

NOBLE ENERGY, INC

Location: COLORADO Slot: SLOT#34 INDEPENDENCE D30-711(300'FNL&1045'FEL,SEC.19)
Field: WELD COUNTY (NOBLE NAD 83 GRID) Well: INDEPENDENCE D30-711
Facility: SEC.19-T03N-R64W Wellbore: INDEPENDENCE D30-711 PWB

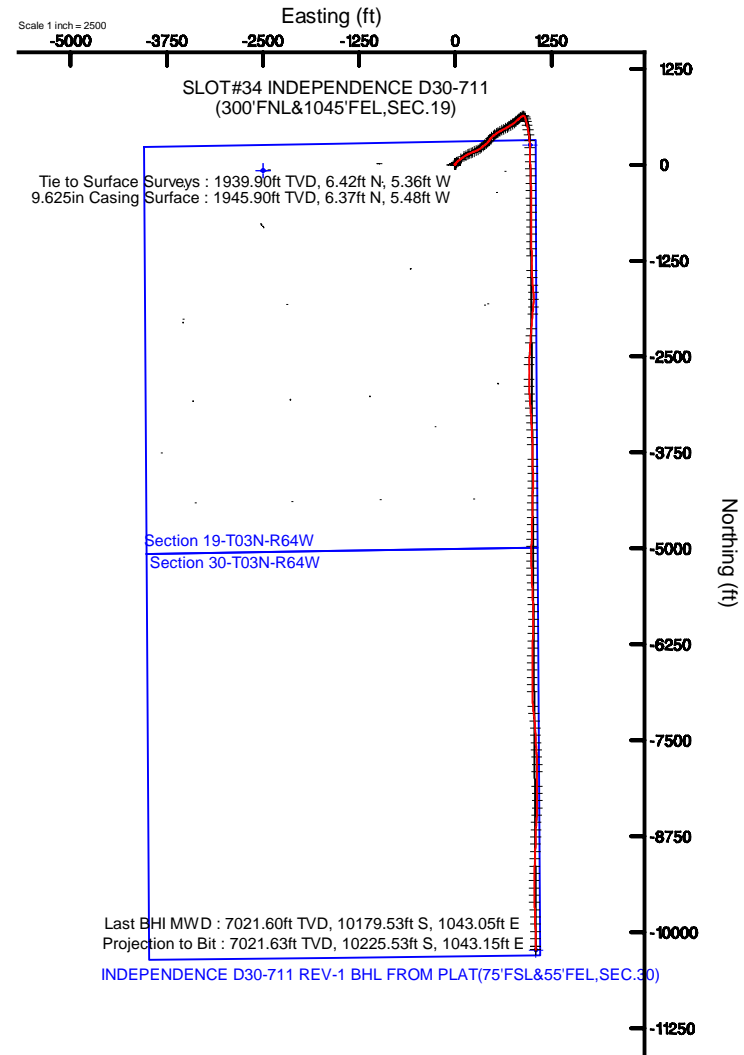
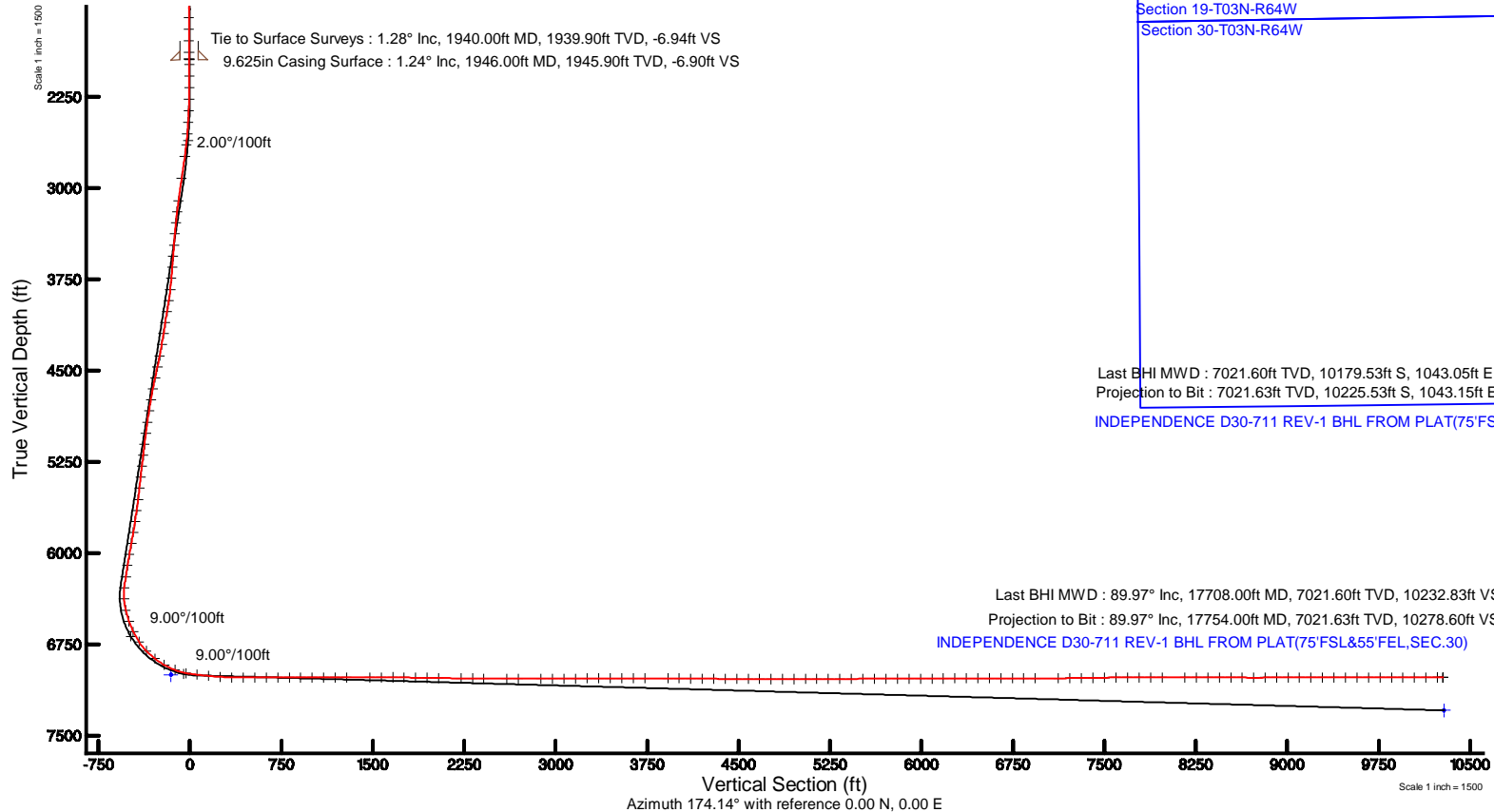
Plot reference wellpath is INDEPENDENCE D30-711 (REV-8.0) PWB	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to RIG(30'KB) (RKB)	" = Wellpath was transformed from a different geodetic datum
Measured depths are referenced to RIG(30'KB) (RKB)	North Reference: Grid north
RIG(30'KB) (RKB) to Mean Sea Level: 4798 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#34 INDEPENDENCE D30-711(300'FNL&1045'FEL,SEC.19)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: guenater on 2019-01-15
	Database: WA_DEN_Denver_Defn

Location Information

Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.19-T03N-R64W			3250809.903	1319533.344	40°12'25.308"N	104°36'07.200"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#34 INDEPENDENCE D30-711(300'FNL&1045'FEL,SEC.19)	3747.77	3821.81	3254631.539	1323280.947	40°13'01.956"N	104°35'17.448"W
RIG(30'KB) (RKB) to Mud line (At Slot: SLOT#34 INDEPENDENCE D30-711(300'FNL&1045'FEL,SEC.19))					4798ft	
Mean Sea Level to Mud line (At Slot: SLOT#34 INDEPENDENCE D30-711(300'FNL&1045'FEL,SEC.19))					0ft	
RIG(30'KB) (RKB) to Mean Sea Level					4798ft	

Survey Program

Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
30.00	18036.71	OWSG MWD rev2	OWSG MWD rev2 + IFR1 + Multi-Station Correction		INDEPENDENCE D30-711 PWB



Last BHI MWD : 89.97° Inc, 17708.00ft MD, 7021.60ft TVD, 10232.83ft VS
Projection to Bit : 89.97° Inc, 17754.00ft MD, 7021.63ft TVD, 10278.60ft VS
INDEPENDENCE D30-711 REV-1 BHL FROM PLAT(75'FSL&55'FEL,SEC.30)

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#34 INDEPENDENCE D30-711(300'FNL&1045'FEL,SEC.19)
Area	COLORADO	Well	INDEPENDENCE D30-711
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	INDEPENDENCE D30-711 AWP
Facility	SEC.19-T03N-R64W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 5.0
North Reference	Grid	User	Guenaler
Scale	0.999957	Report Generated	1/14/2019 at 4:41:13 PM
Convergence at slot	0.59° East	Database/Source file	WA_DEN_Denver_Defn/INDEPENDENCE_D30-711_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	3747.77	3821.81	3254631.54	1323280.95	40°13'01.956"N	104°35'17.448"W
Facility Reference Pt			3250809.90	1319533.34	40°12'25.308"N	104°36'07.200"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	4798.00ft
Horizontal Reference Pt	Slot	RIG(30'KB) (RKB) to Mean Sea Level	4798.00ft
Vertical Reference Pt	RIG(30'KB) (RKB)	RIG(30'KB) (RKB) to Mud Line at Slot (SLOT#34 INDEPENDENCE D30-711(300'FNL&1045'FEL,SEC.19))	4798.00ft
MD Reference Pt	RIG(30'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	174.14°



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Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	INDEPENDENCE D30-711 AWB
Facility	SEC.19-T03N-R64W		

WELLPATH DATA (181 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00	0.000	344.800	0.00	0.00	0.00	0.00	40°13'01.956"N	104°35'17.448"W	0.00	
84.00	0.130	344.800	84.00	-0.09	0.09	-0.02	40°13'01.957"N	104°35'17.448"W	0.15	
179.00	0.190	348.580	179.00	-0.36	0.35	-0.08	40°13'01.959"N	104°35'17.449"W	0.06	
274.00	0.220	301.550	274.00	-0.62	0.60	-0.27	40°13'01.962"N	104°35'17.451"W	0.17	
369.00	0.340	74.140	369.00	-0.78	0.77	-0.16	40°13'01.964"N	104°35'17.450"W	0.54	
463.00	0.090	183.010	463.00	-0.76	0.78	0.11	40°13'01.964"N	104°35'17.446"W	0.40	
558.00	0.330	162.010	558.00	-0.42	0.44	0.19	40°13'01.960"N	104°35'17.445"W	0.26	
653.00	0.190	74.770	653.00	-0.18	0.22	0.43	40°13'01.958"N	104°35'17.442"W	0.39	
747.00	0.180	40.050	747.00	-0.31	0.38	0.67	40°13'01.960"N	104°35'17.439"W	0.12	
842.00	0.600	16.050	841.99	-0.87	0.97	0.91	40°13'01.965"N	104°35'17.436"W	0.46	
937.00	0.760	23.300	936.99	-1.88	2.02	1.29	40°13'01.976"N	104°35'17.431"W	0.19	
1032.00	0.810	10.300	1031.98	-3.08	3.26	1.66	40°13'01.988"N	104°35'17.426"W	0.19	
1126.00	0.450	338.840	1125.97	-4.07	4.26	1.65	40°13'01.998"N	104°35'17.426"W	0.52	
1221.00	0.780	340.000	1220.97	-5.06	5.22	1.29	40°13'02.007"N	104°35'17.431"W	0.35	
1315.00	0.910	312.470	1314.96	-6.24	6.32	0.52	40°13'02.018"N	104°35'17.440"W	0.45	
1410.00	0.680	274.310	1409.95	-6.90	6.87	-0.60	40°13'02.024"N	104°35'17.455"W	0.59	
1505.00	0.360	354.140	1504.95	-7.30	7.21	-1.19	40°13'02.027"N	104°35'17.462"W	0.75	
1600.00	0.580	306.040	1599.94	-7.92	7.79	-1.61	40°13'02.033"N	104°35'17.468"W	0.46	
1695.00	0.490	303.240	1694.94	-8.49	8.30	-2.34	40°13'02.038"N	104°35'17.477"W	0.10	
1789.00	0.550	220.450	1788.94	-8.44	8.18	-2.97	40°13'02.037"N	104°35'17.485"W	0.73	
1884.00	1.450	232.900	1883.92	-7.50	7.10	-4.22	40°13'02.027"N	104°35'17.501"W	0.97	
1940.00	1.280	246.060	1939.90	-6.94	6.42	-5.36	40°13'02.020"N	104°35'17.516"W	0.63	Tie to Surface Surveys
1985.00	1.020	255.450	1984.90	-6.72	6.12	-6.20	40°13'02.017"N	104°35'17.527"W	0.71	
2080.00	0.070	37.100	2079.89	-6.63	5.95	-6.99	40°13'02.016"N	104°35'17.537"W	1.13	
2174.00	0.030	58.680	2173.89	-6.69	6.01	-6.93	40°13'02.016"N	104°35'17.537"W	0.05	
2269.00	1.790	45.160	2268.87	-7.63	7.07	-5.86	40°13'02.026"N	104°35'17.523"W	1.85	
2364.00	3.790	47.620	2363.76	-10.43	10.23	-2.49	40°13'02.057"N	104°35'17.479"W	2.11	
2459.00	5.360	45.490	2458.45	-15.07	15.46	3.00	40°13'02.108"N	104°35'17.407"W	1.66	
2553.00	7.710	43.200	2551.83	-21.95	23.14	10.44	40°13'02.184"N	104°35'17.310"W	2.51	
2648.00	10.110	45.860	2645.68	-31.29	33.59	20.79	40°13'02.286"N	104°35'17.176"W	2.56	



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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#34 INDEPENDENCE D30-711(300'FNL&1045'FEL,SEC.19)
Area	COLORADO	Well	INDEPENDENCE D30-711
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	INDEPENDENCE D30-711 AWB
Facility	SEC.19-T03N-R64W		

WELLPATH DATA (181 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2742.00	13.180	50.680	2737.74	-42.31	46.13	35.01	40°13'02.408"N	104°35'16.991"W	3.42	
2932.00	16.440	53.150	2921.40	-68.11	75.99	73.29	40°13'02.699"N	104°35'16.493"W	1.75	
3121.00	16.450	57.010	3102.68	-94.09	106.60	117.14	40°13'02.997"N	104°35'15.924"W	0.58	
3216.00	15.670	58.870	3193.97	-105.70	120.55	139.40	40°13'03.133"N	104°35'15.635"W	0.98	
3311.00	14.430	61.940	3285.71	-115.65	132.76	160.83	40°13'03.251"N	104°35'15.357"W	1.55	
3405.00	13.190	64.040	3376.99	-123.76	142.96	180.81	40°13'03.350"N	104°35'15.098"W	1.42	
3500.00	14.630	66.460	3469.20	-131.13	152.50	201.56	40°13'03.442"N	104°35'14.830"W	1.63	
3595.00	16.370	68.650	3560.75	-138.35	162.16	225.03	40°13'03.536"N	104°35'14.526"W	1.93	
3689.00	16.390	68.370	3650.93	-145.49	171.87	249.69	40°13'03.629"N	104°35'14.207"W	0.09	
3784.00	16.320	67.730	3742.09	-152.91	181.87	274.50	40°13'03.725"N	104°35'13.886"W	0.20	
3879.00	16.550	62.300	3833.21	-161.71	193.22	298.84	40°13'03.835"N	104°35'13.570"W	1.63	
3973.00	16.570	52.960	3923.33	-173.64	207.52	321.39	40°13'03.974"N	104°35'13.278"W	2.83	
4068.00	16.220	47.980	4014.47	-188.48	224.56	342.06	40°13'04.140"N	104°35'13.009"W	1.52	
4162.00	16.390	53.710	4104.70	-202.95	241.20	362.51	40°13'04.303"N	104°35'12.743"W	1.72	
4257.00	16.330	52.660	4195.85	-216.71	257.24	383.93	40°13'04.459"N	104°35'12.465"W	0.32	
4352.00	16.290	48.160	4287.03	-231.51	274.23	404.47	40°13'04.625"N	104°35'12.198"W	1.33	
4447.00	16.480	42.960	4378.18	-248.21	292.98	423.59	40°13'04.808"N	104°35'11.949"W	1.56	
4541.00	16.490	37.010	4468.32	-266.77	313.39	440.70	40°13'05.008"N	104°35'11.726"W	1.80	
4636.00	16.190	36.740	4559.48	-286.40	334.77	456.74	40°13'05.218"N	104°35'11.516"W	0.33	
4731.00	16.320	43.900	4650.69	-304.78	355.00	473.92	40°13'05.416"N	104°35'11.292"W	2.11	
4826.00	16.310	47.880	4741.87	-321.29	373.57	493.07	40°13'05.597"N	104°35'11.043"W	1.18	
4920.00	16.060	51.710	4832.15	-336.07	390.48	513.07	40°13'05.762"N	104°35'10.783"W	1.17	
5015.00	16.370	56.640	4923.37	-349.30	405.98	534.56	40°13'05.913"N	104°35'10.504"W	1.48	
5110.00	16.390	57.060	5014.52	-361.59	420.63	556.99	40°13'06.056"N	104°35'10.213"W	0.13	
5205.00	16.260	59.720	5105.69	-373.19	434.62	579.73	40°13'06.192"N	104°35'09.918"W	0.80	
5299.00	16.990	60.460	5195.76	-384.14	448.03	603.04	40°13'06.322"N	104°35'09.615"W	0.81	
5394.00	16.650	61.820	5286.69	-394.89	461.30	627.11	40°13'06.451"N	104°35'09.303"W	0.55	
5489.00	17.010	63.970	5377.63	-404.85	473.83	651.60	40°13'06.572"N	104°35'08.986"W	0.76	
5583.00	16.610	61.410	5467.61	-414.78	486.29	675.75	40°13'06.692"N	104°35'08.673"W	0.90	
5678.00	17.050	60.840	5558.54	-425.54	499.57	699.83	40°13'06.821"N	104°35'08.361"W	0.49	



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Operator	NOBLE ENERGY, INC	Slot	SLOT#34 INDEPENDENCE D30-711(300'FNL&1045'FEL,SEC.19)
Area	COLORADO	Well	INDEPENDENCE D30-711
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	INDEPENDENCE D30-711 AWB
Facility	SEC.19-T03N-R64W		

WELLPATH DATA (181 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5773.00	16.990	55.870	5649.39	-437.62	514.15	723.49	40°13'06.963"N	104°35'08.054"W	1.53	
5867.00	16.920	54.200	5739.30	-450.96	529.86	745.95	40°13'07.116"N	104°35'07.762"W	0.52	
5962.00	16.950	53.240	5830.18	-464.97	546.23	768.26	40°13'07.275"N	104°35'07.473"W	0.30	
6057.00	16.980	46.510	5921.06	-480.55	564.07	789.42	40°13'07.449"N	104°35'07.198"W	2.07	
6152.00	16.420	47.220	6012.05	-497.09	582.73	809.34	40°13'07.632"N	104°35'06.938"W	0.63	
6246.00	15.740	50.110	6102.37	-512.21	599.93	828.87	40°13'07.800"N	104°35'06.684"W	1.12	
6341.00	15.200	51.380	6193.93	-526.16	615.97	848.49	40°13'07.956"N	104°35'06.429"W	0.67	
6436.00	15.050	54.140	6285.64	-539.06	630.97	868.21	40°13'08.102"N	104°35'06.173"W	0.77	
6530.00	12.770	103.740	6377.19	-541.69	635.67	888.27	40°13'08.147"N	104°35'05.914"W	12.51	
6625.00	14.470	153.820	6469.82	-526.99	622.48	903.75	40°13'08.015"N	104°35'05.716"W	12.15	
6720.00	19.320	165.010	6560.72	-500.32	596.62	913.06	40°13'07.759"N	104°35'05.599"W	6.12	
6815.00	25.660	164.680	6648.45	-464.48	561.57	922.57	40°13'07.411"N	104°35'05.481"W	6.67	
6910.00	34.570	168.380	6730.55	-417.27	515.23	933.46	40°13'06.952"N	104°35'05.347"W	9.58	
7005.00	43.350	168.790	6804.35	-357.88	456.74	945.25	40°13'06.373"N	104°35'05.203"W	9.25	
7099.00	51.420	171.470	6867.94	-288.93	388.63	956.99	40°13'05.699"N	104°35'05.061"W	8.84	
7194.00	61.190	176.070	6920.60	-210.02	310.17	965.38	40°13'04.923"N	104°35'04.963"W	11.04	
7289.00	68.870	179.140	6960.68	-124.14	224.20	968.90	40°13'04.073"N	104°35'04.929"W	8.60	
7384.00	79.190	178.770	6986.79	-33.25	133.01	970.57	40°13'03.171"N	104°35'04.920"W	10.87	
7478.00	84.230	177.570	7000.34	59.50	40.07	973.55	40°13'02.253"N	104°35'04.894"W	5.51	
7573.00	84.200	177.480	7009.91	153.86	-54.36	977.63	40°13'01.319"N	104°35'04.854"W	0.10	
7668.00	86.360	178.660	7017.73	248.30	-148.98	980.81	40°13'00.384"N	104°35'04.825"W	2.59	
7762.00	88.340	178.900	7022.07	341.89	-242.85	982.81	40°12'59.456"N	104°35'04.812"W	2.12	
7857.00	90.030	179.050	7023.43	436.54	-337.82	984.51	40°12'58.518"N	104°35'04.803"W	1.79	
7952.00	90.150	178.680	7023.28	531.22	-432.80	986.39	40°12'57.579"N	104°35'04.791"W	0.41	
8046.00	90.060	178.880	7023.10	624.91	-526.78	988.40	40°12'56.650"N	104°35'04.778"W	0.23	
8141.00	90.000	179.100	7023.05	719.57	-621.77	990.07	40°12'55.711"N	104°35'04.769"W	0.24	
8236.00	90.090	180.210	7022.98	814.13	-716.76	990.64	40°12'54.772"N	104°35'04.774"W	1.17	
8330.00	90.150	180.540	7022.78	907.57	-810.76	990.03	40°12'53.844"N	104°35'04.795"W	0.36	
8425.00	90.150	179.960	7022.53	1002.03	-905.76	989.61	40°12'52.905"N	104°35'04.813"W	0.61	
8520.00	89.940	179.360	7022.46	1096.59	-1000.76	990.18	40°12'51.966"N	104°35'04.818"W	0.67	



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Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	INDEPENDENCE D30-711 AWB
Facility	SEC.19-T03N-R64W		

WELLPATH DATA (181 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8614.00	89.940	179.280	7022.56	1190.21	-1094.75	991.29	40°12'51.037"N	104°35'04.816"W	0.09	
8709.00	90.220	178.970	7022.43	1284.85	-1189.74	992.74	40°12'50.099"N	104°35'04.810"W	0.44	
8898.00	90.180	178.850	7021.77	1473.19	-1378.71	996.34	40°12'48.231"N	104°35'04.789"W	0.07	
8993.00	89.820	176.380	7021.77	1568.01	-1473.62	1000.29	40°12'47.293"N	104°35'04.750"W	2.63	
9088.00	90.650	174.400	7021.38	1662.98	-1568.30	1007.93	40°12'46.356"N	104°35'04.665"W	2.26	
9182.00	88.150	175.340	7022.36	1756.96	-1661.91	1016.33	40°12'45.430"N	104°35'04.569"W	2.84	
9277.00	89.080	181.260	7024.66	1851.64	-1756.80	1019.15	40°12'44.493"N	104°35'04.545"W	6.31	
9372.00	89.260	185.290	7026.04	1945.41	-1851.61	1013.72	40°12'43.556"N	104°35'04.628"W	4.25	
9466.00	89.230	185.170	7027.27	2037.64	-1945.21	1005.15	40°12'42.632"N	104°35'04.751"W	0.13	
9656.00	89.290	184.590	7029.73	2224.30	-2134.51	988.99	40°12'40.763"N	104°35'04.984"W	0.31	
9750.00	89.200	184.030	7030.97	2316.82	-2228.23	981.93	40°12'39.838"N	104°35'05.088"W	0.60	
9845.00	89.410	183.600	7032.12	2410.46	-2323.02	975.61	40°12'38.902"N	104°35'05.182"W	0.50	
10034.00	90.360	182.510	7032.50	2597.17	-2511.74	965.53	40°12'37.038"N	104°35'05.337"W	0.77	
10129.00	89.690	182.180	7032.46	2691.20	-2606.66	961.65	40°12'36.101"N	104°35'05.399"W	0.79	
10319.00	90.090	179.530	7032.82	2879.88	-2796.62	958.81	40°12'34.224"N	104°35'05.461"W	1.41	
10414.00	90.030	177.680	7032.72	2974.59	-2891.59	961.12	40°12'33.285"N	104°35'05.444"W	1.95	
10508.00	90.330	176.300	7032.43	3068.47	-2985.46	966.06	40°12'32.357"N	104°35'05.393"W	1.50	
10603.00	90.670	176.070	7031.60	3163.40	-3080.24	972.38	40°12'31.420"N	104°35'05.324"W	0.43	
10698.00	90.610	176.560	7030.54	3258.33	-3175.04	978.49	40°12'30.482"N	104°35'05.258"W	0.52	
10792.00	90.460	175.830	7029.66	3352.26	-3268.83	984.72	40°12'29.555"N	104°35'05.190"W	0.79	
10887.00	90.270	176.960	7029.05	3447.19	-3363.64	990.70	40°12'28.618"N	104°35'05.126"W	1.21	
10981.00	89.870	177.300	7028.94	3541.06	-3457.52	995.40	40°12'27.689"N	104°35'05.077"W	0.56	
11076.00	89.960	178.130	7029.08	3635.87	-3552.44	999.19	40°12'26.751"N	104°35'05.041"W	0.88	
11171.00	89.930	178.260	7029.17	3730.63	-3647.40	1002.18	40°12'25.812"N	104°35'05.015"W	0.14	
11360.00	90.120	179.300	7029.09	3919.01	-3836.35	1006.21	40°12'23.945"N	104°35'04.989"W	0.56	
11454.00	88.800	179.260	7029.97	4012.63	-3930.34	1007.39	40°12'23.016"N	104°35'04.986"W	1.40	
11549.00	89.010	179.080	7031.79	4107.25	-4025.31	1008.76	40°12'22.077"N	104°35'04.981"W	0.29	
11644.00	89.630	180.030	7032.92	4201.81	-4120.30	1009.50	40°12'21.139"N	104°35'04.984"W	1.19	
11739.00	89.630	180.960	7033.53	4296.23	-4215.29	1008.68	40°12'20.200"N	104°35'05.007"W	0.98	
11834.00	89.630	181.480	7034.14	4390.50	-4310.27	1006.66	40°12'19.262"N	104°35'05.046"W	0.55	



Actual Wellpath Report
INDEPENDENCE D30-711 AWP
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#34 INDEPENDENCE D30-711(300'FNL&1045'FEL,SEC.19)
Area	COLORADO	Well	INDEPENDENCE D30-711
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	INDEPENDENCE D30-711 AWB
Facility	SEC.19-T03N-R64W		

WELLPATH DATA (181 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11928.00	89.690	181.790	7034.70	4483.70	-4404.23	1003.98	40°12'18.334"N	104°35'05.093"W	0.34	
12023.00	89.720	180.830	7035.19	4577.95	-4499.20	1001.81	40°12'17.395"N	104°35'05.133"W	1.01	
12118.00	89.690	181.100	7035.68	4672.28	-4594.19	1000.21	40°12'16.457"N	104°35'05.167"W	0.29	
12212.00	89.720	180.480	7036.16	4765.64	-4688.18	998.91	40°12'15.528"N	104°35'05.196"W	0.66	
12307.00	90.090	181.710	7036.32	4859.94	-4783.16	997.09	40°12'14.590"N	104°35'05.232"W	1.35	
12402.00	90.180	182.140	7036.10	4954.07	-4878.10	993.90	40°12'13.652"N	104°35'05.286"W	0.46	
12496.00	90.150	181.500	7035.83	5047.22	-4972.05	990.92	40°12'12.724"N	104°35'05.337"W	0.68	
12591.00	90.000	180.240	7035.70	5141.57	-5067.04	989.48	40°12'11.786"N	104°35'05.368"W	1.34	
12686.00	90.180	179.120	7035.55	5236.12	-5162.04	990.01	40°12'10.847"N	104°35'05.374"W	1.19	
12780.00	90.460	178.620	7035.03	5329.80	-5256.02	991.86	40°12'09.918"N	104°35'05.362"W	0.61	
12875.00	90.550	177.630	7034.19	5424.57	-5350.96	994.97	40°12'08.980"N	104°35'05.335"W	1.05	
12970.00	90.550	177.970	7033.28	5519.37	-5445.89	998.61	40°12'08.041"N	104°35'05.300"W	0.36	
13065.00	90.330	177.550	7032.55	5614.18	-5540.81	1002.33	40°12'07.103"N	104°35'05.265"W	0.50	
13159.00	90.150	177.560	7032.16	5708.01	-5634.73	1006.34	40°12'06.174"N	104°35'05.226"W	0.19	
13254.00	89.930	177.430	7032.09	5802.85	-5729.63	1010.49	40°12'05.236"N	104°35'05.185"W	0.27	
13349.00	90.060	177.990	7032.10	5897.66	-5824.56	1014.29	40°12'04.298"N	104°35'05.149"W	0.61	
13443.00	90.270	180.350	7031.83	5991.29	-5918.54	1015.65	40°12'03.369"N	104°35'05.144"W	2.52	
13538.00	90.000	181.290	7031.60	6085.65	-6013.53	1014.29	40°12'02.430"N	104°35'05.174"W	1.03	
13633.00	90.300	182.180	7031.35	6179.81	-6108.49	1011.41	40°12'01.492"N	104°35'05.224"W	0.99	
13728.00	90.400	181.990	7030.77	6273.90	-6203.42	1007.95	40°12'00.555"N	104°35'05.281"W	0.23	
13823.00	90.090	181.180	7030.37	6368.10	-6298.38	1005.33	40°11'59.617"N	104°35'05.327"W	0.91	
13918.00	90.120	181.510	7030.19	6462.35	-6393.36	1003.10	40°11'58.678"N	104°35'05.369"W	0.35	
14012.00	89.750	181.210	7030.30	6555.60	-6487.33	1000.87	40°11'57.750"N	104°35'05.410"W	0.51	
14107.00	90.240	179.840	7030.31	6650.01	-6582.32	1000.00	40°11'56.811"N	104°35'05.434"W	1.53	
14202.00	90.330	179.750	7029.84	6744.55	-6677.32	1000.34	40°11'55.873"N	104°35'05.442"W	0.13	
14297.00	90.090	180.020	7029.49	6839.07	-6772.32	1000.53	40°11'54.934"N	104°35'05.452"W	0.38	
14392.00	90.060	179.120	7029.36	6933.64	-6867.32	1001.24	40°11'53.995"N	104°35'05.456"W	0.95	
14581.00	90.150	175.090	7029.02	7122.35	-7056.04	1010.78	40°11'52.129"N	104°35'05.358"W	2.13	
14676.00	90.610	173.020	7028.39	7217.34	-7150.52	1020.62	40°11'51.195"N	104°35'05.244"W	2.23	
14770.00	90.640	173.410	7027.36	7311.33	-7243.85	1031.73	40°11'50.271"N	104°35'05.113"W	0.42	



Actual Wellpath Report
INDEPENDENCE D30-711 AWP
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#34 INDEPENDENCE D30-711(300'FNL&1045'FEL,SEC.19)
Area	COLORADO	Well	INDEPENDENCE D30-711
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	INDEPENDENCE D30-711 AWB
Facility	SEC.19-T03N-R64W		

WELLPATH DATA (181 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
14865.00	91.130	177.490	7025.89	7406.27	-7338.52	1039.26	40°11'49.335"N	104°35'05.028"W	4.33	
14960.00	91.010	178.260	7024.12	7501.05	-7433.44	1042.78	40°11'48.397"N	104°35'04.996"W	0.82	
15054.00	90.180	175.950	7023.14	7594.91	-7527.31	1047.53	40°11'47.469"N	104°35'04.947"W	2.61	
15149.00	89.630	175.510	7023.30	7689.88	-7622.04	1054.60	40°11'46.532"N	104°35'04.868"W	0.74	
15244.00	90.430	177.470	7023.25	7784.79	-7716.86	1060.42	40°11'45.594"N	104°35'04.806"W	2.23	
15338.00	90.030	179.330	7022.87	7878.53	-7810.82	1063.04	40°11'44.666"N	104°35'04.785"W	2.02	
15433.00	89.630	181.140	7023.16	7972.98	-7905.81	1062.65	40°11'43.727"N	104°35'04.802"W	1.95	
15622.00	90.430	178.790	7023.06	8160.99	-8094.80	1062.77	40°11'41.860"N	104°35'04.826"W	1.31	
15717.00	89.750	178.680	7022.91	8255.69	-8189.77	1064.87	40°11'40.921"N	104°35'04.812"W	0.73	
15811.00	90.150	179.710	7022.99	8349.32	-8283.76	1066.19	40°11'39.992"N	104°35'04.807"W	1.18	
15906.00	89.500	181.610	7023.28	8443.70	-8378.75	1065.09	40°11'39.053"N	104°35'04.834"W	2.11	
16001.00	90.460	184.600	7023.31	8537.53	-8473.60	1059.95	40°11'38.117"N	104°35'04.913"W	3.31	
16096.00	89.380	183.700	7023.45	8631.08	-8568.35	1053.07	40°11'37.181"N	104°35'05.014"W	1.48	
16191.00	90.120	182.090	7023.86	8724.97	-8663.22	1048.27	40°11'36.244"N	104°35'05.088"W	1.87	
16285.00	90.090	181.240	7023.69	8818.16	-8757.18	1045.54	40°11'35.316"N	104°35'05.136"W	0.90	
16380.00	90.030	181.830	7023.59	8912.37	-8852.15	1043.00	40°11'34.378"N	104°35'05.182"W	0.62	
16475.00	90.180	182.190	7023.41	9006.48	-8947.09	1039.67	40°11'33.440"N	104°35'05.237"W	0.41	
16570.00	90.150	182.090	7023.14	9100.55	-9042.02	1036.12	40°11'32.502"N	104°35'05.295"W	0.11	
16665.00	90.210	181.980	7022.84	9194.65	-9136.96	1032.75	40°11'31.564"N	104°35'05.352"W	0.13	
16760.00	90.090	181.350	7022.59	9288.83	-9231.92	1029.99	40°11'30.626"N	104°35'05.400"W	0.68	
16855.00	90.210	181.580	7022.34	9383.06	-9326.89	1027.56	40°11'29.688"N	104°35'05.444"W	0.27	
16950.00	90.060	180.630	7022.12	9477.36	-9421.87	1025.72	40°11'28.750"N	104°35'05.480"W	1.01	
17044.00	89.810	178.820	7022.23	9570.91	-9515.86	1026.18	40°11'27.821"N	104°35'05.487"W	1.94	
17139.00	89.830	177.440	7022.53	9665.67	-9610.81	1029.28	40°11'26.883"N	104°35'05.459"W	1.45	
17234.00	89.970	176.500	7022.69	9760.56	-9705.68	1034.30	40°11'25.945"N	104°35'05.407"W	1.00	
17329.00	90.240	178.200	7022.52	9855.40	-9800.57	1038.69	40°11'25.006"N	104°35'05.363"W	1.81	
17423.00	90.150	178.950	7022.20	9949.12	-9894.54	1041.03	40°11'24.078"N	104°35'05.346"W	0.80	
17518.00	90.060	179.710	7022.02	10043.73	-9989.53	1042.14	40°11'23.139"N	104°35'05.344"W	0.81	
17613.00	90.240	179.660	7021.78	10138.29	-10084.53	1042.66	40°11'22.200"N	104°35'05.350"W	0.20	
17708.00	89.970	179.870	7021.60	10232.83	-10179.53	1043.05	40°11'21.261"N	104°35'05.357"W	0.36	Last BHI MWD



Actual Wellpath Report

INDEPENDENCE D30-711 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#34 INDEPENDENCE D30-711(300'FNL&1045'FEL,SEC.19)
Area	COLORADO	Well	INDEPENDENCE D30-711
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	INDEPENDENCE D30-711 AWB
Facility	SEC.19-T03N-R64W		

WELLPATH DATA (181 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
17754.00	89.970	179.870	7021.63	10278.60	-10225.53	1043.15	40°11'20.807"N	104°35'05.362"W	0.00	Projection to Bit

HOLE & CASING SECTIONS - Ref Wellbore: INDEPENDENCE D30-711 AWB Ref Wellpath: INDEPENDENCE D30-711 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	1946.00	1916.00	30.00	1945.90	0.01	0.00	6.37	-5.48
9.625in Casing Surface	30.00	1946.00	1916.00	30.00	1945.90	0.01	0.00	6.37	-5.48
8.5in Open Hole	1946.00	10792.00	8846.00	1945.90	7029.66	6.37	-5.48	-3268.83	984.72

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
INDEPENDENCE STATE D30-784 Section 19-T03N-R64W	-19.00	-76.57	-2498.85	3252132.80	1323204.38	40°13'01.452"N	104°35'49.668"W	polygon
INDEPENDENCE STATE D30-784 Section 30-T03N-R64W	-19.00	-76.57	-2498.85	3252132.80	1323204.38	40°13'01.452"N	104°35'49.668"W	polygon
INDEPENDENCE D30-711 LANDING POINT	7000.00	256.60	972.77	3255604.26	1323537.54	40°13'04.393"N	104°35'04.875"W	point
INDEPENDENCE D30-711 REV-1 BHL FROM PLAT (75'FSL&55'FEL,SEC.30)	7292.92	-10230.20	1049.58	3255681.08	1313051.21	40°11'20.760"N	104°35'05.280"W	point



Actual Wellpath Report
INDEPENDENCE D30-711 AWP
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#34 INDEPENDENCE D30-711(300'FNL&1045'FEL,SEC.19)
Area	COLORADO	Well	INDEPENDENCE D30-711
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	INDEPENDENCE D30-711 AWB
Facility	SEC.19-T03N-R64W		

WELLPATH COMPOSITION - Ref Wellbore: INDEPENDENCE D30-711 AWB Ref Wellpath: INDEPENDENCE D30-711 AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	1940.00	BHI Generic gyro - northseeking (Standard)	3rd Party Gyrodata Surface Surveys <84'-1940'>	INDEPENDENCE D30-711 AWB
1940.00	17708.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	BHGE ATC 8.5" Hole OWSG MWD rev2+IFR1+MSA <1985'-17708'>	INDEPENDENCE D30-711 AWB
17708.00	17754.00	Blind Drilling (std)	Projection to bit	INDEPENDENCE D30-711 AWB



Actual Wellpath Report

INDEPENDENCE D30-711 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#34 INDEPENDENCE D30-711(300'FNL&1045'FEL,SEC.19)
Area	COLORADO	Well	INDEPENDENCE D30-711
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	INDEPENDENCE D30-711 AWP
Facility	SEC.19-T03N-R64W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1940.00	1.280	246.060	1939.90	Tie to Surface Surveys
17708.00	89.970	179.870	7021.60	Last BHI MWD
17754.00	89.970	179.870	7021.63	Projection to Bit