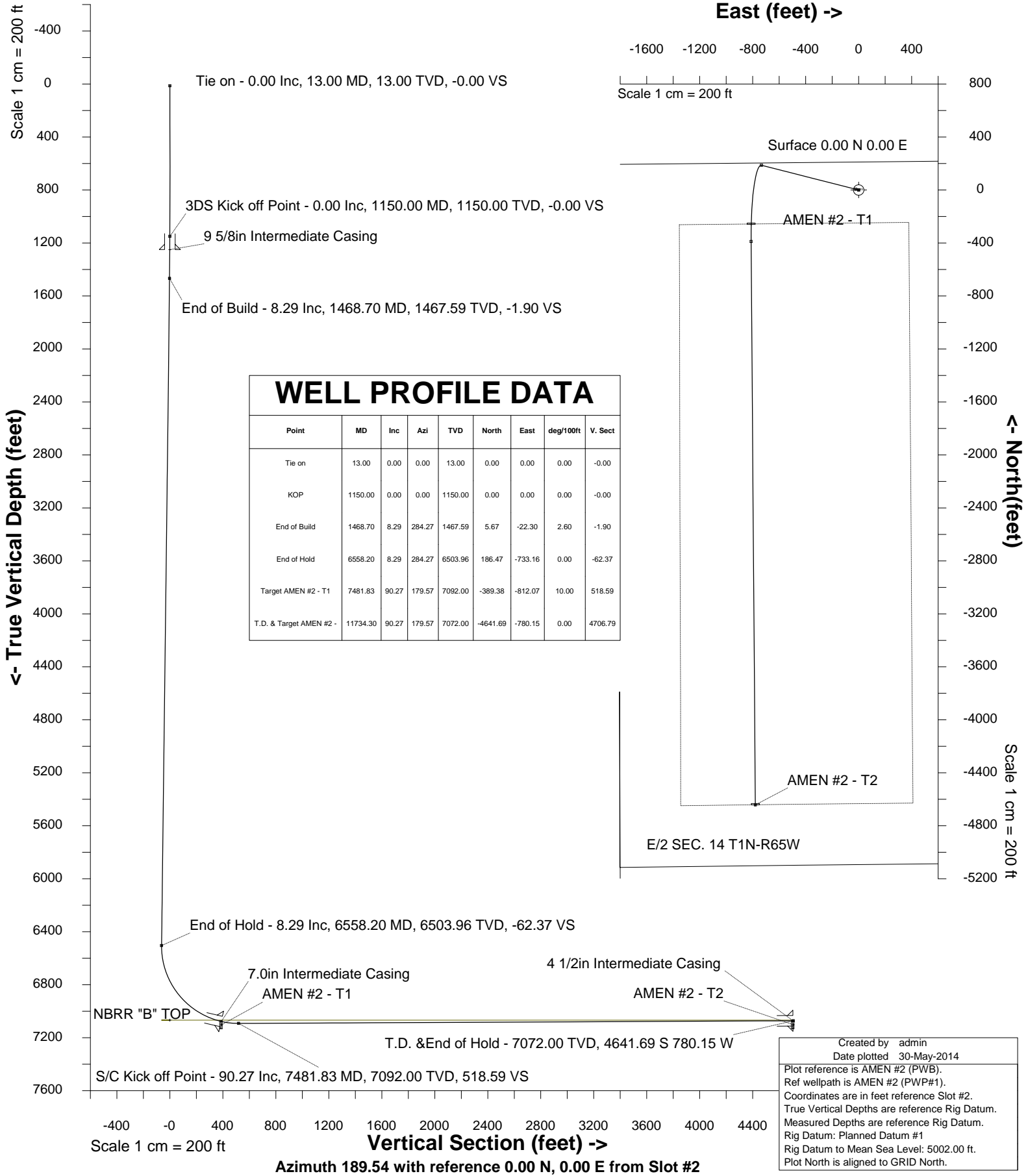


VERDAD OIL & GAS CORP

Location WELD COUNTY, CO
 Field Wattenburg
 Installation AMEN PAD

Slot Slot #2
 Well AMEN #2
 Wellbore AMEN #2 (PWB)



INTEGRATED PETROLEUM TECHNOLOGIES, INC
 SYSDRILL
 Well Design Combined Report
 Wellbore: AMEN #2 (PWB)



Wellhead Details							
Name	Northing	Easting	Latitude	Longitude	North	East	Elevation Above Inst.
Slot #2	1265242.7244	3245050.1164	40.05816000	-104.62454000	31525.09N	88728.93E	-0.00

Declination			
Date	Source	Time	
14-May-2014	IGRF Model [1900.0-2015.0]		10:32

Site Details				
Name	Northing	Easting	Coord System Name	North Alignment
AMEN PAD	1233718.6881	3156324.1575	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
13.00	0.00	0.000	13.00	0.00N	0.00E		0.00	1265242.72	3245050.12
1150.00	0.00	0.000	1150.00	0.00N	0.00E	==>	0.00	1265242.72	3245050.12
1468.70	8.29	284.270	1467.59	5.67N	22.30W	2.60	-1.90	1265248.39	3245027.82
6558.20	8.29	284.270	6503.96	186.47N	733.16W	==>	-62.37	1265429.19	3244316.99
7481.83	90.27	179.570	7092.00	389.38S	812.07W	10.00	518.59	1264853.36	3244238.08
11734.30	90.27	179.570	7072.00	4641.69S	780.15W	==>	4706.79	1260601.22	3244270.00

Interpolated Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Northing	Easting
0.00	0.00	0.000	0.00	0.00N	0.00E		0.00	1265242.72	3245050.12
13.00	0.00	0.000	13.00	0.00N	0.00E	==>	0.00	1265242.72	3245050.12
100.00	0.00	0.000	100.00	0.00N	0.00E	==>	0.00	1265242.72	3245050.12
200.00	0.00	0.000	200.00	0.00N	0.00E	==>	0.00	1265242.72	3245050.12
300.00	0.00	0.000	300.00	0.00N	0.00E	==>	0.00	1265242.72	3245050.12
400.00	0.00	0.000	400.00	0.00N	0.00E	==>	0.00	1265242.72	3245050.12
500.00	0.00	0.000	500.00	0.00N	0.00E	==>	0.00	1265242.72	3245050.12
600.00	0.00	0.000	600.00	0.00N	0.00E	==>	0.00	1265242.72	3245050.12
700.00	0.00	0.000	700.00	0.00N	0.00E	==>	0.00	1265242.72	3245050.12
800.00	0.00	0.000	800.00	0.00N	0.00E	==>	0.00	1265242.72	3245050.12
900.00	0.00	0.000	900.00	0.00N	0.00E	==>	0.00	1265242.72	3245050.12
1000.00	0.00	0.000	1000.00	0.00N	0.00E	==>	0.00	1265242.72	3245050.12
1100.00	0.00	0.000	1100.00	0.00N	0.00E	==>	0.00	1265242.72	3245050.12
1137.00	0.00	0.000	1137.00	0.00N	0.00E	==>	0.00	1265242.72	3245050.12
1150.00	0.00	0.000	1150.00	0.00N	0.00E	==>	0.00	1265242.72	3245050.12
1237.00	2.26	284.270	1236.98	0.42N	1.66W	2.60	-0.14	1265243.15	3245048.45
1337.00	4.86	284.270	1336.78	1.95N	7.68W	2.60	-0.65	1265244.68	3245042.43
1437.00	7.46	284.270	1436.19	4.60N	18.09W	2.60	-1.54	1265247.32	3245032.03
1468.70	8.29	284.270	1467.59	5.67N	22.30W	2.60	-1.90	1265248.39	3245027.82
1500.00	8.29	284.270	1498.56	6.78N	26.67W	==>	-2.27	1265249.51	3245023.45
1600.00	8.29	284.270	1597.52	10.34N	40.63W	==>	-3.46	1265253.06	3245009.48
1700.00	8.29	284.270	1696.48	13.89N	54.60W	==>	-4.65	1265256.61	3244995.52
1800.00	8.29	284.270	1795.43	17.44N	68.57W	==>	-5.83	1265260.16	3244981.55
1900.00	8.29	284.270	1894.39	20.99N	82.54W	==>	-7.02	1265263.72	3244967.58
2000.00	8.29	284.270	1993.34	24.54N	96.50W	==>	-8.21	1265267.27	3244953.62
2100.00	8.29	284.270	2092.30	28.10N	110.47W	==>	-9.40	1265270.82	3244939.65
2200.00	8.29	284.270	2191.26	31.65N	124.44W	==>	-10.59	1265274.37	3244925.68
2300.00	8.29	284.270	2290.21	35.20N	138.40W	==>	-11.77	1265277.93	3244911.72
2400.00	8.29	284.270	2389.17	38.75N	152.37W	==>	-12.96	1265281.48	3244897.75
2500.00	8.29	284.270	2488.12	42.31N	166.34W	==>	-14.15	1265285.03	3244883.78
2600.00	8.29	284.270	2587.08	45.86N	180.31W	==>	-15.34	1265288.58	3244869.82
2700.00	8.29	284.270	2686.04	49.41N	194.27W	==>	-16.53	1265292.13	3244855.85
2800.00	8.29	284.270	2784.99	52.96N	208.24W	==>	-17.72	1265295.69	3244841.88
2900.00	8.29	284.270	2883.95	56.52N	222.21W	==>	-18.90	1265299.24	3244827.92
3000.00	8.29	284.270	2982.90	60.07N	236.18W	==>	-20.09	1265302.79	3244813.95
3100.00	8.29	284.270	3081.86	63.62N	250.14W	==>	-21.28	1265306.34	3244799.98
3200.00	8.29	284.270	3180.82	67.17N	264.11W	==>	-22.47	1265309.90	3244786.02

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 Vertical Section is from 0.00N 0.00E on azimuth 189.540 degrees
 Bottom hole distance is 4706.79 Feet on azimuth 189.54 degrees from Wellhead
 Calculation method uses Minimum Curvature method
 Prepared by Integrated Petroleum Technologies, Inc.
 Date Printed: 30-May-2014

INTEGRATED PETROLEUM TECHNOLOGIES, INC

SYSDRILL

Well Design Combined Report

Wellbore: AMEN #2 (PWB)



Interpolated Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Northing	Easting
3300.00	8.29	284.270	3279.77	70.73N	278.08W	==>	-23.66	1265313.45	3244772.05
3400.00	8.29	284.270	3378.73	74.28N	292.04W	==>	-24.85	1265317.00	3244758.08
3500.00	8.29	284.270	3477.68	77.83N	306.01W	==>	-26.03	1265320.55	3244744.12
3600.00	8.29	284.270	3576.64	81.38N	319.98W	==>	-27.22	1265324.11	3244730.15
3700.00	8.29	284.270	3675.60	84.94N	333.95W	==>	-28.41	1265327.66	3244716.18
3800.00	8.29	284.270	3774.55	88.49N	347.91W	==>	-29.60	1265331.21	3244702.22
3900.00	8.29	284.270	3873.51	92.04N	361.88W	==>	-30.79	1265334.76	3244688.25
4000.00	8.29	284.270	3972.46	95.59N	375.85W	==>	-31.98	1265338.32	3244674.28
4100.00	8.29	284.270	4071.42	99.15N	389.81W	==>	-33.16	1265341.87	3244660.32
4200.00	8.29	284.270	4170.38	102.70N	403.78W	==>	-34.35	1265345.42	3244646.35
4300.00	8.29	284.270	4269.33	106.25N	417.75W	==>	-35.54	1265348.97	3244632.38
4400.00	8.29	284.270	4368.29	109.80N	431.72W	==>	-36.73	1265352.52	3244618.42
4500.00	8.29	284.270	4467.24	113.36N	445.68W	==>	-37.92	1265356.08	3244604.45
4600.00	8.29	284.270	4566.20	116.91N	459.65W	==>	-39.11	1265359.63	3244590.48
4700.00	8.29	284.270	4665.16	120.46N	473.62W	==>	-40.29	1265363.18	3244576.52
4800.00	8.29	284.270	4764.11	124.01N	487.59W	==>	-41.48	1265366.73	3244562.55
4900.00	8.29	284.270	4863.07	127.57N	501.55W	==>	-42.67	1265370.29	3244548.58
5000.00	8.29	284.270	4962.02	131.12N	515.52W	==>	-43.86	1265373.84	3244534.62
5100.00	8.29	284.270	5060.98	134.67N	529.49W	==>	-45.05	1265377.39	3244520.65
5200.00	8.29	284.270	5159.94	138.22N	543.45W	==>	-46.23	1265380.94	3244506.68
5300.00	8.29	284.270	5258.89	141.78N	557.42W	==>	-47.42	1265384.50	3244492.72
5400.00	8.29	284.270	5357.85	145.33N	571.39W	==>	-48.61	1265388.05	3244478.75
5500.00	8.29	284.270	5456.80	148.88N	585.36W	==>	-49.80	1265391.60	3244464.78
5600.00	8.29	284.270	5555.76	152.43N	599.32W	==>	-50.99	1265395.15	3244450.82
5700.00	8.29	284.270	5654.72	155.99N	613.29W	==>	-52.18	1265398.70	3244436.85
5800.00	8.29	284.270	5753.67	159.54N	627.26W	==>	-53.36	1265402.26	3244422.88
5900.00	8.29	284.270	5852.63	163.09N	641.22W	==>	-54.55	1265405.81	3244408.92
6000.00	8.29	284.270	5951.58	166.64N	655.19W	==>	-55.74	1265409.36	3244394.95
6100.00	8.29	284.270	6050.54	170.20N	669.16W	==>	-56.93	1265412.91	3244380.98
6200.00	8.29	284.270	6149.50	173.75N	683.13W	==>	-58.12	1265416.47	3244367.02
6300.00	8.29	284.270	6248.45	177.30N	697.09W	==>	-59.31	1265420.02	3244353.05
6400.00	8.29	284.270	6347.41	180.85N	711.06W	==>	-60.49	1265423.57	3244339.08
6500.00	8.29	284.270	6446.37	184.41N	725.03W	==>	-61.68	1265427.12	3244325.12
6558.20	8.29	284.270	6503.96	186.47N	733.16W	==>	-62.37	1265429.19	3244316.99
6600.00	8.29	254.950	6545.34	186.43N	738.99W	10.00	-61.37	1265429.15	3244311.16
6700.00	14.47	212.690	6643.48	174.01N	752.73W	10.00	-46.84	1265416.73	3244297.42
6800.00	23.43	198.580	6738.01	144.57N	765.85W	10.00	-15.63	1265387.29	3244284.30
6900.00	32.97	192.150	6826.06	99.01N	777.94W	10.00	31.30	1265341.73	3244272.20
7000.00	42.71	188.390	6904.95	38.70N	788.65W	10.00	92.55	1265281.43	3244261.50
7100.00	52.52	185.810	6972.28	34.51S	797.63W	10.00	166.24	1265208.22	3244252.52
7200.00	62.39	183.830	7026.01	118.40S	804.63W	10.00	250.13	1265124.33	3244245.52
7300.00	72.27	182.190	7064.51	210.43S	809.42W	10.00	341.68	1265032.30	3244240.73
7400.00	82.17	180.720	7086.61	307.80S	811.87W	10.00	438.11	1264934.94	3244238.28
7481.83	90.27	179.570	7092.00	389.38S	812.07W	10.00	518.59	1264853.36	3244238.08
7500.00	90.27	179.570	7091.91	407.55S	811.93W	==>	536.49	1264835.19	3244238.21
7600.00	90.27	179.570	7091.44	507.55S	811.18W	==>	634.98	1264735.20	3244238.96
7700.00	90.27	179.570	7090.97	607.54S	810.43W	==>	733.47	1264635.20	3244239.72
7800.00	90.27	179.570	7090.50	707.54S	809.68W	==>	831.96	1264535.21	3244240.47
7900.00	90.27	179.570	7090.03	807.54S	808.93W	==>	930.45	1264435.22	3244241.22
8000.00	90.27	179.570	7089.56	907.53S	808.18W	==>	1028.93	1264335.23	3244241.97
8100.00	90.27	179.570	7089.09	1007.53S	807.43W	==>	1127.42	1264235.24	3244242.72
8200.00	90.27	179.570	7088.62	1107.52S	806.68W	==>	1225.91	1264135.24	3244243.47
8300.00	90.27	179.570	7088.15	1207.52S	805.93W	==>	1324.40	1264035.25	3244244.22
8400.00	90.27	179.570	7087.68	1307.52S	805.18W	==>	1422.89	1263935.26	3244244.97
8500.00	90.27	179.570	7087.21	1407.51S	804.43W	==>	1521.38	1263835.27	3244245.72
8600.00	90.27	179.570	7086.74	1507.51S	803.68W	==>	1619.87	1263735.28	3244246.47
8700.00	90.27	179.570	7086.27	1607.50S	802.93W	==>	1718.35	1263635.28	3244247.22
8800.00	90.27	179.570	7085.80	1707.50S	802.18W	==>	1816.84	1263535.29	3244247.97
8900.00	90.27	179.570	7085.33	1807.50S	801.42W	==>	1915.33	1263435.30	3244248.72
9000.00	90.27	179.570	7084.86	1907.49S	800.67W	==>	2013.82	1263335.31	3244249.47

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 Vertical Section is from 0.00N 0.00E on azimuth 189.540 degrees
 Bottom hole distance is 4706.79 Feet on azimuth 189.54 degrees from Wellhead
 Calculation method uses Minimum Curvature method
 Prepared by Integrated Petroleum Technologies, Inc.
 Date Printed: 30-May-2014

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 SYSDRILL
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Interpolated Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Northing	Easting
9100.00	90.27	179.570	7084.39	2007.49S	799.92W	==>	2112.31	1263235.31	3244250.22
9200.00	90.27	179.570	7083.92	2107.49S	799.17W	==>	2210.80	1263135.32	3244250.98
9300.00	90.27	179.570	7083.45	2207.48S	798.42W	==>	2309.28	1263035.33	3244251.73
9400.00	90.27	179.570	7082.98	2307.48S	797.67W	==>	2407.77	1262935.34	3244252.48
9500.00	90.27	179.570	7082.51	2407.47S	796.92W	==>	2506.26	1262835.35	3244253.23
9600.00	90.27	179.570	7082.04	2507.47S	796.17W	==>	2604.75	1262735.35	3244253.98
9700.00	90.27	179.570	7081.57	2607.47S	795.42W	==>	2703.24	1262635.36	3244254.73
9800.00	90.27	179.570	7081.10	2707.46S	794.67W	==>	2801.73	1262535.37	3244255.48
9900.00	90.27	179.570	7080.63	2807.46S	793.92W	==>	2900.22	1262435.38	3244256.23
10000.00	90.27	179.570	7080.16	2907.45S	793.17W	==>	2998.70	1262335.39	3244256.98
10100.00	90.27	179.570	7079.69	3007.45S	792.42W	==>	3097.19	1262235.39	3244257.73
10200.00	90.27	179.570	7079.22	3107.45S	791.67W	==>	3195.68	1262135.40	3244258.48
10300.00	90.27	179.570	7078.75	3207.44S	790.92W	==>	3294.17	1262035.41	3244259.23
10400.00	90.27	179.570	7078.28	3307.44S	790.16W	==>	3392.66	1261935.42	3244259.98
10500.00	90.27	179.570	7077.81	3407.43S	789.41W	==>	3491.15	1261835.43	3244260.73
10600.00	90.27	179.570	7077.33	3507.43S	788.66W	==>	3589.64	1261735.43	3244261.48
10700.00	90.27	179.570	7076.86	3607.43S	787.91W	==>	3688.12	1261635.44	3244262.24
10800.00	90.27	179.570	7076.39	3707.42S	787.16W	==>	3786.61	1261535.45	3244262.99
10900.00	90.27	179.570	7075.92	3807.42S	786.41W	==>	3885.10	1261435.46	3244263.74
11000.00	90.27	179.570	7075.45	3907.41S	785.66W	==>	3983.59	1261335.46	3244264.49
11100.00	90.27	179.570	7074.98	4007.41S	784.91W	==>	4082.08	1261235.47	3244265.24
11200.00	90.27	179.570	7074.51	4107.41S	784.16W	==>	4180.57	1261135.48	3244265.99
11300.00	90.27	179.570	7074.04	4207.40S	783.41W	==>	4279.05	1261035.49	3244266.74
11400.00	90.27	179.570	7073.57	4307.40S	782.66W	==>	4377.54	1260935.50	3244267.49
11500.00	90.27	179.570	7073.10	4407.39S	781.91W	==>	4476.03	1260835.50	3244268.24
11600.00	90.27	179.570	7072.63	4507.39S	781.16W	==>	4574.52	1260735.51	3244268.99
11700.00	90.27	179.570	7072.16	4607.39S	780.41W	==>	4673.01	1260635.52	3244269.74
11734.30	90.27	179.570	7072.00	4641.69S	780.15W	==>	4706.79	1260601.22	3244270.00

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 Bottom hole distance is 4706.79 Feet on azimuth 189.54 degrees from Wellhead
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 Date Printed: 30-May-2014



Hole Sections								
Diameter [in]	Start MD[ft]	Start TVD[ft]	Start North[ft]	Start East[ft]	End MD[ft]	End TVD[ft]	End North[ft]	End East[ft]
13 1/2	13.00	13.00	0.00N	0.00E	1250.00	1249.97	0.56N	2.20W
8 3/4	1250.00	1249.97	0.56N	2.20W	7348.00	7077.22	256.68S	810.90W
6 1/8	7348.00	7077.22	256.68S	810.90W	11731.32	7072.01	4638.70S	780.17W

Casings								
Name	Top MD[ft]	Top TVD[ft]	Top North[ft]	Top East[ft]	Shoe MD[ft]	Shoe TVD[ft]	Shoe North[ft]	Shoe East[ft]
9 5/8in Intermediate Casing	13.00	13.00	0.00N	0.00E	1250.00	1249.97	0.56N	2.20W
7.0in Intermediate Casing	13.00	13.00	0.00N	0.00E	7348.00	7077.22	256.68S	810.90W
4 1/2in Intermediate Casing	7148.00	6999.88	73.59S	801.25W	11731.32	7072.01	4638.71S	780.17W

Targets								
Name	North[ft]	East[ft]	TVD[ft]	Latitude	Longitude	Northing	Easting	Last Revised
AMEN #2 - T1	259.38S	812.07W	7102.00	40.05747000	-104.62745000	1264983.36	3244238.08	14-May-2014
AMEN #2 - T2	4641.69S	780.15W	7102.00	40.04544000	-104.62749000	1260601.22	3244270.00	14-May-2014

Formations						
Formation Name	MD[ft]	TVD[ft]	Dip Angle[deg]	Dip Azimuth[deg]	Incidence Angle[deg]	Remarks
NBRR "B" TOP			0.00	0.00		

Survey Tool Program						
Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model	
192497	Planned	11734.30	7072.00	WdW Rate Gyro	Standard	

Notes

SYSDRILL
Closest Approach + Clearance Factor Summary Report
Wellbore: AMEN #2 (PWB)



Ellipse separations are reported ONLY if BOTH wells have uncertainty data
Only Depth and Magnetic Reference Field error terms are correlated across tie points
Scan limit is calculated on CENTRE to CENTRE distance

Summary data uses Closest Approach clearance calculation for all minima
Hole size/Casings ARE included
Hole size/Casings are NOT subtracted from Centre-Centre distance
Confidence limit of 95.00% / 2.80 SD.

Wellbore			
Name	Created	Last Revised	
AMEN #2 (PWB)	14-May-2014	30-May-2014	

Well		
Name	Government ID	Last Revised
AMEN #2		14-May-2014

Slot						
Name	Grid Northing	Grid Easting	Latitude	Longitude	North	East
Slot #2	1265242.7244	3245050.1164	40.05816000	-104.62454000	31525.09N	88728.93E

Installation					
Name	Easting	Northing	Coord System Name	North Alignment	
AMEN PAD	3156324.1575	1233718.6881	CO83-NF on NORTH AMERICAN DATUM 1983 datum	Grid	

Field					
Name	Easting	Northing	Coord System Name	North Alignment	
Wattenburg	3156324.1603	1233718.6881	CO83-NF on NORTH AMERICAN DATUM 1983 datum	Grid	

Clearance Summary								
Offset Wellbore	Offset Structure	Separation [ft]	MD[ft]	Diverging From[ft]	Ellipse Separation [ft]	Ellipse MD[ft]	Clearance Factor	Clearance MD[ft]
AMEN #3 (PWB)	AMEN PAD	14.00	1150.00	1150.00	11.20	1150.00	3.93	11725.60
AMEN #1 (PWB)	AMEN PAD	14.00	1100.00	1100.00	11.28	1100.00	3.93	11725.60
AMEN #4 (PWB)	AMEN PAD	30.79	1150.00	1150.00	28.00	1150.00	7.87	11725.60
AMEN #5 (PWB)	AMEN PAD	44.79	1150.00	1150.00	41.99	1150.00	11.80	11725.60
WUERTZ #12-3 (AWB)	Amen Pad Offsets	2178.41	1150.00	1150.00	2167.22	1161.29	92.05	6673.10
STEINWALD #37 (AWB)	Amen Pad Offsets	2390.21	10843.60	10843.60	2331.78	10872.58	38.44	11512.34