

PETROLEUM DEVELOPMENT CORP Weld County CO

Well Name: **Riteaway 32M-243**

Surface Location: Riteaway NW-32 Pad Sec.32-T5N-R67W

North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

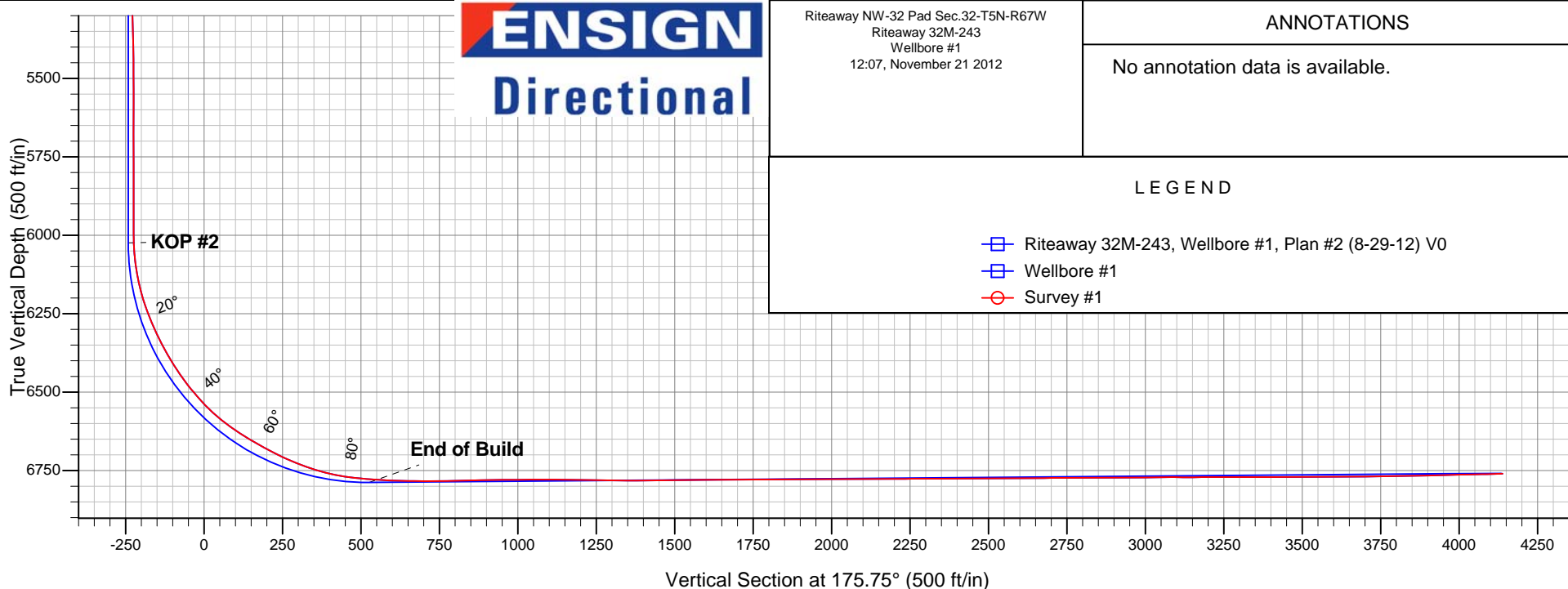
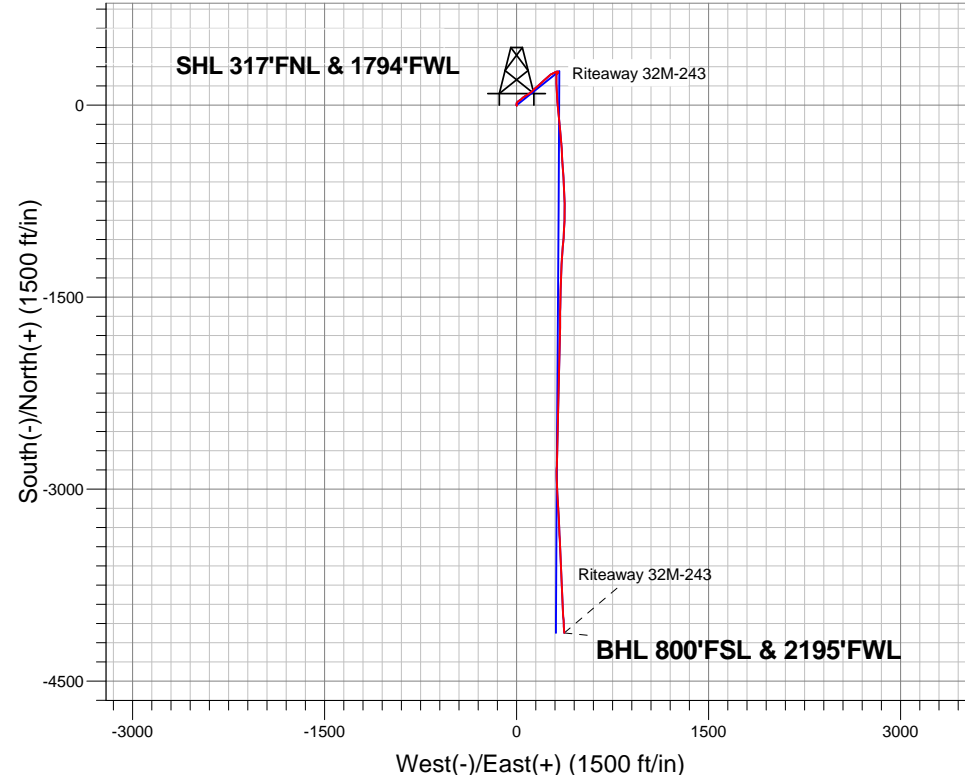
Ground Elevation: 4795.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1375449.59	3161601.77	40.362560	-104.920080	

Original Well Elev WELL @ 4810.0ft (Original Well Elev)

FINAL SURVEY

Projected Bottom Hole Location
10836'MD 6760'TVD 4122'S & 373'E of SHL
91.3 degree Incl @ 176.2 degree AZM



Riteaway NW-32 Pad Sec.32-T5N-R67W
Riteaway 32M-243
Wellbore #1
12:07, November 21 2012

ANNOTATIONS

No annotation data is available.

LEGEND

- Riteaway 32M-243, Wellbore #1, Plan #2 (8-29-12) V0
- Wellbore #1
- Survey #1



PETROLEUM DEVELOPMENT CORP Weld County CO

SEC.32-T5N-R67W

Riteaway NW-32 Pad Sec.32-T5N-R67W

Riteaway 32M-243

Wellbore #1

Survey: Survey #1

Standard Survey Report

21 November, 2012

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Riteaway 32M-243
Project:	SEC.32-T5N-R67W	TVD Reference:	WELL @ 4810.0ft (Original Well Elev)
Site:	Riteaway NW-32 Pad Sec.32-T5N-R67W	MD Reference:	WELL @ 4810.0ft (Original Well Elev)
Well:	Riteaway 32M-243	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.32-T5N-R67W, Weld County, Colorado		
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		Riteaway NW-32 Pad Sec.32-T5N-R67W			
Site Position:		Northing:	1,375,525.79ft	Latitude:	40.362770
From:	Lat/Long	Easting:	3,161,553.90ft	Longitude:	-104.920250
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.37 °

Well	Riteaway 32M-243					
Well Position	+N-S	0.0 ft	Northing:	1,375,449.59 ft	Latitude:	40.362560
	+E-W	0.0 ft	Easting:	3,161,601.77 ft	Longitude:	-104.920080
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,795.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	9/6/2012	8.78	66.95	52,966

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	175.75	

Survey Program	Date	11/21/2012			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
113.0	10,836.0	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 (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
1.0	0.01	138.80	1.0	0.0	0.0	0.0	0.80	0.80	0.00	
SECTION LINE 317°N OF SHL										
1.7	0.01	138.80	1.7	0.0	0.0	0.0	0.80	0.80	0.00	
HARDLINES SHL 460°FNL & 2166°FWL										
29.3	0.23	138.80	29.3	0.0	0.0	0.0	0.80	0.80	0.00	
HARDLINE BHL 460°FSL										
113.0	0.90	138.80	113.0	-0.7	0.6	0.7	0.80	0.80	0.00	
205.0	0.70	154.80	205.0	-1.7	1.3	1.8	0.32	-0.22	17.39	
298.0	0.10	310.00	298.0	-2.2	1.5	2.3	0.85	-0.65	166.88	
389.0	0.40	337.20	389.0	-1.8	1.3	1.9	0.35	0.33	29.89	
482.0	0.30	337.70	482.0	-1.3	1.1	1.4	0.11	-0.11	0.54	

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Site:	Riteaway NW-32 Pad Sec.32-T5N-R67W	MD Reference:	WELL @ 4810.0ft (Original Well Elev)
Well:	Riteaway 32M-243	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
573.0	1.10	354.40	573.0	-0.2	0.9	0.3	0.90	0.88	18.35
665.0	1.40	343.10	665.0	1.7	0.5	-1.7	0.42	0.33	-12.28
757.0	1.40	343.40	756.9	3.9	-0.2	-3.9	0.01	0.00	0.33
849.0	1.70	358.40	848.9	6.3	-0.5	-6.3	0.55	0.33	16.30
944.0	2.10	349.80	943.8	9.4	-0.9	-9.5	0.52	0.42	-9.05
1,036.0	1.90	16.30	1,035.8	12.6	-0.7	-12.6	1.02	-0.22	28.80
1,129.0	2.60	18.40	1,128.7	16.1	0.4	-16.0	0.76	0.75	2.26
1,224.0	3.30	38.70	1,223.6	20.2	2.8	-20.0	1.31	0.74	21.37
1,319.0	4.00	43.40	1,318.4	24.8	6.7	-24.2	0.80	0.74	4.95
1,414.0	4.20	59.10	1,413.2	29.0	12.0	-28.0	1.20	0.21	16.53
1,509.0	4.70	53.40	1,507.9	33.1	18.1	-31.6	0.70	0.53	-6.00
1,605.0	4.70	51.50	1,603.5	37.9	24.3	-36.0	0.16	0.00	-1.98
1,700.0	5.30	51.50	1,698.2	43.0	30.8	-40.6	0.63	0.63	0.00
1,795.0	5.80	45.10	1,792.7	49.1	37.7	-46.2	0.84	0.53	-6.74
1,890.0	5.80	48.30	1,887.3	55.7	44.6	-52.3	0.34	0.00	3.37
1,985.0	5.90	53.40	1,981.8	61.8	52.1	-57.8	0.56	0.11	5.37
2,080.0	5.60	57.10	2,076.3	67.3	60.0	-62.6	0.50	-0.32	3.89
2,175.0	6.00	63.30	2,170.8	72.0	68.3	-66.7	0.78	0.42	6.53
2,271.0	7.10	63.30	2,266.2	76.9	78.1	-70.9	1.15	1.15	0.00
2,366.0	7.60	55.60	2,360.4	83.1	88.5	-76.3	1.16	0.53	-8.11
2,461.0	7.20	53.80	2,454.6	90.2	98.5	-82.6	0.49	-0.42	-1.89
2,556.0	7.10	53.50	2,548.9	97.2	108.0	-88.9	0.11	-0.11	-0.32
2,652.0	7.30	50.90	2,644.1	104.6	117.5	-95.6	0.40	0.21	-2.71
2,747.0	6.60	44.60	2,738.4	112.3	126.0	-102.6	1.09	-0.74	-6.63
2,843.0	6.50	44.40	2,833.8	120.1	133.7	-109.8	0.11	-0.10	-0.21
2,938.0	6.70	44.60	2,928.1	127.9	141.4	-117.0	0.21	0.21	0.21
3,034.0	6.80	45.80	3,023.5	135.8	149.4	-124.3	0.18	0.10	1.25
3,129.0	6.50	52.40	3,117.8	143.0	157.7	-130.9	0.86	-0.32	6.95
3,224.0	6.20	52.50	3,212.3	149.4	166.0	-136.7	0.32	-0.32	0.11
3,319.0	6.00	47.50	3,306.7	155.9	173.7	-142.6	0.60	-0.21	-5.26
3,414.0	6.90	45.80	3,401.1	163.2	181.5	-149.3	0.97	0.95	-1.79
3,509.0	7.60	48.40	3,495.4	171.4	190.3	-156.8	0.81	0.74	2.74
3,604.0	8.50	48.30	3,589.4	180.2	200.2	-164.9	0.95	0.95	-0.11
3,699.0	9.10	47.80	3,683.3	189.9	211.0	-173.8	0.64	0.63	-0.53
3,794.0	8.70	48.00	3,777.2	199.8	221.9	-182.8	0.42	-0.42	0.21
3,889.0	8.80	47.30	3,871.1	209.5	232.6	-191.7	0.15	0.11	-0.74
3,984.0	8.10	47.50	3,965.0	219.0	242.9	-200.3	0.74	-0.74	0.21
4,079.0	6.80	49.20	4,059.2	227.2	252.1	-207.8	1.39	-1.37	1.79
4,174.0	6.50	48.50	4,153.6	234.4	260.3	-214.4	0.33	-0.32	-0.74
4,269.0	6.30	55.90	4,248.0	240.9	268.7	-220.3	0.89	-0.21	7.79
4,364.0	5.50	67.20	4,342.5	245.6	277.2	-224.3	1.48	-0.84	11.89
4,459.0	5.10	63.30	4,437.1	249.2	285.2	-227.4	0.57	-0.42	-4.11
4,553.0	4.50	66.90	4,530.8	252.6	292.3	-230.2	0.71	-0.64	3.83
4,648.0	4.00	66.00	4,625.5	255.4	298.8	-232.5	0.53	-0.53	-0.95
4,744.0	3.50	66.40	4,721.3	257.9	304.5	-234.6	0.52	-0.52	0.42
4,839.0	3.80	60.40	4,816.1	260.6	309.9	-236.9	0.51	0.32	-6.32
4,934.0	3.30	74.90	4,910.9	262.9	315.3	-238.8	1.08	-0.53	15.26
5,029.0	2.80	102.70	5,005.8	263.1	320.2	-238.6	1.62	-0.53	29.26
5,124.0	2.50	137.30	5,100.7	261.1	323.8	-236.3	1.69	-0.32	36.42
5,219.0	2.70	172.60	5,195.6	257.3	325.5	-232.5	1.67	0.21	37.16
5,314.0	2.70	214.30	5,290.5	253.2	324.6	-228.5	2.02	0.00	43.89
5,415.0	2.90	244.40	5,391.4	250.2	320.9	-225.7	1.45	0.20	29.80
5,511.0	1.40	253.50	5,487.3	248.8	317.6	-224.6	1.60	-1.56	9.48

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5,606.0	0.40	291.80	5,582.3	248.6	316.2	-224.5	1.17	-1.05	40.32
5,701.0	0.40	260.80	5,677.3	248.7	315.5	-224.6	0.23	0.00	-32.63
5,796.0	0.40	241.00	5,772.3	248.4	314.9	-224.4	0.14	0.00	-20.84
5,892.0	0.70	258.20	5,868.3	248.2	314.1	-224.2	0.35	0.31	17.92
5,988.0	0.60	269.10	5,964.3	248.0	313.0	-224.1	0.17	-0.10	11.35
6,020.0	0.50	257.80	5,996.3	248.0	312.7	-224.1	0.46	-0.31	-35.31
6,051.0	2.00	189.70	6,027.3	247.4	312.5	-223.6	6.04	4.84	-219.68
6,083.0	4.70	185.70	6,059.2	245.6	312.2	-221.8	8.46	8.44	-12.50
6,115.0	7.50	183.40	6,091.0	242.2	312.0	-218.4	8.78	8.75	-7.19
6,146.0	10.20	182.20	6,121.7	237.4	311.8	-213.7	8.73	8.71	-3.87
6,178.0	12.50	181.20	6,153.0	231.1	311.6	-207.4	7.21	7.19	-3.13
6,210.0	15.30	180.90	6,184.1	223.5	311.4	-199.7	8.75	8.75	-0.94
6,242.0	18.00	180.50	6,214.8	214.3	311.3	-190.6	8.45	8.44	-1.25
6,273.0	20.40	179.70	6,244.0	204.1	311.3	-180.4	7.79	7.74	-2.58
6,305.0	22.60	177.90	6,273.8	192.4	311.6	-168.7	7.18	6.88	-5.63
6,337.0	24.40	178.70	6,303.1	179.6	311.9	-156.0	5.71	5.63	2.50
6,369.0	26.60	179.20	6,332.0	165.8	312.2	-142.2	6.91	6.88	1.56
6,401.0	28.50	178.80	6,360.4	151.0	312.4	-127.5	5.97	5.94	-1.25
6,433.0	30.40	178.90	6,388.3	135.3	312.8	-111.7	5.94	5.94	0.31
6,464.0	32.30	177.20	6,414.7	119.2	313.3	-95.6	6.76	6.13	-5.48
6,495.0	34.20	176.20	6,440.7	102.2	314.3	-78.6	6.38	6.13	-3.23
6,526.0	36.80	176.50	6,465.9	84.3	315.4	-60.6	8.41	8.39	0.97
6,556.0	39.30	176.50	6,489.5	65.8	316.6	-42.2	8.33	8.33	0.00
6,587.0	40.70	176.50	6,513.3	45.9	317.8	-22.2	4.52	4.52	0.00
6,617.0	43.60	175.70	6,535.5	25.8	319.2	-2.1	9.83	9.67	-2.67
6,648.0	46.10	175.20	6,557.5	4.0	320.9	19.8	8.14	8.06	-1.61
6,678.0	49.10	175.00	6,577.7	-18.0	322.8	41.9	10.01	10.00	-0.67
6,709.0	52.50	175.00	6,597.3	-42.0	324.9	65.9	10.97	10.97	0.00
6,739.0	55.30	174.30	6,615.0	-66.1	327.1	90.2	9.52	9.33	-2.33
6,770.0	57.00	174.10	6,632.2	-91.7	329.8	115.9	5.51	5.48	-0.65
6,801.0	58.70	174.20	6,648.7	-117.8	332.4	142.1	5.49	5.48	0.32
6,831.0	60.20	174.40	6,664.0	-143.5	335.0	168.0	5.03	5.00	0.67
6,862.0	61.10	174.30	6,679.2	-170.4	337.7	195.0	2.92	2.90	-0.32
6,892.0	63.60	174.00	6,693.1	-196.8	340.4	221.5	8.38	8.33	-1.00
6,923.0	64.90	174.00	6,706.6	-224.6	343.3	249.4	4.19	4.19	0.00
6,954.0	66.70	175.00	6,719.3	-252.7	346.0	277.7	6.51	5.81	3.23
6,984.0	68.70	175.70	6,730.7	-280.4	348.2	305.5	7.01	6.67	2.33
7,015.0	71.10	176.10	6,741.3	-309.4	350.3	334.6	7.84	7.74	1.29
7,045.0	73.30	176.80	6,750.5	-338.0	352.1	363.1	7.66	7.33	2.33
7,076.0	76.40	177.20	6,758.6	-367.8	353.6	393.0	10.08	10.00	1.29
7,107.0	79.20	176.70	6,765.1	-398.1	355.3	423.3	9.17	9.03	-1.61
7,137.0	81.90	176.50	6,770.1	-427.6	357.0	452.9	9.02	9.00	-0.67
7,168.0	83.90	176.20	6,773.9	-458.3	359.0	483.7	6.52	6.45	-0.97
7,183.0	84.70	176.40	6,775.4	-473.2	359.9	498.6	5.50	5.33	1.33
7,243.0	86.70	176.10	6,779.9	-532.9	363.9	558.4	3.37	3.33	-0.50
7,275.0	87.20	175.90	6,781.6	-564.8	366.1	590.4	1.68	1.56	-0.63
7,306.0	88.10	176.50	6,782.8	-595.7	368.1	621.4	3.49	2.90	1.94
7,338.0	88.80	176.60	6,783.7	-627.6	370.1	653.3	2.21	2.19	0.31
7,370.0	89.90	177.40	6,784.1	-659.6	371.7	685.3	4.25	3.44	2.50
7,402.0	90.20	177.80	6,784.0	-691.6	373.1	717.3	1.56	0.94	1.25
7,433.0	90.80	178.40	6,783.8	-722.5	374.1	748.3	2.74	1.94	1.94
7,464.0	90.90	178.70	6,783.3	-753.5	374.9	779.2	1.02	0.32	0.97
7,496.0	90.90	179.50	6,782.8	-785.5	375.4	811.2	2.50	0.00	2.50

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Survey									
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7,528.0	91.40	180.00	6,782.2	-817.5	375.5	843.1	2.21	1.56	1.56
7,560.0	91.60	180.80	6,781.3	-849.5	375.3	875.0	2.58	0.63	2.50
7,591.0	91.40	181.20	6,780.5	-880.5	374.8	905.8	1.44	-0.65	1.29
7,623.0	90.90	181.90	6,779.9	-912.5	373.9	937.7	2.69	-1.56	2.19
7,654.0	89.80	183.00	6,779.7	-943.4	372.6	968.5	5.02	-3.55	3.55
7,686.0	90.50	183.60	6,779.6	-975.4	370.7	1,000.2	2.88	2.19	1.88
7,717.0	91.30	183.80	6,779.1	-1,006.3	368.7	1,030.9	2.66	2.58	0.65
7,749.0	90.00	184.10	6,778.8	-1,038.2	366.5	1,062.6	4.17	-4.06	0.94
7,786.0	89.10	184.50	6,779.0	-1,075.1	363.8	1,099.1	2.66	-2.43	1.08
7,817.0	89.20	184.50	6,779.5	-1,106.0	361.3	1,129.8	0.32	0.32	0.00
7,849.0	89.60	184.10	6,779.8	-1,137.9	358.9	1,161.4	1.77	1.25	-1.25
7,881.0	89.80	184.30	6,780.0	-1,169.8	356.6	1,193.1	0.88	0.63	0.63
7,913.0	89.40	183.70	6,780.2	-1,201.8	354.3	1,224.7	2.25	-1.25	-1.88
7,944.0	89.10	183.30	6,780.6	-1,232.7	352.5	1,255.4	1.61	-0.97	-1.29
7,976.0	89.10	183.50	6,781.1	-1,264.6	350.6	1,287.2	0.62	0.00	0.63
8,008.0	88.70	183.10	6,781.8	-1,296.6	348.7	1,318.9	1.77	-1.25	-1.25
8,039.0	89.20	182.20	6,782.3	-1,327.5	347.3	1,349.6	3.32	1.61	-2.90
8,071.0	90.50	181.20	6,782.4	-1,359.5	346.3	1,381.5	5.13	4.06	-3.13
8,103.0	90.90	181.40	6,782.0	-1,391.5	345.6	1,413.3	1.40	1.25	0.63
8,135.0	90.80	181.30	6,781.5	-1,423.5	344.9	1,445.2	0.44	-0.31	-0.31
8,166.0	90.70	181.10	6,781.1	-1,454.5	344.2	1,476.0	0.72	-0.32	-0.65
8,198.0	90.70	181.10	6,780.7	-1,486.5	343.6	1,507.9	0.00	0.00	0.00
8,230.0	90.80	181.10	6,780.3	-1,518.5	343.0	1,539.7	0.31	0.31	0.00
8,261.0	90.80	181.80	6,779.9	-1,549.5	342.2	1,570.6	2.26	0.00	2.26
8,293.0	90.50	181.20	6,779.5	-1,581.5	341.4	1,602.4	2.10	-0.94	-1.88
8,325.0	90.20	180.40	6,779.3	-1,613.5	340.9	1,634.3	2.67	-0.94	-2.50
8,356.0	90.10	180.10	6,779.3	-1,644.5	340.8	1,665.2	1.02	-0.32	-0.97
8,388.0	90.10	180.40	6,779.2	-1,676.5	340.6	1,697.1	0.94	0.00	0.94
8,420.0	90.10	180.90	6,779.1	-1,708.4	340.3	1,729.0	1.56	0.00	1.56
8,453.0	90.20	181.00	6,779.1	-1,741.4	339.7	1,761.8	0.43	0.30	0.30
8,484.0	90.20	180.90	6,778.9	-1,772.4	339.2	1,792.7	0.32	0.00	-0.32
8,516.0	90.40	181.10	6,778.8	-1,804.4	338.6	1,824.6	0.88	0.63	0.63
8,548.0	90.50	181.10	6,778.5	-1,836.4	338.0	1,856.4	0.31	0.31	0.00
8,580.0	90.60	181.20	6,778.2	-1,868.4	337.4	1,888.3	0.44	0.31	0.31
8,612.0	90.40	181.00	6,777.9	-1,900.4	336.8	1,920.2	0.88	-0.63	-0.63
8,643.0	90.20	181.20	6,777.8	-1,931.4	336.2	1,951.0	0.91	-0.65	0.65
8,675.0	90.10	181.30	6,777.7	-1,963.4	335.5	1,982.9	0.44	-0.31	0.31
8,707.0	90.30	181.20	6,777.6	-1,995.4	334.8	2,014.7	0.70	0.63	-0.31
8,738.0	90.50	181.60	6,777.4	-2,026.4	334.0	2,045.6	1.44	0.65	1.29
8,770.0	90.30	181.60	6,777.1	-2,058.4	333.1	2,077.4	0.63	-0.63	0.00
8,802.0	90.10	181.50	6,777.0	-2,090.4	332.3	2,109.2	0.70	-0.63	-0.31
8,834.0	90.20	181.70	6,776.9	-2,122.3	331.4	2,141.1	0.70	0.31	0.63
8,865.0	90.30	181.80	6,776.8	-2,153.3	330.4	2,171.9	0.46	0.32	0.32
8,897.0	90.20	181.70	6,776.7	-2,185.3	329.5	2,203.7	0.44	-0.31	-0.31
8,929.0	90.20	181.70	6,776.6	-2,217.3	328.5	2,235.6	0.00	0.00	0.00
8,960.0	90.40	181.80	6,776.4	-2,248.3	327.6	2,266.4	0.72	0.65	0.32
8,992.0	90.30	181.80	6,776.2	-2,280.3	326.6	2,298.2	0.31	-0.31	0.00
9,024.0	90.00	181.80	6,776.1	-2,312.3	325.5	2,330.0	0.94	-0.94	0.00
9,056.0	90.20	181.90	6,776.1	-2,344.2	324.5	2,361.8	0.70	0.63	0.31
9,087.0	90.30	177.50	6,775.9	-2,375.2	324.7	2,392.8	14.20	0.32	-14.19
9,118.0	90.40	181.80	6,775.7	-2,406.2	324.9	2,423.7	13.87	0.32	13.87
9,150.0	90.20	181.60	6,775.6	-2,438.2	323.9	2,455.5	0.88	-0.63	-0.63
9,182.0	90.30	181.40	6,775.4	-2,470.2	323.1	2,487.3	0.70	0.31	-0.63
9,213.0	90.40	181.60	6,775.2	-2,501.2	322.3	2,518.2	0.72	0.32	0.65

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Riteaway 32M-243
Project:	SEC.32-T5N-R67W	TVD Reference:	WELL @ 4810.0ft (Original Well Elev)
Site:	Riteaway NW-32 Pad Sec.32-T5N-R67W	MD Reference:	WELL @ 4810.0ft (Original Well Elev)
Well:	Riteaway 32M-243	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,245.0	90.40	181.60	6,775.0	-2,533.2	321.4	2,550.0	0.00	0.00	0.00
9,277.0	90.30	181.40	6,774.8	-2,565.2	320.5	2,581.9	0.70	-0.31	-0.63
9,309.0	90.20	181.20	6,774.7	-2,597.1	319.8	2,613.7	0.70	-0.31	-0.63
9,341.0	90.90	181.50	6,774.4	-2,629.1	319.1	2,645.6	2.38	2.19	0.94
9,372.0	90.30	181.60	6,774.1	-2,660.1	318.2	2,676.4	1.96	-1.94	0.32
9,404.0	90.20	181.60	6,773.9	-2,692.1	317.3	2,708.2	0.31	-0.31	0.00
9,436.0	90.20	181.40	6,773.8	-2,724.1	316.5	2,740.1	0.62	0.00	-0.63
9,468.0	90.40	181.60	6,773.6	-2,756.1	315.6	2,771.9	0.88	0.63	0.63
9,499.0	90.20	181.30	6,773.5	-2,787.1	314.9	2,802.8	1.16	-0.65	-0.97
9,531.0	90.10	181.30	6,773.4	-2,819.1	314.1	2,834.6	0.31	-0.31	0.00
9,563.0	90.30	180.80	6,773.3	-2,851.1	313.6	2,866.5	1.68	0.63	-1.56
9,594.0	90.30	180.00	6,773.1	-2,882.1	313.3	2,897.4	2.58	0.00	-2.58
9,626.0	90.20	178.90	6,773.0	-2,914.1	313.6	2,929.3	3.45	-0.31	-3.44
9,658.0	90.80	177.90	6,772.7	-2,946.0	314.5	2,961.3	3.64	1.88	-3.13
9,690.0	91.00	177.50	6,772.2	-2,978.0	315.8	2,993.2	1.40	0.63	-1.25
9,721.0	90.50	177.60	6,771.8	-3,009.0	317.1	3,024.2	1.64	-1.61	0.32
9,753.0	90.30	177.10	6,771.6	-3,040.9	318.6	3,056.2	1.68	-0.63	-1.56
9,785.0	90.00	175.80	6,771.5	-3,072.9	320.6	3,088.2	4.17	-0.94	-4.06
9,816.0	89.80	176.40	6,771.5	-3,103.8	322.7	3,119.2	2.04	-0.65	1.94
9,849.0	90.20	177.10	6,771.5	-3,136.8	324.6	3,152.2	2.44	1.21	2.12
9,880.0	90.30	177.30	6,771.4	-3,167.7	326.1	3,183.2	0.72	0.32	0.65
9,912.0	90.50	177.20	6,771.2	-3,199.7	327.6	3,215.2	0.70	0.63	-0.31
9,944.0	90.50	176.60	6,770.9	-3,231.6	329.4	3,247.2	1.87	0.00	-1.88
9,975.0	90.10	176.80	6,770.7	-3,262.6	331.1	3,278.2	1.44	-1.29	0.65
10,008.0	89.60	176.50	6,770.8	-3,295.5	333.1	3,311.2	1.77	-1.52	-0.91
10,039.0	89.50	176.90	6,771.1	-3,326.5	334.9	3,342.2	1.33	-0.32	1.29
10,071.0	90.00	177.30	6,771.2	-3,358.4	336.5	3,374.1	2.00	1.56	1.25
10,103.0	90.20	177.50	6,771.1	-3,390.4	337.9	3,406.1	0.88	0.63	0.63
10,135.0	90.20	177.70	6,771.0	-3,422.4	339.3	3,438.1	0.62	0.00	0.63
10,167.0	90.00	177.80	6,771.0	-3,454.4	340.5	3,470.1	0.70	-0.63	0.31
10,198.0	90.10	177.60	6,771.0	-3,485.3	341.8	3,501.1	0.72	0.32	-0.65
10,230.0	90.20	177.40	6,770.9	-3,517.3	343.2	3,533.1	0.70	0.31	-0.63
10,262.0	90.20	177.40	6,770.8	-3,549.3	344.6	3,565.0	0.00	0.00	0.00
10,293.0	90.30	177.40	6,770.6	-3,580.2	346.0	3,596.0	0.32	0.32	0.00
10,325.0	90.40	177.60	6,770.4	-3,612.2	347.4	3,628.0	0.70	0.31	0.63
10,357.0	90.70	177.70	6,770.1	-3,644.2	348.7	3,660.0	0.99	0.94	0.31
10,389.0	90.80	177.60	6,769.7	-3,676.1	350.0	3,692.0	0.44	0.31	-0.31
10,421.0	90.90	177.70	6,769.2	-3,708.1	351.4	3,724.0	0.44	0.31	0.31
10,452.0	90.90	177.90	6,768.7	-3,739.1	352.5	3,754.9	0.65	0.00	0.65
10,484.0	91.00	177.90	6,768.2	-3,771.1	353.7	3,786.9	0.31	0.31	0.00
10,516.0	91.10	177.40	6,767.6	-3,803.0	355.0	3,818.9	1.59	0.31	-1.56
10,548.0	91.30	177.40	6,767.0	-3,835.0	356.5	3,850.9	0.63	0.63	0.00
10,580.0	91.40	177.50	6,766.2	-3,866.9	357.9	3,882.8	0.44	0.31	0.31
10,611.0	91.20	177.10	6,765.5	-3,897.9	359.4	3,913.8	1.44	-0.65	-1.29
10,643.0	91.20	176.90	6,764.8	-3,929.9	361.0	3,945.8	0.62	0.00	-0.63
10,675.0	91.30	176.70	6,764.1	-3,961.8	362.8	3,977.8	0.70	0.31	-0.63
10,707.0	91.30	176.60	6,763.4	-3,993.7	364.7	4,009.8	0.31	0.00	-0.31
10,738.0	91.50	176.60	6,762.6	-4,024.7	366.5	4,040.8	0.65	0.65	0.00
10,770.0	91.30	176.30	6,761.9	-4,056.6	368.5	4,072.8	1.13	-0.63	-0.94
10,785.0	91.30	176.20	6,761.5	-4,071.6	369.5	4,087.8	0.67	0.00	-0.67
10,831.9	91.30	176.20	6,760.5	-4,118.3	372.6	4,134.6	0.00	0.00	0.00
BHL 800'FSL & 2129'FWL									
10,836.0	91.30	176.20	6,760.4	-4,122.4	372.9	4,138.7	0.00	0.00	0.00

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Riteaway 32M-243
Project:	SEC.32-T5N-R67W	TVD Reference:	WELL @ 4810.0ft (Original Well Elev)
Site:	Riteaway NW-32 Pad Sec.32-T5N-R67W	MD Reference:	WELL @ 4810.0ft (Original Well Elev)
Well:	Riteaway 32M-243	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)

Checked By: _____	Approved By: _____	Date: _____
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