

SYSDRILL
Closest Approach = Clearance Factor/Report
Wellbore: Ocho LD 17-364HC (PWB)
Wellpath: Ocho LD 17-364HC (PWP#1)

Ellipse separations are reported ONLY if BOTH wells have uncertainty data
Only Depth and Magnetic Reference Field error terms are correlated across tie points
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		Ocho LD 17-364HC (PWB)	
Name	Created	1-Sep-2016	
Last Revised		1-Sep-2016	
Well		Ocho LD 17-364HC	
Name	Government ID		
Last Revised		1-Sep-2016	
Slot		Slot E09 - Ocho LD 17-364HC	
Name			
Grid Northing		1237700.416	
Grid Easting		3164297.477	
Latitude		N99 59 3.7716	
Longitude		W104 54 49.2300	
North		-119.120	
East		100.320	
Installation		Ocho	
Name			
Easting		3164196.374	
Northing		1237818.868	
Map Name		<unknown>	
North Alignment		True	
Field		Wattenburg	
Name			
Easting		41136929.757	
Northing		12284170.646	
Map Name		<unknown>	
North Alignment		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]	
Ocho LD 17-364HN	Ocho LD 17-364HN (PWB)	Slot E08 - Ocho LD 17-364HN	Ocho	13.840	3571.000	18307.090	7.510	3571.000	2.180	3600.000	
Ocho LD 17-365HN	Ocho LD 17-365HN (PWB)	Slot E10 - Ocho LD 17-365HN	Ocho	15.300	3987.000	10547.980	8.290	4000.000	2.180	4002.620	
Ocho LD 17-363HN	Ocho LD 17-363HN (PWB)	Slot E07 - Ocho LD 17-363HN	Ocho	29.140	3225.000	9580.050	23.370	3231.630	2.630	18342.570	
Ocho LD 17-367HN	Ocho LD 17-367HN (PWB)	Slot E11 - Ocho LD 17-367HN	Ocho	30.600	3987.000	10547.980	23.590	4000.000	4.020	18342.570	
Ocho LD 17-362HC	Ocho LD 17-362HC (PWB)	Slot E06 - Ocho LD 17-362HC	Ocho	44.440	3083.990	17541.170	38.870	3100.390	3.420	18342.570	
Ocho LD 17-367HC	Ocho LD 17-367HC (PWB)	Slot E12 - Ocho LD 17-367HC	Ocho	45.540	3987.000	10547.980	38.530	4000.000	3.990	18342.570	
Ocho LD 17-362HN	Ocho LD 17-362HN (PWB)	Slot E05 - Ocho LD 17-362HN	Ocho	59.380	2616.000	9580.050	54.590	2624.670	4.700	18342.570	
Ocho LD 17-368HN	Ocho LD 17-368HN (PWB)	Slot E13 - Ocho LD 17-368HN	Ocho	60.840	3987.000	10547.980	53.830	4000.000	5.850	18342.570	
Ocho LD 17-361HN	Ocho LD 17-361HN (PWB)	Slot E04 - Ocho LD 17-361HN	Ocho	74.680	2167.000	9580.050	70.610	2167.000	6.320	18342.570	
Ocho LD 17-369HN	Ocho LD 17-369HN (PWB)	Slot E14 - Ocho LD 17-369HN	Ocho	78.140	3987.000	10547.980	69.130	4000.000	7.680	18342.570	
Ocho LD 17-369HC	Ocho LD 17-369HC (PWB)	Slot E15 - Ocho LD 17-369HC	Ocho	90.350	3987.000	10547.980	83.340	4000.000	7.980	18342.570	
Ocho LD 17-375HN	Ocho LD 17-375HN (PWB)	Slot W09 - Ocho LD 17-375HN	Ocho	99.770	3987.000	10547.980	92.760	3987.000	14.170	4035.430	
Ocho LD 17-377HC	Ocho LD 17-377HC (PWB)	Slot W08 - Ocho LD 17-377HC	Ocho	100.720	3987.000	10547.980	93.710	3987.000	14.300	4035.430	
Ocho LD 17-374HN	Ocho LD 17-374HN (PWB)	Slot W10 - Ocho LD 17-374HN	Ocho	101.100	3987.000	10547.980	94.100	3987.000	14.360	4035.430	
Ocho LD 17-374HC	Ocho LD 17-374HC (PWB)	Slot W11 - Ocho LD 17-374HC	Ocho	104.350	3987.000	10547.980	97.350	3987.000	14.820	4035.430	
Ocho LD 17-377HN	Ocho LD 17-377HN (PWB)	Slot W07 - Ocho LD 17-377HN	Ocho	104.470	3987.000	10547.980	97.470	3987.000	14.820	4051.840	
Ocho LD 17-378HN	Ocho LD 17-378HN (PWB)	Slot W06 - Ocho LD 17-378HN	Ocho	109.210	3987.000	10547.980	102.210	3987.000	15.470	4051.840	
Ocho LD 17-373HN	Ocho LD 17-373HN (PWB)	Slot W12 - Ocho LD 17-373HN	Ocho	109.660	3987.000	10547.980	102.660	3987.000	13.640	18342.570	
Ocho LD 17-379HC	Ocho LD 17-379HC (PWB)	Slot W05 - Ocho LD 17-379HC	Ocho	115.720	3987.000	10531.500	108.720	3987.000	16.370	4068.240	
Ocho LD 17-372HC	Ocho LD 17-372HC (PWB)	Slot W13 - Ocho LD 17-372HC	Ocho	116.850	3987.000	10547.980	109.840	3987.000	11.890	18342.570	
Ocho LD 17-379HN	Ocho LD 17-379HN (PWB)	Slot W04 - Ocho LD 17-379HN	Ocho	124.420	3706.000	10531.500	117.870	3706.000	18.860	3772.970	
Ocho LD 17-372HN	Ocho LD 17-372HN (PWB)	Slot W14 - Ocho LD 17-372HN	Ocho	125.490	3987.000	10547.980	118.490	3987.000	11.500	18342.570	
Ocho LD 17-370HN	Ocho LD 17-370HN (PWB)	Slot W15 - Ocho LD 17-370HN	Ocho	135.080	3987.000	10547.980	128.080	3987.000	9.750	18342.570	
PDC - LEISLE 8-5	PDC - LEISLE 8-5 (AWB)	ZZ-PDC - LEISLE 8-5	Ocho	157.670	9514.440	9514.440	140.610	9500.000	8.350	9448.820	
BCHP - STONEHOCKER 21-8	BCHP - STONEHOCKER 21-8 (AWB)	ZZ-BCHP - STONEHOCKER 21-8	Ocho	240.080	4215.880	8789.220	228.910	4215.880	20.720	4363.520	
PDC - MC ELWAIN 4	PDC - MC ELWAIN 4 (AWB)	ZZ-PDC - MC ELWAIN 4	Ocho	317.300	17511.600	17511.600	233.840	17500.000	3.790	17486.880	
KPK - NORTH QUEBEC 16-8	KPK - NORTH QUEBEC 16-8 (AWB)	ZZ-KPK - NORTH QUEBEC 16-8	Ocho	368.260	12832.550	12832.550	325.070	12844.490	8.090	12926.510	
KPK - QUEBEC NORTH 12-8	KPK - QUEBEC NORTH 12-8 (AWB)	ZZ-KPK - QUEBEC NORTH 12-8	Ocho	378.570	11486.840	11486.840	347.260	11482.940	11.180	11581.360	
PDC - MCELWAIN 41-17	PDC - MCELWAIN 41-17 (AWB)	ZZ-PDC - MCELWAIN 41-17	Ocho	390.740	14477.340	14477.340	333.840	14500.000	6.700	14500.520	
PDC - MCELWAIN 42-17	PDC - MCELWAIN 42-17 (AWB)	ZZ-PDC - MCELWAIN 42-17	Ocho	466.250	15489.140	15489.140	400.550	15501.970	6.960	15567.590	
KMG - QUEBEC NORTH 34-8	KMG - QUEBEC NORTH 34-8 (AWB)	ZZ-KMG - QUEBEC NORTH 34-8	Ocho	519.310	12603.090	12603.090	478.790	12598.430	12.570	12516.400	
PDC - MCELWAIN 44-17A	PDC - MCELWAIN 44-17A (AWB)	ZZ-PDC - MCELWAIN 44-17A	Ocho	677.010	18342.570	18342.570	600.590	18342.570	8.860	18342.570	
BCHP - STONEHOCKER 11-8H	BCHP - STONEHOCKER 11-8H (AWB)	ZZ-BCHP - STONEHOCKER 11-8H	Ocho	748.840	2329.400	8811.710	741.320	2362.200	74.040	3772.970	
BCHP - STONEHOCKER 22-8H	BCHP - STONEHOCKER 22-8H (AWB)	ZZ-BCHP - STONEHOCKER 22-8H	Ocho	946.270	1319.580	10449.480	943.190	1319.580	97.440	10777.560	
BCHP - STONEHOCKER 12-8H	BCHP - STONEHOCKER 12-8H (AWB)	ZZ-BCHP - STONEHOCKER 12-8H	Ocho	949.420	16.400	10510.620	948.400	49.210	117.330	12368.770	
SYG - QUEBEC-N INVESTMENT 1	SYG - QUEBEC-N INVESTMENT 1 (AWB)	ZZ-SYG - QUEBEC-N INVESTMENT 1	Ocho	983.130	11554.630	11554.630	951.680	11548.560	30.830	11433.730	
PDC - STONEHOCKER 32-8	PDC - STONEHOCKER 32-8 (AWB)	ZZ-PDC - STONEHOCKER 32-8	Ocho	1002.370	10443.450	10443.450	979.830	10433.070	43.410	10252.620	
PDC - MCELWAIN 34-17	PDC - MCELWAIN 34-17 (AWB)	ZZ-PDC - MCELWAIN 34-17	Ocho	1055.620	18342.570	18342.570	963.510	18342.570	11.460	18342.570	
BCHP - STONEHOCKER 8-5	BCHP - STONEHOCKER 8-5 (AWB)	ZZ-BCHP - STONEHOCKER 8-5	Ocho	1185.550	3987.000	9357.850	1177.040	3987.000	135.230	4347.110	
PDC - MCELWAIN 32-17	PDC - MCELWAIN 32-17 (AWB)	ZZ-PDC - MCELWAIN 32-17	Ocho	1559.310	15990.230	15990.230	1489.380	15990.230	22.290	15861.290	
MERT - MCELWAIN 1	MERT - MCELWAIN 1 (AWB)	ZZ-MERT - MCELWAIN 1	Ocho	2206.240	14243.350	14243.350	2145.610	14243.350	40.240	14561.290	
SYG - BROWN 11-8	SYG - BROWN 11-8 (AWB)	ZZ-SYG - BROWN 11-8	Ocho	2390.200	11500.000	11500.000	2344.900	11500.000	68.900	11729.000	
KMG - EDSTROM 24-8 1	KMG - EDSTROM 24-8 1 (AWB)	ZZ-KMG - EDSTROM 24-8 1	Ocho	2575.630	12600.000	12600.000	2535.170	12600.000	63.230	12828.080	
KPK - EDSTROM UNIT 1	KPK - EDSTROM UNIT 1 (AWB)	ZZ-KPK - EDSTROM UNIT 1	Ocho	3057.020	3987.000	11582.480	3048.670	3987.000	106.010	12483.600	
PDC - MCELWAIN 11-17	PDC - MCELWAIN 11-17 (AWB)	ZZ-PDC - MCELWAIN 11-17	Ocho	3191.010	14670.730	14670.730	3132.620	14681.760	54.080	15026.250	
PDC - MCELWAIN 12-17	PDC - MCELWAIN 12-17 (AWB)	ZZ-PDC - MCELWAIN 12-17	Ocho	3192.540	15277.990	15277.990	3128.760	15268.710	49.620	15583.990	
PDC - MCELWAIN 2	PDC - MCELWAIN 2 (AWB)	ZZ-PDC - MCELWAIN 2	Ocho	3276.860	17807.380	17807.380	3191.020	17814.960	37.970	18061.020	
STARLIGHT - MARK MCELWAIN 1	STARLIGHT - MARK MCELWAIN 1 (AWB)	ZZ-STARLIGHT - MARK MCELWAIN 1	Ocho	3530.660	14240.040	14240.040	3486.150	14255.250	63.390	14747.380	
KPK - BROWN 13-8	KPK - BROWN 13-8 (AWB)	ZZ-KPK - BROWN 13-8	Ocho	3537.510	180.450	12917.580	3508.130	12942.910	76.250	13746.720	
ESRCH - MARK MCELWAIN 2	ESRCH - MARK MCELWAIN 2 (AWB)	ZZ-ESRCH - MARK MCELWAIN 2	Ocho	3585.350	16863.520	16863.520	3507.920	16879.920	45.860	17240.810	
PDC - MCELWAIN 13-17	PDC - MCELWAIN 13-17 (AWB)	ZZ-PDC - MCELWAIN 13-17	Ocho	3740.300	16289.370	16289.370	3667.680	16305.770	50.830	16748.690	

Reference Wellbore Survey Tool Program		Planned	
Survey Name		18342.570	
MD[ft]			
Survey Tool		WdW Rate Gyro	
Error Model		Standard	

Clearance Data												
Reference MD[ft]	Reference TVD[ft]	Reference North[ft]	Reference East[ft]	Offset Well	Offset MD[ft]	Offset TVD[ft]	Offset North[ft]	Offset East[ft]	Angle From Highside [deg]	Closest Approach Distance [ft]	Ellipse Separation [ft]	Clearance Factor
0.000	0.000	0.000	0.000	0.000 STARLIGHT - MARK MCELWAIN 1	0.000	14.200	-5213.600	-1636.310	-162.600	5464.370	5463.410	
14.200	14.200	0.000	0.000	0.000 STARLIGHT - MARK MCELWAIN 1	0.000	14.200	-5213.600	-1636.310	-162.600	5464.350	5463.360	5498.010
100.000	100.000	0.000	0.000	0.000 STARLIGHT - MARK MCELWAIN 1	85.800	100.000	-5213.600	-1636.310	-162.600	5464.350	5462.630	3177.250
200.000	200.000	0.000	0.000	0.000 STARLIGHT - MARK MCELWAIN 1	185.800	200.000	-5213.600	-1636.310	-162.600	5464.350	5462.230	2578.720
300.000	300.000	0.000	0.000	0.000 STARLIGHT - MARK MCELWAIN 1	285.800	300.000	-5213.600	-1636.310	-162.600	5464.350	5461.920	2240.920
400.000	400.000	0.000	0.000	0.000 STARLIGHT - MARK MCELWAIN 1	385.800	400.000	-5213.600	-1636.310	-162.600	5464.350	5461.630	2010.010
500.000	500.000	0.000	0.000	0.000 STARLIGHT - MARK MCELWAIN 1	485.800	500.000	-5213.600	-1636.310	-162.600	5464.350	5461.380	1837.310
600.000	600.000	0.000	0.000	0.000 STARLIGHT - MARK MCELWAIN 1	585.800	600.000	-5213.600	-1636.310	-162.600	5464.350	5461.140	1701.490
700.000	700.000	0.000	0.000	0.000 STARLIGHT - MARK MCELWAIN 1	685.800	700.000	-5213.600	-1636.310	-162.600	5464.350	5460.920	1589.560
800.000	800.000	0.000	0.000	0.000 STARLIGHT - MARK MCELWAIN 1	785.800	800.000	-5213.600	-1636.310	-162.600	5464.350	5460.700	1485.970
900.000	900.000	0.000	0.000	0.000 STARLIGHT - MARK MCELWAIN 1	885.800	900.000	-5213.600	-1636.310	-162.600	5464.350	5460.490	1415.830
1000.000	1000.000	0.000	0.000	0.000 STARLIGHT - MARK MCELWAIN 1	985.800	1000.000	-5213.600	-1636.310	-162.600	5464.350	5460.290	1346.150
1100.000	1100.000	0.000	0.000	0.000 STARLIGHT - MARK MCELWAIN 1	1085.800	1100.000	-5213.600	-1636.310	-162.600	5464.350	5460.100	1284.780
1200.000	1200.000	0.000	0.000	0.000 STARLIGHT - MARK MCELWAIN 1	1185.800	1200.000	-5213.600	-1636.310	-162.600	5464.350	5459.920	1230.190
1300.000	1300.000	0.000	0.000	0.000 STARLIGHT - MARK MCELWAIN 1	1285.800	1300.000	-5213.600	-1636.310	-162.600	5464.350	5459.730	1181.170
1400.000	1400.000	0.000	0.000	0.000 STARLIGHT - MARK MCELWAIN 1	1385.800	1400.000	-5213.600	-1636.310	-162.600	5464.350	5459.550	1136.860
1500.000	1500.000	0.000	0.000	0.000 STARLIGHT - MARK MCELWAIN 1	1485.800	1500.000	-5213.600	-1636.310	-162.600	5464.350	5459.370	1096.530
1600.000	1600.000	0.000	0.000	0.000 STARLIGHT - MARK MCELWAIN 1	1585.800	1600.000	-5213.600	-1636.310	-162.600	5464.350	5459.200	1059.620
1700.000	1700.000	0.000	0.000	0.000 STARLIGHT - MARK MCELWAIN 1	1685.800	1700.000	-5213.600	-1636.310	-162.600	5464.350	5459.030	1026.660
1800.000	1800.000	0.000	0.000	0.000 STARLIGHT - MARK MCELWAIN 1	1785.800	1800.000	-5213.600	-1636.310	-162.600	5464.350	5458.840	998.200
1900.000	1900.000	0.000	0.000	0.000 STARLIGHT - MARK MCELWAIN 1	1885.800	1900.000	-5213.600	-1636.310	-162.600	5464.350	5458.670	970.640
2000.000	2000.000	0.000	0.000	0.000 STARLIGHT - MARK MCELWAIN 1	1985.800	2000.000	-5213.600	-1636.310	-162.600	5464.350	5458.910	1003.690
2100.000	2100.000	0.000	0.000	0.000 STARLIGHT - MARK MCELWAIN 1	2085.800	2100.000	-5213.600	-1636.310	-162.600	5464.350	5458.750	974.750
2200.000	2200.000	0.000	0.000	0.000 STARLIGHT - MARK MCELWAIN 1	2185.800	2200.000	-5213.600	-1636.310	-162.600	5464.350	5458.590	947.790
2300.000	2300.000	0.000	0.000	0.000 STARLIGHT - MARK MCELWAIN 1	2285.800	2300.000	-5213.600	-1636.310	-162.600	5464.350	5458.430	922.560
2400.000	2400.000	0.000	0.000	0.000 STARLIGHT - MARK MCELWAIN 1	2385.800	2400.000	-5213.600	-1636.310	-162.600	5464.350	5458.270	899.670
2500.000	2500.000	0.000	0.000	0.000 STARLIGHT - MARK MCELWAIN 1	2485.800	2500.000	-5213.600	-1636.310	-162.600	5464.350	5458.120	876.620
2600.000	2600.000	0.000	0.000	0.000 STARLIGHT - MARK MCELWAIN 1	2585.800	2600.000	-5213.600	-1636.310	-162.600	5464.350	5457.970	855.630
2700.000	2700.000	0.000	0.000	0.000 STARLIGHT - MARK MCELWAIN 1	2685.800	2700.000	-5213.600	-1636.310	-162.600	5464.350	5457.820	835.790