



# Jay-Bee Oil & Gas

Tyler County

Moe Pad

Moe 2

Wellbore #1

Plan: Design #3 (Tie-in)

## QES Well Planning Report

16 September, 2018

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WV Department of  
Environmental Protection





Well Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well Moe 2
<b>Company:</b>	Jay-Bee Oil & Gas	<b>TVD Reference:</b>	well @ 982.6usft (Patterson #581)
<b>Project:</b>	Tyler County	<b>MD Reference:</b>	well @ 982.6usft (Patterson #581)
<b>Site:</b>	Moe Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	Moe 2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #3 (Tie-in)		

<b>Project</b>	Tyler County		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	West Virginia Northern Zone		

<b>Site</b>	Moe Pad				
<b>Site Position:</b>		<b>Northing:</b>	355,617.63 usft	<b>Latitude:</b>	39° 28' 4.999 N
<b>From:</b>	Map	<b>Easting:</b>	1,576,794.07 usft	<b>Longitude:</b>	80° 53' 15.224 W
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	-0.88 °

<b>Well</b>	Moe 2					
<b>Well Position</b>	<b>+N/-S</b>	8.2 usft	<b>Northing:</b>	355,625.80 usft	<b>Latitude:</b>	39° 28' 5.086 N
	<b>+E/-W</b>	39.2 usft	<b>Easting:</b>	1,576,833.23 usft	<b>Longitude:</b>	80° 53' 14.726 W
<b>Position Uncertainty</b>		0.0 usft	<b>Wellhead Elevation:</b>	0.0 usft	<b>Ground Level:</b>	962.0 usft

<b>Wellbore</b>	Wellbore #1				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	6/5/2018	-8.53	66.65	51,922.05117827

<b>Design</b>	Design #3 (Tie-in)				
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<b>Audit Notes:</b>					
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	387.0	
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	163.19	

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Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
387.0	1.46	357.64	386.9	1.3	-6.1	0.00	0.00	0.00	0.00	
475.5	5.00	0.00	475.3	6.3	-6.1	4.00	4.00	2.67	3.33	
819.5	5.00	0.00	818.0	36.2	-6.1	0.00	0.00	0.00	0.00	
1,004.6	5.00	316.50	1,002.4	50.2	-11.7	2.00	0.00	-23.50	-111.67	
5,793.0	5.00	316.50	5,772.6	352.9	-299.0	0.00	0.00	0.00	0.00	
5,939.5	10.00	163.00	5,918.4	345.3	-299.6	10.00	3.41	-104.82	-162.15	
6,539.5	70.00	163.00	6,357.4	-6.9	-192.0	10.00	10.00	0.00	0.00	
6,739.8	90.00	161.80	6,392.0	-194.0	-132.5	10.00	9.98	-0.60	-3.51	
14,281.6	90.00	161.80	6,392.0	-7,358.3	2,223.4	0.00	0.00	0.00	0.00	PBHL - Moe 2

WV Department of Environmental Protection



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 Site: Moe Pad  
 Well: Moe 2  
 Wellbore: Wellbore #1  
 Design: Design #3 (Tie-in)

Local Co-ordinate Reference:  
 TVD Reference:  
 MD Reference:  
 North Reference:  
 Survey Calculation Method:

Well Moe 2  
 well @ 982.6usft (Patterson #581)  
 well @ 982.6usft (Patterson #581)  
 Grid  
 Minimum Curvature

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Planned 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)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
40.0	0.21	189.34	40.0	-0.1	0.0	0.1	0.53	0.53	0.00	
60.0	0.19	215.21	60.0	-0.1	0.0	0.1	0.46	-0.10	129.35	
80.0	0.47	232.89	80.0	-0.2	-0.1	0.2	1.47	1.40	88.40	
100.0	0.88	225.59	100.0	-0.4	-0.3	0.3	2.09	2.05	-36.50	
120.0	1.01	229.99	120.0	-0.6	-0.5	0.4	0.74	0.65	22.00	
140.0	1.40	241.22	140.0	-0.8	-0.9	0.5	2.27	1.95	56.15	
160.0	1.72	239.69	160.0	-1.1	-1.4	0.6	1.61	1.60	-7.65	
180.0	1.79	244.17	180.0	-1.4	-1.9	0.8	0.77	0.35	22.40	
200.0	1.93	257.62	200.0	-1.6	-2.5	0.8	2.29	0.70	67.25	
220.0	1.91	270.60	220.0	-1.7	-3.2	0.7	2.17	-0.10	64.90	
240.0	1.91	281.30	239.9	-1.6	-3.8	0.4	1.78	0.00	53.50	
260.0	1.97	288.38	259.9	-1.4	-4.5	0.1	1.23	0.30	35.40	
280.0	1.82	296.37	279.9	-1.2	-5.1	-0.4	1.52	-0.75	39.95	
300.0	1.62	316.09	299.9	-0.8	-5.6	-0.8	3.11	-1.00	98.60	
320.0	1.40	336.76	319.9	-0.4	-5.9	-1.3	2.92	-1.10	103.35	
340.0	1.43	348.65	339.9	0.1	-6.0	-1.8	1.47	0.15	59.45	
343.0	1.46	357.64	342.9	0.2	-6.0	-1.9	7.61	1.00	299.67	
<b>Gyro Tie-in / Build 4° / 100'</b>										
387.0	1.46	357.64	386.9	1.3	-6.1	-3.0	0.00	0.00	0.00	
400.0	1.98	358.51	399.9	1.7	-6.1	-3.4	4.00	4.00	6.73	
<b>EOB @ 5.00° Inc. / 360.00° Azm</b>										
475.5	5.00	0.00	475.3	6.3	-6.1	-7.8	4.00	4.00	1.97	
500.0	5.00	0.00	499.6	8.4	-6.1	-9.8	0.00	0.00	0.00	
600.0	5.00	0.00	599.3	17.1	-6.1	-18.1	0.00	0.00	0.00	
700.0	5.00	0.00	698.9	25.8	-6.1	-26.5	0.00	0.00	0.00	
800.0	5.00	0.00	798.5	34.5	-6.1	-34.8	0.00	0.00	0.00	
<b>Build 2° / 100'</b>										
819.5	5.00	0.00	818.0	36.2	-6.1	-36.5	0.00	0.00	0.00	
900.0	4.65	341.23	898.1	42.8	-7.2	-43.1	2.00	-0.43	-23.33	
<b>EOB @ 5.00° Inc. / 316.50° Azm</b>										
1,004.6	5.00	316.50	1,002.4	50.2	-11.7	-51.4	2.00	0.33	-23.64	
1,100.0	5.00	316.50	1,097.4	56.2	-17.4	-58.8	0.00	0.00	0.00	
1,200.0	5.00	316.50	1,197.0	62.5	-23.4	-66.6	0.00	0.00	0.00	
1,300.0	5.00	316.50	1,296.7	68.8	-29.4	-74.4	0.00	0.00	0.00	
1,400.0	5.00	316.50	1,396.3	75.2	-35.4	-82.2	0.00	0.00	0.00	
1,500.0	5.00	316.50	1,495.9	81.5	-41.4	-90.0	0.00	0.00	0.00	
1,600.0	5.00	316.50	1,595.5	87.8	-47.4	-97.8	0.00	0.00	0.00	
1,700.0	5.00	316.50	1,695.1	94.1	-53.4	-105.5	0.00	0.00	0.00	
1,800.0	5.00	316.50	1,794.8	100.4	-59.4	-113.3	0.00	0.00	0.00	
1,900.0	5.00	316.50	1,894.4	106.8	-65.4	-121.1	0.00	0.00	0.00	
2,000.0	5.00	316.50	1,994.0	113.1	-71.4	-128.9	0.00	0.00	0.00	
2,100.0	5.00	316.50	2,093.6	119.4	-77.4	-136.7	0.00	0.00	0.00	
2,200.0	5.00	316.50	2,193.2	125.7	-83.4	-144.5	0.00	0.00	0.00	
2,300.0	5.00	316.50	2,292.8	132.1	-89.4	-152.3	0.00	0.00	0.00	
2,400.0	5.00	316.50	2,392.5	138.4	-95.4	-160.1	0.00	0.00	0.00	
2,500.0	5.00	316.50	2,492.1	144.7	-101.4	-167.8	0.00	0.00	0.00	
2,600.0	5.00	316.50	2,591.7	151.0	-107.4	-175.6	0.00	0.00	0.00	
2,700.0	5.00	316.50	2,691.3	157.3	-113.4	-183.4	0.00	0.00	0.00	
2,800.0	5.00	316.50	2,790.9	163.7	-119.4	-191.2	0.00	0.00	0.00	
2,900.0	5.00	316.50	2,890.6	170.0	-125.4	-199.0	0.00	0.00	0.00	
3,000.0	5.00	316.50	2,990.2	176.3	-131.4	-206.8	0.00	0.00	0.00	
3,100.0	5.00	316.50	3,089.8	182.6	-137.4	-214.6	0.00	0.00	0.00	
3,200.0	5.00	316.50	3,189.4	189.0	-143.4	-222.4	0.00	0.00	0.00	



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3,300.0	5.00	316.50	3,289.0	195.3	-149.4	-230.1	0.00	0.00	0.00
3,400.0	5.00	316.50	3,388.7	201.6	-155.4	-237.9	0.00	0.00	0.00
3,500.0	5.00	316.50	3,488.3	207.9	-161.4	-245.7	0.00	0.00	0.00
3,600.0	5.00	316.50	3,587.9	214.2	-167.4	-253.5	0.00	0.00	0.00
3,700.0	5.00	316.50	3,687.5	220.6	-173.4	-261.3	0.00	0.00	0.00
3,800.0	5.00	316.50	3,787.1	226.9	-179.4	-269.1	0.00	0.00	0.00
3,900.0	5.00	316.50	3,886.8	233.2	-185.4	-276.9	0.00	0.00	0.00
4,000.0	5.00	316.50	3,986.4	239.5	-191.4	-284.6	0.00	0.00	0.00
4,100.0	5.00	316.50	4,086.0	245.9	-197.4	-292.4	0.00	0.00	0.00
4,200.0	5.00	316.50	4,185.6	252.2	-203.4	-300.2	0.00	0.00	0.00
4,300.0	5.00	316.50	4,285.2	258.5	-209.4	-308.0	0.00	0.00	0.00
4,400.0	5.00	316.50	4,384.9	264.8	-215.4	-315.8	0.00	0.00	0.00
4,500.0	5.00	316.50	4,484.5	271.1	-221.4	-323.6	0.00	0.00	0.00
4,600.0	5.00	316.50	4,584.1	277.5	-227.4	-331.4	0.00	0.00	0.00
4,700.0	5.00	316.50	4,683.7	283.8	-233.4	-339.2	0.00	0.00	0.00
4,800.0	5.00	316.50	4,783.3	290.1	-239.4	-346.9	0.00	0.00	0.00
4,900.0	5.00	316.50	4,883.0	296.4	-245.4	-354.7	0.00	0.00	0.00
5,000.0	5.00	316.50	4,982.6	302.8	-251.4	-362.5	0.00	0.00	0.00
5,100.0	5.00	316.50	5,082.2	309.1	-257.4	-370.3	0.00	0.00	0.00
5,200.0	5.00	316.50	5,181.8	315.4	-263.4	-378.1	0.00	0.00	0.00
5,300.0	5.00	316.50	5,281.4	321.7	-269.4	-385.9	0.00	0.00	0.00
5,400.0	5.00	316.50	5,381.1	328.0	-275.4	-393.7	0.00	0.00	0.00
5,500.0	5.00	316.50	5,480.7	334.4	-281.4	-401.5	0.00	0.00	0.00
5,600.0	5.00	316.50	5,580.3	340.7	-287.4	-409.2	0.00	0.00	0.00
5,700.0	5.00	316.50	5,679.9	347.0	-293.4	-417.0	0.00	0.00	0.00
<b>Build 10° / 100'</b>									
5,793.0	5.00	316.50	5,772.6	352.9	-299.0	-424.3	0.00	0.00	0.00
5,800.0	4.34	313.68	5,779.5	353.3	-299.4	-424.8	10.00	-9.44	-40.49
5,850.0	1.79	212.85	5,829.5	353.9	-301.1	-425.9	10.00	-5.10	-201.66
5,900.0	6.13	168.69	5,879.4	350.7	-301.0	-422.8	10.00	8.67	-88.32
<b>EOB @ 10.00° Inc. / 163.00° Azm / Build 10° / 100'</b>									
5,939.5	10.00	163.00	5,918.4	345.3	-299.6	-417.2	10.00	9.81	-14.42
5,950.0	11.05	163.00	5,928.8	343.5	-299.1	-415.3	10.00	10.00	0.00
6,000.0	16.05	163.00	5,977.4	332.3	-295.6	-403.6	10.00	10.00	0.00
6,050.0	21.05	163.00	6,024.8	317.1	-291.0	-387.7	10.00	10.00	0.00
6,100.0	26.05	163.00	6,070.6	298.0	-285.2	-367.7	10.00	10.00	0.00
6,150.0	31.05	163.00	6,114.5	275.1	-278.2	-343.8	10.00	10.00	0.00
6,200.0	36.05	163.00	6,156.1	248.7	-270.1	-316.2	10.00	10.00	0.00
6,250.0	41.05	163.00	6,195.2	218.9	-261.0	-285.0	10.00	10.00	0.00
6,300.0	46.05	163.00	6,231.5	186.0	-250.9	-250.6	10.00	10.00	0.00
6,350.0	51.05	163.00	6,264.5	150.2	-240.0	-213.1	10.00	10.00	0.00
6,400.0	56.05	163.00	6,294.2	111.7	-228.2	-172.9	10.00	10.00	0.00
6,450.0	61.05	163.00	6,320.3	70.9	-215.7	-130.3	10.00	10.00	0.00
6,500.0	66.05	163.00	6,342.6	28.1	-202.7	-85.5	10.00	10.00	0.00
<b>EOB @ 70.00° Inc. / Build 10° / 100'</b>									
6,539.5	70.00	163.00	6,357.4	-6.9	-192.0	-48.9	10.00	10.00	0.00
6,550.0	71.05	162.93	6,360.9	-16.4	-189.0	-39.0	10.00	9.98	-0.65
6,600.0	76.04	162.62	6,375.0	-62.1	-174.9	8.9	10.00	9.98	-0.63
6,650.0	81.03	162.32	6,385.0	-108.9	-160.1	57.9	10.00	9.98	-0.60
6,700.0	86.02	162.03	6,390.6	-156.1	-144.9	107.6	10.00	9.98	-0.58
<b>EOB @ 90.00° Inc. / 161.80° Azm</b>									
6,739.8	90.00	161.80	6,392.0	-194.0	-132.5	147.3	10.00	9.98	-0.58
6,800.0	90.00	161.80	6,392.0	-251.1	-113.7	207.5	0.00	0.00	0.00



Well Planning Report



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<b>Well:</b>	Moe 2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #3 (Tie-in)		

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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)
6,900.0	90.00	161.80	6,392.0	-346.1	-82.5	307.5	0.00	0.00	0.00
7,000.0	90.00	161.80	6,392.0	-441.1	-51.3	407.4	0.00	0.00	0.00
7,100.0	90.00	161.80	6,392.0	-536.1	-20.0	507.4	0.00	0.00	0.00
7,200.0	90.00	161.80	6,392.0	-631.1	11.2	607.4	0.00	0.00	0.00
7,300.0	90.00	161.80	6,392.0	-726.1	42.5	707.3	0.00	0.00	0.00
7,400.0	90.00	161.80	6,392.0	-821.1	73.7	807.3	0.00	0.00	0.00
7,500.0	90.00	161.80	6,392.0	-916.1	104.9	907.3	0.00	0.00	0.00
7,600.0	90.00	161.80	6,392.0	-1,011.1	136.2	1,007.3	0.00	0.00	0.00
7,700.0	90.00	161.80	6,392.0	-1,106.1	167.4	1,107.2	0.00	0.00	0.00
7,800.0	90.00	161.80	6,392.0	-1,201.1	198.7	1,207.2	0.00	0.00	0.00
7,900.0	90.00	161.80	6,392.0	-1,296.1	229.9	1,307.2	0.00	0.00	0.00
8,000.0	90.00	161.80	6,392.0	-1,391.1	261.1	1,407.1	0.00	0.00	0.00
8,100.0	90.00	161.80	6,392.0	-1,486.1	292.4	1,507.1	0.00	0.00	0.00
8,200.0	90.00	161.80	6,392.0	-1,581.1	323.6	1,607.1	0.00	0.00	0.00
8,300.0	90.00	161.80	6,392.0	-1,676.1	354.8	1,707.1	0.00	0.00	0.00
8,400.0	90.00	161.80	6,392.0	-1,771.1	386.1	1,807.0	0.00	0.00	0.00
8,500.0	90.00	161.80	6,392.0	-1,866.1	417.3	1,907.0	0.00	0.00	0.00
8,600.0	90.00	161.80	6,392.0	-1,961.0	448.6	2,007.0	0.00	0.00	0.00
8,700.0	90.00	161.80	6,392.0	-2,056.0	479.8	2,106.9	0.00	0.00	0.00
8,800.0	90.00	161.80	6,392.0	-2,151.0	511.0	2,206.9	0.00	0.00	0.00
8,900.0	90.00	161.80	6,392.0	-2,246.0	542.3	2,306.9	0.00	0.00	0.00
9,000.0	90.00	161.80	6,392.0	-2,341.0	573.5	2,406.8	0.00	0.00	0.00
9,100.0	90.00	161.80	6,392.0	-2,436.0	604.8	2,506.8	0.00	0.00	0.00
9,200.0	90.00	161.80	6,392.0	-2,531.0	636.0	2,606.8	0.00	0.00	0.00
9,300.0	90.00	161.80	6,392.0	-2,626.0	667.2	2,706.8	0.00	0.00	0.00
9,400.0	90.00	161.80	6,392.0	-2,721.0	698.5	2,806.7	0.00	0.00	0.00
9,500.0	90.00	161.80	6,392.0	-2,816.0	729.7	2,906.7	0.00	0.00	0.00
9,600.0	90.00	161.80	6,392.0	-2,911.0	760.9	3,006.7	0.00	0.00	0.00
9,700.0	90.00	161.80	6,392.0	-3,006.0	792.2	3,106.6	0.00	0.00	0.00
9,800.0	90.00	161.80	6,392.0	-3,101.0	823.4	3,206.6	0.00	0.00	0.00
9,900.0	90.00	161.80	6,392.0	-3,196.0	854.7	3,306.6	0.00	0.00	0.00
10,000.0	90.00	161.80	6,392.0	-3,291.0	885.9	3,406.6	0.00	0.00	0.00
10,100.0	90.00	161.80	6,392.0	-3,386.0	917.1	3,506.5	0.00	0.00	0.00
10,200.0	90.00	161.80	6,392.0	-3,481.0	948.4	3,606.5	0.00	0.00	0.00
10,300.0	90.00	161.80	6,392.0	-3,576.0	979.6	3,706.5	0.00	0.00	0.00
10,400.0	90.00	161.80	6,392.0	-3,671.0	1,010.9	3,806.4	0.00	0.00	0.00
10,500.0	90.00	161.80	6,392.0	-3,766.0	1,042.1	3,906.4	0.00	0.00	0.00
10,600.0	90.00	161.80	6,392.0	-3,861.0	1,073.3	4,006.4	0.00	0.00	0.00
10,700.0	90.00	161.80	6,392.0	-3,956.0	1,104.6	4,106.3	0.00	0.00	0.00
10,800.0	90.00	161.80	6,392.0	-4,051.0	1,135.8	4,206.3	0.00	0.00	0.00
10,900.0	90.00	161.80	6,392.0	-4,145.9	1,167.0	4,306.3	0.00	0.00	0.00
11,000.0	90.00	161.80	6,392.0	-4,240.9	1,198.3	4,406.3	0.00	0.00	0.00
11,100.0	90.00	161.80	6,392.0	-4,335.9	1,229.5	4,506.2	0.00	0.00	0.00
11,200.0	90.00	161.80	6,392.0	-4,430.9	1,260.8	4,606.2	0.00	0.00	0.00
11,300.0	90.00	161.80	6,392.0	-4,525.9	1,292.0	4,706.2	0.00	0.00	0.00
11,400.0	90.00	161.80	6,392.0	-4,620.9	1,323.2	4,806.1	0.00	0.00	0.00
11,500.0	90.00	161.80	6,392.0	-4,715.9	1,354.5	4,906.1	0.00	0.00	0.00
11,600.0	90.00	161.80	6,392.0	-4,810.9	1,385.7	5,006.1	0.00	0.00	0.00
11,700.0	90.00	161.80	6,392.0	-4,905.9	1,417.0	5,106.1	0.00	0.00	0.00
11,800.0	90.00	161.80	6,392.0	-5,000.9	1,448.2	5,206.0	0.00	0.00	0.00
11,900.0	90.00	161.80	6,392.0	-5,095.9	1,479.4	5,306.0	0.00	0.00	0.00
12,000.0	90.00	161.80	6,392.0	-5,190.9	1,510.7	5,406.0	0.00	0.00	0.00
12,100.0	90.00	161.80	6,392.0	-5,285.9	1,541.9	5,505.9	0.00	0.00	0.00
12,200.0	90.00	161.80	6,392.0	-5,380.9	1,573.1	5,605.9	0.00	0.00	0.00



Well Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well Moe 2
<b>Company:</b>	Jay-Bee Oil & Gas	<b>TVD Reference:</b>	well @ 982.6usft (Patterson #581)
<b>Project:</b>	Tyler County	<b>MD Reference:</b>	well @ 982.6usft (Patterson #581)
<b>Site:</b>	Moe Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	Moe 2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #3 (Tie-in)		

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 Tyler County Oil and Gas  
 JUN 12 2020  
 WV Department of  
 Environmental Protection

Planned 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)	
12,300.0	90.00	161.80	6,392.0	-5,475.9	1,604.4	5,705.9	0.00	0.00	0.00	
12,400.0	90.00	161.80	6,392.0	-5,570.9	1,635.6	5,805.8	0.00	0.00	0.00	
12,500.0	90.00	161.80	6,392.0	-5,665.9	1,666.9	5,905.8	0.00	0.00	0.00	
12,600.0	90.00	161.80	6,392.0	-5,760.9	1,698.1	6,005.8	0.00	0.00	0.00	
12,700.0	90.00	161.80	6,392.0	-5,855.9	1,729.3	6,105.8	0.00	0.00	0.00	
12,800.0	90.00	161.80	6,392.0	-5,950.9	1,760.6	6,205.7	0.00	0.00	0.00	
12,900.0	90.00	161.80	6,392.0	-6,045.9	1,791.8	6,305.7	0.00	0.00	0.00	
13,000.0	90.00	161.80	6,392.0	-6,140.9	1,823.1	6,405.7	0.00	0.00	0.00	
13,100.0	90.00	161.80	6,392.0	-6,235.8	1,854.3	6,505.6	0.00	0.00	0.00	
13,200.0	90.00	161.80	6,392.0	-6,330.8	1,885.5	6,605.6	0.00	0.00	0.00	
13,300.0	90.00	161.80	6,392.0	-6,425.8	1,916.8	6,705.6	0.00	0.00	0.00	
13,400.0	90.00	161.80	6,392.0	-6,520.8	1,948.0	6,805.6	0.00	0.00	0.00	
13,500.0	90.00	161.80	6,392.0	-6,615.8	1,979.2	6,905.5	0.00	0.00	0.00	
13,600.0	90.00	161.80	6,392.0	-6,710.8	2,010.5	7,005.5	0.00	0.00	0.00	
13,700.0	90.00	161.80	6,392.0	-6,805.8	2,041.7	7,105.5	0.00	0.00	0.00	
13,800.0	90.00	161.80	6,392.0	-6,900.8	2,073.0	7,205.4	0.00	0.00	0.00	
13,900.0	90.00	161.80	6,392.0	-6,995.8	2,104.2	7,305.4	0.00	0.00	0.00	
14,000.0	90.00	161.80	6,392.0	-7,090.8	2,135.4	7,405.4	0.00	0.00	0.00	
14,100.0	90.00	161.80	6,392.0	-7,185.8	2,166.7	7,505.3	0.00	0.00	0.00	
14,200.0	90.00	161.80	6,392.0	-7,280.8	2,197.9	7,605.3	0.00	0.00	0.00	
<b>TD @ 14281.6' MD / 6392.0' TVD</b>										
14,281.6	90.00	161.80	6,392.0	-7,358.3	2,223.4	7,686.9	0.00	0.00	0.00	

Design Targets

Target Name	- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
LP - Moe 2		0.00	0.00	6,392.0	-252.2	-112.9	355,373.60	1,576,720.33	39° 28' 2.576 N	80° 53' 16.116 W
- plan misses target center by 0.5usft at 6801.3usft MD (6392.0 TVD, -252.3 N, -113.3 E)										
- Point										
PBHL - Moe 2		0.00	360.00	6,392.0	-7,358.3	2,223.4	348,267.50	1,579,056.63	39° 26' 52.705 N	80° 52' 44.936 W
- plan hits target center										
- Point										

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
387.0	386.9	1.3	-6.1	Gyro Tie-in / Build 4° / 100'
475.5	475.3	6.3	-6.1	EOB @ 5.00° Inc. / 360.00° Azm
819.5	818.0	36.2	-6.1	Build 2° / 100'
1,004.6	1,002.4	50.2	-11.7	EOB @ 5.00° Inc. / 316.50° Azm
5,793.0	5,772.6	352.9	-299.0	Build 10° / 100'
5,939.5	5,918.4	345.3	-299.6	EOB @ 10.00° Inc. / 163.00° Azm / Build 10° / 100'
6,539.5	6,357.4	-6.9	-192.0	EOB @ 70.00° Inc. / Build 10° / 100'
6,739.8	6,392.0	-194.0	-132.5	EOB @ 90.00° Inc. / 161.80° Azm
14,281.6	6,392.0	-7,358.3	2,223.4	TD @ 14281.6' MD / 6392.0' TVD