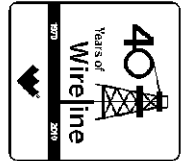




**Weatherford**<sup>®</sup>

**CALIPER LOG**

COMPANY SUNFLOWER ENERGY, LLC.  
 WELL GINEST #1 OWWO  
 FIELD UNNAMED  
 PROVINCE/COUNTY GRAY  
 COUNTRY/STATE U.S.A. / KANSAS  
 LOCATION 1980' FNL & 1730' FWL



SEC TWP RGE Other Services  
 30 27S 29W CMI  
 API Number 15-069-20053  
 Permit Number

Permanent Datum GL, Elevation 2754 feet  
 Log Measured From KB Elevations: KB 2765.00  
 Drilling Measured From KB DF 2763.00  
 GL 2754.00

|                        |                      |
|------------------------|----------------------|
| Date                   | 29-APR-2012          |
| Run Number             | ONE                  |
| Depth Driller          | 5200.00 feet         |
| Depth Logger           | 5200.00 feet         |
| First Reading          | 5200.00 feet         |
| Last Reading           | 4200.00 feet         |
| Casing Driller         | 1784.00 feet         |
| Casing Logger          |                      |
| Bit Size               | 7.875 inches         |
| Hole Fluid Type        | CHEMICAL             |
| Density / Viscosity    | 8.60 lb/USg 47.00 CP |
| PH / Fluid Loss        | 7.00                 |
| Sample Source          |                      |
| Rm @ Measured Temp     |                      |
| Rmf @ Measured Temp    |                      |
| Rmc @ Measured Temp    |                      |
| Source Rmf / Rmc       |                      |
| Rm @ BHT               |                      |
| Time Since Circulation | 4 HOURS              |
| Max Recorded Temp      |                      |
| Equipment Name         | COMPACT              |
| Equipment / Base       | 13025 LIB            |
| Recorded By            | ADAM SILL            |
| Witnessed By           | TIM THOMSON          |
| S.O. # / JOB #         | 3534644 LB12-106     |

| BOREHOLE RECORD    |                    |                  | Last Edited: 29-APR-2012 06:40 |
|--------------------|--------------------|------------------|--------------------------------|
| Bit Size<br>inches | Depth From<br>feet | Depth To<br>feet |                                |
| 7.875              | 1784.00            | 5200.00          |                                |

| CASING RECORD |                |                    |                    |                     |
|---------------|----------------|--------------------|--------------------|---------------------|
| Type          | Size<br>inches | Depth From<br>feet | Shoe Depth<br>feet | Weight<br>pounds/ft |
| SURFACE       | 8.625          | 0.00               | 1784.00            | 0.00                |

**REMARKS**

- SOFTWARE ISSUE: WLS 11.03.4044.

- TOOLS RUN: MCG, MIM, MIE.  
-HARDWARE: CENTRALIZER BASKET RAN ON MIM.

- SERVICE ORDER # 3534649.

- RIG: H2 DRILLING #2.

- ENGINEER: A. SILL.

- OPERATOR(S): B. REEVES.

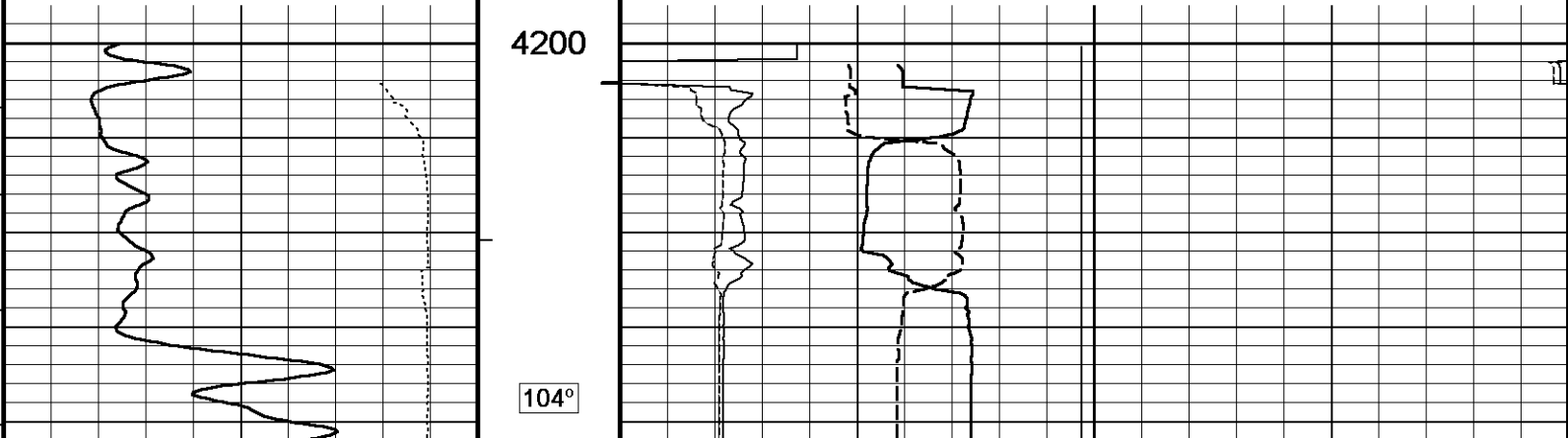
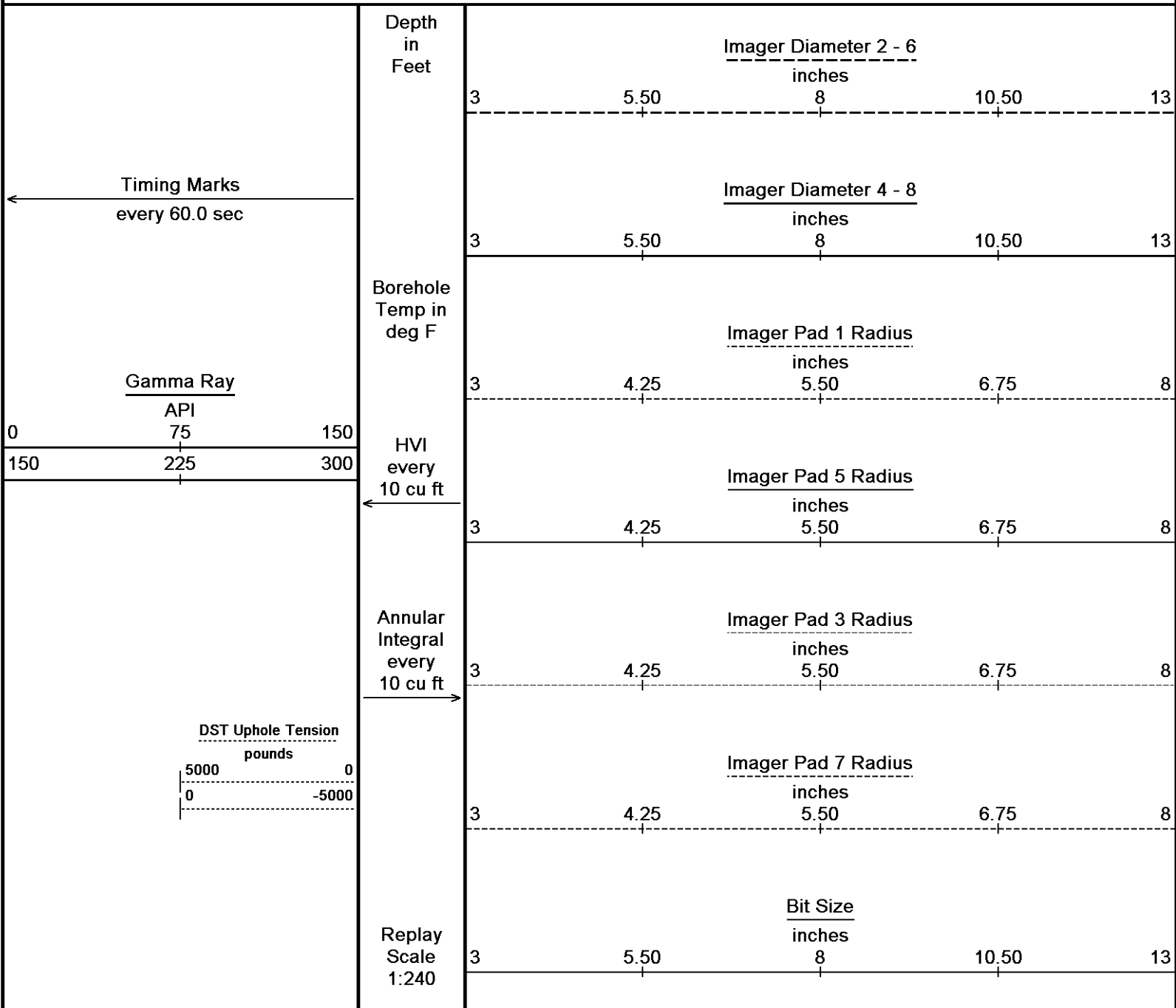
\*\*\*\* PULLED TIGHT AT 4460 FT. CLOSED CALIPERS AND PULLED 2500 LBS. AND PULLED FREE, CONTINUED TO LOG AND PULLED TIGHT AT 4202 CLOSED CALIPERS AND PULLED 3100 LBS. AND PULLED FREE.\*\*\*\*

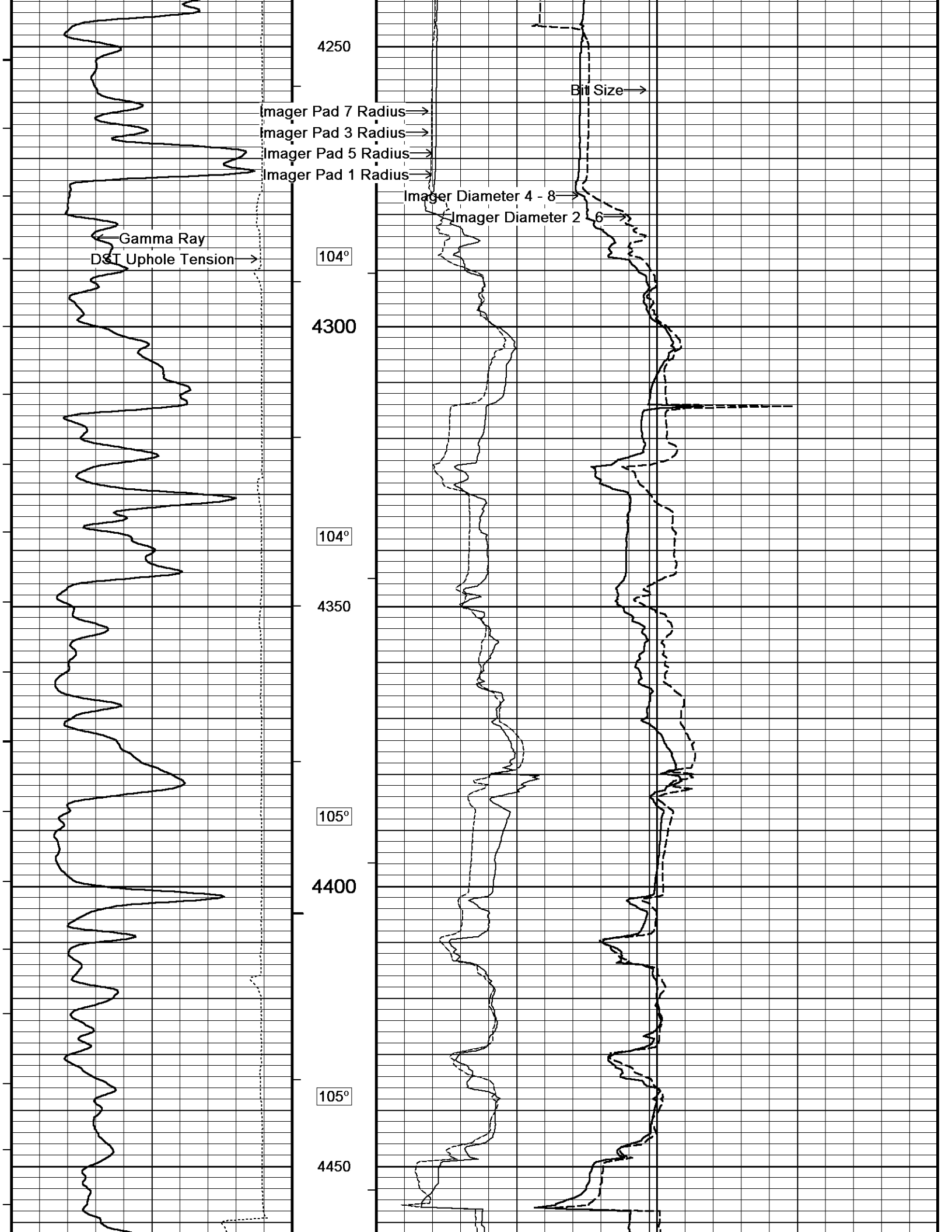
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy

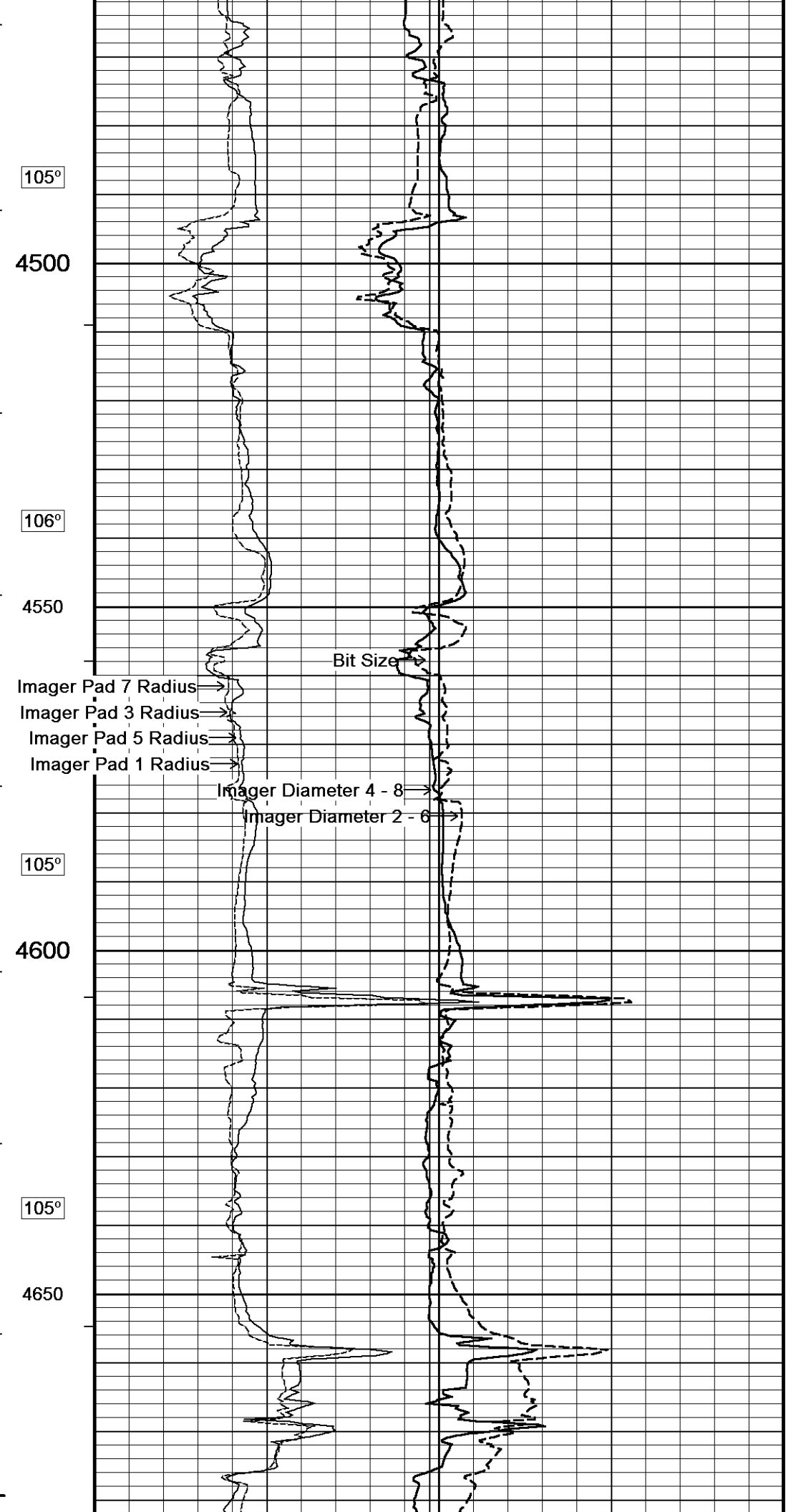
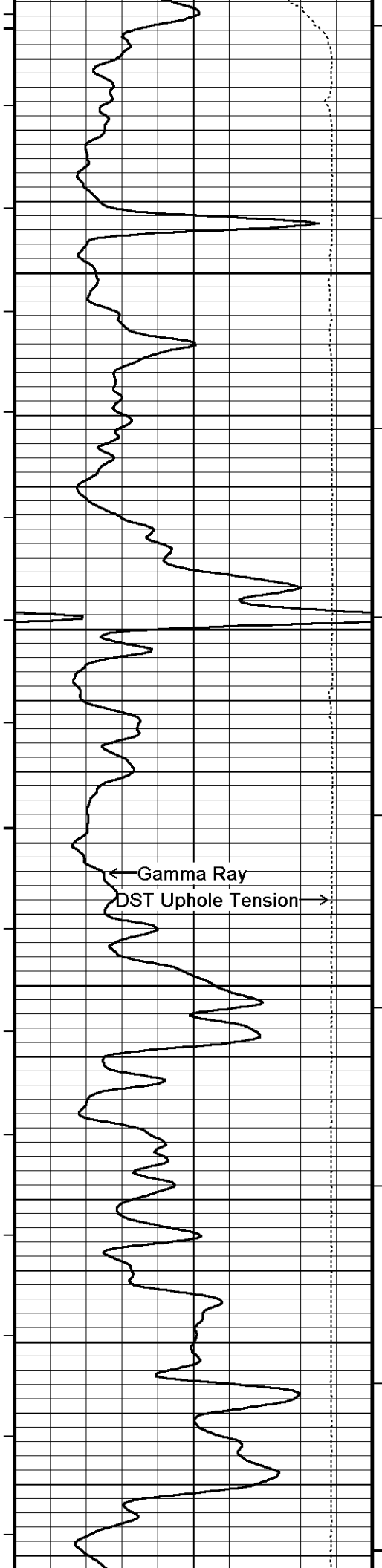
or correctness of any interpretations, and we shall not, in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions in our price schedule.

**IMAGER**

Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 29-APR-2012 10:53  
 Filename: C:\Minimus 11.03.4044\Data\Sunflower Ginest #1\Sunflower Ginest #1.dta Recorded on 29-APR-2012 07:23  
 System Versions: Logged with 11.03.4044 Plotted with 11.03.4044







105°

4500

106°

4550

Bit Size

Imager Pad 7 Radius

Imager Pad 3 Radius

Imager Pad 5 Radius

Imager Pad 1 Radius

Imager Diameter 4 - 8

Imager Diameter 2 - 6

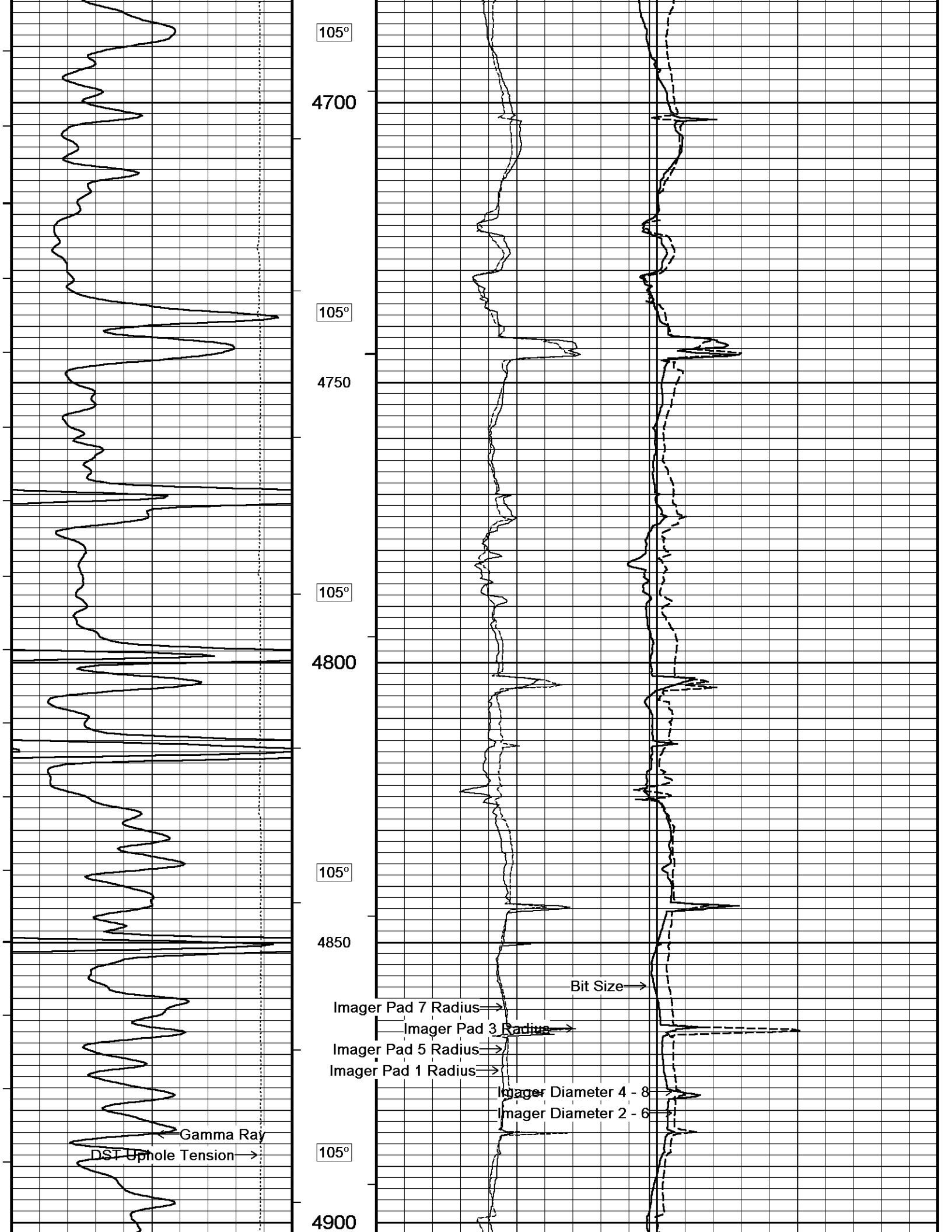
← Gamma Ray  
DST Uphole Tension →

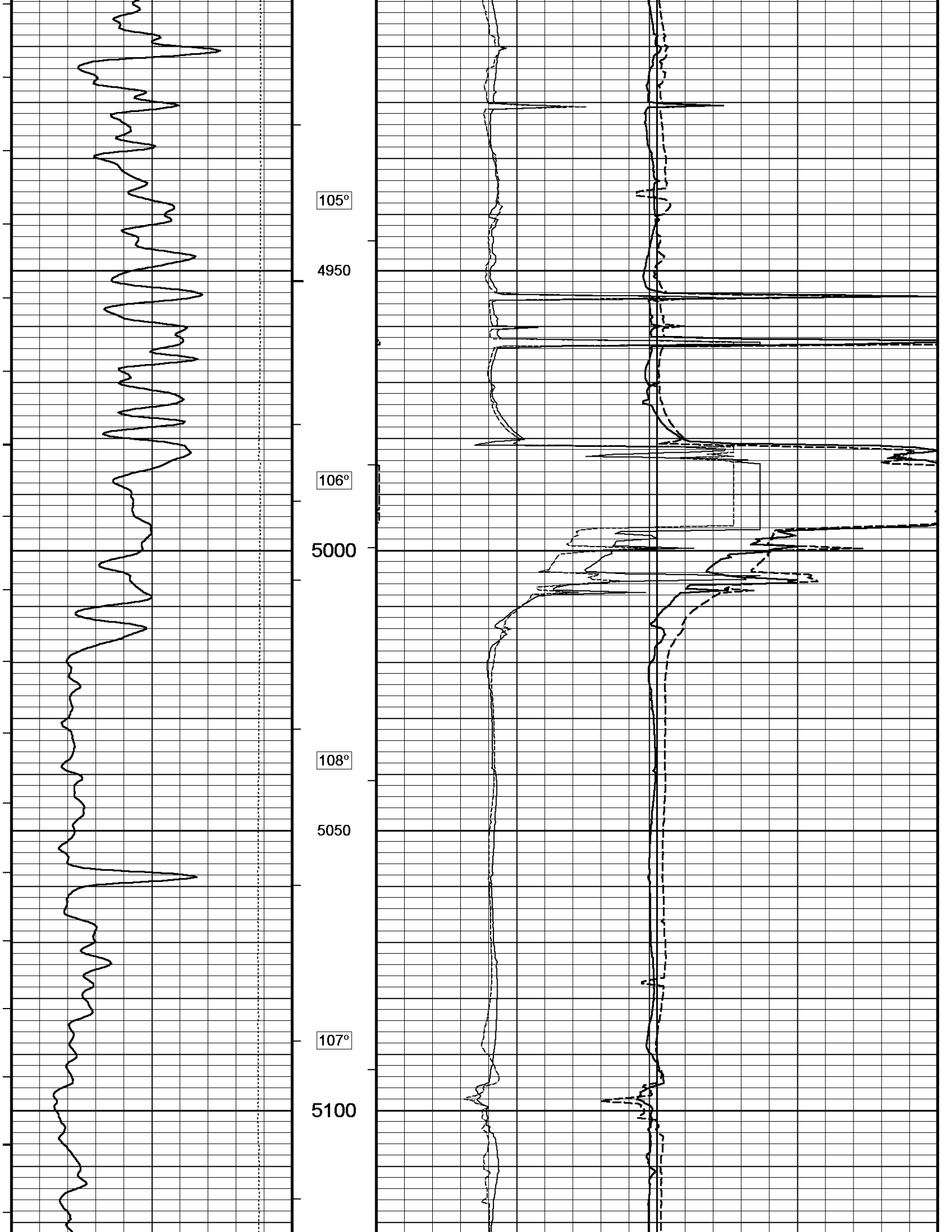
105°

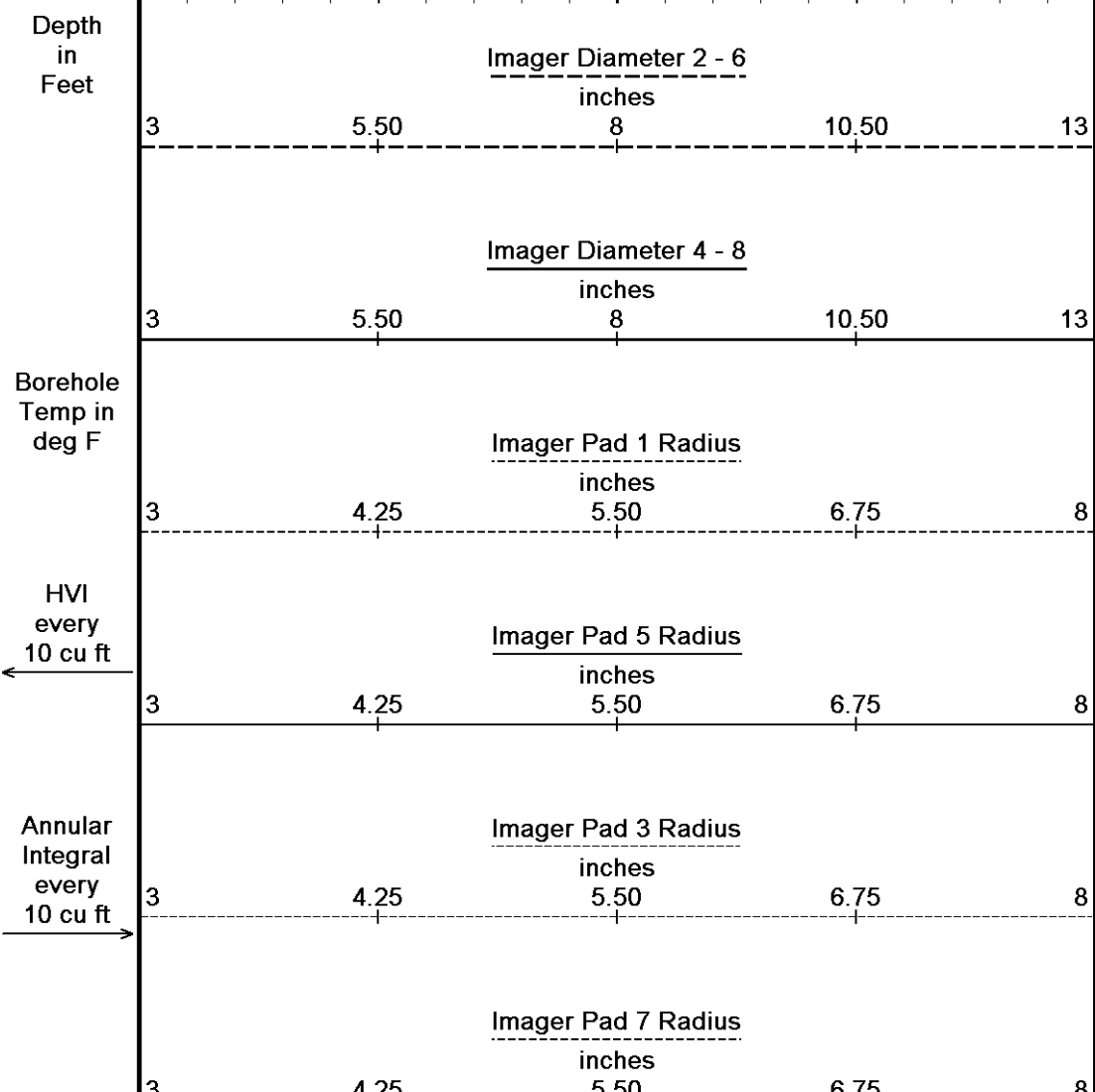
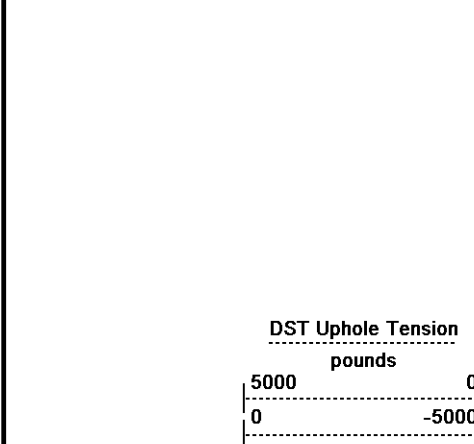
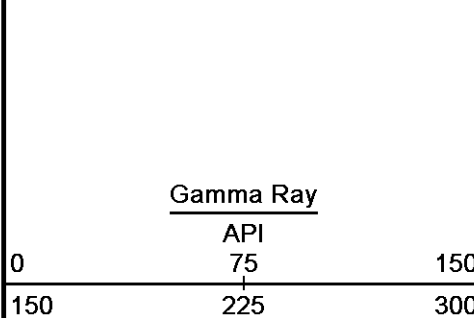
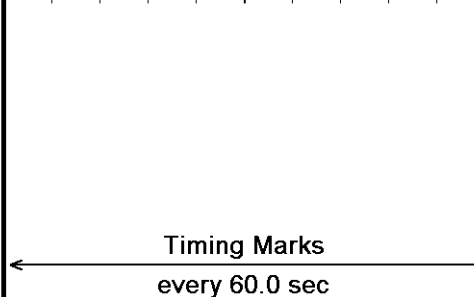
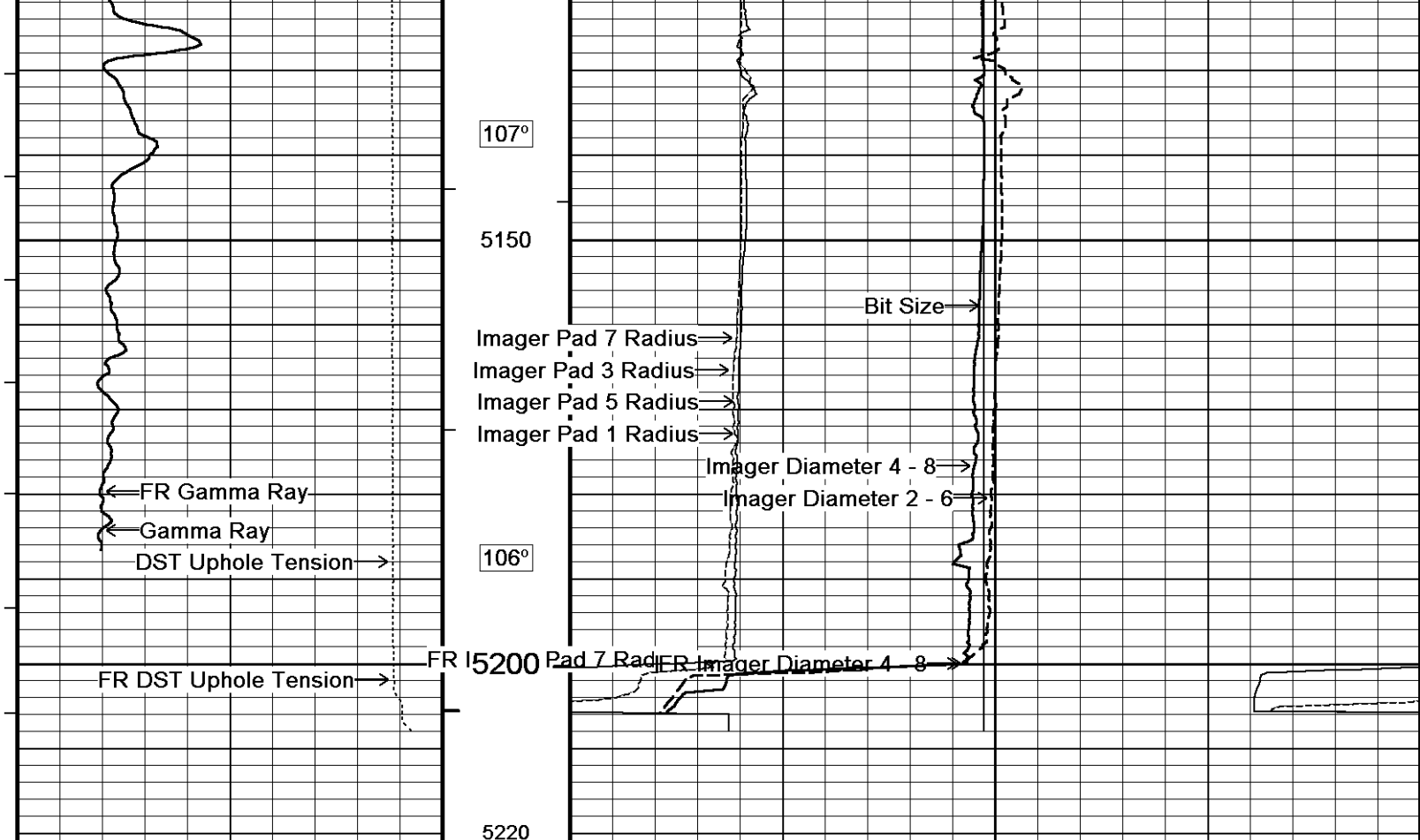
4600

105°

4650







Replay  
Scale  
1:240

3

5.50

Bit Size  
inches

8

10.50

13

Depth Based Data - Maximum Sampling Increment 10.0cm

Plotted on 29-APR-2012 10:53

Filename: C:\Minimus 11.03.4044\Data\Sunflower Ginest #1\Sunflower Ginest #1.dta

Recorded on 29-APR-2012 07:23

System Versions: Logged with 11.03.4044 Plotted with 11.03.4044



IMAGER



### BEFORE SURVEY CALIBRATION

C:\Minimus 11.03.4044\Data\Sunflower Ginest #1\Sunflower Ginest #1.dta

#### General Constants All 000

Last Edited on 29-APR-2012,03:17

##### General Parameters

|                             |          |            |
|-----------------------------|----------|------------|
| Mud Resistivity             | 0.500    | ohm-metres |
| Mud Resistivity Temperature | 73.000   | degrees F  |
| Water Level                 | 0.000    | feet       |
| Density/Neutron Processing  | Wet Hole |            |

##### Hole/Annular Volume and Differential Caliper Parameters

|                                  |                |        |
|----------------------------------|----------------|--------|
| HVOL Method                      | Single Caliper |        |
| HVOL Caliper 1                   | MIE Caliper X  |        |
| HVOL Caliper 2                   | N/A            |        |
| Annular Volume Diameter          | 5.500          | inches |
| Caliper for Differential Caliper | MIE Caliper X  |        |

##### Rwa Parameters

|                  |     |
|------------------|-----|
| Porosity used    | N/A |
| Resistivity used | N/A |
| RWA Constant A   | N/A |
| RWA Constant M   | N/A |

#### Down-hole Tension Calibration All 000

Field Calibration on 30-JUN-2010

| Reading No | Measured | Calibrated (lbs) |
|------------|----------|------------------|
| 1          | 14112.01 | 10.00            |
| 2          | 15164.79 | 427.00           |

#### Down-hole Tension Calibration SMS 0

Field Calibration on 29-MAR-2012 11:07

| Reading No | Measured | Calibrated (lbs) |
|------------|----------|------------------|
| 1          | -2133.10 | 0.00             |
| 2          | -2135.89 | 100.00           |

#### Gamma Calibration MCG-C 208

Field Calibration on 28-APR-2012 14:29

|                    | Measured | Calibrated (API) |
|--------------------|----------|------------------|
| Background         | 67       | 47               |
| Calibrator (Gross) | 1096     | 772              |
| Calibrator (Net)   | 1029     | 725              |

#### Gamma Constants MCG-C 208

Last Edited on 29-APR-2012,03:21

|                               |               |       |
|-------------------------------|---------------|-------|
| Gamma Calibrator Number       | gcr38         |       |
| Mud Density                   | 1.03          | gm/cc |
| Caliper Source for Processing | MIE Caliper X |       |
| Tool Position                 | Centred       |       |
| Concentration of KCl          | 0.00          | kppm  |

#### SP Calibration MCG-C 208

Field Calibration on 24-FEB-2012 11:08

|             | Measured | Calibrated (mV) |
|-------------|----------|-----------------|
| Reference 1 | 98.6     | 100.0           |
| Reference 2 | -101.8   | -100.0          |

#### High Resolution Temperature Calibration MCG-C 208



|       | Measured | Calibrated(Deg F) |
|-------|----------|-------------------|
| Lower | 50.00    | 50.00             |
| Upper | 75.00    | 75.00             |

## High Resolution Temperature Constants MCG-C 208

Last Edited on

Pre-filter Length 11

## Accelerometer Parameters MIE-A.A 105

|  |                 |                 |                 |
|--|-----------------|-----------------|-----------------|
| Date Of Last Accelerometer Calibration | 01-JAN-1998     |                 |                 |
| Slope                                  | X Accelerometer | Y Accelerometer | Z Accelerometer |
|  | -1.112750       | -1.110820       | -1.121460       |
| Offset                                 | 0.012495        | 0.001190        | 0.008117        |

## Accelerometer Constants MIE-A.A 105

Last Edited on 9-MAY-2007,07:45

|  |              |               |               |               |
|--|--------------|---------------|---------------|---------------|
| Accelerometer Calibrator Number            | 000          |               |               |               |
| Accelerometer Temperature Characterisation |              |               |               |               |
| X Accelerometer                            |              |               |               |               |
| Serial Number                              | 3745         |               |               |               |
| Calibration Date                           | 01-Jan-1998  |               |               |               |
|  | B0           | B1            | B2            | B3            |
| Bias(g)                                    | 0.00000e+000 | -2.02925e-005 | 6.54754e-008  | -1.79517e-010 |
|  | SF0          | SF1           | SF2           | SF3           |
| Scale Factor(mA/g)                         | 3.00000e+000 | 2.48327e-004  | 4.75709e-007  | -6.03094e-011 |
| Y Accelerometer                            |              |               |               |               |
| Serial Number                              | 218          |               |               |               |
| Calibration Date                           | 01-Jan-1998  |               |               |               |
|  | B0           | B1            | B2            | B3            |
| Bias(g)                                    | 0.00000e+000 | 2.20530e-005  | -2.95334e-008 | 1.50437e-010  |
|  | SF0          | SF1           | SF2           | SF3           |
| Scale Factor(mA/g)                         | 3.00000e+000 | 2.70587e-004  | 5.34011e-007  | -5.79861e-012 |
| Z Accelerometer                            |              |               |               |               |
| Serial Number                              | 231          |               |               |               |
| Calibration Date                           | 01-Jan-1998  |               |               |               |
|  | B0           | B1            | B2            | B3            |
| Bias(g)                                    | 0.00000e+000 | 4.37276e-006  | -7.93417e-011 | 8.17287e-011  |
|  | SF0          | SF1           | SF2           | SF3           |
| Scale Factor(mA/g)                         | 3.00000e+000 | 2.74026e-004  | 6.12371e-007  | -2.15117e-010 |

## Imager Pad Check MIE-A.A 105

Field Check on 5-NOV-2008,12:41

|       |                |       |                |
|-------|----------------|-------|----------------|
| Pad 1 | Pad Not Tested | Pad 5 | Pad Not Tested |
| Pad 2 | Pad Not Tested | Pad 6 | Pad Not Tested |
| Pad 3 | Pad Not Tested | Pad 7 | Pad Not Tested |
| Pad 4 | Pad Not Tested | Pad 8 | Pad Not Tested |

## Compact Micro Imager Constants MIE-A.A 105

Last Edited on 5-NOV-2008,12:41

|                                  |                        |         |
|----------------------------------|------------------------|---------|
| Sonde Configuration              | Imager Mode            | degrees |
| Arm-Pad Kit                      | Normal Pads (12.25 in) |         |
| Centre Pad 1 Rotational Offset   | 0.00                   |         |
| Image/Borehole Ovality Reference | Azimuth of Pad 1       | degrees |
| Non Active Buttons               | Interpolate            | feet    |
| Search Angle                     | 0.00                   | feet    |
| Correlation Interval             | 3.28                   | mAmp    |
| Correlation Step                 | 1.64                   | mAmp    |
| Current Offset                   | 0.0000                 |         |
| Squasher Start                   | 0.0500                 |         |
| Image Processing                 | Enabled                |         |

## Caliper Calibration MIE-A.A 105

Base Calibration on 16-JUN-2011,07:50

Field Calibration on 16-JUN-2011,07:51

|                  |                |                |                      |  |
|------------------|----------------|----------------|----------------------|--|
| Base Calibration |                |                |                      |  |
| Reading No       | Pads 1-5 Meas. | Pads 3-7 Meas. | Calibrator Size (in) |  |
| 1                | 25527          | 26143          | 5.96                 |  |
| 2                | 35811          | 36299          | 7.98                 |  |
| 3                | 46009          | 46706          | 9.95                 |  |

4 57039 58445 11.91  
 5 0 0 0.00

| Reading No | Pad 2 Meas. | Pad 4 Meas. | Pad 6 Meas. | Pad 8 Meas. | Calibrator Size (in) |
|------------|-------------|-------------|-------------|-------------|----------------------|
| 1          | 25976       | 25192       | 25800       | 25035       | 5.96                 |
| 2          | 34449       | 33449       | 34321       | 33872       | 7.98                 |
| 3          | 43015       | 42147       | 42933       | 42357       | 9.95                 |
| 4          | 52805       | 51573       | 52223       | 52103       | 11.91                |
| 5          | 0           | 0           | 0           | 0           | 0.00                 |

Field Calibration

| Measured Pads 1-5 Caliper(in) | Measured Pads 3-7 Caliper(in) | Actual Caliper(in)         |                            |                    |
|-------------------------------|-------------------------------|----------------------------|----------------------------|--------------------|
| 6.00                          | 6.02                          | 5.98                       |                            |                    |
| Measured Pad 2 Caliper(in)    | Measured Pad 4 Caliper(in)    | Measured Pad 6 Caliper(in) | Measured Pad 8 Caliper(in) | Actual Caliper(in) |
| 3.04                          | 3.00                          | 2.99                       | 3.01                       | 5.98               |

Caliper Constants MIE-A.A 105

Last Edited on 08-JUN-2011,21:53

Caliper Difference for BRKT 0.120 inches

Magnetometer Parameters MIE-A.A 105

|                                       |                |                |                |
|---------------------------------------|----------------|----------------|----------------|
| Date Of Last Magnetometer Calibration | 01-JAN-1998    |                |                |
| Slope                                 | X Magnetometer | Y Magnetometer | Z Magnetometer |
| Offset                                | -1.000000      | -0.998568      | -0.980616      |
|                                       | 0.005777       | -0.016073      | 0.003505       |

Magnetometer Constants MIE-A.A 105

Last Edited on

Magnetometer Calibrator Number 000

Navigation Constants MIE-A.A 105

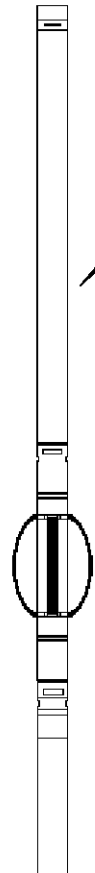
Last Edited on 29-APR-2012,03:17

Magnetic Declination 6.17 degrees East

DOWNHOLE EQUIPMENT

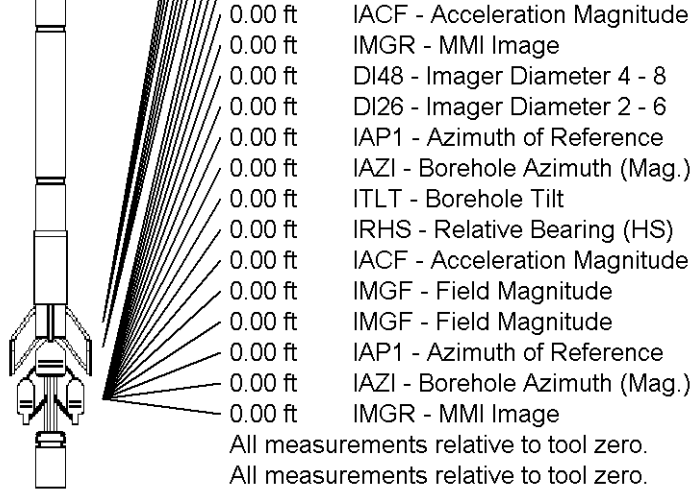
C:\Minimus 11.03.4044\Data\Sunflower Ginest #1\Sunflower Ginest #1.dta

- Compact Comms Gamma  
MCG-C 208 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in
- Compact Comms Gamma  
MCG-C 208 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in
- Compact MMI Memory Section  
MIM-A.A 105 LG: 4.65 ft WT: 26.5 lb OD: 2.24 in
- Compact MMI Memory Section  
MIM-A.A 105 LG: 4.65 ft WT: 26.5 lb OD: 2.24 in
- Compact MMI Electrode Section  
MIE-A.A 105 LG: 13.96 ft WT: 99.2 lb OD: 4.09 in
- Compact MMI Electrode Section  
MIE-A.A 105 LG: 13.96 ft WT: 99.2 lb OD: 4.09 in
- Total Length: 27.30 ft Weight: 189.6 lb
- Total Length: 27.30 ft Weight: 189.6 lb



20.29 ft GRGC - Gamma Ray  
 20.29 ft GRGC - Gamma Ray

0.52 ft IECY - MIE Caliper Y  
 0.52 ft IECX - MIE Caliper X  
 0.52 ft IECY - MIE Caliper Y  
 0.52 ft IECX - MIE Caliper X  
 0.00 ft IMZA - Z Accelerometer  
 Tool Zero (1.86ft from bottom)  
 Tool Zero (1.86ft from bottom)  
 0.00 ft IMZA - Z Accelerometer  
 0.00 ft ITLT - Borehole Tilt  
 0.00 ft DI48 - Imager Diameter 4 - 8  
 0.00 ft DI26 - Imager Diameter 2 - 6  
 0.00 ft IRHS - Relative Bearing (HS)



|                         |                        |      |               |              |
|-------------------------|------------------------|------|---------------|--------------|
| COMPANY                 | SUNFLOWER ENERGY, LLC. |      |               |              |
| WELL                    | GINEST #1 OWWO         |      |               |              |
| FIELD                   | UNNAMED                |      |               |              |
| PROVINCE/COUNTY         | GRAY                   |      |               |              |
| COUNTRY/STATE           | U.S.A. / KANSAS        |      |               |              |
| Elevation Kelly Bushing | 2765.00                | feet | First Reading | feet         |
| Elevation Drill Floor   | 2763.00                | feet | Depth Driller | 5200.00 feet |
| Elevation Ground Level  | 2754.00                | feet | Depth Logger  | 5200.00 feet |



CALIPER LOG

