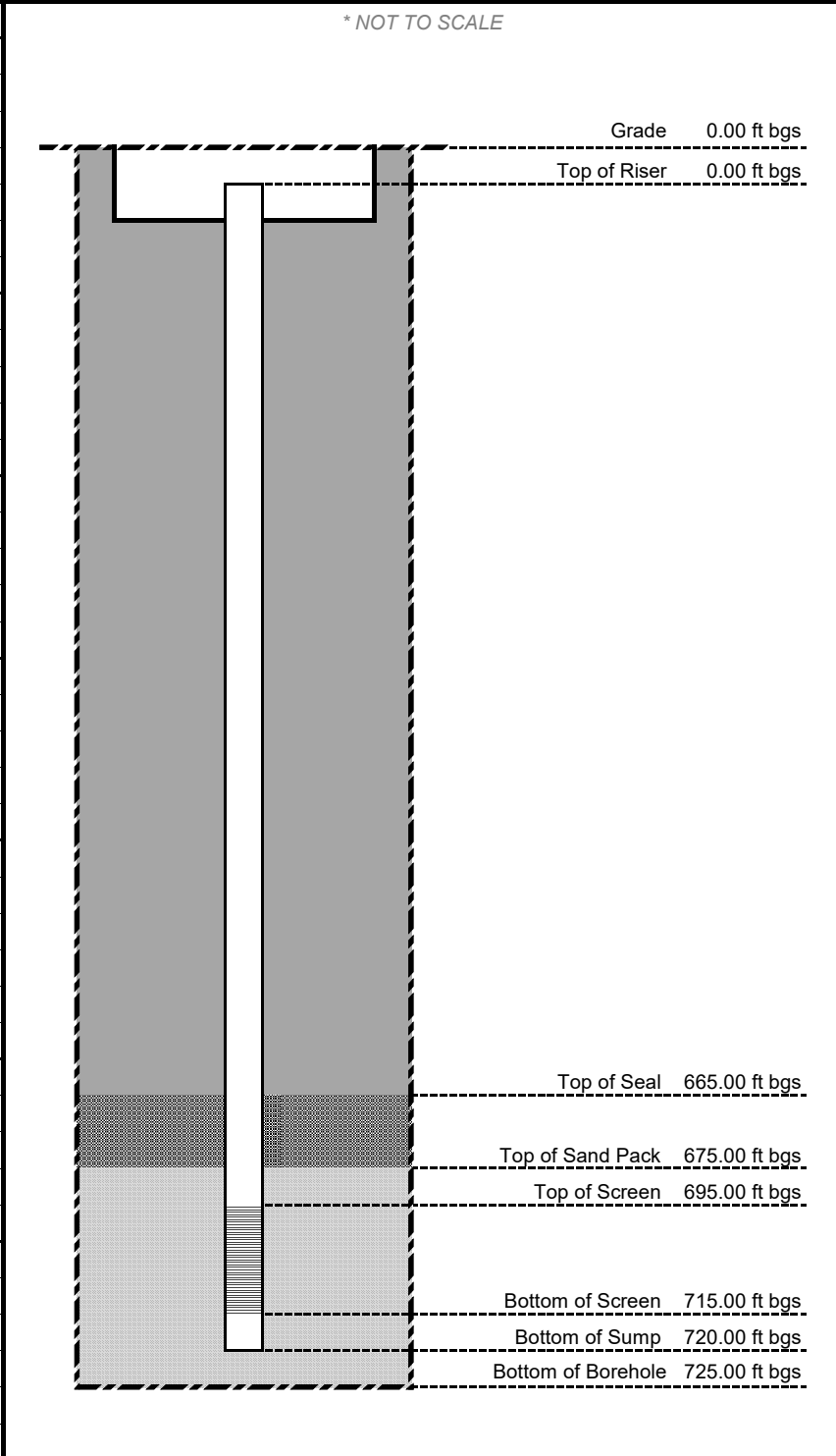




Well ID:	DEC1D1	Project:	WA#32 Northrop Grumman
Location:	Bethpage, NY	Client:	NYSDEC
Drilling Contractor:	Delta Well & Pump	Project Number:	10054840
Date Drilled:	Oct 02, 2017	Drilling Rig:	Mud Rotary
Date Completed:	Oct 05, 2017	Drilling Method:	Mud Rotary
Cover Type:	Manhole Cover	Development Method:	Airlift & Pump
Grade Elevation:	47.9 feet	Key ID or Socket Size:	--
Borehole Depth:	725 feet	Coordinate System:	NAD 1983 (2011) StatePlane NY LI FIPS 3104
Borehole Dia.:	8-inch	X:	1125010E
		Y:	194033N

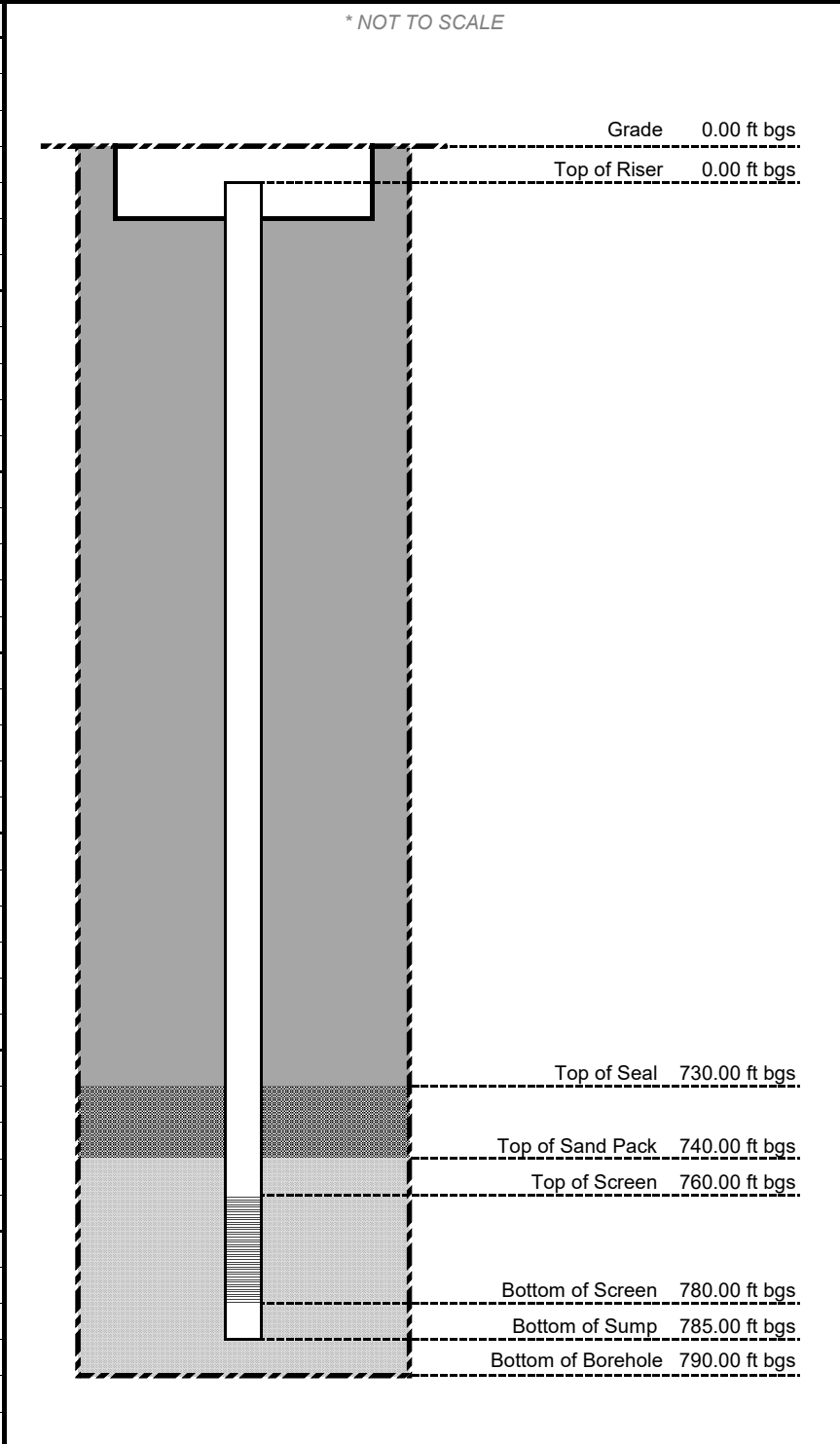
General Well Information	
Well ID:	DEC1D1
Start Date:	Oct 02, 2017
End Date:	Oct 12, 2017
Static Water Level:	--
SWL Date:	--
Measuring Point:	TOC
Well Depth (ft):	720' bgs
Riser Pipe(s)	
Interval (ft):	0' - 695' bgs
Material:	Sch. 120 PVC
Diameter (in):	4-inch
Joint Type:	Coupled
Surface Casing	
Interval (ft):	--
Material:	--
Diameter (in):	--
Joint Type:	--
Screen(s)	
Interval (ft):	695' - 715' bgs
Diameter (in):	4-inch
Material:	Sch. 120 PVC
Slot Size:	--
Filter Pack(s)	
Interval (ft):	675' - 725' bgs
Sand:	#1
Gravel:	--
Natural:	--
Amount:	--
Sump(s)	
Interval (ft):	715' - 720' bgs
Material:	Sch. 120 PVC
Diameter (in):	4-inch
Joint Type:	Coupled
Seal(s) / QTY(s)	
Grout:	0' - 665' bgs
Concrete Mix:	--
Bentonite Slurry:	--
Bentonite Pellets:	665' - 670' bgs
Other:	#00 Sand





Well ID:	DEC1D2	Project:	WA#32 Northrop Grumman
Location:	Bethpage, NY	Client:	NYSDEC
Drilling Contractor:	Delta Well & Pump	Project Number:	10054840
Date Drilled:	Sep 12, 2017	Drilling Rig:	Mud Rotary
Date Completed:	Sep 21, 2017	Drilling Method:	Mud Rotary
Cover Type:	Manhole Cover	Development Method:	Airlift & Pump
Grade Elevation:	47.8 feet	Key ID or Socket Size:	--
Borehole Depth:	790 feet	Coordinate System:	NAD 1983 (2011) StatePlane NY LI FIPS 3104
Borehole Dia.:	8-inch	X: 1125016E	Y: 194051N

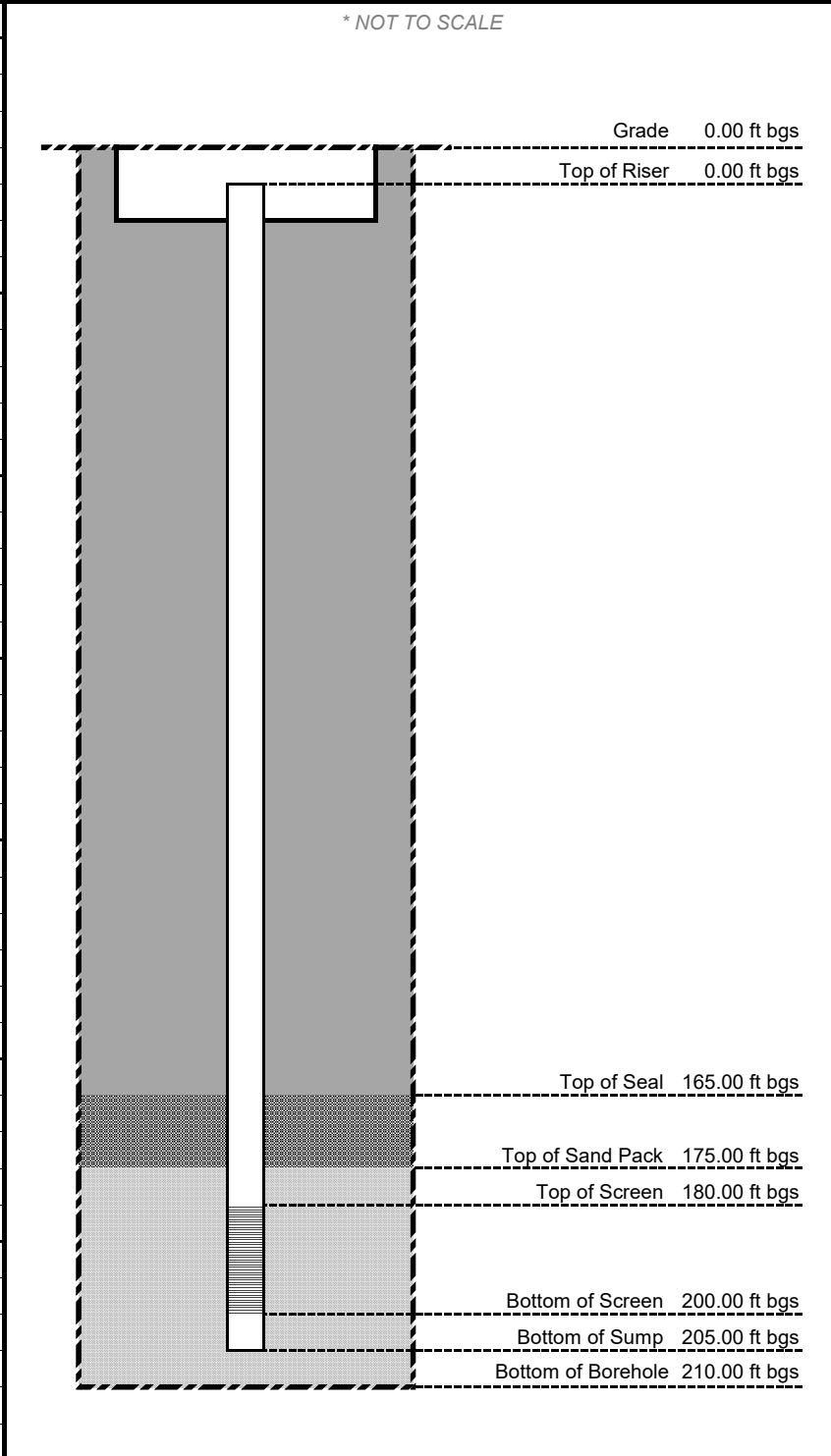
General Well Information	
Well ID:	DEC1D2
Start Date:	Sep 12, 2017
End Date:	Sep 21, 2017
Static Water Level:	--
SWL Date:	--
Measuring Point:	TOC
Well Depth (ft):	785' bgs
Riser Pipe(s)	
Interval (ft):	0' - 760' bgs
Material:	Sch. 120 PVC
Diameter (in):	4-inch
Joint Type:	Coupled
Surface Casing	
Interval (ft):	--
Material:	--
Diameter (in):	--
Joint Type:	--
Screen(s)	
Interval (ft):	760' - 780' bgs
Diameter (in):	4-inch
Material:	Sch. 120 PVC
Slot Size:	--
Filter Pack(s)	
Interval (ft):	740' - 790' bgs
Sand:	#1
Gravel:	--
Natural:	--
Amount:	24 - 100lb bags
Sump(s)	
Interval (ft):	780' - 785' bgs
Material:	Sch. 120 PVC
Diameter (in):	4-inch
Joint Type:	Coupled
Seal(s) / QTY(s)	
Grout:	0' - 730' bgs
Concrete Mix:	--
Bentonite Slurry:	--
Bentonite Pellets:	
Other:	#00 Sand 735'-740' bgs





Well ID:	DEC2D1	Project:	WA#32 Northrop Grumman
Location:	Bethpage, NY	Client:	NYSDEC
Drilling Contractor:	Delta Well & Pump	Project Number:	10054840
Date Drilled:	Oct 13, 2017	Drilling Rig:	Mud Rotary
Date Completed:	Nov 22, 2017	Drilling Method:	Mud Rotary
Cover Type:	Manhole Cover	Development Method:	Airlift & Pump
Grade Elevation:	56.1 feet	Key ID or Socket Size:	--
Borehole Depth:	210 feet	Coordinate System:	NAD 1983 (2011) StatePlane NY LI FIPS 3104
Borehole Dia.:	8-inch	X:	1131224E
		Y:	197068N

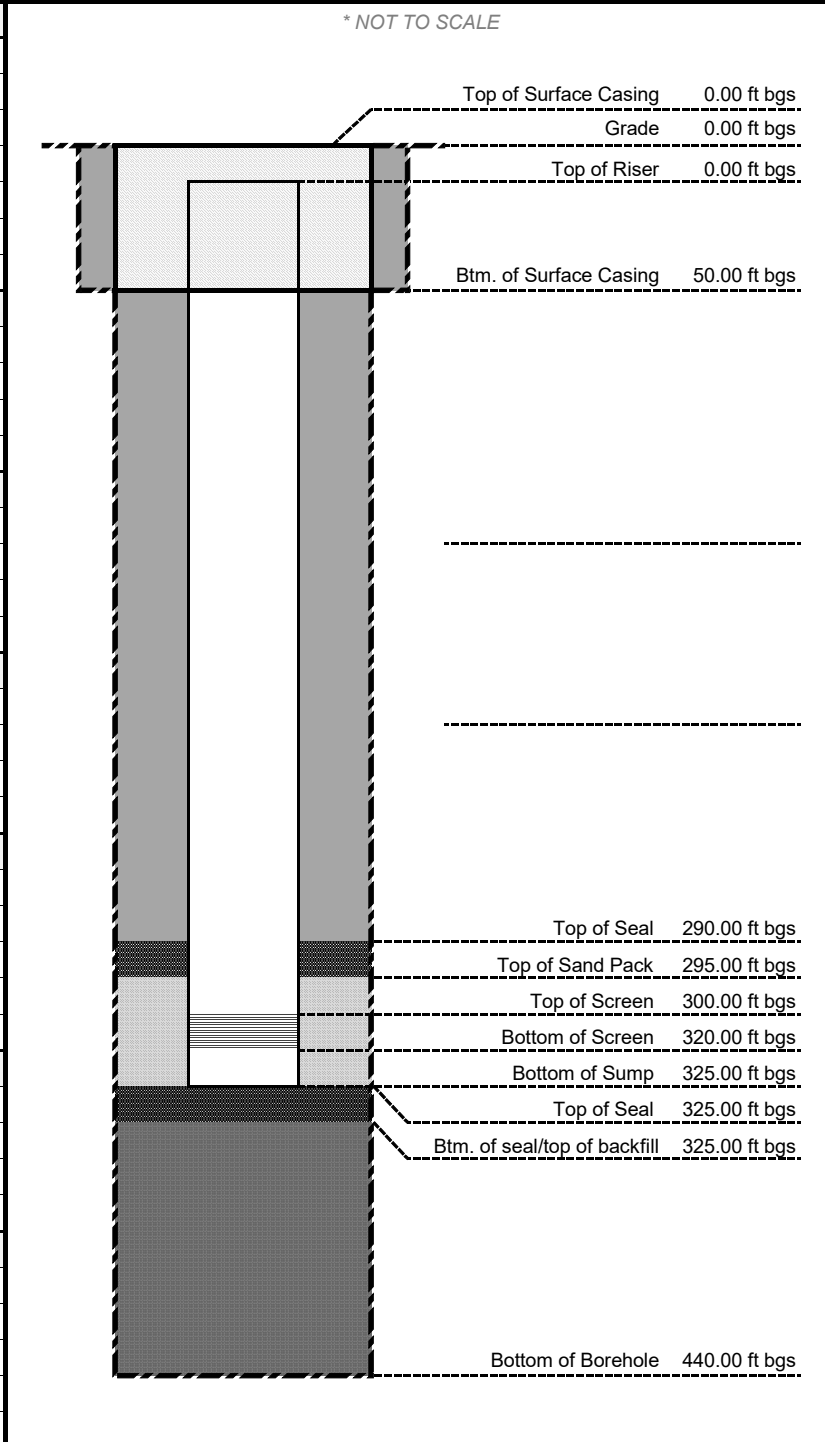
General Well Information	
Well ID:	DEC2D1
Start Date:	Oct 13, 2017
End Date:	Nov 22, 2017
Static Water Level:	--
SWL Date:	--
Measuring Point:	TOC
Well Depth (ft):	205 ft bgs
Riser Pipe(s)	
Interval (ft bgs):	0-180
Material:	Sch. 120 PVC
Diameter (in):	4
Joint Type:	Coupled
Surface Casing	
Interval (ft bgs):	0-50
Material:	Steel
Diameter (in):	8
Joint Type:	Flush
Screen(s)	
Interval (ft bgs):	180-200
Diameter (in):	4
Material:	Sch. 120 PVC
Slot Size:	10
Filter Pack(s)	
Interval (ft):	30
Sand:	#1
Gravel:	--
Natural:	--
Amount:	--
Sump(s)	
Interval (ft bgs):	200-205
Material:	Sch. 120 PVC
Diameter (in):	4
Joint Type:	Coupled
Seal(s) / QTY(s)	
Grout:	--
Concrete Mix:	--
Bentonite Slurry:	--
Bentonite Pellets:	--
Other:	#00 Sand





Well ID:	DEC3D2	Project:	WA#32 Northrop Grumman
Location:	Bethpage, NY	Client:	NYSDEC
Drilling Contractor:	Delta Well & Pump	Project Number:	10054840
Date Drilled:	3/26/2018-4/18/2018	Drilling Rig:	Mud Rotary
Date Completed:	Apr 24, 2018	Drilling Method:	Mud Rotary
Cover Type:	Manhole Cover	Development Method:	Airlift & Pump
Grade Elevation:	114.4 feet	Key ID or Socket Size:	--
Borehole Depth:	440 feet	Coordinate System:	NAD 1983 (2011) StatePlane NY LI FIPS 3104
Borehole Dia.:	8-inch	X: 1127373E	Y: 212504N

General Well Information	
Well ID:	DEC3D2
Start Date:	Mar 26, 2018
End Date:	Apr 24, 2018
Static Water Level:	--
SWL Date:	--
Measuring Point:	Top of Casing
Well Depth (ft):	325
Riser Pipe(s)	
Interval (ft bgs):	0-300
Material:	Sch. 120 PVC
Diameter (in):	4
Joint Type:	Coupled
Surface Casing	
Interval (ft bgs):	0-50
Material:	Steel
Diameter (in):	10
Joint Type:	Welded
Screen(s)	
Interval (ft bgs):	300-320
Diameter (in):	4-inch
Material:	Sch. 120 PVC
Slot Size:	10
Filter Pack(s)	
Interval (ft bgs):	295-325
Sand:	--
Gravel:	No 1 size
Natural:	--
Amount:	--
Sump(s)	
Interval (ft bgs):	320-325
Material:	Sch. 120 PVC
Diameter (in):	4-inch
Joint Type:	Coupled
Seals (ft bgs)	
Grout:	0-290
Concrete Mix:	--
Bentonite Slurry:	--
Bentonite Pellets:	290-295; 325-328
Other:	--

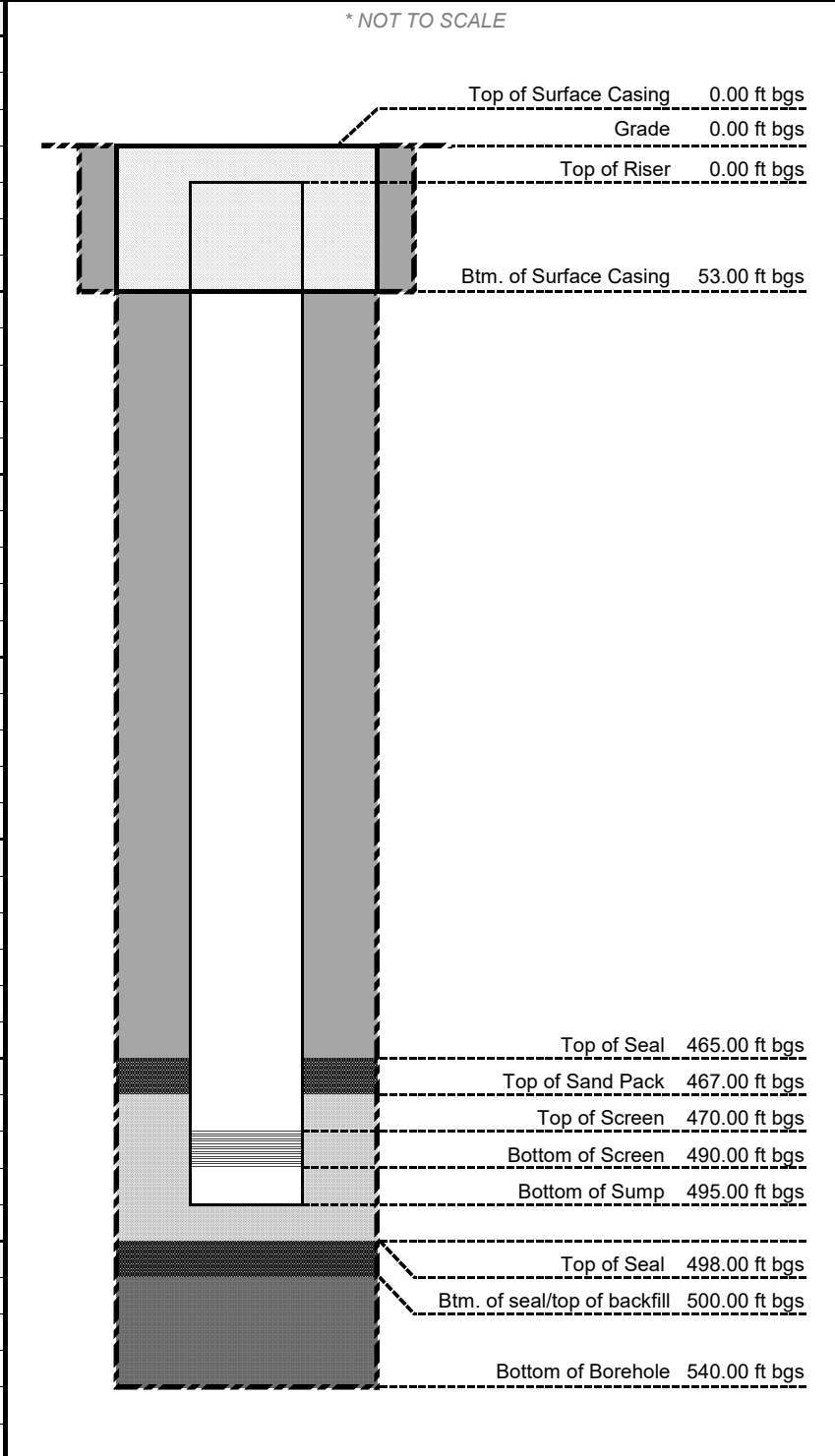


Location of bentonite seal confirmed with Derek Matuszewski



Well ID:	DEC4D1	Project:	WA#32 Northrop Grumman
Location:	Bethpage, NY	Client:	NYSDEC
Drilling Contractor:	Delta Well & Pump	Project Number:	10054840
Date Drilled:	4/23/2018-5/22/2018	Drilling Rig:	Mud Rotary
Date Completed:	May 22, 2018	Drilling Method:	Mud Rotary
Cover Type:	Manhole Cover	Development Method:	Airlift & Pump
Grade Elevation:	101.7 feet	Key ID or Socket Size:	--
Borehole Depth:	540 feet	Coordinate System:	NAD 1983 (2011) StatePlane NY LI FIPS 3104
Borehole Dia.:	8-inch	X:	1127936 E
		Y:	210174 N

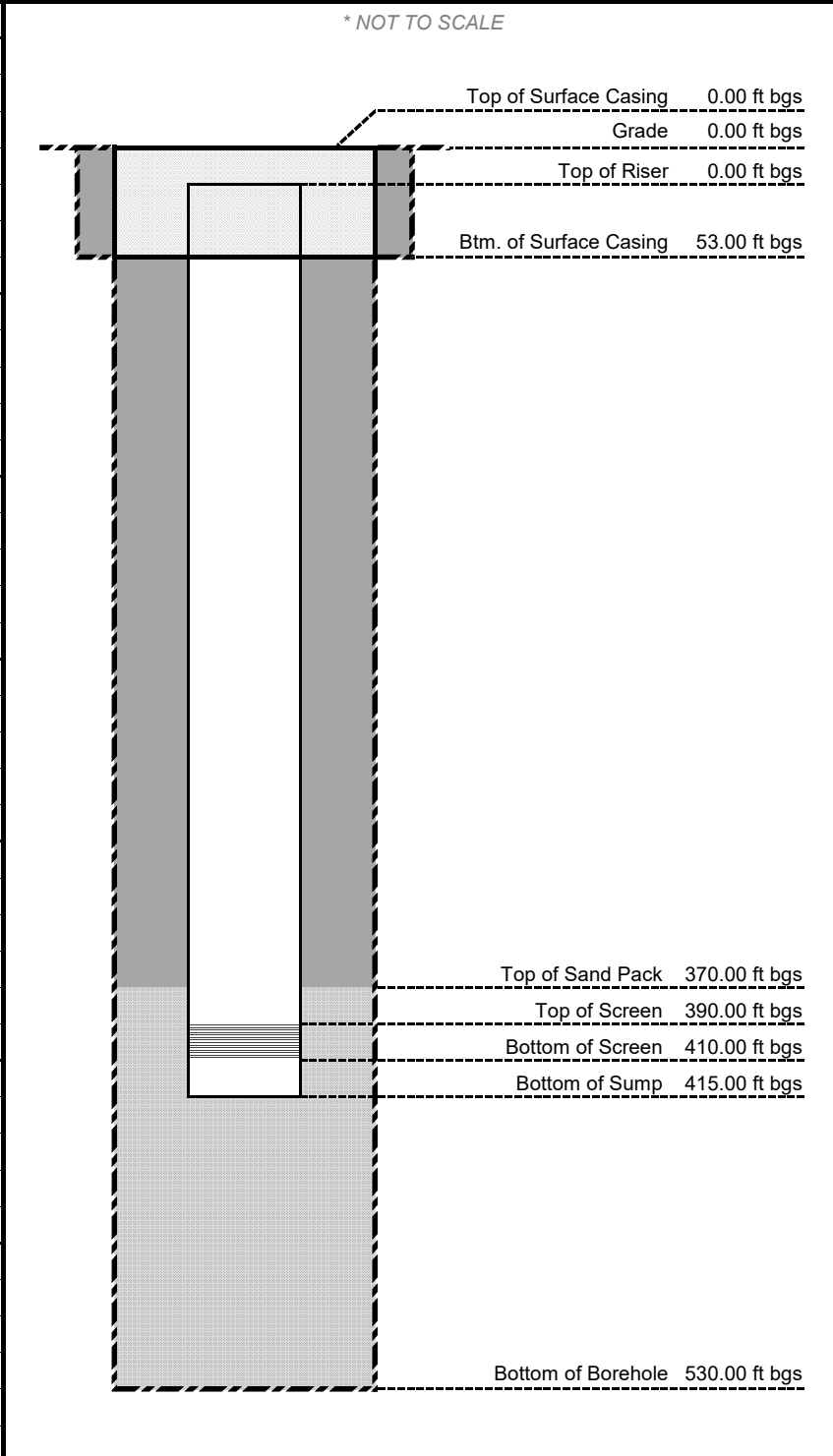
General Well Information	
Well ID:	DEC4D1
Start Date:	May 29, 2018
End Date:	Jun 06, 2018
Static Water Level:	--
SWL Date:	--
Measuring Point:	Top of Casing
Well Depth (ft):	495
Riser Pipe(s)	
Interval (ft bgs):	0-470
Material:	Sch. 120 PVC
Diameter (in):	4
Joint Type:	Coupled
Surface Casing	
Interval (ft bgs):	0-53
Material:	Steel
Diameter (in):	10
Joint Type:	Welded
Screen(s)	
Interval (ft bgs):	470-490
Diameter (in):	4-inch
Material:	Sch. 120 PVC
Slot Size:	10
Filter Pack(s)	
Interval (ft):	467-500
Sand:	--
Gravel:	No 1 size
Natural:	--
Amount:	--
Sump(s)	
Interval (ft):	490' - 495' bgs
Material:	Sch. 120 PVC
Diameter (in):	4-inch
Joint Type:	Coupled
Seal(s) / QTY(s)	
Grout:	0-465
Concrete Mix:	--
Bentonite Slurry:	--
Bentonite Pellets:	465-467
Other:	--





Well ID:	DEC5D1	Project:	WA#32 Northrop Grumman
Location:	Bethpage, NY	Client:	NYSDEC
Drilling Contractor:	Delta Well & Pump	Project Number:	10054840
Date Drilled:	5/14/2018-6/4/2018	Drilling Rig:	Mud Rotary
Date Completed:	Jun 04, 2018	Drilling Method:	Mud Rotary
Cover Type:	Manhole Cover	Development Method:	Airlift & Pump
Grade Elevation:	106.1 feet	Key ID or Socket Size:	--
Borehole Depth:	530 feet	Coordinate System:	NAD 1983 (2011) StatePlane NY LI FIPS 3104
Borehole Dia.:	8-inch	X:	1127265E
		Y:	210941N

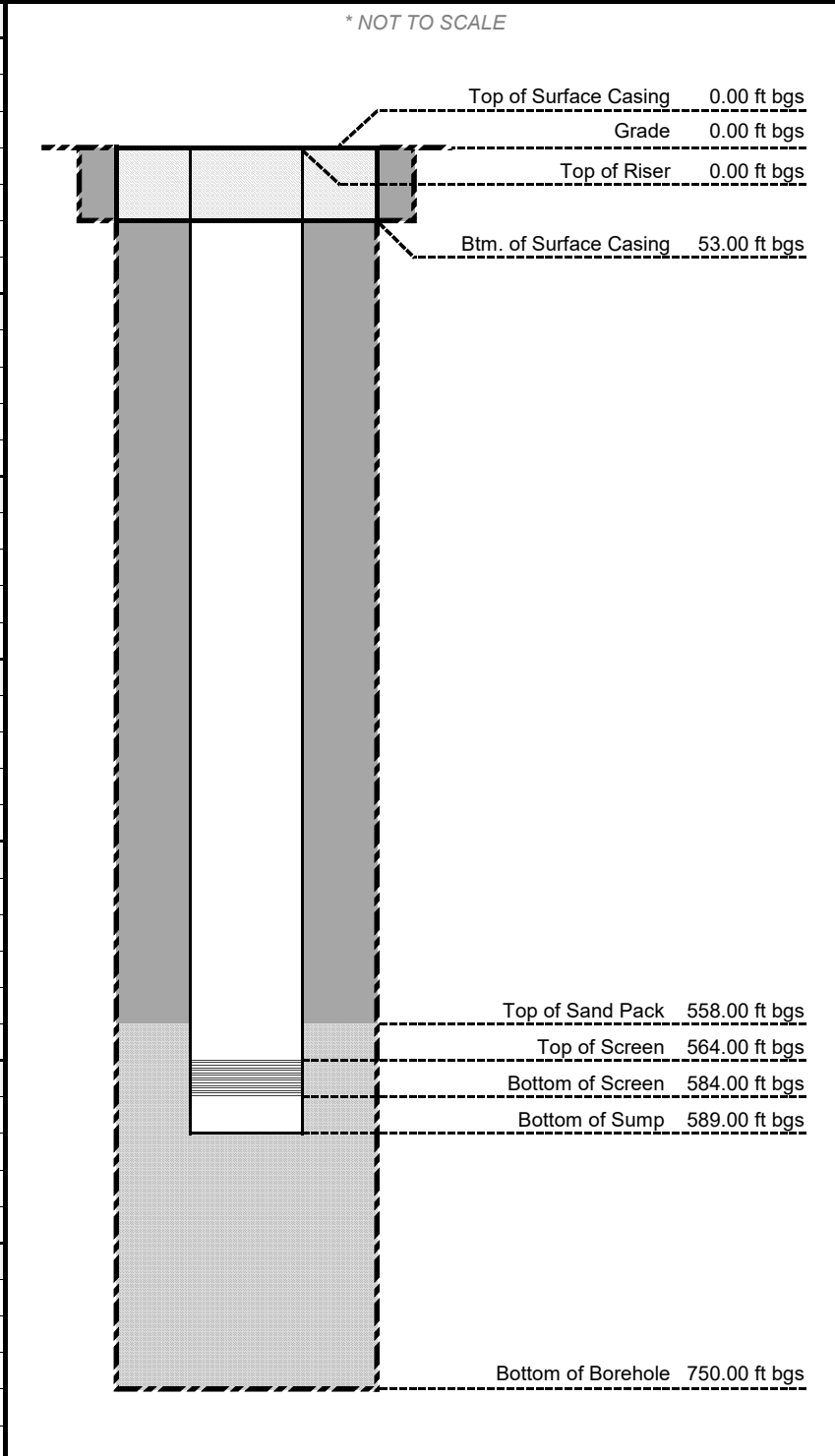
General Well Information	
Well ID:	DEC5D1
Start Date:	May 14, 2018
End Date:	Jun 04, 2018
Static Water Level:	--
SWL Date:	--
Measuring Point:	Top of Casing
Well Depth (ft):	415
Riser Pipe(s)	
Interval (ft):	0-370
Material:	Sch. 120 PVC
Diameter (in):	4-inch
Joint Type:	Coupled
Surface Casing	
Interval (ft):	0-53
Material:	Steel
Diameter (in):	10
Joint Type:	Welded
Screen(s)	
Interval (ft):	390-410
Diameter (in):	4-inch
Material:	Sch. 120 PVC
Slot Size:	10
Filter Pack(s)	
Interval (ft):	370-420
Sand:	--
Gravel:	No 1 size
Natural:	--
Amount:	53 Bags
Sump(s)	
Interval (ft):	410-415
Material:	Sch. 120 PVC
Diameter (in):	4-inch
Joint Type:	Coupled
Seal(s) / QTY(s)	
Grout:	0-370
Concrete Mix:	--
Bentonite Slurry:	--
Bentonite Pellets:	--
Other:	--





Well ID:	DEC6D1	Project:	WA#32 Northrop Grumman
Location:	Bethpage, NY	Client:	NYSDEC
Drilling Contractor:	Delta Well & Pump	Project Number:	10054840
Date Drilled:	Jun 18, 2018	Drilling Rig:	Mud Rotary
Date Completed:	Jul 30, 2018	Drilling Method:	Mud Rotary
Cover Type:	Manhole Cover	Development Method:	Airlift & Pump
Grade Elevation:	86.1 feet	Key ID or Socket Size:	--
Borehole Depth:	750 feet	Coordinate System:	NAD 1983 (2011) StatePlane NY LI FIPS 3104
Borehole Dia.:	8-inch	X:	1124846E
		Y:	204462N

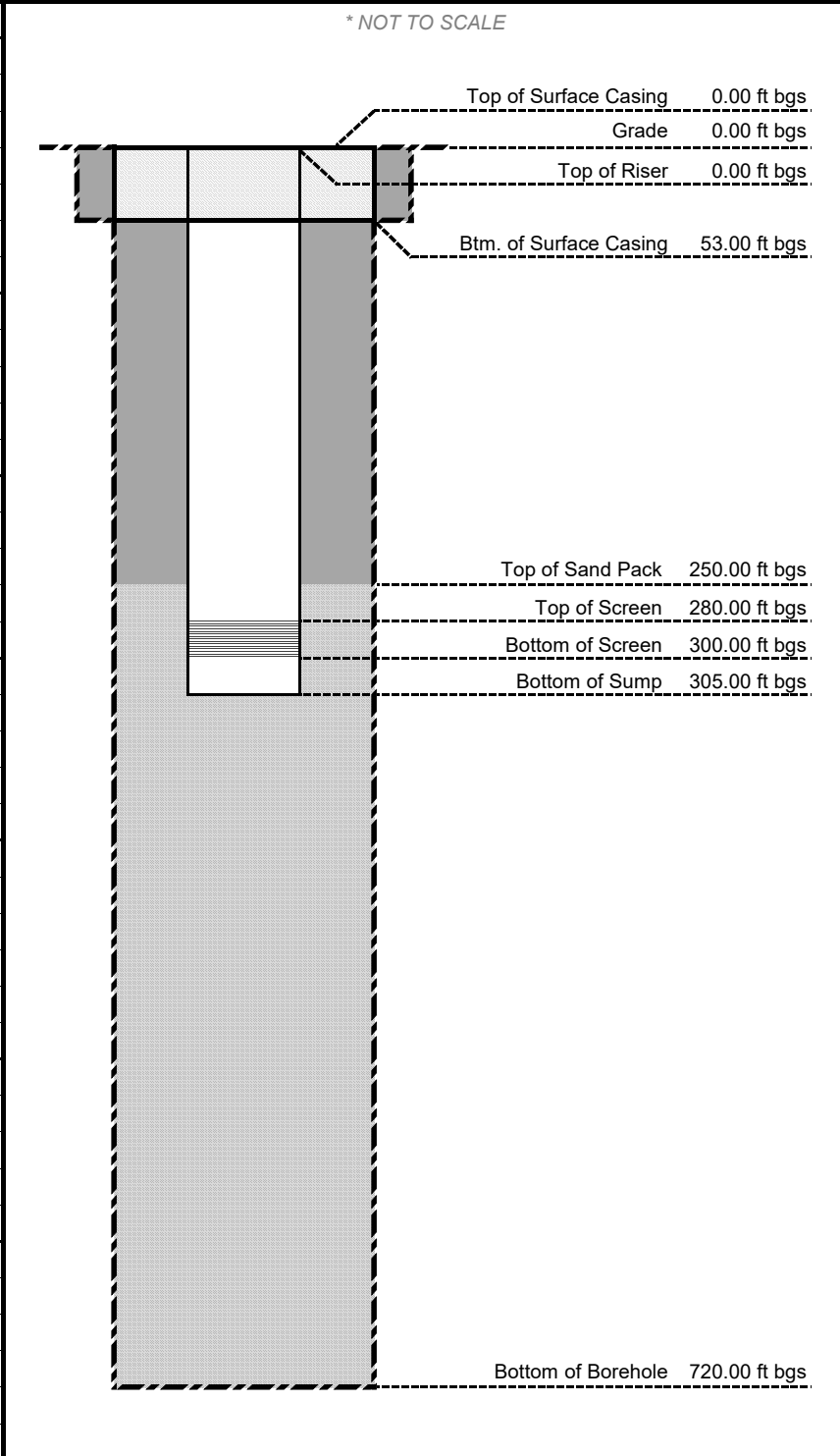
General Well Information	
Well ID:	DEC6D1
Start Date:	May 29, 2018
End Date:	Jul 30, 2018
Static Water Level:	--
SWL Date:	--
Measuring Point:	Top of Casing
Well Depth (ft):	589
Riser Pipe(s)	
Interval (ft):	0-546
Material:	Sch. 120 PVC
Diameter (in):	4-inch
Joint Type:	Coupled
Surface Casing	
Interval (ft):	50
Material:	Steel
Diameter (in):	10
Joint Type:	Welded
Screen(s)	
Interval (ft):	564-584
Diameter (in):	4-inch
Material:	Sch. 120 PVC
Slot Size:	10
Filter Pack(s)	
Interval (ft):	558-750
Sand:	--
Gravel:	No 1 size
Natural:	--
Amount:	60 Bags
Sump(s)	
Interval (ft):	584-589
Material:	Sch. 120 PVC
Diameter (in):	4-inch
Joint Type:	Coupled
Seal(s) / QTY(s)	
Grout:	0-558
Concrete Mix:	--
Bentonite Slurry:	--
Bentonite Pellets:	--
Other:	--





Well ID:	DEC7D1	Project:	WA#32 Northrop Grumman
Location:	Plainedge, NY	Client:	NYSDEC
Drilling Contractor:	Delta Well & Pump	Project Number:	10054840
Date Drilled:	8/10/2018-9/7/2018	Drilling Rig:	Mud Rotary
Date Completed:	Sep 20, 2018	Drilling Method:	Mud Rotary
Cover Type:	Manhole Cover	Development Method:	Airlift & Pump
Grade Elevation:	75.7 feet	Key ID or Socket Size:	--
Borehole Depth:	720 feet	Coordinate System:	NAD 1983 (2011) StatePlane NY LI FIPS 3104
Borehole Dia.:	8-inch	X:	1123621E
		Y:	204417N

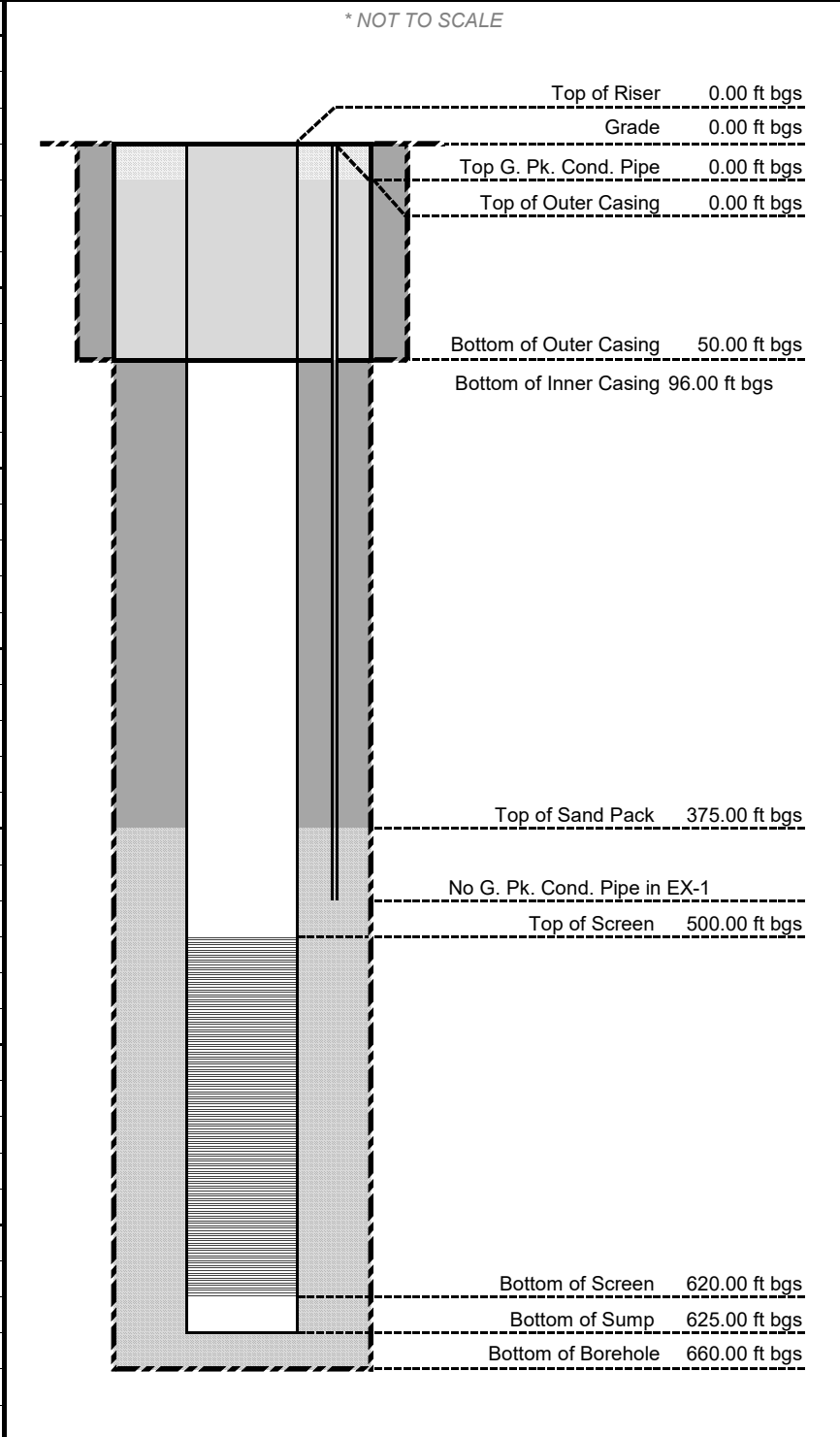
General Well Information	
Well ID:	DEC7D1
Start Date:	Aug 10, 2018
End Date:	Sep 20, 2018
Static Water Level:	--
SWL Date:	--
Measuring Point:	Top of Casing
Well Depth (ft):	305
Riser Pipe(s)	
Interval (ft):	0-280
Material:	Sch. 120 PVC
Diameter (in):	4-inch
Joint Type:	Coupled
Surface Casing	
Interval (ft):	0-53
Material:	Steel
Diameter (in):	10
Joint Type:	Welded
Screen(s)	
Interval (ft):	280-300
Diameter (in):	4-inch
Material:	Sch. 80 PVC
Slot Size:	10 slot
Filter Pack(s)	
Interval (ft):	250-310
Sand:	--
Gravel:	№ 1 Size
Natural:	--
Amount (cubic yd):	--
Sump(s)	
Interval (ft):	300-305
Material:	Sch. 120 PVC
Diameter (in):	4-inch
Joint Type:	Coupled
Seal(s) / QTY(s)	
Grout:	10-248
Concrete Mix:	--
Bentonite Slurry:	--
Bentonite Pellets:	--
Other:	--





Well ID:	DECEX-01	Project:	WA#32 Northrop Grumman
Location:	Bethpage, NY	Client:	NYS Department of Environmental Conservation
Drilling Contractor	Delta Well & Pump	Project Number:	10054840
Date Drilled:	4/25/2019-7/01/2019	Drilling Rig:	Dual Rotary Rig
Date Completed:	Jul 01, 2019	Drilling Method:	Reverse Rotary
Cover Type:	Manhole Cover	Development Method:	Airlift & Pump
Grade Elevation:	74.8 feet	Corresponding VPB:	DEC-VPB-7 (DEC7D1)
Borehole Depth:	660 feet	Coordinate System:	NAD 1983 (2011) StatePlane NY LI FIPS 3104
Borehole Dia.:	30-24 inches	X:	1123696E
		Y:	204419N

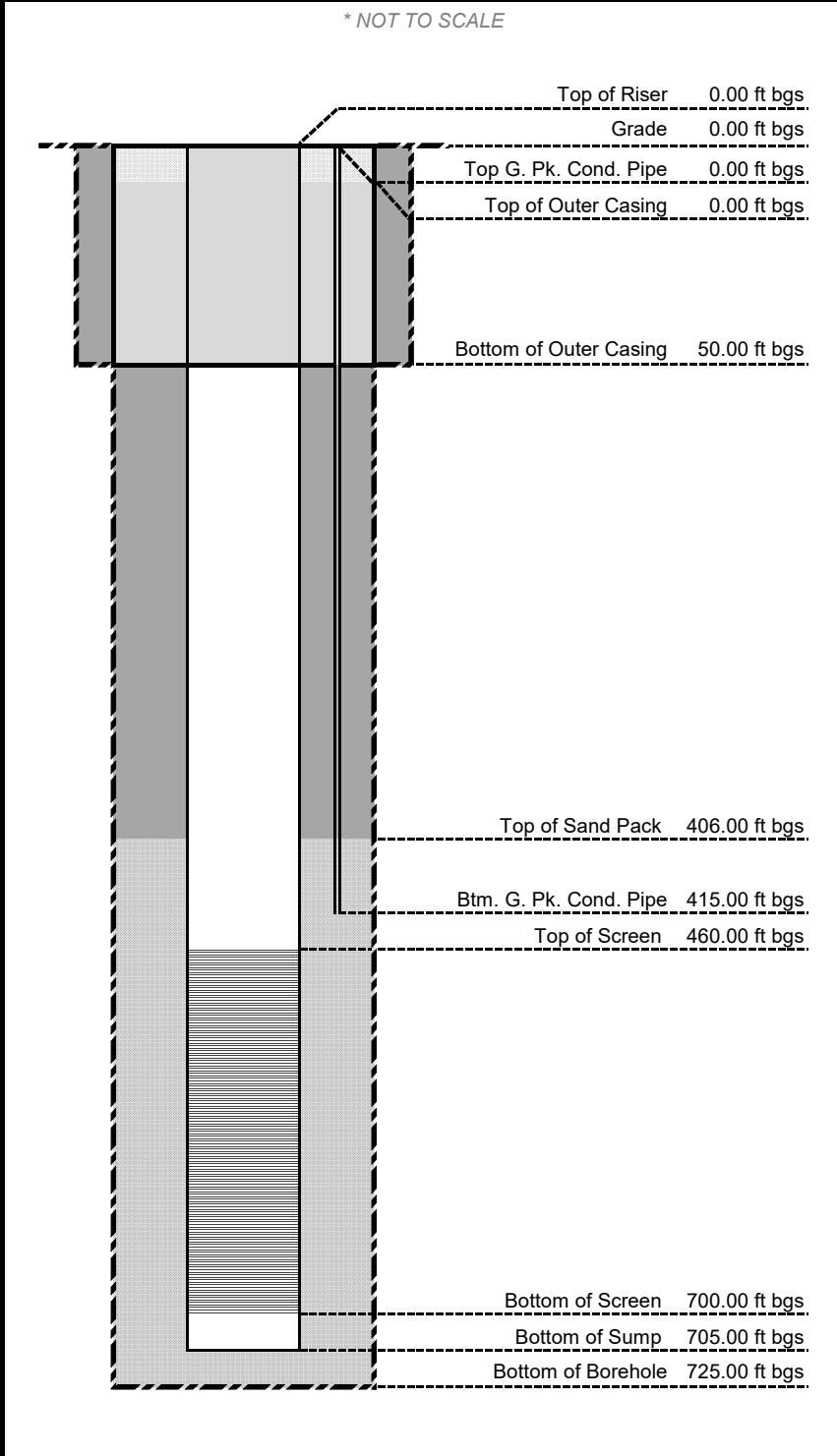
General Well Information	
Well ID:	DECEX-01
Start Date:	Apr 25, 2019
End Date:	Jul 01, 2019
Static Water Level:	--
SWL Date:	--
Measuring Point:	Top of Casing
Well Depth (ft):	625
Riser Pipe(s)	
Interval (ft):	0-375
Material:	Black Steel
Diameter (in):	14
Joint Type:	Welded
Surface Casing/Inner Casing	
Interval (ft):	50/96
Material:	Black Steel
Diameter (in):	24/20
Joint Type:	Welded
Screen(s)	
Interval (ft):	500-620
Diameter (in):	14
Material:	Stainless steel
Slot Size:	30
Filter Pack(s)	
Interval (ft.):	375-625
Sand:	--
Gravel:	No 1 size
Natural:	--
Amount:	15 cubic yards
Sump(s)	
Interval (ft):	620-625
Material:	Stainless steel
Diameter (in):	14
Joint Type:	Welded
Seal(s) / QTY(s)	
Grout:	0-375
Concrete Mix:	--
Bentonite Slurry:	--
Bentonite Pellets:	--
Sand:	0-30





Well ID:	DECEX-02	Project:	WA#32 Northrop Grumman
Location:	Bethpage, NY	Client:	NYS Department of Environmental Conservation
Drilling Contractor	Delta Well & Pump	Project Number:	10054840
Date Drilled:	9/4/2018-9/24/2018	Drilling Rig:	Dual Rotary Rig
Date Completed:	Oct 03, 2018	Drilling Method:	Reverse Rotary
Cover Type:	Manhole Cover	Development Method:	Airlift & Pump
Grade Elevation:	85.9 feet	Corresponding VPB:	DEC-VPB-6 (DEC6D1)
Borehole Depth:	725 feet	Coordinate System:	NAD 1983 (2011) StatePlane NY LI FIPS 3104
Borehole Dia.:	30-24 inches	X:	1124837E
		Y:	204451N

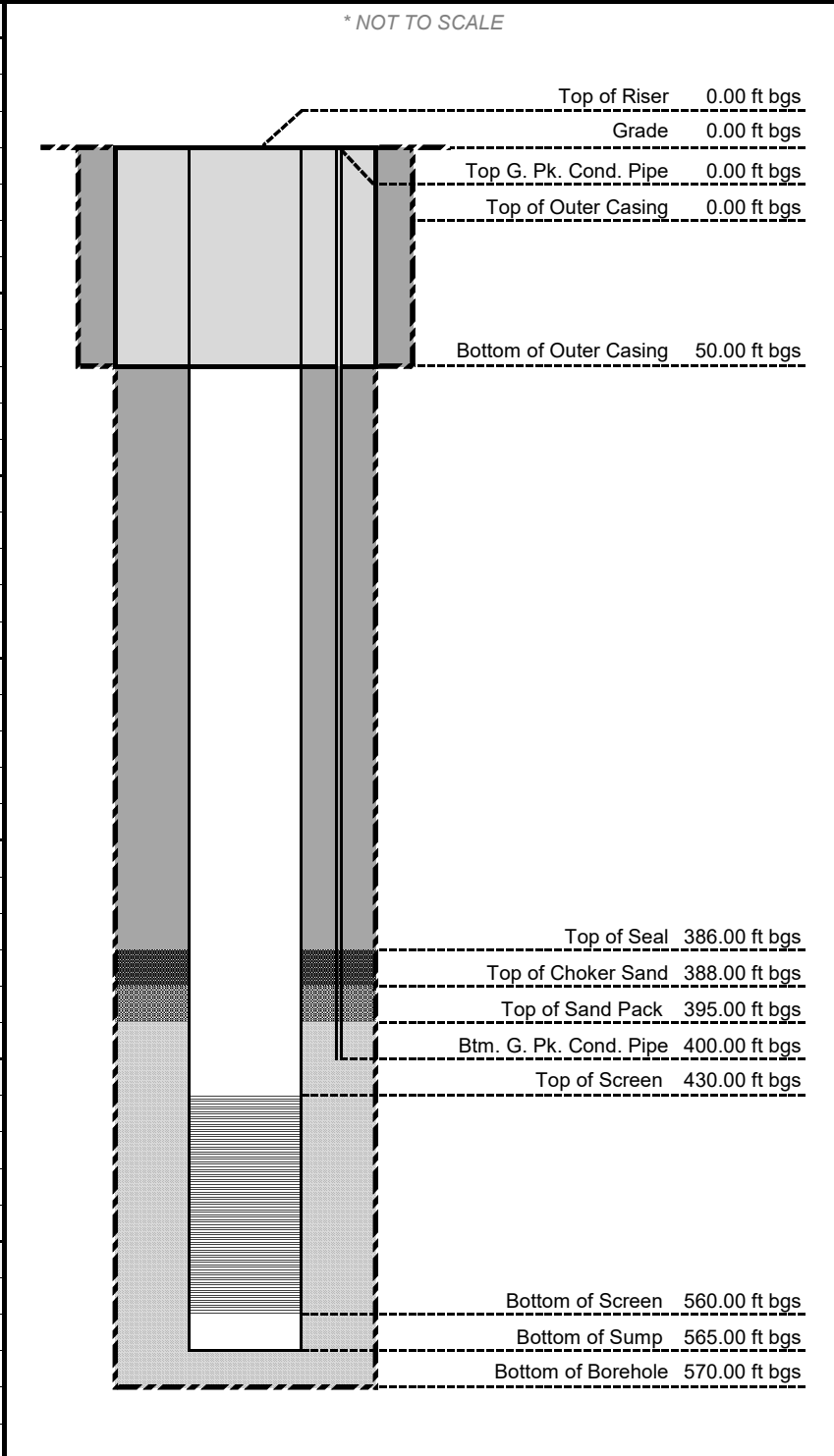
General Well Information	
Well ID:	DECEX-02
Start Date:	Sep 04, 2018
End Date:	Oct 03, 2018
Static Water Level:	--
SWL Date:	--
Measuring Point:	Top of Casing
Well Depth (ft):	705
Riser Pipe(s)	
Interval (ft):	0-460
Material:	Black Steel
Diameter (in):	14
Joint Type:	Welded
Surface Casing	
Interval (ft):	50
Material:	Black Steel
Diameter (in):	24
Joint Type:	Welded
Screen(s)	
Interval (ft):	460-700
Diameter (in):	14
Material:	Stainless steel
Slot Size:	30
Filter Pack(s)	
Interval (ft.):	406-725
Sand:	--
Gravel:	No 1 size
Natural:	--
Amount:	23 cubic yards
Sump(s)	
Interval (ft):	700-705
Material:	Stainless steel
Diameter (in):	14
Joint Type:	Welded
Seal(s) / QTY(s)	
Grout:	30-406
Concrete Mix:	--
Bentonite Slurry:	--
Bentonite Pellets:	--
Sand:	0-30





Well ID:	DECEX-06	Project:	WA#32 Northrop Grumman
Location:	Bethpage, NY	Client:	NYS Department of Environmental Conservation
Drilling Contractor	Delta Well & Pump	Project Number:	10054840
Date Drilled:	6/4/2018-6/9/2018	Drilling Rig:	Dual Rotary Rig
Date Completed:	Jun 16, 2018	Drilling Method:	Reverse Rotary
Cover Type:	Manhole Cover	Development Method:	Airlift & Pump
Grade Elevation:	101.8 feet	Corresponding VPB:	DEC-VPB-4 (DEC4D1)
Borehole Depth:	570 feet	Coordinate System:	NAD 1983 (2011) StatePlane NY LI FIPS 3104
Borehole Dia.:	30-23 inches	X:	1127968E
		Y:	210171N

General Well Information	
Well ID:	DECEX-06
Start Date:	Jun 04, 2018
End Date:	Jun 16, 2018
Static Water Level:	--
SWL Date:	--
Measuring Point:	Top of Casing
Well Depth (ft):	565
Riser Pipe	
Interval (ft bgs):	0-430
Material:	Black Steel
Diameter (in):	14
Joint Type:	Welded
Surface Casing	
Interval (ft):	0-50
Material:	Black Steel
Diameter (in):	24
Joint Type:	Welded
Screen(s)	
Interval (ft bgs):	430-560
Diameter (in):	14
Material:	Stainless Steel
Slot Size:	30
Filter Pack(s)	
Interval (ft bgs):	388-570
Sand:	--
Gravel:	No 1 size
Natural:	--
Amount:	--
Sump(s)	
Interval (ft):	5
Material:	Stainless Steel
Diameter (in):	14
Joint Type:	Welded
Seal(s) / QTY(s)	
Grout (ft bgs):	0-386
Conc. Mix (ft bgs):	--
Ben. Slurry (ft bgs):	--
Ben. Pellets (ft bgs):	386-388
Other (ft bgs):	--





Project: WA#32 Northrop Grumman
 Subject: Extraction Well Construction

Well ID:	DECEX-08	Project:	WA#32 Northrop Grumman
Location:	Bethpage, NY	Client:	NYSDEC
Drilling Contractor:	Delta Well & Pump	Project Number:	10054840
Date Drilled:	11/12/2018-11/13/2018	Drilling Rig:	Dual Rotary Rig
Date Completed:	Nov 16, 2018	Drilling Method:	Reverse Rotary
Cover Type:	Manhole Cover	Development Method:	Air lift & Surge
Grade Elevation:	114.2 feet	Corresponding VPB:	DEC-VPB-3 (DEC3D1)
Borehole Depth:	230 feet	Coordinate System:	NAD 1983 (2011) StatePlane NY LI FIPS 3104
Borehole Dia.:	30-23 inches	X:	1127369E
		Y:	212469N

General Well Information	
Well ID:	DECEX-08
Start Date:	Nov 12, 2018
End Date:	Nov 16, 2018
Static Water Level:	--
SWL Date:	--
Measuring Point:	Top of Casing
Well Depth (ft):	225
Riser Pipe(s)	
Interval (ft):	0-170
Material:	Black steel
Diameter (in):	14
Joint Type:	Welded
Surface Casing	
Interval (ft):	50
Material:	Black Steel
Diameter (in):	24
Joint Type:	Welded
Screen(s)	
Interval (ft):	170-220
Diameter (in):	14-inch
Material:	Stainless steel
Slot Size:	30
Filter Pack(s)	
Interval (ft):	120-230
Sand:	--
Gravel:	№ 1 size
Natural:	--
Amount:	--
Sump(s)	
Interval (ft):	220-225
Material:	Stainless steel
Diameter (in):	14
Joint Type:	Welded
Seal(s) / QTY(s)	
Grout:	0-120
Concrete Mix:	--
Bentonite Slurry:	--
Bentonite Pellets:	--
Other:	--

