

Actual Wellpath Report

WELLS RANCH AF05-655 AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#05 WELLS RANCH AF05-655 (2146'FNL & 604'FWL, SEC.05)
Area	COLORADO	Well	WELLS RANCH AF05-655
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH AF05-655 AWB
Facility	SEC.05-T05N-R62W		

REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 5.0
North Reference	Grid	User	Adamkat
Scale	0.999962	Report Generated	3/11/2016 at 12:55:34 PM
Convergence at slot	0.75° East	Database/Source file	WA_DEN_Denver_Defn/WELLS_RANCH_AF05-655_AWP.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	38.37	149.85	3318852.66	1401570.49	40°25'48.216"N	104°21'16.596"W
Facility Reference Pt			3318702.82	1401532.12	40°25'47.856"N	104°21'18.540"W
Field Reference Pt			3000000.00	4454105.15	48°46'34.315"N	105°30'00.000"W

WELLPATH DATUM

Calculation method	Minimum curvature	H&P 321 (RKB) to Facility Vertical Datum	4712.00ft
Horizontal Reference Pt	Slot	H&P 321 (RKB) to Mean Sea Level	4712.00ft
Vertical Reference Pt	H&P 321 (RKB)	H&P 321 (RKB) to Mud Line at Slot (SLOT#05 WELLS RANCH AF05-655 (2146'FNL & 604'FWL, SEC.05))	4712.00ft
MD Reference Pt	H&P 321 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	88.97°



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WELLPATH DATA (174 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00	0.000	244.840	0.00	0.00	0.00	0.00	40°25'48.216"N	104°21'16.596"W	0.00	
83.00	0.430	244.840	83.00	-0.28	-0.13	-0.28	40°25'48.215"N	104°21'16.600"W	0.52	
177.00	0.640	217.330	177.00	-0.93	-0.70	-0.92	40°25'48.209"N	104°21'16.608"W	0.35	
269.00	0.780	234.870	268.99	-1.77	-1.47	-1.74	40°25'48.202"N	104°21'16.619"W	0.28	
361.00	0.800	226.670	360.98	-2.76	-2.27	-2.72	40°25'48.194"N	104°21'16.632"W	0.12	
453.00	0.790	219.630	452.97	-3.65	-3.20	-3.59	40°25'48.185"N	104°21'16.643"W	0.11	
547.00	0.280	247.120	546.97	-4.29	-3.79	-4.22	40°25'48.179"N	104°21'16.651"W	0.59	
642.00	0.520	121.080	641.97	-4.14	-4.10	-4.06	40°25'48.176"N	104°21'16.649"W	0.76	
736.00	0.690	106.010	735.96	-3.23	-4.48	-3.15	40°25'48.172"N	104°21'16.638"W	0.25	
831.00	0.460	209.420	830.96	-2.88	-4.97	-2.79	40°25'48.167"N	104°21'16.633"W	0.96	
925.00	0.480	235.730	924.95	-3.40	-5.52	-3.30	40°25'48.162"N	104°21'16.640"W	0.23	
1020.00	1.010	265.670	1019.95	-4.57	-5.80	-4.47	40°25'48.159"N	104°21'16.655"W	0.67	
1115.00	1.210	282.200	1114.93	-6.38	-5.66	-6.28	40°25'48.161"N	104°21'16.678"W	0.40	
1209.00	1.130	259.170	1208.91	-8.26	-5.62	-8.16	40°25'48.162"N	104°21'16.702"W	0.50	
1304.00	1.110	242.650	1303.89	-10.01	-6.22	-9.90	40°25'48.156"N	104°21'16.725"W	0.34	
1399.00	0.800	262.870	1398.88	-11.49	-6.72	-11.38	40°25'48.151"N	104°21'16.744"W	0.48	
1493.00	0.840	268.500	1492.87	-12.83	-6.82	-12.71	40°25'48.150"N	104°21'16.762"W	0.10	
1588.00	0.550	287.910	1587.86	-13.96	-6.70	-13.84	40°25'48.152"N	104°21'16.776"W	0.39	
1683.00	0.860	264.750	1682.85	-15.10	-6.63	-14.99	40°25'48.152"N	104°21'16.791"W	0.44	
1778.00	0.840	233.450	1777.84	-16.38	-7.11	-16.26	40°25'48.148"N	104°21'16.807"W	0.48	
1872.00	0.610	232.960	1871.84	-17.35	-7.82	-17.21	40°25'48.141"N	104°21'16.820"W	0.24	
1882.00	0.770	236.780	1881.84	-17.45	-7.89	-17.31	40°25'48.140"N	104°21'16.821"W	1.66	TIE INTO GYRO SURFACE SURVEYS
1939.00	0.340	241.240	1938.83	-17.92	-8.18	-17.78	40°25'48.137"N	104°21'16.827"W	0.76	FIRST BHI MWD SURVEY
2033.00	1.060	59.010	2032.83	-17.42	-7.86	-17.28	40°25'48.140"N	104°21'16.821"W	1.49	
2128.00	0.890	61.210	2127.82	-16.00	-7.06	-15.88	40°25'48.148"N	104°21'16.802"W	0.18	
2223.00	0.830	83.510	2222.80	-14.66	-6.62	-14.55	40°25'48.152"N	104°21'16.785"W	0.36	
2317.00	0.920	103.870	2316.79	-13.26	-6.73	-13.14	40°25'48.151"N	104°21'16.767"W	0.34	
2412.00	0.810	110.140	2411.78	-11.89	-7.14	-11.77	40°25'48.147"N	104°21'16.749"W	0.15	
2507.00	1.360	122.780	2506.77	-10.33	-7.98	-10.19	40°25'48.138"N	104°21'16.729"W	0.63	
2601.00	2.270	138.760	2600.72	-8.20	-9.99	-8.02	40°25'48.118"N	104°21'16.701"W	1.10	
2696.00	4.740	151.500	2695.53	-5.18	-14.85	-4.91	40°25'48.070"N	104°21'16.662"W	2.71	
2791.00	5.540	172.940	2790.16	-2.88	-22.85	-2.47	40°25'47.991"N	104°21'16.632"W	2.17	
2886.00	7.590	166.910	2884.53	-1.09	-33.52	-0.49	40°25'47.885"N	104°21'16.608"W	2.27	
2980.00	8.620	163.680	2977.59	2.07	-46.32	2.90	40°25'47.758"N	104°21'16.566"W	1.20	
3075.00	8.710	152.320	3071.52	7.17	-59.53	8.24	40°25'47.627"N	104°21'16.499"W	1.80	
3170.00	7.410	151.230	3165.58	13.25	-71.27	14.53	40°25'47.510"N	104°21'16.420"W	1.38	
3265.00	7.370	148.650	3259.79	19.18	-81.84	20.65	40°25'47.405"N	104°21'16.343"W	0.35	
3359.00	7.100	148.740	3353.04	25.15	-91.96	26.80	40°25'47.304"N	104°21'16.265"W	0.29	
3454.00	9.020	155.080	3447.10	31.12	-103.73	32.98	40°25'47.187"N	104°21'16.187"W	2.22	
3549.00	9.110	156.150	3540.91	37.06	-117.36	39.16	40°25'47.051"N	104°21'16.109"W	0.20	
3644.00	10.290	153.810	3634.55	43.58	-131.85	45.95	40°25'46.907"N	104°21'16.024"W	1.31	
3738.00	9.310	149.530	3727.18	50.89	-145.94	53.51	40°25'46.767"N	104°21'15.928"W	1.30	
3802.00	6.750	150.950	3790.55	55.20	-153.69	57.96	40°25'46.690"N	104°21'15.872"W	4.01	
3927.00	4.220	155.170	3914.97	60.51	-164.29	63.46	40°25'46.585"N	104°21'15.803"W	2.05	
4022.00	1.940	142.820	4009.82	62.87	-168.74	65.90	40°25'46.540"N	104°21'15.772"W	2.49	



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Area	COLORADO	Well	WELLS RANCH AF05-655
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH AF05-655 AWB
Facility	SEC.05-T05N-R62W		

WELLPATH DATA (174 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4117.00	0.600	177.510	4104.80	63.83	-170.52	66.90	40°25'46.523"N	104°21'15.760"W	1.56	
4211.00	0.860	188.070	4198.79	63.73	-171.71	66.82	40°25'46.511"N	104°21'15.761"W	0.31	
4306.00	0.820	50.640	4293.79	64.16	-171.99	67.24	40°25'46.508"N	104°21'15.755"W	1.65	
4401.00	0.920	40.760	4388.78	65.20	-170.98	68.27	40°25'46.518"N	104°21'15.742"W	0.19	
4495.00	1.130	44.850	4482.76	66.36	-169.75	69.41	40°25'46.530"N	104°21'15.727"W	0.24	
4590.00	0.710	109.390	4577.75	67.59	-169.28	70.63	40°25'46.534"N	104°21'15.711"W	1.10	
4685.00	0.980	101.640	4672.74	68.93	-169.64	71.98	40°25'46.531"N	104°21'15.694"W	0.31	
4779.00	0.930	169.270	4766.73	69.85	-170.55	72.91	40°25'46.522"N	104°21'15.682"W	1.13	
4873.00	0.810	168.330	4860.72	70.10	-171.95	73.19	40°25'46.508"N	104°21'15.678"W	0.13	
4968.00	0.550	280.920	4955.72	69.78	-172.52	72.87	40°25'46.502"N	104°21'15.683"W	1.20	
5062.00	0.650	282.260	5049.71	68.82	-172.33	71.91	40°25'46.504"N	104°21'15.695"W	0.11	
5157.00	0.700	283.800	5144.70	67.73	-172.07	70.82	40°25'46.507"N	104°21'15.709"W	0.06	
5252.00	0.430	267.070	5239.70	66.81	-171.95	69.90	40°25'46.508"N	104°21'15.721"W	0.33	
5346.00	0.490	237.690	5333.70	66.12	-172.19	69.21	40°25'46.506"N	104°21'15.730"W	0.26	
5441.00	0.530	229.270	5428.69	65.43	-172.69	68.53	40°25'46.501"N	104°21'15.739"W	0.09	
5535.00	0.400	220.020	5522.69	64.88	-173.22	67.99	40°25'46.496"N	104°21'15.746"W	0.16	
5630.00	0.280	213.590	5617.69	64.53	-173.67	67.65	40°25'46.491"N	104°21'15.750"W	0.13	
5705.00	0.260	200.470	5692.69	64.37	-173.98	67.49	40°25'46.488"N	104°21'15.752"W	0.09	
5762.00	0.340	112.920	5749.69	64.47	-174.17	67.60	40°25'46.486"N	104°21'15.751"W	0.74	
5857.00	10.530	66.910	5844.14	72.80	-170.87	75.87	40°25'46.518"N	104°21'15.644"W	10.84	
5951.00	17.110	71.880	5935.37	94.00	-163.19	96.93	40°25'46.591"N	104°21'15.370"W	7.11	
6046.00	22.420	72.410	6024.74	124.74	-153.36	127.51	40°25'46.684"N	104°21'14.973"W	5.59	
6140.00	30.700	82.340	6108.79	165.85	-144.73	168.47	40°25'46.764"N	104°21'14.442"W	9.97	
6235.00	38.660	88.040	6186.87	219.71	-140.47	222.26	40°25'46.800"N	104°21'13.746"W	9.04	
6330.00	47.990	89.730	6255.91	284.81	-139.29	287.35	40°25'46.803"N	104°21'12.904"W	9.90	
6425.00	54.340	89.530	6315.45	358.77	-138.80	361.31	40°25'46.798"N	104°21'11.947"W	6.69	
6519.00	61.920	88.950	6365.04	438.54	-137.73	441.08	40°25'46.799"N	104°21'10.916"W	8.08	
6614.00	69.780	88.990	6403.88	525.16	-136.17	527.68	40°25'46.803"N	104°21'09.796"W	8.27	
6709.00	80.870	86.470	6427.91	616.89	-132.49	619.36	40°25'46.828"N	104°21'08.610"W	11.95	
6804.00	89.010	85.840	6436.29	711.32	-126.14	713.69	40°25'46.878"N	104°21'07.389"W	8.59	
6898.00	90.300	84.900	6436.85	805.13	-118.56	807.38	40°25'46.941"N	104°21'06.176"W	1.70	
6993.00	90.520	83.640	6436.17	899.81	-109.07	901.90	40°25'47.023"N	104°21'04.953"W	1.35	
7088.00	90.640	83.920	6435.21	994.41	-98.78	996.34	40°25'47.113"N	104°21'03.730"W	0.32	
7182.00	90.550	84.550	6434.23	1088.08	-89.34	1089.86	40°25'47.194"N	104°21'02.519"W	0.68	
7277.00	90.580	84.650	6433.30	1182.80	-80.40	1184.43	40°25'47.270"N	104°21'01.295"W	0.11	
7371.00	90.640	85.190	6432.30	1276.56	-72.08	1278.06	40°25'47.340"N	104°21'00.083"W	0.58	
7466.00	90.700	85.900	6431.19	1371.38	-64.70	1372.76	40°25'47.401"N	104°20'58.857"W	0.75	
7561.00	90.550	86.580	6430.15	1466.27	-58.47	1467.55	40°25'47.451"N	104°20'57.630"W	0.73	
7655.00	90.610	85.450	6429.20	1560.14	-51.94	1561.32	40°25'47.503"N	104°20'56.417"W	1.20	
7750.00	90.520	88.610	6428.26	1655.07	-47.01	1656.17	40°25'47.540"N	104°20'55.190"W	3.33	
7845.00	90.610	90.980	6427.32	1750.05	-46.67	1751.16	40°25'47.531"N	104°20'53.961"W	2.50	
7939.00	90.490	91.060	6426.42	1843.98	-48.35	1845.14	40°25'47.502"N	104°20'52.746"W	0.15	
8034.00	90.460	89.680	6425.63	1938.95	-48.96	1940.13	40°25'47.484"N	104°20'51.518"W	1.45	
8129.00	90.430	86.830	6424.90	2033.93	-46.07	2035.08	40°25'47.500"N	104°20'50.290"W	3.00	
8223.00	90.360	87.380	6424.25	2127.87	-41.32	2128.95	40°25'47.535"N	104°20'49.075"W	0.59	



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8318.00	90.520	87.110	6423.52	2222.83	-36.75	2223.84	40°25'47.568"N	104°20'47.848"W	0.33	
8412.00	90.580	84.830	6422.62	2316.69	-30.15	2317.60	40°25'47.621"N	104°20'46.634"W	2.43	
8507.00	90.400	84.650	6421.80	2411.43	-21.44	2412.20	40°25'47.695"N	104°20'45.410"W	0.27	
8602.00	90.430	85.080	6421.12	2506.18	-12.94	2506.81	40°25'47.767"N	104°20'44.185"W	0.45	
8696.00	90.490	86.360	6420.36	2600.02	-5.92	2600.54	40°25'47.824"N	104°20'42.972"W	1.36	
8791.00	90.550	87.410	6419.50	2694.95	-0.76	2695.40	40°25'47.863"N	104°20'41.745"W	1.11	
8886.00	90.490	88.410	6418.64	2789.93	2.70	2790.33	40°25'47.885"N	104°20'40.516"W	1.05	
8980.00	90.490	89.610	6417.83	2883.93	4.33	2884.31	40°25'47.889"N	104°20'39.301"W	1.28	
9075.00	90.950	91.510	6416.64	2978.88	3.40	2979.29	40°25'47.868"N	104°20'38.073"W	2.06	
9170.00	90.640	91.430	6415.32	3073.78	0.96	3074.25	40°25'47.831"N	104°20'36.846"W	0.34	
9264.00	90.580	88.380	6414.32	3167.75	1.12	3168.24	40°25'47.821"N	104°20'35.630"W	3.25	
9359.00	90.460	86.940	6413.46	3262.72	5.00	3263.15	40°25'47.847"N	104°20'34.403"W	1.52	
9454.00	90.650	87.900	6412.54	3357.68	9.27	3358.05	40°25'47.877"N	104°20'33.175"W	1.03	
9548.00	90.400	90.690	6411.68	3451.66	10.43	3452.03	40°25'47.876"N	104°20'31.959"W	2.98	
9643.00	90.330	88.910	6411.07	3546.65	10.76	3547.02	40°25'47.867"N	104°20'30.731"W	1.88	
9738.00	90.300	90.960	6410.55	3641.63	10.87	3642.02	40°25'47.856"N	104°20'29.503"W	2.16	
9833.00	90.360	94.090	6410.00	3736.43	6.68	3736.91	40°25'47.802"N	104°20'28.277"W	3.30	
9927.00	90.400	95.420	6409.38	3829.95	-1.11	3830.58	40°25'47.713"N	104°20'27.067"W	1.42	
10022.00	90.300	95.710	6408.80	3924.32	-10.32	3925.13	40°25'47.610"N	104°20'25.846"W	0.32	
10116.00	90.180	93.310	6408.40	4017.88	-17.71	4018.84	40°25'47.525"N	104°20'24.635"W	2.56	
10211.00	90.150	92.680	6408.13	4112.64	-22.67	4113.70	40°25'47.464"N	104°20'23.410"W	0.66	
10305.00	90.270	93.460	6407.79	4206.40	-27.71	4207.57	40°25'47.402"N	104°20'22.197"W	0.84	
10400.00	90.610	91.870	6407.06	4301.20	-32.13	4302.46	40°25'47.346"N	104°20'20.971"W	1.71	
10495.00	90.640	90.120	6406.02	4396.13	-33.78	4397.44	40°25'47.317"N	104°20'19.743"W	1.84	
10590.00	90.610	90.430	6404.98	4491.10	-34.23	4492.43	40°25'47.300"N	104°20'18.515"W	0.33	
10684.00	90.550	87.310	6404.03	4585.08	-32.38	4586.39	40°25'47.306"N	104°20'17.299"W	3.32	
10779.00	90.670	86.830	6403.02	4680.02	-27.52	4681.26	40°25'47.342"N	104°20'16.072"W	0.52	
10874.00	90.520	86.210	6402.03	4774.93	-21.76	4776.08	40°25'47.387"N	104°20'14.845"W	0.67	
10968.00	90.640	86.130	6401.08	4868.81	-15.48	4869.87	40°25'47.437"N	104°20'13.631"W	0.15	
11063.00	90.640	85.380	6400.02	4963.66	-8.45	4964.60	40°25'47.494"N	104°20'12.405"W	0.79	
11158.00	90.640	85.640	6398.96	5058.48	-1.01	5059.30	40°25'47.555"N	104°20'11.179"W	0.27	
11252.00	90.550	85.970	6397.98	5152.33	5.87	5153.05	40°25'47.611"N	104°20'09.966"W	0.36	
11347.00	90.610	86.380	6397.02	5247.21	12.20	5247.83	40°25'47.661"N	104°20'08.739"W	0.44	
11442.00	90.730	86.440	6395.91	5342.11	18.15	5342.64	40°25'47.708"N	104°20'07.513"W	0.14	
11536.00	90.520	87.360	6394.89	5436.04	23.23	5436.49	40°25'47.746"N	104°20'06.298"W	1.00	
11631.00	90.860	88.010	6393.74	5531.01	27.07	5531.41	40°25'47.771"N	104°20'05.070"W	0.77	
11726.00	90.150	87.260	6392.90	5625.98	30.99	5626.32	40°25'47.798"N	104°20'03.842"W	1.09	
11820.00	90.460	87.420	6392.40	5719.94	35.35	5720.22	40°25'47.829"N	104°20'02.628"W	0.37	
11915.00	90.430	87.670	6391.67	5814.90	39.42	5815.13	40°25'47.857"N	104°20'01.400"W	0.27	
12010.00	90.400	88.630	6390.98	5909.89	42.49	5910.08	40°25'47.875"N	104°20'00.171"W	1.01	
12104.00	90.430	88.070	6390.30	6003.88	45.20	6004.03	40°25'47.889"N	104°19'58.956"W	0.60	
12199.00	90.550	89.180	6389.48	6098.88	47.48	6099.00	40°25'47.899"N	104°19'57.728"W	1.18	
12294.00	90.490	90.570	6388.62	6193.86	47.68	6194.00	40°25'47.889"N	104°19'56.499"W	1.46	
12388.00	90.610	89.120	6387.72	6287.84	47.94	6287.99	40°25'47.879"N	104°19'55.284"W	1.55	
12483.00	90.490	88.100	6386.81	6382.83	50.24	6382.95	40°25'47.890"N	104°19'54.056"W	1.08	



Actual Wellpath Report

WELLS RANCH AF05-655 AWP



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#05 WELLS RANCH AF05-655 (2146'FNL & 604'FWL, SEC.05)
Area	COLORADO	Well	WELLS RANCH AF05-655
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH AF05-655 AWB
Facility	SEC.05-T05N-R62W		

WELLPATH DATA (174 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12577.00	90.460	87.510	6386.03	6476.81	53.84	6476.88	40°25'47.913"N	104°19'52.841"W	0.63	
12672.00	90.460	86.330	6385.27	6571.74	58.95	6571.74	40°25'47.951"N	104°19'51.613"W	1.24	
12766.00	90.550	85.800	6384.44	6665.62	65.40	6665.51	40°25'48.003"N	104°19'50.400"W	0.57	
12861.00	90.550	86.920	6383.53	6760.51	71.43	6760.32	40°25'48.050"N	104°19'49.173"W	1.18	
12956.00	90.520	89.870	6382.64	6855.49	74.09	6855.27	40°25'48.064"N	104°19'47.945"W	3.11	
13051.00	90.520	92.650	6381.78	6950.40	72.00	6950.23	40°25'48.031"N	104°19'46.717"W	2.93	
13145.00	90.800	92.950	6380.69	7044.19	67.41	7044.11	40°25'47.973"N	104°19'45.504"W	0.44	
13240.00	90.490	91.520	6379.62	7139.03	63.70	7139.03	40°25'47.924"N	104°19'44.277"W	1.54	
13334.00	90.360	92.520	6378.93	7232.89	60.39	7232.97	40°25'47.879"N	104°19'43.063"W	1.07	
13429.00	90.460	90.460	6378.25	7327.79	57.92	7327.93	40°25'47.842"N	104°19'41.836"W	2.17	
13523.00	90.460	90.250	6377.49	7421.76	57.34	7421.92	40°25'47.824"N	104°19'40.621"W	0.22	
13618.00	90.460	85.760	6376.73	7516.72	60.64	7516.84	40°25'47.844"N	104°19'39.393"W	4.73	
13712.00	90.490	83.990	6375.95	7610.47	69.04	7610.46	40°25'47.915"N	104°19'38.181"W	1.88	
13807.00	90.610	86.710	6375.04	7705.27	76.74	7705.13	40°25'47.979"N	104°19'36.956"W	2.87	
13901.00	90.300	86.970	6374.29	7799.20	81.92	7798.98	40°25'48.018"N	104°19'35.741"W	0.43	
13996.00	90.330	86.950	6373.77	7894.14	86.96	7893.85	40°25'48.055"N	104°19'34.514"W	0.04	
14090.00	90.360	85.110	6373.20	7988.01	93.47	7987.62	40°25'48.107"N	104°19'33.300"W	1.96	
14185.00	90.490	84.440	6372.50	8082.75	102.12	8082.22	40°25'48.180"N	104°19'32.076"W	0.72	
14280.00	90.580	86.570	6371.61	8177.57	109.56	8176.92	40°25'48.242"N	104°19'30.850"W	2.24	
14375.00	90.460	87.440	6370.75	8272.51	114.53	8271.78	40°25'48.278"N	104°19'29.622"W	0.92	
14469.00	90.550	88.410	6369.92	8366.49	117.93	8365.72	40°25'48.299"N	104°19'28.407"W	1.04	
14564.00	90.580	89.310	6368.98	8461.48	119.82	8460.69	40°25'48.306"N	104°19'27.179"W	0.95	
14659.00	90.580	88.030	6368.02	8556.47	122.03	8555.66	40°25'48.315"N	104°19'25.951"W	1.35	
14753.00	90.490	87.090	6367.14	8650.44	126.03	8649.57	40°25'48.342"N	104°19'24.736"W	1.00	
14848.00	90.430	85.890	6366.38	8745.34	131.84	8744.39	40°25'48.387"N	104°19'23.509"W	1.26	
14943.00	90.640	86.860	6365.49	8840.24	137.85	8839.19	40°25'48.434"N	104°19'22.282"W	1.04	
15037.00	90.580	87.870	6364.49	8934.20	142.17	8933.08	40°25'48.465"N	104°19'21.067"W	1.08	
15132.00	90.490	87.970	6363.61	9029.18	145.62	9028.02	40°25'48.486"N	104°19'19.839"W	0.14	
15227.00	90.580	87.380	6362.72	9124.15	149.47	9122.93	40°25'48.512"N	104°19'18.611"W	0.63	
15321.00	90.800	87.620	6361.59	9218.11	153.57	9216.84	40°25'48.540"N	104°19'17.396"W	0.35	
15416.00	90.640	88.330	6360.39	9313.09	156.93	9311.77	40°25'48.561"N	104°19'16.168"W	0.77	
15510.00	90.490	89.690	6359.47	9407.08	158.55	9405.75	40°25'48.564"N	104°19'14.953"W	1.46	
15605.00	90.520	89.900	6358.63	9502.07	158.89	9500.75	40°25'48.555"N	104°19'13.724"W	0.22	
15699.00	90.550	90.130	6357.75	9596.05	158.87	9594.74	40°25'48.543"N	104°19'12.509"W	0.25	
15794.00	90.580	90.030	6356.81	9691.03	158.73	9689.74	40°25'48.529"N	104°19'11.281"W	0.11	
15889.00	90.490	90.810	6355.93	9785.99	158.04	9784.73	40°25'48.510"N	104°19'10.052"W	0.83	
15983.00	90.430	90.670	6355.17	9879.94	156.82	9878.72	40°25'48.485"N	104°19'08.837"W	0.16	
16000.00	90.360	90.080	6355.06	9896.94	156.71	9895.72	40°25'48.482"N	104°19'08.618"W	3.49	LAST BHI MWD SURVEY
16024.00	90.360	90.080	6354.90	9920.93	156.68	9919.72	40°25'48.478"N	104°19'08.307"W	0.00	PROJECTION TO BIT

Actual Wellpath Report

WELLS RANCH AF05-655 AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#05 WELLS RANCH AF05-655 (2146'FNL & 604'FWL, SEC.05)
Area	COLORADO	Well	WELLS RANCH AF05-655
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH AF05-655 AWB
Facility	SEC.05-T05N-R62W		

HOLE & CASING SECTIONS - Ref Wellbore: WELLS RANCH AF05-655 AWB Ref Wellpath: WELLS RANCH AF05-655 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]
9.625in Casing Surface	0.00	1889.00	1889.00	0.00	1888.84	0.00	0.00	-7.94	-17.39
8.5in Open Hole	1899.00	16024.00	14125.00	1898.83	6354.90	-8.00	-17.49	156.68	9919.72

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
EX. WELLS#1	0.00	1685.44	5312.99	3324165.44	1403255.86	40°26'04.186"N	104°20'07.613"W	circle
SEC.04-T05N-R62W	6.00	-38.37	-149.85	3318702.82	1401532.12	40°25'47.856"N	104°21'18.540"W	polygon
SEC.05-T05N-R62W	6.00	-38.37	-149.85	3318702.82	1401532.12	40°25'47.856"N	104°21'18.540"W	polygon
WELLS RANCH AF05-655 KOP (35' RADII)	2500.00	0.00	0.00	3318852.66	1401570.49	40°25'48.216"N	104°21'16.596"W	circle
WELLS RANCH AF05-655 BHL ON PLAT REV-1 (2310'FNL & 1'FEL, SEC.04)	6355.41	177.51	9920.62	3328772.88	1401747.99	40°25'48.684"N	104°19'08.292"W	point
WELLS RANCH AF05-655 DRILLING COORIDOR (35'LEFT/RIGHT & 8'UP/DOWN)	6355.41	177.51	9920.62	3328772.88	1401747.99	40°25'48.684"N	104°19'08.292"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: WELLS RANCH AF05-655 AWB Ref Wellpath: WELLS RANCH AF05-655 AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	1882.00	Gyrodata standard - Continuous gyro	GYRODATA 13 1/2" SURFACE SURVEYS <0 - 1882>	WELLS RANCH AF05-655 AWB
1882.00	16000.00	Custom OnTrak (Standard) (Rockies 0.03Gt model)	BHI MWD ONTRAK (STANDARD, Rockies 0.03Gt model) <1882 - 16000>	WELLS RANCH AF05-655 AWB
16000.00	16024.00	Blind Drilling (std)	Projection to bit	WELLS RANCH AF05-655 AWB



Actual Wellpath Report

WELLS RANCH AF05-655 AWP



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#05 WELLS RANCH AF05-655 (2146'FNL & 604'FWL, SEC.05)
Area	COLORADO	Well	WELLS RANCH AF05-655
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH AF05-655 AWB
Facility	SEC.05-T05N-R62W		

WELLPATH COMMENTS					
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment	
1882.00	0.770	236.780	1881.84	TIE INTO GYRO SURFACE SURVEYS	
1939.00	0.340	241.240	1938.83	FIRST BHI MWD SURVEY	
16000.00	90.360	90.080	6355.06	LAST BHI MWD SURVEY	
16024.00	90.360	90.080	6354.90	PROJECTION TO BIT	