

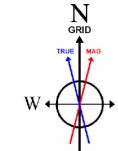
NOBLE ENERGY, INC

Location: COLORADO Slot: SLOT#05 WELLS RANCH AF07-631 (1275'FSL & 175'FEL, SEC.08)
 Field: WELD COUNTY (NOBLE NAD 83 GRID) Well: WELLS RANCH AF07-631
 Facility: SEC.08-T05N-R62W Wellbore: WELLS RANCH AF07-631 PWB

PWD reference wellbore is WELLS RANCH AF07-631 PWB (REV 0.0)	Grid System: NAD83 - Lambert Colorado SP, Northern Zone (2011 US Nat)
True vertical depths are referenced to PWD (2010) (PWB)	North Reference: Grid north
Measured depths are referenced to PWD (2010) (PWB)	Scale: True distance
PWD (2010) (PWB) to Mean Sea Level: 4743 feet	Depths are in feet
Mean Sea Level to Mud line (at Slot) SLOT#05 WELLS RANCH AF07-631 (1275'FSL & 175'FEL, SEC.08): 0 feet	Created by: cadmyan on 2017-08-20
Coordinates are in feet referenced to SNA	Drawn by: cadmyan

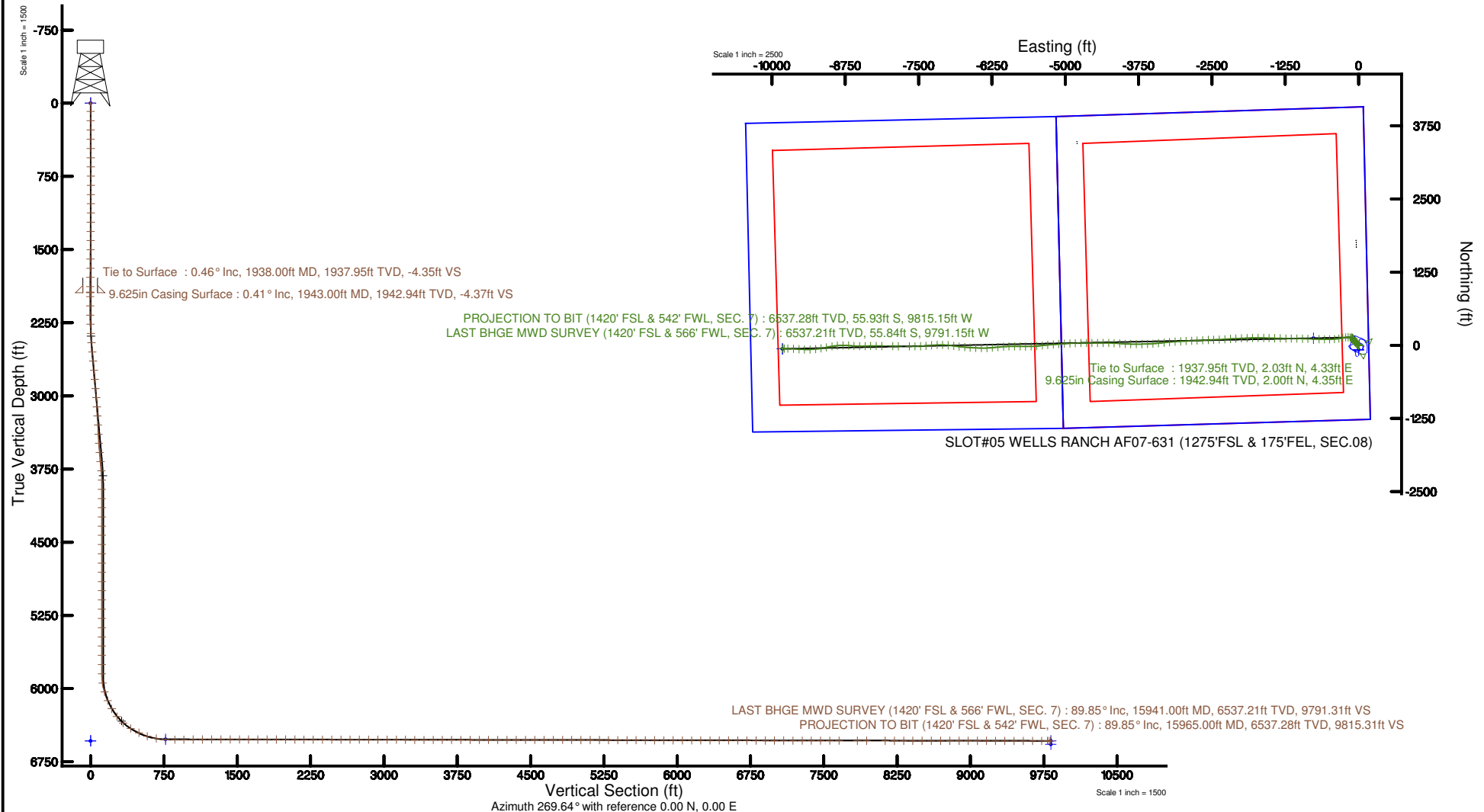
Location Information

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.08 T05N-R62W	2215888.024	1387865.630	40°50'11.848"N	104°51'16.322"W
Well	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#05 WELLS RANCH AF07-631 (1275'FSL & 175'FEL, SEC.08)	2215888.024	1387865.630	40°50'11.848"N	104°51'16.322"W
SEC.08 T05N-R62W to Mean Sea Level: 4743 feet	2215888.024	1387865.630	40°50'11.848"N	104°51'16.322"W
Mean Sea Level to Mud line (at Slot) SLOT#05 WELLS RANCH AF07-631 (1275'FSL & 175'FEL, SEC.08)	0 feet	0 feet	0°	0°
SEC.08 T05N-R62W to Mean Sea Level	4743 feet	4743 feet	0°	0°



BGGM (1900.0 to 2018.0) Dip: 66.96° Field: 52513.1 nT
 Magnetic North is 8.15 degrees East of True North (at 6/6/2017)
 Grid North is 0.75 degrees East of True North
 To correct azimuth from True to Grid subtract 0.75 degrees
 To correct azimuth from Magnetic to Grid add 7.40 degrees

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Actual Wellpath Report

WELLS RANCH AF07-631 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#05 WELLS RANCH AF07-631 (1275'FSL & 175'FEL, SEC.08)
Area	COLORADO	Well	WELLS RANCH AF07-631
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH AF07-631 AWB
Facility	SEC.08-T05N-R62W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 5.1
North Reference	Grid	User	Cantryat
Scale	0.999961	Report Generated	8/30/2017 at 9:44:26 AM
Convergence at slot	0.75° East	Database/Source file	Denver/WELLS_RANCH_AF07-631_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-3446.23	4798.52	3323486.83	1394449.85	40°24'37.260"N	104°20'17.880"W
Facility Reference Pt			3318688.50	1397895.93	40°25'11.928"N	104°21'19.332"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'KB) (RKB) to Facility Vertical Datum	4743.00ft
Horizontal Reference Pt	Slot	RIG (30'KB) (RKB) to Mean Sea Level	4743.00ft
Vertical Reference Pt	RIG (30'KB) (RKB)	RIG (30'KB) (RKB) to Mud Line at Slot (SLOT#05 WELLS RANCH AF07-631 (1275'FSL & 175'FEL, SEC.08))	4743.00ft
MD Reference Pt	RIG (30'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	269.64°



Actual Wellpath Report

WELLS RANCH AF07-631 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#05 WELLS RANCH AF07-631 (1275'FSL & 175'FEL, SEC.08)
Area	COLORADO	Well	WELLS RANCH AF07-631
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH AF07-631 AWB
Facility	SEC.08-T05N-R62W		

WELLPATH DATA (149 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
1938.00	0.460	148.280	1937.95	-4.35	2.03	4.33	40°24'37.280"N	104°20'17.824"W	0.35	Tie to Surface
1983.00	0.110	85.800	1982.94	-4.48	1.88	4.47	40°24'37.278"N	104°20'17.822"W	0.93	
2077.00	0.040	155.230	2076.94	-4.59	1.86	4.58	40°24'37.278"N	104°20'17.821"W	0.11	
2172.00	0.100	227.470	2171.94	-4.54	1.77	4.53	40°24'37.277"N	104°20'17.821"W	0.10	
2266.00	3.370	307.370	2265.89	-2.29	3.40	2.27	40°24'37.293"N	104°20'17.850"W	3.57	
2361.00	3.710	291.820	2360.71	2.76	6.23	-2.80	40°24'37.322"N	104°20'17.915"W	1.07	
2455.00	4.250	288.100	2454.48	8.88	8.44	-8.94	40°24'37.345"N	104°20'17.994"W	0.64	
2550.00	6.940	304.660	2549.03	16.92	12.80	-17.00	40°24'37.389"N	104°20'18.098"W	3.27	
2644.00	6.700	307.430	2642.36	25.91	19.37	-26.03	40°24'37.455"N	104°20'18.213"W	0.43	
2739.00	7.160	314.640	2736.67	34.48	26.89	-34.64	40°24'37.530"N	104°20'18.323"W	1.03	
2834.00	7.510	319.240	2830.89	42.69	35.76	-42.91	40°24'37.619"N	104°20'18.429"W	0.72	
2928.00	7.330	319.330	2924.11	50.55	44.96	-50.83	40°24'37.711"N	104°20'18.529"W	0.19	
3023.00	7.240	326.980	3018.34	57.70	54.57	-58.04	40°24'37.807"N	104°20'18.621"W	1.02	
3117.00	7.200	331.110	3111.60	63.71	64.70	-64.11	40°24'37.908"N	104°20'18.698"W	0.55	
3212.00	7.270	332.730	3205.84	69.27	75.25	-69.74	40°24'38.013"N	104°20'18.769"W	0.23	
3306.00	7.240	332.550	3299.09	74.66	85.80	-75.20	40°24'38.117"N	104°20'18.838"W	0.04	
3401.00	7.290	337.400	3393.33	79.67	96.67	-80.28	40°24'38.226"N	104°20'18.901"W	0.65	
3495.00	7.400	327.020	3486.56	85.19	107.26	-85.86	40°24'38.331"N	104°20'18.972"W	1.41	
3590.00	7.430	318.510	3580.77	92.53	116.99	-93.26	40°24'38.428"N	104°20'19.066"W	1.16	
3684.00	6.640	303.700	3674.07	101.03	124.56	-101.81	40°24'38.504"N	104°20'19.175"W	2.10	
3779.00	5.130	270.480	3768.59	109.83	127.64	-110.63	40°24'38.536"N	104°20'19.288"W	3.85	
3874.00	2.850	198.330	3863.40	114.84	125.44	-115.62	40°24'38.514"N	104°20'19.353"W	5.31	
3968.00	0.740	359.600	3957.37	115.59	123.82	-116.36	40°24'38.499"N	104°20'19.363"W	3.79	
4063.00	0.030	356.280	4052.37	115.59	124.46	-116.37	40°24'38.505"N	104°20'19.363"W	0.75	
4157.00	0.100	125.650	4146.37	115.53	124.44	-116.30	40°24'38.505"N	104°20'19.362"W	0.13	
4252.00	0.060	102.310	4241.37	115.41	124.38	-116.19	40°24'38.504"N	104°20'19.361"W	0.05	
4346.00	0.060	71.400	4335.37	115.32	124.39	-116.09	40°24'38.504"N	104°20'19.360"W	0.03	
4440.00	0.110	21.790	4429.37	115.24	124.49	-116.01	40°24'38.505"N	104°20'19.359"W	0.09	
4535.00	0.070	130.890	4524.37	115.16	124.53	-115.94	40°24'38.505"N	104°20'19.358"W	0.16	
4629.00	0.060	284.790	4618.37	115.16	124.51	-115.94	40°24'38.505"N	104°20'19.358"W	0.13	



Actual Wellpath Report

WELLS RANCH AF07-631 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#05 WELLS RANCH AF07-631 (1275'FSL & 175'FEL, SEC.08)
Area	COLORADO	Well	WELLS RANCH AF07-631
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH AF07-631 AWB
Facility	SEC.08-T05N-R62W		

WELLPATH DATA (149 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4724.00	0.110	11.310	4713.37	115.19	124.61	-115.97	40°24'38.506"N	104°20'19.358"W	0.13	
4818.00	0.060	265.560	4807.37	115.22	124.69	-116.00	40°24'38.507"N	104°20'19.358"W	0.15	
4913.00	0.140	97.900	4902.37	115.16	124.67	-115.94	40°24'38.507"N	104°20'19.358"W	0.21	
5007.00	0.040	61.370	4996.37	115.01	124.67	-115.79	40°24'38.507"N	104°20'19.356"W	0.12	
5102.00	0.090	189.040	5091.37	115.00	124.62	-115.78	40°24'38.506"N	104°20'19.355"W	0.12	
5197.00	0.070	175.880	5186.37	115.01	124.48	-115.78	40°24'38.505"N	104°20'19.356"W	0.03	
5291.00	0.110	113.120	5280.37	114.92	124.39	-115.70	40°24'38.504"N	104°20'19.354"W	0.11	
5386.00	0.030	201.010	5375.37	114.84	124.33	-115.62	40°24'38.503"N	104°20'19.353"W	0.12	
5481.00	0.060	226.760	5470.37	114.89	124.28	-115.67	40°24'38.503"N	104°20'19.354"W	0.04	
5575.00	0.040	196.270	5564.37	114.94	124.21	-115.71	40°24'38.502"N	104°20'19.355"W	0.03	
5670.00	0.070	217.880	5659.37	114.98	124.13	-115.76	40°24'38.502"N	104°20'19.355"W	0.04	
5765.00	0.070	288.120	5754.37	115.07	124.11	-115.85	40°24'38.501"N	104°20'19.356"W	0.08	
5859.00	0.100	7.500	5848.37	115.12	124.20	-115.89	40°24'38.502"N	104°20'19.357"W	0.12	
5954.00	8.600	285.490	5943.01	121.95	126.19	-122.74	40°24'38.523"N	104°20'19.445"W	9.04	
6048.00	17.560	288.420	6034.48	142.18	132.56	-143.01	40°24'38.588"N	104°20'19.706"W	9.55	
6143.00	23.320	273.030	6123.52	174.57	138.09	-175.43	40°24'38.647"N	104°20'20.124"W	8.25	
6237.00	29.350	260.600	6207.79	215.96	135.30	-216.81	40°24'38.625"N	104°20'20.660"W	8.66	
6332.00	39.070	259.680	6286.26	268.57	126.12	-269.36	40°24'38.541"N	104°20'21.340"W	10.25	
6426.00	49.550	260.570	6353.43	333.24	114.92	-333.96	40°24'38.439"N	104°20'22.177"W	11.17	
6521.00	59.460	264.540	6408.54	409.89	105.08	-410.56	40°24'38.351"N	104°20'23.169"W	10.97	
6616.00	64.580	269.510	6453.12	493.64	100.81	-494.28	40°24'38.320"N	104°20'24.252"W	7.10	
6710.00	70.680	271.680	6488.88	580.51	101.75	-581.15	40°24'38.341"N	104°20'25.375"W	6.83	
6805.00	80.630	271.440	6512.39	672.38	104.25	-673.04	40°24'38.377"N	104°20'26.562"W	10.48	
6899.00	87.720	272.200	6521.92	765.76	107.22	-766.45	40°24'38.419"N	104°20'27.769"W	7.59	
6994.00	89.970	271.820	6523.84	860.66	110.55	-861.36	40°24'38.464"N	104°20'28.996"W	2.40	
7088.00	90.340	271.250	6523.58	954.61	113.07	-955.33	40°24'38.501"N	104°20'30.210"W	0.72	
7183.00	90.280	270.770	6523.07	1049.58	114.74	-1050.31	40°24'38.530"N	104°20'31.437"W	0.51	
7278.00	90.150	270.090	6522.71	1144.57	115.46	-1145.31	40°24'38.549"N	104°20'32.665"W	0.73	
7372.00	90.150	270.720	6522.46	1238.56	116.12	-1239.30	40°24'38.567"N	104°20'33.880"W	0.67	
7466.00	90.120	271.540	6522.24	1332.53	117.98	-1333.29	40°24'38.598"N	104°20'35.094"W	0.87	



Actual Wellpath Report

WELLS RANCH AF07-631 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#05 WELLS RANCH AF07-631 (1275'FSL & 175'FEL, SEC.08)
Area	COLORADO	Well	WELLS RANCH AF07-631
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH AF07-631 AWB
Facility	SEC.08-T05N-R62W		

WELLPATH DATA (149 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7561.00	89.820	271.710	6522.29	1427.47	120.67	-1428.25	40°24'38.637"N	104°20'36.322"W	0.36	
7656.00	89.850	271.380	6522.57	1522.42	123.23	-1523.21	40°24'38.674"N	104°20'37.549"W	0.35	
7750.00	89.880	271.370	6522.79	1616.37	125.49	-1617.18	40°24'38.709"N	104°20'38.763"W	0.03	
7845.00	90.000	269.960	6522.89	1711.35	126.59	-1712.18	40°24'38.732"N	104°20'39.991"W	1.49	
7939.00	89.940	268.930	6522.94	1805.35	125.68	-1806.17	40°24'38.735"N	104°20'41.206"W	1.10	
8034.00	89.880	267.560	6523.09	1900.32	122.77	-1901.12	40°24'38.718"N	104°20'42.434"W	1.44	
8128.00	89.940	266.810	6523.23	1994.23	118.15	-1995.01	40°24'38.685"N	104°20'43.648"W	0.80	
8223.00	90.000	267.280	6523.28	2089.14	113.26	-2089.88	40°24'38.649"N	104°20'44.875"W	0.50	
8317.00	89.940	267.060	6523.33	2183.05	108.61	-2183.77	40°24'38.615"N	104°20'46.090"W	0.24	
8412.00	89.970	266.560	6523.41	2277.93	103.33	-2278.62	40°24'38.575"N	104°20'47.317"W	0.53	
8506.00	89.910	267.330	6523.51	2371.83	98.32	-2372.49	40°24'38.537"N	104°20'48.531"W	0.82	
8601.00	89.820	268.720	6523.73	2466.79	95.04	-2467.43	40°24'38.517"N	104°20'49.759"W	1.47	
8695.00	89.940	267.310	6523.93	2560.75	91.79	-2561.37	40°24'38.497"N	104°20'50.973"W	1.51	
8789.00	89.970	266.730	6524.00	2654.65	86.90	-2655.24	40°24'38.461"N	104°20'52.188"W	0.62	
8884.00	90.030	267.360	6524.00	2749.55	82.00	-2750.11	40°24'38.425"N	104°20'53.415"W	0.67	
8978.00	89.600	266.830	6524.30	2843.46	77.24	-2843.99	40°24'38.390"N	104°20'54.629"W	0.73	
9073.00	90.060	266.470	6524.59	2938.33	71.69	-2938.83	40°24'38.347"N	104°20'55.856"W	0.61	
9167.00	89.850	267.750	6524.66	3032.23	66.95	-3032.71	40°24'38.312"N	104°20'57.070"W	1.38	
9262.00	89.690	266.410	6525.04	3127.13	62.11	-3127.58	40°24'38.277"N	104°20'58.298"W	1.42	
9356.00	89.690	264.700	6525.55	3220.89	54.83	-3221.29	40°24'38.217"N	104°20'59.510"W	1.82	
9451.00	89.720	263.790	6526.04	3315.47	45.30	-3315.81	40°24'38.135"N	104°21'00.733"W	0.96	
9545.00	90.090	263.840	6526.19	3408.98	35.17	-3409.26	40°24'38.047"N	104°21'01.943"W	0.40	
9640.00	89.850	268.010	6526.24	3503.76	28.42	-3504.00	40°24'37.992"N	104°21'03.169"W	4.40	
9734.00	89.910	266.940	6526.44	3597.69	24.28	-3597.91	40°24'37.963"N	104°21'04.383"W	1.14	
9829.00	90.000	268.790	6526.52	3692.64	20.74	-3692.84	40°24'37.940"N	104°21'05.611"W	1.95	
9924.00	89.970	269.850	6526.54	3787.64	19.62	-3787.83	40°24'37.941"N	104°21'06.839"W	1.12	
10018.00	90.120	271.200	6526.47	3881.62	20.48	-3881.83	40°24'37.962"N	104°21'08.054"W	1.45	
10112.00	90.060	273.550	6526.32	3975.51	24.37	-3975.74	40°24'38.012"N	104°21'09.267"W	2.50	
10207.00	89.970	273.650	6526.29	4070.28	30.34	-4070.55	40°24'38.083"N	104°21'10.492"W	0.14	
10302.00	89.940	272.780	6526.37	4165.10	35.66	-4165.40	40°24'38.148"N	104°21'11.717"W	0.92	



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WELLS RANCH AF07-631 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#05 WELLS RANCH AF07-631 (1275'FSL & 175'FEL, SEC.08)
Area	COLORADO	Well	WELLS RANCH AF07-631
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH AF07-631 AWB
Facility	SEC.08-T05N-R62W		

WELLPATH DATA (149 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
10396.00	89.940	271.170	6526.47	4259.02	38.90	-4259.34	40°24'38.192"N	104°21'12.931"W	1.71	
10491.00	89.850	269.890	6526.64	4354.00	39.78	-4354.34	40°24'38.213"N	104°21'14.159"W	1.35	
10586.00	89.910	270.050	6526.84	4449.00	39.73	-4449.34	40°24'38.225"N	104°21'15.387"W	0.18	
10680.00	89.970	270.190	6526.94	4543.00	39.93	-4543.33	40°24'38.239"N	104°21'16.602"W	0.16	
10775.00	89.820	269.670	6527.11	4638.00	39.81	-4638.33	40°24'38.250"N	104°21'17.830"W	0.57	
10869.00	89.940	268.500	6527.31	4731.99	38.31	-4732.32	40°24'38.247"N	104°21'19.045"W	1.25	
10964.00	89.880	268.600	6527.46	4826.97	35.91	-4827.29	40°24'38.235"N	104°21'20.273"W	0.12	
11058.00	89.970	267.610	6527.58	4920.94	32.80	-4921.24	40°24'38.216"N	104°21'21.488"W	1.06	
11153.00	90.000	265.960	6527.61	5015.82	27.47	-5016.08	40°24'38.176"N	104°21'22.715"W	1.74	
11247.00	89.880	265.660	6527.71	5109.61	20.60	-5109.83	40°24'38.120"N	104°21'23.928"W	0.34	
11342.00	89.780	265.770	6527.99	5204.38	13.51	-5204.57	40°24'38.062"N	104°21'25.153"W	0.16	
11436.00	89.660	265.390	6528.45	5298.14	6.26	-5298.29	40°24'38.002"N	104°21'26.366"W	0.42	
11530.00	89.630	263.600	6529.03	5391.76	-2.75	-5391.85	40°24'37.925"N	104°21'27.577"W	1.90	
11625.00	89.780	264.530	6529.52	5486.31	-12.58	-5486.34	40°24'37.840"N	104°21'28.800"W	0.99	
11719.00	89.750	267.770	6529.90	5580.12	-18.89	-5580.11	40°24'37.789"N	104°21'30.013"W	3.45	
11814.00	89.780	270.500	6530.29	5675.11	-20.32	-5675.09	40°24'37.787"N	104°21'31.241"W	2.87	
11909.00	89.750	271.000	6530.68	5770.09	-19.08	-5770.08	40°24'37.812"N	104°21'32.469"W	0.53	
12003.00	90.060	270.110	6530.84	5864.07	-18.17	-5864.07	40°24'37.833"N	104°21'33.684"W	1.00	
12098.00	90.000	268.410	6530.79	5959.07	-19.39	-5959.06	40°24'37.833"N	104°21'34.912"W	1.79	
12192.00	89.780	265.710	6530.97	6052.96	-24.22	-6052.93	40°24'37.797"N	104°21'36.126"W	2.88	
12287.00	89.750	265.390	6531.36	6147.72	-31.59	-6147.64	40°24'37.736"N	104°21'37.351"W	0.34	
12381.00	89.850	264.380	6531.69	6241.39	-39.97	-6241.27	40°24'37.665"N	104°21'38.563"W	1.08	
12476.00	89.940	267.960	6531.86	6336.20	-46.31	-6336.04	40°24'37.615"N	104°21'39.789"W	3.77	
12570.00	89.910	270.490	6531.98	6430.19	-47.58	-6430.02	40°24'37.614"N	104°21'41.004"W	2.69	
12665.00	89.910	273.390	6532.13	6525.11	-44.37	-6524.96	40°24'37.658"N	104°21'42.231"W	3.05	
12760.00	89.720	272.870	6532.44	6619.93	-39.18	-6619.82	40°24'37.721"N	104°21'43.456"W	0.58	
12854.00	89.910	275.170	6532.74	6713.65	-32.59	-6713.58	40°24'37.798"N	104°21'44.667"W	2.46	
12949.00	89.940	276.770	6532.87	6808.07	-22.71	-6808.06	40°24'37.908"N	104°21'45.887"W	1.68	
13043.00	89.910	277.900	6532.99	6901.22	-10.71	-6901.29	40°24'38.038"N	104°21'47.090"W	1.20	
13138.00	89.750	275.520	6533.27	6995.49	0.39	-6995.63	40°24'38.160"N	104°21'48.307"W	2.51	



Actual Wellpath Report

WELLS RANCH AF07-631 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#05 WELLS RANCH AF07-631 (1275'FSL & 175'FEL, SEC.08)
Area	COLORADO	Well	WELLS RANCH AF07-631
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH AF07-631 AWB
Facility	SEC.08-T05N-R62W		

WELLPATH DATA (149 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
13232.00	90.250	270.810	6533.27	7089.29	5.58	-7089.46	40°24'38.223"N	104°21'49.519"W	5.04	
13327.00	89.660	268.690	6533.35	7184.28	5.16	-7184.45	40°24'38.231"N	104°21'50.747"W	2.32	
13421.00	89.660	264.910	6533.91	7278.15	-0.08	-7278.29	40°24'38.191"N	104°21'51.961"W	4.02	
13516.00	89.910	264.300	6534.26	7372.78	-9.01	-7372.87	40°24'38.114"N	104°21'53.185"W	0.69	
13610.00	90.000	266.480	6534.34	7466.51	-16.57	-7466.56	40°24'38.052"N	104°21'54.398"W	2.32	
13705.00	89.880	269.550	6534.44	7561.47	-19.86	-7561.49	40°24'38.031"N	104°21'55.625"W	3.23	
13799.00	89.880	271.050	6534.63	7655.46	-19.37	-7655.48	40°24'38.048"N	104°21'56.840"W	1.60	
13988.00	89.820	270.940	6535.13	7844.40	-16.09	-7844.45	40°24'38.104"N	104°21'59.282"W	0.07	
14082.00	89.970	270.570	6535.30	7938.38	-14.85	-7938.45	40°24'38.128"N	104°22'00.497"W	0.42	
14271.00	90.060	271.200	6535.25	8127.34	-11.93	-8127.42	40°24'38.181"N	104°22'02.939"W	0.34	
14366.00	89.940	272.030	6535.25	8222.28	-9.25	-8222.38	40°24'38.219"N	104°22'04.167"W	0.88	
14461.00	89.880	267.020	6535.40	8317.25	-10.04	-8317.35	40°24'38.224"N	104°22'05.394"W	5.27	
14555.00	89.880	267.270	6535.60	8411.16	-14.72	-8411.23	40°24'38.189"N	104°22'06.609"W	0.27	
14650.00	90.030	271.540	6535.67	8506.14	-15.71	-8506.21	40°24'38.191"N	104°22'07.836"W	4.50	
14744.00	90.000	273.870	6535.65	8600.00	-11.27	-8600.10	40°24'38.247"N	104°22'09.049"W	2.48	
14839.00	90.120	274.650	6535.55	8694.69	-4.21	-8694.83	40°24'38.329"N	104°22'10.273"W	0.83	
14934.00	90.030	269.330	6535.42	8789.58	-0.92	-8789.74	40°24'38.373"N	104°22'11.499"W	5.60	
15028.00	90.000	264.220	6535.40	8883.43	-6.20	-8883.56	40°24'38.333"N	104°22'12.713"W	5.44	
15123.00	90.060	261.390	6535.35	8977.74	-18.10	-8977.80	40°24'38.227"N	104°22'13.933"W	2.98	
15217.00	89.850	258.230	6535.42	9070.35	-34.73	-9070.31	40°24'38.075"N	104°22'15.131"W	3.37	
15312.00	89.970	260.880	6535.57	9163.87	-51.95	-9163.73	40°24'37.916"N	104°22'16.342"W	2.79	
15406.00	89.050	263.920	6536.38	9257.11	-64.38	-9256.88	40°24'37.805"N	104°22'17.548"W	3.38	
15500.00	90.150	267.530	6537.03	9350.87	-71.38	-9350.60	40°24'37.748"N	104°22'18.760"W	4.01	
15595.00	90.060	272.330	6536.86	9445.84	-71.50	-9445.58	40°24'37.758"N	104°22'19.988"W	5.05	
15689.00	90.000	273.240	6536.81	9539.70	-66.93	-9539.46	40°24'37.815"N	104°22'21.201"W	0.97	
15784.00	89.880	274.080	6536.91	9634.46	-60.87	-9634.27	40°24'37.887"N	104°22'22.426"W	0.89	
15878.00	89.910	271.310	6537.08	9728.32	-56.45	-9728.16	40°24'37.943"N	104°22'23.638"W	2.95	
15941.00	89.850	269.790	6537.21	9791.31	-55.84	-9791.15	40°24'37.957"N	104°22'24.453"W	2.41	LAST BHGE MWD SURVEY (1420' FSL & 566' FWL, SEC. 7)
15965.00	89.850	269.790	6537.28	9815.31	-55.93	-9815.15	40°24'37.959"N	104°22'24.763"W	0.00	PROJECTION TO BIT (1420' FSL & 542' FWL, SEC. 7)

HOLE & CASING SECTIONS - Ref Wellbore: WELLS RANCH AF07-631 AWB Ref Wellpath: WELLS RANCH AF07-631 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	30.00	1943.00	1913.00	30.00	1942.94	0.02	0.01	2.00	4.35
8.5in Open Hole	30.00	15965.00	15935.00	30.00	6537.28	0.02	0.01	-55.93	-9815.15

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.07-T05N-R62W	-1.00	-76.50	1.00	3323487.83	1394373.35	40°24'36.504"N	104°20'17.880"W	polygon
SEC.08-T05N-R62W	-1.00	-76.50	1.00	3323487.83	1394373.35	40°24'36.504"N	104°20'17.880"W	polygon
WELLS RANCH AF07-631 LANDING POINT	6520.00	122.10	-766.50	3322720.36	1394571.94	40°24'38.566"N	104°20'27.767"W	point
WELLS RANCH AF07-631 REV-2 BHL (1415'FSL & 535'FWL, SEC.07)	6535.81	-61.15	-9821.98	3313665.26	1394388.70	40°24'37.908"N	104°22'24.852"W	point
SEC.07-T05N-R62W 460' SETBACKS	6536.00	-76.50	1.00	3323487.83	1394373.35	40°24'36.504"N	104°20'17.880"W	polygon
SEC.08-T05N-R62W 460'SETBACKS	6536.00	-76.50	1.00	3323487.83	1394373.35	40°24'36.504"N	104°20'17.880"W	polygon
WELLS RANCH AF07-631 BHL (1415'FSL & 535'FWL, SEC.07)	6571.15	-61.15	-9821.98	3313665.26	1394388.70	40°24'37.908"N	104°22'24.852"W	point



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WELLS RANCH AF07-631 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#05 WELLS RANCH AF07-631 (1275'FSL & 175'FEL, SEC.08)
Area	COLORADO	Well	WELLS RANCH AF07-631
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH AF07-631 AWB
Facility	SEC.08-T05N-R62W		

WELLPATH COMPOSITION - Ref Wellbore: WELLS RANCH AF07-631 AWB Ref Wellpath: WELLS RANCH AF07-631 AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	1938.00	Gyrodata standard - Drop gyro or Multi-shot	3rd Party surface gyro <84'-1938'>	WELLS RANCH AF07-631 AWB
1938.00	15941.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	BHI/ATC 8.5 OWSG MWD rev2+IFR1+MSA <1983'-15941'>	WELLS RANCH AF07-631 AWB
15941.00	15965.00	Blind Drilling (std)	Projection to bit	WELLS RANCH AF07-631 AWB



Actual Wellpath Report

WELLS RANCH AF07-631 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#05 WELLS RANCH AF07-631 (1275'FSL & 175'FEL, SEC.08)
Area	COLORADO	Well	WELLS RANCH AF07-631
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH AF07-631 AWP
Facility	SEC.08-T05N-R62W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1938.00	0.460	148.280	1937.95	Tie to Surface
15941.00	89.850	269.790	6537.21	LAST BHGE MWD SURVEY (1420' FSL & 566' FWL, SEC. 7)
15965.00	89.850	269.790	6537.28	PROJECTION TO BIT (1420' FSL & 542' FWL, SEC. 7)

COMMENTS	
Wellpath general comments SURFACE LOCATION: SESE 40.41035N 104.3383W API: 05-123-44241	