

NOBLE ENERGY, INC

Location: COLORADO Slot: SLOT#02 WELLS RANCH STATE AA36-633 (2046'FSL & 817'FWL,SEC.32)
Field: WELD COUNTY (NOBLE NAD 83 GRID) Well: WELLS RANCH STATE AA36-633
Facility: SEC.32-T06N-R62W Wellbore: WELLS RANCH STATE AA36-633 PWB



Location Information

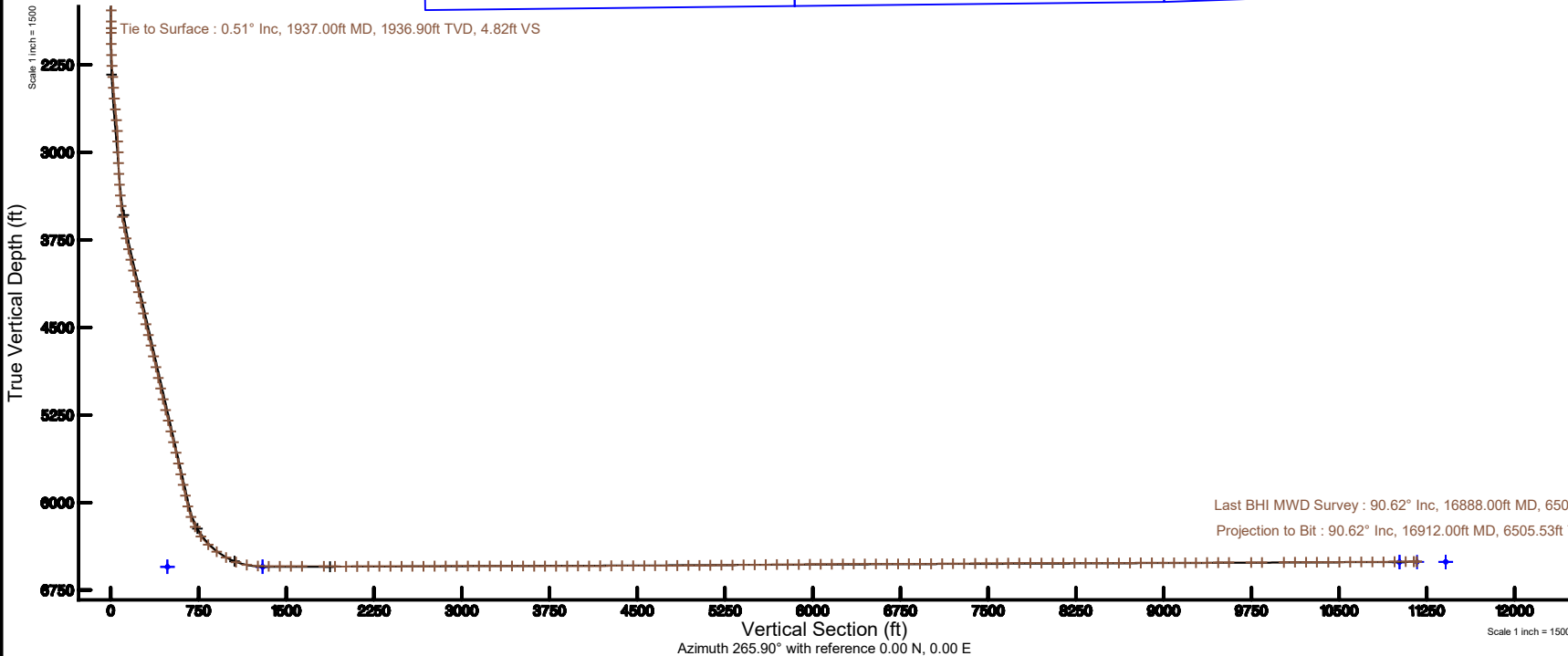
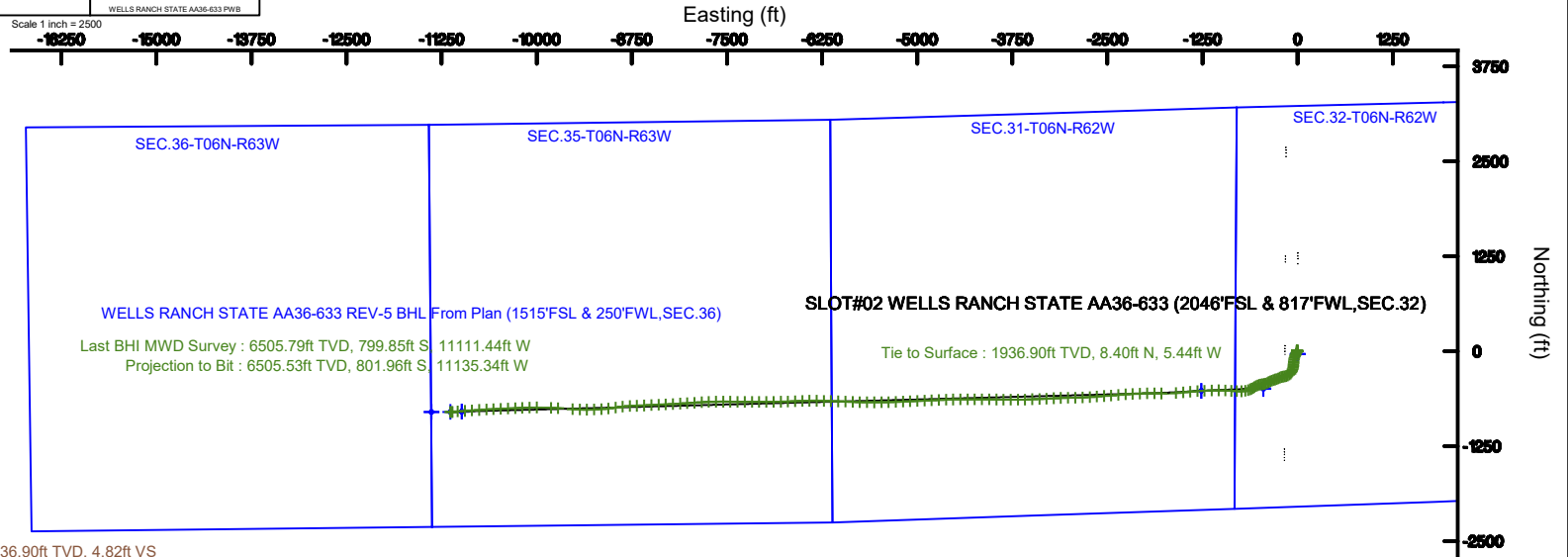
Facility Name			Grid East (US Ft)	Grid North (US Ft)	Latitude	Longitude
SEC. 32, T6N, R62W			2018804.302	1480733.368	43°54'28.328"N	104°21'13.887"W
Site	Local N (ft)	Local E (ft)	Grid East (US Ft)	Grid North (US Ft)	Latitude	Longitude
SLOT#02 WELLS RANCH STATE AA36-633 (2046'FSL & 817'FWL, SEC. 32)	38.40	-12.47	2018803.801	1480733.785	43°54'28.328"N	104°21'13.887"W
RG (201) (2046) to West line of Slot SLOT#02 WELLS RANCH STATE AA36-633 (2046'FSL & 817'FWL, SEC. 32)						47529
Mean Sea Level to West line of Slot SLOT#02 WELLS RANCH STATE AA36-633 (2046'FSL & 817'FWL, SEC. 32)						05
RG (201) (2046) to Mean Sea Level						47524

Plot reference wellbore is WELLS RANCH STATE AA36-633 (REV-E,3) PWB	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (2011), US Feet
True vertical depths are referenced to RG (201) (RWB)	North Reference: Grid north
Measured depths are referenced to RG (201) (RWB)	Scale: True distance
RG (201) (RWB) to Mean Sea Level: 4756 feet	Depths are in feet
Mean Sea Level to West line (of Slot) SLOT#02 WELLS RANCH STATE AA36-633 (2046'FSL & 817'FWL,SEC.32): 0 feet	Created by: daddams on 2019-07-19
Coordinates are in feet referenced to Slot	Database: WorkOrderDB

Survey Program

Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
30.00	17862.44	OWSG MWD rev2	OWSG MWD rev2 + JPR1 + Multi-Station Correction		WELLS RANCH STATE AA36-633 PWB

Scale 1 inch = 2500



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#02 WELLS RANCH STATE AA36-633 (2046'FSL & 817'FWL,SEC.32)
Area	COLORADO	Well	WELLS RANCH STATE AA36-633
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA36-633 AWB
Facility	SEC.32-T06N-R62W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 5.1
North Reference	Grid	User	Doddanna
Scale	0.999962	Report Generated	7/19/2019 at 11:10:22 AM
Convergence at slot	0.74° East	Database/Source file	WellArchitectDB/WELLS_RANCH_STATE_AA36-633_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	36.43	-0.47	3319023.89	1405769.79	40°26'29.688"N	104°21'13.680"W
Facility Reference Pt			3319024.36	1405733.36	40°26'29.328"N	104°21'13.680"W
Field Reference Pt			3000000.00	4454105.15	48°46'34.315"N	105°30'00.000"W

WELLPATH DATUM			
Calculation method	Minimum curvature	RIG (30') (RKB) to Facility Vertical Datum	4756.00ft
Horizontal Reference Pt	Slot	RIG (30') (RKB) to Mean Sea Level	4756.00ft
Vertical Reference Pt	RIG (30') (RKB)	RIG (30') (RKB) to Mud Line at Slot (SLOT#02 WELLS RANCH STATE AA36-633 (2046'FSL & 817'FWL,SEC.32))	4756.00ft
MD Reference Pt	RIG (30') (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	265.90°

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Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA36-633 AWB
Facility	SEC.32-T06N-R62W		

WELLPATH DATA (179 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00	0.000	267.220	0.00	0.00	0.00	0.00	40°26'29.688"N	104°21'13.680"W	0.00	
84.00	0.910	267.220	84.00	0.67	-0.03	-0.67	40°26'29.688"N	104°21'13.689"W	1.08	
180.00	0.460	262.800	179.99	1.81	-0.12	-1.81	40°26'29.687"N	104°21'13.703"W	0.47	
271.00	0.700	270.620	270.98	2.73	-0.16	-2.73	40°26'29.687"N	104°21'13.715"W	0.28	
366.00	0.960	308.620	365.98	3.90	0.35	-3.93	40°26'29.692"N	104°21'13.731"W	0.62	
461.00	0.500	270.780	460.97	4.89	0.85	-4.97	40°26'29.697"N	104°21'13.744"W	0.68	
555.00	0.740	315.880	554.96	5.69	1.29	-5.80	40°26'29.701"N	104°21'13.755"W	0.56	
650.00	0.660	333.690	649.96	6.29	2.22	-6.47	40°26'29.711"N	104°21'13.763"W	0.24	
744.00	0.250	326.260	743.95	6.60	2.88	-6.82	40°26'29.717"N	104°21'13.768"W	0.44	
839.00	0.690	274.440	838.95	7.27	3.09	-7.51	40°26'29.720"N	104°21'13.777"W	0.60	
933.00	0.630	296.380	932.94	8.27	3.37	-8.54	40°26'29.722"N	104°21'13.790"W	0.27	
1028.00	0.500	223.540	1027.94	9.03	3.30	-9.29	40°26'29.722"N	104°21'13.800"W	0.71	
1122.00	0.090	335.330	1121.94	9.36	3.07	-9.60	40°26'29.720"N	104°21'13.804"W	0.57	
1217.00	0.190	355.410	1216.94	9.39	3.29	-9.65	40°26'29.722"N	104°21'13.804"W	0.12	
1311.00	0.580	76.530	1310.94	8.92	3.56	-9.20	40°26'29.724"N	104°21'13.798"W	0.62	
1405.00	0.830	65.980	1404.93	7.81	3.95	-8.11	40°26'29.728"N	104°21'13.784"W	0.30	
1500.00	0.740	43.080	1499.92	6.71	4.67	-7.06	40°26'29.735"N	104°21'13.771"W	0.34	
1594.00	0.510	41.350	1593.92	5.97	5.43	-6.37	40°26'29.742"N	104°21'13.762"W	0.25	
1688.00	0.510	50.170	1687.91	5.33	6.01	-5.78	40°26'29.748"N	104°21'13.754"W	0.08	
1783.00	0.620	5.550	1782.91	4.90	6.80	-5.40	40°26'29.756"N	104°21'13.749"W	0.46	
1878.00	0.620	356.220	1877.90	4.81	7.82	-5.38	40°26'29.766"N	104°21'13.748"W	0.11	
1937.00	0.510	353.430	1936.90	4.82	8.40	-5.44	40°26'29.772"N	104°21'13.749"W	0.19	Tie to Surface
1977.00	0.110	269.830	1976.90	4.87	8.58	-5.49	40°26'29.773"N	104°21'13.750"W	1.27	
2071.00	2.290	189.640	2070.87	5.40	6.72	-5.90	40°26'29.755"N	104°21'13.755"W	2.42	
2166.00	4.620	194.260	2165.69	7.06	1.14	-7.16	40°26'29.700"N	104°21'13.772"W	2.47	
2261.00	6.900	201.720	2260.21	10.75	-7.87	-10.21	40°26'29.612"N	104°21'13.813"W	2.52	
2355.00	8.620	202.640	2353.34	16.38	-19.61	-15.02	40°26'29.496"N	104°21'13.877"W	1.83	
2450.00	9.990	201.230	2447.09	23.11	-33.87	-20.74	40°26'29.356"N	104°21'13.954"W	1.46	
2544.00	11.440	202.630	2539.45	30.79	-50.07	-27.28	40°26'29.197"N	104°21'14.041"W	1.57	
2639.00	13.480	200.130	2632.21	39.58	-69.17	-34.72	40°26'29.009"N	104°21'14.141"W	2.22	

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#02 WELLS RANCH STATE AA36-633 (2046'FSL & 817'FWL, SEC.32)
Area	COLORADO	Well	WELLS RANCH STATE AA36-633
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA36-633 AWB
Facility	SEC.32-T06N-R62W		

WELLPATH DATA (179 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2733.00	13.320	198.610	2723.65	48.26	-89.71	-41.94	40°26'28.807"N	104°21'14.237"W	0.41	
2828.00	13.520	192.780	2816.06	55.71	-110.92	-47.89	40°26'28.598"N	104°21'14.318"W	1.44	
2922.00	13.110	183.900	2907.54	60.38	-132.27	-51.05	40°26'28.388"N	104°21'14.362"W	2.22	
3017.00	12.920	182.220	3000.10	63.05	-153.63	-52.19	40°26'28.177"N	104°21'14.381"W	0.45	
3111.00	12.830	186.080	3091.74	66.06	-174.51	-53.71	40°26'27.971"N	104°21'14.404"W	0.92	
3206.00	12.890	188.100	3184.36	70.16	-195.49	-56.32	40°26'27.764"N	104°21'14.441"W	0.48	
3301.00	12.950	190.590	3276.96	75.10	-216.44	-59.76	40°26'27.557"N	104°21'14.489"W	0.59	
3395.00	13.170	196.570	3368.53	81.55	-237.06	-64.75	40°26'27.354"N	104°21'14.557"W	1.46	
3490.00	13.200	200.640	3461.03	89.91	-257.59	-71.66	40°26'27.152"N	104°21'14.650"W	0.98	
3585.00	13.460	208.650	3553.47	100.44	-277.44	-80.79	40°26'26.957"N	104°21'14.771"W	1.96	
3679.00	13.440	221.800	3644.92	114.20	-295.19	-93.32	40°26'26.783"N	104°21'14.936"W	3.25	
3774.00	13.390	234.460	3737.35	131.52	-309.82	-109.63	40°26'26.641"N	104°21'15.150"W	3.09	
3868.00	13.480	247.110	3828.79	151.19	-320.41	-128.59	40°26'26.539"N	104°21'15.396"W	3.12	
3963.00	13.450	254.730	3921.19	172.51	-327.63	-149.45	40°26'26.470"N	104°21'15.667"W	1.87	
4058.00	13.460	261.290	4013.59	194.37	-332.21	-171.04	40°26'26.427"N	104°21'15.947"W	1.61	
4152.00	13.510	259.960	4105.00	216.20	-335.78	-192.66	40°26'26.395"N	104°21'16.228"W	0.33	
4247.00	13.580	254.980	4197.36	238.19	-340.61	-214.36	40°26'26.350"N	104°21'16.509"W	1.23	
4341.00	13.570	241.320	4288.75	259.06	-348.76	-234.70	40°26'26.272"N	104°21'16.773"W	3.40	
4436.00	13.770	241.820	4381.06	279.51	-359.45	-254.44	40°26'26.169"N	104°21'17.031"W	0.24	
4530.00	13.180	251.860	4472.49	300.13	-368.07	-274.49	40°26'26.086"N	104°21'17.291"W	2.56	
4625.00	13.780	257.920	4564.88	321.84	-373.81	-295.85	40°26'26.032"N	104°21'17.568"W	1.61	
4719.00	13.650	252.150	4656.20	343.70	-379.55	-317.35	40°26'25.978"N	104°21'17.847"W	1.46	
4814.00	13.750	249.090	4748.50	365.40	-387.02	-338.57	40°26'25.907"N	104°21'18.123"W	0.77	
4908.00	13.860	243.430	4839.79	386.50	-396.04	-359.08	40°26'25.821"N	104°21'18.390"W	1.44	
5003.00	13.670	238.460	4932.06	406.98	-407.00	-378.82	40°26'25.715"N	104°21'18.647"W	1.26	
5097.00	13.240	243.950	5023.49	426.82	-417.54	-397.96	40°26'25.613"N	104°21'18.896"W	1.43	
5192.00	13.570	251.630	5115.90	447.71	-425.83	-418.31	40°26'25.534"N	104°21'19.161"W	1.90	
5286.00	13.710	257.020	5207.26	469.41	-431.81	-439.63	40°26'25.478"N	104°21'19.438"W	1.36	
5380.00	13.770	261.780	5298.57	491.57	-435.91	-461.56	40°26'25.440"N	104°21'19.722"W	1.20	
5474.00	13.690	263.820	5389.88	513.85	-438.71	-483.69	40°26'25.415"N	104°21'20.008"W	0.52	

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#02 WELLS RANCH STATE AA36-633 (2046'FSL & 817'FWL, SEC.32)
Area	COLORADO	Well	WELLS RANCH STATE AA36-633
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA36-633 AWB
Facility	SEC.32-T06N-R62W		

WELLPATH DATA (179 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5569.00	13.770	255.170	5482.18	536.19	-442.81	-505.80	40°26'25.377"N	104°21'20.295"W	2.16	
5663.00	13.740	245.580	5573.50	557.66	-450.29	-526.78	40°26'25.306"N	104°21'20.568"W	2.42	
5758.00	13.730	242.920	5665.78	578.62	-460.09	-547.09	40°26'25.212"N	104°21'20.832"W	0.66	
5852.00	13.740	235.140	5757.10	598.48	-471.55	-566.19	40°26'25.101"N	104°21'21.081"W	1.96	
5947.00	13.590	238.870	5849.41	618.12	-483.77	-585.00	40°26'24.983"N	104°21'21.326"W	0.94	
6041.00	13.500	245.530	5940.80	638.25	-494.02	-604.44	40°26'24.884"N	104°21'21.579"W	1.66	
6136.00	13.700	250.340	6033.14	659.48	-502.40	-625.13	40°26'24.804"N	104°21'21.848"W	1.21	
6230.00	19.990	249.010	6123.06	685.60	-511.91	-650.64	40°26'24.713"N	104°21'22.180"W	6.70	
6324.00	27.220	256.100	6209.16	722.22	-522.85	-686.56	40°26'24.609"N	104°21'22.646"W	8.25	
6419.00	36.160	269.470	6290.01	771.76	-528.34	-735.84	40°26'24.561"N	104°21'23.284"W	11.92	
6514.00	46.200	272.710	6361.43	833.94	-526.98	-798.28	40°26'24.583"N	104°21'24.091"W	10.80	
6608.00	55.000	272.640	6421.04	906.00	-523.59	-870.76	40°26'24.626"N	104°21'25.028"W	9.36	
6703.00	60.950	274.130	6471.39	985.81	-518.81	-951.12	40°26'24.683"N	104°21'26.067"W	6.40	
6797.00	70.510	269.950	6510.00	1070.90	-515.88	-1036.64	40°26'24.723"N	104°21'27.172"W	10.95	
6892.00	79.350	267.870	6534.68	1162.41	-517.66	-1128.26	40°26'24.717"N	104°21'28.357"W	9.54	
6987.00	88.920	268.380	6544.38	1256.73	-520.74	-1222.60	40°26'24.699"N	104°21'29.578"W	10.09	
7081.00	89.780	266.080	6545.44	1350.70	-525.28	-1316.48	40°26'24.666"N	104°21'30.793"W	2.61	
7176.00	89.690	264.060	6545.88	1445.68	-533.45	-1411.12	40°26'24.597"N	104°21'32.018"W	2.13	
7270.00	89.820	263.950	6546.28	1539.63	-543.26	-1504.61	40°26'24.512"N	104°21'33.228"W	0.18	
7365.00	90.120	265.250	6546.33	1634.60	-552.20	-1599.18	40°26'24.436"N	104°21'34.453"W	1.40	
7554.00	89.690	272.100	6546.65	1823.27	-556.57	-1788.02	40°26'24.416"N	104°21'36.896"W	3.63	
7649.00	89.480	270.150	6547.33	1917.86	-554.71	-1882.99	40°26'24.447"N	104°21'38.124"W	2.06	
7744.00	90.370	268.850	6547.46	2012.67	-555.54	-1977.99	40°26'24.451"N	104°21'39.352"W	1.66	
7838.00	90.000	267.750	6547.16	2106.59	-558.33	-2071.94	40°26'24.435"N	104°21'40.568"W	1.23	
7933.00	90.220	266.810	6546.97	2201.56	-562.83	-2166.84	40°26'24.403"N	104°21'41.796"W	1.02	
8027.00	90.310	266.050	6546.54	2295.55	-568.69	-2260.65	40°26'24.357"N	104°21'43.010"W	0.81	
8122.00	90.120	265.690	6546.18	2390.55	-575.53	-2355.40	40°26'24.301"N	104°21'44.236"W	0.43	
8217.00	90.120	265.440	6545.98	2485.55	-582.87	-2450.12	40°26'24.241"N	104°21'45.462"W	0.26	
8311.00	90.220	265.410	6545.70	2579.55	-590.37	-2543.82	40°26'24.178"N	104°21'46.675"W	0.11	
8406.00	90.090	266.110	6545.45	2674.54	-597.40	-2638.56	40°26'24.121"N	104°21'47.902"W	0.75	

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Area	COLORADO	Well	WELLS RANCH STATE AA36-633
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA36-633 AWB
Facility	SEC.32-T06N-R62W		

WELLPATH DATA (179 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8500.00	90.250	265.900	6545.17	2768.54	-603.94	-2732.33	40°26'24.068"N	104°21'49.115"W	0.28	
8595.00	90.120	267.080	6544.86	2863.54	-609.76	-2827.15	40°26'24.023"N	104°21'50.342"W	1.25	
8690.00	90.280	268.890	6544.53	2958.47	-613.10	-2922.09	40°26'24.002"N	104°21'51.571"W	1.91	
8784.00	90.150	269.820	6544.18	3052.30	-614.16	-3016.08	40°26'24.003"N	104°21'52.786"W	1.00	
8879.00	89.940	268.360	6544.10	3147.15	-615.67	-3111.06	40°26'24.000"N	104°21'54.015"W	1.55	
8973.00	90.120	266.490	6544.05	3241.11	-619.89	-3204.97	40°26'23.970"N	104°21'55.230"W	2.00	
9068.00	90.150	266.660	6543.83	3336.10	-625.57	-3299.80	40°26'23.926"N	104°21'56.457"W	0.18	
9162.00	90.280	268.820	6543.48	3430.05	-629.27	-3393.72	40°26'23.901"N	104°21'57.673"W	2.30	
9256.00	89.350	267.170	6543.78	3523.98	-632.56	-3487.65	40°26'23.881"N	104°21'58.888"W	2.01	
9351.00	89.480	267.390	6544.75	3618.95	-637.07	-3582.54	40°26'23.848"N	104°22'00.116"W	0.27	
9445.00	90.460	269.740	6544.80	3712.84	-639.42	-3676.50	40°26'23.837"N	104°22'01.331"W	2.71	
9540.00	89.600	270.700	6544.75	3807.56	-639.06	-3771.50	40°26'23.852"N	104°22'02.560"W	1.36	
9634.00	90.550	270.840	6544.63	3901.22	-637.80	-3865.49	40°26'23.877"N	104°22'03.775"W	1.02	
9728.00	90.280	270.360	6543.95	3994.90	-636.81	-3959.48	40°26'23.898"N	104°22'04.990"W	0.59	
9823.00	90.580	271.340	6543.23	4089.54	-635.40	-4054.47	40°26'23.924"N	104°22'06.218"W	1.08	
9917.00	90.150	270.390	6542.63	4183.19	-633.98	-4148.46	40°26'23.950"N	104°22'07.434"W	1.11	
10012.00	90.220	269.890	6542.33	4277.93	-633.75	-4243.45	40°26'23.964"N	104°22'08.662"W	0.53	
10106.00	90.400	270.180	6541.82	4371.68	-633.69	-4337.45	40°26'23.977"N	104°22'09.878"W	0.36	
10200.00	89.780	269.190	6541.67	4465.47	-634.21	-4431.45	40°26'23.984"N	104°22'11.093"W	1.24	
10295.00	90.550	268.520	6541.40	4560.35	-636.11	-4526.43	40°26'23.977"N	104°22'12.322"W	1.07	
10389.00	89.880	267.370	6541.04	4654.28	-639.48	-4620.37	40°26'23.955"N	104°22'13.537"W	1.42	
10484.00	90.340	267.590	6540.86	4749.25	-643.66	-4715.27	40°26'23.926"N	104°22'14.765"W	0.54	
10578.00	90.520	267.640	6540.16	4843.20	-647.57	-4809.19	40°26'23.899"N	104°22'15.980"W	0.20	
10672.00	90.460	267.960	6539.35	4937.15	-651.18	-4903.12	40°26'23.875"N	104°22'17.196"W	0.35	
10767.00	90.460	267.330	6538.59	5032.10	-655.08	-4998.03	40°26'23.849"N	104°22'18.424"W	0.66	
10861.00	90.680	266.940	6537.65	5126.07	-659.78	-5091.91	40°26'23.814"N	104°22'19.639"W	0.48	
10956.00	90.680	267.930	6536.53	5221.03	-664.03	-5186.81	40°26'23.784"N	104°22'20.866"W	1.04	
11050.00	90.830	268.210	6535.29	5314.95	-667.19	-5280.75	40°26'23.765"N	104°22'22.082"W	0.34	
11145.00	90.770	267.890	6533.96	5409.88	-670.43	-5375.68	40°26'23.744"N	104°22'23.310"W	0.34	
11239.00	90.250	269.000	6533.13	5503.78	-672.98	-5469.64	40°26'23.731"N	104°22'24.526"W	1.30	

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#02 WELLS RANCH STATE AA36-633 (2046'FSL & 817'FWL, SEC.32)
Area	COLORADO	Well	WELLS RANCH STATE AA36-633
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA36-633 AWB
Facility	SEC.32-T06N-R62W		

WELLPATH DATA (179 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11334.00	90.490	270.000	6532.51	5598.59	-673.81	-5564.63	40°26'23.735"N	104°22'25.754"W	1.08	
11429.00	90.250	270.790	6531.90	5693.29	-673.15	-5659.63	40°26'23.753"N	104°22'26.982"W	0.87	
11523.00	90.400	271.560	6531.37	5786.89	-671.22	-5753.61	40°26'23.784"N	104°22'28.197"W	0.83	
11618.00	90.460	272.030	6530.65	5881.38	-668.25	-5848.56	40°26'23.825"N	104°22'29.425"W	0.50	
11713.00	90.580	272.310	6529.79	5975.81	-664.65	-5943.49	40°26'23.873"N	104°22'30.652"W	0.32	
11807.00	90.620	272.140	6528.81	6069.23	-661.00	-6037.41	40°26'23.921"N	104°22'31.866"W	0.19	
11902.00	90.580	272.400	6527.81	6163.64	-657.24	-6132.33	40°26'23.970"N	104°22'33.093"W	0.28	
11996.00	90.220	271.210	6527.15	6257.14	-654.28	-6226.28	40°26'24.011"N	104°22'34.307"W	1.32	
12091.00	90.120	270.580	6526.87	6351.77	-652.79	-6321.27	40°26'24.037"N	104°22'35.535"W	0.67	
12185.00	90.120	268.710	6526.68	6445.57	-653.38	-6415.26	40°26'24.043"N	104°22'36.751"W	1.99	
12280.00	90.310	268.350	6526.32	6540.47	-655.81	-6510.23	40°26'24.031"N	104°22'37.980"W	0.43	
12374.00	90.460	267.720	6525.69	6634.40	-659.04	-6604.17	40°26'24.011"N	104°22'39.195"W	0.69	
12469.00	90.000	267.530	6525.31	6729.36	-662.97	-6699.09	40°26'23.984"N	104°22'40.423"W	0.52	
12563.00	90.090	269.040	6525.23	6823.27	-665.79	-6793.04	40°26'23.968"N	104°22'41.639"W	1.61	
12658.00	90.000	269.480	6525.16	6918.11	-667.01	-6888.03	40°26'23.968"N	104°22'42.867"W	0.47	
12752.00	90.120	269.450	6525.06	7011.93	-667.89	-6982.03	40°26'23.971"N	104°22'44.083"W	0.13	
12847.00	90.150	269.840	6524.84	7106.72	-668.48	-7077.03	40°26'23.977"N	104°22'45.312"W	0.41	
12941.00	90.460	270.330	6524.34	7200.47	-668.34	-7171.03	40°26'23.990"N	104°22'46.527"W	0.62	
13036.00	90.620	269.150	6523.44	7295.25	-668.77	-7266.02	40°26'23.997"N	104°22'47.756"W	1.25	
13130.00	90.710	271.390	6522.35	7388.96	-668.33	-7360.01	40°26'24.014"N	104°22'48.971"W	2.38	
13225.00	90.340	271.340	6521.48	7483.53	-666.07	-7454.97	40°26'24.048"N	104°22'50.199"W	0.39	
13319.00	90.370	269.710	6520.90	7577.21	-665.20	-7548.97	40°26'24.068"N	104°22'51.414"W	1.73	
13414.00	90.680	269.300	6520.03	7672.02	-666.03	-7643.96	40°26'24.072"N	104°22'52.643"W	0.54	
13508.00	90.150	267.960	6519.34	7765.91	-668.27	-7737.93	40°26'24.061"N	104°22'53.858"W	1.53	
13603.00	90.120	266.580	6519.12	7860.88	-672.80	-7832.82	40°26'24.028"N	104°22'55.086"W	1.45	
13697.00	90.150	266.160	6518.90	7954.88	-678.75	-7926.63	40°26'23.981"N	104°22'56.300"W	0.45	
13792.00	90.060	266.270	6518.73	8049.88	-685.02	-8021.42	40°26'23.931"N	104°22'57.527"W	0.15	
13886.00	90.180	266.980	6518.53	8143.87	-690.55	-8115.26	40°26'23.888"N	104°22'58.741"W	0.77	
13980.00	90.000	266.540	6518.38	8237.86	-695.87	-8209.10	40°26'23.847"N	104°22'59.956"W	0.51	
14075.00	90.120	267.010	6518.28	8332.84	-701.21	-8303.95	40°26'23.806"N	104°23'01.183"W	0.51	

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#02 WELLS RANCH STATE AA36-633 (2046'FSL & 817'FWL, SEC.32)
Area	COLORADO	Well	WELLS RANCH STATE AA36-633
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA36-633 AWB
Facility	SEC.32-T06N-R62W		

WELLPATH DATA (179 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
14170.00	90.030	267.180	6518.16	8427.82	-706.03	-8398.83	40°26'23.771"N	104°23'02.411"W	0.20	
14264.00	90.150	267.320	6518.01	8521.80	-710.54	-8492.72	40°26'23.738"N	104°23'03.626"W	0.20	
14359.00	90.120	267.340	6517.79	8616.77	-714.96	-8587.62	40°26'23.706"N	104°23'04.854"W	0.04	
14454.00	90.180	267.630	6517.54	8711.73	-719.13	-8682.53	40°26'23.676"N	104°23'06.082"W	0.31	
14548.00	90.180	268.030	6517.24	8805.68	-722.69	-8776.46	40°26'23.653"N	104°23'07.297"W	0.43	
14642.00	90.060	264.010	6517.04	8899.66	-729.21	-8870.21	40°26'23.600"N	104°23'08.511"W	4.28	
14737.00	90.120	260.930	6516.90	8994.47	-741.66	-8964.38	40°26'23.489"N	104°23'09.731"W	3.24	
14832.00	90.150	263.810	6516.67	9089.28	-754.27	-9058.53	40°26'23.376"N	104°23'10.950"W	3.03	
14926.00	90.370	266.200	6516.24	9183.27	-762.46	-9152.17	40°26'23.307"N	104°23'12.162"W	2.55	
15020.00	90.370	267.500	6515.64	9277.25	-767.62	-9246.02	40°26'23.267"N	104°23'13.377"W	1.38	
15114.00	90.120	269.440	6515.24	9371.15	-770.13	-9339.98	40°26'23.254"N	104°23'14.593"W	2.08	
15209.00	90.400	272.670	6514.80	9465.75	-768.38	-9434.95	40°26'23.283"N	104°23'15.820"W	3.41	
15303.00	90.340	273.980	6514.20	9558.96	-762.93	-9528.79	40°26'23.349"N	104°23'17.033"W	1.40	
15493.00	90.090	273.400	6513.48	9747.20	-750.70	-9718.39	40°26'23.493"N	104°23'19.483"W	0.33	
15587.00	90.220	272.810	6513.23	9840.46	-745.61	-9812.26	40°26'23.555"N	104°23'20.696"W	0.64	
15776.00	90.310	270.030	6512.36	10028.56	-740.93	-10001.18	40°26'23.624"N	104°23'23.138"W	1.47	
15871.00	90.400	267.250	6511.77	10123.44	-743.18	-10096.14	40°26'23.614"N	104°23'24.367"W	2.93	
15965.00	90.220	268.120	6511.26	10217.39	-746.98	-10190.06	40°26'23.588"N	104°23'25.582"W	0.95	
16059.00	90.180	266.740	6510.93	10311.35	-751.19	-10283.96	40°26'23.558"N	104°23'26.797"W	1.47	
16154.00	90.220	267.240	6510.60	10406.33	-756.18	-10378.83	40°26'23.520"N	104°23'28.025"W	0.53	
16249.00	90.310	267.300	6510.16	10501.31	-760.71	-10473.72	40°26'23.487"N	104°23'29.253"W	0.11	
16343.00	90.400	267.760	6509.58	10595.27	-764.76	-10567.63	40°26'23.459"N	104°23'30.468"W	0.50	
16437.00	90.310	267.360	6508.99	10689.22	-768.76	-10661.54	40°26'23.431"N	104°23'31.683"W	0.44	
16532.00	90.310	266.410	6508.48	10784.21	-773.92	-10756.40	40°26'23.392"N	104°23'32.910"W	1.00	
16626.00	90.490	266.010	6507.82	10878.20	-780.13	-10850.19	40°26'23.342"N	104°23'34.124"W	0.47	
16721.00	90.340	266.050	6507.14	10973.20	-786.71	-10944.96	40°26'23.289"N	104°23'35.351"W	0.16	
16816.00	90.460	265.400	6506.47	11068.20	-793.79	-11039.70	40°26'23.230"N	104°23'36.577"W	0.70	
16888.00	90.620	264.950	6505.79	11140.19	-799.85	-11111.44	40°26'23.179"N	104°23'37.506"W	0.66	Last BHI MWD Survey
16912.00	90.620	264.950	6505.53	11164.18	-801.96	-11135.34	40°26'23.161"N	104°23'37.815"W	0.00	Projection to Bit

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
WELLS RANCH STATE AA36-622 SEC.31-T06N-R62W	1.00	-36.43	0.47	3319024.36	1405733.36	40°26'29.328"N	104°21'13.680"W	polygon
WELLS RANCH STATE AA36-622 SEC.32-T06N-R62W	1.00	-36.43	0.47	3319024.36	1405733.36	40°26'29.328"N	104°21'13.680"W	polygon
WELLS RANCH STATE AA36-622 SEC.35-T06N-R63W	1.00	-36.43	0.47	3319024.36	1405733.36	40°26'29.328"N	104°21'13.680"W	polygon
WELLS RANCH STATE AA36-622 SEC.36-T06N-R63W	1.00	-36.43	0.47	3319024.36	1405733.36	40°26'29.328"N	104°21'13.680"W	polygon
WELLS RANCH STATE AA36-633 BHL ON PLAT (1515'FSL & 0'FWL, SEC.36)	6509.00	-800.35	-11383.80	3307640.55	1404969.47	40°26'23.208"N	104°23'41.028"W	point
WELLS RANCH STATE AA36-633 REV-2 BHL FROM PLAN (1515'FSL & 0'FWL, SEC.36)	6509.00	-799.94	-11383.26	3307641.08	1404969.88	40°26'23.212"N	104°23'41.021"W	point
WELLS RANCH STATE AA36-633 REV-5 BHL From Plan (1515'FSL & 250'FWL, SEC.36)	6509.49	-799.04	-11137.11	3307887.22	1404970.78	40°26'23.191"N	104°23'37.838"W	point
WELLS RANCH STATE AA36-633 REV-3 BHL From Plan (1515'FSL & 400'FWL, SEC.36)	6510.15	-795.11	-10987.11	3308037.22	1404974.71	40°26'23.211"N	104°23'35.897"W	point
WELLS RANCH STATE AA36-633 REV-4 BHL From Plan (1515'FSL & 400'FWL, SEC.36)	6510.20	-795.11	-10987.11	3308037.22	1404974.71	40°26'23.211"N	104°23'35.897"W	point
WELLS RANCH STATE AA36-633 Landing Point	6550.00	-497.13	-450.59	3318573.32	1405272.68	40°26'24.833"N	104°21'19.590"W	point
WELLS RANCH STATE AA36-633 REV-2 Landing Point	6550.00	-522.67	-1264.38	3317759.56	1405247.14	40°26'24.685"N	104°21'30.118"W	point
WELLS RANCH STATE AA36-633 TPZ	6550.00	-487.11	-450.98	3318572.93	1405282.69	40°26'24.933"N	104°21'19.594"W	point

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
WELLS RANCH STATE AA36-633 REV-3 Landing Point	6550.07	-522.67	-1264.38	3317759.56	1405247.14	40°26'24.685"N	104°21'30.118"W	point

WELLPATH COMPOSITION - Ref Wellbore: WELLS RANCH STATE AA36-633 AWB					Ref Wellpath: WELLS RANCH STATE AA36-633 AWP			
Start MD [ft]	End MD [ft]	Positional Uncertainty Model		Log Name/Comment			Wellbore	
0.00	1937.00	BHI Generic gyro - northseeking (Standard)		3rd Party Surface Surveys <84'-1937'>			WELLS RANCH STATE AA36-633 AWB	
1937.00	16888.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction		BH/ATC 8.5" Hole OWSG MWD rev2+IFR+MSA <1977'-16888'>			WELLS RANCH STATE AA36-633 AWB	
16888.00	16912.00	Blind Drilling (std)		Projection to bit			WELLS RANCH STATE AA36-633 AWB	



Actual Wellpath Report
WELLS RANCH STATE AA36-633 AWP
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#02 WELLS RANCH STATE AA36-633 (2046'FSL & 817'FWL,SEC.32)
Area	COLORADO	Well	WELLS RANCH STATE AA36-633
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA36-633 AWB
Facility	SEC.32-T06N-R62W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1937.00	0.510	353.430	1936.90	Tie to Surface
16888.00	90.620	264.950	6505.79	Last BHI MWD Survey
16912.00	90.620	264.950	6505.53	Projection to Bit