

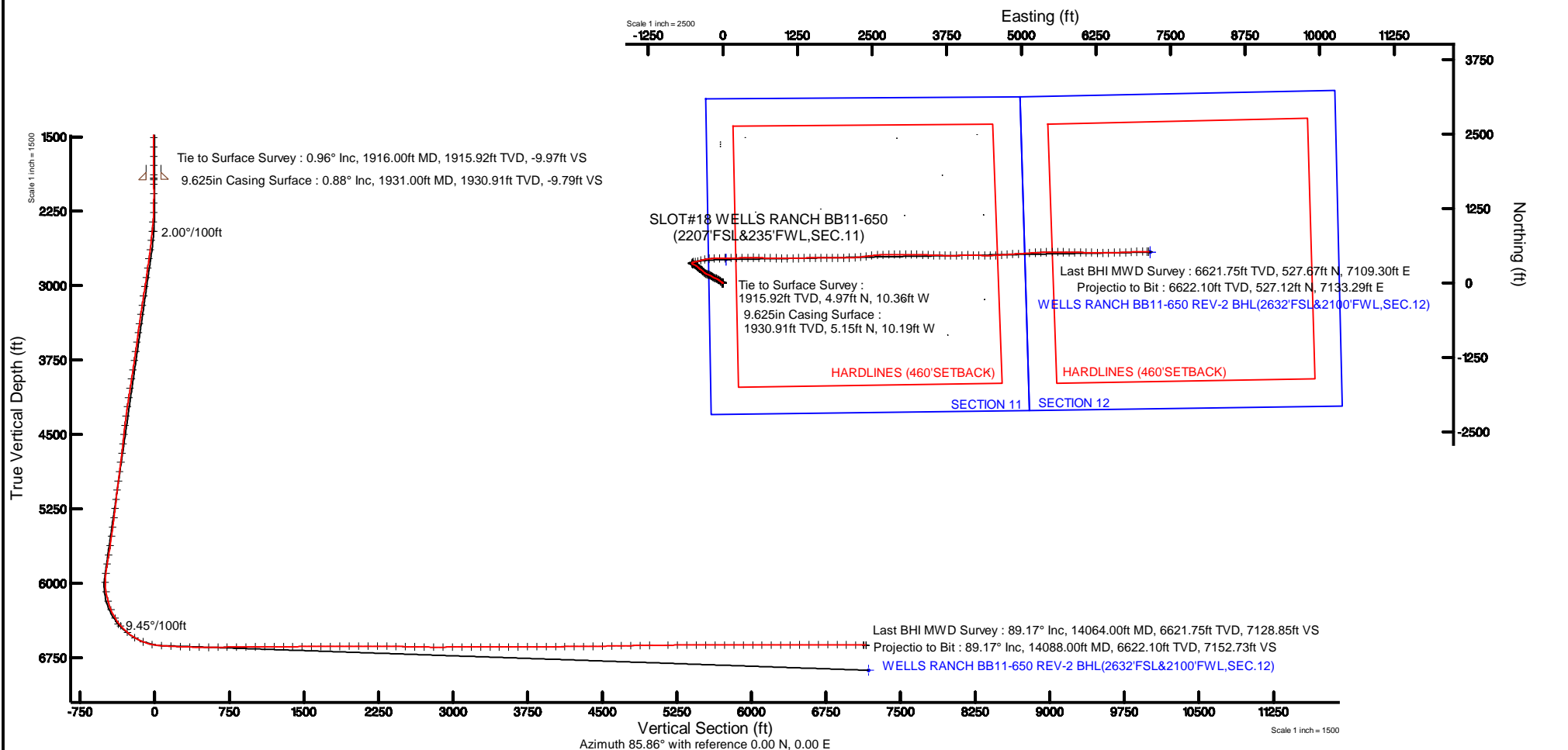
<h1 style="margin: 0;">NOBLE ENERGY, INC</h1>			
Location:	COLORADO	Slot:	SLOT#18 WELLS RANCH BB11-650(2207FSL&235FWL,SEC.11)
Field:	WELD COUNTY (NOBLE NAD 83 GRID)	Well:	WELLS RANCH BB11-650
Facility:	SEC.11-T05N-R63W	Wellbore:	WELLS RANCH BB11-650 PWB

Plot reference wellpath is WELLS RANCH BB11-650 (REV-B.0) PWP	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to H&P RIG (30'KB) (RKB)	* = Wellpath was transformed from a different geodetic datum
Measured depths are referenced to H&P RIG (30'KB) (RKB)	North Reference: Grid north
H&P RIG (30'KB) (RKB) to Mean Sea Level: 4698 feet	Scale: True distance
Mean Sea Level to Ground level (At Slot: SLOT#18 WELLS RANCH BB11-650(2207FSL&235FWL,SEC.11)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: gualanar on 2017-10-23
	Database: WA_DEN_Denver_Defn

Survey Program				
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment
30.00	14138.28	OW/SW MWD rev2	OW/SW MWD rev2 + IFR1 + Multi-Station Correction	WELLS RANCH BB11-650 PWB

Location Information						
Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.11-T05N-R63W			3302802.430	1393626.455	40°24'31.716"N	104°24'45.396"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#18 WELLS RANCH BB11-650(2207FSL&235FWL,SEC.11)	1409.72	-22.86	3302779.574	1395036.113	40°24'45.648"N	104°24'45.468"W
H&P RIG (30KB) (RKB) to Ground level (At Slot: SLOT#18 WELLS RANCH BB11-650(2207FSL&235FWL,SEC.11))					4698ft	
Mean Sea Level to Ground level (At Slot: SLOT#18 WELLS RANCH BB11-650(2207FSL&235FWL,SEC.11))					0ft	
H&P RIG (30KB) (RKB) to Mean Sea Level					4698ft	

Comments	
SURFACE LOCATION: NWSW	
40.41268N	
104.41263W	
API #: 05-123-44961	



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#18 WELLS RANCH BB11-650(2207'FSL&235'FWL,SEC.11)
Area	COLORADO	Well	WELLS RANCH BB11-650
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH BB11-650 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	Guenaler
Scale	0.999961	Report Generated	10/23/2017 at 12:59:18 PM
Convergence at slot	0.71° East	Database/Source file	WA_DEN_Denver_Defn/WELLS_RANCH_BB11-650_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	1409.72	-22.86	3302779.57	1395036.11	40°24'45.648"N	104°24'45.468"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	4698.00ft
Horizontal Reference Pt	Slot	H&P RIG (30'KB) (RKB) to Mean Sea Level	4698.00ft
Vertical Reference Pt	H&P RIG (30'KB) (RKB)	H&P RIG (30'KB) (RKB) to Ground Level at Slot (SLOT#18 WELLS RANCH BB11-650 (2207'FSL&235'FWL,SEC.11))	4698.00ft
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	85.86°



Actual Wellpath Report

WELLS RANCH BB11-650 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#18 WELLS RANCH BB11-650(2207'FSL&235'FWL,SEC.11)
Area	COLORADO	Well	WELLS RANCH BB11-650
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH BB11-650 AWB
Facility	SEC.11-T05N-R63W		

WELLPATH DATA (151 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00	0.000	313.410	0.00	0.00	0.00	0.00	40°24'45.648"N	104°24'45.468"W	0.00	
86.00	0.190	313.410	86.00	-0.10	0.10	-0.10	40°24'45.649"N	104°24'45.469"W	0.22	
183.00	0.330	211.440	183.00	-0.37	-0.03	-0.37	40°24'45.648"N	104°24'45.473"W	0.43	
277.00	0.280	14.780	277.00	-0.45	-0.04	-0.45	40°24'45.648"N	104°24'45.474"W	0.64	
372.00	0.320	280.490	372.00	-0.63	0.23	-0.65	40°24'45.650"N	104°24'45.476"W	0.46	
467.00	0.170	208.160	467.00	-0.96	0.16	-0.98	40°24'45.650"N	104°24'45.481"W	0.33	
561.00	0.900	279.750	560.99	-1.75	0.16	-1.77	40°24'45.650"N	104°24'45.491"W	0.92	
656.00	0.420	273.130	655.99	-2.82	0.31	-2.85	40°24'45.651"N	104°24'45.505"W	0.51	
750.00	0.430	266.610	749.98	-3.52	0.30	-3.55	40°24'45.651"N	104°24'45.514"W	0.05	
845.00	0.280	301.330	844.98	-4.06	0.40	-4.10	40°24'45.652"N	104°24'45.521"W	0.27	
939.00	0.290	221.470	938.98	-4.42	0.34	-4.46	40°24'45.652"N	104°24'45.526"W	0.39	
1034.00	0.850	243.330	1033.98	-5.24	-0.15	-5.25	40°24'45.647"N	104°24'45.536"W	0.62	
1128.00	0.680	268.410	1127.97	-6.45	-0.48	-6.43	40°24'45.644"N	104°24'45.551"W	0.40	
1223.00	0.380	264.470	1222.96	-7.32	-0.53	-7.30	40°24'45.644"N	104°24'45.563"W	0.32	
1317.00	0.410	271.450	1316.96	-7.97	-0.55	-7.95	40°24'45.644"N	104°24'45.571"W	0.06	
1412.00	0.850	284.770	1411.96	-8.97	-0.36	-8.97	40°24'45.646"N	104°24'45.584"W	0.49	
1507.00	0.690	324.250	1506.95	-9.94	0.28	-9.99	40°24'45.652"N	104°24'45.597"W	0.57	
1601.00	0.540	331.520	1600.94	-10.42	1.13	-10.53	40°24'45.660"N	104°24'45.604"W	0.18	
1696.00	0.690	341.130	1695.94	-10.75	2.07	-10.93	40°24'45.670"N	104°24'45.609"W	0.19	
1790.00	0.830	5.020	1789.93	-10.79	3.28	-11.05	40°24'45.682"N	104°24'45.610"W	0.37	
1885.00	0.850	29.590	1884.92	-10.28	4.58	-10.64	40°24'45.695"N	104°24'45.605"W	0.38	
1916.00	0.960	42.340	1915.92	-9.97	4.97	-10.36	40°24'45.698"N	104°24'45.601"W	0.74	Tie to Surface Survey
1979.00	0.650	54.510	1978.91	-9.28	5.57	-9.71	40°24'45.704"N	104°24'45.593"W	0.56	
2073.00	0.070	353.690	2072.91	-8.83	5.94	-9.28	40°24'45.708"N	104°24'45.587"W	0.66	
2168.00	0.190	278.150	2167.91	-8.98	6.02	-9.44	40°24'45.709"N	104°24'45.589"W	0.20	
2263.00	2.630	297.110	2262.87	-11.00	7.03	-11.54	40°24'45.719"N	104°24'45.616"W	2.58	
2357.00	5.270	300.110	2356.64	-16.41	10.18	-17.19	40°24'45.751"N	104°24'45.689"W	2.82	
2452.00	7.600	308.140	2451.04	-24.67	16.25	-25.91	40°24'45.812"N	104°24'45.800"W	2.62	
2546.00	9.680	312.520	2543.97	-34.69	25.43	-36.63	40°24'45.904"N	104°24'45.937"W	2.32	
2641.00	9.740	309.670	2637.60	-45.97	35.96	-48.70	40°24'46.009"N	104°24'46.092"W	0.51	



Actual Wellpath Report
WELLS RANCH BB11-650 AWP
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#18 WELLS RANCH BB11-650(2207'FSL&235'FWL,SEC.11)
Area	COLORADO	Well	WELLS RANCH BB11-650
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH BB11-650 AWB
Facility	SEC.11-T05N-R63W		

WELLPATH DATA (151 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2735.00	9.790	305.670	2730.24	-57.85	45.69	-61.31	40°24'46.107"N	104°24'46.253"W	0.72	
2830.00	9.780	302.720	2823.86	-70.51	54.77	-74.66	40°24'46.198"N	104°24'46.424"W	0.53	
2924.00	9.660	299.450	2916.51	-83.46	62.96	-88.25	40°24'46.281"N	104°24'46.599"W	0.60	
3019.00	9.680	295.810	3010.16	-97.02	70.36	-102.38	40°24'46.356"N	104°24'46.780"W	0.64	
3113.00	9.710	292.540	3102.82	-110.95	76.83	-116.81	40°24'46.421"N	104°24'46.966"W	0.59	
3208.00	9.620	289.800	3196.48	-125.37	82.59	-131.68	40°24'46.480"N	104°24'47.157"W	0.49	
3302.00	9.540	291.940	3289.16	-139.54	88.17	-146.30	40°24'46.537"N	104°24'47.345"W	0.39	
3397.00	9.590	299.760	3382.85	-153.18	95.04	-160.47	40°24'46.606"N	104°24'47.527"W	1.37	
3491.00	9.540	308.390	3475.55	-165.42	103.76	-173.37	40°24'46.694"N	104°24'47.693"W	1.53	
3586.00	9.720	302.950	3569.21	-177.62	113.01	-186.27	40°24'46.787"N	104°24'47.858"W	0.98	
3680.00	9.770	296.950	3661.86	-190.78	120.94	-200.04	40°24'46.867"N	104°24'48.035"W	1.08	
3775.00	9.590	295.300	3755.50	-204.57	127.98	-214.38	40°24'46.938"N	104°24'48.219"W	0.35	
3869.00	9.520	293.080	3848.20	-218.30	134.37	-228.61	40°24'47.003"N	104°24'48.402"W	0.40	
3963.00	9.560	289.090	3940.90	-232.39	139.97	-243.14	40°24'47.060"N	104°24'48.589"W	0.70	
4058.00	9.430	289.250	4034.60	-246.78	145.12	-257.94	40°24'47.113"N	104°24'48.779"W	0.14	
4153.00	9.590	293.750	4128.29	-260.92	150.87	-272.53	40°24'47.172"N	104°24'48.967"W	0.80	
4247.00	9.530	299.400	4220.99	-274.32	157.84	-286.48	40°24'47.242"N	104°24'49.146"W	1.00	
4342.00	9.510	303.950	4314.68	-287.05	166.09	-299.84	40°24'47.325"N	104°24'49.318"W	0.79	
4436.00	9.450	310.320	4407.40	-298.67	175.42	-312.17	40°24'47.419"N	104°24'49.476"W	1.12	
4531.00	9.580	317.730	4501.10	-309.12	186.31	-323.43	40°24'47.528"N	104°24'49.619"W	1.30	
4625.00	9.590	318.390	4593.79	-318.71	197.96	-333.89	40°24'47.644"N	104°24'49.753"W	0.12	
4720.00	9.490	309.840	4687.48	-329.16	208.89	-345.16	40°24'47.754"N	104°24'49.897"W	1.49	
4814.00	9.560	306.120	4780.18	-340.69	218.46	-357.42	40°24'47.850"N	104°24'50.054"W	0.66	
4909.00	9.580	298.490	4873.86	-353.37	226.88	-370.74	40°24'47.935"N	104°24'50.225"W	1.33	
5003.00	9.200	303.830	4966.61	-365.88	234.79	-383.85	40°24'48.014"N	104°24'50.393"W	1.01	
5097.00	9.400	316.080	5059.38	-376.72	244.51	-395.42	40°24'48.112"N	104°24'50.541"W	2.11	
5192.00	9.160	311.460	5153.14	-386.97	255.10	-406.47	40°24'48.218"N	104°24'50.682"W	0.82	
5286.00	9.930	311.980	5245.84	-397.82	265.48	-418.10	40°24'48.322"N	104°24'50.831"W	0.82	
5381.00	9.530	308.650	5339.47	-409.27	275.87	-430.33	40°24'48.426"N	104°24'50.987"W	0.73	
5475.00	9.880	305.670	5432.13	-421.18	285.43	-442.96	40°24'48.522"N	104°24'51.149"W	0.65	



Actual Wellpath Report
WELLS RANCH BB11-650 AWP
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#18 WELLS RANCH BB11-650(2207'FSL&235'FWL,SEC.11)
Area	COLORADO	Well	WELLS RANCH BB11-650
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH BB11-650 AWB
Facility	SEC.11-T05N-R63W		

WELLPATH DATA (151 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5569.00	9.980	302.180	5524.72	-433.93	294.47	-456.41	40°24'48.613"N	104°24'51.321"W	0.65	
5664.00	10.020	297.340	5618.28	-447.61	302.65	-470.72	40°24'48.695"N	104°24'51.505"W	0.89	
5759.00	9.930	293.160	5711.84	-461.94	309.67	-485.59	40°24'48.767"N	104°24'51.696"W	0.77	
5853.00	9.680	289.130	5804.47	-476.40	315.45	-500.51	40°24'48.825"N	104°24'51.888"W	0.78	
5948.00	9.550	295.350	5898.14	-490.60	321.44	-515.18	40°24'48.886"N	104°24'52.077"W	1.10	
6042.00	7.350	356.930	5991.28	-497.29	330.80	-522.56	40°24'48.980"N	104°24'52.171"W	9.40	
6137.00	10.460	52.900	6085.29	-489.92	342.09	-515.99	40°24'49.091"N	104°24'52.084"W	9.24	
6232.00	16.090	73.550	6177.76	-469.80	351.03	-496.46	40°24'49.177"N	104°24'51.830"W	7.66	
6326.00	22.460	81.440	6266.46	-439.13	357.40	-466.18	40°24'49.236"N	104°24'51.438"W	7.31	
6421.00	31.290	77.920	6351.12	-396.52	365.28	-424.02	40°24'49.309"N	104°24'50.891"W	9.44	
6515.00	40.940	73.290	6426.98	-342.14	379.28	-370.52	40°24'49.440"N	104°24'50.198"W	10.66	
6610.00	50.240	76.950	6493.40	-275.53	396.52	-304.98	40°24'49.603"N	104°24'49.348"W	10.17	
6704.00	58.830	84.320	6547.94	-199.42	408.69	-229.56	40°24'49.714"N	104°24'48.371"W	11.14	
6799.00	69.240	88.310	6589.49	-114.16	414.04	-144.46	40°24'49.757"N	104°24'47.270"W	11.59	
6893.00	77.560	88.910	6616.32	-24.26	416.21	-54.48	40°24'49.767"N	104°24'46.106"W	8.87	
6988.00	86.980	89.180	6629.09	69.63	417.77	39.54	40°24'49.771"N	104°24'44.891"W	9.92	
7083.00	87.540	89.320	6633.63	164.35	419.02	134.42	40°24'49.772"N	104°24'43.664"W	0.61	
7177.00	86.980	88.860	6638.12	258.09	420.51	228.30	40°24'49.775"N	104°24'42.450"W	0.77	
7272.00	88.740	88.880	6641.67	352.89	422.38	323.21	40°24'49.782"N	104°24'41.223"W	1.85	
7366.00	89.020	88.940	6643.51	446.74	424.17	417.18	40°24'49.789"N	104°24'40.008"W	0.30	
7461.00	89.750	89.610	6644.52	541.57	425.37	512.16	40°24'49.789"N	104°24'38.780"W	1.04	
7555.00	91.110	91.880	6643.82	635.21	424.15	606.14	40°24'49.765"N	104°24'37.565"W	2.82	
7650.00	91.110	92.130	6641.98	729.65	420.82	701.07	40°24'49.721"N	104°24'36.339"W	0.26	
7744.00	90.370	90.820	6640.76	823.19	418.40	795.03	40°24'49.686"N	104°24'35.124"W	1.60	
7839.00	90.340	91.050	6640.18	917.81	416.85	890.01	40°24'49.659"N	104°24'33.897"W	0.24	
7933.00	90.310	90.630	6639.64	1011.45	415.48	984.00	40°24'49.634"N	104°24'32.682"W	0.45	
8028.00	90.430	89.760	6639.03	1106.18	415.15	1079.00	40°24'49.619"N	104°24'31.454"W	0.92	
8122.00	90.310	89.570	6638.42	1199.97	415.70	1172.99	40°24'49.613"N	104°24'30.239"W	0.24	
8217.00	90.310	87.930	6637.91	1294.84	417.78	1267.97	40°24'49.622"N	104°24'29.011"W	1.73	
8311.00	90.310	88.410	6637.40	1388.76	420.78	1361.92	40°24'49.640"N	104°24'27.796"W	0.51	



Actual Wellpath Report
WELLS RANCH BB11-650 AWP
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REFERENCE WELLPATH IDENTIFICATION			
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Area	COLORADO	Well	WELLS RANCH BB11-650
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH BB11-650 AWB
Facility	SEC.11-T05N-R63W		

WELLPATH DATA (151 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8406.00	90.250	89.450	6636.94	1483.63	422.55	1456.90	40°24'49.646"N	104°24'26.568"W	1.10	
8500.00	90.430	89.430	6636.38	1577.44	423.47	1550.89	40°24'49.644"N	104°24'25.352"W	0.19	
8595.00	90.280	89.550	6635.79	1672.25	424.32	1645.88	40°24'49.641"N	104°24'24.124"W	0.20	
8689.00	90.370	90.950	6635.26	1765.97	423.91	1739.88	40°24'49.625"N	104°24'22.909"W	1.49	
8784.00	90.310	90.290	6634.69	1860.64	422.88	1834.87	40°24'49.603"N	104°24'21.682"W	0.70	
8878.00	90.310	89.130	6634.18	1954.42	423.35	1928.87	40°24'49.597"N	104°24'20.466"W	1.23	
8973.00	90.180	89.680	6633.78	2049.24	424.34	2023.86	40°24'49.595"N	104°24'19.238"W	0.59	
9068.00	90.180	89.040	6633.48	2144.06	425.40	2118.85	40°24'49.594"N	104°24'18.010"W	0.67	
9162.00	89.880	86.510	6633.43	2238.00	429.05	2212.78	40°24'49.618"N	104°24'16.795"W	2.71	
9257.00	89.540	83.440	6633.91	2332.97	437.37	2307.40	40°24'49.689"N	104°24'15.571"W	3.25	
9351.00	88.800	83.090	6635.27	2426.87	448.39	2400.74	40°24'49.786"N	104°24'14.362"W	0.87	
9446.00	88.550	82.520	6637.47	2521.71	460.29	2494.97	40°24'49.892"N	104°24'13.142"W	0.66	
9541.00	88.550	85.920	6639.87	2616.62	469.85	2589.44	40°24'49.975"N	104°24'11.920"W	3.58	
9635.00	89.320	88.320	6641.62	2710.58	474.57	2683.30	40°24'50.011"N	104°24'10.706"W	2.68	
9730.00	90.030	89.230	6642.16	2805.45	476.60	2778.27	40°24'50.019"N	104°24'09.478"W	1.21	
9824.00	90.060	89.890	6642.09	2899.25	477.32	2872.27	40°24'50.015"N	104°24'08.262"W	0.70	
9919.00	90.370	90.060	6641.73	2994.01	477.37	2967.27	40°24'50.003"N	104°24'07.034"W	0.37	
10014.00	90.280	89.140	6641.19	3088.80	478.03	3062.26	40°24'49.998"N	104°24'05.806"W	0.97	
10109.00	89.320	90.450	6641.52	3183.57	478.37	3157.26	40°24'49.990"N	104°24'04.578"W	1.71	
10203.00	90.250	91.640	6641.88	3277.18	476.65	3251.24	40°24'49.962"N	104°24'03.364"W	1.61	
10298.00	90.370	91.440	6641.36	3371.72	474.10	3346.20	40°24'49.925"N	104°24'02.136"W	0.25	
10392.00	90.400	92.000	6640.73	3465.22	471.28	3440.16	40°24'49.885"N	104°24'00.922"W	0.60	
10487.00	90.250	92.120	6640.19	3559.66	467.87	3535.09	40°24'49.840"N	104°23'59.695"W	0.20	
10581.00	90.310	91.660	6639.73	3653.14	464.77	3629.04	40°24'49.798"N	104°23'58.482"W	0.49	
10676.00	90.400	91.180	6639.14	3747.69	462.41	3724.01	40°24'49.763"N	104°23'57.254"W	0.51	
10770.00	90.400	90.610	6638.49	3841.33	460.94	3818.00	40°24'49.737"N	104°23'56.040"W	0.61	
10865.00	90.220	88.040	6637.97	3936.14	462.06	3912.98	40°24'49.736"N	104°23'54.811"W	2.71	
10960.00	90.280	87.990	6637.56	4031.07	465.35	4007.92	40°24'49.757"N	104°23'53.584"W	0.08	
11054.00	90.370	89.710	6637.02	4124.94	467.24	4101.90	40°24'49.764"N	104°23'52.369"W	1.83	
11148.00	90.340	91.240	6636.44	4218.63	466.46	4195.89	40°24'49.745"N	104°23'51.154"W	1.63	

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#18 WELLS RANCH BB11-650(2207'FSL&235'FWL,SEC.11)
Area	COLORADO	Well	WELLS RANCH BB11-650
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH BB11-650 AWB
Facility	SEC.11-T05N-R63W		

WELLPATH DATA (151 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11243.00	90.250	91.470	6635.95	4313.19	464.21	4290.86	40°24'49.711"N	104°23'49.926"W	0.26	
11337.00	91.140	90.720	6634.81	4406.79	462.42	4384.84	40°24'49.682"N	104°23'48.712"W	1.24	
11432.00	91.200	89.260	6632.87	4501.52	462.43	4479.82	40°24'49.670"N	104°23'47.484"W	1.54	
11526.00	91.480	86.810	6630.67	4595.42	465.66	4573.73	40°24'49.691"N	104°23'46.269"W	2.62	
11621.00	90.920	85.590	6628.68	4690.40	471.95	4668.50	40°24'49.741"N	104°23'45.043"W	1.41	
11716.00	90.950	85.590	6627.13	4785.38	479.25	4763.20	40°24'49.802"N	104°23'43.818"W	0.03	
11810.00	90.800	86.530	6625.70	4879.37	485.71	4856.97	40°24'49.854"N	104°23'42.605"W	1.01	
11905.00	90.920	86.800	6624.27	4974.35	491.24	4951.80	40°24'49.897"N	104°23'41.378"W	0.31	
12094.00	90.280	85.910	6622.29	5163.33	503.25	5140.40	40°24'49.992"N	104°23'38.938"W	0.58	
12188.00	90.120	86.940	6621.97	5257.32	509.11	5234.22	40°24'50.039"N	104°23'37.724"W	1.11	
12283.00	90.220	87.440	6621.68	5352.30	513.77	5329.10	40°24'50.073"N	104°23'36.497"W	0.54	
12378.00	90.060	87.830	6621.45	5447.25	517.69	5424.02	40°24'50.100"N	104°23'35.269"W	0.44	
12472.00	90.180	89.240	6621.26	5541.14	520.09	5517.99	40°24'50.112"N	104°23'34.054"W	1.51	
12567.00	90.030	91.060	6621.08	5635.87	519.85	5612.98	40°24'50.098"N	104°23'32.826"W	1.92	
12661.00	90.180	91.520	6620.91	5729.45	517.73	5706.96	40°24'50.066"N	104°23'31.612"W	0.51	
12756.00	89.910	90.950	6620.83	5824.03	515.68	5801.93	40°24'50.034"N	104°23'30.384"W	0.66	
12851.00	90.120	90.360	6620.81	5918.70	514.60	5896.93	40°24'50.011"N	104°23'29.157"W	0.66	
12945.00	90.120	90.530	6620.61	6012.40	513.87	5990.92	40°24'49.992"N	104°23'27.942"W	0.18	
13040.00	90.060	90.990	6620.46	6107.05	512.61	6085.92	40°24'49.968"N	104°23'26.714"W	0.49	
13134.00	90.060	91.720	6620.36	6200.61	510.38	6179.89	40°24'49.935"N	104°23'25.499"W	0.78	
13229.00	90.150	92.070	6620.19	6295.09	507.24	6274.84	40°24'49.892"N	104°23'24.272"W	0.38	
13323.00	90.060	90.180	6620.02	6388.68	505.40	6368.81	40°24'49.862"N	104°23'23.058"W	2.01	
13418.00	90.150	88.310	6619.84	6483.51	506.65	6463.80	40°24'49.863"N	104°23'21.830"W	1.97	
13512.00	90.220	87.920	6619.54	6577.44	509.74	6557.75	40°24'49.881"N	104°23'20.615"W	0.42	
13607.00	90.220	88.160	6619.18	6672.37	512.99	6652.69	40°24'49.902"N	104°23'19.387"W	0.25	
13702.00	90.280	88.100	6618.76	6767.30	516.09	6747.64	40°24'49.921"N	104°23'18.159"W	0.09	
13796.00	89.850	86.270	6618.65	6861.27	520.71	6841.52	40°24'49.955"N	104°23'16.945"W	2.00	
13890.00	89.420	87.150	6619.25	6955.25	526.10	6935.37	40°24'49.996"N	104°23'15.731"W	1.04	
13985.00	89.050	89.920	6620.52	7050.13	528.53	7030.32	40°24'50.009"N	104°23'14.503"W	2.94	
14064.00	89.170	91.320	6621.75	7128.85	527.67	7109.30	40°24'49.990"N	104°23'13.482"W	1.78	Last BHI MWD Survey



Actual Wellpath Report

WELLS RANCH BB11-650 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#18 WELLS RANCH BB11-650(2207'FSL&235'FWL,SEC.11)
Area	COLORADO	Well	WELLS RANCH BB11-650
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH BB11-650 AWB
Facility	SEC.11-T05N-R63W		

WELLPATH DATA (151 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
14088.00	89.170	91.320	6622.10	7152.73	527.12	7133.29	40°24'49.982"N	104°23'13.172"W	0.00	Projectio to Bit

HOLE & CASING SECTIONS - Ref Wellbore: WELLS RANCH BB11-650 AWB Ref Wellpath: WELLS RANCH BB11-650 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	1931.00	1901.00	30.00	1930.91	0.01	-0.01	5.15	-10.19
9.625in Casing Surface	30.00	1931.00	1901.00	30.00	1930.91	0.01	-0.01	5.15	-10.19
8.5in Open Hole	1931.00	14088.00	12157.00	1930.91	6622.10	5.15	-10.19	527.12	7133.29



Actual Wellpath Report

WELLS RANCH BB11-650 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#18 WELLS RANCH BB11-650(2207'FSL&235'FWL,SEC.11)
Area	COLORADO	Well	WELLS RANCH BB11-650
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH BB11-650 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	-7.00	-1409.72	22.86	3302802.43	1393626.45	40°24'31.716"N	104°24'45.396"W	polygon
WELLS RANCH BB11-618 SECTION 12-T05N-R63W	-7.00	-1409.72	22.86	3302802.43	1393626.45	40°24'31.716"N	104°24'45.396"W	polygon
WELLS RANCH BB11-618 SECTION 11 HARDLINES (460'SETBACK)	6493.00	-1409.72	22.86	3302802.43	1393626.45	40°24'31.716"N	104°24'45.396"W	polygon
WELLS RANCH BB11-618 SECTION 12 HARDLINES (460'SETBACK)	6493.00	-1409.72	22.86	3302802.43	1393626.45	40°24'31.716"N	104°24'45.396"W	polygon
WELLS RANCH BB11-650 Landing Point 2 (2590'FSL&300'FWL,SEC.11)	6627.37	395.00	50.00	3302829.57	1395431.10	40°24'49.545"N	104°24'44.759"W	point
WELLS RANCH BB11-650 Landing Point(2590'FSL&300'FWL,SEC.11)	6642.37	395.00	50.00	3302829.57	1395431.10	40°24'49.545"N	104°24'44.759"W	point
WELLS RANCH BB11-650 REV-2 BHL(2632'FSL&2100'FWL,SEC.12)	6875.66	518.75	7159.08	3309938.36	1395554.84	40°24'49.896"N	104°23'12.840"W	point
WELLS RANCH BB11-650 REV-1 BHL(2632'FSL&2100'FWL,SEC.12)	6890.66	518.75	7159.08	3309938.36	1395554.84	40°24'49.896"N	104°23'12.840"W	point

WELLPATH COMPOSITION - Ref Wellbore: WELLS RANCH BB11-650 AWB Ref Wellpath: WELLS RANCH BB11-650 AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	1916.00	Gyrodata standard - Drop gyro or Multi-shot	Gyrodata Surface Survaeys <0'-1916'>	WELLS RANCH BB11-650 AWB
1916.00	14064.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	BHI 8 1/2" Monobore with ATCurve <1979'-14064'>	WELLS RANCH BB11-650 AWB
14064.00	14088.00	Blind Drilling (std)	Projection to bit	WELLS RANCH BB11-650 AWB



Actual Wellpath Report

WELLS RANCH BB11-650 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#18 WELLS RANCH BB11-650(2207'FSL&235'FWL,SEC.11)
Area	COLORADO	Well	WELLS RANCH BB11-650
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	WELLS RANCH BB11-650 AWB
Facility	SEC.11-T05N-R63W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1916.00	0.960	42.340	1915.92	Tie to Surface Survey
14064.00	89.170	91.320	6621.75	Last BHI MWD Survey
14088.00	89.170	91.320	6622.10	Projectio to Bit

COMMENTS
<div>Wellpath general comments</div> <div>SURFACE LOCATION: NWSW</div> <div>40.41268N</div> <div>104.41263W</div> <div>API #: 05-123-44961</div>