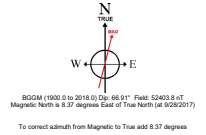


Location:	COLORADO	Slot:	SLOT#08 WARD R-20-19HN (349'FSL&213'FEL.SEC.20)
Field:	WELD COUNTY (NAD83/TRUE NORTH)	Well:	WARD R-20-19HN
Facility:	SEC.20-T06N-R66W	Wellbore:	WARD R-20-19HN PWB



Actual Wellpath Report

WARD R-20-19HN AWP

Page 1 of 8



REFERENCE WELLPATH IDENTIFICATION			
Operator	BAYSWATER E & P LLC	Slot	SLOT#08 WARD R-20-19HN (349'FSL&213'FEL.SEC.20)
Area	COLORADO	Well	WARD R-20-19HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	WARD R-20-19HN AWB
Facility	SEC.20-T06N-R66W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 5.0
North Reference	True	User	Doddanna
Scale	0.999964	Report Generated	11/28/2017 at 1:14:46 PM
Convergence at slot	0.46° East	Database/Source file	Denver DB/WARD_R-20-19HN_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-171.83	4484.68	3196665.67	1413882.03	40°28'02.482"N	104°47'35.362"W
Facility Reference Pt			3192179.96	1414018.92	40°28'04.184"N	104°48'33.386"W
Field Reference Pt			3174587.00	1430859.71	40°30'51.890"N	104°52'19.470"W

WELLPATH DATUM			
Calculation method	Minimum curvature	True 38 (25'KB) (RKB) to Facility Vertical Datum	4753.00ft
Horizontal Reference Pt	Slot	True 38 (25'KB) (RKB) to Mean Sea Level	4753.00ft
Vertical Reference Pt	True 38 (25'KB) (RKB)	True 38 (25'KB) (RKB) to Ground Level at Slot (SLOT#08 WARD R-20-19HN (349'FSL&213'FEL.SEC.20))	4753.00ft
MD Reference Pt	True 38 (25'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	274.26°

Actual Wellpath Report

WARD R-20-19HN AWP

Page 2 of 8



REFERENCE WELLPATH IDENTIFICATION			
Operator	BAYSWATER E & P LLC	Slot	SLOT#08 WARD R-20-19HN (349'FSL&213'FEL.SEC.20)
Area	COLORADO	Well	WARD R-20-19HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	WARD R-20-19HN AWB
Facility	SEC.20-T06N-R66W		

WELLPATH DATA (190 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
0.00	0.000	82.400	0.00	0.00	0.00	0.00	0.00	
146.00	0.900	82.400	145.99	-1.12	0.15	1.14	0.62	
241.00	0.200	322.900	240.99	-1.74	0.38	1.78	1.07	
336.00	0.200	305.200	335.99	-1.49	0.61	1.54	0.06	
431.00	0.400	306.700	430.99	-1.07	0.90	1.14	0.21	
525.00	0.600	297.400	524.98	-0.34	1.33	0.44	0.23	
620.00	0.600	298.600	619.98	0.57	1.79	-0.44	0.01	
715.00	0.800	298.500	714.97	1.63	2.35	-1.46	0.21	
810.00	0.600	208.600	809.97	2.44	2.23	-2.28	1.05	
904.00	0.700	195.300	903.96	2.75	1.24	-2.67	0.19	
999.00	0.400	62.700	998.96	2.58	0.83	-2.53	1.07	
1094.00	1.200	35.900	1093.95	1.78	1.79	-1.65	0.91	
1189.00	1.900	33.700	1188.91	0.48	3.91	-0.19	0.74	
1284.00	2.700	37.600	1283.84	-1.52	6.99	2.05	0.86	
1378.00	3.300	15.500	1377.71	-3.27	11.35	4.12	1.37	
1473.00	3.900	14.100	1472.52	-4.35	17.12	5.64	0.64	
1495.00	3.900	11.600	1494.47	-4.58	18.58	5.97	0.77	TIED INTO 3RD PARTY SURFACE SURVEYS
1603.00	5.240	27.680	1602.13	-7.00	26.55	9.00	1.71	
1698.00	7.340	30.000	1696.55	-11.36	35.64	14.05	2.23	
1794.00	8.860	32.140	1791.59	-17.48	47.22	21.05	1.61	
1888.00	10.410	33.330	1884.26	-25.00	60.44	29.57	1.66	
1983.00	11.260	29.430	1977.57	-33.11	75.69	38.84	1.18	
2077.00	12.220	27.800	2069.60	-40.99	92.48	47.99	1.08	
2172.00	12.950	28.180	2162.32	-49.32	110.76	57.71	0.77	
2266.00	12.980	25.860	2253.93	-57.47	129.55	67.29	0.55	
2360.00	12.920	29.150	2345.54	-65.78	148.22	77.01	0.79	
2454.00	13.670	27.320	2437.02	-74.55	167.27	87.23	0.91	
2549.00	13.690	20.810	2529.33	-82.15	187.75	96.38	1.62	
2644.00	13.700	21.140	2621.63	-88.62	208.75	104.43	0.08	
2739.00	13.890	13.710	2713.89	-93.76	230.33	111.19	1.87	
2834.00	13.250	12.560	2806.24	-97.20	252.03	116.26	0.73	
2928.00	13.660	17.590	2897.66	-101.31	273.13	121.95	1.32	
3023.00	13.500	20.980	2990.01	-107.09	294.17	129.31	0.85	
3117.00	13.480	26.110	3081.42	-114.32	314.26	138.06	1.27	
3211.00	13.470	28.650	3172.83	-122.92	333.70	148.14	0.63	
3306.00	13.280	33.480	3265.26	-132.81	352.51	159.46	1.19	
3401.00	13.510	37.650	3357.68	-144.24	370.40	172.26	1.05	
3494.00	13.500	40.380	3448.11	-156.62	387.27	185.93	0.69	
3589.00	13.390	34.230	3540.51	-168.65	404.81	199.30	1.51	
3683.00	13.620	27.300	3631.91	-178.42	423.65	210.50	1.74	
3778.00	13.780	19.180	3724.22	-185.71	444.28	219.35	2.03	
3872.00	13.520	14.730	3815.57	-190.59	465.48	225.82	1.15	
3967.00	13.590	17.350	3907.92	-195.13	486.87	231.97	0.65	
4062.00	13.350	24.120	4000.31	-201.39	507.54	239.78	1.68	
4156.00	13.450	27.200	4091.76	-209.33	527.16	249.21	0.77	

Actual Wellpath Report

WARD R-20-19HN AWP

Page 3 of 8



REFERENCE WELLPATH IDENTIFICATION			
Operator	BAYSWATER E & P LLC	Slot	SLOT#08 WARD R-20-19HN (349'FSL&213'FEL.SEC.20)
Area	COLORADO	Well	WARD R-20-19HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	WARD R-20-19HN AWB
Facility	SEC.20-T06N-R66W		

WELLPATH DATA (190 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
4251.00	13.430	27.030	4184.15	-217.91	546.82	259.28	0.05	
4346.00	13.530	24.990	4276.54	-226.11	566.72	268.98	0.51	
4440.00	13.490	19.950	4367.94	-232.97	586.99	277.37	1.25	
4534.00	13.490	19.340	4459.35	-238.78	607.64	284.74	0.15	
4629.00	13.480	22.750	4551.73	-245.18	628.31	292.69	0.84	
4724.00	13.600	22.770	4644.09	-252.23	648.82	301.30	0.13	
4819.00	13.760	21.930	4736.39	-259.21	669.60	309.84	0.27	
4915.00	13.400	22.410	4829.71	-266.13	690.47	318.35	0.39	
5010.00	13.520	21.430	4922.10	-272.84	710.99	326.60	0.27	
5105.00	13.190	21.820	5014.53	-279.39	731.39	334.69	0.36	
5199.00	13.300	23.400	5106.03	-286.17	751.26	342.97	0.40	
5295.00	13.410	23.560	5199.44	-293.47	771.60	351.80	0.12	
5389.00	13.230	23.920	5290.91	-300.69	791.43	360.52	0.21	
5484.00	13.180	24.630	5383.39	-308.11	811.21	369.44	0.18	
5578.00	13.260	26.060	5474.90	-315.85	830.64	378.64	0.36	
5673.00	13.090	30.420	5567.41	-324.63	849.70	388.88	1.06	
5772.00	13.460	28.620	5663.76	-334.33	869.48	400.07	0.56	
5866.00	13.420	26.950	5755.19	-343.05	888.81	410.26	0.42	
5960.00	13.570	28.120	5846.59	-351.71	908.26	420.40	0.33	
6055.00	13.450	29.420	5938.96	-360.92	927.71	431.08	0.34	
6150.00	13.260	29.010	6031.39	-370.17	946.86	441.79	0.22	
6244.00	13.280	28.580	6122.88	-379.13	965.77	452.18	0.11	
6339.00	12.440	12.740	6215.53	-385.14	985.34	459.66	3.80	
6433.00	12.430	330.690	6307.51	-381.03	1004.08	456.94	9.43	
6528.00	16.700	317.660	6399.46	-365.44	1023.09	442.73	5.64	
6623.00	21.900	295.210	6489.21	-338.92	1040.77	417.45	9.45	
6717.00	28.760	289.930	6574.13	-300.73	1055.96	380.28	7.68	
6812.00	35.900	288.620	6654.36	-251.68	1072.67	332.34	7.55	
6907.00	43.360	284.830	6727.48	-192.54	1089.93	274.33	8.25	
7002.00	50.020	281.960	6792.62	-124.33	1105.84	207.11	7.35	
7096.00	60.150	274.100	6846.40	-47.59	1116.26	130.94	12.76	
7191.00	64.970	271.940	6890.17	36.67	1120.66	46.78	5.46	
7286.00	72.740	271.910	6924.42	125.13	1123.64	-41.71	8.18	
7381.00	79.790	271.250	6946.96	217.25	1126.17	-133.90	7.45	
7476.00	87.010	271.290	6957.87	311.43	1128.26	-228.19	7.60	
7570.00	90.460	270.060	6959.95	405.21	1129.37	-322.14	3.90	
7665.00	90.520	268.520	6959.13	499.84	1128.19	-417.13	1.62	
7760.00	90.520	266.910	6958.27	594.22	1124.40	-512.04	1.69	
7855.00	90.370	265.650	6957.53	688.29	1118.24	-606.84	1.34	
7949.00	90.400	264.560	6956.90	781.09	1110.22	-700.49	1.16	
8043.00	90.490	265.820	6956.17	873.91	1102.34	-794.16	1.34	
8138.00	90.550	266.900	6955.31	968.00	1096.31	-888.96	1.14	
8233.00	90.590	268.580	6954.36	1062.38	1092.56	-983.88	1.77	
8328.00	90.250	269.390	6953.67	1156.97	1090.88	-1078.86	0.92	
8422.00	90.400	269.830	6953.13	1250.66	1090.24	-1172.86	0.49	

Actual Wellpath Report

WARD R-20-19HN AWP

Page 4 of 8



REFERENCE WELLPATH IDENTIFICATION			
Operator	BAYSWATER E & P LLC	Slot	SLOT#08 WARD R-20-19HN (349'FSL&213'FEL.SEC.20)
Area	COLORADO	Well	WARD R-20-19HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	WARD R-20-19HN AWB
Facility	SEC.20-T06N-R66W		

WELLPATH DATA (190 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
8517.00	90.310	269.770	6952.55	1345.37	1089.91	-1267.85	0.11	
8612.00	90.340	272.150	6952.01	1440.20	1091.50	-1362.83	2.51	
8706.00	90.280	271.370	6951.50	1534.11	1094.39	-1456.78	0.83	
8801.00	90.430	270.230	6950.91	1628.94	1095.71	-1551.77	1.21	
8896.00	90.220	269.080	6950.37	1723.62	1095.14	-1646.77	1.23	
8990.00	90.280	268.890	6949.96	1817.23	1093.48	-1740.75	0.21	
9084.00	90.370	268.220	6949.43	1910.76	1091.11	-1834.72	0.72	
9179.00	90.490	267.540	6948.71	2005.16	1087.59	-1929.65	0.73	
9274.00	90.220	266.990	6948.13	2099.45	1083.06	-2024.54	0.64	
9368.00	90.370	266.940	6947.64	2192.69	1078.08	-2118.41	0.17	
9463.00	90.090	267.480	6947.26	2286.97	1073.46	-2213.29	0.64	
9558.00	90.740	266.480	6946.57	2381.20	1068.45	-2308.16	1.26	
9653.00	90.400	268.320	6945.63	2475.51	1064.14	-2403.05	1.97	
9748.00	90.770	269.270	6944.66	2570.07	1062.15	-2498.02	1.07	
9841.00	90.310	269.200	6943.78	2662.71	1060.90	-2591.01	0.50	
9936.00	91.020	270.080	6942.68	2757.39	1060.31	-2686.00	1.19	
10031.00	91.050	272.300	6940.96	2852.24	1062.28	-2780.96	2.34	
10126.00	90.830	273.850	6939.40	2947.20	1067.38	-2875.81	1.65	
10221.00	90.710	273.800	6938.13	3042.19	1073.71	-2970.59	0.14	
10316.00	90.830	272.660	6936.85	3137.16	1079.06	-3065.43	1.21	
10411.00	90.120	271.000	6936.06	3232.07	1082.10	-3160.37	1.90	
10505.00	89.690	267.580	6936.22	3325.70	1080.93	-3254.35	3.67	
10600.00	89.780	266.430	6936.66	3419.94	1075.97	-3349.22	1.21	
10695.00	90.090	267.640	6936.77	3514.18	1071.06	-3444.09	1.31	
10790.00	89.630	267.350	6937.00	3608.52	1066.90	-3539.00	0.57	
10884.00	90.180	266.580	6937.15	3701.76	1061.93	-3632.86	1.01	
10979.00	90.520	265.200	6936.57	3795.74	1055.12	-3727.61	1.50	
11074.00	90.370	264.680	6935.84	3889.48	1046.74	-3822.24	0.57	
11169.00	90.250	265.360	6935.32	3983.24	1038.49	-3916.88	0.73	
11264.00	89.880	266.750	6935.21	4077.27	1031.96	-4011.65	1.51	
11358.00	89.940	267.040	6935.36	4170.49	1026.87	-4105.51	0.32	
11453.00	89.780	267.260	6935.59	4264.76	1022.14	-4200.40	0.29	
11548.00	89.320	267.750	6936.34	4359.10	1018.01	-4295.30	0.71	
11643.00	90.460	269.720	6936.52	4453.65	1015.91	-4390.27	2.40	
11738.00	89.970	271.990	6936.17	4548.47	1017.33	-4485.26	2.44	
11832.00	90.430	273.470	6935.84	4642.44	1021.80	-4579.15	1.65	
11927.00	89.880	272.400	6935.58	4737.41	1026.67	-4674.02	1.27	
12022.00	89.690	271.650	6935.94	4832.34	1030.03	-4768.96	0.81	
12117.00	89.940	271.030	6936.24	4927.21	1032.25	-4863.93	0.70	
12212.00	90.150	270.440	6936.17	5022.03	1033.47	-4958.92	0.66	
12306.00	90.220	270.270	6935.87	5115.81	1034.05	-5052.92	0.20	
12401.00	89.880	268.470	6935.78	5210.46	1033.00	-5147.91	1.93	
12496.00	89.970	267.760	6935.91	5304.91	1029.88	-5242.86	0.75	
12591.00	89.970	266.930	6935.96	5399.22	1025.48	-5337.76	0.87	
12686.00	90.310	266.270	6935.72	5493.37	1019.84	-5432.59	0.78	

Actual Wellpath Report

WARD R-20-19HN AWP

Page 5 of 8



REFERENCE WELLPATH IDENTIFICATION			
Operator	BAYSWATER E & P LLC	Slot	SLOT#08 WARD R-20-19HN (349'FSL&213'FEL.SEC.20)
Area	COLORADO	Well	WARD R-20-19HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	WARD R-20-19HN AWB
Facility	SEC.20-T06N-R66W		

WELLPATH DATA (190 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
12780.00	90.000	267.260	6935.47	5586.57	1014.54	-5526.44	1.10	
12875.00	90.030	267.720	6935.45	5680.90	1010.38	-5621.34	0.49	
12970.00	90.150	266.830	6935.30	5775.20	1005.86	-5716.24	0.95	
13065.00	90.180	264.710	6935.02	5869.15	998.86	-5810.97	2.23	
13160.00	90.220	264.050	6934.69	5962.74	989.55	-5905.51	0.70	
13254.00	89.630	266.050	6934.81	6055.52	981.44	-5999.16	2.22	
13349.00	89.720	265.140	6935.35	6149.43	974.15	-6093.87	0.96	
13443.00	89.820	266.170	6935.73	6242.37	967.02	-6187.60	1.10	
13538.00	89.570	268.810	6936.24	6336.70	962.86	-6282.50	2.79	
13633.00	89.570	270.720	6936.95	6431.40	962.47	-6377.49	2.01	
13728.00	90.370	270.940	6937.00	6526.23	963.85	-6472.48	0.87	
13823.00	90.030	270.850	6936.67	6621.06	965.33	-6567.47	0.37	
13918.00	89.910	270.960	6936.72	6715.90	966.83	-6662.46	0.17	
14013.00	89.570	270.410	6937.15	6810.71	967.97	-6757.45	0.68	
14108.00	89.690	271.010	6937.76	6905.53	969.15	-6852.44	0.64	
14202.00	90.650	270.720	6937.48	6999.36	970.57	-6946.43	1.07	
14297.00	90.800	269.400	6936.28	7094.09	970.67	-7041.42	1.40	
14392.00	90.490	268.910	6935.21	7188.71	969.27	-7136.40	0.61	
14487.00	89.750	268.350	6935.01	7283.25	966.99	-7231.37	0.98	
14581.00	90.120	268.030	6935.12	7376.72	964.03	-7325.33	0.52	
14676.00	90.250	266.560	6934.81	7471.02	959.54	-7420.22	1.55	
14771.00	90.280	267.510	6934.37	7565.26	954.63	-7515.09	1.00	
14866.00	90.220	267.280	6933.96	7659.58	950.31	-7609.99	0.25	
14960.00	89.880	267.370	6933.88	7752.89	945.92	-7703.89	0.37	
15055.00	89.850	265.990	6934.10	7847.06	940.42	-7798.72	1.45	
15150.00	90.250	265.580	6934.02	7941.02	933.44	-7893.47	0.60	
15244.00	90.000	266.780	6933.81	8034.08	927.18	-7987.26	1.30	
15339.00	90.950	268.720	6933.02	8128.46	923.45	-8082.17	2.27	
15434.00	90.650	268.320	6931.70	8222.97	920.99	-8177.13	0.53	
15529.00	90.650	269.130	6930.62	8317.52	918.88	-8272.10	0.85	
15623.00	90.740	269.110	6929.48	8411.14	917.44	-8366.08	0.10	
15718.00	90.620	268.160	6928.35	8505.67	915.17	-8461.05	1.01	
15813.00	90.890	267.690	6927.10	8600.08	911.73	-8555.98	0.57	
15907.00	90.650	267.270	6925.84	8693.42	907.60	-8649.88	0.51	
16002.00	90.150	265.030	6925.17	8787.46	901.22	-8744.66	2.42	
16097.00	90.250	264.190	6924.84	8881.11	892.30	-8839.23	0.89	
16192.00	90.550	264.840	6924.18	8974.73	883.22	-8933.80	0.75	
16287.00	90.740	262.640	6923.11	9068.13	872.86	-9028.22	2.32	
16381.00	90.280	263.400	6922.27	9160.32	861.44	-9121.52	0.95	
16476.00	90.280	264.450	6921.81	9253.77	851.39	-9215.98	1.11	
16571.00	90.460	265.680	6921.20	9347.55	843.21	-9310.62	1.31	
16666.00	90.520	265.770	6920.38	9441.49	836.13	-9405.36	0.11	
16761.00	90.000	264.930	6919.95	9535.34	828.43	-9500.04	1.04	
16856.00	90.220	265.520	6919.77	9629.16	820.52	-9594.71	0.66	
16951.00	90.340	265.640	6919.30	9723.07	813.20	-9689.43	0.18	

Actual Wellpath Report

WARD R-20-19HN AWP

Page 6 of 8



REFERENCE WELLPATH IDENTIFICATION			
Operator	BAYSWATER E & P LLC	Slot	SLOT#08 WARD R-20-19HN (349'FSL&213'FEL.SEC.20)
Area	COLORADO	Well	WARD R-20-19HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	WARD R-20-19HN AWB
Facility	SEC.20-T06N-R66W		

WELLPATH DATA (190 stations)								
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
17045.00	90.400	266.280	6918.70	9816.08	806.58	-9783.19	0.68	
17140.00	90.590	267.210	6917.88	9910.26	801.19	-9878.03	1.00	
17235.00	90.620	268.240	6916.87	10004.64	797.41	-9972.95	1.08	
17330.00	90.550	269.230	6915.90	10099.19	795.32	-10067.92	1.04	
17425.00	90.220	270.180	6915.27	10193.89	794.83	-10162.92	1.06	
17520.00	90.280	270.230	6914.85	10288.65	795.17	-10257.92	0.08	
17614.00	90.650	270.550	6914.09	10382.43	795.81	-10351.91	0.52	
17709.00	90.220	269.440	6913.37	10477.16	795.80	-10446.91	1.25	
17715.00	89.970	269.490	6913.36	10483.14	795.74	-10452.91	4.25	LAST BHI MWD SURVEY
17739.00	89.970	269.490	6913.37	10507.06	795.53	-10476.91	0.00	PROJECTION TO BIT

HOLE & CASING SECTIONS - Ref Wellbore: WARD R-20-19HN AWB Ref Wellpath: WARD R-20-19HN 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]
9.625in Casing Surface	25.00	1549.00	1524.00	25.00	1548.33	0.00	0.03	22.37	7.10
8.5in Open Hole	1549.00	17739.00	16190.00	1548.33	6913.37	22.37	7.10	795.53	-10476.91

Actual Wellpath Report

WARD R-20-19HN AWP

Page 7 of 8



REFERENCE WELLPATH IDENTIFICATION			
Operator	BAYSWATER E & P LLC	Slot	SLOT#08 WARD R-20-19HN (349'FSL&213'FEL,SEC.20)
Area	COLORADO	Well	WARD R-20-19HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	WARD R-20-19HN AWB
Facility	SEC.20-T06N-R66W		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
WARD R-20-19HN Section 19	0.00	0.00	0.00	3196665.66	1413882.03	40°28'02.482"N	104°47'35.362"W	polygon
WARD R-20-19HN Section 20	0.00	0.00	0.00	3196665.66	1413882.03	40°28'02.482"N	104°47'35.362"W	polygon
WARD R-20-19HN BHL (1452'FSL&470'FWL,SEC.19)	6909.00	781.05	-10477.19	3186182.98	1414579.52	40°28'10.178"N	104°49'50.923"W	point
WARD R-20-19HN REV-2 BHL from Plat (1452'FSL&470'FWL,SEC.19)	6913.00	781.05	-10477.19	3186182.98	1414579.52	40°28'10.178"N	104°49'50.923"W	point
Boreline Vertex Location (1467'FSL)	6933.00	936.72	-7821.38	3188837.36	1414756.35	40°28'11.726"N	104°49'16.561"W	point
Boreline Vertex Location (1474'FSL)	6936.00	1016.97	-5106.65	3191551.26	1414858.23	40°28'12.526"N	104°48'41.436"W	point
WP#1 (Ward R-20-19HN)	6936.00	1051.30	-3607.30	3193050.24	1414904.51	40°28'12.868"N	104°48'22.036"W	point
WP#2 (Ward R-20-19HN)	6936.00	950.20	-7376.00	3189282.61	1414773.37	40°28'11.861"N	104°49'10.798"W	point
WARD R-20-19HN LANDING POINT (1480'FSL&470'FEL,SEC.20)	6960.00	1127.86	-258.45	3196398.25	1415007.76	40°28'13.627"N	104°47'38.706"W	point
WARD R-20-19HN Section 19 Hardline (460'Setback)	7300.00	0.00	0.00	3196665.66	1413882.03	40°28'02.482"N	104°47'35.362"W	polygon
WARD R-20-19HN Section 20 Hardline (460'Setback)	7300.00	0.00	0.00	3196665.66	1413882.03	40°28'02.482"N	104°47'35.362"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: WARD R-20-19HN AWB Ref Wellpath: WARD R-20-19HN AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	1495.00	ISCWSA MWD, Rev. 4 (Standard)	3rd Party Surface Surveys <146'-1495'>	WARD R-20-19HN AWB
1495.00	17715.00	BHI AutoTrak Curve (Short)	BHI/BHI AutoTrak Curve (Short) 8 1/2" Hole <1603'-17715'>	WARD R-20-19HN AWB
17715.00	17739.00	Blind Drilling (std)	Projection to bit	WARD R-20-19HN AWB

Actual Wellpath Report

WARD R-20-19HN AWP

Page 8 of 8



REFERENCE WELLPATH IDENTIFICATION			
Operator	BAYSWATER E & P LLC	Slot	SLOT#08 WARD R-20-19HN (349'FSL&213'FEL.SEC.20)
Area	COLORADO	Well	WARD R-20-19HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	WARD R-20-19HN AWB
Facility	SEC.20-T06N-R66W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1495.00	3.900	11.600	1494.47	TIED INTO 3RD PARTY SURFACE SURVEYS
17715.00	89.970	269.490	6913.36	LAST BHI MWD SURVEY
17739.00	89.970	269.490	6913.37	PROJECTION TO BIT