

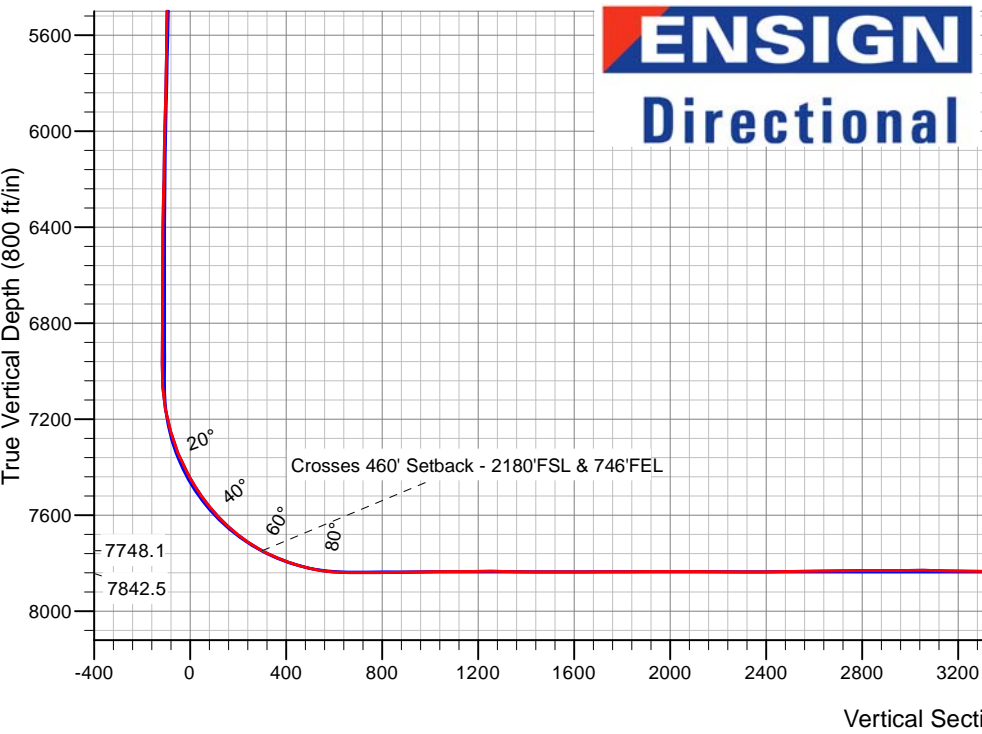
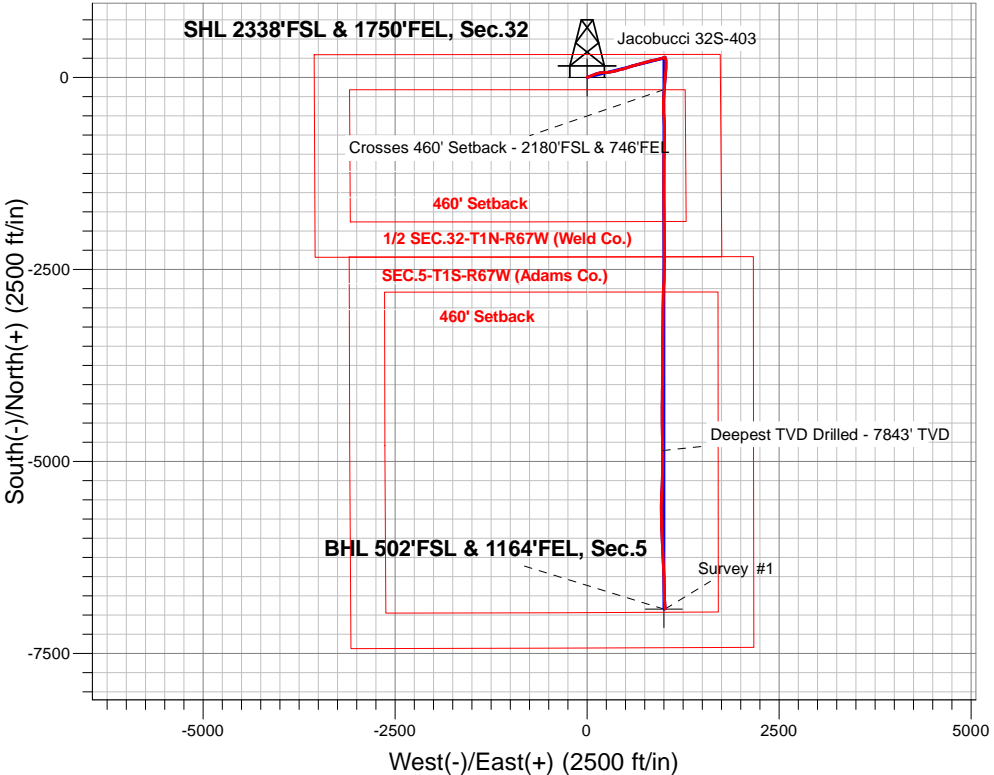
PETROLEUM DEVELOPMENT CORP DJ Basin

Well Name: **Jacobucci 32S-403**

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 1245853.423164964.91 40.006750 -104.911100
RKB - 23' WELL @ 5082.0ft (RKB - 23')

FINAL SURVEY

Projected Bottom Hole Location
14787'MD 7826'TVD 6920'S & 1017'E of SHL
91.6 degree Incl @ 176.6 degree AZM



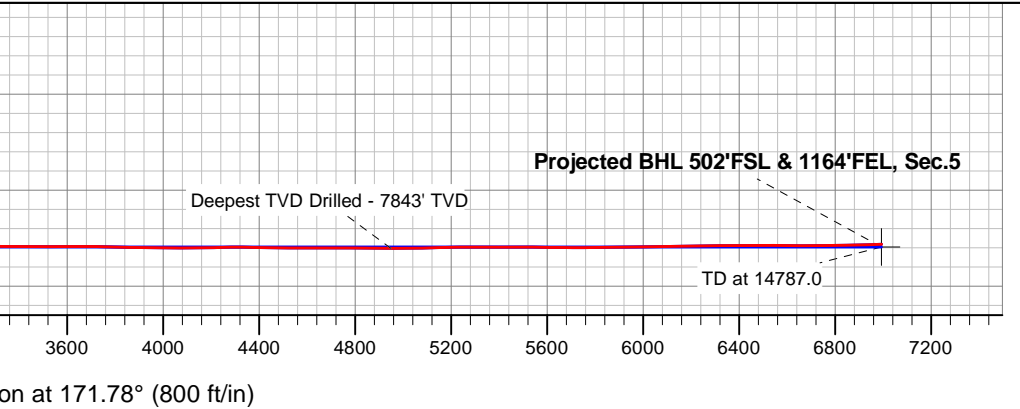
Jacobucci 1N67W32S Pad Sec.32-T1N-R67W Jacobucci 32S-403 Wellbore #1 7:47, October 24 2016		ANNOTATIONS	
TVD	MD	Annotation	
7748.1	8006.9	Crosses 460' Setback - 2180'FSL & 746'FEL	
7842.5	12724.0	Deepest TVD Drilled - 7843' TVD	

LEGEND

✕ Jacobucci 32S-403, Wellbore #1, Plan #3 (10-07-16)R V0

□ Wellbore #1

○ Survey #1





PETROLEUM DEVELOPMENT CORP DJ Basin

SEC.32-T1N-R67W

Jacobucci 1N67W32S Pad Sec.32-T1N-R67W

Jacobucci 32S-403

Wellbore #1

Survey: Survey #1

Standard Survey Report

24 October, 2016

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Jacobucci 32S-403
Project:	SEC.32-T1N-R67W	TVD Reference:	WELL @ 5082.0ft (RKB - 23')
Site:	Jacobucci 1N67W32S Pad Sec.32-T1N-R67W	MD Reference:	WELL @ 5082.0ft (RKB - 23')
Well:	Jacobucci 32S-403	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	US_EDM

Project	SEC.32-T1N-R67W, Weld County, CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	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-403					
Well Position	+N/-S	0.0 ft	Northing:	1,245,853.42 usft	Latitude:	40.006750
	+E/-W	0.0 ft	Easting:	3,164,964.91 usft	Longitude:	-104.911100
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,059.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	10/7/2016	8.19	66.53	52,348

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	171.78	

Survey Program	Date	10/24/2016			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
252.0	14,787.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

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)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
252.0	0.50	76.60	252.0	0.3	1.1	-0.1	0.20	0.20	0.00	
347.0	0.20	126.30	347.0	0.3	1.6	0.0	0.42	-0.32	52.32	
444.0	0.40	72.20	444.0	0.3	2.1	0.0	0.34	0.21	-55.77	
539.0	0.40	9.40	539.0	0.7	2.4	-0.3	0.44	0.00	-66.11	
635.0	0.40	26.70	635.0	1.3	2.6	-0.9	0.13	0.00	18.02	
730.0	0.40	1.50	730.0	1.9	2.8	-1.5	0.18	0.00	-26.53	
826.0	0.40	31.10	826.0	2.6	3.0	-2.1	0.21	0.00	30.83	
922.0	0.30	8.70	922.0	3.1	3.2	-2.6	0.17	-0.10	-23.33	
1,018.0	1.70	59.40	1,018.0	4.1	4.5	-3.4	1.59	1.46	52.81	

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Jacobucci 32S-403
Project:	SEC.32-T1N-R67W	TVD Reference:	WELL @ 5082.0ft (RKB - 23')
Site:	Jacobucci 1N67W32S Pad Sec.32-T1N-R67W	MD Reference:	WELL @ 5082.0ft (RKB - 23')
Well:	Jacobucci 32S-403	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	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)
1,114.0	4.00	76.10	1,113.8	5.6	8.9	-4.3	2.52	2.40	17.40
1,209.0	5.50	76.20	1,208.5	7.5	16.6	-5.0	1.58	1.58	0.11
1,305.0	6.70	71.70	1,304.0	10.3	26.4	-6.5	1.34	1.25	-4.69
1,401.0	7.40	66.60	1,399.2	14.6	37.3	-9.1	0.98	0.73	-5.31
1,497.0	8.60	69.40	1,494.3	19.5	49.7	-12.2	1.31	1.25	2.92
1,593.0	10.30	65.70	1,589.0	25.6	64.3	-16.1	1.88	1.77	-3.85
1,689.0	11.60	66.90	1,683.3	32.9	81.0	-21.0	1.37	1.35	1.25
1,785.0	12.00	71.70	1,777.2	39.8	99.3	-25.2	1.10	0.42	5.00
1,880.0	10.60	71.70	1,870.4	45.7	117.0	-28.5	1.47	-1.47	0.00
2,006.0	10.00	71.50	1,994.4	52.8	138.4	-32.4	0.48	-0.48	-0.16
2,070.0	9.10	73.40	2,057.5	56.0	148.5	-34.2	1.49	-1.41	2.97
2,165.0	10.70	78.40	2,151.0	59.9	164.3	-35.8	1.91	1.68	5.26
2,261.0	11.80	89.90	2,245.2	61.7	182.9	-34.9	2.60	1.15	11.98
2,357.0	13.50	87.50	2,338.9	62.2	203.9	-32.4	1.85	1.77	-2.50
2,453.0	13.00	87.30	2,432.3	63.2	225.9	-30.3	0.52	-0.52	-0.21
2,548.0	13.50	84.50	2,524.8	64.8	247.6	-28.7	0.86	0.53	-2.95
2,645.0	12.80	85.70	2,619.3	66.7	269.6	-27.4	0.77	-0.72	1.24
2,740.0	14.20	83.40	2,711.6	68.8	291.7	-26.4	1.58	1.47	-2.42
2,836.0	14.00	77.50	2,804.7	72.7	314.7	-26.9	1.51	-0.21	-6.15
2,931.0	13.50	76.80	2,897.0	77.7	336.7	-28.7	0.55	-0.53	-0.74
3,027.0	12.60	75.90	2,990.5	82.8	357.8	-30.8	0.96	-0.94	-0.94
3,123.0	11.80	75.50	3,084.4	87.8	377.4	-32.9	0.84	-0.83	-0.42
3,218.0	11.00	74.50	3,177.5	92.7	395.6	-35.1	0.87	-0.84	-1.05
3,314.0	10.30	73.80	3,271.8	97.5	412.6	-37.5	0.74	-0.73	-0.73
3,410.0	10.90	75.90	3,366.2	102.1	429.7	-39.6	0.74	0.63	2.19
3,505.0	10.60	76.90	3,459.5	106.3	446.9	-41.3	0.37	-0.32	1.05
3,601.0	11.30	76.10	3,553.8	110.6	464.6	-43.0	0.75	0.73	-0.83
3,697.0	10.60	75.70	3,648.0	115.0	482.3	-44.8	0.73	-0.73	-0.42
3,792.0	11.30	72.40	3,741.3	120.0	499.7	-47.3	0.99	0.74	-3.47
3,888.0	10.60	70.80	3,835.6	125.7	517.0	-50.5	0.79	-0.73	-1.67
3,983.0	11.50	70.60	3,928.8	131.7	534.1	-54.0	0.95	0.95	-0.21
4,079.0	12.00	72.70	4,022.8	137.9	552.7	-57.4	0.69	0.52	2.19
4,175.0	12.80	73.20	4,116.5	143.9	572.4	-60.6	0.84	0.83	0.52
4,271.0	12.00	73.10	4,210.3	149.9	592.1	-63.6	0.83	-0.83	-0.10
4,367.0	12.90	74.10	4,304.0	155.7	612.0	-66.6	0.96	0.94	1.04
4,463.0	12.10	74.60	4,397.8	161.3	632.0	-69.3	0.84	-0.83	0.52
4,558.0	12.50	75.30	4,490.6	166.6	651.5	-71.7	0.45	0.42	0.74
4,655.0	11.60	75.70	4,585.5	171.7	671.1	-73.9	0.93	-0.93	0.41
4,750.0	12.30	73.80	4,678.4	176.8	690.1	-76.3	0.85	0.74	-2.00
4,846.0	11.40	73.10	4,772.3	182.5	709.0	-79.2	0.95	-0.94	-0.73
4,941.0	12.30	74.80	4,865.3	187.8	727.8	-81.8	1.02	0.95	1.79
5,036.0	11.90	73.90	4,958.2	193.2	746.9	-84.4	0.47	-0.42	-0.95
5,132.0	11.70	73.40	5,052.2	198.7	765.8	-87.1	0.23	-0.21	-0.52
5,226.0	11.90	75.20	5,144.2	203.9	784.3	-89.6	0.45	0.21	1.91

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Jacobucci 32S-403
Project:	SEC.32-T1N-R67W	TVD Reference:	WELL @ 5082.0ft (RKB - 23')
Site:	Jacobucci 1N67W32S Pad Sec.32-T1N-R67W	MD Reference:	WELL @ 5082.0ft (RKB - 23')
Well:	Jacobucci 32S-403	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	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)
5,321.0	12.20	74.10	5,237.1	209.2	803.4	-92.1	0.40	0.32	-1.16
5,416.0	12.20	75.30	5,330.0	214.5	822.8	-94.6	0.27	0.00	1.26
5,511.0	12.40	80.10	5,422.8	218.8	842.5	-96.0	1.10	0.21	5.05
5,607.0	11.60	78.90	5,516.7	222.4	862.2	-96.8	0.87	-0.83	-1.25
5,703.0	12.30	78.50	5,610.6	226.3	881.6	-97.9	0.73	0.73	-0.42
5,799.0	11.50	77.50	5,704.5	230.4	901.0	-99.2	0.86	-0.83	-1.04
5,895.0	11.90	77.10	5,798.5	234.7	920.0	-100.7	0.43	0.42	-0.42
5,991.0	10.90	75.00	5,892.6	239.3	938.4	-102.6	1.13	-1.04	-2.19
6,085.0	10.40	72.70	5,985.0	244.1	955.1	-105.0	0.70	-0.53	-2.45
6,180.0	8.80	74.80	6,078.7	248.5	970.3	-107.2	1.72	-1.68	2.21
6,276.0	7.40	73.60	6,173.7	252.2	983.3	-109.0	1.47	-1.46	-1.25
6,371.0	5.40	72.40	6,268.1	255.3	993.4	-110.6	2.11	-2.11	-1.26
6,467.0	4.70	64.60	6,363.8	258.3	1,001.3	-112.5	1.02	-0.73	-8.13
6,562.0	2.60	79.90	6,458.6	260.4	1,006.9	-113.7	2.42	-2.21	16.11
6,658.0	0.40	57.10	6,554.5	261.0	1,009.4	-113.9	2.33	-2.29	-23.75
6,754.0	0.50	28.90	6,650.5	261.5	1,009.9	-114.4	0.25	0.10	-29.38
6,850.0	0.70	62.50	6,746.5	262.1	1,010.6	-114.9	0.41	0.21	35.00
6,976.0	1.40	71.80	6,872.5	263.0	1,012.7	-115.4	0.57	0.56	7.38
7,072.0	1.80	63.70	6,968.5	264.0	1,015.2	-116.1	0.48	0.42	-8.44
7,168.0	3.50	158.00	7,064.4	262.0	1,017.6	-113.7	4.22	1.77	98.23
7,263.0	10.20	165.30	7,158.7	251.1	1,020.9	-102.5	7.10	7.05	7.68
7,359.0	15.70	172.90	7,252.2	230.0	1,024.6	-81.1	5.99	5.73	7.92
7,455.0	22.20	177.50	7,342.9	199.0	1,027.0	-50.0	6.94	6.77	4.79
7,551.0	28.70	180.10	7,429.6	157.7	1,027.8	-9.1	6.87	6.77	2.71
7,647.0	34.90	182.20	7,511.1	107.2	1,026.7	40.8	6.56	6.46	2.19
7,743.0	41.60	182.90	7,586.5	47.9	1,024.0	99.1	6.99	6.98	0.73
7,838.0	49.20	185.70	7,653.1	-19.5	1,018.8	165.1	8.27	8.00	2.95
7,934.0	56.50	186.80	7,711.1	-95.5	1,010.5	239.1	7.66	7.60	1.15
8,006.9	62.42	184.64	7,748.1	-158.0	1,004.3	300.0	8.51	8.12	-2.97
Crosses 460' Setback - 2180'FSL & 746'FEL									
8,030.0	64.30	184.00	7,758.5	-178.6	1,002.7	320.2	8.51	8.15	-2.75
8,126.0	71.00	182.90	7,795.0	-267.1	997.4	407.1	7.06	6.98	-1.15
8,222.0	76.70	180.30	7,821.7	-359.3	994.8	497.9	6.48	5.94	-2.71
8,318.0	85.90	176.40	7,836.2	-454.0	997.6	592.0	10.39	9.58	-4.06
8,414.0	89.50	176.40	7,840.0	-549.7	1,003.6	687.6	3.75	3.75	0.00
8,509.0	90.90	178.50	7,839.7	-644.6	1,007.9	782.2	2.66	1.47	2.21
8,605.0	91.20	180.10	7,837.9	-740.6	1,009.0	877.3	1.70	0.31	1.67
8,700.0	90.70	180.80	7,836.3	-835.6	1,008.3	971.2	0.91	-0.53	0.74
8,796.0	90.10	181.70	7,835.7	-931.6	1,006.2	1,065.9	1.13	-0.63	0.94
8,892.0	91.20	181.30	7,834.6	-1,027.5	1,003.7	1,160.5	1.22	1.15	-0.42
8,988.0	89.30	181.90	7,834.2	-1,123.5	1,001.0	1,255.1	2.08	-1.98	0.63
9,084.0	89.30	181.50	7,835.3	-1,219.4	998.2	1,349.7	0.42	0.00	-0.42
9,180.0	89.80	180.50	7,836.1	-1,315.4	996.5	1,444.4	1.16	0.52	-1.04

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Site:	Jacobucci 1N67W32S Pad Sec.32-T1N-R67W	MD Reference:	WELL @ 5082.0ft (RKB - 23')
Well:	Jacobucci 32S-403	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	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)
9,275.0	90.00	179.20	7,836.3	-1,410.4	996.7	1,538.5	1.38	0.21	-1.37
9,371.0	90.00	177.10	7,836.3	-1,506.3	999.8	1,633.9	2.19	0.00	-2.19
9,467.0	90.50	179.10	7,835.8	-1,602.3	1,003.0	1,729.3	2.15	0.52	2.08
9,563.0	89.90	179.40	7,835.5	-1,698.3	1,004.3	1,824.5	0.70	-0.63	0.31
9,659.0	90.50	180.50	7,835.2	-1,794.3	1,004.4	1,919.5	1.31	0.63	1.15
9,755.0	89.70	179.10	7,835.0	-1,890.3	1,004.7	2,014.5	1.68	-0.83	-1.46
9,851.0	90.20	181.90	7,835.1	-1,986.3	1,003.8	2,109.4	2.96	0.52	2.92
9,946.0	89.00	179.80	7,835.8	-2,081.2	1,002.4	2,203.2	2.55	-1.26	-2.21
10,042.0	89.80	179.90	7,836.8	-2,177.2	1,002.7	2,298.3	0.84	0.83	0.10
10,137.0	90.50	179.90	7,836.5	-2,272.2	1,002.9	2,392.3	0.74	0.74	0.00
10,236.0	90.70	180.30	7,835.5	-2,371.2	1,002.7	2,490.3	0.45	0.20	0.40
10,329.0	91.50	180.30	7,833.7	-2,464.2	1,002.2	2,582.2	0.86	0.86	0.00
10,425.0	90.80	180.80	7,831.8	-2,560.2	1,001.3	2,677.1	0.90	-0.73	0.52
10,521.0	90.00	181.30	7,831.1	-2,656.2	999.5	2,771.8	0.98	-0.83	0.52
10,616.0	89.70	181.90	7,831.3	-2,751.1	996.9	2,865.4	0.71	-0.32	0.63
10,712.0	90.90	181.70	7,830.8	-2,847.1	993.8	2,960.0	1.27	1.25	-0.21
10,808.0	89.70	181.90	7,830.3	-2,943.0	990.8	3,054.5	1.27	-1.25	0.21
10,904.0	88.30	180.80	7,832.0	-3,039.0	988.6	3,149.1	1.85	-1.46	-1.15
11,000.0	89.20	181.00	7,834.1	-3,134.9	987.1	3,243.9	0.96	0.94	0.21
11,095.0	90.30	181.20	7,834.5	-3,229.9	985.2	3,337.6	1.18	1.16	0.21
11,191.0	89.30	179.60	7,834.9	-3,325.9	984.6	3,432.5	1.97	-1.04	-1.67
11,286.0	90.00	179.10	7,835.4	-3,420.9	985.6	3,526.7	0.91	0.74	-0.53
11,383.0	90.80	179.10	7,834.8	-3,517.9	987.2	3,622.9	0.82	0.82	0.00
11,478.0	88.90	180.50	7,835.0	-3,612.9	987.5	3,717.0	2.48	-2.00	1.47
11,574.0	88.50	180.80	7,837.2	-3,708.8	986.4	3,811.8	0.52	-0.42	0.31
11,669.0	88.80	181.00	7,839.4	-3,803.8	984.9	3,905.6	0.38	0.32	0.21
11,765.0	89.50	181.00	7,840.8	-3,899.8	983.2	4,000.3	0.73	0.73	0.00
11,861.0	90.00	179.80	7,841.3	-3,995.8	982.6	4,095.2	1.35	0.52	-1.25
11,957.0	91.90	181.00	7,839.7	-4,091.8	981.9	4,190.1	2.34	1.98	1.25
12,052.0	90.10	181.00	7,838.0	-4,186.7	980.3	4,283.9	1.89	-1.89	0.00
12,148.0	89.10	181.30	7,838.7	-4,282.7	978.3	4,378.6	1.09	-1.04	0.31
12,244.0	89.00	180.10	7,840.3	-4,378.7	977.2	4,473.4	1.25	-0.10	-1.25
12,340.0	90.10	178.50	7,841.0	-4,474.7	978.3	4,568.6	2.02	1.15	-1.67
12,436.0	90.00	179.10	7,840.9	-4,570.6	980.3	4,663.9	0.63	-0.10	0.63
12,532.0	89.30	178.40	7,841.5	-4,666.6	982.4	4,759.2	1.03	-0.73	-0.73
12,628.0	90.10	179.20	7,842.0	-4,762.6	984.4	4,854.4	1.18	0.83	0.83
12,724.0	89.30	179.10	7,842.5	-4,858.6	985.9	4,949.6	0.84	-0.83	-0.10
Deepest TVD Drilled - 7843' TVD									
12,819.0	91.20	179.80	7,842.1	-4,953.6	986.8	5,043.8	2.13	2.00	0.74
12,915.0	91.40	180.80	7,839.9	-5,049.5	986.3	5,138.7	1.06	0.21	1.04
13,011.0	90.50	181.90	7,838.4	-5,145.5	984.0	5,233.3	1.48	-0.94	1.15
13,107.0	90.30	182.40	7,837.7	-5,241.4	980.4	5,327.8	0.56	-0.21	0.52
13,155.0	89.80	182.80	7,837.6	-5,289.4	978.2	5,374.9	1.33	-1.04	0.83
13,203.0	89.90	183.30	7,837.8	-5,337.3	975.7	5,422.0	1.06	0.21	1.04

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Jacobucci 32S-403
Project:	SEC.32-T1N-R67W	TVD Reference:	WELL @ 5082.0ft (RKB - 23')
Site:	Jacobucci 1N67W32S Pad Sec.32-T1N-R67W	MD Reference:	WELL @ 5082.0ft (RKB - 23')
Well:	Jacobucci 32S-403	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	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)	
13,251.0	89.60	182.90	7,838.0	-5,385.2	973.1	5,469.1	1.04	-0.63	-0.83	
13,299.0	90.00	181.90	7,838.1	-5,433.2	971.1	5,516.2	2.24	0.83	-2.08	
13,347.0	89.70	181.50	7,838.3	-5,481.2	969.6	5,563.5	1.04	-0.63	-0.83	
13,394.0	89.80	180.60	7,838.5	-5,528.2	968.8	5,609.9	1.93	0.21	-1.91	
13,442.0	89.40	179.90	7,838.8	-5,576.2	968.6	5,657.4	1.68	-0.83	-1.46	
13,491.0	89.30	180.30	7,839.4	-5,625.2	968.5	5,705.8	0.84	-0.20	0.82	
13,538.0	89.60	181.00	7,839.8	-5,672.2	968.0	5,752.3	1.62	0.64	1.49	
13,585.0	90.00	179.90	7,840.0	-5,719.2	967.6	5,798.7	2.49	0.85	-2.34	
13,633.0	90.80	178.50	7,839.6	-5,767.1	968.3	5,846.3	3.36	1.67	-2.92	
13,681.0	90.80	177.70	7,839.0	-5,815.1	969.9	5,894.0	1.67	0.00	-1.67	
13,729.0	91.20	177.50	7,838.1	-5,863.1	971.9	5,941.8	0.93	0.83	-0.42	
13,777.0	91.40	177.70	7,837.0	-5,911.0	973.9	5,989.5	0.59	0.42	0.42	
13,824.0	91.40	177.30	7,835.9	-5,957.9	975.9	6,036.3	0.85	0.00	-0.85	
13,873.0	91.40	177.10	7,834.7	-6,006.9	978.3	6,085.0	0.41	0.00	-0.41	
13,920.0	91.60	176.80	7,833.5	-6,053.8	980.8	6,131.8	0.77	0.43	-0.64	
13,969.0	91.10	176.60	7,832.3	-6,102.7	983.6	6,180.6	1.10	-1.02	-0.41	
14,016.0	90.60	176.60	7,831.6	-6,149.6	986.4	6,227.5	1.06	-1.06	0.00	
14,065.0	90.00	177.10	7,831.4	-6,198.5	989.1	6,276.3	1.59	-1.22	1.02	
14,161.0	89.80	177.50	7,831.5	-6,294.4	993.6	6,371.8	0.47	-0.21	0.42	
14,256.0	89.80	178.90	7,831.9	-6,389.4	996.6	6,466.2	1.47	0.00	1.47	
14,352.0	90.10	178.40	7,831.9	-6,485.4	998.9	6,561.5	0.61	0.31	-0.52	
14,448.0	90.70	177.70	7,831.3	-6,581.3	1,002.1	6,657.0	0.96	0.63	-0.73	
14,544.0	90.10	178.20	7,830.6	-6,677.2	1,005.6	6,752.4	0.81	-0.63	0.52	
14,640.0	90.90	177.50	7,829.8	-6,773.2	1,009.2	6,847.9	1.11	0.83	-0.73	
14,727.0	91.60	176.60	7,827.9	-6,860.0	1,013.7	6,934.5	1.31	0.80	-1.03	
14,787.0	91.60	176.60	7,826.2	-6,919.9	1,017.2	6,994.2	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 & 1750'FI	0.00	0.00	1.0	0.0	0.0	1,245,853.46	3,164,964.91	40.006750	-104.911100	
- survey hits target center										
- Point										
BHL 500'FSL & 1181'FEI	0.00	0.00	7,837.0	-6,921.4	1,000.4	1,238,939.07	3,166,011.18	39.987750	-104.907530	
- survey misses target center by 20.1ft at 14787.0ft MD (7826.2 TVD, -6919.9 N, 1017.2 E)										
- Point										

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Site:	Jacobucci 1N67W32S Pad Sec.32-T1N-R67W	MD Reference:	WELL @ 5082.0ft (RKB - 23')
Well:	Jacobucci 32S-403	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	US_EDM

Survey Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
8,006.9	7,748.1	-158.0	1,004.3	Crosses 460' Setback - 2180'FSL & 746'FEL
12,724.0	7,842.5	-4,858.6	985.9	Deepest TVD Drilled - 7843' TVD

Checked By: _____	Approved By: _____	Date: _____
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