

# NOBLE ENERGY, INC

Location: COLORADO Slot: SLOT#01 SHUFLY STATE Y34-714(300'FSL&750'FEL,SEC.34)  
Field: WELD COUNTY (NOBLE NAD 83 GRID) Well: SHUFLY STATE Y34-714  
Facility: SEC.34-T02N-R64W Wellbore: SHUFLY STATE Y34-714 PWB

Not reference wellpath is SHUFLY STATE Y34-714 (REV-3) PWB	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to RGS (30'NB) (RGS)	* - Wellpath was transformed from a different geodetic datum
Measured depths are referenced to RGS (30'NB) (RGS)	North Reference: Grid north
RGS (30'NB) (RGS) to Mean Sea Level: 5069 feet	Scale: True distance
Mean Sea Level to Ground level (At Slot: SLOT#01 SHUFLY STATE Y34-714(300'FSL&750'FEL,SEC.34): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: gusman on 2018-01-18
	Database: WA_DEN_Denver_Defn

## Survey Program

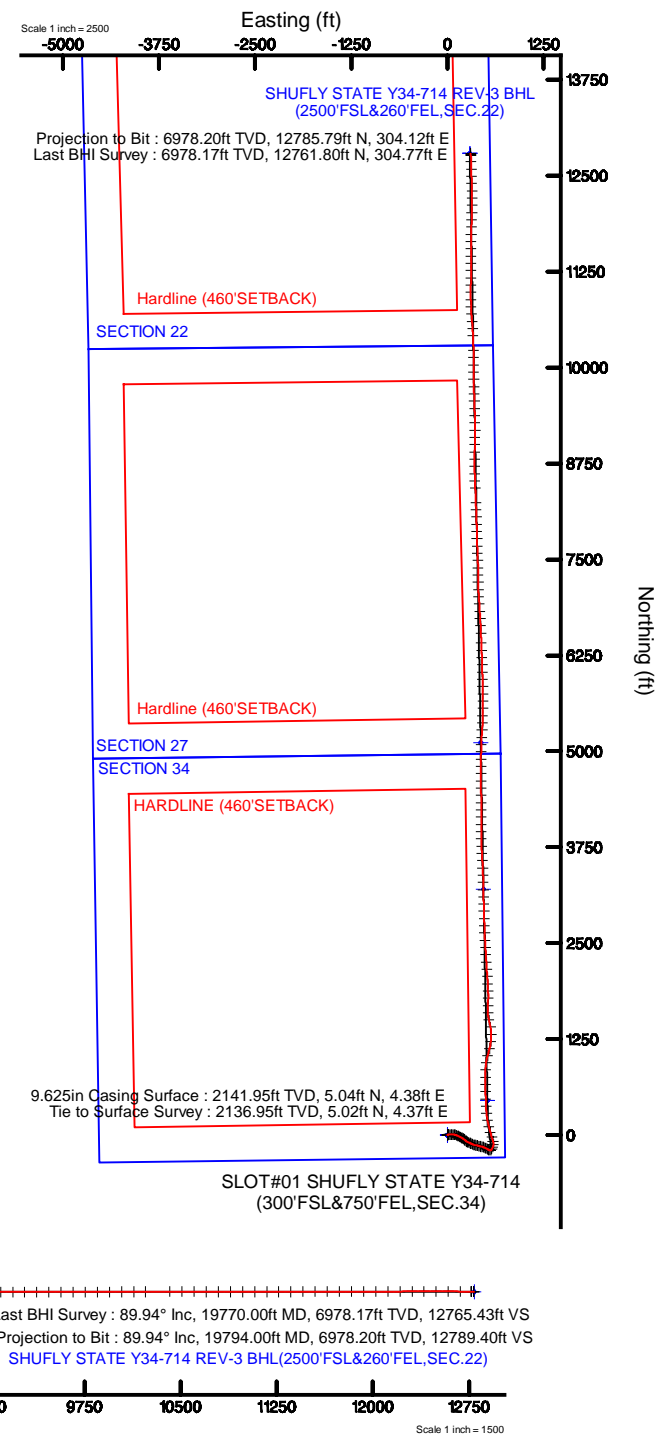
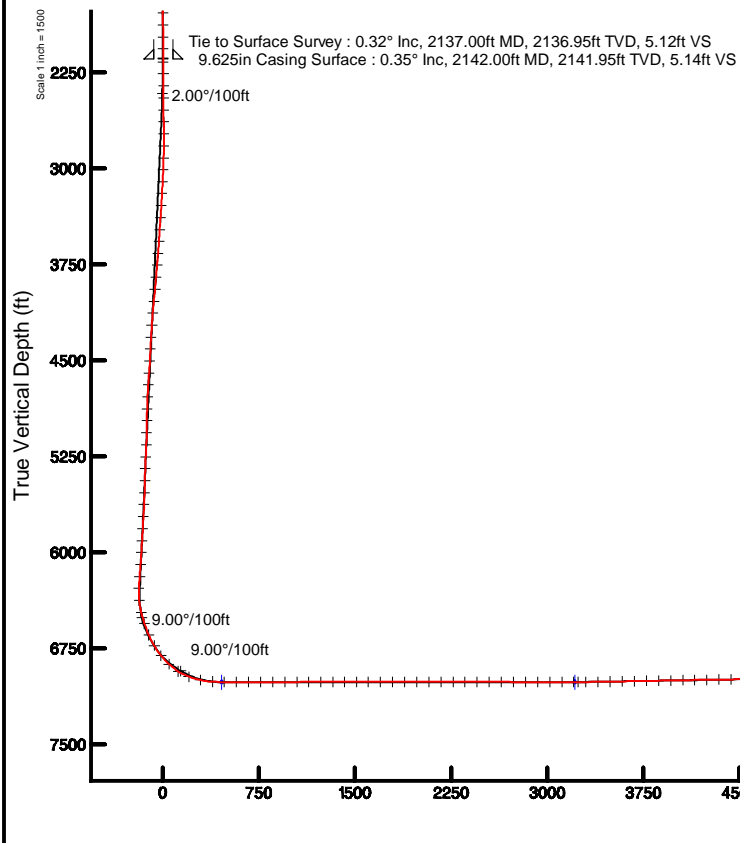
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
30.00	19821.16	OWSG MWD rev2	OWSG MWD rev2 + IFR1 + Multi-Station Correction		SHUFLY STATE Y34-714 PWB

## Location Information

Facility Name			Grid East (SUS F)	Grid North (SUS F)	Latitude	Longitude
SEC.34-T02N-R64W			3271251.162	1275933.485	42°05'18.495"N	104°31'49.800"W
Slot	Local N (F)	Local E (F)	Grid East (SUS F)	Grid North (SUS F)	Latitude	Longitude
SLOT#01 SHUFLY STATE Y34-714(300'FSL&750'FEL,SEC.34)	0.00	0.00	3271251.162	1275933.485	42°05'18.495"N	104°31'49.800"W
R/G (30'NB) (RGS) to Ground level (At Slot: SLOT#01 SHUFLY STATE Y34-714(300'FSL&750'FEL,SEC.34)					5069ft	
Mean Sea Level to Ground level (At Slot: SLOT#01 SHUFLY STATE Y34-714(300'FSL&750'FEL,SEC.34)					0ft	
R/G (30'NB) (RGS) to Mean Sea Level					5069ft	

## Comments

SURFACE LOCATION: SESE  
40.08846N  
104.53050W  
API: 05-123-45621





Actual Wellpath Report

SHUFLY STATE Y34-714 AWP

Page 1 of 9



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#01 SHUFLY STATE Y34-714(300'FSL&750'FEL,SEC.34)
Area	COLORADO	Well	SHUFLY STATE Y34-714
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	SHUFLY STATE Y34-714 AWB
Facility	SEC.34-T02N-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	0.999961	Report Generated	1/18/2018 at 2:19:54 PM
Convergence at slot	0.63° East	Database/Source file	WA_DEN_Denver_Defn/SHUFLY_STATE_Y34-714_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.00	0.00	3271251.19	1276553.49	40°05'18.456"N	104°31'49.800"W
Facility Reference Pt			3271251.19	1276553.49	40°05'18.456"N	104°31'49.800"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	5069.00ft
Horizontal Reference Pt	Slot	RIG (30'KB) (RKB) to Mean Sea Level	5069.00ft
Vertical Reference Pt	RIG (30'KB) (RKB)	RIG (30'KB) (RKB) to Ground Level at Slot (SLOT#01 SHUFLY STATE Y34-714 (300'FSL&750'FEL,SEC.34))	5069.00ft
MD Reference Pt	RIG (30'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	1.30°



Actual Wellpath Report  
SHUFLY STATE Y34-714 AWP  
Page 2 of 9



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Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	SHUFLY STATE Y34-714 AWB
Facility	SEC.34-T02N-R64W		

WELLPATH DATA (210 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00	0.000	62.500	0.00	0.00	0.00	0.00	40°05'18.456"N	104°31'49.800"W	0.00	
77.00	0.160	62.500	77.00	0.05	0.05	0.10	40°05'18.456"N	104°31'49.799"W	0.21	
176.00	0.220	55.300	176.00	0.23	0.22	0.37	40°05'18.458"N	104°31'49.795"W	0.07	
270.00	0.400	7.210	270.00	0.66	0.65	0.56	40°05'18.462"N	104°31'49.793"W	0.32	
365.00	0.340	238.090	365.00	0.84	0.83	0.37	40°05'18.464"N	104°31'49.795"W	0.70	
459.00	0.500	290.750	458.99	0.82	0.83	-0.25	40°05'18.464"N	104°31'49.803"W	0.42	
554.00	0.650	302.230	553.99	1.24	1.26	-1.10	40°05'18.469"N	104°31'49.814"W	0.20	
648.00	0.260	179.710	647.99	1.30	1.33	-1.55	40°05'18.469"N	104°31'49.820"W	0.87	
743.00	0.370	186.870	742.99	0.78	0.81	-1.58	40°05'18.464"N	104°31'49.820"W	0.12	
837.00	0.710	96.370	836.98	0.42	0.45	-1.04	40°05'18.461"N	104°31'49.813"W	0.85	
932.00	0.580	79.360	931.98	0.47	0.47	0.02	40°05'18.461"N	104°31'49.800"W	0.24	
1026.00	0.570	106.050	1025.97	0.45	0.43	0.93	40°05'18.460"N	104°31'49.788"W	0.28	
1121.00	0.400	98.690	1120.97	0.29	0.25	1.72	40°05'18.458"N	104°31'49.778"W	0.19	
1215.00	0.230	73.940	1214.97	0.30	0.25	2.22	40°05'18.458"N	104°31'49.771"W	0.23	
1310.00	0.380	68.610	1309.97	0.48	0.42	2.70	40°05'18.460"N	104°31'49.765"W	0.16	
1404.00	0.440	55.630	1403.96	0.81	0.74	3.29	40°05'18.463"N	104°31'49.758"W	0.12	
1499.00	0.490	13.340	1498.96	1.42	1.34	3.68	40°05'18.469"N	104°31'49.752"W	0.36	
1593.00	0.410	346.790	1592.96	2.14	2.06	3.70	40°05'18.476"N	104°31'49.752"W	0.23	
1688.00	0.140	313.360	1687.96	2.55	2.47	3.53	40°05'18.480"N	104°31'49.754"W	0.32	
1782.00	0.220	21.360	1781.96	2.79	2.71	3.52	40°05'18.482"N	104°31'49.754"W	0.23	
1876.00	0.250	20.400	1875.96	3.16	3.07	3.65	40°05'18.486"N	104°31'49.753"W	0.03	
1971.00	0.450	10.090	1970.95	3.72	3.64	3.79	40°05'18.492"N	104°31'49.751"W	0.22	
2065.00	0.650	25.060	2064.95	4.57	4.48	4.08	40°05'18.500"N	104°31'49.747"W	0.26	
2137.00	0.320	33.300	2136.95	5.12	5.02	4.37	40°05'18.505"N	104°31'49.743"W	0.47	Tie to Surface Survey
2166.00	0.480	35.350	2165.95	5.29	5.19	4.48	40°05'18.507"N	104°31'49.742"W	0.55	
2260.00	2.170	85.320	2259.92	5.80	5.65	6.48	40°05'18.511"N	104°31'49.716"W	2.02	
2355.00	4.600	88.840	2354.75	6.15	5.88	12.08	40°05'18.513"N	104°31'49.644"W	2.57	
2449.00	6.520	88.100	2448.30	6.61	6.13	21.19	40°05'18.514"N	104°31'49.527"W	2.04	
2544.00	8.710	88.690	2542.46	7.24	6.47	33.77	40°05'18.516"N	104°31'49.365"W	2.31	
2638.00	8.700	84.910	2635.38	8.36	7.27	47.97	40°05'18.523"N	104°31'49.182"W	0.61	



Actual Wellpath Report  
SHUFLY STATE Y34-714 AWP  
Page 3 of 9



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#01 SHUFLY STATE Y34-714(300'FSL&750'FEL,SEC.34)
Area	COLORADO	Well	SHUFLY STATE Y34-714
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	SHUFLY STATE Y34-714 AWB
Facility	SEC.34-T02N-R64W		

WELLPATH DATA (210 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2733.00	8.740	87.470	2729.28	9.64	8.22	62.34	40°05'18.531"N	104°31'48.997"W	0.41	
2827.00	8.600	94.240	2822.21	9.76	8.02	76.48	40°05'18.527"N	104°31'48.815"W	1.10	
2922.00	8.790	101.620	2916.12	8.09	6.03	90.67	40°05'18.506"N	104°31'48.633"W	1.19	
3016.00	8.740	108.310	3009.02	4.72	2.34	104.49	40°05'18.468"N	104°31'48.455"W	1.09	
3111.00	8.780	110.660	3102.91	0.20	-2.48	118.12	40°05'18.419"N	104°31'48.281"W	0.38	
3205.00	8.680	112.450	3195.82	-4.73	-7.72	131.39	40°05'18.365"N	104°31'48.111"W	0.31	
3300.00	8.700	116.060	3289.74	-10.33	-13.62	144.47	40°05'18.306"N	104°31'47.943"W	0.57	
3394.00	8.680	118.400	3382.66	-16.54	-20.12	157.10	40°05'18.240"N	104°31'47.782"W	0.38	
3489.00	8.690	116.360	3476.57	-22.84	-26.71	169.84	40°05'18.174"N	104°31'47.619"W	0.32	
3583.00	8.630	116.760	3569.50	-28.88	-33.04	182.50	40°05'18.110"N	104°31'47.457"W	0.09	
3677.00	8.280	122.010	3662.48	-35.37	-39.80	194.53	40°05'18.042"N	104°31'47.303"W	0.90	
3772.00	8.780	126.600	3756.43	-43.05	-47.75	206.15	40°05'17.962"N	104°31'47.154"W	0.89	
3867.00	8.480	125.870	3850.35	-51.21	-56.18	217.65	40°05'17.877"N	104°31'47.008"W	0.34	
3961.00	8.420	130.690	3943.33	-59.51	-64.73	228.49	40°05'17.792"N	104°31'46.870"W	0.76	
4056.00	8.610	130.300	4037.28	-68.40	-73.86	239.18	40°05'17.700"N	104°31'46.733"W	0.21	
4150.00	8.780	124.850	4130.20	-76.80	-82.51	250.44	40°05'17.614"N	104°31'46.590"W	0.89	
4245.00	8.790	117.970	4224.09	-84.06	-90.06	262.80	40°05'17.538"N	104°31'46.432"W	1.11	
4340.00	8.730	111.350	4317.99	-89.79	-96.09	275.92	40°05'17.477"N	104°31'46.264"W	1.06	
4434.00	8.710	111.850	4410.90	-94.73	-101.34	289.17	40°05'17.423"N	104°31'46.094"W	0.08	
4529.00	8.680	111.910	4504.81	-99.78	-106.69	302.50	40°05'17.369"N	104°31'45.923"W	0.03	
4623.00	8.730	120.220	4597.73	-105.73	-112.92	315.25	40°05'17.306"N	104°31'45.760"W	1.34	
4718.00	8.720	119.940	4691.63	-112.66	-120.15	327.72	40°05'17.233"N	104°31'45.601"W	0.05	
4812.00	8.770	106.940	4784.55	-118.01	-125.79	340.75	40°05'17.176"N	104°31'45.434"W	2.10	
4907.00	8.610	101.480	4878.46	-121.22	-129.32	354.64	40°05'17.140"N	104°31'45.256"W	0.88	
5001.00	8.600	97.000	4971.40	-123.16	-131.57	368.52	40°05'17.116"N	104°31'45.077"W	0.71	
5096.00	8.570	98.050	5065.34	-124.70	-133.43	382.57	40°05'17.096"N	104°31'44.897"W	0.17	
5191.00	8.690	107.770	5159.27	-127.56	-136.61	396.42	40°05'17.063"N	104°31'44.719"W	1.54	
5285.00	8.770	109.080	5252.18	-131.76	-141.12	409.95	40°05'17.017"N	104°31'44.546"W	0.23	
5380.00	8.720	103.880	5346.07	-135.54	-145.22	423.79	40°05'16.975"N	104°31'44.368"W	0.83	
5475.00	8.400	101.040	5440.02	-138.28	-148.27	437.59	40°05'16.943"N	104°31'44.191"W	0.56	



Actual Wellpath Report  
SHUFLY STATE Y34-714 AWP  
Page 4 of 9



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#01 SHUFLY STATE Y34-714(300'FSL&750'FEL,SEC.34)
Area	COLORADO	Well	SHUFLY STATE Y34-714
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	SHUFLY STATE Y34-714 AWB
Facility	SEC.34-T02N-R64W		

WELLPATH DATA (210 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5569.00	8.250	104.780	5533.03	-141.02	-151.31	450.85	40°05'16.912"N	104°31'44.021"W	0.60	
5664.00	7.800	111.300	5627.10	-144.81	-155.39	463.45	40°05'16.870"N	104°31'43.859"W	1.07	
5759.00	8.250	113.440	5721.17	-149.58	-160.44	475.71	40°05'16.819"N	104°31'43.702"W	0.57	
5853.00	8.550	111.810	5814.16	-154.57	-165.72	488.38	40°05'16.766"N	104°31'43.540"W	0.41	
5948.00	8.460	116.650	5908.11	-160.04	-171.48	501.18	40°05'16.707"N	104°31'43.376"W	0.76	
6042.00	8.490	117.160	6001.09	-166.02	-177.75	513.54	40°05'16.644"N	104°31'43.218"W	0.09	
6137.00	8.520	119.790	6095.04	-172.44	-184.45	525.88	40°05'16.577"N	104°31'43.060"W	0.41	
6231.00	8.480	119.630	6188.01	-179.05	-191.33	537.95	40°05'16.507"N	104°31'42.906"W	0.05	
6326.00	8.620	109.170	6281.96	-184.56	-197.13	550.77	40°05'16.448"N	104°31'42.742"W	1.64	
6420.00	8.950	57.470	6375.00	-182.64	-195.51	563.60	40°05'16.463"N	104°31'42.577"W	8.13	
6515.00	15.870	34.830	6467.77	-167.68	-180.85	577.28	40°05'16.606"N	104°31'42.399"W	8.77	
6609.00	19.990	21.390	6557.22	-141.85	-155.32	590.49	40°05'16.857"N	104°31'42.225"W	6.19	
6704.00	23.980	4.810	6645.38	-107.28	-120.92	598.04	40°05'17.196"N	104°31'42.123"W	7.73	
6799.00	31.100	343.110	6729.78	-64.54	-78.04	592.51	40°05'17.621"N	104°31'42.188"W	12.84	
6893.00	39.580	342.350	6806.39	-13.06	-26.18	576.35	40°05'18.135"N	104°31'42.389"W	9.03	
6988.00	48.410	344.190	6874.66	49.64	36.97	557.45	40°05'18.761"N	104°31'42.623"W	9.39	
7082.00	59.150	346.290	6930.13	122.43	110.21	538.25	40°05'19.487"N	104°31'42.860"W	11.57	
7177.00	69.500	349.690	6971.24	205.64	193.85	520.57	40°05'20.315"N	104°31'43.075"W	11.36	
7271.00	78.030	354.640	6997.51	294.65	283.16	508.37	40°05'21.199"N	104°31'43.220"W	10.39	
7366.00	86.300	357.460	7010.46	388.28	376.96	501.92	40°05'22.127"N	104°31'43.289"W	9.19	
7460.00	89.910	358.090	7013.56	482.03	470.82	498.27	40°05'23.055"N	104°31'43.323"W	3.90	
7555.00	90.150	358.030	7013.51	576.88	565.77	495.05	40°05'23.993"N	104°31'43.351"W	0.26	
7649.00	89.940	0.100	7013.44	670.80	659.75	493.52	40°05'24.922"N	104°31'43.358"W	2.21	
7744.00	89.850	0.810	7013.62	765.79	754.74	494.28	40°05'25.861"N	104°31'43.335"W	0.75	
7838.00	90.030	0.690	7013.71	859.79	848.74	495.51	40°05'26.789"N	104°31'43.305"W	0.23	
7933.00	90.220	8.510	7013.51	954.56	943.36	503.12	40°05'27.723"N	104°31'43.194"W	8.23	
8027.00	90.430	15.530	7012.97	1046.86	1035.24	522.68	40°05'28.629"N	104°31'42.930"W	7.47	
8122.00	90.550	13.790	7012.16	1139.28	1127.14	546.72	40°05'29.535"N	104°31'42.607"W	1.84	
8216.00	90.120	7.570	7011.61	1231.98	1219.46	564.13	40°05'30.445"N	104°31'42.370"W	6.63	
8311.00	90.000	0.300	7011.51	1326.81	1314.17	570.65	40°05'31.380"N	104°31'42.273"W	7.65	



Actual Wellpath Report  
SHUFLY STATE Y34-714 AWP  
Page 5 of 9



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Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	SHUFLY STATE Y34-714 AWB
Facility	SEC.34-T02N-R64W		

WELLPATH DATA (210 stations)										
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8405.00	89.850	347.970	7011.63	1419.90	1407.50	561.06	40°05'32.304"N	104°31'42.383"W	13.12	
8500.00	89.970	346.570	7011.78	1512.06	1500.16	540.13	40°05'33.222"N	104°31'42.640"W	1.48	
8594.00	90.180	356.970	7011.66	1604.63	1593.07	526.69	40°05'34.141"N	104°31'42.799"W	11.07	
8689.00	89.940	2.960	7011.56	1699.57	1688.02	526.63	40°05'35.079"N	104°31'42.787"W	6.31	
8784.00	89.820	0.940	7011.76	1794.55	1782.96	529.87	40°05'36.017"N	104°31'42.732"W	2.13	
8878.00	89.820	358.100	7012.05	1888.50	1876.95	529.08	40°05'36.946"N	104°31'42.729"W	3.02	
8973.00	90.030	356.600	7012.18	1983.27	1971.85	524.69	40°05'37.884"N	104°31'42.772"W	1.59	
9067.00	89.850	355.580	7012.28	2076.88	2065.63	518.28	40°05'38.812"N	104°31'42.841"W	1.10	
9162.00	89.820	355.850	7012.55	2171.43	2160.36	511.18	40°05'39.748"N	104°31'42.919"W	0.29	
9257.00	90.310	356.830	7012.44	2266.07	2255.17	505.11	40°05'40.686"N	104°31'42.984"W	1.15	
9351.00	89.910	356.570	7012.26	2359.77	2349.01	499.70	40°05'41.614"N	104°31'43.040"W	0.51	
9446.00	89.940	356.620	7012.39	2454.45	2443.84	494.06	40°05'42.552"N	104°31'43.099"W	0.06	
9540.00	89.910	357.010	7012.51	2548.16	2537.70	488.84	40°05'43.480"N	104°31'43.153"W	0.42	
9635.00	89.880	357.600	7012.68	2642.93	2632.59	484.37	40°05'44.418"N	104°31'43.197"W	0.62	
9729.00	89.940	358.100	7012.83	2736.75	2726.52	480.85	40°05'45.346"N	104°31'43.229"W	0.54	
9824.00	89.820	358.550	7013.03	2831.63	2821.48	478.07	40°05'46.285"N	104°31'43.252"W	0.49	
9918.00	89.570	358.530	7013.53	2925.51	2915.45	475.67	40°05'47.214"N	104°31'43.269"W	0.27	
10013.00	89.970	358.020	7013.91	3020.38	3010.41	472.81	40°05'48.152"N	104°31'43.293"W	0.68	
10107.00	89.880	358.370	7014.04	3114.24	3104.36	469.85	40°05'49.081"N	104°31'43.318"W	0.38	
10201.00	89.940	358.850	7014.18	3208.14	3198.33	467.57	40°05'50.010"N	104°31'43.334"W	0.51	
10296.00	91.140	358.710	7013.29	3303.04	3293.30	465.55	40°05'50.949"N	104°31'43.346"W	1.27	
10391.00	90.860	358.370	7011.63	3397.91	3388.26	463.13	40°05'51.887"N	104°31'43.364"W	0.46	
10485.00	91.110	357.210	7010.01	3491.72	3482.17	459.51	40°05'52.816"N	104°31'43.398"W	1.26	
10580.00	91.080	356.800	7008.20	3586.44	3577.03	454.54	40°05'53.753"N	104°31'43.448"W	0.43	
10674.00	91.110	356.180	7006.40	3680.09	3670.83	448.79	40°05'54.681"N	104°31'43.509"W	0.66	
10769.00	91.080	357.790	7004.59	3774.80	3765.68	443.79	40°05'55.619"N	104°31'43.560"W	1.69	
10863.00	91.080	359.320	7002.81	3868.67	3859.63	441.42	40°05'56.547"N	104°31'43.577"W	1.63	
10957.00	91.080	359.300	7001.04	3962.60	3953.61	440.29	40°05'57.476"N	104°31'43.578"W	0.02	
11052.00	91.020	359.910	6999.30	4057.54	4048.59	439.64	40°05'58.415"N	104°31'43.573"W	0.65	
11146.00	90.950	359.800	6997.69	4151.50	4142.57	439.40	40°05'59.344"N	104°31'43.563"W	0.14	





Actual Wellpath Report  
SHUFLY STATE Y34-714 AWP  
Page 6 of 9



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#01 SHUFLY STATE Y34-714(300'FSL&750'FEL,SEC.34)
Area	COLORADO	Well	SHUFLY STATE Y34-714
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	SHUFLY STATE Y34-714 AWB
Facility	SEC.34-T02N-R64W		

WELLPATH DATA (210 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11241.00	90.950	359.820	6996.11	4246.45	4237.56	439.08	40°06'00.282"N	104°31'43.554"W	0.02	
11336.00	91.020	359.830	6994.48	4341.40	4332.55	438.79	40°06'01.221"N	104°31'43.544"W	0.07	
11430.00	90.800	359.610	6992.98	4435.36	4426.53	438.33	40°06'02.150"N	104°31'43.537"W	0.33	
11524.00	90.800	359.580	6991.67	4529.31	4520.52	437.67	40°06'03.079"N	104°31'43.532"W	0.03	
11619.00	91.110	0.290	6990.09	4624.26	4615.51	437.56	40°06'04.017"N	104°31'43.520"W	0.82	
11713.00	90.860	359.670	6988.47	4718.23	4709.49	437.53	40°06'04.946"N	104°31'43.507"W	0.71	
11808.00	90.980	359.980	6986.95	4813.18	4804.48	437.24	40°06'05.885"N	104°31'43.498"W	0.35	
11902.00	90.980	0.440	6985.34	4907.15	4898.47	437.58	40°06'06.813"N	104°31'43.480"W	0.49	
11997.00	91.020	0.680	6983.68	5002.13	4993.45	438.51	40°06'07.752"N	104°31'43.455"W	0.26	
12091.00	90.950	2.460	6982.07	5096.11	5087.39	441.09	40°06'08.680"N	104°31'43.408"W	1.89	
12186.00	90.490	2.130	6980.87	5191.09	5182.31	444.89	40°06'09.617"N	104°31'43.346"W	0.60	
12281.00	90.150	5.460	6980.34	5285.98	5277.09	451.18	40°06'10.553"N	104°31'43.252"W	3.52	
12375.00	89.910	1.850	6980.29	5379.89	5370.88	457.17	40°06'11.479"N	104°31'43.161"W	3.85	
12470.00	90.060	359.610	6980.32	5474.88	5465.87	458.38	40°06'12.418"N	104°31'43.132"W	2.36	
12564.00	89.910	2.200	6980.34	5568.87	5559.85	459.86	40°06'13.346"N	104°31'43.100"W	2.76	
12659.00	90.090	359.880	6980.34	5663.86	5654.82	461.59	40°06'14.285"N	104°31'43.064"W	2.45	
12753.00	90.060	359.380	6980.22	5757.82	5748.82	460.98	40°06'15.214"N	104°31'43.059"W	0.53	
12848.00	90.060	358.010	6980.12	5852.72	5843.79	458.82	40°06'16.152"N	104°31'43.073"W	1.44	
12942.00	90.150	358.620	6979.95	5946.59	5937.75	456.05	40°06'17.081"N	104°31'43.096"W	0.66	
13037.00	90.030	359.650	6979.80	6041.52	6032.74	454.62	40°06'18.020"N	104°31'43.101"W	1.09	
13131.00	89.660	358.130	6980.05	6135.43	6126.72	452.80	40°06'18.949"N	104°31'43.111"W	1.66	
13225.00	89.690	357.150	6980.58	6229.24	6220.64	448.93	40°06'19.877"N	104°31'43.148"W	1.04	
13320.00	89.940	356.940	6980.89	6323.98	6315.51	444.03	40°06'20.815"N	104°31'43.197"W	0.34	
13414.00	90.000	358.570	6980.94	6417.79	6409.43	440.35	40°06'21.744"N	104°31'43.231"W	1.74	
13545.00	90.060	357.880	6980.87	6548.60	6540.37	436.29	40°06'23.038"N	104°31'43.265"W	0.53	
13640.00	89.750	356.780	6981.03	6643.37	6635.27	431.87	40°06'23.976"N	104°31'43.309"W	1.20	
13734.00	89.940	356.160	6981.28	6737.04	6729.09	426.08	40°06'24.904"N	104°31'43.370"W	0.69	
13829.00	89.880	356.490	6981.43	6831.68	6823.89	419.99	40°06'25.841"N	104°31'43.435"W	0.35	
13923.00	89.850	356.640	6981.65	6925.36	6917.72	414.36	40°06'26.769"N	104°31'43.494"W	0.16	
14018.00	89.940	355.940	6981.83	7019.99	7012.52	408.21	40°06'27.707"N	104°31'43.560"W	0.74	



Actual Wellpath Report

SHUFLY STATE Y34-714 AWP



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#01 SHUFLY STATE Y34-714(300'FSL&750'FEL,SEC.34)
Area	COLORADO	Well	SHUFLY STATE Y34-714
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	SHUFLY STATE Y34-714 AWB
Facility	SEC.34-T02N-R64W		

WELLPATH DATA (210 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
14112.00	90.060	357.800	6981.83	7113.71	7106.38	403.08	40°06'28.635"N	104°31'43.613"W	1.98	
14207.00	90.060	358.830	6981.73	7208.58	7201.34	400.28	40°06'29.573"N	104°31'43.635"W	1.08	
14301.00	89.910	359.230	6981.75	7302.50	7295.32	398.69	40°06'30.502"N	104°31'43.643"W	0.45	
14396.00	90.250	359.530	6981.62	7397.45	7390.32	397.66	40°06'31.441"N	104°31'43.642"W	0.48	
14491.00	90.000	357.590	6981.41	7492.34	7485.28	395.28	40°06'32.380"N	104°31'43.660"W	2.06	
14585.00	89.880	357.430	6981.51	7586.13	7579.19	391.19	40°06'33.308"N	104°31'43.699"W	0.21	
14679.00	90.090	358.320	6981.54	7679.96	7673.13	387.71	40°06'34.237"N	104°31'43.731"W	0.97	
14774.00	89.880	358.020	6981.56	7774.82	7768.08	384.67	40°06'35.175"N	104°31'43.756"W	0.39	
14868.00	89.630	358.970	6981.96	7868.70	7862.04	382.21	40°06'36.104"N	104°31'43.775"W	1.05	
14963.00	90.000	358.280	6982.27	7963.60	7957.02	379.93	40°06'37.043"N	104°31'43.791"W	0.82	
15057.00	89.940	357.840	6982.32	8057.45	8050.96	376.74	40°06'37.971"N	104°31'43.819"W	0.47	
15152.00	89.880	357.810	6982.47	8152.27	8145.89	373.14	40°06'38.910"N	104°31'43.852"W	0.07	
15246.00	89.940	358.140	6982.62	8246.11	8239.83	369.82	40°06'39.838"N	104°31'43.881"W	0.36	
15435.00	89.970	357.190	6982.77	8434.73	8428.67	362.12	40°06'41.705"N	104°31'43.954"W	0.50	
15529.00	90.150	357.780	6982.67	8528.52	8522.58	357.99	40°06'42.634"N	104°31'43.993"W	0.66	
15624.00	90.120	358.680	6982.44	8623.38	8617.54	355.06	40°06'43.572"N	104°31'44.018"W	0.95	
15718.00	90.060	359.650	6982.30	8717.32	8711.53	353.69	40°06'44.501"N	104°31'44.022"W	1.03	
15813.00	90.000	0.440	6982.25	8812.29	8806.52	353.76	40°06'45.440"N	104°31'44.008"W	0.83	
15907.00	90.180	0.670	6982.10	8906.28	8900.52	354.67	40°06'46.369"N	104°31'43.983"W	0.31	
16002.00	90.060	1.160	6981.90	9001.28	8995.51	356.19	40°06'47.307"N	104°31'43.950"W	0.53	
16096.00	90.150	1.230	6981.73	9095.28	9089.49	358.15	40°06'48.236"N	104°31'43.911"W	0.12	
16191.00	90.060	359.770	6981.55	9190.27	9184.48	358.98	40°06'49.174"N	104°31'43.887"W	1.54	
16285.00	90.090	359.020	6981.43	9284.22	9278.47	357.99	40°06'50.103"N	104°31'43.887"W	0.80	
16380.00	90.060	358.720	6981.31	9379.13	9373.46	356.11	40°06'51.042"N	104°31'43.898"W	0.32	
16474.00	90.060	358.370	6981.21	9473.02	9467.43	353.73	40°06'51.971"N	104°31'43.915"W	0.37	
16569.00	90.030	357.620	6981.13	9567.86	9562.37	350.40	40°06'52.909"N	104°31'43.945"W	0.79	
16663.00	89.820	357.850	6981.26	9661.68	9656.29	346.69	40°06'53.838"N	104°31'43.979"W	0.33	
16758.00	90.120	358.690	6981.30	9756.55	9751.25	343.82	40°06'54.776"N	104°31'44.003"W	0.94	
16852.00	90.280	359.510	6980.98	9850.47	9845.24	342.34	40°06'55.705"N	104°31'44.008"W	0.89	
16947.00	90.030	359.370	6980.72	9945.42	9940.23	341.42	40°06'56.644"N	104°31'44.007"W	0.30	





Actual Wellpath Report  
SHUFLY STATE Y34-714 AWP  
Page 8 of 9



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#01 SHUFLY STATE Y34-714(300'FSL&750'FEL,SEC.34)
Area	COLORADO	Well	SHUFLY STATE Y34-714
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	SHUFLY STATE Y34-714 AWB
Facility	SEC.34-T02N-R64W		

WELLPATH DATA (210 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
17041.00	90.280	359.530	6980.47	10039.37	10034.23	340.51	40°06'57.573"N	104°31'44.005"W	0.32	
17136.00	90.030	359.470	6980.21	10134.33	10129.22	339.68	40°06'58.512"N	104°31'44.003"W	0.27	
17230.00	90.150	359.730	6980.06	10228.29	10223.22	339.03	40°06'59.441"N	104°31'43.998"W	0.30	
17419.00	90.060	356.550	6979.71	10416.97	10412.10	332.89	40°07'01.308"N	104°31'44.050"W	1.68	
17514.00	89.940	356.530	6979.71	10511.64	10506.92	327.16	40°07'02.245"N	104°31'44.111"W	0.13	
17609.00	89.880	354.840	6979.86	10606.18	10601.65	320.01	40°07'03.182"N	104°31'44.189"W	1.78	
17703.00	89.970	355.640	6979.99	10699.66	10695.32	312.21	40°07'04.109"N	104°31'44.276"W	0.86	
17798.00	89.850	358.130	6980.14	10794.37	10790.18	307.05	40°07'05.047"N	104°31'44.329"W	2.62	
17892.00	90.150	359.270	6980.14	10888.27	10884.15	304.92	40°07'05.975"N	104°31'44.344"W	1.25	
17987.00	89.910	0.230	6980.09	10983.23	10979.15	304.50	40°07'06.914"N	104°31'44.336"W	1.04	
18081.00	89.970	0.340	6980.18	11077.22	11073.15	304.97	40°07'07.843"N	104°31'44.316"W	0.13	
18176.00	90.030	0.260	6980.18	11172.20	11168.15	305.47	40°07'08.782"N	104°31'44.297"W	0.11	
18270.00	89.940	0.240	6980.21	11266.19	11262.14	305.88	40°07'09.710"N	104°31'44.278"W	0.10	
18365.00	90.150	0.120	6980.13	11361.17	11357.14	306.18	40°07'10.649"N	104°31'44.261"W	0.25	
18459.00	90.220	0.250	6979.83	11455.15	11451.14	306.48	40°07'11.578"N	104°31'44.244"W	0.16	
18554.00	90.250	0.470	6979.44	11550.14	11546.14	307.08	40°07'12.517"N	104°31'44.223"W	0.23	
18649.00	89.910	0.680	6979.31	11645.13	11641.14	308.03	40°07'13.455"N	104°31'44.197"W	0.42	
18743.00	90.150	1.190	6979.26	11739.13	11735.12	309.56	40°07'14.384"N	104°31'44.164"W	0.60	
18837.00	90.620	1.860	6978.63	11833.12	11829.09	312.07	40°07'15.312"N	104°31'44.118"W	0.87	
18932.00	90.060	1.510	6978.06	11928.12	11924.04	314.86	40°07'16.250"N	104°31'44.069"W	0.70	
19026.00	89.940	1.230	6978.06	12022.12	12018.02	317.11	40°07'17.178"N	104°31'44.027"W	0.32	
19121.00	90.090	0.470	6978.04	12117.12	12113.00	318.52	40°07'18.117"N	104°31'43.995"W	0.82	
19215.00	90.180	0.010	6977.82	12211.10	12207.00	318.91	40°07'19.046"N	104°31'43.977"W	0.50	
19310.00	90.250	359.040	6977.46	12306.05	12302.00	318.12	40°07'19.985"N	104°31'43.974"W	1.02	
19404.00	90.220	358.110	6977.08	12399.94	12395.97	315.79	40°07'20.913"N	104°31'43.991"W	0.99	
19499.00	89.850	358.270	6977.02	12494.80	12490.92	312.78	40°07'21.852"N	104°31'44.016"W	0.42	
19594.00	89.690	358.260	6977.40	12589.67	12585.88	309.91	40°07'22.791"N	104°31'44.040"W	0.17	
19688.00	89.690	358.300	6977.91	12683.54	12679.83	307.09	40°07'23.719"N	104°31'44.063"W	0.04	
19770.00	89.940	358.460	6978.17	12765.43	12761.80	304.77	40°07'24.529"N	104°31'44.081"W	0.36	Last BHI Survey
19794.00	89.940	358.460	6978.20	12789.40	12785.79	304.12	40°07'24.767"N	104°31'44.086"W	0.00	Projection to Bit

HOLE & CASING SECTIONS - Ref Wellbore: SHUFLY STATE Y34-714 AWB    Ref Wellpath: SHUFLY STATE Y34-714 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	2142.00	2112.00	30.00	2141.95	0.01	0.01	5.04	4.38
9.625in Casing Surface	30.00	2142.00	2112.00	30.00	2141.95	0.01	0.01	5.04	4.38
8.5in Open Hole	2142.00	19794.00	17652.00	2141.95	6978.20	5.04	4.38	12785.79	304.12

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SHUFLY STATE Y34-714 SECTION 22	0.00	0.00	0.00	3271251.19	1276553.48	40°05'18.456"N	104°31'49.800"W	polygon
SHUFLY STATE Y34-714 SECTION 27	0.00	0.00	0.00	3271251.19	1276553.48	40°05'18.456"N	104°31'49.800"W	polygon
SHUFLY STATE Y34-714 SECTION 34	0.00	0.00	0.00	3271251.19	1276553.48	40°05'18.456"N	104°31'49.800"W	polygon
SHUFLY STATE Y34-714 REV-3 BHL(2500'FSL&260'FEL,SEC.22)	6980.66	12787.00	290.89	3271542.07	1289339.96	40°07'24.780"N	104°31'44.256"W	point

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SHUFLY STATE Y34-714 Target 2	6981.10	5114.81	433.37	3271684.54	1281668.08	40°06'08.951"N	104°31'43.504"W	point
SHUFLY STATE Y34-714 Landing Point 2	6994.00	450.00	520.00	3271771.17	1277003.47	40°05'22.846"N	104°31'43.047"W	point
SHUFLY STATE Y34-714 REV-2 BHL(2500'FSL&260'FEL,SEC.22)	6994.00	12787.00	290.89	3271542.07	1289339.96	40°07'24.780"N	104°31'44.256"W	point
SHUFLY STATE Y34-714 Landing Point 3	7014.00	450.00	520.00	3271771.17	1277003.47	40°05'22.846"N	104°31'43.047"W	point
SHUFLY STATE Y34-714 Target 1	7014.00	3205.42	468.83	3271720.00	1279758.77	40°05'50.080"N	104°31'43.317"W	point
SHUFLY STATE Y34-714 Landing Point	7024.00	450.00	520.00	3271771.17	1277003.47	40°05'22.846"N	104°31'43.047"W	point
SHUFLY STATE Y34-714 REV-1 BHL(2500'FSL&260'FEL,SEC.22)	7024.00	12787.00	290.89	3271542.07	1289339.96	40°07'24.780"N	104°31'44.256"W	point
SHUFLY STATE Y34-714 SECTION 22 HARDLINE (460'SETBACK)	7200.00	0.00	0.00	3271251.19	1276553.48	40°05'18.456"N	104°31'49.800"W	polygon

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SHUFLY STATE Y34-714 SECTION 27 Hardline (460'SETBACK)	7200.00	0.00	0.00	3271251.19	1276553.48	40°05'18.456"N	104°31'49.800"W	polygon
SHUFLY STATE Y34-714 SECTION 34 Hardline (460'SETBACK)	7200.00	0.00	0.00	3271251.19	1276553.48	40°05'18.456"N	104°31'49.800"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: SHUFLY STATE Y34-714 AWB      Ref Wellpath: SHUFLY STATE Y34-714 AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	2137.00	Gyrodata standard - Drop gyro or Multi-shot	3rd Party Surface Gyros <77'-2137'>	SHUFLY STATE Y34-714 AWB
2137.00	19770.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	BHI/ATC 8.5" Hole OWSG MWD rev2+IFR+MSA <2166'-19770'>	SHUFLY STATE Y34-714 AWB
19770.00	19794.00	Blind Drilling (std)	Projection to bit	SHUFLY STATE Y34-714 AWB



Actual Wellpath Report

SHUFLY STATE Y34-714 AWP

Page 9 of 9



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#01 SHUFLY STATE Y34-714(300'FSL&750'FEL,SEC.34)
Area	COLORADO	Well	SHUFLY STATE Y34-714
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	SHUFLY STATE Y34-714 AWB
Facility	SEC.34-T02N-R64W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
2137.00	0.320	33.300	2136.95	Tie to Surface Survey
19770.00	89.940	358.460	6978.17	Last BHI Survey
19794.00	89.940	358.460	6978.20	Projection to Bit

COMMENTS	
<div>Wellpath general comments</div> <div>SURFACE LOCATION: SESE</div> <div>40.08846N</div> <div>104.53050W</div> <div>API: 05-123-45621</div>	