

MINERAL RESOURCES, INC.

Location	Windsor	Slot	Slot #54
Field	Wattenberg	Well	GP-Dairy #3-20-19
Installation	Mineral Resources MRI	Wellbore	GP-Dairy #3-20-19 (PWB)

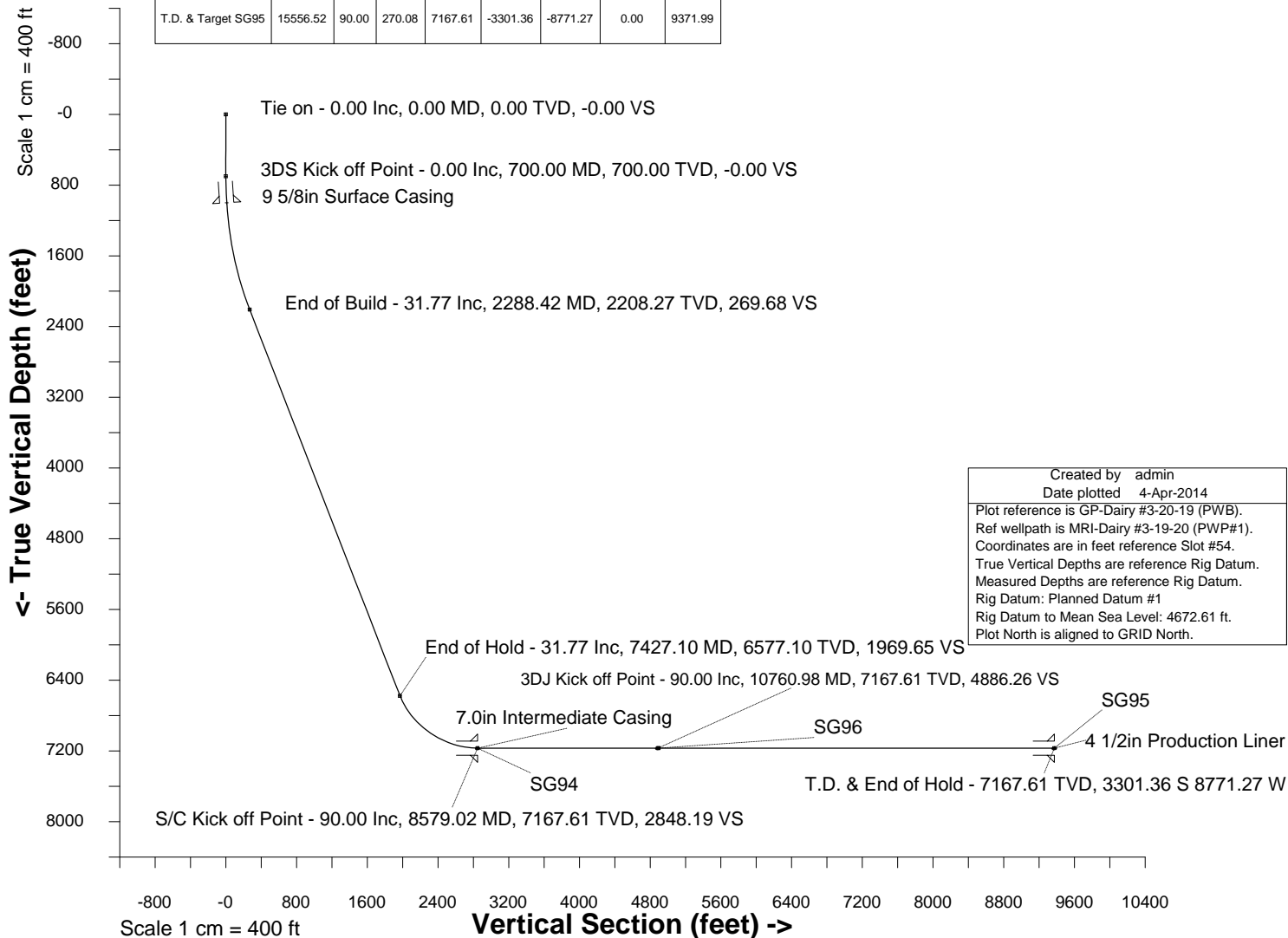
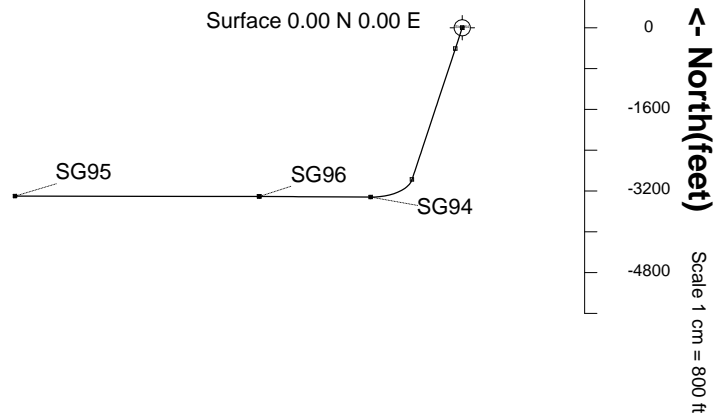
East (feet) ->

Scale 1 cm = 800 ft

-11200 -9600 -8000 -6400 -4800 -3200 -1600 0 1600

WELL PROFILE DATA

Point	MD	Inc	Azi	TVD	North	East	deg/100ft	V. Sect
Tie on	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.00
KOP	700.00	0.00	0.00	700.00	0.00	0.00	0.00	-0.00
End of Build	2288.42	31.77	198.30	2208.27	-407.48	-134.78	2.00	269.68
End of Hold	7427.10	31.77	198.30	6577.10	-2976.05	-984.41	0.00	1969.65
Target SG94	8579.02	90.00	270.30	7167.61	-3319.61	-1793.81	7.00	2848.19
Target SG96	10760.98	90.00	270.30	7167.61	-3308.24	-3975.74	0.00	4886.26
End of Turn	10771.81	90.00	270.08	7167.61	-3308.20	-3986.57	2.00	4896.38
T.D. & Target SG95	15556.52	90.00	270.08	7167.61	-3301.36	-8771.27	0.00	9371.99



Created by admin
Date plotted 4-Apr-2014
Plot reference is GP-Dairy #3-20-19 (PWB).
Ref wellpath is MRI-Dairy #3-19-20 (PWP#1).
Coordinates are in feet reference Slot #54.
True Vertical Depths are reference Rig Datum.
Measured Depths are reference Rig Datum.
Rig Datum: Planned Datum #1
Rig Datum to Mean Sea Level: 4672.61 ft.
Plot North is aligned to GRID North.

Vertical Section (feet) ->

Azimuth 249.37 with reference 0.00 N, 0.00 E from Slot #54



INTEGRATED PETROLEUM TECHNOLOGIES, INC
SYSDRILL
Well Design Combined Report
Wellbore: GP-Dairy #3-20-19 (PWB)

Wellhead Details							
Name	Northing	Easting	Latitude	Longitude	North	East	Elevation Above Inst.
Slot #54	1385962.7120	3227711.0790	40.38998804	-104.68250552	532.45S	375.48W	0.61

Declination			
Date	Source	Time	
22-Jan-2013	IGRF Model [1900.0-2015.0]	09:44	
18-Sep-2013	IGRF Model [1900.0-2015.0]	10:23	

Site Details				
Name	Northing	Easting	Coord System Name	North Alignment
Mineral Resources MRI	1386495.1419	3228086.5450	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
0.00	0.00	0.000	0.00	0.00N	0.00E		0.00	1385962.71	3227711.08
700.00	0.00	0.000	700.00	0.00N	0.00E	==>	0.00	1385962.71	3227711.08
2288.42	31.77	198.300	2208.27	407.48S	134.78W	2.00	269.68	1385555.25	3227576.30
7427.10	31.77	198.300	6577.10	2976.05S	984.41W	==>	1969.65	1382986.79	3226726.71
8579.02	90.00	270.300	7167.61	3319.61S	1793.81W	7.00	2848.19	1382643.24	3225917.34
10760.98	90.00	270.300	7167.61	3308.24S	3975.74W	==>	4886.26	1382654.61	3223735.50
10771.81	90.00	270.080	7167.61	3308.20S	3986.57W	2.00	4896.38	1382654.65	3223724.68
15556.52	90.00	270.080	7167.61	3301.36S	8771.27W	==>	9371.99	1382661.50	3218940.18

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	1385962.71	3227711.08
100.00	0.00	0.000	100.00	0.00N	0.00E	==>	0.00	1385962.71	3227711.08
200.00	0.00	0.000	200.00	0.00N	0.00E	==>	0.00	1385962.71	3227711.08
300.00	0.00	0.000	300.00	0.00N	0.00E	==>	0.00	1385962.71	3227711.08
400.00	0.00	0.000	400.00	0.00N	0.00E	==>	0.00	1385962.71	3227711.08
500.00	0.00	0.000	500.00	0.00N	0.00E	==>	0.00	1385962.71	3227711.08
600.00	0.00	0.000	600.00	0.00N	0.00E	==>	0.00	1385962.71	3227711.08
700.00	0.00	0.000	700.00	0.00N	0.00E	==>	0.00	1385962.71	3227711.08
800.00	2.00	198.300	799.98	1.66S	0.55W	2.00	1.10	1385961.06	3227710.53
900.00	4.00	198.300	899.84	6.63S	2.19W	2.00	4.38	1385956.09	3227708.89
1000.00	6.00	198.300	999.45	14.90S	4.93W	2.00	9.86	1385947.81	3227706.15
1100.00	8.00	198.300	1098.70	26.47S	8.76W	2.00	17.52	1385936.24	3227702.32
1200.00	10.00	198.300	1197.47	41.32S	13.67W	2.00	27.35	1385921.39	3227697.41
1300.00	12.00	198.300	1295.62	59.44S	19.66W	2.00	39.34	1385903.28	3227691.42
1400.00	14.00	198.300	1393.06	80.79S	26.72W	2.00	53.47	1385881.92	3227684.36
1500.00	16.00	198.300	1489.64	105.36S	34.85W	2.00	69.73	1385857.35	3227676.23
1600.00	18.00	198.300	1585.27	133.12S	44.03W	2.00	88.10	1385829.60	3227667.05
1700.00	20.00	198.300	1679.82	164.03S	54.26W	2.00	108.56	1385798.69	3227656.82
1800.00	22.00	198.300	1773.17	198.05S	65.51W	2.00	131.08	1385764.67	3227645.57
1900.00	24.00	198.300	1865.21	235.14S	77.78W	2.00	155.63	1385727.58	3227633.30
2000.00	26.00	198.300	1955.84	275.27S	91.05W	2.00	182.18	1385687.46	3227620.03
2100.00	28.00	198.300	2044.94	318.37S	105.31W	2.00	210.71	1385644.36	3227605.78
2200.00	30.00	198.300	2132.39	364.39S	120.53W	2.00	241.17	1385598.34	3227590.55
2288.42	31.77	198.300	2208.27	407.48S	134.78W	2.00	269.68	1385555.25	3227576.30
2300.00	31.77	198.300	2218.12	413.27S	136.70W	==>	273.51	1385549.46	3227574.38
2400.00	31.77	198.300	2303.14	463.25S	153.23W	==>	306.60	1385499.48	3227557.85
2500.00	31.77	198.300	2388.16	513.24S	169.77W	==>	339.68	1385449.50	3227541.32
2600.00	31.77	198.300	2473.17	563.22S	186.30W	==>	372.76	1385399.51	3227524.79
2700.00	31.77	198.300	2558.19	613.21S	202.84W	==>	405.84	1385349.53	3227508.25
2800.00	31.77	198.300	2643.21	663.19S	219.37W	==>	438.92	1385299.55	3227491.72
2900.00	31.77	198.300	2728.23	713.18S	235.90W	==>	472.01	1385249.56	3227475.19
3000.00	31.77	198.300	2813.25	763.16S	252.44W	==>	505.09	1385199.58	3227458.65
3100.00	31.77	198.300	2898.27	813.15S	268.97W	==>	538.17	1385149.60	3227442.12
3200.00	31.77	198.300	2983.28	863.13S	285.51W	==>	571.25	1385099.61	3227425.59
3300.00	31.77	198.300	3068.30	913.12S	302.04W	==>	604.33	1385049.63	3227409.05

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 4672.6ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 249.370 degrees
Bottom hole distance is 9371.99 Feet on azimuth 249.37 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Integrated Petroleum Technologies, Inc.
Date Printed: 4-Apr-2014



INTEGRATED PETROLEUM TECHNOLOGIES, INC
SYSDRILL

Well Design Combined Report
Wellbore: GP-Dairy #3-20-19 (PWB)

Interpolated Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Northing	Easting
3400.00	31.77	198.300	3153.32	963.10S	318.57W	==>	637.41	1384999.65	3227392.52
3500.00	31.77	198.300	3238.34	1013.09S	335.11W	==>	670.50	1384949.67	3227375.99
3600.00	31.77	198.300	3323.36	1063.07S	351.64W	==>	703.58	1384899.68	3227359.45
3700.00	31.77	198.300	3408.38	1113.06S	368.17W	==>	736.66	1384849.70	3227342.92
3800.00	31.77	198.300	3493.40	1163.04S	384.71W	==>	769.74	1384799.72	3227326.39
3900.00	31.77	198.300	3578.41	1213.03S	401.24W	==>	802.82	1384749.73	3227309.85
4000.00	31.77	198.300	3663.43	1263.01S	417.78W	==>	835.90	1384699.75	3227293.32
4100.00	31.77	198.300	3748.45	1313.00S	434.31W	==>	868.99	1384649.77	3227276.79
4200.00	31.77	198.300	3833.47	1362.98S	450.84W	==>	902.07	1384599.79	3227260.25
4300.00	31.77	198.300	3918.49	1412.97S	467.38W	==>	935.15	1384549.80	3227243.72
4400.00	31.77	198.300	4003.51	1462.95S	483.91W	==>	968.23	1384499.82	3227227.19
4500.00	31.77	198.300	4088.52	1512.94S	500.45W	==>	1001.31	1384449.84	3227210.65
4600.00	31.77	198.300	4173.54	1562.92S	516.98W	==>	1034.40	1384399.85	3227194.12
4700.00	31.77	198.300	4258.56	1612.91S	533.51W	==>	1067.48	1384349.87	3227177.59
4800.00	31.77	198.300	4343.58	1662.89S	550.05W	==>	1100.56	1384299.89	3227161.05
4900.00	31.77	198.300	4428.60	1712.88S	566.58W	==>	1133.64	1384249.91	3227144.52
5000.00	31.77	198.300	4513.62	1762.86S	583.12W	==>	1166.72	1384199.92	3227127.99
5100.00	31.77	198.300	4598.63	1812.85S	599.65W	==>	1199.80	1384149.94	3227111.45
5200.00	31.77	198.300	4683.65	1862.83S	616.18W	==>	1232.89	1384099.96	3227094.92
5300.00	31.77	198.300	4768.67	1912.82S	632.72W	==>	1265.97	1384049.97	3227078.39
5400.00	31.77	198.300	4853.69	1962.80S	649.25W	==>	1299.05	1383999.99	3227061.85
5500.00	31.77	198.300	4938.71	2012.79S	665.79W	==>	1332.13	1383950.01	3227045.32
5600.00	31.77	198.300	5023.73	2062.77S	682.32W	==>	1365.21	1383900.02	3227028.79
5700.00	31.77	198.300	5108.74	2112.76S	698.85W	==>	1398.29	1383850.04	3227012.26
5800.00	31.77	198.300	5193.76	2162.74S	715.39W	==>	1431.38	1383800.06	3226995.72
5900.00	31.77	198.300	5278.78	2212.73S	731.92W	==>	1464.46	1383750.08	3226979.19
6000.00	31.77	198.300	5363.80	2262.71S	748.46W	==>	1497.54	1383700.09	3226962.66
6100.00	31.77	198.300	5448.82	2312.70S	764.99W	==>	1530.62	1383650.11	3226946.12
6200.00	31.77	198.300	5533.84	2362.68S	781.52W	==>	1563.70	1383600.13	3226929.59
6300.00	31.77	198.300	5618.85	2412.67S	798.06W	==>	1596.79	1383550.14	3226913.06
6400.00	31.77	198.300	5703.87	2462.65S	814.59W	==>	1629.87	1383500.16	3226896.52
6500.00	31.77	198.300	5788.89	2512.64S	831.12W	==>	1662.95	1383450.18	3226879.99
6600.00	31.77	198.300	5873.91	2562.62S	847.66W	==>	1696.03	1383400.20	3226863.46
6700.00	31.77	198.300	5958.93	2612.61S	864.19W	==>	1729.11	1383350.21	3226846.92
6800.00	31.77	198.300	6043.95	2662.59S	880.73W	==>	1762.19	1383300.23	3226830.39
6900.00	31.77	198.300	6128.97	2712.58S	897.26W	==>	1795.28	1383250.25	3226813.86
7000.00	31.77	198.300	6213.98	2762.56S	913.79W	==>	1828.36	1383200.26	3226797.32
7100.00	31.77	198.300	6299.00	2812.55S	930.33W	==>	1861.44	1383150.28	3226780.79
7200.00	31.77	198.300	6384.02	2862.53S	946.86W	==>	1894.52	1383100.30	3226764.26
7300.00	31.77	198.300	6469.04	2912.52S	963.40W	==>	1927.60	1383050.32	3226747.72
7400.00	31.77	198.300	6554.06	2962.50S	979.93W	==>	1960.68	1383000.33	3226731.19
7427.10	31.77	198.300	6577.10	2976.05S	984.41W	==>	1969.65	1382986.79	3226726.71
7500.00	33.45	207.250	6638.54	3012.16S	999.65W	7.00	1996.63	1382950.68	3226711.47
7600.00	36.69	218.070	6720.45	3060.24S	1030.73W	7.00	2042.65	1382902.60	3226680.39
7700.00	40.76	227.200	6798.52	3105.99S	1073.15W	7.00	2098.48	1382856.85	3226637.97
7800.00	45.43	234.840	6871.57	3148.74S	1126.29W	7.00	2163.27	1382814.11	3226584.84
7900.00	50.53	241.290	6938.52	3187.84S	1189.34W	7.00	2236.05	1382775.00	3226521.78
8000.00	55.95	246.840	6998.38	3222.72S	1261.38W	7.00	2315.76	1382740.13	3226449.75
8100.00	61.58	251.710	7050.24	3252.84S	1341.32W	7.00	2401.18	1382710.00	3226369.82
8200.00	67.36	256.080	7093.34	3277.78S	1427.97W	7.00	2491.06	1382685.08	3226283.17
8300.00	73.26	260.090	7127.03	3297.14S	1520.04W	7.00	2584.06	1382665.71	3226191.10
8400.00	79.22	263.860	7150.81	3310.64S	1616.17W	7.00	2678.77	1382652.21	3226094.98
8500.00	85.24	267.490	7164.33	3318.09S	1714.91W	7.00	2773.81	1382644.76	3225996.25
8579.02	90.00	270.300	7167.61	3319.61S	1793.81W	7.00	2848.19	1382643.24	3225917.34
8600.00	90.00	270.300	7167.61	3319.50S	1814.79W	==>	2867.79	1382643.35	3225896.36
8700.00	90.00	270.300	7167.61	3318.98S	1914.79W	==>	2961.20	1382643.87	3225796.37
8800.00	90.00	270.300	7167.61	3318.46S	2014.79W	==>	3054.60	1382644.39	3225696.37
8900.00	90.00	270.300	7167.61	3317.94S	2114.79W	==>	3148.01	1382644.91	3225596.38
9000.00	90.00	270.300	7167.61	3317.42S	2214.79W	==>	3241.41	1382645.43	3225496.39
9100.00	90.00	270.300	7167.61	3316.90S	2314.79W	==>	3334.82	1382645.96	3225396.39
9200.00	90.00	270.300	7167.61	3316.38S	2414.78W	==>	3428.22	1382646.48	3225296.40

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Wellbore: GP-Dairy #3-20-19 (PWB)

Interpolated Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Northing	Easting
9300.00	90.00	270.300	7167.61	3315.85S	2514.78W	==>	3521.63	1382647.00	3225196.40
9400.00	90.00	270.300	7167.61	3315.33S	2614.78W	==>	3615.03	1382647.52	3225096.41
9500.00	90.00	270.300	7167.61	3314.81S	2714.78W	==>	3708.44	1382648.04	3224996.41
9600.00	90.00	270.300	7167.61	3314.29S	2814.78W	==>	3801.84	1382648.56	3224896.42
9700.00	90.00	270.300	7167.61	3313.77S	2914.78W	==>	3895.25	1382649.08	3224796.43
9800.00	90.00	270.300	7167.61	3313.25S	3014.78W	==>	3988.66	1382649.60	3224696.43
9900.00	90.00	270.300	7167.61	3312.73S	3114.77W	==>	4082.06	1382650.12	3224596.44
10000.00	90.00	270.300	7167.61	3312.21S	3214.77W	==>	4175.47	1382650.65	3224496.44
10100.00	90.00	270.300	7167.61	3311.69S	3314.77W	==>	4268.87	1382651.17	3224396.45
10200.00	90.00	270.300	7167.61	3311.16S	3414.77W	==>	4362.28	1382651.69	3224296.45
10300.00	90.00	270.300	7167.61	3310.64S	3514.77W	==>	4455.68	1382652.21	3224196.46
10400.00	90.00	270.300	7167.61	3310.12S	3614.77W	==>	4549.09	1382652.73	3224096.46
10500.00	90.00	270.300	7167.61	3309.60S	3714.77W	==>	4642.49	1382653.25	3223996.47
10600.00	90.00	270.300	7167.61	3309.08S	3814.76W	==>	4735.90	1382653.77	3223896.48
10700.00	90.00	270.300	7167.61	3308.56S	3914.76W	==>	4829.30	1382654.29	3223796.48
10760.98	90.00	270.300	7167.61	3308.24S	3975.74W	==>	4886.26	1382654.61	3223735.50
10771.81	90.00	270.080	7167.61	3308.20S	3986.57W	2.00	4896.38	1382654.65	3223724.68
10800.00	90.00	270.080	7167.61	3308.16S	4014.76W	==>	4922.75	1382654.69	3223696.49
10900.00	90.00	270.080	7167.61	3308.02S	4114.76W	==>	5016.29	1382654.83	3223596.49
11000.00	90.00	270.080	7167.61	3307.88S	4214.76W	==>	5109.83	1382654.97	3223496.49
11100.00	90.00	270.080	7167.61	3307.73S	4314.76W	==>	5203.37	1382655.12	3223396.50
11200.00	90.00	270.080	7167.61	3307.59S	4414.76W	==>	5296.91	1382655.26	3223296.50
11300.00	90.00	270.080	7167.61	3307.45S	4514.76W	==>	5390.45	1382655.40	3223196.51
11400.00	90.00	270.080	7167.61	3307.31S	4614.76W	==>	5483.99	1382655.55	3223096.51
11500.00	90.00	270.080	7167.61	3307.16S	4714.76W	==>	5577.53	1382655.69	3222996.52
11600.00	90.00	270.080	7167.61	3307.02S	4814.76W	==>	5671.07	1382655.83	3222896.52
11700.00	90.00	270.080	7167.61	3306.88S	4914.76W	==>	5764.61	1382655.98	3222796.52
11800.00	90.00	270.080	7167.61	3306.73S	5014.76W	==>	5858.15	1382656.12	3222696.53
11900.00	90.00	270.080	7167.61	3306.59S	5114.76W	==>	5951.69	1382656.26	3222596.53
12000.00	90.00	270.080	7167.61	3306.45S	5214.76W	==>	6045.23	1382656.41	3222496.54
12100.00	90.00	270.080	7167.61	3306.30S	5314.76W	==>	6138.77	1382656.55	3222396.54
12200.00	90.00	270.080	7167.61	3306.16S	5414.76W	==>	6232.31	1382656.69	3222296.55
12300.00	90.00	270.080	7167.61	3306.02S	5514.76W	==>	6325.85	1382656.83	3222196.55
12400.00	90.00	270.080	7167.61	3305.87S	5614.76W	==>	6419.39	1382656.98	3222096.56
12500.00	90.00	270.080	7167.61	3305.73S	5714.76W	==>	6512.93	1382657.12	3221996.56
12600.00	90.00	270.080	7167.61	3305.59S	5814.76W	==>	6606.47	1382657.26	3221896.56
12700.00	90.00	270.080	7167.61	3305.44S	5914.76W	==>	6700.01	1382657.41	3221796.57
12800.00	90.00	270.080	7167.61	3305.30S	6014.76W	==>	6793.55	1382657.55	3221696.57
12900.00	90.00	270.080	7167.61	3305.16S	6114.76W	==>	6887.09	1382657.69	3221596.58
13000.00	90.00	270.080	7167.61	3305.01S	6214.76W	==>	6980.63	1382657.84	3221496.58
13100.00	90.00	270.080	7167.61	3304.87S	6314.76W	==>	7074.17	1382657.98	3221396.59
13200.00	90.00	270.080	7167.61	3304.73S	6414.76W	==>	7167.71	1382658.12	3221296.59
13300.00	90.00	270.080	7167.61	3304.59S	6514.76W	==>	7261.25	1382658.27	3221196.59
13400.00	90.00	270.080	7167.61	3304.44S	6614.76W	==>	7354.79	1382658.41	3221096.60
13500.00	90.00	270.080	7167.61	3304.30S	6714.76W	==>	7448.33	1382658.55	3220996.60
13600.00	90.00	270.080	7167.61	3304.16S	6814.76W	==>	7541.87	1382658.70	3220896.61
13700.00	90.00	270.080	7167.61	3304.01S	6914.76W	==>	7635.41	1382658.84	3220796.61
13800.00	90.00	270.080	7167.61	3303.87S	7014.76W	==>	7728.95	1382658.98	3220696.62
13900.00	90.00	270.080	7167.61	3303.73S	7114.76W	==>	7822.49	1382659.12	3220596.62
14000.00	90.00	270.080	7167.61	3303.58S	7214.76W	==>	7916.03	1382659.27	3220496.62
14100.00	90.00	270.080	7167.61	3303.44S	7314.76W	==>	8009.57	1382659.41	3220396.63
14200.00	90.00	270.080	7167.61	3303.30S	7414.76W	==>	8103.11	1382659.55	3220296.63
14300.00	90.00	270.080	7167.61	3303.15S	7514.76W	==>	8196.65	1382659.70	3220196.64
14400.00	90.00	270.080	7167.61	3303.01S	7614.76W	==>	8290.19	1382659.84	3220096.64
14500.00	90.00	270.080	7167.61	3302.87S	7714.76W	==>	8383.73	1382659.98	3219996.65
14600.00	90.00	270.080	7167.61	3302.72S	7814.76W	==>	8477.27	1382660.13	3219896.65
14700.00	90.00	270.080	7167.61	3302.58S	7914.76W	==>	8570.81	1382660.27	3219796.65
14800.00	90.00	270.080	7167.61	3302.44S	8014.76W	==>	8664.35	1382660.41	3219696.66
14900.00	90.00	270.080	7167.61	3302.30S	8114.76W	==>	8757.89	1382660.56	3219596.66
15000.00	90.00	270.080	7167.61	3302.15S	8214.76W	==>	8851.43	1382660.70	3219496.67
15100.00	90.00	270.080	7167.61	3302.01S	8314.76W	==>	8944.97	1382660.84	3219396.67
15200.00	90.00	270.080	7167.61	3301.87S	8414.76W	==>	9038.51	1382660.99	3219296.68

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Vertical Section is from 0.00N 0.00E on azimuth 249.370 degrees
Bottom hole distance is 9371.99 Feet on azimuth 249.37 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Integrated Petroleum Technologies, Inc.
Date Printed: 4-Apr-2014



INTEGRATED PETROLEUM TECHNOLOGIES, INC
 SYSDRILL
 Well Design Combined Report
 Wellbore: GP-Dairy #3-20-19 (PWB)

Interpolated Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Northing	Easting
15300.00	90.00	270.080	7167.61	3301.72S	8514.76W	==>	9132.05	1382661.13	3219196.68
15400.00	90.00	270.080	7167.61	3301.58S	8614.76W	==>	9225.58	1382661.27	3219096.68
15500.00	90.00	270.080	7167.61	3301.44S	8714.76W	==>	9319.12	1382661.42	3218996.69
15556.52	90.00	270.080	7167.61	3301.36S	8771.27W	==>	9371.99	1382661.50	3218940.18

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SYSDRILL
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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]
12 1/4	0.00	0.00	0.00N	0.00E	1000.00	999.45	14.90S	4.93W
8 3/4	1000.00	999.45	14.90S	4.93W	8579.00	7167.61	3319.61S	1793.79W
6 1/8	8579.00	7167.61	3319.61S	1793.79W	15556.52	7167.61	3301.36S	8771.27W

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	0.00	0.00	0.00N	0.00E	1000.00	999.45	14.90S	4.93W
7.0in Intermediate Casing	0.00	0.00	0.00N	0.00E	8579.00	7167.61	3319.61S	1793.79W
4 1/2in Production Liner	8379.00	7146.66	3308.30S	1595.72W	15556.52	7167.61	3301.36S	8771.27W

Targets								
Name	North[ft]	East[ft]	TVD[ft]	Latitude	Longitude	Northing	Easting	Last Revised
SG94	3319.61S	1793.81W	7167.61	40.38092161	-104.68905374	1382643.24	3225917.34	17-Mar-2014
SG95	3301.36S	8771.27W	7167.61	40.38114417	-104.711409686	1382661.50	3218940.18	17-Mar-2014
SG96	3308.24S	3975.74W	7167.61	40.38100733	-104.69688480	1382654.61	3223735.50	17-Mar-2014

Survey Tool Program						
Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model	
64481	Planned	15556.52	7167.61	WdW Rate Gyro	Standard	

Notes

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Wellbore: GP-Dairy #3-20-19 (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 1500.00ft 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
GP-Dairy #3-20-19 (PWB)	23-Sep-2013	4-Apr-2014

Well		
Name	Government ID	Last Revised
GP-Dairy #3-20-19		4-Apr-2014

Slot						
Name	Grid Northing	Grid Easting	Latitude	Longitude	North	East
Slot #54	1385962.7120	3227711.0790	40.38998804	-104.68250552	532.45S	375.48W

Installation				
Name	Easting	Northing	Coord System Name	North Alignment
Mineral Resources MRI	3228086.5450	1386495.1419	CO83-NF on NORTH AMERICAN DATUM 1983 datum	Grid

Field				
Name	Easting	Northing	Coord System Name	North Alignment
Wattenberg	3211772.6087	1400656.3763	CO83-NF on NORTH AMERICAN DATUM 1983 datum	Grid

Clearance Summary										
Offset WellName	Offset Wellbore	Offset Slot	Offset Structure	Separation [ft]	MD[ft]	Diverging From[ft]	Ellipse Separation [ft]	Ellipse MD[ft]	Clearance Factor	Clearance MD[ft]
GP-Dairy #2-20-19	GP-Dairy #2-20-19 (PWB)	Slot #53	Mineral Resources MRI	12.00	700.00	10771.81	9.96	705.38	2.53	15556.52
GP-Dairy #4-19-20	GP-Dairy #4-19-20 (PWB)	Slot #55	Mineral Resources MRI	12.00	649.94	15552.28	10.04	649.94	2.46	15556.52
GP-Dairy #1-20-19	GP-Dairy #1-20-19 (PWB)	Slot #52	Mineral Resources MRI	24.00	700.00	10771.81	21.96	705.38	4.20	15556.52
GP-Dairy #5-19-20	GP-Dairy #5-19-20 (PWB)	Slot #56	Mineral Resources MRI	24.00	600.00	15548.05	22.01	600.00	4.17	15556.52
GP-Double Clutch #3-20-19	GP-Double Clutch #3-20-19 (PWB)	Slot #51	Mineral Resources MRI	36.00	700.00	10771.81	33.96	705.38	6.46	15556.52
GP-Library #1-19-20	GP-Library #1-19-20 (PWB)	Slot #57	Mineral Resources MRI	36.00	549.91	15543.81	34.20	549.91	6.37	15556.52
GP-Double Clutch #2-19-19	GP-Double Clutch #2-19-19 (PWB)	Slot #50	Mineral Resources MRI	48.00	700.00	15556.52	45.96	705.38	8.45	15556.52
GP-Double Clutch #1-19-19	GP-Double Clutch #1-19-19 (PWB)	Slot #49	Mineral Resources MRI	55.56	609.89	609.89	53.62	623.36	26.75	721.78
GP-JEvans #5-19-19	GP-JEvans #5-19-19	Slot #48	Mineral Resources	68.38	557.74	557.74	66.52	574.15	33.14	738.19

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Wellbore: GP-Dairy #3-20-19 (PWB)

Clearance Summary										
Offset WellName	Offset Wellbore	Offset Slot	Offset Structure	Separation [ft]	MD[ft]	Diverging From[ft]	Ellipse Separation [ft]	Ellipse MD[ft]	Clearance Factor	Clearance MD[ft]
	(PWB)		MRI							
GP-JEvans 4-19-19	GP-JEvans 4-19-19 (PWB)	Slot #47	Mineral Resources MRI	84.00	700.00	700.00	81.96	705.38	37.98	885.83
GP-JEvans #3-19-19	GP-JEvans #3-19-19 (PWB)	Slot #46	Mineral Resources MRI	95.32	721.78	721.78	93.24	721.78	42.24	885.83
GP-JEvans #2-19-19	GP-JEvans #2-19-19 (PWB)	Slot #45	Mineral Resources MRI	107.51	600.00	600.00	105.61	623.36	48.46	885.83
GP-JEvans #1-19-19	GP-JEvans #1-19-19 (PWB)	Slot #44	Mineral Resources MRI	120.00	700.00	700.00	117.96	705.38	53.73	885.83
GP-Hillside #3-19-19	GP-Hillside #3-19-19 (PWB)	Slot #43	Mineral Resources MRI	132.01	700.00	700.00	129.96	705.38	58.87	900.00
GP-Hillside #2-19-19	GP-Hillside #2-19-19 (PWB)	Slot #42	Mineral Resources MRI	144.01	500.00	500.00	142.27	541.34	65.41	902.23
GP-Hillside #1-18-18	GP-Hillside #1-18-18 (PWB)	Slot #41	Mineral Resources MRI	156.01	700.00	700.00	153.96	705.38	69.11	885.83
GP-Jackson #5-18-18	GP-Jackson #5-18-18 (PWB)	Slot #40	Mineral Resources MRI	169.01	700.00	700.00	166.96	705.38	74.65	885.83
GP-Jackson #4-18-18	GP-Jackson #4-18-18 (PWB)	Slot #39	Mineral Resources MRI	181.01	700.00	700.00	178.96	705.38	79.79	885.83
GP-Jackson #3-18-18	GP-Jackson #3-18-18 (PWB)	Slot #38	Mineral Resources MRI	193.01	700.00	700.00	190.96	705.38	84.92	885.83
GP-Jackson #2-18-18	GP-Jackson #2-18-18 (PWB)	Slot #37	Mineral Resources MRI	205.01	700.00	700.00	202.96	705.38	89.72	900.00
GP-Jackson #1-18-18	GP-Jackson #1-18-18 (PWB)	Slot #36	Mineral Resources MRI	217.01	688.98	688.98	214.97	700.00	96.37	902.23
GP-Alles #3-18-18	GP-Alles #3-18-18 (PWB)	Slot #35	Mineral Resources MRI	229.01	524.93	524.93	227.25	524.93	105.28	902.23
GP-Alles #2-18-18	GP-Alles #2-18-18 (PWB)	Slot #34	Mineral Resources MRI	241.01	473.93	473.93	239.34	475.72	113.19	918.64
Commerce Center 4 #20-2H5	Commerce Center 4 #20-2H5 (AWB)	Commerce Center 4 #20-2H5	MRI Offsets	247.80	1833.37	1833.37	241.73	1837.27	38.62	2017.72
Commerce Center 2 #20-7H5	Commerce Center 2 #20-7H5 (AWB)	Commerce Center 2 #20-7H5	MRI Offsets	248.63	4275.65	4275.65	224.86	4281.50	10.37	4314.30
CDOT-2 #D7	CDOT-2 #D7 (AWB)	CDOT-2 #D7	Mineral Resources MRI	302.59	541.34	541.34	299.59	574.15	60.23	1935.70
CDOT-3 #D2	CDOT-3 #D2 (AWB)	CDOT-3 #D2	Mineral Resources MRI	315.70	705.38	705.38	312.11	721.78	67.34	1443.57

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Wellbore: GP-Dairy #3-20-19 (PWB)

Clearance Summary										
Offset WellName	Offset Wellbore	Offset Slot	Offset Structure	Separation [ft]	MD[ft]	Diverging From[ft]	Ellipse Separation [ft]	Ellipse MD[ft]	Clearance Factor	Clearance MD[ft]
Sunnyview #E4	Sunnyview #E4 (AWB)	Sunnyview #E4	Mineral Resources MRI	325.81	935.04	935.04	320.95	951.44	25.51	4363.52
Ehrlich Motors #D8	Ehrlich Motors #D8 (AWB)	Ehrlich Motors #D8	Mineral Resources MRI	331.05	560.60	560.60	329.56	639.76	58.35	3461.29
Sleep Inn #E5	Sleep Inn #E5 (AWB)	Sleep Inn #E5	Mineral Resources MRI	344.43	0.00	0.00	343.32	49.21	97.99	2288.42
Tri Point #E3	Tri Point #E3 (AWB)	Tri Point #E3	Mineral Resources MRI	360.02	803.81	803.81	355.81	820.21	31.83	4051.84
CDOT-1 #E2	CDOT-1 #E2 (AWB)	CDOT-1 #E2	Mineral Resources MRI	388.13	754.59	754.59	383.57	771.00	42.00	3838.58
University Square #D6	University Square #D6 (AWB)	University Square #D6	Mineral Resources MRI	427.17	16.40	705.38	424.99	721.78	66.20	2952.76
Garden City #D5	Garden City #D5 (AWB)	Garden City #D5	Mineral Resources MRI	445.98	11.61	700.00	444.18	246.06	94.53	3149.61
University 5 Spot #D4	University 5 Spot #D4 (AWB)	University 5 Spot #D4	Mineral Resources MRI	497.71	218.94	218.94	496.17	218.94	77.14	2526.25
Wheeler #D3	Wheeler #D3 (AWB)	Wheeler #D3	Mineral Resources MRI	504.64	156.92	156.92	503.20	196.85	86.18	2263.78
Driftwood #D1	Driftwood #D1 (AWB)	Driftwood #D1	Mineral Resources MRI	511.05	0.00	0.00	509.88	49.21	107.62	2148.95
Classic Lanes #C9	Classic Lanes #C9 (AWB)	Classic Lanes #C9	Mineral Resources MRI	514.51	0.00	0.00	513.33	65.62	91.89	2132.55
District Six #C6	District Six #C6 (AWB)	District Six #C6	Mineral Resources MRI	523.64	200.00	200.00	522.13	200.00	157.55	1000.00
Volk #C7	Volk #C7 (AWB)	Volk #C7	Mineral Resources MRI	524.33	0.00	0.00	523.24	32.81	124.22	1722.44
Union Pacific #C5	Union Pacific #C5 (AWB)	Union Pacific #C5	Mineral Resources MRI	531.07	136.61	136.61	529.60	180.45	186.92	984.25
HWY 85-3 #C4	HWY 85-3 #C4 (AWB)	HWY 85-3 #C4	Mineral Resources MRI	541.64	116.94	116.94	540.36	147.64	212.72	1476.38
Countryside Center #C3	Countryside Center #C3 (AWB)	Countryside Center #C3	Mineral Resources MRI	545.71	0.61	0.61	544.69	32.81	176.95	967.85
Millers Green House #A10	Millers Green House #A10 (AWB)	Millers Green House #A10	Mineral Resources MRI	625.79	2.61	2.61	624.13	180.45	96.15	2772.31
Riverview #A9	Riverview #A9 (AWB)	Riverview #A9	Mineral Resources MRI	630.22	500.60	500.60	627.34	500.60	110.83	2673.88
HWY 34-2	HWY 34-2	HWY 34-2	Mineral Resources	641.91	1.61	1.61	640.35	131.23	144.34	2575.46

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Clearance Summary										
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#A8	#A8 (AWB)	#A8	MRI							
BMC #B8	BMC #B8 (AWB)	BMC #B8	Mineral Resources MRI	651.53	0.61	0.61	649.88	131.23	102.63	2887.14
HWY 34-1 #A7	HWY 34-1 #A7 (AWB)	HWY 34-1 #A7	Mineral Resources MRI	652.44	1.61	1.61	650.64	200.00	172.69	2739.50
Greeley Industrial South #B9	Greeley Industrial South #B9 (AWB)	Greeley Industrial South #B9	Mineral Resources MRI	666.48	600.61	600.61	664.32	600.61	159.28	2542.65
Shupe 5 Spot #B10	Shupe 5 Spot #B10 (AWB)	Shupe 5 Spot #B10	Mineral Resources MRI	683.10	700.00	700.00	680.79	705.38	227.51	2641.08
Sam Pak #A6	Sam Pak #A6 (AWB)	Sam Pak #A6	Mineral Resources MRI	683.72	4.61	4.61	682.07	300.00	189.07	2312.99
Bus Barn #A5	Bus Barn #A5 (AWB)	Bus Barn #A5	Mineral Resources MRI	694.32	4.61	4.61	692.23	311.68	160.04	1492.78
Highway 85-2 #B-11	Highway 85-2 #B-11 (AWB)	Highway 85-2 #B-11	Mineral Resources MRI	698.58	278.87	278.87	696.56	311.68	195.48	2099.74
Smith 5 Spot #A4	Smith 5 Spot #A4 (AWB)	Smith 5 Spot #A4	Mineral Resources MRI	709.89	3.61	3.61	708.22	147.64	212.43	1000.00
Highway 85-1 #B12	Highway 85-1 #B12 (AWB)	Highway 85-1 #B12	Mineral Resources MRI	715.57	700.00	700.00	713.26	705.38	252.08	1952.10
Parkview South #A3	Parkview South #A3 (AWB)	Parkview South #A3	Mineral Resources MRI	726.03	4.61	4.61	724.56	147.64	254.73	2034.12
Delta Park #A2	Delta Park #A2 (AWB)	Delta Park #A2	Mineral Resources MRI	738.19	204.61	204.61	736.50	204.61	184.76	1673.23
Clark #A1	Clark #A1 (AWB)	Clark #A1	Mineral Resources MRI	755.32	4.61	4.61	753.54	246.06	120.99	2165.35
Commerce Center 3 #20-1H5	Commerce Center 3 #20-1H5 (AWB)	Commerce Center 3 #20-1H5	MRI Offsets	771.56	721.78	721.78	768.31	721.78	147.55	3412.07