

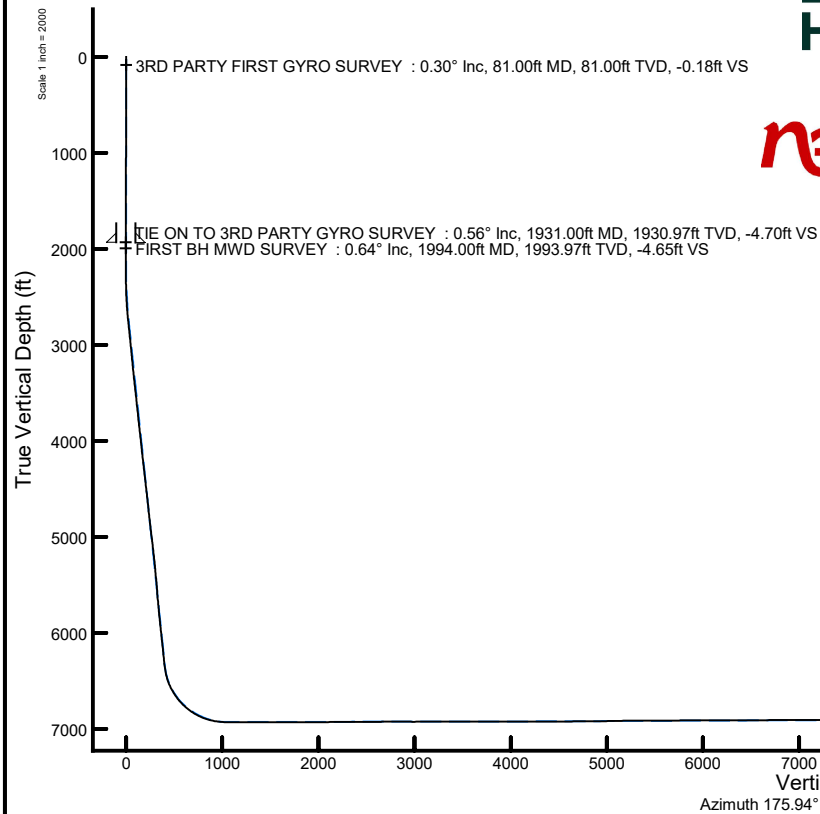
NOBLE ENERGY, INC

Location: COLORADO Slot: SLOT#36 GUTTERSEN Y05-771 (2206'FNL & 1010'FWL, SEC.29)
Field: WELD COUNTY (NOBLE NAD 83 GRID) Well: GUTTERSEN Y05-771
Facility: SEC.29-T03N-R64W Wellbore: GUTTERSEN Y05-771 AWB

Location Information

Facility Name				Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.29-T03N-R64W				3256078.619	1317026.618	40°12'0.0040"N	104°34'59.6280"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
SLOT#36 GUTTERSEN Y05-771 (2206'FNL & 1010'FWL, SEC.29)	-927.56	643.81	3256722.404	1316099.099	40°11'50.7725"N	104°34'51.4553"W	
H&P 321 (4785°30'KB@4815') (RKB) to Mud line (At Slot: SLOT#36 GUTTERSEN Y05-771 (2206'FNL & 1010'FWL, SEC.29))						4815#	
Mean Sea Level to Mud line (At Slot: SLOT#36 GUTTERSEN Y05-771 (2206'FNL & 1010'FWL, SEC.29))						0#	
H&P 321 (4785°30'KB@4815') (RKB) to Mean Sea Level						4815#	

Plot reference wellpath is GUTTERSEN Y05-771 AWP	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to H&P 321 (4785°30'KB@4815') (RKB)	North Reference: Grid north
Reference wellpath measured depths are referenced to H&P 321 (4785°30'KB@4815') (RKB)	Scale: True distance
H&P 321 (4785°30'KB@4815') (RKB) to Mean Sea Level: 4815 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Mud line (At Slot: SLOT#36 GUTTERSEN Y05-771 (2206'FNL & 1010'FWL, SEC.29)): 0 feet	Depths are in feet
Offset wellpath MDs are referenced to each path's default MD datum	Created by: manojh on 2020-01-02, Database: WA_NOBLE

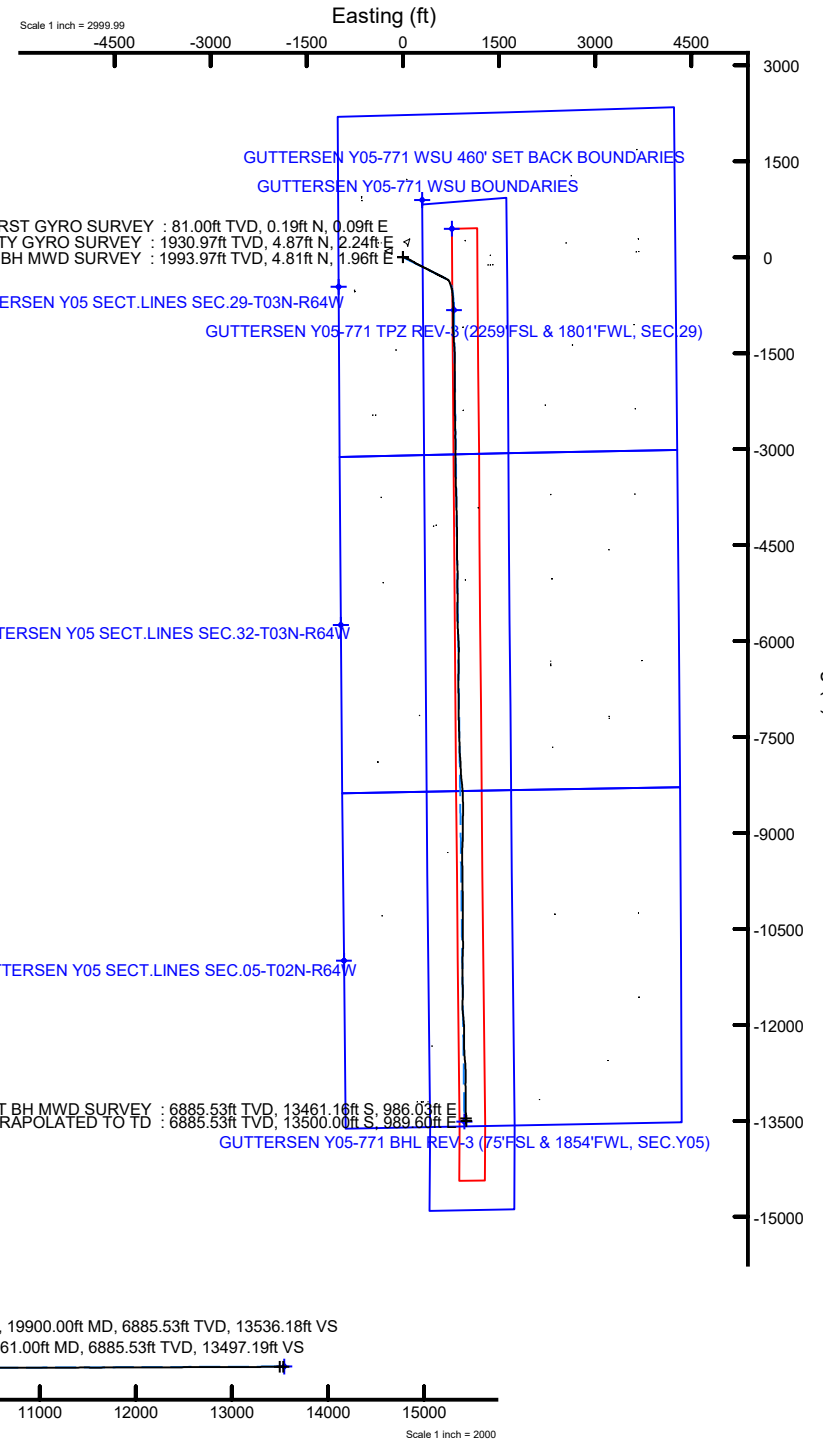


GUTTERSEN Y05 SECT.LINES SEC.32-T03N-R64W

GUTTERSEN Y05 SECT.LINES SEC.05-T02N-R64W

LAST BH MWD SURVEY : 6885.53ft TVD, 13461.16ft S, 986.03ft E
EXTRAPOLATED TO TD : 6885.53ft TVD, 13500.00ft S, 989.60ft E

GUTTERSEN Y05-771 BHL REV-3 (75'FSL & 1854'FWL, SEC.Y05)



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GUTTERSEN Y05-771
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API	05-123-48041
Facility	SEC.29-T03N-R64W	Wellbore	GUTTERSEN Y05-771 AWB
Slot	SLOT#36 GUTTERSEN Y05-771 (2206'FNL & 1010'FWL, SEC.29)		

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	1/2/2020 at 1:16:36 PM
Convergence at slot	0.59° 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	-927.56	643.81	3256722.40	1316099.10	40°11'50.7725"N	104°34'51.4553"W
Facility Reference Pt			3256078.62	1317026.62	40°12'0.0040"N	104°34'59.6280"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 (4785'+30'KB@4815') (RKB) to Facility Vertical Datum	4815.00ft
Horizontal Reference Pt	Slot	H&P 321 (4785'+30'KB@4815') (RKB) to Mean Sea Level	4815.00ft
Vertical Reference Pt	H&P 321 (4785'+30'KB@4815') (RKB)	H&P 321 (4785'+30'KB@4815') (RKB) to Mud Line at Slot (SLOT#36 GUTTERSEN Y05-771 (2206'FNL & 1010'FWL, SEC.29))	4815.00ft
MD Reference Pt	H&P 321 (4785'+30'KB@4815') (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	175.94°

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Well	GUTTERSEN Y05-771
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API	05-123-48041
Facility	SEC.29-T03N-R64W	Wellbore	GUTTERSEN Y05-771 AWB
Slot	SLOT#36 GUTTERSEN Y05-771 (2206'FNL & 1010'FWL, SEC.29)		

WELLPATH DATA (212 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	TVDSS [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Tooface [°]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
0.00	0.000	26.410	0.00	-4815.00	0.00	0.00	0.00	40°11'50.7725"N	104°34'51.4553"W	0.00	0.00	0.00	0.00	
81.00	0.300	26.410	81.00	-4734.00	-0.18	0.19	0.09	40°11'50.7744"N	104°34'51.4541"W	0.37	94.98	0.37	0.00	3RD PARTY FIRST GYRO SURVEY
176.00	0.300	36.360	176.00	-4639.00	-0.59	0.61	0.35	40°11'50.7785"N	104°34'51.4507"W	0.05	131.83	0.00	10.47	
267.00	0.360	129.800	267.00	-4548.00	-0.57	0.62	0.71	40°11'50.7786"N	104°34'51.4460"W	0.53	-158.54	0.07	102.68	
362.00	0.150	32.640	362.00	-4453.00	-0.46	0.54	1.01	40°11'50.7777"N	104°34'51.4422"W	0.43	117.74	-0.22	-102.27	
457.00	0.640	138.410	456.99	-4358.01	-0.14	0.24	1.43	40°11'50.7748"N	104°34'51.4369"W	0.73	178.48	0.52	111.34	
551.00	0.040	162.090	550.99	-4264.01	0.31	-0.18	1.79	40°11'50.7705"N	104°34'51.4323"W	0.64	-104.88	-0.64	25.19	
645.00	0.440	62.250	644.99	-4170.01	0.19	-0.04	2.12	40°11'50.7719"N	104°34'51.4280"W	0.48	-125.52	0.43	-106.21	
740.00	0.360	32.590	739.99	-4075.01	-0.19	0.38	2.60	40°11'50.7760"N	104°34'51.4217"W	0.23	-137.18	-0.08	-31.22	
834.00	0.250	357.240	833.99	-3981.01	-0.63	0.83	2.75	40°11'50.7804"N	104°34'51.4198"W	0.23	107.92	-0.12	-37.61	
928.00	0.380	66.410	927.99	-3887.01	-0.94	1.16	3.03	40°11'50.7837"N	104°34'51.4162"W	0.40	-94.16	0.14	73.59	
1023.00	0.530	17.900	1022.98	-3792.02	-1.46	1.71	3.45	40°11'50.7890"N	104°34'51.4106"W	0.42	-172.91	0.16	-51.06	
1117.00	0.170	2.360	1116.98	-3698.02	-2.00	2.26	3.59	40°11'50.7944"N	104°34'51.4088"W	0.39	-177.64	-0.38	-16.53	
1212.00	0.030	351.240	1211.98	-3603.02	-2.16	2.42	3.59	40°11'50.7961"N	104°34'51.4087"W	0.15	-55.55	-0.15	-11.71	
1307.00	0.140	305.870	1306.98	-3508.02	-2.26	2.52	3.49	40°11'50.7970"N	104°34'51.4100"W	0.13	168.01	0.12	-47.76	
1401.00	0.030	9.660	1400.98	-3414.02	-2.36	2.61	3.40	40°11'50.7979"N	104°34'51.4111"W	0.14	9.45	-0.12	67.86	
1496.00	0.150	17.230	1495.98	-3319.02	-2.50	2.75	3.44	40°11'50.7993"N	104°34'51.4105"W	0.13	3.80	0.13	7.97	
1590.00	0.250	18.750	1589.98	-3225.02	-2.80	3.06	3.55	40°11'50.8024"N	104°34'51.4092"W	0.11	-105.54	0.11	1.62	
1685.00	0.310	324.200	1684.98	-3130.02	-3.21	3.47	3.46	40°11'50.8064"N	104°34'51.4102"W	0.28	-92.71	0.06	-57.42	
1779.00	0.340	297.100	1778.98	-3036.02	-3.57	3.80	3.07	40°11'50.8097"N	104°34'51.4153"W	0.16	59.42	0.03	-28.83	
1874.00	0.620	328.350	1873.98	-2941.02	-4.18	4.37	2.55	40°11'50.8154"N	104°34'51.4219"W	0.39	168.25	0.29	32.89	
1931.00	0.560	329.630	1930.97	-2884.03	-4.70	4.87	2.24	40°11'50.8204"N	104°34'51.4257"W	0.11	-152.80	-0.11	2.25	TIE ON TO 3RD PARTY GYRO SURVEY
1994.00	0.640	200.400	1993.97	-2821.03	-4.65	4.81	1.96	40°11'50.8198"N	104°34'51.4293"W	1.72	146.19	0.13	-205.13	FIRST BH MWD SURVEY
2089.00	0.450	218.910	2088.97	-2726.03	-3.90	4.02	1.55	40°11'50.8120"N	104°34'51.4348"W	0.27	179.30	-0.20	19.48	
2183.00	0.100	35.080	2182.97	-2632.03	-3.69	3.80	1.36	40°11'50.8099"N	104°34'51.4373"W	0.58	85.92	-0.37	187.41	
2277.00	1.450	117.060	2276.96	-2538.04	-3.14	3.32	2.47	40°11'50.8051"N	104°34'51.4231"W	1.53	-16.84	1.44	87.21	
2372.00	3.970	106.290	2371.84	-2443.16	-1.38	1.85	6.69	40°11'50.7901"N	104°34'51.3688"W	2.69	-8.19	2.65	-11.34	
2467.00	5.760	103.730	2466.50	-2348.50	1.22	-0.20	14.48	40°11'50.7690"N	104°34'51.2687"W	1.90	20.04	1.88	-2.69	
2561.00	8.240	109.930	2559.79	-2255.21	5.41	-3.62	25.40	40°11'50.7342"N	104°34'51.1285"W	2.75	15.70	2.64	6.60	
2656.00	10.680	113.600	2653.49	-2161.51	12.26	-9.46	39.87	40°11'50.6749"N	104°34'50.9428"W	2.64	46.90	2.57	3.86	
2750.00	11.380	117.270	2745.76	-2069.24	21.13	-17.20	56.09	40°11'50.5968"N	104°34'50.7348"W	1.05	-94.65	0.74	3.90	
2844.00	11.350	114.700	2837.91	-1977.09	30.40	-25.31	72.74	40°11'50.5149"N	104°34'50.5213"W	0.54	68.72	-0.03	-2.73	
2939.00	11.520	116.790	2931.03	-1883.97	39.76	-33.49	89.70	40°11'50.4323"N	104°34'50.3039"W	0.47	-164.92	0.18	2.20	
3034.00	11.210	116.360	3024.16	-1790.84	49.30	-41.87	106.44	40°11'50.3479"N	104°34'50.0892"W	0.34	157.39	-0.33	-0.45	
3128.00	10.210	118.730	3116.53	-1698.47	58.44	-49.93	121.94	40°11'50.2666"N	104°34'49.8907"W	1.16	-18.50	-1.06	2.52	
3222.00	11.100	117.190	3208.91	-1606.09	67.64	-58.07	137.29	40°11'50.1846"N	104°34'49.6939"W	0.99	-126.95	0.95	-1.64	
3316.00	11.020	116.630	3301.16	-1513.84	76.92	-66.23	153.37	40°11'50.1023"N	104°34'49.4878"W	0.14	128.27	-0.09	-0.60	
3411.00	10.290	122.150	3394.52	-1420.48	86.57	-74.82	168.67	40°11'50.0159"N	104°34'49.2918"W	1.32	70.79	-0.77	5.81	
3505.00	10.430	124.260	3486.99	-1328.01	96.81	-84.08	182.81	40°11'49.9230"N	104°34'49.1108"W	0.43	-73.18	0.15	2.24	
3600.00	10.600	121.430	3580.40	-1234.60	107.21	-93.47	197.38	40°11'49.8286"N	104°34'48.9244"W	0.57	-51.10	0.18	-2.98	
3694.00	11.260	117.410	3672.69	-1142.31	117.02	-102.21	212.90	40°11'49.7407"N	104°34'48.7255"W	1.07	-36.15	0.70	-4.28	
3789.00	11.360	117.040	3765.85	-1049.15	126.70	-110.73	229.47	40°11'49.6548"N	104°34'48.5132"W	0.13	-11.67	0.11	-0.39	
3883.00	12.390	116.050	3857.83	-957.17	136.54	-119.37	246.77	40°11'49.5677"N	104°34'48.2913"W	1.12	85.03	1.10	-1.05	
3978.00	12.450	118.610	3950.61	-864.39	147.18	-128.75	264.92	40°11'49.4731"N	104°34'48.0587"W	0.58	-139.14	0.06	2.69	
4072.00	11.880	116.170	4042.50	-772.50	157.52	-137.87	282.50	40°11'49.3812"N	104°34'47.8334"W	0.82	7.55	-0.61	-2.60	

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Well	GUTTERSEN Y05-771
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API	05-123-48041
Facility	SEC.29-T03N-R64W	Wellbore	GUTTERSEN Y05-771 AWB
Slot	SLOT#36 GUTTERSEN Y05-771 (2206'FNL & 1010'FWL, SEC.29)		

WELLPATH DATA (212 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
4167.00	12.640	116.630	4135.33	-679.67	167.75	-146.84	300.57	40°11'49.2907"N	104°34'47.6018"W	0.81	-175.61	0.80	0.48	
4261.00	12.280	116.500	4227.12	-587.88	178.08	-155.91	318.71	40°11'49.1992"N	104°34'47.3692"W	0.38	1.23	-0.38	-0.14	
4355.00	12.380	116.510	4318.95	-496.05	188.29	-164.87	336.67	40°11'49.1089"N	104°34'47.1390"W	0.11	95.25	0.11	0.01	
4449.00	12.350	118.350	4410.77	-404.23	198.80	-174.14	354.53	40°11'49.0154"N	104°34'46.9100"W	0.42	-92.30	-0.03	1.96	
4544.00	12.340	116.210	4503.58	-311.42	209.36	-183.45	372.58	40°11'48.9216"N	104°34'46.6787"W	0.48	-39.63	-0.01	-2.25	
4639.00	12.630	116.500	4596.33	-218.67	219.54	-192.34	391.09	40°11'48.8318"N	104°34'46.4413"W	0.39	149.39	0.31	-1.15	
4733.00	11.810	117.520	4688.20	-126.80	229.59	-201.15	408.93	40°11'48.7430"N	104°34'46.2127"W	1.03	-1.56	-0.87	2.55	
4827.00	12.280	117.460	4780.13	-34.87	239.85	-210.20	426.33	40°11'48.6517"N	104°34'45.9897"W	0.50	-67.44	0.50	-0.06	
4922.00	12.450	115.630	4872.93	57.93	250.21	-219.29	444.53	40°11'48.5600"N	104°34'45.7564"W	0.45	84.21	0.18	-1.93	
5017.00	12.530	116.500	4965.68	150.68	260.83	-228.64	462.81	40°11'48.4657"N	104°34'45.5220"W	0.67	-136.99	0.08	3.07	
5111.00	12.330	117.670	5057.48	242.48	271.61	-238.18	480.66	40°11'48.3697"N	104°34'45.2933"W	0.29	94.31	-0.21	-0.94	
5206.00	12.310	119.170	5150.29	335.29	282.49	-247.82	498.49	40°11'48.2725"N	104°34'45.0649"W	0.34	-139.86	-0.02	1.58	
5301.00	11.710	116.630	5243.21	428.21	292.96	-257.08	515.95	40°11'48.1793"N	104°34'44.8412"W	0.84	-179.39	-0.63	-2.67	
5395.00	9.660	116.500	5335.57	520.57	301.84	-264.88	531.53	40°11'48.1006"N	104°34'44.6413"W	2.18	19.82	-2.18	-0.14	
5490.00	10.340	117.860	5429.13	614.13	310.40	-272.42	546.20	40°11'48.0246"N	104°34'44.4533"W	0.76	-163.64	0.72	1.43	
5584.00	9.010	115.350	5521.79	706.79	318.48	-279.51	560.31	40°11'47.9531"N	104°34'44.2724"W	1.48	97.29	-1.41	-2.67	
5679.00	8.960	118.550	5615.63	800.63	326.11	-286.23	573.54	40°11'47.8853"N	104°34'44.1030"W	0.53	-16.18	-0.05	3.37	
5774.00	10.020	116.790	5709.32	894.32	334.34	-293.49	587.41	40°11'47.8121"N	104°34'43.9251"W	1.16	-4.93	1.12	-1.85	
5869.00	10.920	116.380	5802.74	987.74	343.14	-301.22	602.85	40°11'47.7342"N	104°34'43.7272"W	0.95	98.96	0.95	-0.43	
5963.00	10.850	119.160	5895.05	1080.05	352.49	-309.48	618.55	40°11'47.6509"N	104°34'43.5260"W	0.56	-27.57	-0.07	2.96	
6058.00	11.240	118.120	5988.29	1173.29	362.32	-318.20	634.53	40°11'47.5631"N	104°34'43.3213"W	0.46	11.85	0.41	-1.09	
6153.00	11.920	118.810	6081.36	1266.36	372.58	-327.29	651.29	40°11'47.4716"N	104°34'43.1065"W	0.73	-93.08	0.72	0.73	
6248.00	11.910	113.610	6174.31	1359.31	382.46	-335.95	668.87	40°11'47.3842"N	104°34'42.8811"W	1.13	128.35	-0.01	-5.47	
6342.00	11.530	116.080	6266.35	1451.35	391.68	-343.96	686.20	40°11'47.3033"N	104°34'42.6590"W	0.67	100.76	-0.40	2.63	
6437.00	11.360	122.470	6359.47	1544.47	402.01	-353.16	702.62	40°11'47.2107"N	104°34'42.4486"W	1.35	63.50	-0.18	6.73	
6532.00	16.610	148.620	6451.71	1636.71	419.68	-369.80	717.61	40°11'47.0447"N	104°34'42.2577"W	8.52	28.89	5.53	27.53	
6626.00	23.890	158.140	6539.86	1724.86	449.78	-398.99	731.71	40°11'46.7549"N	104°34'42.0798"W	8.48	12.69	7.74	10.13	
6721.00	32.200	161.620	6623.64	1808.64	492.70	-440.94	746.88	40°11'46.3388"N	104°34'41.8899"W	8.91	24.86	8.75	3.66	
6816.00	40.190	167.240	6700.27	1885.27	547.63	-494.96	761.66	40°11'45.8035"N	104°34'41.7067"W	9.10	27.16	8.41	5.92	
6911.00	47.970	172.510	6768.48	1953.48	613.28	-559.96	773.05	40°11'45.1600"N	104°34'41.5686"W	9.05	24.70	8.19	5.55	
7005.00	56.510	177.150	6826.01	2011.01	687.48	-633.88	779.57	40°11'44.4289"N	104°34'41.4946"W	9.88	11.26	9.09	4.94	
7100.00	65.120	179.030	6872.29	2057.29	770.27	-716.69	782.27	40°11'43.6103"N	104°34'41.4709"W	9.23	4.62	9.06	1.98	
7195.00	74.220	179.790	6905.27	2090.27	859.10	-805.67	783.17	40°11'42.7309"N	104°34'41.4712"W	9.61	0.92	9.58	0.80	
7289.00	82.280	179.920	6924.39	2109.39	950.84	-897.63	783.40	40°11'41.8223"N	104°34'41.4805"W	8.58	6.00	8.57	0.14	
7384.00	89.720	180.700	6931.01	2116.01	1045.26	-992.33	782.89	40°11'40.8865"N	104°34'41.4999"W	7.87	-75.97	7.83	0.82	
7479.00	90.180	178.860	6931.10	2116.10	1140.04	-1087.32	783.25	40°11'39.9478"N	104°34'41.5079"W	2.00	-90.53	0.48	-1.94	
7573.00	90.150	175.620	6930.83	2115.83	1234.01	-1181.20	787.78	40°11'39.0197"N	104°34'41.4621"W	3.45	103.47	-0.03	-3.45	
7668.00	89.750	177.290	6930.91	2115.91	1329.00	-1276.02	793.65	40°11'38.0822"N	104°34'41.3992"W	1.81	-75.26	-0.42	1.76	
7763.00	90.250	175.390	6930.91	2115.91	1423.99	-1370.82	799.71	40°11'37.1448"N	104°34'41.3337"W	2.07	93.71	0.53	-2.00	
7857.00	90.180	176.470	6930.56	2115.56	1517.99	-1464.58	806.39	40°11'36.2176"N	104°34'41.2603"W	1.15	95.48	-0.07	1.15	
7952.00	89.970	178.660	6930.43	2115.43	1612.95	-1559.49	810.42	40°11'35.2794"N	104°34'41.2210"W	2.32	82.61	-0.22	2.31	
8046.00	90.250	180.820	6930.25	2115.25	1706.73	-1653.48	810.85	40°11'34.3505"N	104°34'41.2281"W	2.32	-105.84	0.30	2.30	
8141.00	89.850	179.410	6930.17	2115.17	1801.48	-1748.48	810.66	40°11'33.4118"N	104°34'41.2433"W	1.54	86.99	-0.42	-1.48	
8235.00	89.940	181.120	6930.34	2115.34	1895.21	-1842.47	810.22	40°11'32.4831"N	104°34'41.2615"W	1.82	-63.02	0.10	1.82	
8330.00	90.220	180.570	6930.21	2115.21	1989.86	-1937.46	808.82	40°11'31.5446"N	104°34'41.2923"W	0.65	-92.11	0.29	-0.58	

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Well	GUTTERSEN Y05-771
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API	05-123-48041
Facility	SEC.29-T03N-R64W	Wellbore	GUTTERSEN Y05-771 AWB
Slot	SLOT#36 GUTTERSEN Y05-771 (2206'FNL & 1010'FWL, SEC.29)		

WELLPATH DATA (212 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	TVDSS [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Tooface [°]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
8425.00	90.120	177.860	6929.93	2114.93	2084.69	-2032.44	810.12	40°11'30.6059"N	104°34'41.2882"W	2.85	85.51	-0.11	-2.85	
8519.00	90.370	181.050	6929.52	2114.52	2178.50	-2126.43	811.02	40°11'29.6771"N	104°34'41.2893"W	3.40	-96.85	0.27	3.39	
8614.00	90.090	178.720	6929.14	2114.14	2273.27	-2221.42	811.21	40°11'28.7384"N	104°34'41.2996"W	2.47	80.84	-0.29	-2.45	
8708.00	90.430	180.830	6928.72	2113.72	2367.06	-2315.41	811.58	40°11'27.8096"N	104°34'41.3074"W	2.27	-106.95	0.36	2.24	
8803.00	90.180	180.010	6928.21	2113.21	2461.76	-2410.41	810.88	40°11'26.8710"N	104°34'41.3291"W	0.90	-77.41	-0.26	-0.86	
8898.00	90.740	177.500	6927.45	2112.45	2556.64	-2505.37	812.95	40°11'25.9324"N	104°34'41.3152"W	2.71	99.08	0.59	-2.64	
8993.00	90.340	180.000	6926.55	2111.55	2651.51	-2600.34	815.02	40°11'24.9938"N	104°34'41.3012"W	2.66	-106.35	-0.42	2.63	
9087.00	89.850	178.330	6926.40	2111.40	2745.36	-2694.33	816.39	40°11'24.0649"N	104°34'41.2962"W	1.85	85.29	-0.52	-1.78	
9182.00	90.060	180.880	6926.47	2111.47	2840.16	-2789.31	817.04	40°11'23.1262"N	104°34'41.3005"W	2.69	-92.33	0.22	2.68	
9277.00	89.910	177.190	6926.50	2111.50	2935.00	-2884.29	818.64	40°11'22.1876"N	104°34'41.2926"W	3.89	87.74	-0.16	-3.88	
9371.00	90.060	180.990	6926.52	2111.52	3028.84	-2978.26	820.13	40°11'21.2589"N	104°34'41.2859"W	4.05	-82.40	0.16	4.04	
9466.00	90.340	178.890	6926.19	2111.19	3123.61	-3073.25	820.23	40°11'20.3202"N	104°34'41.2974"W	2.23	96.01	0.29	-2.21	
9561.00	90.220	180.030	6925.73	2110.73	3218.42	-3168.24	821.13	40°11'19.3814"N	104°34'41.2986"W	1.21	132.97	-0.13	1.20	
9655.00	89.540	180.760	6925.92	2110.92	3312.14	-3262.24	820.48	40°11'18.4527"N	104°34'41.3195"W	1.06	-71.66	-0.72	0.78	
9750.00	90.180	178.830	6926.15	2111.15	3406.92	-3357.23	820.82	40°11'17.5139"N	104°34'41.3279"W	2.14	114.08	0.67	-2.03	
9845.00	89.970	179.300	6926.03	2111.03	3501.78	-3452.22	822.37	40°11'16.5752"N	104°34'41.3206"W	0.54	-83.99	-0.22	0.49	
9940.00	90.150	177.590	6925.93	2110.93	3596.68	-3547.18	824.95	40°11'15.6365"N	104°34'41.3001"W	1.81	110.56	0.19	-1.80	
10034.00	89.880	178.310	6925.91	2110.91	3690.62	-3641.12	828.31	40°11'14.7079"N	104°34'41.2694"W	0.82	-67.93	-0.29	0.77	
10128.00	90.180	177.570	6925.86	2110.86	3784.57	-3735.06	831.69	40°11'13.7794"N	104°34'41.2384"W	0.85	90.00	0.32	-0.79	
10223.00	90.180	178.270	6925.56	2110.56	3879.51	-3830.00	835.14	40°11'12.8409"N	104°34'41.2067"W	0.74	93.81	0.00	0.74	
10317.00	90.090	179.620	6925.34	2110.34	3973.38	-3923.98	836.87	40°11'11.9120"N	104°34'41.1970"W	1.44	84.47	-0.10	1.44	
10411.00	90.120	179.930	6925.16	2110.16	4067.17	-4017.98	837.24	40°11'10.9831"N	104°34'41.2048"W	0.33	-80.12	0.03	0.33	
10506.00	90.430	178.150	6924.71	2109.71	4162.02	-4112.96	838.83	40°11'10.0444"N	104°34'41.1971"W	1.90	104.83	0.33	-1.87	
10601.00	90.340	178.490	6924.07	2109.07	4256.94	-4207.91	841.61	40°11'9.1058"N	104°34'41.1739"W	0.37	94.40	-0.09	0.36	
10695.00	90.280	179.270	6923.56	2108.56	4350.81	-4301.89	843.45	40°11'8.1770"N	104°34'41.1628"W	0.83	148.88	-0.06	0.83	
10789.00	89.750	179.590	6923.54	2108.54	4444.64	-4395.89	844.39	40°11'7.2481"N	104°34'41.1633"W	0.66	84.29	-0.56	0.34	
10884.00	89.850	180.590	6923.87	2108.87	4539.39	-4490.89	844.24	40°11'6.3094"N	104°34'41.1780"W	1.06	-37.78	0.11	1.05	
10979.00	90.650	179.970	6923.45	2108.45	4634.11	-4585.88	843.77	40°11'5.3707"N	104°34'41.1967"W	1.07	-71.83	0.84	-0.65	
11074.00	91.260	178.110	6921.87	2106.87	4728.95	-4680.85	845.37	40°11'4.4321"N	104°34'41.1889"W	2.06	130.06	0.64	-1.96	
11168.00	90.520	178.990	6920.41	2105.41	4822.84	-4774.81	847.74	40°11'3.5034"N	104°34'41.1709"W	1.22	-105.37	-0.79	0.94	
11262.00	89.970	176.990	6920.01	2105.01	4916.78	-4868.75	851.04	40°11'2.5749"N	104°34'41.1410"W	2.21	83.15	-0.59	-2.13	
11357.00	90.280	179.570	6919.80	2104.80	5011.69	-4963.70	853.89	40°11'1.6363"N	104°34'41.1170"W	2.74	72.83	0.33	2.72	
11452.00	91.720	184.240	6918.14	2103.14	5106.13	-5058.60	850.74	40°11'0.6989"N	104°34'41.1703"W	5.14	-87.69	1.52	4.92	
11547.00	91.940	178.560	6915.11	2100.11	5200.62	-5153.48	848.42	40°10'59.7615"N	104°34'41.2129"W	5.98	-152.68	0.23	-5.98	
11641.00	90.120	177.620	6913.42	2098.42	5294.53	-5247.41	851.55	40°10'58.8331"N	104°34'41.1851"W	2.18	102.34	-1.94	-1.00	
11736.00	89.510	180.410	6913.72	2098.72	5389.38	-5342.39	853.18	40°10'57.8944"N	104°34'41.1768"W	3.01	80.35	-0.64	2.94	
11830.00	89.910	182.760	6914.20	2099.20	5482.92	-5436.34	850.58	40°10'56.9662"N	104°34'41.2229"W	2.54	-86.32	0.43	2.50	
11925.00	90.090	179.960	6914.20	2099.20	5577.48	-5531.31	848.33	40°10'56.0281"N	104°34'41.2647"W	2.95	-79.72	0.19	-2.95	
12019.00	90.400	178.250	6913.80	2098.80	5671.34	-5625.29	849.80	40°10'55.0992"N	104°34'41.2583"W	1.85	0.00	0.33	-1.82	
12113.00	90.400	178.250	6913.14	2098.14	5765.26	-5719.24	852.67	40°10'54.1705"N	104°34'41.2339"W	0.00	-96.59	0.00	0.00	
12208.00	90.120	175.830	6912.71	2097.71	5860.23	-5814.11	857.57	40°10'53.2326"N	104°34'41.1835"W	2.56	96.34	-0.29	-2.55	
12302.00	89.910	177.720	6912.68	2097.68	5954.22	-5907.96	862.86	40°10'52.3047"N	104°34'41.1279"W	2.02	-77.93	-0.22	2.01	
12396.00	90.220	176.270	6912.58	2097.58	6048.20	-6001.82	867.79	40°10'51.3767"N	104°34'41.0770"W	1.58	93.11	0.33	-1.54	
12491.00	90.090	178.660	6912.32	2097.32	6143.16	-6096.72	871.99	40°10'50.4385"N	104°34'41.0356"W	2.52	83.58	-0.14	2.52	
12586.00	90.460	181.950	6911.87	2096.87	6237.87	-6191.71	871.48	40°10'49.5000"N	104°34'41.0548"W	3.48	-98.26	0.39	3.46	

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Well	GUTTERSEN Y05-771
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API	05-123-48041
Facility	SEC.29-T03N-R64W	Wellbore	GUTTERSEN Y05-771 AWB
Slot	SLOT#36 GUTTERSEN Y05-771 (2206'FNL & 1010'FWL, SEC.29)		

WELLPATH DATA (212 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	TVDSS [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Tooface [°]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
12775.00	90.030	178.990	6911.06	2096.06	6426.26	-6380.68	869.93	40°10'47.6328"N	104°34'41.1001"W	1.58	87.03	-0.23	-1.57	
12869.00	90.220	182.650	6910.85	2095.85	6519.90	-6474.65	868.59	40°10'46.7043"N	104°34'41.1300"W	3.90	-60.25	0.20	3.89	
12964.00	90.340	182.440	6910.39	2095.39	6614.27	-6569.56	864.37	40°10'45.7670"N	104°34'41.1971"W	0.25	-84.69	0.13	-0.22	
13058.00	90.680	178.770	6909.55	2094.55	6707.94	-6663.53	863.38	40°10'44.8385"N	104°34'41.2224"W	3.92	162.07	0.36	-3.90	
13153.00	90.340	178.880	6908.70	2093.70	6802.81	-6758.51	865.33	40°10'43.8998"N	104°34'41.2101"W	0.38	-93.01	-0.36	0.12	
13247.00	90.280	177.740	6908.20	2093.20	6896.73	-6852.47	868.10	40°10'42.9710"N	104°34'41.1869"W	1.21	98.59	-0.06	-1.21	
13341.00	89.940	179.990	6908.02	2093.02	6990.60	-6946.44	869.96	40°10'42.0422"N	104°34'41.1755"W	2.42	-65.64	-0.36	2.39	
13436.00	90.180	179.460	6907.92	2092.92	7085.39	-7041.44	870.42	40°10'41.1035"N	104°34'41.1824"W	0.61	176.25	0.25	-0.56	
13530.00	89.570	179.500	6908.12	2093.12	7179.21	-7135.43	871.27	40°10'40.1746"N	104°34'41.1840"W	0.65	6.30	-0.65	0.04	
13625.00	91.290	179.690	6907.41	2092.41	7274.01	-7230.43	871.94	40°10'39.2358"N	104°34'41.1881"W	1.82	-124.80	1.81	0.20	
13719.00	90.400	178.410	6906.02	2091.02	7367.86	-7324.40	873.50	40°10'38.3071"N	104°34'41.1806"W	1.66	-111.17	-0.95	-1.36	
13814.00	89.850	176.990	6905.81	2090.81	7462.81	-7419.32	877.31	40°10'37.3687"N	104°34'41.1442"W	1.60	78.20	-0.58	-1.49	
13908.00	90.180	178.570	6905.79	2090.79	7556.76	-7513.25	880.95	40°10'36.4402"N	104°34'41.1098"W	1.72	97.92	0.35	1.68	
14003.00	89.970	180.080	6905.67	2090.67	7651.59	-7608.24	882.07	40°10'35.5015"N	104°34'41.1081"W	1.60	-86.66	-0.22	1.59	
14097.00	90.150	177.000	6905.57	2090.57	7745.48	-7702.20	884.47	40°10'34.5728"N	104°34'41.0899"W	3.28	-98.59	0.19	-3.28	
14191.00	89.940	175.610	6905.49	2090.49	7839.48	-7796.00	890.52	40°10'33.6452"N	104°34'41.0244"W	1.50	75.17	-0.22	-1.48	
14286.00	90.030	175.950	6905.52	2090.52	7934.48	-7890.74	897.51	40°10'32.7083"N	104°34'40.9470"W	0.37	90.64	0.09	0.36	
14380.00	90.000	178.620	6905.45	2090.49	8028.45	-7984.63	901.97	40°10'31.7801"N	104°34'40.9023"W	2.84	-77.56	-0.03	2.84	
14474.00	90.430	176.670	6905.14	2090.14	8122.40	-8078.54	905.83	40°10'30.8517"N	104°34'40.8651"W	2.12	-88.07	0.46	-2.07	
14569.00	90.550	173.090	6904.33	2089.33	8217.36	-8173.14	914.30	40°10'29.9160"N	104°34'40.7686"W	3.77	116.33	0.13	-3.77	
14664.00	90.060	174.080	6903.82	2088.82	8312.28	-8267.55	924.92	40°10'28.9821"N	104°34'40.6445"W	1.16	93.88	-0.52	1.04	
14758.00	89.910	176.290	6903.85	2088.85	8406.27	-8361.21	932.81	40°10'28.0558"N	104°34'40.5554"W	2.36	88.91	-0.16	2.35	
14853.00	89.970	179.430	6903.95	2088.95	8501.20	-8456.13	936.36	40°10'27.1175"N	104°34'40.5224"W	3.31	-29.41	0.06	3.31	
14947.00	90.520	179.120	6903.54	2088.54	8595.04	-8550.12	937.54	40°10'26.1886"N	104°34'40.5197"W	0.67	115.46	0.59	-0.33	
15042.00	90.120	179.960	6903.01	2088.01	8689.85	-8645.12	938.31	40°10'25.2498"N	104°34'40.5226"W	0.98	94.82	-0.42	0.88	
15136.00	89.970	181.740	6902.94	2087.94	8783.50	-8739.10	936.91	40°10'24.3212"N	104°34'40.5531"W	1.90	-79.56	-0.16	1.89	
15230.00	90.250	180.220	6902.76	2087.76	8877.14	-8833.08	935.31	40°10'23.3927"N	104°34'40.5864"W	1.64	88.24	0.30	-1.62	
15325.00	90.280	181.200	6902.32	2087.32	8971.80	-8928.08	934.13	40°10'22.4542"N	104°34'40.6143"W	1.03	-86.42	0.03	1.03	
15419.00	90.370	179.760	6901.79	2086.79	9065.51	-9022.07	933.34	40°10'21.5255"N	104°34'40.6371"W	1.53	128.11	0.10	-1.53	
15513.00	89.170	181.290	6902.16	2087.16	9159.20	-9116.06	932.48	40°10'20.5968"N	104°34'40.6607"W	2.07	61.94	-1.28	1.63	
15608.00	90.370	183.540	6902.55	2087.55	9253.58	-9210.97	928.48	40°10'19.6594"N	104°34'40.7250"W	2.68	-86.30	1.26	2.37	
15703.00	90.580	180.280	6901.76	2086.76	9348.05	-9305.90	925.31	40°10'18.7216"N	104°34'40.7785"W	3.44	-160.77	0.22	-3.43	
15797.00	90.150	180.130	6901.16	2086.16	9441.79	-9399.89	924.97	40°10'17.7928"N	104°34'40.7954"W	0.48	-91.73	-0.46	-0.16	
15891.00	90.090	178.140	6900.96	2085.96	9535.64	-9493.88	926.39	40°10'16.8640"N	104°34'40.7897"W	2.12	88.50	-0.06	-2.12	
15986.00	90.150	180.440	6900.76	2085.76	9630.47	-9588.86	927.57	40°10'15.9253"N	104°34'40.7873"W	2.42	-49.16	0.06	2.42	
16081.00	91.420	178.970	6899.46	2084.46	9725.25	-9683.85	928.06	40°10'14.9866"N	104°34'40.7937"W	2.04	162.40	1.34	-1.55	
16176.00	89.970	179.430	6898.31	2083.31	9820.09	-9778.83	929.39	40°10'14.0479"N	104°34'40.7894"W	1.60	-52.56	-1.53	0.48	
16270.00	90.460	178.790	6897.96	2082.96	9913.94	-9872.82	930.85	40°10'13.1190"N	104°34'40.7832"W	0.86	-148.08	0.52	-0.68	
16365.00	89.850	178.410	6897.70	2082.70	10008.84	-9967.79	933.17	40°10'12.1803"N	104°34'40.7660"W	0.76	84.60	-0.64	-0.40	
16459.00	90.090	180.950	6897.75	2082.75	10102.63	-10061.78	933.69	40°10'11.2515"N	104°34'40.7718"W	2.71	-61.80	0.26	2.70	
16553.00	90.460	180.260	6897.30	2082.30	10196.32	-10155.77	932.70	40°10'10.3228"N	104°34'40.7972"W	0.83	-110.66	0.39	-0.73	
16648.00	90.030	179.120	6896.89	2081.89	10291.11	-10250.77	933.21	40°10'9.3841"N	104°34'40.8033"W	1.28	-19.54	-0.45	-1.20	
16742.00	90.340	179.010	6896.59	2081.59	10384.97	-10344.76	934.75	40°10'8.4552"N	104°34'40.7961"W	0.35	79.63	0.33	-0.12	
16837.00	90.490	179.830	6895.90	2080.90	10479.80	-10439.75	935.71	40°10'7.5164"N	104°34'40.7964"W	0.88	94.78	0.16	0.86	
16931.00	90.340	181.620	6895.22	2080.22	10573.46	-10533.73	934.52	40°10'6.5878"N	104°34'40.8244"W	1.91	-94.50	-0.16	1.90	

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Well	GUTTERSEN Y05-771
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API	05-123-48041
Facility	SEC.29-T03N-R64W	Wellbore	GUTTERSEN Y05-771 AWB
Slot	SLOT#36 GUTTERSEN Y05-771 (2206'FNL & 1010'FWL, SEC.29)		

WELLPATH DATA (212 stations) † = interpolated, ‡ = extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	TVDSS [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Tooface [°]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
17025.00	90.030	177.690	6894.92	2079.92	10667.24	-10627.71	935.09	40°10'5.6591"N	104°34'40.8297"W	4.19	84.40	-0.33	-4.18	
17120.00	90.180	179.220	6894.74	2079.74	10762.15	-10722.67	937.65	40°10'4.7205"N	104°34'40.8094"W	1.62	87.55	0.16	1.61	
17215.00	90.310	182.260	6894.34	2079.34	10856.81	-10817.65	936.42	40°10'3.7821"N	104°34'40.8379"W	3.20	-163.20	0.14	3.20	
17309.00	89.780	182.100	6894.26	2079.26	10950.25	-10911.59	932.84	40°10'2.8542"N	104°34'40.8965"W	0.59	-78.03	-0.56	-0.17	
17403.00	90.060	180.780	6894.39	2079.39	11043.81	-11005.55	930.48	40°10'1.9259"N	104°34'40.9395"W	1.44	92.53	0.30	-1.40	
17498.00	90.030	181.460	6894.32	2079.32	11138.42	-11100.54	928.63	40°10'0.9876"N	104°34'40.9762"W	0.72	-86.85	-0.03	0.72	
17593.00	90.180	178.730	6894.14	2079.14	11233.17	-11195.53	928.47	40°10'0.0489"N	104°34'40.9909"W	2.88	76.31	0.16	-2.87	
17687.00	90.370	179.510	6893.69	2078.69	11327.02	-11289.51	929.91	40°09'59.1201"N	104°34'40.9849"W	0.85	-92.87	0.20	0.83	
17782.00	90.280	177.720	6893.15	2078.15	11421.91	-11384.48	932.21	40°09'58.1814"N	104°34'40.9681"W	1.89	123.25	-0.09	-1.88	
17876.00	89.690	178.620	6893.18	2078.18	11515.84	-11478.43	935.21	40°09'57.2527"N	104°34'40.9420"W	1.14	84.04	-0.63	0.96	
17971.00	90.180	183.310	6893.29	2078.29	11610.45	-11573.39	933.61	40°09'56.3146"N	104°34'40.9753"W	4.96	-91.80	0.52	4.94	
18065.00	90.120	181.400	6893.04	2078.04	11703.85	-11667.31	929.75	40°09'55.3869"N	104°34'41.0376"W	2.03	-92.55	-0.06	-2.03	
18160.00	89.880	176.020	6893.04	2078.04	11798.71	-11762.25	931.89	40°09'54.4485"N	104°34'41.0228"W	5.67	-86.37	-0.25	-5.66	
18254.00	90.030	173.660	6893.11	2078.11	11892.68	-11855.86	940.34	40°09'53.5226"N	104°34'40.9265"W	2.52	90.78	0.16	-2.51	
18349.00	90.000	175.850	6893.09	2078.09	11987.66	-11950.46	949.02	40°09'52.5870"N	104°34'40.8273"W	2.31	84.10	-0.03	2.31	
18444.00	90.340	179.140	6892.81	2077.81	12082.61	-12045.35	953.17	40°09'51.6489"N	104°34'40.7865"W	3.48	89.99	0.36	3.46	
18538.00	90.340	181.520	6892.25	2077.25	12176.32	-12139.34	952.63	40°09'50.7201"N	104°34'40.8061"W	2.53	-89.17	0.00	2.53	
18633.00	90.400	177.310	6891.64	2076.64	12271.13	-12234.31	953.60	40°09'49.7816"N	104°34'40.8063"W	4.43	94.21	0.06	-4.43	
18727.00	90.220	179.750	6891.13	2076.13	12365.02	-12328.27	956.01	40°09'48.8529"N	104°34'40.7878"W	2.60	-62.70	-0.19	2.60	
18822.00	90.860	178.510	6890.23	2075.23	12459.87	-12423.26	957.46	40°09'47.9141"N	104°34'40.7820"W	1.47	-92.69	0.67	-1.31	
18916.00	90.620	173.460	6889.02	2074.02	12553.83	-12516.99	964.04	40°09'46.9873"N	104°34'40.7098"W	5.38	98.94	-0.26	-5.37	
19011.00	90.220	176.000	6888.32	2073.32	12648.80	-12611.58	972.76	40°09'46.0517"N	104°34'40.6101"W	2.71	92.70	-0.42	2.67	
19105.00	90.090	178.750	6888.07	2073.07	12742.76	-12705.47	977.06	40°09'45.1235"N	104°34'40.5672"W	2.93	78.27	-0.14	2.93	
19200.00	90.310	179.810	6887.73	2072.73	12837.60	-12800.46	978.26	40°09'44.1847"N	104°34'40.5646"W	1.14	92.84	0.23	1.12	
19295.00	90.220	181.620	6887.29	2072.29	12932.26	-12895.45	977.07	40°09'43.2462"N	104°34'40.5926"W	1.91	-94.91	-0.09	1.91	
19389.00	89.850	177.320	6887.24	2072.24	13026.06	-12989.42	977.94	40°09'42.3175"N	104°34'40.5940"W	4.59	86.40	-0.39	-4.57	
19484.00	90.000	179.700	6887.36	2072.36	13120.96	-13084.38	980.41	40°09'41.3789"N	104°34'40.5749"W	2.51	78.44	0.16	2.51	
19578.00	90.370	181.510	6887.06	2072.06	13214.64	-13178.37	979.42	40°09'40.4502"N	104°34'40.6002"W	1.97	-91.55	0.39	1.93	
19672.00	90.310	179.300	6886.50	2071.50	13308.35	-13272.36	978.76	40°09'39.5215"N	104°34'40.6214"W	2.35	-80.91	-0.06	-2.35	
19767.00	90.430	178.550	6885.89	2070.89	13403.22	-13367.34	980.54	40°09'38.5828"N	104°34'40.6111"W	0.80	-96.45	0.13	-0.79	
19861.00	90.000	174.750	6885.53	2070.53	13497.19	-13461.16	986.03	40°09'37.6551"N	104°34'40.5530"W	4.07	0.00	-0.46	-4.04	LAST BH MWD SURVEY
19900.00‡	90.000	174.750	6885.53	2070.53	13536.18	-13500.00	989.60	40°09'37.2710"N	104°34'40.5122"W	0.00		0.00	0.00	EXTRAPOLATED TO TD

HOLE & CASING SECTIONS - Ref Wellbore: GUTTERSEN Y05-771 AWB Ref Wellpath: GUTTERSEN Y05-771 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	1932.00	1902.00	30.00	1931.97	0.03	0.01	4.88	2.24
9.625in Casing Surface	30.00	1932.00	1902.00	30.00	1931.97	0.03	0.01	4.88	2.24
8.5in Open Hole	1932.00	19900.00	17968.00	1931.97	6885.53	4.88	2.24	-13500.00	989.60

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GUTTERSEN Y05-771
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API	05-123-48041
Facility	SEC.29-T03N-R64W	Wellbore	GUTTERSEN Y05-771 AWB
Slot	SLOT#36 GUTTERSEN Y05-771 (2206'FNL & 1010'FWL, SEC.29)		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
GUTTERSEN Y05-771 BHL REV-3 (75'FSL & 1854'FWL, SEC.Y05)	6882.15	-13510.47	958.84	3257681.20	1302589.23	40°09'37.1707"N	104°34'40.9098"W	point
GUTTERSEN Y05-771 TPZ REV-3 (2259'FSL & 1801'FWL, SEC.29)	6906.82	-825.27	796.26	3257518.63	1315273.87	40°11'42.5360"N	104°34'41.3051"W	point
GUTTERSEN Y05 SECT.LINES SEC.05-T02N-R64W	9001.00	-10997.48	-920.37	3255802.08	1305102.11	40°10'2.1952"N	104°35'4.7782"W	polygon
	2D Polygon: dimensions not calculated							
GUTTERSEN Y05 SECT.LINES SEC.29-T03N-R64W	9001.00	-463.64	-1003.48	3255718.96	1315635.48	40°11'46.2937"N	104°35'4.4480"W	polygon
	2D Polygon: dimensions not calculated							
GUTTERSEN Y05 SECT.LINES SEC.32-T03N-R64W	9001.00	-5749.64	-967.41	3255755.04	1310349.72	40°10'54.0565"N	104°35'4.6863"W	polygon
	2D Polygon: dimensions not calculated							
GUTTERSEN Y05-771 WSU 460' SET BACK BOUNDARIES	9001.00	445.07	763.37	3257485.74	1316544.15	40°11'55.0921"N	104°34'41.5588"W	polygon
	2D Polygon: dimensions not calculated							
GUTTERSEN Y05-771 WSU BOUNDARIES	9001.00	893.75	300.19	3257022.58	1316992.81	40°11'59.5733"N	104°34'47.4675"W	polygon
	2D Polygon: dimensions not calculated							

WELLPATH COMPOSITION - Ref Wellbore: GUTTERSEN Y05-771 AWB						Ref Wellpath: GUTTERSEN Y05-771 AWP	
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment		Wellbore	Survey Date	
0.00	1931.00	Gyrodata 2015 - GC+DROP+COND	13.5" Gyrodata (GYRODATA 2015-GC-DROP-COND) <0' - 1931'>		GUTTERSEN Y05-771 AWB	12/31/2019	
1931.00	19900.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	8.5" ATK (OWSG MWD REV.2+IFR1+MSA) <1994' - 19861'>		GUTTERSEN Y05-771 AWB	12/31/2019	

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Well	GUTTERSEN Y05-771
Field	WELD COUNTY (NOBLE NAD 83 GRID)	API	05-123-48041
Facility	SEC.29-T03N-R64W	Wellbore	GUTTERSEN Y05-771 AWB
Slot	SLOT#36 GUTTERSEN Y05-771 (2206'FNL & 1010'FWL, SEC.29)		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
81.00	0.300	26.410	81.00	3RD PARTY FIRST GYRO SURVEY
1931.00	0.560	329.630	1930.97	TIE ON TO 3RD PARTY GYRO SURVEY
1994.00	0.640	200.400	1993.97	FIRST BH MWD SURVEY
19861.00	90.000	174.750	6885.53	LAST BH MWD SURVEY
19900.00	90.000	174.750	6885.53	EXTRAPOLATED TO TD