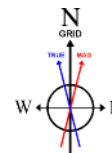


# NOBLE ENERGY, INC

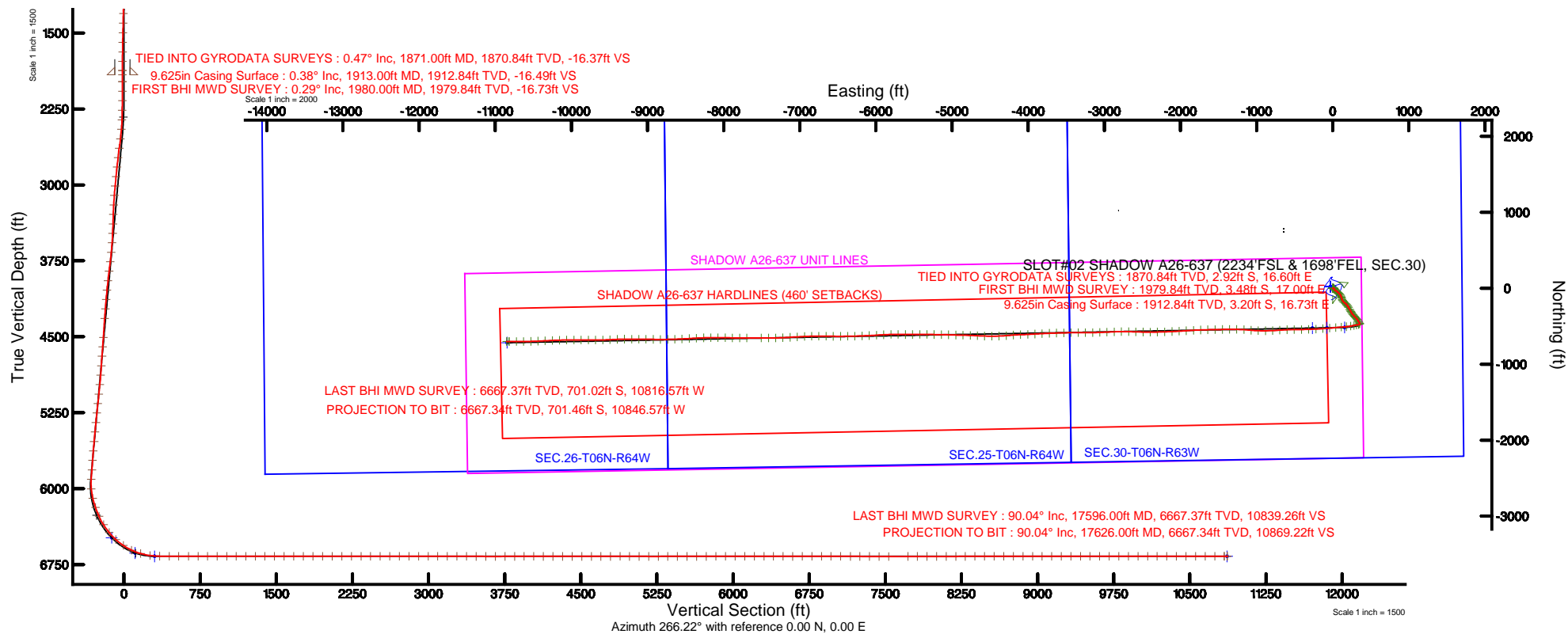
Location: COLORADO Slot: SLOT#02 SHADOW A26-637 (2234'FSL & 1698'FEL, SEC.30)  
 Field: WELD COUNTY (NOBLE NAD 83 GRID) Well: SHADOW A26-637  
 Facility: SEC.30-T06N-R63W Wellbore: SHADOW A26-637 PWB



BGGM (1945.0 to 2017.0) Dip: 67.04° Field: 52595.3 nT  
 Magnetic North is 8.31 degrees East of True North (at 5/4/16)  
 Grid North is 0.66 degrees East of True North  
 To correct azimuth from True to Grid subtract 0.66 degrees  
 To correct azimuth from Magnetic to Grid add 7.65 degrees

Plot reference wellpath is SHADOW A26-637 (REV-B.0, B-MARL NIO) PWP	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to H&P 321 (RKB)	* = Wellpath was transformed from a different geodetic datum
Measured depths are referenced to H&P 321 (RKB)	North Reference: Grid north
H&P 321 (RKB) to Mean Sea Level: 4673 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#02 SHADOW A26-637 (2234'FSL & 1698'FEL, SEC.30)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: cookdanm on 2016-05-27
	Database: WA_DEN_Denver_Defn

API: 05-123-42884



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#02 SHADOW A26-637 (2234'FSL & 1698'FEL, SEC.30)
Area	COLORADO	Well	SHADOW A26-637
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	SHADOW A26-637 AWB
Facility	SEC.30-T06N-R63W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 5.0
North Reference	Grid	User	Cookdanm
Scale	0.999963	Report Generated	5/27/16 at 12:42:19 PM
Convergence at slot	0.67° East	Database/Source file	WA_DEN_Denver_Defn/SHADOW_A26-637_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-21.50	30.86	3284859.22	1410747.46	40°27'23.004"N	104°28'34.788"W
Facility Reference Pt			3284828.36	1410768.96	40°27'23.220"N	104°28'35.184"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	4673.00ft
Horizontal Reference Pt	Slot	H&P 321 (RKB) to Mean Sea Level	4673.00ft
Vertical Reference Pt	H&P 321 (RKB)	H&P 321 (RKB) to Mud Line at Slot (SLOT#02 SHADOW A26-637 (2234'FSL & 1698'FEL, SEC.30))	4673.00ft
MD Reference Pt	H&P 321 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	266.22°

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#02 SHADOW A26-637 (2234'FSL & 1698'FEL, SEC.30)
Area	COLORADO	Well	SHADOW A26-637
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	SHADOW A26-637 AWB
Facility	SEC.30-T06N-R63W		

WELLPATH DATA (166 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
1871.00	0.470	159.350	1870.84	-16.37	-2.92	16.60	40°27'22.973"N	104°28'34.574"W	0.65	TIED INTO GYRODATA SURVEYS
1980.00	0.290	120.630	1979.84	-16.73	-3.48	17.00	40°27'22.968"N	104°28'34.569"W	0.28	FIRST BHI MWD SURVEY
2075.00	0.220	257.020	2074.84	-16.75	-3.64	17.02	40°27'22.966"N	104°28'34.568"W	0.50	
2169.00	1.520	161.610	2168.82	-16.88	-4.86	17.24	40°27'22.954"N	104°28'34.566"W	1.66	
2264.00	3.140	160.550	2263.74	-17.90	-8.51	18.51	40°27'22.918"N	104°28'34.550"W	1.71	
2359.00	4.130	147.700	2358.55	-20.24	-13.86	21.20	40°27'22.865"N	104°28'34.516"W	1.34	
2453.00	6.900	133.210	2452.11	-25.71	-20.59	27.13	40°27'22.797"N	104°28'34.440"W	3.28	
2547.00	9.290	125.320	2545.17	-35.45	-28.84	37.43	40°27'22.715"N	104°28'34.308"W	2.80	
2641.00	9.210	122.380	2637.95	-47.41	-37.26	49.98	40°27'22.630"N	104°28'34.147"W	0.51	
2736.00	9.180	130.060	2731.73	-59.02	-46.21	62.20	40°27'22.540"N	104°28'33.990"W	1.29	
2830.00	9.180	134.860	2824.53	-69.38	-56.32	73.25	40°27'22.439"N	104°28'33.849"W	0.81	
2924.00	8.870	138.680	2917.37	-78.75	-67.05	83.35	40°27'22.332"N	104°28'33.720"W	0.72	
3019.00	9.030	143.410	3011.21	-87.25	-78.54	92.63	40°27'22.217"N	104°28'33.601"W	0.79	
3113.00	9.470	147.370	3103.99	-94.98	-90.97	101.20	40°27'22.094"N	104°28'33.493"W	0.82	
3208.00	8.680	153.270	3197.80	-101.55	-103.96	108.64	40°27'21.964"N	104°28'33.398"W	1.28	
3303.00	9.010	164.460	3291.68	-105.86	-117.53	113.86	40°27'21.830"N	104°28'33.333"W	1.84	
3398.00	9.340	165.960	3385.46	-108.75	-132.18	117.72	40°27'21.685"N	104°28'33.285"W	0.43	
3492.00	9.080	159.580	3478.25	-112.23	-146.53	122.16	40°27'21.542"N	104°28'33.230"W	1.12	
3587.00	8.980	150.070	3572.08	-117.64	-159.98	128.47	40°27'21.409"N	104°28'33.150"W	1.57	
3682.00	9.800	140.920	3665.81	-125.58	-172.68	137.27	40°27'21.282"N	104°28'33.038"W	1.79	
3777.00	9.520	130.760	3759.47	-135.85	-184.09	148.32	40°27'21.168"N	104°28'32.897"W	1.82	
3871.00	9.130	128.450	3852.23	-146.92	-193.80	160.05	40°27'21.071"N	104°28'32.747"W	0.57	
3966.00	9.180	132.180	3946.02	-157.77	-203.57	171.56	40°27'20.973"N	104°28'32.599"W	0.63	
4060.00	9.070	137.940	4038.83	-167.57	-214.11	182.08	40°27'20.868"N	104°28'32.465"W	0.98	
4155.00	9.400	143.770	4132.60	-176.37	-225.93	191.69	40°27'20.750"N	104°28'32.342"W	1.04	
4249.00	9.460	148.000	4225.34	-184.14	-238.67	200.32	40°27'20.623"N	104°28'32.233"W	0.74	
4344.00	9.040	150.540	4319.10	-191.07	-251.79	208.12	40°27'20.492"N	104°28'32.133"W	0.62	
4533.00	8.870	150.480	4505.80	-203.83	-277.40	222.61	40°27'20.238"N	104°28'31.950"W	0.09	
4628.00	9.370	148.240	4599.60	-210.64	-290.35	230.29	40°27'20.109"N	104°28'31.853"W	0.65	
4722.00	9.870	153.120	4692.28	-217.39	-304.04	237.96	40°27'19.973"N	104°28'31.755"W	1.02	

**REFERENCE WELLPATH IDENTIFICATION**

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Area	COLORADO	Well	SHADOW A26-637
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	SHADOW A26-637 AWB
Facility	SEC.30-T06N-R63W		

**WELLPATH DATA (166 stations)**

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS ["/100ft]	Comments
4817.00	9.380	153.030	4785.94	-223.63	-318.20	245.15	40°27'19.832"N	104°28'31.664"W	0.52	
4912.00	9.010	145.680	4879.72	-230.46	-331.25	252.85	40°27'19.702"N	104°28'31.567"W	1.30	
5006.00	9.310	138.760	4972.52	-238.82	-343.04	262.02	40°27'19.585"N	104°28'31.450"W	1.21	
5101.00	9.200	140.010	5066.29	-247.98	-354.64	271.96	40°27'19.469"N	104°28'31.323"W	0.24	
5196.00	9.450	136.010	5160.03	-257.50	-366.07	282.26	40°27'19.355"N	104°28'31.192"W	0.73	
5290.00	9.180	133.650	5252.79	-267.56	-376.80	293.05	40°27'19.247"N	104°28'31.054"W	0.50	
5385.00	8.970	138.670	5346.61	-277.20	-387.59	303.42	40°27'19.140"N	104°28'30.921"W	0.86	
5480.00	9.220	141.600	5440.41	-286.04	-399.12	313.04	40°27'19.025"N	104°28'30.798"W	0.55	
5575.00	9.110	141.040	5534.20	-294.69	-410.93	322.49	40°27'18.907"N	104°28'30.678"W	0.15	
5669.00	9.150	146.550	5627.01	-302.68	-422.95	331.29	40°27'18.787"N	104°28'30.566"W	0.93	
5764.00	9.030	149.290	5720.82	-309.79	-435.66	339.26	40°27'18.661"N	104°28'30.465"W	0.47	
5858.00	9.210	149.080	5813.63	-316.57	-448.46	346.90	40°27'18.533"N	104°28'30.368"W	0.19	
5953.00	8.550	149.460	5907.49	-323.21	-461.06	354.39	40°27'18.408"N	104°28'30.273"W	0.70	
6048.00	7.220	218.460	6001.78	-322.38	-471.84	354.27	40°27'18.301"N	104°28'30.276"W	9.45	
6142.00	13.240	259.560	6094.35	-307.68	-478.43	339.98	40°27'18.238"N	104°28'30.462"W	9.69	
6237.00	19.170	261.160	6185.54	-281.32	-482.80	313.84	40°27'18.198"N	104°28'30.801"W	6.26	
6332.00	24.770	257.360	6273.61	-246.09	-489.56	278.98	40°27'18.135"N	104°28'31.252"W	6.08	
6426.00	32.030	259.640	6356.24	-201.81	-498.36	235.19	40°27'18.053"N	104°28'31.820"W	7.81	
6521.00	39.700	264.780	6433.19	-146.35	-505.67	180.09	40°27'17.987"N	104°28'32.534"W	8.67	
6616.00	47.700	266.230	6501.82	-80.78	-510.75	114.71	40°27'17.944"N	104°28'33.380"W	8.49	
6711.00	55.600	263.860	6560.72	-6.36	-517.26	40.57	40°27'17.888"N	104°28'34.341"W	8.54	
6805.00	64.590	265.220	6607.54	75.00	-524.96	-40.47	40°27'17.822"N	104°28'35.390"W	9.65	
6900.00	74.650	266.170	6640.58	163.93	-531.61	-129.16	40°27'17.766"N	104°28'36.538"W	10.63	
6994.00	82.080	267.220	6659.52	255.93	-536.91	-221.01	40°27'17.724"N	104°28'37.727"W	7.98	
7089.00	89.560	268.200	6666.44	350.58	-540.69	-315.61	40°27'17.698"N	104°28'38.951"W	7.94	
7184.00	89.930	269.220	6666.87	445.49	-542.82	-410.58	40°27'17.687"N	104°28'40.180"W	1.14	
7278.00	90.020	269.450	6666.91	539.35	-543.92	-504.58	40°27'17.687"N	104°28'41.396"W	0.26	
7373.00	89.870	268.040	6667.00	634.25	-546.00	-599.55	40°27'17.677"N	104°28'42.625"W	1.49	
7468.00	89.720	265.780	6667.34	729.24	-551.12	-694.41	40°27'17.638"N	104°28'43.852"W	2.38	
7562.00	90.000	267.290	6667.57	823.24	-556.80	-788.23	40°27'17.592"N	104°28'45.067"W	1.63	

### REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#02 SHADOW A26-637 (2234'FSL & 1698'FEL, SEC.30)
Area	COLORADO	Well	SHADOW A26-637
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	SHADOW A26-637 AWB
Facility	SEC.30-T06N-R63W		

### WELLPATH DATA (166 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS ["/100ft]	Comments
7657.00	90.000	269.550	6667.57	918.16	-559.42	-883.19	40°27'17.577"N	104°28'46.296"W	2.38	
7751.00	90.030	271.890	6667.54	1011.86	-558.24	-977.18	40°27'17.599"N	104°28'47.511"W	2.49	
7846.00	90.060	275.500	6667.47	1106.04	-552.11	-1071.96	40°27'17.671"N	104°28'48.736"W	3.80	
7941.00	90.030	273.190	6667.40	1200.08	-544.92	-1166.68	40°27'17.753"N	104°28'49.960"W	2.43	
8035.00	90.000	270.930	6667.37	1293.59	-541.54	-1260.62	40°27'17.797"N	104°28'51.175"W	2.40	
8129.00	89.940	269.580	6667.42	1387.35	-541.12	-1354.61	40°27'17.811"N	104°28'52.391"W	1.44	
8224.00	90.090	269.050	6667.40	1482.21	-542.26	-1449.61	40°27'17.811"N	104°28'53.620"W	0.58	
8319.00	90.060	269.110	6667.27	1577.09	-543.78	-1544.59	40°27'17.807"N	104°28'54.849"W	0.07	
8414.00	90.030	268.550	6667.20	1671.99	-545.72	-1639.57	40°27'17.798"N	104°28'56.077"W	0.59	
8509.00	90.120	267.720	6667.07	1766.94	-548.81	-1734.52	40°27'17.778"N	104°28'57.306"W	0.88	
8603.00	90.000	266.720	6666.97	1860.92	-553.37	-1828.41	40°27'17.744"N	104°28'58.521"W	1.07	
8698.00	90.120	266.480	6666.87	1955.92	-559.01	-1923.24	40°27'17.699"N	104°28'59.749"W	0.28	
8793.00	89.870	266.730	6666.88	2050.92	-564.63	-2018.08	40°27'17.654"N	104°29'00.976"W	0.37	
8887.00	89.780	267.340	6667.17	2144.91	-569.49	-2111.95	40°27'17.617"N	104°29'02.191"W	0.66	
8982.00	89.780	268.070	6667.53	2239.88	-573.30	-2206.87	40°27'17.590"N	104°29'03.420"W	0.77	
9077.00	89.900	268.680	6667.80	2334.81	-575.99	-2301.83	40°27'17.574"N	104°29'04.648"W	0.65	
9171.00	90.090	270.090	6667.81	2428.66	-577.00	-2395.82	40°27'17.575"N	104°29'05.864"W	1.51	
9266.00	89.810	271.050	6667.89	2523.39	-576.06	-2490.82	40°27'17.595"N	104°29'07.093"W	1.05	
9361.00	89.900	271.760	6668.13	2618.00	-573.73	-2585.79	40°27'17.629"N	104°29'08.321"W	0.75	
9456.00	90.060	271.230	6668.16	2712.59	-571.25	-2680.76	40°27'17.664"N	104°29'09.549"W	0.58	
9550.00	90.090	269.220	6668.04	2806.36	-570.88	-2774.75	40°27'17.678"N	104°29'10.765"W	2.14	
9645.00	90.090	268.180	6667.89	2901.27	-573.03	-2869.72	40°27'17.668"N	104°29'11.994"W	1.09	
9740.00	89.930	267.540	6667.88	2996.23	-576.58	-2964.66	40°27'17.643"N	104°29'13.222"W	0.69	
9834.00	89.960	267.210	6667.97	3090.21	-580.89	-3058.56	40°27'17.611"N	104°29'14.437"W	0.35	
9929.00	89.990	269.460	6668.01	3185.14	-583.65	-3153.51	40°27'17.595"N	104°29'15.666"W	2.37	
10024.00	89.810	270.090	6668.17	3279.96	-584.02	-3248.51	40°27'17.602"N	104°29'16.895"W	0.69	
10118.00	89.960	269.950	6668.36	3373.75	-583.99	-3342.51	40°27'17.613"N	104°29'18.111"W	0.22	
10213.00	89.810	269.090	6668.55	3468.59	-584.78	-3437.51	40°27'17.616"N	104°29'19.340"W	0.92	
10308.00	89.680	268.570	6668.97	3563.49	-586.72	-3532.49	40°27'17.607"N	104°29'20.568"W	0.56	
10403.00	90.180	268.450	6669.09	3658.41	-589.19	-3627.45	40°27'17.593"N	104°29'21.797"W	0.54	

## REFERENCE WELLPATH IDENTIFICATION

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Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	SHADOW A26-637 AWB
Facility	SEC.30-T06N-R63W		

## WELLPATH DATA (166 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
10497.00	90.180	267.800	6668.80	3752.36	-592.27	-3721.40	40°27'17.574"N	104°29'23.013"W	0.69	
10592.00	90.080	267.010	6668.58	3847.34	-596.57	-3816.30	40°27'17.542"N	104°29'24.241"W	0.84	
10686.00	89.990	266.450	6668.52	3941.33	-601.93	-3910.15	40°27'17.499"N	104°29'25.456"W	0.60	
10781.00	89.990	266.900	6668.54	4036.33	-607.44	-4004.99	40°27'17.456"N	104°29'26.683"W	0.47	
10876.00	89.990	268.490	6668.56	4131.30	-611.26	-4099.91	40°27'17.428"N	104°29'27.912"W	1.67	
10970.00	89.960	266.190	6668.60	4225.27	-615.62	-4193.80	40°27'17.396"N	104°29'29.127"W	2.45	
11065.00	90.050	264.780	6668.59	4320.26	-623.10	-4288.51	40°27'17.333"N	104°29'30.353"W	1.49	
11159.00	89.990	268.300	6668.56	4414.25	-628.78	-4382.32	40°27'17.287"N	104°29'31.567"W	3.75	
11254.00	89.900	270.020	6668.65	4509.12	-630.17	-4477.31	40°27'17.284"N	104°29'32.796"W	1.81	
11349.00	90.020	271.680	6668.71	4603.80	-628.76	-4572.29	40°27'17.309"N	104°29'34.025"W	1.75	
11443.00	89.990	273.290	6668.70	4697.24	-624.68	-4666.20	40°27'17.359"N	104°29'35.239"W	1.71	
11538.00	90.110	272.290	6668.62	4791.61	-620.06	-4761.09	40°27'17.416"N	104°29'36.465"W	1.06	
11633.00	90.020	270.620	6668.51	4886.21	-617.65	-4856.05	40°27'17.450"N	104°29'37.693"W	1.76	
11727.00	89.930	272.010	6668.56	4979.84	-615.49	-4950.02	40°27'17.482"N	104°29'38.909"W	1.48	
11822.00	89.870	271.720	6668.72	5074.38	-612.40	-5044.97	40°27'17.523"N	104°29'40.136"W	0.31	
11917.00	89.900	270.280	6668.91	5169.05	-610.74	-5139.96	40°27'17.550"N	104°29'41.365"W	1.52	
12012.00	90.080	271.740	6668.93	5263.71	-609.07	-5234.94	40°27'17.578"N	104°29'42.593"W	1.55	
12106.00	90.050	270.230	6668.82	5357.38	-607.45	-5328.92	40°27'17.604"N	104°29'43.808"W	1.61	
12201.00	90.020	269.200	6668.76	5452.20	-607.92	-5423.92	40°27'17.610"N	104°29'45.037"W	1.08	
12296.00	90.080	269.830	6668.68	5547.05	-608.73	-5518.92	40°27'17.613"N	104°29'46.266"W	0.67	
12390.00	89.960	270.170	6668.65	5640.84	-608.73	-5612.92	40°27'17.623"N	104°29'47.482"W	0.38	
12485.00	90.140	270.850	6668.57	5735.58	-607.88	-5707.91	40°27'17.642"N	104°29'48.711"W	0.74	
12580.00	90.110	268.610	6668.36	5830.39	-608.33	-5802.90	40°27'17.648"N	104°29'49.940"W	2.36	
12674.00	90.020	267.010	6668.25	5924.35	-611.92	-5896.83	40°27'17.623"N	104°29'51.155"W	1.70	
12769.00	89.960	266.330	6668.27	6019.35	-617.44	-5991.67	40°27'17.579"N	104°29'52.383"W	0.72	
12864.00	89.990	267.220	6668.31	6114.34	-622.78	-6086.52	40°27'17.537"N	104°29'53.610"W	0.94	
12959.00	89.860	268.060	6668.43	6209.31	-626.69	-6181.44	40°27'17.509"N	104°29'54.839"W	0.89	
13054.00	90.080	268.410	6668.48	6304.25	-629.62	-6276.39	40°27'17.491"N	104°29'56.067"W	0.44	
13148.00	89.990	269.070	6668.43	6398.16	-631.69	-6370.37	40°27'17.481"N	104°29'57.283"W	0.71	
13243.00	89.890	269.740	6668.53	6493.01	-632.67	-6465.36	40°27'17.482"N	104°29'58.512"W	0.71	

**REFERENCE WELLPATH IDENTIFICATION**

Operator	NOBLE ENERGY, INC	Slot	SLOT#02 SHADOW A26-637 (2234'FSL & 1698'FEL, SEC.30)
Area	COLORADO	Well	SHADOW A26-637
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	SHADOW A26-637 AWB
Facility	SEC.30-T06N-R63W		

**WELLPATH DATA (166 stations)**

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
13337.00	90.020	270.930	6668.60	6586.77	-632.12	-6559.36	40°27'17.498"N	104°29'59.728"W	1.27	
13432.00	90.050	270.760	6668.54	6681.46	-630.72	-6654.35	40°27'17.522"N	104°30'00.956"W	0.18	
13527.00	90.050	269.960	6668.46	6776.21	-630.13	-6749.35	40°27'17.539"N	104°30'02.185"W	0.84	
13622.00	89.990	268.280	6668.43	6871.09	-631.59	-6844.33	40°27'17.535"N	104°30'03.414"W	1.77	
13716.00	89.990	267.470	6668.44	6965.05	-635.07	-6938.27	40°27'17.511"N	104°30'04.629"W	0.86	
13811.00	89.920	267.020	6668.52	7060.03	-639.64	-7033.16	40°27'17.476"N	104°30'05.858"W	0.48	
13906.00	89.960	266.110	6668.62	7155.03	-645.33	-7127.99	40°27'17.430"N	104°30'07.085"W	0.96	
14000.00	89.770	267.290	6668.84	7249.02	-650.74	-7221.83	40°27'17.387"N	104°30'08.300"W	1.27	
14095.00	89.920	268.960	6669.09	7343.97	-653.85	-7316.77	40°27'17.367"N	104°30'09.528"W	1.76	
14189.00	89.830	270.040	6669.30	7437.81	-654.67	-7410.77	40°27'17.370"N	104°30'10.744"W	1.15	
14284.00	90.080	269.820	6669.37	7532.61	-654.78	-7505.77	40°27'17.379"N	104°30'11.973"W	0.35	
14474.00	90.110	270.040	6669.06	7722.21	-655.02	-7695.77	40°27'17.398"N	104°30'14.431"W	0.12	
14568.00	89.890	270.500	6669.06	7815.98	-654.57	-7789.77	40°27'17.413"N	104°30'15.646"W	0.54	
14663.00	90.020	271.370	6669.13	7910.65	-653.02	-7884.75	40°27'17.438"N	104°30'16.875"W	0.93	
14758.00	90.020	271.310	6669.10	8005.28	-650.80	-7979.73	40°27'17.471"N	104°30'18.103"W	0.06	
14852.00	89.980	269.790	6669.10	8099.00	-649.90	-8073.72	40°27'17.490"N	104°30'19.319"W	1.62	
14947.00	90.200	269.580	6668.95	8193.83	-650.42	-8168.72	40°27'17.496"N	104°30'20.548"W	0.32	
15041.00	90.110	267.990	6668.70	8287.73	-652.42	-8262.69	40°27'17.486"N	104°30'21.764"W	1.69	
15136.00	90.140	267.170	6668.49	8382.70	-656.43	-8357.61	40°27'17.457"N	104°30'22.992"W	0.86	
15230.00	89.980	266.230	6668.39	8476.70	-661.84	-8451.45	40°27'17.414"N	104°30'24.206"W	1.01	
15325.00	90.080	267.910	6668.34	8571.69	-666.69	-8546.32	40°27'17.377"N	104°30'25.434"W	1.77	
15420.00	89.890	268.210	6668.37	8666.64	-669.91	-8641.27	40°27'17.355"N	104°30'26.663"W	0.37	
15514.00	90.170	268.870	6668.32	8760.56	-672.30	-8735.24	40°27'17.342"N	104°30'27.879"W	0.76	
15609.00	90.050	270.270	6668.13	8855.39	-673.02	-8830.23	40°27'17.346"N	104°30'29.108"W	1.48	
15704.00	90.110	270.660	6668.00	8950.13	-672.25	-8925.23	40°27'17.364"N	104°30'30.336"W	0.42	
15798.00	89.860	270.640	6668.03	9043.85	-671.18	-9019.22	40°27'17.385"N	104°30'31.552"W	0.27	
15893.00	89.800	269.920	6668.31	9138.61	-670.72	-9114.22	40°27'17.400"N	104°30'32.781"W	0.76	
15987.00	89.980	271.180	6668.49	9232.34	-669.81	-9208.21	40°27'17.419"N	104°30'33.996"W	1.35	
16082.00	90.110	269.460	6668.41	9327.09	-669.28	-9303.21	40°27'17.435"N	104°30'35.225"W	1.82	
16177.00	90.080	266.810	6668.26	9422.03	-672.37	-9398.15	40°27'17.415"N	104°30'36.454"W	2.79	

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#02 SHADOW A26-637 (2234'FSL & 1698'FEL, SEC.30)
Area	COLORADO	Well	SHADOW A26-637
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	SHADOW A26-637 AWB
Facility	SEC.30-T06N-R63W		

WELLPATH DATA (166 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
16271.00	89.860	267.840	6668.31	9516.01	-676.76	-9492.05	40°27'17.382"N	104°30'37.669"W	1.12	
16366.00	90.040	268.500	6668.39	9610.96	-679.80	-9587.00	40°27'17.362"N	104°30'38.897"W	0.72	
16461.00	90.140	270.120	6668.24	9705.82	-680.94	-9681.99	40°27'17.361"N	104°30'40.126"W	1.71	
16555.00	90.010	270.140	6668.12	9799.60	-680.73	-9775.99	40°27'17.374"N	104°30'41.342"W	0.14	
16650.00	90.040	270.550	6668.07	9894.35	-680.15	-9870.99	40°27'17.390"N	104°30'42.571"W	0.43	
16745.00	90.230	270.090	6667.85	9989.11	-679.62	-9965.98	40°27'17.406"N	104°30'43.800"W	0.52	
16840.00	90.010	268.770	6667.65	10083.96	-680.57	-10060.98	40°27'17.407"N	104°30'45.028"W	1.41	
16934.00	90.140	268.250	6667.53	10177.88	-683.01	-10154.94	40°27'17.393"N	104°30'46.244"W	0.57	
17029.00	90.040	267.300	6667.38	10272.84	-686.70	-10249.87	40°27'17.367"N	104°30'47.473"W	1.01	
17123.00	90.140	267.140	6667.23	10366.83	-691.26	-10343.76	40°27'17.332"N	104°30'48.688"W	0.20	
17218.00	90.040	267.390	6667.08	10461.81	-695.79	-10438.65	40°27'17.298"N	104°30'49.916"W	0.28	
17312.00	90.040	268.440	6667.02	10555.77	-699.21	-10532.59	40°27'17.274"N	104°30'51.131"W	1.12	
17407.00	89.830	269.940	6667.13	10650.64	-700.56	-10627.58	40°27'17.272"N	104°30'52.360"W	1.59	
17502.00	89.920	270.160	6667.33	10745.43	-700.47	-10722.58	40°27'17.283"N	104°30'53.589"W	0.25	
17596.00	90.040	269.170	6667.37	10839.26	-701.02	-10816.57	40°27'17.288"N	104°30'54.805"W	1.06	LAST BHI MWD SURVEY
17626.00	90.040	269.170	6667.34	10869.22	-701.46	-10846.57	40°27'17.287"N	104°30'55.193"W	0.00	PROJECTION TO BIT

HOLE & CASING SECTIONS - Ref Wellbore: SHADOW A26-637 AWB Ref Wellpath: SHADOW A26-637 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	0.00	1913.00	1913.00	0.00	1912.84	0.00	0.00	-3.20	16.73	
9.625in Casing Surface	0.00	1913.00	1913.00	0.00	1912.84	0.00	0.00	-3.20	16.73	
8.5in Open Hole	1913.00	17626.00	15713.00	1912.84	6667.34	-3.20	16.73	-701.46	-10846.57	

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#02 SHADOW A26-637 (2234'FSL & 1698'FEL, SEC.30)
Area	COLORADO	Well	SHADOW A26-637
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	SHADOW A26-637 AWB
Facility	SEC.30-T06N-R63W		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.25-T06N-R64W	0.00	21.50	-30.86	3284828.36	1410768.96	40°27'23.220"N	104°28'35.184"W	polygon
SEC.26-T06N-R64W	0.00	21.50	-30.86	3284828.36	1410768.96	40°27'23.220"N	104°28'35.184"W	polygon
SEC.30-T06N-R63W	0.00	21.50	-30.86	3284828.36	1410768.96	40°27'23.220"N	104°28'35.184"W	polygon
SHADOW A26-637 TOP OF NIO (1719'FSL & 1542'FEL, SEC.30) 6588'MD	6484.20	-515.37	155.61	3285014.82	1410232.11	40°27'17.894"N	104°28'32.852"W	point
SHADOW A26-637 460' SETBACK (1714'FSL & 1773'FEL, SEC.30) 6866'MD	6634.88	-520.50	-75.05	3284784.17	1410226.98	40°27'17.870"N	104°28'35.837"W	point
SHADOW A26-637 BHL ON PLAT REV-1 (1710'FSL & 2097'FEL, SEC.26)	6668.00	-716.67	-10843.22	3274016.42	1410030.82	40°27'17.136"N	104°30'55.152"W	point
SHADOW A26-637 HARDLINES (460' SETBACKS)	6668.00	21.50	-30.86	3284828.36	1410768.96	40°27'23.220"N	104°28'35.184"W	polygon
SHADOW A26-637 LANDING POINT (1710'FSL & 1965'FEL, SEC.30) 7061.77'MD	6668.00	-524.00	-267.00	3284592.23	1410223.48	40°27'17.857"N	104°28'38.320"W	point
SHADOW A26-637 UNIT LINES	6668.00	21.50	-30.86	3284828.36	1410768.96	40°27'23.220"N	104°28'35.184"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: SHADOW A26-637 AWB Ref Wellpath: SHADOW A26-637 AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	1871.00	Gyrodatta standard - Drop gyro or Multi-shot	GYRODATA SURFACE SURVEYS <0 - 1871>	SHADOW A26-637 AWB
1871.00	17596.00	Custom BHI AutoTrak Curve (IFR1, Short) (Rockies 0.03Gt model)	BHI MWD AUTOTRAK CURVE (IFR, SHORT) & 1/2" MONOBORE (SURCON, MSA CORRECTED) <1871 - 17596>	SHADOW A26-637 AWB
17596.00	17626.00	Blind Drilling (std)	Projection to bit	SHADOW A26-637 AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#02 SHADOW A26-637 (2234'FSL & 1698'FEL, SEC.30)
Area	COLORADO	Well	SHADOW A26-637
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	SHADOW A26-637 AWB
Facility	SEC.30-T06N-R63W		

WELLPATH COMMENTS					
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment	
1871.00	0.470	159.350	1870.84	TIED INTO GYRODATA SURVEYS	
1980.00	0.290	120.630	1979.84	FIRST BHI MWD SURVEY	
17596.00	90.040	269.170	6667.37	LAST BHI MWD SURVEY	
17626.00	90.040	269.170	6667.34	PROJECTION TO BIT	