Permit # 30036 4?? [redacted]

60307

FINAL PRINT
Schlumberger

COMPENSATED NEUTRON/LITHODENSITY W/NGT

CSU Field Log

COMPANY: THE STONE PETROLEUM CORPORATION

WELL: E.M. MCCARTNEY 1-11 81

FIELD: WILDCAT
COUNTY: ATCHISON
STATE: MISSOURI
NATION: USA
LOCATION: 1827' FSL & 1822' FWL

SEC: 1 TWP: 64N RGE: 40W

PERMANENT DATUM: GL ELEVATIONS:
ELEV. OF PERM. DATUM: 1065.0 F KB: 1071.0 F
LOG MEASURED FROM: KB DF: 106[illegible] F
6.0 F ABOVE PERM. DATUM GL: 1065.0 F
DRLG. MEASURED FROM: KB

DATE: 1 FEB 88
RUN NO: 1

DEPTH-DRILLER: 3800.0 F
DEPTH-LOGGER: 3798.0 F
BTM. LOG INTERVAL: 3795.0 F
TOP LOG INTERVAL: 404.0 F

CASING-DRILLER: 397 F
CASING-LOGGER: 404 F
CASING: 8 5/8"

BIT SIZE: 7 7/8"

OTHER SERVICES-
DIL-BHC-GR
LDT-CNL-NGT
EPT-ML-GR
WST
CST
HDT

PROGRAM
TAPE NO:
26.2
SERVICE
ORDER NO:
508110

TYPE FLUID IN HOLE:	CHEMICAL
DENSITY:	9.2 LB/G
VISCOSITY:	40.0 S
PH:	11.5
FLUID LOSS:	8.4 C3
SOURCE OF SAMPLE:	FLOWLINE
RM:	1.080 OHMM AT 68.0 DEGF
RMF:	.798 OHMM AT 69.0 DEGF
RMC:	1.540 OHMM AT 69.0 DEGF
SOURCE RMF/RMC:	PRESS /PRESS
RM AT BHT:	.692 OHMM AT 110. DEGF
RMF AT BHT:	.518 OHMM AT 110. DEGF
RMC AT BHT:	1.000 OHMM AT 110. DEGF
TIME CIRC. STOPPED:	0000 2/1
TIME LOGGER ON BTM.:	0500 2/1
MAX. REC. TEMP.:	110.0 DEGF
LOGGING UNIT NO:	8353
LOGGING UNIT LOC:	GREAT BEND
RECORDED BY:	INGRAHAM
WITNESSED BY:	EBLE/LANGHUS

REMARKS:

THANKS FROM THE CREW OF 8353: DAVE, LACY, & TERRY
CHLORIDES = 2200 PPM
SONDE ECCENTERED BOWSPRING USED

EQUIPMENT NUMBERS-

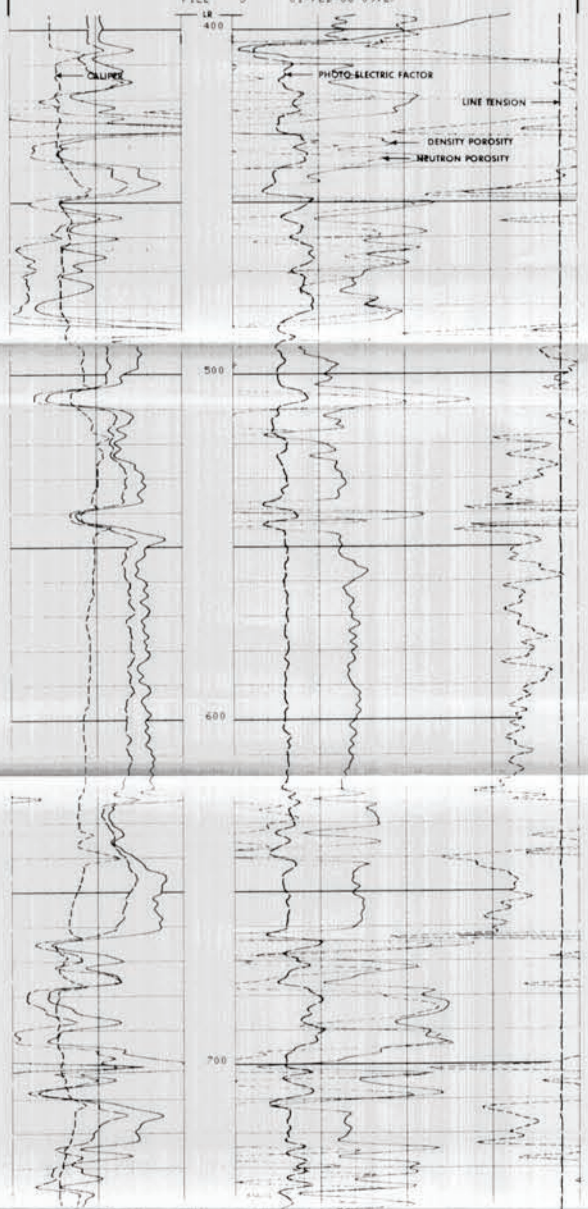
GREEN DITD	GREEN SGTE	BLACK LDTC	BLACK CNTH
BLACK SGTL	BLACK TCCA	GREEN SLTL	BLUE NGTC
ORANGE PCDB	SILVER EPTD	BLUE HDTD	CASPER WST

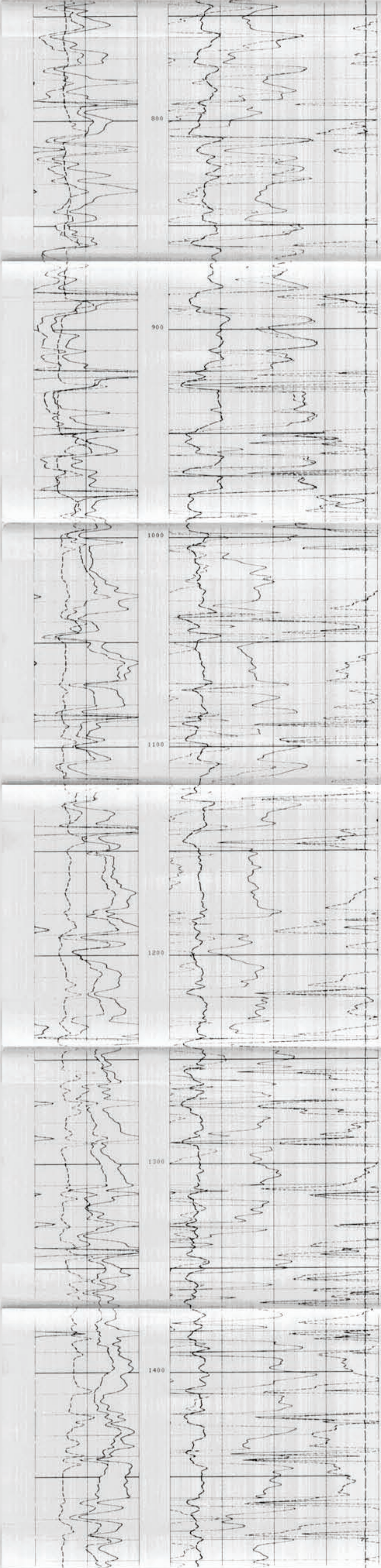
ALL INTERPRETATIONS ARE OPINIONS BASED ON INFERENCES FROM ELECTRICAL OR OTHER MEASUREMENTS AND WE CANNOT, AND DO NOT GUARANTEE THE ACCURACY OR CORRECTNESS OF ANY INTERPRETATIONS, AND WE SHALL NOT, EXCEPT IN THE CASE OF GROSS OR WILLFUL NEGLIGENCE ON OUR PART, BE LIABLE OR RESPONSIBLE FOR ANY LOSS, COSTS, 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 AS SET OUT IN OUR CURRENT PRICE SCHEDULE.

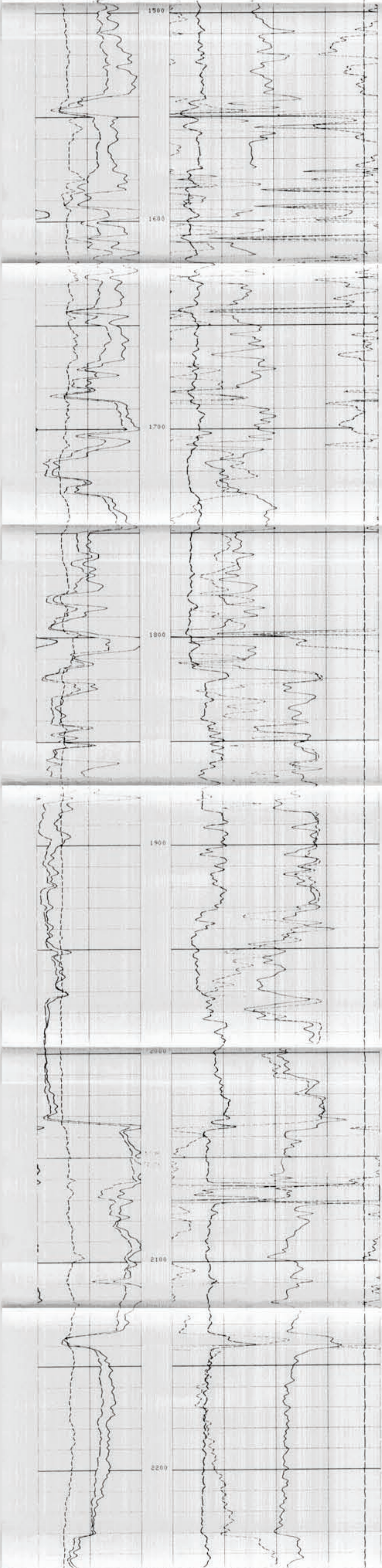
FILE 6 01-FEB-88 09:29

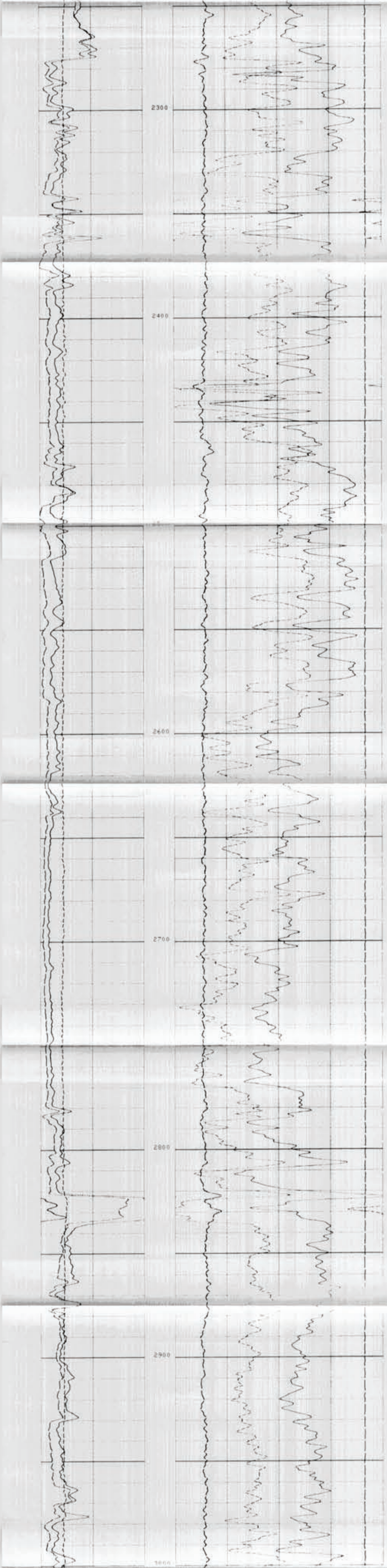
CGR (GAPI)		PEF		TENS(LB)	
0.0	150.00	0.0	10.000	10000.	0.0
SGR (GAPI)			NPHI		
[illegible]	[illegible]	.70000			.30000
HCAL (IN)			DPHI		
[illegible]	[illegible]	.30000			-.1000
SGR (GAPI)			NPHI		
0.0	150.00	.30000			-.1000

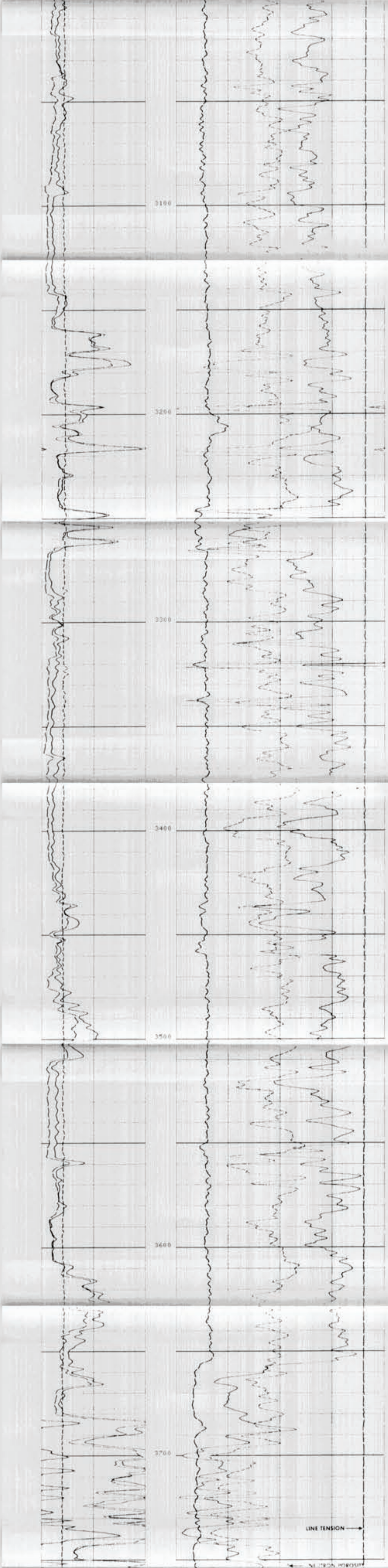
FILE 5 01-FEB-88 09:27

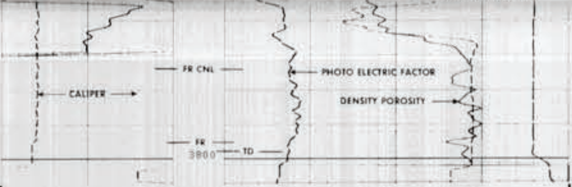












```
                    FILE    3      01-FEB-88 05:28
```

```
      CGR (GAPI)                    PEF                        TENS(LB  )
0.0               150.00     0.0                10.000 10000.             0.0
      SGR (GAPI)                                  NPHI
150.00            300.00     .70000                                    .30000
      CALI(IN  )                                  DPHI
6.0000            16.000     .30000                                   -.1000
      SGR (GAPI)                                  NPHI
0.0               150.00     .30000                                   -.1000
```

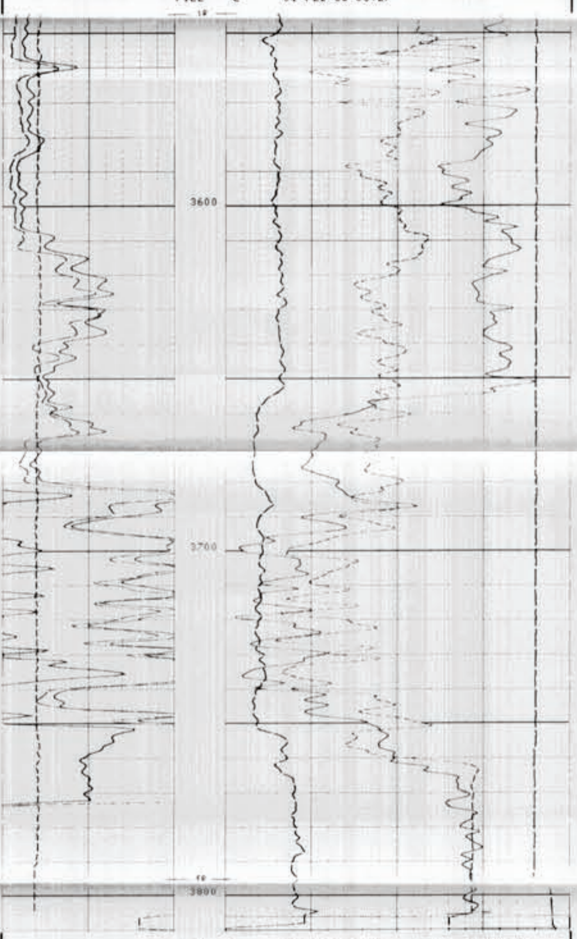
```
                 SENSOR MEASURE POINT TO TOOL ZERO

        W4NG 35.0  FEET                     W5NG 35.0  FEET
        W2NG 35.0  FEET                     W3NG 35.0  FEET
        SNGT 34.2  FEET                     W1NG 35.0  FEET
        TPUW 34.2  FEET                     NGPE 34.2  FEET
        PPUW 34.2  FEET                     TPLW 34.2  FEET
        APUW 34.2  FEET                     PPLW 34.2  FEET
        SCNL 23.2  FEET                     APLW 34.2  FEET
        FCNL 23.2  FEET                     NCNL 23.2  FEET
        SS1   2.0  FEET                     SS2   2.0  FEET
        LS    2.5  FEET                     LITH  2.5  FEET
        LL    2.5  FEET                     LU    2.5  FEET
        TENS  -.9  FEET                     CALI  2.6  FEET
        NRAT 23.2  FEET                     SGR  35.0  FEET
```

```
                          PARAMETERS

        NAME  VALUE    UNIT                 NAME  VALUE    UNIT

        BHT  110.000   DEGF                 TD   6000.00   F
        PSNR 2.25000                        SHT  65.0000   DEGF
        MATR LIME                           HC   CALI
        MDEN 2.71000   G/C3                 FD   1.00000   G/C3
        LPCS TWIN                           WMUD 9.20000   LB/G
        BHS  OPEN                           DHC  NONE
        BS   7.87500   IN
```

```
      CGR (GAPI)                    PEF                        TENS(LB  )
0.0               150.00     0.0                10.000 10000.             0.0
      SGR (GAPI)                                  NPHI
150.00            300.00     .70000                                    .30000
      CALI(IN  )                                  DPHI
6.0000            16.000     .30000                                   -.1000
      SGR (GAPI)                                  NPHI
0.0               150.00     .30000                                   -.1000
```

```
                    FILE    2      01-FEB-88 05:27
```

REPEAT SECTION



```
                    FILE    2      01-FEB-88 05:08
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REPEAT SECTION

```
      CGR (GAPI)                    PEF                        TENS(LB  )
0.0               150.00     0.0                10.000 10000.             0.0
      SGR (GAPI)                                  NPHI
150.00            300.00     .70000                                    .30000
      CALI(IN  )                                  DPHI
6.0000            16.000     .30000                                   -.1000
      SGR (GAPI)                                  NPHI
0.0               150.00     .30000                                   -.1000
```

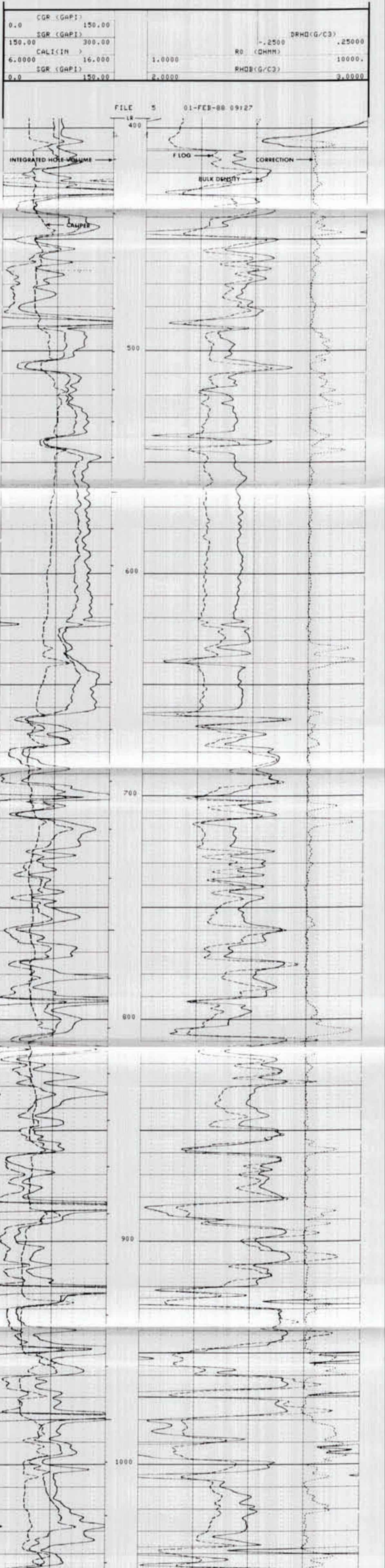
```
                 SENSOR MEASURE POINT TO TOOL ZERO

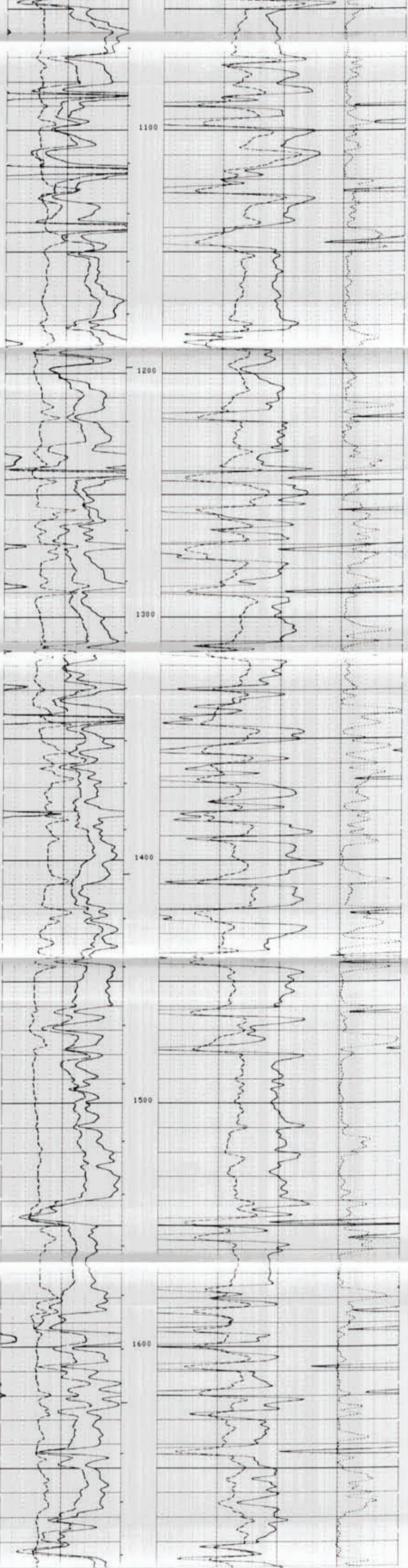
        W4NG 35.0  FEET                     W5NG 35.0  FEET
        W2NG 35.0  FEET                     W3NG 35.0  FEET
        SNGT 34.2  FEET                     W1NG 35.0  FEET
        TPUW 34.2  FEET                     NGPE 34.2  FEET
        PPUW 34.2  FEET                     TPLW 34.2  FEET
        APUW 34.2  FEET                     PPLW 34.2  FEET
        SCNL 23.2  FEET                     APLW 34.2  FEET
        FCNL 23.2  FEET                     NCNL 23.2  FEET
        SS1   2.0  FEET                     SS2   2.0  FEET
        LS    2.5  FEET                     LITH  2.5  FEET
        LL    2.5  FEET                     LU    2.5  FEET
        TENS  -.9  FEET                     CALI  2.6  FEET
        NRAT 23.2  FEET                     SGR  35.0  FEET
```

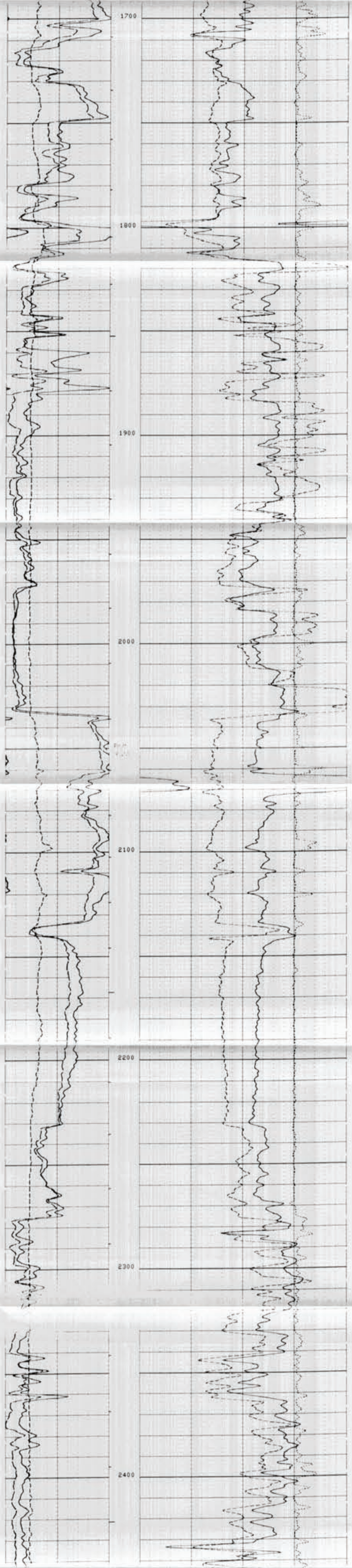
```
                          PARAMETERS

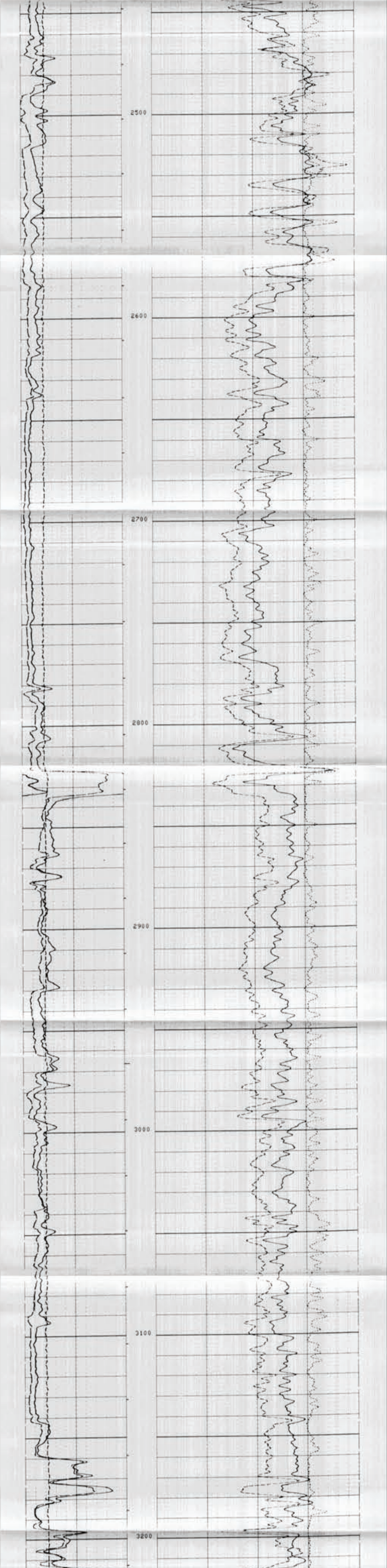
        NAME  VALUE    UNIT                 NAME  VALUE    UNIT

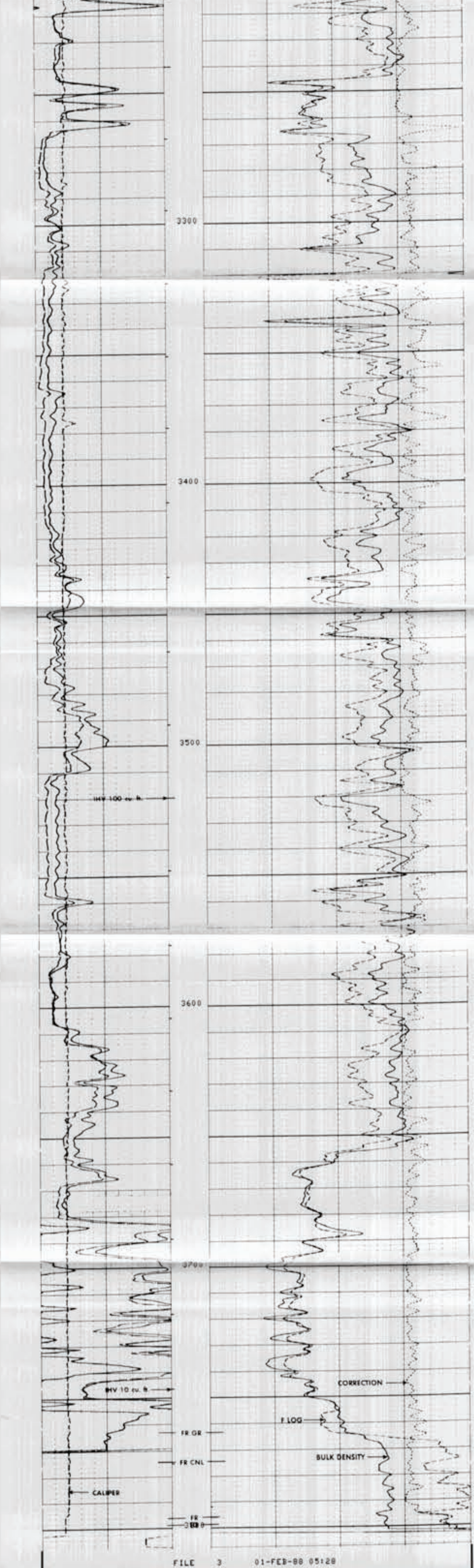
        BHT  110.000   DEGF                 TD   6000.00   F
        PSNR 2.25000                        SHT  65.0000   DEGF
        MATR LIME                           HC   CALI
        MDEN 2.71000   G/C3                 FD   1.00000   G/C3
        LPCS TWIN                           WMUD 9.20000   LB/G
        BHS  OPEN                           DHC  NONE
        BS   7.87500   IN
```











```
                          FILE    3     01-FEB-88 05:28

        CGR (GAPI)
0.0                 150.00
        SGR (GAPI)                                          DRHO(G/C3)
150.00              300.00                        -.2500                 .25000
        CALI(IN  )                           RO  (OHMM)
6.0000              16.000     1.0000                                    10000.
        SGR (GAPI)                           RHOB(G/C3)
0.0                 150.00     2.0000                                    3.0000

                    SENSOR MEASURE POINT TO TOOL ZERO

        W4NG 35.0  FEET                       W5NG 35.0  FEET
        W2NG 35.0  FEET                       W3NG 35.0  FEET
        SNGT 34.2  FEET                       W1NG 35.0  FEET
        TPUW 34.2  FEET                       NGPE 34.2  FEET
        PPUW 34.2  FEET                       TPLW 34.2  FEET
        APUW 34.2  FEET                       PPLW 34.2  FEET
        SCNL 23.2  FEET                       APLW 34.2  FEET
        FCNL 23.2  FEET                       NCNL 23.2  FEET
        SS1   2.0  FEET                       SS2   2.0  FEET
        LS    2.5  FEET                       LITH  2.5  FEET
        LL    2.5  FEET                       LU    2.5  FEET
        TENS  -.9  FEET                       CALI  2.6  FEET
        NRAT 23.2  FEET                       SGR  35.0  FEET

                               PARAMETERS

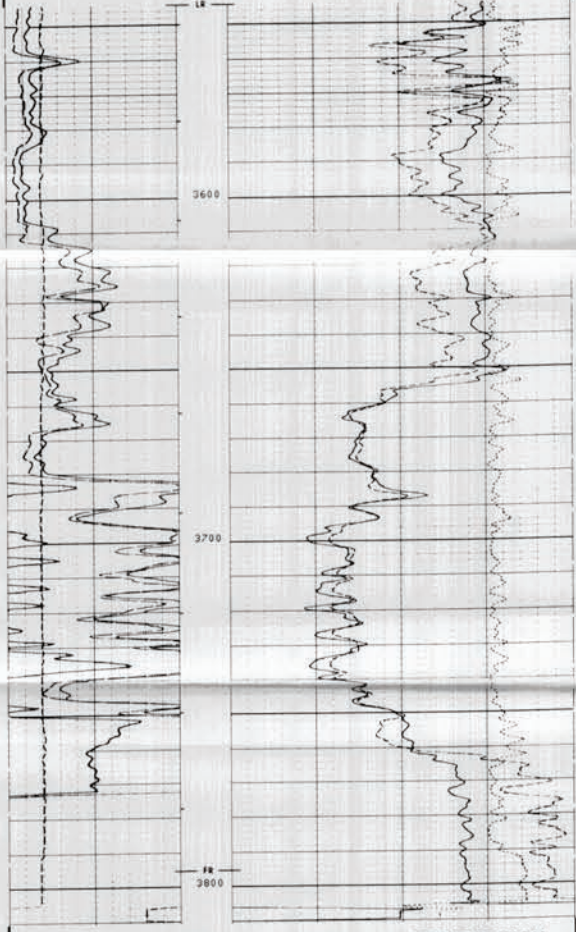
        NAME  VALUE     UNIT                  NAME  VALUE      UNIT

        BHT  110.000    DEGF                  TD   6000.00     F
        PSNR 2.25000                          SHT  65.0000     DEGF
        MATR LIME                             HC   CALI
        MDEN 2.71000    G/C3                  FD   1.00000     G/C3
        LPCS TWIN                             WMUD 9.20000     LB/G
        BHS  OPEN                             DHC  NONE
        BS   7.87500    IN
```

```
        CGR (GAPI)                                                      DRHO(G/C3)
0.0               150.00                                         -.2500            .25000
        SGR (GAPI)                                     RO  (OHMM)
150.00            300.00              1.0000                                       10000.
        CALI(IN  )                                     RHOB(G/C3)
6.0000            16.000              2.0000                                       3.0000
        SGR (GAPI)
0.0               150.00
```

REPEAT SECTION

```
                 FILE   2      01-FEB-88 05:27
```



```
                 FILE   2      01-FEB-88 05:08
```

REPEAT SECTION

```
        CGR (GAPI)                                                      DRHO(G/C3)
0.0               150.00                                         -.2500            .25000
        SGR (GAPI)                                     RO  (OHMM)
150.00            300.00              1.0000                                       10000.
        CALI(IN  )                                     RHOB(G/C3)
6.0000            16.000              2.0000                                       3.0000
        SGR (GAPI)
0.0               150.00

                    SENSOR MEASURE POINT TO TOOL ZERO

        W4NG 35.0  FEET                         W5NG 35.0  FEET
        W2NG 35.0  FEET                         W3NG 35.0  FEET
        SNGT 34.2  FEET                         W1NG 35.0  FEET
        TPUW 34.2  FEET                         NGPE 34.2  FEET
        PPUW 34.2  FEET                         TPLW 34.2  FEET
        APUW 34.2  FEET                         PPLW 34.2  FEET
        SCNL 23.2  FEET                         APLW 34.2  FEET
        FCNL 23.2  FEET                         NCNL 23.2  FEET
        SS1   2.0  FEET                         SS2   2.0  FEET
        LS    2.5  FEET                         LITH  2.5  FEET
        LL    2.5  FEET                         LU    2.5  FEET
        TENS  -.9  FEET                         CALI  2.6  FEET
        NRAT 23.2  FEET                         SGR  35.0  FEET

                              PARAMETERS

        NAME  VALUE     UNIT                    NAME  VALUE     UNIT

        BHT  110.000    DEGF                    TD    6000.00   F
        PSNR 2.25000                            SHT   65.0000   DEGF
        MATR LIME                               HC    CALI
        MDEN 2.71000    G/C3                    FD    1.00000   G/C3
        LPCS TWIN                               WMUD 9.20000    LB/G
        BHS  OPEN                               DHC   NONE
        BS   7.87500    IN
```

```
              BEFORE SURVEY CALIBRATION SUMMARY


  PERFORMED:     88/02/01
  PROGRAM FILE: LEP    (VERSION    26.2    85/04/17)

NGTC               DETECTOR CALIBRATION SUMMARY

           MEASURED
         BKGD    JIG          CALIBRATED          UNITS
  SGR     58     206             160              GAPI
         MEASURED BEFORE SURVEY
          BKG      JIG      UNITS
 W1NG    141.5    484.5      CPS
 W2NG     55.7    219.1      CPS
 W3NG     16.2     38.4      CPS
 W4NG      3.3     16.3      CPS
 W5NG      3.0     23.1      CPS

CNTH               DETECTOR CALIBRATION SUMMARY

            TANK                           JIG
       INPUT   CALIBRATED         MEASURED   CALIBRATED
  NRAT   2.25000  2.158              2.283      2.190

LDTC               DETECTOR CALIBRATION SUMMARY

       DRS SONDE NUMBER                           :   3701
       NUCLEAR SERVICE CARTRIDGE NUMBER           :   878
       POWERED DETECTOR HOUSING NUMBER            :   1986
       POWERED GAMMA-GAMMA DETECTOR NUMBER        :   2745
       LDT LOGGING SOURCE NUMBER                  :   6959
       LDT CALIBRATION MODE                       :   WATE
       MUD DENSITY                                :   9.20000

            M E A S U R E D
         BKGD   AL+FE    AL   UNITS
    LL   19.8    83.5   93.0   CPS
    LU   75.0   128.0  142.5   CPS
    LS   57.4   147.5  164.2   CPS
  LITH    5.7    31.5   48.0   CPS
   SS1   15.5   169.6  186.6   CPS
   SS2   10.5   236.0  258.0   CPS

LDTC               CALIPER CALIBRATION SUMMARY

           MEASURED                          CALIBRATED
        SMALL   LARGE                     SMALL     LARGE        UNITS
  CALI   7.7     11.8                      8.0       12.0          IN

                    FILE    1      01-FEB-88 05:06


              AFTER SURVEY TOOL CHECK SUMMARY


  PERFORMED:     88/02/01
  PROGRAM FILE: LEP    (VERSION    26.2    85/04/17)

NGTC                    TOOL  CHECK

          BEFORE      AFTER     UNITS
  SGR       160        160      GAPI
        MEASURED AFTER SURVEY
         BKG      JIG      UNITS
 W1NG   139.3    482.2      CPS
 W2NG    54.2    217.7      CPS
 W3NG    15.6     37.6      CPS
 W4NG     3.4     16.0      CPS
 W5NG     3.3     24.0      CPS

CNTH                    TOOL  CHECK

                 JIG
          BEFORE      AFTER
  NRAT    2.190       2.195

  POROSITY CHANGE  (LIME):   .001

LDTC                    TOOL  CHECK
```

```
        DRS SONDE NUMBER                          :   3701
        NUCLEAR SERVICE CARTRIDGE NUMBER          :   878
        POWERED DETECTOR HOUSING NUMBER           :   1986
        POWERED GAMMA-GAMMA DETECTOR NUMBER       :   2745
        LDT LOGGING SOURCE NUMBER                 :   6959
        LDT CALIBRATION MODE                      :   WATE
        MUD DENSITY                               :   9.20000

           BACKGROUND MEASURED
           BEFORE        AFTER        UNITS
    LL     19.89         19.92         CPS
    LU     75.06         75.50         CPS
    LS     57.43         57.68         CPS
  LITH      5.750         5.70         CPS
   SS1     15.58         15.51         CPS
   SS2     10.53         10.55         CPS


               SHOP SUMMARY

  PERFORMED:     88/01/29
  PROGRAM FILE: CCSHOP (VERSION   26.2   83/11/17)

 CNTH               DETECTOR CALIBRATION SUMMARY

           TANK                          JIG
     MEASURED  CALIBRATED      MEASURED   CALIBRATED

  NRAT   2.250      2.158          2.250       2.157

                    (CNC:373 , CNB:2634)

 LDTC               DETECTOR CALIBRATION SUMMARY

       DRS SONDE NUMBER                          :   3701
       NUCLEAR SERVICE CARTRIDGE NUMBER          :   878
       POWERED DETECTOR HOUSING NUMBER           :   1986
       POWERED GAMMA-GAMMA DETECTOR NUMBER       :   2745
       LDT LOGGING SOURCE NUMBER                 :   6959
       LDT CALIBRATION MODE                      :   WATE
       MUD DENSITY                               :   8.00000

         MASTER  CALIBRATED
         BKGD   AL+FE     AL  UNITS
    LL   19.4    83.5   93.1   CPS
    LU   74.7   128.1  142.6   CPS
    LS   56.8   147.5  164.3   CPS
  LITH    5.6    31.5   48.0   CPS
   SS1   15.2   169.7  186.7   CPS
   SS2   10.3   236.0  258.2   CPS
```

```
 CEMENT VOLUME = 58.0252 F3
 HOLE VOLUME =   58.0253 F3
 FROM  3307.9 TO  3150.2 FEET

      CGR (GAPI)                     PEF
 0.0            150.00      0.0              10.000
      CALI(IN  )                               NPOR
 6.0000         16.000      .70000                                .30000
      SGR (GAPI)                               NPOR
 150.00         300.00      .30000                                -.1000
      SGR (GAPI)                               PHND
 0.0            150.00      .30000                                -.1000

   CP 30.4A          FILE    1       01-FEB-88 11:41

            INPUT FILE:              DATA ACQUIRED
            1                        01-FEB-88 04:58
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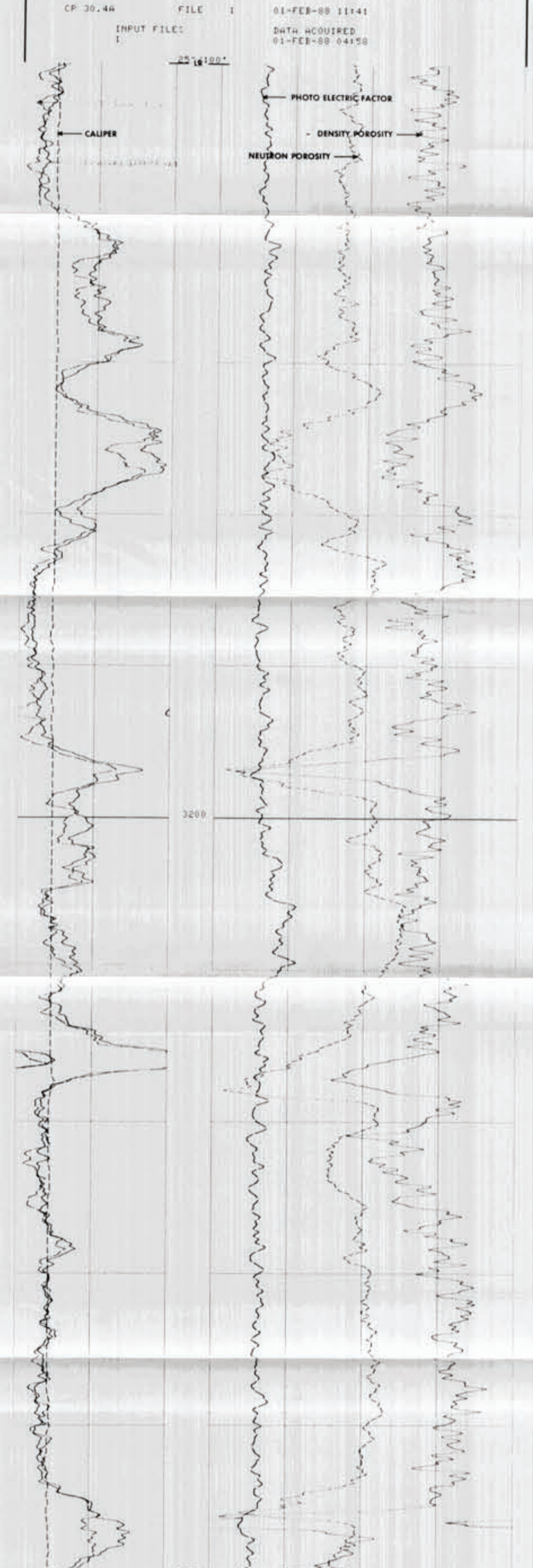
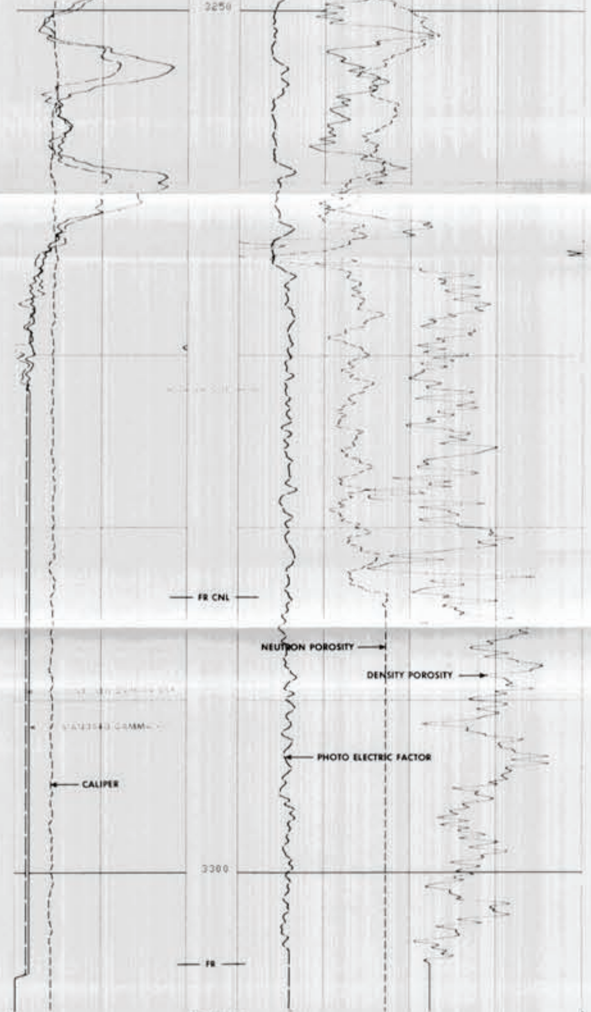




```
                    25°/100'

  CP 30.4A          FILE    1        01-FEB-88 11:36

              INPUT FILES            DATA ACQUIRED
              1                      01-FEB-88 04:48
```

```
      CGR (GAPI)                        PEF
0.0             150.00      0.0              10.000
      CALI(IN  )                                NPOR
6.0000          16.000      .70000                                  .30000
      SGR (GAPI)                                NPOR
150.00          300.00      .30000                                  -.1000
      SGR (GAPI)                                PHND
0.0             150.00      .30000                                  -.1000
```

```
                   SENSOR MEASURE POINT TO TOOL ZERO

          W2NG 35.0  FEET                      W1NG 35.0  FEET
          W4NG 35.0  FEET                      W3NG 35.0  FEET
          CFTC 23.2  FEET                      W5NG 35.0  FEET
          LITH  2.6  FEET                      CNTC 22.7  FEET
          LS    2.6  FEET                      LL    2.6  FEET
          PARI  2.1  FEET                      LU    2.6  FEET
          SS2   2.1  FEET                      SS1   2.1  FEET
          FSS   2.1  FEET                      FLS   2.1  FEET
          TLS   2.1  FEET                      SEO   2.1  FEET
          CALI  2.7  FEET                      TSS   2.1  FEET
          SGR  35.0  FEET                      TENS  -.9  FEET
          TNRA 23.7  FEET
```

```
                              PARAMETERS

        NAME  VALUE        UNIT                NAME  VALUE        UNIT

        BS    8.00000      IN                  BHS   OPEN
        CBAR 1.00000                           PMUD 0.0           %
        PCSL 87            KEV                 NFD   KALM
        GGRD .0100000      DF/F                BHFL WATE
        FSAL -50000.0      PPM                 ANGL 0.0           DEG
        MCOR NATU                              SOCN .500000       IN
        PTCO NO                                SDAT SOCN
        FSCO NO                                MWCO NO
        MCCO NO                                BSCO NO
        MSCO YES                               SOCO NO
        HC    CALI                             NPDC 0
        FD    1.00000      G/C3                MATR LIME
        BFM   LIOU                             MDEN 2.71000       G/C3
        WMUD 9.20000       LB/G                DHC   NONE
        PP    RECO                             DO    0.0          F

                           DATA NOT RECORDED
```

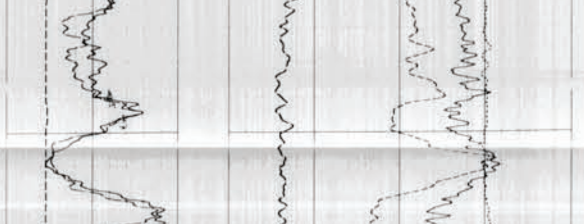
```
  CEMENT VOLUME = 58.0253 F3
  HOLE VOLUME =   58.0253 F3
  FROM  3307.9 TO  3150.2 FEET
```

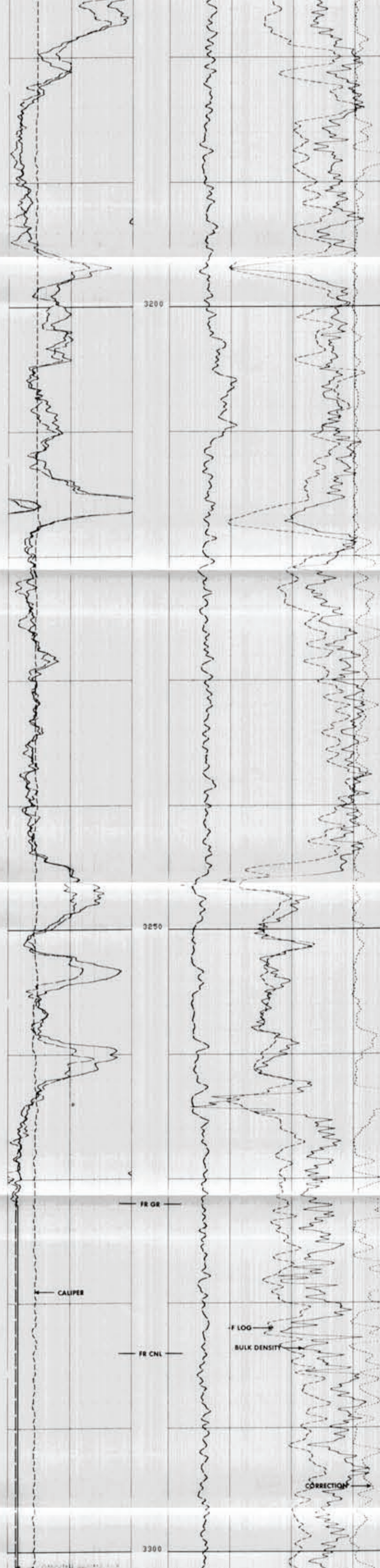
```
      CGR (GAPI)
0.0             150.00
      CALI(IN  )                  PEF                     DRHO(G/C3)
6.0000          16.000      0.0              10.000 -.2500             .25000
      SGR (GAPI)                                 RO  (OHMM)
150.00          300.00      1.0000                                     10000.
      SGR (GAPI)                                 NRHO(G/C3)
0.0             150.00      2.0000                                     3.0000
```

```
  CP 30.4A          FILE    1        01-FEB-88 11:41

              INPUT FILES            DATA ACQUIRED
              1                      01-FEB-88 04:58
```

25°/100'





```
                  25"/100'

    CP 30.4A           FILE    1      01-FEB-88 11:36

          INPUT FILES                 DATA ACQUIRED
          1                           01-FEB-88 04:48

      CGR (GAPI)
0.0            150.00
      CALI(IN  )                        PEF                      DRHO(G/C3)
6.0000         16.000       0.0                10.000 -.2500               .25000
      SGR (GAPI)                                  RO   (OHMM)
150.00         300.00       1.0000                                         10000.
      SGR (GAPI)                                  NRHO(G/C3)
0.0            150.00       2.0000                                         3.0000

                    SENSOR MEASURE POINT TO TOOL ZERO

         W2NG 35.0  FEET                      W1NG 35.0  FEET
         W4NG 35.0  FEET                      W3NG 35.0  FEET
         CFTC 23.2  FEET                      W5NG 35.0  FEET
         LITH  2.6  FEET                      CNTC 22.7  FEET
         LS    2.6  FEET                      LL    2.6  FEET
         PARI  2.1  FEET                      LU    2.6  FEET
         SS2   2.1  FEET                      SS1   2.1  FEET
         FSS   2.1  FEET                      FLS   2.1  FEET
         TLS   2.1  FEET                      SEO   2.1  FEET
         CALI  2.7  FEET                      TSS   2.1  FEET
         SGR  35.0  FEET                      TENS  -.9  FEET
         TNRA 23.7  FEET

                              PARAMETERS

       NAME  VALUE       UNIT                NAME  VALUE       UNIT

       BS   8.00000      IN                  BHS  OPEN
       CBAR 1.00000                          PMUD 0.0          %
       PCSL 87           KEV                 NFD  KALM
       GGRD .0100000     DF/F                BHFL WATE
       FSAL -50000.0     PPM                 ANGL 0.0          DEG
       MCOR NATU                             SOCN .500000      IN
       PTCO NO                               SDAT SOCN
       FSCO NO                               MWCO NO
       MCCO NO                               BSCO NO
       HSCO YES                              SOCO NO
       HC   CALI                             NPDC 0
       FD   1.00000      G/C3                MATR LIME
       BFM  LIQU                             MDEN 2.71000      G/C3
       WMUD 9.20000      LB/G                DHC  NONE
       PP   RECO                             DO   0.0          F

                          DATA NOT RECORDED
```