**ATLAS WIRELINE SERVICES**

COMPENSATED **DENSILOG®**
COMPENSATED **NEUTRON**
**GAMMA RAY**

FILE NO.

API NO.

5" = 100'

COMPANY OREGON NATURAL GAS CORP.
WELL 43B - 10
FIELD MIST
COUNTY COLUMBIA STATE OR.

SCANNED

LOCATION:
2035' N. & 802' W. OF SE CORNER.

SEC 10 TWP 6N RGE 5W

OTHER SERVICES
DIFL
BHC/AL
DIP
PRODIP

PERMANENT DATUM GL ELEV. 728.11'
LOGGING MEASURED FROM KB 11.4 FT. ABOVE P.D.
DRILLING MEASURED FROM KB

ELEVATIONS
KB 739.51
DF
GL 728.11

| | | | | | |
|---|---|---|---|---|---|
| DATE | 9-18-88 | | | | |
| RUN | 1 | | | | |
| SERVICE ORDER | 159024 | | | | |
| DEPTH-DRILLER | 2616' | | | | |
| DEPTH-LOGGER | 2606' | | | | |
| BOTTOM LOGGED INTERVAL | 2604' | | | | |
| TOP LOGGED INTERVAL | 506' | | | | |
| CASING - DRILLER | 8 5/8" | @ 508' | @ | @ | @ |
| CASING - LOGGER | 506' | | | | |
| BIT SIZE | 7 7/8" | | | | |
| TYPE FLUID IN HOLE | GEL/DRISPAC | | | | |
| DENSITY / VISCOSITY | 10.1 | 42 | | | |
| PH / FLUID LOSS | 8.95 | 5.8 | | | |
| SOURCE OF SAMPLE | FLOWLINE | | | | |
| RM AT MEAS. TEMP. | 1.50 | @ 80 DEG. F | @ | @ | @ |
| RMF AT MEAS. TEMP. | 1.15 | @ 70 DEG. F | @ | @ | @ |
| RMC AT MEAS. TEMP. | 1.86 | @ 70 DEG. F | @ | @ | @ |
| SOURCE OF RMF / RMC | M | M | | | |
| RM AT BHT | 1.13 | @ 107 DEG. F | @ | @ | @ |
| TIME SINCE CIRCULATION | 4 HRS | | | | |
| MAX. REC. TEMP. DEG. F | 107 DEG. F | | | | |
| EQUIP. NO. / LOC. | 6398 | BAK. | | | |
| RECORDED BY | M. HINDS | | | | |
| WITNESSED BY | MR. THOMAS | | | | |

RECEIVED
OCT 26 1988
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Portland

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 MEASURMENTS, 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 | 72541 | 2212 | DE-CENT |
| 1 | 1 | CAL | 72541 | 2212 | VARIABLE |
| 1 | 1 | CN | 53264 | 2435 | DE-CENT |
| 1 | 1 | GR | 73467 | 1309 | DE-CENT |

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 | 16,6 | FT,IN |
| TTEN | 0,0 | FT,IN |
| TEN | 0,0 | FT,IN |
| SPD | 0,0 | FT,IN |

PARAMETERS

| NAME | DEPTH INTERVAL | VALUE | UNITS |
|---|---|---|---|
| A | 2615 TO 505 | 0.000 | |
| CAL CORR | 2615 TO 505 | 7.375 | INCH |
| CHI SMTH | 2615 TO 505 | ACTIVE | |
| M | 2615 TO 505 | 0.000 | |
| MATRIX | 2615 TO 505 | SANDSTONE | |
| O.D. | 2615 TO 505 | 5.500 | INCH |
| RHO F | 2615 TO 505 | 0.980 | G/CC |
| RHO M | 2615 TO 505 | 2.650 | G/CC |
| SALINITY | 2615 TO 505 | 0.000 | PPK |

DISPLAY SCALE CHANGES

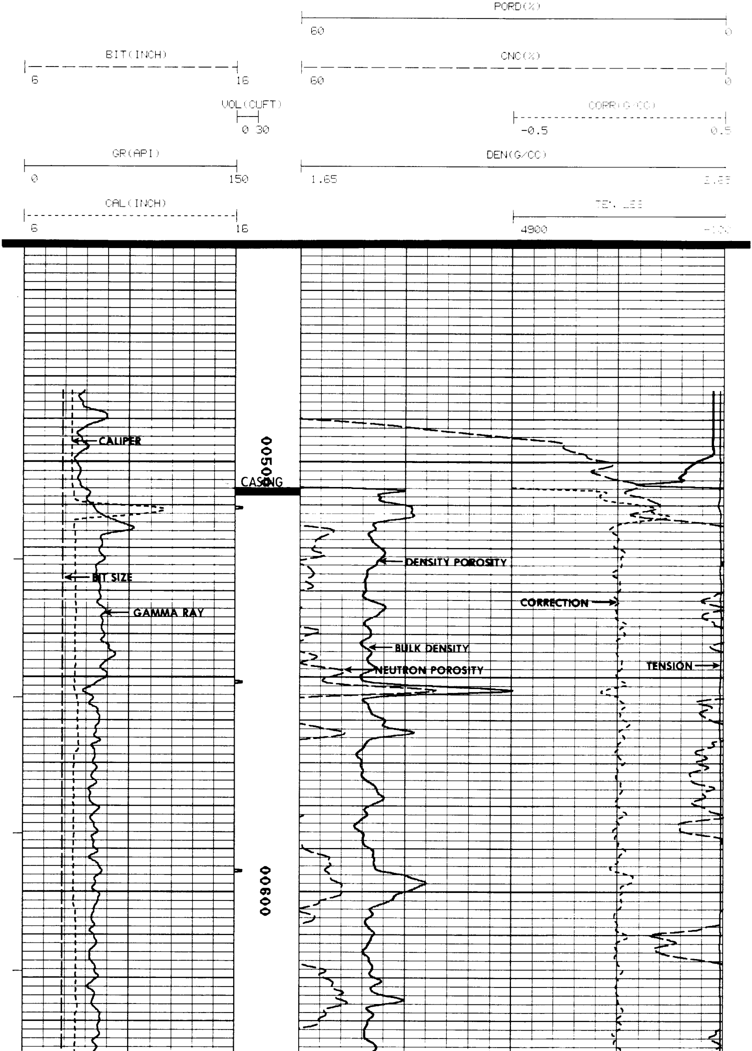
*** NONE ***

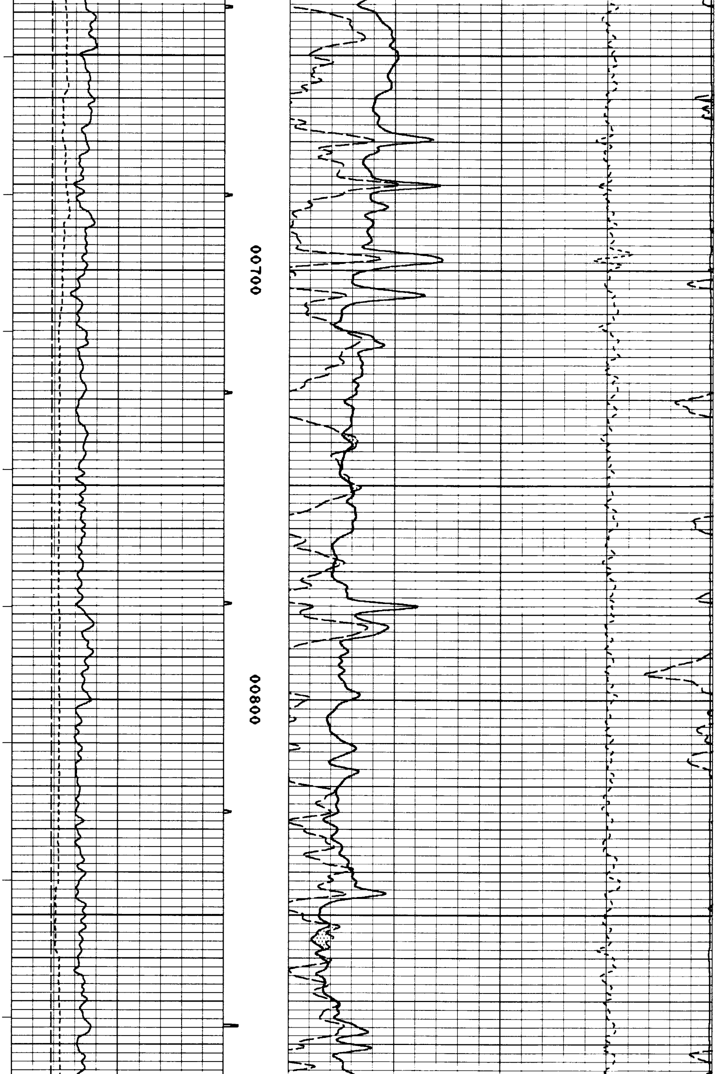
COMPANY: OREGON NATURAL GAS CORP. RUN: 1

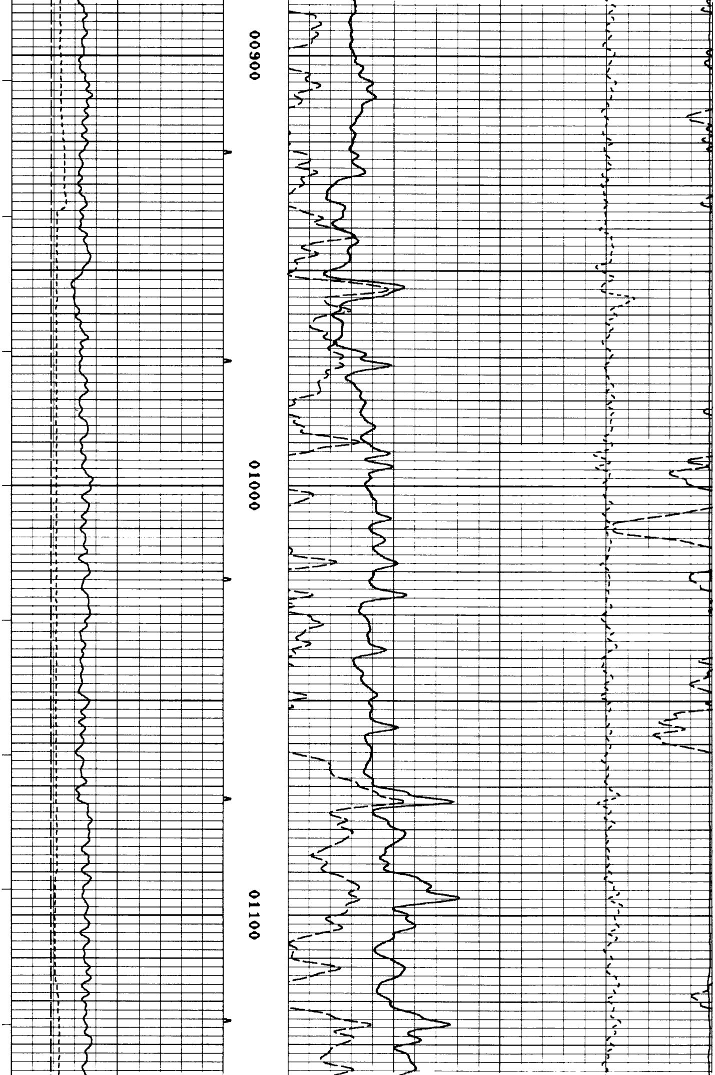
WELL NAME: 43B - 10 TRIP: 1

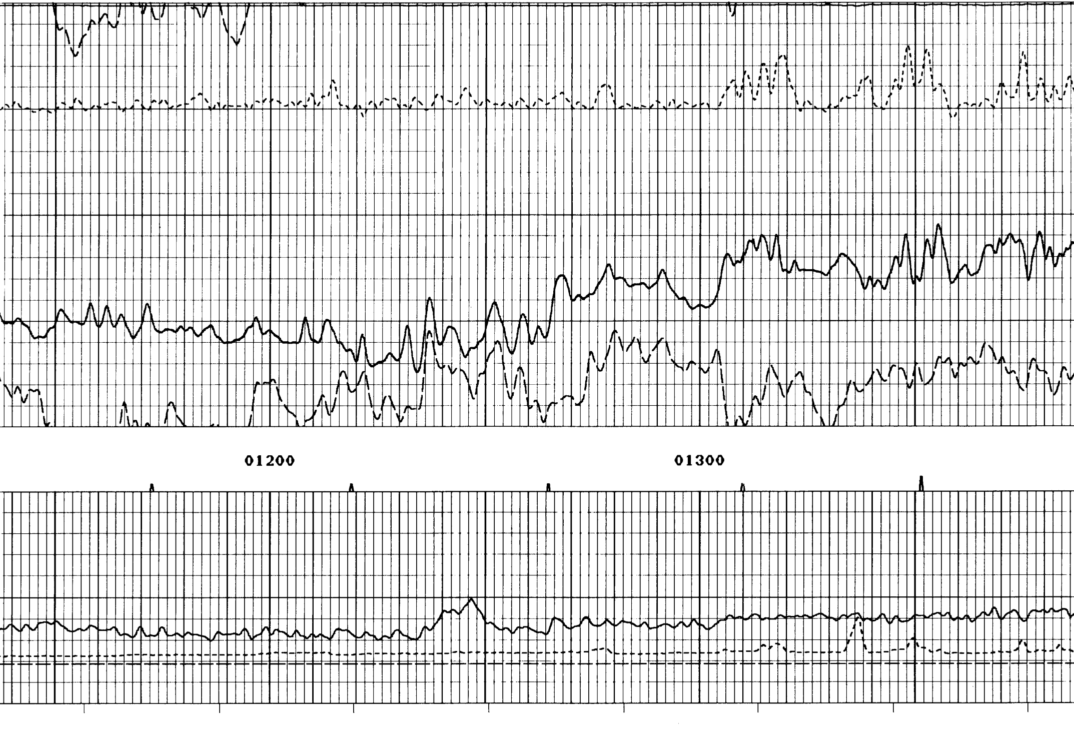
SERVICE: KC287B FILE: 2 DATE: 09/18/88 TIME: 15:36:37

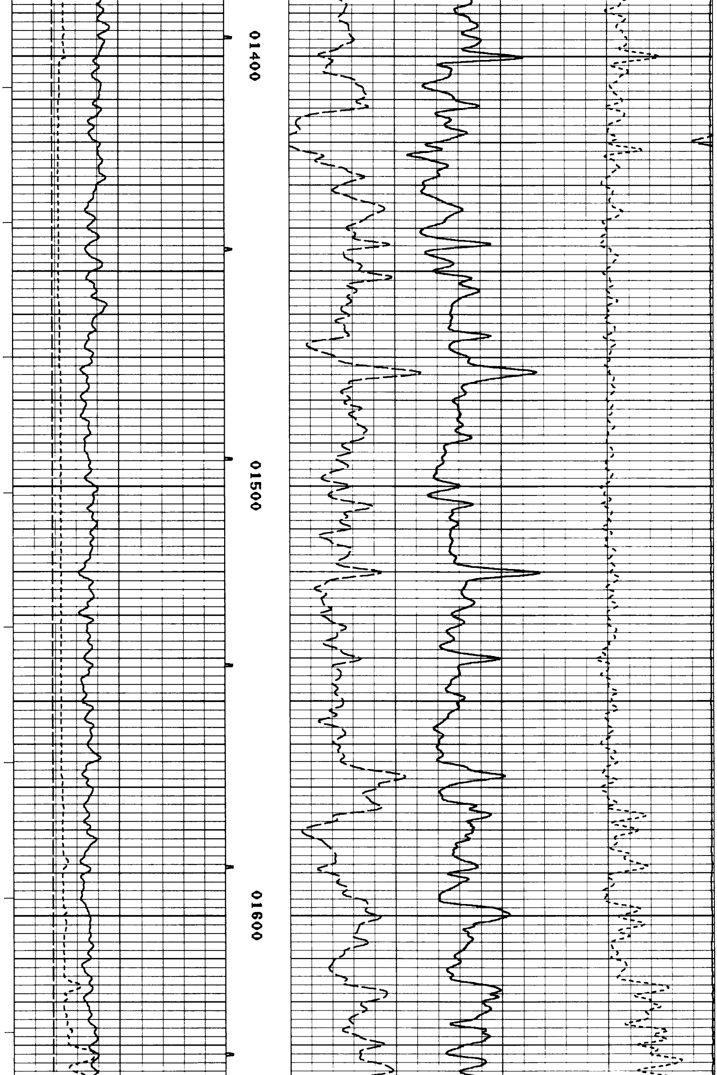
REVISION: FSYSAL REV GS08 VER+2 MODE: RECORD

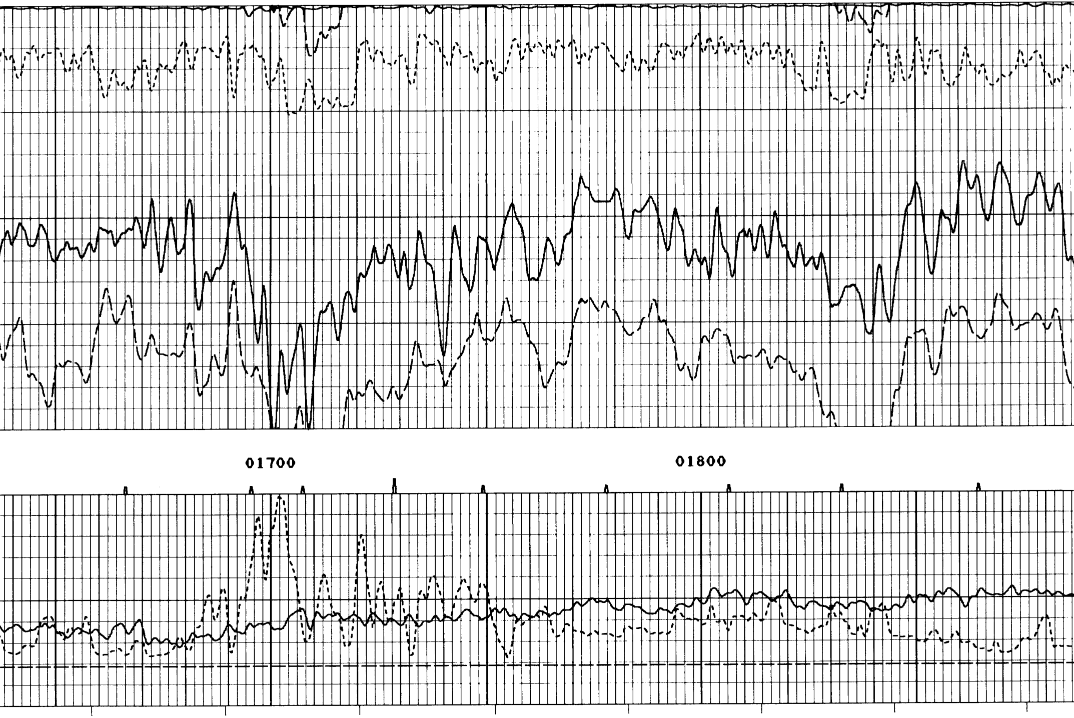


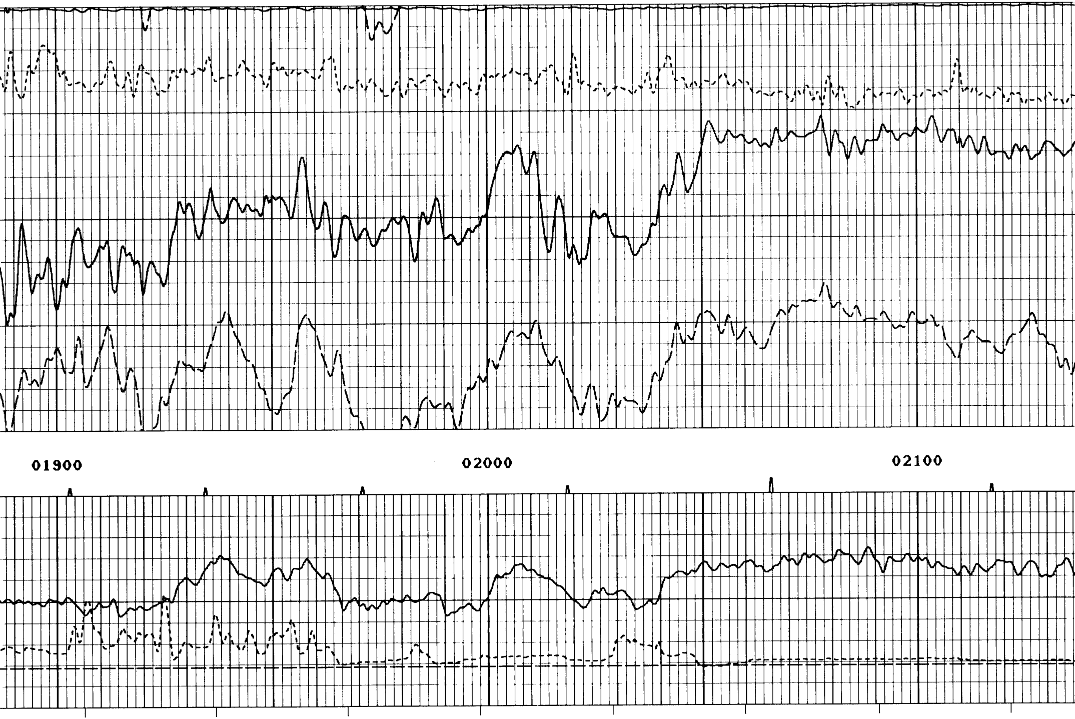


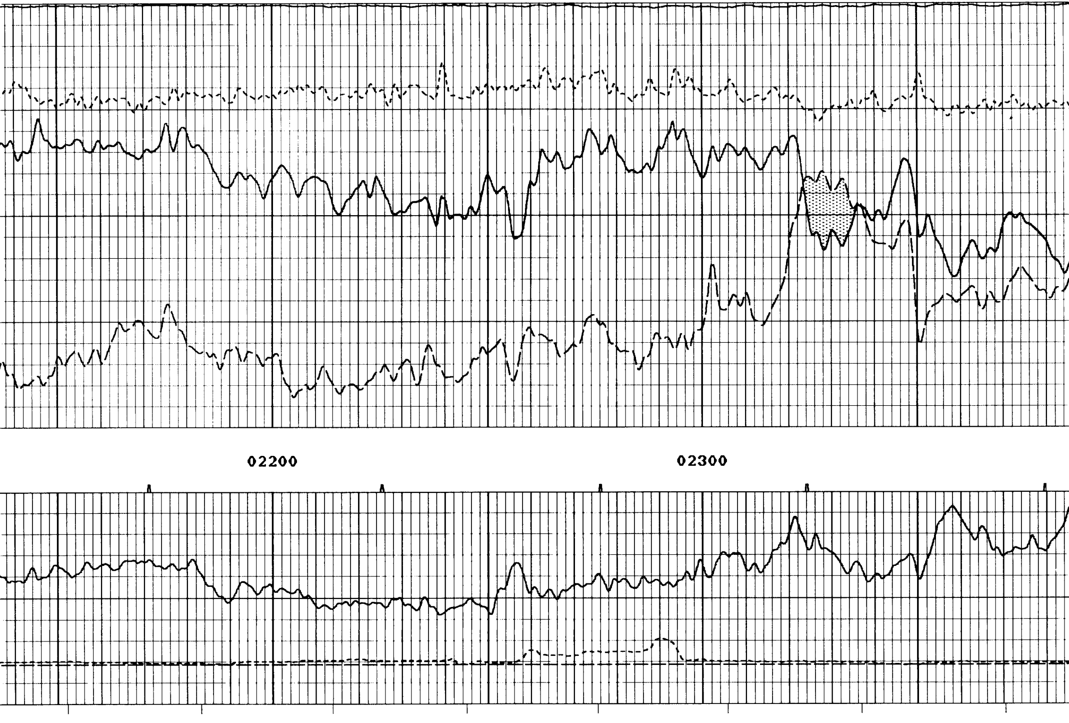


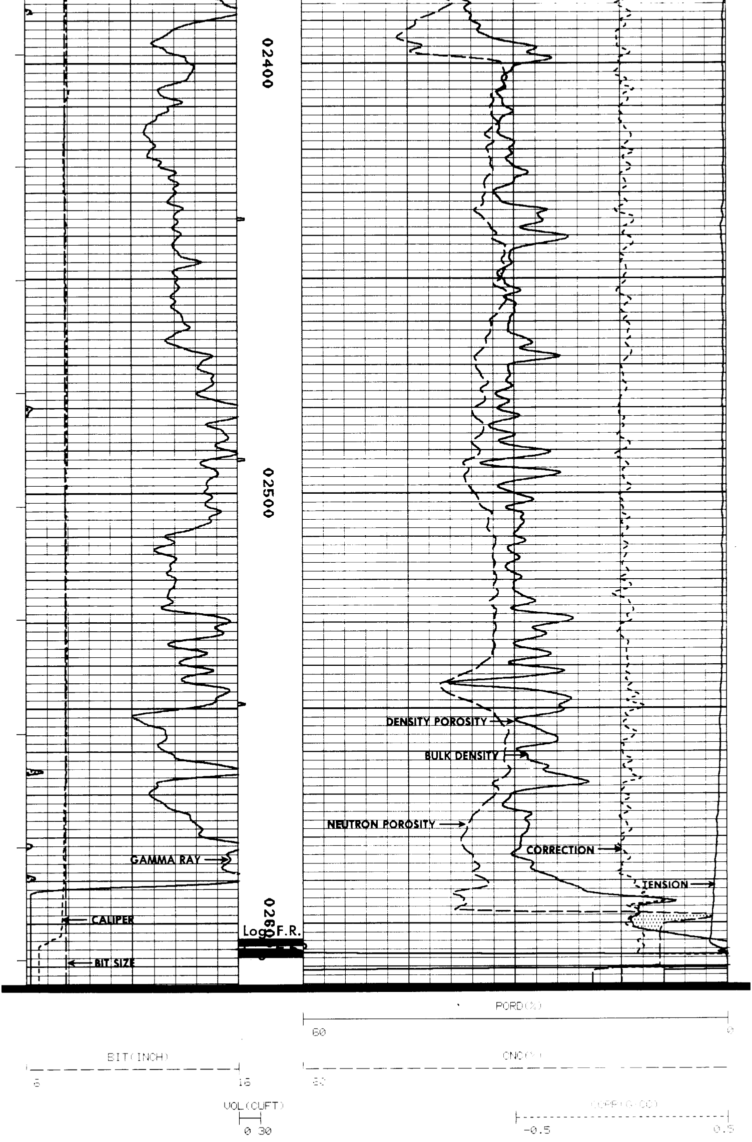












```
          GR(API)                                              DEN(G/CC)
|--------------------------------|        |------------------------------------------------------|
 0                             150         1.65                                               2.65

          CAL(INCH)                                                          TEN(LBS)
_|--------------------------------|                                  |-----------------------------|
 6                              16                                    4900                     -100
```

```
      CURVE DELAYS

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

  SSD      0,3  FT,IN
  LSD        0  FT,IN
  CAL      0,0  FT,IN
  SSN      9,9  FT,IN
  LSN     10,3  FT,IN
  GR      16,6  FT,IN
  TTEN     0,0  FT,IN
  TEN      0,0  FT,IN
  SPD      0,0  FT,IN
```

```
                     PARAMETERS

   NAME      DEPTH INTERVAL     VALUE       UNITS
 --------   --------------   ----------   -------
 A            2616 TO  2408       0.000

 CAL DIFF     2616 TO  2408       7.375   INCH

 CAL SWTCH    2616 TO  2408     ACTIVE

 [illegible]  2616 TO  2408       0.000

 MATRIX       2616 TO  2408  SANDSTONE

 B.S.         2616 TO  2408       5.500   INCH

 RHO F        2616 TO  2408       0.980   G/CC

 RHO M        2616 TO  2408       2.650   G/CC

 SALINITY     2616 TO  2408       0.000   PPK
```

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              DISPLAY SCALE CHANGES

                   *** NONE ***
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```
COMPANY:     OREGON NATURAL GAS CORP.                                 RUN:  1

WELL NAME:   43B - 10                                                 TRIP: 1

REF NO:      [illegible]       FILE:   1     DATE: [illegible]         TIME: [illegible]

REVISION:    FSYSAL REV GS08 VER+2                                    MODE: RECORD
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**REPEAT SECTION**

```
                                              PORD(%)
                      |------------------------------------------------------|
                       60                                                    0
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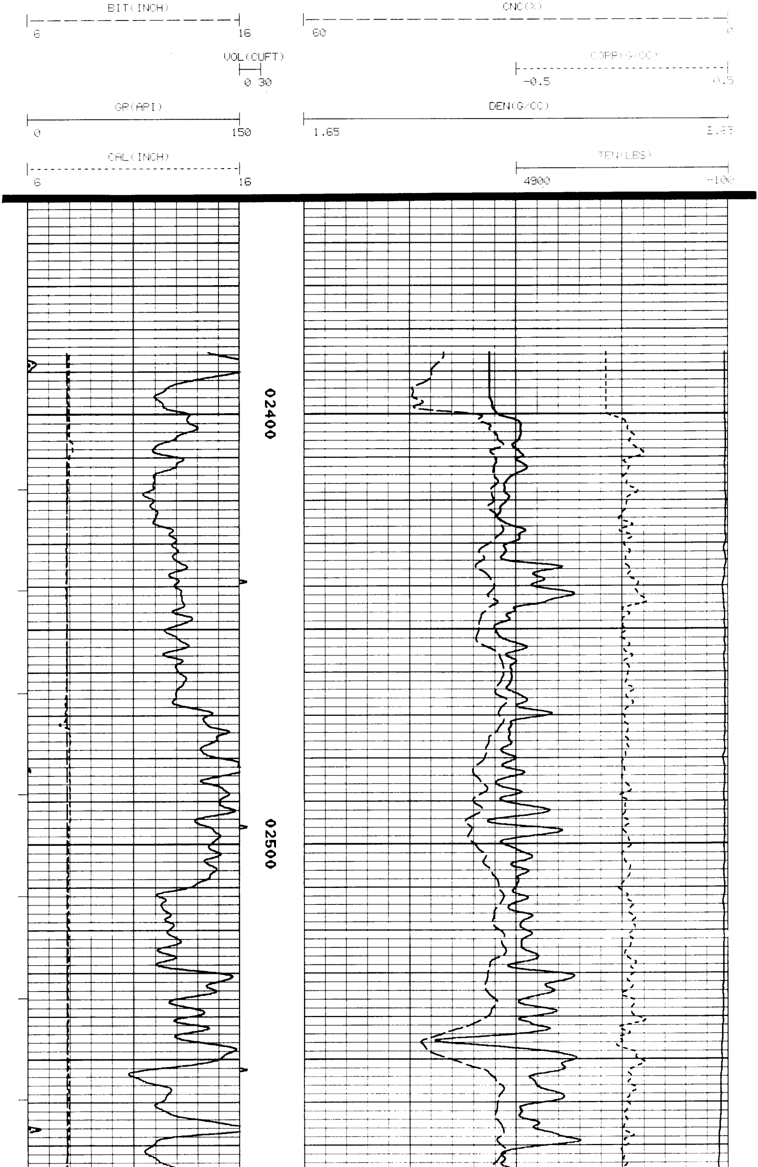

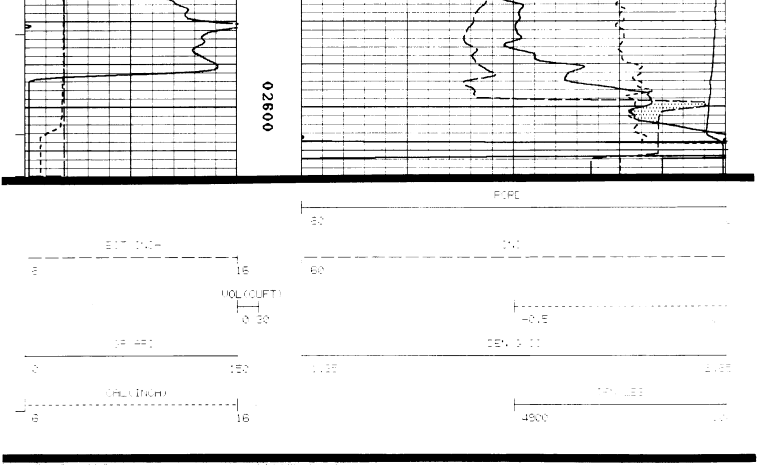

```
            ******************************************
            *                                        *
            *  CALIBRATION/VERIFICATION SUMMARIES    *
            *  DATE 09/18/88          TIME 17:20:25  *
            *  RUN  1                 TRIP 1         *
            *                                        *
            ******************************************


        LOG NAME CDL     ASSET NO. 72541     UNIT NO. HL 6406
    CALIBRATION ENTERED ON  09/18/88 AT 11:27:06        LARGE TOOL
                      SOURCE NUMBER    845

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

       DATE 08/16/88          CALIBRATION          TIME 13:11:34

  LSD      MG       346.4
  SSD               463.5
  DEN                                                      3.200   G/CC
  CORR                                                     0.000   G/CC
  LSD      AL       118.3    0.000     1.0000    2.9277
  SSD               298.3    0.000     1.0000    1.5538
  DEN                                                      2.800   G/CC
  CORR                                                     0.000   G/CC
  LSD      MGRV     320.4
  SSD               503.3
  DEN                                                      2.480   G/CC
  CORR                                                     0.235   G/CC

       DATE 09/02/88    PRIMARY VERIFICATION       TIME 22:05:27

  LSD      JIG      167.9    0.000     1.0000
  SSD               329.9    0.000     1.0000
  DEN                                                      2.523   G/CC
  CORR                                                    -0.085   G/CC

       DATE 09/18/88   BEFORE LOG VERIFICATION     TIME 11:32:56

  LSD      JIG      167.5    0.000     1.0000
  SSD               328.6    0.000     1.0000
  DEN                                                      2.520   G/CC
  CORR                                                    -0.090   G/CC

       DATE 09/18/88    AFTER LOG VERIFICATION     TIME 16:43:31
```

```
LSD    JIG     167.4    0.000    1.0000
SSD            327.1    0.000    1.0000
DEN                                                        2.512  G/CC
CORR                                                      -0.099  G/CC


      LOG NAME CAL     ASSET NO. 72541     UNIT NO. 6393
  CALIBRATION ENTERED ON  09/18/88 AT 11:53:10

CURVE    MILLIVOLTS      SCALING FACTORS     ENGINEERING VALUES    UNITS
          LOW    HIGH    ADD.      MULT.          LOW        HIGH
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     DATE 09/18/88          CALIBRATION           TIME 11:53:10

CAL     3381.2  4060.3   -2.593    0.0263       6.000      12.000 INCH

                        PRIMARY VERIFICATION            NOT DONE

     DATE 09/18/88   BEFORE LOG VERIFICATION    TIME 15:15:27

CAL     3372.2    E       -2.593    0.0263       8.033       E      INCH

     DATE 09/18/88    AFTER LOG VERIFICATION    TIME 16:47:25

CAL     3031.5    E       -2.593    0.0263       8.301       E      INCH


      LOG NAME CN      ASSET NO. 53264A   UNIT NO. 6406
  CALIBRATION ENTERED ON  09/18/88 AT 11:27:56            2435
                  SOURCE NUMBER   S17920

CURVE   COUNTS/SEC.     SCALING FACTORS    RATIO     ENG. VALUE  UNITS
                         ADD.      MULT.  LSN/(SSN+4)
----    ---------       ------------------ ---------  ----------  ----

     DATE 08/28/88          CALIBRATION           TIME 19:27:34

LSN           85.0          0.000     1.0000
SSN          165.4          0.000     1.0000
CN                                             0.1285        24.558  %

     DATE 08/28/88    PRIMARY VERIFICATION      TIME 19:38:49

LSN           82.1          0.000     1.0000
SSN          122.7          0.000     1.0000
CN                                             0.1674        15.374  %

     DATE 09/18/88   BEFORE LOG VERIFICATION    TIME 11:38:38

LSN           82.4          0.000     1.0000
SSN          123.2          0.000     1.0000
CN                                             0.1672        15.399  %

     DATE 09/18/88    AFTER LOG VERIFICATION    TIME 16:52:31

LSN           83.6          0.000     1.0000
SSN          123.8          0.000     1.0000
CN                                             0.1698        15.117


      LOG NAME GR      ASSET NO. 73467D   UNIT NO. 6406
  CALIBRATION ENTERED ON  09/18/88 AT 11:25:39

CURVE    MILLIVOLTS      SCALING FACTORS     ENGINEERING VALUES    UNITS
          LOW    HIGH    ADD.      MULT.          LOW        HIGH
----  ---------------  ------------------  ---------------------  ----

     DATE 08/28/88          CALIBRATION           TIME 19:46:18

GR      3197.6  6939.2    0.000     0.0978       0.000      150.000 API

                        PRIMARY VERIFICATION            NOT DONE

     DATE 09/18/88   BEFORE LOG VERIFICATION    TIME 11:46:16

GR      1788.6  5628.4    0.000     0.0978      71.706      225.643 API

     DATE 09/18/88    AFTER LOG VERIFICATION    TIME 17:14:53

GR      1752.3  5529.0    0.000     0.0978      70.268      221.657 API
```