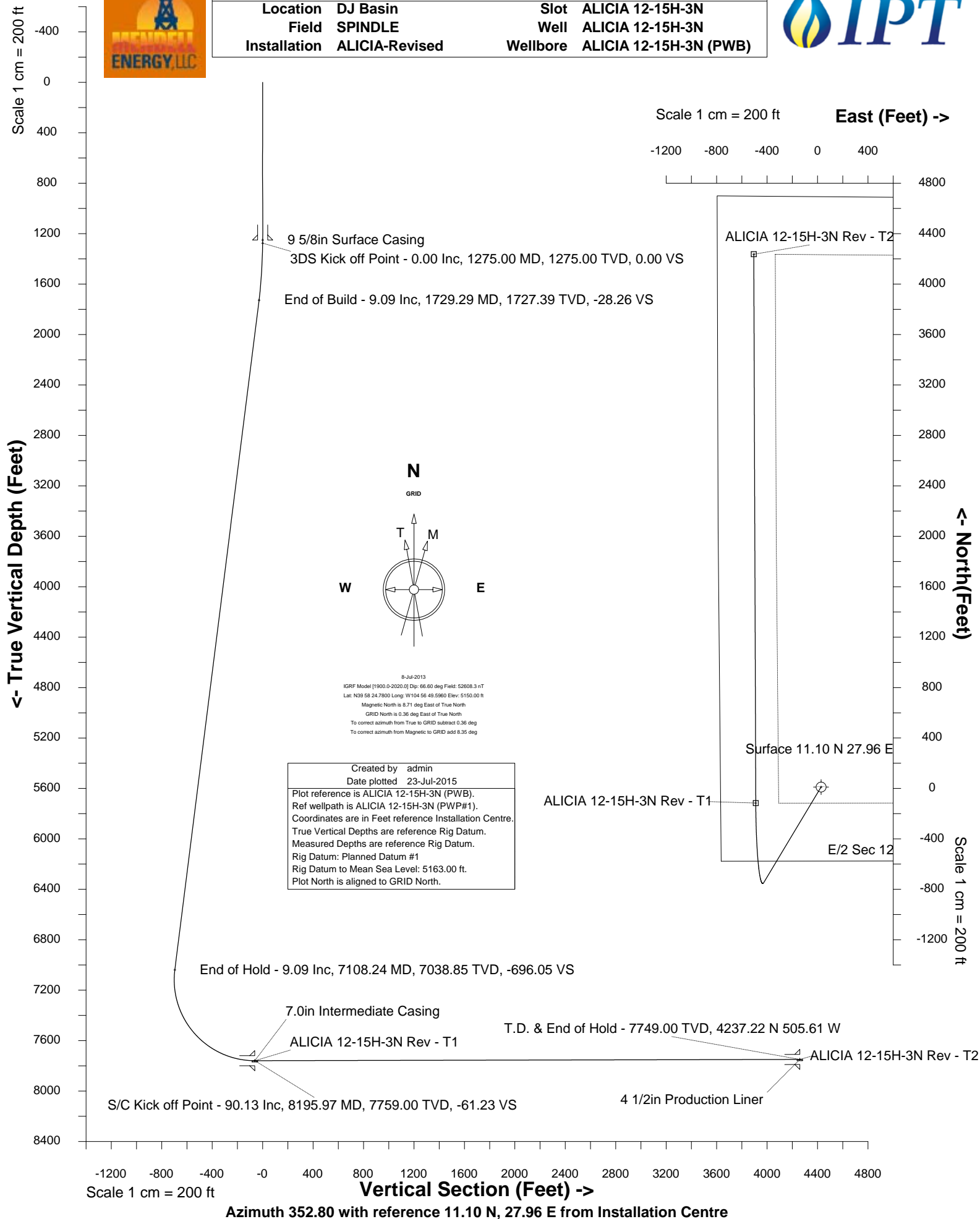


# MENDELL ENERGY, LLC



Location DJ Basin  
Field SPINDLE  
Installation ALICIA-Revised

Slot ALICIA 12-15H-3N  
Well ALICIA 12-15H-3N  
Wellbore ALICIA 12-15H-3N (PWB)





SYSDRILL  
Well Design Combined Report  
Wellbore: ALICIA 12-15H-3N (PWB)



Wellhead Details							
Name	Latitude	Longitude	Northing	Easting	North	East	Slot Elevation Above Ground
ALICIA 12-15H-3N	39.97358000	-104.94701000	1233705.9707	3154981.1472	11.10N	27.96E	0.00

Declination		
Date	Source	Time
9-Jul-2015	IGRF Model [1900.0-2020.0]	15:08
8-Jul-2013	IGRF Model [1900.0-2020.0]	09:34

Installation Details						
Name	Installation Position (Latitude)	Installation Position (Longitude)	Northing	Easting	Coord System Name	North Alignment
ALICIA-Revised	39.97355000	-104.94711000	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	1233705.97	3154981.15
12549.21	90.13	359.790	7749.00	4226.11N	533.57W	==>	4259.66	1237931.94	3154447.60

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 Slot Datum
13.00	0.00	0.000	13.00	0.00N	0.00E	==>	0.00	
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	0.00	0.000	1100.00	0.00N	0.00E	==>	0.00	
1200.00	0.00	0.000	1200.00	0.00N	0.00E	==>	0.00	
1250.00	0.00	0.000	1250.00	0.00N	0.00E	==>	0.00	
1300.00	0.50	210.970	1300.00	0.09S	0.06W	2.00	-0.09	
1400.00	2.50	210.970	1399.96	2.34S	1.40W	2.00	-2.14	
1500.00	4.50	210.970	1499.77	7.57S	4.55W	2.00	-6.94	
1600.00	6.50	210.970	1599.30	15.79S	9.48W	2.00	-14.48	
1700.00	8.50	210.970	1698.44	26.98S	16.19W	2.00	-24.74	
1800.00	9.09	210.970	1797.21	40.39S	24.25W	==>	-37.04	
1900.00	9.09	210.970	1895.96	53.93S	32.37W	==>	-49.45	
2000.00	9.09	210.970	1994.70	67.47S	40.50W	==>	-61.87	
2100.00	9.09	210.970	2093.45	81.01S	48.63W	==>	-74.28	
2200.00	9.09	210.970	2192.19	94.55S	56.75W	==>	-86.70	
2300.00	9.09	210.970	2290.94	108.09S	64.88W	==>	-99.11	
2400.00	9.09	210.970	2389.68	121.63S	73.01W	==>	-111.53	
2500.00	9.09	210.970	2488.43	135.17S	81.14W	==>	-123.94	
2600.00	9.09	210.970	2587.17	148.71S	89.26W	==>	-136.36	
2700.00	9.09	210.970	2685.92	162.25S	97.39W	==>	-148.77	
2800.00	9.09	210.970	2784.66	175.79S	105.52W	==>	-161.19	
2900.00	9.09	210.970	2883.41	189.33S	113.64W	==>	-173.60	
3000.00	9.09	210.970	2982.15	202.87S	121.77W	==>	-186.02	
3100.00	9.09	210.970	3080.90	216.41S	129.90W	==>	-198.43	
3200.00	9.09	210.970	3179.65	229.95S	138.03W	==>	-210.85	
3300.00	9.09	210.970	3278.39	243.48S	146.15W	==>	-223.26	

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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 352.800 degrees  
Bottom hole distance is 4259.66 Feet on azimuth 352.80 degrees from Wellhead  
Calculation method uses Minimum Curvature method  
Prepared by Integrated Petroleum Technologies, Inc.  
Date Printed: 23-Jul-2015



SYSDRILL  
Well Design Combined Report  
Wellbore: ALICIA 12-15H-3N (PWB)



Interpolated Wellpath								
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	All Station Comments
3400.00	9.09	210.970	3377.14	257.02S	154.28W	==>	-235.67	
3500.00	9.09	210.970	3475.88	270.56S	162.41W	==>	-248.09	
3600.00	9.09	210.970	3574.63	284.10S	170.53W	==>	-260.50	
3700.00	9.09	210.970	3673.37	297.64S	178.66W	==>	-272.92	
3800.00	9.09	210.970	3772.12	311.18S	186.79W	==>	-285.33	
3900.00	9.09	210.970	3870.86	324.72S	194.91W	==>	-297.75	
4000.00	9.09	210.970	3969.61	338.26S	203.04W	==>	-310.16	
4100.00	9.09	210.970	4068.35	351.80S	211.17W	==>	-322.58	
4200.00	9.09	210.970	4167.10	365.34S	219.30W	==>	-334.99	
4300.00	9.09	210.970	4265.84	378.88S	227.42W	==>	-347.41	
4400.00	9.09	210.970	4364.59	392.42S	235.55W	==>	-359.82	
4500.00	9.09	210.970	4463.33	405.96S	243.68W	==>	-372.24	
4600.00	9.09	210.970	4562.08	419.50S	251.80W	==>	-384.65	
4700.00	9.09	210.970	4660.82	433.04S	259.93W	==>	-397.07	
4800.00	9.09	210.970	4759.57	446.58S	268.06W	==>	-409.48	
4900.00	9.09	210.970	4858.32	460.12S	276.19W	==>	-421.90	
5000.00	9.09	210.970	4957.06	473.66S	284.31W	==>	-434.31	
5100.00	9.09	210.970	5055.81	487.20S	292.44W	==>	-446.73	
5200.00	9.09	210.970	5154.55	500.74S	300.57W	==>	-459.14	
5300.00	9.09	210.970	5253.30	514.27S	308.69W	==>	-471.56	
5400.00	9.09	210.970	5352.04	527.81S	316.82W	==>	-483.97	
5500.00	9.09	210.970	5450.79	541.35S	324.95W	==>	-496.39	
5600.00	9.09	210.970	5549.53	554.89S	333.08W	==>	-508.80	
5700.00	9.09	210.970	5648.28	568.43S	341.20W	==>	-521.22	
5800.00	9.09	210.970	5747.02	581.97S	349.33W	==>	-533.63	
5900.00	9.09	210.970	5845.77	595.51S	357.46W	==>	-546.05	
6000.00	9.09	210.970	5944.51	609.05S	365.58W	==>	-558.46	
6100.00	9.09	210.970	6043.26	622.59S	373.71W	==>	-570.88	
6200.00	9.09	210.970	6142.00	636.13S	381.84W	==>	-583.29	
6300.00	9.09	210.970	6240.75	649.67S	389.97W	==>	-595.71	
6400.00	9.09	210.970	6339.49	663.21S	398.09W	==>	-608.12	
6500.00	9.09	210.970	6438.24	676.75S	406.22W	==>	-620.53	
6600.00	9.09	210.970	6536.99	690.29S	414.35W	==>	-632.95	
6700.00	9.09	210.970	6635.73	703.83S	422.47W	==>	-645.36	
6800.00	9.09	210.970	6734.48	717.37S	430.60W	==>	-657.78	
6900.00	9.09	210.970	6833.22	730.91S	438.73W	==>	-670.19	
7000.00	9.09	210.970	6931.97	744.45S	446.86W	==>	-682.61	
7100.00	9.09	210.970	7030.71	757.99S	454.98W	==>	-695.02	
7200.00	4.76	275.750	7130.03	764.94S	463.18W	9.00	-700.90	
7300.00	10.60	333.510	7229.21	756.28S	471.43W	9.00	-691.27	
7400.00	19.07	345.920	7325.81	732.15S	479.52W	9.00	-666.32	
7500.00	27.87	350.770	7417.46	693.15S	487.26W	9.00	-626.66	
7600.00	36.76	353.410	7501.89	640.25S	494.46W	9.00	-573.27	
7700.00	45.69	355.140	7577.03	574.74S	500.94W	9.00	-507.47	
7800.00	54.63	356.410	7641.03	498.24S	506.53W	9.00	-430.87	
7900.00	63.59	357.420	7692.32	412.64S	511.11W	9.00	-345.37	
8000.00	72.56	358.290	7729.62	320.03S	514.55W	9.00	-253.06	
8100.00	81.52	359.070	7752.02	222.70S	516.78W	9.00	-156.22	
8195.00	90.04	359.780	7759.00	128.05S	517.72W	9.00	-62.19	7.0in Intermediate Casing
8200.00	90.13	359.790	7758.99	123.05S	517.74W	==>	-57.23	
8300.00	90.13	359.790	7758.76	23.05S	518.10W	==>	42.02	
8400.00	90.13	359.790	7758.53	76.94N	518.47W	==>	141.28	
8500.00	90.13	359.790	7758.30	176.94N	518.83W	==>	240.54	
8600.00	90.13	359.790	7758.07	276.94N	519.19W	==>	339.80	
8700.00	90.13	359.790	7757.84	376.94N	519.56W	==>	439.05	
8800.00	90.13	359.790	7757.61	476.94N	519.92W	==>	538.31	
8900.00	90.13	359.790	7757.38	576.94N	520.29W	==>	637.57	
9000.00	90.13	359.790	7757.15	676.94N	520.65W	==>	736.82	
9100.00	90.13	359.790	7756.92	776.94N	521.01W	==>	836.08	

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Bottom hole distance is 4259.66 Feet on azimuth 352.80 degrees from Wellhead  
Calculation method uses Minimum Curvature method  
Prepared by Integrated Petroleum Technologies, Inc.  
Date Printed: 23-Jul-2015



SYSDRILL  
Well Design Combined Report  
Wellbore: ALICIA 12-15H-3N (PWB)



Interpolated Wellpath								
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	All Station Comments
9200.00	90.13	359.790	7756.69	876.94N	521.38W	==>	935.34	
9300.00	90.13	359.790	7756.46	976.94N	521.74W	==>	1034.60	
9400.00	90.13	359.790	7756.23	1076.94N	522.11W	==>	1133.85	
9500.00	90.13	359.790	7756.00	1176.93N	522.47W	==>	1233.11	
9600.00	90.13	359.790	7755.77	1276.93N	522.83W	==>	1332.37	
9700.00	90.13	359.790	7755.55	1376.93N	523.20W	==>	1431.62	
9800.00	90.13	359.790	7755.32	1476.93N	523.56W	==>	1530.88	
9900.00	90.13	359.790	7755.09	1576.93N	523.93W	==>	1630.14	
10000.00	90.13	359.790	7754.86	1676.93N	524.29W	==>	1729.40	
10100.00	90.13	359.790	7754.63	1776.93N	524.65W	==>	1828.65	
10200.00	90.13	359.790	7754.40	1876.93N	525.02W	==>	1927.91	
10300.00	90.13	359.790	7754.17	1976.93N	525.38W	==>	2027.17	
10400.00	90.13	359.790	7753.94	2076.93N	525.75W	==>	2126.42	
10500.00	90.13	359.790	7753.71	2176.93N	526.11W	==>	2225.68	
10600.00	90.13	359.790	7753.48	2276.92N	526.47W	==>	2324.94	
10700.00	90.13	359.790	7753.25	2376.92N	526.84W	==>	2424.19	
10800.00	90.13	359.790	7753.02	2476.92N	527.20W	==>	2523.45	
10900.00	90.13	359.790	7752.79	2576.92N	527.57W	==>	2622.71	
11000.00	90.13	359.790	7752.56	2676.92N	527.93W	==>	2721.97	
11100.00	90.13	359.790	7752.33	2776.92N	528.29W	==>	2821.22	
11200.00	90.13	359.790	7752.10	2876.92N	528.66W	==>	2920.48	
11300.00	90.13	359.790	7751.87	2976.92N	529.02W	==>	3019.74	
11400.00	90.13	359.790	7751.64	3076.92N	529.39W	==>	3118.99	
11500.00	90.13	359.790	7751.41	3176.92N	529.75W	==>	3218.25	
11600.00	90.13	359.790	7751.18	3276.91N	530.11W	==>	3317.51	
11700.00	90.13	359.790	7750.95	3376.91N	530.48W	==>	3416.77	
11800.00	90.13	359.790	7750.72	3476.91N	530.84W	==>	3516.02	
11900.00	90.13	359.790	7750.49	3576.91N	531.21W	==>	3615.28	
12000.00	90.13	359.790	7750.26	3676.91N	531.57W	==>	3714.54	
12100.00	90.13	359.790	7750.03	3776.91N	531.93W	==>	3813.79	
12200.00	90.13	359.790	7749.80	3876.91N	532.30W	==>	3913.05	
12300.00	90.13	359.790	7749.57	3976.91N	532.66W	==>	4012.31	
12400.00	90.13	359.790	7749.34	4076.91N	533.03W	==>	4111.56	
12500.00	90.13	359.790	7749.11	4176.91N	533.39W	==>	4210.82	
12549.21	90.13	359.790	7749.00	4226.11N	533.57W	==>	4259.66	4 1/2in Production Liner

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Bottom hole distance is 4259.66 Feet on azimuth 352.80 degrees from Wellhead  
Calculation method uses Minimum Curvature method  
Prepared by Integrated Petroleum Technologies, Inc.  
Date Printed: 23-Jul-2015



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	8195.00	7759.00	128.05S	517.72W
6 1/8	8195.00	7759.00	128.05S	517.72W	12549.21	7749.00	4226.11N	533.57W

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	8195.00	7759.00	128.05S	517.72W
4 1/2in Production Liner	7197.00	7127.04	764.96S	462.93W	12549.21	7749.00	4226.11N	533.57W

Name	North[ft]	East[ft]	TVD[ft]	Latitude	Longitude	Northing	Easting
ALICIA 12-15H-3N Rev - T1	127.08S	517.72W	7759.00	39.97324000	-104.94886000	1233578.89	3154463.44
ALICIA 12-15H-3N Rev - T2	4226.11N	533.57W	7749.00	39.98519000	-104.94882000	1237931.94	3154447.60

Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model
398199	Planned	12549.21	7749.00	ISCWSA MWD	Rev 3 + Fixed Rig + Rotating

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Bottom hole distance is 4259.66 Feet on azimuth 352.80 degrees from Wellhead  
Calculation method uses Minimum Curvature method  
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SYSDRILL  
Closest Approach + Clearance Factor Summary Report  
Wellbore: ALICIA 12-15H-3N (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
Proximities beyond 1000.00ft 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
ALICIA 12-15H-3N (PWB)	9-Jul-2015	23-Jul-2015

Well		
Name	Government ID	Last Revised
ALICIA 12-15H-3N		9-Jul-2015

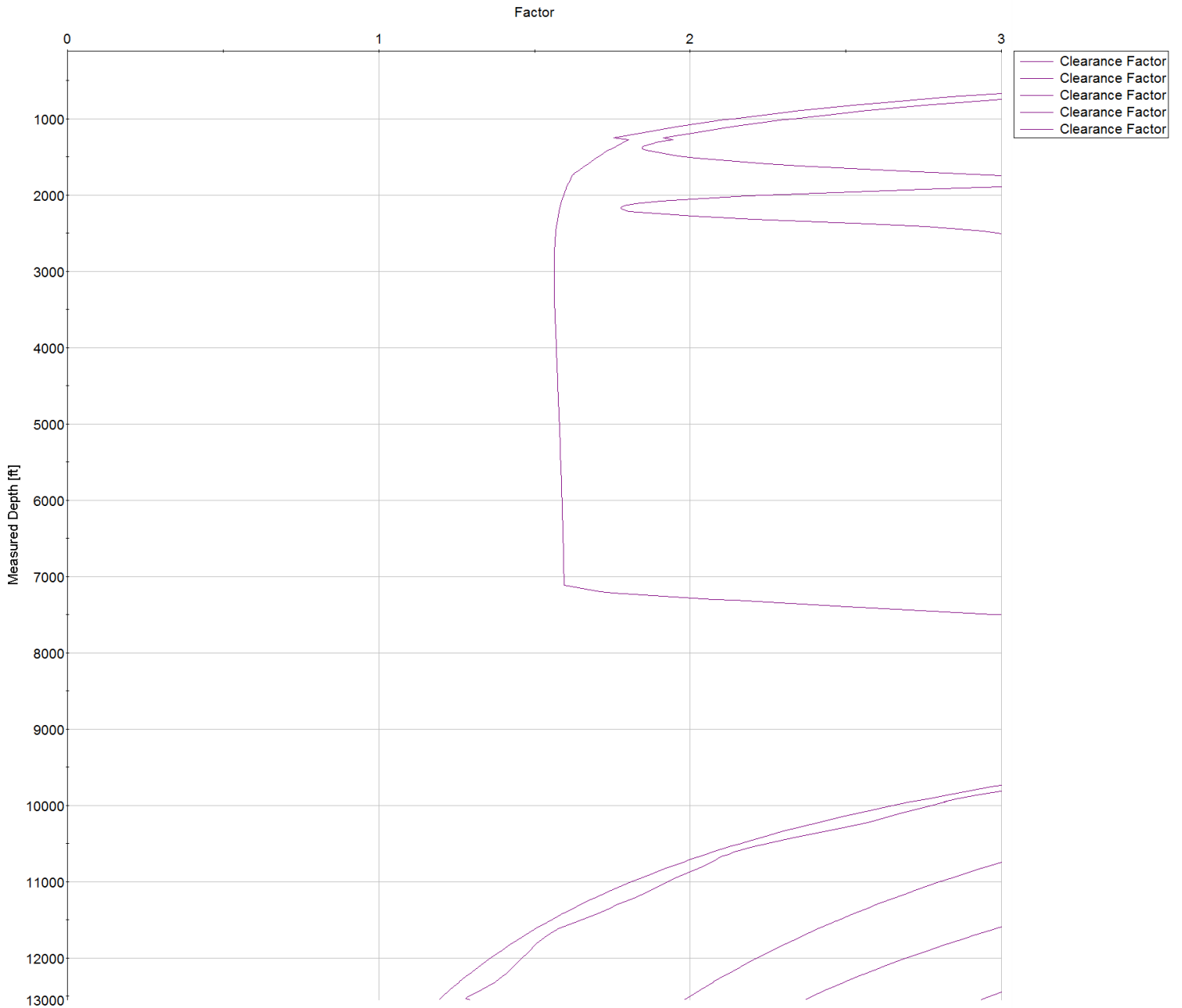
Slot						
Name	Latitude	Longitude	Grid Northing	Grid Easting	North	East
ALICIA 12-15H-3N	39.97358000	-104.94701000	1233705.9707	3154981.1472	11.10N	27.96E

Installation						
Name	Installation Position (Latitude)	Installation Position (Longitude)	Easting	Northing	Coord System Name	North Alignment
ALICIA-Revised	39.97355000	-104.94711000	3154953.1896	1233694.8679	CO83-NF on NORTH AMERICAN DATUM 1983 datum	Grid

Clearance Summary							
Offset WellName	Separation [ft]	MD[ft]	Diverging From[ft]	Ellipse Separation [ft]	Ellipse MD[ft]	Clearance Factor	Clearance MD[ft]
ALICIA 12-15H-2C	14.48	1250.00	12525.87	6.23	1250.00	1.56	2965.76
ALICIA 12-15H-4N	15.67	1308.93	1308.93	7.28	1358.14	1.85	1374.55
ALICIA 12-15H-5N	24.46	2137.68	12531.00	10.75	2161.95	1.28	12529.40
ALICIA 12-15H-1N	30.08	1125.00	12549.21	22.54	1144.89	1.19	12549.21
ALICIA 12-15H-6C	31.59	1276.12	1276.12	23.38	1243.31	3.05	12545.81
ALICIA 12-15H-7N	45.82	1276.12	1276.12	37.60	1243.31	2.93	12549.21
Ruby #2	52.22	18.00	9720.07	50.86	62.21	4.71	9707.88
ALICIA 12-15H-8N	61.58	1276.12	1276.12	53.37	1243.31	3.71	12549.21
ALICIA 12-15H-9N	74.83	1276.12	1276.12	66.62	1243.31	4.71	12549.21
ALICIA 12-15H-10N	89.07	1276.12	1276.12	80.85	1243.31	10.26	1472.97
MALLO #1	93.63	1276.12	1276.12	87.01	1243.31	13.96	1423.76
TUDEX REINHOLT #NC4	465.00	12077.56	12077.56	341.49	12077.56	3.76	12077.56
CUNDALL #6-12	843.04	11054.93	11054.93	743.74	11085.83	8.28	11217.07
NORTH YORK #11-12	908.07	9734.22	9734.22	839.35	9757.09	12.51	9986.75



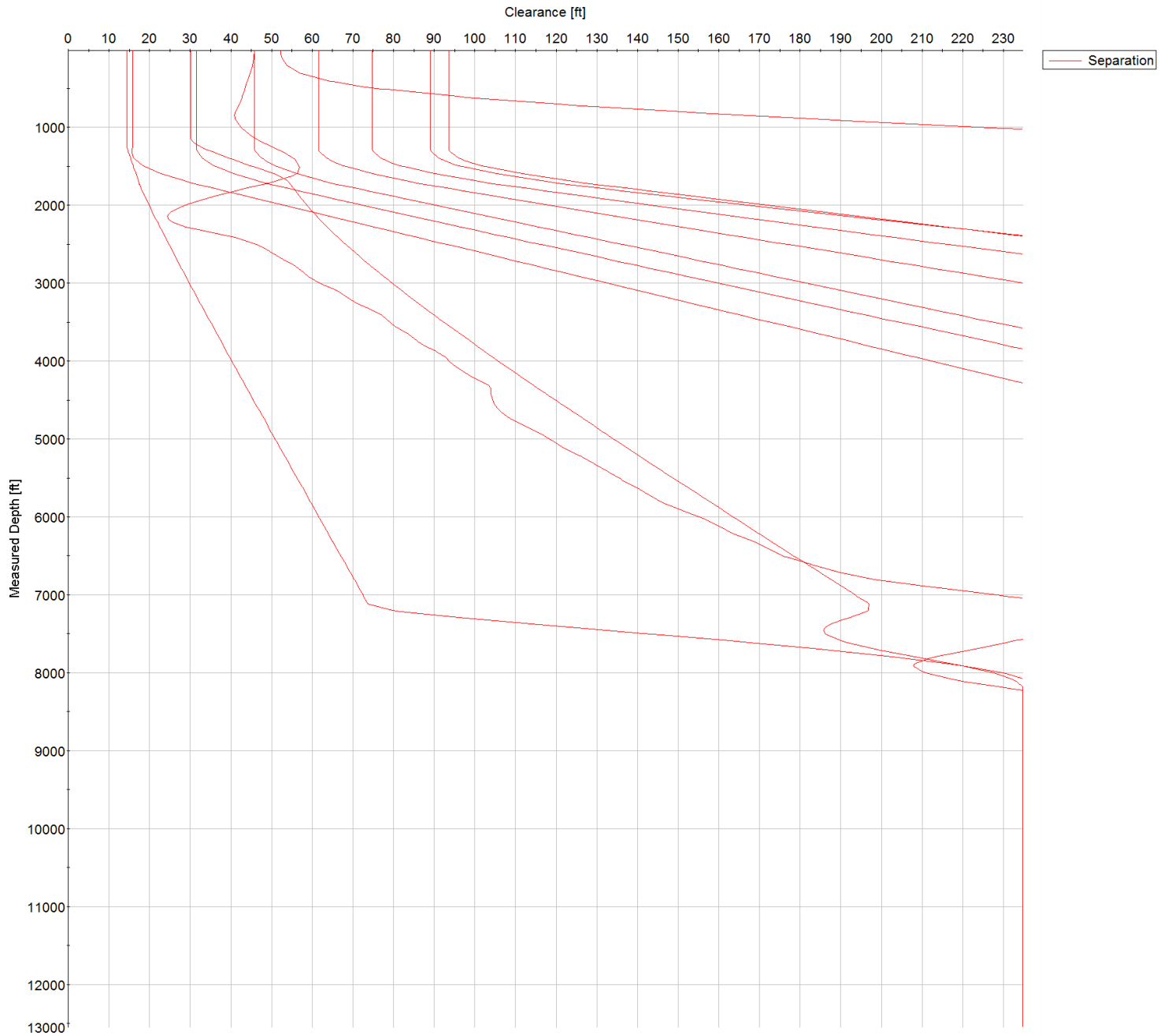
SYSDRILL  
Closest Approach + Clearance Factor Summary Report  
Wellbore: ALICIA 12-15H-3N (PWB)



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 352.800 degrees  
Prepared by Integrated Petroleum Technologies, Inc.  
Date Printed: 23-Jul-2015



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