FORM 925322 REV. (8-80)

Western Atlas International
A Litton/Dresser Company
Atlas Wireline Services

Compensated Densilog®
Compensated Neutron
Gamma Ray

FILE NO.

API NO.

5" = 100'

COMPANY OREGON NATURAL GAS CORPORATION

WELL IW 22D 10

FIELD MIST

COUNTY COLUMBIA STATE OREGON

LOCATION: 285' N. & 2516' E. OF W/4
CORNER OF:

SEC 10 TWP 6N RGE 5W

Other Services
DIFL/SP
BHC/AL
DIP

Permanent Datum GL Elev. 787.3'
Log Measured from KB 11.5 Ft. Above Permanent Datum
Drilling Measured from KB

Elev.
KB 798.8'
DF
GL 787.3'

CONFIDENTIAL/FINAL.

Date	8 22 88		8-28-88					
Run No.	ONE		TWO					
Service Order	159041		159044					
Depth—Driller	2117'		2770'					
Depth—Logger	2106'		2762'					
Bottom Logged Interval	2104'		2760'					
Top Logged Interval	450'		2100'					
Casing—Driller	13 3/8" @ 452'		8 5/8" @ 2100'		@		@	
Casing—Logger	450'		2100'					
Bit Size	12 1/4"		7 5/8"					
Type Fluid in Hole	GEL/DPAC		gel/LIGNA					
Density and Viscosity	9.7	40	9.4	38				
pH and Fluid Loss	10.0	7.3 cc	11.1	6.4 cc		cc		cc
Source of Sample	FLOWLINE		FLOWLINE					
Rm @ Meas. Temp.	1.10 @ 70 °F		1.25 @ 70 °F		@ °F		@ °F	
Rmf @ Meas. Temp.	0.85 @ 70 °F		1.05 @ 70 °F		@ °F		@ °F	
Rmc @ Meas. Temp.	1.55 @ 70 °F		1.80 @ 70 °F		@ °F		@ °F	
Source of Rmf and Rmc	M	M	M	M				
Rm @ BHT	0.71 @ 108 °F		0.78 @ 112 °F		@ °F		@ °F	
Time Since Circ.	6 HRS.		6 HRS.					
Max. Rec. Temp. Deg. F.	108 °F		112 °F		°F		°F	
Equip. No. and Location	6406	SAC.	6406	SAC.				
Recorded By	M. HINDS		M. HINDS					
Witnessed By	MR THOMAS		MR. MEYER & MR. THOMAS					

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	2541	2212	DE-CENT
1	1	CAL	72541	2212	VAR.
1	1	CN	53264	2435	DE-CENT
1	1	GR	73467	1309	DE-CENT

REMARKS RUN (2)

VOL COMPUTED FOR 5.5 CASING.

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIAL NO.	SERIES NO.	POSITION
2	2	CDL	72541	2212	DE-CENT
2	2	CAL	72541	2212	VAR.
2	2	CN	53264	2435	DE-CENT
2	2	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	9,9	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	2113 TO 449	0.000	
CAL CORR	2113 TO 449	12.250	INCH
CHI SMTH	2113 TO 449	ACTIVE	
M	2113 TO 449	0.000	
MATRIX	2113 TO 449	SANDSTONE	
O.D.	2113 TO 449	8.625	INCH
RHO F	2113 TO 449	0.980	G/CC

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RHO M       2113 TO    449         2.650  G/CC

SALINITY    2113 TO    449         0.000  PPK




           DISPLAY SCALE CHANGES

                *** NONE ***




COMPANY:    OREGON NATURAL GAS CORP.                           RUN:  1

WELL NAME:  IW 22D-10                                          TRIP: 1

SERVICE:    KC287B        FILE:   2        DATE:  08/22/88      TIME:  18:16:39

REVISION:   FSYSAL REV GS08 VER+2                              MODE: RECORD
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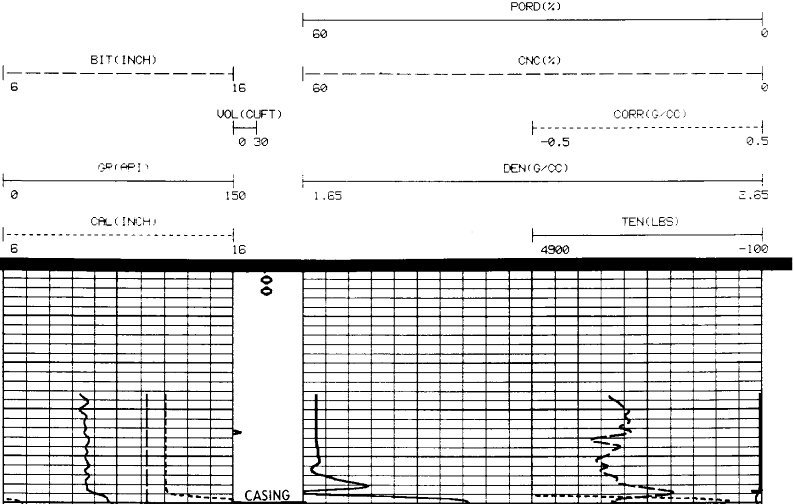
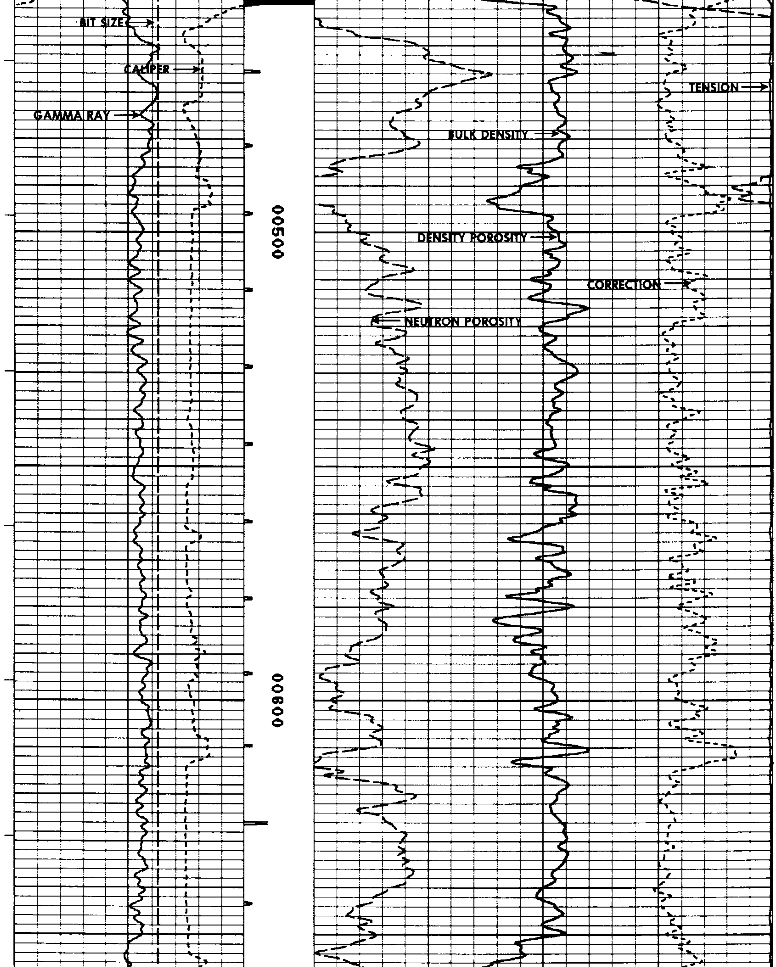
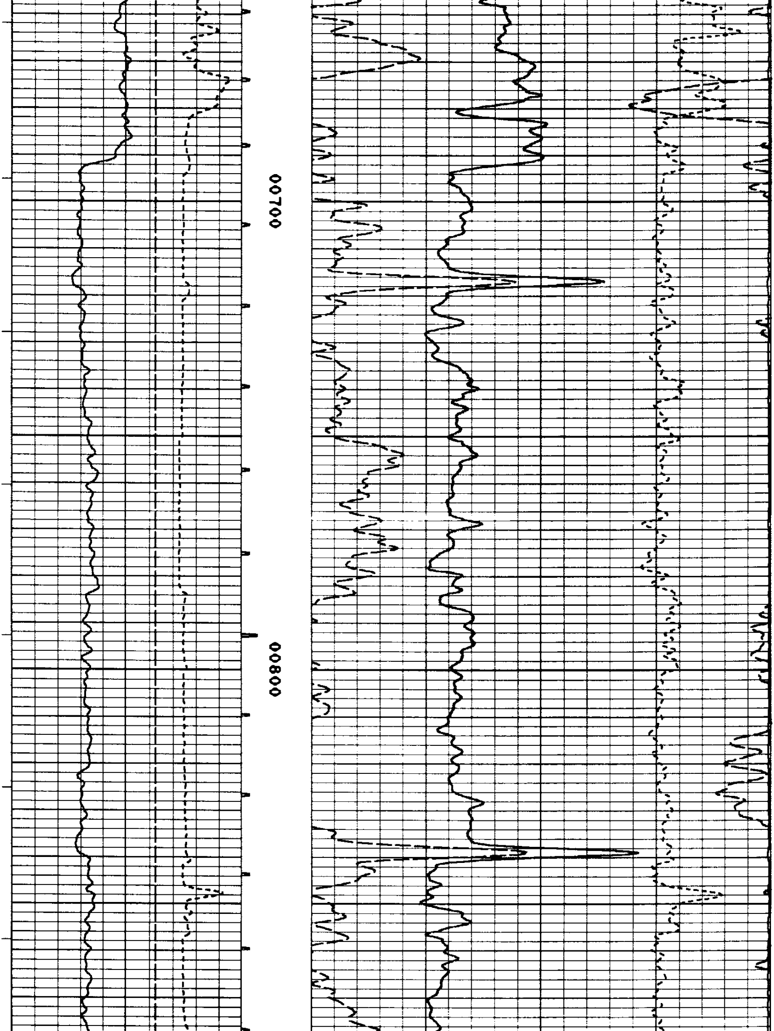
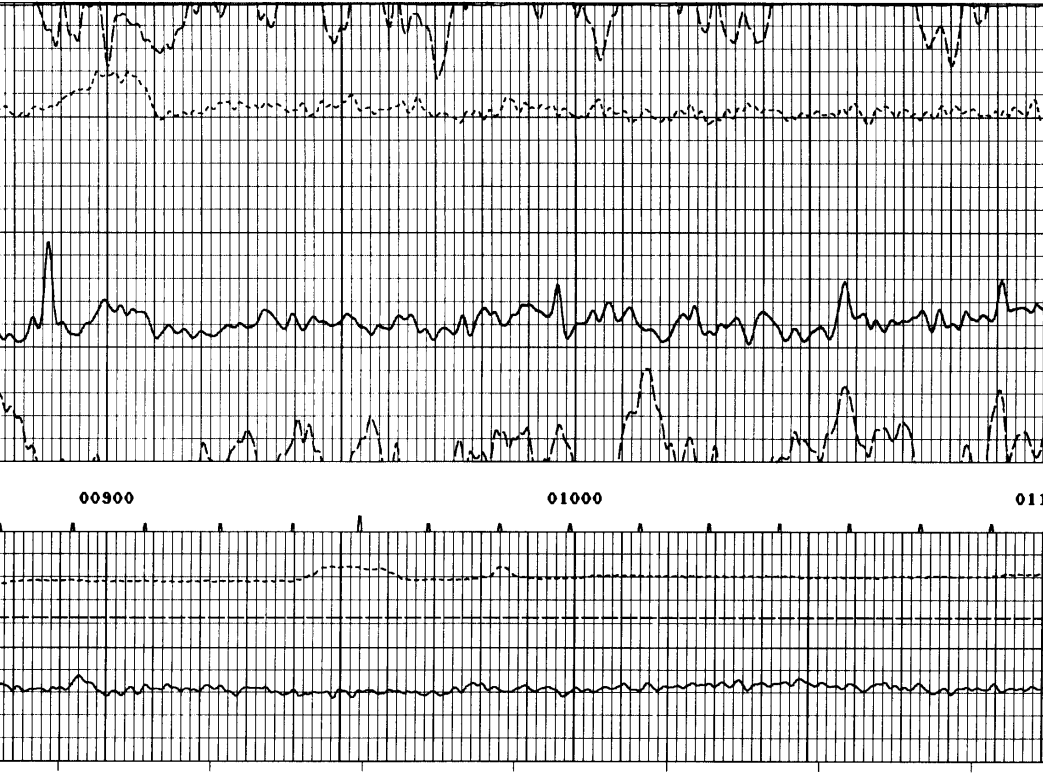
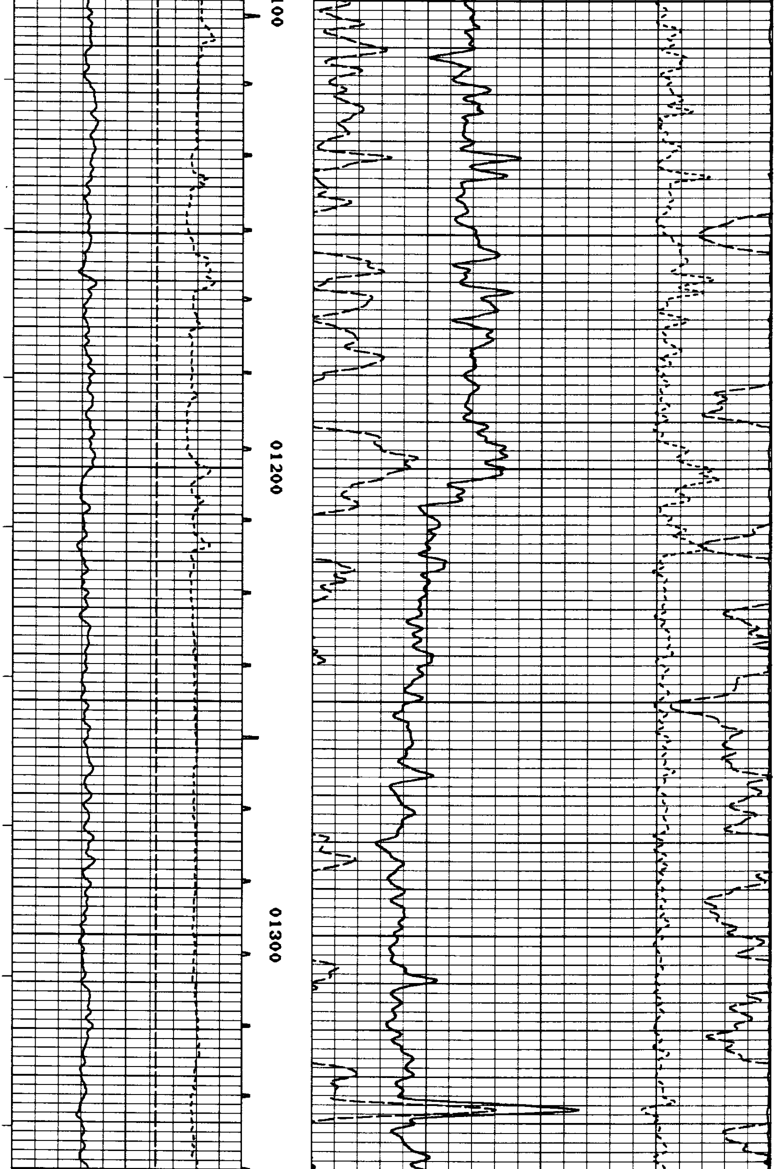
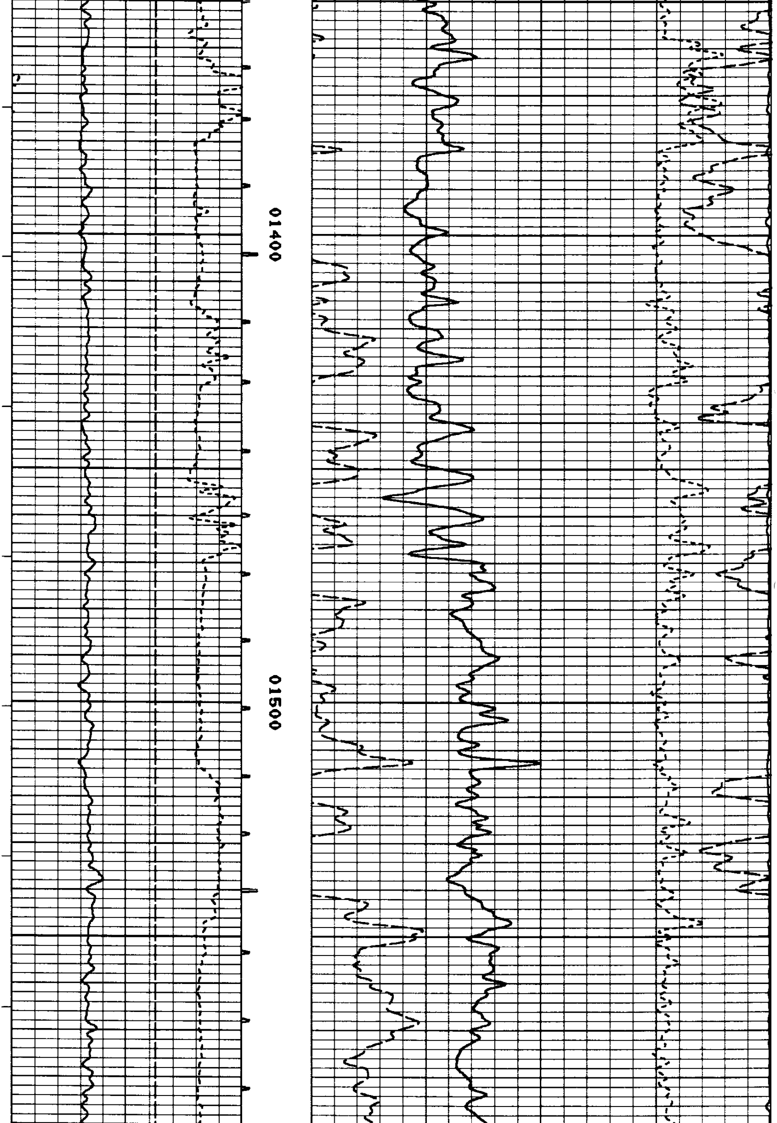


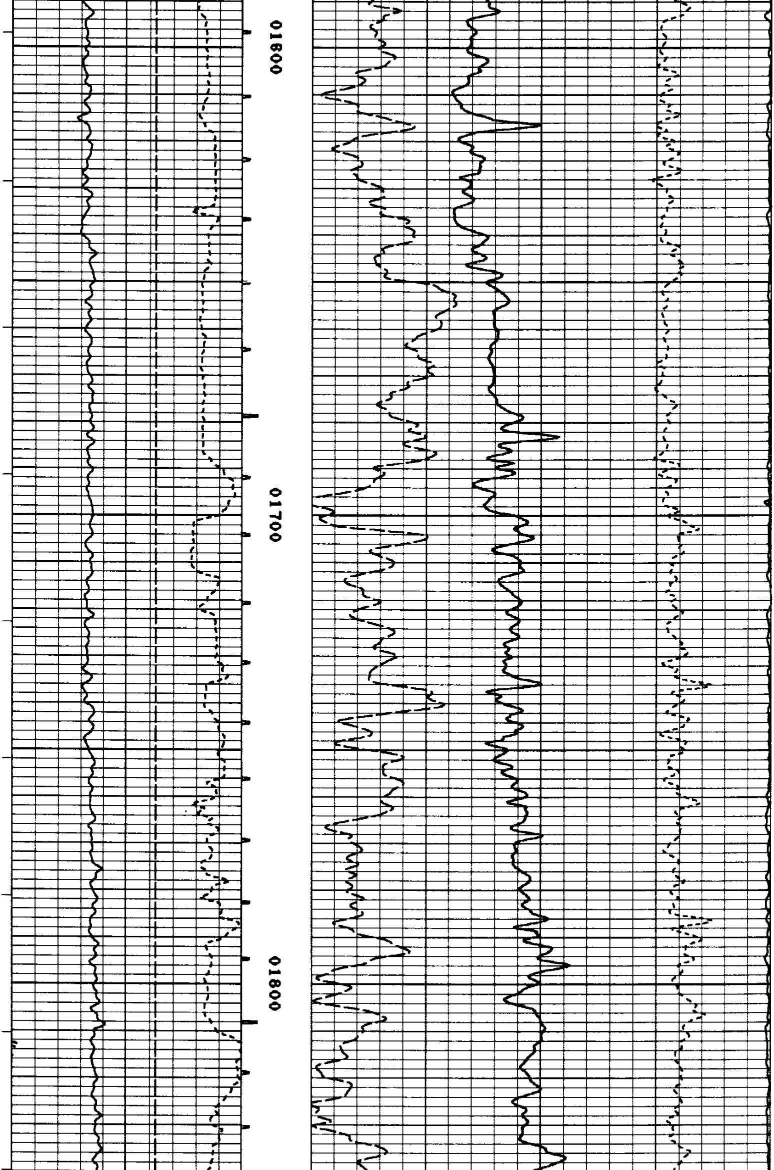


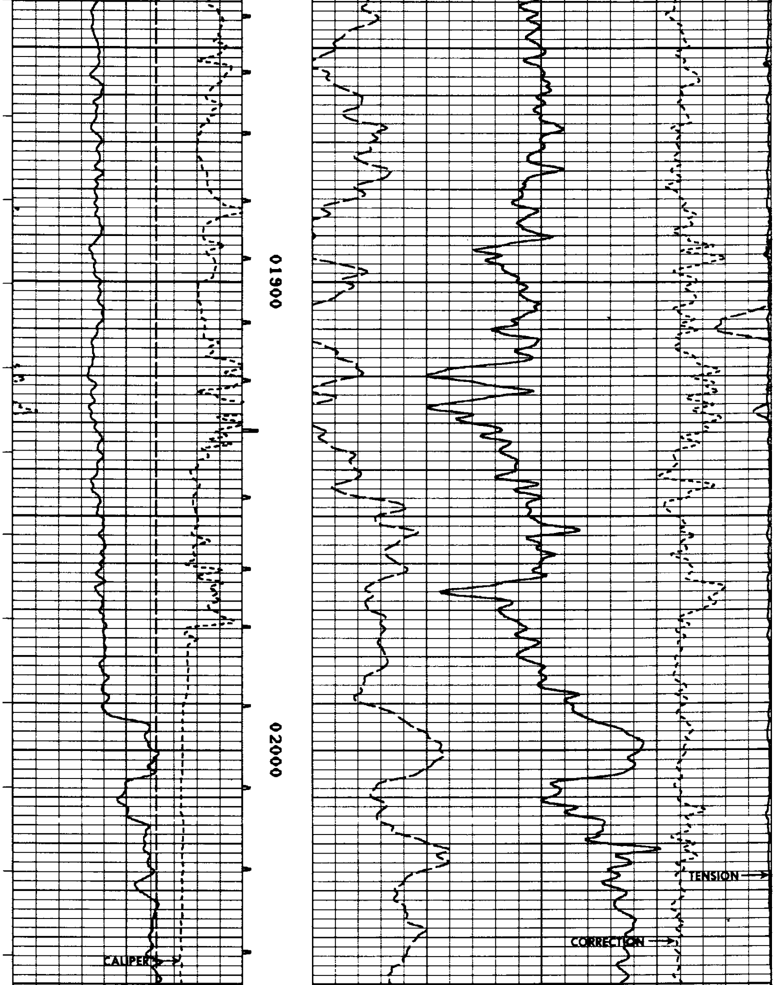


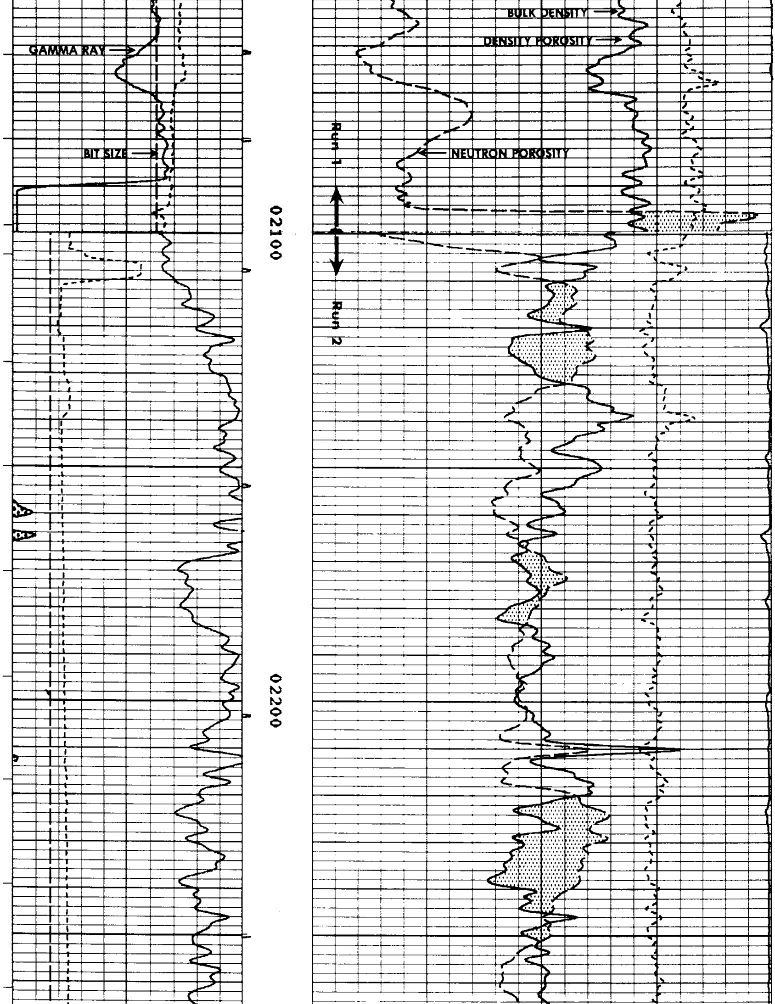


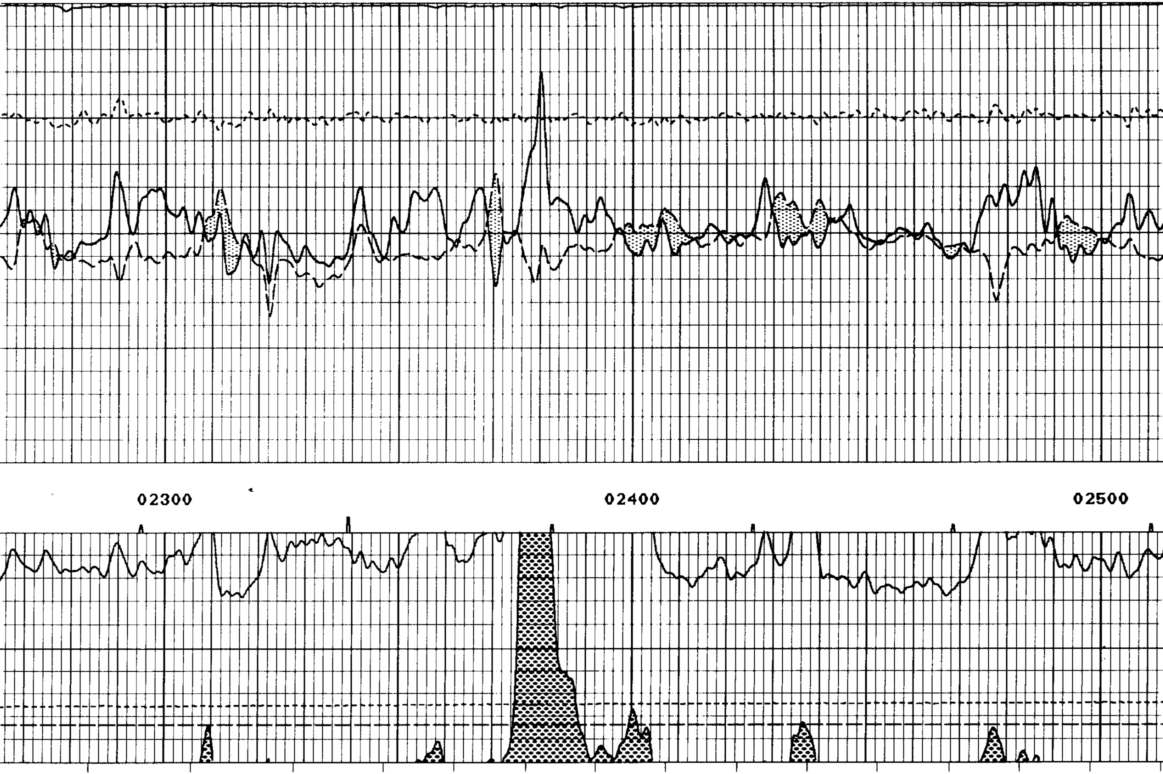


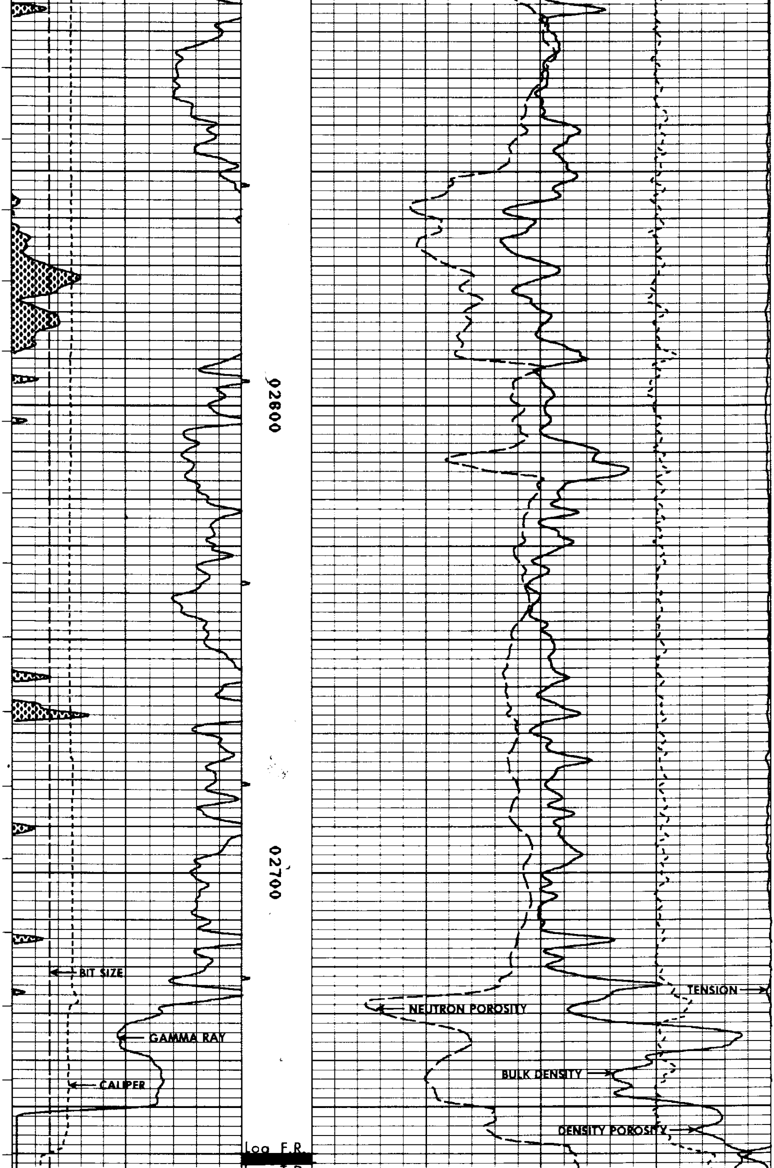


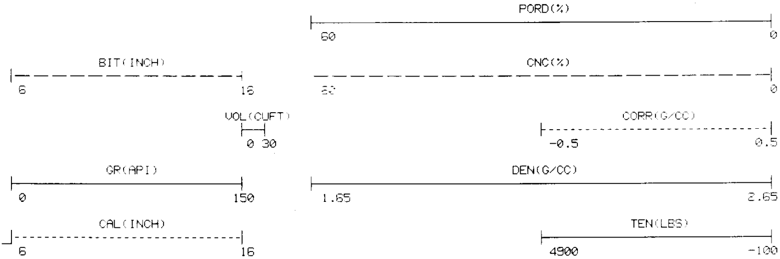












CURVE DELAYS

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	2,0	FT,IN
SPD	3,0	FT,IN

PARAMETERS

NAME	DEPTH INTERVAL	VALUE	UNITS
A	2769 TO 2563	0.000	
CAL CORR	2769 TO 2563	7.625	INCH
CHI SMTH	2769 TO 2563	ACTIVE	
M	2769 TO 2563	0.000	
MATRIX	2769 TO 2563	SANDSTONE	
O.D.	2769 TO 2563	5.500	INCH
RHO F	2769 TO 2563	0.980	G/CC
RHO M	2769 TO 2563	2.650	G/CC
SALINITY	2769 TO 2563	0.000	PPK

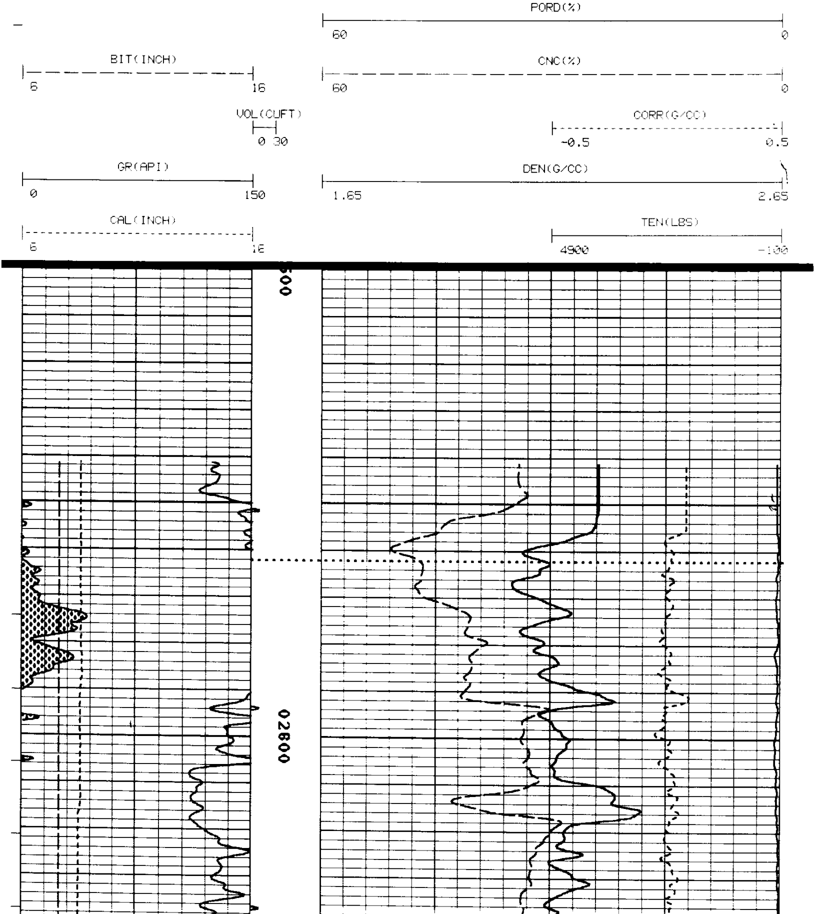
DISPLAY SCALE CHANGES

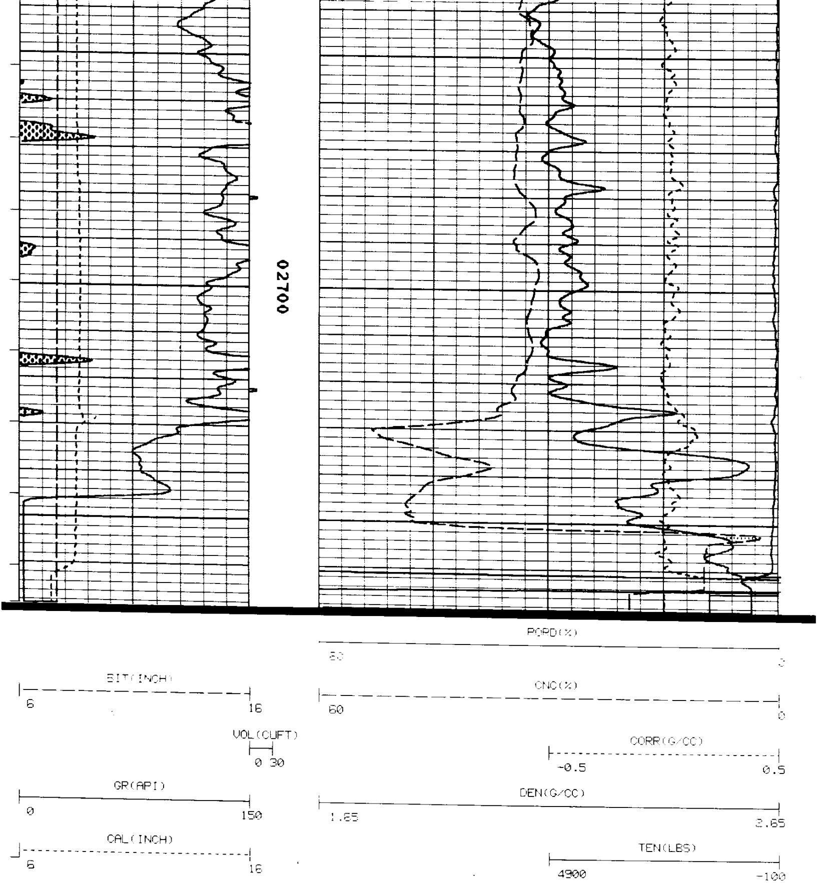
*** NONE ***

COMPANY: OREGON NATURAL GAS CORP.
RUN: 2
WELL NAME: IW 22D-10
TRIP: 2
SERVICE: KC287B
FILE: 1
DATE: 08/28/88
TIME: 23:39:45
REVISION: FSYSAL REV GS08 VER+2
MODE: RECORD

REPEAT SECTION

Run 2





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*                                                  *
*   CALIBRATION/VERIFICATION SUMMARIES             *
*   DATE 08/29/88              TIME [illegible]    *
*   RUN  2                     TRIP 3              *
*                                                  *
****************************************************


          LOG NAME CDL    ASSET NO. 72541    UNIT NO. HL 6406
     CALIBRATION ENTERED ON  08/28/88 AT 19:33:32         LARGE TOOL
                           SOURCE NUMBER 845

  CURVE   COUNTS/SEC.     SCALING FACTORS    RATIO     ENG. VALUE  UNITS
         BLOCK   VALUE    ADD.     MULT.     MG/AL
  ----   --------         ----------------  --------  ----------  ----
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        DATE 08/16/88            CALIBRATION              TIME 13:11:34

  LSD      MG         346.4
  SSD                 463.5
  DEN                                                                 2.200   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                                                                 2.430   G/CC
  CORR                                                                0.235   G/CC

                           PRIMARY VERIFICATION                 NOT DONE

        DATE 08/28/88    BEFORE LOG VERIFICATION    TIME 19:34:20

  LSD      JIG        166.8     0.000      1.0000
  SSD                 333.2     0.000      1.0000
  DEN                                                                 2.550   G/CC
  CORR                                                               -0.062   G/CC

        DATE 08/29/88     AFTER LOG VERIFICATION    TIME 00:42:28

  LSD      JIG        167.0     0.000      1.0000
  SSD                 332.0     0.000      1.0000
  DEN                                                                 2.542   G/CC
  CORR                                                               -0.069   G/CC



         LOG NAME CAL     ASSET NO. 72541     UNIT NO. 6406
     CALIBRATION ENTERED ON  08/28/88 AT 19:51:49

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

        DATE 07/23/88            CALIBRATION              TIME 17:22:02

  CAL     2326.7   4215.4   -1.392     0.0233       6.000      12.000 INCH

        DATE 07/23/88      PRIMARY VERIFICATION           TIME 17:22:46

  CAL        E      4214.6   -1.392     0.0233      E           11.998 INCH

        DATE 08/28/88    BEFORE LOG VERIFICATION       TIME 23:34:00

  CAL        E      3070.3   -1.692     0.0233      E            8.062 INCH

        DATE 08/29/88     AFTER LOG VERIFICATION       TIME 00:39:25

  CAL        E      3152.4   -1.692     0.0233      E            8.323 INCH



        LOG NAME CN      ASSET NO. 53264A   UNIT NO. 6406
    CALIBRATION ENTERED ON  08/28/88 AT 19:27:34                  2435
                             SOURCE NUMBER S17520

  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                                          0.1235         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  %

                        BEFORE LOG VERIFICATION              NOT DONE

       DATE 08/29/88     AFTER LOG VERIFICATION        TIME 00:46:36

  LSN         82.7          0.000     1.0000
  SSN        122.4          0.000     1.0000
  CN                                          0.1690         15.084  %
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    LOG NAME GR       ASSET NO. 73467D   UNIT NO. 6406
  CALIBRATION ENTERED ON  08/28/88 AT 19:46:18

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

                     BEFORE LOG VERIFICATION         NOT DONE

      DATE 08/29/88   AFTER LOG VERIFICATION   TIME 01:10:34

GR      1838.5  6078.1   0.000    0.0978      73.704    243.669 API
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COMPANY: OREGON NATURAL GAS CORP.

RUN: 1

WELL NAME: IW 22D-10

TRIP: 1

SERVICE: KC287B

FILE: 1

DATE: 08/22/88

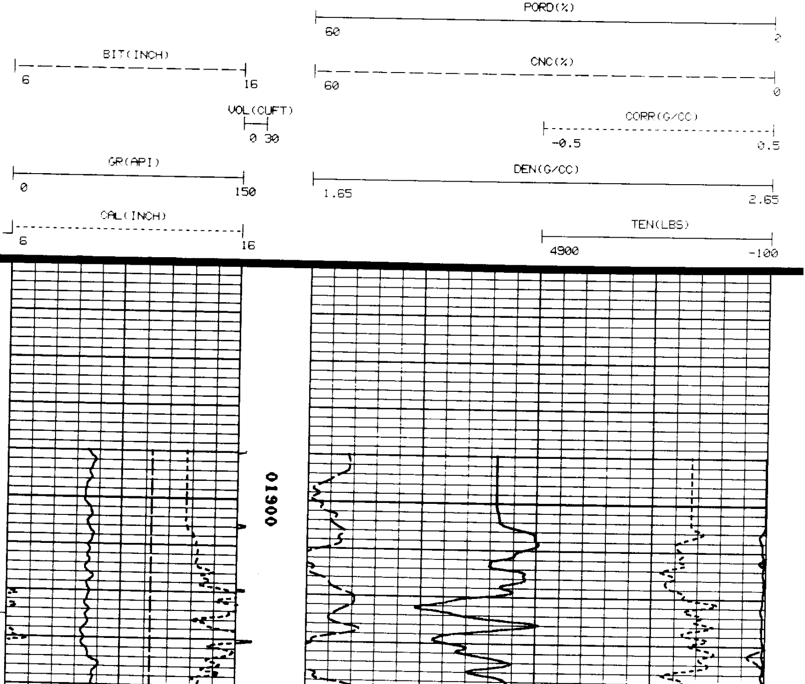
TIME: 18:00:38

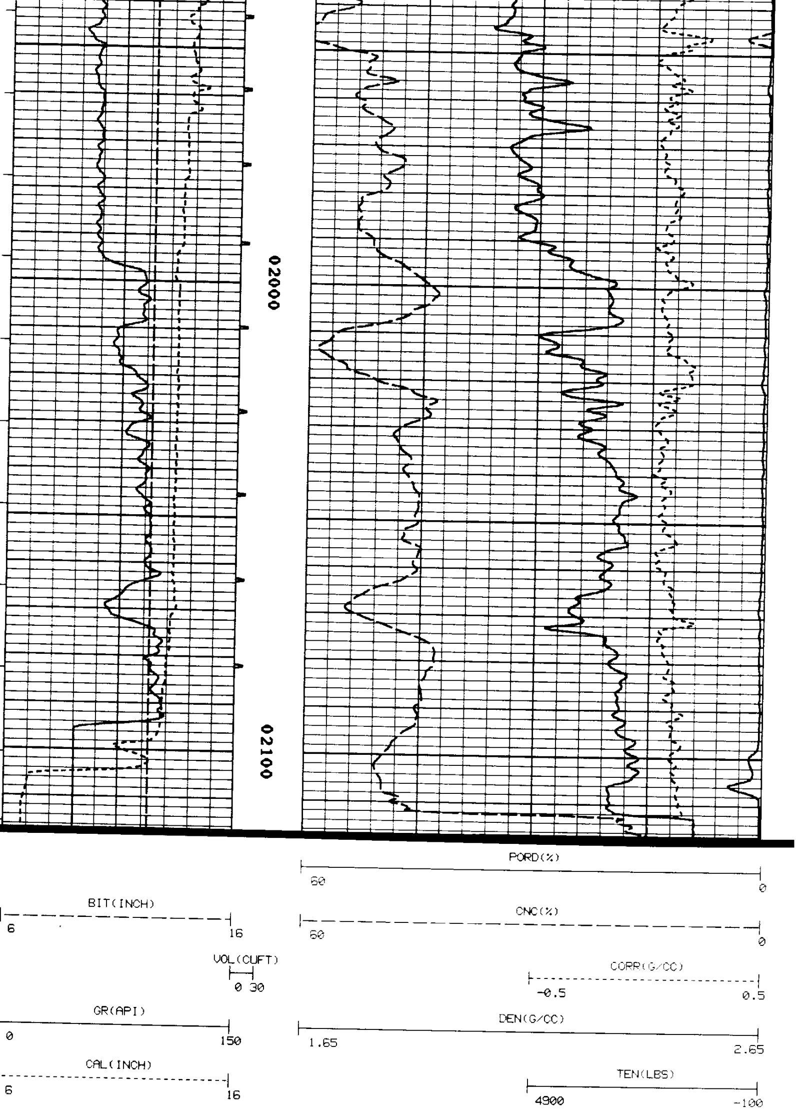
REVISION: FSYSAL REV GS08 VER+2

REPEAT SECTION

Run 1

MODE: RECORD





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           *****************************************
           *                                       *
           *  CALIBRATION/VERIFICATION SUMMARIES   *
           *  DATE 08/22/88         TIME 19:32:06  *
           *  RUN  1                TRIP 1         *
           *                                       *
           *****************************************



      LOG NAME CDL     ASSET NO. 72541     UNIT NO. HL 6406
   CALIBRATION ENTERED ON  08/22/88 AT 14:09:03         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                                                   2.200   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 08/22/88    PRIMARY VERIFICATION      TIME 08:54:31

 LSD      JIG    166.7    0.000     1.0000
 SSD             331.4    0.000     1.0000
 DEN                                                   2.542   G/CC
 CORR                                                 -0.071   G/CC

     DATE 08/22/88   BEFORE LOG VERIFICATION    TIME 14:30:15

 LSD      JIG    167.0    0.000     1.0000
 SSD             331.7    0.000     1.0000
 DEN                                                   2.541   G/CC
 CORR                                                 -0.071   G/CC

     DATE 08/22/88    AFTER LOG VERIFICATION    TIME 19:21:35

 LSD      JIG    167.2    0.000     1.0000
 SSD             331.8    0.000     1.0000
 DEN                                                   2.540   G/CC
 CORR                                                 -0.071   G/CC



      LOG NAME CAL     ASSET NO. 72541     UNIT NO. 6406
   CALIBRATION ENTERED ON  08/22/88 AT 14:10:43

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

     DATE 08/22/88         CALIBRATION          TIME 08:44:01

 CAL    2322.3  4081.3  -1.922    0.0250      6.000      12.000 INCH

                      PRIMARY VERIFICATION         NOT DONE

     DATE 08/22/88   BEFORE LOG VERIFICATION    TIME 14:34:46

 CAL       E    4087.2  -1.922    0.0250      E          12.020 INCH

     DATE 08/22/88    AFTER LOG VERIFICATION    TIME 19:26:08

 CAL       E    4079.8  -1.922    0.0250      E          11.995 INCH



      LOG NAME CN      ASSET NO. 53264     UNIT NO. 8678
   CALIBRATION ENTERED ON  08/22/88 AT 14:09:03            2435
                           SOURCE NUMBER VENT
```

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

     DATE 07/19/88          CALIBRATION          TIME 18:08:03

LSN           85.2        0.000     1.0000
SSN          165.2        0.000     1.0000
CN                                          0.1290       24.558  %

     DATE 07/28/88     PRIMARY VERIFICATION      TIME 09:30:16

LSN           82.5        0.000     1.0000
SSN          121.6        0.000     1.0000
CN                                          0.1697       15.034  %

     DATE 08/22/88    BEFORE LOG VERIFICATION    TIME 14:26:05

LSN           82.1        0.000     1.0000
SSN          121.8        0.000     1.0000
CN                                          0.1685       15.263  %

     DATE 08/22/88     AFTER LOG VERIFICATION    TIME 19:17:40

LSN           81.3        0.000     1.0000
SSN          122.5        0.000     1.0000
CN                                          0.1659       15.738  %



      LOG NAME GR       ASSET NO. 73467    UNIT NO. HL 6406
   CALIBRATION ENTERED ON  08/22/88 AT 14:09:52

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

     DATE 07/08/88          CALIBRATION          TIME 12:22:32

GR      2196.3  6310.6   0.000     0.0890      0.000     150.000 API

                     PRIMARY VERIFICATION            NOT DONE

     DATE 08/22/88    BEFORE LOG VERIFICATION    TIME 14:18:05

GR      1192.1  5747.9   0.000     0.0890     43.461     209.557 API

                     AFTER LOG VERIFICATION          NOT DONE
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