

BAYSWATER E & P, LLC

Location	Weld County, CO	Slot	EAST AULT X-18-19HN
Field	WATTENBERG	Well	W EAST AULT X-18-19HN
Installation	East Ault Pad	Wellbore	W EAST AULT X-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	78.68	1025.00	S 0.00	W 0.00	0.00	0.00
End of Build	1993.35	19.37	78.68	1975.01	N 31.82	E 158.95	2.00	0.63
End of Hold	6966.70	19.37	78.68	6666.95	N 355.57	E 1776.11	0.00	7.00
Target EAST A...N - EP	7905.03	90.18	179.79	7243.00	S 217.17	E 1977.56	10.00	608.47
T.D. & Target EAS...BHL	17544.45	90.18	179.79	7213.00	S 9856.48	E 2012.89	0.00	10059.92

East (Feet) ->

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

Surface 0.00 N 0.00 E

EAST AULT X-18-19HN - EP

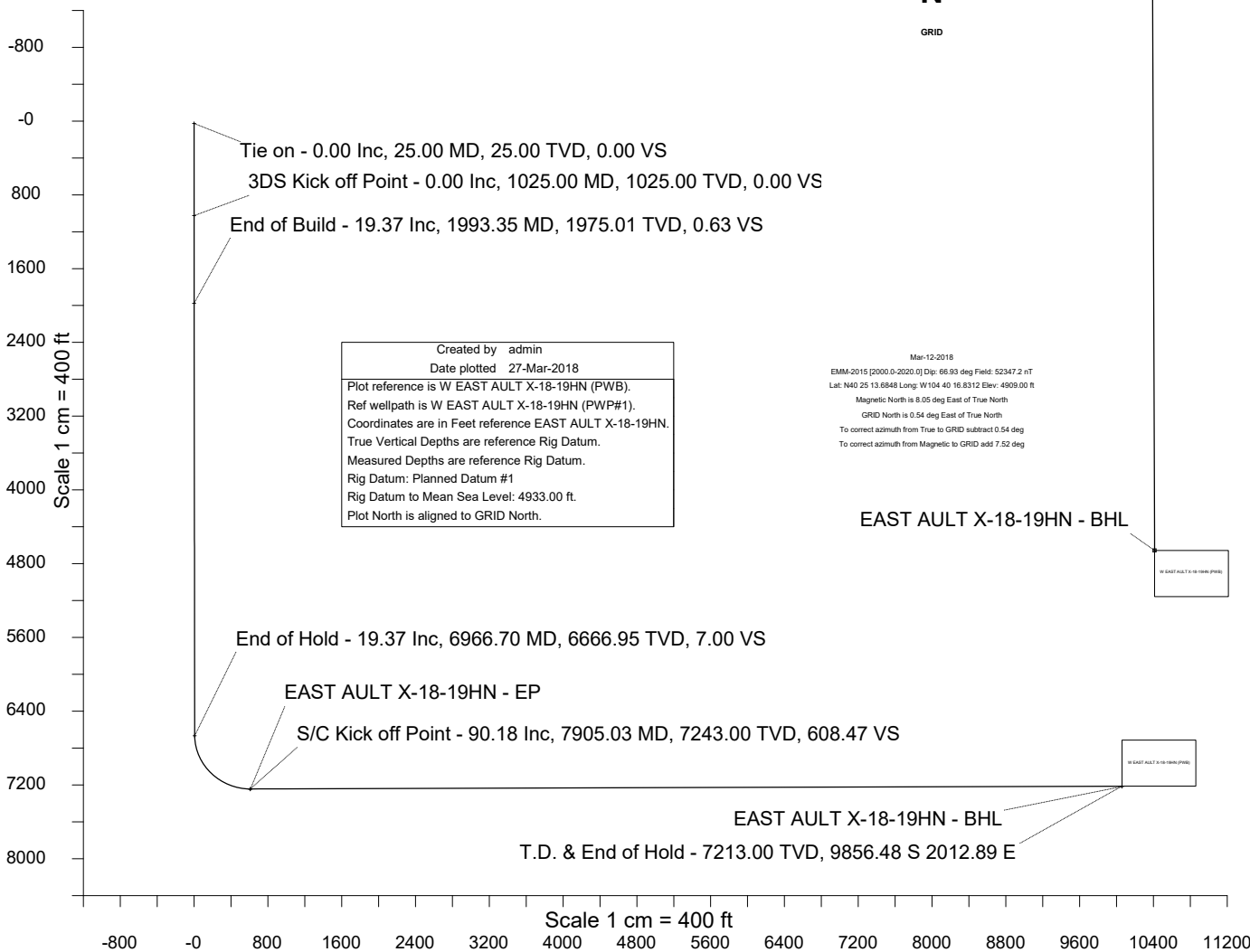
N

GRID

Scale 1 cm = 400 ft

<- North(Feet)

<- True Vertical Depth (Feet)



Azimuth 168.46 with reference 0.00 N, 0.00 E from EAST AULT X-18-19HN



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



Wellhead Details

Name	Latitude	Longitude	Northing	Easting	North	East	Slot Elevation Above Ground
EAST AULT X-18-19HN	40.58166800	-104.70412400	1455734.9534	3221062.7379	58642.49N	9654.45W	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	1455734.95	3221062.74
1025.00	0.00	78.680	1025.00	0.00N	0.00E	==>	0.00	1455734.95	3221062.74
1993.35	19.37	78.680	1975.01	31.82N	158.95E	2.00	0.63	1455766.77	3221221.69
6966.70	19.37	78.680	6666.95	355.57N	1776.11E	==>	7.00	1456090.51	3222838.80
7905.03	90.18	179.790	7243.00	217.17S	1977.56E	10.00	608.47	1455517.79	3223040.24
17544.45	90.18	179.790	7213.00	9856.48S	2012.89E	==>	10059.92	1445878.75	3223075.57

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	78.680	1099.99	0.19N	0.96E	2.00	0.00	
1200.00	3.50	78.680	1199.89	1.05N	5.24E	2.00	0.02	
1300.00	5.50	78.680	1299.58	2.59N	12.93E	2.00	0.05	
1400.00	7.50	78.680	1398.93	4.81N	24.03E	2.00	0.09	
1500.00	9.50	78.680	1497.83	7.71N	38.52E	2.00	0.15	
1600.00	11.50	78.680	1596.15	11.29N	56.39E	2.00	0.22	
1700.00	13.50	78.680	1693.77	15.54N	77.61E	2.00	0.31	
1800.00	15.50	78.680	1790.58	20.45N	102.16E	2.00	0.40	
1900.00	17.50	78.680	1886.46	26.03N	130.01E	2.00	0.51	
2000.00	19.37	78.680	1981.29	32.25N	161.12E	==>	0.64	
2100.00	19.37	78.680	2075.63	38.76N	193.63E	==>	0.76	
2200.00	19.37	78.680	2169.97	45.27N	226.15E	==>	0.89	
2300.00	19.37	78.680	2264.31	51.78N	258.67E	==>	1.02	
2400.00	19.37	78.680	2358.65	58.29N	291.18E	==>	1.15	
2500.00	19.37	78.680	2453.00	64.80N	323.70E	==>	1.28	
2600.00	19.37	78.680	2547.34	71.31N	356.21E	==>	1.40	
2700.00	19.37	78.680	2641.68	77.82N	388.73E	==>	1.53	
2800.00	19.37	78.680	2736.02	84.33N	421.25E	==>	1.66	
2900.00	19.37	78.680	2830.36	90.84N	453.76E	==>	1.79	
3000.00	19.37	78.680	2924.70	97.35N	486.28E	==>	1.92	

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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 168.460 degrees
Bottom hole distance is 10059.92 Feet on azimuth 168.46 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 X-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	19.37	78.680	3019.04	103.86N	518.80E	==>	2.05	
3200.00	19.37	78.680	3113.39	110.37N	551.31E	==>	2.17	
3300.00	19.37	78.680	3207.73	116.88N	583.83E	==>	2.30	
3400.00	19.37	78.680	3302.07	123.39N	616.35E	==>	2.43	
3500.00	19.37	78.680	3396.41	129.90N	648.86E	==>	2.56	
3600.00	19.37	78.680	3490.75	136.41N	681.38E	==>	2.69	
3700.00	19.37	78.680	3585.09	142.92N	713.90E	==>	2.82	
3800.00	19.37	78.680	3679.43	149.43N	746.41E	==>	2.94	
3900.00	19.37	78.680	3773.78	155.94N	778.93E	==>	3.07	
4000.00	19.37	78.680	3868.12	162.45N	811.45E	==>	3.20	
4100.00	19.37	78.680	3962.46	168.96N	843.96E	==>	3.33	
4200.00	19.37	78.680	4056.80	175.47N	876.48E	==>	3.46	
4300.00	19.37	78.680	4151.14	181.98N	908.99E	==>	3.58	
4400.00	19.37	78.680	4245.48	188.49N	941.51E	==>	3.71	
4500.00	19.37	78.680	4339.82	195.00N	974.03E	==>	3.84	
4600.00	19.37	78.680	4434.17	201.50N	1006.54E	==>	3.97	
4700.00	19.37	78.680	4528.51	208.01N	1039.06E	==>	4.10	
4800.00	19.37	78.680	4622.85	214.52N	1071.58E	==>	4.23	
4900.00	19.37	78.680	4717.19	221.03N	1104.09E	==>	4.35	
5000.00	19.37	78.680	4811.53	227.54N	1136.61E	==>	4.48	
5100.00	19.37	78.680	4905.87	234.05N	1169.13E	==>	4.61	
5200.00	19.37	78.680	5000.21	240.56N	1201.64E	==>	4.74	
5300.00	19.37	78.680	5094.56	247.07N	1234.16E	==>	4.87	
5400.00	19.37	78.680	5188.90	253.58N	1266.68E	==>	5.00	
5500.00	19.37	78.680	5283.24	260.09N	1299.19E	==>	5.12	
5600.00	19.37	78.680	5377.58	266.60N	1331.71E	==>	5.25	
5700.00	19.37	78.680	5471.92	273.11N	1364.23E	==>	5.38	
5800.00	19.37	78.680	5566.26	279.62N	1396.74E	==>	5.51	
5900.00	19.37	78.680	5660.60	286.13N	1429.26E	==>	5.64	
6000.00	19.37	78.680	5754.95	292.64N	1461.77E	==>	5.76	
6100.00	19.37	78.680	5849.29	299.15N	1494.29E	==>	5.89	
6200.00	19.37	78.680	5943.63	305.66N	1526.81E	==>	6.02	
6300.00	19.37	78.680	6037.97	312.17N	1559.32E	==>	6.15	
6400.00	19.37	78.680	6132.31	318.68N	1591.84E	==>	6.28	
6500.00	19.37	78.680	6226.65	325.19N	1624.36E	==>	6.41	
6600.00	19.37	78.680	6320.99	331.70N	1656.87E	==>	6.53	
6700.00	19.37	78.680	6415.34	338.21N	1689.39E	==>	6.66	
6800.00	19.37	78.680	6509.68	344.72N	1721.91E	==>	6.79	
6900.00	19.37	78.680	6604.02	351.23N	1754.42E	==>	6.92	
7000.00	19.04	88.760	6698.40	356.77N	1786.96E	10.00	8.00	
7100.00	21.27	117.350	6792.50	348.76N	1819.46E	10.00	22.34	
7200.00	27.12	137.380	6883.83	323.59N	1851.09E	10.00	53.33	
7300.00	34.79	149.950	6969.61	282.02N	1880.88E	10.00	100.02	
7400.00	43.32	158.270	7047.24	225.32N	1907.93E	10.00	161.00	
7500.00	52.29	164.260	7114.37	155.19N	1931.42E	10.00	234.40	
7600.00	61.50	168.930	7168.95	73.79N	1950.63E	10.00	318.00	
7700.00	70.84	172.840	7209.31	16.43S	1964.99E	10.00	409.27	
7800.00	80.26	176.330	7234.25	112.71S	1974.05E	10.00	505.42	
7900.00	89.70	179.630	7242.99	212.14S	1977.54E	10.00	603.53	
8000.00	90.18	179.790	7242.70	312.14S	1977.91E	==>	701.59	
8100.00	90.18	179.790	7242.39	412.14S	1978.28E	==>	799.64	
8200.00	90.18	179.790	7242.08	512.14S	1978.64E	==>	897.69	
8300.00	90.18	179.790	7241.77	612.14S	1979.01E	==>	995.74	
8400.00	90.18	179.790	7241.46	712.13S	1979.38E	==>	1093.79	
8500.00	90.18	179.790	7241.15	812.13S	1979.74E	==>	1191.84	
8600.00	90.18	179.790	7240.84	912.13S	1980.11E	==>	1289.89	
8700.00	90.18	179.790	7240.53	1012.13S	1980.47E	==>	1387.94	
8800.00	90.18	179.790	7240.21	1112.13S	1980.84E	==>	1485.99	
8900.00	90.18	179.790	7239.90	1212.13S	1981.21E	==>	1584.04	

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Vertical Section is from 0.00N 0.00E on azimuth 168.460 degrees
Bottom hole distance is 10059.92 Feet on azimuth 168.46 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 X-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	90.18	179.790	7239.59	1312.13S	1981.57E	==>	1682.09	
9100.00	90.18	179.790	7239.28	1412.13S	1981.94E	==>	1780.14	
9200.00	90.18	179.790	7238.97	1512.13S	1982.31E	==>	1878.19	
9300.00	90.18	179.790	7238.66	1612.12S	1982.67E	==>	1976.24	
9400.00	90.18	179.790	7238.35	1712.12S	1983.04E	==>	2074.29	
9500.00	90.18	179.790	7238.04	1812.12S	1983.41E	==>	2172.34	
9600.00	90.18	179.790	7237.72	1912.12S	1983.77E	==>	2270.39	
9700.00	90.18	179.790	7237.41	2012.12S	1984.14E	==>	2368.44	
9800.00	90.18	179.790	7237.10	2112.12S	1984.51E	==>	2466.49	
9900.00	90.18	179.790	7236.79	2212.12S	1984.87E	==>	2564.54	
10000.00	90.18	179.790	7236.48	2312.12S	1985.24E	==>	2662.59	
10100.00	90.18	179.790	7236.17	2412.11S	1985.61E	==>	2760.64	
10200.00	90.18	179.790	7235.86	2512.11S	1985.97E	==>	2858.69	
10300.00	90.18	179.790	7235.55	2612.11S	1986.34E	==>	2956.73	
10400.00	90.18	179.790	7235.24	2712.11S	1986.70E	==>	3054.78	
10500.00	90.18	179.790	7234.92	2812.11S	1987.07E	==>	3152.83	
10600.00	90.18	179.790	7234.61	2912.11S	1987.44E	==>	3250.88	
10700.00	90.18	179.790	7234.30	3012.11S	1987.80E	==>	3348.93	
10800.00	90.18	179.790	7233.99	3112.11S	1988.17E	==>	3446.98	
10900.00	90.18	179.790	7233.68	3212.11S	1988.54E	==>	3545.03	
11000.00	90.18	179.790	7233.37	3312.10S	1988.90E	==>	3643.08	
11100.00	90.18	179.790	7233.06	3412.10S	1989.27E	==>	3741.13	
11200.00	90.18	179.790	7232.75	3512.10S	1989.64E	==>	3839.18	
11300.00	90.18	179.790	7232.43	3612.10S	1990.00E	==>	3937.23	
11400.00	90.18	179.790	7232.12	3712.10S	1990.37E	==>	4035.28	
11500.00	90.18	179.790	7231.81	3812.10S	1990.74E	==>	4133.33	
11600.00	90.18	179.790	7231.50	3912.10S	1991.10E	==>	4231.38	
11700.00	90.18	179.790	7231.19	4012.10S	1991.47E	==>	4329.43	
11800.00	90.18	179.790	7230.88	4112.10S	1991.83E	==>	4427.48	
11900.00	90.18	179.790	7230.57	4212.09S	1992.20E	==>	4525.53	
12000.00	90.18	179.790	7230.26	4312.09S	1992.57E	==>	4623.58	
12100.00	90.18	179.790	7229.94	4412.09S	1992.93E	==>	4721.63	
12200.00	90.18	179.790	7229.63	4512.09S	1993.30E	==>	4819.68	
12300.00	90.18	179.790	7229.32	4612.09S	1993.67E	==>	4917.73	
12400.00	90.18	179.790	7229.01	4712.09S	1994.03E	==>	5015.78	
12500.00	90.18	179.790	7228.70	4812.09S	1994.40E	==>	5113.83	
12600.00	90.18	179.790	7228.39	4912.09S	1994.77E	==>	5211.88	
12700.00	90.18	179.790	7228.08	5012.08S	1995.13E	==>	5309.93	
12800.00	90.18	179.790	7227.77	5112.08S	1995.50E	==>	5407.98	
12900.00	90.18	179.790	7227.45	5212.08S	1995.87E	==>	5506.03	
13000.00	90.18	179.790	7227.14	5312.08S	1996.23E	==>	5604.08	
13100.00	90.18	179.790	7226.83	5412.08S	1996.60E	==>	5702.13	
13200.00	90.18	179.790	7226.52	5512.08S	1996.97E	==>	5800.18	
13300.00	90.18	179.790	7226.21	5612.08S	1997.33E	==>	5898.23	
13400.00	90.18	179.790	7225.90	5712.08S	1997.70E	==>	5996.28	
13500.00	90.18	179.790	7225.59	5812.08S	1998.06E	==>	6094.33	
13600.00	90.18	179.790	7225.28	5912.07S	1998.43E	==>	6192.38	
13700.00	90.18	179.790	7224.96	6012.07S	1998.80E	==>	6290.43	
13800.00	90.18	179.790	7224.65	6112.07S	1999.16E	==>	6388.48	
13900.00	90.18	179.790	7224.34	6212.07S	1999.53E	==>	6486.53	
14000.00	90.18	179.790	7224.03	6312.07S	1999.90E	==>	6584.58	
14100.00	90.18	179.790	7223.72	6412.07S	2000.26E	==>	6682.63	
14200.00	90.18	179.790	7223.41	6512.07S	2000.63E	==>	6780.68	
14300.00	90.18	179.790	7223.10	6612.07S	2001.00E	==>	6878.73	
14400.00	90.18	179.790	7222.79	6712.07S	2001.36E	==>	6976.78	
14500.00	90.18	179.790	7222.48	6812.06S	2001.73E	==>	7074.83	
14600.00	90.18	179.790	7222.16	6912.06S	2002.10E	==>	7172.88	
14700.00	90.18	179.790	7221.85	7012.06S	2002.46E	==>	7270.93	
14800.00	90.18	179.790	7221.54	7112.06S	2002.83E	==>	7368.98	

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Vertical Section is from 0.00N 0.00E on azimuth 168.460 degrees
Bottom hole distance is 10059.92 Feet on azimuth 168.46 degrees from Wellhead
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Wellbore: W EAST AULT X-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	90.18	179.790	7221.23	7212.06S	2003.19E	==>	7467.03	
15000.00	90.18	179.790	7220.92	7312.06S	2003.56E	==>	7565.08	
15100.00	90.18	179.790	7220.61	7412.06S	2003.93E	==>	7663.13	
15200.00	90.18	179.790	7220.30	7512.06S	2004.29E	==>	7761.18	
15300.00	90.18	179.790	7219.99	7612.05S	2004.66E	==>	7859.23	
15400.00	90.18	179.790	7219.67	7712.05S	2005.03E	==>	7957.28	
15500.00	90.18	179.790	7219.36	7812.05S	2005.39E	==>	8055.33	
15600.00	90.18	179.790	7219.05	7912.05S	2005.76E	==>	8153.38	
15700.00	90.18	179.790	7218.74	8012.05S	2006.13E	==>	8251.43	
15800.00	90.18	179.790	7218.43	8112.05S	2006.49E	==>	8349.48	
15900.00	90.18	179.790	7218.12	8212.05S	2006.86E	==>	8447.53	
16000.00	90.18	179.790	7217.81	8312.05S	2007.23E	==>	8545.58	
16100.00	90.18	179.790	7217.50	8412.05S	2007.59E	==>	8643.63	
16200.00	90.18	179.790	7217.18	8512.04S	2007.96E	==>	8741.68	
16300.00	90.18	179.790	7216.87	8612.04S	2008.33E	==>	8839.73	
16400.00	90.18	179.790	7216.56	8712.04S	2008.69E	==>	8937.78	
16500.00	90.18	179.790	7216.25	8812.04S	2009.06E	==>	9035.83	
16600.00	90.18	179.790	7215.94	8912.04S	2009.42E	==>	9133.88	
16700.00	90.18	179.790	7215.63	9012.04S	2009.79E	==>	9231.93	
16800.00	90.18	179.790	7215.32	9112.04S	2010.16E	==>	9329.98	
16900.00	90.18	179.790	7215.01	9212.04S	2010.52E	==>	9428.03	
17000.00	90.18	179.790	7214.69	9312.04S	2010.89E	==>	9526.08	
17100.00	90.18	179.790	7214.38	9412.03S	2011.26E	==>	9624.13	
17200.00	90.18	179.790	7214.07	9512.03S	2011.62E	==>	9722.18	
17300.00	90.18	179.790	7213.76	9612.03S	2011.99E	==>	9820.23	
17400.00	90.18	179.790	7213.45	9712.03S	2012.36E	==>	9918.28	
17500.00	90.18	179.790	7213.14	9812.03S	2012.72E	==>	10016.33	
17544.45	90.18	179.790	7213.00	9856.48S	2012.89E	==>	10059.92	

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 168.460 degrees
Bottom hole distance is 10059.92 Feet on azimuth 168.46 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 X-18-19HN (PWB)



Targets							
Name	North[ft]	East[ft]	TVD[ft]	Latitude	Longitude	Northing	Easting
EAST AULT X-18-19HN - BHL	9856.48S	2012.89E	7213.00	40.55456500	-104.69719900	1445878.75	3223075.57
EAST AULT X-18-19HN - EP	217.17S	1977.56E	7243.00	40.58102300	-104.69701200	1455517.79	3223040.24

Survey Tool Program					
Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model
620373	Planned	1500.00	1497.83	WdW Rate Gyro	Standard
620372	Planned	17544.45	7213.00	ISCWSA MWD	Rev 4 + SAG + FLT

Notes