



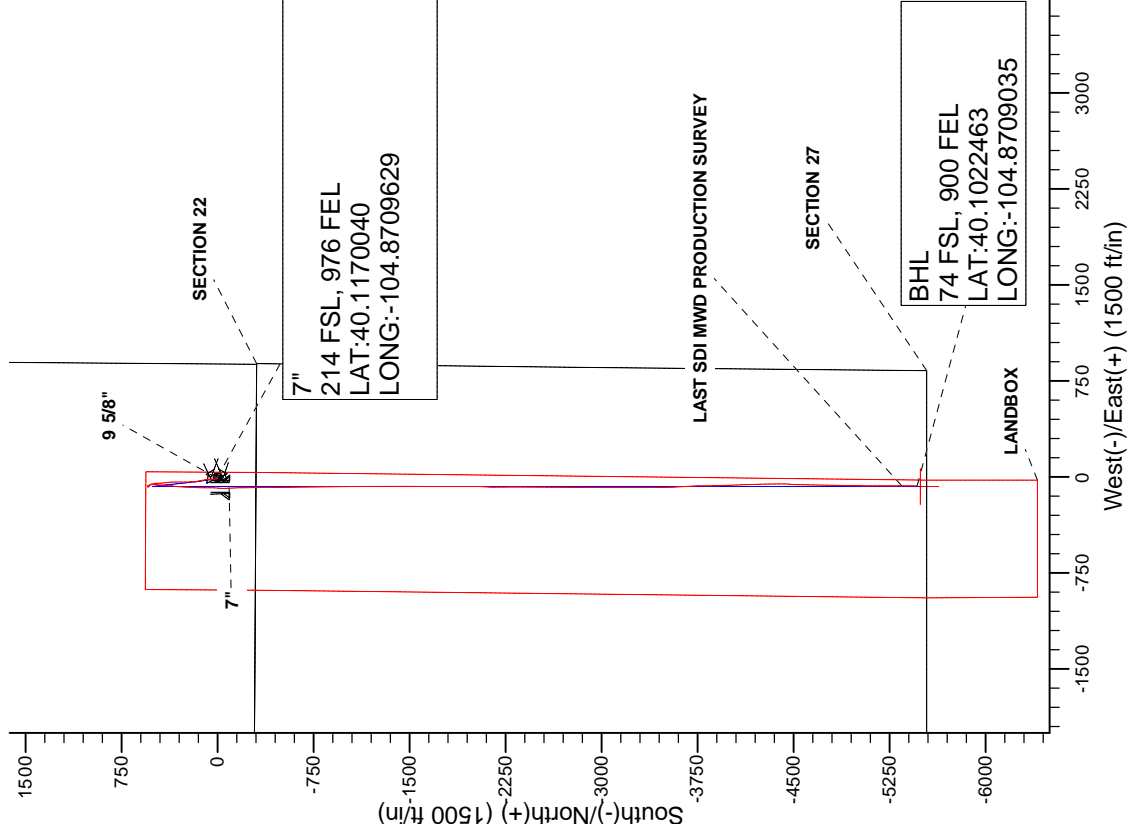
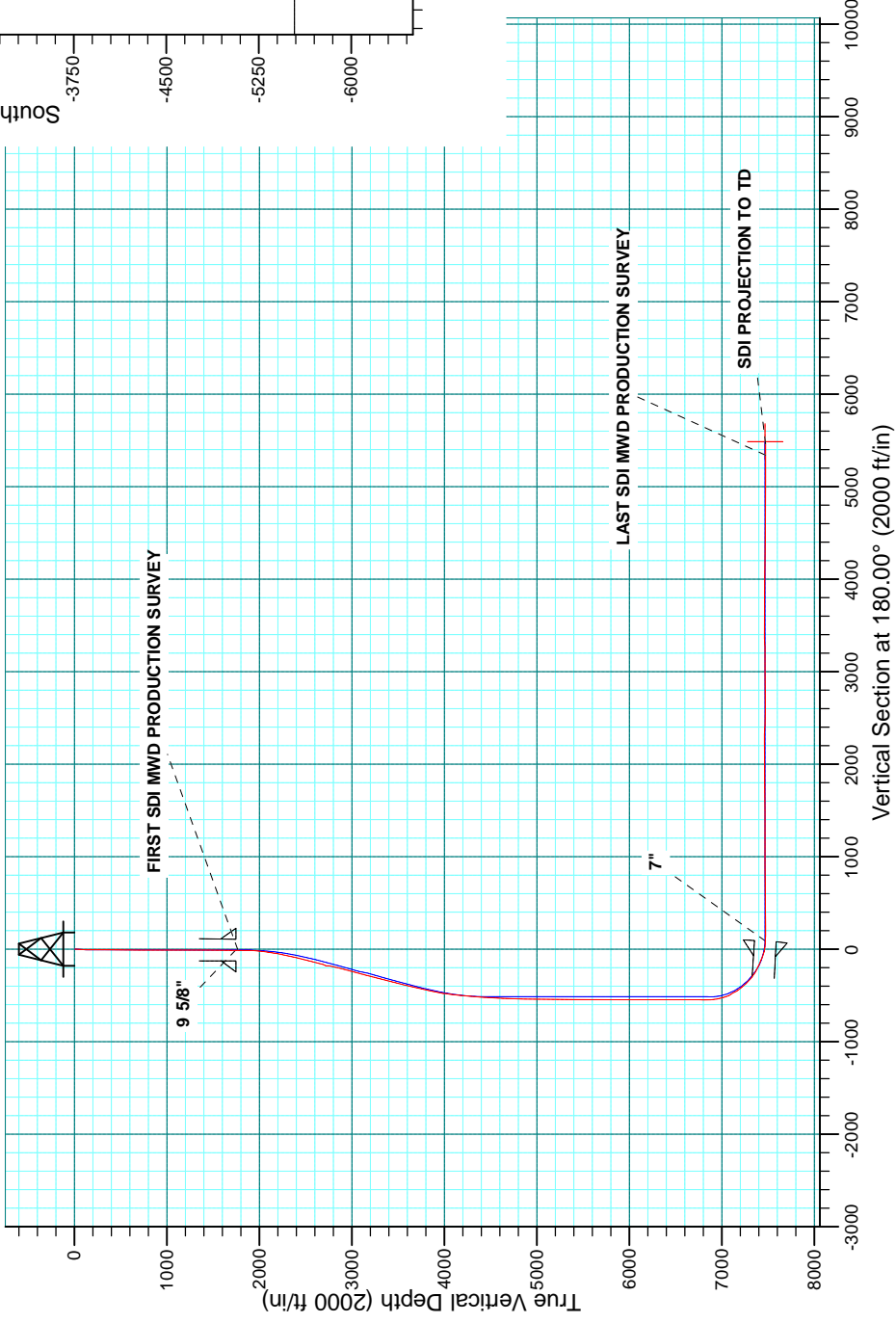
Project: COLORADO NORTHERN ZONE - 83  
Site: BANDED 37-22 HZ PAD  
Well: BANDED 16N-27HZ  
Wellbore: OH  
Design: OH



WELL DETAILS: BANDED 16N-27HZ					
GL 4977 & KB 25 @ 5002.00ft (HP 311)					
+N/-S 0.00	+E/-W 0.00	Northing 1286182.43	Easting 3176008.65	Latitude 40.1172490	Longitude -104.8706550

PROJECT DETAILS: COLORADO NORTHERN ZONE - 83	
Geodetic System:	US State Plane 1983
Datum:	North American Datum 1983
Ellipsoid:	GRS 1980
Zone:	Colorado Northern Zone
Location:	SECTION 22 T2N-R67W
System Datum:	Mean Sea Level

CASING DETAILS		
TVD	MD	Name Size
1748.94	1749.00	9 5/8" 9.625
7470.12	7676.00	7" 7.000





**Scientific Drilling**

# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**BANDED 37-22 HZ PAD**

**BANDED 16N-27HZ**

**OH**

**Design: OH**

## **Standard Survey Report**

**26 August, 2014**

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well BANDED 16N-27HZ
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	GL 4977 & KB 25 @ 5002.00ft (HP 311)
<b>Site:</b>	BANDED 37-22 HZ PAD	<b>MD Reference:</b>	GL 4977 & KB 25 @ 5002.00ft (HP 311)
<b>Well:</b>	BANDED 16N-27HZ	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Denver Sales

<b>Project</b>	COLORADO NORTHERN ZONE - 83, KERR MCGEE OIL & GAS ONSHORE LP		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

Site	BANDED 37-22 HZ PAD, SECTION 22 T2N-R67W				
Site Position:		Northing:	1,286,182.29 usft	Latitude:	40.1172480
From:	Lat/Long	Easting:	3,176,038.58 usft	Longitude:	-104.8705480
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.41 °

Well	BANDED 16N-27HZ, 300' FSL 886' FEL					
Well Position	+N/-S	0.00 ft	Northing:	1,286,182.43 usft	Latitude:	40.1172490
	+E/-W	0.00 ft	Easting:	3,176,008.66 usft	Longitude:	-104.8706550
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	4,977.00 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	BGGM2014	7/14/2014	8.57	66.69	52,546

<b>Design</b>	OH				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	180.00	

<b>Survey Program</b>	<b>Date</b>	8/26/2014			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
25.00	1,667.00	Survey #1 GYRO (OH)	NS-GYRO-MS	North sensing gyrocompassing m/s	
1,767.00	13,255.00	Survey #2 SDI MWD PRODUCTION (OH)	SDI_MWD+CRUST_1.0	SDI MWD + Crustal anomaly, Version 1.0	

<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>	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
25.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00	
125.00	0.26	11.27	125.00	0.22	0.04	-0.22	0.26	0.26	0.00	
225.00	0.37	332.45	225.00	0.73	-0.06	-0.73	0.23	0.11	-38.82	
325.00	0.37	329.61	325.00	1.30	-0.37	-1.30	0.02	0.00	-2.84	
425.00	0.38	320.40	424.99	1.83	-0.75	-1.83	0.06	0.01	-9.21	
525.00	0.39	304.99	524.99	2.28	-1.24	-2.28	0.10	0.01	-15.41	
625.00	0.43	314.02	624.99	2.74	-1.79	-2.74	0.08	0.04	9.03	
725.00	0.46	308.80	724.99	3.25	-2.37	-3.25	0.05	0.03	-5.22	
825.00	0.53	302.46	824.98	3.75	-3.07	-3.75	0.09	0.07	-6.34	

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well BANDED 16N-27HZ
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	GL 4977 & KB 25 @ 5002.00ft (HP 311)
<b>Site:</b>	BANDED 37-22 HZ PAD	<b>MD Reference:</b>	GL 4977 & KB 25 @ 5002.00ft (HP 311)
<b>Well:</b>	BANDED 16N-27HZ	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Denver Sales

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)
925.00	0.52	287.51	924.98	4.13	-3.90	-4.13	0.14	-0.01	-14.95
1,025.00	0.61	286.64	1,024.97	4.42	-4.84	-4.42	0.09	0.09	-0.87
1,125.00	0.67	278.07	1,124.97	4.66	-5.93	-4.66	0.11	0.06	-8.57
1,225.00	0.64	275.19	1,224.96	4.79	-7.06	-4.79	0.04	-0.03	-2.88
1,325.00	0.53	290.90	1,324.96	5.01	-8.05	-5.01	0.19	-0.11	15.71
1,425.00	0.43	280.19	1,424.95	5.24	-8.85	-5.24	0.13	-0.10	-10.71
1,525.00	0.36	280.13	1,524.95	5.36	-9.53	-5.36	0.07	-0.07	-0.06
1,625.00	0.41	235.42	1,624.95	5.21	-10.13	-5.21	0.30	0.05	-44.71
1,667.00	0.47	245.83	1,666.95	5.05	-10.42	-5.05	0.24	0.14	24.79
1,749.00	0.76	289.71	1,748.94	5.10	-11.23	-5.10	0.65	0.35	53.52
9 5/8"									
1,767.00	0.85	294.54	1,766.94	5.19	-11.46	-5.19	0.65	0.52	26.81
FIRST SDI MWD PRODUCTION SURVEY									
1,858.00	3.24	333.90	1,857.88	7.78	-13.21	-7.78	2.90	2.63	43.25
1,949.00	4.58	348.25	1,948.67	13.65	-15.08	-13.65	1.81	1.47	15.77
2,041.00	6.88	1.52	2,040.20	22.76	-15.68	-22.76	2.87	2.50	14.42
2,132.00	8.91	359.28	2,130.34	35.25	-15.63	-35.25	2.26	2.23	-2.46
2,224.00	10.71	357.95	2,220.99	50.92	-16.02	-50.92	1.97	1.96	-1.45
2,315.00	11.90	356.43	2,310.22	68.74	-16.91	-68.74	1.35	1.31	-1.67
2,407.00	14.12	352.28	2,399.86	89.33	-19.01	-89.33	2.62	2.41	-4.51
2,498.00	14.59	350.98	2,488.02	111.65	-22.30	-111.65	0.63	0.52	-1.43
2,590.00	15.05	349.07	2,576.96	134.82	-26.38	-134.82	0.73	0.50	-2.08
2,681.00	14.60	350.73	2,664.93	157.74	-30.47	-157.74	0.68	-0.49	1.82
2,772.00	12.26	350.72	2,753.43	178.60	-33.87	-178.60	2.57	-2.57	-0.01
2,863.00	12.76	357.29	2,842.28	198.17	-35.90	-198.17	1.66	0.55	7.22
2,955.00	14.86	359.95	2,931.61	220.12	-36.40	-220.12	2.38	2.28	2.89
3,046.00	15.07	1.82	3,019.53	243.61	-36.03	-243.61	0.58	0.23	2.05
3,137.00	13.82	1.85	3,107.65	266.30	-35.30	-266.30	1.37	-1.37	0.03
3,229.00	14.18	358.86	3,196.92	288.55	-35.17	-288.55	0.88	0.39	-3.25
3,321.00	14.33	352.81	3,286.09	311.11	-36.82	-311.11	1.63	0.16	-6.58
3,415.00	15.08	355.17	3,377.01	334.84	-39.31	-334.84	1.02	0.80	2.51
3,510.00	13.15	358.23	3,469.14	357.96	-40.68	-357.96	2.18	-2.03	3.22
3,604.00	13.48	357.29	3,560.61	379.59	-41.53	-379.59	0.42	0.35	-1.00
3,793.00	12.46	351.92	3,744.79	421.78	-45.44	-421.78	0.83	-0.54	-2.84
3,887.00	11.61	357.83	3,836.73	441.27	-47.22	-441.27	1.59	-0.90	6.29
3,981.00	11.69	359.92	3,928.79	460.25	-47.59	-460.25	0.46	0.09	2.22
4,170.00	6.55	349.96	4,115.35	490.03	-49.50	-490.03	2.84	-2.72	-5.27
4,359.00	4.53	343.24	4,303.46	507.80	-53.53	-507.80	1.12	-1.07	-3.56
4,453.00	4.08	342.18	4,397.20	514.53	-55.63	-514.53	0.49	-0.48	-1.13
4,736.00	2.54	326.48	4,679.72	529.35	-62.17	-529.35	0.63	-0.54	-5.55
4,830.00	2.33	320.84	4,773.64	532.57	-64.53	-532.57	0.34	-0.22	-6.00
5,019.00	1.25	298.09	4,962.54	536.52	-68.77	-536.52	0.67	-0.57	-12.04
5,113.00	0.92	274.97	5,056.53	537.06	-70.43	-537.06	0.58	-0.35	-24.60

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<b>Well:</b>	BANDED 16N-27HZ	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Denver Sales

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)
5,207.00	0.89	292.36	5,150.52	537.41	-71.86	-537.41	0.29	-0.03	18.50
5,489.00	0.50	330.72	5,432.50	539.31	-74.48	-539.31	0.21	-0.14	13.60
5,584.00	0.72	308.50	5,527.49	540.05	-75.15	-540.05	0.34	0.23	-23.39
5,678.00	0.78	311.94	5,621.48	540.84	-76.09	-540.84	0.08	0.06	3.66
5,773.00	0.52	326.49	5,716.48	541.63	-76.81	-541.63	0.32	-0.27	15.32
5,961.00	0.54	352.65	5,904.47	543.22	-77.39	-543.22	0.13	0.01	13.91
6,056.00	0.81	103.34	5,999.47	543.51	-76.80	-543.51	1.18	0.28	116.52
6,150.00	0.64	73.47	6,093.46	543.51	-75.65	-543.51	0.43	-0.18	-31.78
6,244.00	0.71	330.97	6,187.45	544.17	-75.43	-544.17	1.12	0.07	-109.04
6,433.00	1.45	126.06	6,376.44	543.78	-74.06	-543.78	1.12	0.39	82.06
6,621.00	0.67	110.55	6,564.41	542.00	-71.11	-542.00	0.44	-0.41	-8.25
6,716.00	0.48	51.12	6,659.40	542.05	-70.28	-542.05	0.62	-0.20	-62.56
6,810.00	1.30	48.85	6,753.39	543.00	-69.17	-543.00	0.87	0.87	-2.41
6,857.00	1.69	53.59	6,800.37	543.76	-68.21	-543.76	0.87	0.83	10.09
6,905.00	3.18	151.40	6,848.34	543.01	-67.00	-543.01	7.91	3.10	203.77
6,952.00	6.89	166.31	6,895.16	539.13	-65.71	-539.13	8.31	7.89	31.72
6,999.00	10.37	164.34	6,941.62	532.32	-63.90	-532.32	7.43	7.40	-4.19
7,046.00	14.09	167.74	6,987.54	522.65	-61.55	-522.65	8.06	7.91	7.23
7,093.00	18.87	173.68	7,032.60	509.49	-59.49	-509.49	10.77	10.17	12.64
7,140.00	24.08	178.93	7,076.33	492.34	-58.48	-492.34	11.80	11.09	11.17
7,187.00	29.89	184.09	7,118.20	471.05	-59.13	-471.05	13.32	12.36	10.98
7,234.00	33.53	184.39	7,158.18	446.42	-60.96	-446.42	7.75	7.74	0.64
7,282.00	37.07	184.66	7,197.34	418.77	-63.15	-418.77	7.38	7.38	0.56
7,329.00	40.96	185.39	7,233.85	389.31	-65.75	-389.31	8.33	8.28	1.55
7,376.00	44.32	183.99	7,268.43	357.58	-68.34	-357.58	7.43	7.15	-2.98
7,423.00	48.08	185.02	7,300.95	323.77	-71.02	-323.77	8.15	8.00	2.19
7,470.00	52.38	184.64	7,331.01	287.78	-74.05	-287.78	9.17	9.15	-0.81
7,517.00	56.80	183.94	7,358.24	249.59	-76.91	-249.59	9.48	9.40	-1.49
7,565.00	62.03	183.08	7,382.65	208.36	-79.43	-208.36	11.00	10.90	-1.79
7,612.00	65.13	182.61	7,403.56	166.33	-81.52	-166.33	6.66	6.60	-1.00
7,659.00	67.90	181.41	7,422.29	123.25	-83.03	-123.25	6.34	5.89	-2.55
7,706.00	71.34	181.42	7,438.65	79.22	-84.11	-79.22	7.32	7.32	0.02
7,753.00	75.27	181.18	7,452.15	34.22	-85.13	-34.22	8.38	8.36	-0.51
7,835.00	84.35	180.22	7,466.65	-46.40	-86.11	46.40	11.13	11.07	-1.17
7,878.00	86.39	179.83	7,470.12	-89.26	-86.13	89.26	4.83	4.74	-0.92
7"									
7,950.00	89.80	179.17	7,472.51	-161.20	-85.50	161.20	4.83	4.74	-0.91
8,045.00	89.66	178.80	7,472.96	-256.19	-83.81	256.19	0.42	-0.15	-0.39
8,139.00	90.60	179.44	7,472.75	-350.17	-82.37	350.17	1.21	1.00	0.68
8,233.00	90.87	179.22	7,471.54	-444.16	-81.27	444.16	0.37	0.29	-0.23
8,327.00	90.91	179.12	7,470.08	-538.14	-79.91	538.14	0.11	0.04	-0.11
8,422.00	90.64	179.08	7,468.80	-633.12	-78.42	633.12	0.29	-0.28	-0.04
8,516.00	91.48	178.78	7,467.06	-727.08	-76.66	727.08	0.95	0.89	-0.32
8,611.00	90.81	179.01	7,465.16	-822.05	-74.83	822.05	0.75	-0.71	0.24

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<b>Well:</b>	BANDED 16N-27HZ	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Denver Sales

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)	
8,705.00	89.36	179.31	7,465.02	-916.03	-73.45	916.03	1.58	-1.54	0.32	
8,799.00	89.43	179.57	7,466.01	-1,010.02	-72.53	1,010.02	0.29	0.07	0.28	
8,893.00	89.06	179.81	7,467.25	-1,104.01	-72.02	1,104.01	0.47	-0.39	0.26	
8,988.00	89.06	179.86	7,468.81	-1,199.00	-71.75	1,199.00	0.05	0.00	0.05	
9,082.00	89.60	179.98	7,469.91	-1,292.99	-71.62	1,292.99	0.59	0.57	0.13	
9,177.00	90.77	180.86	7,469.60	-1,387.99	-72.32	1,387.99	1.54	1.23	0.93	
9,271.00	89.83	180.02	7,469.11	-1,481.98	-73.04	1,481.98	1.34	-1.00	-0.89	
9,365.00	91.21	180.46	7,468.26	-1,575.97	-73.43	1,575.97	1.54	1.47	0.47	
9,460.00	91.31	179.95	7,466.17	-1,670.95	-73.77	1,670.95	0.55	0.11	-0.54	
9,554.00	90.61	180.07	7,464.59	-1,764.94	-73.79	1,764.94	0.76	-0.74	0.13	
9,743.00	90.54	180.46	7,462.70	-1,953.93	-74.66	1,953.93	0.21	-0.04	0.21	
9,837.00	90.07	180.50	7,462.20	-2,047.92	-75.45	2,047.92	0.50	-0.50	0.04	
9,931.00	90.91	180.69	7,461.39	-2,141.91	-76.43	2,141.91	0.92	0.89	0.20	
10,025.00	89.09	180.11	7,461.39	-2,235.90	-77.08	2,235.90	2.03	-1.94	-0.62	
10,120.00	89.06	179.96	7,462.93	-2,330.89	-77.14	2,330.89	0.16	-0.03	-0.16	
10,214.00	88.99	180.30	7,464.52	-2,424.88	-77.35	2,424.88	0.37	-0.07	0.36	
10,308.00	89.13	180.40	7,466.07	-2,518.86	-77.93	2,518.86	0.18	0.15	0.11	
10,403.00	89.33	180.61	7,467.34	-2,613.85	-78.76	2,613.85	0.31	0.21	0.22	
10,497.00	90.20	180.87	7,467.73	-2,707.84	-79.98	2,707.84	0.97	0.93	0.28	
10,591.00	90.37	180.95	7,467.26	-2,801.83	-81.47	2,801.83	0.20	0.18	0.09	
10,686.00	90.50	179.98	7,466.54	-2,896.82	-82.24	2,896.82	1.03	0.14	-1.02	
10,780.00	91.04	179.64	7,465.28	-2,990.81	-81.93	2,990.81	0.68	0.57	-0.36	
10,875.00	89.63	179.83	7,464.72	-3,085.81	-81.49	3,085.81	1.50	-1.48	0.20	
10,969.00	90.27	180.32	7,464.80	-3,179.81	-81.61	3,179.81	0.86	0.68	0.52	
11,063.00	90.54	179.81	7,464.14	-3,273.80	-81.72	3,273.80	0.61	0.29	-0.54	
11,157.00	90.57	179.11	7,463.23	-3,367.79	-80.83	3,367.79	0.75	0.03	-0.74	
11,252.00	90.37	178.57	7,462.45	-3,462.77	-78.91	3,462.77	0.61	-0.21	-0.57	
11,346.00	90.24	178.45	7,461.95	-3,556.74	-76.47	3,556.74	0.19	-0.14	-0.13	
11,440.00	89.73	177.78	7,461.97	-3,650.69	-73.38	3,650.69	0.90	-0.54	-0.71	
11,534.00	90.30	178.45	7,461.95	-3,744.63	-70.28	3,744.63	0.94	0.61	0.71	
11,628.00	89.56	178.79	7,462.06	-3,838.61	-68.02	3,838.61	0.87	-0.79	0.36	
11,723.00	89.13	177.93	7,463.15	-3,933.56	-65.30	3,933.56	1.01	-0.45	-0.91	
11,818.00	89.83	178.65	7,464.01	-4,028.51	-62.47	4,028.51	1.06	0.74	0.76	
11,912.00	89.66	177.83	7,464.43	-4,122.47	-59.58	4,122.47	0.89	-0.18	-0.87	
12,006.00	89.56	178.67	7,465.07	-4,216.42	-56.71	4,216.42	0.90	-0.11	0.89	
12,101.00	89.29	178.82	7,466.02	-4,311.39	-54.63	4,311.39	0.33	-0.28	0.16	
12,195.00	89.23	180.76	7,467.24	-4,405.38	-54.28	4,405.38	2.06	-0.06	2.06	
12,289.00	89.93	181.92	7,467.93	-4,499.35	-56.48	4,499.35	1.44	0.74	1.23	
12,383.00	89.53	181.27	7,468.37	-4,593.31	-59.10	4,593.31	0.81	-0.43	-0.69	
12,478.00	89.50	181.35	7,469.17	-4,688.28	-61.27	4,688.28	0.09	-0.03	0.08	
12,572.00	89.29	180.95	7,470.17	-4,782.26	-63.16	4,782.26	0.48	-0.22	-0.43	
12,666.00	90.07	181.24	7,470.69	-4,876.24	-64.95	4,876.24	0.89	0.83	0.31	
12,761.00	90.30	181.10	7,470.38	-4,971.22	-66.89	4,971.22	0.28	0.24	-0.15	

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well BANDED 16N-27HZ
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>TVD Reference:</b>	GL 4977 & KB 25 @ 5002.00ft (HP 311)
<b>Site:</b>	BANDED 37-22 HZ PAD	<b>MD Reference:</b>	GL 4977 & KB 25 @ 5002.00ft (HP 311)
<b>Well:</b>	BANDED 16N-27HZ	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Denver Sales

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)	
12,855.00	89.80	180.88	7,470.30	-5,065.20	-68.52	5,065.20	0.58	-0.53	-0.23	
12,949.00	89.36	179.92	7,470.99	-5,159.20	-69.17	5,159.20	1.12	-0.47	-1.02	
13,043.00	89.33	179.30	7,472.07	-5,253.19	-68.53	5,253.19	0.66	-0.03	-0.66	
13,137.00	89.80	180.54	7,472.78	-5,347.18	-68.40	5,347.18	1.41	0.50	1.32	
<b>LAST SDI MWD PRODUCTION SURVEY</b>										
13,255.00	89.80	180.54	7,473.19	-5,465.18	-69.51	5,465.18	0.00	0.00	0.00	
<b>SDI PROJECTION TO TD</b>										

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name		Casing Diameter (in)	Hole Diameter (in)
1,749.00	1,748.94	9 5/8"		9.625	13.500
7,878.00	7,470.12	7"		7.000	8.750

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
1,767.00	1,766.94	5.19	-11.46	FIRST SDI MWD PRODUCTION SURVEY	
13,137.00	7,472.78	-5,347.18	-68.40	LAST SDI MWD PRODUCTION SURVEY	
13,255.00	7,473.19	-5,465.18	-69.51	SDI PROJECTION TO TD	

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_