

BAYSWATER E & P, LLC

Location	Weld County, CO	Slot	EAST AULT W-18-19HC
Field	WATTENBERG	Well	W EAST AULT W-18-19HC
Installation	East Ault Pad	Wellbore	W EAST AULT W-18-19HC (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	75.44	1025.00	S 0.00	W 0.00	0.00	0.00
End of Build	1910.77	17.72	75.44	1896.72	N 34.16	E 131.48	2.00	-9.15
End of Hold	6973.18	17.72	75.44	6719.08	N 421.53	E 1622.41	0.00	-112.88
Target EAST A...C - EP	8022.52	90.12	179.79	7373.00	S 213.79	E 1827.53	9.00	549.49
T.D. & Target EAS...BHL	17662.65	90.12	179.79	7353.00	S 9853.84	E 1862.51	0.00	10028.31

East (Feet) ->

-800 0 800 1600 2400 3200
Scale 1 cm = 400 ft

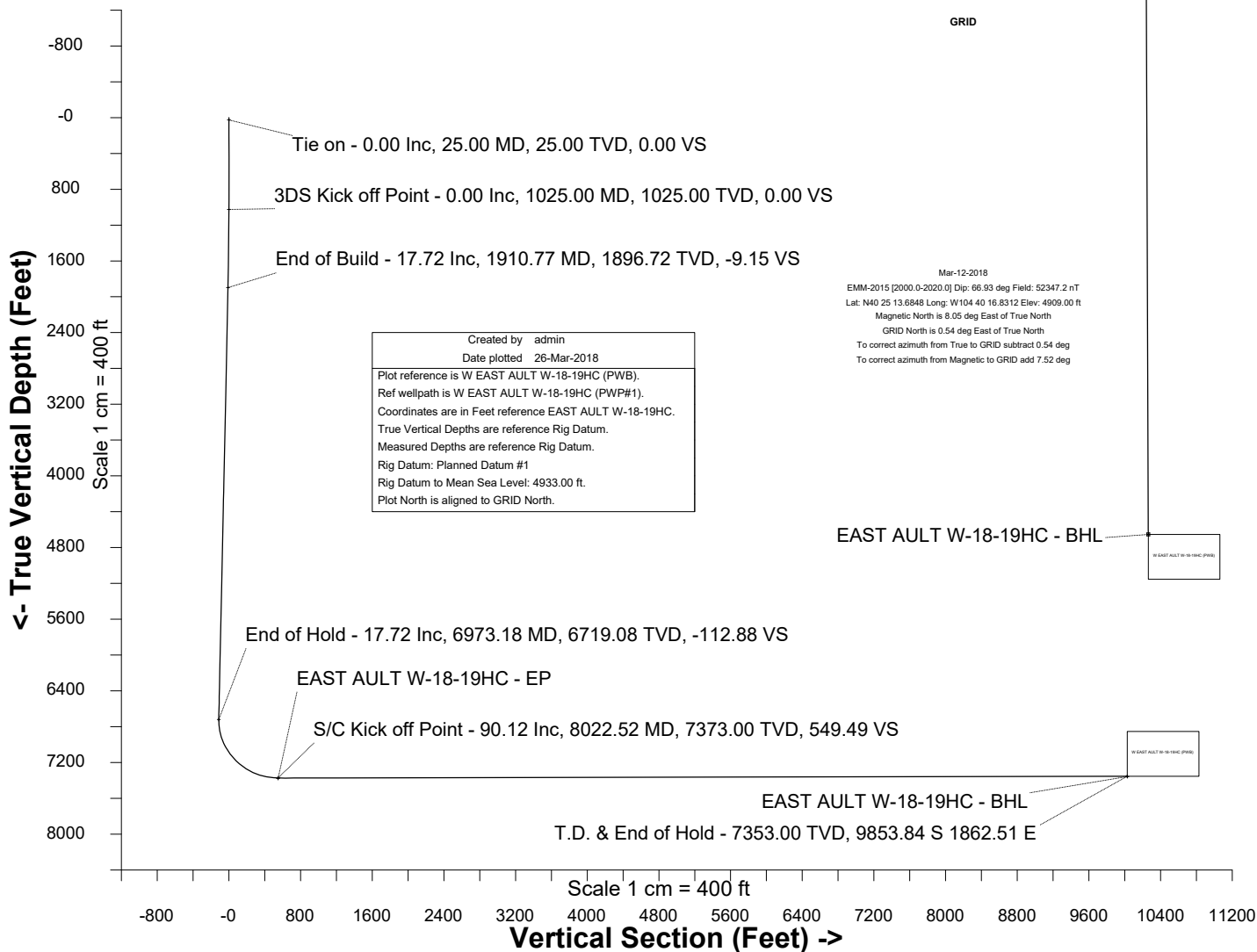
Surface 0.00 N 0.00 E

EAST AULT W-18-19HC - EP

N
GRID

<- North(Feet)

Scale 1 cm = 400 ft



Azimuth 169.30 with reference 0.00 N, 0.00 E from EAST AULT W-18-19HC



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



Wellhead Details

Name	Latitude	Longitude	Northing	Easting	North	East	Slot Elevation Above Ground
EAST AULT W-18-19HC	40.58166900	-104.70417700	1455735.1856	3221048.0137	58642.72N	9669.18W	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	1455735.19	3221048.01
1025.00	0.00	75.440	1025.00	0.00N	0.00E	==>	0.00	1455735.19	3221048.01
1910.77	17.72	75.440	1896.72	34.16N	131.48E	2.00	-9.15	1455769.35	3221179.49
6973.18	17.72	75.440	6719.08	421.53N	1622.41E	==>	-112.88	1456156.71	3222670.38
8022.52	90.12	179.790	7373.00	213.79S	1827.53E	9.00	549.49	1455521.40	3222875.49
17662.65	90.12	179.790	7353.00	9853.84S	1862.51E	==>	10028.31	1445881.63	3222910.48

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	75.440	1099.99	0.25N	0.95E	2.00	-0.07	
1200.00	3.50	75.440	1199.89	1.34N	5.17E	2.00	-0.36	
1300.00	5.50	75.440	1299.58	3.32N	12.77E	2.00	-0.89	
1400.00	7.50	75.440	1398.93	6.16N	23.72E	2.00	-1.65	
1500.00	9.50	75.440	1497.83	9.88N	38.03E	2.00	-2.65	
1600.00	11.50	75.440	1596.15	14.46N	55.66E	2.00	-3.87	
1700.00	13.50	75.440	1693.77	19.90N	76.61E	2.00	-5.33	
1800.00	15.50	75.440	1790.58	26.20N	100.84E	2.00	-7.02	
1900.00	17.50	75.440	1886.46	33.34N	128.33E	2.00	-8.93	
2000.00	17.72	75.440	1981.72	40.99N	157.76E	==>	-10.98	
2100.00	17.72	75.440	2076.98	48.64N	187.21E	==>	-13.03	
2200.00	17.72	75.440	2172.24	56.29N	216.66E	==>	-15.07	
2300.00	17.72	75.440	2267.50	63.95N	246.12E	==>	-17.12	
2400.00	17.72	75.440	2362.75	71.60N	275.57E	==>	-19.17	
2500.00	17.72	75.440	2458.01	79.25N	305.02E	==>	-21.22	
2600.00	17.72	75.440	2553.27	86.90N	334.47E	==>	-23.27	
2700.00	17.72	75.440	2648.53	94.55N	363.92E	==>	-25.32	
2800.00	17.72	75.440	2743.79	102.21N	393.37E	==>	-27.37	
2900.00	17.72	75.440	2839.04	109.86N	422.82E	==>	-29.42	
3000.00	17.72	75.440	2934.30	117.51N	452.27E	==>	-31.47	

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 4933.0ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 169.300 degrees
Bottom hole distance is 10028.31 Feet on azimuth 169.30 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Microsoft
Date Printed: 26-Mar-2018



SYSDRILL
Well Design Combined Report
Wellbore: W EAST AULT W-18-19HC (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	17.72	75.440	3029.56	125.16N	481.72E	==>	-33.52	
3200.00	17.72	75.440	3124.82	132.81N	511.17E	==>	-35.56	
3300.00	17.72	75.440	3220.08	140.46N	540.63E	==>	-37.61	
3400.00	17.72	75.440	3315.33	148.12N	570.08E	==>	-39.66	
3500.00	17.72	75.440	3410.59	155.77N	599.53E	==>	-41.71	
3600.00	17.72	75.440	3505.85	163.42N	628.98E	==>	-43.76	
3700.00	17.72	75.440	3601.11	171.07N	658.43E	==>	-45.81	
3800.00	17.72	75.440	3696.37	178.72N	687.88E	==>	-47.86	
3900.00	17.72	75.440	3791.62	186.38N	717.33E	==>	-49.91	
4000.00	17.72	75.440	3886.88	194.03N	746.78E	==>	-51.96	
4100.00	17.72	75.440	3982.14	201.68N	776.23E	==>	-54.00	
4200.00	17.72	75.440	4077.40	209.33N	805.68E	==>	-56.05	
4300.00	17.72	75.440	4172.66	216.98N	835.14E	==>	-58.10	
4400.00	17.72	75.440	4267.91	224.64N	864.59E	==>	-60.15	
4500.00	17.72	75.440	4363.17	232.29N	894.04E	==>	-62.20	
4600.00	17.72	75.440	4458.43	239.94N	923.49E	==>	-64.25	
4700.00	17.72	75.440	4553.69	247.59N	952.94E	==>	-66.30	
4800.00	17.72	75.440	4648.95	255.24N	982.39E	==>	-68.35	
4900.00	17.72	75.440	4744.20	262.90N	1011.84E	==>	-70.40	
5000.00	17.72	75.440	4839.46	270.55N	1041.29E	==>	-72.45	
5100.00	17.72	75.440	4934.72	278.20N	1070.74E	==>	-74.49	
5200.00	17.72	75.440	5029.98	285.85N	1100.19E	==>	-76.54	
5300.00	17.72	75.440	5125.24	293.50N	1129.65E	==>	-78.59	
5400.00	17.72	75.440	5220.49	301.16N	1159.10E	==>	-80.64	
5500.00	17.72	75.440	5315.75	308.81N	1188.55E	==>	-82.69	
5600.00	17.72	75.440	5411.01	316.46N	1218.00E	==>	-84.74	
5700.00	17.72	75.440	5506.27	324.11N	1247.45E	==>	-86.79	
5800.00	17.72	75.440	5601.53	331.76N	1276.90E	==>	-88.84	
5900.00	17.72	75.440	5696.78	339.42N	1306.35E	==>	-90.89	
6000.00	17.72	75.440	5792.04	347.07N	1335.80E	==>	-92.94	
6100.00	17.72	75.440	5887.30	354.72N	1365.25E	==>	-94.98	
6200.00	17.72	75.440	5982.56	362.37N	1394.70E	==>	-97.03	
6300.00	17.72	75.440	6077.82	370.02N	1424.16E	==>	-99.08	
6400.00	17.72	75.440	6173.07	377.67N	1453.61E	==>	-101.13	
6500.00	17.72	75.440	6268.33	385.33N	1483.06E	==>	-103.18	
6600.00	17.72	75.440	6363.59	392.98N	1512.51E	==>	-105.23	
6700.00	17.72	75.440	6458.85	400.63N	1541.96E	==>	-107.28	
6800.00	17.72	75.440	6554.11	408.28N	1571.41E	==>	-109.33	
6900.00	17.72	75.440	6649.36	415.93N	1600.86E	==>	-111.38	
7000.00	17.30	83.350	6744.66	423.02N	1630.32E	9.00	-112.87	
7100.00	18.56	112.590	6839.99	418.62N	1659.85E	9.00	-103.06	
7200.00	23.39	134.060	6933.47	398.66N	1688.87E	9.00	-78.06	
7300.00	30.11	147.490	7022.80	363.64N	1716.67E	9.00	-38.48	
7400.00	37.72	156.160	7105.78	314.41N	1742.56E	9.00	14.70	
7500.00	45.77	162.220	7180.36	252.19N	1765.91E	9.00	80.18	
7600.00	54.07	166.790	7244.72	178.50N	1786.14E	9.00	156.33	
7700.00	62.50	170.480	7297.25	95.18N	1802.76E	9.00	241.30	
7800.00	71.02	173.650	7336.68	4.26N	1815.35E	9.00	332.97	
7900.00	79.59	176.500	7362.02	92.02S	1823.61E	9.00	429.11	
8000.00	88.18	179.190	7372.67	191.28S	1827.33E	9.00	527.33	
8100.00	90.12	179.790	7372.84	291.27S	1827.81E	==>	625.67	
8200.00	90.12	179.790	7372.63	391.27S	1828.17E	==>	724.00	
8300.00	90.12	179.790	7372.42	491.27S	1828.53E	==>	822.33	
8400.00	90.12	179.790	7372.22	591.27S	1828.90E	==>	920.65	
8500.00	90.12	179.790	7372.01	691.27S	1829.26E	==>	1018.98	
8600.00	90.12	179.790	7371.80	791.27S	1829.62E	==>	1117.31	
8700.00	90.12	179.790	7371.59	891.27S	1829.99E	==>	1215.63	
8800.00	90.12	179.790	7371.39	991.26S	1830.35E	==>	1313.96	
8900.00	90.12	179.790	7371.18	1091.26S	1830.71E	==>	1412.29	

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Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Planned Datum #1 4933.0ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 169.300 degrees
Bottom hole distance is 10028.31 Feet on azimuth 169.30 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Microsoft
Date Printed: 26-Mar-2018



SYS DRILL
Well Design Combined Report
Wellbore: W EAST AULT W-18-19HC (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	90.12	179.790	7370.97	1191.26S	1831.07E	==>	1510.61	
9100.00	90.12	179.790	7370.76	1291.26S	1831.44E	==>	1608.94	
9200.00	90.12	179.790	7370.56	1391.26S	1831.80E	==>	1707.27	
9300.00	90.12	179.790	7370.35	1491.26S	1832.16E	==>	1805.59	
9400.00	90.12	179.790	7370.14	1591.26S	1832.53E	==>	1903.92	
9500.00	90.12	179.790	7369.93	1691.26S	1832.89E	==>	2002.25	
9600.00	90.12	179.790	7369.73	1791.26S	1833.25E	==>	2100.57	
9700.00	90.12	179.790	7369.52	1891.26S	1833.61E	==>	2198.90	
9800.00	90.12	179.790	7369.31	1991.26S	1833.98E	==>	2297.23	
9900.00	90.12	179.790	7369.10	2091.26S	1834.34E	==>	2395.55	
10000.00	90.12	179.790	7368.90	2191.25S	1834.70E	==>	2493.88	
10100.00	90.12	179.790	7368.69	2291.25S	1835.07E	==>	2592.21	
10200.00	90.12	179.790	7368.48	2391.25S	1835.43E	==>	2690.53	
10300.00	90.12	179.790	7368.28	2491.25S	1835.79E	==>	2788.86	
10400.00	90.12	179.790	7368.07	2591.25S	1836.16E	==>	2887.19	
10500.00	90.12	179.790	7367.86	2691.25S	1836.52E	==>	2985.52	
10600.00	90.12	179.790	7367.65	2791.25S	1836.88E	==>	3083.84	
10700.00	90.12	179.790	7367.45	2891.25S	1837.24E	==>	3182.17	
10800.00	90.12	179.790	7367.24	2991.25S	1837.61E	==>	3280.50	
10900.00	90.12	179.790	7367.03	3091.25S	1837.97E	==>	3378.82	
11000.00	90.12	179.790	7366.82	3191.25S	1838.33E	==>	3477.15	
11100.00	90.12	179.790	7366.62	3291.24S	1838.70E	==>	3575.48	
11200.00	90.12	179.790	7366.41	3391.24S	1839.06E	==>	3673.80	
11300.00	90.12	179.790	7366.20	3491.24S	1839.42E	==>	3772.13	
11400.00	90.12	179.790	7365.99	3591.24S	1839.78E	==>	3870.46	
11500.00	90.12	179.790	7365.79	3691.24S	1840.15E	==>	3968.78	
11600.00	90.12	179.790	7365.58	3791.24S	1840.51E	==>	4067.11	
11700.00	90.12	179.790	7365.37	3891.24S	1840.87E	==>	4165.44	
11800.00	90.12	179.790	7365.16	3991.24S	1841.24E	==>	4263.76	
11900.00	90.12	179.790	7364.96	4091.24S	1841.60E	==>	4362.09	
12000.00	90.12	179.790	7364.75	4191.24S	1841.96E	==>	4460.42	
12100.00	90.12	179.790	7364.54	4291.24S	1842.33E	==>	4558.74	
12200.00	90.12	179.790	7364.33	4391.24S	1842.69E	==>	4657.07	
12300.00	90.12	179.790	7364.13	4491.23S	1843.05E	==>	4755.40	
12400.00	90.12	179.790	7363.92	4591.23S	1843.41E	==>	4853.72	
12500.00	90.12	179.790	7363.71	4691.23S	1843.78E	==>	4952.05	
12600.00	90.12	179.790	7363.50	4791.23S	1844.14E	==>	5050.38	
12700.00	90.12	179.790	7363.30	4891.23S	1844.50E	==>	5148.70	
12800.00	90.12	179.790	7363.09	4991.23S	1844.87E	==>	5247.03	
12900.00	90.12	179.790	7362.88	5091.23S	1845.23E	==>	5345.36	
13000.00	90.12	179.790	7362.67	5191.23S	1845.59E	==>	5443.68	
13100.00	90.12	179.790	7362.47	5291.23S	1845.95E	==>	5542.01	
13200.00	90.12	179.790	7362.26	5391.23S	1846.32E	==>	5640.34	
13300.00	90.12	179.790	7362.05	5491.23S	1846.68E	==>	5738.66	
13400.00	90.12	179.790	7361.84	5591.22S	1847.04E	==>	5836.99	
13500.00	90.12	179.790	7361.64	5691.22S	1847.41E	==>	5935.32	
13600.00	90.12	179.790	7361.43	5791.22S	1847.77E	==>	6033.64	
13700.00	90.12	179.790	7361.22	5891.22S	1848.13E	==>	6131.97	
13800.00	90.12	179.790	7361.01	5991.22S	1848.50E	==>	6230.30	
13900.00	90.12	179.790	7360.81	6091.22S	1848.86E	==>	6328.62	
14000.00	90.12	179.790	7360.60	6191.22S	1849.22E	==>	6426.95	
14100.00	90.12	179.790	7360.39	6291.22S	1849.58E	==>	6525.28	
14200.00	90.12	179.790	7360.18	6391.22S	1849.95E	==>	6623.60	
14300.00	90.12	179.790	7359.98	6491.22S	1850.31E	==>	6721.93	
14400.00	90.12	179.790	7359.77	6591.22S	1850.67E	==>	6820.26	
14500.00	90.12	179.790	7359.56	6691.21S	1851.04E	==>	6918.58	
14600.00	90.12	179.790	7359.35	6791.21S	1851.40E	==>	7016.91	
14700.00	90.12	179.790	7359.15	6891.21S	1851.76E	==>	7115.24	
14800.00	90.12	179.790	7358.94	6991.21S	1852.12E	==>	7213.56	

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Vertical Section is from 0.00N 0.00E on azimuth 169.300 degrees
Bottom hole distance is 10028.31 Feet on azimuth 169.30 degrees from Wellhead
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Wellbore: W EAST AULT W-18-19HC (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	90.12	179.790	7358.73	7091.21S	1852.49E	==>	7311.89	
15000.00	90.12	179.790	7358.52	7191.21S	1852.85E	==>	7410.22	
15100.00	90.12	179.790	7358.32	7291.21S	1853.21E	==>	7508.54	
15200.00	90.12	179.790	7358.11	7391.21S	1853.58E	==>	7606.87	
15300.00	90.12	179.790	7357.90	7491.21S	1853.94E	==>	7705.20	
15400.00	90.12	179.790	7357.69	7591.21S	1854.30E	==>	7803.52	
15500.00	90.12	179.790	7357.49	7691.21S	1854.67E	==>	7901.85	
15600.00	90.12	179.790	7357.28	7791.21S	1855.03E	==>	8000.18	
15700.00	90.12	179.790	7357.07	7891.20S	1855.39E	==>	8098.50	
15800.00	90.12	179.790	7356.86	7991.20S	1855.75E	==>	8196.83	
15900.00	90.12	179.790	7356.66	8091.20S	1856.12E	==>	8295.16	
16000.00	90.12	179.790	7356.45	8191.20S	1856.48E	==>	8393.48	
16100.00	90.12	179.790	7356.24	8291.20S	1856.84E	==>	8491.81	
16200.00	90.12	179.790	7356.03	8391.20S	1857.21E	==>	8590.14	
16300.00	90.12	179.790	7355.83	8491.20S	1857.57E	==>	8688.46	
16400.00	90.12	179.790	7355.62	8591.20S	1857.93E	==>	8786.79	
16500.00	90.12	179.790	7355.41	8691.20S	1858.30E	==>	8885.12	
16600.00	90.12	179.790	7355.20	8791.20S	1858.66E	==>	8983.44	
16700.00	90.12	179.790	7355.00	8891.20S	1859.02E	==>	9081.77	
16800.00	90.12	179.790	7354.79	8991.19S	1859.38E	==>	9180.10	
16900.00	90.12	179.790	7354.58	9091.19S	1859.75E	==>	9278.42	
17000.00	90.12	179.790	7354.37	9191.19S	1860.11E	==>	9376.75	
17100.00	90.12	179.790	7354.17	9291.19S	1860.47E	==>	9475.08	
17200.00	90.12	179.790	7353.96	9391.19S	1860.84E	==>	9573.40	
17300.00	90.12	179.790	7353.75	9491.19S	1861.20E	==>	9671.73	
17400.00	90.12	179.790	7353.54	9591.19S	1861.56E	==>	9770.06	
17500.00	90.12	179.790	7353.34	9691.19S	1861.92E	==>	9868.39	
17600.00	90.12	179.790	7353.13	9791.19S	1862.29E	==>	9966.71	
17662.65	90.12	179.790	7353.00	9853.84S	1862.51E	==>	10028.31	

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 4933.0ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 169.300 degrees
Bottom hole distance is 10028.31 Feet on azimuth 169.30 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Microsoft
Date Printed: 26-Mar-2018



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



Targets							
Name	North[ft]	East[ft]	TVD[ft]	Latitude	Longitude	Northing	Easting
EAST AULT W-18-19HC - BHL	9853.84S	1862.51E	7353.00	40.55457700	-104.69779300	1445881.63	3222910.48
EAST AULT W-18-19HC - EP	213.79S	1827.53E	7373.00	40.58103700	-104.69760500	1455521.40	3222875.49

Survey Tool Program					
Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model
620359	Planned	1500.00	1497.83	WdW Rate Gyro	Standard
620358	Planned	17662.65	7353.00	ISCWSA MWD	Rev 4 + SAG + FLT

Notes