

NOBLE ENERGY, INC

Location: COLORADO Slot: SLOT#05 EMMY STATE H25-738(285'FSL&1782'FEL,SEC.25)
Field: WELD COUNTY (NOBLE NAD 83 GRID) Well: EMMY STATE H25-738
Facility: SEC.25-T03N-R65W Wellbore: EMMY STATE H25-738 PWB

Plot reference wellpath is EMMY STATE H25-738 (REV-B.0) PWP	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to Rig (30KB) (RKB)	* = Wellpath was transformed from a different geodetic datum
Measured depths are referenced to Rig (30KB) (RKB)	North Reference: Grid north
Rig (30KB) (RKB) to Mean Sea Level: 4835 feet	Scale: True distance
Mean Sea Level to Ground level (At Slot: SLOT#05 EMMY STATE H25-738(285'FSL&1782'FEL,SEC.25)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: guenaler on 2018-10-09
	Database: WA_DEN_Denver_Defn

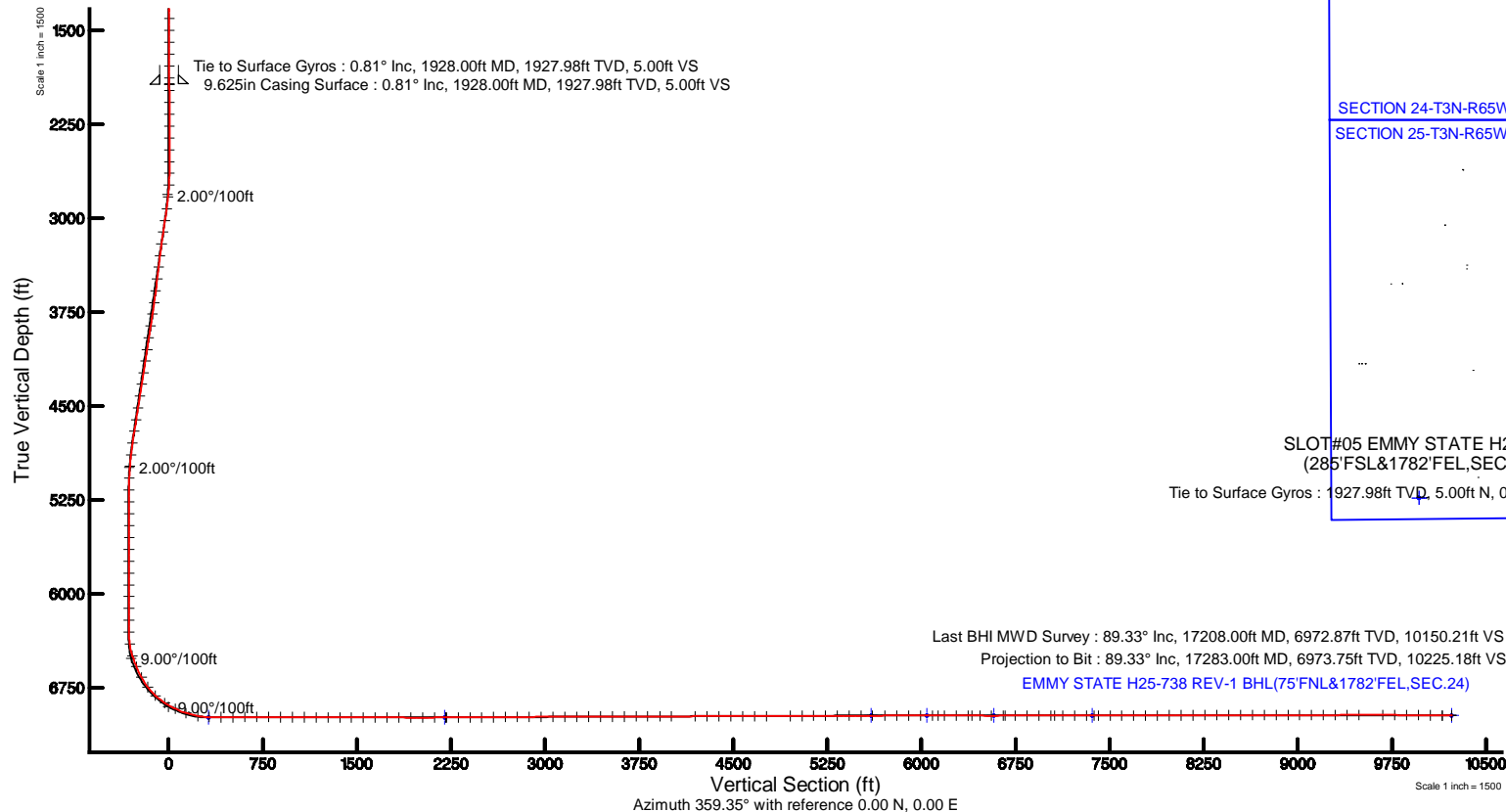


Location Information

Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.25-T03N-R65W			3248954.739	1313190.352	40°11'22.812"N	104°36'31.932"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#05 EMMY STATE H25-738(285'FSL&1782'FEL,SEC.25)	-0.90	-89.40	3248865.343	1313189.454	40°11'22.812"N	104°36'33.084"W
Rig (30KB) (RKB) to Ground level (At Slot: SLOT#05 EMMY STATE H25-738(285'FSL&1782'FEL,SEC.25))					4835ft	
Mean Sea Level to Ground level (At Slot: SLOT#05 EMMY STATE H25-738(285'FSL&1782'FEL,SEC.25))					0ft	
Rig (30KB) (RKB) to Mean Sea Level					4835ft	

Survey Program

Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
30.00	17300.08	OWSG MWD rev2	OWSG MWD rev2 + IFR1 + Multi-Station Correction		EMMY STATE H25-738 PWB





Actual Wellpath Report

EMMY STATE H25-738 AWP

Page 1 of 9



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#05 EMMY STATE H25-738(285'FSL&1782'FEL,SEC.25)
Area	COLORADO	Well	EMMY STATE H25-738
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	EMMY STATE H25-738 AWB
Facility	SEC.25-T03N-R65W		

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	10/9/2018 at 1:35:36 PM
Convergence at slot	0.58° East	Database/Source file	WA_DEN_Denver_Defn/EMMY_STATE_H25-738_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-0.90	-89.40	3248865.34	1313189.45	40°11'22.812"N	104°36'33.084"W
Facility Reference Pt			3248954.74	1313190.35	40°11'22.812"N	104°36'31.932"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	4835.00ft
Horizontal Reference Pt	Slot	Rig (30'KB) (RKB) to Mean Sea Level	4835.00ft
Vertical Reference Pt	Rig (30'KB) (RKB)	Rig (30'KB) (RKB) to Ground Level at Slot (SLOT#05 EMMY STATE H25-738 (285'FSL&1782'FEL,SEC.25))	4835.00ft
MD Reference Pt	Rig (30'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	359.24°



Actual Wellpath Report

EMMY STATE H25-738 AWP



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#05 EMMY STATE H25-738(285'FSL&1782'FEL,SEC.25)
Area	COLORADO	Well	EMMY STATE H25-738
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	EMMY STATE H25-738 AWB
Facility	SEC.25-T03N-R65W		

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	67.720	0.00	0.00	0.00	0.00	40°11'22.812"N	104°36'33.084"W	0.00	
84.00	0.070	67.720	84.00	0.02	0.02	0.05	40°11'22.812"N	104°36'33.083"W	0.08	
179.00	0.130	39.840	179.00	0.12	0.12	0.17	40°11'22.813"N	104°36'33.082"W	0.08	
274.00	0.320	322.520	274.00	0.42	0.42	0.08	40°11'22.816"N	104°36'33.083"W	0.33	
368.00	0.330	31.500	368.00	0.86	0.86	0.06	40°11'22.820"N	104°36'33.083"W	0.39	
463.00	0.190	26.390	463.00	1.23	1.23	0.27	40°11'22.824"N	104°36'33.080"W	0.15	
557.00	0.110	14.590	557.00	1.45	1.46	0.36	40°11'22.826"N	104°36'33.079"W	0.09	
652.00	0.260	20.930	652.00	1.74	1.75	0.46	40°11'22.829"N	104°36'33.078"W	0.16	
746.00	0.110	28.840	746.00	2.02	2.03	0.58	40°11'22.832"N	104°36'33.076"W	0.16	
841.00	0.290	326.640	841.00	2.30	2.31	0.50	40°11'22.835"N	104°36'33.077"W	0.27	
935.00	0.120	28.880	934.99	2.59	2.59	0.41	40°11'22.838"N	104°36'33.078"W	0.27	
1029.00	0.190	49.570	1028.99	2.77	2.78	0.58	40°11'22.839"N	104°36'33.076"W	0.09	
1124.00	0.050	119.370	1123.99	2.85	2.86	0.73	40°11'22.840"N	104°36'33.074"W	0.19	
1218.00	0.310	37.250	1217.99	3.03	3.04	0.92	40°11'22.842"N	104°36'33.072"W	0.33	
1313.00	0.130	62.580	1312.99	3.28	3.30	1.18	40°11'22.844"N	104°36'33.068"W	0.21	
1407.00	0.170	53.370	1406.99	3.41	3.43	1.38	40°11'22.846"N	104°36'33.066"W	0.05	
1502.00	0.140	285.740	1501.99	3.53	3.54	1.38	40°11'22.847"N	104°36'33.066"W	0.29	
1596.00	0.360	333.040	1595.99	3.82	3.84	1.14	40°11'22.850"N	104°36'33.069"W	0.30	
1689.00	0.280	332.010	1688.99	4.29	4.30	0.90	40°11'22.854"N	104°36'33.072"W	0.09	
1785.00	0.380	258.230	1784.99	4.44	4.44	0.48	40°11'22.856"N	104°36'33.077"W	0.42	
1880.00	0.620	298.600	1879.99	4.63	4.62	-0.28	40°11'22.858"N	104°36'33.087"W	0.43	
1928.00	0.810	317.030	1927.98	5.01	5.00	-0.74	40°11'22.861"N	104°36'33.093"W	0.62	Tie to Surface Gyros
1980.00	0.960	331.110	1979.98	5.66	5.65	-1.20	40°11'22.868"N	104°36'33.099"W	0.51	
2075.00	0.250	266.770	2074.97	6.36	6.33	-1.79	40°11'22.875"N	104°36'33.106"W	0.93	
2169.00	0.220	320.810	2168.97	6.49	6.46	-2.11	40°11'22.876"N	104°36'33.110"W	0.23	
2264.00	0.090	48.280	2263.97	6.68	6.65	-2.17	40°11'22.878"N	104°36'33.111"W	0.25	
2358.00	0.880	293.380	2357.97	7.02	6.99	-2.78	40°11'22.881"N	104°36'33.119"W	0.98	
2453.00	0.260	244.630	2452.96	7.23	7.18	-3.64	40°11'22.883"N	104°36'33.130"W	0.77	
2548.00	0.170	342.770	2547.96	7.28	7.23	-3.88	40°11'22.884"N	104°36'33.133"W	0.35	
2642.00	1.550	156.900	2641.95	6.24	6.19	-3.42	40°11'22.874"N	104°36'33.127"W	1.83	



Actual Wellpath Report

EMMY STATE H25-738 AWP



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#05 EMMY STATE H25-738(285'FSL&1782'FEL,SEC.25)
Area	COLORADO	Well	EMMY STATE H25-738
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	EMMY STATE H25-738 AWB
Facility	SEC.25-T03N-R65W		

WELLPATH DATA (181 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2737.00	2.980	175.730	2736.87	2.58	2.55	-2.73	40°11'22.837"N	104°36'33.119"W	1.68	
2831.00	5.960	179.830	2830.58	-4.74	-4.77	-2.54	40°11'22.765"N	104°36'33.117"W	3.19	
2926.00	8.400	182.560	2924.83	-16.60	-16.64	-2.83	40°11'22.648"N	104°36'33.123"W	2.59	
3021.00	8.200	182.860	3018.83	-30.29	-30.34	-3.48	40°11'22.513"N	104°36'33.133"W	0.22	
3115.00	8.310	188.550	3111.86	-43.68	-43.75	-4.83	40°11'22.380"N	104°36'33.152"W	0.88	
3210.00	8.240	194.430	3205.87	-57.03	-57.13	-7.54	40°11'22.248"N	104°36'33.189"W	0.89	
3304.00	8.370	206.240	3298.89	-69.62	-69.79	-12.25	40°11'22.124"N	104°36'33.251"W	1.82	
3399.00	8.340	219.820	3392.89	-81.02	-81.29	-19.72	40°11'22.011"N	104°36'33.349"W	2.07	
3494.00	8.350	219.420	3486.89	-91.52	-91.91	-28.51	40°11'21.907"N	104°36'33.463"W	0.06	
3589.00	8.240	207.680	3580.90	-102.78	-103.27	-36.05	40°11'21.795"N	104°36'33.562"W	1.78	
3683.00	8.480	198.510	3673.91	-115.25	-115.80	-41.38	40°11'21.672"N	104°36'33.632"W	1.44	
3778.00	8.850	189.510	3767.83	-129.05	-129.65	-44.81	40°11'21.535"N	104°36'33.678"W	1.48	
3872.00	8.920	175.960	3860.71	-143.44	-144.06	-45.49	40°11'21.393"N	104°36'33.689"W	2.22	
3967.00	9.030	161.200	3954.56	-157.89	-158.46	-42.57	40°11'21.250"N	104°36'33.653"W	2.42	
4062.00	8.900	161.760	4048.40	-171.98	-172.50	-37.87	40°11'21.111"N	104°36'33.594"W	0.16	
4156.00	8.840	166.190	4141.27	-185.96	-186.42	-33.87	40°11'20.973"N	104°36'33.545"W	0.73	
4251.00	8.850	169.770	4235.15	-200.27	-200.70	-30.83	40°11'20.832"N	104°36'33.507"W	0.58	
4345.00	8.800	173.570	4328.03	-214.56	-214.96	-28.74	40°11'20.691"N	104°36'33.482"W	0.62	
4440.00	9.080	177.060	4421.88	-229.28	-229.67	-27.54	40°11'20.545"N	104°36'33.469"W	0.64	
4535.00	9.010	178.940	4515.70	-244.21	-244.59	-27.02	40°11'20.398"N	104°36'33.464"W	0.32	
4629.00	9.070	179.420	4608.53	-258.98	-259.36	-26.81	40°11'20.252"N	104°36'33.463"W	0.10	
4724.00	8.910	179.910	4702.36	-273.83	-274.21	-26.72	40°11'20.105"N	104°36'33.464"W	0.19	
4818.00	8.590	184.220	4795.27	-288.10	-288.49	-27.23	40°11'19.964"N	104°36'33.472"W	0.78	
4913.00	6.140	181.410	4889.48	-300.25	-300.64	-27.87	40°11'19.844"N	104°36'33.482"W	2.61	
5007.00	4.380	181.590	4983.08	-308.86	-309.26	-28.10	40°11'19.759"N	104°36'33.486"W	1.87	
5102.00	2.250	171.160	5077.92	-314.33	-314.73	-27.91	40°11'19.705"N	104°36'33.484"W	2.32	
5197.00	0.040	296.450	5172.89	-316.16	-316.55	-27.65	40°11'19.687"N	104°36'33.481"W	2.39	
5291.00	0.070	347.270	5266.89	-316.09	-316.48	-27.70	40°11'19.687"N	104°36'33.482"W	0.06	
5386.00	0.100	255.130	5361.89	-316.05	-316.45	-27.79	40°11'19.688"N	104°36'33.483"W	0.13	
5481.00	0.030	105.260	5456.89	-316.08	-316.48	-27.84	40°11'19.687"N	104°36'33.484"W	0.13	



Actual Wellpath Report
EMMY STATE H25-738 AWP
Page 4 of 9



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#05 EMMY STATE H25-738(285'FSL&1782'FEL,SEC.25)
Area	COLORADO	Well	EMMY STATE H25-738
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	EMMY STATE H25-738 AWB
Facility	SEC.25-T03N-R65W		

WELLPATH DATA (181 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5575.00	0.150	96.310	5550.89	-316.10	-316.50	-27.70	40°11'19.687"N	104°36'33.482"W	0.13	
5670.00	0.140	158.430	5645.89	-316.23	-316.62	-27.53	40°11'19.686"N	104°36'33.480"W	0.16	
5765.00	0.130	281.020	5740.89	-316.31	-316.71	-27.60	40°11'19.685"N	104°36'33.481"W	0.25	
5859.00	0.070	158.550	5834.89	-316.34	-316.74	-27.68	40°11'19.685"N	104°36'33.482"W	0.19	
5954.00	0.040	89.670	5929.89	-316.40	-316.79	-27.62	40°11'19.684"N	104°36'33.481"W	0.07	
6048.00	0.070	249.870	6023.89	-316.42	-316.81	-27.65	40°11'19.684"N	104°36'33.481"W	0.12	
6143.00	0.070	89.410	6118.89	-316.44	-316.83	-27.64	40°11'19.684"N	104°36'33.481"W	0.15	
6237.00	0.070	72.810	6212.89	-316.42	-316.81	-27.53	40°11'19.684"N	104°36'33.480"W	0.02	
6332.00	0.060	19.210	6307.89	-316.36	-316.75	-27.46	40°11'19.685"N	104°36'33.479"W	0.06	
6427.00	8.130	359.490	6402.57	-309.58	-309.97	-27.50	40°11'19.752"N	104°36'33.478"W	8.50	
6521.00	16.450	1.880	6494.34	-289.61	-289.99	-27.12	40°11'19.949"N	104°36'33.471"W	8.87	
6616.00	23.000	357.070	6583.72	-257.59	-257.97	-27.63	40°11'20.266"N	104°36'33.473"W	7.10	
6710.00	29.410	343.040	6668.10	-216.99	-217.48	-35.32	40°11'20.667"N	104°36'33.567"W	9.44	
6805.00	37.940	341.640	6747.08	-166.66	-167.35	-51.35	40°11'21.163"N	104°36'33.767"W	9.02	
6899.00	47.980	350.260	6815.85	-104.41	-105.30	-66.41	40°11'21.778"N	104°36'33.953"W	12.36	
6994.00	57.020	357.610	6873.67	-29.51	-30.49	-74.07	40°11'22.518"N	104°36'34.042"W	11.31	
7088.00	64.830	4.590	6919.36	52.46	51.51	-72.30	40°11'23.328"N	104°36'34.009"W	10.54	
7183.00	72.270	8.750	6954.08	140.04	139.23	-61.96	40°11'24.194"N	104°36'33.864"W	8.83	
7278.00	80.010	5.740	6976.83	231.30	230.65	-50.38	40°11'25.096"N	104°36'33.703"W	8.71	
7372.00	88.550	3.060	6986.19	324.36	323.82	-43.23	40°11'26.016"N	104°36'33.599"W	9.52	
7467.00	90.150	1.340	6987.27	419.22	418.73	-39.58	40°11'26.954"N	104°36'33.540"W	2.47	
7561.00	90.280	0.430	6986.92	513.18	512.72	-38.13	40°11'27.882"N	104°36'33.509"W	0.98	
7656.00	90.180	359.290	6986.53	608.17	607.72	-38.36	40°11'28.821"N	104°36'33.500"W	1.20	
7750.00	89.970	358.010	6986.41	702.16	701.69	-40.58	40°11'29.750"N	104°36'33.516"W	1.38	
7845.00	89.880	356.990	6986.54	797.12	796.60	-44.72	40°11'30.688"N	104°36'33.557"W	1.08	
7940.00	89.750	355.490	6986.84	891.99	891.39	-50.95	40°11'31.625"N	104°36'33.625"W	1.58	
8034.00	89.850	355.000	6987.17	985.76	985.06	-58.74	40°11'32.552"N	104°36'33.713"W	0.53	
8129.00	90.060	357.220	6987.25	1080.61	1079.84	-65.19	40°11'33.489"N	104°36'33.784"W	2.35	
8223.00	89.820	357.350	6987.34	1174.55	1173.73	-69.64	40°11'34.417"N	104°36'33.829"W	0.29	
8318.00	89.940	356.090	6987.54	1269.46	1268.58	-75.07	40°11'35.355"N	104°36'33.887"W	1.33	



Actual Wellpath Report
EMMY STATE H25-738 AWP
Page 5 of 9



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#05 EMMY STATE H25-738(285'FSL&1782'FEL,SEC.25)
Area	COLORADO	Well	EMMY STATE H25-738
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	EMMY STATE H25-738 AWB
Facility	SEC.25-T03N-R65W		

WELLPATH DATA (181 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8413.00	89.910	355.040	6987.67	1364.26	1363.29	-82.42	40°11'36.292"N	104°36'33.970"W	1.11	
8507.00	89.850	354.750	6987.86	1457.99	1456.92	-90.78	40°11'37.218"N	104°36'34.065"W	0.32	
8602.00	89.720	355.540	6988.22	1552.75	1551.58	-98.82	40°11'38.154"N	104°36'34.157"W	0.84	
8696.00	89.750	356.470	6988.66	1646.60	1645.34	-105.37	40°11'39.081"N	104°36'34.229"W	0.99	
8791.00	89.880	357.160	6988.96	1741.51	1740.20	-110.65	40°11'40.019"N	104°36'34.285"W	0.74	
8885.00	89.790	359.330	6989.23	1835.49	1834.15	-113.53	40°11'40.947"N	104°36'34.309"W	2.31	
8980.00	89.600	2.250	6989.74	1930.44	1929.13	-112.22	40°11'41.886"N	104°36'34.280"W	3.08	
9075.00	90.190	3.910	6989.91	2025.23	2023.98	-107.12	40°11'42.823"N	104°36'34.202"W	1.85	
9169.00	90.340	3.670	6989.48	2118.93	2117.78	-100.90	40°11'43.749"N	104°36'34.110"W	0.30	
9264.00	90.160	3.110	6989.06	2213.68	2212.61	-95.28	40°11'44.685"N	104°36'34.025"W	0.62	
9358.00	90.220	3.660	6988.75	2307.43	2306.45	-89.73	40°11'45.612"N	104°36'33.942"W	0.59	
9453.00	90.400	4.150	6988.24	2402.12	2401.22	-83.26	40°11'46.548"N	104°36'33.846"W	0.55	
9547.00	90.370	3.360	6987.61	2495.82	2495.02	-77.11	40°11'47.474"N	104°36'33.755"W	0.84	
9642.00	90.590	1.600	6986.81	2590.66	2589.92	-73.00	40°11'48.412"N	104°36'33.689"W	1.87	
9737.00	90.280	0.520	6986.09	2685.61	2684.90	-71.24	40°11'49.350"N	104°36'33.654"W	1.18	
9831.00	90.400	0.840	6985.53	2779.58	2778.89	-70.13	40°11'50.279"N	104°36'33.628"W	0.36	
9926.00	90.440	2.440	6984.83	2874.49	2873.85	-67.41	40°11'51.217"N	104°36'33.581"W	1.68	
10021.00	90.400	3.270	6984.14	2969.30	2968.73	-62.68	40°11'52.154"N	104°36'33.507"W	0.87	
10115.00	90.340	3.040	6983.53	3063.08	3062.58	-57.50	40°11'53.081"N	104°36'33.429"W	0.25	
10210.00	90.220	0.670	6983.07	3157.97	3157.53	-54.43	40°11'54.018"N	104°36'33.377"W	2.50	
10304.00	90.250	357.840	6982.68	3251.96	3251.51	-55.65	40°11'54.947"N	104°36'33.380"W	3.01	
10399.00	90.190	354.840	6982.32	3346.83	3346.30	-61.71	40°11'55.885"N	104°36'33.446"W	3.16	
10494.00	90.130	355.510	6982.05	3441.59	3440.96	-69.70	40°11'56.821"N	104°36'33.537"W	0.71	
10588.00	90.070	357.560	6981.89	3535.48	3534.79	-75.38	40°11'57.748"N	104°36'33.598"W	2.18	
10683.00	90.160	358.930	6981.70	3630.46	3629.74	-78.29	40°11'58.687"N	104°36'33.623"W	1.45	
10778.00	90.160	0.710	6981.43	3725.45	3724.74	-78.59	40°11'59.626"N	104°36'33.615"W	1.87	
10872.00	90.340	1.890	6981.02	3819.39	3818.71	-76.46	40°12'00.554"N	104°36'33.575"W	1.27	
10967.00	90.220	2.250	6980.56	3914.27	3913.65	-73.03	40°12'01.492"N	104°36'33.518"W	0.40	
11061.00	90.250	2.720	6980.17	4008.12	4007.56	-68.95	40°12'02.419"N	104°36'33.454"W	0.50	
11251.00	90.190	1.780	6979.44	4197.85	4197.41	-61.49	40°12'04.295"N	104°36'33.333"W	0.50	



Actual Wellpath Report

EMMY STATE H25-738 AWP



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#05 EMMY STATE H25-738(285'FSL&1782'FEL,SEC.25)
Area	COLORADO	Well	EMMY STATE H25-738
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	EMMY STATE H25-738 AWB
Facility	SEC.25-T03N-R65W		

WELLPATH DATA (181 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11345.00	90.250	1.270	6979.08	4291.78	4291.37	-58.99	40°12'05.223"N	104°36'33.289"W	0.55	
11439.00	90.220	1.730	6978.70	4385.70	4385.34	-56.53	40°12'06.151"N	104°36'33.245"W	0.49	
11534.00	90.220	1.360	6978.33	4480.63	4480.30	-53.97	40°12'07.089"N	104°36'33.199"W	0.39	
11629.00	90.040	359.260	6978.12	4575.60	4575.30	-53.46	40°12'08.028"N	104°36'33.181"W	2.22	
11723.00	90.280	357.260	6977.85	4669.58	4669.25	-56.31	40°12'08.957"N	104°36'33.205"W	2.14	
11818.00	90.190	356.420	6977.46	4764.50	4764.10	-61.55	40°12'09.895"N	104°36'33.260"W	0.89	
12007.00	90.130	357.150	6976.94	4953.32	4952.80	-72.15	40°12'11.760"N	104°36'33.373"W	0.39	
12102.00	90.220	356.310	6976.64	5048.23	5047.65	-77.57	40°12'12.698"N	104°36'33.430"W	0.89	
12196.00	90.130	357.430	6976.36	5142.15	5141.50	-82.70	40°12'13.626"N	104°36'33.484"W	1.20	
12291.00	90.190	358.860	6976.09	5237.13	5236.45	-85.77	40°12'14.564"N	104°36'33.511"W	1.51	
12385.00	90.190	0.500	6975.78	5331.12	5330.45	-86.30	40°12'15.493"N	104°36'33.506"W	1.74	
12480.00	90.130	1.370	6975.52	5426.08	5425.43	-84.75	40°12'16.432"N	104°36'33.474"W	0.92	
12574.00	90.280	1.390	6975.18	5520.01	5519.40	-82.48	40°12'17.360"N	104°36'33.432"W	0.16	
12764.00	90.190	358.400	6974.40	5709.98	5709.38	-82.83	40°12'19.237"N	104°36'33.412"W	1.57	
12858.00	90.100	357.500	6974.16	5803.95	5803.32	-86.19	40°12'20.166"N	104°36'33.443"W	0.96	
12953.00	89.880	356.830	6974.18	5898.89	5898.20	-90.89	40°12'21.104"N	104°36'33.492"W	0.74	
13047.00	90.160	356.220	6974.15	5992.78	5992.03	-96.59	40°12'22.032"N	104°36'33.553"W	0.71	
13142.00	89.970	355.230	6974.04	6087.60	6086.76	-103.67	40°12'22.969"N	104°36'33.632"W	1.06	
13237.00	89.820	355.260	6974.21	6182.37	6181.44	-111.55	40°12'23.905"N	104°36'33.721"W	0.16	
13331.00	90.100	358.370	6974.28	6276.28	6275.28	-116.77	40°12'24.833"N	104°36'33.776"W	3.32	
13426.00	89.850	359.890	6974.32	6371.27	6370.27	-118.21	40°12'25.771"N	104°36'33.783"W	1.62	
13520.00	89.970	357.760	6974.47	6465.26	6464.24	-120.14	40°12'26.700"N	104°36'33.795"W	2.27	
13614.00	89.970	355.930	6974.52	6559.18	6558.09	-125.31	40°12'27.628"N	104°36'33.850"W	1.95	
13709.00	90.280	356.490	6974.31	6654.04	6652.89	-131.59	40°12'28.565"N	104°36'33.919"W	0.67	
13804.00	90.130	355.820	6973.97	6748.91	6747.67	-137.96	40°12'29.503"N	104°36'33.988"W	0.72	
13898.00	90.100	355.690	6973.78	6842.73	6841.41	-144.92	40°12'30.430"N	104°36'34.066"W	0.14	
13993.00	90.000	355.830	6973.70	6937.56	6936.15	-151.94	40°12'31.367"N	104°36'34.144"W	0.18	
14087.00	90.220	356.610	6973.52	7031.42	7029.95	-158.14	40°12'32.294"N	104°36'34.212"W	0.86	
14182.00	90.160	356.930	6973.20	7126.34	7124.80	-163.49	40°12'33.232"N	104°36'34.269"W	0.34	
14276.00	90.000	357.730	6973.07	7220.28	7218.69	-167.87	40°12'34.160"N	104°36'34.313"W	0.87	



Actual Wellpath Report
EMMY STATE H25-738 AWP
Page 7 of 9



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#05 EMMY STATE H25-738(285'FSL&1782'FEL,SEC.25)
Area	COLORADO	Well	EMMY STATE H25-738
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	EMMY STATE H25-738 AWB
Facility	SEC.25-T03N-R65W		

WELLPATH DATA (181 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
14371.00	90.130	358.470	6972.96	7315.26	7313.64	-171.02	40°12'35.099"N	104°36'34.341"W	0.79	
14465.00	90.000	359.180	6972.86	7409.26	7407.62	-172.95	40°12'36.027"N	104°36'34.354"W	0.77	
14560.00	89.880	0.420	6972.96	7504.25	7502.62	-173.28	40°12'36.966"N	104°36'34.346"W	1.31	
14654.00	90.070	1.210	6973.00	7598.22	7596.61	-171.94	40°12'37.895"N	104°36'34.317"W	0.86	
14749.00	89.880	1.940	6973.04	7693.14	7691.57	-169.33	40°12'38.833"N	104°36'34.271"W	0.79	
14843.00	90.370	2.830	6972.83	7786.99	7785.49	-165.42	40°12'39.761"N	104°36'34.208"W	1.08	
14938.00	90.190	2.530	6972.37	7881.82	7880.38	-160.98	40°12'40.698"N	104°36'34.138"W	0.37	
15032.00	90.070	0.060	6972.16	7975.75	7974.35	-158.86	40°12'41.626"N	104°36'34.099"W	2.63	
15127.00	90.190	359.600	6971.94	8070.75	8069.35	-159.14	40°12'42.565"N	104°36'34.090"W	0.50	
15222.00	90.160	0.280	6971.65	8165.74	8164.35	-159.24	40°12'43.504"N	104°36'34.079"W	0.72	
15316.00	90.100	0.720	6971.44	8259.72	8258.34	-158.42	40°12'44.432"N	104°36'34.056"W	0.47	
15411.00	89.970	1.600	6971.38	8354.66	8353.32	-156.49	40°12'45.371"N	104°36'34.019"W	0.94	
15506.00	90.000	1.910	6971.40	8449.57	8448.28	-153.58	40°12'46.309"N	104°36'33.970"W	0.33	
15600.00	89.850	1.190	6971.53	8543.50	8542.24	-151.04	40°12'47.237"N	104°36'33.925"W	0.78	
15695.00	90.160	0.850	6971.52	8638.45	8637.23	-149.35	40°12'48.175"N	104°36'33.891"W	0.48	
15789.00	89.850	0.410	6971.51	8732.42	8731.22	-148.32	40°12'49.104"N	104°36'33.865"W	0.57	
15884.00	90.800	0.320	6970.97	8827.40	8826.22	-147.71	40°12'50.043"N	104°36'33.845"W	1.00	
15978.00	90.280	0.710	6970.08	8921.37	8920.21	-146.87	40°12'50.971"N	104°36'33.822"W	0.69	
16072.00	90.000	1.580	6969.86	9015.32	9014.19	-144.99	40°12'51.900"N	104°36'33.786"W	0.97	
16167.00	89.940	1.890	6969.90	9110.23	9109.15	-142.11	40°12'52.838"N	104°36'33.736"W	0.33	
16261.00	90.130	2.670	6969.85	9204.10	9203.07	-138.37	40°12'53.766"N	104°36'33.676"W	0.85	
16356.00	90.160	2.830	6969.61	9298.92	9297.96	-133.81	40°12'54.703"N	104°36'33.605"W	0.17	
16451.00	90.590	2.530	6968.99	9393.74	9392.85	-129.37	40°12'55.640"N	104°36'33.535"W	0.55	
16545.00	90.590	2.690	6968.02	9487.58	9486.75	-125.09	40°12'56.568"N	104°36'33.468"W	0.17	
16734.00	89.300	1.110	6968.20	9676.36	9675.64	-118.83	40°12'58.433"N	104°36'33.363"W	1.08	
16829.00	89.480	358.600	6969.21	9771.34	9770.62	-119.07	40°12'59.372"N	104°36'33.354"W	2.65	
16924.00	89.540	358.190	6970.02	9866.33	9865.58	-121.73	40°13'00.311"N	104°36'33.376"W	0.44	
17019.00	89.540	357.890	6970.79	9961.31	9960.52	-124.98	40°13'01.249"N	104°36'33.405"W	0.32	
17113.00	89.300	357.590	6971.74	10055.27	10054.45	-128.68	40°13'02.178"N	104°36'33.441"W	0.41	
17208.00	89.330	357.780	6972.87	10150.23	10149.36	-132.52	40°13'03.116"N	104°36'33.478"W	0.20	Last BHI MWD Survey



Actual Wellpath Report

EMMY STATE H25-738 AWP

Page 8 of 9



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#05 EMMY STATE H25-738(285'FSL&1782'FEL,SEC.25)
Area	COLORADO	Well	EMMY STATE H25-738
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	EMMY STATE H25-738 AWB
Facility	SEC.25-T03N-R65W		

WELLPATH DATA (181 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
17283.00	89.330	357.780	6973.75	10225.20	10224.30	-135.42	40°13'03.857"N	104°36'33.506"W	0.00	Projection to Bit

HOLE & CASING SECTIONS - Ref Wellbore: EMMY STATE H25-738 AWB Ref Wellpath: EMMY STATE H25-738 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	1928.00	1898.00	30.00	1927.98	0.00	0.01	5.00	-0.74
9.625in Casing Surface	30.00	1928.00	1898.00	30.00	1927.98	0.00	0.01	5.00	-0.74
8.5in Open Hole	1928.00	17238.00	15310.00	1927.98	6973.22	5.00	-0.74	10179.34	-133.68

WELLPATH COMPOSITION - Ref Wellbore: EMMY STATE H25-738 AWB Ref Wellpath: EMMY STATE H25-738 AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	1928.00	Gyrodata standard - Drop gyro or Multi-shot	3rd party Surface Gyro <84'-1928'>	EMMY STATE H25-738 AWB
1928.00	17208.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	BHI/ATC 8.5" Hole OWSG MWD rev2+IFR1+MSA <1980'-17208'>	EMMY STATE H25-738 AWB
17208.00	17283.00	Blind Drilling (std)	Projection to bit	EMMY STATE H25-738 AWB



Actual Wellpath Report

EMMY STATE H25-738 AWP

Page 9 of 9



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#05 EMMY STATE H25-738(285'FSL&1782'FEL,SEC.25)
Area	COLORADO	Well	EMMY STATE H25-738
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	EMMY STATE H25-738 AWB
Facility	SEC.25-T03N-R65W		

WELLPATH COMMENTS					
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment	
1928.00	0.810	317.030	1927.98	Tie to Surface Gyros	
17208.00	89.330	357.780	6972.87	Last BHI MWD Survey	
17283.00	89.330	357.780	6973.75	Projection to Bit	