

Site: Bull Creek North

Well ID: OS0264

Lat/Long 28 06 29 80 58 43

UTM: 17-502103 3109159

Datum: NAD 83

Well ID: OS0265

Lat/Long: 28 06 28 80 58 43

UTM: 17-502106 3109158

Datum: NAD 83

Well ID: OSO266

Lat/Long: 28 06 28 80 58 43

UTM: 17-502108 3109154

Datum: NAD 83

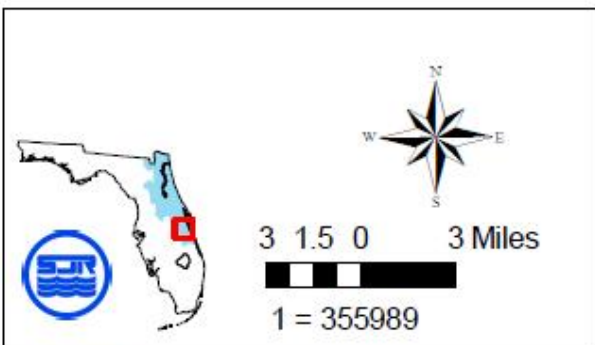
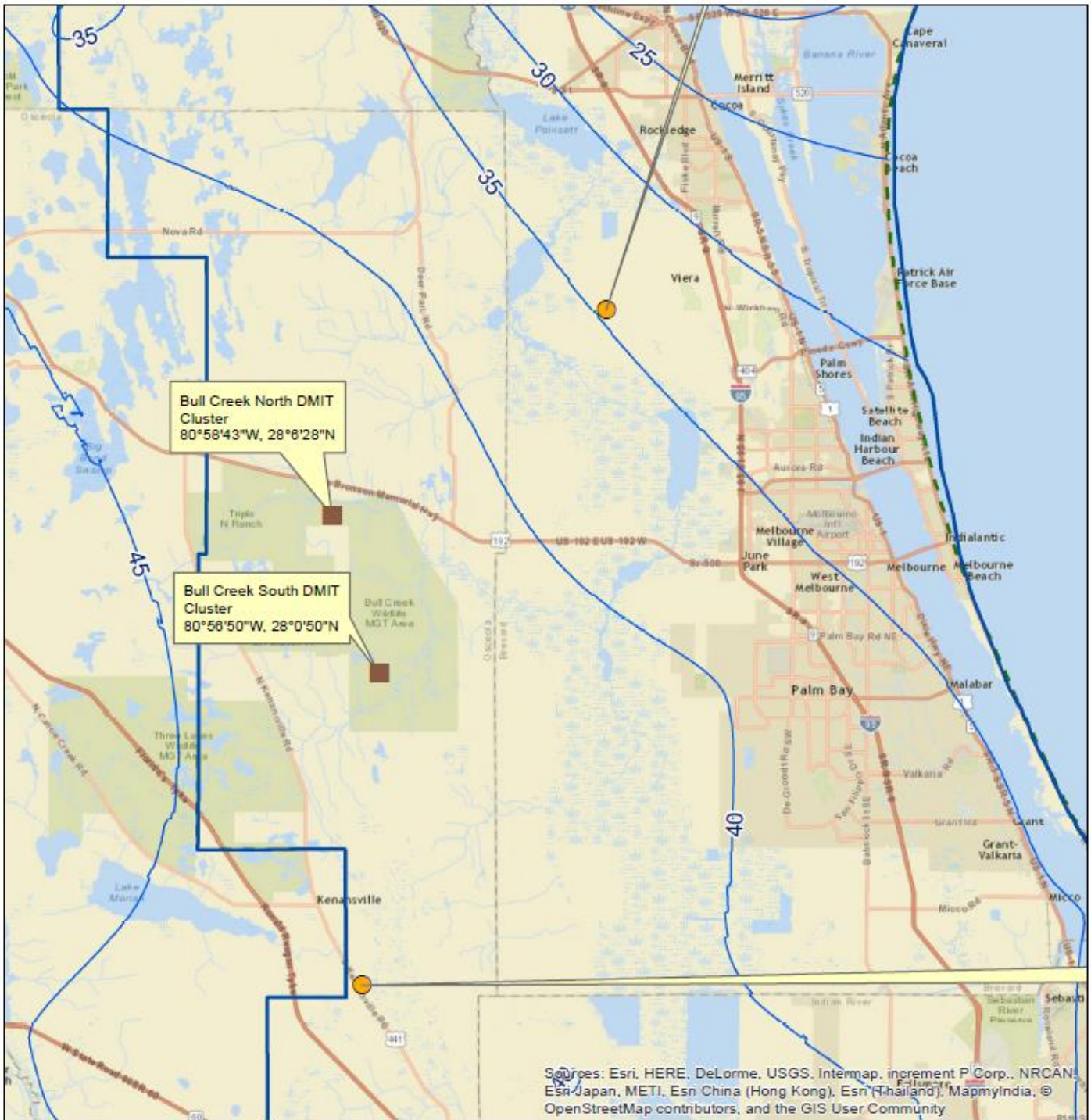


Exhibit (A)

Bull Creek Sites

The St. Johns River Water Management District prepares and uses this information for its own purposes and this information may not be suitable for other purposes. This information is provided as is. Further documentation of this data can be obtained by contacting: St. Johns River Water Management District, Geographic Information Systems, Program Management, P.O. Box 1429, 4049 Reid Street Palatka, Florida 32178-1429 Tel: (386) 329-4176.

← To Crabgrass Road

Nth
↑

7-7-2016
AVS

New Road with Fill

Site: Bull Creek North

27 Yds



050264
T.D. 425' ft.
C.D. 317' ft.

15.5' ft.



050265
T.D. 165' ft.
145'-165' Screened

17.5' ft.

8.5' ft.



Supply Well
Temp Screened Well 60' ft
Abandoned

13' ft.



050266
T.D. 24' ft.
2'-24' Screened

10 Yds



Wetlands

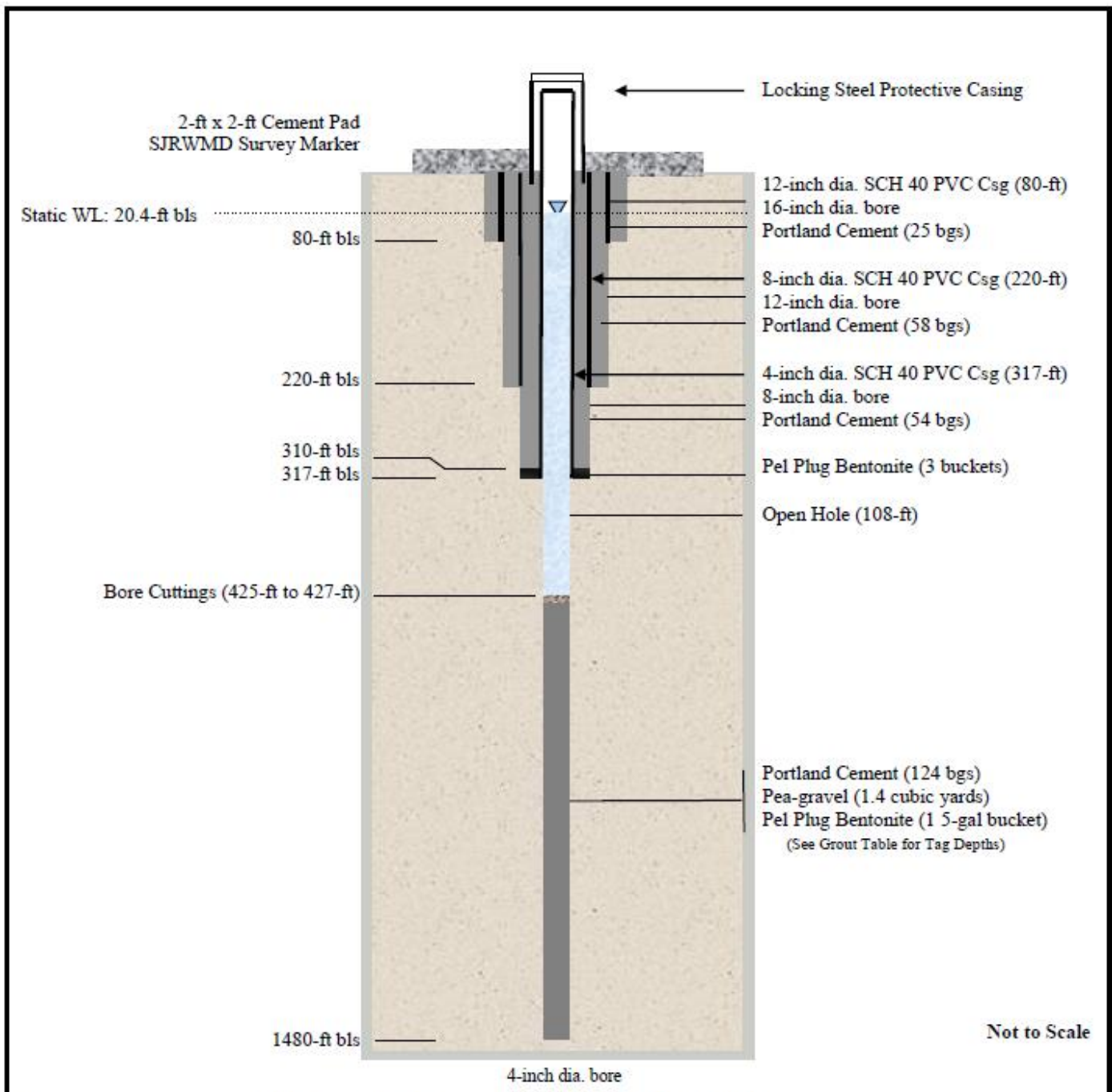
Bull Creek North

OS0266
Well Diameter: 4-inch
Screen Interval: 2-ft to 22-ft

OS0265
Well Diameter: 4-inch
Screen Interval: 145-ft to 165-ft

OS0264
Well Diameter: 4-inch
Open Hole: 317-ft to 425-ft
Floridan Top: 310-ft below land surface

07/05/2016



<p>Site: Bull Creek North</p> <p>Drilled: Mud Rotary/Core</p> <p>Developed: Air and Submersible</p> <p>Rate: 70 gpm</p> <p>Drawdown: 18.8 ft</p> <p>Specific Capacity: 3.7 gpm/ft</p> <p>Lat/Long: 280629/805843 NAD 83</p> <p>UTM: 17502103E/3109159N</p> <p>Driller: Huss Drilling, Inc.</p> <p>Well Completed: July 30, 2016</p>	<p>Field Water Quality</p> <p>Date Sampled: June 28, 2016</p> <p>Specific Conductivity: 309 us/cm</p> <p>Temperature: 24.4 C</p> <p>Chlorides: 15.5 mg/L</p> <p>pH: 7.94</p>
<p>SJRWMD</p> <p>Figure. Monitor Well OS0264</p>	



STATE OF FLORIDA WELL COMPLETION REPORT

Date Stamp
Official Use Only

- Southwest
Northwest
St. Johns River
South Florida
Suwannee River
DEP
Delegated Authority (If Applicable)

PLEASE, FILL OUT ALL APPLICABLE FIELDS
(*Denotes Required Fields Where Applicable)

1. *Permit Number OS 0264 *CUP/WUP Number *DID Number 62-524 Delineation No.
2. *Number of permitted wells constructed, repaired, or abandoned 1 *Number of permitted wells not constructed, repaired, or abandoned 0
3. *Owner's Name SJRWMD 4. *Completion Date 6/30/16 5. Florida Unique ID
6. Crabgrass Rd, Melbourne, FL
7. *County Osceola *Section 29 Land Grant *Township 28S *Range 34E
8. Latitude 28 06 29 Longitude 80 58 43
9. Data Obtained From: X GPS Map Survey Datum: NAD 27 NAD 83 X WGS 84
10. *Type of Work: X Construction Repair Modification Abandonment
11. *Specify Intended Use(s) of Well(s):
12. *Drill Method: Auger Cable Tool X Rotary Combination (Two or More Methods) Jetted Sonic
13. *Measured Static Water Level 20.41 ft. Measured Pumping Water Level 39.19 ft. After 3 Hours at 70 GPM
14. *Measuring Point (Describe) Top csg Which is 4.3 ft. X Above Below Land Surface *Flowing: Yes No
15. *Casing Material: Black Steel Galvanized X PVC Stainless Steel Not Cased Other
16. *Total Well Depth 465 ft. Cased Depth 317 ft. *Open Hole: From 317 To 425 ft. *Screen: From To ft. Slot Size
17. *Abandonment: Other (Explain)
18. *Surface Casing Diameter and Depth:
19. *Primary Casing Diameter and Depth:
20. *Liner Casing Diameter and Depth:
21. *Telescope Casing Diameter and Depth:
22. Pump Type (If Known): Centrifugal Jet Submersible Turbine
23. Chemical Analysis (When Required):
24. Water Well Contractor:
*Contractor Name Stephanie Stallworth *License Number 9342 E-mail Address Stephanie@hussdrilling.com
*Contractor's Signature *Driller's Name (Print or Type) Kevin Huffuse

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
 2379 BROAD STREET, BROOKSVILLE, FL 34804-6899
 PHONE: (352) 796-7211 or (800) 423-1476
 WWW.SWFWMD.STATE.FL.US

SOUTH FLORIDA WATER MANAGEMENT DISTRICT
 P.O. BOX 24680
 3301 GUN CLUB ROAD
 WEST PALM BEACH, FL 33416-4680
 PHONE: (561) 886-8800
 WWW.SFWMD.GOV

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
 4049 REID STREET, PALATKA, FL 32178-1429
 PHONE: (386) 329-4500
 WWW.SJRWMD.COM

SUWANNEE RIVER WATER MANAGEMENT DISTRICT
 9225 CR 49
 LIVE OAK, FL 32060
 PHONE: (386) 362-1001 or (800) 228-1066 (Florida-only)
 WWW.MYSUWANNEERIVER.COM

NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT
 152 WATER MANAGEMENT DR., HAVANA, FL 32333-4712
 (U.S. Highway 90, 10 miles west of Tallahassee)
 PHONE: (850) 539-5999
 WWW.NWFWMD.STATE.FL.US

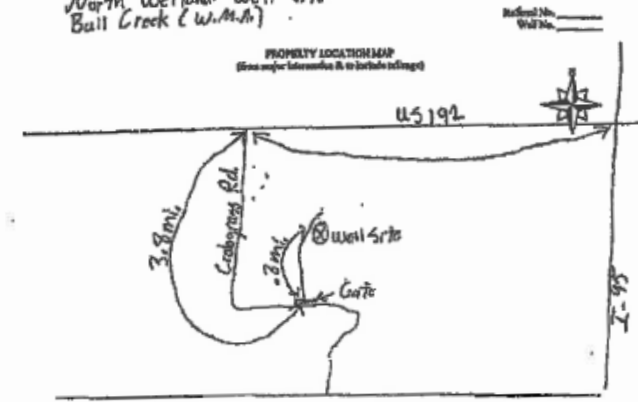
*DRILL CUTTINGS LOG (Examine cuttings every 20 ft. or at formation changes. Note cavities and depth to producing zone. Grain Size: F=Fine, M=Medium, and C=Coarse)

From	To	Color	Grain Size (F, M, C)	Material
0	2	Brown/black		Sand/organics
2	8	black	M	Sand
8	12	black	F	Sand
12	18	black	C	Sand
18	28	Dark Brown	M	Sand
28	42	Brown	F	Silt/sand
42	62	Blue	M-C	Sand-slime shell
62	67	Blue	M-C	sandstone
67	120	olive	F-M	clay/sand
120	132	olive	M-C	Sand/shell
132	142	Dark green	S-M	clay/sand
142	147	Dark Green	M	spoil/shell
147	152	black		shell/sand/shell
152	165	green	M-C	Sand/shell/silt
165	177	Dark Green		clay/sand/shell
177	182	Blue	M	Sand/clay
182	187	green	S	clay/sand/shell
187	192	Blue	F	Sand & phosphates
192	202	green	M	clay/shell/phosphates
202	207			shell & phosphates
207	232	grey	S	clay
232	256.5	blue	S	limestone/clay/shell
256.5	260	tan	S	clay
260	270	white		limestone
270	290	green/olive	M-S	clay-sand
290	304	green	S	clay/shell

Comments: 304 - 425

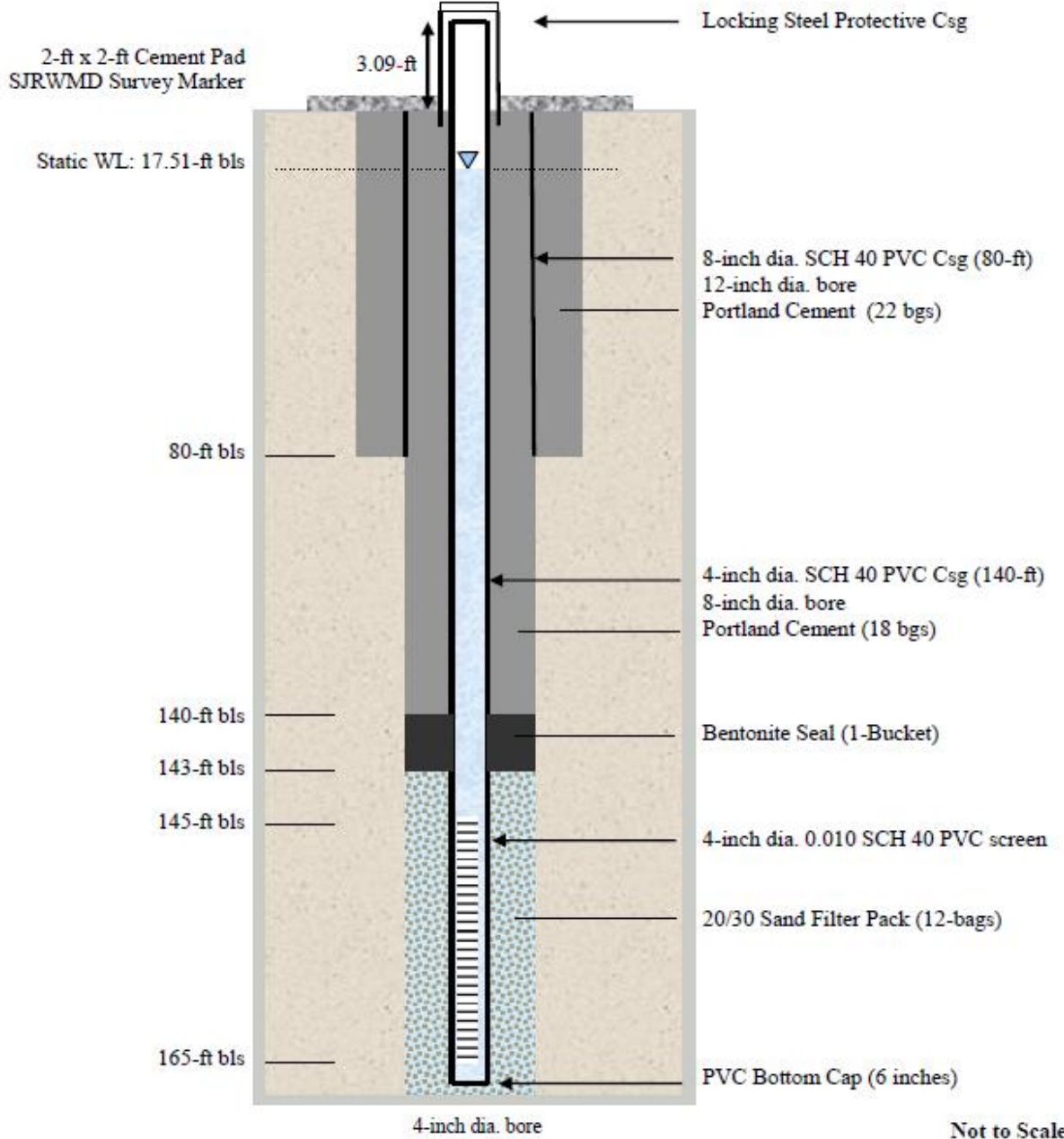
North Wetland Well site
 Bull Creek (W.M.A.)

limestone



Give distances

of well.



Not to Scale

Site: Bull Creek North
Drilled: Mud Rotary
Developed: Submersible Pump
Rate: 5 gpm
Pumping GWL: 81.9 ft bls
Specific Capacity: 0.08 gpm/ft
Lat/Long: 280628 / 805843 NAD 83
UTM: 17 502106E/3109158N
Driller: Huss Drilling, Inc.
Well Completed: June 30, 2016

Field Water Quality
Date Sampled: June 30, 2016
Specific Conductivity: 603 us/cm
Temperature: 25.2 C
Chlorides: 12.6 mg/L
pH: 7.79

SJRWMD

Figure. Monitor Well OS0265



STATE OF FLORIDA WELL COMPLETION REPORT

PLEASE FILL OUT ALL APPLICABLE FIELDS (*Denotes Required Fields Where Applicable)
Southwest
Northwest
St. Johns River
South Florida
Suwannee River
DEP
Delegated Authority (If Applicable)

Date Stamp
Official Use Only

1.*Permit Number OS 0265 *CUP/WUP Number *DID Number 82-524 Delineation No.

2.*Number of permitted wells constructed, repaired, or abandoned 1 *Number of permitted wells not constructed, repaired, or abandoned 0

3.*Owner's Name SIP WMD 4.*Completion Date 6/30/16 5. Florida Unique ID

6. Crabgrass Rd. Melbourne, FL
*Well Location - Address, Road Name or Number, City, ZIP

7.*County Osceola *Section 29 Land Grant *Township 28S *Range 34E

8. Latitude 28 0628 Longitude 80 5843

9. Data Obtained From: GPS Map Survey Datum: NAD 27 NAD 83 WGS 84

10.*Type of Work: X Construction Repair Modification Abandonment

11.*Specify Intended Use(s) of Well(s):
Domestic Landscape Irrigation Agricultural Irrigation Site Investigation
Bottled Water Supply Recreation Area Irrigation Livestock Monitoring
Public Water Supply (Limited Use/DOH) Nursery Irrigation Test
Public Water Supply (Community or Non-Community/DEP) Commercial/Industrial Earth-Coupled Geothermal
Class I Injection Golf Course Irrigation HVAC Supply
Class V Injection: Recharge Commercial/Industrial Disposal Aquifer Storage and Recovery Drainage
Remediation: Recovery Air Sparge Other (Describe)
Other (Describe)

12.*Drill Method: Auger Cable Tool X Rotary Combination (Two or More Methods) Jetted Sonic
Horizontal Drilling Hydraulic Point (Direct Push) Other

13.*Measured Static Water Level 20.6 ft. Measured Pumping Water Level 84.99 ft. After 2 Hours at 5 GPM

14.*Measuring Point (Describe) Top CSG Which is 3.09 ft. Above Below Land Surface *Flowing: Yes No

15.*Casing Material: Black Steel Galvanized X PVC Stainless Steel Not Cased Other

16.*Total Well Depth 165 ft. Cased Depth 145 ft. *Open Hole: From To ft. *Screen: From 145 To 165 ft. Slot Size .01

17.*Abandonment: Other (Explain)
From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other

18.*Surface Casing Diameter and Depth:
Dia 8 in. From 80 ft. To 0 ft. No. of Bags 22 Seal Material (Check One): X Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other

19.*Primary Casing Diameter and Depth:
Dia 4 in. From 165 ft. To 143 ft. No. of Bags 12 Seal Material (Check One): Neat Cement Bentonite X Other sand
Dia 4 in. From 143 ft. To 140 ft. No. of Bags 14 Seal Material (Check One): Neat Cement Bentonite X Other gravel plus
Dia 4 in. From 140 ft. To 6 ft. No. of Bags 18 Seal Material (Check One): X Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other

20.*Liner Casing Diameter and Depth:
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other

21.*Telescope Casing Diameter and Depth:
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other

22. Pump Type (If Known): Centrifugal Jet Submersible Turbine
Horsepower Pump Capacity (GPM)
Pump Depth ft. Intake Depth ft.
23. Chemical Analysis (When Required):
Iron ppm Sulfate ppm Chloride ppm
Laboratory Test Field Test Kit

24. Water Well Contractor:
*Contractor Name Stephanie Stallsmith *License Number 9342 E-mail Address Stephanie@hussdrilling.com

*Contractor's Signature *Driller's Name (Print or Type) Kevin Reffuse

I certify that the information provided in this report is accurate and true.

Steel Protective Outer Casing with locking 6x6 inch hinged lid

3.19-ft

2 x 2 ft Cement Pad

Portland Cement (0.5-bags)

4-inch dia. SCH 40 PVC Casing (2.0-ft)

Bentonite Seal (.25-bag) 1-ft bls

1.5-ft bls

2-ft bls

Static WL: 2.02-ft bls

4-inch dia. 0.010 SCH 40 PVC screen

20/30 Sand Filter Pack (10-bags)

24-ft bls

PVC Bottom Cap (6 inches)

8-inch dia. bore

Not to Scale

Site: Bull Creek North
Drilled: Mud Rotary
Developed: Submersible Pump
Rate: 16 gpm
Drawdown: 9.2-ft
Specific Capacity: 1.7 gpm/ft
Lat/Long: 260628 / 805843 NAD 83
UTM: 17502108E/3109154N
Driller: Huss Drilling
Well Completed: June 30, 2016

Field Water Quality
Date Sampled: June 28, 2016
Specific Conductivity: 344.0 us/cm
Temperature: 25.0 C
Chlorides: 16.5 mg/L
pH: 3.45

SJR WMD

Figure. Monitor Well OS0266



STATE OF FLORIDA WELL COMPLETION REPORT

PLEASE, FILL OUT ALL APPLICABLE FIELDS (*Denotes Required Fields Where Applicable)
Southwest
Northwest
St. Johns River
South Florida
Suwannee River
DEP
Delegated Authority (If Applicable)

Date Stamp
Official Use Only

1.*Permit Number OS 02106 *CUPWUP Number *DID Number 62-524 Delineation No.

2.*Number of permitted wells constructed, repaired, or abandoned 1 *Number of permitted wells not constructed, repaired, or abandoned 0

3.*Owner's Name SLP WMD 4.*Completion Date 6/30/16 5. Florida Unique ID

6. Crabgrass Rd. Melbourne, Fl.
*Well Location - Address, Road Name or Number, City, ZIP

7.*County Escambia *Section 29 Land Grant *Township 28S *Range 34E

8. Latitude 28 0628 Longitude 80 5843

9. Data Obtained From: GPS Map Survey Datum: NAD 27 NAD 83 WGS 84

10.*Type of Work: Construction Repair Modification Abandonment

11.*Specify Intended Use(s) of Well(s):
Domestic Landscape Irrigation Agricultural Irrigation Site Investigation
Bottled Water Supply Recreation Area Irrigation Livestock Monitoring
Public Water Supply (Limited Use/DOH) Nursery Irrigation Test
Public Water Supply (Community or Non-Community/DEP) Commercial/Industrial Earth-Coupled Geothermal
Class I Injection Golf Course Irrigation HVAC Supply
Class V Injection: Recharge Commercial/Industrial Disposal Aquifer Storage and Recovery Drainage
Remediation: Recovery Air Sparge Other (describe)
Other (describe)

12.*Drill Method: Auger Cable Tool Rotary Combination (Two or More Methods) Jetted Sonic
Horizontal Drilling Hydraulic Point (Direct Push) Other

13.*Measured Static Water Level 5.21 ft. Measured Pumping Water Level 14.43 ft. After 1.5 Hours at 160 GPM

14.*Measuring Point (Describe) Top of CSG Which is 3.19 ft. Above Below Land Surface *Flowing: Yes No

15.*Casing Material: Black Steel Galvanized PVC Stainless Steel Not Cased Other

16.*Total Well Depth 24 ft. Cased Depth 2 ft. *Open Hole: From To ft. *Screen: From 2 To 24 ft. Slot Size .01

17.*Abandonment: Other (Explain)
From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other

18.*Surface Casing Diameter and Depth:
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other

19.*Primary Casing Diameter and Depth:
Dia 4 in. From 24 ft. To 45 ft. No. of Bags 10 Seal Material (Check One): Neat Cement Bentonite Other Sand
Dia 4 in. From 25 ft. To 6 ft. No. of Bags 14 Seal Material (Check One): Neat Cement Bentonite Other
Dia 4 in. From 7 ft. To 6 ft. No. of Bags 14 Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other

20.*Liner Casing Diameter and Depth:
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other

21.*Telescope Casing Diameter and Depth:
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other

22. Pump Type (If Known): Centrifugal Jet Submersible Turbine
Horsepower Pump Capacity (GPM)
Pump Depth ft. Intake Depth ft.
23. Chemical Analysis (When Required):
Iron ppm Sulfate ppm Chloride ppm
Laboratory Test Field Test Kit

24. Water Well Contractor:
*Contractor Name Stephanie Stalcksmith *License Number 9342 E-mail Address Stephanie@hussdrilling.com
*Contractor's Signature *Driller's Name (Print or Type) Kevin Beffuse

I certify that the information provided in this report is accurate and true.

Field Groundwater Quality/Drilling and Packer Testing

Site: Bull Creek North

Well ID: OS0264

Lab	Date	Sampler	Packer Depth	Bore Depth	Specific Conductivity	Temp	pH	Chlorides	Comments
√	(mm/dd/yyyy hh:mm)	Name	(ft bls)	(ft bls)	(us/cm)	(Deg C)		(mg/L)	
	3/23/2016 11:45	Huss	310	340	1445	24.7	7.91	302.0	
	3/24/2016 8:30	Huss	340	370	1506	24.8	7.84	318.0	
	3/24/2016 14:40	Huss	370	400	1470	24.8	7.94	290.0	
	3/25/2016 11:50	Huss	400	430	1434	25.3	7.87	290.0	
	3/28/2016 17:25	Huss	430	460	1341	25.8	7.97	265.0	
	3/29/2016 14:22	Huss	460	490	1322	25.8	7.96	256.0	
	3/30/2016 14:40	Huss	490	520	1297	26	7.91	246.0	
	3/31/2016 13:25	Huss	520	550	1437	25.8	7.89	287.0	
	4/1/2016 11:20	Huss	550	580	1416	25.9	7.84	276.0	
	4/4/2016 17:20	Huss	580	610	1566	26.1	7.82	320.0	
	4/5/2016 13:50	Huss	610	640	1694	26.2	7.83	380.0	
	4/6/2016 16:05	Huss	640	670	1711	26.3	7.92	355.0	
	4/7/2016 15:15	Huss	670	700	1576	26.5	7.90	335.0	
	4/8/2016 10:00	Huss	700	730	1538	26.4	7.94	320.0	
	4/11/2016 15:00	Huss	730	760	1667	26.5	7.95	360.0	
	4/12/2016 15:25	Huss	760	790	1715	26.8	7.91	356.0	
	4/13/2016 14:30	Huss	790	820	1478	26.9	8.06	283.0	
	4/14/2016 14:05	Huss	820	850	1047	26.9	8.02	170.0	
	4/15/2016 10:15	Huss	850	880	1660	26.9	8.04	355.0	
	4/18/2016 17:30	Huss	880	910	1759	27	8.02	380.0	
	4/20/2016 14:00	Huss	910	940	1729	27.1	8.13	375.0	
	4/21/2016 15:05	Huss	940	970	1642	27	8.00	355.0	
	4/22/2016 11:50	Huss	970	1000	1702	27.1	8.02	356.0	
	4/26/2016 08:20	Huss	1000	1030					Aborted Pump Test-W.L. Drew Down To Pump
	4/28/2016 10:05	Huss	1030	1,060	818.0	27.0	7.92	100.0	
	04/29/2016 07:30	Huss	1060	1,090	907.0	27.1	7.92	35.0	

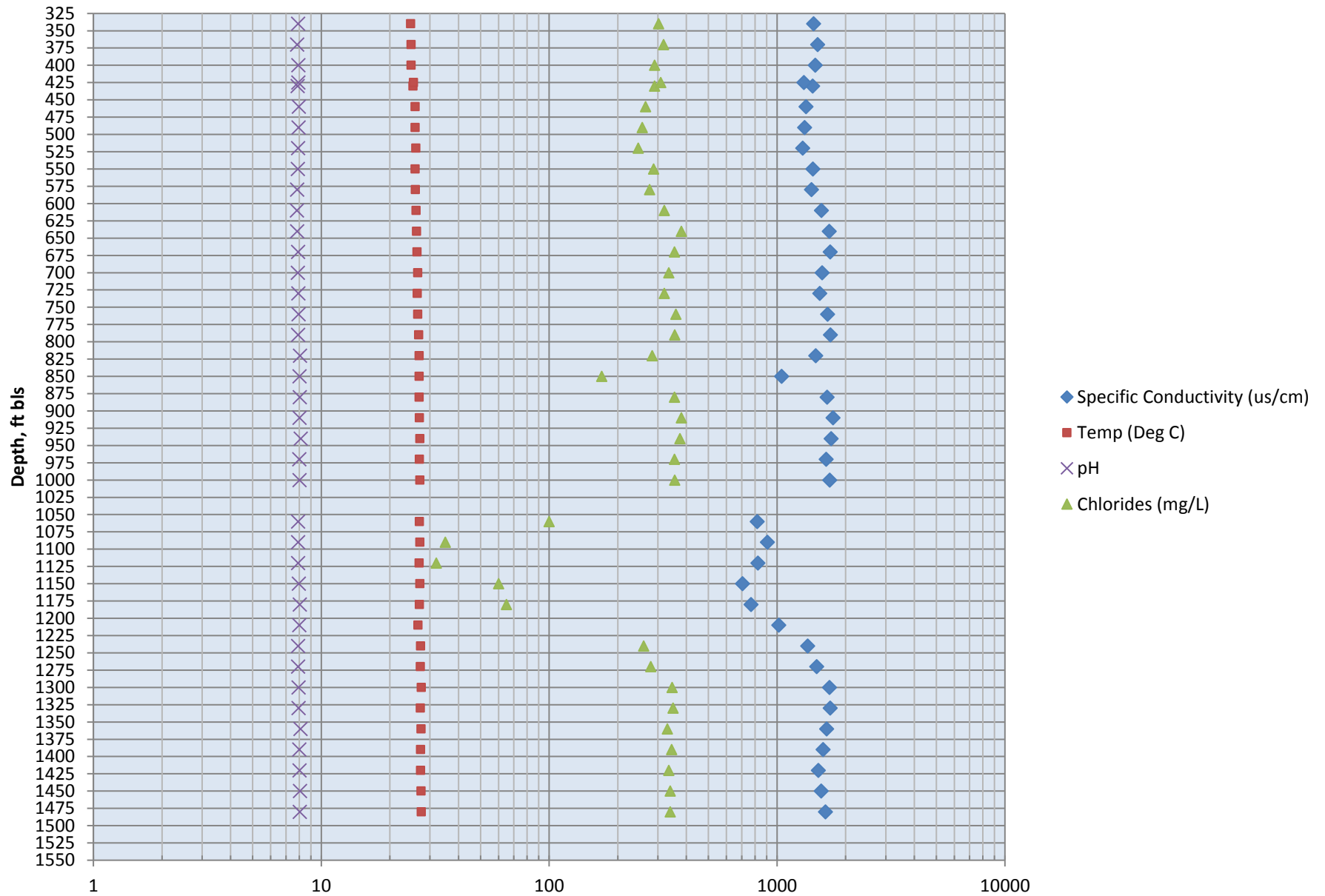
Field Groundwater Quality/Drilling and Packer Testing

Site: Bull Creek North

Well ID: OS0264

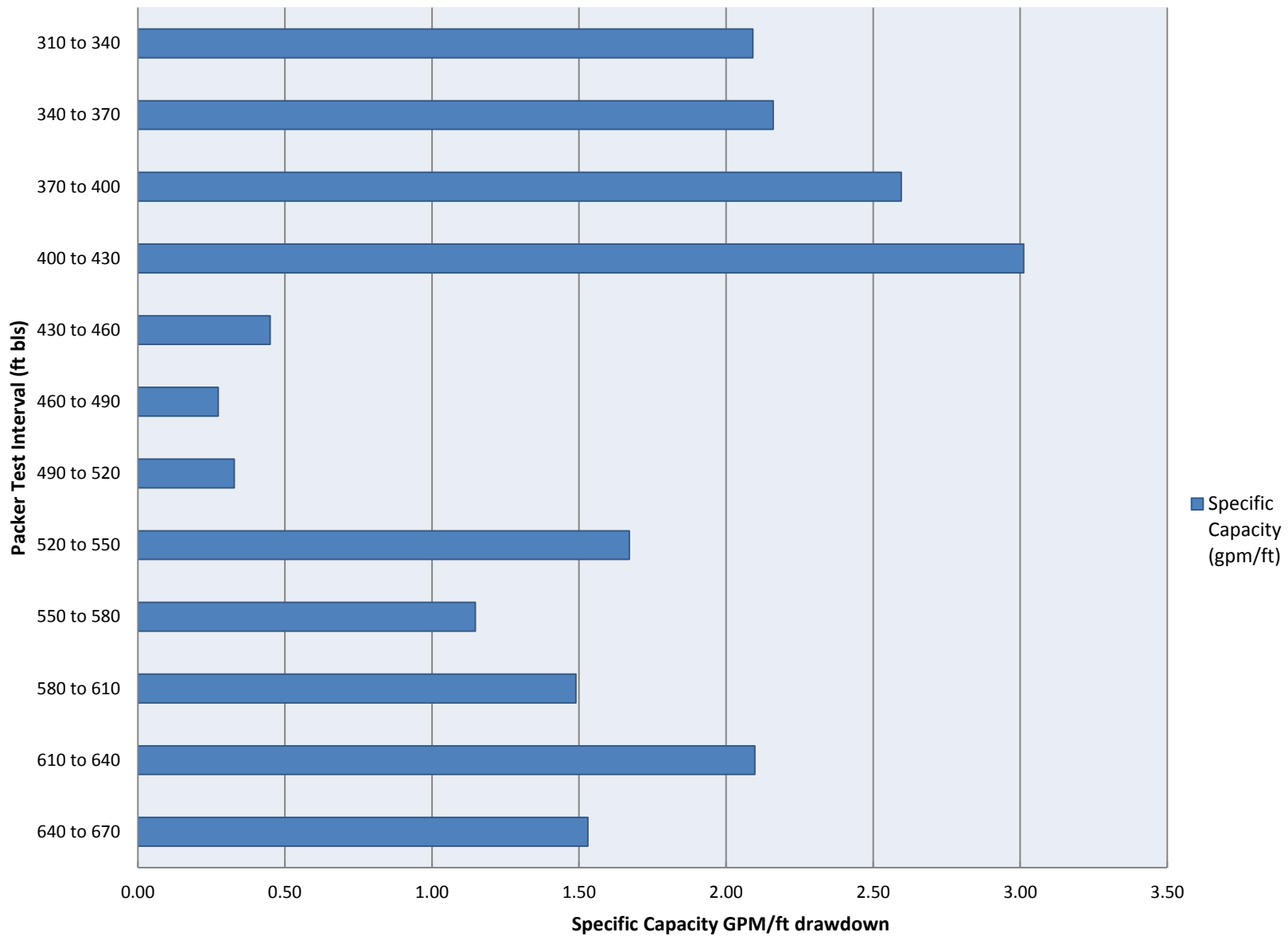
Lab	Date	Sampler	Packer Depth	Bore Depth	Specific Conductivity	Temp	pH	Chlorides	Comments
√	(mm/dd/yyyy hh:mm)	Name	(ft bls)	(ft bls)	(us/cm)	(Deg C)		(mg/L)	
	05/06/2016 10:50	Huss	1090	1,120	824.0	26.9	7.91	32.0	
	05/10/2016 12:35	Huss	1020	1,150	705.0	27.1	7.97	60.0	
	05/11/2016 12:40	Huss	1150	1,180	769.0	27.0	8.05	65.0	
	05/12/2016 11:25	Huss	1180	1,210	1017.0	26.6	8.01		W.L.Drew Down To Pump - No Sample Taken
	05/16/2016 13:45	Huss	1210	1,240	1364.0	27.3	7.92	260.0	
	05/18/2016 12:30	Huss	1240	1,270	1493.0	27.2	7.92	279.0	
	05/19/2016 16:45	Huss	1270	1,300	1699.0	27.5	7.95	346.0	
	05/23/2016 15:55	Huss	1300	1330	1710.0	27.2	7.95	350.0	
	05/25/2016 11:30	Huss	1330	1360	1652.0	27.4	8.10	330.0	
	05/26/2016 1030	Huss	1360	1390	1592.0	27.3	8.01	345.0	
	05/31/2016 15:35	Huss	1390	1420	1518.0	27.3	8.03	335.0	
	06/01/2016 17:25	Huss	1420	1450	1562.0	27.4	8.07	340.0	
	06/02/2016 18:25	Huss	1450	1480	1630.0	27.5	8.05	340.0	
	06/28/2016 11:30	Huss	N/A	425	1310.0	25.4	7.94	309.0	Final Well Development-Open Hole 317 - 425 ft. BLS

OS0264 Packer Test Water Quality VS Depth



Packer Test/Specific Capacity														Well ID: OS0264
Site: Bull Creek North														
Lab	Date	Casing Depth	Packer Depth	Bore Depth	Packer Test Interval	GWL at Pump Start	Stick-up	GWL at Pump Start	Pumping GWL	Pumping GWL	Drawdown	Rate	Specific Capacity	Comments
√	(mm/dd/yyyy hh:mm)	(ft bls)	(ft bls)	(ft bls)	(ft bls)	(ft TOC)	(ft)	(ft bls)	(ft TOC)	(ft bls)	(ft)	(GPM)	(gpm/ft)	
	03/23/2016 11:45	270	310	340	310 to 340	21.91	2.39	19.52	35.30	32.91	13.39	28.0	2.09	
	03/24/2016 08:30	300	340	370	340 to 370	21.70	2.32	19.38	35.59	33.27	13.89	30.0	2.16	
	03/24/2016 14:40	300	370	400	370 to 400	21.91	2.40	19.51	33.47	31.07	11.56	30.0	2.60	
	03/25/2016 11:50	305	400	430	400 to 430	21.70	2.50	19.20	31.66	29.16	9.96	30.0	3.01	
	03/28/2016 17:25	305	430	460	430 to 460	21.50	2.29	19.21	43.73	41.44	22.23	10.0	0.45	
	03/29/2016 14:25	305	460	490	460 to 490	21.39	2.14	19.25	50.64	48.50	29.25	8.0	0.27	
	03/30/2016 14:40	305	490	520	490 to 520	21.39	2.99	18.40	51.88	48.89	30.49	10.0	0.33	
	03/31/2016 13:25	305	520	550	520 to 550	21.35	2.19	19.16	39.30	37.11	17.95	30.0	1.67	
	04/01/2016 11:20	305	550	580	550 to 580	21.35	2.31	19.04	47.50	45.19	26.15	30.0	1.15	
	04/04/2016 17:20	305	580	610	580 to 610	21.34	2.31	19.03	41.48	39.17	20.14	30.0	1.49	
	04/05/2016 13:50	305	610	640	610 to 640	21.80	2.70	19.10	36.10	33.40	14.30	30.0	2.10	
	04/06/2016 16:05	305	640	670	640 to 670	21.60	2.40	19.20	41.21	38.81	19.61	30.0	1.53	

OS0264 Packer Test Specific Capacity



Groundwater Levels

Site: Bull Creek North

Well ID: OS0264

		Borehole	Prior to Coring Start Up Each Day	Stick-up	Prior to Coring Start Up Each Day	Packer Depth	Packer Test Interval	Before Packer Inflation	After Packer Inflation	Stick-up	Before Packer Inflation	After Packer Inflation	Comments
(mm/dd/yyyy hh:mm)	Casing Depth (ft, bls)	Total Depth (ft bls)	Water Level (ft, TOC)	(ft)	Water Level (ft, bls)	(ft bls)	(ft bls)	(ft TOC)	(ft TOC)	(ft)	Water Level (ft, bls)	Water Level (ft, bls)	
03/23/2016 07:15	270	330	22.07	2.66	19.41	310	310 to 340	21.50	21.91	2.39	19.11	19.52	
03/23/2016 07:15	300	370	21.74	2.32	19.42	340	340 to 370	21.74	21.70	2.32	19.42	19.38	
03/24/2016 07:00	300	400	21.89	2.64	19.25	370	370 to 400	21.94	21.91	2.40	19.54	19.51	
03/25/2016 07:15	300	420	21.89	2.64	19.25	400	400 to 430	21.70	21.70	2.50	19.20	19.20	Top Packer Did Not Seal
03/28/2016 09:30	305	430	21.58	2.50	19.08	430	430 to 460	21.50	21.50	2.29	19.21	19.21	
03/29/2016 07:15	305	460	21.45	2.29	19.16	460	460 to 490	21.39	21.39	2.14	19.25	19.25	
03/30/2016 07:30	305	490	21.30	2.14	19.16	490	490 to 520	21.30	21.39	2.11	19.19	19.28	
03/31/2016 07:30	305	530	21.45	2.39	19.06	520	520 to 550	21.35	21.39	2.19	19.16	19.20	
04/01/2016 07:30	305	570	21.63	2.60	19.03	550	550 to 580	21.30	21.50	2.31	18.99	19.19	
04/04/2016 09:30	305	580	21.50	2.31	19.19	580	580 to 610	21.34	21.38	2.31	19.03	19.07	
04/05/2016 07:30	305	610	21.50	2.31	19.19	610	610 to 640	21.80	21.85	2.70	19.10	19.15	
04/06/2016 07:30	305	660	21.74	2.50	19.24	640	640 to 670	21.55	21.60	2.40	19.15	19.20	
04/07/2016 07:30	305	670	21.50	2.50	19.00	670	670 to 700	21.34	21.43	2.36	18.98	19.07	
04/08/2016 07:50	305	730	21.35	2.24	19.11						#N/A	#N/A	Morning Static
04/11/2016 09:15	305	747	21.98	2.44	19.54	730	730 to 760	21.63	21.70	2.25	19.38	19.45	
04/12/2016 07:15	305	760	21.79	2.25	19.54	760	760 to 790	21.50	21.55	2.17	19.33	19.38	
04/13/2016 07:30	305	800	21.79	2.24	19.55	790	790 to 820	21.51	21.53	2.24	19.27	19.29	
04/14/2016 07:30	395	830	21.85	2.39	19.46								Morning Static
04/14/2016 14:05	395	850			#N/A	820	820 to 850	21.49	21.71	2.18	19.31	19.53	
04/15/2016 07:30	395	880	21.48	2.12	19.36						#N/A	#N/A	Morning Static
04/15/2016 10:15	395	880			#N/A	850	850 to 880	21.48	21.67	2.12	19.36	19.55	
04/18/2016 09:15	395	890	21.88	2.16	19.72						#N/A	#N/A	Morning Static
04/18/2016 17:30	395	910			#N/A	880	880 to 910	21.48	21.56	2.18	19.30	19.38	
04/20/2016 07:30	395	910	21.79	2.18	19.61						#N/A	#N/A	Morning Static
04/20/2016 14:00	395	940			#N/A	910	910 to 940	21.54	21.59	2.13	19.41	19.46	
04/21/2016 07:30	395	950	21.41	2.01	19.40						#N/A	#N/A	Morning Static

Groundwater Levels

Site: Bull Creek North

Well ID: OS0264

		Borehole	Prior to Coring Start Up Each Day	Stick-up	Prior to Coring Start Up Each Day	Packer Depth	Packer Test Interval	Before Packer Inflation	After Packer Inflation	Stick-up	Before Packer Inflation	After Packer Inflation	Comments
(mm/dd/yyyy hh:mm)	Casing Depth (ft, bls)	Total Depth (ft bls)	Water Level (ft, TOC)	(ft)	Water Level (ft, bls)	(ft bls)	(ft bls)	(ft TOC)	(ft TOC)	(ft)	Water Level (ft, bls)	Water Level (ft, bls)	
04/21/2016 15:05	395	970			#N/A	940	940 to 970	21.50	21.61	2.13	19.37	19.48	
04/22/2016 07:30	395	990	21.69	2.16	19.53						#N/A	#N/A	Morning Static
04/22/2016 11:30	395	1,000			#N/A	970	970 to 1000	21.45	21.52	2.00	19.45	19.52	
04/25/2016 10:30	395	1,000	21.85	2.21	19.64						#N/A	#N/A	Morning Static
04/26/2016 08:20	395	1030			#N/A	1000	1000 to 1030	21.76	21.95	2.21	19.55	19.74	Aborted Pump Test
04/28/2016 07:30	395	1060	21.70	2.11	19.59						#N/A	#N/A	Morning Static
04/28/2016 10:05	395	1,060			#N/A	1030	1030 to 1060	21.70	21.75	2.11	19.59	19.64	
04/29/2016 07:30	395	1,085	21.82	2.15	19.67						#N/A	#N/A	Morning Static
04/29/2016 13:30	395	1,090			#N/A	1060	1060 to 1090	21.57	21.62	2.10	19.47	19.52	
05/04/2016 07:15	395	1,100	21.95	2.14	19.81						#N/A	#N/A	Morning Static
05/05/2016 07:15	395	1,100	21.89	2.14	19.75						#N/A	#N/A	Morning Static
05/06/2016 07:30	395	1,120	21.74	2.11	19.63						#N/A	#N/A	Morning Static
05/06/2016 10:50	395	1,120			#N/A	1090	1090 to 1120	21.74	21.90	2.11	19.63	19.79	
05/09/2016 09:15	395	1,120	22.10	2.30	19.80						#N/A	#N/A	Morning Static
05/10/2016 07:30	395	1,140	22.10	2.11	19.99						#N/A	#N/A	Morning Static
05/10/2016 12:35	395	1,150			#N/A	1120	1120 to 1150	21.89	21.85	2.06	19.83	19.79	
05/11/2016 07:15	395	1,170	22.00	2.01	19.99						#N/A	#N/A	Morning Static
05/11/2016 12:40	395	1,180			#N/A	1150	1150 to 1180	23.19	22.55	1.98	21.21	20.57	
05/12/2016 07:20	395	1,200	22.16	2.16	20.00						#N/A	#N/A	Morning Static
05/12/2016 11:25	395	1210			#N/A	1180	1180 to 1210	22.11	22.01	1.92	20.19	20.09	
05/13/2016 07:15	395	1230	22.05	2.05	20.00						#N/A	#N/A	Morning Static
05/16/2016 10:00	395	1,240	22.25	1.90	20.35						#N/A	#N/A	Morning Static
05/16/2016 13:45	395	1,240			#N/A	1210	1210 to 1240	22.25	22.32	1.90	20.35	20.42	
05/17/2016 07:15	395	1,250	22.06	1.94	20.12						#N/A	#N/A	Morning Static
05/18/2016 07:30	395	1,265	22.30	2.14	20.16						#N/A	#N/A	Morning Static
05/18/2016 12:30	395	1,270			#N/A	1,240	1240 to 1270	22.09	22.20	1.85	20.24	20.35	

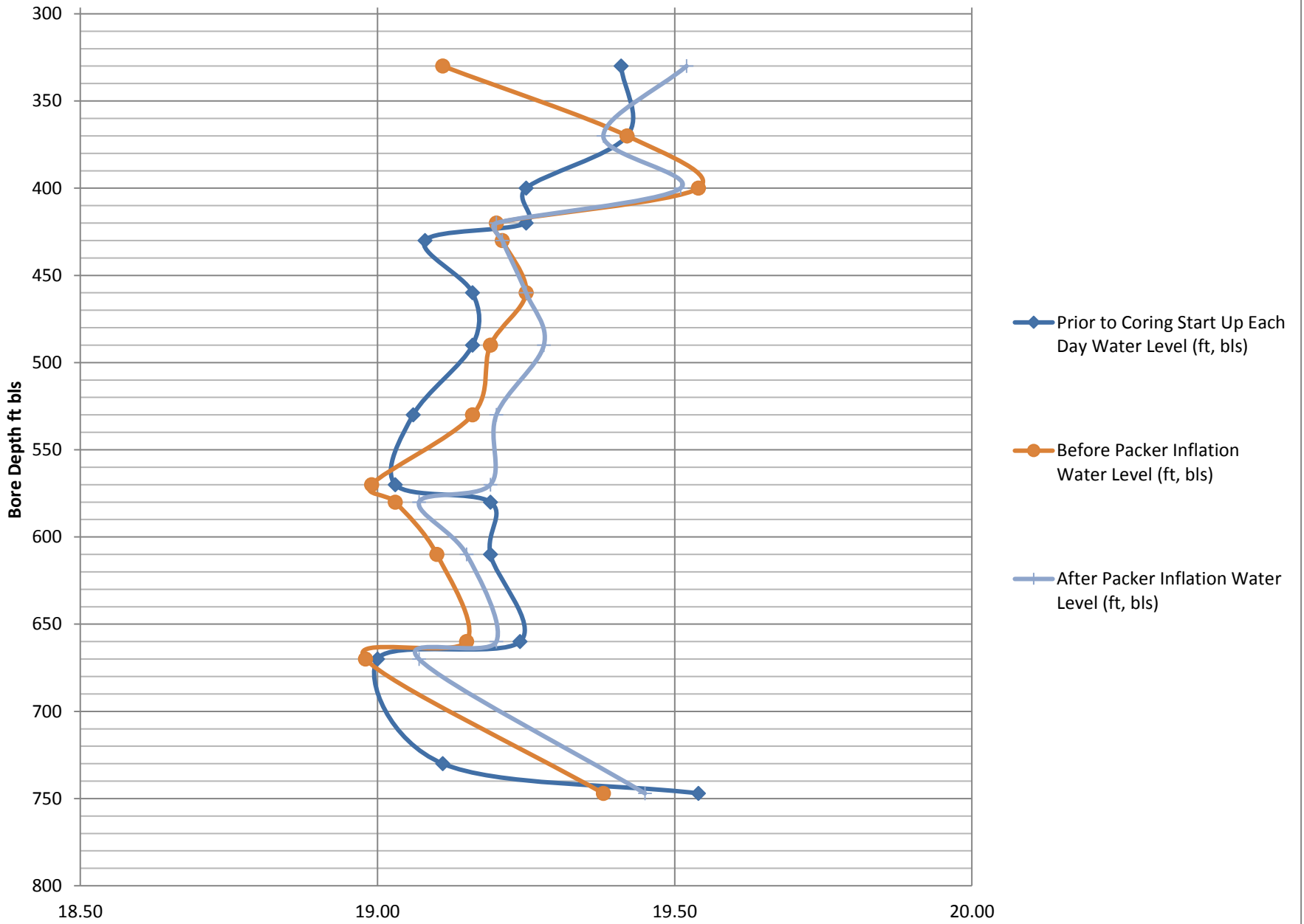
Groundwater Levels

Site: Bull Creek North

Well ID: OS0264

		Borehole	Prior to Coring Start Up Each Day	Stick-up	Prior to Coring Start Up Each Day	Packer Depth	Packer Test Interval	Before Packer Inflation	After Packer Inflation	Stick-up	Before Packer Inflation	After Packer Inflation	Comments
(mm/dd/yyyy hh:mm)	Casing Depth (ft, bls)	Total Depth (ft bls)	Water Level (ft, TOC)	(ft)	Water Level (ft, bls)	(ft bls)	(ft bls)	(ft TOC)	(ft TOC)	(ft)	Water Level (ft, bls)	Water Level (ft, bls)	
05/19/2016 07:30	395	1,284	22.48	2.25	20.23						#N/A	#N/A	Morning Static
05/19/2016 16:45	395	1,300			#N/A	1270	1270 to 1300	22.21	22.16	2.08	20.13	20.08	
05/20/2016 07:30	395	1,300	22.16	2.16	20.00						#N/A	#N/A	Morning Static
05/23/2016 09:30	395	1,318	22.19	2.21	19.98						#N/A	#N/A	Morning Static
05/23/2016 15:55	395	1,330			#N/A	1300	1300 to 1330	21.95	21.99	2.01	19.94	19.98	
05/24/2016 07:30	395	1,330	21.95	2.01	19.94						#N/A	#N/A	Morning Static
05/25/2016 07:30	395	1,360	21.95	2.02	19.93						#N/A	#N/A	Morning Static
05/25/2016 11:30	395	1,360			#N/A	1330	1330 to 1360	21.95	21.97	2.02	19.93	19.95	
05/26/2016 07:30	395	1,390	21.91	1.98	19.93						#N/A	#N/A	Morning Static
05/26/2016 10:30	395	1,390			#N/A	1360	1360 to 1390	21.91	21.98	1.98	19.93	20.00	
05/27/2016 07:15	395	1,407	22.09	2.04	20.05						#N/A	#N/A	Morning Static
05/31/2016 10:30	395	1,417	22.10	2.14	19.96						#N/A	#N/A	Morning Static
05/31/2016 15:35	395	1,420			#N/A	1390	1390 to 1420	23.95	23.65	1.98	21.97	21.67	
06/01/2016 07:30	395	1,420	21.90	1.98	19.92						#N/A	#N/A	Morning Static
06/01/2016 07:30	395	1,450			#N/A	1420	1420 to 1450	22.35	22.38	1.96	20.39	20.42	
06/02/2016 07:30	395	1,450	21.85	1.96	19.89						#N/A	#N/A	Morning Static
06/02/2016 18:25	395	1,480			#N/A	1450	1450 to 1480	22.35	22.40	1.89	20.46	20.51	
06/28/2016 08:00	317	425	20.41	1.43	18.98						#N/A	#N/A	Morning Static

OS0264 Water Levels ft bls



Specific Capacity/Final Development

Site: Bull Creek North

Well ID: OS0264

Lab	Date	Casing Depth	Bore Depth	GWL at Pump Start	Stick-up	GWL at Pump Start	Pumping GWL	Pumping GWL	dd	Rate	Specific Capacity	Specific Conductivity	Temp	pH	Chlorides	Vol Pumped	Comments
√	(mm/dd/yyyy hh:mm)	(ft bls)	(ft bls)	(ft TOC)	(ft)	(ft bls)	(ft TOC)	(ft bls)	(ft)	(GPM)	(gpm/ft)	(us/cm)	(Deg C)		(mg/L)	Gallons	
√	06/28/2016 11:30	317	425	20.41	1.43	18.98	39.19	37.76	18.78	70.0	3.73	1310.0	25.4	7.94	309.0	12,600	

Specific Capacity/Final Development

Site: Bull Creek North

Well ID: OS0265

Lab	Date	Top Screen Depth	Bottom Screen Depth	GWL at Pump Start	Stick-up	GWL at Pump Start	Pumping GWL	Pumping GWL	dd	Rate	Specific Capacity	Specific Conductivity	Temp	pH	Chlorides	Vol Pumped	Comments
√	(mm/dd/yyyy hh:mm)	(ft bls)	(ft bls)	(ft TOC)	(ft)	(ft bls)	(ft TOC)	(ft bls)	(ft)	(GPM)	(gpm/ft)	(us/cm)	(Deg C)		(mg/L)	Gallons	
√	06/30/2016 10:30	145	165	20.60	3.09	17.51	84.99	81.90	64.39	5.0	0.08	603.0	25.2	7.79	12.6	600	

Specific Capacity/Final Development

Site: Bull Creek North

Well ID: OS0266

Lab	Date	Top Screen Depth	Bottom Screen Depth	GWL at Pump Start	Stick-up	GWL at Pump Start	Pumping GWL	Pumping GWL	dd	Rate	Specific Capacity	Specific Conductivity	Temp	pH	Chlorides	Vol Pumped	Comments
√	(mm/dd/yyyy hh:mm)	(ft bls)	(ft bls)	(ft TOC)	(ft)	(ft bls)	(ft TOC)	(ft bls)	(ft)	(GPM)	(gpm/ft)	(us/cm)	(Deg C)		(mg/L)	Gallons	
√	06/28/2016 13:45	2	24	5.21	3.19	2.02	14.43	11.24	9.22	16.0	1.7	344.0	25.0	345.00	16.5	1,440	

Grout Data

Site: Bull Creek North

Well ID: OS0264

Date/ Time (mm/dd/yyyy hh:mm)	Tag Depth (ft bls)	Annulus/ Bore (inches)	Quantity #	Units Bag *Cubic Feet *Sack-94 lbs*Yards	Material Aggregate *Native Fill *Portland Cement *Gravel *Bentonite *Sand Filter Pack	Comments
03/08/2016 0:00	80	Bore 18"				Set 12"sch 40 PVC Casing
03/08/2016 0:00	80	Annulus 18"	25.00	Sack-94	Portland Cement	Pumped Grout Trimmie Method
03/15/2016 0:00	220	Bore 12"				Set 8"sch 40 PVC Casing
03/15/2016 0:00	220	Annulus 12"	55.00	Sack-94	Portland Cement	Pumped Grout Trimmie Method
03/16/2016 0:00	15	Annulus 12"	3.00	Sack-94	Portland Cement	Top Grout to LSD
06/13/2016 0:00	1480	Bore 4"	36.00	Sack-94	Portland Cement	Back Plugging Well
06/14/2016 0:00	1395	Bore 4"	72.00	Sack-94	Portland Cement	Back Plugging Well
06/15/2016 0:00	1392	Bore 4"	72.00	Sack-94	Portland Cement	Back Plugging Well
06/16/2016 0:00	1380	Bore 4"	17.00	Bag *.5 Cubic Feet	Gravel	Back Plugging Well
06/16/2016 0:00	1328	Bore 4"	90.00	Sack-94	Portland Cement	Back Plugging Well
06/17/2016 0:00	788	Bore 4"	72.00	Sack-94	Portland Cement	Back Plugging Well
06/20/2016 0:00	788	Bore 4"	15.00	Bag *.5 Cubic Feet	Gravel	Back Plugging Well
06/20/2016 0:00	735	Bore 4"	36.00	Sack-94	Portland Cement	Back Plugging Well
06/21/2016 0:00	641	Bore 4"	54.00	Sack-94	Portland Cement	Back Plugging Well
06/21/2016 0:00	577	Bore 4"	40.00	Bag *.5 Cubic Feet	Gravel	Back Plugging Well
06/21/2016 0:00	567	Bore 4"	18.00	Sack-94	Portland Cement	Back Plugging Well
06/22/2016 0:00	520	Bore 4"	36.00	Sack-94	Portland Cement	Back Plugging Well
06/22/2016 0:00	445	Bore 4"	1.00	5 Gallon Bucket	Bentonite Pel Plug	Back Plugging Well
06/22/2016 0:00	440	Bore 4"	5.00	Bag *.5 Cubic Feet	Gravel	Back Plugging Well
06/22/2016 0:00	427	Bore 4"				Hard Tag Only
06/23/2016 0:00	317	Bore 8"				Set 4" sch. 40 PVC Casing
06/23/2016 0:00	315	Annulus 8"	3.00	5 Gallon Bucket	Bentonite Pel Plug	4" X 8" Packer set at 315ft.
06/23/2016 0:00	315	Annulus 8"	36.00	Sack-94	Portland Cement	Pumped Grout Trimmie Method
06/24/2016 0:00	130	Annulus 8"	18.00	Sack-94	Portland Cement	Pumped Grout Trimmie Method
06/27/2016 0:00	425	Bore 4"				Final Well Total Depth

Grout Data

Site: Bull Creek North

Well ID: OS0265

Date/ Time (mm/dd/yyyy hh:mm)	Tag Depth (ft bls)	Annulus/ Bore (inches)	Quantity #	Units Bag *Cubic Feet *Sack-94 lbs*Yards	Material Aggregate *Native Fill *Portland Cement *Gravel *Bentonite *Sand Filter Pack	Comments
6/28/2016	80	Bore 12"				Set 8" sch. 40 PVC Casing-0-80ft. BLS
6/28/2016	80	Annulus 12"	22.00	Sack-94	Portland Cement	Pumped Grout-Trimmi Method to LSD
06/29/2016 0:00	165	Bore 8"				Set 4" PVC Sreen Well - 145-165ft. BLS
06/29/2016 0:00	165	Annulus 8"	12.00	Bag	Sand Filter Pack	
06/29/2016 0:00	143	Annulus 8"				Hard Tag Top of Sand
06/29/2016 0:00	143	Annulus 8"	1.00	5 Gallon Bucket	Bentonite Pel Plug	
06/29/2016 0:00	140	Annulus 8"				Hard Tag Top Of Hole Plug
06/29/2016 0:00	140	Annulus 8"	18.00	Sack-94	Portland Cement	Pumped Grout-Trimmi Method to LSD

Grout Data

Site: Bull Creek North

Well ID: OSO266

Date/ Time (mm/dd/yyyy hh:mm)	Tag Depth (ft bls)	Annulus/ Bore (inches)	Quantity #	Units Bag *Cubic Feet *Sack-94 lbs*Yards	Material Aggregate *Native Fill *Portland Cement *Gravel *Bentonite *Sand Filter Pack	Comments
06/28/2016 0:00	24	Bore 8"				Set 4" PVC Sreen Well-2-24ft. BLS
06/28/2016 0:00	24	Annulus 8"	10.00	Bag	Sand Filter Pack	
06/28/2016 0:00	1.5	Annulus 8"				Hard Tag Top of Sand
06/28/2016 0:00	1.5	Annulus 8"	0.50	5 Gallon Bucket	Bentonite Pel Plug	
06/28/2016 0:00	1	Annulus 8"				Hard Tag Top of Hole Plug
06/28/2016 0:00	1	Annulus 8"	0.25	Sack-94	Portland Cement	Pumped Grout-Trimmi Method to LSD

Lithologic Description

Site: Bull Creek North

Well ID: OS0264

From	To	Sample Method	Blow Counts	Lithology	Return
(ft)	(ft)	Core, Split Spoon, Shelby, Cuttings	(###/###/##)	Sampler: A. Story	%
0	2	Spoon	3-3-4-7	Sand-Brown and Black-with Organics	100
2	4	Spoon	8-10-15-15	San-Gray and Black-Medium Coarse	100
4	6	Spoon	4-5-7-9	Sand-Beige-Medium Wet	100
6	8	Spoon	12-9-15-20	Sand Light Black-Medium	100
8	10	Spoon	5-3-4-5	Sand-Black-Medium Fine	100
10	12	Spoon	10-18-21-17	Sand-Black-Medium Fine	100
12	14	Spoon	18-37-50 for 2"	Sand-Black-Medium Coarse	80
14	16	Spoon	40-40-50 for 3"	Sand-Black-Medium Coarse	80
18	20	Spoon	34-50 for 5"	Sand-Dark Brown-Medium	50
20	22	Spoon	35-35-25-35	Sand-Dark Brown-Medium	100
22	24	Spoon	14-17-17-25	Sand-Dark Brown-Medium	100
24	26	Spoon	15-10-13-20	Sand-Dark Brown-Medium	100
26	28	Spoon	3-10-12-15	Sand-Light Brown-Medium Fine	100
28	30	Spoon	10-10-16-18	Sand-Brown-Fine	100
35	37	Spoon	2-2-1-2	Sand-Brown-Fine-with Silts	100
40	42	Spoon	3-3-3-3	Sand-Green-Fine-with Silts	100
45	47	Spoon	6-5-5-6	Sand-Beige-Medium Coars	100
50	52	Spoon	20-22-25-30	Sand-Beige-Medium Coarse-with Minor Shell	100
55	57	Spoon	13-13-14-12	Sand-Light Olive-Medium	100
60	62	Spoon	18-11-11-11	Sand-Light Olive-with Specs of Shell	100
65	67	Spoon	11-6-9-9	Sand-Medium Coarse-with Sandstone	100
70	72	Spoon	5-10-12-14	Clay-Olive-Medium	100
75	77	Spoon	22-18-37-25	Sand-Olive-Medium Fine-with Minor Silt	100
80	82	Spoon	10-4-8-15	Clay-Light Green-Medium Soft-with Sand	100
85	87	Spoon	5-2-2-5	Sand-Olive-Fine-with Clay-Olive-Soft	100
90	92	Spoon	5-6-7-10	Sand-Light Green-Fine-With Minor Clay-and Specs of Shell	100
95	97	Spoon	3-3-8-9	Clay-Olive-Soft-with Sands-Fine	100
100	102	Spoon	12-7-5-32	Clay-Olive-Soft-with Sands-Fine	100
105	107	Spoon	3-4-7-12	Clay-Olive-Medim	100
107	109	Shelby			100
110	112	Spoon	9-10-12-16	Clay-Olive-Medium	100
115	117	Spoon	5-7-25-15	Clay-Dark Olive-Medium	100
120	122	Spoon	30-35-32-24	Sand-Olive-Medium Coarse	100
125	127	Spoon	12-17-35-28	Sand-Olive-Medium Coarse-with Specs of Shell	100
130	132	Spoon	22-27-40-22	Sand-Dark Beige-Medium Coarse-with Shell	100
135	137	Spoon	15-14-20-22	Clay-Dark Green-Stiff	100
140	142	Spoon	6-6-9-15	Clay-Dark Green-Medium Soft-with Sands	100
145	147	Spoon	21-15-20-25	Sand-Dark Green-Medium-with Specs of Shell	100
150	152	Spoon	12-15-48-25	Shell and Sand-with Chert-Black	40
155	157	Spoon	50 for 3"	Sand-Green-Medium Fine-with Shell and Silts	15
160	162	Spoon	18-25-50 for 1"	Sand-Green-Medium Fine-with Shell and Silts	50
160	165	Cuttings		Sand-Green-Medium Fine-with Shell and Silts	50
170	172	Spoon	4-12-25-50 for 5"	Clay-Dark Green-with Sand and Shell	100

Lithologic Description

Site: Bull Creek North

Well ID: OS0264

From	To	Sample Method	Blow Counts	Lithology	Return
(ft)	(ft)	Core, Split Spoon, Shelby, Cuttings	(###/###/##)	Sampler: A. Story	%
175	177	Spoon	12-16-16-22-	Clay-Dark Green-with Sand and Shell	100
180	182	Spoon	11-11-50 for 5"	Sand-Beige-Medium-Clayey	70
185	187	Spoon	21-17-38-40	Clay-Green-Soft-with Sand and Shell	100
190	192	Spoon	18-16-16-22	Sand Beige-Fine-with Phosphates	100
195	197	Spoon	25-26-50 for 5"	Clay-Green and Blue-Medium Stiff-with Shell	100
200	202	Spoon	50 for 5"	Clay-Green to Olive-with Phosphates-and Minor Shell	20
205	207	Spoon	50 for 1"	Shell and Phosphates-with Silts-Caught Cuttings	10
210	212	Spoon	27-25-50 for 5"	Clay-Light Green-Medium-with Minor Phosphates	60
215	217	Spoon	50 for 1"	Clay-Light Green-Medium Soft-Caught Cuttings	20
220	222	Spoon	44-40-50 for 5"	Clay-Green -Stiff	20
225	227	Spoon	50 for 5"	Clay-Green-Stiff	15
230	232	Spoon	50 for 3"	Clay-Green-Medium-with Minor Sand Stone and Chert	15
232	240	Cuttings		Limestone-Beige-with Minor Phosphates-to Limestone-Tan	60
240	246	Core		Limestone-Light Tan-with large Shell	100
246	250	Core		Limestone-Beige-Soft-with Clay-Beige-Soft	90
250	253	Core		Limestone-Beige-Soft-with Clay-Beige-Soft	100
253	254	Core		Limestone-Off White-with a few large pieces of Chert-Black	100
254	256.5	Core		Limestone-Beige-Well Indurated	100
256.5	260	Core		Clay-Tan-Soft-with a few large pieces of Shell	90
260	269.5	Core		Limestone-Beige-Soft-with Clay-Soft-and minor Chert	100
269.5	270	Core		Limestone-White-Well Indurated	100
270	278	Core		Clay-Olive Green-with Sand-and minor Shell	100
278	280	Core		Clay-Light Green-Medium Soft	100
280	288	Core		Clay-Olive Green-Medium Soft-with Sand	100
288	290	Core		Clay-Dark Green-Medium Soft-with Sand	50
290	300	Core		Chert-Green-and Clay-Green-Soft-with Sand and Phosphates	40
300	304	Core		Chert-Gray and Light Green-with Clay-Green and Sand-Phosphates	100
304	310	Core		Limestone-Tan-Well Indurated-to Sand-Tan-Fine	60
310	314	Core		No Return	0
314	320	Core		Limestone-Light Tan-Fossils-Leps.	60
320	325	Core		Limestone-Light Tan- with specs of Gray-Fossils-Leps	100
325	330	Core		No Return	0
330	340	Core		Limestone-Off White-Medium Soft	100
340	350	Core		Limestone-Off White-	55
350	360	Core		Limestone-Off White	45
360	365.5	Core		Limestone-Off White	100
365.5	370	Core		Clay-Off White-Soft-Limey	30
370	380	Core		Limestone-Light Tan	80
380	390	Core		Limestone-Light Tan to Tan	60
390	394	Core		Limestone-Light Tan	100
394	400	Core		Dolostone-Tan-Well Indurated	30
400	410	Core		Limestone-Light Tan-Medium Soft	60
410	420	Core		Limestone-Light Tan-Medium Soft	20

Lithologic Description

Site: Bull Creek North

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From	To	Sample Method	Blow Counts	Lithology	Return
(ft)	(ft)	Core, Split Spoon, Shelby, Cuttings	(###/###/##)	Sampler: A. Story	%
420	430	Core		Limestone-Light Tan-Medium Soft	40
430	435	Core		Limestone-Light Tan-Medium Soft	100
435	438	Core		Limestone-Light Tan-with streaks of Black-MediumSoft	100
438	440	Core		Limestone-Light Tan-Medium Soft	70
440	450	Core		Limestone-Off White to Light Tan-Medium Soft	80
450	451	Core		Limestone-Off White-Medium Soft	100
451	455.5	Core		Dolostone-Brown-Well Indurated	100
455.5	460	Core		Limestone-Light Tan-Fine-Soft-Sandy	100
460	467.5	Core		Dolostone-Tan with some Black-Medium Soft	100
467.5	470	Core		Dolostone- Light Tan-Medium Soft	100
470	470.5	Core		Dolostone-Light Tan-Medium Soft	100
470.5	473	Core		Dolostone-Brown-Well Indurated	100
473	475	Core		Dolostone-Light Tan-Medium Indurated	100
475	475.5	Core		Clay-Beige-Soft-Limey	100
475.5	480	Core		Dolostone-Beige-Medium Soft	50
480	490	Core		Dolostone-Beige-Medium Soft	100
490	492.5	Core		Dolostone-Beige-Medium Soft	100
492.5	493	Core		Clay-Olive-Medium Soft	100
493	500	Core		Dolostone-Beige-Medium Soft	100
500	510	Core		Dolostone-Beige-Medium Soft	75
510	512	Core		Dolostone-Beige and Gray-Medium Soft	100
512	517	Core		Dolostone-Beige-Medium Soft	100
517	520	Core		Dolostone-Beige and Gray-Medium Soft	30
520	530	Core		Dolostone-Beige to Tan-Medium Coarse-Medium	70
530	531.5	Core		Dolostone-Beige-Medium Coarse-Medium Indurated	100
531.5	533	Core		Dolostone-Off White-Medium Soft-Smooth	100
533	536	Core		Dolostone-Tan with Gray-Medium Soft	100
536	540	Core		Dolostone-Beige-Medium Indurated	40
540	546	Core		Dolostone-Beige-Medium Soft	100
546	550	Core		Dolostone-Beige and Gray-Medium Soft	95
550	554	Core		Dolostone-Beige-Medium Soft	100
554	556	Core		Dolostone-Beige-Coarse-Medium Soft	100
556	558.5	Core		Dolostone-Beige-Smooth-Medium Soft	100
558.5	560	Core		Dolostone-Beige and Gray-Well Indurated	40
560	570	Core		Dolostone-Beige and Gray-Medium Soft	80
570	580	Core		Dolostone-Beige to Light Tan-Medium Soft	85
580	590	Core		Dolostone-Beige to Gray to Beige-Medium Soft	95
590	600	Core		Dolostone-Beige to Tan-Medium Soft	95
600	610	Core		Dolostone-Beige to Tan-MediumSoft	85
610	612	Core		Dolostone-Light Tan-Medium Soft	100
612	614	Core		Dolostone-Cream-Medium Indurated	100
614	616.5	Core		Dolostone-Tan-Coarse-Medium Soft	100
616.5	620	Core		Dolostone-Beige-Smooth-Medium Soft	80

Lithologic Description

Site: Bull Creek North

Well ID: OS0264

From	To	Sample Method	Blow Counts	Lithology	Return
(ft)	(ft)	Core, Split Spoon, Shelby, Cuttings	(#/#/#/#)	Sampler: A. Story	%
620	630	Core		Dolostone-Tan to Beige to Tan-Coarse to Smooth	100
630	634.5	Core		Dolostone-Tan-Medium	100
634.5	637.5	Core		Dolostone-Light Tan-Medium	100
637.5	640	Core		Dolostone-Tan and Gray-Medium Soft	100
640	647.5	Core		Dolostone-Tan-Mrdium Coarse-Medium Indurated	100
647.5	650	Core		Dolostone-Light Tan to Beige-Smooth to Coarse to Smooth	!00
650	656.5	Core		Dolostone-Beige to Tan-Medium Coarse-Medium	100
656.5	660	Core		Dolostone-Light Tan-Medium Soft-Semi Smooth	100
660	668	Core		Dolostone-Light Tan and Beige-Medium Soft	!00
668	670	Core		Dolostone-Light Tan-Fine-Soft	100
670	680	Core		Dolostone-Off White to Tan-Medium to Medium Soft	!00
680	690	Core		Dolostone-Tan to Beige-Medium Indurated	100
690	695	Core		Dolostone-Tan-Beige-to Dark Brown-Well Indurated	100
695	700	Core		Dolostone-Light Tan-Medium	100
700	710	Core		Dolostone-Tan-Medium Soft	100
710	720	Core		Dolostone-Light Tan-Medium Soft	100
720	730	Core		Dolostone-Light Tan-Medium Soft	100
730	740	Core		Dolostone-Light Tan-Medium Soft	100
740	742	Core		Dolostone-Tan-Medium	100
742	748	Core		Dolostone-Tan and Brown-Well Indurated	100
748	750	Core		Dolostone-Tan-Medium Soft	100
750	760	Core		Dolostone-Light Tan-Medium Soft to Medium	100
760	763.5	Core		Dolostone-Tan-Medium	100
763.5	770	Core		Dolostone-Brown-Well Indurated	100
770	780	Core		Dolostone-Brown-Well Indurated	100
780	790	Core		Dolostone-Brown-Well Indurated	100
790	796	Core		Dolostone-Tan to Light Brown-Well Indurated	100
796	800	Core		Dolostone-Tan-Medium Indurated	100
800	802	Core		Dolostone-Tan and Brown-Medium	100
802	810	Core		Dolostone-Tan-Medium Soft	100
810	820	Core		Dolostone-Tan-Medium	100
820	830	Core		Dolostone-Tan to Beige-Medium Indurated	100
830	840	Core		Dolostone-Tan to Beige to Tan-Medium Indurated	100
840	850	Core		Dolostone-Tan-Medium Indurated	100
850	860	Core		Dolostone-Tan-Medium Indurated	100
860	870	Core		Dolostone-Beige-Well Indurated-with minor Peat-Black	100
870	880	Core		Dolostone-Beige and Light Tan-Well Indurated	100
870	880	Core		Dolostone-Beige and Light Tan-Well Indurated	100
880	890	Core		Dolostone-Beige and Light Tan-Medium Indurated	100
890	899	Core		Dolostone-Tan-Medium Indurated	100
899	899.5	Core		Clay-Gray-Soft	100
899.5	900	Core		Dolostone-Beige and Gray-Well Indurated	100
900	902	Core		Dolostone-Tan-Well Indurated	100

Lithologic Description

Site: Bull Creek North

Well ID: OS0264

From	To	Sample Method	Blow Counts	Lithology	Return
(ft)	(ft)	Core, Split Spoon, Shelby, Cuttings	(###/###/##)	Sampler: A. Story	%
902	910	Core		Dolostone-Light Tan-Medium Indurated	100
910	916.5	Core		Dolostone-Light Tan-Well Indurated	100
916.5	920	Core		Dolostone-Grayish Brown-Well Indurated	100
920	930	Core		Dolostone-Light Tan to Tan-Medium Indurated	100
930	940	Core		Dolostone-Tan to Light Brown-Medium Indurated to Well	100
940	950	Core		Dolostone-Tan-Well Indurated	100
950	960	Core		Dolostone-Tan to Brown-Medium Indurated	100
960	970	Core		Dolostone-Tan and Brown-Medium Indurated	100
970	980	Core		Dolostone-Brown-Medium Indurated	100
980	990	Core		Dolostone-Tan and Beige-Medium Indurated	100
990	1000	Core		Dolostone-Tan-Medium Indurated	100
1000	1010	Core		Dolostone-Tan-Well Indurated	100
1010	1020	Core		Dolostone-Tan-Well Indurated	100
1020	1030	Core		Dolostone-Tan and Brown-Medium Indurated	100
1030	1040	Core		Dolostone-Tan and Brown-Medium Indurated	100
1040	1050	Core		Dolostone-Light Tan-Medium Indurated	100
1050	1060	Core		Dolostone-Tan and Brown-Well Indurated	100
1060	1070	Core		Dolostone-Light Tan-Medium Indurated	100
1070	1080	Core		Dolostone-Tan-Medium Indurated to Medium Soft	95
1080	1090	Core		Dolostone-Light Tan to Light Brown-Medium Soft	100
1090	1100	Core		Dolostone-Tan-Medium-Some Pourous	100
1100	1110	Core		Dolostone-Beige to Tan-Medium Indurated-Some Pourous	100
1110	1120	Core		Dolostone-Beige-Medium Indurated to Medium Soft	100
1120	1130	Core		Dolostone-Light Tan-Medium Soft	100
1130	1140	Core		Dolostone-Light Tan-Medium Soft	100
1140	1150	Core		Dolostone-Tan to Brown-Medium Soft	100
1150	1160	Core		Dolostone-Brown to Light Tan-Medium Soft	100
1160	1170	Core		Dolostone-Beige-Medium Indurated	100
1170	1180	Core		Dolostone-Beige-Medium Soft	100
1180	1190	Core		Dolostone-Light Tan-Medium Indurated	100
1190	1200	Core		Dolostone-Tan-Medium Indurated to Medium Soft	100
1200	1210	Core		Dolostone-Light Tan-Medium Indurated	100
1210	1220	Core		Dolostone-Tan to Light Tan-Medium Indurated	100
1220	1230	Core		Dolostone-Tan and Beige-Medium and Well Indurated	100
1230	1240	Core		Dolostone-Tan and Off White-Medium Indurated	80
1240	1250	Core		Dolostone-Light Brown and Tan-Medium Indurated	100
1250	1260	Core		Dolostone-Tan and Brown-Medium and Well Indurated	100
1260	1270	Core		Dolostone-Light Tan and Beige-Medium Indurated	100
1270	1280	Core		Dolostone-Light Tan to Tan-Medium Indurated	100
1280	1290	Core		Dolostone-Tan-Medium Indurated	95
1290	1300	Core		Dolostone-Tan-Medium Indurated	100
1300	1310	Core		Dolostone-Brown and Tan-Medium to Well Indurated	100
1310	1312.5	Core		Dolostone-Beige-Well Indurated	80

Lithologic Description

Site: Bull Creek North

Well ID: OS0264

From (ft)	To (ft)	Sample Method Core, Split Spoon, Shelby, Cuttings	Blow Counts (###/###/##)	Lithology Sampler: A. Story	Return %
1312.5	1320	Core		Dolostone-Brown-Medium Indurated	100
1320	1330	Core		Dolostone-Brown-Medium Indurated	100
1330	1340	Core		Dolostone-Beige-Gray and Brown-Well Indurated	95
1340	1350	Core		Dolostone-Brown to Dark Brown and Gray-Well Indurated	100
1350	1360	Core		Dolostone-Charcoal to Brown-Well Indurated	100
1360	1370	Core		Dolostone-Light Tan to Brown-Medium Indurated	90
1370	1380	Core		Dolostone-Brown to Light Tan-Medium Indurated	100
1380	1390	Core		Dolostone-Brown-Porous-Well Indurated	100
1390	1400	Core		Dolostone-Brown to Beige-Semi Porous-Medium Indurated	100
1400	1410	Core		Dolostone-Brown and Beige-Semi Porous-Medium Indurated	100
1410	1420	Core		Dolostone-Beige to Dark Brown and Black-Well Indurated	100
1420	1430	Core		Dolostone-Brown to Dark Brown-Well Indurated	100
1430	1440	Core		Dolostone-Dark Beige-Well Indurated	100
1440	1450	Core		Dolostone-Brown to Dark Brown-Well Indurated	100
1450	1460	Core		Dolostone-Brown-Medium Indurated	100
1460	1470	Core		Dolostone-Brown-Medium Indurated	100
1470	1480	Core		Dolostone-Tan-Well Indurated	100