

SYSORILL  
Closest Approach + Clearance Factor Report  
Wellbore: Dittmer KE 29-034HC (PWB)  
Wellpath: Dittmer KE 29-034HC (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 29-034HC (PWB)
Created	4-May-2016
Last Revised	4-May-2016

Well	
Name	Dittmer KE 29-034HC
Government ID	
Last Revised	4-May-2016

Slot	
Name	Slot N07 - Dittmer KE 29-034HC
Grid Northing	1248054.493
Grid Easting	3195262.073
Latitude	N40 0 43.8804
Longitude	W104 48 10.3896
North	0.000
East	89.640

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 From[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		571.980	7775.390	7775.390	543.470	7791.790	19.750	7841.000
SRC - Phelps 11-32NHZ	SRC - Phelps 11-32NHZ (AWB)	AA - SRC - Phelps 11-32NHZ	Dittmer		830.290	7582.820	7582.820	801.080	7594.940	27.990	7709.770
SRC - Phelps A-32CHZ	SRC - Phelps A-32CHZ (AWB)	AA - SRC - Phelps A-32CHZ	Dittmer		1201.200	7621.610	7621.610	1172.970	7627.750	41.970	7758.980
SRC - Phelps A-32NHZ	SRC - Phelps A-32NHZ (AWB)	AA - SRC - Phelps A-32NHZ	Dittmer		1532.420	7272.610	7272.610	1504.140	7283.260	53.470	7594.940
SRC - Phelps 12-32CHZ	SRC - Phelps 12-32CHZ (AWB)	AA - SRC - Phelps 12-32CHZ	Dittmer		1907.860	7338.960	7338.960	1879.370	7348.880	65.770	7660.560
SRC - Phelps 12-32NHZ	SRC - Phelps 12-32NHZ (AWB)	AA - SRC - Phelps 12-32NHZ	Dittmer		2150.440	7097.990	7097.990	2122.410	7102.810	74.430	7516.200

#### Reference Wellbore Survey Tool Program

Survey Name	Planned
MD[ft]	12638.400
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	2922.520	104.800	3022.700	3021.740	
98.220	98.220		0.000	0.000 SRC - Phelps 11-32CHZ	127.330	90.530	-771.600	2922.630	104.800	3022.780	3021.640	2648.220
116.200	116.200		0.000	0.000 SRC - Phelps 11-32CHZ	144.560	107.760	-771.490	2922.710	104.800	3022.830	3021.670	2604.610
216.200	216.200		0.000	0.000 SRC - Phelps 11-32CHZ	238.940	202.140	-770.720	2923.250	104.800	3023.180	3021.890	2342.470
316.200	316.200		0.000	0.000 SRC - Phelps 11-32CHZ	306.620	269.810	-770.050	2923.930	104.800	3023.990	3022.580	2141.960
416.200	416.200		0.000	0.000 SRC - Phelps 11-32CHZ	369.990	333.160	-769.630	2925.230	104.700	3025.920	3024.380	1960.040
516.200	516.200		0.000	0.000 SRC - Phelps 11-32CHZ	428.000	391.120	-768.780	2927.360	104.700	3029.210	3027.540	1811.420
616.200	616.200		0.000	0.000 SRC - Phelps 11-32CHZ	488.400	451.400	-767.210	2930.820	104.700	3034.050	3032.250	1681.200
716.200	716.200		0.000	0.000 SRC - Phelps 11-32CHZ	525.460	488.350	-766.150	2933.610	104.600	3040.550	3038.630	1585.530
816.200	816.200		0.000	0.000 SRC - Phelps 11-32CHZ	722.670	684.460	-754.210	2949.640	104.300	3047.380	3045.190	1388.850
916.200	916.200		0.000	0.000 SRC - Phelps 11-32CHZ	773.470	734.900	-749.400	2953.370	104.200	3052.360	3050.030	1309.380
1016.200	1016.200		0.000	0.000 SRC - Phelps 11-32CHZ	834.000	794.970	-744.240	2958.750	104.100	3058.930	3056.450	1233.520
1116.200	1116.200		0.000	0.000 SRC - Phelps 11-32CHZ	870.790	831.440	-741.460	2962.630	104.100	3067.250	3064.650	1178.850
1216.200	1216.200		0.000	0.000 SRC - Phelps 11-32CHZ	927.500	887.620	-737.420	2969.310	104.000	3077.110	3074.360	1120.210
1316.200	1316.200		0.000	0.000 SRC - Phelps 11-32CHZ	999.240	958.440	-731.310	2978.990	103.800	3088.230	3085.320	1059.620
1416.200	1416.200		0.000	0.000 SRC - Phelps 11-32CHZ	1254.290	1208.920	-696.470	3011.600	103.000	3098.030	3094.650	916.570
1516.200	1516.200		0.000	0.000 SRC - Phelps 11-32CHZ	1349.980	1303.230	-683.400	3021.160	102.800	3104.800	3101.200	861.660
1616.200	1616.200		0.000	0.000 SRC - Phelps 11-32CHZ	1437.060	1389.020	-671.470	3030.050	102.500	3111.870	3108.050	814.940
1716.200	1716.200		0.000	0.000 SRC - Phelps 11-32CHZ	1893.100	1831.900	-570.090	3059.250	100.600	3114.060	3109.250	646.470
1816.200	1816.200		0.000	0.000 SRC - Phelps 11-32CHZ	2000.640	1934.710	-538.590	3061.010	100.000	3110.300	3105.140	602.760
1916.200	1916.200		0.000	0.000 SRC - Phelps 11-32CHZ	2101.380	2031.000	-509.030	3062.390	99.400	3106.530	3101.420	607.960
2016.200	2016.200		0.000	0.000 SRC - Phelps 11-32CHZ	2193.230	2119.120	-483.140	3063.410	99.000	3102.990	3097.570	573.040
2116.200	2116.200		0.000	0.000 SRC - Phelps 11-32CHZ	2267.330	2190.470	-463.150	3064.350	98.600	3100.040	3094.360	546.280
2216.200	2216.200		0.000	0.000 SRC - Phelps 11-32CHZ	2326.530	2247.400	-447.000	3065.810	98.300	3098.380	3092.490	525.400
2316.200	2316.200		0.000	0.000 SRC - Phelps 11-32CHZ	2411.530	2329.150	-423.870	3068.590	97.900	3097.750	3091.570	501.160
2416.200	2416.200		0.000	0.000 SRC - Phelps 11-32CHZ	2543.830	2456.810	-389.360	3072.290	97.200	3097.130	3090.560	471.160
2516.200	2516.200		0.000	0.000 SRC - Phelps 11-32CHZ	2665.460	2573.730	-355.910	3074.010	96.600	3095.080	3088.130	445.290
2616.200	2616.200		0.000	0.000 SRC - Phelps 11-32CHZ	2746.600	2651.290	-332.110	3075.520	96.200	3093.600	3086.360	427.650
2716.200	2716.200		0.000	0.000 SRC - Phelps 11-32CHZ	2823.660	2725.250	-310.570	3077.260	95.800	3092.910	3085.400	412.050
2816.200	2816.200		0.000	0.000 SRC - Phelps 11-32CHZ	2940.030	2837.210	-278.950	3079.900	95.200	3092.580	3084.710	392.820
2916.200	2916.200		0.000	0.000 SRC - Phelps 11-32CHZ	3104.600	2994.740	-231.400	3081.210	94.300	3090.890	3082.520	369.430
3016.200	3016.200		0.000	0.000 SRC - Phelps 11-32CHZ	3179.400	3066.210	-209.310	3081.330	93.900	3088.830	3080.190	357.280
3116.200	3116.200		0.000	0.000 SRC - Phelps 11-32CHZ	3241.990	3125.840	-190.310	3082.130	93.500	3088.020	3079.130	347.380
3198.610	3198.610		0.000	0.000 SRC - Phelps 11-32CHZ	3318.280	3198.610	-167.420	3083.340	93.100	3087.890	3078.730	337.210
3216.200	3216.200		0.000	0.000 SRC - Phelps 11-32CHZ	3335.080	3214.650	-162.450	3083.610	93.000	3087.890	3078.680	335.110
3316.200	3316.200		0.000	0.000 SRC - Phelps 11-32CHZ	3441.160	3316.250	-131.980	3085.130	92.500	3087.950	3078.380	322.880
3316.860	3316.860		0.000	0.000 SRC - Phelps 11-32CHZ	3441.800	3316.860	-131.810	3085.130	92.500	3087.950	3078.380	322.880
3329.850	3329.850		0.000	0.000 SRC - Phelps 11-32CHZ	3454.260	3328.820	-128.310	3085.280	92.400	3087.950	3078.340	321.410
3416.200	3416.200		0.000	0.000 SRC - Phelps 11-32CHZ	3518.330	3390.330	-110.380	3086.270	92.000	3088.350	3078.510	313.910
3516.200	3516.200		0.000	0.000 SRC - Phelps 11-32CHZ	3560.670	3430.900	-98.370	3087.530	91.800	3090.270	3080.250	308.300
3616.200	3616.200		0.000	0.000 SRC - Phelps 11-32CHZ	3629.520	3496.760	-78.510	3090.510	91.500	3093.810	3083.530	301.100
3716.200	3716.200		0.000	0.000 SRC - Phelps 11-32CHZ	3820.060	3678.890	-22.770	3095.340	90.400	3095.650	3084.800	285.320
3782.000	3782.000		0.000	0.000 SRC - Phelps 11-32CHZ	3879.680	3735.620	-4.470	3096.180	90.100	3096.530	3085.480	280.020
3816.200	3816.200		0.180	0.240 SRC - Phelps 11-32CHZ	3912.270	3766.640	5.550	3096.660	36.900	3096.820	3085.650	277.180
3916.200	3916.090		2.840	3.760 SRC - Phelps 11-32CHZ	3985.130	3836.080	27.530	3098.030	36.000	3098.400	3083.960	270.500
4016.200	4015.610		8.640	11.450 SRC - Phelps 11-32CHZ	4076.770	3923.650	54.480	3100.130	36.300	3090.390	3079.630	262.760
4116.200	4114.500		17.570	23.280 SRC - Phelps 11-32CHZ	4172.280	4015.220	81.520	3102.510	36.100	3081.490	3078.410	255.070
4216.200	4212.470		29.610	39.230 SRC - Phelps 11-32CHZ	4273.590	4112.990	107.890	3105.060	36.000	3068.450	3056.040	247.300
4316.200	4309.260		44.720	59.240 SRC - Phelps 11-32CHZ	4364.000	4200.580	130.200	3107.240	36.200	3051.130	3038.430	240.150
4416.200	4404.610		62.860	83.270 SRC - Phelps 11-32CHZ	4425.640	4260.210	145.670	3109.310	36.500	3030.610	3017.660	233.920
4516.200	4498.250		83.980	111.260 SRC - Phelps 11-32CHZ	4459.250	4292.570	154.600	3110.960	36.900	3007.580	2994.430	228.740
4616.200	4589.930		108.020	143.110 SRC - Phelps 11-32CHZ	4631.380	4457.080	204.430	3119.790	37.200	2981.200	2967.480	217.280
4716.200	4679.390		134.930	178.750 SRC - Phelps 11-32CHZ	4897.200	4756.820	250.700	3126.970	37.600	2927.130	2912.010	193.620
4782.130	4737.040		154.190	204.280 SRC - Phelps 11-32CHZ	5077.000	4976.840	291.000	3131.170	37.900	2867.440	2852.330	189.840
4816.200	4766.550		164.450	217.880 SRC - Phelps 11-32CHZ	5047.000	4976.840	291.000	3131.170	37.900	2867.440	2852.330	189.840
4916.200	4853.150		194.580	257.790 SRC - Phelps 11-32CHZ	5144.500	5077.130	301.000	3131.170	37.900	2867.440	2852.330	189.840
5016.200	4939.750		224.710	297.700 SRC - Phelps 11-32CHZ	5144.500	5077.130	301.000	3131.170	37.900	2867.440	2852.330	189.840
5116.200	5026.340		254.830	337.610 SRC - Phelps 11-32CHZ	5144.500	5077.130	301.000	3131.170	37.900	2867.440	2852.330	189.840
5216.200	5112.940		284.960	377.520 SRC - Phelps 11-32CHZ	5144.500	5077.130	301.000	3131.170	37.900	2867.440	2852.330	189.840
5316.200	5199.540		315.090	417.440 SRC - Phelps 11-32CHZ	5144.500	5077.130	301.000	3131.170	37.900	2867.440	2852.330	189.840
5416.200	5286.140		345.210	457.350 SRC - Phelps 11-32CHZ	5144.500	5077.130	301.000	3131.170	37.900	2867.440	2852.330	189.840

5516.200	5372.740	375.340	497.260	SRC - Phelps 11-32CHZ	10221.770	7581.640	549.550	444.340	-170.800	2216.390	2201.530	149.110
5610.030	5454.000	403.610	534.710	SRC - Phelps 11-32CHZ	10147.020	7583.150	548.110	519.060	-172.900	2134.110	2119.330	144.340
5616.200	5459.340	405.460	537.170	SRC - Phelps 11-32CHZ	10108.070	7583.150	547.400	558.000	-174.100	2128.650	2113.920	144.560
5716.200	5545.940	435.590	577.090	SRC - Phelps 11-32CHZ	10050.080	7582.210	546.770	615.980	-176.000	2039.670	2024.990	138.950
5816.200	5632.540	465.720	617.000	SRC - Phelps 11-32CHZ	10014.270	7581.550	546.690	651.780	-177.300	1951.000	1936.330	132.930
5916.200	5719.140	495.840	656.910	SRC - Phelps 11-32CHZ	9981.190	7581.010	546.890	684.860	-178.400	1862.780	1848.090	126.790
6016.200	5805.740	525.970	696.820	SRC - Phelps 11-32CHZ	9946.190	7580.530	547.230	719.850	-179.800	1775.070	1760.350	120.620
6116.200	5892.340	556.100	736.730	SRC - Phelps 11-32CHZ	9910.150	7580.100	547.340	755.890	-178.700	1687.900	1673.140	114.380
6216.200	5978.940	586.220	776.650	SRC - Phelps 11-32CHZ	9880.740	7579.910	547.060	785.290	-177.400	1601.480	1586.640	107.940
6316.200	6065.540	616.350	816.560	SRC - Phelps 11-32CHZ	9857.310	7579.940	546.540	808.720	-176.300	1516.030	1501.060	101.280
6416.200	6152.130	646.470	856.470	SRC - Phelps 11-32CHZ	9827.660	7580.150	545.670	836.350	-174.900	1431.680	1416.550	94.630
6516.200	6238.730	676.600	896.380	SRC - Phelps 11-32CHZ	9787.800	7580.570	544.430	878.190	-172.800	1348.450	1333.140	88.080
6616.200	6325.330	706.730	936.300	SRC - Phelps 11-32CHZ	9741.300	7581.030	543.280	924.670	-170.300	1266.350	1250.820	81.560
6716.200	6411.930	736.850	976.210	SRC - Phelps 11-32CHZ	9696.090	7581.290	542.650	969.880	-167.700	1185.390	1169.580	74.940
6816.200	6498.530	766.980	1016.120	SRC - Phelps 11-32CHZ	9646.520	7581.380	542.600	1019.450	-164.600	1105.850	1089.670	68.360
6916.200	6585.130	797.100	1056.030	SRC - Phelps 11-32CHZ	9602.360	7581.270	543.080	1063.600	-161.700	1028.050	1011.370	61.660
7016.200	6671.730	827.230	1095.940	SRC - Phelps 11-32CHZ	9558.380	7580.980	543.750	1107.570	-158.600	952.490	935.170	55.010
7116.200	6758.330	857.360	1135.860	SRC - Phelps 11-32CHZ	9517.180	7580.630	544.370	1148.770	-155.500	879.950	861.790	48.470
7216.200	6844.930	887.480	1175.770	SRC - Phelps 11-32CHZ	9477.910	7580.190	544.820	1188.040	-152.400	811.280	792.050	42.200
7316.200	6931.530	917.610	1215.680	SRC - Phelps 11-32CHZ	9443.940	7579.890	545.120	1222.000	-149.700	747.770	727.190	36.330
7416.200	7018.130	947.740	1255.590	SRC - Phelps 11-32CHZ	9413.430	7579.990	545.230	1252.510	-147.100	691.090	668.870	31.100
7516.200	7104.730	977.860	1295.510	SRC - Phelps 11-32CHZ	9377.770	7580.290	545.230	1288.170	-144.000	642.950	618.930	26.760
7616.200	7191.330	1007.990	1335.420	SRC - Phelps 11-32CHZ	9337.930	7581.030	545.250	1326.650	-140.400	605.030	591.150	23.380
7716.200	7277.920	1038.110	1375.330	SRC - Phelps 11-32CHZ	9296.110	7581.810	545.260	1369.820	-136.600	579.040	551.420	20.970
7732.810	7292.310	1043.120	1381.960	SRC - Phelps 11-32CHZ	9289.210	7581.930	545.260	1376.710	-136.000	576.000	548.120	20.660
7775.390	7328.560	1057.880	1398.670	SRC - Phelps 11-32CHZ	9269.450	7582.290	545.260	1396.470	-141.300	571.980	543.490	20.080
7816.200	7361.940	1075.590	1414.050	SRC - Phelps 11-32CHZ	9253.570	7582.500	545.300	1412.350	-145.400	574.330	545.310	19.790
7841.000	7381.450	1087.990	1423.040	SRC - Phelps 11-32CHZ	9244.290	7582.630	545.320	1421.630	-147.400	578.750	549.450	19.750
7916.200	7436.290	1132.650	1448.320	SRC - Phelps 11-32CHZ	9213.560	7583.020	545.590	1452.350	-151.300	605.130	575.260	20.260
8016.200	7497.080	1206.650	1476.330	SRC - Phelps 11-32CHZ	9179.840	7583.350	546.090	1486.070	-153.900	666.250	636.050	22.060
8116.200	7541.190	1293.820	1496.650	SRC - Phelps 11-32CHZ	9155.300	7583.450	546.550	1510.870	-154.300	748.600	718.340	24.740
8216.200	7566.360	1389.680	1508.250	SRC - Phelps 11-32CHZ	9138.360	7583.470	546.890	1527.540	-151.300	843.180	812.930	27.870
8290.280	7572.000	1463.390	1510.840	SRC - Phelps 11-32CHZ	9134.110	7583.450	546.990	1531.790	-118.700	916.710	886.440	30.280
8316.200	7572.000	1489.330	1510.840	SRC - Phelps 11-32CHZ	9133.520	7583.450	547.000	1532.380	-118.100	942.650	912.360	31.130
8416.200	7572.000	1589.330	1510.840	SRC - Phelps 11-32CHZ	9131.250	7583.440	547.050	1534.650	-115.700	1012.300	978.130	34.380
8516.200	7572.000	1689.330	1510.830	SRC - Phelps 11-32CHZ	9128.970	7583.440	547.110	1536.930	-113.700	1142.580	1112.240	37.650
8616.200	7572.000	1789.330	1510.820	SRC - Phelps 11-32CHZ	9126.700	7583.430	547.160	1539.200	-112.000	1242.550	1212.170	40.900
8716.200	7572.000	1889.330	1510.820	SRC - Phelps 11-32CHZ	9124.420	7583.420	547.210	1541.470	-110.500	1342.520	1312.110	44.140
8816.200	7572.000	1989.330	1510.810	SRC - Phelps 11-32CHZ	9122.150	7583.410	547.260	1543.750	-109.200	1442.490	1412.050	47.380
8916.200	7572.000	2089.330	1510.810	SRC - Phelps 11-32CHZ	9119.870	7583.400	547.310	1546.020	-108.000	1542.460	1511.980	50.600
9016.200	7572.000	2189.330	1510.800	SRC - Phelps 11-32CHZ	9117.600	7583.400	547.370	1548.290	-107.000	1642.440	1611.920	53.820
9116.200	7572.000	2289.330	1510.790	SRC - Phelps 11-32CHZ	9115.330	7583.390	547.420	1550.570	-106.000	1742.410	1711.860	57.030
9216.200	7572.000	2389.330	1510.790	SRC - Phelps 11-32CHZ	9113.050	7583.380	547.470	1552.840	-105.200	1842.380	1811.790	60.240
9316.200	7572.000	2489.330	1510.780	SRC - Phelps 11-32CHZ	9110.780	7583.370	547.520	1555.120	-104.400	1942.350	1911.730	63.430
9416.200	7572.000	2589.330	1510.780	SRC - Phelps 11-32CHZ	9108.500	7583.360	547.570	1557.390	-103.700	2042.320	2011.670	66.620
9516.200	7572.000	2689.330	1510.770	SRC - Phelps 11-32CHZ	9106.230	7583.360	547.620	1559.660	-103.100	2142.300	2111.610	69.800
9616.200	7572.000	2789.330	1510.760	SRC - Phelps 11-32CHZ	9103.950	7583.350	547.680	1561.940	-102.500	2242.270	2211.540	72.980
9716.200	7572.000	2889.330	1510.760	SRC - Phelps 11-32CHZ	9101.680	7583.340	547.730	1564.210	-102.000	2342.240	2311.480	76.140
9816.200	7572.000	2989.330	1510.750	SRC - Phelps 11-32CHZ	9099.400	7583.330	547.780	1566.490	-101.500	2442.220	2411.420	79.300
9916.200	7572.000	3089.330	1510.750	SRC - Phelps 11-32CHZ	9097.130	7583.320	547.830	1568.760	-101.100	2542.190	2511.360	82.450
10016.200	7572.000	3189.330	1510.740	SRC - Phelps 11-32CHZ	9094.860	7583.320	547.880	1571.030	-100.700	2642.160	2611.290	85.590
10116.200	7572.000	3289.330	1510.730	SRC - Phelps 11-32CHZ	9092.580	7583.310	547.940	1573.310	-100.300	2742.140	2711.230	88.730
10216.200	7572.000	3389.330	1510.730	SRC - Phelps 11-32CHZ	9090.310	7583.300	547.990	1575.580	-99.900	2842.110	2811.170	91.850
10316.200	7572.000	3489.330	1510.720	SRC - Phelps 11-32CHZ	9088.030	7583.290	548.040	1577.850	-99.600	2942.080	2911.100	94.970
10416.200	7572.000	3589.330	1510.720	SRC - Phelps 11-32CHZ	9085.760	7583.280	548.090	1580.120	-99.300	3042.050	3011.070	98.170
10516.200	7572.000	3689.330	1510.710	SRC - Phelps 11-32CHZ	9083.490	7583.170	548.140	1582.390	-99.000	3142.020	3110.990	101.280
10616.200	7572.000	3789.330	1510.700	SRC - Phelps 11-32CHZ	9081.220	7583.140	548.190	1584.660	-98.700	3242.000	3210.920	104.380
10716.200	7572.000	3889.330	1510.700	SRC - Phelps 11-32CHZ	9078.950	7583.110	548.240	1586.930	-98.400	3341.970	3310.850	107.470
10816.200	7572.000	3989.330	1510.690	SRC - Phelps 11-32CHZ	9076.680	7583.080	548.290	1589.200	-98.100	3441.940	3410.770	110.550
10916.200	7572.000	4089.330	1510.680	SRC - Phelps 11-32CHZ	9074.410	7583.050	548.340	1591.470	-97.800	3541.910	3510.700	113.630
11016.200	7572.000	4189.330	1510.680	SRC - Phelps 11-32CHZ	9072.140	7583.020	548.390	1593.740	-97.500	3641.880	3610.620	116.690
11116.200	7572.000	4289.330	1510.670	SRC - Phelps 11-32CHZ	9069.870	7582.990	548.440	1596.010	-97.200	3741.850	3710.570	119.860
11216.200	7572.000	4389.330	1510.670	SRC - Phelps 11-32CHZ	9067.600	7582.960	548.490	1598.280	-96.900	3841.820	3810.490	122.910
11316.200	7572.000	4489.330	1510.660	SRC - Phelps 11-32CHZ	9065.330	7582.930	548.540	1600.550	-96.600	3941.790	3910.400	125.960
11416.200	7572.000	4589.330	1510.650	SRC - Phelps 11-32CHZ	9063.060	7582.900	548.590	1602.820	-96.300	4041.760	4010.320	129.000
11516.200	7572.000	4689.330	1510.650	SRC - Phelps 11-32CHZ	9060.790	7582.870	548.640	1605.090	-96.000	4141.730	4110.230	132.030
11616.200	7572.000	4789.330	1510.640	SRC - Phelps 11-32CHZ	9058.520	7582.840	548.690	1607.360	-95.700	4241.700	4210.140	135.060
11716.200	7572.000	4889.330	1510.640	SRC - Phelps 11-32CHZ	9056.250	7582.810	548.740	1609.630	-95.400	4341.670	4310.060	138.070
11816.200	7572.000	4989.330	1510.630	SRC - Phelps 11-32CHZ	9053.980	7582.780	548.790	1611.900	-95.100	4441.640	4410.000	141.080
11916.200	7572.000	5089.330	1510.620	SRC - Phelps 11-32CHZ	9051.710	7582.750	548.840	1614.170	-94.800	4541.610	4510.000	144.060
12016.200	7572.000	5189.330	1510.620	SRC - Phelps 11-32CHZ	9049.440	7582.720	548.890	1616.440	-94.500	4641.580	4610.000	147.030
12116.200	7572.000	5289.330	1510.610	SRC - Phelps 11-32CHZ	9047.170	7582.690						

3316.200	3316.200	0.000	0.000	SRC - Phelps 11-32NHZ	3309.270	3217.570	-231.400	3028.220	94.400	3038.650	3029.980	350.570
3416.200	3416.200	0.000	0.000	SRC - Phelps 11-32NHZ	3403.960	3310.520	-123.870	3032.650	94.000	3042.020	3033.100	341.020
3516.200	3516.200	0.000	0.000	SRC - Phelps 11-32NHZ	3503.230	3408.120	-196.400	3037.370	93.700	3045.630	3036.460	331.970
3616.200	3616.200	0.000	0.000	SRC - Phelps 11-32NHZ	3617.940	3521.030	-176.670	3042.230	93.300	3048.850	3039.390	322.580
3716.200	3716.200	0.000	0.000	SRC - Phelps 11-32NHZ	3701.410	3603.200	-162.480	3045.830	93.000	3052.250	3042.580	315.580
3782.000	3782.000	0.000	0.000	SRC - Phelps 11-32NHZ	3756.850	3657.790	-153.230	3048.450	92.900	3054.820	3045.000	311.220
3816.200	3816.200	0.180	0.240	SRC - Phelps 11-32NHZ	3787.400	3687.890	-148.180	3049.930	39.800	3055.980	3046.090	308.910
3916.200	3916.090	2.840	3.760	SRC - Phelps 11-32NHZ	3880.980	3780.180	-133.450	3054.580	39.600	3056.890	3046.760	301.970
4016.200	4015.610	8.640	11.450	SRC - Phelps 11-32NHZ	3973.020	3871.020	-119.410	3059.400	39.500	3054.070	3043.720	295.140
4116.200	4114.500	315.270	23.280	SRC - Phelps 11-32NHZ	4063.570	3960.340	-105.390	3064.410	39.500	3047.520	3036.950	288.150
4216.200	4212.470	29.610	39.230	SRC - Phelps 11-32NHZ	4183.210	4078.300	-86.480	3070.930	39.600	3036.890	3026.030	278.720
4316.200	4309.260	44.720	59.240	SRC - Phelps 11-32NHZ	4289.700	4183.460	-70.550	3076.040	39.900	3021.620	3010.500	271.750
4416.200	4404.610	62.860	83.270	SRC - Phelps 11-32NHZ	4391.550	4284.130	-55.800	3080.730	40.400	3002.220	2990.840	263.750
4516.200	4498.250	83.980	111.260	SRC - Phelps 11-32NHZ	4380.750	438.070	212.550	34.590	-172.200	2943.630	2929.030	201.570
4616.200	4589.930	108.020	143.110	SRC - Phelps 11-32NHZ	4028.450	7439.050	210.400	176.860	-176.900	2851.160	2836.770	198.110
4716.200	4679.390	134.930	178.750	SRC - Phelps 11-32NHZ	10211.290	7438.810	209.980	204.010	-177.900	2760.560	2746.160	191.730
4782.130	4737.040	154.190	204.280	SRC - Phelps 11-32NHZ	10187.210	7438.600	209.800	228.090	-178.700	2702.240	2687.830	187.590
4816.200	4766.550	164.450	217.880	SRC - Phelps 11-32NHZ	10155.730	7438.200	209.860	259.560	-179.500	2672.360	2657.990	185.880
4916.200	4853.150	194.580	257.790	SRC - Phelps 11-32NHZ	10089.740	7436.780	209.820	325.530	178.700	2584.560	2570.260	180.750
5016.200	4939.750	224.710	297.700	SRC - Phelps 11-32NHZ	10063.500	7436.100	209.630	351.770	177.900	2496.990	2482.660	174.240
5116.200	5026.340	254.830	337.610	SRC - Phelps 11-32NHZ	10048.000	7435.850	209.380	367.270	177.400	2410.110	2395.710	167.380
5216.200	5112.940	284.960	377.520	SRC - Phelps 11-32NHZ	10031.080	7435.790	209.060	384.190	176.900	2324.090	2309.610	160.480
5316.200	5199.540	315.270	417.440	SRC - Phelps 11-32NHZ	10016.120	7435.730	208.770	399.280	176.400	2239.110	2224.200	153.430
5416.200	5286.140	345.210	457.350	SRC - Phelps 11-32NHZ	9985.000	7436.060	208.070	430.250	175.400	2154.460	2139.770	146.730
5516.200	5372.740	375.340	497.260	SRC - Phelps 11-32NHZ	9944.930	7436.600	207.410	470.300	174.100	2070.860	2056.080	140.180
5616.200	5459.340	405.460	537.170	SRC - Phelps 11-32NHZ	9867.850	7437.000	207.230	547.380	171.400	1987.590	1972.820	134.530
5716.200	5545.940	435.590	577.090	SRC - Phelps 11-32NHZ	9827.000	7436.710	207.360	588.230	169.900	1904.530	1889.620	127.780
5816.200	5632.540	465.720	617.000	SRC - Phelps 11-32NHZ	9796.640	7436.630	206.990	618.590	168.700	1822.550	1807.440	120.660
5916.200	5719.140	495.840	656.910	SRC - Phelps 11-32NHZ	9745.390	7436.500	207.170	669.840	166.600	1741.510	1726.230	114.040
6016.200	5805.740	525.970	696.820	SRC - Phelps 11-32NHZ	9693.250	7436.320	209.390	721.930	164.500	1661.220	1645.760	107.440
6116.200	5892.340	556.100	736.730	SRC - Phelps 11-32NHZ	9657.970	7436.240	211.520	757.140	163.000	1582.020	1566.250	100.350
6216.200	5978.940	586.220	776.650	SRC - Phelps 11-32NHZ	9638.000	7436.350	212.570	777.080	162.100	1504.550	1488.350	92.840
6316.200	6065.540	616.350	816.560	SRC - Phelps 11-32NHZ	9607.000	7436.730	213.660	808.060	160.700	1429.130	1412.450	85.700
6416.200	6152.130	646.470	856.470	SRC - Phelps 11-32NHZ	9575.000	7437.230	214.330	840.050	159.200	1355.910	1338.680	78.690
6516.200	6238.730	676.600	896.380	SRC - Phelps 11-32NHZ	9528.660	7438.000	214.980	889.380	156.800	1285.980	1267.280	72.170
6616.200	6325.330	706.730	936.300	SRC - Phelps 11-32NHZ	9485.620	7438.500	215.450	929.410	154.600	1216.770	1198.270	65.760
6716.200	6411.930	736.850	976.210	SRC - Phelps 11-32NHZ	9423.820	7438.710	216.310	991.200	151.300	1151.290	1132.100	59.980
6816.200	6498.530	766.980	1016.120	SRC - Phelps 11-32NHZ	9380.000	7438.420	217.000	1028.010	149.200	1089.040	1068.880	54.030
6916.200	6585.130	797.100	1056.030	SRC - Phelps 11-32NHZ	9335.340	7438.470	217.280	1059.670	147.400	1031.700	1010.430	48.500
7016.200	6671.730	827.230	1095.940	SRC - Phelps 11-32NHZ	9303.210	7438.590	217.840	1104.800	144.700	979.550	957.140	43.710
7116.200	6758.330	857.360	1135.860	SRC - Phelps 11-32NHZ	9277.590	7438.550	218.080	1137.420	142.800	933.480	909.760	39.350
7216.200	6844.930	887.480	1175.770	SRC - Phelps 11-32NHZ	9255.890	7438.690	217.860	1159.110	141.400	895.110	869.950	35.570
7316.200	6931.530	917.610	1215.680	SRC - Phelps 11-32NHZ	9217.390	7439.100	217.230	1197.610	139.100	865.150	838.690	32.690
7416.200	7018.130	947.740	1255.590	SRC - Phelps 11-32NHZ	9175.190	7439.400	216.440	1239.800	136.400	844.100	816.460	30.530
7516.200	7104.730	977.860	1295.510	SRC - Phelps 11-32NHZ	9129.350	7439.190	215.570	1285.630	133.500	832.500	803.860	29.070
7582.820	7162.420	997.930	1322.100	SRC - Phelps 11-32NHZ	9101.580	7438.790	215.040	1313.390	131.700	830.290	801.090	28.440
7616.200	7191.330	1007.990	1335.420	SRC - Phelps 11-32NHZ	9089.030	7438.530	214.810	1325.940	130.900	830.860	801.420	28.220
7709.770	7272.360	1036.180	1372.760	SRC - Phelps 11-32NHZ	9053.110	7437.730	214.160	1361.840	128.600	838.600	808.600	27.990
7716.200	7277.920	1038.110	1375.330	SRC - Phelps 11-32NHZ	9050.720	7437.670	214.110	1364.230	128.500	839.420	809.430	28.000
7732.810	7292.310	1043.120	1381.960	SRC - Phelps 11-32NHZ	9044.540	7437.520	214.000	1370.410	128.100	841.820	811.770	28.020
7816.200	7361.940	1075.590	1414.050	SRC - Phelps 11-32NHZ	9007.330	7437.000	213.510	1407.610	138.600	865.370	835.170	28.660
7916.200	7436.290	1132.650	1448.320	SRC - Phelps 11-32NHZ	8974.550	7437.260	213.280	1440.380	145.800	919.400	889.170	30.410
8016.200	7497.080	1206.650	1476.330	SRC - Phelps 11-32NHZ	8945.460	7437.770	213.030	1469.470	148.400	995.420	965.260	33.010
8116.200	7541.190	1293.820	1496.650	SRC - Phelps 11-32NHZ	8925.190	7438.050	212.870	1489.730	147.000	1085.880	1055.800	36.100
8216.200	7566.360	1389.680	1508.250	SRC - Phelps 11-32NHZ	8912.030	7438.210	212.780	1502.900	123.600	1183.870	1153.810	39.380
8290.260	7572.000	1463.390	1510.840	SRC - Phelps 11-32NHZ	8909.780	7438.220	212.770	1505.140	-2.500	1257.770	1227.680	41.800
8316.200	7572.000	1489.330	1510.840	SRC - Phelps 11-32NHZ	8909.920	7438.220	212.770	1505.010	-2.500	1283.570	1253.460	42.630
8416.200	7572.000	1589.330	1510.840	SRC - Phelps 11-32NHZ	8910.430	7438.220	212.770	1504.490	-2.800	1383.060	1352.900	45.850
8516.200	7572.000	1689.330	1510.830	SRC - Phelps 11-32NHZ	8910.950	7438.210	212.770	1503.980	-3.000	1482.630	1452.410	49.060
8616.200	7572.000	1789.330	1510.820	SRC - Phelps 11-32NHZ	8911.470	7438.210	212.780	1503.460	-3.200	1582.240	1551.970	52.270
8716.200	7572.000	1889.330	1510.820	SRC - Phelps 11-32NHZ	8911.990	7438.210	212.780	1502.940	-3.400	1681.900	1651.590	55.480
8816.200	7572.000	1989.330	1510.810	SRC - Phelps 11-32NHZ	8912.500	7438.200	212.780	1502.420	-3.600	1781.600	1751.240	58.670
8916.200	7572.000	2089.330	1510.810	SRC - Phelps 11-32NHZ	8913.020	7438.200	212.780	1501.900	-3.900	1881.340	1850.920	61.860
9016.200	7572.000	2189.330	1510.800	SRC - Phelps 11-32NHZ	8917.550	7438.160	212.810	1497.380	-5.800	1981.090	1950.620	65.000
9116.200	7572.000	2289.330	1510.790	SRC - Phelps 11-32NHZ	8918.330	7438.140	212.820	1496.600	-6.100	2080.870	2050.360	68.200
9216.200	7572.000	2389.330	1510.790	SRC - Phelps 11-32NHZ	8919.110	7438.130	212.830	1495.820	-6.400	2180.670	2150.120	71.360
9316.200	7572.000	2489.330	1510.780	SRC - Phelps 11-32NHZ	8919.880	7438.120	212.830	1495.040	-6.800	2280.490	2249.890	74.530
9416.200	7572.000	2589.330	1510.780	SRC - Phelps 11-32NHZ	8920.660	7438.110	212.840	1494.260	-7.100	2380.320	2349.680	77.680
9516.200	7572.000	2689.330	1510.770	SRC - Phelps 11-32NHZ	8921.440	7438.100	212.840	1493.480	-7.400	2480.170	2449.480	80.830
9616.200	7572.000	2789.330	1510.760	SRC - Phelps 11-32NHZ	8922.220	7438.090	212.850	1492.700	-7.800	2580.030	2549.300	83.970
9716.200	7572.000	2889.330	1510.760	SRC - Phelps 11-32NHZ	8923.000	7438.080	212.860	1491.920	-8.100	2679.890	2649.120	87.100
9816.200	7572.000	2989.330	1510.750	SRC - Phelps 11-32NHZ	8923.780	7438.070	212.860	1491.140	-8.400	2779.770	2748.960	90.220
9916.200	7572.000	3089.330	1510.750	SRC - Phelps								

1516.200	1516.200	0.000	0.000	SRC - Phelps 12-32CHZ	1322.700	1283.730	-794.920	2954.160	105.100	3068.060	3064.860	957.860
1616.200	1616.200	0.000	0.000	SRC - Phelps 12-32CHZ	1415.630	1376.380	-795.490	2961.370	105.000	3075.710	3072.350	915.300
1716.200	1716.200	0.000	0.000	SRC - Phelps 12-32CHZ	1507.140	1467.600	-797.230	2968.530	105.000	3083.750	3080.240	877.060
1816.200	1816.200	0.000	0.000	SRC - Phelps 12-32CHZ	1615.220	1575.340	-799.160	2976.770	105.000	3091.580	3087.890	838.870
1916.200	1916.200	0.000	0.000	SRC - Phelps 12-32CHZ	1707.000	1666.830	-800.590	2983.950	105.000	3099.530	3096.070	895.680
2016.200	2016.200	0.000	0.000	SRC - Phelps 12-32CHZ	1800.290	1759.800	-801.760	2991.570	105.000	3107.740	3104.120	858.800
2116.200	2116.200	0.000	0.000	SRC - Phelps 12-32CHZ	1901.420	1860.580	-803.130	2999.840	105.000	3115.990	3112.210	823.690
2216.200	2216.200	0.000	0.000	SRC - Phelps 12-32CHZ	2001.750	1960.580	-805.450	3007.730	105.000	3124.180	3120.240	791.660
2316.200	2316.200	0.000	0.000	SRC - Phelps 12-32CHZ	2128.410	2088.820	-808.260	3017.510	105.000	3132.290	3128.160	758.110
2416.200	2416.200	0.000	0.000	SRC - Phelps 12-32CHZ	2283.260	2241.330	-812.660	3028.710	105.000	3143.780	3134.440	723.270
2516.200	2516.200	0.000	0.000	SRC - Phelps 12-32CHZ	2379.740	2337.650	-815.200	3031.650	105.100	3144.410	3139.910	698.880
2616.200	2616.200	0.000	0.000	SRC - Phelps 12-32CHZ	2453.240	2410.990	-817.230	3035.980	105.100	3150.740	3146.100	679.170
2716.200	2716.200	0.000	0.000	SRC - Phelps 12-32CHZ	2577.430	2534.950	-819.930	3043.110	105.100	3156.850	3152.030	654.730
2816.200	2816.200	0.000	0.000	SRC - Phelps 12-32CHZ	2656.030	2613.410	-821.460	3047.530	105.100	3162.810	3157.840	636.800
2916.200	2916.200	0.000	0.000	SRC - Phelps 12-32CHZ	2745.610	2702.790	-823.710	3053.030	105.100	3169.400	3164.270	618.950
3016.200	3016.200	0.000	0.000	SRC - Phelps 12-32CHZ	2834.480	2791.450	-826.120	3058.640	105.100	3176.200	3170.930	602.250
3116.200	3116.200	0.000	0.000	SRC - Phelps 12-32CHZ	2901.670	2858.450	-828.050	3063.340	105.100	3183.740	3178.330	588.530
3216.200	3216.200	0.000	0.000	SRC - Phelps 12-32CHZ	2973.830	2930.330	-830.390	3069.210	105.100	3192.390	3186.840	575.260
3316.200	3316.200	0.000	0.000	SRC - Phelps 12-32CHZ	3076.630	3032.690	-834.630	3077.730	105.200	3201.470	3195.750	560.140
3416.200	3416.200	0.000	0.000	SRC - Phelps 12-32CHZ	3230.630	3186.190	-840.410	3088.630	105.200	3209.180	3203.260	541.610
3516.200	3516.200	0.000	0.000	SRC - Phelps 12-32CHZ	3308.890	3264.220	-842.720	3094.150	105.200	3216.740	3210.670	529.940
3616.200	3616.200	0.000	0.000	SRC - Phelps 12-32CHZ	3392.670	3347.710	-845.210	3100.620	105.300	3224.960	3218.740	518.480
3716.200	3716.200	0.000	0.000	SRC - Phelps 12-32CHZ	3498.160	3442.860	-848.980	3108.160	105.300	3233.330	3226.950	506.840
3782.000	3782.000	0.000	0.000	SRC - Phelps 12-32CHZ	3557.770	3512.220	-848.980	3113.930	105.300	3238.440	3232.350	499.060
3816.200	3816.200	0.180	0.240	SRC - Phelps 12-32CHZ	3598.110	3552.420	-849.230	3117.300	52.200	3241.870	3234.920	494.810
3916.200	3916.090	2.840	3.760	SRC - Phelps 12-32CHZ	3727.880	3681.780	-850.540	3127.460	52.200	3246.640	3239.900	481.790
4016.200	4015.610	8.640	11.450	SRC - Phelps 12-32CHZ	3878.250	3831.840	-852.220	3136.930	52.300	3247.080	3240.130	467.580
4116.200	4114.500	17.570	23.280	SRC - Phelps 12-32CHZ	4044.880	3998.280	-852.640	3145.010	52.800	3242.840	3235.670	452.600
4216.200	4212.470	29.610	39.230	SRC - Phelps 12-32CHZ	4174.750	4128.070	-852.670	3149.170	53.300	3233.780	3226.410	439.290
4316.200	4309.260	44.720	59.240	SRC - Phelps 12-32CHZ	4351.690	4304.970	-854.720	3151.580	54.300	3220.490	3212.890	423.490
4416.200	4404.610	62.860	83.270	SRC - Phelps 12-32CHZ	4504.670	4457.940	-854.700	3150.090	55.500	3201.580	3193.730	408.220
4516.200	4498.250	83.980	111.260	SRC - Phelps 12-32CHZ	4590.980	4544.230	-853.400	3149.120	56.500	3179.530	3171.480	394.960
4616.200	4589.930	108.020	143.110	SRC - Phelps 12-32CHZ	4679.510	4632.750	-852.400	3148.180	57.700	3155.100	3146.810	380.730
4716.200	4679.390	134.930	178.750	SRC - Phelps 12-32CHZ	4699.600	4659.210	-861.370	3147.690	58.000	3085.270	3068.470	183.550
4782.130	4737.040	154.190	204.280	SRC - Phelps 12-32CHZ	4672.720	4629.270	-861.990	3174.560	58.200	3037.420	3020.460	179.140
4816.200	4766.550	164.450	217.880	SRC - Phelps 12-32CHZ	4259.320	4215.930	-862.310	3179.960	57.900	3013.240	2996.200	176.830
4916.200	4853.150	194.580	257.790	SRC - Phelps 12-32CHZ	4024.110	3979.330	-863.460	323.150	56.900	2943.060	2925.810	170.620
5016.200	4939.750	224.710	297.700	SRC - Phelps 12-32CHZ	3878.250	3831.840	-852.220	3136.930	52.300	3247.080	3240.130	467.580
5116.200	5026.340	254.830	337.610	SRC - Phelps 12-32CHZ	4044.880	3998.280	-852.640	3145.010	52.800	3242.840	3235.670	452.600
5216.200	5112.940	284.960	377.620	SRC - Phelps 12-32CHZ	4174.750	4128.070	-852.670	3149.170	53.300	3233.780	3226.410	439.290
5316.200	5199.540	315.090	417.440	SRC - Phelps 12-32CHZ	4351.690	4304.970	-854.720	3151.580	54.300	3220.490	3212.890	423.490
5416.200	5286.140	345.210	457.350	SRC - Phelps 12-32CHZ	4504.670	4457.940	-854.700	3150.090	55.500	3201.580	3193.730	408.220
5516.200	5372.740	375.340	497.260	SRC - Phelps 12-32CHZ	4679.510	4632.750	-852.400	3148.180	57.700	3155.100	3146.810	380.730
5616.200	5459.340	405.460	537.170	SRC - Phelps 12-32CHZ	4699.600	4659.210	-861.370	3147.690	58.000	3085.270	3068.470	183.550
5716.200	5545.940	435.590	577.090	SRC - Phelps 12-32CHZ	4672.720	4629.270	-861.990	3174.560	58.200	3037.420	3020.460	179.140
5816.200	5632.540	465.720	617.000	SRC - Phelps 12-32CHZ	4259.320	4215.930	-862.310	3179.960	57.900	3013.240	2996.200	176.830
5916.200	5719.140	495.840	656.910	SRC - Phelps 12-32CHZ	4024.110	3979.330	-863.460	323.150	56.900	2943.060	2925.810	170.620
6016.200	5805.740	525.970	696.820	SRC - Phelps 12-32CHZ	3878.250	3831.840	-852.220	3136.930	52.300	3247.080	3240.130	467.580
6116.200	5892.340	556.100	736.730	SRC - Phelps 12-32CHZ	4044.880	3998.280	-852.640	3145.010	52.800	3242.840	3235.670	452.600
6216.200	5978.940	586.220	776.650	SRC - Phelps 12-32CHZ	4174.750	4128.070	-852.670	3149.170	53.300	3233.780	3226.410	439.290
6316.200	6065.540	616.350	816.560	SRC - Phelps 12-32CHZ	4351.690	4304.970	-854.720	3151.580	54.300	3220.490	3212.890	423.490
6416.200	6152.130	646.470	856.470	SRC - Phelps 12-32CHZ	4504.670	4457.940	-854.700	3150.090	55.500	3201.580	3193.730	408.220
6516.200	6238.730	676.600	896.380	SRC - Phelps 12-32CHZ	4679.510	4632.750	-852.400	3148.180	57.700	3155.100	3146.810	380.730
6616.200	6325.330	706.730	936.300	SRC - Phelps 12-32CHZ	4699.600	4659.210	-861.370	3147.690	58.000	3085.270	3068.470	183.550
6716.200	6411.930	736.850	976.210	SRC - Phelps 12-32CHZ	4672.720	4629.270	-861.990	3174.560	58.200	3037.420	3020.460	179.140
6816.200	6498.530	766.980	1016.120	SRC - Phelps 12-32CHZ	4259.320	4215.930	-862.310	3179.960	57.900	3013.240	2996.200	176.830
6916.200	6585.130	797.100	1056.030	SRC - Phelps 12-32CHZ	4024.110	3979.330	-863.460	323.150	56.900	2943.060	2925.810	170.620
7016.200	6671.730	827.230	1095.940	SRC - Phelps 12-32CHZ	3878.250	3831.840	-852.220	3136.930	52.300	3247.080	3240.130	467.580
7116.200	6758.330	857.360	1135.860	SRC - Phelps 12-32CHZ	4044.880	3998.280	-852.640	3145.010	52.800	3242.840	3235.670	452.600
7216.200	6844.930	887.480	1175.770	SRC - Phelps 12-32CHZ	4174.750	4128.070	-852.670	3149.170	53.300	3233.780	3226.410	439.290
7316.200	6931.530	917.610	1215.680	SRC - Phelps 12-32CHZ	4351.690	4304.970	-854.720	3151.580	54.300	3220.490	3212.890	423.490
7338.960	6951.230	924.460	1224.760	SRC - Phelps 12-32CHZ	4504.670	4457.940	-854.700	3150.090	55.500	3201.580	3193.730	408.220
7348.880	6959.830	927.450	1228.720	SRC - Phelps 12-32CHZ	4679.510	4632.750	-852.400	3148.180	57.700	3155.100	3146.810	380.730
7416.200	7018.130	947.740	1255.590	SRC - Phelps 12-32CHZ	4699.600	4659.210	-861.370	3147.690	58.000	3085.270	3068.470	183.550
7516.200	7104.730	977.860	1295.510	SRC - Phelps 12-32CHZ	4672.720	4629.270	-861.990	3174.560	58.200	3037.420	3020.460	179.140
7611.340	7187.120	1006.520	1333.480	SRC - Phelps 12-32CHZ	4259.320	4215.930	-862.310	3179.960	57.900	3013.240	2996.200	176.830
7616.200	7191.330	1007.990	1335.420	SRC - Phelps 12-32CHZ	4024.110	3979.330	-863.460	323.150	56.900	2943.060	2925.810	170.620
7660.560	7229.740	1021.350	1353.120	SRC - Phelps 12-32CHZ	3878.250	3831.840	-852.220	3136.930	52.300	3247.080	3240.130	467.580
7716.200	7277.920	1038.110	1375.330	SRC - Phelps 12-32CHZ	4044.880	3998.280	-852.640	3145.010	52.800	3242.840	3235.670	452.600
7732.810	7292.310	1043.120	1381.960	SRC - Phelps 12-32CHZ	4174.750	4128.070	-852.670	3149.170	53.300	3233.780	3226.410	439.290
7816.200	7361.940	1075.590	1414.050	SRC - Phelps 12-32CHZ	4351.690	4304.970	-854.720	3151.580	54.300	3220.490	3212.890	423.490
7916.200	7436.290	1123.650	1448.320	SRC - Phelps 12-32CHZ	4504.670	4457.940	-854.700	3150.090	55.500	3201.580	3193.730	408.220
8016.200	7497.080	1206.650	1476.330	SRC - Phelps 12-32CHZ	4679.510	4						

## 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 12-32NHZ	54.620	17.820	-781.230	2878.540	105.200	2982.670	2981.700	3074.590
	57.200	57.200	0.000	0.000 SRC - Phelps 12-32NHZ	94.000	57.200	-781.290	2878.500	105.200	2982.650	2981.600	2845.720
	116.200	116.200	0.000	0.000 SRC - Phelps 12-32NHZ	150.440	113.640	-781.450	2878.510	105.200	2982.700	2981.560	2622.040
	180.240	180.240	0.000	0.000 SRC - Phelps 12-32NHZ	214.480	177.680	-781.630	2878.510	105.200	2982.750	2981.520	2418.820
	216.200	216.200	0.000	0.000 SRC - Phelps 12-32NHZ	243.650	206.850	-781.690	2878.580	105.200	2982.840	2981.550	2314.790
	316.200	316.200	0.000	0.000 SRC - Phelps 12-32NHZ	343.650	306.840	-781.850	2878.860	105.200	2982.150	2981.690	2043.530
	416.200	416.200	0.000	0.000 SRC - Phelps 12-32NHZ	443.650	406.840	-782.010	2878.140	105.200	2983.470	2981.860	1857.330
	516.200	516.200	0.000	0.000 SRC - Phelps 12-32NHZ	540.260	503.460	-781.960	2879.550	105.200	2983.860	2982.100	1693.900
	616.200	616.200	0.000	0.000 SRC - Phelps 12-32NHZ	630.050	593.240	-781.930	2880.080	105.200	2984.420	2982.510	1559.850
	716.200	716.200	0.000	0.000 SRC - Phelps 12-32NHZ	714.400	677.590	-782.550	2880.890	105.200	2985.530	2983.470	1449.290
	816.200	816.200	0.000	0.000 SRC - Phelps 12-32NHZ	788.600	751.770	-784.190	2881.880	105.200	2987.360	2985.160	1356.400
	916.200	916.200	0.000	0.000 SRC - Phelps 12-32NHZ	864.000	827.100	-787.050	2883.120	105.300	2989.940	2987.600	1275.830
	1016.200	1016.200	0.000	0.000 SRC - Phelps 12-32NHZ	937.590	900.570	-790.960	2884.590	105.300	2993.300	2990.820	1204.040
	1116.200	1116.200	0.000	0.000 SRC - Phelps 12-32NHZ	1027.760	990.500	-797.060	2886.720	105.400	2997.370	2994.730	1133.190
	1216.200	1216.200	0.000	0.000 SRC - Phelps 12-32NHZ	1107.440	1069.920	-803.110	2888.720	105.500	3001.850	2999.060	1074.220
	1316.200	1316.200	0.000	0.000 SRC - Phelps 12-32NHZ	1197.350	1159.500	-810.410	2891.410	105.700	3006.920	3003.960	1016.160
	1416.200	1416.200	0.000	0.000 SRC - Phelps 12-32NHZ	1310.910	1272.710	-818.390	2895.120	105.800	3011.990	3008.850	958.530
	1516.200	1516.200	0.000	0.000 SRC - Phelps 12-32NHZ	1431.150	1392.730	-824.840	2898.610	105.900	3016.220	3012.890	906.250
	1616.200	1616.200	0.000	0.000 SRC - Phelps 12-32NHZ	1487.420	1448.810	-826.980	2900.940	105.900	3021.130	3016.680	874.120
	1716.200	1716.200	0.000	0.000 SRC - Phelps 12-32NHZ	1554.170	1515.480	-830.610	2904.170	106.000	3027.280	3023.680	841.870
	1816.200	1816.200	0.000	0.000 SRC - Phelps 12-32NHZ	1621.140	1582.160	-835.740	2907.620	106.000	3034.380	3030.650	811.590
	1916.200	1916.200	0.000	0.000 SRC - Phelps 12-32NHZ	1712.800	1673.260	-844.560	2912.570	106.200	3042.260	3038.730	862.210
	2016.200	2016.200	0.000	0.000 SRC - Phelps 12-32NHZ	1812.670	1772.510	-854.260	2918.030	106.300	3050.250	3046.540	822.640
	2116.200	2116.200	0.000	0.000 SRC - Phelps 12-32NHZ	1914.600	1873.820	-863.880	2923.670	106.500	3058.250	3054.360	786.400
	2216.200	2216.200	0.000	0.000 SRC - Phelps 12-32NHZ	2018.870	1977.540	-872.860	2929.530	106.600	3066.100	3062.030	753.130
	2316.200	2316.200	0.000	0.000 SRC - Phelps 12-32NHZ	2125.330	2083.540	-880.620	2935.700	106.700	3073.750	3069.500	723.070
	2416.200	2416.200	0.000	0.000 SRC - Phelps 12-32NHZ	2262.890	2220.640	-888.840	2943.250	106.800	3080.740	3076.290	691.500
	2516.200	2516.200	0.000	0.000 SRC - Phelps 12-32NHZ	2332.580	2290.120	-892.970	2946.730	106.900	3087.350	3082.750	671.370
	2616.200	2616.200	0.000	0.000 SRC - Phelps 12-32NHZ	2403.900	2361.130	-898.000	2951.020	106.900	3095.160	3090.420	652.610
	2716.200	2716.200	0.000	0.000 SRC - Phelps 12-32NHZ	2503.610	2460.360	-905.290	2957.580	107.000	3103.590	3098.680	631.350
	2816.200	2816.200	0.000	0.000 SRC - Phelps 12-32NHZ	2635.460	2591.700	-913.640	2965.650	107.100	3111.300	3106.180	608.210
	2916.200	2916.200	0.000	0.000 SRC - Phelps 12-32NHZ	2719.500	2675.450	-918.620	2970.440	107.200	3118.540	3113.270	591.600
	3016.200	3016.200	0.000	0.000 SRC - Phelps 12-32NHZ	2805.010	2760.600	-924.480	2975.650	107.300	3126.420	3120.990	575.890
	3116.200	3116.200	0.000	0.000 SRC - Phelps 12-32NHZ	2895.370	2850.520	-931.290	2981.420	107.300	3134.760	3129.170	560.460
	3216.200	3216.200	0.000	0.000 SRC - Phelps 12-32NHZ	2986.660	2941.310	-938.710	2987.360	107.400	3143.410	3137.650	545.640
	3316.200	3316.200	0.000	0.000 SRC - Phelps 12-32NHZ	3082.580	3036.680	-946.880	2993.630	107.600	3152.220	3146.290	531.270
	3416.200	3416.200	0.000	0.000 SRC - Phelps 12-32NHZ	3178.460	3132.000	-954.950	3000.100	107.700	3161.220	3155.110	517.750
	3516.200	3516.200	0.000	0.000 SRC - Phelps 12-32NHZ	3289.560	3242.460	-964.300	3007.420	107.800	3170.070	3163.780	503.740
	3616.200	3616.200	0.000	0.000 SRC - Phelps 12-32NHZ	3389.010	3341.360	-972.510	3013.790	107.900	3178.710	3172.250	491.390
	3716.200	3716.200	0.000	0.000 SRC - Phelps 12-32NHZ	3494.350	3446.130	-981.340	3020.390	108.000	3187.270	3180.620	479.190
	3782.000	3782.000	0.000	0.000 SRC - Phelps 12-32NHZ	3556.990	3508.400	-986.940	3024.160	108.100	3192.870	3186.110	471.950
	3816.200	3816.200	0.180	0.240 SRC - Phelps 12-32NHZ	3590.980	3542.180	-990.060	3026.190	55.100	3195.630	3188.800	468.090
	3916.200	3916.090	2.840	3.760 SRC - Phelps 12-32NHZ	3680.940	3631.570	-998.560	3031.760	55.100	3201.950	3194.960	457.730
	4016.200	4015.610	6.640	11.450 SRC - Phelps 12-32NHZ	3793.920	3743.870	-1008.850	3038.710	55.300	3207.260	3198.030	445.960
	4116.200	4114.500	17.570	23.280 SRC - Phelps 12-32NHZ	3892.140	3841.520	-1017.610	3044.530	55.700	3205.320	3197.950	435.130
	4216.200	4212.470	29.610	39.230 SRC - Phelps 12-32NHZ	3965.090	3914.020	-1024.380	3048.910	56.000	3202.840	3195.310	425.550
	4316.200	4309.260	44.720	59.240 SRC - Phelps 12-32NHZ	4053.710	4002.040	-1032.940	3054.760	56.600	3198.260	3190.540	414.690
	4416.200	4404.610	62.860	83.270 SRC - Phelps 12-32NHZ	4158.050	4105.720	-1042.010	3061.980	57.300	3191.040	3183.110	402.470
	4516.200	4498.250	83.980	111.260 SRC - Phelps 12-32NHZ	4270.940	4217.940	-1052.020	3069.240	58.300	3181.000	3172.820	389.170
	4616.200	4589.930	108.020	143.110 SRC - Phelps 12-32NHZ	4108.890	4444.560	-1169.760	156.660	151.500	3127.590	3109.830	176.090
	4716.200	4679.390	134.930	178.750 SRC - Phelps 12-32NHZ	10170.680	7444.590	-1169.580	174.870	152.500	3057.460	3039.390	169.220
	4782.130	4737.040	154.190	204.280 SRC - Phelps 12-32NHZ	10158.050	7444.600	-1169.610	187.500	153.000	3013.910	2995.610	164.770
	4816.200	4766.550	164.450	217.880 SRC - Phelps 12-32NHZ	10139.150	7444.600	-1169.840	206.400	152.600	2992.060	2973.680	162.830
	4916.200	4853.150	194.580	257.790 SRC - Phelps 12-32NHZ	10082.000	7444.360	-1170.280	263.550	151.400	2928.690	2910.100	157.470
	5016.200	4939.750	224.710	297.700 SRC - Phelps 12-32NHZ	10066.500	7444.230	-1170.480	279.040	151.100	2866.940	2847.950	150.960
	5116.200	5028.340	254.830	337.610 SRC - Phelps 12-32NHZ	10051.000	7444.140	-1171.030	294.530	150.700	2807.260	2787.850	144.640
	5216.200	5112.940	284.960	377.520 SRC - Phelps 12-32NHZ	10043.100	7444.110	-1171.490	302.420	150.500	2749.770	2729.890	138.360
	5316.200	5199.540	315.090	417.440 SRC - Phelps 12-32NHZ	10035.500	7444.080	-1171.930	310.010	150.400	2694.570	2674.200	132.330
	5416.200	5286.140	345.210	457.350 SRC - Phelps 12-32NHZ	10020.000	7444.060	-1173.170	325.460	150.000	2641.870	2621.020	126.700
	5516.200	5372.740	375.340	497.260 SRC - Phelps 12-32NHZ	10004.500	7444.030	-1174.670	340.880	149.700	2591.760	2570.400	121.340
	5616.200	5459.340	405.460	537.170 SRC - Phelps 12-32NHZ	9978.130	7443.860	-1177.670	367.080	149.100	2544.320	2522.460	116.400
	5716.200	5545.940	435.590	577.090 SRC - Phelps 12-32NHZ	9950.730	7443.680	-1180.870	394.290	148.400	2499.550	2477.180	111.730
	5816.200	5632.540	465.720	617.000 SRC - Phelps 12-32NHZ	9910.790	7443.510	-1185.510	433.960	147.500	2457.570	2434.710	107.490
	5916.200	5719.140	495.840	656.910 SRC - Phelps 12-32NHZ	9864.520	7443.350	-1190.590	479.960	146.400	2418.320	2394.980	103.590
	6016.200	5805.740	525.970	696.820 SRC - Phelps 12-32NHZ	9517.000	7443.550	-1192.210	826.730	138.300	2377.270	2354.550	104.620
	6116.200	5892.340	556.100	736.730 SRC - Phelps 12-32NHZ	9476.800	7443.690	-1189.080	866.800	137.300	2338.650	2315.440	100.800
	6216.200	5978.940	586.220	776.650 SRC - Phelps 12-32NHZ	9445.520	7443.720	-1186.780	898.000	136.600	2303.010	2279.290	97.080
	6316.200	6065.540	616.350	816.560 SRC - Phelps 12-32NHZ	9416.310	7443.740	-1184.820	927.140	135.900	2270.660	2246.400	93.620
	6416.200	6152.130	646.470	856.470 SRC - Phelps 12-32NHZ	9394.240	7443.740	-1182.600	949.180	135.400	2240.680	2217.060	90.340
	6516.200	6238.730	676.600	896.380 SRC - Phelps 12-32NHZ	9375.500	7443.740	-1182.840	967.900	134.900	2216.900	2191.520	87.340
	6616.200	6325.330	706.730	936.300 SRC - Phelps 12-32NHZ	9360.000	7443.740	-1182.440	983.400	134.600	2195.900	2169.950	84.630
	6716.200	6411.930	736.850	976.210 SRC - Phelps 12-32NHZ	9344.000	7443.760	-1182.230	999.400	134.200	2179.010	2152.520	82.250
	6816.200	6498.530	766.980	1016.120 SRC - Phelps 12-32NHZ	9331.840	7443						

11816.200	7572.000	4989.330	1510.630	SRC - Phelps 12-32NHZ	9097.350	7443.560	-1184.260	1245.970	-64.100	6180.600	6149.120	196.370
11916.200	7572.000	5089.330	1510.620	SRC - Phelps 12-32NHZ	9101.620	7443.600	-1184.070	1241.700	-64.500	6280.480	6248.960	199.220
12016.200	7572.000	5189.330	1510.620	SRC - Phelps 12-32NHZ	9111.010	7443.680	-1183.670	1232.320	-65.300	6380.370	6348.780	201.980
12116.200	7572.000	5289.330	1510.610	SRC - Phelps 12-32NHZ	9115.370	7443.700	-1183.480	1227.970	-65.600	6480.250	6448.610	204.790
12216.200	7572.000	5389.330	1510.610	SRC - Phelps 12-32NHZ	9119.720	7443.730	-1183.290	1223.620	-66.000	6580.140	6548.440	207.600
12316.200	7572.000	5489.330	1510.600	SRC - Phelps 12-32NHZ	9124.080	7443.760	-1183.100	1219.270	-66.300	6680.030	6648.270	210.390
12416.200	7572.000	5589.330	1510.590	SRC - Phelps 12-32NHZ	9128.430	7443.780	-1182.910	1214.910	-66.600	6779.910	6748.110	213.170
12516.200	7572.000	5689.330	1510.590	SRC - Phelps 12-32NHZ	9132.790	7443.810	-1182.720	1210.560	-66.900	6879.800	6847.940	215.940
12616.200	7572.000	5789.330	1510.580	SRC - Phelps 12-32NHZ	9137.150	7443.840	-1182.530	1206.210	-67.200	6979.690	6947.770	218.700
12638.400	7572.000	5811.530	1510.580	SRC - Phelps 12-32NHZ	9138.110	7443.840	-1182.490	1205.240	-67.300	7001.860	6969.920	219.250

## Offset Wellbore Survey Tool Programs

Well	SRC - Phelps 12-32NHZ
Wellbore	SRC - Phelps 12-32NHZ (AWB)
Survey Name	As Drilled Survey - Entered 20160505
MD(ft)	11948.200
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		0.000	0.000 SRC - Phelps A-32CHZ	53.000	16.200	-791.070	2834.560	105.600	2942.880	2941.910	
32.600	32.600		0.000	0.000 SRC - Phelps A-32CHZ	59.950	23.150	-791.040	2834.590	105.600	2942.920	2941.910	2913.100
116.200	116.200		0.000	0.000 SRC - Phelps A-32CHZ	118.860	82.040	-790.180	2835.380	105.600	2943.630	2942.520	2646.610
216.200	216.200		0.000	0.000 SRC - Phelps A-32CHZ	234.170	197.330	-788.280	2837.040	105.500	2944.580	2943.300	2303.090
316.200	316.200		0.000	0.000 SRC - Phelps A-32CHZ	349.020	312.170	-787.290	2837.860	105.500	2945.050	2943.600	2033.240
416.200	416.200		0.000	0.000 SRC - Phelps A-32CHZ	453.550	416.700	-787.130	2837.980	105.500	2945.110	2943.500	1826.000
516.200	516.200		0.000	0.000 SRC - Phelps A-32CHZ	567.910	531.060	-786.870	2837.700	105.500	2944.810	2943.030	1649.540
616.200	616.200		0.000	0.000 SRC - Phelps A-32CHZ	691.710	654.850	-785.800	2836.800	105.500	2943.880	2941.910	1498.000
716.200	716.200		0.000	0.000 SRC - Phelps A-32CHZ	794.110	757.240	-784.470	2835.650	105.500	2942.450	2940.320	1382.040
816.200	816.200		0.000	0.000 SRC - Phelps A-32CHZ	885.700	848.810	-783.080	2834.840	105.400	2941.190	2938.900	1287.990
916.200	916.200		0.000	0.000 SRC - Phelps A-32CHZ	970.600	933.700	-782.100	2834.460	105.400	2940.430	2938.000	1209.380
1016.200	1016.200		0.000	0.000 SRC - Phelps A-32CHZ	1082.350	1045.450	-780.910	2833.890	105.400	2939.670	2937.060	1129.400
1116.200	1116.200		0.000	0.000 SRC - Phelps A-32CHZ	1197.050	1160.120	-778.950	2833.020	105.400	2938.480	2935.710	1058.220
1216.200	1216.200		0.000	0.000 SRC - Phelps A-32CHZ	1341.450	1304.460	-775.970	2830.000	105.300	2935.780	2932.800	986.580
1316.200	1316.200		0.000	0.000 SRC - Phelps A-32CHZ	1448.680	1411.630	-773.970	2827.140	105.300	2932.730	2929.580	933.350
1416.200	1416.200		0.000	0.000 SRC - Phelps A-32CHZ	1636.230	1598.850	-765.750	2820.020	105.200	2927.840	2924.460	866.520
1516.200	1516.200		0.000	0.000 SRC - Phelps A-32CHZ	1744.310	1706.640	-760.190	2814.220	105.100	2921.300	2917.750	822.540
1616.200	1616.200		0.000	0.000 SRC - Phelps A-32CHZ	1863.460	1825.380	-752.670	2807.910	105.000	2914.560	2910.820	780.120
1716.200	1716.200		0.000	0.000 SRC - Phelps A-32CHZ	1954.000	1915.500	-745.430	2803.190	104.900	2907.450	2903.550	745.590
1816.200	1816.200		0.000	0.000 SRC - Phelps A-32CHZ	2039.480	2000.550	-737.700	2799.430	104.800	2900.860	2896.800	714.480
1916.200	1916.200		0.000	0.000 SRC - Phelps A-32CHZ	2133.870	2094.400	-728.310	2795.830	104.600	2894.620	2890.770	751.450
2016.200	2016.200		0.000	0.000 SRC - Phelps A-32CHZ	2171.730	2132.040	-724.410	2794.730	104.500	2889.410	2885.440	727.480
2116.200	2116.200		0.000	0.000 SRC - Phelps A-32CHZ	2232.000	2192.030	-718.640	2794.170	104.400	2886.100	2881.990	701.700
2216.200	2216.200		0.000	0.000 SRC - Phelps A-32CHZ	2263.000	2222.910	-715.900	2794.470	104.400	2884.730	2880.500	682.950
2222.910	2222.910		0.000	0.000 SRC - Phelps A-32CHZ	2263.000	2222.910	-715.900	2794.470	104.400	2884.720	2880.490	682.060
2230.770	2230.770		0.000	0.000 SRC - Phelps A-32CHZ	2269.680	2229.560	-715.320	2794.620	104.400	2884.720	2880.480	679.890
2263.580	2263.580		0.000	0.000 SRC - Phelps A-32CHZ	2302.350	2262.100	-712.480	2795.370	104.300	2884.740	2880.430	670.260
2316.200	2316.200		0.000	0.000 SRC - Phelps A-32CHZ	2319.340	2279.010	-710.950	2795.950	104.300	2885.170	2880.800	661.240
2416.200	2416.200		0.000	0.000 SRC - Phelps A-32CHZ	2383.470	2342.800	-705.070	2798.770	104.100	2887.150	2882.650	640.370
2516.200	2516.200		0.000	0.000 SRC - Phelps A-32CHZ	2518.300	2476.720	-690.770	2805.250	103.800	2889.320	2884.580	609.610
2616.200	2616.200		0.000	0.000 SRC - Phelps A-32CHZ	2592.670	2550.420	-681.540	2808.750	103.600	2891.000	2886.090	588.730
2716.200	2716.200		0.000	0.000 SRC - Phelps A-32CHZ	2675.000	2631.830	-670.250	2813.630	103.400	2893.590	2888.500	567.850
2816.200	2816.200		0.000	0.000 SRC - Phelps A-32CHZ	2744.300	2700.170	-659.900	2818.640	103.200	2897.190	2891.920	550.030
2916.200	2916.200		0.000	0.000 SRC - Phelps A-32CHZ	2809.090	2763.980	-650.050	2823.950	103.000	2901.800	2896.360	533.700
3016.200	3016.200		0.000	0.000 SRC - Phelps A-32CHZ	2891.360	2845.070	-638.280	2831.340	102.700	2907.430	2901.800	516.370
3116.200	3116.200		0.000	0.000 SRC - Phelps A-32CHZ	3029.050	2980.810	-618.320	2842.900	102.300	2912.510	2906.600	493.010
3216.200	3216.200		0.000	0.000 SRC - Phelps A-32CHZ	3111.740	3062.300	-606.070	2849.670	102.000	2917.470	2911.360	477.700
3316.200	3316.200		0.000	0.000 SRC - Phelps A-32CHZ	3176.330	3125.950	-596.650	2855.400	101.800	2923.270	2916.990	456.390
3416.200	3416.200		0.000	0.000 SRC - Phelps A-32CHZ	3243.890	3192.480	-587.070	2862.230	101.600	2930.370	2923.910	435.800
3516.200	3516.200		0.000	0.000 SRC - Phelps A-32CHZ	3410.990	3356.860	-561.840	2878.350	101.000	2937.000	2930.210	432.200
3616.200	3616.200		0.000	0.000 SRC - Phelps A-32CHZ	3502.310	3446.570	-546.790	2886.380	100.700	2942.610	2935.590	419.130
3716.200	3716.200		0.000	0.000 SRC - Phelps A-32CHZ	3642.000	3584.460	-527.410	2897.100	100.300	2947.660	2940.360	403.490
3782.000	3782.000		0.000	0.000 SRC - Phelps A-32CHZ	3684.330	3626.490	-523.100	2899.810	100.200	2950.720	2943.310	398.200
3816.200	3816.200	0.180	0.240	SRC - Phelps A-32CHZ	3716.340	3658.250	-519.970	2902.100	47.200	2952.340	2944.860	394.860
3916.200	3916.090	2.840	3.760	SRC - Phelps A-32CHZ	3782.690	3724.090	-513.610	2907.330	47.000	2955.380	2947.750	386.870
4016.200	4015.610	8.640	11.450	SRC - Phelps A-32CHZ	3896.000	3836.020	-498.990	2916.980	46.900	2955.000	2947.120	375.000
4116.200	4114.500	17.570	23.280	SRC - Phelps A-32CHZ	3975.390	3913.940	-485.720	2924.420	46.800	2951.290	2943.190	364.450
4216.200	4212.470	29.610	39.230	SRC - Phelps A-32CHZ	4056.320	3993.140	-471.380	2932.840	46.900	2944.840	2936.520	353.850
4316.200	4309.260	44.720	59.240	SRC - Phelps A-32CHZ	4178.180	4112.810	-451.580	2944.520	47.100	2943.230	2935.610	340.100
4416.200	4404.610	62.860	83.270	SRC - Phelps A-32CHZ	4234.670	4168.230	-442.260	2950.230	47.500	2920.700	2911.860	330.620
4516.200	4498.250	83.980	111.260	SRC - Phelps A-32CHZ	4386.260	4316.410	-414.730	2965.510	48.100	2904.180	2894.940	314.460
4616.200	4589.930	108.020	143.110	SRC - Phelps A-32CHZ	4454.400	4382.980	-401.830	2973.100	48.700	2882.990	2873.470	302.970
4716.200	4679.390	134.930	178.750	SRC - Phelps A-32CHZ	4523.140	4449.860	-387.960	2980.830	49.400	2859.670	2849.850	291.090
4782.130	4737.040	154.190	204.280	SRC - Phelps A-32CHZ	4648.090	4571.410	-362.360	2994.350	50.200	2842.310	2832.110	278.520
4816.200	4766.550	164.450	217.880	SRC - Phelps A-32CHZ	4684.600	4607.030	-355.160	2997.750	50.400	2832.520	2822.170	273.690
4916.200	4853.150	194.580	257.790	SRC - Phelps A-32CHZ	10289.000	7590.640	-117.900	199.000	172.300	2755.900	2740.970	184.580
5016.200	4939.750	224.710	297.700	SRC - Phelps A-32CHZ	10247.850	7591.690	-116.740	204.120	171.200	2674.450	2659.440	178.110
5116.200	5026.340	254.830	337.610	SRC - Phelps A-32CHZ	10206.020	7592.730	-115.690	281.920	170.200	2693.600	2578.480	171.600
5216.200	5112.940	284.960	377.520	SRC - Phelps A-32CHZ	10147.660	7593.980	-114.870	340.270	168.600	2513.330	2498.150	165.580
5316.200	5199.540	315.090	417.440	SRC - Phelps A-32CHZ	10088.770	7594.880	-114.310	399.140	167.000	2433.590	2418.330	159.490
5416.200	5286.140	345.210	457.350	SRC - Phelps A-32CHZ	10108.970	7595.100	-114.010	468.940	164.900	2354.210	2338.890	153.660
5516.200	5372.740	375.340	497.260	SRC - Phelps A-32CHZ	9962.790	7594.380	-114.380	525.110	163.200	2275.140	2259.690	147.230
5616.200	5459.340	405.460	537.170	SRC - Phelps A-32CHZ	9940.000	7594.030	-114.660	547.900	162.400	2197.170	2181.440	139.680
5716.200	5545.940	435.590	577.090	SRC - Phelps A-32CHZ	9912.140	7593.920	-115.140	575.760	161.500	2120.740	2104.720	132.340
5816.200	5632.540	465.720	617.000	SRC - Phelps A-32CHZ	9890.200	7593.960	-115.610	597.690	160.800	2045.850	2029.470	124.880
5916.200	5719.140	495.840	656.910	SRC - Phelps A-32CHZ	9860.580	7594.090	-116.420	627.300	159.800	1972.610	1955.860	117.720
6016.200	5805.740	525.970	696.820	SRC - Phelps A-32CHZ	9799.680	7594.250	-118.200	688.170	157.600	1901.000	1883.950	111.490
6116.200	5892.340	556.100	736.730	SRC - Phelps A-32CHZ	9758.030	7594.060	-119.170	729.810	156.100	1830.820	1813.350	104.820
6216.200	5978.940	586.220	776.650	SRC - Phelps A-32CHZ	9719.290	7593.860	-120.070	768.540	154.700	1762.640	1744.690	98.220
6316.200	6065.540	616.350	816.560	SRC - Phelps A-32CHZ	9666.860	7593.480	-121.140	820.950	152.700	1696.620	1678.200	92.110
6416.200	6152.130	646.470	856.470	SRC - Phelps A-32CHZ	9633.000	7593.150	-121.680	854.810	151.400	1632.970	1613.940	85.800
6516.200	6236.730	676.600	896.380	SRC - Phelps A-32CHZ	9612.000	7593.080	-122.320	875.800	150.600	1572.560	1552.7	

9616.200	7572.000	2789.330	1510.760	SRC - Phelps A-32CHZ	8971.220	7587.150	-124.730	1516.350	160.400	2914.110	2884.200	97.450
9716.200	7572.000	2889.330	1510.760	SRC - Phelps A-32CHZ	8971.040	7587.150	-124.730	1516.520	159.800	3014.100	2984.160	100.670
9816.200	7572.000	2989.330	1510.750	SRC - Phelps A-32CHZ	8970.860	7587.150	-124.730	1516.700	159.200	3114.100	3064.120	103.880
9916.200	7572.000	3089.330	1510.750	SRC - Phelps A-32CHZ	8970.680	7587.150	-124.730	1516.880	158.600	3214.100	3184.090	107.080
10016.200	7572.000	3189.330	1510.740	SRC - Phelps A-32CHZ	8970.500	7587.140	-124.730	1517.060	158.000	3314.100	3284.050	110.270
10116.200	7572.000	3289.330	1510.730	SRC - Phelps A-32CHZ	8970.320	7587.140	-124.720	1517.240	157.400	3414.100	3384.010	113.460
10216.200	7572.000	3389.330	1510.730	SRC - Phelps A-32CHZ	8970.140	7587.140	-124.720	1517.420	156.800	3514.100	3483.970	116.630
10316.200	7572.000	3489.330	1510.720	SRC - Phelps A-32CHZ	8969.960	7587.140	-124.720	1517.600	156.200	3614.100	3583.930	119.800
10416.200	7572.000	3589.330	1510.720	SRC - Phelps A-32CHZ	8969.780	7587.140	-124.720	1517.780	155.700	3714.100	3683.890	122.960
10516.200	7572.000	3689.330	1510.710	SRC - Phelps A-32CHZ	8969.600	7587.130	-124.720	1517.960	155.100	3814.090	3783.850	126.110
10616.200	7572.000	3789.330	1510.700	SRC - Phelps A-32CHZ	8969.420	7587.130	-124.720	1518.140	154.600	3914.090	3883.810	129.250
10716.200	7572.000	3889.330	1510.700	SRC - Phelps A-32CHZ	8969.240	7587.130	-124.720	1518.320	154.000	4014.090	3983.770	132.380
10816.200	7572.000	3989.330	1510.690	SRC - Phelps A-32CHZ	8969.060	7587.130	-124.720	1518.500	153.400	4114.090	4083.730	135.500
10916.200	7572.000	4089.330	1510.680	SRC - Phelps A-32CHZ	8968.890	7587.130	-124.720	1518.680	152.900	4214.090	4183.690	138.610
11016.200	7572.000	4189.330	1510.680	SRC - Phelps A-32CHZ	8968.710	7587.120	-124.720	1518.860	152.400	4314.090	4283.650	141.720
11116.200	7572.000	4289.330	1510.670	SRC - Phelps A-32CHZ	8968.530	7587.120	-124.720	1519.040	151.800	4414.090	4383.610	144.810
11216.200	7572.000	4389.330	1510.670	SRC - Phelps A-32CHZ	8968.350	7587.120	-124.720	1519.220	151.300	4514.090	4483.570	147.900
11316.200	7572.000	4489.330	1510.660	SRC - Phelps A-32CHZ	8968.170	7587.120	-124.720	1519.400	150.800	4614.090	4583.530	150.970
11416.200	7572.000	4589.330	1510.650	SRC - Phelps A-32CHZ	8967.990	7587.120	-124.720	1519.580	150.300	4714.090	4683.480	154.040
11516.200	7572.000	4689.330	1510.650	SRC - Phelps A-32CHZ	8967.810	7587.110	-124.720	1519.760	149.700	4814.090	4783.440	157.100
11616.200	7572.000	4789.330	1510.640	SRC - Phelps A-32CHZ	8967.630	7587.110	-124.720	1519.940	149.200	4914.090	4883.400	160.150
11716.200	7572.000	4889.330	1510.640	SRC - Phelps A-32CHZ	8967.450	7587.110	-124.720	1520.120	148.700	5014.080	4983.360	163.190
11816.200	7572.000	4989.330	1510.630	SRC - Phelps A-32CHZ	8967.270	7587.110	-124.720	1520.300	148.200	5114.080	5083.320	166.220
11916.200	7572.000	5089.330	1510.620	SRC - Phelps A-32CHZ	8967.090	7587.110	-124.720	1520.480	147.700	5214.080	5183.280	169.240
12016.200	7572.000	5189.330	1510.620	SRC - Phelps A-32CHZ	8966.910	7587.100	-124.720	1520.660	147.200	5314.080	5283.230	172.260
12116.200	7572.000	5289.330	1510.610	SRC - Phelps A-32CHZ	8966.730	7587.100	-124.720	1520.840	146.800	5414.080	5383.190	175.260
12216.200	7572.000	5389.330	1510.610	SRC - Phelps A-32CHZ	8966.550	7587.100	-124.720	1521.020	146.300	5514.080	5483.150	178.260
12316.200	7572.000	5489.330	1510.600	SRC - Phelps A-32CHZ	8966.370	7587.100	-124.720	1521.200	145.800	5614.080	5583.110	181.240
12416.200	7572.000	5589.330	1510.590	SRC - Phelps A-32CHZ	8966.190	7587.100	-124.720	1521.380	145.300	5714.080	5683.060	184.220
12516.200	7572.000	5689.330	1510.590	SRC - Phelps A-32CHZ	8966.010	7587.090	-124.720	1521.560	144.900	5814.080	5783.020	187.190
12616.200	7572.000	5789.330	1510.580	SRC - Phelps A-32CHZ	8965.830	7587.090	-124.720	1521.740	144.400	5914.080	5882.980	190.140
12638.400	7572.000	5811.330	1510.580	SRC - Phelps A-32CHZ	8965.790	7587.090	-124.720	1521.780	144.300	5936.280	5905.160	190.760

## 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			0.000	0.000	SRC - Phelps A-32NHZ	53.000	16.200	-786.330	2855.570	105.400	2961.860	2960.890	
32.600	32.600			0.000	0.000	SRC - Phelps A-32NHZ	59.490	22.690	-786.340	2855.590	105.400	2961.900	2960.890	2937.050
116.200	116.200			0.000	0.000	SRC - Phelps A-32NHZ	129.110	92.310	-786.530	2855.980	105.400	2962.400	2961.280	2642.370
216.200	216.200			0.000	0.000	SRC - Phelps A-32NHZ	219.470	182.660	-786.790	2856.860	105.400	2963.410	2962.150	2351.060
316.200	316.200			0.000	0.000	SRC - Phelps A-32NHZ	319.460	282.650	-787.070	2857.960	105.400	2964.540	2963.120	2083.860
416.200	416.200			0.000	0.000	SRC - Phelps A-32NHZ	422.190	385.370	-787.310	2859.020	105.400	2965.600	2964.010	1869.120
516.200	516.200			0.000	0.000	SRC - Phelps A-32NHZ	518.460	481.630	-787.520	2860.070	105.400	2966.710	2964.970	1700.830
616.200	616.200			0.000	0.000	SRC - Phelps A-32NHZ	616.920	580.090	-787.930	2861.330	105.400	2968.050	2966.150	1559.880
716.200	716.200			0.000	0.000	SRC - Phelps A-32NHZ	779.510	742.670	-786.910	2861.480	105.400	2967.830	2965.720	1403.680
816.200	816.200			0.000	0.000	SRC - Phelps A-32NHZ	885.660	848.800	-784.770	2860.980	105.300	2966.840	2964.560	1301.000
916.200	916.200			0.000	0.000	SRC - Phelps A-32NHZ	987.990	951.080	-781.730	2860.530	105.300	2965.630	2963.180	1213.550
1016.200	1016.200			0.000	0.000	SRC - Phelps A-32NHZ	1078.690	1041.730	-778.650	2860.440	105.200	2964.630	2962.030	1140.950
1116.200	1116.200			0.000	0.000	SRC - Phelps A-32NHZ	1184.120	1147.090	-774.840	2860.470	105.200	2963.720	2960.950	1071.070
1216.200	1216.200			0.000	0.000	SRC - Phelps A-32NHZ	1275.000	1237.890	-771.150	2860.500	105.100	2962.700	2959.780	1013.500
1316.200	1316.200			0.000	0.000	SRC - Phelps A-32NHZ	1355.630	1318.450	-767.900	2860.920	105.000	2962.180	2959.110	963.820
1361.340	1361.340			0.000	0.000	SRC - Phelps A-32NHZ	1398.000	1360.790	-766.330	2861.300	105.000	2962.150	2959.000	941.780
1416.200	1416.200			0.000	0.000	SRC - Phelps A-32NHZ	1428.340	1391.120	-765.390	2861.820	105.000	2962.510	2959.300	921.550
1516.200	1516.200			0.000	0.000	SRC - Phelps A-32NHZ	1460.000	1422.750	-764.640	2862.690	105.000	2964.520	2961.200	892.540
1616.200	1616.200			0.000	0.000	SRC - Phelps A-32NHZ	1522.000	1484.680	-763.540	2865.380	104.900	2968.280	2964.830	859.240
1716.200	1716.200			0.000	0.000	SRC - Phelps A-32NHZ	1585.180	1547.680	-761.050	2869.420	104.800	2973.410	2969.820	828.500
1816.200	1816.200			0.000	0.000	SRC - Phelps A-32NHZ	1680.670	1642.810	-756.340	2876.310	104.700	2979.140	2975.380	792.750
1916.200	1916.200			0.000	0.000	SRC - Phelps A-32NHZ	1746.940	1708.760	-752.760	2881.690	104.600	2985.600	2982.080	848.380
2016.200	2016.200			0.000	0.000	SRC - Phelps A-32NHZ	1816.840	1778.230	-748.430	2888.110	104.500	2992.980	2989.320	815.960
2116.200	2116.200			0.000	0.000	SRC - Phelps A-32NHZ	1907.960	1868.600	-741.630	2897.560	104.400	3001.200	2997.360	781.620
2216.200	2216.200			0.000	0.000	SRC - Phelps A-32NHZ	2065.830	2025.280	-728.840	2912.080	104.100	3007.970	3003.880	735.500
2316.200	2316.200			0.000	0.000	SRC - Phelps A-32NHZ	2158.710	2117.380	-720.450	2920.560	103.900	3014.670	3010.400	705.820
2416.200	2416.200			0.000	0.000	SRC - Phelps A-32NHZ	2259.420	2256.970	-707.060	2932.200	103.600	3020.440	3015.930	669.360
2516.200	2516.200			0.000	0.000	SRC - Phelps A-32NHZ	2400.750	2357.490	-697.110	2940.200	103.300	3027.870	3021.160	642.570
2616.200	2616.200			0.000	0.000	SRC - Phelps A-32NHZ	2582.420	2538.060	-680.480	2950.960	103.000	3029.410	3024.410	606.620
2716.200	2716.200			0.000	0.000	SRC - Phelps A-32NHZ	2664.000	2619.380	-675.040	2954.580	102.900	3032.260	3027.100	587.760
2816.200	2816.200			0.000	0.000	SRC - Phelps A-32NHZ	2727.000	2682.150	-670.860	2957.990	102.800	3036.070	3030.770	572.590
2916.200	2916.200			0.000	0.000	SRC - Phelps A-32NHZ	2811.770	2766.570	-665.240	2963.240	102.700	3040.680	3035.210	555.760
3016.200	3016.200			0.000	0.000	SRC - Phelps A-32NHZ	2958.280	2912.480	-655.410	2972.080	102.400	3045.260	3039.550	533.870
3116.200	3116.200			0.000	0.000	SRC - Phelps A-32NHZ	3035.530	2989.460	-650.280	2976.000	102.300	3048.850	3042.990	520.010
3216.200	3216.200			0.000	0.000	SRC - Phelps A-32NHZ	3108.000	3061.680	-644.070	2980.300	102.200	3053.440	3047.430	507.620
3316.200	3316.200			0.000	0.000	SRC - Phelps A-32NHZ	3192.670	3145.980	-640.850	2986.090	102.100	3058.820	3052.630	494.590
3416.200	3416.200			0.000	0.000	SRC - Phelps A-32NHZ	3277.330	3230.160	-634.470	2992.460	102.000	3064.640	3058.280	482.370
3516.200	3516.200			0.000	0.000	SRC - Phelps A-32NHZ	3333.440	3285.960	-630.990	2997.170	101.900	3071.510	3065.020	473.210
3616.200	3616.200			0.000	0.000	SRC - Phelps A-32NHZ	3506.340	3458.130	-622.140	3010.330	101.700	3078.010	3071.260	456.340
3716.200	3716.200			0.000	0.000	SRC - Phelps A-32NHZ	3572.670	3524.250	-619.220	3014.640	101.600	3083.560	3076.670	447.770
3782.000	3782.000			0.000	0.000	SRC - Phelps A-32NHZ	3620.690	3572.130	-617.620	3018.060	101.600	3087.740	3080.760	442.180
3816.200	3816.200			0.180	0.240	SRC - Phelps A-32NHZ	3654.800	3606.120	-616.580	3020.630	48.500	3089.870	3082.820	438.790
3916.200	3916.090			2.840	3.760	SRC - Phelps A-32NHZ	3737.170	3688.180	-613.980	3027.210	48.400	3094.130	3086.940	429.970
4016.200	4015.610			8.640	11.450	SRC - Phelps A-32NHZ	3812.100	3762.780	-611.290	3033.740	48.400	3095.560	3088.210	421.200
4116.200	4114.500			17.570	23.280	SRC - Phelps A-32NHZ	3990.190	3940.050	-602.980	3048.540	48.600	3093.170	3085.560	406.360
4216.200	4212.470			29.610	39.230	SRC - Phelps A-32NHZ	4090.670	4030.150	-597.610	3054.760	49.000	3089.460	3077.660	395.610
4316.200	4304.280			59.240	59.240	SRC - Phelps A-32NHZ	4193.000	4122.860	-590.360	3063.270	49.400	3086.500	3074.190	382.500
4416.200	4404.610			62.660	83.270	SRC - Phelps A-32NHZ	4344.930	7396.010	-530.760	12.760	163.300	3051.340	3035.750	197.000
4516.200	4498.250			83.980	111.260	SRC - Phelps A-32NHZ	4324.430	7396.700	-530.730	7.720	164.100	2964.730	2949.080	189.480
4616.200	4589.590			108.020	143.110	SRC - Phelps A-32NHZ	4300.500	7397.570	-530.670	3.160	164.700	2881.530	2865.710	182.130
4716.200	4679.390			134.930	178.750	SRC - Phelps A-32NHZ	4269.000	7398.790	-530.790	63.110	164.900	2802.090	2786.090	175.110
4782.130	4737.040			154.190	204.280	SRC - Phelps A-32NHZ	4242.930	7399.880	-530.930	89.160	164.900	2751.980	2735.850	170.610
4816.200	4766.550			164.450	217.880	SRC - Phelps A-32NHZ	4228.160	7400.500	-531.000	103.920	164.500	2726.600	2710.400	168.310
4853.150	4853.150			194.580	257.790	SRC - Phelps A-32NHZ	4117.700	7404.090	-530.490	214.310	161.800	2652.340	2636.190	164.240
5016.200	4939.750			224.710	297.700	SRC - Phelps A-32NHZ	4005.060	7405.320	-528.680	276.910	160.300	2578.190	2561.910	158.310
5116.200	5026.340			254.830	337.610	SRC - Phelps A-32NHZ	4001.000	7406.050	-527.380	316.940	159.200	2505.050	2488.530	151.590
5216.200	5112.940			284.960	377.520	SRC - Phelps A-32NHZ	3989.500	7405.630	-526.540	348.430	159.400	2433.930	2416.340	144.510
5316.200	5195.440			315.090	417.440	SRC - Phelps A-32NHZ	3952.000	7399.910	-525.890	379.910	157.400	2377.770	2361.100	137.340
5416.200	5286.140			345.210	457.350	SRC - Phelps A-32NHZ	3912.640	7408.220	-525.270	419.250	156.400	2294.000	2276.510	131.160
5516.200	5372.740			375.340	497.260	SRC - Phelps A-32NHZ	3877.430	7409.090	-524.780	454.460	155.500	2226.830	2208.960	124.600
5616.200	5459.340			405.460	537.170	SRC - Phelps A-32NHZ	3835.040	7410.160	-524.370	496.820	154.300	2161.460	2143.200	118.370
5716.200	5545.940			435.590	577.090	SRC - Phelps A-32NHZ	3752.740	7411.170	-523.700	579.120	151.800	2097.450	2078.940	113.290
5816.200	5632.540			465.720	617.000	SRC - Phelps A-32NHZ	3728.830	7411.230	-523.530	603.030	151.100	2035.330	2016.270	106.820
5916.200	5719.140			495.840	656.910	SRC - Phelps A-32NHZ	3698.000	7411.470	-523.530	633.850	150.200	1975.770	1956.170	100.790
6016.200	5805.740			525.970	696.820	SRC - Phelps A-32NHZ	3666.000	7411.930	-523.570	666.800	149.200	1918.950	1898.760	95.070
6116.200	5892.340			556.100	736.730	SRC - Phelps A-32NHZ	3633.640	7412.660	-523.470	698.200	148.200	1865.020	1844.220	89.670
6216.200	5979.940			586.220	776.650	SRC - Phelps A-32NHZ	3600.870	7413.550	-523.400	730.960	147.100	1814.240	1792.790	84.890
6316.200	6065.540			616.350	816.560	SRC - Phelps A-32NHZ	3568.530	7414.650	-523.550	766.990	146.000	1764.670	1743.170	79.880
6416.200	6156.130			646.470	856.470	SRC - Phelps A-32NHZ	3530.930	7415.740	-523.790	800.860	144.800	1723.170	1700.770	75.000
6516.200	6238.730			676.600	896.380	SRC - Phelps A-32NHZ	3497.910	7417.320	-524.120	843.850	143.500	1683.320	1659.850	71.720
6616.200	6325.330			706.730	936.300	SRC - Phelps A-32NHZ	3465.190	7418.850	-524.490	886.550	142.100	1647.470	16	

7816.200	7361.940	1075.590	1414.050	SRC - Phelps A-32NHZ	8946.540	7430.590	-533.440	1384.870	138.100	1610.760	1581.370	54.800
7916.200	7436.290	1132.650	1448.320	SRC - Phelps A-32NHZ	8883.820	7430.460	-534.000	1447.590	145.000	1666.660	1637.360	56.880
8016.200	7497.080	1206.650	1476.330	SRC - Phelps A-32NHZ	8823.590	7430.320	-533.370	1507.810	147.100	1741.590	1712.420	59.700
8116.200	7541.190	1293.820	1496.650	SRC - Phelps A-32NHZ	8800.790	7430.240	-532.950	1530.610	146.400	1830.460	1801.280	62.740
8216.200	7566.360	1389.680	1508.250	SRC - Phelps A-32NHZ	8787.410	7430.240	-532.710	1543.990	132.300	1927.530	1898.340	66.030
8290.260	7572.000	1463.390	1510.840	SRC - Phelps A-32NHZ	8783.440	7430.250	-532.630	1547.950	14.600	2001.390	1972.180	68.510
8316.200	7572.000	1489.330	1510.840	SRC - Phelps A-32NHZ	8782.960	7430.250	-532.620	1548.430	14.800	2027.270	1998.040	69.360
8416.200	7572.000	1589.330	1510.840	SRC - Phelps A-32NHZ	8781.110	7430.250	-532.590	1550.280	15.500	2127.020	2097.760	72.690
8516.200	7572.000	1689.330	1510.830	SRC - Phelps A-32NHZ	8779.260	7430.250	-532.550	1552.130	16.200	2226.790	2197.490	76.000
8616.200	7572.000	1789.330	1510.820	SRC - Phelps A-32NHZ	8777.500	7430.250	-532.520	1553.890	16.900	2326.580	2297.240	79.300
8716.200	7572.000	1889.330	1510.820	SRC - Phelps A-32NHZ	8777.500	7430.250	-532.520	1553.890	16.900	2426.380	2397.000	82.580
8816.200	7572.000	1989.330	1510.810	SRC - Phelps A-32NHZ	8777.500	7430.250	-532.520	1553.890	16.900	2526.200	2496.780	85.860
8916.200	7572.000	2089.330	1510.810	SRC - Phelps A-32NHZ	8777.500	7430.250	-532.520	1553.890	16.900	2626.040	2596.570	89.120
9016.200	7572.000	2189.330	1510.800	SRC - Phelps A-32NHZ	8777.500	7430.250	-532.520	1553.890	16.900	2725.880	2696.380	92.380
9116.200	7572.000	2289.330	1510.790	SRC - Phelps A-32NHZ	8777.500	7430.250	-532.520	1553.890	16.900	2825.740	2796.200	95.630
9216.200	7572.000	2389.330	1510.790	SRC - Phelps A-32NHZ	8777.500	7430.250	-532.520	1553.890	16.900	2925.610	2896.020	98.880
9316.200	7572.000	2489.330	1510.780	SRC - Phelps A-32NHZ	8777.500	7430.250	-532.520	1553.890	16.900	3025.490	2995.860	102.110
9416.200	7572.000	2589.330	1510.780	SRC - Phelps A-32NHZ	8777.500	7430.250	-532.520	1553.890	16.900	3125.370	3095.700	105.340
9516.200	7572.000	2689.330	1510.770	SRC - Phelps A-32NHZ	8777.500	7430.250	-532.520	1553.890	16.900	3225.260	3195.550	108.560
9616.200	7572.000	2789.330	1510.760	SRC - Phelps A-32NHZ	8777.500	7430.250	-532.520	1553.890	16.900	3325.160	3295.410	111.770
9716.200	7572.000	2889.330	1510.760	SRC - Phelps A-32NHZ	8777.500	7430.250	-532.520	1553.890	16.900	3425.060	3395.270	114.970
9816.200	7572.000	2989.330	1510.750	SRC - Phelps A-32NHZ	8777.500	7430.250	-532.520	1553.890	16.900	3524.970	3495.140	118.170
9916.200	7572.000	3089.330	1510.750	SRC - Phelps A-32NHZ	8777.500	7430.250	-532.520	1553.890	16.900	3624.890	3595.010	121.350
10016.200	7572.000	3189.330	1510.740	SRC - Phelps A-32NHZ	8777.500	7430.250	-532.520	1553.890	16.900	3724.800	3694.890	124.530
10116.200	7572.000	3289.330	1510.730	SRC - Phelps A-32NHZ	8777.500	7430.250	-532.520	1553.890	16.900	3824.730	3794.780	127.700
10216.200	7572.000	3389.330	1510.730	SRC - Phelps A-32NHZ	8777.500	7430.250	-532.520	1553.890	16.900	3924.650	3894.660	130.860
10316.200	7572.000	3489.330	1510.720	SRC - Phelps A-32NHZ	8777.500	7430.250	-532.520	1553.890	16.900	4024.580	3994.550	134.010
10416.200	7572.000	3589.330	1510.720	SRC - Phelps A-32NHZ	8777.500	7430.250	-532.520	1553.890	16.900	4124.520	4094.450	137.150
10516.200	7572.000	3689.330	1510.710	SRC - Phelps A-32NHZ	8777.490	7430.250	-532.520	1553.900	16.900	4224.460	4194.340	140.290
10616.200	7572.000	3789.330	1510.700	SRC - Phelps A-32NHZ	8776.530	7430.270	-532.510	1554.860	17.200	4324.400	4294.240	143.420
10716.200	7572.000	3889.330	1510.700	SRC - Phelps A-32NHZ	8775.580	7430.280	-532.500	1555.810	17.600	4424.340	4394.150	146.550
10816.200	7572.000	3989.330	1510.690	SRC - Phelps A-32NHZ	8774.630	7430.300	-532.490	1556.760	17.900	4524.280	4494.050	149.660
10916.200	7572.000	4089.330	1510.680	SRC - Phelps A-32NHZ	8773.670	7430.320	-532.490	1557.720	18.300	4624.230	4593.960	152.770
11016.200	7572.000	4189.330	1510.680	SRC - Phelps A-32NHZ	8772.720	7430.340	-532.480	1558.670	18.600	4724.180	4693.870	155.870
11116.200	7572.000	4289.330	1510.670	SRC - Phelps A-32NHZ	8771.760	7430.360	-532.470	1559.630	19.000	4824.130	4793.780	158.960
11216.200	7572.000	4389.330	1510.670	SRC - Phelps A-32NHZ	8770.810	7430.370	-532.460	1560.580	19.300	4924.080	4893.690	162.040
11316.200	7572.000	4489.330	1510.660	SRC - Phelps A-32NHZ	8769.860	7430.390	-532.450	1561.530	19.600	5024.040	4993.610	165.120
11416.200	7572.000	4589.330	1510.650	SRC - Phelps A-32NHZ	8768.900	7430.410	-532.440	1562.490	20.000	5123.990	5093.530	168.180
11516.200	7572.000	4689.330	1510.650	SRC - Phelps A-32NHZ	8767.950	7430.430	-532.430	1563.440	20.300	5223.950	5193.440	171.240
11616.200	7572.000	4789.330	1510.640	SRC - Phelps A-32NHZ	8767.000	7430.450	-532.420	1564.390	20.700	5323.910	5293.360	174.280
11716.200	7572.000	4889.330	1510.640	SRC - Phelps A-32NHZ	8766.040	7430.460	-532.410	1565.350	21.000	5423.870	5393.280	177.320
11816.200	7572.000	4989.330	1510.630	SRC - Phelps A-32NHZ	8765.090	7430.480	-532.400	1566.300	21.400	5523.830	5493.200	180.350
11916.200	7572.000	5089.330	1510.620	SRC - Phelps A-32NHZ	8764.130	7430.500	-532.390	1567.250	21.700	5623.790	5593.120	183.370
12016.200	7572.000	5189.330	1510.620	SRC - Phelps A-32NHZ	8763.180	7430.520	-532.380	1568.210	22.000	5723.760	5693.050	186.380
12116.200	7572.000	5289.330	1510.610	SRC - Phelps A-32NHZ	8665.730	7433.200	-530.370	1675.610	49.900	5823.690	5793.120	190.490
12216.200	7572.000	5389.330	1510.610	SRC - Phelps A-32NHZ	8652.960	7433.270	-530.290	1678.370	50.400	5923.630	5893.010	193.510
12316.200	7572.000	5489.330	1510.600	SRC - Phelps A-32NHZ	8650.500	7433.340	-530.220	1680.830	50.800	6023.560	5992.910	196.520
12416.200	7572.000	5589.330	1510.590	SRC - Phelps A-32NHZ	8650.500	7433.340	-530.220	1680.830	50.800	6123.490	6092.800	199.500
12516.200	7572.000	5689.330	1510.590	SRC - Phelps A-32NHZ	8650.500	7433.340	-530.220	1680.830	50.800	6223.430	6192.690	202.470
12616.200	7572.000	5789.330	1510.580	SRC - Phelps A-32NHZ	8650.500	7433.340	-530.220	1680.830	50.800	6323.370	6292.590	205.430
12638.400	7572.000	5811.530	1510.580	SRC - Phelps A-32NHZ	8650.500	7433.340	-530.220	1680.830	50.800	6345.550	6314.760	206.040

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 Rig and TVDs are from Rig ( Planned Datum #1 4982.511 above Mean Sea Level )  
Vertical Section is from 0.00N/0.00E on screen to 14.57N degrees  
Prepared by Great Western Operating Co., LLC  
Date Printed: