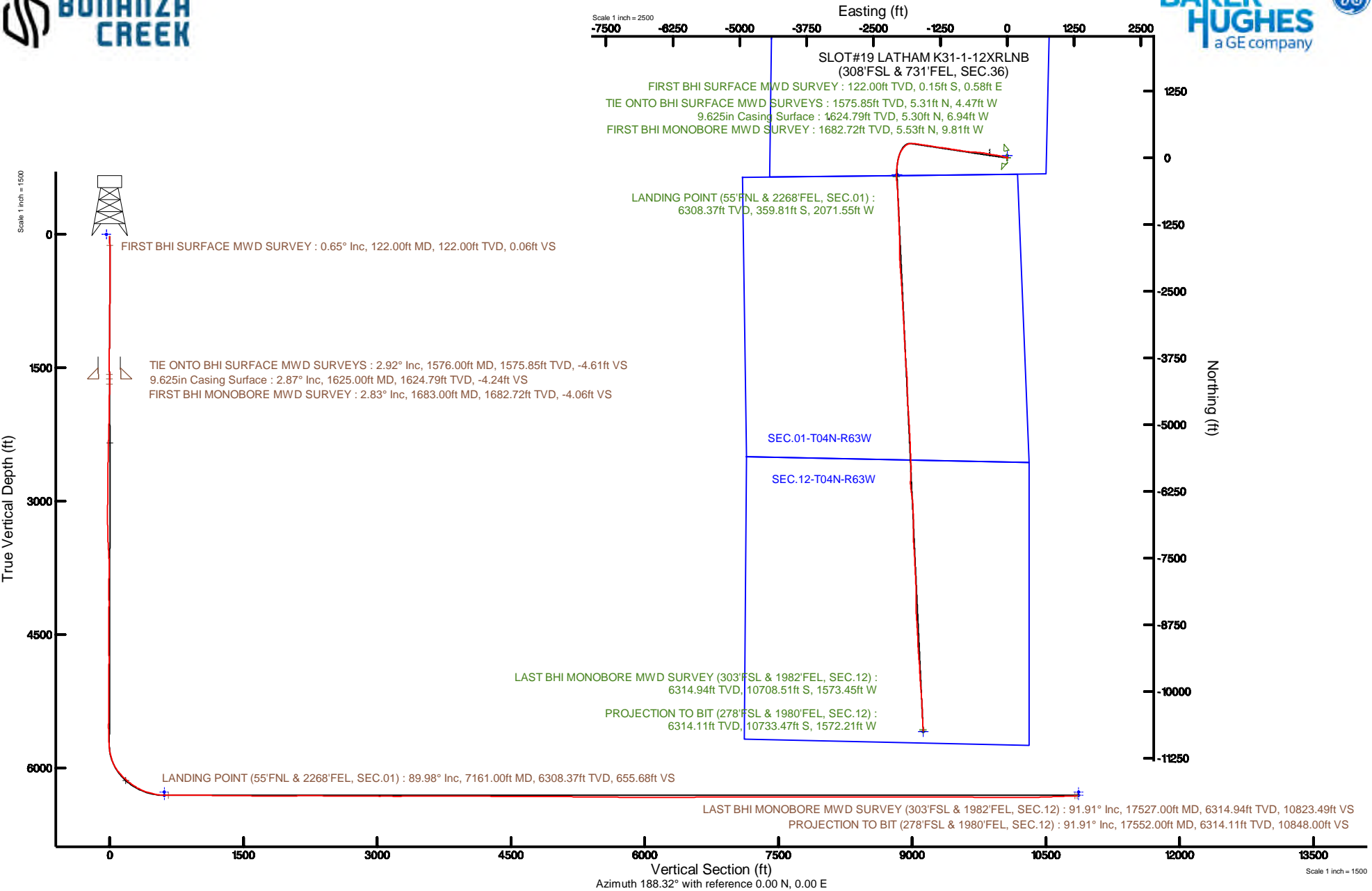


BONANZA CREEK ENERGY

Location: COLORADO Slot: SLOT#19 LATHAM K31-1-12XRLNB (308'FSL & 731'FEL, SEC.36)
Field: WELD COUNTY (NAD83/TRUE) Well: LATHAM K31-1-12XRLNB
Facility: SEC.36-T05N-R63W Wellbore: LATHAM K31-1-12XRLNB PWB 05-123-50034

Plot reference wellpath is LATHAM K31-1-12XRLNB 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#19 LATHAM K31-1-12XRLNB (308'FSL & 731'FEL, SEC.36)): 0 feet	Created by: robale01 on 2019-09-26
Coordinates are in feet referenced to Slot	Database: WA DENVER





Actual Wellpath Report

LATHAM K31-1-12XRLNB AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK ENERGY	Slot	SLOT#19 LATHAM K31-1-12XRLNB (308'FSL & 731'FEL, SEC.36)
Area	COLORADO	Well	LATHAM K31-1-12XRLNB
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	LATHAM K31-1-12XRLNB 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	9/26/2019 at 12:03:33 PM
Convergence at slot	0.72° East	Database/Source file	WA DENVER/LATHAM_K31-1-12XRLNB_AWP.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-4478.52	3853.70	3312643.09	1372296.21	40°20'59.734"N	104°22'41.678"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#19 LATHAM K31-1-12XRLNB (308'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	188.32°



Actual Wellpath Report

LATHAM K31-1-12XRLNB AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK ENERGY	Slot	SLOT#19 LATHAM K31-1-12XRLNB (308'FSL & 731'FEL, SEC.36)
Area	COLORADO	Well	LATHAM K31-1-12XRLNB
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	LATHAM K31-1-12XRLNB AWB
Facility	SEC.36-T05N-R63W		

WELLPATH DATA (196 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	104.180	0.00	0.00	0.00	0.00	40°20'59.734"N	104°22'41.678"W	0.00	
17.00	0.000	104.180	17.00	0.00	0.00	0.00	40°20'59.734"N	104°22'41.678"W	0.00	
122.00	0.650	104.180	122.00	0.06	-0.15	0.58	40°20'59.732"N	104°22'41.671"W	0.62	FIRST BHI SURFACE MWD SURVEY
211.00	0.310	146.120	210.99	0.29	-0.47	1.20	40°20'59.729"N	104°22'41.663"W	0.53	
299.00	0.580	131.520	298.99	0.71	-0.96	1.67	40°20'59.724"N	104°22'41.657"W	0.33	
388.00	0.350	136.060	387.99	1.12	-1.46	2.19	40°20'59.719"N	104°22'41.650"W	0.26	
476.00	0.500	120.170	475.99	1.43	-1.84	2.71	40°20'59.715"N	104°22'41.643"W	0.22	
565.00	0.650	127.030	564.98	1.82	-2.34	3.45	40°20'59.710"N	104°22'41.634"W	0.19	
653.00	0.630	348.260	652.98	1.60	-2.17	3.75	40°20'59.712"N	104°22'41.630"W	1.36	
740.00	0.780	339.400	739.97	0.64	-1.15	3.44	40°20'59.722"N	104°22'41.634"W	0.21	
828.00	0.650	326.570	827.97	-0.26	-0.17	2.96	40°20'59.732"N	104°22'41.640"W	0.23	
916.00	0.840	353.320	915.96	-1.26	0.89	2.61	40°20'59.742"N	104°22'41.645"W	0.44	
1003.00	0.660	336.760	1002.95	-2.30	1.98	2.34	40°20'59.753"N	104°22'41.648"W	0.32	
1091.00	0.770	332.620	1090.94	-3.21	2.97	1.87	40°20'59.763"N	104°22'41.654"W	0.14	
1180.00	0.570	346.270	1179.94	-4.11	3.93	1.49	40°20'59.772"N	104°22'41.659"W	0.29	
1268.00	0.690	319.510	1267.93	-4.86	4.76	1.04	40°20'59.781"N	104°22'41.665"W	0.36	
1357.00	0.710	319.530	1356.93	-5.58	5.59	0.33	40°20'59.789"N	104°22'41.674"W	0.02	
1445.00	0.600	261.890	1444.92	-5.81	5.94	-0.48	40°20'59.792"N	104°22'41.685"W	0.73	
1533.00	2.180	257.970	1532.89	-5.09	5.52	-2.57	40°20'59.788"N	104°22'41.712"W	1.80	
1576.00	2.920	267.650	1575.85	-4.61	5.31	-4.47	40°20'59.786"N	104°22'41.736"W	1.99	TIE ONTO BHI SURFACE MWD SURVEYS
1683.00	2.830	277.280	1682.72	-4.06	5.53	-9.81	40°20'59.788"N	104°22'41.805"W	0.46	FIRST BHI MONOBORE MWD SURVEY
1772.00	3.430	290.190	1771.58	-4.56	6.73	-14.49	40°20'59.800"N	104°22'41.866"W	1.04	
1860.00	5.120	279.210	1859.34	-5.17	8.27	-20.84	40°20'59.815"N	104°22'41.948"W	2.13	
1947.00	6.370	281.570	1945.90	-5.50	9.86	-29.40	40°20'59.831"N	104°22'42.058"W	1.46	
2035.00	9.350	288.100	2033.06	-6.99	13.06	-40.98	40°20'59.863"N	104°22'42.208"W	3.53	
2122.00	11.780	287.780	2118.58	-9.65	17.97	-56.15	40°20'59.911"N	104°22'42.404"W	2.79	
2211.00	13.820	284.320	2205.37	-12.26	23.37	-75.10	40°20'59.965"N	104°22'42.648"W	2.45	
2299.00	15.780	283.140	2290.44	-14.36	28.69	-96.94	40°21'00.017"N	104°22'42.930"W	2.25	
2388.00	17.960	281.430	2375.61	-16.13	34.16	-122.18	40°21'00.071"N	104°22'43.256"W	2.51	
2475.00	19.600	282.860	2457.98	-18.01	40.07	-149.56	40°21'00.130"N	104°22'43.610"W	1.96	



Actual Wellpath Report

LATHAM K31-1-12XRLNB AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK ENERGY	Slot	SLOT#19 LATHAM K31-1-12XRLNB (308'FSL & 731'FEL, SEC.36)
Area	COLORADO	Well	LATHAM K31-1-12XRLNB
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	LATHAM K31-1-12XRLNB AWB
Facility	SEC.36-T05N-R63W		

WELLPATH DATA (196 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2561.00	20.460	280.400	2538.78	-19.70	45.99	-178.40	40°21'00.188"N	104°22'43.983"W	1.40	
2650.00	21.540	278.070	2621.86	-20.20	51.09	-209.88	40°21'00.238"N	104°22'44.389"W	1.53	
2739.00	22.210	278.540	2704.46	-20.19	55.88	-242.69	40°21'00.286"N	104°22'44.813"W	0.78	
2826.00	22.420	278.740	2784.94	-20.38	60.85	-275.35	40°21'00.335"N	104°22'45.235"W	0.26	
2914.00	23.300	279.380	2866.03	-20.82	66.23	-309.11	40°21'00.388"N	104°22'45.671"W	1.04	
3001.00	25.870	281.880	2945.14	-22.32	72.95	-344.67	40°21'00.454"N	104°22'46.130"W	3.19	
3089.00	27.180	281.320	3023.87	-24.57	80.84	-383.16	40°21'00.532"N	104°22'46.627"W	1.52	
3176.00	27.330	281.160	3101.21	-26.60	88.61	-422.24	40°21'00.609"N	104°22'47.132"W	0.19	
3263.00	27.920	276.330	3178.30	-26.88	94.72	-462.08	40°21'00.670"N	104°22'47.647"W	2.66	
3351.00	27.840	276.120	3256.09	-25.38	99.18	-502.99	40°21'00.714"N	104°22'48.175"W	0.14	
3438.00	28.240	274.790	3332.88	-23.34	103.07	-543.70	40°21'00.752"N	104°22'48.701"W	0.85	
3526.00	28.810	277.010	3410.20	-21.57	107.40	-585.50	40°21'00.795"N	104°22'49.241"W	1.37	
3615.00	29.670	272.250	3487.87	-18.75	110.88	-628.80	40°21'00.829"N	104°22'49.800"W	2.78	
3704.00	28.640	271.450	3565.59	-13.88	112.28	-672.13	40°21'00.843"N	104°22'50.360"W	1.24	
3793.00	28.190	274.560	3643.87	-9.95	114.49	-714.41	40°21'00.865"N	104°22'50.906"W	1.74	
3881.00	28.130	278.160	3721.46	-8.53	119.09	-755.67	40°21'00.910"N	104°22'51.439"W	1.93	
3970.00	27.990	279.230	3800.00	-8.80	125.42	-797.05	40°21'00.973"N	104°22'51.973"W	0.59	
4058.00	27.740	281.270	3877.80	-10.19	132.73	-837.52	40°21'01.045"N	104°22'52.496"W	1.12	
4145.00	27.720	278.060	3954.81	-11.14	139.53	-877.41	40°21'01.112"N	104°22'53.011"W	1.72	
4233.00	27.480	277.360	4032.80	-10.71	145.00	-917.82	40°21'01.166"N	104°22'53.533"W	0.46	
4321.00	27.970	277.380	4110.69	-10.03	150.25	-958.42	40°21'01.218"N	104°22'54.057"W	0.56	
4410.00	27.530	279.090	4189.46	-9.97	156.18	-999.43	40°21'01.277"N	104°22'54.587"W	1.02	
4496.00	27.080	279.560	4265.88	-10.66	162.57	-1038.36	40°21'01.340"N	104°22'55.090"W	0.58	
4583.00	27.070	283.290	4343.35	-12.81	170.41	-1077.15	40°21'01.417"N	104°22'55.591"W	1.95	
4671.00	27.720	278.440	4421.49	-14.59	178.02	-1116.89	40°21'01.492"N	104°22'56.104"W	2.64	
4760.00	27.340	275.330	4500.42	-13.57	182.96	-1157.72	40°21'01.541"N	104°22'56.631"W	1.67	
4848.00	25.250	278.610	4579.31	-12.61	187.64	-1196.40	40°21'01.588"N	104°22'57.131"W	2.89	
4934.00	27.260	276.250	4656.44	-11.99	192.54	-1234.12	40°21'01.636"N	104°22'57.618"W	2.63	
5022.00	27.070	275.190	4734.73	-10.17	196.54	-1274.09	40°21'01.675"N	104°22'58.134"W	0.59	
5111.00	25.970	280.200	4814.37	-9.71	201.82	-1313.45	40°21'01.728"N	104°22'58.643"W	2.80	



Actual Wellpath Report

LATHAM K31-1-12XRLNB AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK ENERGY	Slot	SLOT#19 LATHAM K31-1-12XRLNB (308'FSL & 731'FEL, SEC.36)
Area	COLORADO	Well	LATHAM K31-1-12XRLNB
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	LATHAM K31-1-12XRLNB AWB
Facility	SEC.36-T05N-R63W		

WELLPATH DATA (196 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5200.00	26.020	281.690	4894.37	-11.50	209.23	-1351.74	40°21'01.801"N	104°22'59.137"W	0.74	
5289.00	27.450	281.130	4973.85	-13.65	217.15	-1390.99	40°21'01.879"N	104°22'59.644"W	1.63	
5378.00	27.560	278.420	5052.80	-14.70	224.12	-1431.49	40°21'01.948"N	104°23'00.167"W	1.41	
5466.00	27.510	277.720	5130.83	-14.52	229.83	-1471.76	40°21'02.004"N	104°23'00.688"W	0.37	
5552.00	27.460	277.530	5207.12	-14.04	235.10	-1511.10	40°21'02.056"N	104°23'01.196"W	0.12	
5640.00	27.210	276.820	5285.30	-13.24	240.15	-1551.19	40°21'02.106"N	104°23'01.714"W	0.47	
5728.00	27.040	279.960	5363.62	-13.29	246.00	-1590.87	40°21'02.164"N	104°23'02.226"W	1.64	
5816.00	26.760	279.660	5442.10	-14.32	252.78	-1630.11	40°21'02.231"N	104°23'02.733"W	0.35	
5905.00	28.410	278.790	5520.98	-14.97	259.38	-1670.78	40°21'02.296"N	104°23'03.258"W	1.91	
5994.00	28.440	276.010	5599.25	-14.29	264.83	-1712.79	40°21'02.350"N	104°23'03.801"W	1.49	
6081.00	28.490	273.180	5675.74	-11.60	268.15	-1754.11	40°21'02.383"N	104°23'04.334"W	1.55	
6169.00	27.280	272.520	5753.52	-7.68	270.20	-1795.21	40°21'02.403"N	104°23'04.865"W	1.42	
6257.00	25.660	250.520	5832.48	3.27	264.72	-1833.42	40°21'02.349"N	104°23'05.359"W	11.24	
6346.00	29.480	244.100	5911.38	24.58	248.72	-1871.31	40°21'02.191"N	104°23'05.848"W	5.43	
6433.00	36.140	229.610	5984.57	55.98	222.68	-1910.21	40°21'01.933"N	104°23'06.351"W	11.79	
6520.00	43.600	216.480	6051.42	101.85	181.80	-1947.70	40°21'01.529"N	104°23'06.835"W	12.89	
6608.00	48.640	210.500	6112.43	159.24	128.89	-1982.54	40°21'01.006"N	104°23'07.285"W	7.53	
6696.00	52.710	201.340	6168.25	224.04	67.73	-2012.09	40°21'00.402"N	104°23'07.666"W	9.28	
6784.00	58.760	191.980	6217.85	295.86	-1.85	-2032.69	40°20'59.714"N	104°23'07.932"W	11.15	
6871.00	69.280	191.460	6255.91	373.82	-78.32	-2048.54	40°20'58.959"N	104°23'08.137"W	12.10	
6960.00	73.470	186.970	6284.34	458.11	-161.54	-2062.00	40°20'58.136"N	104°23'08.311"W	6.71	
7047.00	82.410	184.000	6302.50	542.99	-246.13	-2070.09	40°20'57.301"N	104°23'08.415"W	10.80	
7136.00	90.030	178.870	6308.37	631.06	-334.82	-2072.29	40°20'56.424"N	104°23'08.443"W	10.31	
7161.00†	89.979	177.731	6308.37	655.68	-359.81	-2071.55	40°20'56.177"N	104°23'08.434"W	4.56	LANDING POINT (55'FNL & 2268'FEL, SEC.01)
7224.00	89.850	174.860	6308.46	717.29	-422.67	-2067.48	40°20'55.556"N	104°23'08.381"W	4.56	
7312.00	89.970	173.680	6308.60	802.65	-510.23	-2058.69	40°20'54.691"N	104°23'08.268"W	1.35	
7400.00	90.030	175.130	6308.60	888.07	-597.81	-2050.11	40°20'53.825"N	104°23'08.157"W	1.65	
7488.00	89.690	177.250	6308.81	974.10	-685.61	-2044.27	40°20'52.958"N	104°23'08.081"W	2.44	
7576.00	90.090	179.400	6308.98	1060.76	-773.56	-2041.69	40°20'52.089"N	104°23'08.048"W	2.49	
7665.00	89.320	177.340	6309.44	1148.42	-862.52	-2039.16	40°20'51.210"N	104°23'08.015"W	2.47	



Actual Wellpath Report

LATHAM K31-1-12XRLNB AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK ENERGY	Slot	SLOT#19 LATHAM K31-1-12XRLNB (308'FSL & 731'FEL, SEC.36)
Area	COLORADO	Well	LATHAM K31-1-12XRLNB
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	LATHAM K31-1-12XRLNB AWB
Facility	SEC.36-T05N-R63W		

WELLPATH DATA (196 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7752.00	89.630	177.380	6310.24	1233.83	-949.42	-2035.16	40°20'50.351"N	104°23'07.963"W	0.36	
7839.00	88.920	176.680	6311.34	1319.14	-1036.30	-2030.65	40°20'49.492"N	104°23'07.905"W	1.15	
7927.00	89.510	178.560	6312.54	1405.59	-1124.21	-2026.99	40°20'48.624"N	104°23'07.857"W	2.24	
8103.00	89.290	177.710	6314.39	1578.81	-1300.11	-2021.27	40°20'46.885"N	104°23'07.783"W	0.50	
8191.00	89.750	178.170	6315.13	1665.37	-1388.05	-2018.10	40°20'46.017"N	104°23'07.742"W	0.74	
8278.00	89.820	178.710	6315.45	1751.08	-1475.01	-2015.74	40°20'45.157"N	104°23'07.712"W	0.63	
8366.00	90.280	180.780	6315.37	1838.09	-1563.01	-2015.34	40°20'44.288"N	104°23'07.707"W	2.41	
8455.00	89.910	178.570	6315.23	1926.07	-1652.00	-2014.84	40°20'43.408"N	104°23'07.700"W	2.52	
8541.00	90.090	178.420	6315.23	2010.81	-1737.97	-2012.58	40°20'42.559"N	104°23'07.671"W	0.27	
8629.00	90.830	179.390	6314.52	2097.62	-1825.95	-2010.90	40°20'41.689"N	104°23'07.649"W	1.39	
8717.00	90.030	177.540	6313.86	2184.32	-1913.91	-2008.54	40°20'40.820"N	104°23'07.618"W	2.29	
8806.00	90.030	176.630	6313.81	2271.61	-2002.79	-2004.02	40°20'39.942"N	104°23'07.560"W	1.02	
8895.00	89.480	175.300	6314.19	2358.55	-2091.57	-1997.75	40°20'39.064"N	104°23'07.479"W	1.62	
8983.00	89.690	175.220	6314.83	2444.27	-2179.27	-1990.48	40°20'38.198"N	104°23'07.385"W	0.26	
9071.00	89.570	175.380	6315.40	2530.01	-2266.97	-1983.27	40°20'37.331"N	104°23'07.292"W	0.23	
9159.00	89.420	177.000	6316.18	2616.04	-2354.77	-1977.42	40°20'36.464"N	104°23'07.216"W	1.85	
9247.00	89.660	177.150	6316.88	2702.35	-2442.65	-1972.93	40°20'35.595"N	104°23'07.158"W	0.32	
9335.00	89.570	176.450	6317.47	2788.57	-2530.51	-1968.02	40°20'34.727"N	104°23'07.094"W	0.80	
9424.00	89.420	175.990	6318.26	2875.59	-2619.31	-1962.15	40°20'33.849"N	104°23'07.019"W	0.54	
9511.00	89.450	177.120	6319.12	2960.76	-2706.15	-1956.93	40°20'32.991"N	104°23'06.951"W	1.30	
9601.00	90.180	176.810	6319.41	3049.00	-2796.02	-1952.16	40°20'32.103"N	104°23'06.889"W	0.88	
9688.00	89.880	176.400	6319.36	3134.19	-2882.87	-1947.01	40°20'31.245"N	104°23'06.823"W	0.58	
9776.00	90.000	176.070	6319.45	3220.24	-2970.68	-1941.23	40°20'30.377"N	104°23'06.748"W	0.40	
9864.00	90.180	177.420	6319.31	3306.45	-3058.54	-1936.23	40°20'29.509"N	104°23'06.683"W	1.55	
9951.00	90.000	177.370	6319.18	3391.87	-3145.45	-1932.28	40°20'28.650"N	104°23'06.632"W	0.21	
10039.00	90.180	177.450	6319.04	3478.28	-3233.36	-1928.30	40°20'27.782"N	104°23'06.581"W	0.22	
10125.00	90.000	177.190	6318.90	3562.70	-3319.26	-1924.28	40°20'26.933"N	104°23'06.529"W	0.37	
10213.00	89.820	176.520	6319.04	3648.95	-3407.13	-1919.45	40°20'26.065"N	104°23'06.466"W	0.79	
10302.00	90.060	177.460	6319.14	3736.21	-3496.00	-1914.78	40°20'25.186"N	104°23'06.406"W	1.09	
10389.00	90.120	177.610	6319.00	3821.68	-3582.92	-1911.04	40°20'24.327"N	104°23'06.357"W	0.19	



Actual Wellpath Report

LATHAM K31-1-12XRLNB AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK ENERGY	Slot	SLOT#19 LATHAM K31-1-12XRLNB (308'FSL & 731'FEL, SEC.36)
Area	COLORADO	Well	LATHAM K31-1-12XRLNB
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	LATHAM K31-1-12XRLNB AWB
Facility	SEC.36-T05N-R63W		

WELLPATH DATA (196 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
10475.00	90.030	176.870	6318.89	3906.07	-3668.82	-1906.90	40°20'23.479"N	104°23'06.304"W	0.87	
10563.00	90.150	177.040	6318.75	3992.35	-3756.70	-1902.22	40°20'22.610"N	104°23'06.243"W	0.24	
10651.00	90.060	176.030	6318.59	4078.49	-3844.54	-1896.91	40°20'21.742"N	104°23'06.175"W	1.15	
10739.00	89.880	175.030	6318.63	4164.31	-3932.27	-1890.05	40°20'20.875"N	104°23'06.086"W	1.15	
10828.00	89.320	174.180	6319.25	4250.77	-4020.87	-1881.68	40°20'20.000"N	104°23'05.978"W	1.14	
10917.00	89.570	176.750	6320.12	4337.53	-4109.58	-1874.64	40°20'19.123"N	104°23'05.887"W	2.90	
11004.00	89.780	178.910	6320.61	4423.07	-4196.51	-1871.35	40°20'18.264"N	104°23'05.844"W	2.49	
11093.00	89.720	178.820	6321.00	4510.86	-4285.49	-1869.59	40°20'17.385"N	104°23'05.821"W	0.12	
11182.00	90.000	178.750	6321.22	4598.63	-4374.47	-1867.70	40°20'16.506"N	104°23'05.797"W	0.32	
11270.00	90.090	178.600	6321.15	4685.39	-4462.45	-1865.66	40°20'15.636"N	104°23'05.771"W	0.20	
11358.00	90.000	177.570	6321.08	4771.99	-4550.40	-1862.72	40°20'14.767"N	104°23'05.733"W	1.17	
11534.00	89.420	175.160	6321.97	4944.16	-4726.03	-1851.57	40°20'13.032"N	104°23'05.588"W	1.41	
11622.00	89.350	176.520	6322.91	5030.07	-4813.79	-1845.18	40°20'12.164"N	104°23'05.506"W	1.55	
11710.00	89.510	176.640	6323.79	5116.23	-4901.63	-1839.93	40°20'11.296"N	104°23'05.438"W	0.23	
11799.00	89.510	176.000	6324.55	5203.28	-4990.44	-1834.22	40°20'10.419"N	104°23'05.364"W	0.72	
11888.00	89.420	177.160	6325.38	5290.41	-5079.28	-1828.91	40°20'09.541"N	104°23'05.295"W	1.31	
11976.00	89.480	176.970	6326.23	5376.72	-5167.16	-1824.41	40°20'08.672"N	104°23'05.237"W	0.23	
12063.00	89.380	177.020	6327.09	5462.02	-5254.03	-1819.85	40°20'07.814"N	104°23'05.178"W	0.13	
12151.00	89.510	177.720	6327.94	5548.41	-5341.94	-1815.81	40°20'06.945"N	104°23'05.126"W	0.81	
12240.00	89.420	177.430	6328.77	5635.85	-5430.85	-1812.04	40°20'06.067"N	104°23'05.077"W	0.34	
12326.00	89.570	178.380	6329.53	5720.43	-5516.79	-1808.90	40°20'05.217"N	104°23'05.037"W	1.12	
12414.00	89.600	177.820	6330.17	5807.03	-5604.74	-1805.98	40°20'04.348"N	104°23'04.999"W	0.64	
12502.00	89.630	177.400	6330.76	5893.50	-5692.66	-1802.31	40°20'03.480"N	104°23'04.951"W	0.48	
12589.00	90.680	178.570	6330.53	5979.08	-5779.60	-1799.25	40°20'02.620"N	104°23'04.912"W	1.81	
12676.00	90.000	182.990	6330.01	6065.31	-5866.57	-1800.44	40°20'01.761"N	104°23'04.927"W	5.14	
12874.00	90.060	181.870	6329.91	6262.26	-6064.39	-1808.83	40°19'59.806"N	104°23'05.035"W	0.57	
12940.00	90.250	176.610	6329.73	6327.41	-6130.36	-1807.96	40°19'59.154"N	104°23'05.024"W	7.97	
13029.00	89.940	172.490	6329.58	6413.84	-6218.94	-1799.51	40°19'58.279"N	104°23'04.915"W	4.64	
13206.00	90.180	171.290	6329.39	6583.61	-6394.17	-1774.54	40°19'56.547"N	104°23'04.592"W	0.69	
13295.00	90.150	177.600	6329.14	6669.97	-6482.70	-1765.93	40°19'55.673"N	104°23'04.481"W	7.09	



Actual Wellpath Report

LATHAM K31-1-12XRLNB AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK ENERGY	Slot	SLOT#19 LATHAM K31-1-12XRLNB (308'FSL & 731'FEL, SEC.36)
Area	COLORADO	Well	LATHAM K31-1-12XRLNB
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	LATHAM K31-1-12XRLNB AWB
Facility	SEC.36-T05N-R63W		

WELLPATH DATA (196 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
13383.00	90.060	177.490	6328.98	6756.42	-6570.62	-1762.16	40°19'54.804"N	104°23'04.432"W	0.16	
13472.00	90.090	177.960	6328.86	6843.90	-6659.55	-1758.62	40°19'53.925"N	104°23'04.386"W	0.53	
13558.00	90.120	179.910	6328.70	6928.74	-6745.53	-1757.02	40°19'53.075"N	104°23'04.366"W	2.27	
13646.00	89.720	179.100	6328.83	7015.71	-6833.53	-1756.26	40°19'52.206"N	104°23'04.356"W	1.03	
13735.00	90.120	180.340	6328.95	7103.70	-6922.53	-1755.83	40°19'51.326"N	104°23'04.350"W	1.46	
13823.00	89.970	180.890	6328.88	7190.91	-7010.52	-1756.77	40°19'50.457"N	104°23'04.362"W	0.65	
13911.00	90.460	179.030	6328.55	7277.97	-7098.52	-1756.71	40°19'49.587"N	104°23'04.361"W	2.19	
13999.00	90.120	175.560	6328.10	7364.33	-7186.40	-1752.56	40°19'48.719"N	104°23'04.308"W	3.96	
14175.00	89.970	175.590	6327.97	7536.00	-7361.88	-1738.98	40°19'46.985"N	104°23'04.132"W	0.09	
14263.00	90.060	177.560	6327.94	7622.15	-7449.72	-1733.72	40°19'46.117"N	104°23'04.064"W	2.24	
14352.00	89.940	177.570	6327.94	7709.59	-7538.64	-1729.94	40°19'45.238"N	104°23'04.015"W	0.14	
14440.00	90.030	177.320	6327.97	7796.01	-7626.55	-1726.02	40°19'44.369"N	104°23'03.964"W	0.30	
14527.00	90.090	176.770	6327.88	7881.33	-7713.43	-1721.54	40°19'43.511"N	104°23'03.906"W	0.64	
14615.00	89.630	177.580	6328.09	7967.67	-7801.32	-1717.20	40°19'42.642"N	104°23'03.850"W	1.06	
14704.00	90.220	177.140	6328.21	8055.05	-7890.23	-1713.10	40°19'41.764"N	104°23'03.797"W	0.83	
14792.00	89.940	177.370	6328.08	8141.41	-7978.13	-1708.88	40°19'40.895"N	104°23'03.743"W	0.41	
14880.00	90.370	178.870	6327.85	8228.02	-8066.08	-1706.00	40°19'40.026"N	104°23'03.706"W	1.77	
14968.00	90.150	178.760	6327.45	8314.81	-8154.06	-1704.18	40°19'39.157"N	104°23'03.682"W	0.28	
15056.00	90.120	182.150	6327.24	8401.97	-8242.04	-1704.88	40°19'38.287"N	104°23'03.691"W	3.85	
15143.00	90.650	180.460	6326.65	8488.31	-8329.01	-1706.86	40°19'37.428"N	104°23'03.716"W	2.04	
15232.00	90.060	179.350	6326.10	8576.35	-8418.01	-1706.71	40°19'36.548"N	104°23'03.714"W	1.41	
15320.00	89.600	175.960	6326.36	8662.82	-8505.92	-1703.11	40°19'35.680"N	104°23'03.668"W	3.89	
15407.00	89.720	176.410	6326.88	8747.88	-8592.73	-1697.32	40°19'34.822"N	104°23'03.593"W	0.54	
15583.00	89.720	176.320	6327.74	8920.06	-8768.37	-1686.16	40°19'33.086"N	104°23'03.449"W	0.05	
15672.00	89.780	176.290	6328.13	9007.11	-8857.19	-1680.43	40°19'32.209"N	104°23'03.375"W	0.08	
15761.00	89.970	177.290	6328.32	9094.31	-8946.05	-1675.44	40°19'31.330"N	104°23'03.310"W	1.14	
15848.00	90.580	177.740	6327.91	9179.77	-9032.96	-1671.67	40°19'30.472"N	104°23'03.262"W	0.87	
15937.00	90.340	178.250	6327.19	9267.33	-9121.90	-1668.56	40°19'29.593"N	104°23'03.221"W	0.63	
16026.00	90.060	176.130	6326.88	9354.65	-9210.79	-1664.20	40°19'28.714"N	104°23'03.165"W	2.40	
16200.00	89.320	175.600	6327.82	9524.55	-9384.33	-1651.65	40°19'26.999"N	104°23'03.003"W	0.52	



Actual Wellpath Report

LATHAM K31-1-12XRLNB AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK ENERGY	Slot	SLOT#19 LATHAM K31-1-12XRLNB (308'FSL & 731'FEL, SEC.36)
Area	COLORADO	Well	LATHAM K31-1-12XRLNB
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	LATHAM K31-1-12XRLNB AWB
Facility	SEC.36-T05N-R63W		

WELLPATH DATA (196 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
16288.00	89.450	174.680	6328.77	9610.23	-9472.01	-1644.19	40°19'26.133"N	104°23'02.906"W	1.06	
16377.00	89.600	179.080	6329.50	9697.44	-9560.86	-1639.35	40°19'25.255"N	104°23'02.844"W	4.95	
16465.00	89.510	176.190	6330.19	9783.90	-9648.77	-1635.72	40°19'24.386"N	104°23'02.797"W	3.29	
16553.00	89.510	176.160	6330.94	9869.93	-9736.57	-1629.85	40°19'23.519"N	104°23'02.721"W	0.03	
16642.00	89.350	176.030	6331.83	9956.91	-9825.36	-1623.79	40°19'22.641"N	104°23'02.643"W	0.23	
16730.00	90.030	175.320	6332.30	10042.77	-9913.11	-1617.15	40°19'21.774"N	104°23'02.557"W	1.12	
16905.00	90.060	175.840	6332.16	10213.46	-10087.58	-1603.67	40°19'20.050"N	104°23'02.383"W	0.30	
16994.00	90.030	177.450	6332.09	10300.62	-10176.43	-1598.46	40°19'19.172"N	104°23'02.315"W	1.81	
17082.00	91.450	176.170	6330.96	10386.84	-10264.28	-1593.56	40°19'18.304"N	104°23'02.252"W	2.17	
17169.00	92.090	178.190	6328.27	10472.16	-10351.13	-1589.28	40°19'17.446"N	104°23'02.197"W	2.43	
17255.00	92.250	178.330	6325.01	10556.77	-10437.03	-1586.67	40°19'16.597"N	104°23'02.163"W	0.25	
17343.00	92.180	177.090	6321.61	10643.20	-10524.89	-1583.16	40°19'15.729"N	104°23'02.117"W	1.41	
17431.00	92.030	176.860	6318.38	10729.43	-10612.71	-1578.52	40°19'14.861"N	104°23'02.058"W	0.31	
17518.00	92.090	177.050	6315.25	10814.67	-10699.53	-1573.90	40°19'14.003"N	104°23'01.998"W	0.23	
17527.00	91.910	177.160	6314.94	10823.49	-10708.51	-1573.45	40°19'13.914"N	104°23'01.992"W	2.34	LAST BHI MONOBORE MWD SURVEY (303'FSL & 1982'FEL, SEC.12)
17552.00	91.910	177.160	6314.11	10848.00	-10733.47	-1572.21	40°19'13.668"N	104°23'01.976"W	0.00	PROJECTION TO BIT (278'FSL & 1980'FEL, SEC.12)

HOLE & CASING SECTIONS - Ref Wellbore: LATHAM K31-1-12XRLNB AWB Ref Wellpath: LATHAM K31-1-12XRLNB 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	1632.00	1615.00	17.00	1631.78	0.00	0.00	5.31	-7.29
9.625in Casing Surface	17.00	1625.00	1608.00	17.00	1624.79	0.00	0.00	5.30	-6.94
8.5in Open Hole	1632.00	17552.00	15920.00	1631.78	6314.11	5.31	-7.29	-10733.47	-1572.21



Actual Wellpath Report

LATHAM K31-1-12XRLNB AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK ENERGY	Slot	SLOT#19 LATHAM K31-1-12XRLNB (308'FSL & 731'FEL, SEC.36)
Area	COLORADO	Well	LATHAM K31-1-12XRLNB
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	LATHAM K31-1-12XRLNB 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	40.07	0.28	3312642.86	1372336.29	40°21'00.130"N	104°22'41.675"W	polygon
SEC.12-T04N-R63W	0.00	40.07	0.28	3312642.86	1372336.29	40°21'00.130"N	104°22'41.675"W	polygon
SEC.36-T5N-R63W	3.00	5363.95	-6914.88	3305661.21	1377572.03	40°21'52.729"N	104°24'11.009"W	polygon
LATHAM K31-1-12XRLNB BHL (260'FSL & 1980'FEL, SEC.12)	6270.00	-10751.57	-1571.76	3311207.52	1361526.10	40°19'13.489"N	104°23'01.970"W	point
LATHAM K31-1-12XRLNB LP (10'FNL & 2258'FEL, SEC.01)	6270.00	-314.53	-2061.77	3310585.55	1371955.65	40°20'56.625"N	104°23'08.307"W	point
LATHAM K31-1-12XRLNB BHL REV-1 (260'FSL & 1980'FEL, SEC.12)	6308.00	-10751.57	-1571.76	3311207.52	1361526.10	40°19'13.489"N	104°23'01.970"W	point
LATHAM K31-1-12XRLNB LP REV-1 (10'FNL & 2258'FEL, SEC.01)	6308.00	-314.53	-2061.77	3310585.55	1371955.65	40°20'56.625"N	104°23'08.307"W	point

WELLPATH COMPOSITION - Ref Wellbore: LATHAM K31-1-12XRLNB AWB Ref Wellpath: LATHAM K31-1-12XRLNB AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	1576.00	BHI NaviTrak (Rotating+Axial Corr)	BHI NaviTrak Surface MWD (Rotating+Axial Corr) <122-1576>	LATHAM K31-1-12XRLNB AWB
1576.00	17527.00	BHI AutoTrak Curve (Short)	BHI NaviTrak Monobore MWD (Short) <1683-17527>	LATHAM K31-1-12XRLNB AWB
17527.00	17552.00	Blind Drilling (std)	Projection to bit	LATHAM K31-1-12XRLNB AWB



Actual Wellpath Report

LATHAM K31-1-12XRLNB AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK ENERGY	Slot	SLOT#19 LATHAM K31-1-12XRLNB (308'FSL & 731'FEL, SEC.36)
Area	COLORADO	Well	LATHAM K31-1-12XRLNB
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	LATHAM K31-1-12XRLNB AWB
Facility	SEC.36-T05N-R63W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
122.00	0.650	104.180	122.00	FIRST BHI SURFACE MWD SURVEY
1576.00	2.920	267.650	1575.85	TIE ONTO BHI SURFACE MWD SURVEYS
1683.00	2.830	277.280	1682.72	FIRST BHI MONOBORE MWD SURVEY
7161.00	89.979	177.731	6308.37	LANDING POINT (55'FNL & 2268'FEL, SEC.01)
17527.00	91.910	177.160	6314.94	LAST BHI MONOBORE MWD SURVEY (303'FSL & 1982'FEL, SEC.12)
17552.00	91.910	177.160	6314.11	PROJECTION TO BIT (278'FSL & 1980'FEL, SEC.12)