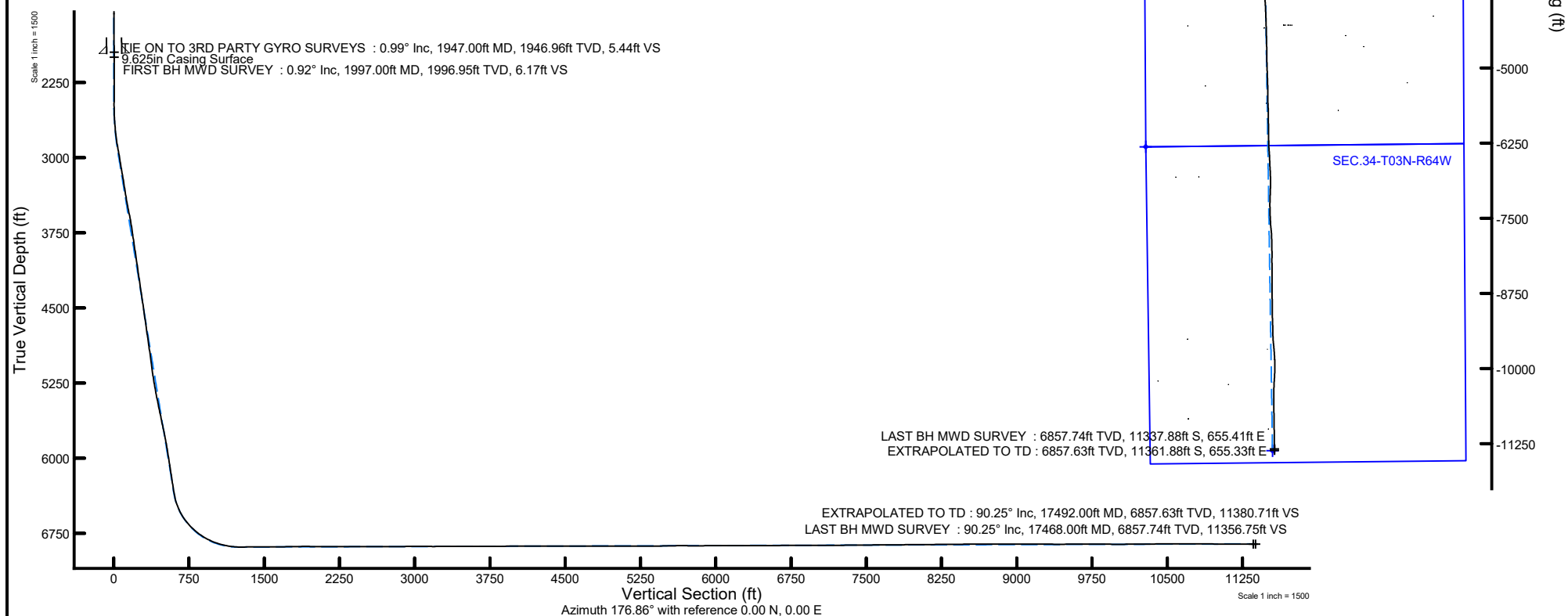


Location:	COLORADO	Slot:	SLOT#31 GUTTERSEN D34-759 (1015'FSL & 1515'FWL, SEC.22)
Field:	WELD COUNTY (NOBLE NAD 83 GRID)	Well:	GUTTERSEN D34-759
Facility:	SEC.22-T03N-R64W	Wellbore:	GUTTERSEN D34-759 AWB

Plot reference wellpath is GUTTERSEN D34-759 AWP	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to H&P 321 (4825'GL+30'KB@4855') (RKB)	North Reference: Grid north
Reference wellpath measured depths are referenced to H&P 321 (4825'GL+30'KB@4855') (RKB)	Scale: True distance
H&P 321 (4825'GL+30'KB@4855') (RKB) to Mean Sea Level: 4855 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Mud line (At Slot: SLOT#31 GUTTERSEN D34-759 (1015'FSL & 1515'FWL, SEC.22)): 0 feet	Depths are in feet
Offset wellpath MDs are referenced to each path's default MD datum	Created by: manajohj on 2020-03-23; Database: WA_NOBLE



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GUTTERSEN D34-759
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.22-T03N-R64W	Wellbore	GUTTERSEN D34-759 AWB
Slot	SLOT#31 GUTTERSEN D34-759 (1015'FSL & 1515'FWL, SEC.22)		

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	3/23/2020 at 12:25:52 PM
Convergence at slot	0.62° 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	150.76	-39.90	3267715.70	1319482.63	40°12'23.0580"N	104°32'29.3172"W
Facility Reference Pt			3267755.60	1319331.88	40°12'21.5640"N	104°32'28.8240"W
Field Reference Pt			3000000.00	4454105.15	48°46'34.3150"N	105°30'0.0000"W

WELLPATH DATUM			
Calculation method	Minimum curvature	H&P 321 (4825'GL+30'KB@4855') (RKB) to Facility Vertical Datum	4855.00ft
Horizontal Reference Pt	Slot	H&P 321 (4825'GL+30'KB@4855') (RKB) to Mean Sea Level	4855.00ft
Vertical Reference Pt	H&P 321 (4825'GL+30'KB@4855') (RKB)	H&P 321 (4825'GL+30'KB@4855') (RKB) to Mud Line at Slot (SLOT#31 GUTTERSEN D34-759 (1015'FSL & 1515'FWL, SEC.22))	4855.00ft
MD Reference Pt	H&P 321 (4825'GL+30'KB@4855') (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	176.86°

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GUTTERSEN D34-759
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.22-T03N-R64W	Wellbore	GUTTERSEN D34-759 AWB
Slot	SLOT#31 GUTTERSEN D34-759 (1015'FSL & 1515'FWL, SEC.22)		

WELLPATH DATA (187 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	106.700	0.00	-4855.00	0.00	0.00	0.00	40°12'23.0580"N	104°32'29.3172"W	0.00	0.00	0.00	0.00	
81.00	0.240	106.700	81.00	-4774.00	0.06	-0.05	0.16	40°12'23.0575"N	104°32'29.3151"W	0.30	179.56	0.30	0.00	FIRST 3RD PARTY GYRO SURVEY
175.00	0.120	107.140	175.00	-4680.00	0.16	-0.13	0.45	40°12'23.0566"N	104°32'29.3115"W	0.13	-109.70	-0.13	0.47	
267.00	0.370	15.220	267.00	-4588.00	-0.09	0.12	0.62	40°12'23.0592"N	104°32'29.3093"W	0.43	145.13	0.27	-99.91	
361.00	0.220	86.310	361.00	-4494.00	-0.38	0.43	0.87	40°12'23.0621"N	104°32'29.3059"W	0.39	-75.15	-0.16	75.63	
456.00	0.480	37.460	456.00	-4399.00	-0.68	0.76	1.30	40°12'23.0653"N	104°32'29.3004"W	0.39	165.57	0.27	-51.42	
550.00	0.130	89.990	549.99	-4305.01	-0.98	1.07	1.65	40°12'23.0684"N	104°32'29.2958"W	0.44	-19.42	-0.37	55.88	
645.00	0.420	76.480	644.99	-4210.01	-1.03	1.15	2.09	40°12'23.0691"N	104°32'29.2901"W	0.31	-173.75	0.31	-14.22	
739.00	0.230	71.260	738.99	-4116.01	-1.15	1.29	2.61	40°12'23.0705"N	104°32'29.2834"W	0.20	100.08	-0.20	-5.55	
834.00	0.260	110.770	833.99	-4021.01	-1.11	1.28	2.99	40°12'23.0703"N	104°32'29.2785"W	0.18	-162.44	0.03	41.59	
928.00	0.130	345.450	927.99	-3927.01	-1.13	1.30	3.16	40°12'23.0705"N	104°32'29.2763"W	0.37	-149.73	-0.14	-133.32	
1023.00	0.660	201.420	1022.99	-3832.01	-0.74	0.90	2.93	40°12'23.0666"N	104°32'29.2793"W	0.81	-148.70	0.56	-151.61	
1117.00	0.480	187.130	1116.98	-3738.02	0.14	0.00	2.69	40°12'23.0578"N	104°32'29.2826"W	0.24	-147.25	-0.19	-15.20	
1212.00	0.260	132.760	1211.98	-3643.02	0.69	-0.54	2.80	40°12'23.0524"N	104°32'29.2813"W	0.41	85.28	-0.23	-57.23	
1306.00	0.540	189.360	1305.98	-3549.02	1.28	-1.12	2.88	40°12'23.0466"N	104°32'29.2802"W	0.48	-55.82	0.30	60.21	
1401.00	0.600	181.660	1400.98	-3454.02	2.21	-2.06	2.79	40°12'23.0374"N	104°32'29.2815"W	0.10	-168.86	0.06	-8.11	
1495.00	0.450	177.870	1494.97	-3360.03	3.07	-2.92	2.79	40°12'23.0289"N	104°32'29.2816"W	0.16	133.72	-0.16	-4.03	
1590.00	0.330	211.830	1589.97	-3265.03	3.66	-3.52	2.66	40°12'23.0229"N	104°32'29.2834"W	0.27	128.11	-0.13	35.75	
1684.00	0.300	219.880	1683.97	-3171.03	4.07	-3.94	2.36	40°12'23.0188"N	104°32'29.2873"W	0.06	136.76	-0.03	8.56	
1779.00	0.210	254.790	1778.97	-3076.03	4.28	-4.18	2.03	40°12'23.0165"N	104°32'29.2916"W	0.18	-117.12	-0.09	36.75	
1873.00	0.370	168.010	1872.97	-2982.03	4.62	-4.52	1.93	40°12'23.0131"N	104°32'29.2930"W	0.44	-23.73	0.17	-92.32	
1947.00	0.990	152.930	1946.96	-2908.04	5.44	-5.32	2.27	40°12'23.0051"N	104°32'29.2887"W	0.86	-117.25	0.84	-20.38	TIE ON TO 3RD PARTY GYRO SURVEYS
1997.00	0.920	142.610	1996.95	-2858.05	6.17	-6.03	2.71	40°12'22.9981"N	104°32'29.2831"W	0.37	-151.29	-0.14	-20.64	FIRST BH MWD SURVEY
2091.00	0.450	70.500	2090.95	-2764.05	6.69	-6.50	3.52	40°12'22.9933"N	104°32'29.2728"W	0.95	-123.17	-0.50	-76.71	
2185.00	0.990	329.690	2184.94	-2670.06	5.86	-5.68	3.46	40°12'23.0015"N	104°32'29.2735"W	1.24	-150.71	0.57	-107.24	
2280.00	0.510	287.250	2279.94	-2575.06	4.98	-4.85	2.64	40°12'23.0098"N	104°32'29.2839"W	0.74	169.13	-0.51	-44.67	
2374.00	0.100	350.430	2373.93	-2481.07	4.76	-4.64	2.22	40°12'23.0119"N	104°32'29.2892"W	0.50	-84.73	-0.44	67.21	
2468.00	1.700	269.060	2467.92	-2387.08	4.62	-4.58	0.82	40°12'23.0126"N	104°32'29.3073"W	1.80	-28.80	1.70	-86.56	
2563.00	5.130	249.430	2562.74	-2292.26	5.84	-6.10	-4.57	40°12'22.9982"N	104°32'29.3770"W	3.76	-100.05	3.61	-20.66	
2657.00	5.730	211.090	2656.35	-2198.65	10.98	-11.60	-10.93	40°12'22.9446"N	104°32'29.4597"W	3.84	-112.93	0.64	-40.79	
2751.00	6.090	158.000	2749.91	-2105.09	19.59	-20.24	-11.49	40°12'22.8592"N	104°32'29.4681"W	5.62	3.22	0.38	-56.48	
2846.00	9.310	159.120	2844.04	-2010.96	31.68	-32.10	-6.86	40°12'22.7415"N	104°32'29.4101"W	3.39	-41.12	3.39	1.18	
2940.00	12.320	147.710	2936.37	-1918.63	47.68	-47.69	1.21	40°12'22.5867"N	104°32'29.3082"W	3.91	-118.66	3.20	-12.14	
3035.00	11.360	136.920	3029.36	-1825.64	63.71	-63.09	13.02	40°12'22.4332"N	104°32'29.1582"W	2.54	35.77	-1.01	-11.36	
3129.00	12.320	140.100	3121.36	-1733.64	78.84	-77.55	25.77	40°12'22.2890"N	104°32'28.9958"W	1.23	-136.80	1.02	3.38	
3224.00	11.990	138.590	3214.23	-1640.77	94.71	-92.72	38.80	40°12'22.1376"N	104°32'28.8300"W	0.48	175.09	-0.35	-1.59	
3318.00	11.370	138.860	3306.29	-1548.71	109.67	-107.02	51.36	40°12'21.9950"N	104°32'28.6702"W	0.66	114.80	-0.66	0.29	
3413.00	10.770	147.090	3399.53	-1455.47	124.76	-121.53	62.34	40°12'21.8505"N	104°32'28.5307"W	1.78	83.93	-0.63	8.66	
3507.00	11.370	160.790	3491.79	-1363.21	141.29	-137.65	70.16	40°12'21.6903"N	104°32'28.4321"W	2.86	-17.60	0.64	14.57	
3601.00	12.170	159.590	3583.82	-1271.18	159.65	-155.69	76.67	40°12'21.5114"N	104°32'28.3508"W	0.89	-102.87	0.85	-1.28	
3696.00	12.130	134.150	3676.75	-1178.25	176.56	-172.04	87.33	40°12'21.3487"N	104°32'28.2157"W	5.59	170.80	-0.04	-26.78	
3790.00	10.200	135.920	3768.97	-1086.03	190.10	-184.90	100.21	40°12'21.2202"N	104°32'28.0515"W	2.09	-20.08	-2.05	1.88	
3885.00	11.770	133.130	3862.23	-992.77	203.46	-197.57	113.13	40°12'21.0937"N	104°32'27.8867"W	1.74	-127.54	1.65	-2.94	
3979.00	11.620	132.150	3954.28	-900.72	217.11	-210.47	127.15	40°12'20.9646"N	104°32'27.7079"W	0.26	112.81	-0.16	-1.04	
4074.00	11.570	132.750	4047.34	-807.66	230.75	-223.36	141.23	40°12'20.8358"N	104°32'27.5281"W	0.14	-101.00	-0.05	0.63	

REFERENCE WELLPATH IDENTIFICATION				
Operator	NOBLE ENERGY, INC		Well	GUTTERSEN D34-759
Field	WELD COUNTY (NOBLE NAD 83 GRID)		API/Legal	
Facility	SEC.22-T03N-R64W		Wellbore	GUTTERSEN D34-759 AWB
Slot	SLOT#31 GUTTERSEN D34-759 (1015'FSL & 1515'FWL, SEC.22)			

WELLPATH DATA (187 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
4168.00	11.540	131.950	4139.43	-715.57	244.18	-236.05	155.15	40°12'20.7090"N	104°32'27.3506"W	0.17	125.56	-0.03	-0.85	
4263.00	11.270	133.930	4232.56	-622.44	257.70	-248.84	168.90	40°12'20.5811"N	104°32'27.1751"W	0.50	-20.56	-0.28	2.08	
4357.00	11.570	133.370	4324.70	-530.30	271.27	-261.68	182.37	40°12'20.4527"N	104°32'27.0033"W	0.34	147.57	0.32	-0.60	
4452.00	11.430	133.820	4417.79	-437.21	285.06	-274.74	196.09	40°12'20.3222"N	104°32'26.8284"W	0.18	-132.85	-0.15	0.47	
4546.00	11.270	132.930	4509.95	-345.05	298.48	-287.45	209.53	40°12'20.1952"N	104°32'26.6569"W	0.25	-84.11	-0.17	-0.95	
4735.00	11.290	132.010	4695.30	-159.70	324.89	-312.41	236.80	40°12'19.9457"N	104°32'26.3089"W	0.10	18.37	0.01	-0.49	
4830.00	11.920	133.020	4788.36	-66.64	338.56	-325.33	250.88	40°12'19.8165"N	104°32'26.1292"W	0.70	163.84	0.66	1.06	
4924.00	10.030	136.190	4880.63	25.63	351.77	-337.86	263.65	40°12'19.6913"N	104°32'25.9665"W	2.11	-46.70	-2.01	3.37	
5019.00	11.230	129.990	4974.01	119.01	364.37	-349.77	276.47	40°12'19.5722"N	104°32'25.8030"W	1.74	141.12	1.26	-6.53	
5113.00	10.250	134.580	5066.36	211.36	376.82	-361.53	289.44	40°12'19.4547"N	104°32'25.6374"W	1.38	7.41	-1.04	4.88	
5208.00	10.920	135.040	5159.74	304.74	389.78	-373.83	301.81	40°12'19.3318"N	104°32'25.4796"W	0.71	104.10	0.71	0.48	
5302.00	10.590	150.670	5252.11	397.11	404.17	-387.66	312.34	40°12'19.1940"N	104°32'25.3459"W	3.11	67.54	-0.35	16.63	
5397.00	11.310	158.350	5345.39	490.39	420.83	-403.93	320.05	40°12'19.0324"N	104°32'25.2488"W	1.71	67.77	0.76	8.08	
5492.00	11.790	163.540	5438.46	583.46	439.11	-421.90	326.24	40°12'18.8542"N	104°32'25.1715"W	1.20	49.00	0.51	5.46	
5586.00	12.080	165.110	5530.43	675.43	458.09	-440.61	331.49	40°12'18.6687"N	104°32'25.1065"W	0.46	-130.87	0.31	1.67	
5682.00	11.740	163.140	5624.37	769.37	477.41	-459.67	336.90	40°12'18.4798"N	104°32'25.0394"W	0.55	-49.17	-0.35	-2.05	
5776.00	13.170	156.320	5716.16	861.16	496.73	-478.63	343.98	40°12'18.2917"N	104°32'24.9509"W	2.18	-97.26	1.52	-7.26	
5871.00	13.200	140.450	5808.68	953.68	515.60	-496.91	355.23	40°12'18.1099"N	104°32'24.8083"W	3.80	-106.45	0.03	-16.71	
5966.00	12.790	132.190	5901.26	1046.26	531.81	-512.34	369.93	40°12'17.9559"N	104°32'24.6211"W	2.00	-161.27	-0.43	-8.69	
6060.00	12.680	132.020	5992.95	1137.95	546.52	-526.23	385.31	40°12'17.8169"N	104°32'24.4249"W	0.12	-62.26	-0.12	-0.18	
6155.00	12.840	130.680	6085.60	1230.60	561.22	-540.09	401.06	40°12'17.6783"N	104°32'24.2238"W	0.35	158.14	0.17	-1.41	
6249.00	12.240	131.820	6177.36	1322.36	575.49	-553.54	416.40	40°12'17.5437"N	104°32'24.0279"W	0.69	85.62	-0.64	1.21	
6344.00	12.270	133.390	6270.19	1415.19	589.93	-567.19	431.25	40°12'17.4072"N	104°32'23.8385"W	0.35	6.67	0.03	1.65	
6438.00	12.940	133.740	6361.93	1506.93	604.86	-581.33	446.11	40°12'17.2659"N	104°32'23.6490"W	0.72	54.10	0.71	0.37	
6533.00	19.410	155.570	6453.20	1598.20	627.38	-603.10	460.35	40°12'17.0493"N	104°32'23.4685"W	9.24	21.46	6.81	22.98	
6627.00	28.350	162.790	6539.08	1684.08	663.66	-638.72	473.44	40°12'16.6959"N	104°32'23.3047"W	9.99	25.35	9.51	7.68	
6722.00	36.410	169.070	6619.27	1764.27	713.57	-688.04	485.48	40°12'16.2073"N	104°32'23.1564"W	9.18	-1.86	8.48	6.61	
6816.00	45.420	168.660	6690.23	1835.23	774.47	-748.38	497.38	40°12'15.6098"N	104°32'23.0115"W	9.59	12.14	9.59	-0.44	
6911.00	53.420	170.790	6751.98	1896.98	846.01	-819.33	510.16	40°12'14.9074"N	104°32'22.8567"W	8.59	29.29	8.42	2.24	
7006.00	61.250	175.720	6803.24	1948.24	925.73	-898.67	519.39	40°12'14.1224"N	104°32'22.7488"W	9.32	32.05	8.24	5.19	
7100.00	69.620	181.220	6842.31	1987.31	1011.06	-984.01	521.53	40°12'13.2788"N	104°32'22.7331"W	10.37	35.45	8.90	5.85	
7195.00	77.270	186.730	6869.37	2014.37	1101.31	-1074.74	515.14	40°12'12.3830"N	104°32'22.8282"W	9.78	-1.92	8.05	5.80	
7290.00	84.730	186.480	6884.23	2029.23	1193.72	-1167.88	504.36	40°12'11.4638"N	104°32'22.9801"W	7.86	-19.51	7.85	-0.26	
7384.00	91.320	184.150	6887.46	2032.46	1286.59	-1261.36	495.67	40°12'10.5410"N	104°32'23.1052"W	7.43	-96.82	7.01	-2.48	
7479.00	90.430	176.780	6886.01	2031.01	1381.32	-1356.28	494.90	40°12'9.6031"N	104°32'23.1284"W	7.81	125.29	-0.94	-7.76	
7574.00	89.970	177.430	6885.68	2030.68	1476.32	-1451.16	499.70	40°12'8.6651"N	104°32'23.0798"W	0.84	82.70	-0.48	0.68	
7668.00	90.280	179.850	6885.47	2030.47	1570.27	-1545.13	501.93	40°12'7.7363"N	104°32'23.0641"W	2.60	78.18	0.33	2.57	
7763.00	90.370	180.280	6884.94	2029.94	1665.12	-1640.12	501.82	40°12'6.7976"N	104°32'23.0788"W	0.46	26.21	0.09	0.45	
7857.00	91.020	180.600	6883.79	2028.79	1758.93	-1734.11	501.10	40°12'5.8690"N	104°32'23.1012"W	0.77	-95.82	0.69	0.34	
7952.00	90.830	178.740	6882.26	2027.26	1853.80	-1829.10	501.64	40°12'4.9303"N	104°32'23.1074"W	1.97	-139.78	-0.20	-1.96	
8046.00	89.600	177.700	6881.91	2026.91	1947.77	-1923.05	504.56	40°12'4.0017"N	104°32'23.0829"W	1.71	89.13	-1.31	-1.11	
8141.00	89.630	179.660	6882.55	2027.55	2042.71	-2018.02	506.75	40°12'3.0630"N	104°32'23.0680"W	2.06	97.84	0.03	2.06	
8235.00	89.410	181.260	6883.33	2028.33	2136.52	-2112.01	506.00	40°12'2.1343"N	104°32'23.0908"W	1.72	64.66	-0.23	1.70	
8329.00	90.400	183.350	6883.49	2028.49	2230.09	-2205.92	502.22	40°12'1.2067"N	104°32'23.1526"W	2.46	-89.01	1.05	2.22	
8424.00	90.460	179.820	6882.78	2027.78	2324.75	-2300.87	499.59	40°12'0.2688"N	104°32'23.1997"W	3.72	-97.45	0.06	-3.72	

REFERENCE WELLPATH IDENTIFICATION					
Operator	NOBLE ENERGY, INC			Well	GUTTERSEN D34-759
Field	WELD COUNTY (NOBLE NAD 83 GRID)			API/Legal	
Facility	SEC.22-T03N-R64W			Wellbore	GUTTERSEN D34-759 AWB
Slot	SLOT#31 GUTTERSEN D34-759 (1015'FSL & 1515'FWL, SEC.22)				

WELLPATH DATA (187 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
8518.00	90.150	177.450	6882.28	2027.28	2418.70	-2394.83	501.83	40°11'59.3400"N	104°32'23.1840"W	2.54	105.14	-0.33	-2.52	
8612.00	89.690	179.150	6882.41	2027.41	2512.67	-2488.79	504.62	40°11'58.4113"N	104°32'23.1612"W	1.87	91.12	-0.49	1.81	
8707.00	89.630	182.250	6882.97	2027.97	2607.44	-2583.77	503.46	40°11'57.4729"N	104°32'23.1894"W	3.26	88.88	-0.06	3.26	
8801.00	89.720	186.780	6883.51	2028.51	2700.58	-2677.45	496.06	40°11'56.5480"N	104°32'23.2978"W	4.82	-39.09	0.10	4.82	
8896.00	90.680	186.000	6883.17	2028.17	2794.26	-2771.86	485.49	40°11'55.6163"N	104°32'23.4472"W	1.30	-90.88	1.01	-0.82	
8990.00	90.620	182.170	6882.11	2027.11	2887.50	-2865.60	478.79	40°11'54.6907"N	104°32'23.5465"W	4.07	-109.87	-0.06	-4.07	
9084.00	90.150	180.870	6881.48	2026.48	2981.18	-2959.56	476.30	40°11'53.7625"N	104°32'23.5918"W	1.47	-97.80	-0.50	-1.38	
9179.00	89.750	177.950	6881.56	2026.56	3076.08	-3054.54	477.28	40°11'52.8238"N	104°32'23.5924"W	3.10	90.00	-0.42	-3.07	
9273.00	89.750	179.850	6881.97	2026.97	3170.01	-3148.52	479.08	40°11'51.8950"N	104°32'23.5823"W	2.02	-34.72	0.00	2.02	
9368.00	90.890	179.060	6881.44	2026.44	3264.91	-3243.51	479.98	40°11'50.9563"N	104°32'23.5839"W	1.46	-142.03	1.20	-0.83	
9463.00	89.570	178.030	6881.06	2026.06	3359.87	-3338.48	482.40	40°11'50.0176"N	104°32'23.5661"W	1.76	64.50	-1.39	-1.08	
9557.00	90.710	180.420	6880.83	2025.83	3453.78	-3432.46	483.67	40°11'49.0888"N	104°32'23.5628"W	2.82	-115.54	1.21	2.54	
9652.00	89.630	178.160	6880.54	2025.54	3548.68	-3527.45	484.84	40°11'48.1501"N	104°32'23.5609"W	2.64	-36.49	-1.14	-2.38	
9746.00	90.590	177.450	6880.36	2025.36	3642.67	-3621.37	488.45	40°11'47.2215"N	104°32'23.5276"W	1.27	-179.61	1.02	-0.76	
9841.00	89.140	177.440	6880.59	2025.59	3737.66	-3716.28	492.68	40°11'46.2833"N	104°32'23.4863"W	1.53	26.03	-1.53	-0.01	
9935.00	90.860	178.280	6880.59	2025.59	3831.64	-3810.21	496.19	40°11'45.3548"N	104°32'23.4541"W	2.04	-91.03	1.83	0.89	
10030.00	90.800	175.010	6879.21	2024.21	3926.62	-3905.02	501.75	40°11'44.4173"N	104°32'23.3957"W	3.44	104.06	-0.06	-3.44	
10125.00	89.970	178.320	6878.57	2023.57	4021.60	-3999.84	507.27	40°11'43.4797"N	104°32'23.3378"W	3.59	-103.52	-0.87	3.48	
10219.00	89.780	177.530	6878.78	2023.78	4115.59	-4093.78	510.68	40°11'42.5511"N	104°32'23.3070"W	0.86	19.89	-0.20	-0.84	
10314.00	90.250	177.700	6878.75	2023.75	4210.58	-4188.70	514.63	40°11'41.6128"N	104°32'23.2693"W	0.53	103.52	0.49	0.18	
10408.00	90.000	178.740	6878.55	2023.55	4304.55	-4282.65	517.55	40°11'40.6841"N	104°32'23.2448"W	1.14	-67.75	-0.27	1.11	
10503.00	90.090	178.520	6878.47	2023.47	4399.51	-4377.63	519.82	40°11'39.7454"N	104°32'23.2288"W	0.25	-106.70	0.09	-0.23	
10597.00	90.060	178.420	6878.35	2023.35	4493.47	-4471.59	522.33	40°11'38.8166"N	104°32'23.2096"W	0.11	135.00	-0.03	-0.11	
10692.00	89.850	178.630	6878.43	2023.43	4588.43	-4566.56	524.78	40°11'37.8779"N	104°32'23.1913"W	0.31	73.91	-0.22	0.22	
10786.00	90.000	179.150	6878.55	2023.55	4682.37	-4660.54	526.60	40°11'36.9490"N	104°32'23.1810"W	0.58	165.34	0.16	0.55	
10881.00	89.350	179.320	6879.09	2024.09	4777.29	-4755.53	527.87	40°11'36.0103"N	104°32'23.1779"W	0.71	-9.22	-0.68	0.18	
10975.00	90.520	179.130	6879.19	2024.19	4871.20	-4849.52	529.14	40°11'35.0814"N	104°32'23.1746"W	1.26	-116.71	1.24	-0.20	
11070.00	89.720	177.540	6878.99	2023.99	4966.17	-4944.48	531.90	40°11'34.1428"N	104°32'23.1523"W	1.87	64.30	-0.84	-1.67	
11164.00	90.620	179.410	6878.72	2023.72	5060.13	-5038.44	534.40	40°11'33.2140"N	104°32'23.1332"W	2.21	-95.14	0.96	1.99	
11258.00	90.400	176.970	6877.88	2022.88	5154.09	-5132.38	537.37	40°11'32.2854"N	104°32'23.1080"W	2.61	106.75	-0.23	-2.60	
11353.00	90.090	178.000	6877.47	2022.47	5249.08	-5227.29	541.54	40°11'31.3472"N	104°32'23.0676"W	1.13	87.47	-0.33	1.08	
11447.00	90.180	180.040	6877.25	2022.25	5343.01	-5321.27	543.14	40°11'30.4183"N	104°32'23.0600"W	2.17	-93.54	0.10	2.17	
11542.00	90.060	178.100	6877.05	2022.05	5437.94	-5416.25	544.69	40°11'29.4796"N	104°32'23.0533"W	2.05	58.18	-0.13	-2.04	
11636.00	91.350	180.180	6875.90	2020.90	5531.85	-5510.23	546.10	40°11'28.5509"N	104°32'23.0483"W	2.60	-103.24	1.37	2.21	
11731.00	90.650	177.210	6874.24	2019.24	5626.77	-5605.17	548.26	40°11'27.6124"N	104°32'23.0337"W	3.21	165.11	-0.74	-3.13	
11826.00	88.920	177.670	6874.59	2019.59	5721.76	-5700.08	552.50	40°11'26.6742"N	104°32'22.9922"W	1.88	64.55	-1.82	0.48	
11920.00	90.220	180.400	6875.30	2020.30	5815.68	-5794.05	554.09	40°11'25.7454"N	104°32'22.9849"W	3.22	-49.02	1.38	2.90	
12015.00	91.540	178.880	6873.84	2018.84	5910.55	-5889.03	554.68	40°11'24.8068"N	104°32'22.9905"W	2.12	178.81	1.39	-1.60	
12110.00	89.140	178.930	6873.28	2018.28	6005.49	-5984.00	556.50	40°11'23.8681"N	104°32'22.9804"W	2.53	9.06	-2.53	0.05	
12204.00	90.520	179.150	6873.56	2018.56	6099.42	-6077.99	558.07	40°11'22.9393"N	104°32'22.9732"W	1.49	147.35	1.47	0.23	
12299.00	89.880	179.560	6873.22	2018.22	6194.32	-6172.98	559.14	40°11'22.0005"N	104°32'22.9727"W	0.80	-84.29	-0.67	0.43	
12393.00	90.060	177.760	6873.27	2018.27	6288.27	-6266.95	561.34	40°11'21.0717"N	104°32'22.9575"W	1.92	-90.00	0.19	-1.91	
12487.00	90.060	175.610	6873.17	2018.17	6382.27	-6360.79	566.78	40°11'20.1439"N	104°32'22.9005"W	2.29	90.98	0.00	-2.29	
12582.00	90.030	177.360	6873.10	2018.10	6477.26	-6455.61	572.60	40°11'19.2063"N	104°32'22.8387"W	1.84	56.84	-0.03	1.84	
12676.00	90.520	178.110	6872.65	2017.65	6571.25	-6549.53	576.31	40°11'18.2778"N	104°32'22.8040"W	0.95	-94.10	0.52	0.80	

REFERENCE WELLPATH IDENTIFICATION				
Operator	NOBLE ENERGY, INC		Well	GUTTERSEN D34-759
Field	WELD COUNTY (NOBLE NAD 83 GRID)		API/Legal	
Facility	SEC.22-T03N-R64W		Wellbore	GUTTERSEN D34-759 AWB
Slot	SLOT#31 GUTTERSEN D34-759 (1015'FSL & 1515'FWL, SEC.22)			

WELLPATH DATA (187 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
12771.00	90.400	176.440	6871.89	2016.89	6666.24	-6644.42	580.83	40°11'17.3397"N	104°32'22.7590"W	1.76	107.82	-0.13	-1.76	
12865.00	90.220	177.000	6871.38	2016.38	6760.24	-6738.26	586.21	40°11'16.4118"N	104°32'22.7028"W	0.63	97.01	-0.19	0.60	
12959.00	90.000	178.790	6871.20	2016.20	6854.22	-6832.19	589.66	40°11'15.4833"N	104°32'22.6714"W	1.92	87.17	-0.23	1.90	
13054.00	90.090	180.610	6871.12	2016.12	6949.10	-6927.19	590.16	40°11'14.5445"N	104°32'22.6783"W	1.92	100.78	0.09	1.92	
13148.00	89.850	181.870	6871.17	2016.17	7042.82	-7021.16	588.12	40°11'13.6161"N	104°32'22.7176"W	1.36	51.44	-0.26	1.34	
13242.00	90.400	182.560	6870.97	2015.97	7136.41	-7115.09	584.49	40°11'12.6884"N	104°32'22.7775"W	0.94	-71.39	0.59	0.73	
13337.00	90.740	181.550	6870.02	2015.02	7231.02	-7210.03	581.09	40°11'11.7507"N	104°32'22.8347"W	1.12	-97.31	0.36	-1.06	
13431.00	90.460	179.370	6869.04	2014.04	7324.82	-7304.01	580.33	40°11'10.8220"N	104°32'22.8575"W	2.34	-90.00	-0.30	-2.32	
13526.00	90.460	181.210	6868.27	2013.27	7419.76	-7398.99	582.34	40°11'9.8833"N	104°32'22.8449"W	1.22	-87.04	0.00	-1.22	
13620.00	90.490	177.630	6867.49	2012.49	7513.74	-7492.92	585.75	40°11'8.9548"N	104°32'22.8141"W	0.62	-75.61	0.03	-0.62	
13715.00	90.890	176.070	6866.35	2011.35	7608.73	-7587.77	590.97	40°11'8.0170"N	104°32'22.7600"W	1.70	-101.35	0.42	-1.64	
13809.00	90.460	173.930	6865.24	2010.24	7702.67	-7681.40	599.16	40°11'7.0909"N	104°32'22.6676"W	2.32	99.46	-0.46	-2.28	
13904.00	90.000	176.690	6864.86	2009.86	7797.63	-7776.07	606.93	40°11'6.1546"N	104°32'22.5807"W	2.95	80.04	-0.48	2.91	
13998.00	90.490	179.480	6864.46	2009.46	7891.59	-7870.01	610.07	40°11'5.2260"N	104°32'22.5533"W	3.01	-76.09	0.52	2.97	
14092.00	90.740	178.470	6863.45	2008.45	7985.52	-7963.98	611.75	40°11'4.2972"N	104°32'22.5448"W	1.11	147.83	0.27	-1.07	
14187.00	90.120	178.860	6862.74	2007.74	8080.47	-8058.96	613.96	40°11'3.3585"N	104°32'22.5295"W	0.77	76.65	-0.65	0.41	
14282.00	90.680	181.220	6862.07	2007.07	8175.32	-8153.95	613.90	40°11'2.4199"N	104°32'22.5436"W	2.55	-97.14	0.59	2.48	
14376.00	90.370	178.750	6861.21	2006.21	8269.17	-8247.93	613.92	40°11'1.4912"N	104°32'22.5564"W	2.65	89.13	-0.33	-2.63	
14470.00	90.400	180.750	6860.58	2005.58	8363.04	-8341.93	614.33	40°11'0.5623"N	104°32'22.5643"W	2.13	-72.57	0.03	2.13	
14565.00	90.830	179.380	6859.56	2004.56	8457.89	-8436.92	614.22	40°10'59.6237"N	104°32'22.5789"W	1.51	-178.57	0.45	-1.44	
14659.00	89.630	179.350	6859.18	2004.18	8551.79	-8530.91	615.26	40°10'58.6948"N	104°32'22.5786"W	1.28	51.10	-1.28	-0.03	
14754.00	90.800	180.800	6858.83	2003.83	8646.64	-8625.91	615.14	40°10'57.7561"N	104°32'22.5935"W	1.96	-125.39	1.23	1.53	
14849.00	89.720	179.280	6858.40	2003.40	8741.49	-8720.90	615.07	40°10'56.8175"N	104°32'22.6076"W	1.96	-35.90	-1.14	-1.60	
14943.00	90.770	178.520	6857.99	2002.99	8835.43	-8814.88	616.88	40°10'55.8886"N	104°32'22.5974"W	1.38	177.42	1.12	-0.81	
15037.00	89.660	178.570	6857.64	2002.64	8929.38	-8908.85	619.27	40°10'54.9598"N	104°32'22.5798"W	1.18	94.38	-1.18	0.05	
15132.00	89.540	180.140	6858.31	2003.31	9024.29	-9003.84	620.33	40°10'54.0211"N	104°32'22.5793"W	1.66	-26.71	-0.13	1.65	
15227.00	91.110	179.350	6857.77	2002.77	9119.16	-9098.83	620.76	40°10'53.0824"N	104°32'22.5871"W	1.85	-132.84	1.65	-0.83	
15321.00	89.450	177.560	6857.31	2002.31	9213.12	-9192.79	623.29	40°10'52.1537"N	104°32'22.5676"W	2.60	120.81	-1.77	-1.90	
15415.00	88.830	178.600	6858.72	2003.72	9307.09	-9286.72	626.44	40°10'51.2251"N	104°32'22.5401"W	1.29	28.50	-0.66	1.11	
15510.00	89.880	179.170	6859.79	2004.79	9402.02	-9381.70	628.29	40°10'50.2864"N	104°32'22.5295"W	1.26	-54.11	1.11	0.60	
15604.00	90.770	177.940	6859.25	2004.25	9495.97	-9475.66	630.66	40°10'49.3577"N	104°32'22.5121"W	1.62	-100.77	0.95	-1.31	
15699.00	89.970	173.740	6858.64	2003.64	9590.93	-9570.39	637.55	40°10'48.4209"N	104°32'22.4366"W	4.50	101.24	-0.84	-4.42	
15793.00	89.660	175.300	6858.94	2003.94	9684.85	-9663.96	646.53	40°10'47.4954"N	104°32'22.3340"W	1.69	68.75	-0.33	1.66	
15888.00	89.940	176.020	6859.28	2004.28	9779.83	-9758.68	653.71	40°10'46.5586"N	104°32'22.2546"W	0.81	90.00	0.29	0.76	
15982.00	89.940	176.920	6859.37	2004.37	9873.83	-9852.50	659.50	40°10'45.6309"N	104°32'22.1931"W	0.96	91.76	0.00	0.96	
16076.00	89.880	178.870	6859.52	2004.52	9967.81	-9946.43	662.95	40°10'44.7023"N	104°32'22.1617"W	2.08	86.45	-0.06	2.07	
16171.00	90.120	182.740	6859.52	2004.52	10062.56	-10041.41	661.62	40°10'43.7640"N	104°32'22.1922"W	4.08	46.79	0.25	4.07	
16266.00	90.740	183.400	6858.81	2003.81	10157.00	-10136.27	656.53	40°10'42.8272"N	104°32'22.2710"W	0.95	161.97	0.65	0.69	
16360.00	90.310	183.540	6857.95	2002.95	10250.38	-10230.09	650.84	40°10'41.9007"N	104°32'22.3574"W	0.48	-84.19	-0.46	0.15	
16455.00	90.550	181.180	6857.23	2002.23	10344.93	-10325.00	646.93	40°10'40.9632"N	104°32'22.4210"W	2.50	-111.58	0.25	-2.48	
16549.00	90.000	179.790	6856.78	2001.78	10438.74	-10418.99	646.14	40°10'40.0345"N	104°32'22.4444"W	1.59	19.65	-0.59	-1.48	
16643.00	90.280	179.890	6856.55	2001.55	10532.61	-10512.99	646.40	40°10'39.1057"N	104°32'22.4541"W	0.32	73.95	0.30	0.11	
16738.00	90.490	180.620	6855.92	2000.92	10627.44	-10607.99	645.98	40°10'38.1670"N	104°32'22.4728"W	0.80	-118.36	0.22	0.77	
16833.00	89.540	178.860	6855.89	2000.89	10722.32	-10702.98	646.41	40°10'37.2283"N	104°32'22.4805"W	2.11	57.32	-1.00	-1.85	
16927.00	90.220	179.920	6856.09	2001.09	10816.22	-10796.98	647.41	40°10'36.2994"N	104°32'22.4807"W	1.34	-125.46	0.72	1.13	

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Well	GUTTERSEN D34-759
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.22-T03N-R64W	Wellbore	GUTTERSEN D34-759 AWB
Slot	SLOT#31 GUTTERSEN D34-759 (1015'FSL & 1515'FWL, SEC.22)		

WELLPATH DATA (187 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
17022.00	89.230	178.530	6856.54	2001.54	10911.14	-10891.96	648.69	40°10'35.3607"N	104°32'22.4774"W	1.80	34.00	-1.04	-1.46	
17116.00	90.090	179.110	6857.10	2002.10	11005.08	-10985.94	650.63	40°10'34.4318"N	104°32'22.4656"W	1.10	-132.05	0.91	0.62	
17211.00	89.080	177.990	6857.79	2002.79	11100.03	-11080.90	653.03	40°10'33.4932"N	104°32'22.4479"W	1.59	56.98	-1.06	-1.18	
17306.00	90.250	179.790	6858.34	2003.34	11194.97	-11175.88	654.87	40°10'32.5545"N	104°32'22.4374"W	2.26	-116.57	1.23	1.89	
17400.00	90.180	179.650	6857.99	2002.99	11288.85	-11269.88	655.33	40°10'31.6256"N	104°32'22.4446"W	0.17	82.87	-0.07	-0.15	
17468.00	90.250	180.210	6857.74	2002.74	11356.75	-11337.88	655.41	40°10'30.9537"N	104°32'22.4530"W	0.83	0.00	0.10	0.82	LAST BH MWD SURVEY
17492.00‡	90.250	180.210	6857.63	2002.63	11380.71	-11361.88	655.33	40°10'30.7165"N	104°32'22.4575"W	0.00		0.00	0.00	EXTRAPOLATED TO TD

HOLE & CASING SECTIONS - Ref Wellbore: GUTTERSEN D34-759 AWB Ref Wellpath: GUTTERSEN D34-759 AWP

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
13.5in Open Hole	30.00	1957.00	1927.00	30.00	1956.96	-0.01	0.02	-5.48	2.35
9.625in Casing Surface	30.00	1957.00	1927.00	30.00	1956.96	-0.01	0.02	-5.48	2.35
8.5in Open Hole	1957.00	17492.00	15535.00	1956.96	6857.63	-5.48	2.35	-11361.88	655.33

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.22-T03N-R64W	1.00	-150.76	39.90	3267755.60	1319331.88	40°12'21.5640"N	104°32'28.8240"W	polygon
	2D Polygon: dimensions not calculated							
SEC.27-T03N-R64W	1.00	-1033.08	-1516.50	3266199.27	1318449.60	40°12'13.0113"N	104°32'49.0046"W	polygon
	2D Polygon: dimensions not calculated							
SEC.34-T03N-R64W	1.00	-6309.97	-1482.47	3266233.30	1313172.95	40°11'20.8645"N	104°32'49.2969"W	polygon
	2D Polygon: dimensions not calculated							
GUTTERSEN D34-759 BHL REV-1 (200'FSL & 2030'FWL, SEC.34)	6856.00	-11368.07	622.76	3268338.43	1308115.07	40°10'30.6588"N	104°32'22.8779"W	point
GUTTERSEN D34-759 T1 REV-1	6882.76	-2877.16	494.21	3268209.89	1316605.60	40°11'54.5748"N	104°32'23.3495"W	point
GUTTERSEN D34-759 TPZ REV-1 (200'FNL & 2030'FWL, SEC.27)	6888.00	-1209.00	514.78	3268230.45	1318273.68	40°12'11.0563"N	104°32'22.8516"W	point

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GUTTERSEN D34-759
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.22-T03N-R64W	Wellbore	GUTTERSEN D34-759 AWB
Slot	SLOT#31 GUTTERSEN D34-759 (1015'FSL & 1515'FWL, SEC.22)		

WELLPATH COMPOSITION - Ref Wellbore: GUTTERSEN D34-759 AWB Ref Wellpath: GUTTERSEN D34-759 AWP					
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
0.00	1947.00	Gyrodatta 2015 - GC+DROP+COND	13.5" GYRODATA 2015 (GC+DROP+COND) <0' - 1947'>	GUTTERSEN D34-759 AWB	3/20/2020
1947.00	17492.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	8.5" OWSG MWD REV.2 (IFR1+MSA) <1997' - 17468'>	GUTTERSEN D34-759 AWB	3/20/2020

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GUTTERSEN D34-759
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.22-T03N-R64W	Wellbore	GUTTERSEN D34-759 AWB
Slot	SLOT#31 GUTTERSEN D34-759 (1015'FSL & 1515'FWL, SEC.22)		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
81.00	0.240	106.700	81.00	FIRST 3RD PARTY GYRO SURVEY
1947.00	0.990	152.930	1946.96	TIE ON TO 3RD PARTY GYRO SURVEYS
1997.00	0.920	142.610	1996.95	FIRST BH MWD SURVEY
17468.00	90.250	180.210	6857.74	LAST BH MWD SURVEY
17492.00	90.250	180.210	6857.63	EXTRAPOLATED TO TD