Scanned

JUL 24 1980
Schlumberger

SIMULTANEOUS
# COMPENSATED NEUTRON-FORMATION DENSITY

SCANNED

COUNTY
FIELD
LOCATION
WELL
COMPANY

COMPANY American Quesar Petroleum Co
WELL Crown Zellerbach 15-14
FIELD Mist
COUNTY Columbia STATE Oregon

| LOCATION | | | | Other Services: |
|---|---|---|---|---|
| API SERIAL NO. | SEC. 15 | TWP. 6N | RANGE 4W | |

Permanent Datum: GL ; Elev.:
Log Measured From KB , Ft. Above Perm. Datum
Drilling Measured From KB

Elev.: K.B.
D.F.
G.L.

| | | | | |
|---|---|---|---|---|
| Date | 10/21/79 | | | |
| Run No. | 1 | | | |
| Depth—Driller | 3219 | | | |
| Depth—Logger | 3206 | | | |
| Btm. Log Interval | 3205 | | | |
| Top Log Interval | 515 | | | |
| Casing—Driller | 7 @ 515 | @ | @ | @ |
| Casing—Logger | 515 | | | |
| Bit Size | 6 1/4 | | | |
| Type Fluid in Hole | Caustic Q Broxin | | | |
| Dens. \| Visc. | 9.4 \| 50 | \| | \| | \| |
| pH \| Fluid Loss | 10.5 \| 5 ml | \| ml | \| ml | \| ml |
| Source of Sample | Pit | | | |
| Rm @ Meas. Temp. | 5.45 @ 54 °F | @ °F | @ °F | @ °F |
| Rmf @ Meas. Temp. | 5.95 @ 44 °F | @ °F | @ °F | @ °F |
| Rmc @ Meas. Temp. | 7.8 @ 50 °F | @ °F | @ °F | @ °F |
| Source: Rmf \| Rmc | M \| M | \| | \| | \| |
| Rm @ BHT | 3.38 @ 88 °F | @ °F | @ °F | @ °F |
| TIME Circulation Stopped | 10/20 1900 | | | |
| TIME Logger on Bottom | 10/21 0200 | | | |
| Max. Rec. Temp. | 88 °F | °F | °F | °F |
| Equip. \| Location | 8126 \| SAL | \| | \| | \| |
| Recorded By | Anderson | | | |
| Witnessed By Mr. | Newman | | | |

SWS-1072-J

FOLD HERE The well name, location and borehole reference data were furnished by the customer.

| | | | | |
|---|---|---|---|---|
| RUN NO. | 1 | | | |
| Service Order No. | 31609 | | | |
| Fluid Level | FULL | | | |
| Salinity, PPM CL. | — | | | |
| Speed - F.P.M. | 30 | | | |
| **EQUIPMENT DATA** | | | | |
| Dens. Panel | CSU | | | |
| Dens. Cart. | | | | |
| Dens. Skid. | 208 | | | |
| Dens. Sonde | 392 | | | |
| Dens. Source | 5153 | | | |
| Dens. Calibrator | 1177 | | | |
| Neut. Panel | — | | | |
| Neut. Cart. | 409 | | | |
| Neut. Source | 594 | | | |
| Neut. Calibrator | 708 | | | |
| GR Cart. | 1246 | | | |
| Memorizer Panel | — | | | |
| Tape Recorder (TTR) | — | | | |
| Depth Encoder (DRE) | — | | | |
| Pressure Wheel (CPW) | — | | | |
| Centralizers: Enter Spring, Standoffs, In-line, or None — Type | — | | | |
| Centralizers — No. | — | | | |
| Centralizers — S. O. — Inches | — | | | |
| **CALIBRATION DATA** | | | | |
| GR — BKG. CPS | 47 | | | |
| GR — Source CPS | 215 | | | |
| GR — Sens. - Cal | — | | | |
| GR — T. C. - Cal | — | | | |
| CNL — Short Spacing - Before Log | 1266 | | | |
| CNL — Long Spacing - Before Log | 2858 | | | |
| CNL — Short Spacing - After Log | 1276 | | | |
| CNL — Long Spacing - After Log | 2854 | | | |
| FDC — P1 — Before Log | 432 | | | |
| FDC — P2 — Before Log | 770 | | | |
| FDC — P1 — After Log | 441 | | | |
| FDC — P2 — After Log | 714 | | | |

| Type Log | Depth | | |
|---|---|---|---|
| | | | |

REMARKS:

## LOGGING DATA

| DEPTH | | CNP | | | FDC | | | | | GR | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Top | Bottom | Porosity Scale | Matrix | Auto Corr. or Hole Size Setting | Porosity Scale | Grain Density | Liquid Density | Hole Fluid | Sens. Logged | T. C. | Zero. Div. Left | Scale Per 100 Div. |
| 575 | 3205 | 60-30-0 | SAND | AUTO | 60-30-0 | 2.65 | 1.0 | LIQ | 150 | AUTO | 0 | 150 |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

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 Clause 4 of our General Terms and Conditions as set out in our current Price Schedule.

**CALIPER** DIAM. IN INCHES

**GAMMA RAY** API UNITS

DEPTH

**POROSITY INDEX %** Sandstone MATRIX

COMPENSATED FORMATION DENSITY POROSITY

60 30 0

COMPENSATED NEUTRON POROSITY

60 30 0

FIELD PRINT SECTION

**CALIPER** DIAM. IN INCHES

5" 15"

**GAMMA RAY** API UNITS

DEPTH

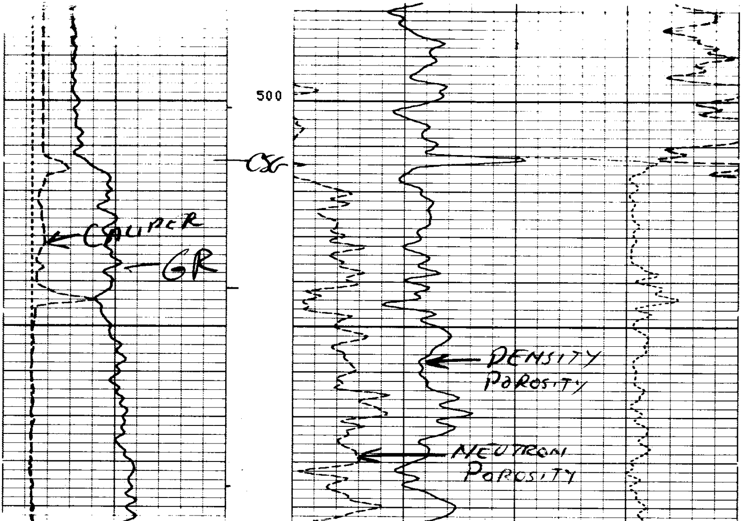
**CORRECTION** GRAMS/CC

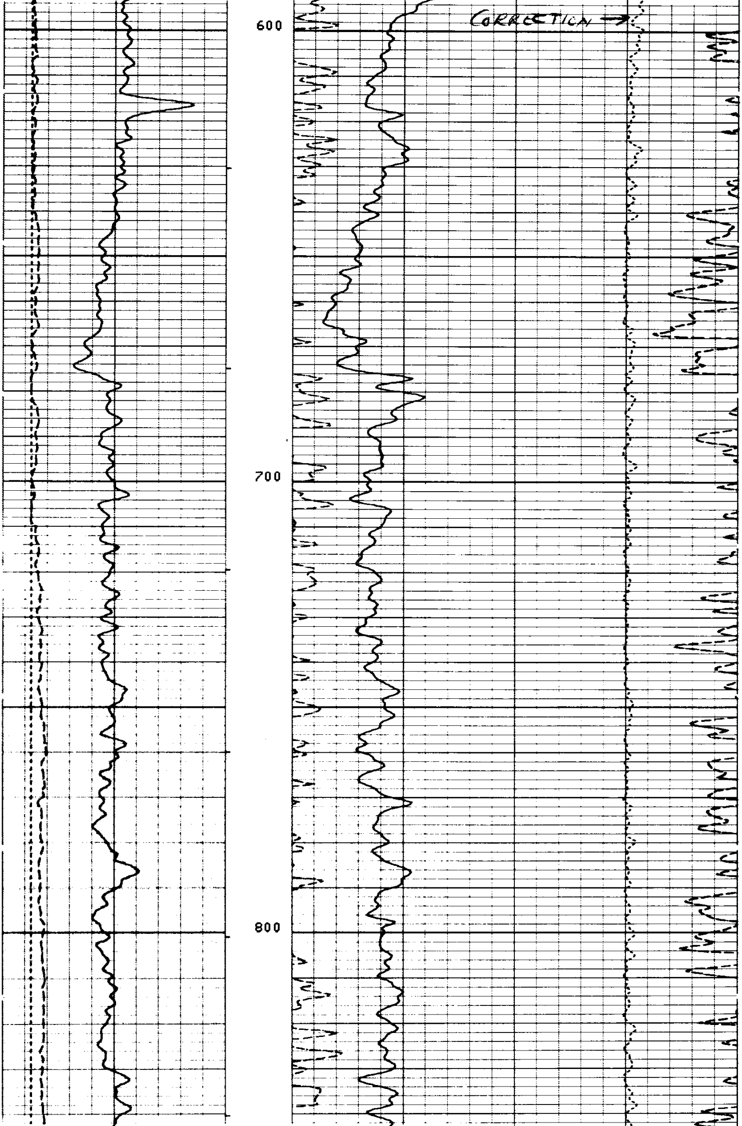
Use this scale when correction curve is presented in Track 3

−.25 0 +.25

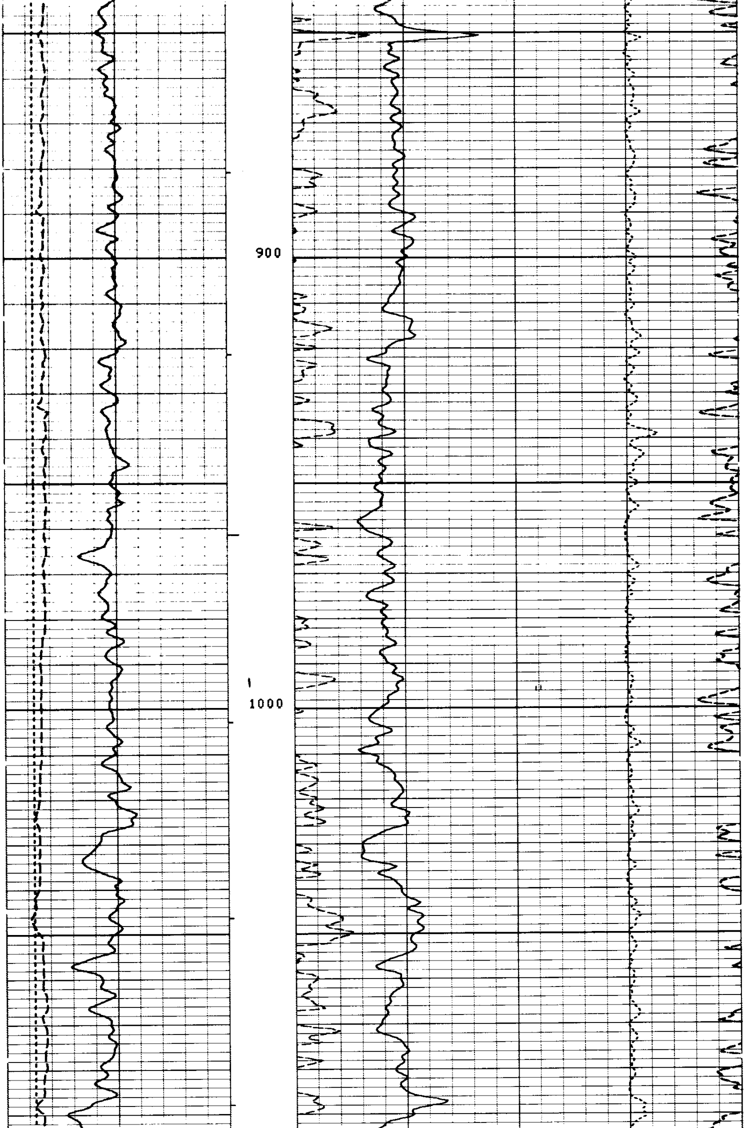
**BULK DENSITY** GRAMS/CC

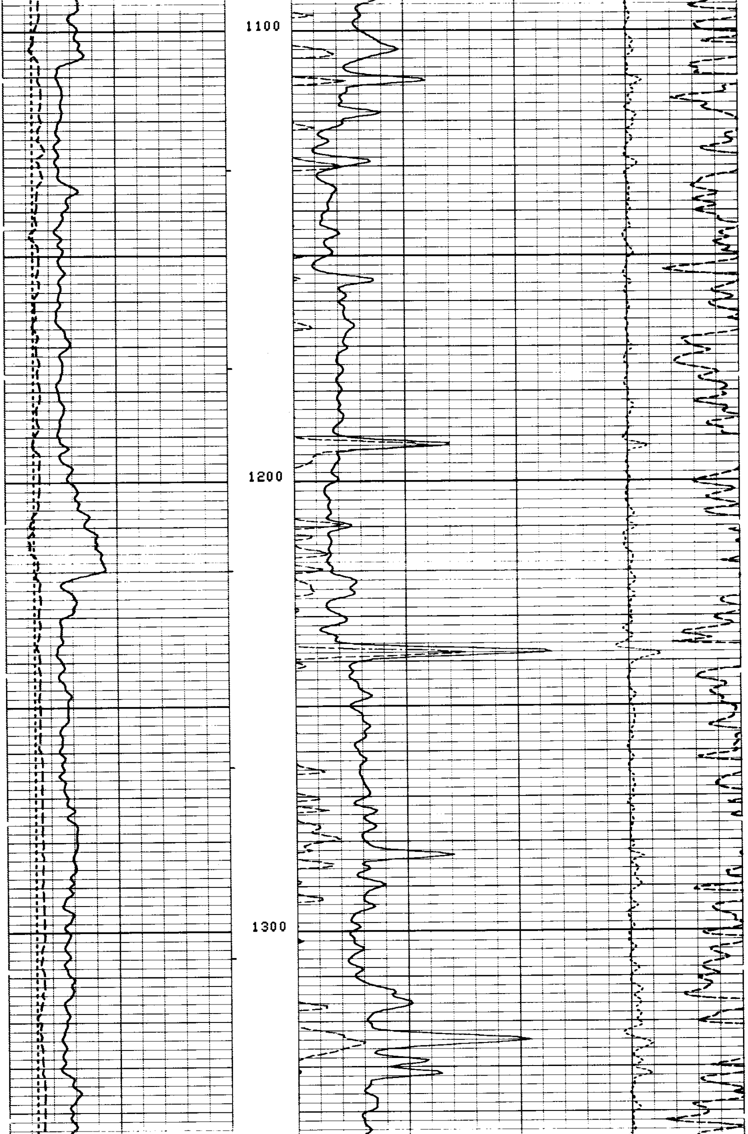
2.15 2.65

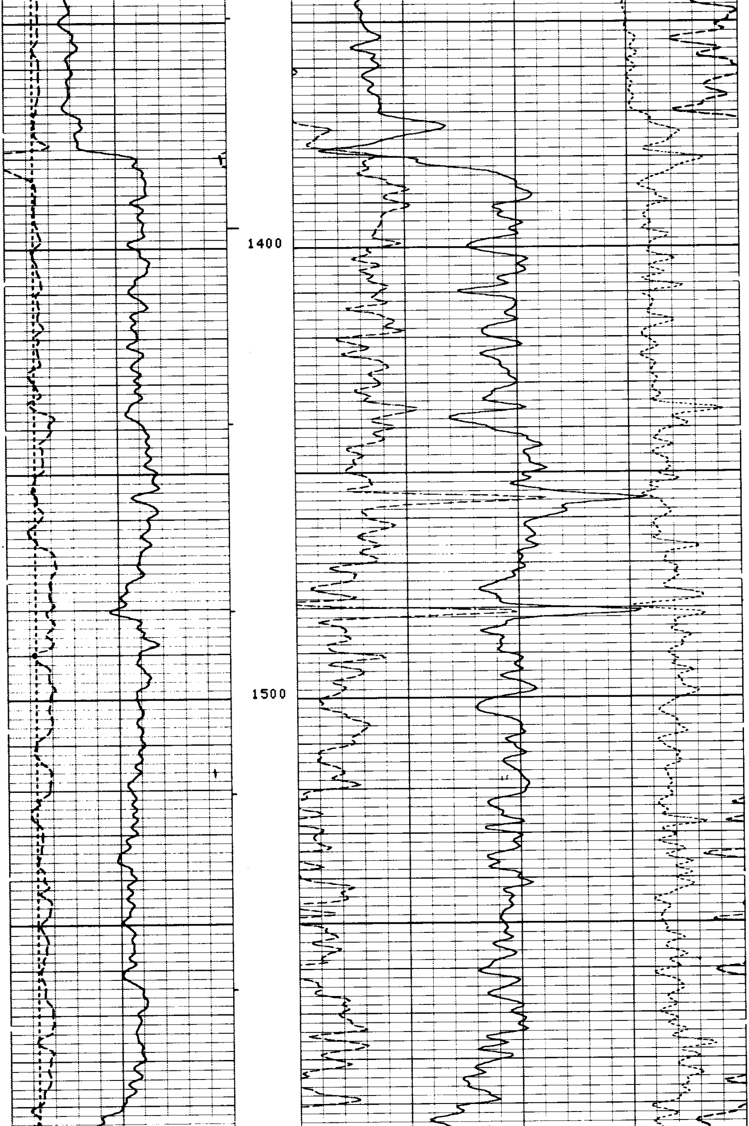


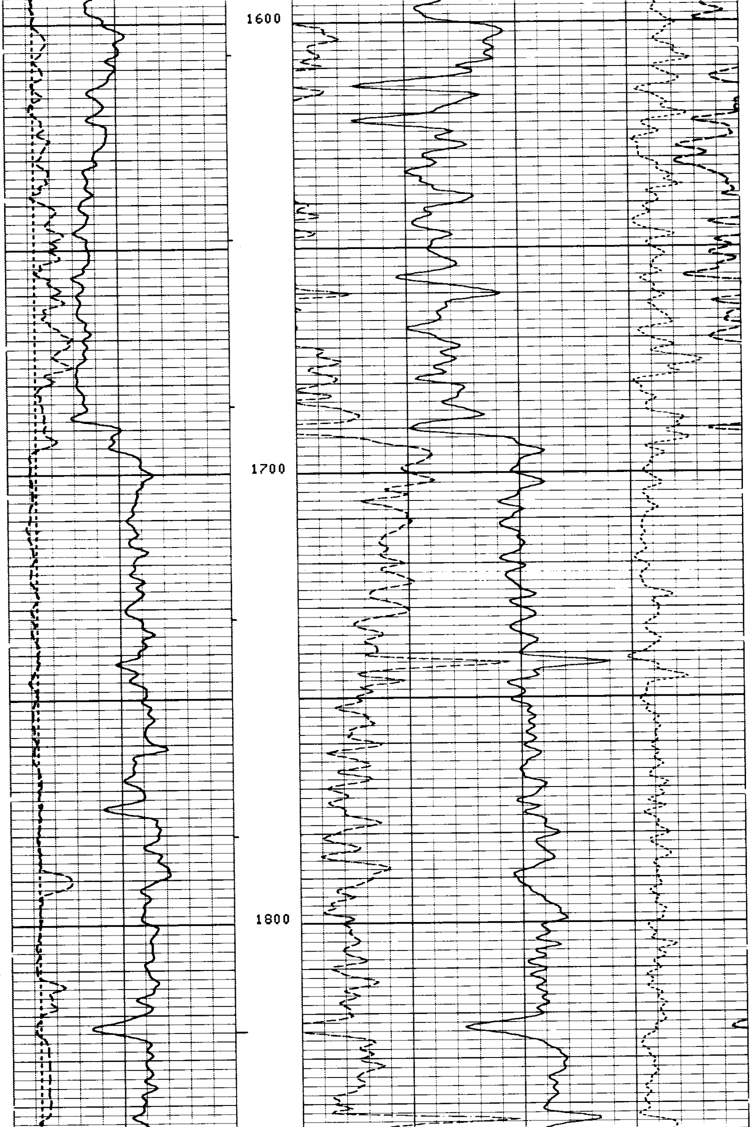


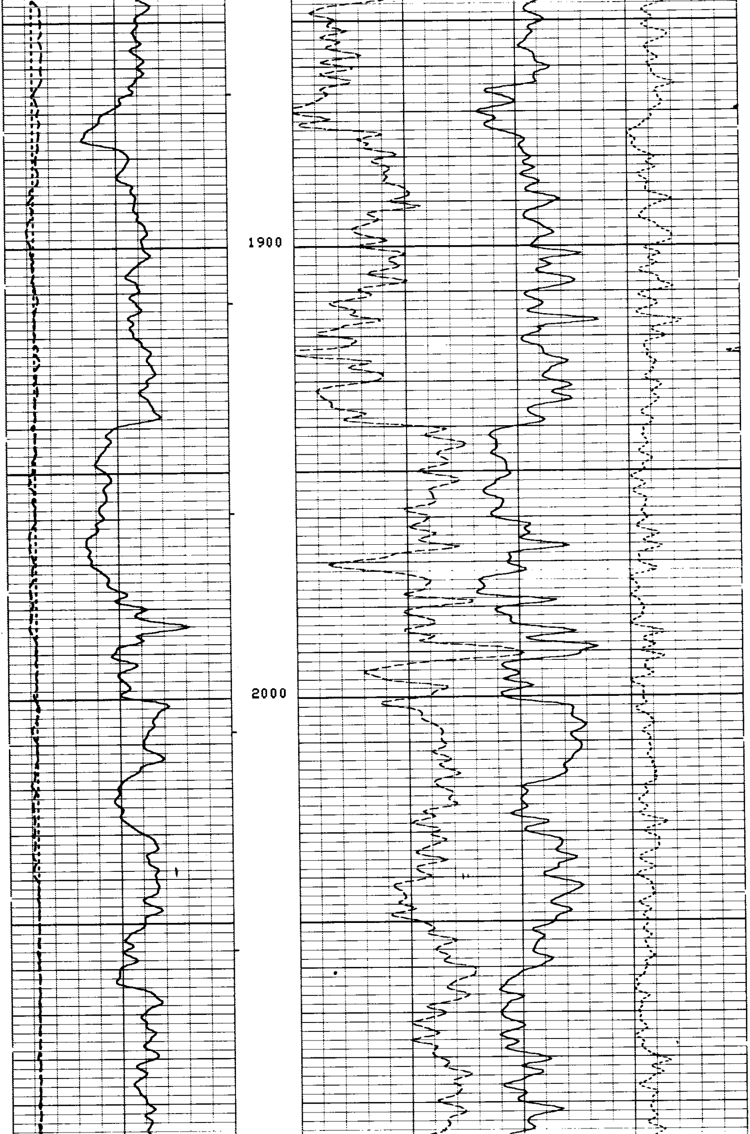
CORRECTION →

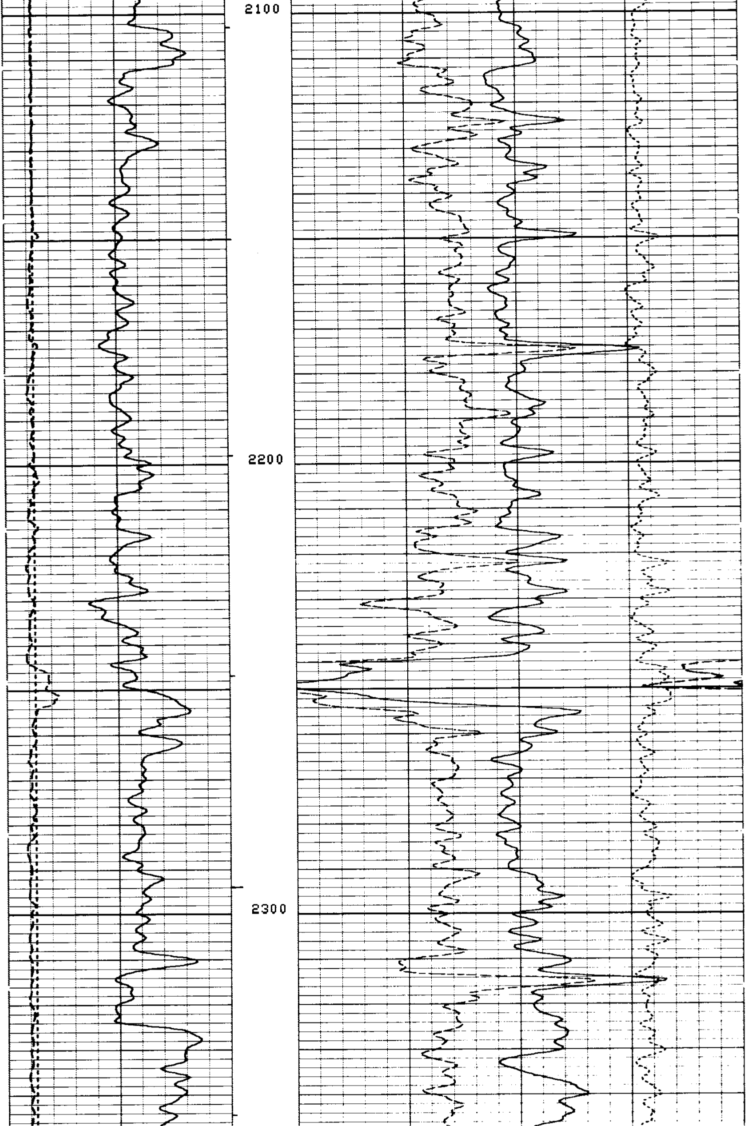


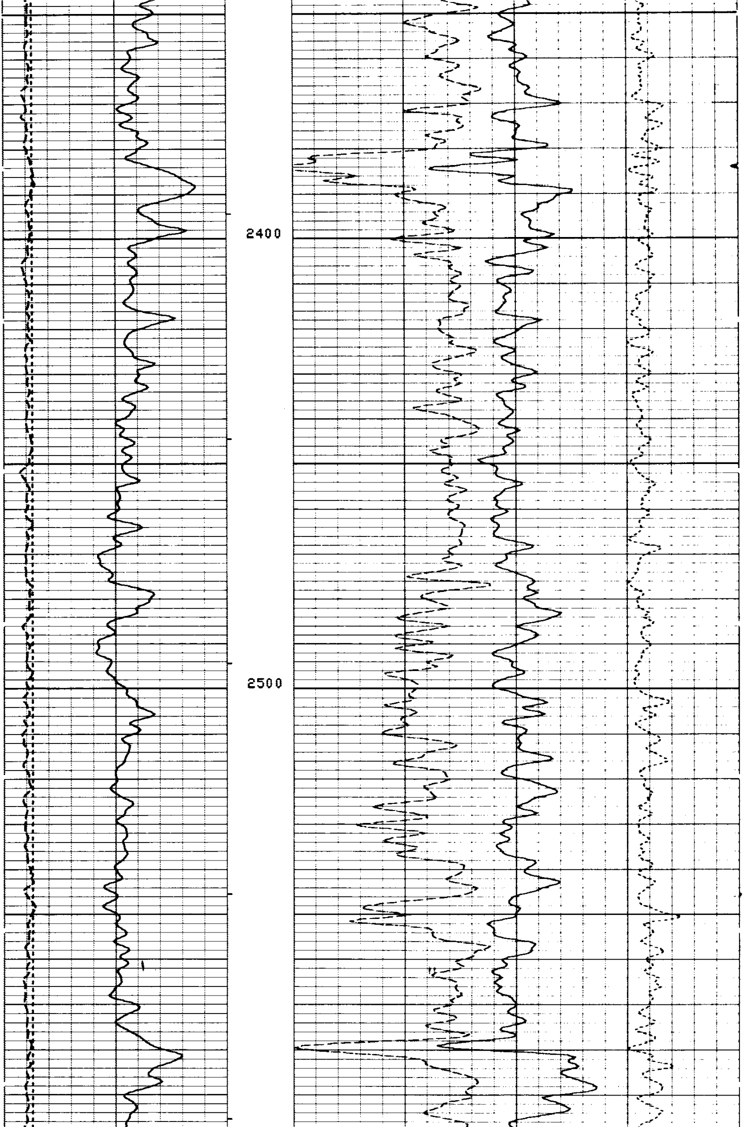


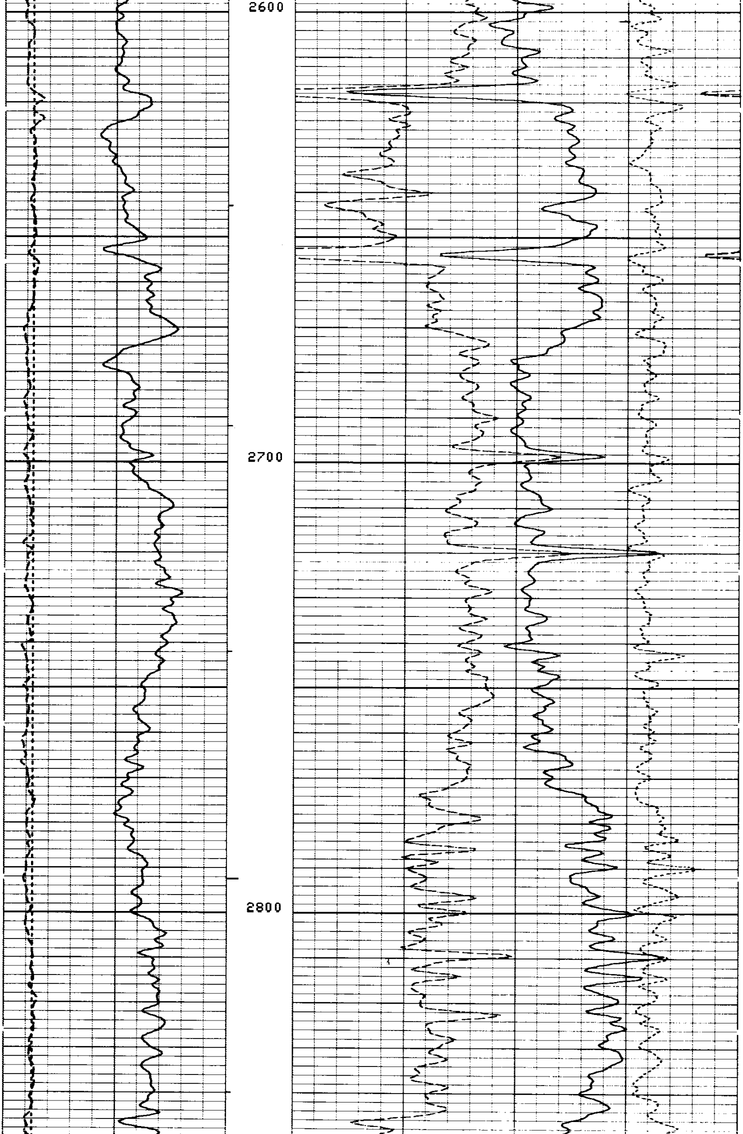


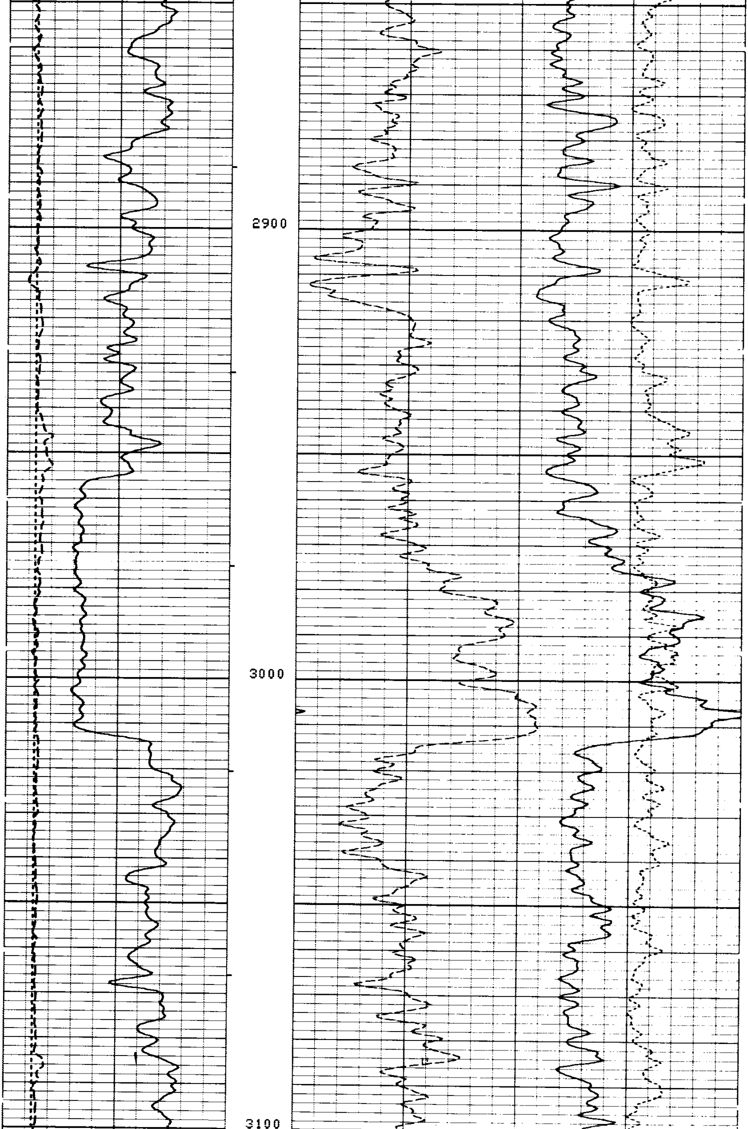


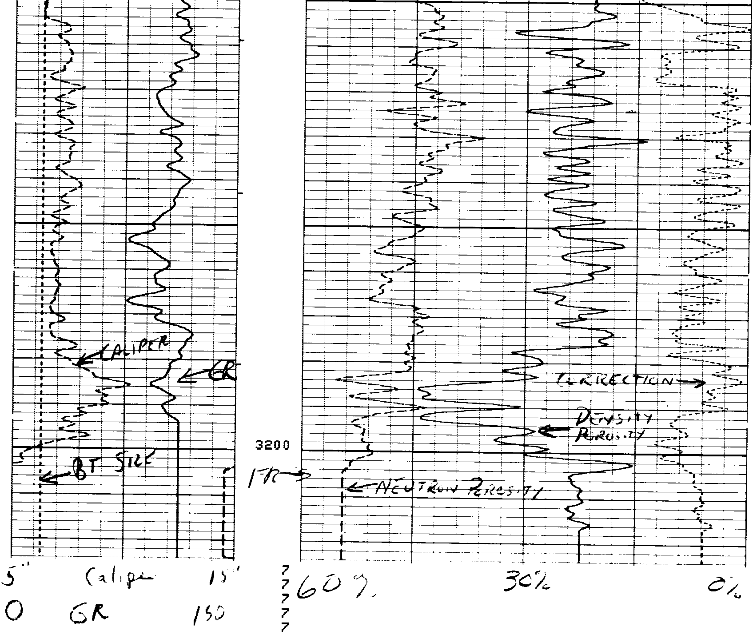












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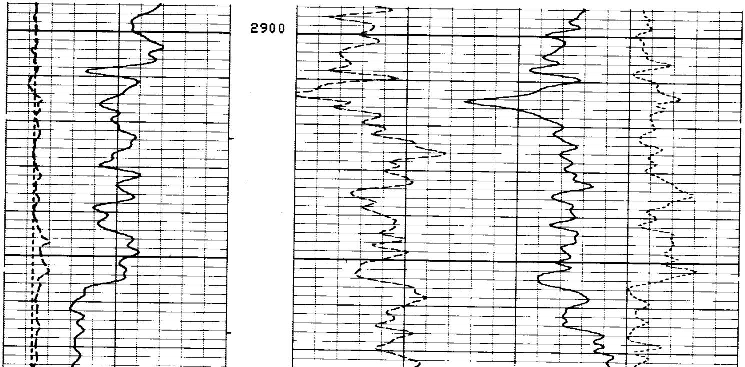

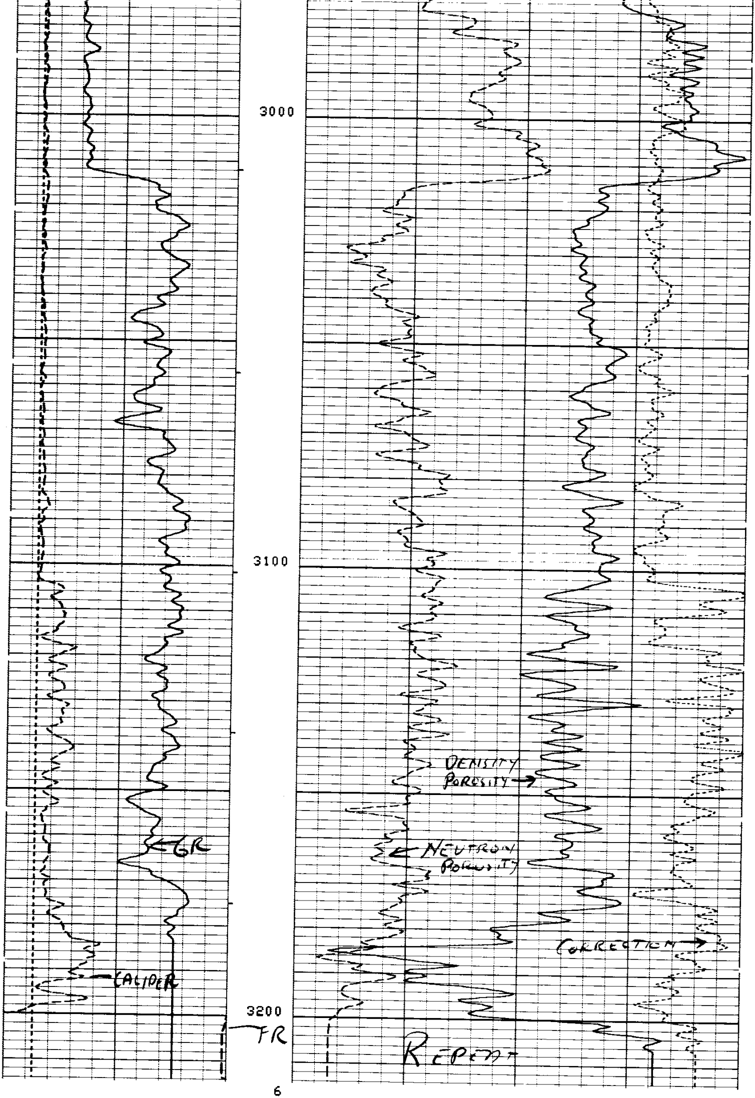

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                                   6
                                   6
 5.000    BS  (IN  )       16.00 |  |                                        DRHO(G/C3)
                                 |  |                               -0.250                 0.2500
          CALI(IN  )             |  |                      NPHI(     )
 6.000                     16.00 |  | 0.6000                                               0.0
          GR  (GAPI)             |  |                      DPHI(     )
 0.0                       150.0 |  | 0.6000                                               0.0

                                   PARAMETERS

   NAME  UNIT  VALUE           NAME  UNIT  VALUE           NAME  UNIT  VALUE

   DO          0.0             FPHI        PHIX


                                  3
                                  3
                                  3
                                  3
                                  3
                                  3


                      BEFORE SURVEY CALIBRATION SUMMARY


     PERFORMED:     79/10/20
     PROGRAM FILE:  NUC     (VERSION    14.4    79/09/05)


   SGTE                  DETECTOR CALIBRATION SUMMARY

               MEASURED
              BKGD    JIG          CALIBRATED          UNITS
      GR       47     215             165              GAPI


   CNTA                  DETECTOR CALIBRATION SUMMARY

                  TANK                             JIG
              INPUT  CALIBRATED             MEASURED   CALIBRATED
     NRAT     2.260     2.15                  2.25        2.15


   PGTE                  DETECTOR CALIBRATION SUMMARY

                  BLOCK                            JIG
              INPUT  CALIBRATED             MEASURED   CALIBRATED      UNITS
     FFDC      432      337                   431         336           CPS
     NFDC      815      528                   770         499           CPS


   PGTE                  CALIPER CALIBRATION SUMMARY

               MEASURED                         CALIBRATED
             SMALL    LARGE                  SMALL      LARGE          UNITS
     CALI     5.4     10.0                    6.0       12.0            IN
                                 3
                                 3
                                 3
                                 3
                                 3
                     SHOP SUMMARY


     PERFORMED:     79/10/01
     PROGRAM FILE:  SHOP    (VERSION    14.4    79/ 6/ 1)


   PGTE                  DETECTOR CALIBRATION SUMMARY

               BLOCK                             JIG
         MEASURED   CALIBRATED          MEASURED   CALIBRATED      UNITS
```

```
 FFDC   432           337           433           337          CPS
 NFDC   815           528           780           505          CPS

          (PGS:392  , PDH:208  , GSR:5153 , SFT:1177 )

                SHOP SUMMARY


  PERFORMED:      79/09/23
  PROGRAM FILE:   SHOP   (VERSION    14.4    79/09/05)


CNTA                   DETECTOR CALIBRATION SUMMARY

              TANK                             JIG
       MEASURED  CALIBRATED      MEASURED   CALIBRATED

  NRAT   2.26        2.15           2.20         2.09

                    (CNC:409  , CNB:594   )



                AFTER SURVEY TOOL CHECK SUMMARY


  PERFORMED:      79/10/20
  PROGRAM FILE:   NUC    (VERSION    14.4    79/09/05)


CNTA                      TOOL  CHECK

                      JIG
                BEFORE      AFTER
  NRAT            2.15        2.13

  POROSITY CHANGE  (LIME): -0.002


PGTE                      TOOL  CHECK

                      JIG
                BEFORE      AFTER      UNITS
  FFDC            336         344       CPS
  NFDC            499         462       CPS
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                        7
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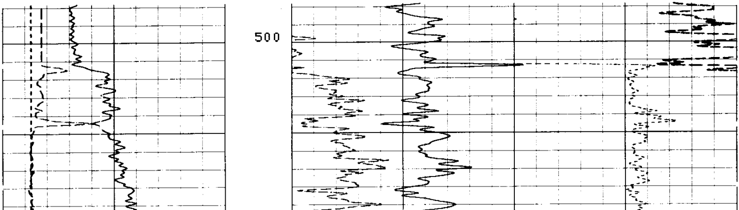

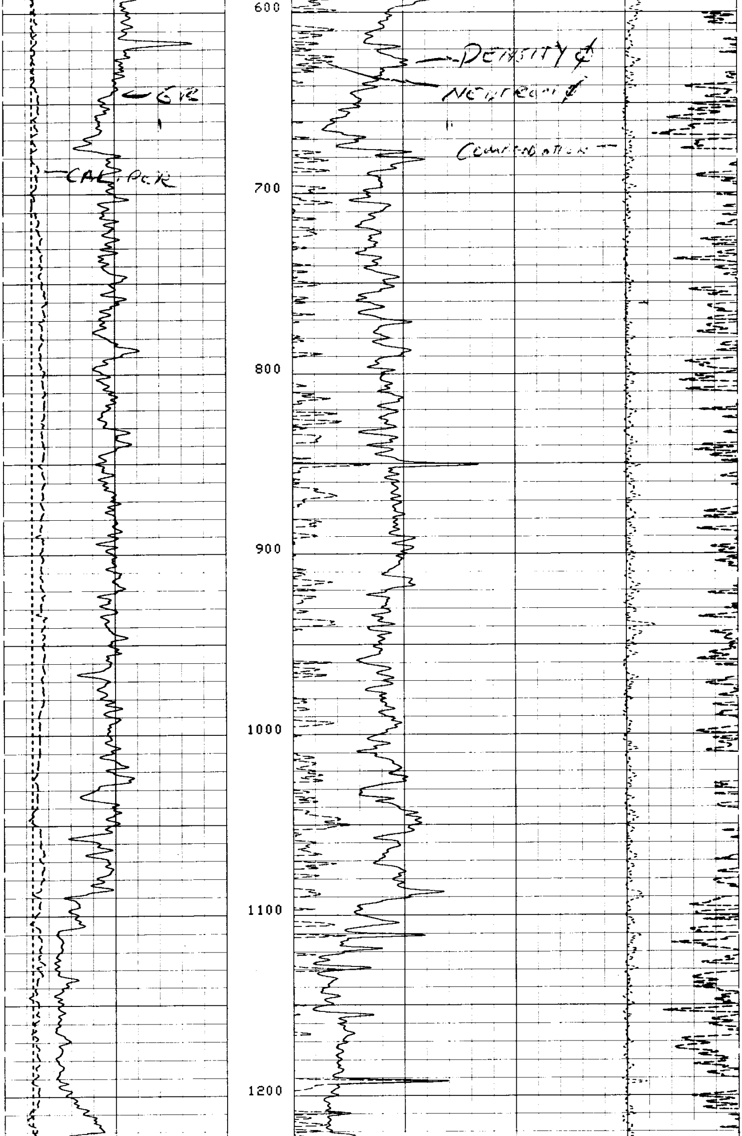

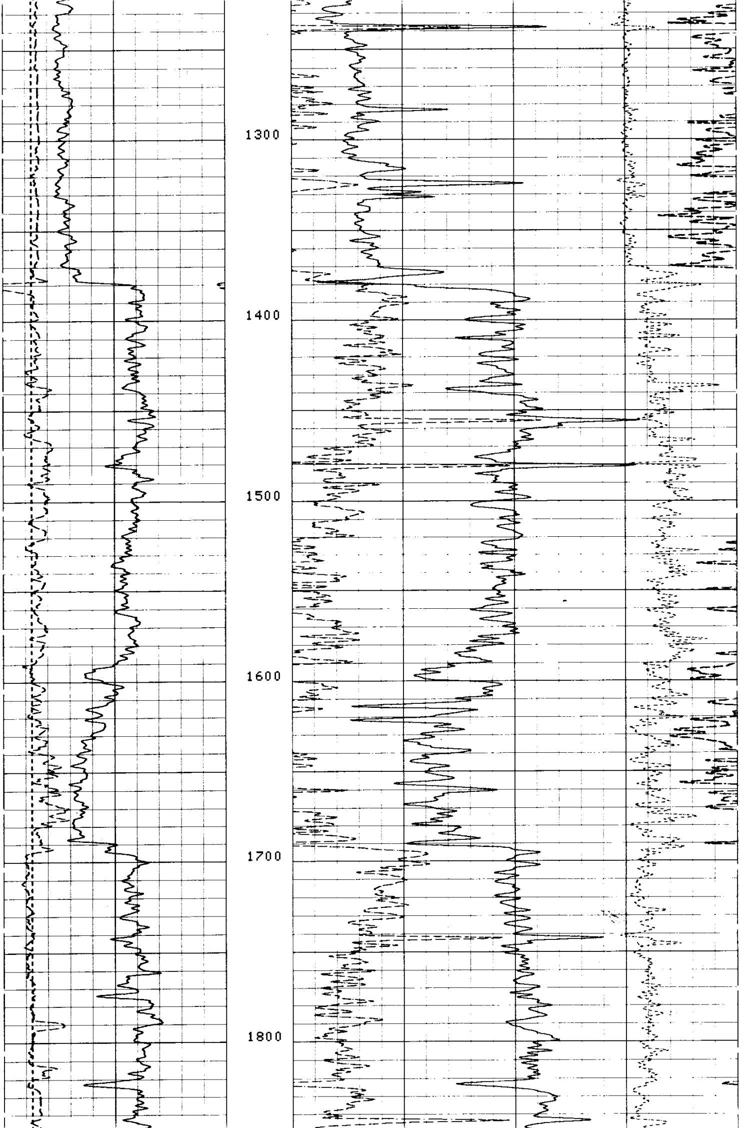

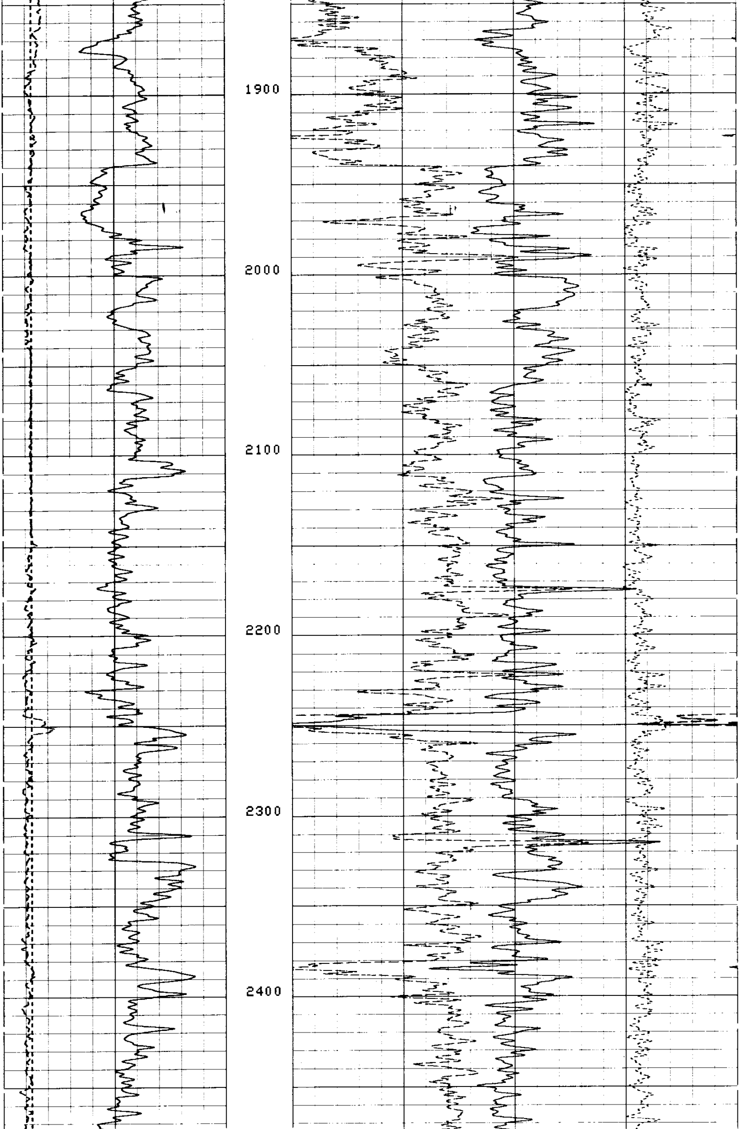

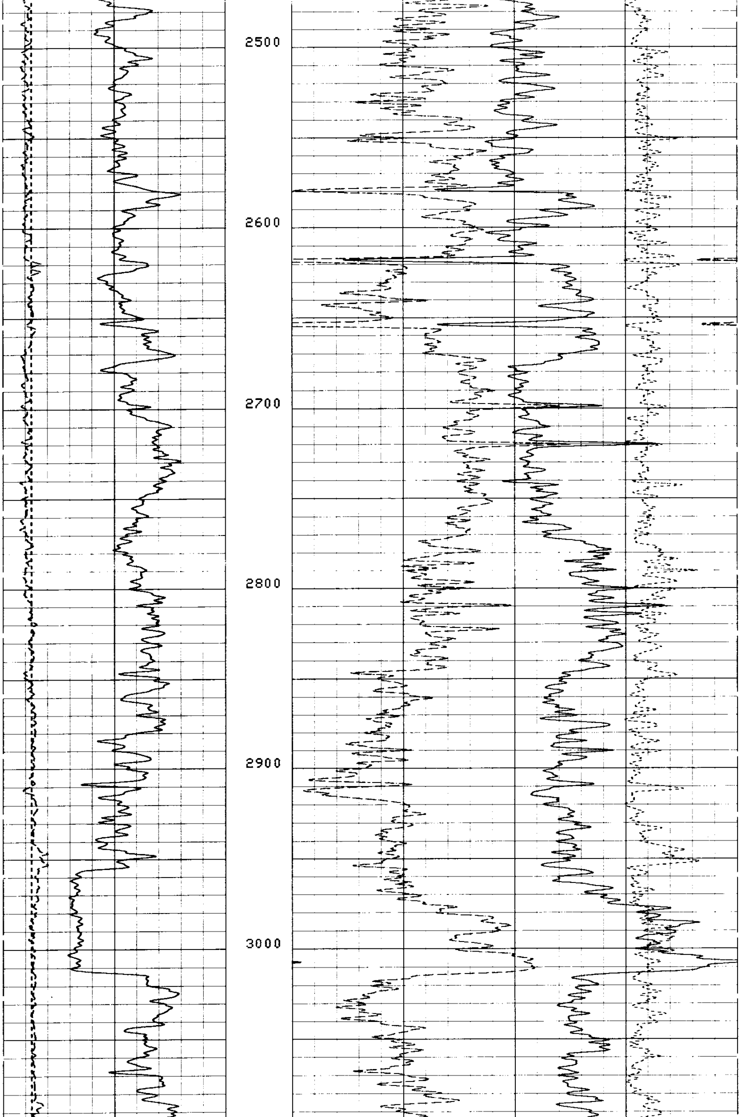

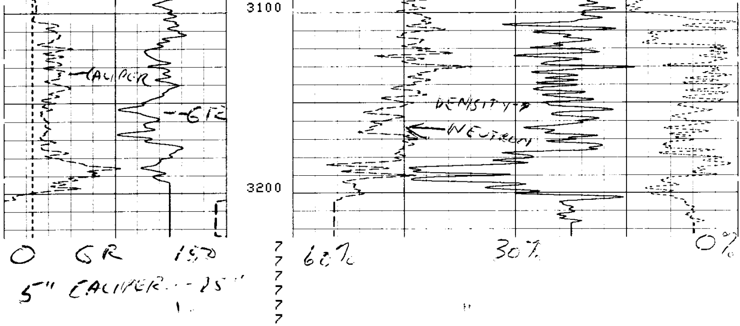

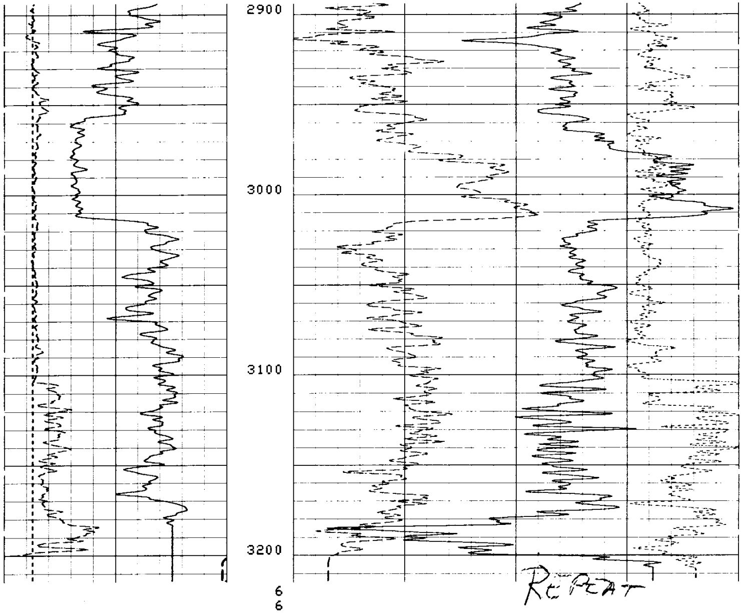

| | | |
|---|---|---|
| BS (IN) | | DRHO(G/C3) |
| 5.000 15.00 | | -0.250 0.2500 |
| CALI(IN) | NPHI( ) | |
| 5.000 15.00 | 0.6000 | 0.0 |
| GR (GAPI) | DPHI( ) | |
| 0.0 150.0 | 0.6000 | 0.0 |

PARAMETERS

| NAME | UNIT | VALUE | NAME | UNIT | VALUE | NAME | UNIT | VALUE |
|---|---|---|---|---|---|---|---|---|
| DO | | 0.0 | FPHI | | PHIX | | | |