



Owo Unit 1H
Tyler County WV
Northing: 14316227.01
Easting: 1715424.65
As Drilled



Genie Lightfoot
 11:01, June 18 2015
 Scientific Drilling
 421 South Eagle Lane
 Oklahoma City, OK

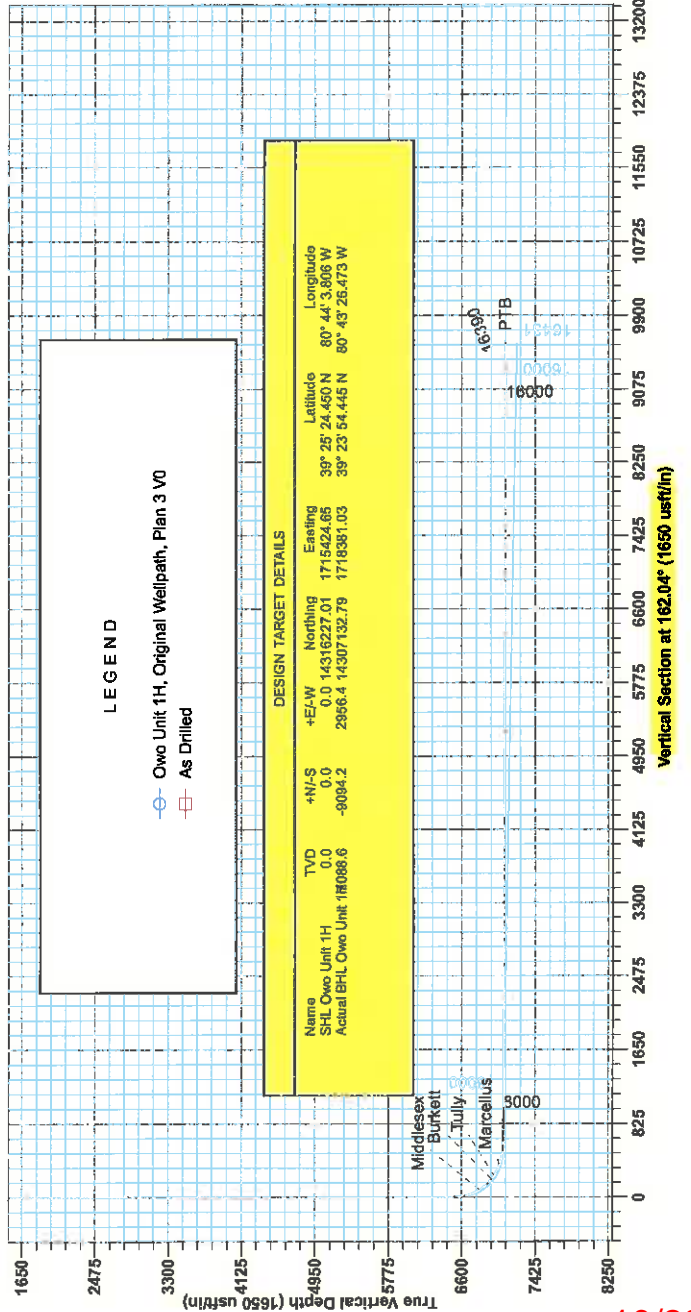
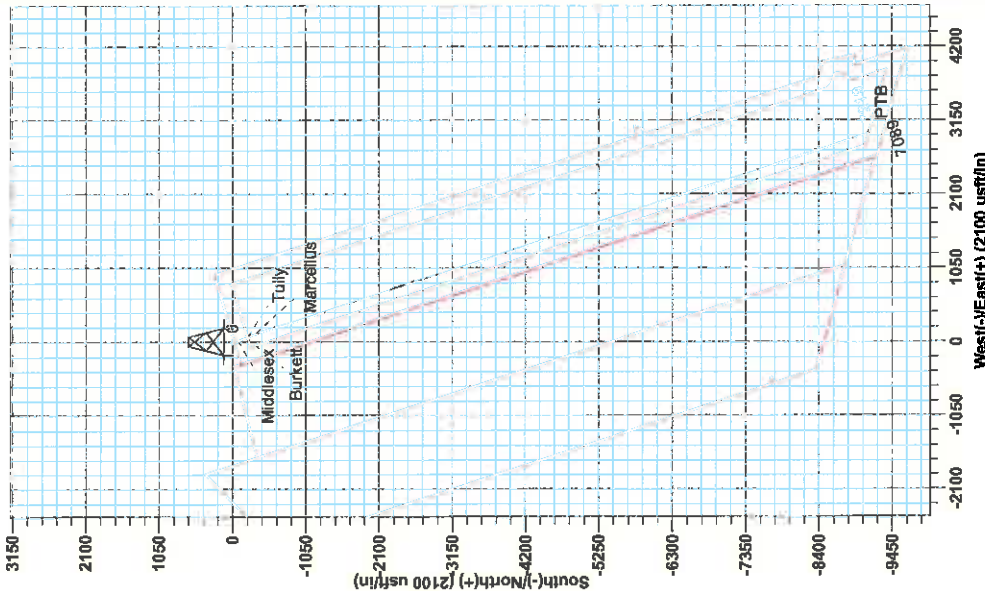
WELL DETAILS Owo Unit 1H			
	Ground Level:	1164.0	
+N/-S	+E/-W	Northing	Longitude
0.0	0.0	14316227.01	1715424.65
		25° 24' 45.0" N	80° 44' 3.806" W

PROJECT DETAILS: Tyler County WV
 Geodetic System: Universal Transverse Mercator (US Survey Feet)
 Datum: NAD 1983 (NAD83 / NAD83 CONUS)
 Ellipsoid: GRS 1980 (GRS 80)
 Zone: Zone 17N (84 W to 78 W)
 System Datum: Mean Sea Level

SITE DETAILS: Coastal 1 Pad: Berry/Gray/Owo
 Site Centre Northing: 14316233.70
 Easting: 1715406.00
 Positional Uncertainty: 0.0
 Convergence: 0.17
 Local North: Grid

Azimuths to Grid North
 True North: -0.17°
 Magnetic North: -8.70°
 Magnetic Field
 Strength: 52256.45nT
 Dip Angle: 66.95°
 Date: 8/19/2014
 Model: BGGW2014

To convert Magnetic North to Grid, Subtract 8.70°
 To convert True North to Grid, Subtract 0.17°



DESIGN TARGET DETAILS					
Name	TVD	+N/-S	+E/-W	Northing	Longitude
SHL Owo Unit 1H	0.0	0.0	0.0	14316227.01	1715424.65
Actual BHL Owo Unit 1H088.6	-8084.2	2986.4	14307.32.79	1719381.03	39° 25' 24.450" N 80° 43' 26.473" W

LEGEND
 -○- Owo Unit 1H, Original Wellpath, Plan 3 V0
 -□- As Drilled



Antero

**Tyler County WV
Coastal 1 Pad: Berry/Gray/Owo
Owo Unit 1H
Original Wellpath**

Design: As Drilled

EOW Completion Report

18 June, 2015



10/28/2016



Company:	Antero	Local Co-ordinate Reference:	Well Owo Unit 1H
Project:	Tyler County WV	TVD Reference:	Precision 522. GL 1164' + KB 18' @ 1182 0usft
Site:	Coastal 1 Pad: Berry/Gray/Owo	MD Reference:	Precision 522 GL 1164' + KB 18' @ 1182 0usft
Well:	Owo Unit 1H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Oklahoma District

Project	Tyler County WV, Tyler Co West Virginia		
Map System:	Universal Transverse Mercator (US Survey Fee	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Zone 17N (84 W to 78 W)		

Site	Coastal 1 Pad: Berry/Gray/Owo				
Site Position:		Northing:	14,316,233.70 usft	Latitude:	39° 25' 24.517 N
From:	Map	Easting:	1,715,406.00 usft	Longitude:	80° 44' 4.043 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"	Grid Convergence:	0.17 °

Well	Owo Unit 1H, Marcellus					
Well Position	+N/-S	0.0 usft	Northing:	14,316,227.01 usft	Latitude:	39° 25' 24.450 N
	+E/-W	0.0 usft	Easting:	1,715,424.65 usft	Longitude:	80° 44' 3.806 W
Position Uncertainty		2.0 usft	Wellhead Elevation:	1,182.0 usft	Ground Level:	1,164.0 usft

Wellbore	Original Wellpath				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2014	8/19/2014	-8.53	66.95	52,296

Design	As Drilled				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	162.04	

Survey Program	Date	6/18/2015			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
105.0	6,428.7	Survey #1 Final Gyro (Original Wellpath)	SDI Standard Keeper	Scientific Drilling Intl. Standard Wireline Keeper	
6,455.0	16,390.0	Survey #2 MWD (Original Wellpath)	MWD SDI	MWD - Standard ver 1.0.1	

Survey	MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
	0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00
	105.0	1.13	237.28	105.0	-0.6	-0.9	0.3	1.08
	205.0	0.81	240.27	205.0	-1.4	-2.3	0.7	0.32
	305.0	0.55	247.53	305.0	-2.0	-3.4	0.8	0.27
	405.0	0.60	256.57	405.0	-2.3	-4.3	0.8	0.10
	505.0	0.60	254.17	505.0	-2.5	-5.3	0.8	0.03
	605.0	0.59	258.65	605.0	-2.8	-6.3	0.7	0.05
	705.0	0.60	253.57	705.0	-3.0	-7.4	0.6	0.05
	805.0	0.53	248.20	804.9	-3.4	-8.3	0.6	0.09
	905.0	0.44	244.30	904.9	-3.7	-9.1	0.7	0.10
	1,005.0	0.49	247.81	1,004.9	-4.0	-9.8	0.8	0.06



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Site:	Coastal 1 Pad: Berry/Gray/Owo	MD Reference:	Precision 522 GL 1164' + KB 18' @ 1182.0usft
Well:	Owo Unit 1H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
1,105.0	0.52	247.23	1,104.9	-4.4	-10.6	0.9	0.03
1,205.0	0.49	253.04	1,204.9	-4.7	-11.4	0.9	0.06
1,305.0	0.45	251.61	1,304.9	-4.9	-12.2	0.9	0.04
1,405.0	0.46	246.70	1,404.9	-5.2	-13.0	0.9	0.04
1,505.0	0.38	238.13	1,504.9	-5.5	-13.6	1.1	0.10
1,605.0	0.57	224.19	1,604.9	-6.1	-14.2	1.4	0.22
1,705.0	0.48	230.30	1,704.9	-6.7	-14.9	1.8	0.11
1,805.0	0.43	230.98	1,804.9	-7.2	-15.5	2.1	0.05
1,905.0	0.43	231.76	1,904.9	-7.7	-16.1	2.3	0.01
2,005.0	0.41	232.15	2,004.9	-8.1	-16.7	2.6	0.02
2,105.0	0.38	243.05	2,104.9	-8.5	-17.3	2.7	0.08
2,205.0	0.33	261.47	2,204.9	-8.7	-17.9	2.7	0.12
2,305.0	0.36	236.79	2,304.9	-8.9	-18.4	2.8	0.15
2,405.0	0.40	231.91	2,404.9	-9.3	-18.9	3.0	0.05
2,505.0	0.39	240.12	2,504.9	-9.7	-19.5	3.2	0.06
2,605.0	0.39	258.94	2,604.9	-9.9	-20.1	3.2	0.13
2,705.0	0.40	265.21	2,704.9	-10.0	-20.8	3.1	0.04
2,805.0	0.45	269.83	2,804.9	-10.0	-21.6	2.9	0.06
2,905.0	0.37	264.64	2,904.9	-10.0	-22.3	2.7	0.09
3,005.0	0.47	279.73	3,004.9	-10.0	-23.0	2.4	0.15
3,105.0	0.61	285.43	3,104.9	-9.8	-23.9	1.9	0.15
3,205.0	0.66	284.40	3,204.9	-9.5	-25.0	1.3	0.05
3,305.0	0.68	283.56	3,304.9	-9.2	-26.1	0.7	0.02
3,405.0	0.56	281.46	3,404.9	-9.0	-27.2	0.2	0.12
3,505.0	0.51	281.12	3,504.9	-8.8	-28.1	-0.3	0.05
3,605.0	0.60	279.43	3,604.8	-8.6	-29.0	-0.7	0.09
3,705.0	0.66	280.61	3,704.8	-8.4	-30.1	-1.3	0.06
3,805.0	0.67	277.36	3,804.8	-8.3	-31.3	-1.8	0.04
3,905.0	0.60	276.61	3,904.8	-8.1	-32.4	-2.2	0.07
4,005.0	0.59	274.72	4,004.8	-8.0	-33.4	-2.7	0.02
4,105.0	0.55	273.24	4,104.8	-8.0	-34.4	-3.0	0.04
4,205.0	0.36	270.28	4,204.8	-7.9	-35.2	-3.3	0.19
4,305.0	0.11	282.50	4,304.8	-7.9	-35.6	-3.5	0.25
4,405.0	0.19	305.15	4,404.8	-7.8	-35.8	-3.6	0.10
4,505.0	0.15	299.60	4,504.8	-7.6	-36.1	-3.9	0.04
4,605.0	0.05	168.10	4,604.8	-7.6	-36.2	-3.9	0.19
4,705.0	0.17	119.05	4,704.8	-7.7	-36.0	-3.8	0.14
4,805.0	0.18	127.89	4,804.8	-7.9	-35.8	-3.5	0.03
4,905.0	0.18	133.05	4,904.8	-8.1	-35.6	-3.3	0.02
5,005.0	0.20	139.12	5,004.8	-8.3	-35.3	-3.0	0.03
5,105.0	0.27	134.04	5,104.8	-8.6	-35.0	-2.6	0.07
5,205.0	0.23	124.17	5,204.8	-8.9	-34.7	-2.2	0.06
5,305.0	0.28	123.68	5,304.8	-9.2	-34.3	-1.8	0.04
5,405.0	0.30	129.81	5,404.8	-9.5	-33.9	-1.4	0.04

Received
Office of Oil & Gas
JUL 18 2016



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Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
5,505.0	0.29	112.16	5,504.8	-9.7	-33.5	-1.1	0.09
5,605.0	0.34	113.99	5,604.8	-9.9	-33.0	-0.7	0.05
5,705.0	0.36	118.50	5,704.8	-10.2	-32.4	-0.3	0.03
5,805.0	0.37	117.03	5,804.8	-10.5	-31.9	0.2	0.01
5,905.0	0.37	119.05	5,904.8	-10.8	-31.3	0.6	0.01
6,005.0	0.31	149.91	6,004.8	-11.2	-30.9	1.1	0.19
6,105.0	0.42	153.99	6,104.8	-11.8	-30.6	1.8	0.11
6,205.0	0.25	171.93	6,204.8	-12.3	-30.4	2.3	0.20
6,305.0	0.15	212.60	6,304.8	-12.6	-30.4	2.6	0.17
6,405.0	0.34	221.68	6,404.8	-13.0	-30.7	2.9	0.19
6,428.7	0.65	212.21	6,428.5	-13.1	-30.8	3.0	1.35
6,455.0	0.27	241.02	6,454.8	-13.3	-31.0	3.1	1.65
6,486.0	0.57	152.28	6,485.8	-13.5	-31.0	3.3	2.02
6,517.0	1.68	135.84	6,516.8	-13.9	-30.6	3.8	3.69
6,548.0	3.76	135.66	6,547.7	-15.0	-29.5	5.1	6.71
6,579.0	7.35	134.27	6,578.6	-17.1	-27.4	7.8	11.59
6,609.0	10.53	135.36	6,608.2	-20.4	-24.1	12.0	10.61
6,640.0	12.99	137.10	6,638.6	-25.0	-19.7	17.6	8.02
6,671.0	16.12	140.05	6,668.6	-30.8	-14.6	24.8	10.37
6,702.0	19.42	143.22	6,698.1	-38.2	-8.8	33.7	11.09
6,733.0	22.83	144.89	6,727.0	-47.3	-2.2	44.3	11.17
6,763.0	26.73	147.03	6,754.2	-57.7	4.8	56.4	13.34
6,794.0	30.28	149.17	6,781.5	-70.3	12.6	70.7	11.91
6,816.0	32.60	150.79	6,800.2	-80.2	18.3	82.0	11.24
Middlesex							
6,825.0	33.56	151.39	6,807.8	-84.5	20.7	86.8	11.24
6,856.0	37.12	154.04	6,833.1	-100.4	28.9	104.5	12.50
6,887.0	40.45	156.00	6,857.2	-118.1	37.1	123.7	11.45
6,918.0	43.40	157.80	6,880.3	-137.1	45.2	144.4	10.28
6,949.0	46.98	158.67	6,902.1	-157.5	53.4	166.3	11.72
6,979.0	49.45	159.93	6,922.1	-178.5	61.3	188.7	8.81
6,999.0	51.09	160.92	6,934.9	-192.9	66.4	204.0	9.06
Burkett							
7,010.0	52.00	161.45	6,941.8	-201.1	69.2	212.6	9.06
7,041.0	55.25	161.59	6,960.1	-224.8	77.1	237.6	10.49
7,045.0	55.65	161.53	6,962.4	-227.9	78.2	240.9	9.98
Tully							
7,072.0	58.32	161.12	6,977.1	-249.3	85.4	263.5	9.98
7,103.0	61.78	160.76	6,992.6	-274.7	94.2	290.4	11.21
7,134.0	65.07	160.54	7,006.5	-300.9	103.4	318.1	10.63
7,164.0	68.01	160.24	7,018.4	-326.8	112.6	345.6	9.84
7,178.0	69.38	160.42	7,023.5	-339.1	117.0	357.7	9.88
Marcellus							
7,195.0	71.05	160.64	7,029.2	-354.2	122.3	374.8	8.88
7,226.0	73.34	160.92	7,038.7	-382.0	132.0	404.1	7.44

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Survey								
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7,257.0	75.46	160.80	160.80	7,047.1	-410.2	141.8	434.0	6.85
7,288.0	79.13	160.86	160.86	7,053.9	-438.8	151.8	464.2	11.84
7,310.0	82.22	161.27	161.27	7,057.4	-459.3	158.8	485.9	14.17
7,388.0	88.64	163.82	163.82	7,063.6	-533.5	182.1	563.6	8.85
7,481.0	88.72	163.47	163.47	7,065.8	-622.7	208.3	656.6	0.39
7,573.0	88.76	163.14	163.14	7,067.8	-710.8	234.7	748.5	0.36
7,666.0	88.90	163.56	163.56	7,069.7	-799.9	261.3	841.5	0.48
7,759.0	89.87	163.03	163.03	7,070.7	-888.9	288.1	934.4	1.19
7,851.0	90.84	162.24	162.24	7,070.1	-976.7	315.5	1,026.4	1.36
7,944.0	90.13	161.27	161.27	7,069.4	-1,065.0	344.6	1,119.4	1.29
8,036.0	89.96	163.12	163.12	7,069.3	-1,152.6	372.8	1,211.4	2.02
8,129.0	90.31	162.94	162.94	7,069.1	-1,241.6	399.9	1,304.4	0.42
8,221.0	88.90	161.88	161.88	7,069.7	-1,329.3	427.7	1,396.4	1.92
8,314.0	89.34	161.80	161.80	7,071.1	-1,417.6	456.7	1,489.4	0.48
8,407.0	88.81	160.22	160.22	7,072.6	-1,505.6	487.0	1,582.4	1.79
8,499.0	90.57	159.60	159.60	7,073.1	-1,592.0	518.6	1,674.3	2.02
8,592.0	90.57	158.90	158.90	7,072.2	-1,678.9	551.5	1,767.2	0.75
8,684.0	89.52	161.62	161.62	7,072.1	-1,765.5	582.6	1,859.1	3.17
8,777.0	89.33	162.51	162.51	7,073.1	-1,854.0	611.2	1,952.1	0.98
8,870.0	91.01	163.47	163.47	7,072.8	-1,942.9	638.4	2,045.1	2.08
8,962.0	89.34	161.89	161.89	7,072.5	-2,030.7	665.8	2,137.1	2.50
9,055.0	88.99	161.71	161.71	7,073.9	-2,119.1	694.9	2,230.1	0.42
9,148.0	89.96	160.31	160.31	7,074.7	-2,207.0	725.1	2,323.0	1.83
9,240.0	90.04	161.01	161.01	7,074.7	-2,293.8	755.6	2,415.0	0.77
9,333.0	89.87	161.54	161.54	7,074.8	-2,381.9	785.4	2,508.0	0.60
9,426.0	89.96	162.94	162.94	7,074.9	-2,470.4	813.8	2,601.0	1.51
9,518.0	89.60	160.92	160.92	7,075.3	-2,557.9	842.3	2,693.0	2.23
9,611.0	89.78	162.24	162.24	7,075.8	-2,646.1	871.7	2,786.0	1.43
9,704.0	90.22	163.73	163.73	7,075.8	-2,735.1	898.9	2,879.0	1.67
9,796.0	89.43	163.29	163.29	7,076.1	-2,823.3	925.0	2,970.9	0.98
9,889.0	90.31	163.56	163.56	7,076.3	-2,912.4	951.6	3,063.9	0.99
9,982.0	90.22	162.59	162.59	7,075.8	-3,001.4	978.7	3,156.9	1.05
10,074.0	90.31	163.47	163.47	7,075.4	-3,089.4	1,005.5	3,248.9	0.96
10,167.0	89.87	162.94	162.94	7,075.3	-3,178.4	1,032.4	3,341.9	0.74
10,259.0	90.84	163.73	163.73	7,074.7	-3,266.5	1,058.8	3,433.8	1.36
10,353.0	89.69	163.21	163.21	7,074.3	-3,356.6	1,085.5	3,527.8	1.34
10,448.0	89.08	159.78	159.78	7,075.3	-3,446.7	1,115.6	3,622.8	3.67
10,542.0	89.60	159.69	159.69	7,076.4	-3,534.9	1,148.2	3,716.7	0.56
10,636.0	89.87	163.12	163.12	7,076.8	-3,624.0	1,178.2	3,810.7	3.66
10,730.0	90.66	164.00	164.00	7,076.4	-3,714.1	1,204.8	3,904.6	1.26
10,824.0	90.66	162.33	162.33	7,075.3	-3,804.1	1,232.0	3,998.6	1.78
10,919.0	90.31	162.77	162.77	7,074.5	-3,894.7	1,260.5	4,093.6	0.59
11,014.0	90.40	162.85	162.85	7,073.9	-3,985.5	1,288.6	4,188.6	0.13
11,108.0	87.76	159.60	159.60	7,075.4	-4,074.4	1,288.6	4,282.6	4.45

Received
Office of Oil & Gas



Company:	Antero	Local Co-ordinate Reference:	Well Owo Unit 1H
Project:	Tyler County WV	TVD Reference:	Precision 522 GL 1164' + KB 18' @ 1182.0usft
Site:	Coastal 1 Pad: Berry/Gray/Owo	MD Reference:	Precision 522 GL 1164' + KB 18' @ 1182.0usft
Well:	Owo Unit 1H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
11,203.0	88.46	159.87	7,078.5	-4,163.5	1,351.7	4,377.4	0.79
11,297.0	89.34	160.92	7,080.3	-4,252.0	1,383.2	4,471.4	1.46
11,391.0	90.22	161.10	7,080.7	-4,340.9	1,413.8	4,565.3	0.96
11,484.0	89.25	162.50	7,081.1	-4,429.3	1,442.9	4,658.3	1.83
11,576.0	89.87	162.24	7,081.8	-4,516.9	1,470.7	4,750.3	0.73
11,669.0	90.40	162.68	7,081.6	-4,605.6	1,498.7	4,843.3	0.74
11,761.0	90.22	162.06	7,081.1	-4,693.3	1,526.6	4,935.3	0.70
11,854.0	87.85	162.85	7,082.7	-4,781.9	1,554.6	5,028.3	2.69
11,947.0	88.55	161.36	7,085.6	-4,870.4	1,583.2	5,121.3	1.77
12,039.0	91.54	163.91	7,085.5	-4,958.2	1,610.7	5,213.2	4.27
12,132.0	91.71	163.21	7,082.9	-5,047.4	1,637.0	5,306.2	0.77
12,224.0	91.36	162.94	7,080.4	-5,135.3	1,663.7	5,398.1	0.48
12,317.0	90.31	161.98	7,079.1	-5,224.0	1,691.8	5,491.1	1.53
12,410.0	89.78	164.08	7,079.0	-5,312.9	1,718.9	5,584.1	2.33
12,502.0	90.13	164.96	7,079.1	-5,401.6	1,743.5	5,676.0	1.03
12,595.0	89.16	162.59	7,079.6	-5,490.9	1,769.4	5,768.9	2.75
12,688.0	89.25	160.66	7,080.9	-5,579.1	1,798.8	5,861.9	2.08
12,780.0	89.34	162.06	7,082.1	-5,666.3	1,828.2	5,953.9	1.52
12,873.0	88.64	160.39	7,083.7	-5,754.3	1,858.1	6,046.9	1.95
12,966.0	88.90	159.78	7,085.7	-5,841.8	1,889.7	6,139.8	0.71
13,058.0	90.92	158.55	7,085.8	-5,927.7	1,922.5	6,231.7	2.57
13,151.0	90.40	161.27	7,084.8	-6,015.1	1,954.4	6,324.6	2.98
13,243.0	89.78	162.15	7,084.6	-6,102.4	1,983.3	6,416.6	1.17
13,336.0	89.60	161.80	7,085.1	-6,190.8	2,012.1	6,509.6	0.42
13,428.0	89.69	160.66	7,085.7	-6,277.9	2,041.7	6,601.6	1.24
13,521.0	89.69	159.25	7,086.2	-6,365.3	2,073.5	6,694.5	1.52
13,613.0	89.87	162.06	7,086.6	-6,452.1	2,104.0	6,786.5	3.06
13,705.0	90.04	161.36	7,086.6	-6,539.5	2,132.9	6,878.5	0.78
13,798.0	89.96	161.71	7,086.6	-6,627.7	2,162.3	6,971.5	0.39
13,890.0	89.16	161.18	7,087.3	-6,714.9	2,191.6	7,063.5	1.04
13,983.0	89.87	163.73	7,088.1	-6,803.5	2,219.6	7,156.5	2.85
14,075.0	90.57	165.58	7,087.8	-6,892.3	2,244.0	7,248.4	2.15
14,168.0	89.08	162.42	7,088.1	-6,981.6	2,269.6	7,341.3	3.76
14,261.0	90.04	163.91	7,088.8	-7,070.7	2,296.5	7,434.3	1.91
14,353.0	89.52	162.15	7,089.1	-7,158.6	2,323.4	7,526.2	1.99
14,446.0	90.92	163.73	7,088.8	-7,247.5	2,350.7	7,619.2	2.27
14,538.0	90.40	160.83	7,087.7	-7,335.2	2,378.7	7,711.2	3.20
14,631.0	90.48	162.24	7,087.0	-7,423.4	2,408.1	7,804.2	1.52
14,724.0	89.08	162.50	7,087.4	-7,512.0	2,436.3	7,897.2	1.53
14,816.0	87.92	160.41	7,089.8	-7,599.2	2,465.5	7,989.2	2.60
14,909.0	88.29	160.48	7,092.8	-7,686.8	2,496.7	8,082.1	0.40
15,002.0	88.99	159.78	7,095.0	-7,774.2	2,528.3	8,175.0	1.06
15,094.0	90.66	161.18	7,095.3	-7,860.9	2,559.0	8,266.9	2.37
15,187.0	90.57	159.78	7,094.3	-7,948.6	2,590.1	8,359.9	1.51
15,279.0	90.31	161.10	7,093.6	-8,035.3	2,620.9	8,451.9	1.46



Company: Antero	Local Co-ordinate Reference: Well Owo Unit 1H
Project: Tyler County WV	TVD Reference: Precision 522 GL 1164' + KB 18' @ 1182.0usft
Site: Coastal 1 Pad: Berry/Gray/Owo	MD Reference: Precision 522 GL 1164' + KB 18' @ 1182.0usft
Well: Owo Unit 1H	North Reference: Grid
Wellbore: Original Wellpath	Survey Calculation Method: Minimum Curvature
Design: As Drilled	Database: Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
15,372.0	90.31	162.24	7,093.1	-8,123.5	2,650.1	8,544.9	1.23
15,465.0	90.04	163.65	7,092.8	-8,212.4	2,677.4	8,637.8	1.54
15,557.0	89.34	163.65	7,093.3	-8,300.7	2,703.3	8,729.8	0.76
15,650.0	89.34	162.06	7,094.4	-8,389.6	2,730.7	8,822.8	1.71
15,743.0	89.08	162.15	7,095.7	-8,478.1	2,759.3	8,915.8	0.30
15,835.0	89.69	162.06	7,096.7	-8,565.6	2,787.5	9,007.8	0.67
15,928.0	90.31	162.85	7,096.7	-8,654.3	2,815.6	9,100.8	1.08
16,021.0	90.84	162.15	7,095.7	-8,743.0	2,843.5	9,193.8	0.94
16,113.0	90.92	161.98	7,094.3	-8,830.5	2,871.9	9,285.8	0.20
16,206.0	91.01	161.80	7,092.8	-8,918.9	2,900.8	9,378.7	0.22
16,298.0	91.36	162.77	7,090.9	-9,006.5	2,928.8	9,470.7	1.12
16,331.0	91.44	162.47	7,090.1	-9,038.0	2,938.6	9,503.7	0.94
16,390.0	91.44	162.47	7,088.6	-9,094.2	2,956.4	9,562.7	0.00

PTB

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
6,816.0	6,800.2	-80.2	18.3	Middlesex
6,999.0	6,934.9	-192.9	66.4	Burkett
7,045.0	6,962.4	-227.9	78.2	Tully
7,178.0	7,023.5	-339.1	117.0	Marcellus
16,390.0	7,088.6	-9,094.2	2,956.4	PTB

Checked By: _____	Approved By: _____	Date: _____
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