FORM 925322 REV. (8-80)

Western Atlas International
A Litton/Dresser Company
Atlas Wireline Services

Compensated Densilog®
Compensated Neutron
Gamma Ray

Ø

FILE NO.

API NO.

2962

5" = 100'

COMPANY ARCO OIL & GAS COMPANY

WELL STERLING #12-24-66

FIELD MIST

COUNTY CLATSOP STATE OREGON

LOCATION: 528.83' N. & 546.30' E. FR. THE W. ¼ CORNER OF:

SEC 24 TWP 6N RGE 6W

Other Services
DIFL/GR
BHC AL/GR

Permanent Datum GL Elev 191.83'
Log Measured from KB 10' Ft. Above Permanent Datum
Drilling Measured from KB

Elev.
KB 201.83'
DF
GL 191.83'

FINAL PRINT

Date	11 11 88				
Run No.	ONE				
Service Order	159116				
Depth—Driller	3144'				
Depth—Logger	3122'				
Bottom Logged Interval	3120'				
Top Logged Interval	436'				
Casing—Driller	7"	@ 437'	@	@	@
Casing—Logger	436'				
Bit Size	6 1/4"				
Type Fluid in Hole	EZ MUD				
Density and Viscosity	10.2	45			
pH and Fluid Loss	9.0	5.4 cc	cc	cc	cc
Source of Sample	FLOWLINE				
Rm @ Meas. Temp.	2.30	@ 60°F	@ °F	@ °F	@ °F
Rmf @ Meas. Temp.	2.05	@ 60°F	@ °F	@ °F	@ °F
Rmc @ Meas. Temp.	2.90	@ 60°F	@ °F	@ °F	@ °F
Source of Rmf and Rmc	M	M			
Rm @ BHT	1.30	@ 107°F	@ °F	@ °F	@ °F
Time Since Circ.	5 HRS.				
Max. Rec. Temp. Deg. F.	107	°F	°F	°F	°F
Equip. No. and Location	6406	SAC.			
Recorded By	M. HINDS				
Witnessed By	MR. ELDEWA				

FOLD HERE

IN MAKING INTERPRETATIONS OF LOGS OUR EMPLOYEES WILL GIVE CUSTOMER THE BENEFIT OF THEIR BEST JUDGEMENT. BUT SINCE ALL INTERPRETATIONS ARE OPINIONS BASED ON INFERENCES FROM ELECTRICAL OR OTHER MEASUREMENTS, WE CANNOT, AND WE DO NOT GUARANTEE THE ACCURACY OR CORRECTNESS OF ANY INTERPRETATION. WE SHALL NOT BE LIABLE OR RESPONSIBLE FOR ANY LOSS, COST, DAMAGES, OR EXPENSES WHATSOEVER INCURRED OR SUSTAINED BY THE CUSTOMER RESULTING FROM ANY INTERPRETATION MADE BY ANY OF OUR EMPLOYEES.

Western Atlas International
A Litton/Dresser Company

ATLAS WIRELINE SERVICES

REMARKS RUN (1)

EQUIPMENT DATA

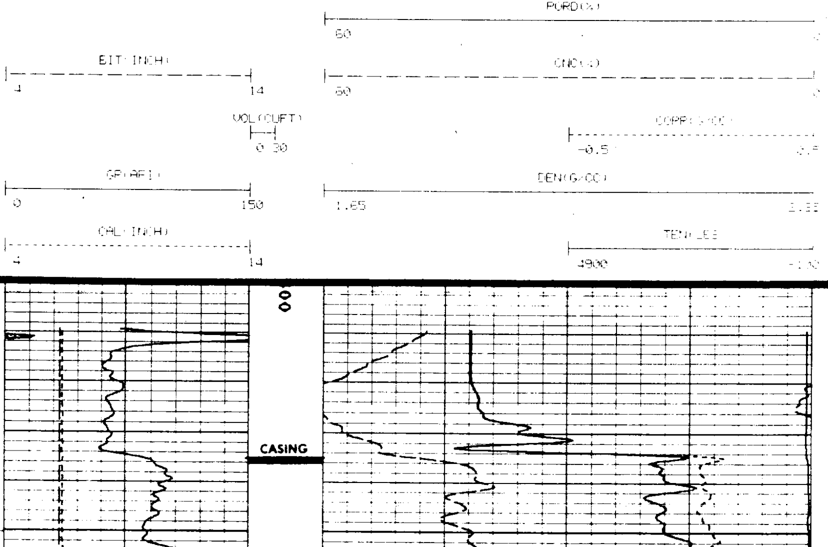
RUN	TRIP	TOOL	SERIAL NO.	SERIES NO.	POSITION
1	1	CDL	50138	2212	DE-CENT
1	1	CAL	60578	2212	DE-CENT
1	1	CN	72435	2435	DE-CENT
1	1	GR	78585	1309	DE-CENT

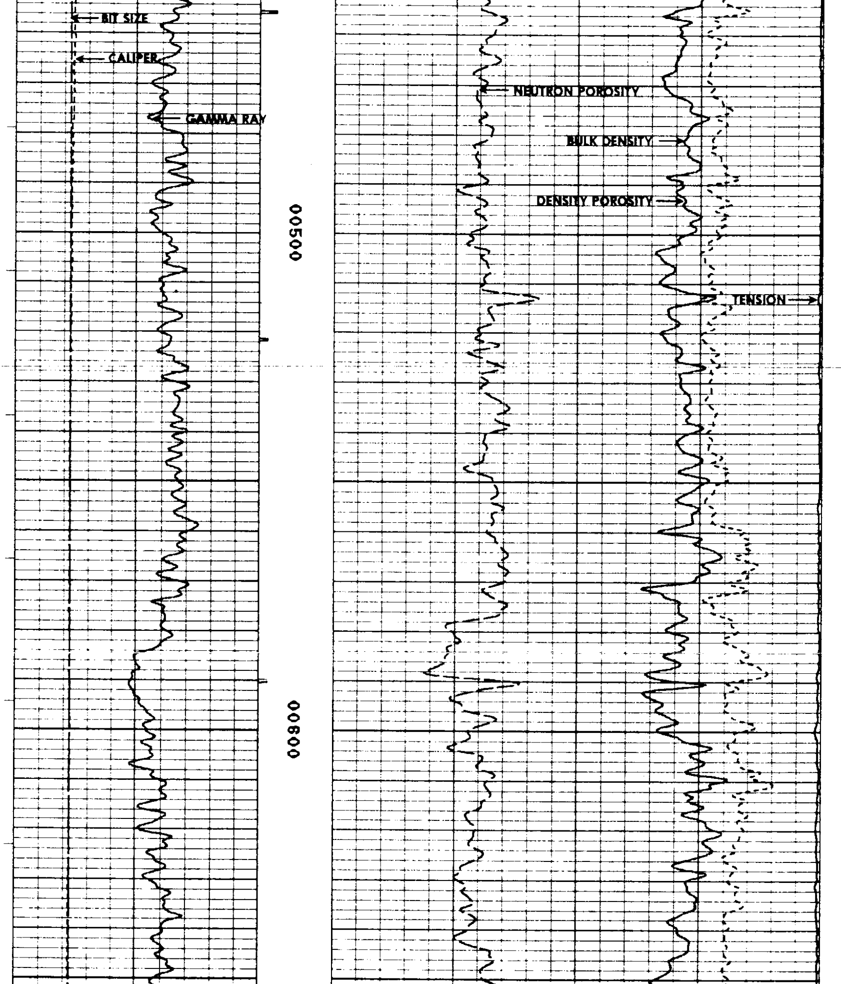
COMPANY: ARCO OIL & GAS COMPANY — RUN: 1

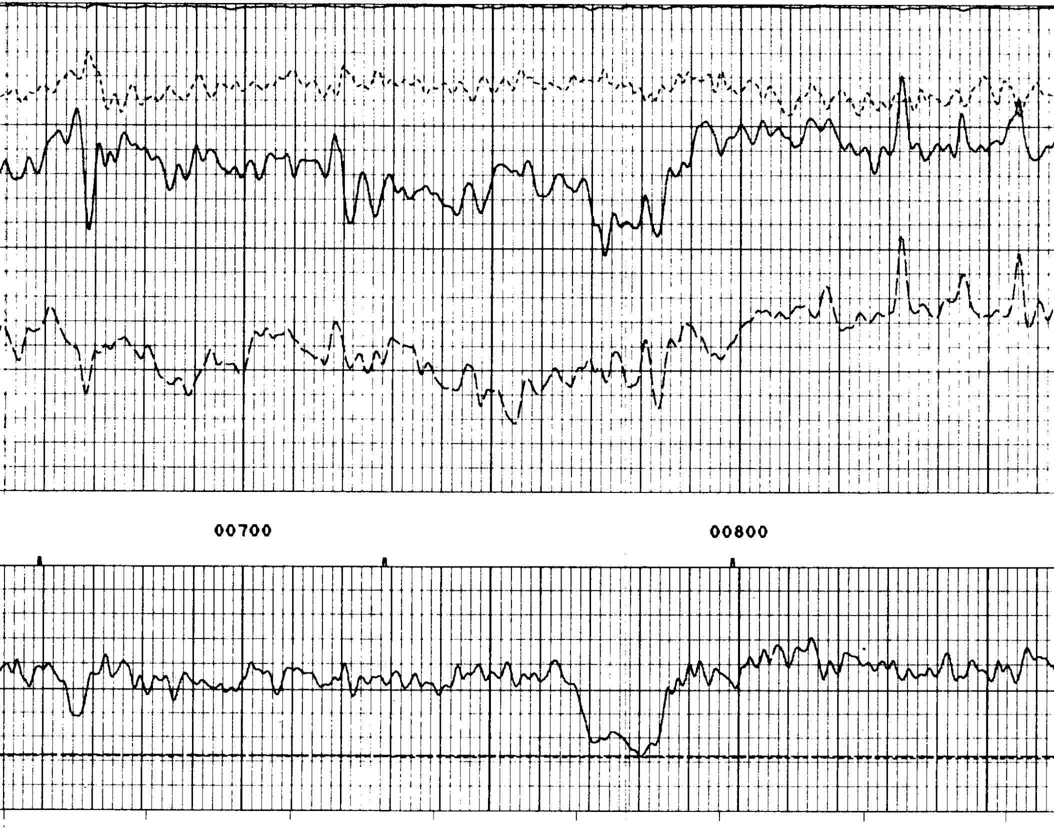
WELL NAME: STERLING NO. 12-24-.6 — TRIP: 1

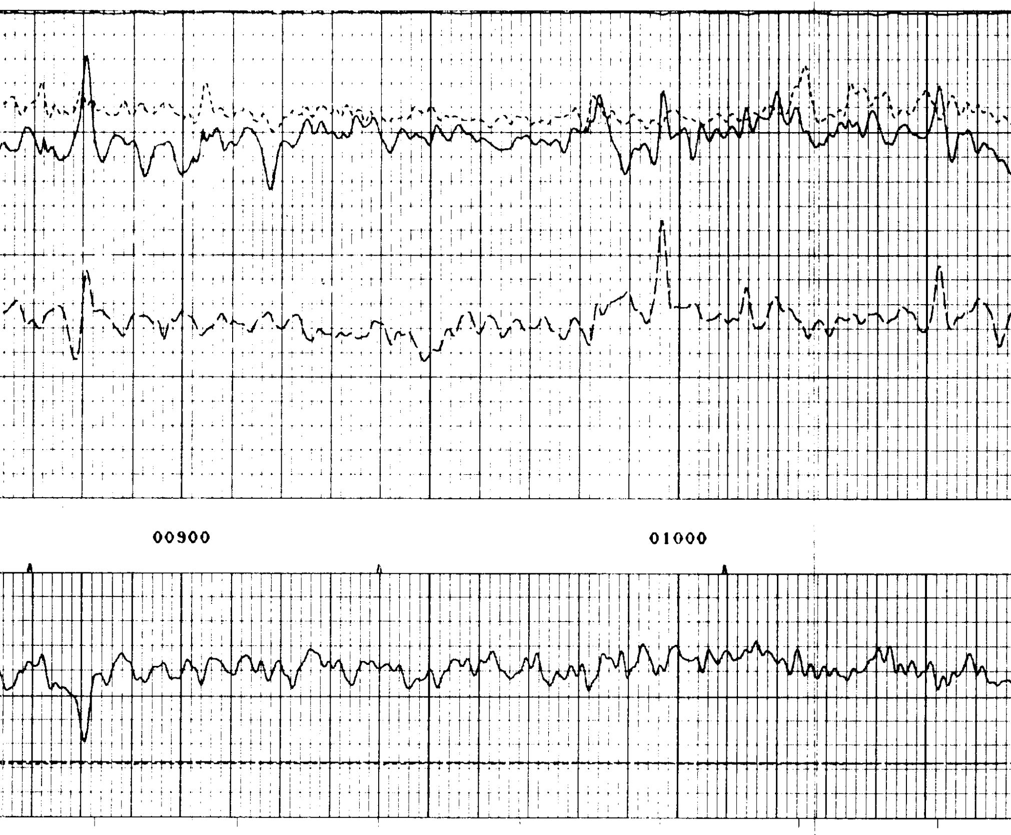
SERVICE: PC287B FILE: 5 DATE: 11/05/88 TIME: 05:31:35

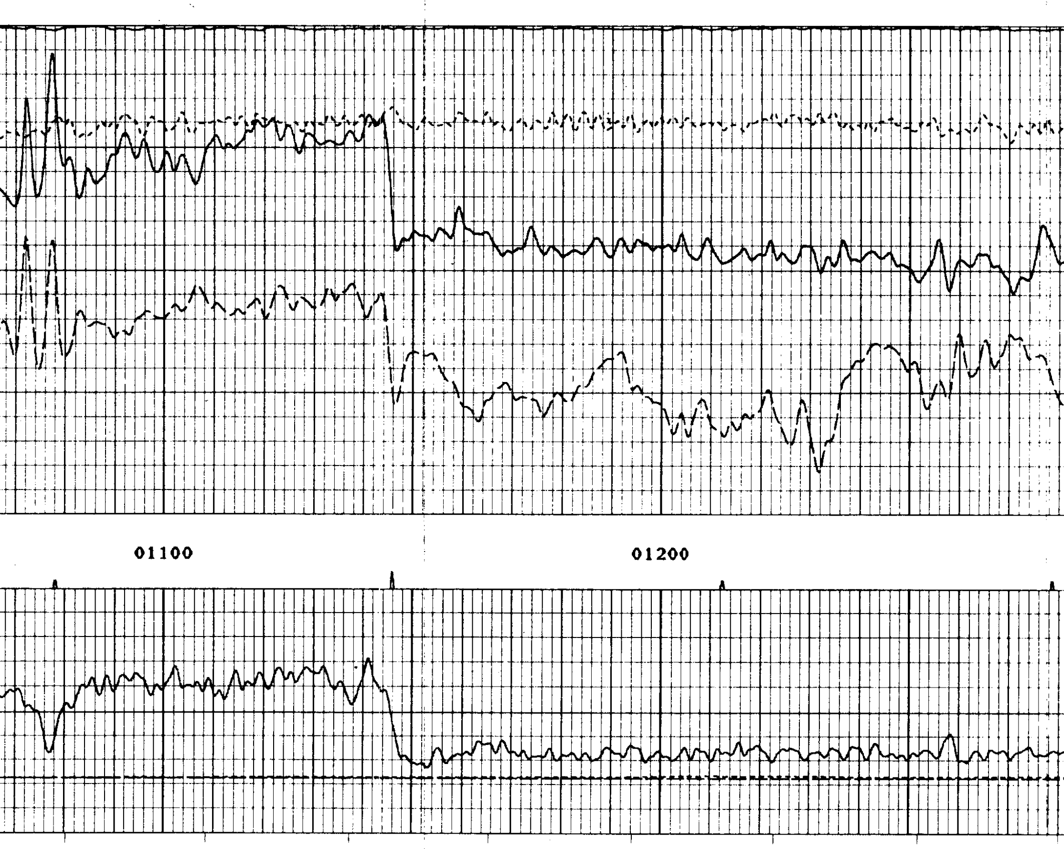
REVISION: FSYSAL REV GS08 VER+2 — MODE: RECORD

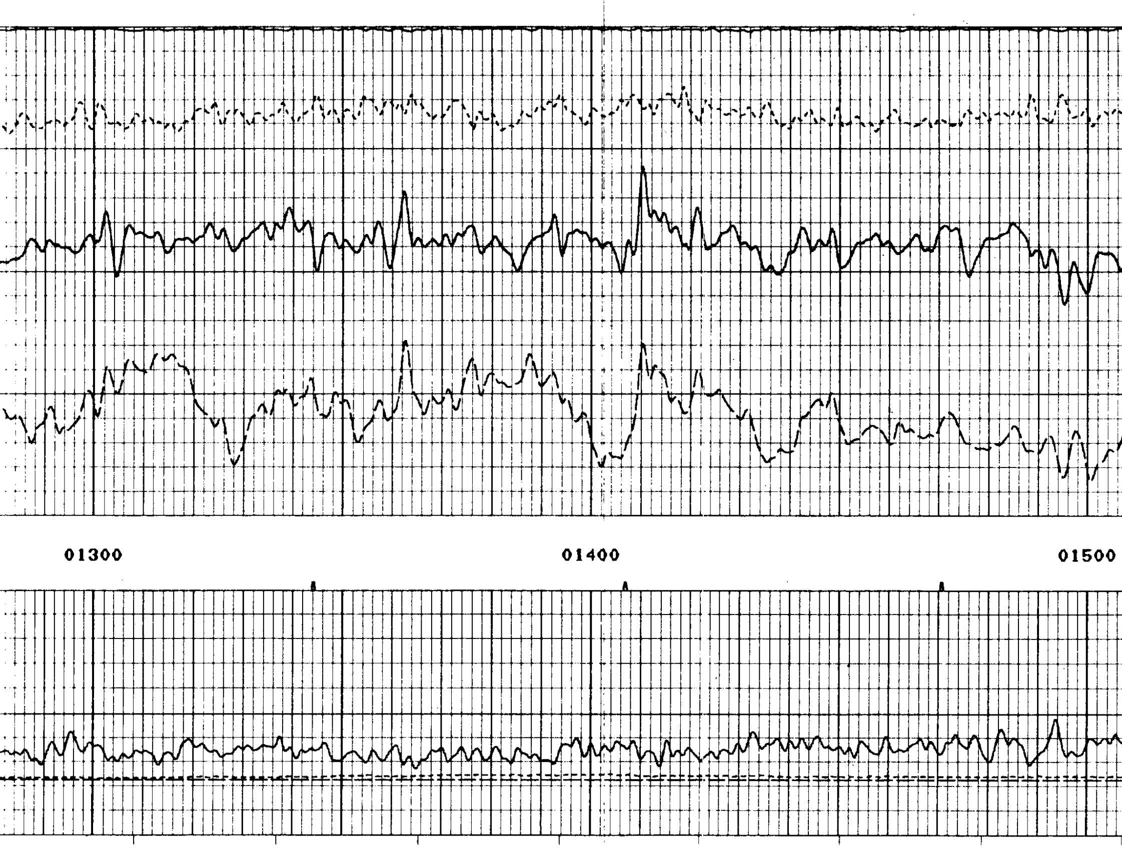


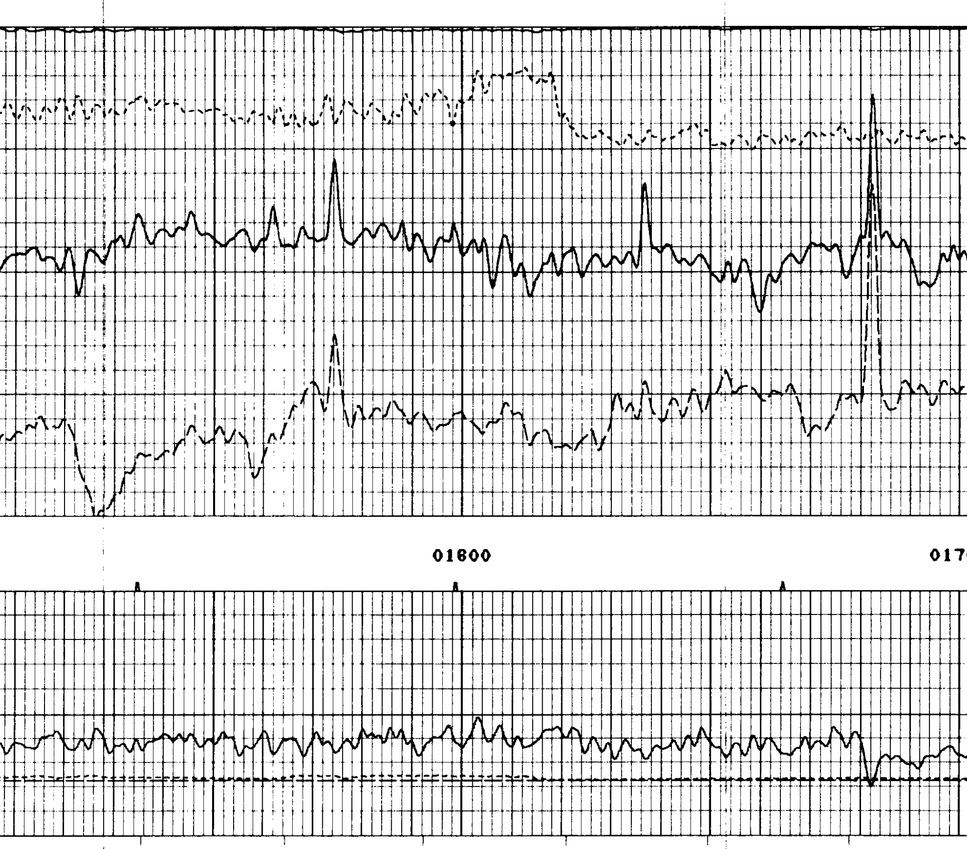


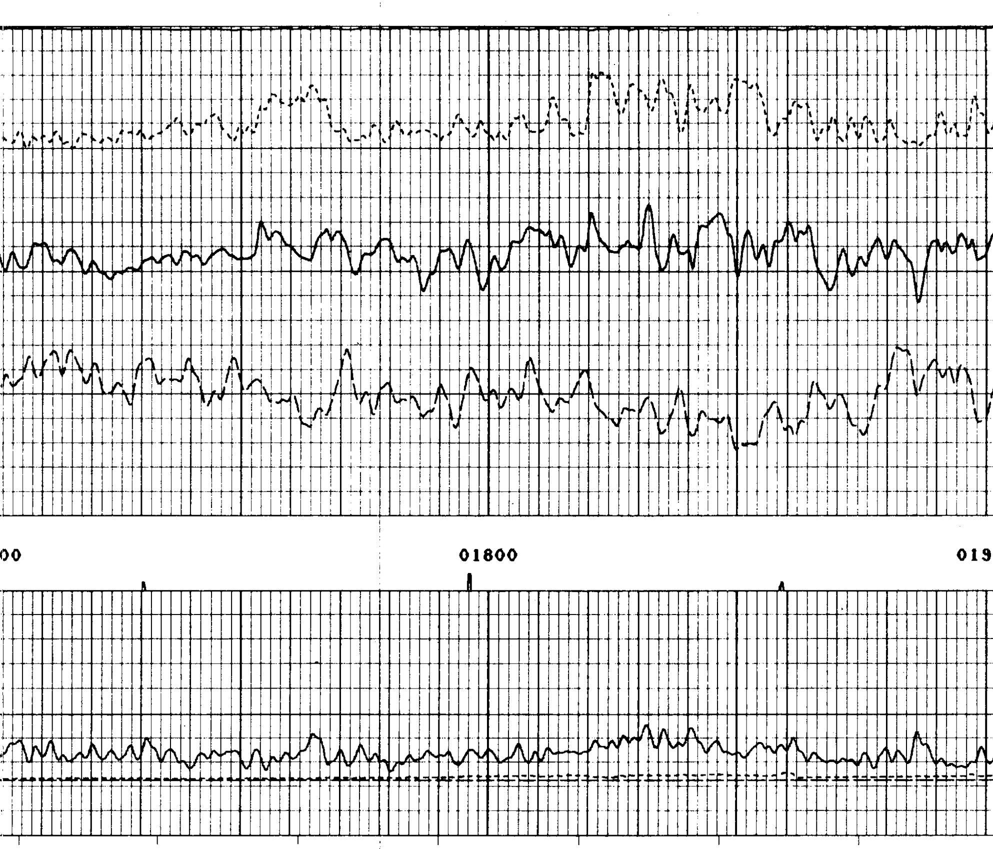


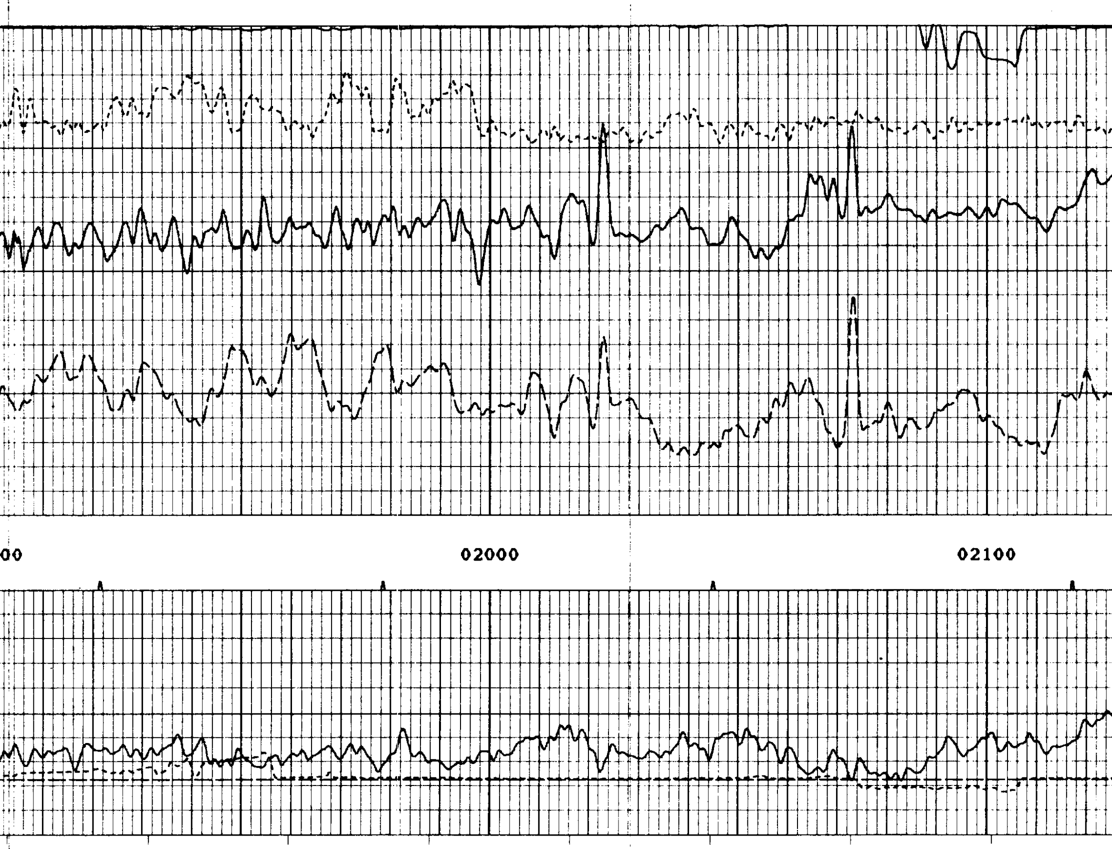


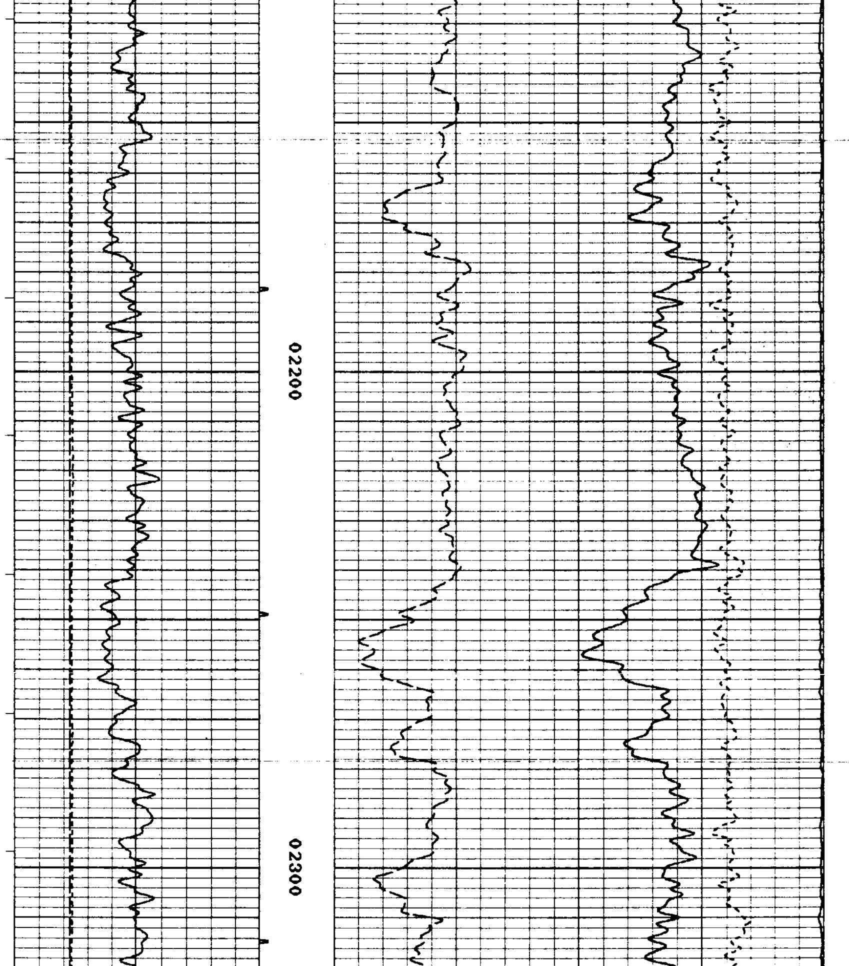


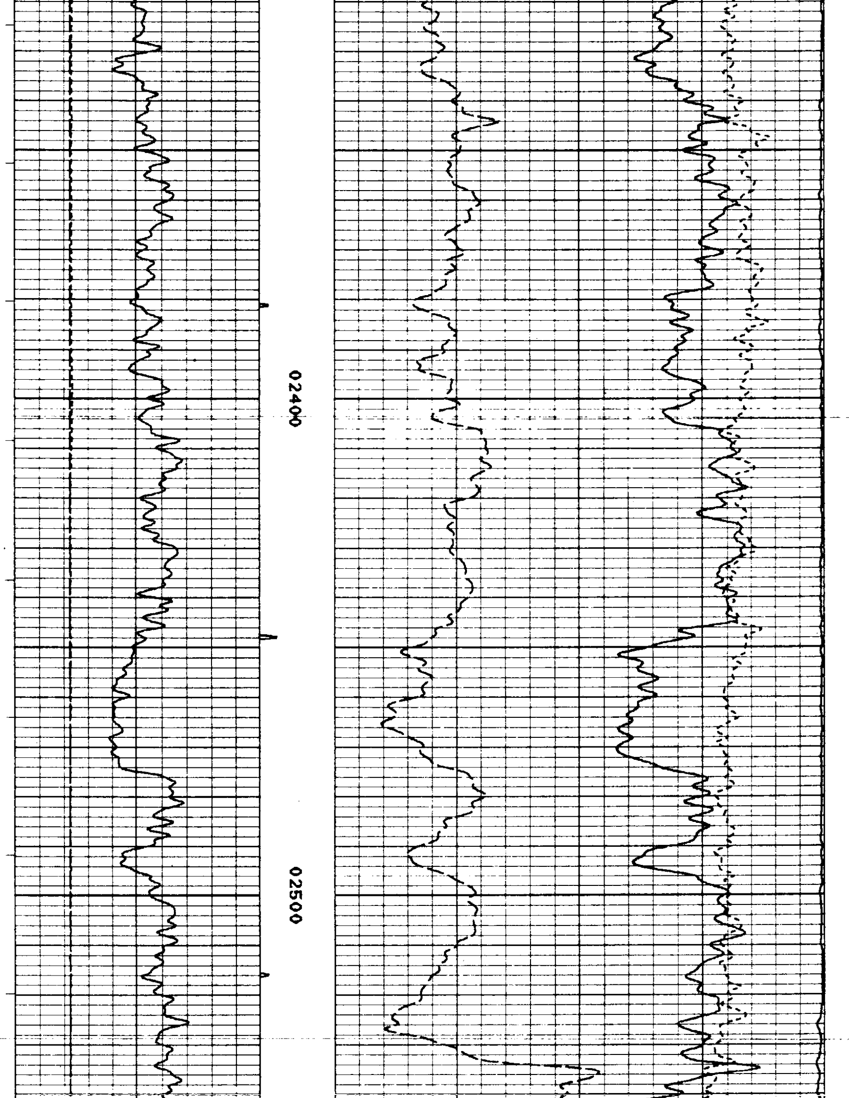


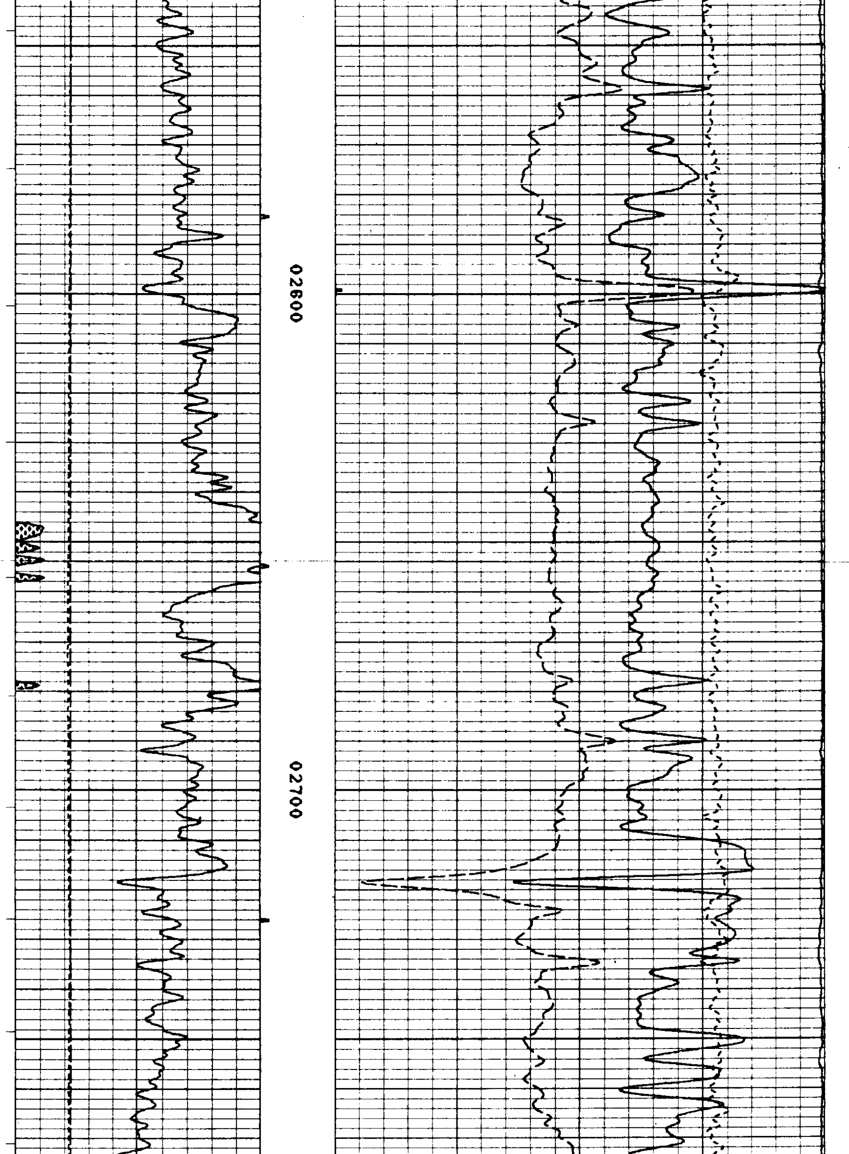


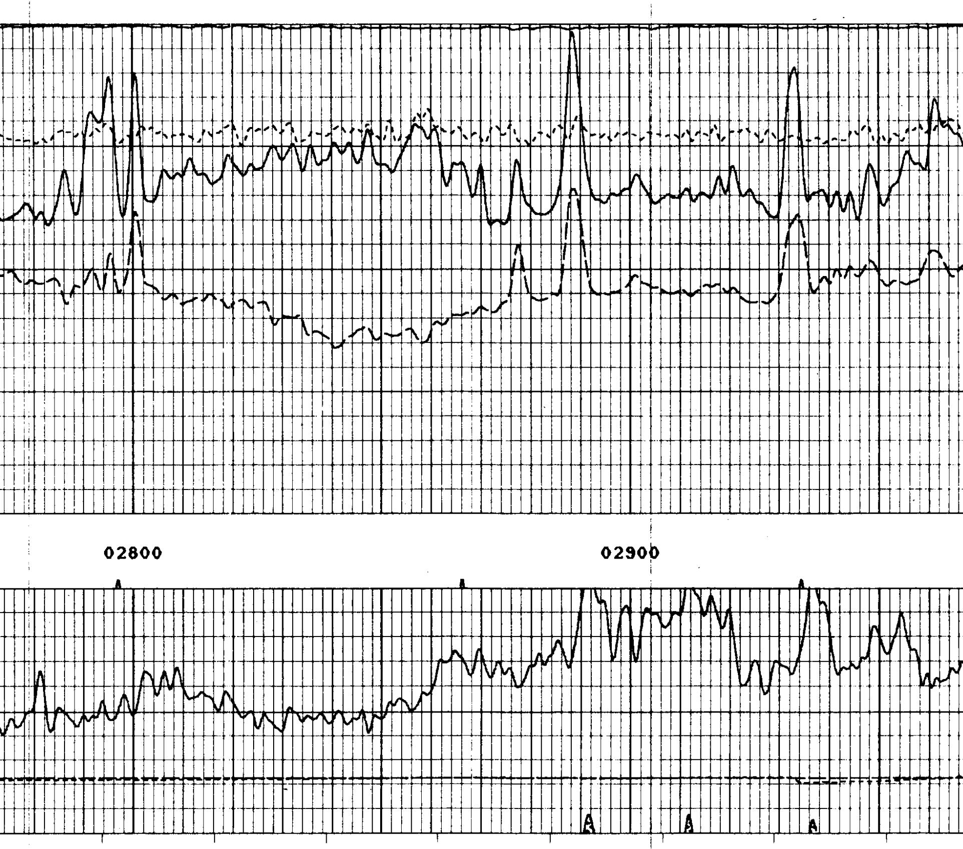


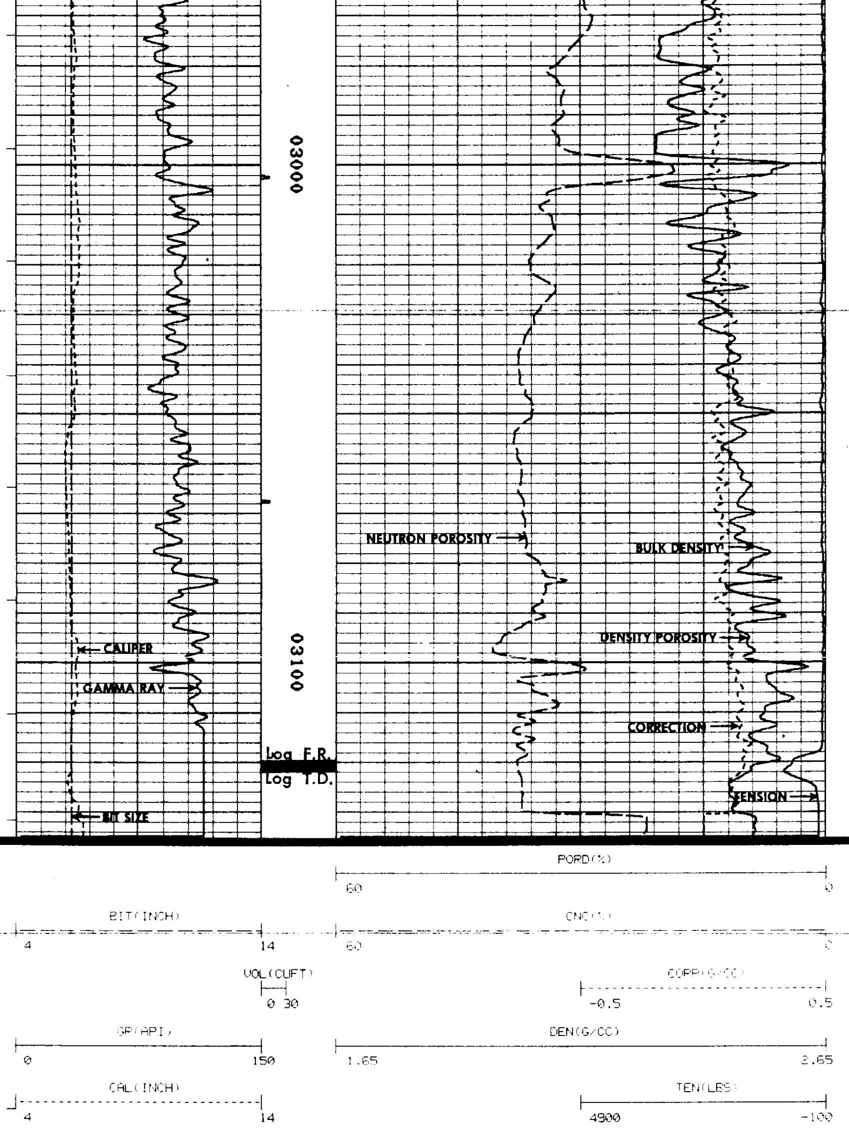












CURVE DELAYS

```
CURVE   DELAY  UNITS
-----   -----  -----

 SSD      0.3  FT.IN
 LSD        0  FT.IN
 CAL      0.0  FT.IN
 SSN      9.3  FT.IN
 LSN     10.3  FT.IN
 GR      12.6  FT.IN
 TTEN     0.0  FT.IN
 TEN      0.0  FT.IN
 SPD      0.0  FT.IN
```

```
                 PARAMETERS

  NAME      DEPTH INTERVAL    VALUE      UNITS
 --------   --------------  ----------  -------
 A          2719 TO  2456       0.000

 CAL CORR   2719 TO  2456       6.250   INCH

 CHI SMTH   2719 TO  2456    ACTIVE

 M          2719 TO  2456       0.000

 MATRIX     2719 TO  2456   SANDSTONE

 O.D.       2719 TO  2456       3.500   INCH

 RHO F      2719 TO  2456       0.980   G/CC

 RHO M      2719 TO  2456       2.650   G/CC

 SALINITY   2719 TO  2456       0.000   PPK
```

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            DISPLAY SCALE CHANGES

                 *** NONE ***
```

```
COMPANY:    ARCO OIL & GAS COMPANY                          RUN:  1

WELL NAME:  STERLING NO. 12-24-16                           TRIP: 1

SERVICE:    [illegible]     FILE: [illegible]     DATE: [illegible]     TIME: 05:[illegible]

REVISION:   FS/SAL REV GS08 VER+2
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REPEAT SECTION

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MODE: RECORD
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                                                  PORD(%)
                              |----------------------------------------------|
                               60                                            0
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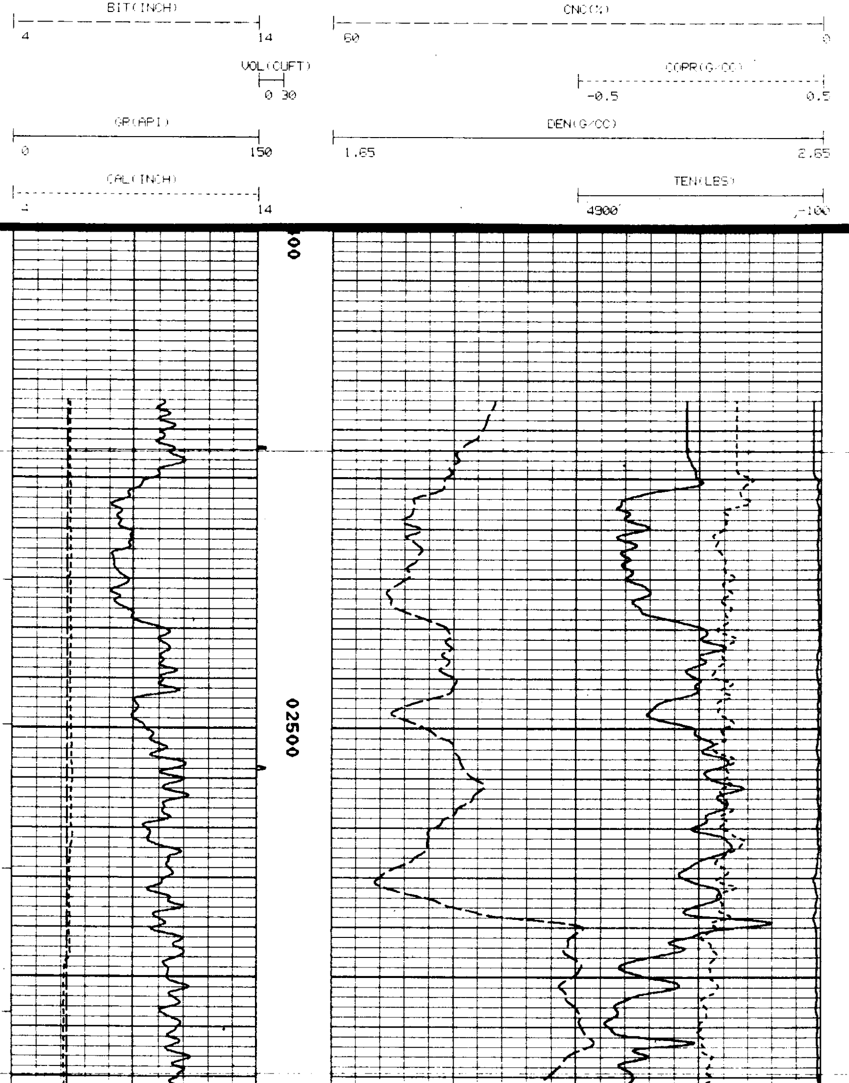

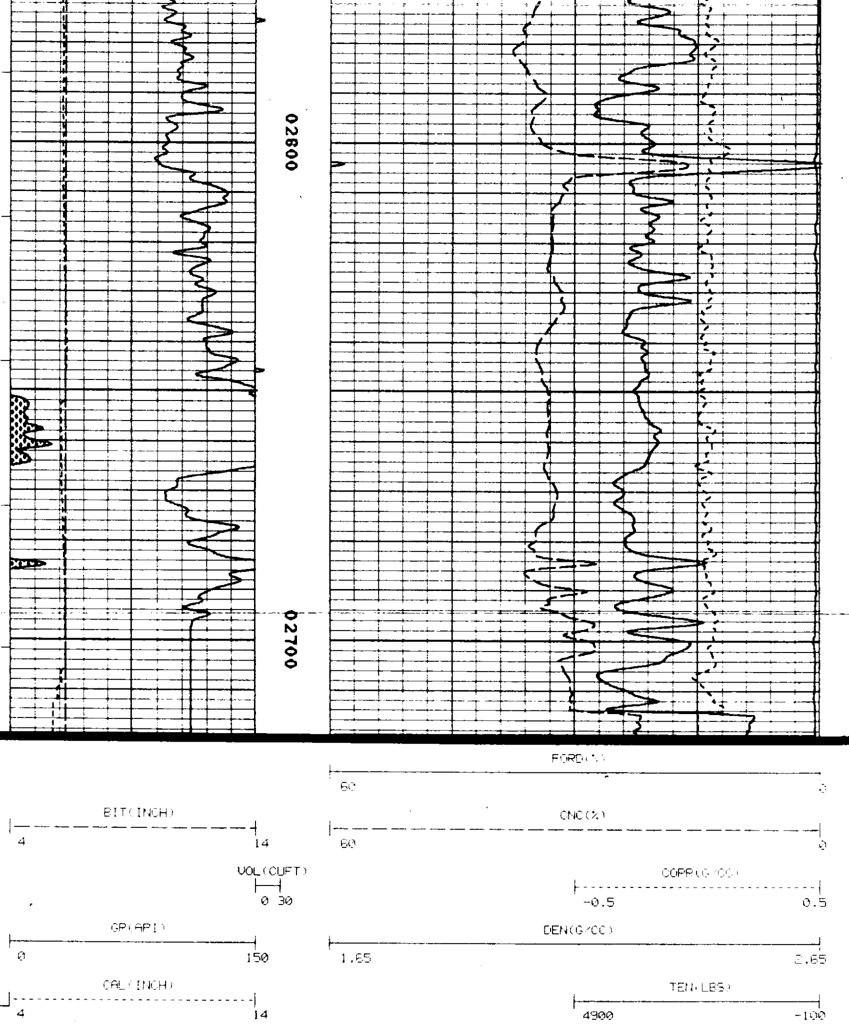

```
****************************************
*                                      *
*  CALIBRATION/VERIFICATION SUMMARIES  *
*  DATE 11/08/88        TIME 07:39:50  *
*  RUN  1               TRIP 1         *
*                                      *
****************************************
```

```
        LOG NAME CDL      ASSET NO. 50133      UNIT NO. [illegible]
  CALIBRATION ENTERED ON  11/08/88 AT 04:20:30          LARGE TOOL
                          SOURCE NUMBER 767

CURVE    COUNTS/SEC.     SCALING FACTORS      RATIO     ENG. VALUE  UNITS
         BLOCK  VALUE    ADD.      MULT.      MG/AL
-----    --------       ------------------ --------   ----------  ----

      DATE 09/29/88           CALIBRATION              TIME 11:05:30

LSD       MG       295.5
SSD                335.9
DEN                                                        2.200  G/CC
CORR                                                       0.000  G/CC
LSD       AL        98.3    0.000      1.0000    3.0070
SSD                250.5    0.000      1.0000    1.5844
DEN                                                        2.800  G/CC
CORR                                                       0.000  G/CC
LSD       MGRV     270.3
SSD                432.0 ·
DEN                                                        2.480  G/CC
CORR                                                       0.230  G/CC

      DATE 10/06/88    PRIMARY VERIFICATION        TIME 13:42:57

LSD       JIG      168.7    0.000      1.0000
SSD                354.5    0.000      1.0000
DEN                                                        2.724  G/CC
CORR                                                       0.214  G/CC

      DATE 11/08/88   BEFORE LOG VERIFICATION      TIME 05:02:11

LSD       JIG      168.4    0.000      1.0000
SSD                355.1    0.000      1..0000
DEN                                                        2.729  G/CC
CORR                                                       0.219  G/CC

      DATE 11/08/88    AFTER LOG VERIFICATION      TIME 07:24:39

LSD       JIG      167.3    0.000      1.0000
SSD                354.8    0.000      1.0000
DEN                                                        2.736  G/CC
CORR                                                       0.222  G/CC
```

```
        LOG NAME CN       ASSET NO. 72435      UNIT N[illegible]
  CALIBRATION ENTERED ON  11/07/88 AT [illegible]          [illegible]
                          SOURCE NUMBER [illegible]

CURVE    COUNTS/SEC.     SCALING FACTORS      RATIO     ENG. VALUE  UNITS
                          ADD.      MULT.   LSN/SSN
-----    --------       ------------------ --------   ----------  ----

      DATE [illegible]          CALIBRATION            TIME [illegible]

LSN                [illegible]    [illegible]    [illegible]
SSN                [illegible]    [illegible]    [illegible]
[illegible]                                   [illegible]       [illegible]

      DATE [illegible]    PRIMARY VERIFICATION      TIME [illegible]

LSN                [illegible]    [illegible]    [illegible]
SSN                [illegible]    [illegible]    [illegible]
[illegible]                                   [illegible]       [illegible]

      DATE 11/07/88   BEFORE LOG VERIFICATION   TIME [illegible]

LSN                [illegible]    0.000      1.0000
SSN                [illegible]    0.000      1.0000
[illegible]                                   [illegible]       15.141

      DATE 11/08/88    AFTER LOG VERIFICATION    TIME [illegible]

LSN                 77.2    0.000      1.0000
SSN                [illegible]    0.000      1.0000
[illegible]                                   [illegible]       [illegible]
```

```
        LOG NAME GR      ASSET NO. [illegible]      UNIT NO. HL [illegible]
   CALIBRATION ENTERED ON  11/07/88 AT 19:[illegible]

CURVE   MILLIVOLTS        SCALING FACTORS      ENGINEERING VALUES    UNITS
          LOW     HIGH     ADD.      MULT.          LOW        HIGH
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      DATE 10/25/88             CALIBRATION              TIME [illegible]

GR        320.8  2533.5    0.000    0.2200        0.000     [illegible].000 API

                          PRIMARY VERIFICATION                NOT DONE

      DATE 11/07/88   BEFORE LOG VERIFICATION     TIME 19:[illegible]

GR        577.8  3243.8    0.000    0.2200       52.0[illegible]    [illegible] API

      DATE 11/08/88    AFTER LOG VERIFICATION     TIME [illegible]

GR        619.8  3254.8    0.000    0.2200       55.[illegible]    [illegible] API



        LOG NAME CAL      ASSET NO. 60578     UNIT NO. 6406
   CALIBRATION ENTERED ON  11/08/88 AT 05:07:16

CURVE   MILLIVOLTS        SCALING FACTORS      ENGINEERING VALUES    UNITS
          LOW     HIGH     ADD.      MULT.          LOW        HIGH
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      DATE 10/25/88             CALIBRATION              TIME 14:51:46

CAL     1123.8  3145.1     2.664    0.0217        6.000      12.000 INCH

                          PRIMARY VERIFICATION                NOT DONE

      DATE 11/08/88   BEFORE LOG VERIFICATION     TIME 05:08:36

CAL      392.7     E       5.064    0.0217        6.220        E     INCH
```