

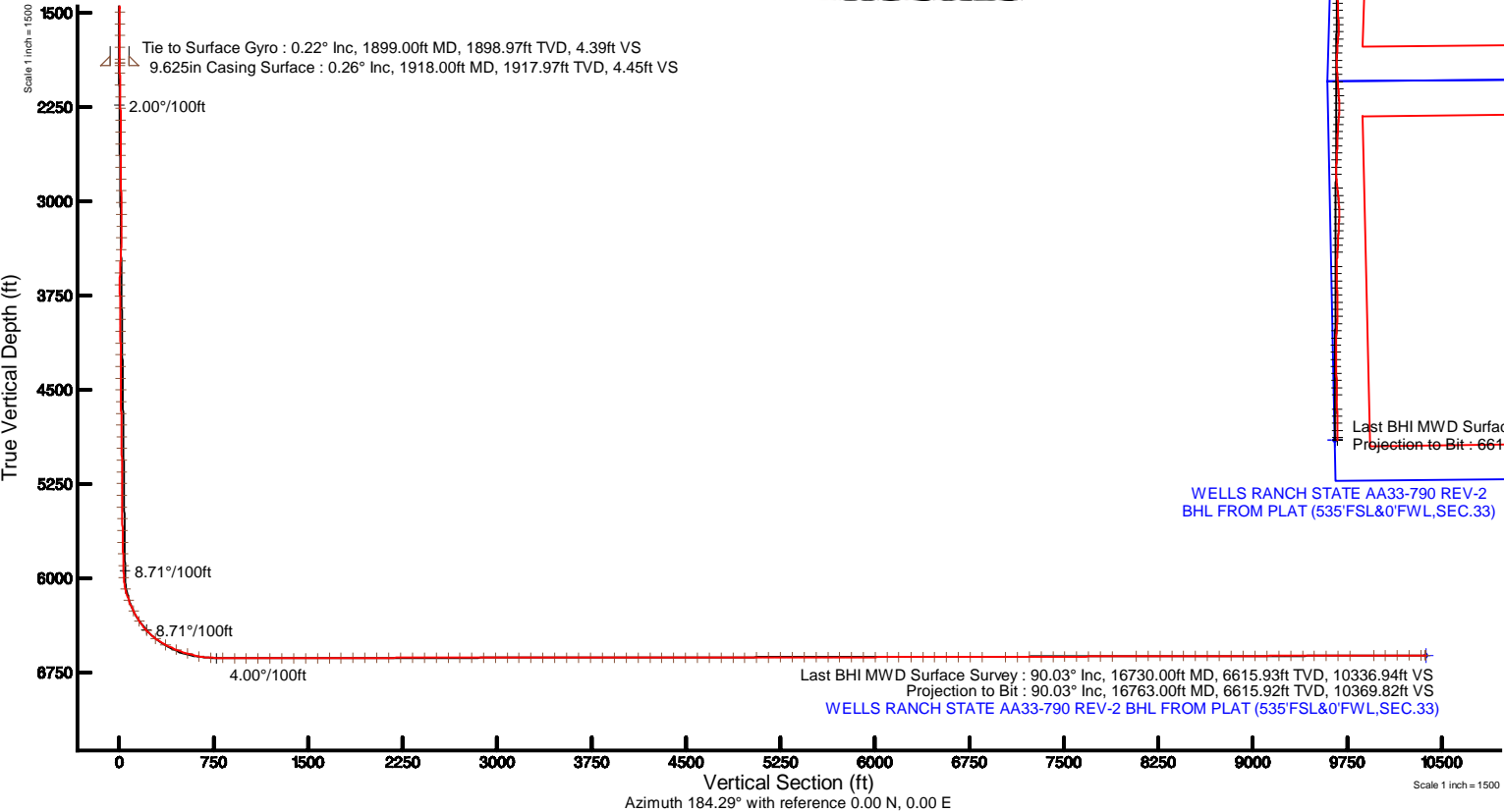
# NOBLE ENERGY, INC

Location: COLORADO Slot: SLOT#21 WELLS RANCH STATE AA33-790 (255'FSL&735'FWL,SEC.21)  
Field: WELD COUNTY (NOBLE NAD 83 GRID) Well: WELLS RANCH STATE AA33-790  
Facility: SEC.21-T06N-R63W Wellbore: WELLS RANCH STATE AA33-790 PWB

Plot reference wellpath is WELLS RANCH STATE AA33-790 (REV-B.0) PWP	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to H&P RIG (30KB) (RKB)	* = Wellpath was transformed from a different geodetic datum
Measured depths are referenced to H&P RIG (30KB) (RKB)	North Reference: Grid north
H&P RIG (30KB) (RKB) to Mean Sea Level: 4731 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#21 WELLS RANCH STATE AA33-790 (255'FSL&735'FWL,SEC.21)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: guenaler on 2017-03-28
	Database: WA_DEN_Denver_Defn

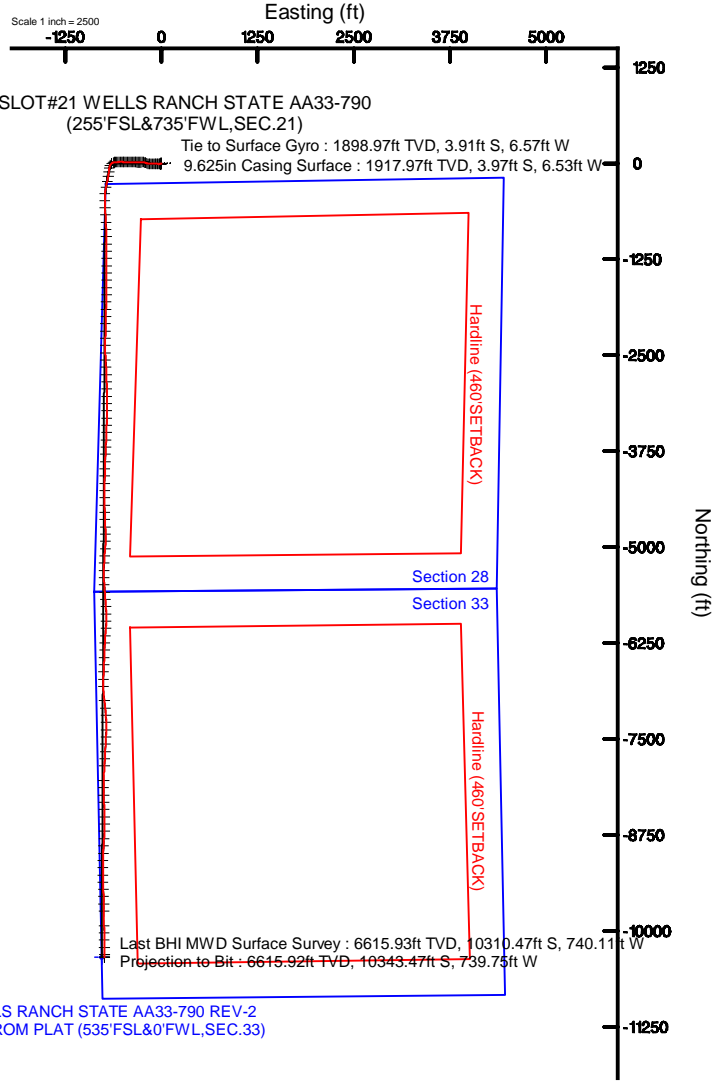
## Location Information

Facility Name			Grid East (US R)	Grid North (US R)	Latitude	Longitude
SEC.21-T06N-R63W			3296551.084	1415076.401	40°28'04.418"N	104°26'02.872"W
Slot	Local N (R)	Local E (R)	Grid East (US R)	Grid North (US R)	Latitude	Longitude
SLOT#21 WELLS RANCH STATE AA33-790 (255'FSL&735'FWL,SEC.21)	-907.75	-3892.93	3292658.299	1414168.684	40°27'55.908"N	104°26'53.376"W
H&P RIG (30KB) (RKB) to Mud line (At Slot: SLOT#21 WELLS RANCH STATE AA33-790 (255'FSL&735'FWL,SEC.21))					4731ft	
Mean Sea Level to Mud line (At Slot: SLOT#21 WELLS RANCH STATE AA33-790 (255'FSL&735'FWL,SEC.21))					0ft	
H&P RIG (30KB) (RKB) to Mean Sea Level					4731ft	



## Comments

SHL Location:  
Lat: 40.46553 N  
Long: 104.44816 W  
API# 05-123-43876





Actual Wellpath Report

WELLS RANCH STATE AA33-790 AWP

Page 1 of 9



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#21 WELLS RANCH STATE AA33-790 (255'FSL&735'FWL,SEC.21)
Area	COLORADO	Well	WELLS RANCH STATE AA33-790
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA33-790 AWB
Facility	SEC.21-T06N-R63W		

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	0.999964	Report Generated	3/28/2017 at 4:38:23 PM
Convergence at slot	0.68° East	Database/Source file	WA_DEN_Denver_Defn/WELLS_RANCH_STATE_AA33-790_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-907.75	-3892.93	3292658.30	1414168.68	40°27'55.908"N	104°26'53.376"W
Facility Reference Pt			3296551.08	1415076.40	40°28'04.418"N	104°26'02.872"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 RIG (30'KB) (RKB) to Facility Vertical Datum	4731.00ft
Horizontal Reference Pt	Slot	H&P RIG (30'KB) (RKB) to Mean Sea Level	4731.00ft
Vertical Reference Pt	H&P RIG (30'KB) (RKB)	H&P RIG (30'KB) (RKB) to Mud Line at Slot (SLOT#21 WELLS RANCH STATE AA33-790 (255'FSL&735'FWL,SEC.21))	4731.00ft
MD Reference Pt	H&P RIG (30'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	184.29°

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#21 WELLS RANCH STATE AA33-790 (255'FSL&735'FWL,SEC.21)
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Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA33-790 AWB
Facility	SEC.21-T06N-R63W		

WELLPATH DATA (177 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00	0.000	188.670	0.00	0.00	0.00	0.00	40°27'55.908"N	104°26'53.376"W	0.00	
75.00	0.260	188.670	75.00	0.17	-0.17	-0.03	40°27'55.906"N	104°26'53.376"W	0.35	
171.00	0.440	238.810	171.00	0.60	-0.57	-0.37	40°27'55.902"N	104°26'53.381"W	0.35	
263.00	0.430	237.830	263.00	1.01	-0.94	-0.97	40°27'55.899"N	104°26'53.389"W	0.01	
358.00	0.400	273.910	357.99	1.23	-1.11	-1.60	40°27'55.897"N	104°26'53.397"W	0.27	
452.00	0.150	214.170	451.99	1.33	-1.19	-2.00	40°27'55.896"N	104°26'53.402"W	0.37	
547.00	0.230	262.630	546.99	1.48	-1.32	-2.26	40°27'55.895"N	104°26'53.405"W	0.18	
641.00	0.150	281.410	640.99	1.50	-1.32	-2.56	40°27'55.895"N	104°26'53.409"W	0.11	
736.00	0.390	281.460	735.99	1.45	-1.23	-3.00	40°27'55.896"N	104°26'53.415"W	0.25	
831.00	0.570	231.540	830.99	1.73	-1.46	-3.69	40°27'55.894"N	104°26'53.424"W	0.46	
925.00	0.210	218.210	924.98	2.19	-1.88	-4.16	40°27'55.890"N	104°26'53.430"W	0.39	
1020.00	0.310	205.360	1019.98	2.57	-2.25	-4.38	40°27'55.886"N	104°26'53.433"W	0.12	
1114.00	0.320	223.900	1113.98	3.01	-2.67	-4.67	40°27'55.882"N	104°26'53.437"W	0.11	
1209.00	0.260	222.690	1208.98	3.39	-3.02	-5.00	40°27'55.879"N	104°26'53.441"W	0.06	
1304.00	0.330	228.090	1303.98	3.75	-3.36	-5.35	40°27'55.875"N	104°26'53.446"W	0.08	
1398.00	0.300	239.290	1397.98	4.09	-3.67	-5.76	40°27'55.872"N	104°26'53.451"W	0.07	
1493.00	0.350	247.150	1492.98	4.36	-3.91	-6.25	40°27'55.870"N	104°26'53.457"W	0.07	
1588.00	0.280	252.420	1587.98	4.58	-4.09	-6.73	40°27'55.868"N	104°26'53.464"W	0.08	
1682.00	0.220	24.380	1681.98	4.50	-3.99	-6.88	40°27'55.869"N	104°26'53.466"W	0.49	
1776.00	0.050	40.880	1775.97	4.30	-3.80	-6.78	40°27'55.871"N	104°26'53.464"W	0.18	
1870.00	0.160	125.610	1869.97	4.33	-3.84	-6.64	40°27'55.871"N	104°26'53.463"W	0.17	
1899.00	0.220	131.930	1898.97	4.39	-3.91	-6.57	40°27'55.870"N	104°26'53.462"W	0.22	Tie to Surface Gyro
1980.00	0.590	197.210	1979.97	4.89	-4.41	-6.58	40°27'55.865"N	104°26'53.462"W	0.66	
2074.00	2.940	250.970	2073.92	6.31	-5.66	-9.00	40°27'55.853"N	104°26'53.493"W	2.80	
2169.00	5.290	261.280	2168.67	8.26	-7.11	-15.63	40°27'55.840"N	104°26'53.579"W	2.58	
2263.00	6.440	266.080	2262.18	9.99	-8.13	-25.17	40°27'55.831"N	104°26'53.703"W	1.33	
2358.00	6.400	270.760	2356.59	11.08	-8.43	-35.78	40°27'55.829"N	104°26'53.840"W	0.55	
2453.00	7.300	273.650	2450.91	11.47	-7.97	-47.10	40°27'55.835"N	104°26'53.987"W	1.01	
2547.00	7.810	275.980	2544.09	11.35	-6.93	-59.41	40°27'55.847"N	104°26'54.146"W	0.63	
2641.00	8.150	272.720	2637.18	11.35	-5.94	-72.42	40°27'55.858"N	104°26'54.314"W	0.60	



Actual Wellpath Report  
WELLS RANCH STATE AA33-790 AWP  
Page 3 of 9



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#21 WELLS RANCH STATE AA33-790 (255'FSL&735'FWL,SEC.21)
Area	COLORADO	Well	WELLS RANCH STATE AA33-790
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA33-790 AWB
Facility	SEC.21-T06N-R63W		

WELLPATH DATA (177 stations)											
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments	
2736.00	8.800	269.820	2731.14	12.10	-5.65	-86.42	40°27'55.862"N	104°26'54.495"W	0.82		
2830.00	9.160	268.390	2823.99	13.43	-5.88	-101.08	40°27'55.862"N	104°26'54.685"W	0.45		
2925.00	9.230	268.620	2917.77	14.96	-6.28	-116.26	40°27'55.860"N	104°26'54.881"W	0.08		
3019.00	9.260	269.300	3010.55	16.36	-6.55	-131.36	40°27'55.859"N	104°26'55.076"W	0.12		
3114.00	9.240	269.180	3104.31	17.71	-6.75	-146.63	40°27'55.858"N	104°26'55.274"W	0.03		
3209.00	9.130	273.100	3198.10	18.54	-6.45	-161.78	40°27'55.863"N	104°26'55.470"W	0.67		
3303.00	9.230	281.730	3290.90	17.72	-4.52	-176.61	40°27'55.884"N	104°26'55.661"W	1.47		
3398.00	9.190	290.170	3384.68	14.66	-0.35	-191.19	40°27'55.927"N	104°26'55.849"W	1.42		
3492.00	9.350	293.070	3477.45	10.15	5.23	-205.26	40°27'55.984"N	104°26'56.031"W	0.53		
3586.00	9.450	288.880	3570.19	5.75	10.72	-219.59	40°27'56.040"N	104°26'56.215"W	0.74		
3681.00	9.380	272.250	3663.93	4.06	13.54	-234.71	40°27'56.069"N	104°26'56.410"W	2.85		
3775.00	9.390	268.490	3756.67	5.11	13.64	-250.03	40°27'56.072"N	104°26'56.609"W	0.65		
3870.00	9.720	268.570	3850.35	6.69	13.24	-265.79	40°27'56.070"N	104°26'56.813"W	0.35		
3964.00	9.800	270.150	3942.99	8.06	13.06	-281.72	40°27'56.070"N	104°26'57.019"W	0.30		
4059.00	9.670	270.560	4036.62	9.16	13.16	-297.79	40°27'56.073"N	104°26'57.226"W	0.16		
4153.00	9.650	270.920	4129.29	10.14	13.36	-313.56	40°27'56.077"N	104°26'57.430"W	0.07		
4248.00	9.800	272.360	4222.93	10.88	13.82	-329.60	40°27'56.083"N	104°26'57.638"W	0.30		
4342.00	9.560	272.900	4315.59	11.34	14.55	-345.39	40°27'56.092"N	104°26'57.842"W	0.27		
4437.00	9.790	272.120	4409.24	11.84	15.25	-361.34	40°27'56.101"N	104°26'58.048"W	0.28		
4531.00	9.690	271.100	4501.88	12.58	15.69	-377.23	40°27'56.107"N	104°26'58.254"W	0.21		
4626.00	9.640	270.120	4595.53	13.61	15.86	-393.18	40°27'56.111"N	104°26'58.460"W	0.18		
4721.00	9.700	266.750	4689.18	15.24	15.43	-409.13	40°27'56.108"N	104°26'58.666"W	0.60		
4815.00	9.430	266.220	4781.88	17.36	14.47	-424.72	40°27'56.101"N	104°26'58.868"W	0.30		
4910.00	9.600	269.970	4875.57	19.05	13.95	-440.40	40°27'56.097"N	104°26'59.071"W	0.68		
5004.00	9.810	273.170	4968.23	19.79	14.39	-456.24	40°27'56.104"N	104°26'59.276"W	0.62		
5099.00	9.560	272.610	5061.87	20.18	15.20	-472.20	40°27'56.113"N	104°26'59.483"W	0.28		
5194.00	9.490	274.060	5155.56	20.45	16.11	-487.89	40°27'56.124"N	104°26'59.685"W	0.26		
5288.00	9.490	274.340	5248.28	20.47	17.25	-503.35	40°27'56.137"N	104°26'59.885"W	0.05		
5383.00	9.420	271.940	5341.99	20.78	18.10	-518.93	40°27'56.148"N	104°27'00.087"W	0.42		
5477.00	9.310	268.040	5434.73	21.93	18.10	-534.21	40°27'56.149"N	104°27'00.284"W	0.69		



Actual Wellpath Report  
WELLS RANCH STATE AA33-790 AWP  
Page 4 of 9



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#21 WELLS RANCH STATE AA33-790 (255'FSL&735'FWL,SEC.21)
Area	COLORADO	Well	WELLS RANCH STATE AA33-790
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA33-790 AWB
Facility	SEC.21-T06N-R63W		

WELLPATH DATA (177 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5572.00	9.340	267.250	5528.48	23.71	17.47	-549.59	40°27'56.145"N	104°27'00.483"W	0.14	
5666.00	9.380	266.820	5621.23	25.64	16.68	-564.86	40°27'56.139"N	104°27'00.681"W	0.09	
5761.00	9.260	265.930	5714.97	27.76	15.71	-580.21	40°27'56.131"N	104°27'00.880"W	0.20	
5856.00	9.340	264.150	5808.72	30.23	14.38	-595.51	40°27'56.120"N	104°27'01.078"W	0.31	
5950.00	9.360	262.610	5901.48	33.12	12.62	-610.68	40°27'56.104"N	104°27'01.274"W	0.27	
6045.00	11.160	261.510	5994.95	36.72	10.27	-627.43	40°27'56.083"N	104°27'01.492"W	1.91	
6139.00	17.540	230.670	6086.10	48.53	-0.08	-647.43	40°27'55.983"N	104°27'01.752"W	10.37	
6234.00	22.700	207.170	6175.42	75.36	-25.52	-666.92	40°27'55.734"N	104°27'02.008"W	9.99	
6329.00	26.370	187.780	6261.96	113.38	-62.80	-678.17	40°27'55.367"N	104°27'02.159"W	9.26	
6423.00	32.940	185.360	6343.61	159.82	-108.98	-683.39	40°27'54.911"N	104°27'02.234"W	7.10	
6518.00	43.040	188.920	6418.39	218.12	-166.88	-690.85	40°27'54.340"N	104°27'02.339"W	10.88	
6613.00	53.140	192.240	6481.78	288.26	-236.24	-703.97	40°27'53.656"N	104°27'02.519"W	10.94	
6707.00	62.820	193.050	6531.56	367.02	-313.91	-721.42	40°27'52.891"N	104°27'02.757"W	10.32	
6802.00	69.150	184.090	6570.27	453.40	-399.58	-734.17	40°27'52.046"N	104°27'02.935"W	10.88	
6896.00	73.030	178.530	6600.75	542.15	-488.42	-736.15	40°27'51.168"N	104°27'02.974"W	6.95	
6990.00	79.280	177.200	6623.23	632.80	-579.58	-732.73	40°27'50.267"N	104°27'02.944"W	6.79	
7085.00	88.030	177.200	6633.72	726.40	-673.79	-728.13	40°27'49.336"N	104°27'02.899"W	9.21	
7179.00	89.050	177.290	6636.11	819.66	-767.65	-723.61	40°27'48.408"N	104°27'02.855"W	1.09	
7274.00	88.920	177.260	6637.80	913.93	-862.53	-719.09	40°27'47.470"N	104°27'02.811"W	0.14	
7368.00	90.180	178.590	6638.54	1007.35	-956.46	-715.69	40°27'46.541"N	104°27'02.781"W	1.95	
7463.00	89.910	180.140	6638.46	1101.99	-1051.45	-714.64	40°27'45.602"N	104°27'02.782"W	1.66	
7558.00	90.250	179.910	6638.33	1196.73	-1146.45	-714.68	40°27'44.664"N	104°27'02.797"W	0.43	
7652.00	90.030	179.470	6638.10	1290.42	-1240.45	-714.17	40°27'43.735"N	104°27'02.805"W	0.52	
7747.00	90.150	179.350	6637.95	1385.08	-1335.45	-713.19	40°27'42.796"N	104°27'02.807"W	0.18	
7842.00	90.120	179.880	6637.73	1479.76	-1430.44	-712.55	40°27'41.857"N	104°27'02.813"W	0.56	
7936.00	90.180	179.820	6637.48	1573.48	-1524.44	-712.31	40°27'40.929"N	104°27'02.825"W	0.09	
8031.00	90.120	180.770	6637.23	1668.25	-1619.44	-712.80	40°27'39.990"N	104°27'02.845"W	1.00	
8125.00	90.370	182.050	6636.83	1762.13	-1713.41	-715.11	40°27'39.062"N	104°27'02.890"W	1.39	
8220.00	90.280	181.510	6636.29	1857.03	-1808.36	-718.06	40°27'38.124"N	104°27'02.942"W	0.58	
8315.00	90.340	181.510	6635.78	1951.92	-1903.33	-720.56	40°27'37.186"N	104°27'02.989"W	0.06	

REFERENCE WELLPATH IDENTIFICATION			
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Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA33-790 AWB
Facility	SEC.21-T06N-R63W		

WELLPATH DATA (177 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8409.00	90.340	181.450	6635.22	2045.80	-1997.29	-722.99	40°27'36.258"N	104°27'03.035"W	0.06	
8503.00	90.370	181.230	6634.64	2139.68	-2091.27	-725.19	40°27'35.329"N	104°27'03.078"W	0.24	
8598.00	90.090	181.160	6634.25	2234.54	-2186.25	-727.17	40°27'34.391"N	104°27'03.118"W	0.30	
8692.00	90.150	181.100	6634.06	2328.39	-2280.23	-729.03	40°27'33.463"N	104°27'03.156"W	0.09	
8787.00	89.910	180.720	6634.01	2423.23	-2375.21	-730.53	40°27'32.524"N	104°27'03.191"W	0.47	
8881.00	89.910	177.930	6634.16	2516.87	-2469.20	-729.43	40°27'31.596"N	104°27'03.191"W	2.97	
8976.00	90.090	176.810	6634.16	2611.17	-2564.10	-725.07	40°27'30.657"N	104°27'03.149"W	1.19	
9071.00	89.820	177.110	6634.23	2705.40	-2658.96	-720.03	40°27'29.719"N	104°27'03.098"W	0.42	
9164.00	90.150	177.500	6634.25	2797.70	-2751.86	-715.66	40°27'28.801"N	104°27'03.056"W	0.55	
9259.00	89.940	178.150	6634.18	2892.10	-2846.79	-712.05	40°27'27.863"N	104°27'03.024"W	0.72	
9353.00	90.250	179.190	6634.02	2985.65	-2940.76	-709.87	40°27'26.934"N	104°27'03.010"W	1.15	
9448.00	90.030	180.270	6633.79	3080.34	-3035.76	-709.42	40°27'25.995"N	104°27'03.019"W	1.16	
9542.00	90.120	180.730	6633.67	3174.14	-3129.76	-710.24	40°27'25.067"N	104°27'03.043"W	0.50	
9637.00	90.000	180.200	6633.57	3268.92	-3224.75	-711.01	40°27'24.128"N	104°27'03.068"W	0.57	
9732.00	90.220	180.030	6633.39	3363.67	-3319.75	-711.20	40°27'23.189"N	104°27'03.085"W	0.29	
9826.00	90.060	180.910	6633.16	3457.46	-3413.75	-711.98	40°27'22.261"N	104°27'03.109"W	0.95	
9921.00	90.030	181.970	6633.08	3552.34	-3508.72	-714.36	40°27'21.323"N	104°27'03.155"W	1.12	
10016.00	90.120	183.130	6632.96	3647.30	-3603.62	-718.59	40°27'20.385"N	104°27'03.224"W	1.22	
10110.00	89.880	182.760	6632.96	3741.27	-3697.50	-723.42	40°27'19.458"N	104°27'03.301"W	0.47	
10205.00	90.030	182.270	6633.03	3836.22	-3792.41	-727.59	40°27'18.521"N	104°27'03.369"W	0.54	
10299.00	89.850	181.910	6633.13	3930.15	-3886.34	-731.02	40°27'17.593"N	104°27'03.428"W	0.43	
10394.00	89.970	181.540	6633.28	4025.06	-3981.30	-733.88	40°27'16.655"N	104°27'03.480"W	0.41	
10488.00	90.090	181.430	6633.23	4118.95	-4075.27	-736.31	40°27'15.727"N	104°27'03.525"W	0.17	
10583.00	90.090	180.840	6633.08	4213.80	-4170.25	-738.19	40°27'14.789"N	104°27'03.564"W	0.62	
10677.00	89.970	180.330	6633.03	4307.60	-4264.24	-739.15	40°27'13.860"N	104°27'03.591"W	0.56	
10771.00	89.970	180.670	6633.08	4401.40	-4358.24	-739.97	40°27'12.932"N	104°27'03.616"W	0.36	
10867.00	89.970	177.830	6633.13	4497.02	-4454.22	-738.72	40°27'11.983"N	104°27'03.615"W	2.96	
10961.00	90.060	179.290	6633.11	4590.54	-4548.19	-736.35	40°27'11.054"N	104°27'03.598"W	1.56	
11055.00	90.000	177.320	6633.06	4684.03	-4642.14	-733.57	40°27'10.126"N	104°27'03.577"W	2.10	
11150.00	90.310	177.720	6632.80	4778.36	-4737.05	-729.46	40°27'09.187"N	104°27'03.538"W	0.53	





Actual Wellpath Report  
WELLS RANCH STATE AA33-790 AWP  
Page 6 of 9



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#21 WELLS RANCH STATE AA33-790 (255'FSL&735'FWL,SEC.21)
Area	COLORADO	Well	WELLS RANCH STATE AA33-790
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA33-790 AWB
Facility	SEC.21-T06N-R63W		

WELLPATH DATA (177 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11245.00	90.060	177.900	6632.49	4872.76	-4831.98	-725.83	40°27'08.249"N	104°27'03.506"W	0.32	
11339.00	90.150	181.900	6632.32	4966.46	-4925.96	-725.67	40°27'07.320"N	104°27'03.518"W	4.26	
11434.00	90.120	185.250	6632.10	5061.44	-5020.77	-731.59	40°27'06.384"N	104°27'03.609"W	3.53	
11529.00	90.220	184.320	6631.82	5156.43	-5115.43	-739.52	40°27'05.450"N	104°27'03.726"W	0.98	
11623.00	90.120	182.620	6631.54	5250.42	-5209.26	-745.21	40°27'04.523"N	104°27'03.814"W	1.81	
11717.00	90.180	180.670	6631.29	5344.32	-5303.21	-747.90	40°27'03.595"N	104°27'03.863"W	2.08	
11812.00	90.060	178.320	6631.09	5438.98	-5398.20	-747.07	40°27'02.657"N	104°27'03.867"W	2.48	
11907.00	90.250	177.100	6630.84	5533.35	-5493.13	-743.27	40°27'01.718"N	104°27'03.832"W	1.30	
12001.00	90.250	174.970	6630.43	5626.37	-5586.89	-736.77	40°27'00.791"N	104°27'03.763"W	2.27	
12096.00	90.030	175.380	6630.19	5720.17	-5681.56	-728.78	40°26'59.855"N	104°27'03.674"W	0.49	
12190.00	90.180	176.540	6630.02	5813.17	-5775.32	-722.16	40°26'58.927"N	104°27'03.602"W	1.24	
12285.00	90.250	178.680	6629.66	5907.52	-5870.23	-718.20	40°26'57.989"N	104°27'03.566"W	2.25	
12379.00	90.030	180.710	6629.43	6001.21	-5964.23	-717.70	40°26'57.060"N	104°27'03.574"W	2.17	
12474.00	90.250	184.020	6629.20	6096.15	-6059.13	-721.62	40°26'56.123"N	104°27'03.639"W	3.49	
12568.00	90.060	185.400	6628.95	6190.14	-6152.81	-729.33	40°26'55.198"N	104°27'03.753"W	1.48	
12663.00	90.220	182.730	6628.72	6285.13	-6247.56	-736.07	40°26'54.263"N	104°27'03.855"W	2.82	
12758.00	90.090	181.670	6628.46	6380.07	-6342.49	-739.72	40°26'53.325"N	104°27'03.916"W	1.12	
12852.00	90.220	181.740	6628.20	6473.97	-6436.45	-742.51	40°26'52.397"N	104°27'03.967"W	0.16	
12947.00	90.060	183.920	6627.97	6568.93	-6531.33	-747.20	40°26'51.460"N	104°27'04.042"W	2.30	
13041.00	90.120	181.890	6627.82	6662.90	-6625.20	-751.97	40°26'50.533"N	104°27'04.118"W	2.16	
13135.00	90.150	182.250	6627.60	6756.83	-6719.14	-755.36	40°26'49.606"N	104°27'04.176"W	0.38	
13230.00	89.970	178.930	6627.50	6851.62	-6814.12	-756.34	40°26'48.667"N	104°27'04.204"W	3.50	
13419.00	90.030	172.150	6627.50	7038.31	-7002.44	-741.65	40°26'46.805"N	104°27'04.042"W	3.59	
13514.00	90.090	173.890	6627.40	7131.47	-7096.73	-730.11	40°26'45.872"N	104°27'03.907"W	1.83	
13609.00	90.220	176.650	6627.15	7225.29	-7191.40	-722.27	40°26'44.935"N	104°27'03.821"W	2.91	
13703.00	90.000	178.760	6626.97	7318.66	-7285.32	-718.51	40°26'44.007"N	104°27'03.786"W	2.26	
13798.00	90.280	181.180	6626.73	7413.38	-7380.31	-718.46	40°26'43.068"N	104°27'03.800"W	2.56	
13892.00	90.520	182.570	6626.08	7507.29	-7474.26	-721.54	40°26'42.140"N	104°27'03.854"W	1.50	
13986.00	90.490	183.290	6625.25	7601.26	-7568.13	-726.34	40°26'41.213"N	104°27'03.931"W	0.77	
14081.00	90.550	182.350	6624.39	7696.23	-7663.01	-731.01	40°26'40.276"N	104°27'04.006"W	0.99	

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#21 WELLS RANCH STATE AA33-790 (255'FSL&735'FWL,SEC.21)
Area	COLORADO	Well	WELLS RANCH STATE AA33-790
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA33-790 AWB
Facility	SEC.21-T06N-R63W		

WELLPATH DATA (177 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
14175.00	90.460	183.120	6623.56	7790.19	-7756.90	-735.50	40°26'39.349"N	104°27'04.078"W	0.82	
14270.00	90.550	183.590	6622.72	7885.17	-7851.73	-741.06	40°26'38.413"N	104°27'04.165"W	0.50	
14459.00	90.120	181.770	6621.62	8074.09	-8040.51	-749.89	40°26'36.549"N	104°27'04.308"W	0.99	
14554.00	90.030	179.850	6621.49	8168.91	-8135.50	-751.24	40°26'35.610"N	104°27'04.340"W	2.02	
14648.00	90.120	178.320	6621.37	8262.51	-8229.48	-749.74	40°26'34.681"N	104°27'04.335"W	1.63	
14743.00	89.970	177.360	6621.29	8356.91	-8324.41	-746.16	40°26'33.743"N	104°27'04.303"W	1.02	
14838.00	90.150	177.650	6621.20	8451.25	-8419.32	-742.02	40°26'32.805"N	104°27'04.264"W	0.36	
14932.00	90.060	179.000	6621.02	8544.73	-8513.28	-739.27	40°26'31.876"N	104°27'04.243"W	1.44	
15027.00	90.280	180.610	6620.74	8639.44	-8608.28	-738.95	40°26'30.937"N	104°27'04.253"W	1.71	
15122.00	90.060	182.430	6620.46	8734.32	-8703.24	-741.47	40°26'29.999"N	104°27'04.300"W	1.93	
15216.00	90.060	183.210	6620.36	8828.29	-8797.12	-746.09	40°26'29.072"N	104°27'04.374"W	0.83	
15311.00	90.250	183.260	6620.10	8923.28	-8891.97	-751.45	40°26'28.136"N	104°27'04.458"W	0.21	
15406.00	90.220	182.820	6619.71	9018.25	-8986.84	-756.49	40°26'27.199"N	104°27'04.538"W	0.46	
15500.00	90.120	181.420	6619.44	9112.18	-9080.77	-759.97	40°26'26.271"N	104°27'04.597"W	1.49	
15595.00	90.280	180.500	6619.10	9207.02	-9175.76	-761.56	40°26'25.333"N	104°27'04.632"W	0.98	
15690.00	90.120	179.630	6618.77	9301.76	-9270.75	-761.67	40°26'24.394"N	104°27'04.648"W	0.93	
15784.00	90.120	178.000	6618.58	9395.33	-9364.73	-759.73	40°26'23.465"N	104°27'04.637"W	1.73	
15879.00	90.280	177.560	6618.24	9489.71	-9459.66	-756.05	40°26'22.527"N	104°27'04.604"W	0.49	
15973.00	90.000	177.810	6618.01	9583.09	-9553.58	-752.25	40°26'21.598"N	104°27'04.570"W	0.40	
16068.00	90.220	178.820	6617.83	9677.57	-9648.54	-749.46	40°26'20.660"N	104°27'04.548"W	1.09	
16163.00	90.150	179.500	6617.52	9772.19	-9743.53	-748.06	40°26'19.721"N	104°27'04.545"W	0.72	
16351.00	90.220	178.930	6616.92	9959.45	-9931.51	-745.49	40°26'17.863"N	104°27'04.540"W	0.31	
16446.00	90.220	179.300	6616.55	10054.06	-10026.50	-744.02	40°26'16.925"N	104°27'04.536"W	0.39	
16540.00	90.000	179.040	6616.37	10147.68	-10120.49	-742.66	40°26'15.996"N	104°27'04.532"W	0.36	
16635.00	90.250	179.260	6616.17	10242.30	-10215.48	-741.25	40°26'15.057"N	104°27'04.529"W	0.35	
16730.00	90.030	179.370	6615.93	10336.94	-10310.47	-740.11	40°26'14.118"N	104°27'04.528"W	0.26	Last BHI MWD Surface Survey
16763.00	90.030	179.370	6615.92	10369.82	-10343.47	-739.75	40°26'13.792"N	104°27'04.529"W	0.00	Projection to Bit



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#21 WELLS RANCH STATE AA33-790 (255'FSL&735'FWL,SEC.21)
Area	COLORADO	Well	WELLS RANCH STATE AA33-790
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA33-790 AWB
Facility	SEC.21-T06N-R63W		

HOLE & CASING SECTIONS - Ref Wellbore: WELLS RANCH STATE AA33-790 AWB      Ref Wellpath: WELLS RANCH STATE AA33-790 AWP									
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
13.5in Open Hole	30.00	1918.00	1888.00	30.00	1917.97	-0.03	0.00	-3.97	-6.53
9.625in Casing Surface	30.00	1918.00	1888.00	30.00	1917.97	-0.03	0.00	-3.97	-6.53
8.5in Open Hole	1918.00	16763.00	14845.00	1917.97	6615.92	-3.97	-6.53	-10343.47	-739.75

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
WELLS RANCH STATE AA33-718 Section 28	-42.00	50.49	3316.39	3295974.57	1414219.18	40°27'56.016"N	104°26'10.464"W	polygon
WELLS RANCH STATE AA33-718 Section 33	-42.00	50.49	3316.39	3295974.57	1414219.18	40°27'56.016"N	104°26'10.464"W	polygon
WELLS RANCH STATE AA33-790 REV-1 BHL FROM PLAT (535'FSL&0'FWL,SEC.33)	6596.00	-10345.54	-776.47	3291881.86	1403823.54	40°26'13.776"N	104°27'05.004"W	point
WELLS RANCH STATE AA33-790 REV-2 BHL FROM PLAT (535'FSL&0'FWL,SEC.33)	6617.25	-10345.54	-776.47	3291881.86	1403823.54	40°26'13.776"N	104°27'05.004"W	point
WELLS RANCH STATE AA33-718 Section 28 Hardline (460'SETBACK)	6758.00	50.49	3316.39	3295974.57	1414219.18	40°27'56.016"N	104°26'10.464"W	polygon
WELLS RANCH STATE AA33-718 Section 33 Hardline (460'SETBACK)	6758.00	50.49	3316.39	3295974.57	1414219.18	40°27'56.016"N	104°26'10.464"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: WELLS RANCH STATE AA33-790 AWB      Ref Wellpath: WELLS RANCH STATE AA33-790 AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	1899.00	Gyrodata standard - Drop gyro or Multi-shot	Gyrodata Surface 13.5" Surveys <75'-1899'>	WELLS RANCH STATE AA33-790 AWB
1899.00	16730.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	BHI/ATC 8.5" OWSG MWD+IFR+MSA Surveys <1980'-16730'>	WELLS RANCH STATE AA33-790 AWB
16730.00	16763.00	Blind Drilling (std)	Projection to bit	WELLS RANCH STATE AA33-790 AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#21 WELLS RANCH STATE AA33-790 (255'FSL&735'FWL,SEC.21)
Area	COLORADO	Well	WELLS RANCH STATE AA33-790
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA33-790 AWB
Facility	SEC.21-T06N-R63W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1899.00	0.220	131.930	1898.97	Tie to Surface Gyro
16730.00	90.030	179.370	6615.93	Last BHI MWD Surface Survey
16763.00	90.030	179.370	6615.92	Projection to Bit

COMMENTS
<p><b>Wellpath general comments</b></p> <p>SHL Location:</p> <p>Lat: 40.46553 N</p> <p>Long: 104.44816 W</p> <p>API# 05-123-43876</p>