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December14, 2017

Mr. John Dupnik, P.G.
Barton Springs Edwards Aquifer Conservation District
1124 Regal Row
Austin, Texas 78745

RE: Administrative Completeness Review of a Production Permit Application submitted by Electro Purification LLC, for authorization to produce groundwater from the Middle Trinity Aquifer

Dear Mr. Dupnik:

This letter serves as Electro Purification's ("EP") response to additional information requested by the Barton Springs Edwards Aquifer Conservation District (the District) in your letter dated October 11, 2017. Based upon my conversations with District staff, Electro Purification understands that this format, in lieu of rewriting the fully hydrogeologic report documenting the aquifer testing, is acceptable.

The aquifer tests conducted for EP in 2015 and 2017 demonstrated the availability of sufficient groundwater from the Cow Creek Member of the Middle Trinity Aquifer to support the requested permit of 2.5 million gallons per day (mgd).

Section 1
3-1.4(A)(8)(c) – Pumpage Volume. The estimated pumping rate at which water will be withdrawn from each well.

Please find below in Table 1 the estimated pumping rate for each of the seven existing wells. Please note that EP intends to phase-in its production over time and, therefore, will be bringing the additional wells identified in this supplement on-line overtime as reflected in Table 1.

Table 1 - Estimated production from pumping wells

Well	Estimated Production Rate (gpm)	Daily Estimated Production Volume (gallons)	Yearly Estimated Production Volume (gallons)
Bridges Well No. 1	645	928,800	339,012,000
Bridges Well No. 2	148	213,120	77,788,800
Bridges Well No. 3	48	69,120	25,228,800
Bridges Well No. 4	66	95,040	34,689,600
Odell Well No. 1	95	136,800	49,932,000
Odell Well No. 2	560	806,400	294,336,000
Odell Well No. 3	175	252,000	91,980,000
Totals	**1737**	**2,501,280**	**912,967,200**
Notes: gpm = gallons per minute			

Section 2.
3-1.4(A)(8)(c) – Pumpage Volume. The requested permit pumpage volume; a description of how the requested pumpage volume was determined. The applicant shall provide pumpage volume calculations based on the type of use, anticipated pumping capabilities, pumping times, pumping frequency, and other pertinent data to substantiate approximate groundwater production. The requested pumpage volume should demonstrate reasonable nonspeculative demand.

Please find within Attachment A, a letter from Neal Goedrich, P.E. (engineer for Goforth SUD) detailing both Goforth SUD's historic and future growth rate, total number of new meters and annual water needs dated March 10, 2017. As the District is aware, EP has a long-term water supply contract with the Goforth SUD to provide up to 3 million gallons of water per day. Copies of the Goforth Contract, as amended, are on file with the District.

Also included within Attachment A is a final report from AquaStrategies for the Dripping Springs Water Supply Corporation (DSWSC) which details the needs of DSWSC and evaluates potential new water sources to meet those needs. We have supplied this information to show additional need for water in the area of the EP Project.

Section 3.
3-1.4(A)(8)(d) – Demand Trends. Provide a detailed statement describing:

i. A projected annual volume breakdown by type of use (e.g. PWS, commercial, irrigation, industrial)
ii. A projected quarterly timeline detailing the anticipated pumpage volumes for the first three to five years of pumping;
iii. An explanation of future demands and long term system growth
iv. For public water suppliers, provide an estimated or calculated per capita and/or household consumption.

Table 2 provides details of the anticipated quarterly and annual pumpage volumes for the first five years of the EP Project. All pumpage will be for public water supply. EP is supplying this water as a wholesale water provider to supplement existing municipal water supplies for the Goforth SUD, which serves as a retail municipal water provider to portions of Hays, Caldwell and Travis Counties. As such, the future demand and system growth of the purchaser will not impact the projected production rates since the water purchased will be provided at consistent rates after year 5 at the maximum permit of approximately 912.50 million gallons per year. From the 2016 Region L Regional Water Plan the Goforth SUD per capita water use for the year 2011 was 105 gallons per capita per day (gpcd) (2016 Region L Plan Table 5.2.1-4).

Table 2 – Quarterly and annual projected pumpage. ***Note all pumpage is for public water supply.***

Pumping Year	Estimated Pumping Volume (MGD)	Quarterly Pumpage Volume (MG)				Total Annual Production Volume (MG)
		Qtr 1	Qtr 2	Qtr 3	Qtr 4	
No. 1	0.50	45.625	42.625	42.625	42.625	182.50
No. 2	1.00	91.250	91.250	91.250	91.250	365.00
No. 3	1.50	136.875	136.875	136.875	136.875	547.50
No. 4	2.00	182.500	182.500	182.500	182.500	730.00
No. 5	2.50	228.125	228.125	228.125	228.125	912.50

Note: MGD = million gallons per day; MG = million gallons

Section 4.
3-1.4(A)(8)(l)(i) – A notice list of registered well owners within a half-mile radius.

District staff is currently reviewing data submitted and will provide EP updated well registration to allow for preparation of certified mailings.

Section 5.
3-1.4(D)(2) – Guidelines Section III-C, Hydrogeology and Conceptual Model

The aquifer test data from the EP wells tested in 2017 (Bridges Well Nos. 1, 2; Odell Well No. 2) indicate that over the localized area there are partial barriers to flow within the Cow Creek Member, the Lower Glen Rose Formation and the Upper Trinity Aquifer. Locally, within the monitored area, there was a limited hydrologic connection to some wells completed within the Cow Creek. Bridges 3 and Bridges 4 had observed drawdowns that were at a much lower magnitude than other wells completed in the Cow Creek; this is likely associated with faulting.

Within the testing area, there was only one well that was discretely completed within the Lower Glen Rose Formation (Odell 1). While there were other wells completed in the Lower Glen Rose in the area monitored, these wells were also partially completed in other formations, making it difficult to interpret the response to those wells. Many of the third-party monitoring wells used during EP's aquifer testing were also dual completed in multiple aquifers commingling waters. For example, the Carnes, Czerwienski and

Miller wells appear to be dual completed. The Lowe monitor well, although cased to the base of the Cow Creek, has a casing that is not fully cemented making it possible for waters to mix. The Ochoa monitor well is cased to the Cow Creek but only cemented at the top 50 ft. In addition, there was a lack of construction information on some of the monitoring wells with unknown casing depths, type of completion, cementing depths and producing interval (Shown in Table 7 of Hydrogeological Report; Wet Rock Groundwater Services, 2017) making it difficult to analyze the test data from these wells since the actual construction of the wells are unknown. In these cases, the aquifer(s) that the respective monitor well is open to is unknown.

The production rate and duration of pumping from the third-party monitor wells over the course of the 2017 aquifer testing is also unknown. These “unknowns” make it difficult to determine the magnitude of drawdown caused by pumping of the EP wells versus pumping of the monitoring well, other monitoring wells nearby or other wells in the area that were not monitored but which communicate with the monitor well(s). The Page well is an example of a well that was pumping during testing; drawdowns from the production at the Page well, which were on the order of approximately 100 feet likely due to the well producing. The Bernal well is another example. This well had drawdown on the order of approximately 140 feet also likely due to its pumping.

The Cow Creek Member of the Middle Trinity Aquifer exhibits some disconnects over the local area. It appears to have little connection to the Upper Trinity Aquifer. This can be seen in the lack of drawdown associated with the EP well production in monitor wells completed in the Upper Trinity. There were a few wells in the Upper Trinity (Carnes, Jones 01, Page) that had measurable drawdown in the dataset, however, those drawdowns are more likely a result of (i) the well itself pumping, (ii) natural fluctuation of the aquifer or (iii) other Upper Trinity wells producing nearby. The lack of detailed well construction information on the monitoring wells, including a lack of knowledge of other pumping occurring near these wells, makes the determination of connection to the Upper Trinity difficult. Based upon the water level dataset, however, it appears that there is no direct connection to the Upper Trinity.

The only discretely completed well within the Lower Glen Rose Formation is Odell 1. Based upon the data, there appears to be little connection between the Cow Creek and the Lower Glen Rose. The Hydrogeologic Report (Wet Rock Groundwater Services, 2017) stated that there was no observable impact from production in the Cow Creek and drawdown in the Lower Glen Rose. The argument can be made that there is a muted response between the two as seen by the delayed response in Odell 1 to pumping at the EP wells. At the pumping wells, it was difficult to determine the magnitude of the response in the upper zone, because during the testing of a pumping well, the inflatable packer would get inflated thereby causing the water level to immediately rise and over time the water level would fall. It is undetermined what the contribution to the changes in water level in the Lower Glen Rose was due to pumping and what was attributed to the water level in the Lower Glen Rose reaching a steady state due to the response to inflating the packer.

Regionally, the Cow Creek Member is hydraulically connected to the Middle Trinity Aquifer especially where the Hensell Sands are present. The Middle Trinity aquifer receives recharge in areas where streams cross the recharge zone and to a lesser degree from precipitation infiltration. Regional water level studies (Watson et. al, 2014) indicate that flow is generally from the recharge zone in a southeast direction. Wierman and others (2008) have indicated that faults across the Balcones Fault Zone (BFZ) may be acting as partial barriers to flow. Indications of flow and connection across the aquifer regionally have been shown by Hunt and others (2015), which suggest that flow from the recharge zone moves towards the

BFZ and across some faults via relay ramps. Flow across faults occurs where faults have small displacement or where permeable units are juxtaposed with other permeable units (Hunt et. al, 2015).

The source of water for the proposed EP wells over the short term (years) and long-term (decadal) is from the Middle Trinity Aquifer. Locally, the data from the EP wells suggests some compartmentalization of the Cow Creek. Initially, water to the wells will come from storage in the Cow Creek until a source of recharge is intersected, the timeline of that occurrence is not known based upon the data; that may be on the order of months or years. In the EP area, we do not have enough information to determine the length of time for that to occur. Over the long term, the source of water will come regionally from the aquifer as recharge occurs and moves downgradient.

Impacts to springs (Jacobs Well Spring; JWS and Pleasant Valley Springs; PVS) are not immediately known based upon the available data. Although the source of water to the EP wells conceptually is shown to occur from a regional source in the aquifer, there is no data indicating that the amount of production from the EP wellfield will detrimentally impact JWS or PVS. For an impact to occur at either spring, groundwater flow that would otherwise feed the springs would need to be diverted to the well field. The EP wells are located almost six miles downgradient from JWS. Accordingly, aquifer flow would have supplied flows at JWS before ever reaching the EP well field. Moreover, the Trinity Aquifer is a large and regionally extensive aquifer of which the entire volume does not feed JWS or PVS. At this point in time there is no direct evidence that production from EP's well field will impact the springs at all and, if so, to what degree.

The Hydrogeologic Report (Wet Rock Groundwater Services, 2017) does indicate some isolation of the Cow Creek to overlying units (Upper Trinity and Lower Glen Rose) over the localized area. The conceptual model of the aquifer as a whole is not argued with the District's interpretation. We could have been clearer in our interpretation of the conceptual model. However, we do not agree that the test data indicates connection to the Upper Trinity Aquifer. As described earlier, the argument can be made that there is a muted response between the Lower Glen Rose and the Cow Creek as seen by the delayed response in Odell 1 to pumping at the EP wells. However, it was difficult to determine the magnitude of the response to pumping from the EP wells. It is undetermined what the contribution to the changes in water level in the Lower Glen Rose was due to pumping from EP wells or from other neighboring wells in the area because of a lack of information and control on other wells' pumping.

Section 6.
3-1.4(D)(1&4) – Guidelines Section III-F

Table 3 provides a summary of the well construction of the EP wells and the wells monitored by the District (BSEACD wells). Well construction of all wells was reviewed again and the aquifer(s) that each well is completed within were updated. In addition, hydrographs for all wells were re-evaluated and updated quantitative and qualitative impacts were also provided in this addendum.

Some of the well construction information on the BSEACD wells was lacking and unverifiable. Wells with which State Well Reports were available provided some information on the well construction; however, some of those wells had incomplete information on the State Well Report. Recent wells (drilled after 2003) had better records.

Many of the wells had no State Well Report or verifiable information on well completion (Carnes, Czerwienski, Gluesenkamp, Green, Jones 01, Las Lomas, Page, Phillips, Wood 02). These wells simply had a total depth which was unverified by video logs, geophysical logs or other sources. Due to the lack of well construction information in some wells, it makes it difficult to understand impacts to these wells.

Table 3: Well construction summary

Well	Construction Date	Elevation (ft msl)	Aquifer	Borehole Dia. (in)	From (ft bgs)	To (ft bgs)	Casing Type	Casing Size (in)	From (ft bgs)	To (ft bgs)	Pump Set (ft bgs)	Well# (TDLR/TWDB)
Bernal	9-21-2009	1118	LGR	12 1/4 9 7	0 3 300	3 300 915	Steel PVC Screen	10 5 5	+2 3 800	3 915 900	700	198272
Bowman	12-20-2013	1118	MT (CC)	9 6 1/4	0 50	50 850	PVC Screen	5 5	+3 810	810 850	*	353577
Bridges 1	12-20-2013	1040	MT (CC)	14 3/4 9 7/8	0 160	160 930	PVC Open	10	+2 160	160 840		364899
Bridges 2	1-15-2014	1004	MT (CC)	143/4 9 7/8	0 160	160 905	PVC Open	10	+2 160	160 905		36490
Bridges 3	1-4-2014	1000	MT	14 3/4 9 7/8	0 260	260 940	PVC Open	10	+2 260	260 940		353110
Bridges 4	1-27-2015	994	MT	14 3/4 9 7/8	0 580	580 905	PVC Open	10	+2 580	580 905		388352
Carnes	1-1-1997	1028	UT & LGR	*	0	520	*	*	*	*	*	*
Czerwienski	1-1-1998	1134	UT/ MT?	*	0	700	*	*	*	*	660	*
Escondida 1	9-12-2016	1104	MT (CC)	10	0	930	PVC Open	5	+3 877	877 930	*	435981
Gluesenkamp	*	1007	UT	*	0	195	*	*	*	*	*	5764606
Green	12-1-1997	1000	UT	*	0	483	*	*	*	*	460	*
Jones 01	*	1049	UT	6	0	350	*	*	*	*	*	*
Las Lomas	*	1070	UT	*	0	225	*	*	*	*	*	*
Lowe	4-15-2015	1070	MT (CC)	7 7/8	0	860	PVC Open	4 ½	0 840	840 860	760	394760
Miller	8-24-2005	1067	UT/MT	9 8	0 300	300 900	PVC Open	4 ½	0 300	300 900	*	153626
Ochoa	3-27-2002	1073	MT(CC)	8 3/4 6	0 50	50 810	PVC Screen	5 5	0 ?	810 ?	660	5764605
Odell 1	1-12-2015	1102	LGR	143/4 9 7/8	0 565	565 742	PVC Open	10	+2 565	565 742		388355
Odell 2	1-21-2015	1098	MT (CC)	14 3/4 9 7/8	0 540	540 850	PVC Open	10	+2 540	540 840		388364
Odell 3	1-10-2015	1063	MT	14 3/4 9 7/8	0 520	520 845	PVC Open	10	+2 520	520 845		388365
Page	*	1007	UT	*	0	430	*	*	*	*	*	*
Phillips	*	1010	UT	*	*	*	*	*	*	*	*	*
Wood 01	10-8-2010	1067	MT(CC)	9 6 ½	0 50	50 790	PVC Screen	5 5	+2 710	710 790	500	233129
Wood 02	*	1066	UT	*	0	110	*	*	*	*	*	*
Wood (Deer Barn)	11-15-2005	1081	MT (LGR)	9 6 ½	0 50	50 630	PVC Screen	5 5	0 570	570 630	500	77215

Notes: msl = Mean Seal Level; bgs = Below Ground Surface; * = no data; LGR = Lower Glen Rose; CC = Cow Creek; UT = Upper Trinity; MT = Middle Trinity

Table 4 and Figure 1 provide a summary of the drawdown response from the aquifer testing; Attachment B provides well hydrographs for all wells. The aquifer testing of Bridges 1, Bridges 2 and Odell 2 provided information related to the connection of the Cow Creek to the Lower Glen Rose and the Upper Trinity Aquifer. The analyses of the connectivity between wells and impacts are difficult to make in some wells due to:

a) **The lack of verifiable well construction**. The lack of verified well construction information for third-party wells makes is difficult to ascertain whether a given well is open to multiple aquifers or is discretely completed in a single formation/aquifer;

b) **Well construction**. Some of the third-party wells are open to multiple aquifers (Carnes, Czerwienski, Miller). In addition, most of the wells are not cemented to the base of the casing (where known) and have a packer in place as a seal. Although, use of a packer is accepted by the Texas Department of Licensing and Regulation (TDLR), these packers are not water tight long-term and, therefore, can fail causing the well to be open to multiple formations/aquifers;

c) **Lack of control on pumping within monitored area**. The aquifer testing covered a large monitored area; limiting pumping is difficult and not feasible in many cases. However, on wells that were monitored there was no information provided regarding pumping rates, pumping duration and pumping volume on monitored wells during the aquifer testing. The data indicated that pumping was ongoing in some third-party wells with drawdown likely from that pumping (Bernal, Carnes, Gluesenkamp, Page, Wood Deer Barn). In addition to the monitored third-party wells, there was a lack of knowledge on production occurring from non-monitored wells during the aquifer testing (Figure 1). The production from these wells during the aquifer testing could impact the analyses of the data. For example, many of the third-party wells in the area are completed within both the Upper Trinity and the Middle Trinity; production from these wells may cause drawdown in monitored wells located nearby affecting the analyses.

Section 6a.

Upper Trinity Wells (Carnes, Czerwienski, Gluesenkamp, Green, Jones 01, Las Lomas, Miller, Page, Phillips, Wood 02)

The hydrographs for the monitor wells completed in the Upper Trinity show a lack of response to pumping from the EP wells in some cases and others show ambiguous data. Three of the wells are dual completed in multiple aquifers (Carnes, Czerwienski and Miller). The Czerwienski, Gluesenkamp, Green, Las Lomas, Miller, Page and Wood 02 wells showed a lack of response to the EP wells pumping as analyzed by the District (BSEACD 2017-1010; Table 4).

The District noted ambiguous or equivocal responses to pumping within the Carnes and Phillips wells to EP pumping. Based upon our analyses of these data, we believe that these wells show no clear response to EP pumping. The Carnes well is a dual completed well located approximately 1,775 ft., 2,500 ft. and 1 mile away from Bridges 2, Bridges 1 and Odell 2, respectively. The hydrograph of the Carnes well (Attachment B) indicates that the well was likely pumping throughout the testing period with an observed difference in water level before any production from the EP wells commenced of approximately 10 feet. The well experienced an approximate 10 ft. drop in water level prior to the testing at the EP wells. The response in the Carnes well to pumping from the EP wells is not a clear indication of production from the EP wells, but rather the response shows a likely natural fluctuation in water level seen prior to pumping and may also be impacted from other neighboring wells pumping (Figure 1). The lack of knowledge on production of other third-party wells in the area makes it difficult to determine the impact from other wells pumping.

Table 4: Summary of aquifer test response

Well	Data	Aquifer	Drawdown (ft) Bridges 2 Test	Bridges 1 Test	Odell 2 Test	Combined	SWL (prior to Bridges 2 Test; ft bgs)	Combined Drawdown from SWL (ft bgs)	Pump Set (ft bgs)	Comments
Bernal	Periodic	LGR	NR	NR	NR	NR	305.4	NR	700	Well pumping has ~ 140 ft. drawdown
Bowman	Periodic	MT (CC)	139.4	60.8	4.3	204.5	291.4	495.9		
Bridges 1	Continuous	MT (CC)	73.7	218.6	19.9	312.2	250.1	562.3		
Bridges1 (Upper)	Continuous	UT & LGR	ND	7.6*	ND					Packer shows quick response to pump on/off. Possible slight leakage or steady state response to pumping.
Bridges 2	Continuous	MT (CC)	409.0	97.1	9.8	515.9	233.7	749.6		
Bridges2 (Upper)	Continuous	UT & LGR	8.0*	ND	ND					Packer shows quick response to pump on/off. Possible slight leakage or steady state response to pumping.
Bridges 3	Continuous	MT	5.9	5.7	0.5	12.1	298.2	310.3		
Bridges 4	Continuous	MT	55.9	33.6	3.4	92.9	289.3	382.2		
Carnes	Periodic	UT & LGR	NR	NR	NR	NR	127.0	NR		Well pumping during testing.
Czerwienski	Periodic	UT/ MT?	NR	NR	NR	NR	224.8	NR	660	
Escondida 1	Continuous	MT (CC)	ND	82.9r	13.2	96.1	338e	434.1		
Gluesenkamp	Continuous	UT	NR	NR	NR	NR	95.5	NR		
Green	Periodic	UT	NR	NR	NR	NR	257.6	NR	460	
Jones 01	Continuous	UT	*	*	*	*	139.1	*		Drawdown ambiguous, rapid recovery & drawdown at some times and at others slow. No control on neighboring pumping.
Las Lomas	Continuous	UT	NR	NR	NR	NR	140.4	NR		
Lowe	Continuous)	MT (CC)	15.3	37.1	107.1	159.5	247.0	406.5	760	
Miller	Continuous	UT/MT	NR	NR	NR	NR	333.7	NR		
Ochoa	Continuous	MT(CC)	49.3	87.3	44.6	181.2	258.0	439.2	660	
Odell 1	Continuous	LGR	*	9.3*	10.3*	20.6*	250.3	*		Muted response, drawdown observed is ambiguous, Ochoa Well located nearby pumping.
Odell 2	Continuous	MT (CC)	13.0	32.3	157.2	202.5	265.4	467.9		
Odell2 (Upper)	Continuous	LGR	ND	ND	5.2*					Packer shows quick response to pump on/off. Possible slight leakage or steady state response to pumping.
Odell 3	Continuous	MT	51.9	112.1	38.7	202.6	261.8	464.4		
Page	Periodic	UT	NR	NR	NR	NR	201e	NR		Well pumping during testing; observed > 100 ft. drawdown.
Phillips	Periodic	UT	NR	NR	NR	NR	104.6	NR		Gluesenkamp located nearby pumping throughout testing.
Wood 01	Continuous	MT(CC)	58.3	106.6	19.1	184.0	259.3	443.3	500	
Wood 02	Periodic	UT	NR	NR	NR	NR	96.0	NR		
Wood (Deer Barn)	Continuous	MT (LGR)	NR	NR	NR	NR	292.9	NR	500	WL rising through testing period. Historical data shows ~125 ft drawdown from pumping.

Notes: SWL= Static Water Level; bgs = Below Ground Surface; LGR = Lower Glen Rose; CC = Cow Creek; UT = Upper Trinity; MT = Middle Trinity;
* response to pumping ambiguous; NR = no discernible response; r = recovery data; e = estimated; ND = No data available

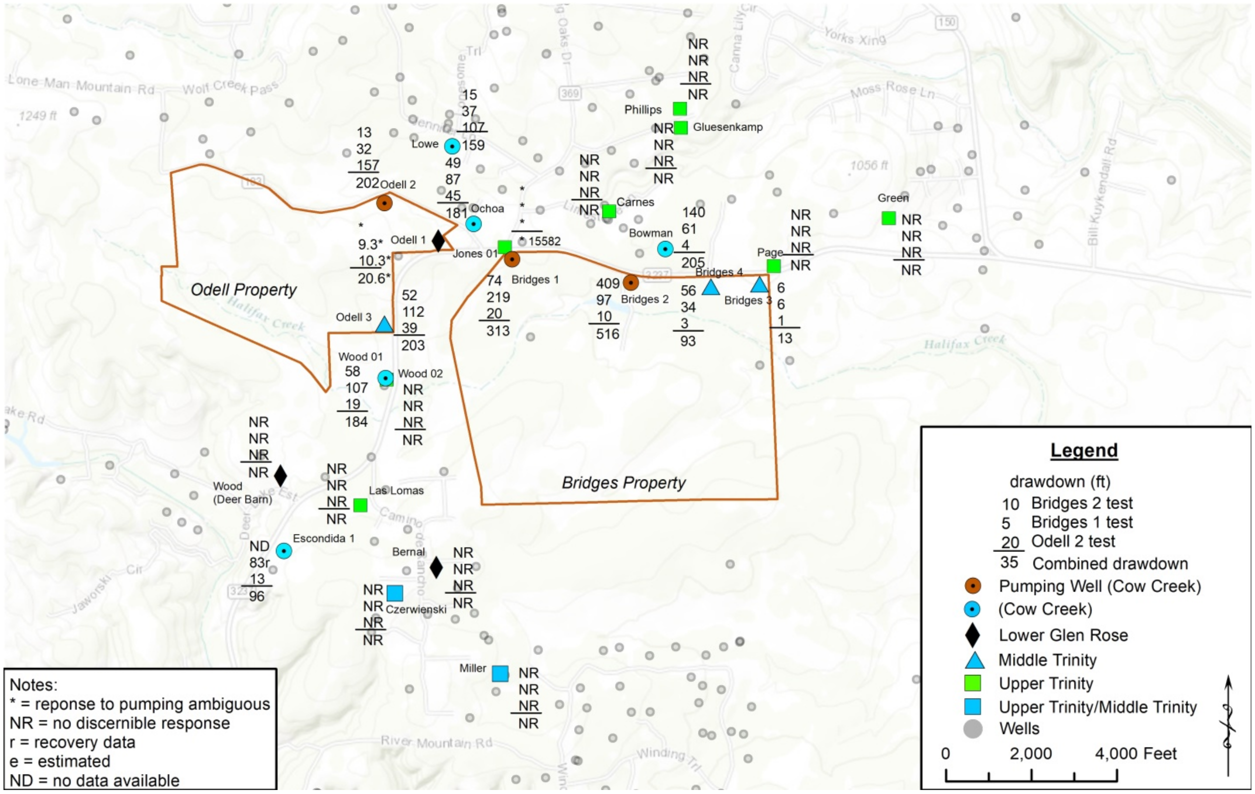

Figure 1: Summary of drawdown from testing at EP wells

The Phillips well is located approximately 0.8, 1 and 1.4 miles from Bridges 2, Bridges 1 and Odell 2, respectively. The Phillips well showed a similar response as the Carnes well, interpreted as a likely natural fluctuation in water level seen prior to pumping at the Carnes well and may also show a possible impact from other neighboring wells pumping. The lack of knowledge on production of other third-party wells in the area makes it difficult to determine the impact from other wells producing (Figure 1).

The Jones 01 well is located directly north of Bridges 1 near the Carnes (2,600 ft away) and Ochoa (860 feet away) wells. There is no well construction information on the Jones 01 well other than a total depth of 350 ft. The hydrograph of the Jones 01 well (Attachment B) indicates that it is completed in the Upper Trinity as shown by the water elevation. The hydrograph shows an unexplained lowering of water level in the well of approximately 11 ft. *prior* to the pumping of the EP wells. This is a similar pre-testing trend seen in the Carnes well. The water level shows a gradual drop in water level approximately seven days after the Bridges 2 test ceased with a sharp rise in water level eight days after. Again, four days after the Bridges 1 test ceased, the water level dropped sharply, then slowly rose through the remaining portion of the monitored period, with a sudden sharp rise in water level seventeen days after the Odell 2 test ceased. None of the other Upper Trinity wells monitored showed this type of response; the data are ambiguous and not clearly indicative of a response to pumping from the EP wells. Again, since there was a lack of control over production from both monitored and unmonitored third-party wells in the area, the water level at Jones 01 could have been impacted from production in another Upper Trinity third-party well in the vicinity. Immediately adjacent to the Jones 01 well is TDLR Well # 15582 (Figure 1) located approximately 400 ft. away. This well is completed to a depth of 690 ft., however it is only cemented at the top 30 ft. with a packer set at 30 and 220 ft. This completion allows for communication with both the Upper Trinity and the

Middle Trinity. As TDLR Well # 15582 is completed, production from this well could reasonably impact the Upper Trinity and the Jones 01 well.

If there was a connection to the Upper Trinity from production in the Cow Creek at the EP wells, it would have been more pronounced within the upper zone monitored within each of the EP wells. The upper zone of Odell 2 monitored the water level in the Lower Glen Rose Formation because it is cased off through the Upper Trinity. Hydrographs of the upper zone on Bridges 1 and Bridges 2 show no clear indication of drawdown from production within the lower zone (Cow Creek). Nor do the hydrographs show the same magnitude of water level change as seen in the Jones 01 well. The hydrographs of the upper zone in Bridges 1, Bridges 2 and Odell 2 show a quick response in water level change when the packer is inflated prior to pumping commencing with the water level rising quickly and then very slowly lowering; interpreted as the water level reaching a steady state in response to the packer inflating. When the pump is turned on and off, the water level in the upper zone shows an immediate change which is interpreted as a slight leakage in the packer at that point in time due to the pressure change from the pump turning on/off.

Section 6b.

Lower Glen Rose Wells (Bernal, Odell 1, Odell 2 upper, Wood Deer Barn)

The response to pumping from the EP wells to the Lower Glen Rose Formation indicates no response in some wells (Bernal and Wood Deer Barn) and an ambiguous response in others (Odell 1, Odell 2). During testing, the hydrograph of the Bernal well (Attachment B) indicates that the well was pumping with observed drawdown of up to approximately 140 ft. The data show no clear response at the Bernal well to pumping at the EP wells.

The Wood (Deer Barn) well has continuous water level data dating back to June 2015 (Attachment B). The hydrograph of the Wood (Deer Barn) well shows large rises and falls in water level up to approximately 155 ft. *prior* to any pumping from the EP wells. In fact, during the testing period, the water level in the Wood (Deer Barn) well *increased* approximately 27 ft. The data from the Wood (Deer Barn) well indicates no response to pumping at the EP wells.

The Odell 2 upper zone was isolated such that the Lower Glen Rose Formation was monitored above the packer and the Cow Creek was monitored during pumping (Attachment B). The hydrograph of the upper zone shows an initial rise in water level (approximately 34 ft.), once the packer was inflated prior to pumping. The water level responds immediately once the pump is turned on/off interpreted as a slight leakage in the packer at that point in time due to the pressure change from the pump turning on/off. Overall there is a slight decline in water level within the upper zone during the pumping period however it is not clear whether this is caused by pumping or whether the water level is equilibrating to a steady state caused by the sudden rise in water level from inflation of the packer.

The Odell 1 well is discreetly completed within the Lower Glen Rose, cemented off from all other formations. Prior to commencement of testing at the EP wells, the water level was rising almost 10 ft. in Odell 1, and remained stable through midway of the Bridges 1 test. There was a slight decline in water level within the well after the Bridges 1 test and the Odell 1 test that could be interpreted as a muted response to pumping. Due to the lack of control on production of neighboring wells, it is unknown whether the response is from the EP wells pumping or from another well in the area pumping. We calculated the drawdown from the Bridges 1 test and Bridges 2 test shown in Table 4 and Figure 1.

Section 6c.
Cow Creek Wells

The response to pumping from the EP wells to the Cow Creek member indicates a good response in some wells (Bowman, Bridges 1, Bridges 2, Escondida 1, Lowe, Ochoa, Odell 2, Odell 3, Wood 01) and a lesser connection in others (Bridges 3 and Bridges 4).

The hydrographs of Bridges 3 and Bridges 4 show some connection to pumping but the magnitude of drawdown was much less than other wells located at similar distances. We interpret this as being caused by faulting in the area between these wells and Bridges 2. The faulting indicates that there is flow across the fault as seen by measured drawdown in these wells; however, the response is much less.

The other Cow Creek wells monitored during testing show a good hydrologic connection to pumping with water levels falling and rising in response to the pump being turned on and off. The magnitude of drawdown within these wells is shown in Figure 1 and Table 4. Combined drawdown within these wells ranges from approximately 159.5 ft. at the Ochoa well up to 204.5 ft. at the Bowman well located directly across from Bridges 2. At the pumping wells the combined drawdown for the Bridges 2, Bridges 1 and Odell 2 wells was 515.9 ft., 312.2 ft. and 157.2 ft., respectively.

Table 4 provides the combined drawdown from the testing. We also show the static water level (where available) from each well prior to when testing began. Using the combined drawdown together with the static water level, Table 4 shows the combined drawdown from static water level. This gives an indication of what the water level would be in these wells prior to any calculation of drawdown from the well pumping itself. Where pump settings are provided we show the depth to the pump. There were three wells with pump settings available that were completed within the Cow Creek (Lowe, Ochoa and Wood 01). The combined drawdown from static water level in the Lowe and Ochoa wells were 406.5 ft. and 439.2 ft below ground surface (bgs). These levels are both well above the Cow Creek member where the wells are screened (Lowe is screened from 840-860 ft, bgs; and Ochoa is screened from ~700-800 ft. bgs). The pump settings at these wells are 760 ft. and 660 ft. bgs. respectively.

Both wells are domestic wells meaning that they cannot produce greater than 10,000 gallons per day (gpd) or approximately 7 gpm. Based upon these values, and the pump settings, both wells should be able to produce their required volumes. It is possible that a larger horsepower pump might be required to lift the water from a lower water level; however, without knowledge of the specific pump it is difficult to determine whether that would be necessary. The Wood 01 well has a combined drawdown from static water level of 443.3 ft. and a pump setting of 500 ft. The well is screened from 710-790 ft. bgs and the well is also a domestic well. The Wood 01 well may require a deepening of the pump and/or larger horsepower motor however, due to the low pumping rates for domestic wells it is unknown whether that would be needed without more information.

Based upon the response to the EP well testing, wells completed in the Cow Creek could have a hydrologic connection and possibly be impacted by pumping from the well field. Since almost all wells in the area are domestic wells, they cannot be equipped to produce more than 7 gpm. Pump settings that are approximately less than 550 to 600 ft. in depth could be required to be deepened and/or have a new pump installed to lift the water from a deeper level. Identification of wells constructed in the Cow Creek and their pump details and pump settings would need to be acquired as part of a mitigation program to analyze these wells and determine whether a new pump, deeper setting or both would be necessary. At the tested rates, the combined drawdown from static water level was not below the top of the Cow Creek in any of the wells monitored.

Even without pumping from the EP Well Field, water levels within the Middle Trinity Aquifer will rise and fall depending upon precipitation, as noted in the WRGS report (Wet Rock Groundwater Services, 2017; Fig. 17). Water levels within the Middle Trinity Aquifer follow a short term cycle of decreasing water level during times of low precipitation and higher well production followed by a recovery of water level during precipitation events. The hydrographs (Wet Rock Groundwater Services, 2017; Fig. 17) also show the rapid response to precipitation and thereby recharge to the aquifer. Water level changes from drought to wet periods in State Well No. 57-64-705 show a maximum change in water level of approximately 47 ft. The District's monitoring of the Ruby Ranch Westbay Well shows a maximum change in water level of approximately 42 feet. Based upon the data from these wells, we estimate that water levels in the area surrounding the EP wells would show a similar range in water level from 40 to 50 ft. Accounting for this change in water level in predicting impacts associated with pumping can aid in the determination of mitigation measures regarding pump settings. When accounting for drought and impacts however, the pumping rate during drought would need to be adjusted, since pumping rates during drought will also decrease in response to lower water levels.

Section 6d.
Estimated Drawdown and Effects of Pumping

The aquifer test data were analyzed using the Cooper-Jacob, Theis, and the Theis Recovery methods to calculate transmissivity and storativity for the pumping well and observation wells. The same well parameters (aquifer thickness, well construction) from Wet Rock Groundwater Services, 2017; Table 11 were used to calculate the aquifer parameters from the test data using AQTESOLV version 4.5. The Theis and Cooper-Jacob methods analyze data from the pumping phase and the Theis Recovery method analyzes data from the recovery phase of the aquifer test; however, the Theis Recovery data were not utilized in drawdown projections due to the lack of full recovery in some of the pumping and monitoring wells during testing. Tables 5 through 11 summarize the calculated aquifer characteristics from the aquifer testing conducted between 2013 and 2016 and Attachment C provides the AQTESOLV plots.

The results of the aquifer testing were representative of a heterogeneous system with hydraulic disconnects between some areas. Average transmissivity (T) values ranged from 112.81 to 4,561 $ft.^2$/day; storativity (S) values ranged from 1.0×10^{-6} to 4.46×10^{-4}; and drawdown within observation wells showed both very strong and very weak connections across the monitored wells. In general, the drawdown patterns formed an elliptical shape with the largest drawdown occurring where a greater hydraulic connection exists between wells. This pattern occurs near a known normal fault bisecting the study area as shown in BSEACD 2017-1010 (Figure 9). Due to this phenomenon, modeling predicted drawdown in time and space that is representative of the study area using the Theis Nonequilibrium equation presents difficulties.

Aquifer properties and drawdown estimates (Attachment C) were calculated for those wells shown in Table 4 that were determined to have a hydrologic connection to pumping from the EP wells during testing and for Odell 1. Aquifer properties and drawdown estimates cannot be calculated for wells which do not have a hydrologic connection to the pumping well. For this reason, we did not calculate aquifer properties for wells which had an ambiguous or no discernible response. For Odell 1, we are unsure if the response is a muted connection to pumping, or whether the well has no hydrologic connection; however, we calculated aquifer properties for the well. We also included estimated drawdowns for specified pumping scenarios at Odell Well No. 1 completed as a Cow Creek well and for Bridges 3 & 4 and Odell 3. The estimations were based upon previous aquifer test data summarized in Wet Rock Groundwater Services, LLC (2015).

In order to most accurately quantify drawdown from pumping the EP wells, the averaged transmissivity and storativity value (calculated from Cooper-Jacob and Theis) for each well from each aquifer test was assigned to that well during pumping scenarios. For example, from the Odell 2 aquifer test, we calculated T and S values (averaged from Cooper-Jacob and Theis) of 554.05 ft^2/day and 7.52 x 10^{-5}, for Odell 3. Those values were then used to estimate drawdown at Odell 3 exclusively from pumping Odell Well No. 2. Instead of using a single T and S value across the entire aquifer like previous modeling scenarios (Wet Rock Groundwater Services, 2017), each well was assigned its unique T and S value. Calculated aquifer parameters were then plugged back into the Theis Equation to confirm that the values used recreated measured values from the aquifer testing.

For the EP wells that were incorporated into this addendum to achieve the 2.5 MGD production (Bridges 3 & 4; Odell 1 & 3), a similar methodology for determining drawdown over time was used. If monitor wells were available during aquifer testing, the calculated T and S values associated with those wells were utilized to estimate drawdown. If monitor well data was not available, the averaged T and S values from the 2015 aquifer testing were utilized in the study area. For modeling purposes, it is assumed that Odell Well No. 1 will be completed as a Cow Creek well.

Table 5: Summary of Bridges Well No. 2 aquifer test results

Method	**Cooper Jacob**		**Theis**		**Theis Recovery**		**Average****	
Well	**T**	**S**	**T**	**S**	**T**	**S/S'**	**T**	**S**
Bridges 1	245.9	1.80E-05	241.5	1.78E-05	225	1.0910	243.7	1.79E-05
Bridges 2	1048.2	5.87E-34	264.5	2.00E-06	195.9	1.2650	656.35	1E-06
Bridges 3	1396	0.0003558	1337.7	.0004612	1054.4	1.396	1366.85	.0004085
Bridges 4	361.4	3.53E-05	288.8	5.14E-05	224.4	1.8850	325.1	4.34E-05
Odell 1*	2936.6	.000499	10550	.0001699	2866.9	3.54	6743.3	.0003344
Odell 2	624.6	5.77E-05	523	7.95E-05	1209.3	0.0882	573.8	6.86E-05
Odell 3	270.5	1.14E-05	243.1	1.48E-05	230.4	1.1030	256.8	1.31E-05
Wood 01	257.9	7.51E-06	227	9.093E-06	186.7	1.252	242.45	8.3E-06
Lowe	599.7	8.21E-05	238.1	1.05E-04	1343.9	0.0707	418.9	9.36E-05
Bowman	226.8	2.24E-05	189.2	3.46E-04	135.3	3.7010	208	0.000184
Escondida1+	-	-	-	-	-	-	-	-
Ochoa	268.3	2.37E-05	238.7	3.23E-05	238.7	1.0000	253.5	2.8E-05

***Lower Glen Rose Well;**
**** Average taken from Cooper Jacob and Theis methods; + no data available**

Table 6: Summary of Bridges Well No. 1 aquifer test results

Method	**Cooper Jacob**	**Theis**	**Theis Recovery**	**Average****

Well	T	S	T	S	T	S/S'	T	S
Bridges 1	375.2	9.704	354.5	12.3	247.8	1.0570	364.85	11.007
Bridges 2	320.2	3.36E-05	277.8	4.54E-05	260.9	1.0010	299	3.95E-05
Bridges 3	2958.7	0.0003895	1225.7	0.000503	3551.5	0.4636	2092.2	0.000446
Bridges 4	336.2	8.11E-05	387.5	9.52E-05	411.4	1.1030	361.85	8.81E-05
Odell 1*+	10780	0.00636	-	-	-	-	10780	0.00636
Odell 2	351.9	0.000185	221.7	2.78E-04	537.8	0.5099	286.8	0.000232
Odell 3	347.5	1.11E-05	305.8	1.47E-05	271.9	.9575	326.65	1.29E-05
Wood 01	336.9	5.66E-06	272.3	8.31E-06	230	1.1200	304.6	6.98E-06
Lowe	322.2	0.0002099	200.4	3.07E-04	504.6	0.5343	261.3	0.000259
Bowman	203	8.37E-05	275.5	8.61E-05	318	1.1760	239.25	8.49E-05
Escondida 1	-	-	-	-	168.2	.7437	168.2***	-
Ochoa	330.5	7.21E-05	292.9	9.39E-05	267	0.9057	311.7	8.3E-05

***Lower Glen Rose Well; ** Average taken from Cooper Jacob and Theis methods; *** Average taken from Theis Recovery; + insufficient match for obtaining aquifer parameters for Theis and Theis Recovery**

Table 7: Summary of Odell Well No. 2 aquifer test results

Method	Cooper Jacob		Theis		Theis Recovery		Average**	
Well	**T**	**S**	**T**	**S**	**T**	**S/S'**	**T**	**S**
Bridges 1	705.2	0.0001622	399.4	2.40E-04	411.1	1.1460	552.3	0.000201
Bridges 2	1011.9	1.21E-04	479.8	1.55E-04	581.7	1.1440	745.85	0.000138
Bridges 3++	-	-	-	-	1680.5	1.779	1680.5***	-
Bridges 4	2780	3.56E-04	582.1	3.14E-04	1331.3	1.2160	1681.05	0.000335
Odell 1*++	6669.6	.03306	-	-	-	-	6669.6	.03306
Odell 2	391.3	17.43	391.3	1.74E+01	271.4	1.0910	391.3	17.43
Odell 3	608	6.33E-05	500.1	8.71E-05	418.6	1.0480	554.05	7.52E-05
Wood 01	714.2	1.12E-04	459.7	1.50E-04	538.7	1.0090	586.95	0.000131
Lowe	376.7	1.24E-05	271.3	2.76E-05	247.9	1.0660	324	2E-05
Bowman+	4561	2.38E-04	-	-	-	-	4561	0.000238
Escondida 1	812.4	5.26E-05	494.3	7.33E-05	589.4	1.1280	653.35	6.29E-05
Ochoa	536.1	8.66E-05	402	1.30E-04	396.7	1.0300	444.9333	1.08E-04

***Lower Glen Rose Well; ** Average taken from Cooper Jacob and Theis methods; *** Average taken from Theis Recovery; + insufficient match for obtaining aquifer parameters for Theis and Theis Recovery; ++ insufficient response to pumping to obtain aquifer parameters using pumping data**

Table 8: Summary of Bridges Well No. 3 aquifer test results (12-30-2013)

Method	Cooper Jacob		Theis		Theis Recovery		Average**	
Well	**T**	**S**	**T**	**S**	**T**	**S/S'**	**T**	**S**
Bridges 2	1763.9	4.1E-4	2654.8	1.412E-3	1205.5	3.425	2209.35	9.11E-4
Bridges 3	192.4	8.952E-49	190.3	9.376E-49	118.5	1.315	191.35	9.164E-49

***Lower Glen Rose Well;**
**** Average taken from Cooper Jacob and Theis methods**

Table 9: Summary of Bridges Well No. 4 aquifer test results (2-6-2015)

Method	Cooper Jacob		Theis		Theis Recovery		Average**	
Well	**T**	**S**	**T**	**S**	**T**	**S/S'**	**T**	**S**
Bridges 1++	-	-	-	-	-	-	-	-
Bridges 2	392.6	1.086E-4	232	1.56E-4	244.1	1.348	312.3	1.866E-4
Bridges 4	157.2	6.554E-13	68.42	1.648E-4	68.42	1	112.81	8.24E-5

***Lower Glen Rose Well;**
**** Average taken from Cooper Jacob and Theis methods; + insufficient match for obtaining aquifer parameters for Theis and Theis Recovery; ++ insufficient response to pumping to obtain aquifer parameters using pumping data**

Table 10: Summary of Odell Well No. 1 aquifer test results (2-11-2015)

Method	Cooper Jacob		Theis		Theis Recovery		Average**	
Well	**T**	**S**	**T**	**S**	**T**	**S/S'**	**T**	**S**
Odell 1	728.4	4.914E-47	208.8	3.944E-12	174.2	3.218	468.6	1.97E-12
Odell 3	895.3	4.577E-5	693.2	6.438E-5	284.1	3.611	794.25	5.508E-5
Bridges 1	1007.8	1.265E-4	780.3	1.805E-4	288.1	2.909	894.05	1.535E-4

***Lower Glen Rose Well;**
**** Average taken from Cooper Jacob and Theis methods**

Table 11: Summary of Odell Well No. 3 aquifer test results (1-22-2015)

Method	Cooper Jacob		Theis		Theis Recovery		Average**	
Well	**T**	**S**	**T**	**S**	**T**	**S/S'**	**T**	**S**
Odell 1	634.2	6.673E-5	550.2	8.34E-5	594.4	1.285	592.2	7.5E-5
Odell 3	461.2	7.294E-14	404	7.212E-12	280.5	1.388	432.6	7.28E-12
Bridges 1	382.8	1.171E-5	326.2	1.438E-5	303.1	1.158	354.5	1.30E-5

***Lower Glen Rose Well;**
**** Average taken from Cooper Jacob and Theis methods**

Tables 12 through 14 and Figures 2 through 4 provide the estimated drawdown associated with continuous pumping for 1 week, 1 year, and 7 years, respectively, at a daily rate of approximately 2.5 mgd for each of the following EP wells: Bridges 1 (645 gpm), Bridges 2 (148 gpm), Bridges 3 (48 gpm), Bridges 4 (66 gpm, Odell 1 (95 gpm), Odell 2 (560 gpm), and Odell 3 (175 gpm). The aquifer properties at the Escondida 1 well were not calculated during the aquifer testing of Bridges 2 due to the lack of data; only recovery data was available during the Bridges 1 aquifer test. The Wood 01 well is the closest well with available calculated aquifer properties, so those were used in place of the missing Escondida 1 data for the drawdown calculations from pumping Bridges Wells 1 and 2. Multiple wells were not monitored during the 2013 and 2015 aquifer testing due to the fact that they were not yet constructed and/or the extensive aquifer testing requirements did not exist because the area was not subject to a groundwater conservation district. To more accurately estimate drawdown from pumping the wells, data from the 2015 aquifer testing were incorporated into the modeling scenarios. The average T and S values that were calculated from the 2015 aquifer tests were used for the wells that had no observation data.

The resulting drawdown estimates indicate the formation of an elliptical cone of depression along normal faults that bisect the study area. In the extreme case of pumping the aquifer continuously for 7 years without recharge, the combined estimated drawdowns range from 429.6 feet at the Bowman Well on the eastern edge of the study area up to 847.63 feet at the Odell Well No. 1. As previously stated, accurate estimation of water levels due to pumping is difficult. It is important to note that the Theis Equation assumes both a homogenous state in the aquifer, and that all water is taken from storage with no recharge occurring. Accordingly, the estimates of drawdown after one and seven years overestimate the impact from pumping, because they include no recharge at a minimum and fail to account for the heterogeneous character of the karst formation.

Table 12: Summary of modeled drawdown after 1 week of pumping

Well	Data	Aquifer	Modeled Drawdown (ft) After 1 Week								SWL Prior to aquifer testing ** (ft bgs)	Combined Drawdown from SWL** (ft bgs)	Pump Set (ft bgs)
			Bridges 2 (148 gpm)	Bridges 1 (645 gpm)	Odell 2 (560 gpm)	Bridges 3* (48 gpm)	Bridges 4* (66 gpm)	Odell 1* (95 gpm)	Odell 3* (175 gpm)	Combined (2.5 MGD)			
Bowman	Periodic	MT (CC)	29.25	56.43	3.76	1.49	2.67	1.56	2.18	97.34	291.4	388.74	
Bridges 1	Continuous	MT (CC)	11.91	244.50	23.84	1.54	2.98	5.49	27.66	317.92	250.1	568.02	
Bridges 2	Continuous	MT (CC)	207.67	90.63	12.33	0.52	6.73	5.16	7.58	330.62	233.7	564.32	
Bridges 3	Continuous	MT	4.52	4.81	2.44	466.47	2.27	0.46	0.60	481.57	298.25	779.82	
Bridges 4	Continuous	MT	15.76	34.36	3.25	3.85	274.55	1.74	2.38	335.89	289.3	625.19	
Escondida 1	Continuous	MT (CC)	14.94	73.74	13.86	0.53	0.89	2.67	7.73	114.36	338e	452.36	
Lowe	Continuous	MT (CC)	4.04	32.88	108.32	0.65	1.30	9.47	8.07	164.73	247.0	411.73	760
Ochoa	Continuous	MT	20.40	120.05	51.76	1.70	3.15	18.61	16.26	231.93	258.0	489.93	660
Odell 1^	Continuous	LGR	0.91	2.00	0.86	0.08	0.04	3.40	0.29	7.58	250.3	257.88	
Odell 1***	Continuous	MT	3.26	51.35	40.54	2.03	0.64	237.56	10.98	346.36	349	695.36	
Odell 2	Continuous	MT (CC)	3.03	30.15	189.39	0.38	0.77	10.24	11.59	245.55	265.4	510.95	
Odell 3	Continuous	MT	2.98	108.40	42.07	2.04	3.40	6.91	246.74	412.54	261.8	674.34	
Wood 01	Continuous	MT	23.78	121.37	22.85	1.48	2.52	9.22	8.07	189.29	259.3	448.59	500

Notes: SWL= Static Water Level; bgs = Below Ground Surface; * Aquifer Testing in 2013 and 2014; ** Aquifer Testing in October 2016; *** Completed as Middle Trinity well; LGR = Lower Glen Rose; CC = Cow Creek; MT = Middle Trinity; ^ response to pumping ambiguous; e = estimated;

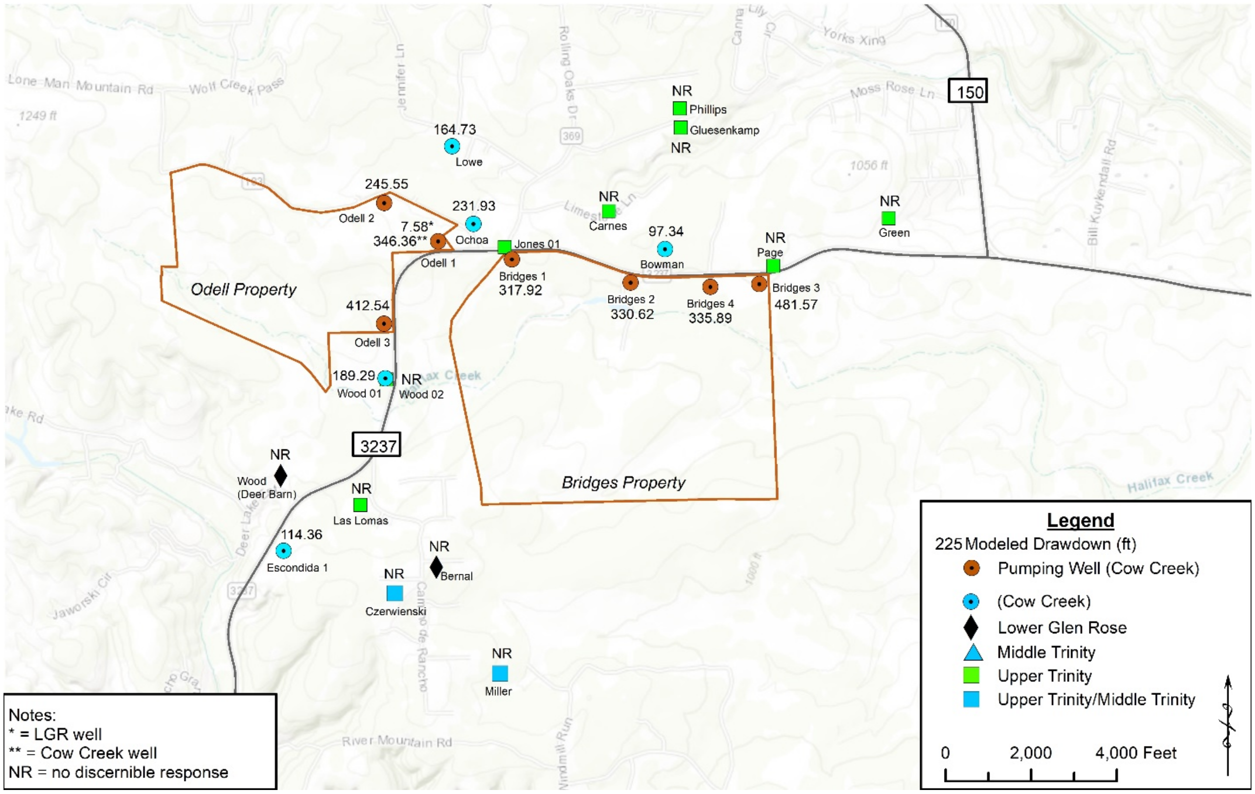

Figure 2: Map of modeled drawdown after 1 week of pumping

Table 13: Summary of modeled drawdown after 1 year of pumping

Well	Data	Aquifer	Modeled Drawdown (ft) After 1 Year								SWL Prior to aquifer testing ^ (ft bgs)	Combined Drawdown from SWL^ (ft bgs)	Pump Set (ft bgs)
			Bridges 2 (148 gpm)	Bridges 1 (645 gpm)	Odell 2 (560 gpm)	Bridges 3 (48 gpm)	Bridges 4 (66 gpm)	Odell 1 (95 gpm)	Odell 3 (175 gpm)	Combined (2.5 MGD)			
Bowman	Periodic	MT (CC)	71.93	213.19	11.05	3.22	5.06	4.92	8.27	317.64	291.4	609.04	
Bridges 1	Continuous	MT (CC)	47.07	351.58	83.22	8.47	12.77	11.89	57.45	572.45	250.1	822.55	
Bridges 2	Continuous	MT (CC)	241.56	220.09	55.24	1.79	19.30	15.11	25.70	578.79	233.7	812.49	
Bridges 3	Continuous	MT	11.01	22.36	20.11	481.67	4.57	3.42	5.84	548.98	298.25	847.23	
Bridges 4	Continuous	MT	42.92	137.44	21.44	7.53	332.98	8.55	14.60	565.46	289.3	854.76	
Escondida 1	Continuous	MT (CC)	50.77	200.08	62.79	5.34	7.64	13.09	27.55	367.26	338e	705.26	
Lowe	Continuous	MT (CC)	23.63	171.58	212.76	7.85	11.63	26.37	37.81	491.63	247.0	738.63	760
Ochoa	Continuous	MT	55.23	244.99	127.25	9.64	14.34	35.67	47.14	534.26	258.0	792.26	660
Odell 1*	Continuous	LGR	2.23	5.56	5.46	0.20	0.32	4.11	1.51	19.39	250.3	269.69	
Odell 1***	Continuous	MT	22.63	143.98	212.40	7.14	8.51	245.46	35.84	675.96	349	1024.96	
Odell 2	Continuous	MT (CC)	17.36	156.59	276.07	5.92	8.77	23.93	36.36	525	265.4	790.4	
Odell 3	Continuous	MT	32.38	227.53	102.71	9.27	13.48	14.13	272.97	672.47	261.8	934.27	
Wood 01	Continuous	MT	60.34	249.20	78.79	8.52	12.40	24.24	58.61	492.1	259.3	751.4	500

Notes: SWL= Static Water Level; bgs = Below Ground Surface; * Aquifer Testing in 2013 and 2014; ** Aquifer Testing in October 2016; *** Completed as Middle Trinity well; LGR = Lower Glen Rose; CC = Cow Creek; MT = Middle Trinity; ^ response to pumping ambiguous; e = estimated;

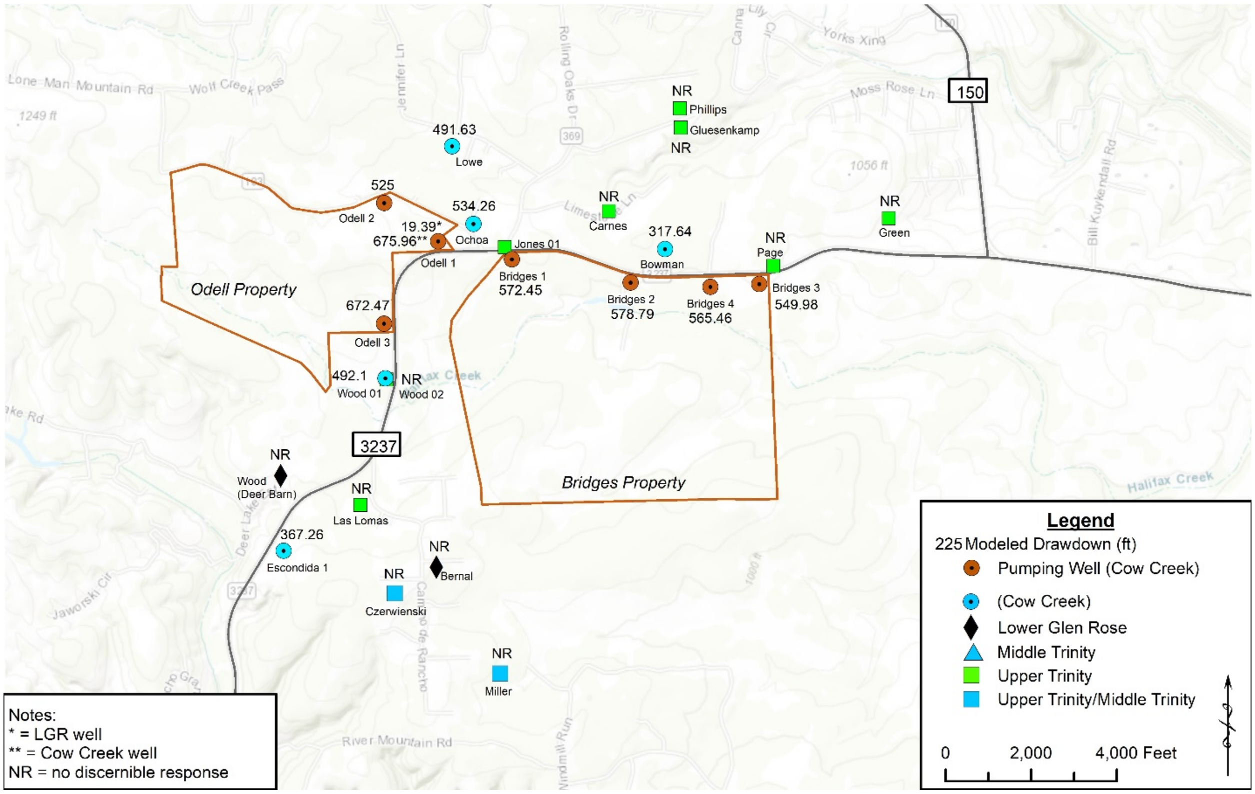

Figure 3: Map of modeled drawdown after 1 year of pumping

Table 14: Summary of modeled drawdown after 7 years of pumping

Well	Data	Aquifer	Modeled Drawdown (ft) After 7 Years Bridges 2 (148 gpm)	Bridges 1 (645 gpm)	Odell 2 (560 gpm)	Bridges 3 (48 gpm)	Bridges 4 (66 gpm)	Odell 1 (95 gpm)	Odell 3 (175 gpm)	Combined (2.5 MGD)	SWL Prior to aquifer testing ^ (ft bgs)	Combined Drawdown from SWL^ (ft bgs)	Pump Set (ft bgs)
Bowman	Periodic	MT (CC)	93.13	293.44	14.71	4.08	6.24	6.61	11.39	429.6	291.4	721	
Bridges 1	Continuous	MT (CC)	65.14	404.28	113.41	12.16	17.85	15.06	72.17	700.07	250.1	950.17	
Bridges 2	Continuous	MT (CC)	258.24	284.37	77.58	2.44	25.59	20.10	34.89	703.21	233.7	936.91	
Bridges 3	Continuous	MT	14.24	31.53	29.99	489.14	5.71	5.05	8.84	584.5	298.25	882.75	
Bridges 4	Continuous	MT	56.48	190.49	31.34	9.34	361.73	12.13	21.19	682.7	289.3	972	
Escondida 1	Continuous	MT (CC)	68.95	263.17	88.29	8.09	11.43	18.56	37.64	496.13	338e	834.13	
Lowe	Continuous	MT (CC)	34.12	244.96	264.28	12.10	17.48	34.83	53.36	661.13	247.0	908.13	760
Ochoa	Continuous	MT	72.63	306.66	164.75	13.88	20.17	44.07	62.62	684.78	258.0	942.78	660
Odell 1*	Continuous	LGR	2.88	7.35	7.95	0.37	0.56	4.47	2.16	25.74	250.3	276.04	
Odell 1***	Continuous	MT	33.23	190.32	303.38	9.73	13.21	249.35	48.41	847.63	349	1196.63	
Odell 2	Continuous	MT (CC)	25.03	223.45	318.73	9.32	13.45	30.71	48.45	669.14	265.4	934.54	
Odell 3	Continuous	MT	49.45	286.38	132.83	13.03	18.66	17.70	285.89	803.94	261.8	1065.74	
Wood 01	Continuous	MT	78.53	312.31	107.20	12.30	17.59	31.73	72.41	632.07	259.3	891.37	500

Notes: SWL= Static Water Level; bgs = Below Ground Surface; * Aquifer Testing in 2013 and 2014; ** Aquifer Testing in October 2016; *** Completed as Middle Trinity well; LGR = Lower Glen Rose; CC = Cow Creek; MT = Middle Trinity; ^ response to pumping ambiguous; e = estimated;

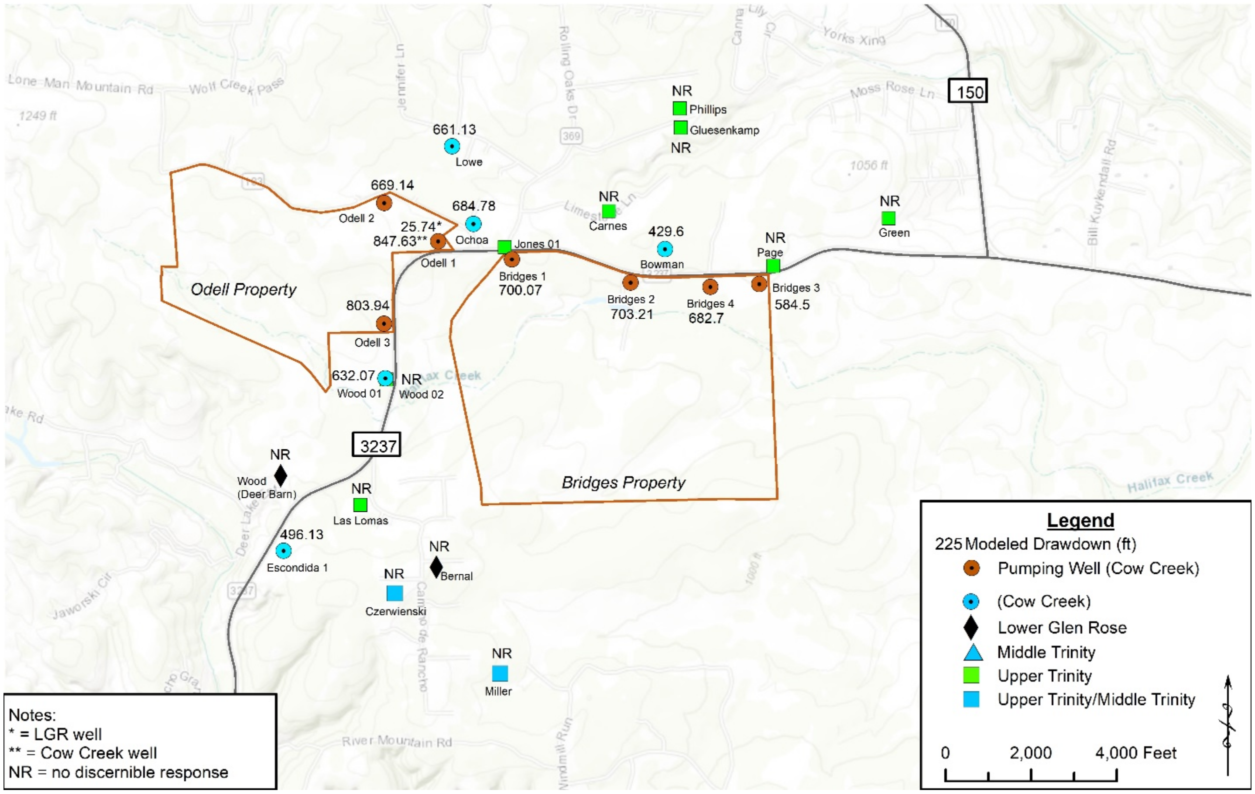

Figure 4: Map of modeled drawdown after 7 years of pumping

The estimated drawdown projections (Tables 12-14) provide a "worst-case" scenario of drawdown occurring with no recharge to the aquifer. In reality, within a karst aquifer, sustained pumping depending on only aquifer storage does not happen over long periods of time because recharge occurs (Driscoll, 1986).

Section 7.
3-1.4(D)(4)

All references to the previously modeled and reported proposed Bridges 5 and Bridges 6 wells have been removed from the Report.

<u>RESPONSES TO WRGS REPORT STATEMENTS (a-e)</u>

a) **"…some drawdown will be seen in neighboring wells completed within the Cow Creek Limestone."**

Wells completed within the Cow Creek may have some hydrologic connection and response to the pumping at the EP wells. Based upon the testing, wells located east of Bridges 2 will have less of a response to pumping than wells located west of Bridges 2. Tables 12-14 and the discussion above details the quantitative response and calculated drawdowns in the Cow Creek.

b) "There was no connection observed between the pumping wells and observation wells completed in the Upper Glen Rose Formation."

The sections above detail our analyses and quantitative approach regarding wells completed in the Upper and Lower Glen Rose formations.

c) "…no significant recharge or discharge boundaries experienced."

The WRGS report (Wet Rock Groundwater Services, 2017) stated that no significant recharge or discharge boundaries were experienced based upon the manner in which the pumping well hydrographs showed a smooth drawdown and recovery curve that did not significantly deflect. The District stated that the slow recovery of some wells (Odell 2, Lowe and Ochoa) is an indication of a no flow boundary. We do not disagree that this is a possible interpretation, there is faulting in the area that locally acts to partially compartmentalize the Cow Creek as seen by the response to pumping at Bridges 3 and Bridges 4. Although, the faulting and intersection of that boundary is not really a no-flow boundary, as flow and some hydrologic connection is established across these faults. The faults in the area may act as a partial no-flow boundary.

Well field-wide, the pumping at the EP wells lasted for a total of approximately two months, so the recovery of water levels to pre-pumping levels would take some time to reach those levels after pumping ceased. Interestingly, the Odell 2 well recovered to its pre-pumping level during its aquifer test; however, it did recover slower from pumping at Bridges 2 and Bridges 1. The Lowe and Ochoa wells also recovered to their pre-pumping levels for the Odell 2 test. The slower recovery rates during the Bridges 2 and Bridges 1 tests may be due to the faulting in the area causing a partial no-flow boundary.

d) "The heterogeneity, anisotropy, and non-perfect elastic characteristics of the Middle Trinity Aquifer explain the delayed recovery rates post pumping phase of the aquifer test."

We should have devoted more time and discussion in the report clarifying our analysis of the slower recovery rates in some wells. Describing the heterogeneity of the aquifer (*i.e.,* fractures and faults) as an explanation of the delayed recovery rates during the aquifer testing was intended to say that due to faults and fractures there are varying hydrologic connections within the aquifer. This is shown by the response to pumping at Bridges 3 and Bridges 4, as well as the documented faults in the area. As discussed above, the faults and fracturing may act as a partial no-flow boundary. We attempted to describe the slower recovery rates as being caused by this heterogeneity in the subject Middle Trinity aquifer.

e) "Based upon EP's anticipated phased-in pumping schedule for delivery to the Goforth SUD, actual impacts on the aquifer and neighboring wells will be able to be observed based upon actual pumping and appropriate measures taken, if needed, in a timely manner without the threat of unreasonable impacts occurring."

The discussion within Section 6 quantifies the impacts from the aquifer testing, the hydrologic connection between wells and the estimated drawdown from the maximum requested production (2.5 mgd) with no recharge. The modeled drawdown after 1 year and 7 years shows a reduction in water level at the monitoring wells. Most all of the wells in the area are domestic wells which should be able to produce the BSEACD's limit of 10,000 gallons per day if the pump is set at a deep enough level. Some wells could need to have their pumps lowered and/or resized. For example, the Wood 01 well has a pump setting of 500 ft. with a modeled estimated combined drawdown from static water level of 526 ft. Pump depths would need to be acquired for wells within a 1 to 2 mile area and evaluated to determine if a new pump or deeper setting might be required over time assuming that the actual drawdown from EP's pumping at the maximum rate of 2,5 mgd tracks the modeled drawdown calculated using the Theis Equation.

Section 8.
3-1.4(D)(4)

References in this addendum to Bridges 5 and Bridges 6 have been removed.

Section 9.
3-1.4(D)(4)

a) Lack of manual measurements.

We apologize for not including these in the original hydrogeologic report. Please find the graphed manual measurement for Bridges 1, Bridges 2 and Odell 2 within Attachment B and in table form below (Table 11). Manual measurements were not taken from the other EP monitoring wells because a transducer was installed in each of those wells. The transducers have manufacturers specifications detailing the accuracy of the tool and are considered in the industry to be a reliable tool for measurement of water level. As shown by the manual measurements for Bridges 1, Bridges 2 and Odell 2, the transducers were working properly.

Table 15: Manual measurements

Well	Date/Time	Manual Measurement (ft. bgs)
Bridges 1	10-17-2016 12:15	246.62
	10-21-2016 17:01	249.28
	10-24-2016 17:04	256.23
	11-4-2016 11:28	305.45
	11-9-2016 2:14	295.45
	11-21-2016 6:44	271.5
Bridges 2	10-17-2016 11:45	215.18
	10-21-2016 9:20	230.47
	10-23-2016 15:35	227.15
	10-30-2016 15:15	229.25
	10-31-2016 9:44	224.69
	11-12-2016 12:50	257.2
	1-13-2017 8:22	236.13
Odell 2	10-17-2016 13:45	269.26
	1-13-2017 10:30	307.04

b) Lack of observation well hydrographs

Please see Attachment B and discussion above.

c) Appendix B does not contain well completion data from surrounding monitor wells.

Appendix B of the Hydrogeologic Report (Wet Rock Groundwater Services, 2017) provides diagrams for the EP wells (Bridges 1, 2, 3 and 4, and Odell 1, 2 and 3), and the Lowe, Miller, Ochoa, Wood 01 and Wood Deer Barn wells. Please find the remaining well diagrams in Attachment D.

d) Figure 13 is not an accurate geologic base map.

Please find an update figure below (Figure 5).

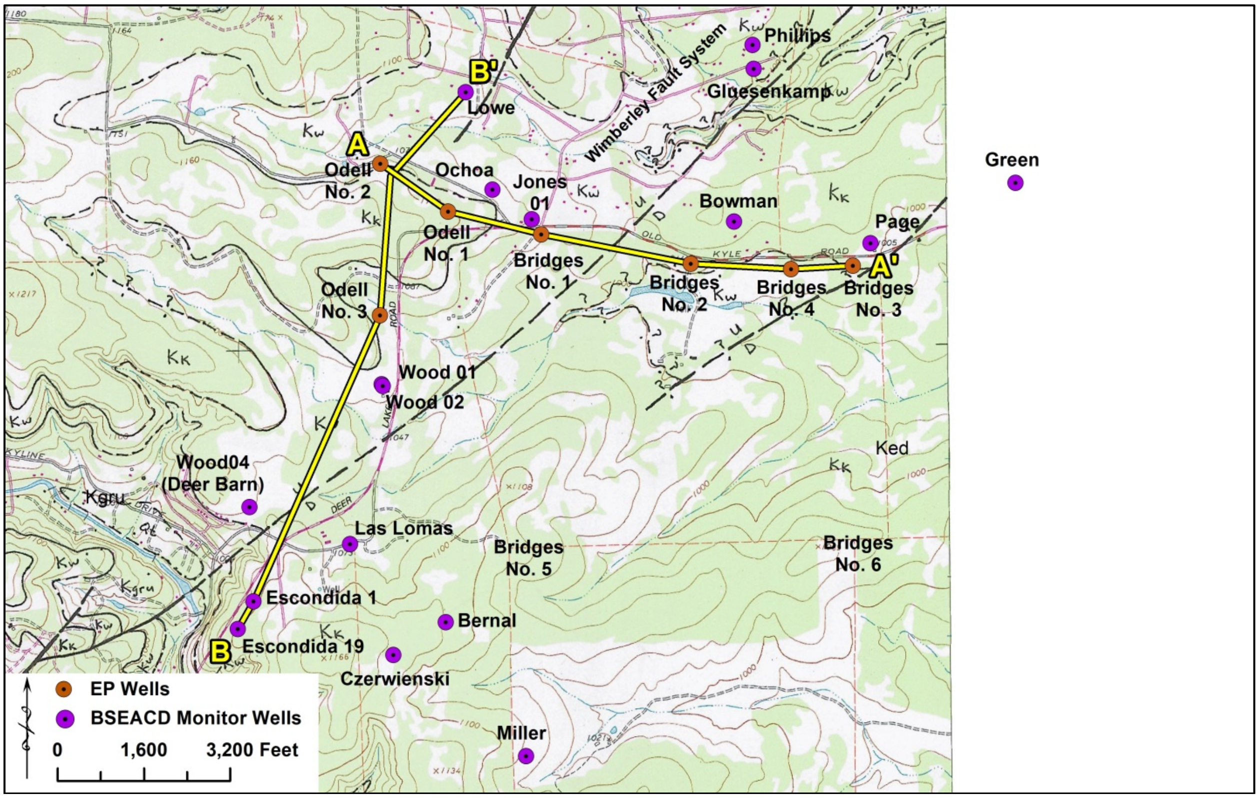

Figure 5: Geologic map with EP and BSEACD wells with cross-sections

e) Figure 15 and 41 have the wrong sense of motion on fault.

Please find updated Figure 15 (Figure 6) and Figure 41 (Figure 7).

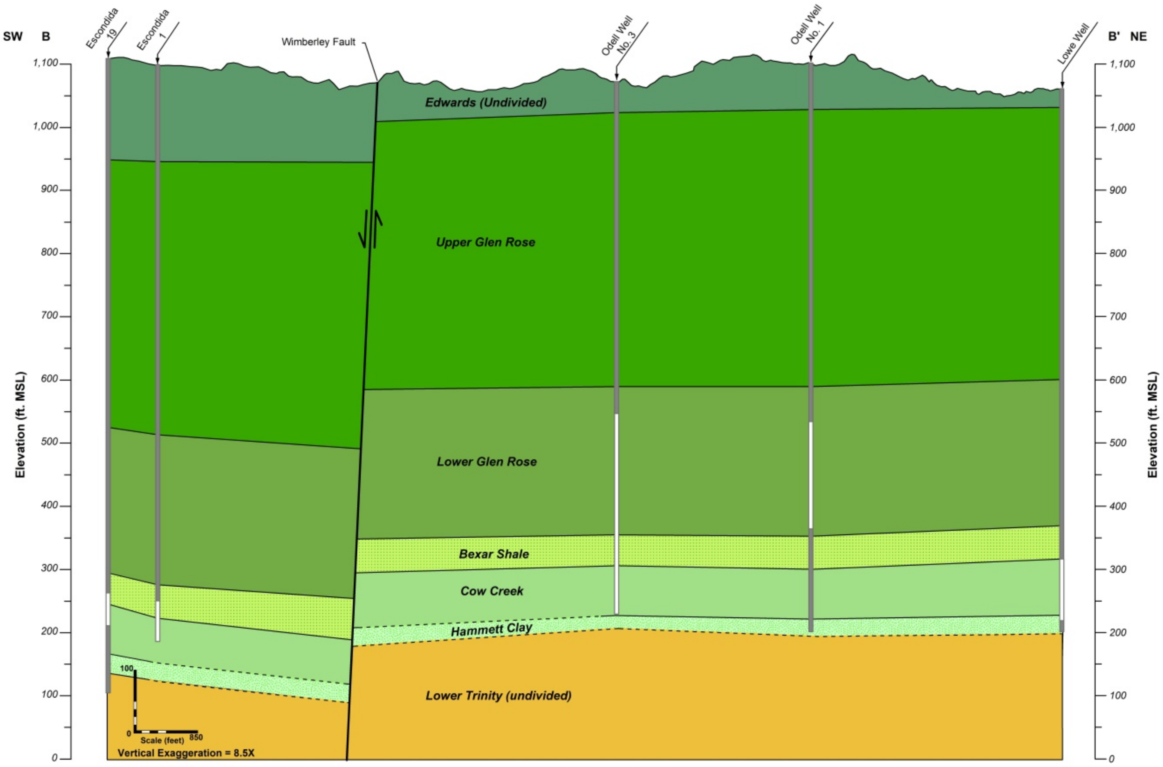

Figure 6: Conceptual geologic cross section B - B' (Figure 15)

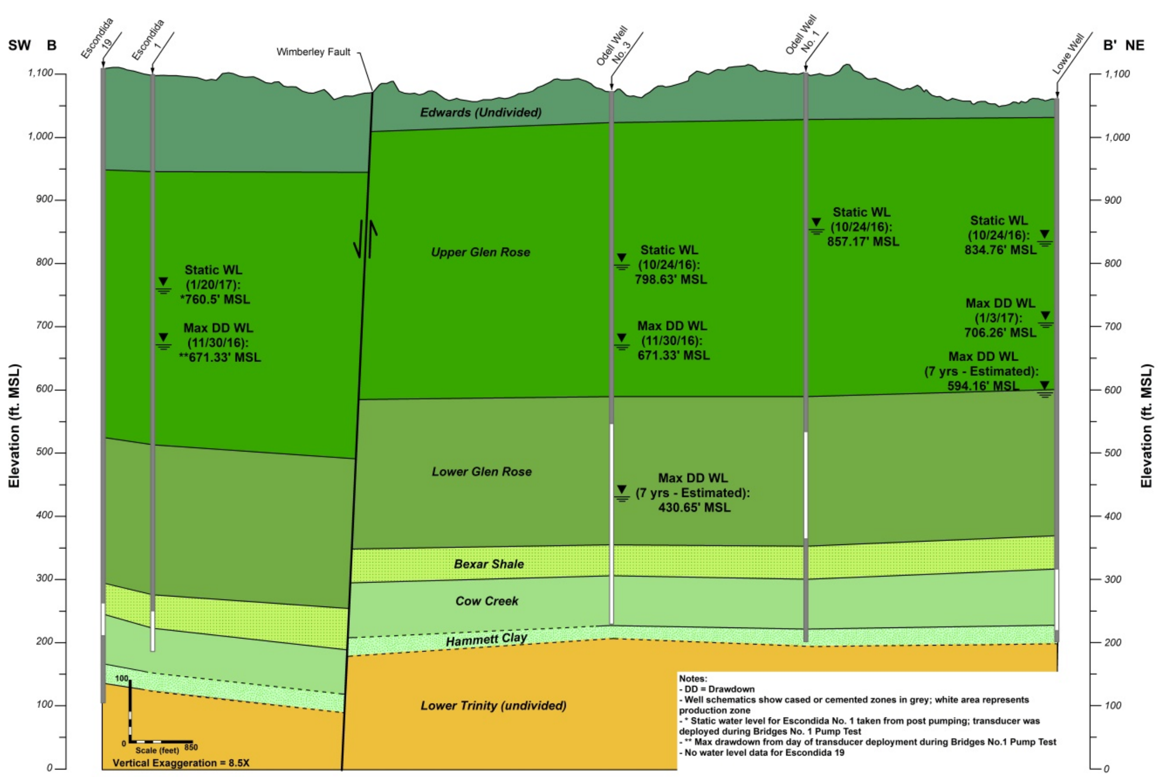

Figure 7: Cross section B-B' with water levels (Figure 41)

f) Some hydrographs in Figure 17 are not directly comparable to the study area. The DSWSC well is within the recharge zone of the Middle Trinity Aquifer.

The hydrographs shown in Figure 17 were selected based upon their long term continuous monitoring of water levels and availability of these data from the TWDB. The hydrographs were shown based upon the amount of data points available from these wells. We acknowledge that the Dripping Springs Water Supply Corporation well (Well 57-56-702) is located in the recharge zone.

g) Recovery data at Escondida 1 from the Bridges 1 test was 85 ft.

We acknowledge this and have this information shown in hydrographs (Attachment B) and Table 4.

h) Rate of change of drawdown from pumping wells was not zero as Figures 27, 30 and 33 suggest.

The hydrogeologic report (Wet Rock Groundwater Services, 2017) did not state that the rate of change was zero. Our intent in the referenced Figures 27, 30 and 33 was to show that the pumping level was stabilizing, and that near the end of the pumping phase, the pumping well was approaching a stable water level.

i) Estimates of aquifer parameters.

Attachment C provides the aquifer parameters for the wells. They are also summarized in Tables 5 - 7. Aquifer properties and drawdown estimates (Attachment C) were calculated for those wells shown in Table 4 that were determined to have a potential hydrologic connection to pumping from the EP wells during testing and for Odell 1. Aquifer properties and drawdown estimates cannot be calculated for wells which do not have a hydrologic connection to the pumping well. For this reason, we did not calculate aquifer properties for wells which had an ambiguous or no discernible response. For Odell 1, we are unsure if the response is a muted connection to pumping or whether the well has no hydrologic connection; regardless we still calculated aquifer properties for the well.

j) Methods and parameters selected to model future drawdown.

Section 6d of this supplement provides a summary and discussion of the parameters used in the model and the results.

Please call me at 512-773-3226 if you have any questions or require additional information.

Respectfully,

Kaveh Khorzad, P.G.
President/ Senior Hydrogeologist

cc: Electro Purification, LLC

The seal appearing on this document was authorized by Kaveh Khorzad, P.G. License No. 1126 on November 16, 2017.

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

References:

BSEACD. 2017. Hydrogeologic Setting and Data Evaluation: 2016 Electro Purification Aquifer Test, Cow Creek Well Field: Hays County, Texas. Technical Memo 2017-1010, 73p.

Driscoll, F.G., 1986. Groundwater and Wells (2nd. Ed.): Johnson Division, St. Paul, Minnesota, p. 1021.

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Wet Rock Groundwater Services, LLC. 2015. Report of Findings – Test Well Construction and Aquifer Testing of the Electro Purification Wells: Hays County, Texas. WRGS 15-001, 196 p.

Wet Rock Groundwater Services, LLC. 2017. Report of Findings – Hydrogeologic Report of the Electro Purification, LLC Cow Creek Well Field. WRGS 17-001, 94 p.

Wierman, D.A., Broun, A.S., Backus, A.H. and Llano, L. 2008. Cypress Creek/Jacob's Well Hydrogeologic Report, Hays Trinity Groundwater Conservation District, December 2008, 43p.

Attachment A:

Goforth SUD Future Water Needs

&

Proposed Water Management Strategies and Implementation Schedule for the Dripping Springs WSC

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March 10, 2017

Mr. Mario Tobias, General Manager
Goforth Special Utility District
8900 Niederwald Strasse
Niederwald, Texas 78640

RE: Electro-Purification - Trinity Ground Water Wells
Future Water Needs Schedule

Dear Mario,

The following Schedule identifies the timing and amount of additional water supply that Goforth SUD will need from the Electro-Purification (EP) project in the near future, by year.

Several assumptions were made for this estimate. First, while early, 2017 appears to be just as strong as the previous two years as far as customer growth, then the next three years growth is based on an average of the past five years (2012 – 2016), and finally growth for the remaining years is estimated to taper off as the Sunfield area is projected to start supplying additional water of its own. The other assumptions relate to the drought category that BSEACD may impose, based on weather conditions. Historically, 30% has been the largest cutback, occurring every few years for several months out of the year, and that cutback was assumed to determine the "firm" water supply from Goforth's groundwater wells.

Actual usage by Goforth customers was taken as an average over the past five years, which included times of extremely dry to wet conditions/years.

Based on these assumptions, it is projected that Goforth will be using about 90% of its water supply, which exceeds the 85% TCEQ rule for planning, in the summer of 2019. Therefore, Goforth's new water supply should be scheduled for delivery not later than the summer of 2019 (June), with annual increases each year thereafter, as shown on the Schedule.

Finally, I recommend that the annual increases be based on a water supply rate of 0.44 gpm per meter, in lieu of the TCEQ-required default of 0.6 gpm per connection, given my review of Goforth's historic customer use data. As we have discussed, I recommend that Goforth prepare an application for an alternative capacity variance and file the variance with the TCEQ requesting the 0.44 gpm number. The Schedule shows Goforth's needs using the 0.44 gpm number.

Goforth SUD – Future Water Needs Schedule

Year	Growth Rate %	Total Meters	Number of New Meters	Annual Water Needs in MGD
2012	7.0*	4,886	320	-
2013	6.5*	5,204	318	-
2014	6.6*	5,550	346	-
2015	11.2*	6,174	624	-
2016	10.3*	6,812	638	-
Projected				
2017	10	7,493	681	0
2018	8.2	8,108	615	0
2019	8.2	8,772	664	0.50
2020	8.2	9,492	720	0.38
2021	7.5	10,204	712	0.45
2022	5.25	10,740	536	0.34
2023	5.25	11,304	564	0.36
2024	5.25	11,899	595	0.38
2025	5.25	12,524	625	0.40
2026	5.25	13,182	658	0.42
2027	5.25	13,874	692	0.44

*Actual growth rate

Should you have any questions or need further assistance, please call.

Respectfully submitted,

Neal R. Goedrich, P.E.

cc: Board of Directors
Leonard Dougal

O:\CompanyData\Clients\0092-Goforth Special Utility District_T\0092-063-08 - Future Water Sources Study\EP_Water Needs Schedule.doc

Final Report

Proposed Water Management Strategies and Implementation Schedule for the Dripping Springs Water Supply Corporation

April 11, 2016

AquaStrategies

Executive Summary

The Dripping Springs Water Supply Corporation customer base is growing rapidly. In anticipation of future water needs, a dozen or so water management strategies have been considered by the General Manager and board of directors. To determine which of these water management strategies are most viable, from an engineering perspective, the Dripping Springs Water Supply Corporation hired Aqua Strategies Inc. to gather information on each of these water management strategies, and develop criteria by which to compare each and a process for ranking. Ultimately we make recommendations on which water management strategies look most promising and propose an implementation schedule for those that ranked highest.

It is important to understand that none of the water management strategies being considered are guaranteed to be implemented, each having varying degrees of uncertainty regarding the amount of water they may ultimately provide. Even the most obvious solution to meeting short-term water needs – additional groundwater from the Corporation's existing wells – requires a permit amendment from the Hays Trinity Groundwater Conservation District, which has not been applied for yet. However, even if the permit amendment is granted, there is insufficient water remaining to be permitted by the Hays Trinity Groundwater Conservation District to meet projected needs through 2035, the planning horizon for this study.

The long-term water supply solution for the Dripping Springs Water Supply Corporation is the implementation of a suite of water management strategies that reduces demand and increases supply from a broad range of sources. In total, we estimate that the Dripping Springs Water Supply Corporation will need an additional 3 million gallons per day of water to meet the anticipated needs through the year 2035. Implementation of each of these water management strategies will allow the supply curve to stay ahead of demand curve, but requires support from the community, the general manager, and the board of directors.

The highest ranked water management strategies are as follows (in order):

1. Non-potable reuse for irrigation;
2. Water conservation;
3. Additional local groundwater from the Hays Trinity Groundwater Conservation District;
4. Direct potable reuse;
5. Additional surface water from West Travis County PUA; and
6. Groundwater from the Rutherford Ranch.

We recommend that each and every one of these water management strategies be pursued at this time, in anticipation of one or more proving to not be viable due to physical, regulatory, financial or more practical reasons. Assuming all of these water management strategies can be implemented, a schedule for water supply development is presented in Section 10. If one or more water management strategies are not chosen, the schedule for implementation of the others will have to be accelerated.

Table of Contents

1.0 Introduction

A study for the Dripping Springs Water Supply Corporation (DSWSC or "Corporation") was completed in November 2015 forecasting water demands, supplies and needs based on various growth and drought scenarios [1]. Hays County is the fastest growing county in Texas and one of the fastest in the Nation. The DSWSC has a large number of housing developments planned within its service area, each of which will need water. The study determined that the Corporation has sufficient water to meet the current needs of its customers; yet under aggressive estimates provided by the managers of the planned housing developments, could face shortages as early at 2018.

The DSWSC currently serves 1,880 Living Unit Equivalents (LUEs). The growth scenarios projected in the 2015 study are listed in Table 1-1. Under the "Mid" growth scenario – what we consider to be the most likely scenario and suitable for water supply planning purposes – the number of connections is projected to increase by a factor of 4.8 from the current customer base, by 2035. To meet future needs, the DSWSC will need to develop additional water supplies. The DSWSC has commissioned this study to help vet and choose appropriate water management strategies to meet these future needs.

Table 1-1. Projected growth rate [1]

Growth Scenario	Growth in Years 2015 - 2024	Growth in Years 2025 - 2035	Total LUEs In 2035
Low	4%	4%	4,200
Mid	DSISD Estimate	7%	9,030
High	Developer Estimates	10%	15,259

DSWSC has two existing water supplies - surface water from the Colorado River basin provided by West Travis County Public Utility Agency (WTCPUA) and groundwater from the Trinity Aquifer, provided by DSWSC-owned wells and permitted by the Hays Trinity Groundwater Conservation District (HTGCD). The 2015 study determined that an extra 500 acft/yr of permitted water would see the DSWSC through three or four more years of growth; 1000 acft/yr would allow the water supply corporation to push out the development of an alternative supply for six or seven years.

The DSWSC Certificate of Convenience and Necessity (CCN) is a permit issued by the Texas Commission on Environmental Quality (TCEQ) which authorizes and obligates a retail public utility to furnish, make available, render, or extend continuous and adequate retail water service to their defined exclusive geographic service area as required by Title 30 Texas Administrative Code Rule §291.114 [2]. If the holder fails to provide service, a decertification process through TCEQ can revoke the CCN (30 TAC §291.114) [3].
Currently the DSWSC has 1880 connections (or LUEs) and signed commitments to provide water to an additional 3361 LUEs. In the near future, an additional 337 LUEs are anticipated to pursue supply commitments with the DSWSC. In the longer term, 484 LUEs have been identified as potential lots for development within the DSWSC CCN but do not have a contract with the Corporation [4]. The DSWSC Summary of System Capacities [5] indicated that the current supply capacity (permitted and contracted water) can serve 1570 LUEs, demonstrating that the DSWSC water supply obligations exceed their system supply capacity. An estimate of the committed water demand volume is shown in Figure 1-1. The calculated committed demand volume assumes 0.53 acft/LUE/year of use and the identified future potential 821 LUEs (337 + 484 LUEs) are committed by 2025.

[1] Forecasts of water demand, supply and needs for the Dripping Springs Water Supply Corporation, Aqua Strategies 2015.

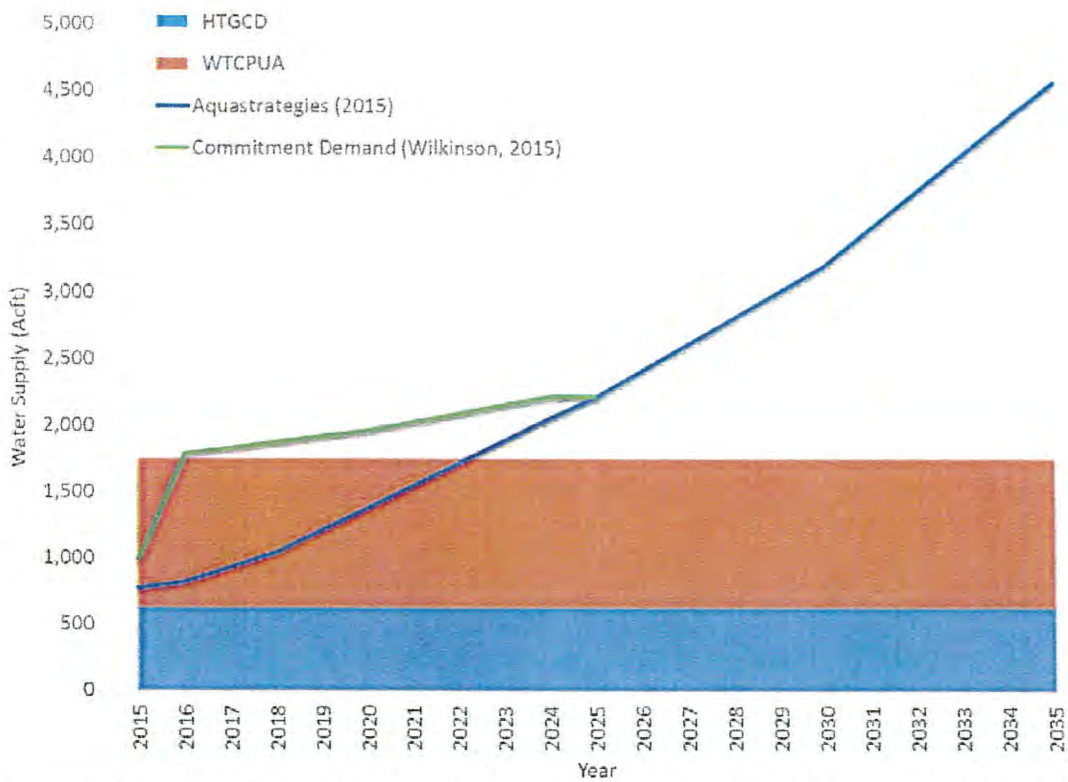

Figure 1-1. Projected Demands, Estimated Commitment Demand and Current Water Supplies

The blue line in Figure 1-1 represents the projected demands developed by the previous demand study [1], which was developed using the Mid population growth scenario and an assumed use rate of 0.53 acft/LUE/year.

The purpose of this study is to provide an evaluation of potentially feasible water management strategies for the DSWSC, so it can meet its future water needs and obligations under the CCN. This report will identify and discuss elements of potentially feasible water supply projects to meet short, medium, and long term water needs and to develop a criteria for ranking and weighting the potential supply projects. The following list of potentially feasible future water management strategies are alternatives that have been identified by the Corporation (in no particular order):

1) Conservation (demand reduction through education and public outreach; leak detection and repair);
2) Additional local groundwater from the Trinity Aquifer and permitted through HTGCD;
3) Hays Caldwell Public Utility Agency Water Project;
4) Electro-Purification well field in Western Hays County;
5) Additional Supply from LCRA through WTCPUA;
6) Water reuse;
7) SAWS Vista Ridge Pipeline;
8) Rutherford Ranch water from Middle and Lower Trinity Aquifer in Hays County;
9) Texas Water Alliance water from Carrizo Aquifer in Gonzales County;
10) Forestar water from Simsboro Aquifer in Lee County;
11) Aquifer Storage and Recovery; and
12) Brackish Groundwater Desalination

An initial vetting of these strategies, which is discussed in the next section, resulted in five projects being eliminated from the list due to infeasibility and/or scheduling incompatibility with DSWSC needs. The remaining seven projects were heavily scrutinized and are detailed in this report. Information provided on each short-listed water management strategy includes supply source and volume, cost, schedule of availability, water quality and water treatment issues. The costs evaluated include the unit cost of delivered water as well as impact fees. The DSWSC currently charges an impact fee of $4,400 per connection with other miscellaneous connection fees. Connection fees presented here would be in addition to that $4,400 fee per connection, currently charged. Additional considerations include evaluations of anticipated environmental impacts, supply uncertainty, political or regulatory issues, and potential local economic impact. Each of these criteria are then weighted prior to ranking. A project implementation schedule is then developed for the water management strategies that rank highest, and that can help DSWSC meet its projected needs.

2.0 Evaluation of Potential Feasible Projects

The purpose of this study is to help the DSWSC prioritize water management strategies to meet the future water needs of its growing customer base. Together with Greg Perrin, the General Manager of the DSWSC, we have identified 12 possibilities. On face value, some of these water management strategies look less appealing than others, for various reasons, be it probable cost of the project, permit uncertainty, or some other factor. Of the water management strategies identified for this project, five fall into this category. Public opposition and permit uncertainty have pushed the Electro-Purification project lower on the list. The time frame as well as financing uncertainty of the Vista Ridge project dictated that our limited time and resources should be spent on other projects that are more likely to bring water to the community. The five lower priority water management strategies are (in no particular order):

1) Hays Caldwell Public Utility Agency Water Project;
2) Electro-Purification well field in Western Hays County;
3) SAWS Vista Ridge Pipeline;
4) Aquifer Storage and Recovery; and
5) Brackish Groundwater Desalination.

A brief summary of each of these project is provided in the following subsections.

Hays Caldwell Public Utility Agency Water Project

The Hays Caldwell Public Utility Agency (HCPUA) is comprised of the cities of San Marcos, Kyle, Buda, and the Canyon Regional Water Authority. These entities formed the agency in January 2007 to jointly pursue a water supply project in the Carrizo and Wilcox aquifers in an area near the intersection of Bastrop, Caldwell, Fayette and Gonzales counties to help manage their future water supply needs.

An initial project study was commissioned by Kyle and the Canyon Regional Water Authority to determine alternative water supplies. The project study ultimately included participants other than the original sponsors including the Wimberley WSC, Goforth WSC, Lockhart, Creedmoor-Maha WSC, Monarch Water Co., Polonia WSC [6].

This $200 million water project is planned to bring 15,000 acft/yr of treated groundwater via a 45-mile pipeline to its members in Hays, Caldwell, Comal, and Guadalupe Counties by 2030 in Phase 1 and an additional 20,560 acft/yr by 2038 in Phase 2 [7]. The water for this project has been secured through 17,385 acres of leased water rights from over 80 land owners. These leases are split between the Plum Creek Conservation District and the Gonzales County Underground Water Conservation District. A schematic of the water supply project is shown in Figure 2-1 below.

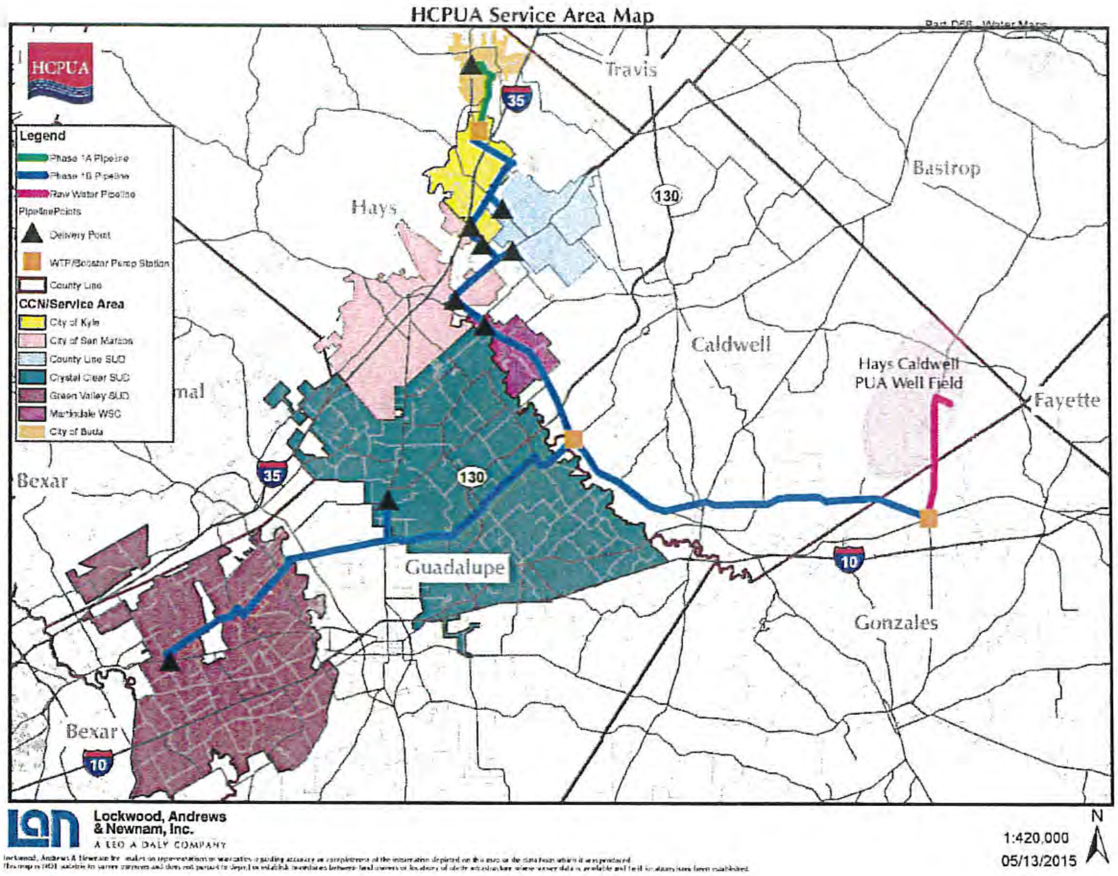

Figure 2-1. HCPUA Water Supply Project Schematic

The Texas Water Development Board (TWDB) has approved financial assistance in the amount of $12,500,000 from the State Water Implementation Fund for Texas (SWIFT) to the Hays Caldwell Public Utility Agency to finance the planning, acquisition, design, and construction of a water supply project [8].

The scope of this project is very well defined and does not include a pipeline to Western Hays County making this an unlikely source available to DSWSC for consideration.

Electro Purification well field in Western Hays County

The Electro Purification (EP) project initially contracted with the City of Buda, Goforth Special Utility District and the Anthem Municipal Utility District for a total of 5.3 MGD from the middle Trinity Aquifer in Hays County. Seven test wells were drilled approximately five miles northeast of Wimberley near the intersection of Old Kyle Road (FM 3237) and Rolling Oaks Drive (CR 369) as shown in in Figure 2-2 [9]. The project was located in an area that was not under the regulatory authority of a groundwater conservation district at the time. During the 2015 Legislative Session HB3405 was passed that brought the project wells under the authority of the Barton Springs Edwards Aquifer Groundwater Conservation District (BSEACD).

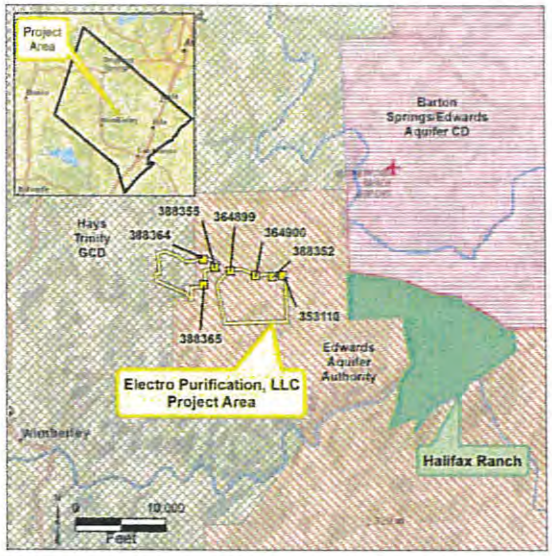

Figure 2-2. Electro Purification Supply Project Location[2]

Under the requirements of HB 3405, EP applied for a temporary permit with BSEACD which was approved for 35,560,000 gallons a year (109 acft/yr) [10]. Since that time, the water supply contract between EP and the City of Buda has expired after EP did not prove up the contracted water supply. The EP Project owners are still in negotiations with the BSEACD to secure a permanent production permit, though the volume is unknown.

The regulatory uncertainty and undetermined supply volume of this project prevented it from further evaluation for this study.

SAWS Vista Ridge Pipeline

San Antonio Water Supply System (SAWS) entered into an agreement with Spanish firm Abengoa after approval in October 2014 from the San Antonio City Council to deliver 50,023 acft/yr of Carrizo Aquifer water from Burleson County to San Antonio via a 142 mile 54-inch transmission pipeline (Figure 2-3) [11]. The well field in Burleson County consists of 18 wells in a 4-square mile well field about 8 miles west of Caldwell, Texas. The Post Oak Savannah Groundwater Conservation district permitted the supplies to the project through 3,400 water rights leases with local landowners in Burleson and Milam counties.

[2] Source: Hydrogeologic Evaluation of Proposed Electro Purification, LLC Project in Hays County, Texas. LBG-Guyton Associates, March 2015

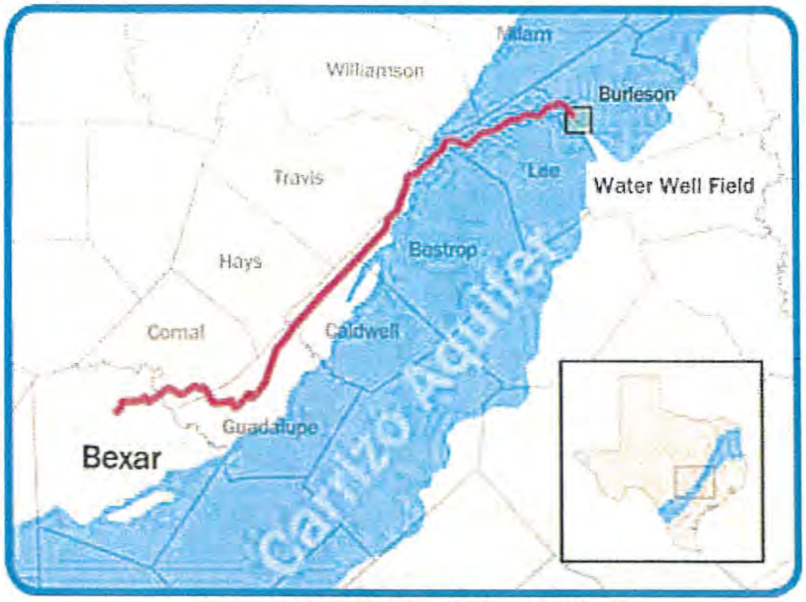

Figure 2-3. SAWS Vista Ridge Pipeline[3]

The total cost of the pipeline to supply 44.6 MGD to San Antonio is expected to be $844 million. The current contract with Abengoa requires SAWS to buy the water, which could be delivered by 2020. SAWS will own the pipeline by 2050. SAWS estimates that the water will cost $2,042 per acre-foot in 2020.

Abengoa's financial stability has been brought into question since filing for creditor projection in November 2015 and declaring bankruptcy in February 2016 [12]. Abengoa recently announced plans to sell 80 percent of its $82 million equity share of the pipeline [13].

The uncertainty of this project is considered too high to be further evaluated in this study.

Aquifer Storage and Recovery

Aquifer storage and recovery (ASR) is a water supply strategy in which water is injected and stored in an aquifer during times of excess water supply, and recovered for use from that same aquifer during drier periods or periods of greater water demand. A typical ASR well is shown in Figure 2-4. Storing water in an aquifer can improve drought preparedness by providing an additional supply during drier periods when many supplies are curtailed. Additionally, storing water in an aquifer eliminates evaporative losses relative to water stored in open surface reservoirs, so it is ideally suited for managing surface water supplies that may be vulnerable to drought conditions. ASR is currently being used for water supply management in Texas by the cities of San Antonio, Kerrville and El Paso [14].

The Trinity Aquifer is the storage aquifer to be considered for this strategy within or near to the DSWSC service area. However no studies have been performed that confirm the feasibility of using the Middle or Lower Trinity in the Hays County area for an ASR project. Further research and study is needed before this water supply strategy can be considered as a potential supply for the DSWSC. Also managing excess supply during normal times for use during drought conditions is not a management situation available to DSWSC at this time, so this strategy has not been evaluated further.

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[3] Source: http://www.saws.org/latest_news/NewsDrill.cfm?news_id=1023

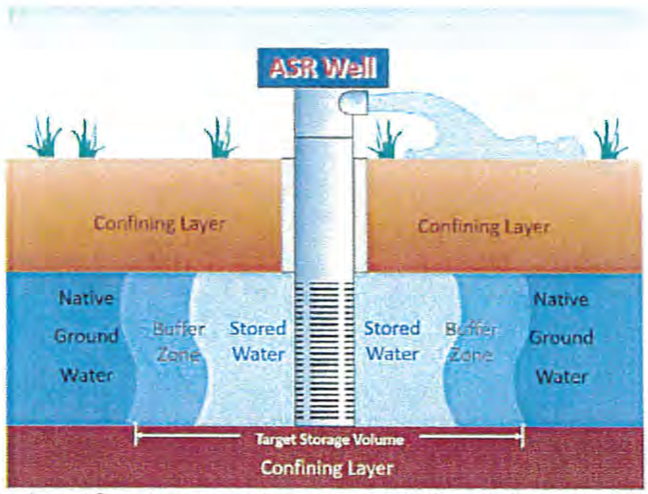

Figure 2-4. Typical Aquifer Storage and Recovery Well used for both injection and recovery[4].

Brackish Groundwater Desalination

Texas has more than 2.7 billion acre-feet of brackish groundwater [15], though its distribution and characteristics vary geographically throughout the state (Figure 2-5) [16]. Brackish groundwater is defined as water containing more than 1,000 milligrams per liter (mg/L) of dissolved minerals. A significant source of brackish water may be found in the down-dip areas of the Trinity aquifer. However, the wells completed in these locations are expected to be relatively deep and lower producing. Permeability of the aquifer typically decreases in the areas of the aquifer where brackish water is present. Due to the deeper, lower transmissivity of the brackish sections of the Trinity aquifer throughout most of its extent, producing water from this source may be more costly than wells producing freshwater supplies from more shallow areas of the aquifer. Also, treating brackish water to remove the high concentrations of dissolved solids is expensive (of the order $2/acft in 2012, in Texas) [17] and creates a brine reject that must be properly disposed.

Because there are supply options that are less expensive to produce available freshwater from the Trinity Aquifer than to pump and treat brackish groundwater, this supply option is best considered after all of the available freshwater supplies from local aquifers have been permitted to their regulatory limits.

[4] Source: An Assessment of Aquifer Storage and Recovery in Texas. Malcom Pirnie for Texas Water Development Board, February 2011

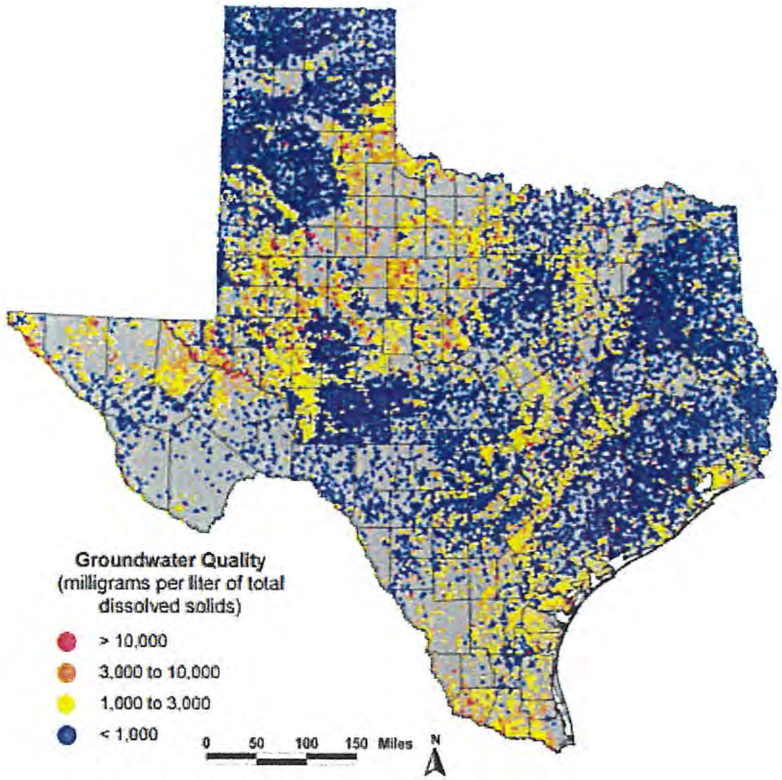

Figure 2-5. Brackish Groundwater in Texas[5]

Summary

While we have written very brief descriptions for these water management strategies, we have dedicated more time to seven water management strategies we think might have more merit. These strategies are more attractive in terms of the volume of water they would produce, the cost of that water, and/or other factors. Our analysis allows a side-by-side comparison of each. These write-ups also identify features of each strategy that make them appealing, as well as remaining impediments or uncertainties that need to be addressed prior to implementation. The water management strategies listed below are described in more detail in subsequent sections. This list is presented in no particular order.

1) Conservation (demand reduction through education and public outreach; leak detection and repair);
2) Additional local groundwater from the Trinity Aquifer and permitted through Hays Trinity GCD;
3) Additional supply from West Travis County Public Utility Authority;
4) Wastewater reuse;
5) Rutherford Ranch water from Middle and Lower Trinity Aquifer in Hays County;
6) Texas Water Alliance water from Carrizo Aquifer in Gonzales County; and
7) Forestar water from Simsboro Aquifer in Lee County.

[5] Source: Guidance Manual for Brackish Groundwater Desalination in Texas. R.W. Harden & Associates for Texas Water Development Board, April 2008

3.0 Conservation

Project Description

Water Conservation programs are meant to improve the efficiency of water use by communities. Conservation policies and programs are intended to be year-round efforts to provide long-term water savings. While conservation initiatives are often voluntary, they may also be implemented through capital improvements or specified by developer rules passed by regional water suppliers.

Implementation of conservation strategies have typically been very successful across Texas. For example, conservation strategies resulted in significant water use reductions in larger cities such as Austin and San Antonio. Austin's per capita use, as measured in Gallons per Capita per Day (gpcd), has dropped 22% since 2006 [18], while San Antonio has seen a reduction in water use from 225 gpcd in the mid-1980s to 133 gpcd in 2010 [19].

Water Conservation is recommended as a water supply strategy for the DSWSC in the 2016 Region K Regional Water Plan. If a municipal water provider has a year 2020 per capita water usage of greater than 140 gpcd, then Region K plan indicates a potential for savings through conservation [20].

Should this strategy be selected by DSWSC, they would have to develop a program and choose which methods might be most effective for the community. Examples of conservation measures that might be considered by DSWSC include the following brief list:

- Installation of Smart ("time-of-use") Meters;
- Utility water loss audits and repair;
- Assist customers with personal water use management with specialized software;
- Landscape Irrigation Standards; and
- Public Outreach and Education.

The DSWSC Water Conservation Plan submitted to the HTGCD includes conservation practices such as system leak detection and repair, encouraging the use of water-efficient landscape practices, and assisting the Groundwater District in the distribution of conservation and educational materials [21].

Expanding ongoing activities, this strategy mimics the water conservation strategies Region K recommended for DSWSC, which include continued leak detection and repair, and meter replacement with smart meters. Smart meters are electronic devices that record water consumption in real time and help customers identify water-wasting activities. Additional conservation measures such as revised landscape irrigation standards, and public outreach and education should also be considered. Lastly, public education efforts should also consider including source water protection (i.e ways consumers can protect their source water supplies through the use of environmentally friendly household products) in addition to encouraging efficient water use. With such a close connection between the aquifer and recharge from the surface, maintaining the water quality integrity of our surface and groundwater supplies ensures they are available into the future.

Source and Supply Volume

Conservation is a common water management strategy – meeting almost 25 percent of the projected water needs for the state over the next 50 years. Conservation efforts may postpone the need for implementation of some water development strategies, but is unlikely to meet all of the future needs for DSWSC.

The Region K Planning group (encompassing DSWSC) maintains a goal of 140 GPCD for all water user groups and recommends water conservation to meet that goal. Records indicate that DSWSC water use rate for 2013 was 183 gpcd.

If DSWSC implemented the water conservation practices recommended in the 2016 Region K Regional Water Plan and accomplished a 5% reduction in gpcd per decade until meeting the 140 gpcd goal, it would allow the Corporation to meet an additional 102 acft/yr of water demand to 2020. This additional supply made available through conservation increases to 250 acft by 2030 and 545 acft by 2070 (Table 3-1)[6].

The DSWSC future supply with conservation is shown in Figure 3-1.

Table 3-1. Volume of Water Available through Conservation

Year	2020	2030	2040	2050	2060	2070
Water Conserved (acft)	102	191	250	328	427	545

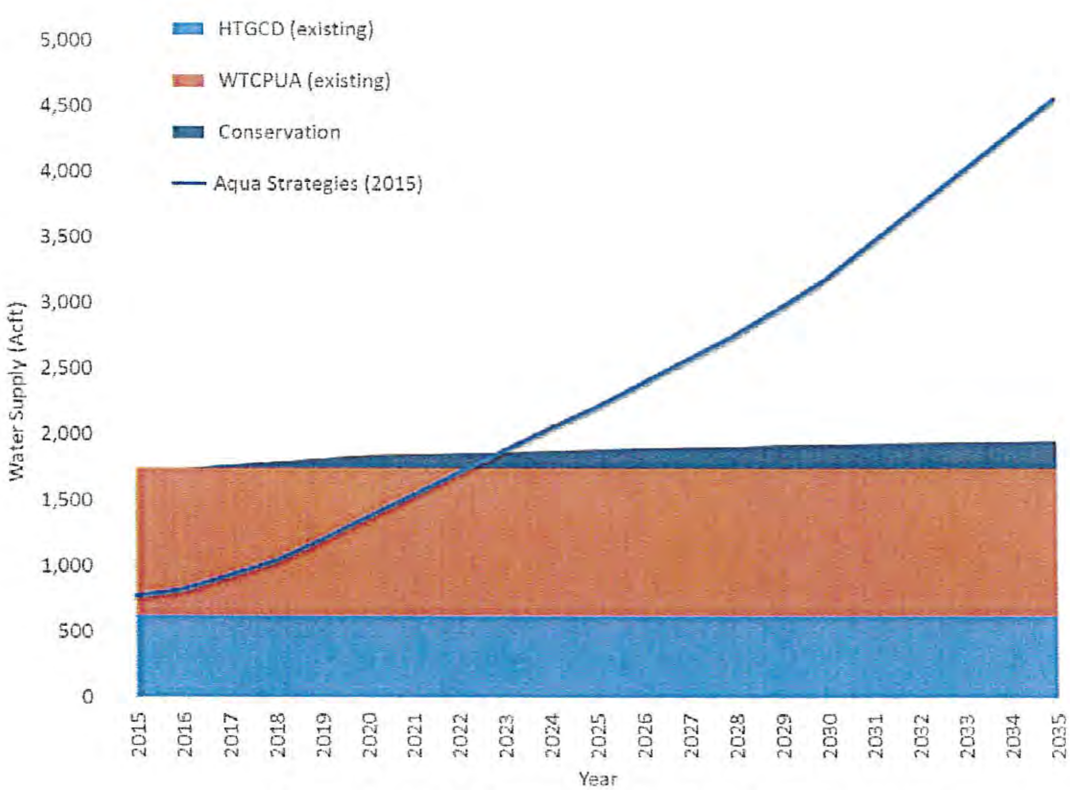

Figure 3-1. DSWSC Potential Future Supply with Conservation

Cost

The total capital cost to implement Conservation is listed in the 2016 Region K Plan as $117,553. Conservation capital costs were developed in the Region K Plan to represent the cost of meter replacement with smart

[6] In state water planning, conservation is considered to be a new supply of water (rather than a demand-reducing term) in order for it to be considered and compared to other conventional supply-enhancing water management strategies. This is the approach we took here too.

meters (ex. $100 per home) and leak detection and repair, but are intended to encompass other types of capital-cost associated conservation measures as well. The unit costs to achieve the water savings listed in the previous subsection is $304/acft [20].

Schedule of Availability

Water use reductions achieved are incremental over each year that Conservation is implemented, though Conservation practices can be implemented immediately. Some project elements like replacing meters and distribution system maintenance to reduce water losses may take a few months accomplish or may be included in the upcoming year's Capital Improvement Plan. The proposed implementation schedule for conservation is shown in Figure 3-2.

Conservation Tasks	Q2 -2016	Q3-2016
Project Initiation	■■■■	
Additional Water		■■

Figure 3-2. Project Schedule

Water Quality and Water Treatment

There are no water quality or water treatment considerations for this water supply strategy.

Additional Considerations

- Added resiliency
    - Does not diversify current supply, but extends existing supply
- Environmental Impacts
    - Extending use of current supply
- Uncertainty
    - Most conservation strategies are voluntary and depend on customer participation
- PR/Politics
    - Conservation recommended by the 2012 State Water Plan and current wholesale water suppliers (HTGCD & WTCPUA) to DSWSC.
- Regulatory
    - Some Conservation strategies can be mandated by DSWSC through developer requirements for landscaping.
- Local Economic Impact
    - Implementation of plumbing codes and/or landscaping requirements may promote local businesses, but can have negative economic impacts of DSWSC customers.

4.0 Additional Groundwater with Existing Permit Amendment

Project Description

The DSWSC is currently authorized by the Hays Trinity Groundwater Conservation District (HTGCD) to pump 625 acft/year of groundwater from the Trinity Aquifer. Additional groundwater may be authorized by the Hays Trinity Groundwater Conservation District by requesting an amendment to the current production permit held by the Corporation. Figure 4-1 below indicates the location of the four existing DSWSC groundwater wells.

Figure 4-1. Location of existing DSWSC Wells

Source and Supply Volume

DSWSC operates four wells that currently have a total pumping capacity of 1,275 gpm. The annual production available from these wells is 1,234 acft/yr [22]; the total annual production permitted by the HTGCD is 625 acft/yr. From a production perspective, the existing wells can produce an additional 609 acft/yr. This water supply strategy includes requesting authorization to ultimately pump an additional 495 acft/yr, for a total of 1120 acft/yr (1 MGD).

The HTGCD 2015 Annual Report indicates that there is an additional 2,248 acft/yr of Trinity Aquifer water available from the Modeled Available Groundwater (MAG) volume [23]. Of that amount, the report lists 2,242 acft/yr under future exempt use, however it also notes that this volume is not necessarily reserved for that use. In GMA 9, the DFC for the Trinity Aquifer is to "Allow for an increase in average drawdown of approximately 30 feet through 2060" which was adopted July 26, 2010 [24]. The Modeled Available Groundwater (MAG) was determined by applying the DFC to a three-dimensional numerical groundwater flow model of the Middle Trinity Aquifer. This MAG value was determined to be 9,100 acft/yr [25].

The production permit amendment would request authorization to pump in tiered fashion. An additional 250 acft/yr pumped until 2020 when additional pumping would increase to 375 acft/yr. By 2030 full additional authorized amount would be pumped [26].This would bring the total supply available from the Trinity Aquifer to 1120 acft/yr. This pumping schedule is shown in Table 4-1. The total DSWSC future water supply with this additional supply is shown in Figure 4-2.

Table 4-1. Additional Trinity Groundwater Supply

Year	**2017**	**2020**	**2025**	**2030**	**2035**
Additional HTGCD Supply (acft)	250	375	375	495	495

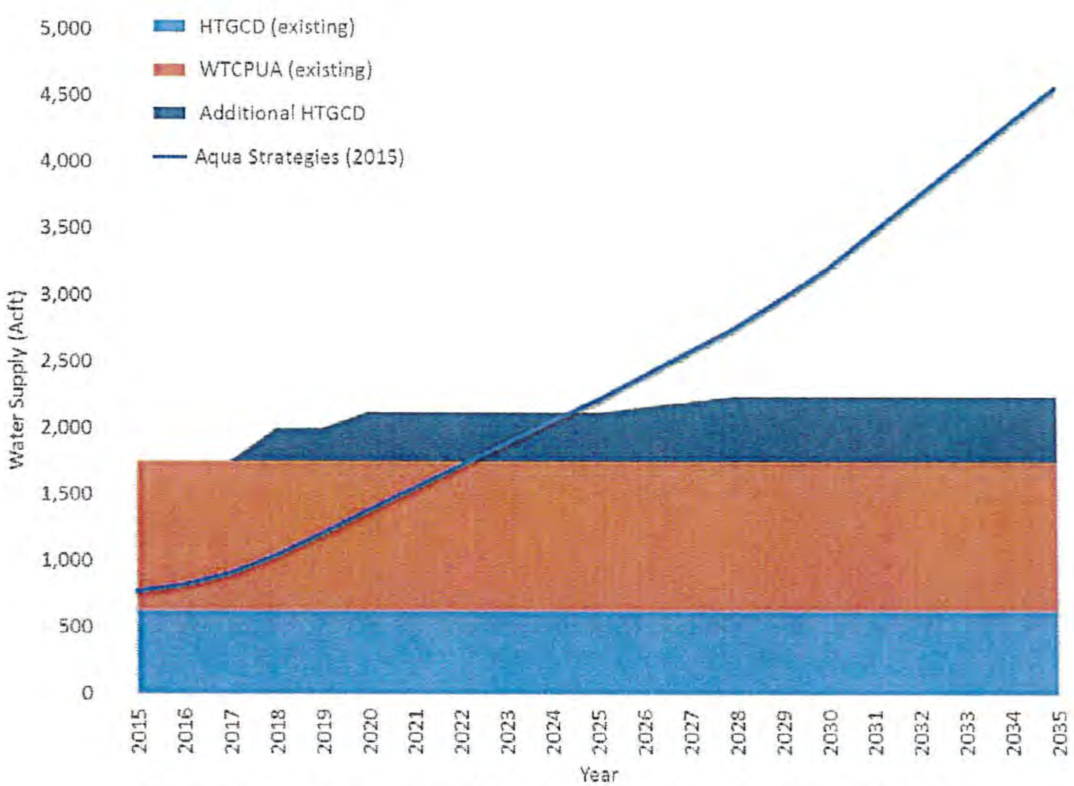

Figure 4-2. Total DSWSC supply with additional supplies from WTCPUA

Cost

There is no additional annual cost of the permitted wholesale water supply from the Hays Trinity Groundwater Conservation District. However, additional pumping power costs are anticipated to be approximately $34,040 annually by 2035 to pump an additional 495 acft/yr from the existing wells ($68.77/acft, historical pumping costs from DSWSC records).

Schedule of Availability

Authorization to pump additional water from the existing DSWSC wells will require a permit amendment from the Hays Trinity Groundwater Conservation District. It is anticipated that the permit amendment process, if initiated soon after the completion of this study, will take approximately 9 months. Additional water delivery should be anticipated during the first quarter of next year, 2017, as shown in Figure 4-3.

Additional HTGCD Tasks	Q2 -2016	Q3-2016	Q4-2016	Q1 -2017
Permit Ammendment	■	■	■	
Water Delivery				■

Figure 4-3. Project Schedule

Water Quality and Water Treatment

There are no water quality or additional water treatment considerations for this supply option because this is an expansion of the DSWSC current supply and will be sourced from existing wells.

Additional Considerations

- Added resiliency
  - Does not diversify the DSWSC supply
- Environmental Impacts
  - Minimal
- Uncertainty
  - Once permit amendment is authorized, uncertainty is low. Existing wells have available pumping capacity
- PR/Politics
  - Possible community opposition to additional pumping from the Trinity Aquifer
- Regulatory
  - Potential for HTGCD Board to not approve permit amendment application (or authorize a reduced amount)
- Local Economic Impact
  - Minimal

5.0 Additional Surface Water through WTCPUA

Project Description

The DSWSC is currently contracted to purchase 1,120 acft of water from the West Travis County Public Utility Authority (WTCPUA). The WTCPUA is a publicly owned Water and Wastewater Utility that serves Western Travis and northern Hays Counties.

This water supply strategy includes increasing the contracted volume of water that DSWSC purchases from the WTCPUA through a contract amendment.

Recent discussions with the WTCPUA indicate that there is an additional 300,000 gpd of available transmission capacity in the current highway 290 pipeline, that could be delivered to the DSWSC system [26]. Additionally, there is surplus supply capacity available in their system but delivery of that water is currently limited by their existing intake and pump station. The current 2013 Capital Improvement Plan includes system improvements to increase that delivery capacity. This includes an expansion of the raw water intake, raw water pipeline, ground storage and pump stations to increase the capacity to 30 MGD [27]. However, the long term future capacity that would ultimately be made available is dependent on a request from DSWSC for additional water and the development of the 2016 CIP as indicated by conversations with Don Rauschuber, General Manager of WTCPUA [28].

Source and Supply Volume

The supply from the West Travis County PUA is from the Colorado River (Figure 5-1). WTCPUA pumps raw water from the lake through an intake structure located on Lake Austin and treats it at the Uplands Water Treatment Plant. Treated water is transported to the DSWSC service area via the 290 pipeline portion of the WTCPUA distribution system.

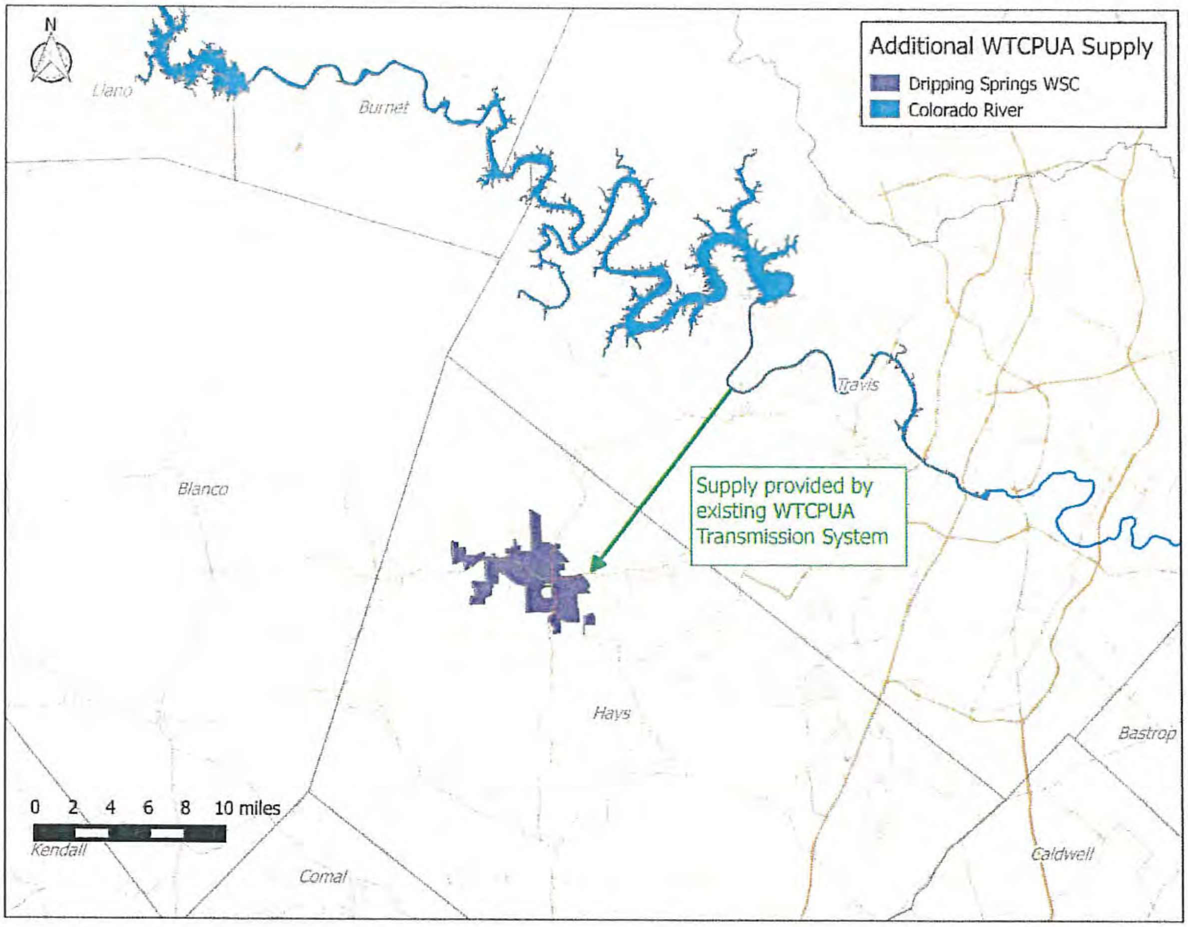

Figure 5-1. West Travis County Public Utility Agency Supply Source

This supply strategy requires amending the current supply contract with WTCPUA to purchase an additional 300,000 gallons per day (336 acft/yr) of treated water which would be available from WTCPUA through their existing infrastructure and would be available once the contract is amended. An additional 700,000 gallons per day (784 acft/yr) would be secured from WTCPUA by 2025 which would increase the current supply of 1120 acft/yr by another 1120 acft/yr, resulting in a total future supply from WTCPUA of 2.0 MGD. This future supply scenario is shown in Figure 5-2.

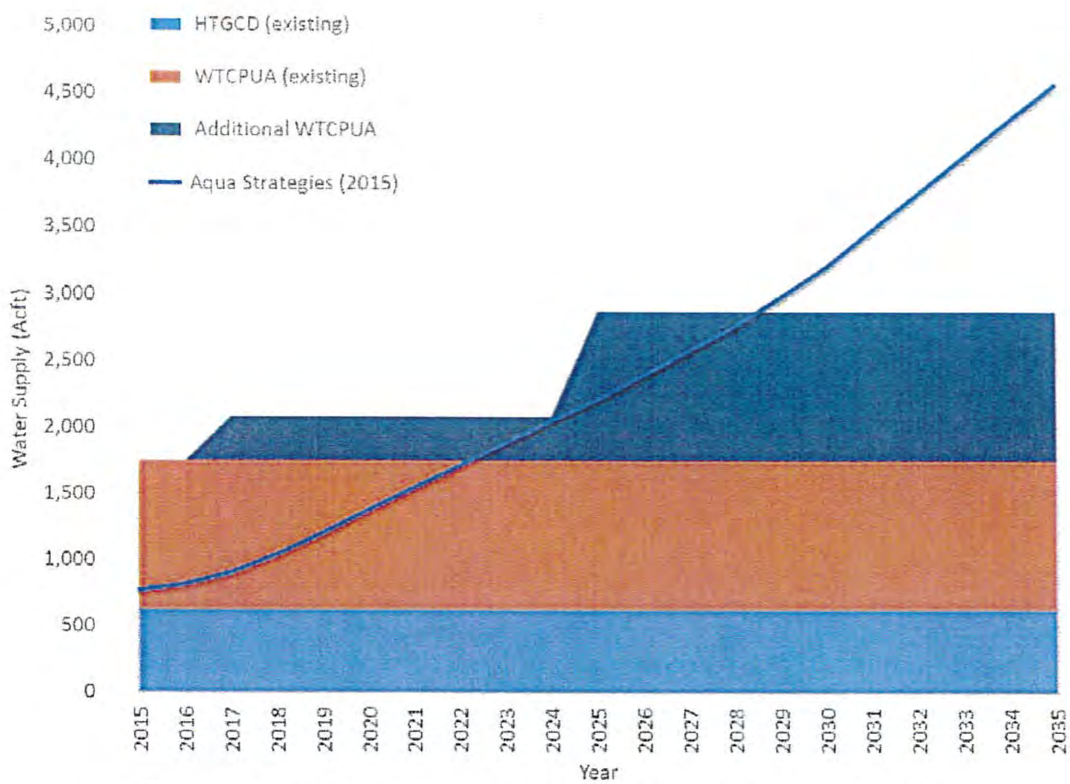

Figure 5-2. Total DSWSC supply with additional supplies from WTCPUA

Cost

The cost of additional water from WTCPUA is assumed to be equivalent to the current unit cost of water, which is $1.76 per 1,000 gallons, or $573.50/acft. Increasing the supply from WTCPUA would result in an additional impact fee of $12,938 per connection that would be charged by the DSWSC in addition to the existing $4,400 Capital Contribution Fee.

Schedule of Availability

It is anticipated that the contract amendment and negotiation process could take the remainder of the year if the DSWSC decides to move forward with this strategy. Additional water would then be available by early 2017 as shown in the project schedule below (Figure 5-3)

Additional WTCPUA Tasks	Q2 -2016	Q3-2016	Q4-2016	Q1 -2017
Contract Negotiations				
Water Delivery				

Figure 5-3. Project Schedule

Water Quality and Water Treatment

There are no water quality or additional water treatment considerations for this supply option because this is an expansion of the DSWSC current supply from the WTCPUA.

Additional Considerations

- Added resiliency
    - Does not diversify the DSWSC supply
- Environmental Impacts
    - Minimal
- Uncertainty
    - Contract negotiations with WTCPUA may ultimately fail
- PR/Politics
    - None
- Regulatory
    - Minimal
- Local Economic Impact
    - Minimal

6.0 Wastewater reuse

Project Description

The City of Dripping Springs (the City) operates the South Regional wastewater treatment plant (WWTP) which is rated for 127,500 gallons per day (gpd) and currently treats an average flow of approximately 70,000 gpd. Due to projected population growth, the City plans to expand this capacity in three permit phases. The first phase is an expansion to 399,000 gpd. The next stage would increase the capacity to 497,500 gpd. The ultimate capacity will be 995,000 gpd. [29, 30]

The City currently holds a Texas Land Application Permit (TLAP) issued by the Texas Commission on Environmental Quality (TCEQ) that allows for disposal of the effluent from the South Regional Plant via drip irrigation on-site. A pending amendment to the City's TLAP permit will authorize disposal of the treated effluent using spray irrigation once the flow at the South Regional Plant exceeds the existing Texas Pollution Discharge Elimination System (TPDES) permit capacity. This will allow the implementation of beneficial reuse of non-potable water for irrigation use throughout the City.

The City filed a discharge permit application in October 2015 to authorize disposal of treated effluent into Walnut Springs, a tributary to Onion Creek [30]. The City intends to beneficially reuse the treated effluent as much as possible to reduce the volume of discharge into Walnut Springs and to reduce the use of potable water for irrigation.

In April 2015, Carollo Engineers completed a study to evaluate the feasibility of Direct Potable Reuse (DPR) of the treated effluent and the City is moving forward with next steps towards implementation [31]. The City and DSWSC recently entered into a nonbinding letter of intent to evaluate a joint effort to implement DPR [30]. The City also maintains a long term goal of treating the effluent for direct potable reuse to provide an additional water supply to their residents as well as reduce the volume of discharge to Walnut Springs as the population and demand for wastewater treatment grows.

For the purposes of this study, the two forms of beneficial reuse – non-potable reuse for irrigation and DPR – are treated separately.

Non-potable Reuse for Irrigation

Texas Administrative Code 30 §210.3 defines reclaimed water as domestic or municipal wastewater treated to a quality suitable for a beneficial use [32]. As the population of Texas continues to grow and unused surface water and groundwater supplies diminish, reuse is becoming a popular and widely used method to increase water supply.

Reclaimed water can be used for potable and non-potable purposes including but not limited to municipal and industrial uses. Examples of non-potable municipal and industrial applications include golf course irrigation and use in cooling towers. Most of the 2016 Regional Water Plans include reuse strategies to meet non-potable demands. Volumetrically, reuse accounts for 14.2 percent of all new water through the year 2070 in the draft 2017 State Water Plan, most of which is non-potable reuse for industrial or irrigation purposes. Texas' annual existing water supply from reuse will increased by 28 percent from 2020 to 2070 [33].

Beneficial reuse of non-potable treated effluent for irrigation demands in Dripping Springs has the potential to offset current potable water demands from the DSWSC. Figure 6-1 shows the parks where the City has plans to irrigate with treated effluent [34].

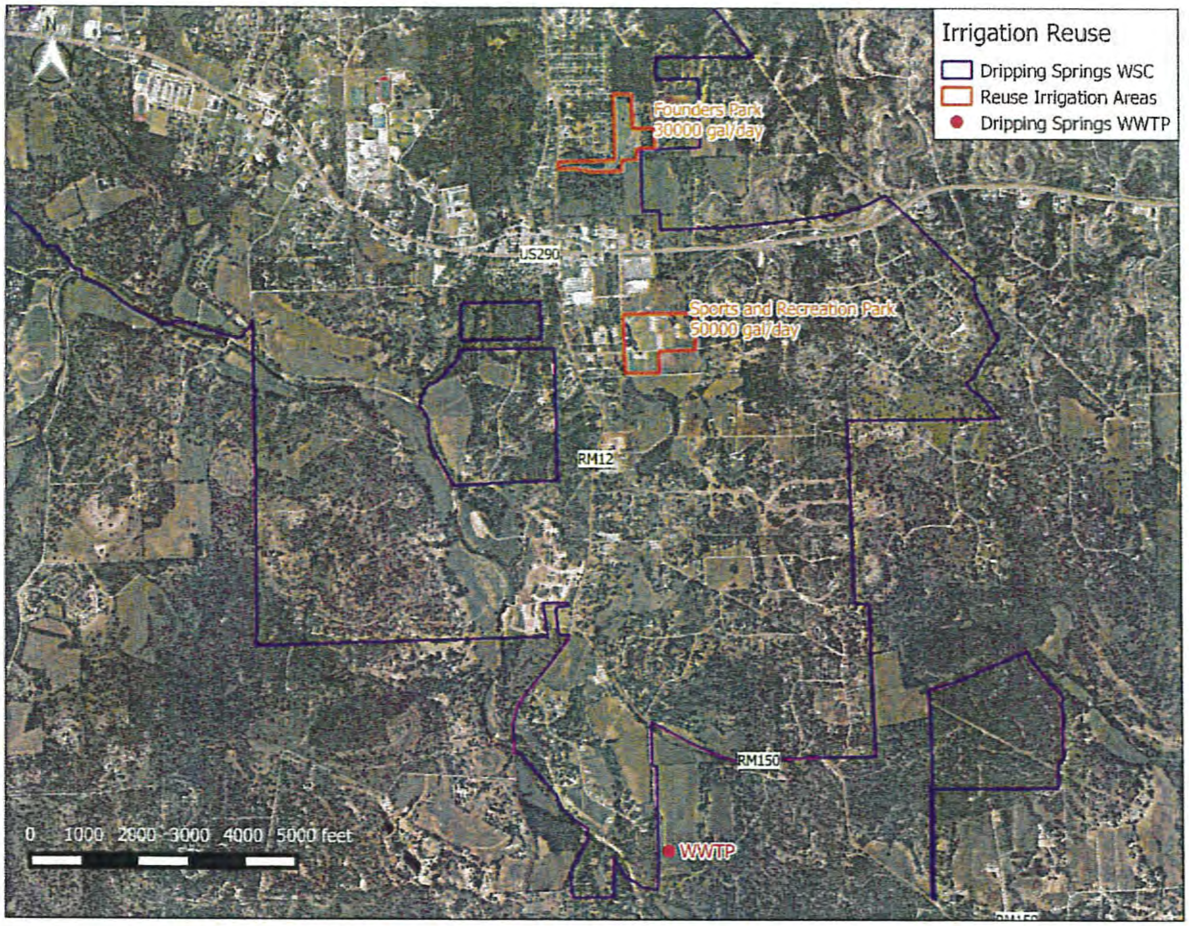

Figure 6-1. Location of future beneficial reuse irrigation sites

Source and Supply Volume

The City plans to aggressively expand its beneficial reuse program. The City has an executed contract with Caliterra for 118,000 gpd in reuse supplies, and is in active negotiations with other developers to accept treated effluent for reuse at their respective future developments [35]. Additionally, two City park areas have been identified for irrigation with treated effluent that currently use potable water from DSWSC. The beneficial reuse supplies were estimated from the current annual average irrigation water use. This volume is 50,000 gpd at the Sports and Recreation Park and an additional 30,000 gpd for irrigation of Founders Park [36].

Implementation of the City of Dripping Springs reuse program will result in a savings of 80,000 gpd of DSWSC supplies water, which is 90 acft/yr on an average annual basis (Figure 6-2).

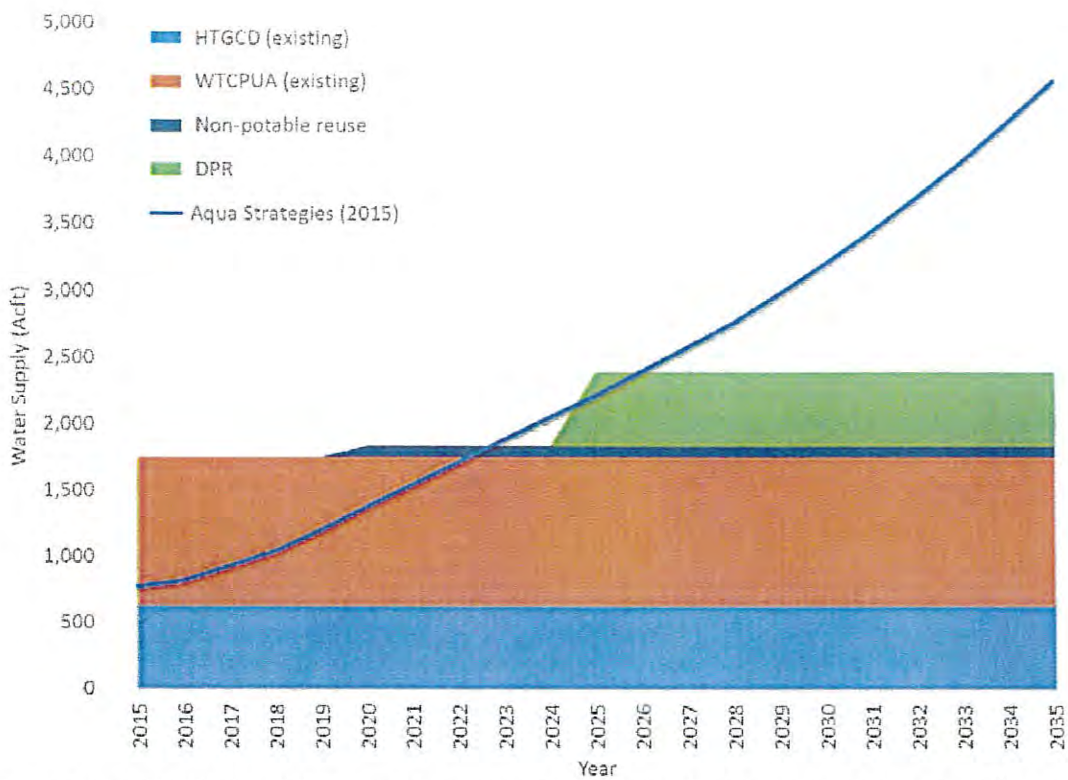

Figure 6-2. DSWSC Potential Future Water Supply with Irrigation Reuse and Direct Potable Reuse

Cost

The reclaimed water supply being made available by the City of Dripping Springs for its irrigation needs reduces demand from DSWSC. This makes that same volume of water available for DSWSC to meet future water supply needs. This can be considered a cost savings of capital costs that would otherwise be spent securing new supplies.

Using an example supply and demand curve Figure 6-3 shows that by reducing potable water demand on the system with beneficial reuse, certain costs for expanded treatment, pumping, storage and distribution infrastructure can be eliminated or at least pushed out to a future date, thereby representing a resulting savings to the water provider. Additional savings may be realized if new potable water supplies are needed and the cost to capture new water supplies is eliminated or postponed.

For example, irrigation use of non-potable supplies generally has the greatest impact to the system during summer months when peak irrigation drives the sizing of the potable system. By meeting peak summer demand with reuse supplies, the current sizing of the potable system can last longer without capacity modifications.

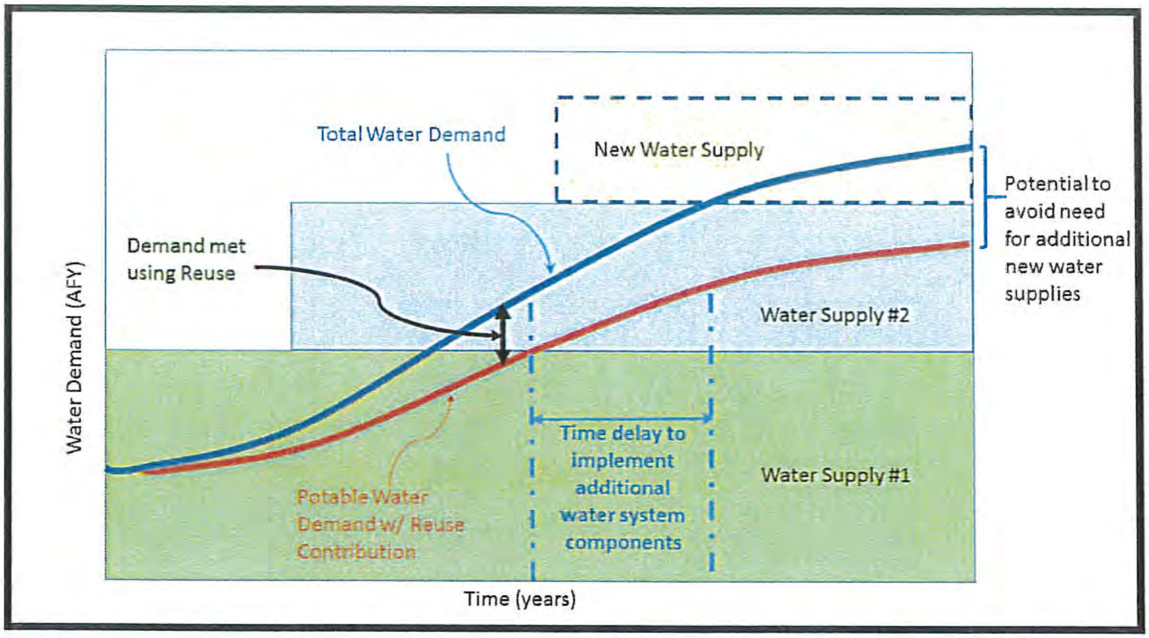

Figure 6-3. Avoided Costs due to Implementation of Reuse

Schedule and Availability

Implementation of beneficial reuse supplies in areas that are currently irrigated with DSWSC potable supplies is dependent upon the development of the Heritage Public Improvement District. This development has an agreement with the City of Dripping Springs to use reclaimed water for irrigation purposes and will help to extend the needed infrastructure along Hwy 12 to its property. This extension will allow access to the reuse supply line for irrigation of the Sports and Recreation Park and Founders Park. The timeline below (Figure 6-4) provides an estimate of when the reclaimed water line extension may take place based on conversations with the City [36].

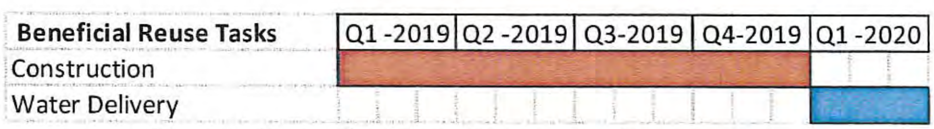

Figure 6-4. Beneficial Reuse Project Timelines

Water Quality and Water Treatment

The beneficial reuse supply will serve to offset potable demand for irrigation, so there are no water quality or water treatment considerations for DSWSC to consider for this strategy.

Additional Considerations

- Added resiliency
    - Reuse water supplies are essentially drought proof supplies, which creates a more resilient water supply for the Dripping Springs community
- Environmental Impacts

    - Minimal as pipeline construction for the distribution system will be within existing right-of-way. Beneficial reuse provides an alternative to disposal of the treated effluent by discharging into a tributary to Onion Creek.
- Uncertainty
    - Minimal
- PR/Politics
    - Minimal. Beneficial reuse through irrigation has become a common practice.
- Regulatory
    - DSWSC should encourage additional water users (future water commitments) to offset potable water use with non-potable reuse water provided by City of Dripping Springs, where appropriate.
- Local Economic Impact
    - Provides a local benefit by developing additional local water supply through construction of distribution pipelines and treatment facilities into the future.

Direct Potable Reuse

Direct potable reuse (DPR), is the direct reuse of treated wastewater effluent that has been subjected to additional advanced water treatment to meet drinking water standards for potable use. DPR projects are typically considered in situations where local supplies are insufficient or unreliable and other options are expensive.

In Texas, DPR has been implemented in Big Spring and Wichita Falls. The City of Buda is in the planning stages, similar to Drippings Springs. El Paso Water Utilities, North Texas Municipal Water District and Tarrant Regional Water District (and many, many other water suppliers) use indirect potable reuse to supplement their drinking water, where the reclaimed water is released into a surface water and withdrawn again downstream, treated, and placed back in the distribution system. [37]

Over the last decade, treatment technology has improved and the costs have decreased. These developments have made it easier to implement direct potable reuse. Despite implementation of projects across Texas and many across the US, implementing DPR remains challenging due to the perception that water from DPR plants is unsafe or unhealthy. These challenges may be overcome through education and public relation campaigns.

Drinking water safety is a primary focus for any direct potable reuse project. The Texas Commission on Environmental Quality (TCEQ) regulations establish the requirements for system design, operational requirements and quality of reclaimed water for potable use.

The treatment process proposed in the Dripping Springs DPR Feasibility report [31] includes ozone-biofiltration based advanced treatment, and engineered storage to ensure a buffer between the DPR supply stream and the DSWSC distribution system. The purpose of the storage buffer is to confirm that finished water meets all quality specifications before it can be released into the distribution system

It should be noted that pathogen exposure represents the most acute health concern for DPR. The proposed advanced treatment process meets the requirements for pathogen control which includes inactivation/removal of bacteria, protozoan cysts, and viruses to meet TCEQ goals that are specific to potable reuse to minimize exposure to pathogens.

TCEQ requires that utilities considering treated wastewater as a potential raw water source conduct an effluent characterization program. This involves taking wastewater effluent samples over a 12-month period and analyzing those samples for all regulated water quality constituents and contaminants including contaminants of emerging concern (CEC) from pharmaceuticals and personal care products. TCEQ may require additional performance criteria from the results of this characterization program.

TCEQ also requires significant pilot testing to be completed before a project can achieve final approval. This is done with the operation of a smaller-scale treatment process unit that can appropriately simulate the full scale advanced treatment process. The purpose of the pilot testing is to establish that the proposed treatment process will consistently produce water quality that meets all drinking water standards.

DPR is of interest to many water suppliers because it represents a drought-proof supply of water that grows with the increasing size of the customer base. It is also a sustainable supply of water in that does not draw from existing (and sometimes depleted sources), such as aquifers, streams or rivers, or lakes. Furthermore, advanced treatment and reuse may reduce the discharge or disposal of wastewater that would otherwise have to be made to local water courses.

Source and Supply Volume

City of Dripping Springs is planning a 500,000 gpd (560 acft/yr) direct potable reuse treatment facility to meet long term demands by integrating this supply into the DSWSC system. The full 560 acft/yr of supply is expected to be available in 2025 because the projected wastewater volume available for treatment is anticipated to be in excess of the full capacity of the DPR plant.

In the long term, both potable and non-potable reuse provide an opportunity to reduce the future demand of drinking water the DSWSC would otherwise have to meet. A plot of both reuse supply volumes with the current DSWSC supply to 2035 is shown in Figure 6-2.

Cost

The City of Dripping Springs with the participation of DSWSC plans to integrate the DPR supply with the existing DSWSC supplies to serve the entire system. The Dripping Springs Direct Potable Reuse Feasibility Study [31] provided costs for implementing DPR which consists of the DPR treatment process at the South Regional Plant Site with backup discharge to Walnut Creek that discharges into Onion Creek. However, some items included in the cost estimate are planned for implementation in association with the City's wastewater treatment plant upgrades as a part of their current discharge permit application. Revised costs for Alternative 1A were provided by Dr. Steinle-Darling with Carollo Engineers [38] to reflect the actual future cost of implementing DPR. These costs are shown in Figure 6-5.

Table 7.1 Cost Summary for Alternative 1A - REVISED Direct Potable Reuse Feasibility Study City of Dripping Springs			
Description		**Totals**	
Upgrades to Existing WWTP for Biological Nutrient Removal		$	-
Advanced Treatment Facilities and Engineered Storage Buffer		$	4,821,000
Pumping Finished Water to DSWSC Wells		$	462,000
Discharge Infrastructure		$	75,000
Total Direct Cost		**$**	**5,358,000**
Unidentified Project Elements - All but Advanced Treatment System	30%	$	161,000
Unidentified Project Elements - Advanced Treatment System	15%	$	723,000
Subtotal		**$**	**6,242,000**
General Contractor Overhead, Profit & Risk	15%	$	936,000
Subtotal		**$**	**7,178,000**
Engineering, Legal, and Administrative Fees	15%	$	1,077,000
Total Estimated Project Capital Cost		**$**	**8,255,000**

Table 7.2 O&M Cost Summary for Alternative 1A - REVISED Direct Potable Reuse Feasibility Study City of Dripping Springs		
Description	**Totals**	
Upgrades to Existing WWTP for Biological Nutrient Removal	-	
Advanced Treatment Facilities	$	104,000
Advanced Treatment Facilities Operation Staff	$	368,000
1 MG Finished Water Storage Tank and Connection to Existing System	$	5,000
Discharge Infrastructure	$	-
Annual O&M Cost	$	477,000
Annualized Capital Costs	$	662,000
Total Annual Cost ($/yr)	**$**	**1,139,000**
Total Cost of Water ($/1000 gallons)	$	6.24
Total Cost of Water ($/ac-ft)	$	2,034
O&M Cost of Water ($/1000 gallons)	***$***	***2.61***
O&M Cost of Water ($/ac-ft)	***$***	***852***

Figure 6-5. Drippings Springs DPR Cost Estimates[7]

The total project capital cost to implement DPR is $8,255,000. The annual cost of debt service is calculated from the capital cost based on a 20-year project life at a 5% annual discount rate. The annual debt service is determined to be $662,000. Based on the additional LUEs projected from 2023 when it is expected that the

[7] Source: Communications with Dr. Eva Steinle-Darling, Carollo Engineers, March 3, 2016.

City will begin to incur costs associated with the project, we estimate that the appropriate Impact Fee would be $2,500 per connection until 2035 to repay the debt service on the capital expenditure to build the DPR facilities. It is unknown at this time whether the City of Dripping Springs or the DSWSC would collect the impact fee for each new connection.

The annual O&M of $477,000 is expected to be paid for by DSWSC water users. The DPR strategy will provide 500,000 gallons per day, which results in a unit cost $852 per acft or $2.61 per 1,000 gallons of water. This unit cost is used in the project comparison ranking as the cost of water for DSWSC to implement this strategy. It should be noted that the O&M costs presented are conservative as they assume staffing the treatments facilities 24 hours per day which may not necessarily be required by TCEQ in the final permit authorization [38].

Schedule of Availability

The City of Dripping Springs anticipates the construction of the WWTP expansion will be complete in early 2020 [30]. DPR pilot testing is planned after completion of the WWTP. After pilot testing is complete there are many factors that will determine the timeline for the implementation of the Direct Potable Reuse system. However, the City of Dripping Springs anticipates that the DPR supply will be available by early 2025. This project schedule is estimated based on an assumed implementation start date of mid-2023 (Figure 6-6).

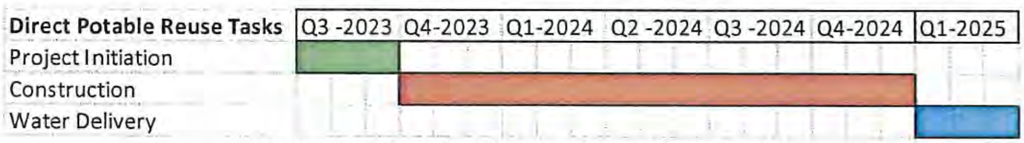

Figure 6-6. Beneficial Reuse Project Timelines

Water Quality and Water Treatment

The direct potable reuse supply will require considerable treatment but this treatment process will be owned and operated by the City of Dripping Springs. The DPR feasibility study [31] determined that there is a possibility that the salinity levels of the DPR supply may be slightly higher than the maximum allowable TDS concentration of 1,000 mg/L. Blending the DPR source with the existing DSWSC supply in the distribution system alleviates this issue.

Additional Considerations

- Added resiliency
    - Reuse water supplies are essentially drought proof supplies, which creates a more resilient water supply for the Dripping Springs community
- Environmental Impacts
    - Beneficial reuse provides an alternative to disposal of the treated effluent by discharging into a tributary to Onion Creek.
- Uncertainty
    - The availability of additional supplies through DPR is very certain because treated wastewater effluent will always be available.
- PR/Politics

    - Community acceptance of potable reuse will need to be fostered through education and outreach. However, the long term feasibility of Direct Potable Reuse due to public acceptance and perception is uncertain at this time.
- Regulatory
    - DPR would have to meet TCEQ standards.
- Local Economic Impact
    - Provides some local benefit by developing additional local water supply through construction of distribution pipelines and treatment facilities into the future.

7.0 Rutherford Ranch Groundwater

Project Description

The owners of the Rutherford Ranch plan to develop a groundwater supply project with a wellfield consisting of 5 to 10 wells completed in the middle and lower Trinity Aquifers [39]. The Rutherford Ranch is located on FM 967 in Hays County between Buda and Driftwood. The original property was purchased by Mr. Rutherford's grandfather in the 1940s and at one time encompassed over 14,000 acres of land. The property where the well field will be located is approximately 3,662 acres on the south side of FM 967 (see Figure 7-1). Delivery of the water from a take point at the northeast corner of the ranch to the DSWSC distribution will be via an 8-mile transmission pipeline built, owned and operated by the DSWSC.

An unbinding letter of intent has been submitted to the DSWSC from the Rutherford Ranch to initiate discussions about this potential water supply [23].

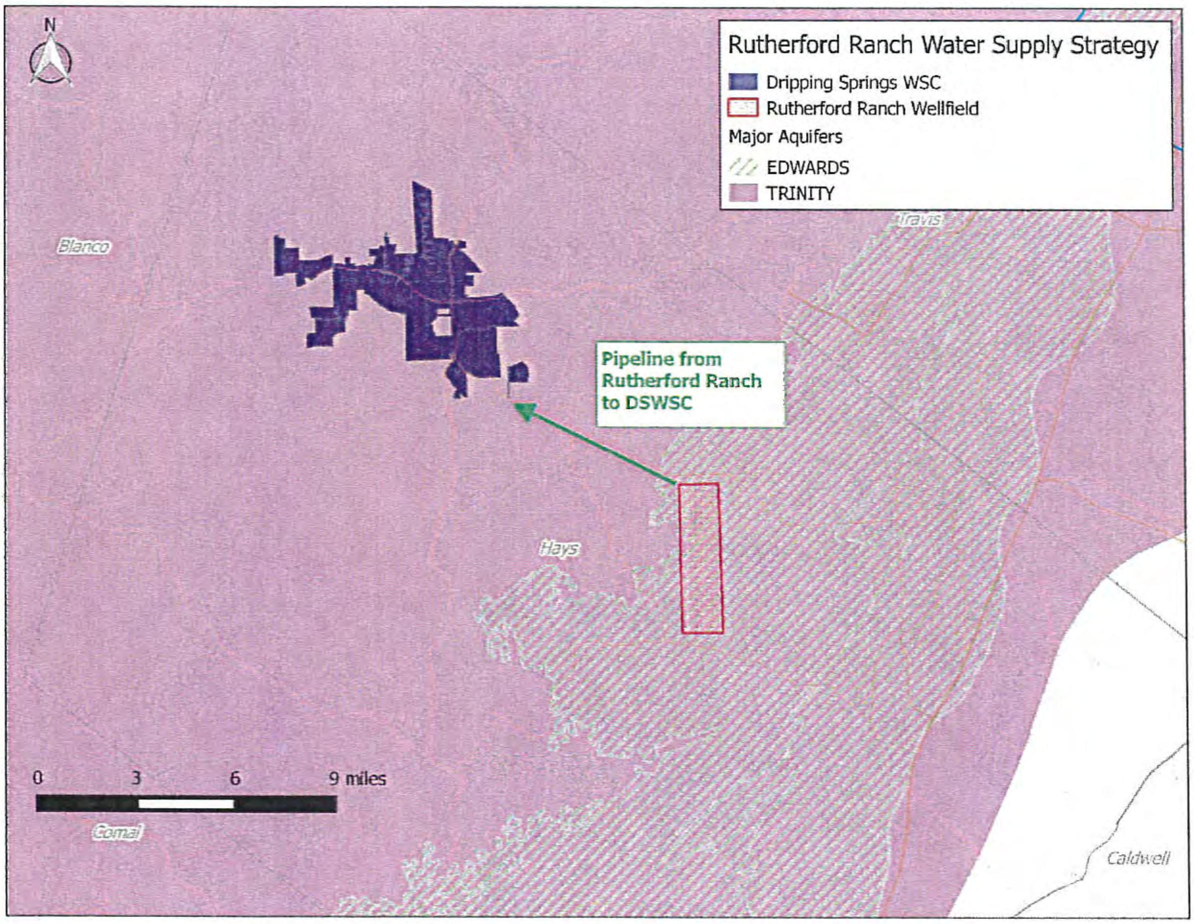

Figure 7-2. Rutherford Ranch Supply Project Schematic

Source and Supply Volume

This project will consist of 5 to 10 wells that will produce up to 3.0 MGD or 3360 acft/year from the Middle and/or Lower Trinity Aquifer within the Barton Springs Edwards Aquifer Groundwater Conservation District [40]. Figure 7-2 shows the volume of Rutherford Ranch supplies with the DSWSC current supplies. There is little data on the Lower Trinity aquifer in this region. For this reason, the Barton Springs Edwards Aquifer

Conservation District has indicated that they would be interested in participating in the installation of test wells and continued monitoring of the those wells to better understand the characteristics of the groundwater formation [40,41].

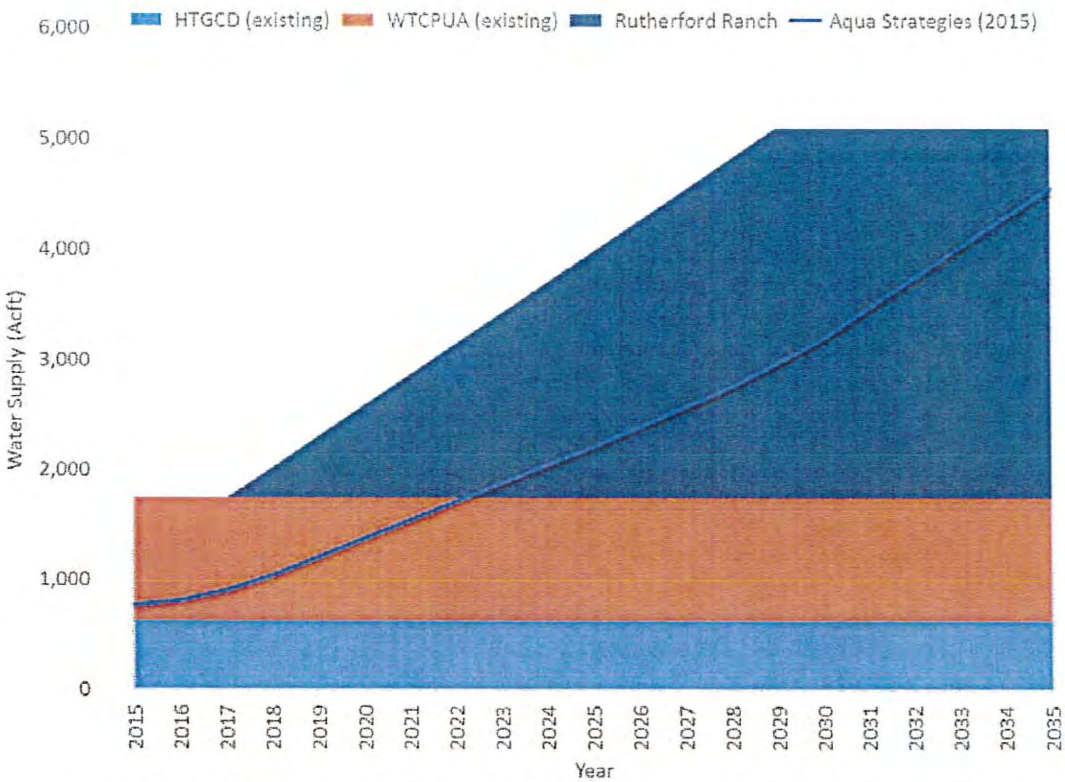

Figure 7-2. DSWSC Supply and Rutherford Ranch Supply with Project Water Demands

There is considerable faulting of the Trinity Aquifer formation between the Dripping Springs area and the Rutherford Ranch (Figure 7-3), which potentially enhances the yield of their proposed wells. Water levels within the Trinity aquifer also indicate that this supply would be considered 'downstream' of the Trinity Aquifer supply that is drawn on by current DSWSC wells, minimizing impacts to DSWSC. There are also conservation lands adjacent to the Rutherford Property, providing a buffer between the proposed well field and adjacent landowners.

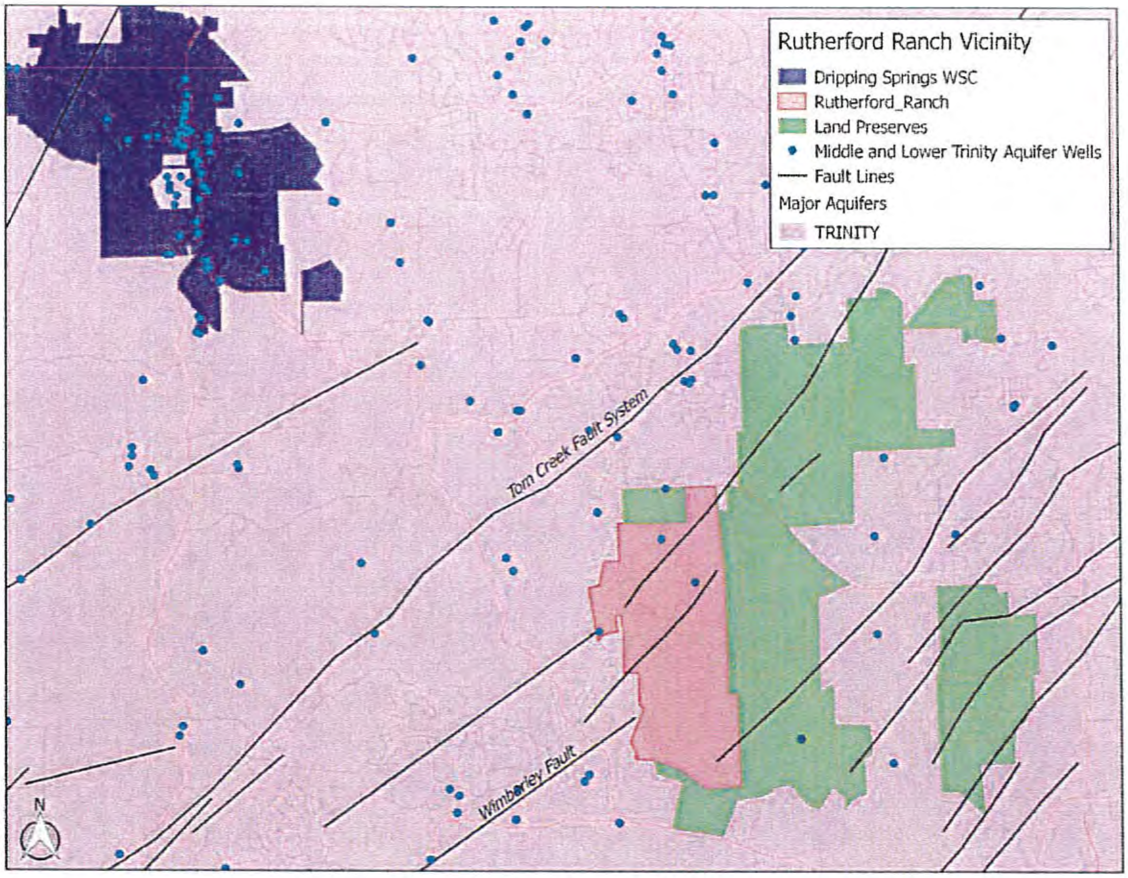

Figure 7-3. Rutherford Ranch Vicinity

Cost

The cost figures presented in this subsection were provided by Mike Rutherford and are taken on their face value. The first year unit cost of water is \$4.50/1,000 gallons, cost with a 3.22% rate of inflation applied each year. By 2025 the unit cost of wholesale water from the Rutherford Ranch supply project will be \$5.80 /1000 gallons, and \$7.96 /1000 gallons in 2035. There is an initial reservation fee of \$0.45 /1000 gallons which is 10% of the cost of delivered water. This cost will increase annually by the same inflation factor. An Impact fee of \$3,000 is also included in the contracted cost of the supply. This impact fee will be assessed per connection in addition to the DSWSC \$4,400 Capital Contribution fee until the ultimate project supply capacity of 3.0 MGD is being purchased by DSWSC. The unit cost of the water supply is \$4.64 by 2018 when it will ultimately be delivered. [42]

Mr. Rutherford indicated that the payment model is negotiable in order to help DSWSC maintain positive cash flow. For example, the delivered cost of the water may be priced at \$6.00 per 1,000 gallons with higher impact fee payments deferred until later years in the contract. This would allow DSWSC to collect an impact fee for connections in earlier years of the contract, but use those funds towards wholesale water payments. Transmission of the water supply from the take point at the northwest corner of the Rutherford Ranch will be the responsibility of the DSWSC. Initial capital cost estimates given by the Rutherford Ranch project consultants for an 8 mile pipeline range from \$3.6 to \$5.1 million. Table 7-1 provides a preliminary annual cost estimate to build an 8 mile, 16-inch transmission pipeline from the Rutherford Ranch to the DSWSC system. The lower initial capital cost estimate was assumed with additional contingencies applied resulting in a total project cost of $4,680,000. The annual cost including O&M, power costs, and debt service for 20 years is estimated to be $420,000.

The total unit cost for water from the Rutherford Ranch Project is the sum of the unit costs for the wholesale supply, which will be paid to the Rutherford Ranch and the debt service for the transmission pipeline that will be owned and operated by the DSWSC. This total unit cost is $5.02 per 1,000 gallons or $1,636 per acft (see Table 7-2).

There is a $0.48 transportation fee per 1,000 gallons that is imposed by BSEACD [43]. It is unknown if this cost will be passed on to DSWSC or included in the delivered costs and will be paid by the project owners.

Table 7-1. Opinion of Probable Cost Summary for Transmission Pipeline from Rutherford Ranch to Dripping Springs Water Supply Corporation System.

Opinion of Probable Cost Summary ***DSWSC - Rutherford Supply Transmission Pipeline***	
Item	***Estimated Costs for Facilities***
CAPITAL COST	
Transmission Pipeline and Pump Station	$3,600,000
TOTAL COST OF FACILITIES	**$3,600,000**
Contingencies (15% for all facilities)	$540,000
Engineering, Legal Assistance, Financing and Bond Counsel (15% for all facilities)	$540,000
TOTAL COST OF PROJECT	**$4,680,000**
ANNUAL COST	
Debt Service (3 percent, 20 years)	$333,000
Operation and Maintenance	
Pump Station, Pipeline and Storage Tanks (1% of Cost of Facilities)	$50,000
Pumping Energy Costs (414370 kW-hr @ 0.09 $/kW-hr)	$37,000
TOTAL ANNUAL COST	**$420,000**
Total Annual Supply (acft/yr)	3,360
Annual Cost of Transmission ($ per acft water delivered)	$125
Annual Cost of Transmission ($ per 1,000 gallons water delivered)	$0.38

Table 7-2. Rutherford Ranch Water Supply Project Unit Costs

Rutherford Ranch Water Supply Project	Cost ($ per 1,000 gallons)
Wholesale Water Supply	$4.64
Transmission Pipeline	$0.38
Total	$5.02

Schedule of Availability

Mike Rutherford plans to have test wells installed by late March/early April 2016 with a goal to deliver water by late 2017. However, the process of receiving a production permit from the Barton Springs Edwards Aquifer Groundwater Conservation District is expected to take at least 18 months. This process includes submitting a Test Well Application for review and approval, then a Drilling Modification Application, and finally a Production Permit Application. Each of these three applications would typically have a review period of 180 days each. Assuming that the permit application is not contested and the transmission pipeline is built within the same 18 month period, it would be reasonable to anticipate that water from this project will be available by early 2018 as shown in Figure 7-4 below.

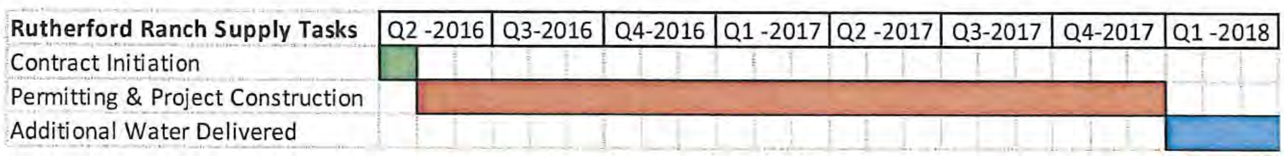

Figure 7-4. Rutherford Ranch Water Supply Project Schedule

Water Quality and Water Treatment

Records indicate that the Lower Trinity Aquifer can have total dissolved solids (TDS) concentrations of that range from acceptable to exceeding drinking water standards of 1,000 mg/L [44]. The project developers have anticipated that if test wells indicate that the Lower Trinity have TDS issues, then that supply will be blended with better quality water from the Middle Trinity aquifer to provide consistently acceptable water quality. The supply will be chlorinated before being delivered to the DSWSC system.

Additional Considerations

- Added resiliency
  - Diversifies existing supply somewhat. During extreme drought this supply will likely be affected and supplies curtailed, similar to what happens with the Corporation's existing supplies.
- Environmental Impacts
  - Pipeline construction is under 5 miles in length and would be shorter than the other pipeline projects contemplated in this study.
- Uncertainty
  - Once project supply is delivered there is minimal uncertainty. However, test wells to determine if anticipated supply volume can be delivered have not been drilled. Furthermore, the permitting process for this project has not started.
- PR/Politics
  - Possible pipeline construction opponents.

  - Adjacent to City of Austin Conservation lands, so low potential of pumping affecting any adjacent property owners. Nearest subdivision of homes is Ruby Ranch which supplies its customers from water in the Edwards Aquifer. There is one Middle Trinity well within 3 miles, owned by Joe Rodgers (SW#5857104).
- Regulatory
  - Barton Springs Edwards Aquifer Conservation District wants to study the production of the Lower Trinity Aquifer to support their science-based policy.
  - BSEACD have higher production fees and a more complex regulatory framework than the Hays Trinity Groundwater Conservation District.
  - BSEACD is in GMA 10 and has a regulated pumping limit for the Trinity Aquifer that is independent of the HTGCD MAG in GMA 9.
  - BSEACD has released draft rule changes that may affect the viability of this project with increased monitoring and mitigation requirements once finalized.
- Local Economic Impact
  - Local well and pipeline construction will provide local jobs for the first few years of the project.

8.0 Texas Water Alliance Supply

Project Description

The Texas Water Alliance (TWA) has secured groundwater leases on 42,000 acres of land in northeastern Gonzales County and has a groundwater permit from the Gonzales County Underground Water Conservation District (GCUWCD) for 15,000 acft/yr from the Carrizo Aquifer. TWA is developing a well field, treatment, conveyance, and delivery infrastructure to transport this water supply from Gonzales County to utility customers along the I-35 corridor between Austin and San Antonio. The initial phases of infrastructure include the installation of 13 groundwater wells, a 20 million gallons-per-day (MGD) water treatment plant, booster pumps, and storage and transportation facilities necessary to produce, treat, store, and convey to one or more delivery points. Figure 8-1 shows the general location of the TWA project relative to the DSWSC service area. [45]

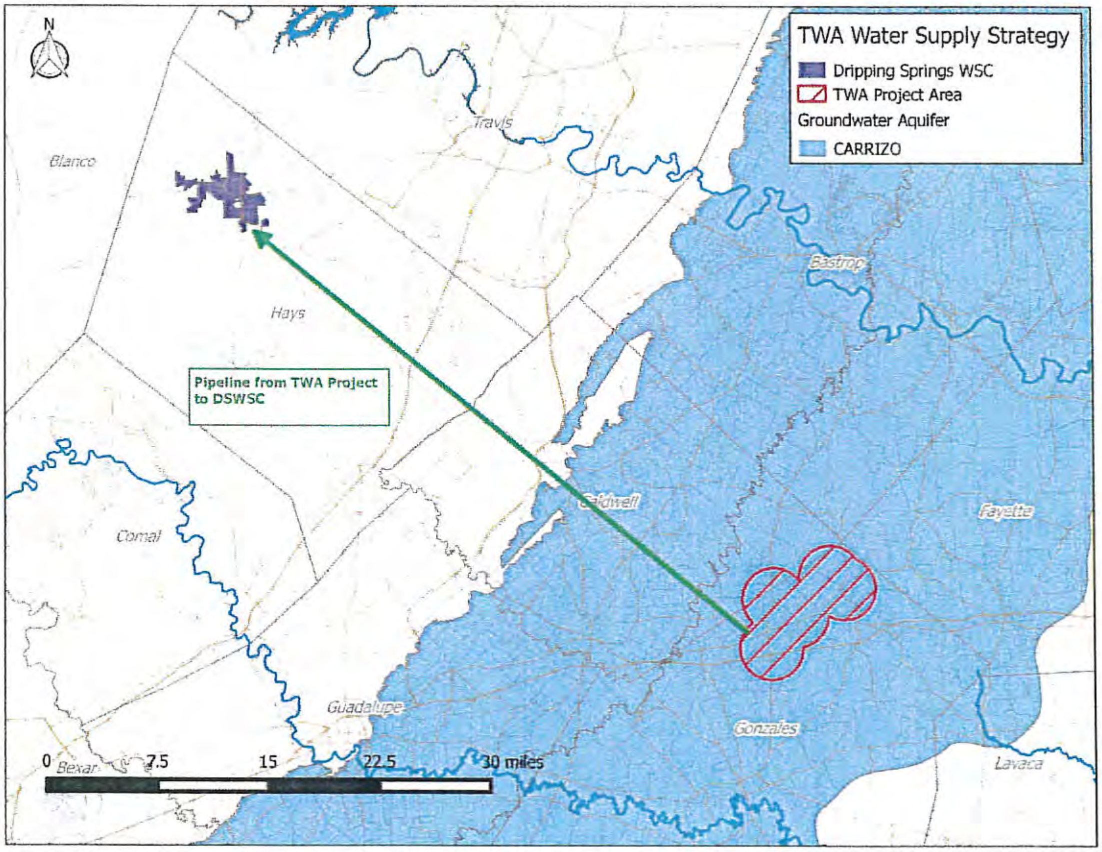

Figure 8-3. TWA Project Schematic

The Guadalupe-Blanco River Authority (GBRA) Board of Directors has recently approved the purchase of the TWA assets. The purchase of these assets in Gonzales and Caldwell counties will provide 15,000 acft of groundwater toward the GBRA's planned Mid-Basin Project. The Mid-Basin Project is a proposed conjunctive use water supply project recommended in the 2016 Region L Water Plan. It would supply more than 65,000 acft of water to potential customers along the I-35 and SH Toll 130 corridors. [46]

Source and Supply Volume

TWA has permits from the Gonzales County Underground Water Conservation District for the production and transportation of 15,000 acre-feet of Carrizo Aquifer groundwater from Gonzales County. The Carrizo Aquifer offers a high quality, sustainable, and drought tolerant water source. The Carrizo Aquifer is a large sand aquifer with water stored under pressure in such quantities that it will supply water through droughts with very little loss in water levels.

The Dripping Springs Water Supply Corporation could contract with TWA for as much as 2,500 acft/yr of water which could bring the total supply to 4,245 acft (Figure 8-2). However, according to TWA, this project isn't feasible unless a total volume of 10,000 acft/yr is delivered to the Travis and Hays County Area.

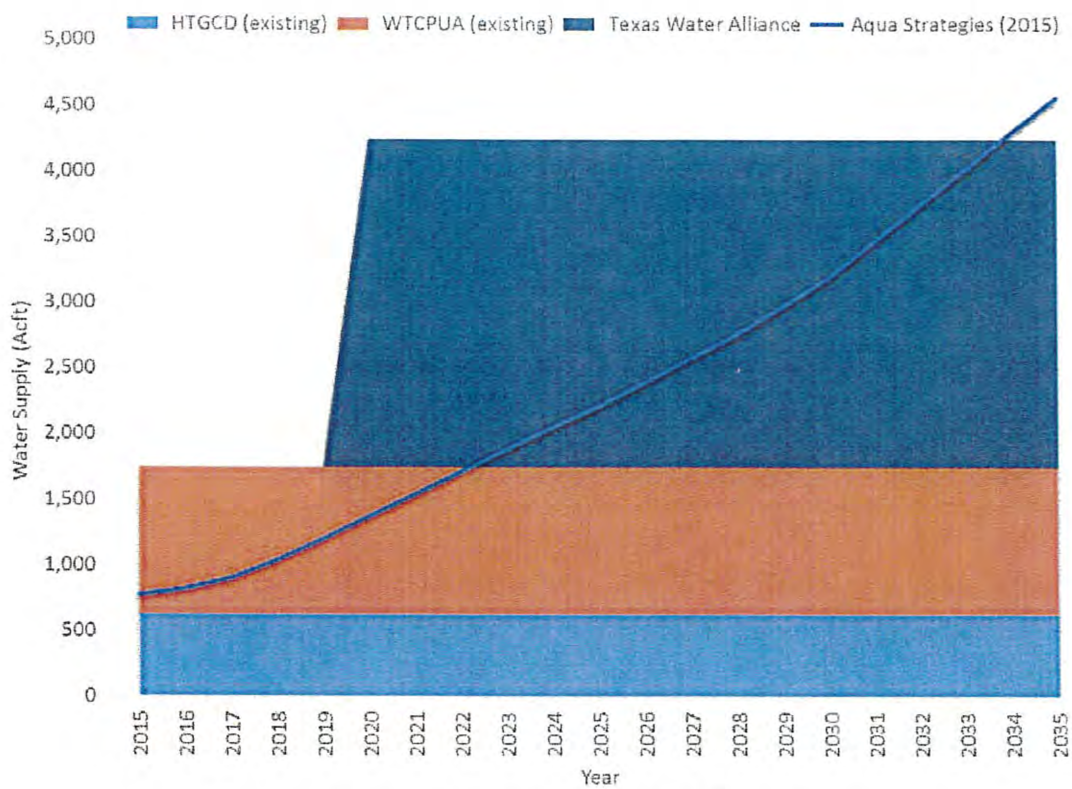

Figure 8-2. Future Supply with Texas Water Alliance Project

Cost

TWA will be the owner and complete all phases of the project including design, construction, operations, financing, and maintenance over term of the agreement. The cost of the delivered water includes 55 miles of pipeline to DSWSC from the TWA facilities. The initial costs of supply from TWA include Reservation Fees, Shared Infrastructure Fee, a Delivery Fee and Project Development Fee and are listed in Table 8-1. The Project Development Fee is an additional impact fee of $5,000 per connection that would be charged by the DSWSC in addition to the existing $4,400 Capital Contribution Fee. The delivered water cost is $1,338/acft or $3.83 per 1,000 gallons. These costs assume that the project will be built to deliver at least 10,000 acft or water to the Travis and Hays County areas and DSWSC is one of several entities that will receive water from the project pipeline.

Table 8-1 Texas Water Alliance Fees

Fee	Unit Cost	
Reservation	$100 / acft	Paid through term of WSA
Shared Infrastructure	$550 / acft	Paid beginning upon water delivery through WSA term
Delivery	$775 / acft	Paid beginning upon water delivery through WSA term
Project Development	$5,000 / LUE	One-time payment Developer Paid Fee

**WSA = Water Supply Agreement*

Schedule of Availability

Water may be delivered as soon as three years from contract initiation which includes completion of the TWA facilities and a year for construction of a delivery pipeline to DSWSC. If a contract is completed between DSWSC and TWA in 2016, the water supply can be expected to be delivered by 2020. The schedule is shown in Figure 8-3.

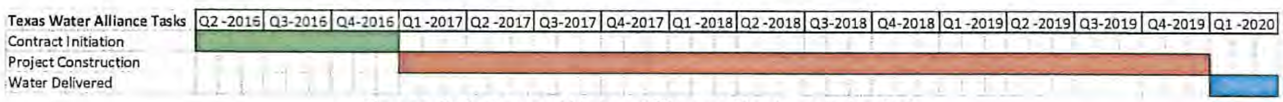

Figure 8-3. Texas Water Alliance Project Schedule

Water Quality and Water Treatment

The Carrizo water will be treated prior to delivery, which will include removal of iron and manganese, and disinfection. The water treatment facility will receive Carrizo Aquifer water from the well field collection pipelines and will consist of a greensand filtration system, cooling tower, chemical storage and feed area, backwash lagoon, chlorine storage facility, finished water storage tank, filtered water pump station, and telemetry and electrical systems. It is possible that water temperature may be an issue as it can affect the efficiency of the treatment process; in this event, the facility layout will also include a space for the addition of one or more cooling towers.

Iron and manganese can be removed from the groundwater by the addition of chemicals and greensand filters. Chlorine dioxide and/or potassium permanganate will be integrated into the facility design and added upstream of the filters. Both chemicals oxidize iron, and to a much lesser extent manganese, producing a solid that will be removed by filters. Greensand filters will remove the remaining manganese and filter the precipitated iron. Greensand filters may be of the pressure or gravity variety. Both systems include integrated backwash systems. Caustic will be added after treatment as necessary to adjust the pH prior to distribution. A separate chlorine storage building will provide disinfection and residual for the treated water.

Treated water will be stored in a 2.0 million gallon pre-stressed concrete storage tank. Treated water will be transported through a series of vertical turbine pumps sized to meet the transmission requirements of the conveyance system as well as the delivery requirements of customers receiving water.

There are potential issues with blending two water supplies from different sources. The water from the Carrizo Aquifer may be more corrosive than the DSWSC existing blended supplies from the Trinity Aquifer and surface water from the Colorado River. Additional treatment may be required to accommodate this new supply and to protect the integrity of the existing distribution system.

Additional Considerations

- Added resiliency
    - Long-term studies indicate that the Carrizo Aquifer can provide a reliable and sustainable supply given the massive quantity of water contained within the aquifer. This potential supply diversifies the DSWSC water supply portfolio and should provide additional water security during droughts.
- Environmental Impacts
    - Pipeline construction is over 55 miles
- Uncertainty
    - TWA has secured both the 5-year production permit as well as the 30-year transportation permit from the local groundwater district necessary to begin development of a 15,000 acre-foot water supply.
- PR/Politics
    - GBRA has purchased the TWA project. There now exists considerable uncertainty about the future of this water for the DSWSC.
    - Possible pipeline opposition.
- Regulatory
    - TWA project recommended in Regional Water Plans as Supplier for Hays County
- Local Economic Impact
    - No additional benefits besides additional water supply.

9.0 Forestar Water Supply from Lee County

Project Description

Forestar holds permits from the Lost Pines Groundwater Conservation District (LPGCD) for up to 28,500 acft/yr in the Simsboro formation of the Carrizo-Wilcox Aquifer in Lee County. The project includes a well field, collection system, treatment, and 85 miles of transmission facilities, which will deliver 12,000 acft/yr of water to potential customers throughout Hays County. Figure 9-1 shows the well field location and a general proposed pipeline route. [47]

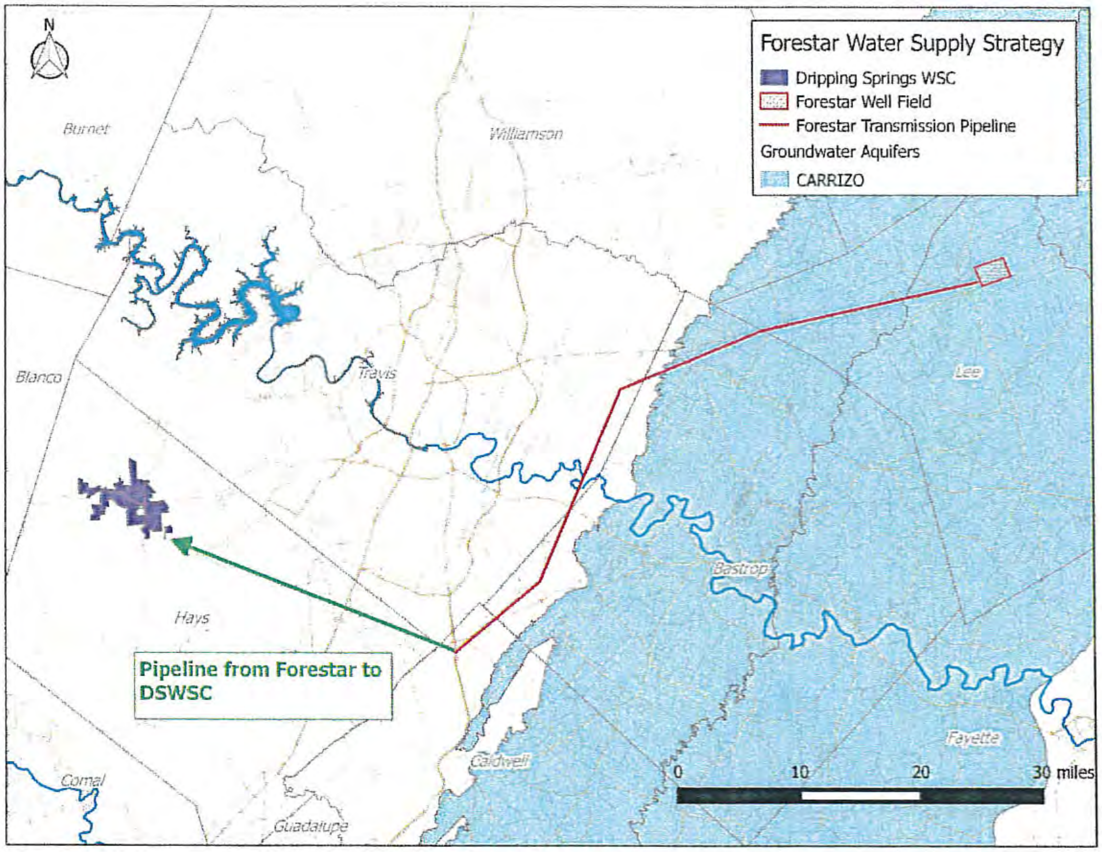

Figure 9-4. Forestar Water Supply Project Schematic

Source and Supply Volume

The Lost Pines Groundwater Conservation District approved a settlement agreement and an operating permit in December 2015 that would allow Forestar Real Estate Group to pump up 28,500 acft/yr of groundwater from the Simsboro formation of Carrizo-Wilcox Aquifer in Lee County. [48, 49]

The project proposed by the Forestar Group would deliver 12,000 acft/yr of water to Hays County and the DSWSC service area. The project supply for DSWSC assumes 2,500 acft/year will be supplied by the Forestar Supply Project until 2025 then increase to an ultimate supply of 5,000 acft/yr (Figure 9-2) to meet all future demands. The remaining 7,000 acft of supply available from the project would need to be contracted by other regional water suppliers in order for this project to be viable. [50]

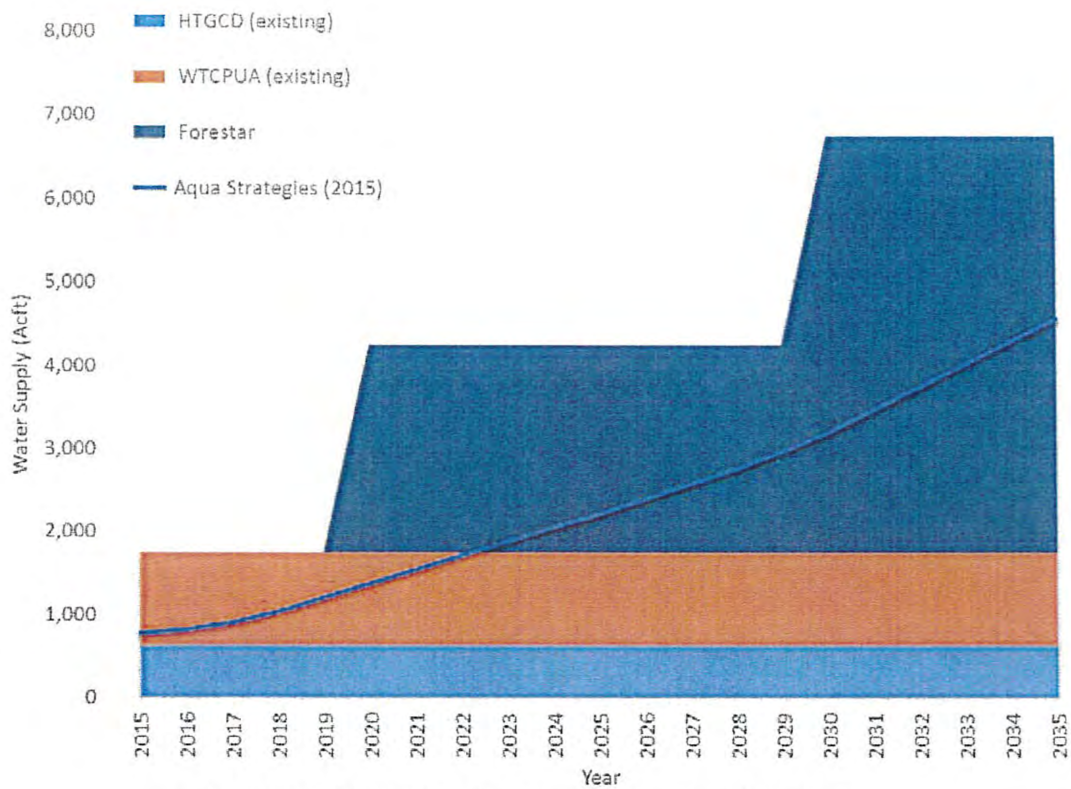

Figure 9-2. Total Future Supply with Forestar Water Supply

Cost

The total estimated project cost to develop 12,000 acft/yr of new supply in Lee County and deliver it to Hays County is $170 million for facilities that include a well field with 3 wells, well field collection system, cooling and disinfection water treatment facilities, and approximately 85 miles of transmission systems. The average annual cost of water is estimated to be $1,258/acft to deliver water to Dripping Springs from the Forestar Lee County Assets. Initial cost estimates provided by Forestar did not include impact or reservation fees. [51]

Schedule of Availability

The implementation of this project is dependent upon additional participants due to the scale of the water supply (12,000 acft). The project schedule (Figure 9-3) below represents the best case scenario for contracts to be initiated with Forestar and construction to begin. The estimated date of delivery is late 2018.

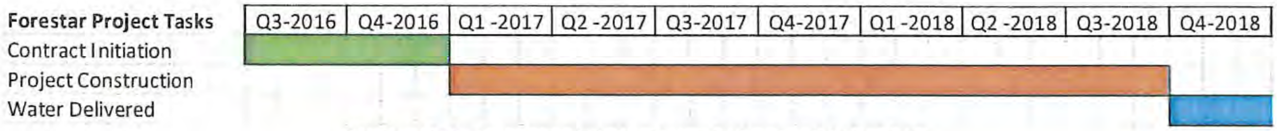

Figure 9-3. Forestar Water Supply Project Schedule

Water Quality and Water Treatment

The Forestar water supply will be treated (disinfection) and allowed to release excess heat. However, this supply is from the Simsboro formation of the Carrizo Aquifer which may be more corrosive than current supplies. Depending upon the blending ratio of this source water with existing supplies, water quality may be an issue. Additional treatment may be required to accommodate this new supply and to protect the integrity of the existing distribution system.

Additional Considerations

- Added resiliency
  - Long-term studies indicate that the Carrizo Aquifer can provide a reliable and sustainable supply given the massive quantity of water contained within the aquifer. This potential supply diversifies DSWSC water supply portfolio and should provide additional water security during droughts.
- Environmental Impacts
  - Pipeline construction is over 85 miles
- Uncertainty
  - The supply sources is certain, however uncertainly is high until additional project sponsors in the Travis and Hays County region contract for the remaining available supply from the project.
- PR/Politics
  - Lost Pines GCD settlement agreement has been made. Water supply is permitted and the project appears to be ready to move forward.
- Regulatory
  - Forestar Water Supply project is no longer recommended in Regional Water Plans as Supplier for Hays County
- Local Economic Impact
  - None

10.0 Project Ranking and Proposed Implementation Schedule

Criteria and associated weights

In order to effectively compare each of the water management strategies presented in previous sections, we have tabulated the top seven and developed criteria by which to rank them. In ranking projects, water planners typically consider a broad range of factors and also minimum requirements. In other words, cost might be the most important factor (and would thus get a higher weight), but if the permit to build the project is unobtainable it would get vetoed. Some of these criteria can be easily quantified (e.g. cost), while others are more qualitative (e.g. environmental impacts). However, for the purposes of ranking, all criteria for all water management strategies were assigned numerical values.

In total, we have identified seven criteria to use in the ranking process. Each are deemed important and are regularly used for water resources planning decision-making. A description of each criterion is provided in the subsections below. Two criteria which we had initially identified but ultimately decided to leave out are volume of water and time required for implementation. In some instances, the volume of water the project will develop is critical. For example, if there are only two strategies that a water provider is considering, one of which is marginal, in terms of the volume produced to meet future needs, and both of which would require substantial capital investment, it makes sense to incorporate volume of water in the ranking process. The Corporation will eventually be in a situation where it may have to choose between different water import projects. At that point in the future, it may want to use volume of water in the ranking process to help differentiate.

Another criterion often used by water planners for ranking water management strategies is time required for implementation. Since there are several strategies that could be implemented by the DSWSC in fairly short order to meet near-term needs, it was decided not to use this as a factor in the ranking process.

In choosing the criteria to apply, and their associated weights, Aqua Strategies staff reached out to the DSWSC long-range planning subcommittee for input. However, the subcommittee members suggested we develop these based on our experience and expertise, without their influence. The ranking criteria selected, and their associated weights (out of a total of 1500 points), are listed below and discussed in more detail in the rest of the section. Each criterion is scaled to the maximum number of points. Thus, the more points available, the greater the weight of that criterion in the ranking process.

- Unit Cost (500 points)
- Impact Fees (200 points)
- Source Reliability (200 points)
- Implementation Probability (300 points)
- Water Quality (100 points)
- Environmental Impact (100 points)
- Economic Benefit (100 points)

Unit Cost (500 points)

The unit cost of developed water is an important factor in determining the desirability of each water management strategy. Projects involving considerable infrastructure typically have higher costs. Unit costs were developed for all seven of the shortlisted water management strategies. A unit cost of $0 per acft would receive 500 points. We have set the criterion such that $3,000 per acft (considered the maximum unit cost of any water management strategy the Corporation would consider) receives a score of zero and everything in between is scaled accordingly. The unit costs determined for the short-listed water management strategies are presented in Table 10-1. The additional impact fees associated with each project and the number of connections that each project could support are also listed.

Table 10-1. Summary of Water Supply and Unit Costs

Strategy	Total Available Supply (acft)	Unit Cost ($/acft)	Unit Cost ($/1000 gal)	Additional Impact Fees	Number of LUEs /Connections*
Conservation (Demand Reduction)	211	$304	$0.93	$0	398
Additional Local Groundwater (HTGCD)	495	$69	$0.21	$0	934
Additional WTCPUA Supply	1,120	$573	$1.76	$12,938	2,113
Water Reuse (Irrigation)	90	n/a	n/a	$0	170
Water Reuse (DPR)	560	$852	$2.61	$2,500	1,057
Rutherford Ranch Supply	3,360	$ 1,636	$5.02	$3,000	6,340
Texas Water Alliance	2,500	$1,338	$4.11	$5,000	4,717
Forestar Water Supply	5,000	$1,258	$3.86	$0	9,434

*Calculated assuming 0.53 acft/LUE

Impact Fees (200 points)

Similar to the previous criterion in that the customer ultimately must bear the cost, impact fees are levied to cover the cost of new infrastructure to deliver the water. There is typically some flexibility in this fee. Unit costs can be adjusted to cover some of the capital outlay, this being negotiated between the buyer and seller. Impact fees presented here are in addition to current impact fees (see discussion in the introduction). In other words, none of the water management strategies have associated impact fees except WTCPUA water ($12,938), Direct Potable Reuse ($2,500), Rutherford Ranch ($3,000) and Texas Water Alliance ($5,000).

Source Reliability (200 points)

Some water management strategies are not 100 percent reliable. In other words, there may be ample water during normal conditions but regulatory curtailment or physical availability is compromised during drought conditions. Some Groundwater Districts impose restrictions on groundwater use during drought conditions (typically 30%), as does WTCPUA (20%). The criterion relating to the reliability of the source has a scale from 0 (no water available during drought conditions) to 200 (water always available).

Implementation Probability (300 points)

Choosing one or more of the short-listed water management strategies does not guarantee that it will ultimately bear fruit. For example, the Rutherford Ranch project still needs a permit from the BSEACD and the Forestar water supply project needs other customers in North Hays County to justify building a pipeline out to Dripping Springs. The numbers developed are somewhat subjective, but the projects received 300 points if implementation is a sure thing with board approval (e.g. conservation), and somewhat less if there are some obstacles to overcome prior to implementation.

Water Quality (100 points)

We are fortunate in that local groundwater supplies require no treatment (disinfection only). WTCPUA water is treated prior to delivery. Demand-reducing strategies have no water quality implications. Water imported from counties east of here may have water quality issues to deal with. At this point it is not clear what may need to be dealt with, nor what those costs may be.

Environmental Impact (100 points)

Some water management strategies can have significant environmental consequences, either from construction activities or through operation. The water management strategies considered here are fairly inconsequential, relating to the environment. The pipeline projects are the only ones that might have a significant impact, with the distance to the source defining the scale of the points assigned.

Economic Benefit (100 points)

Some water planners like to include a factor relating to the economic impact water management strategies might bring to the region. For example, a construction project that uses local labor or material, or a strategy that requires significant O&M costs that can be sourced locally, may be appealing to DSWSC customers. Although capped at only 100 points, we use this factor in the ranking process to boost projects that have the potential to strengthen the local economy.

Table 10-2 on the following page presents the seven short-listed water management strategies together with the criteria used for ranking. This MS-Excel spreadsheet has been provided to the DSWSC and may be used to adjust the criteria and weighting, as appropriate or as conditions change. In particular, if one or more of the proposed water management strategies is not, or cannot be, implemented, it would be sensible to revisit the table. The table, as presented, is based on current conditions, as we know them. Should conditions change, the table should be revised.

Table 10-2. Ranking of water management strategies for DSWSC.

[illegible]	Unit Cost	Impact Fees	Source Reliability	Implementation Probability	Water Quality	Environmental Impact	Economic Benefit	TOTAL	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Recommended Water Management Strategies and Associated Implementation Schedule

The rankings presented in Table 10-2 are based on seven different criteria, with cost being assigned the highest weight (most important). However, in order to meet projected water needs for the DSWSC, more than one water management strategy should be pursued. Strategies that are reliable, have high certainty and low cost should move to the front of the line, even if they don't meet all of the Corporation's needs through the year 2035, volumetrically. The water management strategy descriptions in the previous sections describe how quickly each project could be implemented. From a practical perspective it does not make sense to develop water supplies much more quickly than they are needed, particularly if expensive infrastructure is required. Figure 10-1 presents the recommended water management strategies (those ranked 1 through 6), together with their proposed implementation schedule. The proposed schedule allows DSWSC to stay ahead of the projected demand curve, while minimizing its costs and meeting its CCN requirements.

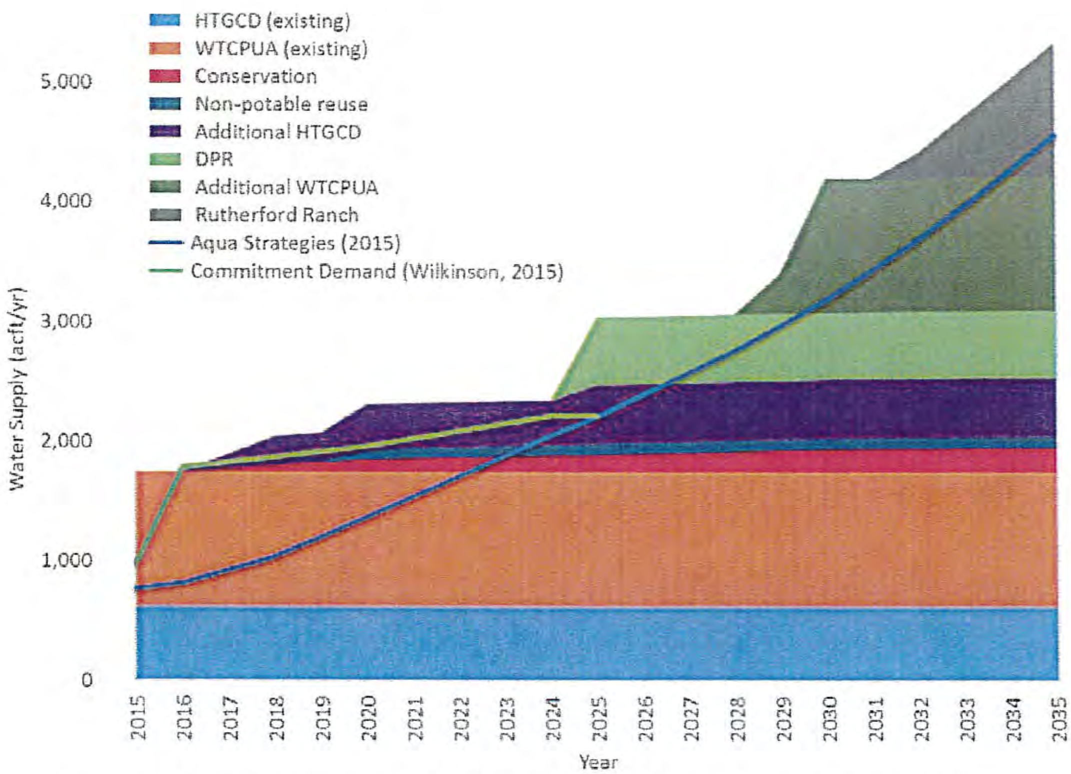

Figure 10-1. Implementation schedule for proposed water management strategies.

11.0 Conclusions

This study describes 12 water management strategies that the DSWSC has considered to meet the future needs of its customers. Seven of these proposed projects were short-listed for further study and a matrix was developed to score each based on defined criteria, and then ranked.

The ranking process identified six water management strategies that ought to be pursued in order to meet future water needs through 2035 (our planning horizon). These water management strategies are (ranked):

1. Non-potable reuse for irrigation;
2. Water conservation;
3. Additional local groundwater from the Hays Trinity Groundwater Conservation District;
4. Direct potable reuse;
5. Additional surface water from West Travis County PUA; and
6. Groundwater from the Rutherford Ranch.

The proposed implementation schedule is shown in graphical form in Section 10. In tabulated form, the proposed schedule, by year, is as follows:

2017: Conservation; and
Additional groundwater from the Hays Trinity GCD;
2020: Non-potable reuse for irrigation;
2025: Direct potable reuse;
2028: Additional surface water from West Travis County PUA;
2030: Rutherford Ranch groundwater.

Conditions will change substantially between now and the planning horizon for this study (2035). State and regional water plans are typically revisited every five years to address changing conditions, including demographics and status of existing and proposed water supplies. If the DSWSC is not able to secure the water it expects from the HTGCD, negotiations with WTCPUA will need to be accelerated. If negotiations with WTCPUA prove unsuccessful then it will be necessary to secure a third large source of water as soon as possible, probably a groundwater import project.

Groundwater from the Rutherford Ranch has the potential to meet all of the projected water needs through 2035, though it is the most expensive of all the options considered and a permit from the Barton Springs/Edwards Aquifer Conservation District has yet to be applied for, and no test wells have been completed.

While there remains uncertainty in the implementation each of these top-ranked major water management strategies, we strongly recommend that the Dripping Springs Water Supply Corporation pursue all seven, at least until some are confirmed to be "implementable" or until significant capital outlay is required.

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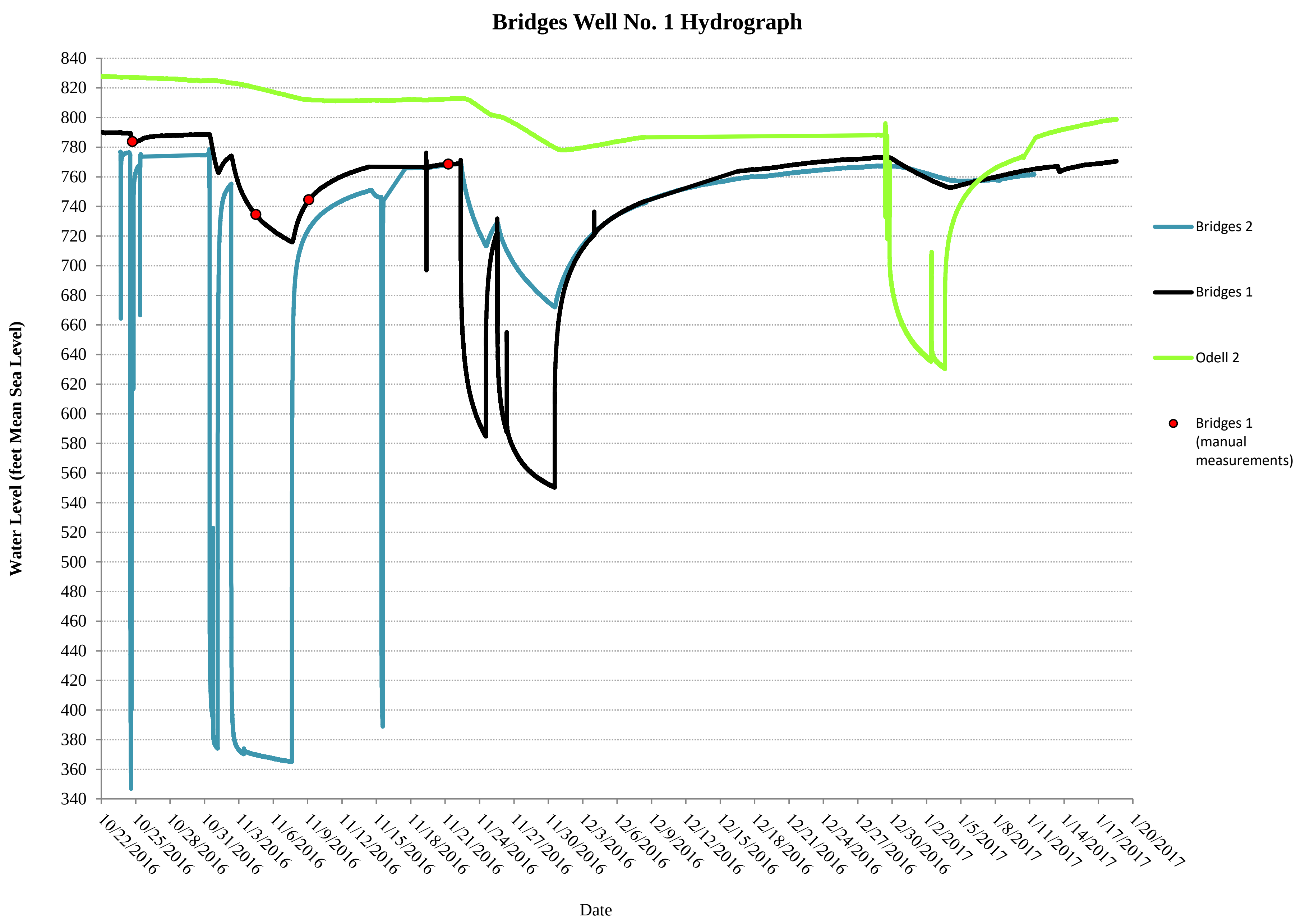
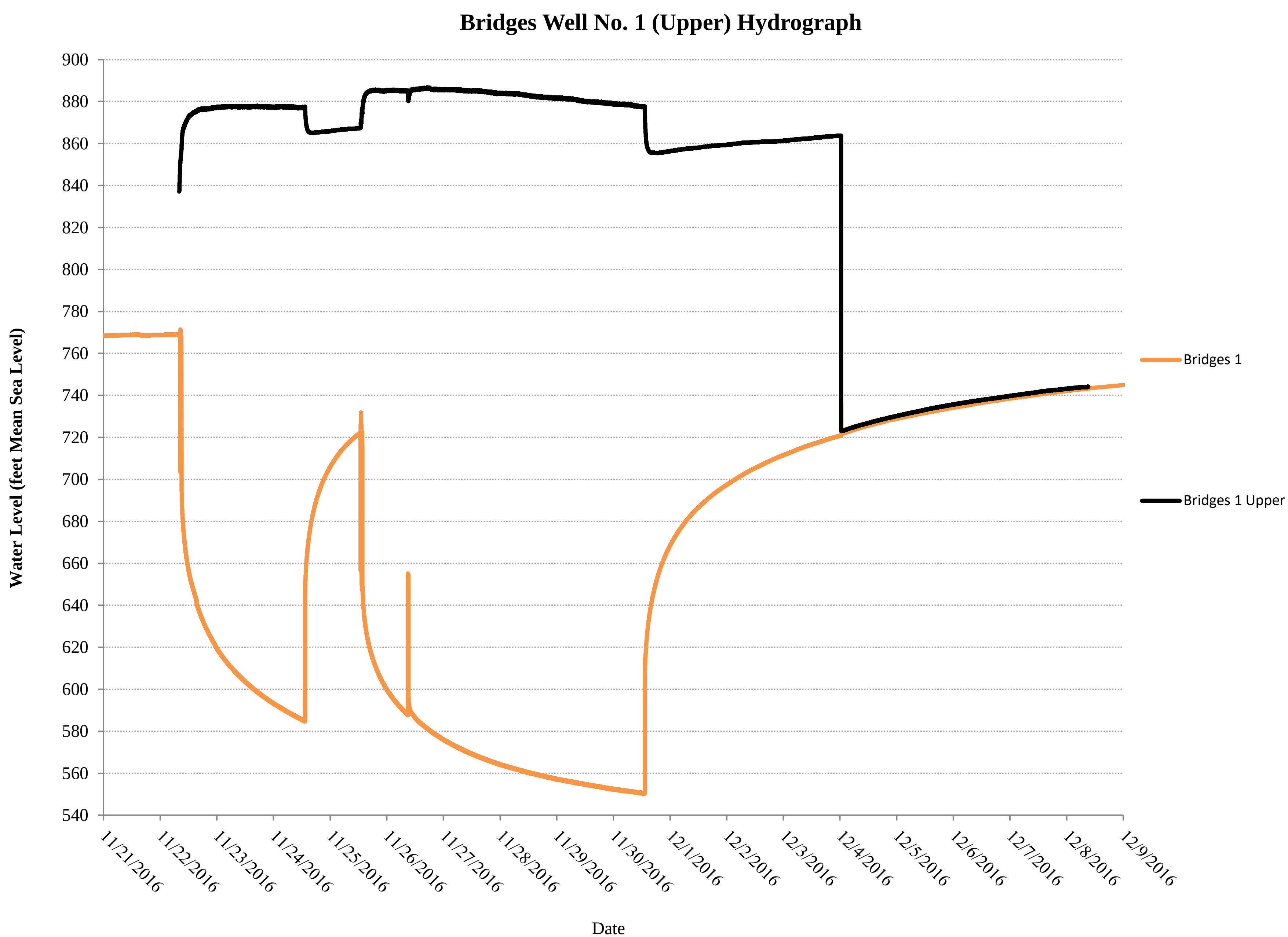
Attachment B:

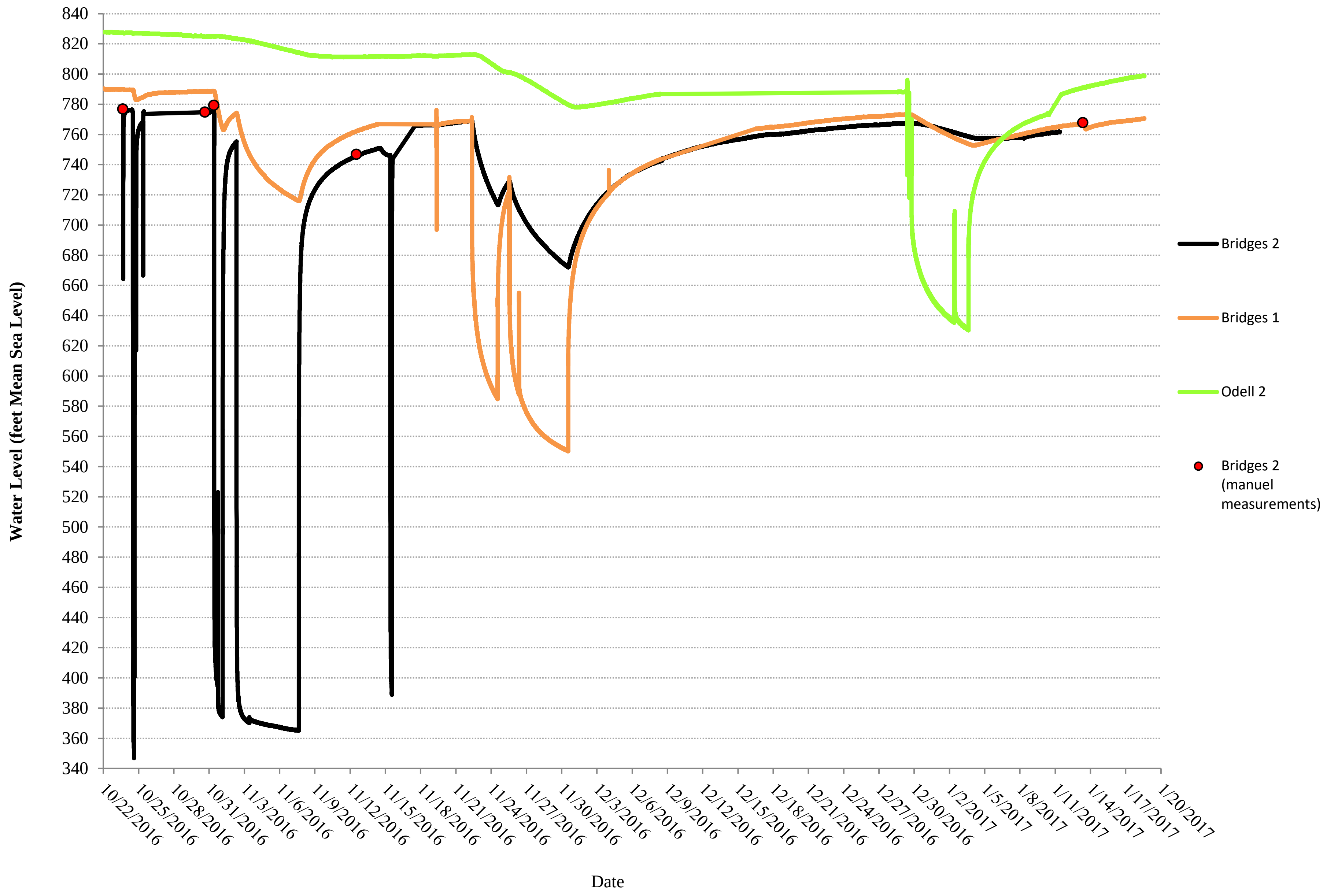
Well Hydrographs

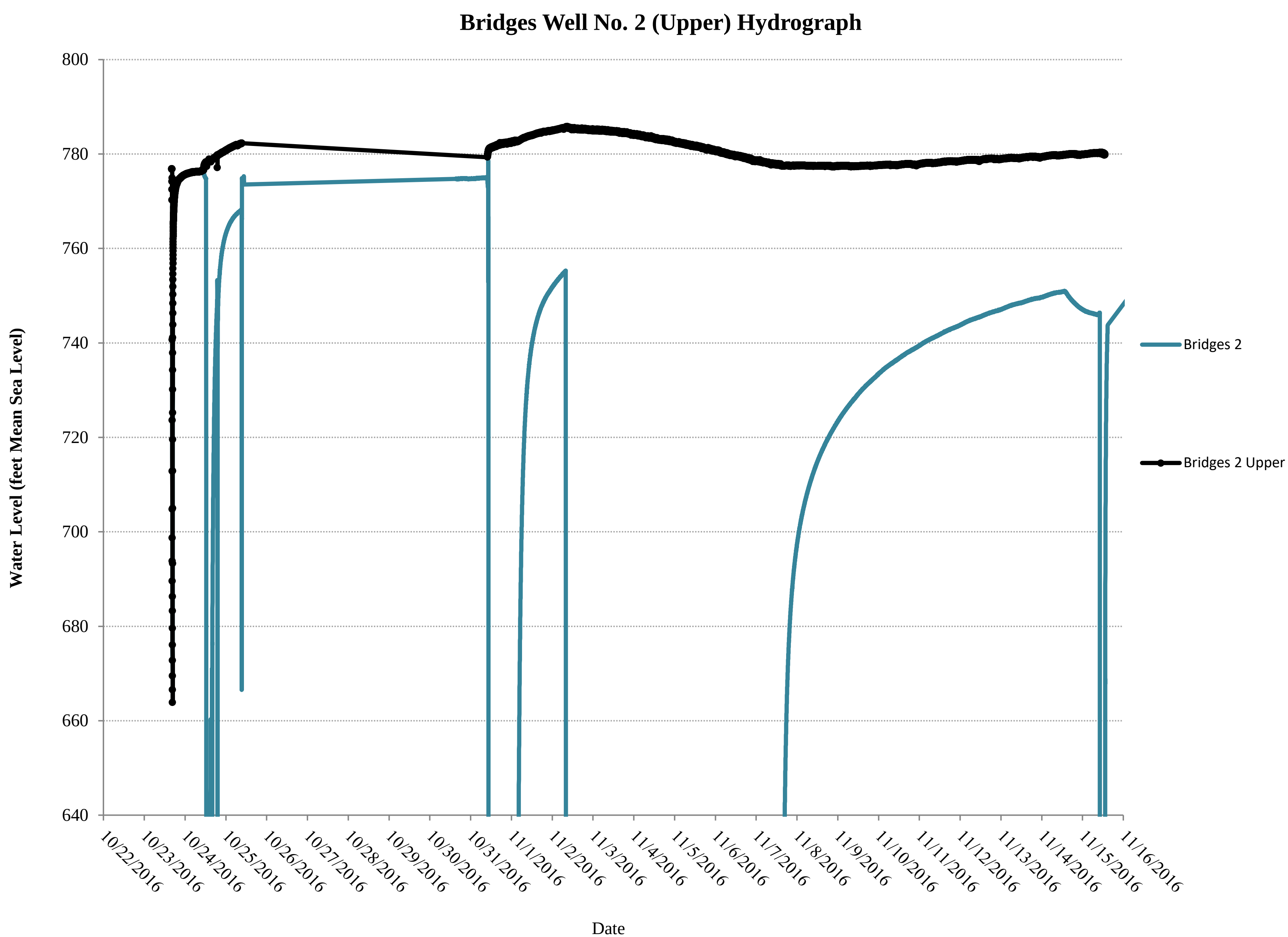


Bridges Well No. 1 Hydrograph
Water Level (feet Mean Sea Level)
840
820
800
780
760
740
720
700
680
660
640
620
600
580
560
540
520
500
480
460
440
420
400
380
360
340
10/22/2016
10/25/2016
10/28/2016
10/31/2016
11/3/2016
11/6/2016
11/9/2016
11/12/2016
11/15/2016
11/18/2016
11/21/2016
11/24/2016
11/27/2016
11/30/2016
12/3/2016
12/6/2016
12/9/2016
12/12/2016
12/15/2016
12/18/2016
12/21/2016
12/24/2016
12/27/2016
12/30/2016
1/2/2017
1/5/2017
1/8/2017
1/11/2017
1/14/2017
1/17/2017
1/20/2017
Date
Bridges 2
Bridges 1
Odell 2
Bridges 1 (manual measurements)


Bridges Well No. 1 (Upper) Hydrograph
Water Level (feet Mean Sea Level)
900
880
860
840
820
800
780
760
740
720
700
680
660
640
620
600
580
560
540
11/21/2016
11/22/2016
11/23/2016
11/24/2016
11/25/2016
11/26/2016
11/27/2016
11/28/2016
11/29/2016
11/30/2016
12/1/2016
12/2/2016
12/3/2016
12/4/2016
12/5/2016
12/6/2016
12/7/2016
12/8/2016
12/9/2016
Date
Bridges 1
Bridges 1 Upper

Bridges Well No. 2 Hydrograph





Bridges Well No. 2 (Upper) Hydrograph
800
780
760
740
720
700
680
660
640
Water Level (feet Mean Sea Level)
10/22/2016
10/23/2016
10/24/2016
10/25/2016
10/26/2016
10/27/2016
10/28/2016
10/29/2016
10/30/2016
10/31/2016
11/1/2016
11/2/2016
11/3/2016
11/4/2016
11/5/2016
11/6/2016
11/7/2016
11/8/2016
11/9/2016
11/10/2016
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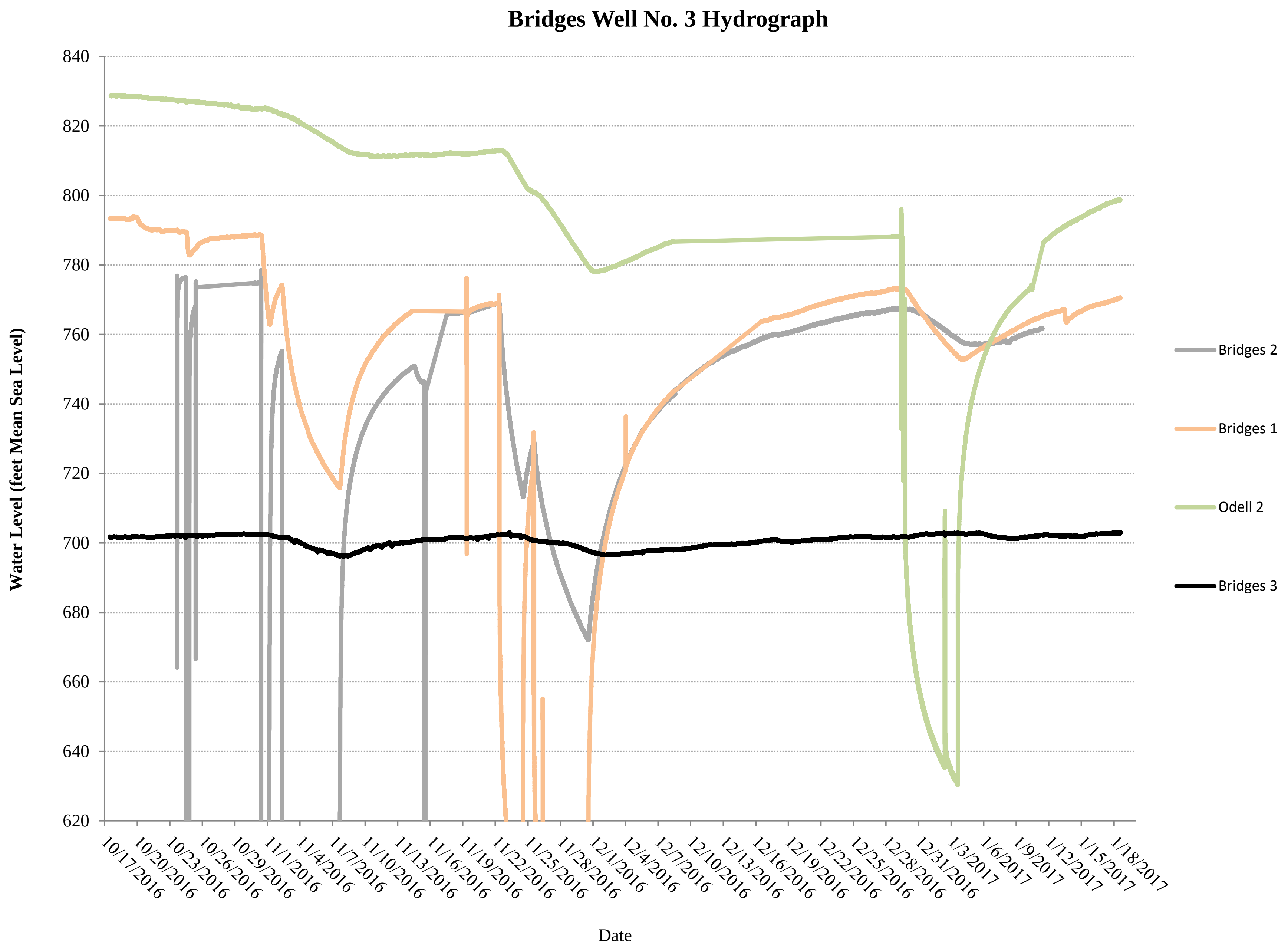
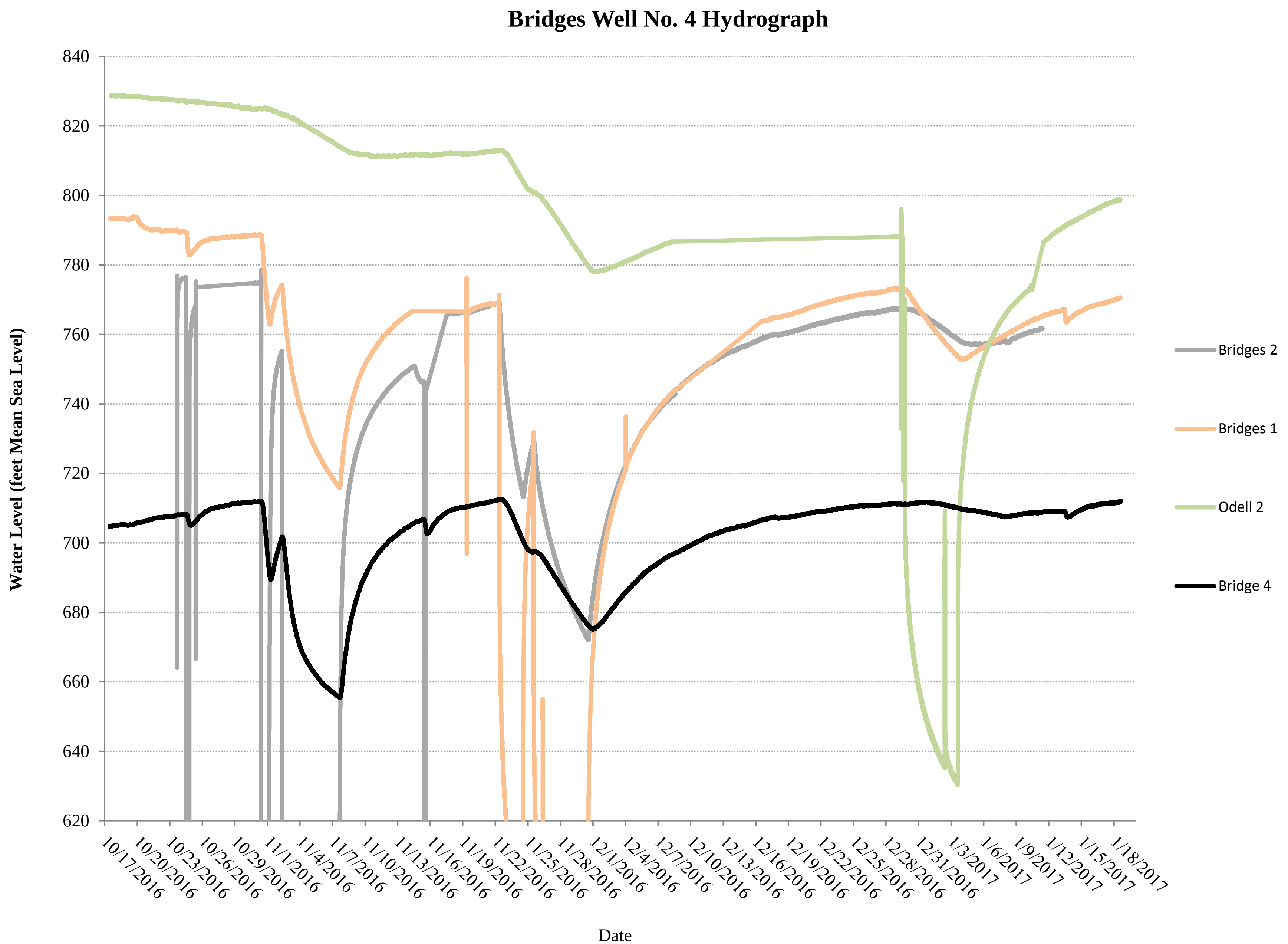
11/16/2016
Date
Bridges 2
Bridges 2 Upper



Bridges Well No. 3 Hydrograph
840
820
800
780
760
740
720
700
680
660
640
620
Water Level (feet Mean Sea Level)
10/17/2016
10/20/2016
10/23/2016
10/26/2016
10/29/2016
11/1/2016
11/4/2016
11/7/2016
11/10/2016
11/13/2016
11/16/2016
11/19/2016
11/22/2016
11/25/2016
11/28/2016
12/1/2016
12/4/2016
12/7/2016
12/10/2016
12/13/2016
12/16/2016
12/19/2016
12/22/2016
12/25/2016
12/28/2016
12/31/2016
1/3/2017
1/6/2017
1/9/2017
1/12/2017
1/15/2017
1/18/2017
Date
Bridges 2
Bridges 1
Odell 2
Bridges 3


Bridges Well No. 4 Hydrograph
Water Level (feet Mean Sea Level)
840
820
800
780
760
740
720
700
680
660
640
620
10/17/2016
10/20/2016
10/23/2016
10/26/2016
10/29/2016
11/1/2016
11/4/2016
11/7/2016
11/10/2016
11/13/2016
11/16/2016
11/19/2016
11/22/2016
11/25/2016
11/28/2016
12/1/2016
12/4/2016
12/7/2016
12/10/2016
12/13/2016
12/16/2016
12/19/2016
12/22/2016
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12/28/2016
12/31/2016
1/3/2017
1/6/2017
1/9/2017
1/12/2017
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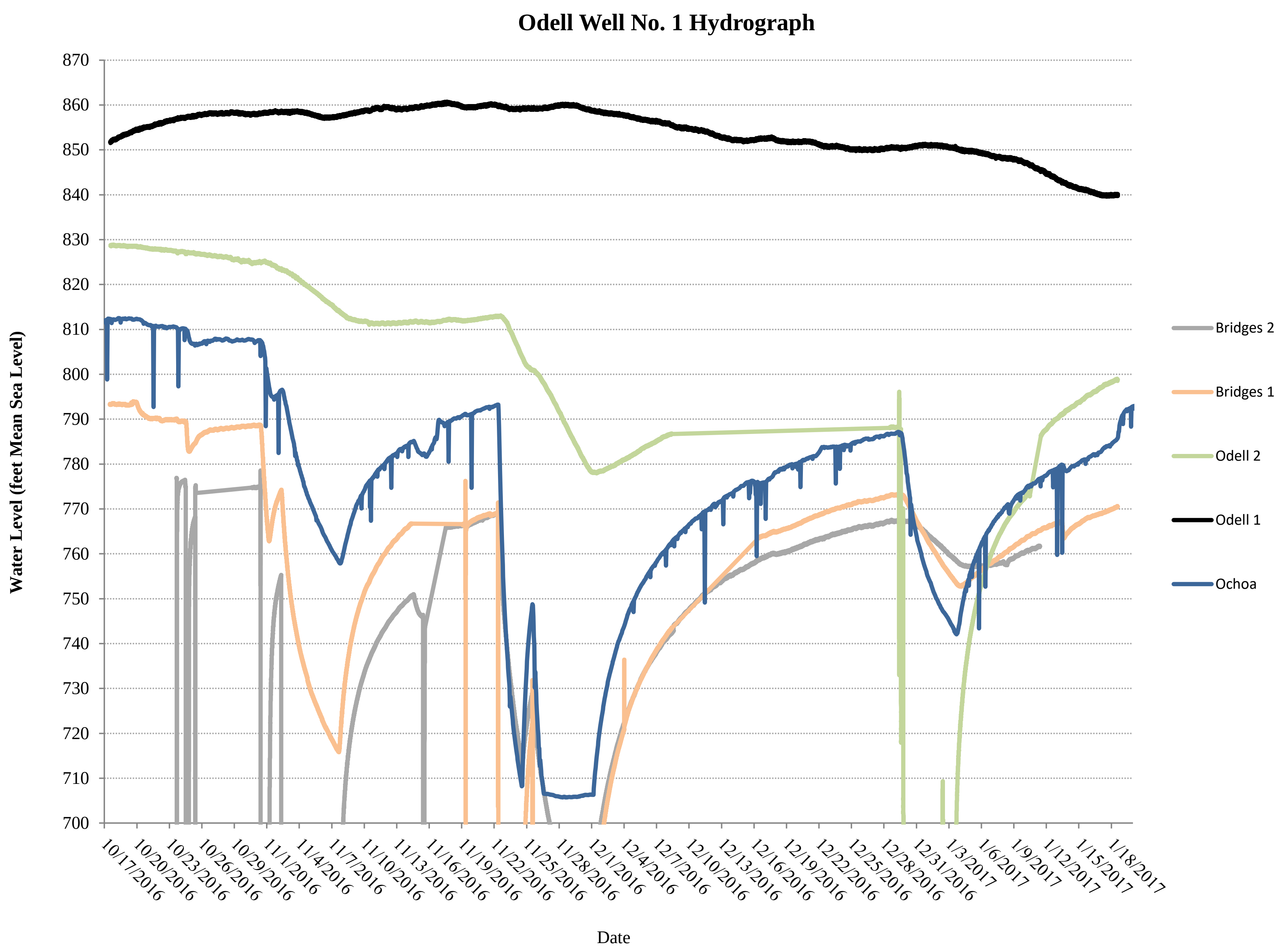
1/18/2017
Date
Bridges 2
Bridges 1
Odell 2
Bridge 4


Odell Well No. 1 Hydrograph
Water Level (feet Mean Sea Level)
870
860
850
840
830
820
810
800
790
780
770
760
750
740
730
720
710
700
10/17/2016
10/20/2016
10/23/2016
10/26/2016
10/29/2016
11/1/2016
11/4/2016
11/7/2016
11/10/2016
11/13/2016
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11/19/2016
11/22/2016
11/25/2016
11/28/2016
12/1/2016
12/4/2016
12/7/2016
12/10/2016
12/13/2016
12/16/2016
12/19/2016
12/22/2016
12/25/2016
12/28/2016
12/31/2016
1/3/2017
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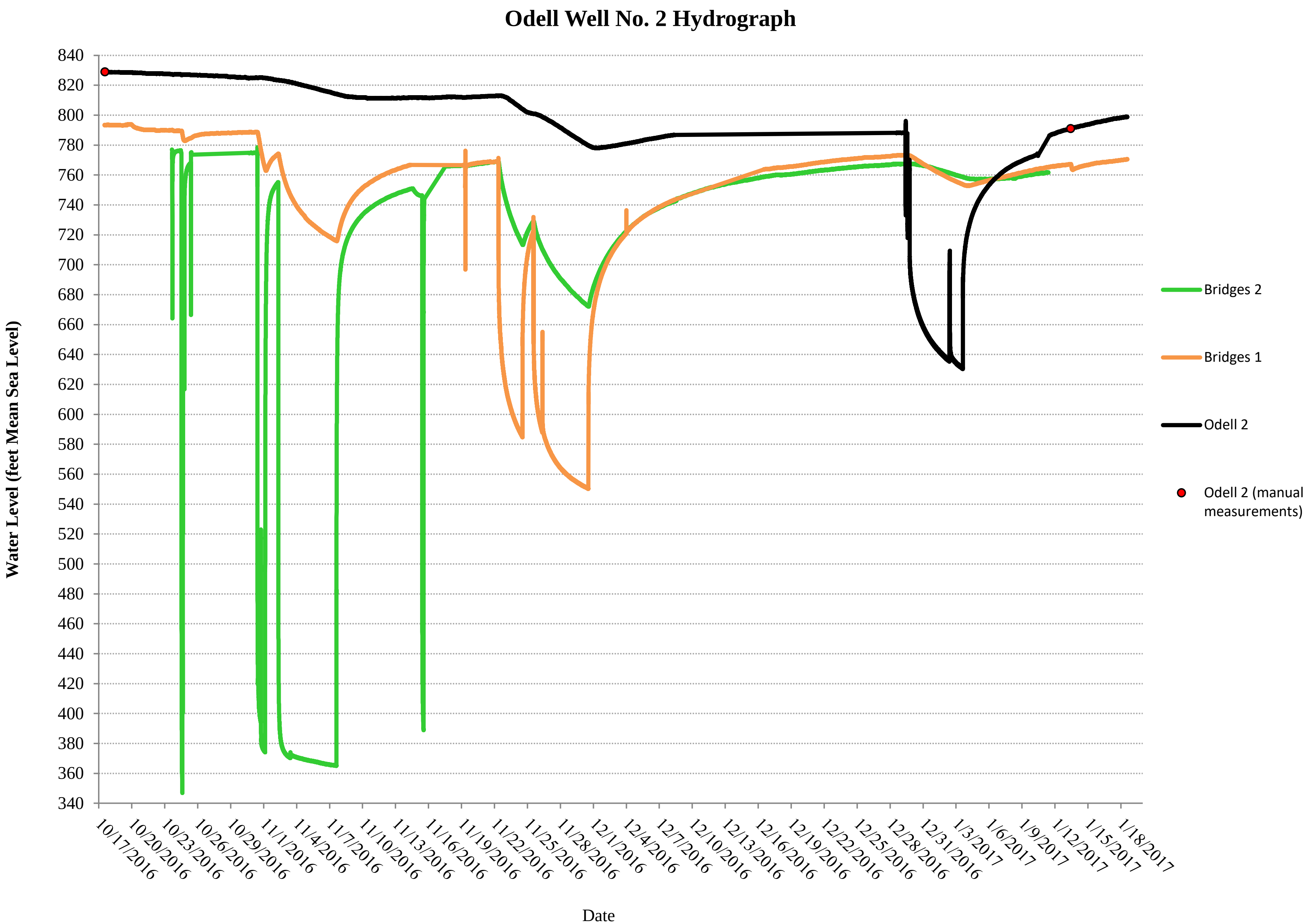
1/18/2017
Date
Bridges 2
Bridges 1
Odell 2
Odell 1
Ochoa



Odell Well No. 2 Hydrograph
Water Level (feet Mean Sea Level)
840
820
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680
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600
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560
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10/23/2016
10/26/2016
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11/1/2016
11/4/2016
11/7/2016
11/10/2016
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11/16/2016
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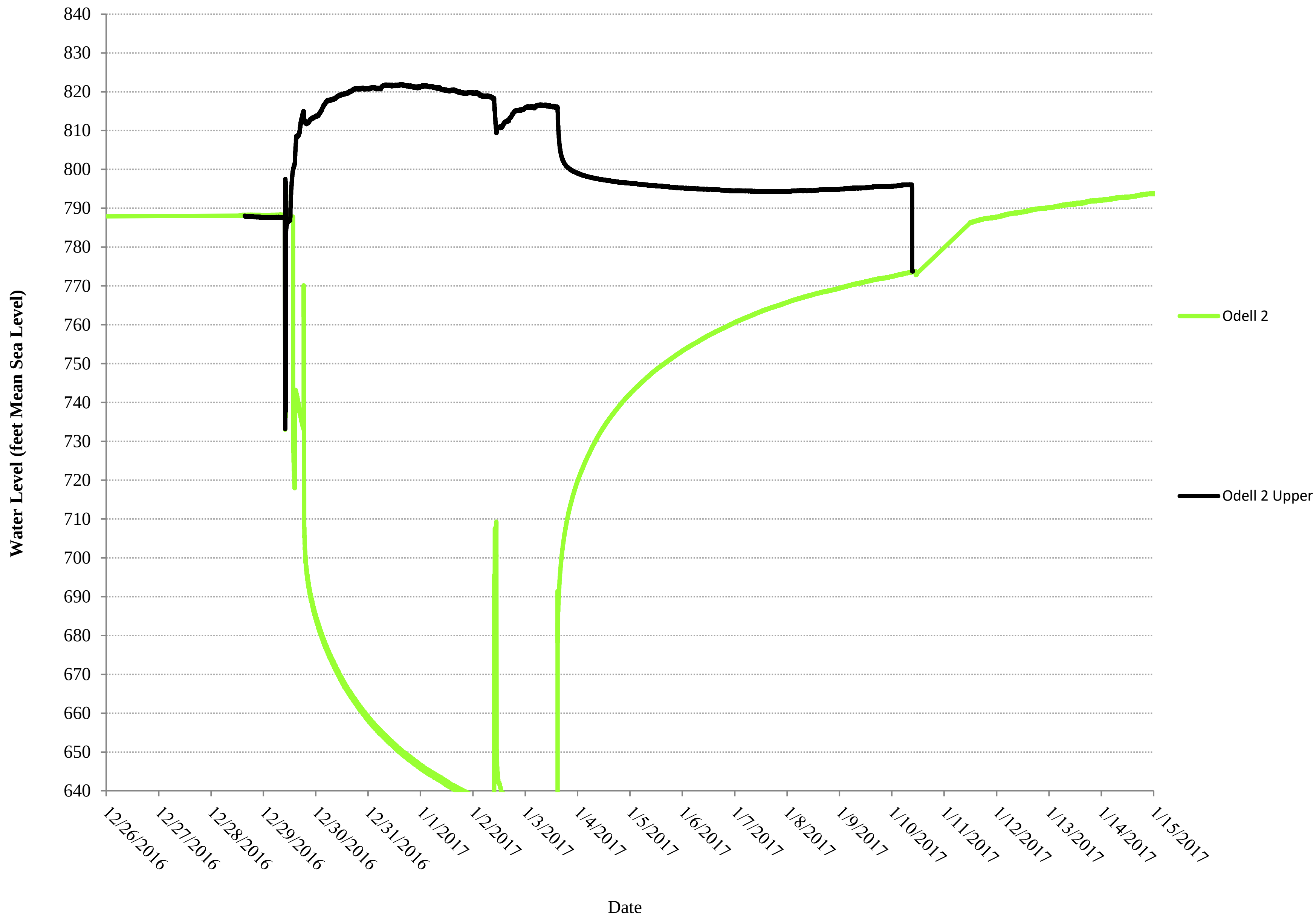
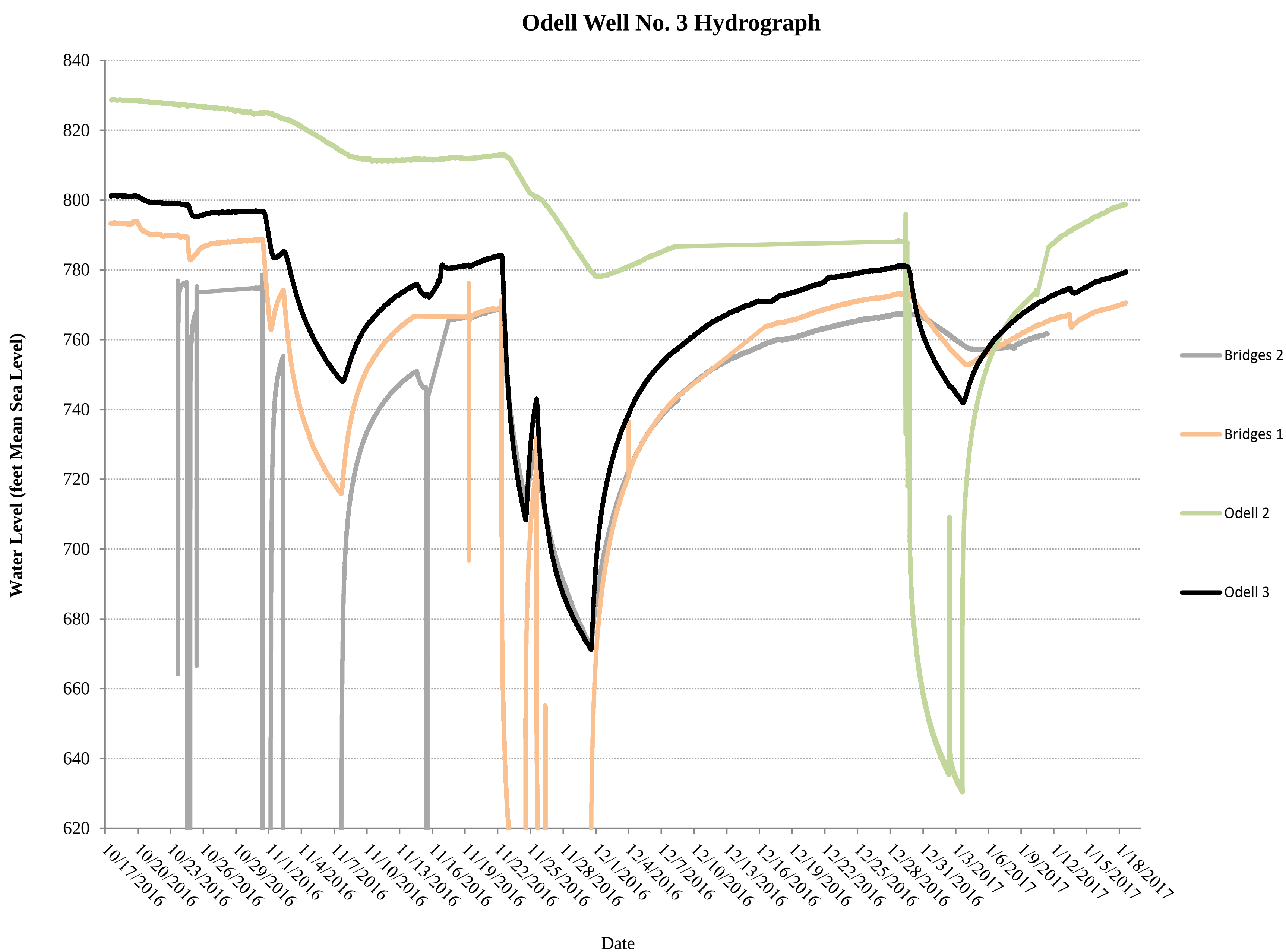
12/4/2016
12/7/2016
12/10/2016
12/13/2016
12/16/2016
12/19/2016
12/22/2016
12/25/2016
12/28/2016
12/31/2016
1/3/2017
1/6/2017
1/9/2017
1/12/2017
1/15/2017
1/18/2017
Date
Bridges 2
Bridges 1
Odell 2
Odell 2 (manual measurements)

Odell Well No. 2 (Upper) Hydrograph




Odell Well No. 3 Hydrograph
Water Level (feet Mean Sea Level)
840
820
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780
760
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700
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660
640
620
10/17/2016
10/20/2016
10/23/2016
10/26/2016
10/29/2016
11/1/2016
11/4/2016
11/7/2016
11/10/2016
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12/7/2016
12/10/2016
12/13/2016
12/16/2016
12/19/2016
12/22/2016
12/25/2016
12/28/2016
12/31/2016
1/3/2017
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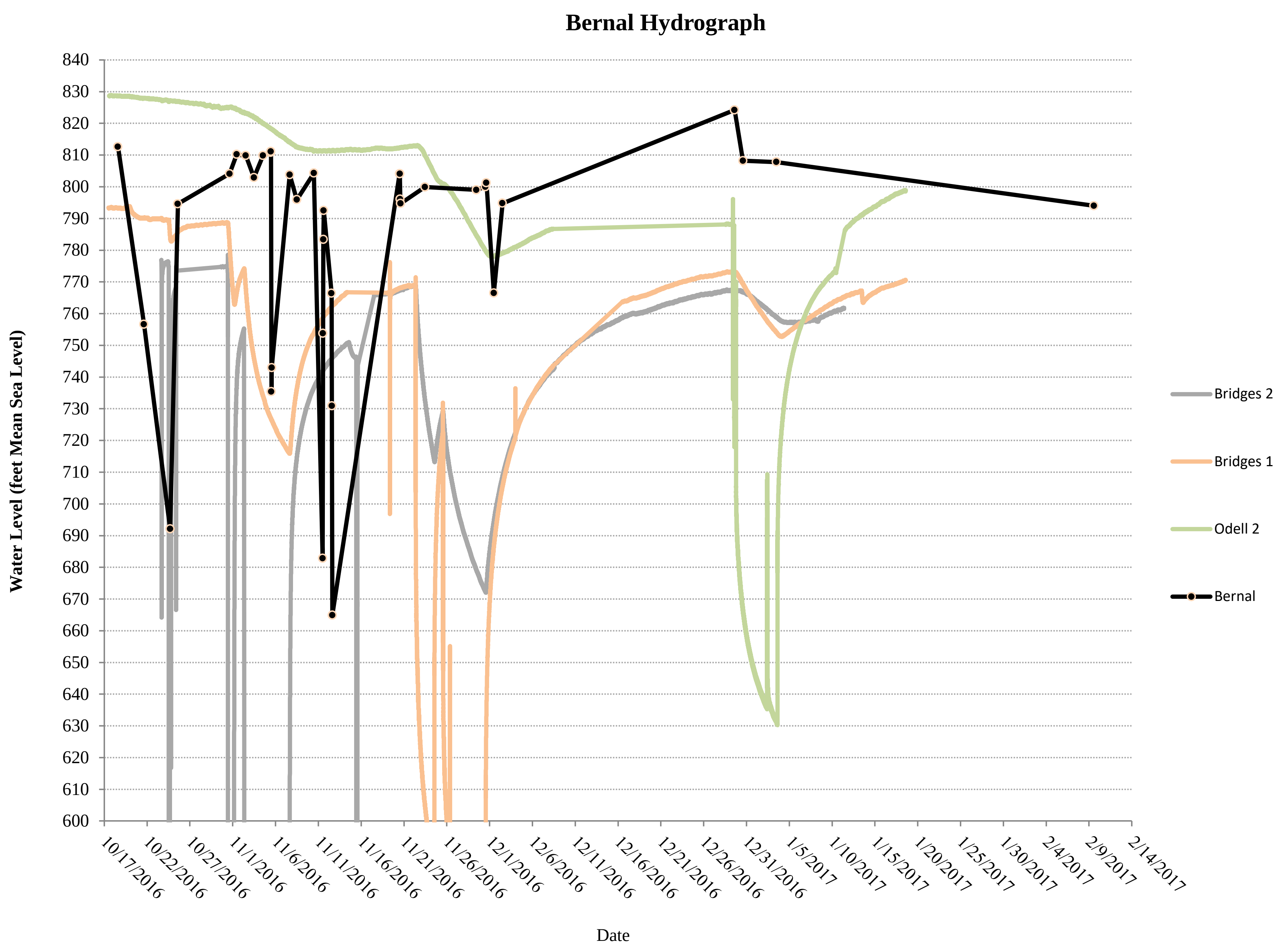
1/9/2017
1/12/2017
1/15/2017
1/18/2017
Date
Bridges 2
Bridges 1
Odell 2
Odell 3



Bernal Hydrograph
Water Level (feet Mean Sea Level)
840
830
820
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790
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770
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750
740
730
720
710
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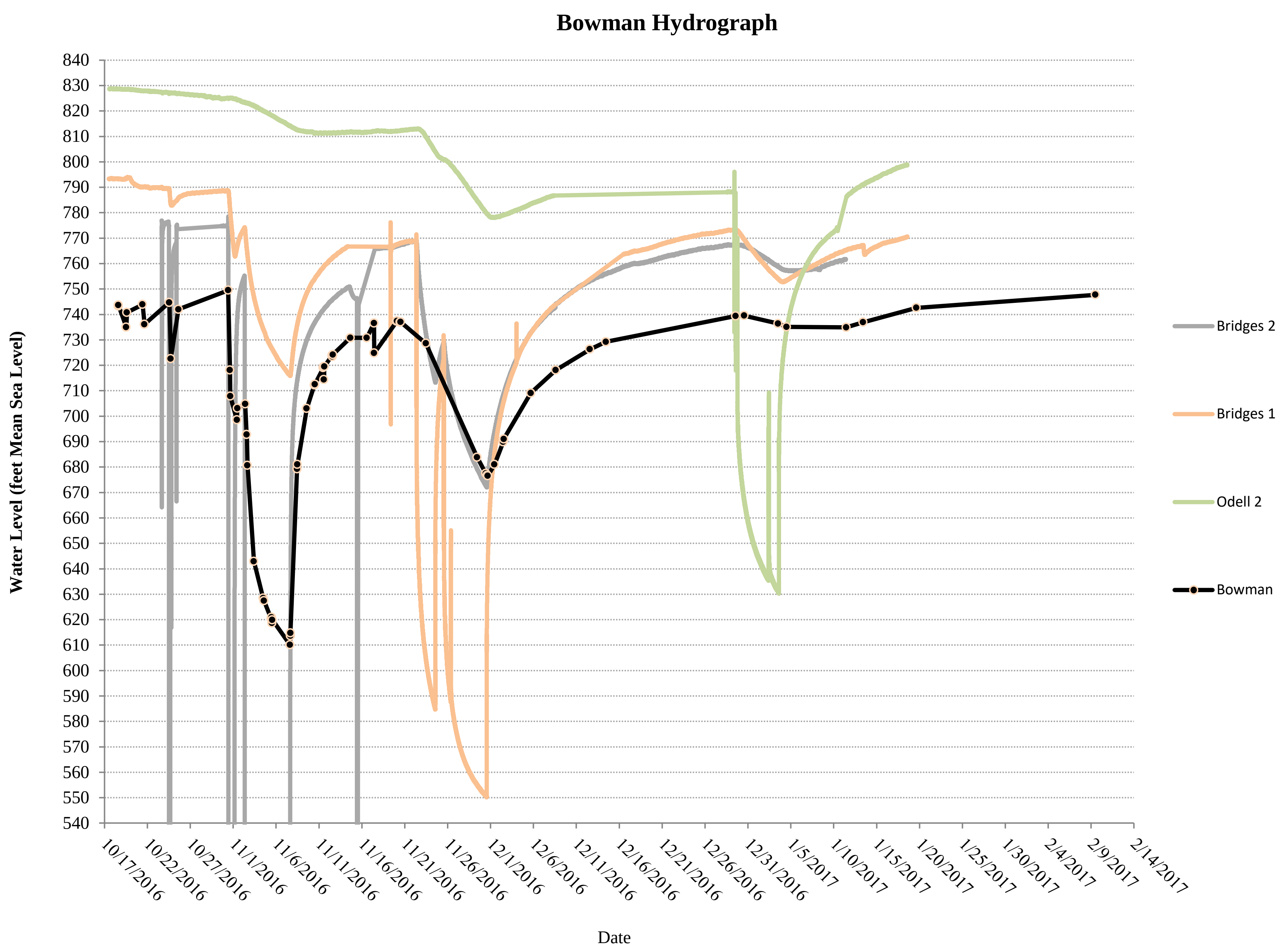
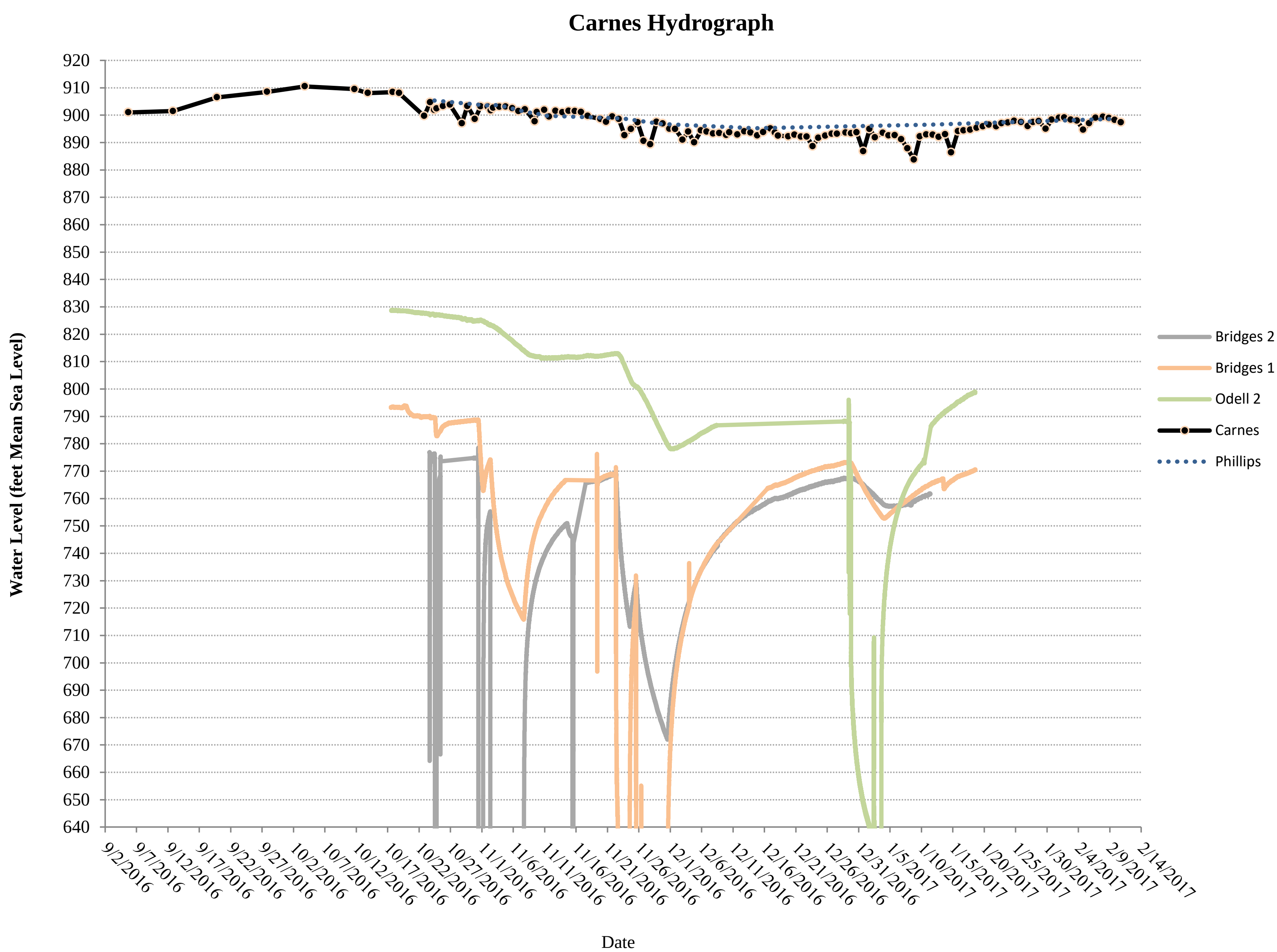
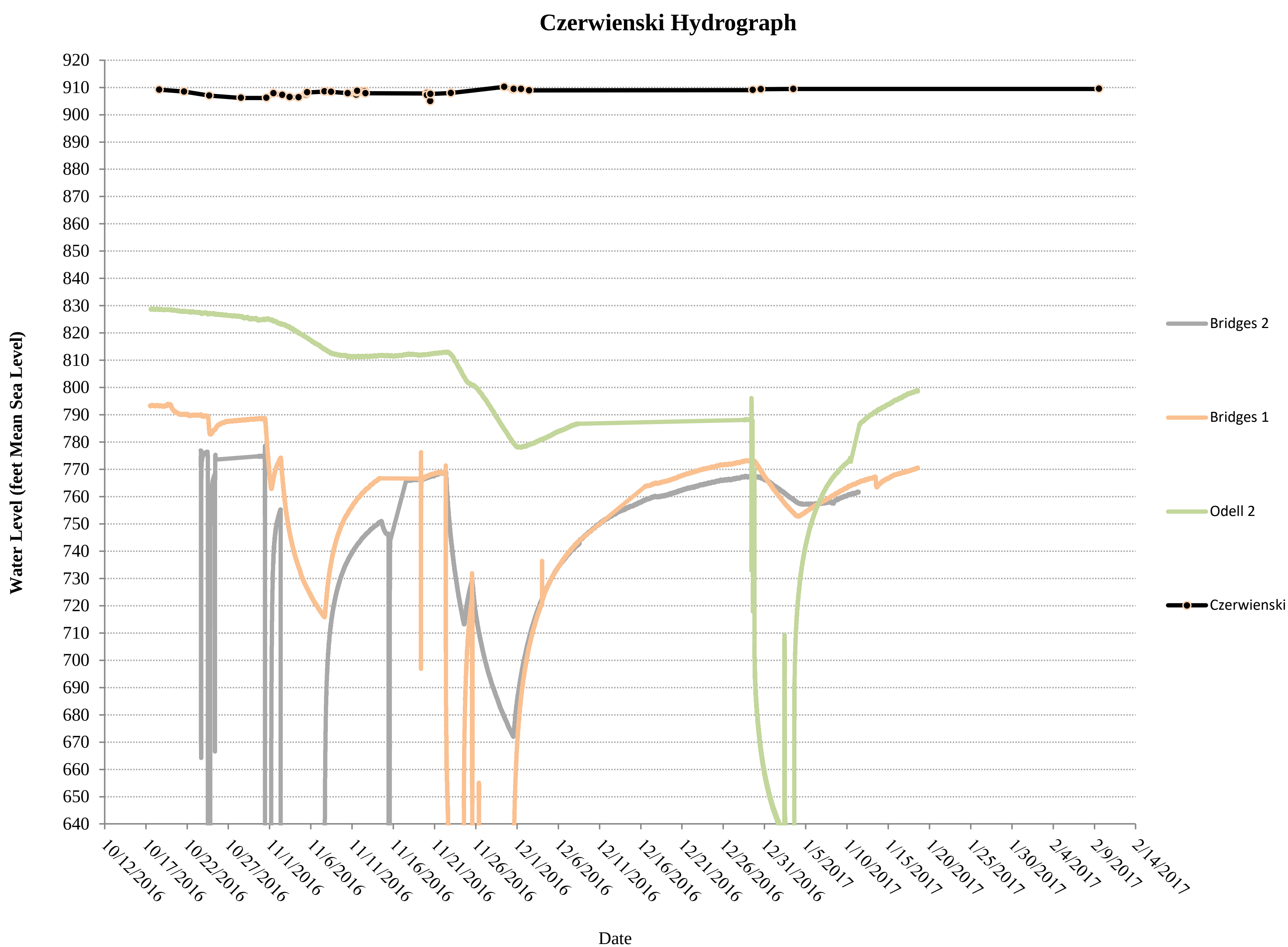
690
680
670
660
650
640
630
620
610
600
10/17/2016
10/22/2016
10/27/2016
11/1/2016
11/6/2016
11/11/2016
11/16/2016
11/21/2016
11/26/2016
12/1/2016
12/6/2016
12/11/2016
12/16/2016
12/21/2016
12/26/2016
12/31/2016
1/5/2017
1/10/2017
1/15/2017
1/20/2017
1/25/2017
1/30/2017
2/4/2017
2/9/2017
2/14/2017
Date
Bridges 2
Bridges 1
Odell 2
Bernal

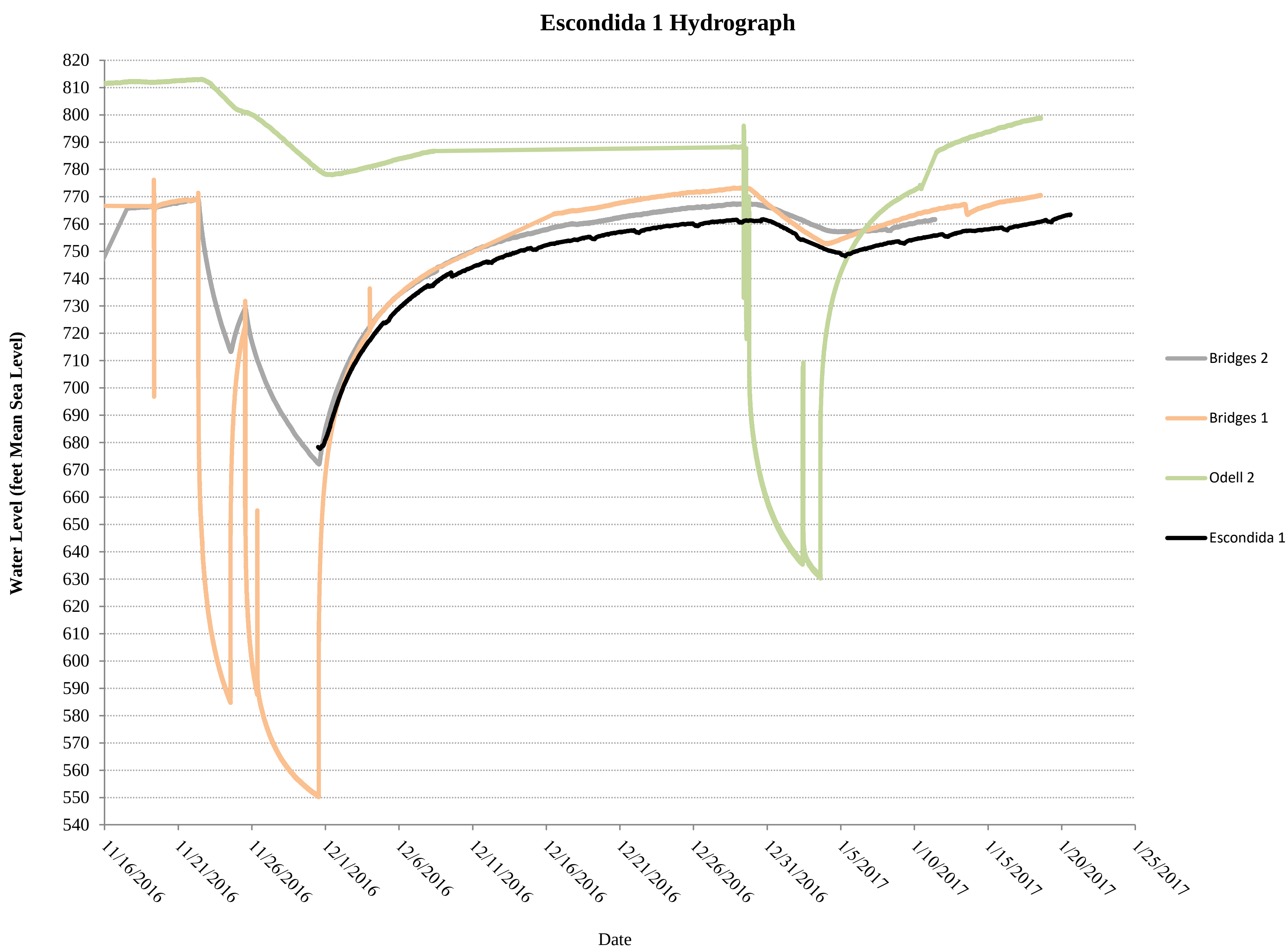


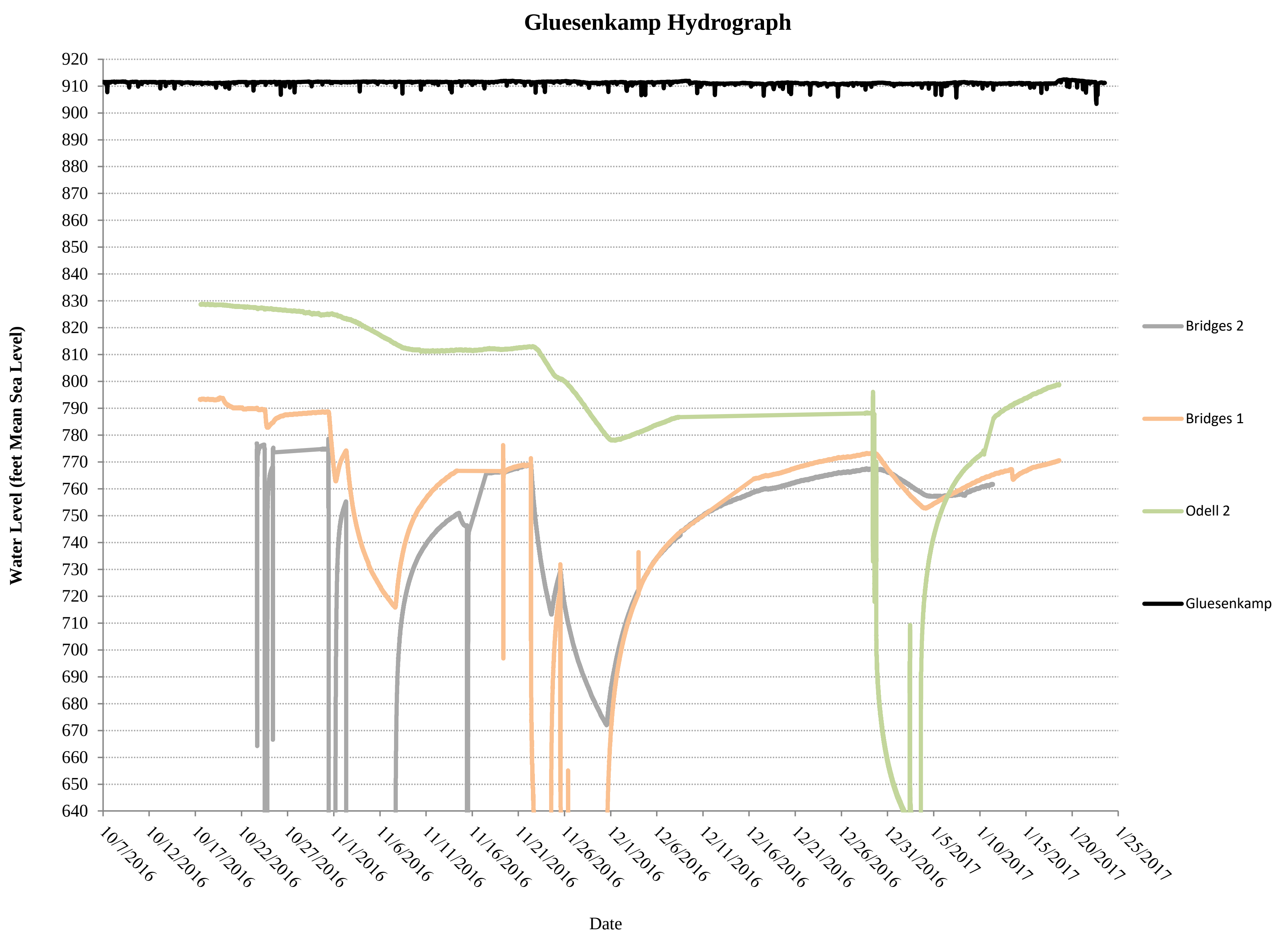
Bowman Hydrograph
Water Level (feet Mean Sea Level)
840
830
820
810
800
790
780
770
760
750
740
730
720
710
700
690
680
670
660
650
640
630
620
610
600
590
580
570
560
550
540
10/17/2016
10/22/2016
10/27/2016
11/1/2016
11/6/2016
11/11/2016
11/16/2016
11/21/2016
11/26/2016
12/1/2016
12/6/2016
12/11/2016
12/16/2016
12/21/2016
12/26/2016
12/31/2016
1/5/2017
1/10/2017
1/15/2017
1/20/2017
1/25/2017
1/30/2017
2/4/2017
2/9/2017
2/14/2017
Date
Bridges 2
Bridges 1
Odell 2
Bowman



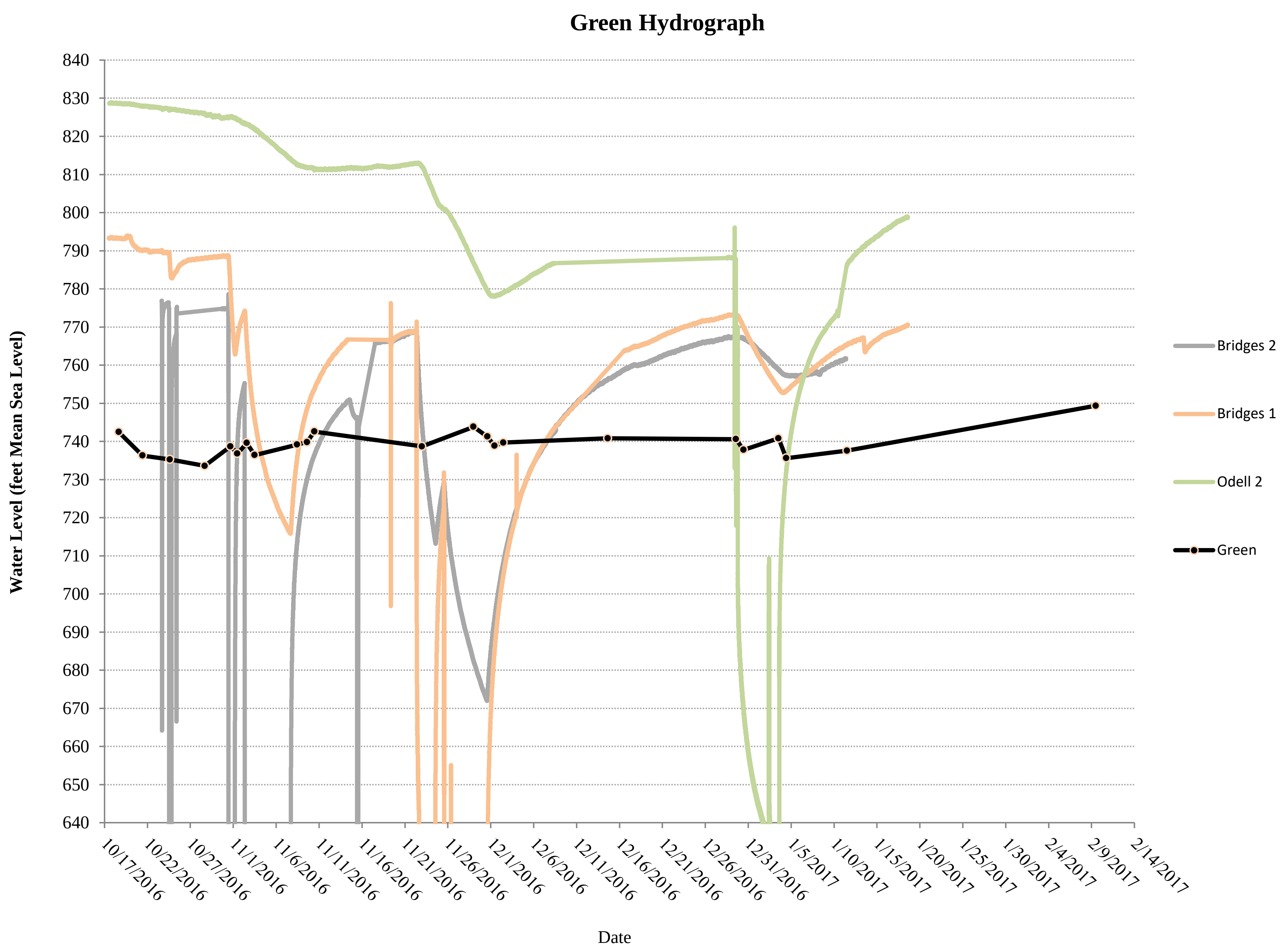
Carnes Hydrograph
Water Level (feet Mean Sea Level)
920
910
900
890
880
870
860
850
840
830
820
810
800
790
780
770
760
750
740
730
720
710
700
690
680
670
660
650
640
9/2/2016
9/7/2016
9/12/2016
9/17/2016
9/22/2016
9/27/2016
10/2/2016
10/7/2016
10/12/2016
10/17/2016
10/22/2016
10/27/2016
11/1/2016
11/6/2016
11/11/2016
11/16/2016
11/21/2016
11/26/2016
12/1/2016
12/6/2016
12/11/2016
12/16/2016
12/21/2016
12/26/2016
12/31/2016
1/5/2017
1/10/2017
1/15/2017
1/20/2017
1/25/2017
1/30/2017
2/4/2017
2/9/2017
2/14/2017
Date
Bridges 2
Bridges 1
Odell 2
Carnes
Phillips


Czerwienski Hydrograph
Water Level (feet Mean Sea Level)
920
910
900
890
880
870
860
850
840
830
820
810
800
790
780
770
760
750
740
730
720
710
700
690
680
670
660
650
640
10/12/2016
10/17/2016
10/22/2016
10/27/2016
11/1/2016
11/6/2016
11/11/2016
11/16/2016
11/21/2016
11/26/2016
12/1/2016
12/6/2016
12/11/2016
12/16/2016
12/21/2016
12/26/2016
12/31/2016
1/5/2017
1/10/2017
1/15/2017
1/20/2017
1/25/2017
1/30/2017
2/4/2017
2/9/2017
2/14/2017
Date
Bridges 2
Bridges 1
Odell 2
Czerwienski

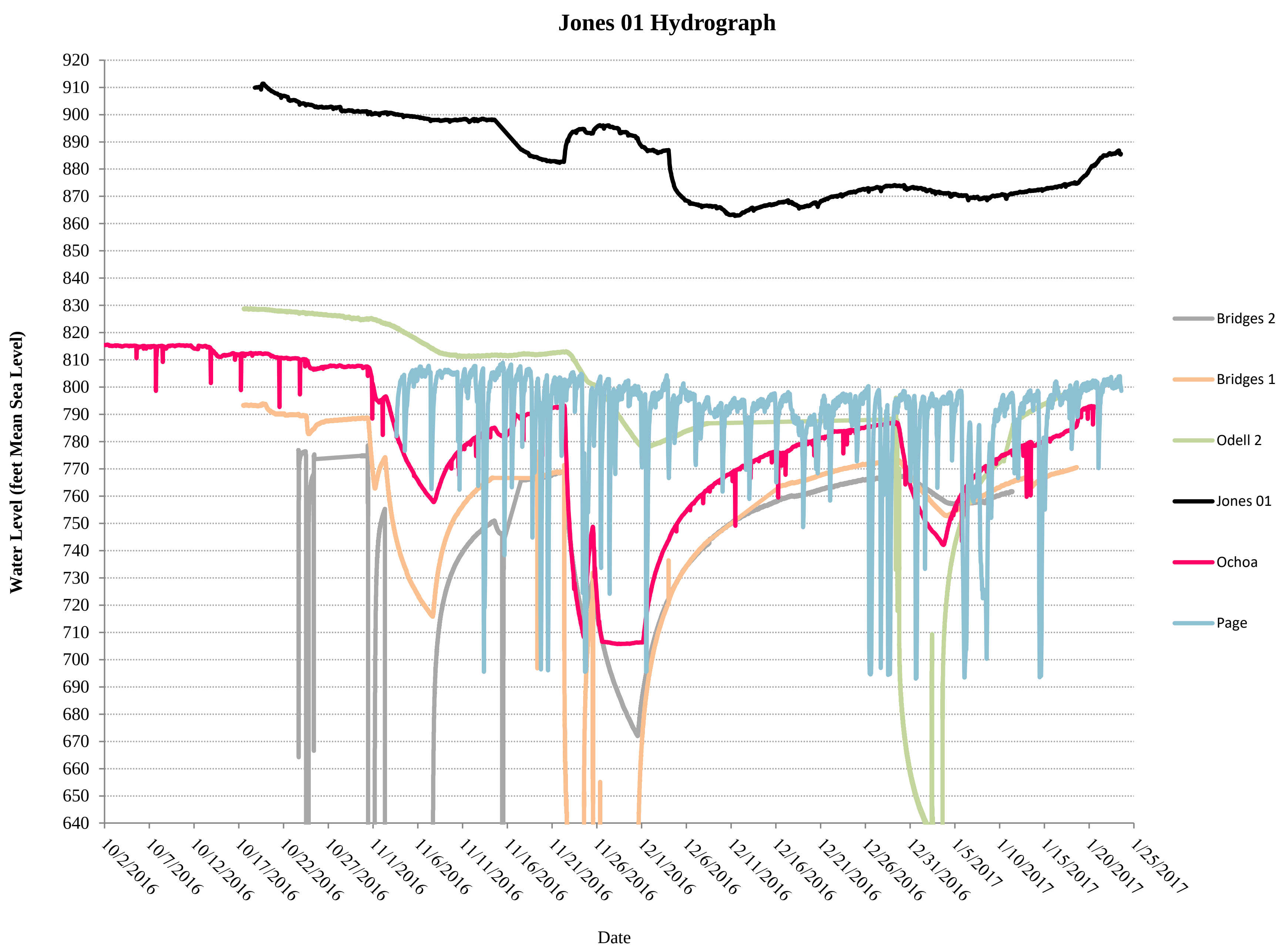

Escondida 1 Hydrograph
Water Level (feet Mean Sea Level)
820
810
800
790
780
770
760
750
740
730
720
710
700
690
680
670
660
650
640
630
620
610
600
590
580
570
560
550
540
11/16/2016
11/21/2016
11/26/2016
12/1/2016
12/6/2016
12/11/2016
12/16/2016
12/21/2016
12/26/2016
12/31/2016
1/5/2017
1/10/2017
1/15/2017
1/20/2017
1/25/2017
Date
Bridges 2
Bridges 1
Odell 2
Escondida 1



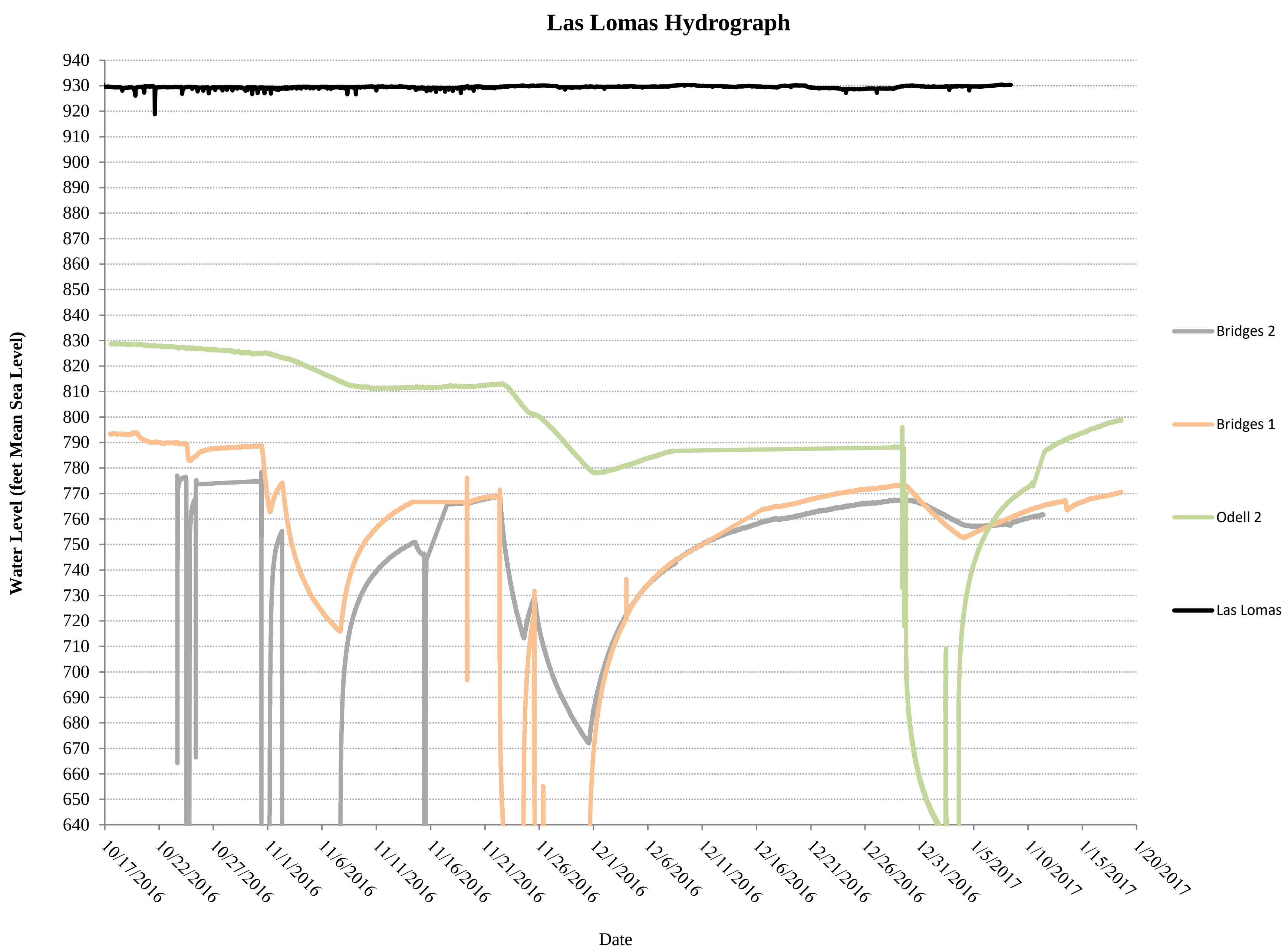
Gluesenkamp Hydrograph
Water Level (feet Mean Sea Level)
920
910
900
890
880
870
860
850
840
830
820
810
800
790
780
770
760
750
740
730
720
710
700
690
680
670
660
650
640
10/7/2016
10/12/2016
10/17/2016
10/22/2016
10/27/2016
11/1/2016
11/6/2016
11/11/2016
11/16/2016
11/21/2016
11/26/2016
12/1/2016
12/6/2016
12/11/2016
12/16/2016
12/21/2016
12/26/2016
12/31/2016
1/5/2017
1/10/2017
1/15/2017
1/20/2017
1/25/2017
Date
Bridges 2
Bridges 1
Odell 2
Gluesenkamp



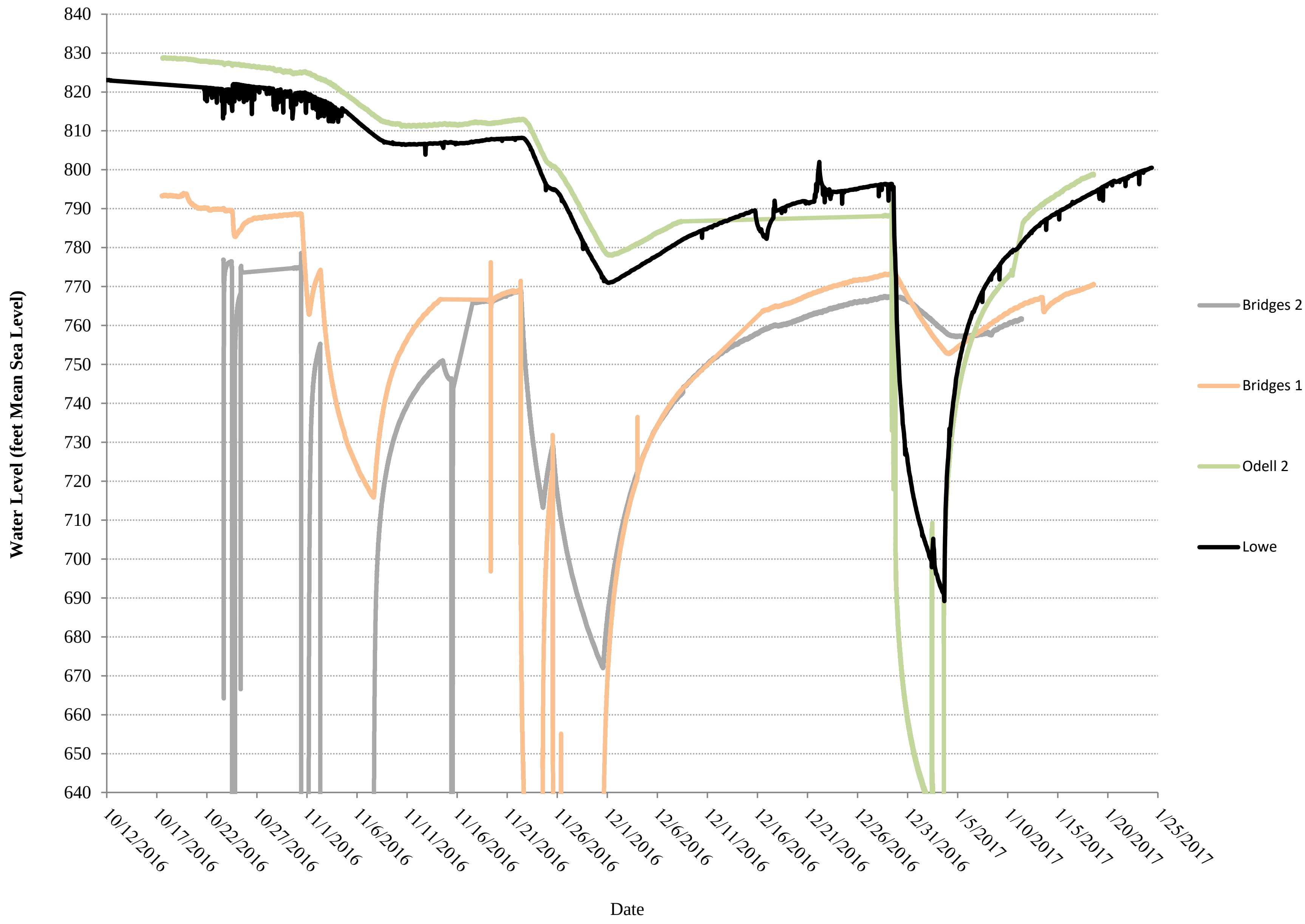
Green Hydrograph
Water Level (feet Mean Sea Level)
840
830
820
810
800
790
780
770
760
750
740
730
720
710
700
690
680
670
660
650
640
10/17/2016
10/22/2016
10/27/2016
11/1/2016
11/6/2016
11/11/2016
11/16/2016
11/21/2016
11/26/2016
12/1/2016
12/6/2016
12/11/2016
12/16/2016
12/21/2016
12/26/2016
12/31/2016
1/5/2017
1/10/2017
1/15/2017
1/20/2017
1/25/2017
1/30/2017
2/4/2017
2/9/2017
2/14/2017
Date
Bridges 2
Bridges 1
Odell 2
Green

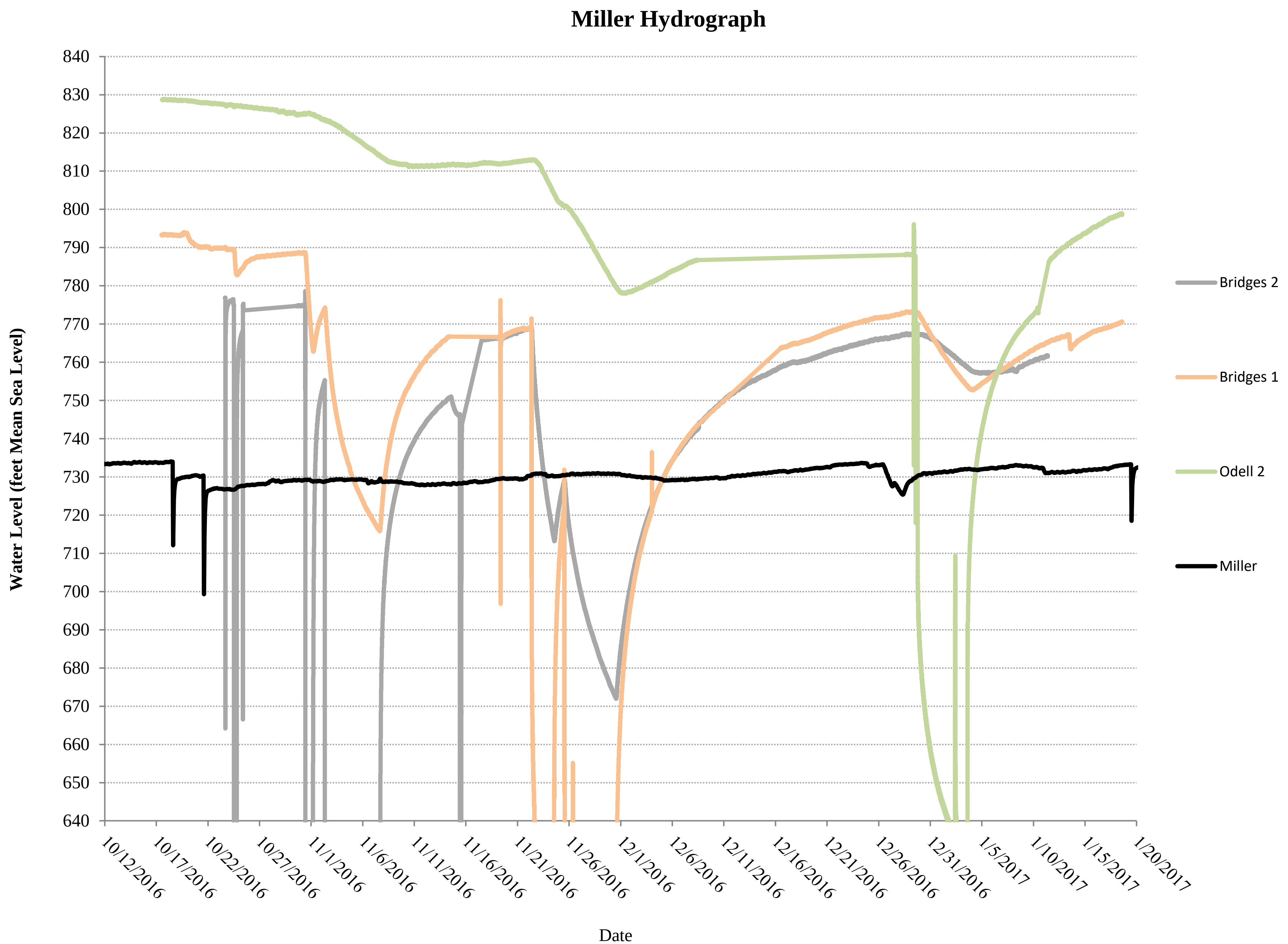


Jones 01 Hydrograph
Water Level (feet Mean Sea Level)
920
910
900
890
880
870
860
850
840
830
820
810
800
790
780
770
760
750
740
730
720
710
700
690
680
670
660
650
640
10/2/2016
10/7/2016
10/12/2016
10/17/2016
10/22/2016
10/27/2016
11/1/2016
11/6/2016
11/11/2016
11/16/2016
11/21/2016
11/26/2016
12/1/2016
12/6/2016
12/11/2016
12/16/2016
12/21/2016
12/26/2016
12/31/2016
1/5/2017
1/10/2017
1/15/2017
1/20/2017
1/25/2017
Date
Bridges 2
Bridges 1
Odell 2
Jones 01
Ochoa
Page

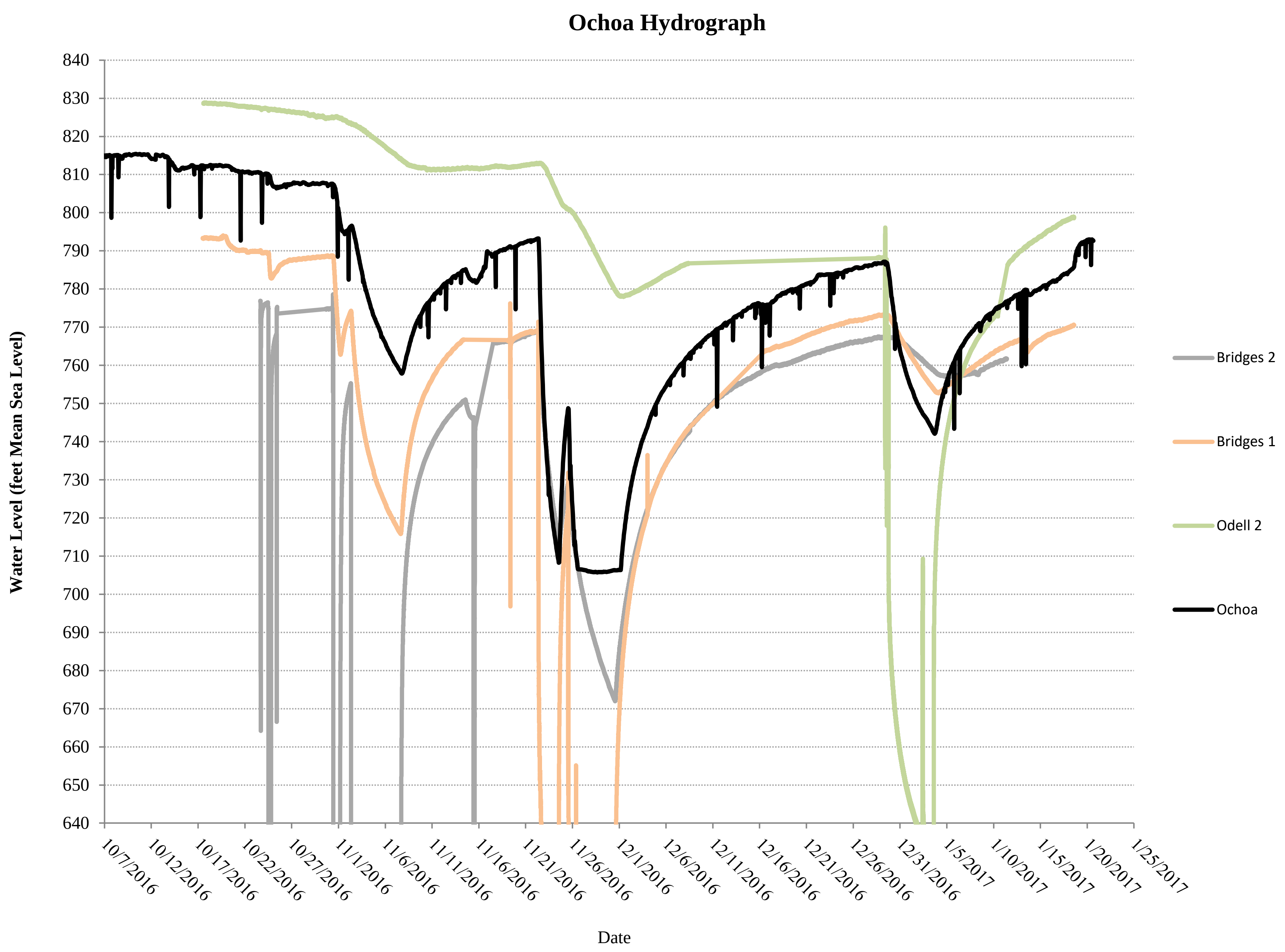

Las Lomas Hydrograph
Water Level (feet Mean Sea Level)
940
930
920
910
900
890
880
870
860
850
840
830
820
810
800
790
780
770
760
750
740
730
720
710
700
690
680
670
660
650
640
10/17/2016
10/22/2016
10/27/2016
11/1/2016
11/6/2016
11/11/2016
11/16/2016
11/21/2016
11/26/2016
12/1/2016
12/6/2016
12/11/2016
12/16/2016
12/21/2016
12/26/2016
12/31/2016
1/5/2017
1/10/2017
1/15/2017
1/20/2017
Date
Bridges 2
Bridges 1
Odell 2
Las Lomas

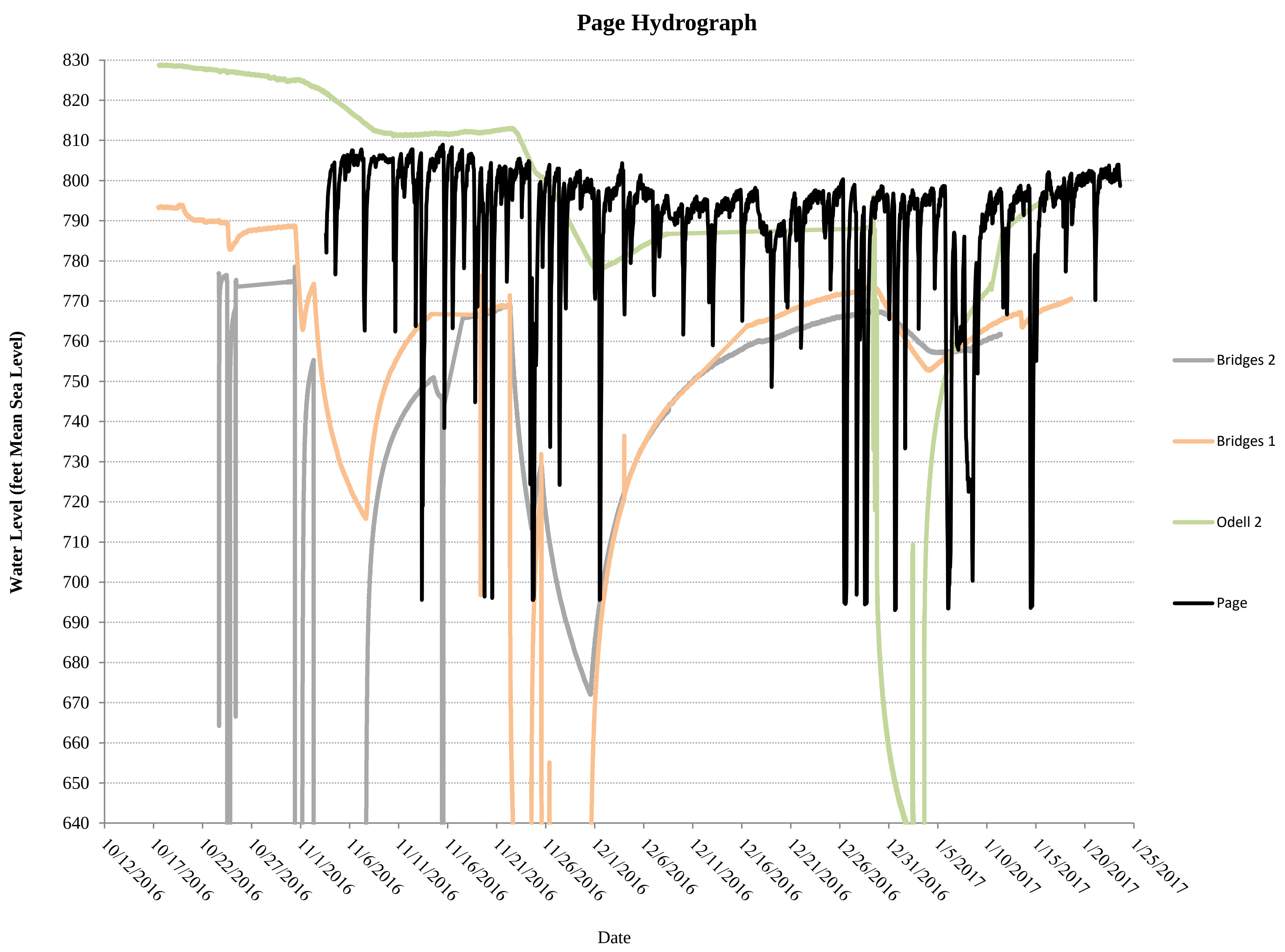
Lowe Hydrograph



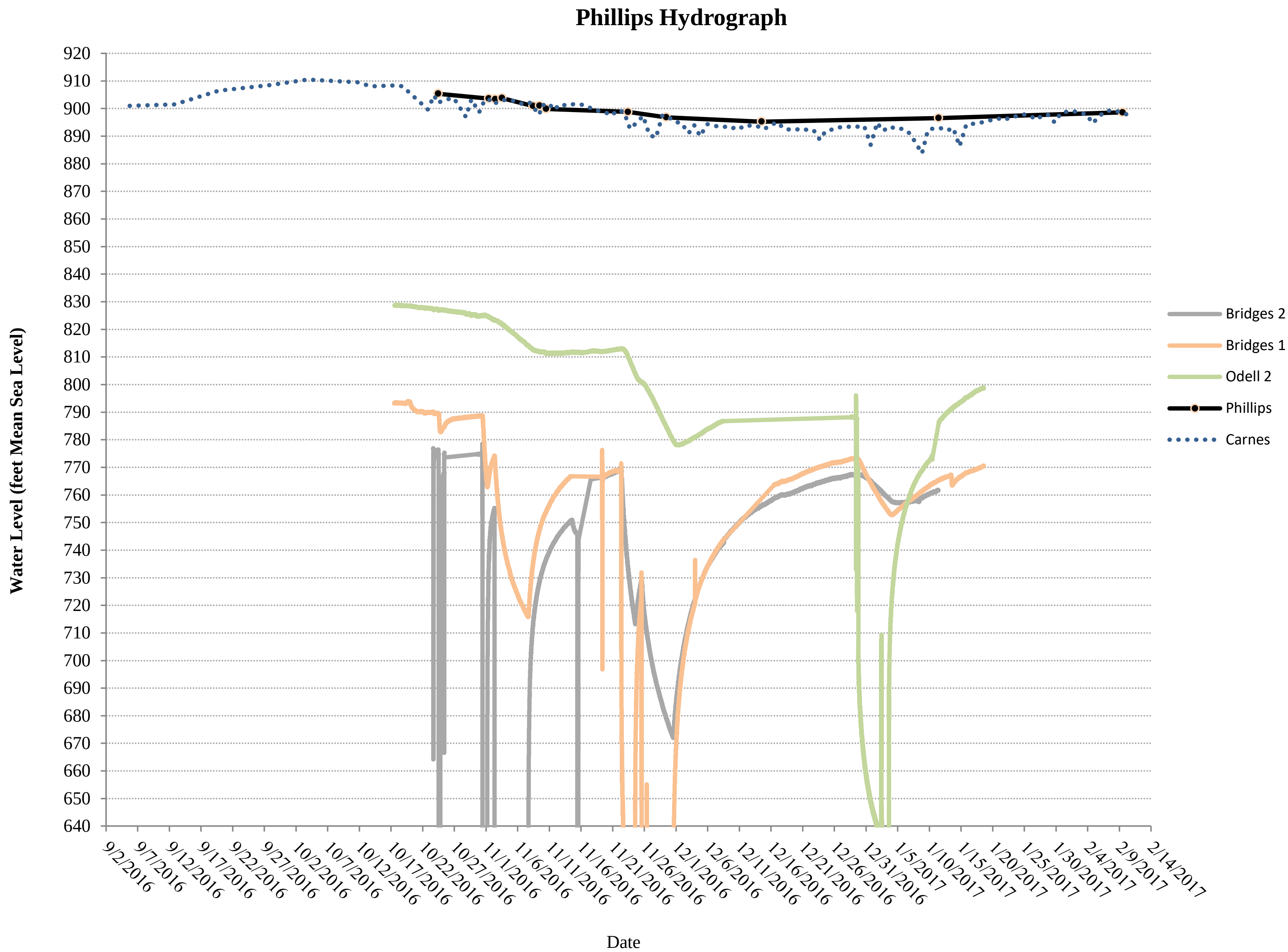


Miller Hydrograph
Water Level (feet Mean Sea Level)
840
830
820
810
800
790
780
770
760
750
740
730
720
710
700
690
680
670
660
650
640
10/12/2016
10/17/2016
10/22/2016
10/27/2016
11/1/2016
11/6/2016
11/11/2016
11/16/2016
11/21/2016
11/26/2016
12/1/2016
12/6/2016
12/11/2016
12/16/2016
12/21/2016
12/26/2016
12/31/2016
1/5/2017
1/10/2017
1/15/2017
1/20/2017
Date
Bridges 2
Bridges 1
Odell 2
Miller

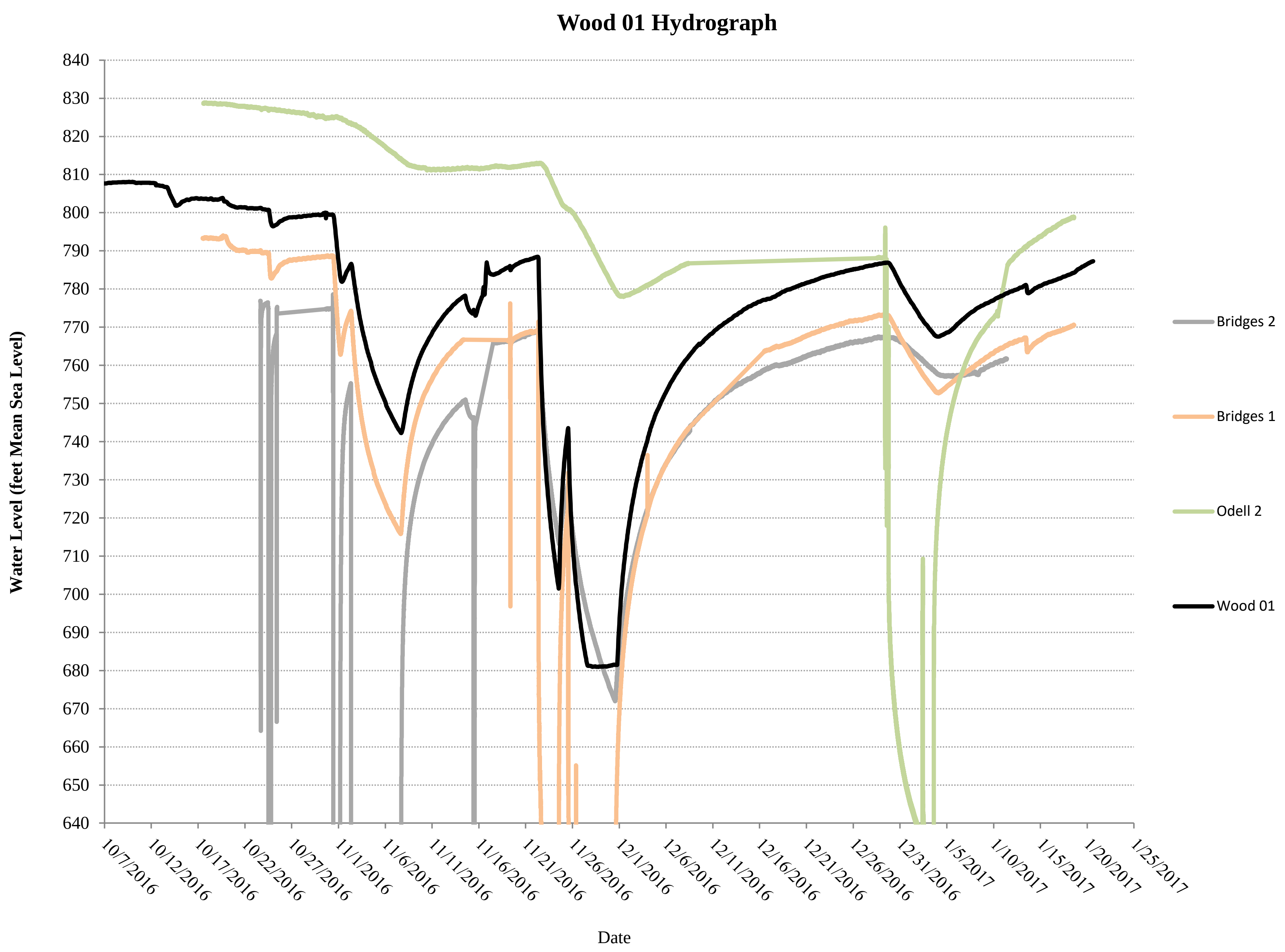

Ochoa Hydrograph
Water Level (feet Mean Sea Level)
840
830
820
810
800
790
780
770
760
750
740
730
720
710
700
690
680
670
660
650
640
10/7/2016
10/12/2016
10/17/2016
10/22/2016
10/27/2016
11/1/2016
11/6/2016
11/11/2016
11/16/2016
11/21/2016
11/26/2016
12/1/2016
12/6/2016
12/11/2016
12/16/2016
12/21/2016
12/26/2016
12/31/2016
1/5/2017
1/10/2017
1/15/2017
1/20/2017
1/25/2017
Date
Bridges 2
Bridges 1
Odell 2
Ochoa

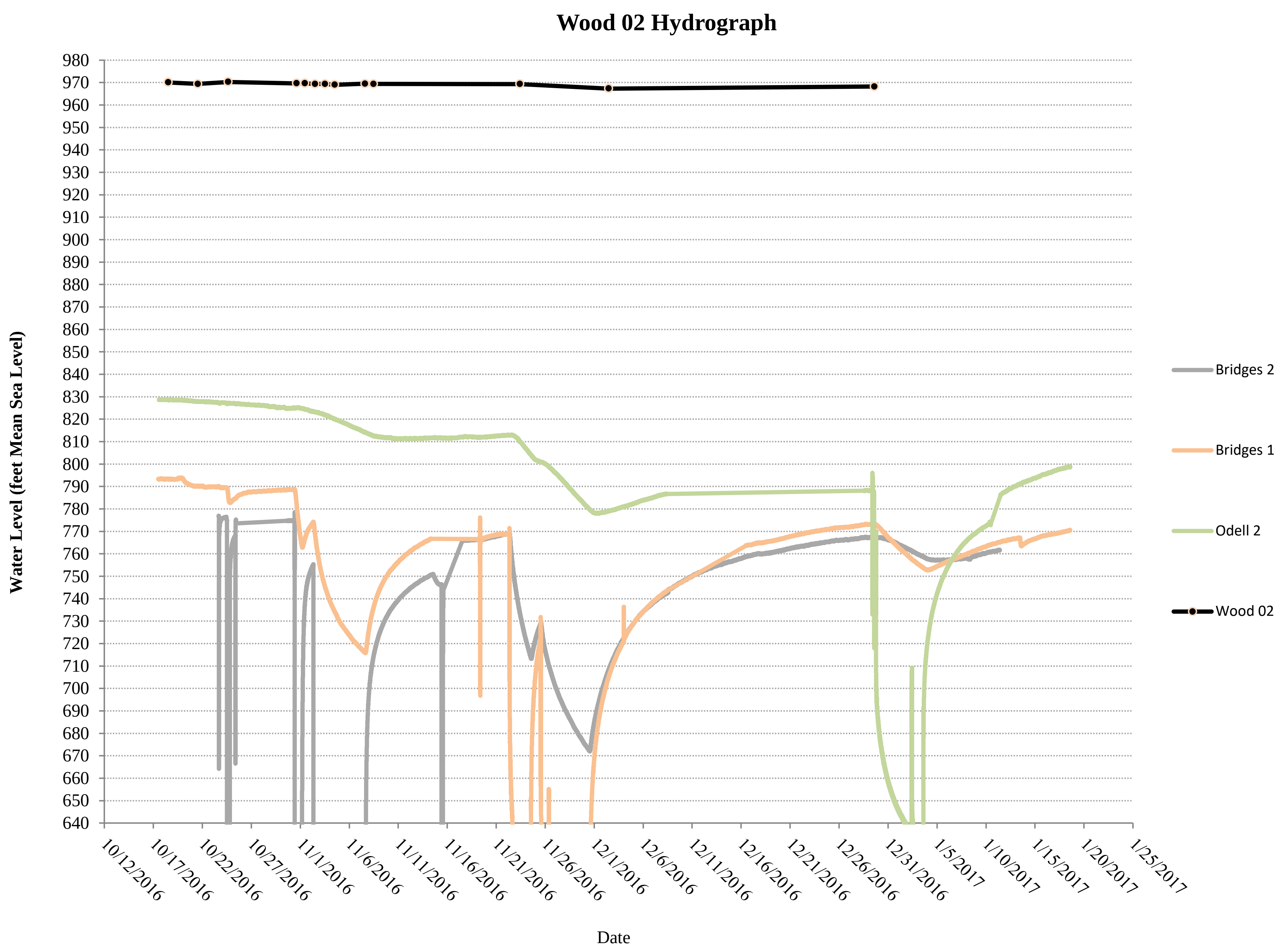


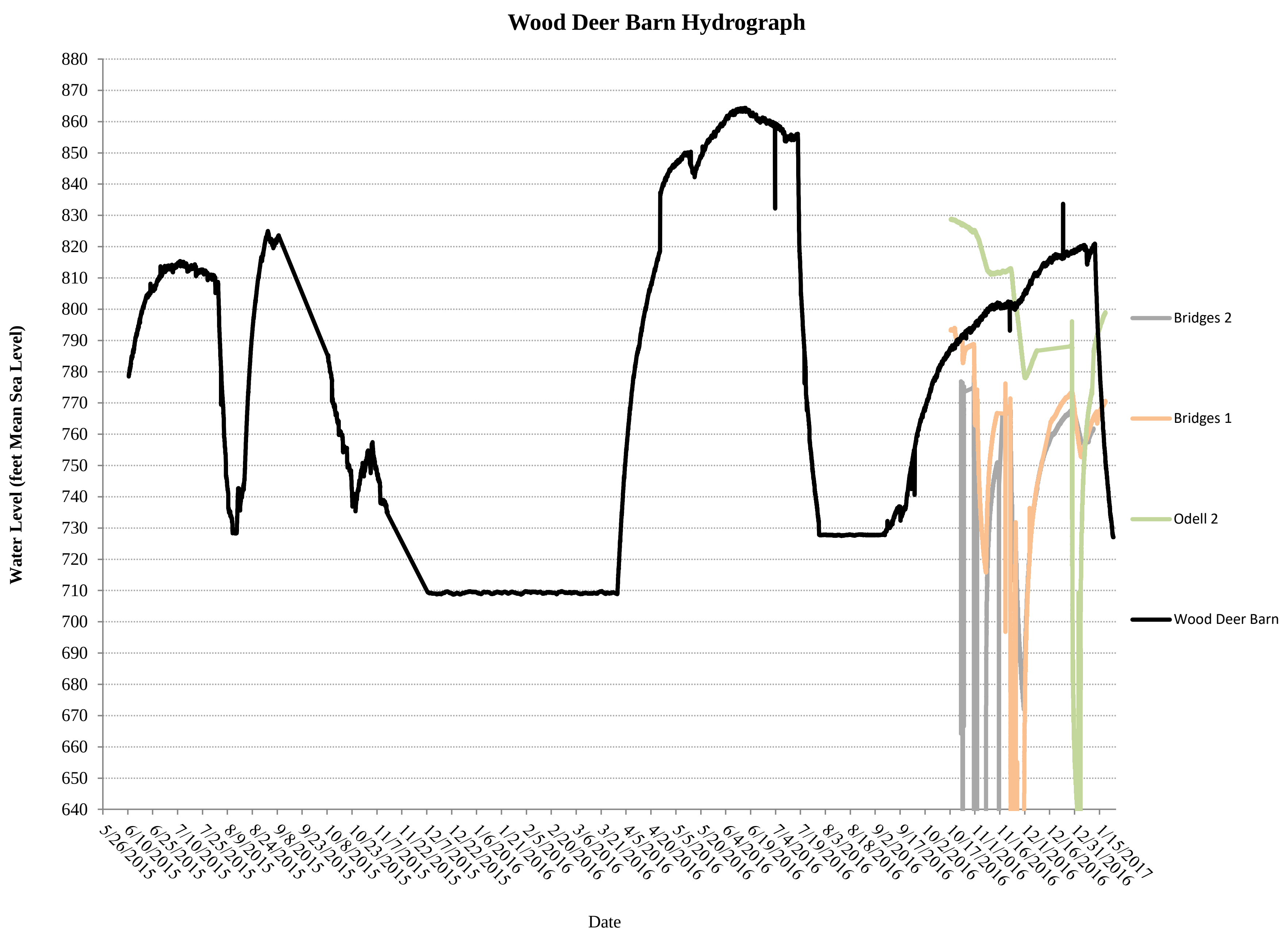
Page Hydrograph
Water Level (feet Mean Sea Level)
830
820
810
800
790
780
770
760
750
740
730
720
710
700
690
680
670
660
650
640
10/12/2016
10/17/2016
10/22/2016
10/27/2016
11/1/2016
11/6/2016
11/11/2016
11/16/2016
11/21/2016
11/26/2016
12/1/2016
12/6/2016
12/11/2016
12/16/2016
12/21/2016
12/26/2016
12/31/2016
1/5/2017
1/10/2017
1/15/2017
1/20/2017
1/25/2017
Date
Bridges 2
Bridges 1
Odell 2
Page



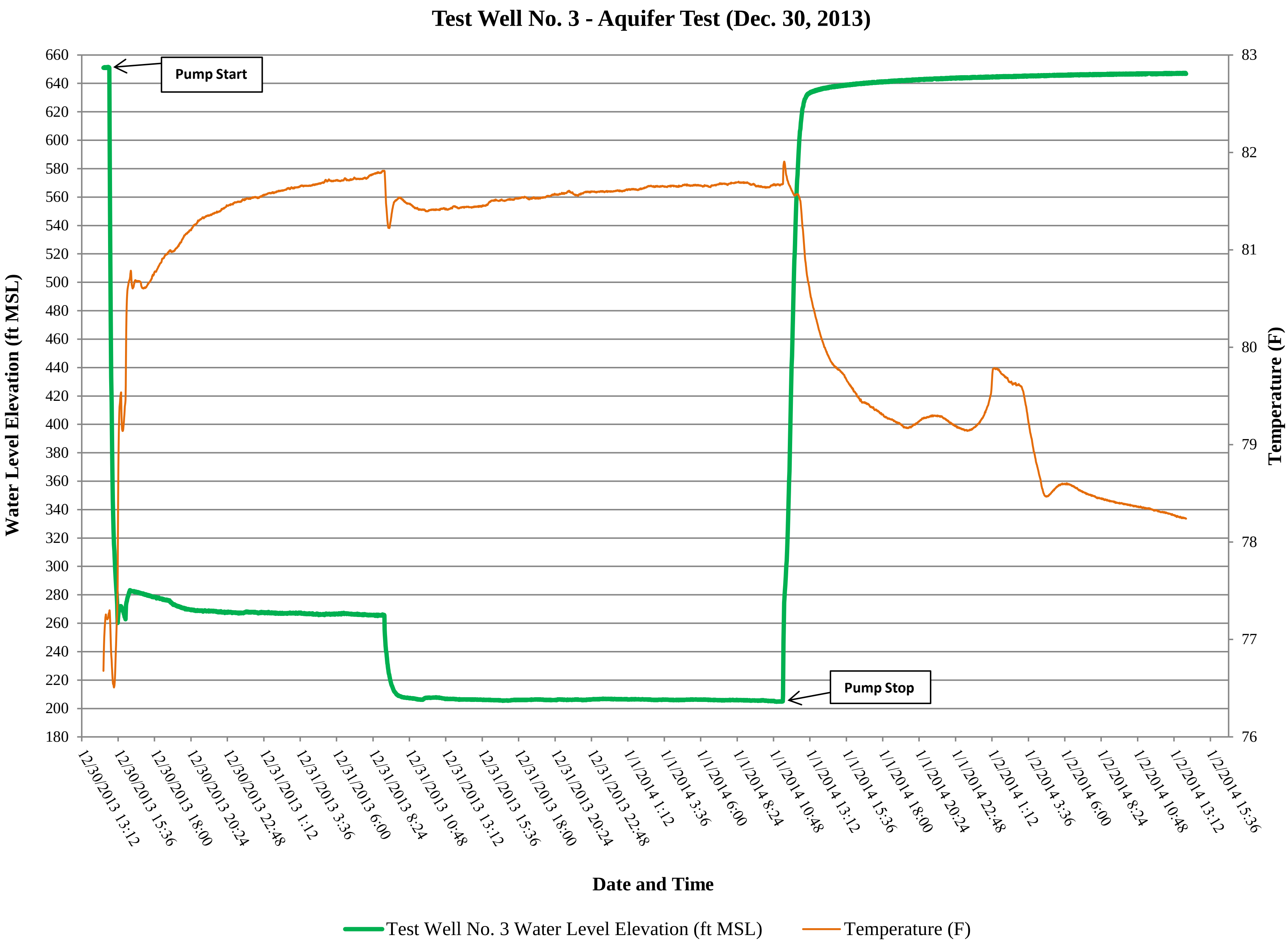
Phillips Hydrograph
Water Level (feet Mean Sea Level)
920
910
900
890
880
870
860
850
840
830
820
810
800
790
780
770
760
750
740
730
720
710
700
690
680
670
660
650
640
9/2/2016
9/7/2016
9/12/2016
9/17/2016
9/22/2016
9/27/2016
10/2/2016
10/7/2016
10/12/2016
10/17/2016
10/22/2016
10/27/2016
11/1/2016
11/6/2016
11/11/2016
11/16/2016
11/21/2016
11/26/2016
12/1/2016
12/6/2016
12/11/2016
12/16/2016
12/21/2016
12/26/2016
12/31/2016
1/5/2017
1/10/2017
1/15/2017
1/20/2017
1/25/2017
1/30/2017
2/4/2017
2/9/2017
2/14/2017
Date
Bridges 2
Bridges 1
Odell 2
Phillips
Carnes


Wood 01 Hydrograph
840
830
820
810
800
790
780
770
760
750
740
730
720
710
700
690
680
670
660
650
640
Water Level (feet Mean Sea Level)
10/7/2016
10/12/2016
10/17/2016
10/22/2016
10/27/2016
11/1/2016
11/6/2016
11/11/2016
11/16/2016
11/21/2016
11/26/2016
12/1/2016
12/6/2016
12/11/2016
12/16/2016
12/21/2016
12/26/2016
12/31/2016
1/5/2017
1/10/2017
1/15/2017
1/20/2017
1/25/2017
Date
Bridges 2
Bridges 1
Odell 2
Wood 01

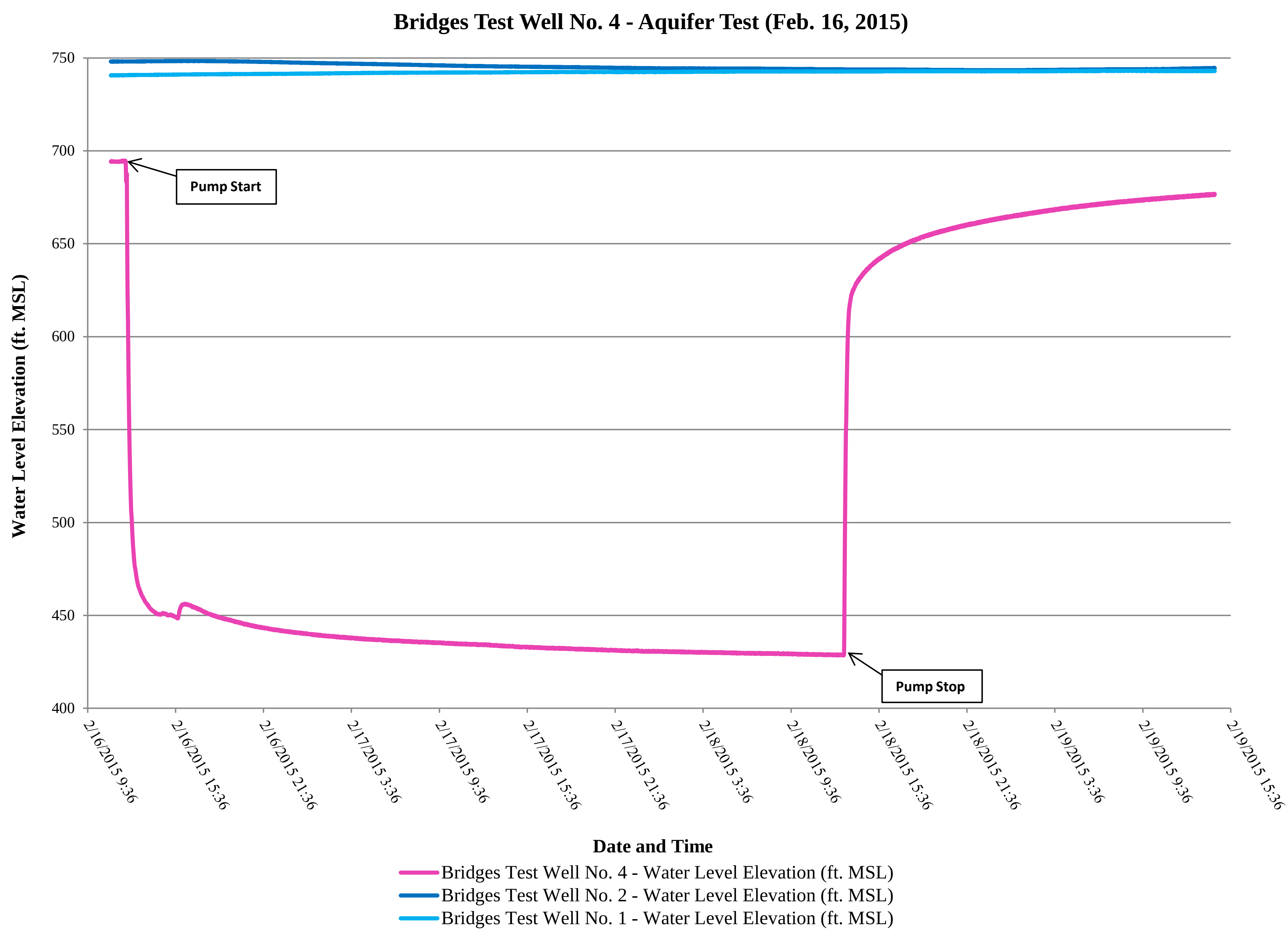

Wood 02 Hydrograph
Water Level (feet Mean Sea Level)
980
970
960
950
940
930
920
910
900
890
880
870
860
850
840
830
820
810
800
790
780
770
760
750
740
730
720
710
700
690
680
670
660
650
640
10/12/2016
10/17/2016
10/22/2016
10/27/2016
11/1/2016
11/6/2016
11/11/2016
11/16/2016
11/21/2016
11/26/2016
12/1/2016
12/6/2016
12/11/2016
12/16/2016
12/21/2016
12/26/2016
12/31/2016
1/5/2017
1/10/2017
1/15/2017
1/20/2017
1/25/2017
Date
Bridges 2
Bridges 1
Odell 2
Wood 02

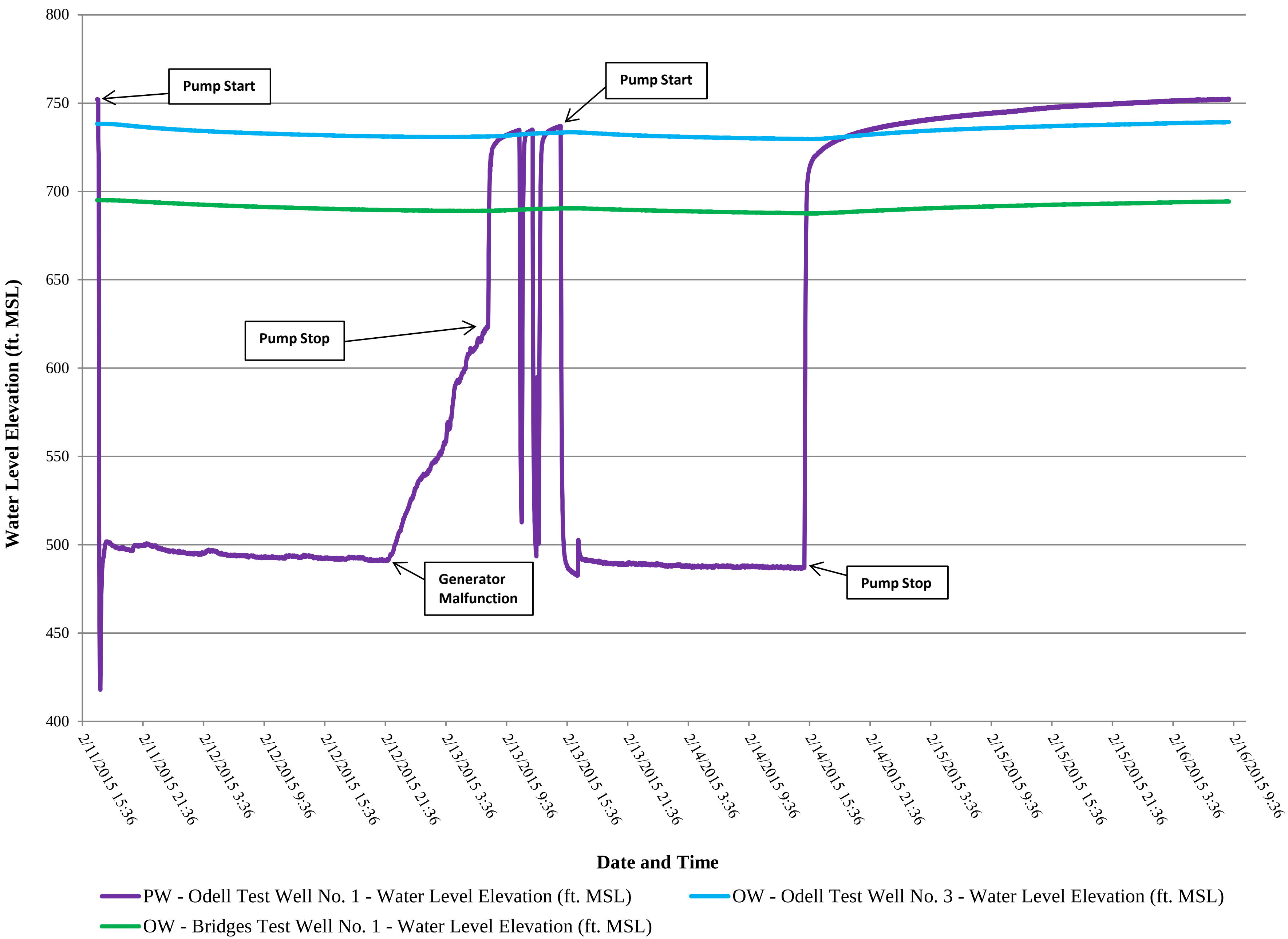


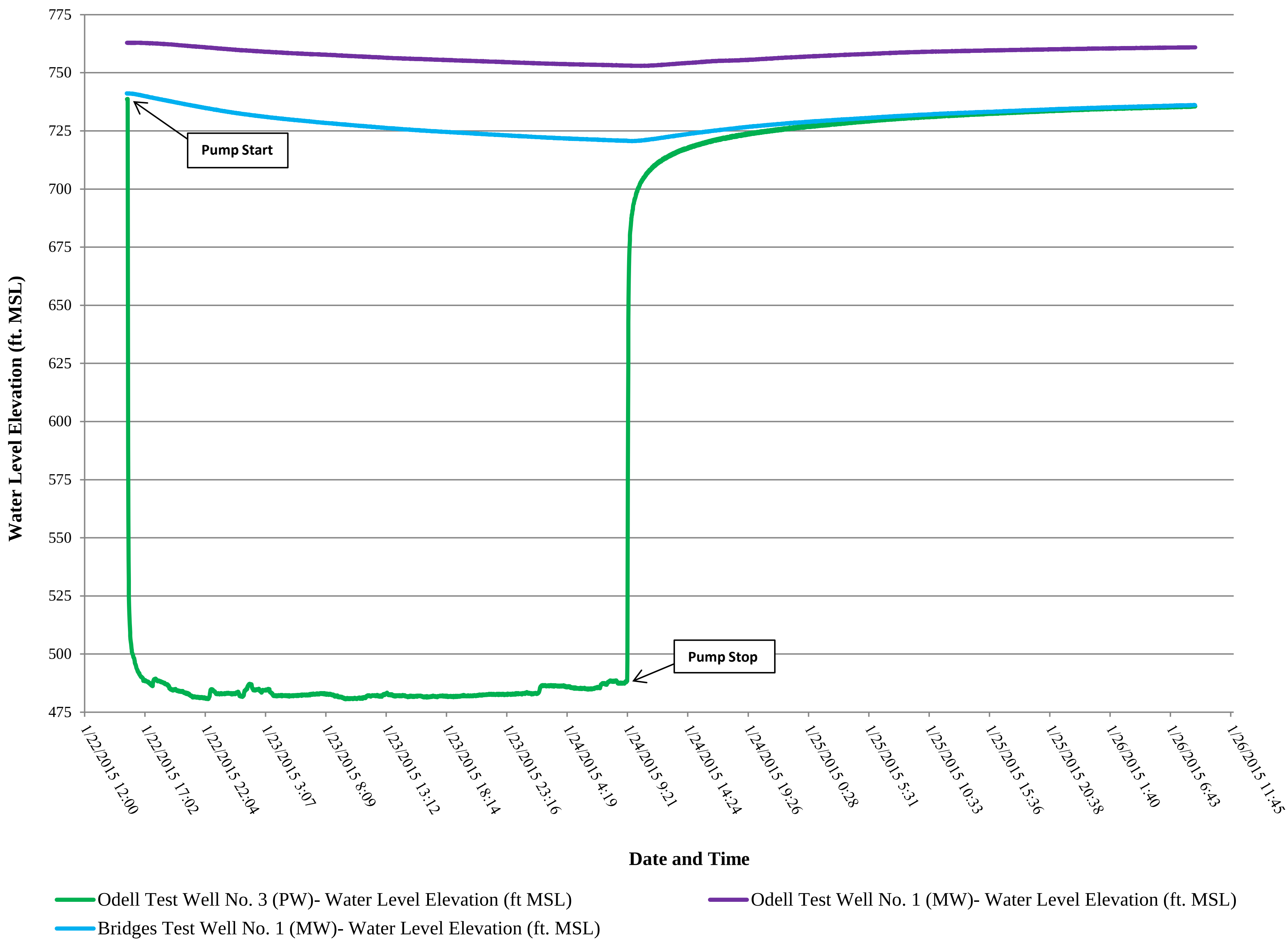
Wood Deer Barn Hydrograph
Water Level (feet Mean Sea Level)
880
870
860
850
840
830
820
810
800
790
780
770
760
750
740
730
720
710
700
690
680
670
660
650
640
5/26/2015
6/10/2015
6/25/2015
7/10/2015
7/25/2015
8/9/2015
8/24/2015
9/8/2015
9/23/2015
10/8/2015
10/23/2015
11/7/2015
11/22/2015
12/7/2015
12/22/2015
1/6/2016
1/21/2016
2/5/2016
2/20/2016
3/6/2016
3/21/2016
4/5/2016
4/20/2016
5/5/2016
5/20/2016
6/4/2016
6/19/2016
7/4/2016
7/19/2016
8/3/2016
8/18/2016
9/2/2016
9/17/2016
10/2/2016
10/17/2016
11/1/2016
11/16/2016
12/1/2016
12/16/2016
12/31/2016
1/15/2017
Date
Bridges 2
Bridges 1
Odell 2
Wood Deer Barn



Test Well No. 3 - Aquifer Test (Dec. 30, 2013)
Pump Start
Pump Stop
Water Level Elevation (ft MSL)
Temperature (F)
660
640
620
600
580
560
540
520
500
480
460
440
420
400
380
360
340
320
300
280
260
240
220
200
180
83
82
81
80
79
78
77
76
12/30/2013 13:12
12/30/2013 15:36
12/30/2013 18:00
12/30/2013 20:24
12/30/2013 22:48
12/31/2013 1:12
12/31/2013 3:36
12/31/2013 6:00
12/31/2013 8:24
12/31/2013 10:48
12/31/2013 13:12
12/31/2013 15:36
12/31/2013 18:00
12/31/2013 20:24
12/31/2013 22:48
1/1/2014 1:12
1/1/2014 3:36
1/1/2014 6:00
1/1/2014 8:24
1/1/2014 10:48
1/1/2014 13:12
1/1/2014 15:36
1/1/2014 18:00
1/1/2014 20:24
1/1/2014 22:48
1/2/2014 1:12
1/2/2014 3:36
1/2/2014 6:00
1/2/2014 8:24
1/2/2014 10:48
1/2/2014 13:12
1/2/2014 15:36
Date and Time
Test Well No. 3 Water Level Elevation (ft MSL)
Temperature (F)


Bridges Test Well No. 4 - Aquifer Test (Feb. 16, 2015)
Water Level Elevation (ft. MSL)
750
700
650
600
550
500
450
400
Pump Start
Pump Stop
2/16/2015 9:36
2/16/2015 15:36
2/16/2015 21:36
2/17/2015 3:36
2/17/2015 9:36
2/17/2015 15:36
2/17/2015 21:36
2/18/2015 3:36
2/18/2015 9:36
2/18/2015 15:36
2/18/2015 21:36
2/19/2015 3:36
2/19/2015 9:36
2/19/2015 15:36
Date and Time
Bridges Test Well No. 4 - Water Level Elevation (ft. MSL)
Bridges Test Well No. 2 - Water Level Elevation (ft. MSL)
Bridges Test Well No. 1 - Water Level Elevation (ft. MSL)

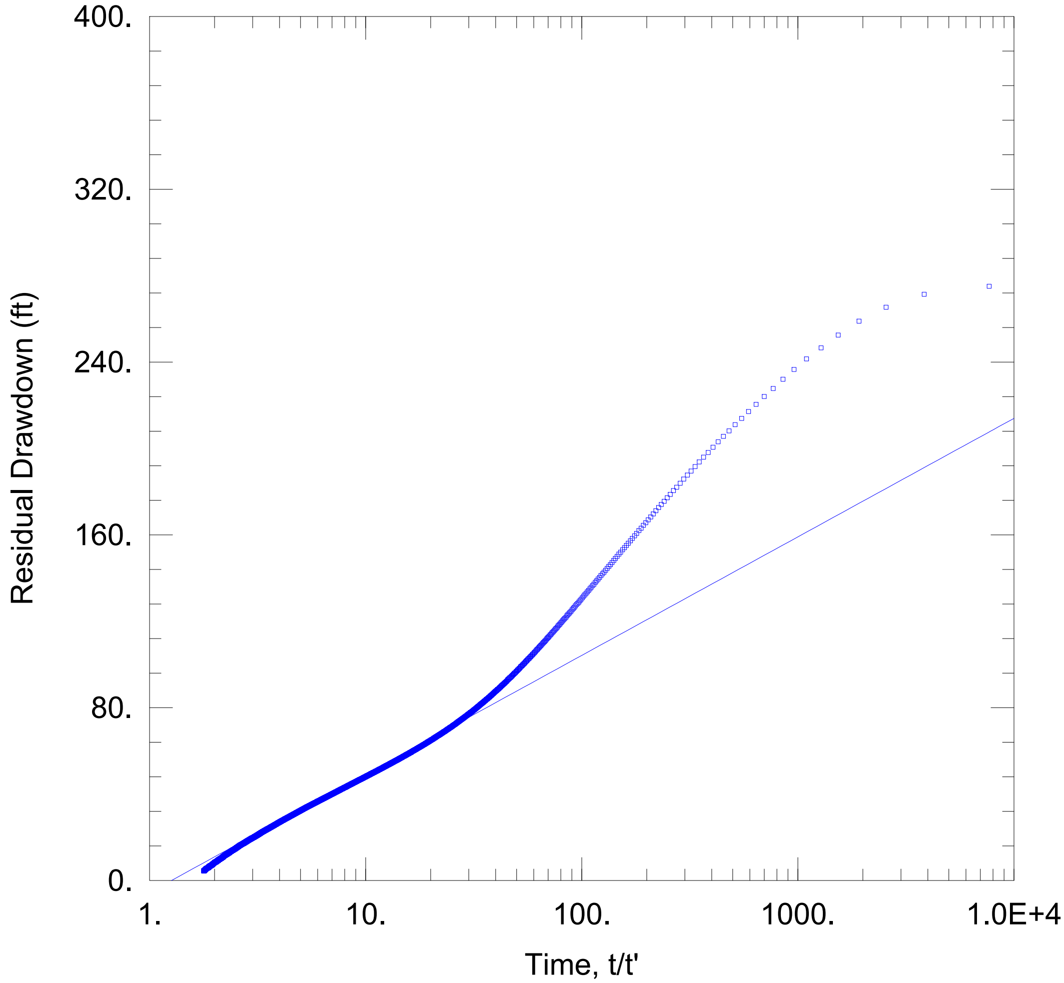

Pump Start
Pump Start
Pump Stop
Generator Malfunction
Pump Stop
800
750
700
650
600
550
500
450
400
Water Level Elevation (ft. MSL)
2/11/2015 15:36
2/11/2015 21:36
2/12/2015 3:36
2/12/2015 9:36
2/12/2015 15:36
2/12/2015 21:36
2/13/2015 3:36
2/13/2015 9:36
2/13/2015 15:36
2/13/2015 21:36
2/14/2015 3:36
2/14/2015 9:36
2/14/2015 15:36
2/14/2015 21:36
2/15/2015 3:36
2/15/2015 9:36
2/15/2015 15:36
2/15/2015 21:36
2/16/2015 3:36
2/16/2015 9:36
Date and Time
PW - Odell Test Well No. 1 - Water Level Elevation (ft. MSL)
OW - Odell Test Well No. 3 - Water Level Elevation (ft. MSL)
OW - Bridges Test Well No. 1 - Water Level Elevation (ft. MSL)


775
750
725
700
675
650
625
600
575
550
525
500
475
Water Level Elevation (ft. MSL)
Pump Start
Pump Stop
1/22/2015 12:00
1/22/2015 17:02
1/22/2015 22:04
1/23/2015 3:07
1/23/2015 8:09
1/23/2015 13:12
1/23/2015 18:14
1/23/2015 23:16
1/24/2015 4:19
1/24/2015 9:21
1/24/2015 14:24
1/24/2015 19:26
1/25/2015 0:28
1/25/2015 5:31
1/25/2015 10:33
1/25/2015 15:36
1/25/2015 20:38
1/26/2015 1:40
1/26/2015 6:43
1/26/2015 11:45
Date and Time
Odell Test Well No. 3 (PW)- Water Level Elevation (ft MSL)
Odell Test Well No. 1 (MW)- Water Level Elevation (ft. MSL)
Bridges Test Well No. 1 (MW)- Water Level Elevation (ft. MSL)

Attachment C:

Calculated Aquifer Parameters

Bridges 1 Test



WELL TEST ANALYSIS

Data Set: \...\Bridges 2 - theis recovery.aqt
Date: 11/15/17 Time: 07:41:25

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 2
Test Date: 11/2/2016

AQUIFER DATA

Saturated Thickness: 82. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 2	1951951.936	10906446.69

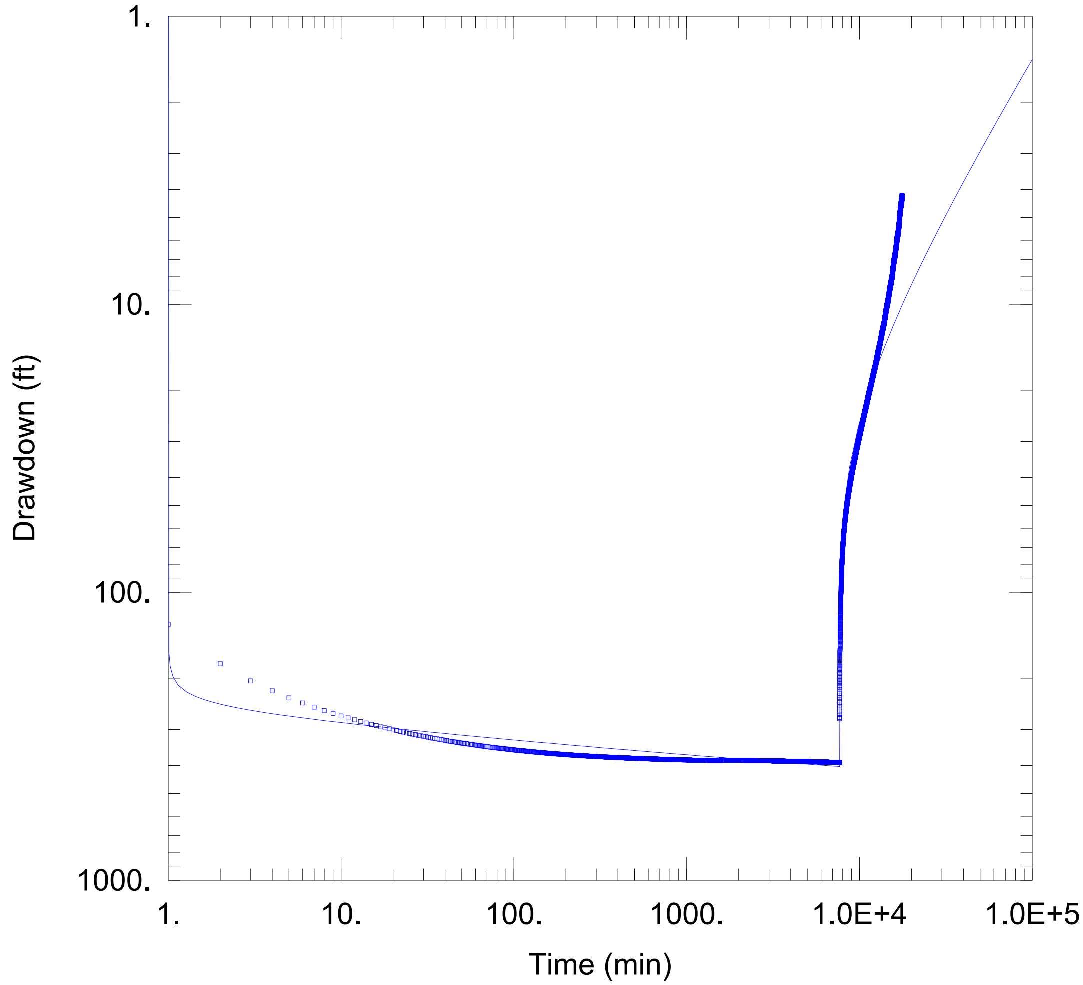
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 2	1951951.936	10906446.69

SOLUTION

Aquifer Model: Confined Solution Method: Theis (Recovery)

T = 195.9 ft^2/day S/S' = 1.265



WELL TEST ANALYSIS

Data Set: \...\Bridges 2 - theis.aqt
Date: 11/15/17 Time: 07:42:14

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 2
Test Date: 11/2/2016

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 2	1951951.936	10906446.69

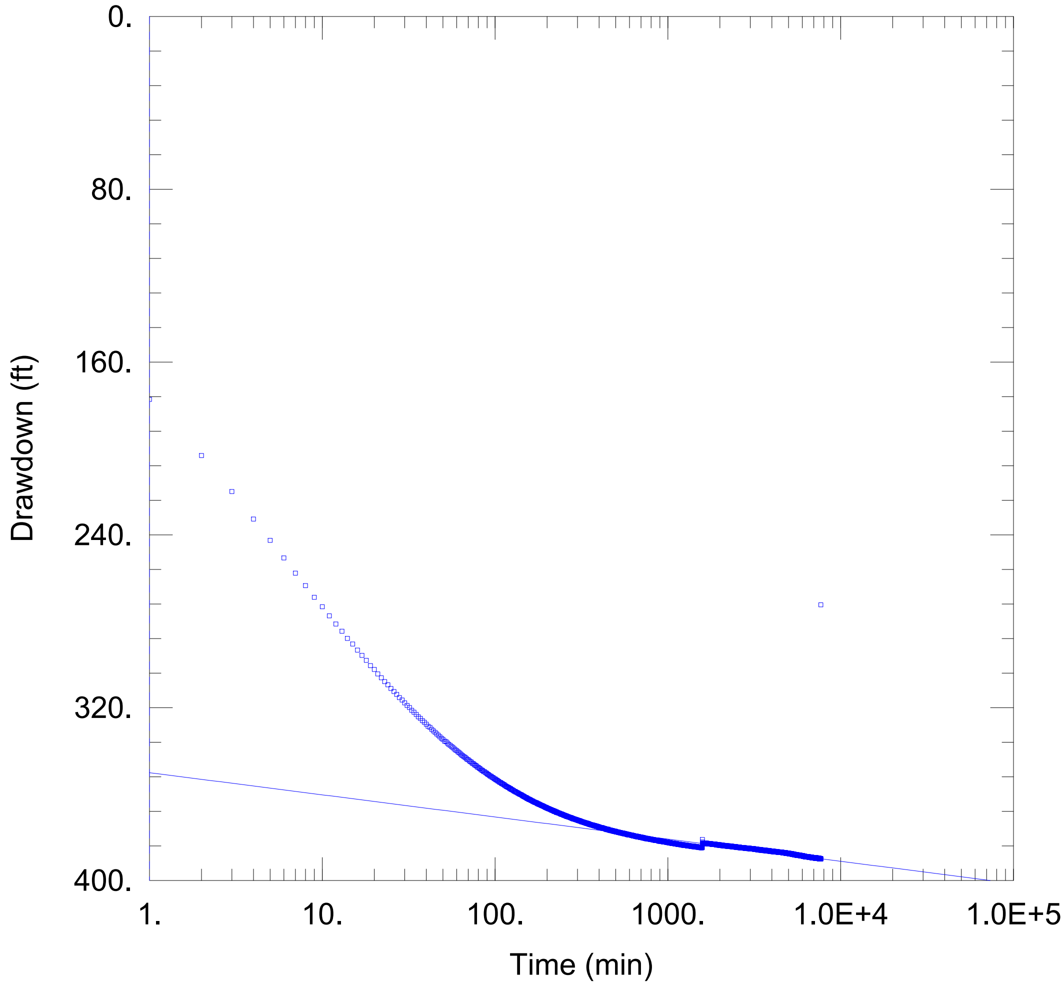
Observation Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 2	1951951.936	10906446.69

SOLUTION

Aquifer Model: Confined
Solution Method: Theis

T = 264. ft^2/day
S = 2.001E-6
Kz/Kr = 0.01
b = 79. ft



WELL TEST ANALYSIS

Data Set: \...\Bridges 2.aqt
Date: 11/15/17 Time: 07:42:35

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 2
Test Date: 11/2/2016

AQUIFER DATA

Saturated Thickness: 82. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 2	1951951.936	10906446.69

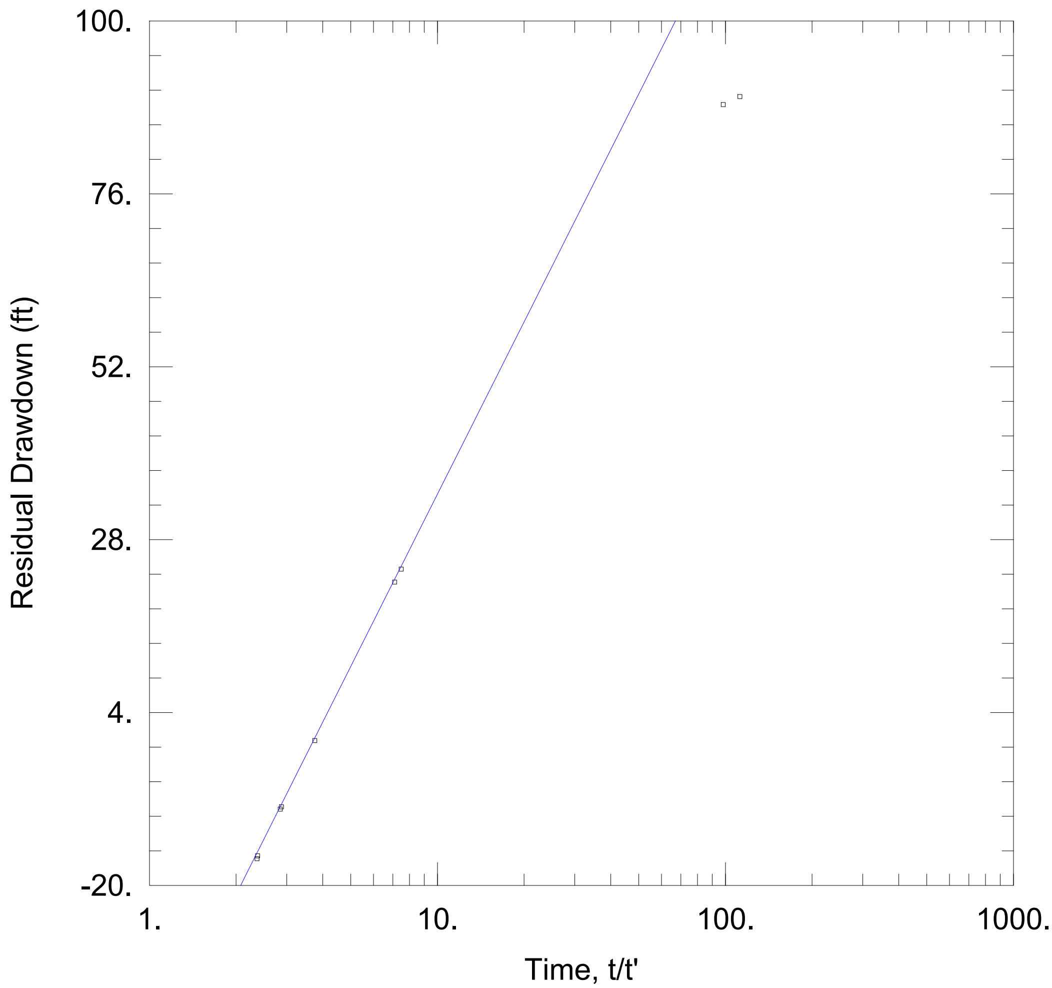
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 2	1951951.936	10906446.69

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 1048.2 ft^2/day S = 5.874E-34



WELL TEST ANALYSIS

Data Set: \...\OW Bowman - theis recovery.aqt
Date: 11/15/17 Time: 07:43:07

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 2
Test Date: 11/2/2016

AQUIFER DATA

Saturated Thickness: 82. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 2	1951951.936	10906446.69

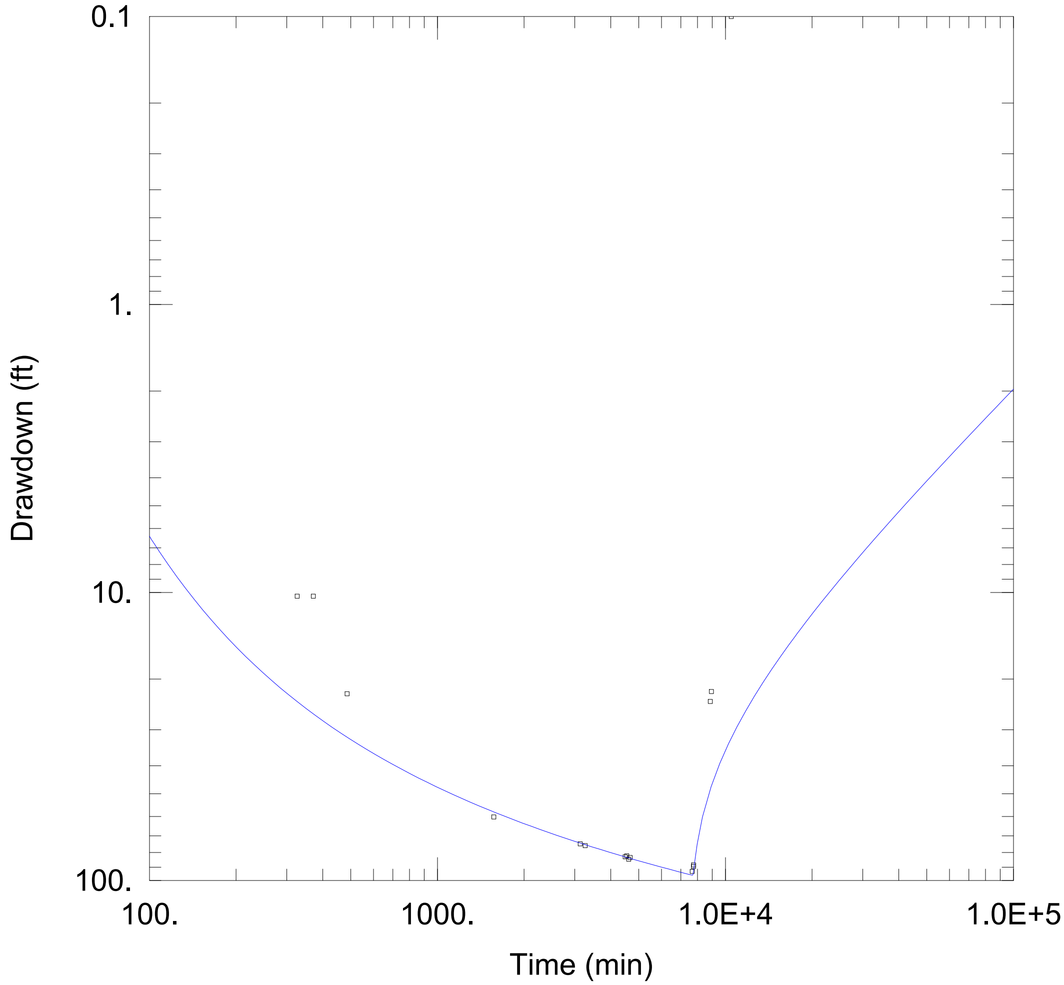
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bowman	1952817.257	10907226.9

SOLUTION

Aquifer Model: Confined Solution Method: Theis (Recovery)

T = 135.3 ft^2/day S/S' = 3.701



WELL TEST ANALYSIS

Data Set: \...\OW Bowman - theis.aqt
Date: 11/15/17 Time: 07:43:47

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 2
Test Date: 11/2/2016

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 2	1951951.936	10906446.69

Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bowman	1952817.257	10907226.9

SOLUTION

Aquifer Model: Confined

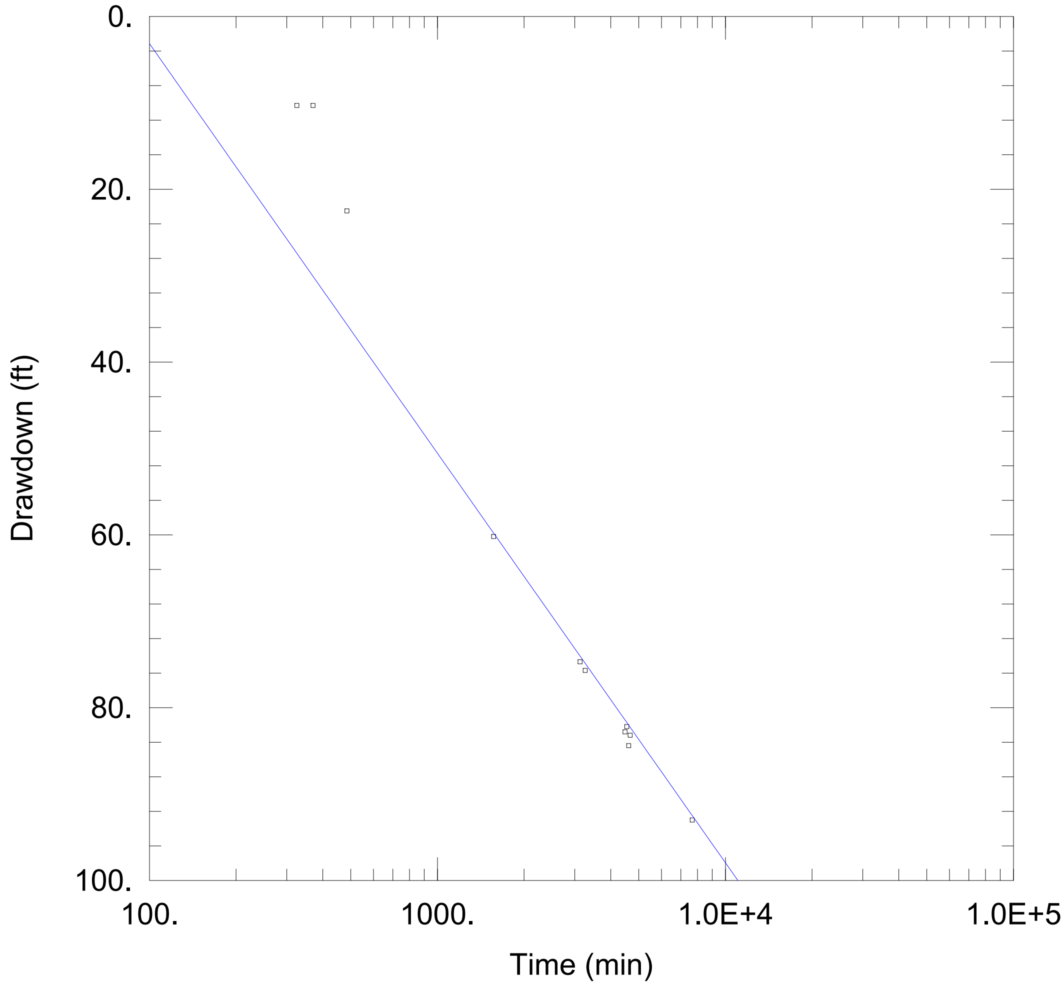
Solution Method: Theis

T = 189.2 ft^2/day

S = 3.461E-5

Kz/Kr = 0.01

b = 82. ft



WELL TEST ANALYSIS

Data Set: \...\OW Bowman.aqt
Date: 11/15/17 Time: 07:44:05

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 2
Test Date: 11/2/2016

AQUIFER DATA

Saturated Thickness: 82. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 2	1951951.936	10906446.69

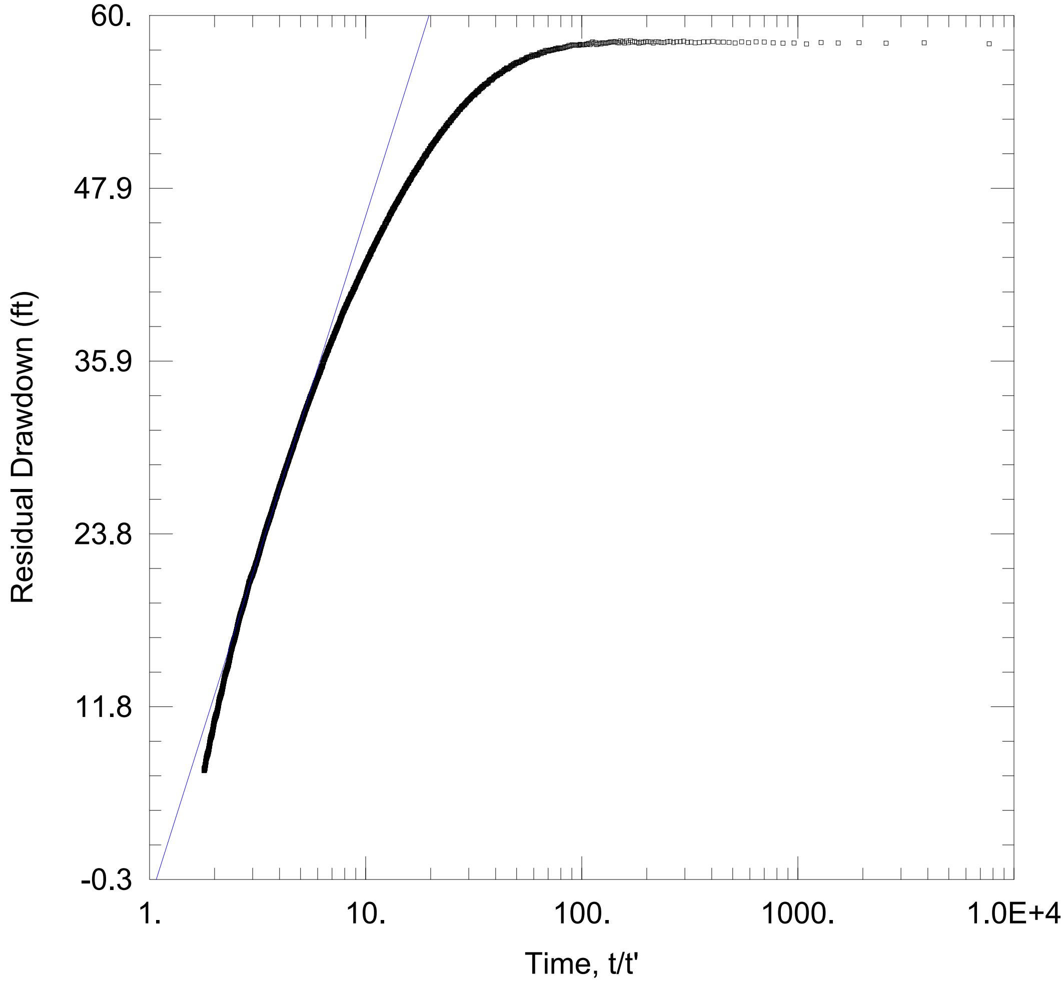
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bowman	1952817.257	10907226.9

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 226.8 ft^2/day S = 2.236E-5



WELL TEST ANALYSIS

Data Set: \...\OW Bridges 1 - theis recover.aqt
Date: 11/15/17 Time: 07:44:29

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 2
Test Date: 11/2/2016

AQUIFER DATA

Saturated Thickness: 82. ft
Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 2	1951951.936	10906446.69

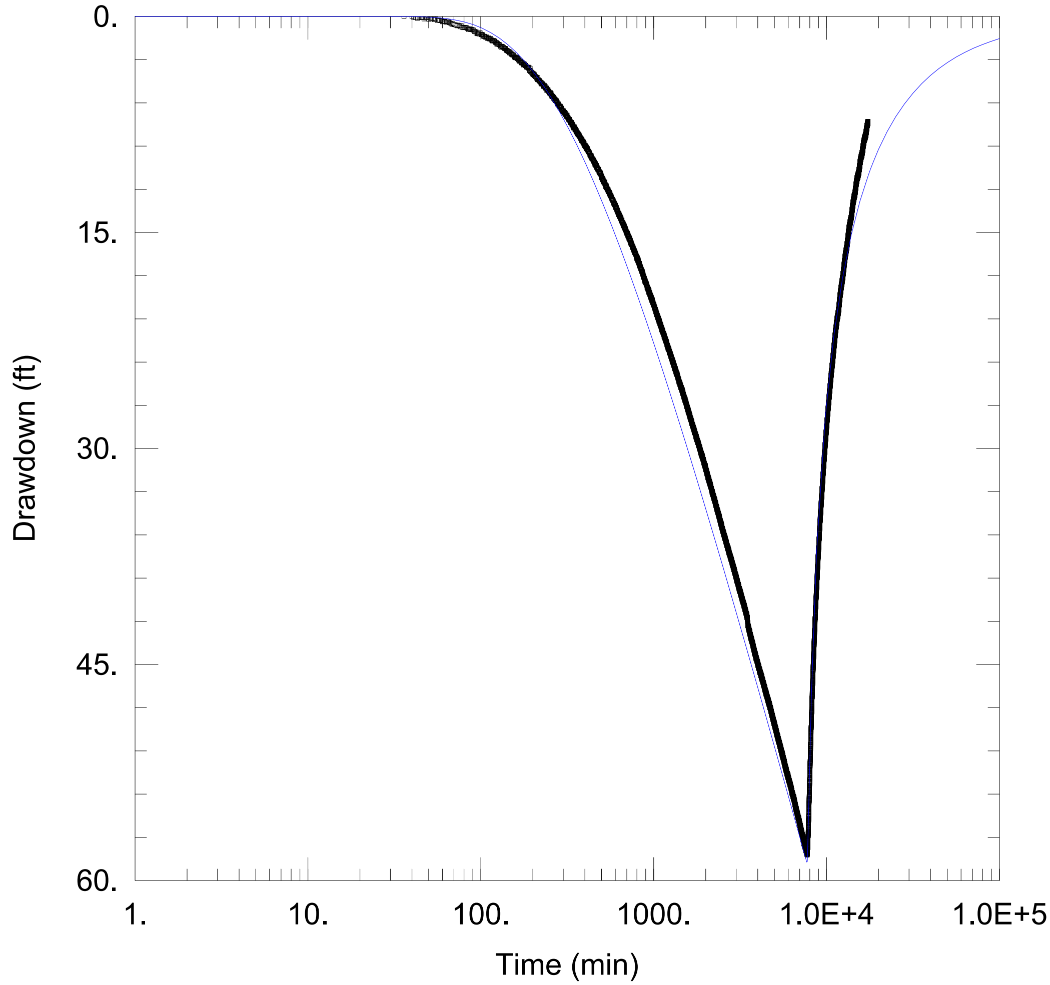
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 1	1949181.234	10907020.34

SOLUTION

Aquifer Model: Confined
Solution Method: Theis (Recovery)

T = 225. ft^2/day
S/S' = 1.091



WELL TEST ANALYSIS

Data Set: \...\OW Bridges 1 - theis.aqt
Date: 11/15/17 Time: 07:44:52

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No.2
Test Date: 11/2/2016

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 2	1951951.936	10906446.69

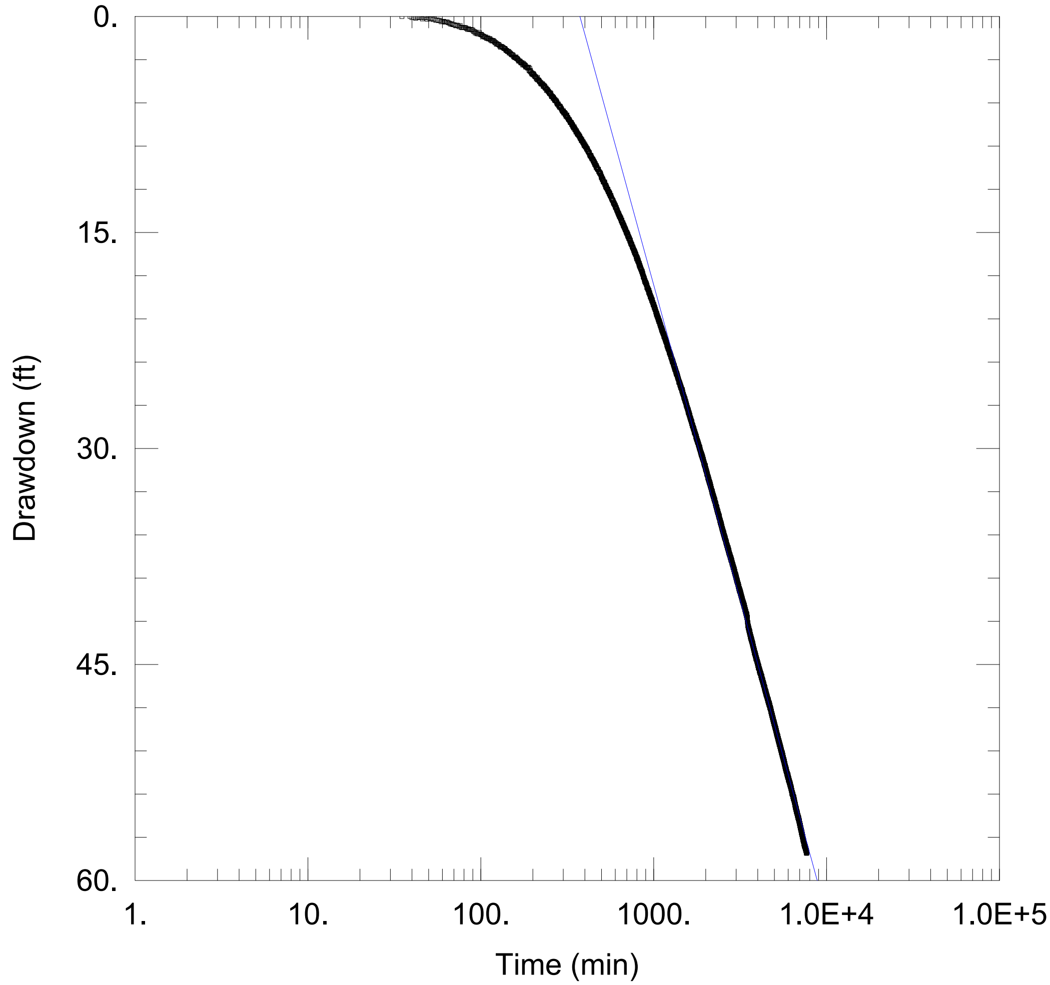
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 1	1949181.234	10907020.34

SOLUTION

Aquifer Model: Confined   Solution Method: Theis

$T = 241.5\ ft^2/day$ $S = 1.779E-5$
$Kz/Kr = 0.01$ $b = 82.\ ft$



WELL TEST ANALYSIS

Data Set: \...\OW Bridges 1.aqt
Date: 11/15/17 Time: 07:45:12

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 2
Test Date: 11/2/2016

AQUIFER DATA

Saturated Thickness: 82. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 2	1951951.936	10906446.69

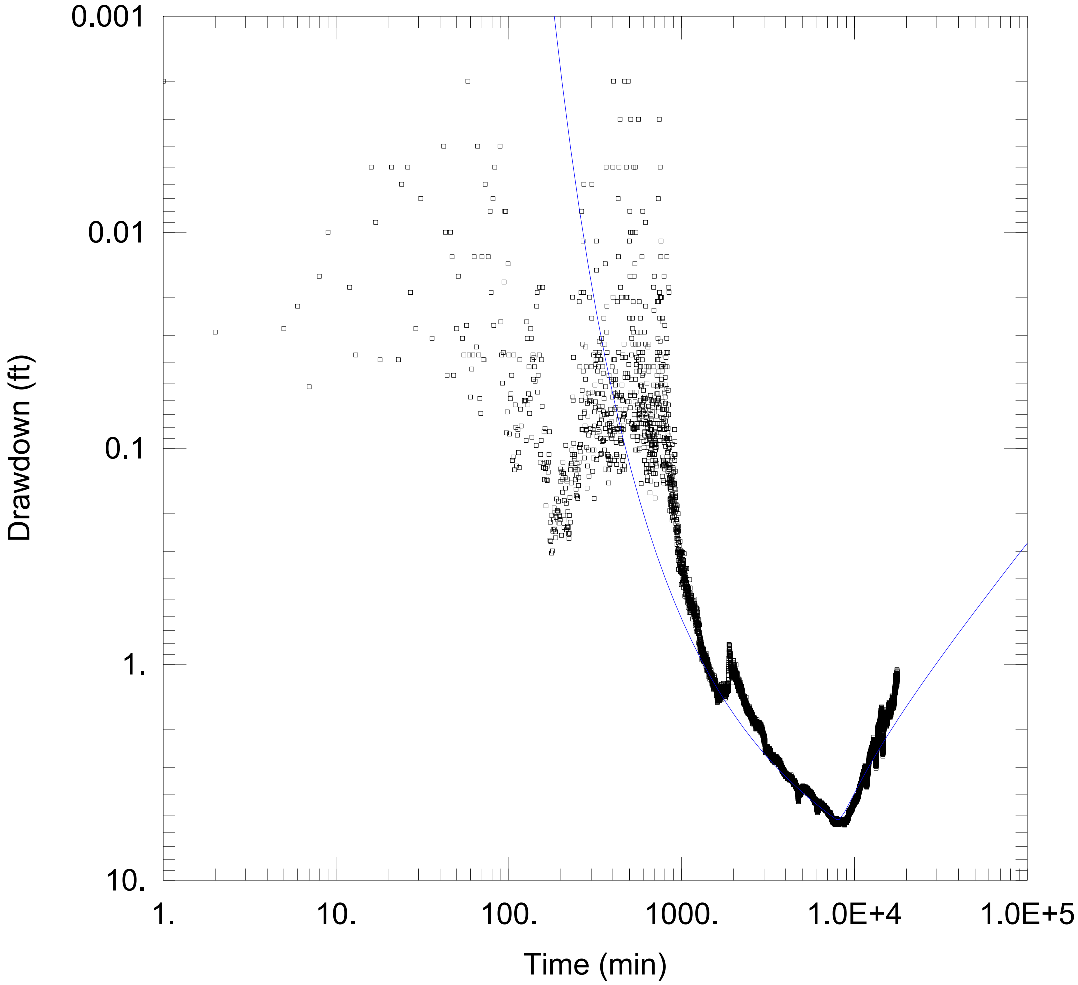
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 1	1949181.234	10907020.34

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 245.9 ft^2/day S = 1.795E-5



WELL TEST ANALYSIS

Data Set: \...\OW Bridges 3 - theis.aqt
Date: 11/15/17 Time: 07:45:42

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 2
Test Date: 11/2/2016

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 2	1951951.936	10906446.69

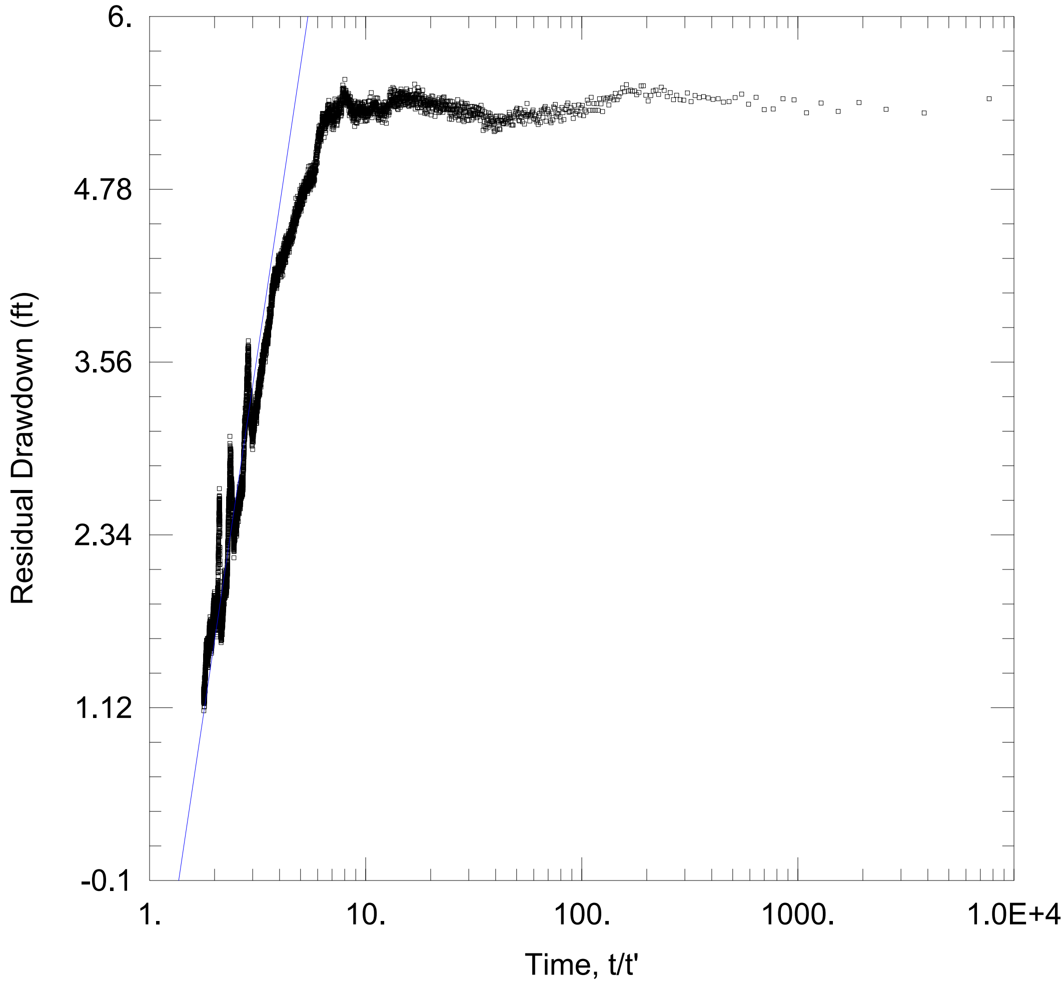
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 3	1954970.013	10906385.3

SOLUTION

Aquifer Model: Confined Solution Method: Theis

T = 1337.7 ft^2/day S = 0.0004612
Kz/Kr = 0.01 b = 82. ft



WELL TEST ANALYSIS

Data Set: \...\OW Bridges 3 theis recover.aqt
Date: 11/15/17 Time: 07:46:28

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 2
Test Date: 11/2/2016

AQUIFER DATA

Saturated Thickness: 82. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 2	1951951.936	10906446.69

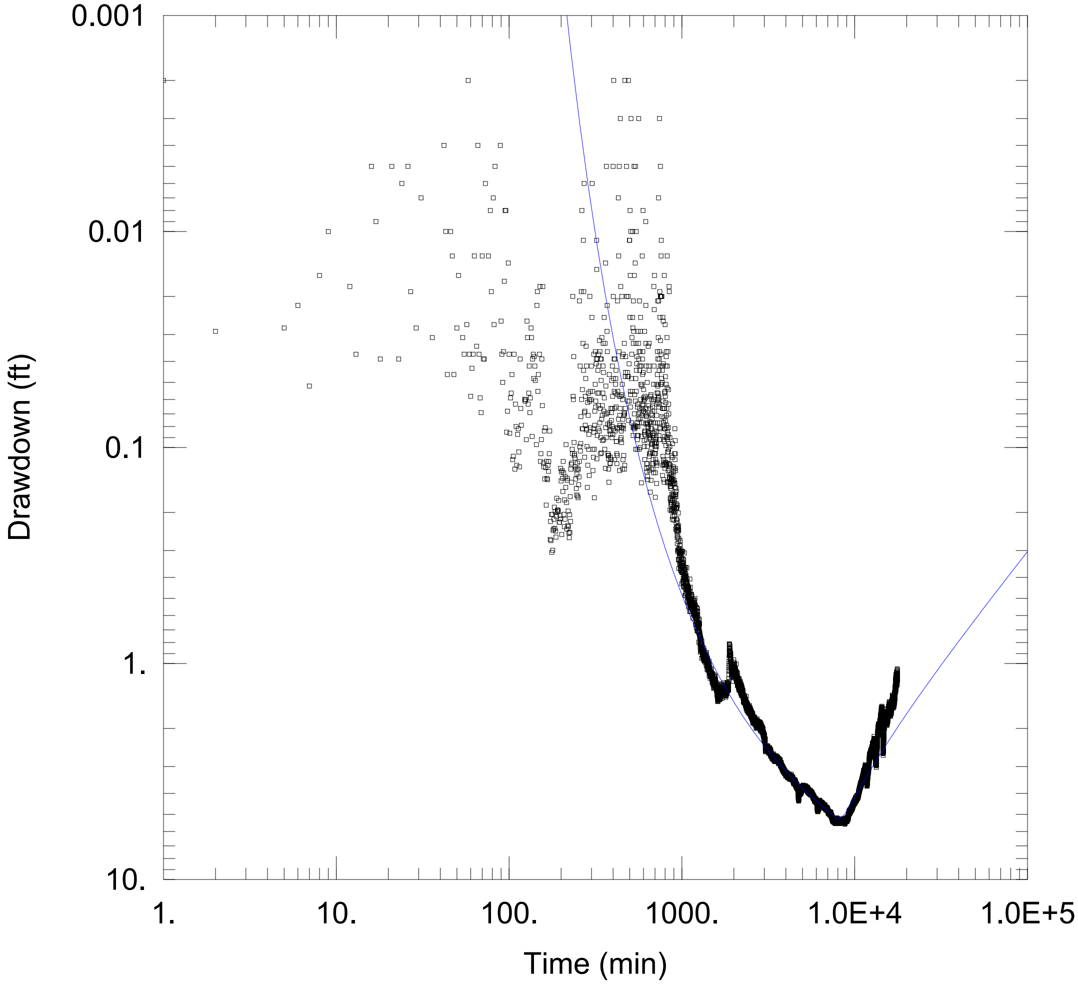
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 3	1954970.013	10906385.3

SOLUTION

Aquifer Model: Confined Solution Method: Theis (Recovery)

T = 1054.4 ft^2/day S/S' = 1.396



WELL TEST ANALYSIS

Data Set: \...\OW Bridges 3 theis.aqt
Date: 11/15/17 Time: 07:46:49

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 2
Test Date: 11/2/2016

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 2	1951951.936	10906446.69

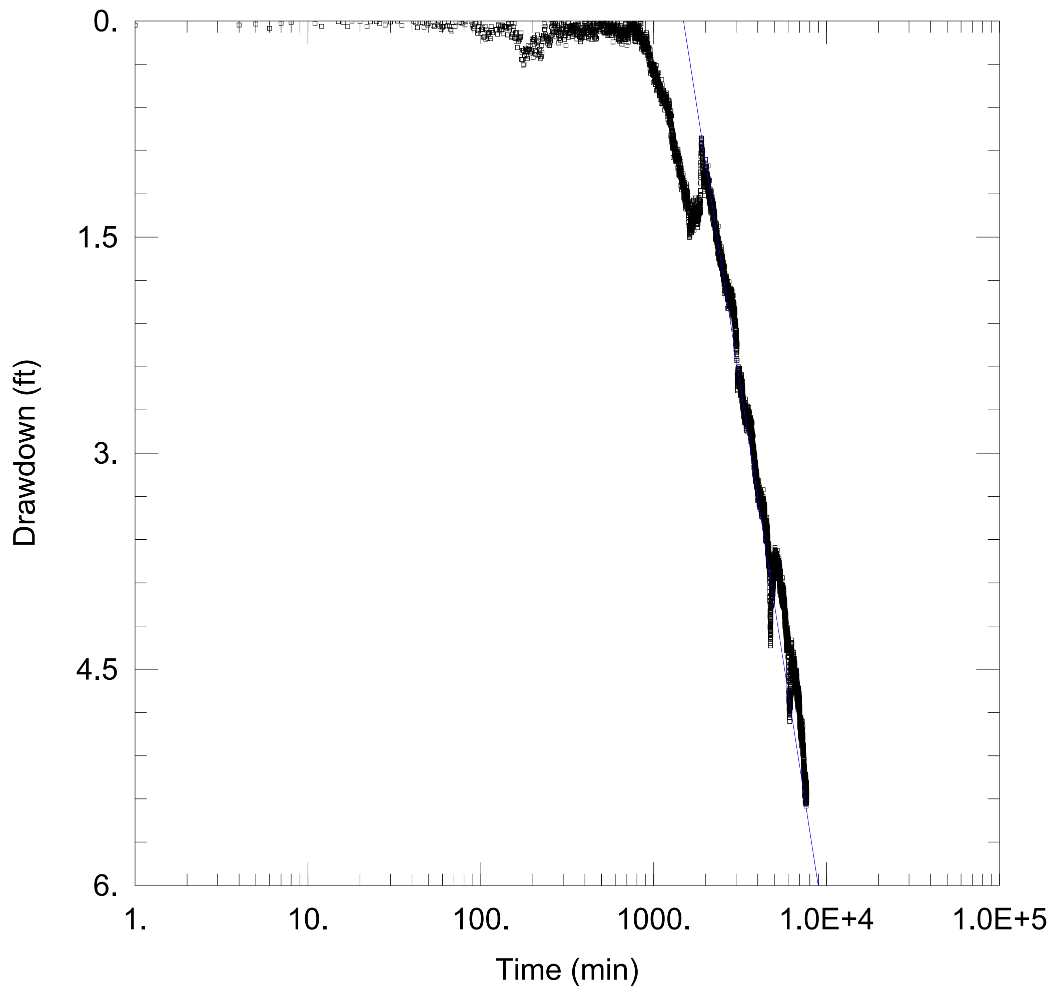
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 3	1954970.013	10906385.3

SOLUTION

Aquifer Model: Confined
Solution Method: Theis

T = 1211. ft^2/day
S = 0.0004987
Kz/Kr = 0.01
b = 82. ft



WELL TEST ANALYSIS

Data Set: \...\OW Bridges 3.aqt
Date: 11/15/17 Time: 07:47:05

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 2
Test Date: 11/2/2016

AQUIFER DATA

Saturated Thickness: 82. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 2	1951951.936	10906446.69

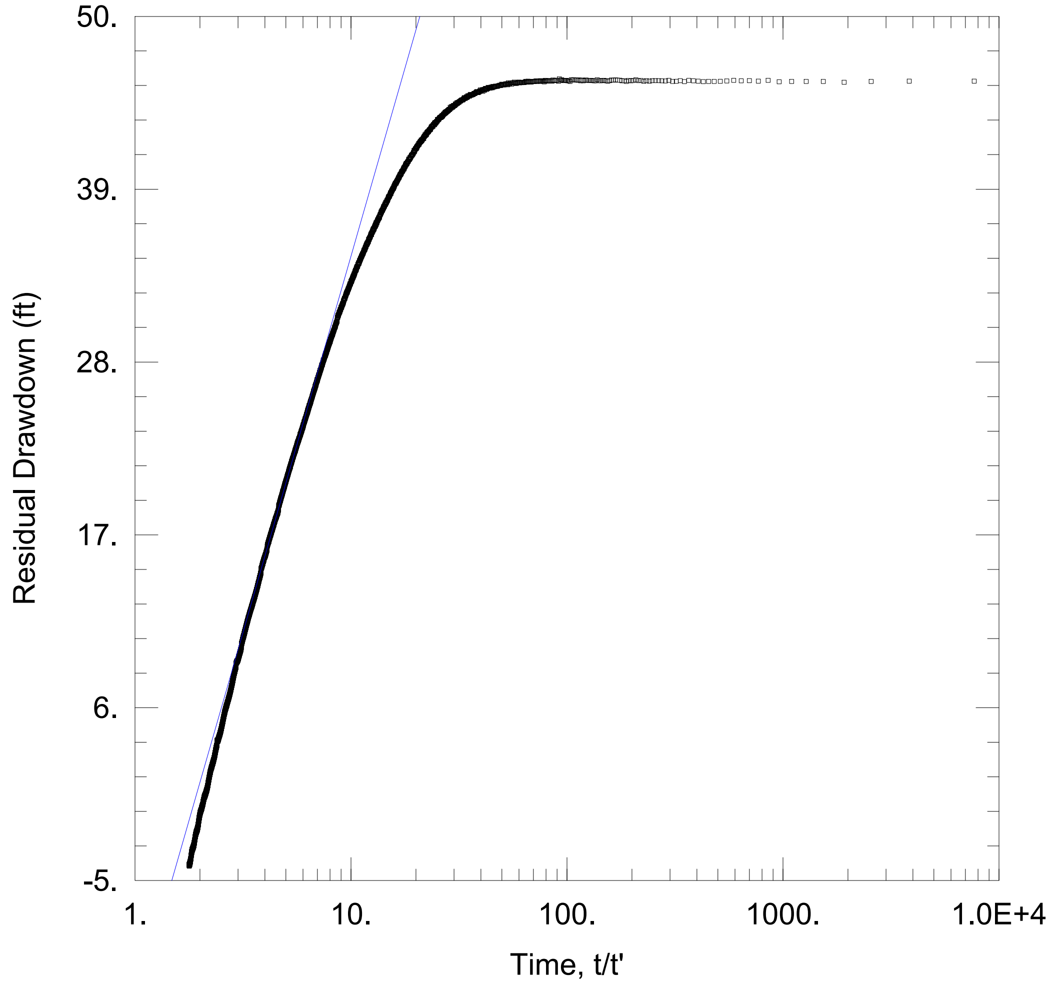
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 3	1954970.013	10906385.3

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 1396. ft^2/day S = 0.0003558



WELL TEST ANALYSIS

Data Set: \...\OW Bridges 4 - theis recovery.aqt
Date: 11/15/17 Time: 07:47:34

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 2
Test Date: 11/2/2016

AQUIFER DATA

Saturated Thickness: 82. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 2	1951951.936	10906446.69

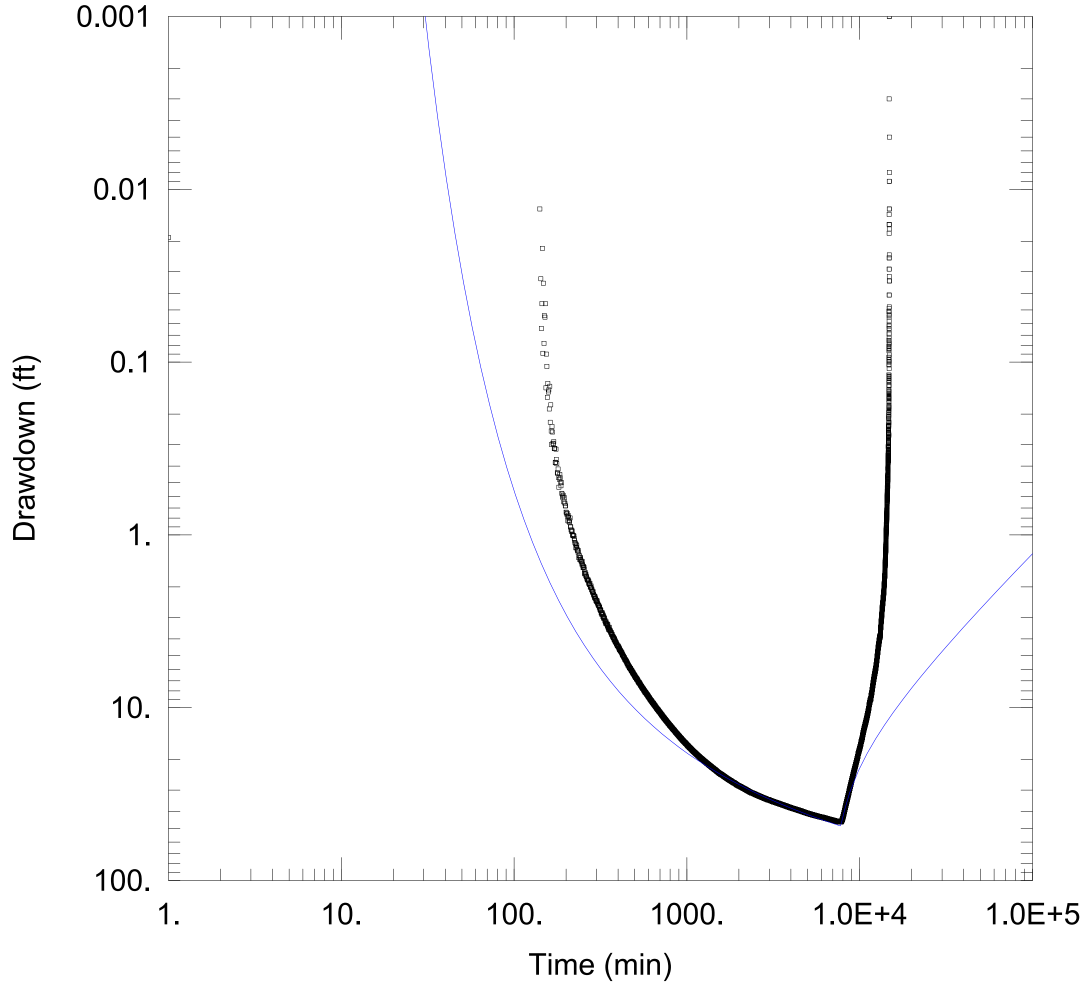
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 4	1953817.782	10906346.59

SOLUTION

Aquifer Model: Confined Solution Method: Theis (Recovery)

T = 224.4 ft^2/day S/S' = 1.885



WELL TEST ANALYSIS

Data Set: \...\OW Bridges 4 - theis.aqt
Date: 11/15/17 Time: 07:47:55

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 2
Test Date: 11/2/2016

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 2	1951951.936	10906446.69

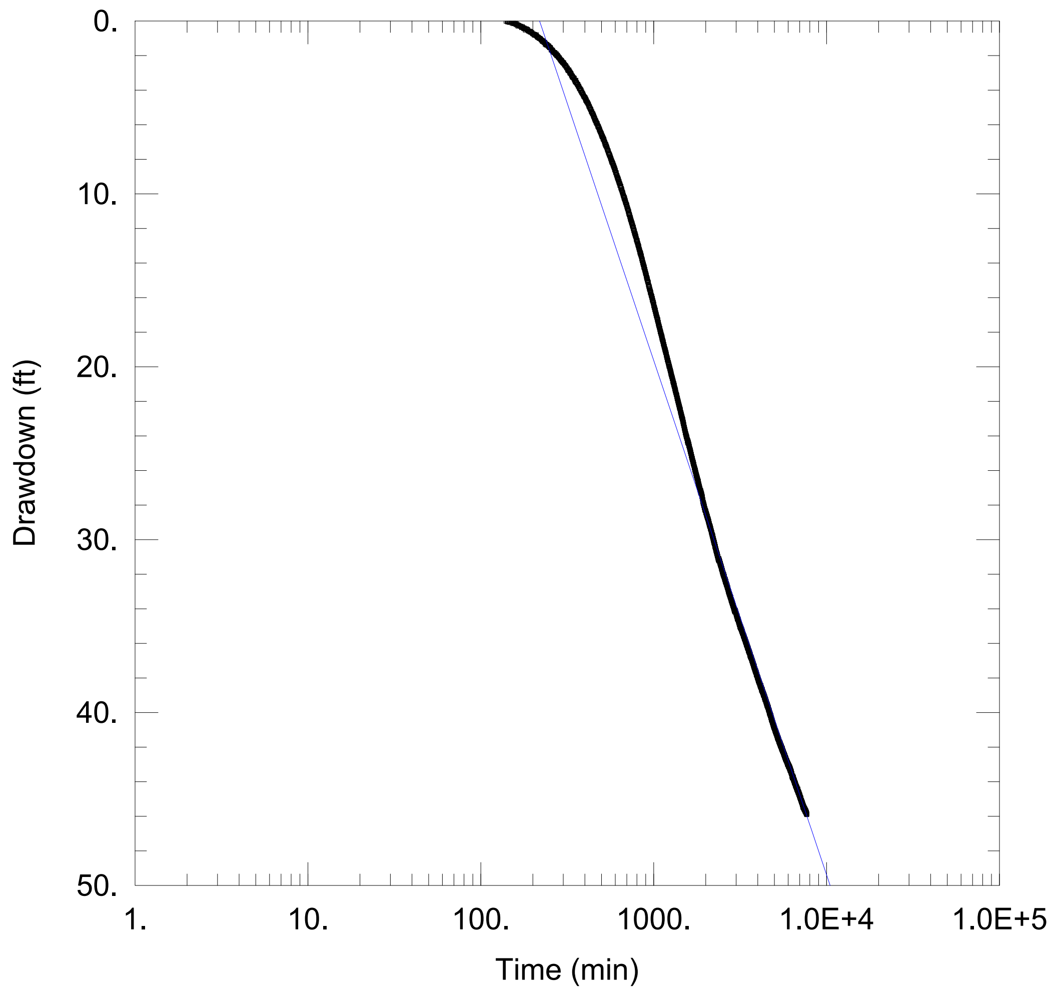
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 4	1953817.782	10906346.59

SOLUTION

Aquifer Model: Confined Solution Method: Theis

T = 288.8 ft^2/day S = 5.14E-5
Kz/Kr = 0.01 b = 82. ft



WELL TEST ANALYSIS

Data Set: \...\OW Bridges 4.aqt
Date: 11/15/17 Time: 07:48:16

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 2
Test Date: 11/2/2016

AQUIFER DATA

Saturated Thickness: 82. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 2	1951951.936	10906446.69

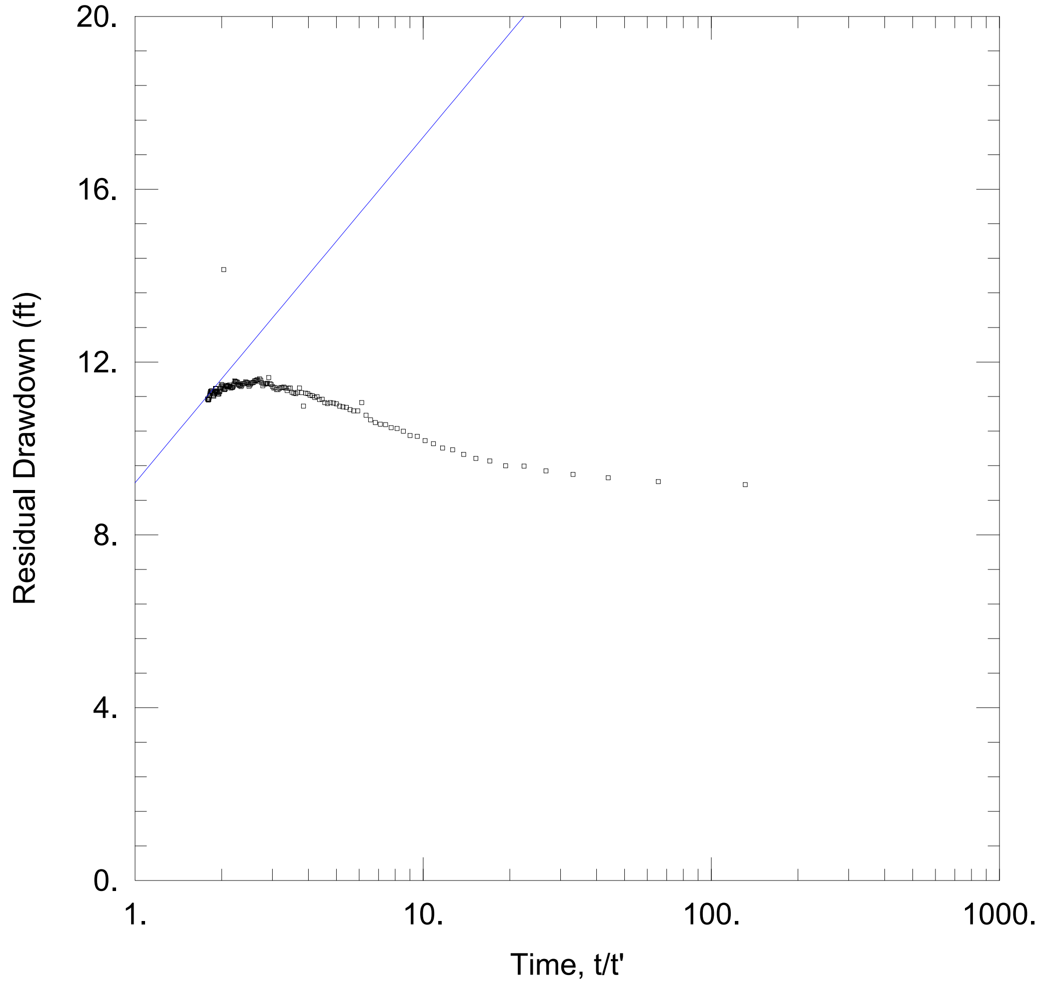
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 4	1953817.782	10906346.59

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 361.4 ft^2/day S = 3.533E-5



WELL TEST ANALYSIS

Data Set: \...\OW Lowe - theis recovery.aqt
Date: 11/15/17 Time: 07:49:16

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 2
Test Date: 11/2/2016

AQUIFER DATA

Saturated Thickness: 82. ft
Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 2	1951951.936	10906446.69

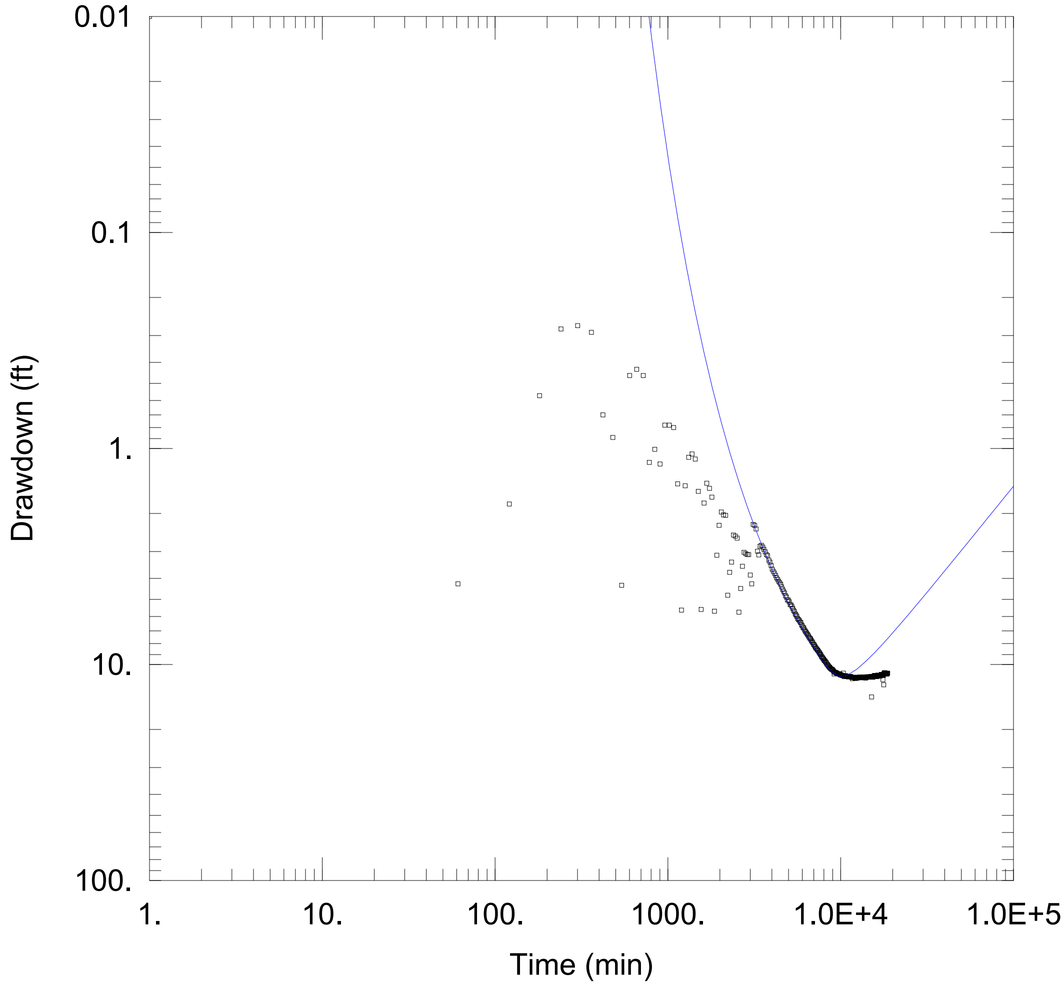
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Lowe	1947758.99	10909644.82

SOLUTION

Aquifer Model: Confined
Solution Method: Theis (Recovery)

T = 1343.9 ft^2/day
S/S' = 0.07072



WELL TEST ANALYSIS

Data Set: \...\OW Lowe - theis.aqt
Date: 11/15/17 Time: 07:49:30

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 2
Test Date: 11/2/2016

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 2	1951951.936	10906446.69

Observation Wells

Well Name	X (ft)	Y (ft)
▫ Lowe	1947758.99	10909644.82

SOLUTION

Aquifer Model: Confined

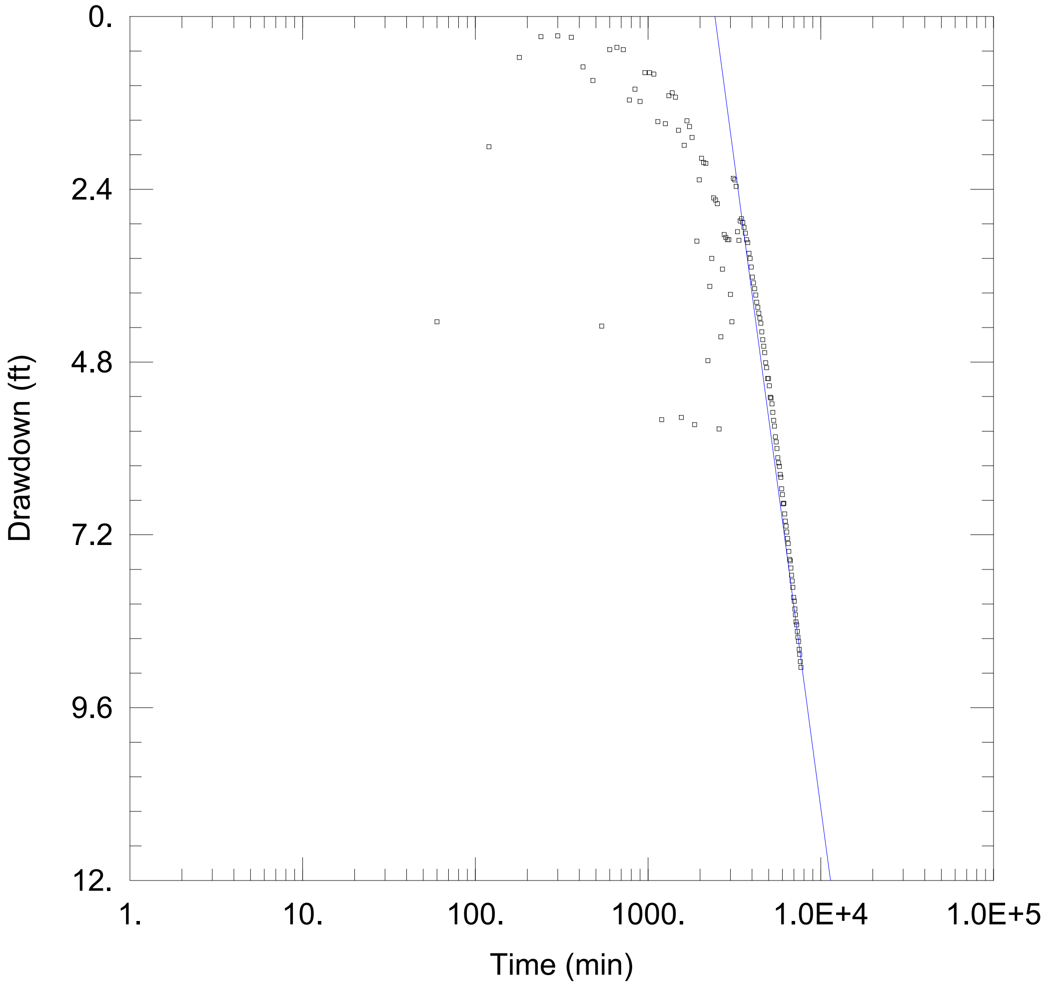
Solution Method: Theis

T = 238.1 ft^2/day

Kz/Kr = 0.01

S = 0.0001052

b = 82. ft



WELL TEST ANALYSIS

Data Set: \...\OW Lowe.aqt
Date: 11/15/17 Time: 07:49:44

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 2
Test Date: 11/2/2016

AQUIFER DATA

Saturated Thickness: 82. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 2	1951951.936	10906446.69

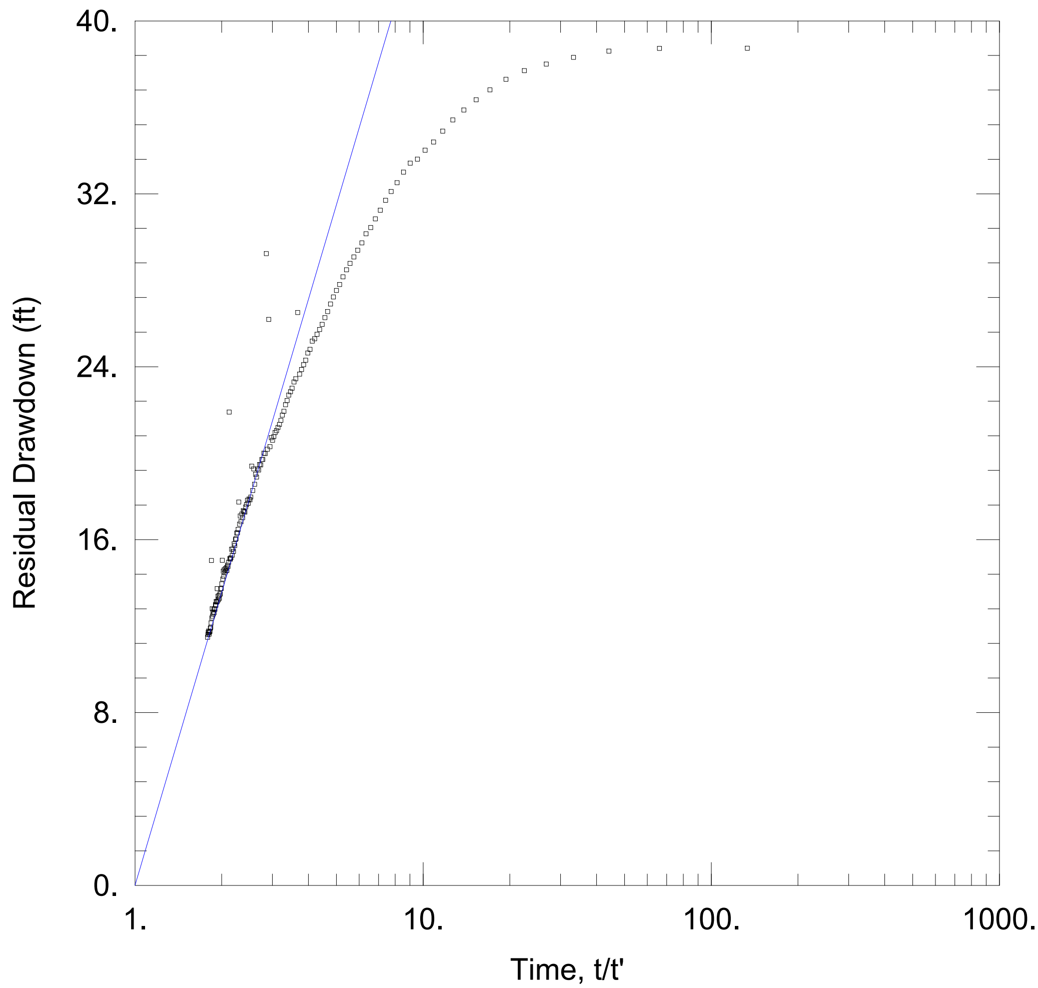
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Lowe	1947758.99	10909644.82

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 599.7 ft^2/day S = 8.206E-5



WELL TEST ANALYSIS

Data Set: \...\OW Ochoa - theis recovery.aqt
Date: 11/15/17 Time: 07:50:10

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 2
Test Date: 11/2/2016

AQUIFER DATA

Saturated Thickness: 82. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 2	1951951.936	10906446.69

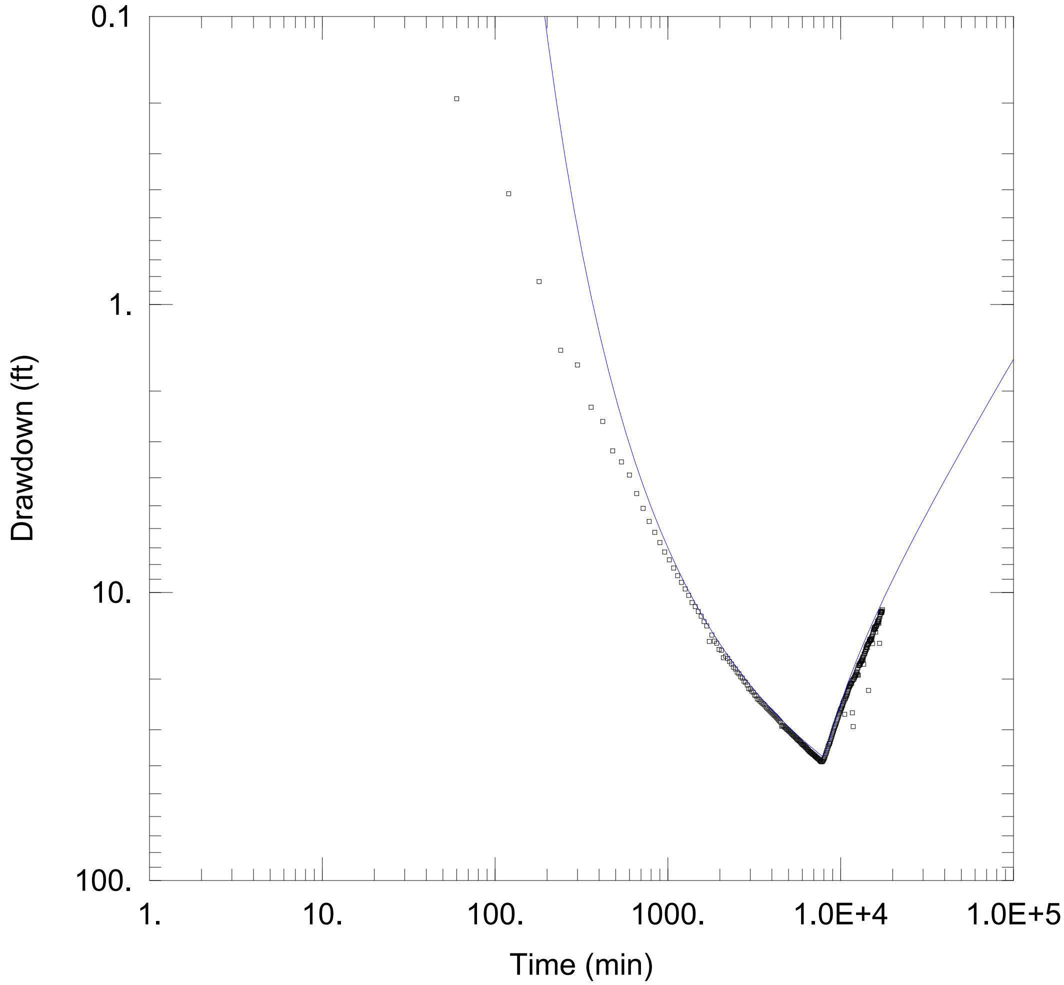
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Ochoa	1948354.429	10907814.57

SOLUTION

Aquifer Model: Confined Solution Method: Theis (Recovery)

T = 238.7 ft^2/day S/S' = 1.



WELL TEST ANALYSIS

Data Set: \...\OW Ochoa - theis.aqt
Date: 11/15/17 Time: 07:50:32

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 2
Test Date: 11/2/2016

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 2	1951951.936	10906446.69

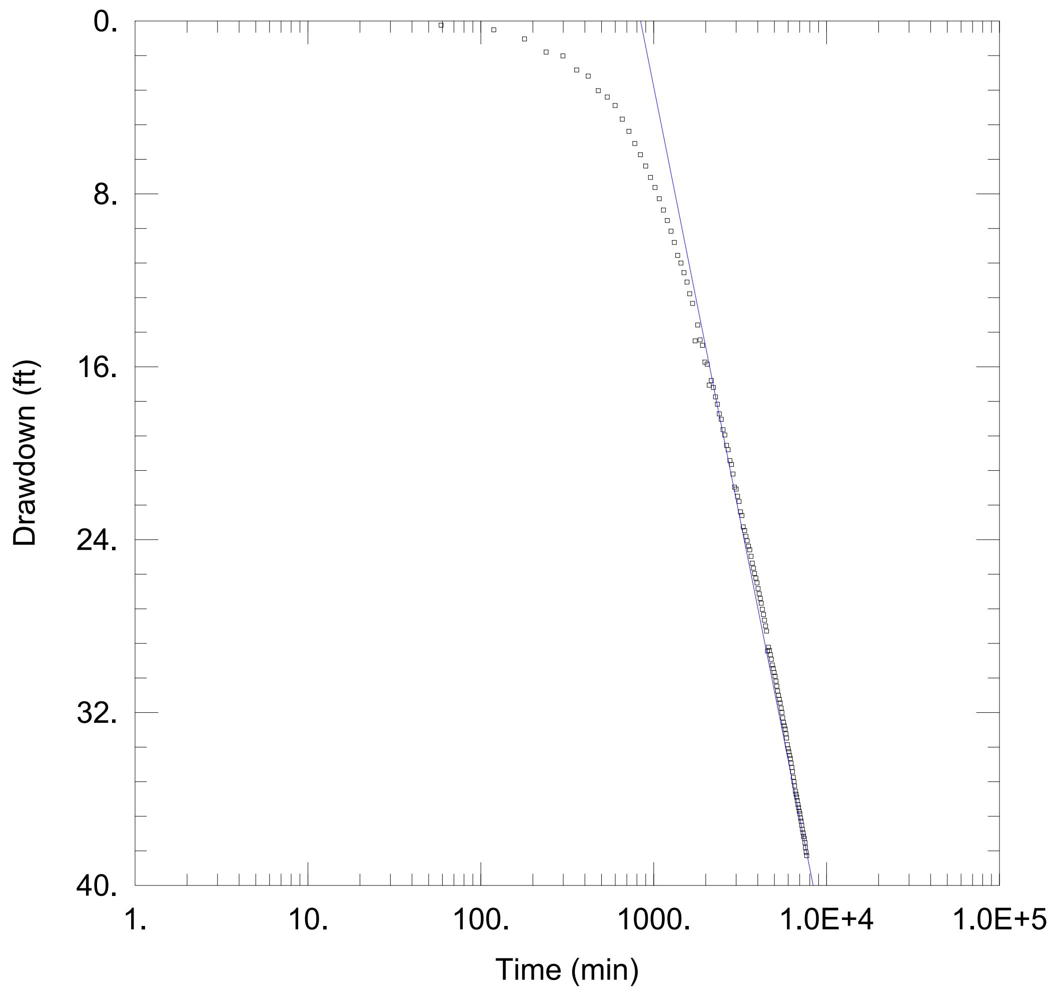
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Ochoa	1948354.429	10907814.57

SOLUTION

Aquifer Model: Confined
Solution Method: Theis

T = 238.7 ft^2/day
S = 3.234E-5
Kz/Kr = 0.01
b = 82. ft



WELL TEST ANALYSIS

Data Set: \...\OW Ochoa.aqt
Date: 11/15/17 Time: 07:50:48

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 2
Test Date: 11/2/2016

AQUIFER DATA

Saturated Thickness: 82. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 2	1951951.936	10906446.69

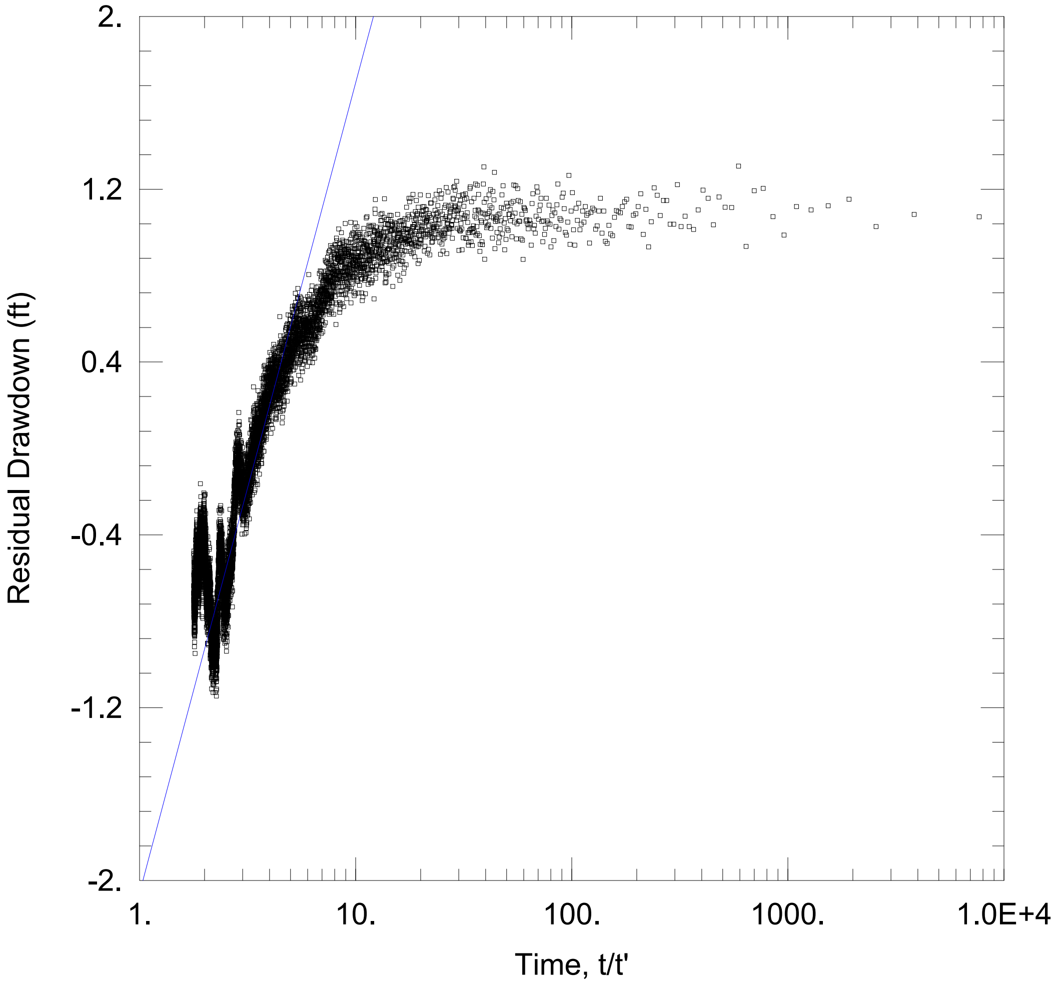
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Ochoa	1948354.429	10907814.57

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 268.3 ft^2/day S = 2.374E-5



WELL TEST ANALYSIS

Data Set: \...\OW Odell 1 - theis recovery.aqt
Date: 11/15/17 Time: 07:51:04

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 2
Test Date: 11/2/2016

AQUIFER DATA

Saturated Thickness: 82. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 2	1951951.936	10906446.69

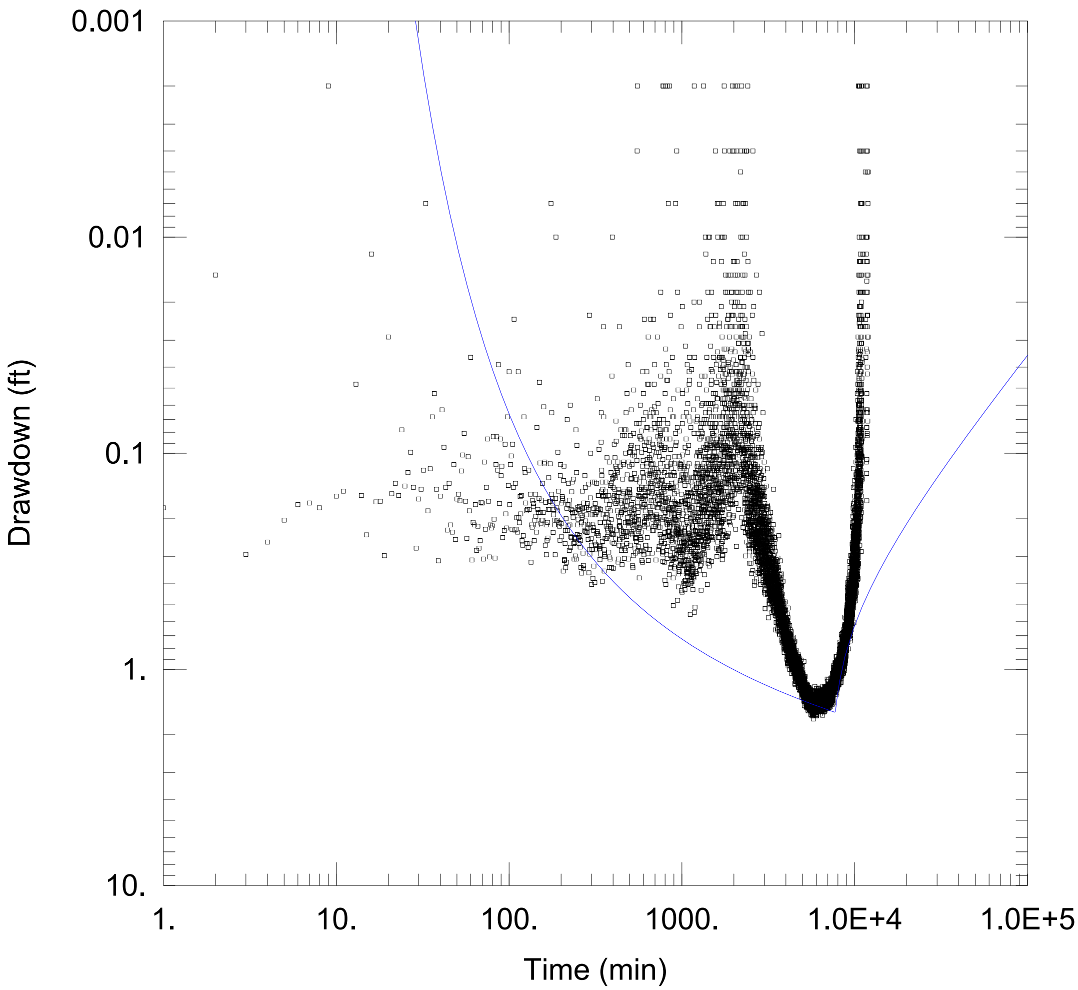
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Odell Well No. 1	1947452.756	10907426.21

SOLUTION

Aquifer Model: Confined Solution Method: Theis (Recovery)

T = 2866.9 ft^2/day S/S' = 3.54



WELL TEST ANALYSIS

Data Set: \...\OW Odell 1 - theis.aqt
Date: 11/15/17 Time: 07:51:25

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 2
Test Date: 11/2/2016

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 2	1951951.936	10906446.69

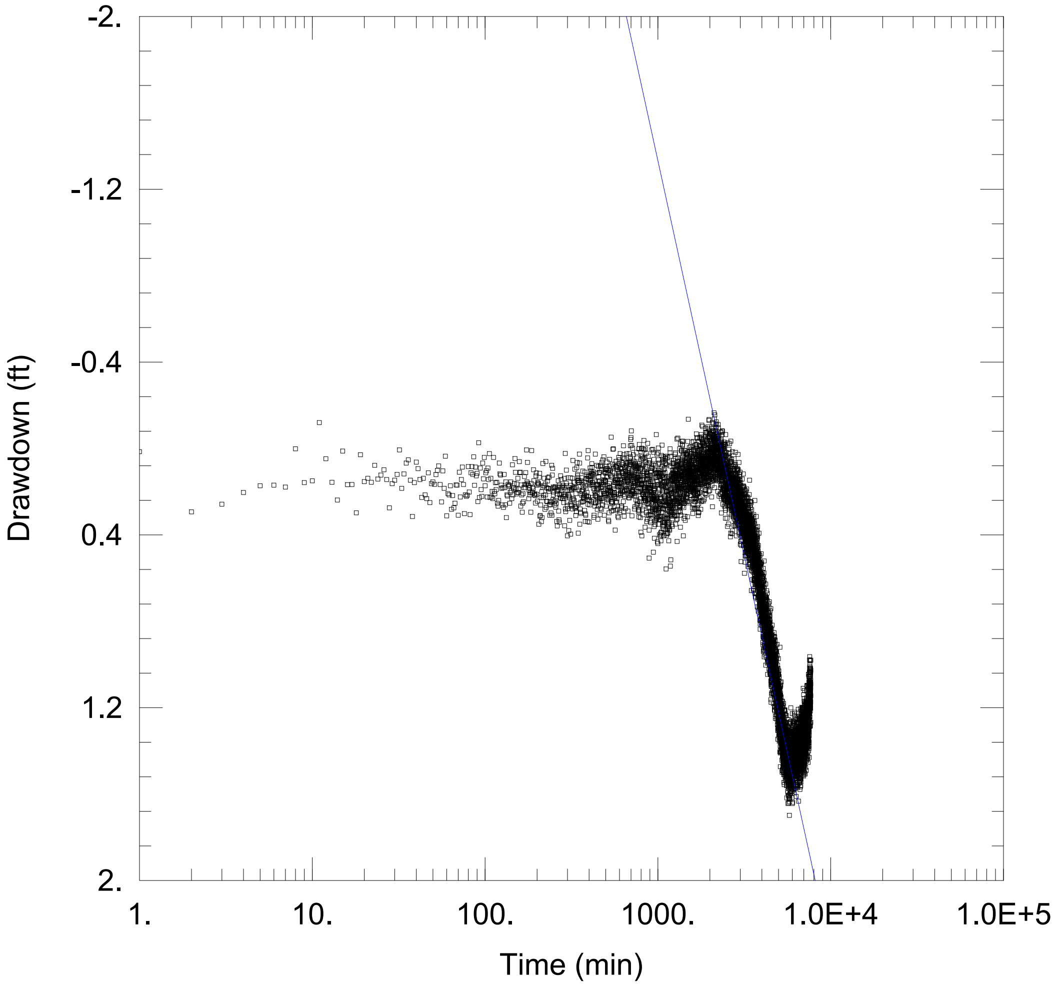
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Odell Well No. 1	1947452.756	10907426.21

SOLUTION

Aquifer Model: Confined
Solution Method: Theis

T = 1.055E+4 ft^2/day
S = 0.0001699
Kz/Kr = 0.01
b = 82. ft



WELL TEST ANALYSIS

Data Set: \...\OW Odell 1.aqt
Date: 11/15/17 Time: 07:51:41

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 2
Test Date: 11/2/2016

AQUIFER DATA

Saturated Thickness: 82. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 2	1951951.936	10906446.69

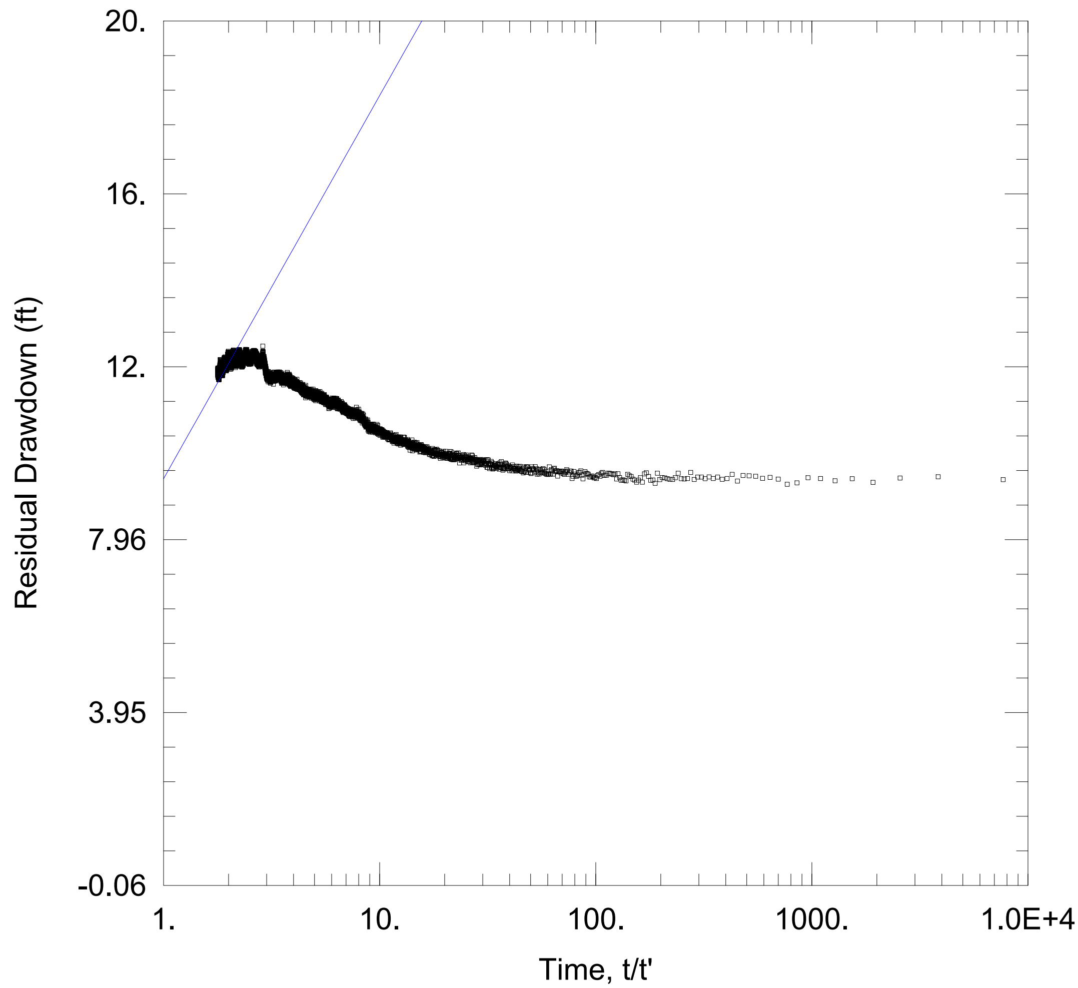
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Odell Well No. 1	1947452.756	10907426.21

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 2936.6 ft^2/day S = 0.0004999



WELL TEST ANALYSIS

Data Set: \...\OW Odell 2 - theis recovery.aqt
Date: 11/15/17 Time: 07:52:02

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 2
Test Date: 11/2/2016

AQUIFER DATA

Saturated Thickness: 82. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 2	1951951.936	10906446.69

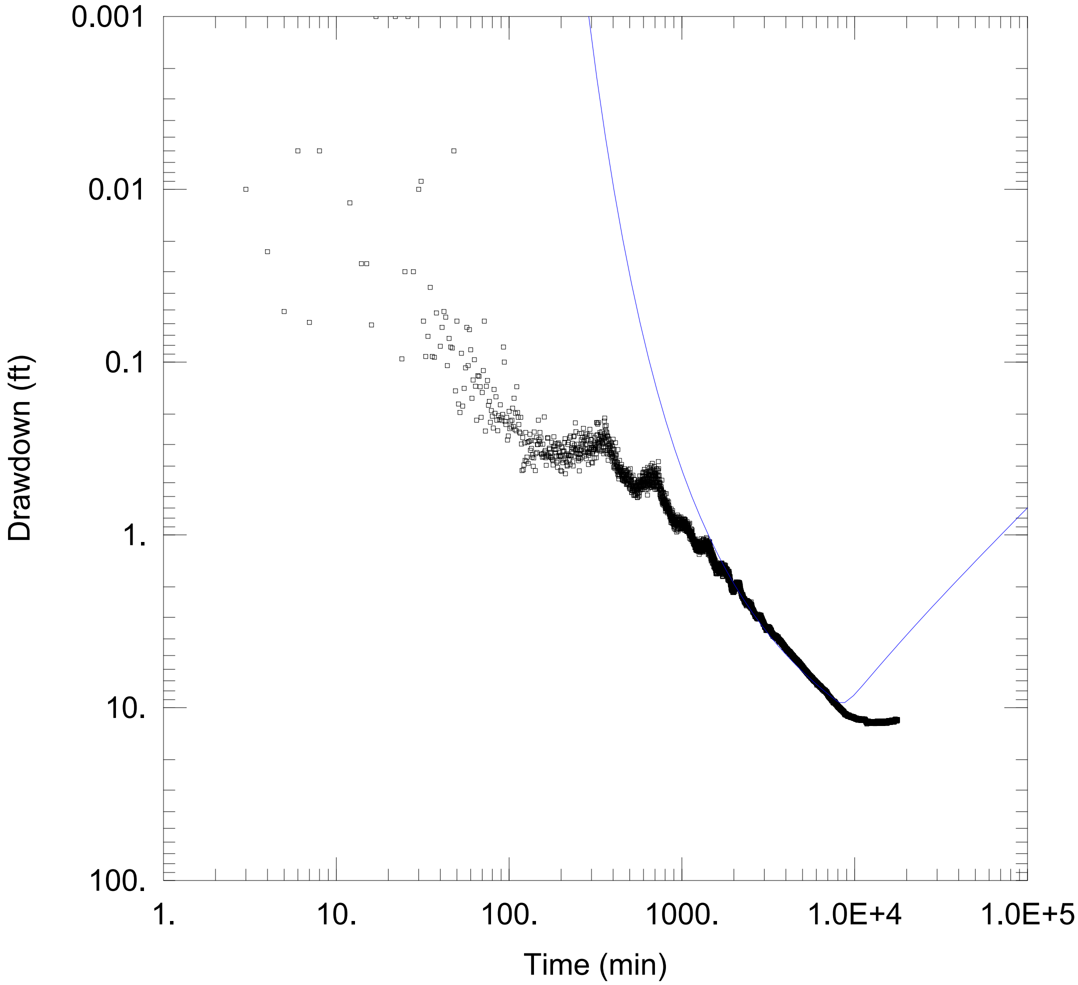
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Odell Well No. 2	1946169.751	10908337.14

SOLUTION

Aquifer Model: Confined Solution Method: Theis (Recovery)

T = 1209.3 ft^2/day S/S' = 0.08821



WELL TEST ANALYSIS

Data Set: \...\OW Odell 2 - theis.aqt
Date: 11/15/17 Time: 07:52:32

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 2
Test Date: 11/2/2016

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 2	1951951.936	10906446.69

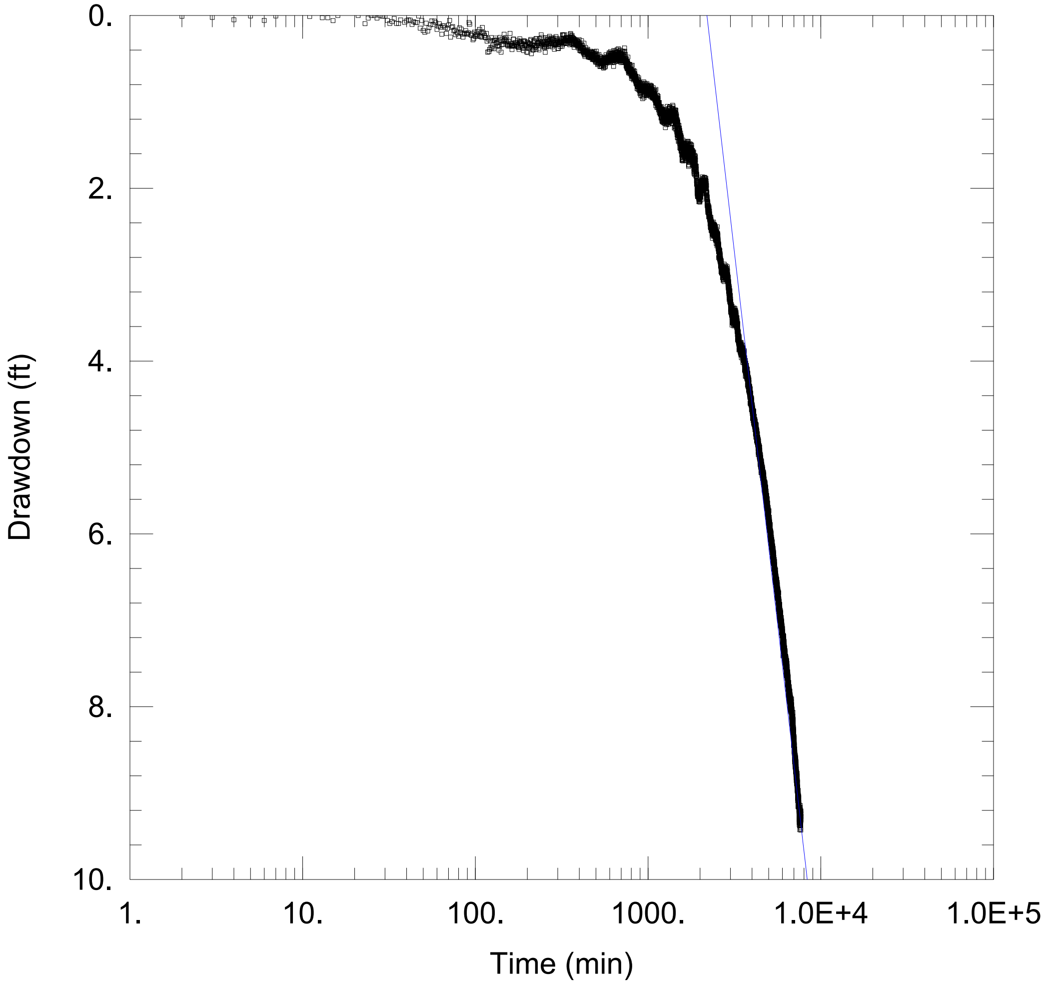
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Odell Well No. 2	1946169.751	10908337.14

SOLUTION

Aquifer Model: Confined
Solution Method: Theis

T = 523. ft^2/day
S = 7.949E-5
Kz/Kr = 0.01
b = 82. ft



WELL TEST ANALYSIS

Data Set: \...\OW Odell 2.aqt
Date: 11/15/17 Time: 07:52:54

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 2
Test Date: 11/2/2016

AQUIFER DATA

Saturated Thickness: 82. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 2	1951951.936	10906446.69

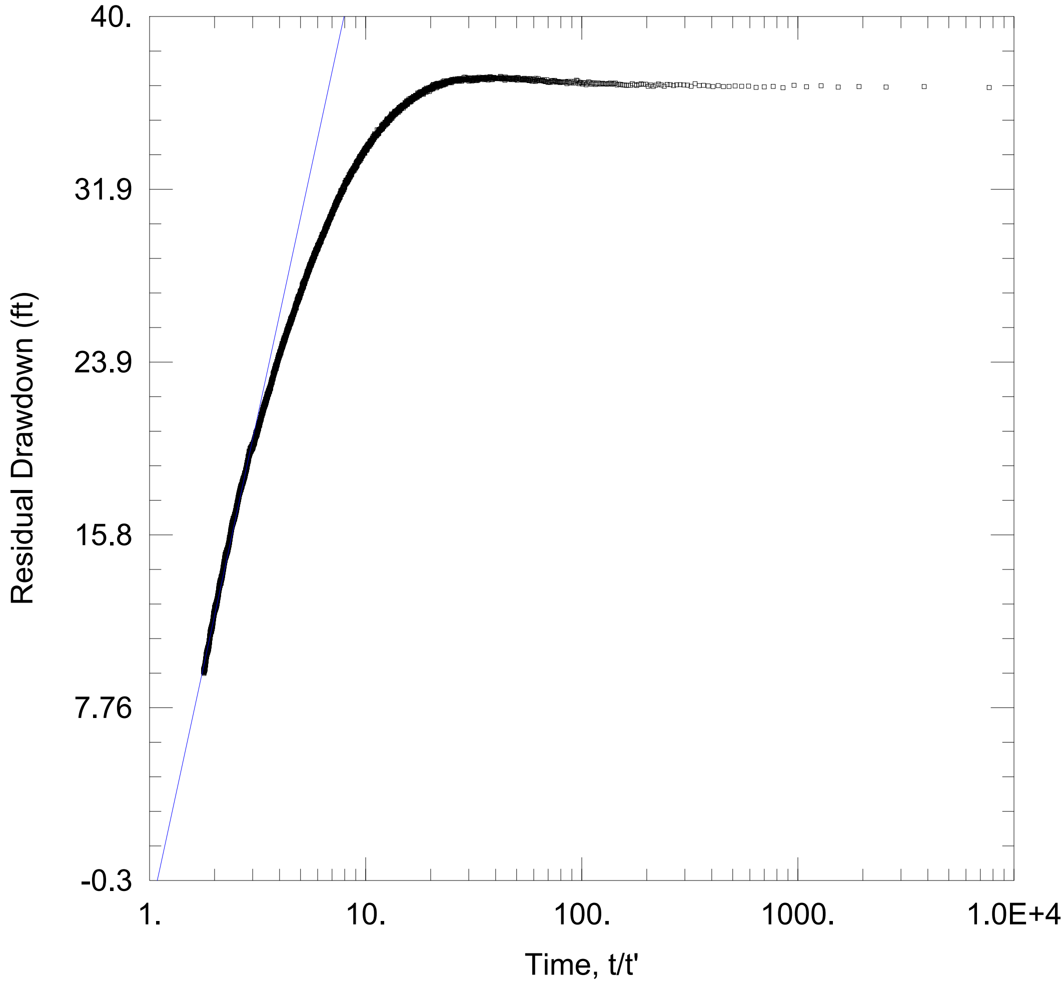
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Odell Well No. 2	1946169.751	10908337.14

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 624.6 ft^2/day S = 5.773E-5



WELL TEST ANALYSIS

Data Set: \...\OW Odell 3 - theis recovery.aqt
Date: 11/15/17 Time: 07:53:14

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 2
Test Date: 11/2/2016

AQUIFER DATA

Saturated Thickness: 82. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 2	1951951.936	10906446.69

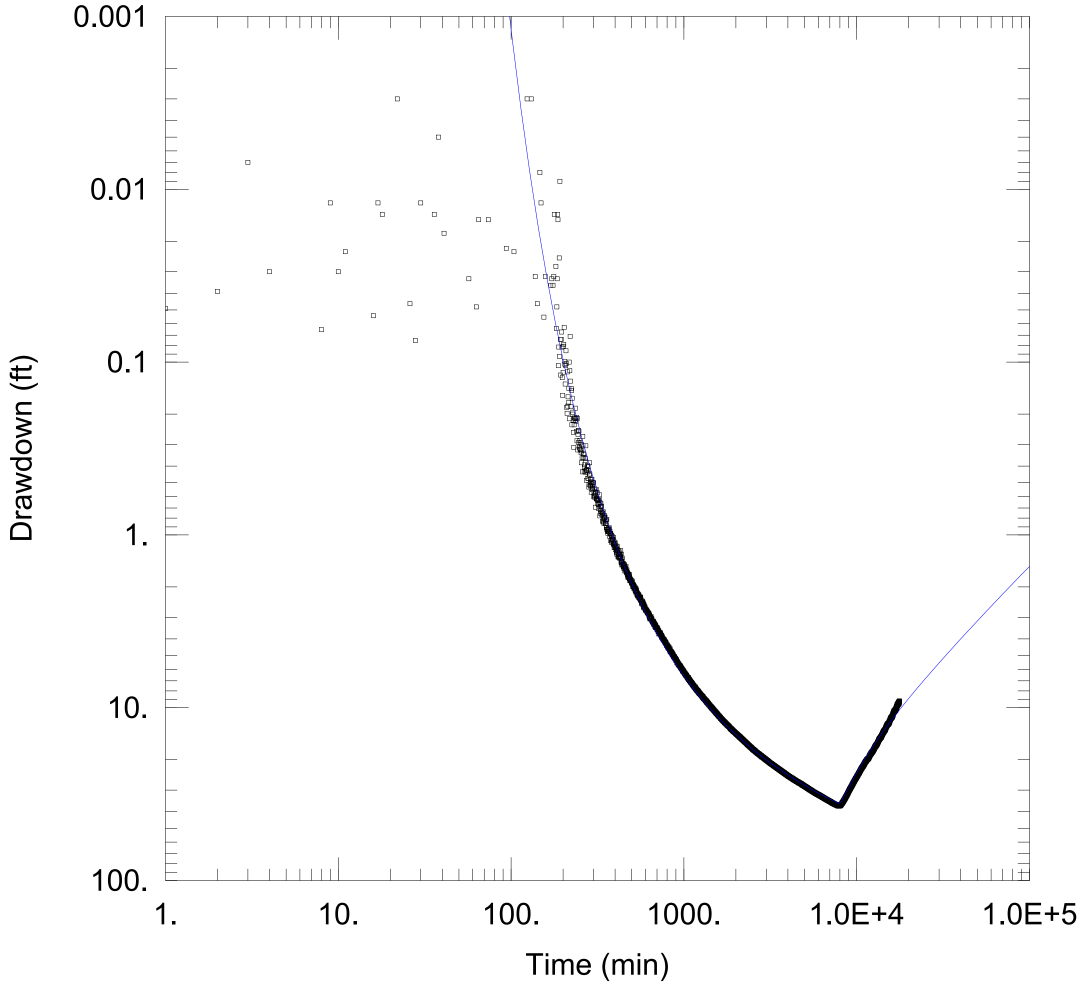
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Odell Well No. 3	1946190.223	10905502.23

SOLUTION

Aquifer Model: Confined Solution Method: Theis (Recovery)

T = 230.4 ft^2/day S/S' = 1.103



WELL TEST ANALYSIS

Data Set: \...\OW Odell 3 - theis.aqt
Date: 11/15/17 Time: 07:53:47

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 2
Test Date: 11/2/2016

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 2	1951951.936	10906446.69

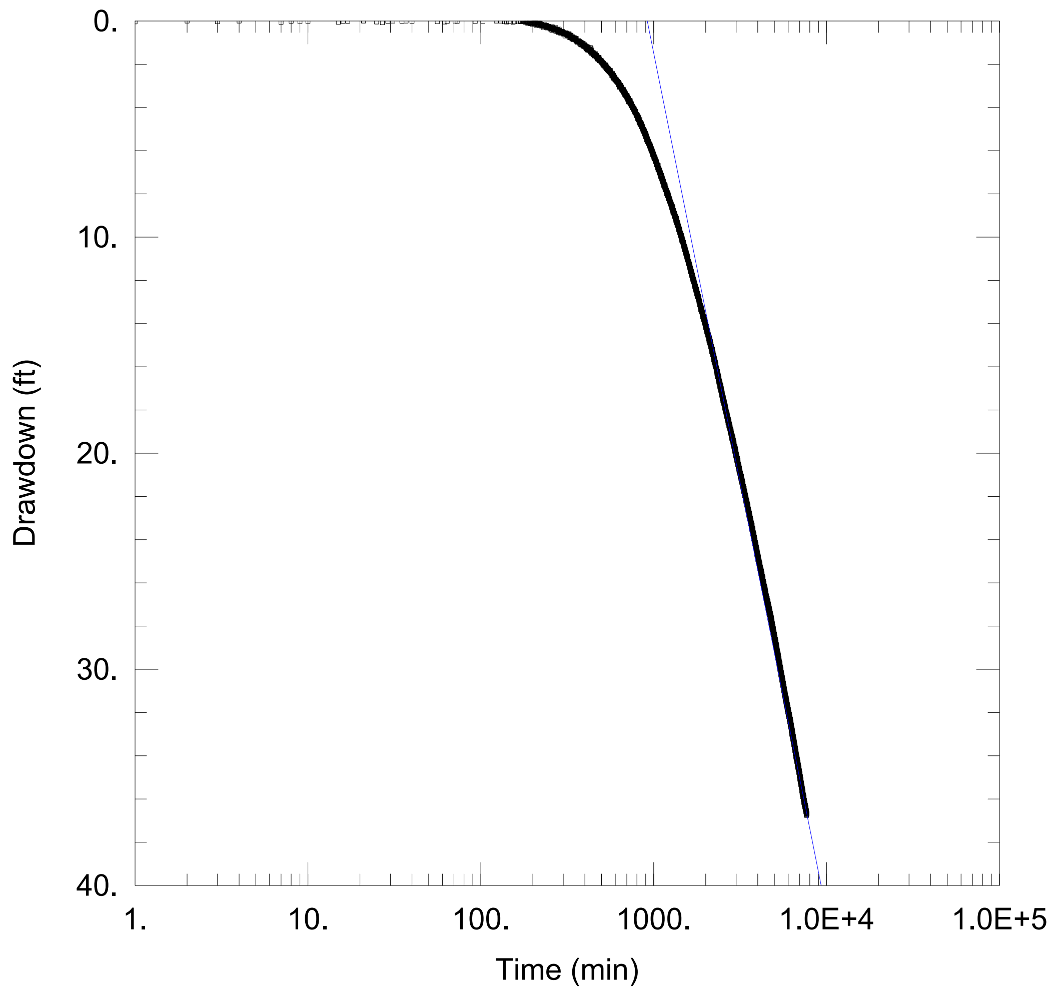
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Odell Well No. 3	1946190.223	10905502.23

SOLUTION

Aquifer Model: Confined Solution Method: Theis

T = 243.1 ft^2/day S = 1.483E-5
Kz/Kr = 0.01 b = 82. ft



WELL TEST ANALYSIS

Data Set: \...\OW Odell 3.aqt
Date: 11/15/17 Time: 07:54:18

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 2
Test Date: 11/2/2016

AQUIFER DATA

Saturated Thickness: 82. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 2	1951951.936	10906446.69

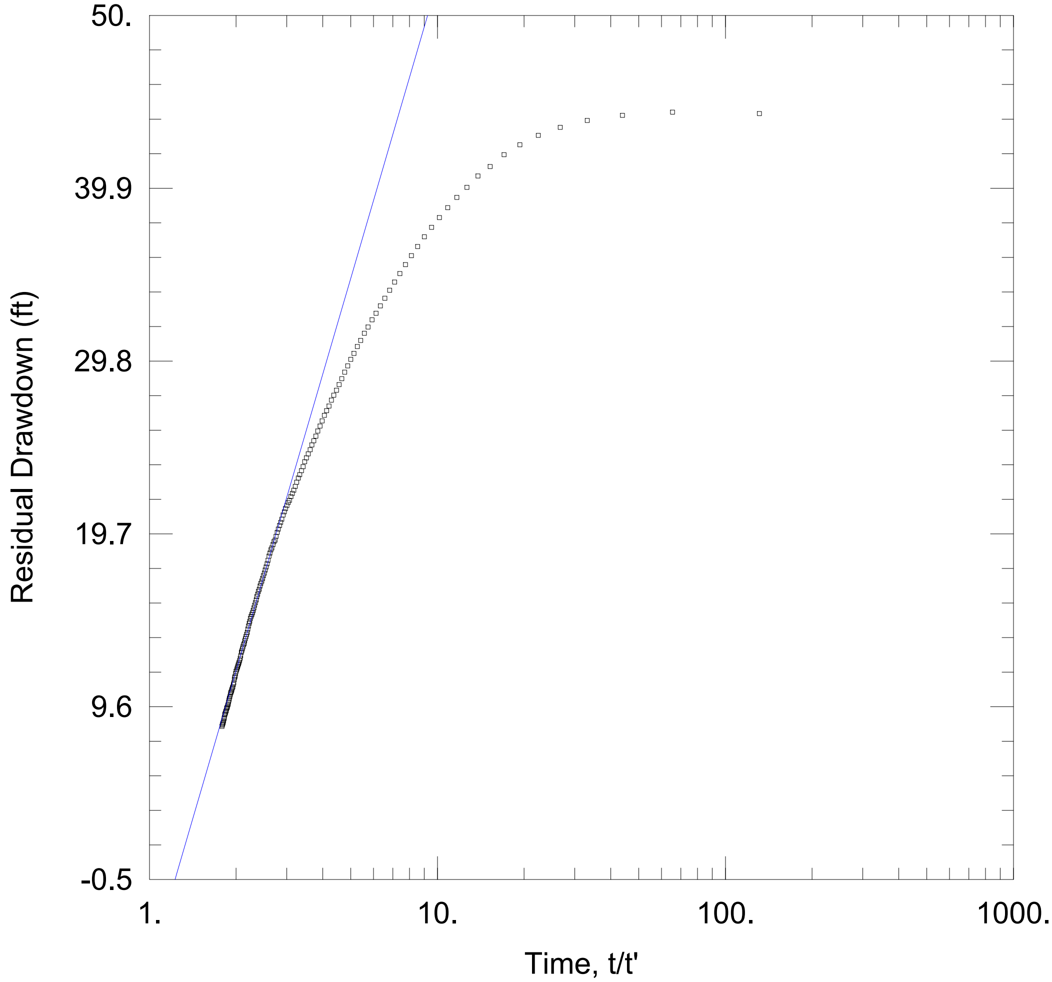
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Odell Well No. 3	1946190.223	10905502.23

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 270.5 ft^2/day S = 1.136E-5



WELL TEST ANALYSIS

Data Set: \...\OW Wood 1 - theis recovery.aqt
Date: 11/15/17 Time: 07:54:40

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 2
Test Date: 11/2/2016

AQUIFER DATA

Saturated Thickness: 82. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 2	1951951.936	10906446.69

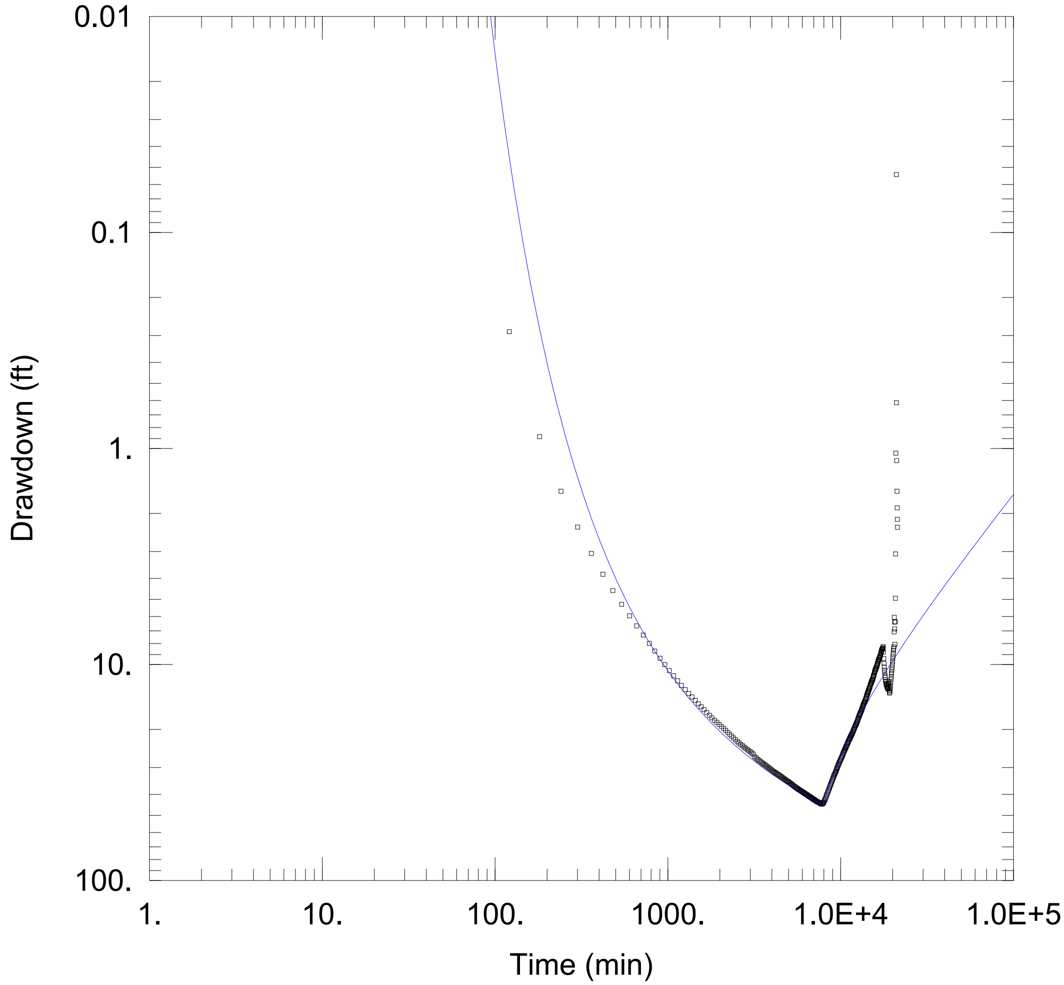
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Wood 1	1946282.382	10904234.12

SOLUTION

Aquifer Model: Confined Solution Method: Theis (Recovery)

T = 186.7 ft^2/day S/S' = 1.252



WELL TEST ANALYSIS

Data Set: \...\OW Wood 1 - theis.aqt
Date: 11/15/17 Time: 07:54:55

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 2
Test Date: 11/2/2016

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 2	1951951.936	10906446.69

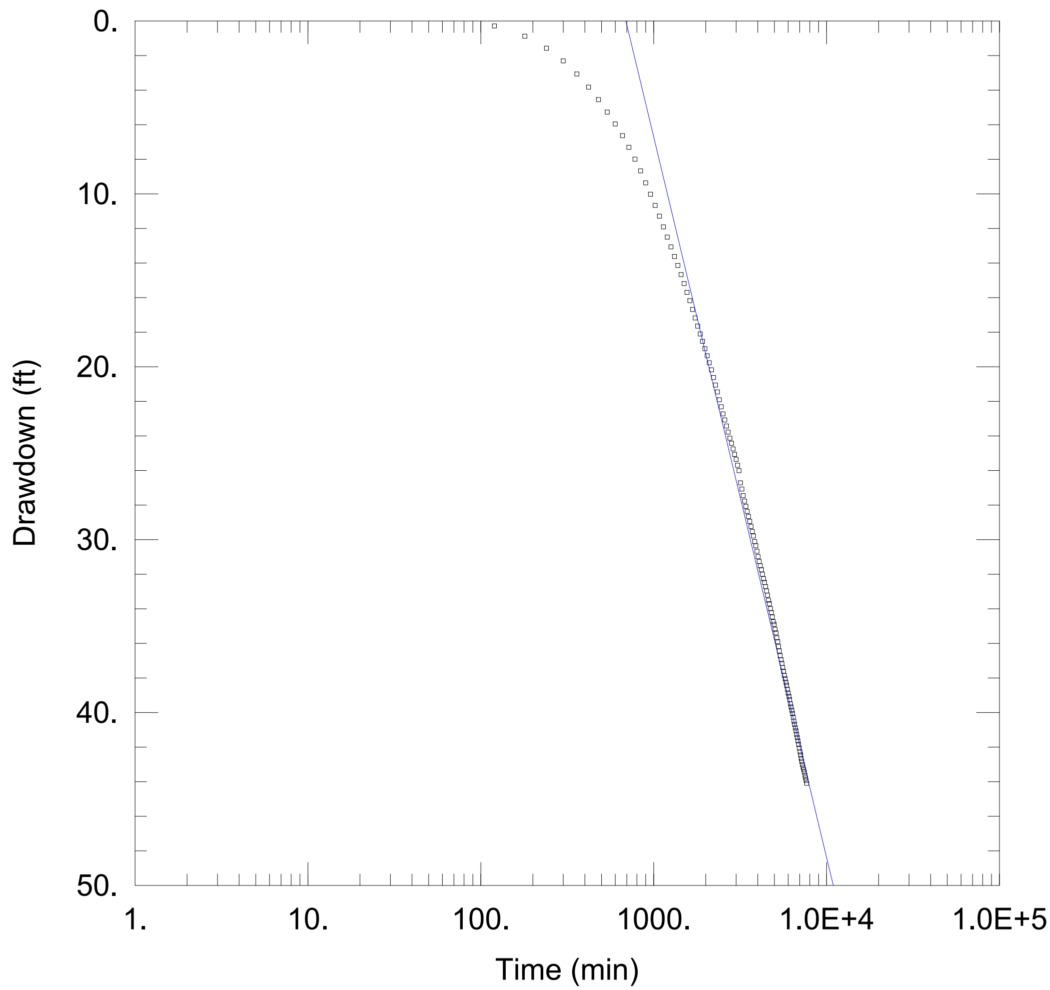
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Wood 1	1946282.382	10904234.12

SOLUTION

Aquifer Model: Confined Solution Method: Theis

T = 227. ft^2/day
S = 9.093E-6
Kz/Kr = 0.01
b = 82. ft



WELL TEST ANALYSIS

Data Set: \...\OW Wood 1.aqt
Date: 11/15/17 Time: 07:55:09

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 2
Test Date: 11/2/2016

AQUIFER DATA

Saturated Thickness: 82. ft
Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 2	1951951.936	10906446.69

Observation Wells

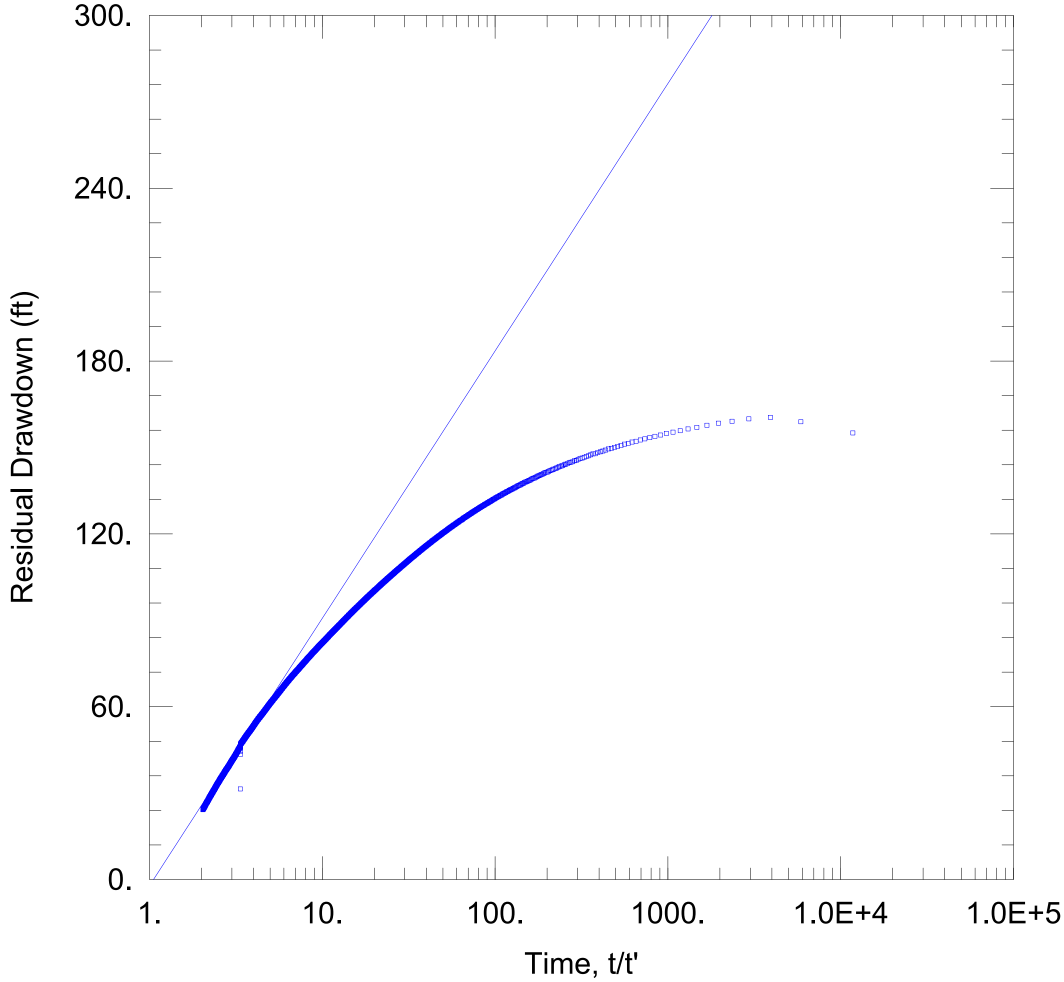
Well Name	X (ft)	Y (ft)
▫ Wood 1	1946282.382	10904234.12

SOLUTION

Aquifer Model: Confined
Solution Method: Cooper-Jacob

T = 257.9 ft^2/day
S = 7.506E-6

Bridges 2 Test



WELL TEST ANALYSIS

Data Set: \...\Bridges 1 - theis recovery.aqt
Date: 11/14/17 Time: 11:53:22

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 1
Test Date: 11/22/2016

AQUIFER DATA

Saturated Thickness: 82. ft
Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 1	1949181.234	10907020.34

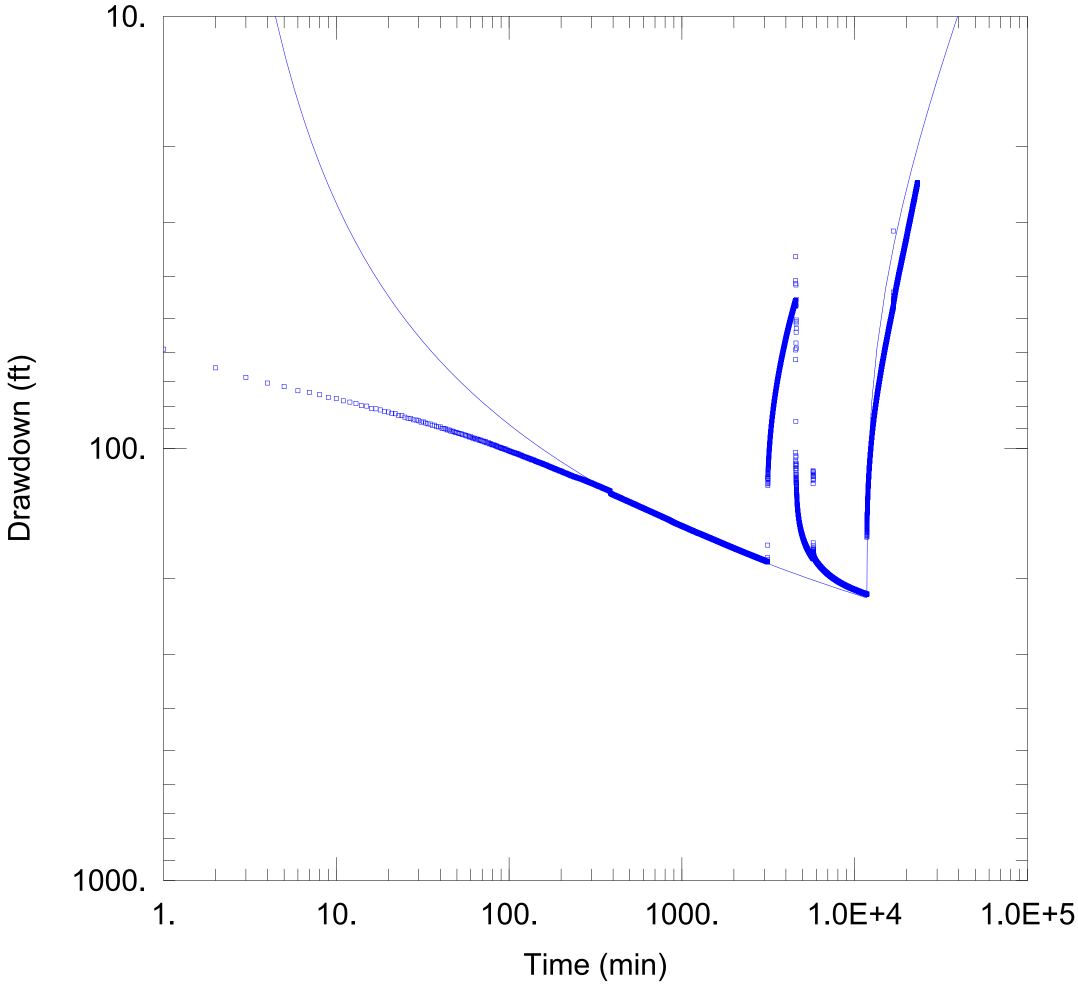
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 1	1949181.234	10907020.34

SOLUTION

Aquifer Model: Confined
Solution Method: Theis (Recovery)

T = 247.8 ft^2/day
S/S' = 1.057



WELL TEST ANALYSIS

Data Set: \...\Bridges 1 - theis.aqt
Date: 11/14/17 Time: 11:54:30

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 1
Test Date: 11/22/2016

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 1	1949181.234	10907020.34

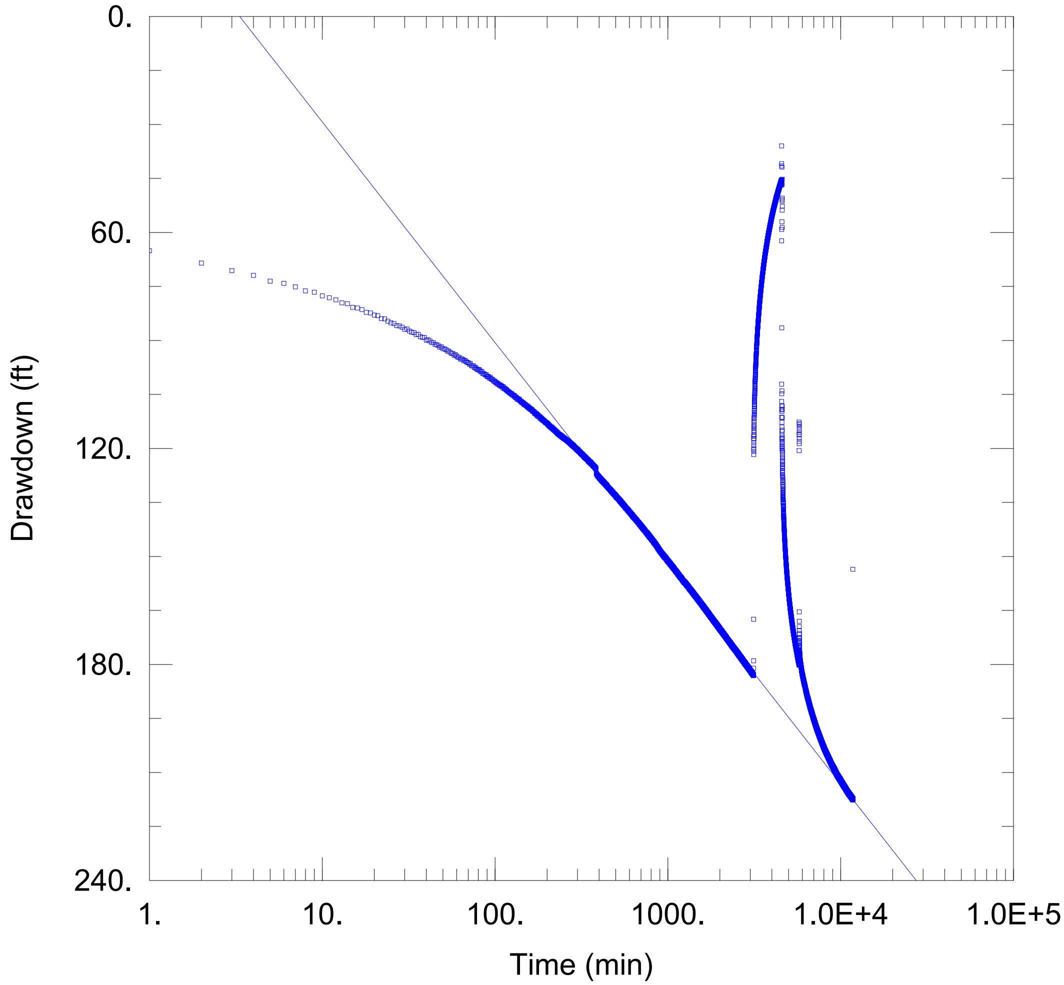
Observation Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 1	1949181.234	10907020.34

SOLUTION

Aquifer Model: Confined Solution Method: Theis

T = 354.5 ft^2/day
Kz/Kr = 0.01
S = 12.31
b = 82. ft



WELL TEST ANALYSIS

Data Set: \...\Bridges 1.aqt
Date: 11/14/17 Time: 11:55:17

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100
Location: Hays County, TX
Test Well: Bridges Well No. 1
Test Date: 11/22/2016

AQUIFER DATA

Saturated Thickness: 82. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 1	1949181.234	10907020.34

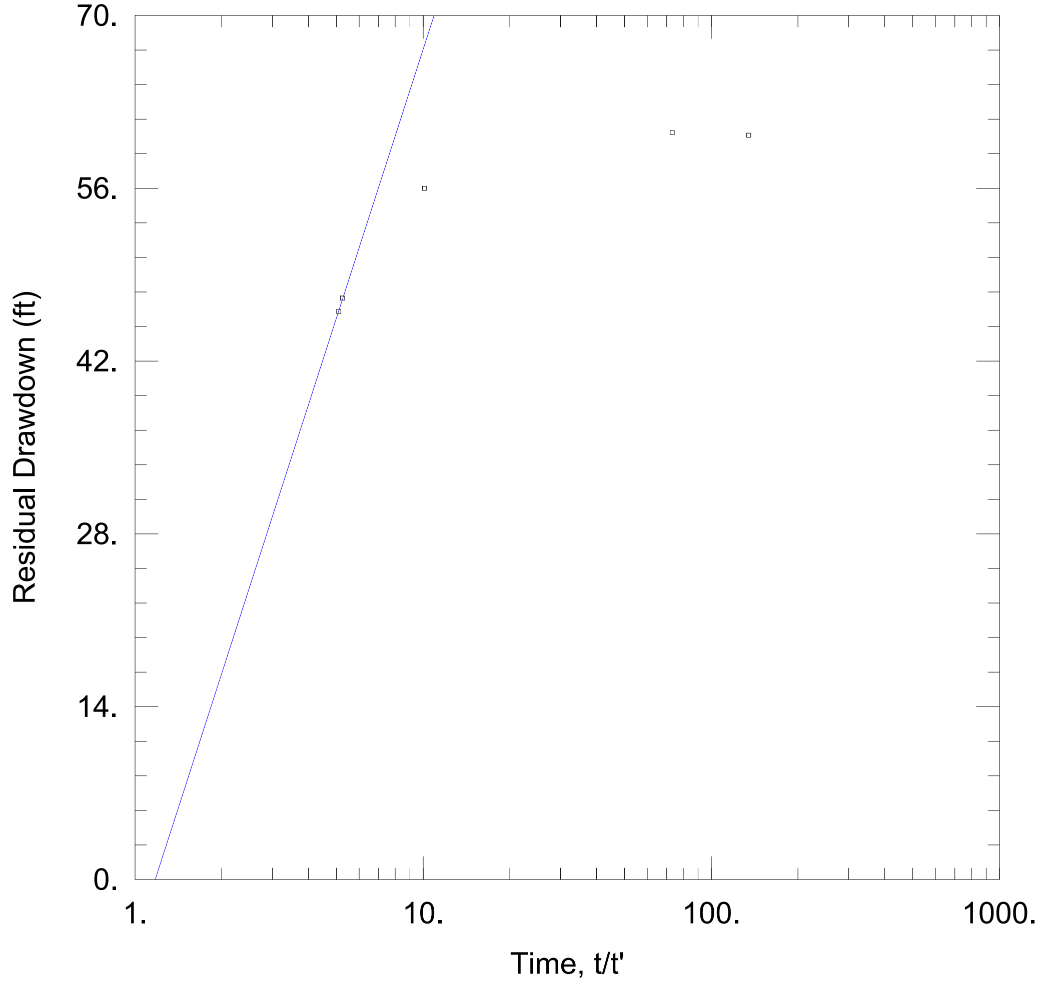
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 1	1949181.234	10907020.34

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 375.2 ft^2/day S = 9.704



WELL TEST ANALYSIS

Data Set: \...\ow bowman - theis recovery.aqt
Date: 11/14/17 Time: 11:55:41

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 1
Test Date: 11/22/2016

AQUIFER DATA

Saturated Thickness: 82. ft
Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 1	1949181.234	10907020.34

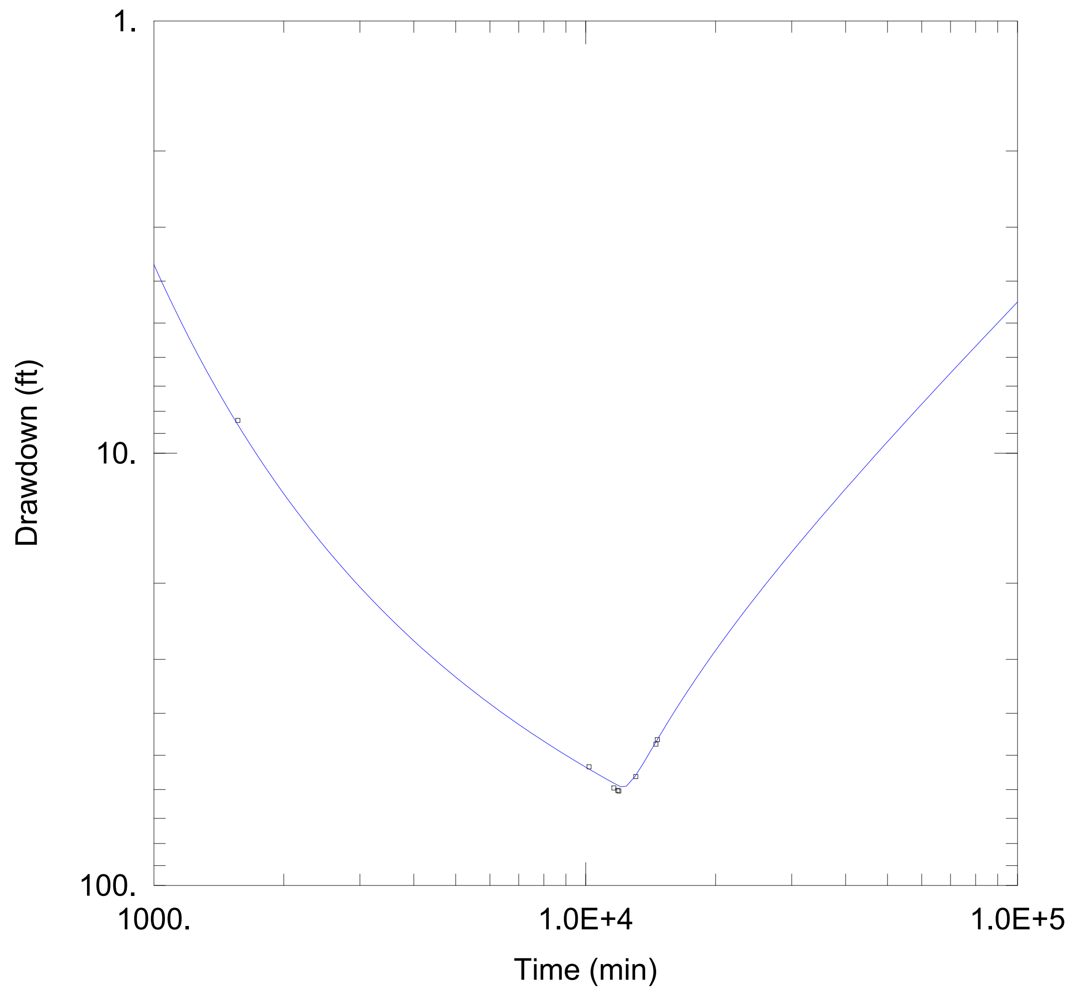
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bowman	1952817.257	10907226.9

SOLUTION

Aquifer Model: Confined
Solution Method: Theis (Recovery)

T = 318. ft^2/day
S/S' = 1.176



WELL TEST ANALYSIS

Data Set: \...\ow bowman - theis.aqt
Date: 11/14/17 Time: 11:56:03

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 1
Test Date: 11/22/2016

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 1	1949181.234	10907020.34

Observation Wells

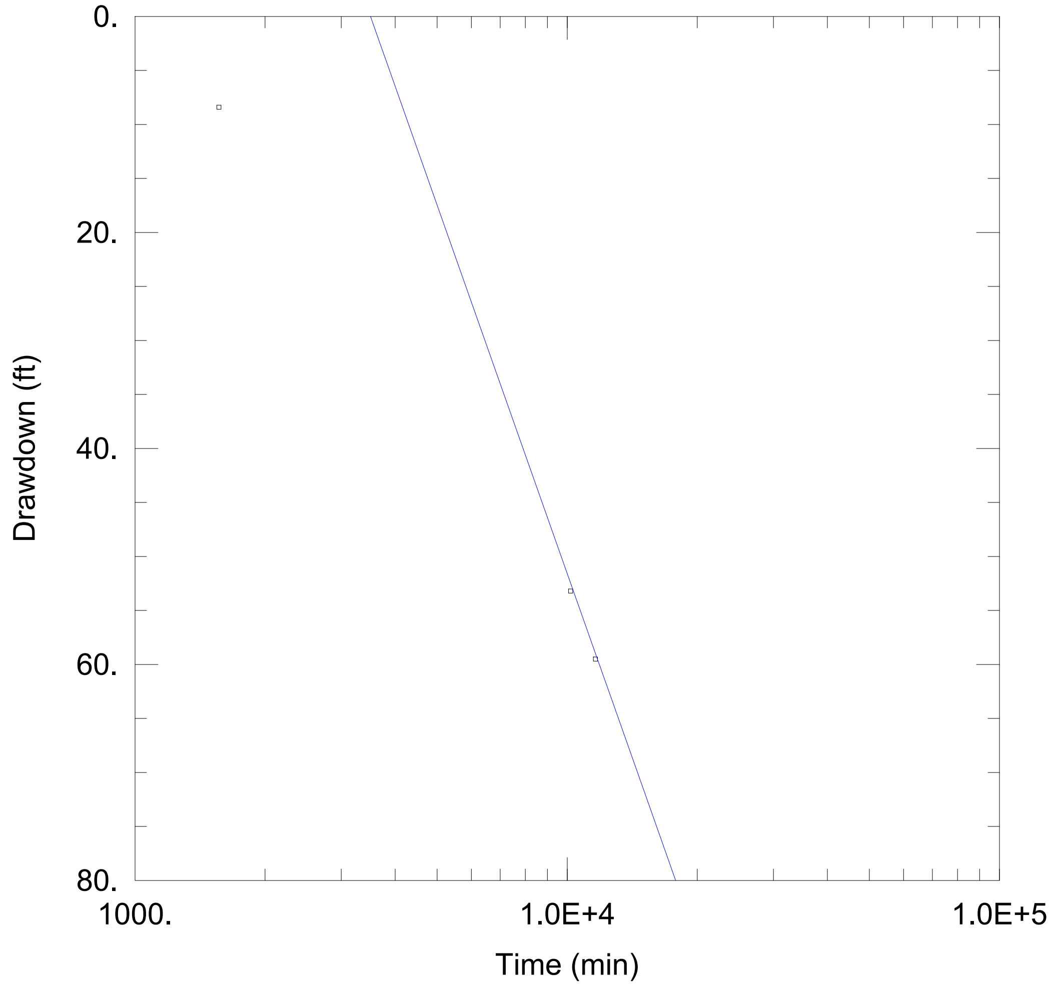
Well Name	X (ft)	Y (ft)
▫ Bowman	1952817.257	10907226.9

SOLUTION

Aquifer Model: Confined
Solution Method: Theis

T = 275.5 ft^2/day
Kz/Kr = 0.01

S = 8.609E-5
b = 82. ft



WELL TEST ANALYSIS

Data Set: \...\ow bowman.aqt
Date: 11/14/17 Time: 11:56:25

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 1
Test Date: 11/22/2016

AQUIFER DATA

Saturated Thickness: 82. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 1	1949181.234	10907020.34

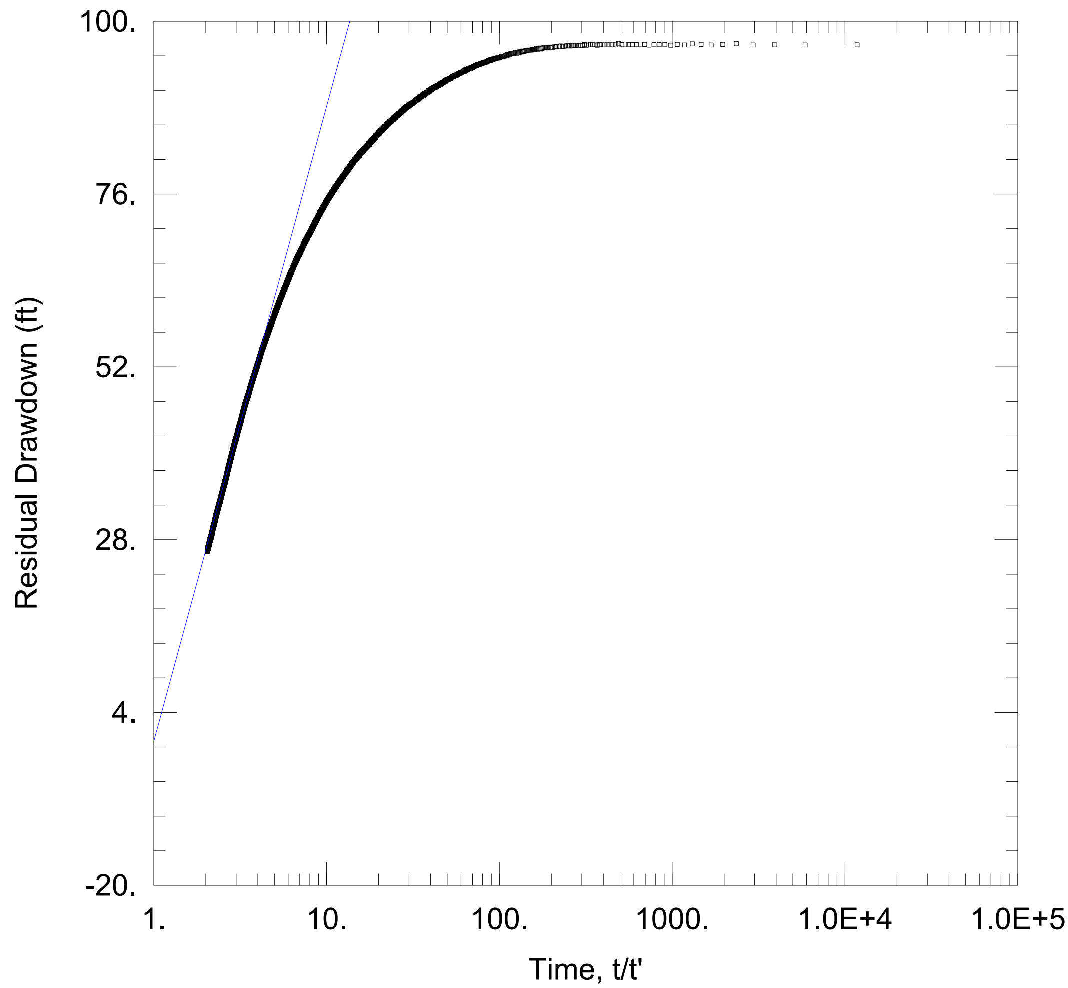
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bowman	1952817.257	10907226.9

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 203. ft^2/day S = 8.368E-5



WELL TEST ANALYSIS

Data Set: \...\ow Bridges 2 - theis recovery.aqt
Date: 11/14/17 Time: 11:57:00

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 1
Test Date: 11/22/2016

AQUIFER DATA

Saturated Thickness: 82. ft
Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 1	1949181.234	10907020.34

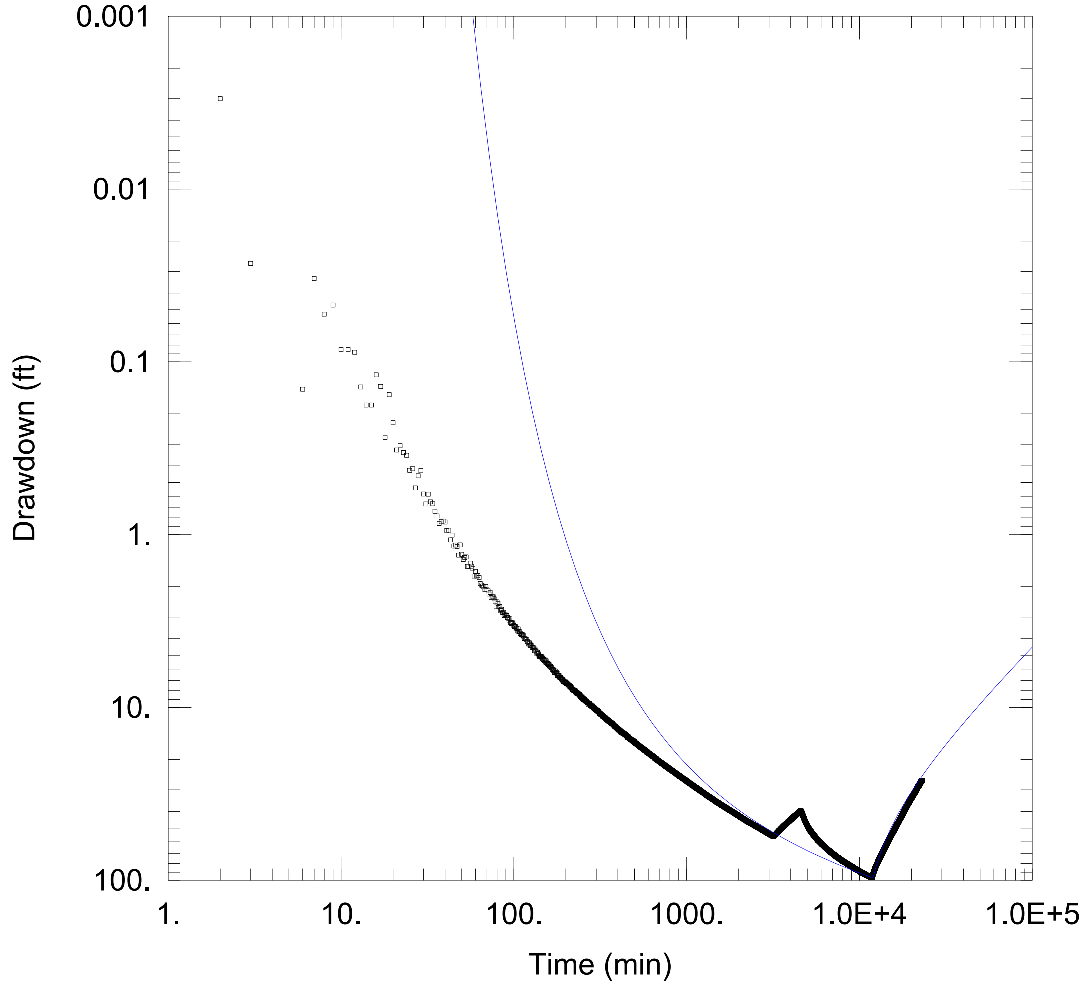
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 2	1951951.936	10906446.69

SOLUTION

Aquifer Model: Confined
Solution Method: Theis (Recovery)

T = 260.9 ft^2/day
S/S' = 1.001



WELL TEST ANALYSIS

Data Set: \...\ow Bridges 2 - theis.aqt
Date: 11/14/17 Time: 11:58:02

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 1
Test Date: 11/22/2016

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 1	1949181.234	10907020.34

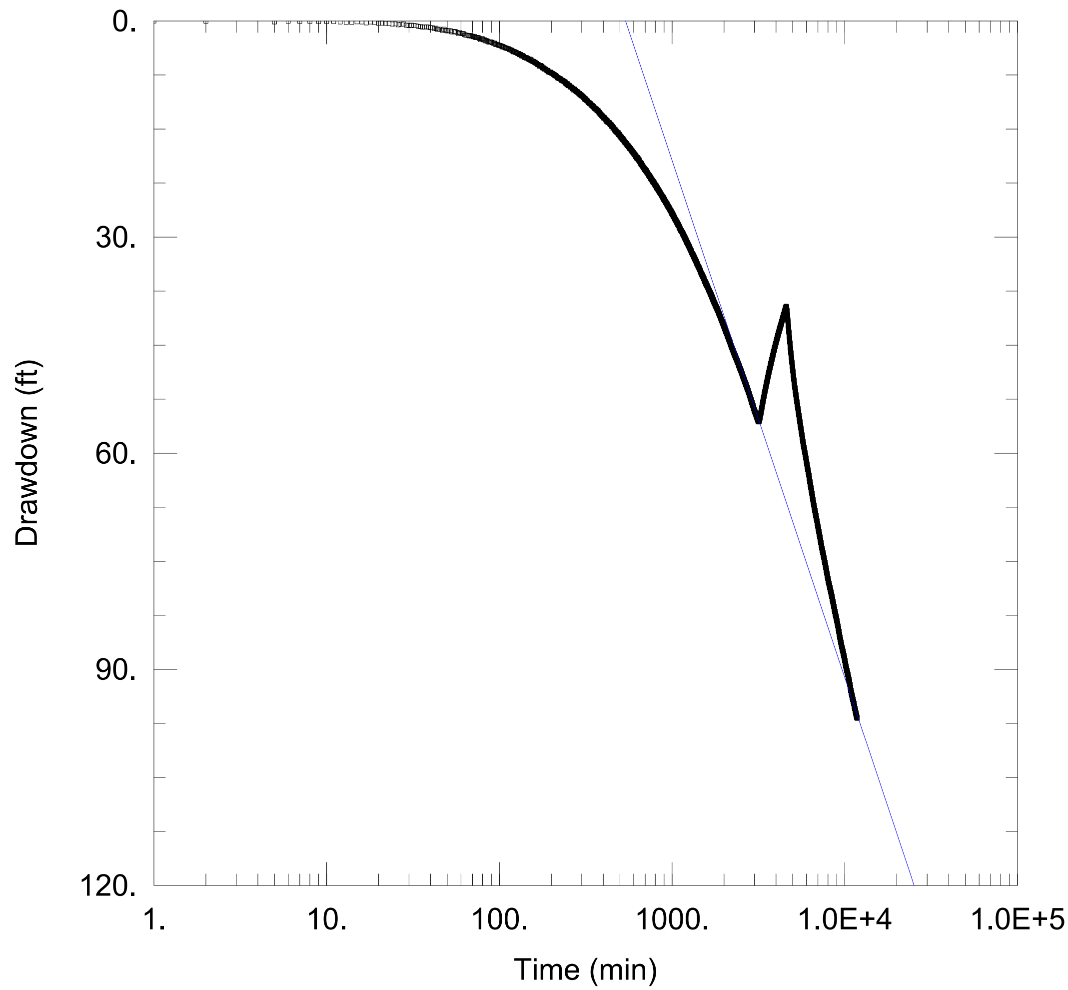
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 2	1951951.936	10906446.69

SOLUTION

Aquifer Model: Confined
Solution Method: Theis

T = 277.8 ft^2/day
S = 4.54E-5
Kz/Kr = 0.01
b = 82. ft



WELL TEST ANALYSIS

Data Set: \...\ow Bridges 2.aqt
Date: 11/14/17 Time: 11:58:37

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 1
Test Date: 11/22/2016

AQUIFER DATA

Saturated Thickness: 82. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 1	1949181.234	10907020.34

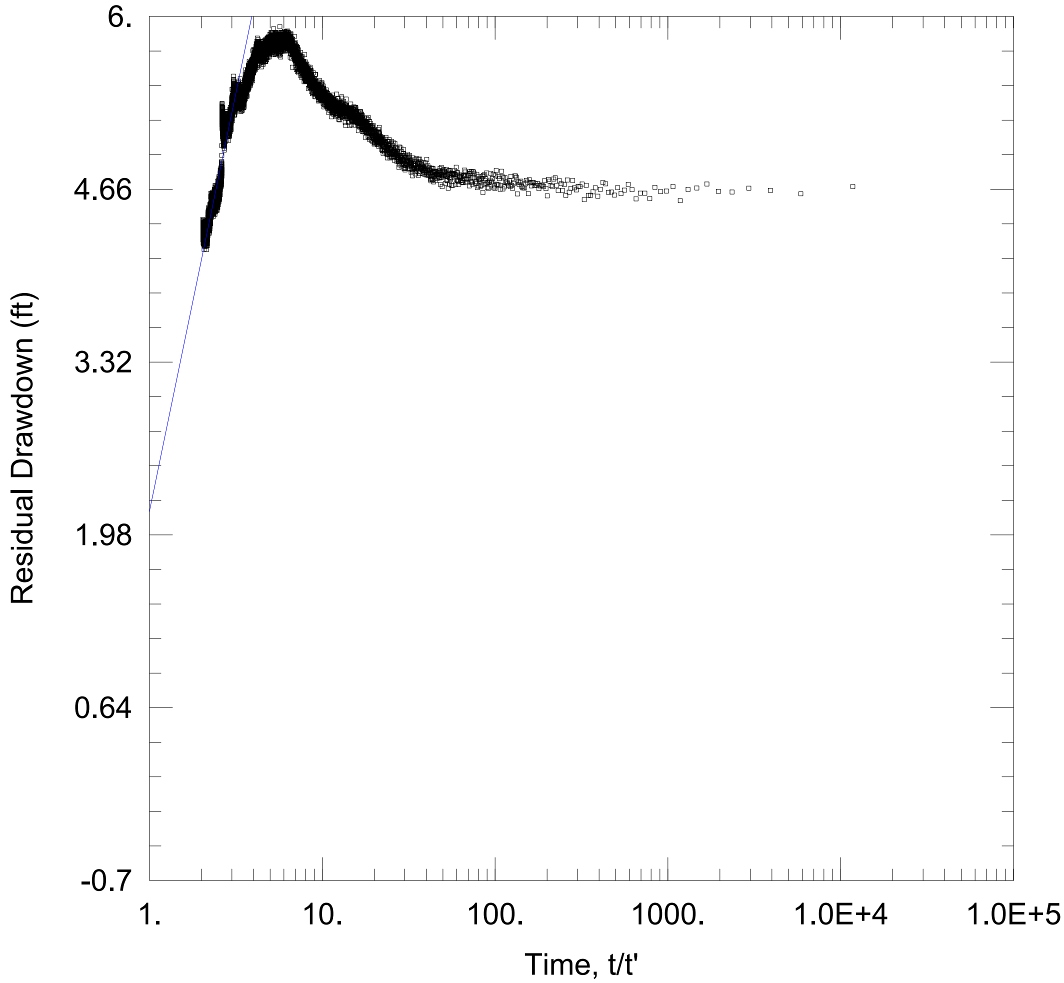
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 2	1951951.936	10906446.69

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 320.2 ft^2/day S = 3.356E-5



WELL TEST ANALYSIS

Data Set: \...\ow Bridges 3 - theis recovery.aqt
Date: 11/14/17 Time: 12:00:05

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 1
Test Date: 11/22/2016

AQUIFER DATA

Saturated Thickness: 82. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 1	1949181.234	10907020.34

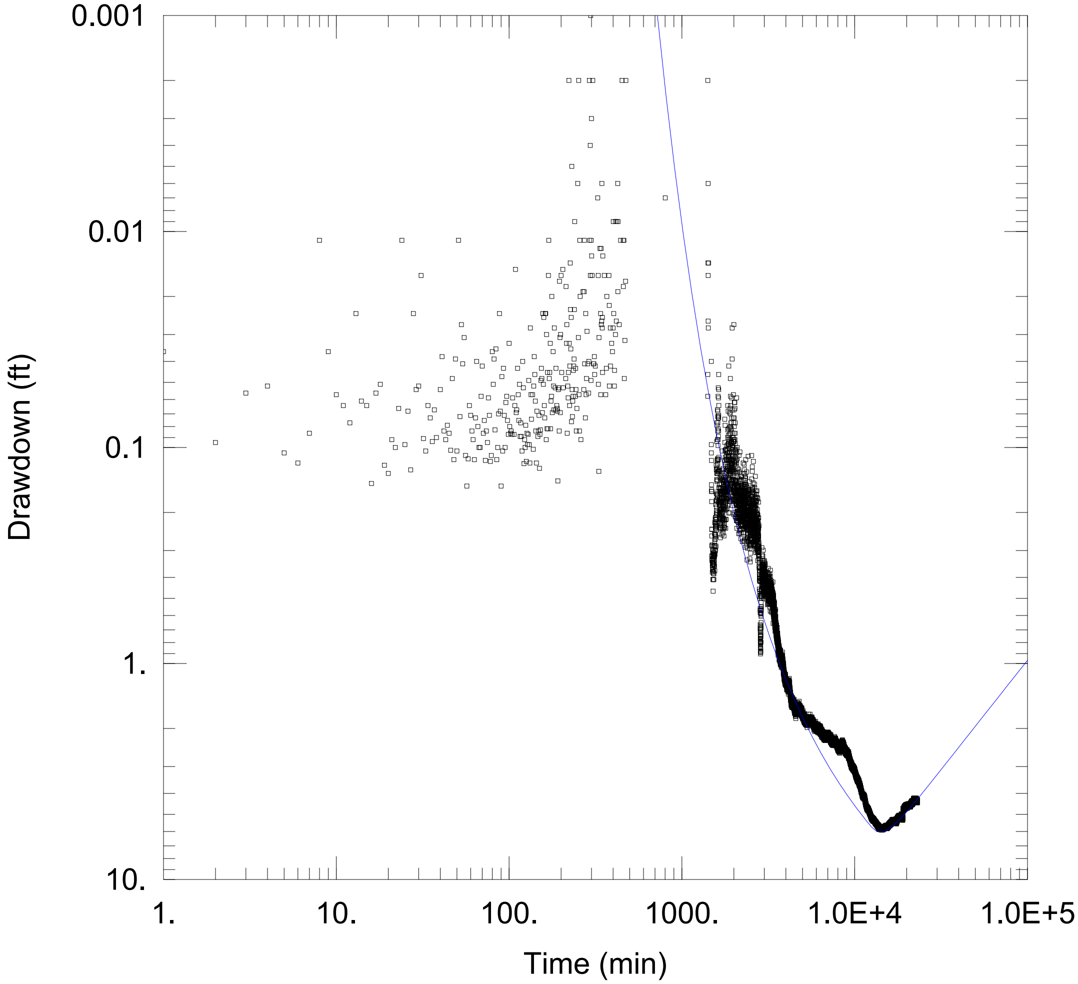
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 3	1954970.013	10906385.3

SOLUTION

Aquifer Model: Confined Solution Method: Theis (Recovery)

T = 3551.5 ft^2/day S/S' = 0.4636



WELL TEST ANALYSIS

Data Set: \...\ow Bridges 3 - theis.aqt
Date: 11/14/17 Time: 11:59:29

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 1
Test Date: 11/22/2016

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 1	1949181.234	10907020.34

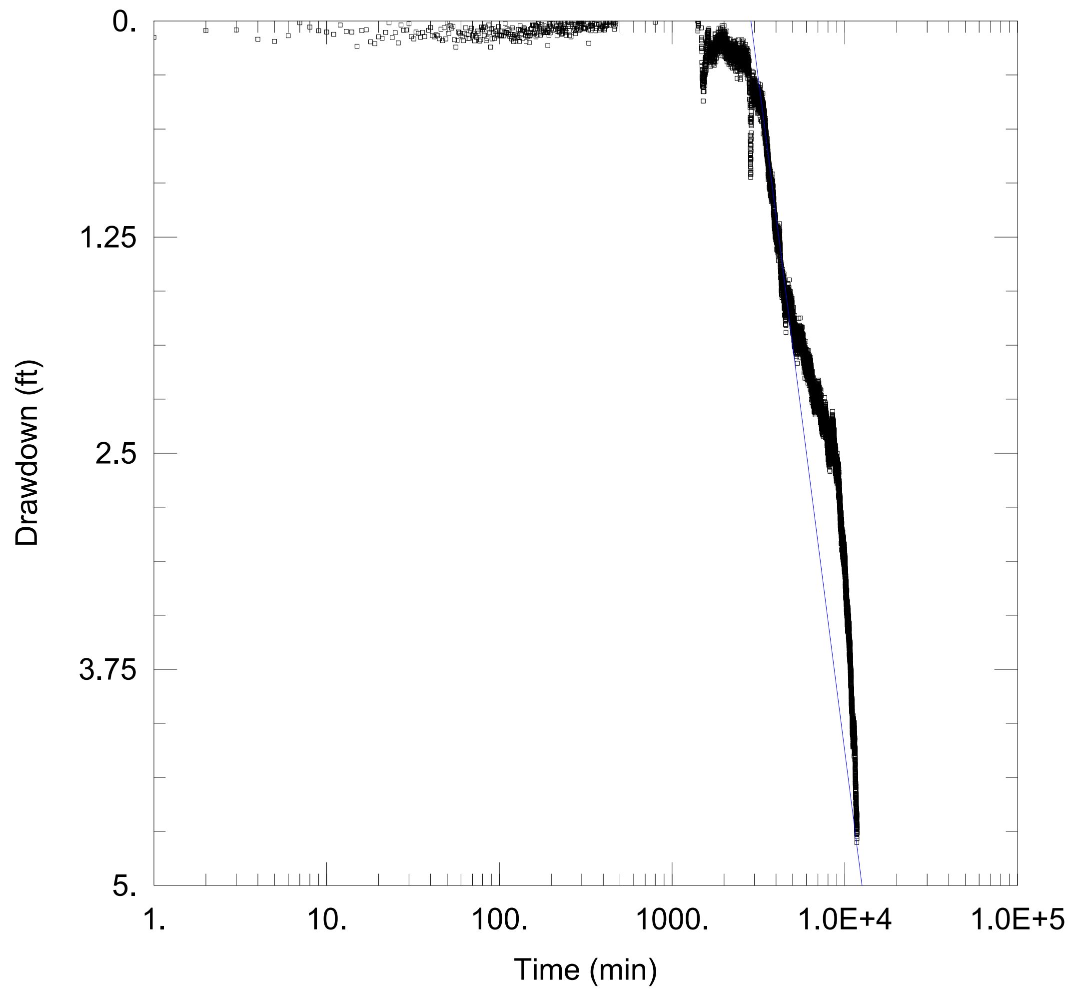
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 3	1954970.013	10906385.3

SOLUTION

Aquifer Model: Confined Solution Method: Theis

T = 1225.7 ft^2/day S = 0.0005031
Kz/Kr = 0.01 b = 82. ft



WELL TEST ANALYSIS

Data Set: \...\ow Bridges 3.aqt
Date: 11/14/17 Time: 12:00:38

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 1
Test Date: 11/22/2016

AQUIFER DATA

Saturated Thickness: 82. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 1	1949181.234	10907020.34

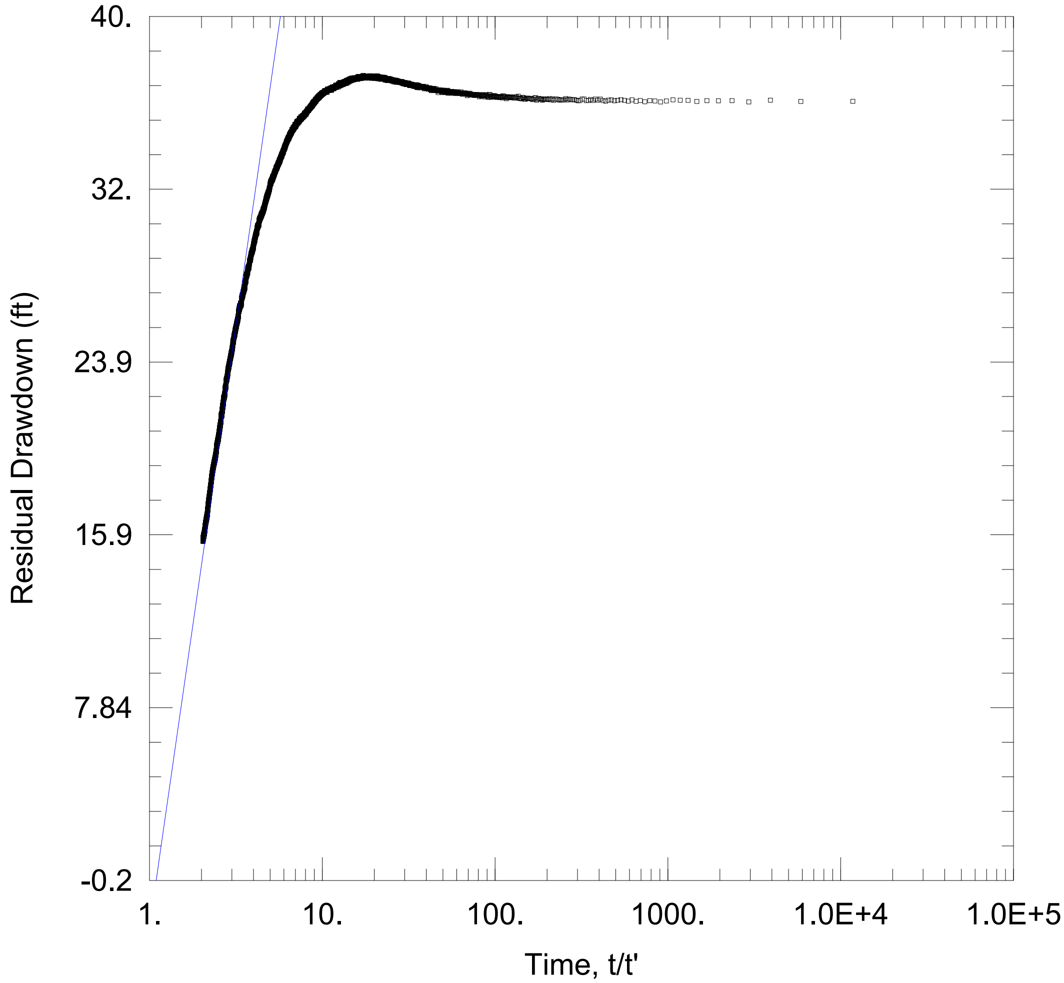
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 3	1954970.013	10906385.3

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 2958.7 ft^2/day S = 0.0003895



WELL TEST ANALYSIS

Data Set: \...\ow Bridges 4 - theis recovery.aqt
Date: 11/14/17 Time: 12:03:48

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 1
Test Date: 11/22/2016

AQUIFER DATA

Saturated Thickness: 82. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 1	1949181.234	10907020.34

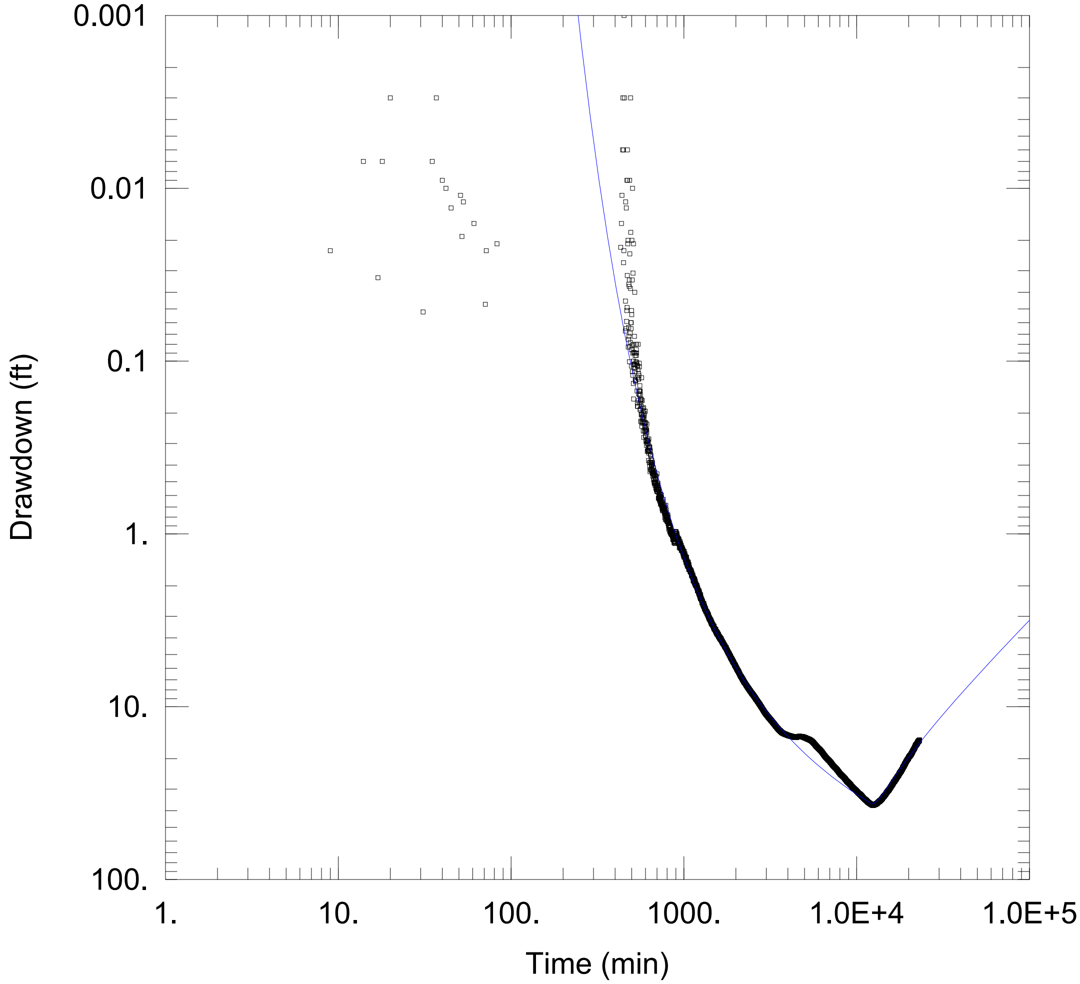
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 4	1953817.782	10906346.59

SOLUTION

Aquifer Model: Confined Solution Method: Theis (Recovery)

T = 411.4 ft^2/day S/S' = 1.103



WELL TEST ANALYSIS

Data Set: \...\ow Bridges 4 - theis.aqt
Date: 11/14/17 Time: 12:04:25

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 1
Test Date: 11/22/2016

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 1	1949181.234	10907020.34

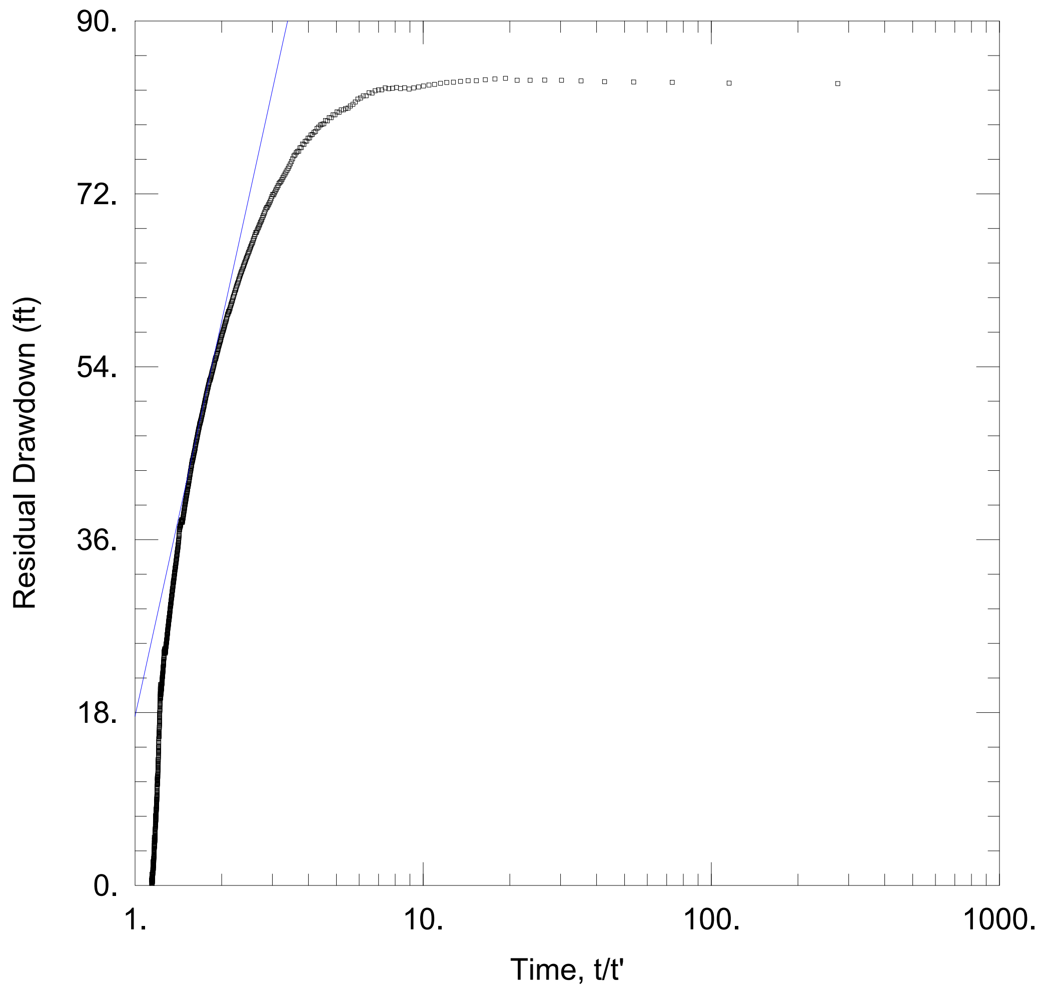
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 4	1953817.782	10906346.59

SOLUTION

Aquifer Model: Confined Solution Method: Theis

T = 387.5 ft^2/day S = 9.515E-5
Kz/Kr = 0.01 b = 82. ft



WELL TEST ANALYSIS

Data Set: \...\escondita 1 - theis recovery.aqt
Date: 11/16/17 Time: 13:24:01

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Reeves County, TX
Test Well: Bridges Well No. 1
Test Date: 11/22/2016

AQUIFER DATA

Saturated Thickness: 82. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 1	1949181.234	10907020.34

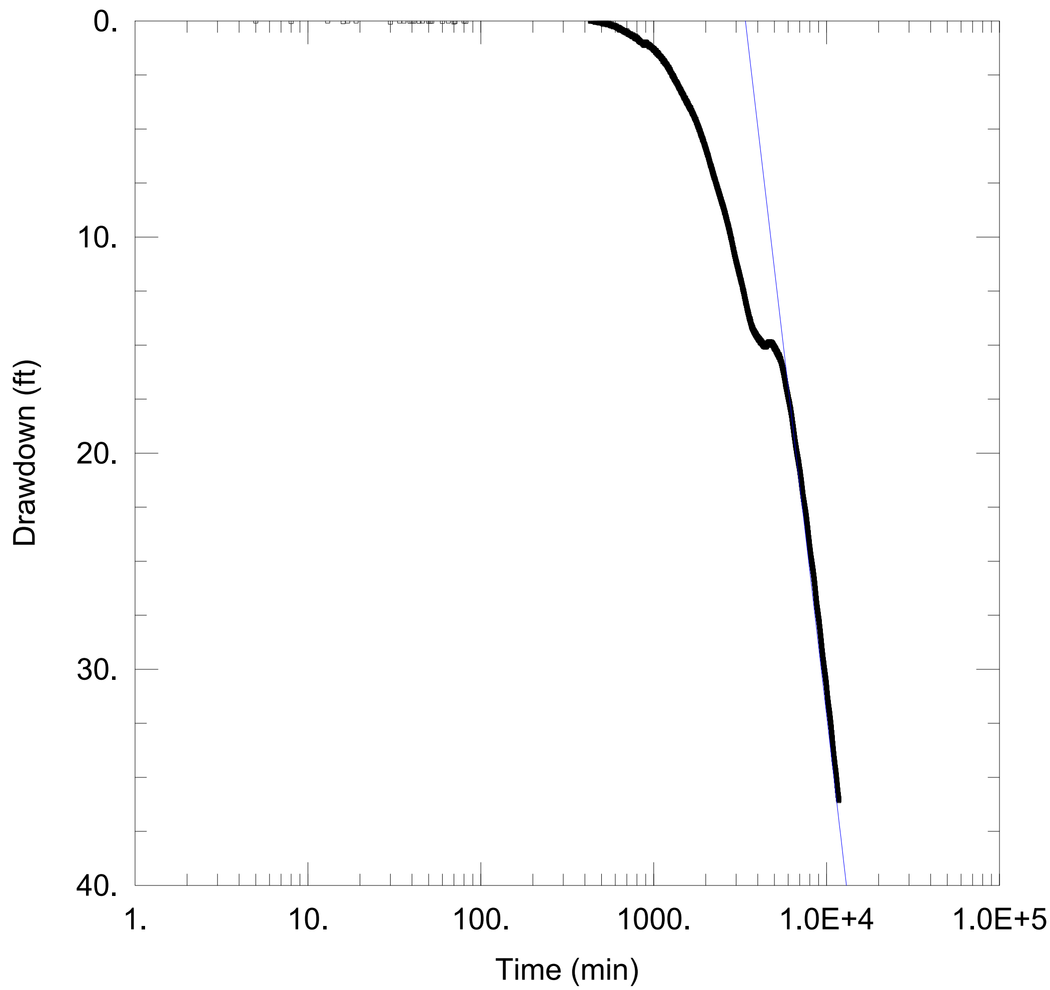
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Escondida 1	1943836.155	10900180.87

SOLUTION

Aquifer Model: Confined Solution Method: Theis (Recovery)

T = 168.2 ft^2/day S/S' = 0.7437



WELL TEST ANALYSIS

Data Set: \...\ow Bridges 4.aqt
Date: 11/14/17 Time: 12:04:53

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 1
Test Date: 11/22/2016

AQUIFER DATA

Saturated Thickness: 82. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 1	1949181.234	10907020.34

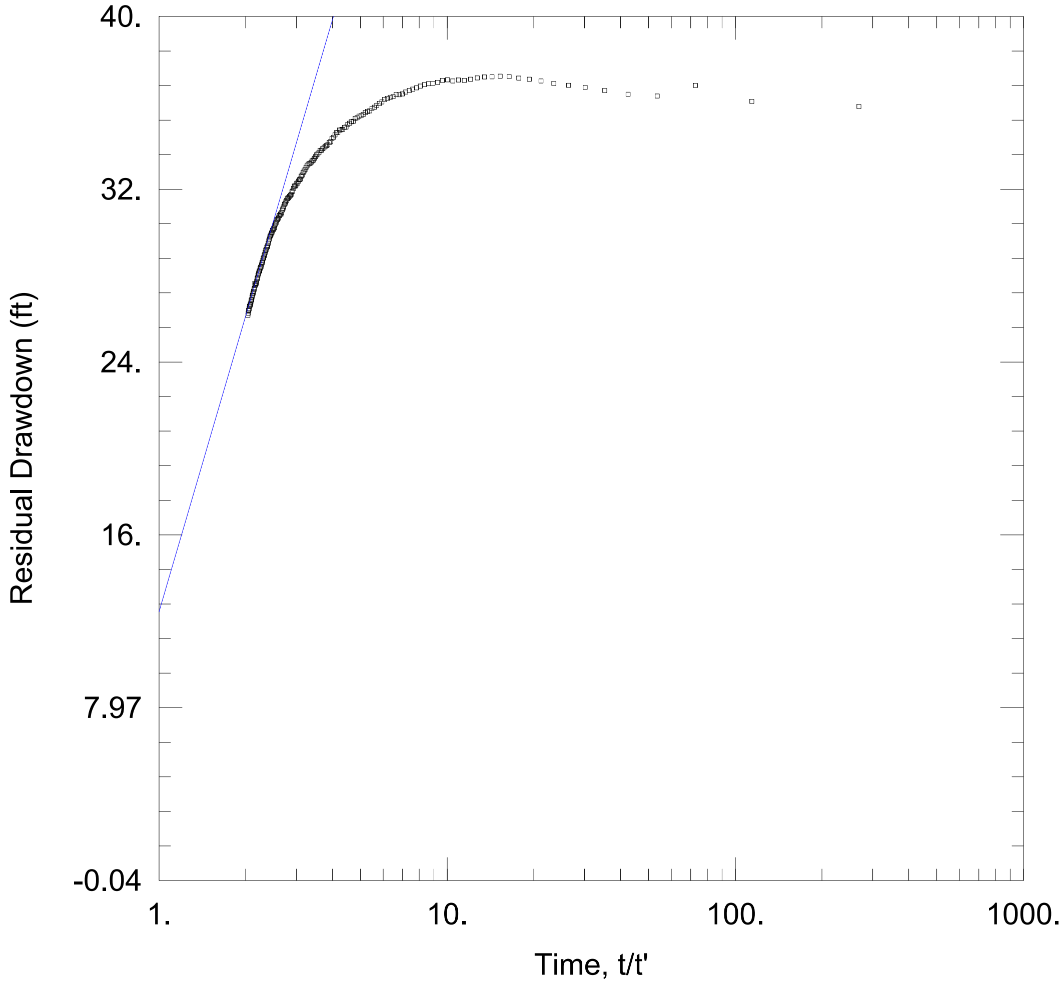
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 4	1953817.782	10906346.59

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 336.2 ft^2/day S = 8.109E-5



WELL TEST ANALYSIS

Data Set: \...\ow lowe - theis recovery.aqt
Date: 11/14/17 Time: 12:06:44

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 1
Test Date: 11/22/2016

AQUIFER DATA

Saturated Thickness: 82. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 1	1949181.234	10907020.34

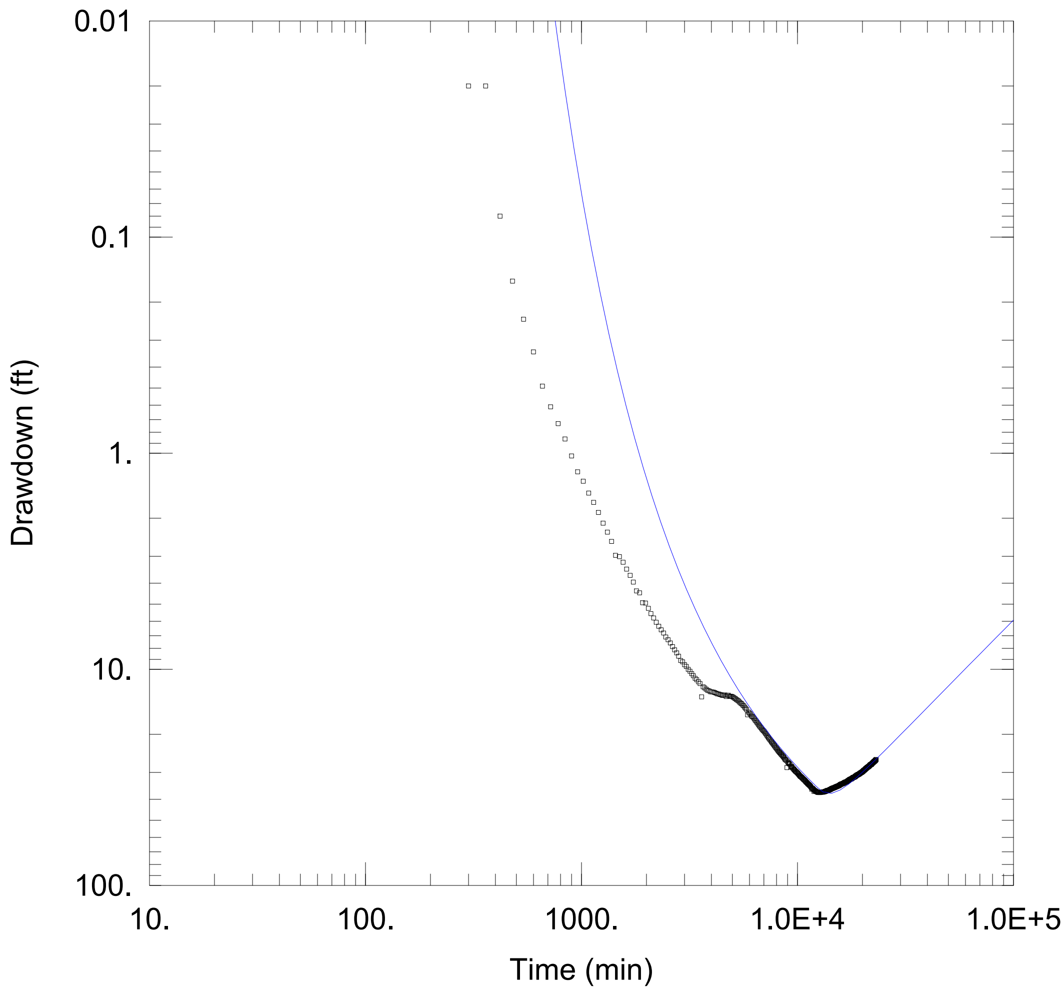
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Lowe	1947758.99	10909644.82

SOLUTION

Aquifer Model: Confined Solution Method: Theis (Recovery)

T = 504.6 ft^2/day S/S' = 0.5343



WELL TEST ANALYSIS

Data Set: \...\ow lowe - theis.aqt
Date: 11/14/17 Time: 12:07:05

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 1
Test Date: 11/22/2016

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 1	1949181.234	10907020.34

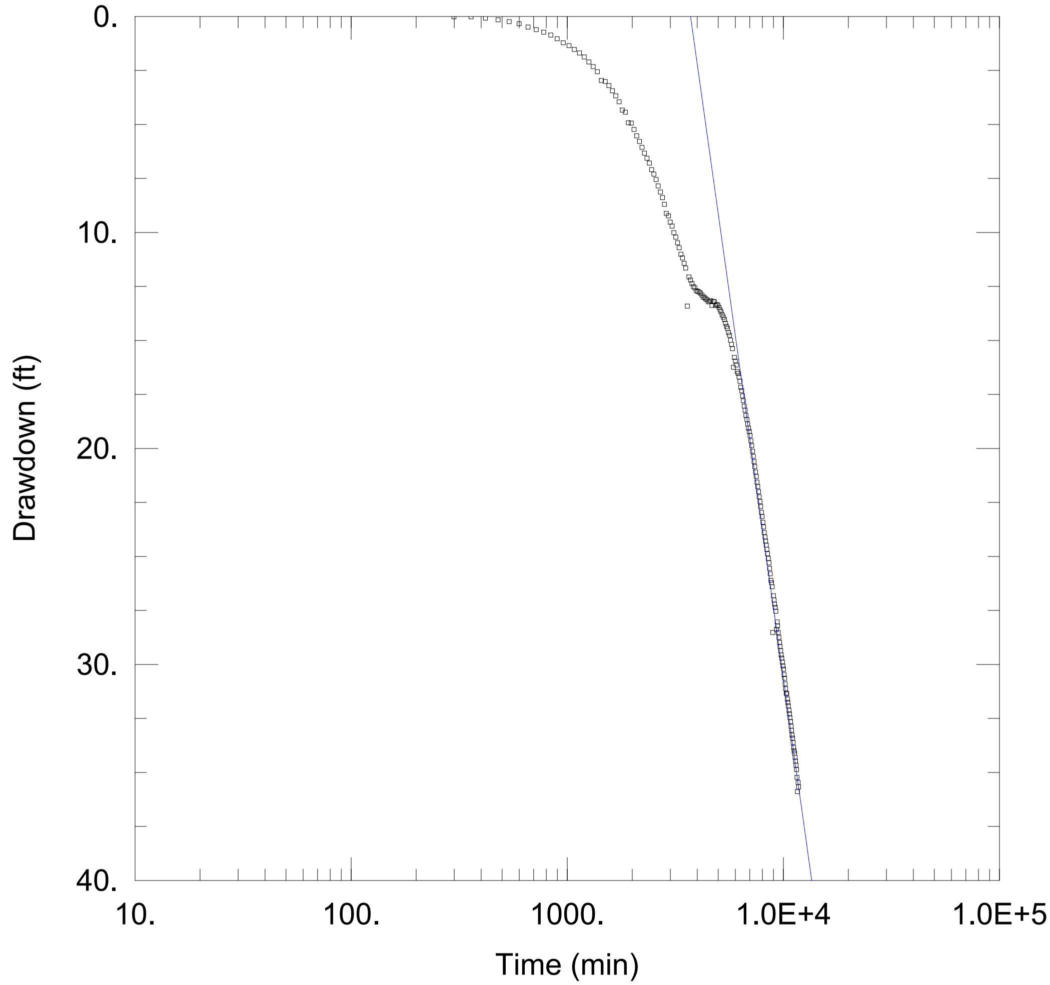
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Lowe	1947758.99	10909644.82

SOLUTION

Aquifer Model: Confined
Solution Method: Theis

T = 200.4 ft^2/day
S = 0.0003073
Kz/Kr = 0.01
b = 82. ft



WELL TEST ANALYSIS

Data Set: \...\ow lowe.aqt
Date: 11/14/17 Time: 12:07:26

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 1
Test Date: 11/22/2016

AQUIFER DATA

Saturated Thickness: 82. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 1	1949181.234	10907020.34

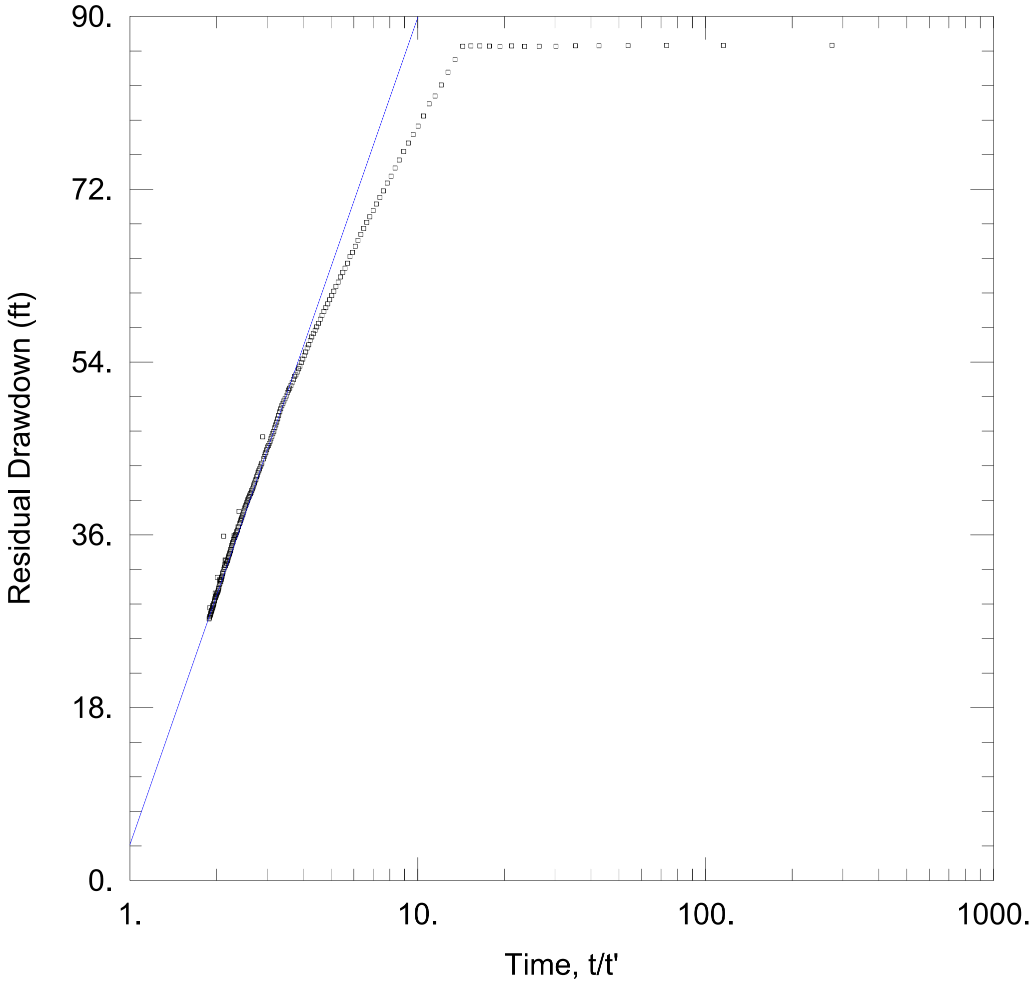
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Lowe	1947758.99	10909644.82

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 322.2 ft^2/day S = 0.0002099



WELL TEST ANALYSIS

Data Set: \...\ow ochoa - theis recovery.aqt
Date: 11/14/17 Time: 12:08:13

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 1
Test Date: 11/22/2016

AQUIFER DATA

Saturated Thickness: 82. ft
Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 1	1949181.234	10907020.34

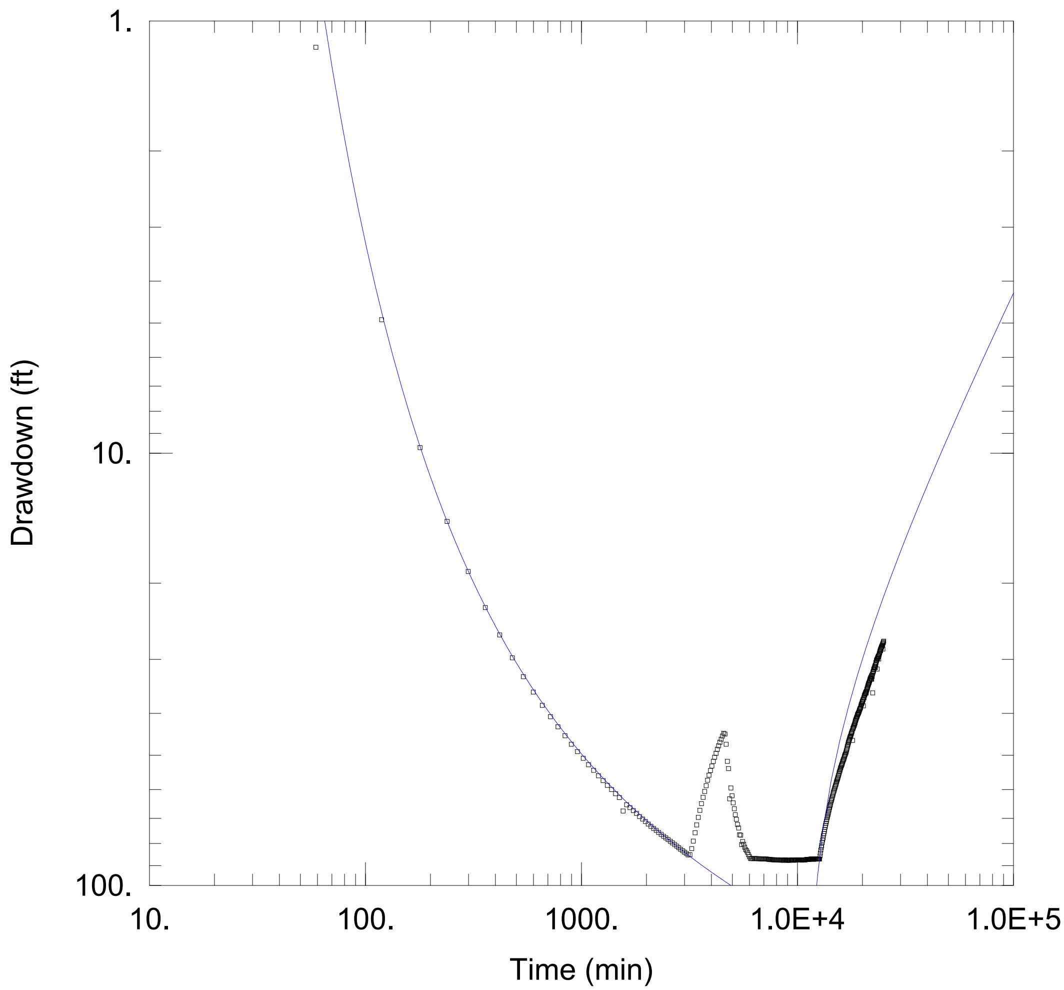
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Ochoa	1948354.429	10907814.57

SOLUTION

Aquifer Model: Confined
Solution Method: Theis (Recovery)

T = 267. ft^2/day
S/S' = 0.9057



WELL TEST ANALYSIS

Data Set: \...\ow ochoa - theis.aqt
Date: 11/14/17 Time: 12:08:52

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 1
Test Date: 11/22/2016

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 1	1949181.234	10907020.34

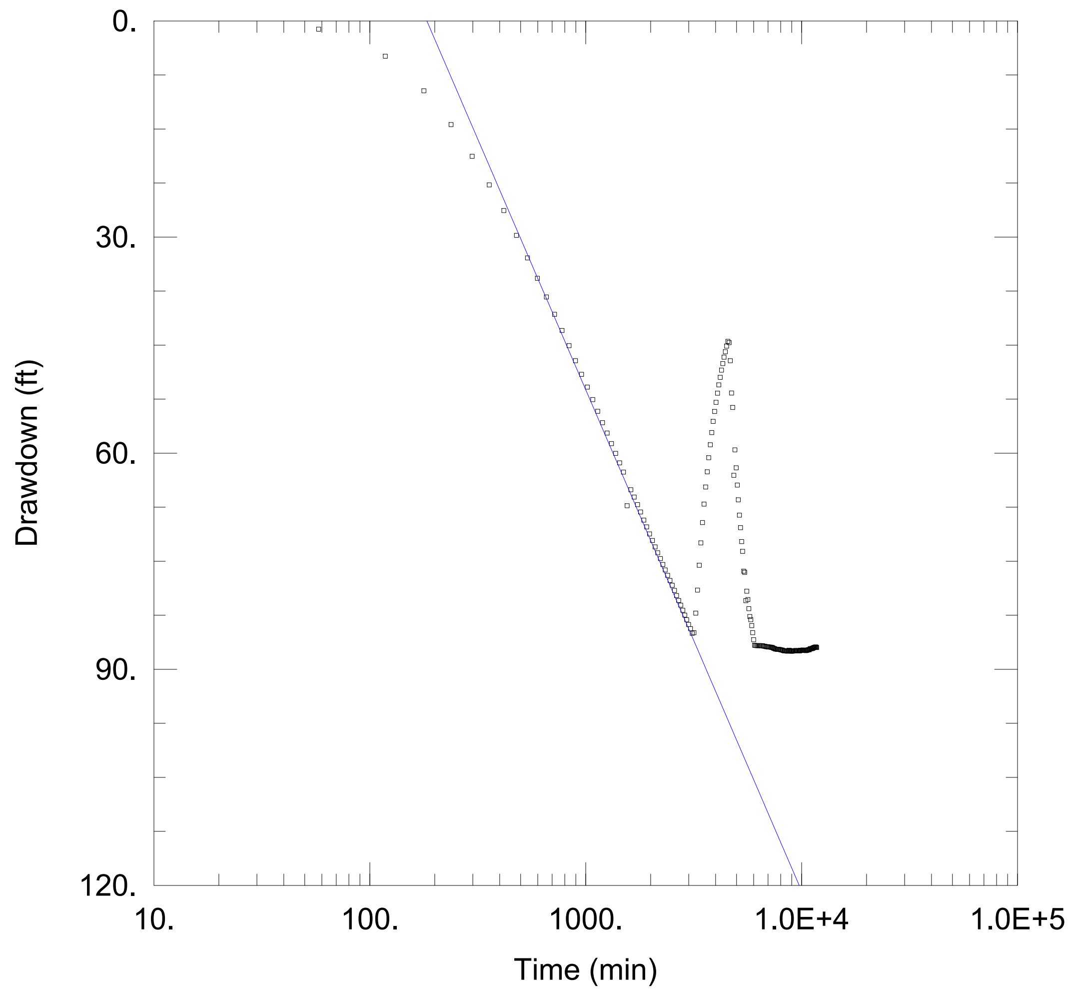
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Ochoa	1948354.429	10907814.57

SOLUTION

Aquifer Model: Confined Solution Method: Theis

T = 292.9 ft^2/day S = 9.38E-5
Kz/Kr = 0.01 b = 82. ft



WELL TEST ANALYSIS

Data Set: \...\ow ochoa.aqt
Date: 11/14/17 Time: 12:09:17

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 1
Test Date: 11/22/2016

AQUIFER DATA

Saturated Thickness: 82. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 1	1949181.234	10907020.34

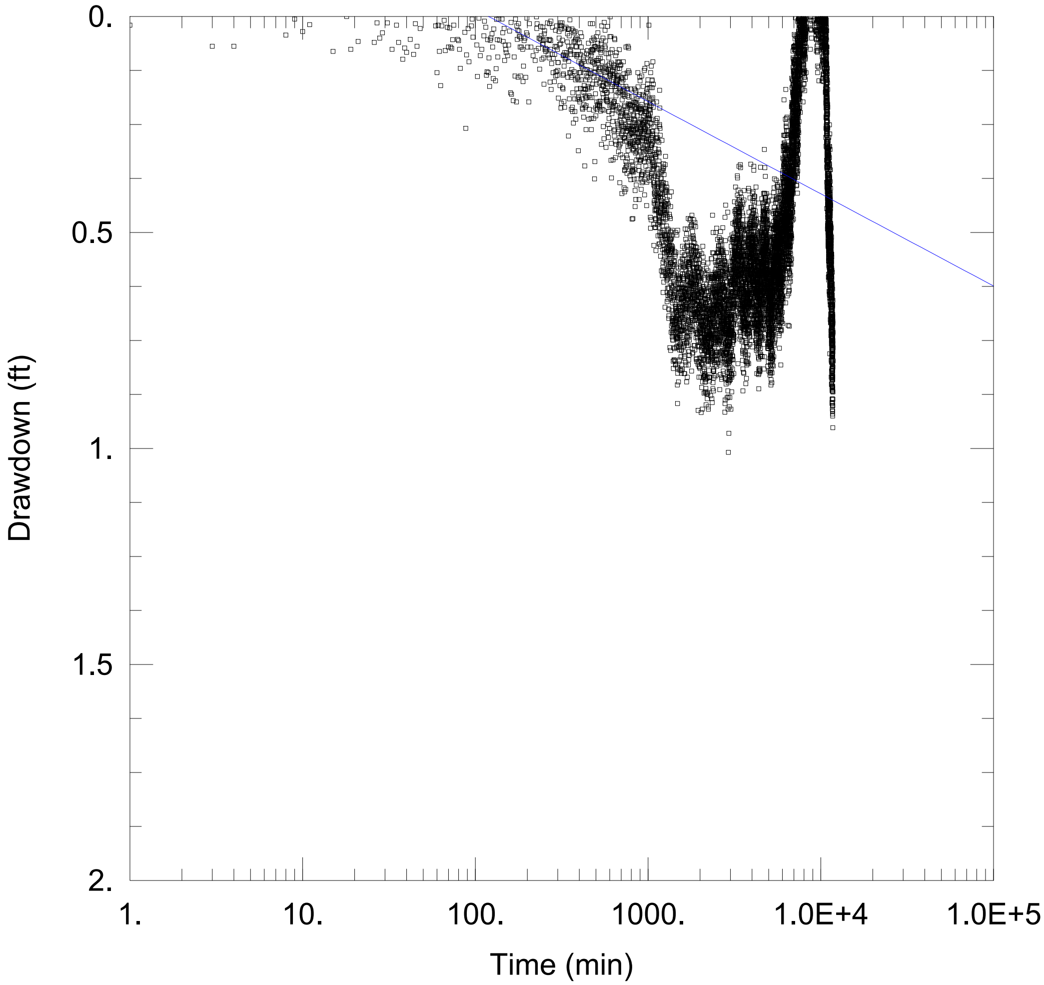
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Ochoa	1948354.429	10907814.57

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 330.5 ft^2/day S = 7.211E-5



WELL TEST ANALYSIS

Data Set: \...\ow odell 1.aqt
Date: 11/14/17 Time: 12:10:17

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 1
Test Date: 11/22/2016

AQUIFER DATA

Saturated Thickness: 82. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 1	1949181.234	10907020.34

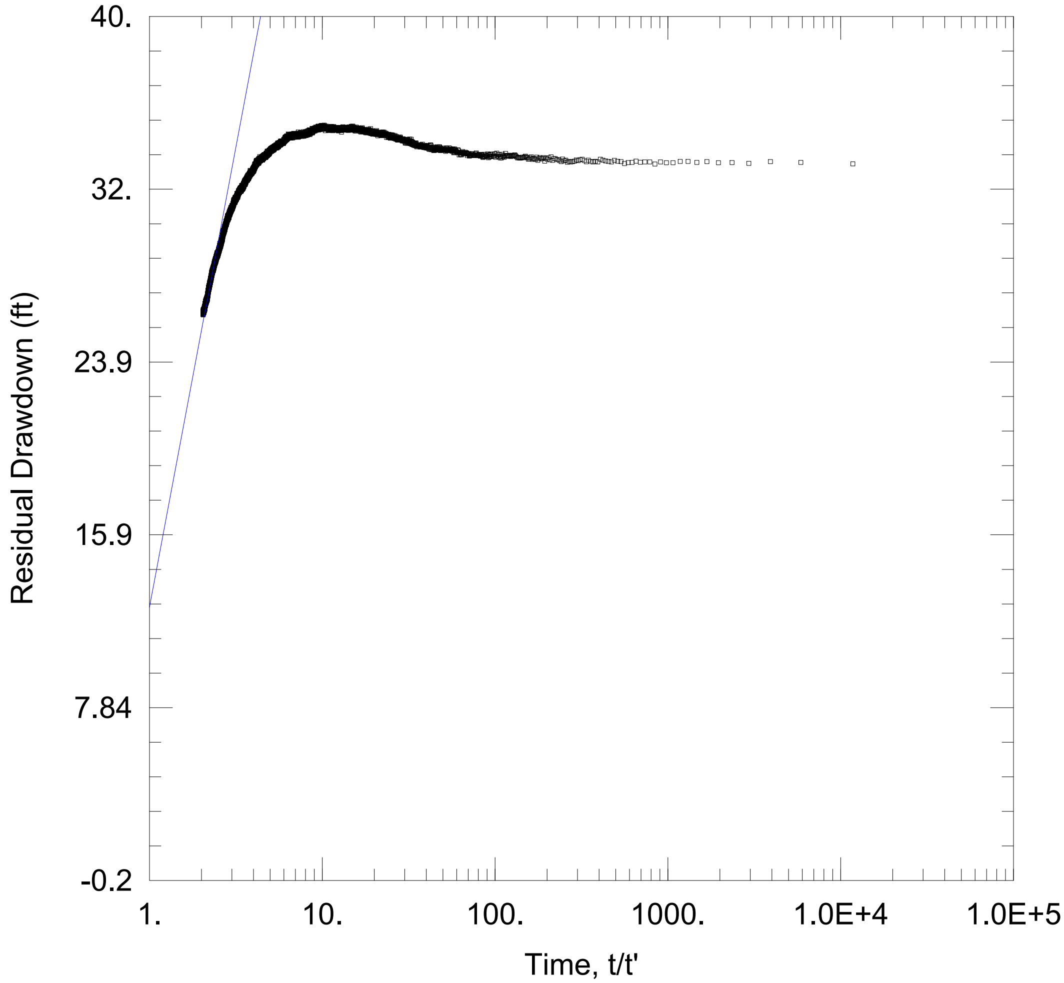
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Odell Well No. 1	1947452.756	10907426.21

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 1.078E+5 ft^2/day S = 0.00636



WELL TEST ANALYSIS

Data Set: \...\ow odell 2 - theis recovery.aqt
Date: 11/14/17 Time: 12:12:09

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 1
Test Date: 11/22/2016

AQUIFER DATA

Saturated Thickness: 82. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 1	1949181.234	10907020.34

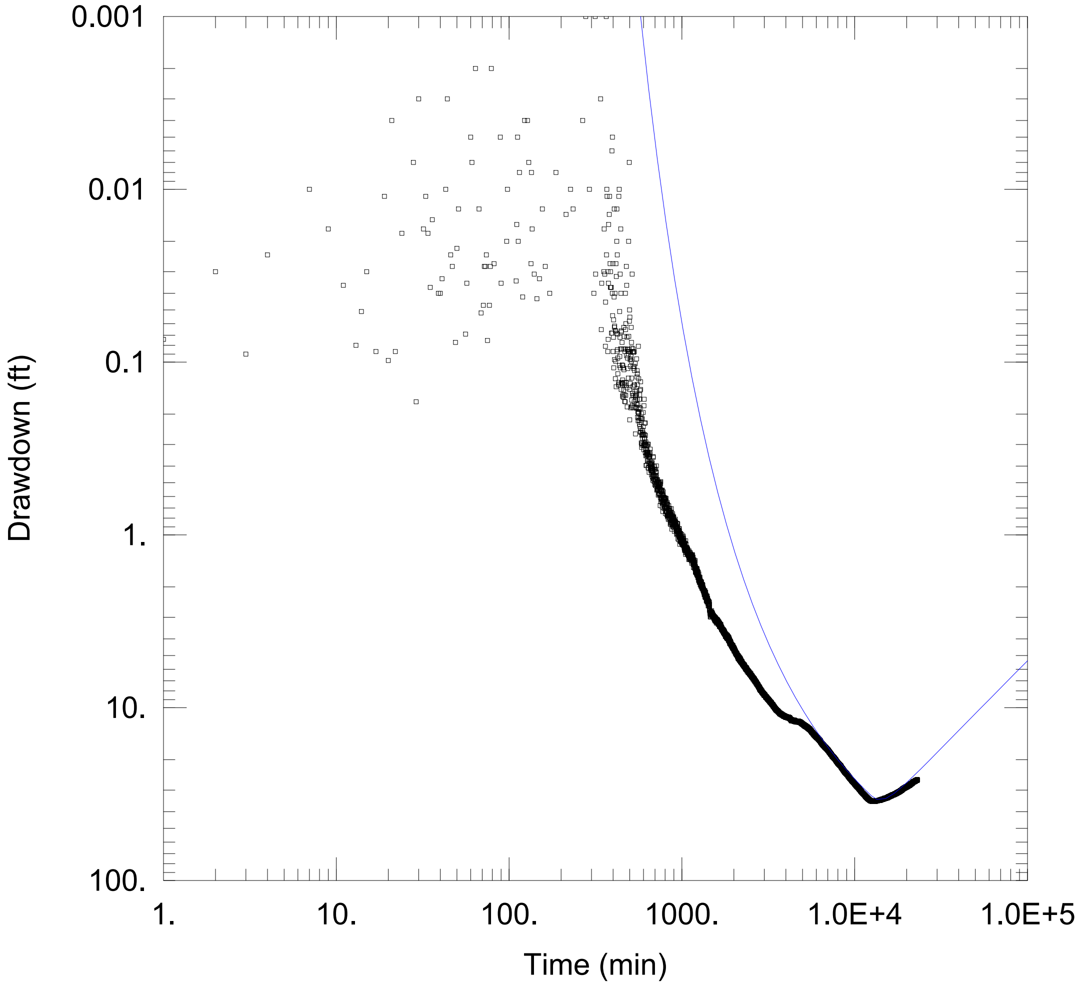
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Odell Well No. 2	1946169.751	10908337.14

SOLUTION

Aquifer Model: Confined Solution Method: Theis (Recovery)

T = 537.8 ft^2/day S/S' = 0.5099



WELL TEST ANALYSIS

Data Set: \...\ow odell 2 - theis.aqt
Date: 11/14/17 Time: 12:12:49

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 1
Test Date: 11/22/2016

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 1	1949181.234	10907020.34

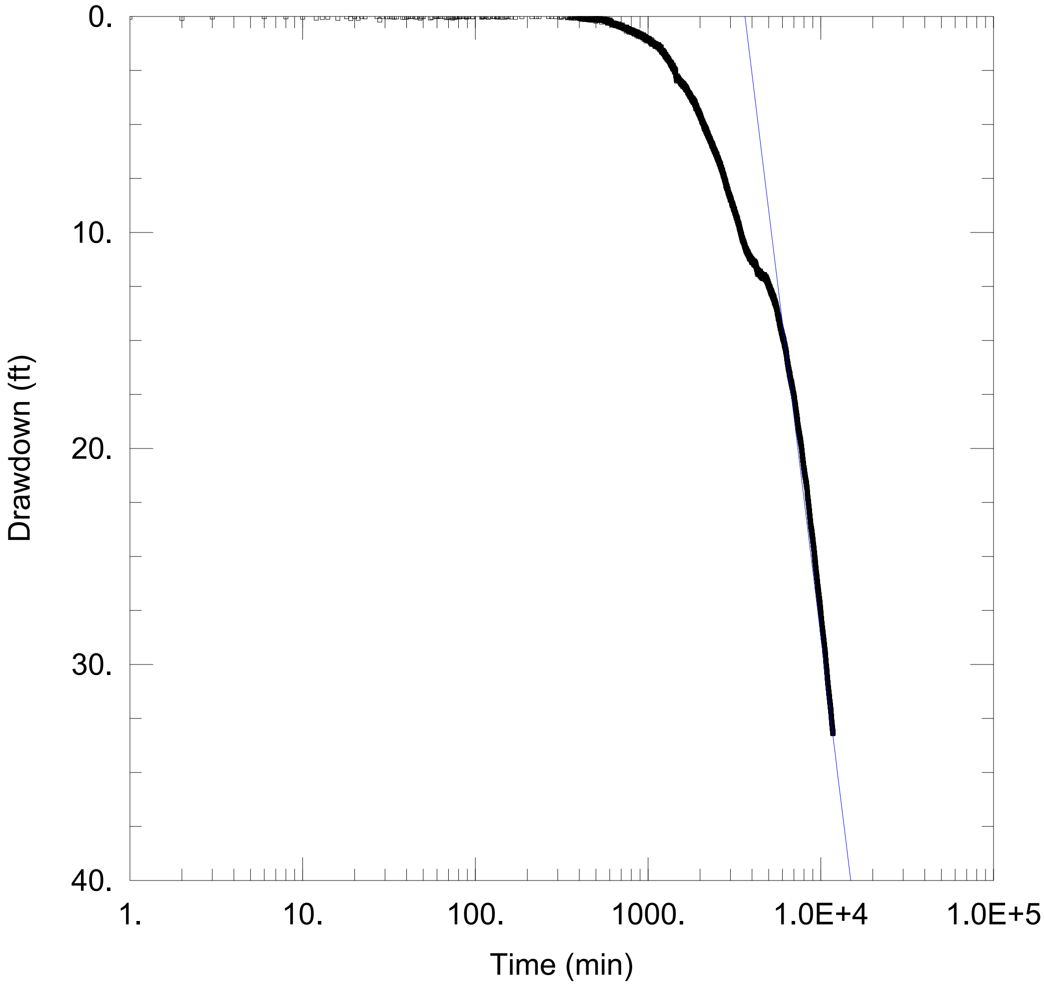
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Odell Well No. 2	1946169.751	10908337.14

SOLUTION

Aquifer Model: Confined
Solution Method: Theis

T = 221.7 ft^2/day
Kz/Kr = 0.01
S = 0.0002784
b = 82. ft



WELL TEST ANALYSIS

Data Set: \...\ow odell 2.aqt
Date: 11/14/17 Time: 12:13:29

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 1
Test Date: 11/22/2016

AQUIFER DATA

Saturated Thickness: 82. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 1	1949181.234	10907020.34

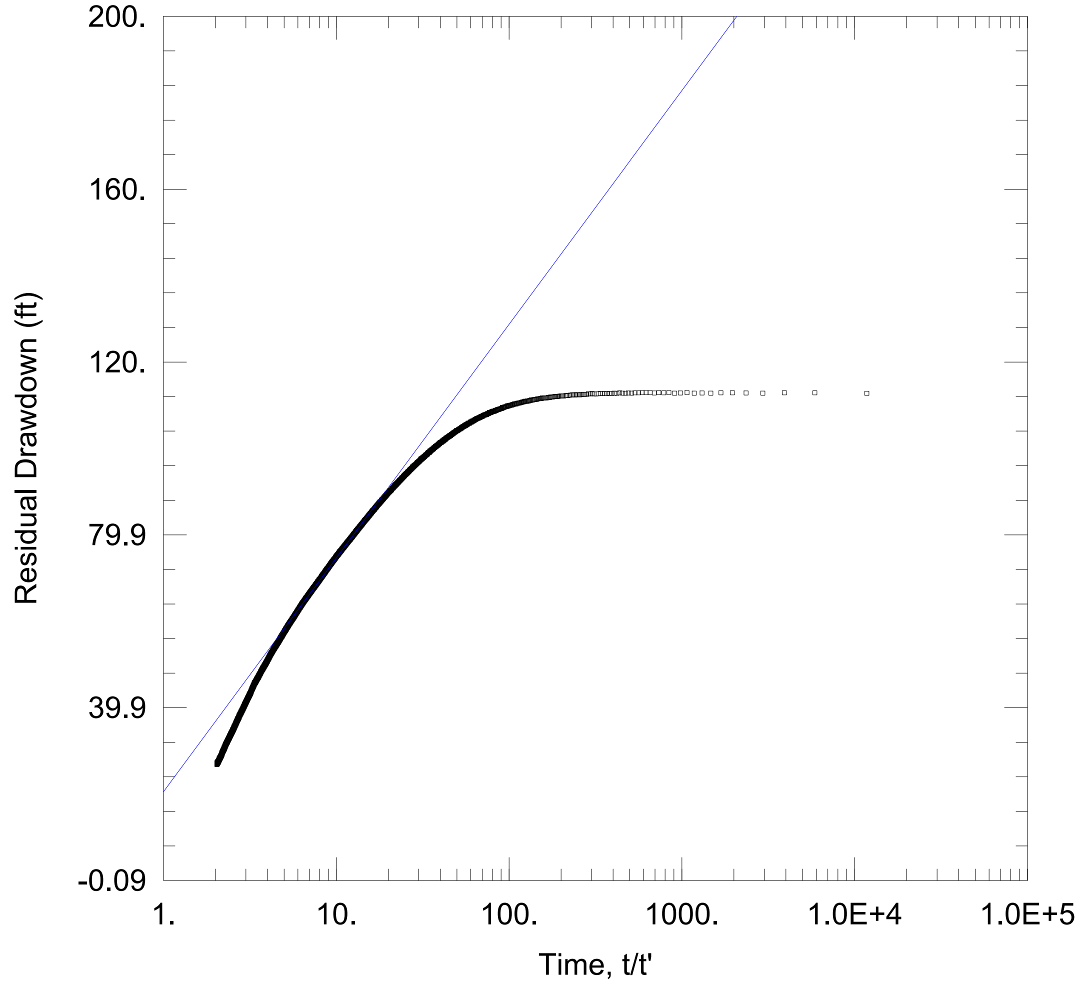
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Odell Well No. 2	1946169.751	10908337.14

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 351.9 ft^2/day S = 0.000185



WELL TEST ANALYSIS

Data Set: \...\ow odell 3 - theis recovery.aqt
Date: 11/14/17 Time: 12:14:01

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 1
Test Date: 11/22/2016

AQUIFER DATA

Saturated Thickness: 82. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 1	1949181.234	10907020.34

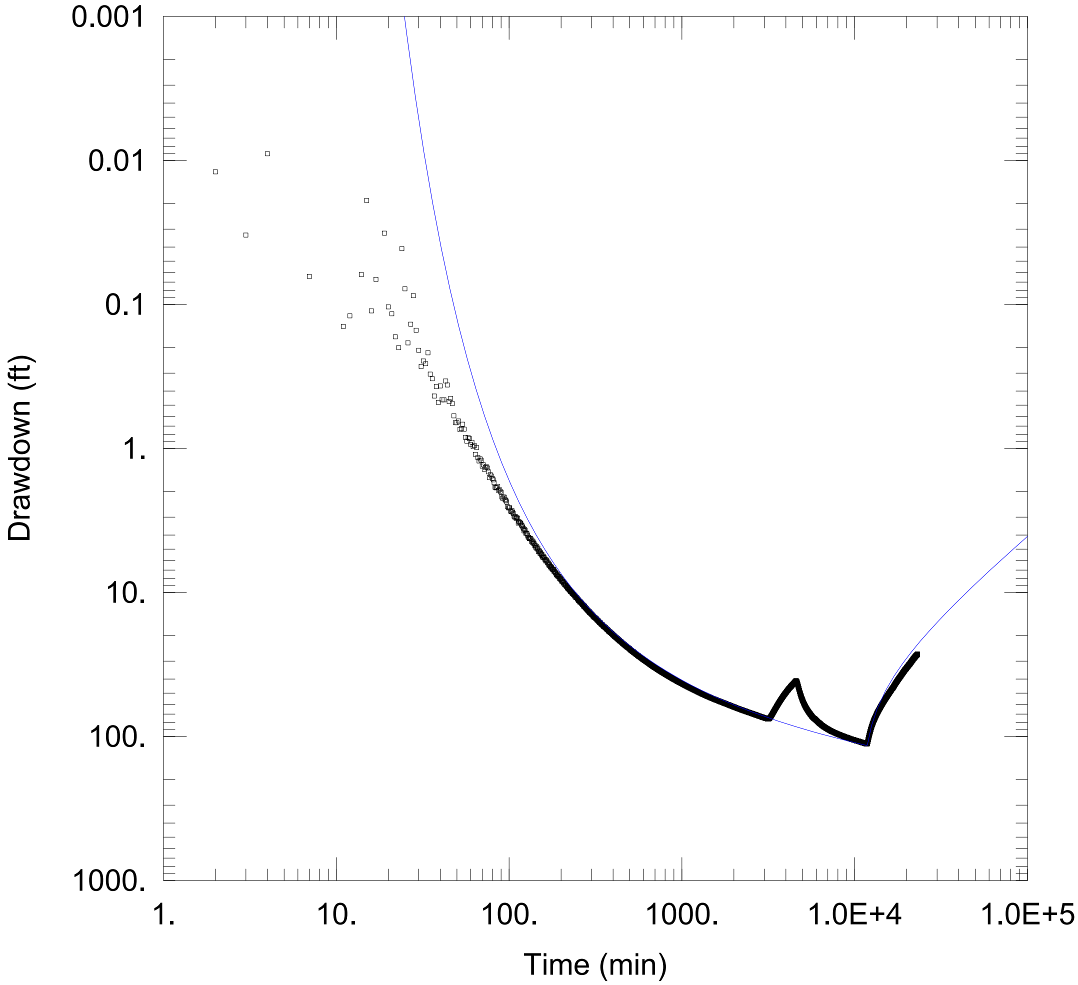
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Odell Well No. 3	1946190.223	10905502.23

SOLUTION

Aquifer Model: Confined Solution Method: Theis (Recovery)

T = 425. ft^2/day S/S' = 0.4193



WELL TEST ANALYSIS

Data Set: \...\ow odell 3 - theis.aqt
Date: 11/14/17 Time: 12:15:33

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 1
Test Date: 11/22/2016

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 1	1949181.234	10907020.34

Observation Wells

Well Name	X (ft)	Y (ft)
▫ Odell Well No. 3	1946190.223	10905502.23

SOLUTION

Aquifer Model: Confined

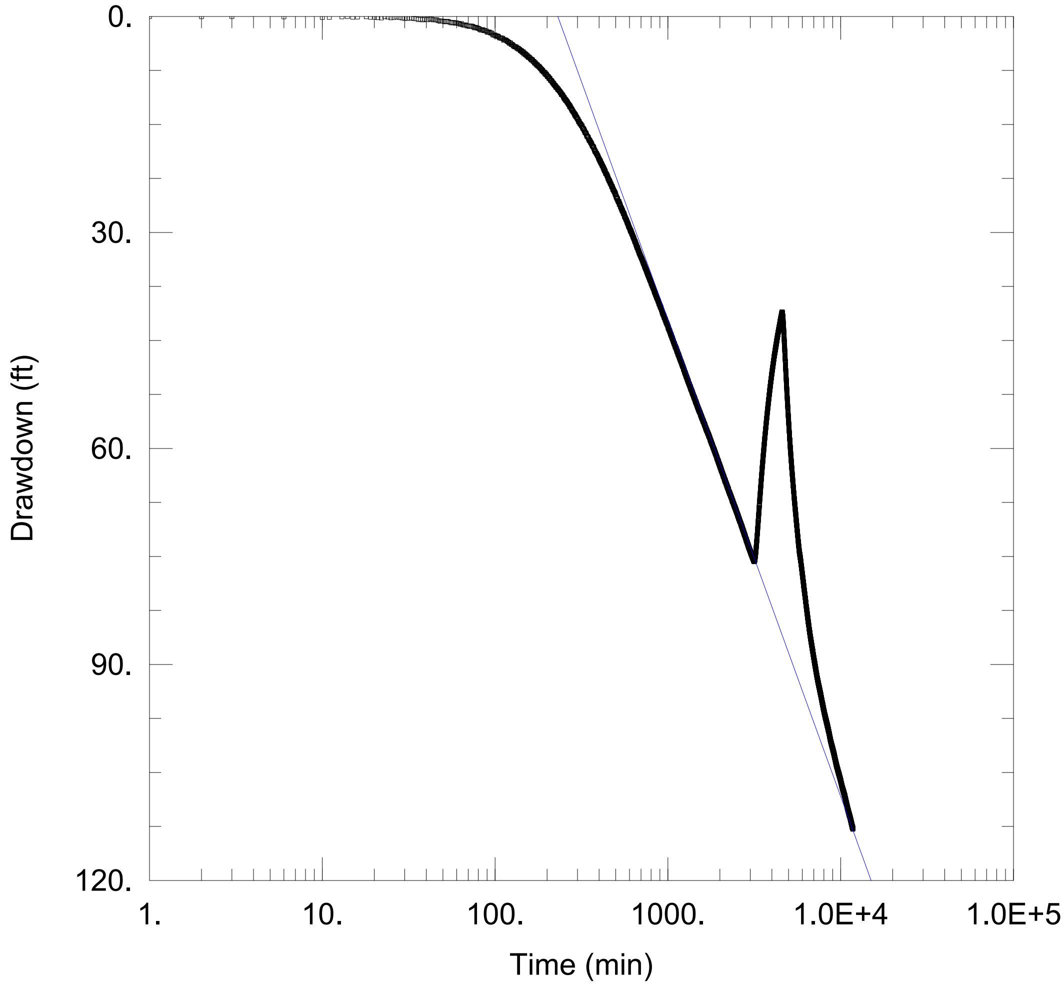
Solution Method: Theis

T = 305.8 ft^2/day

S = 1.472E-5

Kz/Kr = 0.01

b = 82. ft



WELL TEST ANALYSIS

Data Set: \...\ow odell 3.aqt
Date: 11/14/17 Time: 12:16:03

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 1
Test Date: 11/22/2016

AQUIFER DATA

Saturated Thickness: 82. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 1	1949181.234	10907020.34

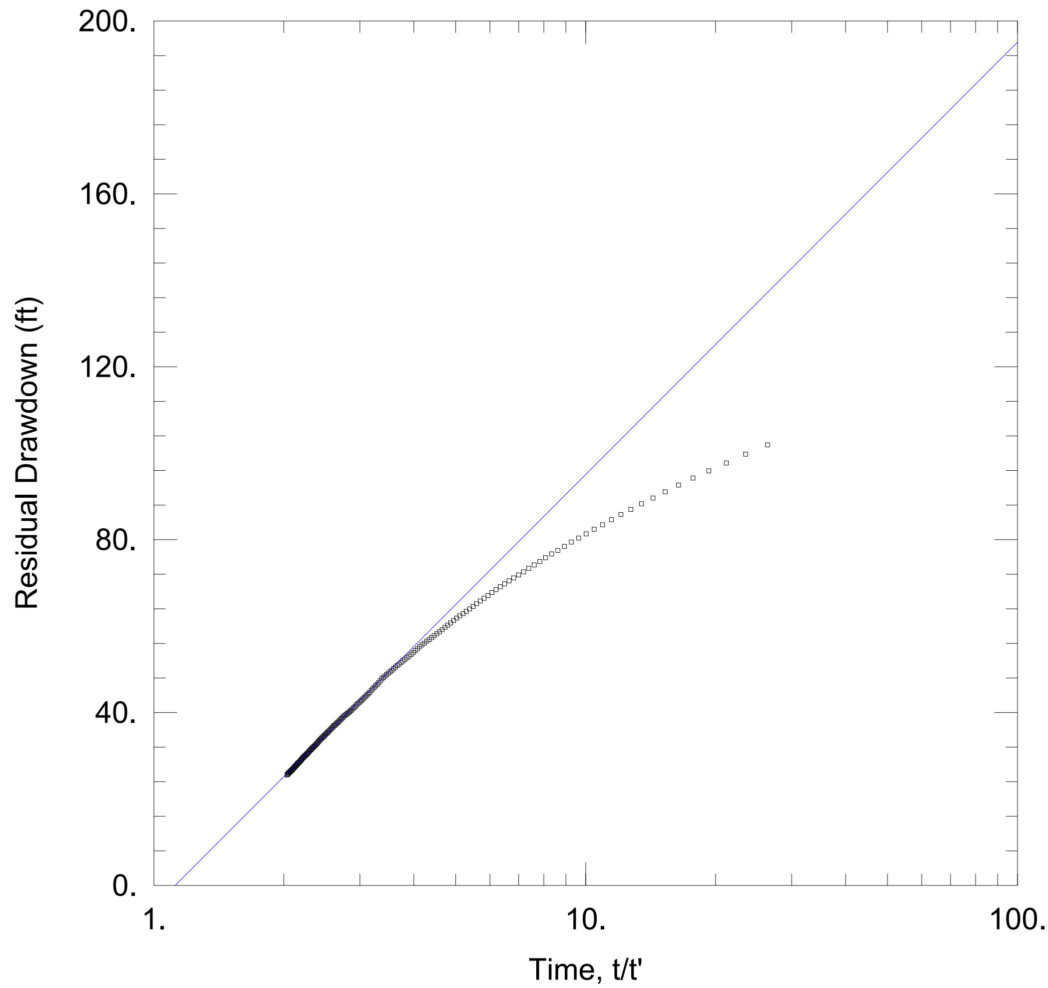
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Odell Well No. 3	1946190.223	10905502.23

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 347.5 ft^2/day S = 1.112E-5



WELL TEST ANALYSIS

Data Set: \...\ow wood 1 - theis recovery.aqt
Date: 11/14/17 Time: 12:16:30

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 1
Test Date: 11/22/2016

AQUIFER DATA

Saturated Thickness: 82. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 1	1949181.234	10907020.34

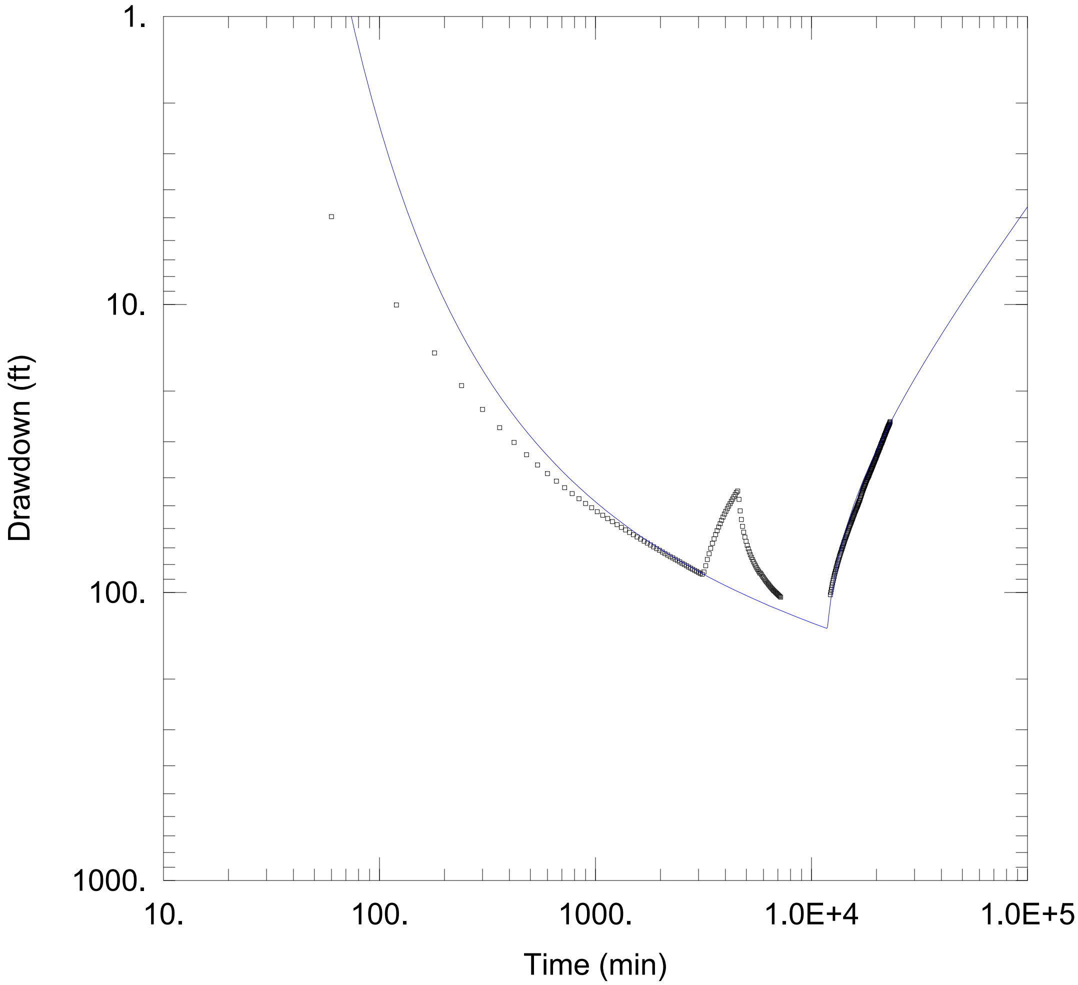
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Wood 1	1946282.382	10904234.12

SOLUTION

Aquifer Model: Confined Solution Method: Theis (Recovery)

T = 230. ft^2/day S/S' = 1.12



WELL TEST ANALYSIS

Data Set: \...\ow wood 1 - theis.aqt
Date: 11/14/17 Time: 12:16:50

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 1
Test Date: 11/22/2016

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 1	1949181.234	10907020.34

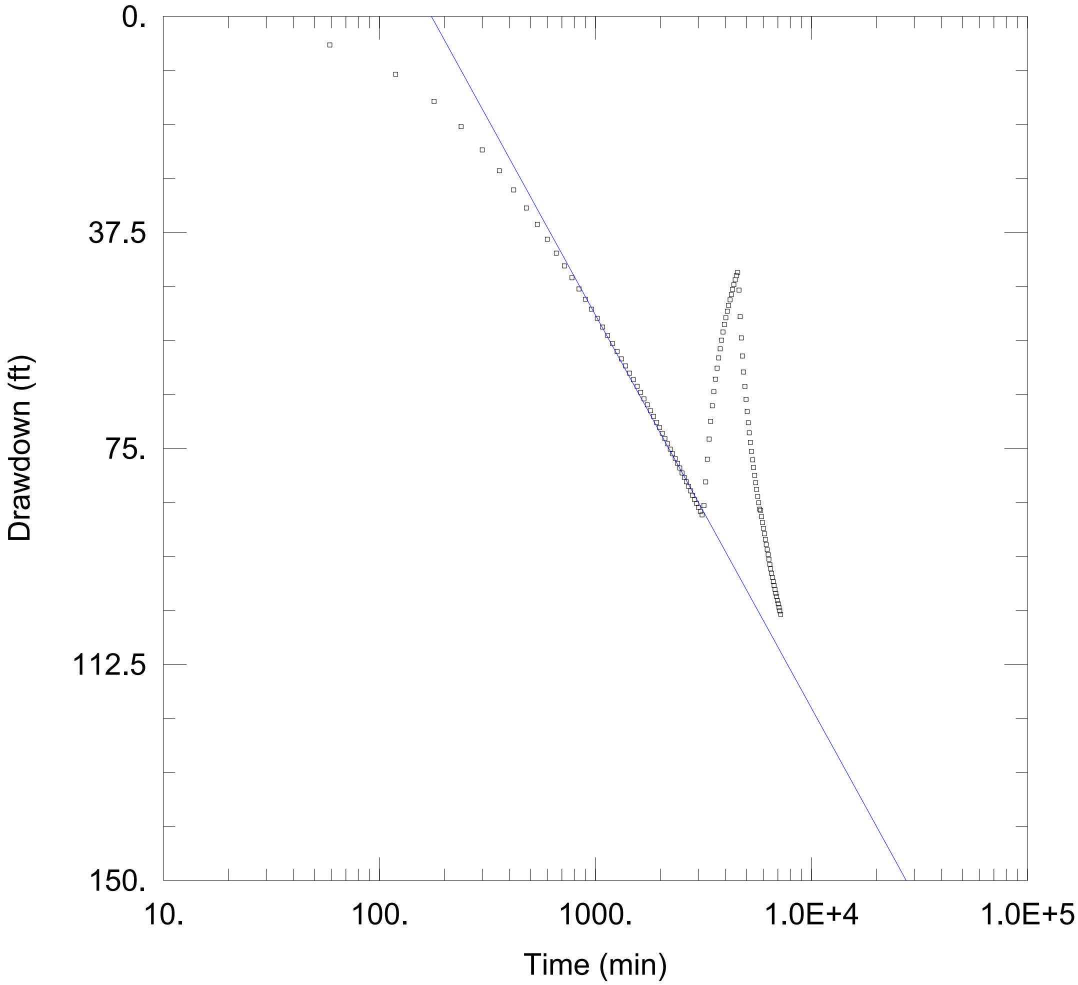
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Wood 1	1946282.382	10904234.12

SOLUTION

Aquifer Model: Confined Solution Method: Theis

T = 272.3 ft^2/day S = 8.306E-6
Kz/Kr = 0.01 b = 82. ft



WELL TEST ANALYSIS

Data Set: \...\ow wood 1.aqt
Date: 11/14/17 Time: 12:17:09

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 1
Test Date: 11/22/2016

AQUIFER DATA

Saturated Thickness: 82. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 1	1949181.234	10907020.34

Observation Wells

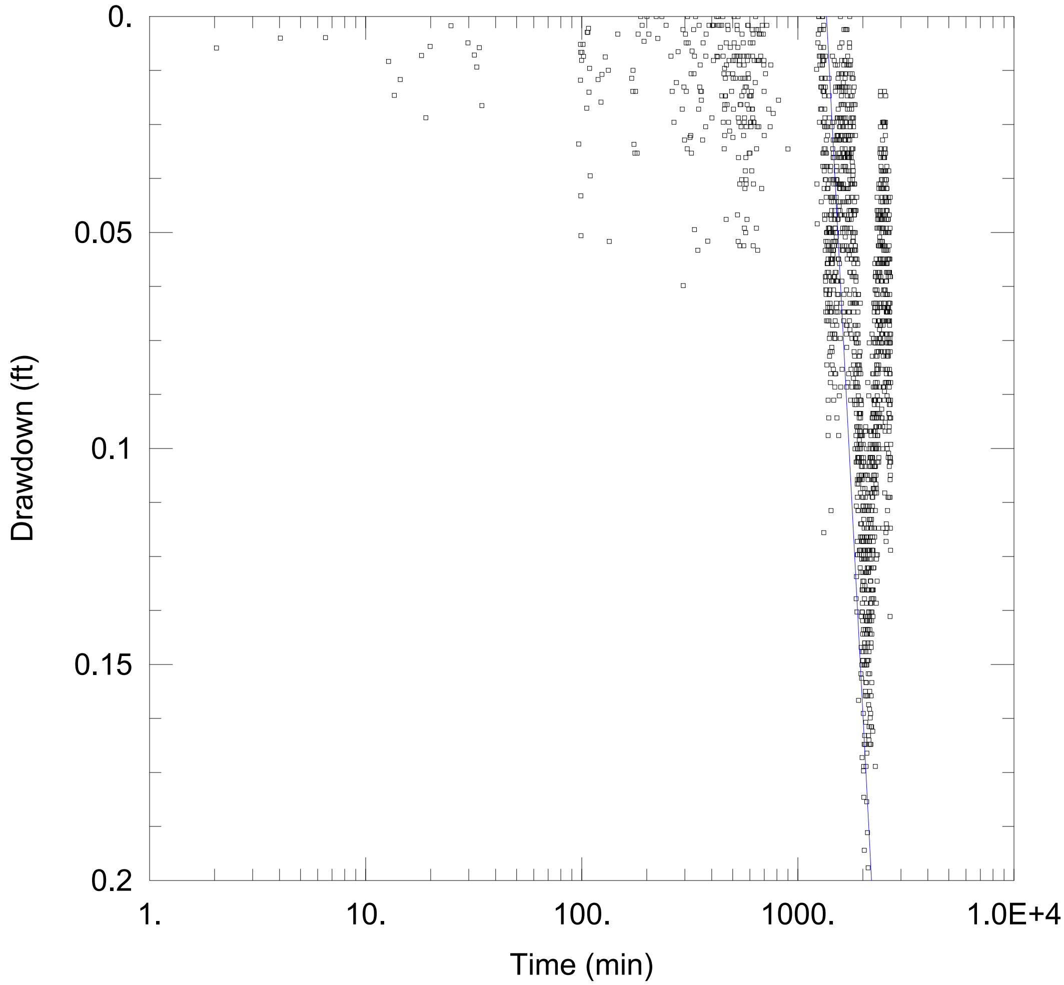
Well Name	X (ft)	Y (ft)
▫ Wood 1	1946282.382	10904234.12

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 336.9 ft^2/day S = 5.659E-6

Bridges 3 Test



WELL TEST ANALYSIS

Data Set: \...\Bridges 2 cooper jacob.aqt
Date: 12/11/17 Time: 08:49:16

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 3
Test Date: 12/30/2013

AQUIFER DATA

Saturated Thickness: 319. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 3	1954970.013	10906385.3

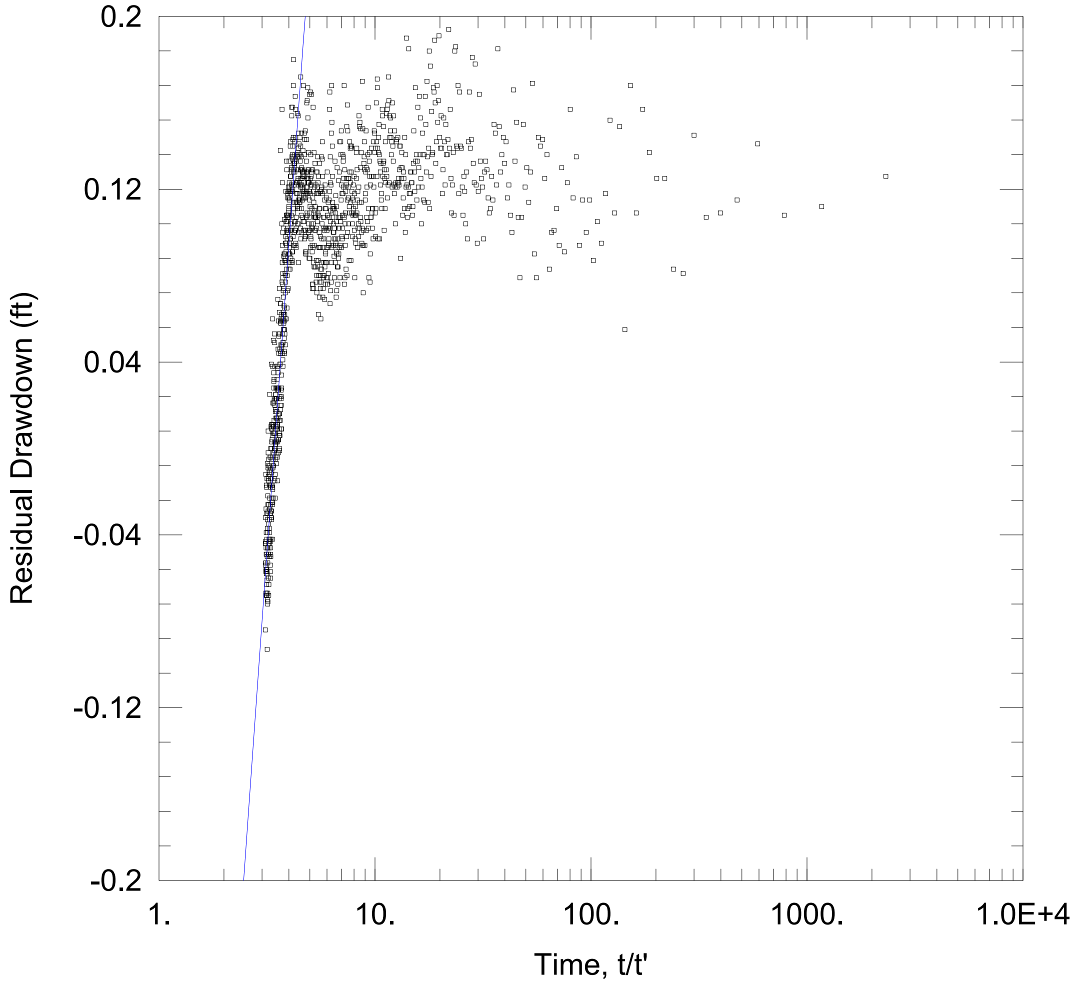
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 2	1951951.936	10906446.69

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 1763.9 ft^2/day S = 0.00041



WELL TEST ANALYSIS

Data Set: \...\Bridges 2 theis recovery.aqt
Date: 12/11/17 Time: 08:49:32

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 3
Test Date: 12/30/2013

AQUIFER DATA

Saturated Thickness: 319. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 3	1954970.013	10906385.3

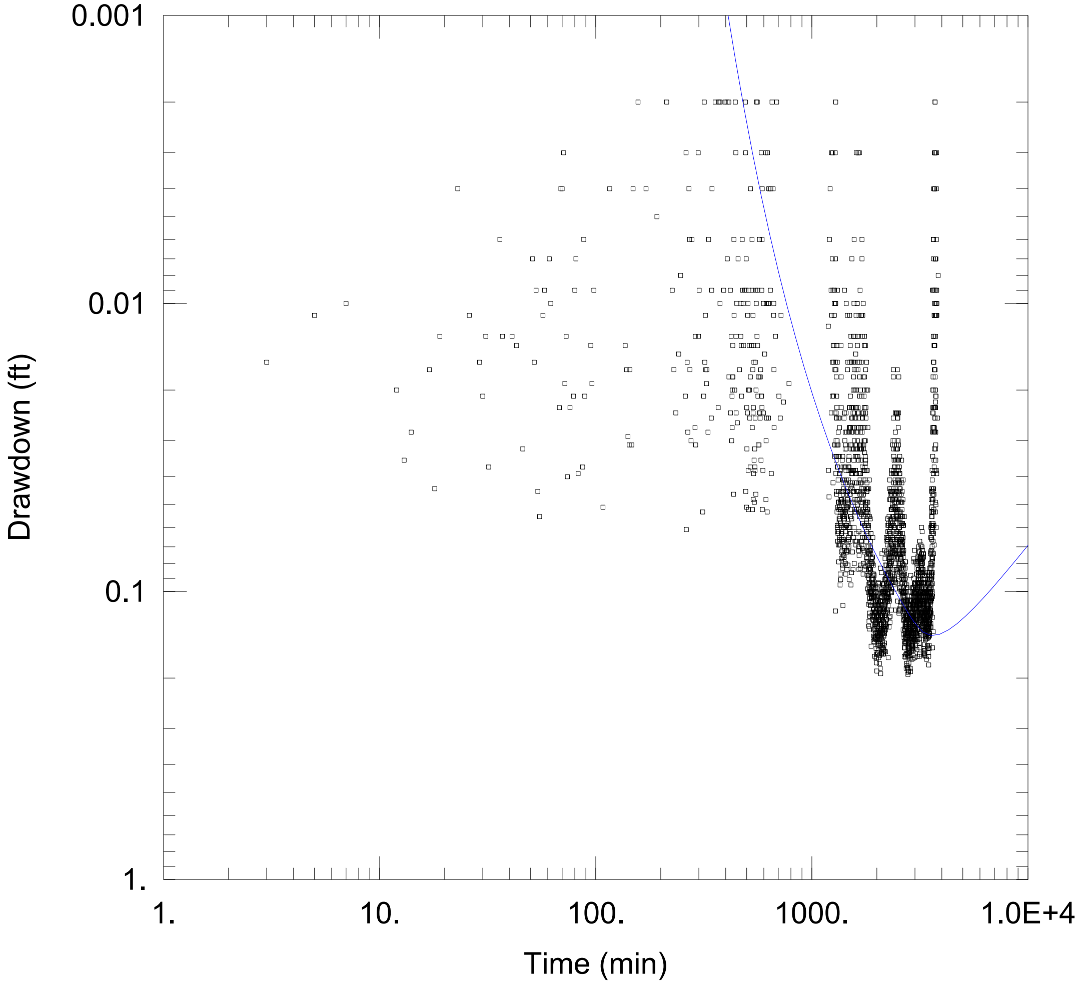
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 2	1951951.936	10906446.69

SOLUTION

Aquifer Model: Confined Solution Method: Theis (Recovery)

T = 1205.5 ft^2/day S/S' = 3.425



WELL TEST ANALYSIS

Data Set: \...\Bridges 2 theis.aqt
Date: 12/11/17 Time: 08:49:48

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 3
Test Date: 12/30/2013

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 3	1954970.013	10906385.3

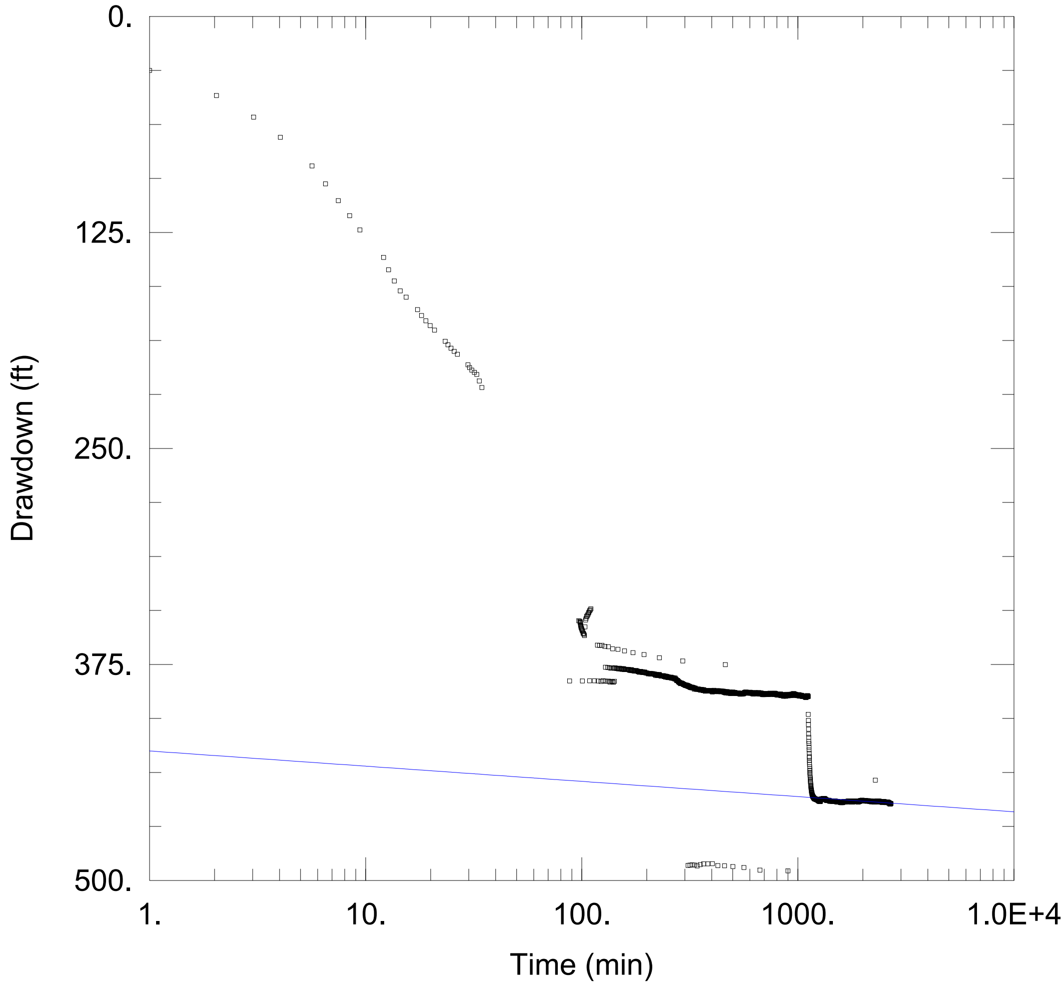
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 2	1951951.936	10906446.69

SOLUTION

Aquifer Model: Confined
Solution Method: Theis

T = 2654.8 ft^2/day
S = 0.001412
Kz/Kr = 0.01
b = 319. ft



WELL TEST ANALYSIS

Data Set: \...\Bridges 3 cooper jacob.aqt
Date: 12/11/17 Time: 08:49:56

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 3
Test Date: 12/30/2013

AQUIFER DATA

Saturated Thickness: 319. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 3	1954970.013	10906385.3

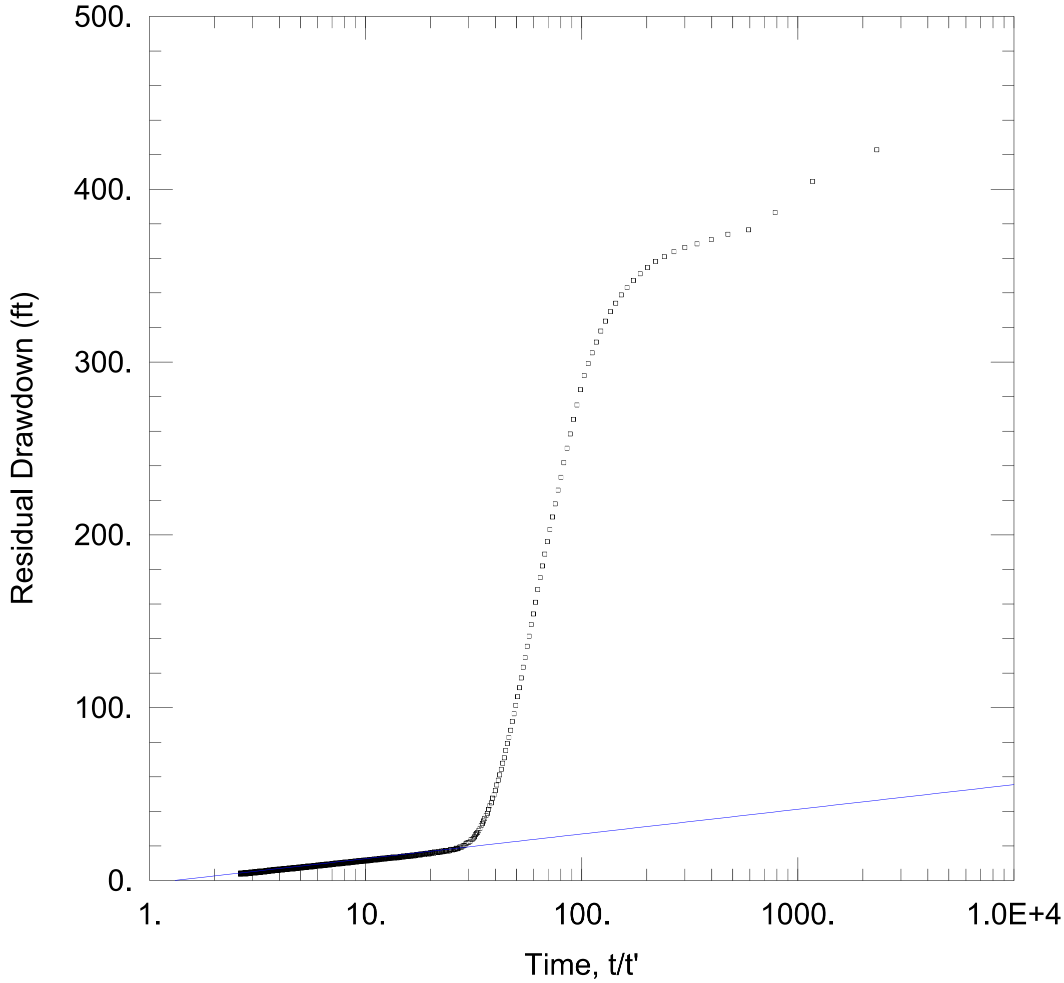
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 3	1954970.013	10906385.3

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

$T = 192.4\ ft^2/day$ S = 8.952E-49



WELL TEST ANALYSIS

Data Set: \...\Bridges 3 theis recovery.aqt
Date: 12/11/17 Time: 08:50:05

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 3
Test Date: 12/30/2013

AQUIFER DATA

Saturated Thickness: 319. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 3	1954970.013	10906385.3

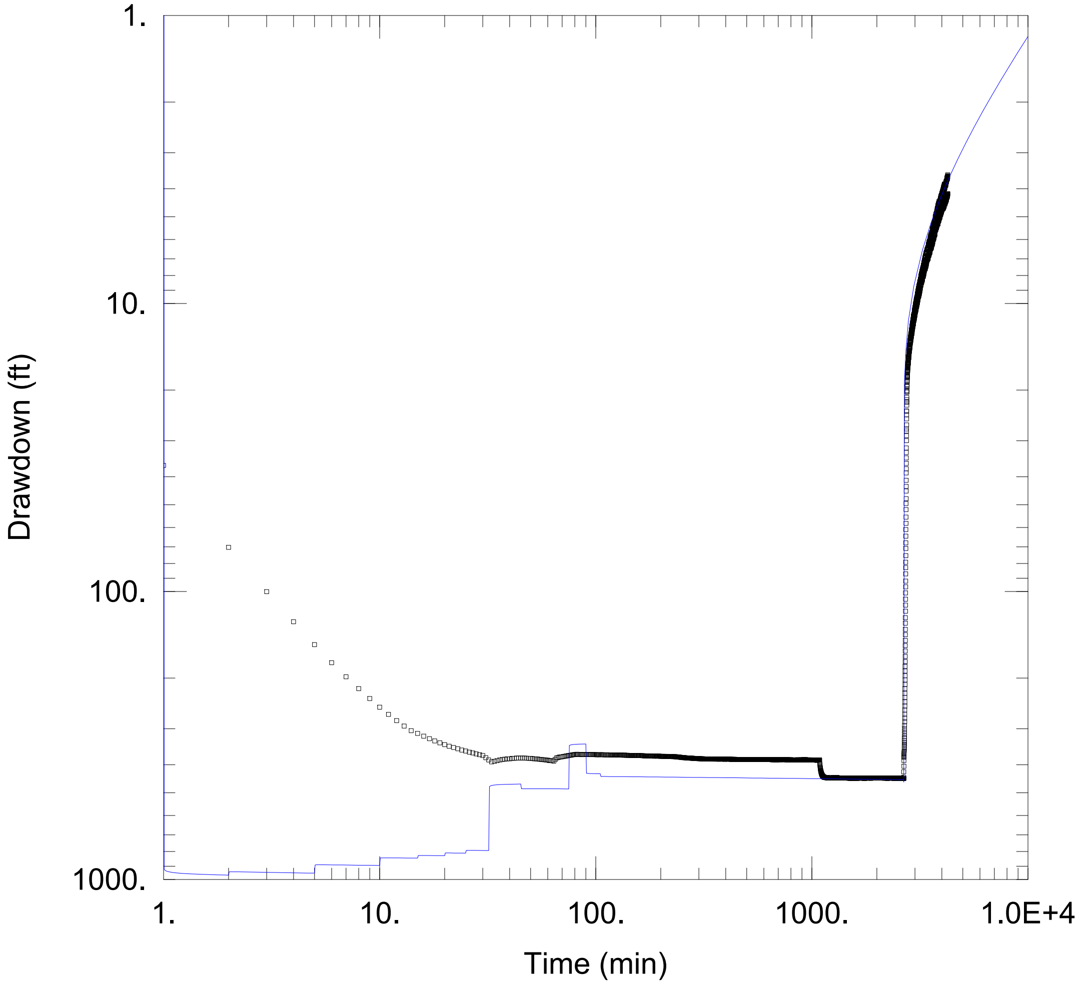
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 3	1954970.013	10906385.3

SOLUTION

Aquifer Model: Confined Solution Method: Theis (Recovery)

T = 118.5 ft^2/day S/S' = 1.315



WELL TEST ANALYSIS

Data Set: \...\Bridges 3 theis.aqt
Date: 12/11/17 Time: 08:50:13

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 3
Test Date: 12/30/2013

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 3	1954970.013	10906385.3

Observation Wells

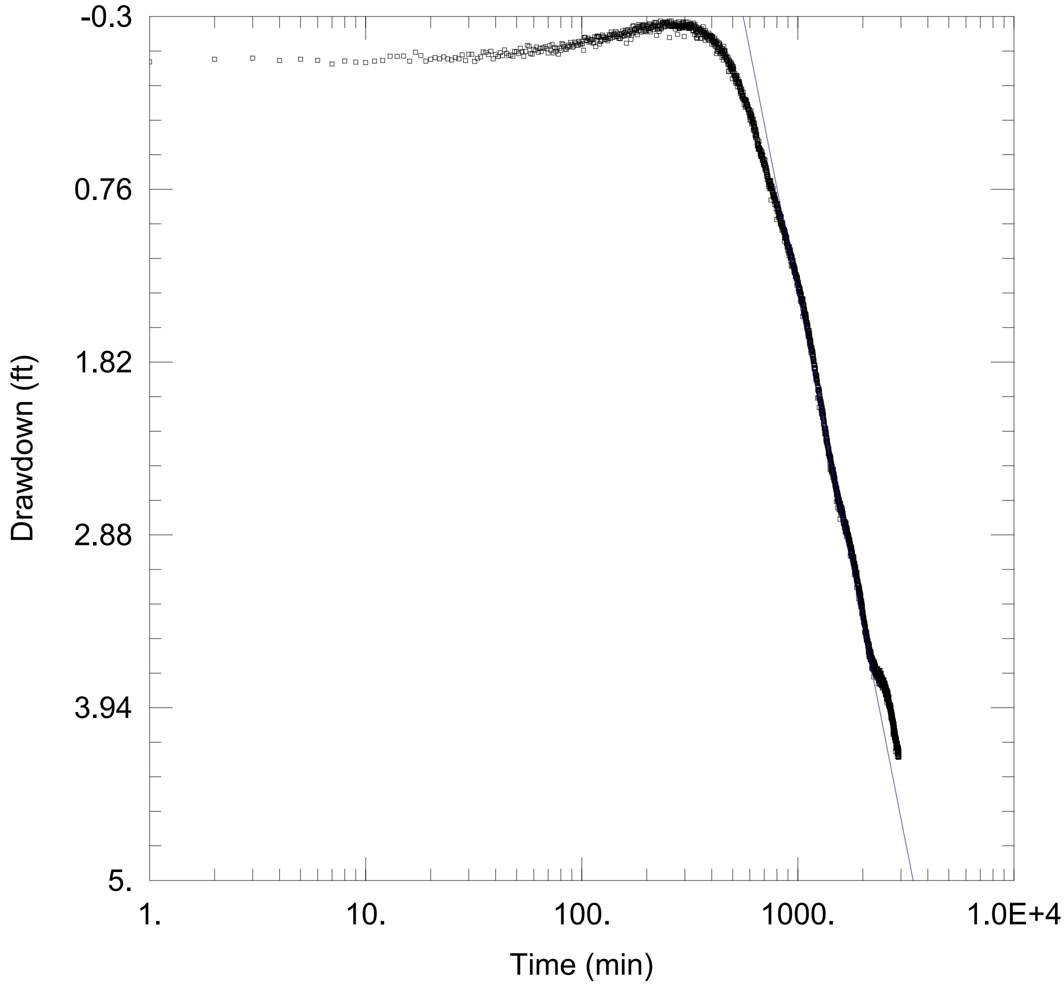
Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 3	1954970.013	10906385.3

SOLUTION

Aquifer Model: Confined
Solution Method: Theis

T = 190.3 ft^2/day
Kz/Kr = 0.01
S = 9.376E-49
b = 319. ft

Bridges 4 Test



WELL TEST ANALYSIS

Data Set: \...\Bridges 2 cooper jacob.aqt
Date: 12/11/17 Time: 08:50:29

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 4
Test Date: 2/16/2015

AQUIFER DATA

Saturated Thickness: 316. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 4	1953817.782	10906346.59

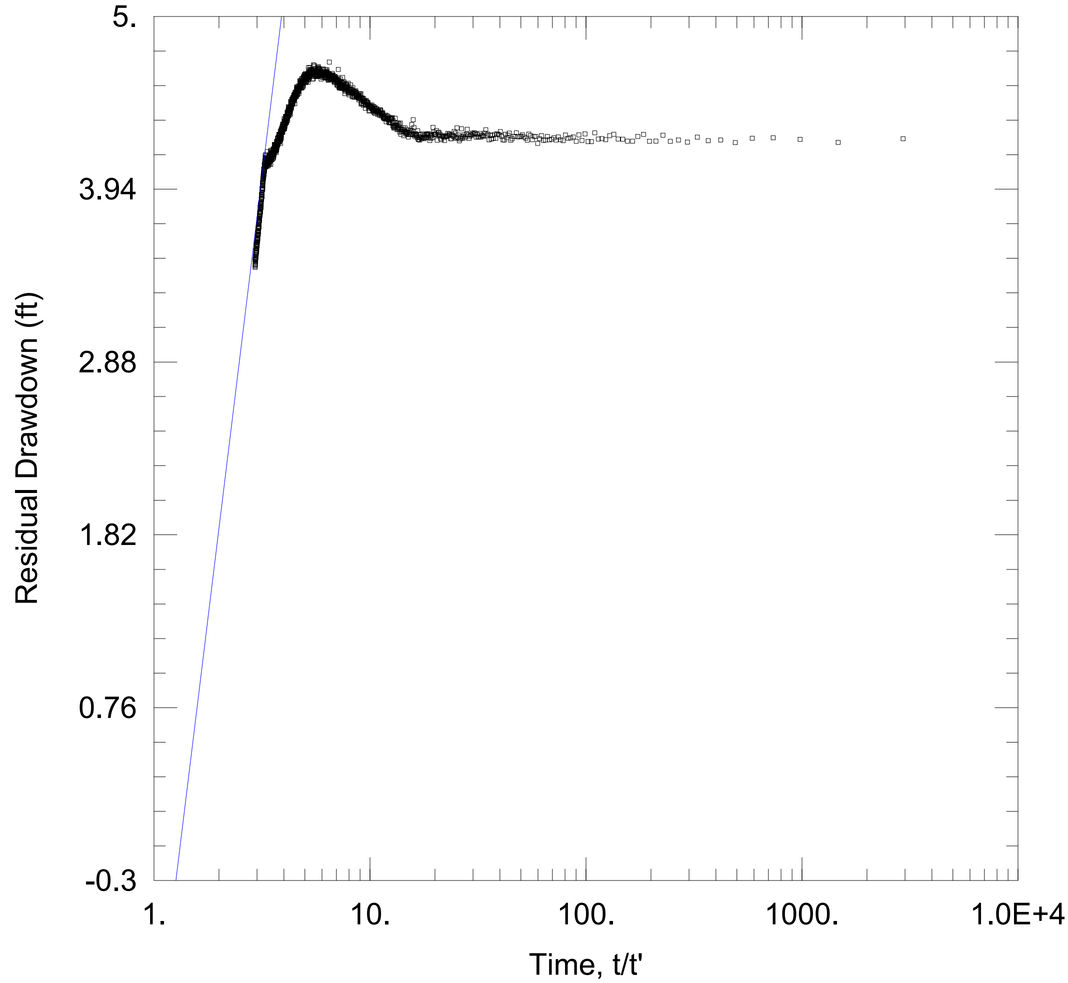
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 2	1951951.936	10906446.69

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 392.6 ft^2/day S = 0.0001086



WELL TEST ANALYSIS

Data Set: \...\Bridges 2 theis recovery.aqt
Date: 12/11/17 Time: 08:50:40

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 4
Test Date: 2/16/2015

AQUIFER DATA

Saturated Thickness: 316. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 4	1953817.782	10906346.59

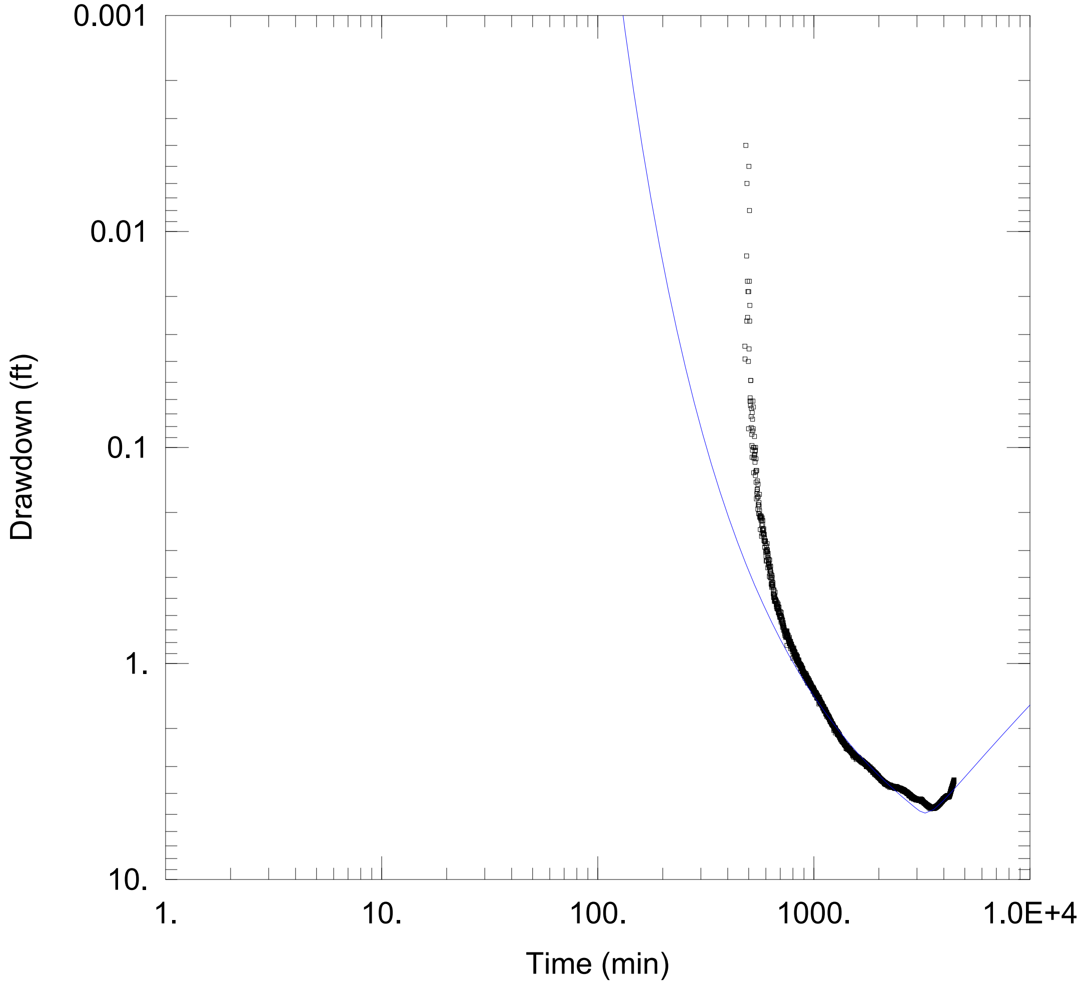
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 2	1951951.936	10906446.69

SOLUTION

Aquifer Model: Confined Solution Method: Theis (Recovery)

T = 244.1 ft^2/day S/S' = 1.348



WELL TEST ANALYSIS

Data Set: \...\Bridges 2 theis.aqt
Date: 12/11/17 Time: 08:50:48

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 4
Test Date: 2/16/2015

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 4	1953817.782	10906346.59

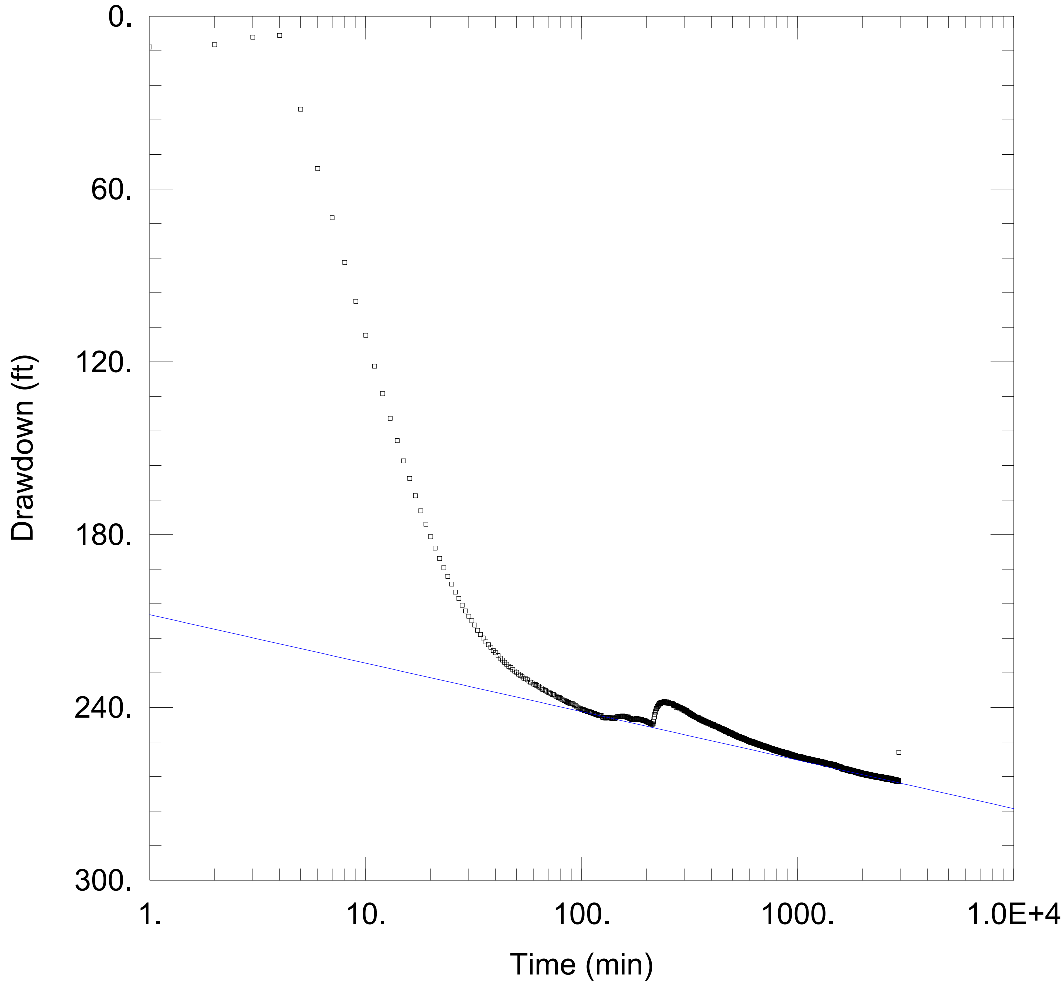
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 2	1951951.936	10906446.69

SOLUTION

Aquifer Model: Confined
Solution Method: Theis

T = 232. ft^2/day
Kz/Kr = 0.01
S = 0.000156
b = 316. ft



WELL TEST ANALYSIS

Data Set: \...\Bridges 4 cooper jacob.aqt
Date: 12/11/17 Time: 08:50:56

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 4
Test Date: 2/16/2015

AQUIFER DATA

Saturated Thickness: 316. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 4	1953817.782	10906346.59

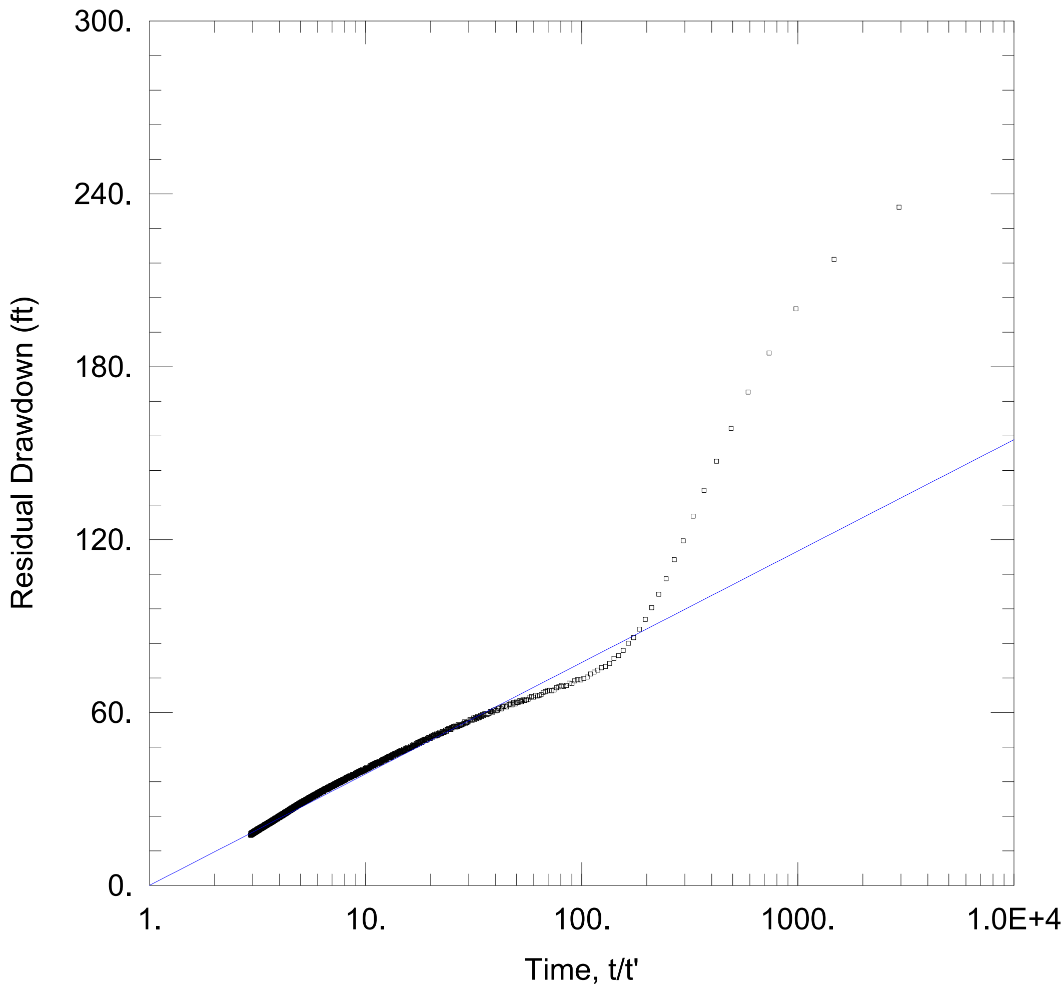
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 4	1953817.782	10906346.59

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 157.2 ft^2/day S = 6.554E-13



WELL TEST ANALYSIS

Data Set: \...\Bridges 4 theis recovery.aqt
Date: 12/11/17 Time: 08:51:06

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 4
Test Date: 2/16/2015

AQUIFER DATA

Saturated Thickness: 316. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 4	1953817.782	10906346.59

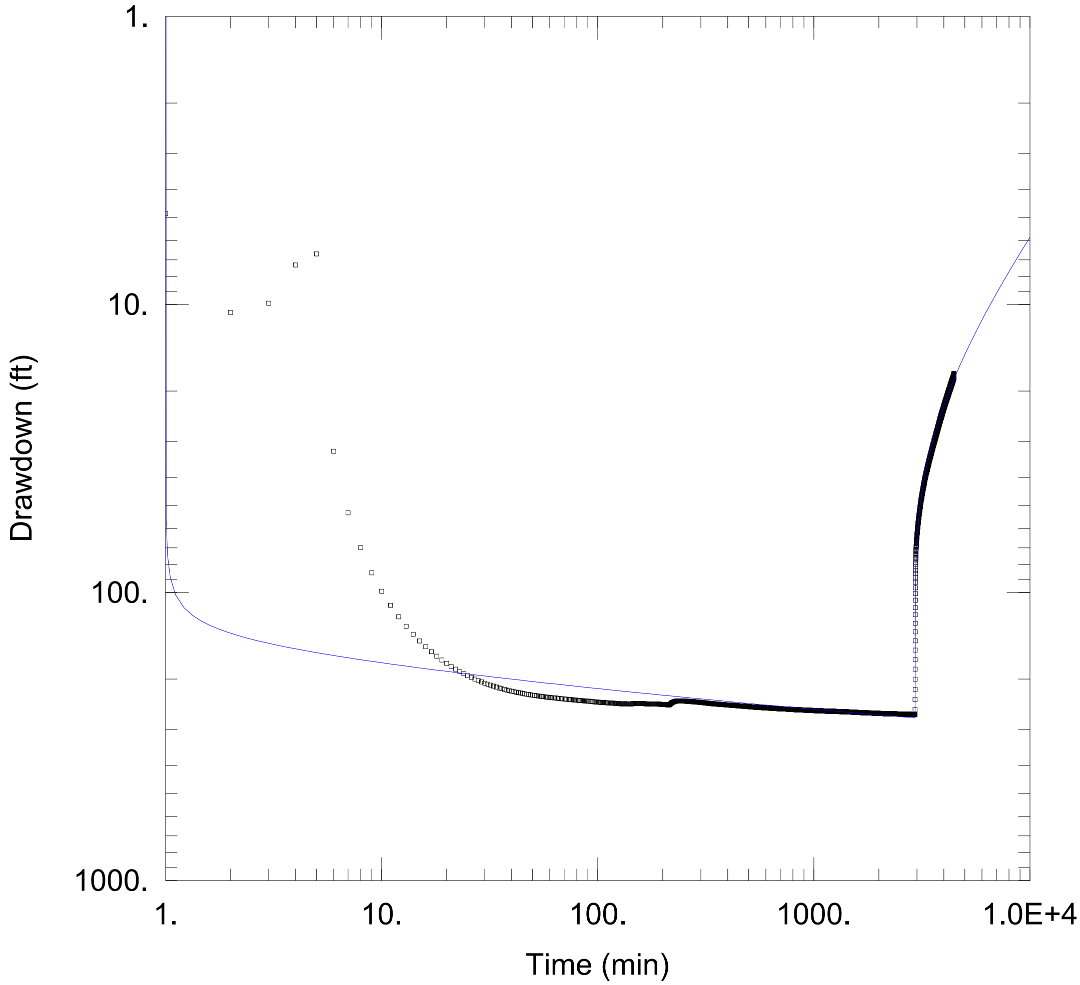
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 4	1953817.782	10906346.59

SOLUTION

Aquifer Model: Confined Solution Method: Theis (Recovery)

T = 68.42 ft^2/day S/S' = 1.



WELL TEST ANALYSIS

Data Set: \...\Bridges 4 theis.aqt
Date: 12/11/17 Time: 08:51:16

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Bridges Well No. 4
Test Date: 2/16/2015

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Bridges Well No. 4	1953817.782	10906346.59

Observation Wells

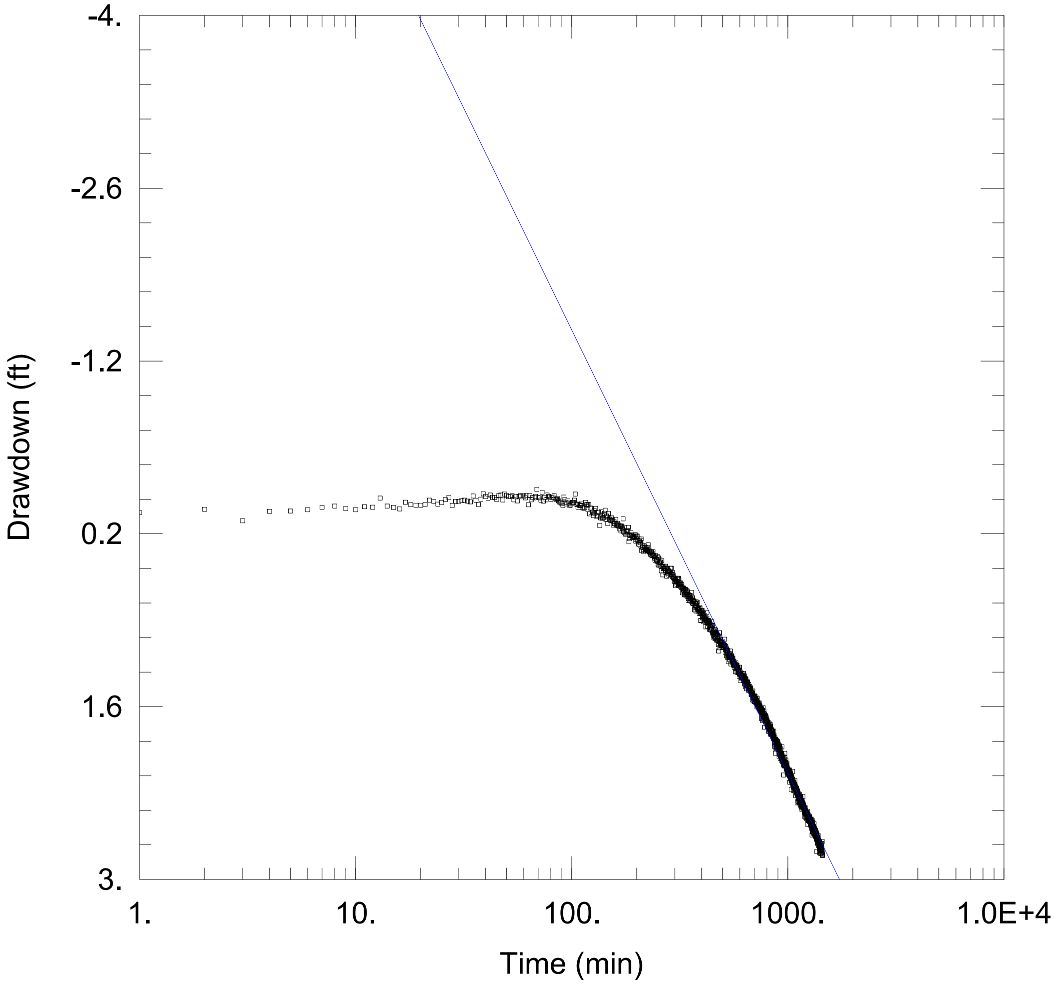
Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 4	1953817.782	10906346.59

SOLUTION

Aquifer Model: Confined
Solution Method: Theis

T = 68.42 ft^2/day
S = 0.0001648
Kz/Kr = 0.01
b = 316. ft

Odell 1 Test



WELL TEST ANALYSIS

Data Set: \...\bridges 1 cooper jacob.aqt
Date: 12/11/17 Time: 08:51:32

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 1
Test Date: 2/11/2015

AQUIFER DATA

Saturated Thickness: 318. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 1	1947452.756	10907426.21

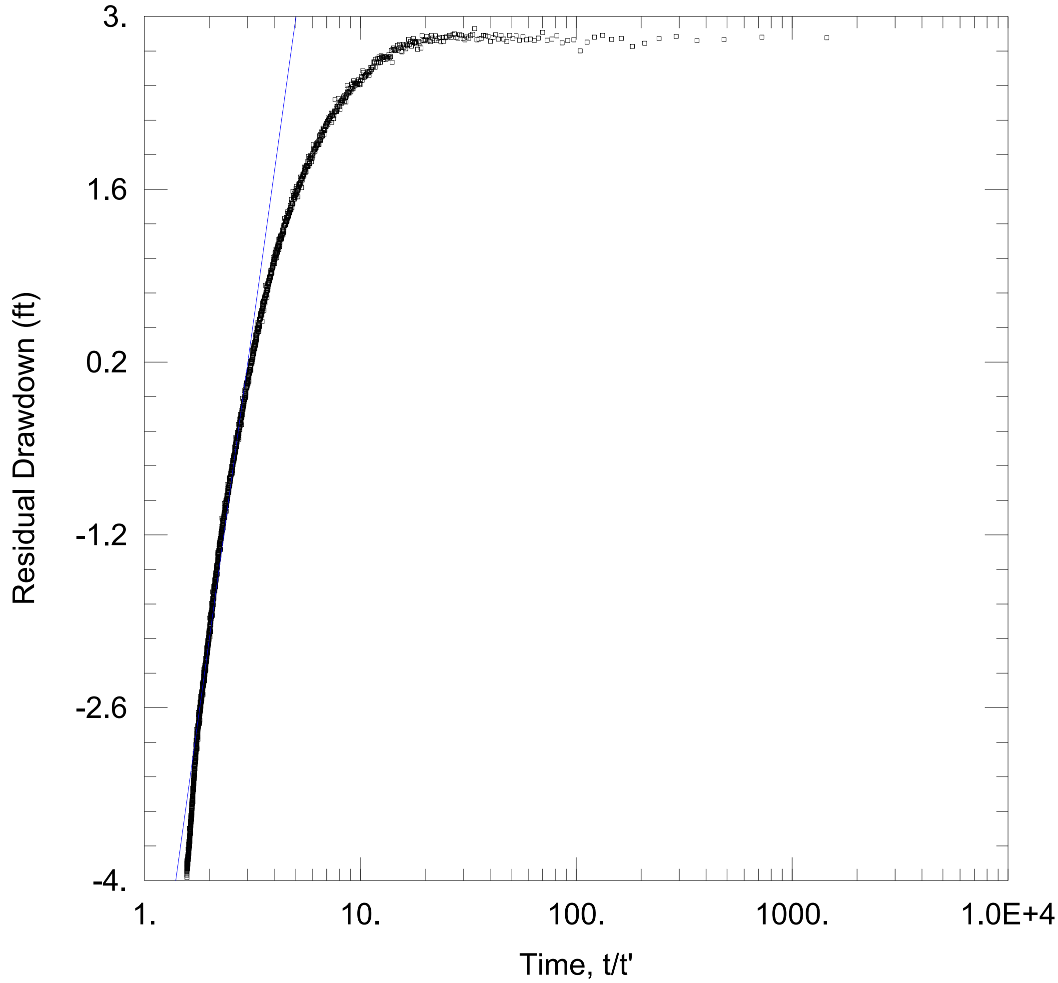
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 1	1949181.234	10907020.34

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 1007.8 ft^2/day S = 0.0001265



WELL TEST ANALYSIS

Data Set: \...\bridges 1 theis recovery.aqt
Date: 12/11/17 Time: 08:51:42

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 1
Test Date: 2/11/2015

AQUIFER DATA

Saturated Thickness: 318. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 1	1947452.756	10907426.21

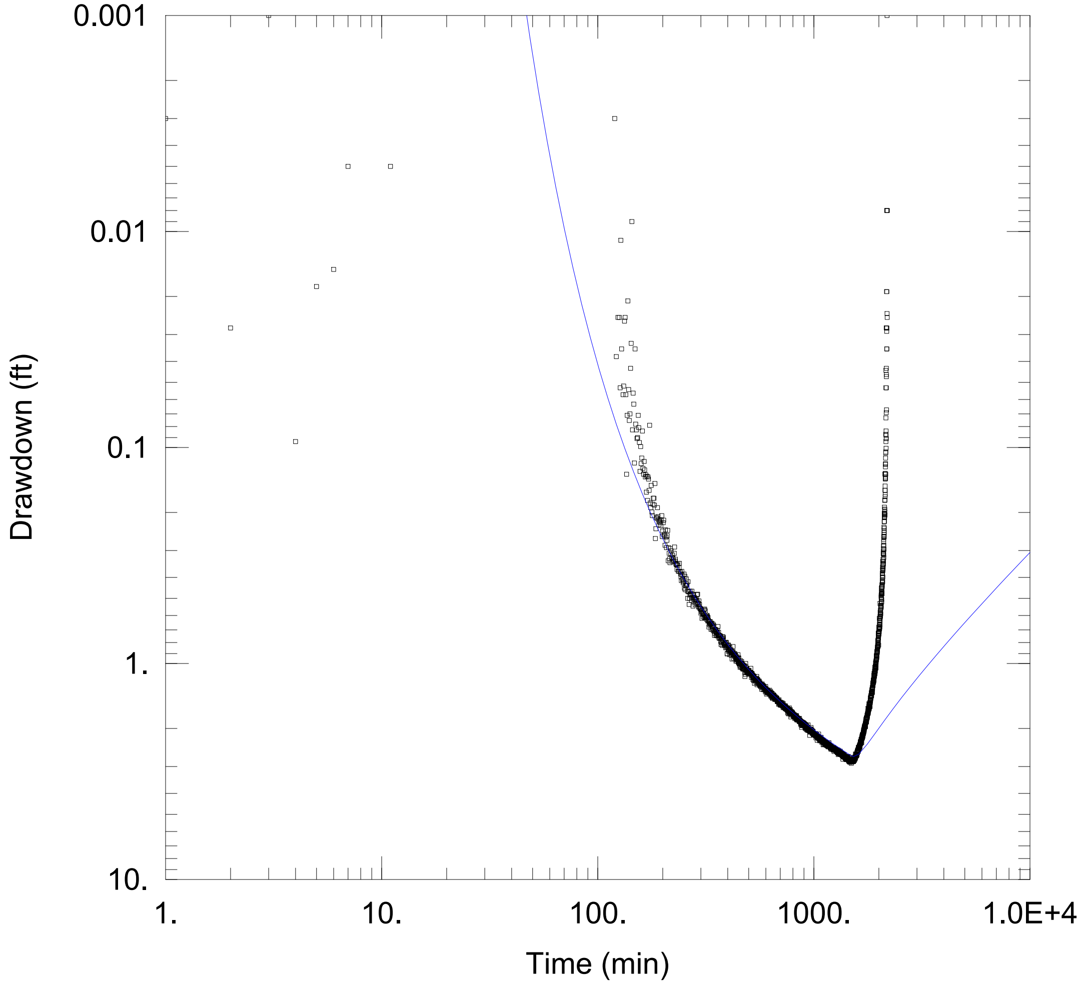
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 1	1949181.234	10907020.34

SOLUTION

Aquifer Model: Confined Solution Method: Theis (Recovery)

T = 288.1 ft^2/day S/S' = 2.909



WELL TEST ANALYSIS

Data Set: \...\bridges 1 theis.aqt
Date: 12/11/17 Time: 08:51:48

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 1
Test Date: 2/11/2015

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 1	1947452.756	10907426.21

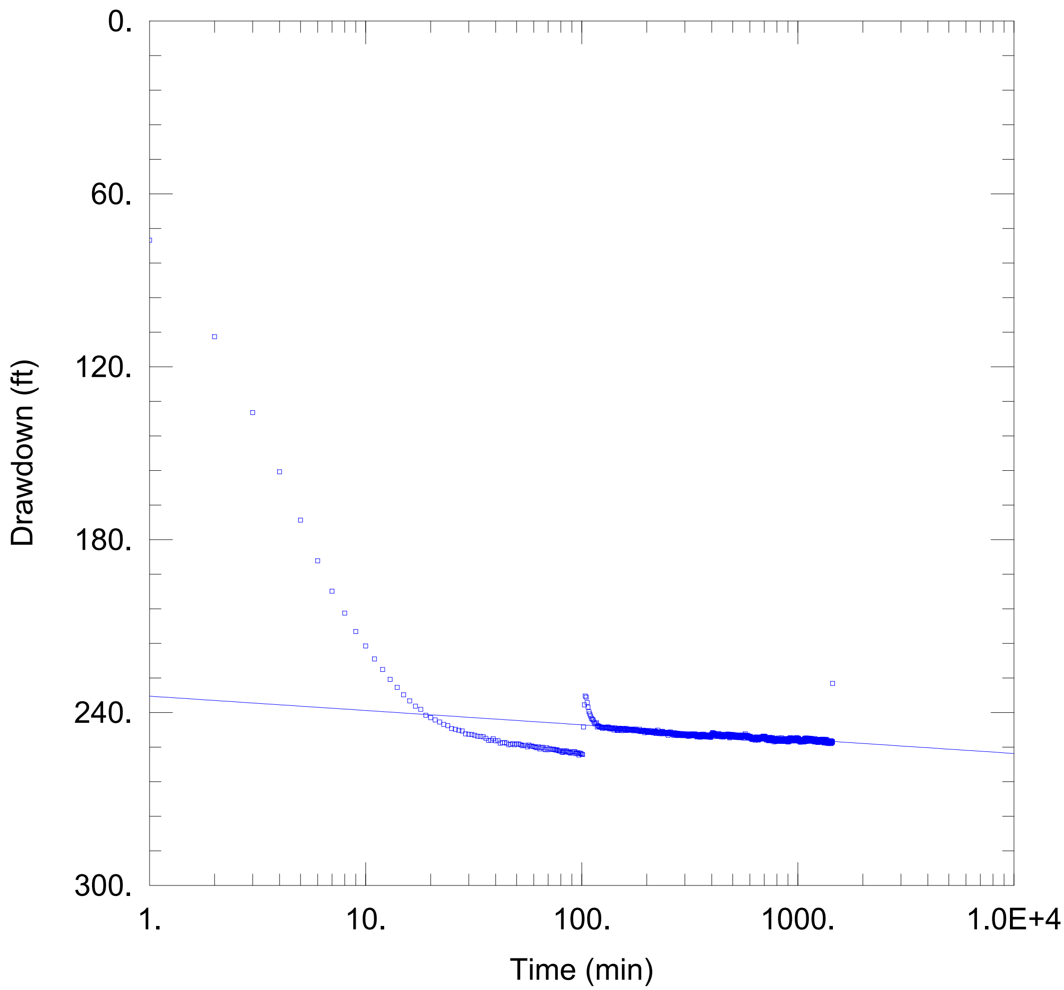
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 1	1949181.234	10907020.34

SOLUTION

Aquifer Model: Confined
Solution Method: Theis

T = 780.3 ft^2/day
S = 0.0001805
Kz/Kr = 0.01
b = 318. ft



WELL TEST ANALYSIS

Data Set: \...\Odell 1 cooper jacob.aqt
Date: 12/11/17 Time: 08:51:55

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 1
Test Date: 2/11/2015

AQUIFER DATA

Saturated Thickness: 318. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 1	1947452.756	10907426.21

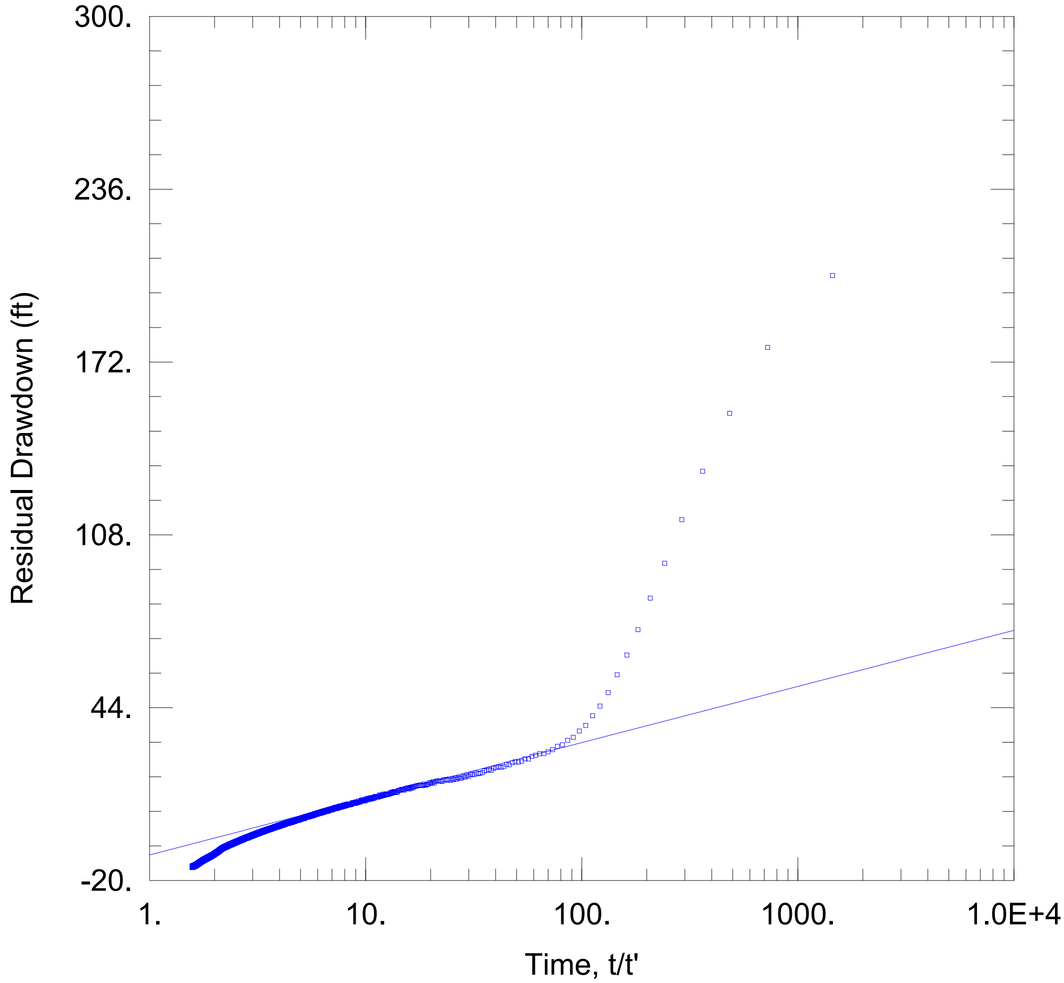
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Odell Well No. 1	1947452.756	10907426.21

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 728.4 ft^2/day S = 4.914E-47



WELL TEST ANALYSIS

Data Set: \...\Odell 1 theis recovery.aqt
Date: 12/11/17 Time: 08:52:17

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 1
Test Date: 2/11/2015

AQUIFER DATA

Saturated Thickness: 318. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 1	1947452.756	10907426.21

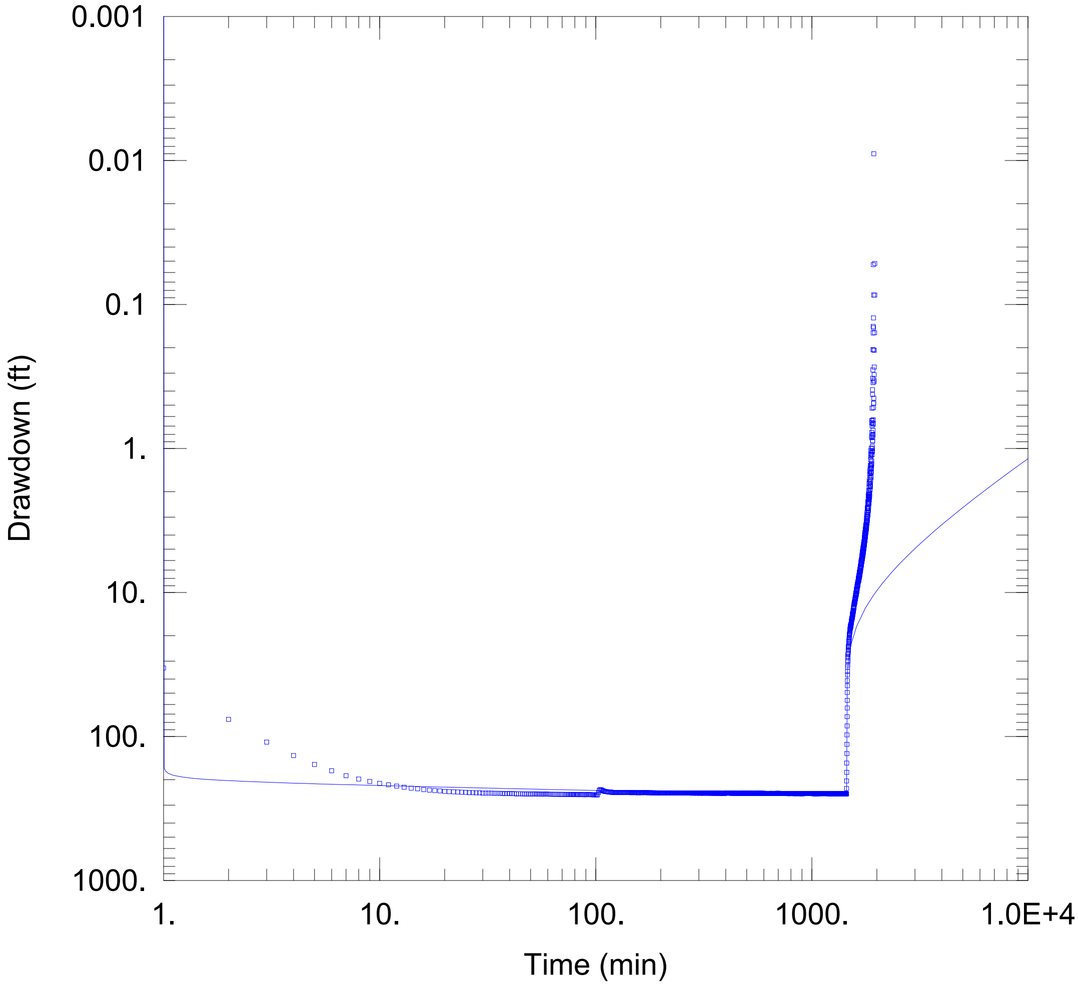
Observation Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 1	1947452.756	10907426.21

SOLUTION

Aquifer Model: Confined Solution Method: Theis (Recovery)

T = 174.2 ft^2/day S/S' = 3.218



WELL TEST ANALYSIS

Data Set: \...\Odell 1 theis.aqt
Date: 12/11/17 Time: 08:52:03

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 1
Test Date: 2/11/2015

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 1	1947452.756	10907426.21

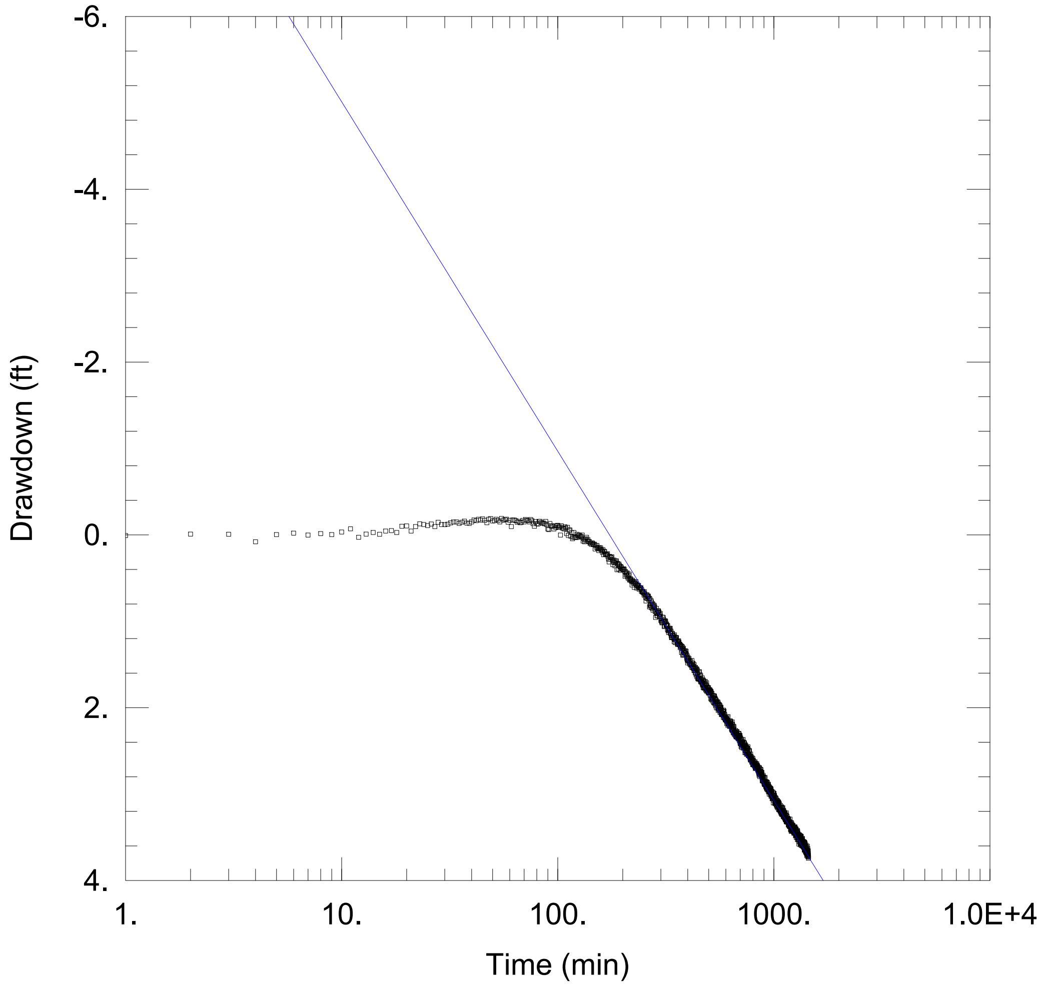
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Odell Well No. 1	1947452.756	10907426.21

SOLUTION

Aquifer Model: Confined
Solution Method: Theis

T = 208.8 ft^2/day
S = 3.944E-12
Kz/Kr = 0.01
b = 318. ft



WELL TEST ANALYSIS

Data Set: \...\odell 3 cooper jacob.aqt
Date: 12/11/17 Time: 08:52:29

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 1
Test Date: 2/11/2015

AQUIFER DATA

Saturated Thickness: 318. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 1	1947452.756	10907426.21

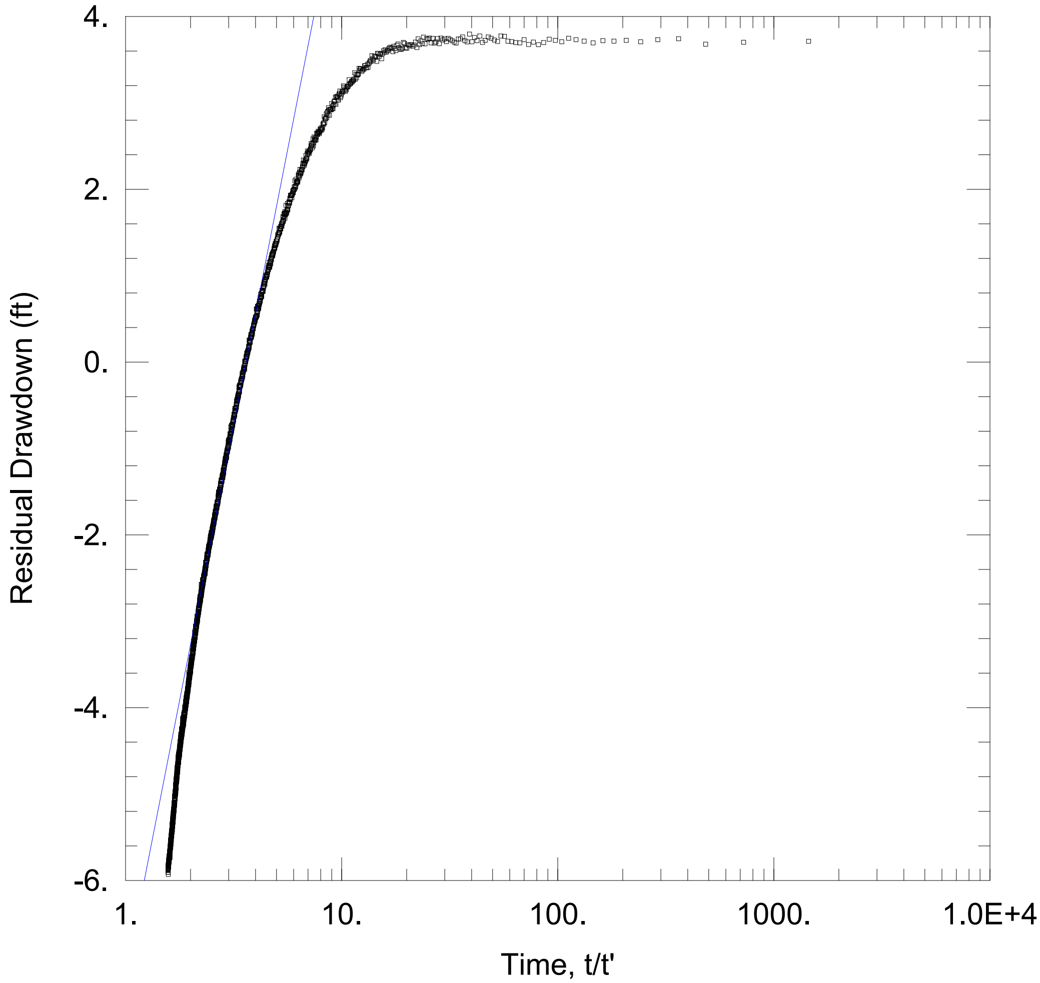
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Odell Well No. 3	1946190.223	10905502.23

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 895.3 ft^2/day S = 4.577E-5



WELL TEST ANALYSIS

Data Set: \...\odell 3 theis recovery.aqt
Date: 12/11/17 Time: 08:52:36

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 1
Test Date: 2/11/2015

AQUIFER DATA

Saturated Thickness: 318. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 1	1947452.756	10907426.21

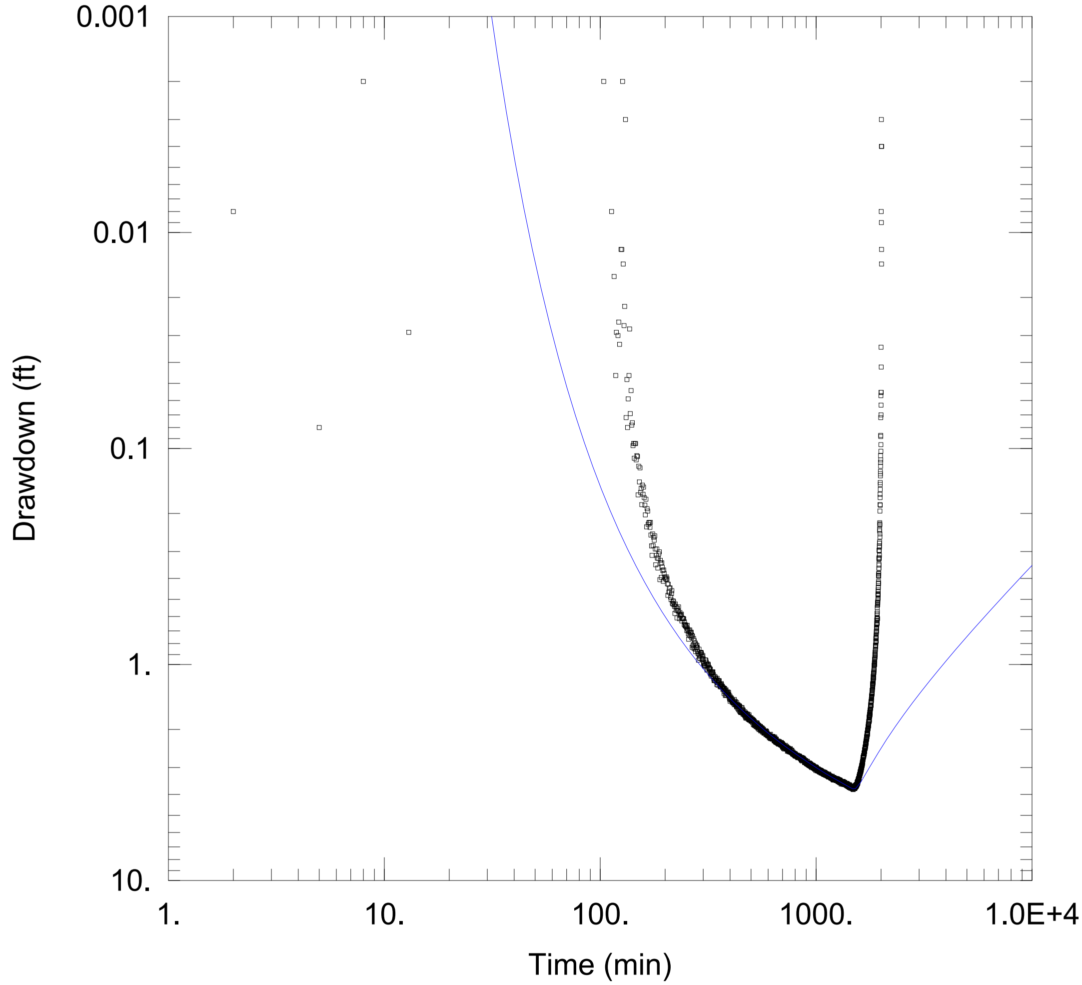
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Odell Well No. 3	1946190.223	10905502.23

SOLUTION

Aquifer Model: Confined Solution Method: Theis (Recovery)

T = 284.1 ft^2/day S/S' = 3.611



WELL TEST ANALYSIS

Data Set: \...\odell 3 theis.aqt
Date: 12/11/17 Time: 08:52:43

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 1
Test Date: 2/11/2015

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 1	1947452.756	10907426.21

Observation Wells

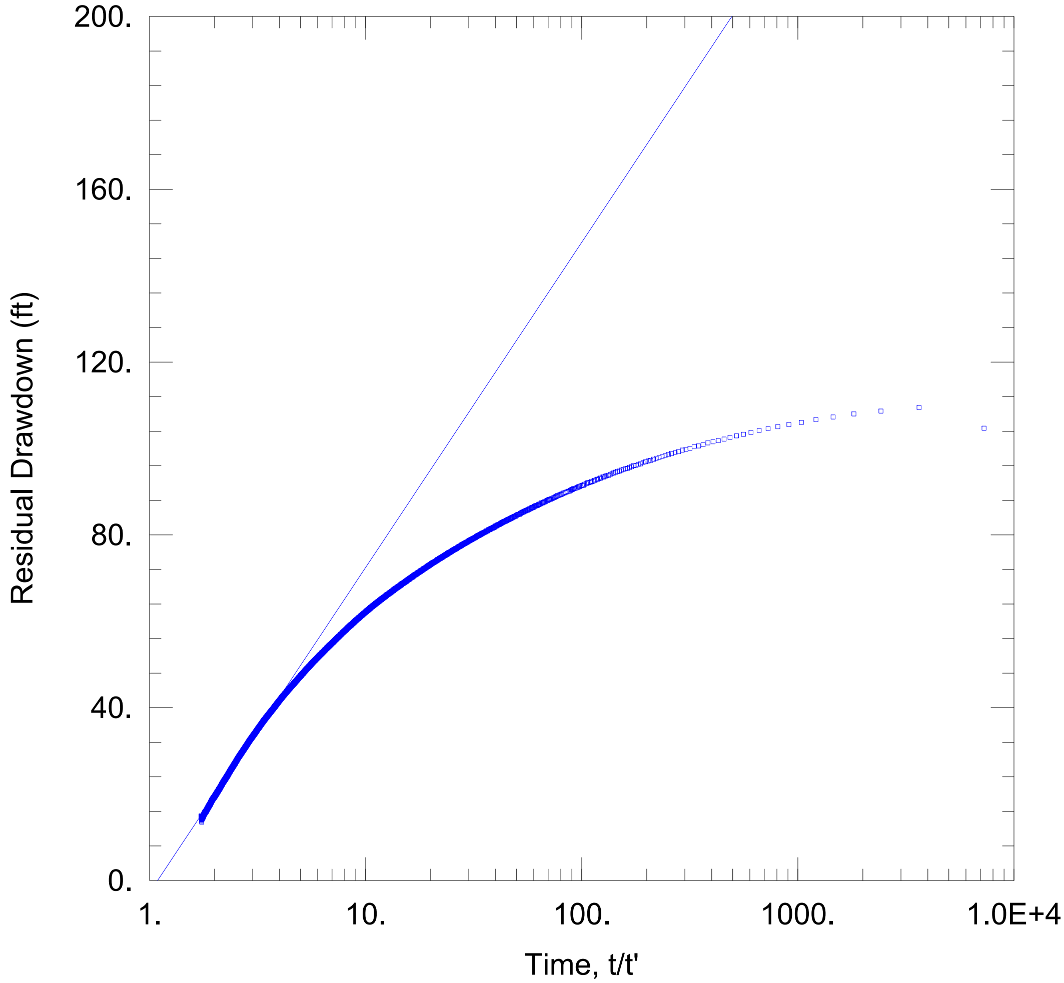
Well Name	X (ft)	Y (ft)
▫ Odell Well No. 3	1946190.223	10905502.23

SOLUTION

Aquifer Model: Confined
Solution Method: Theis

T = 693.2 ft^2/day
S = 6.438E-5
Kz/Kr = 0.01
b = 318. ft

Odell 2 Test



WELL TEST ANALYSIS

Data Set: \...\Odell 2 - theis recovery.aqt
Date: 11/15/17 Time: 07:59:13

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 2
Test Date: 12/29/2016

AQUIFER DATA

Saturated Thickness: 81. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 2	1946169.751	10908337.14

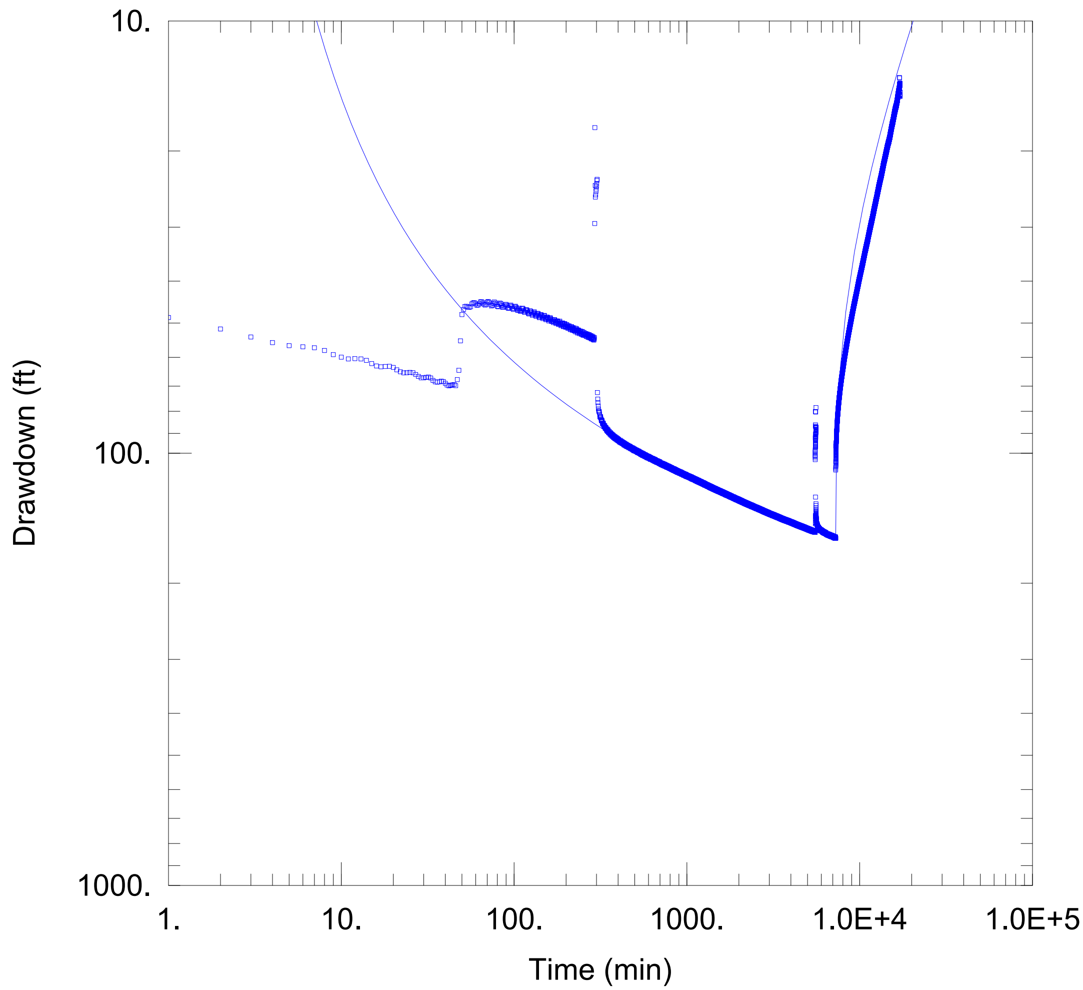
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Odell Well No. 2	1946169.751	10908337.14

SOLUTION

Aquifer Model: Confined Solution Method: Theis (Recovery)

T = 271.4 ft^2/day S/S' = 1.091



WELL TEST ANALYSIS

Data Set: \...\Odell 2 - theis.aqt
Date: 11/15/17 Time: 07:59:41

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 2
Test Date: 12/29/2016

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 2	1946169.751	10908337.14

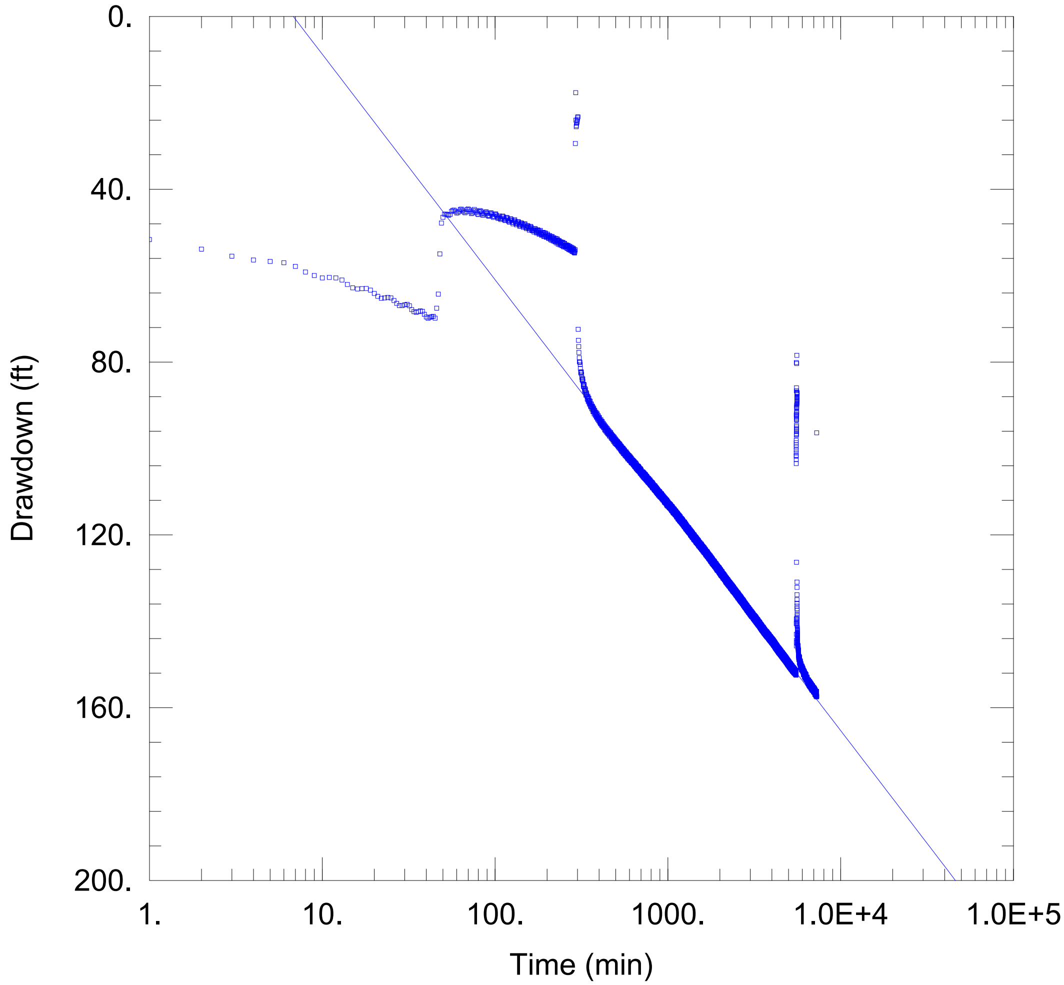
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Odell Well No. 2	1946169.751	10908337.14

SOLUTION

Aquifer Model: Confined
Solution Method: Theis

T = 391.3 ft^2/day
S = 17.43
Kz/Kr = 0.01
b = 81. ft



WELL TEST ANALYSIS

Data Set: \...\Odell 2.aqt
Date: 11/15/17 Time: 08:00:07

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 2
Test Date: 12/29/2016

AQUIFER DATA

Saturated Thickness: 81. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 2	1946169.751	10908337.14

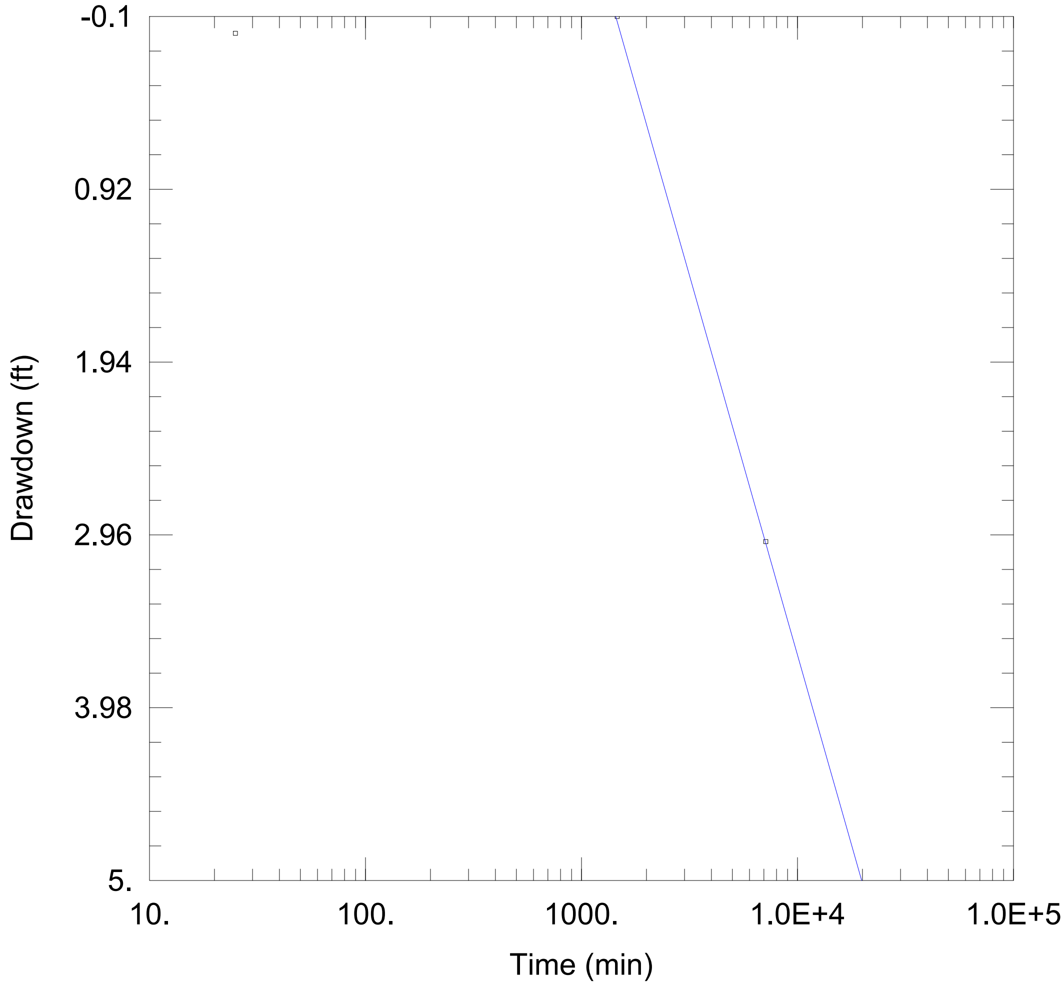
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Odell Well No. 2	1946169.751	10908337.14

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 391.3 ft^2/day S = 17.43



WELL TEST ANALYSIS

Data Set: \...\ow bowman.aqt
Date: 11/16/17 Time: 13:24:24

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 2
Test Date: 12/29/2016

AQUIFER DATA

Saturated Thickness: 81. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 2	1946169.751	10908337.14

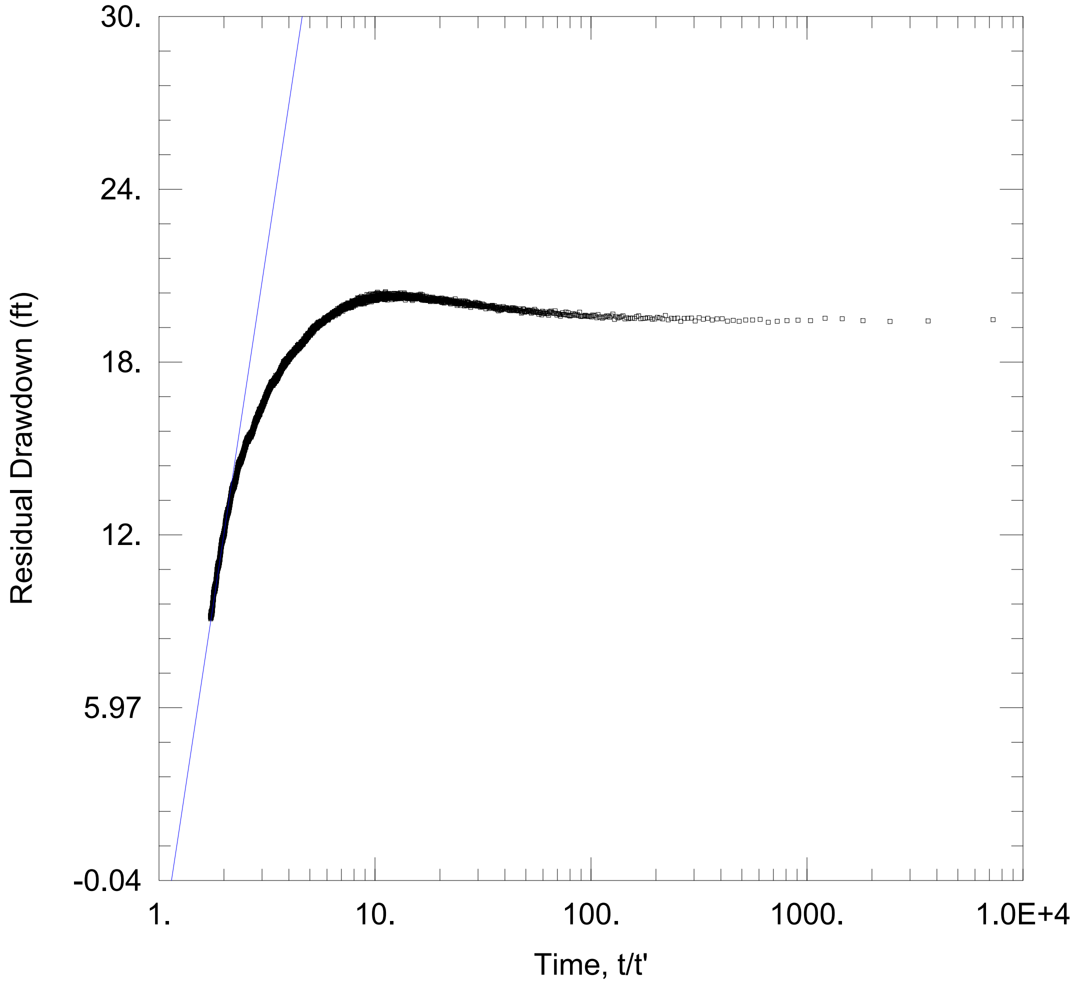
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bowman	1952817.257	10907226.9

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 4561. ft^2/day S = 0.0002376



WELL TEST ANALYSIS

Data Set: \...\OW Bridges 1 - theis recovery.aqt
Date: 11/15/17 Time: 08:00:46

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 2
Test Date: 12/29/2016

AQUIFER DATA

Saturated Thickness: 81. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 2	1946169.751	10908337.14

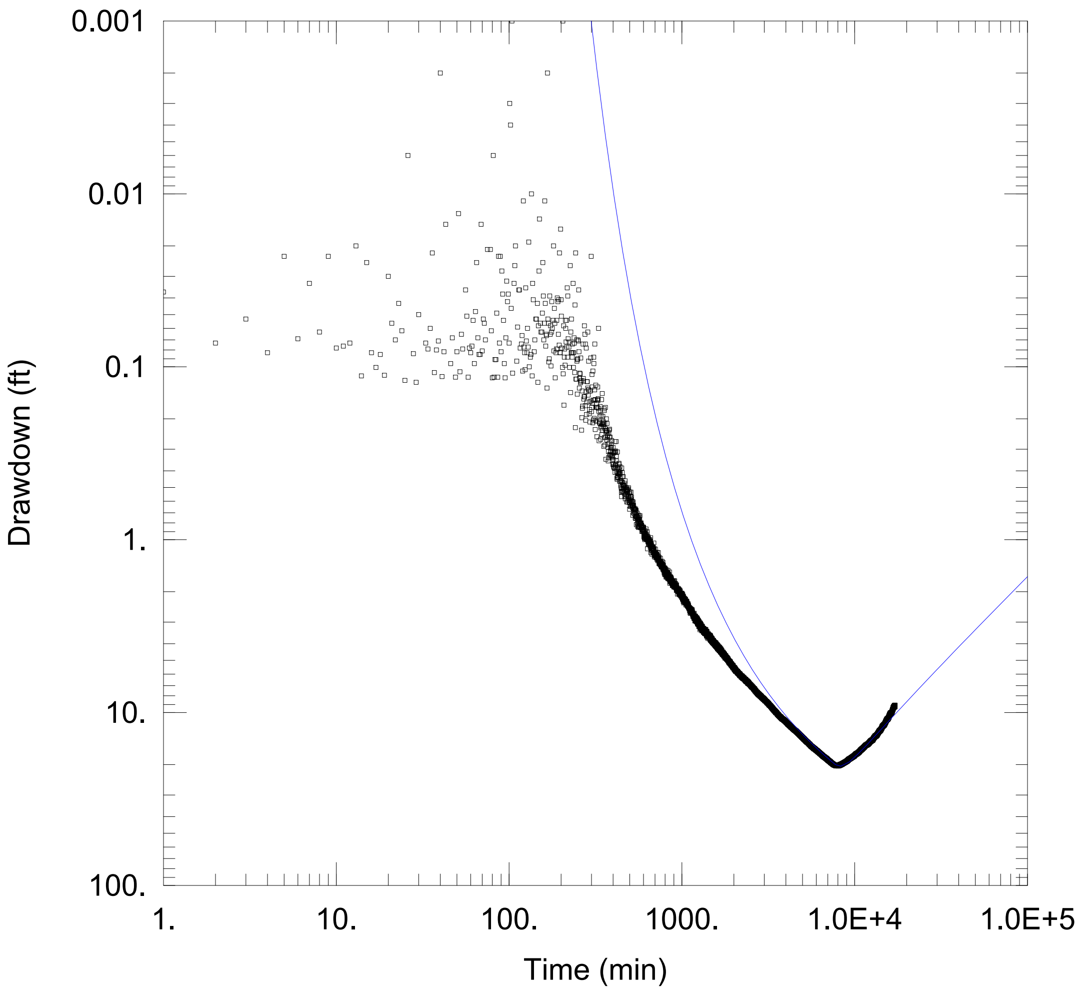
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 1	1949181.234	10907020.34

SOLUTION

Aquifer Model: Confined Solution Method: Theis (Recovery)

T = 411.1 ft^2/day S/S' = 1.146



WELL TEST ANALYSIS

Data Set: \...\OW Bridges 1 - theis.aqt
Date: 11/15/17 Time: 08:01:09

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 2
Test Date: 12/29/2016

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 2	1946169.751	10908337.14

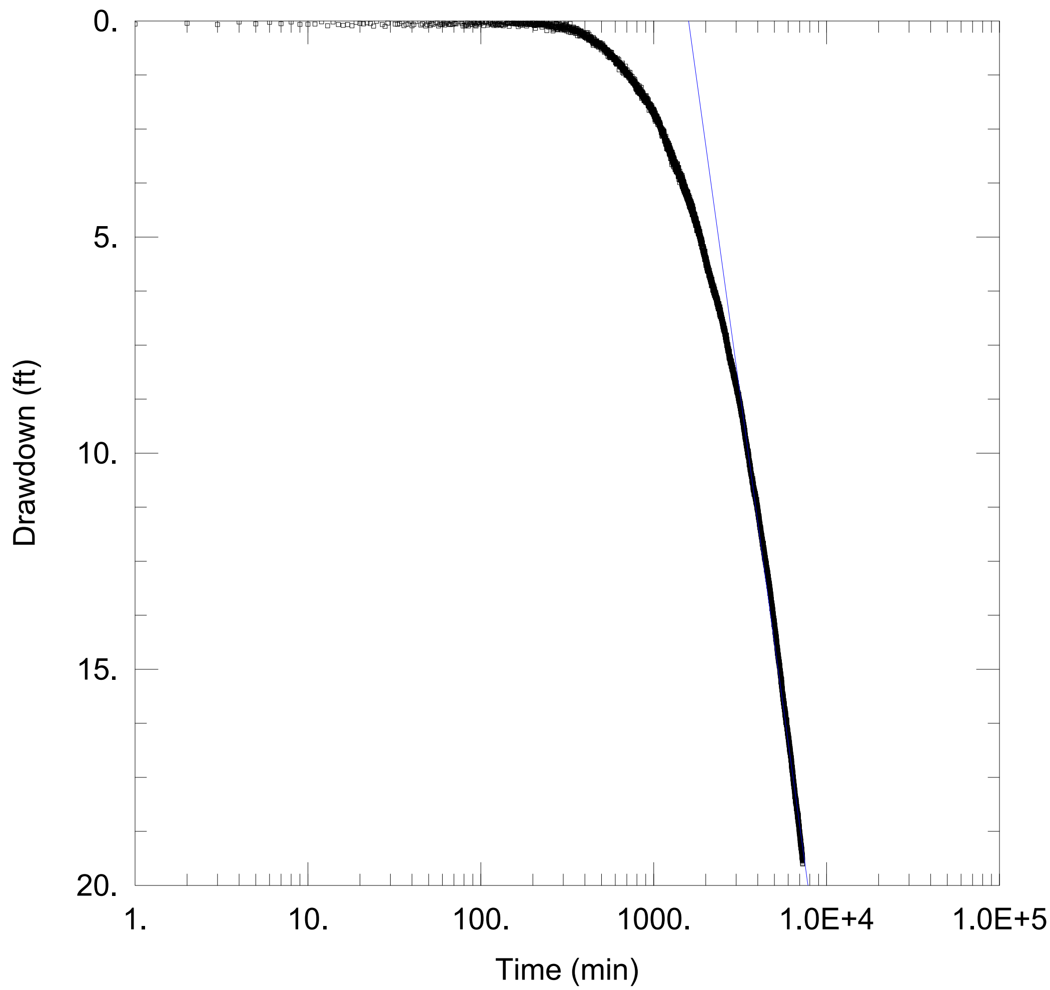
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 1	1949181.234	10907020.34

SOLUTION

Aquifer Model: Confined Solution Method: Theis

T = 399.4 ft^2/day S = 0.0002397
Kz/Kr = 0.01 b = 81. ft



WELL TEST ANALYSIS

Data Set: \...\OW Bridges 1.aqt
Date: 11/15/17 Time: 08:01:33

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 2
Test Date: 12/29/2016

AQUIFER DATA

Saturated Thickness: 81. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 2	1946169.751	10908337.14

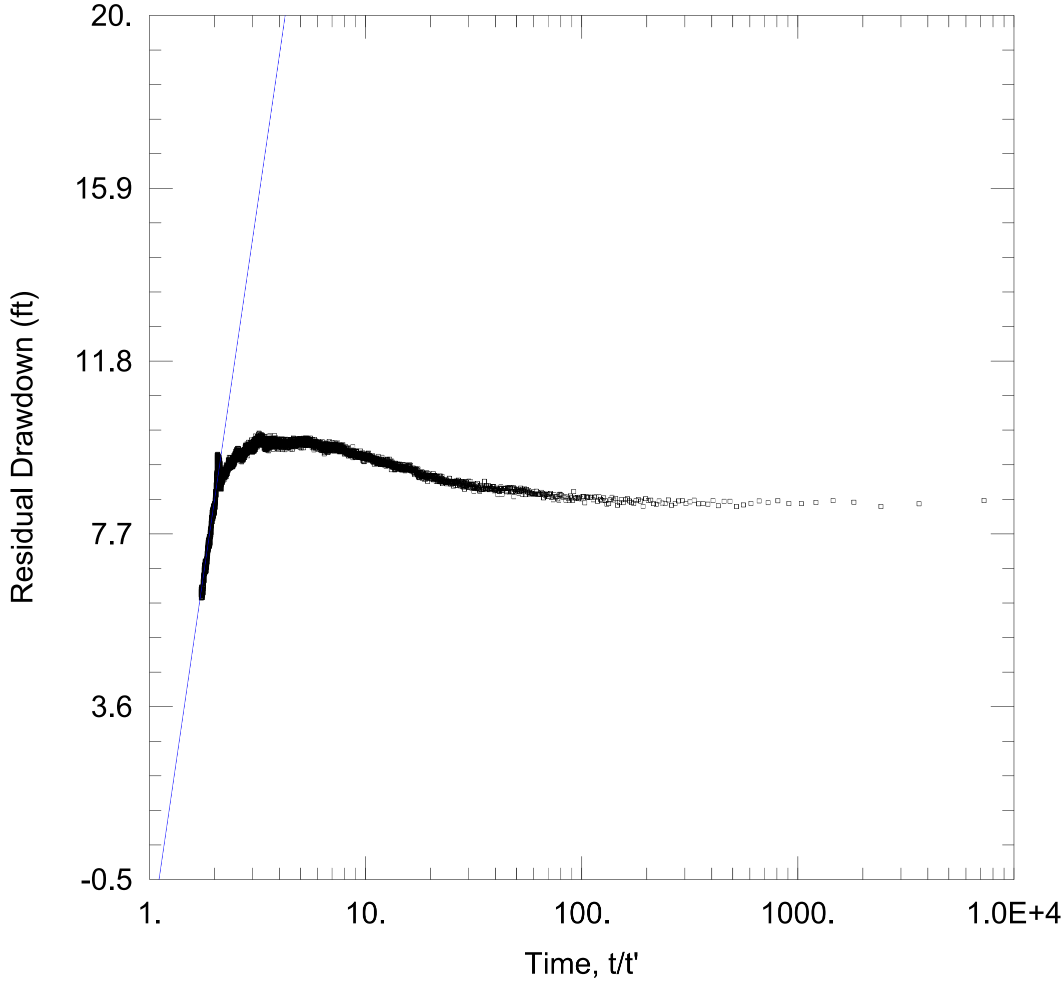
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 1	1949181.234	10907020.34

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 705.2 ft^2/day S = 0.0001622



WELL TEST ANALYSIS

Data Set: \...\OW Bridges 2 - theis recovery.aqt
Date: 11/15/17 Time: 08:01:51

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 2
Test Date: 12/29/2016

AQUIFER DATA

Saturated Thickness: 81. ft
Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 2	1946169.751	10908337.14

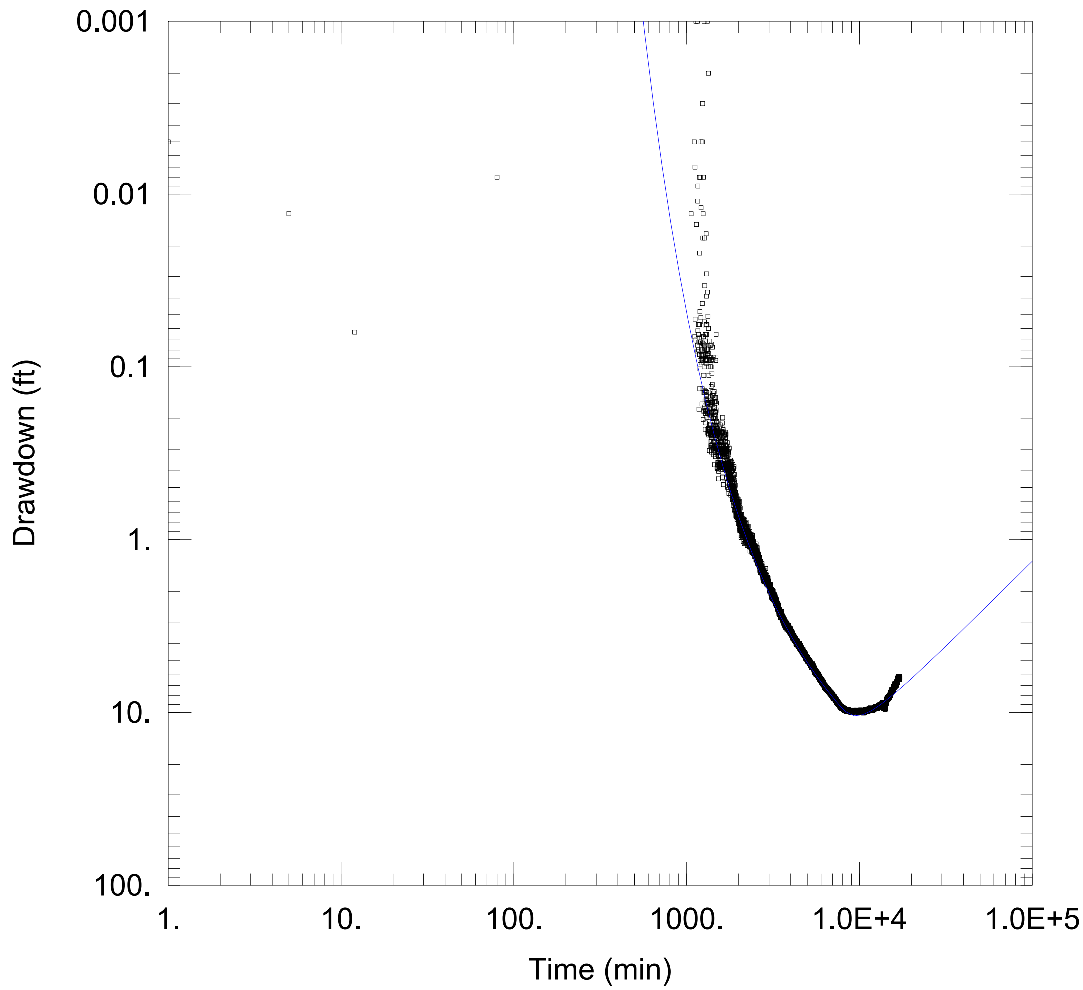
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 2	1951951.936	10906446.69

SOLUTION

Aquifer Model: Confined
Solution Method: Theis (Recovery)

T = 581.7 ft^2/day
S/S' = 1.144



WELL TEST ANALYSIS

Data Set: \...\OW Bridges 2 - theis.aqt
Date: 11/15/17 Time: 08:02:16

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 2
Test Date: 12/29/2016

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 2	1946169.751	10908337.14

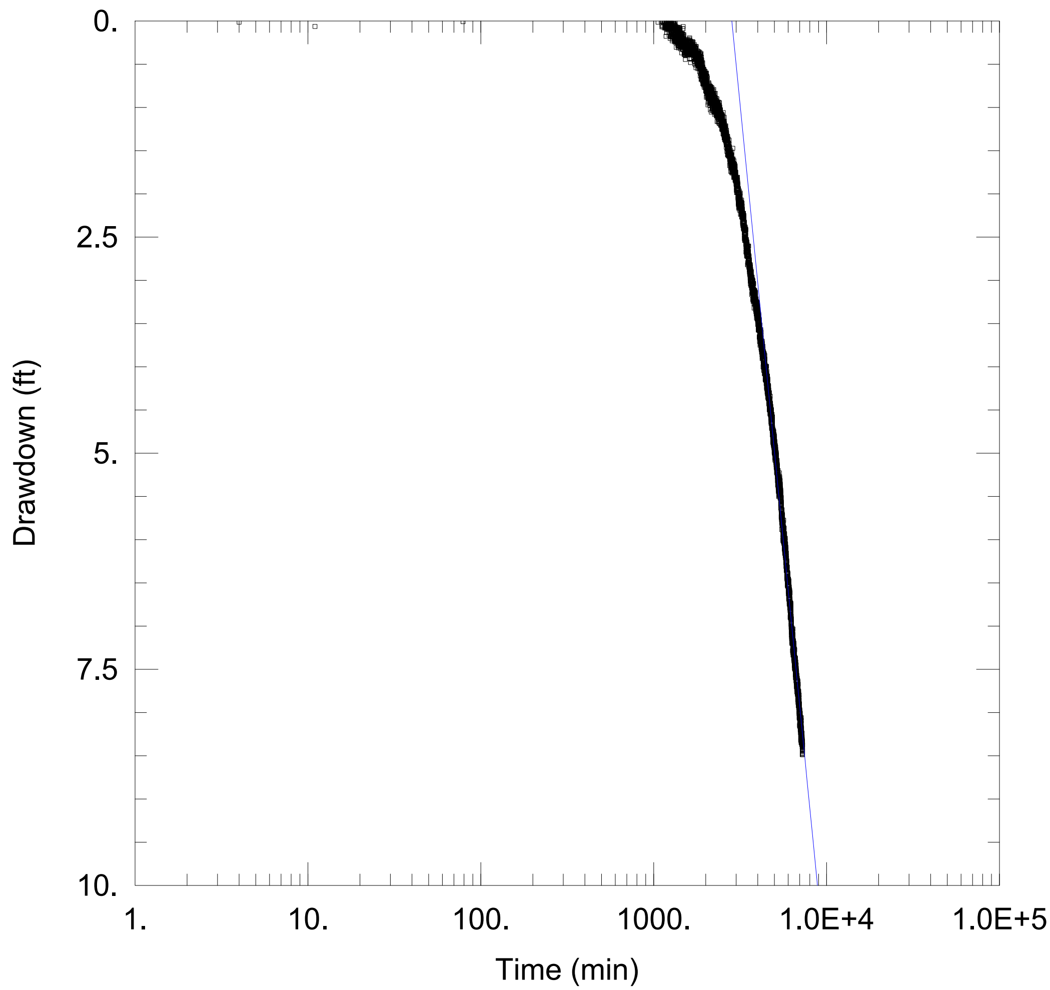
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 2	1951951.936	10906446.69

SOLUTION

Aquifer Model: Confined Solution Method: Theis

T = 479.8 ft^2/day S = 0.0001549
Kz/Kr = 0.01 b = 81. ft



WELL TEST ANALYSIS

Data Set: \...\OW Bridges 2.aqt
Date: 11/15/17 Time: 08:02:39

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 2
Test Date: 12/29/2016

AQUIFER DATA

Saturated Thickness: 81. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 2	1946169.751	10908337.14

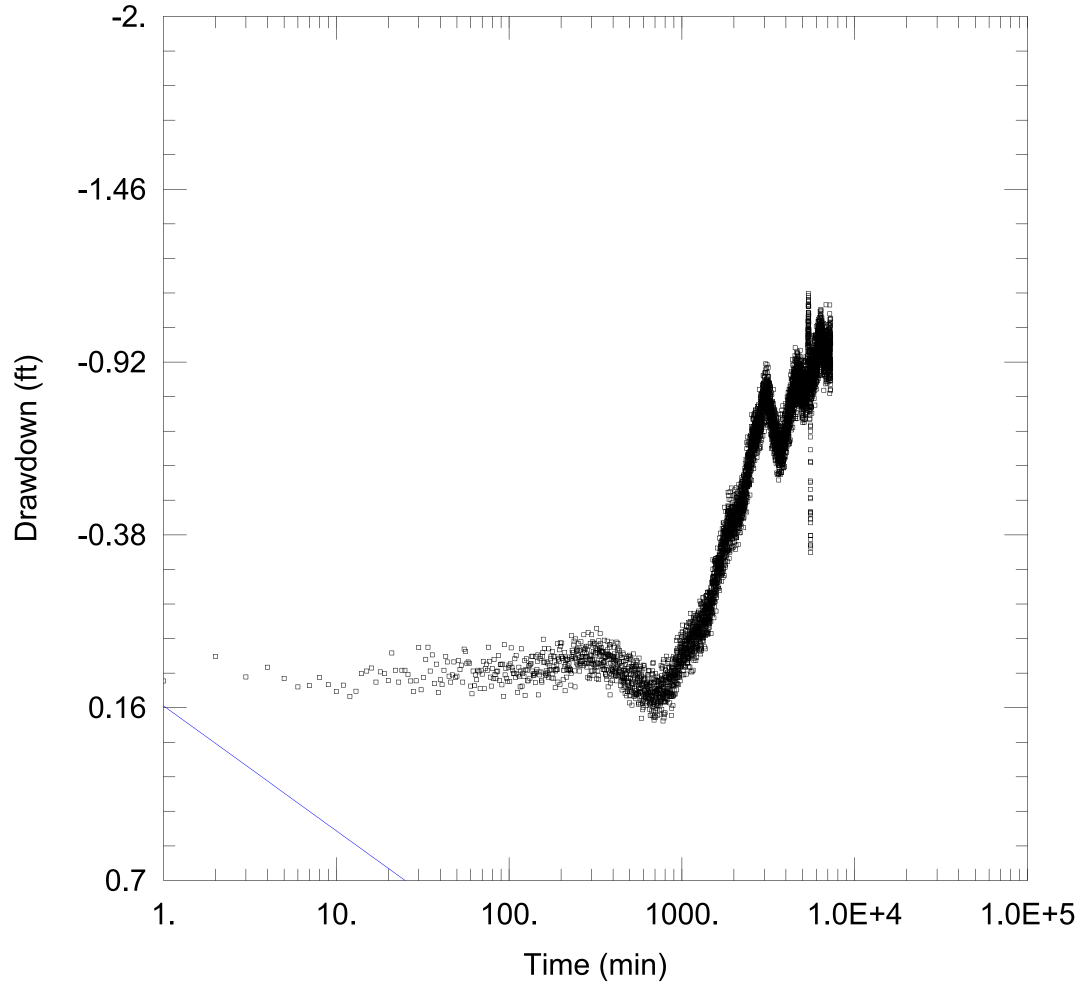
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 2	1951951.936	10906446.69

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 1011.9 ft^2/day S = 0.0001208



WELL TEST ANALYSIS

Data Set: \...\OW Bridges 3 - theis recovery.aqt
Date: 11/15/17 Time: 08:02:58

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 2
Test Date: 12/29/2016

AQUIFER DATA

Saturated Thickness: 81. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 2	1946169.751	10908337.14

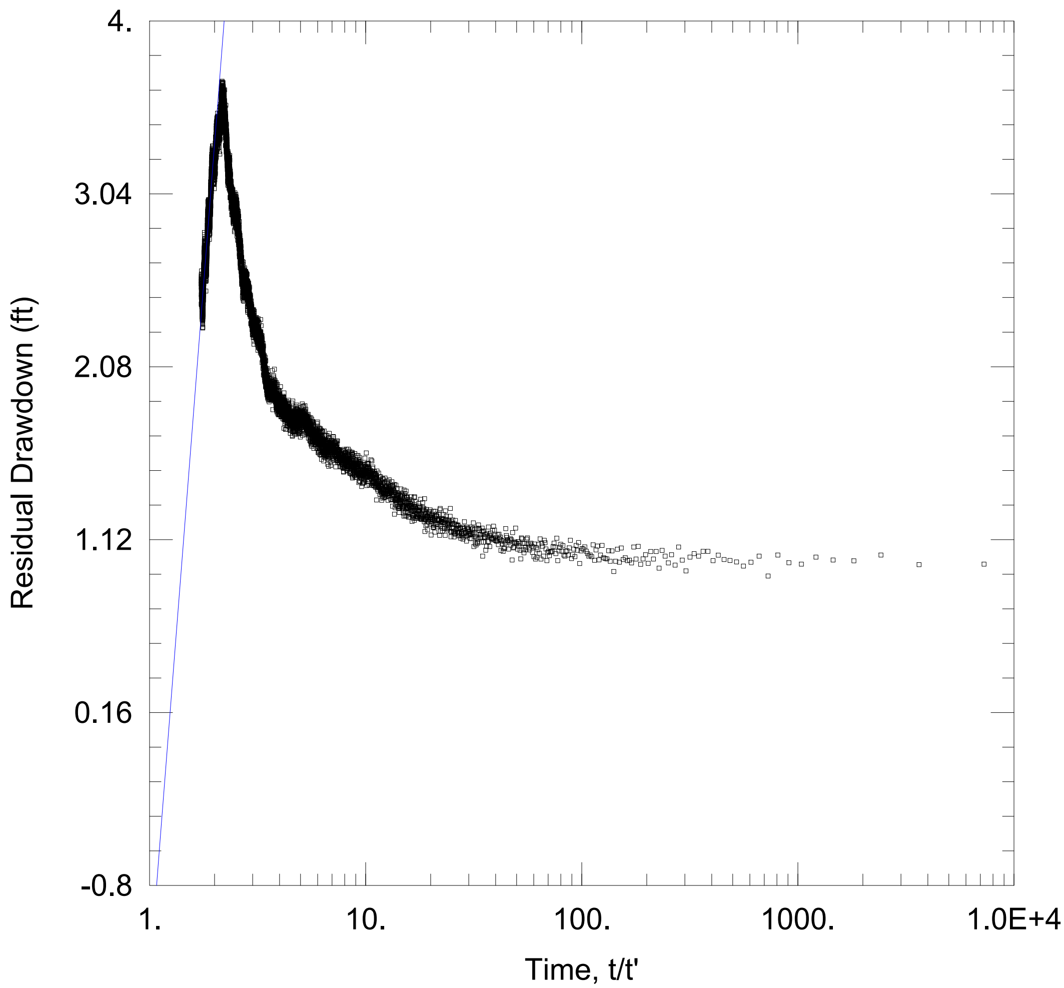
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 3	1954970.013	10906385.3

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 5.232E+4 ft^2/day S = 4.043E-7



WELL TEST ANALYSIS

Data Set: \...\OW Bridges 4 - theis recovery.aqt
Date: 11/15/17 Time: 08:03:35

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 2
Test Date: 12/29/2016

AQUIFER DATA

Saturated Thickness: 81. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 2	1946169.751	10908337.14

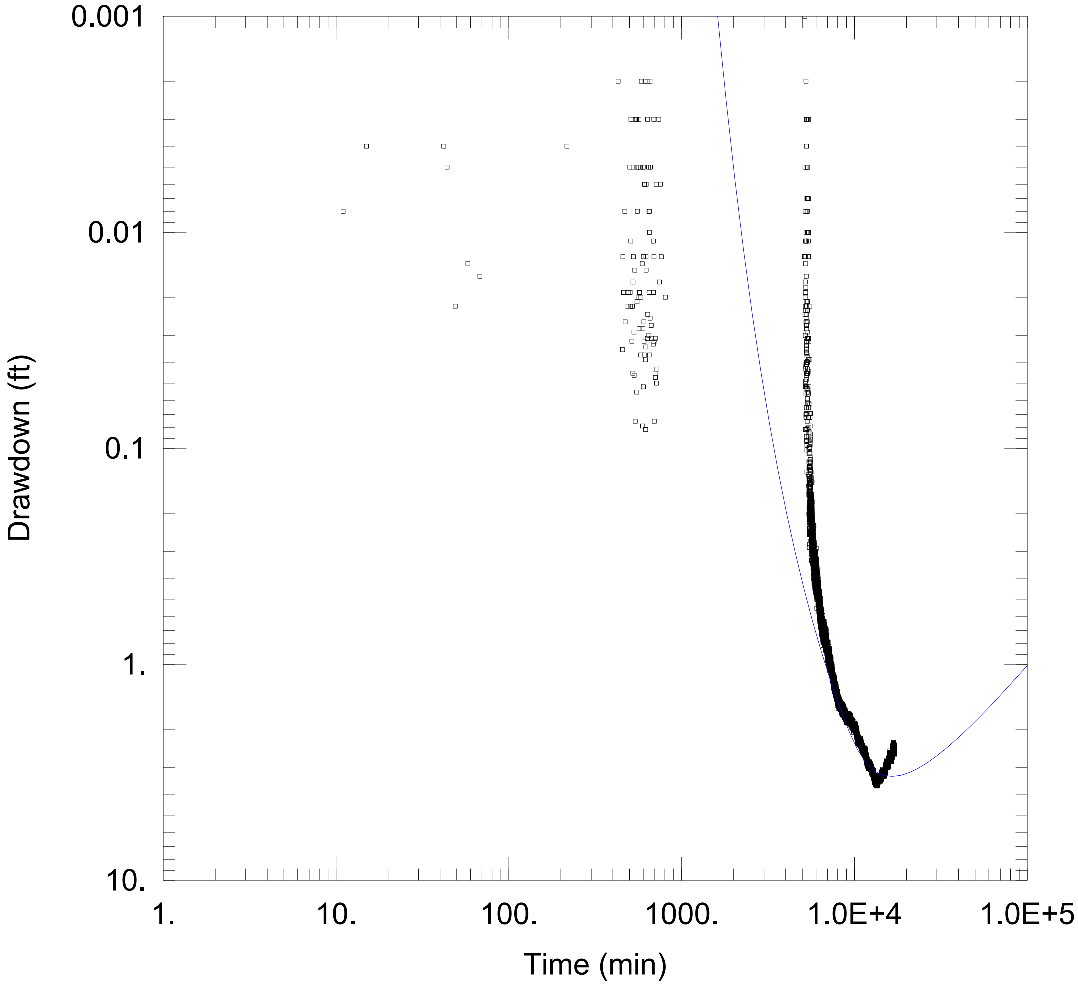
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 4	1953817.782	10906346.59

SOLUTION

Aquifer Model: Confined Solution Method: Theis (Recovery)

T = 1331.3 ft^2/day S/S' = 1.216



WELL TEST ANALYSIS

Data Set: \...\OW Bridges 4 - theis.aqt
Date: 11/15/17 Time: 08:03:56

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 2
Test Date: 12/29/2016

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 2	1946169.751	10908337.14

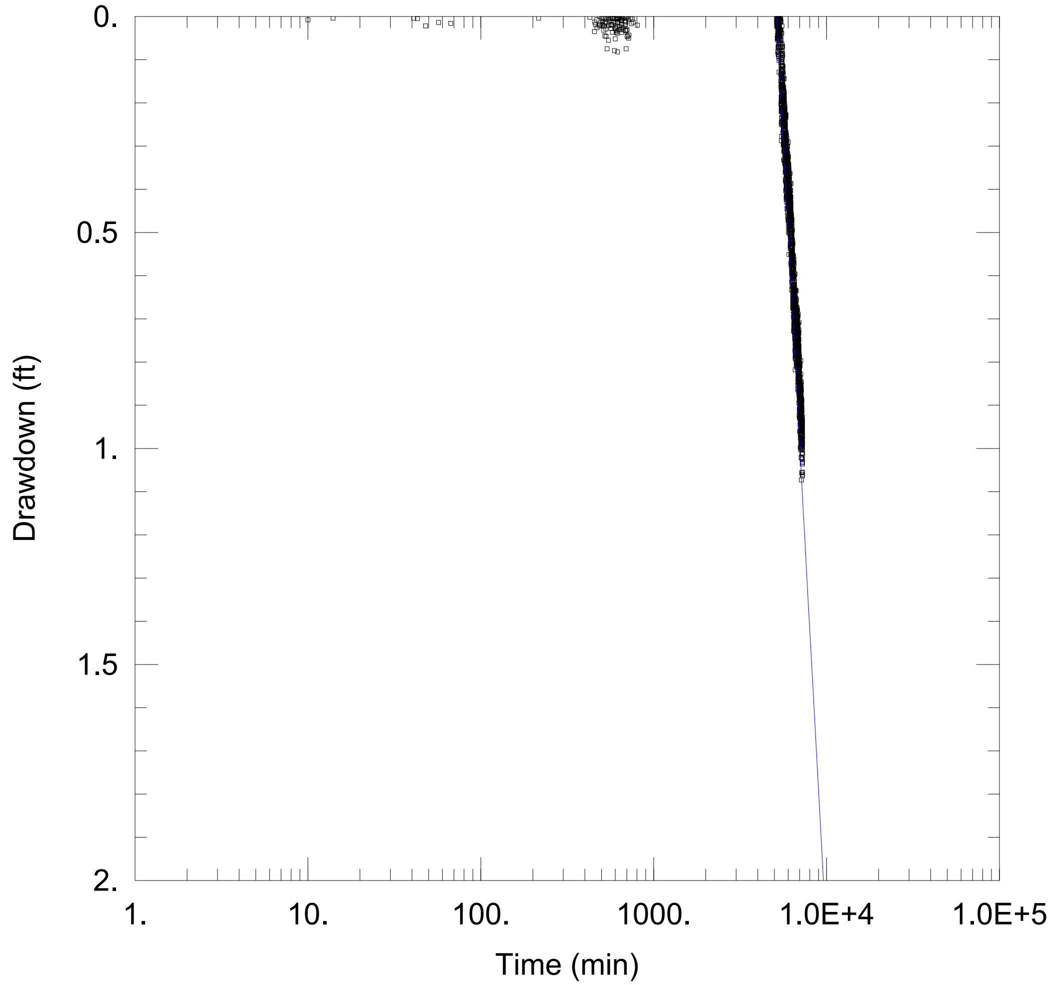
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 4	1953817.782	10906346.59

SOLUTION

Aquifer Model: Confined Solution Method: Theis

T = 582.1 ft^2/day S = 0.0003142
Kz/Kr = 0.01 b = 81. ft



WELL TEST ANALYSIS

Data Set: \...\OW Bridges 4.aqt
Date: 11/15/17 Time: 08:04:13

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 2
Test Date: 12/29/2016

AQUIFER DATA

Saturated Thickness: 81. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 2	1946169.751	10908337.14

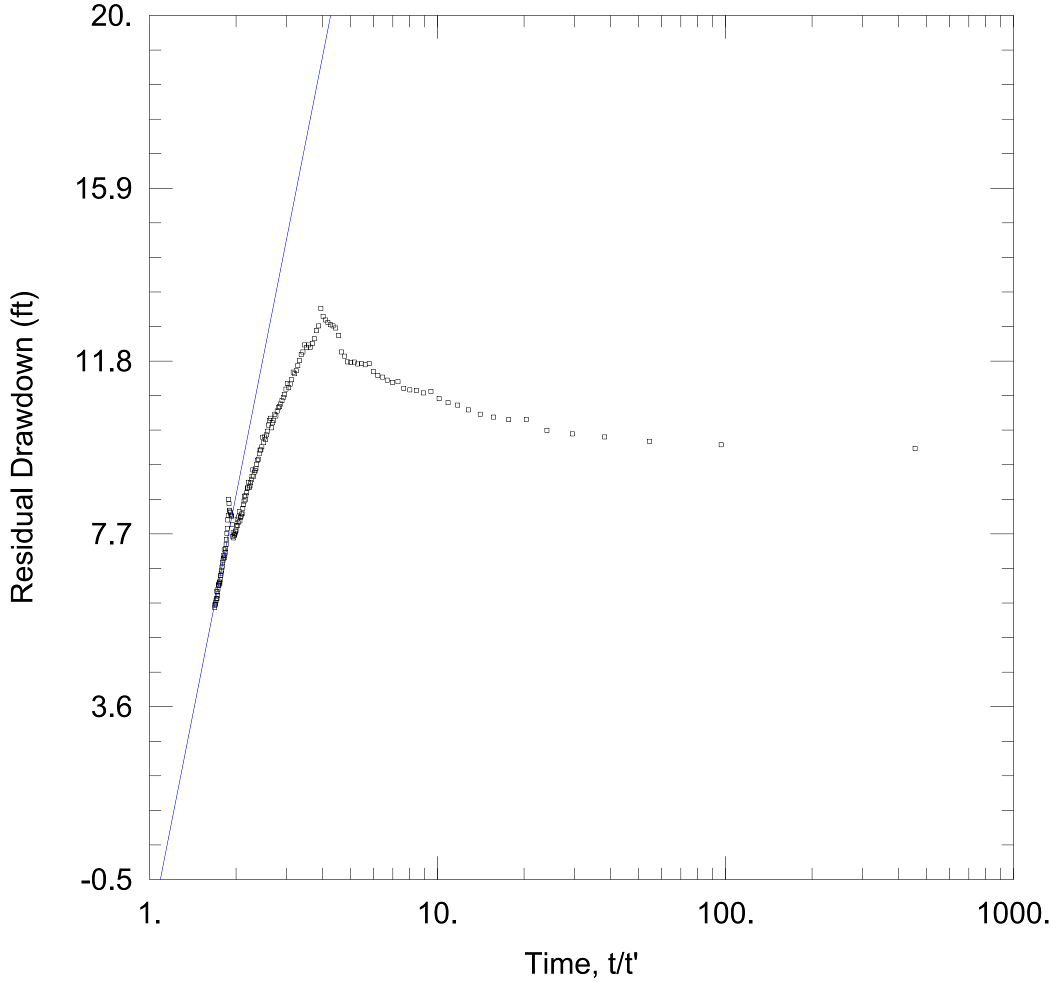
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Bridges Well No. 4	1953817.782	10906346.59

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 2780. ft^2/day S = 0.0003558



WELL TEST ANALYSIS

Data Set: \...\OW escondida 1 -theis recovery.aqt
Date: 11/15/17 Time: 08:04:28

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 2
Test Date: 12/29/2016

AQUIFER DATA

Saturated Thickness: 81. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 2	1946169.751	10908337.14

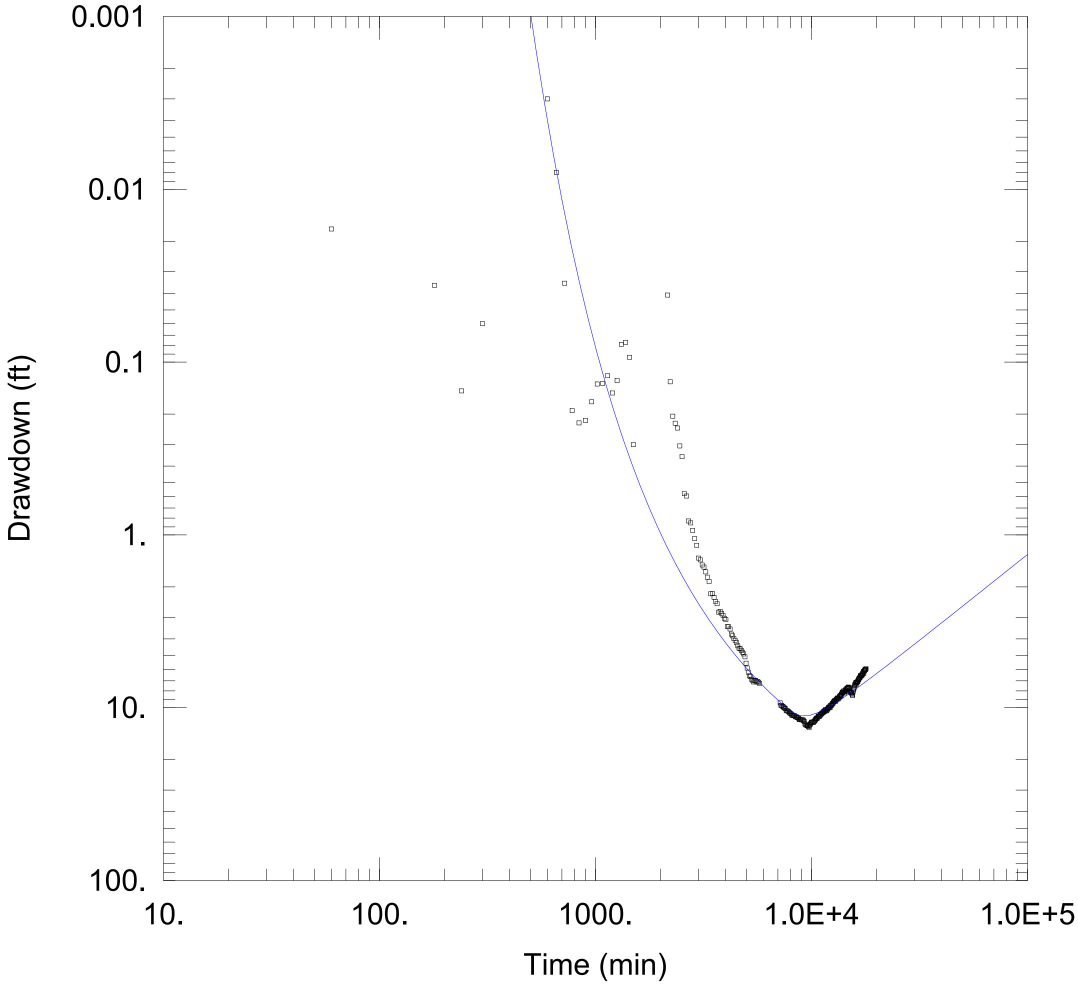
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Escondida 1	1943836.155	10900180.87

SOLUTION

Aquifer Model: Confined Solution Method: Theis (Recovery)

T = 589.4 ft^2/day S/S' = 1.128



WELL TEST ANALYSIS

Data Set: \...\OW escondida 1 -theis.aqt
Date: 11/15/17 Time: 08:04:44

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 2
Test Date: 12/29/2016

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 2	1946169.751	10908337.14

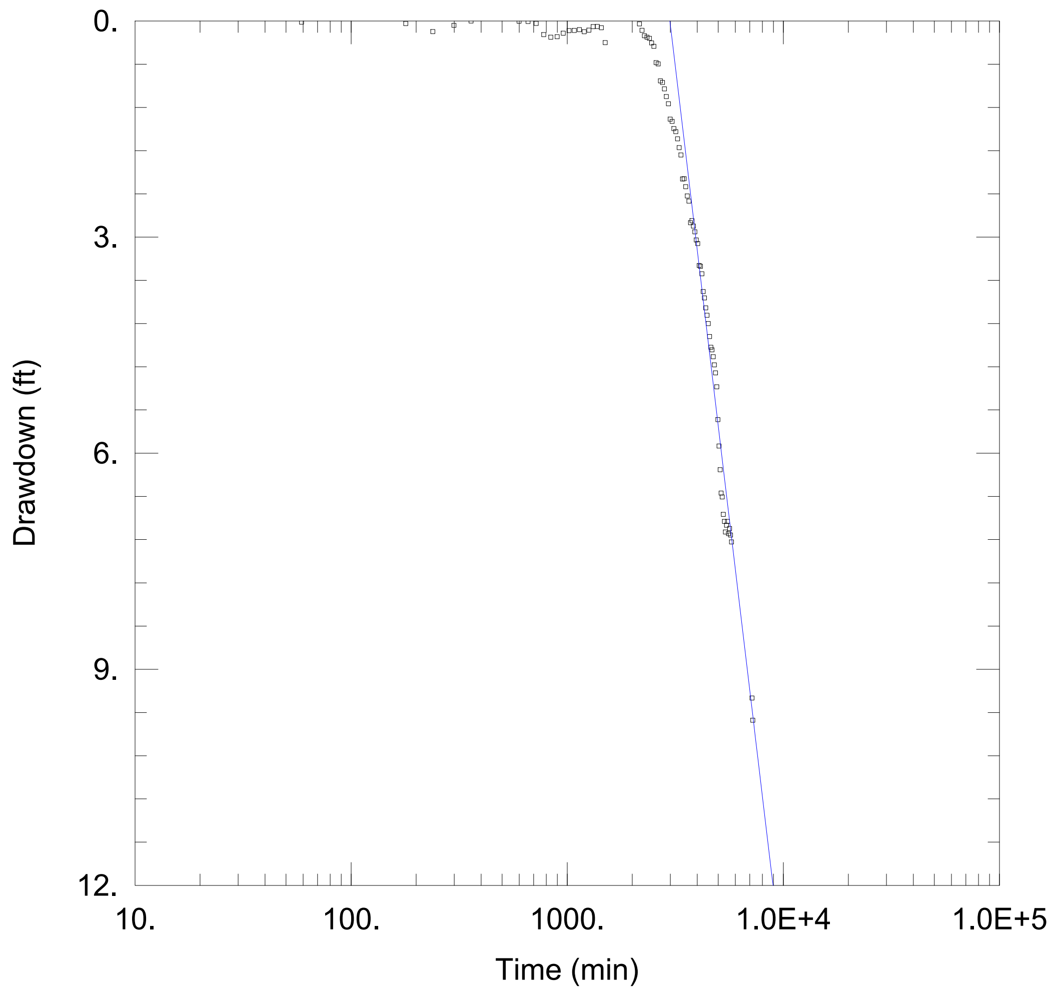
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Escondida 1	1943836.155	10900180.87

SOLUTION

Aquifer Model: Confined Solution Method: Theis

T = 494.3 ft^2/day S = 7.329E-5
Kz/Kr = 0.01 b = 81. ft



WELL TEST ANALYSIS

Data Set: \...\OW escondida 1.aqt
Date: 11/15/17 Time: 08:04:56

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 2
Test Date: 12/29/2016

AQUIFER DATA

Saturated Thickness: 81. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 2	1946169.751	10908337.14

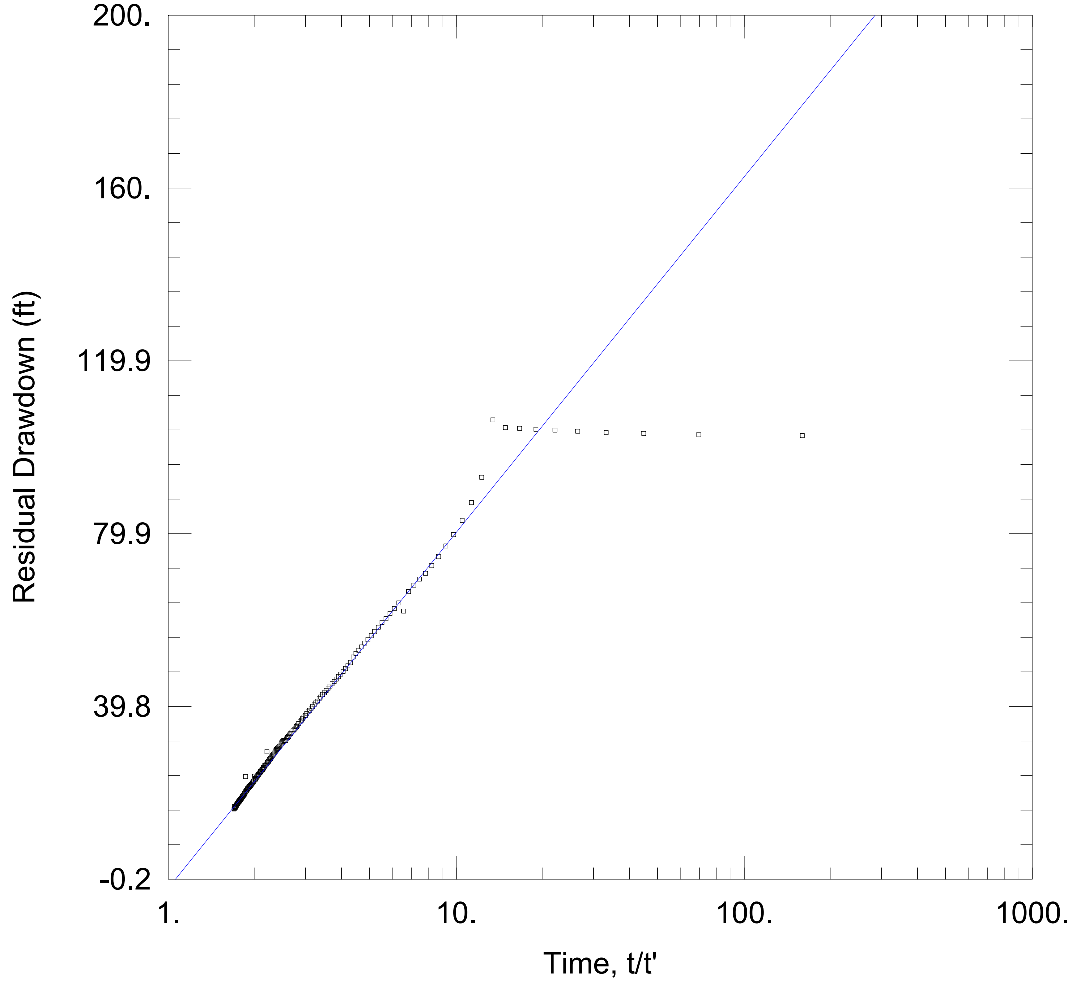
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Escondida 1	1943836.155	10900180.87

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 812.4 ft^2/day S = 5.259E-5



WELL TEST ANALYSIS

Data Set: \...\ow lowe -theis recovery.aqt
Date: 11/15/17 Time: 08:05:45

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 2
Test Date: 12/29/2016

AQUIFER DATA

Saturated Thickness: 81. ft
Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 2	1946169.751	10908337.14

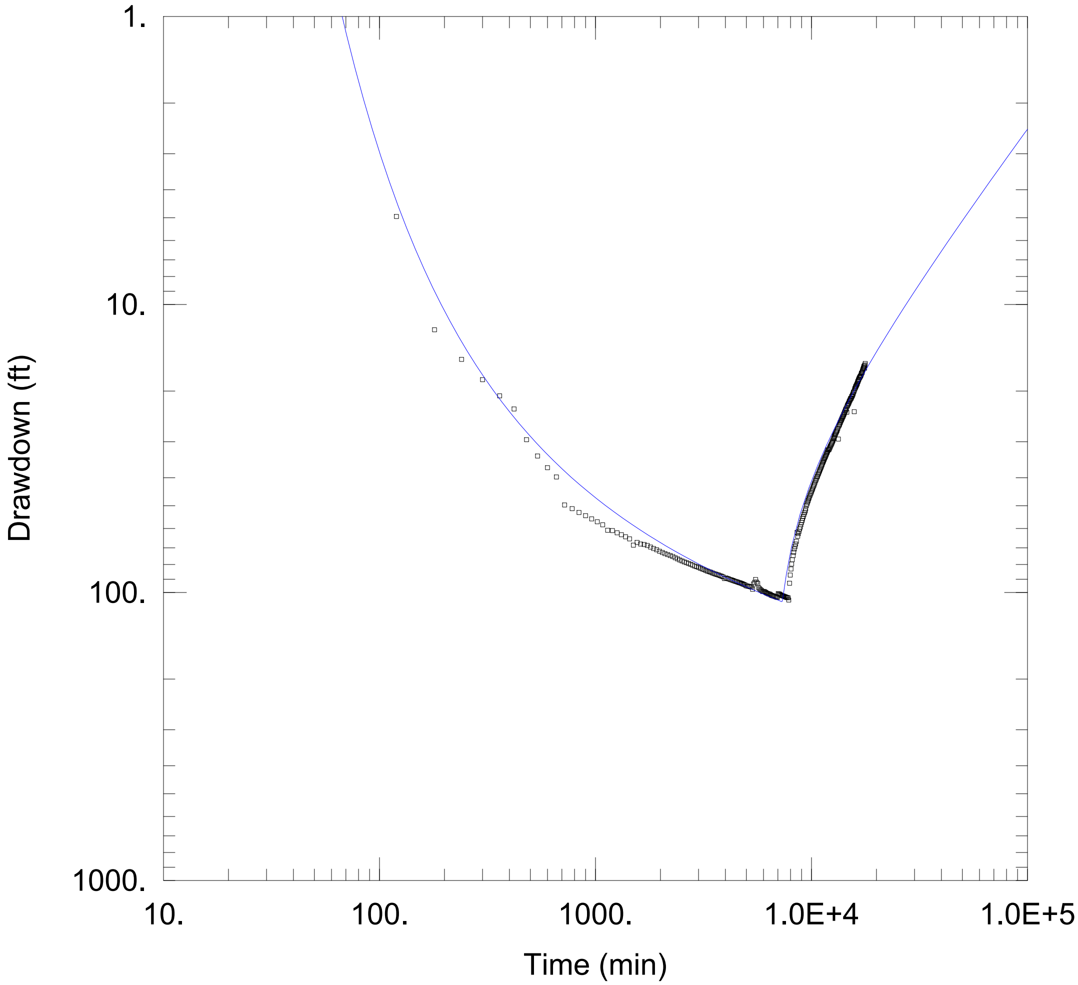
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Lowe	1947758.99	10909644.82

SOLUTION

Aquifer Model: Confined
Solution Method: Theis (Recovery)

T = 247.9 ft^2/day
S/S' = 1.066



WELL TEST ANALYSIS

Data Set: \...\ow lowe -theis.aqt
Date: 11/15/17 Time: 08:05:58

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 2
Test Date: 12/29/2016

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 2	1946169.751	10908337.14

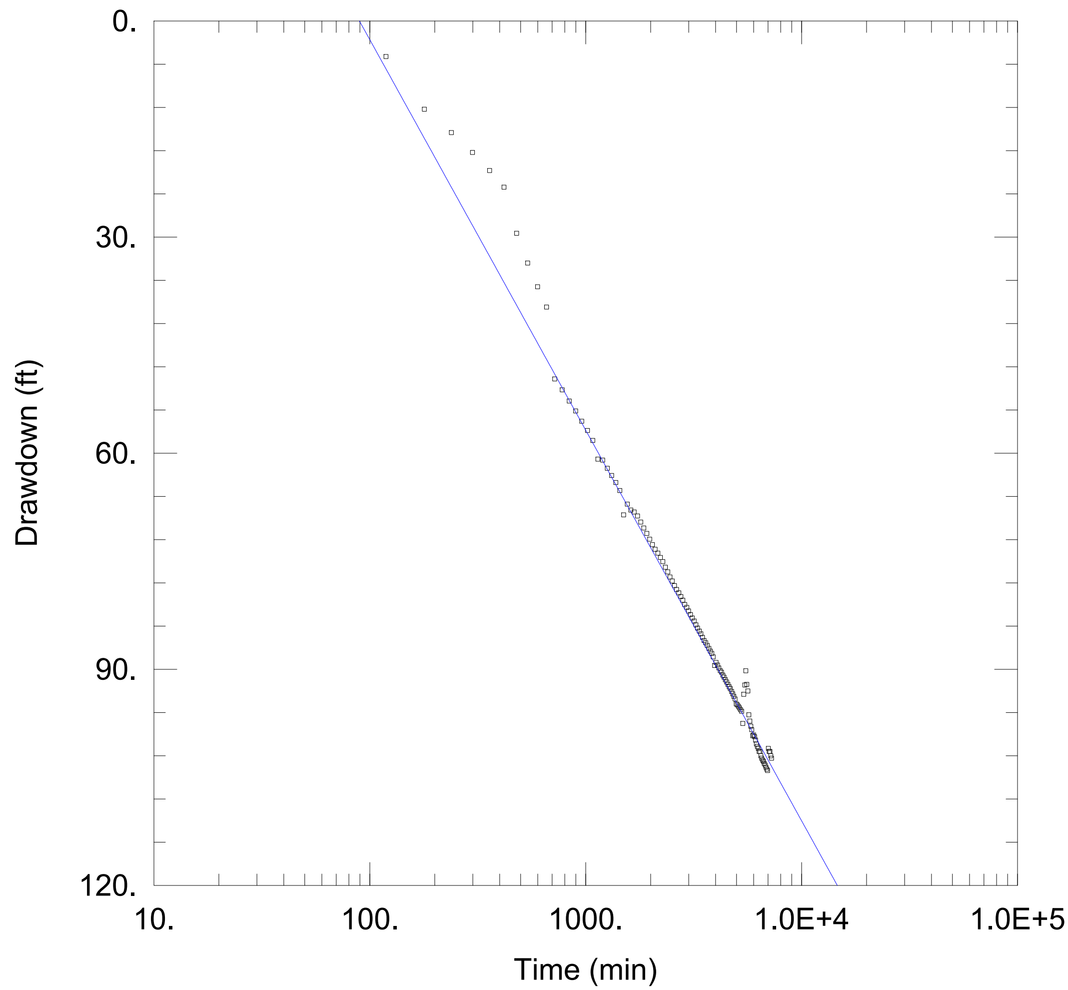
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Lowe	1947758.99	10909644.82

SOLUTION

Aquifer Model: Confined
Solution Method: Theis

T = 271.3 ft^2/day
S = 2.762E-5
Kz/Kr = 0.01
b = 81. ft



WELL TEST ANALYSIS

Data Set: \...\ow lowe.aqt
Date: 11/15/17 Time: 08:06:11

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 2
Test Date: 12/29/2016

AQUIFER DATA

Saturated Thickness: 81. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 2	1946169.751	10908337.14

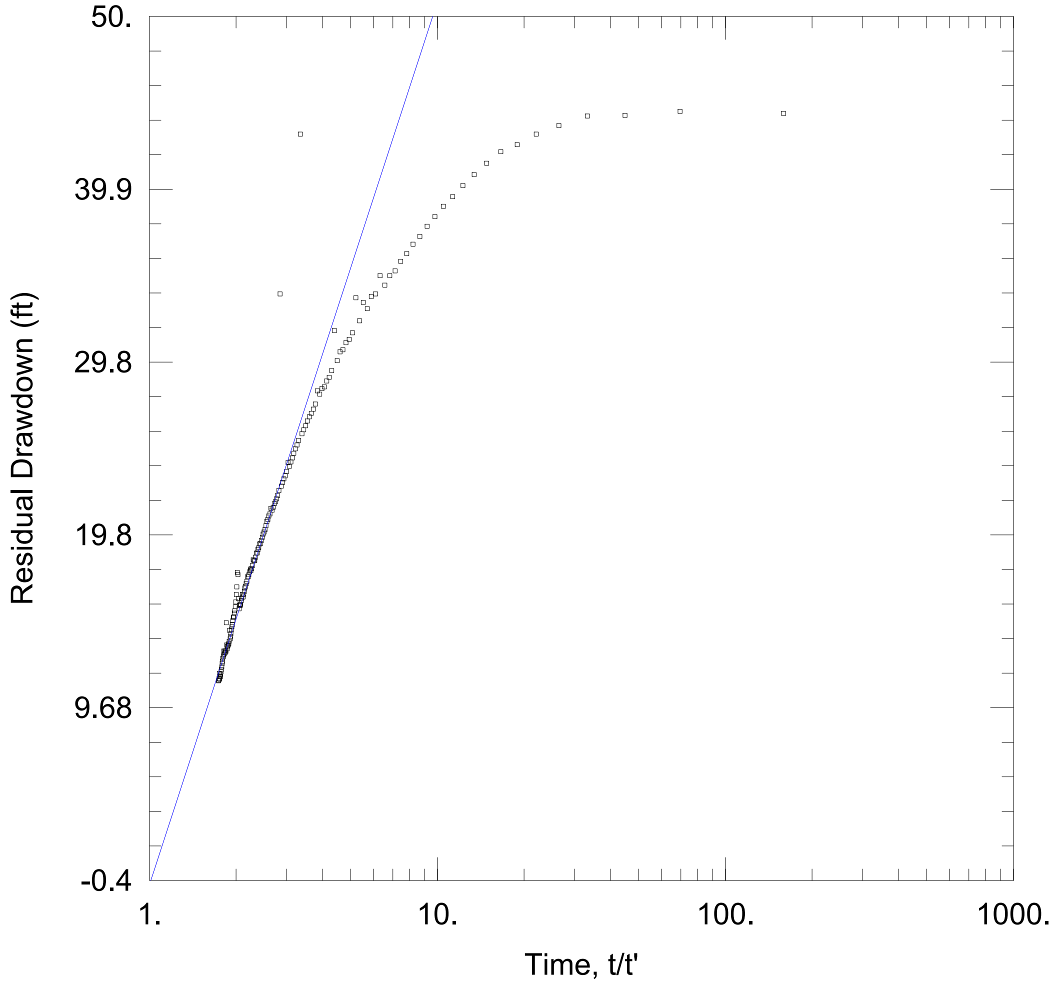
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Lowe	1947758.99	10909644.82

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 376.7 ft^2/day S = 1.243E-5



WELL TEST ANALYSIS

Data Set: \...\ow ochoa - theis recovery.aqt
Date: 11/15/17 Time: 08:06:36

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 2
Test Date: 12/29/2016

AQUIFER DATA

Saturated Thickness: 81. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 2	1946169.751	10908337.14

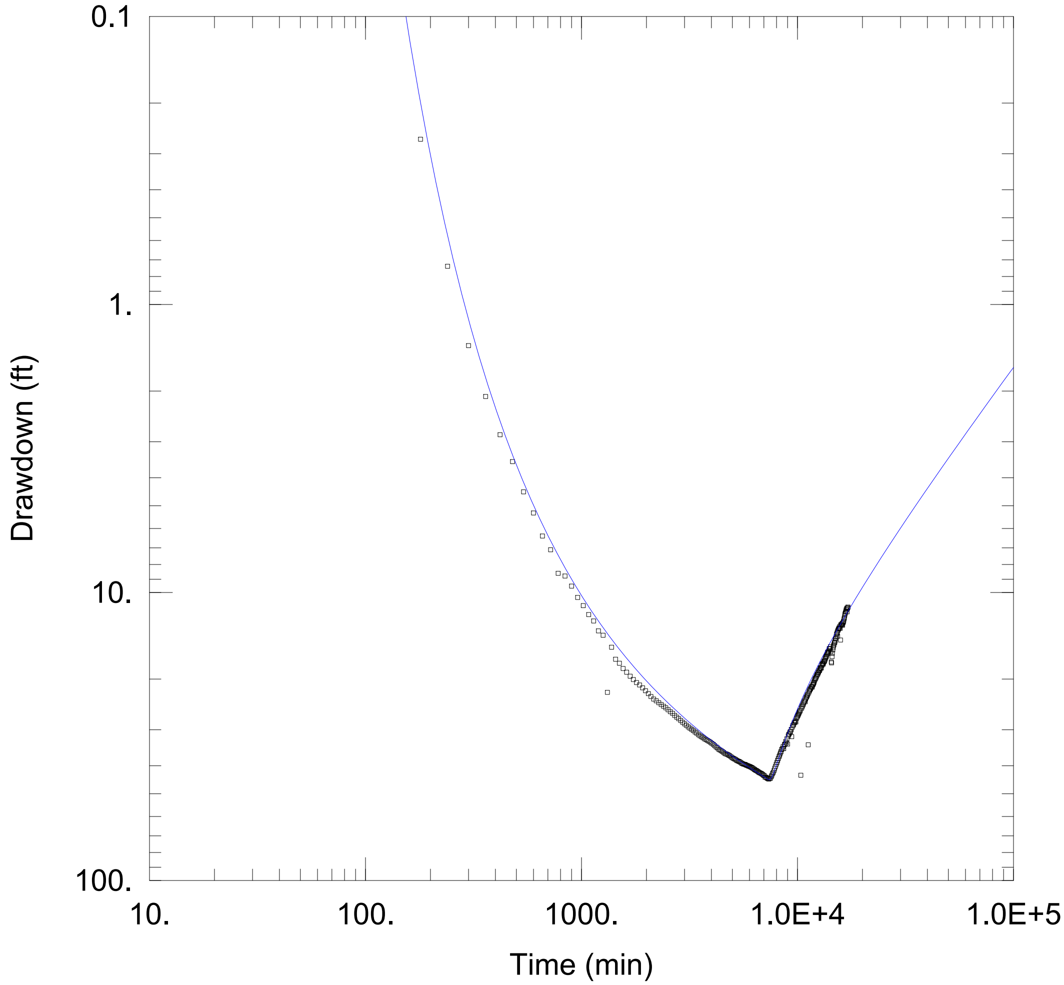
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Ochoa	1948354.429	10907814.57

SOLUTION

Aquifer Model: Confined Solution Method: Theis (Recovery)

T = 396.7 ft^2/day S/S' = 1.03



WELL TEST ANALYSIS

Data Set: \...\ow ochoa - theis.aqt
Date: 11/15/17 Time: 08:06:51

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 2
Test Date: 12/29/2016

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 2	1946169.751	10908337.14

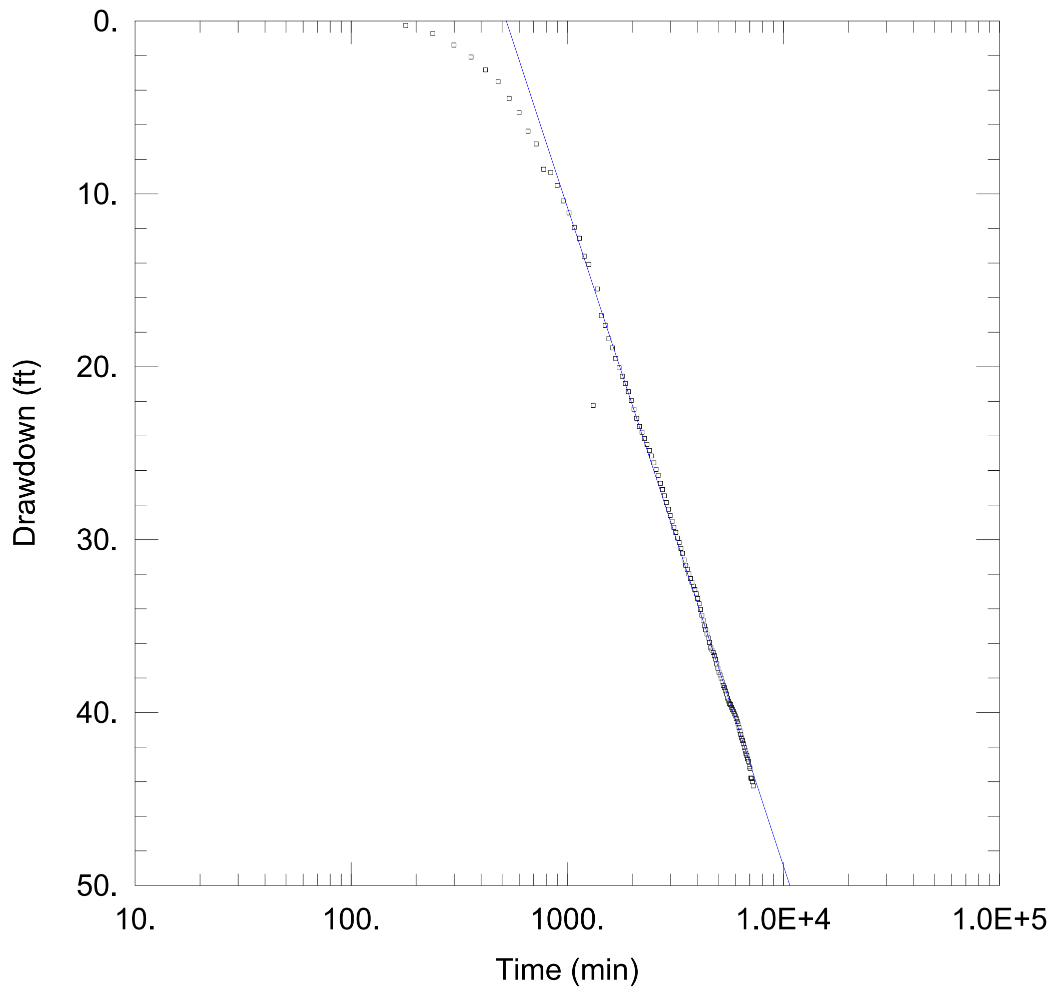
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Ochoa	1948354.429	10907814.57

SOLUTION

Aquifer Model: Confined
Solution Method: Theis

T = 402. ft^2/day
S = 0.0001303
Kz/Kr = 0.01
b = 81. ft



WELL TEST ANALYSIS

Data Set: \...\ow ochoa.aqt
Date: 11/15/17 Time: 08:07:04

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 2
Test Date: 12/29/2016

AQUIFER DATA

Saturated Thickness: 81. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 2	1946169.751	10908337.14

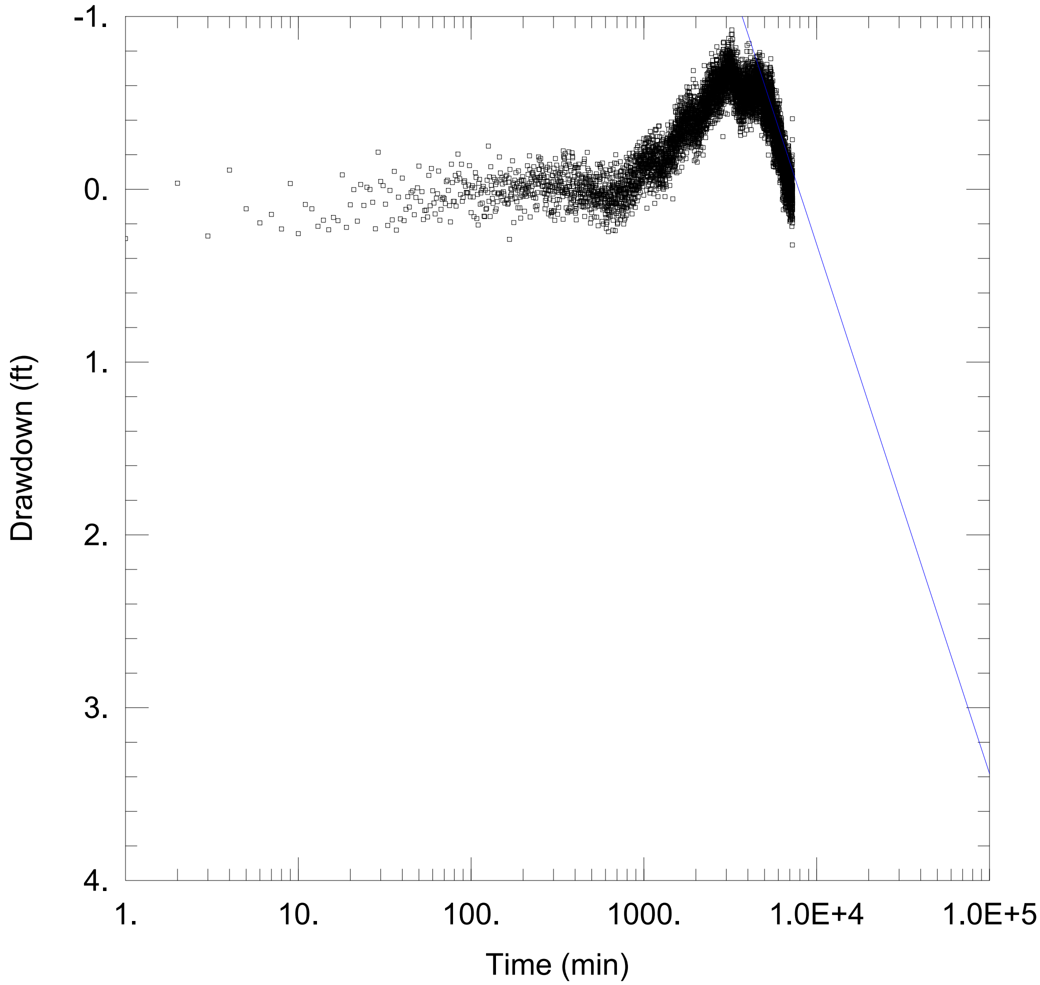
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Ochoa	1948354.429	10907814.57

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 536.1 ft^2/day S = 8.659E-5



WELL TEST ANALYSIS

Data Set: \...\OW Odell 1.aqt
Date: 11/15/17 Time: 08:07:19

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 2
Test Date: 12/29/2016

AQUIFER DATA

Saturated Thickness: 81. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 2	1946169.751	10908337.14

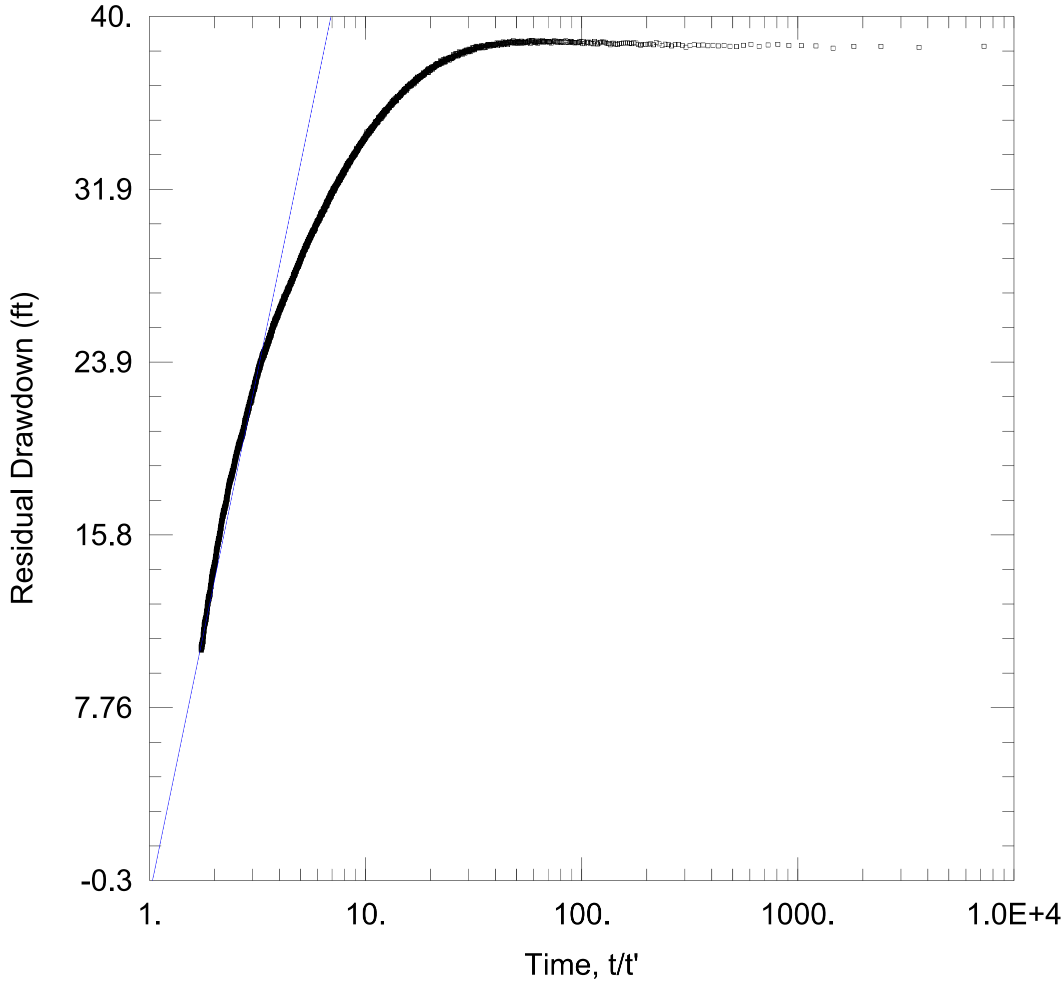
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Odell Well No. 1	1947452.756	10907426.21

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 6669.6 ft^2/day S = 0.03306



WELL TEST ANALYSIS

Data Set: \...\OW Odell 3 - theis recovery.aqt
Date: 11/15/17 Time: 08:07:40

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 2
Test Date: 12/29/2016

AQUIFER DATA

Saturated Thickness: 81. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 2	1946169.751	10908337.14

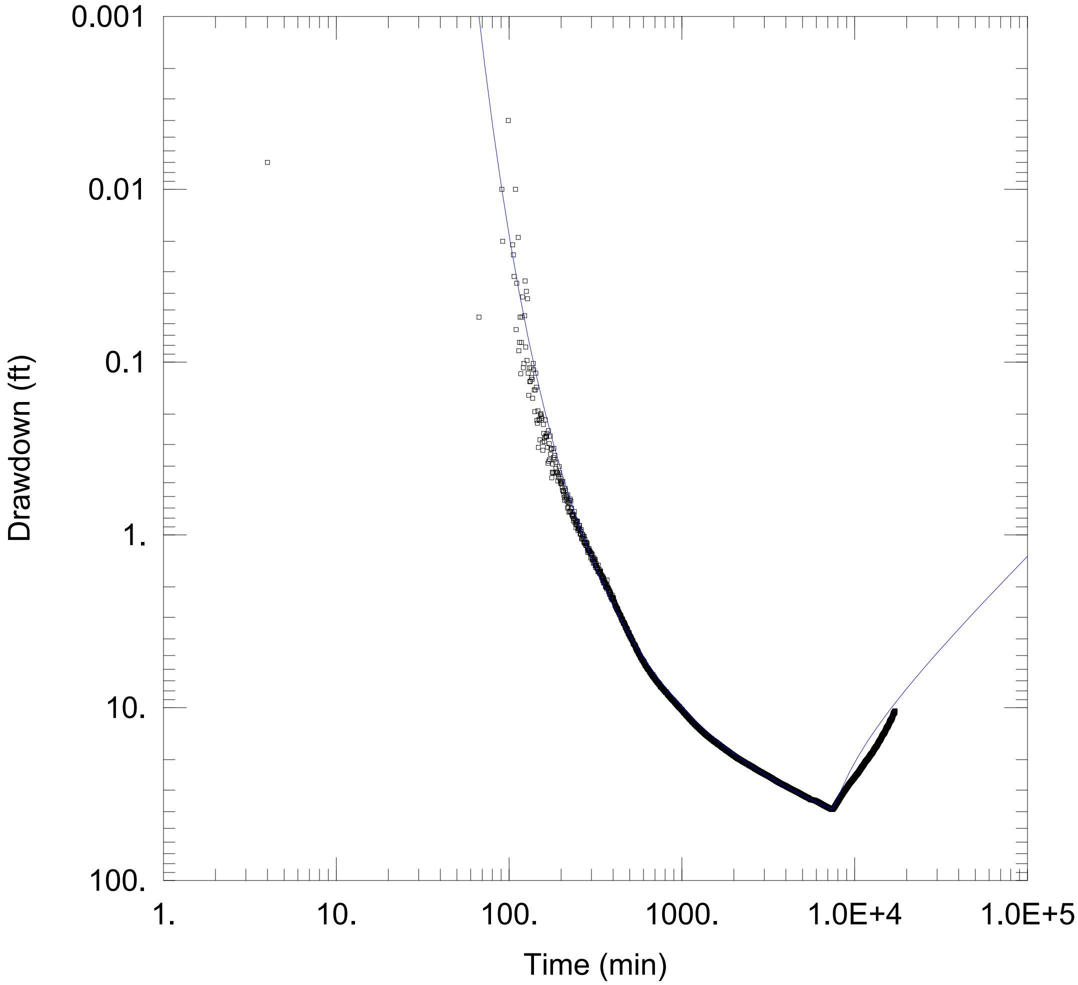
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Odell Well No. 3	1946190.223	10905502.23

SOLUTION

Aquifer Model: Confined Solution Method: Theis (Recovery)

T = 418.6 ft^2/day S/S' = 1.048



WELL TEST ANALYSIS

Data Set: \...\OW Odell 3 - theis.aqt
Date: 11/15/17 Time: 08:08:11

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 2
Test Date: 12/29/2016

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 2	1946169.751	10908337.14

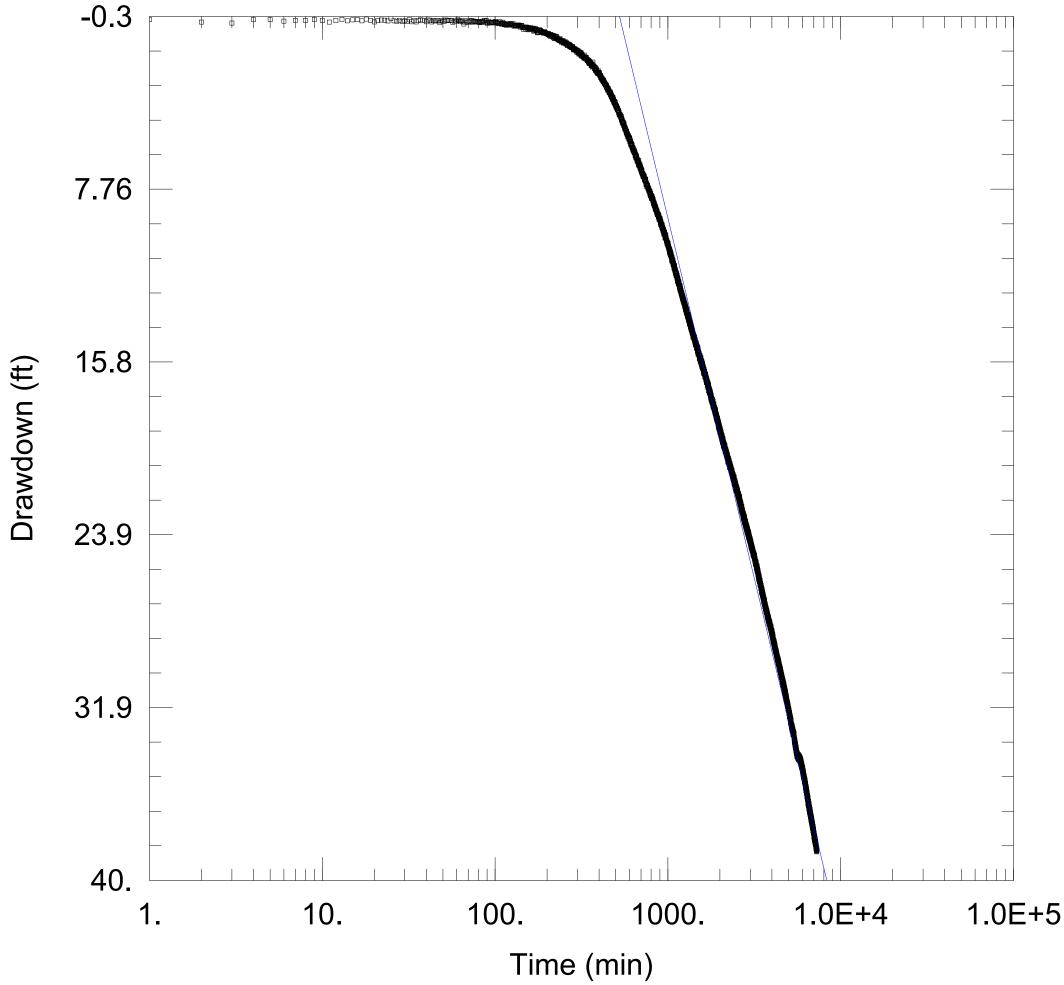
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Odell Well No. 3	1946190.223	10905502.23

SOLUTION

Aquifer Model: Confined Solution Method: Theis

T = 500.1 ft^2/day
S = 8.711E-5
Kz/Kr = 0.01
b = 81. ft



WELL TEST ANALYSIS

Data Set: \...\OW Odell 3.aqt
Date: 11/15/17 Time: 08:08:25

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 2
Test Date: 12/29/2016

AQUIFER DATA

Saturated Thickness: 81. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 2	1946169.751	10908337.14

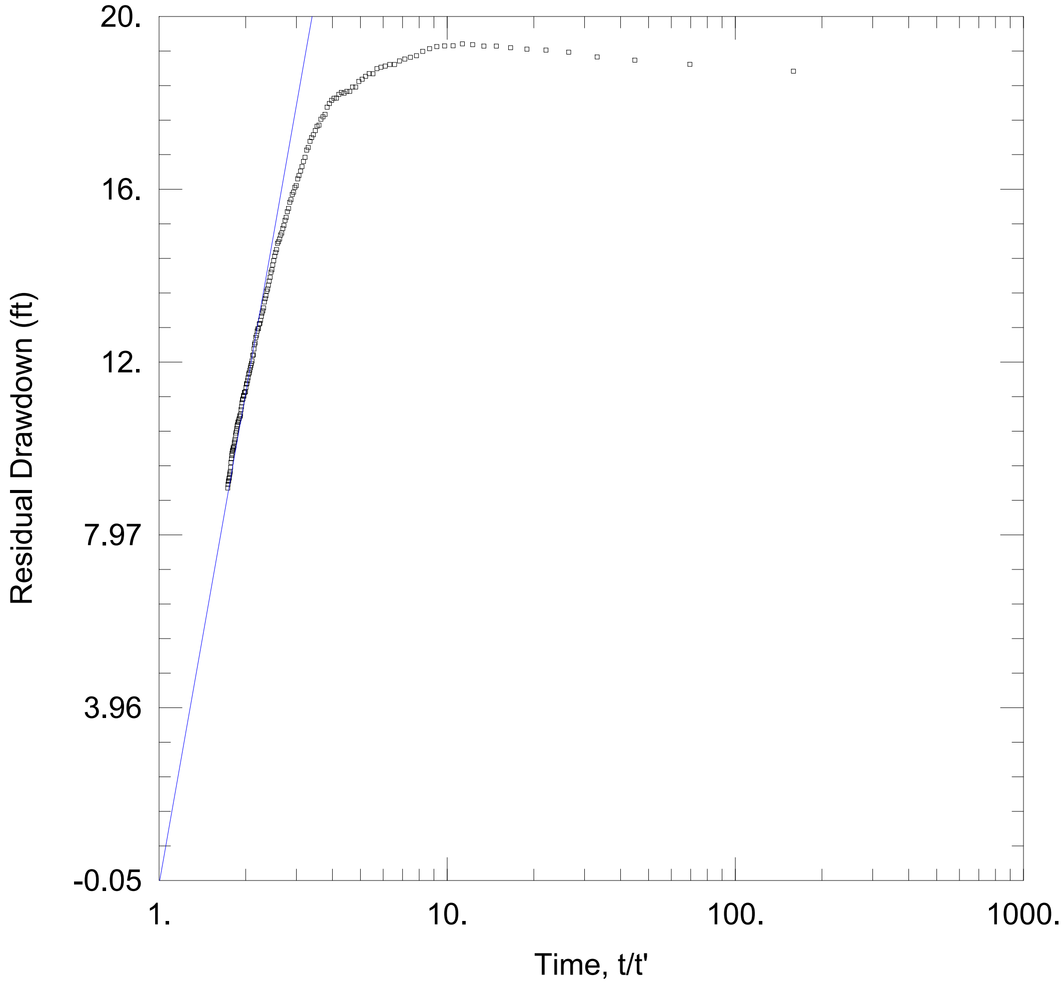
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Odell Well No. 3	1946190.223	10905502.23

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 608. ft^2/day S = 6.326E-5



WELL TEST ANALYSIS

Data Set: \...\OW wood 1 -theis recovery.aqt
Date: 11/15/17 Time: 08:08:44

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 2
Test Date: 12/29/2016

AQUIFER DATA

Saturated Thickness: 81. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 2	1946169.751	10908337.14

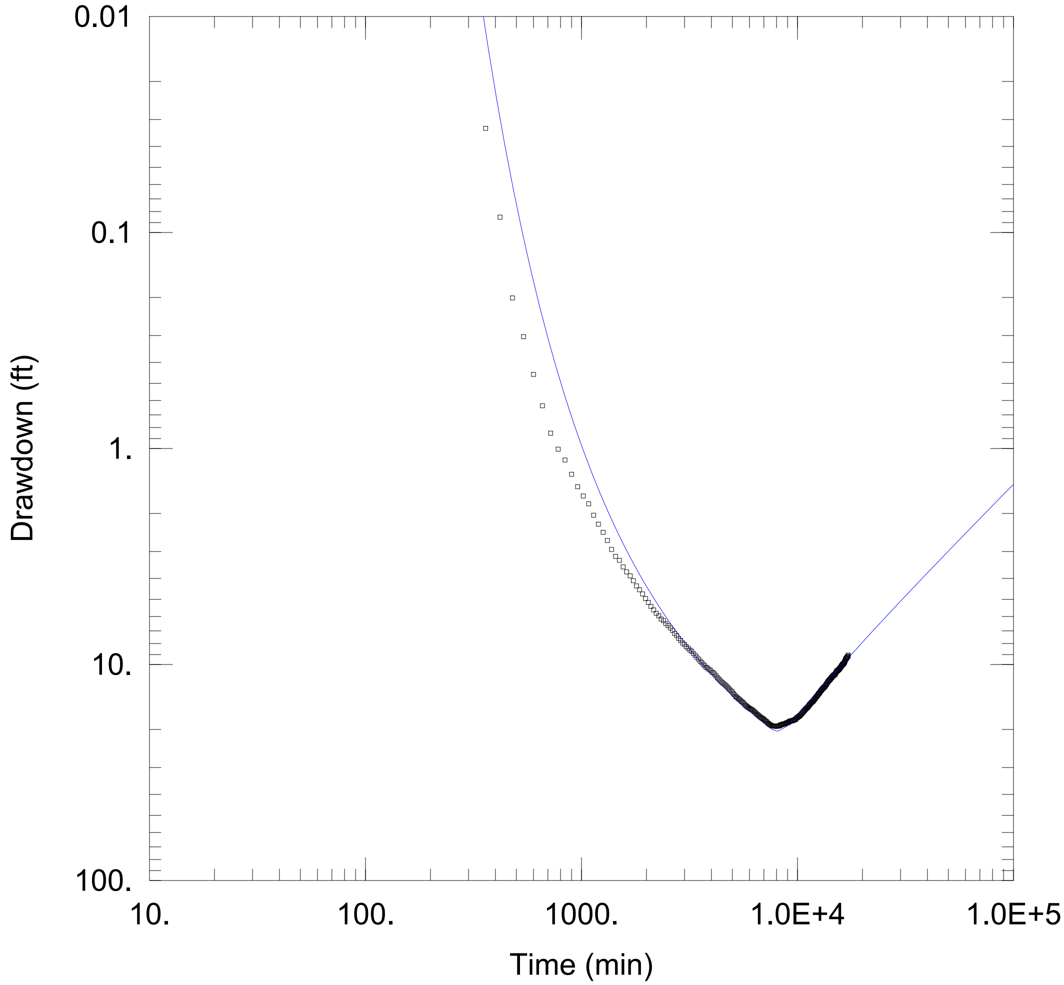
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Wood 1	1946282.382	10904234.12

SOLUTION

Aquifer Model: Confined Solution Method: Theis (Recovery)

T = 538.7 ft^2/day S/S' = 1.009



WELL TEST ANALYSIS

Data Set: \...\OW wood 1 -theis.aqt
Date: 11/15/17 Time: 08:08:57

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 2
Test Date: 12/29/2016

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 2	1946169.751	10908337.14

Observation Wells

Well Name	X (ft)	Y (ft)
▫ Wood 1	1946282.382	10904234.12

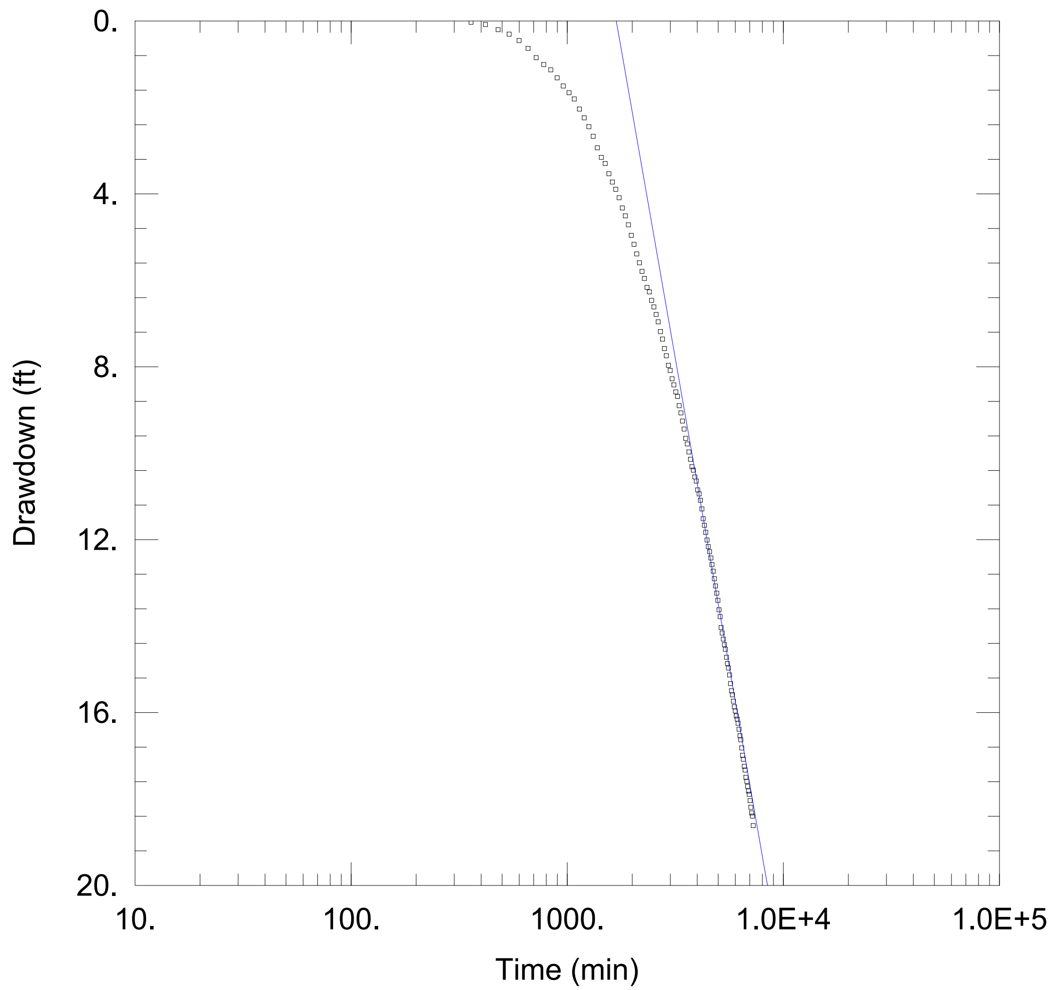
SOLUTION

Aquifer Model: Confined

Solution Method: Theis

T = 446.8 ft^2/day
Kz/Kr = 0.01

S = 0.0001474
b = 81. ft



WELL TEST ANALYSIS

Data Set: \...\OW wood 1.aqt
Date: 11/15/17 Time: 08:09:11

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 2
Test Date: 12/29/2016

AQUIFER DATA

Saturated Thickness: 81. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 2	1946169.751	10908337.14

Observation Wells

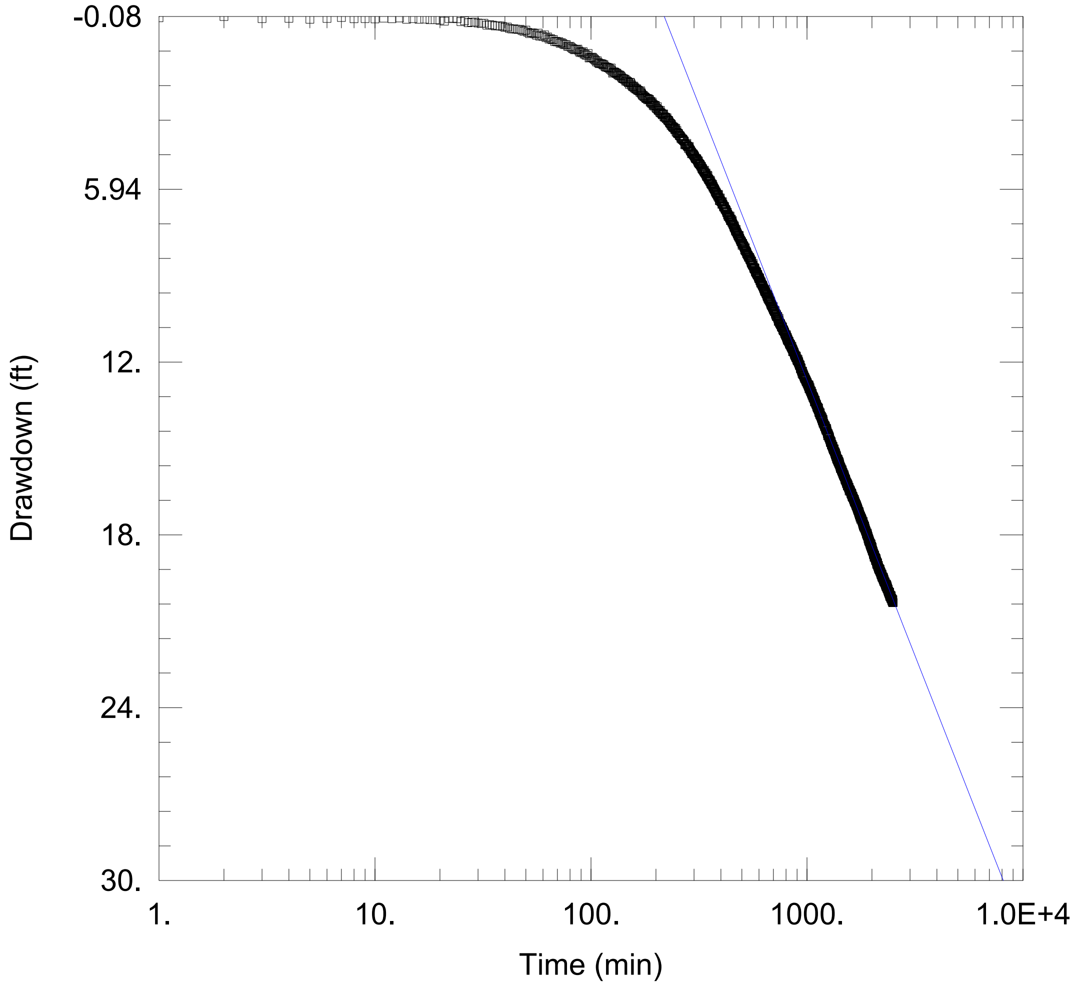
Well Name	X (ft)	Y (ft)
▫ Wood 1	1946282.382	10904234.12

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 714.2 ft^2/day S = 0.0001116

Odell 3 Test



WELL TEST ANALYSIS

Data Set: \...\bridges 1 cooper jacob.aqt
Date: 12/11/17 Time: 08:52:56

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 3
Test Date: 1/22/2015

AQUIFER DATA

Saturated Thickness: 318. ft
Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 3	1946190.223	10905502.23

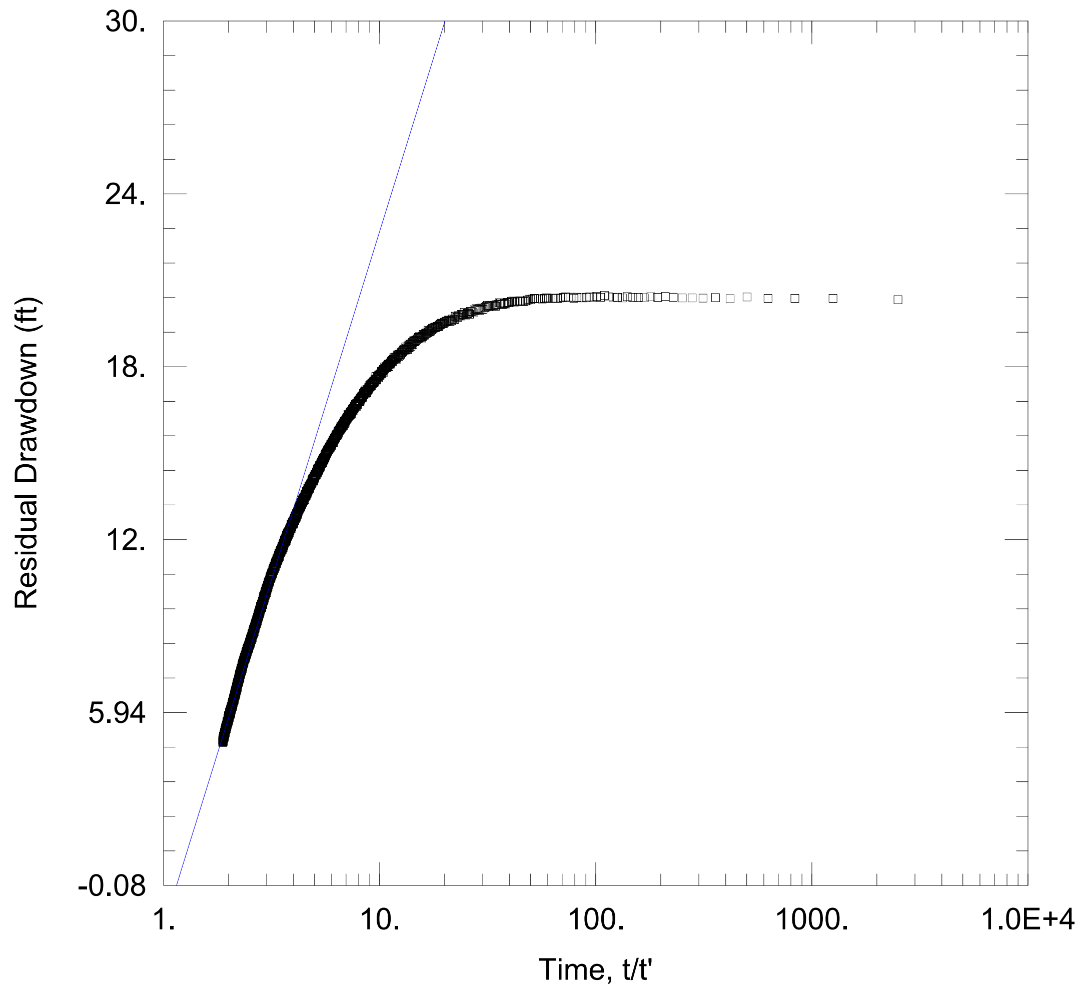
Observation Wells

Well Name	X (ft)	Y (ft)
□ Bridges Well No. 1	1949181.234	10907020.34

SOLUTION

Aquifer Model: Confined
Solution Method: Cooper-Jacob

T = 382.8 ft^2/day
S = 1.171E-5



WELL TEST ANALYSIS

Data Set: \...\bridges 1 theis recovery.aqt
Date: 12/11/17 Time: 08:53:04

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 3
Test Date: 1/22/2015

AQUIFER DATA

Saturated Thickness: 318. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 3	1946190.223	10905502.23

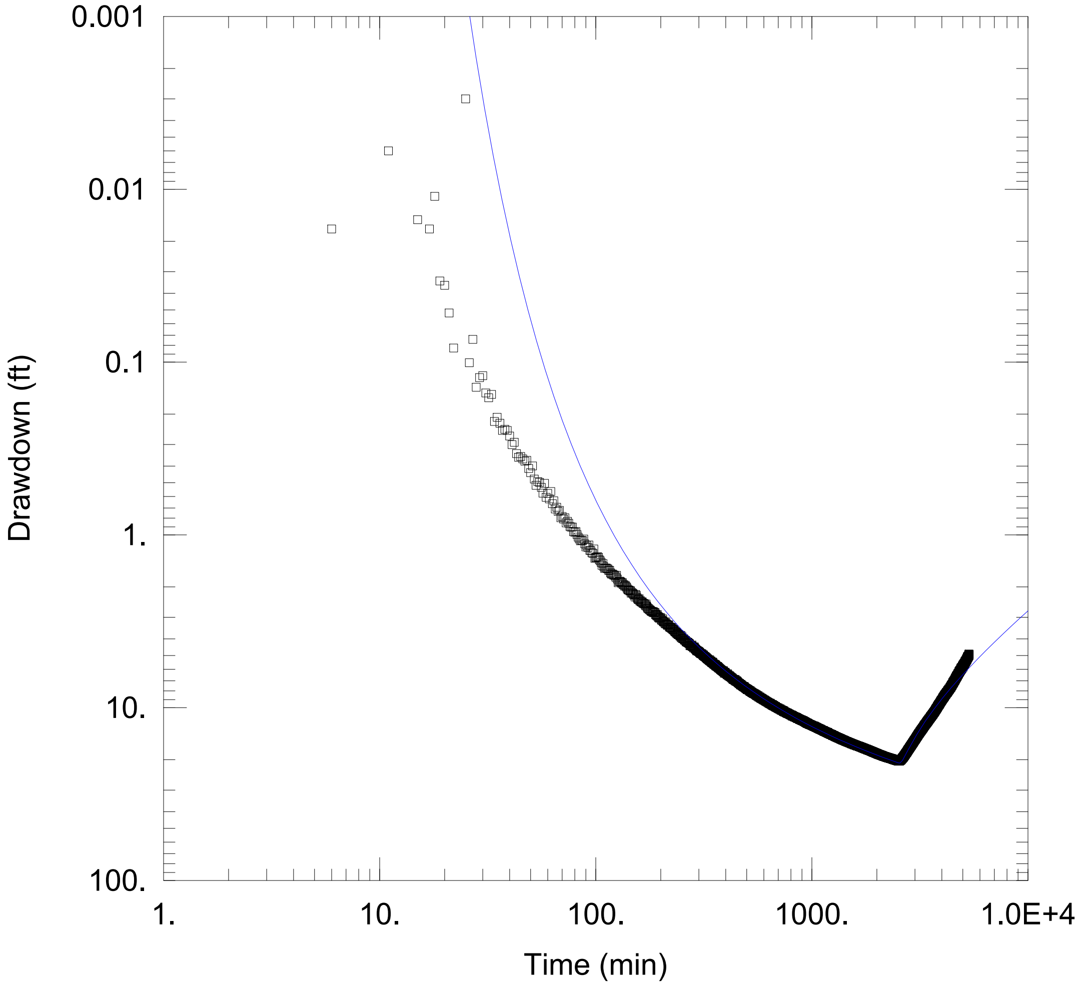
Observation Wells

Well Name	X (ft)	Y (ft)
□ Bridges Well No. 1	1949181.234	10907020.34

SOLUTION

Aquifer Model: Confined Solution Method: Theis (Recovery)

T = 303.1 ft^2/day S/S' = 1.158



WELL TEST ANALYSIS

Data Set: \...\bridges 1 theis.aqt
Date: 12/11/17 Time: 08:53:11

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 3
Test Date: 1/22/2015

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 3	1946190.223	10905502.23

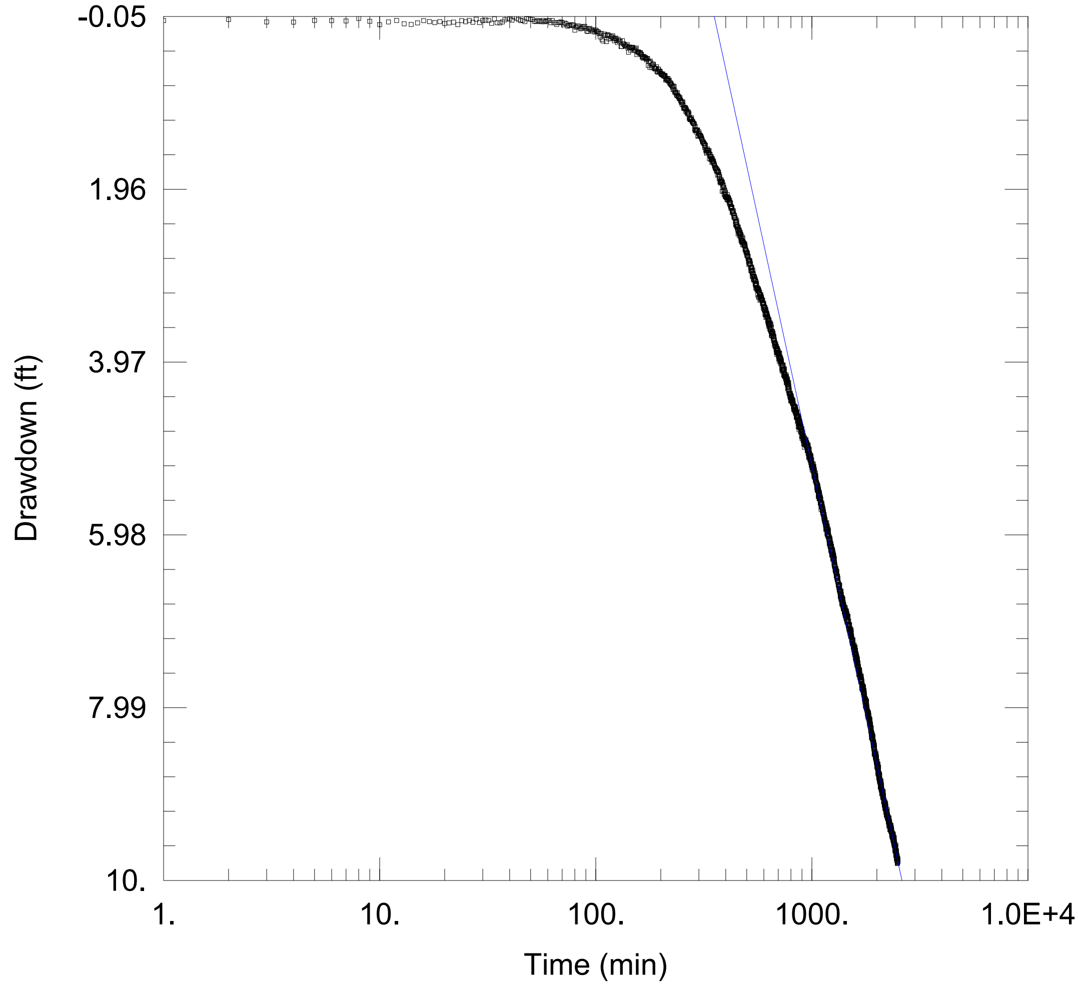
Observation Wells

Well Name	X (ft)	Y (ft)
□ Bridges Well No. 1	1949181.234	10907020.34

SOLUTION

Aquifer Model: Confined
Solution Method: Theis

T = 326.2 ft^2/day
S = 1.438E-5
Kz/Kr = 0.01
b = 318. ft



WELL TEST ANALYSIS

Data Set: \...\Odell 1 cooper jacob.aqt
Date: 12/11/17 Time: 08:53:18

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: ODell Well No. 3
Test Date: 1/22/2015

AQUIFER DATA

Saturated Thickness: 318. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 3	1946190.223	10905502.23

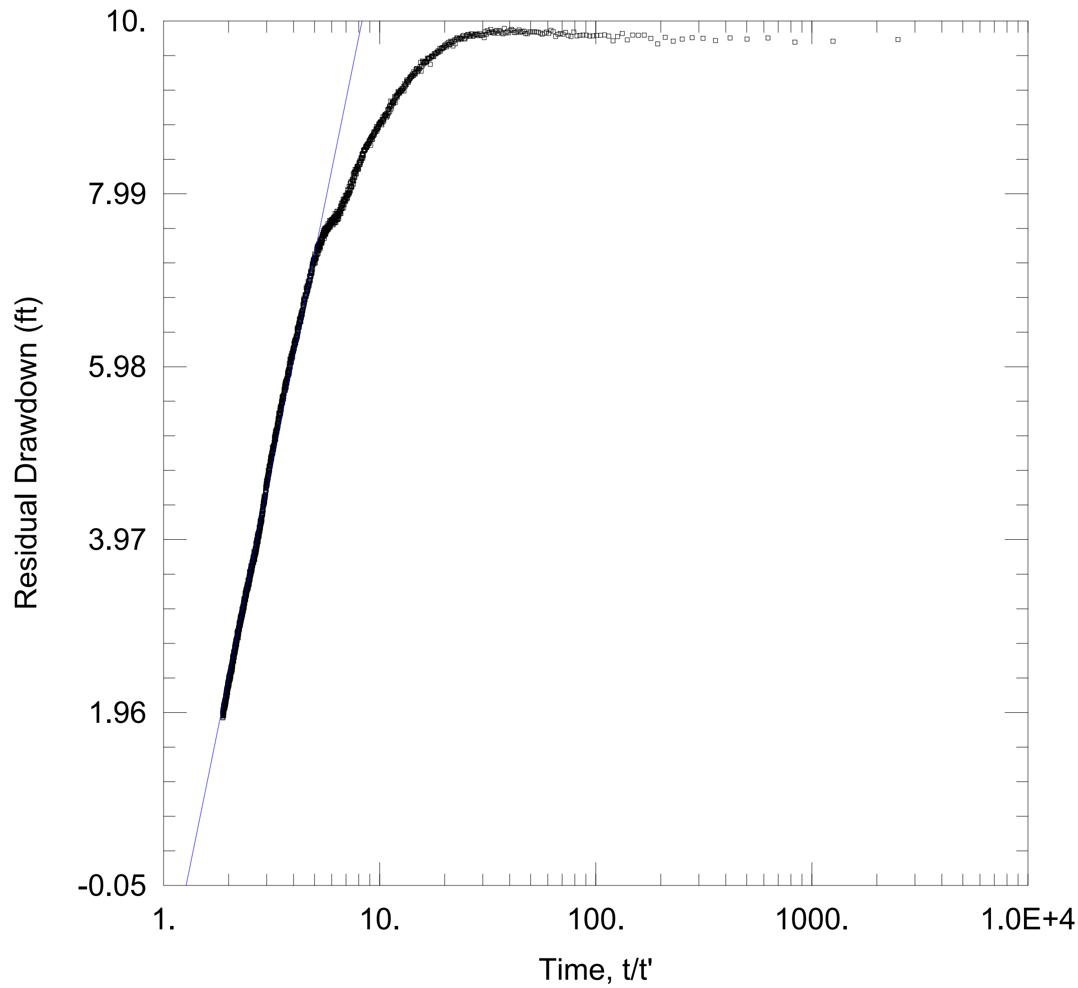
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Odell Well No. 1	1947452.756	10907426.21

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 634.2 ft^2/day S = 6.673E-5



WELL TEST ANALYSIS

Data Set: \...\Odell 1 theis recovery.aqt
Date: 12/11/17 Time: 08:53:25

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 3
Test Date: 1/22/2015

AQUIFER DATA

Saturated Thickness: 318. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 3	1946190.223	10905502.23

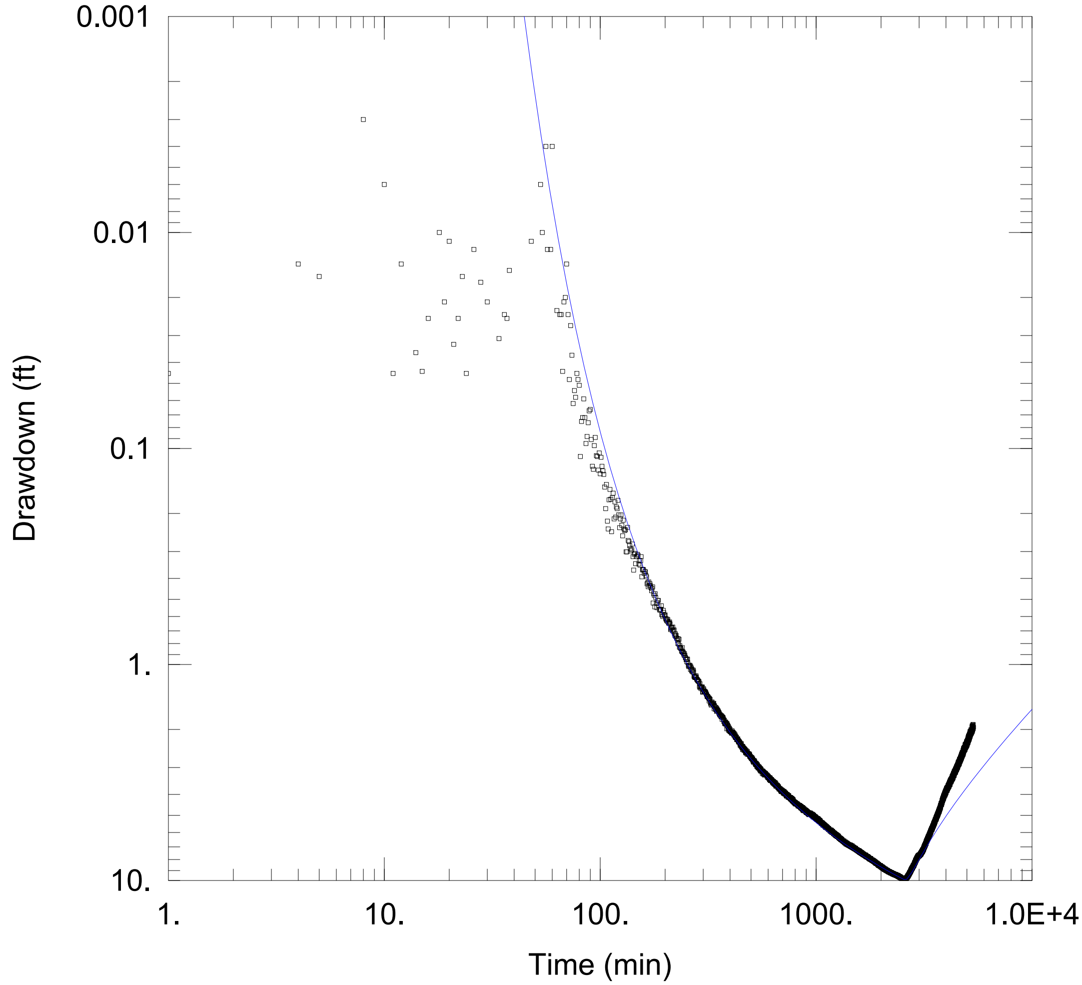
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Odell Well No. 1	1947452.756	10907426.21

SOLUTION

Aquifer Model: Confined Solution Method: Theis (Recovery)

T = 594.4 ft^2/day S/S' = 1.285



WELL TEST ANALYSIS

Data Set: \...\Odell 1 theis.aqt
Date: 12/11/17 Time: 08:53:34

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 3
Test Date: 1/22/2015

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 3	1946190.223	10905502.23

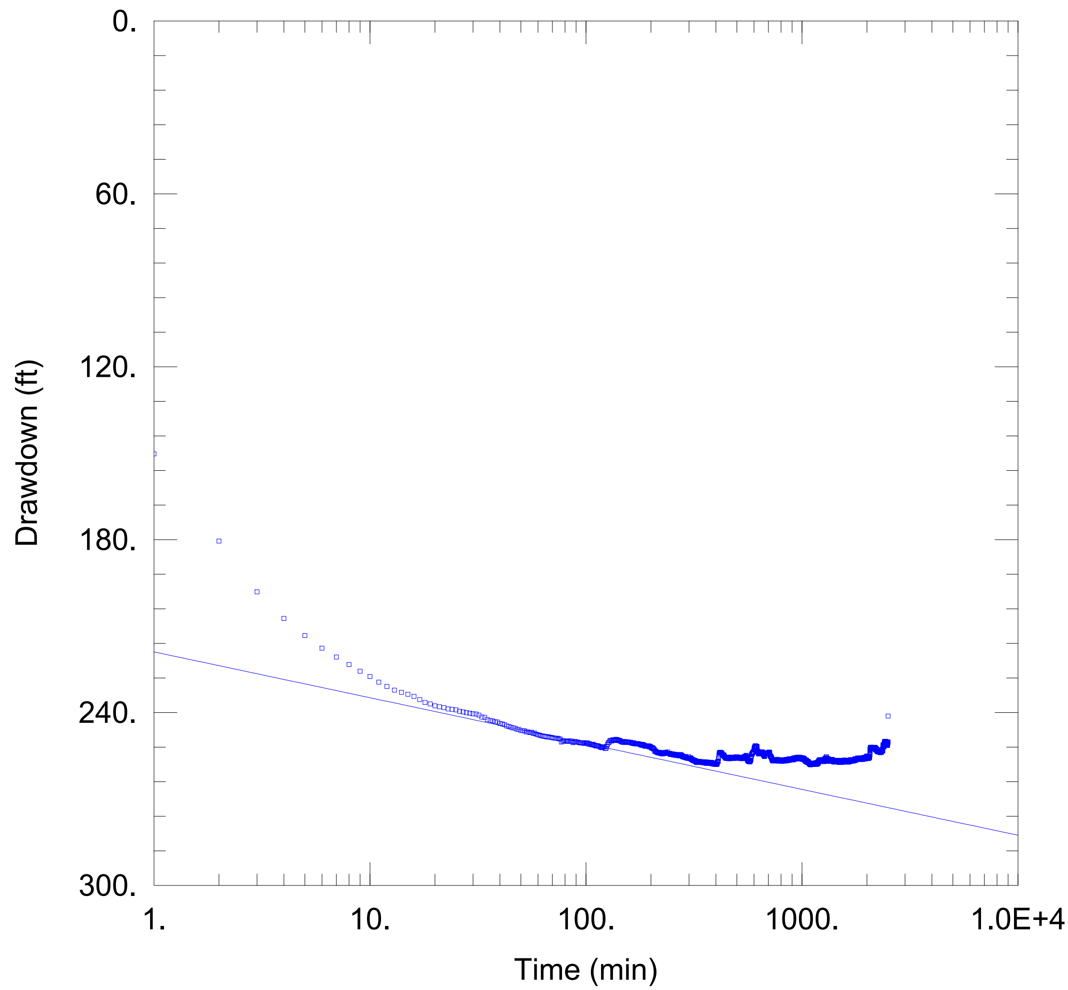
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Odell Well No. 1	1947452.756	10907426.21

SOLUTION

Aquifer Model: Confined
Solution Method: Theis

T = 550.2 ft^2/day
S = 8.347E-5
Kz/Kr = 0.01
b = 318. ft



WELL TEST ANALYSIS

Data Set: \...\Odell 3 cooper jacob.aqt
Date: 12/11/17 Time: 08:53:43

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 3
Test Date: 1/22/2015

AQUIFER DATA

Saturated Thickness: 318. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 3	1946190.223	10905502.23

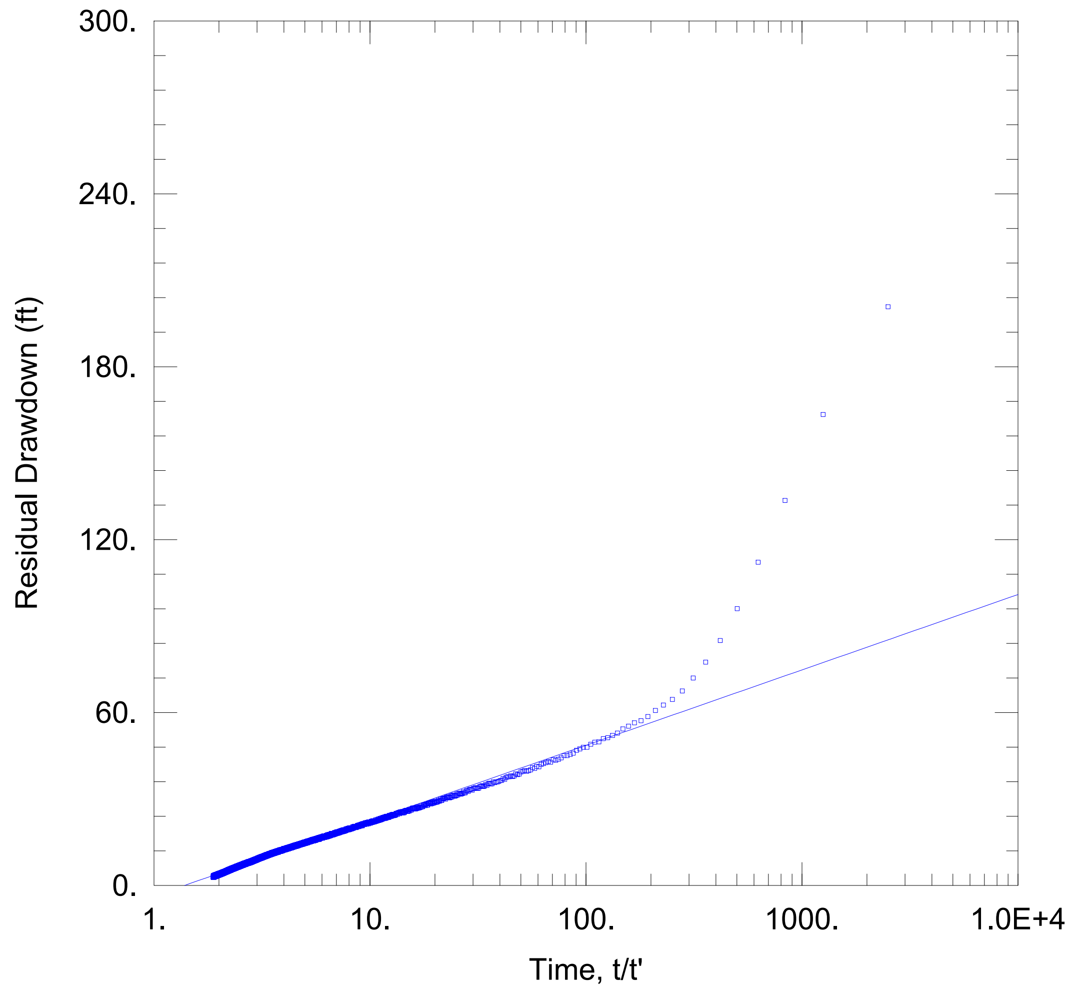
Observation Wells

Well Name	X (ft)	Y (ft)
▫ Odell Well No. 3	1946190.223	10905502.23

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 461.2 ft^2/day S = 7.294E-14



WELL TEST ANALYSIS

Data Set: \...\Odell 3theis recovery.aqt
Date: 12/11/17 Time: 08:53:51

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 3
Test Date: 1/22/2015

AQUIFER DATA

Saturated Thickness: 318. ft Anisotropy Ratio (Kz/Kr): 0.01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 3	1946190.223	10905502.23

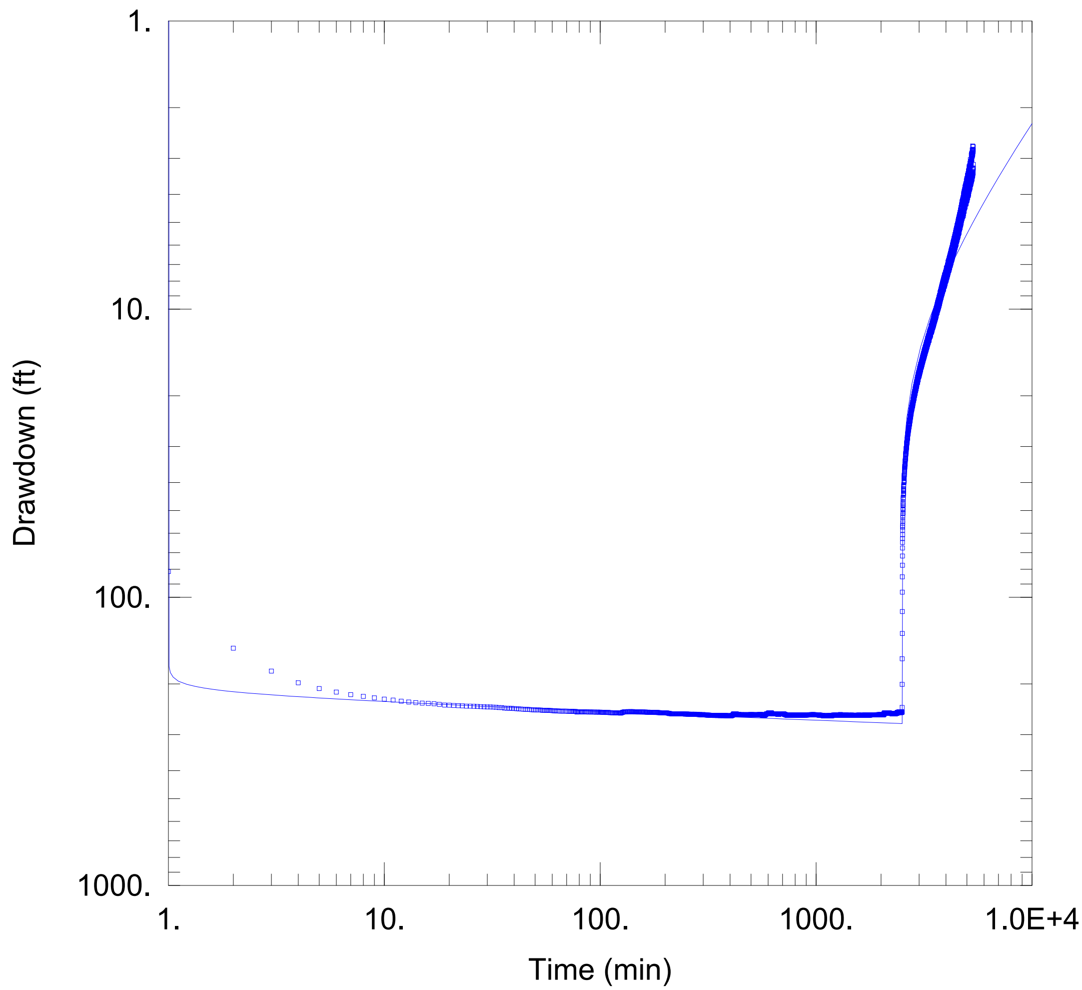
Observation Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 3	1946190.223	10905502.23

SOLUTION

Aquifer Model: Confined Solution Method: Theis (Recovery)

T = 280.5 ft^2/day S/S' = 1.388



WELL TEST ANALYSIS

Data Set: \...\Odell 3theis.aqt
Date: 12/11/17 Time: 08:54:00

PROJECT INFORMATION

Company: Wet Rock Groundwater Services
Client: Electro Purification, LLC
Project: 100-
Location: Hays County, TX
Test Well: Odell Well No. 3
Test Date: 1/22/2015

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
Odell Well No. 3	1946190.223	10905502.23

Observation Wells

Well Name	X (ft)	Y (ft)
▫ Odell Well No. 3	1946190.223	10905502.23

SOLUTION

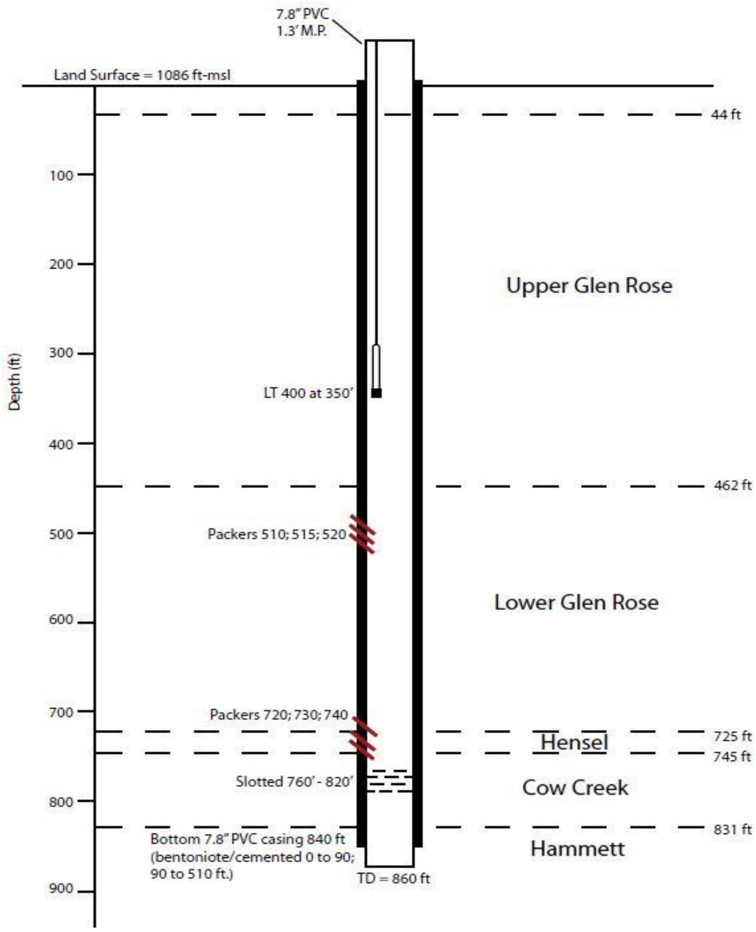
Aquifer Model: Confined
Solution Method: Theis

T = 404. ft^2/day
S = 7.212E-12
Kz/Kr = 0.01
b = 318. ft

Attachment D:

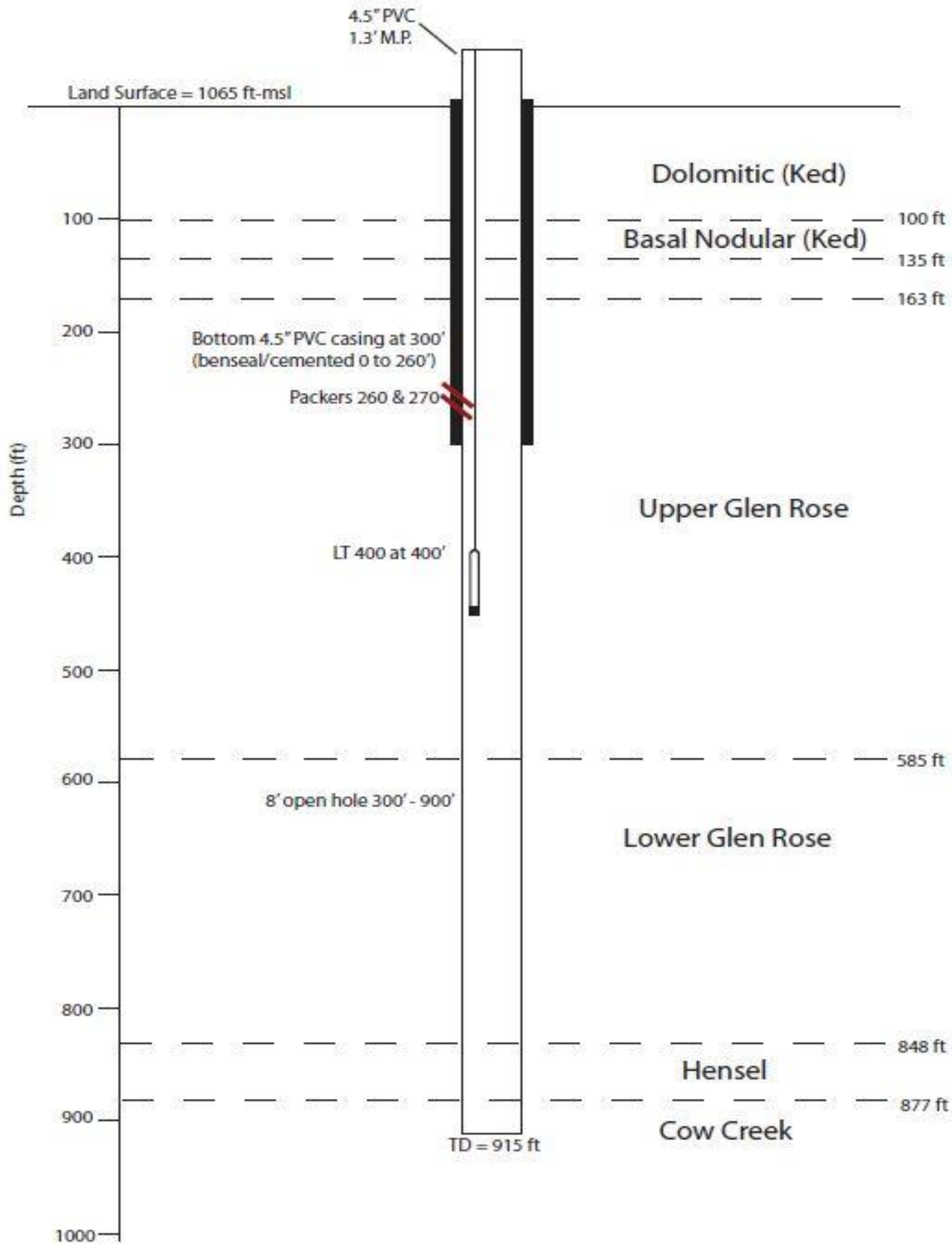
Well Profiles

Lowe Monitor well

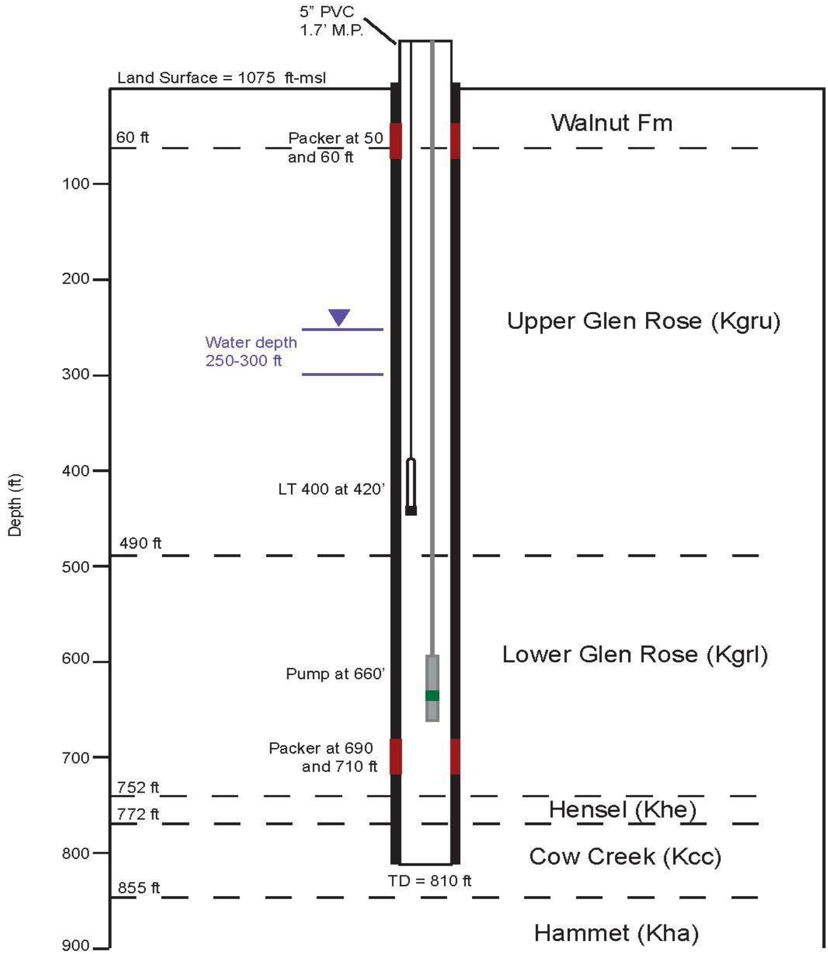


Pump Depth= 760'

Miller Monitor well

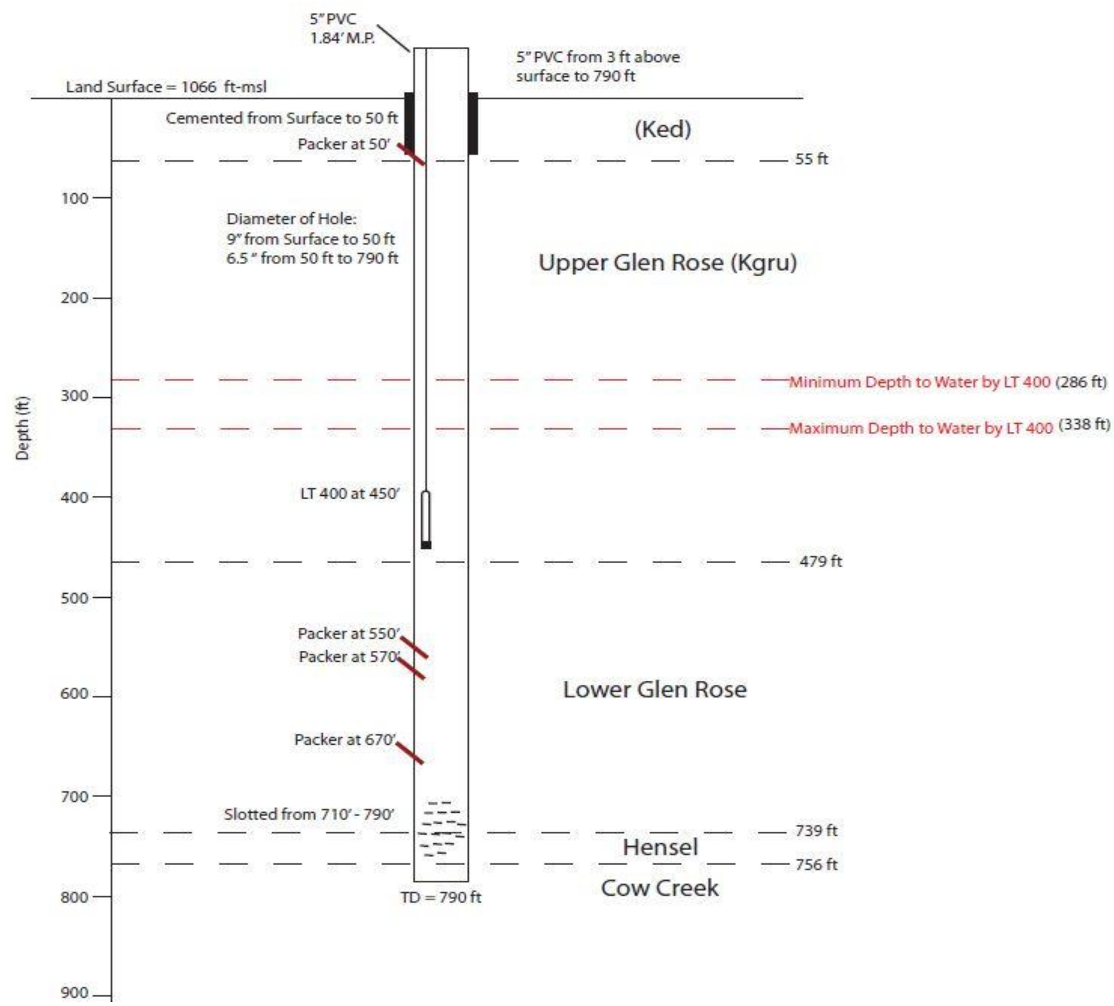


Ochoa Monitor well

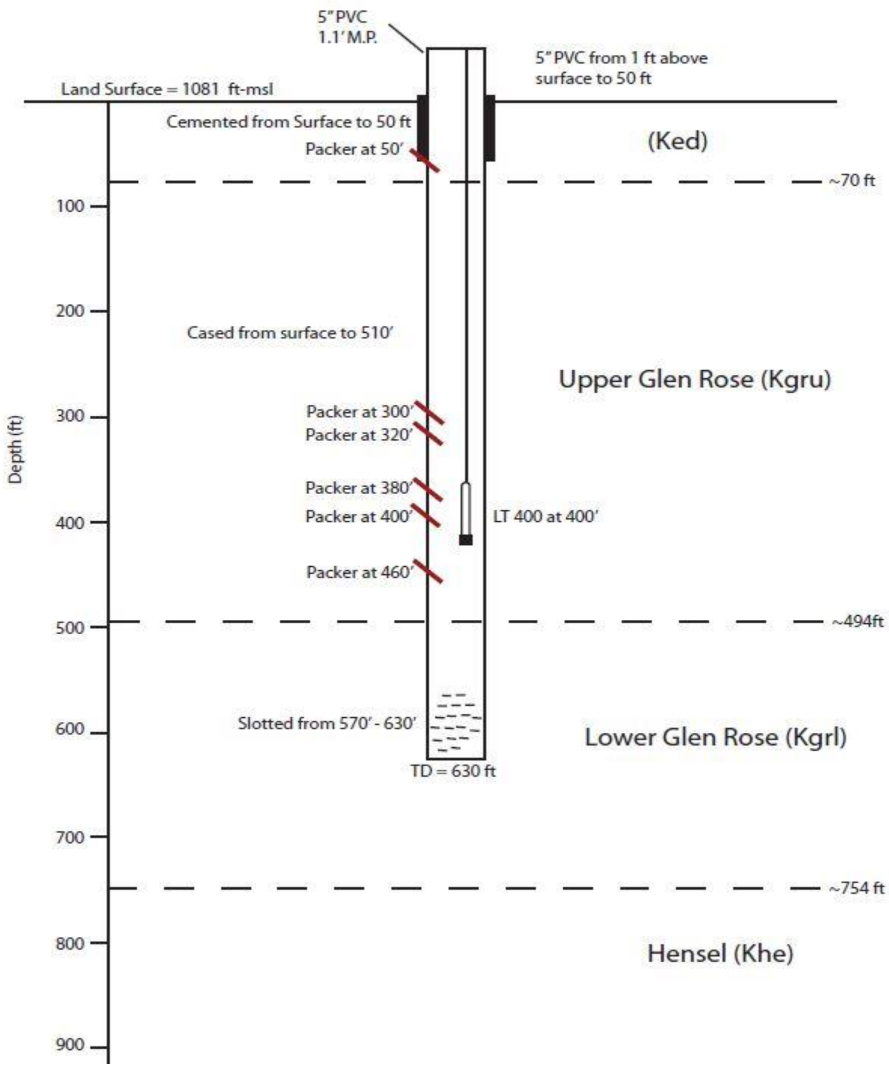


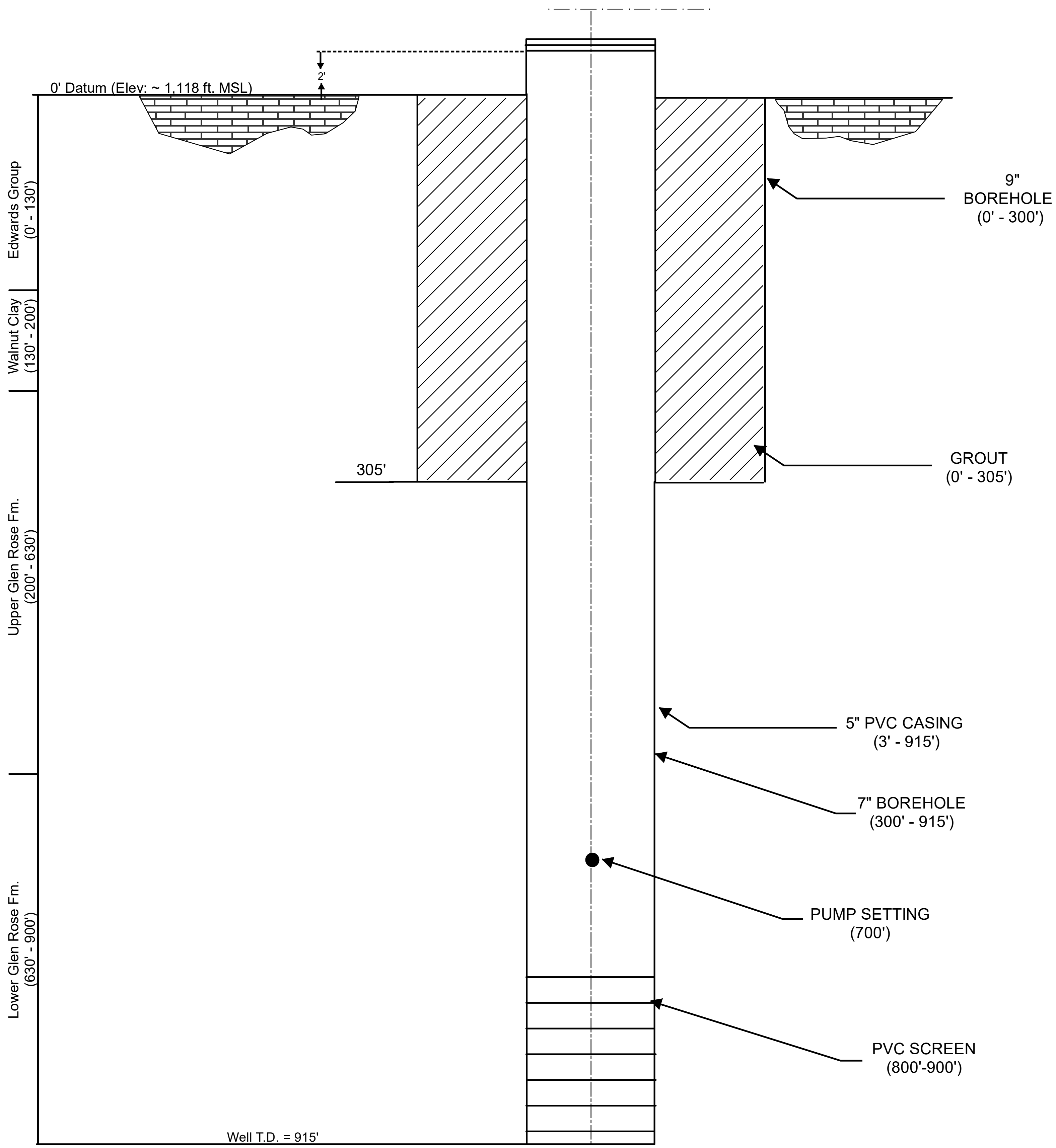
Construction Notes:
5" PVC from +1.7 to 810 ft;
Cemented from surface to 50 ft.
Assume slotted at Kcc.

Wood 01 Monitor well



Wood Deer Barn Monitor well



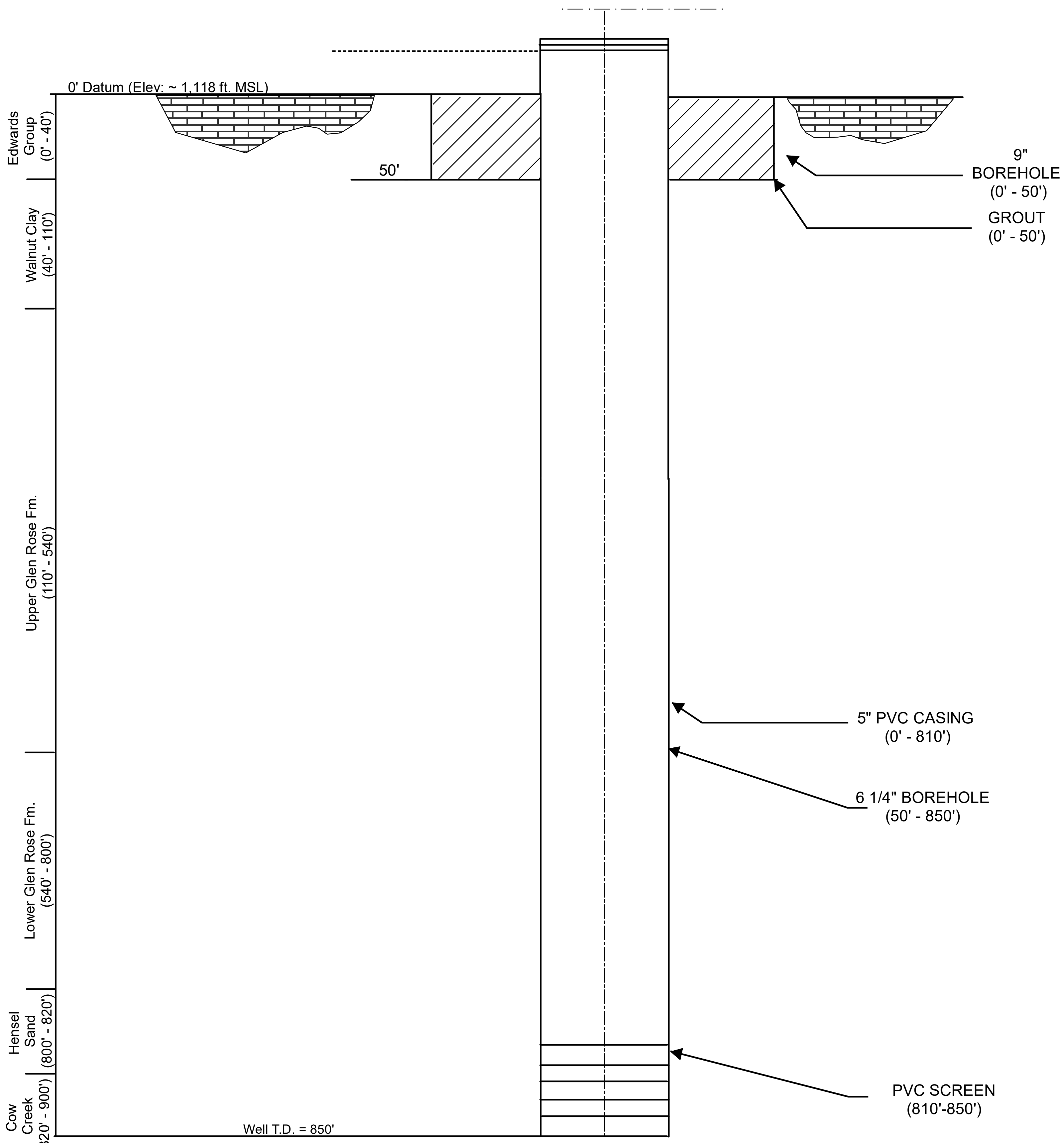


Notes:

1. Well profile based upon infromation provided by the District.
2. Formational picks estimated based upon information provided by the district.

	Well Profile: Bernal Well
SCALE: NONE	**Electro Purification, LLC**
APPROVED BY: KK DATE: 11-10-17	**Hays County, Texas**
REVISED BY: DATE:	
DRAWING NO: W-1	
SHEET:	

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



Notes:

1. Well profile based upon infromation provided by the District.

SCALE: NONE	**Well Profile: Bowman Well**
APPROVED BY: KK DATE: 11-10-17	**Electro Purification, LLC** **Hays County, Texas**
REVISED BY: DATE:	
DRAWING NO: W-1	
SHEET:	

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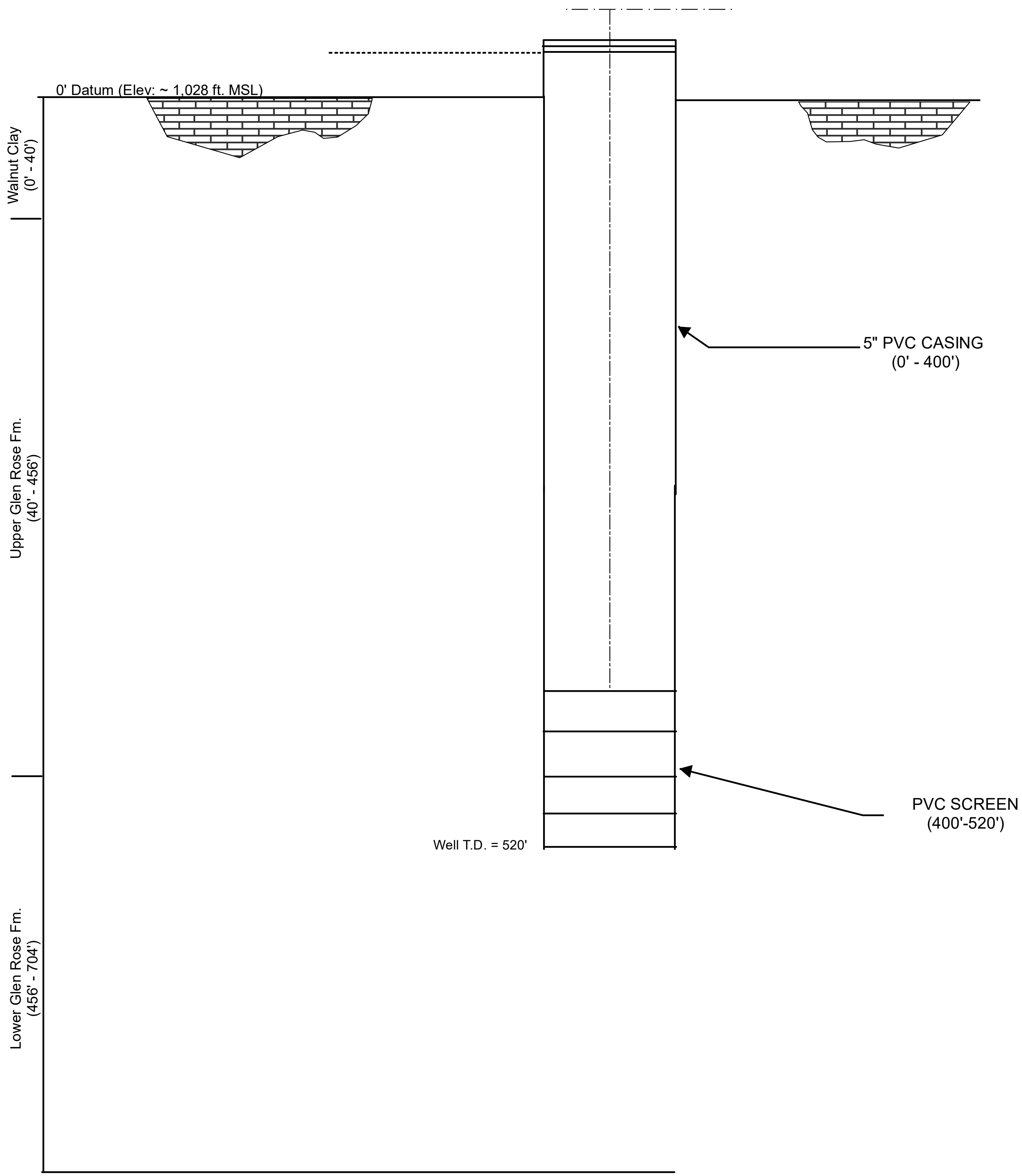

Notes:

1. Well profile based upon infromation provided by the District.
2. Fomrational picks estimated based upon information provided by the District.

SCALE: NONE	**Well Profile: Carnes Well**
APPROVED BY: KK DATE: 11-10-17	**Electro Purification, LLC**
REVISED BY: DATE:	**Hays County, Texas**
DRAWING NO: W-1	
SHEET:	

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TBPG Firm No: 50038
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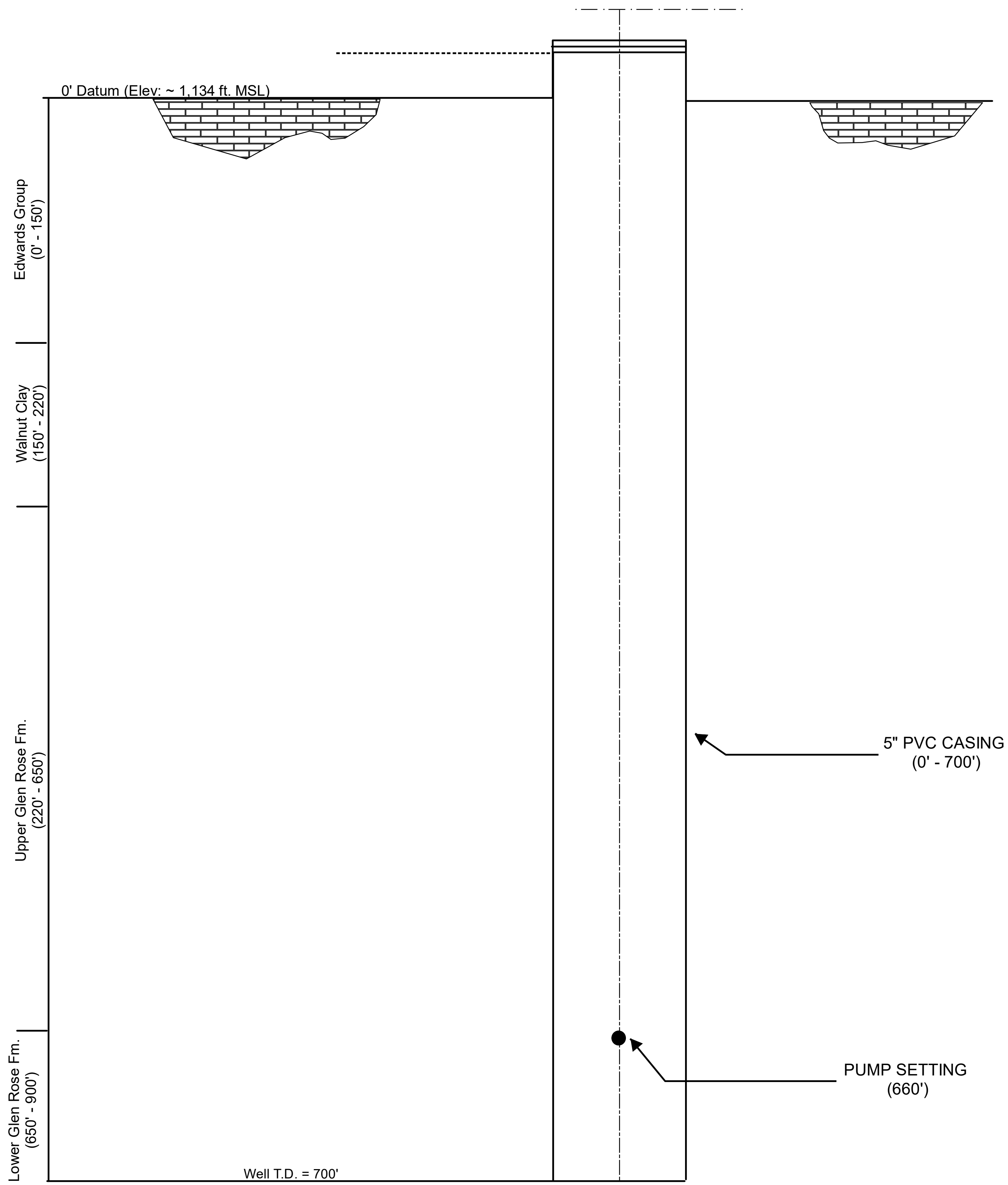
Austin, Texas 78734
Ph: 512.773.3226 www.wetrockgs.com

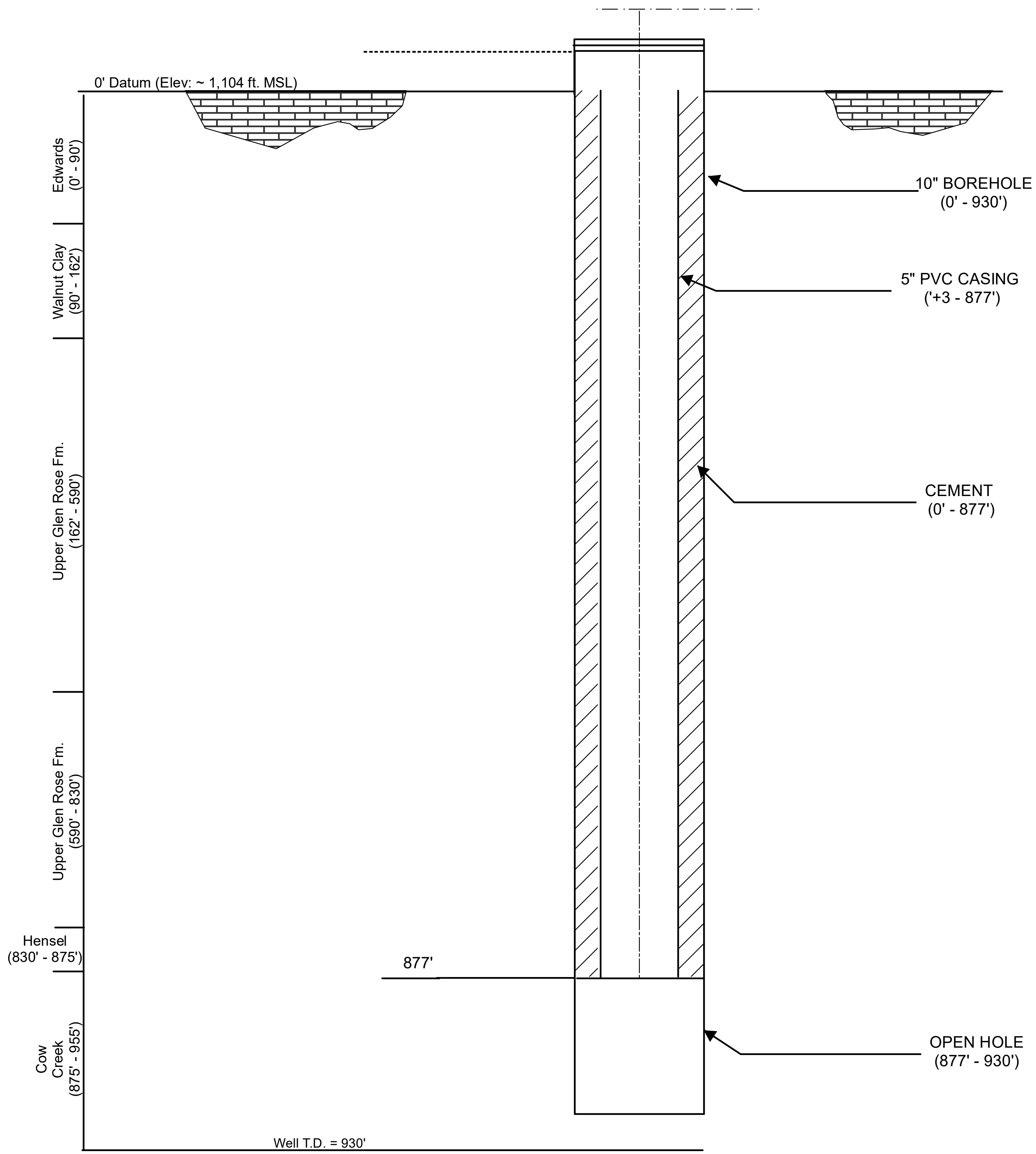


Notes:

1. Well profile based upon infromation provided by the District.
2. Fomrational picks estimated based upon information provided by the District.

SCALE: NONE	**Well Profile: Czerwieknski Well**
APPROVED BY: KK DATE: 11-10-17	**Electro Purification, LLC** **Hays County, Texas**
REVISED BY: DATE:	
DRAWING NO: W-1	
SHEET:	

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



Notes:

1. Well profile based upon infromation provided by the District.
2. Fomrational picks estimated based upon information provided by the District.

Well Profile: Escondida 1 Well

Electro Purification, LLC

Hays County, Texas

SCALE: NONE

APPROVED BY: KK DATE: 11-10-17

REVISED BY: DATE:

DRAWING NO: W-1

SHEET:

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Groundwater Specialists
TBPG Firm No: 50038
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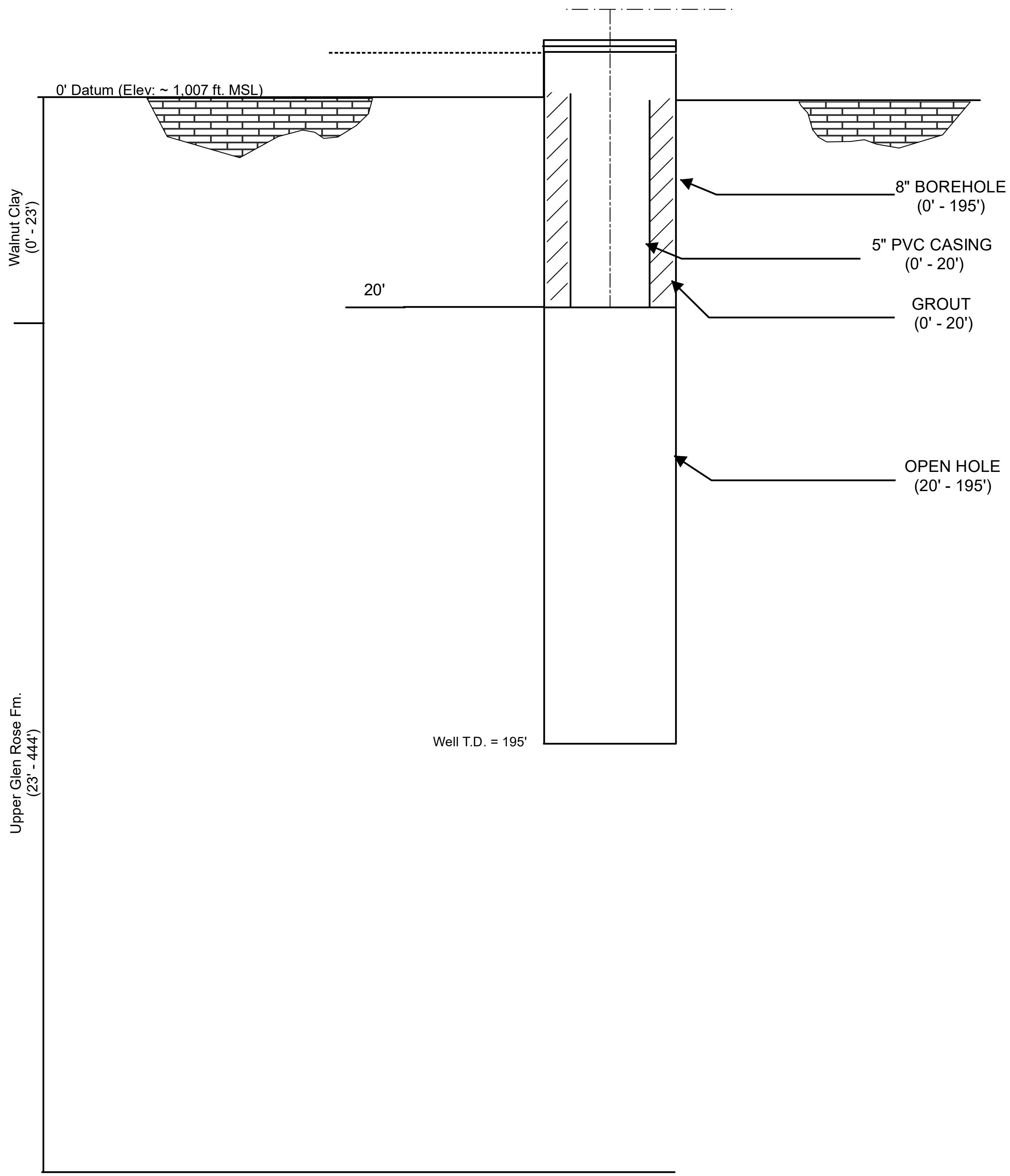
Ph: 512.773.3226 www.wetrockgs.com



Notes:

1. Well profile based upon infromation provided by the District.
2. Fomrational picks estimated based upon information provided by the District.

Well Profile: Gluesenkamp

Electro Purification, LLC

Hays County, Texas

SCALE: NONE

APPROVED BY: KK DATE: 11-10-17

REVISED BY: DATE:

DRAWING NO: W-1

SHEET:

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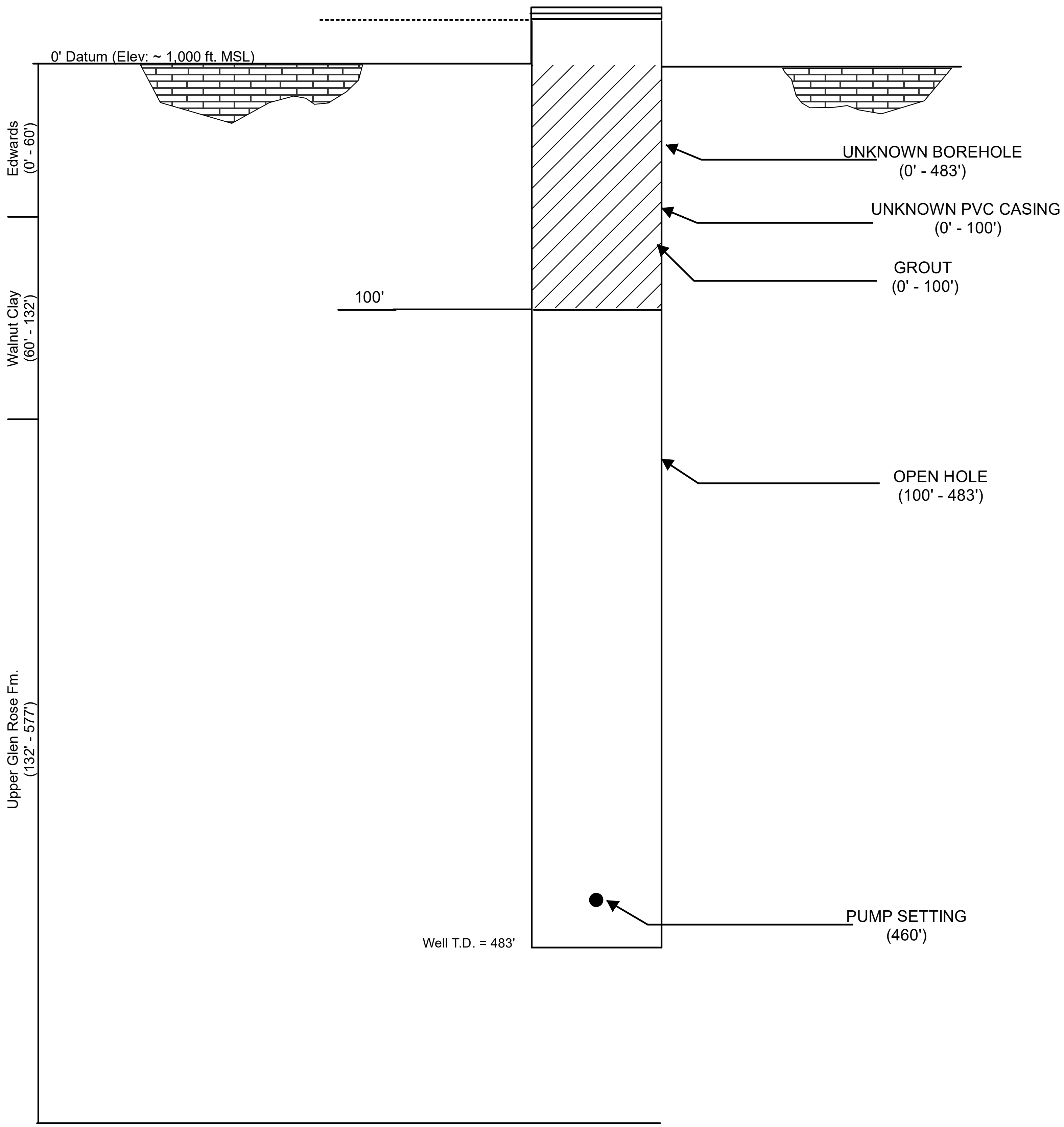
Groundwater Specialists
TBPG Firm No: 50038
317 Ranch Road 620 South, Suite 203
Austin, Texas 78734
Ph: 512.773.3226 www.wetrockgs.com



Notes:

1. Well profile based upon infromation provided by the District.
2. Fomrational picks estimated based upon information provided by the District.

SCALE: NONE	**Well Profile: Green**
APPROVED BY: KK DATE: 11-10-17	**Electro Purification, LLC**
REVISED BY: DATE:	**Hays County, Texas**
DRAWING NO: W-1	
SHEET:	

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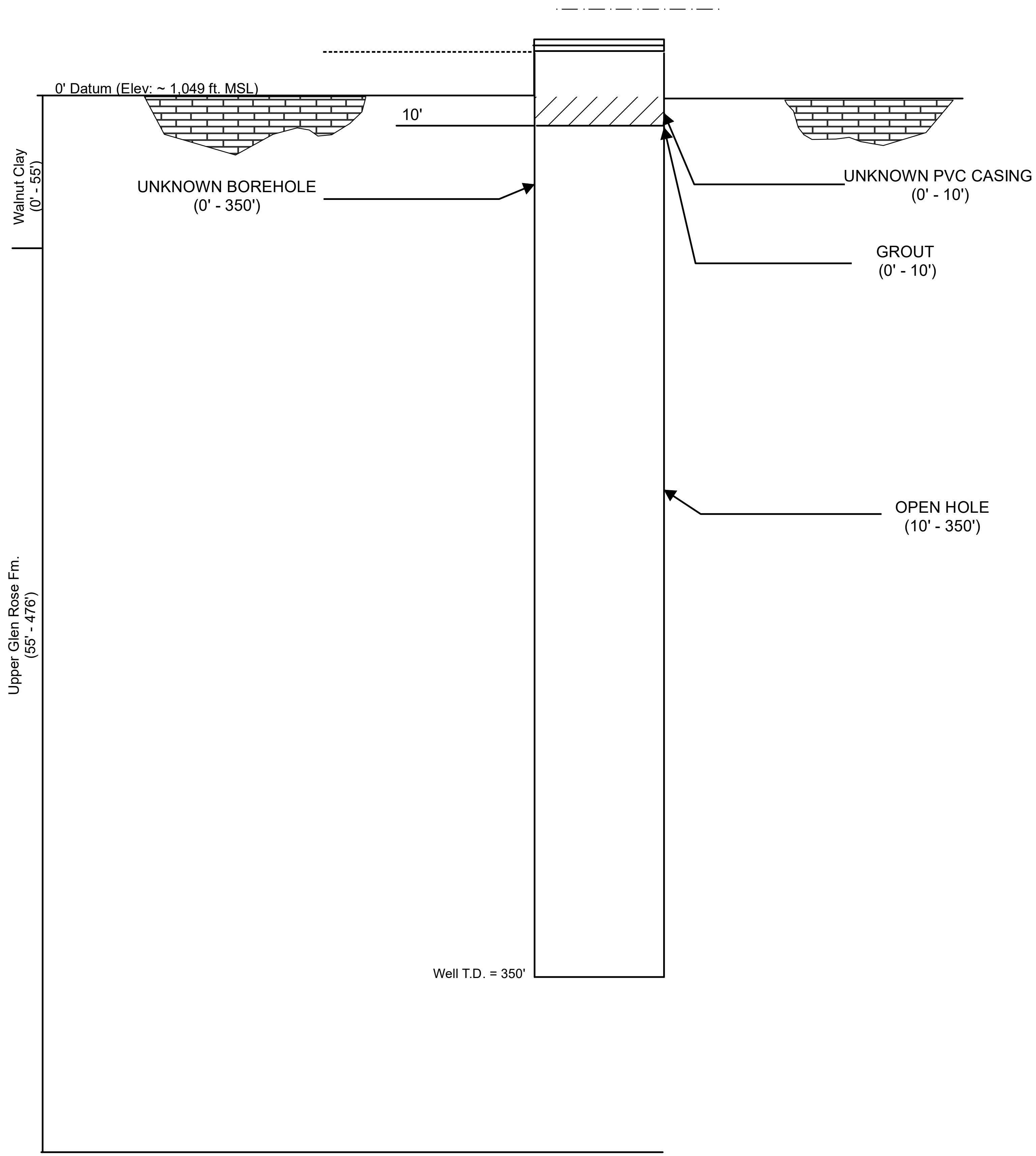

Notes:

1. Well profile based upon infromation provided by the District.
2. Fomrational picks estimated based upon information provided by the District.

Well Profile: Jones 01 Well

Electro Purification, LLC

Hays County, Texas

SCALE: NONE	
APPROVED BY: KK	DATE: 11-10-17
REVISED BY:	DATE:
DRAWING NO: W-1	
SHEET:	

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Groundwater Specialists
TBPG Firm No: 50038
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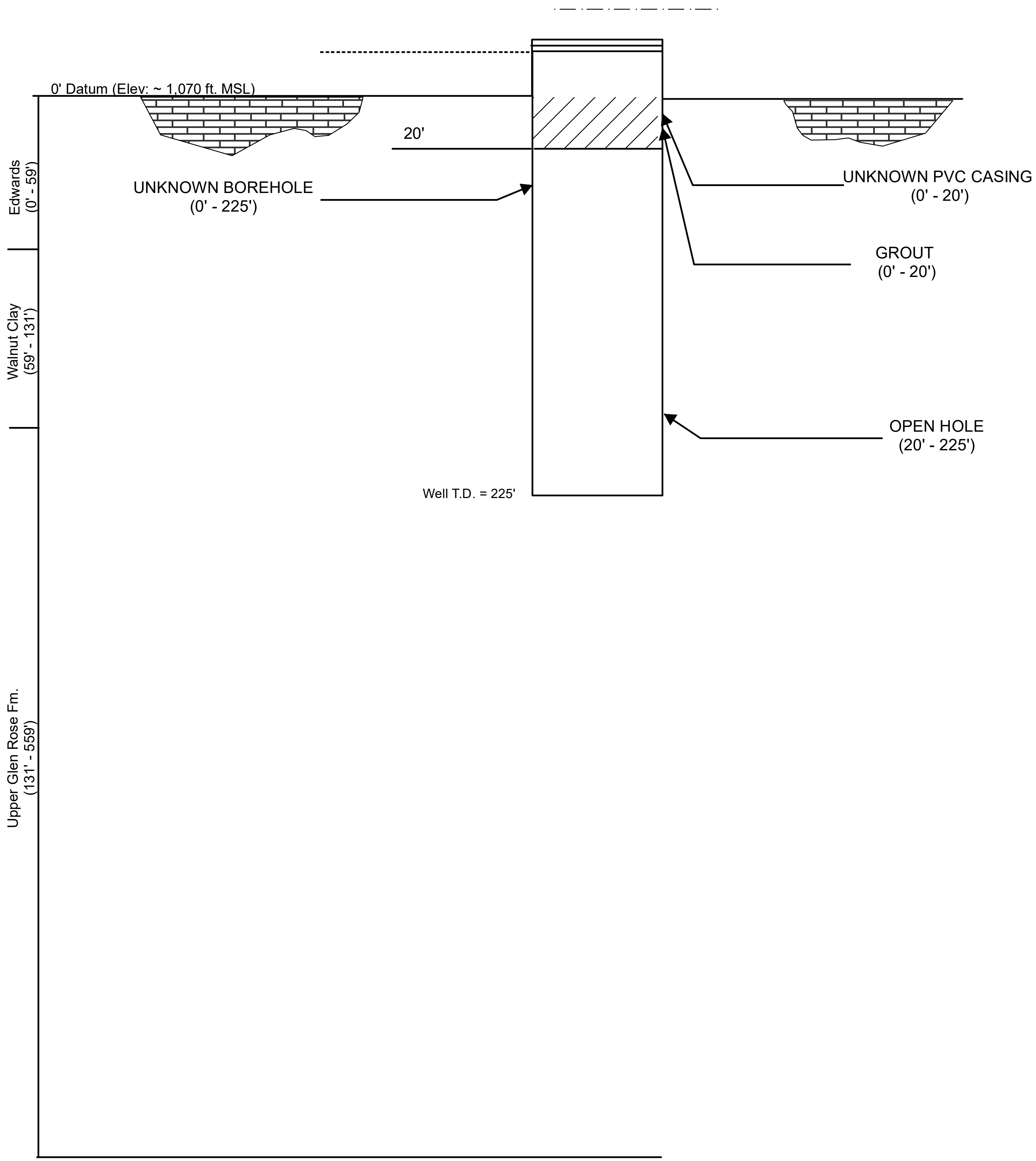
Austin, Texas 78734
Ph: 512.773.3226 www.wetrockgs.com



Notes:

1. Well profile based upon infromation provided by the District.
2. Fomrational picks estimated based upon information provided by the District.

SCALE: NONE	**Well Profile: Las Lomas Well**
APPROVED BY: KK DATE: 11-10-17	**Electro Purification, LLC**
REVISED BY: DATE:	**Hays County, Texas**
DRAWING NO: W-1	
SHEET:	

Wet Rock Groundwater Services, LLC
Groundwater Specialists
TBPG Firm No: 50038
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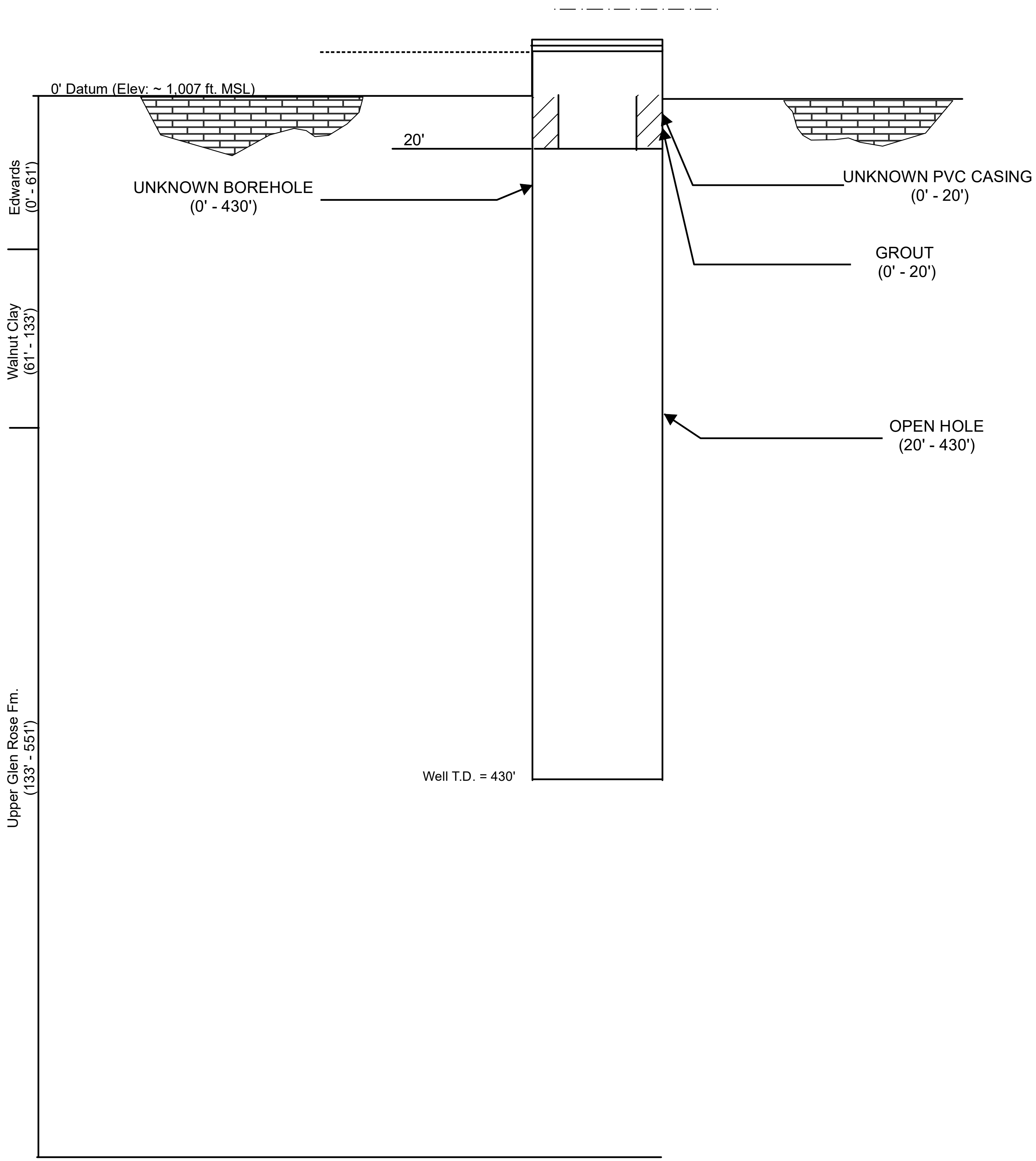
Austin, Texas 78734
Ph: 512.773.3226 www.wetrockgs.com



Notes:

1. Well profile based upon infromation provided by the District.
2. Fomrational picks estimated based upon information provided by the District.

Well Profile: Page Well

Electro Purification, LLC

Hays County, Texas

SCALE: NONE

APPROVED BY: KK DATE: 11-10-17

REVISED BY: DATE:

DRAWING NO: W-1

SHEET:

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