

# Chesapeake Energy

## EOW Survey Report

Well Name: Alice Edge OHI

Well Number: 201H

Date: 11/14/14

Prepared by Troy Lewis



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Environmental Protection

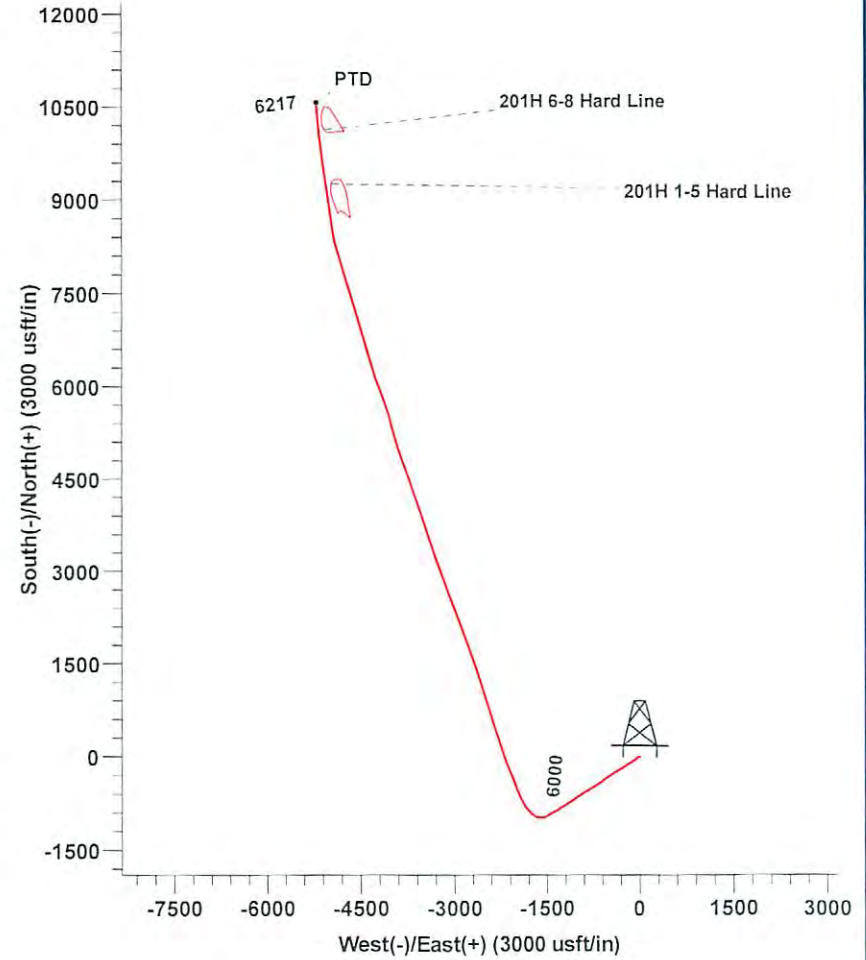


# Chesapeake

Project: Ohio Co, WV  
 Site: Alice Edge OHI  
 Well: 201H  
 Wellbore: OH  
 Plan: OH



WELL DETAILS: 201H						
Ground Level: GL 1198+RKB 20 @ 1218.00usft (Nomac 74)						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	584432.10	1703303.50	40° 5' 59.119 N	80° 33' 38.095 W	



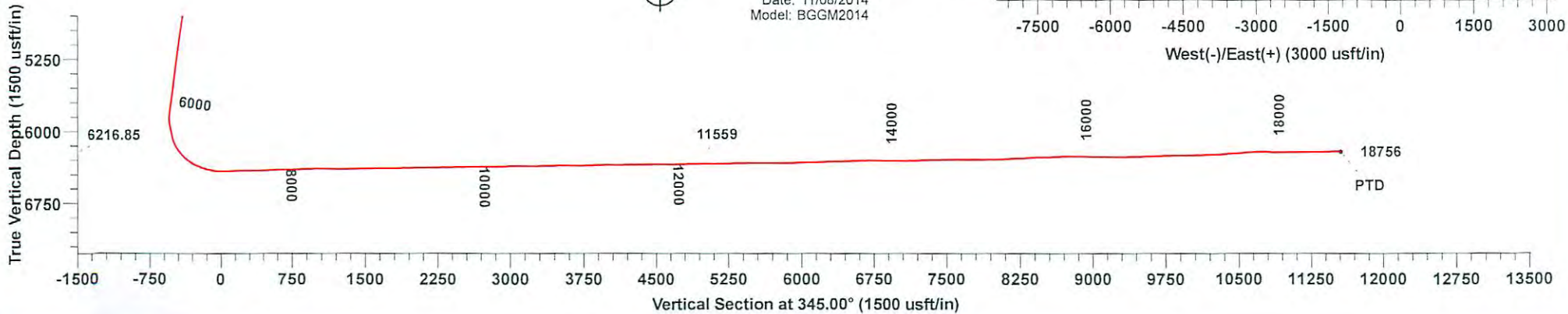
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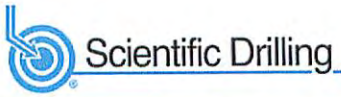
Target Line = 6432' TVD @ 91.10 Inc. @ 345 Azm.



Azimuths to Grid North  
 True North: 0.68°  
 Magnetic North: -8.10°

Magnetic Field  
 Strength: 52582.2snT  
 Dip Angle: 67.42°  
 Date: 11/08/2014  
 Model: BGGM2014





**SDI**  
Survey Report

<b>Company:</b> Chesapeake	<b>Local Co-ordinate Reference:</b> Well 201H
<b>Project:</b> Ohio Co, WV	<b>TVD Reference:</b> GL 1198+RKB 20 @ 1218.00usft (Nomac 74)
<b>Site:</b> Alice Edge OHI	<b>MD Reference:</b> GL 1198+RKB 20 @ 1218.00usft (Nomac 74)
<b>Well:</b> 201H	<b>North Reference:</b> Grid
<b>Wellbore:</b> OH	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> OH	<b>Database:</b> EDM LEWIS

<b>Project</b> Ohio Co, WV	
<b>Map System:</b> US State Plane 1927 (Exact solution)	<b>System Datum:</b> Mean Sea Level
<b>Geo Datum:</b> NAD 1927 (NADCON CONUS)	
<b>Map Zone:</b> West Virginia North 4701	

<b>Site</b> Alice Edge OHI		
<b>Site Position:</b>	<b>Northing:</b> 584,442.30 usft	<b>Latitude:</b> 40° 5' 59.221 N
<b>From:</b> Map	<b>Easting:</b> 1,703,320.70 usft	<b>Longitude:</b> 80° 33' 37.876 W
<b>Position Uncertainty:</b> 0.00 usft	<b>Slot Radius:</b> 0 "	<b>Grid Convergence:</b> -0.68 °

<b>Well</b> 201H		
<b>Well Position</b> +N/-S 0.00 usft	<b>Northing:</b> 584,432.10 usft	<b>Latitude:</b> 40° 5' 59.119 N
+E/-W 0.00 usft	<b>Easting:</b> 1,703,303.50 usft	<b>Longitude:</b> 80° 33' 38.095 W
<b>Position Uncertainty</b> 0.00 usft	<b>Wellhead Elevation:</b> 0.00 usft	<b>Ground Level:</b> 1,198.00 usft

<b>Wellbore</b> OH
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2014	11/08/14	-8.78	67.42	52,582

<b>Design</b> OH
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<b>Audit Notes:</b>		
<b>Version:</b> 1.0	<b>Phase:</b> ACTUAL	<b>Tie On Depth:</b> 0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	345.00

Survey Program		Date			
	11/11/14				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.00	560.00	Survey #1 (OH)	NS-GYRO-MS	North sensing gyrocompassing m	
660.00	18,756.00	Survey #2 (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.55	248.29	100.00	-0.18	-0.45	-0.06	0.55	0.55	0.00
200.00	0.20	225.57	200.00	-0.48	-1.02	-0.20	0.37	-0.35	-22.72
300.00	0.26	186.54	300.00	-0.82	-1.17	-0.49	0.16	0.06	-39.03
400.00	0.44	173.42	399.99	-1.43	-1.15	-1.09	0.20	0.18	-13.12
500.00	0.33	168.09	499.99	-2.09	-1.05	-1.75	0.12	-0.11	-5.33
560.00	0.37	161.48	559.99	-2.45	-0.95	-2.12	0.09	0.07	-11.02
660.00	0.30	100.50	659.99	-2.80	-0.59	-2.55	0.35	-0.07	-60.98
724.00	0.40	69.80	723.99	-2.75	-0.21	-2.61	0.33	0.16	-47.97
818.00	1.30	263.40	817.98	-2.76	-0.97	-2.42	1.80	0.96	-177.02

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<b>Company:</b>	Chesapeake	<b>Local Co-ordinate Reference:</b>	Well 201H
<b>Project:</b>	Ohio Co, WV	<b>TVD Reference:</b>	GL 1198+RKB 20 @ 1218.00usft (Nomac 74)
<b>Site:</b>	Alice Edge OHI	<b>MD Reference:</b>	GL 1198+RKB 20 @ 1218.00usft (Nomac 74)
<b>Well:</b>	201H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	EDM LEWIS

**Survey**

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
913.00	3.70	257.70	912.88	-3.54	-5.03	-2.12	2.54	2.53	-6.00
1,008.00	6.90	253.50	1,007.47	-5.82	-13.50	-2.12	3.39	3.37	-4.42
1,102.00	8.70	243.40	1,100.60	-10.60	-25.27	-3.70	2.40	1.91	-10.74
1,197.00	9.20	233.50	1,194.45	-18.34	-37.80	-7.93	1.70	0.53	-10.42
1,297.00	9.20	225.70	1,293.16	-28.68	-49.95	-14.77	1.25	0.00	-7.80
1,392.00	8.00	229.10	1,387.09	-38.31	-60.38	-21.38	1.37	-1.26	3.58
1,486.00	7.00	237.30	1,480.29	-45.69	-70.15	-25.97	1.56	-1.06	8.72
1,581.00	8.10	240.90	1,574.47	-52.07	-80.87	-29.37	1.26	1.16	3.79
1,676.00	9.60	235.10	1,668.33	-59.86	-93.21	-33.69	1.84	1.58	-6.11
1,771.00	11.20	231.20	1,761.77	-70.17	-106.90	-40.11	1.84	1.68	-4.11
1,865.00	9.70	228.20	1,854.21	-81.17	-119.92	-47.37	1.70	-1.60	-3.19
1,960.00	8.10	228.50	1,948.06	-90.94	-130.90	-53.96	1.68	-1.68	0.32
2,055.00	6.10	236.10	2,042.33	-98.19	-140.10	-58.58	2.32	-2.11	8.00
2,147.00	8.70	255.60	2,133.57	-102.65	-150.90	-60.10	3.89	2.83	21.20
2,246.00	9.10	243.80	2,231.39	-107.97	-165.18	-61.54	1.88	0.40	-11.92
2,341.00	12.00	238.60	2,324.78	-116.43	-180.35	-65.79	3.21	3.05	-5.47
2,435.00	14.60	236.40	2,416.25	-128.08	-198.57	-72.33	2.82	2.77	-2.34
2,530.00	16.30	235.70	2,507.81	-142.22	-219.55	-80.55	1.80	1.79	-0.74
2,625.00	18.20	233.70	2,598.53	-158.52	-242.53	-90.35	2.09	2.00	-2.11
2,719.00	19.60	236.80	2,687.47	-175.84	-267.55	-100.61	1.83	1.49	3.30
2,814.00	22.00	239.50	2,776.27	-193.60	-296.22	-110.34	2.72	2.53	2.84
2,909.00	25.80	241.30	2,863.11	-212.57	-329.70	-119.99	4.07	4.00	1.89
3,003.00	25.50	240.00	2,947.85	-232.51	-365.17	-130.08	0.68	-0.32	-1.38
3,097.00	24.30	240.10	3,033.11	-252.27	-399.46	-140.29	1.28	-1.28	0.11
3,192.00	25.40	235.80	3,119.32	-273.47	-433.26	-152.01	2.23	1.16	-4.53
3,290.00	24.30	235.40	3,208.24	-296.73	-467.24	-165.69	1.14	-1.12	-0.41
3,385.00	26.40	236.60	3,294.09	-319.46	-500.96	-178.92	2.28	2.21	1.26
3,480.00	25.50	234.50	3,379.51	-342.96	-535.25	-192.74	1.35	-0.95	-2.21
3,575.00	24.50	233.80	3,465.61	-366.47	-567.79	-207.03	1.10	-1.05	-0.74
3,670.00	26.40	234.80	3,551.39	-390.28	-600.95	-221.45	2.05	2.00	1.05
3,764.00	25.30	232.30	3,635.98	-414.61	-633.92	-236.42	1.65	-1.17	-2.66
3,859.00	24.50	235.80	3,722.16	-438.10	-666.27	-250.73	1.76	-0.84	3.68
3,954.00	25.80	239.80	3,808.16	-459.57	-700.44	-262.63	2.25	1.37	4.21
4,048.00	23.70	237.30	3,893.52	-480.07	-734.02	-273.74	2.50	-2.23	-2.66
4,143.00	24.80	236.80	3,980.14	-501.30	-766.76	-285.76	1.18	1.16	-0.53
4,241.00	25.70	240.00	4,068.78	-523.18	-802.36	-297.68	1.67	0.92	3.27
4,335.00	26.40	243.40	4,153.23	-542.73	-838.70	-307.16	1.75	0.74	3.62
4,430.00	26.10	237.10	4,238.45	-563.54	-875.14	-317.83	2.95	-0.32	-6.63
4,525.00	24.40	235.30	4,324.37	-586.06	-908.82	-330.87	1.96	-1.79	-1.89
4,619.00	26.70	234.30	4,409.17	-609.44	-941.94	-344.88	2.49	2.45	-1.06
4,714.00	26.60	237.40	4,494.09	-633.36	-977.19	-358.86	1.47	-0.11	3.26
4,809.00	25.00	235.40	4,579.61	-656.22	-1,011.63	-372.03	1.92	-1.68	-2.11
4,903.00	25.80	239.60	4,664.53	-677.85	-1,045.63	-384.12	2.10	0.85	4.47

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<b>Project:</b>	Ohio Co, WV	<b>TVD Reference:</b>	GL 1198+RKB 20 @ 1218.00usft (Nomac 74)
<b>Site:</b>	Alice Edge OHI	<b>MD Reference:</b>	GL 1198+RKB 20 @ 1218.00usft (Nomac 74)
<b>Well:</b>	201H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	EDM LEWIS

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
4,998.00	24.30	237.80	4,750.60	-698.73	-1,080.00	-395.39	1.77	-1.58	-1.89	
5,093.00	26.10	238.30	4,836.55	-720.13	-1,114.33	-407.18	1.91	1.89	0.53	
5,187.00	25.00	235.40	4,921.36	-742.27	-1,148.27	-419.79	1.77	-1.17	-3.09	
5,282.00	26.90	238.30	5,006.78	-764.97	-1,183.08	-432.70	2.40	2.00	3.05	
5,377.00	25.90	237.30	5,091.88	-787.47	-1,218.83	-445.18	1.15	-1.05	-1.05	
5,471.00	27.00	240.10	5,176.04	-809.20	-1,254.61	-456.91	1.77	1.17	2.98	
5,566.00	25.80	238.60	5,261.13	-830.72	-1,290.95	-468.29	1.45	-1.26	-1.58	
5,661.00	26.90	237.10	5,346.26	-853.17	-1,326.64	-480.74	1.35	1.16	-1.58	
5,756.00	26.70	243.10	5,431.07	-874.50	-1,363.72	-491.74	2.85	-0.21	6.32	
5,850.00	25.00	242.20	5,515.66	-893.32	-1,400.13	-500.50	1.86	-1.81	-0.96	
5,945.00	26.40	239.80	5,601.26	-913.31	-1,436.14	-510.49	1.84	1.47	-2.53	
6,039.00	25.10	236.80	5,685.93	-934.74	-1,470.89	-522.19	1.96	-1.38	-3.19	
6,119.00	25.60	236.90	5,758.23	-953.47	-1,499.57	-532.86	0.63	0.63	0.13	
6,144.00	26.50	238.00	5,780.69	-959.37	-1,508.82	-536.17	4.09	3.60	4.40	
6,175.00	26.50	240.20	5,808.43	-966.47	-1,520.69	-539.96	3.17	0.00	7.10	
6,207.00	26.60	247.70	5,837.07	-972.74	-1,533.52	-542.69	10.47	0.31	23.44	
6,238.00	27.80	257.00	5,864.65	-977.00	-1,546.99	-543.32	14.23	3.87	30.00	
6,270.00	28.90	265.90	5,892.82	-979.24	-1,561.98	-541.60	13.63	3.44	27.81	
6,301.00	30.10	275.40	5,919.82	-979.04	-1,577.20	-537.47	15.56	3.87	30.65	
6,333.00	30.20	277.50	5,947.49	-977.24	-1,593.17	-531.60	3.31	0.31	6.56	
6,364.00	28.70	275.40	5,974.49	-975.52	-1,608.31	-526.02	5.87	-4.84	-6.77	
6,396.00	28.10	274.90	6,002.63	-974.15	-1,623.47	-520.77	2.02	-1.88	-1.56	
6,427.00	27.20	276.70	6,030.09	-972.70	-1,637.78	-515.67	3.96	-2.90	5.81	
6,459.00	27.10	284.10	6,058.58	-970.07	-1,652.12	-509.42	10.55	-0.31	23.13	
6,490.00	29.00	292.50	6,085.94	-965.47	-1,665.91	-501.40	14.13	6.13	27.10	
6,522.00	32.00	299.00	6,113.52	-958.39	-1,680.50	-490.79	13.92	9.38	20.31	
6,553.00	35.70	304.10	6,139.27	-949.33	-1,695.18	-478.24	15.04	11.94	16.45	
6,585.00	39.40	306.70	6,164.63	-938.02	-1,711.06	-463.20	12.58	11.56	8.13	
6,617.00	42.70	309.40	6,188.77	-925.06	-1,727.60	-446.41	11.70	10.31	8.44	
6,648.00	44.70	311.40	6,211.18	-911.18	-1,743.90	-428.78	7.84	6.45	6.45	
6,680.00	47.10	313.50	6,233.45	-895.66	-1,760.85	-409.40	8.86	7.50	6.56	
6,711.00	49.50	315.80	6,254.07	-879.40	-1,777.30	-389.43	9.52	7.74	7.42	
6,743.00	53.00	318.50	6,274.10	-861.09	-1,794.26	-367.36	12.76	10.94	8.44	
6,774.00	56.40	321.10	6,292.01	-841.77	-1,810.58	-344.47	12.93	10.97	8.39	
6,806.00	58.90	323.20	6,309.13	-820.42	-1,827.16	-319.56	9.58	7.81	6.56	
6,838.00	61.40	325.30	6,325.06	-797.90	-1,843.36	-293.61	9.67	7.81	6.56	
6,869.00	64.10	326.70	6,339.25	-775.05	-1,858.77	-267.56	9.59	8.71	4.52	
6,901.00	66.90	328.90	6,352.52	-750.41	-1,874.28	-239.74	10.76	8.75	6.88	
6,932.00	69.30	330.50	6,364.09	-725.58	-1,888.79	-212.00	9.10	7.74	5.16	
6,964.00	72.30	332.30	6,374.61	-699.05	-1,903.25	-182.63	10.77	9.38	5.63	
6,995.00	75.10	333.40	6,383.31	-672.57	-1,916.82	-153.55	9.65	9.03	3.55	
7,027.00	78.40	334.10	6,390.64	-644.64	-1,930.59	-123.00	10.53	10.31	2.19	
7,058.00	80.40	335.00	6,396.35	-617.13	-1,943.69	-93.04	7.95	6.45	2.90	

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<b>Company:</b>	Chesapeake	<b>Local Co-ordinate Reference:</b>	Well 201H
<b>Project:</b>	Ohio Co, WV	<b>TVD Reference:</b>	GL 1198+RKB 20 @ 1218.00usft (Nomac 74)
<b>Site:</b>	Alice Edge OHI	<b>MD Reference:</b>	GL 1198+RKB 20 @ 1218.00usft (Nomac 74)
<b>Well:</b>	201H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	EDM LEWIS

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,090.00	82.70	336.90	6,401.05	-588.23	-1,956.58	-61.78	9.28	7.19	5.94
7,121.00	85.30	338.70	6,404.29	-559.69	-1,968.23	-31.20	10.18	8.39	5.81
7,185.00	90.70	340.30	6,406.52	-499.80	-1,990.62	32.44	8.80	8.44	2.50
7,279.00	90.00	339.40	6,405.95	-411.55	-2,023.00	126.06	1.21	-0.74	-0.96
7,374.00	91.30	339.70	6,404.87	-322.55	-2,056.19	220.62	1.40	1.37	0.32
7,469.00	89.20	334.20	6,404.45	-235.17	-2,093.37	314.64	6.20	-2.21	-5.79
7,563.00	92.50	337.80	6,403.06	-149.34	-2,131.59	407.45	5.19	3.51	3.83
7,658.00	93.10	339.80	6,398.42	-60.88	-2,165.90	501.77	2.20	0.63	2.11
7,752.00	92.20	341.70	6,394.07	27.77	-2,196.85	595.41	2.23	-0.96	2.02
7,847.00	92.30	342.80	6,390.34	118.17	-2,225.79	690.23	1.16	0.11	1.16
7,941.00	91.70	342.50	6,387.06	207.84	-2,253.81	784.09	0.71	-0.64	-0.32
8,036.00	91.10	340.70	6,384.74	297.95	-2,283.78	878.89	2.00	-0.63	-1.89
8,131.00	90.70	341.50	6,383.25	387.82	-2,314.55	973.66	0.94	-0.42	0.84
8,226.00	90.70	342.30	6,382.09	478.11	-2,344.06	1,068.51	0.84	0.00	0.84
8,321.00	90.30	342.80	6,381.26	568.74	-2,372.55	1,163.42	0.67	-0.42	0.53
8,415.00	89.70	342.80	6,381.26	658.53	-2,400.35	1,257.35	0.64	-0.64	0.00
8,510.00	89.50	343.10	6,381.92	749.35	-2,428.20	1,352.29	0.38	-0.21	0.32
8,605.00	88.50	342.60	6,383.58	840.12	-2,456.21	1,447.20	1.18	-1.05	-0.53
8,699.00	91.00	342.20	6,383.99	929.71	-2,484.63	1,541.10	2.69	2.66	-0.43
8,794.00	91.90	342.70	6,381.59	1,020.25	-2,513.26	1,635.97	1.08	0.95	0.53
8,888.00	91.00	341.50	6,379.21	1,109.67	-2,542.15	1,729.82	1.60	-0.96	-1.28
8,983.00	91.00	342.20	6,377.55	1,199.93	-2,571.73	1,824.66	0.74	0.00	0.74
9,078.00	90.60	341.90	6,376.22	1,290.30	-2,601.01	1,919.52	0.53	-0.42	-0.32
9,172.00	90.00	342.00	6,375.73	1,379.67	-2,630.13	2,013.39	0.65	-0.64	0.11
9,267.00	91.80	341.40	6,374.24	1,469.85	-2,659.96	2,108.22	2.00	1.89	-0.63
9,362.00	91.30	340.60	6,371.67	1,559.64	-2,690.88	2,202.95	0.99	-0.53	-0.84
9,456.00	90.50	341.10	6,370.19	1,648.43	-2,721.71	2,296.69	1.00	-0.85	0.53
9,550.00	89.60	340.40	6,370.11	1,737.17	-2,752.70	2,390.43	1.21	-0.96	-0.74
9,645.00	92.10	340.50	6,368.70	1,826.68	-2,784.48	2,485.11	2.63	2.63	0.11
9,740.00	92.00	339.90	6,365.30	1,916.00	-2,816.64	2,579.72	0.64	-0.11	-0.63
9,834.00	91.20	339.00	6,362.68	2,003.99	-2,849.62	2,673.24	1.28	-0.85	-0.96
9,929.00	91.30	340.30	6,360.61	2,093.03	-2,882.65	2,767.80	1.37	0.11	1.37
10,024.00	90.30	338.90	6,359.28	2,182.06	-2,915.76	2,862.37	1.81	-1.05	-1.47
10,118.00	90.20	339.50	6,358.87	2,269.94	-2,949.14	2,955.88	0.65	-0.11	0.64
10,213.00	89.70	339.50	6,358.95	2,358.92	-2,982.41	3,050.45	0.53	-0.53	0.00
10,308.00	89.10	338.90	6,359.95	2,447.72	-3,016.14	3,144.95	0.89	-0.63	-0.63
10,403.00	91.50	339.80	6,359.45	2,536.61	-3,049.64	3,239.48	2.70	2.53	0.95
10,498.00	91.50	339.80	6,356.96	2,625.74	-3,082.44	3,334.06	0.00	0.00	0.00
10,592.00	90.80	340.00	6,355.08	2,713.99	-3,114.73	3,427.67	0.77	-0.74	0.21
10,687.00	90.50	340.50	6,354.00	2,803.40	-3,146.83	3,522.34	0.61	-0.32	0.53
10,782.00	89.70	339.00	6,353.83	2,892.52	-3,179.71	3,616.93	1.79	-0.84	-1.58
10,877.00	91.70	341.00	6,352.67	2,981.78	-3,212.20	3,711.55	2.98	2.11	2.11
10,971.00	91.90	341.40	6,349.72	3,070.72	-3,242.48	3,805.30	0.48	0.21	0.43
11,066.00	90.90	340.10	6,347.40	3,160.38	-3,273.79	3,900.01	1.73	-1.05	-1.37

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<b>Company:</b>	Chesapeake	<b>Local Co-ordinate Reference:</b>	Well 201H
<b>Project:</b>	Ohio Co, WV	<b>TVD Reference:</b>	GL 1198+RKB 20 @ 1218.00usft (Nomac 74)
<b>Site:</b>	Alice Edge OHI	<b>MD Reference:</b>	GL 1198+RKB 20 @ 1218.00usft (Nomac 74)
<b>Well:</b>	201H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	EDM LEWIS

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,161.00	90.40	340.40	6,346.32	3,249.78	-3,305.89	3,994.68	0.61	-0.53	0.32
11,256.00	89.60	340.60	6,346.32	3,339.33	-3,337.60	4,089.38	0.87	-0.84	0.21
11,350.00	90.90	341.70	6,345.91	3,428.29	-3,367.97	4,183.17	1.81	1.38	1.17
11,445.00	91.40	342.00	6,344.00	3,518.54	-3,397.56	4,278.00	0.61	0.53	0.32
11,539.00	90.50	342.40	6,342.45	3,608.03	-3,426.29	4,371.88	1.05	-0.96	0.43
11,633.00	90.00	342.80	6,342.04	3,697.73	-3,454.40	4,465.79	0.68	-0.53	0.43
11,728.00	89.30	342.70	6,342.62	3,788.45	-3,482.57	4,560.72	0.74	-0.74	-0.11
11,823.00	91.40	342.80	6,342.04	3,879.17	-3,510.74	4,655.64	2.21	2.21	0.11
11,917.00	91.60	341.30	6,339.57	3,968.56	-3,539.69	4,749.48	1.61	0.21	-1.60
12,012.00	91.10	342.30	6,337.34	4,058.78	-3,569.36	4,844.30	1.18	-0.53	1.05
12,106.00	90.10	341.60	6,336.35	4,148.15	-3,598.48	4,938.16	1.30	-1.06	-0.74
12,201.00	89.50	341.80	6,336.68	4,238.35	-3,628.31	5,033.00	0.67	-0.63	0.21
12,296.00	91.60	341.70	6,335.77	4,328.56	-3,658.06	5,127.84	2.21	2.21	-0.11
12,390.00	92.00	340.00	6,332.82	4,417.31	-3,688.88	5,221.54	1.86	0.43	-1.81
12,485.00	91.80	340.60	6,329.67	4,506.70	-3,720.88	5,316.17	0.67	-0.21	0.63
12,580.00	91.20	341.40	6,327.18	4,596.49	-3,751.80	5,410.91	1.05	-0.63	0.84
12,675.00	90.10	340.00	6,326.10	4,686.14	-3,783.20	5,505.63	1.87	-1.16	-1.47
12,769.00	89.80	341.00	6,326.19	4,774.75	-3,814.57	5,599.34	1.11	-0.32	1.06
12,864.00	89.20	340.90	6,327.02	4,864.54	-3,845.58	5,694.10	0.64	-0.63	-0.11
12,958.00	90.90	341.90	6,326.93	4,953.63	-3,875.56	5,787.91	2.10	1.81	1.06
13,053.00	90.70	343.20	6,325.61	5,044.25	-3,904.05	5,882.81	1.38	-0.21	1.37
13,148.00	89.70	342.80	6,325.28	5,135.09	-3,931.82	5,977.75	1.13	-1.05	-0.42
13,243.00	91.90	344.60	6,323.95	5,226.26	-3,958.48	6,072.71	2.99	2.32	1.89
13,337.00	92.20	345.20	6,320.59	5,316.95	-3,982.95	6,166.64	0.71	0.32	0.64
13,432.00	91.40	345.50	6,317.60	5,408.82	-4,006.97	6,261.60	0.90	-0.84	0.32
13,527.00	91.10	346.40	6,315.53	5,500.95	-4,030.02	6,356.56	1.00	-0.32	0.95
13,622.00	92.40	343.30	6,312.63	5,592.59	-4,054.83	6,451.50	3.54	1.37	-3.26
13,716.00	92.20	341.30	6,308.86	5,682.07	-4,083.39	6,545.32	2.14	-0.21	-2.13
13,811.00	91.40	340.50	6,305.87	5,771.79	-4,114.46	6,640.02	1.19	-0.84	-0.84
13,906.00	90.60	340.10	6,304.21	5,861.22	-4,146.48	6,734.69	0.94	-0.84	-0.42
14,001.00	89.60	339.60	6,304.05	5,950.40	-4,179.20	6,829.30	1.18	-1.05	-0.53
14,095.00	88.70	339.20	6,305.44	6,038.38	-4,212.27	6,922.84	1.05	-0.96	-0.43
14,190.00	89.70	341.40	6,306.77	6,127.80	-4,244.29	7,017.51	2.54	1.05	2.32
14,284.00	92.00	343.10	6,305.37	6,217.31	-4,272.94	7,111.38	3.04	2.45	1.81
14,379.00	91.90	343.60	6,302.14	6,308.27	-4,300.15	7,206.29	0.54	-0.11	0.53
14,474.00	91.10	343.50	6,299.65	6,399.35	-4,327.04	7,301.22	0.85	-0.84	-0.11
14,568.00	91.30	345.20	6,297.69	6,489.85	-4,352.39	7,395.19	1.82	0.21	1.81
14,663.00	90.80	345.00	6,295.95	6,581.64	-4,376.81	7,490.17	0.57	-0.53	-0.21
14,758.00	90.00	344.30	6,295.28	6,673.24	-4,401.96	7,585.17	1.12	-0.84	-0.74
14,853.00	89.00	343.70	6,296.11	6,764.56	-4,428.14	7,680.15	1.23	-1.05	-0.63
14,948.00	90.40	342.90	6,296.61	6,855.55	-4,455.44	7,775.10	1.70	1.47	-0.84
15,042.00	92.20	344.40	6,294.48	6,945.72	-4,481.89	7,869.05	2.49	1.91	1.60
15,137.00	91.50	344.20	6,291.41	7,037.12	-4,507.59	7,963.99	1.72	-0.74	-0.21

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<b>Company:</b> Chesapeake	<b>Local Co-ordinate Reference:</b> Well 201H
<b>Project:</b> Ohio Co, WV	<b>TVD Reference:</b> GL 1198+RKB 20 @ 1218.00usft (Nomac 74)
<b>Site:</b> Alice Edge OHI	<b>MD Reference:</b> GL 1198+RKB 20 @ 1218.00usft (Nomac 74)
<b>Well:</b> 201H	<b>North Reference:</b> Grid
<b>Wellbore:</b> OH	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> OH	<b>Database:</b> EDM LEWIS

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
15,232.00	90.70	344.20	6,289.59	7,128.52	-4,533.45	8,058.96	0.84	-0.84	0.00
15,327.00	92.70	344.30	6,286.77	7,219.91	-4,559.22	8,153.91	2.11	2.11	0.11
15,422.00	93.30	342.80	6,281.79	7,310.89	-4,586.09	8,248.74	1.70	0.63	-1.58
15,517.00	93.00	342.70	6,276.57	7,401.48	-4,614.22	8,343.53	0.33	-0.32	-0.11
15,611.00	92.50	342.70	6,272.06	7,491.12	-4,642.14	8,437.34	0.53	-0.53	0.00
15,706.00	92.00	342.80	6,268.34	7,581.78	-4,670.29	8,532.20	0.54	-0.53	0.11
15,800.00	91.10	342.50	6,265.79	7,671.47	-4,698.31	8,626.08	1.01	-0.96	-0.32
15,895.00	90.60	342.70	6,264.38	7,762.11	-4,726.71	8,720.99	0.57	-0.53	0.21
15,990.00	89.60	342.90	6,264.22	7,852.86	-4,754.81	8,815.92	1.07	-1.05	0.21
16,085.00	89.10	343.90	6,265.30	7,943.89	-4,781.94	8,910.87	1.18	-0.53	1.05
16,179.00	88.40	343.80	6,267.35	8,034.16	-4,808.08	9,004.83	0.75	-0.74	-0.11
16,274.00	87.80	343.20	6,270.50	8,125.20	-4,835.05	9,099.74	0.89	-0.63	-0.63
16,368.00	90.00	341.50	6,272.30	8,214.75	-4,863.54	9,193.62	2.96	2.34	-1.81
16,463.00	90.70	345.20	6,271.72	8,305.75	-4,890.76	9,288.56	3.96	0.74	3.89
16,557.00	89.90	347.90	6,271.23	8,397.16	-4,912.62	9,382.51	3.00	-0.85	2.87
16,652.00	91.60	351.60	6,269.98	8,490.62	-4,929.52	9,477.16	4.29	1.79	3.89
16,747.00	93.20	353.70	6,266.00	8,584.74	-4,941.66	9,571.22	2.78	1.68	2.21
16,841.00	91.90	352.40	6,261.82	8,677.96	-4,953.03	9,664.20	1.95	-1.38	-1.38
16,936.00	91.90	353.40	6,258.67	8,772.18	-4,964.76	9,758.25	1.05	0.00	1.05
17,030.00	90.00	349.30	6,257.11	8,865.07	-4,978.89	9,851.63	4.81	-2.02	-4.36
17,123.00	91.40	352.40	6,255.98	8,956.87	-4,993.68	9,944.13	3.66	1.51	3.33
17,217.00	91.40	352.80	6,253.68	9,050.05	-5,005.78	10,037.27	0.43	0.00	0.43
17,311.00	91.30	352.30	6,251.47	9,143.23	-5,017.97	10,130.43	0.54	-0.11	-0.53
17,403.00	92.10	351.50	6,248.74	9,234.28	-5,030.92	10,221.72	1.23	0.87	-0.87
17,496.00	94.30	352.30	6,243.55	9,326.20	-5,044.01	10,313.90	2.52	2.37	0.86
17,587.00	94.20	351.80	6,236.80	9,416.07	-5,056.56	10,403.96	0.56	-0.11	-0.55
17,680.00	94.30	352.90	6,229.91	9,507.99	-5,068.91	10,495.94	1.18	0.11	1.18
17,771.00	94.20	352.30	6,223.17	9,597.99	-5,080.59	10,585.90	0.67	-0.11	-0.66
17,863.00	91.20	352.00	6,218.83	9,689.01	-5,093.14	10,677.07	3.28	-3.26	-0.33
17,957.00	89.60	352.50	6,218.18	9,782.15	-5,105.82	10,770.31	1.78	-1.70	0.53
18,052.00	89.30	352.60	6,219.09	9,876.34	-5,118.14	10,864.48	0.33	-0.32	0.11
18,147.00	88.20	351.70	6,221.16	9,970.43	-5,131.11	10,958.72	1.50	-1.16	-0.95
18,241.00	89.60	354.10	6,222.96	10,063.68	-5,142.72	11,051.80	2.96	1.49	2.55
18,336.00	90.20	354.80	6,223.13	10,158.23	-5,151.91	11,145.51	0.97	0.63	0.74
18,431.00	91.50	355.80	6,221.72	10,252.90	-5,159.69	11,238.97	1.73	1.37	1.05
18,526.00	90.60	355.20	6,219.98	10,347.59	-5,167.15	11,332.36	1.14	-0.95	-0.63
18,621.00	91.60	355.10	6,218.16	10,442.23	-5,175.18	11,425.85	1.06	1.05	-0.11
18,689.00	90.20	353.50	6,217.09	10,509.88	-5,181.93	11,492.95	3.13	-2.06	-2.35
18,756.00	90.20	353.50	6,216.85	10,576.45	-5,189.51	11,559.21	0.00	0.00	0.00

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**SDI**  
Survey Report - Geographic

<b>Company:</b> Chesapeake	<b>Local Co-ordinate Reference:</b> Well 201H
<b>Project:</b> Ohio Co, WV	<b>TVD Reference:</b> GL 1198+RKB 20 @ 1218.00usft (Nomac 74)
<b>Site:</b> Alice Edge OHI	<b>MD Reference:</b> GL 1198+RKB 20 @ 1218.00usft (Nomac 74)
<b>Well:</b> 201H	<b>North Reference:</b> Grid
<b>Wellbore:</b> OH	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> OH	<b>Database:</b> EDM LEWIS

<b>Project</b> Ohio Co, WV	
<b>Map System:</b> US State Plane 1927 (Exact solution)	<b>System Datum:</b> Mean Sea Level
<b>Geo Datum:</b> NAD 1927 (NADCON CONUS)	
<b>Map Zone:</b> West Virginia North 4701	

<b>Site</b> Alice Edge OHI		
<b>Site Position:</b>	<b>Northing:</b> 584,442.30 usft	<b>Latitude:</b> 40° 5' 59.221 N
<b>From:</b> Map	<b>Easting:</b> 1,703,320.70 usft	<b>Longitude:</b> 80° 33' 37.876 W
<b>Position Uncertainty:</b> 0.00 usft	<b>Slot Radius:</b> 0 "	<b>Grid Convergence:</b> -0.68 °

<b>Well</b> 201H		
<b>Well Position</b> +N/-S 0.00 usft	<b>Northing:</b> 584,432.10 usft	<b>Latitude:</b> 40° 5' 59.119 N
+E/-W 0.00 usft	<b>Easting:</b> 1,703,303.50 usft	<b>Longitude:</b> 80° 33' 38.095 W
<b>Position Uncertainty</b> 0.00 usft	<b>Wellhead Elevation:</b> 0.00 usft	<b>Ground Level:</b> 1,198.00 usft

<b>Wellbore</b> OH
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2014	11/08/14	-8.78	67.42	52,582

<b>Design</b> OH
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<b>Audit Notes:</b>		
<b>Version:</b> 1.0	<b>Phase:</b> ACTUAL	<b>Tie On Depth:</b> 0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	345.00

Survey Program	Date	11/11/14		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.00	560.00	Survey #1 (OH)	NS-GYRO-MS	North sensing gyrocompassing m
660.00	18,756.00	Survey #2 (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	584,432.10	1,703,303.50	40° 5' 59.119 N	80° 33' 38.095 W
100.00	0.55	248.29	100.00	-0.18	-0.45	584,431.93	1,703,303.05	40° 5' 59.117 N	80° 33' 38.101 W
200.00	0.20	225.57	200.00	-0.48	-1.02	584,431.63	1,703,302.48	40° 5' 59.114 N	80° 33' 38.108 W
300.00	0.26	186.54	300.00	-0.82	-1.17	584,431.28	1,703,302.33	40° 5' 59.110 N	80° 33' 38.110 W
400.00	0.44	173.42	399.99	-1.43	-1.15	584,430.67	1,703,302.35	40° 5' 59.104 N	80° 33' 38.110 W
500.00	0.33	168.09	499.99	-2.09	-1.05	584,430.01	1,703,302.45	40° 5' 59.098 N	80° 33' 38.109 W
560.00	0.37	161.48	559.99	-2.45	-0.95	584,429.66	1,703,302.55	40° 5' 59.094 N	80° 33' 38.107 W
660.00	0.30	100.50	659.99	-2.80	-0.59	584,429.30	1,703,302.91	40° 5' 59.091 N	80° 33' 38.103 W
724.00	0.40	69.80	723.99	-2.75	-0.21	584,429.35	1,703,303.28	40° 5' 59.091 N	80° 33' 38.098 W
818.00	1.30	263.40	817.98	-2.76	-0.97	584,429.34	1,703,302.53	40° 5' 59.091 N	80° 33' 38.107 W
913.00	3.70	257.70	912.88	-3.54	-5.03	584,428.56	1,703,298.47	40° 5' 59.083 N	80° 33' 38.160 W

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02/26/2016

WV Department of Environmental Protection

<b>Company:</b> Chesapeake	<b>Local Co-ordinate Reference:</b> Well 201H
<b>Project:</b> Ohio Co, WV	<b>TVD Reference:</b> GL 1198+RKB 20 @ 1218.00usft (Nomac 74)
<b>Site:</b> Alice Edge OHI	<b>MD Reference:</b> GL 1198+RKB 20 @ 1218.00usft (Nomac 74)
<b>Well:</b> 201H	<b>North Reference:</b> Grid
<b>Wellbore:</b> OH	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> OH	<b>Database:</b> EDM LEWIS

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
1,008.00	6.90	253.50	1,007.47	-5.82	-13.50	584,426.29	1,703,290.00	40° 5' 59.060 N	80° 33' 38.268 W
1,102.00	8.70	243.40	1,100.60	-10.60	-25.27	584,421.50	1,703,278.23	40° 5' 59.011 N	80° 33' 38.419 W
1,197.00	9.20	233.50	1,194.45	-18.34	-37.80	584,413.77	1,703,265.70	40° 5' 58.933 N	80° 33' 38.579 W
1,297.00	9.20	225.70	1,293.16	-28.68	-49.95	584,403.43	1,703,253.55	40° 5' 58.829 N	80° 33' 38.734 W
1,392.00	8.00	229.10	1,387.09	-38.31	-60.38	584,393.79	1,703,243.12	40° 5' 58.733 N	80° 33' 38.867 W
1,486.00	7.00	237.30	1,480.29	-45.69	-70.15	584,386.42	1,703,233.35	40° 5' 58.659 N	80° 33' 38.991 W
1,581.00	8.10	240.90	1,574.47	-52.07	-80.87	584,380.03	1,703,222.63	40° 5' 58.595 N	80° 33' 39.128 W
1,676.00	9.60	235.10	1,668.33	-59.86	-93.21	584,372.25	1,703,210.29	40° 5' 58.516 N	80° 33' 39.286 W
1,771.00	11.20	231.20	1,761.77	-70.17	-106.90	584,361.93	1,703,196.60	40° 5' 58.413 N	80° 33' 39.460 W
1,865.00	9.70	228.20	1,854.21	-81.17	-119.92	584,350.93	1,703,183.58	40° 5' 58.302 N	80° 33' 39.626 W
1,960.00	8.10	228.50	1,948.06	-90.94	-130.90	584,341.16	1,703,172.60	40° 5' 58.205 N	80° 33' 39.766 W
2,055.00	6.10	236.10	2,042.33	-98.19	-140.10	584,333.91	1,703,163.40	40° 5' 58.132 N	80° 33' 39.883 W
2,147.00	8.70	255.60	2,133.57	-102.65	-150.90	584,329.45	1,703,152.60	40° 5' 58.087 N	80° 33' 40.022 W
2,246.00	9.10	243.80	2,231.39	-107.97	-165.18	584,324.13	1,703,138.32	40° 5' 58.032 N	80° 33' 40.204 W
2,341.00	12.00	238.60	2,324.78	-116.43	-180.35	584,315.67	1,703,123.14	40° 5' 57.947 N	80° 33' 40.398 W
2,435.00	14.60	236.40	2,416.25	-128.08	-198.57	584,304.02	1,703,104.93	40° 5' 57.830 N	80° 33' 40.631 W
2,530.00	16.30	235.70	2,507.81	-142.22	-219.55	584,289.88	1,703,083.94	40° 5' 57.688 N	80° 33' 40.899 W
2,625.00	18.20	233.70	2,598.53	-158.52	-242.53	584,273.58	1,703,060.97	40° 5' 57.524 N	80° 33' 41.192 W
2,719.00	19.60	236.80	2,687.47	-175.84	-267.55	584,256.26	1,703,035.95	40° 5' 57.350 N	80° 33' 41.511 W
2,814.00	22.00	239.50	2,776.27	-193.60	-296.22	584,238.50	1,703,007.28	40° 5' 57.171 N	80° 33' 41.878 W
2,909.00	25.80	241.30	2,863.11	-212.57	-329.70	584,219.53	1,702,973.80	40° 5' 56.980 N	80° 33' 42.306 W
3,003.00	25.50	240.00	2,947.85	-232.51	-365.17	584,199.59	1,702,938.33	40° 5' 56.778 N	80° 33' 42.759 W
3,097.00	24.30	240.10	3,033.11	-252.27	-399.46	584,179.83	1,702,904.04	40° 5' 56.579 N	80° 33' 43.197 W
3,192.00	25.40	235.80	3,119.32	-273.47	-433.26	584,158.64	1,702,870.24	40° 5' 56.366 N	80° 33' 43.629 W
3,290.00	24.30	235.40	3,208.24	-296.73	-467.24	584,135.37	1,702,836.26	40° 5' 56.132 N	80° 33' 44.062 W
3,385.00	26.40	236.60	3,294.09	-319.46	-500.96	584,112.64	1,702,802.53	40° 5' 55.903 N	80° 33' 44.493 W
3,480.00	25.50	234.50	3,379.51	-342.96	-535.25	584,089.14	1,702,768.25	40° 5' 55.667 N	80° 33' 44.931 W
3,575.00	24.50	233.80	3,465.61	-366.47	-567.79	584,065.63	1,702,735.71	40° 5' 55.431 N	80° 33' 45.346 W
3,670.00	26.40	234.80	3,551.39	-390.28	-600.95	584,041.82	1,702,702.55	40° 5' 55.192 N	80° 33' 45.769 W
3,764.00	25.30	232.30	3,635.98	-414.61	-633.92	584,017.49	1,702,669.58	40° 5' 54.947 N	80° 33' 46.189 W
3,859.00	24.50	235.80	3,722.16	-438.10	-666.27	583,994.00	1,702,637.22	40° 5' 54.712 N	80° 33' 46.602 W
3,954.00	25.80	239.80	3,808.16	-459.57	-700.44	583,972.53	1,702,603.06	40° 5' 54.495 N	80° 33' 47.038 W
4,048.00	23.70	237.30	3,893.52	-480.07	-734.02	583,952.03	1,702,569.48	40° 5' 54.289 N	80° 33' 47.467 W
4,143.00	24.80	236.80	3,980.14	-501.30	-766.76	583,930.81	1,702,536.74	40° 5' 54.075 N	80° 33' 47.885 W
4,241.00	25.70	240.00	4,068.78	-523.18	-802.36	583,908.93	1,702,501.14	40° 5' 53.855 N	80° 33' 48.340 W
4,335.00	26.40	243.40	4,153.23	-542.73	-838.70	583,889.38	1,702,464.80	40° 5' 53.657 N	80° 33' 48.805 W
4,430.00	26.10	237.10	4,238.45	-563.54	-875.14	583,868.56	1,702,428.36	40° 5' 53.448 N	80° 33' 49.270 W
4,525.00	24.40	235.30	4,324.37	-586.06	-908.82	583,846.04	1,702,394.68	40° 5' 53.221 N	80° 33' 49.700 W
4,619.00	26.70	234.30	4,409.17	-609.44	-941.94	583,822.66	1,702,361.56	40° 5' 52.986 N	80° 33' 50.123 W
4,714.00	26.60	237.40	4,494.09	-633.36	-977.19	583,798.75	1,702,326.31	40° 5' 52.746 N	80° 33' 50.573 W
4,809.00	25.00	235.40	4,579.61	-656.22	-1,011.63	583,775.89	1,702,291.87	40° 5' 52.516 N	80° 33' 51.013 W
4,903.00	25.80	239.60	4,664.53	-677.85	-1,045.63	583,754.25	1,702,257.87	40° 5' 52.298 N	80° 33' 51.447 W
4,998.00	24.30	237.80	4,750.60	-698.73	-1,080.00	583,733.38	1,702,223.49	40° 5' 52.088 N	80° 33' 51.886 W
5,093.00	26.10	238.30	4,836.55	-720.13	-1,114.33	583,711.98	1,702,189.17	40° 5' 51.872 N	80° 33' 52.324 W
5,187.00	25.00	235.40	4,921.36	-742.27	-1,148.27	583,689.83	1,702,155.23	40° 5' 51.649 N	80° 33' 52.758 W
5,282.00	26.90	238.30	5,006.78	-764.97	-1,183.08	583,667.14	1,702,120.41	40° 5' 51.421 N	80° 33' 53.202 W
5,377.00	25.90	237.30	5,091.88	-787.47	-1,218.83	583,644.63	1,702,084.67	40° 5' 51.194 N	80° 33' 53.659 W
5,471.00	27.00	240.10	5,176.04	-809.20	-1,254.61	583,622.90	1,702,048.89	40° 5' 50.976 N	80° 33' 54.116 W
5,566.00	25.80	238.60	5,261.13	-830.72	-1,290.95	583,601.38	1,702,012.55	40° 5' 50.759 N	80° 33' 54.580 W
5,661.00	26.90	237.10	5,346.26	-853.17	-1,326.64	583,578.94	1,701,976.86	40° 5' 50.533 N	80° 33' 55.036 W
5,756.00	26.70	243.10	5,431.07	-874.50	-1,363.72	583,557.60	1,701,939.77	40° 5' 50.317 N	80° 33' 55.510 W
5,850.00	25.00	242.20	5,515.66	-893.32	-1,400.13	583,538.78	1,701,903.37	40° 5' 50.127 N	80° 33' 55.975 W
5,945.00	26.40	239.80	5,601.26	-913.31	-1,436.14	583,518.80	1,701,867.35	40° 5' 49.925 N	80° 33' 56.436 W
6,039.00	25.10	236.80	5,685.93	-934.74	-1,470.89	583,497.37	1,701,832.61	40° 5' 49.710 N	80° 33' 56.879 W
6,119.00	25.60	236.90	5,758.23	-953.47	-1,499.57	583,478.64	1,701,803.93	40° 5' 49.521 N	80° 33' 57.246 W

<b>Company:</b>	Chesapeake	<b>Local Co-ordinate Reference:</b>	Well 201H
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<b>Site:</b>	Alice Edge OHI	<b>MD Reference:</b>	GL 1198+RKB 20 @ 1218.00usft (Nomac 74)
<b>Well:</b>	201H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	EDM LEWIS

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
6,144.00	26.50	238.00	5,780.69	-959.37	-1,508.82	583,472.73	1,701,794.68	40° 5' 49.462 N	80° 33' 57.364 W
6,175.00	26.50	240.20	5,808.43	-966.47	-1,520.69	583,465.63	1,701,782.81	40° 5' 49.390 N	80° 33' 57.515 W
6,207.00	26.60	247.70	5,837.07	-972.74	-1,533.52	583,459.36	1,701,769.98	40° 5' 49.327 N	80° 33' 57.679 W
6,238.00	27.80	257.00	5,864.65	-977.00	-1,546.99	583,455.10	1,701,756.51	40° 5' 49.283 N	80° 33' 57.852 W
6,270.00	28.90	265.90	5,892.82	-979.24	-1,561.98	583,452.87	1,701,741.52	40° 5' 49.259 N	80° 33' 58.045 W
6,301.00	30.10	275.40	5,919.82	-979.04	-1,577.20	583,453.06	1,701,726.30	40° 5' 49.259 N	80° 33' 58.241 W
6,333.00	30.20	277.50	5,947.49	-977.24	-1,593.17	583,454.87	1,701,710.33	40° 5' 49.275 N	80° 33' 58.446 W
6,364.00	28.70	275.40	5,974.49	-975.52	-1,608.31	583,456.59	1,701,695.19	40° 5' 49.291 N	80° 33' 58.641 W
6,396.00	28.10	274.90	6,002.63	-974.15	-1,623.47	583,457.95	1,701,680.03	40° 5' 49.302 N	80° 33' 58.837 W
6,427.00	27.20	276.70	6,030.09	-972.70	-1,637.78	583,459.40	1,701,665.72	40° 5' 49.315 N	80° 33' 59.021 W
6,459.00	27.10	284.10	6,058.58	-970.07	-1,652.12	583,462.03	1,701,651.38	40° 5' 49.339 N	80° 33' 59.206 W
6,490.00	29.00	292.50	6,085.94	-965.47	-1,665.91	583,466.63	1,701,637.59	40° 5' 49.383 N	80° 33' 59.384 W
6,522.00	32.00	299.00	6,113.52	-958.39	-1,680.50	583,473.71	1,701,623.00	40° 5' 49.451 N	80° 33' 59.573 W
6,553.00	35.70	304.10	6,139.27	-949.33	-1,695.18	583,482.77	1,701,608.31	40° 5' 49.539 N	80° 33' 59.763 W
6,585.00	39.40	306.70	6,164.63	-938.02	-1,711.06	583,494.08	1,701,592.43	40° 5' 49.649 N	80° 33' 59.969 W
6,617.00	42.70	309.40	6,188.77	-925.06	-1,727.60	583,507.04	1,701,575.90	40° 5' 49.775 N	80° 34' 0.184 W
6,648.00	44.70	311.40	6,211.18	-911.18	-1,743.90	583,520.92	1,701,559.60	40° 5' 49.910 N	80° 34' 0.396 W
6,680.00	47.10	313.50	6,233.45	-895.66	-1,760.85	583,536.44	1,701,542.65	40° 5' 50.062 N	80° 34' 0.616 W
6,711.00	49.50	315.80	6,254.07	-879.40	-1,777.30	583,552.71	1,701,526.19	40° 5' 50.221 N	80° 34' 0.830 W
6,743.00	53.00	318.50	6,274.10	-861.09	-1,794.26	583,571.01	1,701,509.24	40° 5' 50.399 N	80° 34' 1.051 W
6,774.00	56.40	321.10	6,292.01	-841.77	-1,810.58	583,590.33	1,701,492.92	40° 5' 50.588 N	80° 34' 1.264 W
6,806.00	58.90	323.20	6,309.13	-820.42	-1,827.16	583,611.68	1,701,476.34	40° 5' 50.797 N	80° 34' 1.481 W
6,838.00	61.40	325.30	6,325.06	-797.90	-1,843.36	583,634.21	1,701,460.13	40° 5' 51.018 N	80° 34' 1.693 W
6,869.00	64.10	326.70	6,339.25	-775.05	-1,858.77	583,657.05	1,701,444.73	40° 5' 51.242 N	80° 34' 1.895 W
6,901.00	66.90	328.90	6,352.52	-750.41	-1,874.28	583,681.69	1,701,429.22	40° 5' 51.484 N	80° 34' 2.098 W
6,932.00	69.30	330.50	6,364.09	-725.58	-1,888.79	583,706.53	1,701,414.71	40° 5' 51.727 N	80° 34' 2.288 W
6,964.00	72.30	332.30	6,374.61	-699.05	-1,903.25	583,733.06	1,701,400.25	40° 5' 51.988 N	80° 34' 2.479 W
6,995.00	75.10	333.40	6,383.31	-672.57	-1,916.82	583,759.53	1,701,386.68	40° 5' 52.248 N	80° 34' 2.657 W
7,027.00	78.40	334.10	6,390.64	-644.64	-1,930.59	583,787.46	1,701,372.90	40° 5' 52.522 N	80° 34' 2.839 W
7,058.00	80.40	335.00	6,396.35	-617.13	-1,943.69	583,814.97	1,701,359.81	40° 5' 52.793 N	80° 34' 3.011 W
7,090.00	82.70	336.90	6,401.05	-588.23	-1,956.58	583,843.88	1,701,346.92	40° 5' 53.077 N	80° 34' 3.182 W
7,121.00	85.30	338.70	6,404.29	-559.69	-1,968.23	583,872.42	1,701,335.27	40° 5' 53.357 N	80° 34' 3.336 W
7,185.00	90.70	340.30	6,406.52	-499.80	-1,990.62	583,932.30	1,701,312.88	40° 5' 53.947 N	80° 34' 3.633 W
7,279.00	90.00	339.40	6,405.95	-411.55	-2,023.00	584,020.55	1,701,280.50	40° 5' 54.815 N	80° 34' 4.063 W
7,374.00	91.30	339.70	6,404.87	-322.55	-2,056.19	584,109.55	1,701,247.31	40° 5' 55.690 N	80° 34' 4.504 W
7,469.00	89.20	334.20	6,404.45	-235.17	-2,093.37	584,196.93	1,701,210.13	40° 5' 56.550 N	80° 34' 4.996 W
7,563.00	92.50	337.80	6,403.06	-149.34	-2,131.59	584,282.77	1,701,171.91	40° 5' 57.393 N	80° 34' 5.501 W
7,658.00	93.10	339.80	6,398.42	-60.88	-2,165.90	584,371.23	1,701,137.60	40° 5' 58.263 N	80° 34' 5.956 W
7,752.00	92.20	341.70	6,394.07	27.77	-2,196.85	584,459.87	1,701,106.65	40° 5' 59.136 N	80° 34' 6.368 W
7,847.00	92.30	342.80	6,390.34	118.17	-2,225.79	584,550.28	1,701,077.71	40° 6' 0.026 N	80° 34' 6.754 W
7,941.00	91.70	342.50	6,387.06	207.84	-2,253.81	584,639.95	1,701,049.69	40° 6' 0.909 N	80° 34' 7.128 W
8,036.00	91.10	340.70	6,384.74	297.95	-2,283.78	584,730.06	1,701,019.72	40° 6' 1.796 N	80° 34' 7.528 W
8,131.00	90.70	341.50	6,383.25	387.82	-2,314.55	584,819.92	1,700,988.95	40° 6' 2.680 N	80° 34' 7.937 W
8,226.00	90.70	342.30	6,382.09	478.11	-2,344.06	584,910.22	1,700,959.44	40° 6' 3.569 N	80° 34' 8.331 W
8,321.00	90.30	342.80	6,381.26	568.74	-2,372.55	585,000.84	1,700,930.95	40° 6' 4.461 N	80° 34' 8.711 W
8,415.00	89.70	342.80	6,381.26	658.53	-2,400.35	585,090.64	1,700,903.15	40° 6' 5.345 N	80° 34' 9.083 W
8,510.00	89.50	343.10	6,381.92	749.35	-2,428.20	585,181.46	1,700,875.30	40° 6' 6.239 N	80° 34' 9.455 W
8,605.00	88.50	342.60	6,383.58	840.12	-2,456.21	585,272.22	1,700,847.29	40° 6' 7.133 N	80° 34' 9.829 W
8,699.00	91.00	342.20	6,383.99	929.71	-2,484.63	585,361.81	1,700,818.87	40° 6' 8.015 N	80° 34' 10.209 W
8,794.00	91.90	342.70	6,381.59	1,020.25	-2,513.26	585,452.36	1,700,790.23	40° 6' 8.906 N	80° 34' 10.591 W
8,888.00	91.00	341.50	6,379.21	1,109.67	-2,542.15	585,541.78	1,700,761.35	40° 6' 9.786 N	80° 34' 10.976 W
8,983.00	91.00	342.20	6,377.55	1,199.93	-2,571.73	585,632.04	1,700,731.76	40° 6' 10.675 N	80° 34' 11.371 W
9,078.00	90.60	341.90	6,376.22	1,290.30	-2,601.01	585,722.40	1,700,702.49	40° 6' 11.564 N	80° 34' 11.762 W
9,172.00	90.00	342.00	6,375.73	1,379.67	-2,630.13	585,811.77	1,700,673.36	40° 6' 12.444 N	80° 34' 12.150 W
9,267.00	91.80	341.40	6,374.24	1,469.85	-2,659.96	585,901.95	1,700,643.54	40° 6' 13.332 N	80° 34' 12.548 W

<b>Company:</b>	Chesapeake	<b>Local Co-ordinate Reference:</b>	Well 201H
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<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	EDM LEWIS

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
9,362.00	91.30	340.60	6,371.67	1,559.64	-2,690.88	585,991.75	1,700,612.62	40° 6' 14.215 N	80° 34' 12.959 W
9,456.00	90.50	341.10	6,370.19	1,648.43	-2,721.71	586,080.53	1,700,581.79	40° 6' 15.089 N	80° 34' 13.370 W
9,550.00	89.60	340.40	6,370.11	1,737.17	-2,752.70	586,169.27	1,700,550.80	40° 6' 15.962 N	80° 34' 13.782 W
9,645.00	92.10	340.50	6,368.70	1,826.68	-2,784.48	586,258.78	1,700,519.02	40° 6' 16.843 N	80° 34' 14.205 W
9,740.00	92.00	339.90	6,365.30	1,916.00	-2,816.64	586,348.11	1,700,486.86	40° 6' 17.722 N	80° 34' 14.632 W
9,834.00	91.20	339.00	6,362.68	2,003.99	-2,849.62	586,436.09	1,700,453.87	40° 6' 18.588 N	80° 34' 15.070 W
9,929.00	91.30	340.30	6,360.61	2,093.03	-2,882.65	586,525.14	1,700,420.85	40° 6' 19.464 N	80° 34' 15.509 W
10,024.00	90.30	338.90	6,359.28	2,182.06	-2,915.76	586,614.17	1,700,387.74	40° 6' 20.340 N	80° 34' 15.949 W
10,118.00	90.20	339.50	6,358.87	2,269.94	-2,949.14	586,702.04	1,700,354.36	40° 6' 21.204 N	80° 34' 16.392 W
10,213.00	89.70	339.50	6,358.95	2,358.92	-2,982.41	586,791.02	1,700,321.09	40° 6' 22.079 N	80° 34' 16.834 W
10,308.00	89.10	338.90	6,359.95	2,447.72	-3,016.14	586,879.83	1,700,287.35	40° 6' 22.953 N	80° 34' 17.281 W
10,403.00	91.50	339.80	6,359.45	2,536.61	-3,049.64	586,968.71	1,700,253.85	40° 6' 23.827 N	80° 34' 17.726 W
10,498.00	91.50	339.80	6,356.96	2,625.74	-3,082.44	587,057.84	1,700,221.06	40° 6' 24.704 N	80° 34' 18.162 W
10,592.00	90.80	340.00	6,355.08	2,713.99	-3,114.73	587,146.10	1,700,188.76	40° 6' 25.573 N	80° 34' 18.591 W
10,687.00	90.50	340.50	6,354.00	2,803.40	-3,146.83	587,235.50	1,700,156.66	40° 6' 26.452 N	80° 34' 19.018 W
10,782.00	89.70	339.00	6,353.83	2,892.52	-3,179.71	587,324.63	1,700,123.79	40° 6' 27.329 N	80° 34' 19.455 W
10,877.00	91.70	341.00	6,352.67	2,981.78	-3,212.20	587,413.88	1,700,091.30	40° 6' 28.207 N	80° 34' 19.886 W
10,971.00	91.90	341.40	6,349.72	3,070.72	-3,242.48	587,502.82	1,700,061.02	40° 6' 29.083 N	80° 34' 20.290 W
11,066.00	90.90	340.10	6,347.40	3,160.38	-3,273.79	587,592.48	1,700,029.71	40° 6' 29.965 N	80° 34' 20.706 W
11,161.00	90.40	340.40	6,346.32	3,249.78	-3,305.89	587,681.89	1,699,997.61	40° 6' 30.845 N	80° 34' 21.133 W
11,256.00	89.60	340.60	6,346.32	3,339.33	-3,337.60	587,771.44	1,699,965.90	40° 6' 31.726 N	80° 34' 21.555 W
11,350.00	90.90	341.70	6,345.91	3,428.29	-3,367.97	587,860.39	1,699,935.53	40° 6' 32.601 N	80° 34' 21.959 W
11,445.00	91.40	342.00	6,344.00	3,518.54	-3,397.56	587,950.65	1,699,905.94	40° 6' 33.490 N	80° 34' 22.354 W
11,539.00	90.50	342.40	6,342.45	3,608.03	-3,426.29	588,040.13	1,699,877.21	40° 6' 34.371 N	80° 34' 22.738 W
11,633.00	90.00	342.80	6,342.04	3,697.73	-3,454.40	588,129.83	1,699,849.10	40° 6' 35.254 N	80° 34' 23.113 W
11,728.00	89.30	342.70	6,342.62	3,788.45	-3,482.57	588,220.55	1,699,820.93	40° 6' 36.147 N	80° 34' 23.490 W
11,823.00	91.40	342.80	6,342.04	3,879.17	-3,510.74	588,311.27	1,699,792.76	40° 6' 37.040 N	80° 34' 23.866 W
11,917.00	91.60	341.30	6,339.57	3,968.56	-3,539.69	588,400.67	1,699,763.80	40° 6' 37.920 N	80° 34' 24.253 W
12,012.00	91.10	342.30	6,337.34	4,058.78	-3,569.36	588,490.89	1,699,734.14	40° 6' 38.808 N	80° 34' 24.648 W
12,106.00	90.10	341.60	6,336.35	4,148.15	-3,598.48	588,580.25	1,699,705.02	40° 6' 39.688 N	80° 34' 25.037 W
12,201.00	89.50	341.80	6,336.68	4,238.35	-3,628.31	588,670.45	1,699,675.19	40° 6' 40.575 N	80° 34' 25.434 W
12,296.00	91.60	341.70	6,335.77	4,328.56	-3,658.06	588,760.66	1,699,645.44	40° 6' 41.463 N	80° 34' 25.831 W
12,390.00	92.00	340.00	6,332.82	4,417.31	-3,688.88	588,849.41	1,699,614.62	40° 6' 42.337 N	80° 34' 26.241 W
12,485.00	91.80	340.60	6,329.67	4,506.70	-3,720.88	588,938.80	1,699,582.61	40° 6' 43.216 N	80° 34' 26.667 W
12,580.00	91.20	341.40	6,327.18	4,596.49	-3,751.80	589,028.59	1,699,551.70	40° 6' 44.100 N	80° 34' 27.079 W
12,675.00	90.10	340.00	6,326.10	4,686.14	-3,783.20	589,118.25	1,699,520.30	40° 6' 44.982 N	80° 34' 27.497 W
12,769.00	89.80	341.00	6,326.19	4,774.75	-3,814.57	589,206.85	1,699,488.92	40° 6' 45.854 N	80° 34' 27.914 W
12,864.00	89.20	340.90	6,327.02	4,864.54	-3,845.58	589,296.65	1,699,457.92	40° 6' 46.738 N	80° 34' 28.327 W
12,958.00	90.90	341.90	6,326.93	4,953.63	-3,875.56	589,385.73	1,699,427.94	40° 6' 47.615 N	80° 34' 28.727 W
13,053.00	90.70	343.20	6,325.61	5,044.25	-3,904.05	589,476.35	1,699,399.45	40° 6' 48.507 N	80° 34' 29.107 W
13,148.00	89.70	342.80	6,325.28	5,135.09	-3,931.82	589,567.20	1,699,371.68	40° 6' 49.401 N	80° 34' 29.479 W
13,243.00	91.90	344.60	6,323.95	5,226.26	-3,958.48	589,658.36	1,699,345.02	40° 6' 50.299 N	80° 34' 29.836 W
13,337.00	92.20	345.20	6,320.59	5,316.95	-3,982.95	589,749.06	1,699,320.55	40° 6' 51.192 N	80° 34' 30.165 W
13,432.00	91.40	345.50	6,317.60	5,408.82	-4,006.97	589,840.92	1,699,296.53	40° 6' 52.097 N	80° 34' 30.488 W
13,527.00	91.10	346.40	6,315.53	5,500.95	-4,030.02	589,933.06	1,699,273.48	40° 6' 53.005 N	80° 34' 30.799 W
13,622.00	92.40	343.30	6,312.63	5,592.59	-4,054.83	590,024.70	1,699,248.66	40° 6' 53.908 N	80° 34' 31.132 W
13,716.00	92.20	341.30	6,308.86	5,682.07	-4,083.39	590,114.17	1,699,220.11	40° 6' 54.788 N	80° 34' 31.514 W
13,811.00	91.40	340.50	6,305.87	5,771.79	-4,114.46	590,203.90	1,699,189.04	40° 6' 55.671 N	80° 34' 31.927 W
13,906.00	90.60	340.10	6,304.21	5,861.22	-4,146.48	590,293.32	1,699,157.02	40° 6' 56.551 N	80° 34' 32.353 W
14,001.00	89.60	339.60	6,304.05	5,950.40	-4,179.20	590,382.50	1,699,124.30	40° 6' 57.429 N	80° 34' 32.788 W
14,095.00	88.70	339.20	6,305.44	6,038.38	-4,212.27	590,470.48	1,699,091.23	40° 6' 58.294 N	80° 34' 33.227 W
14,190.00	89.70	341.40	6,306.77	6,127.80	-4,244.29	590,559.91	1,699,059.21	40° 6' 59.174 N	80° 34' 33.653 W
14,284.00	92.00	343.10	6,305.37	6,217.31	-4,272.94	590,649.41	1,699,030.56	40° 7' 0.055 N	80° 34' 34.036 W
14,379.00	91.90	343.60	6,302.14	6,308.27	-4,300.15	590,740.38	1,699,003.35	40° 7' 0.951 N	80° 34' 34.400 W
14,474.00	91.10	343.50	6,299.65	6,399.35	-4,327.04	590,831.46	1,698,976.46	40° 7' 1.848 N	80° 34' 34.760 W

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 Office of Oil and Gas



**SDI**  
Survey Report - Geographic

<b>Company:</b> Chesapeake	<b>Local Co-ordinate Reference:</b> Well 201H
<b>Project:</b> Ohio Co, WV	<b>TVD Reference:</b> GL 1198+RKB 20 @ 1218.00usft (Nomac 74)
<b>Site:</b> Alice Edge OHI	<b>MD Reference:</b> GL 1198+RKB 20 @ 1218.00usft (Nomac 74)
<b>Well:</b> 201H	<b>North Reference:</b> Grid
<b>Wellbore:</b> OH	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> OH	<b>Database:</b> EDM LEWIS

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
14,568.00	91.30	345.20	6,297.69	6,489.85	-4,352.39	590,921.95	1,698,951.11	40° 7' 2.739 N	80° 34' 35.100 W
14,663.00	90.80	345.00	6,295.95	6,581.64	-4,376.81	591,013.74	1,698,926.69	40° 7' 3.643 N	80° 34' 35.429 W
14,758.00	90.00	344.30	6,295.28	6,673.24	-4,401.96	591,105.35	1,698,901.54	40° 7' 4.545 N	80° 34' 35.767 W
14,853.00	89.00	343.70	6,296.11	6,764.56	-4,428.14	591,196.66	1,698,875.35	40° 7' 5.445 N	80° 34' 36.118 W
14,948.00	90.40	342.90	6,296.61	6,855.55	-4,455.44	591,287.65	1,698,848.06	40° 7' 6.340 N	80° 34' 36.483 W
15,042.00	92.20	344.40	6,294.48	6,945.72	-4,481.89	591,377.82	1,698,821.60	40° 7' 7.228 N	80° 34' 36.837 W
15,137.00	91.50	344.20	6,291.41	7,037.12	-4,507.59	591,469.23	1,698,795.91	40° 7' 8.129 N	80° 34' 37.182 W
15,232.00	90.70	344.20	6,289.59	7,128.52	-4,533.45	591,560.62	1,698,770.05	40° 7' 9.029 N	80° 34' 37.529 W
15,327.00	92.70	344.30	6,286.77	7,219.91	-4,559.22	591,652.01	1,698,744.27	40° 7' 9.929 N	80° 34' 37.875 W
15,422.00	93.30	342.80	6,281.79	7,310.89	-4,586.09	591,742.99	1,698,717.41	40° 7' 10.825 N	80° 34' 38.235 W
15,517.00	93.00	342.70	6,276.57	7,401.48	-4,614.22	591,833.58	1,698,689.28	40° 7' 11.716 N	80° 34' 38.611 W
15,611.00	92.50	342.70	6,272.06	7,491.12	-4,642.14	591,923.23	1,698,661.36	40° 7' 12.599 N	80° 34' 38.984 W
15,706.00	92.00	342.80	6,268.34	7,581.78	-4,670.29	592,013.88	1,698,633.21	40° 7' 13.491 N	80° 34' 39.360 W
15,800.00	91.10	342.50	6,265.79	7,671.47	-4,698.31	592,103.57	1,698,605.19	40° 7' 14.374 N	80° 34' 39.735 W
15,895.00	90.60	342.70	6,264.38	7,762.11	-4,726.71	592,194.21	1,698,576.78	40° 7' 15.267 N	80° 34' 40.115 W
15,990.00	89.60	342.90	6,264.22	7,852.86	-4,754.81	592,284.96	1,698,548.69	40° 7' 16.160 N	80° 34' 40.490 W
16,085.00	89.10	343.90	6,265.30	7,943.89	-4,781.94	592,376.00	1,698,521.55	40° 7' 17.057 N	80° 34' 40.854 W
16,179.00	88.40	343.80	6,267.35	8,034.16	-4,808.08	592,466.27	1,698,495.41	40° 7' 17.945 N	80° 34' 41.204 W
16,274.00	87.80	343.20	6,270.50	8,125.20	-4,835.05	592,557.30	1,698,468.45	40° 7' 18.842 N	80° 34' 41.565 W
16,368.00	90.00	341.50	6,272.30	8,214.75	-4,863.54	592,646.85	1,698,439.95	40° 7' 19.723 N	80° 34' 41.946 W
16,463.00	90.70	345.20	6,271.72	8,305.75	-4,890.76	592,737.85	1,698,412.74	40° 7' 20.619 N	80° 34' 42.310 W
16,557.00	89.90	347.90	6,271.23	8,397.16	-4,912.62	592,829.26	1,698,390.88	40° 7' 21.520 N	80° 34' 42.606 W
16,652.00	91.60	351.60	6,269.98	8,490.62	-4,929.52	592,922.72	1,698,373.98	40° 7' 22.442 N	80° 34' 42.838 W
16,747.00	93.20	353.70	6,266.00	8,584.74	-4,941.66	593,016.85	1,698,361.84	40° 7' 23.370 N	80° 34' 43.008 W
16,841.00	91.90	352.40	6,261.82	8,677.96	-4,953.03	593,110.06	1,698,350.47	40° 7' 24.290 N	80° 34' 43.169 W
16,936.00	91.90	353.40	6,258.67	8,772.18	-4,964.76	593,204.28	1,698,338.74	40° 7' 25.220 N	80° 34' 43.335 W
17,030.00	90.00	349.30	6,257.11	8,865.07	-4,978.89	593,297.17	1,698,324.60	40° 7' 26.136 N	80° 34' 43.531 W
17,123.00	91.40	352.40	6,255.98	8,956.87	-4,993.68	593,388.97	1,698,309.82	40° 7' 27.041 N	80° 34' 43.736 W
17,217.00	91.40	352.80	6,253.68	9,050.05	-5,005.78	593,482.16	1,698,297.71	40° 7' 27.961 N	80° 34' 43.906 W
17,311.00	91.30	352.30	6,251.47	9,143.23	-5,017.97	593,575.34	1,698,285.53	40° 7' 28.880 N	80° 34' 44.077 W
17,403.00	92.10	351.50	6,248.74	9,234.28	-5,030.92	593,666.38	1,698,272.57	40° 7' 29.778 N	80° 34' 44.258 W
17,496.00	94.30	352.30	6,243.55	9,326.20	-5,044.01	593,758.30	1,698,259.49	40° 7' 30.685 N	80° 34' 44.440 W
17,587.00	94.20	351.80	6,236.80	9,416.07	-5,056.56	593,848.18	1,698,246.94	40° 7' 31.572 N	80° 34' 44.616 W
17,680.00	94.30	352.90	6,229.91	9,507.99	-5,068.91	593,940.10	1,698,234.59	40° 7' 32.479 N	80° 34' 44.789 W
17,771.00	94.20	352.30	6,223.17	9,597.99	-5,080.59	594,030.09	1,698,222.90	40° 7' 33.367 N	80° 34' 44.953 W
17,863.00	91.20	352.00	6,218.83	9,689.01	-5,093.14	594,121.11	1,698,210.35	40° 7' 34.265 N	80° 34' 45.129 W
17,957.00	89.60	352.50	6,218.18	9,782.15	-5,105.82	594,214.25	1,698,197.68	40° 7' 35.183 N	80° 34' 45.307 W
18,052.00	89.30	352.60	6,219.09	9,876.34	-5,118.14	594,308.44	1,698,185.36	40° 7' 36.113 N	80° 34' 45.480 W
18,147.00	88.20	351.70	6,221.16	9,970.43	-5,131.11	594,402.53	1,698,172.39	40° 7' 37.041 N	80° 34' 45.661 W
18,241.00	89.60	354.10	6,222.96	10,063.68	-5,142.72	594,495.78	1,698,160.78	40° 7' 37.961 N	80° 34' 45.825 W
18,336.00	90.20	354.80	6,223.13	10,158.23	-5,151.91	594,590.34	1,698,151.59	40° 7' 38.894 N	80° 34' 45.958 W
18,431.00	91.50	355.80	6,221.72	10,252.90	-5,159.69	594,685.00	1,698,143.80	40° 7' 39.829 N	80° 34' 46.073 W
18,526.00	90.60	355.20	6,219.98	10,347.59	-5,167.15	594,779.69	1,698,136.35	40° 7' 40.764 N	80° 34' 46.183 W
18,621.00	91.60	355.10	6,218.16	10,442.23	-5,175.18	594,874.33	1,698,128.32	40° 7' 41.698 N	80° 34' 46.302 W
18,689.00	90.20	353.50	6,217.09	10,509.88	-5,181.93	594,941.99	1,698,121.57	40° 7' 42.366 N	80° 34' 46.399 W
18,756.00	90.20	353.50	6,216.85	10,576.45	-5,189.51	595,008.55	1,698,113.98	40° 7' 43.023 N	80° 34' 46.507 W

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
18,756.00	6,216.85	10,576.45	-5,189.51	PTD

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