/A	06/28/2022 16:52	SM 4500-H+ B	DMM
Chloride_IC		21	mg/L	2	06/29/2022 17:41	EPA 300.0	JAS
Conductivity, Specific		724	µmhos/cm at 25° C	1	07/01/2022 16:15	SM 2510B	PML
Nitrate-N_IC		<0.2	mg/L	0.2	06/29/2022 17:41	EPA 300.0	JAS
Sulfate_IC		55	mg/L	2	06/29/2022 17:41	EPA 300.0	JAS
Total Dissolved Solids		432	mg/L	10	06/29/2022 14:35	SM 2540C	PML
Total Hardness as CaCO3		340	mg/L	5	07/05/2022 15:35	SM 2340C	PML
Fluoride_IC		1.39	mg/L	0.20	06/29/2022 17:41	EPA 300.0	JAS

Quality Assurance Summary

Test Description	Precision	Limit	LCL	MS	MSD	UCL	LCS	LCS Limit	Blank
pH	N/A	N/A	N/A			N/A			
Chloride_IC	3	10	95	100	97	102	107	85 - 115	
Conductivity, Specific	N/A	N/A	N/A			N/A			
Nitrate-N_IC	<1	20	70	98	98	130	100	85 - 115	
Sulfate_IC	1	10	91	99	98	101	104	85 - 115	
Total Dissolved Solids	<1	10	N/A	N/A	N/A	N/A			
Total Hardness as CaCO3	<1	10	70	104	104	120	105	85 - 115	
Fluoride_IC	<1	10	90	98	98	110	105	85 - 115	

Quality Statement: All supporting quality data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request.

' Not NELAP Certifiable Parameter
! Informational purposes only - pH outside hold time

These analytical results relate only to the sample tested.
All data is reported on an 'As Is' basis unless designated as 'Dry Wt'.
RL = Reporting Limits

Web Site: www.pcslab.net **Toll Free 800-880-4616** **1532 Universal City Blvd, Suite 100** **210-340-0343** **FAX # 210-658-7903**
eMail: chuck@pcslab.net **Universal City, TX 78148-3318**

POLLUTION CONTROL SERVICES

Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Brice Bormann **Texan Water** **161 Industrial Loop** **Fredericksburg, TX 78624**	**Project Name: Maverick #1** **Sample ID: Maverick #1** **Matrix: Drinking Water** **Date/Time Taken: 06/28/2022 1116**	**PCS Sample #: 682588 Page 2 of 2** **Date/Time Received: 06/28/2022 15:45** **Report Date: 07/06/2022**

Test Description	Result	Units	RL	Analysis Date/Time	Method	Analyst
Iron/ICP (Total)	0.028	mg/L	0.010	07/01/2022 15:26	EPA 200.7 / 6010 B	DJL
Manganese/ICP (Total)	<0.010	mg/L	0.010	07/01/2022 15:26	EPA 200.7 / 6010 B	DJL

Quality Assurance Summary

Test Description	Precision	Limit	LCL	MS	MSD	UCL	LCS	LCS Limit	Blank
Iron/ICP (Total)	<1	20	75	96	96	125	100	85 - 115	
Manganese/ICP (Total)	<1	20	75	95	95	125	100	85 - 115	

Quality Statement: All supporting quality data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request.

These analytical results relate only to the sample tested.
All data is reported on an 'As is' basis unless designated as 'Dry Wt'.
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1532 Universal City Blvd, Suite 100
Universal City, TX 78148-3318
210-340-0343
FAX # 210-658-7903

POLLUTION CONTROL SERVICES

Chain of Custody Number
682588

MULTIPLE SAMPLE ANALYSIS REQUEST AND CHAIN OF CUSTODY FORM

Stamp 1st sample and COC as same number

CUSTOMER INFORMATION

Name: TEXAN WATER

REPORT INFORMATION

Attention: CHRIS KNOX | Phone: | Fax:

SAMPLE INFORMATION

Project Information: MAVERICK #1

Report "Soils" ☐ As Is ☐ Dry Wt.

Collected By:

Requested Analysis | Instructions/Comments:

Client / Field Sample ID	Collected Date	Collected Time	Field Chlorine Residual mg/L	Composite or Grab	Matrix (DW-Drinking Water, NPW-Non-potable water, WW-Wastewater, LW-Liquid Waste)	Container Type	Container Number	Container Preservative	Cl, Cond	F, Fe	NO3	Mn	pH, SO4	T Hard	TDS		PCS Sample Number
MAVERICK # 1	Start: 06/28/2022 End:	Start: 11:16 AM End:		☐C ☑G	☑DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☑P ☐G ☐O	1	☐H2SO4 ☐HNO3 ☐H3PO4 ☐NaOH ☑ICE ☐	/	/	/	/	/	/	/		682588 ☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H2SO4 ☐HNO3 ☐H3PO4 ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H2SO4 ☐HNO3 ☐H3PO4 ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H2SO4 ☐HNO3 ☐H3PO4 ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H2SO4 ☐HNO3 ☐H3PO4 ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H2SO4 ☐HNO3 ☐H3PO4 ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H2SO4 ☐HNO3 ☐H3PO4 ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H2SO4 ☐HNO3 ☐H3PO4 ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:

Required Turnaround: ☐ Routine (6-10 days) | EXPEDITE (See Surcharge Schedule) ☐ < 8 Hrs ☐ < 16 Hrs ☐ < 24 Hrs ☐ 5 days ☐ Other ______ Rush Charges Authorized by:

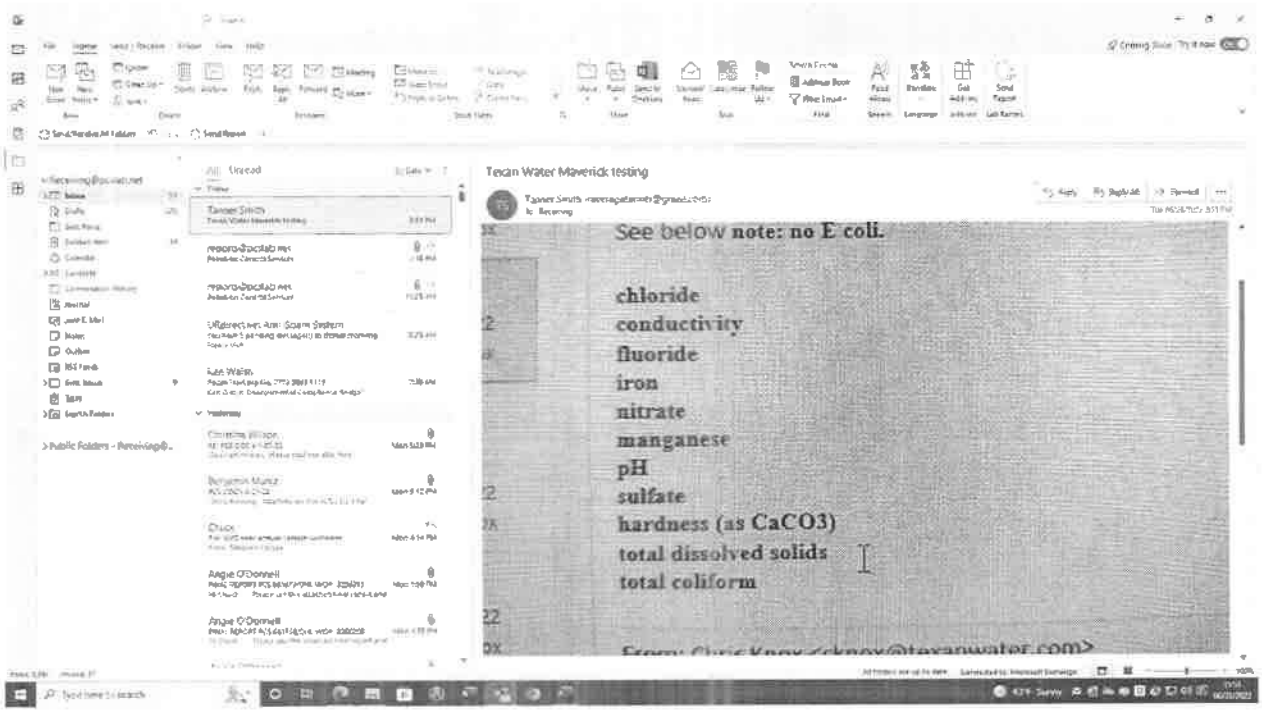
Sample Archive/Disposal: ☐ Laboratory Standard ☐ Hold for client pick up | Container Type: P = Plastic, G = Glass, O = Other | Carrier ID:

Relinquished By:	TANNER SMITH	Date:	06/28/2022	Time:	3:45 PM	Received By:	[signature]	Date: 6/28/22	Time: 1545
Relinquished By:		Date:		Time:		Received By:		Date:	Time:

Rev. Multiple Sample COC_20180628

1532 Universal City Blvd., Ste. 100, Universal City, Texas 78148
P (210) 340-0343 or (800) 880-4616 - F (210) 658-7903

Login at www.pcslab.net


Texan Water Maverick testing
See below note: no E coli.
chloride
conductivity
fluoride
iron
nitrate
manganese
pH
sulfate
hardness (as CaCO3)
total dissolved solids
total coliform

Pollution Control Services

Sample Log-In Checklist

682588

682588

PCS Sample No(s) _____ **COC No.** _____

Client/Company Name: Tem (tx **Checklist Completed by:** _____

Sample Delivery to Lab Via:
Client Drop Off ✓ Commercial Carrier: Bus ____ UPS ____ Lone Star ____ FedEx ____ USPS ____
PCS Field Services: Collection/Pick Up____ Other: _____

Sample Kit/Coolers
Sample Kit/Cooler? Yes ✓ No____ Sample Kit/Cooler: Intact? Yes ✓ No___
Custody Seals on Sample Kit/Cooler: Not Present ✓ If Present, Intact ___ Broken ___
Sample Containers Intact; Unbroken and Not Leaking? Yes ✓ No ___
Custody Seals on Sample Bottles: Not Present ✓ If Present, Intact ___ Broken ___
COC Present with Shipment or Delivery or Completed at Drop Off? Yes ✓ No ___
Has COC sample date/time and other pertinent information been provided by client/sampler? Yes: ✓ No: ____
Has COC been properly Signed when Received/Relinquished? Yes ✓ No ___
Does COC agree with Sample Bottle Information, Bottle Types, Preservation, etc.? Yes ✓ No ___
All Samples Received before Hold Time Expiration? Yes ✓ No ___
Sufficient Sample Volumes for Analysis Requested? Yes ✓ No ___
Zero Headspace in VOA Vial? Yes ___ No ___

Sample Preservation: ✓ 6hSule ✓
* ***Cooling:*** **Not Required** _____ or **Required** _____
If cooling required. record temperature of submitted samples Observed/Corrected 4 / 2 °C
Is Ice Present in Sample Kit/Cooler? ✓ Yes _____ No Samples received same day as collected? _____ Yes ✓ No
Lab Thermometer Make and Serial Number: Vaughan 180700958 3 Other: _____

Acid Preserved Sample - If present, is pH <2? **Yes** ____ **No** ____** _____H_2SO_4 _____HNO_3 _____H_3PO_4
Base Preserved Sample - If present, is pH >12? Yes ____ No ____ _____NaOH
Other Preservation: _____ If Present, Meets Requirements? Yes_____ No_____
Sample Preservations Checked by: _____ Date _____ Time _____
pH paper used to check sample preservation (PCS log #): _____ (HEM pH checked at analysis).

Samples Preserved/Adjusted by Lab:	Lab #	Parameters Preserved	Preservative Used	Log #
	_____	Metals	HNO3	0161760
	_____	_____	_____	_____
	_____	_____	_____	_____

Adjusted by Tech/Analyst: _____ Date : 6/28/22 Time: 1053

Client Notification/ Documentation for "No" Responses Above/ Discrepancies/ RevisionComments
Person Notified: _____ Contacted by: _____
Notified Date: _____ Time: _____
Method of Contact: At Drop Off:_____ Phone ___ Left Voice Mail ___ E-Mail _____ Fax _____
Unable to Contact_____ Authorized Laboratory to Proceed : _____(Lab Director)
Regarding / Comments: _____
_____
_____
Actions taken to correct problems/discrepancies: _____
_____
_____
Receiving qualifier needed (*requires client notification above*) Temp. ___ Holding Time ___ Initails: _____
Receiving qualifier entered into LIMS at login Initial/Date: _____
Revision Comments: _____
_____

POLLUTION CONTROL SERVICES

Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Brice Bormann **Texan Water** **161 Industrial Loop** **Fredericksburg, TX 78624**	**Project Name: Maverick #1** **Sample ID: Maverick #1** **Matrix: Drinking Water** **Date/Time Taken: 06/28/2022 1115**	**PCS Sample #: 682586 Page 1 of 1** **Date/Time Received: 06/28/2022 15:45** **Report Date: 06/29/2022** **Approved by:** Chuck Wallgren, President

Test Description	Result	Units	RL	Analysis Date/Time	Method	Analyst
E. coli. (Enumeration-MPN) 18	0	CFU/100ml	1	06/28/2022 16:25	9223 IDEXX Quanti-Tray	DMM
Total Coliform (Enumeration) 18	3	CFU/100ml	1	06/28/2022 16:25	9223 IDEXX Quanti-Tray	DMM

Sample passed / failed criteria for bacteriological test.
Sample of satisfactory bacteriological quality should be free from Coliform organisms.
Coliform Organisms
___ Not Found
X Found
___ Total
___ Fecal (E.Coli)
___ Repeat Samples Required / Recommended (Circle One)
___ Unsuitable - See Below
___ Other reason: _____

Quality Statement: All supporting quality data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request.

These analytical results relate only to the sample tested.
All data is reported on an 'As Is' basis unless designated as 'Dry Wt'.
RL = Reporting Limits

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Toll Free 800-880-4616
1532 Universal City Blvd, Suite 100
Universal City, TX 78148-3318
210-340-0343
FAX # 210-658-7903

Water Quality

Well No. 3

POLLUTION CONTROL SERVICES

Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Brice Bormann **Texan Water** **161 Industrial Loop** **Fredericksburg, TX 78624**	**Project Name:** **Sample ID: Maverick #3 A** **Matrix: Drinking Water** **Date/Time Taken: 06/30/2022 11:00**	**PCS Sample #: 682932 Page 1 of 2** **Date/Time Received: 06/30/2022 13:06** **Report Date: 07/07/2022** **Approved by:** Chuck Wallgren, President

Test Description	Flag	Result	Units	RL	Analysis Date/Time	Method	Analyst
pH	!, I	6.8	S.U.	N/A	06/30/2022 16:14	SM 4500-H+ B	DMM
Chloride_IC		22	mg/L	1	06/30/2022 15:33	EPA 300.0	JAS
Conductivity, Specific		714	µmhos/cm at 25° C	1	07/01/2022 16:15	SM 2510B	PML
Nitrate-N_IC		0.3	mg/L	0.1	06/30/2022 15:33	EPA 300.0	JAS
Sulfate_IC		48	mg/L	1	06/30/2022 15:33	EPA 300.0	JAS
Total Dissolved Solids		464	mg/L	10	07/05/2022 09:30	SM 2540C	PML
Total Hardness as CaCO3		330	mg/L	5	07/05/2022 15:35	SM 2340C	PML
Fluoride_IC		1.15	mg/L	0.10	06/30/2022 15:33	EPA 300.0	JAS

Quality Assurance Summary

Test Description	Precision Limit	LCL	MS	MSD	UCL	LCS	LCS Limit	Blank
pH	N/A	N/A	N/A			N/A		
Chloride_IC	1	10	95	99	98	102	102	85 - 115
Conductivity, Specific	N/A	N/A	N/A			N/A		
Nitrate-N_IC	<1	20	70	97	97	130	94	85 - 115
Sulfate_IC	1	10	91	95	94	101	104	85 - 115
Total Dissolved Solids	3	10	N/A	N/A	N/A	N/A		
Total Hardness as CaCO3	<1	10	70	104	104	120	105	85 - 115
Fluoride_IC	1	10	90	99	98	110	100	85 - 115

Quality Statement: All supporting quality data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request.

! Not NELAP Certifiable Parameter
I Informational purposes only - pH outside hold time

These analytical results relate only to the sample tested.
All data is reported on an 'As Is' basis unless designated as 'Dry Wt'.
RL = Reporting Limits

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FAX # 210-658-7903

POLLUTION CONTROL SERVICES

Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Brice Bormann **Texan Water** **161 Industrial Loop** **Fredericksburg, TX 78624**	**Project Name:** **Sample ID: Maverick #3 A** **Matrix: Drinking Water** **Date/Time Taken: 06/30/2022 11:00**	**PCS Sample #: 682932 Page 2 of 2** **Date/Time Received: 06/30/2022 13:06** **Report Date: 07/07/2022**

Test Description	Result	Units	RL	Analysis Date/Time	Method	Analyst
Iron/ICP (Total)	0.012	mg/L	0.010	07/06/2022 13:45	EPA 200.7 / 6010 B	DJL
Manganese/ICP (Total)	<0.010	mg/L	0.010	07/06/2022 13:45	EPA 200.7 / 6010 B	DJL

Quality Assurance Summary

Test Description	Precision	Limit	LCL	MS	MSD	UCL	LCS	LCS Limit	Blank
Iron/ICP (Total)	1	20	75	91	90	125	100	85 - 115	
Manganese/ICP (Total)	1	20	75	92	91	125	100	85 - 115	

Quality Statement: All supporting quality data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request.

These analytical results relate only to the sample tested.
All data is reported on an 'As Is' basis unless designated as 'Dry Wt'.
RL = Reporting Limits

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eMail: chuck@pcslab.net **Universal City, TX 78148-3318**

POLLUTION CONTROL SERVICES

Chain of Custody Number

Stamp 1st sample and COC as same number 682932

MULTIPLE SAMPLE ANALYSIS REQUEST AND CHAIN OF CUSTODY FORM

CUSTOMER INFORMATION	REPORT INFORMATION		
Name: Texan Water	Attention: Austin Noah	Phone:	Fax:

SAMPLE INFORMATION

Project Information:

Report "Soils" ☐ As Is ☐ Dry Wt.

Collected By:

Instructions/Comments:

Client / Field Sample ID	Collected Date	Collected Time	Field Chlorine Residual mg/L	Composite or Grab	Matrix (DW-Drinking Water; NPW-Non-potable water; WW-Wastewater; LW-Liquid Waste)	Container Type	Container Number	Container Preservative	Cl, F, NO_3	Spcond, pH	SO_4, TDS	Fe, Mn	T Hard				PCS Sample Number
Maverick #3A	Start: 6/30/22 End:	Start: 11:00 End:		☐C ☑G	☑DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O	1	☐H_2SO_4 ☐HNO_3 ☐H_3PO_4 ☐NaOH ☑ICE ☐	Ac	Ac	Ac	Ac	Ac				682932 ☐S ☐B ☑N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H_2SO_4 ☐HNO_3 ☐H_3PO_4 ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H_2SO_4 ☐HNO_3 ☐H_3PO_4 ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H_2SO_4 ☐HNO_3 ☐H_3PO_4 ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H_2SO_4 ☐HNO_3 ☐H_3PO_4 ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H_2SO_4 ☐HNO_3 ☐H_3PO_4 ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H_2SO_4 ☐HNO_3 ☐H_3PO_4 ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H_2SO_4 ☐HNO_3 ☐H_3PO_4 ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:

Required Turnaround: ☐ Routine (6-10 days) ***EXPEDITE:*** (See Surcharge Schedule) ☐ < 8 Hrs. ☐ < 16 Hrs. ☐ < 24 Hrs. ☐ 5 days ☐ Other: ______ ***Rush Charges Authorized by:***

Sample Archive/Disposal: ☐ Laboratory Standard ☐ Hold for client pick up **Container Type:** P = Plastic, G = Glass, O = Other Carrier ID:

Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Daniel Russell	6/30/22	13:04	[signature]	6/30/22	1306
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

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Pollution Control Services

Sample Log-In Checklist

PCS Sample No(s) 682932 **COC No.** 682932

Client/Company Name: TexasH2O **Checklist Completed by:** [illegible]

Sample Delivery to Lab Via:
Client Drop Off ✓ Commercial Carrier: Bus ___ UPS ___ Lone Star ___ FedEx ___ USPS ___
PCS Field Services: Collection/Pick Up ___ Other: ___

Sample Kit/Coolers
Sample Kit/Cooler? Yes ✓ No ___ Sample Kit/Cooler: Intact? Yes ✓ No ___
Custody Seals on Sample Kit/Cooler: Not Present ✓ If Present, Intact ___ Broken ___
Sample Containers Intact; Unbroken and Not Leaking? Yes ✓ No ___
Custody Seals on Sample Bottles: Not Present ✓ If Present, Intact ___ Broken ___
COC Present with Shipment or Delivery or Completed at Drop Off? Yes ✓ No ___
Has COC sample date/time and other pertinent information been provided by client/sampler? Yes: ✓ No: ___
Has COC been properly Signed when Received/Relinquished? Yes ✓ No ___
Does COC agree with Sample Bottle Information, Bottle Types, Preservation, etc.? Yes ✓ No ___
All Samples Received before Hold Time Expiration? Yes ✓ No ___
Sufficient Sample Volumes for Analysis Requested? Yes ✓ No ___
Zero Headspace in VOA Vial? Yes ___ No ___

Sample Preservation:
* ***Cooling:*** **Not Required** ___ or **Required** ✓
If cooling required, record temperature of submitted samples Observed/Corrected 5 / 3 °C
Is Ice Present in Sample Kit/Cooler? ✓ Yes ___ No Samples received same day as collected? ✓ Yes ___ No
Lab Thermometer Make and Serial Number: Vaughan 1807009583 Other: ___

Acid Preserved Sample - If present, is pH <2? Yes ___ No ___** ___H_2SO_4 ___HNO_3 ___H_3PO_4
Base Preserved Sample - If present, is pH >12? Yes ___ No ___ ___NaOH
Other Preservation: ___ If Present, Meets Requirements? Yes ___ No ___
Sample Preservations Checked by: ___ Date ___ Time ___
pH paper used to check sample preservation (PCS log #): ___ (HEM pH checked at analysis).

Samples Preserved/Adjusted by Lab:	Lab #	Parameters Preserved	Preservative Used	Log #
	___	Metals	HNO3	01617603
	___	___	___	___
	___	___	___	___

Adjusted by Tech/Analyst: [illegible] Date: 6/30/22 Time: 1315

Client Notification/ Documentation for "No" Responses Above/ Discrepancies/ RevisionComments
Person Notified: ___ Contacted by: ___
Notified Date: ___ Time: ___
Method of Contact: At Drop Off: ___ Phone ___ Left Voice Mail ___ E-Mail ___ Fax ___
Unable to Contact ___ Authorized Laboratory to Proceed: ___ (Lab Director)
Regarding / Comments: ___
Actions taken to correct problems/discrepancies: ___
Receiving qualifier needed (*requires client notification above*) Temp. ___ Holding Time ___ Initails: ___
Receiving qualifier entered into LIMS at login Initial/Date: ___
Revision Comments: ___

POLLUTION CONTROL SERVICES

Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Brice Bormann **Texan Water** **161 Industrial Loop** **Fredericksburg, TX 78624**	**Project Name:** **Sample ID: Maverick #3 A** **Matrix: Drinking Water** **Date/Time Taken: 06/30/2022 1100**	**PCS Sample #: 682930 Page 1 of 1** **Date/Time Received: 06/30/2022 12:59** **Report Date: 07/01/2022** **Approved by:** Chuck Wallgren, President

Test Description	Result	Units	RL	Analysis Date/Time	Method	Analyst
E. coli. (Enumeration-MPN) 18	0	CFU/100ml	1	06/30/2022 15:35	9223 IDEXX Quanti-Tray	DMM
Total Coliform (Enumeration) 18	0	CFU/100ml	1	06/30/2022 15:35	9223 IDEXX Quanti-Tray	DMM

Sample passed / failed criteria for bacteriological test.
Sample of satisfactory bacteriological quality should be free from Coliform organisms.
Coliform Organisms
- X Not Found
- ___ Found
  - ___ Total
    - ___ Fecal (E.Coli)
    - ___ Repeat Samples Required / Recommended (Circle One)
  - ___ Unsuitable - See Below
  - ___ Other reason: _____

Quality Statement: All supporting quality data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request.

These analytical results relate only to the sample tested.
All data is reported on an 'As Is' basis unless designated as 'Dry Wt'.
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POLLUTION CONTROL SERVICES

Chain of Custody Number: 682930

Stamp 1st sample and COC as same number

MULTIPLE SAMPLE ANALYSIS REQUEST AND CHAIN OF CUSTODY FORM

CUSTOMER INFORMATION	REPORT INFORMATION		
Name: Texan Water	Attention: Austin Noah	Phone:	Fax:

SAMPLE INFORMATION

Project Information:

Collected By:

Report "Soils" ☐ As Is ☐ Dry Wt.

Requested Analysis: TCEC

Instructions/Comments:

Client / Field Sample ID	Collected Date	Collected Time	Field Chlorine Residual mg/L	Composite or Grab	Matrix (DW-Drinking Water; NPW-Non-potable water; WW-Wastewater; LW-Liquid Waste)	Container Type	Container Number	Preservative	TCEC	PCS Sample Number
Maverick #3 A	Start: 6/30/22 End:	Start: 11:00 End:		☐C ☑G	☑DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☑P ☐G ☐O	1	☐H₂SO₄ ☐HNO₃ ☐H₃PO₄ ☐NaOH ☑ICE ☐	✓	682930 ☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H₂SO₄ ☐HNO₃ ☐H₃PO₄ ☐NaOH ☐ICE ☐		☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H₂SO₄ ☐HNO₃ ☐H₃PO₄ ☐NaOH ☐ICE ☐		☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H₂SO₄ ☐HNO₃ ☐H₃PO₄ ☐NaOH ☐ICE ☐		☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H₂SO₄ ☐HNO₃ ☐H₃PO₄ ☐NaOH ☐ICE ☐		☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H₂SO₄ ☐HNO₃ ☐H₃PO₄ ☐NaOH ☐ICE ☐		☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H₂SO₄ ☐HNO₃ ☐H₃PO₄ ☐NaOH ☐ICE ☐		☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H₂SO₄ ☐HNO₃ ☐H₃PO₄ ☐NaOH ☐ICE ☐		☐S ☐B ☐N ☐HEM Other:

Required Turnaround: ☐ Routine (6-10 days) *EXPEDITE:* (See Surcharge Schedule) ☐ < 8 Hrs. ☐ < 16 Hrs. ☐ < 24 Hrs. ☑ 5 days ☐ Other: ____ ***Rush Charges Authorized by:***

Sample Archive/Disposal: ☐ Laboratory Standard ☐ Hold for client pick up **Container Type:** P = Plastic, G = Glass, O = Other Carrier ID:

Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Daniel Russell	6/30/22	13:03	[signature]	6/30/22	1303

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Pollution Control Services
Sample Log-In Checklist

PCS Sample No(s) 682930 **COC No.** 682930

Client/Company Name: Texan Ho **Checklist Completed by:**

Sample Delivery to Lab Via:
Client Drop Off ✓ Commercial Carrier: Bus ____ UPS ____ Lone Star ____ FedEx ____ USPS ____
PCS Field Services: Collection/Pick Up____ Other: ____

Sample Kit/Coolers
Sample Kit/Cooler? Yes ___ No ✓ Sample Kit/Cooler: Intact? Yes ✓ No ___
Custody Seals on Sample Kit/Cooler: Not Present ✓ If Present, Intact ___ Broken ___
Sample Containers Intact; Unbroken and Not Leaking? Yes ✓ No ___
Custody Seals on Sample Bottles: Not Present ✓ If Present, Intact ___ Broken ___
COC Present with Shipment or Delivery or Completed at Drop Off? Yes ✓ No ___
Has COC sample date/time and other pertinent information been provided by client/sampler? Yes: ✓ No: ___
Has COC been properly Signed when Received/Relinquished? Yes ✓ No ___
Does COC agree with Sample Bottle Information, Bottle Types, Preservation, etc.? Yes ✓ No ___
All Samples Received before Hold Time Expiration? Yes ✓ No ___
Sufficient Sample Volumes for Analysis Requested? Yes ✓ No ___
Zero Headspace in VOA Vial? Yes ___ No ___

Sample Preservation:
* *Cooling:* Not Required ____ or Required ✓
If cooling required, record temperature of submitted samples Observed/Corrected 4 / 2 °C
Is Ice Present in Sample Kit/Cooler? ✓ Yes ____ No Samples received same day as collected? ✓ Yes ____ No
Lab Thermometer Make and Serial Number: Vaughan 1807009583 Other: ____

Acid Preserved Sample - If present, is pH <2? Yes ____ No ____ ** ____ H_2SO_4 ____ HNO_3 ____ H_3PO_4
Base Preserved Sample - If present, is pH >12? Yes ____ No ____ ____ NaOH
Other Preservation: ____ If Present, Meets Requirements? Yes____ No____
Sample Preservations Checked by: ____ Date ____ Time ____
pH paper used to check sample preservation (PCS log #): ____ (HEM pH checked at analysis).

Samples Preserved/Adjusted by Lab:	Lab #	Parameters Preserved	Preservative Used	Log #

Adjusted by Tech/Analyst: ____ Date : ____ Time: ____

Client Notification/ Documentation for "No" Responses Above/ Discrepancies/ RevisionComments
Person Notified: ____ Contacted by: ____
Notified Date: ____ Time: ____
Method of Contact: At Drop Off: ____ Phone ___ Left Voice Mail ____ E-Mail ____ Fax ____
Unable to Contact____ Authorized Laboratory to Proceed : ____ (Lab Director)
Regarding / Comments: ____

Actions taken to correct problems/discrepancies: ____

Receiving qualifier needed (*requires client notification above*) Temp. ___ Holding Time ___ Initails: ____
Receiving qualifier entered into LIMS at login Initial/Date: ____
Revision Comments: ____

Water Quality

Well No. 4

POLLUTION CONTROL SERVICES

Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Brice Bormann **Texan Water** **161 Industrial Loop** **Fredericksburg, TX 78624**	**Project Name: Maverick #4** **Sample ID: Maverick #4** **Matrix: Drinking Water** **Date/Time Taken: 07/13/2022 1001**	**PCS Sample #: 684383 Page 1 of 2** **Date/Time Received: 07/13/2022 12:45** **Report Date: 07/19/2022** **Approved by:** Chuck Wallgren, President

Test Description	Flag	Result	Units	RL	Analysis Date/Time	Method	Analyst
pH	!, I	7.1	S.U.	N/A	07/14/2022 17:00	SM 4500-H+ B	DMM
Chloride_IC		14	mg/L	2	07/13/2022 16:31	EPA 300.0	JAS
Conductivity, Specific		708	µmhos/cm at 25° C	1	07/17/2022 10:40	SM 2510B	PML
Nitrate-N_IC		0.3	mg/L	0.2	07/13/2022 16:31	EPA 300.0	JAS
Sulfate_IC		49	mg/L	2	07/13/2022 16:31	EPA 300.0	JAS
Total Dissolved Solids		368	mg/L	10	07/14/2022 16:00	SM 2540C	PML
Total Hardness as CaCO3		360	mg/L	5	07/18/2022 15:55	SM 2340C	PML
Fluoride_IC		1.02	mg/L	0.20	07/13/2022 16:31	EPA 300.0	JAS

Quality Assurance Summary

Test Description	Precision	Limit	LCL	MS	MSD	UCL	LCS	LCS Limit	Blank
pH	N/A	N/A	N/A			N/A			
Chloride_IC	6	10	95	*94	100	102	99	85 - 115	
Conductivity, Specific	N/A	N/A	N/A			N/A			
Nitrate-N_IC	1	20	70	97	98	130	94	85 - 115	
Sulfate_IC	<1	10	94	96	95	101	103	85 - 115	
Total Dissolved Solids	3	10	N/A	N/A	N/A	N/A			
Total Hardness as CaCO3	<1	10	70	104	104	120	100	85 - 115	
Fluoride_IC	<1	10	87	96	96	105	101	85 - 115	

Quality Statement: All supporting quality data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request.

*Approved for release per QA Plan, Exception to Limits - QAM Section 13-4
' *Not NELAP Certifiable Parameter*
! *Informational purposes only - pH outside hold time*

These analytical results relate only to the sample tested.
All data is reported on an 'As Is' basis unless designated as 'Dry Wt'.
RL = Reporting Limits

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eMail: chuck@pcslab.net **Universal City, TX 78148-3318**

POLLUTION CONTROL SERVICES

Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Brice Bormann **Texan Water** **161 Industrial Loop** **Fredericksburg, TX 78624**	**Project Name: Maverick #4** **Sample ID: Maverick #4** **Matrix: Drinking Water** **Date/Time Taken: 07/13/2022 1001**	**PCS Sample #: 684383 Page 2 of 2** **Date/Time Received: 07/13/2022 12:45** **Report Date: 07/19/2022**

Test Description	Result	Units	RL	Analysis Date/Time	Method	Analyst
Iron/ICP (Total)	0.900	mg/L	0.010	07/18/2022 12:33	EPA 200.7 / 6010 B	DJL
Manganese/ICP (Total)	0.013	mg/L	0.010	07/18/2022 12:33	EPA 200.7 / 6010 B	DJL

Quality Assurance Summary

Test Description	Precision	Limit	LCL	MS	MSD	UCL	LCS	LCS Limit	Blank
Iron/ICP (Total)	1	20	75	96	97	125	105	85 - 115	
Manganese/ICP (Total)	1	20	75	93	94	125	100	85 - 115	

Quality Statement: All supporting quality data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request.

These analytical results relate only to the sample tested.
All data is reported on an 'As Is' basis unless designated as 'Dry Wt'.
RL = Reporting Limits

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POLLUTION CONTROL SERVICES

Chain of Custody Number: 684383

MULTIPLE SAMPLE ANALYSIS REQUEST AND CHAIN OF CUSTODY FORM

Stamp 1st sample and COC as same number

CUSTOMER INFORMATION
Name: Texan Water

REPORT INFORMATION
Attention: C. Knox | Phone: | Fax:

SAMPLE INFORMATION

Project Information: Maverick #4

Report "Soils" ☐ As Is ☐ Dry Wt.

Collected By:

Instructions/Comments:

Matrix: DW-Drinking Water; NPW-Non-potable water; WW-Wastewater; LW-Liquid Waste

Client / Field Sample ID	Collected Date	Collected Time	Field Chlorine Residual mg/L	Composite or Grab	Matrix	Container Type	Container Number	Preservative	See attached	Cl, SpCond	F, NO3N, SO4	pH, TDS, THard	Fe, Mn				PCS Sample Number
Maverick 4	Start: 7/13 End: 7/13	Start: 10:00 AM End: 10:01 AM		☐ C ☑ G	☑ DW ☐ NPW ☐ WW ☐ Soil ☐ Sludge ☐ LW ☐ Other	☑ P ☐ G ☐ O	1	☐ H_2SO_4 ☐ HNO_3 ☐ H_3PO_4 ☐ NaOH ☐ ICE ☐	X	X	X	X	X				684383 ☐S ☐B ☒N ☐HEM Other:
	Start: End:	Start: End:		☐ C ☐ G	☐ DW ☐ NPW ☐ WW ☐ Soil ☐ Sludge ☐ LW ☐ Other	☐ P ☐ G ☐ O		☐ H_2SO_4 ☐ HNO_3 ☐ H_3PO_4 ☐ NaOH ☐ ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐ C ☐ G	☐ DW ☐ NPW ☐ WW ☐ Soil ☐ Sludge ☐ LW ☐ Other	☐ P ☐ G ☐ O		☐ H_2SO_4 ☐ HNO_3 ☐ H_3PO_4 ☐ NaOH ☐ ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐ C ☐ G	☐ DW ☐ NPW ☐ WW ☐ Soil ☐ Sludge ☐ LW ☐ Other	☐ P ☐ G ☐ O		☐ H_2SO_4 ☐ HNO_3 ☐ H_3PO_4 ☐ NaOH ☐ ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐ C ☐ G	☐ DW ☐ NPW ☐ WW ☐ Soil ☐ Sludge ☐ LW ☐ Other	☐ P ☐ G ☐ O		☐ H_2SO_4 ☐ HNO_3 ☐ H_3PO_4 ☐ NaOH ☐ ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐ C ☐ G	☐ DW ☐ NPW ☐ WW ☐ Soil ☐ Sludge ☐ LW ☐ Other	☐ P ☐ G ☐ O		☐ H_2SO_4 ☐ HNO_3 ☐ H_3PO_4 ☐ NaOH ☐ ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐ C ☐ G	☐ DW ☐ NPW ☐ WW ☐ Soil ☐ Sludge ☐ LW ☐ Other	☐ P ☐ G ☐ O		☐ H_2SO_4 ☐ HNO_3 ☐ H_3PO_4 ☐ NaOH ☐ ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐ C ☐ G	☐ DW ☐ NPW ☐ WW ☐ Soil ☐ Sludge ☐ LW ☐ Other	☐ P ☐ G ☐ O		☐ H_2SO_4 ☐ HNO_3 ☐ H_3PO_4 ☐ NaOH ☐ ICE ☐									☐S ☐B ☐N ☐HEM Other:

Required Turnaround: ☒ Routine (6-10 days) | ***EXPEDITE:*** (See Surcharge Schedule) ☐ < 8 Hrs ☐ < 16 Hrs ☐ < 24 Hrs ☒ 3 days ☐ Other: | ***Rush Charges Authorized by:***

Sample Archive/Disposal: ☐ Laboratory Standard ☐ Hold for client pick up | **Container Type:** P = Plastic, G = Glass, O = Other | Carrier ID:

Relinquished By:	[signature]	Date:	7/13	Time:	12:45	Received By:	[signature]	Date: 7/13/[illegible]	Time: [illegible]
Relinquished By:		Date:		Time:		Received By:		Date:	Time:

Rev. Multiple Sample COC 20120201

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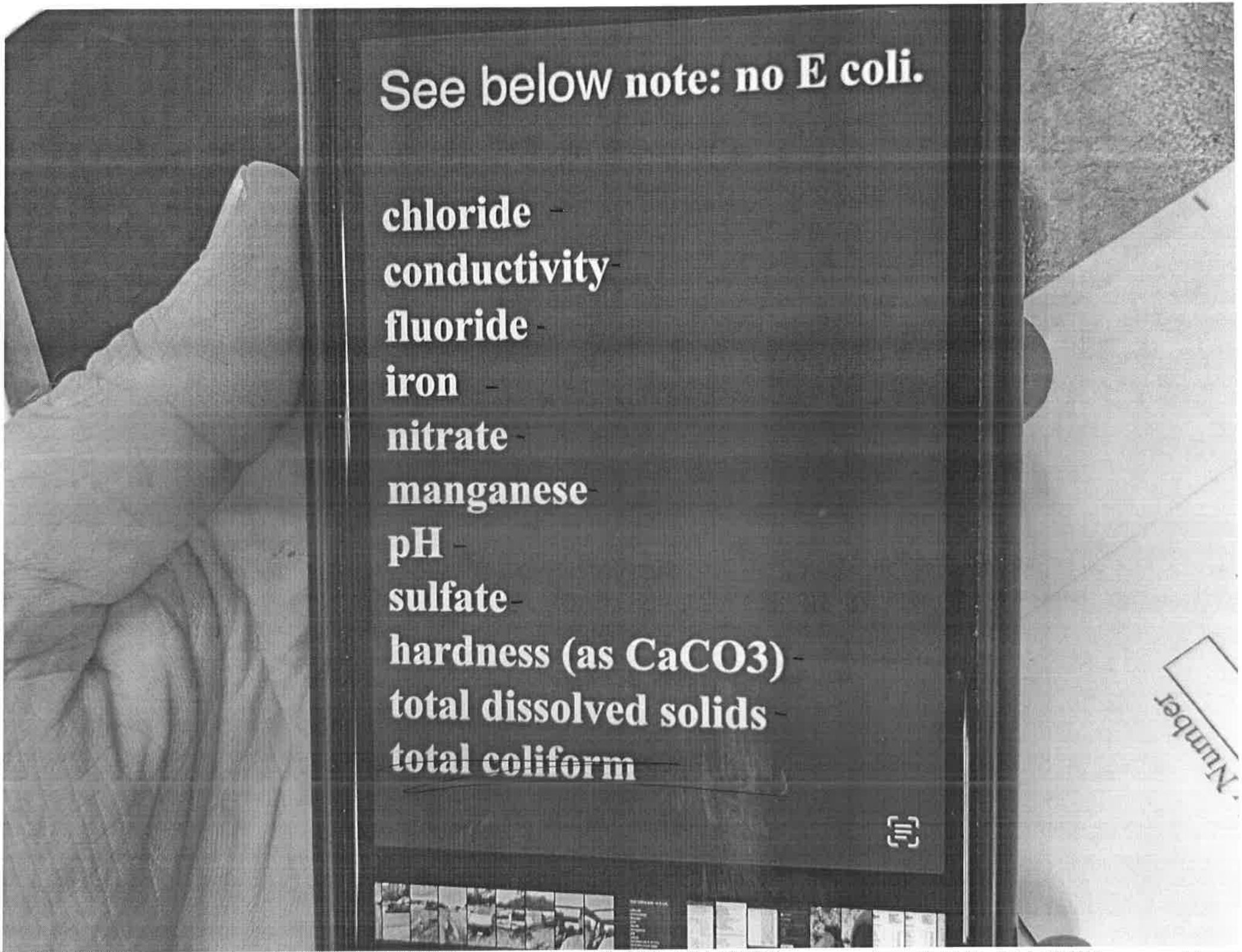
~~TCEQ NELAP T104704361-TX~~


See below note: no E coli.
chloride -
conductivity -
fluoride -
iron -
nitrate -
manganese -
pH -
sulfate -
hardness (as CaCO3) -
total dissolved solids -
total coliform
Number

Pollution Control Services

Sample Log-In Checklist

PCS Sample No(s) 684383 **COC No.** 684383

Client/Company Name: Texan H2O **Checklist Completed by:** Cour

Sample Delivery to Lab Via:
Client Drop Off ✓ Commercial Carrier: Bus ____ UPS ____ Lone Star ____ FedEx ____ USPS ____
PCS Field Services: Collection/Pick Up______ Other:

Sample Kit/Coolers
Sample Kit/Cooler? Yes___ ✓No____ Sample Kit/Cooler: Intact? Yes ✓ No___
Custody Seals on Sample Kit/Cooler: Not Present ✓ If Present, Intact ___ Broken ___
Sample Containers Intact; Unbroken and Not Leaking? Yes ✓ No ___
Custody Seals on Sample Bottles: Not Present ✓ If Present, Intact ___ Broken ___
COC Present with Shipment or Delivery or Completed at Drop Off? Yes ✓ No ___
Has COC sample date/time and other pertinent information been provided by client/sampler? Yes: ✓ No: ____
Has COC been properly Signed when Received/Relinquished? Yes ✓ No ___
Does COC agree with Sample Bottle Information, Bottle Types, Preservation, etc.? Yes ✓ No ___
All Samples Received before Hold Time Expiration? Yes ✓ No ___
Sufficient Sample Volumes for Analysis Requested? Yes ✓ No ___
Zero Headspace in VOA Vial? Yes ___ No ___

Sample Preservation:
* *Cooling:* **Not Required** ________ **or Required** ✓
If cooling required, record temperature of submitted samples Observed/Corrected 7 / 7 °C
Is Ice Present in Sample Kit/Cooler? ✓ Yes _____ No Samples received same day as collected? ✓ Yes _____ No
Lab Thermometer Make and Serial Number: Vaughan 1807009583 Other:

Acid Preserved Sample - If present, is pH <2? Yes ____ No ____ ** _____ H_2SO_4 _____ HNO_3 _____ H_3PO_4
Base Preserved Sample - If present, is pH >12? Yes ____ No ____ _____ NaOH
Other Preservation: ____________ If Present, Meets Requirements? Yes_____ No_____
Sample Preservations Checked by: ____________ Date ____________ Time ____________
pH paper used to check sample preservation (PCS log #): ____________ (HEM pH checked at analysis).

Samples Preserved/Adjusted by Lab: Lab #	Parameters Preserved	Preservative Used	Log #
	Metals	HNO_3	0161260 3

Adjusted by Tech Analyst: 7/13/22 Cour 7/13 mbur Date: 7/13/22 Time: 1250

Client Notification/ Documentation for "No" Responses Above/ Discrepancies/ Revision Comments
Person Notified: ____________ Contacted by: ____________
Notified Date: ____________ Time: ____________
Method of Contact: At Drop Off:_____ Phone ___ Left Voice Mail ___ E-Mail _____ Fax _____
Unable to Contact_____ Authorized Laboratory to Proceed :____________ (Lab Director)
Regarding / Comments:

Actions taken to correct problems/discrepancies:

Receiving qualifier needed (*requires client notification above*) Temp. ___ Holding Time ___ Initails: ____________
Receiving qualifier entered into LIMS at login Initial/Date ____________
Revision Comments:

POLLUTION CONTROL SERVICES

Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Brice Bormann **Texan Water** **161 Industrial Loop** **Fredericksburg, TX 78624**	**Project Name: Maverick #4** **Sample ID: BacT A** **Matrix: Drinking Water** **Date/Time Taken: 07/13/2022 1001**	**PCS Sample #: 684384 Page 1 of 1** **Date/Time Received: 07/13/2022 12:45** **Report Date: 07/14/2022** **Approved by:** Chuck Wallgren, President

Test Description	Result	Units	RL	Analysis Date/Time	Method	Analyst
E. coli. (Enumeration-MPN) 18	0	CFU/100ml	1	07/13/2022 14:30	9223 IDEXX Quanti-Tray	DMM
Total Coliform (Enumeration) 18	2	CFU/100ml	1	07/13/2022 14:30	9223 IDEXX Quanti-Tray	DMM

Sample passed / failed criteria for bacteriological test.
Sample of satisfactory bacteriological quality should be free from Coliform organisms.
Coliform Organisms
- Not Found
- X Found
- √ Total
- ___ Fecal (E.Coli)
- ___ Repeat Samples Required / Recommended (Circle One)

___ Unsuitable - See Below

___ Other reason: _____

Quality Statement: All supporting quality data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are abailable on request.

These analytical results relate only to the sample tested.
All data is reported on an 'As Is' basis unless designated as 'Dry Wt'.
RL = Reporting Limits

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POLLUTION CONTROL SERVICES

Chain of Custody Number
6 8 4 3 8 4

MULTIPLE SAMPLE ANALYSIS REQUEST AND CHAIN OF CUSTODY FORM

Stamp 1st sample and COC as same number

CUSTOMER INFORMATION	REPORT INFORMATION		
Name: Texan Water	Attention: L. Knox	Phone:	Fax:

SAMPLE INFORMATION

Project Information: Maverick #4

Report "Soils" ☐ As Is ☐ Dry Wt.

Collected By:

Client / Field Sample ID	Collected Date	Collected Time	Field Chlorine Residual mg/L	Composite or Grab	Matrix (DW-Drinking Water; NPW-Non-potable water; WW-Wastewater; LW-Liquid Waste)	Container Type	Container Number	Container Preservative	Requested Analysis: BACT								Instructions/Comments: PCS Sample Number
Bact A	Start: 7/13 End: 7/13	Start: 10:00AM End: 10:01PM		☒ C ☒ G	☒ DW ☐ NPW ☐ WW ☐ Soil ☐ Sludge ☐ LW ☐ Other	☒ P ☐ G ☐ O	1	☐ H_2SO_4 ☐ HNO_3 ☐ H_3PO_4 ☐ NaOH ☒ ICE ☐ ______									684384 ☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐ C ☐ G	☐ DW ☐ NPW ☐ WW ☐ Soil ☐ Sludge ☐ LW ☐ Other	☐ P ☐ G ☐ O		☐ H_2SO_4 ☐ HNO_3 ☐ H_3PO_4 ☐ NaOH ☐ ICE ☐ ______									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐ C ☐ G	☐ DW ☐ NPW ☐ WW ☐ Soil ☐ Sludge ☐ LW ☐ Other	☐ P ☐ G ☐ O		☐ H_2SO_4 ☐ HNO_3 ☐ H_3PO_4 ☐ NaOH ☐ ICE ☐ ______									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐ C ☐ G	☐ DW ☐ NPW ☐ WW ☐ Soil ☐ Sludge ☐ LW ☐ Other	☐ P ☐ G ☐ O		☐ H_2SO_4 ☐ HNO_3 ☐ H_3PO_4 ☐ NaOH ☐ ICE ☐ ______									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐ C ☐ G	☐ DW ☐ NPW ☐ WW ☐ Soil ☐ Sludge ☐ LW ☐ Other	☐ P ☐ G ☐ O		☐ H_2SO_4 ☐ HNO_3 ☐ H_3PO_4 ☐ NaOH ☐ ICE ☐ ______									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐ C ☐ G	☐ DW ☐ NPW ☐ WW ☐ Soil ☐ Sludge ☐ LW ☐ Other	☐ P ☐ G ☐ O		☐ H_2SO_4 ☐ HNO_3 ☐ H_3PO_4 ☐ NaOH ☐ ICE ☐ ______									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐ C ☐ G	☐ DW ☐ NPW ☐ WW ☐ Soil ☐ Sludge ☐ LW ☐ Other	☐ P ☐ G ☐ O		☐ H_2SO_4 ☐ HNO_3 ☐ H_3PO_4 ☐ NaOH ☐ ICE ☐ ______									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐ C ☐ G	☐ DW ☐ NPW ☐ WW ☐ Soil ☐ Sludge ☐ LW ☐ Other	☐ P ☐ G ☐ O		☐ H_2SO_4 ☐ HNO_3 ☐ H_3PO_4 ☐ NaOH ☐ ICE ☐ ______									☐S ☐B ☐N ☐HEM Other:

Required Turnaround: ☒ Routine (6-10 days) | ***EXPEDITE:*** (See Surcharge Schedule) ☐ < 8 Hrs. ☐ < 16 Hrs. ☐ < 24 Hrs. ☐ 5 days ☐ Other: ______ ***Rush Charges Authorized by:***

Sample Archive/Disposal: ☐ Laboratory Standard ☐ Hold for client pick up | **Container Type:** P = Plastic, G = Glass, O = Other | Carrier ID:

Relinquished By: [signature]	Date: 7/13/22	Time: 12:45	Received By: [signature]	Date: 7/13/22	Time: 12:45
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Rev. Multiple Sample COC 20120201

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Pollution Control Services
Sample Log-In Checklist

684384

PCS Sample No(s) 684384 **COC No.** _____

Client/Company Name: Texas Hz **Checklist Completed by:** CM

Sample Delivery to Lab Via:
Client Drop Off ✓ Commercial Carrier: Bus ____ UPS ____ Lone Star ____ FedEx ____ USPS ____
PCS Field Services: Collection/Pick Up____ Other:_____

Sample Kit/Coolers
Sample Kit/Cooler? Yes ✓ No____ Sample Kit/Cooler: Intact? Yes ✓ No___
Custody Seals on Sample Kit/Cooler: Not Present ✓ If Present, Intact ___ Broken ___
Sample Containers Intact; Unbroken and Not Leaking? Yes ✓ No ___
Custody Seals on Sample Bottles: Not Present ✓ If Present, Intact ___ Broken ___
COC Present with Shipment or Delivery or Completed at Drop Off? Yes ✓ No ___
Has COC sample date/time and other pertinent information been provided by client/sampler? Yes: ✓ No: ____
Has COC been properly Signed when Received/Relinquished? Yes ✓ No ___
Does COC agree with Sample Bottle Information, Bottle Types, Preservation, etc.? Yes ✓ No ___
All Samples Received before Hold Time Expiration? Yes ✓ No ___
Sufficient Sample Volumes for Analysis Requested? Yes ✓ No ___
Zero Headspace in VOA Vial? Yes ___ No ___

Sample Preservation:
* *Cooling:* Not Required ✓ or **Required** _____
If cooling required, record temperature of submitted samples Observed/Corrected 7 / 7 °C
Is Ice Present in Sample Kit/Cooler? ✓ Yes ____ No Samples received same day as collected? ✓ Yes ____ No
Lab Thermometer Make and Serial Number: Vaughan 180709583 Other: _____

Acid Preserved Sample - If present, is pH <2? Yes ____ No ____** ____H_2SO_4 ____HNO_3 ____H_3PO_4
Base Preserved Sample - If present, is pH >12? Yes ____ No ____ ____NaOH
Other Preservation:_____ If Present, Meets Requirements? Yes____ No____
Sample Preservations Checked by:_____ Date _____ Time _____
pH paper used to check sample preservation (PCS log #): _____ (HEM pH checked at analysis).

Samples Preserved/Adjusted by Lab:	Lab #	Parameters Preserved	Preservative Used	Log #

Adjusted by Tech/Analyst:_____ Date :_____ Time:_____

Client Notification/ Documentation for "No" Responses Above/ Discrepancies/ RevisionComments
Person Notified: _____ Contacted by:_____
Notified Date: _____ Time: _____
Method of Contact: At Drop Off:____ Phone ___ Left Voice Mail ___ E-Mail ____ Fax ____
Unable to Contact____ Authorized Laboratory to Proceed :_____(Lab Director)
Regarding / Comments:_____

Actions taken to correct problems/discrepancies:_____

Receiving qualifier needed (*requires client notification above*) Temp. ___ Holding Time ___ Initails: _____
Receiving qualifier entered into LIMS at login Initial/Date: _____
Revision Comments: _____

Water Quality

Well No. 6

POLLUTION CONTROL SERVICES

Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Brice Bormann **Texan Water** **161 Industrial Loop** **Fredericksburg, TX 78624**	**Project Name:** **Sample ID: Maverick #6** **Matrix: Drinking Water** **Date/Time Taken: 06/07/2022 1100**	**PCS Sample #: 679876 Page 1 of 2** **Date/Time Received: 06/07/2022 12:38** **Report Date: 06/14/2022** Approved by: Chuck Wallgren, President

Test Description	Flag	Result	Units	RL	Analysis Date/Time	Method	Analyst
pH	!, I	7.5	S.U.	N/A	06/08/2022 16:10	SM 4500-H+ B	JHA
Chloride_IC		16	mg/L	2	06/08/2022 10:06	EPA 300.0	JAS
Conductivity, Specific		695	µmhos/cm at 25° C	1	06/13/2022 09:20	SM 2510B	PML
Nitrate-N_IC		0.3	mg/L	0.2	06/08/2022 10:06	EPA 300.0	JAS
Sulfate_IC		40	mg/L	2	06/08/2022 10:06	EPA 300.0	JAS
Total Dissolved Solids		292	mg/L	10	06/08/2022 10:15	SM 2540C	JHA
Total Hardness as CaCO3		350	mg/L	5	06/14/2022 10:00	SM 2340C	PML
Fluoride_IC		0.92	mg/L	0.20	06/08/2022 10:06	EPA 300.0	JAS

Quality Assurance Summary

Test Description	Precision	Limit	LCL	MS	MSD	UCL	LCS	LCS Limit	Blank
pH	N/A	N/A	N/A			N/A			
Chloride_IC	<1	10	95	97	97	102	100	85 - 115	
Conductivity, Specific	N/A	N/A	N/A			N/A			
Nitrate-N_IC	<1	20	70	99	99	130	103	85 - 115	
Sulfate_IC	1	10	91	98	97	101	103	85 - 115	
Total Dissolved Solids	<1	10	N/A	N/A	N/A	N/A			
Total Hardness as CaCO3	2	10	70	98	100	120	100	85 - 115	
Fluoride_IC	1	10	90	93	94	110	101	85 - 115	

Quality Statement: All supporting quality data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request.

! Not NELAP Certifiable Parameter
! Informational purposes only - pH outside hold time

These analytical results relate only to the sample tested.
All data is reported on an 'As Is' basis unless designated as 'Dry Wt'.
RL = Reporting Limits

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FAX # 210-658-7903

POLLUTION CONTROL SERVICES

Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Brice Bormann **Texan Water** **161 Industrial Loop** **Fredericksburg, TX 78624**	**Project Name:** **Sample ID: Maverick #6** **Matrix: Drinking Water** **Date/Time Taken: 06/07/2022 1100**	**PCS Sample #: 679876 Page 2 of 2** **Date/Time Received: 06/07/2022 12:38** **Report Date: 06/14/2022**

Test Description	Result	Units	RL	Analysis Date/Time	Method	Analyst
Iron/ICP (Total)	0.890	mg/L	0.010	06/13/2022 10:10	EPA 200.7 / 6010 B	DJL
Manganese/ICP (Total)	0.018	mg/L	0.010	06/13/2022 10:10	EPA 200.7 / 6010 B	DJL

Quality Assurance Summary

Test Description	Precision	Limit	LCL	MS	MSD	UCL	LCS	LCS Limit	Blank
Iron/ICP (Total)	<1	20	75	96	96	125	105	85 - 115	
Manganese/ICP (Total)	<1	20	75	99	99	125	100	85 - 115	

Quality Statement: All supporting quality data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request.

These analytical results relate only to the sample tested.
All data is reported on an 'As Is' basis unless designated as 'Dry Wt'.
RL = Reporting Limits

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POLLUTION CONTROL SERVICES

Chain of Custody Number
6 7 9 8 7 6

MULTIPLE SAMPLE ANALYSIS REQUEST AND CHAIN OF CUSTODY FORM

Stamp 1st sample and COC as same number

CUSTOMER INFORMATION | **REPORT INFORMATION**

Name: Texan Water | Attention: Austin Noah | Phone: | Fax:

SAMPLE INFORMATION

Project Information:

Report "Soils" ☐ As Is ☐ Dry Wt

Collected By:

Client / Field Sample ID	Collected Date	Collected Time	Field Chlorine Residual mg/L	Composite or Grab	Matrix (DW-Drinking Water; NPW-Non-potable water; WW-Wastewater; LW-Liquid Waste)	Container Type	Container Number	Preservative	Chloride / Conductivity	Fluoride / Iron	Nitrate / Manganese	PH / Sulfate	hardness (as $CaCO_3$) / TDS	~~Total coliform~~ EV 6-7-22			Instructions/Comments: PCS Sample Number
Maverick #6	Start: 6/7/22 End:	Start: 11:00 End:		☐C ☒G	☒DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☒P ☐G ☐O	2	☐H_2SO_4 ☐HNO_3 ☐H_3PO_4 ☐NaOH ☒ICE ☐	X	X	X	X	X				6 7 9 8 7 6 ☐S ☐B ☒N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H_2SO_4 ☐HNO_3 ☐H_3PO_4 ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H_2SO_4 ☐HNO_3 ☐H_3PO_4 ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H_2SO_4 ☐HNO_3 ☐H_3PO_4 ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H_2SO_4 ☐HNO_3 ☐H_3PO_4 ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H_2SO_4 ☐HNO_3 ☐H_3PO_4 ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H_2SO_4 ☐HNO_3 ☐H_3PO_4 ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H_2SO_4 ☐HNO_3 ☐H_3PO_4 ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:

Required Turnaround: ☐ Routine (6-10 days) | *EXPEDITE* (See Surcharge Schedule) | ☐ < 8 Hrs ☐ < 16 Hrs ☐ < 24 Hrs ☐ 5 days ☐ Other | *Rush Charges Authorized by:*

Sample Archive/Disposal: ☐ Laboratory Standard ☐ Hold for client pick up | Container Type: P = Plastic, G = Glass, O = Other | Carrier ID:

Relinquished By:	Daniel Russell	Date:	6/7/22	Time:	12:38	Received By:	[signature]	Date:	6-7-22	Time: 12:38
Relinquished By:		Date:		Time:		Received By:		Date:		Time:

Rev. Multiple Sample COC_20180628

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Pollution Control Services
Sample Log-In Checklist

PCS Sample No(s) 679876 **COC No.** 679876

Client/Company Name: Texas Water **Checklist Completed by:** EV

Sample Delivery to Lab Via:
Client Drop Off ✓ Commercial Carrier: Bus ___ UPS ___ Lone Star ___ FedEx ___ USPS ___
PCS Field Services: Collection/Pick Up ___ Other: ___

Sample Kit/Coolers
Sample Kit/Cooler? Yes ✓ No ___ Sample Kit/Cooler: Intact? Yes ✓ No ___
Custody Seals on Sample Kit/Cooler: Not Present ✓ If Present, Intact ___ Broken ___
Sample Containers Intact; Unbroken and Not Leaking? Yes ✓ No ___
Custody Seals on Sample Bottles: Not Present ✓ If Present, Intact ___ Broken ___
COC Present with Shipment or Delivery or Completed at Drop Off? Yes ✓ No ___
Has COC sample date/time and other pertinent information been provided by client/sampler? Yes: ✓ No: ___
Has COC been properly Signed when Received/Relinquished? Yes ✓ No ___
Does COC agree with Sample Bottle Information, Bottle Types, Preservation, etc.? Yes ✓ No ___
All Samples Received before Hold Time Expiration? Yes ✓ No ___
Sufficient Sample Volumes for Analysis Requested? Yes ✓ No ___
Zero Headspace in VOA Vial? Yes ___ No ___

Sample Preservation:
* ***Cooling:*** **Not Required** ___ or **Required** ✓
If cooling required, record temperature of submitted samples Observed/Corrected 13 / 11 °C
Is Ice Present in Sample Kit/Cooler? ✓ Yes ___ No Samples received same day as collected? ✓ Yes ___ No
Lab Thermometer Make and Serial Number: Vaughan 1807009583 Other: ___

Acid Preserved Sample - If present, is pH <2? Yes ___ No ___** ___H_2SO_4 ___HNO_3 ___H_3PO_4
Base Preserved Sample - If present, is pH >12? Yes ___ No ___ ___NaOH
Other Preservation: ___ If Present, Meets Requirements? Yes ___ No ___
Sample Preservations Checked by: ___ Date ___ Time ___
pH paper used to check sample preservation (PCS log #): ___ (HEM pH checked at analysis).

Samples Preserved/Adjusted by Lab:	Lab #	Parameters Preserved	Preservative Used	Log #
	___	metals	HNO_3	01611706
	___	___	___	___
	___	___	___	___

Adjusted by Tech/Analyst: EV Date: 6/7/22 Time: 12:40

Client Notification/ Documentation for "No" Responses Above/ Discrepancies/ RevisionComments
Person Notified: ___ Contacted by: ___
Notified Date: ___ Time: ___
Method of Contact: At Drop Off: ___ Phone ___ Left Voice Mail ___ E-Mail ___ Fax ___
Unable to Contact ___ Authorized Laboratory to Proceed: ___ (Lab Director)
Regarding / Comments: ___
Actions taken to correct problems/discrepancies: ___
Receiving qualifier needed (*requires client notification above*) Temp. ___ Holding Time ___ Initails: ___
Receiving qualifier entered into LIMS at login Initial/Date: ___
Revision Comments: ___

POLLUTION CONTROL SERVICES

Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Brice Bormann **Texan Water** **161 Industrial Loop** **Fredericksburg, TX 78624**	**Project Name:** **Sample ID: Maverick #6 1** **Matrix: Drinking Water** **Date/Time Taken: 06/07/2022 1100**	**PCS Sample #: 679877 Page 1 of 1** **Date/Time Received: 06/07/2022 12:40** **Report Date: 06/08/2022** Approved by: Chuck Wallgren, President

Test Description	Result	Units	RL	Analysis Date/Time	Method	Analyst
E. coli. (Enumeration-MPN) 18	0	CFU/100ml	1	06/07/2022 14:40	9223 IDEXX Quanti-Tray	JHA
Total Coliform (Enumeration) 18	11	CFU/100ml	1	06/07/2022 14:40	9223 IDEXX Quanti-Tray	JHA

Sample passed (failed) criteria for bacteriological test.
Sample of satisfactory bacteriological quality should be free from Coliform organisms.
Coliform Organisms ___ Not Found
_X_ Found
_X_ Total
___ Fecal (E.Coli)
___ Repeat Samples Required / Recommended (Circle One)
___ Unsuitable - See Below
___ Other reason: _____

Quality Statement: All supporting quality data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request.

These analytical results relate only to the sample tested.
All data is reported on an 'As Is' basis unless designated as 'Dry Wt'.
RL = Reporting Limits

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FAX # 210-658-7903

POLLUTION CONTROL SERVICES

Chain of Custody Number
679877

MULTIPLE SAMPLE ANALYSIS REQUEST AND CHAIN OF CUSTODY FORM

Stamp 1st sample and COC as same number

CUSTOMER INFORMATION	REPORT INFORMATION		
Name: Texan Water	Attention: Austin Water	Phone:	Fax:

SAMPLE INFORMATION

Project Information:

Collected By:

Report "Soils" ☐ As Is ☐ Dry Wt.

Instructions/Comments: LMOM-JHA 6.8.22 0920

Client / Field Sample ID	Collected Date	Collected Time	Field Chlorine Residual mg/L	Composite or Grab	Matrix (DW-Drinking Water, NPW-Non-potable water, WW-Wastewater, LW-Liquid Waste)	Container Type	Container Number	Container Preservative	Requested Analysis: TCEC								PCS Sample Number
Maverick #6 #1	Start: 6/7/22 End:	Start: 11:00 End:		☐C ☒G	☒DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☒P ☐G ☐O	1	☐H_2SO_4 ☐HNO_3 ☐H_3PO_4 ☐NaOH ☐ICE ☐	X								679877 ☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H_2SO_4 ☐HNO_3 ☐H_3PO_4 ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H_2SO_4 ☐HNO_3 ☐H_3PO_4 ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H_2SO_4 ☐HNO_3 ☐H_3PO_4 ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H_2SO_4 ☐HNO_3 ☐H_3PO_4 ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H_2SO_4 ☐HNO_3 ☐H_3PO_4 ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H_2SO_4 ☐HNO_3 ☐H_3PO_4 ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H_2SO_4 ☐HNO_3 ☐H_3PO_4 ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:

Required Turnaround: ☐ Routine (6-10 days) | EXPEDITE: (See Surcharge Schedule) ☐ < 8 Hrs. ☐ < 16 Hrs. ☐ < 24 Hrs. ☐ 5 days ☐ Other: Rush Charges Authorized by:

Sample Archive/Disposal: ☐ Laboratory Standard ☐ Hold for client pick up | Container Type: P = Plastic, G = Glass, O = Other | Carrier ID:

Relinquished By:	Daniel Russed	Date:	6/7/22	Time:	12:40	Received By:	[signature]	Date: 6/7/22	Time: 12:40
Relinquished By:		Date:		Time:		Received By:		Date:	Time:

Rev. Multiple Sample COC_20180628

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Pollution Control Services
Sample Log-In Checklist

PCS Sample No(s) 679877 **COC No.** 679877

Client/Company Name: Texas Water **Checklist Completed by:** EV

Sample Delivery to Lab Via:
Client Drop Off ✓ Commercial Carrier: Bus ____ UPS ____ Lone Star ____ FedEx ____ USPS ____
PCS Field Services: Collection/Pick Up____ Other:____

Sample Kit/Coolers
Sample Kit/Cooler? Yes ✓ No____ Sample Kit/Cooler: Intact? Yes ✓ No___
Custody Seals on Sample Kit/Cooler: Not Present ✓ If Present, Intact ___ Broken ___
Sample Containers Intact; Unbroken and Not Leaking? Yes ✓ No ___
Custody Seals on Sample Bottles: Not Present ✓ If Present, Intact ___ Broken ___
COC Present with Shipment or Delivery or Completed at Drop Off? Yes ✓ No ___
Has COC sample date/time and other pertinent information been provided by client/sampler? Yes: ✓ No: ___
Has COC been properly Signed when Received/Relinquished? Yes ✓ No ___
Does COC agree with Sample Bottle Information, Bottle Types, Preservation, etc.? Yes ✓ No ___
All Samples Received before Hold Time Expiration? Yes ✓ No ___
Sufficient Sample Volumes for Analysis Requested? Yes ✓ No ___
Zero Headspace in VOA Vial? Yes ___ No ___

Sample Preservation:
* *Cooling:* **Not Required** ✓ or **Required** _____
If cooling required, record temperature of submitted samples Observed/Corrected 13 / 11 °C
Is Ice Present in Sample Kit/Cooler? ____ Yes ____ No Samples received same day as collected? ✓ Yes ____ No
Lab Thermometer Make and Serial Number: Vaughan 1807009583 Other ____

Acid Preserved Sample - If present, is pH <2? Yes ___ No ___** ____H_2SO_4 ____HNO_3 ____H_3PO_4
Base Preserved Sample - If present, is pH >12? Yes ___ No ___ ____NaOH
Other Preservation:____ If Present, Meets Requirements? Yes____ No____
Sample Preservations Checked by:____ Date ____ Time ____
pH paper used to check sample preservation (PCS log #): ____ (HEM pH checked at analysis).

Samples Preserved/Adjusted by Lab:	Lab #	Parameters Preserved	Preservative Used	Log #

Adjusted by Tech/Analyst:____ Date :____ Time:____

Client Notification/ Documentation for "No" Responses Above/ Discrepancies/ RevisionComments
Person Notified: ____ Contacted by: ____
Notified Date: ____ Time: ____
Method of Contact: At Drop Off:____ Phone ___ Left Voice Mail ___ E-Mail ____ Fax ____
Unable to Contact____ Authorized Laboratory to Proceed :____(Lab Director)
Regarding / Comments:____

Actions taken to correct problems/discrepancies:____

Receiving qualifier needed (*requires client notification above*) Temp. ___ Holding Time ___ Initails: ____
Receiving qualifier entered into LIMS at login Initial/Date: ____
Revision Comments: ____

Water Quality

Well No. 8

POLLUTION CONTROL SERVICES

Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Brice Bormann **Texan Water** **161 Industrial Loop** **Fredericksburg, TX 78624**	**Project Name: Maverick #8** **Sample ID: Maverick #8** **Matrix: Drinking Water** **Date/Time Taken: 07/15/2022 0905**	**PCS Sample #: 684717 Page 1 of 2** **Date/Time Received: 07/15/2022 11:00** **Report Date: 07/21/2022** **Approved by:** Chuck Wallgren, President

Test Description	Flag	Result	Units	RL	Analysis Date/Time	Method	Analyst
pH	!, I	7.4	S.U.	N/A	07/18/2022 08:33	SM 4500-H+ B	DMM
Chloride_IC		18	mg/L	2	07/15/2022 14:17	EPA 300.0	JAS
Conductivity, Specific		765	µmhos/cm at 25° C	1	07/17/2022 10:40	SM 2510B	PML
Nitrate-N_IC		<0.2	mg/L	0.2	07/15/2022 14:17	EPA 300.0	JAS
Sulfate_IC		72	mg/L	2	07/15/2022 14:17	EPA 300.0	JAS
Total Dissolved Solids		452	mg/L	10	07/15/2022 14:00	SM 2540C	PML
Total Hardness as CaCO3		370	mg/L	5	07/18/2022 14:40	SM 2340C	PML
Fluoride_IC		1.24	mg/L	0.20	07/15/2022 14:17	EPA 300.0	JAS

Quality Assurance Summary

Test Description	Precision	Limit	LCL	MS	MSD	UCL	LCS	LCS Limit	Blank
pH	N/A	N/A	N/A			N/A			
Chloride_IC	<1	10	95	*92	*92	102	96	85 - 115	
Conductivity, Specific	N/A	N/A	N/A			N/A			
Nitrate-N_IC	<1	20	70	95	95	130	94	85 - 115	
Sulfate_IC	1	10	94	95	94	101	95	85 - 115	
Total Dissolved Solids	<1	10	N/A	N/A	N/A	N/A			
Total Hardness as CaCO3	2	10	70	100	102	120	100	85 - 115	
Fluoride_IC	<1	10	87	93	93	105	102	85 - 115	

Quality Statement: All supporting quality data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request.

*Approved for release per QA Plan, Exception to Limits - QAM Section 13-4

' *Not NELAP Certifiable Parameter*

! *Informational purposes only - pH outside hold time*

These analytical results relate only to the sample tested.
All data is reported on an 'As Is' basis unless designated as 'Dry Wt'.
RL = Reporting Limits

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eMail: chuck@pcslab.net **Universal City, TX 78148-3318**

POLLUTION CONTROL SERVICES

Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Brice Bormann **Texan Water** **161 Industrial Loop** **Fredericksburg, TX 78624**	**Project Name: Maverick #8** **Sample ID: Maverick #8** **Matrix: Drinking Water** **Date/Time Taken: 07/15/2022 0905**	**PCS Sample #: 684717 Page 2 of 2** **Date/Time Received: 07/15/2022 11:00** **Report Date: 07/21/2022**

Test Description	Result	Units	RL	Analysis Date/Time	Method	Analyst
Iron/ICP (Total)	0.085	mg/L	0.010	07/20/2022 13:35	EPA 200.7 / 6010 B	DJL
Manganese/ICP (Total)	<0.010	mg/L	0.010	07/20/2022 13:35	EPA 200.7 / 6010 B	DJL

Quality Assurance Summary

Test Description	Precision	Limit	LCL	MS	MSD	UCL	LCS	LCS Limit	Blank
Iron/ICP (Total)	9	20	75	101	92	125	105	85 - 115	
Manganese/ICP (Total)	2	20	75	94	92	125	100	85 - 115	

Quality Statement: All supporting quality data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request.

These analytical results relate only to the sample tested.
All data is reported on an 'As Is' basis unless designated as 'Dry Wt'.
RL = Reporting Limits

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eMail: chuck@pcslab.net **Universal City, TX 78148-3318**

POLLUTION CONTROL SERVICES

Chain of Custody Number: 684717

Stamp 1st sample and COC as same number

MULTIPLE SAMPLE ANALYSIS REQUEST AND CHAIN OF CUSTODY FORM

CUSTOMER INFORMATION	REPORT INFORMATION		
Name: TEXAN WATER	Attention: C. KNOX	Phone:	Fax:

SAMPLE INFORMATION

Project Information: MAVERICK #8

Report "Soils" ☐ As Is ☐ Dry Wt.

Collected By:

Requested Analysis: SEE ATTACHED

Instructions/Comments:

Matrix: DW-Drinking Water; NPW-Non-potable water; WW-Wastewater; LW-Liquid Waste

Client / Field Sample ID	Collected Date	Collected Time	Field Chlorine Residual mg/L	Composite or Grab	Matrix	Container Type	Container Number	Container Preservative	PCS Sample Number
MAVERICK #8	Start: 7/15 End: 7/15	Start: 9:05AM End: 9:05AM		☐ C ☑ G	☑ DW ☐ NPW ☐ WW ☐ Soil ☐ Sludge ☐ LW ☐ Other	☑ P ☐ G ☐ O		☐ H_2SO_4 ☐ HNO_3 ☐ H_3PO_4 ☐ NaOH ☑ ICE ☐	684717 ☐S ☐B ☐N ☐HEM Other: 684717
	Start: End:	Start: End:		☐ C ☐ G	☐ DW ☐ NPW ☐ WW ☐ Soil ☐ Sludge ☐ LW ☐ Other	☐ P ☐ G ☐ O		☐ H_2SO_4 ☐ HNO_3 ☐ H_3PO_4 ☐ NaOH ☐ ICE ☐	☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐ C ☐ G	☐ DW ☐ NPW ☐ WW ☐ Soil ☐ Sludge ☐ LW ☐ Other	☐ P ☐ G ☐ O		☐ H_2SO_4 ☐ HNO_3 ☐ H_3PO_4 ☐ NaOH ☐ ICE ☐	☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐ C ☐ G	☐ DW ☐ NPW ☐ WW ☐ Soil ☐ Sludge ☐ LW ☐ Other	☐ P ☐ G ☐ O		☐ H_2SO_4 ☐ HNO_3 ☐ H_3PO_4 ☐ NaOH ☐ ICE ☐	☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐ C ☐ G	☐ DW ☐ NPW ☐ WW ☐ Soil ☐ Sludge ☐ LW ☐ Other	☐ P ☐ G ☐ O		☐ H_2SO_4 ☐ HNO_3 ☐ H_3PO_4 ☐ NaOH ☐ ICE ☐	☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐ C ☐ G	☐ DW ☐ NPW ☐ WW ☐ Soil ☐ Sludge ☐ LW ☐ Other	☐ P ☐ G ☐ O		☐ H_2SO_4 ☐ HNO_3 ☐ H_3PO_4 ☐ NaOH ☐ ICE ☐	☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐ C ☐ G	☐ DW ☐ NPW ☐ WW ☐ Soil ☐ Sludge ☐ LW ☐ Other	☐ P ☐ G ☐ O		☐ H_2SO_4 ☐ HNO_3 ☐ H_3PO_4 ☐ NaOH ☐ ICE ☐	☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐ C ☐ G	☐ DW ☐ NPW ☐ WW ☐ Soil ☐ Sludge ☐ LW ☐ Other	☐ P ☐ G ☐ O		☐ H_2SO_4 ☐ HNO_3 ☐ H_3PO_4 ☐ NaOH ☐ ICE ☐	☐S ☐B ☐N ☐HEM Other:

Required Turnaround: ☑ Routine (6-10 days) *EXPEDITE:* (See Surcharge Schedule) ☐ < 8 Hrs. ☐ < 16 Hrs. ☑ < 24 Hrs. ☐ 5 days ☐ Other: ____ ***Rush Charges Authorized by:***

Sample Archive/Disposal: ☐ Laboratory Standard ☐ Hold for client pick up **Container Type:** P = Plastic, G = Glass, O = Other Carrier ID:

Relinquished By:	[signature]	Date:	7/15	Time:	[illegible]	Received By:	[signature]	Date: 7/15/[illegible]	Time: 1102
Relinquished By:		Date:		Time:	11:00AM	Received By:		Date:	Time:

Rev. Multiple Sample COC 20120201

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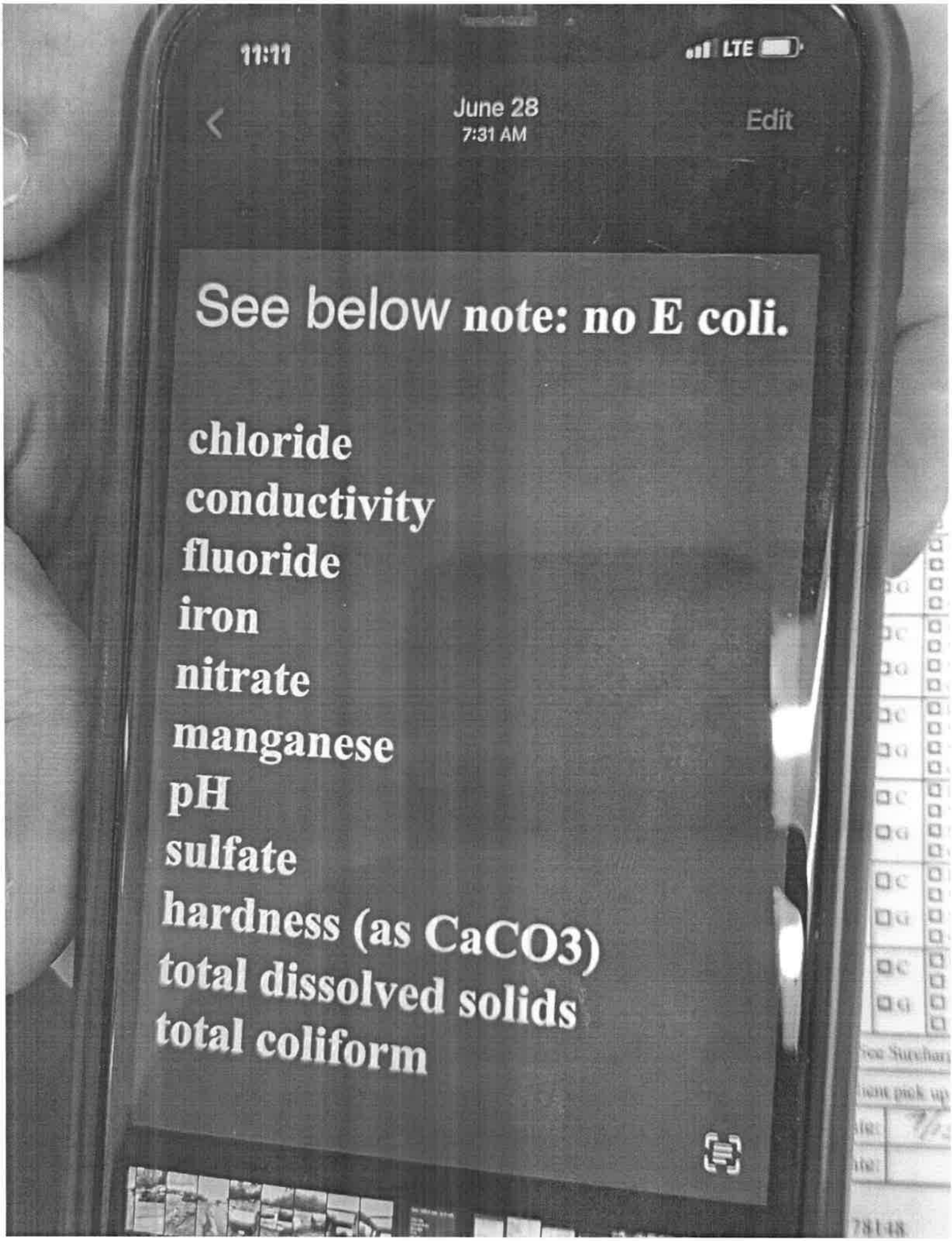
TCEQ NELAP T104704361-TX


11:11
LTE
June 28
7:31 AM
Edit
See below note: no E coli.
chloride
conductivity
fluoride
iron
nitrate
manganese
pH
sulfate
hardness (as CaCO3)
total dissolved solids
total coliform

Pollution Control Services
Sample Log-In Checklist

PCS Sample No(s) 684717 **COC No.** 684717

Client/Company Name: Texas Tech **Checklist Completed by:**

Sample Delivery to Lab Via:
Client Drop Off ✓ Commercial Carrier: Bus ___ UPS ___ Lone Star ___ FedEx ___ USPS ___
PCS Field Services: Collection/Pick Up ___ Other: ___

Sample Kit/Coolers
Sample Kit/Cooler? Yes ✓ No ___ Sample Kit/Cooler: Intact? Yes ✓ No ___
Custody Seals on Sample Kit/Cooler: Not Present ✓ If Present, Intact ___ Broken ___
Sample Containers Intact; Unbroken and Not Leaking? Yes ✓ No ___
Custody Seals on Sample Bottles: Not Present ✓ If Present, Intact ___ Broken ___
COC Present with Shipment or Delivery or Completed at Drop Off? Yes ✓ No ___
Has COC sample date/time and other pertinent information been provided by client/sampler? Yes: ✓ No: ___
Has COC been properly Signed when Received/Relinquished? Yes ✓ No ___
Does COC agree with Sample Bottle Information, Bottle Types, Preservation, etc.? Yes ✓ No ___
All Samples Received before Hold Time Expiration? Yes ✓ No ___
Sufficient Sample Volumes for Analysis Requested? Yes ✓ No ___
Zero Headspace in VOA Vial? Yes ___ No ___

Sample Preservation:
* ***Cooling:*** **Not Required** ___ or **Required** ✓
If cooling required, record temperature of submitted samples Observed/Corrected 4 / 4 °C
Is Ice Present in Sample Kit/Cooler? ✓ Yes ___ No Samples received same day as collected? ✓ Yes ___ No
Lab Thermometer Make and Serial Number: Vaughan 180709583 Other: ___

Acid Preserved Sample - If present, is pH <2? Yes ___ No ___** ___H_2SO_4 ___HNO_3 ___H_3PO_4
Base Preserved Sample - If present, is pH >12? Yes ___ No ___ ___NaOH
Other Preservation: ___ If Present, Meets Requirements? Yes ___ No ___
Sample Preservations Checked by: ___ Date ___ Time ___
pH paper used to check sample preservation (PCS log #): ___ (HEM pH checked at analysis).

Samples Preserved/Adjusted by Lab:	Lab #	Parameters Preserved	Preservative Used	Log #

Adjusted by Tech/Analyst: ___ Date: ___ Time: ___

Client Notification/ Documentation for "No" Responses Above/ Discrepancies/ RevisionComments
Person Notified: ___ Contacted by: ___
Notified Date: ___ Time: ___
Method of Contact: At Drop Off: ___ Phone ___ Left Voice Mail ___ E-Mail ___ Fax ___
Unable to Contact ___ Authorized Laboratory to Proceed: ___ (Lab Director)
Regarding / Comments: ___

Actions taken to correct problems/discrepancies: ___

Receiving qualifier needed (*requires client notification above*) Temp. ___ Holding Time ___ Initails: ___
Receiving qualifier entered into LIMS at login Initial/Date: ___
Revision Comments: ___

POLLUTION CONTROL SERVICES

Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Brice Bormann **Texan Water** **161 Industrial Loop** **Fredericksburg, TX 78624**	**Project Name: Maverick #8** **Sample ID: BacT A** **Matrix: Drinking Water** **Date/Time Taken: 07/15/2022 0905**	**PCS Sample #: 684719 Page 1 of 1** **Date/Time Received: 07/15/2022 11:00** **Report Date: 07/18/2022** **Approved by:** Chuck Wallgren, President

Test Description	Result	Units	RL	Analysis Date/Time	Method	Analyst
E. coli. (Enumeration-MPN) 18	0	CFU/100ml	1	07/15/2022 15:30	9223 IDEXX Quanti-Tray	GWF
Total Coliform (Enumeration) 18	613	CFU/100ml	1	07/15/2022 15:30	9223 IDEXX Quanti-Tray	GWF

Sample passed / failed criteria for bacteriological test.
Sample of satisfactory bacteriological quality should be free from Coliform organisms.
Coliform Organisms
- X Not Found
- X Found
  - Total
  - ___ Fecal (E.Coli)
  - ____ Repeat Samples Required / Recommended (Circle One)
- ___ Unsuitable - See Below
- ___ Other reason: _____

Quality Statement: All supporting quality data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request.

These analytical results relate only to the sample tested.
All data is reported on an 'As Is' basis unless designated as 'Dry Wt'.
RL = Reporting Limits

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eMail: chuck@pcslab.net **Universal City, TX 78148-3318**

POLLUTION CONTROL SERVICES

Chain of Custody Number

6 8 4 7 1 9

Stamp 1st sample and COC as same number

MULTIPLE SAMPLE ANALYSIS REQUEST AND CHAIN OF CUSTODY FORM

CUSTOMER INFORMATION	REPORT INFORMATION		
Name: Texan Water	Attention: C. Knox	Phone:	Fax:

SAMPLE INFORMATION

Project Information: Maverick #8

Collected By:

Report "Soils" ☐ As Is ☐ Dry Wt.

Client / Field Sample ID	Collected Date	Collected Time	Field Chlorine Residual mg/L	Composite or Grab	Matrix (DW-Drinking Water; NPW-Non-potable water; WW-Wastewater; LW-Liquid Waste)	Container Type	Container Number	Container Preservative	BACT								Instructions/Comments: PCS Sample Number
BACT A	Start: 9:05am End: 9:05am	Start: 7/15 End: 7/15		☐ C ☒ G	☒ DW ☐ NPW ☐ WW ☐ Soil ☐ Sludge ☐ LW ☐ Other	☒ P ☐ G ☐ O		☐ H_2SO_4 ☐ HNO_3 ☐ H_3PO_4 ☐ NaOH ☒ ICE ☐ ____									684719 ☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐ C ☐ G	☐ DW ☐ NPW ☐ WW ☐ Soil ☐ Sludge ☐ LW ☐ Other	☐ P ☐ G ☐ O		☐ H_2SO_4 ☐ HNO_3 ☐ H_3PO_4 ☐ NaOH ☐ ICE ☐ ____									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐ C ☐ G	☐ DW ☐ NPW ☐ WW ☐ Soil ☐ Sludge ☐ LW ☐ Other	☐ P ☐ G ☐ O		☐ H_2SO_4 ☐ HNO_3 ☐ H_3PO_4 ☐ NaOH ☐ ICE ☐ ____									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐ C ☐ G	☐ DW ☐ NPW ☐ WW ☐ Soil ☐ Sludge ☐ LW ☐ Other	☐ P ☐ G ☐ O		☐ H_2SO_4 ☐ HNO_3 ☐ H_3PO_4 ☐ NaOH ☐ ICE ☐ ____									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐ C ☐ G	☐ DW ☐ NPW ☐ WW ☐ Soil ☐ Sludge ☐ LW ☐ Other	☐ P ☐ G ☐ O		☐ H_2SO_4 ☐ HNO_3 ☐ H_3PO_4 ☐ NaOH ☐ ICE ☐ ____									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐ C ☐ G	☐ DW ☐ NPW ☐ WW ☐ Soil ☐ Sludge ☐ LW ☐ Other	☐ P ☐ G ☐ O		☐ H_2SO_4 ☐ HNO_3 ☐ H_3PO_4 ☐ NaOH ☐ ICE ☐ ____									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐ C ☐ G	☐ DW ☐ NPW ☐ WW ☐ Soil ☐ Sludge ☐ LW ☐ Other	☐ P ☐ G ☐ O		☐ H_2SO_4 ☐ HNO_3 ☐ H_3PO_4 ☐ NaOH ☐ ICE ☐ ____									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐ C ☐ G	☐ DW ☐ NPW ☐ WW ☐ Soil ☐ Sludge ☐ LW ☐ Other	☐ P ☐ G ☐ O		☐ H_2SO_4 ☐ HNO_3 ☐ H_3PO_4 ☐ NaOH ☐ ICE ☐ ____									☐S ☐B ☐N ☐HEM Other:

Required Turnaround: ☒ Routine (6-10 days) *EXPEDITE:* (See Surcharge Schedule) ☐ < 8 Hrs ☐ < 16 Hrs ☐ < 24 Hrs ☐ 5 days ☐ Other ____ ***Rush Charges Authorized by:***

Sample Archive/Disposal: ☐ Laboratory Standard ☐ Hold for client pick up **Container Type:** P = Plastic, G = Glass, O = Other Carrier ID:

Relinquished By:	[signature]	Date:	7/15/22	Time:	11:00 AM	Received By:	[signature]	Date: 7/15	Time: 11:20
Relinquished By:		Date:		Time:		Received By:		Date:	Time:

Rev. Multiple Sample COC 20120201

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TCEQ NELAP T104704361-TX

Pollution Control Services
Sample Log-In Checklist

PCS Sample No(s) 684719 **COC No.** 684719

Client/Company Name: Tejas Inn **Checklist Completed by:**

Sample Delivery to Lab Via:
Client Drop Off ✓ Commercial Carrier: Bus ___ UPS ___ Lone Star ___ FedEx ___ USPS ___
PCS Field Services: Collection/Pick Up ___ Other: ___

Sample Kit/Coolers
Sample Kit/Cooler? Yes ✓ No ___ Sample Kit/Cooler: Intact? Yes ✓ No ___
Custody Seals on Sample Kit/Cooler: Not Present ✓ If Present, Intact ___ Broken ___
Sample Containers Intact; Unbroken and Not Leaking? Yes ✓ No ___
Custody Seals on Sample Bottles: Not Present ✓ If Present, Intact ___ Broken ___
COC Present with Shipment or Delivery or Completed at Drop Off? Yes ✓ No ___
Has COC sample date/time and other pertinent information been provided by client/sampler? Yes: ✓ No: ___
Has COC been properly Signed when Received/Relinquished? Yes ✓ No ___
Does COC agree with Sample Bottle Information, Bottle Types, Preservation, etc.? Yes ✓ No ___
All Samples Received before Hold Time Expiration? Yes ✓ No ___
Sufficient Sample Volumes for Analysis Requested? Yes ✓ No ___
Zero Headspace in VOA Vial? Yes ___ No ___

Sample Preservation:
* *Cooling:* Not Required ___ or **Required** ✓
If cooling required, record temperature of submitted samples Observed/Corrected 4 / 4 °C
Is Ice Present in Sample Kit/Cooler? ✓ Yes ___ No Samples received same day as collected? ✓ Yes ___ No
Lab Thermometer Make and Serial Number: Vaughan 1807009583 Other: ___

Acid Preserved Sample - If present, is pH <2? Yes ___ No ___ ** ___H_2SO_4 ___HNO_3 ___H_3PO_4
Base Preserved Sample - If present, is pH >12? Yes ___ No ___ ___NaOH
Other Preservation: ___ If Present, Meets Requirements? Yes ___ No ___
Sample Preservations Checked by: ___ Date ___ Time ___
pH paper used to check sample preservation (PCS log #): ___ (HEM pH checked at analysis).

Samples Preserved/Adjusted by Lab:	Lab #	Parameters Preserved	Preservative Used	Log #

Adjusted by Tech/Analyst: ___ Date: ___ Time: ___

Client Notification/ Documentation for "No" Responses Above/ Discrepancies/ RevisionComments
Person Notified: ___ Contacted by: ___
Notified Date: ___ Time: ___
Method of Contact: At Drop Off: ___ Phone ___ Left Voice Mail ___ E-Mail ___ Fax ___
Unable to Contact ___ Authorized Laboratory to Proceed: ___ (Lab Director)
Regarding / Comments: ___

Actions taken to correct problems/discrepancies: ___

Receiving qualifier needed (*requires client notification above*) Temp. ___ Holding Time ___ Initails: ___
Receiving qualifier entered into LIMS at login Initial/Date: ___
Revision Comments: ___

Water Quality

Well No. 10

POLLUTION CONTROL SERVICES

Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Brice Bormann **Texan Water** **161 Industrial Loop** **Fredericksburg, TX 78624**	**Project Name:** **Sample ID: Maverick #10** **Matrix: Drinking Water** **Date/Time Taken: 07/20/2022 0900**	**PCS Sample #: 685230 Page 1 of 2** **Date/Time Received: 07/20/2022 10:33** **Report Date: 07/27/2022** **Approved by:** Chuck Wallgren, President

Test Description	Flag	Result	Units	RL	Analysis Date/Time	Method	Analyst
pH	!, I	7.2	S.U.	N/A	07/21/2022 12:40	SM 4500-H+ B	DMM
Chloride_IC		14	mg/L	2	07/20/2022 14:17	EPA 300.0	JAS
Conductivity, Specific		714	µmhos/cm at 25° C	1	07/26/2022 14:25	SM 2510B	PML
Nitrate-N_IC		<0.2	mg/L	0.2	07/20/2022 14:17	EPA 300.0	JAS
Sulfate_IC		54	mg/L	2	07/20/2022 14:17	EPA 300.0	JAS
Total Dissolved Solids		408	mg/L	10	07/20/2022 13:45	SM 2540C	PML
Total Hardness as CaCO3		350	mg/L	5	07/26/2022 14:40	SM 2340C	PML
Fluoride_IC		0.98	mg/L	0.20	07/20/2022 14:17	EPA 300.0	JAS

Quality Assurance Summary

Test Description	Precision	Limit	LCL	MS	MSD	UCL	LCS	LCS Limit	Blank
pH	N/A	N/A	N/A			N/A			
Chloride_IC	<1	10	95	98	98	102	95	85 - 115	
Conductivity, Specific	N/A	N/A	N/A			N/A			
Nitrate-N_IC	<1	20	70	95	95	130	94	85 - 115	
Sulfate_IC	<1	10	94	94	94	101	95	85 - 115	
Total Dissolved Solids	2	10	N/A	N/A	N/A	N/A			
Total Hardness as CaCO3	2	10	70	104	102	120	100	85 - 115	
Fluoride_IC	<1	10	87	95	95	105	100	85 - 115	

Quality Statement: All supporting quality data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request.

' Not NELAP Certifiable Parameter
! Informational purposes only - pH outside hold time

These analytical results relate only to the sample tested.
All data is reported on an 'As Is' basis unless designated as 'Dry Wt'.
RL = Reporting Limits

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FAX # 210-658-7903

POLLUTION CONTROL SERVICES

Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Brice Bormann **Texan Water** **161 Industrial Loop** **Fredericksburg, TX 78624**	**Project Name:** **Sample ID: Maverick #10** **Matrix: Drinking Water** **Date/Time Taken: 07/20/2022 0900**	**PCS Sample #: 685230 Page 2 of 2** **Date/Time Received: 07/20/2022 10:33** **Report Date: 07/27/2022**

Test Description	Result	Units	RL	Analysis Date/Time	Method	Analyst
Iron/ICP (Total)	0.098	mg/L	0.010	07/22/2022 13:15	EPA 200.7 / 6010 B	DJL
Manganese/ICP (Total)	<0.010	mg/L	0.010	07/22/2022 13:15	EPA 200.7 / 6010 B	DJL

Quality Assurance Summary

Test Description	Precision	Limit	LCL	MS	MSD	UCL	LCS	LCS Limit	Blank
Iron/ICP (Total)	<1	20	75	97	97	125	105	85 - 115	
Manganese/ICP (Total)	<1	20	75	100	100	125	105	85 - 115	

Quality Statement: All supporting quality data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are available on request.

These analytical results relate only to the sample tested.
All data is reported on an 'As Is' basis unless designated as 'Dry Wt'.
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POLLUTION CONTROL SERVICES

Chain of Custody Number: 685230

MULTIPLE SAMPLE ANALYSIS REQUEST AND CHAIN OF CUSTODY FORM

Stamp 1st sample and COC as same number

CUSTOMER INFORMATION
Name: Texas Water

REPORT INFORMATION
Attention: Austin Neal
Phone:
Fax:

SAMPLE INFORMATION
Project Information:
Report "Soils" ☐ As Is ☐ Dry Wt.
Collected By:

Requested Analysis: Cl IC, SRoHD; F IC, FE ICP; Mn ICP, NO3N IC; PA, SO4 IC; TDS, THARD

Instructions/Comments:

Matrix: DW-Drinking Water; NPW-Non-potable water; WW-Wastewater; LW-Liquid Waste

Client / Field Sample ID	Collected Date	Collected Time	Field Chlorine Residual mg/L	Composite or Grab	Matrix	Container Type	Container Number	Preservative	PCS Sample Number
Maverick #10	Start: 7/20/22 End:	Start: 9:00 End:		☐C ☑G	☑DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H₂SO₄ ☐HNO₃ ☐H₃PO₄ ☐NaOH ☑ICE ☐	685230 ☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H_2SO_4 ☐HNO_3 ☐H_3PO_4 ☐NaOH ☐ICE ☐	☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H_2SO_4 ☐HNO_3 ☐H_3PO_4 ☐NaOH ☐ICE ☐	☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H_2SO_4 ☐HNO_3 ☐H_3PO_4 ☐NaOH ☐ICE ☐	☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H_2SO_4 ☐HNO_3 ☐H_3PO_4 ☐NaOH ☐ICE ☐	☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H_2SO_4 ☐HNO_3 ☐H_3PO_4 ☐NaOH ☐ICE ☐	☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H_2SO_4 ☐HNO_3 ☐H_3PO_4 ☐NaOH ☐ICE ☐	☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H_2SO_4 ☐HNO_3 ☐H_3PO_4 ☐NaOH ☐ICE ☐	☐S ☐B ☐N ☐HEM Other:

Required Turnaround: ☐ Routine (6-10 days) *EXPEDITE:* (See Surcharge Schedule) ☐ < 8 Hrs. ☐ < 16 Hrs. ☐ < 24 Hrs. ☑ 5 days ☐ Other: ______ ***Rush Charges Authorized by:***

Sample Archive/Disposal: ☐ Laboratory Standard ☐ Hold for client pick up **Container Type:** P = Plastic, G = Glass, O = Other Carrier ID:

Relinquished By: Daniel Russell	Date: 7/20/22	Time: 10:33	Received By: [signature]	Date: 7/20/22	Time: 1033
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Rev. Multiple Sample COC_20180628

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Pollution Control Services

Sample Log-In Checklist

PCS Sample No(s) 685230 **COC No.** 685230

Client/Company Name: Texan H2O **Checklist Completed by:** [illegible]

Sample Delivery to Lab Via:
Client Drop Off ✓ Commercial Carrier: Bus ___ UPS ___ Lone Star ___ FedEx ___ USPS ___
PCS Field Services: Collection/Pick Up ___ Other: ___

Sample Kit/Coolers
Sample Kit/Cooler? Yes ✓ No ___ Sample Kit/Cooler: Intact? Yes ✓ No ___
Custody Seals on Sample Kit/Cooler: Not Present ✓ If Present, Intact ___ Broken ___
Sample Containers Intact; Unbroken and Not Leaking? Yes ✓ No ___
Custody Seals on Sample Bottles: Not Present ✓ If Present, Intact ___ Broken ___
COC Present with Shipment or Delivery or Completed at Drop Off? Yes ✓ No ___
Has COC sample date/time and other pertinent information been provided by client/sampler? Yes: ✓ No: ___
Has COC been properly Signed when Received/Relinquished? Yes ✓ No ___
Does COC agree with Sample Bottle Information, Bottle Types, Preservation, etc.? Yes ✓ No ___
All Samples Received before Hold Time Expiration? Yes ✓ No ___
Sufficient Sample Volumes for Analysis Requested? Yes ✓ No ___
Zero Headspace in VOA Vial? Yes ___ No ___

Sample Preservation:
* *Cooling:* Not Required ___ or Required ✓
If cooling required, record temperature of submitted samples Observed/Corrected 4 / 4 °C
Is Ice Present in Sample Kit/Cooler? ✓ Yes ___ No Samples received same day as collected? ✓ Yes ___ No
Lab Thermometer Make and Serial Number: Vaughan 1807009583 Other: ___

Acid Preserved Sample - If present, is pH <2? Yes ✓ No ___ 7/20/n ___H_2SO_4 ___HNO_3 ___H_3PO_4
Base Preserved Sample - If present, is pH >12? Yes ___ No ___ ___NaOH
Other Preservation: ___ If Present, Meets Requirements? Yes ___ No ___
Sample Preservations Checked by: ___ Date ___ Time ___
pH paper used to check sample preservation (PCS log #): ___ (HEM pH checked at analysis).
Samples Preserved/Adjusted by Lab:

Lab #	Parameters Preserved	Preservative Used	Log #
___	metals	HNO_3	01617603
___	___	___	___
___	___	___	___

Adjusted by Tech/Analyst: 7/20/n Date: 7/20/n Time: 1046

Client Notification/ Documentation for "No" Responses Above/ Discrepancies/ RevisionComments
Person Notified: ___ Contacted by: ___
Notified Date: ___ Time: ___
Method of Contact: At Drop Off: ___ Phone ___ Left Voice Mail ___ E-Mail ___ Fax ___
Unable to Contact ___ Authorized Laboratory to Proceed: ___ (Lab Director)
Regarding / Comments: ___

Actions taken to correct problems/discrepancies: ___

Receiving qualifier needed (*requires client notification above*) Temp. ___ Holding Time ___ Initails: ___
Receiving qualifier entered into LIMS at login Initial/Date: ___
Revision Comments: ___

POLLUTION CONTROL SERVICES

Report of Sample Analysis

Client Information	Sample Information	Laboratory Information
Brice Bormann **Texan Water** **161 Industrial Loop** **Fredericksburg, TX 78624**	**Project Name:** **Sample ID: Maverick #10 A** **Matrix: Drinking Water** **Date/Time Taken: 07/20/2022 0900**	**PCS Sample #: 685231 Page 1 of 1** **Date/Time Received: 07/20/2022 10:33** **Report Date: 07/21/2022** Approved by: Chuck Wallgren, President

Test Description	Result	Units	RL	Analysis Date/Time	Method	Analyst
E. coli. (Enumeration-MPN) 18	0	CFU/100ml	1	07/20/2022 14:05	9223 IDEXX Quanti-Tray	DMM
Total Coliform (Enumeration) 18	59	CFU/100ml	1	07/20/2022 14:05	9223 IDEXX Quanti-Tray	DMM

Sample passed (failed) criteria for bacteriological test.
Sample of satisfactory bacteriological quality should be free from Coliform organisms.
Coliform Organisms
- ___ Not Found
- X Found
  - Y Total
    - ___ Fecal (E.Coli)
    - ___ Repeat Samples Required / Recommended (Circle One)
  - ___ Unsuitable - See Below
  - ___ Other reason: _____

Quality Statement: All supporting quality data adhered to data quality objectives and test results meet the requirements of NELAC unless otherwise noted as flagged exceptions or in a case narrative attachment. Reports with full quality data deliverables are abailable on request.

These analytical results relate only to the sample tested.
All data is reported on an 'As Is' basis unless designated as 'Dry Wt'.
RL = Reporting Limits

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POLLUTION CONTROL SERVICES

Chain of Custody Number: 685231

Stamp 1st sample and COC as same number

MULTIPLE SAMPLE ANALYSIS REQUEST AND CHAIN OF CUSTODY FORM

CUSTOMER INFORMATION

Name: Daniel Russell

REPORT INFORMATION

Attention: Austin Noah

Phone:

Fax:

SAMPLE INFORMATION

Project Information:

Report "Soils" ☐ As Is ☐ Dry Wt.

Collected By:

Instructions/Comments:

Client / Field Sample ID	Collected: Date	Collected: Time	Field Chlorine Residual mg/L	Composite or Grab	Matrix (DW-Drinking Water; NPW-Non-potable water; WW-Wastewater; LW-Liquid Waste)	Container: Type	Container: Number	Container: Preservative	Requested Analysis: TCEC								PCS Sample Number
Maverick #10A	Start: 7/20/22 End:	Start: 9:00 End:		☐C ☑G	☑DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H₂SO₄ ☐HNO₃ ☐H₃PO₄ ☐NaOH ☑ICE ☐									685231 ☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H₂SO₄ ☐HNO₃ ☐H₃PO₄ ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H₂SO₄ ☐HNO₃ ☐H₃PO₄ ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H₂SO₄ ☐HNO₃ ☐H₃PO₄ ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H₂SO₄ ☐HNO₃ ☐H₃PO₄ ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H₂SO₄ ☐HNO₃ ☐H₃PO₄ ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H₂SO₄ ☐HNO₃ ☐H₃PO₄ ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:
	Start: End:	Start: End:		☐C ☐G	☐DW ☐NPW ☐WW ☐Soil ☐Sludge ☐LW ☐Other	☐P ☐G ☐O		☐H₂SO₄ ☐HNO₃ ☐H₃PO₄ ☐NaOH ☐ICE ☐									☐S ☐B ☐N ☐HEM Other:

Required Turnaround: ☐ Routine (6-10 days) *EXPEDITE:* (See Surcharge Schedule) ☐ < 8 Hrs. ☐ < 16 Hrs. ☐ < 24 Hrs. ☐ 5 days ☐ Other: ______ *Rush Charges Authorized by:*

Sample Archive/Disposal: ☐ Laboratory Standard ☐ Hold for client pick up **Container Type:** P = Plastic, G = Glass, O = Other Carrier ID:

Relinquished By: Daniel Russell	Date: 7/20/22	Time: 10:30	Received By: [signature]	Date: 7/20/22	Time: 1030
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

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Pollution Control Services
Sample Log-In Checklist

PCS Sample No(s) 685231 **COC No.** 685231

Client/Company Name: Texas H2O **Checklist Completed by:** Color

Sample Delivery to Lab Via:
Client Drop Off ✓ Commercial Carrier: Bus ____ UPS ____ Lone Star ____ FedEx ____ USPS ____
PCS Field Services: Collection/Pick Up ____ Other: ____

Sample Kit/Coolers
Sample Kit/Cooler? Yes ✓ No ____ Sample Kit/Cooler: Intact? Yes ✓ No ____
Custody Seals on Sample Kit/Cooler: Not Present ✓ If Present, Intact ____ Broken ____
Sample Containers Intact; Unbroken and Not Leaking? Yes ✓ No ____
Custody Seals on Sample Bottles: Not Present ✓ If Present, Intact ____ Broken ____
COC Present with Shipment or Delivery or Completed at Drop Off? Yes ✓ No ____
Has COC sample date/time and other pertinent information been provided by client/sampler? Yes: ✓ No: ____
Has COC been properly Signed when Received/Relinquished? Yes ✓ No ____
Does COC agree with Sample Bottle Information, Bottle Types, Preservation, etc.? Yes ✓ No ____
All Samples Received before Hold Time Expiration? Yes ✓ No ____
Sufficient Sample Volumes for Analysis Requested? Yes ✓ No ____
Zero Headspace in VOA Vial? Yes ____ No ____

Sample Preservation:
* *Cooling:* **Not Required** ✓ **or Required** ____
If cooling required, record temperature of submitted samples Observed/Corrected 4 / 4 °C
Is Ice Present in Sample Kit/Cooler? ✓ Yes ____ No Samples received same day as collected? ✓ Yes ____ No
Lab Thermometer Make and Serial Number: Vaughan 1807009583 Other: ____

Acid Preserved Sample - If present, is pH <2? **Yes** ____ **No** ____ ** ____H_2SO_4 ____HNO_3 ____H_3PO_4
Base Preserved Sample - If present, is pH >12? Yes ____ No ____ ____NaOH
Other Preservation: ____ If Present, Meets Requirements? Yes____ No____
Sample Preservations Checked by: ____ Date ____ Time ____
pH paper used to check sample preservation (PCS log #): ____ (HEM pH checked at analysis).
Samples Preserved/Adjusted by Lab:

Lab #	Parameters Preserved	Preservative Used	Log #

Adjusted by Tech/Analyst: ____ Date : ____ Time: ____

Client Notification/ Documentation for "No" Responses Above/ Discrepancies/ RevisionComments
Person Notified: ____ Contacted by: ____
Notified Date: ____ Time: ____
Method of Contact: At Drop Off: ____ Phone ____ Left Voice Mail ____ E-Mail ____ Fax ____
Unable to Contact ____ Authorized Laboratory to Proceed : ____ (Lab Director)
Regarding / Comments: ____

Actions taken to correct problems/discrepancies: ____

Receiving qualifier needed (*requires client notification above*) Temp. ____ Holding Time ____ Initails: ____
Receiving qualifier entered into LIMS at login Initial/Date: ____
Revision Comments: ____