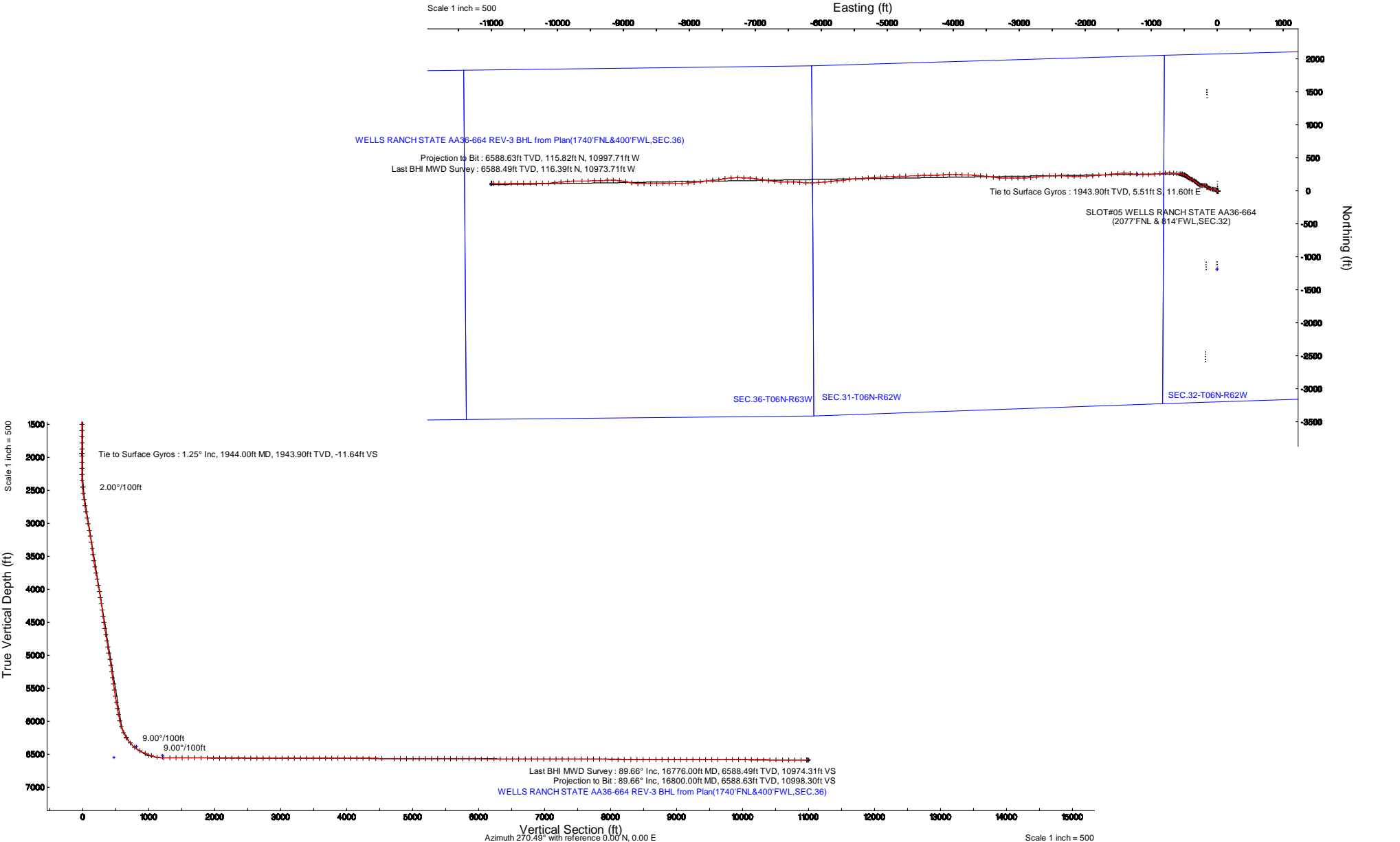


NOBLE ENERGY, INC

Location:	COLORADO	Slot:	SLOT#05 WELLS RANCH STATE AA36-664 (2077FNL & 814FWL, SEC.32)
Field:	WELD COUNTY (NOBLE NAD 83 GRID)	Well:	WELLS RANCH STATE AA36-664
Facility:	SEC.32-T06N-R62W	Wellbore:	WELLS RANCH STATE AA36-664 PWB

Plot reference wellpath is WELLS RANCH STATE AA36-664 (REV-3) BHL	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (2011), US Feet
True vertical depths are referenced to RIG (32) (R62)	" = Wellpath was transformed from a different geoidic datum
Measured depths are referenced to RIG (32) (R62)	North Reference: Grid north
RIG (32) (R62) to Mean Sea Level: 4761 Feet	Scale: True distance
Mean Sea Level to Mud line (M) Slot: SLOTH#05 WELLS RANCH STATE AA36-664 (2077FNL & 814FWL, SEC.32): 0 feet	Depth: sea in feet
Coordinates are in feet referenced to Slot	Created by: generic on 2019-07-13
	Database: WA, DEN, Denver, Data

Location Information					
Section	Grid East (US Feet)	Grid North (US Feet)	Latitude	Longitude	
SEC.32-T06N-R62W	329424.382	440233.359	40°02'03.00"N	104°02'13.00"W	
814		Local N (ft)	Local E (ft)	Latitude	
		1187.78	1.25	40°02'03.00"N	
SLOTH#05 WELLS RANCH STATE AA36-664 (2077FNL & 814FWL, SEC.32)				Longitude	
				104°02'13.00"W	
RIG (32) (R62) to Mud line (M) Slot: SLOTH#05 WELLS RANCH STATE AA36-664 (2077FNL & 814FWL, SEC.32)				2019	
Mean Sea Level to Mud line (M) Slot: SLOTH#05 WELLS RANCH STATE AA36-664 (2077FNL & 814FWL, SEC.32)				2019	
RIG (32) (R62) to Mean Sea Level				2019	





Actual Wellpath Report

WELLS RANCH STATE AA36-664 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#05 WELLS RANCH STATE AA36-664 (2077'FNL & 814'FWL,SEC.32)
Area	COLORADO	Well	WELLS RANCH STATE AA36-664
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA36-664 AWB
Facility	SEC.32-T06N-R62W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 5.0
North Reference	Grid	User	Guenaler
Scale	0.999963	Report Generated	19/Jul/2019 at 15:19
Convergence at slot	0.75° East	Database/Source file	WA_DEN_Denver_Defn/WELLS_RANCH_STATE_AA36-664_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	1187.78	1.35	3319025.71	1406921.09	40°26'41.064"N	104°21'13.464"W
Facility Reference Pt			3319024.36	1405733.36	40°26'29.328"N	104°21'13.680"W
Field Reference Pt			3000000.00	4454105.15	48°46'34.315"N	105°30'00.000"W

WELLPATH DATUM			
Calculation method	Minimum curvature	RIG (30') (RKB) to Facility Vertical Datum	4761.00ft
Horizontal Reference Pt	Slot	RIG (30') (RKB) to Mean Sea Level	4761.00ft
Vertical Reference Pt	RIG (30') (RKB)	RIG (30') (RKB) to Mud Line at Slot (SLOT#05 WELLS RANCH STATE AA36-664 (2077'FNL & 814'FWL,SEC.32))	4761.00ft
MD Reference Pt	RIG (30') (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	270.49°



Actual Wellpath Report

WELLS RANCH STATE AA36-664 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#05 WELLS RANCH STATE AA36-664 (2077'FNL & 814'FWL,SEC.32)
Area	COLORADO	Well	WELLS RANCH STATE AA36-664
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA36-664 AWP
Facility	SEC.32-T06N-R62W		

WELLPATH DATA (179 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00	0.000	351.720	0.00	0.00	0.00	0.00	40°26'41.064"N	104°21'13.464"W	0.00	
84.00	0.180	351.720	84.00	0.02	0.13	-0.02	40°26'41.065"N	104°21'13.464"W	0.21	
178.00	0.170	47.350	178.00	-0.06	0.37	0.06	40°26'41.068"N	104°21'13.463"W	0.17	
269.00	0.360	24.670	269.00	-0.27	0.72	0.28	40°26'41.071"N	104°21'13.460"W	0.23	
364.00	0.290	66.740	364.00	-0.62	1.09	0.63	40°26'41.075"N	104°21'13.456"W	0.26	
459.00	0.260	20.210	459.00	-0.91	1.39	0.92	40°26'41.078"N	104°21'13.452"W	0.23	
553.00	0.360	37.110	552.99	-1.16	1.82	1.17	40°26'41.082"N	104°21'13.449"W	0.14	
648.00	0.550	71.610	647.99	-1.77	2.20	1.79	40°26'41.086"N	104°21'13.441"W	0.34	
743.00	0.120	83.530	742.99	-2.30	2.36	2.32	40°26'41.087"N	104°21'13.434"W	0.46	
837.00	0.580	135.340	836.99	-2.73	2.03	2.75	40°26'41.084"N	104°21'13.428"W	0.55	
932.00	0.850	123.240	931.98	-3.67	1.30	3.68	40°26'41.076"N	104°21'13.416"W	0.32	
1026.00	0.730	129.510	1025.97	-4.72	0.54	4.72	40°26'41.069"N	104°21'13.403"W	0.16	
1121.00	0.810	112.680	1120.96	-5.81	-0.10	5.81	40°26'41.062"N	104°21'13.389"W	0.25	
1216.00	0.770	114.500	1215.95	-7.01	-0.63	7.01	40°26'41.057"N	104°21'13.373"W	0.05	
1310.00	0.580	130.860	1309.95	-7.95	-1.20	7.94	40°26'41.051"N	104°21'13.361"W	0.29	
1405.00	0.660	153.710	1404.94	-8.57	-2.01	8.55	40°26'41.043"N	104°21'13.354"W	0.27	
1500.00	0.720	159.090	1499.94	-9.03	-3.05	9.01	40°26'41.033"N	104°21'13.348"W	0.09	
1594.00	0.460	187.190	1593.93	-9.20	-3.98	9.17	40°26'41.023"N	104°21'13.346"W	0.41	
1689.00	0.240	229.190	1688.93	-9.01	-4.49	8.97	40°26'41.019"N	104°21'13.349"W	0.34	
1784.00	0.330	126.780	1783.93	-9.08	-4.78	9.04	40°26'41.016"N	104°21'13.348"W	0.47	
1878.00	1.210	102.550	1877.92	-10.27	-5.16	10.22	40°26'41.012"N	104°21'13.333"W	0.98	
1944.00	1.250	105.640	1943.90	-11.64	-5.51	11.60	40°26'41.008"N	104°21'13.315"W	0.12	Tie to Surface Gyros
1981.00	0.590	93.920	1980.90	-12.22	-5.63	12.18	40°26'41.007"N	104°21'13.307"W	1.85	
2075.00	0.070	202.790	2074.90	-12.69	-5.71	12.64	40°26'41.006"N	104°21'13.302"W	0.66	
2170.00	0.070	31.360	2169.90	-12.69	-5.72	12.65	40°26'41.006"N	104°21'13.301"W	0.15	
2265.00	1.900	319.350	2264.88	-11.69	-4.47	11.65	40°26'41.018"N	104°21'13.314"W	1.98	
2359.00	3.780	302.930	2358.76	-8.05	-1.61	8.03	40°26'41.047"N	104°21'13.360"W	2.16	
2454.00	5.290	297.280	2453.46	-1.49	2.10	1.51	40°26'41.085"N	104°21'13.444"W	1.66	
2548.00	7.560	300.430	2546.87	7.73	7.22	-7.67	40°26'41.136"N	104°21'13.562"W	2.44	
2643.00	9.870	301.830	2640.76	20.10	14.68	-19.98	40°26'41.212"N	104°21'13.720"W	2.44	

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#05 WELLS RANCH STATE AA36-664 (2077'FNL & 814'FWL,SEC.32)
Area	COLORADO	Well	WELLS RANCH STATE AA36-664
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA36-664 AWP
Facility	SEC.32-T06N-R62W		

WELLPATH DATA (179 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2738.00	9.810	285.780	2734.38	34.87	21.18	-34.69	40°26'41.278"N	104°21'13.909"W	2.88	
2832.00	10.140	273.840	2826.97	50.86	23.91	-50.65	40°26'41.307"N	104°21'14.115"W	2.22	
2927.00	10.040	276.920	2920.50	67.43	25.47	-67.22	40°26'41.324"N	104°21'14.329"W	0.58	
3021.00	10.080	283.110	3013.06	83.60	28.32	-83.36	40°26'41.354"N	104°21'14.537"W	1.15	
3116.00	10.170	289.140	3106.58	99.66	32.96	-99.38	40°26'41.402"N	104°21'14.744"W	1.12	
3210.00	10.110	290.250	3199.12	115.29	38.53	-114.96	40°26'41.459"N	104°21'14.944"W	0.22	
3305.00	9.880	294.070	3292.67	130.61	44.74	-130.23	40°26'41.523"N	104°21'15.141"W	0.74	
3400.00	9.900	304.970	3386.27	144.81	52.75	-144.36	40°26'41.604"N	104°21'15.322"W	1.97	
3494.00	10.420	316.640	3478.81	157.36	63.56	-156.82	40°26'41.712"N	104°21'15.482"W	2.25	
3589.00	10.470	308.080	3572.24	170.15	75.13	-169.52	40°26'41.828"N	104°21'15.644"W	1.63	
3684.00	10.650	288.160	3665.66	185.36	83.20	-184.66	40°26'41.910"N	104°21'15.838"W	3.83	
3778.00	10.500	261.290	3758.12	202.11	84.61	-201.39	40°26'41.926"N	104°21'16.054"W	5.20	
3873.00	10.560	264.080	3851.52	219.30	82.40	-218.60	40°26'41.906"N	104°21'16.277"W	0.54	
3968.00	10.490	271.120	3944.93	236.60	81.67	-235.91	40°26'41.901"N	104°21'16.501"W	1.35	
4062.00	10.410	285.960	4037.38	253.34	84.17	-252.63	40°26'41.928"N	104°21'16.717"W	2.86	
4157.00	10.510	301.930	4130.83	269.01	91.12	-268.24	40°26'41.999"N	104°21'16.918"W	3.04	
4252.00	10.440	306.350	4224.24	283.38	100.80	-282.53	40°26'42.096"N	104°21'17.101"W	0.85	
4346.00	10.570	307.740	4316.67	297.15	111.13	-296.20	40°26'42.200"N	104°21'17.276"W	0.30	
4441.00	10.470	310.940	4410.07	310.65	122.11	-309.61	40°26'42.310"N	104°21'17.448"W	0.62	
4536.00	10.500	310.560	4503.49	323.84	133.40	-322.71	40°26'42.423"N	104°21'17.615"W	0.08	
4630.00	10.530	308.450	4595.91	337.17	144.31	-335.95	40°26'42.533"N	104°21'17.785"W	0.41	
4725.00	10.420	303.190	4689.33	351.24	154.41	-349.93	40°26'42.634"N	104°21'17.964"W	1.01	
4820.00	10.500	299.980	4782.75	366.01	163.44	-364.62	40°26'42.725"N	104°21'18.152"W	0.62	
4915.00	10.490	295.400	4876.16	381.39	171.47	-379.93	40°26'42.807"N	104°21'18.349"W	0.88	
5009.00	10.470	287.470	4968.60	397.32	177.71	-395.81	40°26'42.870"N	104°21'18.553"W	1.53	
5104.00	10.090	292.400	5062.07	413.29	183.47	-411.74	40°26'42.929"N	104°21'18.758"W	1.01	
5199.00	10.310	313.410	5155.61	427.25	192.49	-425.61	40°26'43.020"N	104°21'18.936"W	3.90	
5294.00	10.330	311.390	5249.07	439.91	203.96	-438.18	40°26'43.135"N	104°21'19.097"W	0.38	
5388.00	10.470	310.670	5341.52	452.80	215.10	-450.98	40°26'43.247"N	104°21'19.261"W	0.20	
5483.00	10.530	303.970	5434.94	466.64	225.58	-464.72	40°26'43.352"N	104°21'19.437"W	1.29	

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#05 WELLS RANCH STATE AA36-664 (2077'FNL & 814'FWL,SEC.32)
Area	COLORADO	Well	WELLS RANCH STATE AA36-664
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA36-664 AWB
Facility	SEC.32-T06N-R62W		

WELLPATH DATA (179 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5578.00	9.880	299.620	5528.44	481.00	234.46	-479.01	40°26'43.442"N	104°21'19.620"W	1.06	
5673.00	10.470	298.130	5621.94	495.77	242.55	-493.71	40°26'43.524"N	104°21'19.809"W	0.68	
5767.00	10.490	287.860	5714.38	511.50	249.21	-509.38	40°26'43.591"N	104°21'20.010"W	1.98	
5862.00	10.350	281.790	5807.82	528.12	253.60	-525.97	40°26'43.637"N	104°21'20.224"W	1.16	
5956.00	10.550	276.370	5900.26	544.97	256.28	-542.79	40°26'43.666"N	104°21'20.441"W	1.07	
6051.00	10.530	274.620	5993.66	562.27	257.95	-560.08	40°26'43.684"N	104°21'20.664"W	0.34	
6146.00	17.410	271.500	6085.79	585.17	259.02	-582.97	40°26'43.698"N	104°21'20.960"W	7.28	
6240.00	24.780	274.990	6173.44	618.92	261.10	-616.70	40°26'43.723"N	104°21'21.396"W	7.95	
6335.00	32.000	278.580	6256.96	663.75	266.60	-661.49	40°26'43.783"N	104°21'21.974"W	7.81	
6430.00	41.500	274.050	6333.01	720.22	272.59	-717.91	40°26'43.849"N	104°21'22.703"W	10.39	
6525.00	51.440	265.190	6398.42	788.86	271.70	-786.57	40°26'43.849"N	104°21'23.591"W	12.44	
6619.00	61.820	262.080	6450.07	866.67	262.88	-864.45	40°26'43.772"N	104°21'24.600"W	11.38	
6714.00	66.850	263.880	6491.20	951.53	252.45	-949.40	40°26'43.679"N	104°21'25.700"W	5.56	
6809.00	72.590	268.250	6524.13	1040.32	246.40	-1038.25	40°26'43.631"N	104°21'26.850"W	7.42	
6903.00	78.880	272.090	6547.29	1131.36	246.71	-1129.28	40°26'43.646"N	104°21'28.028"W	7.77	
6998.00	89.630	276.730	6556.79	1225.49	254.00	-1223.36	40°26'43.730"N	104°21'29.243"W	12.31	
7093.00	89.750	275.230	6557.30	1320.05	263.90	-1317.84	40°26'43.840"N	104°21'30.463"W	1.58	
7187.00	90.090	269.580	6557.43	1413.96	267.84	-1411.72	40°26'43.890"N	104°21'31.677"W	6.02	
7282.00	89.570	264.840	6557.72	1508.78	263.22	-1506.58	40°26'43.857"N	104°21'32.905"W	5.02	
7377.00	89.720	263.960	6558.31	1603.24	253.95	-1601.12	40°26'43.777"N	104°21'34.129"W	0.94	
7472.00	89.690	265.530	6558.79	1697.76	245.25	-1695.72	40°26'43.703"N	104°21'35.354"W	1.65	
7567.00	89.660	265.870	6559.33	1792.42	238.13	-1790.45	40°26'43.645"N	104°21'36.580"W	0.36	
7661.00	89.660	265.630	6559.89	1886.10	231.16	-1884.19	40°26'43.588"N	104°21'37.794"W	0.26	
7756.00	89.690	267.090	6560.43	1980.85	225.13	-1978.99	40°26'43.540"N	104°21'39.021"W	1.54	
7851.00	89.720	266.850	6560.92	2075.67	220.11	-2073.86	40°26'43.503"N	104°21'40.248"W	0.25	
7946.00	90.030	270.580	6561.13	2170.60	217.98	-2168.82	40°26'43.494"N	104°21'41.477"W	3.94	
8040.00	90.060	274.520	6561.05	2264.53	222.16	-2262.70	40°26'43.547"N	104°21'42.690"W	4.19	
8135.00	89.940	271.170	6561.05	2359.43	226.87	-2357.57	40°26'43.606"N	104°21'43.917"W	3.53	
8230.00	90.000	270.170	6561.10	2454.43	227.98	-2452.57	40°26'43.629"N	104°21'45.145"W	1.05	
8324.00	89.880	269.000	6561.20	2548.42	227.30	-2546.56	40°26'43.634"N	104°21'46.361"W	1.25	

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#05 WELLS RANCH STATE AA36-664 (2077'FNL & 814'FWL,SEC.32)
Area	COLORADO	Well	WELLS RANCH STATE AA36-664
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA36-664 AWB
Facility	SEC.32-T06N-R62W		

WELLPATH DATA (179 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8419.00	89.940	264.990	6561.35	2643.22	222.32	-2641.41	40°26'43.597"N	104°21'47.588"W	4.22	
8514.00	89.820	261.970	6561.55	2737.50	211.54	-2735.79	40°26'43.502"N	104°21'48.811"W	3.18	
8608.00	90.000	265.250	6561.70	2830.81	201.08	-2829.19	40°26'43.411"N	104°21'50.020"W	3.49	
8703.00	89.910	270.060	6561.77	2925.66	197.19	-2924.08	40°26'43.384"N	104°21'51.248"W	5.06	
8797.00	89.780	269.340	6562.03	3019.65	196.70	-3018.08	40°26'43.391"N	104°21'52.464"W	0.78	
8892.00	89.820	268.790	6562.36	3114.62	195.15	-3113.07	40°26'43.388"N	104°21'53.693"W	0.58	
8987.00	90.060	269.850	6562.46	3209.60	194.02	-3208.06	40°26'43.389"N	104°21'54.921"W	1.14	
9081.00	89.720	274.780	6562.64	3303.53	197.82	-3301.95	40°26'43.438"N	104°21'56.135"W	5.26	
9176.00	90.060	278.310	6562.82	3397.98	208.65	-3396.32	40°26'43.557"N	104°21'57.354"W	3.73	
9271.00	89.880	276.670	6562.87	3492.27	221.03	-3490.50	40°26'43.691"N	104°21'58.570"W	1.74	
9366.00	89.690	274.870	6563.23	3586.86	230.58	-3585.02	40°26'43.798"N	104°21'59.790"W	1.91	
9461.00	89.940	273.350	6563.53	3681.67	237.39	-3679.77	40°26'43.877"N	104°22'01.015"W	1.62	
9555.00	89.850	272.090	6563.70	3775.60	241.85	-3773.66	40°26'43.933"N	104°22'02.228"W	1.34	
9650.00	89.880	272.160	6563.93	3870.56	245.37	-3868.60	40°26'43.980"N	104°22'03.456"W	0.08	
9745.00	90.030	270.170	6564.00	3965.55	247.30	-3963.57	40°26'44.011"N	104°22'04.684"W	2.10	
9840.00	89.750	270.820	6564.19	4060.54	248.12	-4058.57	40°26'44.031"N	104°22'05.912"W	0.74	
9934.00	89.290	265.420	6564.97	4154.43	245.04	-4152.48	40°26'44.012"N	104°22'07.127"W	5.77	
10029.00	89.910	266.650	6565.64	4249.13	238.47	-4247.25	40°26'43.959"N	104°22'08.354"W	1.45	
10124.00	89.910	268.910	6565.79	4344.02	234.79	-4342.17	40°26'43.935"N	104°22'09.582"W	2.38	
10219.00	89.600	269.730	6566.19	4439.00	233.66	-4437.16	40°26'43.936"N	104°22'10.811"W	0.92	
10313.00	89.690	267.520	6566.78	4532.94	231.41	-4531.13	40°26'43.925"N	104°22'12.026"W	2.35	
10503.00	89.780	267.900	6567.65	4722.72	223.82	-4720.97	40°26'43.874"N	104°22'14.483"W	0.21	
10598.00	89.850	267.650	6567.96	4817.61	220.13	-4815.90	40°26'43.850"N	104°22'15.711"W	0.27	
10692.00	89.720	267.830	6568.31	4911.50	216.42	-4909.83	40°26'43.825"N	104°22'16.927"W	0.24	
10787.00	90.030	267.660	6568.52	5006.39	212.68	-5004.75	40°26'43.800"N	104°22'18.155"W	0.37	
10882.00	89.820	267.110	6568.64	5101.25	208.35	-5099.65	40°26'43.769"N	104°22'19.383"W	0.62	
10977.00	90.060	266.190	6568.74	5196.04	202.80	-5194.49	40°26'43.726"N	104°22'20.610"W	1.00	
11071.00	89.690	266.290	6568.95	5289.78	196.63	-5288.29	40°26'43.677"N	104°22'21.825"W	0.41	
11166.00	89.940	266.550	6569.26	5384.54	190.70	-5383.10	40°26'43.630"N	104°22'23.052"W	0.38	
11261.00	89.380	266.700	6569.82	5479.32	185.11	-5477.93	40°26'43.587"N	104°22'24.279"W	0.61	

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#05 WELLS RANCH STATE AA36-664 (2077'FNL & 814'FWL,SEC.32)
Area	COLORADO	Well	WELLS RANCH STATE AA36-664
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA36-664 AWB
Facility	SEC.32-T06N-R62W		

WELLPATH DATA (179 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11356.00	89.720	259.270	6570.57	5573.44	173.52	-5572.15	40°26'43.484"N	104°22'25.500"W	7.83	
11450.00	90.030	264.130	6570.77	5666.30	159.95	-5665.14	40°26'43.362"N	104°22'26.704"W	5.18	
11545.00	89.420	267.490	6571.23	5760.97	153.01	-5759.87	40°26'43.305"N	104°22'27.931"W	3.59	
11640.00	89.750	263.240	6571.92	5855.57	145.34	-5854.54	40°26'43.241"N	104°22'29.156"W	4.49	
11734.00	89.570	264.020	6572.47	5948.89	134.91	-5947.95	40°26'43.150"N	104°22'30.366"W	0.85	
11829.00	89.720	266.110	6573.06	6043.46	126.74	-6042.59	40°26'43.081"N	104°22'31.591"W	2.21	
11924.00	89.780	267.330	6573.48	6138.25	121.30	-6137.44	40°26'43.039"N	104°22'32.819"W	1.29	
12018.00	89.850	273.070	6573.78	6232.21	121.63	-6231.40	40°26'43.054"N	104°22'34.034"W	6.11	
12113.00	89.880	276.590	6574.01	6326.92	129.63	-6326.04	40°26'43.145"N	104°22'35.257"W	3.71	
12208.00	89.690	270.110	6574.36	6421.75	135.17	-6420.83	40°26'43.212"N	104°22'36.482"W	6.82	
12303.00	89.880	267.970	6574.72	6516.72	133.58	-6515.81	40°26'43.208"N	104°22'37.710"W	2.26	
12398.00	89.910	273.530	6574.89	6611.68	134.83	-6610.76	40°26'43.232"N	104°22'38.938"W	5.85	
12492.00	89.780	276.300	6575.15	6705.39	142.88	-6704.41	40°26'43.323"N	104°22'40.148"W	2.95	
12587.00	89.880	278.690	6575.43	6799.67	155.27	-6798.59	40°26'43.457"N	104°22'41.364"W	2.52	
12681.00	90.180	279.340	6575.38	6892.63	170.00	-6891.43	40°26'43.614"N	104°22'42.562"W	0.76	
12776.00	89.910	276.910	6575.31	6986.78	183.42	-6985.47	40°26'43.759"N	104°22'43.776"W	2.57	
12871.00	90.340	274.540	6575.10	7081.38	192.90	-7079.99	40°26'43.864"N	104°22'44.997"W	2.54	
12965.00	90.090	271.790	6574.75	7175.27	198.09	-7173.83	40°26'43.927"N	104°22'46.210"W	2.94	
13060.00	89.940	269.970	6574.72	7270.26	199.55	-7268.82	40°26'43.954"N	104°22'47.438"W	1.92	
13155.00	89.820	266.900	6574.92	7365.19	196.95	-7363.77	40°26'43.940"N	104°22'48.667"W	3.23	
13250.00	89.600	260.380	6575.40	7459.46	186.44	-7458.13	40°26'43.848"N	104°22'49.889"W	6.87	
13344.00	89.540	261.730	6576.11	7552.18	171.82	-7550.99	40°26'43.715"N	104°22'51.092"W	1.44	
13439.00	89.600	264.850	6576.82	7646.42	160.72	-7645.32	40°26'43.617"N	104°22'52.314"W	3.28	
13534.00	89.480	262.850	6577.58	7740.77	150.55	-7739.77	40°26'43.528"N	104°22'53.537"W	2.11	
13629.00	89.290	262.630	6578.60	7834.90	138.54	-7834.00	40°26'43.421"N	104°22'54.758"W	0.31	
13723.00	89.480	264.810	6579.61	7928.23	128.26	-7927.42	40°26'43.331"N	104°22'55.968"W	2.33	
13818.00	89.110	265.060	6580.78	8022.78	119.87	-8022.05	40°26'43.260"N	104°22'57.193"W	0.47	
13913.00	90.000	270.200	6581.52	8117.62	115.95	-8116.93	40°26'43.233"N	104°22'58.421"W	5.49	
14007.00	89.570	271.370	6581.87	8211.62	117.23	-8210.92	40°26'43.258"N	104°22'59.636"W	1.33	
14102.00	89.750	267.440	6582.44	8306.58	116.25	-8305.89	40°26'43.260"N	104°23'00.864"W	4.14	

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#05 WELLS RANCH STATE AA36-664 (2077'FNL & 814'FWL,SEC.32)
Area	COLORADO	Well	WELLS RANCH STATE AA36-664
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA36-664 AWB
Facility	SEC.32-T06N-R62W		

WELLPATH DATA (179 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
14197.00	89.780	267.410	6582.82	8401.45	111.98	-8400.80	40°26'43.229"N	104°23'02.093"W	0.04	
14291.00	89.780	269.280	6583.19	8495.38	109.27	-8494.75	40°26'43.214"N	104°23'03.308"W	1.99	
14386.00	89.720	270.020	6583.60	8590.36	108.69	-8589.75	40°26'43.220"N	104°23'04.537"W	0.78	
14481.00	90.030	269.130	6583.81	8685.35	107.98	-8684.74	40°26'43.225"N	104°23'05.765"W	0.99	
14576.00	90.120	273.960	6583.68	8780.31	110.54	-8779.68	40°26'43.262"N	104°23'06.993"W	5.09	
14671.00	90.090	279.850	6583.51	8874.67	121.96	-8873.95	40°26'43.387"N	104°23'08.210"W	6.20	
14765.00	89.970	282.070	6583.46	8967.10	139.83	-8966.23	40°26'43.575"N	104°23'09.401"W	2.37	
14860.00	90.060	277.360	6583.43	9060.84	155.85	-9059.84	40°26'43.745"N	104°23'10.609"W	4.96	
14955.00	89.940	270.770	6583.43	9155.61	162.58	-9154.55	40°26'43.823"N	104°23'11.833"W	6.94	
15050.00	89.780	266.270	6583.67	9250.53	160.13	-9249.49	40°26'43.811"N	104°23'13.061"W	4.74	
15145.00	89.910	269.010	6583.92	9345.40	156.22	-9344.40	40°26'43.784"N	104°23'14.289"W	2.89	
15239.00	90.090	268.640	6583.92	9439.36	154.29	-9438.38	40°26'43.776"N	104°23'15.505"W	0.44	
15334.00	89.940	268.200	6583.90	9534.30	151.67	-9533.35	40°26'43.762"N	104°23'16.733"W	0.49	
15429.00	90.090	268.490	6583.87	9629.23	148.93	-9628.31	40°26'43.747"N	104°23'17.962"W	0.34	
15555.00	89.820	269.190	6583.97	9755.18	146.38	-9754.28	40°26'43.737"N	104°23'19.592"W	0.60	
15650.00	89.880	264.940	6584.22	9849.99	141.52	-9849.13	40°26'43.701"N	104°23'20.819"W	4.47	
15745.00	89.690	266.780	6584.58	9944.67	134.66	-9943.88	40°26'43.645"N	104°23'22.046"W	1.95	
15840.00	89.720	262.820	6585.07	10039.18	126.05	-10038.47	40°26'43.572"N	104°23'23.270"W	4.17	
15935.00	89.780	265.940	6585.48	10133.63	116.75	-10133.00	40°26'43.491"N	104°23'24.494"W	3.28	
16029.00	89.850	270.400	6585.79	10227.53	113.75	-10226.93	40°26'43.473"N	104°23'25.710"W	4.75	
16124.00	89.750	272.840	6586.12	10322.50	116.43	-10321.88	40°26'43.512"N	104°23'26.937"W	2.57	
16219.00	89.690	269.800	6586.58	10417.48	118.62	-10416.85	40°26'43.545"N	104°23'28.165"W	3.20	
16313.00	89.660	268.740	6587.12	10511.46	117.42	-10510.84	40°26'43.545"N	104°23'29.381"W	1.13	
16408.00	89.850	268.610	6587.52	10606.41	115.23	-10605.81	40°26'43.535"N	104°23'30.610"W	0.24	
16502.00	89.820	268.950	6587.79	10700.36	113.22	-10699.79	40°26'43.527"N	104°23'31.825"W	0.36	
16597.00	89.820	270.410	6588.09	10795.35	112.69	-10794.78	40°26'43.533"N	104°23'33.054"W	1.54	
16692.00	90.000	272.790	6588.24	10890.33	115.35	-10889.74	40°26'43.571"N	104°23'34.282"W	2.51	
16776.00	89.660	268.640	6588.49	10974.31	116.39	-10973.71	40°26'43.592"N	104°23'35.367"W	4.96	Last BHI MWD Survey
16800.00	89.660	268.640	6588.63	10998.30	115.82	-10997.71	40°26'43.589"N	104°23'35.678"W	0.00	Projection to Bit

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
WELLS RANCH STATE AA36-622 SEC.31-T06N-R62W	6.00	-1187.78	-1.35	3319024.36	1405733.36	40°26'29.328"N	104°21'13.680"W	polygon
WELLS RANCH STATE AA36-622 SEC.32-T06N-R62W	6.00	-1187.78	-1.35	3319024.36	1405733.36	40°26'29.328"N	104°21'13.680"W	polygon
WELLS RANCH STATE AA36-622 SEC.35-T06N-R63W	6.00	-1187.78	-1.35	3319024.36	1405733.36	40°26'29.328"N	104°21'13.680"W	polygon
WELLS RANCH STATE AA36-622 SEC.36-T06N-R63W	6.00	-1187.78	-1.35	3319024.36	1405733.36	40°26'29.328"N	104°21'13.680"W	polygon
WELLS RANCH STATE AA36-664 Rev-2 TPZ	6382.00	258.11	-812.32	3318213.42	1407179.19	40°26'43.718"N	104°21'23.927"W	point
WELLS RANCH STATE AA36-664 REV-2 BHL from Plan (1740'FNL&400'FWL,SEC.36	6518.00	94.33	-11006.55	3308019.59	1407015.42	40°26'43.378"N	104°23'35.796"W	point

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
WELLS RANCH STATE AA36-664 Rev-2 Landing Point	6518.00	251.80	-1205.62	3317820.14	1407172.88	40°26'43.706"N	104°21'29.014"W	point
WELLS RANCH STATE AA36-664 TPZ	6553.00	246.90	-473.91	3318551.82	1407167.98	40°26'43.564"N	104°21'19.552"W	point
WELLS RANCH STATE AA36-664 Rev-3 Landing Point	6555.55	251.72	-1205.62	3317820.14	1407172.80	40°26'43.705"N	104°21'29.014"W	point
WELLS RANCH STATE AA36-664 REV-3 BHL from Plan (1740'FNL&400'FWL,SEC.36)	6589.77	94.33	-11006.55	3308019.59	1407015.42	40°26'43.378"N	104°23'35.796"W	point
WELLS RANCH STATE AA36-664 BHL ON PLAT (1740'FNL & 110'FEL,SEC.35)	6591.53	87.06	-11511.23	3307514.93	1407008.15	40°26'43.368"N	104°23'42.324"W	point



Actual Wellpath Report

WELLS RANCH STATE AA36-664 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#05 WELLS RANCH STATE AA36-664 (2077'FNL & 814'FWL,SEC.32)
Area	COLORADO	Well	WELLS RANCH STATE AA36-664
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA36-664 AWB
Facility	SEC.32-T06N-R62W		

WELLPATH COMPOSITION - Ref Wellbore: WELLS RANCH STATE AA36-664 AWB Ref Wellpath: WELLS RANCH STATE AA36-664 AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	1944.00	BHI Generic gyro - northseeking (Standard)	3rd Party Surface Gyros <84'-1944'>	WELLS RANCH STATE AA36-664 AWB
1944.00	16776.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	BHI/ATC 8.5" Hole OWSG MWD rev2+IFR1+MSA <1981'-16776'>	WELLS RANCH STATE AA36-664 AWB
16776.00	16800.00	Blind Drilling (std)	Projection to bit	WELLS RANCH STATE AA36-664 AWB



Actual Wellpath Report

WELLS RANCH STATE AA36-664 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#05 WELLS RANCH STATE AA36-664 (2077'FNL & 814'FWL,SEC.32)
Area	COLORADO	Well	WELLS RANCH STATE AA36-664
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA36-664 AWB
Facility	SEC.32-T06N-R62W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1944.00	1.250	105.640	1943.90	Tie to Surface Gyros
16776.00	89.660	268.640	6588.49	Last BHI MWD Survey
16800.00	89.660	268.640	6588.63	Projection to Bit