

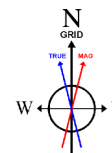
NOBLE ENERGY, INC

Location: COLORADO Slot: SLOT#22 WELLS RANCH BB11-682(728'FNL&235'FWL,SEC.11)
Field: WELD COUNTY (NOBLE NAD 83 GRID) Well: WELLS RANCH BB11-682
Facility: SEC.11-T05N-R63W Wellbore: WELLS RANCH BB11-682 PWB

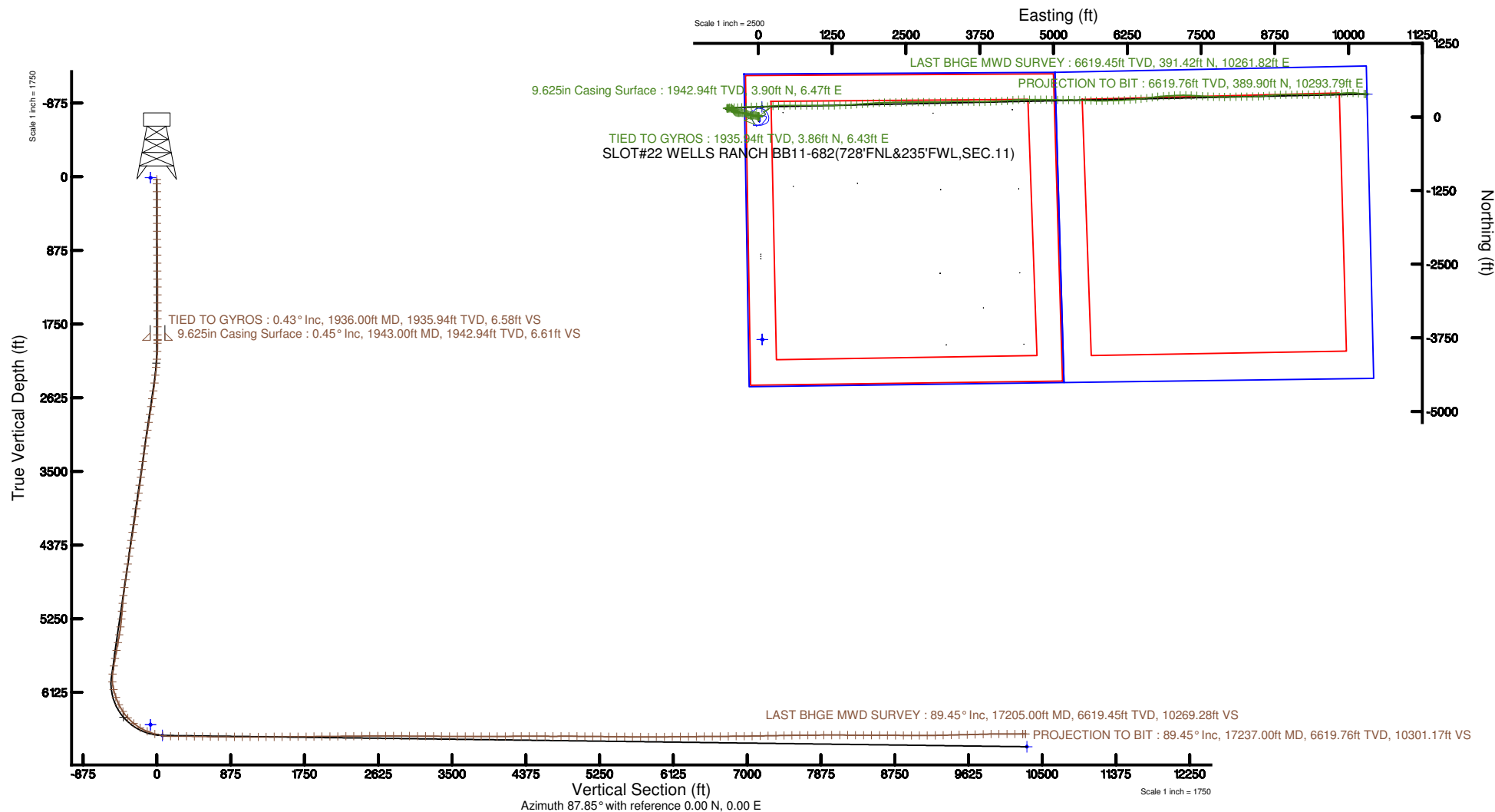
Plan reference wellbore is WELLS RANCH BB11-682 (REV A, 0) PWB	Grid System: NAD83; Lambert Colorado SP, Northern Zone (2011) US feet
True vertical depths are referenced to H&P RIG (2019B) (RIGB)	"-": Wellpath was transformed from a different geoidic datum
Measured depths are referenced to H&P RIG (2019B) (RIGB)	North Reference: Grid north
H&P RIG (2019B) (RIGB) to Mean Sea Level: 4715 feet	Scale: True distance
Mean Sea Level to Ground level (At Site) SLOTRIG2 WELLS RANCH BB11-682(728'FNL&235'FWL,SEC.11): 0 feet	Depth are in feet
Coordinates are in feet referenced to Site	Created by: certified on 2017-08-18
	Revised by:

Location Information

Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.11 T05N-R63W			333830.430	138626.455	40°54'31.7147N	104°34'45.5807W
Site	Local E (ft)	Local N (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOTRIG2 WELLS RANCH BB11-682(728'FNL&235'FWL,SEC.11)	3777.40	45.82	333830.430	138626.455	40°54'31.7147N	104°34'45.5807W
H&P RIG (2019B) (RIGB) to Ground level (At Site) SLOTRIG2 WELLS RANCH BB11-682(728'FNL&235'FWL,SEC.11)					4715ft	
Mean Sea Level to Ground level (At Site) SLOTRIG2 WELLS RANCH BB11-682(728'FNL&235'FWL,SEC.11)					0ft	
H&P RIG (2019B) (RIGB) to Mean Sea Level					4715ft	



BGGM (1900.0 to 2019.0) Dip: 66.93° Field: 52428.8 nT
Magnetic North is 8.18 degrees East of True North (at 7/21/2017)
Grid North is 0.70 degrees East of True North
To correct azimuth from True to Grid subtract 0.70 degrees
To correct azimuth from Magnetic to Grid add 7.48 degrees



REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#22 WELLS RANCH BB11-682(728'FNL&235'FWL,SEC.11)
Area	COLORADO	Well	WELLS RANCH BB11-682
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH BB11-682 AWB
Facility	SEC.11-T05N-R63W		

REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 5.0
North Reference	Grid	User	Cantryat
Scale	0.999961	Report Generated	9/18/2017 at 3:20:16 PM
Convergence at slot	0.71° East	Database/Source file	Denver/WELLS_RANCH_BB11-682_AWP.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	3777.40	-65.82	3302736.62	1397403.70	40°25'09.048"N	104°24'45.648"W
Facility Reference Pt			3302802.43	1393626.46	40°24'31.716"N	104°24'45.396"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 RIG (30'KB) (RKB) to Facility Vertical Datum	4715.00ft
Horizontal Reference Pt	Slot	H&P RIG (30'KB) (RKB) to Mean Sea Level	4715.00ft
Vertical Reference Pt	H&P RIG (30'KB) (RKB)	H&P RIG (30'KB) (RKB) to Ground Level at Slot (SLOT#22 WELLS RANCH BB11-682 (728'FNL&235'FWL,SEC.11))	4715.00ft
MD Reference Pt	H&P RIG (30'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	87.85°

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Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH BB11-682 AWB
Facility	SEC.11-T05N-R63W		

WELLPATH DATA (186 stations) † = interpolated/extrapolated station								
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
0.00†	0.000	144.930	0.00	0.00	0.00	0.00	0.00	
30.00	0.000	144.930	30.00	0.00	0.00	0.00	0.00	
84.00	0.040	144.930	84.00	0.01	-0.02	0.01	0.07	
177.00	0.320	40.140	177.00	0.20	0.16	0.20	0.36	
270.00	1.230	19.890	269.99	0.75	1.29	0.70	1.01	
364.00	0.690	357.630	363.98	1.13	2.81	1.02	0.69	
459.00	0.300	17.200	458.97	1.21	3.62	1.07	0.44	
553.00	0.110	104.720	552.97	1.38	3.83	1.23	0.34	
648.00	0.620	42.580	647.97	1.83	4.18	1.67	0.61	
742.00	0.340	50.390	741.97	2.40	4.74	2.23	0.31	
837.00	0.830	68.550	836.96	3.28	5.17	3.09	0.55	
931.00	0.440	92.070	930.96	4.28	5.40	4.08	0.49	
1026.00	0.260	67.160	1025.95	4.85	5.47	4.64	0.24	
1121.00	0.300	92.590	1120.95	5.30	5.55	5.09	0.14	
1215.00	0.490	80.270	1214.95	5.94	5.60	5.73	0.22	
1310.00	0.230	124.950	1309.95	6.49	5.56	6.29	0.38	
1404.00	0.190	177.140	1403.95	6.65	5.30	6.45	0.20	
1499.00	0.180	94.660	1498.95	6.80	5.13	6.61	0.26	
1593.00	0.230	164.890	1592.95	6.99	4.94	6.80	0.25	
1688.00	0.540	194.100	1687.95	6.90	4.32	6.75	0.38	
1783.00	0.410	237.560	1782.94	6.48	3.70	6.35	0.39	
1877.00	0.210	48.620	1876.94	6.33	3.63	6.20	0.66	
1936.00	0.430	45.830	1935.94	6.58	3.86	6.43	0.37	TIED TO GYROS
1979.00	0.560	28.600	1978.94	6.80	4.16	6.65	0.46	
2074.00	2.100	291.090	2073.92	5.44	5.19	5.25	2.36	
2168.00	4.970	286.820	2167.73	0.01	6.99	-0.26	3.06	
2263.00	6.380	299.590	2262.26	-8.37	10.79	-8.79	1.98	
2357.00	7.120	297.830	2355.61	-17.86	16.09	-18.48	0.82	
2452.00	8.050	290.870	2449.78	-29.08	21.20	-29.90	1.37	
2547.00	8.030	280.310	2543.85	-41.69	24.76	-42.65	1.55	

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#22 WELLS RANCH BB11-682(728'FNL&235'FWL,SEC.11)
Area	COLORADO	Well	WELLS RANCH BB11-682
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH BB11-682 AWB
Facility	SEC.11-T05N-R63W		

WELLPATH DATA (186 stations)								
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
2641.00	8.250	272.090	2636.91	-54.82	26.18	-55.85	1.26	
2735.00	8.670	271.000	2729.89	-68.62	26.55	-69.67	0.48	
2830.00	8.830	264.270	2823.78	-83.05	25.95	-84.08	1.09	
2924.00	8.730	262.280	2916.68	-97.35	24.27	-98.33	0.34	
3019.00	8.870	270.530	3010.57	-111.84	23.37	-112.80	1.34	
3114.00	8.820	276.790	3104.44	-126.35	24.30	-127.36	1.01	
3208.00	8.680	283.930	3197.35	-140.29	26.86	-141.40	1.16	
3303.00	8.610	291.050	3291.27	-153.71	31.14	-154.99	1.13	
3398.00	8.590	293.700	3385.20	-166.63	36.54	-168.12	0.42	
3492.00	8.840	300.430	3478.12	-179.04	43.02	-180.78	1.12	
3587.00	8.930	299.110	3571.98	-191.49	50.31	-193.52	0.23	
3681.00	8.750	291.720	3664.87	-204.27	56.50	-206.53	1.22	
3775.00	8.920	286.960	3757.75	-217.69	61.28	-220.15	0.80	
3870.00	8.810	281.660	3851.62	-231.72	64.89	-234.32	0.87	
3964.00	8.550	279.770	3944.54	-245.54	67.54	-248.25	0.41	
4059.00	8.750	277.980	4038.46	-259.57	69.74	-262.37	0.35	
4154.00	8.690	273.170	4132.37	-273.83	71.14	-276.69	0.77	
4248.00	8.570	271.030	4225.30	-287.89	71.66	-290.78	0.36	
4343.00	8.940	269.370	4319.20	-302.34	71.70	-305.24	0.47	
4437.00	8.640	266.660	4412.09	-316.70	71.21	-319.59	0.54	
4532.00	8.680	270.300	4506.01	-330.99	70.83	-333.89	0.58	
4627.00	8.580	272.860	4599.93	-345.21	71.22	-348.13	0.42	
4721.00	8.660	280.630	4692.88	-359.10	72.88	-362.09	1.24	
4816.00	8.630	293.970	4786.81	-372.48	77.09	-375.63	2.11	
4910.00	8.910	299.850	4879.71	-384.98	83.58	-388.39	1.00	
5005.00	8.590	307.270	4973.61	-396.70	91.54	-400.42	1.23	
5099.00	8.550	322.760	5066.57	-406.14	101.36	-410.24	2.45	
5194.00	8.730	329.910	5160.49	-413.58	113.22	-418.13	1.15	
5289.00	8.660	321.350	5254.41	-421.21	125.04	-426.21	1.36	
5383.00	9.760	304.450	5347.21	-431.82	135.08	-437.20	3.09	

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#22 WELLS RANCH BB11-682(728'FNL&235'FWL,SEC.11)
Area	COLORADO	Well	WELLS RANCH BB11-682
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH BB11-682 AWB
Facility	SEC.11-T05N-R63W		

WELLPATH DATA (186 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
5478.00	9.970	288.950	5440.82	-445.96	142.30	-451.62	2.80	
5572.00	10.420	277.260	5533.35	-461.94	146.02	-467.75	2.25	
5667.00	10.490	263.240	5626.79	-479.04	146.09	-484.86	2.67	
5762.00	10.400	257.460	5720.21	-496.09	143.21	-501.82	1.11	
5856.00	9.290	261.560	5812.83	-511.98	140.25	-517.61	1.40	
5951.00	7.560	286.820	5906.83	-525.52	140.94	-531.18	4.25	
6045.00	7.630	29.600	6000.34	-528.09	148.18	-534.03	12.61	
6139.00	14.790	72.240	6092.63	-513.21	157.29	-519.48	11.17	
6234.00	18.490	92.920	6183.71	-486.49	160.22	-492.85	7.29	
6329.00	26.680	91.060	6271.35	-450.13	159.06	-456.42	8.65	
6423.00	33.560	88.720	6352.62	-403.02	159.25	-409.29	7.42	
6518.00	42.160	87.820	6427.55	-344.78	161.05	-351.07	9.07	
6613.00	49.980	87.180	6493.41	-276.41	164.06	-282.77	8.25	
6707.00	60.040	87.570	6547.24	-199.51	167.57	-205.94	10.71	
6802.00	68.260	88.430	6588.63	-114.09	170.52	-120.57	8.69	
6896.00	74.260	88.680	6618.81	-25.12	172.76	-31.62	6.39	
6991.00	80.980	88.650	6639.17	67.61	174.93	61.09	7.07	
7086.00	90.710	87.400	6646.04	162.25	178.19	155.67	10.33	
7180.00	89.750	83.800	6645.67	256.16	185.40	249.37	3.96	
7274.00	89.110	87.540	6646.60	350.07	192.50	343.08	4.04	
7369.00	89.020	90.970	6648.15	445.01	193.73	438.05	3.61	
7464.00	89.200	90.380	6649.63	539.88	192.62	533.03	0.65	
7558.00	89.170	89.040	6650.97	633.82	193.09	627.02	1.43	
7652.00	89.170	88.980	6652.33	727.79	194.71	720.99	0.06	
7747.00	89.690	89.820	6653.27	822.75	195.71	815.98	1.04	
7842.00	89.970	90.060	6653.55	917.69	195.81	910.98	0.39	
7936.00	89.940	91.410	6653.63	1011.57	194.60	1004.97	1.44	
8031.00	89.850	90.270	6653.80	1106.44	193.21	1099.96	1.20	
8125.00	89.940	89.620	6653.97	1200.37	193.30	1193.96	0.70	
8220.00	90.120	88.850	6653.93	1295.34	194.57	1288.95	0.83	

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Area	COLORADO	Well	WELLS RANCH BB11-682
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH BB11-682 AWB
Facility	SEC.11-T05N-R63W		

WELLPATH DATA (186 stations)								
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
8315.00	90.250	88.010	6653.62	1390.34	197.17	1383.91	0.89	
8409.00	90.220	86.810	6653.23	1484.33	201.42	1477.81	1.28	
8504.00	90.430	86.540	6652.69	1579.31	206.93	1572.65	0.36	
8598.00	90.400	85.320	6652.01	1673.25	213.60	1666.41	1.30	
8693.00	90.430	85.600	6651.32	1768.17	221.12	1761.11	0.30	
8787.00	90.490	86.470	6650.57	1862.12	227.62	1854.88	0.93	
8882.00	90.430	86.360	6649.81	1957.08	233.56	1949.69	0.13	
8977.00	90.460	87.050	6649.07	2052.06	239.02	2044.53	0.73	
9071.00	90.770	88.400	6648.06	2146.05	242.75	2138.45	1.47	
9166.00	90.680	88.630	6646.86	2241.04	245.21	2233.41	0.26	
9261.00	90.650	89.240	6645.76	2336.02	246.98	2328.39	0.64	
9355.00	90.550	88.670	6644.77	2429.99	248.69	2422.37	0.62	
9450.00	90.710	88.380	6643.73	2524.98	251.14	2517.33	0.35	
9544.00	89.820	89.010	6643.29	2618.97	253.28	2611.30	1.16	
9639.00	89.970	91.290	6643.47	2713.88	253.03	2706.29	2.41	
9733.00	89.750	90.520	6643.70	2807.75	251.55	2800.28	0.85	
9827.00	89.690	90.460	6644.16	2901.65	250.74	2894.28	0.09	
9922.00	89.570	89.310	6644.77	2996.59	250.93	2989.27	1.22	
10017.00	89.660	88.260	6645.41	3091.57	252.95	3084.25	1.11	
10111.00	89.480	87.880	6646.11	3185.57	256.11	3178.19	0.45	
10206.00	89.480	88.570	6646.98	3280.56	259.05	3273.14	0.73	
10300.00	89.540	88.860	6647.78	3374.55	261.16	3367.11	0.32	
10395.00	89.480	90.200	6648.59	3469.50	261.94	3462.11	1.41	
10490.00	89.450	92.100	6649.48	3564.33	260.04	3557.08	2.00	
10584.00	89.970	92.350	6649.95	3658.06	256.39	3651.01	0.61	
10679.00	90.250	89.670	6649.77	3752.90	254.71	3745.98	2.84	
10773.00	90.740	87.840	6648.96	3846.88	256.75	3839.95	2.02	
10868.00	90.120	87.180	6648.25	3941.88	260.88	3934.86	0.95	
10962.00	89.970	88.890	6648.17	4035.87	264.10	4028.80	1.83	
11057.00	90.220	86.910	6648.02	4130.87	267.58	4123.73	2.10	

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Area	COLORADO	Well	WELLS RANCH BB11-682
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH BB11-682 AWB
Facility	SEC.11-T05N-R63W		

WELLPATH DATA (186 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
11152.00	90.430	85.120	6647.48	4225.82	274.19	4218.50	1.90	
11246.00	90.000	83.660	6647.12	4319.64	283.38	4312.04	1.62	
11341.00	90.000	85.760	6647.12	4414.49	292.13	4406.63	2.21	
11435.00	89.880	89.780	6647.22	4508.47	295.79	4500.54	4.28	
11530.00	89.850	90.510	6647.45	4603.40	295.55	4595.54	0.77	
11624.00	89.970	90.430	6647.59	4697.30	294.78	4689.54	0.15	
11719.00	90.250	90.960	6647.41	4792.18	293.63	4784.53	0.63	
11813.00	89.880	91.220	6647.30	4886.03	291.84	4878.51	0.48	
11908.00	89.820	91.640	6647.55	4980.84	289.47	4973.48	0.45	
12003.00	89.450	90.300	6648.16	5075.70	287.86	5068.46	1.46	
12097.00	89.380	89.940	6649.12	5169.62	287.66	5162.46	0.39	
12191.00	89.380	89.820	6650.14	5263.55	287.86	5256.45	0.13	
12286.00	89.350	90.490	6651.19	5358.47	287.60	5351.45	0.71	
12381.00	89.420	91.500	6652.21	5453.32	285.95	5446.43	1.07	
12475.00	89.450	93.060	6653.14	5547.03	282.21	5540.34	1.66	
12570.00	89.910	92.750	6653.67	5641.66	277.40	5635.22	0.58	
12664.00	89.850	91.770	6653.86	5735.38	273.69	5729.15	1.04	
12759.00	89.970	89.110	6654.01	5830.28	272.96	5824.13	2.80	
12853.00	89.880	88.190	6654.13	5924.27	275.18	5918.11	0.98	
12948.00	90.490	89.040	6653.83	6019.26	277.47	6013.08	1.10	
13042.00	90.550	87.410	6652.97	6113.25	280.39	6107.03	1.74	
13137.00	90.460	85.370	6652.14	6208.21	286.37	6201.83	2.15	
13232.00	90.490	86.220	6651.35	6303.14	293.33	6296.57	0.90	
13327.00	90.520	85.650	6650.51	6398.08	300.07	6391.33	0.60	
13421.00	90.370	84.690	6649.78	6491.98	307.98	6484.99	1.03	
13516.00	90.430	82.170	6649.12	6586.69	318.85	6579.35	2.65	
13611.00	90.460	82.900	6648.38	6681.27	331.19	6673.54	0.77	
13705.00	90.400	83.900	6647.68	6774.99	341.99	6766.92	1.07	
13800.00	90.460	85.150	6646.96	6869.82	351.06	6861.48	1.32	
13895.00	90.830	86.870	6645.89	6964.76	357.67	6956.24	1.85	

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#22 WELLS RANCH BB11-682(728'FNL&235'FWL,SEC.11)
Area	COLORADO	Well	WELLS RANCH BB11-682
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH BB11-682 AWB
Facility	SEC.11-T05N-R63W		

WELLPATH DATA (186 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
13989.00	90.800	86.850	6644.56	7058.74	362.82	7050.09	0.04	
14084.00	91.230	88.660	6642.87	7153.72	366.54	7145.00	1.96	
14179.00	91.170	91.260	6640.88	7248.63	366.60	7239.97	2.74	
14273.00	90.980	92.700	6639.12	7342.36	363.36	7333.89	1.54	
14368.00	91.020	93.330	6637.46	7436.96	358.36	7428.75	0.66	
14463.00	90.950	94.380	6635.83	7531.43	351.97	7523.52	1.11	
14557.00	90.860	93.280	6634.34	7624.90	345.70	7617.29	1.17	
14652.00	90.220	91.420	6633.45	7719.60	341.80	7712.20	2.07	
14746.00	90.180	91.230	6633.12	7813.43	339.63	7806.18	0.21	
14841.00	90.090	90.810	6632.90	7908.28	337.94	7901.16	0.45	
14935.00	90.030	87.920	6632.80	8002.24	338.98	7995.15	3.08	
15030.00	89.970	88.700	6632.80	8097.23	341.78	8090.11	0.82	
15124.00	89.720	89.830	6633.05	8191.20	342.99	8184.10	1.23	
15219.00	89.660	88.910	6633.57	8286.17	344.03	8279.09	0.97	
15313.00	89.780	88.760	6634.03	8380.15	345.94	8373.07	0.20	
15408.00	89.690	88.200	6634.47	8475.14	348.46	8468.03	0.60	
15502.00	89.570	85.960	6635.07	8569.13	353.25	8561.90	2.39	
15597.00	89.910	83.900	6635.50	8664.00	361.64	8656.52	2.20	
15692.00	89.850	84.820	6635.70	8758.82	370.98	8751.06	0.97	
15786.00	89.290	88.060	6636.41	8852.78	376.82	8844.87	3.50	
15881.00	90.000	90.760	6637.00	8947.73	377.79	8939.85	2.94	
15976.00	89.910	89.800	6637.07	9042.64	377.33	9034.85	1.01	
16070.00	90.090	89.180	6637.07	9136.61	378.17	9128.84	0.69	
16165.00	90.980	89.750	6636.18	9231.56	379.05	9223.83	1.11	
16259.00	91.380	90.310	6634.25	9325.47	379.00	9317.81	0.73	
16354.00	91.420	90.040	6631.93	9420.37	378.71	9412.78	0.29	
16448.00	91.320	89.470	6629.68	9514.29	379.12	9506.76	0.62	
16543.00	91.230	87.770	6627.57	9609.25	381.40	9601.70	1.79	
16638.00	91.510	86.980	6625.29	9704.22	385.75	9696.57	0.88	
16732.00	91.350	87.230	6622.95	9798.18	390.50	9790.43	0.32	

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#22 WELLS RANCH BB11-682(728'FNL&235'FWL,SEC.11)
Area	COLORADO	Well	WELLS RANCH BB11-682
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH BB11-682 AWB
Facility	SEC.11-T05N-R63W		

WELLPATH DATA (186 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
16827.00	91.420	83.680	6620.65	9893.06	398.02	9885.08	3.74	
16921.00	90.490	85.920	6619.09	9986.90	406.54	9978.68	2.58	
17016.00	89.750	92.330	6618.89	10081.83	407.99	10073.62	6.79	
17110.00	90.060	97.540	6619.04	10175.08	399.91	10167.23	5.55	
17205.00	89.450	92.720	6619.45	10269.28	391.42	10261.82	5.11	LAST BHGE MWD SURVEY
17237.00	89.450	92.720	6619.76	10301.17	389.90	10293.79	0.00	PROJECTION TO BIT

HOLE & CASING SECTIONS

- Ref Wellbore: WELLS RANCH BB11-682 AWB Ref Wellpath: WELLS RANCH BB11-682 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	1943.00	1913.00	30.00	1942.94	0.00	0.00	3.90	6.47
9.625in Casing Surface	30.00	1943.00	1913.00	30.00	1942.94	0.00	0.00	3.90	6.47
8.5in Open Hole	1943.00	17237.00	15294.00	1942.94	6619.76	3.90	6.47	389.90	10293.79

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#22 WELLS RANCH BB11-682(728'FNL&235'FWL,SEC.11)
Area	COLORADO	Well	WELLS RANCH BB11-682
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH BB11-682 AWB
Facility	SEC.11-T05N-R63W		

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
WELLS RANCH BB11-618 SECTION 11-T05N-R63W	10.00	-3777.40	65.82	3302802.43	1393626.45	40°24'31.716"N	104°24'45.396"W	polygon
WELLS RANCH BB11-618 SECTION 12-T05N-R63W	10.00	-3777.40	65.82	3302802.43	1393626.45	40°24'31.716"N	104°24'45.396"W	polygon
WELLS RANCH BB11-618 SECTION 11 HARDLINES (460'SETBACK)	6510.00	-3777.40	65.82	3302802.43	1393626.45	40°24'31.716"N	104°24'45.396"W	polygon
WELLS RANCH BB11-618 SECTION 12 HARDLINES (460'SETBACK)	6510.00	-3777.40	65.82	3302802.43	1393626.45	40°24'31.716"N	104°24'45.396"W	polygon
WELLS RANCH BB11-682 Landing Point(550'FNL&300'FWL,SEC.11)	6637.00	170.00	60.00	3302796.61	1397573.70	40°25'10.720"N	104°24'44.845"W	point
WELLS RANCH BB11-682 REV-1 BHL(450'FNL&1'FEL,SEC.12)	6771.20	387.26	10309.44	3313045.64	1397790.94	40°25'11.604"N	104°22'32.304"W	point

WELLPATH COMPOSITION - Ref Wellbore: WELLS RANCH BB11-682 AWB Ref Wellpath: WELLS RANCH BB11-682 AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
30.00	1936.00	Gyrodatta standard - Continuous gyro	13.5" SURFACE GYROS	WELLS RANCH BB11-682 AWB
1936.00	17205.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	BHGE 8.5" MONOBORE <1936-17205>	WELLS RANCH BB11-682 AWB
17205.00	17237.00	Blind Drilling (std)	Projection to bit	WELLS RANCH BB11-682 AWB

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#22 WELLS RANCH BB11-682(728'FNL&235'FWL,SEC.11)
Area	COLORADO	Well	WELLS RANCH BB11-682
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH BB11-682 AWB
Facility	SEC.11-T05N-R63W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1936.00	0.430	45.830	1935.94	TIED TO GYROS
17205.00	89.450	92.720	6619.45	LAST BHGE MWD SURVEY
17237.00	89.450	92.720	6619.76	PROJECTION TO BIT

COMMENTS

Wellpath general comments

SURFACE LOCATION: NWNW

40.41916N

104.41268W

API #: 05-123-44969