

Pilot-reference wellpath is BAD Land 4-64 4-5 4BH (REV-B.0) PWP	Grid System: NAD83 / Lambert Colorado SP, Central Zone (502), US feet
True vertical depths are referenced to RIG (24K8) (RKB)	* = Wellpath was transformed from a different geoidic datum
Measured depths are referenced to RIG (24K8) (RKB)	North Reference: True north
RIG (24K8) (RKB) to Mean Sea Level: 5641 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLO7901 BAD Land 4-64 4-5 4BH (10T5FL & 350F, SEC.04)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: bernjacq on 2017-07-10
	Database: WA_DEN_Demer_Debl

To correct azimuth from Magnetic to True add 8.21 degrees

REFERENCE WELLPATH IDENTIFICATION			
Operator	Burlington Resources	Slot	SLOT#01 B&D LAND 4-64 4-5 4BH (810'FSL & 350'FEL, SEC.04)
Area	COLORADO	Well	B&D LAND 4-64 4-5 4BH
Field	ARAPAHOE COUNTY (NAD83/TN)	Wellbore	B&D LAND 4-64 4-5 4BH AWP
Facility	SEC.04-T04S-R64W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert Colorado SP, Central Zone (502), US feet	Software System	WellArchitect® 5.0
North Reference	True	User	Bensjacj
Scale	0.999995	Report Generated	07/10/2017 at 9:28 AM
Convergence at slot	0.61° East	Database/Source file	WA_DEN_Denver_Defn/B_D LAND 4-64 4-5 4BH AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-39.46	-0.78	3268027.97	1690983.71	39°43'36.100"N	104°32'49.490"W
Facility Reference Pt			3268028.34	1691023.18	39°43'36.490"N	104°32'49.480"W
Field Reference Pt			3256721.09	1679994.75	39°41'48.650"N	104°35'15.610"W

WELLPATH DATUM			
Calculation method	Minimum curvature	RIG (24'KB) (RKB) to Facility Vertical Datum	5641.00ft
Horizontal Reference Pt	Slot	RIG (24'KB) (RKB) to Mean Sea Level	5641.00ft
Vertical Reference Pt	RIG (24'KB) (RKB)	RIG (24'KB) (RKB) to Mud Line at Slot (SLOT#01 B&D LAND 4-64 4-5 4BH (810'FSL & 350'FEL, SEC.04))	5641.00ft
MD Reference Pt	RIG (24'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	271.76°

REFERENCE WELLPATH IDENTIFICATION			
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Area	COLORADO	Well	B&D LAND 4-64 4-5 4BH
Field	ARAPAHOE COUNTY (NAD83/TN)	Wellbore	B&D LAND 4-64 4-5 4BH AWB
Facility	SEC.04-T04S-R64W		

WELLPATH DATA (149 stations)								
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
1931.45	0.090	36.670	1931.38	-7.49	-13.64	7.07	0.32	TIE INTO GYRO SURVEYS
1986.00	0.260	18.100	1985.93	-7.55	-13.48	7.14	0.32	
2081.00	0.340	10.650	2080.93	-7.65	-13.00	7.25	0.09	
2175.00	0.440	5.980	2174.93	-7.72	-12.37	7.34	0.11	
2270.00	0.460	1.270	2269.92	-7.74	-11.63	7.39	0.04	
2365.00	0.390	9.750	2364.92	-7.79	-10.93	7.45	0.10	
2459.00	0.410	8.630	2458.92	-7.87	-10.28	7.56	0.02	
2553.00	0.360	8.680	2552.92	-7.95	-9.65	7.65	0.05	
2648.00	0.330	16.220	2647.91	-8.05	-9.10	7.77	0.06	
2742.00	0.220	8.950	2741.91	-8.14	-8.66	7.88	0.12	
2837.00	0.210	19.240	2836.91	-8.22	-8.31	7.96	0.04	
2931.00	0.230	23.410	2930.91	-8.34	-7.98	8.10	0.03	
3025.00	0.090	62.790	3024.91	-8.47	-7.77	8.24	0.18	
3120.00	0.040	191.760	3119.91	-8.53	-7.77	8.30	0.13	
3214.00	0.060	215.470	3213.91	-8.50	-7.84	8.26	0.03	
3309.00	0.120	179.550	3308.91	-8.47	-7.98	8.23	0.08	
3404.00	0.130	148.650	3403.91	-8.54	-8.17	8.29	0.07	
3498.00	0.060	133.320	3497.91	-8.63	-8.30	8.38	0.08	
3593.00	0.090	290.710	3592.91	-8.60	-8.31	8.35	0.15	
3687.00	0.130	299.370	3686.91	-8.43	-8.23	8.18	0.05	
3782.00	0.160	267.750	3781.91	-8.21	-8.18	7.96	0.09	
3877.00	0.230	260.340	3876.91	-7.89	-8.22	7.64	0.08	
3971.00	0.280	270.350	3970.91	-7.47	-8.25	7.22	0.07	
4066.00	0.300	260.660	4065.91	-7.00	-8.29	6.74	0.06	
4160.00	0.320	271.950	4159.91	-6.49	-8.32	6.24	0.07	
4254.00	0.290	276.520	4253.90	-5.99	-8.28	5.74	0.04	
4349.00	0.330	260.160	4348.90	-5.48	-8.30	5.23	0.10	
4444.00	0.330	248.490	4443.90	-4.97	-8.45	4.71	0.07	
4538.00	0.370	231.320	4537.90	-4.49	-8.74	4.22	0.12	
4633.00	0.360	232.470	4632.90	-4.02	-9.11	3.74	0.01	
4727.00	0.220	262.720	4726.90	-3.61	-9.31	3.33	0.22	
4821.00	0.350	251.990	4820.90	-3.17	-9.42	2.88	0.15	
4916.00	0.450	231.560	4915.89	-2.61	-9.75	2.31	0.18	
5010.00	0.460	219.970	5009.89	-2.09	-10.26	1.78	0.10	
5105.00	0.280	204.260	5104.89	-1.77	-10.77	1.44	0.22	
5199.00	0.210	62.940	5198.89	-1.83	-10.90	1.50	0.49	
5293.00	0.720	40.560	5292.88	-2.35	-10.37	2.03	0.57	
5387.00	0.970	47.460	5386.87	-3.29	-9.39	3.00	0.29	
5482.00	0.940	57.120	5481.86	-4.51	-8.42	4.25	0.17	
5576.00	2.230	56.050	5575.82	-6.63	-6.98	6.42	1.37	
5671.00	3.820	57.490	5670.69	-10.74	-4.25	10.62	1.68	
5765.00	3.950	59.600	5764.47	-16.07	-0.92	16.05	0.21	
5859.00	3.570	60.040	5858.27	-21.30	2.18	21.38	0.41	
5954.00	3.120	60.000	5953.11	-26.02	4.95	26.18	0.47	
6048.00	3.190	66.580	6046.97	-30.56	7.26	30.80	0.39	

REFERENCE WELLPATH IDENTIFICATION

Operator	Burlington Resources	Slot	SLOT#01 B&D LAND 4-64 4-5 4BH (810'FSL & 350'FEL, SEC.04)
Area	COLORADO	Well	B&D LAND 4-64 4-5 4BH
Field	ARAPAHOE COUNTY (NAD83/TN)	Wellbore	B&D LAND 4-64 4-5 4BH AWB
Facility	SEC.04-T04S-R64W		

WELLPATH DATA (149 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
6142.00	3.770	51.900	6140.79	-35.30	10.21	35.63	1.13	
6237.00	3.400	61.070	6235.61	-40.12	13.50	40.55	0.72	
6331.00	3.010	68.190	6329.46	-44.78	15.77	45.28	0.59	
6425.00	2.630	76.240	6423.35	-49.12	17.20	49.67	0.58	
6520.00	2.950	38.190	6518.24	-52.67	19.64	53.30	1.94	
6614.00	2.590	38.790	6612.13	-55.38	23.19	56.12	0.38	
6709.00	2.100	45.430	6707.05	-57.88	26.09	58.71	0.59	
6772.00	1.770	45.580	6770.02	-59.35	27.58	60.23	0.52	
6841.00	1.200	72.510	6838.99	-60.77	28.54	61.68	1.28	
6935.00	9.610	279.620	6932.60	-53.91	30.15	54.86	11.37	
7030.00	14.460	266.810	7025.50	-34.22	30.82	35.18	5.80	
7124.00	27.200	271.000	7113.18	-0.91	30.54	1.85	13.64	
7219.00	36.460	275.450	7193.81	49.09	33.61	-48.08	10.05	
7313.00	44.390	274.660	7265.31	109.90	38.94	-108.75	8.45	
7407.00	50.980	274.450	7328.56	179.28	44.45	-178.00	7.01	
7502.00	55.580	274.230	7385.35	255.33	50.21	-253.91	4.85	
7596.00	60.250	273.370	7435.26	334.90	55.47	-333.36	5.03	
7691.00	68.400	271.420	7476.39	420.44	58.99	-418.83	8.78	
7785.00	83.270	271.010	7499.33	511.32	60.91	-509.69	15.82	
7848.00	90.120	274.070	7502.96	574.17	63.70	-572.48	11.90	
7928.00	90.930	273.690	7502.23	654.11	69.11	-652.29	1.12	
8023.00	89.350	274.590	7502.00	749.02	75.97	-747.04	1.91	
8117.00	89.020	274.870	7503.33	842.89	83.72	-840.71	0.46	
8211.00	88.710	275.010	7505.20	936.72	91.81	-934.34	0.36	
8306.00	88.240	273.850	7507.73	1031.59	99.15	-1029.02	1.32	
8400.00	88.830	273.700	7510.13	1125.50	105.34	-1122.79	0.65	
8494.00	89.320	273.250	7511.65	1219.44	111.03	-1216.60	0.71	
8589.00	90.220	274.190	7512.03	1314.38	117.20	-1311.40	1.37	
8683.00	90.400	274.930	7511.52	1408.27	124.67	-1405.10	0.81	
8774.00	90.550	274.270	7510.76	1499.15	131.97	-1495.80	0.74	
8866.00	89.570	273.250	7510.67	1591.10	138.00	-1587.60	1.54	
8957.00	89.110	272.910	7511.72	1682.06	142.89	-1678.47	0.63	
9049.00	89.380	272.270	7512.93	1774.05	147.05	-1770.36	0.75	
9141.00	88.980	272.070	7514.24	1866.03	150.53	-1862.29	0.49	
9232.00	88.830	272.740	7515.98	1957.01	154.35	-1953.19	0.75	
9323.00	88.740	272.690	7517.91	2047.98	158.66	-2044.07	0.11	
9414.00	88.090	273.420	7520.43	2138.92	163.50	-2134.90	1.07	
9506.00	88.980	272.950	7522.78	2230.86	168.61	-2226.73	1.09	
9598.00	89.970	273.300	7523.63	2322.83	173.63	-2318.59	1.14	
9689.00	90.280	273.610	7523.43	2413.79	179.11	-2409.42	0.48	
9781.00	89.630	273.720	7523.50	2505.74	184.99	-2501.23	0.72	
9873.00	88.280	272.840	7525.18	2597.69	190.26	-2593.06	1.75	
9963.00	87.440	272.400	7528.54	2687.61	194.37	-2682.91	1.05	
10054.00	86.920	271.650	7533.02	2778.50	197.58	-2773.74	1.00	
10149.00	86.700	271.290	7538.30	2873.35	200.01	-2868.56	0.44	

REFERENCE WELLPATH IDENTIFICATION			
Operator	Burlington Resources	Slot	SLOT#01 B&D LAND 4-64 4-5 4BH (810'FSL & 350'FEL, SEC.04)
Area	COLORADO	Well	B&D LAND 4-64 4-5 4BH
Field	ARAPAHOE COUNTY (NAD83/TN)	Wellbore	B&D LAND 4-64 4-5 4BH AWB
Facility	SEC.04-T04S-R64W		

WELLPATH DATA (149 stations)								
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
10243.00	86.740	270.840	7543.68	2967.19	201.76	-2962.39	0.48	
10338.00	86.920	270.240	7548.93	3062.02	202.65	-3057.24	0.66	
10382.00	86.890	270.060	7551.31	3105.94	202.77	-3101.18	0.41	
10432.00	86.550	270.160	7554.17	3155.84	202.86	-3151.09	0.71	
10482.00	87.230	268.680	7556.88	3205.72	202.36	-3201.02	3.25	
10526.00	88.800	267.160	7558.41	3249.59	200.76	-3244.96	4.96	
10575.00	89.230	266.480	7559.25	3298.40	198.04	-3293.87	1.64	
10621.00	88.800	266.470	7560.04	3344.20	195.22	-3339.78	0.94	
10715.00	88.950	266.900	7561.89	3437.81	189.78	-3433.60	0.48	
10810.00	89.910	267.100	7562.83	3532.48	184.81	-3528.47	1.03	
10905.00	91.540	268.700	7561.63	3627.25	181.33	-3623.39	2.40	
10999.00	92.710	269.100	7558.14	3721.07	179.52	-3717.31	1.32	
11093.00	92.060	268.970	7554.23	3814.88	177.94	-3811.21	0.71	
11188.00	92.220	268.660	7550.68	3909.69	175.98	-3906.12	0.37	
11282.00	91.720	270.200	7547.45	4003.55	175.05	-4000.06	1.72	
11376.00	90.800	270.850	7545.39	4097.51	175.91	-4094.03	1.20	
11471.00	90.180	271.010	7544.57	4192.49	177.45	-4189.02	0.67	
11565.00	88.580	272.190	7545.59	4286.48	180.07	-4282.97	2.11	
11659.00	87.720	272.560	7548.62	4380.43	183.97	-4376.84	1.00	
11754.00	87.810	272.380	7552.33	4475.35	188.06	-4471.68	0.21	
11848.00	89.080	271.150	7554.88	4569.31	190.95	-4565.60	1.88	
11943.00	89.420	271.620	7556.12	4664.30	193.25	-4660.56	0.61	
12037.00	89.080	272.040	7557.35	4758.29	196.25	-4754.50	0.57	
12132.00	88.490	272.070	7559.37	4853.27	199.65	-4849.42	0.62	
12226.00	88.920	271.370	7561.49	4947.24	202.47	-4943.35	0.87	
12320.00	89.780	270.060	7562.56	5041.22	203.65	-5037.34	1.67	
12415.00	88.400	269.610	7564.07	5136.15	203.37	-5132.32	1.53	
12510.00	88.770	270.050	7566.41	5231.06	203.09	-5227.29	0.61	
12604.00	89.630	269.520	7567.73	5325.00	202.74	-5321.28	1.07	
12699.00	90.550	269.970	7567.58	5419.94	202.32	-5416.28	1.08	
12794.00	90.740	269.610	7566.51	5514.88	201.97	-5511.27	0.43	
12888.00	90.920	270.250	7565.15	5608.82	201.85	-5605.26	0.71	
12982.00	90.920	270.310	7563.64	5702.77	202.31	-5699.25	0.06	
13076.00	91.050	270.530	7562.02	5796.73	203.00	-5793.23	0.27	
13171.00	90.920	270.560	7560.39	5891.70	203.91	-5888.21	0.14	
13266.00	90.800	270.920	7558.96	5986.67	205.13	-5983.19	0.40	
13360.00	89.540	270.690	7558.68	6080.66	206.45	-6077.18	1.36	
13455.00	88.890	271.150	7559.98	6175.64	207.98	-6172.16	0.84	
13549.00	89.880	272.850	7560.99	6269.63	211.26	-6266.09	2.09	
13644.00	89.750	273.060	7561.30	6364.61	216.16	-6360.97	0.26	
13738.00	89.230	273.210	7562.14	6458.57	221.30	-6454.82	0.58	
13833.00	89.320	275.240	7563.34	6553.47	228.29	-6549.55	2.14	
13927.00	90.340	277.490	7563.62	6647.16	238.71	-6642.96	2.63	
14021.00	89.450	276.620	7563.79	6740.76	250.26	-6736.25	1.32	
14116.00	88.710	275.730	7565.32	6835.46	260.48	-6830.69	1.22	

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Field	ARAPAHOE COUNTY (NAD83/TN)	Wellbore	B&D LAND 4-64 4-5 4BH AWB
Facility	SEC.04-T04S-R64W		

WELLPATH DATA (149 stations)								
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14210.00	88.340	276.130	7567.74	6929.18	270.18	-6924.15	0.58	
14305.00	87.230	275.250	7571.41	7023.89	279.60	-7018.61	1.49	
14399.00	87.130	274.810	7576.03	7117.62	287.83	-7112.13	0.48	
14494.00	87.450	272.740	7580.52	7212.45	294.08	-7206.82	2.20	
14588.00	86.860	272.820	7585.19	7306.32	298.63	-7300.59	0.63	
14682.00	88.520	272.760	7588.98	7400.22	303.20	-7394.40	1.77	
14777.00	88.650	272.890	7591.32	7495.18	307.88	-7489.25	0.19	
14871.00	88.770	271.920	7593.44	7589.15	311.82	-7583.15	1.04	
14966.00	88.490	271.490	7595.71	7684.12	314.65	-7678.08	0.54	
15060.00	87.720	271.800	7598.82	7778.07	317.35	-7771.99	0.88	
15154.00	89.480	274.250	7601.12	7872.01	322.31	-7865.82	3.21	
15249.00	89.350	274.350	7602.09	7966.91	329.43	-7960.54	0.17	
15278.00	89.420	274.500	7602.40	7995.88	331.67	-7989.46	0.57	LAST BHI MWD SURVEY
15341.00	89.420	274.500	7603.04	8058.80	336.61	-8052.26	0.00	PROJECTION TO BIT

HOLE & CASING SECTIONS - Ref Wellbore: B&D LAND 4-64 4-5 4BH AWB Ref Wellpath: B&D LAND 4-64 4-5 4BH 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	24.00	1965.00	1941.00	24.00	1964.93	0.00	0.00	-13.56	7.11
8.5in Open Hole	1965.00	15341.00	13376.00	1964.93	7603.04	-13.56	7.11	336.61	-8052.26

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Area	COLORADO	Well	B&D LAND 4-64 4-5 4BH
Field	ARAPAHOE COUNTY (NAD83/TN)	Wellbore	B&D LAND 4-64 4-5 4BH AWB
Facility	SEC.04-T04S-R64W		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.04-T04S-R64W	24.00	39.46	0.78	3268028.34	1691023.18	39°43'36.490"N	104°32'49.480"W	polygon
SEC.04-T04S-R64W NE CORNER	24.00	4426.82	355.35	3268336.86	1695413.98	39°44'19.849"N	104°32'44.941"W	point
SEC.04-T04S-R64W NW CORNER	24.00	4538.75	-4901.92	3263078.74	1695470.77	39°44'20.951"N	104°33'52.240"W	point
SEC.04-T04S-R64W SE CORNER	24.00	-815.39	349.23	3268385.73	1690172.03	39°43'28.042"N	104°32'45.020"W	point
SEC.04-T04S-R64W SW CORNER	24.00	-723.13	-4888.86	3263146.99	1690209.34	39°43'28.949"N	104°33'52.060"W	point
SEC.05-T04S-R64W	24.00	39.46	0.78	3268028.34	1691023.18	39°43'36.490"N	104°32'49.480"W	polygon
SEC.05-T04S-R64W NW CORNER	24.00	4638.31	-10208.64	3257771.31	1695514.66	39°44'21.919"N	104°35'00.172"W	point
SEC.05-T04S-R64W SW CORNER	24.00	-621.39	-10211.30	3257823.81	1690255.25	39°43'29.939"N	104°35'00.179"W	point
B&D LAND 4-64 4-5 4BH BPI REV-1 (900'FSL & 923'FEL, SEC.04)	7501.00	100.18	-572.71	3267454.24	1691077.88	39°43'37.090"N	104°32'56.820"W	point
B&D LAND 4-64 4-5 4BH BHL ON PLAT REV-1 (900'FSL & 2140'FWL, SEC.05)	7595.00	248.17	-8071.80	3259954.06	1691147.20	39°43'38.540"N	104°34'32.800"W	point

WELLPATH COMPOSITION - Ref Wellbore: B&D LAND 4-64 4-5 4BH AWB				Ref Wellpath: B&D LAND 4-64 4-5 4BH AWP	
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment		Wellbore
24.00	1931.45	BHI Generic gyro - continuous (Standard)	GYRO SURFACE SURVEYS <24 - 1931.45>		B&D LAND 4-64 4-5 4BH AWB
1931.45	6772.00	Custom BHI OnTrak (IFR1, Standard Rotating+Axial Corr) (Rockies 0.03Gt model)	BHI MWD ONTRAK (IFR, MAGCORR) <1931.45 - 6772>		B&D LAND 4-64 4-5 4BH AWB
6772.00	15278.00	BHI Unknown Tool (Standard)	BHI MWD NAVITRAK (STANDARD) <6772 - 15341>		B&D LAND 4-64 4-5 4BH AWB
15278.00	15341.00	Blind Drilling (std)	Projection to bit		B&D LAND 4-64 4-5 4BH AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	Burlington Resources	Slot	SLOT#01 B&D LAND 4-64 4-5 4BH (810'FSL & 350'FEL, SEC.04)
Area	COLORADO	Well	B&D LAND 4-64 4-5 4BH
Field	ARAPAHOE COUNTY (NAD83/TN)	Wellbore	B&D LAND 4-64 4-5 4BH AWB
Facility	SEC.04-T04S-R64W		

WELLPATH COMMENTS					
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment	
1931.45	0.090	36.670	1931.38	TIE INTO GYRO SURVEYS	
15278.00	89.420	274.500	7602.40	LAST BHI MWD SURVEY	
15341.00	89.420	274.500	7603.04	PROJECTION TO BIT	