

Location:	COLORADO	Slot:	SLOT#06 WELLS RANCH AF07-638 (1312FSL & 175FEL, SEC.08)
Field:	WELD COUNTY (NOBLE NAD 83 GRID)	Well:	WELLS RANCH AF07-638
Facility:	SEC.08-T05N-R62W	Wellbore:	WELLS RANCH AF07-638 PWB

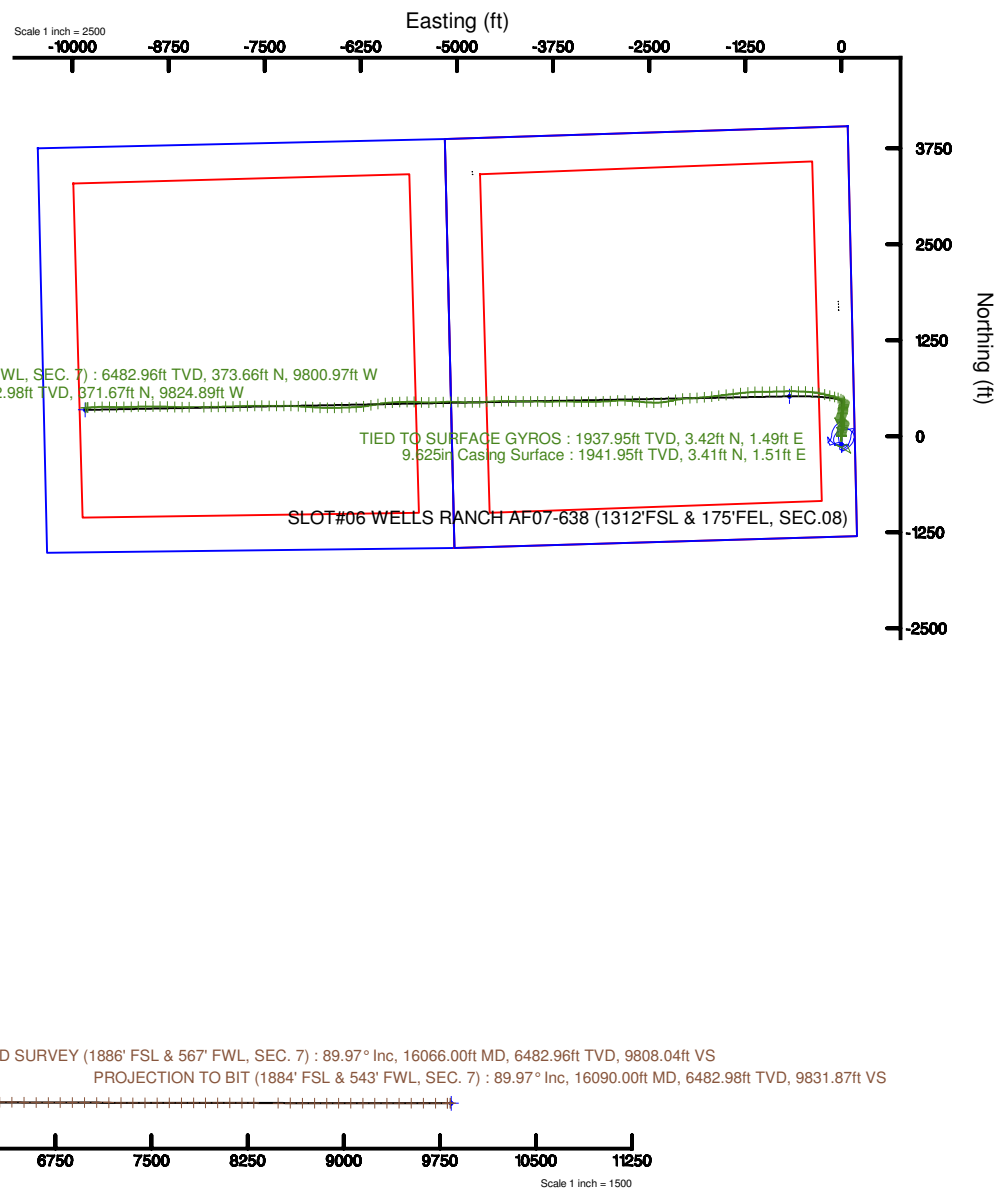
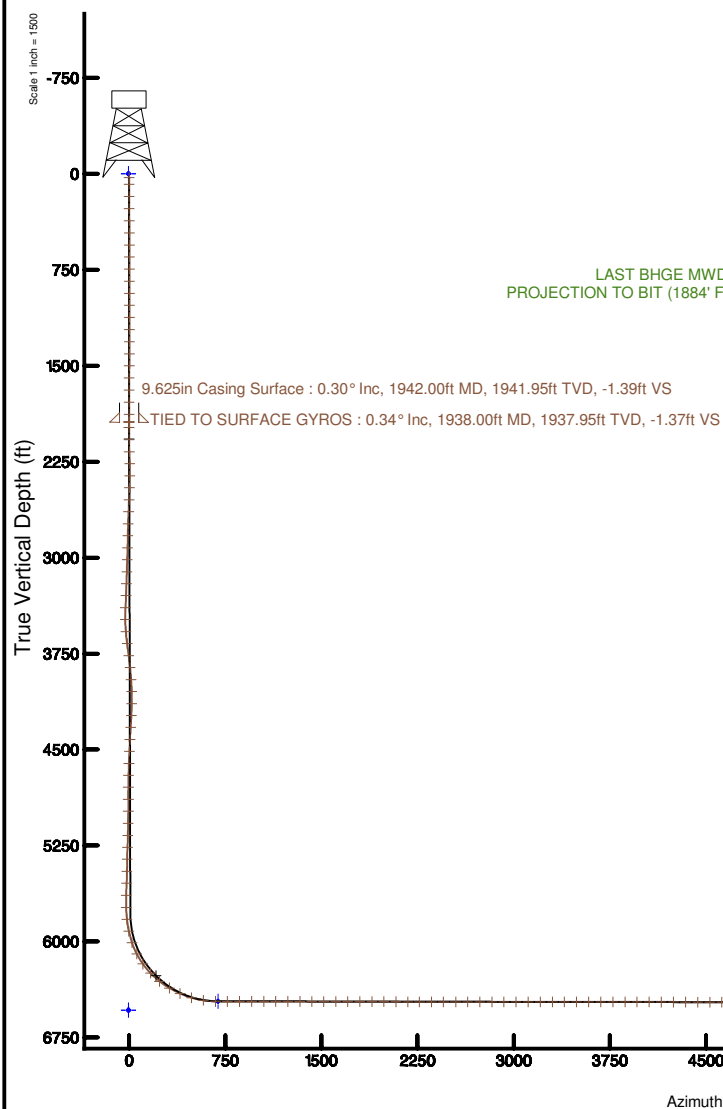
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BGGM (1900.0 to 2018.0) Dip: 66.96° Field: 52513.1 nT  
Magnetic North is 8.15 degrees East of True North (at 6/6/2017)  
Grid North is 0.75 degrees East of True North  
To correct azimuth from True to Grid subtract 0.75 degrees  
To correct azimuth from Magnetic to Grid add 7.40 degrees

[illegible]

## Location Information

[illegible]



# Actual Wellpath Report

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## REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#06 WELLS RANCH AF07-638 (1312'FSL & 175'FEL, SEC.08)
Area	COLORADO	Well	WELLS RANCH AF07-638
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH AF07-638 AWB
Facility	SEC.08-T05N-R62W		

## REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 5.1
North Reference	Grid	User	Cantryat
Scale	0.999961	Report Generated	8/30/2017 at 1:07:11 PM
Convergence at slot	0.75° East	Database/Source file	Denver/WELLS_RANCH_AF07-638_AWB_awp.xml

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-3409.80	4798.05	3323486.35	1394486.27	40°24'37.620"N	104°20'17.880"W
Facility Reference Pt			3318688.50	1397895.93	40°25'11.928"N	104°21'19.332"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'KB) (RKB) to Facility Vertical Datum	4743.00ft
Horizontal Reference Pt	Slot	RIG (30'KB) (RKB) to Mean Sea Level	4743.00ft
Vertical Reference Pt	RIG (30'KB) (RKB)	RIG (30'KB) (RKB) to Mud Line at Slot (SLOT#06 WELLS RANCH AF07-638 (1312'FSL & 175'FEL, SEC.08))	4743.00ft
MD Reference Pt	RIG (30'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	272.00°



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Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH AF07-638 AWB
Facility	SEC.08-T05N-R62W		

## WELLPATH DATA (151 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
1938.00	0.340	133.560	1937.95	-1.37	3.42	1.49	40°24'37.654"N	104°20'17.860"W	0.69	TIED TO SURFACE GYROS
1983.00	0.210	16.840	1982.95	-1.49	3.41	1.61	40°24'37.653"N	104°20'17.859"W	1.05	
2077.00	3.550	352.330	2076.88	-1.05	6.46	1.27	40°24'37.684"N	104°20'17.862"W	3.57	
2172.00	4.540	334.200	2171.65	1.20	12.76	-0.76	40°24'37.746"N	104°20'17.888"W	1.69	
2266.00	6.400	349.870	2265.22	4.04	21.27	-3.30	40°24'37.831"N	104°20'17.919"W	2.52	
2361.00	6.730	5.940	2359.61	4.77	32.02	-3.65	40°24'37.937"N	104°20'17.922"W	1.96	
2455.00	7.220	18.170	2452.92	2.74	43.11	-1.24	40°24'38.046"N	104°20'17.889"W	1.66	
2550.00	7.280	20.640	2547.16	-0.84	54.42	2.74	40°24'38.157"N	104°20'17.835"W	0.33	
2644.00	7.290	18.350	2640.40	-4.43	65.65	6.72	40°24'38.268"N	104°20'17.782"W	0.31	
2739.00	7.270	17.070	2734.63	-7.69	77.12	10.38	40°24'38.381"N	104°20'17.733"W	0.17	
2834.00	7.510	11.860	2828.85	-10.31	88.94	13.42	40°24'38.497"N	104°20'17.691"W	0.75	
2928.00	7.380	12.310	2922.05	-12.44	100.85	15.97	40°24'38.614"N	104°20'17.656"W	0.15	
3023.00	7.270	17.710	3016.28	-15.16	112.54	19.10	40°24'38.729"N	104°20'17.614"W	0.73	
3117.00	7.300	19.400	3109.52	-18.56	123.83	22.89	40°24'38.841"N	104°20'17.563"W	0.23	
3212.00	7.260	11.910	3203.76	-21.40	135.40	26.14	40°24'38.954"N	104°20'17.519"W	1.00	
3306.00	6.960	22.690	3297.04	-24.43	146.47	29.56	40°24'39.063"N	104°20'17.473"W	1.45	
3401.00	7.400	25.240	3391.29	-28.88	157.31	34.39	40°24'39.170"N	104°20'17.409"W	0.57	
3495.00	8.370	358.180	3484.44	-30.82	169.63	36.75	40°24'39.291"N	104°20'17.376"W	4.04	
3590.00	9.870	327.890	3578.29	-25.79	183.45	32.20	40°24'39.428"N	104°20'17.433"W	5.22	
3684.00	8.720	301.360	3671.09	-15.05	193.98	21.83	40°24'39.534"N	104°20'17.565"W	4.67	
3779.00	7.150	290.280	3765.18	-3.16	199.78	10.14	40°24'39.593"N	104°20'17.715"W	2.30	
3874.00	7.310	311.020	3859.45	7.15	205.80	0.03	40°24'39.653"N	104°20'17.845"W	2.74	
3968.00	7.230	329.430	3952.70	14.98	214.82	-7.49	40°24'39.744"N	104°20'17.940"W	2.47	
4063.00	7.250	348.780	4046.96	19.57	225.85	-11.70	40°24'39.853"N	104°20'17.993"W	2.56	
4157.00	7.680	10.460	4140.18	20.00	237.84	-11.71	40°24'39.972"N	104°20'17.991"W	3.01	
4252.00	7.790	22.720	4234.32	16.79	250.02	-8.08	40°24'40.091"N	104°20'17.942"W	1.74	
4346.00	7.900	29.560	4327.45	11.55	261.52	-2.43	40°24'40.204"N	104°20'17.867"W	1.00	
4441.00	7.810	25.180	4421.55	5.99	273.04	3.54	40°24'40.317"N	104°20'17.788"W	0.64	
4535.00	7.810	19.750	4514.68	1.52	284.83	8.41	40°24'40.433"N	104°20'17.723"W	0.78	
4629.00	7.820	15.790	4607.81	-1.95	297.00	12.31	40°24'40.553"N	104°20'17.671"W	0.57	



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Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH AF07-638 AWB
Facility	SEC.08-T05N-R62W		

## WELLPATH DATA (151 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4724.00	7.820	12.610	4701.93	-4.68	309.52	15.48	40°24'40.676"N	104°20'17.627"W	0.46	
4818.00	7.840	6.780	4795.05	-6.39	322.13	17.64	40°24'40.801"N	104°20'17.597"W	0.84	
4913.00	7.900	359.200	4889.16	-6.61	335.09	18.31	40°24'40.929"N	104°20'17.587"W	1.09	
5007.00	7.630	4.220	4982.30	-6.54	347.77	18.68	40°24'41.054"N	104°20'17.580"W	0.78	
5102.00	7.580	10.640	5076.47	-7.72	360.22	20.30	40°24'41.177"N	104°20'17.557"W	0.90	
5197.00	7.760	12.710	5170.62	-9.86	372.64	22.87	40°24'41.299"N	104°20'17.521"W	0.35	
5291.00	7.820	18.670	5263.75	-12.87	384.89	26.31	40°24'41.420"N	104°20'17.475"W	0.86	
5386.00	7.840	8.080	5357.87	-15.41	397.43	29.29	40°24'41.543"N	104°20'17.434"W	1.52	
5481.00	7.390	11.090	5452.03	-17.06	409.84	31.38	40°24'41.665"N	104°20'17.405"W	0.63	
5575.00	7.390	19.730	5545.25	-19.86	421.46	34.58	40°24'41.780"N	104°20'17.362"W	1.18	
5670.00	7.880	10.060	5639.42	-22.63	433.62	37.78	40°24'41.900"N	104°20'17.318"W	1.45	
5765.00	7.730	353.550	5733.55	-22.61	446.38	38.20	40°24'42.026"N	104°20'17.311"W	2.36	
5859.00	8.200	317.290	5826.70	-16.96	457.60	32.94	40°24'42.137"N	104°20'17.377"W	5.28	
5954.00	13.940	300.780	5919.91	-2.15	468.44	18.50	40°24'42.246"N	104°20'17.562"W	6.84	
6048.00	20.170	297.150	6009.74	22.47	481.65	-5.67	40°24'42.380"N	104°20'17.872"W	6.72	
6143.00	28.710	289.770	6096.17	59.10	496.87	-41.80	40°24'42.535"N	104°20'18.336"W	9.53	
6237.00	36.100	284.880	6175.49	107.67	511.64	-89.88	40°24'42.687"N	104°20'18.955"W	8.34	
6332.00	44.660	283.310	6247.79	167.81	526.54	-149.53	40°24'42.842"N	104°20'19.724"W	9.07	
6427.00	51.810	284.080	6311.03	237.14	543.33	-218.33	40°24'43.017"N	104°20'20.610"W	7.55	
6521.00	60.060	280.890	6363.64	313.65	560.05	-294.30	40°24'43.192"N	104°20'21.589"W	9.21	
6616.00	66.140	276.480	6406.62	397.73	572.74	-377.99	40°24'43.328"N	104°20'22.669"W	7.62	
6710.00	73.170	273.480	6439.29	485.69	580.34	-465.73	40°24'43.414"N	104°20'23.802"W	8.05	
6805.00	81.130	271.390	6460.40	578.22	584.24	-558.19	40°24'43.465"N	104°20'24.997"W	8.65	
6900.00	89.510	270.220	6468.15	672.80	585.56	-652.78	40°24'43.490"N	104°20'26.219"W	8.91	
6994.00	89.880	268.340	6468.65	766.69	584.38	-746.76	40°24'43.491"N	104°20'27.434"W	2.04	
7089.00	90.120	268.520	6468.65	861.51	581.78	-841.73	40°24'43.477"N	104°20'28.662"W	0.32	
7183.00	89.910	269.230	6468.62	955.36	579.93	-935.71	40°24'43.471"N	104°20'29.877"W	0.79	
7278.00	90.090	269.750	6468.62	1050.27	579.09	-1030.70	40°24'43.475"N	104°20'31.105"W	0.58	
7372.00	89.820	267.470	6468.69	1144.10	576.81	-1124.67	40°24'43.465"N	104°20'32.320"W	2.44	
7466.00	90.180	264.840	6468.69	1237.61	570.51	-1218.45	40°24'43.414"N	104°20'33.534"W	2.82	



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WELLS RANCH AF07-638 AWB\_awp

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Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH AF07-638 AWB
Facility	SEC.08-T05N-R62W		

## WELLPATH DATA (151 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7561.00	89.850	263.610	6468.67	1331.73	560.95	-1312.97	40°24'43.332"N	104°20'34.757"W	1.34	
7656.00	89.910	262.930	6468.87	1425.63	549.81	-1407.31	40°24'43.234"N	104°20'35.979"W	0.72	
7750.00	89.820	264.200	6469.09	1518.61	539.28	-1500.72	40°24'43.142"N	104°20'37.188"W	1.35	
7845.00	89.970	262.610	6469.26	1612.54	528.37	-1595.08	40°24'43.047"N	104°20'38.409"W	1.68	
7939.00	89.820	263.630	6469.44	1705.41	517.11	-1688.41	40°24'42.947"N	104°20'39.618"W	1.10	
8034.00	89.910	264.760	6469.66	1799.53	507.50	-1782.92	40°24'42.865"N	104°20'40.841"W	1.19	
8129.00	89.820	266.120	6469.88	1893.91	499.95	-1877.61	40°24'42.802"N	104°20'42.066"W	1.43	
8223.00	89.970	269.330	6470.06	1987.63	496.22	-1971.53	40°24'42.777"N	104°20'43.281"W	3.42	
8318.00	89.290	262.550	6470.67	2082.05	489.49	-2066.23	40°24'42.723"N	104°20'44.506"W	7.17	
8412.00	89.320	256.680	6471.81	2173.81	472.56	-2158.64	40°24'42.568"N	104°20'45.704"W	6.24	
8506.00	90.030	259.210	6472.35	2264.99	452.93	-2250.56	40°24'42.386"N	104°20'46.895"W	2.80	
8601.00	90.030	265.920	6472.30	2358.65	440.64	-2344.71	40°24'42.276"N	104°20'48.114"W	7.06	
8695.00	90.120	271.170	6472.17	2452.45	438.26	-2438.65	40°24'42.265"N	104°20'49.329"W	5.59	
8790.00	90.030	273.220	6472.05	2547.44	441.90	-2533.57	40°24'42.313"N	104°20'50.555"W	2.16	
8884.00	90.030	276.520	6472.00	2641.31	449.87	-2627.22	40°24'42.404"N	104°20'51.765"W	3.51	
8978.00	89.910	274.620	6472.05	2735.12	459.00	-2720.77	40°24'42.506"N	104°20'52.972"W	2.03	
9073.00	89.970	272.910	6472.15	2830.07	465.24	-2815.56	40°24'42.580"N	104°20'54.197"W	1.80	
9167.00	89.940	266.190	6472.22	2923.93	464.50	-2909.50	40°24'42.585"N	104°20'55.411"W	7.15	
9262.00	89.880	265.380	6472.37	3018.38	457.52	-3004.25	40°24'42.528"N	104°20'56.637"W	0.85	
9356.00	90.150	268.340	6472.35	3111.99	452.37	-3098.10	40°24'42.489"N	104°20'57.851"W	3.16	
9451.00	90.120	269.240	6472.12	3206.84	450.36	-3193.07	40°24'42.481"N	104°20'59.079"W	0.95	
9546.00	90.000	269.680	6472.02	3301.74	449.47	-3288.07	40°24'42.485"N	104°21'00.307"W	0.48	
9640.00	90.120	270.620	6471.92	3395.69	449.71	-3382.07	40°24'42.499"N	104°21'01.522"W	1.01	
9735.00	90.120	271.270	6471.73	3490.68	451.28	-3477.05	40°24'42.527"N	104°21'02.750"W	0.68	
9829.00	89.820	270.780	6471.77	3584.66	452.96	-3571.04	40°24'42.555"N	104°21'03.964"W	0.61	
9924.00	89.750	269.160	6472.13	3679.60	452.91	-3666.03	40°24'42.567"N	104°21'05.192"W	1.71	
10018.00	89.940	268.810	6472.39	3773.47	451.25	-3760.02	40°24'42.563"N	104°21'06.408"W	0.42	
10113.00	89.910	270.920	6472.51	3868.40	451.02	-3855.01	40°24'42.573"N	104°21'07.636"W	2.22	
10207.00	89.750	270.560	6472.79	3962.37	452.24	-3949.00	40°24'42.597"N	104°21'08.850"W	0.42	
10302.00	90.000	270.250	6473.00	4057.34	452.91	-4044.00	40°24'42.615"N	104°21'10.078"W	0.42	



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10397.00	89.850	270.940	6473.12	4152.31	453.89	-4139.00	40°24'42.637"N	104°21'11.306"W	0.74	
10491.00	89.850	271.190	6473.37	4246.30	455.64	-4232.98	40°24'42.666"N	104°21'12.521"W	0.27	
10586.00	89.780	270.230	6473.67	4341.27	456.82	-4327.97	40°24'42.690"N	104°21'13.748"W	1.01	
10680.00	89.970	269.380	6473.88	4435.20	456.50	-4421.97	40°24'42.699"N	104°21'14.963"W	0.93	
10775.00	89.940	267.760	6473.95	4530.03	454.13	-4516.94	40°24'42.688"N	104°21'16.191"W	1.71	
10869.00	89.970	265.480	6474.03	4623.61	448.59	-4610.77	40°24'42.645"N	104°21'17.405"W	2.43	
10964.00	90.090	267.720	6473.98	4718.18	442.95	-4705.59	40°24'42.601"N	104°21'18.632"W	2.36	
11058.00	89.940	270.520	6473.95	4812.05	441.51	-4799.57	40°24'42.599"N	104°21'19.847"W	2.98	
11153.00	89.940	270.520	6474.05	4907.02	442.37	-4894.57	40°24'42.620"N	104°21'21.075"W	0.00	
11247.00	89.910	272.480	6474.18	5001.01	444.83	-4988.53	40°24'42.656"N	104°21'22.289"W	2.09	
11342.00	89.970	271.160	6474.27	5096.01	447.85	-5083.48	40°24'42.698"N	104°21'23.516"W	1.39	
11436.00	89.970	266.380	6474.32	5189.83	445.83	-5177.43	40°24'42.690"N	104°21'24.731"W	5.09	
11531.00	90.000	267.500	6474.35	5284.46	440.76	-5272.30	40°24'42.652"N	104°21'25.958"W	1.18	
11625.00	90.060	270.350	6474.30	5378.32	439.00	-5366.27	40°24'42.647"N	104°21'27.173"W	3.03	
11720.00	90.000	273.830	6474.25	5473.30	442.46	-5461.19	40°24'42.693"N	104°21'28.399"W	3.66	
11814.00	89.910	271.920	6474.32	5567.29	447.17	-5555.07	40°24'42.751"N	104°21'29.612"W	2.03	
11909.00	89.750	268.640	6474.61	5662.23	447.64	-5650.05	40°24'42.768"N	104°21'30.840"W	3.46	
12003.00	89.970	267.540	6474.84	5756.01	444.51	-5744.00	40°24'42.749"N	104°21'32.055"W	1.19	
12098.00	89.940	266.480	6474.91	5850.65	439.55	-5838.87	40°24'42.712"N	104°21'33.282"W	1.12	
12192.00	89.970	263.770	6474.98	5943.96	431.56	-5932.52	40°24'42.645"N	104°21'34.494"W	2.88	
12287.00	90.090	260.890	6474.93	6037.60	418.89	-6026.66	40°24'42.532"N	104°21'35.713"W	3.03	
12381.00	89.940	259.900	6474.91	6129.68	403.20	-6119.34	40°24'42.389"N	104°21'36.913"W	1.07	
12476.00	89.850	262.470	6475.08	6222.99	388.64	-6213.21	40°24'42.257"N	104°21'38.129"W	2.71	
12571.00	89.910	266.430	6475.28	6317.14	379.46	-6307.75	40°24'42.178"N	104°21'39.353"W	4.17	
12665.00	89.750	268.890	6475.56	6410.87	375.62	-6401.66	40°24'42.152"N	104°21'40.567"W	2.62	
12760.00	89.750	267.190	6475.98	6505.64	372.37	-6496.60	40°24'42.132"N	104°21'41.795"W	1.79	
12854.00	89.880	269.190	6476.28	6599.42	369.40	-6590.55	40°24'42.114"N	104°21'43.010"W	2.13	
12949.00	89.660	270.780	6476.66	6694.36	369.38	-6685.55	40°24'42.126"N	104°21'44.238"W	1.69	
13043.00	89.750	272.940	6477.14	6788.35	372.43	-6779.49	40°24'42.168"N	104°21'45.452"W	2.30	
13138.00	89.820	274.060	6477.50	6883.32	378.23	-6874.31	40°24'42.238"N	104°21'46.677"W	1.18	



# Actual Wellpath Report

WELLS RANCH AF07-638 AWB\_awp

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#06 WELLS RANCH AF07-638 (1312'FSL & 175'FEL, SEC.08)
Area	COLORADO	Well	WELLS RANCH AF07-638
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH AF07-638 AWB
Facility	SEC.08-T05N-R62W		

WELLPATH DATA (151 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS °/100ft	Comments
13232.00	89.880	273.720	6477.75	6977.27	384.60	6968.09	40°24'42.313"N	104°21'47.888"W	0.37	
13327.00	89.750	272.780	6478.05	7072.24	389.99	7062.94	40°24'42.378"N	104°21'49.113"W	1.00	
13421.00	89.850	272.030	6478.38	7166.24	393.93	7156.85	40°24'42.429"N	104°21'50.326"W	0.80	
13516.00	89.820	270.260	6478.66	7261.22	395.83	7251.83	40°24'42.459"N	104°21'51.554"W	1.86	
13610.00	89.880	269.760	6478.90	7355.17	395.85	7345.83	40°24'42.471"N	104°21'52.769"W	0.54	
13705.00	89.780	270.520	6479.18	7450.12	396.08	7440.83	40°24'42.486"N	104°21'53.997"W	0.81	
13800.00	89.850	270.580	6479.49	7545.09	396.99	7535.82	40°24'42.507"N	104°21'55.225"W	0.10	
13894.00	89.780	268.070	6479.79	7638.98	395.89	7629.81	40°24'42.508"N	104°21'56.440"W	2.67	
13988.00	89.970	269.020	6480.00	7732.80	393.50	7723.78	40°24'42.496"N	104°21'57.655"W	1.03	
14083.00	89.880	268.470	6480.12	7827.65	391.42	7818.75	40°24'42.487"N	104°21'58.883"W	0.59	
14177.00	89.880	267.270	6480.32	7921.40	387.93	7912.69	40°24'42.465"N	104°22'00.098"W	1.28	
14272.00	89.970	269.510	6480.44	8016.21	385.26	8007.64	40°24'42.450"N	104°22'01.326"W	2.36	
14366.00	89.940	269.040	6480.52	8110.10	384.07	8101.64	40°24'42.451"N	104°22'02.541"W	0.50	
14461.00	89.910	267.750	6480.64	8204.91	381.41	8196.60	40°24'42.436"N	104°22'03.769"W	1.36	
14555.00	89.850	269.050	6480.84	8298.73	378.78	8290.56	40°24'42.422"N	104°22'04.984"W	1.38	
14745.00	89.940	270.090	6481.19	8488.55	377.36	8480.55	40°24'42.432"N	104°22'07.440"W	0.55	
14839.00	89.970	271.220	6481.26	8582.52	378.43	8574.54	40°24'42.454"N	104°22'08.655"W	1.20	
14934.00	89.910	271.880	6481.36	8677.52	381.00	8669.51	40°24'42.492"N	104°22'09.882"W	0.70	
15028.00	89.820	272.230	6481.58	8771.52	384.37	8763.45	40°24'42.537"N	104°22'11.096"W	0.38	
15123.00	89.970	271.060	6481.76	8866.52	387.10	8858.41	40°24'42.576"N	104°22'12.323"W	1.24	
15217.00	89.780	270.710	6481.96	8960.50	388.55	8952.39	40°24'42.602"N	104°22'13.538"W	0.42	
15312.00	89.850	269.150	6482.27	9055.43	388.43	9047.39	40°24'42.613"N	104°22'14.766"W	1.64	
15406.00	90.120	267.380	6482.29	9149.23	385.59	9141.34	40°24'42.597"N	104°22'15.980"W	1.90	
15500.00	89.940	268.900	6482.24	9243.01	382.54	9235.29	40°24'42.578"N	104°22'17.195"W	1.63	
15595.00	89.880	268.420	6482.39	9337.85	380.32	9330.26	40°24'42.568"N	104°22'18.423"W	0.51	
15689.00	89.910	270.030	6482.57	9431.74	379.04	9424.25	40°24'42.567"N	104°22'19.639"W	1.71	
15784.00	89.910	272.210	6482.72	9526.72	380.90	9519.23	40°24'42.598"N	104°22'20.866"W	2.29	
15879.00	89.910	269.390	6482.86	9621.69	382.23	9614.21	40°24'42.623"N	104°22'22.094"W	2.97	
15973.00	90.000	267.420	6482.94	9715.50	379.61	9708.17	40°24'42.609"N	104°22'23.309"W	2.10	
16066.00	89.970	265.240	6482.96	9808.04	373.66	9800.97	40°24'42.562"N	104°22'24.509"W	2.34	LAST BHGE MWD SURVEY (1886' FSL & 567' FWL, SEC. 7)



# Actual Wellpath Report

WELLS RANCH AF07-638 AWB\_awp

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#06 WELLS RANCH AF07-638 (1312'FSL & 175'FEL, SEC.08)
Area	COLORADO	Well	WELLS RANCH AF07-638
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH AF07-638 AWB
Facility	SEC.08-T05N-R62W		

WELLPATH DATA (151 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
16090.00	89.970	265.240	6482.98	9831.87	371.67	-9824.89	40°24'42.545"N	104°22'24.819"W	0.00	PROJECTION TO BIT (1884' FSL & 543' FWL, SEC. 7)

HOLE & CASING SECTIONS - Ref Wellbore: WELLS RANCH AF07-638 AWB      Ref Wellpath: WELLS RANCH AF07-638 AWB_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 Surface	30.00	1942.00	1912.00	30.00	1941.95	0.00	0.00	3.41	1.51
8.5in Open Hole	30.00	16090.00	16060.00	30.00	6482.98	0.00	0.00	371.67	-9824.89

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.07-T05N-R62W	-1.00	-112.93	1.48	3323487.83	1394373.35	40°24'36.504"N	104°20'17.880"W	polygon
SEC.08-T05N-R62W	-1.00	-112.93	1.48	3323487.83	1394373.35	40°24'36.504"N	104°20'17.880"W	polygon
WELLS RANCH AF07-638 LANDING POINT	6467.21	520.00	-675.00	3322811.38	1395006.25	40°24'42.845"N	104°20'26.517"W	point
WELLS RANCH AF07-638 BHL (1855'FSL & 535'FWL, SEC.07)	6483.20	343.14	-9832.67	3313654.09	1394829.40	<b>40°24'42.264"N</b>	<b>104°22'24.924"W</b>	point
SEC.07-T05N-R62W 460' SETBACKS	6536.00	-112.93	1.48	3323487.83	1394373.35	40°24'36.504"N	104°20'17.880"W	polygon
SEC.08-T05N-R62W 460'SETBACKS	6536.00	-112.93	1.48	3323487.83	1394373.35	40°24'36.504"N	104°20'17.880"W	polygon





# Actual Wellpath Report

WELLS RANCH AF07-638 AWB\_awp

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#06 WELLS RANCH AF07-638 (1312'FSL & 175'FEL, SEC.08)
Area	COLORADO	Well	WELLS RANCH AF07-638
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH AF07-638 AWB
Facility	SEC.08-T05N-R62W		

WELLPATH COMPOSITION - Ref Wellbore: WELLS RANCH AF07-638 AWB    Ref Wellpath: WELLS RANCH AF07-638 AWB_awp				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
30.00	1938.00	Gyrodata standard - Drop gyro or Multi-shot	THIRD PARTY SURFACE GYRO <0'-1938'>	WELLS RANCH AF07-638 AWB
1938.00	16066.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	BHGE/ATC 8.6 OWSG MWD <1983'-16066'>	WELLS RANCH AF07-638 AWB
16066.00	16090.00	Blind Drilling (std)	Projection to bit	WELLS RANCH AF07-638 AWB



## Actual Wellpath Report

WELLS RANCH AF07-638 AWB\_awp

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#06 WELLS RANCH AF07-638 (1312'FSL & 175'FEL, SEC.08)
Area	COLORADO	Well	WELLS RANCH AF07-638
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH AF07-638 AWB
Facility	SEC.08-T05N-R62W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1938.00	0.340	133.560	1937.95	TIED TO SURFACE GYROS
16066.00	89.970	265.240	6482.96	LAST BHGE MWD SURVEY (1886' FSL & 567' FWL, SEC. 7)
16090.00	89.970	265.240	6482.98	PROJECTION TO BIT (1884' FSL & 543' FWL, SEC. 7)

COMMENTS	
<b>Wellpath general comments</b> SURFACE LOCATION: SESE 40.41045N 104.3383W API: 05-123-44247	