

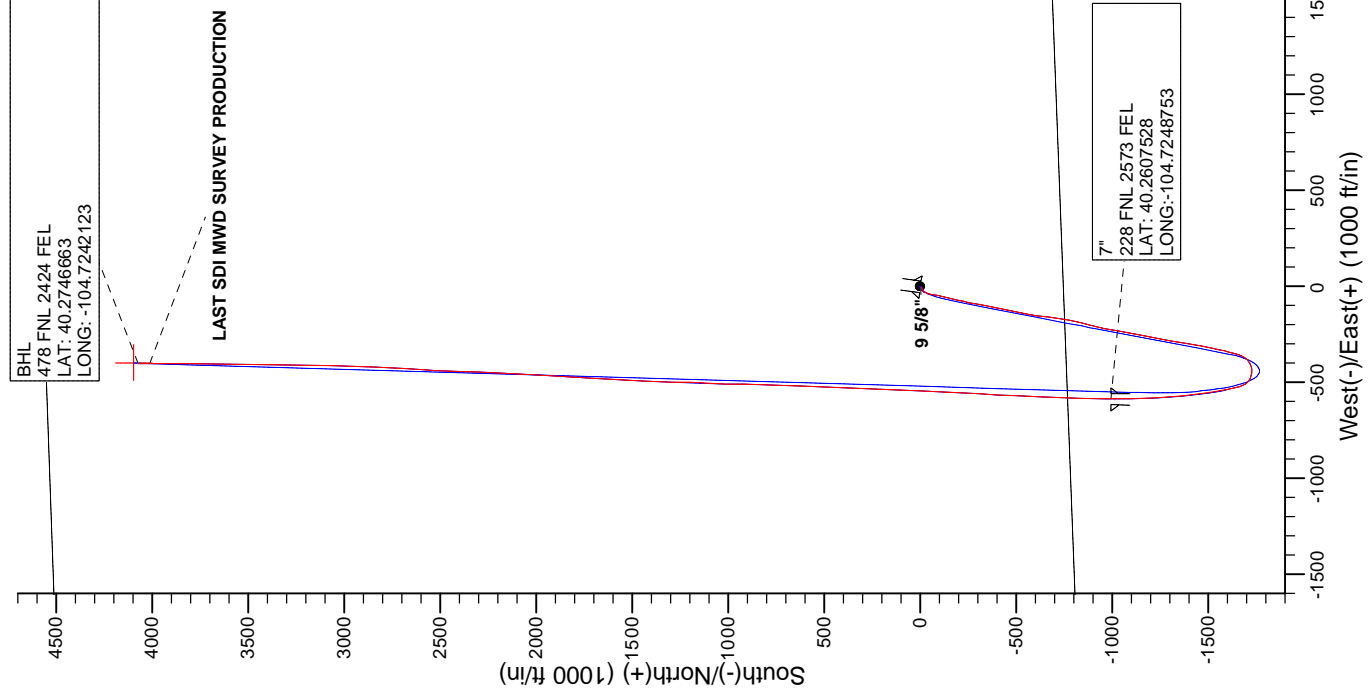
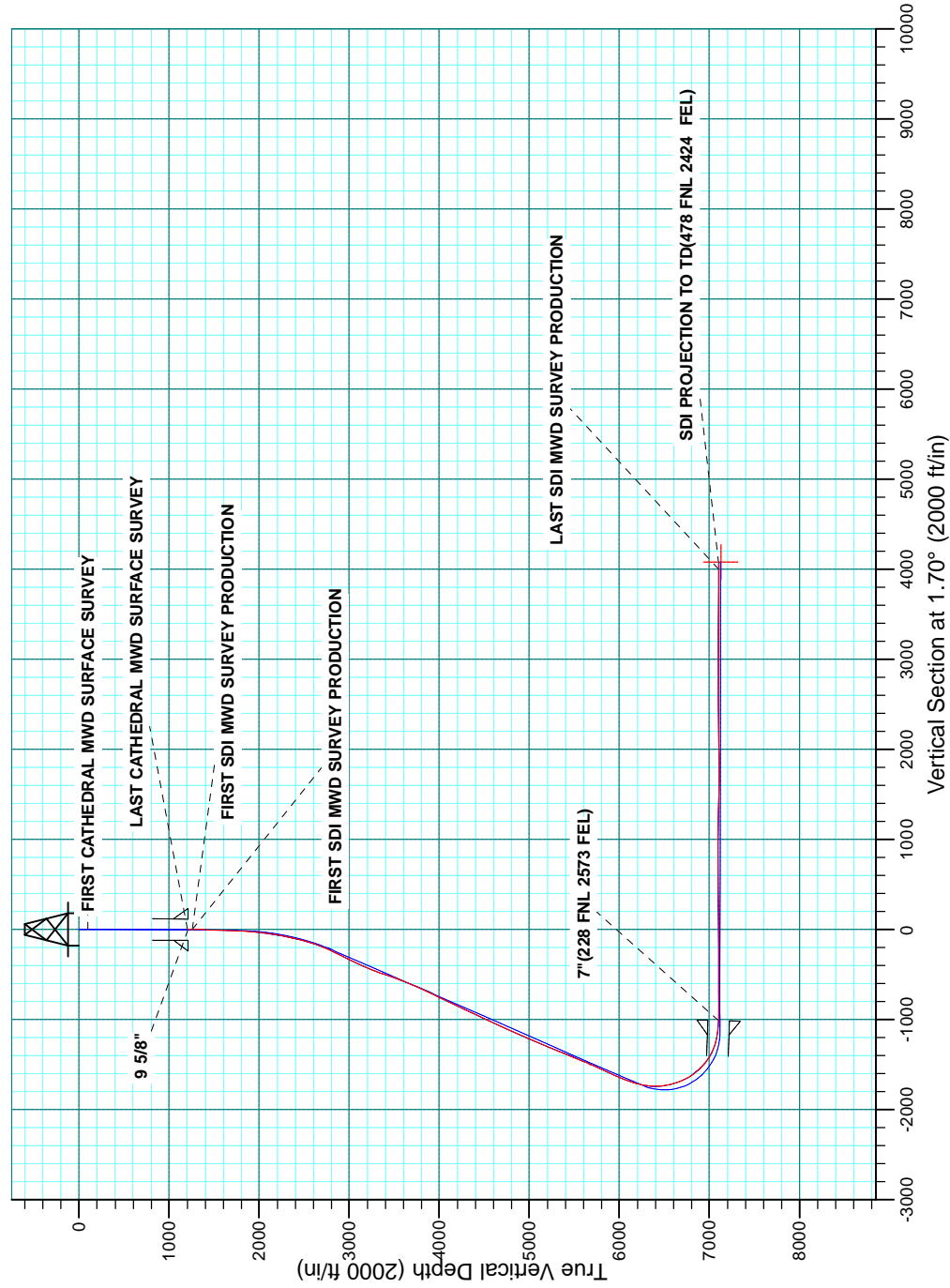


Project: COLORADO NORTHERN ZONE - 83
 Site: DEJANE STATE 15-36 HZ PAD
 Well: DEJANE STATE 2N-36HZ
 Wellbore: OH
 Design: OH



WELL DETAILS: DEJANE STATE 2N-36HZ			
GL 4864 & KB 25 @ 4889.00ft (HP 311)			
+N/-S	+E/-W	Northing	Longitude
0.00	0.00	1339778.90	-104.7227740
		Latitude	Longitude
		40.2634829	-104.7227740

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:	SEC 36 T4N R66W
System Datum:	Mean Sea Level



Survey: Survey #2 SDI MWD PRODUCTION (DEJANE STATE 2N-36HZOH)
 Created By: R.Scott Date: 10/51, December 31 2014



Scientific Drilling

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

DEJANE STATE 15-36 HZ PAD

DEJANE STATE 2N-36HZ

OH

Design: OH

Standard Survey Report

31 December, 2014

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well DEJANE STATE 2N-36HZ
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	GL 4864 & KB 25 @ 4889.00ft (HP 311)
Site:	DEJANE STATE 15-36 HZ PAD	MD Reference:	GL 4864 & KB 25 @ 4889.00ft (HP 311)
Well:	DEJANE STATE 2N-36HZ	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Denver Sales

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

Site	DEJANE STATE 15-36 HZ PAD, SEC 36 T4N R66W				
Site Position:		Northing:	1,339,808.39 usft	Latitude:	40.2635640
From:	Lat/Long	Easting:	3,216,894.17 usft	Longitude:	-104.7227890
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.50 °

Well	DEJANE STATE 2N-36HZ, 746 FSL 1992 FEL					
Well Position	+N/-S	0.00 ft	Northing:	1,339,778.90 usft	Latitude:	40.2634830
	+E/-W	0.00 ft	Easting:	3,216,898.61 usft	Longitude:	-104.7227740
Position Uncertainty		3.28 ft	Wellhead Elevation:	0.00 ft	Ground Level:	4,889.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2014	10/31/2014	8.47	66.82	52,600

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	1.70	

Survey Program	Date	12/31/2014			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
19.00	1,204.00	Survey #1 CATHEDRAL MWD SURFACE (MWD	MWD - Standard	
1,257.00	12,989.00	Survey #2 SDI MWD PRODUCTION (OH)	SDI_MWD+CRUST_1.0	SDI MWD + Crustal anomaly, Version 1.0	

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)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19.00	0.00	0.00	19.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
101.00	0.10	333.60	101.00	0.06	-0.03	0.06	0.12	0.12	0.00	
FIRST CATHEDRAL MWD SURFACE SURVEY										
181.00	0.20	342.70	181.00	0.26	-0.10	0.26	0.13	0.13	11.38	
260.00	0.30	354.20	260.00	0.60	-0.17	0.59	0.14	0.13	14.56	
340.00	0.70	22.10	340.00	1.26	0.00	1.26	0.57	0.50	34.88	
420.00	0.40	12.90	419.99	1.98	0.24	1.99	0.39	-0.38	-11.50	
500.00	0.70	198.00	499.99	1.79	0.15	1.79	1.37	0.38	-218.63	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well DEJANE STATE 2N-36HZ
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	GL 4864 & KB 25 @ 4889.00ft (HP 311)
Site:	DEJANE STATE 15-36 HZ PAD	MD Reference:	GL 4864 & KB 25 @ 4889.00ft (HP 311)
Well:	DEJANE STATE 2N-36HZ	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	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)	
580.00	0.60	182.30	579.99	0.91	-0.01	0.91	0.25	-0.13	-19.63	
660.00	0.70	187.70	659.98	0.00	-0.10	0.00	0.15	0.13	6.75	
740.00	0.70	222.10	739.97	-0.84	-0.49	-0.86	0.52	0.00	43.00	
820.00	0.50	235.70	819.97	-1.40	-1.11	-1.43	0.31	-0.25	17.00	
900.00	0.40	228.50	899.97	-1.78	-1.60	-1.83	0.14	-0.13	-9.00	
980.00	0.20	245.10	979.97	-2.03	-1.94	-2.08	0.27	-0.25	20.75	
1,060.00	0.20	240.50	1,059.97	-2.15	-2.19	-2.22	0.02	0.00	-5.75	
1,140.00	0.20	222.60	1,139.97	-2.33	-2.40	-2.40	0.08	0.00	-22.38	
1,204.00	0.30	182.20	1,203.97	-2.58	-2.48	-2.65	0.31	0.16	-63.13	
LAST CATHEDRAL MWD SURFACE SURVEY										
1,213.00	0.30	187.46	1,212.97	-2.62	-2.49	-2.70	0.31	-0.03	58.43	
9 5/8"										
1,257.00	0.32	212.30	1,256.96	-2.84	-2.57	-2.91	0.31	0.05	56.46	
FIRST SDI MWD SURVEY PRODUCTION										
1,349.00	0.26	201.07	1,348.96	-3.25	-2.78	-3.33	0.09	-0.07	-12.21	
1,440.00	1.93	219.79	1,439.94	-4.62	-3.84	-4.73	1.85	1.84	20.57	
1,531.00	4.06	242.67	1,530.82	-7.28	-7.68	-7.50	2.64	2.34	25.14	
1,623.00	3.86	238.39	1,622.60	-10.40	-13.21	-10.78	0.39	-0.22	-4.65	
1,714.00	3.76	234.48	1,713.40	-13.74	-18.25	-14.27	0.31	-0.11	-4.30	
1,806.00	4.39	236.95	1,805.16	-17.41	-23.65	-18.10	0.71	0.68	2.68	
1,897.00	5.00	213.34	1,895.87	-22.62	-28.75	-23.46	2.21	0.67	-25.95	
1,989.00	6.08	213.15	1,987.44	-30.05	-33.62	-31.03	1.17	1.17	-0.21	
2,083.00	7.71	193.82	2,080.76	-40.34	-37.85	-41.45	2.99	1.73	-20.56	
2,177.00	9.82	191.94	2,173.66	-54.31	-41.02	-55.50	2.26	2.24	-2.00	
2,272.00	11.33	189.58	2,267.05	-71.44	-44.24	-72.72	1.65	1.59	-2.48	
2,366.00	12.79	191.77	2,358.97	-90.73	-47.90	-92.11	1.63	1.55	2.33	
2,460.00	14.74	193.85	2,450.27	-112.53	-52.89	-114.05	2.14	2.07	2.21	
2,554.00	17.04	192.92	2,540.67	-137.57	-58.83	-139.25	2.46	2.45	-0.99	
2,649.00	18.34	193.65	2,631.17	-165.66	-65.47	-167.53	1.39	1.37	0.77	
2,743.00	22.15	191.26	2,719.35	-197.42	-72.42	-199.48	4.15	4.05	-2.54	
2,837.00	26.19	191.85	2,805.09	-235.12	-80.15	-237.39	4.31	4.30	0.63	
2,932.00	27.13	190.04	2,889.99	-276.97	-88.23	-279.46	1.31	0.99	-1.91	
3,026.00	26.76	189.59	2,973.79	-318.94	-95.49	-321.63	0.45	-0.39	-0.48	
3,121.00	24.83	192.07	3,059.32	-359.54	-103.23	-362.44	2.33	-2.03	2.61	
3,215.00	24.49	191.94	3,144.75	-397.90	-111.38	-401.03	0.37	-0.36	-0.14	
3,309.00	22.27	191.84	3,231.03	-434.40	-119.07	-437.74	2.36	-2.36	-0.11	
3,404.00	21.97	189.58	3,319.04	-469.54	-125.72	-473.06	0.95	-0.32	-2.38	
3,498.00	19.58	192.50	3,406.92	-502.26	-132.06	-505.96	2.77	-2.54	3.11	
3,593.00	19.69	191.95	3,496.40	-533.46	-138.82	-537.34	0.23	0.12	-0.58	
3,687.00	21.25	190.21	3,584.46	-565.72	-145.12	-569.78	1.78	1.66	-1.85	
3,781.00	21.15	187.34	3,672.10	-599.30	-150.30	-603.50	1.11	-0.11	-3.05	
3,875.00	22.42	188.45	3,759.38	-633.86	-155.10	-638.18	1.42	1.35	1.18	
4,064.00	26.15	187.55	3,931.63	-710.82	-165.88	-715.43	1.98	1.97	-0.48	
4,158.00	27.62	189.01	4,015.47	-752.88	-172.01	-757.65	1.71	1.56	1.55	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well DEJANE STATE 2N-36HZ
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	GL 4864 & KB 25 @ 4889.00ft (HP 311)
Site:	DEJANE STATE 15-36 HZ PAD	MD Reference:	GL 4864 & KB 25 @ 4889.00ft (HP 311)
Well:	DEJANE STATE 2N-36HZ	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	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)	
4,252.00	26.73	193.09	4,099.10	-794.99	-180.21	-799.99	2.20	-0.95	4.34	
4,347.00	24.67	194.49	4,184.70	-835.00	-190.01	-840.27	2.26	-2.17	1.47	
4,441.00	25.03	193.42	4,269.99	-873.34	-199.54	-878.88	0.61	0.38	-1.14	
4,535.00	27.74	192.26	4,354.20	-914.07	-208.80	-919.86	2.93	2.88	-1.23	
4,630.00	25.71	190.31	4,439.04	-955.95	-217.18	-961.97	2.33	-2.14	-2.05	
4,724.00	25.38	190.69	4,523.86	-995.81	-224.57	-1,002.03	0.39	-0.35	0.40	
4,818.00	24.97	190.35	4,608.93	-1,035.12	-231.87	-1,041.54	0.46	-0.44	-0.36	
4,912.00	24.17	190.47	4,694.41	-1,073.56	-238.93	-1,080.18	0.85	-0.85	0.13	
5,006.00	24.38	189.26	4,780.10	-1,111.64	-245.55	-1,118.43	0.57	0.22	-1.29	
5,101.00	25.14	192.41	4,866.37	-1,150.70	-253.04	-1,157.70	1.60	0.80	3.32	
5,195.00	22.15	190.82	4,952.47	-1,187.61	-260.66	-1,194.82	3.25	-3.18	-1.69	
5,289.00	23.87	190.88	5,038.99	-1,223.70	-267.58	-1,231.10	1.83	1.83	0.06	
5,383.00	24.54	192.05	5,124.73	-1,261.47	-275.24	-1,269.08	0.88	0.71	1.24	
5,477.00	21.59	193.03	5,211.20	-1,297.41	-283.22	-1,305.24	3.16	-3.14	1.04	
5,572.00	21.40	188.88	5,299.60	-1,331.57	-289.84	-1,339.58	1.61	-0.20	-4.37	
5,666.00	22.12	188.46	5,386.90	-1,366.02	-295.09	-1,374.17	0.78	0.77	-0.45	
5,760.00	22.76	186.61	5,473.79	-1,401.59	-299.78	-1,409.86	1.01	0.68	-1.97	
5,854.00	22.93	189.67	5,560.42	-1,437.70	-304.95	-1,446.11	1.28	0.18	3.26	
5,948.00	25.18	192.68	5,646.25	-1,475.27	-312.42	-1,483.89	2.73	2.39	3.20	
6,043.00	23.19	190.74	5,732.91	-1,513.36	-320.34	-1,522.20	2.26	-2.09	-2.04	
6,137.00	23.82	190.76	5,819.11	-1,550.20	-327.34	-1,559.23	0.67	0.67	0.02	
6,231.00	24.12	193.73	5,905.00	-1,587.50	-335.44	-1,596.76	1.32	0.32	3.16	
6,326.00	25.04	195.16	5,991.40	-1,625.77	-345.30	-1,635.29	1.15	0.97	1.51	
6,420.00	22.17	199.90	6,077.53	-1,661.65	-356.55	-1,671.50	3.66	-3.05	5.04	
6,514.00	20.64	214.55	6,165.11	-1,692.00	-371.99	-1,702.29	5.90	-1.63	15.59	
6,609.00	19.95	237.87	6,254.35	-1,714.45	-395.25	-1,725.42	8.49	-0.73	24.55	
6,703.00	18.49	256.74	6,343.20	-1,726.41	-423.37	-1,738.21	6.76	-1.55	20.07	
6,797.00	20.06	275.23	6,432.01	-1,728.36	-453.96	-1,741.06	6.68	1.67	19.67	
6,891.00	21.44	299.99	6,520.08	-1,718.28	-484.95	-1,731.91	9.38	1.47	26.34	
6,985.00	21.73	329.64	6,607.75	-1,694.61	-508.70	-1,708.95	11.50	0.31	31.54	
7,080.00	22.34	342.74	6,695.86	-1,662.17	-522.95	-1,676.96	5.20	0.64	13.79	
7,174.00	31.53	348.28	6,779.59	-1,620.95	-533.27	-1,636.06	10.12	9.78	5.89	
7,268.00	40.02	350.68	6,855.79	-1,566.96	-543.18	-1,582.38	9.15	9.03	2.55	
7,362.00	47.03	350.76	6,923.90	-1,503.11	-553.61	-1,518.87	7.46	7.46	0.09	
7,456.00	55.11	354.08	6,982.93	-1,430.69	-563.12	-1,446.76	9.02	8.60	3.53	
7,551.00	65.14	353.90	7,030.19	-1,348.87	-571.74	-1,365.24	10.56	10.56	-0.19	
7,645.00	73.21	356.93	7,063.59	-1,261.37	-578.70	-1,277.99	9.10	8.59	3.22	
7,739.00	78.45	358.56	7,086.59	-1,170.34	-582.27	-1,187.10	5.82	5.57	1.73	
7,833.00	85.09	357.71	7,100.04	-1,077.41	-585.30	-1,094.30	7.12	7.06	-0.90	
7,916.00	88.38	0.69	7,104.77	-994.57	-586.45	-1,011.53	5.34	3.96	3.59	
7"(228 FNL 2573 FEL)										
7,945.00	89.53	1.73	7,105.30	-965.58	-585.84	-982.54	5.34	3.97	3.58	
8,039.00	89.90	2.13	7,105.76	-871.64	-582.67	-888.54	0.58	0.39	0.43	

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Site:	DEJANE STATE 15-36 HZ PAD	MD Reference:	GL 4864 & KB 25 @ 4889.00ft (HP 311)
Well:	DEJANE STATE 2N-36HZ	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	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)	
8,133.00	90.27	1.08	7,105.62	-777.68	-580.04	-794.54	1.18	0.39	-1.12	
8,227.00	89.67	1.21	7,105.67	-683.70	-578.16	-700.55	0.65	-0.64	0.14	
8,321.00	89.93	3.40	7,106.00	-589.78	-574.38	-606.56	2.35	0.28	2.33	
8,416.00	89.33	2.90	7,106.62	-494.93	-569.16	-511.59	0.82	-0.63	-0.53	
8,510.00	90.23	2.18	7,106.98	-401.02	-564.99	-417.60	1.23	0.96	-0.77	
8,604.00	90.97	3.46	7,105.99	-307.14	-560.37	-323.63	1.57	0.79	1.36	
8,699.00	90.84	2.97	7,104.49	-212.30	-555.04	-228.68	0.53	-0.14	-0.52	
8,793.00	90.44	1.82	7,103.44	-118.39	-551.11	-134.69	1.30	-0.43	-1.22	
8,888.00	89.80	3.23	7,103.24	-23.49	-546.93	-39.70	1.63	-0.67	1.48	
8,982.00	89.33	3.06	7,103.96	70.37	-541.77	54.26	0.53	-0.50	-0.18	
9,076.00	90.64	2.50	7,103.98	164.25	-537.21	148.24	1.52	1.39	-0.60	
9,170.00	91.41	2.29	7,102.30	258.16	-533.29	242.22	0.85	0.82	-0.22	
9,265.00	90.50	2.72	7,100.72	353.05	-529.13	337.20	1.06	-0.96	0.45	
9,359.00	90.70	1.93	7,099.73	446.97	-525.32	431.19	0.87	0.21	-0.84	
9,453.00	90.57	1.68	7,098.69	540.92	-522.36	525.18	0.30	-0.14	-0.27	
9,547.00	90.90	1.90	7,097.48	634.86	-519.43	619.17	0.42	0.35	0.23	
9,641.00	89.56	2.16	7,097.11	728.80	-516.10	713.17	1.45	-1.43	0.28	
9,736.00	90.17	1.79	7,097.33	823.74	-512.82	808.17	0.75	0.64	-0.39	
9,830.00	88.89	2.11	7,098.10	917.68	-509.62	902.16	1.40	-1.36	0.34	
9,924.00	89.13	1.69	7,099.73	1,011.62	-506.51	996.15	0.51	0.26	-0.45	
10,018.00	89.19	1.99	7,101.10	1,105.56	-503.49	1,090.13	0.33	0.06	0.32	
10,113.00	90.37	1.07	7,101.47	1,200.52	-500.95	1,185.13	1.58	1.24	-0.97	
10,207.00	88.63	2.71	7,102.29	1,294.46	-497.85	1,279.12	2.54	-1.85	1.74	
10,301.00	88.46	2.29	7,104.68	1,388.34	-493.75	1,373.08	0.48	-0.18	-0.45	
10,395.00	88.59	2.22	7,107.10	1,482.24	-490.06	1,467.04	0.16	0.14	-0.07	
10,489.00	89.29	2.84	7,108.83	1,576.13	-485.91	1,561.02	0.99	0.74	0.66	
10,584.00	89.29	2.88	7,110.01	1,671.00	-481.17	1,655.99	0.04	0.00	0.04	
10,678.00	90.40	3.80	7,110.27	1,764.84	-475.69	1,749.95	1.53	1.18	0.98	
10,772.00	91.04	4.08	7,109.08	1,858.61	-469.23	1,843.87	0.74	0.68	0.30	
10,866.00	90.27	3.35	7,108.01	1,952.40	-463.14	1,937.80	1.13	-0.82	-0.78	
10,961.00	90.67	2.47	7,107.23	2,047.28	-458.32	2,032.78	1.02	0.42	-0.93	
11,055.00	91.24	2.59	7,105.66	2,141.17	-454.17	2,126.76	0.62	0.61	0.13	
11,149.00	90.40	2.53	7,104.32	2,235.07	-449.97	2,220.73	0.90	-0.89	-0.06	
11,243.00	91.00	1.73	7,103.17	2,328.99	-446.48	2,314.72	1.06	0.64	-0.85	
11,338.00	90.13	2.78	7,102.23	2,423.91	-442.74	2,409.71	1.44	-0.92	1.11	
11,432.00	90.54	3.06	7,101.68	2,517.79	-437.95	2,503.69	0.53	0.44	0.30	
11,526.00	88.93	2.76	7,102.12	2,611.66	-433.18	2,597.66	1.74	-1.71	-0.32	
11,621.00	89.60	2.66	7,103.34	2,706.55	-428.69	2,692.64	0.71	0.71	-0.11	
11,715.00	89.83	3.27	7,103.80	2,800.42	-423.83	2,786.62	0.69	0.24	0.65	
11,809.00	90.34	3.48	7,103.67	2,894.26	-418.30	2,880.58	0.59	0.54	0.22	
11,903.00	90.27	1.00	7,103.16	2,988.18	-414.62	2,974.56	2.64	-0.07	-2.64	
11,997.00	91.17	0.96	7,101.98	3,082.16	-413.01	3,068.55	0.96	0.96	-0.04	
12,092.00	91.04	0.69	7,100.15	3,177.13	-411.65	3,163.52	0.32	-0.14	-0.28	
12,186.00	88.69	1.60	7,100.37	3,271.10	-409.77	3,257.51	2.68	-2.50	0.97	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well DEJANE STATE 2N-36HZ
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	GL 4864 & KB 25 @ 4889.00ft (HP 311)
Site:	DEJANE STATE 15-36 HZ PAD	MD Reference:	GL 4864 & KB 25 @ 4889.00ft (HP 311)
Well:	DEJANE STATE 2N-36HZ	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	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)
12,280.00	89.67	0.85	7,101.72	3,365.07	-407.76	3,351.49	1.31	1.04	-0.80
12,374.00	90.47	1.23	7,101.60	3,459.05	-406.05	3,445.48	0.94	0.85	0.40
12,468.00	89.16	0.67	7,101.91	3,553.04	-404.49	3,539.47	1.52	-1.39	-0.60
12,562.00	89.80	0.99	7,102.76	3,647.02	-403.13	3,633.46	0.76	0.68	0.34
12,657.00	90.50	1.33	7,102.51	3,742.00	-401.21	3,728.45	0.82	0.74	0.36
12,751.00	88.66	359.73	7,103.20	3,835.99	-400.34	3,822.42	2.59	-1.96	-1.70
12,845.00	89.16	359.41	7,104.99	3,929.97	-401.05	3,916.34	0.63	0.53	-0.34
12,927.00	89.87	0.07	7,105.68	4,011.96	-401.42	3,998.29	1.18	0.87	0.80
LAST SDI MWD SURVEY PRODUCTION									
12,989.00	89.87	0.07	7,105.82	4,073.96	-401.34	4,060.26	0.00	0.00	0.00
SDI PROJECTION TO TD(478 FNL 2424 FEL)									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,213.00	1,212.97	9 5/8"	9.625	13.500	
7,916.00	7,104.77	7"(228 FNL 2573 FEL)	7.000	8.750	

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
101.00	101.00	0.06	-0.03	FIRST CATHEDRAL MWD SURFACE SURVEY	
1,204.00	1,203.97	-2.58	-2.48	LAST CATHEDRAL MWD SURFACE SURVEY	
1,257.00	1,256.96	-2.84	-2.57	FIRST SDI MWD SURVEY PRODUCTION	
12,927.00	7,105.68	4,011.96	-401.42	LAST SDI MWD SURVEY PRODUCTION	
12,989.00	7,105.82	4,073.96	-401.34	SDI PROJECTION TO TD(478 FNL 2424 FEL)	

Checked By: _____ Approved By: _____ Date: _____