



INTEGRATED PETROLEUM TECHNOLOGIES, INC
SYSDRILL
Well Design Combined Report
Wellbore: ALICIA 12-15H-6C (PWB)

Wellhead Details							
Name	Northing	Easting	Latitude	Longitude	North	East	Elevation Above Inst.
ALICIA 12-15H-6C	1233687.4952	3154939.2222	39.97353000	-104.94716000	7.37S	13.97W	-0.00

Declination			
Date	Source	Time	
8-Jul-2013	IGRF Model [1900.0-2015.0]	09:34	

Site Details				
Name	Northing	Easting	Coord System Name	North Alignment
ALICIA	1233694.8679	3154953.1896	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	1233687.50	3154939.22
1500.00	0.00	224.670	1500.00	0.00N	0.00E	==>	0.00	1233687.50	3154939.22
1983.06	9.66	224.670	1980.77	28.90S	28.56W	2.00	-24.63	1233658.60	3154910.66
7428.11	9.66	224.670	7348.60	678.81S	670.93W	==>	-578.58	1233008.71	3154268.31
8396.30	90.00	359.700	7985.00	110.31S	750.46W	10.00	-4.55	1233577.19	3154188.79
14042.73	90.00	359.700	7985.00	5536.04N	779.89W	==>	5590.70	1239223.35	3154159.36

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	1233687.50	3154939.22
13.00	0.00	0.000	13.00	0.00N	0.00E	==>	0.00	1233687.50	3154939.22
100.00	0.00	0.000	100.00	0.00N	0.00E	==>	0.00	1233687.50	3154939.22
200.00	0.00	0.000	200.00	0.00N	0.00E	==>	0.00	1233687.50	3154939.22
300.00	0.00	0.000	300.00	0.00N	0.00E	==>	0.00	1233687.50	3154939.22
400.00	0.00	0.000	400.00	0.00N	0.00E	==>	0.00	1233687.50	3154939.22
500.00	0.00	0.000	500.00	0.00N	0.00E	==>	0.00	1233687.50	3154939.22
600.00	0.00	0.000	600.00	0.00N	0.00E	==>	0.00	1233687.50	3154939.22
700.00	0.00	0.000	700.00	0.00N	0.00E	==>	0.00	1233687.50	3154939.22
800.00	0.00	0.000	800.00	0.00N	0.00E	==>	0.00	1233687.50	3154939.22
900.00	0.00	0.000	900.00	0.00N	0.00E	==>	0.00	1233687.50	3154939.22
1000.00	0.00	0.000	1000.00	0.00N	0.00E	==>	0.00	1233687.50	3154939.22
1100.00	0.00	0.000	1100.00	0.00N	0.00E	==>	0.00	1233687.50	3154939.22
1200.00	0.00	0.000	1200.00	0.00N	0.00E	==>	0.00	1233687.50	3154939.22
1300.00	0.00	0.000	1300.00	0.00N	0.00E	==>	0.00	1233687.50	3154939.22
1400.00	0.00	0.000	1400.00	0.00N	0.00E	==>	0.00	1233687.50	3154939.22
1487.00	0.00	0.000	1487.00	0.00N	0.00E	==>	0.00	1233687.50	3154939.22
1500.00	0.00	224.670	1500.00	0.00N	0.00E	==>	0.00	1233687.50	3154939.22
1587.00	1.74	224.670	1586.99	0.94S	0.93W	2.00	-0.80	1233686.56	3154938.29
1687.00	3.74	224.670	1686.87	4.34S	4.29W	2.00	-3.70	1233683.16	3154934.93
1787.00	5.74	224.670	1786.52	10.22S	10.10W	2.00	-8.71	1233677.28	3154929.13
1887.00	7.74	224.670	1885.82	18.56S	18.35W	2.00	-15.82	1233668.93	3154920.88
1983.06	9.66	224.670	1980.77	28.90S	28.56W	2.00	-24.63	1233658.60	3154910.66
2000.00	9.66	224.670	1997.47	30.92S	30.56W	==>	-26.35	1233656.58	3154908.66
2100.00	9.66	224.670	2096.06	42.85S	42.36W	==>	-36.53	1233644.64	3154896.87
2200.00	9.66	224.670	2194.64	54.79S	54.16W	==>	-46.70	1233632.71	3154885.07
2300.00	9.66	224.670	2293.22	66.73S	65.95W	==>	-56.87	1233620.77	3154873.27
2400.00	9.66	224.670	2391.80	78.66S	77.75W	==>	-67.05	1233608.84	3154861.47
2500.00	9.66	224.670	2490.38	90.60S	89.55W	==>	-77.22	1233596.90	3154849.68
2600.00	9.66	224.670	2588.96	102.53S	101.34W	==>	-87.39	1233584.96	3154837.88
2700.00	9.66	224.670	2687.55	114.47S	113.14W	==>	-97.57	1233573.03	3154826.08
2800.00	9.66	224.670	2786.13	126.41S	124.94W	==>	-107.74	1233561.09	3154814.29
2900.00	9.66	224.670	2884.71	138.34S	136.74W	==>	-117.91	1233549.16	3154802.49
3000.00	9.66	224.670	2983.29	150.28S	148.53W	==>	-128.09	1233537.22	3154790.69
3100.00	9.66	224.670	3081.87	162.21S	160.33W	==>	-138.26	1233525.29	3154778.90
3200.00	9.66	224.670	3180.45	174.15S	172.13W	==>	-148.43	1233513.35	3154767.10
3300.00	9.66	224.670	3279.04	186.09S	183.93W	==>	-158.61	1233501.42	3154755.30
3400.00	9.66	224.670	3377.62	198.02S	195.72W	==>	-168.78	1233489.48	3154743.51
3500.00	9.66	224.670	3476.20	209.96S	207.52W	==>	-178.96	1233477.55	3154731.71

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 5163.0ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 351.980 degrees
Bottom hole distance is 5590.70 Feet on azimuth 351.98 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Integrated Petroleum Technologies, Inc.
Date Printed: 16-Oct-2014



INTEGRATED PETROLEUM TECHNOLOGIES, INC
SYSDRILL
Well Design Combined Report
Wellbore: ALICIA 12-15H-6C (PWB)

Interpolated Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Northing	Easting
3600.00	9.66	224.670	3574.78	221.89S	219.32W	==>	-189.13	1233465.61	3154719.91
3700.00	9.66	224.670	3673.36	233.83S	231.12W	==>	-199.30	1233453.67	3154708.11
3800.00	9.66	224.670	3771.95	245.76S	242.91W	==>	-209.48	1233441.74	3154696.32
3900.00	9.66	224.670	3870.53	257.70S	254.71W	==>	-219.65	1233429.80	3154684.52
4000.00	9.66	224.670	3969.11	269.64S	266.51W	==>	-229.82	1233417.87	3154672.72
4100.00	9.66	224.670	4067.69	281.57S	278.31W	==>	-240.00	1233405.93	3154660.93
4200.00	9.66	224.670	4166.27	293.51S	290.10W	==>	-250.17	1233394.00	3154649.13
4300.00	9.66	224.670	4264.85	305.44S	301.90W	==>	-260.34	1233382.06	3154637.33
4400.00	9.66	224.670	4363.44	317.38S	313.70W	==>	-270.52	1233370.13	3154625.54
4500.00	9.66	224.670	4462.02	329.32S	325.49W	==>	-280.69	1233358.19	3154613.74
4600.00	9.66	224.670	4560.60	341.25S	337.29W	==>	-290.86	1233346.26	3154601.94
4700.00	9.66	224.670	4659.18	353.19S	349.09W	==>	-301.04	1233334.32	3154590.14
4800.00	9.66	224.670	4757.76	365.12S	360.89W	==>	-311.21	1233322.38	3154578.35
4900.00	9.66	224.670	4856.34	377.06S	372.68W	==>	-321.38	1233310.45	3154566.55
5000.00	9.66	224.670	4954.93	388.99S	384.48W	==>	-331.56	1233298.51	3154554.75
5100.00	9.66	224.670	5053.51	400.93S	396.28W	==>	-341.73	1233286.58	3154542.96
5200.00	9.66	224.670	5152.09	412.87S	408.08W	==>	-351.90	1233274.64	3154531.16
5300.00	9.66	224.670	5250.67	424.80S	419.87W	==>	-362.08	1233262.71	3154519.36
5400.00	9.66	224.670	5349.25	436.74S	431.67W	==>	-372.25	1233250.77	3154507.57
5500.00	9.66	224.670	5447.83	448.67S	443.47W	==>	-382.42	1233238.84	3154495.77
5600.00	9.66	224.670	5546.42	460.61S	455.27W	==>	-392.60	1233226.90	3154483.97
5700.00	9.66	224.670	5645.00	472.55S	467.06W	==>	-402.77	1233214.97	3154472.17
5800.00	9.66	224.670	5743.58	484.48S	478.86W	==>	-412.94	1233203.03	3154460.38
5900.00	9.66	224.670	5842.16	496.42S	490.66W	==>	-423.12	1233191.09	3154448.58
6000.00	9.66	224.670	5940.74	508.35S	502.46W	==>	-433.29	1233179.16	3154436.78
6100.00	9.66	224.670	6039.32	520.29S	514.25W	==>	-443.46	1233167.22	3154424.99
6200.00	9.66	224.670	6137.91	532.22S	526.05W	==>	-453.64	1233155.29	3154413.19
6300.00	9.66	224.670	6236.49	544.16S	537.85W	==>	-463.81	1233143.35	3154401.39
6400.00	9.66	224.670	6335.07	556.10S	549.64W	==>	-473.99	1233131.42	3154389.60
6500.00	9.66	224.670	6433.65	568.03S	561.44W	==>	-484.16	1233119.48	3154377.80
6600.00	9.66	224.670	6532.23	579.97S	573.24W	==>	-494.33	1233107.55	3154366.00
6700.00	9.66	224.670	6630.82	591.90S	585.04W	==>	-504.51	1233095.61	3154354.20
6800.00	9.66	224.670	6729.40	603.84S	596.83W	==>	-514.68	1233083.68	3154342.41
6900.00	9.66	224.670	6827.98	615.78S	608.63W	==>	-524.85	1233071.74	3154330.61
7000.00	9.66	224.670	6926.56	627.71S	620.43W	==>	-535.03	1233059.80	3154318.81
7100.00	9.66	224.670	7025.14	639.65S	632.23W	==>	-545.20	1233047.87	3154307.02
7200.00	9.66	224.670	7123.72	651.58S	644.02W	==>	-555.37	1233035.93	3154295.22
7300.00	9.66	224.670	7222.31	663.52S	655.82W	==>	-565.55	1233024.00	3154283.42
7400.00	9.66	224.670	7320.89	675.45S	667.62W	==>	-575.72	1233012.06	3154271.63
7428.11	9.66	224.670	7348.60	678.81S	670.93W	==>	-578.58	1233008.71	3154268.31
7500.00	6.87	272.790	7419.81	682.90S	679.48W	10.00	-581.43	1233004.62	3154259.76
7600.00	12.41	326.570	7518.54	673.61S	691.41W	10.00	-570.58	1233013.91	3154247.84
7700.00	21.45	341.870	7614.15	647.20S	703.05W	10.00	-542.80	1233040.32	3154236.20
7800.00	31.06	348.180	7703.74	604.47S	714.05W	10.00	-498.95	1233083.05	3154225.20
7900.00	40.85	351.700	7784.60	546.71S	724.08W	10.00	-440.35	1233140.81	3154215.17
8000.00	50.71	354.050	7854.26	475.68S	732.83W	10.00	-368.80	1233211.84	3154206.42
8100.00	60.60	355.820	7910.61	393.53S	740.03W	10.00	-286.45	1233293.98	3154199.21
8200.00	70.52	357.260	7951.94	302.77S	745.48W	10.00	-195.82	1233384.73	3154193.77
8300.00	80.44	358.540	7976.98	206.16S	748.99W	10.00	-99.66	1233481.35	3154190.25
8396.30	90.00	359.700	7985.00	110.31S	750.46W	10.00	-4.55	1233577.19	3154188.79
8400.00	90.00	359.700	7985.00	106.62S	750.48W	==>	-0.88	1233580.88	3154188.77
8500.00	90.00	359.700	7985.00	6.62S	751.00W	==>	98.21	1233680.88	3154188.25
8600.00	90.00	359.700	7985.00	93.38N	751.52W	==>	197.30	1233780.87	3154187.73
8700.00	90.00	359.700	7985.00	193.38N	752.04W	==>	296.40	1233880.87	3154187.21
8800.00	90.00	359.700	7985.00	293.38N	752.56W	==>	395.49	1233980.86	3154186.69
8900.00	90.00	359.700	7985.00	393.38N	753.08W	==>	494.58	1234080.86	3154186.16
9000.00	90.00	359.700	7985.00	493.38N	753.60W	==>	593.68	1234180.86	3154185.64
9100.00	90.00	359.700	7985.00	593.38N	754.13W	==>	692.77	1234280.85	3154185.12
9200.00	90.00	359.700	7985.00	693.37N	754.65W	==>	791.87	1234380.85	3154184.60
9300.00	90.00	359.700	7985.00	793.37N	755.17W	==>	890.96	1234480.84	3154184.08
9400.00	90.00	359.700	7985.00	893.37N	755.69W	==>	990.05	1234580.84	3154183.56

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Vertical Section is from 0.00N 0.00E on azimuth 351.980 degrees
Bottom hole distance is 5590.70 Feet on azimuth 351.98 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Integrated Petroleum Technologies, Inc.
Date Printed: 16-Oct-2014



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SYSDRILL

Well Design Combined Report
Wellbore: ALICIA 12-15H-6C (PWB)

Interpolated Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Northing	Easting
9500.00	90.00	359.700	7985.00	993.37N	756.21W	==>	1089.15	1234680.83	3154183.04
9600.00	90.00	359.700	7985.00	1093.37N	756.73W	==>	1188.24	1234780.83	3154182.52
9700.00	90.00	359.700	7985.00	1193.37N	757.25W	==>	1287.33	1234880.82	3154181.99
9800.00	90.00	359.700	7985.00	1293.37N	757.77W	==>	1386.43	1234980.82	3154181.47
9900.00	90.00	359.700	7985.00	1393.36N	758.30W	==>	1485.52	1235080.81	3154180.95
10000.00	90.00	359.700	7985.00	1493.36N	758.82W	==>	1584.61	1235180.81	3154180.43
10100.00	90.00	359.700	7985.00	1593.36N	759.34W	==>	1683.71	1235280.80	3154179.91
10200.00	90.00	359.700	7985.00	1693.36N	759.86W	==>	1782.80	1235380.80	3154179.39
10300.00	90.00	359.700	7985.00	1793.36N	760.38W	==>	1881.90	1235480.79	3154178.87
10400.00	90.00	359.700	7985.00	1893.36N	760.90W	==>	1980.99	1235580.79	3154178.35
10500.00	90.00	359.700	7985.00	1993.36N	761.42W	==>	2080.08	1235680.78	3154177.83
10600.00	90.00	359.700	7985.00	2093.35N	761.94W	==>	2179.18	1235780.78	3154177.30
10700.00	90.00	359.700	7985.00	2193.35N	762.46W	==>	2278.27	1235880.78	3154176.78
10800.00	90.00	359.700	7985.00	2293.35N	762.99W	==>	2377.36	1235980.77	3154176.26
10900.00	90.00	359.700	7985.00	2393.35N	763.51W	==>	2476.46	1236080.77	3154175.74
11000.00	90.00	359.700	7985.00	2493.35N	764.03W	==>	2575.55	1236180.76	3154175.22
11100.00	90.00	359.700	7985.00	2593.35N	764.55W	==>	2674.64	1236280.76	3154174.70
11200.00	90.00	359.700	7985.00	2693.35N	765.07W	==>	2773.74	1236380.75	3154174.18
11300.00	90.00	359.700	7985.00	2793.35N	765.59W	==>	2872.83	1236480.75	3154173.66
11400.00	90.00	359.700	7985.00	2893.34N	766.11W	==>	2971.92	1236580.74	3154173.14
11500.00	90.00	359.700	7985.00	2993.34N	766.63W	==>	3071.02	1236680.74	3154172.61
11600.00	90.00	359.700	7985.00	3093.34N	767.15W	==>	3170.11	1236780.73	3154172.09
11700.00	90.00	359.700	7985.00	3193.34N	767.68W	==>	3269.21	1236880.73	3154171.57
11800.00	90.00	359.700	7985.00	3293.34N	768.20W	==>	3368.30	1236980.72	3154171.05
11900.00	90.00	359.700	7985.00	3393.34N	768.72W	==>	3467.39	1237080.72	3154170.53
12000.00	90.00	359.700	7985.00	3493.34N	769.24W	==>	3566.49	1237180.71	3154170.01
12100.00	90.00	359.700	7985.00	3593.33N	769.76W	==>	3665.58	1237280.71	3154169.49
12200.00	90.00	359.700	7985.00	3693.33N	770.28W	==>	3764.67	1237380.70	3154168.97
12300.00	90.00	359.700	7985.00	3793.33N	770.80W	==>	3863.77	1237480.70	3154168.44
12400.00	90.00	359.700	7985.00	3893.33N	771.32W	==>	3962.86	1237580.70	3154167.92
12500.00	90.00	359.700	7985.00	3993.33N	771.85W	==>	4061.95	1237680.69	3154167.40
12600.00	90.00	359.700	7985.00	4093.33N	772.37W	==>	4161.05	1237780.69	3154166.88
12700.00	90.00	359.700	7985.00	4193.33N	772.89W	==>	4260.14	1237880.68	3154166.36
12800.00	90.00	359.700	7985.00	4293.33N	773.41W	==>	4359.24	1237980.68	3154165.84
12900.00	90.00	359.700	7985.00	4393.32N	773.93W	==>	4458.33	1238080.67	3154165.32
13000.00	90.00	359.700	7985.00	4493.32N	774.45W	==>	4557.42	1238180.67	3154164.80
13100.00	90.00	359.700	7985.00	4593.32N	774.97W	==>	4656.52	1238280.66	3154164.28
13200.00	90.00	359.700	7985.00	4693.32N	775.49W	==>	4755.61	1238380.66	3154163.75
13300.00	90.00	359.700	7985.00	4793.32N	776.01W	==>	4854.70	1238480.65	3154163.23
13400.00	90.00	359.700	7985.00	4893.32N	776.54W	==>	4953.80	1238580.65	3154162.71
13500.00	90.00	359.700	7985.00	4993.32N	777.06W	==>	5052.89	1238680.64	3154162.19
13600.00	90.00	359.700	7985.00	5093.31N	777.58W	==>	5151.98	1238780.64	3154161.67
13700.00	90.00	359.700	7985.00	5193.31N	778.10W	==>	5251.08	1238880.63	3154161.15
13800.00	90.00	359.700	7985.00	5293.31N	778.62W	==>	5350.17	1238980.63	3154160.63
13900.00	90.00	359.700	7985.00	5393.31N	779.14W	==>	5449.26	1239080.62	3154160.11
14000.00	90.00	359.700	7985.00	5493.31N	779.66W	==>	5548.36	1239180.62	3154159.59
14042.73	90.00	359.700	7985.00	5536.04N	779.89W	==>	5590.70	1239223.35	3154159.36

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 5163.0ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 351.980 degrees
Bottom hole distance is 5590.70 Feet on azimuth 351.98 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Integrated Petroleum Technologies, Inc.
Date Printed: 16-Oct-2014



INTEGRATED PETROLEUM TECHNOLOGIES, INC
SYSDRILL
Well Design Combined Report
Wellbore: ALICIA 12-15H-6C (PWB)

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	0.00N	0.00E
8 3/4	1250.00	1250.00	0.00N	0.00E	8396.00	7985.00	110.62S	750.46W
6 1/8	8396.00	7985.00	110.62S	750.46W	14042.00	7985.00	5535.31N	779.88W

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	13.00	13.00	0.00N	0.00E	1250.00	1250.00	0.00N	0.00E
7.0in Intermediate Casing	13.00	13.00	0.00N	0.00E	8396.00	7985.00	110.62S	750.46W
4 1/2in Production Liner	8196.00	7950.59	306.54S	745.30W	14042.00	7985.00	5535.31N	779.88W

Targets								
Name	North[ft]	East[ft]	TVD[ft]	Latitude	Longitude	Northing	Easting	Last Revised
ALICIA 12-15H-6 - T1	110.31S	750.46W	7985.00	39.97324000	-104.94984000	1233577.19	3154188.79	3-Mar-2014
ALICIA 12-15H-6 - T2	5536.04N	779.89W	7985.00	39.98874000	-104.94982000	1239223.35	3154159.36	3-Mar-2014

Survey Tool Program					
Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model
172724	Planned	14042.73	7985.00	WdW Rate Gyro	Standard

Notes

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