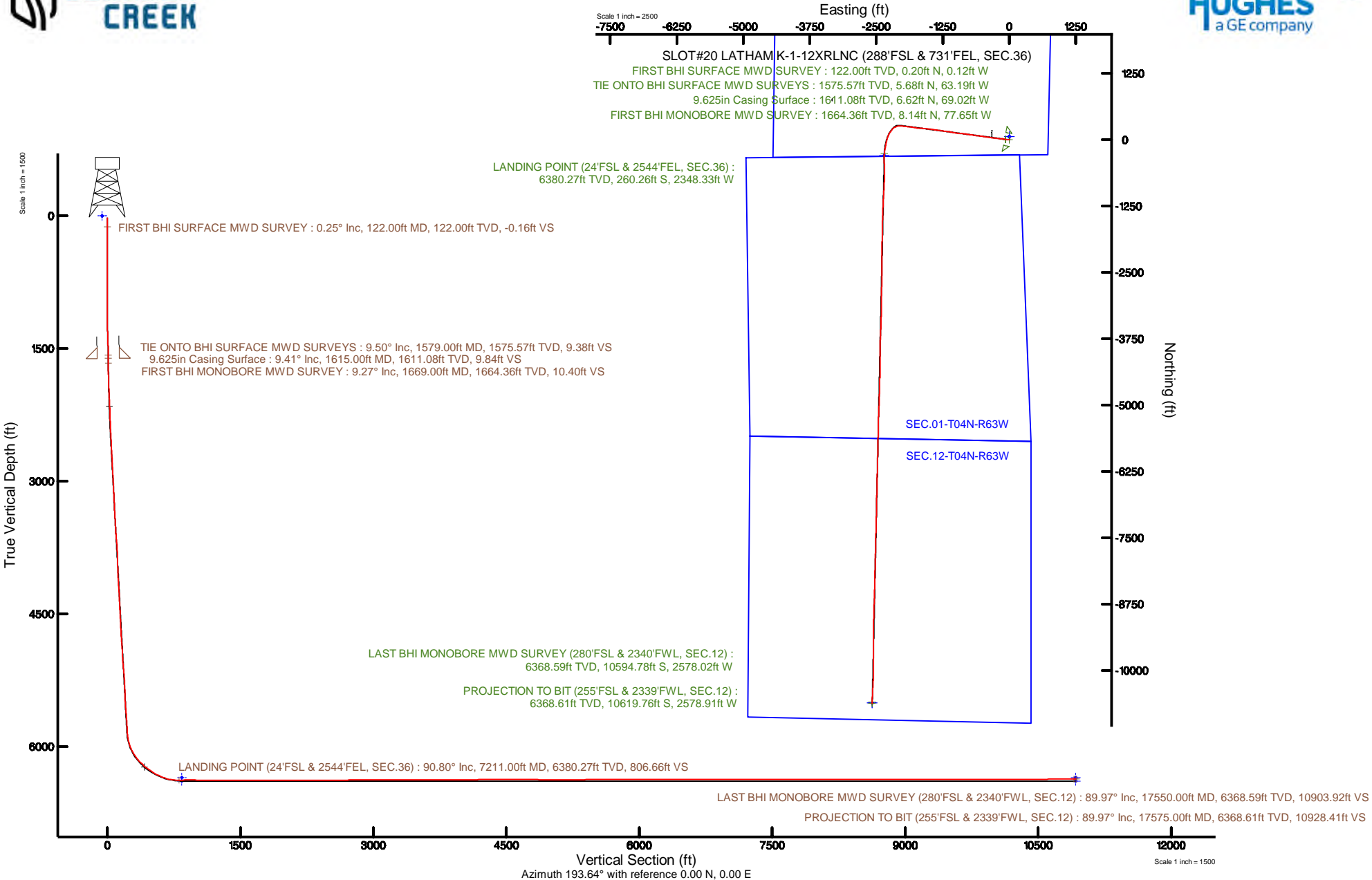


BONANZA CREEK ENERGY

Location: COLORADO Slot: SLOT#20 LATHAM K-1-12XRLNC (288'FSL & 731'FEL, SEC.36)
Field: WELD COUNTY (NAD83/TRUE) Well: LATHAM K-1-12XRLNC
Facility: SEC.36-T05N-R63W Wellbore: LATHAM K-1-12XRLNC PWB 05-123-50032

Plot reference wellpath is LATHAM K-1-12XRLNC PWP (REV-D.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#20 LATHAM K-1-12XRLNC (288'FSL & 731'FEL, SEC.36)): 0 feet	Created by: robale01 on 2019-09-23
Coordinates are in feet referenced to Slot	Database: WADENWER





Actual Wellpath Report

LATHAM K-1-12XRLNC AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK ENERGY	Slot	SLOT#20 LATHAM K-1-12XRLNC (288'FSL & 731'FEL, SEC.36)
Area	COLORADO	Well	LATHAM K-1-12XRLNC
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	LATHAM K-1-12XRLNC 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	9/23/2019 at 1:21:41 PM
Convergence at slot	0.72° East	Database/Source file	WA DENVER/LATHAM_K-1-12XRLNC_AWP.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-4498.55	3853.42	3312643.06	1372276.18	40°20'59.536"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#20 LATHAM K-1-12XRLNC (288'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	193.64°



Actual Wellpath Report

LATHAM K-1-12XRLNC AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK ENERGY	Slot	SLOT#20 LATHAM K-1-12XRLNC (288'FSL & 731'FEL, SEC.36)
Area	COLORADO	Well	LATHAM K-1-12XRLNC
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	LATHAM K-1-12XRLNC AWB
Facility	SEC.36-T05N-R63W		

WELLPATH DATA (195 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	328.610	0.00	0.00	0.00	0.00	40°20'59.536"N	104°22'41.682"W	0.00	
17.00	0.000	328.610	17.00	0.00	0.00	0.00	40°20'59.536"N	104°22'41.682"W	0.00	
122.00	0.250	328.610	122.00	-0.16	0.20	-0.12	40°20'59.538"N	104°22'41.684"W	0.24	FIRST BHI SURFACE MWD SURVEY
211.00	0.400	293.010	211.00	-0.35	0.48	-0.51	40°20'59.540"N	104°22'41.689"W	0.27	
299.00	0.390	342.420	299.00	-0.66	0.89	-0.88	40°20'59.544"N	104°22'41.693"W	0.38	
388.00	0.180	26.210	388.00	-1.05	1.30	-0.91	40°20'59.548"N	104°22'41.694"W	0.32	
476.00	0.390	332.600	475.99	-1.41	1.69	-0.99	40°20'59.552"N	104°22'41.695"W	0.36	
565.00	0.410	286.250	564.99	-1.66	2.05	-1.43	40°20'59.556"N	104°22'41.700"W	0.35	
653.00	0.560	301.810	652.99	-1.80	2.37	-2.10	40°20'59.559"N	104°22'41.709"W	0.23	
828.00	0.610	291.580	827.98	-2.20	3.16	-3.69	40°20'59.567"N	104°22'41.730"W	0.07	
1003.00	1.270	281.300	1002.96	-2.25	3.88	-6.46	40°20'59.574"N	104°22'41.765"W	0.39	
1091.00	3.020	269.010	1090.89	-1.62	4.03	-9.73	40°20'59.575"N	104°22'41.808"W	2.04	
1180.00	3.560	272.680	1179.74	-0.51	4.12	-14.84	40°20'59.576"N	104°22'41.874"W	0.65	
1268.00	4.980	268.490	1267.50	1.01	4.15	-21.39	40°20'59.577"N	104°22'41.958"W	1.65	
1357.00	6.750	268.840	1356.03	3.36	3.94	-30.48	40°20'59.575"N	104°22'42.076"W	1.99	
1445.00	8.530	269.630	1443.24	6.26	3.79	-42.18	40°20'59.573"N	104°22'42.227"W	2.03	
1533.00	9.290	277.150	1530.18	8.64	4.64	-55.75	40°20'59.581"N	104°22'42.402"W	1.58	
1579.00	9.500	278.840	1575.57	9.38	5.68	-63.19	40°20'59.592"N	104°22'42.498"W	0.75	TIE ONTO BHI SURFACE MWD SURVEYS
1669.00	9.270	280.460	1664.36	10.40	8.14	-77.65	40°20'59.616"N	104°22'42.685"W	0.39	FIRST BHI MONOBORE MWD SURVEY
1757.00	12.980	280.630	1750.69	11.31	11.25	-94.34	40°20'59.647"N	104°22'42.901"W	4.22	
1844.00	16.080	278.940	1834.90	12.81	14.92	-115.85	40°20'59.683"N	104°22'43.178"W	3.60	
1976.00	15.590	271.810	1961.90	17.95	18.33	-151.64	40°20'59.717"N	104°22'43.641"W	1.52	
2021.00	14.720	275.930	2005.34	19.95	19.11	-163.37	40°20'59.724"N	104°22'43.792"W	3.08	
2110.00	16.110	274.880	2091.14	23.35	21.33	-186.93	40°20'59.746"N	104°22'44.096"W	1.59	
2197.00	16.350	274.570	2174.67	27.12	23.33	-211.16	40°20'59.766"N	104°22'44.409"W	0.29	
2284.00	17.360	278.970	2257.93	30.11	26.33	-236.19	40°20'59.796"N	104°22'44.733"W	1.87	
2373.00	20.760	277.650	2342.04	32.83	30.50	-264.94	40°20'59.837"N	104°22'45.104"W	3.85	
2549.00	25.960	277.750	2503.56	40.05	39.85	-334.08	40°20'59.929"N	104°22'45.997"W	2.95	
2636.00	26.370	278.350	2581.65	43.78	45.23	-372.06	40°20'59.982"N	104°22'46.487"W	0.56	
2723.00	28.760	277.110	2658.77	47.94	50.62	-411.95	40°21'00.036"N	104°22'47.003"W	2.83	



Actual Wellpath Report

LATHAM K-1-12XRLNC AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK ENERGY	Slot	SLOT#20 LATHAM K-1-12XRLNC (288'FSL & 731'FEL, SEC.36)
Area	COLORADO	Well	LATHAM K-1-12XRLNC
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	LATHAM K-1-12XRLNC AWB
Facility	SEC.36-T05N-R63W		

WELLPATH DATA (195 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2811.00	27.310	277.960	2736.44	52.35	56.04	-452.95	40°21'00.089"N	104°22'47.532"W	1.71	
2898.00	27.140	278.570	2813.80	56.08	61.76	-492.34	40°21'00.146"N	104°22'48.041"W	0.38	
2986.00	27.630	277.850	2891.94	59.91	67.54	-532.40	40°21'00.203"N	104°22'48.558"W	0.67	
3073.00	27.390	277.360	2969.10	64.13	72.86	-572.24	40°21'00.256"N	104°22'49.073"W	0.38	
3160.00	26.870	278.780	3046.53	67.98	78.42	-611.51	40°21'00.310"N	104°22'49.580"W	0.95	
3248.00	27.550	277.840	3124.79	71.73	84.23	-651.33	40°21'00.368"N	104°22'50.094"W	0.91	
3337.00	26.440	277.990	3204.09	75.76	89.80	-691.34	40°21'00.423"N	104°22'50.611"W	1.25	
3426.00	26.840	278.420	3283.64	79.53	95.49	-730.84	40°21'00.479"N	104°22'51.121"W	0.50	
3515.00	27.790	277.810	3362.72	83.47	101.25	-771.27	40°21'00.536"N	104°22'51.644"W	1.11	
3604.00	27.620	276.400	3441.52	88.17	106.37	-812.33	40°21'00.587"N	104°22'52.174"W	0.76	
3693.00	28.490	279.120	3520.06	92.45	112.04	-853.79	40°21'00.643"N	104°22'52.709"W	1.74	
3781.00	29.580	275.470	3597.01	97.19	117.44	-896.14	40°21'00.696"N	104°22'53.256"W	2.36	
3868.00	28.690	273.360	3673.00	103.97	120.71	-938.36	40°21'00.728"N	104°22'53.802"W	1.56	
3955.00	26.950	278.100	3749.95	109.60	124.71	-978.74	40°21'00.768"N	104°22'54.323"W	3.23	
4132.00	27.800	281.440	3907.14	115.05	138.55	-1058.91	40°21'00.904"N	104°22'55.359"W	0.99	
4219.00	27.680	279.380	3984.14	117.33	145.87	-1098.73	40°21'00.977"N	104°22'55.873"W	1.11	
4305.00	27.870	278.590	4060.23	120.58	152.12	-1138.31	40°21'01.039"N	104°22'56.384"W	0.48	
4394.00	28.090	277.770	4138.83	124.56	158.06	-1179.64	40°21'01.097"N	104°22'56.918"W	0.50	
4483.00	27.350	276.000	4217.62	129.42	163.03	-1220.74	40°21'01.146"N	104°22'57.449"W	1.24	
4570.00	27.900	279.910	4294.71	133.40	168.63	-1260.67	40°21'01.202"N	104°22'57.965"W	2.18	
4657.00	27.320	276.120	4371.80	137.33	174.26	-1300.57	40°21'01.257"N	104°22'58.480"W	2.13	
4745.00	27.130	278.600	4450.06	141.74	179.41	-1340.49	40°21'01.308"N	104°22'58.996"W	1.31	
4833.00	26.790	277.450	4528.49	145.64	184.98	-1380.00	40°21'01.363"N	104°22'59.506"W	0.71	
4922.00	25.620	279.030	4608.35	149.35	190.60	-1418.89	40°21'01.419"N	104°23'00.008"W	1.53	
5011.00	27.060	277.460	4688.10	153.07	196.25	-1457.97	40°21'01.474"N	104°23'00.513"W	1.80	
5100.00	27.090	275.200	4767.35	158.23	200.72	-1498.22	40°21'01.519"N	104°23'01.033"W	1.16	
5189.00	26.270	277.050	4846.88	163.46	204.97	-1537.95	40°21'01.561"N	104°23'01.546"W	1.31	
5362.00	25.180	276.160	5002.73	172.64	213.62	-1612.54	40°21'01.646"N	104°23'02.509"W	0.67	
5450.00	19.390	266.690	5084.15	179.35	214.79	-1645.78	40°21'01.658"N	104°23'02.939"W	7.72	
5627.00	26.440	277.730	5247.15	191.99	218.40	-1714.27	40°21'01.693"N	104°23'03.823"W	4.65	



Actual Wellpath Report

LATHAM K-1-12XRLNC AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK ENERGY	Slot	SLOT#20 LATHAM K-1-12XRLNC (288'FSL & 731'FEL, SEC.36)
Area	COLORADO	Well	LATHAM K-1-12XRLNC
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	LATHAM K-1-12XRLNC AWB
Facility	SEC.36-T05N-R63W		

WELLPATH DATA (195 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5716.00	28.160	278.700	5326.24	195.84	224.24	-1754.67	40°21'01.751"N	104°23'04.345"W	2.00	
5803.00	28.830	282.290	5402.70	198.10	231.81	-1795.46	40°21'01.826"N	104°23'04.872"W	2.11	
5892.00	29.850	277.630	5480.30	200.92	239.32	-1838.39	40°21'01.900"N	104°23'05.426"W	2.81	
5980.00	29.740	275.460	5556.67	206.32	244.31	-1881.82	40°21'01.949"N	104°23'05.988"W	1.23	
6068.00	29.660	276.450	5633.11	212.15	248.83	-1925.19	40°21'01.994"N	104°23'06.548"W	0.56	
6155.00	29.230	276.130	5708.87	217.62	253.51	-1967.70	40°21'02.040"N	104°23'07.097"W	0.53	
6243.00	26.800	277.830	5786.55	222.44	258.51	-2008.72	40°21'02.089"N	104°23'07.627"W	2.91	
6331.00	28.320	274.380	5864.57	227.81	262.81	-2049.19	40°21'02.132"N	104°23'08.149"W	2.50	
6419.00	28.740	257.100	5942.02	240.64	259.68	-2090.70	40°21'02.101"N	104°23'08.685"W	9.36	
6506.00	32.860	246.150	6016.79	264.38	245.44	-2132.73	40°21'01.960"N	104°23'09.228"W	7.98	
6594.00	38.290	230.160	6088.49	300.93	218.25	-2175.62	40°21'01.691"N	104°23'09.782"W	12.20	
6682.00	43.640	216.120	6155.06	351.04	176.13	-2214.57	40°21'01.275"N	104°23'10.285"W	12.07	
6769.00	49.660	211.520	6214.77	410.40	123.55	-2249.64	40°21'00.755"N	104°23'10.738"W	7.91	
6858.00	55.670	202.200	6268.80	479.18	60.47	-2281.33	40°21'00.132"N	104°23'11.147"W	10.71	
6946.00	61.090	193.010	6314.99	553.80	-10.87	-2303.78	40°20'59.427"N	104°23'11.437"W	10.81	
7035.00	69.540	190.640	6352.13	634.54	-89.95	-2320.28	40°20'58.646"N	104°23'11.650"W	9.80	
7123.00	81.320	191.150	6374.23	719.46	-173.43	-2336.36	40°20'57.821"N	104°23'11.858"W	13.40	
7211.00	90.800	184.580	6380.27	806.66	-260.26	-2348.33	40°20'56.963"N	104°23'12.012"W	13.09	LANDING POINT (24'FSL & 2544'FEL, SEC.36)
7298.00	90.680	179.630	6379.15	891.87	-347.16	-2351.52	40°20'56.104"N	104°23'12.053"W	5.69	
7387.00	89.230	177.710	6379.22	977.84	-436.13	-2349.46	40°20'55.225"N	104°23'12.027"W	2.70	
7475.00	89.970	177.890	6379.83	1062.50	-524.07	-2346.08	40°20'54.356"N	104°23'11.983"W	0.87	
7561.00	89.850	178.350	6379.97	1145.36	-610.02	-2343.26	40°20'53.506"N	104°23'11.946"W	0.55	
7649.00	89.850	182.280	6380.20	1230.98	-698.00	-2343.74	40°20'52.637"N	104°23'11.952"W	4.47	
7738.00	89.940	183.690	6380.36	1318.44	-786.88	-2348.37	40°20'51.759"N	104°23'12.012"W	1.59	
7826.00	89.880	182.640	6380.50	1404.97	-874.74	-2353.23	40°20'50.891"N	104°23'12.075"W	1.20	
7913.00	90.000	183.260	6380.59	1490.46	-961.63	-2357.71	40°20'50.032"N	104°23'12.133"W	0.73	
8000.00	90.030	182.970	6380.57	1576.00	-1048.50	-2362.44	40°20'49.174"N	104°23'12.193"W	0.34	
8088.00	89.970	182.810	6380.57	1662.46	-1136.39	-2366.87	40°20'48.305"N	104°23'12.251"W	0.19	
8177.00	90.000	183.170	6380.59	1749.92	-1225.26	-2371.52	40°20'47.427"N	104°23'12.311"W	0.41	
8264.00	90.060	182.400	6380.55	1835.37	-1312.16	-2375.74	40°20'46.568"N	104°23'12.365"W	0.89	



Actual Wellpath Report

LATHAM K-1-12XRLNC AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK ENERGY	Slot	SLOT#20 LATHAM K-1-12XRLNC (288'FSL & 731'FEL, SEC.36)
Area	COLORADO	Well	LATHAM K-1-12XRLNC
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	LATHAM K-1-12XRLNC AWB
Facility	SEC.36-T05N-R63W		

WELLPATH DATA (195 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8351.00	89.940	181.440	6380.55	1920.55	-1399.11	-2378.66	40°20'45.709"N	104°23'12.403"W	1.11	
8440.00	89.880	182.500	6380.69	2007.71	-1488.06	-2381.72	40°20'44.830"N	104°23'12.442"W	1.19	
8528.00	89.970	182.200	6380.80	2094.01	-1575.98	-2385.33	40°20'43.961"N	104°23'12.488"W	0.36	
8617.00	89.910	181.610	6380.90	2181.15	-1664.93	-2388.29	40°20'43.082"N	104°23'12.527"W	0.67	
8705.00	90.220	179.810	6380.80	2266.91	-1752.92	-2389.38	40°20'42.213"N	104°23'12.540"W	2.08	
8793.00	89.850	180.760	6380.74	2352.53	-1840.92	-2389.81	40°20'41.343"N	104°23'12.546"W	1.16	
8881.00	90.220	181.040	6380.69	2438.37	-1928.91	-2391.20	40°20'40.473"N	104°23'12.564"W	0.53	
8970.00	90.340	181.850	6380.25	2525.36	-2017.88	-2393.44	40°20'39.594"N	104°23'12.593"W	0.92	
9057.00	90.180	180.880	6379.86	2610.37	-2104.85	-2395.51	40°20'38.735"N	104°23'12.619"W	1.13	
9146.00	90.220	181.200	6379.55	2697.22	-2193.84	-2397.13	40°20'37.856"N	104°23'12.640"W	0.36	
9234.00	90.180	179.380	6379.24	2782.84	-2281.83	-2397.57	40°20'36.986"N	104°23'12.646"W	2.07	
9323.00	90.090	180.570	6379.03	2869.32	-2370.83	-2397.53	40°20'36.107"N	104°23'12.645"W	1.34	
9411.00	90.250	179.160	6378.77	2954.79	-2458.83	-2397.33	40°20'35.237"N	104°23'12.642"W	1.61	
9499.00	90.180	179.330	6378.44	3040.02	-2546.82	-2396.17	40°20'34.367"N	104°23'12.627"W	0.21	
9587.00	90.180	180.470	6378.16	3125.50	-2634.82	-2396.01	40°20'33.498"N	104°23'12.625"W	1.30	
9674.00	90.340	181.800	6377.77	3210.44	-2721.80	-2397.74	40°20'32.638"N	104°23'12.647"W	1.54	
9762.00	90.180	181.150	6377.37	3296.46	-2809.77	-2400.00	40°20'31.769"N	104°23'12.676"W	0.76	
9848.00	90.180	180.980	6377.10	3380.40	-2895.75	-2401.60	40°20'30.919"N	104°23'12.697"W	0.20	
9936.00	90.280	181.450	6376.75	3466.34	-2983.73	-2403.47	40°20'30.050"N	104°23'12.721"W	0.55	
10024.00	90.220	181.530	6376.36	3552.36	-3071.70	-2405.75	40°20'29.181"N	104°23'12.750"W	0.11	
10111.00	90.090	180.260	6376.13	3637.22	-3158.69	-2407.11	40°20'28.321"N	104°23'12.768"W	1.47	
10198.00	90.090	179.090	6375.99	3721.65	-3245.68	-2406.62	40°20'27.461"N	104°23'12.761"W	1.34	
10285.00	90.220	181.800	6375.75	3806.34	-3332.67	-2407.30	40°20'26.602"N	104°23'12.770"W	3.12	
10374.00	90.090	181.770	6375.51	3893.44	-3421.63	-2410.07	40°20'25.723"N	104°23'12.806"W	0.15	
10462.00	90.180	182.530	6375.31	3979.68	-3509.57	-2413.37	40°20'24.854"N	104°23'12.848"W	0.87	
10550.00	90.220	182.040	6375.00	4065.96	-3597.50	-2416.88	40°20'23.985"N	104°23'12.893"W	0.56	
10640.00	90.280	182.370	6374.61	4154.17	-3687.43	-2420.34	40°20'23.096"N	104°23'12.938"W	0.37	
10727.00	90.150	182.770	6374.28	4239.55	-3774.34	-2424.24	40°20'22.237"N	104°23'12.988"W	0.48	
10816.00	90.030	180.170	6374.14	4326.54	-3863.30	-2426.52	40°20'21.358"N	104°23'13.018"W	2.92	
10905.00	89.910	182.390	6374.19	4413.47	-3952.28	-2428.51	40°20'20.479"N	104°23'13.043"W	2.50	



Actual Wellpath Report

LATHAM K-1-12XRLNC AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK ENERGY	Slot	SLOT#20 LATHAM K-1-12XRLNC (288'FSL & 731'FEL, SEC.36)
Area	COLORADO	Well	LATHAM K-1-12XRLNC
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	LATHAM K-1-12XRLNC AWB
Facility	SEC.36-T05N-R63W		

WELLPATH DATA (195 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
10992.00	89.970	181.190	6374.28	4498.62	-4039.23	-2431.23	40°20'19.620"N	104°23'13.078"W	1.38	
11080.00	90.000	179.180	6374.30	4584.20	-4127.23	-2431.51	40°20'18.750"N	104°23'13.082"W	2.28	
11256.00	89.940	178.790	6374.39	4754.47	-4303.20	-2428.40	40°20'17.011"N	104°23'13.041"W	0.22	
11344.00	90.000	181.920	6374.44	4840.11	-4391.19	-2428.94	40°20'16.142"N	104°23'13.048"W	3.56	
11432.00	89.850	182.300	6374.55	4926.33	-4479.13	-2432.18	40°20'15.273"N	104°23'13.090"W	0.46	
11521.00	90.060	181.250	6374.62	5013.43	-4568.08	-2434.94	40°20'14.394"N	104°23'13.125"W	1.20	
11610.00	90.000	181.310	6374.58	5100.37	-4657.06	-2436.93	40°20'13.515"N	104°23'13.151"W	0.10	
11699.00	89.970	181.580	6374.60	5187.36	-4746.03	-2439.17	40°20'12.635"N	104°23'13.180"W	0.31	
11786.00	90.000	182.400	6374.62	5272.57	-4832.98	-2442.19	40°20'11.776"N	104°23'13.219"W	0.94	
11873.00	90.120	182.150	6374.53	5357.86	-4919.91	-2445.65	40°20'10.917"N	104°23'13.263"W	0.32	
11962.00	90.180	182.100	6374.30	5445.07	-5008.85	-2448.95	40°20'10.038"N	104°23'13.306"W	0.09	
12049.00	90.000	182.350	6374.16	5530.35	-5095.78	-2452.32	40°20'09.179"N	104°23'13.349"W	0.35	
12137.00	90.180	182.340	6374.02	5616.65	-5183.71	-2455.92	40°20'08.310"N	104°23'13.396"W	0.20	
12225.00	90.150	182.120	6373.77	5702.91	-5271.64	-2459.35	40°20'07.441"N	104°23'13.440"W	0.25	
12312.00	90.090	181.260	6373.59	5788.02	-5358.60	-2461.91	40°20'06.582"N	104°23'13.473"W	0.99	
12399.00	89.880	180.130	6373.61	5872.81	-5445.59	-2462.97	40°20'05.722"N	104°23'13.486"W	1.32	
12486.00	90.000	181.140	6373.70	5957.58	-5532.59	-2463.93	40°20'04.863"N	104°23'13.499"W	1.17	
12575.00	90.120	181.330	6373.61	6044.50	-5621.57	-2465.85	40°20'03.984"N	104°23'13.523"W	0.25	
12663.00	90.030	181.390	6373.49	6130.48	-5709.54	-2467.94	40°20'03.114"N	104°23'13.550"W	0.12	
12751.00	89.880	181.200	6373.56	6216.45	-5797.52	-2469.93	40°20'02.245"N	104°23'13.576"W	0.28	
12839.00	90.000	181.590	6373.66	6302.45	-5885.49	-2472.07	40°20'01.375"N	104°23'13.603"W	0.46	
12927.00	90.060	181.610	6373.61	6388.51	-5973.46	-2474.53	40°20'00.506"N	104°23'13.635"W	0.07	
13016.00	89.940	181.410	6373.61	6475.53	-6062.43	-2476.87	40°19'59.627"N	104°23'13.665"W	0.26	
13104.00	90.030	181.340	6373.63	6561.52	-6150.40	-2478.99	40°19'58.758"N	104°23'13.692"W	0.13	
13192.00	89.910	181.240	6373.68	6647.48	-6238.38	-2480.97	40°19'57.888"N	104°23'13.718"W	0.18	
13279.00	90.150	181.420	6373.63	6732.48	-6325.36	-2482.99	40°19'57.029"N	104°23'13.744"W	0.34	
13367.00	90.030	180.940	6373.49	6818.41	-6413.34	-2484.80	40°19'56.159"N	104°23'13.767"W	0.56	
13456.00	90.090	181.420	6373.40	6905.31	-6502.32	-2486.63	40°19'55.280"N	104°23'13.790"W	0.54	
13544.00	90.340	181.260	6373.07	6991.29	-6590.29	-2488.69	40°19'54.411"N	104°23'13.817"W	0.34	
13632.00	89.880	180.920	6372.90	7077.19	-6678.28	-2490.36	40°19'53.541"N	104°23'13.838"W	0.65	



Actual Wellpath Report

LATHAM K-1-12XRLNC AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK ENERGY	Slot	SLOT#20 LATHAM K-1-12XRLNC (288'FSL & 731'FEL, SEC.36)
Area	COLORADO	Well	LATHAM K-1-12XRLNC
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	LATHAM K-1-12XRLNC AWB
Facility	SEC.36-T05N-R63W		

WELLPATH DATA (195 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
13720.00	89.780	181.030	6373.16	7163.05	-6766.26	-2491.86	40°19'52.672"N	104°23'13.858"W	0.17	
13808.00	89.880	180.600	6373.42	7248.85	-6854.25	-2493.11	40°19'51.802"N	104°23'13.874"W	0.50	
13896.00	89.970	181.670	6373.54	7334.76	-6942.24	-2494.85	40°19'50.933"N	104°23'13.896"W	1.22	
13984.00	90.060	181.590	6373.52	7420.84	-7030.20	-2497.36	40°19'50.064"N	104°23'13.928"W	0.14	
14073.00	90.060	181.080	6373.42	7507.79	-7119.18	-2499.43	40°19'49.184"N	104°23'13.955"W	0.57	
14161.00	90.090	181.810	6373.31	7593.81	-7207.15	-2501.65	40°19'48.315"N	104°23'13.983"W	0.83	
14248.00	89.940	181.620	6373.29	7678.93	-7294.11	-2504.25	40°19'47.456"N	104°23'14.017"W	0.28	
14336.00	90.400	181.470	6373.02	7764.98	-7382.08	-2506.63	40°19'46.587"N	104°23'14.047"W	0.55	
14425.00	90.150	181.470	6372.60	7851.98	-7471.04	-2508.91	40°19'45.707"N	104°23'14.077"W	0.28	
14513.00	90.030	180.440	6372.46	7937.83	-7559.03	-2510.38	40°19'44.838"N	104°23'14.096"W	1.18	
14601.00	89.940	180.410	6372.48	8023.50	-7647.03	-2511.03	40°19'43.968"N	104°23'14.104"W	0.11	
14689.00	90.090	182.470	6372.46	8109.51	-7735.00	-2513.24	40°19'43.099"N	104°23'14.132"W	2.35	
14777.00	90.030	181.600	6372.37	8195.71	-7822.94	-2516.37	40°19'42.230"N	104°23'14.173"W	0.99	
14864.00	90.120	181.430	6372.25	8280.77	-7909.91	-2518.67	40°19'41.371"N	104°23'14.202"W	0.22	
14953.00	90.250	181.710	6371.97	8367.80	-7998.88	-2521.10	40°19'40.491"N	104°23'14.234"W	0.35	
15041.00	90.090	181.410	6371.70	8453.85	-8086.84	-2523.50	40°19'39.622"N	104°23'14.264"W	0.39	
15128.00	90.030	180.790	6371.61	8538.77	-8173.83	-2525.17	40°19'38.763"N	104°23'14.286"W	0.72	
15217.00	90.000	181.330	6371.59	8625.64	-8262.81	-2526.82	40°19'37.883"N	104°23'14.307"W	0.61	
15304.00	90.090	181.630	6371.52	8710.68	-8349.78	-2529.06	40°19'37.024"N	104°23'14.336"W	0.36	
15393.00	89.910	181.330	6371.52	8797.69	-8438.75	-2531.36	40°19'36.145"N	104°23'14.365"W	0.39	
15482.00	89.970	181.760	6371.61	8884.71	-8527.72	-2533.76	40°19'35.266"N	104°23'14.396"W	0.49	
15569.00	90.060	181.900	6371.59	8969.87	-8614.67	-2536.54	40°19'34.406"N	104°23'14.432"W	0.19	
15658.00	90.000	181.520	6371.55	9056.95	-8703.63	-2539.20	40°19'33.527"N	104°23'14.466"W	0.43	
15747.00	90.000	181.370	6371.55	9143.94	-8792.61	-2541.44	40°19'32.648"N	104°23'14.495"W	0.17	
15833.00	89.970	181.450	6371.57	9227.99	-8878.58	-2543.56	40°19'31.798"N	104°23'14.522"W	0.10	
15921.00	90.220	182.220	6371.42	9314.13	-8966.53	-2546.37	40°19'30.929"N	104°23'14.559"W	0.92	
16009.00	90.280	182.490	6371.04	9400.43	-9054.46	-2549.99	40°19'30.060"N	104°23'14.605"W	0.31	
16098.00	90.090	181.370	6370.75	9487.57	-9143.41	-2552.99	40°19'29.181"N	104°23'14.644"W	1.28	
16274.00	89.910	179.970	6370.75	9659.08	-9319.39	-2555.05	40°19'27.442"N	104°23'14.670"W	0.80	
16363.00	89.820	179.010	6370.96	9745.38	-9408.39	-2554.25	40°19'26.563"N	104°23'14.660"W	1.08	



Actual Wellpath Report

LATHAM K-1-12XRLNC AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK ENERGY	Slot	SLOT#20 LATHAM K-1-12XRLNC (288'FSL & 731'FEL, SEC.36)
Area	COLORADO	Well	LATHAM K-1-12XRLNC
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	LATHAM K-1-12XRLNC AWB
Facility	SEC.36-T05N-R63W		

WELLPATH DATA (195 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
16451.00	90.090	179.610	6371.03	9830.64	-9496.38	-2553.19	40°19'25.693"N	104°23'14.646"W	0.75	
16539.00	89.940	179.640	6371.01	9916.02	-9584.38	-2552.62	40°19'24.824"N	104°23'14.638"W	0.17	
16626.00	90.150	179.670	6370.94	10000.44	-9671.37	-2552.09	40°19'23.964"N	104°23'14.631"W	0.24	
16715.00	90.180	180.020	6370.68	10086.87	-9760.37	-2551.85	40°19'23.085"N	104°23'14.628"W	0.39	
16803.00	90.250	180.830	6370.35	10172.54	-9848.37	-2552.51	40°19'22.215"N	104°23'14.637"W	0.92	
16890.00	90.120	180.650	6370.07	10257.35	-9935.36	-2553.63	40°19'21.356"N	104°23'14.651"W	0.26	
16976.00	90.000	180.060	6369.98	10341.05	-10021.36	-2554.16	40°19'20.506"N	104°23'14.658"W	0.70	
17064.00	90.090	180.890	6369.91	10426.73	-10109.36	-2554.89	40°19'19.636"N	104°23'14.667"W	0.95	
17152.00	90.150	183.090	6369.73	10512.91	-10197.30	-2557.95	40°19'18.767"N	104°23'14.706"W	2.50	
17239.00	90.180	183.560	6369.48	10598.51	-10284.15	-2562.99	40°19'17.909"N	104°23'14.771"W	0.54	
17327.00	90.090	182.390	6369.27	10684.99	-10372.03	-2567.56	40°19'17.040"N	104°23'14.830"W	1.33	
17415.00	90.310	183.430	6368.96	10771.45	-10459.92	-2572.03	40°19'16.172"N	104°23'14.888"W	1.21	
17504.00	90.120	182.130	6368.63	10858.85	-10548.81	-2576.34	40°19'15.294"N	104°23'14.943"W	1.48	
17550.00	89.970	182.040	6368.59	10903.92	-10594.78	-2578.02	40°19'14.839"N	104°23'14.965"W	0.38	LAST BHI MONOBORE MWD SURVEY (280'FSL & 2340'FWL, SEC.12)
17575.00	89.970	182.040	6368.61	10928.41	-10619.76	-2578.91	40°19'14.592"N	104°23'14.976"W	0.00	PROJECTION TO BIT (255'FSL & 2339'FWL, SEC.12)

HOLE & CASING SECTIONS - Ref Wellbore: LATHAM K-1-12XRLNC AWB Ref Wellpath: LATHAM K-1-12XRLNC 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	1635.00	1618.00	17.00	1630.81	0.00	0.00	7.17	-72.24
9.625in Casing Surface	17.00	1615.00	1598.00	17.00	1611.08	0.00	0.00	6.62	-69.02
8.5in Open Hole	1635.00	17575.00	15940.00	1630.81	6368.61	7.17	-72.24	-10619.76	-2578.91



Actual Wellpath Report

LATHAM K-1-12XRLNC AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK ENERGY	Slot	SLOT#20 LATHAM K-1-12XRLNC (288'FSL & 731'FEL, SEC.36)
Area	COLORADO	Well	LATHAM K-1-12XRLNC
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	LATHAM K-1-12XRLNC 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	60.11	0.56	3312642.86	1372336.29	40°21'00.130"N	104°22'41.675"W	polygon
SEC.12-T04N-R63W	0.00	60.11	0.56	3312642.86	1372336.29	40°21'00.130"N	104°22'41.675"W	polygon
SEC.36-T5N-R63W	3.00	5383.98	-6914.60	3305661.21	1377572.03	40°21'52.729"N	104°24'11.009"W	polygon
LATHAM K-1-12XRLNC BHL (260'FSL & 2342'FWL, SEC.12)	6350.00	-10614.47	-2575.54	3310202.10	1361630.44	40°19'14.645"N	104°23'14.933"W	point
LATHAM K-1-12XRLNC LP (10'FNL & 2545'FEL, SEC.01)	6350.00	-294.49	-2349.50	3310297.57	1371952.00	40°20'56.624"N	104°23'12.027"W	point
LATHAM K-1-12XRLNC BHL REV-1 (260'FSL & 2342'FWL, SEC.12)	6390.00	-10614.47	-2575.54	3310202.10	1361630.44	40°19'14.645"N	104°23'14.933"W	point
LATHAM K-1-12XRLNC LP REV-1 (10'FNL & 2545'FEL, SEC.01)	6390.00	-294.49	-2349.50	3310297.57	1371952.00	40°20'56.624"N	104°23'12.027"W	point

WELLPATH COMPOSITION - Ref Wellbore: LATHAM K-1-12XRLNC AWB Ref Wellpath: LATHAM K-1-12XRLNC AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	1579.00	BHI NaviTrak (Rotating+Axial Corr)	BHI NaviTrak Surface MWD (Rotating+Axial Corr) <122-1579>	LATHAM K-1-12XRLNC AWB
1579.00	17550.00	BHI AutoTrak Curve (Short)	BHI NaviTrak Monobore MWD (Rotating+Axial Corr) <1669-17550>	LATHAM K-1-12XRLNC AWB
17550.00	17575.00	Blind Drilling (std)	Projection to bit	LATHAM K-1-12XRLNC AWB



Actual Wellpath Report

LATHAM K-1-12XRLNC AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK ENERGY	Slot	SLOT#20 LATHAM K-1-12XRLNC (288'FSL & 731'FEL, SEC.36)
Area	COLORADO	Well	LATHAM K-1-12XRLNC
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	LATHAM K-1-12XRLNC AWB
Facility	SEC.36-T05N-R63W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
122.00	0.250	328.610	122.00	FIRST BHI SURFACE MWD SURVEY
1579.00	9.500	278.840	1575.57	TIE ONTO BHI SURFACE MWD SURVEYS
1669.00	9.270	280.460	1664.36	FIRST BHI MONOBORE MWD SURVEY
7211.00	90.800	184.580	6380.27	LANDING POINT (24'FSL & 2544'FEL, SEC.36)
17550.00	89.970	182.040	6368.59	LAST BHI MONOBORE MWD SURVEY (280'FSL & 2340'FWL, SEC.12)
17575.00	89.970	182.040	6368.61	PROJECTION TO BIT (255'FSL & 2339'FWL, SEC.12)