

SYSDRILL  
Closest Approach + Clearance Factor Report  
Wellbore: Dittmer KE 29-032HC (PWB)  
Wellpath: Dittmer KE 29-032HC (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 29-032HC (PWB) |
| Created      | 4-May-2016                |
| Last Revised | 4-May-2016                |

#### Well

|               |                     |
|---------------|---------------------|
| Name          | Dittmer KE 29-032HC |
| Government ID |                     |
| Last Revised  | 4-May-2016          |

#### Slot

|               |                                |
|---------------|--------------------------------|
| Name          | Slot S14 - Dittmer KE 29-032HC |
| Grid Northing | 1247956.240                    |
| Grid Easting  | 3195367.888                    |
| Latitude      | N40 0 42.9012                  |
| Longitude     | W104 48 9.0396                 |
| North         | -99.090                        |
| East          | 194.680                        |

#### 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          |                 | 575.070  | 7656.560           | 7656.560                | 546.380        | 7668.640         | 19.750           | 7716.200 |
| SRC - Phelps 11-32NHZ | SRC - Phelps 11-32NHZ (AWB) | AA - SRC - Phelps 11-32NHZ | Dittmer          |                 | 812.750  | 7381.690           | 7381.690                | 784.730        | 7381.690         | 28.190           | 7545.730 |
| SRC - Phelps A-32CHZ  | SRC - Phelps A-32CHZ (AWB)  | AA - SRC - Phelps A-32CHZ  | Dittmer          |                 | 1176.390 | 7354.530           | 7354.530                | 1148.720       | 7365.280         | 41.460           | 7578.540 |
| SRC - Phelps A-32NHZ  | SRC - Phelps A-32NHZ (AWB)  | AA - SRC - Phelps A-32NHZ  | Dittmer          |                 | 1457.040 | 7005.580           | 7005.580                | 1429.700       | 7016.200         | 51.740           | 7250.450 |
| SRC - Phelps 12-32CHZ | SRC - Phelps 12-32CHZ (AWB) | AA - SRC - Phelps 12-32CHZ | Dittmer          |                 | 1845.320 | 7030.470           | 7030.470                | 1817.900       | 7037.200         | 65.010           | 7430.900 |
| SRC - Phelps 12-32NHZ | SRC - Phelps 12-32NHZ (AWB) | AA - SRC - Phelps 12-32NHZ | Dittmer          |                 | 2063.200 | 6686.150           | 6686.150                | 2035.390       | 6692.710         | 71.230           | 7135.620 |

#### Reference Wellbore Survey Tool Program

|             |               |
|-------------|---------------|
| Survey Name | Planned       |
| MD[ft]      | 12511.410     |
| 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         | -672.680         | 2817.470        | 103.400                   | 2896.660                       | 2895.700                |                  |
| 81.820           |                   | 81.820              | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 115.750       | 78.950         | -672.550         | 2817.570        | 103.400                   | 2896.720                       | 2895.600                | 2574.410         |
| 116.200          |                   | 116.200             | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 144.410       | 107.610        | -672.410         | 2817.660        | 103.400                   | 2896.800                       | 2895.640                | 2496.280         |
| 216.200          |                   | 216.200             | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 238.690       | 201.880        | -671.650         | 2818.210        | 103.400                   | 2897.170                       | 2895.880                | 2245.090         |
| 316.200          |                   | 316.200             | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 307.870       | 271.060        | -670.970         | 2818.910        | 103.400                   | 2898.010                       | 2896.600                | 2051.250         |
| 416.200          |                   | 416.200             | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 372.190       | 335.360        | -670.530         | 2820.250        | 103.400                   | 2899.990                       | 2898.450                | 1876.300         |
| 516.200          |                   | 516.200             | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 428.000       | 391.120        | -669.700         | 2822.320        | 103.300                   | 2903.380                       | 2901.710                | 1736.330         |
| 616.200          |                   | 616.200             | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 491.000       | 454.000        | -668.070         | 2825.940        | 103.300                   | 2908.360                       | 2906.550                | 1609.880         |
| 716.200          |                   | 716.200             | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 531.290       | 494.150        | -666.880         | 2829.060        | 103.300                   | 2915.070                       | 2913.150                | 1516.240         |
| 816.200          |                   | 816.200             | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 720.260       | 682.070        | -655.370         | 2844.420        | 103.000                   | 2922.030                       | 2919.840                | 1334.460         |
| 916.200          |                   | 916.200             | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 773.480       | 734.900        | -650.320         | 2848.330        | 102.900                   | 2927.240                       | 2924.920                | 1256.850         |
| 1016.200         |                   | 1016.200            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 834.000       | 794.970        | -645.170         | 2853.710        | 102.700                   | 2934.080                       | 2931.600                | 1184.460         |
| 1116.200         |                   | 1116.200            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 875.640       | 836.250        | -642.040         | 2858.130        | 102.700                   | 2942.700                       | 2940.100                | 1130.010         |
| 1216.200         |                   | 1216.200            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 929.260       | 889.350        | -638.210         | 2864.500        | 102.600                   | 2952.880                       | 2950.130                | 1075.720         |
| 1316.200         |                   | 1316.200            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 1004.530      | 963.650        | -631.720         | 2874.690        | 102.400                   | 2964.330                       | 2961.410                | 1016.560         |
| 1416.200         |                   | 1416.200            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 1251.000      | 1205.670       | -597.850         | 2906.220        | 101.600                   | 2974.540                       | 2971.170                | 883.840          |
| 1516.200         |                   | 1516.200            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 1347.180      | 1300.470       | -584.700         | 2915.840        | 101.300                   | 2981.700                       | 2978.110                | 830.890          |
| 1616.200         |                   | 1616.200            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 1433.840      | 1385.860       | -572.860         | 2924.670        | 101.100                   | 2989.130                       | 2985.330                | 786.290          |
| 1716.200         |                   | 1716.200            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 1847.060      | 1787.790       | -484.200         | 2953.350        | 99.300                    | 2993.630                       | 2988.940                | 638.660          |
| 1816.200         |                   | 1816.200            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 1967.890      | 1903.420       | -449.180         | 2955.460        | 98.600                    | 2990.670                       | 2985.610                | 590.890          |
| 1916.200         |                   | 1916.200            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 2073.770      | 2004.600       | -418.030         | 2956.990        | 98.000                    | 2987.700                       | 2982.680                | 594.400          |
| 2016.200         |                   | 2016.200            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 2169.030      | 2095.860       | -390.750         | 2958.110        | 97.500                    | 2984.870                       | 2979.530                | 559.020          |
| 2116.200         |                   | 2116.200            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 2251.320      | 2175.040       | -368.380         | 2959.070        | 97.100                    | 2982.500                       | 2976.880                | 530.970          |
| 2216.200         |                   | 2216.200            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 2308.670      | 2230.230       | -352.840         | 2960.230        | 96.800                    | 2981.210                       | 2975.380                | 510.810          |
| 2230.230         |                   | 2230.230            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 2308.670      | 2230.230       | -352.840         | 2960.230        | 96.800                    | 2981.180                       | 2975.330                | 509.790          |
| 2269.950         |                   | 2269.950            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 2350.000      | 2269.950       | -341.460         | 2961.480        | 96.600                    | 2981.100                       | 2975.130                | 498.860          |
| 2316.200         |                   | 2316.200            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 2387.420      | 2305.920       | -331.240         | 2962.750        | 96.400                    | 2981.230                       | 2975.120                | 488.430          |
| 2416.200         |                   | 2416.200            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 2497.970      | 2412.560       | -302.290         | 2966.180        | 95.800                    | 2981.550                       | 2975.110                | 462.670          |
| 2516.200         |                   | 2516.200            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 2638.710      | 2548.110       | -264.490         | 2968.560        | 95.100                    | 2980.490                       | 2973.630                | 434.380          |
| 2616.200         |                   | 2616.200            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 2720.000      | 2625.870       | -240.850         | 2969.920        | 94.600                    | 2979.690                       | 2972.540                | 417.140          |
| 2665.370         |                   | 2665.370            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 2761.330      | 2665.370       | -228.710         | 2970.780        | 94.400                    | 2979.570                       | 2972.290                | 408.840          |
| 2706.490         |                   | 2706.490            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 2798.020      | 2700.570       | -218.420         | 2971.610        | 94.200                    | 2979.630                       | 2972.220                | 402.020          |
| 2716.200         |                   | 2716.200            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 2802.670      | 2705.030       | -217.120         | 2971.710        | 94.200                    | 2979.660                       | 2972.220                | 400.990          |
| 2816.200         |                   | 2816.200            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 2904.870      | 2803.460       | -189.690         | 2974.130        | 93.700                    | 2980.200                       | 2972.440                | 383.940          |
| 2916.200         |                   | 2916.200            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 3073.930      | 2965.390       | -141.220         | 2976.240        | 92.700                    | 2979.990                       | 2971.730                | 360.680          |
| 3016.200         |                   | 3016.200            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 3150.380      | 3038.510       | -118.890         | 2976.140        | 92.300                    | 2978.600                       | 2970.060                | 348.710          |
| 3067.420         |                   | 3067.420            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 3180.670      | 3067.420       | -109.860         | 2976.290        | 92.100                    | 2978.310                       | 2969.650                | 343.830          |
| 3116.200         |                   | 3116.200            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 3223.000      | 3107.750       | -96.990          | 2976.790        | 91.900                    | 2978.380                       | 2969.570                | 338.130          |
| 3116.590         |                   | 3116.590            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 3223.000      | 3107.750       | -96.990          | 2976.790        | 91.900                    | 2978.380                       | 2969.570                | 338.130          |
| 3216.200         |                   | 3216.200            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 3307.460      | 3188.270       | -71.540          | 2978.130        | 91.400                    | 2979.120                       | 2970.000                | 326.960          |
| 3316.200         |                   | 3316.200            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 3406.190      | 3262.700       | -42.780          | 2979.650        | 90.800                    | 2980.140                       | 2970.700                | 315.590          |
| 3416.200         |                   | 3416.200            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 3495.510      | 3368.410       | -17.680          | 2980.930        | 90.300                    | 2981.270                       | 2971.520                | 305.930          |
| 3516.200         |                   | 3516.200            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 3553.210      | 3423.750       | -1.420           | 2982.260        | 90.000                    | 2983.700                       | 2973.730                | 299.330          |
| 3616.200         |                   | 3616.200            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 3605.470      | 3473.770       | 13.600           | 2984.400        | 89.700                    | 2987.830                       | 2977.650                | 293.710          |
| 3716.200         |                   | 3716.200            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 3783.270      | 3643.800       | 65.240           | 2989.710        | 88.800                    | 2991.300                       | 2980.580                | 279.290          |
| 3816.200         |                   | 3816.200            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 3883.310      | 3739.070       | 95.720           | 2991.190        | 88.200                    | 2993.720                       | 2982.670                | 270.960          |
| 3916.200         |                   | 3916.200            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 3966.240      | 3818.070       | 120.930          | 2992.620        | 87.700                    | 2996.670                       | 2985.320                | 264.170          |
| 4016.200         |                   | 4016.200            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 4048.300      | 3896.410       | 145.280          | 2994.400        | 87.200                    | 3000.310                       | 2988.680                | 257.950          |
| 4116.200         |                   | 4116.200            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 4142.390      | 3986.490       | 172.360          | 2996.710        | 86.700                    | 3004.460                       | 2992.520                | 251.610          |
| 4216.200         |                   | 4216.200            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 4246.400      | 4086.690       | 200.110          | 2999.340        | 86.200                    | 3008.800                       | 2996.540                | 245.370          |
| 4316.200         |                   | 4316.200            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 4348.790      | 4185.830       | 225.560          | 3001.840        | 85.700                    | 3013.120                       | 3000.560                | 239.830          |
| 4416.200         |                   | 4416.200            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 4396.210      | 4231.780       | 237.200          | 3003.120        | 85.500                    | 3018.110                       | 3005.370                | 236.850          |
| 4492.500         |                   | 4492.500            | 0.000              | 0.000 SRC - Phelps 11-32CHZ  | 4434.870      | 4269.100       | 247.180          | 3004.710        | 85.300                    | 3023.130                       | 3010.240                | 234.640          |
| 4516.200         |                   | 4516.200            | 0.130              | 0.070 SRC - Phelps 11-32CHZ  | 4457.720      | 4291.090       | 253.270          | 3005.850        | 85.300                    | 3024.800                       | 3011.850                | 233.510          |
| 4616.200         |                   | 4616.110            | 3.470              | 1.990 SRC - Phelps 11-32CHZ  | 10548.680     | 7577.010       | 648.890          | 12.460          | -40.000                   | 3030.440                       | 3014.770                | 193.370          |
| 4716.200         |                   | 4715.690            | 11.350             | 6.520 SRC - Phelps 11-32CHZ  | 10544.730     | 7576.980       | 648.950          | 16.410          | -54.600                   | 2931.490                       | 2915.720                | 185.910          |
| 4816.200         |                   | 4814.650            | 23.730             | 13.630 SRC - Phelps 11-32CHZ | 10541.000     | 7576.950       | 649.010          | 20.140          | -76.800                   | 2832.190                       | 2816.340                | 178.690          |
| 4916.200         |                   | 4912.730            | 40.590             | 23.310 SRC - Phelps 11-32CHZ | 10536.960     | 7576.930       | 649.080          | 24.180          | -103.200                  | 2732.810                       | 2716.890                | 171.730          |
| 5016.200         |                   | 5009.660            | 61.870             | 35.540 SRC - Phelps 11-32CHZ | 10524.780     | 7576.880       | 649.300          | 36.350          | -125.000                  | 2633.570                       | 2617.620                | 165.090          |
| 5116.200         |                   | 5105.170            | 87.530             | 50.270 SRC - Phelps 11-32CHZ | 10510.010     | 7576.820       | 649.560          | 51.120          | -139.800                  | 2534.740                       | 2518.770                | 158.720          |
| 5216.200         |                   | 5199.000            | 117.490            | 67.470 SRC - Phelps 11-32CHZ | 10505.020     | 7576.820       | 649.640          | 56.110          | -148.900                  | 2436.660                       | 2420.690                | 152.570          |

|           |          |          |         |                       |           |          |         |         |          |          |          |         |
|-----------|----------|----------|---------|-----------------------|-----------|----------|---------|---------|----------|----------|----------|---------|
| 5316.200  | 5290.900 | 151.660  | 87.100  | SRC - Phelps 11-32CHZ | 10484.720 | 7576.830 | 650.000 | 76.410  | -155.600 | 2339.650 | 2323.710 | 146.760 |
| 5416.200  | 5380.610 | 189.950  | 109.090 | SRC - Phelps 11-32CHZ | 10477.000 | 7576.840 | 650.130 | 84.130  | -159.700 | 2244.060 | 2228.170 | 141.160 |
| 5492.390  | 5447.330 | 221.830  | 127.400 | SRC - Phelps 11-32CHZ | 10458.200 | 7577.010 | 650.350 | 102.930 | -162.700 | 2172.500 | 2156.650 | 137.040 |
| 5516.200  | 5467.960 | 232.160  | 133.330 | SRC - Phelps 11-32CHZ | 10451.960 | 7577.070 | 650.420 | 109.160 | -163.000 | 2150.320 | 2134.470 | 135.650 |
| 5616.200  | 5554.560 | 275.510  | 158.230 | SRC - Phelps 11-32CHZ | 10444.050 | 7577.160 | 650.500 | 117.070 | -163.400 | 2057.480 | 2041.720 | 130.540 |
| 5716.200  | 5641.170 | 318.870  | 183.130 | SRC - Phelps 11-32CHZ | 10417.420 | 7577.700 | 650.470 | 143.700 | -164.800 | 1965.120 | 1949.430 | 125.250 |
| 5816.200  | 5727.770 | 362.220  | 208.030 | SRC - Phelps 11-32CHZ | 10395.830 | 7578.220 | 650.310 | 165.280 | -166.100 | 1873.230 | 1857.600 | 119.870 |
| 5916.200  | 5814.380 | 405.570  | 232.930 | SRC - Phelps 11-32CHZ | 10369.190 | 7578.870 | 650.080 | 191.910 | -167.600 | 1781.830 | 1766.260 | 114.440 |
| 6016.200  | 5900.980 | 448.930  | 257.830 | SRC - Phelps 11-32CHZ | 10334.350 | 7579.650 | 649.770 | 226.740 | -169.700 | 1690.920 | 1675.400 | 108.970 |
| 6116.200  | 5987.590 | 492.280  | 282.720 | SRC - Phelps 11-32CHZ | 10298.670 | 7580.230 | 649.470 | 262.410 | -172.100 | 1600.500 | 1585.030 | 103.420 |
| 6216.200  | 6074.190 | 535.630  | 307.620 | SRC - Phelps 11-32CHZ | 10274.790 | 7580.560 | 649.270 | 286.290 | -173.700 | 1510.800 | 1495.330 | 97.680  |
| 6316.200  | 6160.890 | 578.990  | 332.520 | SRC - Phelps 11-32CHZ | 10255.000 | 7580.860 | 649.090 | 306.080 | -175.100 | 1422.030 | 1406.540 | 91.770  |
| 6416.200  | 6247.400 | 622.340  | 357.420 | SRC - Phelps 11-32CHZ | 10234.730 | 7581.340 | 648.820 | 326.340 | -176.500 | 1334.560 | 1318.990 | 85.720  |
| 6516.200  | 6334.010 | 665.700  | 382.320 | SRC - Phelps 11-32CHZ | 10210.630 | 7581.920 | 648.450 | 350.430 | -178.300 | 1248.440 | 1232.740 | 79.530  |
| 6616.200  | 6420.620 | 709.050  | 407.220 | SRC - Phelps 11-32CHZ | 10178.440 | 7582.670 | 647.840 | 382.600 | -179.200 | 1163.930 | 1148.040 | 73.280  |
| 6716.200  | 6507.220 | 752.400  | 432.120 | SRC - Phelps 11-32CHZ | 10140.450 | 7583.210 | 647.060 | 420.590 | -176.100 | 1081.200 | 1065.050 | 66.970  |
| 6816.200  | 6593.830 | 795.760  | 457.020 | SRC - Phelps 11-32CHZ | 10087.970 | 7582.900 | 646.200 | 473.050 | -171.600 | 1000.440 | 983.990  | 60.800  |
| 6916.200  | 6680.430 | 839.110  | 481.910 | SRC - Phelps 11-32CHZ | 10063.360 | 7582.460 | 645.930 | 497.660 | -169.400 | 922.610  | 905.560  | 54.100  |
| 7016.200  | 6767.040 | 882.460  | 506.810 | SRC - Phelps 11-32CHZ | 10040.350 | 7582.020 | 645.790 | 520.660 | -167.400 | 848.770  | 830.880  | 47.450  |
| 7116.200  | 6853.640 | 925.820  | 531.710 | SRC - Phelps 11-32CHZ | 10015.960 | 7581.580 | 645.770 | 545.040 | -165.100 | 780.070  | 761.070  | 41.080  |
| 7216.200  | 6940.250 | 969.170  | 556.610 | SRC - Phelps 11-32CHZ | 9991.500  | 7581.170 | 645.870 | 569.500 | -162.800 | 717.960  | 697.560  | 35.190  |
| 7316.200  | 7026.850 | 1012.530 | 581.510 | SRC - Phelps 11-32CHZ | 9968.640  | 7580.820 | 646.090 | 592.360 | -160.700 | 664.280  | 642.160  | 30.020  |
| 7416.200  | 7113.460 | 1055.880 | 606.410 | SRC - Phelps 11-32CHZ | 9944.450  | 7580.500 | 646.330 | 615.550 | -158.400 | 621.250  | 597.200  | 25.820  |
| 7516.200  | 7200.060 | 1099.230 | 631.310 | SRC - Phelps 11-32CHZ | 9924.980  | 7580.270 | 646.410 | 636.020 | -156.500 | 591.290  | 565.170  | 22.640  |
| 7616.200  | 7286.670 | 1142.590 | 656.210 | SRC - Phelps 11-32CHZ | 9906.000  | 7580.060 | 646.430 | 654.990 | -154.700 | 576.410  | 548.420  | 20.590  |
| 7656.560  | 7321.620 | 1160.080 | 666.260 | SRC - Phelps 11-32CHZ | 9898.980  | 7580.020 | 646.350 | 662.010 | -154.000 | 575.070  | 546.430  | 20.080  |
| 7668.640  | 7332.080 | 1165.320 | 669.260 | SRC - Phelps 11-32CHZ | 9896.100  | 7580.000 | 646.320 | 664.900 | -153.700 | 575.190  | 546.380  | 19.960  |
| 7716.200  | 7372.130 | 1188.210 | 680.780 | SRC - Phelps 11-32CHZ | 9885.060  | 7579.940 | 646.190 | 675.930 | -157.700 | 580.510  | 551.120  | 19.750  |
| 7816.200  | 7447.310 | 1250.160 | 702.400 | SRC - Phelps 11-32CHZ | 9874.000  | 7579.870 | 646.070 | 686.990 | -163.500 | 618.650  | 588.990  | 20.440  |
| 7916.200  | 7507.170 | 1328.120 | 719.620 | SRC - Phelps 11-32CHZ | 9860.110  | 7579.930 | 645.700 | 700.870 | -166.400 | 686.540  | 656.010  | 22.480  |
| 8016.200  | 7548.630 | 1418.090 | 731.570 | SRC - Phelps 11-32CHZ | 9850.440  | 7579.970 | 645.430 | 710.540 | -169.000 | 773.570  | 742.990  | 25.290  |
| 8116.200  | 7569.590 | 1515.460 | 737.630 | SRC - Phelps 11-32CHZ | 9846.940  | 7579.980 | 645.340 | 714.040 | -176.600 | 870.500  | 839.890  | 28.440  |
| 8163.270  | 7572.000 | 1562.440 | 738.340 | SRC - Phelps 11-32CHZ | 9847.490  | 7579.980 | 645.350 | 713.490 | -108.000 | 917.460  | 886.820  | 29.950  |
| 8216.200  | 7572.000 | 1615.370 | 738.360 | SRC - Phelps 11-32CHZ | 9848.910  | 7579.970 | 645.390 | 712.080 | -107.100 | 970.370  | 939.700  | 31.640  |
| 8316.200  | 7572.000 | 1715.370 | 738.390 | SRC - Phelps 11-32CHZ | 9849.570  | 7579.960 | 645.470 | 709.410 | -105.680 | 1070.330 | 1039.600 | 34.840  |
| 8416.200  | 7572.000 | 1815.370 | 738.430 | SRC - Phelps 11-32CHZ | 9854.240  | 7579.950 | 645.540 | 706.740 | -104.300 | 1170.290 | 1139.500 | 38.010  |
| 8516.200  | 7572.000 | 1915.370 | 738.460 | SRC - Phelps 11-32CHZ | 9856.910  | 7579.940 | 645.610 | 704.070 | -103.200 | 1270.250 | 1239.400 | 41.180  |
| 8616.200  | 7572.000 | 2015.370 | 738.500 | SRC - Phelps 11-32CHZ | 9859.580  | 7579.930 | 645.680 | 701.400 | -102.200 | 1370.210 | 1339.300 | 44.330  |
| 8716.200  | 7572.000 | 2115.370 | 738.530 | SRC - Phelps 11-32CHZ | 9862.250  | 7579.920 | 645.750 | 698.740 | -101.400 | 1470.180 | 1439.210 | 47.470  |
| 8816.200  | 7572.000 | 2215.370 | 738.570 | SRC - Phelps 11-32CHZ | 9864.920  | 7579.910 | 645.830 | 696.070 | -100.700 | 1570.140 | 1539.110 | 50.590  |
| 8916.200  | 7572.000 | 2315.370 | 738.600 | SRC - Phelps 11-32CHZ | 9867.590  | 7579.900 | 645.900 | 693.400 | -100.000 | 1670.100 | 1639.010 | 53.710  |
| 9016.200  | 7572.000 | 2415.370 | 738.640 | SRC - Phelps 11-32CHZ | 9870.260  | 7579.890 | 645.970 | 690.730 | -99.500  | 1770.070 | 1738.910 | 56.810  |
| 9116.200  | 7572.000 | 2515.370 | 738.680 | SRC - Phelps 11-32CHZ | 9872.930  | 7579.880 | 646.040 | 688.060 | -99.000  | 1870.030 | 1838.810 | 59.890  |
| 9216.200  | 7572.000 | 2615.370 | 738.710 | SRC - Phelps 11-32CHZ | 9874.000  | 7579.870 | 646.070 | 686.990 | -98.800  | 1969.990 | 1938.720 | 62.990  |
| 9316.200  | 7572.000 | 2715.370 | 738.750 | SRC - Phelps 11-32CHZ | 9874.000  | 7579.870 | 646.070 | 686.990 | -98.800  | 2069.960 | 2038.640 | 66.080  |
| 9416.200  | 7572.000 | 2815.370 | 738.780 | SRC - Phelps 11-32CHZ | 9874.000  | 7579.870 | 646.070 | 686.990 | -98.800  | 2169.930 | 2138.560 | 69.170  |
| 9516.200  | 7572.000 | 2915.370 | 738.820 | SRC - Phelps 11-32CHZ | 9874.000  | 7579.870 | 646.070 | 686.990 | -98.800  | 2269.900 | 2238.480 | 72.240  |
| 9616.200  | 7572.000 | 3015.370 | 738.850 | SRC - Phelps 11-32CHZ | 9874.000  | 7579.870 | 646.070 | 686.990 | -98.800  | 2369.880 | 2338.410 | 75.300  |
| 9716.200  | 7572.000 | 3115.370 | 738.890 | SRC - Phelps 11-32CHZ | 9874.000  | 7579.870 | 646.070 | 686.990 | -98.800  | 2469.860 | 2438.340 | 78.350  |
| 9816.200  | 7572.000 | 3215.370 | 738.930 | SRC - Phelps 11-32CHZ | 9874.000  | 7579.870 | 646.070 | 686.990 | -98.800  | 2569.840 | 2538.260 | 81.390  |
| 9916.200  | 7572.000 | 3315.370 | 738.960 | SRC - Phelps 11-32CHZ | 9874.000  | 7579.870 | 646.070 | 686.990 | -98.800  | 2669.820 | 2638.190 | 84.420  |
| 10016.200 | 7572.000 | 3415.370 | 739.000 | SRC - Phelps 11-32CHZ | 9874.000  | 7579.870 | 646.070 | 686.990 | -98.800  | 2769.800 | 2738.120 | 87.440  |
| 10116.200 | 7572.000 | 3515.370 | 739.030 | SRC - Phelps 11-32CHZ | 9874.000  | 7579.870 | 646.070 | 686.990 | -98.800  | 2869.780 | 2838.050 | 90.450  |
| 10216.200 | 7572.000 | 3615.370 | 739.070 | SRC - Phelps 11-32CHZ | 9874.000  | 7579.870 | 646.070 | 686.990 | -98.800  | 2969.770 | 2937.980 | 93.440  |
| 10316.200 | 7572.000 | 3715.370 | 739.100 | SRC - Phelps 11-32CHZ | 9874.000  | 7579.870 | 646.070 | 686.990 | -98.800  | 3069.750 | 3037.920 | 96.430  |
| 10416.200 | 7572.000 | 3815.370 | 739.140 | SRC - Phelps 11-32CHZ | 9874.000  | 7579.870 | 646.070 | 686.990 | -98.800  | 3169.740 | 3137.850 | 99.400  |
| 10516.200 | 7572.000 | 3915.370 | 739.180 | SRC - Phelps 11-32CHZ | 9874.000  | 7579.870 | 646.070 | 686.990 | -98.800  | 3269.720 | 3237.780 | 102.360 |
| 10616.200 | 7572.000 | 4015.370 | 739.210 | SRC - Phelps 11-32CHZ | 9874.000  | 7579.870 | 646.070 | 686.990 | -98.800  | 3369.710 | 3337.710 | 105.310 |
| 10716.200 | 7572.000 | 4115.370 | 739.250 | SRC - Phelps 11-32CHZ | 9874.000  | 7579.870 | 646.070 | 686.990 | -98.800  | 3469.700 | 3437.650 | 108.250 |
| 10816.200 | 7572.000 | 4215.370 | 739.280 | SRC - Phelps 11-32CHZ | 9874.000  | 7579.870 | 646.070 | 686.990 | -98.800  | 3569.690 | 3537.590 | 111.180 |
| 10916.200 | 7572.000 | 4315.370 | 739.320 | SRC - Phelps 11-32CHZ | 9874.000  | 7579.870 | 646.070 | 686.990 | -98.800  | 3669.680 | 3637.520 | 114.090 |
| 11016.200 | 7572.000 | 4415.370 | 739.350 | SRC - Phelps 11-32CHZ | 9874.000  | 7579.870 | 646.070 | 686.990 | -98.800  | 3769.670 | 3737.450 | 117.000 |
| 11116.200 | 7572.000 | 4515.370 | 739.390 | SRC - Phelps 11-32CHZ | 9874.000  | 7579.870 | 646.070 | 686.990 | -98.800  | 3869.660 | 3837.390 | 119.890 |
| 11216.200 | 7572.000 | 4615.370 | 739.430 | SRC - Phelps 11-32CHZ | 9874.000  | 7579.870 | 646.070 | 686.990 | -98.800  | 3969.650 | 3907.320 | 122.780 |
| 11316.200 | 7572.000 | 4715.370 | 739.460 | SRC - Phelps 11-32CHZ | 9874.000  | 7579.870 | 646.070 | 686.990 | -98.800  | 4069.640 | 4037.260 | 125.650 |
| 11416.200 | 7572.000 | 4815.370 | 739.500 | SRC - Phelps 11-32CHZ | 9874.000  | 7579.870 | 646.070 | 686.990 | -98.800  | 4169.640 | 4137.190 | 128.510 |
| 11516.200 | 7572.000 | 4915.370 | 739.530 | SRC - Phelps 11-32CHZ | 9874.000  | 7579.870 | 646.070 | 686.990 | -98.800  | 4269.630 | 4237.130 | 131.360 |
| 11616.200 | 7572.000 | 5015.370 | 739.570 | SRC - Phelps 11-32CHZ | 9874.000  | 7579.870 | 646.070 | 686.990 | -98.800  | 4369.620 | 4337.060 | 134.200 |
| 11716.200 | 7572.000 | 5115.370 | 739.600 | SRC - Phelps 11-32CHZ | 9874.000  | 7579.870 | 646.070 | 686.990 | -98.800  | 4469.620 | 4437.000 | 137.030 |
| 11816.200 | 7572.000 | 5215.370 | 739.640 | SRC - Phelps 11-32CHZ | 9874.000  | 7579.870 | 646.070 | 686.990 | -98.800  | 4569.610 | 4536.930 | 139.850 |
| 11916.200 | 7572.000 | 5315.370 | 739.680 | SRC - Phelps 11-32CHZ | 9874.000  | 7579.870 | 646.070 | 686.990 | -98.800  | 4669.600 | 4636.870 | 142.660 |
| 12016.200 | 7572.000 | 5415.370 | 739.710 | SRC - Phelps 11-32CHZ | 9874.260  | 7579.880 | 646.070 | 686.730 | -98.700  | 4769.600 | 4736.800 | 145.450 |
| 12116.200 | 7572.000 | 5515.    |         |                       |           |          |         |         |          |          |          |         |

|           |          |          |         |                       |           |          |          |          |          |          |          |         |
|-----------|----------|----------|---------|-----------------------|-----------|----------|----------|----------|----------|----------|----------|---------|
| 3416.200  | 3416.200 | 0.000    | 0.000   | SRC - Phelps 11-32NHZ | 3390.850  | 3297.650 | -117.180 | 2926.990 | 92.300   | 2931.730 | 2922.850 | 330.030 |
| 3516.200  | 3516.200 | 0.000    | 0.000   | SRC - Phelps 11-32NHZ | 3490.930  | 3396.020 | -99.450  | 2931.760 | 91.900   | 2935.910 | 2926.770 | 321.290 |
| 3616.200  | 3616.200 | 0.000    | 0.000   | SRC - Phelps 11-32NHZ | 3605.330  | 3508.600 | -79.740  | 2936.680 | 91.600   | 2939.730 | 2930.320 | 312.310 |
| 3716.200  | 3716.200 | 0.000    | 0.000   | SRC - Phelps 11-32NHZ | 3689.420  | 3591.390 | -65.440  | 2940.240 | 91.300   | 2943.610 | 2933.980 | 305.570 |
| 3816.200  | 3816.200 | 0.000    | 0.000   | SRC - Phelps 11-32NHZ | 3779.240  | 3679.850 | -50.450  | 2944.490 | 91.000   | 2948.070 | 2938.210 | 299.010 |
| 3916.200  | 3916.200 | 0.000    | 0.000   | SRC - Phelps 11-32NHZ | 3870.510  | 3769.860 | -35.990  | 2949.010 | 90.700   | 2952.850 | 2942.770 | 292.830 |
| 4016.200  | 4016.200 | 0.000    | 0.000   | SRC - Phelps 11-32NHZ | 3962.240  | 3860.380 | -21.970  | 2953.790 | 90.400   | 2957.970 | 2947.670 | 287.070 |
| 4116.200  | 4116.200 | 0.000    | 0.000   | SRC - Phelps 11-32NHZ | 4051.290  | 3948.230 | -8.270   | 2958.680 | 90.200   | 2963.450 | 2952.930 | 281.650 |
| 4216.200  | 4216.200 | 0.000    | 0.000   | SRC - Phelps 11-32NHZ | 4155.240  | 4050.700 | 8.260    | 2964.450 | 89.800   | 2969.070 | 2958.310 | 275.850 |
| 4316.200  | 4316.200 | 0.000    | 0.000   | SRC - Phelps 11-32NHZ | 4277.490  | 4171.400 | 26.730   | 2970.430 | 89.500   | 2974.070 | 2963.040 | 269.620 |
| 4416.200  | 4416.200 | 0.000    | 0.000   | SRC - Phelps 11-32NHZ | 4380.350  | 4273.060 | 41.640   | 2975.180 | 89.200   | 2978.910 | 2967.650 | 264.500 |
| 4492.500  | 4492.500 | 0.000    | 0.000   | SRC - Phelps 11-32NHZ | 10382.990 | 7438.010 | 311.690  | -72.690  | -13.100  | 2962.850 | 2948.130 | 201.280 |
| 4516.200  | 4516.200 | 0.130    | 0.070   | SRC - Phelps 11-32NHZ | 10382.280 | 7438.030 | 311.680  | -71.980  | -47.700  | 2939.280 | 2924.520 | 199.190 |
| 4616.200  | 4616.110 | 3.470    | 1.990   | SRC - Phelps 11-32NHZ | 10377.730 | 7438.150 | 311.570  | -67.430  | -77.000  | 2839.660 | 2824.860 | 191.890 |
| 4716.200  | 4715.690 | 11.350   | 6.520   | SRC - Phelps 11-32NHZ | 10370.690 | 7438.340 | 311.410  | -60.400  | -114.100 | 2739.960 | 2725.100 | 184.440 |
| 4816.200  | 4814.650 | 23.730   | 13.630  | SRC - Phelps 11-32NHZ | 10346.900 | 7438.890 | 310.970  | -36.620  | -139.900 | 2640.390 | 2625.510 | 177.460 |
| 4916.200  | 4912.730 | 40.590   | 23.310  | SRC - Phelps 11-32NHZ | 10254.560 | 7439.230 | 309.710  | 55.700   | -161.300 | 2541.000 | 2526.200 | 171.740 |
| 5016.200  | 5009.660 | 61.870   | 35.540  | SRC - Phelps 11-32NHZ | 10243.730 | 7439.110 | 309.560  | 66.530   | -167.500 | 2442.240 | 2427.420 | 164.780 |
| 5116.200  | 5105.170 | 87.530   | 50.270  | SRC - Phelps 11-32NHZ | 10236.160 | 7439.030 | 309.450  | 74.100   | -170.800 | 2344.500 | 2329.660 | 157.960 |
| 5216.200  | 5199.000 | 117.490  | 67.470  | SRC - Phelps 11-32NHZ | 10220.250 | 7438.890 | 309.200  | 90.010   | -173.500 | 2248.190 | 2233.340 | 151.440 |
| 5316.200  | 5290.900 | 151.660  | 87.100  | SRC - Phelps 11-32NHZ | 10203.750 | 7438.740 | 308.960  | 106.510  | -175.400 | 2153.680 | 2138.840 | 145.090 |
| 5416.200  | 5380.610 | 189.950  | 109.090 | SRC - Phelps 11-32NHZ | 10182.700 | 7438.560 | 308.870  | 127.560  | -177.100 | 2061.470 | 2046.630 | 138.920 |
| 5516.200  | 5347.330 | 227.400  | 127.400 | SRC - Phelps 11-32NHZ | 10152.120 | 7438.140 | 308.970  | 158.140  | -178.900 | 1962.950 | 1978.120 | 134.410 |
| 5516.200  | 5467.960 | 232.160  | 133.330 | SRC - Phelps 11-32NHZ | 10135.660 | 7437.850 | 309.030  | 174.590  | -178.800 | 1971.820 | 1957.000 | 132.990 |
| 5616.200  | 5554.560 | 275.510  | 158.230 | SRC - Phelps 11-32NHZ | 10102.510 | 7437.110 | 308.980  | 207.730  | -178.300 | 1883.500 | 1868.690 | 127.190 |
| 5716.200  | 5641.170 | 318.870  | 183.130 | SRC - Phelps 11-32NHZ | 10080.150 | 7436.520 | 308.850  | 230.080  | -177.000 | 1796.000 | 1781.140 | 120.880 |
| 5816.200  | 5727.770 | 362.220  | 208.030 | SRC - Phelps 11-32NHZ | 10063.500 | 7436.100 | 308.710  | 246.730  | -176.100 | 1709.610 | 1694.650 | 114.300 |
| 5916.200  | 5814.380 | 405.570  | 232.930 | SRC - Phelps 11-32NHZ | 10051.930 | 7435.910 | 308.530  | 258.290  | -175.400 | 1624.630 | 1609.510 | 107.450 |
| 6016.200  | 5900.980 | 448.930  | 257.830 | SRC - Phelps 11-32NHZ | 10048.000 | 7435.850 | 308.470  | 262.220  | -175.200 | 1541.280 | 1525.910 | 100.270 |
| 6116.200  | 5987.590 | 492.280  | 282.720 | SRC - Phelps 11-32NHZ | 10025.950 | 7435.770 | 308.050  | 284.260  | -173.800 | 1459.850 | 1444.200 | 93.280  |
| 6216.200  | 6074.190 | 535.630  | 307.620 | SRC - Phelps 11-32NHZ | 10016.000 | 7435.730 | 307.860  | 294.220  | -173.200 | 1380.530 | 1364.460 | 85.920  |
| 6316.200  | 6160.800 | 578.990  | 332.520 | SRC - Phelps 11-32NHZ | 9997.180  | 7435.930 | 307.430  | 313.030  | -172.100 | 1303.870 | 1287.310 | 78.710  |
| 6416.200  | 6247.400 | 622.340  | 357.420 | SRC - Phelps 11-32NHZ | 9975.130  | 7436.200 | 306.980  | 335.070  | -170.700 | 1230.110 | 1212.940 | 71.610  |
| 6516.200  | 6334.010 | 665.700  | 382.320 | SRC - Phelps 11-32NHZ | 9945.070  | 7436.600 | 306.500  | 365.130  | -168.800 | 1159.750 | 1141.870 | 64.850  |
| 6616.200  | 6420.620 | 709.050  | 407.220 | SRC - Phelps 11-32NHZ | 9911.780  | 7436.950 | 306.220  | 398.410  | -167.700 | 1093.300 | 1074.590 | 58.440  |
| 6716.200  | 6507.220 | 752.400  | 432.120 | SRC - Phelps 11-32NHZ | 9870.460  | 7437.010 | 306.290  | 430.760  | -164.000 | 1031.300 | 1011.680 | 52.570  |
| 6816.200  | 6593.830 | 795.760  | 457.020 | SRC - Phelps 11-32NHZ | 9843.000  | 7436.810 | 306.510  | 467.190  | -162.200 | 974.720  | 953.950  | 46.910  |
| 6916.200  | 6680.430 | 839.110  | 481.910 | SRC - Phelps 11-32NHZ | 9827.000  | 7436.710 | 306.440  | 483.190  | -161.100 | 925.030  | 902.850  | 41.690  |
| 7016.200  | 6767.040 | 882.460  | 506.810 | SRC - Phelps 11-32NHZ | 9808.600  | 7436.660 | 306.220  | 501.590  | -159.800 | 883.450  | 859.760  | 37.300  |
| 7116.200  | 6853.640 | 925.820  | 531.710 | SRC - Phelps 11-32NHZ | 9775.870  | 7436.600 | 305.940  | 534.320  | -157.600 | 850.930  | 825.860  | 33.930  |
| 7216.200  | 6940.250 | 969.170  | 556.610 | SRC - Phelps 11-32NHZ | 9727.100  | 7436.440 | 306.770  | 583.070  | -154.300 | 828.060  | 801.820  | 31.560  |
| 7316.200  | 7026.850 | 1012.530 | 581.510 | SRC - Phelps 11-32NHZ | 9684.060  | 7436.290 | 309.030  | 626.050  | -151.400 | 815.180  | 787.890  | 29.870  |
| 7381.690  | 7083.570 | 1040.920 | 597.810 | SRC - Phelps 11-32NHZ | 9669.000  | 7436.240 | 309.950  | 641.090  | -150.400 | 812.750  | 784.730  | 29.010  |
| 7416.200  | 7113.460 | 1055.880 | 606.410 | SRC - Phelps 11-32NHZ | 9659.530  | 7436.240 | 310.510  | 650.540  | -149.800 | 813.450  | 785.120  | 28.710  |
| 7516.200  | 7200.060 | 1099.230 | 631.310 | SRC - Phelps 11-32NHZ | 9640.140  | 7436.340 | 311.550  | 669.900  | -148.400 | 823.260  | 794.100  | 28.230  |
| 7545.730  | 7225.640 | 1112.030 | 638.660 | SRC - Phelps 11-32NHZ | 9638.000  | 7436.350 | 311.660  | 672.040  | -148.300 | 828.320  | 798.940  | 28.190  |
| 7616.200  | 7286.670 | 1142.590 | 656.210 | SRC - Phelps 11-32NHZ | 9622.500  | 7436.530 | 312.290  | 687.520  | -147.300 | 844.290  | 814.580  | 28.420  |
| 7668.640  | 7332.080 | 1165.320 | 669.260 | SRC - Phelps 11-32NHZ | 9617.550  | 7436.590 | 312.440  | 692.460  | -146.900 | 859.580  | 829.650  | 28.730  |
| 7716.200  | 7372.130 | 1188.210 | 680.780 | SRC - Phelps 11-32NHZ | 9607.000  | 7436.730 | 312.740  | 703.020  | -151.200 | 878.130  | 848.140  | 29.280  |
| 7816.200  | 7447.310 | 1250.160 | 702.400 | SRC - Phelps 11-32NHZ | 9587.720  | 7437.030 | 313.150  | 722.290  | -155.900 | 937.280  | 907.280  | 31.240  |
| 7916.200  | 7507.170 | 1328.120 | 719.620 | SRC - Phelps 11-32NHZ | 9573.930  | 7437.250 | 313.430  | 736.080  | -157.100 | 1017.220 | 987.270  | 33.960  |
| 8016.200  | 7548.630 | 1418.090 | 731.570 | SRC - Phelps 11-32NHZ | 9559.880  | 7437.510 | 313.640  | 750.120  | -152.700 | 1110.180 | 1080.290 | 37.150  |
| 8116.200  | 7569.590 | 1515.460 | 737.630 | SRC - Phelps 11-32NHZ | 9551.990  | 7437.660 | 313.760  | 758.010  | -151.700 | 1209.090 | 1179.200 | 40.450  |
| 8163.270  | 7572.000 | 1562.440 | 738.340 | SRC - Phelps 11-32NHZ | 9550.530  | 7437.680 | 313.780  | 759.470  | 9.100    | 1256.040 | 1226.120 | 41.980  |
| 8216.200  | 7572.000 | 1615.370 | 738.360 | SRC - Phelps 11-32NHZ | 9549.720  | 7437.700 | 313.790  | 760.280  | 9.500    | 1308.670 | 1278.710 | 43.680  |
| 8316.200  | 7572.000 | 1715.370 | 738.390 | SRC - Phelps 11-32NHZ | 9548.190  | 7437.730 | 313.820  | 761.810  | 10.100   | 1408.170 | 1378.140 | 46.900  |
| 8416.200  | 7572.000 | 1815.370 | 738.430 | SRC - Phelps 11-32NHZ | 9546.660  | 7437.750 | 313.840  | 763.340  | 10.700   | 1507.730 | 1477.640 | 50.100  |
| 8516.200  | 7572.000 | 1915.370 | 738.460 | SRC - Phelps 11-32NHZ | 9545.130  | 7437.780 | 313.860  | 764.870  | 11.400   | 1607.340 | 1577.190 | 53.300  |
| 8616.200  | 7572.000 | 2015.370 | 738.500 | SRC - Phelps 11-32NHZ | 9544.000  | 7437.800 | 313.880  | 766.000  | 11.800   | 1707.000 | 1676.780 | 56.490  |
| 8716.200  | 7572.000 | 2115.370 | 738.530 | SRC - Phelps 11-32NHZ | 9544.000  | 7437.800 | 313.880  | 766.000  | 11.800   | 1806.690 | 1776.410 | 59.650  |
| 8816.200  | 7572.000 | 2215.370 | 738.570 | SRC - Phelps 11-32NHZ | 9544.000  | 7437.800 | 313.880  | 766.000  | 11.800   | 1906.420 | 1876.060 | 62.810  |
| 8916.200  | 7572.000 | 2315.370 | 738.600 | SRC - Phelps 11-32NHZ | 9544.000  | 7437.800 | 313.880  | 766.000  | 11.800   | 2006.170 | 1975.750 | 65.950  |
| 9016.200  | 7572.000 | 2415.370 | 738.640 | SRC - Phelps 11-32NHZ | 9543.680  | 7437.810 | 313.880  | 766.310  | 12.000   | 2105.950 | 2075.470 | 69.090  |
| 9116.200  | 7572.000 | 2515.370 | 738.680 | SRC - Phelps 11-32NHZ | 9542.410  | 7437.820 | 313.900  | 767.580  | 12.500   | 2205.750 | 2175.210 | 72.230  |
| 9216.200  | 7572.000 | 2615.370 | 738.710 | SRC - Phelps 11-32NHZ | 9541.150  | 7437.840 | 313.910  | 768.850  | 13.000   | 2305.560 | 2274.970 | 75.360  |
| 9316.200  | 7572.000 | 2715.370 | 738.750 | SRC - Phelps 11-32NHZ | 9539.880  | 7437.860 | 313.930  | 770.120  | 13.500   | 2405.390 | 2374.740 | 78.480  |
| 9416.200  | 7572.000 | 2815.370 | 738.780 | SRC - Phelps 11-32NHZ | 9538.610  | 7437.870 | 313.940  | 771.390  | 14.000   | 2505.230 | 2474.530 | 81.590  |
| 9516.200  | 7572.000 | 2915.370 | 738.820 | SRC - Phelps 11-32NHZ | 9537.340  | 7437.890 | 313.960  | 772.660  | 14.500   | 2605.080 | 2574.330 | 84.690  |
| 9616.200  | 7572.000 | 3015.370 | 738.850 | SRC - Phelps 11-32NHZ | 9536.070  | 7437.910 | 313.980  | 773.920  | 15.000   | 2704.950 | 2674.130 | 87.780  |
| 9716.200  | 7572.000 | 3115.370 | 738.890 | SRC - Phelps 11-32NHZ | 9534.800  | 7437.920 | 313.990  | 775.190  | 15.600   | 2804.820 | 2773.950 | 90.860  |
| 9816.200  | 7572.000 | 3215.370 | 738.930 | SRC - Phelps 11-32NHZ | 9533.530  | 7437.940 | 314.010  | 776.460  | 16.100   | 2904.700 | 2873.780 | 93.940  |
| 9916.200  | 7572.000 | 3315.370 | 738.960 | SRC - Phelps 11-32NHZ | 9532.260  | 7437.960 | 314.020  | 777.730  | 16.600   | 3004.590 | 2973.610 | 97.000  |
| 10016.200 | 7572.000 | 3415.370 | 739.000 | SRC - Phelps 11-32NHZ | 9531.000  | 7437.970 | 314.040  | 779.000  | 17.100   | 3104.480 | 30       |         |

|          |          |          |         |                       |           |          |          |          |          |          |          |         |
|----------|----------|----------|---------|-----------------------|-----------|----------|----------|----------|----------|----------|----------|---------|
| 1816.200 | 1816.200 | 0.000    | 0.000   | SRC - Phelps 12-32CHZ | 1624.850  | 1584.940 | -700.250 | 2872.460 | 103.700  | 2965.610 | 2961.920 | 802.870 |
| 1916.200 | 1916.200 | 0.000    | 0.000   | SRC - Phelps 12-32CHZ | 1712.230  | 1672.040 | -701.590 | 2879.330 | 103.700  | 2973.620 | 2970.150 | 858.140 |
| 2016.200 | 2016.200 | 0.000    | 0.000   | SRC - Phelps 12-32CHZ | 1810.030  | 1769.510 | -702.790 | 2887.330 | 103.700  | 2981.850 | 2978.230 | 822.190 |
| 2116.200 | 2116.200 | 0.000    | 0.000   | SRC - Phelps 12-32CHZ | 1911.890  | 1871.020 | -704.290 | 2895.620 | 103.700  | 2990.110 | 2986.320 | 788.600 |
| 2216.200 | 2216.200 | 0.000    | 0.000   | SRC - Phelps 12-32CHZ | 2012.390  | 1971.170 | -706.640 | 2903.510 | 103.700  | 2998.290 | 2994.340 | 758.040 |
| 2316.200 | 2316.200 | 0.000    | 0.000   | SRC - Phelps 12-32CHZ | 2138.180  | 2096.570 | -709.430 | 2913.140 | 103.700  | 3006.310 | 3002.170 | 726.170 |
| 2416.200 | 2416.200 | 0.000    | 0.000   | SRC - Phelps 12-32CHZ | 2291.210  | 2249.270 | -713.790 | 2922.060 | 103.700  | 3012.610 | 3008.260 | 693.110 |
| 2516.200 | 2516.200 | 0.000    | 0.000   | SRC - Phelps 12-32CHZ | 2386.500  | 2344.400 | -716.300 | 2926.950 | 103.800  | 3018.220 | 3013.720 | 669.930 |
| 2616.200 | 2616.200 | 0.000    | 0.000   | SRC - Phelps 12-32CHZ | 2462.130  | 2419.860 | -718.380 | 2931.470 | 103.800  | 3024.590 | 3019.950 | 650.840 |
| 2716.200 | 2716.200 | 0.000    | 0.000   | SRC - Phelps 12-32CHZ | 2584.940  | 2542.450 | -720.990 | 2936.480 | 103.800  | 3029.620 | 3025.790 | 627.640 |
| 2816.200 | 2816.200 | 0.000    | 0.000   | SRC - Phelps 12-32CHZ | 2664.650  | 2622.010 | -722.580 | 2943.000 | 103.800  | 3036.630 | 3031.650 | 610.440 |
| 2916.200 | 2916.200 | 0.000    | 0.000   | SRC - Phelps 12-32CHZ | 2754.830  | 2711.990 | -724.890 | 2948.560 | 103.800  | 3043.220 | 3038.090 | 593.330 |
| 3016.200 | 3016.200 | 0.000    | 0.000   | SRC - Phelps 12-32CHZ | 2844.170  | 2801.120 | -727.320 | 2954.230 | 103.800  | 3050.040 | 3044.750 | 577.340 |
| 3116.200 | 3116.200 | 0.000    | 0.000   | SRC - Phelps 12-32CHZ | 2901.670  | 2858.450 | -728.980 | 2958.300 | 103.800  | 3057.680 | 3052.260 | 565.140 |
| 3216.200 | 3216.200 | 0.000    | 0.000   | SRC - Phelps 12-32CHZ | 2986.060  | 2942.510 | -731.750 | 2965.180 | 103.900  | 3066.380 | 3060.820 | 551.420 |
| 3316.200 | 3316.200 | 0.000    | 0.000   | SRC - Phelps 12-32CHZ | 3089.480  | 3045.480 | -736.140 | 2973.700 | 103.900  | 3075.400 | 3069.670 | 536.930 |
| 3416.200 | 3416.200 | 0.000    | 0.000   | SRC - Phelps 12-32CHZ | 3240.590  | 3196.120 | -741.640 | 2984.240 | 104.000  | 3082.880 | 3076.950 | 519.410 |
| 3516.200 | 3516.200 | 0.000    | 0.000   | SRC - Phelps 12-32CHZ | 3319.450  | 3274.750 | -743.950 | 2989.880 | 104.000  | 3090.490 | 3084.410 | 508.270 |
| 3616.200 | 3616.200 | 0.000    | 0.000   | SRC - Phelps 12-32CHZ | 3403.840  | 3358.840 | -746.480 | 2996.450 | 104.000  | 3098.740 | 3092.510 | 497.300 |
| 3716.200 | 3716.200 | 0.000    | 0.000   | SRC - Phelps 12-32CHZ | 3500.520  | 3455.170 | -749.150 | 3004.120 | 104.000  | 3107.110 | 3100.720 | 486.120 |
| 3816.200 | 3816.200 | 0.000    | 0.000   | SRC - Phelps 12-32CHZ | 3607.330  | 3561.610 | -750.210 | 3013.020 | 104.000  | 3115.430 | 3108.870 | 474.890 |
| 3916.200 | 3916.200 | 0.000    | 0.000   | SRC - Phelps 12-32CHZ | 3736.590  | 3690.480 | -751.590 | 3023.030 | 104.000  | 3123.230 | 3116.480 | 462.870 |
| 4016.200 | 4016.200 | 0.000    | 0.000   | SRC - Phelps 12-32CHZ | 3885.000  | 3838.590 | -753.200 | 3032.270 | 104.000  | 3129.460 | 3122.510 | 450.280 |
| 4116.200 | 4116.200 | 0.000    | 0.000   | SRC - Phelps 12-32CHZ | 4049.540  | 4002.930 | -753.560 | 3040.140 | 103.900  | 3134.190 | 3127.020 | 437.510 |
| 4216.200 | 4216.200 | 0.000    | 0.000   | SRC - Phelps 12-32CHZ | 4180.600  | 4133.930 | -753.610 | 3044.280 | 103.900  | 3137.250 | 3129.900 | 426.870 |
| 4316.200 | 4316.200 | 0.000    | 0.000   | SRC - Phelps 12-32CHZ | 4360.890  | 4314.170 | -755.800 | 3046.500 | 103.900  | 3138.860 | 3131.280 | 414.480 |
| 4416.200 | 4416.200 | 0.000    | 0.000   | SRC - Phelps 12-32CHZ | 4513.820  | 4467.080 | -755.510 | 3044.920 | 103.900  | 3137.660 | 3129.880 | 403.650 |
| 4492.500 | 4492.500 | 0.000    | 0.000   | SRC - Phelps 12-32CHZ | 4582.400  | 4535.650 | -754.460 | 3044.160 | 103.900  | 3136.560 | 3128.670 | 397.620 |
| 4516.200 | 4516.200 | 0.130    | 0.070   | SRC - Phelps 12-32CHZ | 4603.220  | 4556.470 | -754.160 | 3043.950 | 74.100   | 3136.200 | 3128.280 | 395.800 |
| 4616.200 | 4616.110 | 3.470    | 1.990   | SRC - Phelps 12-32CHZ | 10363.800 | 7598.970 | -761.290 | -21.550  | 157.400  | 3079.420 | 3063.500 | 193.480 |
| 4716.200 | 4716.690 | 11.350   | 6.520   | SRC - Phelps 12-32CHZ | 10358.840 | 7598.990 | -761.340 | -16.590  | 160.200  | 2985.130 | 2969.030 | 185.430 |
| 4816.200 | 4814.650 | 23.730   | 13.630  | SRC - Phelps 12-32CHZ | 10349.130 | 7599.040 | -761.450 | -6.880   | 162.000  | 2893.050 | 2876.750 | 177.530 |
| 4916.200 | 4912.730 | 40.590   | 23.310  | SRC - Phelps 12-32CHZ | 10339.340 | 7599.070 | -761.590 | 2.910    | 163.400  | 2803.620 | 2787.100 | 169.640 |
| 5016.200 | 5009.660 | 61.870   | 35.540  | SRC - Phelps 12-32CHZ | 10327.070 | 7599.110 | -761.750 | 15.180   | 164.300  | 2717.360 | 2700.570 | 161.870 |
| 5116.200 | 5105.170 | 87.530   | 50.270  | SRC - Phelps 12-32CHZ | 10318.480 | 7599.140 | -761.890 | 23.770   | 165.200  | 2634.790 | 2617.690 | 154.090 |
| 5216.200 | 5197.490 | 117.490  | 67.470  | SRC - Phelps 12-32CHZ | 10301.580 | 7599.200 | -762.240 | 40.670   | 165.500  | 2456.480 | 2439.050 | 146.660 |
| 5316.200 | 5290.900 | 151.660  | 87.100  | SRC - Phelps 12-32CHZ | 10281.410 | 7599.260 | -762.690 | 60.830   | 165.700  | 2482.990 | 2465.190 | 139.490 |
| 5416.200 | 5380.610 | 189.950  | 109.090 | SRC - Phelps 12-32CHZ | 10260.200 | 7599.300 | -763.210 | 82.030   | 165.700  | 2414.920 | 2396.700 | 132.570 |
| 5492.390 | 5447.330 | 221.830  | 127.400 | SRC - Phelps 12-32CHZ | 10242.550 | 7599.330 | -763.640 | 99.670   | 165.700  | 2367.070 | 2348.500 | 127.490 |
| 5516.200 | 5467.960 | 232.160  | 133.330 | SRC - Phelps 12-32CHZ | 10236.840 | 7599.340 | -763.780 | 105.380  | 165.500  | 2352.750 | 2334.070 | 125.890 |
| 5616.200 | 5554.560 | 275.510  | 158.230 | SRC - Phelps 12-32CHZ | 10209.350 | 7599.330 | -764.500 | 132.870  | 164.700  | 2294.200 | 2275.040 | 119.750 |
| 5716.200 | 5641.170 | 318.870  | 183.130 | SRC - Phelps 12-32CHZ | 10185.810 | 7599.290 | -765.160 | 156.390  | 164.000  | 2238.310 | 2218.630 | 113.690 |
| 5816.200 | 5727.770 | 362.220  | 208.030 | SRC - Phelps 12-32CHZ | 10162.280 | 7599.240 | -765.810 | 179.910  | 163.300  | 2185.330 | 2165.080 | 107.920 |
| 5916.200 | 5814.380 | 405.570  | 232.930 | SRC - Phelps 12-32CHZ | 10142.000 | 7599.250 | -766.360 | 200.190  | 162.700  | 2135.480 | 2114.630 | 102.410 |
| 6016.200 | 5900.980 | 448.930  | 257.830 | SRC - Phelps 12-32CHZ | 10122.310 | 7599.330 | -766.840 | 219.870  | 162.200  | 2088.990 | 2067.510 | 97.240  |
| 6116.200 | 5987.590 | 492.280  | 282.720 | SRC - Phelps 12-32CHZ | 10093.860 | 7599.580 | -767.350 | 248.320  | 161.300  | 2046.070 | 2023.970 | 92.590  |
| 6216.200 | 6074.190 | 535.630  | 307.620 | SRC - Phelps 12-32CHZ | 10058.600 | 7600.040 | -767.670 | 283.570  | 160.300  | 2006.830 | 1984.140 | 88.420  |
| 6316.200 | 6160.800 | 578.990  | 332.520 | SRC - Phelps 12-32CHZ | 10018.460 | 7600.510 | -767.660 | 323.710  | 159.100  | 1971.380 | 1948.100 | 84.690  |
| 6416.200 | 6247.400 | 624.340  | 357.420 | SRC - Phelps 12-32CHZ | 9991.050  | 7600.600 | -767.280 | 381.110  | 157.400  | 1939.780 | 1916.000 | 81.590  |
| 6516.200 | 6334.010 | 665.700  | 382.320 | SRC - Phelps 12-32CHZ | 9924.250  | 7600.200 | -766.890 | 417.910  | 156.300  | 1912.280 | 1887.910 | 78.470  |
| 6616.200 | 6420.620 | 709.050  | 407.220 | SRC - Phelps 12-32CHZ | 9886.630  | 7599.510 | -766.350 | 455.520  | 155.100  | 1889.160 | 1864.210 | 75.720  |
| 6716.200 | 6507.220 | 752.400  | 432.120 | SRC - Phelps 12-32CHZ | 9862.760  | 7599.040 | -765.950 | 479.390  | 154.400  | 1870.740 | 1845.170 | 73.150  |
| 6816.200 | 6593.830 | 795.760  | 457.020 | SRC - Phelps 12-32CHZ | 9837.540  | 7598.540 | -765.520 | 504.600  | 153.700  | 1857.220 | 1831.050 | 70.970  |
| 6916.200 | 6680.430 | 839.110  | 481.910 | SRC - Phelps 12-32CHZ | 9813.530  | 7598.080 | -765.080 | 528.600  | 152.900  | 1848.700 | 1821.960 | 69.150  |
| 7016.200 | 6767.040 | 882.460  | 506.810 | SRC - Phelps 12-32CHZ | 9802.850  | 7597.910 | -764.960 | 539.280  | 152.600  | 1845.370 | 1818.040 | 67.530  |
| 7030.470 | 6779.390 | 888.650  | 510.370 | SRC - Phelps 12-32CHZ | 9799.420  | 7597.850 | -764.920 | 542.710  | 152.500  | 1845.320 | 1817.920 | 67.350  |
| 7037.200 | 6785.220 | 891.570  | 512.040 | SRC - Phelps 12-32CHZ | 9797.800  | 7597.830 | -764.900 | 544.320  | 152.500  | 1845.330 | 1817.900 | 67.270  |
| 7116.200 | 6853.620 | 925.820  | 531.710 | SRC - Phelps 12-32CHZ | 9782.000  | 7597.580 | -764.710 | 560.120  | 152.000  | 1847.200 | 1819.380 | 66.400  |
| 7216.200 | 6940.250 | 969.170  | 556.610 | SRC - Phelps 12-32CHZ | 9763.100  | 7597.380 | -764.540 | 579.010  | 151.400  | 1854.210 | 1825.940 | 65.590  |
| 7316.200 | 7026.850 | 1012.530 | 581.510 | SRC - Phelps 12-32CHZ | 9743.110  | 7597.220 | -764.380 | 598.010  | 150.800  | 1869.270 | 1837.610 | 65.130  |
| 7416.200 | 7113.460 | 1055.880 | 606.410 | SRC - Phelps 12-32CHZ | 9718.130  | 7597.130 | -764.150 | 623.980  | 150.100  | 1883.280 | 1854.320 | 65.040  |
| 7430.900 | 7126.190 | 1062.250 | 610.070 | SRC - Phelps 12-32CHZ | 9718.000  | 7597.130 | -764.140 | 624.110  | 150.100  | 1886.190 | 1857.180 | 65.010  |
| 7516.200 | 7200.060 | 1099.230 | 631.310 | SRC - Phelps 12-32CHZ | 9697.500  | 7597.100 | -764.010 | 644.610  | 149.500  | 1905.120 | 1875.890 | 65.190  |
| 7616.200 | 7286.670 | 1142.590 | 656.210 | SRC - Phelps 12-32CHZ | 9680.120  | 7597.040 | -763.920 | 661.990  | 148.900  | 1931.610 | 1902.160 | 65.590  |
| 7668.640 | 7332.080 | 1165.320 | 669.260 | SRC - Phelps 12-32CHZ | 9667.260  | 7596.980 | -763.890 | 674.860  | 148.600  | 1947.320 | 1917.790 | 65.950  |
| 7716.200 | 7372.130 | 1188.210 | 680.780 | SRC - Phelps 12-32CHZ | 9655.900  | 7596.920 | -763.860 | 686.210  | 153.300  | 1964.980 | 1935.400 | 66.420  |
| 7816.200 | 7447.310 | 1250.160 | 702.400 | SRC - Phelps 12-32CHZ | 9646.000  | 7596.880 | -763.890 | 696.120  | 159.600  | 2019.610 | 1989.870 | 67.920  |
| 7916.200 | 7517.170 | 1328.120 | 719.620 | SRC - Phelps 12-32CHZ | 9629.240  | 7596.820 | -763.950 | 712.870  | 162.700  | 2094.000 | 2064.190 | 70.260  |
| 8016.200 | 7548.630 | 1418.090 | 731.570 | SRC - Phelps 12-32CHZ | 9617.740  | 7596.780 | -763.990 | 724.370  | 164.600  | 2182.620 | 2152.760 | 73.110  |
| 8116.200 | 7569.590 | 1515.460 | 737.630 | SRC - Phelps 12-32CHZ | 9612.090  | 7596.760 | -764.010 | 730.020  | 166.900  | 2279.640 | 2249.740 | 76.230  |
| 8163.270 | 7572.000 | 1562.440 | 738.340 | SRC - Phelps 12-32CHZ | 9611.550  | 7596.760 | -764.010 | 730.560  | -164.300 | 2326.600 | 2296.660 | 77.730  |
| 8216.200 | 7572.000 | 1615.370 | 738.360 | SRC - Phelps 12-32CHZ | 9611.710  | 7596.760 | -764.010 | 730.560  | -164.000 | 2379.520 | 2349.560 | 79.420  |
| 8316.200 | 7572.000 | 1715.370 | 738.390 | SRC - Phelps 12-32CHZ | 9612.010  | 7596.760 | -764.010 | 730.100  | -165.3   |          |          |         |

|          |          |         |         |                       |           |          |           |          |         |          |          |          |
|----------|----------|---------|---------|-----------------------|-----------|----------|-----------|----------|---------|----------|----------|----------|
| 116.200  | 116.200  | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 150.730   | 113.930  | -682.380  | 2773.460 | 103.800 | 2856.170 | 2855.040 | 2510.340 |
| 180.240  | 180.240  | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 214.770   | 177.970  | -682.560  | 2773.470 | 103.800 | 2856.220 | 2854.990 | 2315.930 |
| 216.200  | 216.200  | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 244.100   | 207.300  | -682.610  | 2773.530 | 103.800 | 2856.310 | 2853.000 | 2215.690 |
| 316.200  | 316.200  | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 344.100   | 307.300  | -682.780  | 2773.810 | 103.800 | 2856.630 | 2855.170 | 1956.390 |
| 416.200  | 416.200  | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 444.100   | 407.300  | -682.940  | 2774.100 | 103.800 | 2856.940 | 2855.330 | 1778.260 |
| 516.200  | 516.200  | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 540.630   | 503.820  | -682.890  | 2774.500 | 103.800 | 2857.340 | 2855.570 | 1621.800 |
| 616.200  | 616.200  | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 630.970   | 594.170  | -682.860  | 2775.040 | 103.800 | 2857.900 | 2855.990 | 1493.110 |
| 716.200  | 716.200  | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 716.540   | 679.730  | -683.500  | 2775.860 | 103.800 | 2859.010 | 2856.940 | 1386.810 |
| 816.200  | 816.200  | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 792.960   | 756.120  | -685.240  | 2776.890 | 103.900 | 2860.820 | 2858.620 | 1296.870 |
| 916.200  | 916.200  | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 870.500   | 833.580  | -688.270  | 2778.190 | 103.900 | 2863.370 | 2861.020 | 1218.790 |
| 1016.200 | 1016.200 | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 946.240   | 909.190  | -692.430  | 2779.740 | 104.000 | 2866.880 | 2864.190 | 1149.800 |
| 1116.200 | 1116.200 | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 1032.500  | 995.230  | -698.310  | 2781.790 | 104.100 | 2870.850 | 2868.000 | 1083.420 |
| 1216.200 | 1216.200 | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 1118.450  | 1080.890 | -704.940  | 2783.980 | 104.200 | 2875.030 | 2872.230 | 1024.890 |
| 1316.200 | 1316.200 | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 1208.640  | 1170.750 | -712.240  | 2786.720 | 104.300 | 2879.970 | 2877.000 | 969.520  |
| 1416.200 | 1416.200 | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 1320.400  | 1282.190 | -719.910  | 2790.380 | 104.500 | 2884.860 | 2881.710 | 915.160  |
| 1516.200 | 1516.200 | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 1438.000  | 1399.570 | -726.060  | 2793.770 | 104.600 | 2888.930 | 2886.000 | 866.060  |
| 1616.200 | 1616.200 | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 1496.160  | 1457.640 | -728.250  | 2796.290 | 104.600 | 2893.910 | 2890.440 | 835.050  |
| 1716.200 | 1716.200 | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 1565.930  | 1527.200 | -732.300  | 2799.710 | 104.700 | 2900.070 | 2896.460 | 803.500  |
| 1816.200 | 1816.200 | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 1635.930  | 1596.860 | -738.040  | 2803.360 | 104.800 | 2907.170 | 2903.420 | 774.250  |
| 1916.200 | 1916.200 | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 1728.250  | 1688.610 | -747.000  | 2808.360 | 104.900 | 2914.910 | 2911.360 | 821.810  |
| 2016.200 | 2016.200 | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 1827.870  | 1787.610 | -756.630  | 2813.820 | 105.100 | 2922.730 | 2919.000 | 784.190  |
| 2116.200 | 2116.200 | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 1929.320  | 1888.470 | -766.120  | 2819.450 | 105.200 | 2930.540 | 2926.630 | 749.840  |
| 2216.200 | 2216.200 | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 2036.270  | 1984.860 | -775.280  | 2824.770 | 105.300 | 2938.370 | 2934.140 | 717.890  |
| 2316.200 | 2316.200 | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 2138.030  | 2096.190 | -782.380  | 2831.400 | 105.500 | 2945.740 | 2941.470 | 690.150  |
| 2416.200 | 2416.200 | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 2273.660  | 2231.380 | -790.370  | 2838.730 | 105.600 | 2952.500 | 2948.030 | 660.380  |
| 2516.200 | 2516.200 | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 2345.080  | 2302.580 | -794.720  | 2842.390 | 105.600 | 2959.120 | 2954.510 | 640.950  |
| 2616.200 | 2616.200 | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 2408.990  | 2366.190 | -799.310  | 2846.310 | 105.700 | 2966.960 | 2962.210 | 624.070  |
| 2716.200 | 2716.200 | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 2517.300  | 2473.980 | -807.160  | 2853.420 | 105.800 | 2975.260 | 2970.330 | 602.770  |
| 2816.200 | 2816.200 | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 2647.290  | 2603.480 | -815.250  | 2861.280 | 105.900 | 2982.750 | 2977.620 | 580.950  |
| 2916.200 | 2916.200 | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 2731.540  | 2687.440 | -820.350  | 2866.120 | 106.000 | 2989.970 | 2984.680 | 565.110  |
| 3016.200 | 3016.200 | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 2818.840  | 2774.360 | -826.420  | 2871.480 | 106.100 | 2997.800 | 2992.350 | 549.930  |
| 3116.200 | 3116.200 | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 2907.000  | 2862.090 | -833.110  | 2877.120 | 106.200 | 3006.070 | 3000.460 | 535.510  |
| 3216.200 | 3216.200 | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 3001.870  | 2956.430 | -840.920  | 2883.300 | 106.300 | 3014.640 | 3008.850 | 521.040  |
| 3316.200 | 3316.200 | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 3094.000  | 3048.030 | -848.790  | 2889.330 | 106.400 | 3023.340 | 3017.380 | 507.670  |
| 3416.200 | 3416.200 | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 3193.850  | 3147.290 | -857.170  | 2895.960 | 106.500 | 3032.220 | 3026.090 | 494.460  |
| 3516.200 | 3516.200 | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 3304.470  | 3257.280 | -866.460  | 2903.330 | 106.600 | 3040.900 | 3034.580 | 481.160  |
| 3616.200 | 3616.200 | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 3403.920  | 3356.190 | -874.670  | 2909.690 | 106.700 | 3049.420 | 3042.930 | 469.440  |
| 3716.200 | 3716.200 | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 3509.490  | 3461.090 | -883.590  | 2916.250 | 106.900 | 3057.830 | 3051.150 | 457.790  |
| 3816.200 | 3816.200 | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 3598.100  | 3549.260 | -891.650  | 2921.580 | 107.000 | 3066.250 | 3058.410 | 447.770  |
| 3916.200 | 3916.200 | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 3696.940  | 3647.470 | -900.990  | 2927.710 | 107.100 | 3074.970 | 3067.950 | 437.610  |
| 4016.200 | 4016.200 | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 3809.660  | 3759.520 | -911.180  | 2934.590 | 107.300 | 3083.500 | 3076.280 | 427.100  |
| 4116.200 | 4116.200 | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 3909.090  | 3858.370 | -920.050  | 2940.490 | 107.400 | 3091.830 | 3084.430 | 417.940  |
| 4216.200 | 4216.200 | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 3985.620  | 3934.410 | -927.310  | 2945.180 | 107.500 | 3100.550 | 3092.990 | 410.430  |
| 4316.200 | 4316.200 | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 4079.310  | 4027.460 | -936.210  | 2951.460 | 107.600 | 3109.820 | 3102.090 | 402.440  |
| 4416.200 | 4416.200 | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 4184.720  | 4132.240 | -945.190  | 2958.760 | 107.700 | 3119.020 | 3111.110 | 394.250  |
| 4492.500 | 4492.500 | 0.000   | 0.000   | SRC - Phelps 12-32NHZ | 4281.600  | 4228.530 | -953.920  | 2964.820 | 107.800 | 3128.670 | 3117.600 | 387.410  |
| 4516.200 | 4516.200 | 0.130   | 0.070   | SRC - Phelps 12-32NHZ | 10208.000 | 7444.550 | -1071.200 | 32.510   | 149.400 | 3118.340 | 3101.580 | 186.070  |
| 4616.200 | 4616.200 | 1.990   | 1.990   | SRC - Phelps 12-32NHZ | 10207.150 | 7444.550 | -1071.170 | 33.360   | 152.900 | 3032.220 | 3026.090 | 178.290  |
| 4716.200 | 4716.200 | 11.350  | 6.520   | SRC - Phelps 12-32NHZ | 10202.340 | 7444.550 | -1071.030 | 38.160   | 155.400 | 2935.850 | 2918.630 | 170.420  |
| 4816.200 | 4816.200 | 23.730  | 13.630  | SRC - Phelps 12-32NHZ | 10194.820 | 7444.560 | -1070.800 | 45.690   | 157.200 | 2848.760 | 2831.250 | 162.700  |
| 4916.200 | 4916.200 | 40.590  | 23.310  | SRC - Phelps 12-32NHZ | 10192.000 | 7444.560 | -1070.710 | 48.500   | 158.800 | 2765.100 | 2747.260 | 154.980  |
| 5016.200 | 5016.200 | 61.870  | 35.540  | SRC - Phelps 12-32NHZ | 10192.000 | 7444.560 | -1070.710 | 48.500   | 160.200 | 2685.450 | 2667.230 | 147.360  |
| 5116.200 | 5116.200 | 87.530  | 50.270  | SRC - Phelps 12-32NHZ | 10177.630 | 7444.580 | -1070.520 | 62.870   | 160.900 | 2610.370 | 2591.770 | 140.330  |
| 5216.200 | 5199.000 | 117.490 | 67.470  | SRC - Phelps 12-32NHZ | 10176.000 | 7444.580 | -1070.500 | 64.500   | 161.800 | 2540.460 | 2521.390 | 133.260  |
| 5316.200 | 5290.900 | 151.660 | 87.100  | SRC - Phelps 12-32NHZ | 10160.500 | 7444.600 | -1070.500 | 80.000   | 162.100 | 2476.320 | 2456.790 | 126.820  |
| 5416.200 | 5380.610 | 189.950 | 109.090 | SRC - Phelps 12-32NHZ | 10147.160 | 7444.600 | -1070.660 | 93.340   | 162.400 | 2418.570 | 2398.530 | 120.700  |
| 5492.390 | 5447.330 | 221.830 | 127.400 | SRC - Phelps 12-32NHZ | 10125.260 | 7444.570 | -1070.920 | 115.240  | 162.200 | 2379.140 | 2358.730 | 116.520  |
| 5516.200 | 5467.960 | 232.160 | 133.330 | SRC - Phelps 12-32NHZ | 10100.630 | 7444.470 | -1071.120 | 139.870  | 161.600 | 2367.520 | 2347.040 | 115.590  |
| 5616.200 | 5554.560 | 275.510 | 158.230 | SRC - Phelps 12-32NHZ | 10082.000 | 7444.360 | -1071.190 | 158.500  | 161.100 | 2320.550 | 2299.520 | 110.350  |
| 5716.200 | 5641.170 | 318.870 | 183.130 | SRC - Phelps 12-32NHZ | 10066.500 | 7444.230 | -1071.380 | 174.000  | 160.700 | 2276.830 | 2255.210 | 105.320  |
| 5816.200 | 5727.720 | 362.150 | 208.030 | SRC - Phelps 12-32NHZ | 10066.500 | 7444.230 | -1071.390 | 174.000  | 160.700 | 2226.660 | 2214.380 | 100.360  |
| 5916.200 | 5814.380 | 405.570 | 232.930 | SRC - Phelps 12-32NHZ | 10051.000 | 7444.140 | -1071.950 | 189.480  | 160.200 | 2200.250 | 2177.340 | 96.060   |
| 6016.200 | 5900.980 | 448.930 | 257.830 | SRC - Phelps 12-32NHZ | 10051.000 | 7444.140 | -1071.950 | 189.480  | 160.200 | 2167.730 | 2144.140 | 91.880   |
| 6116.200 | 5987.590 | 492.280 | 282.720 | SRC - Phelps 12-32NHZ | 10042.570 | 7444.110 | -1072.440 | 197.900  | 160.000 | 2139.390 | 2115.130 | 88.210   |
| 6216.200 | 6074.190 | 535.630 | 307.620 | SRC - Phelps 12-32NHZ | 10035.500 | 7444.080 | -1072.840 | 204.960  | 159.800 | 2115.260 | 2090.340 | 84.900   |
| 6316.200 | 6160.800 | 578.990 | 332.520 | SRC - Phelps 12-32NHZ | 10035.500 | 7444.080 | -1072.840 | 204.960  | 159.800 | 2095.620 | 2070.030 | 81.880   |
| 6416.200 | 6247.400 | 622.340 | 357.420 | SRC - Phelps 12-32NHZ | 10020.000 | 7444.060 | -1074.080 | 220.410  | 159.400 | 2080.530 | 2054.330 | 79.420   |
| 6516.200 | 6334.010 | 665.700 | 382.320 | SRC - Phelps 12-32NHZ | 10020.000 | 7444.060 | -1074.080 | 220.410  | 159.400 | 2070.080 | 2043.250 | 77.140   |
| 6616.200 | 6420.620 | 709.050 | 407.220 | SRC - Phelps 12-32NHZ | 10005.900 | 7444.030 | -1075.450 | 234.440  | 159.000 | 2064.380 | 2037.000 | 75.370   |
| 6686.150 | 6481.200 | 739.380 | 424.640 | SRC - Phelps 12-32NHZ | 10004.500 | 7444.030 | -1075.590 | 235.840  | 159.000 | 2063.200 | 2035.410 | 74.250   |
| 6692.710 | 6486.880 | 742.220 | 426.270 | SRC - Phelps 12-32NHZ | 10004.500 | 7444.030 | -1075.590 | 235.840  | 159.000 | 2063.210 | 2035.390 | 74.150   |
| 6716.200 | 6507.220 | 752.400 | 432.120 | SRC - Phelps 12-32NHZ | 10004.500 | 7444.030 | -1075.590 | 235.840  | 159.000 | 2063.420 | 2035.460 | 73.820   |
| 6816.200 | 6593.830 | 795.760 | 457.020 | SRC - Phelps 12-32NHZ | 9989.000  | 7443.950 | -1077.320 | 251.240  | 158.600 | 2032.930 | 2008.810 | 72.720   |

|           |          |          |         |                       |          |          |           |         |        |          |          |         |
|-----------|----------|----------|---------|-----------------------|----------|----------|-----------|---------|--------|----------|----------|---------|
| 12316.200 | 7572.000 | 5715.370 | 739.820 | SRC - Phelps 12-32NHZ | 9360.000 | 7443.740 | -1083.350 | 878.350 | 47.700 | 6801.340 | 6769.900 | 216.280 |
| 12416.200 | 7572.000 | 5815.370 | 739.850 | SRC - Phelps 12-32NHZ | 9360.000 | 7443.740 | -1083.350 | 878.350 | 47.700 | 6901.310 | 6869.800 | 219.600 |
| 12511.410 | 7572.000 | 5910.580 | 739.890 | SRC - Phelps 12-32NHZ | 9360.000 | 7443.740 | -1083.350 | 878.350 | 47.700 | 6996.480 | 6964.920 | 221.700 |

## 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         | -692.000         | 2729.520        | 104.200                   | 2815.870                       | 2814.900                |                  |
| 32.600           | 32.600            |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 59.940        | 23.140         | -691.960         | 2729.550        | 104.200                   | 2815.910                       | 2814.900                | 2787.430         |
| 116.200          | 116.200           |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 118.800       | 81.980         | -691.110         | 2730.340        | 104.200                   | 2816.650                       | 2815.540                | 2532.690         |
| 216.200          | 216.200           |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 234.030       | 197.190        | -689.210         | 2731.990        | 104.200                   | 2817.650                       | 2816.370                | 2204.200         |
| 316.200          | 316.200           |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 348.980       | 312.130        | -688.220         | 2732.820        | 104.100                   | 2818.140                       | 2816.700                | 1945.800         |
| 416.200          | 416.200           |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 453.530       | 416.680        | -688.060         | 2732.930        | 104.100                   | 2818.220                       | 2816.600                | 1747.410         |
| 516.200          | 516.200           |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 556.990       | 530.140        | -687.800         | 2732.660        | 104.100                   | 2817.920                       | 2816.140                | 1579.110         |
| 616.200          | 616.200           |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 659.510       | 652.650        | -686.750         | 2731.780        | 104.100                   | 2817.020                       | 2815.050                | 1434.680         |
| 716.200          | 716.200           |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 791.500       | 754.630        | -685.430         | 2730.630        | 104.100                   | 2815.610                       | 2813.480                | 1323.740         |
| 816.200          | 816.200           |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 883.460       | 846.570        | -684.040         | 2729.810        | 104.100                   | 2814.370                       | 2812.090                | 1233.440         |
| 916.200          | 916.200           |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 969.270       | 932.370        | -683.040         | 2729.420        | 104.100                   | 2813.630                       | 2811.200                | 1157.760         |
| 1016.200         | 1016.200          |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 1080.430      | 1043.530       | -681.860         | 2728.860        | 104.000                   | 2812.890                       | 2810.290                | 1081.290         |
| 1116.200         | 1116.200          |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 1193.970      | 1157.040       | -679.940         | 2728.000        | 104.000                   | 2811.760                       | 2808.980                | 1013.490         |
| 1216.200         | 1216.200          |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 1336.750      | 1299.760       | -676.990         | 2725.070        | 104.000                   | 2809.150                       | 2806.170                | 945.190          |
| 1316.200         | 1316.200          |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 1443.600      | 1406.550       | -675.010         | 2722.240        | 103.900                   | 2806.130                       | 2803.000                | 894.210          |
| 1416.200         | 1416.200          |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 1626.030      | 1588.680       | -667.160         | 2715.500        | 103.800                   | 2801.570                       | 2798.200                | 831.060          |
| 1516.200         | 1516.200          |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 1733.380      | 1695.740       | -661.710         | 2709.750        | 103.700                   | 2795.140                       | 2791.600                | 788.850          |
| 1616.200         | 1616.200          |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 1843.040      | 1805.040       | -655.070         | 2703.970        | 103.600                   | 2788.580                       | 2784.860                | 749.680          |
| 1716.200         | 1716.200          |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 1947.340      | 1908.880       | -646.910         | 2698.480        | 103.500                   | 2781.620                       | 2777.730                | 714.150          |
| 1816.200         | 1816.200          |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 2025.790      | 1986.930       | -639.930         | 2694.940        | 103.400                   | 2775.130                       | 2771.080                | 685.450          |
| 1916.200         | 1916.200          |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 2119.870      | 2080.480       | -630.670         | 2691.300        | 103.200                   | 2769.080                       | 2765.240                | 650.820          |
| 2016.200         | 2016.200          |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 2170.000      | 2130.320       | -625.500         | 2689.710        | 103.100                   | 2763.840                       | 2759.870                | 616.550          |
| 2116.200         | 2116.200          |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 2222.470      | 2182.540       | -620.450         | 2689.160        | 103.000                   | 2760.600                       | 2756.500                | 582.180          |
| 2216.200         | 2216.200          |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 2263.000      | 2222.910       | -616.830         | 2689.430        | 102.900                   | 2759.260                       | 2755.040                | 547.710          |
| 2222.910         | 2222.910          |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 2263.000      | 2222.910       | -616.830         | 2689.430        | 102.900                   | 2759.260                       | 2755.040                | 513.240          |
| 2230.770         | 2230.770          |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 2263.430      | 2223.340       | -616.790         | 2689.440        | 102.900                   | 2759.270                       | 2755.030                | 478.770          |
| 2316.200         | 2316.200          |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 2314.220      | 2273.920       | -612.340         | 2690.720        | 102.800                   | 2759.840                       | 2755.480                | 444.300          |
| 2416.200         | 2416.200          |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 2379.460      | 2338.820       | -606.370         | 2693.530        | 102.700                   | 2762.030                       | 2757.520                | 409.830          |
| 2516.200         | 2516.200          |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 2508.190      | 2466.680       | -592.890         | 2699.770        | 102.400                   | 2764.550                       | 2759.820                | 375.360          |
| 2616.200         | 2616.200          |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 2592.670      | 2550.420       | -582.470         | 2703.700        | 102.200                   | 2766.520                       | 2761.600                | 340.890          |
| 2716.200         | 2716.200          |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 2669.030      | 2625.920       | -572.010         | 2708.210        | 101.900                   | 2769.430                       | 2764.340                | 306.420          |
| 2816.200         | 2816.200          |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 2737.160      | 2693.130       | -561.920         | 2713.050        | 101.700                   | 2773.130                       | 2768.100                | 271.950          |
| 2916.200         | 2916.200          |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 2803.660      | 2758.630       | -551.770         | 2718.430        | 101.500                   | 2778.340                       | 2772.900                | 237.480          |
| 3016.200         | 3016.200          |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 2887.080      | 2840.850       | -539.810         | 2725.900        | 101.200                   | 2784.360                       | 2778.740                | 203.010          |
| 3116.200         | 3116.200          |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 3022.620      | 2974.480       | -520.200         | 2737.340        | 100.800                   | 2789.930                       | 2784.030                | 168.540          |
| 3216.200         | 3216.200          |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 3106.030      | 3056.680       | -507.840         | 2744.140        | 100.500                   | 2795.290                       | 2789.190                | 134.070          |
| 3316.200         | 3316.200          |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 3176.330      | 3125.950       | -497.580         | 2750.360        | 100.300                   | 2801.470                       | 2795.190                | 99.600           |
| 3416.200         | 3416.200          |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 3241.090      | 3189.710       | -488.390         | 2756.890        | 100.100                   | 2808.960                       | 2802.510                | 65.130           |
| 3516.200         | 3516.200          |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 3403.900      | 3349.890       | -463.920         | 2772.700        | 99.500                    | 2816.160                       | 2809.370                | 415.180          |
| 3616.200         | 3616.200          |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 3495.210      | 3439.600       | -448.900         | 2780.700        | 99.200                    | 2822.230                       | 2815.220                | 402.730          |
| 3716.200         | 3716.200          |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 3641.850      | 3584.320       | -428.360         | 2792.050        | 98.700                    | 2827.790                       | 2820.490                | 387.240          |
| 3816.200         | 3816.200          |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 3714.130      | 3656.060       | -421.110         | 2796.900        | 98.600                    | 2832.950                       | 2825.480                | 372.220          |
| 3916.200         | 3916.200          |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 3781.020      | 3722.440       | -414.710         | 2802.150        | 98.400                    | 2839.290                       | 2831.660                | 370.030          |
| 4016.200         | 4016.200          |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 3891.080      | 3831.180       | -400.660         | 2811.510        | 98.100                    | 2845.330                       | 2838.070                | 361.840          |
| 4116.200         | 4116.200          |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 3955.090      | 3903.840       | -388.410         | 2818.370        | 97.800                    | 2852.920                       | 2844.850                | 353.710          |
| 4216.200         | 4216.200          |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 4044.100      | 3981.190       | -374.470         | 2826.510        | 97.500                    | 2860.880                       | 2852.610                | 345.790          |
| 4316.200         | 4316.200          |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 4166.630      | 4101.460       | -354.330         | 2838.390        | 97.100                    | 2868.470                       | 2859.910                | 338.010          |
| 4416.200         | 4416.200          |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 4234.670      | 4168.230       | -343.190         | 2845.190        | 96.900                    | 2876.520                       | 2867.770                | 328.920          |
| 4492.500         | 4492.500          |                     | 0.000              | 0.000 SRC - Phelps A-32CHZ   | 4292.500      | 4224.760       | -332.870         | 2851.710        | 96.700                    | 2883.530                       | 2874.630                | 323.970          |
| 4516.200         | 4516.200          | 0.130               | 0.070              | 0.070 SRC - Phelps A-32CHZ   | 4342.450      | 4273.570       | -323.730         | 2857.150        | 96.500                    | 2889.590                       | 2879.580                | 320.260          |
| 4616.200         | 4616.110          | 3.470               | 1.990              | 0.990 SRC - Phelps A-32CHZ   | 4446.330      | 4375.120       | -304.350         | 2867.200        | 96.000                    | 2891.750                       | 2882.470                | 311.760          |
| 4716.200         | 4715.690          | 11.350              | 6.520              | 5.990 SRC - Phelps A-32CHZ   | 10409.650     | 7588.780       | -24.540          | -26.540         | -178.400                  | 2873.500                       | 2858.920                | 197.090          |
| 4816.200         | 4814.650          | 23.730              | 13.630             | 13.630 SRC - Phelps A-32CHZ  | 10400.620     | 7588.890       | -24.010          | -17.520         | -179.700                  | 2774.820                       | 2760.180                | 189.550          |
| 4916.200         | 4912.730          | 40.590              | 23.310             | 23.310 SRC - Phelps A-32CHZ  | 10388.770     | 7589.030       | -23.310          | -5.690          | -179.400                  | 2677.220                       | 2662.520                | 182.140          |
| 5016.200         | 5009.660          | 61.870              | 35.540             | 35.540 SRC - Phelps A-32CHZ  | 10374.580     | 7589.210       | -22.530          | 8.470           | -178.600                  | 2581.070                       | 2566.310                | 174.860          |
| 5116.200         | 5105.170          | 87.530              | 50.270             | 50.270 SRC - Phelps A-32CHZ  | 10357.340     | 7589.420       | -21.620          | 25.690          | -177.900                  | 2486.760                       | 2471.930                | 167.700          |
| 5216.200         | 5199.090          | 117.490             | 56.570             | 56.570 SRC - Phelps A-32CHZ  | 10345.770     | 7589.580       | -21.060          | 37.240          | -177.600                  | 2394.780                       | 2379.850                | 160.420          |
| 5316.200         | 5290.900          | 151.660             | 87.100             | 87.100 SRC - Phelps A-32CHZ  | 10323.200     | 7589.930       | -20.030          | 59.780          | -176.800                  | 2305.590                       | 2290.560                | 153.440          |
| 5416.200         | 5380.610          | 189.950             | 109.090            | 109.090 SRC - Phelps A-32CHZ | 10313.840     | 7590.110       | -19.680          | 69.140          | -176.700                  | 2219.790                       | 2204.590                | 146.110          |
| 5492.390         | 5447.330          | 221.830             | 127.400            | 127.400 SRC - Phelps A-32CHZ | 10293.010     | 7590.560       | -18.950          | 89.950          | -176.100                  | 2157.030                       | 2141.720                | 140.830          |
| 5516.200         | 5467.960          | 232.160             | 133.330            | 133.330 SRC - Phelps A-32CHZ | 10289.000     | 7590.640       | -18.810          | 93.960          | -175.900                  | 2137.840                       | 2122.460                | 139.000          |
| 5616.200         | 5554.560          | 275.510             | 158.230            | 158.230 SRC - Phelps A-32CHZ | 10268.050     | 7591.170       | -18.220          | 114.900         | -175.100                  | 2058.140                       | 2042.560                | 132.100          |
| 5716.200         | 5641.170          | 318.870             | 183.130            | 183.130 SRC - Phelps A-32CHZ | 10239.760     | 7591.890       | -17.430          | 143.160         | -173.900                  | 1979.900                       | 1964.080                | 125.150          |
| 5816.200         | 5727.770          | 362.220             | 208.030            | 208.030 SRC - Phelps A-32CHZ | 10212.920     | 7592.560       | -16.760          | 169.980         | -172.800                  | 19                             |                         |                  |

|           |          |          |         |                      |          |          |         |         |          |          |          |         |
|-----------|----------|----------|---------|----------------------|----------|----------|---------|---------|----------|----------|----------|---------|
| 10416.200 | 7572.000 | 3815.370 | 739.140 | SRC - Phelps A-32CHZ | 9733.510 | 7593.930 | -20.660 | 649.280 | -103.900 | 3837.140 | 3806.030 | 123.330 |
| 10516.200 | 7572.000 | 3915.370 | 739.180 | SRC - Phelps A-32CHZ | 9735.820 | 7593.950 | -20.600 | 646.970 | -103.600 | 3937.110 | 3905.940 | 126.270 |
| 10616.200 | 7572.000 | 4015.370 | 739.210 | SRC - Phelps A-32CHZ | 9739.130 | 7593.960 | -20.550 | 644.660 | -103.300 | 4037.090 | 4005.840 | 129.200 |
| 10716.200 | 7572.000 | 4115.370 | 739.250 | SRC - Phelps A-32CHZ | 9740.440 | 7593.970 | -20.500 | 642.350 | -103.000 | 4137.060 | 4105.740 | 132.120 |
| 10816.200 | 7572.000 | 4215.370 | 739.280 | SRC - Phelps A-32CHZ | 9742.750 | 7593.980 | -20.440 | 640.040 | -102.700 | 4237.030 | 4205.650 | 135.010 |
| 10916.200 | 7572.000 | 4315.370 | 739.320 | SRC - Phelps A-32CHZ | 9745.060 | 7593.990 | -20.390 | 637.730 | -102.400 | 4337.000 | 4305.550 | 137.900 |
| 11016.200 | 7572.000 | 4415.370 | 739.350 | SRC - Phelps A-32CHZ | 9747.370 | 7594.010 | -20.330 | 635.420 | -102.100 | 4436.970 | 4405.460 | 140.770 |
| 11116.200 | 7572.000 | 4515.370 | 739.390 | SRC - Phelps A-32CHZ | 9749.680 | 7594.020 | -20.280 | 633.120 | -101.900 | 4536.950 | 4505.360 | 143.630 |
| 11216.200 | 7572.000 | 4615.370 | 739.430 | SRC - Phelps A-32CHZ | 9751.990 | 7594.030 | -20.220 | 630.810 | -101.600 | 4636.920 | 4605.260 | 146.480 |
| 11316.200 | 7572.000 | 4715.370 | 739.460 | SRC - Phelps A-32CHZ | 9754.300 | 7594.040 | -20.170 | 628.500 | -101.400 | 4736.890 | 4705.170 | 149.310 |
| 11416.200 | 7572.000 | 4815.370 | 739.500 | SRC - Phelps A-32CHZ | 9756.610 | 7594.050 | -20.120 | 626.190 | -101.200 | 4836.860 | 4805.070 | 152.130 |
| 11516.200 | 7572.000 | 4915.370 | 739.530 | SRC - Phelps A-32CHZ | 9758.920 | 7594.070 | -20.060 | 623.880 | -101.000 | 4936.840 | 4904.970 | 154.930 |
| 11616.200 | 7572.000 | 5015.370 | 739.570 | SRC - Phelps A-32CHZ | 9761.220 | 7594.080 | -20.010 | 621.570 | -100.800 | 5036.810 | 5004.870 | 157.720 |
| 11716.200 | 7572.000 | 5115.370 | 739.600 | SRC - Phelps A-32CHZ | 9763.530 | 7594.090 | -19.950 | 619.260 | -100.600 | 5136.780 | 5104.780 | 160.500 |
| 11816.200 | 7572.000 | 5215.370 | 739.640 | SRC - Phelps A-32CHZ | 9765.840 | 7594.100 | -19.900 | 616.950 | -100.400 | 5236.750 | 5204.680 | 163.270 |
| 11916.200 | 7572.000 | 5315.370 | 739.680 | SRC - Phelps A-32CHZ | 9768.150 | 7594.110 | -19.850 | 614.650 | -100.200 | 5336.730 | 5304.580 | 166.020 |
| 12016.200 | 7572.000 | 5415.370 | 739.710 | SRC - Phelps A-32CHZ | 9770.460 | 7594.130 | -19.790 | 612.340 | -100.000 | 5436.700 | 5404.480 | 168.760 |
| 12116.200 | 7572.000 | 5515.370 | 739.750 | SRC - Phelps A-32CHZ | 9772.770 | 7594.140 | -19.740 | 610.030 | -99.800  | 5536.670 | 5504.380 | 171.480 |
| 12216.200 | 7572.000 | 5615.370 | 739.780 | SRC - Phelps A-32CHZ | 9775.080 | 7594.150 | -19.680 | 607.720 | -99.700  | 5636.640 | 5604.290 | 174.190 |
| 12316.200 | 7572.000 | 5715.370 | 739.820 | SRC - Phelps A-32CHZ | 9777.390 | 7594.160 | -19.630 | 605.410 | -99.500  | 5736.620 | 5704.190 | 176.890 |
| 12416.200 | 7572.000 | 5815.370 | 739.850 | SRC - Phelps A-32CHZ | 9779.700 | 7594.180 | -19.570 | 603.100 | -99.300  | 5836.590 | 5804.090 | 179.580 |
| 12511.410 | 7572.000 | 5910.580 | 739.890 | SRC - Phelps A-32CHZ | 9781.000 | 7594.180 | -19.540 | 601.800 | -99.300  | 5931.780 | 5899.210 | 182.150 |

## 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         | -687.260         | 2750.520        | 104.000                   | 2835.080                       | 2834.120                |                  |
| 32.600           | 32.600            | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 59.980        | 23.180         | -687.270         | 2750.540        | 104.000                   | 2835.120                       | 2834.110                | 2810.060         |
| 116.200          | 116.200           | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 130.220       | 93.420         | -687.460         | 2750.940        | 104.000                   | 2835.630                       | 2834.510                | 2527.230         |
| 216.200          | 216.200           | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 220.900       | 184.090        | -687.720         | 2751.830        | 104.000                   | 2836.640                       | 2835.380                | 2247.790         |
| 316.200          | 316.200           | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 320.890       | 284.080        | -688.000         | 2752.930        | 104.000                   | 2837.780                       | 2836.350                | 1993.420         |
| 416.200          | 416.200           | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 423.480       | 386.660        | -688.230         | 2753.980        | 104.000                   | 2838.830                       | 2837.240                | 1788.140         |
| 516.200          | 516.200           | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 519.890       | 483.060        | -688.450         | 2755.040        | 104.000                   | 2839.950                       | 2838.200                | 1627.070         |
| 616.200          | 616.200           | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 618.490       | 581.660        | -688.860         | 2756.300        | 104.000                   | 2841.290                       | 2839.390                | 1492.210         |
| 716.200          | 716.200           | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 770.330       | 733.490        | -687.960         | 2756.470        | 104.000                   | 2841.080                       | 2838.970                | 1348.430         |
| 816.200          | 816.200           | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 882.820       | 845.950        | -685.760         | 2755.950        | 104.000                   | 2840.150                       | 2837.870                | 1246.750         |
| 916.200          | 916.200           | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 984.370       | 947.460        | -682.770         | 2755.500        | 103.900                   | 2839.000                       | 2836.560                | 1163.230         |
| 1016.200         | 1016.200          | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 1075.330      | 1038.370       | -679.690         | 2755.390        | 103.900                   | 2838.070                       | 2835.470                | 1093.360         |
| 1116.200         | 1116.200          | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 1180.280      | 1143.250       | -675.910         | 2755.430        | 103.800                   | 2837.250                       | 2834.480                | 1026.610         |
| 1216.200         | 1216.200          | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 1275.000      | 1237.890       | -672.080         | 2755.460        | 103.700                   | 2836.320                       | 2833.390                | 970.280          |
| 1316.200         | 1316.200          | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 1352.930      | 1315.760       | -668.920         | 2755.850        | 103.600                   | 2835.870                       | 2832.800                | 923.410          |
| 1361.340         | 1361.340          | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 1398.000      | 1360.790       | -667.260         | 2756.260        | 103.600                   | 2835.880                       | 2832.730                | 901.640          |
| 1416.200         | 1416.200          | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 1427.060      | 1389.830       | -666.360         | 2756.750        | 103.600                   | 2836.270                       | 2833.050                | 882.600          |
| 1516.200         | 1516.200          | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 1460.000      | 1422.750       | -665.560         | 2757.640        | 103.600                   | 2836.360                       | 2833.040                | 854.580          |
| 1616.200         | 1616.200          | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 1522.000      | 1484.680       | -664.460         | 2760.340        | 103.500                   | 2842.230                       | 2838.780                | 822.800          |
| 1716.200         | 1716.200          | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 1587.790      | 1550.280       | -661.840         | 2764.560        | 103.500                   | 2847.520                       | 2843.930                | 792.960          |
| 1816.200         | 1816.200          | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 1683.490      | 1645.610       | -657.130         | 2771.470        | 103.300                   | 2853.410                       | 2849.650                | 758.890          |
| 1916.200         | 1916.200          | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 1750.340      | 1712.150       | -653.490         | 2776.940        | 103.200                   | 2860.080                       | 2856.560                | 812.220          |
| 2016.200         | 2016.200          | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 1820.420      | 1781.780       | -649.110         | 2783.420        | 103.100                   | 2867.700                       | 2864.030                | 781.330          |
| 2116.200         | 2116.200          | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 1911.080      | 1871.700       | -642.300         | 2792.840        | 103.000                   | 2876.160                       | 2872.320                | 748.790          |
| 2216.200         | 2216.200          | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 2066.610      | 2026.040       | -629.700         | 2807.100        | 102.600                   | 2883.140                       | 2879.050                | 705.370          |
| 2316.200         | 2316.200          | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 2158.910      | 2117.580       | -621.360         | 2815.530        | 102.500                   | 2890.110                       | 2885.860                | 677.230          |
| 2416.200         | 2416.200          | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 2297.960      | 2255.520       | -608.120         | 2827.040        | 102.100                   | 2896.170                       | 2891.660                | 642.760          |
| 2516.200         | 2516.200          | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 2399.030      | 2355.790       | -598.200         | 2835.020        | 101.900                   | 2901.880                       | 2897.180                | 617.260          |
| 2616.200         | 2616.200          | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 2579.930      | 2535.580       | -581.580         | 2845.810        | 101.600                   | 2905.740                       | 2900.760                | 582.960          |
| 2716.200         | 2716.200          | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 2664.000      | 2619.380       | -575.970         | 2849.530        | 101.400                   | 2908.770                       | 2903.620                | 564.610          |
| 2816.200         | 2816.200          | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 2727.000      | 2682.150       | -571.790         | 2852.950        | 101.300                   | 2912.770                       | 2907.470                | 550.120          |
| 2916.200         | 2916.200          | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 2812.060      | 2766.860       | -566.140         | 2858.220        | 101.200                   | 2917.570                       | 2912.110                | 534.020          |
| 3016.200         | 3016.200          | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 2956.700      | 2910.900       | -556.450         | 2866.960        | 101.000                   | 2922.360                       | 2916.660                | 513.280          |
| 3116.200         | 3116.200          | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 3035.340      | 2989.260       | -551.220         | 2870.940        | 100.900                   | 2926.130                       | 2920.280                | 499.910          |
| 3216.200         | 3216.200          | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 3108.000      | 3061.680       | -547.010         | 2875.260        | 100.800                   | 2930.910                       | 2924.900                | 488.050          |
| 3316.200         | 3316.200          | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 3192.670      | 3145.980       | -541.780         | 2881.040        | 100.700                   | 2936.480                       | 2930.300                | 475.620          |
| 3416.200         | 3416.200          | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 3277.330      | 3230.160       | -535.400         | 2887.420        | 100.500                   | 2942.520                       | 2936.180                | 463.980          |
| 3516.200         | 3516.200          | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 3337.290      | 3289.800       | -531.710         | 2892.460        | 100.400                   | 2949.630                       | 2943.150                | 454.970          |
| 3616.200         | 3616.200          | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 3508.050      | 3459.830       | -522.990         | 2905.390        | 100.200                   | 2956.220                       | 2949.490                | 439.030          |
| 3716.200         | 3716.200          | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 3576.420      | 3527.980       | -520.020         | 2909.860        | 100.100                   | 2961.950                       | 2955.070                | 430.740          |
| 3816.200         | 3816.200          | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 3659.690      | 3610.990       | -517.350         | 2915.960        | 100.100                   | 2968.600                       | 2961.570                | 422.150          |
| 3916.200         | 3916.200          | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 3742.000      | 3693.000       | -514.760         | 2922.560        | 100.000                   | 2975.930                       | 2968.740                | 414.190          |
| 4016.200         | 4016.200          | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 3816.750      | 3767.410       | -512.020         | 2929.120        | 99.900                    | 2983.920                       | 2976.590                | 406.820          |
| 4116.200         | 4116.200          | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 3991.440      | 3941.300       | -503.840         | 2943.580        | 99.700                    | 2991.510                       | 2983.920                | 394.370          |
| 4216.200         | 4216.200          | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 4080.670      | 4030.150       | -498.540         | 2949.710        | 99.600                    | 2997.330                       | 2989.570                | 386.410          |
| 4316.200         | 4316.200          | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 4193.220      | 4142.100       | -490.510         | 2958.230        | 99.400                    | 3003.670                       | 2995.720                | 377.620          |
| 4416.200         | 4416.200          | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 4292.330      | 4240.780       | -483.890         | 2964.630        | 99.300                    | 3008.980                       | 3000.850                | 369.790          |
| 4492.500         | 4492.500          | 0.000               | 0.000              | SRC - Phelps A-32NHZ | 10331.290     | 7396.450       | -431.660         | -104.180        | -166.400                  | 2937.710                       | 2922.650                | 195.130          |
| 4516.200         | 4516.200          | 0.130               | 0.070              | SRC - Phelps A-32NHZ | 10330.360     | 7396.490       | -431.660         | -103.250        | 164.800                   | 2914.300                       | 2899.200                | 193.030          |
| 4616.200         | 4616.110          | 3.470               | 1.990              | SRC - Phelps A-32NHZ | 10324.810     | 7396.690       | -431.640         | -97.710         | 167.900                   | 2816.180                       | 2800.990                | 185.490          |
| 4716.200         | 4715.690          | 11.350              | 6.520              | SRC - Phelps A-32NHZ | 10316.670     | 7396.980       | -431.620         | -89.570         | 169.500                   | 2719.340                       | 2704.030                | 177.670          |
| 4816.200         | 4814.650          | 23.730              | 13.630             | SRC - Phelps A-32NHZ | 10305.950     | 7397.370       | -431.600         | -78.850         | 171.400                   | 2624.180                       | 2608.730                | 169.890          |
| 4916.200         | 4912.730          | 40.590              | 23.310             | SRC - Phelps A-32NHZ | 10300.590     | 7397.570       | -431.580         | -73.410         | 171.300                   | 2531.150                       | 2515.510                | 161.920          |
| 5016.200         | 5009.660          | 61.870              | 35.540             | SRC - Phelps A-32NHZ | 10286.280     | 7398.120       | -431.640         | -68.120         | 171.600                   | 2440.750                       | 2424.730                | 154.210          |
| 5116.200         | 5105.170          | 87.530              | 50.270             | SRC - Phelps A-32NHZ | 10269.000     | 7398.790       | -431.710         | -61.930         | 171.600                   | 2353.900                       | 2337.140                | 146.600          |
| 5216.200         | 5199.000          | 117.490             | 67.470             | SRC - Phelps A-32NHZ | 10254.620     | 7399.390       | -431.780         | -27.570         | 171.600                   | 2260.460                       | 2235.560                | 138.940          |
| 5316.200         | 5290.900          | 151.660             | 87.100             | SRC - Phelps A-32NHZ | 10231.340     | 7400.370       | -431.900         | -4.310          | 171.300                   | 2190.600                       | 2173.960                | 131.590          |
| 5416.200         | 5380.610          | 189.950             | 109.090            | SRC - Phelps A-32NHZ | 10195.420     | 7401.840       | -432.030         | 31.580          | 170.500                   | 2116.190                       | 2099.220                | 124.690          |
| 5492.390         | 5447.330          | 221.830             | 127.400            | SRC - Phelps A-32NHZ | 10131.280     | 7403.790       | -431.630         | 95.690          | 168.600                   | 2062.950                       | 2045.830                | 120.500          |
| 5516.200         | 5467.960          | 232.160             | 133.330            | SRC - Phelps A-32NHZ | 10124.730     | 7403.940       | -431.520         | 102.230         | 168.400                   | 2046.820                       | 2029.580                | 118.770          |
| 5616.200         | 5554.560          | 275.510             | 158.230            | SRC - Phelps A-32NHZ | 10085.530     | 7404.750       | -430.560         | 141.410         | 167.000                   | 1980.410                       | 1962.780                | 112.370          |
| 5716.200         | 5641.170          | 318.870             | 183.130            | SRC - Phelps A-32NHZ | 10051.890     | 7405.370       | -429.490         | 175.030         | 165.800                   | 1916.390                       | 1898.290                | 105.900          |
| 5816.200         | 5627.780          | 362.220             | 208.030            | SRC - Phelps A-32NHZ | 10024.020     | 7405.890       | -428.590         | 202.890         | 164.800                   | 1855.120                       | 1836.480                | 99.520           |
| 5916.200         | 5814.380          | 405.570             | 232.930            | SRC - Phelps A-32NHZ | 10000.780     | 7406.310       | -427.920         | 226.110         | 164.000                   | 1796.940                       | 1777.680                | 93.300           |
| 6016.200         | 5900.980          | 448.930             | 257.830            | SRC - Phelps A-32NHZ | 9981.310      | 7406.870       | -427.410         | 245.570         | 163.300                   | 1742.190                       | 1722.240                | 87.340           |
| 6116.200         | 5887.590          | 492.280             | 282.720            | SRC - Phelps A-32NHZ | 9962.810      | 7407.220       | -426.920         | 264.270         | 162.700                   | 1687.230                       | 1667.330                | 81.660           |
| 6216.200         | 5870.190          | 535.630             | 307.620            | SRC - Phelps A-32NHZ | 9936.610      | 7407.640       | -426.570         | 280.990         | 161.600                   | 1644.450                       | 1623.820                | 76.760           |
| 6316.200         | 6160.800          | 578.990             | 332.520            | SRC - Phelps A-32NHZ | 9908.920      | 7408.310       | -426.130         | 317.930         | 160.600                   | 1602.110                       | 1579.930                | 72.220           |
| 6416.200         | 6247.400          | 622.340             | 357.420            | SRC - Phelps A-32NHZ | 9888.000      | 7408.820       | -425.800         | 338.840         | 159.800                   | 1564.560                       | 1541.550                | 68.010           |
| 6516.200         | 6334.010          | 665.700             | 382.320            | SRC - Phelps A-32NHZ | 9861.140      | 7409.500       | -425.540         | 365.690         | 158.800                   | 1532.240                       | 1508.430                | 64.370           |
| 6616.200         | 6420.620          | 709.050             | 407.220            | SRC - Phelps A-32NHZ | 9833.640      | 7410.200       | -425.270         | 393.180         | 157.800                   | 1505.370                       | 1480.790                | 61.230           |
| 6716.200         | 6507.220          | 752.400             | 432.120            | SRC - Phelps A-32NHZ | 9802.110      | 7410.810       | -425.030         | 424.710         | 156.600                   | 1484.210                       | 1458.880                | 58.600           |
| 6816.200         | 6593.830          | 795.760             | 457.020            | SRC - Phelps A-32NHZ | 9763.250      | 7411.130       | -424.700         | 463.560         | 155.100                   | 1468.860                       | 1442.870                | 56.530           |
| 6916.200         | 6680.430          | 839.110             | 481.910            | SRC - Phelps A-32NHZ | 9737.710      | 7411.200       | -424.510         | 489.100         | 154.100                   | 1459.730                       | 1433.060                | 54.730           |
| 7005.580         | 6757.840          | 877.860             | 504.170            |                      |               |                |                  |                 |                           |                                |                         |                  |

|           |          |          |                              |          |          |          |         |         |          |          |         |
|-----------|----------|----------|------------------------------|----------|----------|----------|---------|---------|----------|----------|---------|
| 8716.200  | 7572.000 | 2115.370 | 738.530 SRC - Phelps A-32NHZ | 9504.530 | 7416.730 | -424.890 | 722.200 | -5.700  | 2545.060 | 2515.320 | 85.570  |
| 8816.200  | 7572.000 | 2215.370 | 738.570 SRC - Phelps A-32NHZ | 9505.350 | 7416.700 | -424.890 | 721.380 | -6.000  | 2644.880 | 2615.080 | 88.750  |
| 8916.200  | 7572.000 | 2315.370 | 738.600 SRC - Phelps A-32NHZ | 9506.180 | 7416.670 | -424.880 | 720.550 | -6.300  | 2744.710 | 2714.850 | 91.920  |
| 9016.200  | 7572.000 | 2415.370 | 738.640 SRC - Phelps A-32NHZ | 9507.000 | 7416.640 | -424.870 | 719.730 | -6.600  | 2844.550 | 2814.640 | 95.080  |
| 9116.200  | 7572.000 | 2515.370 | 738.680 SRC - Phelps A-32NHZ | 9507.000 | 7416.640 | -424.870 | 719.730 | -6.600  | 2944.410 | 2914.430 | 98.240  |
| 9216.200  | 7572.000 | 2615.370 | 738.710 SRC - Phelps A-32NHZ | 9507.000 | 7416.640 | -424.870 | 719.730 | -6.600  | 3044.270 | 3014.240 | 101.380 |
| 9316.200  | 7572.000 | 2715.370 | 738.750 SRC - Phelps A-32NHZ | 9507.000 | 7416.640 | -424.870 | 719.730 | -6.600  | 3144.140 | 3114.060 | 104.520 |
| 9416.200  | 7572.000 | 2815.370 | 738.780 SRC - Phelps A-32NHZ | 9507.000 | 7416.640 | -424.870 | 719.730 | -6.600  | 3244.020 | 3213.880 | 107.640 |
| 9516.200  | 7572.000 | 2915.370 | 738.820 SRC - Phelps A-32NHZ | 9507.000 | 7416.640 | -424.870 | 719.730 | -6.600  | 3343.910 | 3313.720 | 110.750 |
| 9616.200  | 7572.000 | 3015.370 | 738.850 SRC - Phelps A-32NHZ | 9507.000 | 7416.640 | -424.870 | 719.730 | -6.600  | 3443.800 | 3413.550 | 113.850 |
| 9716.200  | 7572.000 | 3115.370 | 738.890 SRC - Phelps A-32NHZ | 9507.000 | 7416.640 | -424.870 | 719.730 | -6.600  | 3543.700 | 3513.400 | 116.930 |
| 9816.200  | 7572.000 | 3215.370 | 738.930 SRC - Phelps A-32NHZ | 9507.390 | 7416.620 | -424.870 | 719.350 | -6.700  | 3643.610 | 3613.240 | 120.000 |
| 9916.200  | 7572.000 | 3315.370 | 738.960 SRC - Phelps A-32NHZ | 9508.050 | 7416.600 | -424.870 | 718.680 | -7.000  | 3743.520 | 3713.100 | 123.050 |
| 10016.200 | 7572.000 | 3415.370 | 739.000 SRC - Phelps A-32NHZ | 9508.710 | 7416.580 | -424.860 | 718.020 | -7.200  | 3843.430 | 3812.950 | 126.090 |
| 10116.200 | 7572.000 | 3515.370 | 739.030 SRC - Phelps A-32NHZ | 9509.370 | 7416.550 | -424.860 | 717.360 | -7.400  | 3943.350 | 3912.810 | 129.120 |
| 10216.200 | 7572.000 | 3615.370 | 739.070 SRC - Phelps A-32NHZ | 9510.030 | 7416.530 | -424.850 | 716.700 | -7.700  | 4043.270 | 4012.670 | 132.130 |
| 10316.200 | 7572.000 | 3715.370 | 739.100 SRC - Phelps A-32NHZ | 9510.700 | 7416.500 | -424.850 | 716.040 | -7.900  | 4143.200 | 4112.540 | 135.130 |
| 10416.200 | 7572.000 | 3815.370 | 739.140 SRC - Phelps A-32NHZ | 9511.360 | 7416.480 | -424.840 | 715.380 | -8.100  | 4243.130 | 4212.410 | 138.120 |
| 10516.200 | 7572.000 | 3915.370 | 739.180 SRC - Phelps A-32NHZ | 9512.020 | 7416.450 | -424.840 | 714.710 | -8.400  | 4343.060 | 4312.280 | 141.100 |
| 10616.200 | 7572.000 | 4015.370 | 739.210 SRC - Phelps A-32NHZ | 9512.680 | 7416.430 | -424.830 | 714.050 | -8.600  | 4443.000 | 4412.160 | 144.070 |
| 10716.200 | 7572.000 | 4115.370 | 739.250 SRC - Phelps A-32NHZ | 9513.340 | 7416.400 | -424.830 | 713.390 | -8.800  | 4542.940 | 4512.040 | 147.020 |
| 10816.200 | 7572.000 | 4215.370 | 739.280 SRC - Phelps A-32NHZ | 9514.010 | 7416.380 | -424.820 | 712.730 | -9.100  | 4642.880 | 4611.920 | 149.960 |
| 10916.200 | 7572.000 | 4315.370 | 739.320 SRC - Phelps A-32NHZ | 9514.670 | 7416.350 | -424.820 | 712.070 | -9.300  | 4742.820 | 4711.800 | 152.890 |
| 11016.200 | 7572.000 | 4415.370 | 739.350 SRC - Phelps A-32NHZ | 9515.330 | 7416.330 | -424.820 | 711.410 | -9.600  | 4842.770 | 4811.690 | 155.800 |
| 11116.200 | 7572.000 | 4515.370 | 739.390 SRC - Phelps A-32NHZ | 9515.990 | 7416.300 | -424.810 | 710.750 | -9.800  | 4942.720 | 4911.570 | 158.710 |
| 11216.200 | 7572.000 | 4615.370 | 739.430 SRC - Phelps A-32NHZ | 9516.650 | 7416.280 | -424.810 | 710.080 | -10.000 | 5042.670 | 5011.460 | 161.600 |
| 11316.200 | 7572.000 | 4715.370 | 739.460 SRC - Phelps A-32NHZ | 9517.320 | 7416.250 | -424.800 | 709.420 | -10.300 | 5142.620 | 5111.350 | 164.480 |
| 11416.200 | 7572.000 | 4815.370 | 739.500 SRC - Phelps A-32NHZ | 9517.980 | 7416.230 | -424.800 | 708.760 | -10.500 | 5242.570 | 5211.240 | 167.350 |
| 11516.200 | 7572.000 | 4915.370 | 739.530 SRC - Phelps A-32NHZ | 9518.640 | 7416.200 | -424.790 | 708.100 | -10.700 | 5342.530 | 5311.140 | 170.200 |
| 11616.200 | 7572.000 | 5015.370 | 739.570 SRC - Phelps A-32NHZ | 9519.300 | 7416.180 | -424.790 | 707.440 | -11.000 | 5442.480 | 5411.030 | 173.050 |
| 11716.200 | 7572.000 | 5115.370 | 739.600 SRC - Phelps A-32NHZ | 9519.960 | 7416.150 | -424.780 | 706.780 | -11.200 | 5542.440 | 5510.930 | 175.880 |
| 11816.200 | 7572.000 | 5215.370 | 739.640 SRC - Phelps A-32NHZ | 9520.630 | 7416.130 | -424.780 | 706.110 | -11.400 | 5642.400 | 5610.830 | 178.700 |
| 11916.200 | 7572.000 | 5315.370 | 739.680 SRC - Phelps A-32NHZ | 9521.290 | 7416.100 | -424.770 | 705.450 | -11.700 | 5742.360 | 5710.730 | 181.510 |
| 12016.200 | 7572.000 | 5415.370 | 739.710 SRC - Phelps A-32NHZ | 9521.950 | 7416.080 | -424.770 | 704.790 | -11.900 | 5842.320 | 5810.630 | 184.310 |
| 12116.200 | 7572.000 | 5515.370 | 739.750 SRC - Phelps A-32NHZ | 9522.610 | 7416.050 | -424.760 | 704.130 | -12.100 | 5942.290 | 5910.530 | 187.090 |
| 12216.200 | 7572.000 | 5615.370 | 739.780 SRC - Phelps A-32NHZ | 9523.270 | 7416.030 | -424.760 | 703.470 | -12.400 | 6042.250 | 6010.430 | 189.870 |
| 12316.200 | 7572.000 | 5715.370 | 739.820 SRC - Phelps A-32NHZ | 9523.940 | 7416.000 | -424.750 | 702.810 | -12.600 | 6142.220 | 6110.330 | 192.630 |
| 12416.200 | 7572.000 | 5815.370 | 739.850 SRC - Phelps A-32NHZ | 9524.600 | 7415.980 | -424.750 | 702.150 | -12.800 | 6242.180 | 6210.240 | 195.380 |
| 12511.410 | 7572.000 | 5910.580 | 739.890 SRC - Phelps A-32NHZ | 9525.230 | 7415.960 | -424.750 | 701.520 | -13.000 | 6337.370 | 6305.360 | 197.980 |

## 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 is stated  
Coordinates are from Spot MDs are from Rig and TVDs are from Rig ( Planned Datum #1 4982.591 above Mean Sea Level )  
Vertical Section is from 0.0000.005 to azimuth 7.145 degrees  
Prepared by Great Western Operating Co, LLC  
Data Printed: