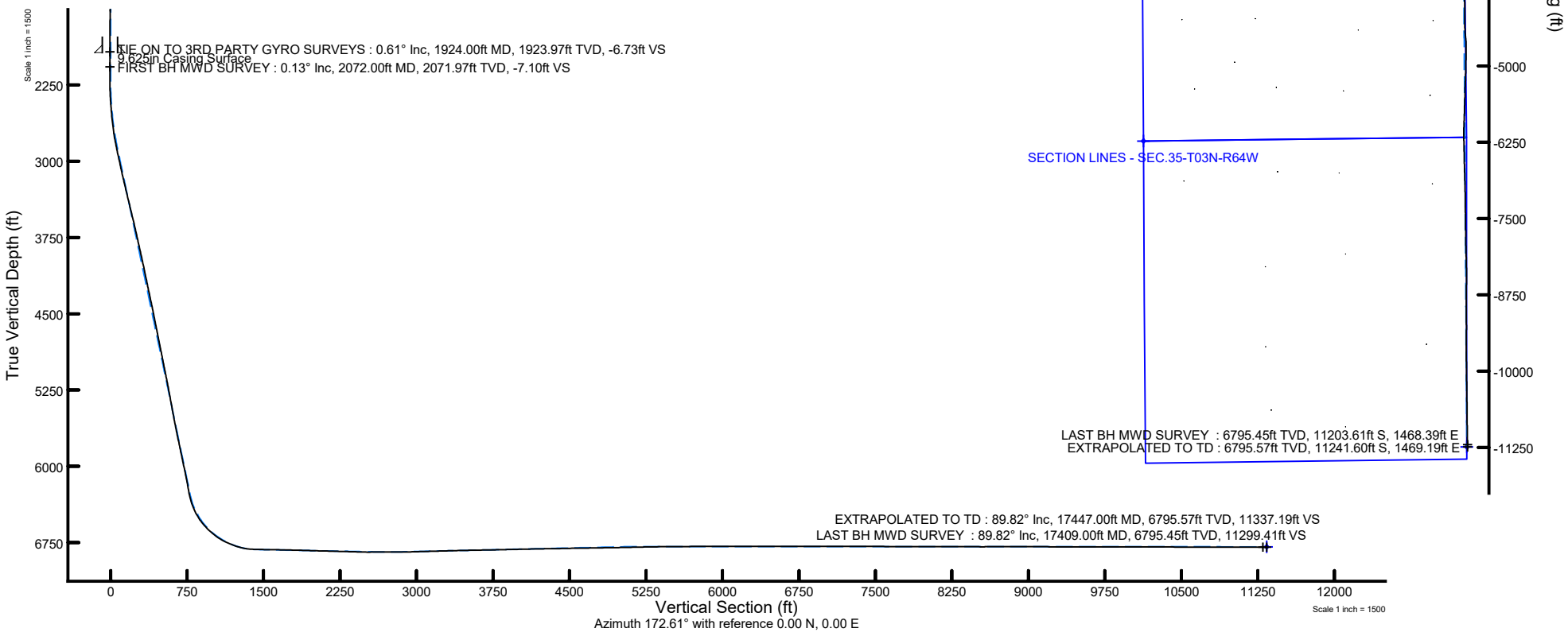
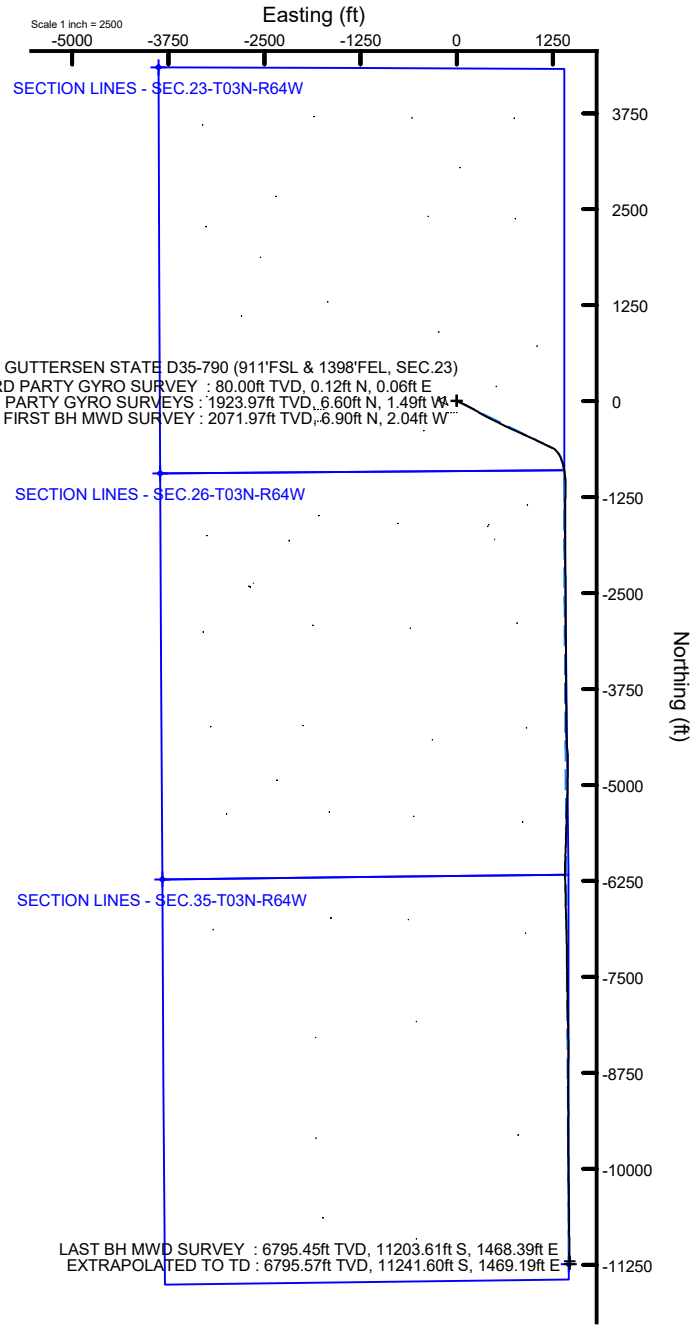
NOBLE ENERGY, INC

Location:	COLORADO	Slot:	SLOT#34 GUTTERSEN STATE D35-790 (911'FSL & 1398'FEL, SEC.23)
Field:	WELD COUNTY (NOBLE NAD 83 GRID)	Well:	GUTTERSEN STATE D35-790
Facility:	SEC.23-T03N-R64W	Wellbore:	GUTTERSEN STATE D35-790 AWB

Plot reference wellpath is GUTTERSEN STATE D35-790 AWP	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to H&P 517 (4813'GL+30'KB@4843') (RKB)	North Reference: Grid north
Reference wellpath measured depths are referenced to H&P 517 (4813'GL+30'KB@4843') (RKB)	Scale: True distance
H&P 517 (4813'GL+30'KB@4843') (RKB) to Mean Sea Level: 4843 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Mud line (At Slot: SLOT#34 GUTTERSEN STATE D35-790 (911'FSL & 1398'FEL, SEC.23)): 0 feet	Depths are in feet
Offset wellpath MDs are referenced to each path's default MD datum	Created by: manajohj on 2020-05-25; Database: WA_NOBLE





Actual Wellpath Report

GUTTERSEN STATE D35-790 AWP

REFERENCE WELLPATH IDENTIFICATION			
Operator	**NOBLE ENERGY, INC**	Well	**GUTTERSEN STATE D35-790**
Field	**WELD COUNTY (NOBLE NAD 83 GRID)**	API/Legal	
Facility	**SEC.23-T03N-R64W**	Wellbore	**GUTTERSEN STATE D35-790 AWB**
Slot	**SLOT#34 GUTTERSEN STATE D35-790 (911'FSL & 1398'FEL, SEC.23)**		

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	**5/25/2020** at **1:33:17 PM**
Convergence at slot	**0.64° 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	259.30	1844.61	3275347.03	1319454.71	**40.2060987°**	**-104.5141573°**
Facility Reference Pt			3273502.50	1319195.42	**40.2054431°**	**-104.5207711°**
Field Reference Pt			**3000000.00**	**4454105.15**	48.7761986°	-105.5000000°

WELLPATH DATUM			
Calculation method	**Minimum curvature**	H&P 517 (4813'GL+30'KB@4843') (RKB) to Facility Vertical Datum	**4843.00ft**
Horizontal Reference Pt	**Slot**	H&P 517 (4813'GL+30'KB@4843') (RKB) to Mean Sea Level	**4843.00ft**
Vertical Reference Pt	**H&P 517 (4813'GL+30'KB@4843') (RKB)**	H&P 517 (4813'GL+30'KB@4843') (RKB) to Mud Line at Slot (SLOT#34 GUTTERSEN STATE D35-790 (911'FSL & 1398'FEL, SEC.23))	**4843.00ft**
MD Reference Pt	**H&P 517 (4813'GL+30'KB@4843') (RKB)**	Section Origin	**N 0.00, E 0.00 ft**
Field Vertical Reference	**Mean Sea Level**	Section Azimuth	**172.61°**

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GUTTERSEN STATE D35-790
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.23-T03N-R64W	Wellbore	GUTTERSEN STATE D35-790 AWB
Slot	SLOT#34 GUTTERSEN STATE D35-790 (911'FSL & 1398'FEL, SEC.23)		

WELLPATH DATA (185 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	25.960	0.00	-4843.00	0.00	0.00	0.00	40.2060987	-104.5141573	0.00	0.00	0.00	0.00	
80.00	0.190	25.960	80.00	-4763.00	-0.11	0.12	0.06	40.2060990	-104.5141571	0.24	57.09	0.24	0.00	FIRST 3RD PARTY GYRO SURVEY
174.00	0.230	39.140	174.00	-4669.00	-0.37	0.41	0.25	40.2060998	-104.5141564	0.07	-83.74	0.04	14.02	
266.00	0.300	5.050	266.00	-4577.00	-0.73	0.79	0.38	40.2061008	-104.5141559	0.18	124.20	0.08	-37.05	
329.00	0.320	78.410	329.00	-4514.00	-0.91	0.99	0.57	40.2061014	-104.5141552	0.59	-103.12	0.03	116.44	
424.00	0.490	14.780	424.00	-4419.00	-1.30	1.43	0.93	40.2061026	-104.5141539	0.47	168.33	0.18	-66.98	
518.00	0.410	17.100	517.99	-4325.01	-1.98	2.14	1.13	40.2061045	-104.5141532	0.09	-67.51	-0.09	2.47	
613.00	0.430	11.350	612.99	-4230.01	-2.63	2.82	1.31	40.2061064	-104.5141525	0.05	-167.72	0.02	-6.05	
708.00	0.240	1.230	707.99	-4135.01	-3.16	3.37	1.38	40.2061079	-104.5141522	0.21	172.46	-0.20	-10.65	
802.00	0.110	157.050	801.99	-4041.01	-3.27	3.48	1.42	40.2061082	-104.5141521	0.37	-128.77	-0.14	165.77	
897.00	0.380	41.320	896.99	-3946.01	-3.39	3.63	1.66	40.2061086	-104.5141512	0.46	-172.89	0.28	-121.82	
992.00	0.170	32.370	991.99	-3851.01	-3.71	3.99	1.95	40.2061096	-104.5141502	0.22	-116.64	-0.22	-9.42	
1087.00	0.300	306.160	1086.99	-3756.01	-3.99	4.26	1.82	40.2061103	-104.5141506	0.35	-90.80	0.14	-90.75	
1181.00	0.310	290.750	1180.98	-3662.02	-4.28	4.49	1.38	40.2061110	-104.5141522	0.09	-104.75	0.01	-16.39	
1276.00	0.300	273.830	1275.98	-3567.02	-4.44	4.60	0.90	40.2061113	-104.5141539	0.10	-74.17	-0.01	-17.81	
1370.00	0.400	245.840	1369.98	-3473.02	-4.40	4.48	0.35	40.2061110	-104.5141559	0.21	141.23	0.11	-29.78	
1465.00	0.260	281.510	1464.98	-3378.02	-4.37	4.39	-0.16	40.2061107	-104.5141577	0.25	119.49	-0.15	37.55	
1560.00	0.450	10.810	1559.98	-3283.02	-4.80	4.80	-0.30	40.2061119	-104.5141582	0.54	-127.24	0.20	94.00	
1654.00	0.380	314.090	1653.98	-3189.02	-5.39	5.38	-0.46	40.2061135	-104.5141587	0.42	128.64	-0.07	-60.34	
1749.00	0.310	335.960	1748.97	-3094.03	-5.88	5.83	-0.79	40.2061147	-104.5141599	0.16	-138.02	-0.07	23.02	
1843.00	0.250	321.900	1842.97	-3000.03	-6.30	6.22	-1.02	40.2061158	-104.5141607	0.10	-31.21	-0.06	-14.96	
1924.00	0.610	302.950	1923.97	-2919.03	-6.73	6.60	-1.49	40.2061168	-104.5141624	0.47	-177.00	0.44	-23.40	TIE ON TO 3RD PARTY GYRO SURVEYS
2072.00	0.130	140.140	2071.97	-2771.03	-7.10	6.90	-2.04	40.2061177	-104.5141644	0.50	-132.08	-0.32	-110.01	FIRST BH MWD SURVEY
2167.00	0.140	51.630	2166.97	-2676.03	-7.07	6.89	-1.88	40.2061177	-104.5141638	0.20	72.49	0.01	-93.17	
2261.00	1.640	119.450	2260.96	-2582.04	-6.32	6.30	-0.62	40.2061160	-104.5141593	1.69	-1.87	1.60	72.15	
2356.00	4.700	118.230	2355.80	-2487.20	-3.24	3.79	3.99	40.2061090	-104.5141429	3.22	2.84	3.22	-1.28	
2450.00	7.130	119.200	2449.29	-2393.71	2.48	-0.88	12.48	40.2060959	-104.5141127	2.59	-8.23	2.59	1.03	
2545.00	9.530	117.110	2543.28	-2299.72	10.45	-7.34	24.63	40.2060778	-104.5140694	2.55	-12.98	2.53	-2.20	
2639.00	12.300	114.130	2635.57	-2207.43	20.09	-14.98	40.69	40.2060563	-104.5140122	3.01	5.16	2.95	-3.17	
2734.00	15.320	115.160	2727.82	-2115.18	32.13	-24.46	61.29	40.2060297	-104.5139389	3.19	3.21	3.18	1.08	
2829.00	19.870	115.910	2818.35	-2024.65	47.76	-36.85	87.19	40.2059949	-104.5138467	4.80	33.28	4.79	0.79	
2924.00	20.610	117.280	2907.48	-1935.52	66.13	-51.57	116.57	40.2059536	-104.5137420	0.92	1.76	0.78	1.44	
3018.00	21.200	117.330	2995.29	-1847.71	85.22	-66.96	146.37	40.2059104	-104.5136360	0.63	-136.27	0.63	0.05	
3113.00	21.080	117.010	3083.90	-1759.10	104.65	-82.60	176.85	40.2058666	-104.5135275	0.18	74.09	-0.13	-0.34	
3208.00	21.320	119.190	3172.47	-1670.53	124.59	-98.79	207.15	40.2058212	-104.5134197	0.87	66.51	0.25	2.29	
3302.00	21.580	120.770	3259.96	-1583.04	145.46	-115.96	236.92	40.2057732	-104.5133138	0.67	-159.98	0.28	1.68	
3397.00	20.580	119.730	3348.61	-1494.39	166.33	-133.18	266.44	40.2057250	-104.5132088	1.12	72.02	-1.05	-1.09	
3491.00	21.040	123.350	3436.48	-1406.52	187.31	-150.65	294.88	40.2056762	-104.5131077	1.45	-73.88	0.49	3.85	
3586.00	21.530	119.210	3525.00	-1318.00	208.83	-168.54	324.34	40.2056262	-104.5130029	1.66	110.87	0.52	-4.36	
3681.00	21.330	120.700	3613.43	-1229.57	229.88	-185.86	354.41	40.2055777	-104.5128959	0.61	-90.93	-0.21	1.57	
3775.00	21.360	116.360	3700.99	-1142.01	249.93	-202.19	384.45	40.2055320	-104.5127891	1.68	-5.70	0.03	-4.62	
3870.00	21.960	116.200	3789.28	-1053.72	269.37	-217.72	415.89	40.2054884	-104.5126771	0.63	-168.01	0.63	-0.17	
3964.00	21.820	116.120	3876.51	-966.49	288.74	-233.17	447.35	40.2054450	-104.5125651	0.15	142.26	-0.15	-0.09	
4059.00	21.630	116.520	3964.76	-878.24	308.25	-248.76	478.87	40.2054013	-104.5124529	0.25	179.84	-0.20	0.42	
4154.00	20.420	116.530	4053.43	-789.57	327.27	-263.98	509.36	40.2053586	-104.5123444	1.27	-20.93	-1.27	0.01	

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GUTTERSEN STATE D35-790
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.23-T03N-R64W	Wellbore	GUTTERSEN STATE D35-790 AWB
Slot	SLOT#34 GUTTERSEN STATE D35-790 (911'FSL & 1398'FEL, SEC.23)		

WELLPATH DATA (185 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
4248.00	20.660	116.270	4141.46	-701.54	345.60	-278.65	538.90	40.2053174	-104.5122392	0.27	104.21	0.26	-0.28	
4343.00	20.630	116.610	4230.36	-612.64	364.25	-293.56	568.90	40.2052755	-104.5121324	0.13	11.99	-0.03	0.36	
4438.00	20.730	116.670	4319.23	-523.77	383.02	-308.60	598.88	40.2052333	-104.5120257	0.11	22.50	0.11	0.06	
4532.00	20.790	116.740	4407.13	-435.87	401.70	-323.58	628.65	40.2051913	-104.5119197	0.07	-94.98	0.06	0.07	
4627.00	20.740	114.750	4495.96	-347.04	420.10	-338.20	658.98	40.2051503	-104.5118117	0.74	163.88	-0.05	-2.09	
4722.00	20.450	114.990	4584.89	-258.11	437.94	-352.26	689.30	40.2051107	-104.5117037	0.32	119.85	-0.31	0.25	
4817.00	20.430	115.090	4673.91	-169.09	455.73	-366.30	719.36	40.2050713	-104.5115967	0.04	-45.48	-0.02	0.11	
4911.00	21.020	113.440	4761.83	-81.17	473.18	-379.96	749.68	40.2050329	-104.5114887	0.88	124.53	0.63	-1.76	
5006.00	20.850	114.140	4850.55	7.55	490.75	-393.65	780.74	40.2049943	-104.5113780	0.32	150.60	-0.18	0.74	
5101.00	20.370	114.920	4939.47	96.47	508.42	-407.54	811.17	40.2049553	-104.5112697	0.58	-19.92	-0.51	0.82	
5195.00	21.190	114.100	5027.36	184.36	526.04	-421.37	841.51	40.2049164	-104.5111616	0.93	171.33	0.87	-0.87	
5290.00	19.960	114.650	5116.30	273.30	543.61	-435.14	871.92	40.2048777	-104.5110533	1.31	0.68	-1.29	0.58	
5385.00	20.860	114.680	5205.33	362.33	561.19	-448.97	902.03	40.2048388	-104.5109461	0.95	178.07	0.95	0.03	
5480.00	18.760	114.900	5294.71	451.71	578.33	-462.46	931.26	40.2048009	-104.5108420	2.21	-16.24	-2.21	0.23	
5574.00	19.530	114.230	5383.51	540.51	594.64	-475.27	959.30	40.2047648	-104.5107421	0.85	134.94	0.82	-0.71	
5669.00	19.520	114.260	5473.04	630.04	611.29	-488.31	988.25	40.2047282	-104.5106390	0.01	81.63	-0.01	0.03	
5764.00	19.550	114.850	5562.58	719.58	628.10	-501.51	1017.14	40.2046910	-104.5105361	0.21	33.60	0.03	0.62	
5859.00	20.150	116.000	5651.93	808.93	645.58	-515.37	1046.27	40.2046521	-104.5104323	0.75	-4.41	0.63	1.21	
5953.00	20.700	115.880	5740.02	897.02	663.60	-529.71	1075.77	40.2046118	-104.5103273	0.59	22.53	0.59	-0.13	
6048.00	20.820	116.020	5828.85	985.85	682.10	-544.45	1106.05	40.2045705	-104.5102195	0.14	-14.96	0.13	0.15	
6143.00	21.310	115.660	5917.50	1074.50	700.81	-559.33	1136.78	40.2045287	-104.5101101	0.53	9.37	0.52	-0.38	
6238.00	21.600	115.790	6005.92	1162.92	719.79	-574.41	1168.08	40.2044863	-104.5099986	0.31	178.81	0.31	0.14	
6333.00	19.960	115.890	6094.74	1251.74	738.26	-589.10	1198.42	40.2044451	-104.5098906	1.73	-174.80	-1.73	0.11	
6427.00	17.960	115.300	6183.63	1340.63	754.89	-602.30	1225.96	40.2044080	-104.5097926	2.14	11.67	-2.13	-0.63	
6522.00	19.170	116.060	6273.69	1430.69	771.40	-615.42	1253.21	40.2043712	-104.5096955	1.30	60.10	1.27	0.80	
6616.00	23.740	132.260	6361.23	1518.23	794.36	-634.95	1281.12	40.2043167	-104.5095964	7.92	43.41	4.86	17.23	
6711.00	29.390	142.410	6446.21	1603.21	829.12	-666.32	1309.53	40.2042297	-104.5094960	7.61	39.00	5.95	10.68	
6806.00	36.740	151.830	6525.82	1682.82	875.93	-709.93	1337.22	40.2041092	-104.5093986	9.42	37.60	7.74	9.92	
6900.00	43.610	159.210	6597.64	1754.64	933.85	-765.12	1362.04	40.2039569	-104.5093119	8.88	33.55	7.31	7.85	
6995.00	50.600	165.060	6662.30	1819.30	1002.22	-831.32	1383.17	40.2037745	-104.5092389	8.63	26.57	7.36	6.16	
7090.00	59.030	169.900	6717.01	1874.01	1079.46	-907.05	1399.81	40.2035662	-104.5091824	9.80	30.99	8.87	5.09	
7184.00	67.170	175.120	6759.52	1916.52	1163.18	-990.07	1410.59	40.2033380	-104.5091471	9.97	31.95	8.66	5.55	
7279.00	73.390	179.130	6791.58	1948.58	1252.26	-1079.33	1415.01	40.2030928	-104.5091349	7.66	11.69	6.55	4.22	
7374.00	82.590	181.040	6811.32	1968.32	1344.28	-1172.14	1414.85	40.2028381	-104.5091392	9.88	3.90	9.68	2.01	
7468.00	89.510	181.510	6817.80	1974.80	1436.93	-1265.84	1412.76	40.2025810	-104.5091504	7.38	-131.82	7.36	0.50	
7563.00	89.170	181.130	6818.89	1975.89	1530.83	-1360.81	1410.57	40.2023204	-104.5091620	0.54	-90.01	-0.36	-0.40	
7658.00	89.170	179.560	6820.27	1977.27	1624.96	-1455.79	1410.00	40.2020597	-104.5091679	1.65	115.89	0.00	-1.65	
7752.00	88.680	180.570	6822.03	1979.03	1718.15	-1549.77	1409.89	40.2018017	-104.5091720	1.19	-106.23	-0.52	1.07	
7848.00	88.520	180.020	6824.38	1981.38	1813.26	-1645.74	1409.40	40.2015383	-104.5091776	0.60	-130.04	-0.17	-0.57	
7942.00	88.310	179.770	6826.98	1983.98	1906.46	-1739.71	1409.57	40.2012804	-104.5091808	0.35	-86.89	-0.22	-0.27	
8037.00	88.340	179.220	6829.75	1986.75	2000.74	-1834.66	1410.41	40.2010197	-104.5091816	0.58	80.71	0.03	-0.58	
8131.00	88.430	179.770	6832.40	1989.40	2094.02	-1928.62	1411.23	40.2007618	-104.5091824	0.59	43.36	0.10	0.59	
8226.00	88.610	179.940	6834.86	1991.86	2188.23	-2023.59	1411.47	40.2005011	-104.5091853	0.26	-120.27	0.19	0.18	
8321.00	88.400	179.580	6837.33	1994.33	2282.46	-2118.56	1411.87	40.2002404	-104.5091877	0.44	18.43	-0.22	-0.38	
8415.00	88.430	179.590	6839.93	1996.93	2375.73	-2212.52	1412.55	40.1999825	-104.5091890	0.03	159.78	0.03	0.01	

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GUTTERSEN STATE D35-790
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.23-T03N-R64W	Wellbore	GUTTERSEN STATE D35-790 AWB
Slot	SLOT#34 GUTTERSEN STATE D35-790 (911'FSL & 1398'FEL, SEC.23)		

WELLPATH DATA (185 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
8510.00	88.240	179.660	6842.69	1999.69	2469.98	-2307.48	1413.17	40.1997218	-104.5091906	0.21	-0.20	-0.20	0.07	
8605.00	91.170	179.650	6843.18	2000.18	2564.26	-2402.46	1413.75	40.1994611	-104.5091923	3.08	175.76	3.08	-0.01	
8700.00	89.820	179.750	6842.36	1999.36	2658.52	-2497.46	1414.24	40.1992004	-104.5091943	1.42	-28.44	-1.42	0.11	
8794.00	90.060	179.620	6842.46	1999.46	2751.81	-2591.45	1414.76	40.1989423	-104.5091963	0.29	101.31	0.26	-0.14	
8889.00	90.030	179.770	6842.39	1999.39	2846.09	-2686.45	1415.27	40.1986816	-104.5091982	0.16	-3.93	-0.03	0.16	
8984.00	91.630	179.660	6841.01	1998.01	2940.34	-2781.44	1415.74	40.1984208	-104.5092004	1.69	90.00	1.68	-0.12	
9078.00	91.630	179.930	6838.34	1995.34	3033.57	-2875.40	1416.08	40.1981629	-104.5092029	0.29	-131.19	0.00	0.29	
9173.00	91.420	179.690	6835.81	1992.81	3127.79	-2970.37	1416.39	40.1979022	-104.5092056	0.34	-9.46	-0.22	-0.25	
9267.00	91.540	179.670	6833.38	1990.38	3221.04	-3064.33	1416.91	40.1976443	-104.5092075	0.13	65.22	0.13	-0.02	
9362.00	91.600	179.800	6830.78	1987.78	3315.27	-3159.30	1417.35	40.1973836	-104.5092097	0.15	-177.27	0.06	0.14	
9456.00	91.390	179.790	6828.32	1985.32	3408.51	-3253.26	1417.69	40.1971257	-104.5092122	0.22	-108.44	-0.22	-0.01	
9551.00	91.260	179.400	6826.13	1983.13	3502.78	-3348.23	1418.36	40.1968650	-104.5092136	0.43	-144.64	-0.14	-0.41	
9646.00	90.950	179.180	6824.30	1981.30	3597.11	-3443.21	1419.54	40.1966043	-104.5092132	0.40	72.14	-0.33	-0.23	
9741.00	91.140	179.770	6822.56	1979.56	3691.42	-3538.19	1420.41	40.1963435	-104.5092139	0.65	84.64	0.20	0.62	
9836.00	91.170	180.090	6820.65	1977.65	3785.62	-3633.17	1420.53	40.1960828	-104.5092173	0.34	-11.31	0.03	0.34	
9930.00	91.320	180.060	6818.61	1975.61	3878.81	-3727.15	1420.40	40.1958249	-104.5092215	0.16	-73.30	0.16	-0.03	
10025.00	91.350	179.960	6816.39	1973.39	3972.99	-3822.12	1420.39	40.1955642	-104.5092253	0.11	-117.35	0.03	-0.11	
10120.00	91.050	179.380	6814.40	1971.40	4067.25	-3917.10	1420.93	40.1953035	-104.5092272	0.69	78.86	-0.32	-0.61	
10214.00	91.170	179.990	6812.58	1969.58	4160.52	-4011.08	1421.45	40.1950455	-104.5092291	0.66	-110.18	0.13	0.65	
10309.00	90.920	179.310	6810.85	1967.85	4254.79	-4106.06	1422.03	40.1947848	-104.5092308	0.76	-106.39	-0.26	-0.72	
10404.00	90.770	178.800	6809.45	1966.45	4349.18	-4201.04	1423.60	40.1945240	-104.5092290	0.56	59.69	-0.16	-0.54	
10498.00	91.290	179.690	6807.76	1964.76	4442.53	-4295.01	1424.83	40.1942661	-104.5092283	1.10	-90.00	0.55	0.95	
10593.00	91.290	179.500	6805.62	1962.62	4536.80	-4389.99	1425.51	40.1940053	-104.5092297	0.20	-98.43	0.00	-0.20	
10688.00	90.430	173.730	6804.19	1961.19	4631.52	-4484.77	1431.11	40.1937450	-104.5092135	6.14	38.45	-0.91	-6.07	
10782.00	91.110	174.270	6802.93	1959.93	4725.48	-4578.24	1440.94	40.1934881	-104.5091820	0.92	89.63	0.72	0.57	
10877.00	91.140	179.660	6801.06	1958.06	4820.16	-4673.06	1445.96	40.1932277	-104.5091678	5.67	109.49	0.03	5.67	
10972.00	90.460	181.580	6799.74	1956.74	4914.22	-4768.04	1444.94	40.1929671	-104.5091753	2.14	-28.65	-0.72	2.02	
11067.00	91.320	181.110	6798.26	1955.26	5008.10	-4863.00	1442.71	40.1927065	-104.5091871	1.03	-96.66	0.91	-0.49	
11162.00	91.230	180.340	6796.15	1953.15	5102.13	-4957.97	1441.51	40.1924458	-104.5091952	0.82	91.44	-0.09	-0.81	
11256.00	91.200	181.520	6794.15	1951.15	5195.12	-5051.93	1439.98	40.1921880	-104.5092044	1.26	121.70	-0.03	1.26	
11351.00	90.990	181.860	6792.34	1949.34	5288.91	-5146.87	1437.18	40.1919275	-104.5092182	0.42	57.99	-0.22	0.36	
11445.00	91.290	182.340	6790.47	1947.47	5381.61	-5240.79	1433.73	40.1916698	-104.5092343	0.60	-165.03	0.32	0.51	
11540.00	90.280	182.070	6789.17	1946.17	5475.27	-5335.71	1430.08	40.1914094	-104.5092512	1.10	-97.06	-1.06	-0.28	
11634.00	90.150	181.020	6788.81	1945.81	5568.13	-5429.68	1427.55	40.1911515	-104.5092640	1.13	83.13	-0.14	-1.12	
11729.00	90.250	181.850	6788.48	1945.48	5662.00	-5524.64	1425.17	40.1908909	-104.5092763	0.88	-129.09	0.11	0.87	
11824.00	90.120	181.690	6788.18	1945.18	5755.79	-5619.60	1422.23	40.1906304	-104.5092906	0.22	109.09	-0.14	-0.17	
11918.00	90.030	181.950	6788.05	1945.05	5848.58	-5713.55	1419.25	40.1903726	-104.5093051	0.29	18.43	-0.10	0.28	
12013.00	90.120	181.980	6787.93	1944.93	5942.32	-5808.49	1415.99	40.1901121	-104.5093205	0.10	140.19	0.09	0.03	
12107.00	90.060	182.030	6787.78	1944.78	6035.06	-5902.44	1412.70	40.1898543	-104.5093360	0.08	0.00	-0.06	0.05	
12202.00	90.090	182.030	6787.66	1944.66	6128.78	-5997.38	1409.34	40.1895938	-104.5093519	0.03	-86.16	0.03	0.00	
12391.00	90.310	178.750	6787.00	1944.00	6316.02	-6186.35	1408.05	40.1890752	-104.5093640	1.74	-106.70	0.12	-1.74	
12486.00	90.280	178.650	6786.51	1943.51	6410.48	-6281.32	1410.20	40.1888144	-104.5093601	0.11	145.01	-0.03	-0.11	
12581.00	89.880	178.930	6786.37	1943.37	6504.93	-6376.30	1412.21	40.1885537	-104.5093567	0.51	-90.00	-0.42	0.29	
12676.00	89.880	178.810	6786.57	1943.57	6599.36	-6471.28	1414.08	40.1882929	-104.5093538	0.13	-79.99	0.00	-0.13	
12770.00	89.910	178.640	6786.75	1943.75	6692.83	-6565.26	1416.18	40.1880349	-104.5093501	0.18	-82.57	0.03	-0.18	

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GUTTERSEN STATE D35-790
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.23-T03N-R64W	Wellbore	GUTTERSEN STATE D35-790 AWB
Slot	SLOT#34 GUTTERSEN STATE D35-790 (911'FSL & 1398'FEL, SEC.23)		

WELLPATH DATA (185 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
12865.00	89.940	178.410	6786.87	1943.87	6787.32	-6660.22	1418.62	40.1877741	-104.5093452	0.24	-86.01	0.03	-0.24	
12960.00	89.970	177.980	6786.94	1943.94	6881.87	-6755.18	1421.61	40.1875134	-104.5093382	0.45	92.56	0.03	-0.45	
13054.00	89.940	178.650	6787.02	1944.02	6975.41	-6849.14	1424.38	40.1872554	-104.5093321	0.71	-90.00	-0.03	0.71	
13148.00	89.940	178.600	6787.12	1944.12	7068.89	-6943.11	1426.63	40.1869974	-104.5093278	0.05	-148.00	0.00	-0.05	
13243.00	89.780	178.500	6787.35	1944.35	7163.38	-7038.08	1429.04	40.1867367	-104.5093230	0.20	93.95	-0.17	-0.11	
13338.00	89.720	179.370	6787.76	1944.76	7257.80	-7133.06	1430.80	40.1864759	-104.5093205	0.92	52.37	-0.06	0.92	
13432.00	90.090	179.850	6787.92	1944.92	7351.10	-7227.06	1431.44	40.1862179	-104.5093219	0.64	-106.93	0.39	0.51	
13527.00	89.880	179.160	6787.94	1944.94	7445.41	-7322.05	1432.26	40.1859571	-104.5093228	0.76	-126.03	-0.22	-0.73	
13622.00	89.720	178.940	6788.28	1945.28	7539.82	-7417.04	1433.84	40.1856964	-104.5093210	0.29	66.41	-0.17	-0.23	
13716.00	90.030	179.650	6788.48	1945.48	7633.18	-7511.03	1434.99	40.1854383	-104.5093206	0.82	-99.26	0.33	0.76	
13811.00	89.880	178.730	6788.56	1945.56	7727.55	-7606.02	1436.34	40.1851776	-104.5093196	0.98	108.44	-0.16	-0.97	
13905.00	89.720	179.210	6788.88	1945.88	7820.97	-7700.00	1438.03	40.1849195	-104.5093173	0.54	-7.35	-0.17	0.51	
14000.00	90.030	179.170	6789.09	1946.09	7915.35	-7794.99	1439.37	40.1846588	-104.5093163	0.33	-118.61	0.33	-0.04	
14094.00	89.910	178.950	6789.14	1946.14	8008.75	-7888.98	1440.91	40.1844007	-104.5093145	0.27	-144.06	-0.13	-0.23	
14189.00	89.510	178.660	6789.62	1946.62	8103.20	-7983.96	1442.89	40.1841400	-104.5093112	0.52	-6.88	-0.42	-0.31	
14283.00	90.090	178.590	6789.95	1946.95	8196.68	-8077.93	1445.15	40.1838820	-104.5093069	0.62	140.04	0.62	-0.07	
14378.00	89.720	178.900	6790.11	1947.11	8291.14	-8172.91	1447.23	40.1836212	-104.5093033	0.51	-63.44	-0.39	0.33	
14473.00	89.940	178.460	6790.39	1947.39	8385.60	-8267.88	1449.42	40.1833605	-104.5092992	0.52	-137.91	0.23	-0.46	
14567.00	89.630	178.180	6790.74	1947.74	8479.14	-8361.84	1452.17	40.1831025	-104.5092931	0.44	80.94	-0.33	-0.30	
14662.00	90.150	181.440	6790.92	1947.92	8573.38	-8456.83	1452.49	40.1828417	-104.5092958	3.47	-80.42	0.55	3.43	
14757.00	90.280	180.670	6790.57	1947.57	8667.35	-8551.81	1450.74	40.1825811	-104.5093058	0.82	-46.33	0.14	-0.81	
14851.00	90.490	180.450	6789.94	1946.94	8760.44	-8645.80	1449.82	40.1823231	-104.5093129	0.32	126.36	0.22	-0.23	
14946.00	89.820	181.360	6789.68	1946.68	8854.45	-8740.79	1448.32	40.1820624	-104.5093221	1.19	-86.14	-0.71	0.96	
15041.00	89.880	180.470	6789.93	1946.93	8948.45	-8835.78	1446.80	40.1818018	-104.5093313	0.94	-90.00	0.06	-0.94	
15136.00	89.880	179.420	6790.13	1947.13	9042.67	-8930.77	1446.90	40.1815410	-104.5093348	1.11	-148.50	0.00	-1.11	
15230.00	89.570	179.230	6790.58	1947.58	9136.03	-9024.77	1448.00	40.1812830	-104.5093345	0.39	46.98	-0.33	-0.20	
15325.00	89.850	179.530	6791.06	1948.06	9230.36	-9119.76	1449.03	40.1810222	-104.5093347	0.43	-94.76	0.29	0.32	
15420.00	89.820	179.170	6791.33	1948.33	9324.71	-9214.75	1450.11	40.1807614	-104.5093346	0.38	85.78	-0.03	-0.38	
15515.00	89.910	180.390	6791.56	1948.56	9418.96	-9309.75	1450.47	40.1805007	-104.5093371	1.29	39.81	0.09	1.28	
15609.00	90.090	180.540	6791.56	1948.56	9512.08	-9403.75	1449.71	40.1802427	-104.5093436	0.25	-111.68	0.19	0.16	
15704.00	89.780	179.760	6791.66	1948.66	9606.26	-9498.75	1449.46	40.1799819	-104.5093483	0.88	46.01	-0.33	-0.82	
15799.00	90.060	180.050	6791.80	1948.80	9700.49	-9593.75	1449.62	40.1797212	-104.5093515	0.42	-123.69	0.29	0.31	
15893.00	89.940	179.870	6791.80	1948.80	9793.72	-9687.75	1449.68	40.1794632	-104.5093550	0.23	-104.04	-0.13	-0.19	
15988.00	89.910	179.750	6791.92	1948.92	9887.97	-9782.74	1450.00	40.1792024	-104.5093577	0.13	-113.20	-0.03	-0.13	
16083.00	89.850	179.610	6792.12	1949.12	9982.25	-9877.74	1450.53	40.1789416	-104.5093596	0.16	-106.51	-0.06	-0.15	
16178.00	89.690	179.070	6792.50	1949.50	10076.60	-9972.74	1451.62	40.1786809	-104.5093595	0.59	-17.10	-0.17	-0.57	
16272.00	89.820	179.030	6792.90	1949.90	10170.00	-10066.72	1453.18	40.1784228	-104.5093577	0.14	81.87	0.14	-0.04	
16367.00	89.880	179.450	6793.15	1950.15	10264.37	-10161.71	1454.44	40.1781621	-104.5093570	0.45	-75.96	0.06	0.44	
16462.00	89.910	179.330	6793.33	1950.33	10358.71	-10256.71	1455.45	40.1779013	-104.5093571	0.13	-100.01	0.03	-0.13	
16556.00	89.880	179.160	6793.50	1950.50	10452.08	-10350.70	1456.69	40.1776433	-104.5093565	0.18	79.38	-0.03	-0.18	
16651.00	89.910	179.320	6793.67	1950.67	10546.44	-10445.69	1457.95	40.1773825	-104.5093557	0.17	-90.00	0.03	0.17	
16746.00	89.910	179.110	6793.82	1950.82	10640.81	-10540.68	1459.25	40.1771217	-104.5093549	0.22	102.63	0.00	-0.22	
16841.00	89.780	179.690	6794.08	1951.08	10735.15	-10635.68	1460.25	40.1768609	-104.5093551	0.63	-78.37	-0.14	0.61	
16935.00	89.850	179.350	6794.38	1951.38	10828.46	-10729.67	1461.04	40.1766029	-104.5093561	0.37	33.69	0.07	-0.36	
17030.00	89.940	179.410	6794.56	1951.56	10922.80	-10824.67	1462.07	40.1763421	-104.5093562	0.11	-97.23	0.09	0.06	

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GUTTERSEN STATE D35-790
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.23-T03N-R64W	Wellbore	GUTTERSEN STATE D35-790 AWB
Slot	SLOT#34 GUTTERSEN STATE D35-790 (911'FSL & 1398'FEL, SEC.23)		

WELLPATH DATA (185 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
17125.00	89.850	178.700	6794.73	1951.73	11017.20	-10919.65	1463.63	40.1760814	-104.5093544	0.75	85.77	-0.09	-0.75	
17220.00	89.910	179.510	6794.93	1951.93	11111.59	-11014.64	1465.12	40.1758206	-104.5093529	0.85	-97.88	0.06	0.85	
17314.00	89.820	178.860	6795.15	1952.15	11204.97	-11108.63	1466.45	40.1755626	-104.5093518	0.70	-90.00	-0.10	-0.69	
17409.00	89.820	178.800	6795.45	1952.45	11299.41	-11203.61	1468.39	40.1753018	-104.5093487	0.06	0.00	0.00	-0.06	LAST BH MWD SURVEY
17447.00‡	89.820	178.800	6795.57	1952.57	11337.19	-11241.60	1469.19	40.1751975	-104.5093474	0.00		0.00	0.00	EXTRAPOLATED TO TD

HOLE & CASING SECTIONS - Ref Wellbore: GUTTERSEN STATE D35-790 AWB Ref Wellpath: GUTTERSEN STATE D35-790 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	1933.00	1903.00	30.00	1932.97	0.02	0.01	6.65	-1.57
9.625in Casing Surface	30.00	1933.00	1903.00	30.00	1932.97	0.02	0.01	6.65	-1.57
8.5in Open Hole	1933.00	17447.00	15514.00	1932.97	6795.57	6.65	-1.57	-11241.60	1469.19

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
GUTTERSEN STATE D35-790 BHL REV-1 (200'FSL & 0'FEL, SEC.35)	6791.00	-11241.77	1457.11	3276804.07	1308213.45	**40.1751974**	**-104.5093906**	point
GUTTERSEN STATE D35-790 TPZ REV-1	6796.41	-1099.69	1400.09	3276747.05	1318355.07	**40.2030374**	**-104.5091891**	point
SECTION LINES - SEC.23-T03N-R64W	7983.00	4349.31	-3879.07	**3271468.13**	**1323803.83**	40.2181543	-104.5278733	polygon
	2D Polygon: dimensions not calculated							
SECTION LINES - SEC.26-T03N-R64W	7983.00	-942.35	-3854.78	**3271492.42**	**1318512.41**	40.2036289	-104.5279941	polygon
	2D Polygon: dimensions not calculated							
SECTION LINES - SEC.35-T03N-R64W	7983.00	-6229.95	-3827.87	**3271519.33**	**1313225.04**	40.1891145	-104.5281052	polygon
	2D Polygon: dimensions not calculated							

WELLPATH COMPOSITION - Ref Wellbore: GUTTERSEN STATE D35-790 AWB Ref Wellpath: GUTTERSEN STATE D35-790 AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
0.00	1924.00	Gyrodata 2015 - GC+DROP+COND	13.5" GYRODATA 2015 (GC+DROP+COND) <0' - 1924'>	GUTTERSEN STATE D35-790 AWB	5/17/2020
1924.00	17447.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	8.5" OWSG MWD REV.2 (IFR1+MSA) <2072' - 17049'>	GUTTERSEN STATE D35-790 AWB	5/17/2020

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GUTTERSEN STATE D35-790
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API/Legal	
Facility	SEC.23-T03N-R64W	Wellbore	GUTTERSEN STATE D35-790 AWB
Slot	SLOT#34 GUTTERSEN STATE D35-790 (911'FSL & 1398'FEL, SEC.23)		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
80.00	0.190	25.960	80.00	FIRST 3RD PARTY GYRO SURVEY
1924.00	0.610	302.950	1923.97	TIE ON TO 3RD PARTY GYRO SURVEYS
2072.00	0.130	140.140	2071.97	FIRST BH MWD SURVEY
17409.00	89.820	178.800	6795.45	LAST BH MWD SURVEY
17447.00	89.820	178.800	6795.57	EXTRAPOLATED TO TD