

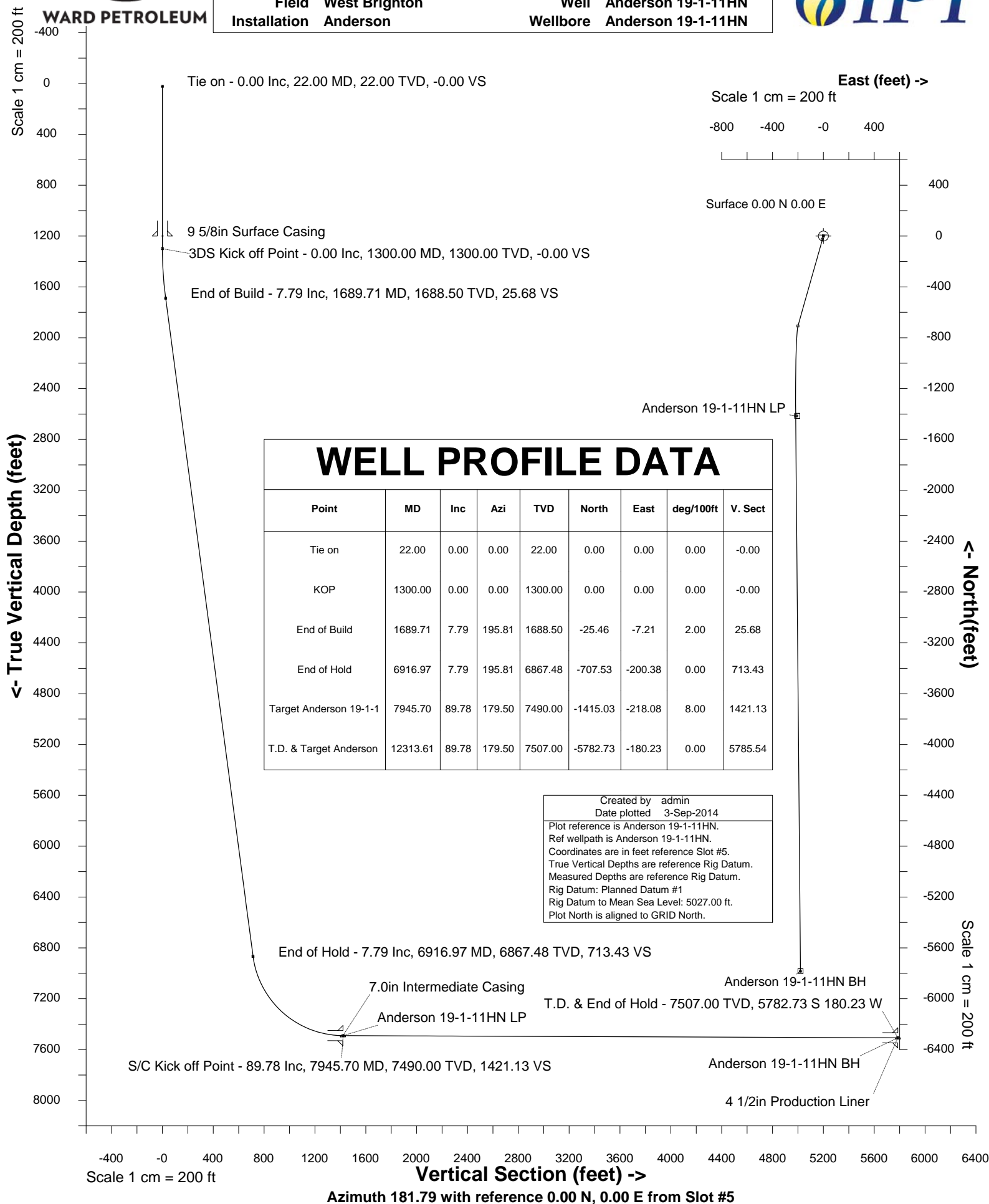


WARD PETROLEUM

WARD PETROLEUM

Location ADAMS COUNTY, CO
Field West Brighton
Installation Anderson

Slot Slot #5
Well Anderson 19-1-11HN
Wellbore Anderson 19-1-11HN





WARD PETROLEUM

INTEGRATED PETROLEUM TECHNOLOGIES, INC
SYSDRILL
Well Design Combined Report
Wellbore: Anderson 19-1-11HN



Wellhead Details							
Name	Northing	Easting	Latitude	Longitude	North	East	Elevation Above Inst.
Slot #5	1229158.6810	3189519.8804	39.96044000	-104.82390000	0.47S	61.67W	-0.00

Declination			
Date	Source	Time	
28-Aug-2014	IGRF Model [1900.0-2015.0]	10:16	

Site Details				
Name	Northing	Easting	Coord System Name	North Alignment
Anderson	1229159.1513	3189581.5481	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
22.00	0.00	0.000	22.00	0.00N	0.00E		0.00	1229158.68	3189519.88
1300.00	0.00	0.000	1300.00	0.00N	0.00E	==>	0.00	1229158.68	3189519.88
1689.71	7.79	195.810	1688.50	25.46S	7.21W	2.00	25.68	1229133.22	3189512.67
6916.97	7.79	195.810	6867.48	707.53S	200.38W	==>	713.43	1228451.18	3189319.51
7945.70	89.78	179.500	7490.00	1415.03S	218.08W	8.00	1421.13	1227743.70	3189301.81
12313.61	89.78	179.500	7507.00	5782.73S	180.23W	==>	5785.54	1223376.14	3189339.66

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	1229158.68	3189519.88
22.00	0.00	0.000	22.00	0.00N	0.00E	==>	0.00	1229158.68	3189519.88
100.00	0.00	0.000	100.00	0.00N	0.00E	==>	0.00	1229158.68	3189519.88
200.00	0.00	0.000	200.00	0.00N	0.00E	==>	0.00	1229158.68	3189519.88
300.00	0.00	0.000	300.00	0.00N	0.00E	==>	0.00	1229158.68	3189519.88
400.00	0.00	0.000	400.00	0.00N	0.00E	==>	0.00	1229158.68	3189519.88
500.00	0.00	0.000	500.00	0.00N	0.00E	==>	0.00	1229158.68	3189519.88
600.00	0.00	0.000	600.00	0.00N	0.00E	==>	0.00	1229158.68	3189519.88
700.00	0.00	0.000	700.00	0.00N	0.00E	==>	0.00	1229158.68	3189519.88
800.00	0.00	0.000	800.00	0.00N	0.00E	==>	0.00	1229158.68	3189519.88
900.00	0.00	0.000	900.00	0.00N	0.00E	==>	0.00	1229158.68	3189519.88
1000.00	0.00	0.000	1000.00	0.00N	0.00E	==>	0.00	1229158.68	3189519.88
1100.00	0.00	0.000	1100.00	0.00N	0.00E	==>	0.00	1229158.68	3189519.88
1200.00	0.00	0.000	1200.00	0.00N	0.00E	==>	0.00	1229158.68	3189519.88
1278.00	0.00	0.000	1278.00	0.00N	0.00E	==>	0.00	1229158.68	3189519.88
1300.00	0.00	0.000	1300.00	0.00N	0.00E	==>	0.00	1229158.68	3189519.88
1378.00	1.56	195.810	1377.99	1.02S	0.29W	2.00	1.03	1229157.66	3189519.59
1478.00	3.56	195.810	1477.89	5.32S	1.51W	2.00	5.36	1229153.36	3189518.37
1578.00	5.56	195.810	1577.56	12.97S	3.67W	2.00	13.08	1229145.71	3189516.21
1678.00	7.56	195.810	1676.90	23.96S	6.79W	2.00	24.16	1229134.72	3189513.10
1689.71	7.79	195.810	1688.50	25.46S	7.21W	2.00	25.68	1229133.22	3189512.67
1700.00	7.79	195.810	1698.70	26.81S	7.59W	==>	27.03	1229131.87	3189512.29
1800.00	7.79	195.810	1797.78	39.86S	11.29W	==>	40.19	1229118.83	3189508.59
1900.00	7.79	195.810	1896.86	52.90S	14.98W	==>	53.34	1229105.78	3189504.90
2000.00	7.79	195.810	1995.93	65.95S	18.68W	==>	66.50	1229092.73	3189501.20
2100.00	7.79	195.810	2095.01	79.00S	22.37W	==>	79.66	1229079.68	3189497.51
2200.00	7.79	195.810	2194.08	92.05S	26.07W	==>	92.82	1229066.64	3189493.81
2300.00	7.79	195.810	2293.16	105.10S	29.76W	==>	105.97	1229053.59	3189490.12
2400.00	7.79	195.810	2392.24	118.14S	33.46W	==>	119.13	1229040.54	3189486.42
2500.00	7.79	195.810	2491.31	131.19S	37.15W	==>	132.29	1229027.49	3189482.73
2600.00	7.79	195.810	2590.39	144.24S	40.85W	==>	145.44	1229014.44	3189479.03
2700.00	7.79	195.810	2689.47	157.29S	44.55W	==>	158.60	1229001.40	3189475.34
2800.00	7.79	195.810	2788.54	170.34S	48.24W	==>	171.76	1228988.35	3189471.64
2900.00	7.79	195.810	2887.62	183.39S	51.94W	==>	184.91	1228975.30	3189467.95
3000.00	7.79	195.810	2986.69	196.43S	55.63W	==>	198.07	1228962.25	3189464.25
3100.00	7.79	195.810	3085.77	209.48S	59.33W	==>	211.23	1228949.21	3189460.56

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 5027.0ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 181.790 degrees
Bottom hole distance is 5785.54 Feet on azimuth 181.79 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Integrated Petroleum Technologies, Inc.
Date Printed: 3-Sep-2014



INTEGRATED PETROLEUM TECHNOLOGIES, INC
SYSDRILL

Well Design Combined Report
Wellbore: Anderson 19-1-11HN



WARD PETROLEUM

Interpolated Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Northing	Easting
3200.00	7.79	195.810	3184.85	222.53S	63.02W	==>	224.39	1228936.16	3189456.86
3300.00	7.79	195.810	3283.92	235.58S	66.72W	==>	237.54	1228923.11	3189453.17
3400.00	7.79	195.810	3383.00	248.63S	70.41W	==>	250.70	1228910.06	3189449.47
3500.00	7.79	195.810	3482.08	261.67S	74.11W	==>	263.86	1228897.01	3189445.78
3600.00	7.79	195.810	3581.15	274.72S	77.80W	==>	277.01	1228883.97	3189442.08
3700.00	7.79	195.810	3680.23	287.77S	81.50W	==>	290.17	1228870.92	3189438.38
3800.00	7.79	195.810	3779.30	300.82S	85.19W	==>	303.33	1228857.87	3189434.69
3900.00	7.79	195.810	3878.38	313.87S	88.89W	==>	316.48	1228844.82	3189430.99
4000.00	7.79	195.810	3977.46	326.92S	92.58W	==>	329.64	1228831.78	3189427.30
4100.00	7.79	195.810	4076.53	339.96S	96.28W	==>	342.80	1228818.73	3189423.60
4200.00	7.79	195.810	4175.61	353.01S	99.98W	==>	355.95	1228805.68	3189419.91
4300.00	7.79	195.810	4274.68	366.06S	103.67W	==>	369.11	1228792.63	3189416.21
4400.00	7.79	195.810	4373.76	379.11S	107.37W	==>	382.27	1228779.59	3189412.52
4500.00	7.79	195.810	4472.84	392.16S	111.06W	==>	395.43	1228766.54	3189408.82
4600.00	7.79	195.810	4571.91	405.20S	114.76W	==>	408.58	1228753.49	3189405.13
4700.00	7.79	195.810	4670.99	418.25S	118.45W	==>	421.74	1228740.44	3189401.43
4800.00	7.79	195.810	4770.07	431.30S	122.15W	==>	434.90	1228727.39	3189397.74
4900.00	7.79	195.810	4869.14	444.35S	125.84W	==>	448.05	1228714.35	3189394.04
5000.00	7.79	195.810	4968.22	457.40S	129.54W	==>	461.21	1228701.30	3189390.35
5100.00	7.79	195.810	5067.29	470.45S	133.23W	==>	474.37	1228688.25	3189386.65
5200.00	7.79	195.810	5166.37	483.49S	136.93W	==>	487.52	1228675.20	3189382.96
5300.00	7.79	195.810	5265.45	496.54S	140.62W	==>	500.68	1228662.16	3189379.26
5400.00	7.79	195.810	5364.52	509.59S	144.32W	==>	513.84	1228649.11	3189375.57
5500.00	7.79	195.810	5463.60	522.64S	148.01W	==>	527.00	1228636.06	3189371.87
5600.00	7.79	195.810	5562.68	535.69S	151.71W	==>	540.15	1228623.01	3189368.18
5700.00	7.79	195.810	5661.75	548.73S	155.40W	==>	553.31	1228609.96	3189364.48
5800.00	7.79	195.810	5760.83	561.78S	159.10W	==>	566.47	1228596.92	3189360.79
5900.00	7.79	195.810	5859.90	574.83S	162.80W	==>	579.62	1228583.87	3189357.09
6000.00	7.79	195.810	5958.98	587.88S	166.49W	==>	592.78	1228570.82	3189353.39
6100.00	7.79	195.810	6058.06	600.93S	170.19W	==>	605.94	1228557.77	3189349.70
6200.00	7.79	195.810	6157.13	613.98S	173.88W	==>	619.09	1228544.73	3189346.00
6300.00	7.79	195.810	6256.21	627.02S	177.58W	==>	632.25	1228531.68	3189342.31
6400.00	7.79	195.810	6355.28	640.07S	181.27W	==>	645.41	1228518.63	3189338.61
6500.00	7.79	195.810	6454.36	653.12S	184.97W	==>	658.57	1228505.58	3189334.92
6600.00	7.79	195.810	6553.44	666.17S	188.66W	==>	671.72	1228492.53	3189331.22
6700.00	7.79	195.810	6652.51	679.22S	192.36W	==>	684.88	1228479.49	3189327.53
6800.00	7.79	195.810	6751.59	692.26S	196.05W	==>	698.04	1228466.44	3189323.83
6900.00	7.79	195.810	6850.67	705.31S	199.75W	==>	711.19	1228453.39	3189320.14
6916.97	7.79	195.810	6867.48	707.53S	200.38W	==>	713.43	1228451.18	3189319.51
7000.00	14.29	188.180	6948.93	723.10S	203.37W	8.00	729.09	1228435.60	3189316.52
7100.00	22.22	184.900	7043.83	754.21S	206.75W	8.00	760.28	1228404.50	3189313.14
7200.00	30.19	183.280	7133.47	798.23S	209.81W	8.00	804.38	1228360.48	3189310.08
7300.00	38.17	182.300	7216.13	854.30S	212.49W	8.00	860.51	1228304.41	3189307.40
7400.00	46.16	181.610	7290.19	921.34S	214.75W	8.00	927.58	1228237.37	3189305.14
7500.00	54.15	181.090	7354.21	998.04S	216.53W	8.00	1004.30	1228160.68	3189303.35
7600.00	62.14	180.660	7406.94	1082.90S	217.81W	8.00	1089.16	1228075.82	3189302.07
7700.00	70.14	180.290	7447.36	1174.27S	218.56W	8.00	1180.51	1227984.45	3189301.33
7800.00	78.13	179.960	7474.68	1270.38S	218.77W	8.00	1276.58	1227888.34	3189301.12
7900.00	86.12	179.640	7488.37	1369.36S	218.42W	8.00	1375.50	1227789.37	3189301.47
7945.70	89.78	179.500	7490.00	1415.03S	218.08W	8.00	1421.13	1227743.70	3189301.81
8000.00	89.78	179.500	7490.21	1469.32S	217.61W	==>	1475.39	1227689.41	3189302.28
8100.00	89.78	179.500	7490.60	1569.31S	216.74W	==>	1575.31	1227589.42	3189303.14
8200.00	89.78	179.500	7490.99	1669.31S	215.88W	==>	1675.23	1227489.42	3189304.01
8300.00	89.78	179.500	7491.38	1769.31S	215.01W	==>	1775.15	1227389.43	3189304.88
8400.00	89.78	179.500	7491.77	1869.30S	214.14W	==>	1875.07	1227289.44	3189305.74
8500.00	89.78	179.500	7492.16	1969.30S	213.28W	==>	1974.99	1227189.45	3189306.61
8600.00	89.78	179.500	7492.55	2069.29S	212.41W	==>	2074.90	1227089.46	3189307.48
8700.00	89.78	179.500	7492.94	2169.29S	211.54W	==>	2174.82	1226989.46	3189308.34
8800.00	89.78	179.500	7493.32	2269.28S	210.68W	==>	2274.74	1226889.47	3189309.21
8900.00	89.78	179.500	7493.71	2369.28S	209.81W	==>	2374.66	1226789.48	3189310.08

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 5027.0ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 181.790 degrees
Bottom hole distance is 5785.54 Feet on azimuth 181.79 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Integrated Petroleum Technologies, Inc.
Date Printed: 3-Sep-2014



WARD PETROLEUM

INTEGRATED PETROLEUM TECHNOLOGIES, INC SYSDRILL

Well Design Combined Report
Wellbore: Anderson 19-1-11HN



Interpolated Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Northing	Easting
9000.00	89.78	179.500	7494.10	2469.27S	208.94W	==>	2474.58	1226689.49	3189310.94
9100.00	89.78	179.500	7494.49	2569.27S	208.08W	==>	2574.50	1226589.49	3189311.81
9200.00	89.78	179.500	7494.88	2669.27S	207.21W	==>	2674.42	1226489.50	3189312.68
9300.00	89.78	179.500	7495.27	2769.26S	206.34W	==>	2774.34	1226389.51	3189313.54
9400.00	89.78	179.500	7495.66	2869.26S	205.48W	==>	2874.26	1226289.52	3189314.41
9500.00	89.78	179.500	7496.05	2969.25S	204.61W	==>	2974.18	1226189.53	3189315.28
9600.00	89.78	179.500	7496.44	3069.25S	203.74W	==>	3074.10	1226089.53	3189316.14
9700.00	89.78	179.500	7496.83	3169.24S	202.88W	==>	3174.02	1225989.54	3189317.01
9800.00	89.78	179.500	7497.22	3269.24S	202.01W	==>	3273.94	1225889.55	3189317.88
9900.00	89.78	179.500	7497.61	3369.23S	201.14W	==>	3373.86	1225789.56	3189318.74
10000.00	89.78	179.500	7498.00	3469.23S	200.28W	==>	3473.78	1225689.56	3189319.61
10100.00	89.78	179.500	7498.38	3569.22S	199.41W	==>	3573.70	1225589.57	3189320.48
10200.00	89.78	179.500	7498.77	3669.22S	198.54W	==>	3673.62	1225489.58	3189321.34
10300.00	89.78	179.500	7499.16	3769.22S	197.68W	==>	3773.54	1225389.59	3189322.21
10400.00	89.78	179.500	7499.55	3869.21S	196.81W	==>	3873.46	1225289.60	3189323.08
10500.00	89.78	179.500	7499.94	3969.21S	195.94W	==>	3973.38	1225189.60	3189323.94
10600.00	89.78	179.500	7500.33	4069.20S	195.08W	==>	4073.30	1225089.61	3189324.81
10700.00	89.78	179.500	7500.72	4169.20S	194.21W	==>	4173.22	1224989.62	3189325.68
10800.00	89.78	179.500	7501.11	4269.19S	193.34W	==>	4273.14	1224889.63	3189326.54
10900.00	89.78	179.500	7501.50	4369.19S	192.48W	==>	4373.06	1224789.63	3189327.41
11000.00	89.78	179.500	7501.89	4469.18S	191.61W	==>	4472.98	1224689.64	3189328.28
11100.00	89.78	179.500	7502.28	4569.18S	190.74W	==>	4572.90	1224589.65	3189329.14
11200.00	89.78	179.500	7502.67	4669.18S	189.88W	==>	4672.82	1224489.66	3189330.01
11300.00	89.78	179.500	7503.06	4769.17S	189.01W	==>	4772.74	1224389.66	3189330.87
11400.00	89.78	179.500	7503.44	4869.17S	188.14W	==>	4872.66	1224289.67	3189331.74
11500.00	89.78	179.500	7503.83	4969.16S	187.28W	==>	4972.58	1224189.68	3189332.61
11600.00	89.78	179.500	7504.22	5069.16S	186.41W	==>	5072.50	1224089.69	3189333.47
11700.00	89.78	179.500	7504.61	5169.15S	185.55W	==>	5172.42	1223989.70	3189334.34
11800.00	89.78	179.500	7505.00	5269.15S	184.68W	==>	5272.34	1223889.70	3189335.21
11900.00	89.78	179.500	7505.39	5369.14S	183.81W	==>	5372.26	1223789.71	3189336.07
12000.00	89.78	179.500	7505.78	5469.14S	182.95W	==>	5472.18	1223689.72	3189336.94
12100.00	89.78	179.500	7506.17	5569.13S	182.08W	==>	5572.10	1223589.73	3189337.81
12200.00	89.78	179.500	7506.56	5669.13S	181.21W	==>	5672.02	1223489.73	3189338.67
12300.00	89.78	179.500	7506.95	5769.13S	180.35W	==>	5771.94	1223389.74	3189339.54
12313.61	89.78	179.500	7507.00	5782.73S	180.23W	==>	5785.54	1223376.14	3189339.66

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Date Printed: 3-Sep-2014



WARD PETROLEUM

INTEGRATED PETROLEUM TECHNOLOGIES, INC

SYSDRILL

Well Design Combined Report

Wellbore: Anderson 19-1-11HN



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	22.00	22.00	0.00N	0.00E	1200.00	1200.00	0.00N	0.00E
8 3/4	1200.00	1200.00	0.00N	0.00E	7945.00	7490.00	1414.32S	218.09W
6 1/8	7945.00	7490.00	1414.32S	218.09W	12313.45	7507.00	5782.58S	180.23W

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 Surface Casing	22.00	22.00	0.00N	0.00E	1200.00	1200.00	0.00N	0.00E
7.0in Intermediate Casing	22.00	22.00	0.00N	0.00E	7945.00	7490.00	1414.32S	218.09W
4 1/2in Production Liner	7745.00	7461.31	1217.05S	218.72W	12313.45	7507.00	5782.58S	180.23W

Targets

Name	North[ft]	East[ft]	TVD[ft]	Latitude	Longitude	Northing	Easting	Last Revised
Anderson 19-1-11HN BH	5782.73S	180.23W	7507.00	39.94457000	-104.82470000	1223376.14	3189339.66	28-Aug-2014
Anderson 19-1-11HN LP	1415.03S	205.08W	7490.00	39.95656000	-104.82467000	1227743.70	3189314.81	28-Aug-2014

Survey Tool Program

Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model
299523	Planned	12313.61	7507.00	WdW Rate Gyro	Standard

Notes

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 5027.0ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 181.790 degrees
Bottom hole distance is 5785.54 Feet on azimuth 181.79 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Integrated Petroleum Technologies, Inc.
Date Printed: 3-Sep-2014



SYSDRILL
Closest Approach + Clearance Factor Summary Report
Wellbore: Anderson 19-1-11HN



Ellipse separations are reported ONLY if BOTH wells have uncertainty data
Only Depth and Magnetic Reference Field error terms are correlated across tie points
Proximities beyond 2000.00ft with expansion rate of 0.00ft/1000ft are not reported
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
Anderson 19-1-11HN	28-Aug-2014	3-Sep-2014

Well		
Name	Government ID	Last Revised
Anderson 19-1-11HN		29-Aug-2014

Slot						
Name	Grid Northing	Grid Easting	Latitude	Longitude	North	East
Slot #5	1229158.6810	3189519.8804	39.96044000	-104.82390000	0.47S	61.67W

Installation				
Name	Easting	Northing	Coord System Name	North Alignment
Anderson	3189581.5481	1229159.1513	CO83-NF on NORTH AMERICAN DATUM 1983 datum	Grid

Field				
Name	Easting	Northing	Coord System Name	North Alignment
West Brighton	3178196.4983	1231661.3262	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]
Anderson 18-3-11HC	Anderson	12.28	1250.00	7591.56	9.44	1186.70	1.53	7591.56
Anderson 18-3-10HN	Anderson	13.79	1300.00	7440.54	10.95	1186.70	4.85	1186.70
Anderson 19-1-12HC	Anderson	14.02	1250.00	1250.00	11.18	1186.70	4.85	12308.75
Anderson 19-1-10HC	Anderson	16.82	1301.53	1301.53	13.98	1186.70	5.11	12308.75
Anderson 18-3-9HC	Anderson	24.88	1350.74	7587.96	22.07	1383.55	8.68	1416.36
Anderson 18-3-12HN	Anderson	24.95	1200.00	7462.41	22.09	1200.00	8.72	1200.00
Anderson 19-1-9HN	Anderson	30.84	1301.53	12313.61	28.00	1186.70	8.47	12308.75
Anderson 18-3-8HN	Anderson	40.74	1300.00	7426.31	37.90	1186.70	14.34	1186.70
Anderson 19-1-8HC	Anderson	44.85	1301.53	12313.61	42.01	1186.70	12.96	12308.75
Anderson 18-3-7HC	Anderson	54.37	1250.00	1250.00	51.53	1186.70	19.14	1186.70
Anderson 19-1-7HN	Anderson	61.67	1300.00	12313.61	58.83	1186.70	16.92	12308.75
Schaefer 24-3-1HC (PWB)	Schaefer	895.75	7945.70	7945.70	841.93	7941.58	15.42	12308.75

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Vertical Section is from 0.00N 0.00E on azimuth 181.790 degrees
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Closest Approach + Clearance Factor Summary Report
Wellbore: Anderson 19-1-11HN



Offset Wellbore	Offset Structure	Separation [ft]	MD[ft]	Diverging From[ft]	Ellipse Separation [ft]	Ellipse MD[ft]	Clearance Factor	Clearance MD[ft]
W RITCHEY #1-19 (AWB)	Offsets	993.40	11783.81	11783.81	920.94	11783.81	13.68	11833.02
W RITCHEY #1-19 (AWB)	Offsets	993.40	11783.81	11783.81	921.03	11783.81	13.69	11833.02
Schaefer 25-1-1HN (PWB)	Schaefer	1071.28	12313.61	12313.61	1013.09	12313.61	18.40	12308.75
Schaefer 24-3-2HN (PWB)	Schaefer	1304.79	7941.72	7941.72	1250.11	7941.72	22.13	12308.75
Schaefer 25-1-2HC (PWB)	Schaefer	1448.91	12313.61	12313.61	1389.78	12313.61	24.45	12308.75
Schaefer 24-3-3HC (PWB)	Schaefer	1759.84	7945.70	7945.70	1705.47	7944.76	30.12	12308.75
Schaefer 25-1-3HN (PWB)	Schaefer	1866.19	12313.61	12313.61	1807.53	12313.61	31.74	12308.75