

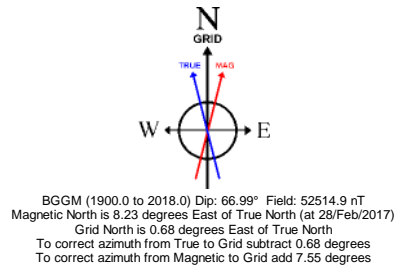
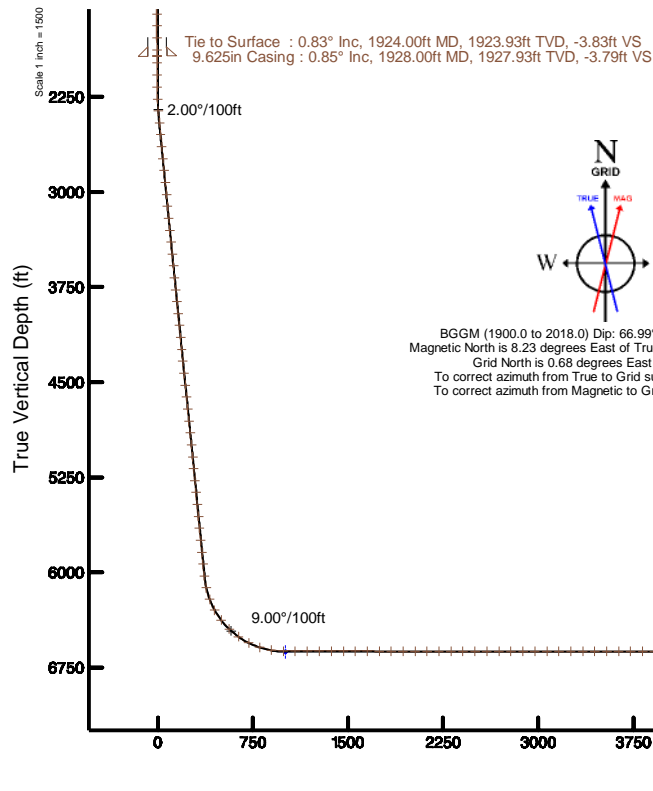
NOBLE ENERGY, INC

Location: COLORADO Slot: SLOT#23 WELLS RANCH STATE AA33-750 (255°FSL&2502°FWL,SEC.21)
Field: WELD COUNTY (NOBLE NAD 83 GRID) Well: WELLS RANCH STATE AA33-750
Facility: SEC.21-T06N-R63W Wellbore: WELLS RANCH STATE AA33-750 PWB

Plot reference wellpath is WELLS RANCH STATE AA33-750 (REV-C.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 geoidetic datum
Measured depths are referenced to H&P RIG (30KB) (RKB)	North Reference: Grid north
H&P RIG (30KB) (RKB) to Mean Sea Level: 4750 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#23 WELLS RANCH STATE AA33-750 (255°FSL&2502°FWL,SEC.21)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: hutaedr on 2017-03-28
	Database: WA_DEN_Denver_Defn

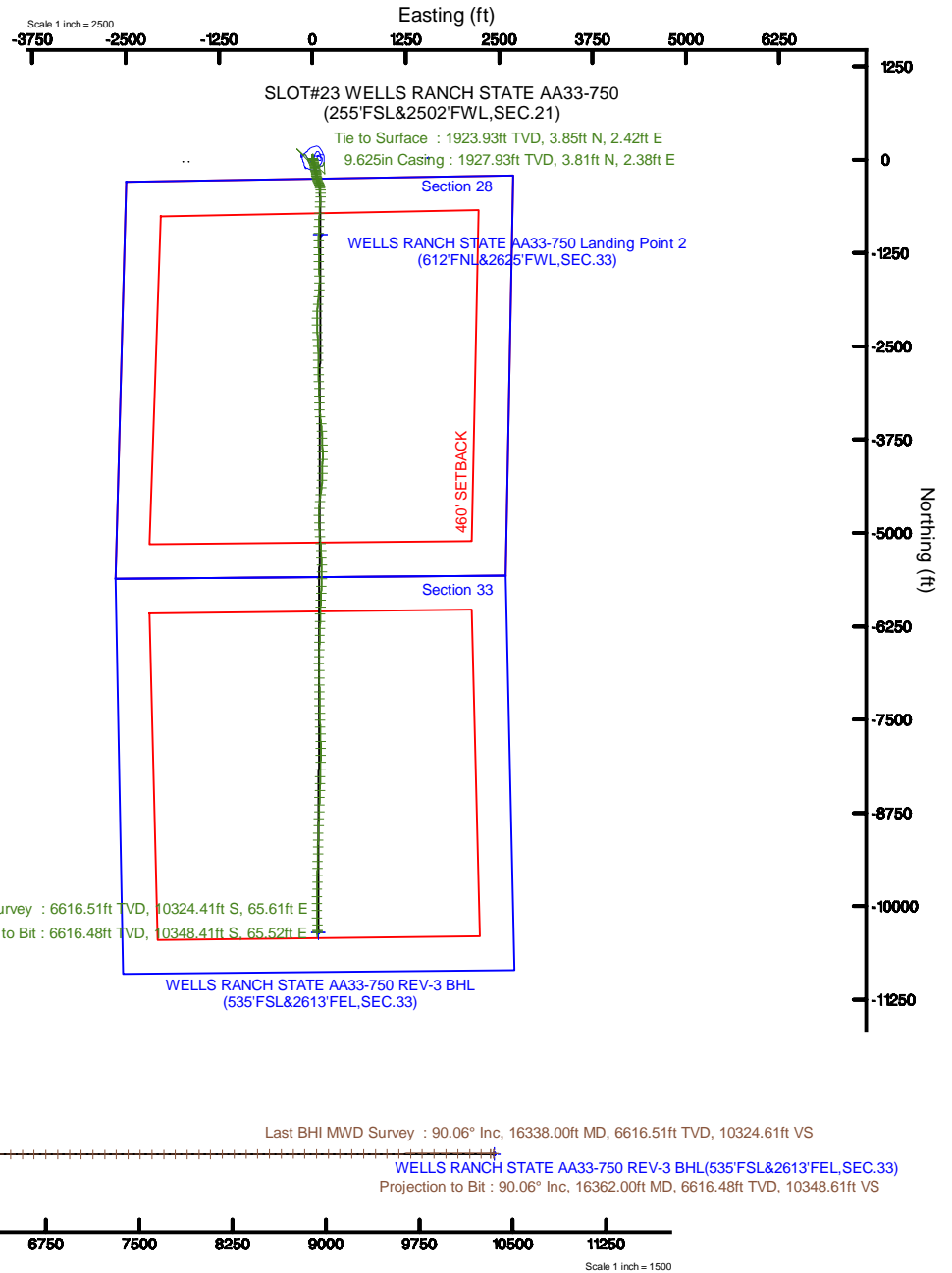
Location Information

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#23 WELLS RANCH STATE AA33-750 (255°FSL&2502°FWL,SEC.21)	-879.44	-2126.25		3294424.918	1414196.990	40°27'55.980"N	104°26'30.516"W
H&P RIG (30KB) (RKB) to Mud line (At Slot: SLOT#23 WELLS RANCH STATE AA33-750 (255°FSL&2502°FWL,SEC.21))				4750ft			
Mean Sea Level to Mud line (At Slot: SLOT#23 WELLS RANCH STATE AA33-750 (255°FSL&2502°FWL,SEC.21))				0ft			
H&P RIG (30KB) (RKB) to Mean Sea Level				4750ft			



Last BHI MWD Survey : 6616.51ft TVD, 10324.41ft S, 65.61ft E
Projection to Bit : 6616.48ft TVD, 10348.41ft S, 65.52ft E

Comments
Surface Location :
Lat : 40.46555 N
Long : 104.44181 W
API : 05-123-43873





Actual Wellpath Report

WELLS RANCH STATE AA33-750 AWP

Page 1 of 10



REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#23 WELLS RANCH STATE AA33-750 (255'FSL&2502'FWL,SEC.21)
Area	COLORADO	Well	WELLS RANCH STATE AA33-750
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA33-750 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	Hutaedr
Scale	0.999964	Report Generated	28/Mar/2017 at 17:03
Convergence at slot	0.69° East	Database/Source file	WA_DEN_Denver_Defn/WELLS_RANCH_STATE_AA33-750_AWP.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-879.44	-2126.25	3294424.92	1414196.99	40°27'55.980"N	104°26'30.516"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#23 WELLS RANCH STATE AA33-750 (255'FSL&2502'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	179.56°



Actual Wellpath Report

WELLS RANCH STATE AA33-750 AWP
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REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#23 WELLS RANCH STATE AA33-750 (255'FSL&2502'FWL,SEC.21)
Area	COLORADO	Well	WELLS RANCH STATE AA33-750
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA33-750 AWB
Facility	SEC.21-T06N-R63W		

WELLPATH DATA (176 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00	0.000	286.770	0.00	0.00	0.00	0.00	40°27'55.980"N	104°26'30.516"W	0.00	
81.55	0.140	286.770	81.55	-0.03	0.03	-0.10	40°27'55.980"N	104°26'30.517"W	0.17	
176.81	0.330	251.460	176.81	0.02	-0.02	-0.47	40°27'55.980"N	104°26'30.522"W	0.24	
271.47	0.170	94.480	271.47	0.12	-0.12	-0.59	40°27'55.979"N	104°26'30.524"W	0.52	
365.98	0.170	33.390	365.98	0.01	-0.02	-0.37	40°27'55.980"N	104°26'30.521"W	0.18	
460.40	0.280	323.210	460.40	-0.29	0.29	-0.43	40°27'55.983"N	104°26'30.522"W	0.29	
555.01	0.330	352.500	555.01	-0.75	0.74	-0.60	40°27'55.987"N	104°26'30.524"W	0.17	
649.65	0.140	294.650	649.65	-1.06	1.06	-0.74	40°27'55.991"N	104°26'30.525"W	0.30	
744.52	0.110	338.750	744.52	-1.20	1.19	-0.88	40°27'55.992"N	104°26'30.527"W	0.10	
839.22	0.330	322.510	839.21	-1.50	1.49	-1.08	40°27'55.995"N	104°26'30.530"W	0.24	
933.78	0.350	343.970	933.77	-2.00	1.99	-1.33	40°27'56.000"N	104°26'30.533"W	0.14	
1028.25	0.370	9.990	1028.24	-2.57	2.56	-1.35	40°27'56.006"N	104°26'30.533"W	0.17	
1122.81	0.490	51.110	1122.80	-3.13	3.12	-0.99	40°27'56.011"N	104°26'30.528"W	0.34	
1217.29	0.430	52.050	1217.28	-3.59	3.59	-0.39	40°27'56.016"N	104°26'30.521"W	0.06	
1311.81	0.810	15.510	1311.79	-4.45	4.45	0.07	40°27'56.024"N	104°26'30.514"W	0.56	
1406.47	0.860	22.440	1406.44	-5.75	5.75	0.52	40°27'56.037"N	104°26'30.508"W	0.12	
1501.20	0.450	67.020	1501.16	-6.55	6.56	1.13	40°27'56.045"N	104°26'30.500"W	0.66	
1595.79	0.590	32.130	1595.75	-7.10	7.11	1.73	40°27'56.050"N	104°26'30.493"W	0.36	
1690.19	0.900	125.010	1690.15	-7.08	7.10	2.60	40°27'56.050"N	104°26'30.481"W	1.17	
1784.77	1.040	181.100	1784.71	-5.79	5.82	3.19	40°27'56.037"N	104°26'30.474"W	0.97	
1879.18	0.840	210.980	1879.11	-4.34	4.37	2.82	40°27'56.023"N	104°26'30.479"W	0.55	
1924.00	0.830	224.690	1923.93	-3.83	3.85	2.42	40°27'56.018"N	104°26'30.484"W	0.45	Tie to Surface
1982.00	1.310	253.150	1981.92	-3.35	3.36	1.49	40°27'56.013"N	104°26'30.496"W	1.21	
2076.00	0.040	22.810	2075.91	-3.08	3.08	0.47	40°27'56.010"N	104°26'30.509"W	1.42	
2171.00	0.060	48.870	2170.91	-3.14	3.14	0.52	40°27'56.011"N	104°26'30.509"W	0.03	
2266.00	2.590	146.150	2265.88	-1.38	1.39	1.76	40°27'55.994"N	104°26'30.493"W	2.74	
2360.00	6.260	147.960	2359.58	4.76	-4.72	5.66	40°27'55.933"N	104°26'30.444"W	3.91	
2455.00	5.940	154.790	2454.04	13.63	-13.55	10.50	40°27'55.845"N	104°26'30.382"W	0.83	
2549.00	5.830	158.350	2547.55	22.50	-22.39	14.33	40°27'55.757"N	104°26'30.334"W	0.41	
2644.00	5.770	161.830	2642.06	31.55	-31.41	17.60	40°27'55.668"N	104°26'30.293"W	0.38	



Actual Wellpath Report

WELLS RANCH STATE AA33-750 AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#23 WELLS RANCH STATE AA33-750 (255'FSL&2502'FWL,SEC.21)
Area	COLORADO	Well	WELLS RANCH STATE AA33-750
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA33-750 AWB
Facility	SEC.21-T06N-R63W		

WELLPATH DATA (176 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2738.00	5.700	165.720	2735.59	40.58	-40.43	20.23	40°27'55.578"N	104°26'30.261"W	0.42	
2833.00	5.750	168.710	2830.12	49.83	-49.67	22.32	40°27'55.487"N	104°26'30.235"W	0.32	
2928.00	5.760	163.710	2924.64	59.09	-58.91	24.59	40°27'55.395"N	104°26'30.207"W	0.53	
3022.00	5.670	161.020	3018.17	68.03	-67.83	27.43	40°27'55.307"N	104°26'30.172"W	0.30	
3117.00	5.790	167.430	3112.70	77.17	-76.94	30.00	40°27'55.216"N	104°26'30.140"W	0.69	
3211.00	5.560	172.490	3206.24	86.32	-86.08	31.62	40°27'55.126"N	104°26'30.120"W	0.59	
3306.00	5.700	175.180	3300.78	95.59	-95.35	32.62	40°27'55.034"N	104°26'30.109"W	0.31	
3401.00	5.670	174.470	3395.31	104.97	-104.72	33.47	40°27'54.941"N	104°26'30.099"W	0.08	
3495.00	5.630	179.100	3488.86	114.21	-113.95	33.99	40°27'54.850"N	104°26'30.094"W	0.49	
3590.00	5.760	172.390	3583.39	123.60	-123.34	34.69	40°27'54.757"N	104°26'30.086"W	0.71	
3684.00	5.720	162.260	3676.92	132.75	-132.48	36.75	40°27'54.667"N	104°26'30.061"W	1.08	
3779.00	6.160	158.270	3771.41	142.02	-141.72	40.08	40°27'54.575"N	104°26'30.019"W	0.63	
3874.00	5.920	162.070	3865.88	151.44	-151.12	43.47	40°27'54.482"N	104°26'29.977"W	0.49	
3968.00	5.960	164.400	3959.38	160.78	-160.43	46.28	40°27'54.389"N	104°26'29.942"W	0.26	
4062.00	5.960	164.640	4052.87	170.20	-169.83	48.88	40°27'54.296"N	104°26'29.910"W	0.03	
4157.00	5.870	166.350	4147.37	179.70	-179.31	51.33	40°27'54.202"N	104°26'29.880"W	0.21	
4252.00	5.590	174.070	4241.89	189.03	-188.63	52.96	40°27'54.110"N	104°26'29.860"W	0.86	
4346.00	5.630	180.670	4335.44	198.20	-197.80	53.38	40°27'54.019"N	104°26'29.856"W	0.69	
4441.00	5.860	181.740	4429.97	207.70	-207.31	53.18	40°27'53.925"N	104°26'29.860"W	0.27	
4535.00	6.180	168.770	4523.45	217.47	-217.06	54.01	40°27'53.829"N	104°26'29.851"W	1.48	
4630.00	5.950	163.240	4617.92	227.22	-226.80	56.43	40°27'53.732"N	104°26'29.821"W	0.66	
4724.00	6.030	163.460	4711.41	236.64	-236.19	59.24	40°27'53.639"N	104°26'29.786"W	0.09	
4819.00	6.100	166.350	4805.88	246.35	-245.88	61.85	40°27'53.543"N	104°26'29.754"W	0.33	
4914.00	6.080	174.100	4900.34	256.27	-255.79	63.56	40°27'53.445"N	104°26'29.733"W	0.87	
5008.00	5.730	172.930	4993.84	265.89	-265.40	64.65	40°27'53.350"N	104°26'29.721"W	0.39	
5103.00	6.180	162.420	5088.33	275.48	-274.98	66.78	40°27'53.255"N	104°26'29.695"W	1.24	
5197.00	5.930	152.160	5181.81	284.63	-284.10	70.57	40°27'53.165"N	104°26'29.647"W	1.18	
5292.00	5.980	153.180	5276.30	293.42	-292.85	75.10	40°27'53.078"N	104°26'29.590"W	0.12	
5386.00	6.000	152.990	5369.79	302.20	-301.60	79.54	40°27'52.991"N	104°26'29.534"W	0.03	
5481.00	6.040	154.440	5464.26	311.16	-310.53	83.95	40°27'52.902"N	104°26'29.478"W	0.17	



Actual Wellpath Report

WELLS RANCH STATE AA33-750 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#23 WELLS RANCH STATE AA33-750 (255'FSL&2502'FWL,SEC.21)
Area	COLORADO	Well	WELLS RANCH STATE AA33-750
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA33-750 AWB
Facility	SEC.21-T06N-R63W		

WELLPATH DATA (176 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5576.00	6.040	157.000	5558.73	320.31	-319.64	88.06	40°27'52.811"N	104°26'29.426"W	0.28	
5670.00	5.980	159.500	5652.22	329.47	-328.78	91.71	40°27'52.721"N	104°26'29.380"W	0.29	
5765.00	6.000	168.710	5746.70	339.00	-338.29	94.41	40°27'52.626"N	104°26'29.347"W	1.01	
5859.00	5.850	168.100	5840.20	348.52	-347.79	96.36	40°27'52.532"N	104°26'29.323"W	0.17	
5954.00	5.820	165.090	5934.71	357.93	-357.18	98.60	40°27'52.439"N	104°26'29.296"W	0.32	
6048.00	5.760	165.980	6028.23	367.13	-366.37	100.97	40°27'52.348"N	104°26'29.266"W	0.11	
6143.00	12.980	166.460	6121.90	382.17	-381.38	104.63	40°27'52.199"N	104°26'29.221"W	7.60	
6237.00	20.280	177.760	6211.93	408.78	-407.97	107.74	40°27'51.936"N	104°26'29.185"W	8.46	
6332.00	28.990	180.980	6298.20	448.33	-447.51	107.99	40°27'51.545"N	104°26'29.188"W	9.27	
6426.00	37.950	180.440	6376.53	500.10	-499.30	107.38	40°27'51.034"N	104°26'29.204"W	9.54	
6521.00	46.040	182.190	6447.08	563.57	-562.78	105.84	40°27'50.407"N	104°26'29.234"W	8.60	
6616.00	54.540	184.540	6507.73	636.41	-635.66	101.47	40°27'49.687"N	104°26'29.302"W	9.15	
6710.00	63.000	183.110	6556.42	716.50	-715.78	96.15	40°27'48.896"N	104°26'29.383"W	9.09	
6805.00	72.910	182.240	6592.04	804.31	-803.63	92.07	40°27'48.029"N	104°26'29.449"W	10.47	
6899.00	81.410	181.780	6612.91	895.79	-895.14	88.87	40°27'47.125"N	104°26'29.505"W	9.06	
6994.00	89.880	181.480	6620.11	990.37	-989.74	86.18	40°27'46.190"N	104°26'29.554"W	8.92	
7088.00	89.750	180.010	6620.42	1084.35	-1083.73	84.96	40°27'45.262"N	104°26'29.584"W	1.57	
7183.00	89.880	179.230	6620.72	1179.35	-1178.73	85.59	40°27'44.323"N	104°26'29.591"W	0.83	
7277.00	89.780	179.930	6621.00	1273.35	-1272.73	86.27	40°27'43.394"N	104°26'29.596"W	0.75	
7372.00	89.660	180.110	6621.47	1368.34	-1367.72	86.24	40°27'42.456"N	104°26'29.612"W	0.23	
7467.00	89.880	176.120	6621.85	1463.29	-1462.65	89.37	40°27'41.517"N	104°26'29.586"W	4.21	
7561.00	89.910	177.850	6622.02	1557.19	-1556.52	94.31	40°27'40.589"N	104°26'29.536"W	1.84	
7656.00	89.720	181.730	6622.33	1652.17	-1651.50	94.66	40°27'39.651"N	104°26'29.546"W	4.09	
7750.00	89.850	183.820	6622.68	1746.02	-1745.38	90.11	40°27'38.724"N	104°26'29.620"W	2.23	
7845.00	89.880	185.410	6622.90	1840.65	-1840.07	82.46	40°27'37.789"N	104°26'29.733"W	1.67	
7939.00	90.030	185.940	6622.98	1934.11	-1933.61	73.17	40°27'36.866"N	104°26'29.868"W	0.59	
8034.00	90.150	183.230	6622.83	2028.74	-2028.30	65.57	40°27'35.931"N	104°26'29.981"W	2.86	
8129.00	90.060	179.850	6622.65	2123.67	-2123.25	63.02	40°27'34.993"N	104°26'30.029"W	3.56	
8223.00	89.910	178.410	6622.68	2217.66	-2217.24	64.45	40°27'34.064"N	104°26'30.025"W	1.54	
8318.00	89.720	177.660	6622.99	2312.63	-2312.18	67.71	40°27'33.126"N	104°26'29.997"W	0.81	



Actual Wellpath Report

WELLS RANCH STATE AA33-750 AWP
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REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#23 WELLS RANCH STATE AA33-750 (255'FSL&2502'FWL,SEC.21)
Area	COLORADO	Well	WELLS RANCH STATE AA33-750
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA33-750 AWB
Facility	SEC.21-T06N-R63W		

WELLPATH DATA (176 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8412.00	89.630	177.030	6623.52	2406.56	-2406.08	72.06	40°27'32.197"N	104°26'29.955"W	0.68	
8507.00	89.820	177.720	6623.97	2501.49	-2500.98	76.41	40°27'31.259"N	104°26'29.914"W	0.75	
8601.00	89.850	179.300	6624.25	2595.47	-2594.94	78.86	40°27'30.331"N	104°26'29.897"W	1.68	
8696.00	90.180	179.960	6624.22	2690.47	-2689.94	79.47	40°27'29.392"N	104°26'29.903"W	0.78	
8790.00	90.280	179.220	6623.84	2784.46	-2783.93	80.14	40°27'28.463"N	104°26'29.909"W	0.79	
8885.00	90.220	178.110	6623.43	2879.45	-2878.91	82.36	40°27'27.524"N	104°26'29.895"W	1.17	
8980.00	90.090	177.420	6623.17	2974.40	-2973.83	86.06	40°27'26.586"N	104°26'29.862"W	0.74	
9074.00	89.940	177.610	6623.15	3068.34	-3067.74	90.14	40°27'25.658"N	104°26'29.824"W	0.26	
9169.00	90.090	177.780	6623.12	3163.29	-3162.67	93.96	40°27'24.719"N	104°26'29.789"W	0.24	
9263.00	89.750	180.370	6623.25	3257.28	-3256.65	95.47	40°27'23.790"N	104°26'29.784"W	2.78	
9358.00	89.880	176.830	6623.56	3352.25	-3351.60	97.79	40°27'22.852"N	104°26'29.768"W	3.73	
9452.00	89.540	173.180	6624.04	3445.94	-3445.23	105.98	40°27'21.926"N	104°26'29.677"W	3.90	
9547.00	89.940	172.770	6624.47	3540.31	-3539.51	117.60	40°27'20.993"N	104°26'29.541"W	0.60	
9642.00	89.940	175.100	6624.57	3634.84	-3633.98	127.63	40°27'20.058"N	104°26'29.426"W	2.45	
9736.00	89.910	179.830	6624.69	3728.75	-3727.86	131.79	40°27'19.130"N	104°26'29.387"W	5.03	
9831.00	89.850	177.590	6624.89	3823.74	-3822.83	133.93	40°27'18.191"N	104°26'29.374"W	2.36	
9925.00	90.030	179.130	6624.99	3917.71	-3916.79	136.62	40°27'17.263"N	104°26'29.353"W	1.65	
10020.00	89.940	180.880	6625.01	4012.71	-4011.78	136.61	40°27'16.324"N	104°26'29.368"W	1.84	
10115.00	90.340	180.340	6624.78	4107.69	-4106.78	135.60	40°27'15.386"N	104°26'29.396"W	0.71	
10209.00	90.250	181.180	6624.30	4201.67	-4200.76	134.35	40°27'14.457"N	104°26'29.427"W	0.90	
10304.00	90.310	182.360	6623.83	4296.59	-4295.72	131.42	40°27'13.519"N	104°26'29.479"W	1.24	
10399.00	90.680	187.660	6623.01	4391.13	-4390.32	123.12	40°27'12.585"N	104°26'29.601"W	5.59	
10493.00	90.280	188.100	6622.22	4484.14	-4483.43	110.24	40°27'11.667"N	104°26'29.782"W	0.63	
10588.00	90.180	186.280	6621.84	4578.29	-4577.67	98.35	40°27'10.737"N	104°26'29.951"W	1.92	
10682.00	90.220	183.500	6621.51	4671.87	-4671.32	90.34	40°27'09.813"N	104°26'30.069"W	2.96	
10777.00	90.220	179.120	6621.15	4766.81	-4766.27	88.16	40°27'08.875"N	104°26'30.111"W	4.61	
10872.00	89.910	177.930	6621.04	4861.79	-4861.24	90.61	40°27'07.936"N	104°26'30.094"W	1.29	
10966.00	89.750	177.030	6621.32	4955.73	-4955.15	94.74	40°27'07.008"N	104°26'30.055"W	0.97	
11061.00	89.880	174.690	6621.63	5050.52	-5049.89	101.60	40°27'06.071"N	104°26'29.981"W	2.47	
11155.00	89.880	174.340	6621.82	5144.16	-5143.46	110.59	40°27'05.145"N	104°26'29.880"W	0.37	



Actual Wellpath Report

WELLS RANCH STATE AA33-750 AWP
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REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#23 WELLS RANCH STATE AA33-750 (255'FSL&2502'FWL,SEC.21)
Area	COLORADO	Well	WELLS RANCH STATE AA33-750
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA33-750 AWB
Facility	SEC.21-T06N-R63W		

WELLPATH DATA (176 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11250.00	89.880	178.670	6622.02	5239.00	-5238.26	116.38	40°27'04.208"N	104°26'29.819"W	4.56	
11344.00	89.820	177.210	6622.27	5332.96	-5332.20	119.75	40°27'03.279"N	104°26'29.790"W	1.55	
11439.00	90.060	177.730	6622.37	5427.89	-5427.11	123.95	40°27'02.341"N	104°26'29.751"W	0.60	
11533.00	90.060	180.000	6622.27	5521.88	-5521.08	125.81	40°27'01.412"N	104°26'29.741"W	2.41	
11628.00	90.000	180.100	6622.22	5616.88	-5616.08	125.73	40°27'00.474"N	104°26'29.757"W	0.12	
11723.00	89.970	183.600	6622.24	5711.79	-5711.02	122.66	40°26'59.536"N	104°26'29.811"W	3.68	
11817.00	90.000	182.260	6622.27	5805.62	-5804.89	117.86	40°26'58.609"N	104°26'29.888"W	1.43	
11912.00	90.030	182.210	6622.24	5900.52	-5899.82	114.15	40°26'57.671"N	104°26'29.950"W	0.06	
12007.00	90.000	182.490	6622.22	5995.41	-5994.74	110.26	40°26'56.734"N	104°26'30.015"W	0.30	
12101.00	90.060	181.990	6622.17	6089.30	-6088.67	106.58	40°26'55.806"N	104°26'30.077"W	0.54	
12196.00	90.090	181.560	6622.05	6184.23	-6183.62	103.64	40°26'54.868"N	104°26'30.130"W	0.45	
12290.00	89.970	181.570	6622.00	6278.17	-6277.59	101.07	40°26'53.940"N	104°26'30.178"W	0.13	
12385.00	90.030	181.730	6622.00	6373.11	-6372.55	98.34	40°26'53.002"N	104°26'30.228"W	0.18	
12479.00	90.150	181.900	6621.85	6467.04	-6466.50	95.36	40°26'52.074"N	104°26'30.281"W	0.22	
12574.00	89.970	181.920	6621.75	6561.96	-6561.45	92.19	40°26'51.137"N	104°26'30.336"W	0.19	
12668.00	90.060	180.940	6621.73	6655.91	-6655.42	89.85	40°26'50.208"N	104°26'30.381"W	1.05	
12763.00	90.180	179.700	6621.53	6750.90	-6750.41	89.32	40°26'49.270"N	104°26'30.403"W	1.31	
12857.00	90.180	178.970	6621.23	6844.90	-6844.40	90.41	40°26'48.341"N	104°26'30.403"W	0.78	
12952.00	90.120	179.140	6620.98	6939.89	-6939.39	91.97	40°26'47.402"N	104°26'30.398"W	0.19	
13046.00	89.910	178.860	6620.96	7033.89	-7033.38	93.61	40°26'46.473"N	104°26'30.391"W	0.37	
13141.00	89.970	178.850	6621.06	7128.88	-7128.36	95.51	40°26'45.535"N	104°26'30.381"W	0.06	
13235.00	90.030	179.380	6621.06	7222.88	-7222.35	96.96	40°26'44.606"N	104°26'30.377"W	0.57	
13329.00	90.030	179.330	6621.01	7316.88	-7316.34	98.02	40°26'43.677"N	104°26'30.377"W	0.05	
13424.00	90.090	179.150	6620.91	7411.87	-7411.33	99.28	40°26'42.738"N	104°26'30.376"W	0.20	
13518.00	90.150	178.470	6620.71	7505.86	-7505.31	101.24	40°26'41.809"N	104°26'30.365"W	0.73	
13613.00	90.060	178.340	6620.54	7600.85	-7600.27	103.88	40°26'40.871"N	104°26'30.346"W	0.17	
13708.00	90.000	177.640	6620.49	7695.81	-7695.21	107.21	40°26'39.932"N	104°26'30.317"W	0.74	
13802.00	90.030	178.200	6620.46	7789.77	-7789.15	110.62	40°26'39.004"N	104°26'30.288"W	0.60	
13897.00	90.030	179.150	6620.41	7884.76	-7884.13	112.82	40°26'38.065"N	104°26'30.274"W	1.00	
13991.00	90.150	181.030	6620.27	7978.75	-7978.12	112.67	40°26'37.136"N	104°26'30.290"W	2.00	



Actual Wellpath Report

WELLS RANCH STATE AA33-750 AWP
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#23 WELLS RANCH STATE AA33-750 (255'FSL&2502'FWL,SEC.21)
Area	COLORADO	Well	WELLS RANCH STATE AA33-750
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA33-750 AWB
Facility	SEC.21-T06N-R63W		

WELLPATH DATA (176 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
14086.00	90.000	181.810	6620.14	8073.70	-8073.09	110.32	40°26'36.198"N	104°26'30.335"W	0.84	
14180.00	90.090	181.080	6620.07	8167.65	-8167.06	107.95	40°26'35.270"N	104°26'30.380"W	0.78	
14275.00	89.970	181.720	6620.02	8262.60	-8262.03	105.63	40°26'34.332"N	104°26'30.425"W	0.69	
14370.00	90.000	181.560	6620.04	8357.54	-8356.99	102.91	40°26'33.394"N	104°26'30.475"W	0.17	
14464.00	90.150	182.040	6619.92	8451.46	-8450.95	99.96	40°26'32.466"N	104°26'30.528"W	0.53	
14559.00	90.060	181.800	6619.75	8546.38	-8545.89	96.77	40°26'31.528"N	104°26'30.583"W	0.27	
14654.00	90.030	181.750	6619.67	8641.31	-8640.85	93.83	40°26'30.590"N	104°26'30.636"W	0.06	
14748.00	90.150	182.330	6619.52	8735.22	-8734.79	90.48	40°26'29.662"N	104°26'30.694"W	0.63	
14843.00	90.220	182.150	6619.22	8830.12	-8829.71	86.77	40°26'28.725"N	104°26'30.757"W	0.20	
14937.00	90.060	181.780	6618.99	8924.04	-8923.66	83.55	40°26'27.797"N	104°26'30.813"W	0.43	
15032.00	90.060	181.740	6618.89	9018.97	-9018.61	80.63	40°26'26.859"N	104°26'30.865"W	0.04	
15126.00	90.120	181.470	6618.74	9112.91	-9112.58	78.00	40°26'25.931"N	104°26'30.914"W	0.29	
15221.00	90.090	181.350	6618.57	9207.86	-9207.55	75.66	40°26'24.993"N	104°26'30.959"W	0.13	
15315.00	90.220	181.320	6618.31	9301.81	-9301.52	73.47	40°26'24.064"N	104°26'31.001"W	0.14	
15410.00	90.060	181.260	6618.08	9396.77	-9396.50	71.33	40°26'23.126"N	104°26'31.044"W	0.18	
15505.00	90.120	181.270	6617.93	9491.73	-9491.47	69.23	40°26'22.188"N	104°26'31.085"W	0.06	
15599.00	90.220	181.460	6617.65	9585.68	-9585.45	66.99	40°26'21.260"N	104°26'31.129"W	0.23	
15694.00	90.120	180.380	6617.37	9680.65	-9680.43	65.47	40°26'20.321"N	104°26'31.163"W	1.14	
15788.00	90.150	180.580	6617.15	9774.64	-9774.43	64.68	40°26'19.393"N	104°26'31.188"W	0.22	
15883.00	90.030	180.070	6617.00	9869.63	-9869.43	64.14	40°26'18.454"N	104°26'31.210"W	0.55	
15977.00	90.030	180.600	6616.95	9963.62	-9963.43	63.59	40°26'17.525"N	104°26'31.231"W	0.56	
16072.00	90.220	179.530	6616.74	10058.61	-10058.42	63.48	40°26'16.587"N	104°26'31.247"W	1.14	
16167.00	90.060	179.200	6616.51	10153.61	-10153.42	64.54	40°26'15.648"N	104°26'31.248"W	0.39	
16261.00	89.940	179.620	6616.51	10247.61	-10247.41	65.51	40°26'14.719"N	104°26'31.250"W	0.46	
16338.00	90.060	180.220	6616.51	10324.61	-10324.41	65.61	40°26'13.958"N	104°26'31.261"W	0.79	Last BHI MWD Survey
16362.00	90.060	180.220	6616.48	10348.61	-10348.41	65.52	40°26'13.721"N	104°26'31.266"W	0.00	Projection to Bit



Actual Wellpath Report

WELLS RANCH STATE AA33-750 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#23 WELLS RANCH STATE AA33-750 (255'FSL&2502'FWL,SEC.21)
Area	COLORADO	Well	WELLS RANCH STATE AA33-750
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA33-750 AWB
Facility	SEC.21-T06N-R63W		

HOLE & CASING SECTIONS - Ref Wellbore: WELLS RANCH STATE AA33-750 AWB Ref Wellpath: WELLS RANCH STATE AA33-750 AWP									
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
9.625in Casing	30.00	1928.00	1898.00	30.00	1927.93	0.00	-0.01	3.81	2.38
8.5in Open Hole	1928.00	16362.00	14434.00	1927.93	6616.48	3.81	2.38	-10348.41	65.52

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	22.19	1549.71	3295974.57	1414219.18	40°27'56.016"N	104°26'10.464"W	polygon
WELLS RANCH STATE AA33-718 Section 33	-23.00	22.19	1549.71	3295974.57	1414219.18	40°27'56.016"N	104°26'10.464"W	polygon
WELLS RANCH STATE AA33-750 REV-3 BHL(535'FSL&2613'FEL,SEC.33)	6617.97	-10349.98	78.97	3294503.89	1403847.40	40°26'13.704"N	104°26'31.092"W	point
WELLS RANCH STATE AA33-750 REV-2 BHL(535'FSL&2613'FEL,SEC.33)	6618.90	-10349.98	78.97	3294503.89	1403847.40	40°26'13.704"N	104°26'31.092"W	point
WELLS RANCH STATE AA33-750 Landing Point 2(612'FNL&2625'FWL,SEC.33)	6626.12	-1006.30	107.80	3294532.71	1413190.73	40°27'46.024"N	104°26'29.277"W	point
WELLS RANCH STATE AA33-750 Landing Point(612'FNL&2625'FWL,SEC.33)	6712.00	-1006.30	107.80	3294532.71	1413190.73	40°27'46.024"N	104°26'29.277"W	point
WELLS RANCH STATE AA33-750 REV-1 BHL(535'FSL&2613'FEL,SEC.33)	6712.00	-10349.98	78.97	3294503.89	1403847.40	40°26'13.704"N	104°26'31.092"W	point
WELLS RANCH STATE AA33-718 Section 28 Hardline (460'SETBACK)	6777.00	22.19	1549.71	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	22.19	1549.71	3295974.57	1414219.18	40°27'56.016"N	104°26'10.464"W	polygon



Actual Wellpath Report

WELLS RANCH STATE AA33-750 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#23 WELLS RANCH STATE AA33-750 (255'FSL&2502'FWL,SEC.21)
Area	COLORADO	Well	WELLS RANCH STATE AA33-750
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA33-750 AWB
Facility	SEC.21-T06N-R63W		

WELLPATH COMPOSITION - Ref Wellbore: WELLS RANCH STATE AA33-750 AWB Ref Wellpath: WELLS RANCH STATE AA33-750 AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	1879.18	Gyrodatta standard - Drop gyro or Multi-shot	GYRODATA SURFACE SURVEYS <0-1879.18>	WELLS RANCH STATE AA33-750 AWB
1879.18	16338.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	BHI/ATC 8.5" OWSG MWD+IFR+MSA <1924-16338'>	WELLS RANCH STATE AA33-750 AWB
16338.00	16362.00	Blind Drilling (std)	Projection to bit	WELLS RANCH STATE AA33-750 AWB



Actual Wellpath Report

WELLS RANCH STATE AA33-750 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#23 WELLS RANCH STATE AA33-750 (255'FSL&2502'FWL,SEC.21)
Area	COLORADO	Well	WELLS RANCH STATE AA33-750
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA33-750 AWB
Facility	SEC.21-T06N-R63W		

WELLPATH COMMENTS					
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment	
1924.00	0.830	224.690	1923.93	Tie to Surface	
16338.00	90.060	180.220	6616.51	Last BHI MWD Survey	
16362.00	90.060	180.220	6616.48	Projection to Bit	

COMMENTS	
Wellpath general comments	
Surface Location :	
Lat : 40.46555 N	
Long : 104.44181 W	
API : 05-123-43873	