

Well Development Form

Project Number: <i>0086.004.01.0310</i>				Well Number: <i>MW-01D</i>						
Project Information				Elevation of Well						
Facility Name: <i>Forbes Atlas S-5</i>				Ground Surface Elevation (GS):						
Location: <i>N E</i>				Top of Casing Elevation (TOC):						
Well Information				Well Volume Calculation						
Date Well Installed: <i>5-13-15</i>				$(67.75 - 31.72) \times 0.0408 \times (\pi) = 5.9 \text{ gal}$ <p>1 well volume (gallons) = initial height of water column (ft) x 0.0408 x (casing diameter (in))²</p>						
Total Depth of Well: <i>65.6 / 67.75</i> feet from <i>GS / TOC</i>										
Depth to Top of Screen: <i>55.6</i> feet from <i>GS</i>										
Length of Casing Screened: <i>10</i> feet										
Type of Formation Screened: <i>Limestone</i>										
Well Development Method				Method Description: <i>Surge for 15 min w/ pump & pump @ ~2 gpm</i>						
Equipment: <i>Pump - 12 V Submersible</i>										
Surge	<i>W/ pump</i>	Bail								
Airlift		Pump	<i>W/ pump</i>							
Observations During Well Development										
Date	Time	Depth to Water* (ft)	Total Depth* (ft)	Fluid Removed		Temp. (degrees F)	pH (units)	S.C. (S/cm)	Turbidity (NTU)	Fluid Appearance and Remarks (color, odor, etc.)
				Gallons	Total					
<i>5-16-15</i>	<i>1622</i>	<i>31.72</i>	<i>67.75</i>	<i>I</i>	<i>J</i>	<i>15.1</i>	<i>8.9</i>	<i>0.32</i>	<i>00R</i>	<i>opaque, brown</i>
<i>5-16-15</i>	<i>1625</i>	<i>Dry @</i>	<i>67.75</i>	<i>6</i>	<i>6</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>cloudy, tan</i>
<i>5-17-15</i>	<i>0855</i>	<i>53.75</i>	<i>67.75</i>	<i>I</i>	<i>I</i>	<i>15.6</i>	<i>8.3</i>	<i>0.39</i>	<i>00R</i>	<i>opaque, brown</i>
<i>5-17-15</i>	<i>0857</i>	<i>Dry @</i>	<i>67.75</i>	<i>4</i>	<i>4</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>cloudy, tan</i>
<i>5-17-15</i>	<i>1912</i>	<i>56.50</i>	<i>67.75</i>	<i>I</i>	<i>I</i>	<i>18.4</i>	<i>9.5</i>	<i>0.44</i>	<i>00R</i>	<i>opaque, brown</i>
<i>5-17-15</i>	<i>1913</i>	<i>Dry @</i>	<i>67.75</i>	<i>2</i>	<i>2</i>	<i>15.5</i>	<i>8.3</i>	<i>0.59</i>	<i>361</i>	<i>cloudy, tan</i>
<i>5-18-15</i>	<i>0840</i>	<i>57.45</i>	<i>67.75</i>	<i>I</i>	<i>I</i>	<i>14.6</i>	<i>7.9</i>	<i>0.67</i>	<i>382</i>	<i>cloudy, tan</i>
<i>5-18-15</i>	<i>0843</i>	<i>Dry @</i>	<i>67.75</i>	<i>2</i>	<i>2</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>cloudy, tan</i>

* From TOC unless otherwise noted in Remarks



Well Development Form

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Project Number: 0084-004.01				Well Number: MW-025						
Project Information				Elevation of Well						
Facility Name: Forbes Atlas S-5				Ground Surface Elevation (GS):						
Location: N		E		Top of Casing Elevation (TOC):						
Well Information				Well Volume Calculation						
Date Well Installed: 5-27-15				See page 1. 1 well volume (gallons) = initial height of water column (ft) x 0.0408 x (casing diameter (in)) ²						
Total Depth of Well: 31'		feet from GS								
Depth to Top of Screen: 26'		feet from GS								
Length of Casing Screened: 5		feet								
Type of Formation Screened: Limestone										
Well Development Method				Method Description: Surge for 15 min. Pump @ 1-2 gpm. Surge periodically.						
Equipment: 12V Submersible Pump										
Surge	w/ pump	Bail								
Airlift		Pump	w/ pump							
Observations During Well Development										
Date	Time	Depth to Water* (ft)	Total Depth* (ft)	Fluid Removed		Temp. (degrees F)	pH (units)	S.C. (S/cm)	Turbidity (NTU)	Fluid Appearance and Remarks (color, odor, etc.)
				Gallons	Total					
5-31-15	1510	16.10	34.42	10	20	16.8	7.3	.59	26.1	CLEAR (SURGE PUMP)
5-31-15	1530	16.10	34.42	I	I	16.7	7.4	.60	525	CLOUDY LIGHT BROWN
5-31-15	1535	16.10	34.42	10	10	15.8	7.2	.60	231	OPAQUE
5-31-15	1540	16.10	34.42	10	20	15.9	7.3	.59	23.0	CLEAR (SURGE PUMP)
5-31-15	1615	16.10	34.42	I	I	16.9	7.4	.60	359	CLOUDY
5-31-15	1620	16.10	34.42	10	10	16.7	7.2	.58	16.9	A LITTLE CLOUDY (SURGE)
5-31-15	1635	16.10	34.42	I	I	16.8	7.4	.59	598	CLOUDY LIGHT BROWN
5-31-15	1640	16.10	34.42	10	10	15.8	7.2	.60	189	MODERATELY CLOUDY (SURGE)
5-31-15	1655	16.10	34.42	I	I	17.1	7.4	.59	645	CLOUDY LIGHT BROWN
5-31-15	1700	16.10	34.42	10	10	16.1	7.4	.59	42.3	CLEAR (SURGE PUMP)
5-31-15	1715	16.10	34.42	I	I	16.0	7.4	.60	247	OPAQUE
5-31-15	1720	16.10	34.42	10	10	15.8	7.4	.59	10.8	CLEAR
5-31-15	1730	16.10	34.42	I	I	16.0	7.3	.59	92.3	PRETTY CLEAR
5-31-15	1735	16.10	34.42	10	10	15.6	7.2	.59	38.6	CLEAR
5-31-15	1750	16.10	34.42	I	I	15.6	7.4	.59	272	OPAQUE
5-31-15	1755	16.10	34.42	10	10	15.1	7.2	.59	29.2	CLEAR

* From TOC unless otherwise noted in Remarks



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Well Development Form

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Project Number: 0086-004-01				Well Number: MW-025						
Project Information				Elevation of Well						
Facility Name: Forbes Atlas S-5				Ground Surface Elevation (GS):						
Location: N E				Top of Casing Elevation (TOC):						
Well Information				Well Volume Calculation						
Date Well Installed: 5-27-15				$(34.42 - 16.05)$ $(TD - WL) \times .0408 \times 4 = 2.99$ 1 well volume (gallons) = initial height of water column (ft) x 0.0408 x (casing diameter (in)) ²						
Total Depth of Well: 31' feet from GS										
Depth to Top of Screen: 26' feet from GS										
Length of Casing Screened: 5' feet										
Type of Formation Screened: Limestone										
Well Development Method										
Equipment: 12V Submersible pump				Method Description: Surge for .15 min. Pump @ 1-2 gpm. Surge periodically						
Surge		wl pump	Bail							
Airlift			Pump	wl pump						
Observations During Well Development										
Date	Time	Depth to Water* (ft)	Total Depth* (ft)	Fluid Removed		Temp. (degrees F)	pH (units)	S.C. (S/cm)	Turbidity (NTU)	Fluid Appearance and Remarks (color, odor, etc.)
				Gallons	Total					
5-30-15	1707	16.05	34.42	I	I	14.6	8.1	.57	252	CLOUDY BROWN
5-30-15	1713	16.05	34.42	12	12	14.2	7.6	.59	00R	OPAQUE BROWN
5-30-15	1725	16.05	34.42	24	36	14.0	7.4	.60	359	CLEAR
5-30-16	1737	16.05	34.42	36	50	14.1	7.3	.60	124	CLEAR
5-31-15	1153	16.10	34.42	I	I	14.9	7.5	.58	652	OPAQUE LIGHT BROWN
5-31-15	1156	16.10	34.42	6	6	14.9	7.4	.61	00R	OPAQUE LIGHT BROWN
5-31-15	1159	16.10	34.42	6	12	14.7	7.4	.61	00R	OPAQUE LIGHT BROWN
5-31-15	1202	16.10	34.42	6	18	14.7	7.4	.60	00R	OPAQUE (SURGE PUMP)
5-31-15	1420	16.10	34.42	I	I	17.1	7.5	.60	00R	OPAQUE LIGHT BROWN
5-31-15	1425	16.10	34.42	10	10	15.9	7.3	.58	00R	OPAQUE LIGHT BROWN
5-31-15	1430	16.10	34.42	5	20	16.0	7.4	.60	750	OPAQUE VERY LIGHT BROWN (SURGE)
5-31-15	1440	16.10	34.42	I	I	15.8	7.4	.60	00R	OPAQUE BROWN
5-31-15	1445	16.10	34.42	10	10	15.6	7.4	.60	00R	OPAQUE LIGHT BROWN
5-31-15	1450	16.10	34.42	10	20	16.2	7.3	.58	216	CLOUDY (SURGE PUMP)
5-31-15	1500	16.10	34.42	I	I	15.8	7.4	.60	909	OPAQUE LIGHT BROWN
	1505	16.10	34.42	10	10	16.0	7.4	.58	399	OPAQUE LIGHT BROWN

* From TOC unless otherwise noted in Remarks



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Well Development Form

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Project Number: 0086-004.01				Well Number: MW-025						
Project Information				Elevation of Well						
Facility Name: Forbes Atlas S-5				Ground Surface Elevation (GS):						
Location: N		E		Top of Casing Elevation (TOC):						
Well Information				Well Volume Calculation						
Date Well Installed: 5-27-15				See page 1 1 well volume (gallons) = initial height of water column (ft) x 0.0408 x (casing diameter (in)) ²						
Total Depth of Well: 31		feet from G-5								
Depth to Top of Screen: 26		feet from G-5								
Length of Casing Screened: 5		feet								
Type of Formation Screened: Limestone										
Well Development Method				Method Description: Surge 15 min @ pump @ 1-2 gpm. Pause pumping each 10 min to surge for ~5 min						
Equipment: 12 V Submersible Pump										
Surge	Pump	Bail								
Airlift		Pump	Pump							
Observations During Well Development										
Date	Time	Depth to Water* (ft)	Total Depth* (ft)	Fluid Removed		Temp. (degrees F)	pH (units)	S.C. (S/cm)	Turbidity (NTU)	Fluid Appearance and Remarks (color, odor, etc.)
				Gallons	Total					
6-3-15	1432	16.30	34.43	7	7	17.8	7.3	0.59	315	Cloudy, gray
6-3-15	1437	30.30	34.43	6	6	17.6	7.3	0.58	97.4	sl cloudy
6-3-15	1442	30.67	34.43	6	12	17.9	7.3	0.58	46.3	sl cloudy (Surge ~5 min)
6-3-15	1450	27.54	34.43	5	17	18.1	7.3	0.56	262	sl cloudy
6-3-15	1455	27.80	34.43	6	23	18.5	7.2	0.59	15.0	clear
6-3-15	1500	30.30	34.43	6	29	18.4	7.3	0.58	10.9	clear (Surge ~5 min)
6-3-15	1510	17.40	34.43	5	34.0	16.9	7.2	0.59	284	cloudy
6-3-15	1515	30.90	34.43	6	40	18.1	7.4	0.56	22.0	clear
6-3-15	1520	29.50	34.43	6	46	17.8	7.3	0.57	12.8	clear
6-3-15	1525	30.30	34.43	6	52	17.5	7.2	0.57	18.8	clear
6-8-15	1610	16.20	34.43	7	7	17.3	7.4	0.61	92.40	cloudy
6-8-15	1615	30.20	34.43	6	6	17.3	7.4	0.58	51.0	clear
6-8-15	1620	29.94	34.43	6	12	18.2	7.3	0.59	14.8	clear (Surge after reading)
6-8-15	1630	18.90	34.43	2	14	16.3	7.3	0.58	476	cloudy
6-8-15	1635	29.80	34.43	6	20	17.5	7.2	0.59	24.2	clear
6-8-15	1640	31.25	34.43	6	26	17.2	7.3	0.57	49.4	sl. cloudy (Surge after reading)

* From TOC unless otherwise noted in Remarks



Well Development Form

(Continued)

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Project Number: 0086.004.01				Well Number: MW-025						
Project Information				Elevation of Well						
Facility Name: Forkes Atlas S-5				Ground Surface Elevation (GS):						
Location: N		E		Top of Casing Elevation (TOC):						
Well Information				Well Volume Calculation						
Date Well Installed: 5-27-15				See Page 1						
Total Depth of Well: 31		feet from 6-5								
Depth to Top of Screen: 26		feet from 6-5								
Length of Casing Screened: 5		feet								
Type of Formation Screened: Limestone										
Well Development Method				Method Description: Surge for 15 min. Pump @ 1-2 gpm. Surges periodically.						
Equipment: 12 V Submersible pump										
Surge		w/ Pump		Bail						
Airlift		Pump		w/ Pump						
Observations During Well Development										
Date	Time	Depth to Water* (ft)	Total Depth* (ft)	Fluid Removed		Temp. (degrees F)	pH (units)	S.C. (S/cm)	Turbidity (NTU)	Fluid Appearance and Remarks (color, odor, etc.)
				Gallons	Total					
6-8-15	1650	18.97	34.43	4	30	17.4	7.3	0.59	42.3	sl. cloudy
6-8-15	1652	31.40	34.43	3	33	-	-	-	-	Stop pumping for 6-8.
6-9-15	1326	16.28	34.43	I	7	19.5	7.4	0.58	827	cloudy
6-9-15	1325	29.60	34.43	6	6	16.9	7.3	0.58	11.3	clear
6-9-15	1335	29.60	34.43	12	18	18.7	7.3	0.58	50.4	sl. cloudy
6-9-15	1340	28.10	34.43	6	24	17.4	7.2	0.57	3.24	clear
6-9-15	1345	28.60	34.43	6	30	17.6	7.3	0.58	2.92	clear
6-9-15	1355	28.40	34.43	12	42	17.5	7.3	0.58	4.42	clear
6-9-15	1405	30.20	34.43	12	54	17.6	7.2	0.59	2.24	clear
6-9-15	1415	27.45	34.43	12	66	17.5	7.3	0.59	5.89	clear
6-9-15	1430	30.10	34.43	18	84	17.8	7.2	0.60	2.37	clear
6-9-15	1440	29.60	34.43	12	96	17.7	7.2	0.58	2.55	clear
6-9-15	1450	27.60	34.43	12	108	17.8	7.3	0.58	3.01	clear - stop pumping for 6-9.

* From TOC unless otherwise noted in Remarks



051801 Form WCD-KC-6-1

Well Development Form

Project Number: <u>0086.004.01 10310</u>				Well Number: <u>MW-020</u>						
Project Information				Elevation of Well						
Facility Name: <u>Forbes Atlas 5-5</u>				Ground Surface Elevation (GS):						
Location: <u>N</u> <u>E</u>				Top of Casing Elevation (TOC):						
Well Information				Well Volume Calculation						
Date Well Installed: <u>5-17-15</u>				$(58.52 - 35.96) \times 0.0408 \times (2^2) = 3.7 \text{ gal}$ $TD - WC \quad (dia^2) =$ <p>1 well volume (gallons) = initial height of water column (ft) x 0.0408 x (casing diameter (in))²</p>						
Total Depth of Well: <u>55</u> <u>158.52</u> feet from <u>GS / TOC</u>										
Depth to Top of Screen: <u>50</u> <u>153.52</u> feet from <u>GS / TOC</u>										
Length of Casing Screened: <u>5</u> feet										
Type of Formation Screened: <u>Limestone</u>										
Well Development Method				Method Description: <u>Surge w/ pump for 10-15 min, then pump @ ~2 gpm.</u>						
Equipment: <u>12 V Submersible pump</u>										
Surge	<u>w/ pump</u>	Bail								
Airlift		Pump	<u>w/ pump</u>							
Observations During Well Development										
Date	Time	Depth to Water* (ft)	Total Depth* (ft)	Fluid Removed		Temp. (degrees F)	pH (units)	S.C. (S/cm)	Turbidity (NTU)	Fluid Appearance and Remarks (color, odor, etc.)
				Gallons	Total					
<u>5-20-15</u>	<u>1414</u>	<u>35.96</u>	<u>58.52</u>	<u>I</u>	<u>I</u>	<u>13.0</u>	<u>8.3</u>	<u>0.31</u>	<u>00R</u>	<u>opaque, brown</u>
<u>5-20-15</u>	<u>1415</u>	<u>Dry @</u>	<u>58.52</u>	<u>3.5</u>	<u>3.5</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>Cloudy, brown</u>
<u>5-30-15</u>	<u>1649</u>	<u>40.82</u>	<u>58.52</u>	<u>I</u>	<u>I</u>	<u>15.7</u>	<u>8.1</u>	<u>0.40</u>	<u>258 NTU</u>	<u>opaque brown</u>
<u>5-30-15</u>	<u>1653</u>	<u>Dry @</u>	<u>58.52</u>	<u>16</u>	<u>16</u>					<u>partly cloudy</u>
<u>5-31-15</u>	<u>1139</u>	<u>44.91</u>	<u>58.52</u>	<u>I</u>	<u>I</u>	<u>15.1</u>	<u>7.7</u>	<u>0.80</u>	<u>00R</u>	<u>Brown - opaque</u>
	<u>1142</u>	<u>Dry @</u>	<u>58.52</u>	<u>6</u>	<u>6</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	
<u>5-31-15</u>	<u>1808</u>	<u>49.90</u>	<u>58.52</u>	<u>I</u>	<u>I</u>	<u>15.4</u>	<u>7.7</u>	<u>0.82</u>	<u>00R</u>	<u>Brown very cloudy</u>
	<u>1808</u>	<u>Dry @</u>	<u>58.52</u>	<u>2</u>	<u>2</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>Brown very cloudy</u>

* From TOC unless otherwise noted in Remarks



Well Development Form

Project Number: 0086.004.01				Well Number: MW-055						
Project Information				Elevation of Well						
Facility Name: Forbes Atlas S-5				Ground Surface Elevation (GS):						
Location: N E				Top of Casing Elevation (TOC):						
Well Information				Well Volume Calculation						
Date Well Installed: 6-9-15				(16toe) 16toe)						
Total Depth of Well: 27		feet from GS		$(30.42 - 17.51) \times 0.0408 \times 4 = 2.1 \text{ gal}$						
Depth to Top of Screen: 22		feet from GS								
Length of Casing Screened: 5		feet								
Type of Formation Screened: Limestone				1 well volume (gallons) = initial height of water column (ft) x 0.0408 x (casing diameter (in)) ²						
Well Development Method										
Equipment: 12" submersible pump				Method Description: Surge for 15 min, pump @ 1-2 gpm						
Surge	w/ pump	Bail								
Airlift		Pump	w/ pump							
Observations During Well Development										
Date	Time	Depth to Water* (ft)	Total Depth* (ft)	Fluid Removed		Temp. (degrees F)	pH (units)	S.C. (S/cm)	Turbidity (NTU)	Fluid Appearance and Remarks (color, odor, etc.)
				Gallons	Total					
6-11-15	1110	17.51	30.42	I	I	20.7	8.0	0.54	00R	opaque, brown
6-11-15	1111	Dry @ ~2gal		2	2	-	-	-	-	cloudy, brown
6-12-15	1315	17.59	30.42	I	I	19.0	7.6	0.44	00R	opaque, brown
6-12-15	1316	Dry @ ~2gal (30.42)		2	2	-	-	-	-	cloudy, brown

* From TOC unless otherwise noted in Remarks



Well Development Form

Project Number: <u>0086-004.01</u>		Well Number: <u>MW-03D</u>	
Project Information		Elevation of Well	
Facility Name: <u>Forbes Atlas 5-5</u>		Ground Surface Elevation (GS):	
Location: <u>N</u> <u>E</u>		Top of Casing Elevation (TOC):	
Well Information		Well Volume Calculation	
Date Well Installed: <u>6-2-15</u>		$\frac{(58.29 - 40.24) \times 0.0408 \times 4}{(57.34 - 39.17)} = 2.8 \text{ gal}$ <p>1 well volume (gallons) = initial height of water column (ft) x 0.0408 x (casing diameter (in))²</p>	
Total Depth of Well: <u>54</u> feet from <u>G-5</u>			
Depth to Top of Screen: <u>49</u> feet from <u>G-5</u>			
Length of Casing Screened: <u>5</u> feet			
Type of Formation Screened: <u>Limestone</u>			

Well Development Method			
Equipment: <u>12V Submersible pump</u>		Method Description: <u>Surge for 15 min. Pump @ 1-2 gpm.</u>	
Surge	<u>w/ pump</u>	Bail	
Airlift		Pump	<u>w/ pump</u>

Observations During Well Development										
Date	Time	Depth to Water* (ft)	Total Depth* (ft)	Fluid Removed		Temp. (degrees F)	pH (units)	S.C. (S/cm)	Turbidity (NTU)	Fluid Appearance and Remarks (color, odor, etc.)
				Gallons	Total					
6-5-15	1455	40.24 ^{37.99}	57.34 ^{58.29}	I	I	21.9	8.2	0.45	00R	Opague & brown
6-5-15	1457	Dry @	57.34	3	3	-	-	-	-	Cloudy, brown
6-8-15	1528	41.71 ^{42.66}	57.34 ^{58.29}	I	I	21.4	7.9	0.45	00R	Cloudy, brown
6-8-15	1529	Dry @	58.29	3	3	-	-	-	-	Cloudy, brown
6-9-15	1300	41.62	57.34	I	I	23.6	7.7	0.47	00R	Cloudy, brown
6-9-15	1301	Dry @	57.34	2.5	2.5	-	-	-	-	Cloudy, brown

* From TOC unless otherwise noted in Remarks



Well Development Form

Project Number: <u>0064.004.01</u>		Well Number: <u>MW-045</u>	
Project Information		Elevation of Well	
Facility Name: <u>Forbes Atlas 5-5</u>		Ground Surface Elevation (GS):	
Location: <u>N</u> <u>E</u>		Top of Casing Elevation (TOC):	
Well Information		Well Volume Calculation	
Date Well Installed: <u>6-1-15 @ 1915</u>		$(37.18 - 24.12) \times 0.0408 \times 4 = 2.1 \text{ gal}$ <p>1 well volume (gallons) = initial height of water column (ft) x 0.0408 x (casing diameter (in))²</p>	
Total Depth of Well: <u>34</u> feet from <u>GS</u>			
Depth to Top of Screen: <u>29</u> feet from <u>GS</u>			
Length of Casing Screened: <u>5</u> feet			
Type of Formation Screened: <u>Limestone</u>			

Well Development Method			
Equipment: <u>12 V Submersible Pump</u>		Method Description: <u>Surge for 15 min. Pump @ 1-2 gpm.</u>	
Surge	<u>w/ Pump</u>	Bail	
Airlift		Pump	<u>w/ pump</u>

Observations During Well Development										
Date	Time	Depth to Water* (ft)	Total Depth* (ft)	Fluid Removed		Temp. (degrees F)	pH (units)	S.C. (µS/cm)	Turbidity (NTU)	Fluid Appearance and Remarks (color, odor, etc.)
				Gallons	Total					
<u>6-5</u>	<u>1139</u>	<u>24.12</u>	<u>37.18</u>	<u>I</u>	<u>I</u>	<u>20.6</u>	<u>8.5</u>	<u>0.39</u>	<u>00R</u>	<u>Opaque, brown</u>
<u>6-5</u>	<u>1140</u>	<u>Dry @</u>	<u>37.18</u>	<u>2</u>	<u>2</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>Cloudy, brown</u>
<u>6-8-15</u>	<u>1445</u>	<u>24.24</u>	<u>37.18</u>	<u>I</u>	<u>I</u>	<u>23.9</u>	<u>7.8</u>	<u>0.41</u>	<u>00R</u>	<u>Opaque, brown</u>
<u>6-8-15</u>	<u>1446</u>	<u>Dry @</u>	<u>37.18</u>	<u>2</u>	<u>2</u>	<u>23.0</u>	<u>-</u>	<u>0.41</u>	<u>-</u>	<u>Opaque, brown</u>
<u>6-9-15</u>	<u>1238</u>	<u>24.38</u>	<u>37.18</u>	<u>2</u>	<u>I</u>	<u>23.0</u>	<u>8.0</u>	<u>0.43</u>	<u>00R</u>	<u>Opaque, brown</u>
<u>6-9-15</u>	<u>1239</u>	<u>Dry @</u>	<u>37.18</u>	<u>2</u>	<u>2</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>" "</u>

* From TOC unless otherwise noted in Remarks



Well Development Form

Project Number: <u>0086.004.01</u>		Well Number: <u>MW-040</u>	
Project Information		Elevation of Well	
Facility Name: <u>Forbes Atlas S-5</u>		Ground Surface Elevation (GS):	
Location: <u>N</u> <u>E</u>		Top of Casing Elevation (TOC):	
Well Information		Well Volume Calculation	
Date Well Installed: <u>6-1-15 @ 0830</u>		$(64.97 - 24.20) \times 0.0408 \times 4 = 6.7$ $(65.52 - 53.56) \times 0.0408 \times 4 = 1.95$ 1 well volume (gallons) = initial height of water column (ft) x 0.0408 x (casing diameter (in)) ²	
Total Depth of Well: <u>64</u> feet from <u>GS</u>			
Depth to Top of Screen: <u>59</u> feet from <u>GS</u>			
Length of Casing Screened: <u>5</u> feet			
Type of Formation Screened: <u>Limestone</u>			

Well Development Method			
Equipment: <u>12" submersible pump</u>		Method Description: <u>Surge for 15 min & pump @ 1-2 gpm.</u>	
Surge	<u>w/ pump</u>	Bail	
Airlift		Pump	<u>w/ pump</u>

Observations During Well Development										
Date	Time	Depth to Water* (ft)	Total Depth* (ft)	Fluid Removed		Temp. (degrees F)	pH (units)	S.C. (S/cm)	Turbidity (NTU)	Fluid Appearance and Remarks (color, odor, etc.)
				Gallons	Total					
<u>6-3-15</u>	<u>1342</u>	<u>24.20</u>	<u>64.97</u>	<u>I</u>	<u>=</u>	<u>18.9</u>	<u>8.4</u>	<u>0.71</u>	<u>00R</u>	<u>(Bottom soft), opaque, brown, thick</u>
<u>6-3-15</u>	<u>1345</u>	<u>Dry @</u>	<u>64.97</u>	<u>6</u>	<u>4</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>opaque, brown</u>
<u>6-5-15</u>	<u>1200</u>	<u>53.54</u>	<u>65.52</u>	<u>I</u>	<u>I</u>	<u>20.1</u>	<u>8.2</u>	<u>0.69</u>	<u>00R</u>	<u>Bottom soft, opaque, brown, thick</u>
<u>6-5-15</u>	<u>1201</u>	<u>Dry @</u>	<u>65.52</u>	<u>2</u>	<u>2</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>opaque, brown</u>
<u>6-8-15</u>	<u>1421</u>	<u>53.96</u>	<u>66.75</u>	<u>I</u>	<u>I</u>	<u>23.1</u>	<u>8.2</u>	<u>0.78</u>	<u>00R</u>	<u>opaque, brown, thick</u>
<u>6-8-15</u>	<u>1422</u>	<u>Dry @</u>	<u>66.75</u>	<u>2</u>	<u>2</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>opaque, brown</u>

* From TOC unless otherwise noted in Remarks



Well Development Form

Project Number: <u>0086.00401</u>				Well Number: <u>MW-065</u>						
Project Information				Elevation of Well						
Facility Name: <u>Forbes Atlas 5-5</u>				Ground Surface Elevation (GS):						
Location: <u>N</u> <u>E</u>				Top of Casing Elevation (TOC):						
Well Information				Well Volume Calculation						
Date Well Installed: <u>5/29/15</u>				$(\overset{24.27}{\cancel{24.27}} - 8.16) \times 0.0408 (2^2) = 2.69$ $\overset{23.55}{\cancel{23.55}}$ 1 well volume (gallons) = initial height of water column (ft) x 0.0408 x (casing diameter (in)) ²						
Total Depth of Well: <u>21</u>		feet from <u>G-5</u>								
Depth to Top of Screen: <u>16</u>		feet from <u>G-5</u>								
Length of Casing Screened: <u>5</u>		feet								
Type of Formation Screened: <u>Limestone</u>										
Well Development Method				Method Description: <u>Surge for 15 min, then pump @ 1-2 gpm.</u>						
Equipment: <u>12 U Submersible pump</u>		Surge		Bail						
Airlift		Pump		Pump		<u>pump</u>				
Observations During Well Development										
Date	Time	Depth to Water* (ft)	Total Depth* (ft)	Fluid Removed		Temp. (degrees F)	pH (units)	S.C. (S/cm)	Turbidity (NTU)	Fluid Appearance and Remarks (color, odor, etc.)
				Gallons	Total					
<u>5-31-15</u>	<u>1837</u>	<u>8.16</u>	<u>24.27</u> ⁽¹²⁾	<u>I</u>	<u>I</u>	<u>14</u>	<u>7.6</u>	<u>.45</u>	<u>00R</u>	<u>CLOUDY DARK BROWN</u>
	<u>1840</u>	<u>DRY @</u>	<u>23.55</u>	<u>6</u>	<u>6</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>opaque LIGHT BROWN</u>
<u>6-3-15</u>	<u>1045</u>	<u>7.84</u>	<u>23.55</u>	<u>I</u>	<u>I</u>	<u>17.4</u>	<u>7.3</u>	<u>0.69</u>	<u>00R</u>	<u>Opaque, brown</u>
<u>6-3-15</u>	<u>1046</u>	<u>Dry @</u>	<u>23.55</u>	<u>3</u>	<u>3</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>- cloudy</u>
<u>6-8-15</u>	<u>1250</u>	<u>7.61</u>	<u>23.55</u>	<u>I</u>	<u>I</u>	<u>22.9</u>	<u>7.3</u>	<u>0.71</u>	<u>00R</u>	<u>Opaque brown</u>
<u>6-8-15</u>	<u>1252</u>	<u>Dry @</u>	<u>23.55</u>	<u>3</u>	<u>3</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	

* From TOC unless otherwise noted in Remarks



Well Development Form

Project Number: <u>0086.004.01:0310</u>				Well Number: <u>MW-060</u>						
Project Information				Elevation of Well						
Facility Name: <u>Forbes Atlas S-5</u>				Ground Surface Elevation (GS):						
Location: <u>N</u> <u>E</u>				Top of Casing Elevation (TOC):						
Well Information				Well Volume Calculation						
Date Well Installed: <u>5-16-15</u>				$(51.51 - 13.52) \times 0.0408 \times (2^2) = 6.2 \text{ gal}$ <p>1 well volume (gallons) = initial height of water column (ft) x 0.0408 x (casing diameter (in))²</p>						
Total Depth of Well: <u>48</u> / <u>51.51'</u> feet from <u>GS</u> / <u>TOC</u>										
Depth to Top of Screen: <u>43</u> / <u>46.51</u> feet from <u>GS</u> / <u>TOC</u>										
Length of Casing Screened: <u>5</u> feet										
Type of Formation Screened: <u>Limestone</u>										
Well Development Method				Method Description: <u>Surge w/ pump for 10-15 min 9 pump @ ~2 gpm</u>						
Equipment: <u>120 Submersible pump</u>										
Surge	<u>w/ pump</u>	Bail								
Airlift		Pump	<u>w/ pump</u>							
Observations During Well Development										
Date	Time	Depth to Water* (ft)	Total Depth* (ft)	Fluid Removed		Temp. (degrees F)	pH (units)	S.C. (S/cm)	Turbidity (NTU)	Fluid Appearance and Remarks (color, odor, etc.)
				Gallons	Total					
<u>5-19-15</u>	<u>1232</u>	<u>13.52</u>	<u>51.51</u>	<u>I</u>	<u>I</u>	<u>16.0</u>	<u>8.6</u>	<u>0.30</u>	<u>00R</u>	<u>cloudy, dark brown</u>
<u>5-19-15</u>	<u>1235</u>	<u>Dry @</u>	<u>51.51</u>	<u>6</u>	<u>6</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>cloudy, brown</u>
<u>5-31-15</u>	<u>1832</u>	<u>28.46</u>	<u>51.51</u>	<u>I</u>	<u>I</u>	<u>15.2</u>	<u>7.8</u>	<u>.60</u>	<u>588</u>	<u>cloudy DARK BROWN</u>
<u>5-31-15</u>	<u>1834</u>	<u>Dry @</u>	<u>51.51</u>	<u>4</u>	<u>4</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>opaque BROWN</u>
<u>6-3-15</u>	<u>1125</u>	<u>36.61</u>	<u>51.51</u>	<u>I</u>	<u>I</u>	<u>16.7</u>	<u>7.8</u>	<u>0.68</u>	<u>00R</u>	<u>opaque, brown</u>
<u>6-3-15</u>	<u>1126</u>	<u>Dry @</u>	<u>51.51</u>	<u>3</u>	<u>3</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>cloudy, tan</u>

* From TOC unless otherwise noted in Remarks



Well Development Form

Project Number: 0086-004.01						Well Number: MW-075					
Project Information						Elevation of Well					
Facility Name: Forbes Atlas S-5						Ground Surface Elevation (GS):					
Location: N E						Top of Casing Elevation (TOC):					
Well Information						Well Volume Calculation					
Date Well Installed: 5-28-15						$(35.46 - 8.02) \times 0.0408 \times 4 = 2.8 \text{ gal}$ <p>1 well volume (gallons) = initial height of water column (ft) x 0.0408 x (casing diameter (in))²</p>					
Total Depth of Well: 32 feet from GS											
Depth to Top of Screen: 27 feet from GS											
Length of Casing Screened: 5 feet											
Type of Formation Screened: Limestone											
Well Development Method						Method Description: Surge for 15 min @ pump @ 1-2 gpm					
Equipment: 12 U Submersible pump											
Surge	w/ pump	Bail									
Airlift		Pump	w/ pump								
Observations During Well Development											
Date	Time	Depth to Water* (ft)	Total Depth* (ft)	Fluid Removed		Temp. (degrees F)	pH (units)	S.C. (S/cm)	Turbidity (NTU)	Fluid Appearance and Remarks (color, odor, etc.)	
				Gallons	Total						
5-30-15	1753	18.02	35.46	I	I	15.1	8.7	.34	00R	BROWN CLOUDY	
	1754	DRY @	35.46	-	-	-	-	-	-	BROWN opaque	
5-31-15	1116	18.41	35.46	I	I	15.7	8.3	.52	00R	BROWN CLOUDY	
	1117	DRY @	35.46	2	2	-	-	-	-	-	
5-31-15	1124	18.41	35.46	I	I	15.2	7.7	.54	00R	BROWN CLOUDY	
	1125	DRY @	35.46	2	2	-	-	-	-	-	
5-31-15	1853	18.40	35.46	I	I	15.3	7.5	.61	00R	VERY CLOUDY DARK BROWN	
	1855	DRY @	35.46	4	4	-	-	-	-	CLOUDY BROW	

* From TOC unless otherwise noted in Remarks



Well Development Form

Project Number: <u>80447</u>	Well Number: <u>MW-085</u>
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Project Information	Elevation of Well
Facility Name: <u>Factors Atlas S-5</u>	Ground Surface Elevation (GS):
Location: <u>N</u> <u>E</u>	Top of Casing Elevation (TOC):

Well Information	Well Volume Calculation
Date Well Installed: <u>6-3-16</u>	$(22.98 - 12.07) \times 0.0408 \times 2^2 = 1.8 \text{ gal}$ <p>1 well volume (gallons) = initial height of water column (ft) x 0.0408 x (casing diameter (in))²</p>
Total Depth of Well: <u>20</u> feet from <u>GS</u>	
Depth to Top of Screen: <u>15</u> feet from <u>GS</u>	
Length of Casing Screened: <u>5</u> feet	
Type of Formation Screened: <u>Limestone</u>	

Well Development Method			
Equipment: <u>1.75" dia x 22' L, 12V Submersible Pump</u>		Method Description: <u>Surge w/ pump for 10-15 min, then pump @ 2-3 gpm.</u>	
Surge	<input checked="" type="checkbox"/>	Bail	<input type="checkbox"/>
Airlift	<input type="checkbox"/>	Pump	<input checked="" type="checkbox"/>

Observations During Well Development										
Date	Time	Depth to Water* (ft)	Total Depth* (ft)	Fluid Removed		Temp. (degrees F)	pH (units)	S.C. (S/cm)	Turbidity (NTU)	Fluid Appearance and Remarks (color, odor, etc.)
				Gallons	Total					
<u>6-5-16</u>	<u>0835</u>	<u>12.07</u>	<u>22.98</u>	<u>I</u>	<u>I</u>	<u>18.7</u>	<u>7.9</u>	<u>0.580</u>	<u>00R</u>	<u>Cloudy, gray-brown</u>
<u>6-5-16</u>	<u>0836</u>	<u>Dry @</u>	<u>22.98</u>	<u>1.5</u>	<u>1.5</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>Cloudy, gray-brown</u>
<u>6-5-16</u>	<u>0914</u>	<u>12.22</u>	<u>22.98</u>	<u>I</u>	<u>1.5</u>	<u>17.9</u>	<u>7.2</u>	<u>0.660</u>	<u>00R</u>	<u>Cloudy, gray-brown</u>
<u>6-5-16</u>	<u>0915</u>	<u>Dry @</u>	<u>22.98</u>	<u>1.5</u>	<u>3.0</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>Cloudy, gray-brown</u>
<u>6-5-16</u>	<u>1000</u>	<u>12.22</u>	<u>22.98</u>	<u>I</u>	<u>3.0</u>	<u>18.1</u>	<u>7.7</u>	<u>0.660</u>	<u>00R</u>	<u>Cloudy, gray-brown</u>
<u>6-5-16</u>	<u>1001</u>	<u>Dry @</u>	<u>23.03</u>	<u>1.5</u>	<u>4.5</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>Cloudy, gray-brown</u>
<u>6-5-16</u>	<u>1005-1042</u>	<u>Pump dry, allow 2-3 min</u>		<u>10</u>	<u>14.5</u>	<u>20.4</u>	<u>7.3</u>	<u>0.730</u>	<u>00R</u>	<u>Cloudy, brown</u>
<u>6-5-16</u>	<u>1055-1120</u>	<u>recovery, & repeat.</u>		<u>6</u>	<u>20.5</u>	<u>21.4</u>	<u>7.1</u>	<u>0.740</u>	<u>00R</u>	<u>Cloudy, tan</u>

* From TOC unless otherwise noted in Remarks



Well Development Form

Project Number: <u>80447</u>	Well Number: <u>MW-095</u>
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Project Information	Elevation of Well
Facility Name: <u>Forbes Atlas S-S Site</u>	Ground Surface Elevation (GS):
Location: <u>N</u> <u>E</u>	Top of Casing Elevation (TOC):

Well Information	Well Volume Calculation
Date Well Installed: <u>6-2-14</u>	$(25.51 - 12.72) \times 0.0408 \times 2^2 = 2.1 \text{ gal}$ <p>1 well volume (gallons) = initial height of water column (ft) x 0.0408 x (casing diameter (in))²</p>
Total Depth of Well: <u>23</u> feet from <u>GS</u>	
Depth to Top of Screen: <u>18</u> feet from <u>GS</u>	
Length of Casing Screened: <u>5</u> feet	
Type of Formation Screened: <u>Limestone</u>	

Well Development Method			
Equipment: <u>1.75" dia x 2.2'L, 12V Submersible pump</u>		Method Description: <u>Surge w/ pump for 15 min, then pump @ 2-3 gpm.</u>	
Surge	<input checked="" type="checkbox"/>	Bail	<input type="checkbox"/>
Airlift	<input type="checkbox"/>	Pump	<input checked="" type="checkbox"/>

Observations During Well Development										
Date	Time	Depth to Water* (ft)	Total Depth* (ft)	Fluid Removed		Temp. (degrees F)	pH (units)	S.C. (S/cm)	Turbidity (NTU)	Fluid Appearance and Remarks (color, odor, etc.)
				Gallons	Total					
6-4-14	1317	12.72	25.51	I	I	18.0	8.2	0.410	00R	cloudy, brown
6-4-14	1318	Dry @	25.51	2	2	-	-	-	-	cloudy, tan
6-4-14	1400	12.90	25.51	I	2	17.8	7.9	0.430	00R	cloudy, tan
6-4-14	1401	Dry @	25.51	1.5	3.5	-	-	-	-	cloudy, tan
6-4-14	1440	12.90	25.51	I	3.5	16.7	7.7	0.550	00R	cloudy, tan
6-4-14	1441	Dry @	25.51	1.5	5.0	-	-	-	-	cloudy, tan
6-4-14	1445-1510	^{dry} Pump & allow 2-3 min recovery		6	11.00	19.7	7.4	0.740	00R	cloudy, tan
6-4-14	1522-1536	then pump dry again, and		6	17.0	17.8	7.6	0.740	00R	cloudy, tan - light
6-4-14	1539-1559	repeat.		6	23.0	19.6	7.6	0.730	537	cloudy, light tan
6-4-14	1617-1634			6	29.0	20.6	7.6	0.720	427	cloudy, light tan
6-4-14	1634-1655	Dry	25.51	6	35.0	20.3	7.3	0.720	241	cloudy, light tan

* From TOC unless otherwise noted in Remarks



Well Development Form

Project Number: <u>80447</u>	Well Number: <u>MW-105</u>
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Project Information	Elevation of Well
Facility Name: <u>Forbes Atlas S-5</u>	Ground Surface Elevation (GS):
Location: <u>N</u> <u>E</u>	Top of Casing Elevation (TOC):

Well Information	Well Volume Calculation
Date Well Installed: <u>5-24-16</u>	$(24.72 - 10.80) \times 0.0408 \times 2^2$ $13.92 \times 0.0408 \times 4 = 2.27 \text{ gal}$ <p>1 well volume (gallons) = initial height of water column (ft) x 0.0408 x (casing diameter (in))²</p>
Total Depth of Well: <u>22'</u> feet from <u>G-S</u>	
Depth to Top of Screen: <u>17</u> feet from <u>G-S</u>	
Length of Casing Screened: <u>5</u> feet	
Type of Formation Screened: <u>Limestone</u>	

Well Development Method			
Equipment: <u>1.75" dia x 2.2'L, 120 Submersible Pump</u>		Method Description: <u>Surge for 15 min. Pump @ ~2-3 gpm.</u>	
Surge	<input checked="" type="checkbox"/>	Bail	<input type="checkbox"/>
Airlift	<input type="checkbox"/>	Pump	<input checked="" type="checkbox"/>

Observations During Well Development										
Date	Time	Depth to Water* (ft)	Total Depth* (ft)	Fluid Removed		Temp. (degrees F)	pH (units)	S.C. (S/cm)	Turbidity (NTU)	Fluid Appearance and Remarks (color, odor, etc.)
				Gallons	Total					
5-26-16	1656	10.80	24.72	I	I	16.3	8.5	0.300	00R	Cloudy, brown
5-26-16	1657	Dry	24.72	2.5	2.5	-	-	-	-	Cloudy, brown
6-1-16	1656	10.68	24.72	I	2.5	16.7	7.6	0.470	00R	Cloudy, tan brown
6-1-16	1657	Dry @	24.72	2.0	4.5	-	-	-	-	Cloudy, tan
6-2-16	1649	10.68	24.77	I	4.5	18.4	7.4	0.630	00R	Cloudy, tan
6-2-16	1650	Dry @	24.77	2	6.5	-	-	-	-	Cloudy, tan
6-5-16	1151	10.83	24.77	I	6.5	17.3	7.3	0.680	00R	Cloudy, tan
6-5-16	1215	19.00 → Dry	24.77	6	12.5	21.5	7.1	0.700	00R	Cloudy, tan
6-5-16	1240	19.00 → Dry	24.77	6	18.5	21.3	7.2	0.700	00R	Cloudy, tan

* From TOC unless otherwise noted in Remarks



Well Development Form

Project Number: <u>80447</u>				Well Number: <u>MW-115</u>						
Project Information				Elevation of Well						
Facility Name: <u>Forbes Atlas S-S site</u>				Ground Surface Elevation (GS):						
Location: <u>N</u> <u>E</u>				Top of Casing Elevation (TOC):						
Well Information				Well Volume Calculation						
Date Well Installed: <u>5-25-16</u>				$(24.81 - 9.29) \cdot 0.0408 \cdot 2^2 = 2.5 \text{ gal}$ $(24.81 - 12.02) \cdot 0.0408 \cdot 2^2 = 2.1 \text{ gal}$ <p>1 well volume (gallons) = initial height of water column (ft) x 0.0408 x (casing diameter (in))²</p>						
Total Depth of Well: <u>22</u>		feet from <u>GS</u>								
Depth to Top of Screen: <u>17</u>		feet from <u>GS</u>								
Length of Casing Screened: <u>5</u>		feet								
Type of Formation Screened: <u>Limestone</u>										
Well Development Method										
Equipment: <u>1.75" dia x 2.2'L, 12V submersible pump</u>				Method Description: <u>Surge for 15 min 7 pump @ ~2-3 gpm</u>						
Surge	<input checked="" type="checkbox"/>	Bail	<input type="checkbox"/>							
Airlift	<input type="checkbox"/>	Pump	<input checked="" type="checkbox"/>							
Observations During Well Development										
Date	Time	Depth to Water* (ft)	Total Depth* (ft)	Fluid Removed		Temp. (degrees F)	pH (units)	S.C. (S/cm)	Turbidity (NTU)	Fluid Appearance and Remarks (color, odor, etc.)
				Gallons	Total					
<u>6-1-16</u>	<u>1607</u>	<u>9.29</u>	<u>24.81</u>	<u>I</u>	<u>I</u>	<u>28.3</u>	<u>8.3</u>	<u>0.360</u>	<u>00R</u>	<u>Cloudy, Tan</u>
<u>6-1-16</u>	<u>1608</u>	<u>Dry @</u>	<u>24.81</u>	<u>2.5</u>	<u>2.5</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>Cloudy, Tan</u>
<u>6-2-16</u>	<u>1623</u>	<u>12.02</u>	<u>24.81</u>	<u>I</u>	<u>2.5</u>	<u>19.3</u>	<u>7.6</u>	<u>0.550</u>	<u>00R</u>	<u>Cloudy, Tan</u>
<u>6-2-16</u>	<u>1624</u>	<u>Dry @</u>	<u>24.81</u>	<u>2</u>	<u>4.5</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>Cloudy, Tan</u>
<u>6-3-16</u>	<u>1626</u>	<u>12.11</u>	<u>24.83</u>	<u>I</u>	<u>4.5</u>	<u>17.6</u>	<u>7.2</u>	<u>0.720</u>	<u>00R</u>	<u>cloudy, tan</u>
<u>6-3-16</u>	<u>1627</u>	<u>Dry @</u>	<u>24.83</u>	<u>1.5</u>	<u>6.0</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>Sl. Cloudy, tan</u>
<u>6-5-16</u>	<u>1659</u>	<u>12.37</u>	<u>24.75</u>	<u>I</u>	<u>6.0</u>	<u>16.8</u>	<u>7.1</u>	<u>0.810</u>	<u>00R</u>	<u>Sl. Cloudy, tan</u>
<u>6-5-16</u>	<u>1327</u>	<u>19.0 to Dry</u>	<u>24.89</u>	<u>6</u>	<u>12.0</u>	<u>19.7</u>	<u>7.0</u>	<u>0.810</u>	<u>00R</u>	<u>Cloudy, tan</u>
<u>6-5-16</u>				<u>7.2</u>	<u>18.0</u>					

* From TOC unless otherwise noted in Remarks



Well Development Form

Project Number: <u>80447</u>	Well Number: <u>MW-125</u>
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Project Information	Elevation of Well
Facility Name: <u>Forbes Atlas 5-5 site</u>	Ground Surface Elevation (GS):
Location: <u>N</u> <u>E</u>	Top of Casing Elevation (TOC):

Well Information	Well Volume Calculation
Date Well Installed: <u>5-26-16</u>	$(27.19 - 15.02) \cdot 0.0408 \cdot 2^2 = 2.0 \text{ gal}$ $(27.19 - 15.31) \cdot 0.0408 \cdot 2^2 = 1.9 \text{ gal}$ 1 well volume (gallons) = initial height of water column (ft) x 0.0408 x (casing diameter (in)) ²
Total Depth of Well: <u>25</u> feet from <u>GS</u>	
Depth to Top of Screen: <u>15</u> feet from <u>GS</u>	
Length of Casing Screened: <u>10</u> feet	
Type of Formation Screened: <u>Limestone</u>	

Well Development Method			
Equipment: <u>1.75" dia x 2.2' L, 12V Submersible pump</u>		Method Description: <u>Surge for 15 min & pump @ -2-3 gpm</u>	
Surge	<input checked="" type="checkbox"/>	Bail	<input type="checkbox"/>
Airlift	<input type="checkbox"/>	Pump	<input checked="" type="checkbox"/>

Observations During Well Development										
Date	Time	Depth to Water* (ft)	Total Depth* (ft)	Fluid Removed		Temp. (degrees F)	pH (units)	S.C. (S/cm)	Turbidity (NTU)	Fluid Appearance and Remarks (color, odor, etc.)
				Gallons	Total					
<u>6-1-16</u>	<u>1637</u>	<u>15.02</u>	<u>27.19</u>	<u>I</u>	<u>I</u>	<u>23.2</u>	<u>7.6</u>	<u>0.420</u>	<u>00R</u>	<u>Cloudy, brown</u>
<u>6-1-16</u>	<u>1638</u>	<u>Dry @</u>	<u>27.19</u>	<u>2</u>	<u>2</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>Cloudy, brown</u>
<u>6-2-16</u>	<u>1605</u>	<u>15.31</u>	<u>27.19</u>	<u>I</u>	<u>2</u>	<u>22.7</u>	<u>7.7</u>	<u>0.640</u>	<u>00R</u>	<u>Cloudy, brown</u>
<u>6-2-16</u>	<u>1606</u>	<u>Dry @</u>	<u>27.19</u>	<u>2</u>	<u>4</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>Cloudy, brown</u>
<u>6-3-16</u>	<u>1450</u>	<u>15.19</u>	<u>27.02</u>	<u>I</u>	<u>4</u>	<u>20.0</u>	<u>7.7</u>	<u>0.800</u>	<u>00R</u>	<u>Cloudy, brown</u>
<u>6-3-16</u>	<u>1451</u>	<u>Dry @</u>	<u>27.02</u>	<u>1.5</u>	<u>5.5</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>Cloudy, brown</u>
<u>6-5-16</u>	<u>1343</u>	<u>15.31</u>	<u>27.03</u>	<u>I</u>	<u>5.5</u>	<u>18.1</u>	<u>7.2</u>	<u>1.040</u>	<u>00R</u>	<u>Cloudy, brown</u>
<u>6-5-16</u>	<u>1409</u>	<u>19.0 Dry</u>	<u>27.03</u>	<u>6</u>	<u>11.5</u>	<u>20.5</u>	<u>7.2</u>	<u>1.130</u>	<u>00R</u>	<u>Cloudy, brown</u>

* From TOC unless otherwise noted in Remarks



Well Development Form

Project Number: 80447				Well Number: MW-135						
Project Information				Elevation of Well						
Facility Name: Forbes Atlas S-S site				Ground Surface Elevation (GS):						
Location: N E				Top of Casing Elevation (TOC):						
Well Information				Well Volume Calculation						
Date Well Installed: 6-1-16				$(19.71 - 7.10) \times 0.0408 \cdot 2^2 = 2.1 \text{ gal}$ $(19.71 - 9.05) \times 0.0408 \cdot 2^2 = 1.7 \text{ gal}$ 1 well volume (gallons) = initial height of water column (ft) x 0.0408 x (casing diameter (in)) ²						
Total Depth of Well: 18		feet from GS								
Depth to Top of Screen: 8		feet from GS								
Length of Casing Screened: 10		feet								
Type of Formation Screened: Limestone										
Well Development Method										
Equipment: 1.75" dia x 2.2' L, 12V Submersible pump				Method Description: Surge w/ pump for 10-15 min & pump @ 2-3 gpm						
Surge	<input checked="" type="checkbox"/>	Bail	<input type="checkbox"/>							
Airlift	<input type="checkbox"/>	Pump	<input checked="" type="checkbox"/>							
Observations During Well Development										
Date	Time	Depth to Water* (ft)	Total Depth* (ft)	Fluid Removed		Temp. (degrees F)	pH (units)	S.C. (S/cm)	Turbidity (NTU)	Fluid Appearance and Remarks (color, odor, etc.)
				Gallons	Total					
6-4-16	0909	7.10	19.71	I	I	19.4	8.5	470	00R	Cloudy, brown
6-4-16	0910	Dry @	19.71	2	2	-	-	-	-	Cloudy, brown
6-4-16	1008	8.54	19.71	I	2	18.0	7.7	550	00R	Cloudy, brown
6-4-16	1009	Dry @	19.71	2	4	-	-	-	-	Cloudy, brown
6-4-16	1115	9.05	19.71	I	4	16.8	7.5	640	00R	Cloudy, brown
6-4-16	1116	Dry @	19.75	2	6	-	-	-	-	Cloudy, brown
6-5-16	1423	7.34	19.76	I	6	16.5	7.3	0.630	00R	Cloudy, brown
6-5-16	1435	9.0 Dry	19.10	6	12	17.4	7.3	0.670	00R	Cloudy, brown

* From TOC unless otherwise noted in Remarks

