

# EXTRACTION OIL & GAS

Location: COLORADO Slot: SLOT#01 BYBEE 1 (2267'FSL & 1080'FEL, SEC.14)  
Field: WELD COUNTY (NAD83/TRUE NORTH) Well: BYBEE 1  
Facility: SEC.14-T02N-R68W Wellbore: BYBEE 1 PWB

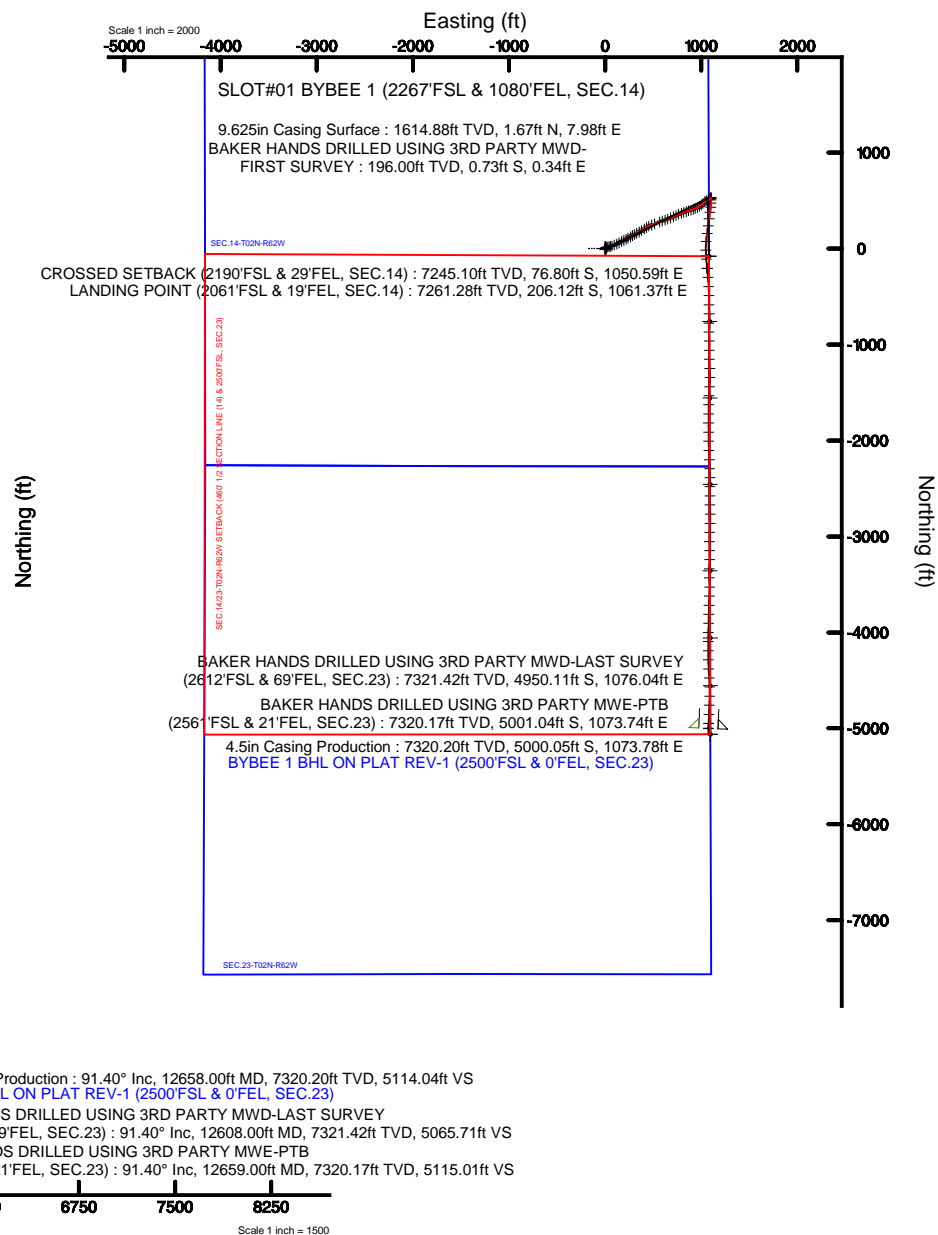
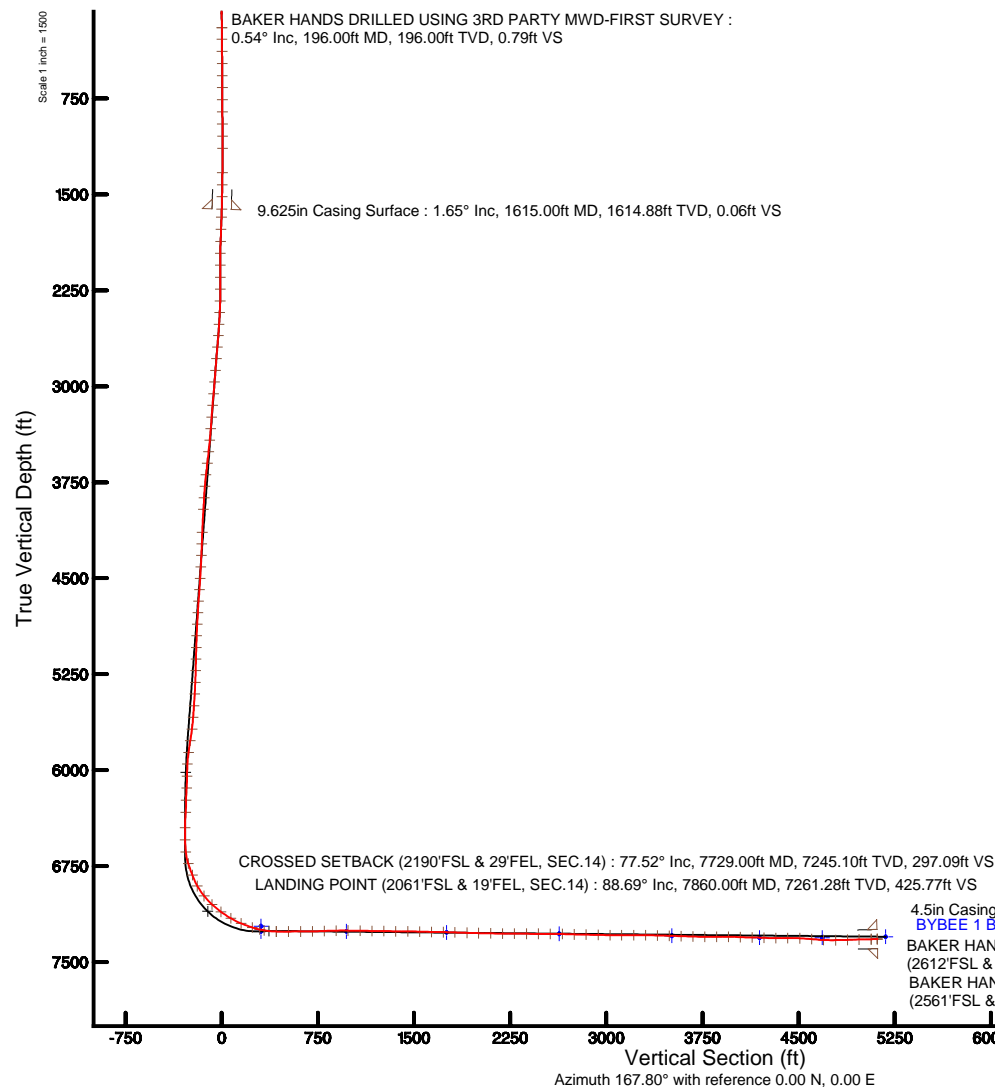
Plot reference wellpath is BYBEE 1 PWP (REV-B.0)

True vertical depths are referenced to PATTERSON 346 (25'KB) (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to PATTERSON 346 (25'KB) (RKB)	* = Wellpath was transformed from a different geodetic datum
PATTERSON 346 (25'KB) (RKB) to Mean Sea Level: 4914 feet	North Reference: True north
Mean Sea Level to Ground level (At Slot: SLOT#01 BYBEE 1 (2267'FSL & 1080'FEL, SEC.14)): 0 feet	Scale: True distance
Coordinates are in feet referenced to Slot	Depths are in feet
	Created by: ingmjmr on 2016-02-29
	Database: WA_DEN_Denver_Defn



BGGM (1945.0 to 2017.0) Dip: 66.70° Field: 52389.7 nT  
Magnetic North is 8.59 degrees East of True North (at 2/10/2016)

To correct azimuth from Magnetic to True add 8.59 degrees





# Actual Wellpath Report

BYBEE 1 AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	EXTRACTION OIL & GAS	Slot	SLOT#01 BYBEE 1 (2267'FSL & 1080'FEL, SEC.14)
Area	COLORADO	Well	BYBEE 1
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	BYBEE 1 AWB
Facility	SEC.14-T02N-R68W		

## REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 5.0
North Reference	True	User	Ingmjmr
Scale	0.999959	Report Generated	2/29/2016 at 8:43:49 AM
Convergence at slot	0.35° East	Database/Source file	WA_DEN_Denver_Defn/BYBEE_1_AWP.xml

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.00	0.00	3149614.52	1293445.00	40°08'15.580"N	104°57'53.539"W
Facility Reference Pt			3149614.52	1293445.00	40°08'15.580"N	104°57'53.539"W
Field Reference Pt			3185481.27	1419166.81	40°28'55.560"N	104°49'59.556"W

## WELLPATH DATUM

Calculation method	Minimum curvature	PATTERSON 346 (25'KB) (RKB) to Facility Vertical Datum	4914.00ft
Horizontal Reference Pt	Slot	PATTERSON 346 (25'KB) (RKB) to Mean Sea Level	4914.00ft
Vertical Reference Pt	PATTERSON 346 (25'KB) (RKB)	PATTERSON 346 (25'KB) (RKB) to Ground Level at Slot (SLOT#01 BYBEE 1 (2267'FSL & 1080'FEL, SEC.14))	4914.00ft
MD Reference Pt	PATTERSON 346 (25'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	167.80°

## REFERENCE WELLPATH IDENTIFICATION

Operator	EXTRACTION OIL & GAS	Slot	SLOT#01 BYBEE 1 (2267'FSL & 1080'FEL, SEC.14)
Area	COLORADO	Well	BYBEE 1
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	BYBEE 1 AWB
Facility	SEC.14-T02N-R68W		

## WELLPATH DATA (133 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
0.00†	0.000	155.120	0.00	0.00	0.00	0.00	0.00	
25.00	0.000	155.120	25.00	0.00	0.00	0.00	0.00	
196.00	0.540	155.120	196.00	0.79	-0.73	0.34	0.32	BAKER HANDS DRILLED USING 3RD PARTY MWD-FIRST SURVEY
288.00	0.590	134.540	287.99	1.61	-1.46	0.86	0.23	
383.00	0.660	155.360	382.99	2.55	-2.30	1.44	0.25	
477.00	0.820	166.210	476.98	3.75	-3.44	1.82	0.23	
572.00	0.500	121.140	571.97	4.71	-4.32	2.34	0.62	
666.00	0.790	81.920	665.97	5.04	-4.44	3.33	0.54	
761.00	0.700	75.700	760.96	5.07	-4.20	4.54	0.13	
856.00	0.640	91.610	855.95	5.17	-4.07	5.63	0.20	
951.00	0.480	111.780	950.95	5.52	-4.24	6.53	0.26	
1045.00	0.490	85.790	1044.95	5.80	-4.35	7.30	0.23	
1140.00	0.550	83.500	1139.94	5.90	-4.27	8.16	0.07	
1329.00	0.440	10.290	1328.94	5.32	-3.46	9.19	0.32	
1424.00	0.850	354.630	1423.93	4.28	-2.39	9.19	0.47	
1519.00	1.300	342.480	1518.91	2.51	-0.67	8.80	0.53	
1678.00	1.890	337.600	1677.85	-1.87	3.48	7.26	0.38	
1772.00	2.110	328.110	1771.79	-5.02	6.38	5.75	0.42	
1867.00	5.100	47.490	1866.64	-8.80	10.72	7.94	5.42	
1961.00	8.000	78.600	1960.04	-10.82	14.84	17.44	4.77	
2055.00	7.210	79.390	2053.21	-10.56	17.22	29.65	0.85	
2150.00	6.500	75.570	2147.54	-10.61	19.66	40.72	0.89	
2244.00	10.200	76.980	2240.52	-10.93	22.86	53.98	3.94	
2338.00	13.300	73.370	2332.54	-11.89	27.83	72.46	3.39	
2432.00	16.700	67.400	2423.33	-15.16	36.12	95.29	3.97	
2527.00	16.000	66.780	2514.49	-20.13	46.53	119.93	0.76	
2621.00	19.100	63.000	2604.11	-26.54	58.62	145.54	3.51	
2715.00	17.490	62.210	2693.35	-34.26	72.19	171.74	1.73	
2810.00	15.800	61.370	2784.37	-41.76	85.04	195.73	1.80	
2904.00	14.000	59.880	2875.20	-48.87	96.88	216.80	1.96	
2999.00	16.900	63.480	2966.76	-55.83	108.81	239.10	3.21	
3094.00	17.690	60.670	3057.47	-63.49	122.05	264.04	1.21	
3188.00	11.800	54.210	3148.34	-71.55	134.68	284.30	6.50	
3283.00	16.000	63.090	3240.55	-78.77	146.29	303.87	4.95	
3377.00	17.490	64.670	3330.56	-85.27	158.20	328.19	1.66	
3471.00	18.310	59.700	3420.01	-93.06	171.69	353.71	1.84	
3566.00	18.000	59.400	3510.28	-102.33	186.69	379.23	0.34	
3661.00	20.500	59.970	3599.97	-112.06	202.49	406.27	2.64	
3756.00	15.600	53.510	3690.27	-122.42	218.43	430.95	5.56	
3851.00	18.590	64.410	3781.09	-131.18	232.57	454.89	4.60	
3947.00	21.210	69.510	3871.35	-137.23	245.26	484.97	3.27	
4042.00	17.690	65.290	3960.92	-142.84	257.31	514.19	3.99	
4231.00	16.590	72.190	4141.55	-151.70	277.57	565.97	1.22	
4326.00	20.110	71.090	4231.70	-154.93	287.02	594.34	3.72	
4420.00	17.210	69.290	4320.75	-158.88	297.17	622.64	3.15	

REFERENCE WELLPATH IDENTIFICATION			
Operator	EXTRACTION OIL & GAS	Slot	SLOT#01 BYBEE 1 (2267'FSL & 1080'FEL, SEC.14)
Area	COLORADO	Well	BYBEE 1
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	BYBEE 1 AWP
Facility	SEC.14-T02N-R68W		

WELLPATH DATA (133 stations) † = interpolated/extrapolated station								Comments
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	
4515.00	20.500	69.770	4410.64	-163.28	307.90	651.41	3.47	
4610.00	17.910	68.580	4500.35	-167.95	318.99	680.62	2.76	
4705.00	20.900	66.300	4589.94	-173.67	331.14	709.74	3.25	
4800.00	16.590	63.000	4679.88	-180.51	344.11	737.35	4.67	
4895.00	19.910	69.770	4770.10	-186.24	355.87	764.63	4.14	
4990.00	16.700	66.210	4860.29	-191.24	366.97	792.30	3.58	
5084.00	18.310	72.670	4949.94	-195.27	376.82	818.76	2.68	
5179.00	14.110	68.890	5041.14	-198.40	385.44	843.82	4.56	
5273.00	16.000	73.510	5131.92	-201.15	393.24	866.93	2.38	
5368.00	17.210	72.890	5222.95	-203.33	401.09	892.92	1.29	
5462.00	12.700	68.490	5313.75	-206.19	408.98	915.84	4.94	
5556.00	17.490	67.180	5404.48	-210.47	418.25	938.48	5.11	
5651.00	11.910	57.990	5496.35	-216.43	428.99	959.97	6.35	
5745.00	15.100	62.610	5587.74	-222.93	439.77	979.08	3.58	
5840.00	15.290	50.080	5679.44	-232.00	453.50	999.67	3.46	
5934.00	16.110	42.390	5769.94	-245.32	471.09	1017.98	2.38	
6029.00	15.010	49.380	5861.47	-258.81	488.84	1036.20	2.29	
6124.00	15.210	65.680	5953.23	-267.29	501.99	1056.90	4.46	
6219.00	10.390	75.700	6045.85	-270.22	509.24	1076.58	5.57	
6314.00	7.690	46.480	6139.71	-273.84	515.74	1089.49	5.52	
6409.00	3.890	76.010	6234.23	-277.25	520.89	1097.23	4.96	
6504.00	5.210	12.680	6328.98	-281.26	525.89	1101.31	5.16	
6624.00	1.010	231.290	6448.83	-285.74	530.54	1101.68	5.03	
6719.00	0.790	231.980	6543.82	-285.08	529.62	1100.51	0.23	
6814.00	5.490	176.090	6638.66	-280.29	524.68	1100.31	5.36	
6908.00	18.390	169.670	6730.43	-260.94	505.52	1103.28	13.77	
7004.00	21.290	185.800	6820.79	-229.20	473.25	1104.24	6.43	
7099.00	31.100	189.180	6905.94	-189.85	431.77	1098.57	10.44	
7195.00	40.700	188.170	6983.61	-137.30	376.18	1090.14	10.02	
7289.00	48.610	186.680	7050.43	-75.10	310.72	1081.67	8.49	
7383.00	55.600	186.990	7108.13	-5.03	237.11	1072.84	7.44	
7478.00	61.510	188.880	7157.67	71.01	156.89	1061.62	6.45	
7572.00	68.100	185.270	7197.67	151.26	72.53	1051.22	7.82	
7667.00	73.000	178.680	7229.33	238.05	-16.91	1048.21	8.33	
7729.00†	77.517	176.788	7245.10	297.09	-76.80	1050.59	7.86	CROSSED SETBACK (2190'FSL & 29'FEL, SEC.14)
7763.00	80.000	175.780	7251.73	330.07	-110.08	1052.76	7.86	
7860.00	88.690	173.980	7261.28	425.77	-206.12	1061.37	9.15	LANDING POINT (2061'FSL & 19'FEL, SEC.14)
7955.00	91.000	174.810	7261.54	520.13	-300.66	1070.65	2.58	
8051.00	89.400	177.670	7261.20	615.08	-396.44	1076.95	3.41	
8146.00	91.590	179.780	7260.38	708.34	-491.40	1079.06	3.20	
8241.00	92.300	178.200	7257.16	801.48	-586.33	1080.73	1.82	
8335.00	91.200	180.480	7254.29	893.53	-680.27	1081.82	2.69	
8430.00	89.310	180.880	7253.86	986.13	-775.26	1080.69	2.03	
8525.00	89.000	179.290	7255.26	1078.95	-870.24	1080.55	1.71	
8620.00	89.200	177.670	7256.76	1172.28	-965.20	1083.07	1.72	



# Actual Wellpath Report

BYBEE 1 AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	EXTRACTION OIL & GAS	Slot	SLOT#01 BYBEE 1 (2267'FSL & 1080'FEL, SEC.14)
Area	COLORADO	Well	BYBEE 1
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	BYBEE 1 AWB
Facility	SEC.14-T02N-R68W		

## WELLPATH DATA (133 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
8714.00	89.200	181.100	7258.07	1264.35	-1059.17	1084.08	3.65	
8809.00	89.310	178.280	7259.30	1357.29	-1154.15	1084.59	2.97	
8904.00	89.510	177.490	7260.28	1450.82	-1249.08	1088.09	0.86	
9000.00	88.410	180.700	7262.03	1544.93	-1345.04	1089.61	3.53	
9094.00	88.410	183.780	7264.63	1635.91	-1438.92	1085.94	3.28	
9190.00	89.790	182.810	7266.14	1728.41	-1534.74	1080.42	1.76	
9284.00	87.590	181.270	7268.29	1819.49	-1628.65	1077.08	2.86	
9380.00	88.410	180.310	7271.64	1912.97	-1724.58	1075.75	1.31	
9474.00	88.690	180.390	7274.02	2004.70	-1818.55	1075.18	0.31	
9569.00	89.000	179.070	7275.94	2097.62	-1913.53	1075.63	1.43	
9664.00	89.310	178.900	7277.34	2190.81	-2008.50	1077.31	0.37	
9759.00	89.510	178.500	7278.32	2284.09	-2103.47	1079.47	0.47	
9855.00	89.900	177.800	7278.81	2378.53	-2199.42	1082.56	0.83	
9949.00	89.700	177.270	7279.14	2471.17	-2293.33	1086.61	0.60	
10043.00	90.010	178.280	7279.38	2563.75	-2387.26	1090.26	1.12	
10138.00	88.100	181.270	7280.94	2656.65	-2482.23	1090.63	3.73	
10233.00	88.490	179.690	7283.77	2749.29	-2577.18	1089.84	1.71	
10328.00	88.890	179.380	7285.94	2842.28	-2672.15	1090.61	0.53	
10424.00	88.800	177.890	7287.88	2936.55	-2768.10	1092.89	1.55	
10519.00	89.510	183.690	7289.28	3029.07	-2863.04	1091.58	6.15	
10614.00	89.790	181.710	7289.86	3120.87	-2957.93	1087.11	2.10	
10709.00	89.790	180.170	7290.21	3213.37	-3052.91	1085.55	1.62	
10804.00	89.900	178.990	7290.46	3306.37	-3147.91	1086.25	1.25	
10899.00	88.490	181.490	7291.80	3399.12	-3242.89	1085.85	3.02	
10994.00	88.300	180.700	7294.46	3491.54	-3337.83	1084.03	0.85	
11089.00	88.300	179.070	7297.28	3584.39	-3432.79	1084.22	1.72	
11184.00	87.900	178.680	7300.43	3677.57	-3527.72	1086.09	0.59	
11278.00	90.100	182.590	7302.07	3769.18	-3621.67	1085.05	4.77	
11373.00	90.100	181.800	7301.90	3861.20	-3716.60	1081.41	0.83	
11468.00	89.110	181.580	7302.56	3953.42	-3811.56	1078.61	1.07	
11563.00	87.700	181.270	7305.20	4045.70	-3906.49	1076.24	1.52	
11657.00	89.110	180.790	7307.82	4137.17	-4000.44	1074.56	1.58	
11752.00	87.790	179.780	7310.39	4229.89	-4095.40	1074.08	1.75	
11848.00	90.210	181.010	7312.06	4323.55	-4191.37	1073.42	2.83	
11943.00	89.510	178.590	7312.30	4416.47	-4286.36	1073.75	2.65	
12037.00	88.300	177.490	7314.09	4508.95	-4380.29	1076.97	1.74	
12132.00	83.990	175.470	7320.48	4602.62	-4474.87	1082.78	5.01	
12227.00	87.510	178.900	7327.52	4696.07	-4569.46	1087.42	5.17	
12322.00	90.890	181.400	7328.85	4788.84	-4664.43	1087.18	4.42	
12417.00	92.010	182.590	7326.44	4880.90	-4759.34	1083.87	1.72	
12512.00	91.310	182.110	7323.69	4972.82	-4854.22	1079.98	0.89	
12608.00	91.400	182.590	7321.42	5065.71	-4950.11	1076.04	0.51	BAKER HANDS DRILLED USING 3RD PARTY MWD-LAST SURVEY (2612'FSL & 69'FEL, SEC.23)
12659.00	91.400	182.590	7320.17	5115.01	-5001.04	1073.74	0.00	BAKER HANDS DRILLED USING 3RD PARTY MWD-PTB (2561'FSL & 21'FEL, SEC.23)

REFERENCE WELLPATH IDENTIFICATION			
Operator	EXTRACTION OIL & GAS	Slot	SLOT#01 BYBEE 1 (2267'FSL & 1080'FEL, SEC.14)
Area	COLORADO	Well	BYBEE 1
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	BYBEE 1 AWB
Facility	SEC.14-T02N-R68W		

HOLE & CASING SECTIONS - Ref Wellbore: BYBEE 1 AWB Ref Wellpath: BYBEE 1 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	25.00	1615.00	1590.00	25.00	1614.88	0.00	0.00	1.67	7.98
9.625in Casing Surface	25.00	1615.00	1590.00	25.00	1614.88	0.00	0.00	1.67	7.98
7.875in Open Hole	1615.00	12658.00	11043.00	1614.88	7320.20	1.67	7.98	-5000.05	1073.78
4.5in Casing Production	25.00	12658.00	12633.00	25.00	7320.20	0.00	0.00	-5000.05	1073.78

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.14-T02N-R62W	0.00	0.00	0.00	3149614.52	1293445.00	40°08'15.580"N	104°57'53.539"W	polygon
SEC.23-T02N-R62W	0.00	0.00	0.00	3149614.52	1293445.00	40°08'15.580"N	104°57'53.539"W	polygon
BYBEE 1 BHL ON PLAT (2500'FSL & 0'FEL, SEC.23)	7220.00	-5062.26	1094.55	3150739.54	1288389.66	40°07'25.554"N	104°57'39.449"W	point
BYBEE 1 LANDING POINT ON PLAT (2188'FSL & 0'FEL, SEC.14)	7220.00	-80.93	1079.80	3150694.74	1293370.59	40°08'14.780"N	104°57'39.636"W	point
BYBEE 1 LANDING POINT ON PLAT REV-1 (2188'FSL & 0'FEL, SEC.14)	7260.00	-80.93	1079.80	3150694.74	1293370.59	40°08'14.780"N	104°57'39.636"W	point
BYBEE 1 TARGET 1	7260.00	-759.60	1088.65	3150707.68	1292692.02	40°08'08.073"N	104°57'39.522"W	point
BYBEE 1 TARGET 2	7268.00	-1558.49	1090.97	3150714.82	1291893.19	40°08'00.179"N	104°57'39.493"W	point
BYBEE 1 TARGET 3	7279.00	-2457.85	1091.89	3150721.17	1290993.89	40°07'51.291"N	104°57'39.482"W	point
BYBEE 1 TARGET 4	7294.00	-3357.21	1092.81	3150727.52	1290094.59	40°07'42.404"N	104°57'39.470"W	point
BYBEE 1 BHL ON PLAT REV-1 (2500'FSL & 0'FEL, SEC.23)	7302.00	-5062.26	1094.55	3150739.54	1288389.66	40°07'25.554"N	104°57'39.449"W	point
BYBEE 1 TARGET 5	7309.00	-4056.72	1093.52	3150732.45	1289395.13	40°07'35.491"N	104°57'39.462"W	point
BYBEE 1 TARGET 6	7309.00	-4556.37	1094.03	3150735.97	1288895.51	40°07'30.553"N	104°57'39.455"W	point
SEC.14/23-T02N-R62W SETBACK (460' 1/2 SECTION LINE (14) & 2500'FSL, SEC.23)	7475.00	0.00	0.00	3149614.52	1293445.00	40°08'15.580"N	104°57'53.539"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: BYBEE 1 AWB Ref Wellpath: BYBEE 1 AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
25.00	1519.00	Custom ISCWSA MWD, Rev. 3 (Standard) (Rockies 0.03Gt)	BAKER HANDS DRILLED USING 3RD PARTY MWD 13.5" HOLE <196-1519>	BYBEE 1 AWB
1519.00	12608.00	Custom ISCWSA MWD, Rev. 3 (Standard) (Rockies 0.03Gt)	BAKER HANDS DRILLED USING 3RD PARTY MWD 7.875" HOLE <1678-12608>	BYBEE 1 AWB
12608.00	12659.00	Blind Drilling (std)	Projection to bit	BYBEE 1 AWB



# Actual Wellpath Report

BYBEE 1 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	EXTRACTION OIL & GAS	Slot	SLOT#01 BYBEE 1 (2267'FSL & 1080'FEL, SEC.14)
Area	COLORADO	Well	BYBEE 1
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	BYBEE 1 AWB
Facility	SEC.14-T02N-R68W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
196.00	0.540	155.120	196.00	BAKER HANDS DRILLED USING 3RD PARTY MWD-FIRST SURVEY
7729.00	77.517	176.788	7245.10	CROSSED SETBACK (2190'FSL & 29'FEL, SEC.14)
7860.00	88.690	173.980	7261.28	LANDING POINT (2061'FSL & 19'FEL, SEC.14)
12608.00	91.400	182.590	7321.42	BAKER HANDS DRILLED USING 3RD PARTY MWD-LAST SURVEY (2612'FSL & 69'FEL, SEC.23)
12659.00	91.400	182.590	7320.17	BAKER HANDS DRILLED USING 3RD PARTY MWD-PTB (2561'FSL & 21'FEL, SEC.23)