

NOBLE ENERGY, INC

Location: COLORADO Slot: SLOT#03 WELLS RANCH STATE AA36-643 (2084'FSL & 817'FWL,SEC.32)
Field: WELD COUNTY (NOBLE NAD 83 GRID) Well: WELLS RANCH STATE AA36-643
Facility: SEC.32-T06N-R62W Wellbore: WELLS RANCH STATE AA36-643 PWB



Location Information

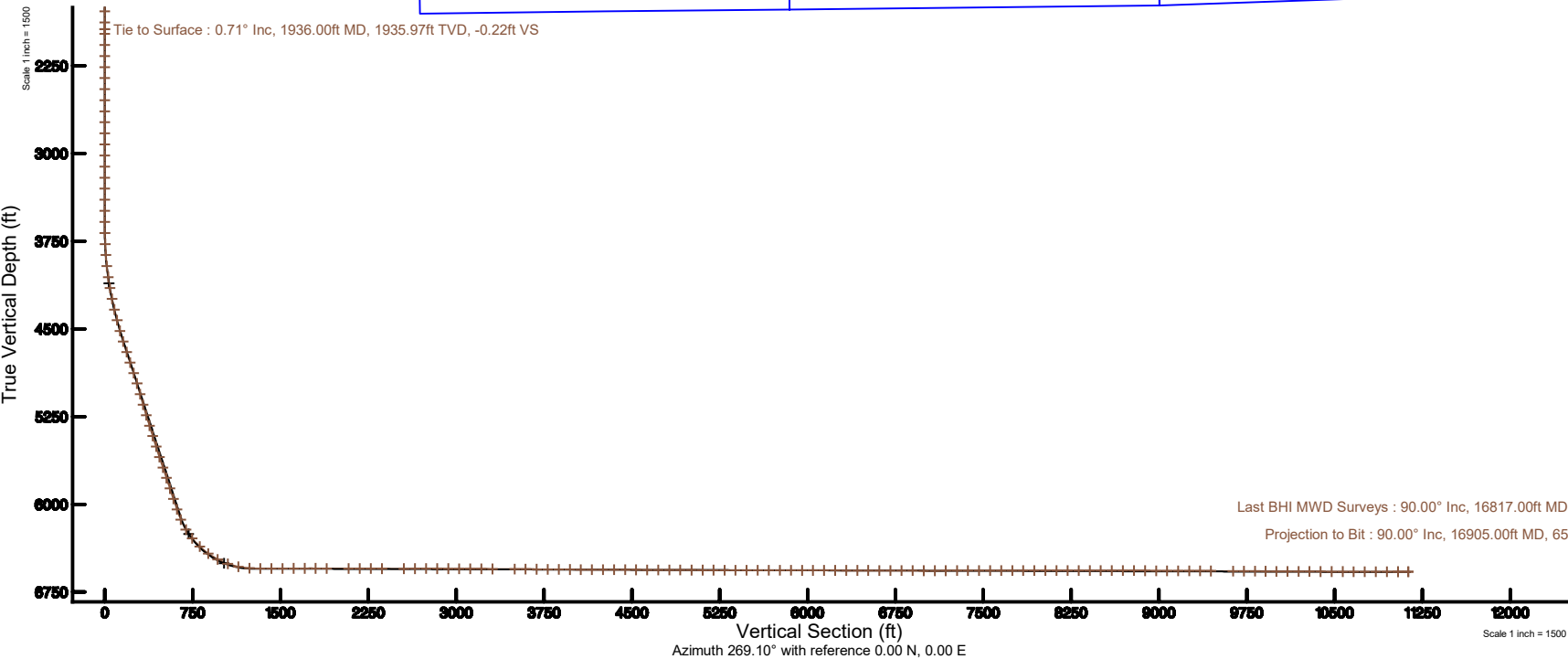
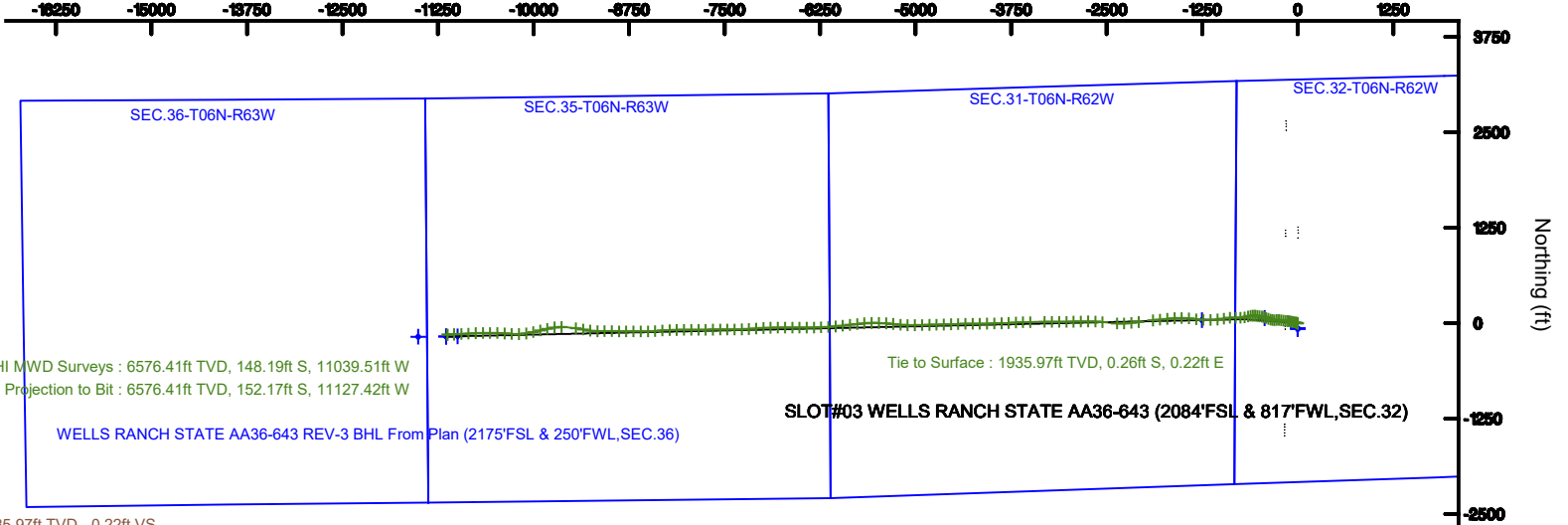
Facility Name				Grid East (US N)	Grid North (US N)	Latitude	Longitude
SEC.32-T06N-R62W				301680N.000	1480733.000	40°54'30.00"N	104°51'13.00"W
Site	Local NAD 83	Local E (ft)	Grid East (US N)	Grid North (US N)	Latitude	Longitude	
SLOT#03 WELLS RANCH STATE AA36-643 (2084'FSL & 817'FWL,SEC.32)	72.86	-0.04	3016803.400	1480806.012	40°54'30.00"N	104°51'13.00"W	
REG.107 (2084' to Mean Sea Level) (at Slot SLOT#03 WELLS RANCH STATE AA36-643 (2084'FSL & 817'FWL,SEC.32))						47558	
Mean Sea Level to Mean Sea Level (at Slot SLOT#03 WELLS RANCH STATE AA36-643 (2084'FSL & 817'FWL,SEC.32))						00	
REG.107 (2084' to Mean Sea Level)						47558	

Plot reference wellbore is WELLS RANCH STATE AA36-643 (REV-03)PWB	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (2011) US feet
True vertical depths are referenced to RIG (207) (RAB)	North Reference: Grid north
Measured depths are referenced to RIG (207) (RAB)	Scale: True distance
RIG (207) (RAB) to Mean Sea Level: 4756 feet	Depths are in feet
Mean Sea Level to Mean Sea Level (at Slot SLOT#03 WELLS RANCH STATE AA36-643 (2084'FSL & 817'FWL,SEC.32)): 0 feet	Created by: dtdalton on 2018-07-19
Coordinates are in feet referenced to RIG	Disclaimer: Wabach/Dalton

Survey Program

Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
30.00	17996.33	CWSSD MWD rev2	CWSSD MWD rev2 + IFR1 + Multi-Station Correction		WELLS RANCH STATE AA36-643 PWB

Scale 1 inch = 2500



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#03 WELLS RANCH STATE AA36-643 (2084'FSL & 817'FWL,SEC.32)
Area	COLORADO	Well	WELLS RANCH STATE AA36-643
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA36-643 AWP
Facility	SEC.32-T06N-R62W		

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	0.999962	Report Generated	7/19/2019 at 11:16:55 AM
Convergence at slot	0.74° East	Database/Source file	WellArchitectDB/WELLS_RANCH_STATE_AA36-643_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	72.86	-0.94	3319023.42	1405806.21	40°26'30.048"N	104°21'13.680"W
Facility Reference Pt			3319024.36	1405733.36	40°26'29.328"N	104°21'13.680"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	4756.00ft
Horizontal Reference Pt	Slot	RIG (30") (RKB) to Mean Sea Level	4756.00ft
Vertical Reference Pt	RIG (30") (RKB)	RIG (30") (RKB) to Mud Line at Slot (SLOT#03 WELLS RANCH STATE AA36-643 (2084'FSL & 817'FWL,SEC.32))	4756.00ft
MD Reference Pt	RIG (30") (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	269.10°

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Area	COLORADO			Well	WELLS RANCH STATE AA36-643
Field	WELD COUNTY (NOBLE NAD 83 GRID)			Wellbore	WELLS RANCH STATE AA36-643 AWB
Facility	SEC.32-T06N-R62W				

WELLPATH DATA (172 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00	0.000	327.970	0.00	0.00	0.00	0.00	40°26'30.048"N	104°21'13.680"W	0.00	
555.00	0.050	327.970	555.00	0.13	0.21	-0.13	40°26'30.050"N	104°21'13.682"W	0.01	
650.00	0.210	87.920	650.00	-0.03	0.25	0.02	40°26'30.050"N	104°21'13.680"W	0.25	
744.00	0.510	163.600	744.00	-0.31	-0.15	0.31	40°26'30.046"N	104°21'13.676"W	0.53	
839.00	0.560	214.480	838.99	-0.16	-0.94	0.17	40°26'30.039"N	104°21'13.678"W	0.49	
933.00	0.360	194.040	932.99	0.19	-1.60	-0.16	40°26'30.032"N	104°21'13.682"W	0.27	
1028.00	0.340	145.610	1027.99	0.11	-2.12	-0.07	40°26'30.027"N	104°21'13.681"W	0.30	
1122.00	0.020	315.820	1121.99	-0.03	-2.34	0.07	40°26'30.025"N	104°21'13.679"W	0.38	
1217.00	0.170	49.000	1216.99	-0.13	-2.24	0.17	40°26'30.026"N	104°21'13.678"W	0.18	
1311.00	0.140	89.840	1310.99	-0.35	-2.15	0.39	40°26'30.027"N	104°21'13.675"W	0.12	
1405.00	0.250	138.570	1404.99	-0.60	-2.30	0.64	40°26'30.025"N	104°21'13.672"W	0.20	
1500.00	0.220	166.380	1499.99	-0.78	-2.63	0.82	40°26'30.022"N	104°21'13.670"W	0.12	
1594.00	0.150	63.850	1593.99	-0.93	-2.75	0.97	40°26'30.021"N	104°21'13.668"W	0.31	
1688.00	0.170	67.810	1687.99	-1.17	-2.65	1.21	40°26'30.022"N	104°21'13.665"W	0.02	
1783.00	0.600	341.890	1782.99	-1.15	-2.12	1.19	40°26'30.027"N	104°21'13.665"W	0.64	
1878.00	0.940	332.480	1877.98	-0.66	-0.96	0.67	40°26'30.038"N	104°21'13.671"W	0.38	
1936.00	0.710	319.820	1935.97	-0.22	-0.26	0.22	40°26'30.045"N	104°21'13.677"W	0.50	Tie to Surface
1977.00	0.280	333.040	1976.97	-0.01	0.02	0.01	40°26'30.048"N	104°21'13.680"W	1.08	
2071.00	0.350	59.420	2070.97	-0.16	0.37	0.15	40°26'30.052"N	104°21'13.678"W	0.46	
2166.00	0.480	257.660	2165.97	-0.02	0.44	0.01	40°26'30.052"N	104°21'13.680"W	0.86	
2261.00	0.680	165.960	2260.96	0.24	-0.20	-0.24	40°26'30.046"N	104°21'13.683"W	0.89	
2355.00	0.030	173.760	2354.96	0.11	-0.76	-0.10	40°26'30.040"N	104°21'13.681"W	0.69	
2450.00	0.280	98.650	2449.96	-0.12	-0.82	0.13	40°26'30.040"N	104°21'13.678"W	0.29	
2544.00	0.310	188.290	2543.96	-0.31	-1.11	0.32	40°26'30.037"N	104°21'13.676"W	0.44	
2639.00	0.420	38.920	2638.96	-0.49	-1.09	0.50	40°26'30.037"N	104°21'13.674"W	0.74	
2733.00	0.320	179.920	2732.96	-0.70	-1.08	0.72	40°26'30.037"N	104°21'13.671"W	0.74	
2828.00	0.090	227.720	2827.96	-0.64	-1.40	0.67	40°26'30.034"N	104°21'13.672"W	0.28	
2922.00	0.030	303.760	2921.96	-0.57	-1.44	0.59	40°26'30.034"N	104°21'13.673"W	0.09	
3017.00	0.090	234.600	3016.96	-0.49	-1.47	0.51	40°26'30.033"N	104°21'13.674"W	0.09	
3112.00	0.030	8.950	3111.96	-0.43	-1.48	0.45	40°26'30.033"N	104°21'13.674"W	0.12	

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Operator	NOBLE ENERGY, INC	Slot	SLOT#03 WELLS RANCH STATE AA36-643 (2084'FSL & 817'FWL, SEC.32)
Area	COLORADO	Well	WELLS RANCH STATE AA36-643
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA36-643 AWB
Facility	SEC.32-T06N-R62W		

WELLPATH DATA (172 stations)										
MD (ft)	Inclination [°]	Azimuth [°]	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Latitude	Longitude	DLS (°/100ft)	Comments
3206.00	0.120	87.490	3205.96	-0.53	-1.46	0.55	40°26'30.034"N	104°21'13.673"W	0.13	
3301.00	0.420	0.140	3300.96	-0.64	-1.10	0.66	40°26'30.037"N	104°21'13.672"W	0.45	
3395.00	0.340	241.470	3394.96	-0.40	-0.89	0.41	40°26'30.039"N	104°21'13.675"W	0.70	
3490.00	0.040	339.960	3489.96	-0.14	-1.00	0.15	40°26'30.038"N	104°21'13.678"W	0.37	
3585.00	0.150	295.520	3584.95	-0.01	-0.91	0.03	40°26'30.039"N	104°21'13.680"W	0.13	
3679.00	0.810	270.620	3678.95	0.76	-0.85	-0.75	40°26'30.040"N	104°21'13.690"W	0.72	
3774.00	2.840	296.760	3773.90	3.52	0.22	-3.52	40°26'30.051"N	104°21'13.725"W	2.26	
3869.00	4.470	295.850	3868.70	8.91	2.89	-8.95	40°26'30.078"N	104°21'13.795"W	1.72	
3963.00	6.640	280.980	3962.26	17.50	5.52	-17.59	40°26'30.105"N	104°21'13.907"W	2.75	
4058.00	8.300	280.760	4056.45	29.59	7.85	-29.72	40°26'30.129"N	104°21'14.063"W	1.75	
4152.00	10.100	280.200	4149.24	44.32	10.58	-44.49	40°26'30.158"N	104°21'14.254"W	1.92	
4247.00	11.970	282.260	4242.48	62.09	14.14	-62.32	40°26'30.196"N	104°21'14.484"W	2.01	
4341.00	13.710	282.720	4334.12	82.41	18.67	-82.71	40°26'30.243"N	104°21'14.747"W	1.85	
4436.00	15.260	279.470	4426.10	105.65	23.20	-106.03	40°26'30.291"N	104°21'15.047"W	1.84	
4530.00	15.640	276.720	4516.71	130.38	26.72	-130.82	40°26'30.329"N	104°21'15.367"W	0.88	
4625.00	17.290	274.680	4607.81	157.12	29.37	-157.61	40°26'30.358"N	104°21'15.713"W	1.84	
4720.00	18.740	278.550	4698.15	186.23	32.79	-186.77	40°26'30.396"N	104°21'16.090"W	1.98	
4814.00	18.760	280.310	4787.16	215.95	37.74	-216.57	40°26'30.449"N	104°21'16.474"W	0.60	
4909.00	18.500	271.350	4877.21	246.00	40.83	-246.68	40°26'30.483"N	104°21'16.863"W	3.02	
5003.00	17.900	265.270	4966.51	275.32	39.99	-275.99	40°26'30.478"N	104°21'17.242"W	2.12	
5098.00	15.010	267.390	5057.61	302.19	38.23	-302.83	40°26'30.464"N	104°21'17.590"W	3.11	
5192.00	16.380	279.560	5148.13	327.40	39.88	-328.07	40°26'30.484"N	104°21'17.916"W	3.78	
5286.00	18.150	287.090	5237.90	354.36	46.38	-355.14	40°26'30.552"N	104°21'18.265"W	3.03	
5380.00	18.480	290.050	5327.14	382.20	55.79	-383.13	40°26'30.648"N	104°21'18.625"W	1.05	
5474.00	18.360	290.080	5416.32	409.94	65.98	-411.03	40°26'30.752"N	104°21'18.985"W	0.13	
5569.00	18.830	289.450	5506.37	438.28	76.22	-439.54	40°26'30.857"N	104°21'19.351"W	0.54	
5663.00	18.650	281.670	5595.40	467.18	84.32	-468.56	40°26'30.941"N	104°21'19.726"W	2.66	
5758.00	18.650	276.460	5685.41	497.07	89.10	-498.54	40°26'30.992"N	104°21'20.112"W	1.75	
5852.00	18.370	280.550	5774.55	526.49	93.50	-528.03	40°26'31.039"N	104°21'20.493"W	1.41	
5947.00	18.740	274.200	5864.63	556.37	97.36	-557.97	40°26'31.081"N	104°21'20.880"W	2.16	

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#03 WELLS RANCH STATE AA36-643 (2084'FSL & 817'FWL, SEC.32)
Area	COLORADO	Well	WELLS RANCH STATE AA36-643
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA36-643 AWB
Facility	SEC.32-T06N-R62W		

WELLPATH DATA (172 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
6041.00	18.690	266.680	5953.67	586.46	97.59	-588.07	40°26'31.087"N	104°21'21.269"W	2.57	
6136.00	18.640	259.990	6043.68	616.66	94.07	-618.22	40°26'31.056"N	104°21'21.659"W	2.25	
6230.00	23.560	251.790	6131.37	649.46	85.58	-650.89	40°26'30.977"N	104°21'22.083"W	6.09	
6325.00	32.030	260.130	6215.37	692.56	75.31	-693.84	40°26'30.881"N	104°21'22.640"W	9.79	
6419.00	39.230	268.320	6291.76	747.01	70.16	-748.21	40°26'30.837"N	104°21'23.344"W	9.17	
6514.00	46.790	272.380	6361.19	811.72	70.71	-812.93	40°26'30.850"N	104°21'24.181"W	8.47	
6608.00	54.190	265.370	6421.00	884.11	69.06	-885.31	40°26'30.843"N	104°21'25.118"W	9.74	
6703.00	62.510	260.630	6470.83	964.40	59.06	-965.45	40°26'30.755"N	104°21'26.156"W	9.73	
6797.00	70.180	262.950	6508.52	1049.74	46.83	-1050.61	40°26'30.645"N	104°21'27.259"W	8.47	
6892.00	79.160	268.370	6533.63	1141.06	40.00	-1141.84	40°26'30.589"N	104°21'28.440"W	10.93	
6987.00	86.670	274.430	6545.35	1235.15	42.34	-1235.97	40°26'30.624"N	104°21'29.657"W	10.12	
7081.00	89.600	276.020	6548.40	1328.55	50.90	-1329.52	40°26'30.720"N	104°21'30.865"W	3.55	
7176.00	89.910	275.690	6548.81	1422.89	60.59	-1424.02	40°26'30.828"N	104°21'32.086"W	0.48	
7271.00	90.710	271.290	6548.30	1517.58	66.37	-1518.82	40°26'30.897"N	104°21'33.311"W	4.71	
7365.00	89.940	265.820	6547.76	1611.54	64.00	-1612.75	40°26'30.886"N	104°21'34.526"W	5.88	
7460.00	90.310	263.870	6547.56	1706.27	55.46	-1707.36	40°26'30.814"N	104°21'35.751"W	2.09	
7555.00	89.720	263.550	6547.53	1800.85	45.06	-1801.79	40°26'30.723"N	104°21'36.974"W	0.71	
7649.00	89.750	263.970	6547.97	1894.44	34.84	-1895.23	40°26'30.634"N	104°21'38.184"W	0.45	
7838.00	89.850	263.630	6548.63	2082.64	14.43	-2083.12	40°26'30.456"N	104°21'40.617"W	0.19	
7933.00	89.660	262.930	6549.03	2177.15	3.31	-2177.47	40°26'30.358"N	104°21'41.839"W	0.76	
8027.00	89.750	266.930	6549.52	2270.88	-4.99	-2271.08	40°26'30.288"N	104°21'43.051"W	4.26	
8122.00	89.880	274.980	6549.82	2365.75	-3.41	-2365.99	40°26'30.315"N	104°21'44.278"W	8.47	
8312.00	89.970	274.880	6550.07	2554.76	12.92	-2555.29	40°26'30.501"N	104°21'46.724"W	0.07	
8406.00	90.460	272.740	6549.72	2648.44	19.16	-2649.07	40°26'30.574"N	104°21'47.935"W	2.34	
8501.00	89.820	270.580	6549.49	2743.34	21.91	-2744.03	40°26'30.613"N	104°21'49.163"W	2.37	
8595.00	89.820	268.470	6549.78	2837.33	21.13	-2838.02	40°26'30.618"N	104°21'50.379"W	2.24	
8690.00	89.850	267.970	6550.06	2932.32	18.18	-2932.97	40°26'30.601"N	104°21'51.607"W	0.53	
8784.00	89.510	268.890	6550.58	3026.31	15.61	-3026.93	40°26'30.587"N	104°21'52.823"W	1.04	
8879.00	89.660	270.290	6551.27	3121.30	14.93	-3121.93	40°26'30.592"N	104°21'54.051"W	1.48	
8973.00	89.510	269.760	6551.95	3215.29	14.97	-3215.92	40°26'30.605"N	104°21'55.267"W	0.59	

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Area	COLORADO	Well	WELLS RANCH STATE AA36-643
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA36-643 AWB
Facility	SEC.32-T06N-R62W		

WELLPATH DATA (172 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
9068.00	89.540	270.080	6552.74	3310.27	14.84	-3310.92	40°26'30.615"N	104°21'56.495"W	0.34	
9257.00	89.630	269.010	6554.11	3499.26	13.34	-3499.91	40°26'30.624"N	104°21'58.940"W	0.57	
9351.00	89.850	268.130	6554.53	3593.25	10.99	-3593.87	40°26'30.613"N	104°22'00.155"W	0.96	
9445.00	89.570	266.410	6555.01	3687.20	6.51	-3687.76	40°26'30.581"N	104°22'01.370"W	1.85	
9540.00	89.540	267.440	6555.75	3782.13	1.42	-3782.62	40°26'30.542"N	104°22'02.598"W	1.08	
9634.00	89.540	267.910	6556.50	3876.10	-2.40	-3876.54	40°26'30.516"N	104°22'03.813"W	0.50	
9729.00	89.540	268.470	6557.26	3971.08	-5.40	-3971.49	40°26'30.499"N	104°22'05.041"W	0.59	
9823.00	89.630	269.170	6557.94	4065.08	-7.33	-4065.47	40°26'30.492"N	104°22'06.257"W	0.75	
9918.00	89.720	270.370	6558.48	4160.07	-7.71	-4160.46	40°26'30.500"N	104°22'07.486"W	1.27	
10012.00	89.750	269.560	6558.92	4254.05	-7.77	-4254.46	40°26'30.511"N	104°22'08.701"W	0.86	
10106.00	89.850	268.990	6559.25	4348.05	-8.96	-4348.45	40°26'30.511"N	104°22'09.917"W	0.62	
10201.00	89.910	267.650	6559.45	4443.04	-11.75	-4443.41	40°26'30.496"N	104°22'11.145"W	1.41	
10295.00	89.750	267.830	6559.72	4537.01	-15.45	-4537.34	40°26'30.471"N	104°22'12.361"W	0.26	
10389.00	89.350	268.030	6560.46	4630.99	-18.85	-4631.27	40°26'30.449"N	104°22'13.576"W	0.48	
10484.00	89.780	268.830	6561.18	4725.98	-21.45	-4726.23	40°26'30.435"N	104°22'14.805"W	0.96	
10578.00	90.000	269.070	6561.36	4819.98	-23.17	-4820.22	40°26'30.430"N	104°22'16.020"W	0.35	
10672.00	89.630	268.220	6561.67	4913.98	-25.40	-4914.19	40°26'30.420"N	104°22'17.236"W	0.99	
10767.00	89.750	269.070	6562.18	5008.97	-27.64	-5009.16	40°26'30.410"N	104°22'18.465"W	0.90	
10862.00	89.910	270.570	6562.46	5103.96	-27.94	-5104.16	40°26'30.419"N	104°22'19.693"W	1.59	
10956.00	89.780	276.080	6562.72	5197.67	-22.49	-5197.96	40°26'30.484"N	104°22'20.905"W	5.86	
11051.00	89.820	277.520	6563.05	5291.81	-11.24	-5292.29	40°26'30.607"N	104°22'22.123"W	1.52	
11145.00	89.880	272.680	6563.30	5385.26	-2.89	-5385.89	40°26'30.702"N	104°22'23.332"W	5.15	
11240.00	89.910	272.180	6563.47	5480.10	1.14	-5480.80	40°26'30.753"N	104°22'24.559"W	0.53	
11334.00	90.520	268.940	6563.12	5574.06	2.06	-5574.79	40°26'30.774"N	104°22'25.774"W	3.51	
11430.00	88.920	265.120	6563.59	5669.97	-2.91	-5670.63	40°26'30.737"N	104°22'27.015"W	4.31	
11525.00	89.970	263.990	6564.51	5764.67	-11.93	-5765.20	40°26'30.660"N	104°22'28.239"W	1.62	
11620.00	89.940	262.590	6564.58	5859.18	-23.03	-5859.55	40°26'30.562"N	104°22'29.461"W	1.47	
11714.00	90.030	263.390	6564.61	5952.65	-34.50	-5952.84	40°26'30.460"N	104°22'30.670"W	0.86	
11809.00	89.940	265.340	6564.63	6047.32	-43.83	-6047.38	40°26'30.380"N	104°22'31.894"W	2.05	
11903.00	89.940	266.740	6564.73	6141.18	-50.32	-6141.15	40°26'30.328"N	104°22'33.108"W	1.49	

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#03 WELLS RANCH STATE AA36-643 (2084'FSL & 817'FWL, SEC.32)
Area	COLORADO	Well	WELLS RANCH STATE AA36-643
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA36-643 AWB
Facility	SEC.32-T06N-R62W		

WELLPATH DATA (172 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11998.00	89.820	267.340	6564.93	6236.12	-55.23	-6236.02	40°26'30.291"N	104°22'34.335"W	0.64	
12093.00	90.030	268.670	6565.05	6331.10	-58.53	-6330.96	40°26'30.270"N	104°22'35.564"W	1.42	
12187.00	89.850	270.260	6565.15	6425.09	-59.41	-6424.96	40°26'30.273"N	104°22'36.779"W	1.70	
12281.00	90.120	270.110	6565.18	6519.08	-59.11	-6518.96	40°26'30.288"N	104°22'37.995"W	0.33	
12376.00	89.450	269.100	6565.53	6614.07	-59.76	-6613.95	40°26'30.294"N	104°22'39.223"W	1.28	
12470.00	90.030	270.240	6565.96	6708.06	-60.30	-6707.95	40°26'30.300"N	104°22'40.439"W	1.36	
12565.00	89.820	270.220	6566.08	6803.04	-59.92	-6802.95	40°26'30.316"N	104°22'41.668"W	0.22	
12660.00	89.290	267.860	6566.82	6898.03	-61.51	-6897.92	40°26'30.312"N	104°22'42.896"W	2.55	
12754.00	89.910	267.930	6567.48	6992.01	-64.97	-6991.86	40°26'30.289"N	104°22'44.112"W	0.66	
12849.00	89.910	265.410	6567.63	7086.92	-70.48	-7086.69	40°26'30.247"N	104°22'45.339"W	2.65	
12943.00	90.400	266.240	6567.37	7180.76	-77.33	-7180.44	40°26'30.191"N	104°22'46.552"W	1.03	
13038.00	90.180	267.590	6566.89	7275.69	-82.44	-7275.30	40°26'30.152"N	104°22'47.780"W	1.44	
13132.00	90.490	269.450	6566.34	7369.68	-84.87	-7369.26	40°26'30.140"N	104°22'48.995"W	2.01	
13227.00	89.880	270.010	6566.03	7464.67	-85.31	-7464.26	40°26'30.147"N	104°22'50.224"W	0.87	
13321.00	90.180	269.940	6565.99	7558.66	-85.36	-7558.26	40°26'30.159"N	104°22'51.440"W	0.33	
13415.00	89.940	269.840	6565.89	7652.65	-85.54	-7652.26	40°26'30.168"N	104°22'52.655"W	0.28	
13510.00	89.750	268.680	6566.14	7747.65	-86.76	-7747.25	40°26'30.168"N	104°22'53.884"W	1.24	
13604.00	90.030	270.470	6566.32	7841.64	-87.46	-7841.24	40°26'30.173"N	104°22'55.100"W	1.93	
13699.00	89.880	269.860	6566.40	7936.63	-87.19	-7936.24	40°26'30.188"N	104°22'56.328"W	0.66	
13793.00	90.120	268.900	6566.40	8030.62	-88.20	-8030.23	40°26'30.189"N	104°22'57.544"W	1.05	
13888.00	89.820	268.810	6566.45	8125.62	-90.10	-8125.21	40°26'30.182"N	104°22'58.773"W	0.33	
13982.00	90.090	268.420	6566.52	8219.62	-92.37	-8219.19	40°26'30.172"N	104°22'59.988"W	0.50	
14077.00	89.820	266.710	6566.60	8314.58	-96.41	-8314.10	40°26'30.143"N	104°23'01.216"W	1.82	
14172.00	90.150	263.240	6566.62	8409.32	-104.73	-8408.72	40°26'30.073"N	104°23'02.441"W	3.67	
14266.00	90.220	269.850	6566.32	8503.18	-110.39	-8502.49	40°26'30.029"N	104°23'03.655"W	7.03	
14361.00	89.690	270.300	6566.39	8598.16	-110.27	-8597.49	40°26'30.042"N	104°23'04.884"W	0.73	
14456.00	89.850	270.190	6566.77	8693.14	-109.86	-8692.49	40°26'30.058"N	104°23'06.112"W	0.20	
14550.00	89.970	270.550	6566.92	8787.12	-109.25	-8786.49	40°26'30.075"N	104°23'07.328"W	0.40	
14644.00	89.540	271.080	6567.32	8881.07	-107.92	-8880.48	40°26'30.100"N	104°23'08.543"W	0.73	
14739.00	89.600	272.590	6568.04	8975.96	-104.88	-8975.42	40°26'30.142"N	104°23'09.770"W	1.59	

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#03 WELLS RANCH STATE AA36-643 (2084'FSL & 817'FWL, SEC.32)
Area	COLORADO	Well	WELLS RANCH STATE AA36-643
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA36-643 AWB
Facility	SEC.32-T06N-R62W		

WELLPATH DATA (172 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
14833.00	89.630	267.070	6568.67	9069.91	-105.15	-9069.38	40°26'30.151"N	104°23'10.985"W	5.87	
14928.00	89.780	271.490	6569.16	9164.89	-106.35	-9164.35	40°26'30.151"N	104°23'12.214"W	4.66	
15022.00	90.090	277.540	6569.27	9258.43	-98.95	-9258.02	40°26'30.236"N	104°23'13.424"W	6.44	
15116.00	89.750	280.050	6569.40	9351.07	-84.58	-9350.90	40°26'30.389"N	104°23'14.623"W	2.69	
15211.00	89.690	278.610	6569.86	9444.56	-69.18	-9444.64	40°26'30.553"N	104°23'15.832"W	1.52	
15400.00	89.820	271.730	6570.67	9632.38	-52.16	-9632.76	40°26'30.744"N	104°23'18.263"W	3.64	
15494.00	89.480	262.020	6571.25	9726.20	-57.28	-9726.51	40°26'30.705"N	104°23'19.476"W	10.34	
15589.00	89.660	256.510	6571.96	9819.77	-74.96	-9819.80	40°26'30.542"N	104°23'20.685"W	5.80	
15683.00	89.690	256.150	6572.49	9911.44	-97.18	-9911.14	40°26'30.334"N	104°23'21.870"W	0.38	
15778.00	89.750	257.630	6572.96	10004.29	-118.73	-10003.66	40°26'30.133"N	104°23'23.070"W	1.56	
15872.00	89.720	261.560	6573.39	10096.98	-135.70	-10096.10	40°26'29.976"N	104°23'24.268"W	4.18	
15967.00	89.630	267.570	6573.93	10191.64	-144.69	-10190.62	40°26'29.899"N	104°23'25.492"W	6.33	
16061.00	89.690	273.860	6574.49	10285.55	-143.52	-10284.57	40°26'29.922"N	104°23'26.707"W	6.69	
16156.00	89.850	275.270	6574.87	10380.12	-135.96	-10379.26	40°26'30.009"N	104°23'27.930"W	1.49	
16250.00	89.820	272.460	6575.14	10473.78	-129.62	-10473.04	40°26'30.083"N	104°23'29.142"W	2.99	
16345.00	90.030	268.930	6575.27	10568.73	-128.47	-10568.02	40°26'30.106"N	104°23'30.370"W	3.72	
16439.00	89.720	269.660	6575.47	10662.73	-129.63	-10662.01	40°26'30.106"N	104°23'31.586"W	0.84	
16534.00	89.820	267.130	6575.85	10757.71	-132.29	-10756.96	40°26'30.092"N	104°23'32.814"W	2.67	
16628.00	89.780	266.480	6576.18	10851.64	-137.53	-10850.82	40°26'30.051"N	104°23'34.029"W	0.69	
16723.00	89.970	266.590	6576.39	10946.54	-143.27	-10945.64	40°26'30.006"N	104°23'35.256"W	0.23	
16817.00	90.000	267.410	6576.41	11040.48	-148.19	-11039.51	40°26'29.969"N	104°23'36.471"W	0.87	Last BHI MWD Surveys
16905.00	90.000	267.410	6576.41	11128.44	-152.17	-11127.42	40°26'29.941"N	104°23'37.608"W	0.00	Projection to Bit

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#03 WELLS RANCH STATE AA36-643 (2084'FSL & 817'FWL, SEC.32)
Area	COLORADO	Well	WELLS RANCH STATE AA36-643
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA36-643 AWB
Facility	SEC.32-T06N-R62W		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
WELLS RANCH STATE AA36-622 SEC.31-T06N-R62W	1.00	-72.86	0.94	3319024.36	1405733.36	40°26'29.328"N	104°21'13.680"W	polygon
WELLS RANCH STATE AA36-622 SEC.32-T06N-R62W	1.00	-72.86	0.94	3319024.36	1405733.36	40°26'29.328"N	104°21'13.680"W	polygon
WELLS RANCH STATE AA36-622 SEC.35-T06N-R63W	1.00	-72.86	0.94	3319024.36	1405733.36	40°26'29.328"N	104°21'13.680"W	polygon
WELLS RANCH STATE AA36-622 SEC.36-T06N-R63W	1.00	-72.86	0.94	3319024.36	1405733.36	40°26'29.328"N	104°21'13.680"W	polygon
WELLS RANCH STATE AA36-643 TPZ	6548.00	65.91	-431.49	3318591.95	1405872.12	40°26'30.754"N	104°21'19.249"W	point
WELLS RANCH STATE AA36-643 Landing	6550.36	39.27	-1254.14	3317769.33	1405845.48	40°26'30.596"N	104°21'29.892"W	point
WELLS RANCH STATE AA36-643 BHL From Plan (2175'FSL & 400'FWL, SEC.36)	6579.20	-172.60	-10992.73	3308031.13	1405633.62	40°26'29.722"N	104°23'35.870"W	point
WELLS RANCH STATE AA36-643 REV-2 BHL From Plan (2175'FSL & 250'FWL, SEC.36)	6579.71	-175.81	-11144.73	3307879.13	1405630.41	40°26'29.709"N	104°23'37.836"W	point
WELLS RANCH STATE AA36-643 REV-3 BHL From Plan (2175'FSL & 250'FWL, SEC.36)	6579.71	-175.81	-11142.73	3307881.13	1405630.41	40°26'29.709"N	104°23'37.810"W	point
WELLS RANCH STATE AA36-643 BHL ON PLAT (2175'FSL & 120'FEL, SEC.35)	6581.00	-178.87	-11508.44	3307515.43	1405627.35	40°26'29.724"N	104°23'42.540"W	point

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#03 WELLS RANCH STATE AA36-643 (2084'FSL & 817'FWL, SEC.32)
Area	COLORADO	Well	WELLS RANCH STATE AA36-643
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA36-643 AWB
Facility	SEC.32-T06N-R62W		

WELLPATH COMPOSITION - Ref Wellbore: WELLS RANCH STATE AA36-643 AWB					Ref Wellpath: WELLS RANCH STATE AA36-643 AWP
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	
0.00	1936.00	BHI Generic gyro - northseeking (Standard)	3rd Party Surface Gyros <555'-1936'>	WELLS RANCH STATE AA36-643 AWB	
1936.00	16817.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	BH/ 8.5" Hole OWSG MWD rev2+IFR+MSA <1977'-16817'>	WELLS RANCH STATE AA36-643 AWB	
16817.00	16905.00	Blind Drilling (std)	Projection to bit	WELLS RANCH STATE AA36-643 AWB	

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#03 WELLS RANCH STATE AA36-643 (2084'FSL & 817'FWL, SEC.32)
Area	COLORADO	Well	WELLS RANCH STATE AA36-643
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH STATE AA36-643 AWB
Facility	SEC.32-T06N-R62W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1936.00	0.710	319.820	1935.97	Tie to Surface
16817.00	90.000	267.410	6576.41	Last BHI MWD Surveys
16905.00	90.000	267.410	6576.41	Projection to Bit