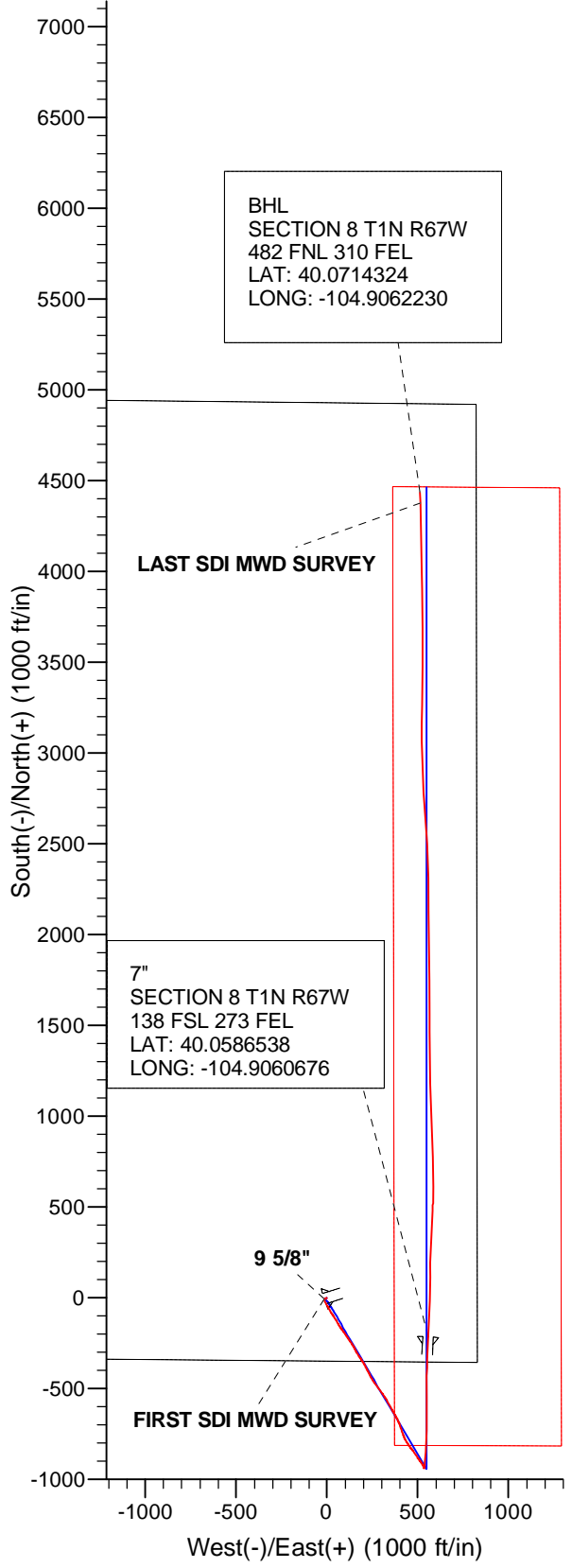
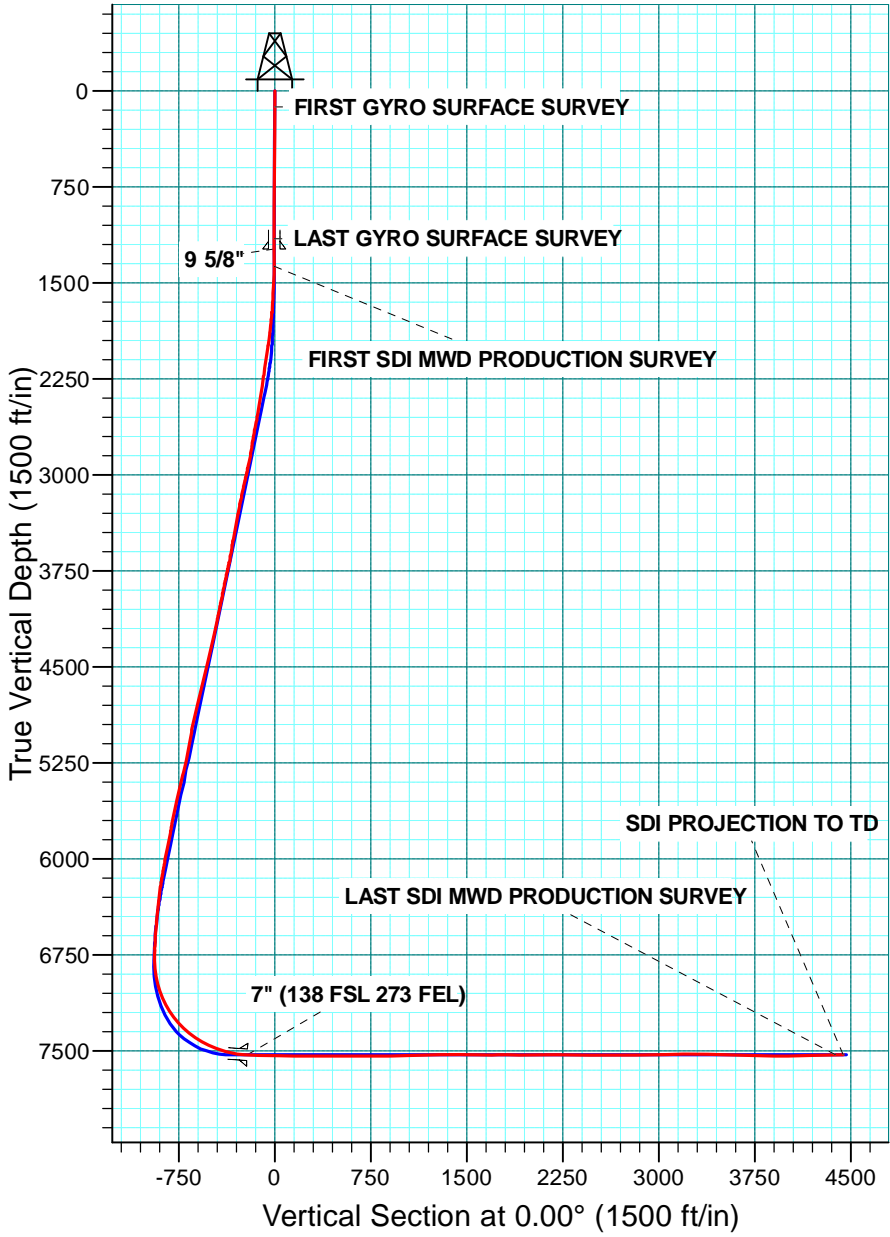


WELL DETAILS: NRC STATE 26N-8HZ					
GL 5074 & KB 25 @ 5099.00ft (H&P 311)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1264982.41	3165689.09	40.0592480	-104.9080590





Scientific Drilling

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

NRC 16-8HZ PAD

NRC STATE 26N-8HZ

OH

Design: OH

Standard Survey Report

05 May, 2014

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NRC STATE 26N-8HZ
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	GL 5074 & KB 25 @ 5099.00ft (H&P 311)
Site:	NRC 16-8HZ PAD	MD Reference:	GL 5074 & KB 25 @ 5099.00ft (H&P 311)
Well:	NRC STATE 26N-8HZ	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	NRC 16-8HZ PAD, SESE SECTION 8 T1N R67W				
Site Position:	Northing:	1,264,982.38 usft	Latitude:	40.0592490	
From:	Lat/Long	Easting:	3,165,629.19 usft	Longitude:	-104.9082730
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.38 °

Well	NRC STATE 26N-8HZ, 350 FSL 830 FEL					
Well Position	+N/-S	0.00 ft	Northing:	1,264,982.40 usft	Latitude:	40.0592480
	+E/-W	0.00 ft	Easting:	3,165,689.09 usft	Longitude:	-104.9080590
Position Uncertainty	0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	5,074.00 ft	

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	4/1/2014	8.58	66.64	52,558

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	5/5/2014			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
25.00	1,155.00	Survey #1 GYRO SURFACE (OH)	NS-GYRO-MS	North sensing gyrocompassing m/s	
1,372.00	12,717.00	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	0.76	243.15	125.00	-0.30	-0.59	-0.30	0.76	0.76	0.00	
FIRST GYRO SURFACE SURVEY										
225.00	0.84	243.15	224.99	-0.93	-1.84	-0.93	0.08	0.08	0.00	
325.00	0.85	235.18	324.98	-1.68	-3.10	-1.68	0.12	0.01	-7.97	
425.00	0.71	238.87	424.97	-2.43	-4.24	-2.43	0.15	-0.14	3.69	
525.00	0.62	228.94	524.96	-3.10	-5.18	-3.10	0.15	-0.09	-9.93	
625.00	0.95	230.21	624.95	-3.99	-6.22	-3.99	0.33	0.33	1.27	
725.00	0.73	224.09	724.94	-4.98	-7.30	-4.98	0.24	-0.22	-6.12	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NRC STATE 26N-8HZ
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	GL 5074 & KB 25 @ 5099.00ft (H&P 311)
Site:	NRC 16-8HZ PAD	MD Reference:	GL 5074 & KB 25 @ 5099.00ft (H&P 311)
Well:	NRC STATE 26N-8HZ	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	0.85	249.91	824.93	-5.69	-8.44	-5.69	0.37	0.12	25.82	
925.00	0.71	264.23	924.92	-6.01	-9.76	-6.01	0.24	-0.14	14.32	
1,025.00	0.84	272.99	1,024.91	-6.03	-11.10	-6.03	0.18	0.13	8.76	
1,125.00	0.70	262.70	1,124.90	-6.07	-12.44	-6.07	0.20	-0.14	-10.29	
1,155.00	0.75	258.93	1,154.90	-6.13	-12.82	-6.13	0.23	0.17	-12.57	
LAST GYRO SURFACE SURVEY										
1,236.00	0.66	252.44	1,235.90	-6.37	-13.78	-6.37	0.15	-0.11	-8.02	
9 5/8"										
1,372.00	0.53	236.85	1,371.89	-6.95	-15.05	-6.95	0.15	-0.09	-11.46	
FIRST SDI MWD PRODUCTION SURVEY										
1,464.00	2.41	142.20	1,463.86	-8.71	-14.22	-8.71	2.73	2.04	-102.88	
1,700.00	4.28	168.60	1,699.46	-21.27	-9.44	-21.27	1.01	0.79	11.19	
1,755.00	5.57	153.87	1,754.26	-25.68	-7.86	-25.68	3.27	2.35	-26.78	
1,938.00	8.90	148.83	1,935.78	-45.77	3.38	-45.77	1.85	1.82	-2.75	
2,029.00	10.82	153.08	2,025.43	-59.41	10.90	-59.41	2.25	2.11	4.67	
2,212.00	8.50	145.99	2,205.83	-85.94	26.24	-85.94	1.42	-1.27	-3.87	
2,395.00	10.67	146.93	2,386.26	-111.35	43.05	-111.35	1.19	1.19	0.51	
2,577.00	12.32	152.19	2,564.61	-142.65	61.30	-142.65	1.07	0.91	2.89	
2,669.00	12.88	145.27	2,654.40	-159.76	71.73	-159.76	1.75	0.61	-7.52	
2,761.00	10.94	142.42	2,744.42	-175.11	82.89	-175.11	2.20	-2.11	-3.10	
2,944.00	13.38	146.72	2,923.30	-206.58	105.11	-206.58	1.42	1.33	2.35	
3,035.00	16.42	146.43	3,011.23	-226.10	118.00	-226.10	3.34	3.34	-0.32	
3,127.00	14.52	143.99	3,099.90	-246.26	131.97	-246.26	2.18	-2.07	-2.65	
3,219.00	13.65	147.88	3,189.13	-264.79	144.52	-264.79	1.40	-0.95	4.23	
3,310.00	12.52	154.98	3,277.77	-282.82	154.41	-282.82	2.16	-1.24	7.80	
3,404.00	12.71	149.98	3,369.51	-301.01	163.89	-301.01	1.18	0.20	-5.32	
3,499.00	12.47	147.38	3,462.22	-318.70	174.65	-318.70	0.65	-0.25	-2.74	
3,593.00	11.18	144.60	3,554.23	-334.67	185.40	-334.67	1.50	-1.37	-2.96	
3,688.00	11.98	146.75	3,647.29	-350.43	196.14	-350.43	0.96	0.84	2.26	
3,782.00	14.21	151.83	3,738.85	-368.76	206.94	-368.76	2.67	2.37	5.40	
3,876.00	13.26	153.92	3,830.16	-388.61	217.12	-388.61	1.14	-1.01	2.22	
3,971.00	12.22	150.20	3,922.82	-407.12	226.91	-407.12	1.39	-1.09	-3.92	
4,065.00	14.11	154.67	4,014.35	-426.12	236.76	-426.12	2.28	2.01	4.76	
4,160.00	13.75	149.00	4,106.56	-446.26	247.53	-446.26	1.49	-0.38	-5.97	
4,348.00	14.87	142.71	4,288.73	-484.61	273.65	-484.61	1.02	0.60	-3.35	
4,442.00	16.52	142.03	4,379.22	-504.74	289.18	-504.74	1.77	1.76	-0.72	
4,536.00	16.83	144.66	4,469.27	-526.38	305.27	-526.38	0.87	0.33	2.80	
4,725.00	14.89	150.32	4,651.08	-569.80	333.13	-569.80	1.31	-1.03	2.99	
4,914.00	15.46	151.57	4,833.49	-613.05	357.15	-613.05	0.35	0.30	0.66	
5,009.00	14.09	151.29	4,925.35	-634.33	368.73	-634.33	1.44	-1.44	-0.29	
5,103.00	12.77	149.91	5,016.77	-653.35	379.44	-653.35	1.44	-1.40	-1.47	
5,197.00	11.21	153.13	5,108.72	-670.49	388.77	-670.49	1.81	-1.66	3.43	
5,386.00	13.43	161.72	5,293.37	-707.73	403.96	-707.73	1.52	1.17	4.54	
5,574.00	14.32	160.57	5,475.89	-750.39	418.55	-750.39	0.50	0.47	-0.61	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NRC STATE 26N-8HZ
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	GL 5074 & KB 25 @ 5099.00ft (H&P 311)
Site:	NRC 16-8HZ PAD	MD Reference:	GL 5074 & KB 25 @ 5099.00ft (H&P 311)
Well:	NRC STATE 26N-8HZ	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)	
5,763.00	12.69	149.82	5,659.68	-790.38	436.76	-790.38	1.58	-0.86	-5.69	
5,858.00	13.77	145.75	5,752.16	-808.75	448.37	-808.75	1.50	1.14	-4.28	
5,952.00	13.96	141.66	5,843.42	-826.89	461.70	-826.89	1.06	0.20	-4.35	
6,047.00	13.27	144.28	5,935.76	-844.73	475.18	-844.73	0.97	-0.73	2.76	
6,236.00	11.89	146.01	6,120.21	-878.49	498.73	-878.49	0.76	-0.73	0.92	
6,330.00	10.24	144.28	6,212.46	-893.30	509.02	-893.30	1.79	-1.76	-1.84	
6,519.00	6.96	146.65	6,399.31	-916.51	525.13	-916.51	1.75	-1.74	1.25	
6,707.00	4.41	167.45	6,586.39	-933.09	532.96	-933.09	1.72	-1.36	11.06	
6,802.00	2.54	162.54	6,681.21	-938.66	534.39	-938.66	1.99	-1.97	-5.17	
6,896.00	0.96	114.79	6,775.17	-940.98	535.73	-940.98	2.15	-1.68	-50.80	
6,943.00	1.02	45.74	6,822.17	-940.85	536.38	-940.85	2.39	0.13	-146.92	
6,991.00	5.61	5.37	6,870.08	-938.21	536.91	-938.21	10.16	9.56	-84.10	
7,038.00	10.53	4.09	6,916.60	-931.64	537.43	-931.64	10.47	10.47	-2.72	
7,085.00	14.04	2.31	6,962.51	-921.66	537.97	-921.66	7.51	7.47	-3.79	
7,132.00	17.36	4.80	7,007.75	-908.97	538.78	-908.97	7.21	7.06	5.30	
7,179.00	21.58	5.14	7,052.06	-893.37	540.15	-893.37	8.98	8.98	0.72	
7,226.00	23.38	6.29	7,095.48	-875.49	541.94	-875.49	3.94	3.83	2.45	
7,274.00	25.84	6.08	7,139.12	-855.62	544.09	-855.62	5.13	5.13	-0.44	
7,321.00	31.29	1.75	7,180.39	-833.21	545.55	-833.21	12.40	11.60	-9.21	
7,368.00	36.54	0.82	7,219.38	-807.00	546.13	-807.00	11.22	11.17	-1.98	
7,415.00	39.57	0.88	7,256.38	-778.04	546.56	-778.04	6.45	6.45	0.13	
7,462.00	43.95	1.25	7,291.43	-746.75	547.14	-746.75	9.33	9.32	0.79	
7,509.00	47.71	2.02	7,324.18	-713.06	548.11	-713.06	8.09	8.00	1.64	
7,556.00	48.26	1.63	7,355.63	-678.16	549.22	-678.16	1.32	1.17	-0.83	
7,603.00	53.23	0.66	7,385.37	-641.78	549.94	-641.78	10.69	10.57	-2.06	
7,651.00	60.06	0.25	7,411.74	-601.71	550.25	-601.71	14.25	14.23	-0.85	
7,698.00	62.63	0.01	7,434.28	-560.47	550.34	-560.47	5.49	5.47	-0.51	
7,745.00	64.88	359.36	7,455.06	-518.32	550.11	-518.32	4.95	4.79	-1.38	
7,792.00	67.82	0.31	7,473.91	-475.27	549.99	-475.27	6.52	6.26	2.02	
7,840.00	70.31	0.95	7,491.06	-430.45	550.48	-430.45	5.33	5.19	1.33	
7,887.00	73.85	0.93	7,505.52	-385.74	551.22	-385.74	7.53	7.53	-0.04	
7,934.00	78.17	1.39	7,516.88	-340.16	552.14	-340.16	9.24	9.19	0.98	
7,981.00	81.89	2.37	7,525.02	-293.90	553.66	-293.90	8.18	7.91	2.09	
8,059.00	86.30	3.16	7,533.04	-216.43	557.41	-216.43	5.74	5.65	1.01	
7" (138 FSL 273 FEL)										
8,090.00	88.05	3.47	7,534.57	-185.52	559.20	-185.52	5.74	5.65	1.00	
8,232.00	88.89	1.59	7,538.36	-43.71	565.46	-43.71	1.45	0.59	-1.32	
8,421.00	89.33	0.73	7,541.30	145.22	569.29	145.22	0.51	0.23	-0.46	
8,515.00	90.57	1.93	7,541.38	239.19	571.47	239.19	1.84	1.32	1.28	
8,609.00	90.47	3.05	7,540.53	333.10	575.55	333.10	1.20	-0.11	1.19	
8,798.00	89.03	2.09	7,541.35	521.90	584.03	521.90	0.92	-0.76	-0.51	
8,986.00	89.60	358.20	7,543.60	709.85	584.50	709.85	2.09	0.30	-2.07	
9,080.00	89.36	359.04	7,544.45	803.82	582.24	803.82	0.93	-0.26	0.89	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NRC STATE 26N-8HZ
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	GL 5074 & KB 25 @ 5099.00ft (H&P 311)
Site:	NRC 16-8HZ PAD	MD Reference:	GL 5074 & KB 25 @ 5099.00ft (H&P 311)
Well:	NRC STATE 26N-8HZ	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)	
9,175.00	91.91	358.04	7,543.40	898.77	579.82	898.77	2.88	2.68	-1.05	
9,269.00	92.42	358.33	7,539.85	992.66	576.84	992.66	0.62	0.54	0.31	
9,458.00	92.35	357.78	7,531.98	1,181.38	570.43	1,181.38	0.29	-0.04	-0.29	
9,740.00	88.42	359.90	7,530.09	1,463.25	564.73	1,463.25	1.58	-1.39	0.75	
9,835.00	89.40	359.93	7,531.90	1,558.23	564.59	1,558.23	1.03	1.03	0.03	
10,023.00	89.83	359.44	7,533.16	1,746.22	563.55	1,746.22	0.35	0.23	-0.26	
10,118.00	89.93	359.15	7,533.36	1,841.22	562.39	1,841.22	0.32	0.11	-0.31	
10,212.00	90.67	359.24	7,532.87	1,935.20	561.06	1,935.20	0.79	0.79	0.10	
10,306.00	90.81	0.49	7,531.65	2,029.19	560.84	2,029.19	1.34	0.15	1.33	
10,495.00	88.66	359.34	7,532.53	2,218.18	560.56	2,218.18	1.29	-1.14	-0.61	
10,589.00	89.56	358.96	7,533.99	2,312.15	559.17	2,312.15	1.04	0.96	-0.40	
10,778.00	89.73	356.13	7,535.16	2,500.96	551.07	2,500.96	1.50	0.09	-1.50	
10,967.00	89.77	355.67	7,535.98	2,689.47	537.56	2,689.47	0.24	0.02	-0.24	
11,061.00	91.07	356.51	7,535.29	2,783.25	531.15	2,783.25	1.65	1.38	0.89	
11,344.00	91.38	359.45	7,529.24	3,065.98	521.18	3,065.98	1.04	0.11	1.04	
11,438.00	90.40	1.03	7,527.78	3,159.96	521.57	3,159.96	1.98	-1.04	1.68	
11,533.00	89.26	1.24	7,528.06	3,254.94	523.45	3,254.94	1.22	-1.20	0.22	
11,722.00	89.23	0.16	7,530.55	3,443.91	525.76	3,443.91	0.57	-0.02	-0.57	
11,816.00	88.56	0.39	7,532.37	3,537.89	526.21	3,537.89	0.75	-0.71	0.24	
12,099.00	88.19	358.92	7,540.39	3,820.76	524.51	3,820.76	0.54	-0.13	-0.52	
12,193.00	90.10	359.40	7,541.80	3,914.73	523.13	3,914.73	2.10	2.03	0.51	
12,288.00	90.50	359.18	7,541.30	4,009.73	521.96	4,009.73	0.48	0.42	-0.23	
12,477.00	92.49	359.28	7,536.37	4,198.63	519.42	4,198.63	1.05	1.05	0.05	
12,656.00	90.50	358.30	7,531.70	4,377.52	515.64	4,377.52	1.24	-1.11	-0.55	
LAST SDI MWD PRODUCTION SURVEY										
12,717.00	90.50	358.30	7,531.16	4,438.49	513.83	4,438.49	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)		
1,236.00	1,235.90	9 5/8"	9.625	12.250		
8,059.00	7,533.04	7" (138 FSL 273 FEL)	7.000	7.500		

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NRC STATE 26N-8HZ
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	GL 5074 & KB 25 @ 5099.00ft (H&P 311)
Site:	NRC 16-8HZ PAD	MD Reference:	GL 5074 & KB 25 @ 5099.00ft (H&P 311)
Well:	NRC STATE 26N-8HZ	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	-0.30	-0.59	FIRST GYRO SURFACE SURVEY
1,155.00	1,154.90	-6.13	-12.82	LAST GYRO SURFACE SURVEY
1,372.00	1,371.89	-6.95	-15.05	FIRST SDI MWD PRODUCTION SURVEY
12,656.00	7,531.70	4,377.52	515.64	LAST SDI MWD PRODUCTION SURVEY
12,717.00	7,531.16	4,438.49	513.83	SDI PROJECTION TO TD

Checked By: _____ Approved By: _____ Date: _____



Scientific Drilling

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

NRC 16-8HZ PAD

NRC STATE 26N-8HZ

OH

Design: OH

Survey Report - Geographic

05 May, 2014

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NRC STATE 26N-8HZ
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	GL 5074 & KB 25 @ 5099.00ft (H&P 311)
Site:	NRC 16-8HZ PAD	MD Reference:	GL 5074 & KB 25 @ 5099.00ft (H&P 311)
Well:	NRC STATE 26N-8HZ	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	NRC 16-8HZ PAD, SESE SECTION 8 T1N R67W				
Site Position:		Northing:	1,264,982.38 usft	Latitude:	40.0592490
From:	Lat/Long	Easting:	3,165,629.19 usft	Longitude:	-104.9082730
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.38 °

Well	NRC STATE 26N-8HZ, 350 FSL 830 FEL					
Well Position	+N/-S	0.00 ft	Northing:	1,264,982.40 usft	Latitude:	40.0592480
	+E/-W	0.00 ft	Easting:	3,165,689.09 usft	Longitude:	-104.9080590
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	5,074.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	4/1/2014	8.58	66.64	52,558

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	5/5/2014			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
25.00	1,155.00	Survey #1 GYRO SURFACE (OH)	NS-GYRO-MS	North sensing gyrocompassing m/s	
1,372.00	12,717.00	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)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
0.00	0.00	0.00	0.00	0.00	0.00	1,264,982.40	3,165,689.09	40.0592480	-104.9080590	
25.00	0.00	0.00	25.00	0.00	0.00	1,264,982.40	3,165,689.09	40.0592480	-104.9080590	
125.00	0.76	243.15	125.00	-0.30	-0.59	1,264,982.10	3,165,688.51	40.0592472	-104.9080611	
FIRST GYRO SURFACE SURVEY										
225.00	0.84	243.15	224.99	-0.93	-1.84	1,264,981.46	3,165,687.26	40.0592454	-104.9080655	
325.00	0.85	235.18	324.98	-1.68	-3.10	1,264,980.70	3,165,686.01	40.0592434	-104.9080701	
425.00	0.71	238.87	424.97	-2.43	-4.24	1,264,979.95	3,165,684.87	40.0592413	-104.9080741	
525.00	0.62	228.94	524.96	-3.10	-5.18	1,264,979.27	3,165,683.94	40.0592395	-104.9080775	
625.00	0.95	230.21	624.95	-3.99	-6.22	1,264,978.37	3,165,682.90	40.0592370	-104.9080812	
725.00	0.73	224.09	724.94	-4.98	-7.30	1,264,977.38	3,165,681.83	40.0592343	-104.9080851	
825.00	0.85	249.91	824.93	-5.69	-8.44	1,264,976.66	3,165,680.69	40.0592324	-104.9080891	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NRC STATE 26N-8HZ
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	GL 5074 & KB 25 @ 5099.00ft (H&P 311)
Site:	NRC 16-8HZ PAD	MD Reference:	GL 5074 & KB 25 @ 5099.00ft (H&P 311)
Well:	NRC STATE 26N-8HZ	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)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
925.00	0.71	264.23	924.92	-6.01	-9.76	1,264,976.33	3,165,679.38	40.0592315	-104.9080938	
1,025.00	0.84	272.99	1,024.91	-6.03	-11.10	1,264,976.30	3,165,678.03	40.0592314	-104.9080986	
1,125.00	0.70	262.70	1,124.90	-6.07	-12.44	1,264,976.25	3,165,676.69	40.0592313	-104.9081034	
1,155.00	0.75	258.93	1,154.90	-6.13	-12.82	1,264,976.19	3,165,676.32	40.0592312	-104.9081048	
LAST GYRO SURFACE SURVEY										
1,236.00	0.66	252.44	1,235.90	-6.37	-13.78	1,264,975.94	3,165,675.36	40.0592305	-104.9081082	
9 5/8"										
1,372.00	0.53	236.85	1,371.89	-6.95	-15.05	1,264,975.35	3,165,674.09	40.0592289	-104.9081127	
FIRST SDI MWD PRODUCTION SURVEY										
1,464.00	2.41	142.20	1,463.86	-8.71	-14.22	1,264,973.59	3,165,674.93	40.0592241	-104.9081098	
1,700.00	4.28	168.60	1,699.46	-21.27	-9.44	1,264,961.07	3,165,679.80	40.0591896	-104.9080927	
1,755.00	5.57	153.87	1,754.26	-25.68	-7.86	1,264,956.67	3,165,681.41	40.0591775	-104.9080870	
1,938.00	8.90	148.83	1,935.78	-45.77	3.38	1,264,936.66	3,165,692.78	40.0591223	-104.9080469	
2,029.00	10.82	153.08	2,025.43	-59.41	10.90	1,264,923.07	3,165,700.39	40.0590849	-104.9080201	
2,212.00	8.50	145.99	2,205.83	-85.94	26.24	1,264,896.64	3,165,715.91	40.0590121	-104.9079652	
2,395.00	10.67	146.93	2,386.26	-111.35	43.05	1,264,871.34	3,165,732.89	40.0589423	-104.9079052	
2,577.00	12.32	152.19	2,564.61	-142.65	61.30	1,264,840.17	3,165,751.35	40.0588564	-104.9078400	
2,669.00	12.88	145.27	2,654.40	-159.76	71.73	1,264,823.13	3,165,761.89	40.0588094	-104.9078027	
2,761.00	10.94	142.42	2,744.42	-175.11	82.89	1,264,807.86	3,165,773.16	40.0587673	-104.9077628	
2,944.00	13.38	146.72	2,923.30	-206.58	105.11	1,264,776.54	3,165,795.58	40.0586809	-104.9076835	
3,035.00	16.42	146.43	3,011.23	-226.10	118.00	1,264,757.10	3,165,808.60	40.0586273	-104.9076374	
3,127.00	14.52	143.99	3,099.90	-246.26	131.97	1,264,737.03	3,165,822.71	40.0585719	-104.9075875	
3,219.00	13.65	147.88	3,189.13	-264.79	144.52	1,264,718.59	3,165,835.38	40.0585211	-104.9075427	
3,310.00	12.52	154.98	3,277.77	-282.82	154.41	1,264,700.62	3,165,845.38	40.0584716	-104.9075074	
3,404.00	12.71	149.98	3,369.51	-301.01	163.89	1,264,682.50	3,165,854.99	40.0584217	-104.9074735	
3,499.00	12.47	147.38	3,462.22	-318.70	174.65	1,264,664.88	3,165,865.86	40.0583731	-104.9074350	
3,593.00	11.18	144.60	3,554.23	-334.67	185.40	1,264,648.98	3,165,876.72	40.0583293	-104.9073966	
3,688.00	11.98	146.75	3,647.29	-350.43	196.14	1,264,633.30	3,165,887.57	40.0582860	-104.9073583	
3,782.00	14.21	151.83	3,738.85	-368.76	206.94	1,264,615.04	3,165,898.49	40.0582357	-104.9073197	
3,876.00	13.26	153.92	3,830.16	-388.61	217.12	1,264,595.25	3,165,908.81	40.0581812	-104.9072833	
3,971.00	12.22	150.20	3,922.82	-407.12	226.91	1,264,576.81	3,165,918.72	40.0581304	-104.9072483	
4,065.00	14.11	154.67	4,014.35	-426.12	236.76	1,264,557.88	3,165,928.69	40.0580782	-104.9072132	
4,160.00	13.75	149.00	4,106.56	-446.26	247.53	1,264,537.81	3,165,939.59	40.0580229	-104.9071747	
4,348.00	14.87	142.71	4,288.73	-484.61	273.65	1,264,499.64	3,165,965.97	40.0579177	-104.9070814	
4,442.00	16.52	142.03	4,379.22	-504.74	289.18	1,264,479.61	3,165,981.64	40.0578624	-104.9070259	
4,536.00	16.83	144.66	4,469.27	-526.38	305.27	1,264,458.08	3,165,997.88	40.0578030	-104.9069684	
4,725.00	14.89	150.32	4,651.08	-569.80	333.13	1,264,414.84	3,166,026.02	40.0576838	-104.9068689	
4,914.00	15.46	151.57	4,833.49	-613.05	357.15	1,264,371.75	3,166,050.32	40.0575651	-104.9067831	
5,009.00	14.09	151.29	4,925.35	-634.33	368.73	1,264,350.55	3,166,062.05	40.0575066	-104.9067417	
5,103.00	12.77	149.91	5,016.77	-653.35	379.44	1,264,331.60	3,166,072.88	40.0574544	-104.9067035	
5,197.00	11.21	153.13	5,108.72	-670.49	388.77	1,264,314.52	3,166,082.34	40.0574074	-104.9066701	
5,386.00	13.43	161.72	5,293.37	-707.73	403.96	1,264,277.39	3,166,097.77	40.0573051	-104.9066158	
5,574.00	14.32	160.57	5,475.89	-750.39	418.55	1,264,234.83	3,166,112.64	40.0571880	-104.9065637	
5,763.00	12.69	149.82	5,659.68	-790.38	436.76	1,264,194.96	3,166,131.12	40.0570782	-104.9064987	
5,858.00	13.77	145.75	5,752.16	-808.75	448.37	1,264,176.67	3,166,142.85	40.0570278	-104.9064572	
5,952.00	13.96	141.66	5,843.42	-826.89	461.70	1,264,158.62	3,166,156.31	40.0569780	-104.9064096	
6,047.00	13.27	144.28	5,935.76	-844.73	475.18	1,264,140.87	3,166,169.90	40.0569290	-104.9063614	
6,236.00	11.89	146.01	6,120.21	-878.49	498.73	1,264,107.27	3,166,193.67	40.0568364	-104.9062773	
6,330.00	10.24	144.28	6,212.46	-893.30	509.02	1,264,092.52	3,166,204.06	40.0567957	-104.9062405	
6,519.00	6.96	146.65	6,399.31	-916.51	525.13	1,264,069.42	3,166,220.33	40.0567320	-104.9061830	
6,707.00	4.41	167.45	6,586.39	-933.09	532.96	1,264,052.90	3,166,228.27	40.0566865	-104.9061550	
6,802.00	2.54	162.54	6,681.21	-938.66	534.39	1,264,047.33	3,166,229.73	40.0566712	-104.9061499	
6,896.00	0.96	114.79	6,775.17	-940.98	535.73	1,264,045.03	3,166,231.09	40.0566648	-104.9061451	
6,943.00	1.02	45.74	6,822.17	-940.85	536.38	1,264,045.16	3,166,231.75	40.0566652	-104.9061428	
6,991.00	5.61	5.37	6,870.08	-938.21	536.91	1,264,047.80	3,166,232.25	40.0566724	-104.9061409	