

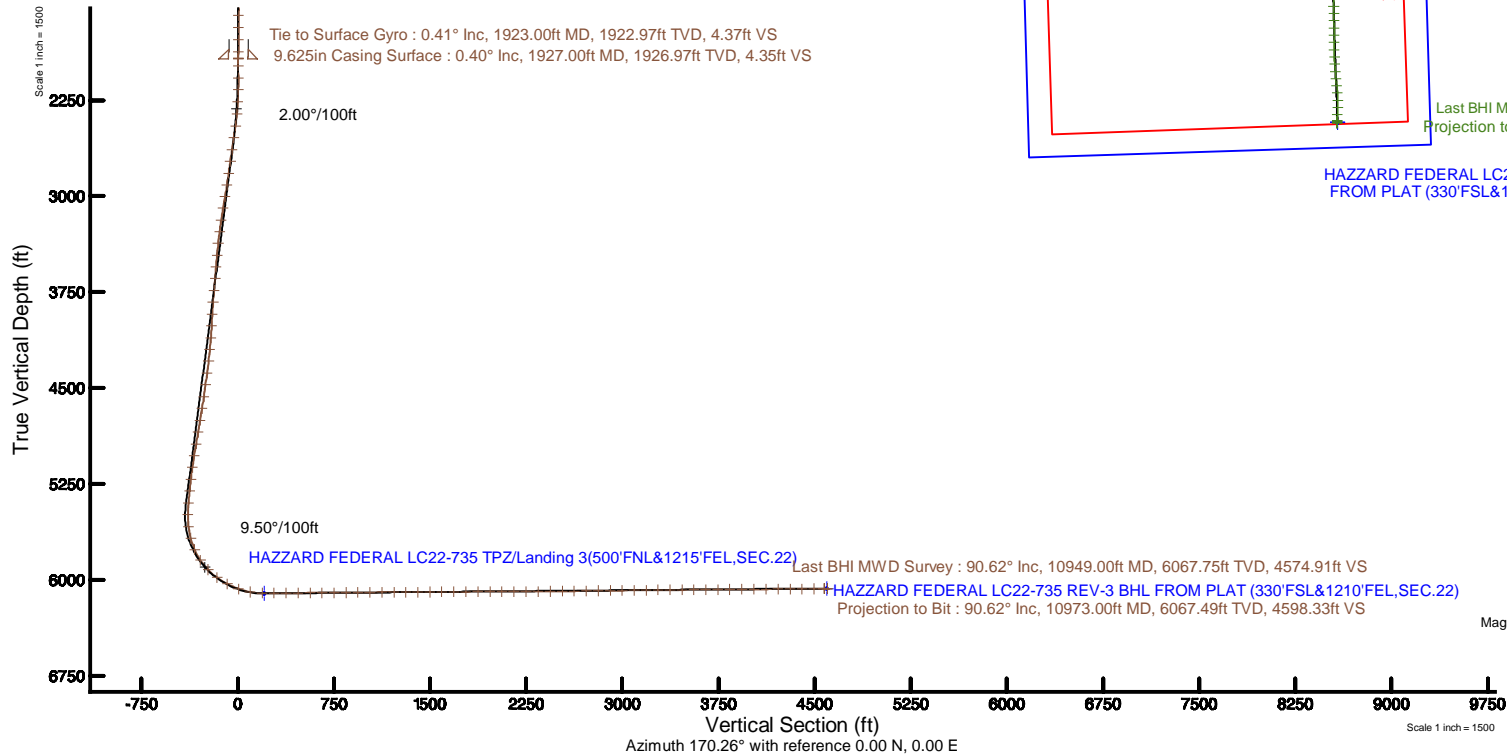
NOBLE ENERGY, INC

Location: COLORADO Slot: SLOT#05 HAZZARD FEDERAL LC22-735 (400'FNL&1851'FEL,SEC.22)
Field: WELD COUNTY (NOBLE NAD 83 GRID) Well: HAZZARD FEDERAL LC22-735
Facility: SEC.22-T09N-R59W Wellbore: HAZZARD FEDERAL LC22-735 PWB

Plot reference wellpath is HAZZARD FEDERAL LC22-735 (REV-E.0) PWP	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to H&P 524 (30KB) (RKB)	* = Wellpath was transformed from a different geodetic datum
Measured depths are referenced to H&P 524 (30KB) (RKB)	North Reference: Grid north
H&P 524 (30KB) (RKB) to Mean Sea Level: 4926 feet	Scale: True distance
Mean Sea Level to Ground level (At Slot: SLOT#05 HAZZARD FEDERAL LC22-735 (400'FNL&1851'FEL,SEC.22)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: hutaed on 2017-03-22
	Database: WA_DEN_Denver_Delhi

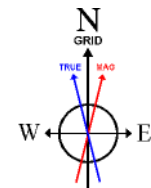
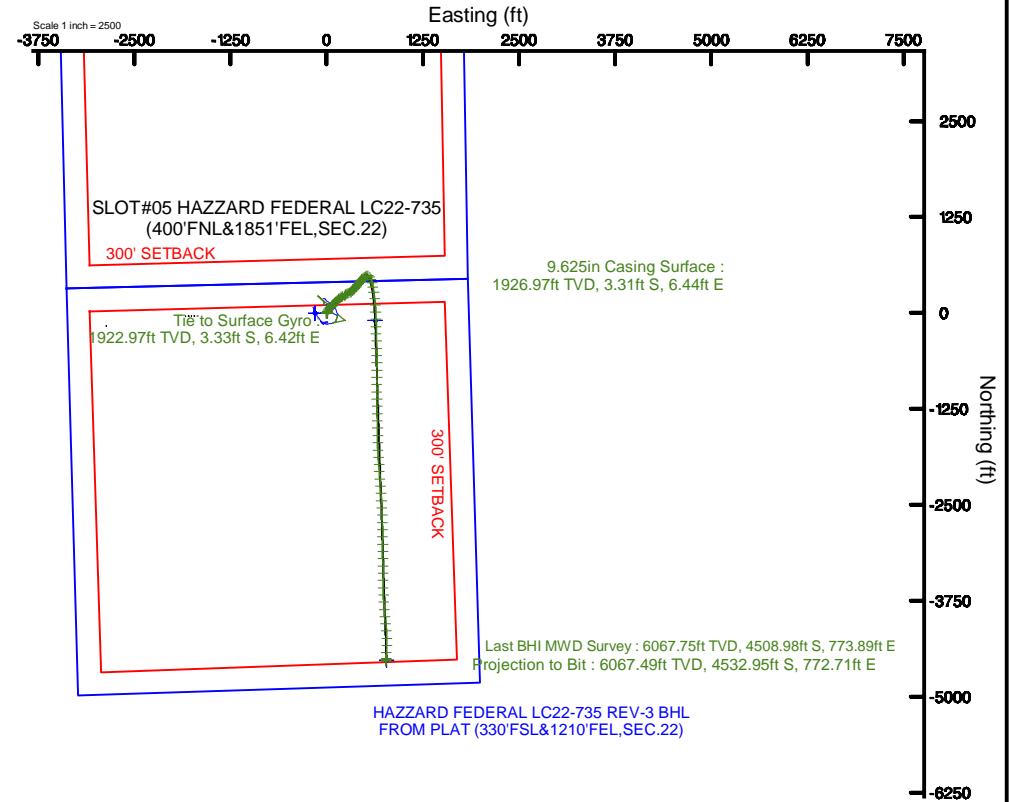
Location Information

Facility Name				Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.22-T09N-R59W				3426161.443	1516985.929	40°44'32.532"N	103°57'43.236"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
SLOT#05 HAZZARD FEDERAL LC22-735 (400'FNL&1851'FEL,SEC.22)	2.80	149.61	3426311.057	1516988.525	40°44'32.532"N	103°57'41.292"W	
H&P 524 (30KB) (RKB) to Ground level (At Slot: SLOT#05 HAZZARD FEDERAL LC22-735 (400'FNL&1851'FEL,SEC.22))						4926ft	
Mean Sea Level to Ground level (At Slot: SLOT#05 HAZZARD FEDERAL LC22-735 (400'FNL&1851'FEL,SEC.22))						0ft	
H&P 524 (30KB) (RKB) to Mean Sea Level						4926ft	



Comments

Surface Location :
Latitude : 40.74237 N
Longitude : 103.96147 W
API : 05-123-42980



BGGM (1900.0 to 2018.0) Dip: 67.30° Field: 52731.4 nT
Magnetic North is 7.96 degrees East of True North (at 03/Mar/2017)
Grid North is 0.99 degrees East of True North
To correct azimuth from True to Grid subtract 0.99 degrees
To correct azimuth from Magnetic to Grid add 6.97 degrees



Actual Wellpath Report

HAZZARD FEDERAL LC22-735 AWP

Page 1 of 8



REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#05 HAZZARD FEDERAL LC22-735 (400'FNL&1851'FEL,SEC.22)
Area	COLORADO	Well	HAZZARD FEDERAL LC22-735
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HAZZARD FEDERAL LC22-735 AWP
Facility	SEC.22-T09N-R59W		

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	0.999994	Report Generated	22/Mar/2017 at 13:33
Convergence at slot	1.00° East	Database/Source file	WA_DEN_Denver_Defn/HAZZARD_FEDERAL_LC22-735_AWP.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	2.60	149.61	3426311.06	1516988.53	40°44'32.532"N	103°57'41.292"W
Facility Reference Pt			3426161.44	1516985.93	40°44'32.532"N	103°57'43.236"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 524 (30'KB) (RKB) to Facility Vertical Datum	4926.00ft
Horizontal Reference Pt	Slot	H&P 524 (30'KB) (RKB) to Mean Sea Level	4926.00ft
Vertical Reference Pt	H&P 524 (30'KB) (RKB)	H&P 524 (30'KB) (RKB) to Ground Level at Slot (SLOT#05 HAZZARD FEDERAL LC22-735 (400'FNL&1851'FEL,SEC.22))	4926.00ft
MD Reference Pt	H&P 524 (30'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	170.26°



Actual Wellpath Report

HAZZARD FEDERAL LC22-735 AWP
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REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#05 HAZZARD FEDERAL LC22-735 (400'FNL&1851'FEL,SEC.22)
Area	COLORADO	Well	HAZZARD FEDERAL LC22-735
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HAZZARD FEDERAL LC22-735 AWB
Facility	SEC.22-T09N-R59W		

WELLPATH DATA (119 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00	0.000	181.930	0.00	0.00	0.00	0.00	40°44'32.532"N	103°57'41.292"W	0.00	
78.00	0.380	181.930	78.00	0.25	-0.26	-0.01	40°44'32.529"N	103°57'41.292"W	0.49	
174.00	0.640	170.650	174.00	1.10	-1.11	0.07	40°44'32.521"N	103°57'41.291"W	0.29	
266.00	0.490	167.400	265.99	2.01	-2.00	0.24	40°44'32.512"N	103°57'41.289"W	0.17	
360.00	0.130	98.120	359.99	2.44	-2.40	0.43	40°44'32.508"N	103°57'41.287"W	0.49	
455.00	0.380	106.960	454.99	2.62	-2.51	0.84	40°44'32.507"N	103°57'41.282"W	0.27	
549.00	0.220	103.220	548.99	2.83	-2.64	1.31	40°44'32.506"N	103°57'41.276"W	0.17	
644.00	0.410	107.370	643.99	3.05	-2.79	1.81	40°44'32.504"N	103°57'41.269"W	0.20	
738.00	0.410	73.990	737.98	3.17	-2.79	2.46	40°44'32.504"N	103°57'41.261"W	0.25	
833.00	0.380	123.560	832.98	3.35	-2.87	3.05	40°44'32.503"N	103°57'41.253"W	0.35	
928.00	0.410	129.080	927.98	3.82	-3.26	3.57	40°44'32.499"N	103°57'41.246"W	0.05	
1022.00	0.270	96.460	1021.98	4.14	-3.50	4.06	40°44'32.497"N	103°57'41.240"W	0.25	
1116.00	0.130	115.390	1115.98	4.26	-3.57	4.37	40°44'32.496"N	103°57'41.236"W	0.16	
1211.00	0.190	83.350	1210.98	4.33	-3.60	4.63	40°44'32.496"N	103°57'41.233"W	0.11	
1305.00	0.300	119.530	1304.98	4.49	-3.70	4.99	40°44'32.495"N	103°57'41.228"W	0.20	
1400.00	0.320	189.950	1399.97	4.90	-4.09	5.16	40°44'32.491"N	103°57'41.226"W	0.38	
1495.00	0.040	228.760	1494.97	5.17	-4.37	5.09	40°44'32.488"N	103°57'41.227"W	0.31	
1589.00	0.140	69.260	1588.97	5.16	-4.35	5.18	40°44'32.488"N	103°57'41.226"W	0.19	
1684.00	0.170	142.620	1683.97	5.27	-4.42	5.37	40°44'32.487"N	103°57'41.223"W	0.20	
1778.00	0.450	56.500	1777.97	5.24	-4.33	5.76	40°44'32.488"N	103°57'41.218"W	0.50	
1872.00	0.540	21.570	1871.97	4.71	-3.71	6.23	40°44'32.494"N	103°57'41.212"W	0.33	
1923.00	0.410	32.410	1922.97	4.37	-3.33	6.42	40°44'32.498"N	103°57'41.209"W	0.31	Tie to Surface Gyro
1981.00	0.560	90.840	1980.97	4.27	-3.16	6.81	40°44'32.500"N	103°57'41.204"W	0.85	
2075.00	0.520	137.930	2074.96	4.72	-3.49	7.56	40°44'32.496"N	103°57'41.195"W	0.46	
2169.00	0.830	349.150	2168.96	4.40	-3.13	7.72	40°44'32.500"N	103°57'41.192"W	1.39	
2264.00	3.850	1.450	2263.87	0.58	0.73	7.67	40°44'32.538"N	103°57'41.192"W	3.20	
2358.00	4.990	1.780	2357.59	-6.52	7.97	7.88	40°44'32.609"N	103°57'41.188"W	1.21	
2453.00	8.670	19.170	2451.91	-16.84	18.87	10.36	40°44'32.717"N	103°57'41.153"W	4.40	
2547.00	11.250	25.550	2544.49	-30.53	33.84	16.64	40°44'32.863"N	103°57'41.068"W	2.98	
2642.00	13.680	42.780	2637.27	-44.94	50.45	28.27	40°44'33.026"N	103°57'40.913"W	4.65	



Actual Wellpath Report

HAZZARD FEDERAL LC22-735 AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#05 HAZZARD FEDERAL LC22-735 (400'FNL&1851'FEL,SEC.22)
Area	COLORADO	Well	HAZZARD FEDERAL LC22-735
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HAZZARD FEDERAL LC22-735 AWB
Facility	SEC.22-T09N-R59W		

WELLPATH DATA (119 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2736.00	13.720	47.200	2728.60	-57.79	66.18	44.00	40°44'33.178"N	103°57'40.706"W	1.11	
2830.00	13.280	43.260	2820.00	-70.36	81.62	59.58	40°44'33.328"N	103°57'40.500"W	1.08	
2925.00	13.710	38.480	2912.38	-84.43	98.38	74.06	40°44'33.491"N	103°57'40.308"W	1.26	
3019.00	14.210	41.490	3003.61	-99.08	115.74	88.64	40°44'33.660"N	103°57'40.115"W	0.94	
3113.00	15.670	42.220	3094.43	-114.13	133.79	104.81	40°44'33.836"N	103°57'39.900"W	1.57	
3208.00	15.180	44.370	3186.01	-129.32	152.18	122.13	40°44'34.015"N	103°57'39.671"W	0.79	
3302.00	13.330	48.340	3277.11	-142.27	168.18	138.83	40°44'34.170"N	103°57'39.451"W	2.22	
3396.00	12.770	53.220	3368.69	-152.72	181.61	155.25	40°44'34.300"N	103°57'39.234"W	1.31	
3490.00	12.790	57.190	3460.36	-161.52	193.46	172.32	40°44'34.414"N	103°57'39.010"W	0.93	
3585.00	12.830	59.250	3553.00	-169.42	204.56	190.22	40°44'34.520"N	103°57'38.775"W	0.48	
3679.00	12.750	58.170	3644.66	-177.07	215.36	208.00	40°44'34.624"N	103°57'38.542"W	0.27	
3774.00	12.760	57.850	3737.32	-185.01	226.47	225.79	40°44'34.731"N	103°57'38.308"W	0.08	
3869.00	12.850	61.610	3829.96	-192.38	237.08	243.97	40°44'34.832"N	103°57'38.070"W	0.88	
3963.00	13.100	67.050	3921.56	-198.16	246.20	262.97	40°44'34.919"N	103°57'37.821"W	1.33	
4058.00	12.820	64.820	4014.14	-203.43	254.89	282.43	40°44'35.002"N	103°57'37.566"W	0.60	
4152.00	12.750	59.380	4105.81	-209.90	264.61	300.79	40°44'35.095"N	103°57'37.325"W	1.28	
4247.00	12.850	55.680	4198.46	-218.03	275.90	318.54	40°44'35.203"N	103°57'37.092"W	0.87	
4341.00	13.080	50.370	4290.06	-227.68	288.58	335.36	40°44'35.326"N	103°57'36.871"W	1.29	
4436.00	13.000	45.920	4382.61	-239.06	302.87	351.32	40°44'35.464"N	103°57'36.660"W	1.06	
4531.00	12.660	42.130	4475.24	-251.52	318.03	365.98	40°44'35.611"N	103°57'36.466"W	0.96	
4625.00	12.380	38.050	4567.01	-264.65	333.60	379.10	40°44'35.763"N	103°57'36.292"W	0.99	
4720.00	13.040	36.190	4659.68	-278.95	350.27	391.70	40°44'35.925"N	103°57'36.125"W	0.82	
4815.00	13.260	34.830	4752.19	-294.16	367.86	404.26	40°44'36.097"N	103°57'35.958"W	0.40	
4910.00	13.350	35.940	4844.64	-309.59	385.69	416.92	40°44'36.271"N	103°57'35.789"W	0.29	
5004.00	13.090	35.160	4936.15	-324.71	403.17	429.42	40°44'36.442"N	103°57'35.623"W	0.34	
5099.00	13.580	37.400	5028.59	-339.92	420.83	442.38	40°44'36.614"N	103°57'35.451"W	0.75	
5193.00	13.360	43.480	5120.01	-353.92	437.48	456.56	40°44'36.776"N	103°57'35.263"W	1.52	
5288.00	12.660	51.510	5212.58	-365.50	451.92	472.26	40°44'36.916"N	103°57'35.056"W	2.04	
5383.00	12.630	54.370	5305.27	-375.05	464.45	488.85	40°44'37.037"N	103°57'34.837"W	0.66	
5477.00	12.050	54.560	5397.10	-383.79	476.13	505.20	40°44'37.149"N	103°57'34.622"W	0.62	



Actual Wellpath Report

HAZZARD FEDERAL LC22-735 AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#05 HAZZARD FEDERAL LC22-735 (400'FNL&1851'FEL,SEC.22)
Area	COLORADO	Well	HAZZARD FEDERAL LC22-735
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HAZZARD FEDERAL LC22-735 AWB
Facility	SEC.22-T09N-R59W		

WELLPATH DATA (119 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5571.00	11.010	72.490	5489.23	-389.26	484.52	521.76	40°44'37.229"N	103°57'34.405"W	3.95	
5666.00	13.850	110.810	5582.15	-384.70	483.21	541.08	40°44'37.213"N	103°57'34.155"W	8.99	
5761.00	17.490	139.320	5673.74	-366.64	468.32	561.05	40°44'37.063"N	103°57'33.899"W	8.85	
5856.00	23.860	156.800	5762.66	-335.65	439.77	577.95	40°44'36.778"N	103°57'33.685"W	9.27	
5951.00	33.960	167.240	5845.76	-290.32	396.09	591.43	40°44'36.344"N	103°57'33.520"W	11.85	
6045.00	44.000	171.690	5918.76	-231.30	338.02	601.97	40°44'35.768"N	103°57'33.396"W	11.08	
6139.00	53.120	172.140	5980.90	-160.94	268.33	611.85	40°44'35.078"N	103°57'33.284"W	9.71	
6234.00	62.800	172.830	6031.24	-80.57	188.58	622.35	40°44'34.288"N	103°57'33.165"W	10.21	
6329.00	69.850	174.890	6069.37	6.20	102.13	631.61	40°44'33.433"N	103°57'33.065"W	7.68	
6423.00	79.660	177.100	6094.06	96.32	11.77	637.89	40°44'32.539"N	103°57'33.003"W	10.68	
6518.00	89.480	178.490	6103.04	189.96	-82.61	641.52	40°44'31.606"N	103°57'32.978"W	10.44	
6613.00	90.490	179.150	6103.06	283.90	-177.59	643.47	40°44'30.667"N	103°57'32.974"W	1.27	
6707.00	90.370	178.910	6102.36	376.80	-271.57	645.06	40°44'29.738"N	103°57'32.974"W	0.29	
6802.00	90.310	178.270	6101.79	470.79	-366.54	647.40	40°44'28.800"N	103°57'32.965"W	0.68	
6897.00	90.650	178.330	6101.00	564.85	-461.50	650.22	40°44'27.861"N	103°57'32.950"W	0.36	
6991.00	90.520	179.020	6100.04	657.84	-555.47	652.39	40°44'26.932"N	103°57'32.943"W	0.75	
7086.00	90.400	179.200	6099.28	751.70	-650.45	653.87	40°44'25.994"N	103°57'32.945"W	0.23	
7180.00	90.460	179.960	6098.57	844.46	-744.45	654.56	40°44'25.065"N	103°57'32.958"W	0.81	
7275.00	90.520	180.880	6097.76	937.96	-839.44	653.86	40°44'24.127"N	103°57'32.988"W	0.97	
7369.00	90.550	181.150	6096.88	1030.31	-933.42	652.20	40°44'23.198"N	103°57'33.031"W	0.29	
7464.00	90.370	179.340	6096.12	1123.86	-1028.41	651.79	40°44'22.260"N	103°57'33.058"W	1.91	
7559.00	90.190	178.340	6095.65	1217.80	-1123.39	653.71	40°44'21.321"N	103°57'33.054"W	1.07	
7653.00	90.490	179.090	6095.09	1310.77	-1217.36	655.82	40°44'20.392"N	103°57'33.048"W	0.86	
7748.00	90.430	179.070	6094.33	1404.65	-1312.35	657.35	40°44'19.454"N	103°57'33.050"W	0.07	
7843.00	90.340	177.970	6093.69	1498.66	-1407.31	659.80	40°44'18.515"N	103°57'33.039"W	1.16	
7937.00	90.590	179.070	6092.93	1591.68	-1501.28	662.23	40°44'17.586"N	103°57'33.029"W	1.20	
8032.00	90.280	179.520	6092.21	1685.49	-1596.27	663.40	40°44'16.648"N	103°57'33.035"W	0.58	
8126.00	90.520	179.290	6091.55	1778.30	-1690.26	664.37	40°44'15.719"N	103°57'33.044"W	0.35	
8221.00	90.550	177.360	6090.67	1872.35	-1785.21	667.15	40°44'14.780"N	103°57'33.029"W	2.03	
8316.00	90.430	175.660	6089.85	1966.78	-1880.03	672.93	40°44'13.843"N	103°57'32.975"W	1.79	



Actual Wellpath Report

HAZZARD FEDERAL LC22-735 AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#05 HAZZARD FEDERAL LC22-735 (400'FNL&1851'FEL,SEC.22)
Area	COLORADO	Well	HAZZARD FEDERAL LC22-735
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HAZZARD FEDERAL LC22-735 AWB
Facility	SEC.22-T09N-R59W		

WELLPATH DATA (119 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8410.00	90.340	175.500	6089.22	2060.37	-1973.75	680.18	40°44'12.916"N	103°57'32.902"W	0.20	
8504.00	89.420	176.590	6089.42	2153.89	-2067.52	686.66	40°44'11.988"N	103°57'32.839"W	1.52	
8599.00	90.220	176.140	6089.72	2248.35	-2162.33	692.68	40°44'11.050"N	103°57'32.783"W	0.97	
8693.00	90.180	176.070	6089.39	2341.86	-2256.11	699.07	40°44'10.123"N	103°57'32.721"W	0.09	
8788.00	90.680	176.010	6088.68	2436.37	-2350.88	705.63	40°44'09.185"N	103°57'32.657"W	0.53	
8883.00	90.680	175.480	6087.55	2530.93	-2445.61	712.68	40°44'08.248"N	103°57'32.587"W	0.56	
8977.00	90.580	177.160	6086.51	2624.40	-2539.41	718.71	40°44'07.320"N	103°57'32.530"W	1.79	
9072.00	90.830	178.630	6085.35	2718.54	-2634.33	722.20	40°44'06.382"N	103°57'32.506"W	1.57	
9166.00	90.740	179.170	6084.06	2811.47	-2728.31	724.00	40°44'05.453"N	103°57'32.504"W	0.58	
9261.00	90.740	178.890	6082.83	2905.35	-2823.29	725.61	40°44'04.515"N	103°57'32.504"W	0.29	
9355.00	90.740	179.070	6081.62	2998.25	-2917.26	727.28	40°44'03.586"N	103°57'32.504"W	0.19	
9450.00	90.740	178.690	6080.39	3092.17	-3012.24	729.14	40°44'02.647"N	103°57'32.501"W	0.40	
9544.00	90.740	178.620	6079.18	3185.16	-3106.20	731.35	40°44'01.719"N	103°57'32.493"W	0.07	
9638.00	90.430	179.480	6078.22	3278.05	-3200.18	732.91	40°44'00.790"N	103°57'32.494"W	0.97	
9733.00	90.580	179.460	6077.38	3371.82	-3295.18	733.78	40°43'59.851"N	103°57'32.504"W	0.16	
9827.00	90.550	180.110	6076.45	3464.52	-3389.17	734.14	40°43'58.922"N	103°57'32.521"W	0.69	
9922.00	90.400	180.200	6075.66	3558.10	-3484.17	733.88	40°43'57.984"N	103°57'32.546"W	0.18	
10016.00	90.250	178.320	6075.13	3650.94	-3578.15	735.09	40°43'57.055"N	103°57'32.551"W	2.01	
10111.00	90.280	177.630	6074.69	3745.08	-3673.09	738.45	40°43'56.117"N	103°57'32.529"W	0.73	
10205.00	90.490	176.190	6074.06	3838.44	-3766.95	743.52	40°43'55.189"N	103°57'32.485"W	1.55	
10300.00	90.550	176.170	6073.20	3932.93	-3861.74	749.85	40°43'54.251"N	103°57'32.424"W	0.07	
10394.00	90.550	174.400	6072.30	4026.56	-3955.41	757.57	40°43'53.324"N	103°57'32.345"W	1.88	
10489.00	90.400	173.070	6071.51	4121.38	-4049.84	767.94	40°43'52.390"N	103°57'32.231"W	1.41	
10583.00	90.370	174.850	6070.88	4215.18	-4143.31	777.83	40°43'51.464"N	103°57'32.124"W	1.89	
10677.00	90.400	179.470	6070.24	4308.47	-4237.17	782.48	40°43'50.536"N	103°57'32.085"W	4.91	
10771.00	90.550	181.720	6069.47	4400.94	-4331.15	781.51	40°43'49.608"N	103°57'32.118"W	2.40	
10866.00	90.520	182.680	6068.58	4493.87	-4426.08	777.86	40°43'48.671"N	103°57'32.187"W	1.01	
10949.00	90.620	182.810	6067.75	4574.91	-4508.98	773.89	40°43'47.852"N	103°57'32.258"W	0.20	Last BHI MWD Survey
10973.00	90.620	182.810	6067.49	4598.33	-4532.95	772.71	40°43'47.616"N	103°57'32.278"W	0.00	Projection to Bit

HOLE & CASING SECTIONS - Ref Wellbore: HAZZARD FEDERAL LC22-735 AWB Ref Wellpath: HAZZARD FEDERAL LC22-735 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	1927.00	1897.00	30.00	1926.97	-0.04	0.00	-3.31	6.44
9.625in Casing Surface	30.00	1927.00	1897.00	30.00	1926.97	-0.04	0.00	-3.31	6.44
8.5in Open Hole	1927.00	10973.00	9046.00	1926.97	6067.49	-3.31	6.44	-4532.95	772.71



Actual Wellpath Report

HAZZARD FEDERAL LC22-735 AWP
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#05 HAZZARD FEDERAL LC22-735 (400'FNL&1851'FEL,SEC.22)
Area	COLORADO	Well	HAZZARD FEDERAL LC22-735
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HAZZARD FEDERAL LC22-735 AWB
Facility	SEC.22-T09N-R59W		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
DUKES FEDERAL LC10-745 SECTION 10	2.00	-2.60	-149.61	3426161.44	1516985.93	40°44'32.532"N	103°57'43.236"W	polygon
DUKES FEDERAL LC10-745 SECTION 15	2.00	-2.60	-149.61	3426161.44	1516985.93	40°44'32.532"N	103°57'43.236"W	polygon
DUKES FEDERAL LC10-745 SECTION 22	2.00	-2.60	-149.61	3426161.44	1516985.93	40°44'32.532"N	103°57'43.236"W	polygon
HAZZARD FEDERAL LC22-745 REV-1 BHL FROM PLAT (330'FSL&1210'FEL,SEC.22)	5973.35	-4526.78	777.09	3427088.14	1512461.78	40°43'47.676"N	103°57'32.220"W	point
HAZZARD FEDERAL LC22-745 TPZ/Landing (500'FNL&1215'FEL,SEC.22)	6012.00	-100.00	630.00	3426941.05	1516888.53	40°44'31.436"N	103°57'33.131"W	point
HAZZARD FEDERAL LC22-735 REV-2 BHL FROM PLAT (330'FSL&1210'FEL,SEC.22) _copy	6048.35	-4526.78	777.09	3427088.14	1512461.78	40°43'47.676"N	103°57'32.220"W	point
HAZZARD FEDERAL LC22-735 REV-3 BHL FROM PLAT (330'FSL&1210'FEL,SEC.22)	6066.34	-4526.78	777.09	3427088.14	1512461.78	40°43'47.676"N	103°57'32.220"W	point
HAZZARD FEDERAL LC22-735 TPZ/Landing 2 (500'FNL&1215'FEL,SEC.22)	6087.00	-100.00	630.00	3426941.05	1516888.53	40°44'31.436"N	103°57'33.131"W	point
HAZZARD FEDERAL LC22-735 TPZ/Landing 3 (500'FNL&1215'FEL,SEC.22)	6105.00	-100.00	630.00	3426941.05	1516888.53	40°44'31.436"N	103°57'33.131"W	point
DUKES FEDERAL LC10-745 SECTION 10 300' SETBACK	6502.00	-2.60	-149.61	3426161.44	1516985.93	40°44'32.532"N	103°57'43.236"W	polygon
DUKES FEDERAL LC10-745 SECTION 15 300' SETBACK	6502.00	-2.60	-149.61	3426161.44	1516985.93	40°44'32.532"N	103°57'43.236"W	polygon
DUKES FEDERAL LC10-745 SECTION 22 300' SETBACK	6502.00	-2.60	-149.61	3426161.44	1516985.93	40°44'32.532"N	103°57'43.236"W	polygon



Actual Wellpath Report

HAZZARD FEDERAL LC22-735 AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#05 HAZZARD FEDERAL LC22-735 (400'FNL&1851'FEL,SEC.22)
Area	COLORADO	Well	HAZZARD FEDERAL LC22-735
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HAZZARD FEDERAL LC22-735 AWB
Facility	SEC.22-T09N-R59W		

WELLPATH COMPOSITION - Ref Wellbore: HAZZARD FEDERAL LC22-735 AWB Ref Wellpath: HAZZARD FEDERAL LC22-735 AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	1923.00	Gyrodatta standard - Drop gyro or Multi-shot	Gyrodatta Surface 13.5" Surveys <78'-1923'>	HAZZARD FEDERAL LC22-735 AWB
1923.00	10949.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	BHI/ATC OWSG MWD,Rev-2+IFR+MSA 8.5" Hole <1981'-10949'>	HAZZARD FEDERAL LC22-735 AWB
10949.00	10973.00	Blind Drilling (std)	Projection to bit	HAZZARD FEDERAL LC22-735 AWB



Actual Wellpath Report

HAZZARD FEDERAL LC22-735 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#05 HAZZARD FEDERAL LC22-735 (400'FNL&1851'FEL,SEC.22)
Area	COLORADO	Well	HAZZARD FEDERAL LC22-735
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	HAZZARD FEDERAL LC22-735 AWB
Facility	SEC.22-T09N-R59W		

WELLPATH COMMENTS					
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment	
1923.00	0.410	32.410	1922.97	Tie to Surface Gyro	
10949.00	90.620	182.810	6067.75	Last BHI MWD Survey	
10973.00	90.620	182.810	6067.49	Projection to Bit	

COMMENTS	
Run-time comments	
Surface Location	
Latitude : 40.74237 N	
Longitude : 103.96147 W	
API : 05-123-42980	