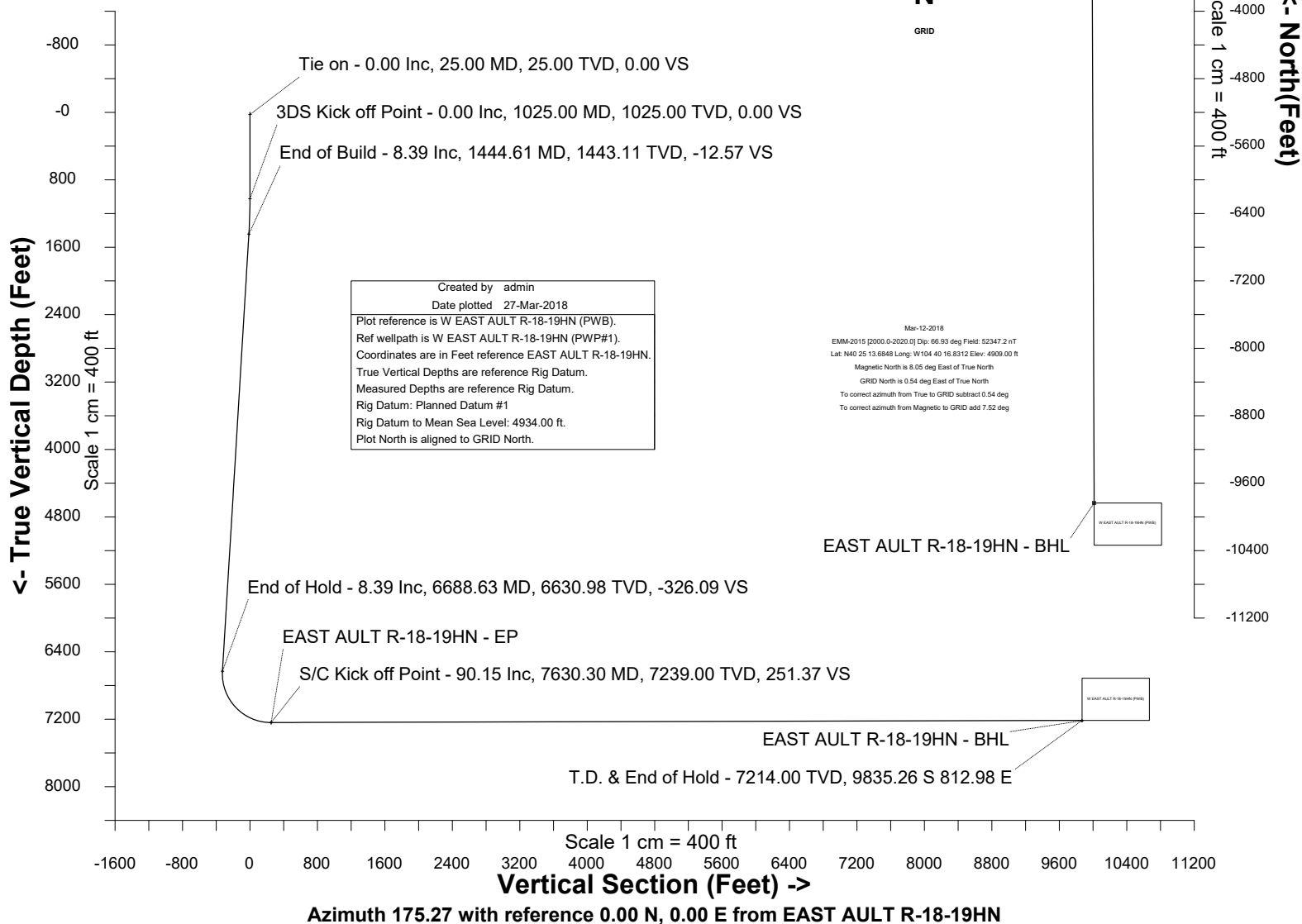


# BAYSWATER E & P, LLC

Location	Weld County, CO	Slot	EAST AULT R-18-19HN
Field	WATTENBERG	Well	W EAST AULT R-18-19HN
Installation	East Ault Pad	Wellbore	W EAST AULT R-18-19HN (PWB)

## WELL PROFILE DATA

Point	MD	Inc	Azi	TVD	North	East	deg/100ft	V. Sect
Tie on	25.00	0.00	0.00	25.00	S 0.00	W 0.00		0.00
KOP	1025.00	0.00	61.09	1025.00	S 0.00	W 0.00	0.00	0.00
End of Build	1444.61	8.39	61.09	1443.11	N 14.83	E 26.85	2.00	-12.57
End of Hold	6688.63	8.39	61.09	6630.98	N 384.80	E 696.84	0.00	-326.09
Target EAST A...N - EP	7630.30	90.15	179.79	7239.00	S 187.93	E 777.82	10.00	251.37
T.D. & Target EAS...BHL	17277.72	90.15	179.79	7214.00	S 9835.26	E 812.98	0.00	9868.80





SYSDRILL  
Well Design Combined Report  
Wellbore: W EAST AULT R-18-19HN (PWB)



### Wellhead Details

Name	Latitude	Longitude	Northing	Easting	North	East	Slot Elevation Above Ground
EAST AULT R-18-19HN	40.58167400	-104.70455600	1455736.0626	3220942.7290	58643.60N	9774.47W	0.00

### Declination

Date	Source	Time
Mar-12-2018	EMM-2015 [2000.0-2020.0]	20:03

### Installation Details

Name	Installation Position (Latitude)	Installation Position (Longitude)	Northing	Easting	Coord System Name	North Alignment
East Ault Pad	40.42046800	-104.67134200	1397094.8569	3230716.7970	CO83-NF on NORTH AMERICAN DATUM 1983 datum	Grid

### Summary Wellpath

MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Northing	Easting
25.00	0.00	0.000	25.00	0.00N	0.00E		0.00	1455736.06	3220942.73
1025.00	0.00	61.090	1025.00	0.00N	0.00E	==>	0.00	1455736.06	3220942.73
1444.61	8.39	61.090	1443.11	14.83N	26.85E	2.00	-12.57	1455750.89	3220969.58
6688.63	8.39	61.090	6630.98	384.80N	696.84E	==>	-326.09	1456120.85	3221639.55
7630.30	90.15	179.790	7239.00	187.93S	777.82E	10.00	251.37	1455548.14	3221720.52
17277.72	90.15	179.790	7214.00	9835.26S	812.98E	==>	9868.80	1445901.08	3221755.68

### Interpolated Wellpath

MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	All Station Comments
0.00	0.00	0.000	0.00	0.00N	0.00E		0.00	Rig Datum
25.00	0.00	0.000	25.00	0.00N	0.00E	==>	0.00	Slot Datum
100.00	0.00	0.000	100.00	0.00N	0.00E	==>	0.00	
200.00	0.00	0.000	200.00	0.00N	0.00E	==>	0.00	
300.00	0.00	0.000	300.00	0.00N	0.00E	==>	0.00	
400.00	0.00	0.000	400.00	0.00N	0.00E	==>	0.00	
500.00	0.00	0.000	500.00	0.00N	0.00E	==>	0.00	
600.00	0.00	0.000	600.00	0.00N	0.00E	==>	0.00	
700.00	0.00	0.000	700.00	0.00N	0.00E	==>	0.00	
800.00	0.00	0.000	800.00	0.00N	0.00E	==>	0.00	
900.00	0.00	0.000	900.00	0.00N	0.00E	==>	0.00	
1000.00	0.00	0.000	1000.00	0.00N	0.00E	==>	0.00	
1100.00	1.50	61.090	1099.99	0.47N	0.86E	2.00	-0.40	
1200.00	3.50	61.090	1199.89	2.58N	4.68E	2.00	-2.19	
1300.00	5.50	61.090	1299.58	6.38N	11.55E	2.00	-5.40	
1400.00	7.50	61.090	1398.93	11.85N	21.45E	2.00	-10.04	
1500.00	8.39	61.090	1497.91	18.74N	33.93E	==>	-15.88	
1600.00	8.39	61.090	1596.84	25.79N	46.71E	==>	-21.86	
1700.00	8.39	61.090	1695.77	32.85N	59.48E	==>	-27.83	
1800.00	8.39	61.090	1794.70	39.90N	72.26E	==>	-33.81	
1900.00	8.39	61.090	1893.63	46.96N	85.04E	==>	-39.79	
2000.00	8.39	61.090	1992.55	54.01N	97.81E	==>	-45.77	
2100.00	8.39	61.090	2091.48	61.07N	110.59E	==>	-51.75	
2200.00	8.39	61.090	2190.41	68.12N	123.36E	==>	-57.73	
2300.00	8.39	61.090	2289.34	75.18N	136.14E	==>	-63.71	
2400.00	8.39	61.090	2388.27	82.23N	148.92E	==>	-69.69	
2500.00	8.39	61.090	2487.20	89.29N	161.69E	==>	-75.66	
2600.00	8.39	61.090	2586.13	96.34N	174.47E	==>	-81.64	
2700.00	8.39	61.090	2685.06	103.40N	187.25E	==>	-87.62	
2800.00	8.39	61.090	2783.99	110.45N	200.02E	==>	-93.60	
2900.00	8.39	61.090	2882.92	117.51N	212.80E	==>	-99.58	
3000.00	8.39	61.090	2981.85	124.56N	225.57E	==>	-105.56	

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Vertical Section is from 0.00N 0.00E on azimuth 175.270 degrees  
Bottom hole distance is 9868.80 Feet on azimuth 175.27 degrees from Wellhead  
Calculation method uses Minimum Curvature method  
Prepared by Microsoft  
Date Printed: 27-Mar-2018



SYSDRILL  
Well Design Combined Report  
Wellbore: W EAST AULT R-18-19HN (PWB)



Interpolated Wellpath								
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	All Station Comments
3100.00	8.39	61.090	3080.78	131.62N	238.35E	==>	-111.54	
3200.00	8.39	61.090	3179.71	138.67N	251.13E	==>	-117.51	
3300.00	8.39	61.090	3278.63	145.73N	263.90E	==>	-123.49	
3400.00	8.39	61.090	3377.56	152.78N	276.68E	==>	-129.47	
3500.00	8.39	61.090	3476.49	159.84N	289.46E	==>	-135.45	
3600.00	8.39	61.090	3575.42	166.89N	302.23E	==>	-141.43	
3700.00	8.39	61.090	3674.35	173.95N	315.01E	==>	-147.41	
3800.00	8.39	61.090	3773.28	181.00N	327.78E	==>	-153.39	
3900.00	8.39	61.090	3872.21	188.06N	340.56E	==>	-159.36	
4000.00	8.39	61.090	3971.14	195.11N	353.34E	==>	-165.34	
4100.00	8.39	61.090	4070.07	202.17N	366.11E	==>	-171.32	
4200.00	8.39	61.090	4169.00	209.22N	378.89E	==>	-177.30	
4300.00	8.39	61.090	4267.93	216.28N	391.67E	==>	-183.28	
4400.00	8.39	61.090	4366.86	223.33N	404.44E	==>	-189.26	
4500.00	8.39	61.090	4465.79	230.39N	417.22E	==>	-195.24	
4600.00	8.39	61.090	4564.71	237.44N	429.99E	==>	-201.21	
4700.00	8.39	61.090	4663.64	244.50N	442.77E	==>	-207.19	
4800.00	8.39	61.090	4762.57	251.55N	455.55E	==>	-213.17	
4900.00	8.39	61.090	4861.50	258.61N	468.32E	==>	-219.15	
5000.00	8.39	61.090	4960.43	265.66N	481.10E	==>	-225.13	
5100.00	8.39	61.090	5059.36	272.72N	493.88E	==>	-231.11	
5200.00	8.39	61.090	5158.29	279.77N	506.65E	==>	-237.09	
5300.00	8.39	61.090	5257.22	286.83N	519.43E	==>	-243.06	
5400.00	8.39	61.090	5356.15	293.88N	532.20E	==>	-249.04	
5500.00	8.39	61.090	5455.08	300.94N	544.98E	==>	-255.02	
5600.00	8.39	61.090	5554.01	307.99N	557.76E	==>	-261.00	
5700.00	8.39	61.090	5652.94	315.05N	570.53E	==>	-266.98	
5800.00	8.39	61.090	5751.87	322.10N	583.31E	==>	-272.96	
5900.00	8.39	61.090	5850.79	329.16N	596.09E	==>	-278.94	
6000.00	8.39	61.090	5949.72	336.22N	608.86E	==>	-284.92	
6100.00	8.39	61.090	6048.65	343.27N	621.64E	==>	-290.89	
6200.00	8.39	61.090	6147.58	350.33N	634.41E	==>	-296.87	
6300.00	8.39	61.090	6246.51	357.38N	647.19E	==>	-302.85	
6400.00	8.39	61.090	6345.44	364.44N	659.97E	==>	-308.83	
6500.00	8.39	61.090	6444.37	371.49N	672.74E	==>	-314.81	
6600.00	8.39	61.090	6543.30	378.55N	685.52E	==>	-320.79	
6700.00	7.91	68.370	6642.24	385.49N	698.30E	10.00	-326.65	
6800.00	10.24	133.990	6741.21	381.84N	711.12E	10.00	-321.97	
6900.00	18.60	157.150	6838.05	360.92N	723.74E	10.00	-300.08	
7000.00	28.03	165.700	6929.81	323.37N	735.76E	10.00	-261.65	
7100.00	37.74	170.150	7013.70	270.31N	746.83E	10.00	-207.86	
7200.00	47.56	172.970	7087.16	203.36N	756.61E	10.00	-140.34	
7300.00	57.43	175.030	7147.98	124.56N	764.79E	10.00	-61.14	
7400.00	67.32	176.670	7194.30	36.31N	771.14E	10.00	27.34	
7500.00	77.23	178.090	7224.71	58.73S	775.45E	10.00	122.41	
7600.00	87.14	179.400	7238.28	157.65S	777.60E	10.00	221.17	
7700.00	90.15	179.790	7238.82	257.63S	778.07E	==>	320.86	
7800.00	90.15	179.790	7238.56	357.63S	778.44E	==>	420.54	
7900.00	90.15	179.790	7238.30	457.63S	778.80E	==>	520.23	
8000.00	90.15	179.790	7238.04	557.63S	779.17E	==>	619.92	
8100.00	90.15	179.790	7237.78	657.63S	779.53E	==>	719.61	
8200.00	90.15	179.790	7237.52	757.63S	779.89E	==>	819.30	
8300.00	90.15	179.790	7237.26	857.63S	780.26E	==>	918.99	
8400.00	90.15	179.790	7237.01	957.63S	780.62E	==>	1018.68	
8500.00	90.15	179.790	7236.75	1057.63S	780.99E	==>	1118.37	
8600.00	90.15	179.790	7236.49	1157.63S	781.35E	==>	1218.06	
8700.00	90.15	179.790	7236.23	1257.62S	781.72E	==>	1317.75	
8800.00	90.15	179.790	7235.97	1357.62S	782.08E	==>	1417.44	
8900.00	90.15	179.790	7235.71	1457.62S	782.45E	==>	1517.13	

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Vertical Section is from 0.00N 0.00E on azimuth 175.270 degrees  
Bottom hole distance is 9868.80 Feet on azimuth 175.27 degrees from Wellhead  
Calculation method uses Minimum Curvature method  
Prepared by Microsoft  
Date Printed: 27-Mar-2018



SYSDRILL  
Well Design Combined Report  
Wellbore: W EAST AULT R-18-19HN (PWB)



Interpolated Wellpath								
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	All Station Comments
9000.00	90.15	179.790	7235.45	1557.62S	782.81E	==>	1616.81	
9100.00	90.15	179.790	7235.19	1657.62S	783.17E	==>	1716.50	
9200.00	90.15	179.790	7234.93	1757.62S	783.54E	==>	1816.19	
9300.00	90.15	179.790	7234.67	1857.62S	783.90E	==>	1915.88	
9400.00	90.15	179.790	7234.41	1957.62S	784.27E	==>	2015.57	
9500.00	90.15	179.790	7234.15	2057.62S	784.63E	==>	2115.26	
9600.00	90.15	179.790	7233.90	2157.62S	785.00E	==>	2214.95	
9700.00	90.15	179.790	7233.64	2257.61S	785.36E	==>	2314.64	
9800.00	90.15	179.790	7233.38	2357.61S	785.72E	==>	2414.33	
9900.00	90.15	179.790	7233.12	2457.61S	786.09E	==>	2514.02	
10000.00	90.15	179.790	7232.86	2557.61S	786.45E	==>	2613.71	
10100.00	90.15	179.790	7232.60	2657.61S	786.82E	==>	2713.39	
10200.00	90.15	179.790	7232.34	2757.61S	787.18E	==>	2813.08	
10300.00	90.15	179.790	7232.08	2857.61S	787.55E	==>	2912.77	
10400.00	90.15	179.790	7231.82	2957.61S	787.91E	==>	3012.46	
10500.00	90.15	179.790	7231.56	3057.61S	788.28E	==>	3112.15	
10600.00	90.15	179.790	7231.30	3157.61S	788.64E	==>	3211.84	
10700.00	90.15	179.790	7231.05	3257.60S	789.00E	==>	3311.53	
10800.00	90.15	179.790	7230.79	3357.60S	789.37E	==>	3411.22	
10900.00	90.15	179.790	7230.53	3457.60S	789.73E	==>	3510.91	
11000.00	90.15	179.790	7230.27	3557.60S	790.10E	==>	3610.60	
11100.00	90.15	179.790	7230.01	3657.60S	790.46E	==>	3710.29	
11200.00	90.15	179.790	7229.75	3757.60S	790.83E	==>	3809.98	
11300.00	90.15	179.790	7229.49	3857.60S	791.19E	==>	3909.66	
11400.00	90.15	179.790	7229.23	3957.60S	791.56E	==>	4009.35	
11500.00	90.15	179.790	7228.97	4057.60S	791.92E	==>	4109.04	
11600.00	90.15	179.790	7228.71	4157.60S	792.28E	==>	4208.73	
11700.00	90.15	179.790	7228.45	4257.59S	792.65E	==>	4308.42	
11800.00	90.15	179.790	7228.19	4357.59S	793.01E	==>	4408.11	
11900.00	90.15	179.790	7227.94	4457.59S	793.38E	==>	4507.80	
12000.00	90.15	179.790	7227.68	4557.59S	793.74E	==>	4607.49	
12100.00	90.15	179.790	7227.42	4657.59S	794.11E	==>	4707.18	
12200.00	90.15	179.790	7227.16	4757.59S	794.47E	==>	4806.87	
12300.00	90.15	179.790	7226.90	4857.59S	794.84E	==>	4906.56	
12400.00	90.15	179.790	7226.64	4957.59S	795.20E	==>	5006.24	
12500.00	90.15	179.790	7226.38	5057.59S	795.56E	==>	5105.93	
12600.00	90.15	179.790	7226.12	5157.59S	795.93E	==>	5205.62	
12700.00	90.15	179.790	7225.86	5257.58S	796.29E	==>	5305.31	
12800.00	90.15	179.790	7225.60	5357.58S	796.66E	==>	5405.00	
12900.00	90.15	179.790	7225.34	5457.58S	797.02E	==>	5504.69	
13000.00	90.15	179.790	7225.09	5557.58S	797.39E	==>	5604.38	
13100.00	90.15	179.790	7224.83	5657.58S	797.75E	==>	5704.07	
13200.00	90.15	179.790	7224.57	5757.58S	798.12E	==>	5803.76	
13300.00	90.15	179.790	7224.31	5857.58S	798.48E	==>	5903.45	
13400.00	90.15	179.790	7224.05	5957.58S	798.84E	==>	6003.14	
13500.00	90.15	179.790	7223.79	6057.58S	799.21E	==>	6102.83	
13600.00	90.15	179.790	7223.53	6157.58S	799.57E	==>	6202.51	
13700.00	90.15	179.790	7223.27	6257.57S	799.94E	==>	6302.20	
13800.00	90.15	179.790	7223.01	6357.57S	800.30E	==>	6401.89	
13900.00	90.15	179.790	7222.75	6457.57S	800.67E	==>	6501.58	
14000.00	90.15	179.790	7222.49	6557.57S	801.03E	==>	6601.27	
14100.00	90.15	179.790	7222.23	6657.57S	801.40E	==>	6700.96	
14200.00	90.15	179.790	7221.98	6757.57S	801.76E	==>	6800.65	
14300.00	90.15	179.790	7221.72	6857.57S	802.12E	==>	6900.34	
14400.00	90.15	179.790	7221.46	6957.57S	802.49E	==>	7000.03	
14500.00	90.15	179.790	7221.20	7057.57S	802.85E	==>	7099.72	
14600.00	90.15	179.790	7220.94	7157.57S	803.22E	==>	7199.41	
14700.00	90.15	179.790	7220.68	7257.56S	803.58E	==>	7299.10	
14800.00	90.15	179.790	7220.42	7357.56S	803.95E	==>	7398.78	

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Vertical Section is from 0.00N 0.00E on azimuth 175.270 degrees  
Bottom hole distance is 9868.80 Feet on azimuth 175.27 degrees from Wellhead  
Calculation method uses Minimum Curvature method  
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Date Printed: 27-Mar-2018



SYS DRILL  
Well Design Combined Report  
Wellbore: W EAST AULT R-18-19HN (PWB)



Interpolated Wellpath								
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	All Station Comments
14900.00	90.15	179.790	7220.16	7457.56S	804.31E	==>	7498.47	
15000.00	90.15	179.790	7219.90	7557.56S	804.68E	==>	7598.16	
15100.00	90.15	179.790	7219.64	7657.56S	805.04E	==>	7697.85	
15200.00	90.15	179.790	7219.38	7757.56S	805.40E	==>	7797.54	
15300.00	90.15	179.790	7219.12	7857.56S	805.77E	==>	7897.23	
15400.00	90.15	179.790	7218.87	7957.56S	806.13E	==>	7996.92	
15500.00	90.15	179.790	7218.61	8057.56S	806.50E	==>	8096.61	
15600.00	90.15	179.790	7218.35	8157.56S	806.86E	==>	8196.30	
15700.00	90.15	179.790	7218.09	8257.55S	807.23E	==>	8295.99	
15800.00	90.15	179.790	7217.83	8357.55S	807.59E	==>	8395.68	
15900.00	90.15	179.790	7217.57	8457.55S	807.95E	==>	8495.36	
16000.00	90.15	179.790	7217.31	8557.55S	808.32E	==>	8595.05	
16100.00	90.15	179.790	7217.05	8657.55S	808.68E	==>	8694.74	
16200.00	90.15	179.790	7216.79	8757.55S	809.05E	==>	8794.43	
16300.00	90.15	179.790	7216.53	8857.55S	809.41E	==>	8894.12	
16400.00	90.15	179.790	7216.27	8957.55S	809.78E	==>	8993.81	
16500.00	90.15	179.790	7216.02	9057.55S	810.14E	==>	9093.50	
16600.00	90.15	179.790	7215.76	9157.55S	810.51E	==>	9193.19	
16700.00	90.15	179.790	7215.50	9257.54S	810.87E	==>	9292.88	
16800.00	90.15	179.790	7215.24	9357.54S	811.23E	==>	9392.57	
16900.00	90.15	179.790	7214.98	9457.54S	811.60E	==>	9492.26	
17000.00	90.15	179.790	7214.72	9557.54S	811.96E	==>	9591.95	
17100.00	90.15	179.790	7214.46	9657.54S	812.33E	==>	9691.63	
17200.00	90.15	179.790	7214.20	9757.54S	812.69E	==>	9791.32	
17277.72	90.15	179.790	7214.00	9835.26S	812.98E	==>	9868.80	

All data is in Feet unless otherwise stated  
Coordinates are from Slot MD's are from Rig and TVD's are from Rig ( Planned Datum #1 4934.0ft above Mean Sea Level )  
Vertical Section is from 0.00N 0.00E on azimuth 175.270 degrees  
Bottom hole distance is 9868.80 Feet on azimuth 175.27 degrees from Wellhead  
Calculation method uses Minimum Curvature method  
Prepared by Microsoft  
Date Printed: 27-Mar-2018



SYSDRILL  
Well Design Combined Report  
Wellbore: W EAST AULT R-18-19HN (PWB)



Targets							
Name	North[ft]	East[ft]	TVD[ft]	Latitude	Longitude	Northing	Easting
EAST AULT R-18-19HN - BHL	9835.26S	812.98E	7214.00	40.55465900	-104.70194800	1445901.08	3221755.68
EAST AULT R-18-19HN - EP	187.93S	777.82E	7239.00	40.58113900	-104.70176200	1455548.14	3221720.52

Survey Tool Program					
Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model
620314	Planned	1500.00	1497.91	WdW Rate Gyro	Standard
620313	Planned	17277.72	7214.00	ISCWSA MWD	Rev 4 + SAG + FLT

Notes