

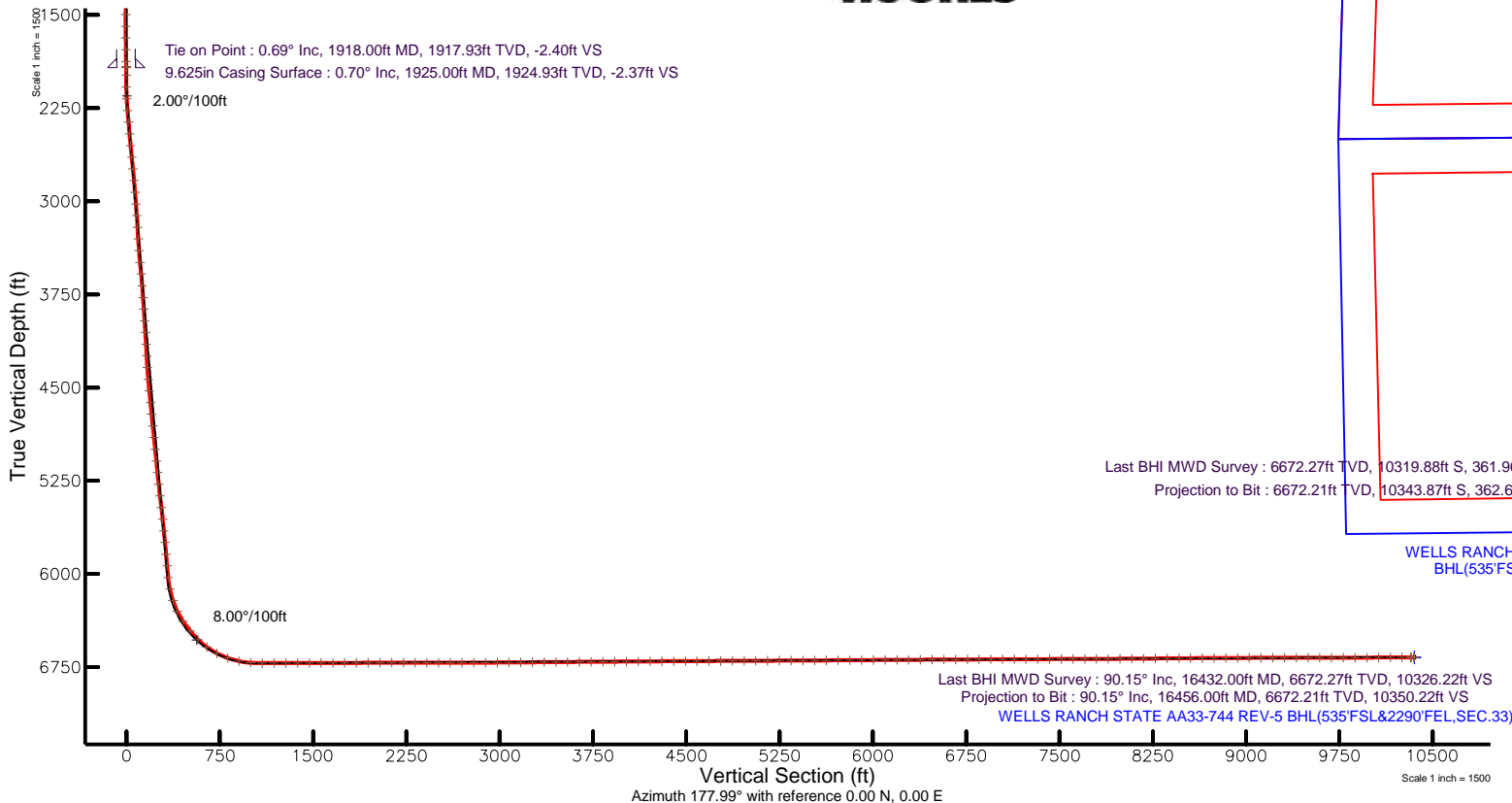
# NOBLE ENERGY, INC

Location: COLORADO Slot: SLOT#22 WELLS RANCH STATE AA33-744 (255°FSL&2540°FWL,SEC.21)  
Field: WELD COUNTY (NOBLE NAD 83 GRID) Well: WELLS RANCH STATE AA33-744  
Facility: SEC.21-T06N-R63W Wellbore: WELLS RANCH STATE AA33-744 PWB

Plot reference wellpath is WELLS RANCH STATE AA33-744 (REV-E.0) PWP	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to H&P RIG (30°KB) (RKB)	* = Wellpath was transformed from a different geodetic datum
Measured depths are referenced to H&P RIG (30°KB) (RKB)	North Reference: Grid north
H&P RIG (30°KB) (RKB) to Mean Sea Level: 4750 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#22 WELLS RANCH STATE AA33-744 (255°FSL&2540°FWL,SEC.21)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: zubabilla on 2017-04-13
	Database: WellArchitect

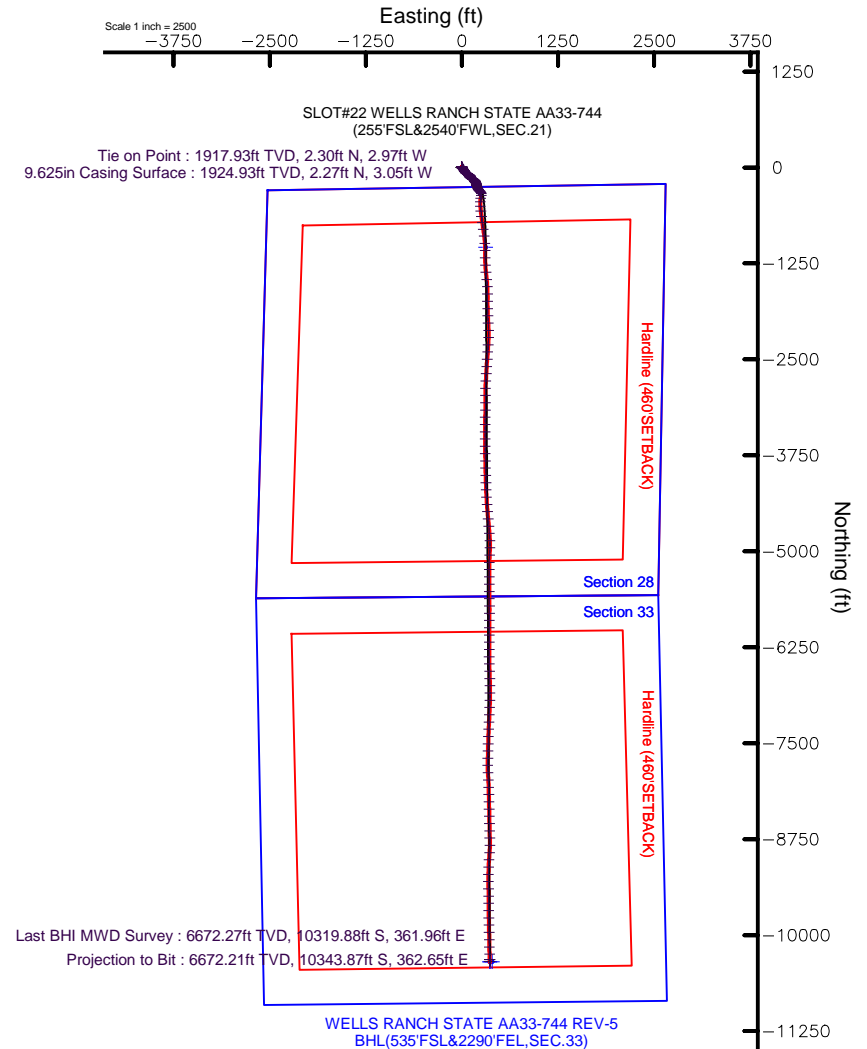
## Location Information

Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.21-T06N-R63W			3296551.084	1415076.401	40°28'04.418"N	104°26'02.872"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#22 WELLS RANCH STATE AA33-744 (255°FSL&2540°FWL,SEC.21)	-879.98	-2087.29	3294463.869	1414197.455	40°27'55.980"N	104°26'30.012"W
H&P RIG (30°KB) (RKB) to Mud line (At Slot: SLOT#22 WELLS RANCH STATE AA33-744 (255°FSL&2540°FWL,SEC.21))					4750ft	
Mean Sea Level to Mud line (At Slot: SLOT#22 WELLS RANCH STATE AA33-744 (255°FSL&2540°FWL,SEC.21))					0ft	
H&P RIG (30°KB) (RKB) to Mean Sea Level					4750ft	



## Comments

Surface Survey: SESW  
40.46555 N  
104.44167 W  
API#: 05-123-43878



## REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#22 WELLS RANCH STATE AA33-744 (255'FSL&2540'FWL,SEC.21)
Area	COLORADO	Well	WELLS RANCH STATE AA33-744
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA33-744 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	Zubabila
Scale	0.999964	Report Generated	4/12/2017 at 2:23:24 PM
Convergence at slot	0.69° East	Database/Source file	WellArchitect/WELLS_RANCH_STATE_AA33-744_AWP.xml

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-878.98	-2087.29	3294463.87	1414197.46	40°27'55.980"N	104°26'30.012"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	4750.00ft
Horizontal Reference Pt	Slot	H&P RIG (30'KB) (RKB) to Mean Sea Level	4750.00ft
Vertical Reference Pt	H&P RIG (30'KB) (RKB)	H&P RIG (30'KB) (RKB) to Mud Line at Slot (SLOT#22 WELLS RANCH STATE AA33-744 (255'FSL&2540'FWL,SEC.21))	4750.00ft
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	177.99°

REFERENCE WELLPATH IDENTIFICATION			
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Area	COLORADO	Well	WELLS RANCH STATE AA33-744
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA33-744 AWP
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	345.330	0.00	0.00	0.00	0.00	40°27'55.980"N	104°26'30.012"W	0.00	
78.00	0.190	345.330	78.00	-0.13	0.13	-0.03	40°27'55.981"N	104°26'30.012"W	0.24	
173.00	0.280	286.020	173.00	-0.35	0.34	-0.30	40°27'55.983"N	104°26'30.016"W	0.26	
267.00	0.070	305.320	267.00	-0.46	0.44	-0.56	40°27'55.984"N	104°26'30.019"W	0.23	
362.00	0.680	354.590	362.00	-1.06	1.03	-0.66	40°27'55.990"N	104°26'30.020"W	0.67	
456.00	0.630	328.670	455.99	-2.06	2.03	-0.99	40°27'56.000"N	104°26'30.024"W	0.32	
551.00	0.290	313.930	550.99	-2.69	2.64	-1.43	40°27'56.006"N	104°26'30.030"W	0.38	
646.00	0.080	34.340	645.99	-2.92	2.86	-1.57	40°27'56.008"N	104°26'30.032"W	0.30	
741.00	0.110	226.690	740.99	-2.91	2.86	-1.59	40°27'56.008"N	104°26'30.032"W	0.20	
835.00	0.370	320.260	834.99	-3.09	3.03	-1.85	40°27'56.010"N	104°26'30.036"W	0.42	
930.00	0.290	278.210	929.98	-3.38	3.30	-2.29	40°27'56.013"N	104°26'30.041"W	0.26	
1024.00	0.080	308.080	1023.98	-3.46	3.37	-2.58	40°27'56.014"N	104°26'30.045"W	0.24	
1119.00	0.290	288.340	1118.98	-3.59	3.49	-2.86	40°27'56.015"N	104°26'30.048"W	0.23	
1213.00	0.370	283.100	1212.98	-3.75	3.63	-3.38	40°27'56.016"N	104°26'30.055"W	0.09	
1308.00	0.490	328.110	1307.98	-4.18	4.05	-3.89	40°27'56.020"N	104°26'30.062"W	0.37	
1402.00	0.540	342.560	1401.98	-4.96	4.81	-4.24	40°27'56.022"N	104°26'30.066"W	0.15	
1497.00	0.250	340.680	1496.97	-5.59	5.43	-4.44	40°27'56.034"N	104°26'30.069"W	0.31	
1592.00	0.340	18.580	1591.97	-6.05	5.90	-4.42	40°27'56.039"N	104°26'30.068"W	0.22	
1686.00	1.040	127.230	1685.97	-5.77	5.64	-3.65	40°27'56.036"N	104°26'30.058"W	1.27	
1781.00	1.120	160.780	1780.95	-4.34	4.25	-2.66	40°27'56.022"N	104°26'30.046"W	0.66	
1875.00	0.870	201.900	1874.94	-2.81	2.72	-2.62	40°27'56.007"N	104°26'30.045"W	0.78	
1918.00	0.690	243.580	1917.93	-2.40	2.30	-2.97	40°27'56.003"N	104°26'30.050"W	1.35	Tie on Point
1986.00	1.030	289.300	1985.93	-2.45	2.32	-3.92	40°27'56.003"N	104°26'30.062"W	1.09	
2081.00	1.470	159.270	2080.92	-1.61	1.46	-4.29	40°27'55.995"N	104°26'30.067"W	2.39	
2175.00	4.450	139.230	2174.78	2.38	-2.43	-1.48	40°27'55.956"N	104°26'30.032"W	3.31	
2270.00	6.250	136.040	2269.36	9.10	-8.94	4.51	40°27'55.891"N	104°26'29.955"W	1.92	
2365.00	6.070	139.130	2363.82	16.85	-16.46	11.39	40°27'55.816"N	104°26'29.867"W	0.40	
2459.00	6.030	146.500	2457.29	24.93	-24.34	17.37	40°27'55.737"N	104°26'29.791"W	0.83	
2554.00	6.280	150.690	2551.75	33.81	-33.03	22.66	40°27'55.651"N	104°26'29.724"W	0.54	
2648.00	6.310	149.240	2645.18	42.90	-41.95	27.82	40°27'55.562"N	104°26'29.659"W	0.17	
2743.00	6.280	151.480	2739.61	52.13	-51.00	32.97	40°27'55.472"N	104°26'29.593"W	0.26	
2837.00	6.320	146.820	2833.04	61.16	-59.85	38.26	40°27'55.384"N	104°26'29.526"W	0.55	
2932.00	6.330	133.920	2927.47	69.40	-67.86	44.89	40°27'55.304"N	104°26'29.442"W	1.49	
3027.00	6.240	130.280	3021.90	76.63	-74.83	52.61	40°27'55.234"N	104°26'29.343"W	0.43	
3121.00	6.260	126.050	3115.34	83.23	-81.15	60.65	40°27'55.171"N	104°26'29.240"W	0.49	
3216.00	6.210	121.090	3209.78	89.23	-86.85	69.23	40°27'55.114"N	104°26'29.130"W	0.57	
3311.00	6.130	123.670	3304.23	95.00	-92.32	77.86	40°27'55.059"N	104°26'29.019"W	0.30	
3405.00	5.930	130.570	3397.71	101.21	-98.26	85.72	40°27'54.999"N	104°26'28.918"W	0.80	
3500.00	6.290	149.370	3492.18	109.10	-105.93	92.10	40°27'54.922"N	104°26'28.837"W	2.13	
3594.00	6.140	148.160	3585.63	117.98	-114.63	97.38	40°27'54.836"N	104°26'28.770"W	0.21	
3689.00	6.230	137.290	3680.08	126.30	-122.73	103.55	40°27'54.755"N	104°26'28.691"W	1.23	
3784.00	6.270	124.350	3774.52	133.28	-129.45	111.33	40°27'54.688"N	104°26'28.592"W	1.48	
3878.00	6.040	128.560	3867.97	139.54	-135.43	119.44	40°27'54.628"N	104°26'28.488"W	0.54	
3973.00	6.070	129.760	3962.44	146.14	-141.76	127.21	40°27'54.564"N	104°26'28.388"W	0.14	
4067.00	5.980	123.480	4055.93	152.29	-147.64	135.11	40°27'54.505"N	104°26'28.287"W	0.71	

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Area	COLORADO	Well	WELLS RANCH STATE AA33-744
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA33-744 AWP
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
4162.00	6.010	117.740	4150.41	157.63	-152.68	143.64	40°27'54.454"N	104°26'28.177"W	0.63	
4256.00	5.960	119.800	4243.90	162.65	-157.40	152.23	40°27'54.407"N	104°26'28.067"W	0.23	
4351.00	6.110	123.930	4338.37	168.21	-162.67	160.71	40°27'54.354"N	104°26'27.958"W	0.48	
4446.00	6.030	138.950	4432.84	175.06	-169.26	168.18	40°27'54.288"N	104°26'27.862"W	1.67	
4540.00	6.210	157.230	4526.32	183.65	-177.67	173.39	40°27'54.204"N	104°26'27.796"W	2.07	
4635.00	5.930	157.260	4620.78	193.04	-186.93	177.28	40°27'54.112"N	104°26'27.747"W	0.29	
4729.00	6.050	154.570	4714.27	202.13	-195.88	181.28	40°27'54.023"N	104°26'27.697"W	0.32	
4824.00	6.150	160.230	4808.73	211.57	-205.19	185.15	40°27'53.931"N	104°26'27.648"W	0.64	
4918.00	5.910	173.550	4902.22	221.19	-214.74	187.40	40°27'53.836"N	104°26'27.621"W	1.51	
5013.00	5.890	176.410	4996.71	230.94	-224.47	188.25	40°27'53.740"N	104°26'27.611"W	0.31	
5107.00	6.200	163.520	5090.20	240.68	-234.15	189.99	40°27'53.644"N	104°26'27.590"W	1.48	
5202.00	6.100	147.200	5184.66	249.98	-243.31	194.18	40°27'53.553"N	104°26'27.537"W	1.84	
5296.00	6.710	158.020	5278.07	259.43	-252.60	198.95	40°27'53.461"N	104°26'27.477"W	1.44	
5391.00	6.920	161.870	5372.40	270.15	-263.19	202.80	40°27'53.356"N	104°26'27.429"W	0.53	
5486.00	7.040	155.360	5466.70	281.02	-273.92	207.01	40°27'53.249"N	104°26'27.376"W	0.84	
5580.00	6.910	150.340	5560.00	291.34	-284.07	212.21	40°27'53.148"N	104°26'27.311"W	0.66	
5675.00	6.950	146.140	5654.31	301.29	-293.81	218.24	40°27'53.051"N	104°26'27.234"W	0.53	
5769.00	6.810	139.080	5747.64	310.46	-302.74	225.06	40°27'52.962"N	104°26'27.147"W	0.91	
5864.00	6.860	135.000	5841.96	318.99	-311.01	232.76	40°27'52.880"N	104°26'27.049"W	0.51	
5958.00	6.730	134.340	5935.30	327.08	-318.83	240.67	40°27'52.801"N	104°26'26.948"W	0.16	
6053.00	6.710	143.440	6029.65	335.68	-327.18	247.96	40°27'52.718"N	104°26'26.855"W	1.12	
6147.00	12.080	169.180	6122.39	349.94	-341.27	253.08	40°27'52.578"N	104°26'26.791"W	7.12	
6242.00	18.360	192.270	6214.10	374.31	-365.70	251.77	40°27'52.337"N	104°26'26.811"W	9.07	
6336.00	26.260	192.430	6300.99	408.85	-400.52	244.13	40°27'51.994"N	104°26'26.916"W	8.40	
6431.00	34.550	181.900	6382.91	456.19	-448.09	238.70	40°27'51.524"N	104°26'26.993"W	10.35	
6526.00	38.770	175.110	6459.14	512.82	-504.70	240.35	40°27'50.965"N	104°26'26.981"W	6.15	
6620.00	45.290	174.360	6528.92	575.62	-567.33	246.14	40°27'50.345"N	104°26'26.915"W	6.96	
6715.00	54.430	172.620	6590.10	647.94	-639.40	254.44	40°27'49.632"N	104°26'26.819"W	9.72	
6809.00	62.830	171.720	6638.99	727.71	-718.83	265.39	40°27'48.846"N	104°26'26.690"W	8.97	
6904.00	70.480	171.960	6676.61	814.36	-805.11	277.76	40°27'47.992"N	104°26'26.543"W	8.06	
6998.00	78.320	173.300	6701.87	904.43	-894.83	289.34	40°27'47.104"N	104°26'26.407"W	8.45	
7093.00	85.870	175.820	6714.93	998.29	-988.43	298.24	40°27'46.178"N	104°26'26.306"W	8.37	
7187.00	90.520	179.190	6717.89	1092.20	-1082.25	302.32	40°27'45.251"N	104°26'26.268"W	6.11	
7282.00	90.180	180.050	6717.31	1187.16	-1177.25	302.95	40°27'44.312"N	104°26'26.275"W	0.97	
7377.00	90.220	177.570	6716.98	1282.14	-1272.22	304.93	40°27'43.373"N	104°26'26.264"W	2.61	
7471.00	90.090	173.780	6716.72	1376.05	-1365.93	312.01	40°27'42.447"N	104°26'26.187"W	4.03	
7566.00	90.060	173.750	6716.60	1470.79	-1460.37	322.33	40°27'41.512"N	104°26'26.068"W	0.04	
7660.00	90.180	176.990	6716.40	1564.68	-1554.05	329.92	40°27'40.586"N	104°26'25.984"W	3.45	
7755.00	90.180	179.510	6716.10	1659.67	-1649.00	332.82	40°27'39.647"N	104°26'25.961"W	2.65	
7849.00	90.090	180.440	6715.88	1753.61	-1743.00	332.86	40°27'38.718"N	104°26'25.975"W	0.99	
7944.00	90.060	178.550	6715.76	1848.57	-1837.99	333.70	40°27'37.780"N	104°26'25.979"W	1.99	
8039.00	90.180	177.410	6715.56	1943.57	-1932.93	337.05	40°27'36.841"N	104°26'25.950"W	1.21	
8133.00	90.120	176.750	6715.31	2037.56	-2026.81	341.83	40°27'35.913"N	104°26'25.903"W	0.71	
8228.00	90.400	177.930	6714.88	2132.55	-2121.70	346.24	40°27'34.975"N	104°26'25.861"W	1.28	
8322.00	89.820	182.130	6714.70	2226.47	-2215.68	346.19	40°27'34.046"N	104°26'25.876"W	4.51	

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Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA33-744 AWP
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
8417.00	89.780	183.110	6715.03	2321.16	-2310.58	341.85	40°27'33.109"N	104°26'25.947"W	1.03	
8511.00	89.910	184.400	6715.28	2414.68	-2404.37	335.70	40°27'32.183"N	104°26'26.041"W	1.38	
8606.00	90.280	184.490	6715.13	2509.08	-2499.09	328.33	40°27'31.248"N	104°26'26.151"W	0.40	
8700.00	90.150	183.490	6714.77	2602.56	-2592.86	321.79	40°27'30.322"N	104°26'26.250"W	1.07	
8795.00	89.850	183.440	6714.77	2697.12	-2687.68	316.05	40°27'29.386"N	104°26'26.339"W	0.32	
8890.00	90.490	183.330	6714.49	2791.70	-2782.52	310.44	40°27'28.450"N	104°26'26.426"W	0.68	
8984.00	90.370	182.170	6713.79	2885.37	-2876.40	305.93	40°27'27.523"N	104°26'26.499"W	1.24	
9079.00	90.430	179.230	6713.12	2980.25	-2971.38	304.77	40°27'26.584"N	104°26'26.528"W	3.10	
9173.00	90.460	179.010	6712.39	3074.23	-3065.37	306.21	40°27'25.655"N	104°26'26.524"W	0.24	
9268.00	90.280	181.460	6711.78	3169.15	-3160.36	305.82	40°27'24.717"N	104°26'26.544"W	2.59	
9362.00	90.620	182.030	6711.04	3262.95	-3254.31	302.96	40°27'23.789"N	104°26'26.596"W	0.71	
9457.00	90.490	181.030	6710.12	3357.76	-3349.27	300.43	40°27'22.851"N	104°26'26.643"W	1.06	
9552.00	90.370	179.020	6709.41	3452.69	-3444.27	300.38	40°27'21.912"N	104°26'26.658"W	2.12	
9646.00	90.430	178.650	6708.75	3546.68	-3538.24	302.30	40°27'20.984"N	104°26'26.648"W	0.40	
9741.00	90.490	180.750	6707.99	3641.63	-3633.24	302.79	40°27'20.045"N	104°26'26.656"W	2.21	
9835.00	90.430	179.070	6707.23	3735.57	-3727.23	302.94	40°27'19.116"N	104°26'26.669"W	1.79	
9930.00	90.520	178.980	6706.45	3830.55	-3822.21	304.56	40°27'18.177"N	104°26'26.663"W	0.13	
10025.00	90.280	178.870	6705.78	3925.53	-3917.19	306.34	40°27'17.239"N	104°26'26.654"W	0.28	
10119.00	90.250	178.080	6705.35	4019.53	-4011.16	308.84	40°27'16.310"N	104°26'26.636"W	0.84	
10214.00	90.520	178.180	6704.71	4114.53	-4106.10	311.94	40°27'15.371"N	104°26'26.611"W	0.30	
10309.00	90.460	178.070	6703.90	4209.52	-4201.05	315.05	40°27'14.433"N	104°26'26.585"W	0.13	
10403.00	90.490	176.270	6703.12	4303.51	-4294.93	319.69	40°27'13.505"N	104°26'26.540"W	1.92	
10498.00	90.280	176.520	6702.48	4398.47	-4389.74	325.66	40°27'12.567"N	104°26'26.477"W	0.34	
10593.00	90.340	175.150	6701.97	4493.40	-4484.48	332.56	40°27'11.630"N	104°26'26.403"W	1.44	
10687.00	90.280	174.410	6701.46	4587.25	-4578.09	341.11	40°27'10.704"N	104°26'26.307"W	0.79	
10782.00	90.340	175.160	6700.94	4682.10	-4672.70	349.75	40°27'09.769"N	104°26'26.210"W	0.79	
10876.00	90.180	175.740	6700.52	4776.00	-4766.40	357.21	40°27'08.842"N	104°26'26.128"W	0.64	
10971.00	90.220	176.820	6700.19	4870.96	-4861.20	363.37	40°27'07.904"N	104°26'26.062"W	1.14	
11065.00	90.460	182.080	6699.63	4964.89	-4955.16	364.27	40°27'06.976"N	104°26'26.065"W	5.60	
11160.00	90.280	183.000	6699.01	5059.59	-5050.06	360.06	40°27'06.039"N	104°26'26.134"W	0.99	
11254.00	90.310	181.240	6698.53	5153.34	-5143.99	356.58	40°27'05.111"N	104°26'26.194"W	1.87	
11349.00	90.430	180.380	6697.92	5248.22	-5238.98	355.24	40°27'04.173"N	104°26'26.226"W	0.91	
11443.00	90.180	179.640	6697.42	5342.16	-5332.98	355.23	40°27'03.244"N	104°26'26.241"W	0.83	
11538.00	90.310	180.200	6697.01	5437.11	-5427.98	355.36	40°27'02.305"N	104°26'26.254"W	0.61	
11633.00	90.310	179.540	6696.50	5532.05	-5522.97	355.57	40°27'01.366"N	104°26'26.266"W	0.69	
11727.00	90.430	179.260	6695.89	5626.02	-5616.97	356.56	40°27'00.438"N	104°26'26.267"W	0.32	
11822.00	90.400	179.360	6695.20	5721.00	-5711.96	357.70	40°26'59.499"N	104°26'26.267"W	0.11	
11917.00	90.220	180.560	6694.69	5815.94	-5806.95	357.77	40°26'58.560"N	104°26'26.281"W	1.28	
12011.00	90.520	181.010	6694.08	5909.82	-5900.94	356.48	40°26'57.632"N	104°26'26.312"W	0.58	
12106.00	90.490	180.320	6693.24	6004.71	-5995.93	355.38	40°26'56.693"N	104°26'26.341"W	0.73	
12200.00	90.310	178.900	6692.59	6098.67	-6089.93	356.02	40°26'55.764"N	104°26'26.347"W	1.52	
12295.00	90.490	180.120	6691.92	6193.63	-6184.92	356.83	40°26'54.826"N	104°26'26.352"W	1.30	
12389.00	90.250	181.780	6691.32	6287.50	-6278.90	355.27	40°26'53.897"N	104°26'26.386"W	1.78	
12484.00	90.340	179.860	6690.83	6382.38	-6373.88	353.91	40°26'52.959"N	104°26'26.419"W	2.02	
12578.00	90.460	178.350	6690.17	6476.36	-6467.87	355.38	40°26'52.030"N	104°26'26.414"W	1.61	

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#22 WELLS RANCH STATE AA33-744 (255'FSL&2540'FWL,SEC.21)
Area	COLORADO	Well	WELLS RANCH STATE AA33-744
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA33-744 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
12673.00	90.280	177.330	6689.56	6571.35	-6562.80	358.96	40°26'51.092"N	104°26'26.382"W	1.09	
12767.00	90.490	179.270	6688.93	6665.35	-6656.75	361.75	40°26'50.163"N	104°26'26.361"W	2.08	
12862.00	90.060	179.150	6688.47	6760.32	-6751.74	363.06	40°26'49.224"N	104°26'26.359"W	0.47	
12956.00	90.370	179.930	6688.12	6854.29	-6845.73	363.81	40°26'48.295"N	104°26'26.363"W	0.89	
13051.00	90.250	180.710	6687.60	6949.21	-6940.73	363.28	40°26'47.357"N	104°26'26.385"W	0.83	
13145.00	90.340	182.090	6687.12	7043.04	-7034.70	360.99	40°26'46.429"N	104°26'26.429"W	1.47	
13240.00	90.280	182.990	6686.60	7137.73	-7129.60	356.78	40°26'45.491"N	104°26'26.498"W	0.95	
13334.00	90.090	182.420	6686.30	7231.41	-7223.50	352.34	40°26'44.564"N	104°26'26.570"W	0.64	
13429.00	90.150	182.860	6686.10	7326.10	-7318.40	347.96	40°26'43.627"N	104°26'26.641"W	0.47	
13523.00	90.340	181.990	6685.70	7419.82	-7412.31	343.99	40°26'42.700"N	104°26'26.707"W	0.95	
13618.00	89.820	181.180	6685.57	7514.63	-7507.27	341.36	40°26'41.762"N	104°26'26.756"W	1.01	
13712.00	90.180	180.860	6685.57	7608.50	-7601.26	339.69	40°26'40.833"N	104°26'26.792"W	0.51	
13807.00	90.370	182.630	6685.11	7703.29	-7696.21	336.79	40°26'39.895"N	104°26'26.844"W	1.87	
13901.00	90.400	179.700	6684.48	7797.13	-7790.18	334.88	40°26'38.967"N	104°26'26.883"W	3.12	
13996.00	90.490	176.840	6683.74	7892.12	-7885.12	337.75	40°26'38.028"N	104°26'26.861"W	3.01	
14090.00	90.490	176.720	6682.94	7986.09	-7978.97	343.03	40°26'37.101"N	104°26'26.807"W	0.13	
14185.00	90.520	178.460	6682.10	8081.08	-8073.88	347.02	40°26'36.162"N	104°26'26.770"W	1.83	
14280.00	90.310	178.470	6681.41	8176.08	-8168.84	349.57	40°26'35.224"N	104°26'26.752"W	0.22	
14374.00	90.490	178.680	6680.76	8270.07	-8262.81	351.91	40°26'34.295"N	104°26'26.736"W	0.29	
14469.00	90.580	178.810	6679.87	8365.06	-8357.78	353.99	40°26'33.356"N	104°26'26.724"W	0.17	
14564.00	90.580	178.930	6678.91	8460.04	-8452.76	355.86	40°26'32.418"N	104°26'26.715"W	0.13	
14658.00	90.180	178.440	6678.28	8554.03	-8546.73	358.02	40°26'31.489"N	104°26'26.701"W	0.67	
14753.00	90.180	178.540	6677.99	8649.03	-8641.70	360.52	40°26'30.550"N	104°26'26.683"W	0.11	
14847.00	90.280	178.880	6677.61	8743.02	-8735.67	362.64	40°26'29.621"N	104°26'26.671"W	0.38	
14942.00	90.520	180.100	6676.94	8837.98	-8830.67	363.48	40°26'28.683"N	104°26'26.674"W	1.31	
15037.00	90.220	184.600	6676.33	8932.68	-8925.56	359.59	40°26'27.745"N	104°26'26.739"W	4.75	
15131.00	90.400	184.070	6675.82	9026.10	-9019.29	352.48	40°26'26.820"N	104°26'26.846"W	0.60	
15226.00	90.090	182.230	6675.42	9120.71	-9114.14	347.26	40°26'25.884"N	104°26'26.928"W	1.96	
15320.00	90.250	180.920	6675.14	9214.53	-9208.10	344.68	40°26'24.955"N	104°26'26.976"W	1.40	
15415.00	90.090	179.560	6674.86	9309.45	-9303.10	344.28	40°26'24.017"N	104°26'26.996"W	1.44	
15509.00	89.910	179.090	6674.86	9403.42	-9397.09	345.39	40°26'23.088"N	104°26'26.996"W	0.54	
15604.00	90.000	179.160	6674.93	9498.41	-9492.08	346.84	40°26'22.149"N	104°26'26.992"W	0.12	
15698.00	90.090	179.490	6674.86	9592.38	-9586.07	347.95	40°26'21.220"N	104°26'26.992"W	0.36	
15793.00	89.780	179.830	6674.96	9687.34	-9681.07	348.51	40°26'20.282"N	104°26'26.999"W	0.48	
15887.00	90.550	178.990	6674.69	9781.31	-9775.06	349.48	40°26'19.353"N	104°26'27.001"W	1.21	
15982.00	90.120	179.150	6674.14	9876.29	-9870.05	351.02	40°26'18.414"N	104°26'26.996"W	0.48	
16077.00	90.490	177.940	6673.63	9971.28	-9965.02	353.43	40°26'17.475"N	104°26'26.980"W	1.33	
16171.00	90.250	179.590	6673.02	10065.27	-10058.99	355.46	40°26'16.547"N	104°26'26.968"W	1.77	
16266.00	90.220	179.400	6672.64	10160.23	-10153.98	356.30	40°26'15.608"N	104°26'26.972"W	0.20	
16360.00	90.060	177.140	6672.41	10254.23	-10247.94	359.13	40°26'14.679"N	104°26'26.950"W	2.41	
16432.00	90.150	178.360	6672.27	10326.22	-10319.88	361.96	40°26'13.968"N	104°26'26.924"W	1.70	Last BHI MWD Survey
16456.00	90.150	178.360	6672.21	10350.22	-10343.87	362.65	40°26'13.731"N	104°26'26.919"W	0.00	Projection to Bit



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#22 WELLS RANCH STATE AA33-744 (255'FSL&2540'FWL,SEC.21)
Area	COLORADO	Well	WELLS RANCH STATE AA33-744
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA33-744 AWB
Facility	SEC.21-T06N-R63W		

HOLE & CASING SECTIONS									
- Ref Wellbore: WELLS RANCH STATE AA33-744 AWB					Ref Wellpath: WELLS RANCH STATE AA33-744 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	1925.00	1895.00	30.00	1924.93	0.02	0.00	2.27	-3.05
9.625in Casing Surface	30.00	1925.00	1895.00	30.00	1924.93	0.02	0.00	2.27	-3.05
8.5in Open Hole	1925.00	16456.00	14531.00	1924.93	6672.21	2.27	-3.05	-10343.87	362.65

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	-23.00	21.72	1510.75	3295974.57	1414219.18	40°27'56.016"N	104°26'10.464"W	polygon
WELLS RANCH STATE AA33-718 Section 33	-23.00	21.72	1510.75	3295974.57	1414219.18	40°27'56.016"N	104°26'10.464"W	polygon
WELLS RANCH STATE AA33-744 REV-3 BHL(535'FSL&2260'FEL,SEC.33)	6670.79	-10346.23	393.52	3294857.38	1403851.62	40°26'13.704"N	104°26'26.520"W	point
WELLS RANCH STATE AA33-744 REV-4 BHL(535'FSL&2290'FEL,SEC.33)	6670.79	-10346.23	363.52	3294827.38	1403851.62	40°26'13.708"N	104°26'26.908"W	point
WELLS RANCH STATE AA33-744 REV-5 BHL(535'FSL&2290'FEL,SEC.33)	6670.79	-10346.23	363.52	3294827.38	1403851.62	40°26'13.708"N	104°26'26.908"W	point
WELLS RANCH STATE AA33-744 Landing Point (658'FNL&2318'FEL,SEC.28)	6719.51	-1041.30	309.20	3294773.06	1413156.19	40°27'45.655"N	104°26'26.173"W	point
WELLS RANCH STATE AA33-718 Section 28 Hardline (460'SETBACK)	6777.00	21.72	1510.75	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)	6777.00	21.72	1510.75	3295974.57	1414219.18	40°27'56.016"N	104°26'10.464"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: WELLS RANCH STATE AA33-744 AWB					Ref Wellpath: WELLS RANCH STATE AA33-744 AWP	
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment		Wellbore	
0.00	1918.00	Gyrodata standard - Drop gyro or Multi-shot	GYRODATA SURFACE SURVEYS <78-1918>		WELLS RANCH STATE AA33-744 AWB	
1918.00	16432.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	BHI/ATC 8.5" OWSG MWD+IFR+MSA <1986'-16432'>		WELLS RANCH STATE AA33-744 AWB	
16432.00	16456.00	Blind Drilling (std)	Projection to bit		WELLS RANCH STATE AA33-744 AWB	



# Actual Wellpath Report

WELLS RANCH STATE AA33-744 AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#22 WELLS RANCH STATE AA33-744 (255'FSL&2540'FWL,SEC.21)
Area	COLORADO	Well	WELLS RANCH STATE AA33-744
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA33-744 AWB
Facility	SEC.21-T06N-R63W		

## WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1918.00	0.690	243.580	1917.93	Tie on Point
16432.00	90.150	178.360	6672.27	Last BHI MWD Survey
16456.00	90.150	178.360	6672.21	Projection to Bit

## COMMENTS

### Wellpath general comments

Surface Survey: SESW  
40.46555 N  
104.44167 W  
API#: 05-123-43878