

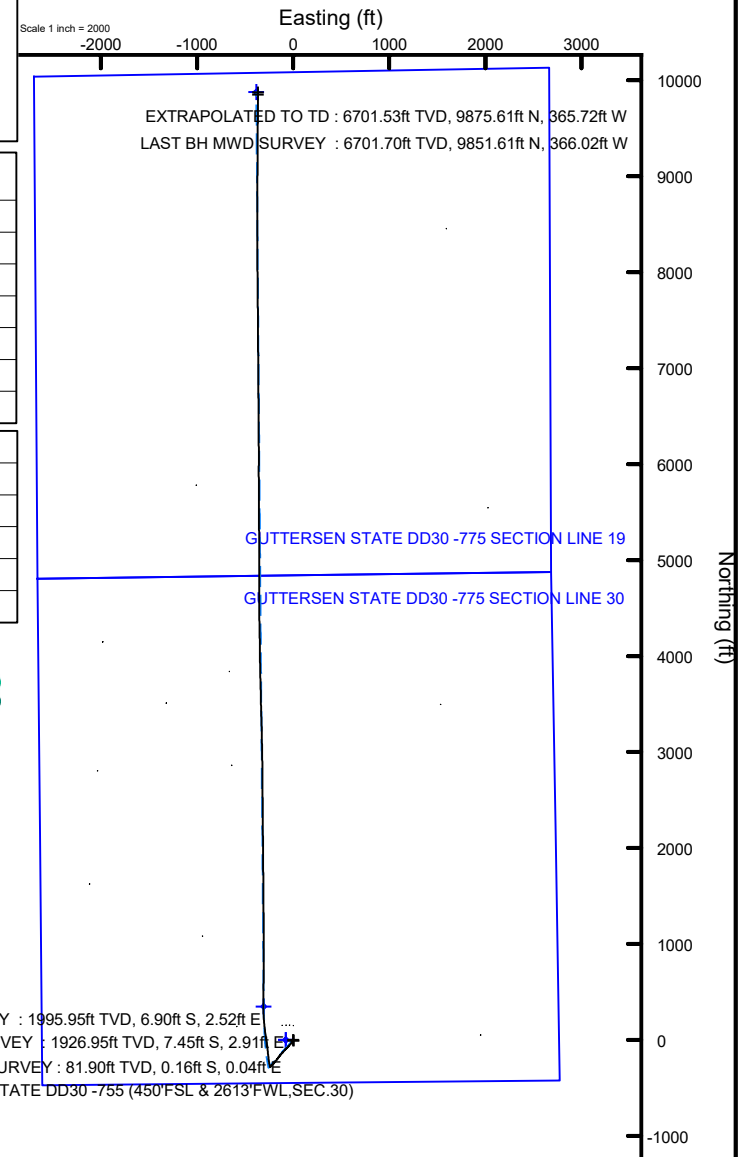
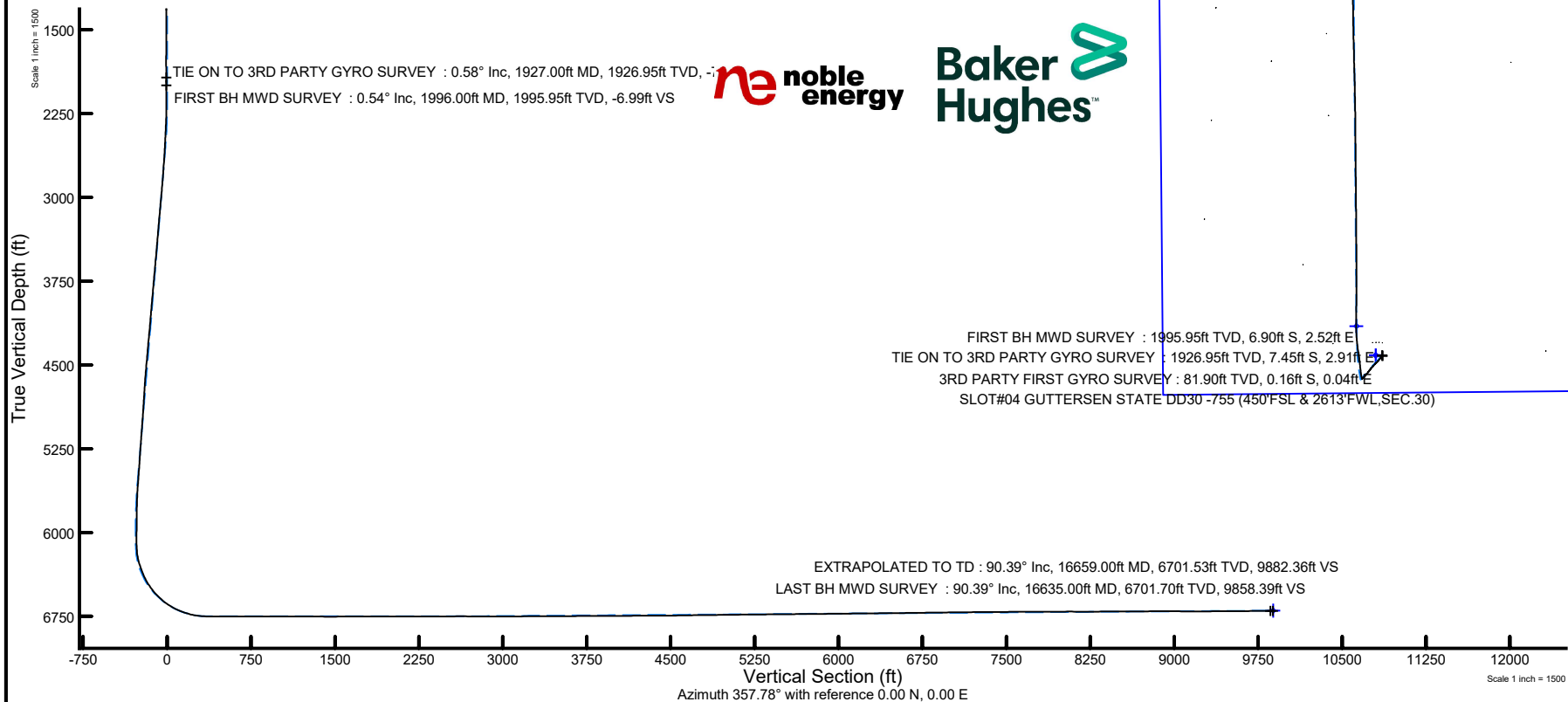
# NOBLE ENERGY, INC

Location:	COLORADO	Slot:	SLOT#04 GUTTERSEN STATE DD30 -755 (450'FSL & 2613'FWL,SEC.30)
Field:	WELD COUNTY (NOBLE NAD 83 GRID)	Well:	GUTTERSEN STATE DD30 -755
Facility:	SEC.30-T03N-R63W	Wellbore:	GUTTERSEN STATE DD30 -755 AWB

## Location Information

Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.30-T03N-R63W			3284561.516	1313836.085	40°11'25.4040"N	104°28'53.0400"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#04 GUTTERSEN STATE DD30 - 755 (450'FSL & 2613'FWL,SEC.30)	-2.36	111.79	3284673.299	1313833.727	40°11'25.3680"N	104°28'51.6000"W
RIG (30') (RKB) to Mud line (At Slot: SLOT#04 GUTTERSEN STATE DD30 - 755 (450'FSL & 2613'FWL,SEC.30))					4823ft	
Mean Sea Level to Mud line (At Slot: SLOT#04 GUTTERSEN STATE DD30 - 755 (450'FSL & 2613'FWL,SEC.30))					0ft	
RIG (30') (RKB) to Mean Sea Level					4823ft	

Plot reference wellpath is GUTTERSEN STATE DD30 -755 AWP	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to RIG (30') (RKB)	North Reference: Grid north
Reference wellpath measured depths are referenced to RIG (30') (RKB)	Scale: True distance
RIG (30') (RKB) to Mean Sea Level: 4823 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Mud line (At Slot: SLOT#04 GUTTERSEN STATE DD30 -755 (450'FSL & 2613'FWL,SEC.30)): 0 feet	Depths are in feet
Offset wellpath MDs are referenced to each path's default MD datum	Created by: manajohj on 2020-01-07; Database: WA_NOBLE



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GUTTERSEN STATE DD30 -755
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.30-T03N-R63W	Wellbore	GUTTERSEN STATE DD30 -755 AWP
Slot	SLOT#04 GUTTERSEN STATE DD30 -755 (450'FSL & 2613'FWL,SEC.30)		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Manajohj
Scale	0.999957	Report Generated	1/7/2020 at 10:49:46 AM
Convergence at slot	0.66° East	Database	WA_NOBLE

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-2.36	111.79	3284673.30	1313833.73	40°11'25.3680"N	104°28'51.6000"W
Facility Reference Pt			3284561.52	1313836.09	40°11'25.4040"N	104°28'53.0400"W
Field Reference Pt			3000000.00	4454105.15	48°46'34.3150"N	105°30'0.0000"W

WELLPATH DATUM			
Calculation method	Minimum curvature	RIG (30') (RKB) to Facility Vertical Datum	4823.00ft
Horizontal Reference Pt	Slot	RIG (30') (RKB) to Mean Sea Level	4823.00ft
Vertical Reference Pt	RIG (30') (RKB)	RIG (30') (RKB) to Mud Line at Slot (SLOT#04 GUTTERSEN STATE DD30 -755 (450'FSL & 2613'FWL,SEC.30))	4823.00ft
MD Reference Pt	RIG (30') (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	357.78°

REFERENCE WELLPATH IDENTIFICATION					
Operator	NOBLE ENERGY, INC			Well	GUTTERSEN STATE DD30 -755
Field	WELD COUNTY (NOBLE NAD 83 GRID)			API/Legal	
Facility	SEC.30-T03N-R63W			Wellbore	GUTTERSEN STATE DD30 -755 AWP
Slot	SLOT#04 GUTTERSEN STATE DD30 -755 (450'FSL & 2613'FWL,SEC.30)				

WELLPATH DATA (179 stations)														
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	TVDSS [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Toolface [°]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
0.00	0.000	164.700	0.00	-4823.00	0.00	0.00	0.00	40°11'25.3680"N	104°28'51.6000"W	0.00	0.00	0.00	0.00	
81.90	0.230	164.700	81.90	-4741.10	-0.16	-0.16	0.04	40°11'25.3664"N	104°28'51.5995"W	0.28	-45.29	0.28	0.00	3RD PARTY FIRST GYRO SURVEY
176.30	0.440	141.220	176.30	-4646.70	-0.64	-0.62	0.32	40°11'25.3618"N	104°28'51.5960"W	0.26	-148.67	0.22	-24.87	
267.30	0.460	22.380	267.30	-4555.70	-0.58	-0.56	0.68	40°11'25.3624"N	104°28'51.5913"W	0.85	-170.90	0.02	-130.59	
361.80	0.310	225.060	361.80	-4461.20	-0.41	-0.39	0.64	40°11'25.3641"N	104°28'51.5918"W	0.80	-130.01	-0.16	-166.48	
456.10	0.520	122.210	456.09	-4366.91	-0.83	-0.80	0.82	40°11'25.3600"N	104°28'51.5895"W	0.70	68.79	0.22	-109.07	
550.70	0.560	131.040	550.69	-4272.31	-1.39	-1.33	1.54	40°11'25.3547"N	104°28'51.5804"W	0.10	138.14	0.04	9.33	
645.20	0.420	152.020	645.19	-4177.81	-2.02	-1.94	2.05	40°11'25.3486"N	104°28'51.5739"W	0.24	150.48	-0.15	22.20	
739.80	0.240	182.080	739.79	-4083.21	-2.53	-2.44	2.20	40°11'25.3436"N	104°28'51.5720"W	0.26	-37.47	-0.19	31.78	
834.40	0.920	153.740	834.38	-3988.62	-3.42	-3.32	2.53	40°11'25.3349"N	104°28'51.5679"W	0.76	-178.99	0.72	-29.96	
928.90	0.380	152.300	928.87	-3894.13	-4.39	-4.28	3.01	40°11'25.3254"N	104°28'51.5618"W	0.57	-8.29	-0.57	-1.52	
1023.40	0.640	148.920	1023.37	-3799.63	-5.14	-5.01	3.43	40°11'25.3181"N	104°28'51.5566"W	0.28	107.70	0.28	-3.58	
1118.00	0.610	164.870	1117.96	-3705.04	-6.09	-5.95	3.83	40°11'25.3088"N	104°28'51.5515"W	0.19	178.48	-0.03	16.86	
1212.50	0.140	170.000	1212.46	-3610.54	-6.70	-6.55	3.99	40°11'25.3029"N	104°28'51.5496"W	0.50	23.00	-0.50	5.43	
1307.00	0.360	184.260	1306.96	-3516.04	-7.11	-6.96	3.98	40°11'25.2988"N	104°28'51.5497"W	0.24	-162.85	0.23	15.09	
1401.80	0.160	159.840	1401.76	-3421.24	-7.53	-7.38	4.01	40°11'25.2946"N	104°28'51.5495"W	0.24	-146.64	-0.21	-25.76	
1496.30	0.220	36.770	1496.26	-3326.74	-7.51	-7.36	4.16	40°11'25.2948"N	104°28'51.5475"W	0.35	162.06	0.06	-130.23	
1590.70	0.180	176.720	1590.66	-3232.34	-7.52	-7.36	4.28	40°11'25.2948"N	104°28'51.5460"W	0.40	48.34	-0.04	148.25	
1685.30	0.340	201.760	1685.26	-3137.74	-7.92	-7.77	4.18	40°11'25.2908"N	104°28'51.5473"W	0.20	121.13	0.17	26.47	
1780.00	0.350	266.640	1779.96	-3043.04	-8.19	-8.05	3.79	40°11'25.2881"N	104°28'51.5524"W	0.39	94.25	0.01	68.51	
1874.70	0.460	311.530	1874.65	-2948.35	-7.93	-7.81	3.22	40°11'25.2905"N	104°28'51.5597"W	0.34	55.41	0.12	47.40	
1927.00	0.580	326.180	1926.95	-2896.05	-7.56	-7.45	2.91	40°11'25.2940"N	104°28'51.5636"W	0.34	-149.15	0.23	28.01	TIE ON TO 3RD PARTY GYRO SURVEY
1996.00	0.540	323.610	1995.95	-2827.05	-6.99	-6.90	2.52	40°11'25.2995"N	104°28'51.5685"W	0.07	-177.36	-0.06	-3.72	FIRST BH MWD SURVEY
2090.00	0.110	159.310	2089.95	-2733.05	-6.71	-6.63	2.29	40°11'25.3022"N	104°28'51.5714"W	0.69	-146.98	-0.46	-174.79	
2185.00	0.060	104.920	2184.95	-2638.05	-6.81	-6.73	2.37	40°11'25.3013"N	104°28'51.5704"W	0.09	117.54	-0.05	-57.25	
2279.00	1.850	220.810	2278.93	-2544.07	-7.94	-7.89	1.43	40°11'25.2899"N	104°28'51.5827"W	2.00	-8.43	1.90	123.29	
2374.00	3.510	216.810	2373.82	-2449.18	-11.32	-11.38	-1.32	40°11'25.2557"N	104°28'51.6186"W	1.76	-81.10	1.75	-4.21	
2468.00	3.550	213.350	2467.65	-2355.35	-15.92	-16.11	-4.64	40°11'25.2093"N	104°28'51.6622"W	0.23	-174.36	0.04	-3.68	
2563.00	3.400	213.100	2562.47	-2260.53	-20.61	-20.93	-7.79	40°11'25.1621"N	104°28'51.7035"W	0.16	12.64	-0.16	-0.26	
2657.00	5.310	217.690	2656.20	-2166.80	-26.22	-26.71	-11.98	40°11'25.1055"N	104°28'51.7583"W	2.06	55.98	2.03	4.88	
2751.00	5.620	222.130	2749.77	-2073.23	-32.85	-33.56	-17.72	40°11'25.0384"N	104°28'51.8333"W	0.56	7.60	0.33	4.72	
2846.00	6.240	222.890	2844.26	-1978.74	-39.82	-40.79	-24.36	40°11'24.9677"N	104°28'51.9199"W	0.66	0.79	0.65	0.80	
2941.00	7.240	223.000	2938.60	-1884.40	-47.68	-48.95	-31.95	40°11'24.8879"N	104°28'52.0190"W	1.05	44.19	1.05	0.12	
3035.00	7.270	223.230	3031.85	-1791.15	-56.02	-57.62	-40.07	40°11'24.8032"N	104°28'52.1248"W	0.04	-75.39	0.03	0.24	
3130.00	7.300	222.350	3126.08	-1696.92	-64.54	-66.46	-48.25	40°11'24.7168"N	104°28'52.2315"W	0.12	110.86	0.03	-0.93	
3225.00	7.210	224.320	3220.32	-1602.68	-72.94	-75.19	-56.48	40°11'24.6315"N	104°28'52.3389"W	0.28	164.91	-0.09	2.07	
3319.00	6.950	224.900	3313.61	-1509.39	-80.87	-83.43	-64.62	40°11'24.5509"N	104°28'52.4449"W	0.29	-109.91	-0.28	0.62	
3413.00	6.890	223.470	3406.92	-1416.08	-88.68	-91.55	-72.51	40°11'24.4716"N	104°28'52.5478"W	0.19	-48.54	-0.06	-1.52	
3508.00	7.020	222.280	3501.22	-1321.78	-96.80	-99.99	-80.34	40°11'24.3891"N	104°28'52.6499"W	0.20	-10.88	0.14	-1.25	
3602.00	7.250	221.930	3594.49	-1228.51	-105.15	-108.65	-88.16	40°11'24.3044"N	104°28'52.7520"W	0.25	126.72	0.24	-0.37	
3696.00	7.120	223.360	3687.76	-1135.24	-113.48	-117.30	-96.13	40°11'24.2199"N	104°28'52.8559"W	0.24	-14.17	-0.14	1.52	
3791.00	7.250	223.100	3782.01	-1040.99	-121.82	-125.95	-104.27	40°11'24.1352"N	104°28'52.9621"W	0.14	-165.93	0.14	-0.27	
3885.00	7.200	223.000	3875.26	-947.74	-130.14	-134.59	-112.34	40°11'24.0508"N	104°28'53.0673"W	0.05	-104.76	-0.05	-0.11	
3980.00	7.180	222.380	3969.52	-853.48	-138.56	-143.33	-120.40	40°11'23.9654"N	104°28'53.1725"W	0.08	-175.25	-0.02	-0.65	
4074.00	6.450	221.840	4062.85	-760.15	-146.54	-151.60	-127.88	40°11'23.8845"N	104°28'53.2701"W	0.78	-113.60	-0.78	-0.57	

REFERENCE WELLPATH IDENTIFICATION				
Operator	NOBLE ENERGY, INC		Well	GUTTERSEN STATE DD30 -755
Field	WELD COUNTY (NOBLE NAD 83 GRID)		API/Legal	
Facility	SEC.30-T03N-R63W		Wellbore	GUTTERSEN STATE DD30 -755 AWP
Slot	SLOT#04 GUTTERSEN STATE DD30 -755 (450'FSL & 2613'FWL,SEC.30)			

WELLPATH DATA (179 stations)														
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	TVDSS [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Toolface [°]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
4169.00	6.330	219.210	4157.26	-665.74	-154.30	-159.64	-134.75	40°11'23.8059"N	104°28'53.3598"W	0.33	-3.63	-0.13	-2.77	
4263.00	7.290	218.730	4250.60	-572.40	-162.69	-168.31	-141.76	40°11'23.7210"N	104°28'53.4514"W	1.02	-156.85	1.02	-0.51	
4358.00	6.360	215.090	4344.92	-478.08	-171.42	-177.31	-148.55	40°11'23.6328"N	104°28'53.5403"W	1.08	71.57	-0.98	-3.83	
4453.00	6.450	217.360	4439.33	-383.67	-179.72	-185.86	-154.82	40°11'23.5490"N	104°28'53.6222"W	0.28	-156.02	0.09	2.39	
4547.00	6.130	216.020	4532.77	-290.23	-187.73	-194.12	-160.97	40°11'23.4681"N	104°28'53.7028"W	0.37	0.00	-0.34	-1.43	
4641.00	6.130	216.020	4626.23	-196.77	-195.62	-202.24	-166.87	40°11'23.3886"N	104°28'53.7800"W	0.00	159.45	0.00	0.00	
4736.00	4.780	222.230	4720.80	-102.20	-202.43	-209.27	-172.52	40°11'23.3197"N	104°28'53.8538"W	1.55	70.33	-1.42	6.54	
4831.00	4.890	225.570	4815.46	-7.54	-207.97	-215.03	-178.07	40°11'23.2634"N	104°28'53.9262"W	0.32	-93.04	0.12	3.52	
4925.00	4.910	216.510	4909.12	86.12	-213.80	-221.07	-183.32	40°11'23.2043"N	104°28'53.9948"W	0.82	9.84	0.02	-9.64	
5019.00	5.790	218.020	5002.71	179.71	-220.56	-228.04	-188.64	40°11'23.1361"N	104°28'54.0643"W	0.95	130.19	0.94	1.61	
5114.00	5.670	219.480	5097.23	274.23	-227.72	-235.44	-194.57	40°11'23.0636"N	104°28'54.1418"W	0.20	118.21	-0.13	1.54	
5208.00	5.520	222.540	5190.78	367.78	-234.40	-242.35	-200.58	40°11'22.9960"N	104°28'54.2203"W	0.36	80.15	-0.16	3.26	
5303.00	5.590	226.060	5285.34	462.34	-240.72	-248.93	-207.00	40°11'22.9317"N	104°28'54.3040"W	0.37	-0.38	0.07	3.71	
5398.00	5.900	226.040	5379.86	556.86	-247.05	-255.53	-213.85	40°11'22.8673"N	104°28'54.3932"W	0.33	17.42	0.33	-0.02	
5492.00	6.450	227.570	5473.31	650.31	-253.68	-262.45	-221.22	40°11'22.7998"N	104°28'54.4892"W	0.61	-142.93	0.59	1.63	
5587.00	5.720	221.810	5567.78	744.78	-260.53	-269.58	-228.32	40°11'22.7301"N	104°28'54.5817"W	1.00	-179.95	-0.77	-6.06	
5681.00	4.760	221.800	5661.39	838.39	-266.70	-275.97	-234.04	40°11'22.6676"N	104°28'54.6564"W	1.02	-178.82	-1.02	-0.01	
5776.00	0.750	215.460	5756.26	933.26	-270.03	-279.42	-237.03	40°11'22.6338"N	104°28'54.6954"W	4.23	-107.55	-4.22	-6.67	
5870.00	0.740	183.000	5850.25	1027.25	-271.12	-280.53	-237.42	40°11'22.6230"N	104°28'54.7006"W	0.44	111.20	-0.01	-34.53	
5965.00	0.690	203.280	5945.24	1122.24	-272.24	-281.67	-237.68	40°11'22.6117"N	104°28'54.7041"W	0.27	43.34	-0.05	21.35	
6059.00	0.930	216.010	6039.23	1216.23	-273.35	-282.80	-238.35	40°11'22.6006"N	104°28'54.7129"W	0.32	138.38	0.26	13.54	
6154.00	2.620	340.760	6134.20	1311.20	-271.88	-281.38	-239.52	40°11'22.6148"N	104°28'54.7277"W	3.41	6.54	1.78	131.32	
6248.00	11.900	345.880	6227.35	1404.35	-260.32	-269.92	-242.60	40°11'22.7283"N	104°28'54.7657"W	9.89	4.36	9.87	5.45	
6342.00	19.730	347.640	6317.72	1494.72	-235.18	-244.99	-248.37	40°11'22.9754"N	104°28'54.8364"W	8.34	21.85	8.33	1.87	
6437.00	25.930	353.220	6405.24	1582.24	-198.65	-208.66	-254.26	40°11'23.3350"N	104°28'54.9069"W	6.91	3.50	6.53	5.87	
6532.00	35.100	354.190	6487.00	1664.00	-150.58	-160.76	-259.49	40°11'23.8089"N	104°28'54.9672"W	9.67	1.97	9.65	1.02	
6626.00	43.550	354.610	6559.65	1736.65	-91.17	-101.53	-265.27	40°11'24.3949"N	104°28'55.0330"W	8.99	-16.08	8.99	0.45	
6721.00	51.990	351.550	6623.45	1800.45	-21.15	-31.79	-273.87	40°11'25.0850"N	104°28'55.1334"W	9.20	-0.98	8.88	-3.22	
6815.00	62.470	351.350	6674.26	1851.26	57.30	46.26	-285.61	40°11'25.8575"N	104°28'55.2731"W	11.15	14.03	11.15	-0.21	
6910.00	70.310	353.420	6712.28	1889.28	143.89	132.48	-297.09	40°11'26.7108"N	104°28'55.4083"W	8.49	20.53	8.25	2.18	
7005.00	78.090	356.380	6738.13	1915.13	235.10	223.45	-305.16	40°11'27.6106"N	104°28'55.4988"W	8.72	16.63	8.19	3.12	
7099.00	87.540	359.190	6749.88	1926.88	328.25	316.52	-308.74	40°11'28.5307"N	104°28'55.5311"W	10.48	24.58	10.05	2.99	
7193.00	89.880	0.260	6751.99	1928.99	422.16	410.49	-309.19	40°11'29.4593"N	104°28'55.5230"W	2.74	77.91	2.49	1.14	
7288.00	89.940	0.540	6752.14	1929.14	517.06	505.49	-308.52	40°11'30.3979"N	104°28'55.5004"W	0.30	81.87	0.06	0.29	
7383.00	89.970	0.750	6752.22	1929.22	611.95	600.48	-307.45	40°11'31.3365"N	104°28'55.4726"W	0.22	-103.76	0.03	0.22	
7477.00	89.850	0.260	6752.37	1929.37	705.84	694.48	-306.63	40°11'32.2652"N	104°28'55.4480"W	0.54	-39.81	-0.13	-0.52	
7571.00	89.970	0.160	6752.51	1929.51	799.75	788.48	-306.28	40°11'33.1940"N	104°28'55.4297"W	0.17	71.57	0.13	-0.11	
7665.00	90.030	0.340	6752.51	1929.51	893.67	882.48	-305.87	40°11'34.1228"N	104°28'55.4105"W	0.20	-17.52	0.06	0.19	
7760.00	90.220	0.280	6752.31	1929.31	988.57	977.48	-305.36	40°11'35.0614"N	104°28'55.3898"W	0.21	162.65	0.20	-0.06	
7854.00	90.060	0.330	6752.08	1929.08	1082.48	1071.47	-304.86	40°11'35.9902"N	104°28'55.3695"W	0.18	-101.54	-0.17	0.05	
7948.00	89.660	358.370	6752.31	1929.31	1176.44	1165.46	-305.92	40°11'36.9191"N	104°28'55.3693"W	2.13	73.56	-0.43	-2.09	
8043.00	90.150	0.030	6752.46	1929.46	1271.41	1260.45	-307.25	40°11'37.8578"N	104°28'55.3724"W	1.82	-108.44	0.52	1.75	
8137.00	89.880	359.220	6752.44	1929.44	1365.36	1354.45	-307.86	40°11'38.7867"N	104°28'55.3664"W	0.91	100.01	-0.29	-0.86	
8232.00	89.820	359.560	6752.69	1929.69	1460.32	1449.44	-308.88	40°11'39.7255"N	104°28'55.3654"W	0.36	5.41	-0.06	0.36	
8326.00	90.770	359.650	6752.20	1929.20	1554.27	1543.44	-309.52	40°11'40.6544"N	104°28'55.3598"W	1.02	173.29	1.01	0.10	

REFERENCE WELLPATH IDENTIFICATION				
Operator	NOBLE ENERGY, INC		Well	GUTTERSEN STATE DD30 -755
Field	WELD COUNTY (NOBLE NAD 83 GRID)		API/Legal	
Facility	SEC.30-T03N-R63W		Wellbore	GUTTERSEN STATE DD30 -755 AWP
Slot	SLOT#04 GUTTERSEN STATE DD30 -755 (450'FSL & 2613'FWL,SEC.30)			

WELLPATH DATA (179 stations)														
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	TVDSS [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Toolface [°]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
8421.00	90.090	359.730	6751.49	1928.49	1649.22	1638.43	-310.04	40°11'41.5931"N	104°28'55.3524"W	0.72	-93.65	-0.72	0.08	
8516.00	90.060	359.260	6751.37	1928.37	1744.17	1733.43	-310.88	40°11'42.5319"N	104°28'55.3491"W	0.50	56.31	-0.03	-0.49	
8610.00	90.220	359.500	6751.14	1928.14	1838.14	1827.42	-311.89	40°11'43.4608"N	104°28'55.3483"W	0.31	174.29	0.17	0.26	
8705.00	89.820	359.540	6751.10	1928.10	1933.09	1922.42	-312.69	40°11'44.3996"N	104°28'55.3445"W	0.42	-26.57	-0.42	0.04	
8800.00	90.000	359.450	6751.25	1928.25	2028.05	2017.41	-313.53	40°11'45.3383"N	104°28'55.3413"W	0.21	113.96	0.19	-0.09	
8894.00	89.880	359.720	6751.35	1928.35	2122.00	2111.41	-314.21	40°11'46.2672"N	104°28'55.3361"W	0.31	-67.38	-0.13	0.29	
8989.00	90.030	359.360	6751.43	1928.43	2216.96	2206.41	-314.97	40°11'47.2060"N	104°28'55.3319"W	0.41	90.00	0.16	-0.38	
9083.00	90.030	0.060	6751.38	1928.38	2310.90	2300.41	-315.44	40°11'48.1349"N	104°28'55.3241"W	0.74	-97.77	0.00	0.74	
9178.00	89.880	358.960	6751.45	1928.45	2405.86	2395.40	-316.26	40°11'49.0737"N	104°28'55.3205"W	1.17	34.38	-0.16	-1.16	
9272.00	90.830	359.610	6750.87	1927.87	2499.82	2489.39	-317.43	40°11'50.0025"N	104°28'55.3217"W	1.22	159.59	1.01	0.69	
9367.00	90.400	359.770	6749.85	1926.85	2594.76	2584.38	-317.94	40°11'50.9413"N	104°28'55.3143"W	0.48	-169.22	-0.45	0.17	
9461.00	89.140	359.530	6750.23	1927.23	2688.71	2678.38	-318.52	40°11'51.8701"N	104°28'55.3078"W	1.36	4.56	-1.34	-0.26	
9556.00	90.520	359.640	6750.51	1927.51	2783.66	2773.37	-319.21	40°11'52.8089"N	104°28'55.3026"W	1.46	-129.54	1.45	0.12	
9650.00	90.000	359.010	6750.08	1927.08	2877.62	2867.37	-320.31	40°11'53.7378"N	104°28'55.3030"W	0.87	-136.04	-0.55	-0.67	
9745.00	89.720	358.740	6750.31	1927.31	2972.61	2962.35	-322.18	40°11'54.6765"N	104°28'55.3130"W	0.41	50.20	-0.29	-0.28	
9839.00	90.120	359.220	6750.45	1927.45	3066.59	3056.33	-323.85	40°11'55.6054"N	104°28'55.3206"W	0.66	-8.97	0.43	0.51	
9934.00	90.310	359.190	6750.09	1927.09	3161.56	3151.32	-325.17	40°11'56.5442"N	104°28'55.3236"W	0.20	-93.81	0.20	-0.03	
10029.00	90.250	358.290	6749.62	1926.62	3256.54	3246.30	-327.26	40°11'57.4829"N	104°28'55.3364"W	0.95	-45.00	-0.06	-0.95	
10123.00	90.520	358.020	6748.99	1925.99	3350.54	3340.25	-330.29	40°11'58.4116"N	104°28'55.3615"W	0.41	147.44	0.29	-0.29	
10218.00	89.690	358.550	6748.82	1925.82	3445.53	3435.20	-333.13	40°11'59.3502"N	104°28'55.3841"W	1.04	30.31	-0.87	0.56	
10313.00	90.340	358.930	6748.79	1925.79	3540.52	3530.18	-335.22	40°12'0.2889"N	104°28'55.3970"W	0.79	-20.56	0.68	0.40	
10407.00	90.740	358.780	6747.91	1924.91	3634.50	3624.16	-337.10	40°12'1.2178"N	104°28'55.4073"W	0.45	-130.69	0.43	-0.16	
10502.00	90.310	358.280	6747.04	1924.04	3729.48	3719.12	-339.53	40°12'2.1564"N	104°28'55.4246"W	0.69	134.20	-0.45	-0.53	
10596.00	89.600	359.010	6747.11	1924.11	3823.47	3813.09	-341.76	40°12'3.0852"N	104°28'55.4394"W	1.08	-24.51	-0.76	0.78	
10691.00	90.280	358.700	6747.21	1924.21	3918.45	3908.07	-343.65	40°12'4.0240"N	104°28'55.4498"W	0.79	29.90	0.72	-0.33	
10786.00	91.080	359.160	6746.08	1923.08	4013.43	4003.05	-345.43	40°12'4.9627"N	104°28'55.4586"W	0.97	151.66	0.84	0.48	
10880.00	90.060	359.710	6745.15	1922.15	4107.38	4097.04	-346.35	40°12'5.8915"N	104°28'55.4567"W	1.23	-64.49	-1.09	0.59	
10975.00	90.580	358.620	6744.62	1921.62	4202.35	4192.02	-347.74	40°12'6.8303"N	104°28'55.4604"W	1.27	78.46	0.55	-1.15	
11070.00	90.680	359.110	6743.57	1920.57	4297.33	4287.00	-349.62	40°12'7.7690"N	104°28'55.4706"W	0.53	-170.91	0.11	0.52	
11164.00	90.180	359.030	6742.87	1919.87	4391.30	4380.98	-351.15	40°12'8.6978"N	104°28'55.4764"W	0.54	140.98	-0.53	-0.09	
11258.00	89.600	359.500	6743.05	1920.05	4485.27	4474.97	-352.35	40°12'9.6267"N	104°28'55.4780"W	0.79	31.83	-0.62	0.50	
11353.00	91.420	0.630	6742.20	1919.20	4580.18	4569.97	-352.24	40°12'10.5653"N	104°28'55.4626"W	2.25	-121.29	1.92	1.19	
11448.00	90.800	359.610	6740.36	1917.36	4675.08	4664.95	-352.05	40°12'11.5038"N	104°28'55.4460"W	1.26	131.82	-0.65	-1.07	
11543.00	90.460	359.990	6739.32	1916.32	4770.02	4759.94	-352.38	40°12'12.4425"N	104°28'55.4362"W	0.54	-26.56	-0.36	0.40	
11637.00	90.860	359.790	6738.24	1915.24	4863.95	4853.93	-352.56	40°12'13.3713"N	104°28'55.4246"W	0.48	119.75	0.43	-0.21	
11732.00	90.740	0.000	6736.91	1913.91	4958.87	4948.92	-352.73	40°12'14.3100"N	104°28'55.4128"W	0.25	-126.87	-0.13	0.22	
11826.00	90.650	359.880	6735.77	1912.77	5052.80	5042.92	-352.83	40°12'15.2388"N	104°28'55.4002"W	0.16	-74.74	-0.10	-0.13	
11921.00	90.710	359.660	6734.64	1911.64	5147.74	5137.91	-353.21	40°12'16.1775"N	104°28'55.3910"W	0.24	-155.23	0.06	-0.23	
12015.00	90.580	359.600	6733.58	1910.58	5241.68	5231.90	-353.82	40°12'17.1063"N	104°28'55.3849"W	0.15	101.31	-0.14	-0.06	
12110.00	90.550	359.750	6732.65	1909.65	5336.63	5326.89	-354.36	40°12'18.0450"N	104°28'55.3778"W	0.16	-97.12	-0.03	0.16	
12204.00	90.490	359.270	6731.79	1908.79	5430.58	5420.89	-355.16	40°12'18.9739"N	104°28'55.3743"W	0.51	88.17	-0.06	-0.51	
12299.00	90.520	0.210	6730.96	1907.96	5525.52	5515.88	-355.59	40°12'19.9126"N	104°28'55.3658"W	0.99	-53.13	0.03	0.99	
12394.00	90.610	0.090	6730.02	1907.02	5620.43	5610.88	-355.34	40°12'20.8513"N	104°28'55.3485"W	0.16	-94.29	0.09	-0.13	
12488.00	90.550	359.290	6729.07	1906.07	5714.37	5704.87	-355.85	40°12'21.7801"N	104°28'55.3412"W	0.85	171.87	-0.06	-0.85	
12583.00	90.480	359.300	6728.21	1905.21	5809.34	5799.86	-357.02	40°12'22.7188"N	104°28'55.3422"W	0.07	82.87	-0.07	0.01	

REFERENCE WELLPATH IDENTIFICATION				
Operator	NOBLE ENERGY, INC		Well	GUTTERSEN STATE DD30 -755
Field	WELD COUNTY (NOBLE NAD 83 GRID)		API/Legal	
Facility	SEC.30-T03N-R63W		Wellbore	GUTTERSEN STATE DD30 -755 AWP
Slot	SLOT#04 GUTTERSEN STATE DD30 -755 (450'FSL & 2613'FWL,SEC.30)			

WELLPATH DATA (179 stations) † = interpolated, ‡ = extrapolated station														
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	TVDSS [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Toolface [°]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
12678.00	90.550	359.860	6727.36	1904.36	5904.29	5894.85	-357.72	40°12'23.6576"N	104°28'55.3371"W	0.59	56.31	0.07	0.59	
12772.00	90.850	0.310	6726.21	1903.21	5998.20	5988.84	-357.58	40°12'24.5863"N	104°28'55.3214"W	0.58	-155.06	0.32	0.48	
12867.00	90.420	0.110	6725.16	1902.16	6093.11	6083.84	-357.23	40°12'25.5250"N	104°28'55.3029"W	0.50	-69.56	-0.45	-0.21	
12961.00	90.610	359.600	6724.31	1901.31	6187.04	6177.83	-357.47	40°12'26.4538"N	104°28'55.2920"W	0.58	63.43	0.20	-0.54	
13056.00	90.670	359.720	6723.25	1900.25	6281.99	6272.83	-358.03	40°12'27.3925"N	104°28'55.2852"W	0.14	-144.25	0.06	0.13	
13150.00	90.420	359.540	6722.36	1899.36	6375.93	6366.82	-358.64	40°12'28.3213"N	104°28'55.2791"W	0.33	21.80	-0.27	-0.19	
13245.00	90.670	359.640	6721.45	1898.45	6470.88	6461.81	-359.32	40°12'29.2601"N	104°28'55.2739"W	0.28	-90.00	0.26	0.11	
13339.00	90.670	359.400	6720.36	1897.36	6564.83	6555.80	-360.11	40°12'30.1889"N	104°28'55.2701"W	0.26	65.22	0.00	-0.26	
13434.00	90.850	359.790	6719.10	1896.10	6659.78	6650.79	-360.78	40°12'31.1276"N	104°28'55.2647"W	0.45	-114.78	0.19	0.41	
13528.00	90.790	359.660	6717.75	1894.75	6753.71	6744.78	-361.23	40°12'32.0564"N	104°28'55.2566"W	0.15	-90.00	-0.06	-0.14	
13623.00	90.790	359.420	6716.44	1893.44	6848.66	6839.77	-361.99	40°12'32.9951"N	104°28'55.2524"W	0.25	115.51	0.00	-0.25	
13718.00	90.580	359.860	6715.30	1892.30	6943.60	6934.76	-362.59	40°12'33.9338"N	104°28'55.2460"W	0.51	-85.10	-0.22	0.46	
13812.00	90.610	359.510	6714.33	1891.33	7037.54	7028.75	-363.10	40°12'34.8626"N	104°28'55.2388"W	0.37	90.00	0.03	-0.37	
13907.00	90.610	359.570	6713.32	1890.32	7132.49	7123.74	-363.87	40°12'35.8014"N	104°28'55.2345"W	0.06	6.34	0.00	0.06	
14002.00	90.790	359.590	6712.16	1889.16	7227.44	7218.73	-364.56	40°12'36.7401"N	104°28'55.2295"W	0.19	-152.45	0.19	0.02	
14096.00	90.330	359.350	6711.24	1888.24	7321.39	7312.73	-365.43	40°12'37.6689"N	104°28'55.2268"W	0.55	93.73	-0.49	-0.26	
14191.00	90.270	0.270	6710.74	1887.74	7416.33	7407.72	-365.75	40°12'38.6077"N	104°28'55.2168"W	0.97	-77.94	-0.06	0.97	
14285.00	90.490	359.240	6710.12	1887.12	7510.27	7501.72	-366.15	40°12'39.5365"N	104°28'55.2080"W	1.12	137.73	0.23	-1.10	
14380.00	90.270	359.440	6709.49	1886.49	7605.24	7596.71	-367.24	40°12'40.4753"N	104°28'55.2081"W	0.31	-54.78	-0.23	0.21	
14474.00	90.390	359.270	6708.95	1885.95	7699.20	7690.70	-368.30	40°12'41.4042"N	104°28'55.2078"W	0.22	117.55	0.13	-0.18	
14569.00	90.270	359.500	6708.40	1885.40	7794.16	7785.70	-369.32	40°12'42.3429"N	104°28'55.2069"W	0.27	102.10	-0.13	0.24	
14664.00	90.240	359.640	6707.98	1884.98	7889.11	7880.69	-370.04	40°12'43.2817"N	104°28'55.2020"W	0.15	-118.61	-0.03	0.15	
14758.00	90.180	359.530	6707.63	1884.63	7983.06	7974.69	-370.72	40°12'44.2106"N	104°28'55.1969"W	0.13	116.57	-0.06	-0.12	
14853.00	89.990	359.910	6707.49	1884.49	8078.01	8069.69	-371.18	40°12'45.1493"N	104°28'55.1888"W	0.45	-149.04	-0.20	0.40	
14947.00	89.690	359.730	6707.75	1884.75	8171.95	8163.69	-371.48	40°12'46.0782"N	104°28'55.1787"W	0.37	43.94	-0.32	-0.19	
15041.00	90.240	0.260	6707.81	1884.81	8265.88	8257.69	-371.48	40°12'47.0071"N	104°28'55.1649"W	0.81	-82.16	0.59	0.56	
15136.00	90.390	359.170	6707.29	1884.29	8360.82	8352.68	-371.96	40°12'47.9458"N	104°28'55.1569"W	1.16	100.15	0.16	-1.15	
15230.00	90.270	359.840	6706.75	1883.75	8454.78	8446.68	-372.77	40°12'48.8747"N	104°28'55.1535"W	0.72	-120.96	-0.13	0.71	
15325.00	90.240	359.790	6706.32	1883.32	8549.72	8541.67	-373.08	40°12'49.8134"N	104°28'55.1434"W	0.06	98.97	-0.03	-0.05	
15419.00	90.210	359.980	6705.95	1882.95	8643.65	8635.67	-373.26	40°12'50.7423"N	104°28'55.1319"W	0.20	65.32	-0.03	0.20	
15514.00	90.550	0.720	6705.32	1882.32	8738.55	8730.67	-372.68	40°12'51.6809"N	104°28'55.1104"W	0.86	-37.30	0.36	0.78	
15608.00	90.760	0.560	6704.25	1881.25	8832.43	8824.66	-371.63	40°12'52.6095"N	104°28'55.0829"W	0.28	-153.21	0.22	-0.17	
15703.00	89.750	0.050	6703.83	1880.83	8927.33	8919.65	-371.13	40°12'53.5481"N	104°28'55.0624"W	1.19	157.46	-1.06	-0.54	
15797.00	89.220	0.270	6704.67	1881.67	9021.25	9013.65	-370.87	40°12'54.4769"N	104°28'55.0451"W	0.61	-17.65	-0.56	0.23	
15892.00	89.440	0.200	6705.78	1882.78	9116.16	9108.64	-370.48	40°12'55.4155"N	104°28'55.0260"W	0.24	4.24	0.23	-0.07	
15986.00	90.520	0.280	6705.82	1882.82	9210.07	9202.64	-370.08	40°12'56.3443"N	104°28'55.0070"W	1.15	-170.91	1.15	0.09	
16081.00	90.270	0.240	6705.16	1882.16	9304.98	9297.64	-369.65	40°12'57.2829"N	104°28'54.9874"W	0.27	54.32	-0.26	-0.04	
16175.00	90.550	0.630	6704.49	1881.49	9398.87	9391.63	-368.94	40°12'58.2116"N	104°28'54.9643"W	0.51	-116.57	0.30	0.41	
16269.00	90.450	0.430	6703.67	1880.67	9492.76	9485.62	-368.07	40°12'59.1403"N	104°28'54.9392"W	0.24	-161.57	-0.11	-0.21	
16363.00	90.330	0.390	6703.03	1880.03	9586.66	9579.62	-367.40	40°13'0.0690"N	104°28'54.9166"W	0.13	-90.00	-0.13	-0.04	
16458.00	90.330	0.290	6702.48	1879.48	9681.56	9674.61	-366.83	40°13'1.0076"N	104°28'54.8953"W	0.11	-124.70	0.00	-0.11	
16553.00	90.150	0.030	6702.08	1879.08	9776.48	9769.61	-366.57	40°13'1.9463"N	104°28'54.8778"W	0.33	71.07	-0.19	-0.27	
16635.00	90.390	0.730	6701.70	1878.70	9858.39	9851.61	-366.02	40°13'2.7565"N	104°28'54.8586"W	0.90	0.00	0.29	0.85	LAST BH MWD SURVEY
16659.00	90.390	0.730	6701.53	1878.53	9882.36	9875.61	-365.72	40°13'2.9936"N	104°28'54.8511"W	0.00		0.00	0.00	EXTRAPOLATED TO TD

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GUTTERSEN STATE DD30 -755
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.30-T03N-R63W	Wellbore	GUTTERSEN STATE DD30 -755 AWB
Slot	SLOT#04 GUTTERSEN STATE DD30 -755 (450'FSL & 2613'FWL,SEC.30)		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
GUTTERSEN STATE DD30 -775 SECTION LINE 19	-1.00	-0.87	-75.43	3284597.87	1313832.86	40°11'25.3680"N	104°28'52.5720"W	polygon
	2D Polygon: dimensions not calculated							
GUTTERSEN STATE DD30 -775 SECTION LINE 30	-1.00	-0.87	-75.43	3284597.87	1313832.86	40°11'25.3680"N	104°28'52.5720"W	polygon
	2D Polygon: dimensions not calculated							
GUTTERSEN STATE DD30 -755 BHL REV-1 (200'FNL & 2310'FWL,SEC.19)	6698.50	9877.84	-383.61	3284289.71	1323711.13	40°13'3.0177"N	104°28'55.0815"W	point
GUTTERSEN STATE DD30 -755 TPZ REV-1 (800'FSL & 2310'FWL,SEC.30)	6750.00	348.35	-306.76	3284366.55	1314182.06	40°11'28.8450"N	104°28'55.5010"W	point

WELLPATH COMPOSITION - Ref Wellbore: GUTTERSEN STATE DD30 -755 AWB      Ref Wellpath: GUTTERSEN STATE DD30 -755 AWP						
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment		Wellbore	Survey Date
0.00	1927.00	Gyrodatta 2015 - GC+DROP+COND	13.5" Gyrodatta Surface Surveys (GYRODATA 2015-GC+DROP+COND) <0' - 1927">		GUTTERSEN STATE DD30 -755 AWB	12/7/2019
1927.00	16659.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	8.5" ATC MONOBORE SURVEYS (OWSG MWD REV.2+IFR1+MSA) <1996' - 16659">		GUTTERSEN STATE DD30 -755 AWB	12/7/2019

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GUTTERSEN STATE DD30 -755
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.30-T03N-R63W	Wellbore	GUTTERSEN STATE DD30 -755 AWP
Slot	SLOT#04 GUTTERSEN STATE DD30 -755 (450'FSL & 2613'FWL,SEC.30)		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
81.90	0.230	164.700	81.90	3RD PARTY FIRST GYRO SURVEY
1927.00	0.580	326.180	1926.95	TIE ON TO 3RD PARTY GYRO SURVEY
1996.00	0.540	323.610	1995.95	FIRST BH MWD SURVEY
16635.00	90.390	0.730	6701.70	LAST BH MWD SURVEY
16659.00	90.390	0.730	6701.53	EXTRAPOLATED TO TD