

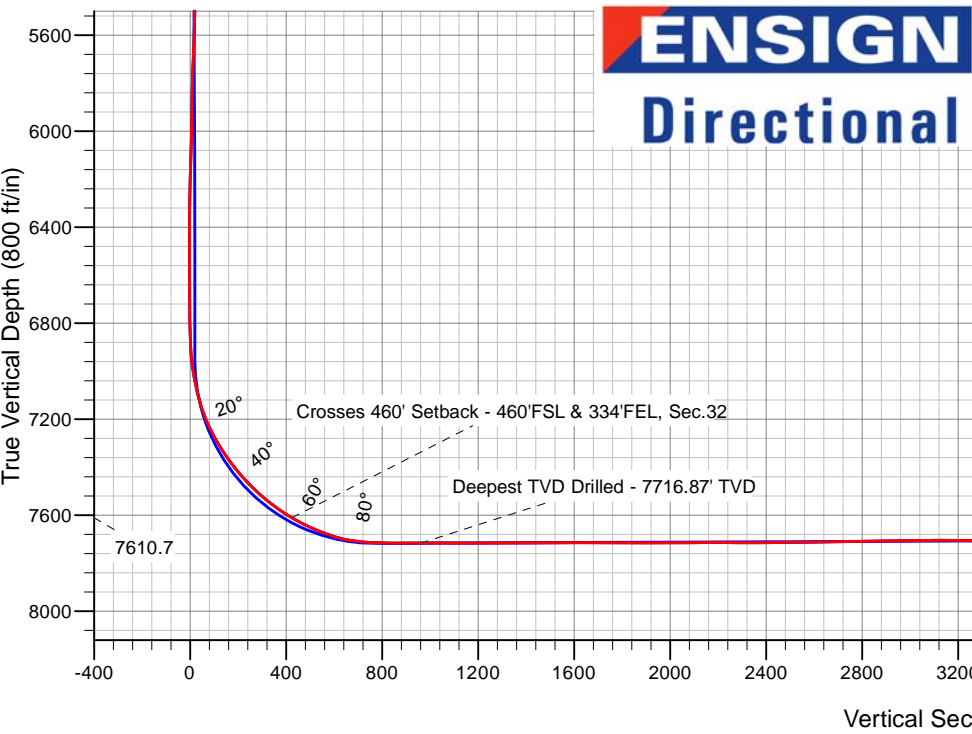
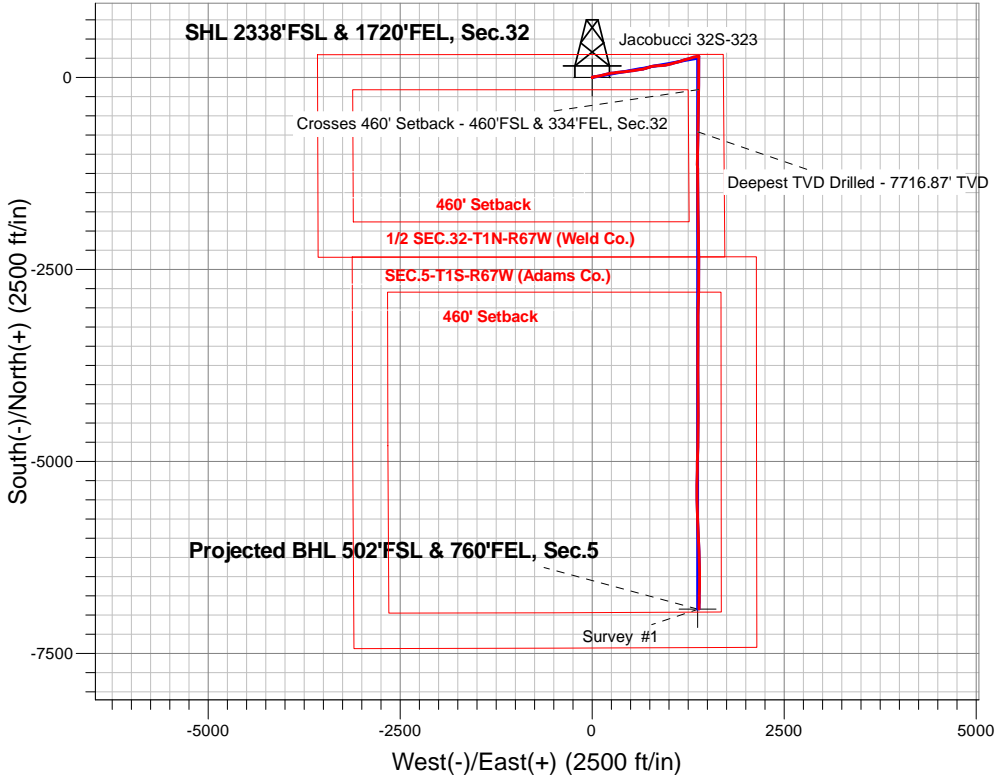
PETROLEUM DEVELOPMENT CORP DJ Basin

Well Name: **Jacobucci 32S-323**

Surface Location: Jacobucci 1N67W32S Pad Sec.32-T1N-R67W  
North American Datum 1983 , US State Plane 1983, Colorado Northern Zone  
Ground Elevation: 5059.0  
+N/-S+E/-W Northing Easting Latitude Longitude Slot  
0.0 0.0 1245853.53 164992.92 40.006750 -104.911000  
RKB - 23' WELL @ 5082.0ft (RKB - 23')

FINAL SURVEY

Projected Bottom Hole Location  
14727'MD 7689'TVD 6920'S & 1392'E of SHL  
92.1 degree Incl @ 181.0 degree AZM



Jacobucci 1N67W32S Pad Sec.32-T1N-R67W Jacobucci 32S-323 Wellbore #1 12:45, October 07 2016		ANNOTATIONS	
TVD	MD	Annotation	
7610.7	7943.9	Crosses 460' Setback - 460'FSL & 334'FEL, Sec.32	
7716.9	8512.0	Deepest TVD Drilled - 7716.87' TVD	

LEGEND

- Jacobucci 32S-323, Wellbore #1, Plan #4 (9-14-16) V0
- Wellbore #1
- Survey #1

Projected BHL 502'FSL & 760'FEL, Sec.5

Jacobucci 32S-323/Survey #1



# **PETROLEUM DEVELOPMENT CORP DJ Basin**

**SEC.32-T1N-R67W**

**Jacobucci 1N67W32S Pad Sec.32-T1N-R67W**

**Jacobucci 32S-323**

**Wellbore #1**

**Survey: Survey #1**

## **Standard Survey Report**

**07 October, 2016**

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Jacobucci 32S-323
<b>Project:</b>	SEC.32-T1N-R67W	<b>TVD Reference:</b>	WELL @ 5082.0ft (RKB - 23')
<b>Site:</b>	Jacobucci 1N67W32S Pad Sec.32-T1N-R67W	<b>MD Reference:</b>	WELL @ 5082.0ft (RKB - 23')
<b>Well:</b>	Jacobucci 32S-323	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	US_EDM

<b>Project</b>	SEC.32-T1N-R67W, Weld County, CO		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		Using Well Reference Point
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

Site		Jacobucci 1N67W32S Pad Sec.32-T1N-R67W			
Site Position:		Northing:	1,245,853.29 usft	Latitude:	40.006750
From:	Lat/Long	Easting:	3,164,939.70 usft	Longitude:	-104.911190
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.38 °

Well	Jacobucci 32S-323					
Well Position	+N/-S	0.0 ft	Northing:	1,245,853.59 usft	Latitude:	40.006750
	+E/-W	0.0 ft	Easting:	3,164,992.92 usft	Longitude:	-104.911000
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,059.0 ft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	9/14/2016	8.20	66.53	52,355

<b>Design</b>	Wellbore #1				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	168.78	

<b>Survey Program</b>	<b>Date</b>	10/7/2016			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
156.0	14,727.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

<b>Survey</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
156.0	0.10	249.40	156.0	0.0	-0.1	0.0	0.06	0.06	0.00	
252.0	0.40	90.80	252.0	-0.1	0.1	0.1	0.52	0.31	-165.21	
348.0	0.40	28.10	348.0	0.2	0.6	-0.1	0.43	0.00	-65.31	
444.0	0.40	31.40	444.0	0.8	1.0	-0.6	0.02	0.00	3.44	
539.0	0.40	21.40	539.0	1.4	1.2	-1.1	0.07	0.00	-10.53	
635.0	0.50	338.70	635.0	2.1	1.2	-1.8	0.35	0.10	-44.48	
731.0	0.50	335.20	731.0	2.9	0.9	-2.6	0.03	0.00	-3.65	
827.0	1.60	66.60	827.0	3.8	1.9	-3.3	1.76	1.15	95.21	
923.0	3.90	67.60	922.9	5.5	6.2	-4.2	2.40	2.40	1.04	

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Jacobucci 32S-323
<b>Project:</b>	SEC.32-T1N-R67W	<b>TVD Reference:</b>	WELL @ 5082.0ft (RKB - 23')
<b>Site:</b>	Jacobucci 1N67W32S Pad Sec.32-T1N-R67W	<b>MD Reference:</b>	WELL @ 5082.0ft (RKB - 23')
<b>Well:</b>	Jacobucci 32S-323	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	US_EDM

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,019.0	5.80	76.10	1,018.5	8.0	13.9	-5.1	2.11	1.98	8.85
1,114.0	6.30	86.80	1,113.0	9.4	23.8	-4.6	1.30	0.53	11.26
1,210.0	8.00	82.70	1,208.2	10.5	35.7	-3.4	1.85	1.77	-4.27
1,306.0	9.70	81.10	1,303.1	12.6	50.3	-2.6	1.79	1.77	-1.67
1,402.0	9.70	80.30	1,397.7	15.3	66.3	-2.1	0.14	0.00	-0.83
1,497.0	11.60	79.20	1,491.1	18.4	83.5	-1.8	2.01	2.00	-1.16
1,594.0	12.80	76.10	1,585.9	22.8	103.5	-2.2	1.41	1.24	-3.20
1,689.0	13.90	75.90	1,678.3	28.1	124.8	-3.3	1.16	1.16	-0.21
1,784.0	14.40	75.70	1,770.4	33.8	147.3	-4.5	0.53	0.53	-0.21
1,880.0	14.60	76.20	1,863.4	39.6	170.6	-5.7	0.25	0.21	0.52
1,985.0	14.60	77.50	1,965.0	45.7	196.4	-6.6	0.31	0.00	1.24
2,070.0	13.40	75.30	2,047.5	50.5	216.4	-7.4	1.54	-1.41	-2.59
2,166.0	13.70	81.90	2,140.8	54.9	238.4	-7.5	1.64	0.31	6.88
2,262.0	14.80	83.60	2,233.8	57.9	261.9	-5.8	1.23	1.15	1.77
2,357.0	15.20	82.40	2,325.6	60.9	286.3	-4.0	0.53	0.42	-1.26
2,453.0	16.40	83.30	2,418.0	64.1	312.2	-2.1	1.28	1.25	0.94
2,549.0	15.60	84.00	2,510.3	67.1	338.5	0.1	0.86	-0.83	0.73
2,645.0	14.90	82.90	2,602.9	69.9	363.6	2.2	0.79	-0.73	-1.15
2,741.0	14.60	85.20	2,695.7	72.5	387.9	4.4	0.69	-0.31	2.40
2,837.0	15.50	81.90	2,788.4	75.3	412.6	6.5	1.29	0.94	-3.44
2,933.0	14.70	83.10	2,881.1	78.6	437.4	8.1	0.89	-0.83	1.25
3,028.0	13.80	83.40	2,973.2	81.3	460.7	9.9	0.95	-0.95	0.32
3,124.0	14.40	85.50	3,066.3	83.6	483.9	12.2	0.82	0.63	2.19
3,219.0	13.80	85.20	3,158.4	85.4	507.0	14.9	0.64	-0.63	-0.32
3,315.0	15.40	80.60	3,251.3	88.5	531.0	16.5	2.06	1.67	-4.79
3,411.0	14.10	78.90	3,344.2	92.8	555.0	17.0	1.43	-1.35	-1.77
3,507.0	14.90	80.10	3,437.1	97.2	578.7	17.3	0.89	0.83	1.25
3,603.0	15.50	84.00	3,529.7	100.6	603.6	18.7	1.23	0.63	4.06
3,698.0	14.20	82.90	3,621.6	103.4	627.8	20.7	1.40	-1.37	-1.16
3,794.0	15.00	75.90	3,714.5	107.9	651.5	20.9	2.02	0.83	-7.29
3,890.0	16.20	74.50	3,806.9	114.5	676.5	19.3	1.31	1.25	-1.46
3,986.0	14.90	74.60	3,899.4	121.4	701.3	17.4	1.35	-1.35	0.10
4,082.0	14.10	72.20	3,992.4	128.2	724.3	15.2	1.04	-0.83	-2.50
4,177.0	14.40	69.70	4,084.4	135.8	746.4	12.0	0.72	0.32	-2.63
4,273.0	13.70	76.40	4,177.6	142.7	768.7	9.6	1.84	-0.73	6.98
4,368.0	14.10	81.30	4,269.8	147.1	791.0	9.7	1.31	0.42	5.16
4,464.0	14.90	84.70	4,362.7	150.0	814.9	11.5	1.22	0.83	3.54
4,560.0	16.40	87.30	4,455.2	151.7	840.7	14.7	1.72	1.56	2.71
4,655.0	15.60	87.70	4,546.5	152.9	866.9	18.7	0.85	-0.84	0.42
4,751.0	16.40	85.90	4,638.8	154.4	893.3	22.4	0.98	0.83	-1.88
4,847.0	15.30	84.00	4,731.1	156.7	919.4	25.2	1.27	-1.15	-1.98
4,943.0	15.70	79.70	4,823.6	160.3	944.8	26.6	1.27	0.42	-4.48
5,038.0	14.90	78.70	4,915.3	165.0	969.4	26.8	0.89	-0.84	-1.05
5,134.0	15.70	77.50	5,007.9	170.2	994.2	26.5	0.90	0.83	-1.25

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Jacobucci 32S-323
<b>Project:</b>	SEC.32-T1N-R67W	<b>TVD Reference:</b>	WELL @ 5082.0ft (RKB - 23')
<b>Site:</b>	Jacobucci 1N67W32S Pad Sec.32-T1N-R67W	<b>MD Reference:</b>	WELL @ 5082.0ft (RKB - 23')
<b>Well:</b>	Jacobucci 32S-323	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	US_EDM

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,230.0	15.50	77.60	5,100.3	175.8	1,019.4	25.9	0.21	-0.21	0.10
5,326.0	14.40	76.20	5,193.1	181.4	1,043.5	25.1	1.21	-1.15	-1.46
5,421.0	14.20	71.50	5,285.1	187.9	1,066.0	23.1	1.24	-0.21	-4.95
5,518.0	14.80	75.70	5,379.1	194.8	1,089.3	20.9	1.25	0.62	4.33
5,614.0	14.50	75.00	5,471.9	200.9	1,112.8	19.5	0.36	-0.31	-0.73
5,710.0	14.80	73.80	5,564.8	207.4	1,136.2	17.6	0.44	0.31	-1.25
5,805.0	14.30	68.30	5,656.8	215.1	1,158.8	14.4	1.55	-0.53	-5.79
5,901.0	15.50	71.80	5,749.5	223.5	1,182.0	10.7	1.56	1.25	3.65
5,997.0	15.30	74.50	5,842.1	230.9	1,206.3	8.2	0.78	-0.21	2.81
6,093.0	16.10	77.30	5,934.5	237.2	1,231.5	6.9	1.15	0.83	2.92
6,188.0	15.70	74.10	6,025.9	243.7	1,256.8	5.5	1.01	-0.42	-3.37
6,284.0	14.50	71.10	6,118.6	251.1	1,280.6	2.9	1.49	-1.25	-3.13
6,380.0	13.70	72.50	6,211.7	258.4	1,302.8	0.0	0.91	-0.83	1.46
6,476.0	12.60	76.10	6,305.2	264.4	1,323.8	-1.7	1.43	-1.15	3.75
6,572.0	10.30	77.50	6,399.2	268.7	1,342.4	-2.4	2.41	-2.40	1.46
6,668.0	8.50	81.00	6,493.9	271.7	1,357.8	-2.3	1.97	-1.88	3.65
6,763.0	6.30	83.30	6,588.1	273.4	1,369.9	-1.6	2.34	-2.32	2.42
6,860.0	5.00	72.00	6,684.7	275.3	1,379.2	-1.7	1.76	-1.34	-11.65
6,956.0	3.80	92.80	6,780.4	276.5	1,386.3	-1.4	2.06	-1.25	21.67
7,074.0	2.90	200.50	6,898.3	273.5	1,389.2	2.1	4.61	-0.76	91.27
7,170.0	9.00	181.70	6,993.7	263.7	1,388.1	11.5	6.59	6.35	-19.58
7,266.0	13.70	181.90	7,087.8	244.8	1,387.5	29.9	4.90	4.90	0.21
7,361.0	20.40	179.80	7,178.6	217.0	1,387.2	57.1	7.08	7.05	-2.21
7,457.0	28.80	181.30	7,265.8	177.1	1,386.7	96.2	8.77	8.75	1.56
7,553.0	35.30	182.90	7,347.1	126.2	1,384.8	145.7	6.83	6.77	1.67
7,649.0	40.40	179.40	7,422.9	67.3	1,383.7	203.2	5.76	5.31	-3.65
7,745.0	46.10	179.60	7,492.8	1.6	1,384.3	267.8	5.94	5.94	0.21
7,841.0	53.80	179.20	7,554.5	-71.8	1,385.1	340.0	8.03	8.02	-0.42
7,937.0	59.60	179.90	7,607.2	-152.0	1,385.7	418.8	6.07	6.04	0.73
7,943.9	60.01	179.95	7,610.7	-158.0	1,385.7	424.6	6.04	6.00	0.77
<b>Crosses 460' Setback - 460'FSL &amp; 334'FEL, Sec.32</b>									
8,032.0	65.30	180.60	7,651.1	-236.2	1,385.3	501.3	6.04	6.00	0.73
8,128.0	72.30	179.90	7,685.8	-325.7	1,384.9	589.0	7.32	7.29	-0.73
8,224.0	82.00	180.80	7,707.2	-419.2	1,384.4	680.5	10.15	10.10	0.94
8,320.0	88.80	182.00	7,714.9	-514.8	1,382.0	773.9	7.19	7.08	1.25
8,416.0	89.40	182.80	7,716.4	-610.7	1,378.0	867.1	1.04	0.63	0.83
8,512.0	90.00	180.60	7,716.9	-706.6	1,375.2	960.7	2.38	0.63	-2.29
<b>Deepest TVD Drilled - 7716.87' TVD</b>									
8,607.0	90.10	180.60	7,716.8	-801.6	1,374.2	1,053.7	0.11	0.11	0.00
8,702.0	90.10	180.60	7,716.6	-896.6	1,373.2	1,146.7	0.00	0.00	0.00
8,798.0	90.50	180.80	7,716.1	-992.6	1,372.0	1,240.6	0.47	0.42	0.21
8,894.0	90.20	180.50	7,715.5	-1,088.6	1,370.9	1,334.5	0.44	-0.31	-0.31
8,990.0	89.80	179.20	7,715.5	-1,184.6	1,371.2	1,428.8	1.42	-0.42	-1.35

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<b>Site:</b>	Jacobucci 1N67W32S Pad Sec.32-T1N-R67W	<b>MD Reference:</b>	WELL @ 5082.0ft (RKB - 23')
<b>Well:</b>	Jacobucci 32S-323	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	US_EDM

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,086.0	90.40	179.60	7,715.4	-1,280.6	1,372.2	1,523.1	0.75	0.63	0.42
9,182.0	90.00	179.20	7,715.0	-1,376.6	1,373.2	1,617.5	0.59	-0.42	-0.42
9,278.0	90.00	179.10	7,715.0	-1,472.6	1,374.6	1,711.9	0.10	0.00	-0.10
9,373.0	89.90	178.90	7,715.1	-1,567.6	1,376.2	1,805.4	0.24	-0.11	-0.21
9,469.0	89.80	179.40	7,715.4	-1,663.5	1,377.7	1,899.8	0.53	-0.10	0.52
9,565.0	90.20	179.90	7,715.4	-1,759.5	1,378.3	1,994.1	0.67	0.42	0.52
9,661.0	90.50	179.40	7,714.8	-1,855.5	1,378.8	2,088.4	0.61	0.31	-0.52
9,757.0	90.00	179.10	7,714.4	-1,951.5	1,380.1	2,182.8	0.61	-0.52	-0.31
9,853.0	89.70	178.70	7,714.6	-2,047.5	1,381.9	2,277.3	0.52	-0.31	-0.42
9,948.0	90.10	178.40	7,714.8	-2,142.5	1,384.3	2,370.9	0.53	0.42	-0.32
10,044.0	89.90	179.40	7,714.8	-2,238.5	1,386.2	2,465.4	1.06	-0.21	1.04
10,140.0	91.20	179.20	7,713.9	-2,334.4	1,387.4	2,559.8	1.37	1.35	-0.21
10,235.0	92.30	180.60	7,711.0	-2,429.4	1,387.5	2,653.0	1.87	1.16	1.47
10,331.0	90.00	180.30	7,709.0	-2,525.4	1,386.8	2,746.9	2.42	-2.40	-0.31
10,427.0	90.30	179.60	7,708.8	-2,621.4	1,386.9	2,841.1	0.79	0.31	-0.73
10,523.0	90.90	181.30	7,707.8	-2,717.4	1,386.1	2,935.1	1.88	0.63	1.77
10,618.0	90.60	181.50	7,706.5	-2,812.3	1,383.8	3,027.8	0.38	-0.32	0.21
10,714.0	90.80	181.30	7,705.4	-2,908.3	1,381.4	3,121.5	0.29	0.21	-0.21
10,810.0	88.90	181.00	7,705.6	-3,004.3	1,379.5	3,215.3	2.00	-1.98	-0.31
10,906.0	89.10	180.50	7,707.3	-3,100.2	1,378.3	3,309.2	0.56	0.21	-0.52
11,002.0	89.20	180.30	7,708.7	-3,196.2	1,377.6	3,403.2	0.23	0.10	-0.21
11,097.0	89.00	179.60	7,710.2	-3,291.2	1,377.7	3,496.4	0.77	-0.21	-0.74
11,193.0	89.20	180.30	7,711.7	-3,387.2	1,377.8	3,590.5	0.76	0.21	0.73
11,289.0	90.70	180.80	7,711.8	-3,483.2	1,376.8	3,684.5	1.65	1.56	0.52
11,384.0	91.00	180.60	7,710.4	-3,578.2	1,375.7	3,777.5	0.38	0.32	-0.21
11,480.0	90.60	179.60	7,709.0	-3,674.2	1,375.5	3,871.6	1.12	-0.42	-1.04
11,576.0	90.60	179.40	7,708.0	-3,770.2	1,376.3	3,965.9	0.21	0.00	-0.21
11,671.0	91.60	179.90	7,706.2	-3,865.1	1,376.9	4,059.2	1.18	1.05	0.53
11,767.0	91.50	180.50	7,703.6	-3,961.1	1,376.6	4,153.2	0.63	-0.10	0.63
11,863.0	90.70	180.10	7,701.8	-4,057.1	1,376.1	4,247.3	0.93	-0.83	-0.42
11,958.0	90.30	178.70	7,700.9	-4,152.1	1,377.1	4,340.7	1.53	-0.42	-1.47
12,054.0	91.20	178.40	7,699.7	-4,248.0	1,379.5	4,435.3	0.99	0.94	-0.31
12,150.0	91.00	179.40	7,697.8	-4,344.0	1,381.3	4,529.7	1.06	-0.21	1.04
12,246.0	90.70	181.00	7,696.4	-4,440.0	1,381.0	4,623.8	1.70	-0.31	1.67
12,342.0	89.70	181.20	7,696.1	-4,536.0	1,379.2	4,717.6	1.06	-1.04	0.21
12,438.0	90.50	180.60	7,695.9	-4,631.9	1,377.7	4,811.5	1.04	0.83	-0.63
12,534.0	90.20	181.50	7,695.3	-4,727.9	1,375.9	4,905.3	0.99	-0.31	0.94
12,630.0	88.70	181.50	7,696.3	-4,823.9	1,373.4	4,998.9	1.56	-1.56	0.00
12,725.0	89.30	180.80	7,697.9	-4,918.8	1,371.5	5,091.7	0.97	0.63	-0.74
12,821.0	89.90	180.80	7,698.6	-5,014.8	1,370.1	5,185.6	0.63	0.63	0.00
12,917.0	90.50	180.30	7,698.2	-5,110.8	1,369.2	5,279.6	0.81	0.63	-0.52
13,013.0	89.60	180.60	7,698.2	-5,206.8	1,368.5	5,373.6	0.99	-0.94	0.31
13,109.0	91.00	180.10	7,697.7	-5,302.8	1,367.9	5,467.6	1.55	1.46	-0.52
13,204.0	90.70	179.80	7,696.2	-5,397.8	1,368.0	5,560.8	0.45	-0.32	-0.32

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Jacobucci 32S-323
<b>Project:</b>	SEC.32-T1N-R67W	<b>TVD Reference:</b>	WELL @ 5082.0ft (RKB - 23')
<b>Site:</b>	Jacobucci 1N67W32S Pad Sec.32-T1N-R67W	<b>MD Reference:</b>	WELL @ 5082.0ft (RKB - 23')
<b>Well:</b>	Jacobucci 32S-323	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	US_EDM

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
13,300.0	89.50	179.60	7,696.1	-5,493.8	1,368.5	5,655.1	1.27	-1.25	-0.21	
13,396.0	90.20	179.20	7,696.3	-5,589.8	1,369.5	5,749.4	0.84	0.73	-0.42	
13,492.0	91.00	178.90	7,695.3	-5,685.8	1,371.1	5,843.9	0.89	0.83	-0.31	
13,588.0	90.20	178.70	7,694.3	-5,781.8	1,373.1	5,938.4	0.86	-0.83	-0.21	
13,684.0	90.70	178.40	7,693.6	-5,877.7	1,375.5	6,033.0	0.61	0.52	-0.31	
13,780.0	90.40	177.50	7,692.6	-5,973.7	1,378.9	6,127.8	0.99	-0.31	-0.94	
13,876.0	88.50	176.80	7,693.6	-6,069.5	1,383.7	6,222.8	2.11	-1.98	-0.73	
13,924.0	86.90	176.10	7,695.5	-6,117.4	1,386.7	6,270.3	3.64	-3.33	-1.46	
13,973.0	87.70	175.40	7,697.8	-6,166.2	1,390.3	6,318.9	2.17	1.63	-1.43	
14,021.0	89.30	176.40	7,699.1	-6,214.1	1,393.7	6,366.5	3.93	3.33	2.08	
14,069.0	90.00	178.20	7,699.4	-6,262.0	1,396.0	6,414.0	4.02	1.46	3.75	
14,165.0	89.30	179.20	7,699.9	-6,358.0	1,398.2	6,508.5	1.27	-0.73	1.04	
14,260.0	89.60	180.10	7,700.9	-6,453.0	1,398.8	6,601.8	1.00	0.32	0.95	
14,356.0	90.80	181.00	7,700.5	-6,549.0	1,397.8	6,695.8	1.56	1.25	0.94	
14,452.0	92.00	180.10	7,698.2	-6,644.9	1,396.9	6,789.7	1.56	1.25	-0.94	
14,548.0	91.90	181.20	7,694.9	-6,740.9	1,395.8	6,883.6	1.15	-0.10	1.15	
14,644.0	91.60	181.20	7,692.0	-6,836.8	1,393.8	6,977.3	0.31	-0.31	0.00	
14,672.0	92.10	181.00	7,691.1	-6,864.8	1,393.3	7,004.7	1.92	1.79	-0.71	
14,727.0	92.10	181.00	7,689.1	-6,919.7	1,392.3	7,058.4	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude		Longitude
- hit/miss target										
- Shape										
SHL 2338'FSL & 1720'FI	0.00	0.00	1.0	0.1	0.0	1,245,853.64	3,164,992.92	40.006750		-104.911000
- survey misses target center by 0.1ft at 1.0ft MD (1.0 TVD, 0.0 N, 0.0 E)										
- Point										
BHL 500'FSL & 779'FEL	0.00	0.00	7,692.0	-6,921.4	1,373.0	1,238,941.75	3,166,411.86	39.987750		-104.906100
- survey misses target center by 19.6ft at 14727.0ft MD (7689.1 TVD, -6919.7 N, 1392.3 E)										
- Point										

Survey Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
7,943.9	7,610.7	-158.0	1,385.7	Crosses 460' Setback - 460'FSL & 334'FEL, Sec.32	
8,512.0	7,716.9	-706.6	1,375.2	Deepest TVD Drilled - 7716.87' TVD	

Checked By: _____	Approved By: _____	Date: _____
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