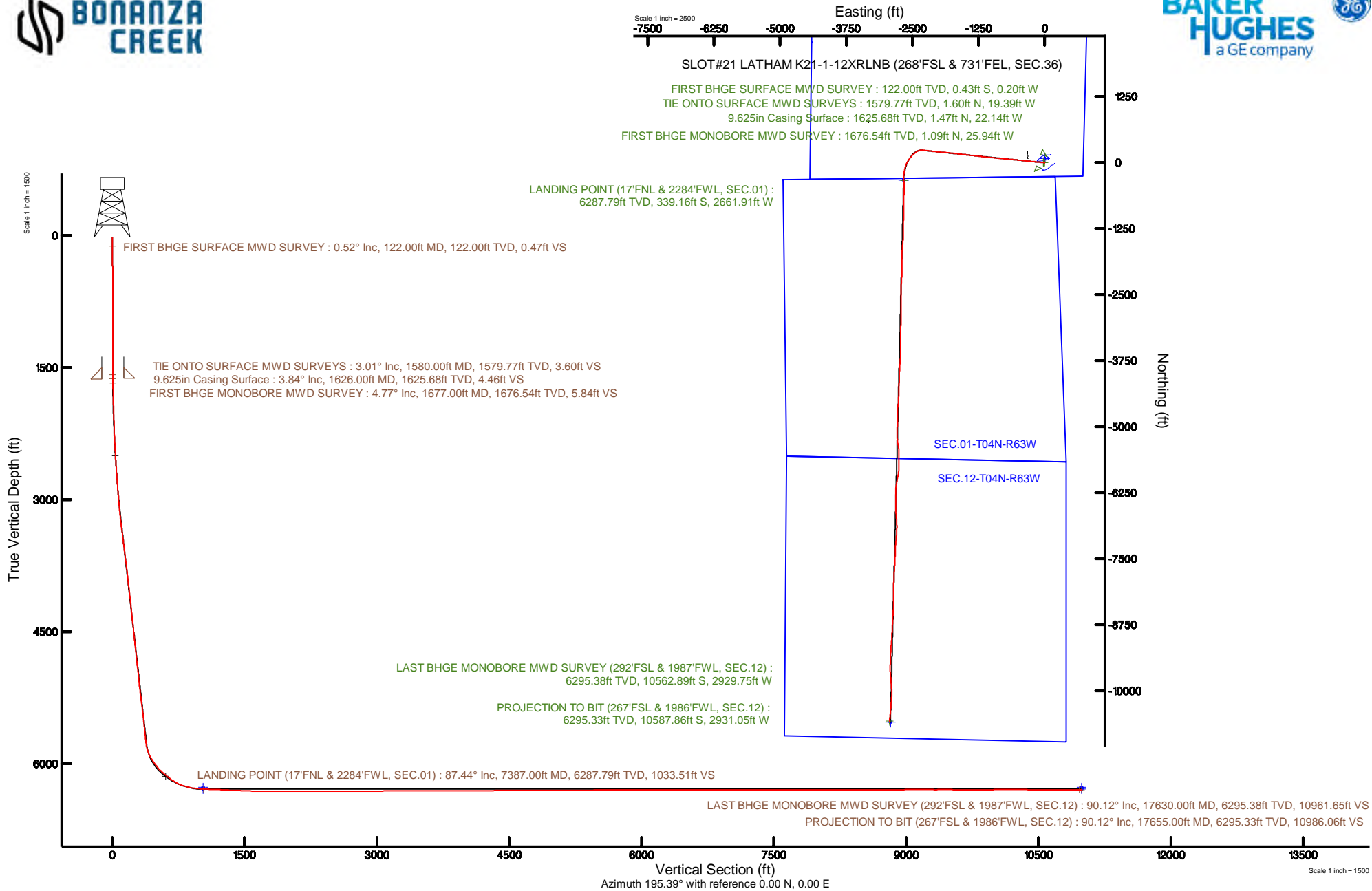


# BONANZA CREEK ENERGY

Location: COLORADO Slot: SLOT#21 LATHAM K21-1-12XRLNB (268°FSL & 731°FEL, SEC.36)  
Field: WELD COUNTY (NAD83/TRUE) Well: LATHAM K21-1-12XRLNB  
Facility: SEC.36-T05N-R63W Wellbore: LATHAM K21-1-12XRLNB PWB 05-123-50033

Plot reference wellpath is LATHAM K21-1-12XRLNB PWP (REV-C.0)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to RIG (17) (RKB)	North Reference: True north
Measured depths are referenced to RIG (17) (RKB)	Scale: True distance
RIG (17) (RKB) to Mean Sea Level: 4670 feet	Depths are in feet
Mean Sea Level to Ground level (At Slot: SLOT#21 LATHAM K21-1-12XRLNB (268°FSL & 731°FEL, SEC.36)): 0 feet	Created by: robale01 on 2019-09-17
Coordinates are in feet referenced to Slot	Database: WA DENVER





# Actual Wellpath Report

LATHAM K21-1-12XRLNB AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK ENERGY	Slot	SLOT#21 LATHAM K21-1-12XRLNB (268'FSL & 731'FEL, SEC.36)
Area	COLORADO	Well	LATHAM K21-1-12XRLNB
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	LATHAM K21-1-12XRLNB AWB
Facility	SEC.36-T05N-R63W		

## REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 5.1
North Reference	True	User	Robiale01
Scale	0.999958	Report Generated	9/17/2019 at 11:02:18 AM
Convergence at slot	0.72° East	Database/Source file	WA DENVER/LATHAM_K21-1-12XRLNB_AWP.xml

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-4518.59	3853.42	3312643.31	1372256.14	40°20'59.338"N	104°22'41.682"W
Facility Reference Pt			3308733.91	1376726.04	40°21'43.992"N	104°23'31.452"W
Field Reference Pt			3224525.77	1254425.87	40°01'44.400"N	104°41'53.556"W

## WELLPATH DATUM

Calculation method	Minimum curvature	RIG (17') (RKB) to Facility Vertical Datum	4570.00ft
Horizontal Reference Pt	Slot	RIG (17') (RKB) to Mean Sea Level	4570.00ft
Vertical Reference Pt	RIG (17') (RKB)	RIG (17') (RKB) to Ground Level at Slot (SLOT#21 LATHAM K21-1-12XRLNB (268'FSL & 731'FEL, SEC.36))	4570.00ft
MD Reference Pt	RIG (17') (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	195.39°



# Actual Wellpath Report

LATHAM K21-1-12XRLNB AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK ENERGY	Slot	SLOT#21 LATHAM K21-1-12XRLNB (268'FSL & 731'FEL, SEC.36)
Area	COLORADO	Well	LATHAM K21-1-12XRLNB
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	LATHAM K21-1-12XRLNB AWB
Facility	SEC.36-T05N-R63W		

## WELLPATH DATA (200 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00†	0.000	204.570	0.00	0.00	0.00	0.00	40°20'59.338"N	104°22'41.682"W	0.00	
17.00	0.000	204.570	17.00	0.00	0.00	0.00	40°20'59.338"N	104°22'41.682"W	0.00	
122.00	0.520	204.570	122.00	0.47	-0.43	-0.20	40°20'59.333"N	104°22'41.685"W	0.50	FIRST BHGE SURFACE MWD SURVEY
211.00	0.810	232.150	210.99	1.37	-1.19	-0.86	40°20'59.326"N	104°22'41.693"W	0.48	
299.00	0.510	236.570	298.99	2.17	-1.78	-1.68	40°20'59.320"N	104°22'41.704"W	0.35	
388.00	0.490	239.190	387.98	2.74	-2.20	-2.34	40°20'59.316"N	104°22'41.712"W	0.03	
565.00	0.570	221.410	564.98	4.08	-3.25	-3.57	40°20'59.306"N	104°22'41.728"W	0.10	
653.00	1.180	212.330	652.97	5.34	-4.34	-4.34	40°20'59.295"N	104°22'41.738"W	0.71	
740.00	0.580	287.420	739.96	6.18	-4.96	-5.24	40°20'59.289"N	104°22'41.750"W	1.35	
828.00	0.520	285.560	827.95	6.16	-4.72	-6.05	40°20'59.291"N	104°22'41.760"W	0.07	
916.00	0.710	320.360	915.95	5.85	-4.20	-6.79	40°20'59.296"N	104°22'41.770"W	0.47	
1003.00	0.660	297.180	1002.94	5.44	-3.55	-7.58	40°20'59.302"N	104°22'41.780"W	0.32	
1091.00	0.820	311.580	1090.93	5.05	-2.90	-8.50	40°20'59.309"N	104°22'41.792"W	0.28	
1180.00	0.940	291.110	1179.92	4.70	-2.22	-9.66	40°20'59.316"N	104°22'41.807"W	0.38	
1268.00	1.410	294.240	1267.91	4.46	-1.51	-11.32	40°20'59.323"N	104°22'41.828"W	0.54	
1357.00	1.020	293.470	1356.89	4.18	-0.75	-13.04	40°20'59.330"N	104°22'41.850"W	0.44	
1445.00	1.440	307.950	1444.87	3.65	0.24	-14.63	40°20'59.340"N	104°22'41.871"W	0.59	
1518.00	2.160	288.730	1517.83	3.22	1.25	-16.66	40°20'59.350"N	104°22'41.897"W	1.27	
1580.00	3.010	269.180	1579.77	3.60	1.60	-19.39	40°20'59.353"N	104°22'41.932"W	1.96	TIE ONTO SURFACE MWD SURVEYS
1677.00	4.770	263.220	1676.54	5.84	1.09	-25.94	40°20'59.348"N	104°22'42.017"W	1.86	FIRST BHGE MONOBORE MWD SURVEY
1764.00	7.710	278.080	1763.02	7.94	1.48	-35.32	40°20'59.352"N	104°22'42.138"W	3.83	
1851.00	10.080	274.340	1848.97	10.15	2.88	-48.69	40°20'59.366"N	104°22'42.311"W	2.80	
1940.00	9.030	274.730	1936.73	12.93	4.04	-63.42	40°20'59.378"N	104°22'42.501"W	1.18	
2029.00	7.930	274.510	2024.76	15.38	5.10	-76.50	40°20'59.388"N	104°22'42.670"W	1.24	
2117.00	9.240	276.100	2111.77	17.67	6.33	-89.57	40°20'59.400"N	104°22'42.839"W	1.51	
2204.00	11.040	274.210	2197.41	20.41	7.68	-104.83	40°20'59.414"N	104°22'43.036"W	2.10	
2291.00	13.060	275.340	2282.49	23.75	9.21	-122.92	40°20'59.429"N	104°22'43.270"W	2.34	
2380.00	14.930	271.490	2368.84	28.26	10.45	-144.40	40°20'59.441"N	104°22'43.547"W	2.35	
2468.00	15.980	276.460	2453.66	32.86	12.10	-167.77	40°20'59.457"N	104°22'43.849"W	1.92	
2548.00	17.110	274.730	2530.35	36.75	14.31	-190.44	40°20'59.479"N	104°22'44.142"W	1.54	



# Actual Wellpath Report

LATHAM K21-1-12XRLNB AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK ENERGY	Slot	SLOT#21 LATHAM K21-1-12XRLNB (268'FSL & 731'FEL, SEC.36)
Area	COLORADO	Well	LATHAM K21-1-12XRLNB
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	LATHAM K21-1-12XRLNB AWB
Facility	SEC.36-T05N-R63W		

## WELLPATH DATA (200 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2636.00	20.290	276.010	2613.69	41.63	16.98	-218.52	40°20'59.505"N	104°22'44.504"W	3.64	
2724.00	23.490	275.430	2695.34	47.15	20.24	-251.17	40°20'59.538"N	104°22'44.926"W	3.64	
2811.00	25.180	275.670	2774.61	53.28	23.71	-286.85	40°20'59.572"N	104°22'45.387"W	1.95	
2898.00	24.890	275.590	2853.43	59.52	27.32	-323.48	40°20'59.608"N	104°22'45.860"W	0.34	
2986.00	26.810	276.410	2932.62	65.77	31.34	-361.64	40°20'59.647"N	104°22'46.353"W	2.22	
3073.00	28.220	276.530	3009.78	72.00	35.87	-401.58	40°20'59.692"N	104°22'46.869"W	1.62	
3160.00	28.110	275.840	3086.48	78.57	40.29	-442.40	40°20'59.736"N	104°22'47.396"W	0.40	
3248.00	29.810	275.650	3163.47	85.72	44.56	-484.79	40°20'59.778"N	104°22'47.944"W	1.93	
3337.00	34.610	274.440	3238.76	94.27	48.69	-532.04	40°20'59.819"N	104°22'48.554"W	5.44	
3426.00	35.690	276.530	3311.53	103.07	53.60	-583.03	40°20'59.867"N	104°22'49.212"W	1.82	
3515.00	35.690	273.740	3383.82	112.31	58.25	-634.74	40°20'59.913"N	104°22'49.880"W	1.83	
3604.00	35.850	276.170	3456.03	121.73	62.74	-686.55	40°20'59.958"N	104°22'50.549"W	1.61	
3693.00	35.890	275.050	3528.15	130.59	67.84	-738.45	40°21'00.008"N	104°22'51.220"W	0.74	
3781.00	35.990	276.040	3599.40	139.42	72.83	-789.86	40°21'00.057"N	104°22'51.884"W	0.67	
3955.00	35.460	274.090	3740.67	157.62	81.81	-891.05	40°21'00.146"N	104°22'53.191"W	0.72	
4044.00	35.560	276.670	3813.12	166.61	86.66	-942.51	40°21'00.194"N	104°22'53.855"W	1.69	
4132.00	35.510	276.900	3884.73	174.26	92.70	-993.29	40°21'00.253"N	104°22'54.511"W	0.16	
4219.00	35.730	276.080	3955.45	182.10	98.43	-1043.64	40°21'00.310"N	104°22'55.161"W	0.60	
4305.00	34.580	275.770	4025.76	190.24	103.54	-1092.89	40°21'00.361"N	104°22'55.798"W	1.35	
4394.00	35.150	276.290	4098.79	198.52	108.89	-1143.48	40°21'00.413"N	104°22'56.451"W	0.72	
4483.00	35.380	275.380	4171.46	207.05	114.11	-1194.60	40°21'00.465"N	104°22'57.111"W	0.64	
4570.00	34.760	277.570	4242.66	214.80	119.74	-1244.26	40°21'00.521"N	104°22'57.753"W	1.61	
4657.00	32.550	276.840	4315.08	221.66	125.79	-1292.09	40°21'00.580"N	104°22'58.370"W	2.58	
4745.00	34.840	274.520	4388.29	229.92	130.60	-1340.66	40°21'00.628"N	104°22'58.998"W	2.98	
4833.00	34.250	276.880	4460.78	238.33	135.54	-1390.31	40°21'00.677"N	104°22'59.639"W	1.66	
4922.00	33.450	277.820	4534.69	245.27	141.88	-1439.48	40°21'00.739"N	104°23'00.274"W	1.07	
5011.00	34.810	276.000	4608.36	252.65	147.87	-1489.05	40°21'00.798"N	104°23'00.914"W	1.91	
5100.00	35.530	275.850	4681.12	261.08	153.16	-1540.04	40°21'00.851"N	104°23'01.573"W	0.81	
5189.00	35.280	277.070	4753.66	269.09	158.96	-1591.27	40°21'00.908"N	104°23'02.235"W	0.84	
5275.00	35.150	276.950	4823.92	276.31	165.02	-1640.49	40°21'00.968"N	104°23'02.870"W	0.17	



# Actual Wellpath Report

LATHAM K21-1-12XRLNB AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK ENERGY	Slot	SLOT#21 LATHAM K21-1-12XRLNB (268'FSL & 731'FEL, SEC.36)
Area	COLORADO	Well	LATHAM K21-1-12XRLNB
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	LATHAM K21-1-12XRLNB AWP
Facility	SEC.36-T05N-R63W		

## WELLPATH DATA (200 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5362.00	34.370	275.440	4895.40	284.24	170.38	-1689.80	40°21'01.021"N	104°23'03.507"W	1.34	
5450.00	31.960	275.320	4969.05	292.60	174.89	-1737.72	40°21'01.065"N	104°23'04.126"W	2.74	
5538.00	30.790	277.680	5044.19	299.70	180.06	-1783.24	40°21'01.116"N	104°23'04.714"W	1.93	
5627.00	34.390	275.830	5119.16	306.93	185.66	-1830.83	40°21'01.172"N	104°23'05.329"W	4.20	
5716.00	35.410	273.600	5192.16	316.38	189.83	-1881.57	40°21'01.213"N	104°23'05.984"W	1.84	
5803.00	33.430	275.760	5263.93	325.54	193.82	-1930.58	40°21'01.252"N	104°23'06.617"W	2.67	
5892.00	34.960	273.740	5337.54	334.79	197.94	-1980.42	40°21'01.293"N	104°23'07.261"W	2.14	
5980.00	34.770	276.070	5409.75	343.95	202.24	-2030.53	40°21'01.335"N	104°23'07.908"W	1.53	
6068.00	35.750	276.200	5481.60	352.12	207.67	-2081.04	40°21'01.389"N	104°23'08.561"W	1.12	
6155.00	35.700	279.090	5552.24	358.97	214.43	-2131.38	40°21'01.456"N	104°23'09.211"W	1.94	
6243.00	36.360	276.100	5623.41	366.00	221.26	-2182.67	40°21'01.523"N	104°23'09.873"W	2.13	
6331.00	36.050	276.660	5694.42	374.14	227.03	-2234.33	40°21'01.580"N	104°23'10.540"W	0.52	
6419.00	36.060	276.910	5765.56	381.89	233.15	-2285.76	40°21'01.640"N	104°23'11.205"W	0.17	
6506.00	37.310	265.010	5835.42	394.87	233.94	-2337.52	40°21'01.648"N	104°23'11.873"W	8.29	
6594.00	38.340	246.980	5905.14	421.20	220.91	-2389.37	40°21'01.519"N	104°23'12.543"W	12.59	
6682.00	40.570	233.800	5973.21	460.65	193.28	-2437.67	40°21'01.246"N	104°23'13.167"W	9.83	
6769.00	44.540	226.350	6037.32	509.04	155.47	-2482.63	40°21'00.873"N	104°23'13.747"W	7.37	
6858.00	51.040	221.080	6097.11	567.07	107.77	-2528.02	40°21'00.401"N	104°23'14.333"W	8.51	
6946.00	52.920	215.920	6151.33	630.81	53.53	-2571.11	40°20'59.865"N	104°23'14.890"W	5.09	
7035.00	57.960	204.680	6201.91	701.48	-9.68	-2607.79	40°20'59.241"N	104°23'15.364"W	11.83	
7123.00	68.630	195.810	6241.46	779.62	-83.32	-2634.65	40°20'58.513"N	104°23'15.710"W	15.09	
7211.00	77.320	190.270	6267.22	863.57	-165.20	-2653.52	40°20'57.704"N	104°23'15.954"W	11.56	
7298.00	84.140	182.060	6281.25	948.18	-250.45	-2662.67	40°20'56.861"N	104°23'16.072"W	12.17	
7387.00	87.440	176.970	6287.79	1033.51	-339.16	-2661.91	40°20'55.985"N	104°23'16.062"W	6.80	LANDING POINT (17'FNL & 2284'FWL, SEC.01)
7475.00	87.970	178.770	6291.31	1117.36	-427.03	-2658.64	40°20'55.116"N	104°23'16.020"W	2.13	
7561.00	87.870	181.250	6294.43	1200.22	-512.97	-2658.65	40°20'54.267"N	104°23'16.020"W	2.88	
7649.00	87.080	181.820	6298.31	1285.57	-600.85	-2661.01	40°20'53.399"N	104°23'16.050"W	1.11	
7738.00	87.910	180.720	6302.20	1371.80	-689.74	-2662.98	40°20'52.520"N	104°23'16.076"W	1.55	
7825.00	87.940	180.680	6305.35	1455.90	-776.67	-2664.04	40°20'51.661"N	104°23'16.089"W	0.06	
7913.00	87.810	181.270	6308.61	1541.07	-864.60	-2665.54	40°20'50.792"N	104°23'16.108"W	0.69	



# Actual Wellpath Report

LATHAM K21-1-12XRLNB AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK ENERGY	Slot	SLOT#21 LATHAM K21-1-12XRLNB (268'FSL & 731'FEL, SEC.36)
Area	COLORADO	Well	LATHAM K21-1-12XRLNB
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	LATHAM K21-1-12XRLNB AWP
Facility	SEC.36-T05N-R63W		

## WELLPATH DATA (200 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8000.00	88.030	181.020	6311.77	1625.34	-951.53	-2667.28	40°20'49.933"N	104°23'16.131"W	0.38	
8088.00	89.480	180.830	6313.68	1710.52	-1039.49	-2668.70	40°20'49.064"N	104°23'16.149"W	1.66	
8177.00	90.180	181.040	6313.95	1796.71	-1128.48	-2670.15	40°20'48.185"N	104°23'16.167"W	0.82	
8264.00	90.220	181.600	6313.64	1881.09	-1215.45	-2672.15	40°20'47.325"N	104°23'16.193"W	0.65	
8351.00	90.180	180.820	6313.34	1965.44	-1302.43	-2673.99	40°20'46.466"N	104°23'16.217"W	0.90	
8440.00	90.280	180.370	6312.98	2051.49	-1391.43	-2674.91	40°20'45.586"N	104°23'16.229"W	0.52	
8528.00	90.250	183.820	6312.58	2137.12	-1479.36	-2678.13	40°20'44.718"N	104°23'16.270"W	3.92	
8617.00	90.550	186.830	6311.96	2224.73	-1567.96	-2686.39	40°20'43.842"N	104°23'16.377"W	3.40	
8705.00	90.060	183.690	6311.49	2311.35	-1655.58	-2694.45	40°20'42.976"N	104°23'16.481"W	3.61	
8793.00	89.850	180.630	6311.56	2397.00	-1743.50	-2697.77	40°20'42.107"N	104°23'16.523"W	3.49	
8881.00	89.940	180.140	6311.72	2482.00	-1831.50	-2698.36	40°20'41.238"N	104°23'16.531"W	0.57	
8969.00	89.880	180.100	6311.86	2566.89	-1919.50	-2698.55	40°20'40.368"N	104°23'16.533"W	0.08	
9057.00	90.030	181.000	6311.92	2651.96	-2007.50	-2699.39	40°20'39.499"N	104°23'16.544"W	1.04	
9146.00	90.310	180.760	6311.66	2738.12	-2096.48	-2700.76	40°20'38.619"N	104°23'16.561"W	0.41	
9234.00	90.180	182.890	6311.28	2823.66	-2184.43	-2703.56	40°20'37.750"N	104°23'16.598"W	2.42	
9323.00	90.280	184.900	6310.93	2910.86	-2273.22	-2709.61	40°20'36.873"N	104°23'16.675"W	2.26	
9411.00	90.250	183.260	6310.52	2997.15	-2361.00	-2715.87	40°20'36.005"N	104°23'16.756"W	1.86	
9499.00	90.180	180.570	6310.19	3082.72	-2448.94	-2718.81	40°20'35.136"N	104°23'16.794"W	3.06	
9587.00	90.250	178.600	6309.86	3167.39	-2536.93	-2718.17	40°20'34.267"N	104°23'16.786"W	2.24	
9674.00	90.220	178.270	6309.50	3250.60	-2623.90	-2715.79	40°20'33.407"N	104°23'16.755"W	0.38	
9762.00	90.180	178.640	6309.20	3334.79	-2711.86	-2713.42	40°20'32.538"N	104°23'16.724"W	0.42	
9848.00	90.220	179.950	6308.89	3417.41	-2797.86	-2712.36	40°20'31.688"N	104°23'16.710"W	1.52	
9936.00	90.180	179.730	6308.59	3502.19	-2885.85	-2712.12	40°20'30.819"N	104°23'16.707"W	0.25	
10023.00	90.220	182.550	6308.28	3586.50	-2972.83	-2713.85	40°20'29.959"N	104°23'16.729"W	3.24	
10112.00	90.180	182.910	6307.97	3673.34	-3061.73	-2718.09	40°20'29.081"N	104°23'16.784"W	0.41	
10200.00	90.180	181.840	6307.70	3759.08	-3149.65	-2721.73	40°20'28.212"N	104°23'16.831"W	1.22	
10285.00	90.150	178.810	6307.45	3841.14	-3234.64	-2722.22	40°20'27.372"N	104°23'16.837"W	3.56	
10374.00	90.220	180.910	6307.16	3926.89	-3323.63	-2722.00	40°20'26.493"N	104°23'16.834"W	2.36	
10462.00	90.310	180.120	6306.76	4011.94	-3411.63	-2722.79	40°20'25.623"N	104°23'16.844"W	0.90	
10550.00	90.000	180.210	6306.52	4096.85	-3499.63	-2723.04	40°20'24.754"N	104°23'16.847"W	0.37	





# Actual Wellpath Report

LATHAM K21-1-12XRLNB AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK ENERGY	Slot	SLOT#21 LATHAM K21-1-12XRLNB (268'FSL & 731'FEL, SEC.36)
Area	COLORADO	Well	LATHAM K21-1-12XRLNB
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	LATHAM K21-1-12XRLNB AWB
Facility	SEC.36-T05N-R63W		

## WELLPATH DATA (200 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
10640.00	90.370	179.850	6306.23	4183.63	-3589.63	-2723.09	40°20'23.864"N	104°23'16.848"W	0.57	
10727.00	90.400	182.970	6305.64	4268.04	-3676.59	-2725.23	40°20'23.005"N	104°23'16.875"W	3.59	
10816.00	90.280	185.730	6305.12	4355.38	-3765.32	-2731.98	40°20'22.128"N	104°23'16.962"W	3.10	
10905.00	90.090	182.890	6304.83	4442.72	-3854.06	-2738.67	40°20'21.251"N	104°23'17.049"W	3.20	
10992.00	90.120	183.330	6304.67	4527.72	-3940.93	-2743.39	40°20'20.393"N	104°23'17.109"W	0.51	
11080.00	90.250	181.450	6304.38	4613.46	-4028.85	-2747.06	40°20'19.524"N	104°23'17.157"W	2.14	
11168.00	90.250	182.670	6304.00	4699.09	-4116.79	-2750.22	40°20'18.655"N	104°23'17.197"W	1.39	
11256.00	90.250	181.570	6303.62	4784.74	-4204.73	-2753.48	40°20'17.786"N	104°23'17.239"W	1.25	
11344.00	90.280	181.720	6303.21	4870.22	-4292.69	-2756.00	40°20'16.917"N	104°23'17.272"W	0.17	
11432.00	90.180	182.140	6302.86	4955.80	-4380.64	-2758.97	40°20'16.048"N	104°23'17.310"W	0.49	
11521.00	90.340	182.410	6302.45	5042.47	-4469.57	-2762.50	40°20'15.169"N	104°23'17.355"W	0.35	
11610.00	90.550	184.650	6301.76	5129.57	-4558.39	-2767.98	40°20'14.291"N	104°23'17.426"W	2.53	
11699.00	90.180	189.480	6301.19	5217.60	-4646.69	-2778.92	40°20'13.419"N	104°23'17.567"W	5.44	
11786.00	90.220	179.920	6300.89	5302.99	-4733.29	-2786.04	40°20'12.563"N	104°23'17.659"W	10.99	
11873.00	90.220	175.610	6300.56	5385.88	-4820.21	-2782.65	40°20'11.704"N	104°23'17.615"W	4.95	
11962.00	90.250	181.310	6300.19	5470.99	-4909.14	-2780.26	40°20'10.825"N	104°23'17.584"W	6.40	
12049.00	90.090	185.630	6299.93	5556.09	-4995.96	-2785.52	40°20'09.967"N	104°23'17.652"W	4.97	
12137.00	89.970	181.370	6299.89	5642.19	-5083.77	-2790.89	40°20'09.100"N	104°23'17.721"W	4.84	
12312.00	90.000	174.020	6299.93	5808.79	-5258.51	-2783.86	40°20'07.373"N	104°23'17.630"W	4.20	
12399.00	90.150	168.730	6299.82	5888.23	-5344.50	-2770.82	40°20'06.523"N	104°23'17.462"W	6.08	
12486.00	90.150	175.670	6299.59	5968.15	-5430.64	-2759.02	40°20'05.672"N	104°23'17.309"W	7.98	
12575.00	89.880	182.600	6299.57	6053.54	-5519.57	-2757.67	40°20'04.793"N	104°23'17.292"W	7.79	
12663.00	90.030	180.220	6299.64	6138.93	-5607.54	-2759.84	40°20'03.924"N	104°23'17.319"W	2.71	
12839.00	90.180	179.280	6299.31	6308.41	-5783.54	-2759.07	40°20'02.185"N	104°23'17.309"W	0.54	
12928.00	90.180	187.480	6299.03	6395.38	-5872.30	-2764.31	40°20'01.307"N	104°23'17.377"W	9.21	
13016.00	90.460	190.870	6298.54	6482.85	-5959.16	-2778.34	40°20'00.449"N	104°23'17.558"W	3.87	
13104.00	90.090	191.360	6298.12	6570.60	-6045.51	-2795.31	40°19'59.596"N	104°23'17.777"W	0.70	
13192.00	90.250	186.350	6297.86	6658.00	-6132.44	-2808.85	40°19'58.737"N	104°23'17.952"W	5.70	
13279.00	90.250	181.460	6297.48	6743.23	-6219.21	-2814.77	40°19'57.879"N	104°23'18.028"W	5.62	
13367.00	90.120	181.630	6297.19	6828.68	-6307.17	-2817.15	40°19'57.010"N	104°23'18.058"W	0.24	



# Actual Wellpath Report

LATHAM K21-1-12XRLNB AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK ENERGY	Slot	SLOT#21 LATHAM K21-1-12XRLNB (268'FSL & 731'FEL, SEC.36)
Area	COLORADO	Well	LATHAM K21-1-12XRLNB
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	LATHAM K21-1-12XRLNB AWB
Facility	SEC.36-T05N-R63W		

## WELLPATH DATA (200 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
13456.00	90.120	179.590	6297.01	6914.73	-6396.16	-2818.09	40°19'56.131"N	104°23'18.070"W	2.29	
13543.00	89.910	178.250	6296.98	6998.15	-6483.15	-2816.45	40°19'55.271"N	104°23'18.049"W	1.56	
13631.00	90.060	178.800	6297.01	7082.37	-6571.12	-2814.19	40°19'54.402"N	104°23'18.020"W	0.65	
13720.00	89.780	176.020	6297.13	7167.01	-6660.02	-2810.17	40°19'53.523"N	104°23'17.968"W	3.14	
13807.00	89.970	173.980	6297.32	7248.56	-6746.68	-2802.59	40°19'52.667"N	104°23'17.870"W	2.35	
13896.00	89.940	177.190	6297.39	7332.28	-6835.41	-2795.73	40°19'51.790"N	104°23'17.781"W	3.61	
13984.00	90.030	181.100	6297.41	7416.75	-6923.38	-2794.42	40°19'50.921"N	104°23'17.764"W	4.44	
14073.00	90.030	184.320	6297.37	7503.57	-7012.27	-2798.63	40°19'50.043"N	104°23'17.818"W	3.62	
14161.00	89.940	184.460	6297.39	7589.95	-7100.01	-2805.37	40°19'49.176"N	104°23'17.905"W	0.19	
14248.00	90.060	185.590	6297.39	7675.53	-7186.67	-2812.99	40°19'48.319"N	104°23'18.003"W	1.31	
14336.00	90.030	185.400	6297.32	7762.22	-7274.27	-2821.41	40°19'47.454"N	104°23'18.112"W	0.22	
14425.00	90.030	181.440	6297.28	7849.27	-7363.09	-2826.72	40°19'46.576"N	104°23'18.180"W	4.45	
14513.00	90.030	179.780	6297.23	7934.35	-7451.08	-2827.66	40°19'45.706"N	104°23'18.192"W	1.89	
14601.00	90.150	183.370	6297.09	8019.79	-7539.04	-2830.08	40°19'44.837"N	104°23'18.224"W	4.08	
14689.00	90.180	184.180	6296.84	8105.99	-7626.84	-2835.87	40°19'43.969"N	104°23'18.298"W	0.92	
14777.00	90.120	183.590	6296.61	8192.22	-7714.64	-2841.83	40°19'43.102"N	104°23'18.375"W	0.67	
14864.00	90.090	183.690	6296.45	8277.39	-7801.47	-2847.36	40°19'42.244"N	104°23'18.446"W	0.12	
14953.00	90.280	181.630	6296.16	8364.20	-7890.37	-2851.49	40°19'41.365"N	104°23'18.499"W	2.32	
15040.00	90.090	180.660	6295.88	8448.52	-7977.35	-2853.22	40°19'40.506"N	104°23'18.522"W	1.14	
15128.00	89.970	180.120	6295.83	8533.52	-8065.34	-2853.82	40°19'39.636"N	104°23'18.529"W	0.63	
15217.00	90.220	179.770	6295.69	8619.31	-8154.34	-2853.74	40°19'38.757"N	104°23'18.528"W	0.48	
15304.00	90.030	180.650	6295.50	8703.27	-8241.34	-2854.06	40°19'37.897"N	104°23'18.532"W	1.03	
15393.00	89.910	181.800	6295.54	8789.56	-8330.32	-2855.96	40°19'37.018"N	104°23'18.557"W	1.30	
15482.00	90.180	182.460	6295.47	8876.19	-8419.26	-2859.27	40°19'36.139"N	104°23'18.599"W	0.80	
15569.00	90.120	183.310	6295.24	8961.12	-8506.15	-2863.65	40°19'35.280"N	104°23'18.656"W	0.98	
15658.00	89.970	184.110	6295.17	9048.28	-8594.96	-2869.40	40°19'34.403"N	104°23'18.730"W	0.91	
15747.00	90.060	183.020	6295.15	9135.39	-8683.79	-2874.94	40°19'33.525"N	104°23'18.801"W	1.23	
15833.00	89.940	183.150	6295.15	9219.41	-8769.66	-2879.57	40°19'32.676"N	104°23'18.861"W	0.21	
15921.00	89.970	182.550	6295.22	9305.31	-8857.55	-2883.94	40°19'31.808"N	104°23'18.917"W	0.68	
16008.00	90.060	183.520	6295.20	9390.29	-8944.43	-2888.55	40°19'30.949"N	104°23'18.976"W	1.12	





# Actual Wellpath Report

LATHAM K21-1-12XRLNB AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK ENERGY	Slot	SLOT#21 LATHAM K21-1-12XRLNB (268'FSL & 731'FEL, SEC.36)
Area	COLORADO	Well	LATHAM K21-1-12XRLNB
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	LATHAM K21-1-12XRLNB AWP
Facility	SEC.36-T05N-R63W		

## WELLPATH DATA (200 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
16098.00	89.970	183.740	6295.17	9478.41	-9034.25	-2894.25	40°19'30.062"N	104°23'19.050"W	0.26	
16186.00	89.780	184.810	6295.37	9564.75	-9122.00	-2900.81	40°19'29.195"N	104°23'19.134"W	1.23	
16274.00	89.940	183.090	6295.58	9651.00	-9209.79	-2906.87	40°19'28.327"N	104°23'19.212"W	1.96	
16363.00	89.940	182.480	6295.67	9737.85	-9298.68	-2911.19	40°19'27.449"N	104°23'19.268"W	0.69	
16451.00	89.970	182.490	6295.74	9823.63	-9386.60	-2915.01	40°19'26.580"N	104°23'19.317"W	0.04	
16539.00	90.000	181.910	6295.77	9909.31	-9474.54	-2918.39	40°19'25.711"N	104°23'19.361"W	0.66	
16626.00	90.770	180.710	6295.18	9993.69	-9561.51	-2920.37	40°19'24.851"N	104°23'19.386"W	1.64	
16714.00	90.030	176.950	6294.57	10078.02	-9649.47	-2918.58	40°19'23.982"N	104°23'19.363"W	4.35	
16803.00	89.780	174.310	6294.72	10161.77	-9738.20	-2911.80	40°19'23.105"N	104°23'19.275"W	2.98	
16890.00	89.750	176.430	6295.07	10243.51	-9824.92	-2904.77	40°19'22.249"N	104°23'19.185"W	2.44	
16976.00	90.060	175.330	6295.21	10324.57	-9910.69	-2898.60	40°19'21.401"N	104°23'19.105"W	1.33	
17064.00	89.750	176.860	6295.36	10407.62	-9998.48	-2892.60	40°19'20.533"N	104°23'19.027"W	1.77	
17152.00	89.940	182.340	6295.60	10492.27	-10086.45	-2891.99	40°19'19.664"N	104°23'19.019"W	6.23	
17239.00	90.000	185.560	6295.64	10577.53	-10173.23	-2897.98	40°19'18.807"N	104°23'19.096"W	3.70	
17327.00	89.750	184.140	6295.84	10664.04	-10260.91	-2905.42	40°19'17.940"N	104°23'19.192"W	1.64	
17415.00	90.400	183.650	6295.72	10750.27	-10348.71	-2911.40	40°19'17.073"N	104°23'19.269"W	0.93	
17503.00	90.060	186.480	6295.37	10836.84	-10436.36	-2919.17	40°19'16.206"N	104°23'19.369"W	3.24	
17591.00	89.910	184.160	6295.39	10923.48	-10523.97	-2927.33	40°19'15.341"N	104°23'19.475"W	2.64	
17630.00	90.120	182.980	6295.38	10961.65	-10562.89	-2929.75	40°19'14.956"N	104°23'19.506"W	3.07	LAST BHGE MONOBORE MWD SURVEY (292'FSL & 1987'FWL, SEC.12)
17655.00	90.120	182.980	6295.33	10986.06	-10587.86	-2931.05	40°19'14.709"N	104°23'19.523"W	0.00	PROJECTION TO BIT (267'FSL & 1986'FWL, SEC.12)

## HOLE & CASING SECTIONS - Ref Wellbore: LATHAM K21-1-12XRLNB AWP Ref Wellpath: LATHAM K21-1-12XRLNB 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	17.00	1636.00	1619.00	17.00	1635.66	0.00	0.00	1.41	-22.82
9.625in Casing Surface	17.00	1626.00	1609.00	17.00	1625.68	0.00	0.00	1.47	-22.14
8.5in Open Hole	1636.00	17655.00	16019.00	1635.66	6295.33	1.41	-22.82	-10587.86	-2931.05



# Actual Wellpath Report

LATHAM K21-1-12XRLNB AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK ENERGY	Slot	SLOT#21 LATHAM K21-1-12XRLNB (268'FSL & 731'FEL, SEC.36)
Area	COLORADO	Well	LATHAM K21-1-12XRLNB
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	LATHAM K21-1-12XRLNB AWB
Facility	SEC.36-T05N-R63W		

## TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.01-T04N-R63W	0.00	80.15	0.56	3312642.86	1372336.29	40°21'00.130"N	104°22'41.675"W	polygon
SEC.12-T04N-R63W	0.00	80.15	0.56	3312642.86	1372336.29	40°21'00.130"N	104°22'41.675"W	polygon
SEC.36-T5N-R63W	3.00	5404.02	-6914.60	3305661.21	1377572.03	40°21'52.729"N	104°24'11.009"W	polygon
LATHAM K21-1-12XRLNB BHL (260'FSL & 2001'FWL, SEC.12)	6270.00	-10594.43	-2916.54	3309861.14	1361626.13	40°19'14.644"N	104°23'19.335"W	point
LATHAM K21-1-12XRLNB LP (10'FNL & 2280'FWL, SEC.01)	6270.00	-332.25	-2666.10	3309981.74	1371890.21	40°20'56.053"N	104°23'16.116"W	point
LATHAM K21-1-12XRLNB BHL REV-1 (260'FSL & 2001'FWL, SEC.12)	6290.00	-10594.43	-2916.54	3309861.14	1361626.13	40°19'14.644"N	104°23'19.335"W	point
LATHAM K21-1-12XRLNB LP REV-1 (10'FNL & 2280'FWL, SEC.01)	6290.00	-332.25	-2666.10	3309981.74	1371890.21	40°20'56.053"N	104°23'16.116"W	point

## WELLPATH COMPOSITION - Ref Wellbore: LATHAM K21-1-12XRLNB AWB Ref Wellpath: LATHAM K21-1-12XRLNB AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	1580.00	BHI NaviTrak (Rotating+Axial Corr)	BHI NaviTrak Surface MWD (Rotating+Axial Corr) <122-1580>	LATHAM K21-1-12XRLNB AWB
1580.00	17630.00	BHI AutoTrak Curve (Short)	BHI NaviTrak Monobore MWD (Rotating+Axial Corr) <1677-17630>	LATHAM K21-1-12XRLNB AWB
17630.00	17655.00	Blind Drilling (std)	Projection to bit	LATHAM K21-1-12XRLNB AWB



# Actual Wellpath Report

LATHAM K21-1-12XRLNB AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK ENERGY	Slot	SLOT#21 LATHAM K21-1-12XRLNB (268'FSL & 731'FEL, SEC.36)
Area	COLORADO	Well	LATHAM K21-1-12XRLNB
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	LATHAM K21-1-12XRLNB AWB
Facility	SEC.36-T05N-R63W		

## WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
122.00	0.520	204.570	122.00	FIRST BHGE SURFACE MWD SURVEY
1580.00	3.010	269.180	1579.77	TIE ONTO SURFACE MWD SURVEYS
1677.00	4.770	263.220	1676.54	FIRST BHGE MONOBORE MWD SURVEY
7387.00	87.440	176.970	6287.79	LANDING POINT (17'FNL & 2284'FWL, SEC.01)
17630.00	90.120	182.980	6295.38	LAST BHGE MONOBORE MWD SURVEY (292'FSL & 1987'FWL, SEC.12)
17655.00	90.120	182.980	6295.33	PROJECTION TO BIT (267'FSL & 1986'FWL, SEC.12)