

SYSDRILL  
Closest Approach + Clearance Factor Report  
Wellbore: Dittmer KE 29-033HN (PWB)  
Wellpath: Dittmer KE 29-033HN (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

Name	Dittmer KE 29-033HN (PWB)
Created	4-May-2016
Last Revised	4-May-2016

#### Well

Name	Dittmer KE 29-033HN
Government ID	
Last Revised	4-May-2016

#### Slot

Name	Slot N06 - Dittmer KE 29-033HN
Grid Northing	1248054.377
Grid Easting	3195247.228
Latitude	N40 0 43.8804
Longitude	W104 48 10.5804
North	0.000
East	74.790

#### Installation

Name	Dittmer
Easting	3195172.443
Northing	1248053.789
Map Name	<unknown>
North Alignment	True

#### Field

Name	Wattenburg
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 Front[ft]	Ellipse Separation [ft]	Ellipse MD[ft]	Clearance Factor	Clearance MD[ft]
SRC - Phelps 11-32CHZ	SRC - Phelps 11-32CHZ (AWB)	AA - SRC - Phelps 11-32CHZ	Dittmer	656.340	7616.200	7616.200	629.070	7616.200	23.460	7693.370
SRC - Phelps 11-32NHZ	SRC - Phelps 11-32NHZ (AWB)	AA - SRC - Phelps 11-32NHZ	Dittmer	883.300	7496.550	7496.550	854.230	7496.550	30.030	7594.940
SRC - Phelps A-32CHZ	SRC - Phelps A-32CHZ (AWB)	AA - SRC - Phelps A-32CHZ	Dittmer	1261.390	7516.200	7516.200	1233.230	7525.380	44.500	7594.940
SRC - Phelps A-32NHZ	SRC - Phelps A-32NHZ (AWB)	AA - SRC - Phelps A-32NHZ	Dittmer	1567.030	7162.560	7162.560	1538.830	7168.430	54.320	7447.300
SRC - Phelps 12-32CHZ	SRC - Phelps 12-32CHZ (AWB)	AA - SRC - Phelps 12-32CHZ	Dittmer	1947.310	7209.020	7209.020	1918.900	7217.640	66.800	7529.320
SRC - Phelps 12-32NHZ	SRC - Phelps 12-32NHZ (AWB)	AA - SRC - Phelps 12-32NHZ	Dittmer	2188.120	6974.990	6974.990	2160.270	6987.980	75.930	7365.280

#### Reference Wellbore Survey Tool Program

Survey Name	Planned
MD[ft]	12410.910
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
	16.200		16.200		0.000	0.000	SRC - Phelps 11-32CHZ	53.000	16.200	-771.750	2937.360	
	98.220		98.220		0.000	0.000	SRC - Phelps 11-32CHZ	127.330	90.530	-771.590	2937.480	
	116.200		116.200		0.000	0.000	SRC - Phelps 11-32CHZ	144.500	107.700	-771.480	2937.560	
	216.200		216.200		0.000	0.000	SRC - Phelps 11-32CHZ	238.830	202.020	-770.720	2938.100	
	316.200		316.200		0.000	0.000	SRC - Phelps 11-32CHZ	306.360	269.550	-770.050	2938.780	
	416.200		416.200		0.000	0.000	SRC - Phelps 11-32CHZ	369.530	332.700	-769.630	2940.060	
	516.200		516.200		0.000	0.000	SRC - Phelps 11-32CHZ	428.000	391.120	-768.780	2942.210	
	616.200		616.200		0.000	0.000	SRC - Phelps 11-32CHZ	487.460	450.470	-767.230	2945.610	
	716.200		716.200		0.000	0.000	SRC - Phelps 11-32CHZ	524.190	487.080	-766.180	2948.340	
	816.200		816.200		0.000	0.000	SRC - Phelps 11-32CHZ	721.640	683.440	-754.310	2964.410	
	916.200		916.200		0.000	0.000	SRC - Phelps 11-32CHZ	772.230	733.670	-749.510	2968.120	
	1016.200		1016.200		0.000	0.000	SRC - Phelps 11-32CHZ	834.000	794.970	-744.240	2973.600	
	1116.200		1116.200		0.000	0.000	SRC - Phelps 11-32CHZ	869.110	829.780	-741.580	2977.280	
	1216.200		1216.200		0.000	0.000	SRC - Phelps 11-32CHZ	927.500	887.620	-737.420	2984.160	
	1316.200		1316.200		0.000	0.000	SRC - Phelps 11-32CHZ	997.130	956.360	-731.520	2993.530	
	1416.200		1416.200		0.000	0.000	SRC - Phelps 11-32CHZ	1252.810	1207.460	-696.670	3026.300	
	1516.200		1516.200		0.000	0.000	SRC - Phelps 11-32CHZ	1348.500	1301.770	-683.590	3035.860	
	1616.200		1616.200		0.000	0.000	SRC - Phelps 11-32CHZ	1435.490	1387.480	-671.700	3044.730	
	1716.200		1716.200		0.000	0.000	SRC - Phelps 11-32CHZ	1892.840	1831.650	-570.160	3074.090	
	1816.200		1816.200		0.000	0.000	SRC - Phelps 11-32CHZ	2000.420	1934.500	-538.660	3075.860	
	1916.200		1916.200		0.000	0.000	SRC - Phelps 11-32CHZ	2101.190	2030.820	-509.090	3077.230	
	2016.200		2016.200		0.000	0.000	SRC - Phelps 11-32CHZ	2193.080	2118.970	-483.180	3078.260	
	2116.200		2116.200		0.000	0.000	SRC - Phelps 11-32CHZ	2267.330	2190.470	-463.150	3079.190	
	2216.200		2216.200		0.000	0.000	SRC - Phelps 11-32CHZ	2326.080	2246.970	-447.120	3080.650	
	2316.200		2316.200		0.000	0.000	SRC - Phelps 11-32CHZ	2411.050	2328.680	-424.000	3083.420	
	2416.200		2416.200		0.000	0.000	SRC - Phelps 11-32CHZ	2543.520	2456.510	-389.440	3087.130	
	2516.200		2516.200		0.000	0.000	SRC - Phelps 11-32CHZ	2665.240	2573.520	-355.970	3088.860	
	2616.200		2616.200		0.000	0.000	SRC - Phelps 11-32CHZ	2746.290	2650.990	-332.200	3090.360	
	2716.200		2716.200		0.000	0.000	SRC - Phelps 11-32CHZ	2823.310	2724.910	-310.670	3092.100	
	2816.200		2816.200		0.000	0.000	SRC - Phelps 11-32CHZ	2939.740	2836.930	-279.030	3094.750	
	2916.200		2916.200		0.000	0.000	SRC - Phelps 11-32CHZ	3104.630	2994.780	-231.390	3096.060	
	3016.200		3016.200		0.000	0.000	SRC - Phelps 11-32CHZ	3179.330	3066.150	-209.330	3096.170	
	3116.200		3116.200		0.000	0.000	SRC - Phelps 11-32CHZ	3241.750	3125.610	-190.380	3096.970	
	3198.610		3198.610		0.000	0.000	SRC - Phelps 11-32CHZ	3318.040	3198.380	-167.490	3098.190	
	3216.200		3216.200		0.000	0.000	SRC - Phelps 11-32CHZ	3334.840	3214.420	-162.520	3098.460	
	3316.200		3316.200		0.000	0.000	SRC - Phelps 11-32CHZ	3440.990	3316.080	-132.030	3099.970	
	3329.850		3329.850		0.000	0.000	SRC - Phelps 11-32CHZ	3454.080	3328.650	-128.350	3100.130	
	3416.200		3416.200		0.000	0.000	SRC - Phelps 11-32CHZ	3518.330	3390.330	-110.380	3101.110	
	3516.200		3516.200		0.000	0.000	SRC - Phelps 11-32CHZ	3560.670	3430.900	-98.370	3102.380	
	3616.200		3616.200		0.000	0.000	SRC - Phelps 11-32CHZ	3628.860	3496.130	-78.700	3105.320	
	3716.200		3716.200		0.000	0.000	SRC - Phelps 11-32CHZ	3919.850	3678.690	-22.830	3110.190	
	3816.200		3816.200		0.000	0.000	SRC - Phelps 11-32CHZ	3912.000	3736.370	5.470	3111.500	
	3916.200		3916.200		0.000	0.000	SRC - Phelps 11-32CHZ	3983.980	3834.980	27.200	3112.850	
	3988.500		3988.500		0.000	0.000	SRC - Phelps 11-32CHZ	4047.690	3895.830	46.030	3114.270	
	4016.200		4016.200		0.140	0.150	SRC - Phelps 11-32CHZ	4074.230	3921.220	53.740	3114.920	
	4116.200		4116.100		2.940	3.090	SRC - Phelps 11-32CHZ	4168.960	4012.020	80.620	3117.270	
	4216.200		4215.660		9.340	9.830	SRC - Phelps 11-32CHZ	4270.460	4109.970	107.100	3119.830	
	4316.200		4314.590		19.310	20.340	SRC - Phelps 11-32CHZ	4364.000	4200.580	130.210	3122.090	
	4416.200		4412.630		32.840	34.580	SRC - Phelps 11-32CHZ	4423.220	4257.880	145.050	3124.070	
	4516.200		4509.510		49.880	52.530	SRC - Phelps 11-32CHZ	4459.250	4292.570	154.600	3125.810	
	4616.200		4604.960		70.390	74.130	SRC - Phelps 11-32CHZ	10593.720	7577.320	549.090	87.310	-152.100
	4716.200		4698.720		94.310	99.320	SRC - Phelps 11-32CHZ	10568.810	7577.150	549.480	112.220	-157.400
	4816.200		4790.530		121.580	128.040	SRC - Phelps 11-32CHZ	10541.000	7576.950	549.920	140.020	-161.300
	4916.200		4880.150		152.120	160.200	SRC - Phelps 11-32CHZ	10516.090	7576.840	550.360	164.930	-164.300
	4988.500		4943.430		176.190	185.550	SRC - Phelps 11-32CHZ	10504.300	7576.820	550.570	176.720	-165.800
	5016.200		4967.420		185.720	195.600	SRC - Phelps 11-32CHZ	10494.070	7576.830	550.750	186.950	-166.100
	5116.200		5054.020		220.150	231.850	SRC - Phelps 11-32CHZ	10476.110	7576.850	551.060	204.900	-166.600
	5216.200		5140.620		254.580	268.110	SRC - Phelps 11-32CHZ	10445.500	7577.130	551.410	235.510	-167.400
	5316.200		5227.230		289.010	304.370	SRC - Phelps 11-32CHZ	10424.610	7577.560	551.390	256.390	-168.000
	5416.200		5313.830		323.440	340.630	SRC - Phelps 11-32CHZ	10393.750	7578.270	551.210	287.250	-168.900
	5516.200		5400.430		357.860	376.890	SRC - Phelps 11-32CHZ	10355.680	7579.200	550.880	325.300	-170.100

5616.200	5487.030	392.290	413.150	SRC - Phelps 11-32CHZ	10294.900	7580.280	550.350	386.070	-172.200	2099.380	2084.280	139.030
5716.200	5573.640	426.720	449.410	SRC - Phelps 11-32CHZ	10260.240	7580.780	550.050	420.730	-173.400	2011.130	1996.040	133.260
5816.200	5660.240	461.150	485.660	SRC - Phelps 11-32CHZ	10239.370	7581.230	549.800	441.590	-174.200	1923.540	1908.420	127.210
5916.200	5746.840	495.580	521.920	SRC - Phelps 11-32CHZ	10204.560	7582.080	549.260	476.390	-175.600	1836.590	1821.440	121.280
6016.200	5833.440	530.010	558.180	SRC - Phelps 11-32CHZ	10107.180	7583.140	547.390	573.730	-179.900	1749.850	1734.800	116.260
6116.200	5920.050	564.440	594.440	SRC - Phelps 11-32CHZ	10055.380	7582.310	546.800	625.530	-177.600	1662.640	1647.580	110.340
6216.200	6006.650	598.860	630.700	SRC - Phelps 11-32CHZ	10021.960	7581.690	546.680	658.940	-175.900	1576.160	1561.010	104.040
6316.200	6093.250	633.290	666.960	SRC - Phelps 11-32CHZ	9990.380	7581.150	546.800	690.510	-174.200	1490.800	1475.320	97.590
6416.200	6179.850	667.720	703.220	SRC - Phelps 11-32CHZ	9958.140	7580.680	547.110	722.740	-172.400	1406.150	1390.700	91.050
6516.200	6266.460	702.150	739.480	SRC - Phelps 11-32CHZ	9926.370	7580.290	547.330	754.520	-170.600	1323.910	1307.330	84.380
6616.200	6353.060	736.580	775.730	SRC - Phelps 11-32CHZ	9900.290	7580.020	547.280	780.590	-169.000	1241.490	1225.470	77.510
6716.200	6439.660	771.010	811.990	SRC - Phelps 11-32CHZ	9874.000	7579.870	546.990	806.880	-167.300	1162.020	1145.560	70.570
6816.200	6526.260	805.430	848.250	SRC - Phelps 11-32CHZ	9843.770	7579.990	546.170	837.100	-165.300	1085.210	1068.180	63.730
6916.200	6612.870	839.860	884.510	SRC - Phelps 11-32CHZ	9813.700	7580.280	545.300	865.150	-163.400	1011.450	993.680	56.930
7016.200	6699.470	874.290	920.770	SRC - Phelps 11-32CHZ	9777.280	7580.680	544.110	903.550	-160.700	941.190	922.570	50.540
7116.200	6786.070	908.720	957.030	SRC - Phelps 11-32CHZ	9735.720	7581.070	543.180	945.100	-157.600	875.090	855.440	44.520
7216.200	6872.670	943.150	993.290	SRC - Phelps 11-32CHZ	9693.890	7581.300	542.630	986.930	-154.400	814.010	793.110	38.960
7316.200	6959.280	977.580	1029.550	SRC - Phelps 11-32CHZ	9646.740	7581.380	542.600	1034.070	-150.700	759.100	736.820	34.070
7416.200	7045.880	1012.000	1065.800	SRC - Phelps 11-32CHZ	9606.150	7581.290	543.020	1074.660	-147.400	711.820	687.940	29.810
7516.200	7132.480	1046.430	1102.060	SRC - Phelps 11-32CHZ	9567.260	7581.050	543.610	1113.540	-144.200	673.930	648.350	26.350
7525.380	7140.430	1049.590	1105.390	SRC - Phelps 11-32CHZ	9563.940	7581.030	543.670	1116.860	-143.900	670.980	645.250	26.070
7616.200	7212.570	1089.390	1136.850	SRC - Phelps 11-32CHZ	9532.450	7580.680	544.160	1148.350	-153.100	656.340	629.070	24.060
7716.200	7287.660	1151.440	1167.030	SRC - Phelps 11-32CHZ	9503.480	7580.480	544.530	1177.310	-158.800	673.930	645.220	23.470
7816.200	7345.020	1229.470	1191.060	SRC - Phelps 11-32CHZ	9479.220	7580.200	544.810	1201.570	-162.100	724.000	694.380	24.440
7916.200	7384.730	1319.490	1207.690	SRC - Phelps 11-32CHZ	9450.000	7580.010	545.000	1218.780	-164.800	798.810	768.710	26.540
8016.200	7404.730	1416.890	1216.070	SRC - Phelps 11-32CHZ	9458.120	7579.980	545.030	1222.670	-170.700	889.320	858.960	29.290
8062.770	7407.000	1463.370	1217.020	SRC - Phelps 11-32CHZ	9456.880	7579.970	545.040	1223.910	-177.700	934.500	904.080	30.720
8116.200	7407.000	1516.810	1217.030	SRC - Phelps 11-32CHZ	9456.540	7579.970	545.040	1224.250	-177.600	987.060	956.590	32.390
8216.200	7407.000	1616.810	1217.030	SRC - Phelps 11-32CHZ	9455.900	7579.960	545.050	1224.890	-177.400	1085.650	1055.100	35.530
8316.200	7407.000	1716.810	1217.040	SRC - Phelps 11-32CHZ	9455.250	7579.960	545.050	1225.530	-177.200	1184.480	1153.860	38.680
8416.200	7407.000	1816.810	1217.050	SRC - Phelps 11-32CHZ	9454.610	7579.960	545.060	1226.180	-176.900	1283.490	1252.800	41.820
8516.200	7407.000	1916.810	1217.060	SRC - Phelps 11-32CHZ	9453.970	7579.950	545.060	1226.820	-176.700	1382.640	1351.900	44.970
8616.200	7407.000	2016.810	1217.070	SRC - Phelps 11-32CHZ	9453.330	7579.950	545.070	1227.460	-176.500	1481.900	1451.110	48.120
8716.200	7407.000	2116.810	1217.070	SRC - Phelps 11-32CHZ	9452.680	7579.940	545.070	1228.100	-176.300	1581.260	1550.410	51.260
8816.200	7407.000	2216.810	1217.080	SRC - Phelps 11-32CHZ	9452.040	7579.940	545.070	1228.750	-176.100	1680.680	1649.800	54.400
8916.200	7407.000	2316.810	1217.090	SRC - Phelps 11-32CHZ	9451.400	7579.940	545.080	1229.390	-175.900	1780.190	1749.250	57.530
9016.200	7407.000	2416.810	1217.100	SRC - Phelps 11-32CHZ	9450.760	7579.930	545.080	1230.030	-175.700	1879.740	1848.750	60.660
9116.200	7407.000	2516.810	1217.110	SRC - Phelps 11-32CHZ	9450.120	7579.930	545.090	1230.670	-175.500	1979.340	1948.300	63.780
9216.200	7407.000	2616.810	1217.110	SRC - Phelps 11-32CHZ	9449.470	7579.920	545.090	1231.320	-175.300	2078.970	2047.890	66.900
9316.200	7407.000	2716.810	1217.120	SRC - Phelps 11-32CHZ	9448.830	7579.920	545.090	1231.960	-175.000	2178.640	2147.520	70.010
9416.200	7407.000	2816.810	1217.130	SRC - Phelps 11-32CHZ	9448.190	7579.920	545.100	1232.600	-174.800	2278.330	2247.170	73.110
9516.200	7407.000	2916.810	1217.140	SRC - Phelps 11-32CHZ	9447.540	7579.910	545.100	1233.240	-174.600	2378.050	2346.850	76.200
9616.200	7407.000	3016.810	1217.150	SRC - Phelps 11-32CHZ	9446.900	7579.910	545.110	1233.890	-174.400	2477.800	2446.550	79.290
9716.200	7407.000	3116.810	1217.150	SRC - Phelps 11-32CHZ	9446.260	7579.900	545.110	1234.530	-174.200	2577.560	2546.270	82.370
9816.200	7407.000	3216.810	1217.160	SRC - Phelps 11-32CHZ	9445.620	7579.900	545.110	1235.170	-174.000	2677.340	2646.010	85.450
9916.200	7407.000	3316.810	1217.170	SRC - Phelps 11-32CHZ	9444.980	7579.900	545.120	1235.810	-173.800	2777.140	2745.760	88.510
10016.200	7407.000	3416.810	1217.180	SRC - Phelps 11-32CHZ	9444.330	7579.890	545.120	1236.460	-173.600	2876.950	2845.530	91.570
10116.200	7407.000	3516.810	1217.190	SRC - Phelps 11-32CHZ	9443.690	7579.890	545.130	1237.100	-173.300	2976.770	2945.310	94.620
10216.200	7407.000	3616.810	1217.190	SRC - Phelps 11-32CHZ	9443.050	7579.880	545.130	1237.740	-173.100	3076.610	3045.100	97.660
10316.200	7407.000	3716.810	1217.200	SRC - Phelps 11-32CHZ	9442.410	7579.880	545.130	1238.380	-172.900	3176.450	3144.900	100.690
10416.200	7407.000	3816.810	1217.210	SRC - Phelps 11-32CHZ	9441.760	7579.880	545.140	1239.030	-172.700	3276.300	3244.710	103.710
10516.200	7407.000	3916.810	1217.220	SRC - Phelps 11-32CHZ	9441.120	7579.870	545.140	1239.670	-172.500	3376.170	3344.530	106.730
10616.200	7407.000	4016.810	1217.230	SRC - Phelps 11-32CHZ	9440.480	7579.870	545.150	1240.310	-172.300	3476.040	3444.360	109.730
10716.200	7407.000	4116.810	1217.230	SRC - Phelps 11-32CHZ	9439.840	7579.870	545.150	1240.950	-172.100	3575.910	3544.190	112.730
10816.200	7407.000	4216.810	1217.240	SRC - Phelps 11-32CHZ	9439.190	7579.860	545.150	1241.600	-171.900	3675.800	3644.040	115.720
10916.200	7407.000	4316.810	1217.250	SRC - Phelps 11-32CHZ	9438.550	7579.860	545.160	1242.240	-171.700	3775.690	3743.880	118.710
11016.200	7407.000	4416.810	1217.260	SRC - Phelps 11-32CHZ	9437.910	7579.850	545.160	1242.880	-171.500	3875.580	3843.730	121.680
11116.200	7407.000	4516.810	1217.270	SRC - Phelps 11-32CHZ	9437.270	7579.850	545.170	1243.520	-171.300	3975.490	3943.590	124.640
11216.200	7407.000	4616.810	1217.270	SRC - Phelps 11-32CHZ	9436.620	7579.850	545.170	1244.170	-171.100	4075.390	4043.450	127.600
11316.200	7407.000	4716.810	1217.280	SRC - Phelps 11-32CHZ	9435.980	7579.840	545.180	1244.810	-170.900	4175.300	4143.320	130.550
11416.200	7407.000	4816.810	1217.290	SRC - Phelps 11-32CHZ	9435.340	7579.840	545.180	1245.450	-170.600	4275.210	4243.190	133.490
11516.200	7407.000	4916.810	1217.300	SRC - Phelps 11-32CHZ	9434.700	7579.830	545.180	1246.090	-170.400	4375.130	4343.060	136.420
11616.200	7407.000	5016.810	1217.310	SRC - Phelps 11-32CHZ	9434.050	7579.830	545.190	1246.740	-170.200	4475.050	4442.940	139.340
11716.200	7407.000	5116.810	1217.310	SRC - Phelps 11-32CHZ	9433.410	7579.830	545.190	1247.380	-170.000	4574.980	4542.820	142.250
11816.200	7407.000	5216.810	1217.320	SRC - Phelps 11-32CHZ	9432.770	7579.820	545.200	1248.020	-169.800	4674.910	4642.700	145.150
11916.200	7407.000	5316.810	1217.330	SRC - Phelps 11-32CHZ	9432.130	7579.820	545.200	1248.660	-169.600	4774.840	4742.590	148.050
12016.200	7407.000	5416.810	1217.340	SRC - Phelps 11-32CHZ	9431.480	7579.810	545.200	1249.300	-169.400	4874.770	4842.470	150.940
12116.200	7407.000	5516.810	1217.350	SRC - Phelps 11-32CHZ	9430.840	7579.810	545.210	1249.950	-169.200	4974.710	4942.370	153.810
12216.200	7407.000	5616.810	1217.350	SRC - Phelps 11-32CHZ	9430.200	7579.810	545.210	1250.590	-169.000	5074.650	5042.260	156.680
12316.200	7407.000	5716.810	1217.360	SRC - Phelps 11-32CHZ	9429.560	7579.800	545.220	1251.230	-168.800	5174.590	5142.150	159.540
12410.910	7407.000	5811.520	1217.370	SRC - Phelps 11-32CHZ	9429.500	7579.800	545.220	1251.290	-168.800	5269.240	5236.760	162.230

## Offset Wellbore Survey Tool Programs

3988.500	3988.500	0.000	0.000	SRC - Phelps 11-32NHZ	3943.550	3841.940	-123.870	3072.680	92.300	3078.670	3068.390	299.570
4016.200	4016.200	0.140	0.150	SRC - Phelps 11-32NHZ	3970.920	3868.950	-119.720	3074.140	45.700	3079.850	3069.510	297.820
4116.100	4116.100	2.940	3.090	SRC - Phelps 11-32NHZ	4060.850	3957.660	-105.820	3079.110	45.500	3082.010	3071.450	291.760
4216.200	4215.660	9.340	9.830	SRC - Phelps 11-32NHZ	4181.080	4076.190	-86.800	3085.670	45.300	3080.500	3069.660	284.260
4316.200	4314.590	19.310	20.340	SRC - Phelps 11-32NHZ	4288.700	4182.470	-70.690	3090.840	45.300	3074.660	3063.570	277.300
4416.200	4412.630	32.840	34.580	SRC - Phelps 11-32NHZ	10426.940	7437.090	213.800	3.280	-165.100	3030.030	3015.360	206.480
4516.200	4509.510	49.880	52.530	SRC - Phelps 11-32NHZ	10425.000	7437.120	213.740	5.210	-168.200	2932.570	2917.840	199.140
4616.200	4604.960	70.390	74.130	SRC - Phelps 11-32NHZ	10406.380	7437.470	213.210	23.820	-170.800	2836.560	2821.810	192.370
4716.200	4698.720	94.310	99.320	SRC - Phelps 11-32NHZ	10394.000	7437.710	212.850	36.190	-172.500	2742.280	2727.510	185.570
4816.200	4790.580	129.040	138.040	SRC - Phelps 11-32NHZ	10371.760	7438.310	212.350	58.420	-174.100	2650.250	2635.460	178.130
4916.200	4880.150	152.120	160.200	SRC - Phelps 11-32NHZ	10240.110	7438.070	210.420	190.040	-178.900	2559.760	2545.150	175.230
4988.500	4943.430	176.190	185.550	SRC - Phelps 11-32NHZ	10222.290	7438.910	210.150	207.860	-179.600	2495.800	2481.170	170.560
5016.200	4967.420	185.720	195.600	SRC - Phelps 11-32NHZ	10212.600	7438.820	210.000	217.540	-179.900	2471.620	2456.970	168.730
5116.200	5054.020	220.150	231.850	SRC - Phelps 11-32NHZ	10160.770	7438.280	209.830	269.370	-178.400	2384.570	2369.960	163.230
5216.200	5140.620	254.580	268.110	SRC - Phelps 11-32NHZ	10102.150	7437.100	209.900	327.980	-176.300	2297.690	2283.110	157.520
5316.200	5227.230	289.010	304.370	SRC - Phelps 11-32NHZ	10070.500	7436.280	209.690	359.620	-175.100	2211.170	2196.530	151.050
5416.200	5313.830	323.440	340.630	SRC - Phelps 11-32NHZ	10056.080	7435.980	209.510	374.040	-174.600	2125.470	2110.710	144.050
5516.200	5400.430	357.860	376.890	SRC - Phelps 11-32NHZ	10048.000	7435.850	209.380	382.110	-174.200	2040.830	2025.910	136.780
5616.200	5487.030	392.290	413.150	SRC - Phelps 11-32NHZ	10016.000	7435.730	208.770	414.100	-173.000	1957.320	1942.270	130.000
5716.200	5573.640	426.720	449.410	SRC - Phelps 11-32NHZ	10005.130	7435.850	208.530	424.970	-172.500	1875.110	1859.820	122.600
5816.200	5660.240	461.150	485.660	SRC - Phelps 11-32NHZ	9973.840	7436.210	207.870	456.250	-171.200	1794.190	1778.670	115.620
5916.200	5746.840	495.580	521.920	SRC - Phelps 11-32NHZ	9931.790	7436.760	207.280	496.290	-169.400	1714.500	1698.750	108.870
6016.200	5833.440	530.010	558.180	SRC - Phelps 11-32NHZ	9854.580	7436.620	207.340	575.490	-166.000	1635.710	1619.830	102.980
6116.200	5920.050	564.440	594.440	SRC - Phelps 11-32NHZ	9827.270	7436.710	207.360	602.810	-164.700	1558.150	1541.880	95.740
6216.200	6006.650	598.860	630.700	SRC - Phelps 11-32NHZ	9800.370	7436.640	207.040	629.700	-163.400	1482.700	1465.950	88.510
6316.200	6093.250	633.290	666.960	SRC - Phelps 11-32NHZ	9752.930	7436.530	207.040	677.140	-161.000	1409.330	1392.120	81.890
6416.200	6179.850	667.720	703.220	SRC - Phelps 11-32NHZ	9694.320	7436.330	209.320	735.700	-158.100	1337.870	1320.200	75.710
6516.200	6266.460	702.150	739.480	SRC - Phelps 11-32NHZ	9661.420	7436.240	211.320	768.540	-156.400	1268.920	1250.550	69.080
6616.200	6353.060	736.580	775.730	SRC - Phelps 11-32NHZ	9638.000	7436.350	212.570	791.930	-155.100	1203.480	1184.240	62.540
6716.200	6439.660	771.010	811.990	SRC - Phelps 11-32NHZ	9614.910	7436.630	213.430	815.000	-153.900	1142.300	1122.050	56.410
6816.200	6526.260	805.430	848.250	SRC - Phelps 11-32NHZ	9583.390	7437.100	214.150	846.400	-152.200	1085.930	1064.610	50.940
6916.200	6612.870	839.860	884.510	SRC - Phelps 11-32NHZ	9551.150	7437.670	214.690	878.740	-150.300	1034.980	1012.490	46.020
7016.200	6699.470	874.290	920.770	SRC - Phelps 11-32NHZ	9510.440	7438.240	215.210	919.440	-148.000	990.400	966.360	41.810
7116.200	6786.070	908.720	957.030	SRC - Phelps 11-32NHZ	9471.810	7438.630	215.580	958.070	-145.700	951.980	927.050	38.190
7216.200	6872.670	943.150	993.290	SRC - Phelps 11-32NHZ	9419.430	7438.700	216.490	1010.480	-142.600	911.320	886.270	35.360
7316.200	6959.280	977.590	1029.650	SRC - Phelps 11-32NHZ	9387.000	7438.620	217.000	1042.860	-140.700	869.020	841.740	32.960
7416.200	7045.880	1012.000	1065.800	SRC - Phelps 11-32NHZ	9357.710	7438.470	217.260	1072.150	-138.900	826.450	805.060	31.220
7496.550	7115.460	1039.670	1094.940	SRC - Phelps 11-32NHZ	9326.190	7438.600	217.640	1103.670	-137.000	883.300	854.230	30.380
7516.200	7132.480	1046.430	1102.060	SRC - Phelps 11-32NHZ	9317.030	7438.600	217.750	1112.820	-136.500	883.480	854.270	30.250
7525.380	7140.430	1049.590	1105.390	SRC - Phelps 11-32NHZ	9313.680	7438.590	217.790	1116.170	-136.300	883.690	854.410	30.180
7616.200	7215.570	1089.390	1136.850	SRC - Phelps 11-32NHZ	9291.180	7438.560	218.050	1138.680	-147.300	899.430	869.520	30.080
7716.200	7267.660	1151.440	1167.030	SRC - Phelps 11-32NHZ	9271.820	7438.580	218.030	1158.030	-154.400	945.570	915.220	31.160
7816.200	7345.020	1229.470	1191.060	SRC - Phelps 11-32NHZ	9255.540	7438.700	217.860	1174.300	-158.600	1016.080	985.520	33.250
7916.200	7384.730	1319.490	1207.690	SRC - Phelps 11-32NHZ	9239.910	7438.860	217.610	1189.940	-161.400	1103.350	1072.170	36.030
8016.200	7404.730	1416.890	1216.070	SRC - Phelps 11-32NHZ	9232.830	7438.930	217.500	1197.010	-168.700	1200.030	1169.380	39.150
8062.770	7407.000	1463.370	1217.020	SRC - Phelps 11-32NHZ	9232.580	7438.940	217.500	1197.260	-148.400	1246.440	1215.770	40.640
8116.200	7407.000	1516.810	1217.030	SRC - Phelps 11-32NHZ	9233.410	7438.930	217.510	1196.440	-147.300	1239.850	1209.160	42.350
8216.200	7407.000	1616.810	1217.030	SRC - Phelps 11-32NHZ	9234.960	7438.910	217.530	1194.890	-145.400	1309.810	1269.060	45.550
8316.200	7407.000	1716.810	1217.040	SRC - Phelps 11-32NHZ	9236.510	7438.900	217.560	1193.340	-143.500	1409.770	1469.000	48.730
8416.200	7407.000	1816.810	1217.050	SRC - Phelps 11-32NHZ	9238.060	7438.880	217.580	1191.780	-141.700	1509.740	1568.920	51.910
8516.200	7407.000	1916.810	1217.060	SRC - Phelps 11-32NHZ	9239.610	7438.860	217.610	1190.230	-140.100	1609.710	1668.850	55.080
8616.200	7407.000	2016.810	1217.070	SRC - Phelps 11-32NHZ	9241.160	7438.850	217.630	1188.680	-138.400	1709.680	1768.780	58.240
8716.200	7407.000	2116.810	1217.070	SRC - Phelps 11-32NHZ	9242.710	7438.830	217.660	1187.130	-136.900	1809.650	1868.710	61.390
8816.200	7407.000	2216.810	1217.080	SRC - Phelps 11-32NHZ	9244.260	7438.810	217.680	1185.580	-135.400	1909.630	1968.640	64.530
8916.200	7407.000	2316.810	1217.090	SRC - Phelps 11-32NHZ	9245.820	7438.800	217.700	1184.030	-134.000	2009.600	2068.570	67.660
9016.200	7407.000	2416.810	1217.100	SRC - Phelps 11-32NHZ	9247.370	7438.780	217.730	1182.480	-132.700	2109.580	2168.510	70.790
9116.200	7407.000	2516.810	1217.110	SRC - Phelps 11-32NHZ	9248.920	7438.770	217.750	1180.930	-131.400	2209.560	2268.440	73.900
9216.200	7407.000	2616.810	1217.110	SRC - Phelps 11-32NHZ	9250.470	7438.750	217.780	1179.380	-130.200	2309.540	2368.380	77.000
9316.200	7407.000	2716.810	1217.120	SRC - Phelps 11-32NHZ	9252.020	7438.730	217.800	1177.830	-129.100	2409.520	2468.310	80.100
9416.200	7407.000	2816.810	1217.130	SRC - Phelps 11-32NHZ	9253.570	7438.720	217.820	1176.280	-128.000	2509.500	2568.250	83.180
9516.200	7407.000	2916.810	1217.140	SRC - Phelps 11-32NHZ	9255.120	7438.700	217.850	1174.730	-126.900	2609.480	2668.180	86.260
9616.200	7407.000	3016.810	1217.150	SRC - Phelps 11-32NHZ	9256.670	7438.690	217.870	1173.180	-125.900	2709.460	2768.120	89.320
9716.200	7407.000	3116.810	1217.150	SRC - Phelps 11-32NHZ	9258.220	7438.670	217.900	1171.630	-125.000	2809.440	2868.050	92.380
9816.200	7407.000	3216.810	1217.160	SRC - Phelps 11-32NHZ	9259.770	7438.650	217.920	1170.080	-124.100	2909.420	2967.990	95.420
9916.200	7407.000	3316.810	1217.170	SRC - Phelps 11-32NHZ	9261.000	7438.640	217.940	1168.850	-123.300	3009.400	3067.930	98.460
10016.200	7407.000	3416.810	1217.180	SRC - Phelps 11-32NHZ	9261.000	7438.640	217.940	1168.850	-123.300	3109.390	3167.870	101.510
10116.200	7407.000	3516.810	1217.190	SRC - Phelps 11-32NHZ	9261.000	7438.640	217.940	1168.850	-123.300	3209.370	3267.810	104.540
10216.200	7407.000	3616.810	1217.190	SRC - Phelps 11-32NHZ	9261.000	7438.640	217.940	1168.850	-123.300	3309.360	3367.750	107.560
10316.200	7407.000	3716.810	1217.200	SRC - Phelps 11-32NHZ	9261.000	7438.640	217.940	1168.850	-123.300	3409.340	3467.700	110.580
10416.200	7407.000	3816.810	1217.210	SRC - Phelps 11-32NHZ	9261.000	7438.640	217.940	1168.850	-123.300	3509.330	3567.640	113.580
10516.200	7407.000	3916.810	1217.220	SRC - Phelps 11-32NHZ	9261.000	7438.640	217.940	1168.850	-123.300	3609.320	3667.590	116.580
10616.200	7407.000	4016.810	1217.230	SRC - Phelps 11-32NHZ	9261.000	7438.640	217.940	1168.850	-123.300	3709.310	3767	

2616.200	2616.200	0.000	0.000	SRC - Phelps 12-32CHZ	2452.340	2410.090	-817.200	3050.770	105.000	3165.050	3160.410	682.360
2716.200	2716.200	0.000	0.000	SRC - Phelps 12-32CHZ	2576.620	2534.140	-819.910	3057.920	105.000	3171.160	3166.340	657.780
2816.200	2816.200	0.000	0.000	SRC - Phelps 12-32CHZ	2655.140	2612.520	-821.430	3062.320	105.000	3177.110	3172.150	639.770
2916.200	2916.200	0.000	0.000	SRC - Phelps 12-32CHZ	2744.680	2701.870	-823.690	3067.820	105.000	3183.700	3178.580	621.830
3016.200	3016.200	0.000	0.000	SRC - Phelps 12-32CHZ	2833.500	2790.480	-826.090	3073.420	105.000	3190.500	3185.230	605.060
3116.200	3116.200	0.000	0.000	SRC - Phelps 12-32CHZ	2901.670	2858.450	-828.050	3078.190	105.100	3198.030	3192.620	591.160
3216.200	3216.200	0.000	0.000	SRC - Phelps 12-32CHZ	2972.590	2929.100	-830.350	3083.950	105.100	3206.660	3201.110	577.940
3316.200	3316.200	0.000	0.000	SRC - Phelps 12-32CHZ	3075.460	3031.520	-834.570	3092.480	105.100	3215.740	3210.030	562.730
3416.200	3416.200	0.000	0.000	SRC - Phelps 12-32CHZ	3229.650	3185.210	-840.380	3103.410	105.200	3223.470	3217.550	544.090
3516.200	3516.200	0.000	0.000	SRC - Phelps 12-32CHZ	3307.890	3263.140	-842.690	3108.920	105.200	3231.030	3224.960	532.370
3616.200	3616.200	0.000	0.000	SRC - Phelps 12-32CHZ	3391.510	3346.560	-845.180	3115.380	105.200	3239.230	3233.010	520.850
3716.200	3716.200	0.000	0.000	SRC - Phelps 12-32CHZ	3486.970	3441.680	-847.930	3122.910	105.200	3247.610	3241.230	509.150
3816.200	3816.200	0.000	0.000	SRC - Phelps 12-32CHZ	3596.860	3551.180	-849.230	3132.050	105.200	3255.940	3249.390	497.100
3916.200	3916.200	0.000	0.000	SRC - Phelps 12-32CHZ	3726.700	3680.610	-850.520	3142.220	105.200	3263.810	3257.070	484.410
3988.500	3988.500	0.000	0.000	SRC - Phelps 12-32CHZ	3849.770	3803.410	-851.980	3150.170	105.100	3268.590	3261.700	473.890
4016.200	4016.200	0.140	0.150	SRC - Phelps 12-32CHZ	3877.430	3831.020	-852.210	3151.730	58.600	3270.060	3263.110	471.030
4116.200	4116.100	2.940	3.090	SRC - Phelps 12-32CHZ	4045.160	3998.560	-852.640	3159.870	58.600	3272.770	3265.620	457.150
4216.200	4215.660	9.340	9.830	SRC - Phelps 12-32CHZ	4176.840	4130.160	-852.670	3164.070	58.800	3271.030	3263.680	445.240
4316.200	4314.590	19.310	20.340	SRC - Phelps 12-32CHZ	4357.640	4310.920	-854.820	3166.410	59.400	3265.250	3257.670	431.030
4416.200	4412.630	32.840	34.580	SRC - Phelps 12-32CHZ	4513.150	4466.410	-854.590	3164.820	60.200	3254.040	3246.250	417.750
4516.200	4509.510	49.880	52.530	SRC - Phelps 12-32CHZ	10429.510	7598.650	-859.660	32.640	156.100	3220.320	3203.830	195.300
4616.200	4604.960	70.390	74.130	SRC - Phelps 12-32CHZ	10413.330	7598.710	-859.860	46.820	157.500	3135.050	3118.340	187.650
4716.200	4698.720	94.310	99.320	SRC - Phelps 12-32CHZ	10387.890	7598.840	-859.120	51.250	158.400	3053.240	3036.310	180.390
4816.200	4790.530	121.580	128.040	SRC - Phelps 12-32CHZ	10358.980	7598.990	-860.420	103.170	159.000	2975.290	2958.130	173.350
4916.200	4880.150	152.120	160.200	SRC - Phelps 12-32CHZ	10325.340	7599.120	-860.860	136.800	159.300	2901.630	2884.210	166.570
4988.500	4943.430	176.190	185.550	SRC - Phelps 12-32CHZ	10307.590	7599.180	-861.200	154.550	159.600	2851.340	2833.690	161.520
5016.200	4967.420	185.720	195.600	SRC - Phelps 12-32CHZ	10297.660	7599.220	-861.410	164.470	159.400	2832.630	2814.890	159.640
5116.200	5054.020	220.150	231.850	SRC - Phelps 12-32CHZ	10261.040	7599.290	-862.270	201.080	158.500	2766.040	2748.010	153.340
5216.200	5140.620	254.580	268.110	SRC - Phelps 12-32CHZ	10220.800	7599.350	-863.270	241.310	157.500	2701.040	2682.680	147.110
5316.200	5227.230	289.010	304.370	SRC - Phelps 12-32CHZ	10185.660	7599.290	-864.250	276.440	156.600	2637.700	2618.970	140.860
5416.200	5131.830	323.440	340.630	SRC - Phelps 12-32CHZ	10154.860	7599.250	-865.100	307.230	155.900	2576.210	2557.080	134.650
5516.200	5400.430	357.860	376.890	SRC - Phelps 12-32CHZ	10127.450	7599.280	-865.820	334.620	155.200	2516.770	2497.200	128.550
5616.200	5487.030	392.290	413.150	SRC - Phelps 12-32CHZ	10089.540	7599.640	-866.490	372.430	154.200	2459.530	2439.520	122.920
5716.200	5573.640	426.720	449.410	SRC - Phelps 12-32CHZ	10027.290	7600.430	-866.780	434.770	152.700	2404.420	2384.050	118.050
5816.200	5660.240	461.150	485.660	SRC - Phelps 12-32CHZ	9931.700	7600.310	-866.060	530.130	150.200	2351.040	2331.420	114.070
5916.200	5745.580	495.580	512.920	SRC - Phelps 12-32CHZ	9880.200	7599.390	-865.320	581.840	148.800	2299.470	2278.420	109.230
6016.200	5833.440	530.010	558.180	SRC - Phelps 12-32CHZ	9844.670	7598.670	-864.730	617.360	147.900	2250.520	2228.940	104.300
6116.200	5920.050	564.440	594.440	SRC - Phelps 12-32CHZ	9813.500	7598.070	-864.160	648.520	147.100	2204.450	2182.310	99.550
6216.200	6006.650	598.860	630.700	SRC - Phelps 12-32CHZ	9789.080	7597.690	-863.880	672.930	146.400	2161.670	2138.910	95.000
6316.200	6093.250	633.290	666.960	SRC - Phelps 12-32CHZ	9765.880	7597.410	-863.650	696.130	145.800	2122.310	2098.920	90.750
6416.200	6179.850	667.720	703.220	SRC - Phelps 12-32CHZ	9740.480	7597.210	-863.420	721.530	145.100	2086.540	2062.520	86.890
6516.200	6266.460	702.150	739.480	SRC - Phelps 12-32CHZ	9709.600	7597.120	-863.170	752.410	144.300	2054.520	2029.900	83.450
6616.200	6353.060	736.580	775.730	SRC - Phelps 12-32CHZ	9676.270	7597.020	-862.990	785.740	143.400	2026.370	2001.160	80.370
6716.200	6439.660	771.010	811.990	SRC - Phelps 12-32CHZ	9651.490	7596.900	-862.960	810.520	142.700	2002.260	1976.430	77.520
6816.200	6526.260	805.430	848.250	SRC - Phelps 12-32CHZ	9615.650	7596.780	-863.080	846.360	141.700	1982.410	1956.020	75.130
6916.200	6612.870	839.860	884.510	SRC - Phelps 12-32CHZ	9591.000	7596.690	-863.160	871.010	141.000	1966.820	1939.860	72.940
7016.200	6699.470	874.290	920.770	SRC - Phelps 12-32CHZ	9560.110	7596.820	-863.430	901.890	140.200	1955.830	1928.340	71.160
7116.200	6786.070	908.720	957.030	SRC - Phelps 12-32CHZ	9528.000	7596.960	-863.700	934.000	139.300	1949.250	1921.280	69.710
7209.020	6866.450	940.680	990.680	SRC - Phelps 12-32CHZ	9503.300	7597.290	-864.010	958.700	138.600	1947.310	1918.920	68.580
7216.200	6872.670	943.150	993.290	SRC - Phelps 12-32CHZ	9500.640	7597.320	-864.040	961.360	138.600	1947.330	1918.900	68.510
7217.640	6873.920	943.650	993.810	SRC - Phelps 12-32CHZ	9500.110	7597.330	-864.050	961.890	138.600	1947.330	1918.900	68.500
7316.200	6959.280	977.580	1029.550	SRC - Phelps 12-32CHZ	9477.730	7597.780	-864.410	984.260	137.900	1950.040	1921.190	67.590
7416.200	7045.880	1012.000	1065.800	SRC - Phelps 12-32CHZ	9446.440	7598.500	-864.990	1015.540	137.100	1957.300	1928.110	67.040
7516.200	7132.480	1046.430	1102.060	SRC - Phelps 12-32CHZ	9410.180	7599.230	-865.760	1051.780	136.100	1968.970	1939.500	66.810
7525.380	7140.430	1049.590	1105.390	SRC - Phelps 12-32CHZ	9406.770	7599.300	-865.830	1055.180	136.000	1970.260	1940.770	66.800
7529.320	7143.840	1050.970	1106.820	SRC - Phelps 12-32CHZ	9405.320	7599.320	-865.860	1056.640	136.700	1970.840	1941.340	66.800
7616.200	7215.570	1089.390	1136.850	SRC - Phelps 12-32CHZ	9372.010	7599.760	-866.580	1089.930	147.600	1993.900	1964.210	67.160
7716.200	7287.660	1151.440	1167.030	SRC - Phelps 12-32CHZ	9337.060	7599.960	-867.290	1124.870	155.000	2043.180	2013.330	68.460
7816.200	7345.020	1229.470	1191.060	SRC - Phelps 12-32CHZ	9317.840	7600.020	-867.710	1144.090	159.900	2113.150	2083.160	70.460
7916.200	7384.730	1319.490	1207.690	SRC - Phelps 12-32CHZ	9305.500	7600.060	-867.980	1156.430	164.500	2198.650	2168.550	73.060
8016.200	7404.730	1416.890	1216.070	SRC - Phelps 12-32CHZ	9305.500	7600.060	-867.980	1156.430	175.300	2233.980	2203.800	76.000
8062.770	7407.000	1463.370	1217.020	SRC - Phelps 12-32CHZ	9305.500	7600.060	-867.980	1156.430	-162.600	2340.120	2309.910	77.460
8116.200	7407.000	1516.810	1217.030	SRC - Phelps 12-32CHZ	9305.500	7600.060	-867.980	1156.430	-162.600	2333.360	2303.130	79.160
8216.200	7407.000	1616.810	1217.030	SRC - Phelps 12-32CHZ	9305.500	7600.060	-867.980	1156.430	-162.600	2433.010	2402.740	82.350
8316.200	7407.000	1716.810	1217.040	SRC - Phelps 12-32CHZ	9305.500	7600.060	-867.980	1156.430	-162.600	2592.700	2562.380	85.520
8416.200	7407.000	1816.810	1217.050	SRC - Phelps 12-32CHZ	9305.500	7600.060	-867.980	1156.430	-162.600	2692.400	2662.040	88.680
8516.200	7407.000	1916.810	1217.060	SRC - Phelps 12-32CHZ	9306.790	7600.050	-867.950	1155.140	-162.300	2792.130	2761.720	91.830
8616.200	7407.000	2016.810	1217.070	SRC - Phelps 12-32CHZ	9308.980	7600.040	-867.910	1152.950	-161.700	2891.880	2861.420	94.950
8716.200	7407.000	2116.810	1217.070	SRC - Phelps 12-32CHZ	9311.180	7600.040	-867.860	1150.760	-161.100	2991.640	2961.130	98.070
8816.200	7407.000	2216.810	1217.080	SRC - Phelps 12-32CHZ	9313.370	7600.030	-867.810	1148.560	-160.500	3091.410	3060.860	101.180
8916.200	7407.000	2316.810	1217.090	SRC - Phelps 12-32CHZ	9315.560	7600.020	-867.760	1146.370	-159.900	3191.200	3160.590	104.280
9016.200	7407.000	2416.810	1217.100	SRC - Phelps 12-32CHZ	9317.760	7600.020	-867.710	1144.180	-159.400	3290.990	3260.340	107.370
9116.200	7407.000	2516.810										

916.200	916.200	0.000	0.000	SRC - Phelps 12-32NHZ	863.730	826.830	-787.030	2897.960	105.200	3004.260	3001.920	1282.060
1016.200	1016.200	0.000	0.000	SRC - Phelps 12-32NHZ	937.260	900.230	-790.940	2899.430	105.300	3007.610	3005.130	1209.920
1116.200	1116.200	0.000	0.000	SRC - Phelps 12-32NHZ	1027.400	990.140	-797.030	2901.560	105.400	3011.670	3009.030	1138.730
1216.200	1216.200	0.000	0.000	SRC - Phelps 12-32NHZ	1107.030	1069.510	-803.080	2903.560	105.500	3016.140	3013.350	1079.470
1316.200	1316.200	0.000	0.000	SRC - Phelps 12-32NHZ	1196.880	1159.030	-810.370	2906.240	105.600	3021.200	3018.240	1021.120
1416.200	1416.200	0.000	0.000	SRC - Phelps 12-32NHZ	1310.430	1272.240	-818.360	2909.950	105.700	3026.260	3023.120	963.810
1516.200	1516.200	0.000	0.000	SRC - Phelps 12-32NHZ	1430.700	1392.280	-824.810	2913.450	105.800	3030.490	3027.160	910.610
1616.200	1616.200	0.000	0.000	SRC - Phelps 12-32NHZ	1486.730	1448.220	-826.950	2915.740	105.800	3035.390	3031.940	878.370
1716.200	1716.200	0.000	0.000	SRC - Phelps 12-32NHZ	1553.420	1514.730	-830.560	2919.680	105.900	3041.520	3037.930	845.980
1816.200	1816.200	0.000	0.000	SRC - Phelps 12-32NHZ	1620.350	1581.570	-835.870	2922.420	106.000	3048.610	3044.880	815.520
1916.200	1916.200	0.000	0.000	SRC - Phelps 12-32NHZ	1711.990	1672.460	-844.470	2927.370	106.100	3056.480	3052.960	866.390
2016.200	2016.200	0.000	0.000	SRC - Phelps 12-32NHZ	1811.850	1771.690	-854.190	2932.830	106.200	3064.460	3060.750	826.610
2116.200	2116.200	0.000	0.000	SRC - Phelps 12-32NHZ	1913.760	1872.990	-863.810	2938.470	106.400	3072.440	3068.550	790.160
2216.200	2216.200	0.000	0.000	SRC - Phelps 12-32NHZ	2018.040	1976.710	-872.790	2944.330	106.500	3080.290	3076.220	756.710
2316.200	2316.200	0.000	0.000	SRC - Phelps 12-32NHZ	2124.450	2082.660	-880.560	2950.490	106.600	3087.930	3083.680	726.480
2416.200	2416.200	0.000	0.000	SRC - Phelps 12-32NHZ	2262.160	2219.910	-888.790	2958.060	106.700	3094.930	3090.470	694.720
2516.200	2516.200	0.000	0.000	SRC - Phelps 12-32NHZ	2331.740	2289.290	-892.910	2961.530	106.800	3101.520	3096.930	674.500
2616.200	2616.200	0.000	0.000	SRC - Phelps 12-32NHZ	2402.960	2360.190	-897.930	2965.810	106.800	3109.320	3104.580	655.650
2716.200	2716.200	0.000	0.000	SRC - Phelps 12-32NHZ	2502.650	2459.400	-905.220	2972.360	106.900	3117.740	3112.830	634.280
2816.200	2816.200	0.000	0.000	SRC - Phelps 12-32NHZ	2634.610	2590.850	-913.580	2980.440	107.000	3125.450	3120.340	611.000
2916.200	2916.200	0.000	0.000	SRC - Phelps 12-32NHZ	2719.500	2675.450	-918.610	2985.280	107.100	3132.690	3127.420	594.220
3016.200	3016.200	0.000	0.000	SRC - Phelps 12-32NHZ	2804.080	2759.670	-924.410	2990.440	107.200	3140.550	3135.130	575.520
3116.200	3116.200	0.000	0.000	SRC - Phelps 12-32NHZ	2894.420	2843.570	-931.210	2995.420	107.300	3148.290	3142.290	563.010
3216.200	3216.200	0.000	0.000	SRC - Phelps 12-32NHZ	2985.700	2940.350	-938.630	3002.140	107.400	3157.530	3151.770	548.110
3316.200	3316.200	0.000	0.000	SRC - Phelps 12-32NHZ	3081.610	3035.710	-946.800	3008.410	107.500	3166.330	3160.390	533.660
3416.200	3416.200	0.000	0.000	SRC - Phelps 12-32NHZ	3177.460	3131.000	-954.870	3014.880	107.600	3175.310	3169.200	520.070
3516.200	3516.200	0.000	0.000	SRC - Phelps 12-32NHZ	3288.610	3241.510	-964.220	3022.200	107.700	3184.160	3177.870	505.990
3616.200	3616.200	0.000	0.000	SRC - Phelps 12-32NHZ	3398.060	3340.420	-972.430	3028.570	107.800	3192.790	3186.320	493.560
3716.200	3716.200	0.000	0.000	SRC - Phelps 12-32NHZ	3493.460	3445.240	-981.260	3035.180	107.900	3201.340	3194.690	481.300
3816.200	3816.200	0.000	0.000	SRC - Phelps 12-32NHZ	3590.090	3541.300	-989.980	3040.990	108.000	3209.870	3203.040	470.180
3916.200	3916.200	0.000	0.000	SRC - Phelps 12-32NHZ	3680.160	3630.790	-998.480	3046.550	108.200	3218.680	3211.690	460.060
3988.500	3988.500	0.000	0.000	SRC - Phelps 12-32NHZ	3759.680	3709.820	-1005.790	3051.470	108.200	3225.020	3217.890	452.100
4016.200	4016.200	0.140	0.150	SRC - Phelps 12-32NHZ	3793.710	3743.660	-1008.830	3053.540	61.700	3227.310	3220.120	448.910
4116.200	4116.200	2.940	3.090	SRC - Phelps 12-32NHZ	3892.970	3842.340	-1017.690	3059.420	61.800	3233.850	3226.480	439.000
4216.200	4216.200	9.340	9.830	SRC - Phelps 12-32NHZ	3967.400	3916.320	-1024.600	3063.900	61.800	3238.210	3230.690	430.660
4316.200	4316.200	19.310	20.340	SRC - Phelps 12-32NHZ	4057.810	4006.100	-1033.330	3069.880	62.100	3240.820	3233.130	421.400
4416.200	4416.200	32.840	34.580	SRC - Phelps 12-32NHZ	4164.210	4111.850	-1042.530	3077.250	62.500	3241.090	3233.210	411.160
4516.200	4516.200	49.880	52.530	SRC - Phelps 12-32NHZ	4223.500	4144.570	-1049.000	3082.900	148.700	3241.990	3232.530	402.550
4616.200	4616.200	70.390	74.130	SRC - Phelps 12-32NHZ	4223.500	4144.570	-1049.000	3082.900	150.700	3099.740	3081.970	174.400
4716.200	4716.200	94.310	99.320	SRC - Phelps 12-32NHZ	4208.000	4144.550	-1070.280	3082.900	152.410	3093.510	3085.430	167.260
4816.200	4790.530	121.580	128.040	SRC - Phelps 12-32NHZ	4194.320	4144.560	-1069.870	3082.900	153.100	2951.800	2933.380	160.260
4916.200	4880.150	152.120	160.200	SRC - Phelps 12-32NHZ	4185.670	4144.570	-1069.710	3082.900	154.100	2885.080	2866.270	153.380
4988.500	4943.430	176.190	185.550	SRC - Phelps 12-32NHZ	4176.000	4144.580	-1069.580	3082.900	154.600	2840.220	2821.110	148.640
5016.200	4967.420	185.720	195.600	SRC - Phelps 12-32NHZ	4168.320	4144.590	-1069.580	3082.900	154.400	2823.690	2804.470	146.930
5116.200	5054.020	220.150	231.850	SRC - Phelps 12-32NHZ	4141.190	4144.600	-1069.810	3082.900	153.800	2765.330	2745.730	141.100
5216.200	5140.620	254.580	268.110	SRC - Phelps 12-32NHZ	4084.260	4144.370	-1070.270	3082.900	152.500	2708.780	2688.070	136.060
5316.200	5227.230	289.010	304.370	SRC - Phelps 12-32NHZ	4066.500	4144.230	-1070.480	3082.900	152.100	2654.310	2633.930	130.250
5416.200	5313.830	323.440	340.630	SRC - Phelps 12-32NHZ	4060.210	4144.200	-1070.700	3082.900	151.900	2581.500	2561.100	124.460
5516.200	5400.430	357.860	376.890	SRC - Phelps 12-32NHZ	4051.000	4144.140	-1071.030	3082.900	151.700	2553.200	2531.750	119.010
5616.200	5487.030	392.290	413.150	SRC - Phelps 12-32NHZ	4035.500	4144.080	-1071.930	324.850	151.400	2506.910	2484.920	113.970
5716.200	5573.640	426.720	449.410	SRC - Phelps 12-32NHZ	4035.500	4144.080	-1071.930	324.850	151.400	2463.690	2441.080	108.970
5816.200	5660.240	461.150	485.660	SRC - Phelps 12-32NHZ	4020.000	4144.060	-1073.160	340.300	151.000	2423.660	2400.480	104.550
5916.200	5746.840	495.580	521.920	SRC - Phelps 12-32NHZ	4004.500	4144.030	-1074.670	355.730	150.600	2387.010	2363.240	100.430
6016.200	5833.440	530.010	558.180	SRC - Phelps 12-32NHZ	3989.000	4143.950	-1076.400	371.130	150.300	2353.840	2329.480	96.630
6116.200	5920.050	564.440	594.440	SRC - Phelps 12-32NHZ	3968.150	4143.710	-1080.000	401.770	149.500	2324.160	2299.250	93.310
6216.200	6006.650	598.860	630.700	SRC - Phelps 12-32NHZ	3933.410	4143.600	-1082.900	426.340	148.900	2298.100	2272.630	90.230
6316.200	6093.250	633.290	666.960	SRC - Phelps 12-32NHZ	3885.420	4143.430	-1088.340	474.020	147.700	2275.640	2249.680	87.680
6331.820	6106.780	638.670	672.820	SRC - Phelps 12-32NHZ	3880.420	4143.410	-1088.880	478.990	147.600	2272.440	2246.410	87.280
6416.200	6178.950	667.720	703.220	SRC - Phelps 12-32NHZ	3854.300	4143.560	-1092.000	484.270	138.800	2255.860	2227.690	89.510
6516.200	6266.460	702.150	739.480	SRC - Phelps 12-32NHZ	3827.580	4143.690	-1095.140	489.870	137.900	2232.230	2206.590	87.060
6616.200	6353.080	735.090	775.730	SRC - Phelps 12-32NHZ	3800.540	4143.720	-1097.130	507.840	137.300	2215.320	2189.180	84.760
6716.200	6438.660	771.010	811.990	SRC - Phelps 12-32NHZ	3743.000	4143.740	-1095.230	535.310	136.600	2202.330	2175.710	82.760
6816.200	6526.260	805.430	848.250	SRC - Phelps 12-32NHZ	3697.000	4143.740	-1094.250	561.280	136.200	2193.450	2166.340	80.900
6916.200	6612.870	839.860	884.510	SRC - Phelps 12-32NHZ	3631.000	4143.740	-1093.440	587.260	135.800	2188.820	2161.240	79.360
6974.990	6663.780	860.100	905.830	SRC - Phelps 12-32NHZ	3575.500	4143.740	-1092.830	587.250	135.500	2188.120	2160.300	78.660
6987.980	6675.030	864.580	910.540	SRC - Phelps 12-32NHZ	3575.500	4143.740	-1092.830	587.250	135.500	2188.150	2160.270	78.470
7016.200	6699.470	874.290	920.770	SRC - Phelps 12-32NHZ	3575.500	4143.740	-1092.830	587.250	135.500	2188.500	2160.480	78.100
7116.200	6786.070	908.720	957.030	SRC - Phelps 12-32NHZ	3560.000	4143.740	-1092.440	598.250	135.100	2192.520	2164.100	77.150
7216.200	6872.670	943.150	993.290	SRC - Phelps 12-32NHZ	3544.000	4143.760	-1092.230	610.420	134.700	2200.870	2172.090	76.480
7316.200	6959.280	977.580	1029.550	SRC - Phelps 12-32NHZ	3531.540	4143.810	-1092.230	626.700	134.400	2213.500	2184.390	76.050
7365.280	7001.780	994.470	1047.340	SRC - Phelps 12-32NHZ	3525.490	4143.830	-1092.250	632.750	134.300	2221.210	2191.950	75.930
7416.200	7045.880	1012.000	1065.800	SRC - Phelps 12-32NHZ	3529.780	4143.890	-1091.610	638.450	132.200	2230.050	2200.950	76.650
7516.200	7132.480	1046.430	1102.060	SRC - Phelps 12-32NHZ	3528.000	4143.850						

Survey Tool Error Model	WdW Rate Gyro 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
16.200	16.200	16.200	0.000	0.000 SRC - Phelps A-32CHZ	53.000	16.200	-791.070	2849.410	105.500	2957.180	2956.220	
32.600	32.600	32.600	0.000	0.000 SRC - Phelps A-32CHZ	59.880	23.080	-791.030	2849.440	105.500	2957.220	2956.210	2927.470
116.200	116.200	116.200	0.000	0.000 SRC - Phelps A-32CHZ	118.600	111.790	-790.180	2850.220	105.500	2957.330	2956.850	2660.110
216.200	216.200	216.200	0.000	0.000 SRC - Phelps A-32CHZ	234.030	197.180	-788.280	2851.890	105.500	2958.890	2957.610	2314.550
316.200	316.200	316.200	0.000	0.000 SRC - Phelps A-32CHZ	348.990	312.140	-787.290	2852.710	105.400	2959.360	2957.910	2043.170
416.200	416.200	416.200	0.000	0.000 SRC - Phelps A-32CHZ	453.560	416.710	-787.130	2852.820	105.400	2959.420	2957.810	1834.870
516.200	516.200	516.200	0.000	0.000 SRC - Phelps A-32CHZ	567.970	531.110	-786.870	2852.550	105.400	2959.120	2957.340	1657.520
616.200	616.200	616.200	0.000	0.000 SRC - Phelps A-32CHZ	691.860	655.000	-785.800	2851.650	105.400	2958.190	2956.220	1505.190
716.200	716.200	716.200	0.000	0.000 SRC - Phelps A-32CHZ	794.260	757.390	-784.460	2850.500	105.400	2956.760	2954.630	1388.680
816.200	816.200	816.200	0.000	0.000 SRC - Phelps A-32CHZ	885.810	848.920	-783.070	2849.680	105.400	2955.500	2953.220	1294.210
916.200	916.200	916.200	0.000	0.000 SRC - Phelps A-32CHZ	970.650	933.750	-782.100	2849.310	105.300	2954.750	2952.320	1215.250
1016.200	1016.200	1016.200	0.000	0.000 SRC - Phelps A-32CHZ	1082.450	1045.550	-780.910	2848.740	105.300	2953.980	2951.380	1134.870
1116.200	1116.200	1116.200	0.000	0.000 SRC - Phelps A-32CHZ	1197.190	1160.270	-778.950	2847.860	105.300	2952.800	2950.020	1063.330
1216.200	1216.200	1216.200	0.000	0.000 SRC - Phelps A-32CHZ	1341.830	1304.840	-775.960	2844.830	105.300	2950.090	2947.120	991.280
1316.200	1316.200	1316.200	0.000	0.000 SRC - Phelps A-32CHZ	1449.090	1412.040	-773.960	2841.980	105.200	2947.040	2943.900	937.790
1416.200	1416.200	1416.200	0.000	0.000 SRC - Phelps A-32CHZ	1636.990	1599.610	-765.710	2834.830	105.100	2942.140	2938.760	870.590
1516.200	1516.200	1516.200	0.000	0.000 SRC - Phelps A-32CHZ	1745.100	1707.420	-760.150	2829.020	105.000	2935.600	2932.050	826.410
1616.200	1616.200	1616.200	0.000	0.000 SRC - Phelps A-32CHZ	1864.260	1826.180	-752.610	2822.720	104.900	2928.860	2925.130	783.790
1716.200	1716.200	1716.200	0.000	0.000 SRC - Phelps A-32CHZ	1954.000	1915.500	-745.430	2818.030	104.800	2921.760	2917.860	749.240
1816.200	1816.200	1816.200	0.000	0.000 SRC - Phelps A-32CHZ	2040.080	2001.140	-737.640	2814.250	104.700	2915.190	2911.130	717.880
1916.200	1916.200	1916.200	0.000	0.000 SRC - Phelps A-32CHZ	2134.410	2094.940	-728.250	2810.650	104.500	2908.960	2905.110	755.040
2016.200	2016.200	2016.200	0.000	0.000 SRC - Phelps A-32CHZ	2171.960	2132.270	-724.380	2809.570	104.500	2903.770	2899.800	731.020
2116.200	2116.200	2116.200	0.000	0.000 SRC - Phelps A-32CHZ	2232.000	2192.030	-718.640	2809.020	104.300	2900.480	2896.370	705.170
2216.200	2216.200	2216.200	0.000	0.000 SRC - Phelps A-32CHZ	2263.000	2222.910	-715.900	2809.320	104.300	2899.110	2894.890	686.330
2222.910	2222.910	2222.910	0.000	0.000 SRC - Phelps A-32CHZ	2263.000	2222.910	-715.900	2809.320	104.300	2899.110	2894.870	685.440
2230.770	2230.770	2230.770	0.000	0.000 SRC - Phelps A-32CHZ	2269.340	2229.220	-715.350	2809.460	104.300	2899.110	2894.860	683.310
2263.580	2263.580	2263.580	0.000	0.000 SRC - Phelps A-32CHZ	2302.010	2261.760	-712.500	2810.210	104.200	2899.120	2894.820	673.630
2316.200	2316.200	2316.200	0.000	0.000 SRC - Phelps A-32CHZ	2318.810	2278.480	-711.000	2810.780	104.200	2899.560	2895.190	664.600
2416.200	2416.200	2416.200	0.000	0.000 SRC - Phelps A-32CHZ	2382.730	2346.070	-705.140	2813.590	104.100	2901.550	2897.040	643.650
2516.200	2516.200	2516.200	0.000	0.000 SRC - Phelps A-32CHZ	2517.660	2476.070	-690.840	2820.070	103.800	2903.730	2899.000	612.730
2616.200	2616.200	2616.200	0.000	0.000 SRC - Phelps A-32CHZ	2592.670	2550.420	-681.540	2823.600	103.600	2905.430	2900.520	591.650
2716.200	2716.200	2716.200	0.000	0.000 SRC - Phelps A-32CHZ	2675.000	2631.830	-670.250	2828.480	103.300	2908.030	2902.930	570.660
2816.200	2816.200	2816.200	0.000	0.000 SRC - Phelps A-32CHZ	2743.170	2699.050	-660.070	2833.400	103.100	2911.630	2906.370	552.910
2916.200	2916.200	2916.200	0.000	0.000 SRC - Phelps A-32CHZ	2807.800	2762.710	-650.240	2838.680	102.900	2916.250	2910.810	536.520
3016.200	3016.200	3016.200	0.000	0.000 SRC - Phelps A-32CHZ	2890.010	2843.740	-638.470	2846.060	102.600	2921.890	2916.260	519.110
3116.200	3116.200	3116.200	0.000	0.000 SRC - Phelps A-32CHZ	3027.880	2979.650	-618.490	2857.650	102.200	2927.000	2921.100	495.600
3216.200	3216.200	3216.200	0.000	0.000 SRC - Phelps A-32CHZ	3110.480	3061.070	-606.250	2864.410	102.000	2931.970	2925.870	480.210
3316.200	3316.200	3316.200	0.000	0.000 SRC - Phelps A-32CHZ	3176.330	3125.950	-596.650	2870.250	101.700	2937.770	2931.490	467.730
3416.200	3416.200	3416.200	0.000	0.000 SRC - Phelps A-32CHZ	3242.320	3190.930	-587.290	2876.910	101.500	2944.870	2938.420	456.200
3516.200	3516.200	3516.200	0.000	0.000 SRC - Phelps A-32CHZ	3409.710	3355.600	-562.050	2893.090	101.000	2951.550	2944.760	434.470
3616.200	3616.200	3616.200	0.000	0.000 SRC - Phelps A-32CHZ	3500.990	3445.270	-547.010	2901.110	100.700	2957.170	2950.150	421.330
3716.200	3716.200	3716.200	0.000	0.000 SRC - Phelps A-32CHZ	3642.000	3584.460	-527.410	2911.950	100.300	2962.260	2954.950	405.490
3816.200	3816.200	3816.200	0.000	0.000 SRC - Phelps A-32CHZ	3715.240	3657.160	-520.070	2916.870	100.100	2967.140	2959.660	396.920
3916.200	3916.200	3916.200	0.000	0.000 SRC - Phelps A-32CHZ	3780.960	3722.380	-513.790	2922.030	100.000	2973.180	2965.550	389.350
3988.500	3988.500	3988.500	0.000	0.000 SRC - Phelps A-32CHZ	3868.480	3808.930	-503.160	2929.440	99.800	2977.760	2969.940	380.890
4016.200	4016.200	4016.200	0.140	0.150 SRC - Phelps A-32CHZ	3895.790	3835.820	-499.020	2931.800	53.100	2979.310	2971.440	378.200
4116.200	4116.200	4116.200	2.940	3.090 SRC - Phelps A-32CHZ	3971.060	3909.690	-486.460	2938.840	52.800	2983.410	2975.320	369.080
4216.200	4216.660	4215.660	9.340	9.830 SRC - Phelps A-32CHZ	4051.220	3988.150	-472.280	2947.150	52.600	2985.220	2976.930	359.810
4316.200	4314.590	4314.590	19.310	20.340 SRC - Phelps A-32CHZ	4174.360	4109.050	-452.180	2959.010	52.500	2983.340	2974.750	347.380
4416.200	4412.630	4412.630	32.840	34.580 SRC - Phelps A-32CHZ	4234.670	4168.230	-442.260	2965.080	52.600	2978.800	2970.020	339.340
4516.200	4509.510	4509.510	49.880	52.530 SRC - Phelps A-32CHZ	4384.020	4314.210	-415.140	2981.150	52.800	2971.730	2962.580	324.950
4604.960	4604.960	4604.960	70.390	74.130 SRC - Phelps A-32CHZ	4452.640	4381.270	-402.180	2987.760	53.100	2960.170	2950.780	315.320
4716.200	4698.720	4698.720	94.310	99.320 SRC - Phelps A-32CHZ	4516.020	4358.700	-387.000	2992.740	173.000	2888.240	2883.420	195.530
4816.200	4790.530	4790.530	121.580	128.040 SRC - Phelps A-32CHZ	4593.830	4340.340	-369.190	2998.160	173.100	2889.140	2884.290	188.390
4916.200	4880.150	4880.150	152.120	160.200 SRC - Phelps A-32CHZ	4661.320	4315.930	-349.190	3003.160	172.700	2889.140	2884.290	188.390
4988.500	4943.430	4943.430	176.190	185.550 SRC - Phelps A-32CHZ	4734.280	4289.600	-329.190	3008.160	172.600	2889.140	2884.290	188.390
5016.200	4967.420	4967.420	185.720	195.600 SRC - Phelps A-32CHZ	4807.240	4265.270	-309.190	3013.160	172.300	2889.140	2884.290	188.390
5116.200	5054.020	5054.020	220.150	231.850 SRC - Phelps A-32CHZ	4880.200	4240.940	-289.190	3018.160	171.800	2889.140	2884.290	188.390
5216.200	5140.620	5140.620	254.580	268.110 SRC - Phelps A-32CHZ	4953.160	4216.610	-269.190	3023.160	171.300	2889.140	2884.290	188.390
5316.200	5227.320	5227.320	289.010	304.370 SRC - Phelps A-32CHZ	5026.120	4192.280	-249.190	3028.160	170.800	2889.140	2884.290	188.390
5416.200	5313.830	5313.830	323.440	340.630 SRC - Phelps A-32CHZ	5099.080	4167.950	-229.190	3033.160	170.300	2889.140	2884.290	188.390
5516.200	5400.430	5400.430	357.860	376.890 SRC - Phelps A-32CHZ	5172.040	4143.620	-209.190	3038.160	169.800	2889.140	2884.290	188.390
5616.200	5487.030	5487.030	392.290	413.150 SRC - Phelps A-32CHZ	5245.000	4119.290	-189.190	3043.160	169.300	2889.140	2884.290	188.390
5716.200	5573.640	5573.640	426.720	449.410 SRC - Phelps A-32CHZ	5317.960	4094.960	-169.190	3048.160	168.800	2889.140	2884.290	188.390
5816.200	5660.240	5660.240	461.150	485.660 SRC - Phelps A-32CHZ	5390.920	4070.630	-149.190	3053.160	168.300	2889.140	2884.290	188.390
5916.200	5746.840	5746.840	495.580	521.920 SRC - Phelps A-32CHZ	5463.880	4046.300	-129.190	3058.160	167.800	2889.140	2884.290	188.390
6016.200	5833.440	5833.440	530.010	558.180 SRC - Phelps A-32CHZ	5536.840	4021.970	-109.190	3063.160	167.300	2889.140	2884.290	188.390
6116.200	5920.050	5920.050	564.440	594.440 SRC - Phelps A-32CHZ	5609.800	3997.640	-89.190	3068.160	166.800	2889.140	2884.290	188.390
6216.200	6006.650	6006.650	598.860	630.700 SRC - Phelps A-32CHZ	5682.760	3973.310	-69.190	3073.				

11416.200	7407.000	4816.810	1217.290	SRC - Phelps A-32CHZ	9217.490	7587.850	-126.610	1284.940	159.400	4947.180	4916.230	159.830
11516.200	7407.000	4916.810	1217.300	SRC - Phelps A-32CHZ	9216.170	7587.830	-126.590	1286.270	159.000	5047.110	5016.110	162.830
11616.200	7407.000	5016.810	1217.310	SRC - Phelps A-32CHZ	9214.840	7587.810	-126.570	1287.590	158.600	5147.030	5115.990	165.820
11716.200	7407.000	5116.810	1217.310	SRC - Phelps A-32CHZ	9213.510	7587.800	-126.550	1288.920	158.300	5246.960	5215.880	168.810
11816.200	7407.000	5216.810	1217.320	SRC - Phelps A-32CHZ	9212.180	7587.780	-126.540	1290.250	157.900	5346.900	5315.770	171.780
11916.200	7407.000	5316.810	1217.330	SRC - Phelps A-32CHZ	9210.850	7587.760	-126.520	1291.580	157.600	5446.830	5415.660	174.740
12016.200	7407.000	5416.810	1217.340	SRC - Phelps A-32CHZ	9210.000	7587.750	-126.510	1292.430	157.300	5546.770	5515.550	177.690
12116.200	7407.000	5516.810	1217.350	SRC - Phelps A-32CHZ	9210.000	7587.750	-126.510	1292.430	157.300	5646.710	5615.440	180.620
12216.200	7407.000	5616.810	1217.350	SRC - Phelps A-32CHZ	9210.000	7587.750	-126.510	1292.430	157.300	5746.650	5715.340	183.530
12316.200	7407.000	5716.810	1217.360	SRC - Phelps A-32CHZ	9210.000	7587.750	-126.510	1292.430	157.300	5846.590	5815.230	186.440
12410.910	7407.000	5811.520	1217.370	SRC - Phelps A-32CHZ	9210.000	7587.750	-126.510	1292.430	157.300	5941.250	5909.840	189.180

## Offset Wellbore Survey Tool Programs

Well	SRC - Phelps A-32CHZ
Wellbore	SRC - Phelps A-32CHZ (AWB)
Survey Name	As Drilled Survey - Entered 20160505
MD[ft]	12081.200
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
16.200	16.200	16.200	0.000	0.000 SRC - Phelps A-32NHZ	53.000	16.200	-786.330	2870.420	105.300	2976.170	2975.210	
32.600	32.600	32.600	0.000	0.000 SRC - Phelps A-32NHZ	59.450	22.650	-786.340	2870.440	105.300	2976.210	2975.200	2951.370
116.200	116.200	116.200	0.000	0.000 SRC - Phelps A-32NHZ	129.000	92.200	-786.530	2870.820	105.300	2976.710	2975.590	2655.350
216.200	216.200	216.200	0.000	0.000 SRC - Phelps A-32NHZ	219.310	182.500	-786.790	2871.700	105.300	2977.730	2976.470	2362.740
316.200	316.200	316.200	0.000	0.000 SRC - Phelps A-32NHZ	319.300	282.490	-787.070	2872.800	105.300	2978.860	2977.440	2094.080
416.200	416.200	416.200	0.000	0.000 SRC - Phelps A-32NHZ	422.040	385.220	-787.300	2873.860	105.300	2979.910	2978.330	1878.280
516.200	516.200	516.200	0.000	0.000 SRC - Phelps A-32NHZ	518.290	481.460	-787.520	2874.910	105.300	2981.020	2979.280	1709.170
616.200	616.200	616.200	0.000	0.000 SRC - Phelps A-32NHZ	616.750	579.910	-787.930	2876.170	105.300	2982.370	2980.470	1567.530
716.200	716.200	716.200	0.000	0.000 SRC - Phelps A-32NHZ	779.580	742.730	-786.910	2876.330	105.300	2982.150	2980.030	1410.410
816.200	816.200	816.200	0.000	0.000 SRC - Phelps A-32NHZ	885.740	848.870	-784.770	2875.830	105.300	2981.160	2978.880	1307.250
916.200	916.200	916.200	0.000	0.000 SRC - Phelps A-32NHZ	988.040	951.130	-781.720	2875.380	105.200	2979.950	2977.510	1219.390
1016.200	1016.200	1016.200	0.000	0.000 SRC - Phelps A-32NHZ	1078.680	1041.720	-778.650	2875.280	105.200	2978.960	2976.360	1146.460
1116.200	1116.200	1116.200	0.000	0.000 SRC - Phelps A-32NHZ	1184.130	1147.090	-774.840	2875.320	105.100	2978.050	2975.280	1076.250
1216.200	1216.200	1216.200	0.000	0.000 SRC - Phelps A-32NHZ	1275.000	1237.890	-771.150	2875.350	105.000	2977.040	2974.120	1018.410
1316.200	1316.200	1316.200	0.000	0.000 SRC - Phelps A-32NHZ	1355.490	1318.320	-767.900	2875.760	105.000	2976.520	2973.450	968.530
1361.340	1361.340	1361.340	0.000	0.000 SRC - Phelps A-32NHZ	1398.000	1360.790	-766.330	2876.150	104.900	2976.490	2973.350	946.340
1416.200	1416.200	1416.200	0.000	0.000 SRC - Phelps A-32NHZ	1428.090	1390.860	-765.400	2876.660	104.900	2976.860	2973.640	926.080
1516.200	1516.200	1516.200	0.000	0.000 SRC - Phelps A-32NHZ	1460.000	1422.750	-764.640	2877.540	104.900	2978.860	2975.540	896.860
1616.200	1616.200	1616.200	0.000	0.000 SRC - Phelps A-32NHZ	1522.000	1484.680	-763.540	2880.230	104.800	2982.620	2979.160	863.390
1716.200	1716.200	1716.200	0.000	0.000 SRC - Phelps A-32NHZ	1584.110	1546.620	-761.100	2884.190	104.800	2987.740	2984.150	832.720
1816.200	1816.200	1816.200	0.000	0.000 SRC - Phelps A-32NHZ	1679.590	1641.730	-756.390	2891.080	104.700	2993.480	2989.720	796.790
1916.200	1916.200	1916.200	0.000	0.000 SRC - Phelps A-32NHZ	1745.660	1707.480	-752.830	2896.420	104.600	2999.390	2996.410	852.750
2016.200	2016.200	2016.200	0.000	0.000 SRC - Phelps A-32NHZ	1815.360	1776.760	-748.530	2902.810	104.500	3007.310	3003.650	820.210
2116.200	2116.200	2116.200	0.000	0.000 SRC - Phelps A-32NHZ	1906.400	1867.050	-741.750	2912.240	104.300	3011.530	3011.690	785.720
2216.200	2216.200	2216.200	0.000	0.000 SRC - Phelps A-32NHZ	2064.560	2024.010	-728.940	2926.820	104.000	3022.340	3018.250	739.390
2316.200	2316.200	2316.200	0.000	0.000 SRC - Phelps A-32NHZ	2157.360	2116.050	-720.580	2935.280	103.800	3029.060	3024.790	709.480
2416.200	2416.200	2416.200	0.000	0.000 SRC - Phelps A-32NHZ	2298.280	2255.830	-707.170	2946.960	103.500	3034.860	3030.350	672.790
2516.200	2516.200	2516.200	0.000	0.000 SRC - Phelps A-32NHZ	2399.600	2356.350	-697.220	2954.960	103.300	3040.300	3035.590	645.860
2616.200	2616.200	2616.200	0.000	0.000 SRC - Phelps A-32NHZ	2581.790	2537.430	-680.530	2965.780	102.900	3043.870	3038.880	609.630
2716.200	2716.200	2716.200	0.000	0.000 SRC - Phelps A-32NHZ	2664.000	2619.380	-675.040	2969.430	102.800	3046.730	3041.570	590.600
2816.200	2816.200	2816.200	0.000	0.000 SRC - Phelps A-32NHZ	2727.000	2682.150	-670.860	2972.840	102.700	3050.540	3045.240	575.350
2916.200	2916.200	2916.200	0.000	0.000 SRC - Phelps A-32NHZ	2810.810	2765.610	-665.300	2978.030	102.600	3055.150	3049.680	558.540
3016.200	3016.200	3016.200	0.000	0.000 SRC - Phelps A-32NHZ	2957.540	2911.740	-655.460	2986.890	102.400	3059.750	3054.050	536.520
3116.200	3116.200	3116.200	0.000	0.000 SRC - Phelps A-32NHZ	3034.700	2988.630	-650.330	2990.800	102.300	3063.340	3057.480	522.590
3216.200	3216.200	3216.200	0.000	0.000 SRC - Phelps A-32NHZ	3108.000	3061.680	-646.090	2995.150	102.200	3067.930	3061.920	510.060
3316.200	3316.200	3316.200	0.000	0.000 SRC - Phelps A-32NHZ	3192.670	3145.980	-640.850	3000.930	102.100	3073.310	3067.130	496.960
3416.200	3416.200	3416.200	0.000	0.000 SRC - Phelps A-32NHZ	3277.000	3229.830	-634.490	3007.280	101.900	3079.730	3072.780	484.710
3516.200	3516.200	3516.200	0.000	0.000 SRC - Phelps A-32NHZ	3332.130	3284.670	-631.060	3011.900	101.800	3086.000	3079.510	475.570
3616.200	3616.200	3616.200	0.000	0.000 SRC - Phelps A-32NHZ	3505.410	3457.200	-622.190	3025.120	101.600	3092.530	3085.780	458.590
3716.200	3716.200	3716.200	0.000	0.000 SRC - Phelps A-32NHZ	3572.670	3524.250	-619.220	3029.490	101.600	3098.070	3091.190	449.910
3816.200	3816.200	3816.200	0.000	0.000 SRC - Phelps A-32NHZ	3653.660	3604.980	-616.610	3035.390	101.500	3104.580	3097.540	440.990
3916.200	3916.200	3916.200	0.000	0.000 SRC - Phelps A-32NHZ	3735.670	3686.690	-614.030	3041.930	101.400	3111.760	3104.570	432.580
3988.500	3988.500	3988.500	0.000	0.000 SRC - Phelps A-32NHZ	3793.300	3744.070	-612.000	3046.920	101.400	3117.370	3110.060	426.710
4016.200	4016.200	4016.200	0.140	0.150 SRC - Phelps A-32NHZ	3809.920	3760.610	-611.380	3048.380	54.800	3119.460	3112.120	424.810
4116.200	4116.100	4116.100	2.940	3.090 SRC - Phelps A-32NHZ	3988.660	3938.520	-603.060	3063.280	54.600	3124.660	3117.060	411.140
4216.200	4215.660	4215.660	9.340	9.830 SRC - Phelps A-32NHZ	4080.670	4030.150	-597.610	3069.600	54.600	3124.900	3117.120	401.770
4316.200	4314.950	4314.950	19.310	20.340 SRC - Phelps A-32NHZ	4192.940	4141.810	-589.600	3078.100	54.700	3122.590	3114.610	391.140
4416.200	4412.630	4412.630	32.840	34.580 SRC - Phelps A-32NHZ	4048.200	3933.970	-530.820	-61.160	162.800	3035.660	3020.090	195.040
4516.200	4509.510	4509.510	49.880	52.530 SRC - Phelps A-32NHZ	10387.120	7394.850	-530.800	-40.090	163.900	2944.450	2928.750	187.540
4616.200	4604.960	4604.960	70.390	74.130 SRC - Phelps A-32NHZ	10362.430	7395.440	-530.780	-15.410	164.600	2855.910	2840.060	180.160
4716.200	4698.720	4698.720	94.310	99.320 SRC - Phelps A-32NHZ	10334.200	7396.360	-530.750	12.810	164.900	2770.450	2754.430	172.930
4816.200	4790.530	4790.530	121.580	128.040 SRC - Phelps A-32NHZ	10311.820	7397.160	-530.700	35.170	165.300	2688.600	2672.360	165.540
4916.200	4880.150	4880.150	152.120	160.200 SRC - Phelps A-32NHZ	10287.280	7398.080	-530.720	59.690	165.600	2610.820	2594.320	158.300
4988.500	4943.430	4943.430	176.190	185.550 SRC - Phelps A-32NHZ	10267.940	7398.830	-530.800	79.020	165.600	2557.380	2540.680	153.130
5016.200	4967.420	4967.420	185.720	195.600 SRC - Phelps A-32NHZ	10256.950	7399.290	-530.860	90.000	165.300	2537.450	2520.670	151.200
5116.200	5054.020	5054.020	220.150	231.850 SRC - Phelps A-32NHZ	10217.270	7400.960	-531.060	129.640	164.300	2466.350	2449.310	144.760
5216.200	5140.620	5140.620	254.580	268.110 SRC - Phelps A-32NHZ	10101.600	7404.420	-530.110	245.250	161.100	2396.050	2379.000	140.570
5316.200	5227.330	5227.330	289.010	304.370 SRC - Phelps A-32NHZ	10055.880	7405.300	-528.710	290.940	159.800	2326.550	2309.220	134.210
5416.200	5313.830	5313.830	323.440	340.630 SRC - Phelps A-32NHZ	10016.940	7406.010	-527.450	329.850	158.700	2258.620	2240.940	127.730
5516.200	5400.430	5400.430	357.860	376.890 SRC - Phelps A-32NHZ	9983.500	7406.630	-526.540	363.270	157.700	2192.530	2174.440	121.200
5616.200	5487.030	5487.030	392.290	413.150 SRC - Phelps A-32NHZ	9953.330	7407.230	-525.920	393.430	156.800	2128.540	2109.990	114.760
5716.200	5573.640	5573.640	426.720	449.410 SRC - Phelps A-32NHZ	9927.110	7407.870	-525.500	419.640	156.000	2066.890	2047.820	108.410
5816.200	5660.240	5660.240	461.150	485.660 SRC - Phelps A-32NHZ	9888.200	7408.820	-524.580	458.530	154.800	2007.620	1988.060	102.630
5916.200	5756.840	5756.840	495.580	521.960 SRC - Phelps A-32NHZ	9856.980	7409.610	-524.580	489.740	153.800	1951.040	1930.910	96.900
6016.200	5833.440	5833.440	530.010	558.180 SRC - Phelps A-32NHZ	9809.220	7410.700	-524.150	538.480	152.300	1897.210	1876.550	91.840
6116.200	5920.050	5920.050	564.440	594.440 SRC - Phelps A-32NHZ	9748.320	7411.180	-523.970	598.380	150.400	1827.090	1806.770	87.230
6216.200	6006.650	6006.650	598.860	630.700 SRC - Phelps A-32NHZ	9707.030	7411.250	-523.530	619.670	149.700	1778.010	1776.110	82.150
6316.200	6093.250	6093.250	633.290	666.960 SRC - Phelps A-32NHZ	9698.000	7411.470	-523.530	648.700	148.700	1753.930	1731.340	77.610
6416.200	6179.850	6179.850	667.720	703.220 SRC - Phelps A-32NHZ	9666.000	7411.930	-523.570	680.700	147.700	1713.970	1690.650	73.510
6516.200	6266.460	6266.460	702.150	739.480 SRC - Phelps A-32NHZ	9634.000	7412.650	-					

9716.200	7407.000	3116.810	1217.150 SRC - Phelps A-32NHZ	9253.260	7426.270	-528.250	1093.140	-98.800	3647.220	3616.510	118.790
9816.200	7407.000	3216.810	1217.160 SRC - Phelps A-32NHZ	9254.000	7426.240	-528.230	1092.400	-98.800	3747.160	3716.410	121.870
9916.200	7407.000	3316.810	1217.170 SRC - Phelps A-32NHZ	9254.000	7426.240	-528.230	1092.400	-98.800	3847.100	3816.320	124.960
10016.200	7407.000	3416.810	1217.180 SRC - Phelps A-32NHZ	9254.000	7426.240	-528.230	1092.400	-98.800	3947.050	3916.220	128.030
10116.200	7407.000	3516.810	1217.190 SRC - Phelps A-32NHZ	9254.000	7426.240	-528.230	1092.400	-98.800	4047.000	4016.130	131.090
10216.200	7407.000	3616.810	1217.190 SRC - Phelps A-32NHZ	9254.000	7426.240	-528.230	1092.400	-98.800	4146.960	4116.040	134.150
10316.200	7407.000	3716.810	1217.200 SRC - Phelps A-32NHZ	9254.000	7426.240	-528.230	1092.400	-98.800	4246.910	4215.950	137.190
10416.200	7407.000	3816.810	1217.210 SRC - Phelps A-32NHZ	9254.000	7426.240	-528.230	1092.400	-98.800	4346.870	4315.870	140.220
10516.200	7407.000	3916.810	1217.220 SRC - Phelps A-32NHZ	9256.070	7426.150	-528.170	1090.330	-96.600	4446.830	4415.780	143.220
10616.200	7407.000	4016.810	1217.230 SRC - Phelps A-32NHZ	9258.890	7426.040	-528.090	1087.510	-98.400	4546.780	4515.680	146.190
10716.200	7407.000	4116.810	1217.230 SRC - Phelps A-32NHZ	9261.720	7425.920	-528.010	1084.690	-98.200	4646.740	4615.590	149.150
10816.200	7407.000	4216.810	1217.240 SRC - Phelps A-32NHZ	9264.550	7425.800	-527.930	1081.860	-97.900	4746.700	4715.490	152.100
10916.200	7407.000	4316.810	1217.250 SRC - Phelps A-32NHZ	9267.370	7425.690	-527.850	1079.040	-97.700	4846.660	4815.400	155.030
11016.200	7407.000	4416.810	1217.260 SRC - Phelps A-32NHZ	9270.200	7425.570	-527.770	1076.220	-97.500	4946.620	4915.300	157.960
11116.200	7407.000	4516.810	1217.270 SRC - Phelps A-32NHZ	9273.020	7425.460	-527.690	1073.400	-97.300	5046.580	5015.210	160.870
11216.200	7407.000	4616.810	1217.270 SRC - Phelps A-32NHZ	9275.850	7425.340	-527.610	1070.580	-97.200	5146.540	5115.110	163.770
11316.200	7407.000	4716.810	1217.280 SRC - Phelps A-32NHZ	9278.670	7425.230	-527.530	1067.750	-97.000	5246.500	5215.020	166.660
11416.200	7407.000	4816.810	1217.290 SRC - Phelps A-32NHZ	9281.500	7425.110	-527.450	1064.930	-96.800	5346.460	5314.920	169.540
11516.200	7407.000	4916.810	1217.300 SRC - Phelps A-32NHZ	9284.320	7424.990	-527.370	1062.110	-96.600	5446.410	5414.820	172.410
11616.200	7407.000	5016.810	1217.310 SRC - Phelps A-32NHZ	9285.500	7424.950	-527.330	1060.940	-96.600	5546.370	5514.730	175.290
11716.200	7407.000	5116.810	1217.310 SRC - Phelps A-32NHZ	9285.500	7424.950	-527.330	1060.940	-96.600	5646.330	5614.650	178.180
11816.200	7407.000	5216.810	1217.320 SRC - Phelps A-32NHZ	9285.500	7424.950	-527.330	1060.940	-96.600	5746.300	5714.560	181.060
11916.200	7407.000	5316.810	1217.330 SRC - Phelps A-32NHZ	9285.500	7424.950	-527.330	1060.940	-96.600	5846.260	5814.480	183.930
12016.200	7407.000	5416.810	1217.340 SRC - Phelps A-32NHZ	9285.500	7424.950	-527.330	1060.940	-96.600	5946.220	5914.390	186.800
12116.200	7407.000	5516.810	1217.350 SRC - Phelps A-32NHZ	9285.500	7424.950	-527.330	1060.940	-96.600	6046.190	6014.310	189.650
12216.200	7407.000	5616.810	1217.350 SRC - Phelps A-32NHZ	9285.500	7424.950	-527.330	1060.940	-96.600	6146.160	6114.230	192.490
12316.200	7407.000	5716.810	1217.360 SRC - Phelps A-32NHZ	9285.500	7424.950	-527.330	1060.940	-96.600	6246.120	6214.150	195.320
12410.910	7407.000	5811.520	1217.370 SRC - Phelps A-32NHZ	9285.500	7424.950	-527.330	1060.940	-96.600	6340.800	6308.780	197.990

## Offset Wellbore Survey Tool Programs

Well	SRC - Phelps A-32NHZ
Wellbore	SRC - Phelps A-32NHZ (AWB)
Survey Name	As Drilled Survey - Entered 20160505
MD[ft]	11935.200
Survey Tool	WdW Rate Gyro
Error Model	Standard

All data is in Feet unless otherwise stated  
Coordinates are from Spot MDs are from Rlg and TVDs are from Rlg ( Planned Datum #1 4982.91 above Mean Sea Level )  
Vertical Section is from 0.000/0.005 on azimuth 11.830 degrees  
Prepared by Great Western Operating Co., LLC  
Date Printed: