



**Weatherford**<sup>®</sup>

## MICRORESISTIVITY LOG

COMPANY

CITATION OIL & GAS CORP.

WELL

SCHMITT # 8-11

FIELD

FAIRPORT

PROVINCE/COUNTY

ELLIS

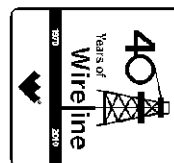
COUNTRY/STATE

U.S.A. / KANSAS

LOCATION

293' FNL & 3455' FEL

NE NW NE NW



SEC

TWP

RGE

Other Services

12

13S

16W

MPD/MDN

API Number

15-051-26153

MAI/MFE

Permit Number

MSS

Permanent Datum G.L., Elevation 1940 feet

Log Measured From KB

Drilling Measured From K.B.

Elevations:  
KB 1948.00  
DF 1946.00  
GL 1940.00

Date 28-FEB-2012

Run Number ONE

Depth Driller 3460.00 feet

Depth Logger 3461.00 feet

First Reading 3412.00 feet

Last Reading 2400.00 feet

Casing Driller 1015.00 feet

Casing Logger 1015.00 feet

Bit Size 7.875 inches

Hole Fluid Type CHEMICAL

Density / Viscosity 8.80 lb/USg 42.00 CP

PH / Fluid Loss 11.00 6.80 ml/30Min

Sample Source FLOWLINE

Rm @ Measured Temp 1.04 @ 70.0 ohm-m

Rmf @ Measured Temp 0.83 @ 70.0 ohm-m

Rmc @ Measured Temp 1.25 @ 70.0 ohm-m

Source Rmf / Rmc CALC CALC

Rm @ BHT 0.84 @ 88.0 ohm-m

Time Since Circulation 4 HOURS

Max Recorded Temp 88.00 deg F

Equipment Name COMPACT

Equipment / Base 13057 LIB

Recorded By A. GIAMBALVO

LIB

Witnessed By JOSH KULL

S.O. / JOB # 3534614

LB12-048

## BOREHOLE RECORD

Last Edited: 28-FEB-2012 10:48

Bit Size  
inches

7.875

Depth From  
feet

1015.00

Depth To  
feet

3461.00

## CASING RECORD

Type

Size  
inches

8.625

Depth From  
feet

8.00

Shoe Depth  
feet

1015.00

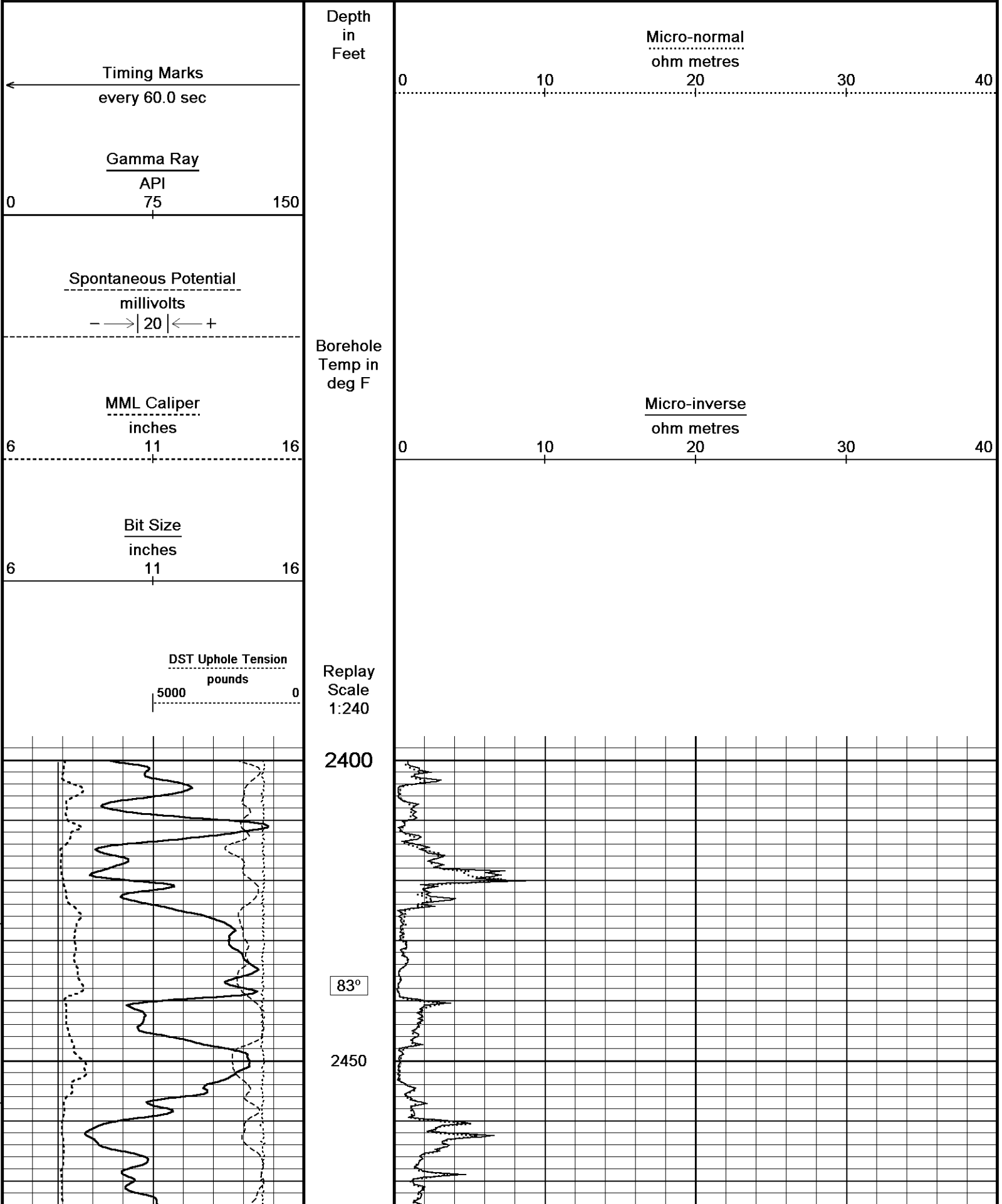
Weight  
pounds/ft

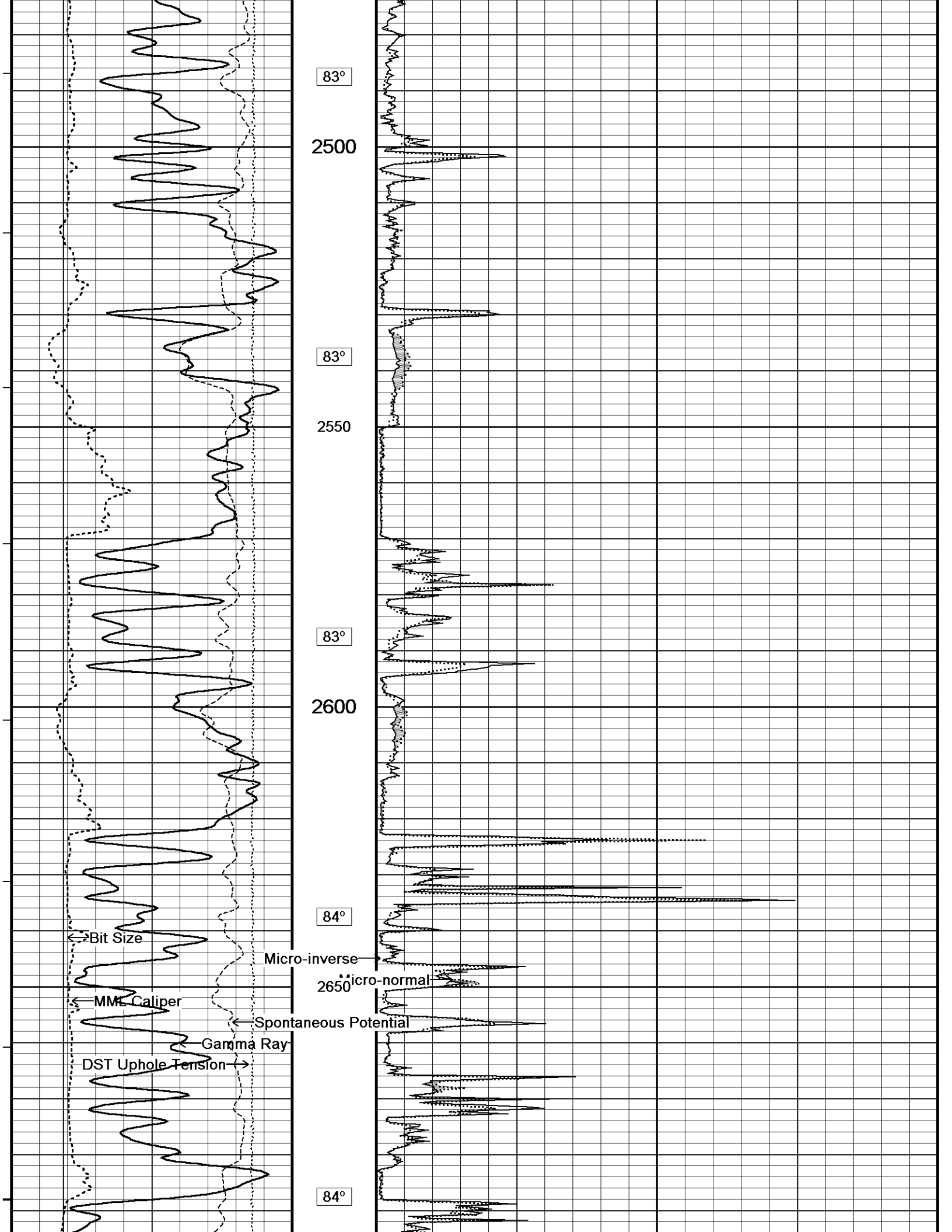
24.00

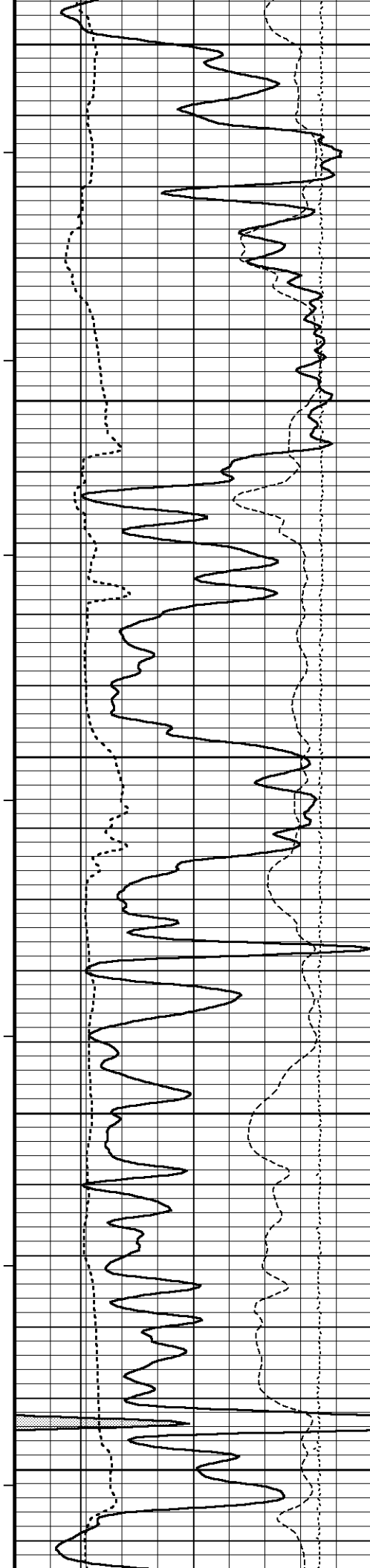
## REMARKS

Tools Ran: MCG, MML, MDN, MPD, SKJ, MFE, MSS, MAI.  
Hardware Used: MDN Dual Eccentralizer used. MPD 8 inch profile plate used. MFE, MSS and MAI 0.5 inch standoffs used.  
2.71 g/cc Limestone Density Matrix used to calculate porosity.  
Sonic porosity calculated using a Limestone scale (47.5 usec/ft).  
All intervals logged and scaled per customer's request.  
Annular volume with 5.5 inch production casing calculated = 869 cu. ft.  
Total hole volume from TD to surface casing = 1258 cu. ft.  
Service order #3534614  
Rig: Duke Drilling Rig #2  
Engineer: A. Giambalvo  
Operator(s): N. Adame

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, except 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.







2700

85°

2750

85°

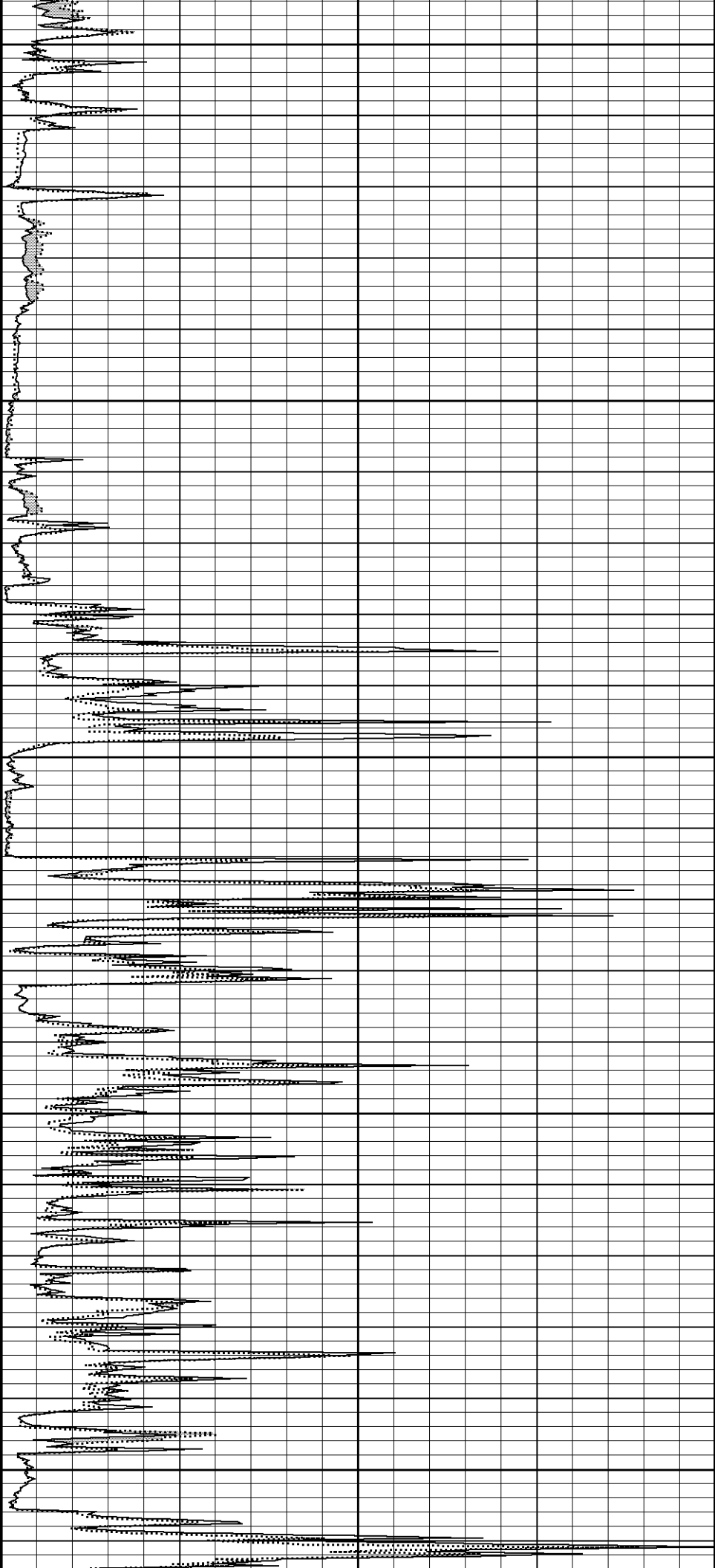
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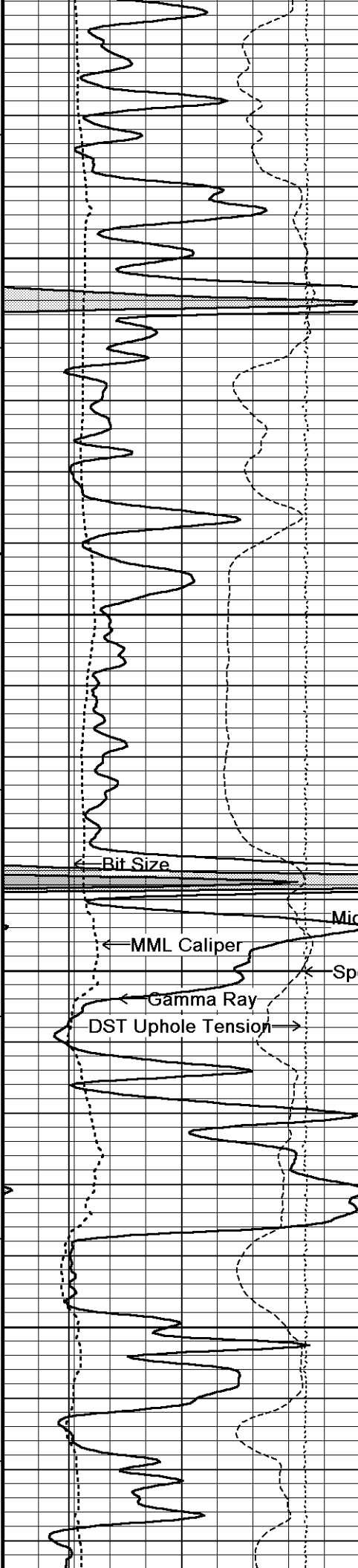
85°

2850

86°

2900





86°

2950

86°

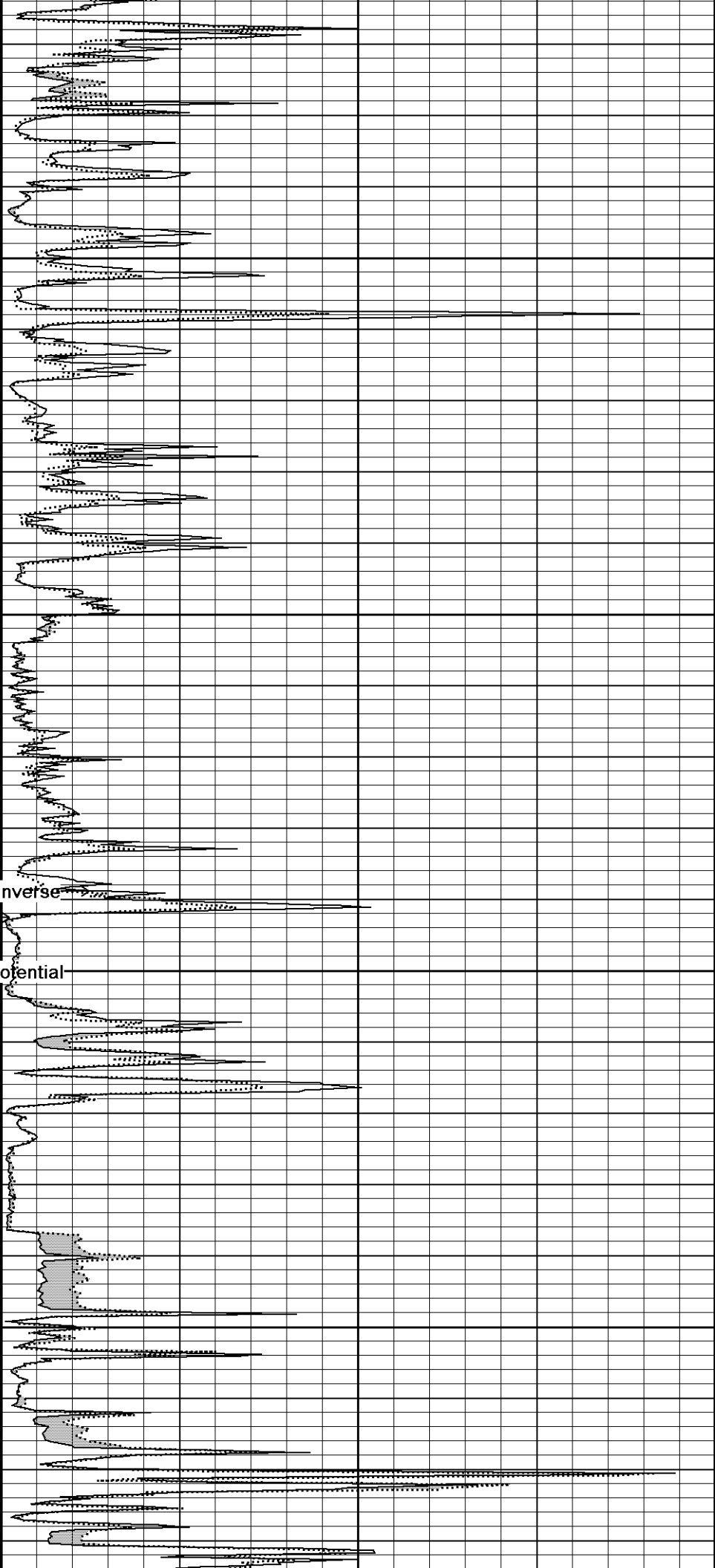
3000

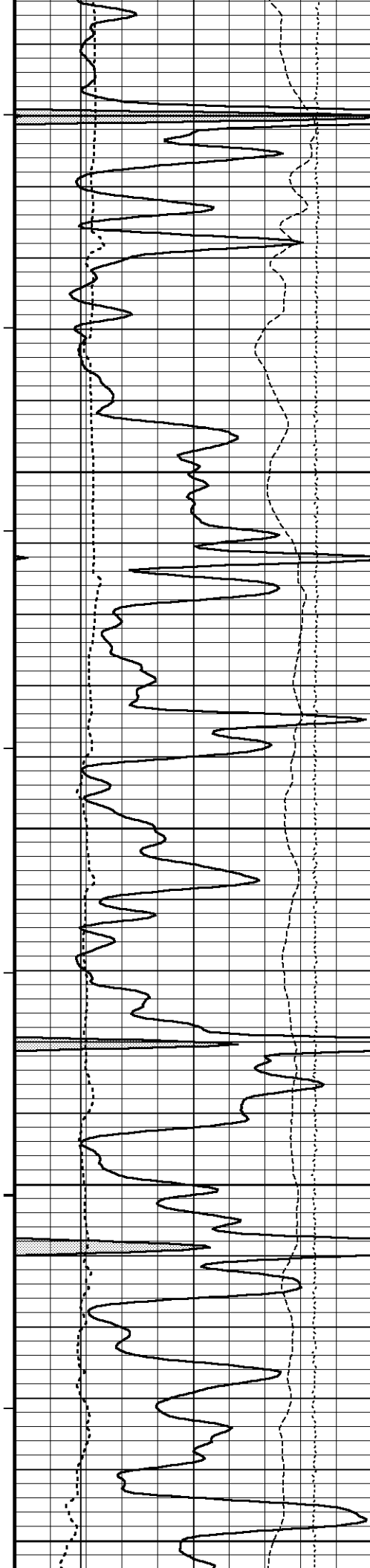
86°

86°

3100

Micro-inverse  
Micro-normal  
Spontaneous Potential





87°

3150

87°

3200

87°

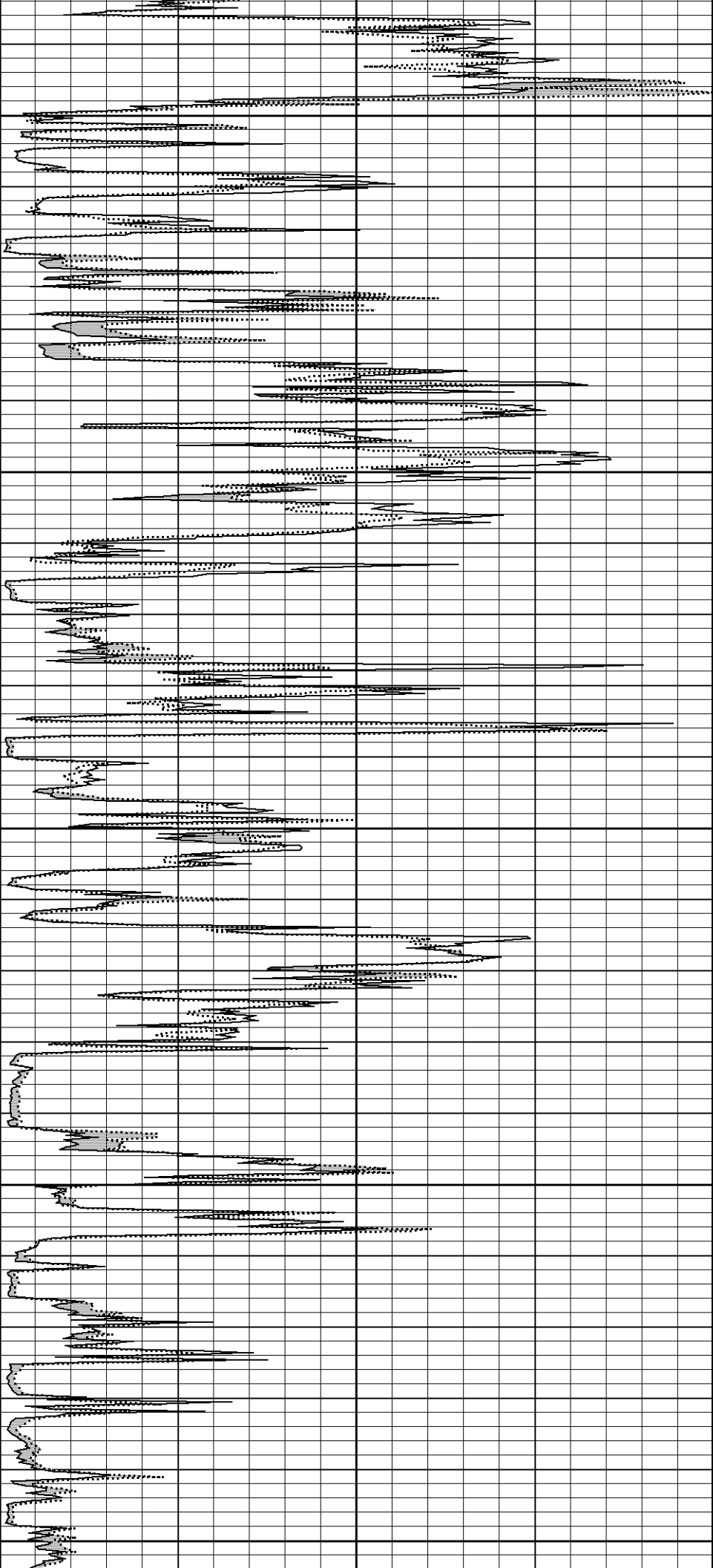
3250

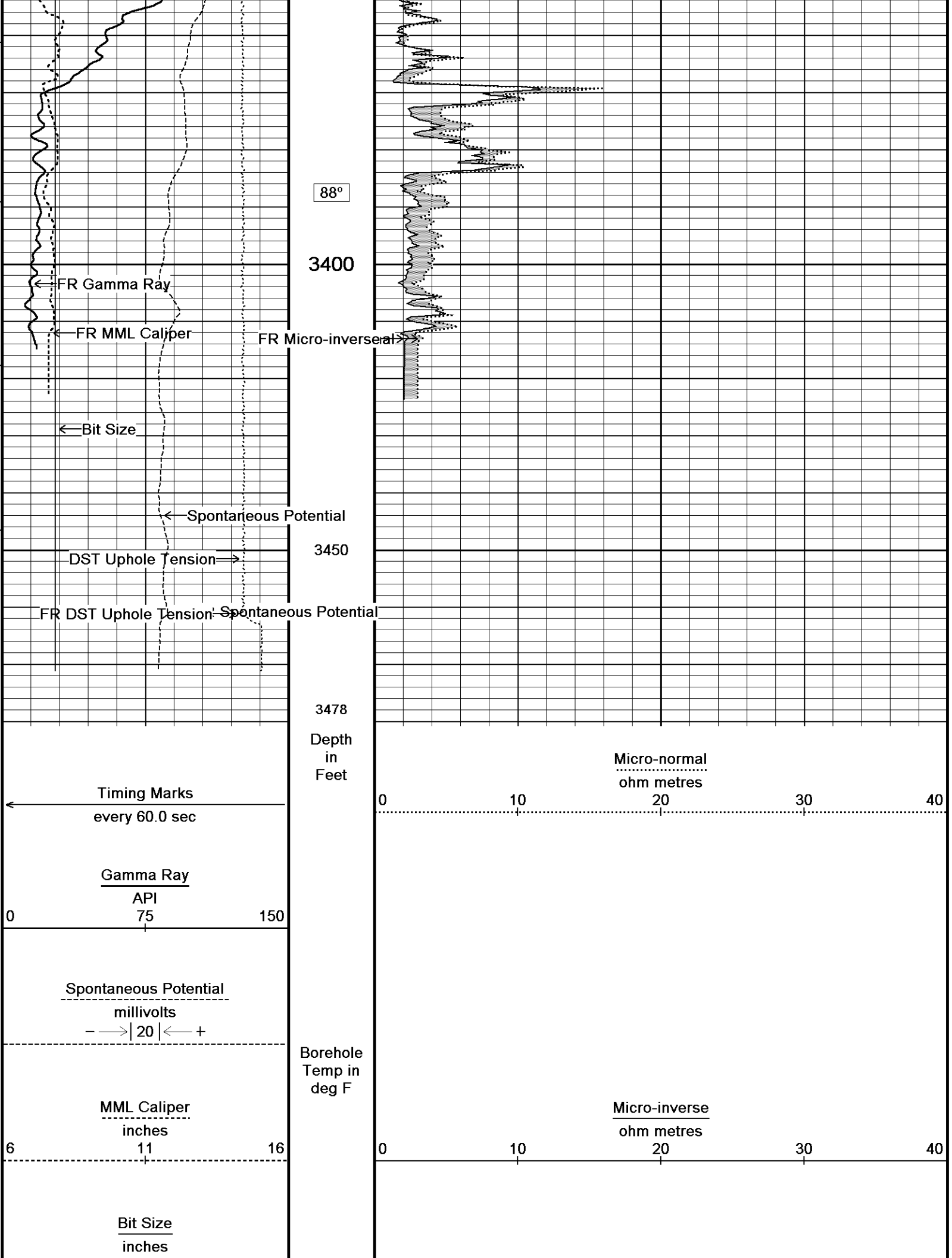
88°

3300

88°

3350





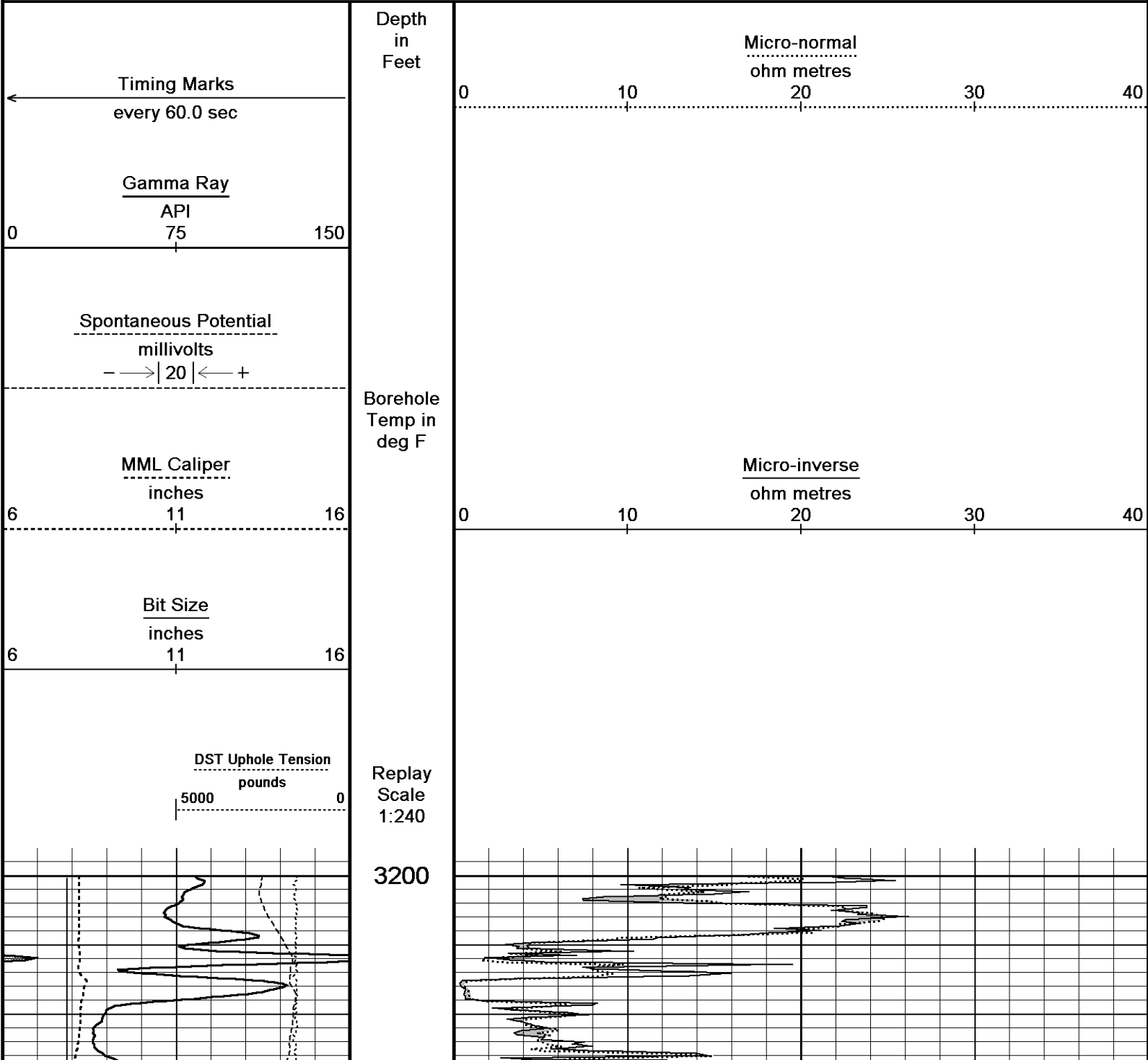


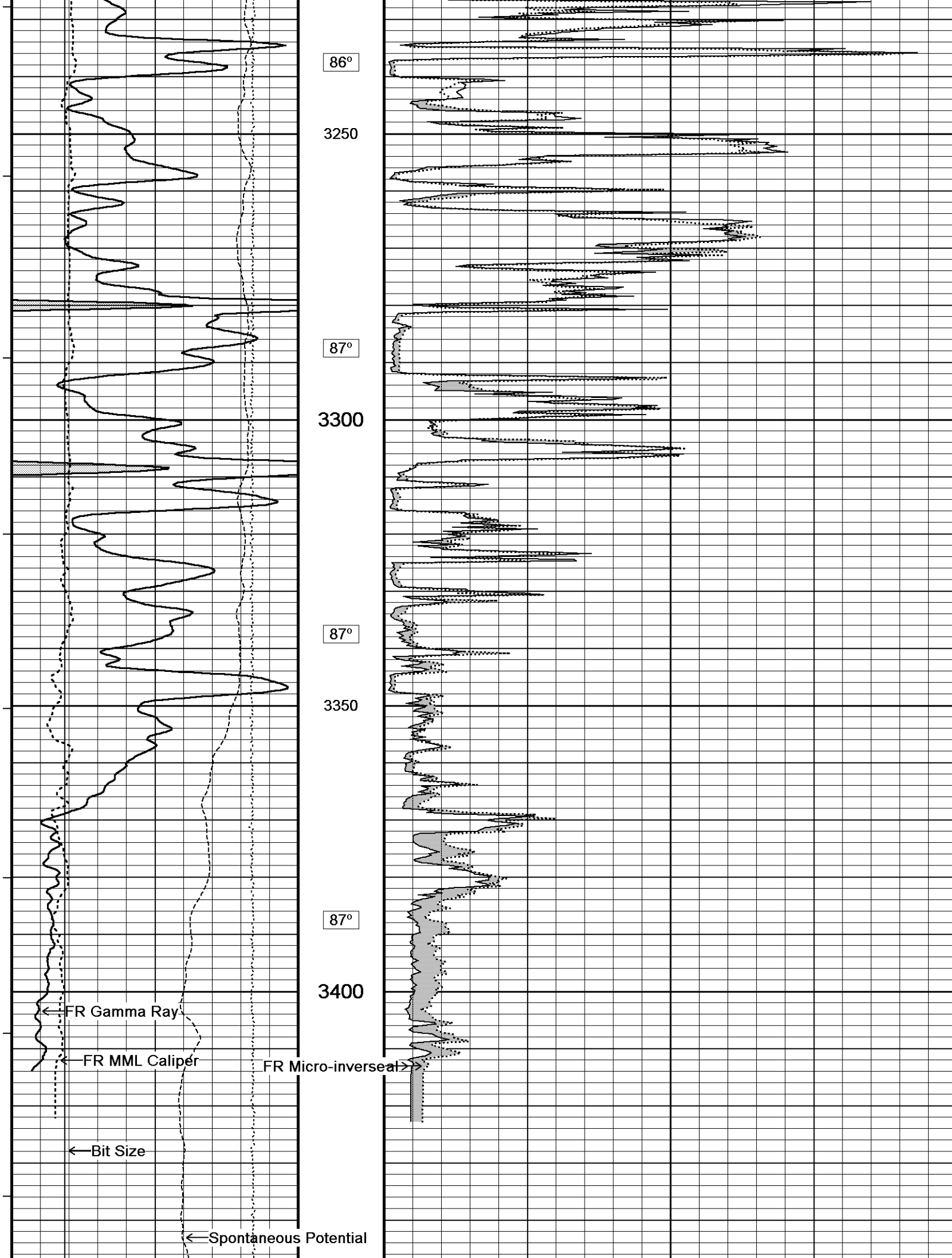
|                                                                                                                                                                                                                         |                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| Depth Based Data - Maximum Sampling Increment 10.0cm<br>Filename: C:\Minimus 11.03.4044\Data\Citation Schmitt # 8-11\Citation Schmitt # 8-11_003.dta<br>System Versions: Logged with 11.03.4044 Plotted with 11.03.4044 | Plotted on 28-FEB-2012 11:12<br>Recorded on 28-FEB-2012 09:19 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|

|   |                  |   |
|---|------------------|---|
| ↑ | 5 INCH MAIN PASS | ↑ |
|---|------------------|---|

|   |                    |   |
|---|--------------------|---|
| ↓ | 5 INCH REPEAT PASS | ↓ |
|---|--------------------|---|

|                                                                                                                                                                                                                         |                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| Depth Based Data - Maximum Sampling Increment 10.0cm<br>Filename: C:\Minimus 11.03.4044\Data\Citation Schmitt # 8-11\Citation Schmitt # 8-11_002.dta<br>System Versions: Logged with 11.03.4044 Plotted with 11.03.4044 | Plotted on 28-FEB-2012 11:12<br>Recorded on 28-FEB-2012 08:59 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|







|                                  |                        |        |
|----------------------------------|------------------------|--------|
| HVOL Method                      | Single Caliper         |        |
| HVOL Caliper 1                   | Density Caliper        |        |
| HVOL Caliper 2                   | N/A                    |        |
| Annular Volume Diameter          | 5.500                  | inches |
| Caliper for Differential Caliper | Density Caliper        |        |
| Rwa Parameters                   |                        |        |
| Porosity used                    | Limestone Density Por. |        |
| Resistivity used                 | Array Ind. One Res Rt  |        |
| RWA Constant A                   | 0.610                  |        |
| RWA Constant M                   | 2.150                  |        |

|                                     |          |                  |                                        |
|-------------------------------------|----------|------------------|----------------------------------------|
| Down-hole Tension Calibration SMS 0 |          |                  | Field Calibration on 24-DEC-2011 19:14 |
| Reading No                          | Measured | Calibrated (lbs) |                                        |
| 1                                   | 13180.10 | 0.00             |                                        |
| 2                                   | 14049.87 | 408.00           |                                        |

|                               |          |                  |                                        |
|-------------------------------|----------|------------------|----------------------------------------|
| Gamma Calibration MCG-D.K 442 |          |                  | Field Calibration on 27-FEB-2012 09:38 |
|                               | Measured | Calibrated (API) |                                        |
| Background                    | 69       | 47               |                                        |
| Calibrator (Gross)            | 1134     | 772              |                                        |
| Calibrator (Net)              | 1065     | 725              |                                        |

|                               |                 |       |                                  |
|-------------------------------|-----------------|-------|----------------------------------|
| Gamma Constants MCG-D.K 442   |                 |       | Last Edited on 28-FEB-2012,07:50 |
| Gamma Calibrator Number       | grc38           |       |                                  |
| Mud Density                   | 1.06            | gm/cc |                                  |
| Caliper Source for Processing | Density Caliper |       |                                  |
| Tool Position                 | Eccentred       |       |                                  |
| Concentration of KCl          | 0.00            | kppm  |                                  |

|                            |          |                 |                                        |
|----------------------------|----------|-----------------|----------------------------------------|
| SP Calibration MCG-D.K 442 |          |                 | Field Calibration on 06-FEB-2012 10:17 |
|                            | Measured | Calibrated (mV) |                                        |
| Reference 1                | 101.0    | 100.0           |                                        |
| Reference 2                | -99.9    | -100.0          |                                        |

|                                                     |          |                   |                                        |
|-----------------------------------------------------|----------|-------------------|----------------------------------------|
| High Resolution Temperature Calibration MCG-D.K 442 |          |                   | Field Calibration on 02-DEC-2011,12:34 |
|                                                     | Measured | Calibrated(Deg F) |                                        |
| Lower                                               | 50.00    | 50.00             |                                        |
| Upper                                               | 75.00    | 75.00             |                                        |

|                                                   |    |  |                                  |
|---------------------------------------------------|----|--|----------------------------------|
| High Resolution Temperature Constants MCG-D.K 442 |    |  | Last Edited on 25-SEP-2011,21:25 |
| Pre-filter Length                                 | 11 |  |                                  |

|                             |                       |                      |                                                                                 |
|-----------------------------|-----------------------|----------------------|---------------------------------------------------------------------------------|
| Caliper Calibration MML-A 4 |                       |                      | Base Calibration on 13-FEB-2012 09:03<br>Field Calibration on 27-FEB-2012 09:30 |
| Base Calibration            |                       |                      |                                                                                 |
| Reading No                  | Measured              | Calibrator Size (in) |                                                                                 |
| 1                           | 15017                 | 5.98                 |                                                                                 |
| 2                           | 18447                 | 7.97                 |                                                                                 |
| 3                           | 21786                 | 9.86                 |                                                                                 |
| 4                           | 25801                 | 11.92                |                                                                                 |
| 5                           | 0                     | 0.00                 |                                                                                 |
| 6                           | N/A                   | N/A                  |                                                                                 |
| Field Calibration           |                       |                      |                                                                                 |
|                             | Measured Caliper (in) | Actual Caliper (in)  |                                                                                 |
|                             | 6.07                  | 5.98                 |                                                                                 |

|                                                    |                       |                       |                                                                           |
|----------------------------------------------------|-----------------------|-----------------------|---------------------------------------------------------------------------|
| Micro Normal and Micro Inverse Calibration MML-A 4 |                       |                       | Base Calibration on 13-FEB-2012 09:11<br>Field Check on 27-FEB-2012 09:28 |
| Base Calibration                                   |                       |                       |                                                                           |
|                                                    | Measured              | Calibrated (ohm-m)    |                                                                           |
| Channel                                            | Resistor 1 Resistor 2 | Resistor 1 Resistor 2 |                                                                           |
| Micro Normal                                       | 12.2 60.2             | 2.6 12.8              |                                                                           |
| Micro Inverse                                      | 15.7 78.3             | 1.7 8.4               |                                                                           |
| Channel                                            | Base Check (ohm-m)    | Field Check (ohm-m)   |                                                                           |
| Micro Normal                                       | 32.1                  | 32.1                  |                                                                           |

|                                                  |                                             |                                                                           |
|--------------------------------------------------|---------------------------------------------|---------------------------------------------------------------------------|
| Micro Normal                                     | 02.1                                        | 02.1                                                                      |
| Micro Inverse                                    | 16.3                                        | 16.3                                                                      |
| Micro Normal and Micro Inverse Constants MML-A 4 |                                             | Last Edited on 27-FEB-2012,09:27                                          |
| Pad Type                                         | 8-12 in Soft Rubber Inflatable 006-9011-159 |                                                                           |
| Micro Normal K Factor                            | 0.5110                                      |                                                                           |
| Micro Inverse K Factor                           | 0.3380                                      |                                                                           |
| Standoff Offset                                  | N/A                                         | inches                                                                    |
| Neutron Calibration MDN-A.B 65                   |                                             | Base Calibration on 13-FEB-2012 14:25<br>Field Check on 27-FEB-2012 09:42 |
| Base Calibration                                 |                                             |                                                                           |
|                                                  | Measured                                    | Calibrated (cps)                                                          |
|                                                  | Near Far                                    | Near Far                                                                  |
|                                                  | 3053 95                                     | 3714 110                                                                  |
| Ratio                                            | 32.113                                      | 33.764                                                                    |
| Field Calibrator at Base                         |                                             |                                                                           |
|                                                  | Calibrated (cps)                            |                                                                           |
|                                                  | 1672                                        | 2379                                                                      |
| Ratio                                            | 0.703                                       |                                                                           |
| Field Check                                      |                                             |                                                                           |
|                                                  | Calibrated (cps)                            |                                                                           |
|                                                  | 1684                                        | 2404                                                                      |
| Ratio                                            | 0.701                                       |                                                                           |
| Neutron Constants MDN-A.B 65                     |                                             | Last Edited on 28-FEB-2012,07:50                                          |
| Neutron Source Id                                | 14035B                                      |                                                                           |
| Neutron Jig Number                               | 5824NE                                      |                                                                           |
| Epithermal Neutron                               | No                                          |                                                                           |
| Caliper Source for Processing                    | Density Caliper                             |                                                                           |
| Stand-off                                        | 0.00                                        | inches                                                                    |
| Mud Density                                      | 1.00                                        | gm/cc                                                                     |
| Limestone Sigma                                  | 7.10                                        | cu                                                                        |
| Sandstone Sigma                                  | 4.26                                        | cu                                                                        |
| Dolomite Sigma                                   | 4.70                                        | cu                                                                        |
| Formation Pressure Source                        | Constant Value                              |                                                                           |
| Formation Pressure                               | 0.00                                        | kpsi                                                                      |
| Temperature Source                               | Constant Value                              |                                                                           |
| Temperature                                      | 68.00                                       | degrees F                                                                 |
| Mud Salinity                                     | 0.00                                        | kppm                                                                      |
| Formation Fluid Salinity Source                  | Constant Value                              |                                                                           |
| Formation Fluid Salinity                         | 0.00                                        | kppm                                                                      |
| Barite Mud Correction                            | Not Applied                                 |                                                                           |
| FE Calibration MFE-A.A 55                        |                                             | Base Calibration on 13-FEB-2012 09:17<br>Field Check on 27-FEB-2012 09:20 |
| Base Calibration                                 |                                             |                                                                           |
|                                                  | Measured                                    | Calibrated (ohm-m)                                                        |
| Reference 1                                      | 0.0                                         | 0.0                                                                       |
| Reference 2                                      | 951.6                                       | 126.8                                                                     |
| Base Check                                       | 281.6                                       |                                                                           |
| Field Check                                      | 281.6                                       |                                                                           |
| FE Constants MFE-A.A 55                          |                                             | Last Edited on 28-FEB-2012,07:51                                          |
| Running Mode                                     | No Sleeve                                   |                                                                           |
| MFE K Factor                                     | 0.1268                                      |                                                                           |
| Caliper Source for FE correction                 | Density Caliper                             |                                                                           |
| Caliper Value for FE correction                  | N/A                                         | inches                                                                    |
| Rm Source for FE correction                      | Temperature Corr                            |                                                                           |
| Temp. for Rm Corr.                               | MCG External Temperature                    |                                                                           |
| Stand-off                                        | 0.5                                         | inches                                                                    |
| Sonic Constants MSS-C.K 330                      |                                             | Last Edited on 28-FEB-2012,07:51                                          |
| Maximum Boundary Contrast                        | 100.00                                      | micro-sec/ft                                                              |
| Fluid Transit Time                               | 189.00                                      | micro-sec/ft                                                              |
| Limestone Transit Time                           | 47.50                                       | micro-sec/ft                                                              |
| Sandstone Transit Time                           | 55.50                                       | micro-sec/ft                                                              |
| Dolomite Transit Time                            | 42.50                                       | micro-sec/ft                                                              |

|                           |                        |              |
|---------------------------|------------------------|--------------|
| Dolomite Transit Time     | 43.50                  | micro-sec/ft |
| Sonic used for Porosities | 3-5' Compensated Sonic |              |
| Correction for Sonde Skew | Applied                |              |
| Cycle Stretch Algorithm   | Applied                |              |
| MN3FT                     | N/A                    | micro-sec    |
| MX3FT                     | N/A                    | micro-sec    |
| Hunt-Raymer Constant      | 83.13                  | micro-sec/ft |

|            |             |
|------------|-------------|
| Sonde Mode | Compensated |
| Hole Type  | Open Hole   |

#### Sonde Parameters

|                       |          |            |
|-----------------------|----------|------------|
|                       | Measured | Calibrated |
| Offset                | N/A      | 0.0000     |
| Free Pipe             | N/A      | N/A        |
| Peak Amplitude Source | N/A      |            |

| Waveform | Start Time (micro-sec) | Width (micro-sec) | Pre Gain | Start Gain | Discriminator (mV) |
|----------|------------------------|-------------------|----------|------------|--------------------|
| 3'       | N/A                    | N/A               | N/A      | N/A        | N/A                |
| 4'       | N/A                    | N/A               | N/A      | N/A        | N/A                |
| 5'       | N/A                    | N/A               | N/A      | N/A        | N/A                |
| 6'       | N/A                    | N/A               | N/A      | N/A        | N/A                |

#### Processed Fixed Gate Parameters

|                              |                      |                    |
|------------------------------|----------------------|--------------------|
| Waveform Used For Processing | N/A                  |                    |
| Start Time (micro-sec)       | End Time (micro-sec) | Discriminator (mV) |
| N/A                          | N/A                  | N/A                |
| N/A                          | N/A                  | N/A                |
| N/A                          | N/A                  | N/A                |
| N/A                          | N/A                  | N/A                |
| N/A                          | N/A                  | N/A                |

#### Full Waveform Parameters

|                                 |               |
|---------------------------------|---------------|
| Use 3' Waveform to derive TR    | N/A           |
| Use 4' Waveform to derive TR    | N/A           |
| Use 5' Waveform to derive TR    | N/A           |
| Use 6' Waveform to derive TR    | N/A           |
| 3' Waveform Discriminator Level | N/A mV        |
| 4' Waveform Discriminator Level | N/A mV        |
| 5' Waveform Discriminator Level | N/A mV        |
| 6' Waveform Discriminator Level | N/A mV        |
| 3' Waveform Filter              | N/A           |
| 4' Waveform Filter              | N/A           |
| 5' Waveform Filter              | N/A           |
| 6' Waveform Filter              | N/A           |
| Semblance Level                 | N/A           |
| Semblance Window Width          | N/A micro-sec |
| Sonic 1 Despiker                | N/A           |
| Sonic 2 Despiker                | N/A           |

#### High Resolution Temperature Calibration MAI-A.A 45

Field Calibration on 12-JAN-2012,13:36

|       |          |                   |
|-------|----------|-------------------|
|       | Measured | Calibrated(Deg F) |
| Lower | 50.00    | 50.00             |
| Upper | 100.00   | 100.00            |

#### High Resolution Temperature Constants MAI-A.A 45

Last Edited on 12-JAN-2012,11:13

|                   |    |
|-------------------|----|
| Pre-filter Length | 11 |
|-------------------|----|

#### Induction Calibration MAI-A.A 45

Base Calibration on 12-JAN-2012,13:34  
Field Check on 27-FEB-2012 09:19

##### Base Calibration

| Test Loop Calibration | Measured |       | Calibrated (mmho/m) |       |
|-----------------------|----------|-------|---------------------|-------|
| Channel               | Low      | High  | Low                 | High  |
| 1                     | 14.4     | 472.6 | 9.3                 | 966.2 |
| 2                     | 5.7      | 374.0 | 7.6                 | 821.4 |
| 3                     | 3.4      | 261.2 | 5.2                 | 566.0 |
| 4                     | 2.5      | 133.9 | 2.6                 | 279.2 |

|                   |                     |                      |
|-------------------|---------------------|----------------------|
| Array Temperature | 79.4                | Deg F                |
| Channel           | Base Check (mmho/m) | Field Check (mmho/m) |
|                   | Low High            | Low High             |
| 1                 | 0.0 0.0             | 18.4 3850.6          |
| 2                 | 0.0 0.0             | 31.6 3628.7          |
| 3                 | 0.0 0.0             | 28.6 3048.9          |
| 4                 | 0.0 0.0             | 18.3 2078.8          |
| Deep              | 0.0 0.0             | 16.0 1910.9          |
| Medium            | 0.0 0.0             | 42.5 4059.9          |
| Shallow           | 0.0 0.0             | 49.5 5482.0          |
| Array Temperature | 0.0                 | 60.9 Deg F           |

# Induction Constants MAI-A.A 45

Last Edited on 28-FEB-2012,07:51

|                                   |                          |
|-----------------------------------|--------------------------|
| Induction Model                   | RtAP-WBM                 |
| Caliper for Borehole Corr.        | Density Caliper          |
| Hole Size for Borehole Correction | N/A inches               |
| Tool Centred                      | No                       |
| Stand-off Type                    | Fins                     |
| Stand-off                         | 0.50 inches              |
| Number of Fins on Stand-off       | 8.0000                   |
| Stand-off Fin Angle               | 45.00 degrees            |
| Stand-off Fin Width               | 0.5000 inches            |
| Borehole Corr. Rm Source          | Temperature Corr         |
| Temp. for Rm Corr.                | MCG External Temperature |
| Squasher Start                    | 0.0020 mhos/metre        |
| Squasher Offset                   | N/A mhos/metre           |
| Borehole Normalisation            |                          |
| DRM1                              | 0.0000 DRC1 0.0000       |
| DRM2                              | 0.0000 DRC2 0.0000       |
| MRM1                              | 0.0000 MRC1 0.0000       |
| MRM2                              | 0.0000 MRC2 0.0000       |
| SRM1                              | 0.0000 SRC1 0.0000       |
| SRM2                              | 0.0000 SRC2 0.0000       |

|                              |                  |
|------------------------------|------------------|
| Calibration Site Corrections |                  |
| Channel 1                    | 0.00 mmhos/metre |
| Channel 2                    | 0.00 mmhos/metre |
| Channel 3                    | 0.00 mmhos/metre |
| Channel 4                    | 0.00 mmhos/metre |

|                                                  |                |
|--------------------------------------------------|----------------|
| Apparent Porosity and Water Saturation Constants |                |
| Archie Constant (A)                              | 1.00           |
| Cementation Exponent (M)                         | 2.00           |
| Saturation Exponent (N)                          | 2.00           |
| Saturation of Water for Apor                     | 100.00 percent |
| Resistivity of Water for Apor and Sw             | 0.05 ohm-m     |
| Resistivity of Mud Filtrate for Sw               | 0.00 ohm-m     |
| Source for Rt                                    | 0.00           |
| Source for Rxo                                   | 0.00           |

# Caliper Calibration MPD-B 64

Base Calibration on 13-FEB-2012 10:56  
Field Calibration on 27-FEB-2012 09:26

|                   |                       |                      |
|-------------------|-----------------------|----------------------|
| Base Calibration  |                       |                      |
| Reading No        | Measured              | Calibrator Size (in) |
| 1                 | 13425                 | 3.99                 |
| 2                 | 22192                 | 5.98                 |
| 3                 | 30768                 | 7.97                 |
| 4                 | 39024                 | 9.86                 |
| 5                 | 48432                 | 11.92                |
| 6                 | N/A                   | N/A                  |
| Field Calibration |                       |                      |
|                   | Measured Caliper (in) | Actual Caliper (in)  |
|                   | 5.91                  | 5.98                 |

# Photo Density Calibration MPD-B 64

Base Calibration on 13-FEB-2012 11:14  
Field Check on 27-FEB-2012 09:25

| Density Calibration |  | Measured |        | Calibrated (sdu) |       |
|---------------------|--|----------|--------|------------------|-------|
| Base Calibration    |  | Near     | Far    | Near             | Far   |
| Reference 1         |  | 47670    | 25060  | 59556            | 30836 |
| Reference 2         |  | 19597    | 2525   | 24941            | 2541  |
| Field Check at Base |  |          |        |                  |       |
|                     |  | 1199.0   | 1386.9 |                  |       |
| Field Check         |  |          |        |                  |       |
|                     |  | 1204.9   | 1393.5 |                  |       |

| PE Calibration      |       |          |       |            |  |
|---------------------|-------|----------|-------|------------|--|
| Base Calibration    |       | Measured |       | Calibrated |  |
|                     | WS    | WH       | Ratio | Ratio      |  |
| Background          | 218   | 1072     |       |            |  |
| Reference 1         | 18017 | 47489    | 0.383 | 0.371      |  |
| Reference 2         | 5304  | 19465    | 0.276 | 0.272      |  |
| Field Check at Base |       |          |       |            |  |
|                     | 218.3 | 1071.8   |       |            |  |
| Field Check         |       |          |       |            |  |
|                     | 216.5 | 1076.6   |       |            |  |

## Density Constants MPD-B 64

Last Edited on 28-FEB-2012,07:50

|                               |                 |       |
|-------------------------------|-----------------|-------|
| Density Source Id             | 254             |       |
| Nylon Calibrator Number       | DNCE695         |       |
| Aluminium Calibrator Number   | DACD698         |       |
| Density Shoe Profile          | 8 inch          |       |
| Caliper Source for Processing | Density Caliper |       |
| PE Correction to Density      | Not Applied     |       |
| Mud Density                   | 1.06            | gm/cc |
| Mud Density Z/A Multiplier    | 1.11            |       |
| Mud Filtrate Density          | 1.00            | gm/cc |
| Dry Hole Mud Filtrate Density | 1.00            | gm/cc |
| DNCT                          | 0.00            | gm/cc |
| CRCT                          | 0.00            | gm/cc |
| Density Z/A Correction        | Hybrid          |       |
| Matrix Density (gm/cc)        | Depth (ft)      |       |
| 2.71                          | 0.00            |       |
| 0.00                          | 0.00            |       |
| 0.00                          | 0.00            |       |
| 0.00                          | 0.00            |       |
| 0.00                          | 0.00            |       |
| 0.00                          | 0.00            |       |
| 0.00                          | 0.00            |       |
| 0.00                          | 0.00            |       |

## DOWNHOLE EQUIPMENT

C:\Minimus 11.03.4044\Data\Citation Schmitt # 8-11\Citation Schmitt # 8-11\_003.dta

MCB-A.A 11B Tension Cablehead  
MCB-A.A 175 LG: 2.40 ft WT: 19.8 lb OD: 2.24 in

MCB-A.A 11B Tension Cablehead  
MCB-A.A 175 LG: 2.40 ft WT: 19.8 lb OD: 2.24 in

Compact Comms Gamma  
MCG-D.K 442 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

Compact Comms Gamma  
MCG-D.K 442 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

Compact Micro-log



57.56 ft GRGC - Gamma Ray  
57.56 ft GRGC - Gamma Ray  
54.65 ft CGXT - MCG External Temperature  
54.65 ft CGXT - MCG External Temperature

MML-A 4 LG: 7.97 ft WT: 81.6 lb OD: 2.24 in

Compact Micro-log  
MML-A 4 LG: 7.97 ft WT: 81.6 lb OD: 2.24 in

Compact Neutron  
MDN-A.B 65 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

Compact Neutron  
MDN-A.B 65 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

Compact Density/Caliper  
MPD-B 64 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

Compact Density/Caliper  
MPD-B 64 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

SKJ-D.A Compact Knuckle Joint  
SKJ-D.A 37 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

SKJ-D.A Compact Knuckle Joint  
SKJ-D.A 37 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

Compact Focussed Electric  
MFE-A.A 55 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

Compact Focussed Electric  
MFE-A.A 55 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

Compact Sonic  
MSS-C.K 330 LG: 12.52 ft WT: 72.8 lb OD: 2.24 in

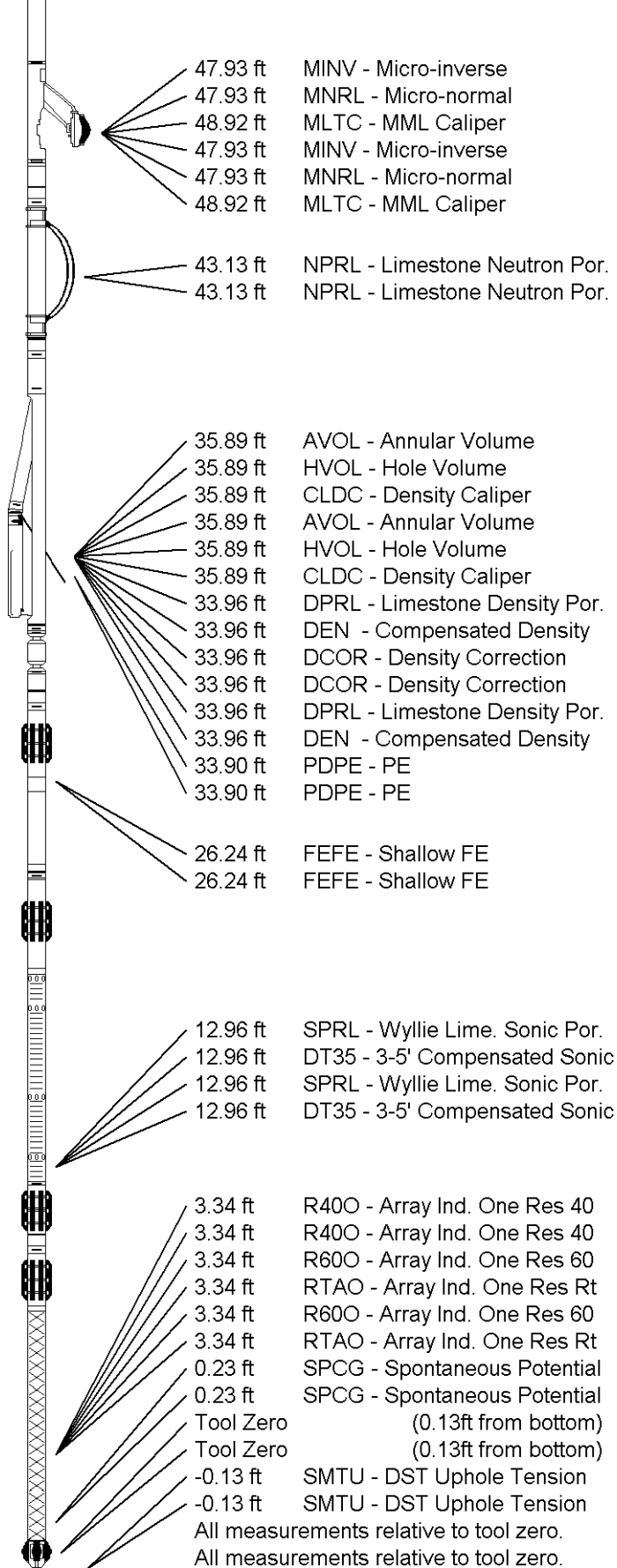
Compact Sonic  
MSS-C.K 330 LG: 12.52 ft WT: 72.8 lb OD: 2.24 in

Compact Induction  
MAI-A.A 45 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

Compact Induction  
MAI-A.A 45 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

Total Length: 65.24 ft Weight: 500.4 lb

Total Length: 65.24 ft Weight: 500.4 lb



|                 |                          |
|-----------------|--------------------------|
| COMPANY         | CITATION OIL & GAS CORP. |
| WELL            | SCHMITT # 8-11           |
| FIELD           | FAIRPORT                 |
| PROVINCE/COUNTY | ELLIS                    |
| COUNTRY/STATE   | U S A / KANSAS           |

COUNTY/STATE COUNTRY/STATE

|                         |         |      |               |         |      |
|-------------------------|---------|------|---------------|---------|------|
| Elevation Kelly Bushing | 1948.00 | feet | First Reading | 3412.00 | feet |
| Elevation Drill Floor   | 1946.00 | feet | Depth Driller | 3460.00 | feet |
| Elevation Ground Level  | 1940.00 | feet | Depth Logger  | 3461.00 | feet |



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