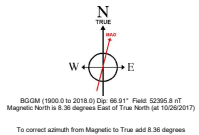
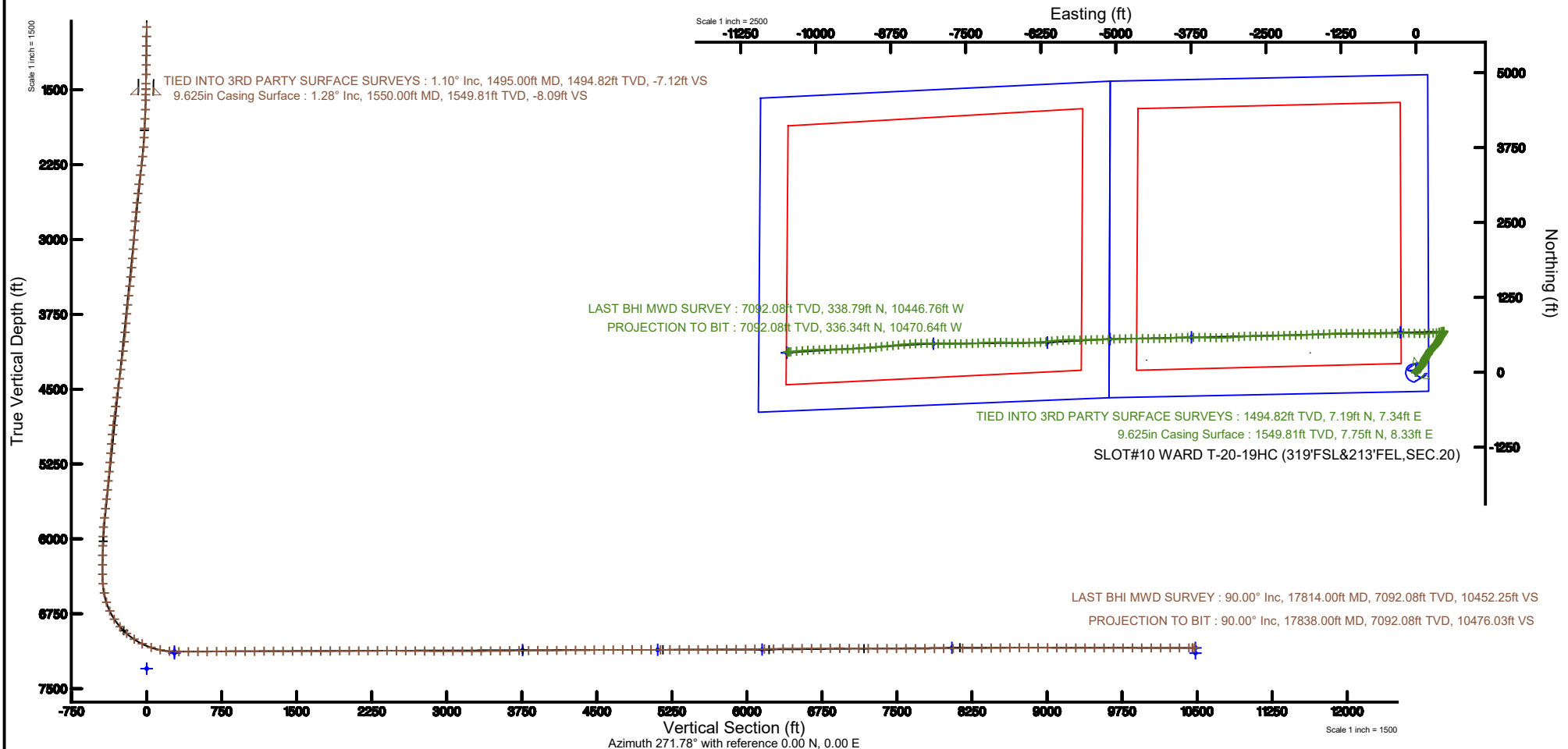


BAYSWATER E & P LLC

Location: COLORADO Slot: SLOT#10 WARD T-20-19HC (319'FSL&213'FEL,SEC.20)
 Field: WELD COUNTY (NAD83/TRUE NORTH) Well: WARD T-20-19HC
 Facility: SEC.20-T06N-R66W Wellbore: WARD T-20-19HC PWB



Plot reference wellpath is WARD T-20-19HC (REV-A.0) PWP	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to TRUE 38 (RKB)	* = Wellpath was transformed from a different geodetic datum
Measured depths are referenced to TRUE 38 (RKB)	North Reference: True north
TRUE 38 (RKB) to Mean Sea Level: 4753 feet	Scale: True distance
Mean Sea Level to Ground level (At Slot: SLOT#10 WARD T-20-19HC (319'FSL&213'FEL,SEC.20)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: doddanna on 2017-11-28
	Database: Denver DB



Actual Wellpath Report

WARD T-20-19HC AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#10 WARD T-20-19HC (319'FSL&213'FEL,SEC.20)
Area	COLORADO	Well	WARD T-20-19HC
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	WARD T-20-19HC AWB
Facility	SEC.20-T06N-R66W		

REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 5.0
North Reference	True	User	Doddanna
Scale	0.999964	Report Generated	11/28/2017 at 1:22:01 PM
Convergence at slot	0.46° East	Database/Source file	Denver DB/WARD_T-20-19HC_AWP.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-201.79	4484.68	3196665.90	1413852.08	40°28'02.186"N	104°47'35.362"W
Facility Reference Pt			3192179.96	1414018.92	40°28'04.184"N	104°48'33.386"W
Field Reference Pt			3174587.00	1430859.71	40°30'51.890"N	104°52'19.470"W

WELLPATH DATUM

Calculation method	Minimum curvature	TRUE 38 (RKB) to Facility Vertical Datum	4753.00ft
Horizontal Reference Pt	Slot	TRUE 38 (RKB) to Mean Sea Level	4753.00ft
Vertical Reference Pt	TRUE 38 (RKB)	TRUE 38 (RKB) to Ground Level at Slot (SLOT#10 WARD T-20-19HC (319'FSL&213'FEL,SEC.20))	4753.00ft
MD Reference Pt	TRUE 38 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	271.78°

Actual Wellpath Report

WARD T-20-19HC AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#10 WARD T-20-19HC (319'FSL&213'FEL,SEC.20)
Area	COLORADO	Well	WARD T-20-19HC
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	WARD T-20-19HC AWP
Facility	SEC.20-T06N-R66W		

WELLPATH DATA (190 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
0.00	0.000	273.500	0.00	0.00	0.00	0.00	0.00	
178.00	0.500	273.500	178.00	0.78	0.05	-0.78	0.28	
273.00	0.700	283.400	272.99	1.76	0.21	-1.75	0.24	
367.00	1.000	286.300	366.98	3.12	0.57	-3.10	0.32	
493.00	1.300	187.600	492.97	4.32	-0.54	-4.34	1.39	
588.00	0.300	120.400	587.96	4.22	-1.73	-4.27	1.28	
683.00	0.500	58.500	682.95	3.65	-1.64	-3.70	0.47	
778.00	0.900	76.100	777.95	2.59	-1.25	-2.63	0.47	
873.00	1.100	62.700	872.93	1.07	-0.65	-1.09	0.32	
967.00	1.000	54.800	966.92	-0.37	0.24	0.38	0.19	
1062.00	0.900	49.200	1061.90	-1.58	1.20	1.62	0.14	
1157.00	1.100	37.400	1156.89	-2.66	2.42	2.74	0.30	
1252.00	1.000	30.800	1251.87	-3.60	3.85	3.72	0.17	
1347.00	1.500	28.800	1346.85	-4.57	5.65	4.74	0.53	
1441.00	1.200	80.200	1440.83	-6.09	6.90	6.31	1.28	
1495.00	1.100	67.700	1494.82	-7.12	7.19	7.34	0.50	TIED INTO 3RD PARTY SURFACE SURVEYS
1605.00	1.520	44.510	1604.79	-9.07	8.63	9.34	0.61	
1699.00	4.650	36.690	1698.64	-12.10	12.58	12.49	3.35	
1794.00	6.480	29.590	1793.19	-16.80	20.33	17.44	2.05	
1888.00	4.190	22.400	1886.78	-20.49	28.12	21.37	2.53	
1982.00	5.000	34.890	1980.48	-23.93	34.65	25.02	1.36	
2077.00	6.970	44.160	2074.96	-30.08	42.19	31.41	2.30	
2172.00	8.960	45.950	2169.04	-39.12	51.46	40.74	2.11	
2265.00	11.050	45.890	2260.62	-50.37	62.70	52.35	2.25	
2360.00	11.090	44.290	2353.85	-62.89	75.58	65.26	0.33	
2455.00	10.880	41.550	2447.11	-74.79	88.83	77.59	0.59	
2550.00	11.090	38.130	2540.37	-85.95	102.73	89.18	0.72	
2645.00	11.390	35.680	2633.55	-96.59	117.54	100.29	0.59	
2739.00	11.370	27.630	2725.71	-105.81	133.29	110.00	1.69	
2834.00	10.490	26.260	2818.98	-113.48	149.34	118.17	0.97	
2928.00	11.360	24.340	2911.28	-120.58	165.45	125.77	1.00	
3023.00	11.440	21.580	3004.40	-127.36	182.73	133.09	0.58	
3118.00	11.370	24.000	3097.53	-134.09	200.05	140.37	0.51	
3213.00	11.380	26.760	3190.66	-141.59	216.97	148.40	0.57	
3308.00	11.290	29.160	3283.81	-149.83	233.46	157.15	0.51	
3402.00	11.400	29.170	3375.97	-158.33	249.61	166.16	0.12	
3497.00	11.350	35.040	3469.11	-167.78	265.46	176.10	1.22	
3592.00	11.310	37.440	3562.26	-178.34	280.51	187.13	0.50	
3686.00	11.310	34.540	3654.44	-188.70	295.42	197.96	0.60	
3780.00	11.470	28.900	3746.59	-197.95	311.20	207.71	1.20	
3875.00	11.330	27.560	3839.71	-206.31	327.74	216.59	0.32	
3969.00	11.190	29.650	3931.90	-214.59	343.85	225.37	0.46	
4064.00	11.290	36.490	4025.09	-224.20	359.34	235.46	1.41	
4158.00	11.110	40.980	4117.30	-235.16	373.58	246.88	0.95	
4253.00	11.210	42.930	4210.50	-247.02	387.25	259.17	0.41	

Actual Wellpath Report

WARD T-20-19HC AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#10 WARD T-20-19HC (319'FSL&213'FEL,SEC.20)
Area	COLORADO	Well	WARD T-20-19HC
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	WARD T-20-19HC AWB
Facility	SEC.20-T06N-R66W		

WELLPATH DATA (190 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
4347.00	11.190	45.680	4302.71	-259.36	400.31	271.92	0.57	
4442.00	11.340	45.780	4395.88	-272.24	413.26	285.21	0.16	
4537.00	10.950	46.770	4489.09	-285.11	425.96	298.47	0.46	
4632.00	11.060	44.990	4582.34	-297.73	438.58	311.49	0.38	
4726.00	11.100	43.400	4674.59	-309.91	451.53	324.08	0.33	
4821.00	11.060	40.410	4767.82	-321.67	465.12	336.27	0.61	
4916.00	11.150	36.610	4861.04	-332.61	479.43	347.66	0.78	
5011.00	11.010	29.030	4954.28	-342.01	494.73	357.54	1.54	
5106.00	10.920	28.310	5047.54	-350.18	510.59	366.21	0.17	
5201.00	11.030	28.000	5140.81	-358.22	526.53	374.74	0.13	
5295.00	10.810	29.390	5233.10	-366.28	542.15	383.29	0.37	
5390.00	10.750	29.540	5326.43	-374.53	557.62	392.03	0.07	
5483.00	10.890	30.240	5417.77	-382.76	572.76	400.73	0.21	
5577.00	10.940	30.710	5510.07	-391.30	588.10	409.76	0.11	
5671.00	11.090	33.230	5602.34	-400.34	603.33	419.27	0.54	
5766.00	11.300	37.230	5695.54	-410.50	618.38	429.90	0.85	
5861.00	11.490	35.290	5788.66	-421.12	633.52	441.00	0.45	
5956.00	9.620	31.170	5882.05	-430.25	648.03	450.58	2.12	
6051.00	6.800	18.580	5976.08	-435.77	660.16	456.48	3.50	
6145.00	4.590	11.350	6069.61	-438.00	669.12	458.99	2.47	
6240.00	4.270	13.880	6164.33	-439.38	676.29	460.59	0.39	
6334.00	1.040	359.120	6258.21	-440.07	680.54	461.42	3.48	
6429.00	0.000	98.370	6353.21	-440.03	681.40	461.40	1.09	
6524.00	5.220	270.110	6448.08	-435.71	681.41	457.08	5.49	
6619.00	10.840	270.140	6542.11	-422.45	681.44	443.81	5.92	
6713.00	17.140	259.160	6633.29	-400.07	678.85	421.34	7.24	
6808.00	25.120	252.730	6721.84	-367.29	670.22	388.28	8.74	
6903.00	33.500	258.660	6804.62	-322.61	659.05	343.23	9.33	
6998.00	40.890	268.000	6880.31	-265.93	652.80	286.33	9.77	
7093.00	49.000	267.710	6947.49	-199.03	650.28	219.32	8.54	
7187.00	56.950	267.200	7004.05	-124.26	646.93	144.41	8.47	
7281.00	63.730	269.770	7050.54	-42.76	644.83	62.81	7.59	
7376.00	71.970	274.030	7086.35	45.12	647.84	-25.03	9.61	
7471.00	77.970	273.100	7110.97	136.79	653.54	-116.56	6.39	
7564.00	84.480	267.620	7125.16	228.58	654.07	-208.38	9.10	
7659.00	90.180	269.160	7129.58	323.27	651.41	-303.20	6.21	
7754.00	90.370	269.370	7129.13	418.18	650.19	-398.19	0.30	
7849.00	90.090	268.400	7128.75	513.06	648.34	-493.17	1.06	
7942.00	90.400	268.640	7128.35	605.91	645.94	-586.14	0.42	
8037.00	90.180	269.410	7127.87	700.79	644.33	-681.12	0.84	
8132.00	90.120	270.350	7127.62	795.74	644.13	-776.12	0.99	
8227.00	90.250	270.430	7127.31	890.71	644.77	-871.12	0.16	
8321.00	90.340	271.690	7126.83	984.70	646.51	-965.10	1.34	
8416.00	90.460	271.080	7126.17	1079.70	648.81	-1060.07	0.65	
8511.00	90.400	269.750	7125.45	1174.66	649.50	-1155.06	1.40	

Actual Wellpath Report

WARD T-20-19HC AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#10 WARD T-20-19HC (319'FSL&213'FEL,SEC.20)
Area	COLORADO	Well	WARD T-20-19HC
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	WARD T-20-19HC AWB
Facility	SEC.20-T06N-R66W		

WELLPATH DATA (190 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
8605.00	90.310	268.480	7124.87	1268.56	648.04	-1249.05	1.35	
8700.00	90.150	268.050	7124.49	1363.38	645.17	-1344.00	0.48	
8795.00	90.090	267.920	7124.29	1458.17	641.83	-1438.94	0.15	
8889.00	90.180	267.160	7124.07	1551.91	637.79	-1532.85	0.81	
8984.00	90.250	267.190	7123.71	1646.61	633.11	-1627.74	0.08	
9079.00	89.940	267.220	7123.56	1741.30	628.48	-1722.63	0.33	
9174.00	90.310	267.690	7123.35	1836.03	624.26	-1817.53	0.63	
9268.00	90.430	267.580	7122.74	1929.78	620.38	-1911.45	0.17	
9363.00	90.180	268.290	7122.24	2024.57	616.96	-2006.38	0.79	
9458.00	90.120	268.230	7121.99	2119.39	614.07	-2101.34	0.09	
9552.00	90.580	269.290	7121.41	2213.26	612.04	-2195.32	1.23	
9647.00	90.120	268.700	7120.83	2308.14	610.37	-2290.30	0.79	
9741.00	90.430	268.470	7120.38	2401.99	608.05	-2384.27	0.41	
9836.00	89.350	268.560	7120.56	2496.84	605.59	-2479.23	1.14	
9930.00	89.420	268.840	7121.57	2590.70	603.46	-2573.21	0.31	
10024.00	89.450	269.390	7122.50	2684.59	602.01	-2667.19	0.59	
10119.00	89.690	269.700	7123.21	2779.51	601.25	-2762.18	0.41	
10213.00	89.320	267.100	7124.02	2873.34	598.63	-2856.13	2.79	
10307.00	89.910	265.990	7124.66	2966.94	592.96	-2949.96	1.34	
10402.00	90.060	266.170	7124.68	3061.47	586.47	-3044.74	0.25	
10497.00	90.150	265.620	7124.51	3155.97	579.67	-3139.49	0.59	
10592.00	90.310	267.850	7124.13	3250.60	574.26	-3234.33	2.35	
10686.00	90.520	270.730	7123.44	3344.50	573.09	-3328.31	3.07	
10781.00	90.340	274.270	7122.73	3439.47	577.24	-3423.20	3.73	
10875.00	90.550	272.170	7122.00	3533.43	582.52	-3517.05	2.25	
10970.00	90.550	268.670	7121.09	3628.39	583.21	-3612.03	3.68	
11064.00	90.740	269.580	7120.03	3722.28	581.78	-3706.01	0.99	
11159.00	90.710	269.600	7118.83	3817.20	581.10	-3801.00	0.04	
11253.00	90.650	267.520	7117.71	3911.04	578.73	-3894.96	2.21	
11347.00	90.310	267.130	7116.93	4004.76	574.35	-3988.85	0.55	
11442.00	90.460	266.820	7116.29	4099.42	569.33	-4083.72	0.36	
11535.00	90.400	267.690	7115.59	4192.13	564.88	-4176.61	0.94	
11630.00	90.490	269.090	7114.85	4286.96	562.21	-4271.56	1.48	
11724.00	90.400	269.970	7114.12	4380.88	561.44	-4365.56	0.94	
11818.00	90.590	269.540	7113.31	4474.82	561.04	-4459.55	0.50	
11913.00	90.550	270.340	7112.36	4569.76	560.94	-4554.55	0.84	
12008.00	90.550	271.430	7111.45	4664.75	562.41	-4649.53	1.15	
12102.00	90.090	267.950	7110.93	4758.67	561.90	-4743.51	3.73	
12197.00	89.940	267.980	7110.90	4853.46	558.53	-4838.45	0.16	
12291.00	90.060	269.410	7110.90	4947.32	556.38	-4932.42	1.53	
12386.00	89.940	268.800	7110.90	5042.21	554.90	-5027.41	0.65	
12481.00	89.780	266.550	7111.13	5136.96	551.05	-5122.33	2.37	
12576.00	90.250	267.140	7111.11	5231.61	545.82	-5217.18	0.79	
12671.00	90.150	269.730	7110.78	5326.44	543.22	-5312.14	2.73	
12765.00	90.250	268.160	7110.45	5420.32	541.49	-5406.12	1.67	

Actual Wellpath Report

WARD T-20-19HC AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#10 WARD T-20-19HC (319'FSL&213'FEL,SEC.20)
Area	COLORADO	Well	WARD T-20-19HC
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	WARD T-20-19HC AWB
Facility	SEC.20-T06N-R66W		

WELLPATH DATA (190 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
12858.00	90.310	268.800	7109.99	5513.17	539.03	-5499.09	0.69	
12953.00	90.180	269.550	7109.59	5608.07	537.66	-5594.07	0.80	
13048.00	91.170	271.800	7108.47	5703.04	538.78	-5689.05	2.59	
13142.00	90.430	269.090	7107.16	5796.99	539.51	-5783.03	2.99	
13237.00	90.460	265.460	7106.42	5891.68	534.99	-5877.91	3.82	
13332.00	90.490	265.240	7105.63	5986.08	527.29	-5972.59	0.23	
13426.00	90.650	263.790	7104.70	6079.32	518.31	-6066.15	1.55	
13521.00	90.920	264.830	7103.39	6173.50	508.89	-6160.67	1.13	
13615.00	90.580	266.580	7102.16	6266.96	501.85	-6254.40	1.90	
13710.00	91.230	267.470	7100.66	6361.62	496.92	-6349.26	1.16	
13805.00	90.430	268.210	7099.29	6456.39	493.34	-6444.18	1.15	
13899.00	90.650	268.580	7098.40	6550.22	490.71	-6538.14	0.46	
13994.00	90.400	270.920	7097.53	6645.15	490.29	-6633.13	2.48	
14088.00	90.490	272.810	7096.80	6739.14	493.35	-6727.07	2.01	
14183.00	90.520	271.310	7095.96	6834.13	496.77	-6822.00	1.58	
14278.00	89.880	270.000	7095.63	6929.11	497.85	-6916.99	1.53	
14372.00	89.200	268.810	7096.39	7023.03	496.88	-7010.98	1.46	
14467.00	89.260	267.330	7097.66	7117.82	493.68	-7105.92	1.56	
14562.00	90.030	267.270	7098.25	7212.52	489.20	-7200.81	0.81	
14656.00	89.820	267.130	7098.37	7306.22	484.61	-7294.70	0.27	
14751.00	89.910	267.920	7098.60	7400.96	480.51	-7389.61	0.84	
14845.00	90.120	268.450	7098.57	7494.77	477.53	-7483.56	0.61	
14940.00	89.880	269.290	7098.57	7589.65	475.66	-7578.54	0.92	
15034.00	89.970	270.460	7098.70	7683.60	475.45	-7672.54	1.25	
15129.00	90.150	269.240	7098.60	7778.54	475.20	-7767.53	1.30	
15224.00	90.430	269.560	7098.12	7873.46	474.21	-7862.53	0.45	
15318.00	90.520	272.240	7097.34	7967.44	475.68	-7956.50	2.85	
15413.00	90.550	272.640	7096.45	8062.43	479.73	-8051.41	0.42	
15508.00	90.430	270.780	7095.64	8157.42	482.56	-8146.36	1.96	
15603.00	90.650	267.820	7094.74	8252.31	481.40	-8241.34	3.12	
15697.00	90.400	266.680	7093.88	8346.01	476.89	-8335.23	1.24	
15792.00	90.580	266.170	7093.07	8440.60	470.97	-8430.04	0.57	
15886.00	90.920	265.190	7091.84	8534.06	463.89	-8523.76	1.10	
15981.00	90.490	263.580	7090.67	8628.25	454.60	-8618.30	1.75	
16076.00	90.090	265.050	7090.19	8722.45	445.19	-8712.83	1.60	
16171.00	89.940	264.150	7090.16	8816.70	436.24	-8807.40	0.96	
16266.00	89.880	263.640	7090.31	8910.80	426.14	-8901.86	0.54	
16360.00	89.690	264.880	7090.66	9003.99	416.74	-8995.39	1.33	
16455.00	89.570	266.570	7091.28	9098.46	409.66	-9090.12	1.78	
16549.00	90.060	267.250	7091.58	9192.12	404.59	-9183.98	0.89	
16644.00	90.090	263.340	7091.46	9286.49	396.80	-9278.64	4.12	
16738.00	89.690	267.490	7091.64	9379.89	389.29	-9372.32	4.44	
16833.00	90.030	268.530	7091.87	9474.68	385.99	-9467.26	1.15	
16927.00	89.970	269.190	7091.87	9568.56	384.12	-9561.24	0.71	
17022.00	89.940	268.610	7091.94	9663.44	382.30	-9656.23	0.61	

Actual Wellpath Report

WARD T-20-19HC AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#10 WARD T-20-19HC (319'FSL&213'FEL,SEC.20)
Area	COLORADO	Well	WARD T-20-19HC
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	WARD T-20-19HC AWB
Facility	SEC.20-T06N-R66W		

WELLPATH DATA (190 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
17117.00	89.970	268.770	7092.02	9758.30	380.12	-9751.20	0.17	
17212.00	90.030	268.750	7092.02	9853.17	378.07	-9846.18	0.07	
17306.00	90.060	267.490	7091.95	9946.98	374.98	-9940.13	1.34	
17400.00	90.030	266.820	7091.87	10040.67	370.32	-10034.01	0.71	
17495.00	90.030	266.360	7091.82	10135.28	364.67	-10128.84	0.48	
17590.00	89.910	266.090	7091.87	10229.83	358.41	-10223.64	0.31	
17685.00	89.940	264.880	7092.00	10324.26	350.94	-10318.34	1.27	
17779.00	89.970	264.510	7092.07	10417.54	342.24	-10411.94	0.39	
17814.00	90.000	264.150	7092.08	10452.25	338.79	-10446.76	1.03	LAST BHI MWD SURVEY
17838.00	90.000	264.150	7092.08	10476.03	336.34	-10470.64	0.00	PROJECTION TO BIT

HOLE & CASING SECTIONS - Ref Wellbore: WARD T-20-19HC AWB Ref Wellpath: WARD T-20-19HC AWP

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
9.625in Casing Surface	25.00	1550.00	1525.00	25.00	1549.81	0.00	-0.02	7.75	8.33
8.5in Open Hole	1550.00	17838.00	16288.00	1549.81	7092.08	7.75	8.33	336.34	-10470.64

Actual Wellpath Report

WARD T-20-19HC AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#10 WARD T-20-19HC (319'FSL&213'FEL,SEC.20)
Area	COLORADO	Well	WARD T-20-19HC
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	WARD T-20-19HC AWB
Facility	SEC.20-T06N-R66W		

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
WARD R-20-19HN Section 19	0.00	29.95	0.00	3196665.66	1413882.03	40°28'02.482"N	104°47'35.362"W	polygon
WARD R-20-19HN Section 20	0.00	29.95	0.00	3196665.66	1413882.03	40°28'02.482"N	104°47'35.362"W	polygon
WARD T-20-19HC BHL REV-2 (967'FSL & 470'FWL, SEC.19)	7091.00	325.41	-10478.80	3186185.24	1414093.95	40°28'05.380"N	104°49'50.941"W	point
WARD T-20-19HC WP#3 (~15,400'MD / 976'FSL)	7091.00	476.00	-8038.16	3188624.51	1414263.98	40°28'06.877"N	104°49'19.364"W	point
WARD T-20-19HC WP#2 (~13,500'MD / 979'FSL)	7109.00	495.40	-6139.21	3190523.17	1414298.51	40°28'07.074"N	104°48'54.794"W	point
WARD T-20-19HC BORELINE VERTEX @ 5109'VS (~12,500'MD / 981'FSL)	7111.00	553.60	-5094.27	3191567.58	1414365.04	40°28'07.651"N	104°48'41.274"W	point
WARD T-20-19HC WP#1 (~11,100'MD / 982'FSL)	7114.00	582.50	-3740.53	3192920.99	1414404.72	40°28'07.939"N	104°48'23.759"W	point
WARD T-20-19HC LANDING POINT REV-2 (985'FSL & 470'FEL, SEC..20)	7128.00	662.73	-257.62	3196403.02	1414512.71	40°28'08.735"N	104°47'38.695"W	point
WARD T-20-19HC BHL From Plat (967'FSL&470'FWL,SEC.19)	7145.00	325.41	-10478.80	3186185.24	1414093.95	40°28'05.380"N	104°49'50.941"W	point
WARD T-20-19HC Landing Point (985'FSL&470'FEL,SEC.20)	7145.00	662.73	-257.62	3196403.02	1414512.71	40°28'08.735"N	104°47'38.695"W	point
WARD R-20-19HN Section 19 Hardline (460'Setback)	7300.00	29.95	0.00	3196665.66	1413882.03	40°28'02.482"N	104°47'35.362"W	polygon
WARD R-20-19HN Section 20 Hardline (460'Setback)	7300.00	29.95	0.00	3196665.66	1413882.03	40°28'02.482"N	104°47'35.362"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: WARD T-20-19HC AWB Ref Wellpath: WARD T-20-19HC AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	1495.00	ISCWSA MWD, Rev. 4 (Standard)	3rd Party Surface Surveys <178'-1495'>	WARD T-20-19HC AWB
1495.00	17814.00	Custom BHI AutoTrak Curve (Short) (Rockies 0.03Gt model)	8 1/2" CUSTOM BHI ATOTRAK CURVE (SHORT) (ROCKIES 0.03GT MODEL) <1605'-17814'>	WARD T-20-19HC AWB
17814.00	17838.00	Blind Drilling (std)	Projection to bit	WARD T-20-19HC AWB

Actual Wellpath Report

WARD T-20-19HC AWP

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REFERENCE WELLPATH IDENTIFICATION

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Area	COLORADO	Well	WARD T-20-19HC
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	WARD T-20-19HC AWB
Facility	SEC.20-T06N-R66W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1495.00	1.100	67.700	1494.82	TIED INTO 3RD PARTY SURFACE SURVEYS
17814.00	90.000	264.150	7092.08	LAST BHI MWD SURVEY
17838.00	90.000	264.150	7092.08	PROJECTION TO BIT