



END OF WELL REPORT

Prepared For:

**Kerr-McGee Oil & Gas Onshore LP
THOMASON 35-6HZ PAD
THOMASON 22N-31HZ
WELD COUNTY, COLORADO**

*Prepared By
Shawn DeVerse, Denver Well Planner
Scientific Drilling
Rocky Mountain Region*

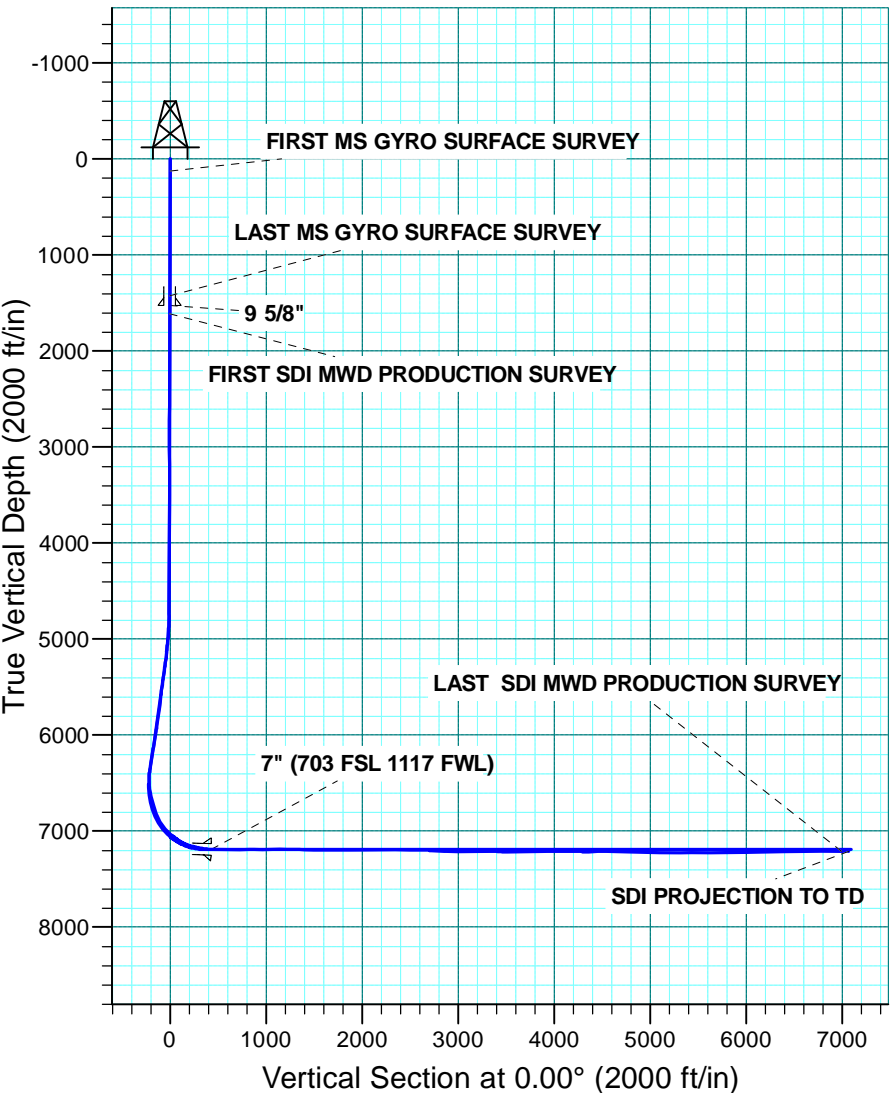
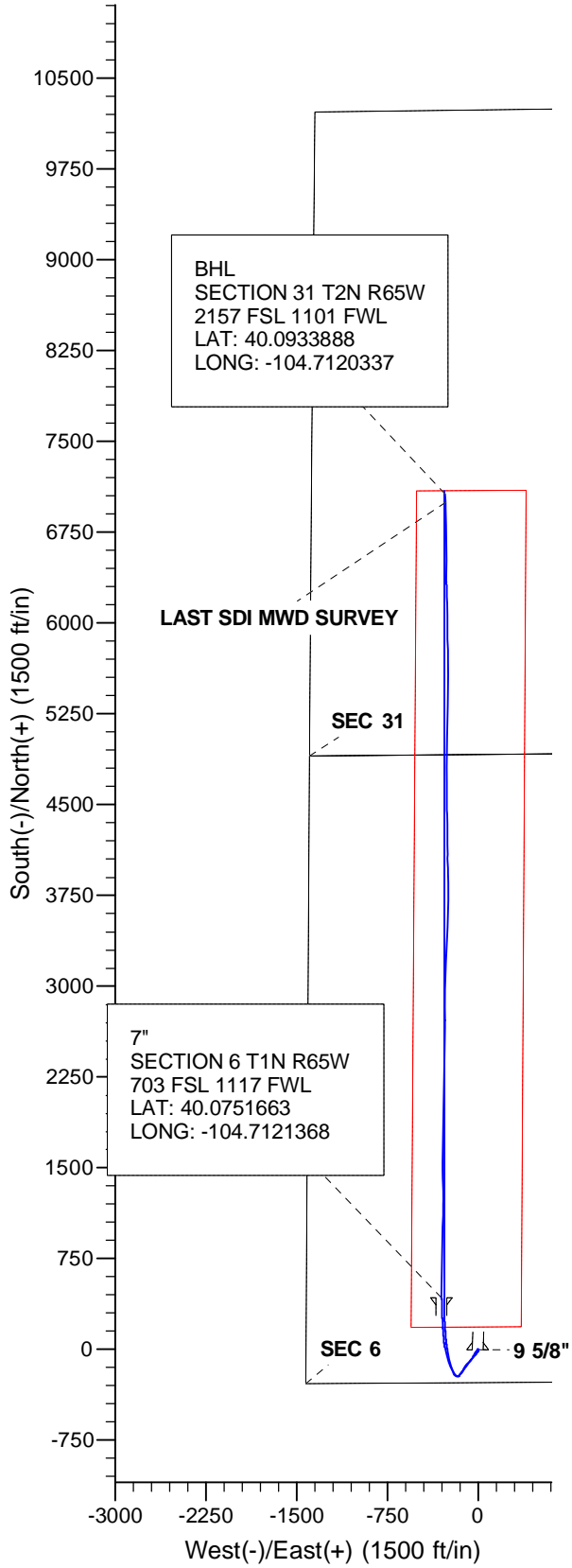
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TABLE OF CONTENTS

- 1. Directional Plot and Surveys**
- 2. Daily Drilling Reports**
- 3. BHA Summary Reports and Slide Sheets**
- 4. Graphical Job History**
- 5. Support Staff**

WELL DETAILS: THOMASON 22N-31HZ					
GL 5001 & KB 25 @ 5026.00ft (HP 311)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1270781.33	3220781.95	40.0739889	-104.7110590





Scientific Drilling

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

THOMASON 35-6HZ PAD

THOMASON 22N-31HZ

OH

Design: OH

Standard Survey Report

23 December, 2013

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well THOMASON 22N-31HZ
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	GL 5001 & KB 25 @ 5026.00ft (HP 311)
Site:	THOMASON 35-6HZ PAD	MD Reference:	GL 5001 & KB 25 @ 5026.00ft (HP 311)
Well:	THOMASON 22N-31HZ	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Denver Sales Office

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	THOMASON 35-6HZ PAD, SESW SEC 6 T1N R65W				
Site Position:		Northing:	1,270,782.52 usft	Latitude:	40.0739900
From:	Lat/Long	Easting:	3,220,872.05 usft	Longitude:	-104.7107370
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.51 °

Well	THOMASON 22N-31HZ, 275' FSL 1420' FWL					
Well Position	+N/-S	0.00 ft	Northing:	1,270,781.33 usft	Latitude:	40.0739890
	+E/-W	0.00 ft	Easting:	3,220,781.95 usft	Longitude:	-104.7110590
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	5,001.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	10/15/2013	8.53	66.71	52,644

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	0.00	

Survey Program	Date	12/23/2013			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
25.00	1,425.00	Survey #1 MS GYRO SURFACE (OH)	NS-GYRO-MS	North sensing gyrocompassing m/s	
1,608.00	14,228.00	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
25.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
125.00	0.41	330.86	125.00	0.31	-0.17	0.31	0.41	0.41	0.41	0.00
FIRST MS GYRO SURFACE SURVEY										
225.00	0.14	359.29	225.00	0.75	-0.35	0.75	0.29	-0.27	28.43	
325.00	0.20	281.44	325.00	0.90	-0.52	0.90	0.22	0.06	-77.85	
425.00	0.21	271.81	425.00	0.94	-0.88	0.94	0.04	0.01	-9.63	
525.00	0.27	274.07	525.00	0.97	-1.29	0.97	0.06	0.06	2.26	
625.00	0.24	226.78	625.00	0.84	-1.68	0.84	0.21	-0.03	-47.29	
725.00	0.38	199.13	724.99	0.38	-1.94	0.38	0.20	0.14	-27.65	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well THOMASON 22N-31HZ
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	GL 5001 & KB 25 @ 5026.00ft (HP 311)
Site:	THOMASON 35-6HZ PAD	MD Reference:	GL 5001 & KB 25 @ 5026.00ft (HP 311)
Well:	THOMASON 22N-31HZ	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Denver Sales Office

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)	
825.00	0.21	197.14	824.99	-0.10	-2.11	-0.10	0.17	-0.17	-1.99	
925.00	0.48	202.53	924.99	-0.67	-2.32	-0.67	0.27	0.27	5.39	
1,025.00	0.29	197.88	1,024.99	-1.29	-2.56	-1.29	0.19	-0.19	-4.65	
1,125.00	0.29	193.62	1,124.99	-1.78	-2.70	-1.78	0.02	0.00	-4.26	
1,225.00	0.32	178.51	1,224.99	-2.31	-2.75	-2.31	0.09	0.03	-15.11	
1,325.00	0.09	223.34	1,324.98	-2.64	-2.80	-2.64	0.26	-0.23	44.83	
1,425.00	0.16	136.48	1,424.98	-2.80	-2.75	-2.80	0.18	0.07	-86.86	
LAST MS GYRO SURFACE SURVEY										
1,525.00	0.19	180.72	1,524.98	-3.07	-2.66	-3.07	0.14	0.03	44.24	
9 5/8"										
1,608.00	0.27	200.79	1,607.98	-3.39	-2.73	-3.39	0.14	0.10	24.18	
FIRST SDI MWD PRODUCTION SURVEY										
1,699.00	0.24	197.39	1,698.98	-3.77	-2.86	-3.77	0.04	-0.03	-3.74	
1,791.00	0.24	214.76	1,790.98	-4.11	-3.03	-4.11	0.08	0.00	18.88	
1,883.00	0.11	195.29	1,882.98	-4.36	-3.16	-4.36	0.15	-0.14	-21.16	
1,974.00	0.35	265.96	1,973.98	-4.46	-3.46	-4.46	0.36	0.26	77.66	
2,066.00	0.29	224.39	2,065.98	-4.65	-3.91	-4.65	0.25	-0.07	-45.18	
2,157.00	0.42	271.00	2,156.98	-4.81	-4.40	-4.81	0.34	0.14	51.22	
2,249.00	0.42	312.77	2,248.98	-4.57	-4.99	-4.57	0.33	0.00	45.40	
2,341.00	0.67	301.17	2,340.97	-4.06	-5.69	-4.06	0.30	0.27	-12.61	
2,433.00	0.61	344.46	2,432.97	-3.31	-6.29	-3.31	0.52	-0.07	47.05	
2,580.00	2.22	160.88	2,579.94	-5.25	-5.56	-5.25	1.92	1.10	120.01	
2,617.00	2.24	153.93	2,616.91	-6.58	-5.01	-6.58	0.73	0.05	-18.78	
2,708.00	1.95	151.29	2,707.85	-9.53	-3.49	-9.53	0.34	-0.32	-2.90	
2,800.00	1.19	146.93	2,799.81	-11.71	-2.21	-11.71	0.84	-0.83	-4.74	
2,895.00	2.90	71.28	2,894.76	-11.76	0.60	-11.76	3.00	1.80	-79.63	
2,989.00	1.38	351.59	2,988.71	-9.88	2.69	-9.88	3.17	-1.62	-84.78	
3,084.00	1.84	349.70	3,083.67	-7.25	2.25	-7.25	0.49	0.48	-1.99	
3,178.00	1.63	333.69	3,177.63	-4.56	1.39	-4.56	0.56	-0.22	-17.03	
3,272.00	0.38	226.74	3,271.62	-3.58	0.57	-3.58	1.89	-1.33	-113.78	
3,367.00	0.38	113.14	3,366.61	-3.92	0.63	-3.92	0.67	0.00	-119.58	
3,462.00	0.48	63.89	3,461.61	-3.87	1.28	-3.87	0.39	0.11	-51.84	
3,556.00	0.91	66.88	3,555.61	-3.40	2.32	-3.40	0.46	0.46	3.18	
3,651.00	1.19	96.71	3,650.59	-3.22	3.99	-3.22	0.64	0.29	31.40	
3,745.00	0.75	191.85	3,744.58	-3.93	4.83	-3.93	1.56	-0.47	101.21	
3,840.00	1.01	217.07	3,839.57	-5.21	4.20	-5.21	0.48	0.27	26.55	
3,934.00	0.78	238.42	3,933.56	-6.21	3.16	-6.21	0.43	-0.24	22.71	
4,028.00	1.57	242.34	4,027.54	-7.14	1.47	-7.14	0.84	0.84	4.17	
4,123.00	1.94	218.98	4,122.49	-8.99	-0.69	-8.99	0.84	0.39	-24.59	
4,217.00	1.11	200.74	4,216.46	-11.08	-2.02	-11.08	1.01	-0.88	-19.40	
4,312.00	0.87	78.27	4,311.45	-11.80	-1.64	-11.80	1.83	-0.25	-128.92	
4,406.00	0.17	358.43	4,405.45	-11.51	-0.94	-11.51	0.91	-0.74	-84.94	
4,501.00	1.19	321.21	4,500.44	-10.60	-1.56	-10.60	1.12	1.07	-39.18	
4,595.00	0.96	282.81	4,594.43	-9.67	-2.94	-9.67	0.79	-0.24	-40.85	

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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Denver Sales Office

Survey										
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4,690.00	2.44	251.62	4,689.38	-10.13	-5.64	-10.13	1.78	1.56	-32.83	
4,784.00	2.91	236.25	4,783.28	-12.09	-9.52	-12.09	0.91	0.50	-16.35	
4,878.00	3.70	222.55	4,877.13	-15.65	-13.56	-15.65	1.18	0.84	-14.57	
4,972.00	5.05	215.75	4,970.85	-21.24	-18.03	-21.24	1.54	1.44	-7.23	
5,067.00	6.03	207.17	5,065.41	-29.07	-22.75	-29.07	1.35	1.03	-9.03	
5,161.00	7.44	212.60	5,158.76	-38.59	-28.28	-38.59	1.64	1.50	5.78	
5,255.00	8.50	210.96	5,251.85	-49.68	-35.13	-49.68	1.15	1.13	-1.74	
5,350.00	10.21	211.41	5,345.58	-62.88	-43.13	-62.88	1.80	1.80	0.47	
5,444.00	9.59	213.65	5,438.18	-76.51	-51.82	-76.51	0.78	-0.66	2.38	
5,538.00	8.91	218.66	5,530.96	-88.71	-60.70	-88.71	1.12	-0.72	5.33	
5,633.00	9.87	227.26	5,624.69	-99.99	-71.28	-99.99	1.79	1.01	9.05	
5,727.00	9.75	222.96	5,717.32	-111.28	-82.62	-111.28	0.79	-0.13	-4.57	
5,822.00	10.30	219.28	5,810.87	-123.74	-93.48	-123.74	0.89	0.58	-3.87	
5,916.00	10.35	211.78	5,903.35	-137.42	-103.25	-137.42	1.43	0.05	-7.98	
6,010.00	10.90	213.24	5,995.74	-152.03	-112.57	-152.03	0.65	0.59	1.55	
6,105.00	10.63	207.07	6,089.07	-167.35	-121.48	-167.35	1.25	-0.28	-6.49	
6,199.00	11.39	212.69	6,181.34	-182.88	-130.44	-182.88	1.40	0.81	5.98	
6,294.00	11.37	218.60	6,274.48	-198.10	-141.35	-198.10	1.23	-0.02	6.22	
6,335.00	11.32	219.67	6,314.68	-204.35	-146.44	-204.35	0.53	-0.12	2.61	
6,386.00	10.08	220.36	6,364.79	-211.61	-152.52	-211.61	2.44	-2.43	1.35	
6,433.00	10.87	244.27	6,411.03	-216.67	-159.18	-216.67	9.33	1.68	50.87	
6,481.00	12.39	259.41	6,458.05	-219.58	-168.32	-219.58	7.08	3.17	31.54	
6,528.00	14.00	281.24	6,503.84	-219.40	-178.86	-219.40	11.07	3.43	46.45	
6,575.00	14.77	303.26	6,549.40	-215.00	-189.46	-215.00	11.68	1.64	46.85	
6,622.00	14.99	317.69	6,594.84	-207.22	-198.56	-207.22	7.88	0.47	30.70	
6,669.00	14.68	337.49	6,640.30	-197.21	-204.94	-197.21	10.76	-0.66	42.13	
6,716.00	16.03	336.83	6,685.62	-185.74	-209.77	-185.74	2.90	2.87	-1.40	
6,763.00	19.70	334.42	6,730.35	-172.63	-215.74	-172.63	7.96	7.81	-5.13	
6,857.00	20.39	336.21	6,818.65	-143.35	-229.19	-143.35	0.98	0.73	1.90	
6,952.00	32.85	341.89	6,903.43	-103.56	-243.94	-103.56	13.37	13.12	5.98	
7,046.00	41.94	344.30	6,978.04	-48.97	-260.40	-48.97	9.79	9.67	2.56	
7,140.00	50.78	350.29	7,042.87	17.33	-275.07	17.33	10.47	9.40	6.37	
7,235.00	56.23	354.68	7,099.37	92.99	-284.95	92.99	6.83	5.74	4.62	
7,329.00	69.65	356.76	7,142.04	176.28	-291.09	176.28	14.41	14.28	2.21	
7,376.00	76.30	356.81	7,155.79	221.12	-293.61	221.12	14.15	14.15	0.11	
7,424.00	78.01	357.51	7,166.46	267.86	-295.93	267.86	3.84	3.56	1.46	
7,471.00	78.40	357.20	7,176.07	313.82	-298.05	313.82	1.05	0.83	-0.66	
7,518.00	82.41	357.88	7,183.90	360.11	-300.04	360.11	8.65	8.53	1.45	
7,542.00	85.05	358.39	7,186.53	383.95	-300.82	383.95	11.20	11.00	2.13	
7,587.00	88.35	359.54	7,189.12	428.87	-301.63	428.87	7.77	7.33	2.56	
7" (703 FSL 1117 FWL)										
7,599.00	89.23	359.85	7,189.37	440.86	-301.69	440.86	7.77	7.33	2.56	
7,622.00	89.39	0.40	7,189.65	463.86	-301.64	463.86	2.49	0.70	2.39	

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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
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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)	
7,714.00	89.60	0.28	7,190.46	555.86	-301.09	555.86	0.26	0.23	-0.13	
7,806.00	89.56	359.58	7,191.13	647.85	-301.21	647.85	0.76	-0.04	-0.76	
7,898.00	90.47	2.17	7,191.11	739.83	-299.80	739.83	2.98	0.99	2.82	
7,989.00	89.50	1.79	7,191.13	830.78	-296.66	830.78	1.14	-1.07	-0.42	
8,081.00	90.00	1.52	7,191.53	922.74	-294.00	922.74	0.62	0.54	-0.29	
8,172.00	90.47	1.88	7,191.16	1,013.70	-291.30	1,013.70	0.65	0.52	0.40	
8,264.00	90.44	1.58	7,190.43	1,105.65	-288.52	1,105.65	0.33	-0.03	-0.33	
8,355.00	89.60	0.31	7,190.40	1,196.64	-287.02	1,196.64	1.67	-0.92	-1.40	
8,447.00	89.40	359.25	7,191.20	1,288.63	-287.38	1,288.63	1.17	-0.22	-1.15	
8,539.00	89.30	358.06	7,192.24	1,380.60	-289.54	1,380.60	1.30	-0.11	-1.29	
8,630.00	89.03	358.87	7,193.57	1,471.55	-291.97	1,471.55	0.94	-0.30	0.89	
8,722.00	88.73	359.84	7,195.37	1,563.53	-293.01	1,563.53	1.10	-0.33	1.05	
8,813.00	90.74	1.25	7,195.79	1,654.52	-292.14	1,654.52	2.70	2.21	1.55	
8,905.00	89.53	1.59	7,195.57	1,746.49	-289.86	1,746.49	1.37	-1.32	0.37	
8,997.00	89.23	0.22	7,196.57	1,838.47	-288.41	1,838.47	1.52	-0.33	-1.49	
9,088.00	89.46	1.31	7,197.61	1,929.45	-287.19	1,929.45	1.22	0.25	1.20	
9,180.00	91.24	2.25	7,197.05	2,021.40	-284.34	2,021.40	2.19	1.93	1.02	
9,271.00	90.71	1.18	7,195.50	2,112.35	-281.61	2,112.35	1.31	-0.58	-1.18	
9,363.00	90.07	0.05	7,194.87	2,204.34	-280.63	2,204.34	1.41	-0.70	-1.23	
9,455.00	90.47	1.17	7,194.44	2,296.33	-279.65	2,296.33	1.29	0.43	1.22	
9,547.00	89.73	0.17	7,194.28	2,388.32	-278.57	2,388.32	1.35	-0.80	-1.09	
9,639.00	89.40	0.77	7,194.98	2,480.31	-277.82	2,480.31	0.74	-0.36	0.65	
9,731.00	89.23	2.36	7,196.08	2,572.27	-275.31	2,572.27	1.74	-0.18	1.73	
9,822.00	87.51	0.53	7,198.66	2,663.20	-273.01	2,663.20	2.76	-1.89	-2.01	
9,914.00	86.23	359.01	7,203.69	2,755.06	-273.38	2,755.06	2.16	-1.39	-1.65	
10,008.00	86.70	0.21	7,209.48	2,848.87	-274.02	2,848.87	1.37	0.50	1.28	
10,103.00	89.90	0.56	7,212.30	2,943.82	-273.38	2,943.82	3.39	3.37	0.37	
10,197.00	90.40	0.66	7,212.06	3,037.81	-272.38	3,037.81	0.54	0.53	0.11	
10,293.00	90.91	1.62	7,210.96	3,133.78	-270.47	3,133.78	1.13	0.53	1.00	
10,386.00	90.54	3.39	7,209.78	3,226.68	-266.40	3,226.68	1.94	-0.40	1.90	
10,481.00	89.36	3.64	7,209.86	3,321.50	-260.58	3,321.50	1.27	-1.24	0.26	
10,575.00	88.52	2.40	7,211.60	3,415.35	-255.63	3,415.35	1.59	-0.89	-1.32	
10,669.00	88.69	2.05	7,213.89	3,509.25	-251.98	3,509.25	0.41	0.18	-0.37	
10,764.00	90.71	1.81	7,214.39	3,604.19	-248.78	3,604.19	2.14	2.13	-0.25	
10,858.00	91.54	0.98	7,212.54	3,698.15	-246.49	3,698.15	1.25	0.88	-0.88	
10,952.00	90.34	359.53	7,211.00	3,792.13	-246.07	3,792.13	2.00	-1.28	-1.54	
11,047.00	89.87	359.09	7,210.83	3,887.12	-247.22	3,887.12	0.68	-0.49	-0.46	
11,141.00	89.56	357.96	7,211.29	3,981.09	-249.64	3,981.09	1.25	-0.33	-1.20	
11,235.00	89.97	359.55	7,211.68	4,075.06	-251.68	4,075.06	1.75	0.44	1.69	
11,330.00	91.04	359.89	7,210.84	4,170.05	-252.14	4,170.05	1.18	1.13	0.36	
11,424.00	87.92	359.00	7,211.70	4,264.03	-253.05	4,264.03	3.45	-3.32	-0.95	
11,518.00	90.77	359.12	7,212.77	4,358.01	-254.60	4,358.01	3.03	3.03	0.13	
11,613.00	90.60	357.87	7,211.63	4,452.96	-257.09	4,452.96	1.33	-0.18	-1.32	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well THOMASON 22N-31HZ
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	GL 5001 & KB 25 @ 5026.00ft (HP 311)
Site:	THOMASON 35-6HZ PAD	MD Reference:	GL 5001 & KB 25 @ 5026.00ft (HP 311)
Well:	THOMASON 22N-31HZ	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Denver Sales Office

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)
11,707.00	89.90	359.73	7,211.22	4,546.94	-259.06	4,546.94	2.11	-0.74	1.98
11,802.00	88.89	359.93	7,212.23	4,641.93	-259.34	4,641.93	1.08	-1.06	0.21
11,896.00	88.19	358.66	7,214.62	4,735.89	-260.50	4,735.89	1.54	-0.74	-1.35
11,991.00	88.22	0.15	7,217.60	4,830.84	-261.48	4,830.84	1.57	0.03	1.57
12,085.00	89.13	2.03	7,219.77	4,924.79	-259.70	4,924.79	2.22	0.97	2.00
12,180.00	89.30	2.06	7,221.07	5,019.72	-256.31	5,019.72	0.18	0.18	0.03
12,274.00	89.53	1.44	7,222.03	5,113.67	-253.44	5,113.67	0.70	0.24	-0.66
12,369.00	89.50	0.55	7,222.84	5,208.65	-251.79	5,208.65	0.94	-0.03	-0.94
12,463.00	91.58	2.00	7,221.95	5,302.62	-249.70	5,302.62	2.70	2.21	1.54
12,558.00	90.10	0.27	7,220.56	5,397.58	-247.81	5,397.58	2.40	-1.56	-1.82
12,652.00	88.86	358.80	7,221.41	5,491.57	-248.58	5,491.57	2.05	-1.32	-1.56
12,747.00	89.80	359.86	7,222.52	5,586.55	-249.69	5,586.55	1.49	0.99	1.12
12,841.00	89.63	359.49	7,222.99	5,680.55	-250.22	5,680.55	0.43	-0.18	-0.39
12,935.00	91.11	0.21	7,222.38	5,774.55	-250.47	5,774.55	1.75	1.57	0.77
13,030.00	90.03	359.25	7,221.44	5,869.54	-250.91	5,869.54	1.52	-1.14	-1.01
13,124.00	91.71	359.49	7,220.01	5,963.52	-251.95	5,963.52	1.81	1.79	0.26
13,218.00	91.98	359.06	7,216.98	6,057.46	-253.14	6,057.46	0.54	0.29	-0.46
13,313.00	91.85	358.73	7,213.81	6,152.39	-254.97	6,152.39	0.37	-0.14	-0.35
13,407.00	91.14	358.03	7,211.36	6,246.32	-257.62	6,246.32	1.06	-0.76	-0.74
13,502.00	89.03	356.00	7,211.22	6,341.18	-262.57	6,341.18	3.08	-2.22	-2.14
13,596.00	91.68	1.54	7,210.63	6,435.11	-264.59	6,435.11	6.53	2.82	5.89
13,690.00	90.91	0.92	7,208.51	6,529.06	-262.57	6,529.06	1.05	-0.82	-0.66
13,784.00	89.43	359.60	7,208.23	6,623.06	-262.14	6,623.06	2.11	-1.57	-1.40
13,879.00	89.77	358.35	7,208.89	6,718.04	-263.84	6,718.04	1.36	0.36	-1.32
13,973.00	90.00	358.57	7,209.08	6,812.01	-266.37	6,812.01	0.34	0.24	0.23
14,068.00	89.90	358.99	7,209.17	6,906.98	-268.39	6,906.98	0.45	-0.11	0.44
14,157.00	89.76	358.25	7,209.43	6,995.96	-270.54	6,995.96	0.85	-0.16	-0.83
LAST SDI MWD PRODUCTION SURVEY									
14,228.00	89.76	358.25	7,209.73	7,066.92	-272.70	7,066.92	0.00	0.00	0.00
SDI PROJECTION TO TD									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,525.00	1,524.98	9 5/8"	9.625	12.250	
7,587.00	7,189.12	7" (703 FSL 1117 FWL)	7.000	7.500	

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Site:	THOMASON 35-6HZ PAD	MD Reference:	GL 5001 & KB 25 @ 5026.00ft (HP 311)
Well:	THOMASON 22N-31HZ	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Denver Sales Office

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
125.00	125.00	0.31	-0.17	FIRST MS GYRO SURFACE SURVEY
1,425.00	1,424.98	-2.80	-2.75	LAST MS GYRO SURFACE SURVEY
1,608.00	1,607.98	-3.39	-2.73	FIRST SDI MWD PRODUCTION SURVEY
14,157.00	7,209.43	6,995.96	-270.54	LAST SDI MWD PRODUCTION SURVEY
14,228.00	7,209.73	7,066.92	-272.70	SDI PROJECTION TO TD

Checked By: _____ Approved By: _____ Date: _____