

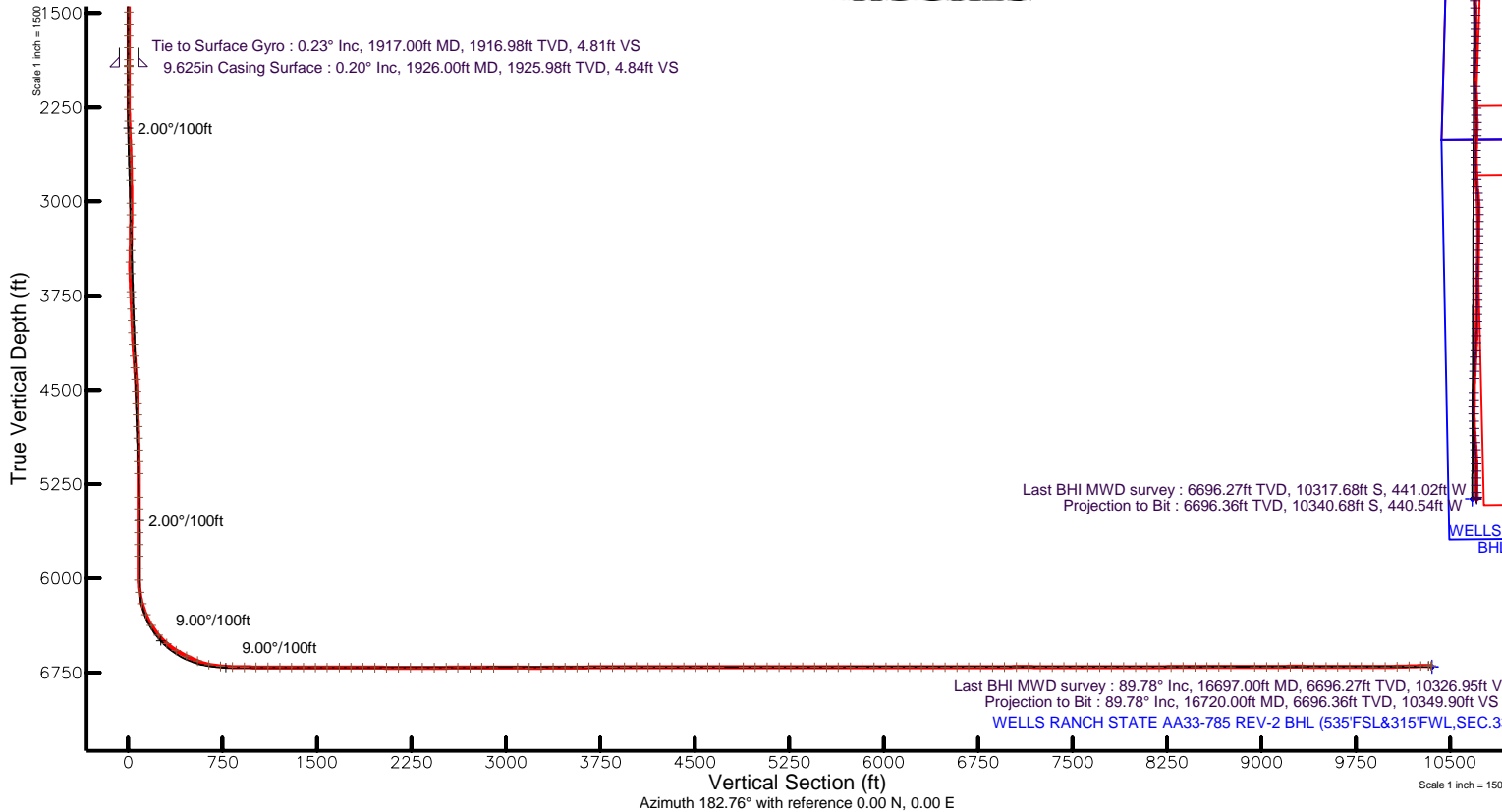
NOBLE ENERGY, INC

Location: COLORADO Slot: SLOT#20 WELLS RANCH STATE AA33-785 (255°FSL&772°FWL,SEC.21)
 Field: WELD COUNTY (NOBLE NAD 83 GRID) Well: WELLS RANCH STATE AA33-785
 Facility: SEC.21-T06N-R63W Wellbore: WELLS RANCH STATE AA33-785 PWB

Plot reference wellpath is WELLS RANCH STATE AA33-785 (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: 4733 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#20 WELLS RANCH STATE AA33-785 (255°FSL&772°FWL,SEC.21)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: zubabla on 2017-04-13
	Database: WellArchitect

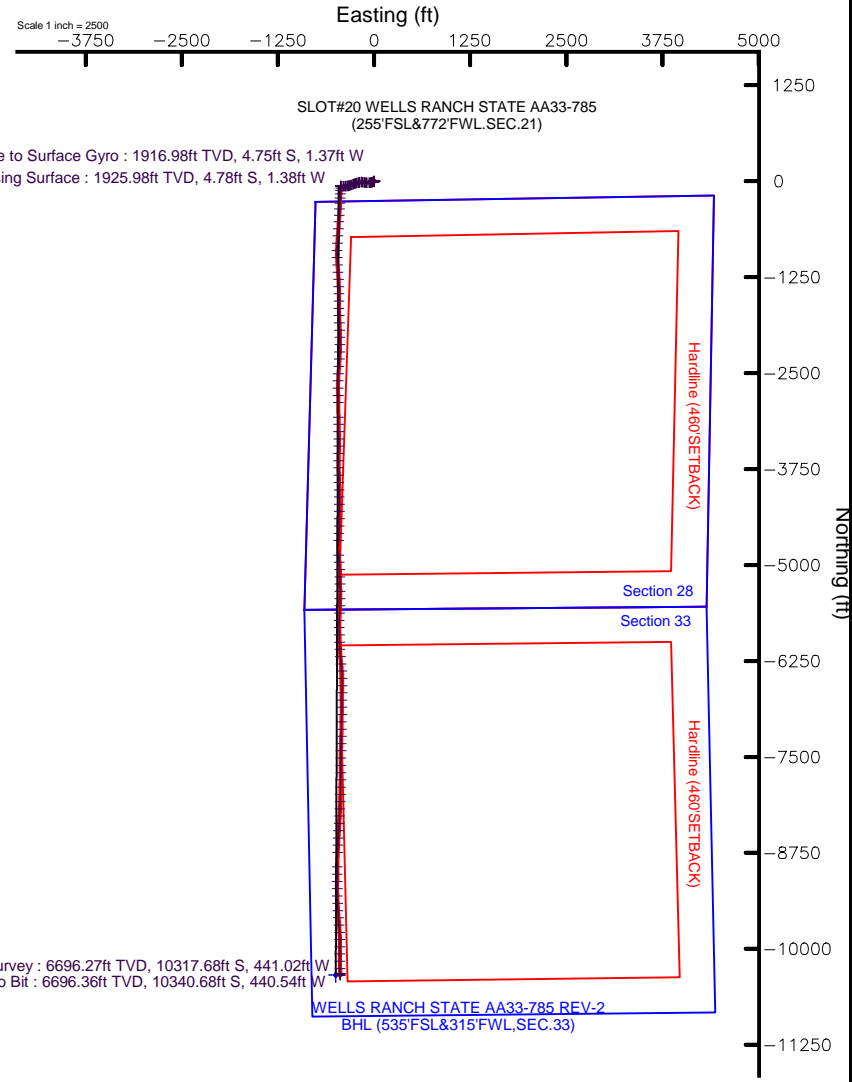
Location Information

Facility Name				Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.21-T06N-R63W				329651.084	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#20 WELLS RANCH STATE AA33-785 (255°FSL&772°FWL,SEC.21)		-907.32	-3856.76	3292694.468	1414169.113	40°27'55.908"N	104°26'52.908"W
H&P RIG (30KB) (RKB) to Mud line (At Slot: SLOT#20 WELLS RANCH STATE AA33-785 (255°FSL&772°FWL,SEC.21))						4733ft	
Mean Sea Level to Mud line (At Slot: SLOT#20 WELLS RANCH STATE AA33-785 (255°FSL&772°FWL,SEC.21))						0ft	
H&P RIG (30KB) (RKB) to Mean Sea Level						4733ft	



Comments

Surface Location: SWSW
40.46553 N
104.44803 W
API#: 05-123-43875



Last BHI MWD survey : 6696.27ft TVD, 10317.68ft S, 441.02ft W
 Projection to Bit : 6696.36ft TVD, 10340.68ft S, 440.54ft W

Last BHI MWD survey : 89.78° Inc, 16697.00ft MD, 6696.27ft TVD, 10326.95ft VS
 Projection to Bit : 89.78° Inc, 16720.00ft MD, 6696.36ft TVD, 10349.90ft VS
 WELLS RANCH STATE AA33-785 REV-2 BHL (535°FSL&315°FWL,SEC.33)

Vertical Section (ft)
 Azimuth 182.76° with reference 0.00 N, 0.00 E

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#20 WELLS RANCH STATE AA33-785 (255'FSL&772'FWL.SEC.21)
Area	COLORADO	Well	WELLS RANCH STATE AA33-785
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA33-785 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 2:26:04 PM
Convergence at slot	0.68° East	Database/Source file	WellArchitect/WELLS_RANCH_STATE_AA33-785_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-907.32	-3856.76	3292694.47	1414169.11	40°27'55.908"N	104°26'52.908"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	4733.00ft
Horizontal Reference Pt	Slot	H&P RIG (30'KB) (RKB) to Mean Sea Level	4733.00ft
Vertical Reference Pt	H&P RIG (30'KB) (RKB)	H&P RIG (30'KB) (RKB) to Mud Line at Slot (SLOT#20 WELLS RANCH STATE AA33-785 (255'FSL&772'FWL.SEC.21))	4733.00ft
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	182.76°



Actual Wellpath Report

WELLS RANCH STATE AA33-785 AWP
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#20 WELLS RANCH STATE AA33-785 (255'FSL&772'FWL.SEC.21)
Area	COLORADO	Well	WELLS RANCH STATE AA33-785
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA33-785 AWB
Facility	SEC.21-T06N-R63W		

WELLPATH DATA (175 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00	0.000	201.660	0.00	0.00	0.00	0.00	40°27'55.908"N	104°26'52.908"W	0.00	
75.00	0.550	201.660	75.00	0.34	-0.33	-0.13	40°27'55.905"N	104°26'52.910"W	0.73	
171.00	0.380	186.040	171.00	1.09	-1.08	-0.34	40°27'55.897"N	104°26'52.913"W	0.22	
263.00	0.320	198.360	262.99	1.65	-1.63	-0.45	40°27'55.892"N	104°26'52.914"W	0.10	
358.00	0.290	264.920	357.99	1.93	-1.90	-0.77	40°27'55.889"N	104°26'52.918"W	0.35	
452.00	0.350	244.280	451.99	2.10	-2.05	-1.27	40°27'55.888"N	104°26'52.925"W	0.14	
547.00	0.340	205.500	546.99	2.50	-2.43	-1.65	40°27'55.884"N	104°26'52.930"W	0.24	
641.00	0.260	168.180	640.99	2.97	-2.89	-1.73	40°27'55.880"N	104°26'52.931"W	0.22	
736.00	0.140	289.780	735.99	3.14	-3.06	-1.79	40°27'55.878"N	104°26'52.932"W	0.37	
831.00	0.140	68.970	830.99	3.06	-2.98	-1.79	40°27'55.879"N	104°26'52.932"W	0.28	
925.00	0.110	345.130	924.99	2.93	-2.85	-1.71	40°27'55.880"N	104°26'52.931"W	0.18	
1020.00	0.170	178.310	1019.99	2.98	-2.90	-1.73	40°27'55.880"N	104°26'52.931"W	0.29	
1114.00	0.130	112.180	1113.99	3.16	-3.08	-1.63	40°27'55.878"N	104°26'52.930"W	0.18	
1209.00	0.050	304.240	1208.99	3.17	-3.10	-1.56	40°27'55.878"N	104°26'52.929"W	0.19	
1304.00	0.240	155.260	1303.99	3.32	-3.26	-1.51	40°27'55.876"N	104°26'52.928"W	0.30	
1398.00	0.450	177.940	1397.99	3.87	-3.80	-1.42	40°27'55.871"N	104°26'52.927"W	0.26	
1493.00	0.240	165.390	1492.98	4.43	-4.37	-1.35	40°27'55.865"N	104°26'52.926"W	0.23	
1588.00	0.090	170.470	1587.98	4.69	-4.63	-1.29	40°27'55.862"N	104°26'52.925"W	0.16	
1682.00	0.160	29.170	1681.98	4.65	-4.59	-1.21	40°27'55.863"N	104°26'52.924"W	0.25	
1776.00	0.070	223.670	1775.98	4.57	-4.52	-1.19	40°27'55.863"N	104°26'52.924"W	0.24	
1870.00	0.120	226.970	1869.98	4.69	-4.63	-1.30	40°27'55.862"N	104°26'52.926"W	0.05	
1917.00	0.230	202.380	1916.98	4.81	-4.75	-1.37	40°27'55.861"N	104°26'52.926"W	0.28	Tie to Surface Gyro
1981.00	0.070	139.050	1980.98	4.96	-4.90	-1.40	40°27'55.860"N	104°26'52.927"W	0.33	
2075.00	0.030	333.440	2074.98	4.98	-4.92	-1.37	40°27'55.860"N	104°26'52.926"W	0.11	
2170.00	0.160	246.190	2169.98	5.02	-4.95	-1.50	40°27'55.859"N	104°26'52.928"W	0.17	
2264.00	2.710	249.100	2263.95	5.97	-5.80	-3.70	40°27'55.851"N	104°26'52.957"W	2.71	
2359.00	4.850	250.310	2358.73	8.40	-7.95	-9.58	40°27'55.831"N	104°26'53.033"W	2.25	
2454.00	6.850	253.380	2453.23	11.82	-10.92	-18.79	40°27'55.802"N	104°26'53.153"W	2.13	
2548.00	7.120	253.700	2546.54	15.58	-14.16	-29.75	40°27'55.772"N	104°26'53.295"W	0.29	
2642.00	7.180	258.350	2639.81	18.94	-16.98	-41.10	40°27'55.745"N	104°26'53.442"W	0.62	
2737.00	7.200	263.100	2734.06	21.42	-18.90	-52.82	40°27'55.727"N	104°26'53.594"W	0.63	
2831.00	7.180	264.930	2827.32	23.21	-20.13	-64.52	40°27'55.717"N	104°26'53.746"W	0.24	
3020.00	8.330	273.650	3014.60	24.60	-20.30	-89.95	40°27'55.718"N	104°26'54.075"W	0.87	
3115.00	8.210	274.510	3108.61	24.29	-19.33	-103.58	40°27'55.729"N	104°26'54.251"W	0.18	
3210.00	8.110	275.660	3202.65	23.74	-18.13	-117.01	40°27'55.743"N	104°26'54.425"W	0.20	
3304.00	8.150	278.100	3295.70	22.78	-16.54	-130.21	40°27'55.760"N	104°26'54.595"W	0.37	
3399.00	8.400	283.590	3389.71	20.85	-13.96	-143.62	40°27'55.787"N	104°26'54.768"W	0.87	
3493.00	8.700	278.970	3482.67	18.79	-11.24	-157.31	40°27'55.815"N	104°26'54.945"W	0.80	
3587.00	8.840	261.050	3575.59	19.49	-11.25	-171.47	40°27'55.817"N	104°26'55.128"W	2.90	
3731.00	8.680	257.470	3717.91	24.60	-15.33	-193.01	40°27'55.779"N	104°26'55.407"W	0.39	
3776.00	8.640	256.740	3762.40	26.43	-16.84	-199.61	40°27'55.765"N	104°26'55.493"W	0.26	
3871.00	8.780	255.960	3856.30	30.49	-20.24	-213.59	40°27'55.733"N	104°26'55.674"W	0.19	
3965.00	8.700	257.080	3949.21	34.49	-23.57	-227.48	40°27'55.702"N	104°26'55.855"W	0.20	
4060.00	8.610	255.960	4043.13	38.48	-26.90	-241.38	40°27'55.670"N	104°26'56.035"W	0.20	
4154.00	8.520	249.530	4136.08	43.26	-31.04	-254.73	40°27'55.631"N	104°26'56.208"W	1.02	



Actual Wellpath Report

WELLS RANCH STATE AA33-785 AWP
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#20 WELLS RANCH STATE AA33-785 (255'FSL&772'FWL.SEC.21)
Area	COLORADO	Well	WELLS RANCH STATE AA33-785
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA33-785 AWB
Facility	SEC.21-T06N-R63W		

WELLPATH DATA (175 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4249.00	8.530	243.490	4230.03	49.48	-36.65	-267.63	40°27'55.577"N	104°26'56.376"W	0.94	
4343.00	8.440	245.860	4323.01	56.01	-42.58	-280.17	40°27'55.520"N	104°26'56.539"W	0.38	
4438.00	8.540	250.210	4416.97	61.87	-47.82	-293.17	40°27'55.470"N	104°26'56.708"W	0.68	
4532.00	8.420	252.940	4509.94	66.88	-52.20	-306.31	40°27'55.428"N	104°26'56.879"W	0.45	
4627.00	8.490	256.270	4603.91	71.23	-55.91	-319.77	40°27'55.393"N	104°26'57.053"W	0.52	
4722.00	8.420	259.010	4697.87	74.87	-58.90	-333.41	40°27'55.365"N	104°26'57.230"W	0.43	
4816.00	8.460	261.640	4790.86	77.84	-61.22	-347.01	40°27'55.344"N	104°26'57.407"W	0.41	
4911.00	8.530	263.870	4884.81	80.28	-62.99	-360.93	40°27'55.328"N	104°26'57.587"W	0.35	
5005.00	8.620	265.570	4977.76	82.23	-64.27	-374.89	40°27'55.317"N	104°26'57.768"W	0.29	
5100.00	8.720	267.560	5071.68	83.78	-65.13	-389.18	40°27'55.310"N	104°26'57.953"W	0.33	
5195.00	8.720	271.630	5165.58	84.57	-65.23	-403.57	40°27'55.311"N	104°26'58.139"W	0.65	
5384.00	6.590	269.560	5352.89	85.46	-64.91	-428.74	40°27'55.317"N	104°26'58.465"W	1.14	
5478.00	0.200	108.620	5446.69	85.80	-65.00	-433.98	40°27'55.317"N	104°26'58.532"W	7.21	
5573.00	0.070	90.760	5541.68	85.85	-65.06	-433.77	40°27'55.316"N	104°26'58.530"W	0.14	
5667.00	0.000	7.210	5635.68	85.85	-65.06	-433.71	40°27'55.316"N	104°26'58.529"W	0.07	
5762.00	0.040	8.370	5730.68	85.81	-65.02	-433.71	40°27'55.316"N	104°26'58.529"W	0.04	
5856.00	0.070	94.510	5824.68	85.78	-65.00	-433.65	40°27'55.317"N	104°26'58.528"W	0.08	
5951.00	0.100	109.630	5919.68	85.81	-65.03	-433.51	40°27'55.316"N	104°26'58.526"W	0.04	
6045.00	0.040	187.740	6013.68	85.86	-65.09	-433.44	40°27'55.316"N	104°26'58.525"W	0.11	
6144.00	7.190	179.760	6112.42	92.09	-71.33	-433.41	40°27'55.254"N	104°26'58.526"W	7.22	
6235.00	15.740	181.740	6201.53	110.15	-89.39	-433.77	40°27'55.076"N	104°26'58.533"W	9.40	
6329.00	23.500	183.810	6290.00	141.69	-120.88	-435.40	40°27'54.765"N	104°26'58.559"W	8.29	
6424.00	31.120	184.850	6374.35	185.22	-164.31	-438.74	40°27'54.336"N	104°26'58.609"W	8.04	
6518.00	39.490	183.200	6451.00	239.49	-218.45	-442.47	40°27'53.801"N	104°26'58.666"W	8.96	
6613.00	49.910	181.190	6518.43	306.20	-285.13	-444.92	40°27'53.143"N	104°26'58.708"W	11.07	
6707.00	58.050	182.760	6573.67	382.16	-361.04	-447.59	40°27'52.393"N	104°26'58.754"W	8.76	
6802.00	64.480	184.010	6619.32	465.41	-444.15	-452.53	40°27'51.572"N	104°26'58.830"W	6.87	
6896.00	66.920	183.760	6658.00	551.06	-529.62	-458.34	40°27'50.729"N	104°26'58.919"W	2.61	
6991.00	77.650	183.590	6686.86	641.41	-619.80	-464.12	40°27'49.838"N	104°26'59.007"W	11.30	
7085.00	85.840	183.930	6700.35	734.34	-712.54	-470.22	40°27'48.923"N	104°26'59.100"W	8.72	
7179.00	87.470	183.500	6705.83	828.16	-806.18	-476.30	40°27'47.998"N	104°26'59.193"W	1.79	
7274.00	89.820	182.110	6708.08	923.13	-901.03	-480.95	40°27'47.061"N	104°26'59.268"W	2.87	
7368.00	90.000	177.540	6708.22	1016.98	-995.01	-480.66	40°27'46.133"N	104°26'59.279"W	4.87	
7463.00	89.850	175.520	6708.35	1111.41	-1089.83	-474.91	40°27'45.195"N	104°26'59.219"W	2.13	
7558.00	89.820	176.580	6708.62	1205.76	-1184.60	-468.37	40°27'44.258"N	104°26'59.149"W	1.12	
7652.00	89.850	176.700	6708.89	1299.23	-1278.44	-462.86	40°27'43.330"N	104°26'59.092"W	0.13	
7747.00	89.940	179.030	6709.07	1393.87	-1373.37	-459.32	40°27'42.392"N	104°26'59.061"W	2.45	
7841.00	89.850	179.630	6709.24	1487.71	-1467.36	-458.22	40°27'41.463"N	104°26'59.061"W	0.65	
7935.00	89.970	179.710	6709.39	1581.57	-1561.36	-457.68	40°27'40.534"N	104°26'59.068"W	0.15	
8030.00	89.780	179.870	6709.59	1676.44	-1656.36	-457.33	40°27'39.595"N	104°26'59.078"W	0.26	
8124.00	89.780	177.320	6709.95	1770.18	-1750.32	-455.03	40°27'38.667"N	104°26'59.063"W	2.71	
8219.00	89.910	177.440	6710.21	1864.77	-1845.22	-450.68	40°27'37.728"N	104°26'59.021"W	0.19	
8314.00	89.820	178.080	6710.44	1959.40	-1940.15	-446.97	40°27'36.790"N	104°26'58.988"W	0.68	
8408.00	89.820	179.010	6710.73	2053.15	-2034.12	-444.58	40°27'35.861"N	104°26'58.971"W	0.99	
8503.00	89.880	180.990	6710.98	2148.03	-2129.11	-444.58	40°27'34.923"N	104°26'58.986"W	2.09	



Actual Wellpath Report

WELLS RANCH STATE AA33-785 AWP
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REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#20 WELLS RANCH STATE AA33-785 (255'FSL&772'FWL.SEC.21)
Area	COLORADO	Well	WELLS RANCH STATE AA33-785
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA33-785 AWB
Facility	SEC.21-T06N-R63W		

WELLPATH DATA (175 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8597.00	90.090	181.870	6711.00	2242.01	-2223.08	-446.93	40°27'33.994"N	104°26'59.031"W	0.96	
8692.00	90.030	183.000	6710.90	2337.00	-2317.99	-450.96	40°27'33.057"N	104°26'59.097"W	1.19	
8786.00	90.030	183.980	6710.86	2431.00	-2411.82	-456.69	40°27'32.131"N	104°26'59.186"W	1.04	
8881.00	90.120	183.660	6710.73	2525.98	-2506.61	-463.02	40°27'31.195"N	104°26'59.282"W	0.35	
8975.00	90.120	181.550	6710.53	2619.97	-2600.50	-467.29	40°27'30.268"N	104°26'59.352"W	2.24	
9070.00	90.090	179.640	6710.36	2714.90	-2695.50	-468.27	40°27'29.329"N	104°26'59.379"W	2.01	
9164.00	89.910	179.530	6710.36	2808.76	-2789.49	-467.59	40°27'28.400"N	104°26'59.385"W	0.22	
9259.00	89.970	178.900	6710.46	2903.58	-2884.48	-466.29	40°27'27.461"N	104°26'59.382"W	0.67	
9448.00	90.030	179.120	6710.46	3092.17	-3073.45	-463.03	40°27'25.594"N	104°26'59.369"W	0.12	
9542.00	89.660	179.460	6710.71	3186.00	-3167.45	-461.86	40°27'24.665"N	104°26'59.368"W	0.53	
9637.00	90.280	178.280	6710.76	3280.78	-3262.43	-459.99	40°27'23.726"N	104°26'59.359"W	1.40	
9732.00	90.280	179.050	6710.30	3375.53	-3357.40	-457.77	40°27'22.788"N	104°26'59.345"W	0.81	
9826.00	90.520	180.790	6709.64	3469.41	-3451.39	-457.64	40°27'21.859"N	104°26'59.357"W	1.87	
9921.00	90.430	181.420	6708.86	3564.37	-3546.37	-459.48	40°27'20.921"N	104°26'59.396"W	0.67	
10016.00	90.370	180.340	6708.19	3659.31	-3641.36	-460.93	40°27'19.982"N	104°26'59.429"W	1.14	
10110.00	90.430	179.040	6707.54	3753.18	-3735.35	-460.43	40°27'19.054"N	104°26'59.437"W	1.38	
10205.00	90.460	178.520	6706.80	3847.94	-3830.33	-458.40	40°27'18.115"N	104°26'59.425"W	0.55	
10299.00	90.430	178.840	6706.07	3941.70	-3924.30	-456.24	40°27'17.186"N	104°26'59.412"W	0.34	
10394.00	89.880	178.780	6705.81	4036.48	-4019.28	-454.27	40°27'16.247"N	104°26'59.401"W	0.58	
10488.00	89.820	178.980	6706.06	4130.26	-4113.26	-452.43	40°27'15.319"N	104°26'59.391"W	0.22	
10583.00	89.880	179.400	6706.31	4225.08	-4208.25	-451.08	40°27'14.380"N	104°26'59.388"W	0.45	
10677.00	89.910	180.410	6706.48	4318.96	-4302.25	-450.93	40°27'13.451"N	104°26'59.401"W	1.07	
10772.00	89.910	180.000	6706.63	4413.86	-4397.25	-451.27	40°27'12.512"N	104°26'59.420"W	0.43	
10867.00	89.940	182.810	6706.75	4508.83	-4492.21	-453.60	40°27'11.574"N	104°26'59.464"W	2.96	
10961.00	89.910	181.710	6706.88	4602.82	-4586.13	-457.30	40°27'10.647"N	104°26'59.527"W	1.17	
11055.00	89.910	182.040	6707.02	4696.81	-4680.08	-460.38	40°27'09.719"N	104°26'59.581"W	0.35	
11245.00	89.910	177.100	6707.32	4886.46	-4870.02	-458.95	40°27'07.842"N	104°26'59.592"W	2.60	
11339.00	89.940	175.100	6707.44	4979.82	-4963.80	-452.56	40°27'06.915"N	104°26'59.523"W	2.13	
11434.00	89.970	177.720	6707.52	5074.23	-5058.60	-446.61	40°27'05.977"N	104°26'59.461"W	2.76	
11529.00	90.000	179.400	6707.54	5168.97	-5153.57	-444.23	40°27'05.038"N	104°26'59.445"W	1.77	
11623.00	90.000	179.400	6707.54	5262.81	-5247.56	-443.24	40°27'04.110"N	104°26'59.446"W	0.00	
11717.00	90.090	179.630	6707.47	5356.66	-5341.56	-442.45	40°27'03.181"N	104°26'59.450"W	0.26	
11812.00	90.180	180.660	6707.25	5451.56	-5436.56	-442.69	40°27'02.242"N	104°26'59.468"W	1.09	
11907.00	89.970	182.050	6707.12	5546.53	-5531.53	-444.93	40°27'01.304"N	104°26'59.512"W	1.48	
12001.00	90.000	182.150	6707.15	5640.52	-5625.46	-448.38	40°27'00.376"N	104°26'59.571"W	0.11	
12096.00	89.970	181.900	6707.17	5735.51	-5720.41	-451.73	40°26'59.438"N	104°26'59.629"W	0.27	
12190.00	90.030	180.000	6707.17	5829.46	-5814.39	-453.29	40°26'58.510"N	104°26'59.663"W	2.02	
12285.00	89.940	177.730	6707.20	5924.24	-5909.36	-451.41	40°26'57.571"N	104°26'59.653"W	2.39	
12379.00	89.940	177.510	6707.29	6017.86	-6003.28	-447.51	40°26'56.643"N	104°26'59.617"W	0.23	
12474.00	90.000	177.950	6707.34	6112.49	-6098.21	-443.75	40°26'55.704"N	104°26'59.583"W	0.47	
12568.00	90.030	175.410	6707.32	6205.96	-6192.04	-438.30	40°26'54.777"N	104°26'59.527"W	2.70	
12663.00	90.060	174.240	6707.25	6300.05	-6286.65	-429.73	40°26'53.841"N	104°26'59.431"W	1.23	
12757.00	89.940	174.790	6707.25	6393.08	-6380.22	-420.75	40°26'52.915"N	104°26'59.329"W	0.60	
12852.00	90.030	179.690	6707.27	6487.61	-6475.08	-416.18	40°26'51.977"N	104°26'59.284"W	5.16	
12947.00	90.120	181.000	6707.15	6582.52	-6570.08	-416.75	40°26'51.039"N	104°26'59.306"W	1.38	



Actual Wellpath Report

WELLS RANCH STATE AA33-785 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#20 WELLS RANCH STATE AA33-785 (255'FSL&772'FWL.SEC.21)
Area	COLORADO	Well	WELLS RANCH STATE AA33-785
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA33-785 AWB
Facility	SEC.21-T06N-R63W		

WELLPATH DATA (175 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
13041.00	90.220	180.370	6706.87	6676.46	-6664.07	-417.87	40°26'50.110"N	104°26'59.335"W	0.68	
13135.00	90.180	180.850	6706.54	6770.39	-6758.07	-418.87	40°26'49.182"N	104°26'59.362"W	0.51	
13230.00	90.150	181.100	6706.27	6865.35	-6853.05	-420.49	40°26'48.243"N	104°26'59.398"W	0.27	
13325.00	90.250	180.690	6705.93	6960.29	-6948.04	-421.97	40°26'47.305"N	104°26'59.432"W	0.44	
13419.00	90.090	180.480	6705.65	7054.23	-7042.03	-422.93	40°26'46.376"N	104°26'59.458"W	0.28	
13514.00	89.940	181.170	6705.63	7149.17	-7137.02	-424.30	40°26'45.438"N	104°26'59.491"W	0.74	
13609.00	89.600	181.630	6706.01	7244.14	-7231.99	-426.62	40°26'44.500"N	104°26'59.535"W	0.60	
13703.00	90.090	181.270	6706.27	7338.12	-7325.96	-429.00	40°26'43.571"N	104°26'59.580"W	0.65	
13797.00	90.180	180.740	6706.04	7432.07	-7419.95	-430.65	40°26'42.643"N	104°26'59.616"W	0.57	
13892.00	89.910	179.920	6705.97	7526.99	-7514.94	-431.20	40°26'41.704"N	104°26'59.638"W	0.91	
13986.00	89.880	180.130	6706.14	7620.88	-7608.94	-431.24	40°26'40.776"N	104°26'59.653"W	0.23	
14081.00	90.090	180.740	6706.17	7715.80	-7703.94	-431.96	40°26'39.837"N	104°26'59.677"W	0.68	
14175.00	90.090	181.370	6706.02	7809.76	-7797.92	-433.69	40°26'38.909"N	104°26'59.713"W	0.67	
14270.00	89.940	181.690	6705.99	7904.74	-7892.89	-436.22	40°26'37.971"N	104°26'59.761"W	0.37	
14365.00	90.030	181.210	6706.02	7999.71	-7987.86	-438.63	40°26'37.032"N	104°26'59.806"W	0.51	
14459.00	90.090	181.570	6705.92	8093.69	-8081.83	-440.91	40°26'36.104"N	104°26'59.850"W	0.39	
14554.00	90.090	182.380	6705.77	8188.68	-8176.78	-444.18	40°26'35.166"N	104°26'59.907"W	0.85	
14648.00	90.090	183.080	6705.62	8282.68	-8270.67	-448.66	40°26'34.239"N	104°26'59.979"W	0.74	
14743.00	90.220	183.540	6705.37	8377.67	-8365.51	-454.15	40°26'33.303"N	104°27'00.065"W	0.50	
14838.00	90.120	182.830	6705.08	8472.67	-8460.36	-459.42	40°26'32.366"N	104°27'00.148"W	0.75	
14932.00	90.220	182.970	6704.81	8566.67	-8554.24	-464.18	40°26'31.439"N	104°27'00.223"W	0.18	
15027.00	90.060	182.800	6704.57	8661.67	-8649.12	-468.96	40°26'30.502"N	104°27'00.300"W	0.25	
15122.00	90.090	182.480	6704.45	8756.66	-8744.02	-473.34	40°26'29.565"N	104°27'00.371"W	0.34	
15311.00	90.120	180.460	6704.10	8945.61	-8932.95	-478.18	40°26'27.699"N	104°27'00.463"W	1.07	
15406.00	90.120	180.740	6703.90	9040.54	-9027.94	-479.18	40°26'26.760"N	104°27'00.490"W	0.29	
15500.00	90.280	180.600	6703.58	9134.48	-9121.93	-480.28	40°26'25.832"N	104°27'00.519"W	0.23	
15595.00	90.340	179.920	6703.06	9229.38	-9216.93	-480.71	40°26'24.893"N	104°27'00.539"W	0.72	
15690.00	89.630	178.120	6703.09	9324.18	-9311.91	-479.08	40°26'23.954"N	104°27'00.532"W	2.04	
15784.00	89.570	176.780	6703.74	9417.77	-9405.81	-474.90	40°26'23.026"N	104°27'00.493"W	1.43	
15879.00	89.970	177.010	6704.12	9512.27	-9500.67	-469.76	40°26'22.088"N	104°27'00.441"W	0.49	
15973.00	90.030	174.810	6704.12	9605.60	-9594.43	-463.05	40°26'21.161"N	104°27'00.368"W	2.34	
16068.00	90.120	175.910	6704.00	9699.80	-9689.12	-455.37	40°26'20.225"N	104°27'00.283"W	1.16	
16163.00	90.180	176.500	6703.75	9794.18	-9783.91	-449.08	40°26'19.287"N	104°27'00.217"W	0.62	
16257.00	90.060	180.200	6703.55	9887.89	-9877.85	-446.37	40°26'18.359"N	104°27'00.196"W	3.94	
16352.00	89.880	180.180	6703.60	9982.79	-9972.85	-446.69	40°26'17.420"N	104°27'00.215"W	0.19	
16446.00	91.020	179.470	6702.87	10076.66	-10066.85	-446.40	40°26'16.491"N	104°27'00.225"W	1.43	
16541.00	91.750	179.100	6700.57	10171.46	-10161.81	-445.22	40°26'15.553"N	104°27'00.224"W	0.86	
16635.00	92.190	177.940	6697.34	10265.15	-10255.72	-442.79	40°26'14.624"N	104°27'00.207"W	1.32	
16697.00	89.780	178.790	6696.27	10326.95	-10317.68	-441.02	40°26'14.012"N	104°27'00.194"W	4.12	Last BHI MWD survey
16720.00	89.780	178.790	6696.36	10349.90	-10340.68	-440.54	40°26'13.785"N	104°27'00.191"W	0.00	Projection to Bit

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#20 WELLS RANCH STATE AA33-785 (255'FSL&772'FWL.SEC.21)
Area	COLORADO	Well	WELLS RANCH STATE AA33-785
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA33-785 AWB
Facility	SEC.21-T06N-R63W		

HOLE & CASING SECTIONS									
- Ref Wellbore: WELLS RANCH STATE AA33-785 AWB					Ref Wellpath: WELLS RANCH STATE AA33-785 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	1926.00	1896.00	30.00	1925.98	-0.05	-0.02	-4.78	-1.38
9.625in Casing Surface	30.00	1926.00	1896.00	30.00	1925.98	-0.05	-0.02	-4.78	-1.38
8.5in Open Hole	1926.00	16720.00	14794.00	1925.98	6696.36	-4.78	-1.38	-10340.68	-440.54

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	-40.00	50.06	3280.22	3295974.57	1414219.18	40°27'56.016"N	104°26'10.464"W	polygon
WELLS RANCH STATE AA33-718 Section 33	-40.00	50.06	3280.22	3295974.57	1414219.18	40°27'56.016"N	104°26'10.464"W	polygon
WELLS RANCH STATE AA33-785 REV-2 BHL (535'FSL&315'FWL,SEC.33)	6701.60	-10342.25	-498.11	3292196.38	1403827.26	40°26'13.776"N	104°27'00.936"W	point
WELLS RANCH STATE AA33-785 REV-1 BHL (535'FSL&315'FWL,SEC.33)	6706.00	-10342.25	-498.11	3292196.38	1403827.26	40°26'13.776"N	104°27'00.936"W	point
WELLS RANCH STATE AA33-718 Section 28 Hardline (460'SETBACK)	6760.00	50.06	3280.22	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)	6760.00	50.06	3280.22	3295974.57	1414219.18	40°27'56.016"N	104°26'10.464"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: WELLS RANCH STATE AA33-785 AWB						Ref Wellpath: WELLS RANCH STATE AA33-785 AWP
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment		Wellbore	
0.00	1917.00	Gyrodata standard - Drop gyro or Multi-shot	GyroData Surface Surveys <75'-1917'>		WELLS RANCH STATE AA33-785 AWB	
1917.00	16697.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	BHI/ATC 8.5" Hole OWSG MWD+IFR+MSA <1981'-16697'>		WELLS RANCH STATE AA33-785 AWB	
16697.00	16720.00	Blind Drilling (std)	Projection to bit		WELLS RANCH STATE AA33-785 AWB	



Actual Wellpath Report
WELLS RANCH STATE AA33-785 AWP
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#20 WELLS RANCH STATE AA33-785 (255'FSL&772'FWL.SEC.21)
Area	COLORADO	Well	WELLS RANCH STATE AA33-785
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA33-785 AWB
Facility	SEC.21-T06N-R63W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1917.00	0.230	202.380	1916.98	Tie to Surface Gyro
16697.00	89.780	178.790	6696.27	Last BHI MWD survey
16720.00	89.780	178.790	6696.36	Projection to Bit

COMMENTS
Wellpath general comments Surface Location: SWSW 40.46553 N 104.44803 W API#: 05-123-43875