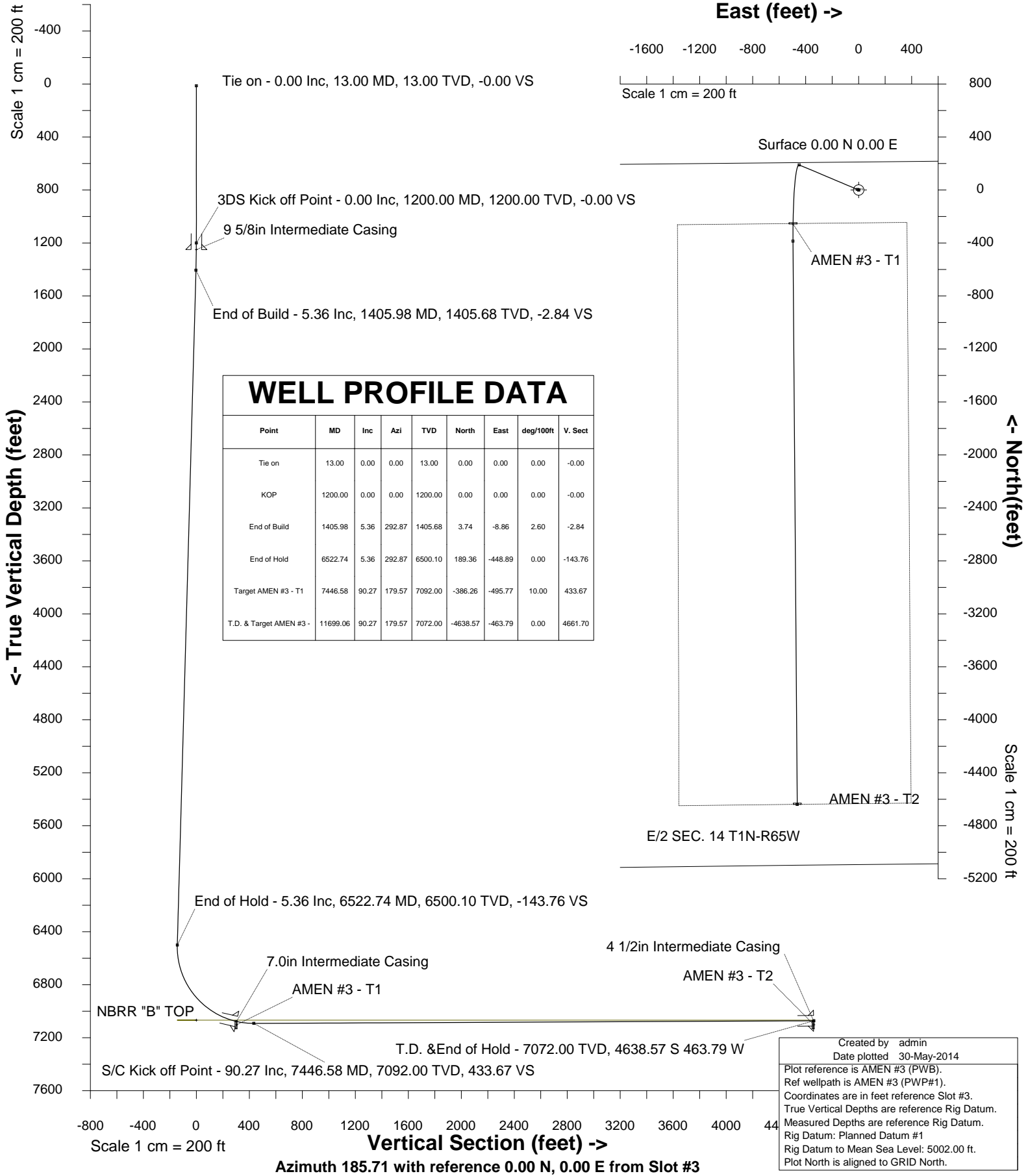


# VERDAD OIL & GAS CORP

Location WELD COUNTY, CO  
 Field Wattenburg  
 Installation AMEN PAD

Slot Slot #3  
 Well AMEN #3  
 Wellbore AMEN #3 (PWB)



Created by admin  
 Date plotted 30-May-2014  
 Plot reference is AMEN #3 (PWB).  
 Ref wellpath is AMEN #3 (PWP#1).  
 Coordinates are in feet reference Slot #3.  
 True Vertical Depths are reference Rig Datum.  
 Measured Depths are reference Rig Datum.  
 Rig Datum: Planned Datum #1  
 Rig Datum to Mean Sea Level: 5002.00 ft.  
 Plot North is aligned to GRID North.

INTEGRATED PETROLEUM TECHNOLOGIES, INC  
 SYSDRILL  
 Well Design Combined Report  
 Wellbore: AMEN #3 (PWB)



Wellhead Details							
Name	Northing	Easting	Latitude	Longitude	North	East	Elevation Above Inst.
Slot #3	1265242.8626	3245064.1115	40.05816000	-104.62449000	31525.23N	88742.93E	-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	1265242.86	3245064.11
1200.00	0.00	0.000	1200.00	0.00N	0.00E	==>	0.00	1265242.86	3245064.11
1405.98	5.36	292.870	1405.68	3.74N	8.86W	2.60	-2.84	1265246.60	3245055.25
6522.74	5.36	292.870	6500.10	189.36N	448.89W	==>	-143.76	1265432.21	3244615.24
7446.58	90.27	179.570	7092.00	386.26S	495.77W	10.00	433.67	1264856.61	3244568.36
11699.06	90.27	179.570	7072.00	4638.57S	463.79W	==>	4661.70	1260604.47	3244600.34

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	1265242.86	3245064.11
13.00	0.00	0.000	13.00	0.00N	0.00E	==>	0.00	1265242.86	3245064.11
100.00	0.00	0.000	100.00	0.00N	0.00E	==>	0.00	1265242.86	3245064.11
200.00	0.00	0.000	200.00	0.00N	0.00E	==>	0.00	1265242.86	3245064.11
300.00	0.00	0.000	300.00	0.00N	0.00E	==>	0.00	1265242.86	3245064.11
400.00	0.00	0.000	400.00	0.00N	0.00E	==>	0.00	1265242.86	3245064.11
500.00	0.00	0.000	500.00	0.00N	0.00E	==>	0.00	1265242.86	3245064.11
600.00	0.00	0.000	600.00	0.00N	0.00E	==>	0.00	1265242.86	3245064.11
700.00	0.00	0.000	700.00	0.00N	0.00E	==>	0.00	1265242.86	3245064.11
800.00	0.00	0.000	800.00	0.00N	0.00E	==>	0.00	1265242.86	3245064.11
900.00	0.00	0.000	900.00	0.00N	0.00E	==>	0.00	1265242.86	3245064.11
1000.00	0.00	0.000	1000.00	0.00N	0.00E	==>	0.00	1265242.86	3245064.11
1100.00	0.00	0.000	1100.00	0.00N	0.00E	==>	0.00	1265242.86	3245064.11
1187.00	0.00	0.000	1187.00	0.00N	0.00E	==>	0.00	1265242.86	3245064.11
1200.00	0.00	0.000	1200.00	0.00N	0.00E	==>	0.00	1265242.86	3245064.11
1287.00	2.26	292.870	1286.98	0.67N	1.58W	2.60	-0.51	1265243.53	3245062.53
1387.00	4.86	292.870	1386.78	3.08N	7.31W	2.60	-2.34	1265245.94	3245056.81
1400.00	5.20	292.870	1399.73	3.53N	8.36W	2.60	-2.68	1265246.39	3245055.76
1405.98	5.36	292.870	1405.68	3.74N	8.86W	2.60	-2.84	1265246.60	3245055.25
1500.00	5.36	292.870	1499.29	7.15N	16.95W	==>	-5.43	1265250.01	3245047.16
1600.00	5.36	292.870	1598.85	10.78N	25.55W	==>	-8.18	1265253.64	3245038.56
1700.00	5.36	292.870	1698.42	14.40N	34.15W	==>	-10.94	1265257.27	3245029.96
1800.00	5.36	292.870	1797.98	18.03N	42.75W	==>	-13.69	1265260.89	3245021.37
1900.00	5.36	292.870	1897.54	21.66N	51.35W	==>	-16.44	1265264.52	3245012.77
2000.00	5.36	292.870	1997.11	25.29N	59.95W	==>	-19.20	1265268.15	3245004.17
2100.00	5.36	292.870	2096.67	28.92N	68.55W	==>	-21.95	1265271.78	3244995.57
2200.00	5.36	292.870	2196.23	32.54N	77.15W	==>	-24.71	1265275.40	3244986.97
2300.00	5.36	292.870	2295.80	36.17N	85.75W	==>	-27.46	1265279.03	3244978.37
2400.00	5.36	292.870	2395.36	39.80N	94.35W	==>	-30.21	1265282.66	3244969.77
2500.00	5.36	292.870	2494.92	43.43N	102.95W	==>	-32.97	1265286.29	3244961.17
2600.00	5.36	292.870	2594.49	47.05N	111.55W	==>	-35.72	1265289.91	3244952.57
2700.00	5.36	292.870	2694.05	50.68N	120.15W	==>	-38.48	1265293.54	3244943.97
2800.00	5.36	292.870	2793.61	54.31N	128.75W	==>	-41.23	1265297.17	3244935.37
2900.00	5.36	292.870	2893.18	57.94N	137.35W	==>	-43.98	1265300.80	3244926.77
3000.00	5.36	292.870	2992.74	61.56N	145.94W	==>	-46.74	1265304.42	3244918.17
3100.00	5.36	292.870	3092.31	65.19N	154.54W	==>	-49.49	1265308.05	3244909.57
3200.00	5.36	292.870	3191.87	68.82N	163.14W	==>	-52.25	1265311.68	3244900.97

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 Vertical Section is from 0.00N 0.00E on azimuth 185.710 degrees  
 Bottom hole distance is 4661.70 Feet on azimuth 185.71 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 #3 (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	5.36	292.870	3291.43	72.45N	171.74W	==>	-55.00	1265315.31	3244892.37
3400.00	5.36	292.870	3391.00	76.07N	180.34W	==>	-57.76	1265318.93	3244883.77
3500.00	5.36	292.870	3490.56	79.70N	188.94W	==>	-60.51	1265322.56	3244875.18
3600.00	5.36	292.870	3590.12	83.33N	197.54W	==>	-63.26	1265326.19	3244866.58
3700.00	5.36	292.870	3689.69	86.96N	206.14W	==>	-66.02	1265329.82	3244857.98
3800.00	5.36	292.870	3789.25	90.59N	214.74W	==>	-68.77	1265333.44	3244849.38
3900.00	5.36	292.870	3888.81	94.21N	223.34W	==>	-71.53	1265337.07	3244840.78
4000.00	5.36	292.870	3988.38	97.84N	231.94W	==>	-74.28	1265340.70	3244832.18
4100.00	5.36	292.870	4087.94	101.47N	240.54W	==>	-77.03	1265344.33	3244823.58
4200.00	5.36	292.870	4187.50	105.10N	249.14W	==>	-79.79	1265347.95	3244814.98
4300.00	5.36	292.870	4287.07	108.72N	257.74W	==>	-82.54	1265351.58	3244806.38
4400.00	5.36	292.870	4386.63	112.35N	266.34W	==>	-85.30	1265355.21	3244797.78
4500.00	5.36	292.870	4486.19	115.98N	274.94W	==>	-88.05	1265358.84	3244789.18
4600.00	5.36	292.870	4585.76	119.61N	283.54W	==>	-90.80	1265362.46	3244780.58
4700.00	5.36	292.870	4685.32	123.23N	292.14W	==>	-93.56	1265366.09	3244771.98
4800.00	5.36	292.870	4784.88	126.86N	300.74W	==>	-96.31	1265369.72	3244763.38
4900.00	5.36	292.870	4884.45	130.49N	309.34W	==>	-99.07	1265373.35	3244754.78
5000.00	5.36	292.870	4984.01	134.12N	317.94W	==>	-101.82	1265376.97	3244746.18
5100.00	5.36	292.870	5083.57	137.75N	326.54W	==>	-104.57	1265380.60	3244737.58
5200.00	5.36	292.870	5183.14	141.37N	335.14W	==>	-107.33	1265384.23	3244728.99
5300.00	5.36	292.870	5282.70	145.00N	343.74W	==>	-110.08	1265387.86	3244720.39
5400.00	5.36	292.870	5382.27	148.63N	352.34W	==>	-112.84	1265391.48	3244711.79
5500.00	5.36	292.870	5481.83	152.26N	360.94W	==>	-115.59	1265395.11	3244703.19
5600.00	5.36	292.870	5581.39	155.88N	369.54W	==>	-118.35	1265398.74	3244694.59
5700.00	5.36	292.870	5680.96	159.51N	378.14W	==>	-121.10	1265402.37	3244685.99
5800.00	5.36	292.870	5780.52	163.14N	386.74W	==>	-123.85	1265405.99	3244677.39
5900.00	5.36	292.870	5880.08	166.77N	395.34W	==>	-126.61	1265409.62	3244668.79
6000.00	5.36	292.870	5979.65	170.39N	403.94W	==>	-129.36	1265413.25	3244660.19
6100.00	5.36	292.870	6079.21	174.02N	412.54W	==>	-132.12	1265416.88	3244651.59
6200.00	5.36	292.870	6178.77	177.65N	421.14W	==>	-134.87	1265420.50	3244642.99
6300.00	5.36	292.870	6278.34	181.28N	429.74W	==>	-137.62	1265424.13	3244634.39
6400.00	5.36	292.870	6377.90	184.90N	438.34W	==>	-140.38	1265427.76	3244625.79
6500.00	5.36	292.870	6477.46	188.53N	446.94W	==>	-143.13	1265431.39	3244617.19
6522.74	5.36	292.870	6500.10	189.36N	448.89W	==>	-143.76	1265432.21	3244615.24
6600.00	7.46	220.720	6576.98	186.95N	455.50W	10.00	-140.71	1265429.81	3244608.63
6700.00	16.35	196.660	6674.79	168.50N	463.79W	10.00	-121.52	1265411.36	3244600.34
6800.00	26.05	189.740	6767.92	133.29N	471.56W	10.00	-85.71	1265376.14	3244592.57
6900.00	35.91	186.420	6853.56	82.38N	478.57W	10.00	-34.36	1265325.24	3244585.56
7000.00	45.82	184.390	6929.10	17.32N	484.61W	10.00	30.98	1265260.18	3244579.52
7100.00	55.76	182.950	6992.24	59.90S	489.50W	10.00	108.31	1265182.96	3244574.63
7200.00	65.71	181.820	7041.07	146.95S	493.08W	10.00	195.28	1265095.92	3244571.05
7300.00	75.67	180.850	7074.10	241.18S	495.26W	10.00	289.25	1265001.69	3244568.87
7400.00	85.63	179.970	7090.33	339.72S	495.95W	10.00	387.38	1264903.15	3244568.18
7446.58	90.27	179.570	7092.00	386.26S	495.77W	10.00	433.67	1264856.61	3244568.36
7500.00	90.27	179.570	7091.75	439.68S	495.37W	==>	486.78	1264803.20	3244568.77
7600.00	90.27	179.570	7091.28	539.67S	494.61W	==>	586.20	1264703.21	3244569.52
7700.00	90.27	179.570	7090.81	639.67S	493.86W	==>	685.63	1264603.22	3244570.27
7800.00	90.27	179.570	7090.34	739.66S	493.11W	==>	785.05	1264503.23	3244571.02
7900.00	90.27	179.570	7089.87	839.66S	492.36W	==>	884.48	1264403.23	3244571.77
8000.00	90.27	179.570	7089.40	939.66S	491.60W	==>	983.90	1264303.24	3244572.53
8100.00	90.27	179.570	7088.93	1039.65S	490.85W	==>	1083.33	1264203.25	3244573.28
8200.00	90.27	179.570	7088.46	1139.65S	490.10W	==>	1182.75	1264103.26	3244574.03
8300.00	90.27	179.570	7087.99	1239.65S	489.35W	==>	1282.18	1264003.27	3244574.78
8400.00	90.27	179.570	7087.52	1339.64S	488.60W	==>	1381.60	1263903.27	3244575.53
8500.00	90.27	179.570	7087.05	1439.64S	487.84W	==>	1481.03	1263803.28	3244576.29
8600.00	90.27	179.570	7086.58	1539.63S	487.09W	==>	1580.45	1263703.29	3244577.04
8700.00	90.27	179.570	7086.11	1639.63S	486.34W	==>	1679.88	1263603.30	3244577.79
8800.00	90.27	179.570	7085.63	1739.63S	485.59W	==>	1779.31	1263503.31	3244578.54
8900.00	90.27	179.570	7085.16	1839.62S	484.84W	==>	1878.73	1263403.31	3244579.29
9000.00	90.27	179.570	7084.69	1939.62S	484.08W	==>	1978.16	1263303.32	3244580.05

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 Vertical Section is from 0.00N 0.00E on azimuth 185.710 degrees  
 Bottom hole distance is 4661.70 Feet on azimuth 185.71 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 #3 (PWB)



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	7084.22	2039.61S	483.33W	==>	2077.58	1263203.33	3244580.80
9200.00	90.27	179.570	7083.75	2139.61S	482.58W	==>	2177.01	1263103.34	3244581.55
9300.00	90.27	179.570	7083.28	2239.61S	481.83W	==>	2276.43	1263003.35	3244582.30
9400.00	90.27	179.570	7082.81	2339.60S	481.08W	==>	2375.86	1262903.35	3244583.05
9500.00	90.27	179.570	7082.34	2439.60S	480.32W	==>	2475.28	1262803.36	3244583.81
9600.00	90.27	179.570	7081.87	2539.59S	479.57W	==>	2574.71	1262703.37	3244584.56
9700.00	90.27	179.570	7081.40	2639.59S	478.82W	==>	2674.13	1262603.38	3244585.31
9800.00	90.27	179.570	7080.93	2739.59S	478.07W	==>	2773.56	1262503.38	3244586.06
9900.00	90.27	179.570	7080.46	2839.58S	477.32W	==>	2872.98	1262403.39	3244586.81
10000.00	90.27	179.570	7079.99	2939.58S	476.56W	==>	2972.41	1262303.40	3244587.57
10100.00	90.27	179.570	7079.52	3039.57S	475.81W	==>	3071.83	1262203.41	3244588.32
10200.00	90.27	179.570	7079.05	3139.57S	475.06W	==>	3171.26	1262103.42	3244589.07
10300.00	90.27	179.570	7078.58	3239.57S	474.31W	==>	3270.68	1262003.42	3244589.82
10400.00	90.27	179.570	7078.11	3339.56S	473.56W	==>	3370.11	1261903.43	3244590.57
10500.00	90.27	179.570	7077.64	3439.56S	472.80W	==>	3469.53	1261803.44	3244591.33
10600.00	90.27	179.570	7077.17	3539.55S	472.05W	==>	3568.96	1261703.45	3244592.08
10700.00	90.27	179.570	7076.70	3639.55S	471.30W	==>	3668.38	1261603.46	3244592.83
10800.00	90.27	179.570	7076.23	3739.55S	470.55W	==>	3767.81	1261503.46	3244593.58
10900.00	90.27	179.570	7075.76	3839.54S	469.79W	==>	3867.23	1261403.47	3244594.34
11000.00	90.27	179.570	7075.29	3939.54S	469.04W	==>	3966.66	1261303.48	3244595.09
11100.00	90.27	179.570	7074.82	4039.54S	468.29W	==>	4066.08	1261203.49	3244595.84
11200.00	90.27	179.570	7074.35	4139.53S	467.54W	==>	4165.51	1261103.50	3244596.59
11300.00	90.27	179.570	7073.88	4239.53S	466.79W	==>	4264.93	1261003.50	3244597.34
11400.00	90.27	179.570	7073.41	4339.52S	466.03W	==>	4364.36	1260903.51	3244598.10
11500.00	90.27	179.570	7072.94	4439.52S	465.28W	==>	4463.78	1260803.52	3244598.85
11600.00	90.27	179.570	7072.47	4539.52S	464.53W	==>	4563.21	1260703.53	3244599.60
11699.06	90.27	179.570	7072.00	4638.57S	463.79W	==>	4661.70	1260604.47	3244600.34

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 Bottom hole distance is 4661.70 Feet on azimuth 185.71 degrees from Wellhead  
 Calculation method uses Minimum Curvature method  
 Prepared by Integrated Petroleum Technologies, Inc.  
 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	1250.00	0.22N	0.52W
8 3/4	1250.00	1250.00	0.22N	0.52W	7314.00	7077.40	254.78S	495.45W
6 1/8	7314.00	7077.40	254.78S	495.45W	11696.59	7072.01	4636.10S	463.80W

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	1250.00	0.22N	0.52W
7.0in Intermediate Casing	13.00	13.00	0.00N	0.00E	7314.00	7077.40	254.78S	495.45W
4 1/2in Intermediate Casing	7114.00	6999.98	71.56S	490.08W	11696.59	7072.01	4636.10S	463.80W

Targets								
Name	North[ft]	East[ft]	TVD[ft]	Latitude	Longitude	Northing	Easting	Last Revised
AMEN #3 - T1	256.26S	495.77W	7102.00	40.05747000	-104.62627000	1264986.61	3244568.36	14-May-2014
AMEN #3 - T2	4638.57S	463.79W	7102.00	40.04544000	-104.62631000	1260604.47	3244600.34	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	
192574	Planned	11699.06	7072.00	WdW Rate Gyro	Standard	

Notes

SYSDRILL  
Closest Approach + Clearance Factor Summary Report  
Wellbore: AMEN #3 (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 #3 (PWB)	14-May-2014	30-May-2014	

Well		
Name	Government ID	Last Revised
AMEN #3		14-May-2014

Slot						
Name	Grid Northing	Grid Easting	Latitude	Longitude	North	East
Slot #3	1265242.8626	3245064.1115	40.05816000	-104.62449000	31525.23N	88742.93E

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 #2 (PWB)	AMEN PAD	14.00	1150.00	1150.00	11.20	1150.00	3.93	11692.79
AMEN #4 (PWB)	AMEN PAD	16.80	1200.00	1200.00	13.92	1200.00	3.93	11692.79
AMEN #1 (PWB)	AMEN PAD	27.99	1100.00	1100.00	25.28	1100.00	7.86	11692.79
AMEN #5 (PWB)	AMEN PAD	30.79	1200.00	1200.00	27.92	1200.00	7.87	11692.79
WUERTZ #12-3 (AWB)	Amen Pad Offsets	2166.76	1200.00	1200.00	2155.31	1226.91	84.32	6656.70
STEINWALD #37 (AWB)	Amen Pad Offsets	2720.57	10813.00	10813.00	2662.20	10839.77	43.74	11577.96