



Jay-Bee Oil & Gas

Pleasants County

P4 Pad

P4S3

Wellbore #1

Design: Wellbore #1

QES Survey Report

17 December, 2018

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WV Department of
Environmental Protection



06/18/2021



Survey Report



Company:	Jay-Bee Oil & Gas	Local Co-ordinate Reference:	Well P4S3
Project:	Pleasants County	TVD Reference:	Well @ 977.8usft (20.6' RKB)
Site:	P4 Pad	MD Reference:	Well @ 977.8usft (20.6' RKB)
Well:	P4S3	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Project	Pleasants County		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	West Virginia Northern Zone		

Site	P4 Pad				
Site Position:		Northing:	341,266.74 usft	Latitude:	39° 25' 34.766 N
From:	Lat/Long	Easting:	1,525,094.26 usft	Longitude:	81° 4' 11.201 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-1.00 °

Well	P4S3					
Well Position	+N/-S	0.0 usft	Northing:	341,258.63 usft	Latitude:	39° 25' 34.697 N
	+E/-W	0.0 usft	Easting:	1,525,156.33 usft	Longitude:	81° 4' 10.408 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	957.2 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	11/30/2018	-8.42	66.60	51,864.13431568

Design	Wellbore #1				
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	149.40	

Survey Program	Date	12/17/2018			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
60.0	352.0	Gyro (Wellbore #1)	GYRO-NS	OWSG Gyrocompass Gyro	
419.0	18,196.0	QES MWD Surveys (Wellbore #1)	OWSG MWD - Standard	OWSG MWD - Standard	

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
60.0	0.28	220.93	60.0	-0.1	-0.1	0.0	0.47	0.00	0.00
100.0	0.33	252.48	100.0	-0.2	-0.3	0.1	0.43	0.13	78.88
160.0	0.19	241.15	160.0	-0.3	-0.5	0.0	0.25	0.12	-18.88
195.0	0.36	203.84	195.0	-0.4	-0.6	0.1	0.68	0.49	-106.60
260.0	0.28	215.17	260.0	-0.8	-0.8	0.3	0.16	0.12	17.43
290.0	0.09	64.00	290.0	-0.8	-0.8	0.3	1.20	0.63	-503.90
Gyro Tie In @ 352.0' MD / 352.0' TVD									
352.0	0.18	120.13	352.0	-0.8	-0.7	0.4	0.24	0.15	90.53
419.0	0.35	23.81	419.0	-0.7	-0.5	0.3	0.61	0.25	-143.76

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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)	
513.0	0.44	23.60	513.0	-0.1	-0.3	0.0	0.10	0.10	-0.22	
607.0	2.25	19.37	607.0	2.0	0.5	-1.4	1.93	1.93	-4.50	
702.0	5.23	10.78	701.8	8.0	1.9	-5.9	3.18	3.14	-9.04	
796.0	7.74	6.62	795.1	18.5	3.5	-14.1	2.71	2.67	-4.43	
891.0	10.65	10.30	888.9	33.5	5.8	-25.9	3.12	3.06	3.87	
986.0	12.88	7.22	981.9	52.6	8.7	-40.9	2.44	2.35	-3.24	
1,080.0	14.13	7.06	1,073.3	74.4	11.4	-58.2	1.33	1.33	-0.17	
1,175.0	15.42	8.31	1,165.2	98.4	14.7	-77.2	1.40	1.36	1.32	
1,270.0	16.62	11.53	1,256.5	124.2	19.2	-97.1	1.57	1.26	3.39	
1,364.0	17.63	12.83	1,346.3	151.3	25.0	-117.4	1.15	1.07	1.38	
1,460.0	18.23	16.15	1,437.7	179.9	32.4	-138.3	1.23	0.63	3.46	
1,554.0	17.14	17.43	1,527.2	207.2	40.7	-157.6	1.23	-1.16	1.36	
1,649.0	15.98	17.13	1,618.3	233.1	48.7	-175.8	1.22	-1.22	-0.32	
1,744.0	15.69	16.67	1,709.7	257.9	56.3	-193.3	0.33	-0.31	-0.46	
1,838.0	17.42	20.77	1,799.8	283.2	64.9	-210.7	2.22	1.84	4.36	
1,933.0	17.52	18.25	1,890.4	310.1	74.4	-229.0	0.80	0.11	-2.65	
2,028.0	17.94	19.91	1,980.9	337.4	83.9	-247.7	0.69	0.44	1.75	
2,123.0	15.49	15.76	2,071.9	363.4	92.3	-265.8	2.87	-2.58	-4.37	
2,214.0	13.43	10.00	2,160.0	385.5	97.5	-282.2	2.76	-2.26	-6.33	
2,309.0	14.81	18.92	2,252.1	407.8	103.3	-298.5	2.71	1.45	9.39	
2,404.0	13.78	16.16	2,344.2	430.2	110.4	-314.1	1.30	-1.08	-2.91	
2,498.0	12.59	12.62	2,435.7	450.9	115.7	-329.2	1.53	-1.27	-3.77	
2,593.0	14.88	13.03	2,528.0	472.9	120.8	-345.6	2.41	2.41	0.43	
2,687.0	15.65	16.25	2,618.7	496.9	127.0	-363.0	1.22	0.82	3.43	
2,782.0	15.20	20.16	2,710.2	520.9	134.9	-379.6	1.19	-0.47	4.12	
2,877.0	15.47	14.57	2,801.9	544.8	142.4	-396.5	1.58	0.28	-5.88	
2,972.0	15.53	15.01	2,893.4	569.4	148.9	-414.3	0.14	0.06	0.46	
3,066.0	14.65	15.71	2,984.2	593.0	155.3	-431.3	0.96	-0.94	0.74	
3,160.0	13.84	18.35	3,075.3	615.1	162.1	-446.9	1.10	-0.86	2.81	
3,255.0	13.25	16.18	3,167.6	636.3	168.7	-461.8	0.82	-0.62	-2.28	
3,349.0	13.46	16.69	3,259.1	657.1	174.9	-476.6	0.26	0.22	0.54	
3,444.0	13.79	15.68	3,351.4	678.6	181.1	-491.9	0.43	0.35	-1.06	
3,539.0	13.66	18.65	3,443.7	700.2	187.7	-507.1	0.75	-0.14	3.13	
3,633.0	14.64	20.24	3,534.8	721.8	195.4	-521.8	1.11	1.04	1.69	
3,728.0	13.39	17.81	3,627.0	743.6	202.9	-536.7	1.27	1.52	-2.56	
3,823.0	12.65	13.57	3,719.6	764.1	208.7	-551.5	1.27	0.78	-4.46	
3,917.0	15.04	15.33	3,810.8	785.9	214.4	-567.3	1.22	2.54	1.87	
4,012.0	13.93	14.03	3,902.8	808.9	220.4	-584.1	1.22	-1.17	-1.37	
4,107.0	14.50	16.13	3,994.9	831.4	226.5	-600.3	1.22	0.60	2.21	
4,201.0	13.89	9.86	4,086.0	853.8	231.7	-617.0	1.22	0.60	-6.67	
4,296.0	13.73	16.88	4,178.3	875.9	236.9	-633.3	1.77	-0.17	7.39	
4,391.0	14.13	18.73	4,270.5	897.6	243.9	-648.5	0.63	0.42	1.95	
4,486.0	13.01	15.80	4,362.9	918.9	250.5	-663.4	1.38	-1.18	-3.08	

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4,580.0	14.55	16.42	4,454.1	940.4	256.8	-678.8	1.65	1.64	0.66
4,675.0	13.48	13.65	4,546.3	962.6	262.7	-694.8	1.33	-1.13	-2.92
4,770.0	12.79	8.92	4,638.8	983.8	267.0	-710.9	1.34	-0.73	-4.98
4,865.0	10.41	7.57	4,731.9	1,002.7	269.7	-725.7	2.52	-2.51	-1.42
4,960.0	7.34	12.52	4,825.7	1,017.1	272.2	-736.9	3.33	-3.23	5.21
5,054.0	5.59	16.45	4,919.1	1,027.4	274.8	-744.4	1.92	-1.86	4.18
5,149.0	3.54	23.93	5,013.8	1,034.5	277.3	-749.3	2.24	-2.16	7.87
5,243.0	1.02	12.36	5,107.8	1,037.9	278.6	-751.6	2.71	-2.68	-12.31
5,275.0	0.80	14.90	5,139.8	1,038.4	278.8	-751.9	0.70	-0.69	7.94
5,322.0	0.40	100.90	5,186.7	1,038.7	279.0	-752.0	1.85	-0.85	182.98
5,370.0	4.60	161.10	5,234.7	1,036.9	279.8	-750.0	9.20	8.75	125.42
5,417.0	8.70	162.70	5,281.4	1,031.7	281.5	-744.7	8.73	8.72	3.40
5,464.0	11.30	157.40	5,327.7	1,024.0	284.3	-736.7	5.86	5.53	-11.28
5,511.0	13.30	153.10	5,373.6	1,015.0	288.5	-726.8	4.68	4.26	-9.15
5,559.0	16.40	151.40	5,420.0	1,004.1	294.3	-714.5	6.52	6.46	-3.54
5,606.0	20.00	151.40	5,464.6	991.2	301.3	-699.8	7.66	7.66	0.00
5,654.0	23.30	152.30	5,509.2	975.6	309.6	-682.1	6.91	6.88	1.88
5,701.0	28.00	151.80	5,551.6	957.6	319.2	-661.8	10.01	10.00	-1.06
5,748.0	32.90	151.00	5,592.1	936.7	330.6	-638.0	10.46	10.43	-1.70
5,795.0	37.40	149.60	5,630.5	913.2	344.0	-611.0	9.73	9.57	-2.98
5,843.0	42.20	148.00	5,667.4	887.0	359.9	-580.2	10.22	10.00	-3.33
5,890.0	46.20	147.60	5,701.1	859.3	377.4	-547.5	8.53	8.51	-0.85
5,938.0	49.40	147.00	5,733.3	829.3	396.6	-512.0	6.73	6.67	-1.25
5,985.0	53.30	148.20	5,762.6	798.4	416.2	-475.3	8.53	8.30	2.55
6,032.0	57.60	151.50	5,789.3	764.9	435.7	-436.6	10.82	9.15	7.02
6,079.0	61.40	154.40	5,813.1	728.8	454.0	-396.2	9.68	8.09	6.17
6,126.0	67.00	154.60	5,833.6	690.6	472.3	-354.1	11.92	11.91	0.43
6,173.0	72.00	154.70	5,850.0	650.9	491.1	-310.2	10.64	10.64	0.21
6,221.0	74.90	154.00	5,863.7	609.4	511.0	-264.4	6.20	6.04	-1.46
6,268.0	76.50	152.10	5,875.3	568.8	531.7	-219.0	5.19	3.40	-4.04
6,316.0	81.00	152.40	5,884.7	527.1	553.6	-172.0	9.40	9.38	0.63
6,363.0	85.40	151.40	5,890.3	486.0	575.5	-125.3	9.60	9.36	-2.13
6,410.0	88.90	153.00	5,892.6	444.5	597.4	-78.5	8.19	7.45	3.40
6,505.0	87.70	153.20	5,895.4	359.8	640.4	16.3	1.28	1.26	0.21
6,600.0	87.60	151.90	5,899.3	275.6	684.2	111.1	10.01	10.01	-1.37
6,694.0	88.60	152.10	5,902.4	192.6	728.3	204.9	1.08	1.06	0.21
6,789.0	89.70	151.30	5,903.8	109.0	773.3	299.8	1.41	1.41	-0.84
6,884.0	88.60	150.90	5,905.2	25.8	819.2	394.8	1.23	-1.16	-0.42
6,978.0	90.10	154.20	5,906.3	-57.6	862.5	488.6	3.86	3.86	3.51
7,073.0	89.20	154.70	5,906.9	-143.3	903.5	583.2	3.86	3.86	0.53
7,168.0	91.30	154.00	5,906.5	-228.9	944.6	677.9	2.33	2.21	-0.74
7,263.0	90.80	154.20	5,904.7	-314.4	986.1	772.5	0.57	-0.53	0.21
7,357.0	90.30	150.80	5,903.8	-397.7	1,029.5	866.4	3.66	-0.53	-3.62

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7,452.0	88.70	148.90	5,904.7	-479.9	1,077.2	961.4	2.61	-1.68	-2.00
7,547.0	89.50	152.20	5,906.2	-562.6	1,123.9	1,056.3	3.57	0.84	3.47
7,642.0	89.50	152.10	5,907.0	-646.6	1,168.3	1,151.2	0.11	0.00	-0.11
7,737.0	89.80	154.40	5,907.6	-731.4	1,211.0	1,246.0	2.44	0.32	2.42
7,832.0	89.10	151.90	5,908.5	-816.1	1,253.9	1,340.8	2.73	-0.74	-2.63
7,926.0	89.60	151.80	5,909.5	-899.0	1,298.3	1,434.7	0.54	0.53	-0.11
8,020.0	89.60	151.70	5,910.2	-981.8	1,342.8	1,528.6	0.11	0.00	-0.11
8,115.0	90.20	151.70	5,910.4	-1,065.5	1,387.8	1,623.5	0.63	0.63	0.00
8,210.0	89.50	149.80	5,910.6	-1,148.3	1,434.2	1,718.5	2.13	-0.74	-2.00
8,305.0	88.60	151.10	5,912.2	-1,231.0	1,481.1	1,813.5	1.66	-0.95	1.37
8,400.0	90.80	156.20	5,912.7	-1,316.1	1,523.2	1,908.2	5.85	2.32	5.37
8,494.0	90.50	155.60	5,911.6	-1,401.9	1,561.6	2,001.6	0.71	-0.32	-0.64
8,589.0	87.50	153.10	5,913.3	-1,487.5	1,602.7	2,096.2	4.11	-3.16	-2.63
8,683.0	88.70	153.70	5,916.4	-1,571.5	1,644.8	2,189.9	1.43	1.28	0.64
8,778.0	89.10	154.40	5,918.2	-1,656.9	1,686.3	2,284.6	0.85	0.42	0.74
8,873.0	89.90	155.00	5,919.0	-1,742.8	1,726.9	2,379.1	1.05	0.84	0.63
8,968.0	89.30	152.40	5,919.7	-1,827.9	1,769.0	2,473.9	2.81	-0.63	-2.74
9,062.0	89.90	152.40	5,920.4	-1,911.2	1,812.6	2,567.7	0.64	0.64	0.00
9,157.0	86.90	150.60	5,923.0	-1,994.7	1,857.9	2,662.6	3.68	-3.16	-1.89
9,251.0	87.40	150.30	5,927.7	-2,076.3	1,904.2	2,756.5	0.62	0.53	-0.32
9,346.0	87.20	150.80	5,932.2	-2,159.0	1,950.8	2,851.4	0.57	-0.21	0.53
9,441.0	89.10	152.80	5,935.2	-2,242.6	1,995.7	2,946.2	2.90	2.00	2.11
9,536.0	89.80	153.30	5,936.1	-2,327.3	2,038.7	3,041.0	0.91	0.74	0.53
9,630.0	88.20	150.60	5,937.8	-2,410.3	2,082.9	3,134.9	3.34	-1.70	-2.87
9,725.0	89.20	152.70	5,939.9	-2,493.8	2,128.0	3,229.8	2.45	1.05	2.21
9,820.0	89.40	153.10	5,941.1	-2,578.4	2,171.3	3,324.6	0.47	0.21	0.42
9,915.0	88.70	149.90	5,942.7	-2,661.9	2,216.6	3,419.5	3.45	-0.74	-3.37
10,010.0	89.50	152.10	5,944.2	-2,744.9	2,262.7	3,514.5	2.46	0.84	2.32
10,104.0	88.70	151.70	5,945.6	-2,827.8	2,306.9	3,608.4	0.95	-0.85	-0.43
10,199.0	89.70	153.70	5,947.0	-2,912.2	2,350.5	3,703.2	2.35	1.05	2.11
10,294.0	89.10	151.30	5,948.0	-2,996.5	2,394.4	3,798.0	2.60	-0.63	-2.53
10,389.0	89.40	151.70	5,949.2	-3,080.0	2,439.7	3,893.0	0.53	0.32	0.42
10,484.0	89.80	153.20	5,949.9	-3,164.2	2,483.6	3,987.8	1.63	0.42	1.58
10,578.0	89.20	150.90	5,950.7	-3,247.2	2,527.7	4,081.7	2.53	-0.64	-2.45
10,673.0	89.60	151.90	5,951.7	-3,330.6	2,573.2	4,176.7	1.13	0.42	1.05
10,768.0	89.20	151.80	5,952.7	-3,414.4	2,618.0	4,271.6	0.43	-0.42	-0.11
10,863.0	90.60	153.90	5,952.8	-3,498.9	2,661.3	4,366.4	2.66	1.13	2.21
10,957.0	90.10	152.90	5,952.3	-3,583.0	2,703.4	4,460.2	1.19	-0.53	-1.06
11,052.0	88.90	151.70	5,953.1	-3,667.1	2,747.6	4,555.0	1.79	-1.26	-1.26
11,147.0	88.50	151.50	5,955.3	-3,750.6	2,792.7	4,649.9	0.47	0.42	-0.21
11,241.0	91.50	154.90	5,955.3	-3,834.5	2,835.1	4,743.7	4.82	3.19	3.62
11,336.0	89.80	153.20	5,954.2	-3,919.9	2,876.7	4,838.4	2.53	-1.79	-1.79
11,431.0	89.50	154.30	5,954.8	-4,005.1	2,918.7	4,933.1	1.20	-0.32	1.16
11,525.0	89.70	157.20	5,955.4	-4,090.8	2,957.3	5,026.5	3.09	0.21	3.09

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Survey Report



Company:	Jay-Bee Oil & Gas	Local Co-ordinate Reference:	Well P4S3
Project:	Pleasants County	TVD Reference:	Well @ 977.8usft (20.6' RKB)
Site:	P4 Pad	MD Reference:	Well @ 977.8usft (20.6' RKB)
Well:	P4S3	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

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)	
11,620.0	89.80	152.60	5,955.8	-4,176.8	2,997.6	5,121.0	4.84	0.11	-4.84	
11,715.0	89.70	153.50	5,956.2	-4,261.5	3,040.6	5,215.8	0.95	-0.11	0.95	
11,809.0	89.20	151.30	5,957.1	-4,344.8	3,084.2	5,309.7	2.40	-0.53	-2.34	
11,904.0	90.30	153.50	5,957.6	-4,429.0	3,128.2	5,404.6	2.59	1.16	2.32	
11,999.0	89.40	150.30	5,957.8	-4,512.8	3,172.9	5,499.5	3.50	-0.95	-3.37	
12,094.0	89.50	151.70	5,958.7	-4,595.8	3,219.0	5,594.4	1.48	0.11	1.47	
12,189.0	87.90	148.80	5,960.9	-4,678.3	3,266.1	5,689.4	3.49	-1.68	-3.05	
12,284.0	90.70	153.20	5,962.0	-4,761.3	3,312.1	5,784.3	5.49	2.95	4.63	
12,379.0	90.50	151.10	5,961.0	-4,845.3	3,356.5	5,879.2	2.22	-0.21	-2.21	
12,474.0	88.80	149.80	5,961.6	-4,928.0	3,403.4	5,974.2	2.25	-1.79	-1.37	
12,568.0	91.40	153.10	5,961.5	-5,010.5	3,448.3	6,068.1	4.47	2.77	3.51	
12,663.0	91.10	151.80	5,959.4	-5,094.7	3,492.2	6,162.9	1.40	-0.32	-1.37	
12,758.0	90.20	149.90	5,958.3	-5,177.7	3,538.5	6,257.9	2.21	-0.95	-2.00	
12,852.0	89.00	148.00	5,959.0	-5,258.2	3,586.9	6,351.9	2.39	-1.28	-2.02	
12,947.0	88.80	150.50	5,960.8	-5,339.8	3,635.5	6,446.8	2.64	-0.21	2.63	
13,042.0	90.20	153.90	5,961.6	-5,423.8	3,679.8	6,541.7	3.87	1.47	3.58	
13,137.0	90.70	153.50	5,960.9	-5,509.0	3,721.9	6,636.4	0.67	0.53	-0.42	
13,231.0	90.50	151.30	5,959.9	-5,592.3	3,765.4	6,730.3	2.35	-0.21	-2.34	
13,326.0	89.80	154.30	5,959.6	-5,676.8	3,808.9	6,825.1	3.24	-0.74	3.16	
13,421.0	89.60	154.40	5,960.1	-5,762.4	3,850.0	6,919.8	0.24	-0.21	0.11	
13,516.0	89.50	154.50	5,960.9	-5,848.1	3,891.0	7,014.4	0.15	-0.11	0.11	
13,610.0	89.60	153.10	5,961.6	-5,932.5	3,932.5	7,108.1	1.49	0.11	-1.49	
13,705.0	89.50	152.00	5,962.4	-6,016.8	3,976.2	7,203.0	1.16	-0.11	-1.16	
13,800.0	89.70	151.00	5,963.0	-6,100.2	4,021.6	7,297.9	1.07	0.21	-1.05	
13,894.0	89.50	152.10	5,963.7	-6,182.9	4,066.4	7,391.8	1.19	-0.21	1.17	
13,989.0	89.90	151.70	5,964.2	-6,266.7	4,111.1	7,486.7	0.60	0.42	-0.42	
14,084.0	89.60	152.70	5,964.6	-6,350.7	4,155.4	7,581.6	1.10	-0.32	1.05	
14,178.0	90.10	152.00	5,964.8	-6,434.0	4,199.0	7,675.5	0.92	0.53	-0.74	
14,272.0	89.40	150.10	5,965.3	-6,516.2	4,244.5	7,769.4	2.15	-0.74	-2.02	
14,367.0	89.30	153.70	5,966.3	-6,600.0	4,289.3	7,864.3	3.79	-0.11	3.79	
14,462.0	90.30	153.40	5,966.7	-6,685.1	4,331.6	7,959.1	1.10	1.05	-0.32	
14,555.0	90.40	151.90	5,966.1	-6,767.7	4,374.3	8,051.9	1.62	0.11	-1.61	
14,650.0	89.50	154.80	5,966.2	-6,852.6	4,416.9	8,146.7	3.20	-0.95	3.05	
14,745.0	89.30	153.30	5,967.2	-6,938.0	4,458.5	8,241.4	1.59	0.74	-1.58	
14,839.0	89.60	152.60	5,968.1	-7,021.7	4,501.2	8,335.2	0.81	0.74	0.74	
14,934.0	90.30	153.80	5,968.2	-7,106.5	4,544.0	8,430.0	1.46	0.74	1.26	
15,029.0	90.60	152.60	5,967.4	-7,191.3	4,586.9	8,524.8	1.30	0.32	-1.26	
15,124.0	90.40	151.40	5,966.6	-7,275.2	4,631.5	8,619.6	1.28	-0.21	-1.26	
15,218.0	88.20	152.70	5,967.7	-7,358.2	4,675.5	8,713.5	2.72	2.84	1.38	
15,313.0	91.00	155.30	5,968.4	-7,443.5	4,717.2	8,808.2	4.02	2.95	2.74	
15,408.0	90.50	153.50	5,967.2	-7,529.2	4,758.2	8,902.8	1.97	-0.53	-1.89	
15,503.0	91.30	152.80	5,965.7	-7,614.0	4,801.1	8,997.6	1.12	0.84	-0.74	
15,598.0	91.70	152.30	5,963.2	-7,698.2	4,844.9	9,092.4	0.67	0.42	-0.53	

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Company:	Jay-Bee Oil & Gas	Local Co-ordinate Reference:	Well P4S3
Project:	Pleasants County	TVD Reference:	Well @ 977.8usft (20.6' RKB)
Site:	P4 Pad	MD Reference:	Well @ 977.8usft (20.6' RKB)
Well:	P4S3	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

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)
15,693.0	89.10	148.90	5,962.5	-7,781.0	4,891.5	9,187.4	4.51	-2.74	-3.58
15,788.0	89.80	151.70	5,963.4	-7,863.5	4,938.6	9,282.4	3.04	0.74	2.95
15,882.0	89.60	154.40	5,963.9	-7,947.3	4,981.2	9,376.2	2.88	-0.21	2.87
15,977.0	89.40	152.90	5,964.7	-8,032.4	5,023.3	9,470.9	1.59	-0.21	-1.58
16,071.0	89.90	151.40	5,965.3	-8,115.5	5,067.2	9,564.8	1.68	0.53	-1.60
16,166.0	89.30	153.20	5,966.0	-8,199.6	5,111.4	9,659.7	2.00	-0.63	1.89
16,261.0	89.80	153.60	5,966.7	-8,284.5	5,153.9	9,754.4	0.67	0.53	0.42
16,355.0	89.70	151.70	5,967.1	-8,368.0	5,197.1	9,848.3	2.02	-0.11	-2.02
16,451.0	89.50	152.30	5,967.8	-8,452.8	5,242.2	9,944.2	0.66	-0.21	0.63
16,544.0	89.70	150.60	5,968.5	-8,534.5	5,286.6	10,037.1	1.84	0.22	-1.83
16,639.0	90.20	153.00	5,968.5	-8,618.2	5,331.5	10,132.0	2.58	0.53	2.53
16,733.0	89.40	151.50	5,968.9	-8,701.4	5,375.3	10,225.9	1.81	-0.85	-1.60
16,828.0	88.70	153.90	5,970.4	-8,785.8	5,418.8	10,320.7	2.63	-0.74	2.53
16,923.0	88.80	152.40	5,972.5	-8,870.5	5,461.7	10,415.5	1.58	0.11	-1.58
17,018.0	89.30	154.80	5,974.1	-8,955.6	5,504.0	10,510.2	2.58	0.53	2.53
17,113.0	90.00	154.10	5,974.7	-9,041.3	5,544.9	10,604.8	1.04	0.74	-0.74
17,208.0	89.10	153.30	5,975.4	-9,126.5	5,587.0	10,699.6	1.27	-0.95	-0.84
17,302.0	89.60	153.10	5,976.5	-9,210.4	5,629.4	10,793.4	0.57	0.53	-0.21
17,397.0	89.70	152.00	5,977.1	-9,294.7	5,673.2	10,888.2	1.16	0.11	-1.16
17,492.0	90.30	151.30	5,977.1	-9,378.3	5,718.3	10,983.1	0.97	0.63	-0.74
17,586.0	89.20	154.50	5,977.5	-9,461.9	5,761.1	11,076.9	3.60	-1.17	3.40
17,681.0	89.50	153.20	5,978.6	-9,547.2	5,803.0	11,171.6	1.40	0.32	-1.37
17,775.0	89.60	152.00	5,979.3	-9,630.7	5,846.3	11,265.5	1.28	0.11	-1.28
17,870.0	89.50	150.60	5,980.0	-9,714.0	5,891.9	11,360.4	1.48	-0.11	-1.47
17,965.0	90.50	154.70	5,980.0	-9,798.3	5,935.5	11,455.3	4.44	1.05	4.32
18,060.0	90.90	153.90	5,978.9	-9,883.9	5,976.7	11,549.9	0.94	0.42	-0.84
TD @ 18196.0' MD / 5976.7' TVD									
18,196.0	90.90	153.90	5,976.7	-10,006.1	6,036.5	11,685.5	0.00	0.00	0.00

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
352.0	352.0	-0.8	-0.7	Gyro Tie In @ 352.0' MD / 352.0' TVD
18,196.0	5,976.7	-10,006.1	6,036.5	TD @ 18196.0' MD / 5976.7' TVD

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