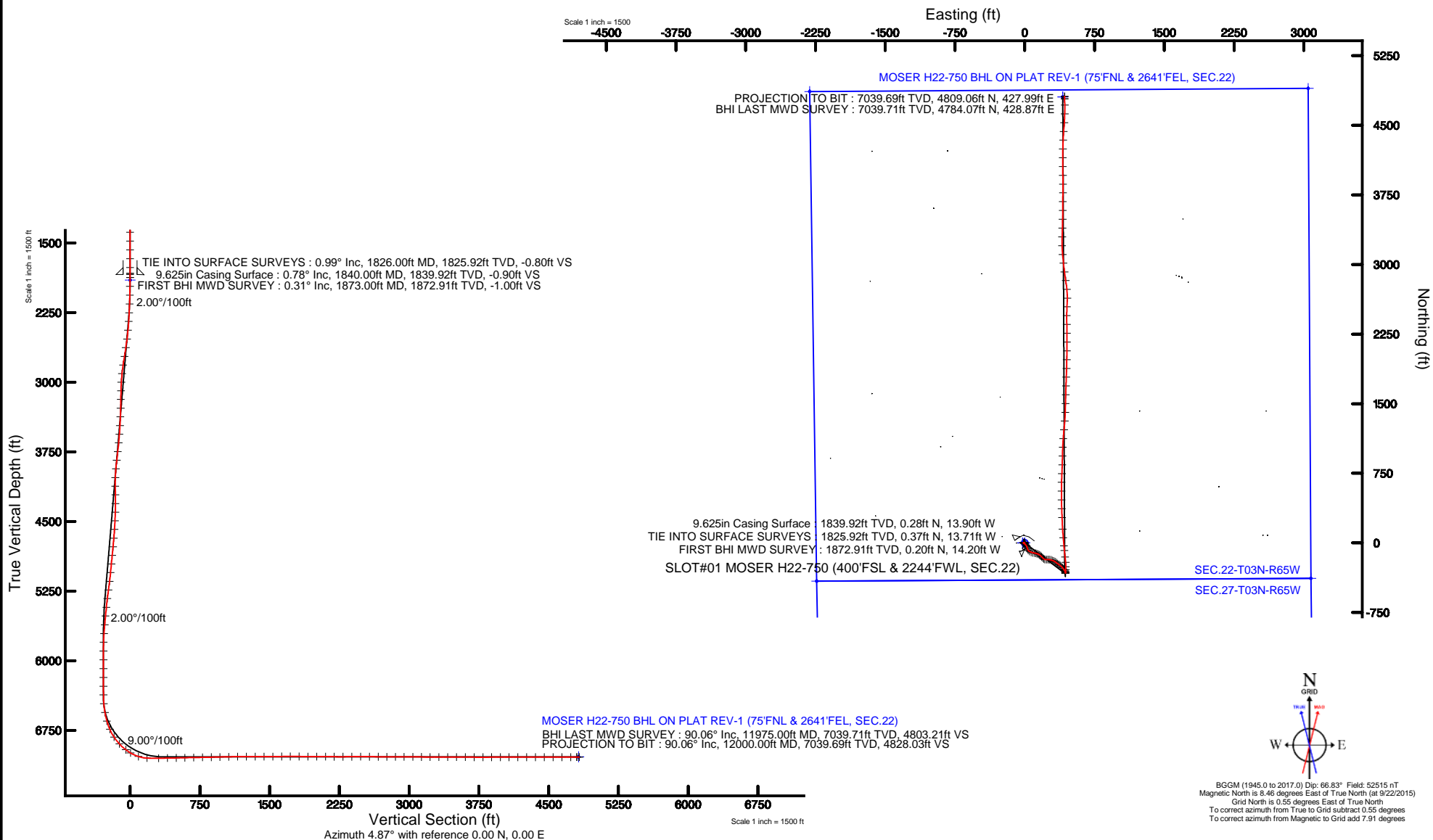


NOBLE ENERGY, INC

Location: COLORADO Slot: SLOT#01 MOSER H22-750 (400'FSL & 2244'FWL, SEC.22)
 Field: WELD COUNTY (NOBLE NAD 83 GRID) Well: MOSER H22-750
 Facility: SEC.22-T03N-R65W Wellbore: MOSER H22-750 PWB

Plot reference wellpath is MOSER H22-750 (REV-A.0) PWP	
True vertical depths are referenced to H&P 321 (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to H&P 321 (RKB)	North Reference: Grid north
H&P 321 (RKB) to Mean Sea Level: 4840 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#01 MOSER H22-750 (400'FSL & 2244'FWL, SEC.22): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: adamkat on 11/16/2015



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#01 MOSER H22-750 (400'FSL & 2244'FWL, SEC.22)
Area	COLORADO	Well	MOSER H22-750
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	MOSER H22-750 AWB
Facility	SEC.22-T03N-R65W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 4.1.1
North Reference	Grid	User	Adamkat
Scale	0.999957	Report Generated	11/16/2015 at 2:16:43 PM
Convergence at slot	0.55° East	Database/Source file	WA_DEN_Denver_Defn/MOSER_H22-750_AWB.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.00	0.00	3237062.81	1318570.98	40°12'17.136"N	104°39'04.500"W
Facility Reference Pt			3237062.81	1318570.98	40°12'17.136"N	104°39'04.500"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 321 (RKB) to Facility Vertical Datum	4840.00ft
Horizontal Reference Pt	Slot	H&P 321 (RKB) to Mean Sea Level	4840.00ft
Vertical Reference Pt	H&P 321 (RKB)	H&P 321 (RKB) to Mud Line at Slot (SLOT#01 MOSER H22-750 (400'FSL & 2244'FWL, SEC.22))	4840.00ft
MD Reference Pt	H&P 321 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	4.87°

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#01 MOSER H22-750 (400'FSL & 2244'FWL, SEC.22)
Area	COLORADO	Well	MOSER H22-750
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	MOSER H22-750 AWB
Facility	SEC.22-T03N-R65W		

WELLPATH DATA (110 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
1826.00	0.990	246.160	1825.92	-0.80	0.37	-13.71	0.61	TIE INTO SURFACE SURVEYS
1873.00	0.310	269.640	1872.91	-1.00	0.20	-14.20	1.52	FIRST BHI MWD SURVEY
1968.00	1.160	131.880	1967.91	-1.61	-0.44	-13.74	1.48	
2062.00	2.720	127.550	2061.85	-3.38	-2.44	-11.27	1.67	
2157.00	3.790	123.820	2156.70	-6.12	-5.56	-6.87	1.15	
2252.00	4.920	125.310	2251.42	-9.70	-9.66	-0.94	1.20	
2346.00	6.310	133.340	2344.97	-14.96	-15.53	6.11	1.70	
2441.00	7.630	140.850	2439.27	-22.74	-24.01	13.89	1.69	
2536.00	8.270	157.910	2533.37	-33.37	-35.23	20.44	2.56	
2631.00	8.600	166.850	2627.34	-46.22	-48.48	24.62	1.42	
2726.00	10.290	159.800	2721.06	-60.66	-63.36	29.17	2.15	
2820.00	11.020	145.440	2813.45	-75.21	-78.64	37.17	2.92	
2915.00	12.480	120.780	2906.52	-86.71	-91.38	51.15	5.46	
3010.00	12.780	111.520	2999.23	-94.21	-100.49	69.74	2.15	
3105.00	10.320	101.760	3092.30	-98.24	-106.08	87.85	3.30	
3199.00	9.310	99.180	3184.93	-99.83	-109.01	103.60	1.17	
3294.00	9.040	105.630	3278.72	-101.80	-112.25	118.38	1.12	
3389.00	9.010	108.580	3372.54	-104.95	-116.63	132.61	0.49	
3484.00	9.160	112.960	3466.35	-109.07	-121.95	146.63	0.74	
3579.00	9.170	124.300	3560.14	-115.13	-129.16	159.85	1.90	
3673.00	8.980	130.410	3652.97	-123.08	-138.14	171.62	1.04	
3768.00	8.910	142.760	3746.82	-132.85	-148.80	181.72	2.02	
3862.00	9.590	138.750	3839.60	-143.68	-160.49	191.29	1.00	
3957.00	9.830	124.800	3933.25	-153.21	-171.07	203.16	2.48	
4052.00	10.000	105.970	4026.86	-158.85	-177.97	217.76	3.40	
4147.00	9.600	88.190	4120.49	-159.51	-179.99	233.61	3.20	
4241.00	9.700	89.740	4213.16	-157.90	-179.70	249.36	0.30	
4336.00	9.440	95.190	4306.84	-157.22	-180.37	265.12	0.99	
4431.00	10.260	105.920	4400.45	-158.89	-183.40	281.02	2.11	
4525.00	10.350	109.560	4492.94	-162.64	-188.52	297.03	0.70	
4620.00	10.090	116.340	4586.43	-167.85	-195.07	312.53	1.29	
4715.00	10.080	124.530	4679.97	-175.01	-203.47	326.84	1.51	
4809.00	10.200	127.390	4772.50	-183.55	-213.19	340.22	0.55	
4904.00	10.460	127.840	4865.96	-192.77	-223.59	353.72	0.29	
4998.00	10.610	122.610	4958.38	-201.44	-233.49	367.75	1.03	
5093.00	10.480	127.750	5051.78	-210.20	-243.49	381.95	1.00	
5188.00	10.430	134.940	5145.20	-220.43	-254.85	394.86	1.37	
5282.00	10.520	140.430	5237.64	-232.04	-267.48	406.35	1.07	
5377.00	10.460	143.280	5331.05	-244.68	-281.08	417.03	0.55	
5472.00	7.010	142.700	5424.94	-255.43	-292.60	425.71	3.63	
5566.00	6.510	151.320	5518.28	-264.12	-301.84	431.74	1.20	
5661.00	5.940	162.810	5612.73	-273.17	-311.26	435.78	1.44	
5756.00	3.550	174.170	5707.40	-280.61	-318.89	437.53	2.69	
5850.00	1.930	183.700	5801.29	-285.06	-323.36	437.72	1.78	
5945.00	0.180	1.730	5896.27	-286.51	-324.81	437.62	2.22	

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#01 MOSER H22-750 (400'FSL & 2244'FWL, SEC.22)
Area	COLORADO	Well	MOSER H22-750
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	MOSER H22-750 AWB
Facility	SEC.22-T03N-R65W		

WELLPATH DATA (110 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
6040.00	0.070	289.300	5991.27	-286.34	-324.64	437.57	0.18	
6134.00	0.060	282.920	6085.27	-286.32	-324.61	437.47	0.01	
6229.00	0.030	350.580	6180.27	-286.29	-324.58	437.42	0.06	
6324.00	0.040	230.520	6275.27	-286.29	-324.57	437.39	0.06	
6418.00	0.300	359.900	6369.27	-286.07	-324.35	437.36	0.35	
6513.00	4.400	8.860	6464.17	-282.18	-320.50	437.92	4.32	
6608.00	9.550	6.160	6558.44	-270.66	-309.05	439.33	5.43	
6702.00	16.040	4.040	6650.05	-249.86	-288.32	441.09	6.92	
6797.00	23.820	0.280	6739.30	-217.56	-256.00	442.11	8.30	
6892.00	33.530	354.830	6822.56	-172.49	-210.57	439.83	10.58	
6987.00	43.290	353.600	6896.91	-114.57	-151.93	433.82	10.30	
7081.00	52.280	354.700	6960.01	-46.23	-82.74	426.78	9.60	
7143.00	59.860	355.100	6994.59	4.40	-31.53	422.22	12.24	
7238.00	72.960	354.790	7032.53	89.97	55.00	414.55	13.79	
7332.00	86.940	356.550	7048.89	181.12	147.06	407.61	14.99	
7459.00	90.950	357.500	7051.23	306.88	273.84	401.02	3.24	
7554.00	91.140	358.620	7049.50	401.19	368.77	397.81	1.20	
7649.00	91.110	359.300	7047.63	495.67	463.73	396.08	0.72	
7743.00	91.110	0.610	7045.81	589.31	557.71	396.01	1.39	
7838.00	91.050	0.850	7044.02	684.04	652.69	397.22	0.26	
7932.00	91.200	2.380	7042.17	777.87	746.63	399.87	1.64	
8027.00	91.170	1.690	7040.21	872.73	841.55	403.24	0.73	
8121.00	91.480	1.480	7038.03	966.55	935.49	405.84	0.40	
8216.00	91.260	2.240	7035.76	1061.39	1030.41	408.92	0.83	
8310.00	90.220	4.370	7034.55	1155.34	1124.24	414.34	2.52	
8405.00	90.150	5.220	7034.24	1250.34	1218.91	422.28	0.90	
8499.00	90.150	4.400	7034.00	1344.34	1312.58	430.17	0.87	
8594.00	90.180	2.030	7033.72	1439.29	1407.42	435.49	2.49	
8689.00	90.250	1.280	7033.37	1534.14	1502.38	438.24	0.79	
8784.00	90.520	1.450	7032.73	1628.96	1597.35	440.50	0.34	
8878.00	90.030	2.350	7032.28	1722.84	1691.29	443.62	1.09	
8973.00	89.660	1.820	7032.53	1817.72	1786.23	447.07	0.68	
9067.00	89.570	1.820	7033.17	1911.59	1880.18	450.06	0.10	
9162.00	89.660	0.920	7033.80	2006.41	1975.15	452.33	0.95	
9257.00	89.630	0.010	7034.39	2101.12	2070.14	453.10	0.96	
9351.00	89.600	0.870	7035.02	2194.84	2164.14	453.82	0.92	
9446.00	90.180	359.410	7035.21	2289.52	2259.14	454.05	1.65	
9541.00	90.250	358.930	7034.85	2384.04	2354.12	452.68	0.51	
9636.00	89.940	0.210	7034.69	2478.64	2449.12	451.96	1.39	
9730.00	89.850	2.920	7034.86	2572.47	2543.08	454.53	2.88	
9825.00	89.510	0.910	7035.40	2667.34	2638.02	457.71	2.15	
9920.00	89.880	353.250	7035.90	2761.39	2732.82	452.87	8.07	
10014.00	90.090	351.640	7035.93	2853.19	2826.00	440.51	1.73	
10109.00	89.660	352.350	7036.13	2945.80	2920.07	427.28	0.87	
10204.00	89.540	354.930	7036.80	3038.97	3014.48	416.76	2.72	

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#01 MOSER H22-750 (400'FSL & 2244'FWL, SEC.22)
Area	COLORADO	Well	MOSER H22-750
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	MOSER H22-750 AWB
Facility	SEC.22-T03N-R65W		

WELLPATH DATA (110 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
10298.00	89.600	353.830	7037.50	3131.40	3108.02	407.55	1.17	
10393.00	89.660	359.310	7038.12	3225.36	3202.82	401.87	5.77	
10488.00	90.090	1.570	7038.32	3320.07	3297.81	402.60	2.42	
10583.00	89.970	1.540	7038.27	3414.92	3392.77	405.18	0.13	
10677.00	89.600	1.370	7038.63	3508.75	3486.74	407.57	0.43	
10772.00	89.540	0.290	7039.34	3603.51	3581.73	408.94	1.14	
10867.00	89.540	0.230	7040.10	3698.20	3676.72	409.37	0.06	
10962.00	90.220	1.240	7040.30	3792.95	3771.71	410.59	1.28	
11056.00	90.060	359.760	7040.07	3886.67	3865.71	411.41	1.58	
11151.00	90.000	358.620	7040.02	3981.21	3960.69	410.07	1.20	
11245.00	90.060	359.540	7039.97	4074.73	4054.68	408.56	0.98	
11340.00	89.940	0.490	7039.97	4169.38	4149.68	408.59	1.01	
11435.00	90.060	1.350	7039.97	4264.16	4244.67	410.11	0.91	
11530.00	90.000	2.580	7039.92	4359.03	4339.61	413.37	1.30	
11624.00	90.030	4.040	7039.90	4453.00	4433.45	418.80	1.55	
11719.00	89.970	3.830	7039.90	4547.98	4528.23	425.32	0.23	
11814.00	90.030	1.760	7039.90	4642.92	4623.11	429.95	2.18	
11909.00	90.090	359.020	7039.80	4737.62	4718.10	430.59	2.88	
11975.00	90.060	357.980	7039.71	4803.21	4784.07	428.87	1.58	BHI LAST MWD SURVEY
12000.00	90.060	357.980	7039.69	4828.03	4809.06	427.99	0.00	PROJECTION TO BIT

HOLE & CASING SECTIONS - Ref Wellbore: MOSER H22-750 AWB Ref Wellpath: MOSER H22-750 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 Surface	0.00	1840.00	1840.00	0.00	1839.92	0.00	0.00	0.28	-13.90
8.5in Open Hole	1850.00	12000.00	10150.00	1849.92	7039.69	0.24	-14.02	4809.06	427.99

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#01 MOSER H22-750 (400'FSL & 2244'FWL, SEC.22)
Area	COLORADO	Well	MOSER H22-750
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	MOSER H22-750 AWB
Facility	SEC.22-T03N-R65W		

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.22-T03N-R65W	0.00	0.00	0.00	3237062.81	1318570.98	40°12'17.136"N	104°39'04.500"W	polygon
SEC.22-T03N-R65W NE CORNER	0.00	4896.64	3047.58	3240110.25	1323467.40	40°13'05.232"N	104°38'24.612"W	point
SEC.22-T03N-R65W NW CORNER	0.00	4863.47	-2311.53	3234751.38	1323434.23	40°13'05.412"N	104°39'33.696"W	point
SEC.22-T03N-R65W SE CORNER	0.00	-382.04	3076.42	3240139.09	1318188.96	40°12'13.068"N	104°38'24.900"W	point
SEC.22-T03N-R65W SW CORNER	0.00	-411.12	-2236.39	3234826.52	1318159.87	40°12'13.284"N	104°39'33.372"W	point
SEC.27-T03N-R65W	0.00	-0.21	-22.34	3237040.46	1318570.76	40°12'17.136"N	104°39'04.788"W	polygon
SEC.34-T03N-R65W	0.00	-0.21	-22.34	3237040.46	1318570.76	40°12'17.136"N	104°39'04.788"W	polygon
MOSER H22-750 KOP (35' RADII)	1900.00	0.00	0.00	3237062.81	1318570.98	40°12'17.136"N	104°39'04.500"W	circle
MOSER H22-750 BHL ON PLAT REV-1 (75'FNL & 2641'FEL, SEC.22)	7036.00	4805.62	409.23	3237472.02	1323376.38	40°13'04.584"N	104°38'58.632"W	point
MOSER H22-750 DRILLING COORIDOR (35' LEFT/RIGHT & 8' UP/DOWN)	7036.00	4805.62	409.23	3237472.02	1323376.38	40°13'04.584"N	104°38'58.632"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: MOSER H22-750 AWB Ref Wellpath: MOSER H22-750 AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	1826.00	Generic gyro - continuous (Standard)	13 1/2" GYRO SURFACE SURVEYS <72 - 1826>	MOSER H22-750 AWB
1826.00	11975.00	Custom NaviTrak (MagCorr) (AT Curve sf 0.01)	BHI MWD AUTOTRAK (MAGCORR) 8 1/2" MONOBORE <1873 - 11975>	MOSER H22-750 AWB
11975.00	12000.00	Blind Drilling (std)	Projection to bit	MOSER H22-750 AWB

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#01 MOSER H22-750 (400'FSL & 2244'FWL, SEC.22)
Area	COLORADO	Well	MOSER H22-750
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	MOSER H22-750 AWB
Facility	SEC.22-T03N-R65W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1826.00	0.990	246.160	1825.92	TIE INTO SURFACE SURVEYS
1873.00	0.310	269.640	1872.91	FIRST BHI MWD SURVEY
11975.00	90.060	357.980	7039.71	BHI LAST MWD SURVEY
12000.00	90.060	357.980	7039.69	PROJECTION TO BIT