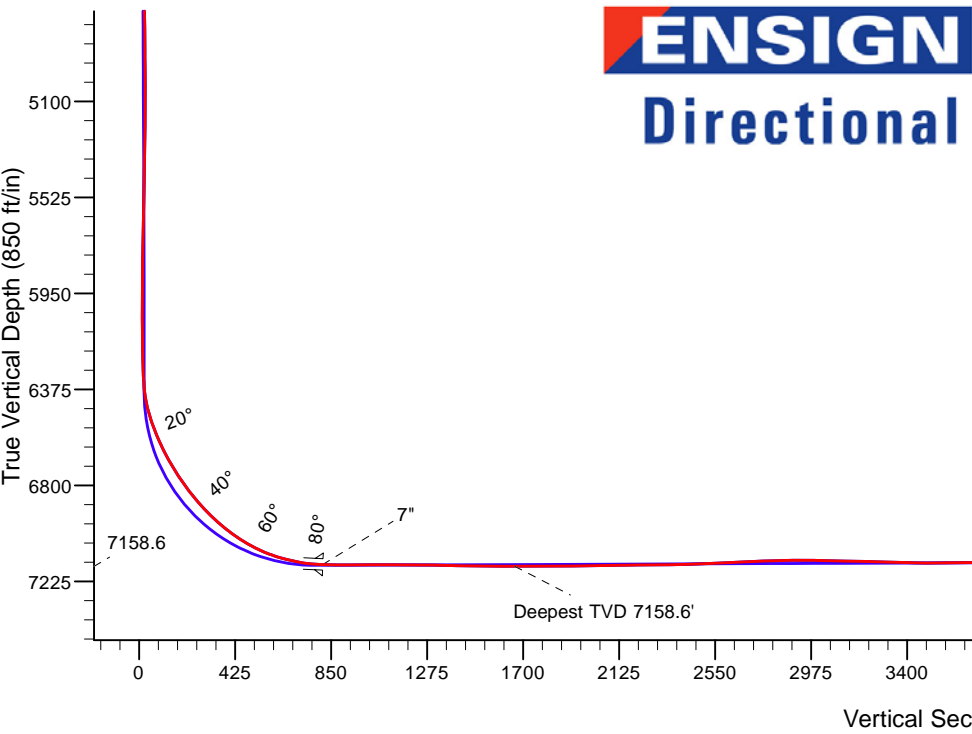
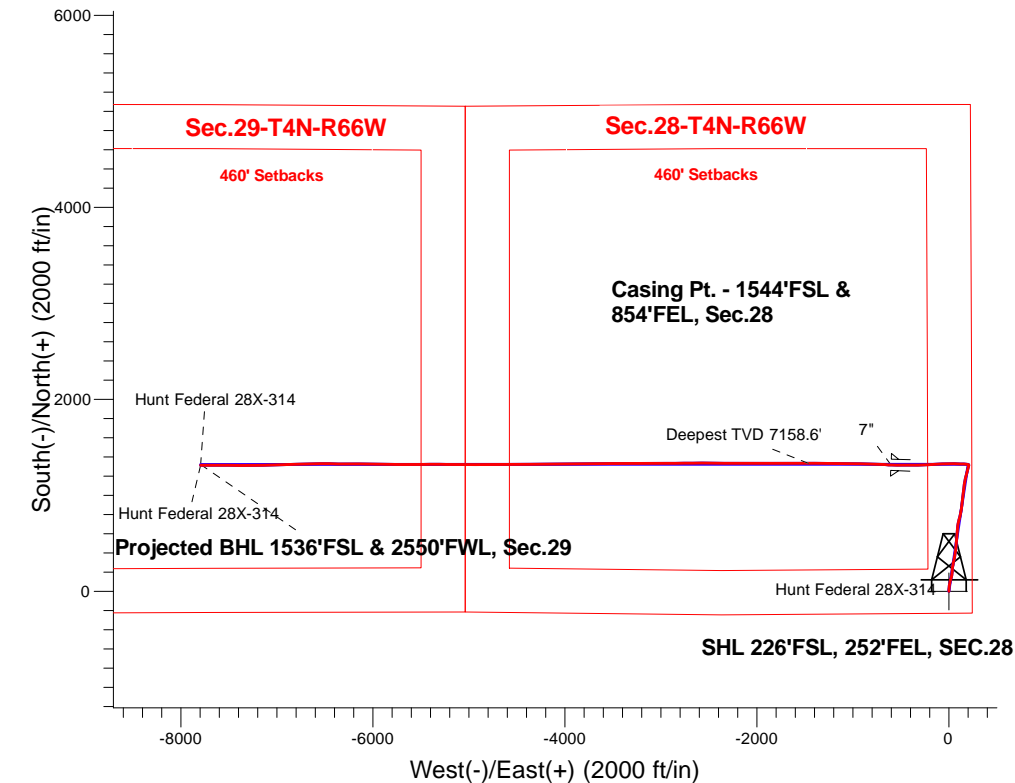


PETROLEUM DEVELOPMENT CORP DJ Basin

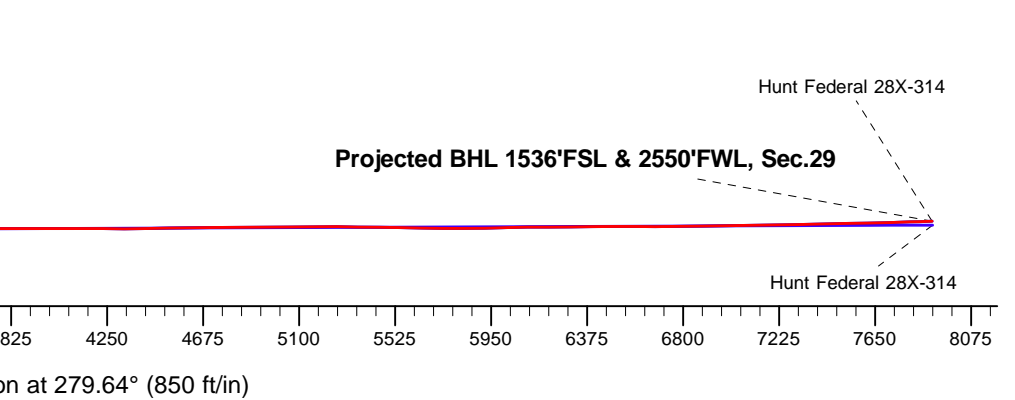
Well Name: **Hunt Federal 28X-314**  
Surface Location: Hunt Federal 4N66W28Y Pad Sec.28-T4N-R66W  
North American Datum 1983 , US State Plane 1983, Colorado Northern Zone  
Ground Elevation: 4761.0  
+N/-S +E/-W Northing Easting Latitude Longitude Slot  
0.0 0.0 1344203.06 3202599.69 40.275960 -104.773880  
Ensign Rig #121 - RKB - 13.5'WELL @ 4774.5ft (Ensign Rig #121 - RKB - 13.5')

FINAL SURVEY

Projected Bottom Hole Location  
14937'MD 7109'TVD 1316'N & 7793'W of SHL  
92.1 degree Incl @ 270.2 degree AZM



Hunt Federal 4N66W28Y Pad Sec.28-T4N-R66W Hunt Federal 28X-314 Wellbore #1 12:22, January 05 2016	ANNOTATIONS		
	TVD	MD	Annotation
	7158.6	8603.9	Deepest TVD 7158.6'
LEGEND			
△ Hunt Federal 28X-314, Wellbore #1, Plan #4 (12-22-15)R V0			
□ Wellbore #1			
○ Survey #1			





# Directional

## **PETROLEUM DEVELOPMENT CORP DJ Basin**

**SEC.28-T4N-R66W**

**Hunt Federal 4N66W28Y Pad Sec.28-T4N-R66W**

**Hunt Federal 28X-314**

**Wellbore #1**

**Survey: Survey #1**

## **Standard Survey Report**

**05 January, 2016**

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Hunt Federal 28X-314
<b>Project:</b>	SEC.28-T4N-R66W	<b>TVD Reference:</b>	WELL @ 4774.5ft (Ensign Rig #121 - RKB - 13.5')
<b>Site:</b>	Hunt Federal 4N66W28Y Pad Sec.28-T4N-R66W	<b>MD Reference:</b>	WELL @ 4774.5ft (Ensign Rig #121 - RKB - 13.5')
<b>Well:</b>	Hunt Federal 28X-314	<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.28-T4N-R66W, 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	Hunt Federal 4N66W28Y Pad Sec.28-T4N-R66W							
Site Position:		Northing:	1,344,202.84	usft	Latitude:	40.275960		
From:	Lat/Long	Easting:	3,202,569.00	usft	Longitude:	-104.773990		
Position Uncertainty:	0.0	ft	Slot Radius:	13-3/16	"	Grid Convergence:	0.47	°

Well	Hunt Federal 28X-314					
Well Position	+N/-S	0.0 ft	Northing:	1,344,203.06 usft	Latitude:	40.275960
	+E/-W	0.0 ft	Easting:	3,202,599.69 usft	Longitude:	-104.773880
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,761.0 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	12/22/2015	8.25	66.79	52,590

<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		279.64

<b>Survey Program</b>	<b>Date</b>	1/5/2016			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
167.0	14,937.0	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	
167.0	0.80	20.90	167.0	1.1	0.4	-0.2	0.48	0.48	0.00	
260.0	2.10	21.30	260.0	3.3	1.3	-0.7	1.40	1.40	0.43	
353.0	3.60	1.00	352.8	7.8	1.9	-0.6	1.92	1.61	-21.83	
446.0	4.80	357.00	445.6	14.6	1.8	0.7	1.33	1.29	-4.30	
541.0	6.50	1.90	540.1	23.9	1.8	2.3	1.86	1.79	5.16	
634.0	7.20	4.90	632.5	35.0	2.4	3.5	0.85	0.75	3.23	
727.0	8.70	10.70	724.6	47.7	4.2	3.8	1.83	1.61	6.24	
820.0	9.50	9.80	816.4	62.2	6.8	3.7	0.87	0.86	-0.97	

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Hunt Federal 28X-314
<b>Project:</b>	SEC.28-T4N-R66W	<b>TVD Reference:</b>	WELL @ 4774.5ft (Ensign Rig #121 - RKB - 13.5')
<b>Site:</b>	Hunt Federal 4N66W28Y Pad	<b>MD Reference:</b>	WELL @ 4774.5ft (Ensign Rig #121 - RKB - 13.5')
<b>Well:</b>	Sec.28-T4N-R66W	<b>North Reference:</b>	True
<b>Wellbore:</b>	Hunt Federal 28X-314	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Design:</b>	Wellbore #1		

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)
855.0	9.70	9.10	850.9	68.0	7.8	3.7	0.66	0.57	-2.00
1,008.0	11.30	9.50	1,001.3	95.5	12.3	3.8	1.05	1.05	0.26
1,101.0	12.50	17.70	1,092.4	114.0	16.9	2.5	2.23	1.29	8.82
1,195.0	14.20	16.00	1,183.8	134.8	23.1	-0.2	1.86	1.81	-1.81
1,289.0	15.70	11.20	1,274.6	158.4	28.8	-1.9	2.07	1.60	-5.11
1,382.0	15.30	9.50	1,364.2	182.8	33.3	-2.2	0.65	-0.43	-1.83
1,476.0	14.10	3.70	1,455.2	206.5	36.1	-1.0	2.02	-1.28	-6.17
1,569.0	13.50	2.80	1,545.5	228.6	37.3	1.5	0.69	-0.65	-0.97
1,662.0	14.20	7.50	1,635.8	250.8	39.3	3.2	1.42	0.75	5.05
1,754.0	13.50	10.00	1,725.1	272.6	42.7	3.6	1.00	-0.76	2.72
1,847.0	14.50	12.30	1,815.3	294.6	47.0	3.0	1.23	1.08	2.47
1,944.0	14.60	15.30	1,909.2	318.3	52.8	1.2	0.78	0.10	3.09
2,040.0	15.00	10.40	2,002.1	342.2	58.3	-0.2	1.37	0.42	-5.10
2,135.0	14.70	7.20	2,093.9	366.2	62.0	0.2	0.92	-0.32	-3.37
2,231.0	15.40	10.20	2,186.6	390.8	65.8	0.6	1.09	0.73	3.13
2,326.0	14.20	6.30	2,278.4	414.8	69.3	1.1	1.64	-1.26	-4.11
2,421.0	14.70	8.10	2,370.4	438.4	72.3	2.1	0.71	0.53	1.89
2,517.0	15.50	6.70	2,463.1	463.2	75.5	3.1	0.92	0.83	-1.46
2,612.0	15.00	4.20	2,554.8	488.0	77.9	4.9	0.87	-0.53	-2.63
2,708.0	16.90	6.30	2,647.1	514.3	80.3	6.9	2.07	1.98	2.19
2,803.0	17.00	5.10	2,738.0	541.8	83.1	8.8	0.38	0.11	-1.26
2,898.0	17.00	3.90	2,828.8	569.5	85.3	11.3	0.37	0.00	-1.26
2,994.0	15.80	2.10	2,920.9	596.6	86.7	14.4	1.36	-1.25	-1.88
3,089.0	14.90	1.20	3,012.5	621.7	87.4	17.9	0.98	-0.95	-0.95
3,185.0	14.10	6.00	3,105.4	645.7	88.9	20.5	1.50	-0.83	5.00
3,280.0	14.00	5.60	3,197.6	668.7	91.2	22.0	0.15	-0.11	-0.42
3,375.0	13.00	11.60	3,290.0	690.6	94.5	22.5	1.81	-1.05	6.32
3,471.0	12.70	11.80	3,383.6	711.5	98.8	21.7	0.32	-0.31	0.21
3,566.0	12.00	12.80	3,476.4	731.3	103.2	20.8	0.77	-0.74	1.05
3,662.0	12.80	16.20	3,570.1	751.3	108.3	19.0	1.13	0.83	3.54
3,757.0	12.80	15.30	3,662.8	771.5	114.0	16.8	0.21	0.00	-0.95
3,852.0	14.80	10.20	3,755.0	793.6	119.0	15.6	2.46	2.11	-5.37
3,948.0	15.10	12.50	3,847.8	817.9	123.8	14.9	0.69	0.31	2.40
4,043.0	15.20	10.90	3,939.5	842.2	128.9	14.0	0.45	0.11	-1.68
4,139.0	14.50	9.50	4,032.3	866.4	133.2	13.7	0.82	-0.73	-1.46
4,234.0	15.60	5.30	4,124.0	890.9	136.4	14.7	1.63	1.16	-4.42
4,329.0	14.60	4.60	4,215.7	915.5	138.5	16.7	1.07	-1.05	-0.74
4,425.0	13.50	2.80	4,308.9	938.8	140.0	19.1	1.23	-1.15	-1.88
4,520.0	13.70	11.10	4,401.2	960.9	142.8	20.2	2.06	0.21	8.74
4,615.0	14.60	8.30	4,493.3	983.8	146.6	20.2	1.19	0.95	-2.95
4,711.0	14.40	3.50	4,586.3	1,007.7	149.1	21.7	1.27	-0.21	-5.00
4,806.0	15.60	4.60	4,678.0	1,032.2	150.9	24.1	1.30	1.26	1.16

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Hunt Federal 28X-314
<b>Project:</b>	SEC.28-T4N-R66W	<b>TVD Reference:</b>	WELL @ 4774.5ft (Ensign Rig #121 - RKB - 13.5')
<b>Site:</b>	Hunt Federal 4N66W28Y Pad Sec.28-T4N-R66W	<b>MD Reference:</b>	WELL @ 4774.5ft (Ensign Rig #121 - RKB - 13.5')
<b>Well:</b>	Hunt Federal 28X-314	<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)	
4,902.0	16.30	9.70	4,770.3	1,058.3	154.2	25.2	1.63	0.73	5.31	
4,997.0	17.00	8.40	4,861.4	1,085.2	158.4	25.5	0.83	0.74	-1.37	
5,093.0	15.90	7.50	4,953.4	1,112.1	162.2	26.3	1.18	-1.15	-0.94	
5,188.0	15.70	10.20	5,044.8	1,137.7	166.2	26.7	0.80	-0.21	2.84	
5,283.0	13.70	8.10	5,136.7	1,161.5	170.1	26.8	2.18	-2.11	-2.21	
5,379.0	14.00	12.60	5,229.9	1,184.1	174.2	26.6	1.16	0.31	4.69	
5,474.0	13.20	14.40	5,322.3	1,205.8	179.4	25.1	0.95	-0.84	1.89	
5,570.0	11.20	13.30	5,416.1	1,225.5	184.3	23.6	2.10	-2.08	-1.15	
5,665.0	11.30	18.10	5,509.3	1,243.3	189.3	21.6	0.99	0.11	5.05	
5,761.0	9.20	17.60	5,603.7	1,259.6	194.5	19.2	2.19	-2.19	-0.52	
5,856.0	7.70	20.90	5,697.7	1,272.7	199.1	16.9	1.66	-1.58	3.47	
5,952.0	7.60	6.50	5,792.9	1,285.1	202.1	15.9	1.99	-0.10	-15.00	
6,047.0	7.30	18.30	5,887.1	1,297.0	204.7	15.4	1.64	-0.32	12.42	
6,143.0	5.80	11.40	5,982.4	1,307.6	207.6	14.3	1.76	-1.56	-7.19	
6,238.0	3.90	9.30	6,077.1	1,315.5	209.1	14.2	2.01	-2.00	-2.21	
6,333.0	1.20	293.20	6,172.0	1,319.1	208.7	15.2	3.99	-2.84	-80.11	
6,429.0	1.10	284.80	6,268.0	1,319.7	206.8	17.1	0.20	-0.10	-8.75	
6,524.0	4.90	279.50	6,362.8	1,320.6	202.0	22.0	4.01	4.00	-5.58	
6,620.0	13.80	283.00	6,457.5	1,323.9	186.7	37.6	9.29	9.27	3.65	
6,715.0	21.30	276.10	6,548.0	1,328.2	158.5	66.2	8.18	7.89	-7.26	
6,810.0	26.30	267.90	6,634.9	1,329.3	120.3	104.0	6.30	5.26	-8.63	
6,906.0	31.10	270.30	6,719.1	1,328.7	74.2	149.4	5.14	5.00	2.50	
7,001.0	36.70	271.90	6,797.9	1,329.7	21.2	201.7	5.97	5.89	1.68	
7,097.0	40.50	269.10	6,872.9	1,330.2	-38.6	260.8	4.36	3.96	-2.92	
7,192.0	47.40	266.50	6,941.3	1,327.6	-104.5	325.3	7.51	7.26	-2.74	
7,288.0	53.70	266.50	7,002.3	1,323.0	-178.4	397.4	6.56	6.56	0.00	
7,383.0	59.40	267.90	7,054.6	1,319.2	-257.5	474.8	6.12	6.00	1.47	
7,478.0	67.70	268.20	7,096.9	1,316.3	-342.5	558.1	8.74	8.74	0.32	
7,525.0	72.90	270.20	7,112.7	1,315.7	-386.7	601.6	11.77	11.06	4.26	
7,574.0	75.60	270.20	7,126.0	1,315.9	-433.9	648.1	5.51	5.51	0.00	
7,621.0	77.70	271.00	7,136.9	1,316.4	-479.6	693.2	4.77	4.47	1.70	
7,669.0	82.70	269.80	7,145.0	1,316.7	-526.9	739.9	10.70	10.42	-2.50	
7,709.0	87.10	271.40	7,148.6	1,317.1	-566.7	779.3	11.70	11.00	4.00	
7,744.0	87.92	271.94	7,150.1	1,318.1	-601.6	813.9	2.81	2.35	1.55	
7"										
7,858.0	90.60	273.70	7,151.6	1,323.7	-715.5	927.1	2.81	2.35	1.54	
7,953.0	90.00	271.90	7,151.1	1,328.4	-810.4	1,021.4	2.00	-0.63	-1.89	
8,049.0	90.00	271.90	7,151.1	1,331.6	-906.3	1,116.5	0.00	0.00	0.00	
8,144.0	89.40	270.20	7,151.6	1,333.3	-1,001.3	1,210.4	1.90	-0.63	-1.79	
8,240.0	89.10	270.20	7,152.9	1,333.6	-1,097.3	1,305.1	0.31	-0.31	0.00	
8,332.0	89.20	269.60	7,154.2	1,333.5	-1,189.3	1,395.8	0.66	0.11	-0.65	
8,424.0	89.00	269.60	7,155.7	1,332.8	-1,281.3	1,486.4	0.22	-0.22	0.00	

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Hunt Federal 28X-314
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<b>Site:</b>	Hunt Federal 4N66W28Y Pad Sec.28-T4N-R66W	<b>MD Reference:</b>	WELL @ 4774.5ft (Ensign Rig #121 - RKB - 13.5')
<b>Well:</b>	Hunt Federal 28X-314	<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)	
8,516.0	88.90	270.50	7,157.3	1,332.9	-1,373.2	1,577.1	0.98	-0.11	0.98	
8,603.9	89.47	270.50	7,158.6	1,333.7	-1,461.1	1,663.8	0.65	0.65	0.00	
<b>Deepest TVD 7158.6'</b>										
8,609.0	89.50	270.50	7,158.6	1,333.7	-1,466.2	1,668.9	0.65	0.65	0.00	
8,701.0	90.90	270.90	7,158.3	1,334.8	-1,558.2	1,759.7	1.58	1.52	0.43	
8,793.0	91.00	269.80	7,156.8	1,335.4	-1,650.2	1,850.5	1.20	0.11	-1.20	
8,885.0	90.70	269.60	7,155.4	1,334.9	-1,742.2	1,941.1	0.39	-0.33	-0.22	
8,978.0	90.70	269.80	7,154.3	1,334.4	-1,835.2	2,032.7	0.22	0.00	0.22	
9,070.0	90.70	270.00	7,153.2	1,334.3	-1,927.2	2,123.4	0.22	0.00	0.22	
9,162.0	90.70	270.30	7,152.1	1,334.5	-2,019.2	2,214.1	0.33	0.00	0.33	
9,254.0	90.70	270.20	7,150.9	1,334.9	-2,111.2	2,304.9	0.11	0.00	-0.11	
9,347.0	91.00	271.00	7,149.5	1,335.9	-2,204.1	2,396.7	0.92	0.32	0.86	
9,439.0	91.80	270.70	7,147.3	1,337.3	-2,296.1	2,487.6	0.93	0.87	-0.33	
9,531.0	93.00	269.30	7,143.4	1,337.3	-2,388.0	2,578.2	2.00	1.30	-1.52	
9,623.0	92.70	270.70	7,138.9	1,337.3	-2,479.9	2,668.8	1.55	-0.33	1.52	
9,715.0	92.90	270.30	7,134.4	1,338.1	-2,571.8	2,759.5	0.49	0.22	-0.43	
9,808.0	90.60	269.10	7,131.5	1,337.6	-2,664.7	2,851.1	2.79	-2.47	-1.29	
9,900.0	89.00	269.30	7,131.9	1,336.3	-2,756.7	2,941.6	1.75	-1.74	0.22	
9,992.0	89.30	269.50	7,133.2	1,335.3	-2,848.7	3,032.1	0.39	0.33	0.22	
10,084.0	89.00	269.60	7,134.6	1,334.6	-2,940.7	3,122.7	0.34	-0.33	0.11	
10,177.0	88.70	269.80	7,136.5	1,334.1	-3,033.7	3,214.2	0.39	-0.32	0.22	
10,269.0	88.30	270.00	7,138.9	1,334.0	-3,125.6	3,304.9	0.49	-0.43	0.22	
10,361.0	88.30	270.00	7,141.6	1,334.0	-3,217.6	3,395.6	0.00	0.00	0.00	
10,453.0	90.00	270.90	7,143.0	1,334.7	-3,309.6	3,486.4	2.09	1.85	0.98	
10,545.0	90.80	270.00	7,142.3	1,335.4	-3,401.6	3,577.2	1.31	0.87	-0.98	
10,638.0	90.00	268.60	7,141.7	1,334.3	-3,494.6	3,668.7	1.73	-0.86	-1.51	
10,733.0	90.00	268.80	7,141.7	1,332.1	-3,589.5	3,761.9	0.21	0.00	0.21	
10,829.0	90.00	268.90	7,141.7	1,330.2	-3,685.5	3,856.2	0.10	0.00	0.10	
10,924.0	90.00	269.30	7,141.7	1,328.7	-3,780.5	3,949.6	0.42	0.00	0.42	
11,019.0	89.90	269.30	7,141.7	1,327.5	-3,875.5	4,043.1	0.11	-0.11	0.00	
11,115.0	90.00	269.80	7,141.8	1,326.8	-3,971.5	4,137.6	0.53	0.10	0.52	
11,210.0	89.80	270.20	7,142.0	1,326.8	-4,066.5	4,231.3	0.47	-0.21	0.42	
11,306.0	89.50	270.20	7,142.6	1,327.1	-4,162.5	4,326.0	0.31	-0.31	0.00	
11,401.0	91.30	269.10	7,141.9	1,326.5	-4,257.5	4,419.5	2.22	1.89	-1.16	
11,497.0	91.00	269.50	7,140.0	1,325.4	-4,353.5	4,513.9	0.52	-0.31	0.42	
11,592.0	90.90	269.10	7,138.4	1,324.2	-4,448.4	4,607.4	0.43	-0.11	-0.42	
11,688.0	91.00	269.30	7,136.8	1,322.9	-4,544.4	4,701.8	0.23	0.10	0.21	
11,783.0	90.20	270.20	7,135.8	1,322.4	-4,639.4	4,795.4	1.27	-0.84	0.95	
11,878.0	90.20	269.60	7,135.5	1,322.3	-4,734.4	4,889.0	0.63	0.00	-0.63	
11,974.0	90.40	270.00	7,135.0	1,321.9	-4,830.4	4,983.6	0.47	0.21	0.42	
12,069.0	90.40	270.20	7,134.3	1,322.1	-4,925.4	5,077.3	0.21	0.00	0.21	
12,165.0	90.50	270.50	7,133.6	1,322.7	-5,021.4	5,172.0	0.33	0.10	0.31	

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Hunt Federal 28X-314
<b>Project:</b>	SEC.28-T4N-R66W	<b>TVD Reference:</b>	WELL @ 4774.5ft (Ensign Rig #121 - RKB - 13.5')
<b>Site:</b>	Hunt Federal 4N66W28Y Pad	<b>MD Reference:</b>	WELL @ 4774.5ft (Ensign Rig #121 - RKB - 13.5')
<b>Well:</b>	Sec.28-T4N-R66W	<b>North Reference:</b>	True
<b>Wellbore:</b>	Hunt Federal 28X-314	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Design:</b>	Wellbore #1		

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)	
12,260.0	89.60	270.20	7,133.5	1,323.3	-5,116.4	5,265.7	1.00	-0.95	-0.32	
12,356.0	89.30	270.20	7,134.4	1,323.6	-5,212.4	5,360.4	0.31	-0.31	0.00	
12,451.0	89.30	270.20	7,135.6	1,323.9	-5,307.4	5,454.1	0.00	0.00	0.00	
12,546.0	89.00	269.60	7,137.0	1,323.8	-5,402.4	5,547.8	0.71	-0.32	-0.63	
12,642.0	88.70	269.10	7,138.9	1,322.7	-5,498.4	5,642.2	0.61	-0.31	-0.52	
12,737.0	89.30	270.50	7,140.6	1,322.4	-5,593.3	5,735.8	1.60	0.63	1.47	
12,832.0	90.00	270.20	7,141.2	1,322.9	-5,688.3	5,829.5	0.80	0.74	-0.32	
12,927.0	91.50	270.30	7,139.9	1,323.4	-5,783.3	5,923.3	1.58	1.58	0.11	
13,023.0	92.00	270.90	7,137.0	1,324.4	-5,879.3	6,018.0	0.81	0.52	0.63	
13,118.0	90.30	271.90	7,135.1	1,326.7	-5,974.2	6,112.0	2.08	-1.79	1.05	
13,214.0	90.10	270.70	7,134.7	1,328.9	-6,070.2	6,207.0	1.27	-0.21	-1.25	
13,309.0	90.70	270.00	7,134.1	1,329.4	-6,165.2	6,300.7	0.97	0.63	-0.74	
13,405.0	90.80	270.00	7,132.8	1,329.4	-6,261.2	6,395.4	0.10	0.10	0.00	
13,500.0	90.00	270.20	7,132.2	1,329.6	-6,356.2	6,489.1	0.87	-0.84	0.21	
13,595.0	89.50	271.00	7,132.6	1,330.6	-6,451.2	6,582.9	0.99	-0.53	0.84	
13,691.0	90.10	269.30	7,132.9	1,330.8	-6,547.2	6,677.6	1.88	0.63	-1.77	
13,786.0	90.70	268.90	7,132.2	1,329.4	-6,642.1	6,771.0	0.76	0.63	-0.42	
13,881.0	90.80	268.40	7,131.0	1,327.1	-6,737.1	6,864.2	0.54	0.11	-0.53	
13,977.0	91.10	268.40	7,129.4	1,324.4	-6,833.1	6,958.4	0.31	0.31	0.00	
14,072.0	91.30	267.90	7,127.4	1,321.4	-6,928.0	7,051.4	0.57	0.21	-0.53	
14,168.0	90.50	268.40	7,125.9	1,318.3	-7,023.9	7,145.5	0.98	-0.83	0.52	
14,263.0	90.70	267.90	7,124.9	1,315.2	-7,118.9	7,238.6	0.57	0.21	-0.53	
14,359.0	91.00	268.80	7,123.5	1,312.4	-7,214.8	7,332.7	0.99	0.31	0.94	
14,454.0	91.90	270.70	7,121.1	1,312.0	-7,309.8	7,426.3	2.21	0.95	2.00	
14,549.0	91.10	271.00	7,118.6	1,313.4	-7,404.7	7,520.1	0.90	-0.84	0.32	
14,645.0	90.80	270.50	7,117.0	1,314.7	-7,500.7	7,615.0	0.61	-0.31	-0.52	
14,740.0	91.60	270.30	7,115.0	1,315.4	-7,595.7	7,708.7	0.87	0.84	-0.21	
14,836.0	91.80	269.80	7,112.2	1,315.4	-7,691.6	7,803.3	0.56	0.21	-0.52	
14,882.0	92.10	270.20	7,110.6	1,315.4	-7,737.6	7,848.6	1.09	0.65	0.87	
14,937.0	92.10	270.20	7,108.6	1,315.6	-7,792.6	7,902.9	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 226'FSL, 252'FEL, :	0.00	0.00	1.0	0.0	0.0	1,344,203.09	3,202,599.69	40.275960	-104.773880	
- survey hits target center										
- Point										

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Hunt Federal 28X-314
<b>Project:</b>	SEC.28-T4N-R66W	<b>TVD Reference:</b>	WELL @ 4774.5ft (Ensign Rig #121 - RKB - 13.5')
<b>Site:</b>	Hunt Federal 4N66W28Y Pad Sec.28-T4N-R66W	<b>MD Reference:</b>	WELL @ 4774.5ft (Ensign Rig #121 - RKB - 13.5')
<b>Well:</b>	Hunt Federal 28X-314	<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

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
7,744.0	7,150.1	7"	7	8-3/4	

Survey Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
8,603.9	7,158.6	1,333.7	-1,461.1	Deepest TVD 7158.6'	

Checked By: _____	Approved By: _____	Date: _____
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