

PETROLEUM DEVELOPMENT CORP Weld County CO

Well Name: **Maxey 24P-332**

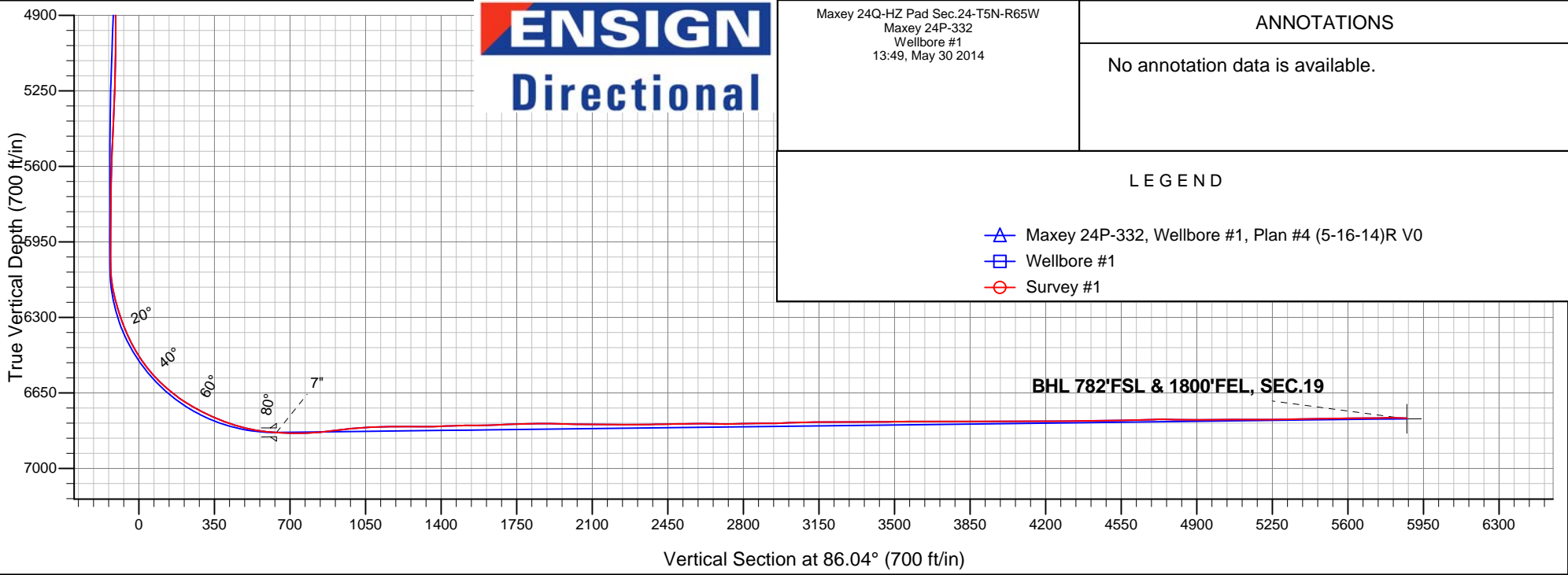
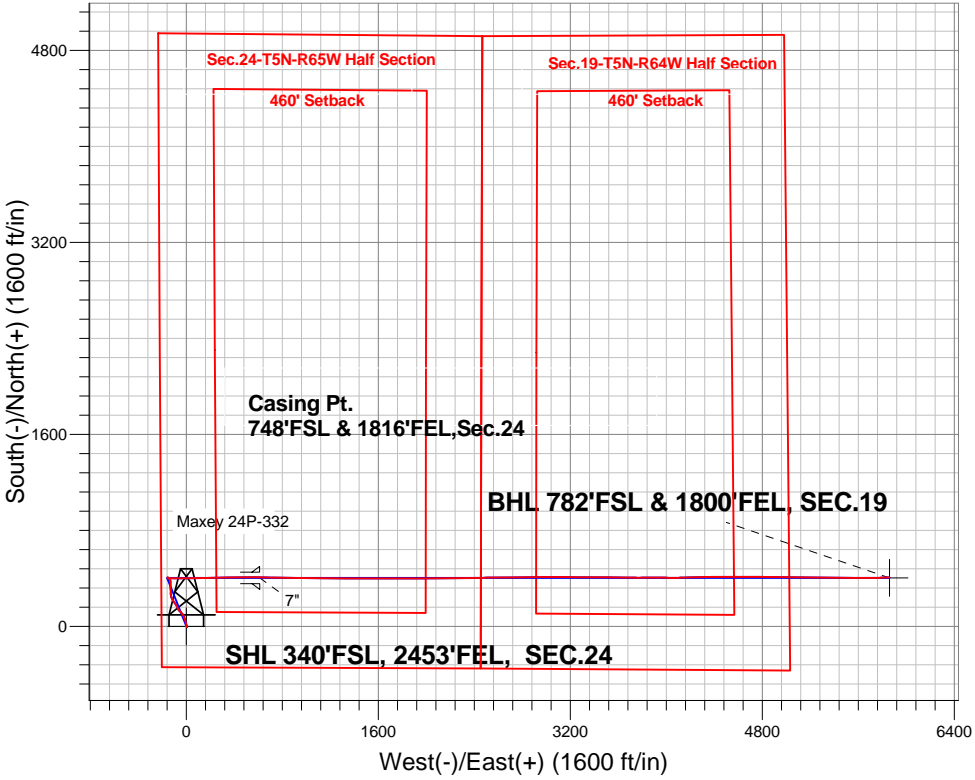
Surface Location: Maxey 24Q-HZ Pad Sec.24-T5N-R65W  
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 4635.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1381915.62	3247745.85	40.378350	-104.610730	
RKB - 15' WELL @ 4650.0ft (RKB - 15')						

FINAL SURVEY

Projected Bottom Hole Location  
12536'MD 6767'TVD 409'N & 5859'E of SHL  
88.9 degree Incl @ 88.0 degree AZM



Maxey 24Q-HZ Pad Sec.24-T5N-R65W  
Maxey 24P-332  
Wellbore #1  
13:49, May 30 2014

ANNOTATIONS

No annotation data is available.

LEGEND

- Maxey 24P-332, Wellbore #1, Plan #4 (5-16-14)R V0
- Wellbore #1
- Survey #1



# **PETROLEUM DEVELOPMENT CORP Weld County CO**

**SEC.24-T5N-R65W**

**Maxey 24Q-HZ Pad Sec.24-T5N-R65W**

**Maxey 24P-332**

**Wellbore #1**

**Survey: Survey #1**

## **Standard Survey Report**

**30 May, 2014**

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Maxey 24P-332
<b>Project:</b>	SEC.24-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4650.0ft (RKB - 15')
<b>Site:</b>	Maxey 24Q-HZ Pad Sec.24-T5N-R65W	<b>MD Reference:</b>	WELL @ 4650.0ft (RKB - 15')
<b>Well:</b>	Maxey 24P-332	<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>	Landmark

<b>Project</b>	SEC.24-T5N-R65W, Weld County, Colorado		
<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	Maxey 24Q-HZ Pad Sec.24-T5N-R65W				
Site Position:		Northing:	1,381,915.64ft	Latitude:	40.378350
From:	Lat/Long	Easting:	3,247,745.85ft	Longitude:	-104.610730
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.57 °

Well	Maxey 24P-332					
Well Position	+N-S	0.0 ft	Northing:	1,381,915.62 ft	Latitude:	40.378350
	+E-W	0.0 ft	Easting:	3,247,745.85 ft	Longitude:	-104.610730
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,635.0 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	5/16/2014	8.39	66.96	52,830

<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	86.04	

<b>Survey Program</b>	<b>Date</b> 5/30/2014				
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
122.0	12,536.0	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 (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Turn Rate (°/100ft)</b>	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
1.0	0.00	313.70	1.0	0.0	0.0	0.0	0.33	0.33	0.00	
<b>SHL 340'FSL, 2453'FEL, SEC.24</b>										
122.0	0.40	313.70	122.0	0.3	-0.3	-0.3	0.33	0.33	0.00	
216.0	0.10	69.60	216.0	0.5	-0.5	-0.4	0.48	-0.32	123.30	
343.0	0.30	129.00	343.0	0.4	-0.1	-0.1	0.21	0.16	46.77	
469.0	0.10	44.40	469.0	0.2	0.2	0.2	0.24	-0.16	-67.14	
596.0	0.30	94.70	596.0	0.3	0.6	0.7	0.20	0.16	39.61	
722.0	1.10	69.00	722.0	0.7	2.1	2.1	0.67	0.63	-20.40	
818.0	1.20	185.40	818.0	0.0	2.9	2.9	2.04	0.10	121.25	
870.0	1.10	194.00	870.0	-1.0	2.7	2.6	0.38	-0.19	16.54	
942.0	1.60	171.00	941.9	-2.7	2.7	2.5	1.01	0.69	-31.94	

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Maxey 24P-332
<b>Project:</b>	SEC.24-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4650.0ft (RKB - 15')
<b>Site:</b>	Maxey 24Q-HZ Pad Sec.24-T5N-R65W	<b>MD Reference:</b>	WELL @ 4650.0ft (RKB - 15')
<b>Well:</b>	Maxey 24P-332	<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>	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)
1,005.0	0.60	275.20	1,004.9	-3.5	2.5	2.2	2.92	-1.59	165.40
1,132.0	3.30	356.40	1,131.9	0.2	1.6	1.6	2.57	2.13	63.94
1,258.0	5.70	349.20	1,257.5	10.0	0.2	0.9	1.95	1.90	-5.71
1,383.0	5.00	346.10	1,381.9	21.4	-2.3	-0.8	0.61	-0.56	-2.48
1,504.0	6.20	347.60	1,502.3	32.9	-4.9	-2.7	1.00	0.99	1.24
1,626.0	7.80	340.30	1,623.4	47.1	-9.2	-5.9	1.50	1.31	-5.98
1,746.0	5.80	342.70	1,742.6	60.6	-13.7	-9.5	1.68	-1.67	2.00
1,867.0	6.60	338.20	1,862.9	72.9	-18.1	-13.0	0.77	0.66	-3.72
1,988.0	7.70	336.40	1,982.9	86.7	-23.9	-17.9	0.93	0.91	-1.49
2,109.0	8.10	325.90	2,102.8	101.2	-32.0	-24.9	1.24	0.33	-8.68
2,231.0	7.60	315.80	2,223.6	114.1	-42.4	-34.4	1.20	-0.41	-8.28
2,353.0	4.80	311.60	2,344.9	123.3	-51.8	-43.2	2.32	-2.30	-3.44
2,474.0	5.20	312.80	2,465.5	130.4	-59.7	-50.5	0.34	0.33	0.99
2,601.0	7.20	335.30	2,591.7	141.5	-67.2	-57.3	2.45	1.57	17.72
2,727.0	7.50	337.60	2,716.7	156.3	-73.6	-62.7	0.33	0.24	1.83
2,854.0	7.00	326.20	2,842.7	170.4	-81.1	-69.1	1.20	-0.39	-8.98
2,981.0	7.80	324.80	2,968.6	183.9	-90.4	-77.4	0.65	0.63	-1.10
3,107.0	6.30	326.00	3,093.7	196.6	-99.2	-85.3	1.20	-1.19	0.95
3,233.0	6.30	326.00	3,218.9	208.1	-106.9	-92.3	0.00	0.00	0.00
3,359.0	4.70	327.60	3,344.3	218.1	-113.5	-98.2	1.28	-1.27	1.27
3,486.0	5.10	328.70	3,470.9	227.4	-119.3	-103.2	0.32	0.31	0.87
3,645.0	4.30	337.30	3,629.3	238.9	-125.2	-108.4	0.67	-0.50	5.41
3,836.0	5.50	354.70	3,819.6	254.6	-128.8	-110.9	0.99	0.63	9.11
4,026.0	5.60	358.50	4,008.7	273.0	-129.9	-110.7	0.20	0.05	2.00
4,216.0	5.50	0.50	4,197.9	291.3	-130.1	-109.6	0.11	-0.05	1.05
4,405.0	5.10	350.10	4,386.1	308.7	-131.4	-109.8	0.55	-0.21	-5.50
4,594.0	5.40	355.40	4,574.3	325.8	-133.6	-110.8	0.30	0.16	2.80
4,751.0	6.40	5.20	4,730.4	341.9	-133.4	-109.4	0.90	0.64	6.24
4,941.0	5.90	0.80	4,919.3	362.2	-132.3	-107.0	0.36	-0.26	-2.32
5,100.0	6.20	346.20	5,077.5	378.7	-134.2	-107.7	0.98	0.19	-9.18
5,258.0	4.70	333.90	5,234.8	392.8	-139.1	-111.6	1.20	-0.95	-7.78
5,416.0	3.80	312.00	5,392.3	402.1	-145.9	-117.7	1.16	-0.57	-13.86
5,574.0	2.60	291.60	5,550.1	406.9	-153.1	-124.6	1.04	-0.76	-12.91
5,732.0	0.80	257.30	5,708.0	408.0	-157.5	-128.9	1.26	-1.14	-21.71
5,890.0	1.00	195.40	5,866.0	406.4	-158.9	-130.5	0.60	0.13	-39.18
6,049.0	0.80	166.40	6,025.0	404.0	-159.0	-130.7	0.31	-0.13	-18.24
6,080.0	0.90	152.70	6,056.0	403.6	-158.9	-130.6	0.73	0.32	-44.19
6,112.0	3.00	104.40	6,087.9	403.2	-158.0	-129.7	7.79	6.56	-150.94
6,144.0	6.20	94.20	6,119.8	402.8	-155.4	-127.2	10.28	10.00	-31.88
6,175.0	9.10	91.70	6,150.6	402.6	-151.3	-123.1	9.41	9.35	-8.06
6,207.0	11.50	91.40	6,182.0	402.5	-145.6	-117.4	7.50	7.50	-0.94
6,238.0	13.80	91.40	6,212.3	402.3	-138.8	-110.6	7.42	7.42	0.00
6,270.0	15.90	89.60	6,243.2	402.3	-130.6	-102.5	6.72	6.56	-5.63
6,302.0	17.50	88.50	6,273.9	402.4	-121.4	-93.3	5.10	5.00	-3.44
6,333.0	19.30	88.90	6,303.3	402.6	-111.6	-83.5	5.82	5.81	1.29
6,365.0	21.30	91.20	6,333.3	402.6	-100.5	-72.4	6.73	6.25	7.19
6,397.0	23.30	91.20	6,362.9	402.4	-88.4	-60.4	6.25	6.25	0.00
6,428.0	25.30	90.00	6,391.2	402.2	-75.6	-47.6	6.65	6.45	-3.87
6,460.0	27.10	90.80	6,419.9	402.1	-61.5	-33.6	5.73	5.63	2.50
6,491.0	29.40	91.70	6,447.2	401.8	-46.8	-18.9	7.55	7.42	2.90
6,523.0	32.00	92.10	6,474.7	401.3	-30.5	-2.7	8.15	8.13	1.25
6,554.0	34.60	91.20	6,500.6	400.8	-13.5	14.2	8.54	8.39	-2.90
6,586.0	37.20	89.60	6,526.5	400.7	5.3	33.0	8.64	8.13	-5.00
6,617.0	40.40	88.40	6,550.7	401.0	24.7	52.3	10.60	10.32	-3.87

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Maxey 24P-332
<b>Project:</b>	SEC.24-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4650.0ft (RKB - 15')
<b>Site:</b>	Maxey 24Q-HZ Pad Sec.24-T5N-R65W	<b>MD Reference:</b>	WELL @ 4650.0ft (RKB - 15')
<b>Well:</b>	Maxey 24P-332	<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>	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)
6,649.0	43.20	87.80	6,574.5	401.7	46.0	73.7	8.84	8.75	-1.88
6,681.0	45.60	87.70	6,597.4	402.6	68.4	96.0	7.50	7.50	-0.31
6,712.0	47.80	88.20	6,618.6	403.4	90.9	118.6	7.19	7.10	1.61
6,744.0	50.30	89.40	6,639.6	403.9	115.1	142.7	8.31	7.81	3.75
6,776.0	52.80	88.50	6,659.5	404.4	140.1	167.8	8.12	7.81	-2.81
6,807.0	55.10	88.50	6,677.8	405.0	165.2	192.8	7.42	7.42	0.00
6,839.0	57.30	88.50	6,695.6	405.7	191.8	219.4	6.88	6.88	0.00
6,870.0	59.80	89.20	6,711.7	406.2	218.2	245.8	8.29	8.06	2.26
6,902.0	62.00	89.40	6,727.3	406.6	246.2	273.7	6.90	6.88	0.63
6,934.0	63.40	88.90	6,742.0	407.0	274.6	302.1	4.59	4.38	-1.56
6,966.0	65.00	89.10	6,755.9	407.5	303.4	330.8	5.03	5.00	0.63
6,998.0	67.50	89.40	6,768.8	407.9	332.7	360.1	7.86	7.81	0.94
7,029.0	69.40	89.20	6,780.2	408.2	361.5	388.9	6.16	6.13	-0.65
7,060.0	71.10	89.40	6,790.6	408.6	390.7	418.0	5.52	5.48	0.65
7,092.0	72.90	89.20	6,800.5	409.0	421.1	448.4	5.66	5.63	-0.63
7,124.0	74.90	89.60	6,809.4	409.3	451.9	479.1	6.36	6.25	1.25
7,155.0	77.30	89.80	6,816.8	409.4	481.9	509.1	7.77	7.74	0.65
7,187.0	80.10	90.00	6,823.1	409.5	513.3	540.4	8.77	8.75	0.63
7,218.0	82.70	90.10	6,827.8	409.5	544.0	571.0	8.39	8.39	0.32
7,250.0	85.00	90.70	6,831.2	409.3	575.8	602.7	7.43	7.19	1.88
7,311.0	87.50	90.85	6,835.2	408.4	636.6	663.4	4.11	4.10	0.25
7,341.0	88.50	91.00	6,836.2	407.9	666.6	693.2	3.37	3.33	0.50
7,371.0	89.70	91.40	6,836.7	407.3	696.6	723.1	4.22	4.00	1.33
7,402.0	90.60	91.20	6,836.6	406.6	727.6	754.0	2.97	2.90	-0.65
7,432.0	92.20	91.20	6,835.9	406.0	757.6	783.8	5.33	5.33	0.00
7,463.0	93.90	91.20	6,834.2	405.3	788.5	814.7	5.48	5.48	0.00
7,493.0	95.70	90.70	6,831.7	404.8	818.4	844.5	6.23	6.00	-1.67
7,524.0	96.50	90.30	6,828.4	404.6	849.2	875.2	2.88	2.58	-1.29
7,555.0	96.70	90.00	6,824.9	404.5	880.0	905.9	1.16	0.65	-0.97
7,585.0	96.60	90.00	6,821.4	404.5	909.8	935.6	0.33	-0.33	0.00
7,615.0	96.50	90.00	6,818.0	404.5	939.6	965.4	0.33	-0.33	0.00
7,646.0	95.50	90.10	6,814.7	404.5	970.5	996.1	3.24	-3.23	0.32
7,676.0	94.20	90.70	6,812.2	404.3	1,000.4	1,025.9	4.77	-4.33	2.00
7,707.0	93.60	90.70	6,810.1	403.9	1,031.3	1,056.7	1.94	-1.94	0.00
7,737.0	93.00	90.70	6,808.3	403.5	1,061.2	1,086.6	2.00	-2.00	0.00
7,768.0	92.20	90.80	6,806.9	403.1	1,092.2	1,117.5	2.60	-2.58	0.32
7,798.0	90.70	91.20	6,806.2	402.6	1,122.2	1,147.3	5.17	-5.00	1.33
7,828.0	89.50	91.40	6,806.1	401.9	1,152.2	1,177.2	4.06	-4.00	0.67
7,859.0	88.80	91.50	6,806.6	401.1	1,183.2	1,208.1	2.28	-2.26	0.32
7,889.0	89.40	91.00	6,807.1	400.5	1,213.2	1,237.9	2.60	2.00	-1.67
7,920.0	90.40	91.00	6,807.1	399.9	1,244.2	1,268.8	3.23	3.23	0.00
7,950.0	90.90	90.70	6,806.8	399.5	1,274.1	1,298.7	1.94	1.67	-1.00
7,980.0	90.30	90.50	6,806.5	399.2	1,304.1	1,328.6	2.11	-2.00	-0.67
8,011.0	91.00	90.10	6,806.1	399.0	1,335.1	1,359.5	2.60	2.26	-1.29
8,041.0	92.20	90.10	6,805.3	399.0	1,365.1	1,389.4	4.00	4.00	0.00
8,072.0	92.70	89.80	6,803.9	399.0	1,396.1	1,420.3	1.88	1.61	-0.97
8,103.0	92.20	89.60	6,802.6	399.1	1,427.1	1,451.2	1.74	-1.61	-0.65
8,133.0	91.50	89.20	6,801.7	399.5	1,457.1	1,481.2	2.69	-2.33	-1.33
8,163.0	90.30	89.20	6,801.2	399.9	1,487.0	1,511.1	4.00	-4.00	0.00
8,194.0	89.80	89.20	6,801.2	400.3	1,518.0	1,542.1	1.61	-1.61	0.00
8,225.0	90.10	89.40	6,801.2	400.7	1,549.0	1,573.0	1.16	0.97	0.65
8,255.0	91.50	89.40	6,800.8	401.0	1,579.0	1,603.0	4.67	4.67	0.00
8,285.0	92.80	89.20	6,799.6	401.4	1,609.0	1,632.9	4.38	4.33	-0.67

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Maxey 24P-332
<b>Project:</b>	SEC.24-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4650.0ft (RKB - 15')
<b>Site:</b>	Maxey 24Q-HZ Pad Sec.24-T5N-R65W	<b>MD Reference:</b>	WELL @ 4650.0ft (RKB - 15')
<b>Well:</b>	Maxey 24P-332	<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>	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)
8,316.0	92.90	89.10	6,798.1	401.8	1,640.0	1,663.8	0.46	0.32	-0.32
8,346.0	92.40	89.40	6,796.7	402.2	1,669.9	1,693.7	1.94	-1.67	1.00
8,376.0	91.90	89.80	6,795.6	402.4	1,699.9	1,723.7	2.13	-1.67	1.33
8,407.0	91.50	90.30	6,794.7	402.4	1,730.9	1,754.6	2.06	-1.29	1.61
8,437.0	91.30	91.00	6,793.9	402.1	1,760.9	1,784.5	2.43	-0.67	2.33
8,468.0	91.10	91.40	6,793.3	401.4	1,791.9	1,815.3	1.44	-0.65	1.29
8,499.0	90.90	91.50	6,792.7	400.6	1,822.9	1,846.2	0.72	-0.65	0.32
8,529.0	90.20	91.70	6,792.5	399.8	1,852.8	1,876.0	2.43	-2.33	0.67
8,559.0	89.20	90.80	6,792.6	399.1	1,882.8	1,905.9	4.48	-3.33	-3.00
8,589.0	88.50	90.50	6,793.2	398.8	1,912.8	1,935.8	2.54	-2.33	-1.00
8,620.0	88.60	90.30	6,794.0	398.6	1,943.8	1,966.7	0.72	0.32	-0.65
8,651.0	88.60	90.30	6,794.8	398.4	1,974.8	1,997.6	0.00	0.00	0.00
8,681.0	88.80	90.10	6,795.4	398.3	2,004.8	2,027.5	0.94	0.67	-0.67
8,711.0	89.00	90.00	6,796.0	398.3	2,034.8	2,057.5	0.75	0.67	-0.33
8,741.0	89.40	89.60	6,796.4	398.4	2,064.8	2,087.4	1.89	1.33	-1.33
8,772.0	89.90	89.20	6,796.6	398.7	2,095.8	2,118.3	2.07	1.61	-1.29
8,802.0	89.90	88.90	6,796.7	399.2	2,125.8	2,148.3	1.00	0.00	-1.00
8,833.0	89.70	88.70	6,796.8	399.9	2,156.8	2,179.3	0.91	-0.65	-0.65
8,863.0	89.70	88.50	6,796.9	400.6	2,186.8	2,209.2	0.67	0.00	-0.67
8,895.0	89.60	88.50	6,797.1	401.4	2,218.8	2,241.2	0.31	-0.31	0.00
8,927.0	89.90	88.70	6,797.3	402.2	2,250.7	2,273.2	1.13	0.94	0.63
8,958.0	90.30	89.10	6,797.2	402.8	2,281.7	2,304.1	1.82	1.29	1.29
8,990.0	90.80	89.10	6,796.9	403.3	2,313.7	2,336.1	1.56	1.56	0.00
9,021.0	91.40	89.10	6,796.3	403.8	2,344.7	2,367.0	1.94	1.94	0.00
9,053.0	91.30	89.10	6,795.6	404.3	2,376.7	2,399.0	0.31	-0.31	0.00
9,084.0	91.00	88.90	6,794.9	404.8	2,407.7	2,429.9	1.16	-0.97	-0.65
9,116.0	90.80	88.90	6,794.4	405.5	2,439.7	2,461.9	0.63	-0.63	0.00
9,148.0	90.70	89.20	6,794.0	406.0	2,471.7	2,493.8	0.99	-0.31	0.94
9,179.0	90.70	89.40	6,793.6	406.4	2,502.7	2,524.8	0.65	0.00	0.65
9,211.0	91.00	90.00	6,793.2	406.5	2,534.7	2,556.7	2.10	0.94	1.88
9,243.0	90.80	89.80	6,792.7	406.6	2,566.7	2,588.6	0.88	-0.63	-0.63
9,274.0	89.80	89.40	6,792.5	406.8	2,597.7	2,619.6	3.47	-3.23	-1.29
9,306.0	88.80	89.40	6,792.9	407.1	2,629.7	2,651.5	3.13	-3.13	0.00
9,337.0	88.50	89.40	6,793.6	407.5	2,660.7	2,682.5	0.97	-0.97	0.00
9,369.0	89.40	89.20	6,794.2	407.9	2,692.6	2,714.4	2.88	2.81	-0.63
9,401.0	91.00	89.20	6,794.1	408.3	2,724.6	2,746.4	5.00	5.00	0.00
9,432.0	91.90	88.90	6,793.3	408.8	2,755.6	2,777.3	3.06	2.90	-0.97
9,464.0	91.50	88.70	6,792.4	409.5	2,787.6	2,809.2	1.40	-1.25	-0.63
9,495.0	91.00	88.70	6,791.7	410.2	2,818.6	2,840.2	1.61	-1.61	0.00
9,527.0	90.60	88.70	6,791.2	410.9	2,850.6	2,872.2	1.25	-1.25	0.00
9,559.0	90.00	88.70	6,791.1	411.6	2,882.6	2,904.1	1.88	-1.88	0.00
9,591.0	90.40	89.10	6,791.0	412.3	2,914.6	2,936.1	1.77	1.25	1.25
9,622.0	91.50	89.60	6,790.4	412.6	2,945.6	2,967.0	3.90	3.55	1.61
9,654.0	92.10	90.00	6,789.4	412.7	2,977.5	2,999.0	2.25	1.88	1.25
9,686.0	92.40	90.50	6,788.2	412.6	3,009.5	3,030.8	1.82	0.94	1.56
9,717.0	91.70	90.70	6,787.1	412.3	3,040.5	3,061.7	2.35	-2.26	0.65
9,749.0	91.80	90.80	6,786.1	411.8	3,072.5	3,093.6	0.44	0.31	0.31
9,781.0	91.50	90.50	6,785.2	411.5	3,104.5	3,125.5	1.33	-0.94	-0.94
9,812.0	90.70	90.00	6,784.6	411.3	3,135.5	3,156.4	3.04	-2.58	-1.61
9,843.0	89.80	90.30	6,784.4	411.3	3,166.5	3,187.3	3.06	-2.90	0.97
9,875.0	89.30	91.00	6,784.7	410.9	3,198.5	3,219.2	2.69	-1.56	2.19
9,906.0	89.80	90.70	6,784.9	410.4	3,229.4	3,250.1	1.88	1.61	-0.97
9,938.0	89.90	90.30	6,785.0	410.2	3,261.4	3,282.0	1.29	0.31	-1.25

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Maxey 24P-332
<b>Project:</b>	SEC.24-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4650.0ft (RKB - 15')
<b>Site:</b>	Maxey 24Q-HZ Pad Sec.24-T5N-R65W	<b>MD Reference:</b>	WELL @ 4650.0ft (RKB - 15')
<b>Well:</b>	Maxey 24P-332	<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>	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)
9,970.0	90.00	90.10	6,785.1	410.0	3,293.4	3,313.9	0.70	0.31	-0.63
10,002.0	90.50	90.00	6,784.9	410.0	3,325.4	3,345.8	1.59	1.56	-0.31
10,033.0	90.60	89.80	6,784.6	410.1	3,356.4	3,376.8	0.72	0.32	-0.65
10,065.0	90.40	89.60	6,784.3	410.2	3,388.4	3,408.7	0.88	-0.63	-0.63
10,096.0	90.20	90.00	6,784.2	410.3	3,419.4	3,439.6	1.44	-0.65	1.29
10,128.0	90.50	90.80	6,784.0	410.1	3,451.4	3,471.5	2.67	0.94	2.50
10,159.0	90.70	91.00	6,783.7	409.6	3,482.4	3,502.4	0.91	0.65	0.65
10,191.0	90.90	90.70	6,783.2	409.2	3,514.4	3,534.3	1.13	0.63	-0.94
10,222.0	90.90	90.30	6,782.7	408.9	3,545.4	3,565.2	1.29	0.00	-1.29
10,254.0	90.40	90.10	6,782.4	408.8	3,577.4	3,597.1	1.68	-1.56	-0.63
10,286.0	89.70	90.30	6,782.3	408.7	3,609.4	3,629.0	2.28	-2.19	0.63
10,318.0	89.60	91.20	6,782.5	408.2	3,641.4	3,660.9	2.83	-0.31	2.81
10,349.0	89.70	91.40	6,782.7	407.5	3,672.4	3,691.8	0.72	0.32	0.65
10,381.0	90.00	91.20	6,782.8	406.8	3,704.4	3,723.7	1.13	0.94	-0.63
10,413.0	89.90	90.70	6,782.8	406.3	3,736.4	3,755.5	1.59	-0.31	-1.56
10,444.0	89.80	90.00	6,782.9	406.1	3,767.4	3,786.5	2.28	-0.32	-2.26
10,476.0	89.50	89.80	6,783.1	406.2	3,799.4	3,818.4	1.13	-0.94	-0.63
10,508.0	89.50	89.60	6,783.4	406.3	3,831.4	3,850.3	0.62	0.00	-0.63
10,539.0	90.50	90.10	6,783.4	406.4	3,862.4	3,881.2	3.61	3.23	1.61
10,571.0	90.90	90.30	6,783.0	406.3	3,894.4	3,913.2	1.40	1.25	0.63
10,602.0	91.10	90.10	6,782.4	406.2	3,925.4	3,944.1	0.91	0.65	-0.65
10,634.0	91.10	90.00	6,781.8	406.2	3,957.4	3,976.0	0.31	0.00	-0.31
10,665.0	90.70	90.00	6,781.3	406.2	3,988.4	4,006.9	1.29	-1.29	0.00
10,697.0	90.40	90.10	6,781.0	406.1	4,020.4	4,038.8	0.99	-0.94	0.31
10,729.0	90.10	90.30	6,780.9	406.0	4,052.4	4,070.7	1.13	-0.94	0.63
10,760.0	89.70	90.00	6,781.0	405.9	4,083.4	4,101.7	1.61	-1.29	-0.97
10,792.0	89.60	88.90	6,781.2	406.2	4,115.4	4,133.6	3.45	-0.31	-3.44
10,823.0	90.10	88.40	6,781.2	407.0	4,146.4	4,164.6	2.28	1.61	-1.61
10,855.0	90.30	88.20	6,781.1	407.9	4,178.3	4,196.5	0.88	0.63	-0.63
10,886.0	90.00	88.00	6,781.0	408.9	4,209.3	4,227.5	1.16	-0.97	-0.65
10,918.0	90.10	88.20	6,781.0	410.0	4,241.3	4,259.5	0.70	0.31	0.63
10,949.0	90.60	88.20	6,780.8	411.0	4,272.3	4,290.5	1.61	1.61	0.00
10,981.0	90.50	88.40	6,780.5	411.9	4,304.3	4,322.5	0.70	-0.31	0.63
11,013.0	90.00	88.40	6,780.4	412.8	4,336.3	4,354.4	1.56	-1.56	0.00
11,045.0	90.60	89.10	6,780.2	413.5	4,368.3	4,386.4	2.88	1.88	2.19
11,077.0	91.20	89.60	6,779.7	413.9	4,400.3	4,418.3	2.44	1.88	1.56
11,108.0	90.50	90.00	6,779.2	414.0	4,431.2	4,449.3	2.60	-2.26	1.29
11,140.0	90.30	90.00	6,779.0	414.0	4,463.2	4,481.2	0.63	-0.63	0.00
11,172.0	91.30	90.00	6,778.6	414.0	4,495.2	4,513.1	3.13	3.13	0.00
11,203.0	91.50	89.80	6,777.8	414.0	4,526.2	4,544.0	0.91	0.65	-0.65
11,235.0	91.90	89.40	6,776.9	414.3	4,558.2	4,576.0	1.77	1.25	-1.25
11,267.0	91.50	89.40	6,775.9	414.6	4,590.2	4,607.9	1.25	-1.25	0.00
11,298.0	91.90	89.60	6,775.0	414.9	4,621.2	4,638.8	1.44	1.29	0.65
11,329.0	91.70	90.30	6,774.0	414.9	4,652.2	4,669.7	2.35	-0.65	2.26
11,361.0	91.10	90.70	6,773.2	414.6	4,684.2	4,701.6	2.25	-1.88	1.25
11,393.0	90.10	91.20	6,772.9	414.1	4,716.2	4,733.5	3.49	-3.13	1.56
11,425.0	89.10	91.00	6,773.1	413.5	4,748.1	4,765.4	3.19	-3.13	-0.63
11,456.0	88.90	90.70	6,773.7	413.0	4,779.1	4,796.3	1.16	-0.65	-0.97
11,489.0	88.70	90.30	6,774.4	412.7	4,812.1	4,829.2	1.35	-0.61	-1.21
11,520.0	89.00	90.80	6,775.0	412.4	4,843.1	4,860.0	1.88	0.97	1.61
11,552.0	90.10	90.70	6,775.2	412.0	4,875.1	4,891.9	3.45	3.44	-0.31
11,583.0	90.90	90.30	6,775.0	411.7	4,906.1	4,922.8	2.89	2.58	-1.29
11,615.0	90.80	90.30	6,774.5	411.6	4,938.1	4,954.8	0.31	-0.31	0.00
11,647.0	90.60	91.20	6,774.1	411.2	4,970.1	4,986.6	2.88	-0.63	2.81



<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Maxey 24P-332
<b>Project:</b>	SEC.24-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4650.0ft (RKB - 15')
<b>Site:</b>	Maxey 24Q-HZ Pad Sec.24-T5N-R65W	<b>MD Reference:</b>	WELL @ 4650.0ft (RKB - 15')
<b>Well:</b>	Maxey 24P-332	<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>	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)
11,679.0	90.20	91.70	6,773.9	410.3	5,002.1	5,018.5	2.00	-1.25	1.56
11,710.0	90.00	91.50	6,773.8	409.5	5,033.1	5,049.4	0.91	-0.65	-0.65
11,742.0	90.20	90.80	6,773.8	408.8	5,065.1	5,081.2	2.28	0.63	-2.19
11,774.0	90.10	90.70	6,773.7	408.4	5,097.1	5,113.1	0.44	-0.31	-0.31
11,806.0	89.90	90.80	6,773.7	408.0	5,129.1	5,145.0	0.70	-0.63	0.31
11,838.0	90.00	90.80	6,773.7	407.6	5,161.1	5,176.9	0.31	0.31	0.00
11,869.0	90.20	90.70	6,773.7	407.2	5,192.1	5,207.8	0.72	0.65	-0.32
11,901.0	90.40	90.50	6,773.5	406.8	5,224.1	5,239.7	0.88	0.63	-0.63
11,932.0	90.30	90.50	6,773.3	406.5	5,255.1	5,270.6	0.32	-0.32	0.00
11,963.0	90.70	90.30	6,773.0	406.3	5,286.1	5,301.5	1.44	1.29	-0.65
11,995.0	91.00	90.10	6,772.6	406.2	5,318.1	5,333.4	1.13	0.94	-0.63
12,027.0	91.30	89.60	6,771.9	406.3	5,350.0	5,365.3	1.82	0.94	-1.56
12,059.0	91.60	89.60	6,771.1	406.5	5,382.0	5,397.3	0.94	0.94	0.00
12,091.0	91.40	89.80	6,770.3	406.7	5,414.0	5,429.2	0.88	-0.63	0.63
12,122.0	91.20	90.00	6,769.6	406.7	5,445.0	5,460.1	0.91	-0.65	0.65
12,153.0	91.20	90.50	6,768.9	406.6	5,476.0	5,491.0	1.61	0.00	1.61
12,185.0	90.70	90.80	6,768.4	406.2	5,508.0	5,522.9	1.82	-1.56	0.94
12,216.0	89.80	91.20	6,768.2	405.7	5,539.0	5,553.8	3.18	-2.90	1.29
12,248.0	90.00	91.50	6,768.3	405.0	5,571.0	5,585.7	1.13	0.63	0.94
12,280.0	90.60	91.70	6,768.1	404.1	5,603.0	5,617.5	1.98	1.88	0.63
12,311.0	90.90	91.00	6,767.7	403.3	5,634.0	5,648.4	2.46	0.97	-2.26
12,344.0	90.80	90.30	6,767.2	403.0	5,667.0	5,681.3	2.14	-0.30	-2.12
12,376.0	90.80	89.60	6,766.8	403.0	5,699.0	5,713.2	2.19	0.00	-2.19
12,407.0	91.00	88.90	6,766.3	403.4	5,730.0	5,744.1	2.35	0.65	-2.26
12,439.0	90.60	86.30	6,765.9	404.7	5,761.9	5,776.1	8.22	-1.25	-8.13
12,481.0	88.90	88.00	6,766.0	406.8	5,803.9	5,818.1	5.72	-4.05	4.05
12,536.0	88.90	88.00	6,767.1	408.7	5,858.8	5,873.1	0.00	0.00	0.00
BHL 779'FSL & 1800'FEL, SEC.19									

Checked By: _____	Approved By: _____	Date: _____
-------------------	--------------------	-------------