

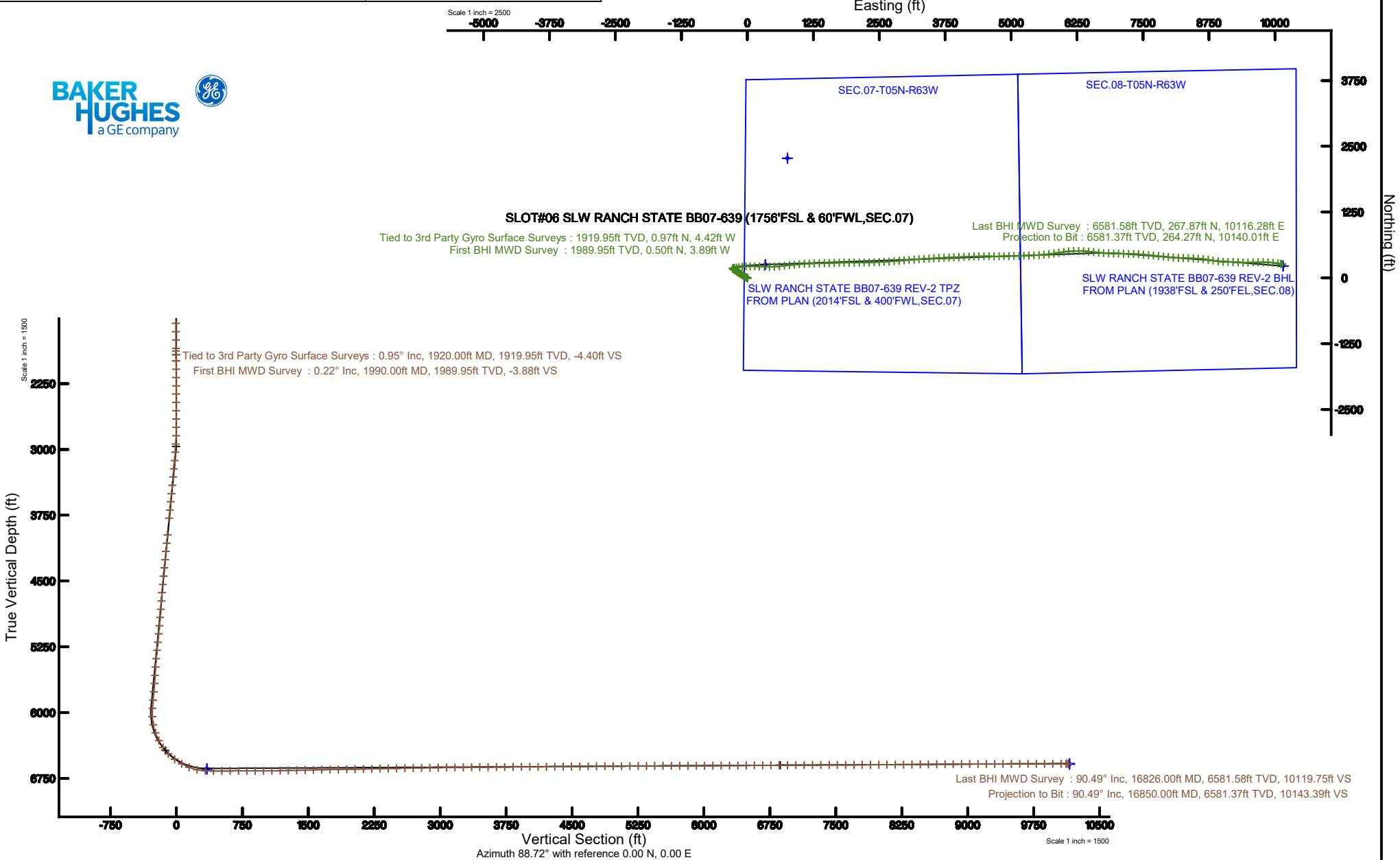
NOBLE ENERGY, INC

Location: COLORADO Slot: SLOT#06 SLW RANCH STATE BB07-639 (1756°FSL & 60°FWL, SEC.07)
Field: WELD COUNTY (NOBLE NAD 83 GRID) Well: SLW RANCH STATE BB07-639
Facility: SEC.07-T05N-R63W Wellbore: SLW RANCH STATE BB07-639 PWB

Plot reference wellpath is SLW RANCH STATE BB07-639 (REV-8.0) PWP	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to RIG (307) (RKB)	North Reference: Grid north
Measured depths are referenced to RIG (307) (RKB)	Scale: True distance
RIG (307) (RKB) to Mean Sea Level: 4640 feet	Depths are in feet
Mean Sea Level to Ground level (At Slot: SLOT#06 SLW RANCH STATE BB07-639 (1756°FSL & 60°FWL, SEC.07)): 0 feet	Created by: doddanna on 2019-09-10
Coordinates are in feet referenced to Slot	Database: WellArchitectDB2



Location Information					
Facility Name		Grid East (US Ft)	Grid North (US Ft)	Latitude	Longitude
SEC.07-T05N-R63W		3282340.091	1396437.016	40°25'01.884"N	104°22'39.402"W
SECT	Local N (ft)	Local E (ft)	Grid East (US Ft)	Latitude	Longitude
SLOT#06 SLW RANCH STATE BB07-639 (1756°FSL & 60°FWL,SEC.07)	-2274.85	-759.34	3281680.781	1394162.263	40°24'39.492"N
RIG (307) (RKB) to Ground level (At Slot: SLOT#06 SLW RANCH STATE BB07-639 (1756°FSL & 60°FWL,SEC.07))				4640ft	
Mean Sea Level to Ground level (At Slot: SLOT#06 SLW RANCH STATE BB07-639 (1756°FSL & 60°FWL,SEC.07))				0ft	
RIG (307) (RKB) to Mean Sea Level				4640ft	
Survey Program					
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
30.00	16851.62	OWSG MWD rev2	OWSG MWD rev2 + IFR1 + Multi-Station Correction		SLW RANCH STATE BB07-639 PWB



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#06 SLW RANCH STATE BB07-639 (1756'FSL & 60'FWL,SEC.07)
Area	COLORADO	Well	SLW RANCH STATE BB07-639
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	SLW RANCH STATE BB07-639 AWB
Facility	SEC.07-T05N-R63W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 5.1
North Reference	Grid	User	Doddanna
Scale	0.999961	Report Generated	9/10/2019 at 11:50:21 AM
Convergence at slot	0.65° East	Database/Source file	WellArchitectDB2/SLW_RANCH_STATE_BB07-639_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-2274.85	-759.34	3281580.78	1394162.26	40°24'39.492"N	104°29'19.644"W
Facility Reference Pt			3282340.09	1396437.02	40°25'01.884"N	104°29'09.492"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') (RKB) to Facility Vertical Datum	4646.00ft
Horizontal Reference Pt	Slot	RIG (30') (RKB) to Mean Sea Level	4646.00ft
Vertical Reference Pt	RIG (30') (RKB)	RIG (30') (RKB) to Ground Level at Slot (SLOT#06 SLW RANCH STATE BB07-639 (1756'FSL & 60'FWL,SEC.07))	4646.00ft
MD Reference Pt	RIG (30') (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	88.72°

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Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	SLW RANCH STATE BB07-639 AWB
Facility	SEC.07-T05N-R63W		

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	277.240	0.00	0.00	0.00	0.00	40°24'39.492"N	104°29'19.644"W	0.00	
82.00	0.400	277.240	82.00	-0.28	0.04	-0.28	40°24'39.492"N	104°29'19.648"W	0.49	
176.00	0.340	233.860	176.00	-0.84	-0.09	-0.83	40°24'39.491"N	104°29'19.655"W	0.30	
268.00	0.530	281.950	268.00	-1.47	-0.16	-1.47	40°24'39.491"N	104°29'19.663"W	0.43	
331.00	0.500	278.310	330.99	-2.03	-0.06	-2.03	40°24'39.492"N	104°29'19.670"W	0.07	
425.00	0.510	331.920	424.99	-2.62	0.37	-2.63	40°24'39.496"N	104°29'19.678"W	0.48	
520.00	0.450	306.520	519.99	-3.11	0.96	-3.13	40°24'39.502"N	104°29'19.684"W	0.23	
615.00	0.370	253.510	614.98	-3.70	1.10	-3.72	40°24'39.503"N	104°29'19.692"W	0.39	
710.00	0.300	308.850	709.98	-4.18	1.17	-4.21	40°24'39.504"N	104°29'19.698"W	0.33	
804.00	0.060	50.790	803.98	-4.33	1.35	-4.37	40°24'39.506"N	104°29'19.700"W	0.34	
899.00	0.190	39.520	898.98	-4.19	1.51	-4.23	40°24'39.507"N	104°29'19.698"W	0.14	
994.00	0.300	189.480	993.98	-4.14	1.38	-4.17	40°24'39.506"N	104°29'19.698"W	0.50	
1089.00	0.230	221.300	1088.98	-4.31	0.99	-4.33	40°24'39.502"N	104°29'19.700"W	0.17	
1184.00	0.340	213.740	1183.98	-4.60	0.62	-4.62	40°24'39.499"N	104°29'19.704"W	0.12	
1278.00	0.320	292.370	1277.98	-5.00	0.48	-5.01	40°24'39.497"N	104°29'19.709"W	0.45	
1373.00	0.120	304.500	1372.98	-5.33	0.64	-5.34	40°24'39.499"N	104°29'19.713"W	0.21	
1468.00	0.420	294.810	1467.98	-5.72	0.84	-5.74	40°24'39.501"N	104°29'19.718"W	0.32	
1563.00	0.630	322.250	1562.97	-6.34	1.40	-6.38	40°24'39.507"N	104°29'19.726"W	0.34	
1657.00	0.370	3.930	1656.97	-6.62	2.11	-6.67	40°24'39.514"N	104°29'19.730"W	0.46	
1752.00	0.530	114.250	1751.97	-6.20	2.24	-6.25	40°24'39.515"N	104°29'19.724"W	0.78	
1847.00	0.800	124.770	1846.96	-5.26	1.68	-5.30	40°24'39.509"N	104°29'19.712"W	0.31	
1878.00	0.900	125.990	1877.96	-4.90	1.41	-4.93	40°24'39.507"N	104°29'19.708"W	0.33	
1920.00	0.950	136.270	1919.95	-4.40	0.97	-4.42	40°24'39.502"N	104°29'19.701"W	0.41	Tied to 3rd Party Gyro Surface Surveys
1990.00	0.220	110.770	1989.95	-3.88	0.50	-3.89	40°24'39.497"N	104°29'19.694"W	1.08	First BHI MWD Survey
2085.00	0.090	311.870	2084.95	-3.77	0.49	-3.78	40°24'39.497"N	104°29'19.693"W	0.32	
2180.00	0.110	2.920	2179.95	-3.82	0.63	-3.83	40°24'39.499"N	104°29'19.693"W	0.09	
2275.00	0.100	280.070	2274.95	-3.89	0.73	-3.91	40°24'39.500"N	104°29'19.694"W	0.15	
2369.00	0.040	121.220	2368.95	-3.94	0.73	-3.96	40°24'39.500"N	104°29'19.695"W	0.15	
2464.00	0.040	106.780	2463.95	-3.88	0.70	-3.90	40°24'39.499"N	104°29'19.694"W	0.01	
2559.00	0.940	149.990	2558.94	-3.48	0.02	-3.48	40°24'39.493"N	104°29'19.689"W	0.96	

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Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	SLW RANCH STATE BB07-639 AWB
Facility	SEC.07-T05N-R63W		

WELLPATH DATA (181 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2653.00	0.960	41.660	2652.94	-2.57	-0.06	-2.57	40°24'39.492"N	104°29'19.677"W	1.64	
2748.00	0.330	260.840	2747.93	-2.30	0.49	-2.31	40°24'39.497"N	104°29'19.674"W	1.30	
2843.00	1.530	299.270	2842.92	-3.66	1.07	-3.69	40°24'39.503"N	104°29'19.692"W	1.36	
2938.00	3.530	300.480	2937.82	-7.24	3.17	-7.31	40°24'39.524"N	104°29'19.738"W	2.11	
3032.00	5.300	304.280	3031.54	-13.23	7.09	-13.40	40°24'39.564"N	104°29'19.816"W	1.91	
3127.00	6.390	300.830	3126.04	-21.28	12.27	-21.56	40°24'39.616"N	104°29'19.921"W	1.20	
3222.00	6.230	301.070	3220.47	-30.11	17.64	-30.52	40°24'39.670"N	104°29'20.036"W	0.17	
3317.00	6.080	301.250	3314.92	-38.71	22.91	-39.23	40°24'39.723"N	104°29'20.148"W	0.16	
3412.00	6.310	299.400	3409.37	-47.44	28.08	-48.08	40°24'39.775"N	104°29'20.261"W	0.32	
3507.00	6.460	298.520	3503.78	-56.57	33.19	-57.33	40°24'39.826"N	104°29'20.380"W	0.19	
3601.00	6.440	300.350	3597.18	-65.64	38.38	-66.52	40°24'39.879"N	104°29'20.498"W	0.22	
3696.00	6.420	299.410	3691.58	-74.75	43.68	-75.75	40°24'39.932"N	104°29'20.617"W	0.11	
3790.00	6.530	302.030	3784.98	-83.73	49.10	-84.85	40°24'39.987"N	104°29'20.734"W	0.34	
3980.00	6.480	302.890	3973.76	-101.63	60.65	-103.02	40°24'40.103"N	104°29'20.967"W	0.06	
4075.00	6.640	302.720	4068.14	-110.62	66.53	-112.14	40°24'40.162"N	104°29'21.084"W	0.17	
4169.00	6.530	302.750	4161.52	-119.55	72.36	-121.21	40°24'40.221"N	104°29'21.200"W	0.12	
4264.00	6.700	303.540	4255.89	-128.58	78.34	-130.37	40°24'40.281"N	104°29'21.318"W	0.20	
4359.00	6.600	302.800	4350.25	-137.65	84.36	-139.58	40°24'40.341"N	104°29'21.436"W	0.14	
4454.00	6.460	303.320	4444.63	-146.57	90.25	-148.63	40°24'40.401"N	104°29'21.552"W	0.16	
4548.00	6.560	304.920	4538.03	-155.26	96.23	-157.45	40°24'40.461"N	104°29'21.665"W	0.22	
4642.00	6.460	302.740	4631.42	-163.97	102.17	-166.30	40°24'40.520"N	104°29'21.779"W	0.28	
4737.00	3.340	300.290	4726.06	-170.76	106.45	-173.19	40°24'40.563"N	104°29'21.867"W	3.29	
4832.00	5.600	304.940	4820.77	-176.86	110.51	-179.38	40°24'40.604"N	104°29'21.947"W	2.41	
4927.00	6.470	302.850	4915.24	-185.03	116.06	-187.68	40°24'40.660"N	104°29'22.053"W	0.94	
5021.00	6.580	305.490	5008.63	-193.73	122.06	-196.51	40°24'40.720"N	104°29'22.166"W	0.34	
5116.00	6.680	305.350	5102.99	-202.52	128.42	-205.45	40°24'40.784"N	104°29'22.281"W	0.11	
5211.00	6.500	304.900	5197.37	-211.29	134.69	-214.37	40°24'40.847"N	104°29'22.395"W	0.20	
5305.00	6.860	303.250	5290.73	-220.21	140.82	-223.43	40°24'40.909"N	104°29'22.511"W	0.43	
5400.00	6.700	303.490	5385.06	-229.44	146.98	-232.79	40°24'40.971"N	104°29'22.632"W	0.17	
5495.00	3.400	299.580	5479.68	-236.41	151.43	-239.87	40°24'41.015"N	104°29'22.722"W	3.49	

REFERENCE WELLPATH IDENTIFICATION			
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Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	SLW RANCH STATE BB07-639 AWB
Facility	SEC.07-T05N-R63W		

WELLPATH DATA (181 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5589.00	4.710	306.110	5573.45	-241.87	155.08	-245.41	40°24'41.052"N	104°29'22.793"W	1.48	
5684.00	5.730	303.730	5668.05	-248.85	160.02	-252.50	40°24'41.102"N	104°29'22.884"W	1.10	
5779.00	5.900	305.620	5762.56	-256.64	165.49	-260.42	40°24'41.157"N	104°29'22.986"W	0.27	
5873.00	5.800	303.440	5856.07	-264.41	170.92	-268.31	40°24'41.211"N	104°29'23.087"W	0.26	
5968.00	5.630	306.640	5950.60	-272.03	176.35	-276.05	40°24'41.266"N	104°29'23.186"W	0.38	
6063.00	4.340	29.190	6045.34	-273.88	182.28	-278.04	40°24'41.324"N	104°29'23.211"W	6.99	
6157.00	12.190	75.130	6138.37	-262.41	187.94	-266.69	40°24'41.379"N	104°29'23.064"W	10.30	
6252.00	19.490	80.820	6229.70	-236.92	193.05	-241.31	40°24'41.427"N	104°29'22.735"W	7.85	
6346.00	26.080	84.940	6316.33	-200.73	197.38	-205.21	40°24'41.465"N	104°29'22.268"W	7.21	
6441.00	35.540	81.560	6397.83	-152.39	203.29	-156.98	40°24'41.518"N	104°29'21.643"W	10.12	
6536.00	44.550	80.790	6470.48	-91.86	212.69	-96.65	40°24'41.605"N	104°29'20.862"W	9.50	
6630.00	54.850	85.090	6531.22	-20.64	221.29	-25.61	40°24'41.681"N	104°29'19.942"W	11.49	
6725.00	60.490	91.680	6582.04	59.53	223.40	54.54	40°24'41.693"N	104°29'18.906"W	8.34	
6819.00	68.610	91.110	6622.40	144.25	221.35	139.32	40°24'41.663"N	104°29'17.810"W	8.66	
6914.00	77.410	92.650	6650.14	234.87	218.34	230.03	40°24'41.624"N	104°29'16.638"W	9.39	
7009.00	87.440	93.730	6662.64	328.63	213.10	323.93	40°24'41.561"N	104°29'15.425"W	10.62	
7103.00	90.340	88.720	6664.47	422.48	211.09	417.85	40°24'41.531"N	104°29'14.211"W	6.16	
7198.00	90.120	86.460	6664.08	517.46	215.09	512.76	40°24'41.559"N	104°29'12.984"W	2.39	
7293.00	90.150	83.760	6663.86	612.26	223.19	607.41	40°24'41.629"N	104°29'11.759"W	2.84	
7388.00	90.340	84.170	6663.45	706.93	233.17	701.88	40°24'41.717"N	104°29'10.537"W	0.48	
7483.00	90.150	84.530	6663.05	801.65	242.53	796.42	40°24'41.799"N	104°29'09.313"W	0.43	
7577.00	90.310	84.720	6662.67	895.41	251.33	890.00	40°24'41.875"N	104°29'08.102"W	0.26	
7672.00	90.150	85.070	6662.29	990.20	259.79	984.63	40°24'41.948"N	104°29'06.878"W	0.41	
7767.00	89.970	85.010	6662.19	1085.01	268.00	1079.27	40°24'42.018"N	104°29'05.653"W	0.20	
7862.00	91.600	88.700	6660.89	1179.93	273.21	1174.10	40°24'42.059"N	104°29'04.426"W	4.25	
7956.00	91.110	88.970	6658.67	1273.90	275.12	1268.05	40°24'42.067"N	104°29'03.212"W	0.60	
8051.00	91.630	88.690	6656.39	1368.87	277.06	1363.01	40°24'42.076"N	104°29'01.984"W	0.62	
8146.00	91.390	88.470	6653.89	1463.84	279.41	1457.94	40°24'42.088"N	104°29'00.756"W	0.34	
8240.00	91.080	87.740	6651.86	1557.81	282.52	1551.87	40°24'42.108"N	104°28'59.542"W	0.84	
8335.00	91.020	88.040	6650.12	1652.79	286.02	1646.79	40°24'42.132"N	104°28'58.314"W	0.32	

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WELLPATH DATA (181 stations)										
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8430.00	90.980	88.840	6648.47	1747.77	288.60	1741.74	40°24'42.147"N	104°28'57.086"W	0.84	
8524.00	90.980	89.170	6646.86	1841.75	290.24	1835.71	40°24'42.152"N	104°28'55.871"W	0.35	
8619.00	90.860	90.100	6645.33	1936.73	290.84	1930.69	40°24'42.147"N	104°28'54.643"W	0.99	
8714.00	90.950	90.140	6643.83	2031.69	290.64	2025.68	40°24'42.135"N	104°28'53.416"W	0.10	
8808.00	91.050	89.600	6642.19	2125.66	290.86	2119.67	40°24'42.126"N	104°28'52.201"W	0.58	
8903.00	91.510	89.470	6640.07	2220.62	291.63	2214.64	40°24'42.123"N	104°28'50.973"W	0.50	
8998.00	91.050	88.450	6637.95	2315.60	293.35	2309.60	40°24'42.129"N	104°28'49.745"W	1.18	
9092.00	90.950	87.220	6636.31	2409.57	296.90	2403.52	40°24'42.154"N	104°28'48.531"W	1.31	
9187.00	91.050	86.990	6634.65	2504.52	301.70	2498.38	40°24'42.190"N	104°28'47.304"W	0.26	
9282.00	91.020	86.980	6632.93	2599.46	306.69	2593.23	40°24'42.229"N	104°28'46.077"W	0.03	
9376.00	91.020	86.490	6631.26	2693.39	312.05	2687.07	40°24'42.271"N	104°28'44.863"W	0.52	
9471.00	90.980	85.510	6629.60	2788.26	318.67	2781.82	40°24'42.326"N	104°28'43.637"W	1.03	
9566.00	90.830	85.600	6628.10	2883.11	326.03	2876.52	40°24'42.388"N	104°28'42.412"W	0.18	
9661.00	91.050	85.040	6626.54	2977.93	333.78	2971.19	40°24'42.454"N	104°28'41.187"W	0.63	
9755.00	90.400	84.950	6625.35	3071.72	341.98	3064.83	40°24'42.524"N	104°28'39.975"W	0.70	
9850.00	90.460	86.130	6624.64	3166.57	349.37	3159.53	40°24'42.586"N	104°28'38.750"W	1.24	
9945.00	90.370	85.990	6623.95	3261.47	355.90	3254.31	40°24'42.640"N	104°28'37.524"W	0.18	
10040.00	90.400	86.100	6623.31	3356.36	362.45	3349.08	40°24'42.694"N	104°28'36.298"W	0.12	
10134.00	90.680	86.650	6622.43	3450.28	368.39	3442.88	40°24'42.742"N	104°28'35.084"W	0.66	
10229.00	90.490	86.840	6621.46	3545.22	373.79	3537.73	40°24'42.784"N	104°28'33.857"W	0.28	
10324.00	90.550	87.350	6620.60	3640.17	378.60	3632.60	40°24'42.821"N	104°28'32.630"W	0.54	
10419.00	90.620	87.020	6619.63	3735.14	383.27	3727.48	40°24'42.856"N	104°28'31.403"W	0.36	
10513.00	90.490	86.520	6618.71	3829.08	388.56	3821.33	40°24'42.898"N	104°28'30.189"W	0.55	
10608.00	90.400	87.460	6617.98	3924.03	393.55	3916.19	40°24'42.936"N	104°28'28.962"W	0.99	
10703.00	90.370	88.020	6617.34	4019.01	397.30	4011.12	40°24'42.962"N	104°28'27.734"W	0.59	
10798.00	90.430	88.090	6616.68	4114.00	400.52	4106.06	40°24'42.983"N	104°28'26.507"W	0.10	
10893.00	90.340	87.440	6616.04	4208.99	404.23	4200.98	40°24'43.009"N	104°28'25.279"W	0.69	
10988.00	90.550	87.890	6615.30	4303.97	408.10	4295.90	40°24'43.037"N	104°28'24.052"W	0.52	
11083.00	90.340	88.000	6614.56	4398.96	411.50	4390.84	40°24'43.059"N	104°28'22.824"W	0.25	
11178.00	90.920	90.010	6613.52	4493.95	413.15	4485.81	40°24'43.065"N	104°28'21.596"W	2.20	

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#06 SLW RANCH STATE BB07-639 (1756'FSL & 60'FWL,SEC.07)
Area	COLORADO	Well	SLW RANCH STATE BB07-639
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	SLW RANCH STATE BB07-639 AWB
Facility	SEC.07-T05N-R63W		

WELLPATH DATA (181 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11273.00	90.370	91.000	6612.45	4588.89	412.32	4580.80	40°24'43.046"N	104°28'20.368"W	1.19	
11367.00	90.490	90.540	6611.74	4682.83	411.05	4674.79	40°24'43.022"N	104°28'19.153"W	0.51	
11462.00	90.310	88.940	6611.08	4777.81	411.48	4769.78	40°24'43.016"N	104°28'17.925"W	1.69	
11557.00	90.430	88.160	6610.47	4872.81	413.89	4864.75	40°24'43.029"N	104°28'16.697"W	0.83	
11652.00	90.310	88.610	6609.85	4967.80	416.57	4959.71	40°24'43.044"N	104°28'15.469"W	0.49	
11746.00	90.430	89.620	6609.24	5061.80	418.02	5053.70	40°24'43.048"N	104°28'14.254"W	1.08	
11841.00	90.460	89.370	6608.51	5156.78	418.85	5148.69	40°24'43.045"N	104°28'13.026"W	0.27	
11936.00	90.520	88.250	6607.69	5251.78	420.83	5243.66	40°24'43.054"N	104°28'11.798"W	1.18	
12031.00	90.280	87.130	6607.03	5346.76	424.66	5338.58	40°24'43.081"N	104°28'10.571"W	1.21	
12125.00	90.280	86.650	6606.57	5440.71	429.76	5432.44	40°24'43.120"N	104°28'09.356"W	0.51	
12220.00	90.520	86.380	6605.91	5535.64	435.53	5527.26	40°24'43.167"N	104°28'08.130"W	0.38	
12315.00	90.150	85.150	6605.35	5630.51	442.55	5622.00	40°24'43.225"N	104°28'06.904"W	1.35	
12410.00	90.220	82.020	6605.05	5725.12	453.16	5716.39	40°24'43.319"N	104°28'05.682"W	3.30	
12505.00	90.150	83.420	6604.74	5819.59	465.20	5810.63	40°24'43.427"N	104°28'04.462"W	1.48	
12599.00	90.220	80.590	6604.44	5912.94	478.27	5903.70	40°24'43.546"N	104°28'03.257"W	3.01	
12694.00	90.090	80.330	6604.18	6006.95	494.01	5997.39	40°24'43.690"N	104°28'02.044"W	0.31	
12789.00	90.180	84.580	6603.95	6101.37	506.49	6091.54	40°24'43.803"N	104°28'00.825"W	4.47	
12884.00	90.310	89.670	6603.55	6196.30	511.25	6186.39	40°24'43.839"N	104°27'59.598"W	5.36	
12979.00	90.280	89.890	6603.06	6291.28	511.61	6281.39	40°24'43.832"N	104°27'58.370"W	0.23	
13073.00	90.460	93.010	6602.45	6385.16	509.24	6375.35	40°24'43.797"N	104°27'57.156"W	3.32	
13168.00	90.620	96.660	6601.56	6479.60	501.23	6469.99	40°24'43.707"N	104°27'55.934"W	3.85	
13263.00	90.460	95.900	6600.66	6573.77	490.84	6564.41	40°24'43.594"N	104°27'54.714"W	0.82	
13358.00	90.620	95.380	6599.77	6668.07	481.50	6658.95	40°24'43.490"N	104°27'53.494"W	0.57	
13452.00	90.220	94.880	6599.08	6761.48	473.10	6752.57	40°24'43.397"N	104°27'52.285"W	0.68	
13547.00	90.150	92.360	6598.77	6856.12	467.10	6847.37	40°24'43.326"N	104°27'51.060"W	2.65	
13642.00	90.120	90.190	6598.55	6951.02	464.99	6942.34	40°24'43.295"N	104°27'49.833"W	2.28	
13736.00	90.310	91.840	6598.19	7044.94	463.32	7036.32	40°24'43.267"N	104°27'48.618"W	1.77	
13831.00	90.650	92.810	6597.40	7139.75	459.47	7131.24	40°24'43.218"N	104°27'47.392"W	1.08	
13926.00	90.620	91.180	6596.34	7234.58	456.16	7226.17	40°24'43.175"N	104°27'46.165"W	1.72	
14021.00	90.220	91.360	6595.65	7329.49	454.06	7321.15	40°24'43.143"N	104°27'44.938"W	0.46	

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#06 SLW RANCH STATE BB07-639 (1756'FSL & 60'FWL, SEC.07)
Area	COLORADO	Well	SLW RANCH STATE BB07-639
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	SLW RANCH STATE BB07-639 AWB
Facility	SEC.07-T05N-R63W		

WELLPATH DATA (181 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
14115.00	90.150	93.010	6595.34	7423.31	450.47	7415.07	40°24'43.097"N	104°27'43.724"W	1.76	
14210.00	90.180	94.460	6595.07	7517.94	444.28	7509.87	40°24'43.024"N	104°27'42.500"W	1.53	
14305.00	90.120	96.050	6594.82	7612.32	435.58	7604.47	40°24'42.928"N	104°27'41.278"W	1.67	
14399.00	90.180	96.150	6594.58	7705.54	425.59	7697.93	40°24'42.818"N	104°27'40.072"W	0.12	
14494.00	90.340	95.860	6594.15	7799.77	415.66	7792.41	40°24'42.709"N	104°27'38.852"W	0.35	
14589.00	90.150	95.490	6593.74	7894.07	406.26	7886.95	40°24'42.605"N	104°27'37.631"W	0.44	
14683.00	90.180	95.820	6593.47	7987.38	397.00	7980.49	40°24'42.503"N	104°27'36.423"W	0.35	
14778.00	90.340	94.650	6593.04	8081.76	388.33	8075.09	40°24'42.406"N	104°27'35.202"W	1.24	
14873.00	90.370	92.970	6592.45	8176.38	382.02	8169.87	40°24'42.333"N	104°27'33.978"W	1.77	
14967.00	90.370	91.590	6591.84	8270.20	378.28	8263.80	40°24'42.285"N	104°27'32.764"W	1.47	
15062.00	90.220	91.550	6591.35	8365.08	375.68	8358.76	40°24'42.248"N	104°27'31.537"W	0.16	
15157.00	90.310	92.140	6590.91	8459.94	372.62	8453.71	40°24'42.207"N	104°27'30.310"W	0.63	
15251.00	90.710	94.260	6590.08	8553.64	367.37	8547.55	40°24'42.144"N	104°27'29.098"W	2.30	
15346.00	91.050	97.240	6588.62	8647.90	357.86	8642.05	40°24'42.039"N	104°27'27.877"W	3.16	
15441.00	90.400	98.760	6587.41	8741.65	344.64	8736.12	40°24'41.898"N	104°27'26.664"W	1.74	
15536.00	90.490	99.030	6586.68	8835.15	329.95	8829.97	40°24'41.742"N	104°27'25.453"W	0.30	
15631.00	90.310	98.090	6586.01	8928.75	315.81	8923.91	40°24'41.591"N	104°27'24.240"W	1.01	
15726.00	90.220	92.920	6585.57	9023.05	306.70	9018.44	40°24'41.490"N	104°27'23.020"W	5.44	
15820.00	90.310	89.960	6585.14	9116.93	304.34	9112.40	40°24'41.456"N	104°27'21.806"W	3.15	
15915.00	90.180	91.790	6584.73	9211.86	302.88	9207.38	40°24'41.430"N	104°27'20.578"W	1.93	
16010.00	90.250	93.420	6584.38	9306.63	298.57	9302.28	40°24'41.377"N	104°27'19.352"W	1.72	
16105.00	90.280	92.620	6583.94	9401.36	293.56	9397.15	40°24'41.316"N	104°27'18.126"W	0.84	
16200.00	90.060	88.030	6583.65	9496.30	293.02	9492.12	40°24'41.300"N	104°27'16.899"W	4.84	
16294.00	90.220	87.980	6583.43	9590.29	296.30	9586.06	40°24'41.321"N	104°27'15.684"W	0.18	
16389.00	90.120	89.010	6583.14	9685.29	298.79	9681.03	40°24'41.335"N	104°27'14.456"W	1.09	
16484.00	90.220	90.740	6582.86	9780.27	299.00	9776.02	40°24'41.326"N	104°27'13.228"W	1.82	
16578.00	90.150	93.230	6582.56	9874.11	295.74	9869.96	40°24'41.283"N	104°27'12.014"W	2.65	
16673.00	90.220	96.060	6582.25	9968.59	288.05	9964.64	40°24'41.195"N	104°27'10.791"W	2.98	
16768.00	90.180	98.130	6581.92	10062.57	276.32	10058.90	40°24'41.069"N	104°27'09.575"W	2.18	
16826.00	90.490	98.620	6581.58	10119.75	267.87	10116.28	40°24'40.978"N	104°27'08.834"W	1.00	Last BHI MWD Survey

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#06 SLW RANCH STATE BB07-639 (1756'FSL & 60'FWL,SEC.07)
Area	COLORADO	Well	SLW RANCH STATE BB07-639
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	SLW RANCH STATE BB07-639 AWB
Facility	SEC.07-T05N-R63W		

WELLPATH DATA (181 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
16850.00	90.490	98.620	6581.37	10143.39	264.27	10140.01	40°24'40.940"N	104°27'08.528"W	0.00	Projection to Bit

TARGETS									
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape	
SEC.07-T05N-R63W	-16.00	2274.85	759.34	3282340.09	1396437.02	40°25'01.884"N	104°29'09.492"W	polygon	
SEC.08-T05N-R63W	-16.00	2274.85	759.34	3282340.09	1396437.02	40°25'01.884"N	104°29'09.492"W	polygon	
SLW RANCH STATE BB07-639 REV-2 BHL FROM PLAN (1938'FSL & 250'FEL,SEC.08)	6580.00	227.71	10155.65	3291736.01	1394389.97	40°24'40.577"N	104°27'08.332"W	point	
SLW RANCH STATE BB07-639 BHL FROM PLAN (1938'FSL & 250'FEL,SEC.08)	6588.00	227.71	10156.05	3291736.41	1394389.97	40°24'40.577"N	104°27'08.326"W	point	
SLW RANCH STATE BB07-639 REV-2 TPZ FROM PLAN (2014'FSL & 400'FWL,SEC.07)	6636.00	253.93	341.72	3281922.49	1394416.18	40°24'41.963"N	104°29'15.189"W	point	
SLW RANCH STATE BB07-639 TPZ FROM PLAN (2014'FSL & 400'FWL,SEC.07)	6644.00	253.93	341.72	3281922.49	1394416.18	40°24'41.963"N	104°29'15.189"W	point	

WELLPATH COMPOSITION - Ref Wellbore: SLW RANCH STATE BB07-639 AWB					Ref Wellpath: SLW RANCH STATE BB07-639 AWP	
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment		Wellbore	
0.00	1920.00	Gyrodata standard - Drop gyro or Multi-shot	3rd Party Surface Gyros <82'-1920'>		SLW RANCH STATE BB07-639 AWP	
1920.00	16826.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	BH/ATC 8.5" Hole OWSG MWD rev2+IFR1+MSA <1990'-16826'>		SLW RANCH STATE BB07-639 AWP	
16826.00	16850.00	Blind Drilling (std)	Projection to bit		SLW RANCH STATE BB07-639 AWP	

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#06 SLW RANCH STATE BB07-639 (1756'FSL & 60'FWL,SEC.07)
Area	COLORADO	Well	SLW RANCH STATE BB07-639
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	SLW RANCH STATE BB07-639 AWB
Facility	SEC.07-T05N-R63W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1920.00	0.950	136.270	1919.95	Tied to 3rd Party Gyro Surface Surveys
1990.00	0.220	110.770	1989.95	First BHI MWD Survey
16826.00	90.490	98.620	6581.58	Last BHI MWD Survey
16850.00	90.490	98.620	6581.37	Projection to Bit