



Extraction Oil & Gas

Location Windsor, CO, USA(Imported)
Field Windsor Project
Installation Diamond Valley East- REV 01

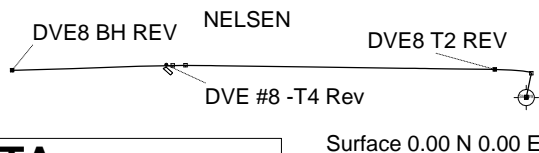
Slot Slot #9
Well DVE #8
Wellbore DVE #8 (PWB)



Scale 1 cm = 800 ft

East (feet) ->

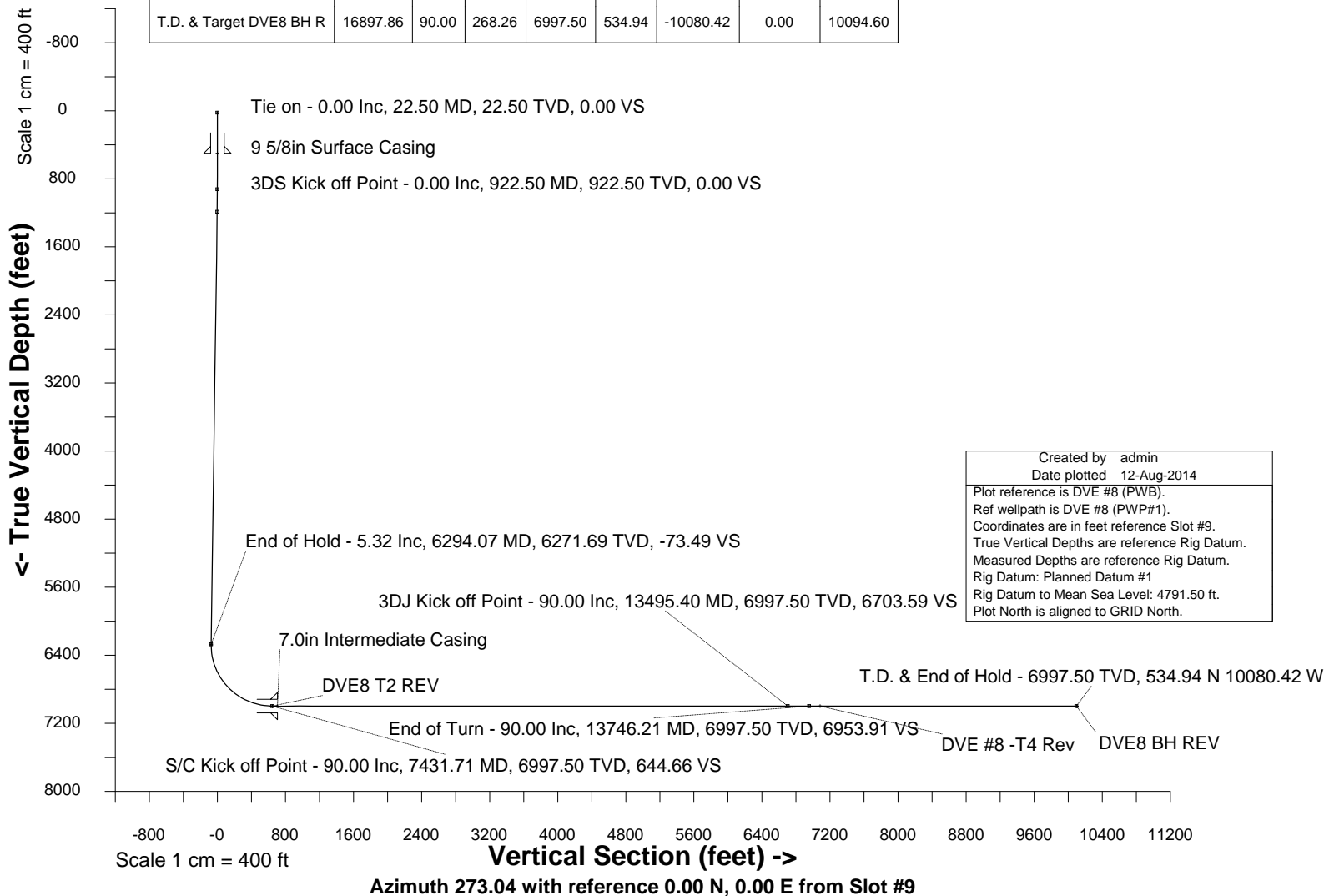
-12800 -11200 -9600 -8000 -6400 -4800 -3200 -1600 0 1600



North (feet)
Scale 1 cm = 800 ft

WELL PROFILE DATA

Point	MD	Inc	Azi	TVD	North	East	deg/100ft	V. Sect
Tie on	22.50	0.00	0.00	22.50	0.00	0.00	0.00	0.00
KOP	922.50	0.00	0.00	922.50	0.00	0.00	0.00	0.00
End of Build	1188.54	5.32	11.74	1188.16	12.09	2.51	2.00	-1.87
End of Hold	6294.07	5.32	11.74	6271.69	475.63	98.83	0.00	-73.49
Target DVE8 T2 REV	7431.71	90.00	270.77	6997.50	551.58	-616.30	8.00	644.66
Target DVE #8 -T4 Rev	13495.40	90.00	270.77	6997.50	632.80	-6679.45	0.00	6703.59
End of Turn	13746.21	90.00	268.26	6997.50	630.67	-6930.22	1.00	6953.91
T.D. & Target DVE8 BH R	16897.86	90.00	268.26	6997.50	534.94	-10080.42	0.00	10094.60





INTEGRATED PETROLEUM TECHNOLOGIES, INC
SYSDRILL
Well Design Combined Report
Wellbore: DVE #8 (PWB)



Wellhead Details							
Name	Northing	Easting	Latitude	Longitude	North	East	Elevation Above Inst.
Slot #9	1413865.0011	3175339.0066	40.46775070	-104.86980480	128.01N	0.01E	-0.00

Declination			
Date	Source	Time	
16-Dec-2013	IGRF Model [1900.0-2015.0]	15:36	

Site Details				
Name	Northing	Easting	Coord System Name	North Alignment
Diamond Valley East- REV 01	1413737.0001	3175339.0009	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
22.50	0.00	0.000	22.50	0.00N	0.00E		0.00	1413865.00	3175339.01
922.50	0.00	0.000	922.50	0.00N	0.00E	==>	0.00	1413865.00	3175339.01
1188.54	5.32	11.740	1188.16	12.09N	2.51E	2.00	-1.87	1413877.09	3175341.52
6294.07	5.32	11.740	6271.69	475.63N	98.83E	==>	-73.49	1414340.62	3175437.84
7431.71	90.00	270.770	6997.50	551.58N	616.30W	8.00	644.66	1414416.56	3174722.73
13495.40	90.00	270.770	6997.50	632.80N	6679.45W	==>	6703.59	1414497.78	3168659.81
13746.21	90.00	268.260	6997.50	630.67N	6930.22W	1.00	6953.91	1414495.65	3168409.05
16897.86	90.00	268.260	6997.50	534.94N	10080.42W	==>	10094.60	1414399.92	3165258.97

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	1413865.00	3175339.01
22.50	0.00	0.000	22.50	0.00N	0.00E	==>	0.00	1413865.00	3175339.01
100.00	0.00	0.000	100.00	0.00N	0.00E	==>	0.00	1413865.00	3175339.01
200.00	0.00	0.000	200.00	0.00N	0.00E	==>	0.00	1413865.00	3175339.01
300.00	0.00	0.000	300.00	0.00N	0.00E	==>	0.00	1413865.00	3175339.01
400.00	0.00	0.000	400.00	0.00N	0.00E	==>	0.00	1413865.00	3175339.01
500.00	0.00	0.000	500.00	0.00N	0.00E	==>	0.00	1413865.00	3175339.01
600.00	0.00	0.000	600.00	0.00N	0.00E	==>	0.00	1413865.00	3175339.01
700.00	0.00	0.000	700.00	0.00N	0.00E	==>	0.00	1413865.00	3175339.01
800.00	0.00	0.000	800.00	0.00N	0.00E	==>	0.00	1413865.00	3175339.01
900.00	0.00	0.000	900.00	0.00N	0.00E	==>	0.00	1413865.00	3175339.01
922.50	0.00	0.000	922.50	0.00N	0.00E	==>	0.00	1413865.00	3175339.01
1000.00	1.55	11.740	999.99	1.03N	0.21E	2.00	-0.16	1413866.03	3175339.22
1100.00	3.55	11.740	1099.89	5.38N	1.12E	2.00	-0.83	1413870.38	3175340.12
1188.54	5.32	11.740	1188.16	12.09N	2.51E	2.00	-1.87	1413877.09	3175341.52
1200.00	5.32	11.740	1199.57	13.13N	2.73E	==>	-2.03	1413878.13	3175341.73
1300.00	5.32	11.740	1299.14	22.21N	4.61E	==>	-3.43	1413887.21	3175343.62
1400.00	5.32	11.740	1398.71	31.29N	6.50E	==>	-4.83	1413896.28	3175345.51
1500.00	5.32	11.740	1498.28	40.36N	8.39E	==>	-6.24	1413905.36	3175347.39
1600.00	5.32	11.740	1597.84	49.44N	10.27E	==>	-7.64	1413914.44	3175349.28
1700.00	5.32	11.740	1697.41	58.52N	12.16E	==>	-9.04	1413923.52	3175351.17
1800.00	5.32	11.740	1796.98	67.60N	14.05E	==>	-10.45	1413932.60	3175353.05
1900.00	5.32	11.740	1896.55	76.68N	15.93E	==>	-11.85	1413941.68	3175354.94
2000.00	5.32	11.740	1996.12	85.76N	17.82E	==>	-13.25	1413950.76	3175356.83
2100.00	5.32	11.740	2095.69	94.84N	19.71E	==>	-14.65	1413959.84	3175358.71
2200.00	5.32	11.740	2195.26	103.92N	21.59E	==>	-16.06	1413968.92	3175360.60
2300.00	5.32	11.740	2294.83	113.00N	23.48E	==>	-17.46	1413978.00	3175362.49
2400.00	5.32	11.740	2394.40	122.08N	25.37E	==>	-18.86	1413987.07	3175364.37
2500.00	5.32	11.740	2493.97	131.16N	27.25E	==>	-20.26	1413996.15	3175366.26
2600.00	5.32	11.740	2593.54	140.24N	29.14E	==>	-21.67	1414005.23	3175368.15
2700.00	5.32	11.740	2693.11	149.32N	31.03E	==>	-23.07	1414014.31	3175370.03
2800.00	5.32	11.740	2792.67	158.40N	32.91E	==>	-24.47	1414023.39	3175371.92
2900.00	5.32	11.740	2892.24	167.47N	34.80E	==>	-25.88	1414032.47	3175373.81
3000.00	5.32	11.740	2991.81	176.55N	36.69E	==>	-27.28	1414041.55	3175375.69

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 4791.5ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 273.040 degrees
Bottom hole distance is 10094.60 Feet on azimuth 273.04 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Integrated Petroleum Technologies, Inc.
Date Printed: 12-Aug-2014



INTEGRATED PETROLEUM TECHNOLOGIES, INC
SYSDRILL

Well Design Combined Report
Wellbore: DVE #8 (PWB)



Interpolated Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Northing	Easting
3100.00	5.32	11.740	3091.38	185.63N	38.57E	==>	-28.68	1414050.63	3175377.58
3200.00	5.32	11.740	3190.95	194.71N	40.46E	==>	-30.08	1414059.71	3175379.47
3300.00	5.32	11.740	3290.52	203.79N	42.35E	==>	-31.49	1414068.78	3175381.35
3400.00	5.32	11.740	3390.09	212.87N	44.23E	==>	-32.89	1414077.86	3175383.24
3500.00	5.32	11.740	3489.66	221.95N	46.12E	==>	-34.29	1414086.94	3175385.12
3600.00	5.32	11.740	3589.23	231.03N	48.01E	==>	-35.70	1414096.02	3175387.01
3700.00	5.32	11.740	3688.80	240.11N	49.89E	==>	-37.10	1414105.10	3175388.90
3800.00	5.32	11.740	3788.37	249.19N	51.78E	==>	-38.50	1414114.18	3175390.78
3900.00	5.32	11.740	3887.93	258.27N	53.67E	==>	-39.90	1414123.26	3175392.67
4000.00	5.32	11.740	3987.50	267.35N	55.55E	==>	-41.31	1414132.34	3175394.56
4100.00	5.32	11.740	4087.07	276.43N	57.44E	==>	-42.71	1414141.42	3175396.44
4200.00	5.32	11.740	4186.64	285.51N	59.33E	==>	-44.11	1414150.50	3175398.33
4300.00	5.32	11.740	4286.21	294.58N	61.21E	==>	-45.52	1414159.57	3175400.22
4400.00	5.32	11.740	4385.78	303.66N	63.10E	==>	-46.92	1414168.65	3175402.10
4500.00	5.32	11.740	4485.35	312.74N	64.99E	==>	-48.32	1414177.73	3175403.99
4600.00	5.32	11.740	4584.92	321.82N	66.87E	==>	-49.72	1414186.81	3175405.88
4700.00	5.32	11.740	4684.49	330.90N	68.76E	==>	-51.13	1414195.89	3175407.76
4800.00	5.32	11.740	4784.06	339.98N	70.65E	==>	-52.53	1414204.97	3175409.65
4900.00	5.32	11.740	4883.63	349.06N	72.53E	==>	-53.93	1414214.05	3175411.54
5000.00	5.32	11.740	4983.19	358.14N	74.42E	==>	-55.34	1414223.13	3175413.42
5100.00	5.32	11.740	5082.76	367.22N	76.31E	==>	-56.74	1414232.21	3175415.31
5200.00	5.32	11.740	5182.33	376.30N	78.19E	==>	-58.14	1414241.29	3175417.20
5300.00	5.32	11.740	5281.90	385.38N	80.08E	==>	-59.54	1414250.36	3175419.08
5400.00	5.32	11.740	5381.47	394.46N	81.97E	==>	-60.95	1414259.44	3175420.97
5500.00	5.32	11.740	5481.04	403.54N	83.85E	==>	-62.35	1414268.52	3175422.86
5600.00	5.32	11.740	5580.61	412.62N	85.74E	==>	-63.75	1414277.60	3175424.74
5700.00	5.32	11.740	5680.18	421.69N	87.63E	==>	-65.16	1414286.68	3175426.63
5800.00	5.32	11.740	5779.75	430.77N	89.51E	==>	-66.56	1414295.76	3175428.52
5900.00	5.32	11.740	5879.32	439.85N	91.40E	==>	-67.96	1414304.84	3175430.40
6000.00	5.32	11.740	5978.89	448.93N	93.29E	==>	-69.36	1414313.92	3175432.29
6100.00	5.32	11.740	6078.45	458.01N	95.17E	==>	-70.77	1414323.00	3175434.18
6200.00	5.32	11.740	6178.02	467.09N	97.06E	==>	-72.17	1414332.07	3175436.06
6294.07	5.32	11.740	6271.69	475.63N	98.83E	==>	-73.49	1414340.62	3175437.84
6300.00	5.25	6.640	6277.59	476.17N	98.92E	8.00	-73.55	1414341.15	3175437.92
6400.00	9.10	305.570	6376.92	485.33N	93.01E	8.00	-67.16	1414350.31	3175432.01
6500.00	16.30	288.990	6474.43	494.51N	73.27E	8.00	-46.96	1414359.50	3175412.28
6600.00	24.01	282.610	6568.25	503.54N	40.10E	8.00	-13.36	1414368.52	3175379.10
6700.00	31.85	279.230	6656.54	512.23N	5.87W	8.00	33.01	1414377.21	3175333.14
6800.00	39.75	277.080	6737.59	520.41N	63.74W	8.00	91.23	1414385.39	3175275.27
6900.00	47.68	275.540	6809.81	527.93N	132.38W	8.00	160.17	1414392.92	3175206.64
7000.00	55.63	274.350	6871.80	534.65N	210.45W	8.00	238.49	1414399.63	3175128.56
7100.00	63.58	273.370	6922.36	540.42N	296.44W	8.00	324.66	1414405.40	3175042.58
7200.00	71.54	272.520	6960.50	545.15N	388.67W	8.00	417.02	1414410.13	3174950.35
7300.00	79.51	271.740	6985.47	548.73N	485.35W	8.00	513.75	1414413.71	3174853.67
7400.00	87.47	271.000	6996.80	551.09N	584.60W	8.00	612.98	1414416.07	3174754.43
7431.71	90.00	270.770	6997.50	551.58N	616.30W	8.00	644.66	1414416.56	3174722.73
7500.00	90.00	270.770	6997.50	552.49N	684.58W	==>	712.90	1414417.47	3174654.45
7600.00	90.00	270.770	6997.50	553.83N	784.57W	==>	812.82	1414418.81	3174554.46
7700.00	90.00	270.770	6997.50	555.17N	884.56W	==>	912.74	1414420.15	3174454.48
7800.00	90.00	270.770	6997.50	556.51N	984.55W	==>	1012.66	1414421.49	3174354.49
7900.00	90.00	270.770	6997.50	557.85N	1084.54W	==>	1112.58	1414422.83	3174254.50
8000.00	90.00	270.770	6997.50	559.19N	1184.54W	==>	1212.50	1414424.17	3174154.52
8100.00	90.00	270.770	6997.50	560.53N	1284.53W	==>	1312.43	1414425.51	3174054.53
8200.00	90.00	270.770	6997.50	561.87N	1384.52W	==>	1412.35	1414426.85	3173954.54
8300.00	90.00	270.770	6997.50	563.21N	1484.51W	==>	1512.27	1414428.19	3173854.55
8400.00	90.00	270.770	6997.50	564.55N	1584.50W	==>	1612.19	1414429.53	3173754.57
8500.00	90.00	270.770	6997.50	565.89N	1684.49W	==>	1712.11	1414430.87	3173654.58
8600.00	90.00	270.770	6997.50	567.23N	1784.48W	==>	1812.03	1414432.21	3173554.59
8700.00	90.00	270.770	6997.50	568.57N	1884.47W	==>	1911.95	1414433.55	3173454.61
8800.00	90.00	270.770	6997.50	569.91N	1984.46W	==>	2011.88	1414434.89	3173354.62

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Vertical Section is from 0.00N 0.00E on azimuth 273.040 degrees
Bottom hole distance is 10094.60 Feet on azimuth 273.04 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Integrated Petroleum Technologies, Inc.
Date Printed: 12-Aug-2014



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SYSDRILL

Well Design Combined Report
Wellbore: DVE #8 (PWB)



Interpolated Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Northing	Easting
8900.00	90.00	270.770	6997.50	571.25N	2084.45W	==>	2111.80	1414436.23	3173254.63
9000.00	90.00	270.770	6997.50	572.59N	2184.45W	==>	2211.72	1414437.57	3173154.64
9100.00	90.00	270.770	6997.50	573.93N	2284.44W	==>	2311.64	1414438.91	3173054.66
9200.00	90.00	270.770	6997.50	575.27N	2384.43W	==>	2411.56	1414440.24	3172954.67
9300.00	90.00	270.770	6997.50	576.61N	2484.42W	==>	2511.48	1414441.58	3172854.68
9400.00	90.00	270.770	6997.50	577.94N	2584.41W	==>	2611.41	1414442.92	3172754.69
9500.00	90.00	270.770	6997.50	579.28N	2684.40W	==>	2711.33	1414444.26	3172654.71
9600.00	90.00	270.770	6997.50	580.62N	2784.39W	==>	2811.25	1414445.60	3172554.72
9700.00	90.00	270.770	6997.50	581.96N	2884.38W	==>	2911.17	1414446.94	3172454.73
9800.00	90.00	270.770	6997.50	583.30N	2984.37W	==>	3011.09	1414448.28	3172354.75
9900.00	90.00	270.770	6997.50	584.64N	3084.37W	==>	3111.01	1414449.62	3172254.76
10000.00	90.00	270.770	6997.50	585.98N	3184.36W	==>	3210.93	1414450.96	3172154.77
10100.00	90.00	270.770	6997.50	587.32N	3284.35W	==>	3310.86	1414452.30	3172054.78
10200.00	90.00	270.770	6997.50	588.66N	3384.34W	==>	3410.78	1414453.64	3171954.80
10300.00	90.00	270.770	6997.50	590.00N	3484.33W	==>	3510.70	1414454.98	3171854.81
10400.00	90.00	270.770	6997.50	591.34N	3584.32W	==>	3610.62	1414456.32	3171754.82
10500.00	90.00	270.770	6997.50	592.68N	3684.31W	==>	3710.54	1414457.66	3171654.84
10600.00	90.00	270.770	6997.50	594.02N	3784.30W	==>	3810.46	1414459.00	3171554.85
10700.00	90.00	270.770	6997.50	595.36N	3884.29W	==>	3910.39	1414460.34	3171454.86
10800.00	90.00	270.770	6997.50	596.70N	3984.28W	==>	4010.31	1414461.68	3171354.87
10900.00	90.00	270.770	6997.50	598.04N	4084.28W	==>	4110.23	1414463.02	3171254.89
11000.00	90.00	270.770	6997.50	599.38N	4184.27W	==>	4210.15	1414464.35	3171154.90
11100.00	90.00	270.770	6997.50	600.72N	4284.26W	==>	4310.07	1414465.69	3171054.91
11200.00	90.00	270.770	6997.50	602.06N	4384.25W	==>	4409.99	1414467.03	3170954.92
11300.00	90.00	270.770	6997.50	603.39N	4484.24W	==>	4509.91	1414468.37	3170854.94
11400.00	90.00	270.770	6997.50	604.73N	4584.23W	==>	4609.84	1414469.71	3170754.95
11500.00	90.00	270.770	6997.50	606.07N	4684.22W	==>	4709.76	1414471.05	3170654.96
11600.00	90.00	270.770	6997.50	607.41N	4784.21W	==>	4809.68	1414472.39	3170554.98
11700.00	90.00	270.770	6997.50	608.75N	4884.20W	==>	4909.60	1414473.73	3170454.99
11800.00	90.00	270.770	6997.50	610.09N	4984.19W	==>	5009.52	1414475.07	3170355.00
11900.00	90.00	270.770	6997.50	611.43N	5084.19W	==>	5109.44	1414476.41	3170255.01
12000.00	90.00	270.770	6997.50	612.77N	5184.18W	==>	5209.36	1414477.75	3170155.03
12100.00	90.00	270.770	6997.50	614.11N	5284.17W	==>	5309.29	1414479.09	3170055.04
12200.00	90.00	270.770	6997.50	615.45N	5384.16W	==>	5409.21	1414480.43	3169955.05
12300.00	90.00	270.770	6997.50	616.79N	5484.15W	==>	5509.13	1414481.77	3169855.07
12400.00	90.00	270.770	6997.50	618.13N	5584.14W	==>	5609.05	1414483.11	3169755.08
12500.00	90.00	270.770	6997.50	619.47N	5684.13W	==>	5708.97	1414484.45	3169655.09
12600.00	90.00	270.770	6997.50	620.81N	5784.12W	==>	5808.89	1414485.79	3169555.10
12700.00	90.00	270.770	6997.50	622.15N	5884.11W	==>	5908.82	1414487.12	3169455.12
12800.00	90.00	270.770	6997.50	623.49N	5984.10W	==>	6008.74	1414488.46	3169355.13
12900.00	90.00	270.770	6997.50	624.83N	6084.10W	==>	6108.66	1414489.80	3169255.14
13000.00	90.00	270.770	6997.50	626.17N	6184.09W	==>	6208.58	1414491.14	3169155.15
13100.00	90.00	270.770	6997.50	627.51N	6284.08W	==>	6308.50	1414492.48	3169055.17
13200.00	90.00	270.770	6997.50	628.84N	6384.07W	==>	6408.42	1414493.82	3168955.18
13300.00	90.00	270.770	6997.50	630.18N	6484.06W	==>	6508.34	1414495.16	3168855.19
13400.00	90.00	270.770	6997.50	631.52N	6584.05W	==>	6608.27	1414496.50	3168755.21
13495.40	90.00	270.770	6997.50	632.80N	6679.45W	==>	6703.59	1414497.78	3168659.81
13500.00	90.00	270.720	6997.50	632.86N	6684.04W	1.00	6708.19	1414497.84	3168655.22
13600.00	90.00	269.720	6997.50	633.25N	6784.04W	1.00	6808.07	1414498.22	3168555.22
13700.00	90.00	268.720	6997.50	631.89N	6884.03W	1.00	6907.84	1414496.87	3168455.24
13746.21	90.00	268.260	6997.50	630.67N	6930.22W	1.00	6953.91	1414495.65	3168409.05
13800.00	90.00	268.260	6997.50	629.04N	6983.99W	==>	7007.51	1414494.02	3168355.28
13900.00	90.00	268.260	6997.50	626.00N	7083.94W	==>	7107.16	1414490.98	3168255.33
14000.00	90.00	268.260	6997.50	622.96N	7183.90W	==>	7206.81	1414487.94	3168155.38
14100.00	90.00	268.260	6997.50	619.93N	7283.85W	==>	7306.47	1414484.90	3168055.43
14200.00	90.00	268.260	6997.50	616.89N	7383.80W	==>	7406.12	1414481.87	3167955.48
14300.00	90.00	268.260	6997.50	613.85N	7483.76W	==>	7505.77	1414478.83	3167855.53
14400.00	90.00	268.260	6997.50	610.81N	7583.71W	==>	7605.42	1414475.79	3167755.58
14500.00	90.00	268.260	6997.50	607.78N	7683.67W	==>	7705.08	1414472.75	3167655.63
14600.00	90.00	268.260	6997.50	604.74N	7783.62W	==>	7804.73	1414469.72	3167555.68

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SYSDRILL
Well Design Combined Report
Wellbore: DVE #8 (PWB)



Interpolated Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Northing	Easting
14700.00	90.00	268.260	6997.50	601.70N	7883.57W	==>	7904.38	1414466.68	3167455.73
14800.00	90.00	268.260	6997.50	598.66N	7983.53W	==>	8004.03	1414463.64	3167355.78
14900.00	90.00	268.260	6997.50	595.63N	8083.48W	==>	8103.69	1414460.60	3167255.83
15000.00	90.00	268.260	6997.50	592.59N	8183.43W	==>	8203.34	1414457.57	3167155.88
15100.00	90.00	268.260	6997.50	589.55N	8283.39W	==>	8302.99	1414454.53	3167055.93
15200.00	90.00	268.260	6997.50	586.51N	8383.34W	==>	8402.64	1414451.49	3166955.98
15300.00	90.00	268.260	6997.50	583.48N	8483.30W	==>	8502.30	1414448.46	3166856.03
15400.00	90.00	268.260	6997.50	580.44N	8583.25W	==>	8601.95	1414445.42	3166756.08
15500.00	90.00	268.260	6997.50	577.40N	8683.20W	==>	8701.60	1414442.38	3166656.13
15600.00	90.00	268.260	6997.50	574.36N	8783.16W	==>	8801.25	1414439.34	3166556.18
15700.00	90.00	268.260	6997.50	571.33N	8883.11W	==>	8900.91	1414436.31	3166456.23
15800.00	90.00	268.260	6997.50	568.29N	8983.07W	==>	9000.56	1414433.27	3166356.28
15900.00	90.00	268.260	6997.50	565.25N	9083.02W	==>	9100.21	1414430.23	3166256.33
16000.00	90.00	268.260	6997.50	562.21N	9182.97W	==>	9199.86	1414427.19	3166156.38
16100.00	90.00	268.260	6997.50	559.18N	9282.93W	==>	9299.52	1414424.16	3166056.43
16200.00	90.00	268.260	6997.50	556.14N	9382.88W	==>	9399.17	1414421.12	3165956.48
16300.00	90.00	268.260	6997.50	553.10N	9482.84W	==>	9498.82	1414418.08	3165856.53
16400.00	90.00	268.260	6997.50	550.06N	9582.79W	==>	9598.47	1414415.04	3165756.58
16500.00	90.00	268.260	6997.50	547.03N	9682.74W	==>	9698.13	1414412.01	3165656.63
16600.00	90.00	268.260	6997.50	543.99N	9782.70W	==>	9797.78	1414408.97	3165556.68
16700.00	90.00	268.260	6997.50	540.95N	9882.65W	==>	9897.43	1414405.93	3165456.73
16800.00	90.00	268.260	6997.50	537.91N	9982.60W	==>	9997.08	1414402.90	3165356.78
16897.86	90.00	268.260	6997.50	534.94N	10080.42W	==>	10094.60	1414399.92	3165258.97

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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	22.50	22.50	0.00N	0.00E	500.00	500.00	0.00N	0.00E
8 3/4	500.00	500.00	0.00N	0.00E	7494.00	6997.50	552.41N	678.58W
6 1/8	7494.00	6997.50	552.41N	678.58W	11790.72	6997.50	609.97N	4974.91W

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	22.50	22.50	0.00N	0.00E	500.00	500.00	0.00N	0.00E
7.0in Intermediate Casing	22.50	22.50	0.00N	0.00E	7494.00	6997.50	552.41N	678.58W
4 1/2in Production Liner	6200.00	6178.02	467.09N	97.06E	11790.72	6997.50	609.97N	4974.91W

Targets								
Name	North[ft]	East[ft]	TVD[ft]	Latitude	Longitude	Northing	Easting	Last Revised
DVE #8 -T4 Rev	642.80N	7059.45W	6997.50	40.46965000	-104.89516000	1414507.78	3168279.83	16-Dec-2013
DVE8 BH REV	534.94N	10080.42 W	6997.50	40.46941000	-104.90602000	1414399.92	3165258.97	16-Dec-2013
DVE8 T2 REV	551.58N	616.30W	6997.50	40.46927668	-104.87200568	1414416.56	3174722.73	16-Dec-2013

Survey Tool Program						
Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model	
143683	Planned	16897.86	6997.50	WdW Rate Gyro	Standard	

Notes

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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
DVE #8 (PWB)	16-Dec-2013	12-Aug-2014

Well		
Name	Government ID	Last Revised
DVE #8		16-Dec-2013

Slot						
Name	Grid Northing	Grid Easting	Latitude	Longitude	North	East
Slot #9	1413865.0011	3175339.0066	40.46775070	-104.86980480	128.01N	0.01E

Installation				
Name	Easting	Northing	Coord System Name	North Alignment
Diamond Valley East- REV 01	3175339.0009	1413737.0001	CO83-NF on NORTH AMERICAN DATUM 1983 datum	Grid

Field				
Name	Easting	Northing	Coord System Name	North Alignment
Windsor Project	3162710.0707	1407271.6545	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]
DVE #9 (PWB)	Diamond Valley East- REV 01	16.00	897.50	11732.07	13.94	897.50	2.54	11751.50
DVE #11 (PWB)	Diamond Valley East- REV 01	16.00	924.73	11737.78	13.89	924.73	5.00	1941.79
DVE #10 (PWB)	Diamond Valley East- REV 01	32.00	872.50	11734.93	29.97	872.50	5.07	11784.31
DVE #7 (PWB)	Diamond Valley East- REV 01	32.00	924.73	924.73	29.89	924.73	4.00	11722.50
DVE #12 (PWB)	Diamond Valley East- REV 01	48.00	847.50	11743.50	46.01	847.50	9.79	11866.33
DVE #6 (R1)	Diamond Valley East- REV 01	48.00	924.73	16897.86				
DVE #6 (PWB)	Diamond Valley East- REV 01	48.00	924.73	924.73	45.90	924.73	4.87	11735.10
DVE #13 (PWB)	Diamond Valley East- REV 01	64.00	822.50	11746.25	62.06	822.50	11.76	11915.54
DVE #5 (PWB)	Diamond Valley East- REV 01	64.00	822.50	822.50	62.06	842.71	8.58	11735.10
DVE #4 (PWB)	Diamond Valley East- REV 01	80.00	822.50	822.50	78.06	822.50	10.72	11751.50
DVE #3 (PWB)	Diamond Valley East- REV 01	96.00	924.73	924.73	93.90	924.73	12.27	11767.91
DVE #2 (PWB)	Diamond Valley East- REV 01	112.00	822.50	822.50	110.06	822.50	15.94	11784.31

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Offset Wellbore	Offset Structure	Separation [ft]	MD[ft]	Diverging From[ft]	Ellipse Separation [ft]	Ellipse MD[ft]	Clearance Factor	Clearance MD[ft]
DVE #1 (PWB)	Diamond Valley East- REV 01	128.01	822.50	822.50	126.06	822.50	22.34	10685.23
Diamond Valley 22-54 (AWB)	Great Western Diamond Valley	189.07	8400.02	8400.02	155.16	8372.24	4.94	8306.62
Diamond Valley 22-23-18 (AWB)	Great Western Diamond Valley	216.31	9576.53	9576.53	146.12	9553.34	2.96	9520.53
Diamond Valley 22-33 (AWB)	Great Western Diamond Valley	457.76	8934.97	8934.97	406.16	8979.19	7.47	9159.64
Diamond Valley 22-43 (AWB)	Great Western Diamond Valley	490.13	7630.37	7630.37	456.97	7617.64	12.16	7338.77
Diamond Valley 22-44 (AWB)	Great Western Diamond Valley	827.04	7609.73	7609.73	802.90	7622.50	29.86	7962.13
Altergott #1 (AWB)	DVE Offset	892.46	8955.33	8955.33	865.87	8955.33	33.42	9012.00
Diamond Valley 22-34 (AWB)	Great Western Diamond Valley	962.23	8909.88	8909.88	919.93	8897.17	22.21	8749.53
Diamond Valley 22-22-13 (AWB)	Great Western Diamond Valley	1102.35	9597.94	9597.94	1027.43	9668.17	12.11	10127.49
Diamond Valley 22-32-12 (AWB)	Great Western Diamond Valley	1133.76	8295.01	8295.01	1092.92	8323.02	19.75	9094.02
Kodak #1	Kodak	1320.68	16897.86	16897.86	1179.28	16897.86	9.34	16886.02
Great Western 27-41-1 (AWB)	Great Western Diamond Valley	1369.28	5255.44	5255.44	1341.02	5321.06	43.21	7158.33
Kodak #2	Kodak	1495.57	16897.86	16897.86	1354.89	16897.86	10.63	16897.86