ATLAS WIRELINE SERVICES

COMPENSATED DENSILOG® COMPENSATED NEUTRON : GAMMA RAY

FILE NO.

API NO.

2" = 100'

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

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
DOGAMI
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

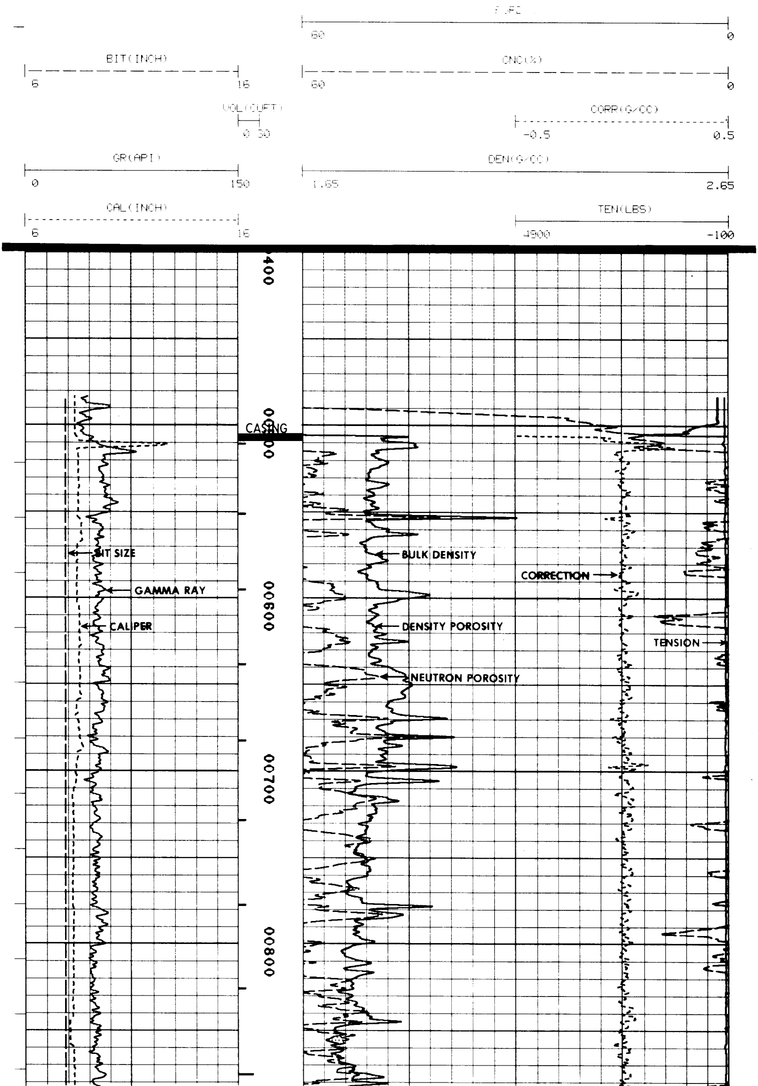
RUN	TRIP	TOOL	SERIAL NO.	SERIES NO.	POSITION
1	1	CDL	72541	2212	DE-CENT
1	1	CAL	72541	2212	VARIABLE
1	1	CN	53264	2435	DE-CENT
1	1	GR	73467	1309	DE-CENT

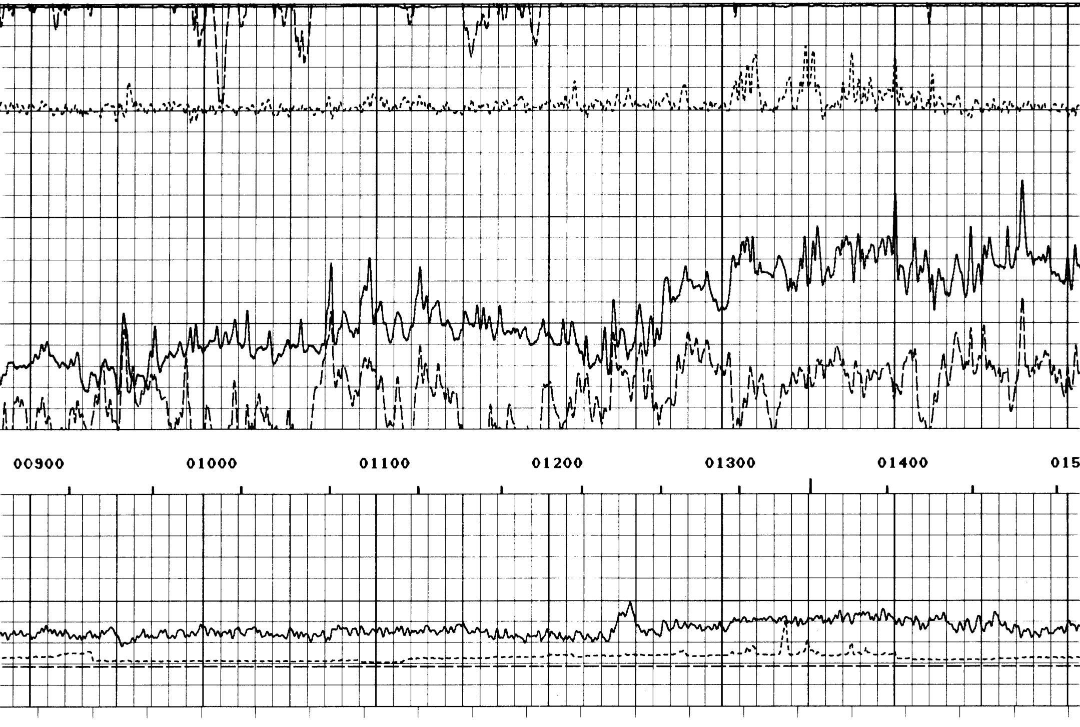
```
CURVE   DELAY  UNITS
-----   -----  -----

 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
```

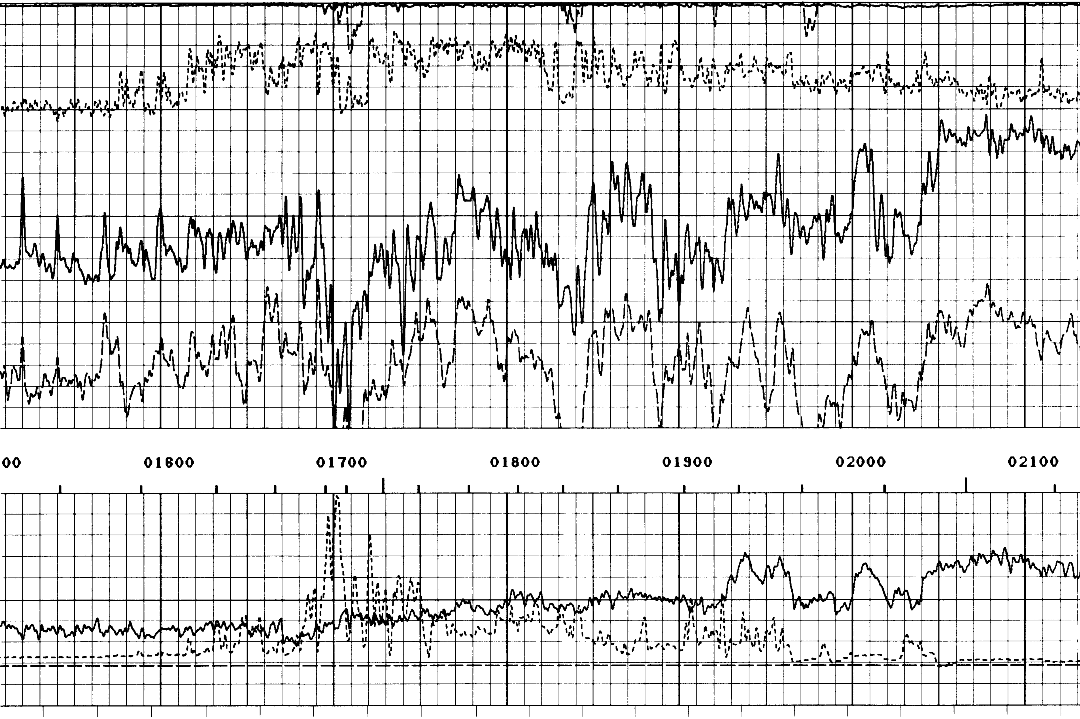
```
                 PARAMETERS

  NAME     DEPTH INTERVAL    VALUE      UNITS
--------   --------------  ----------  -------
A           2615 TO   505       0.000

CAL CORR    2615 TO   505       7.875  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
```

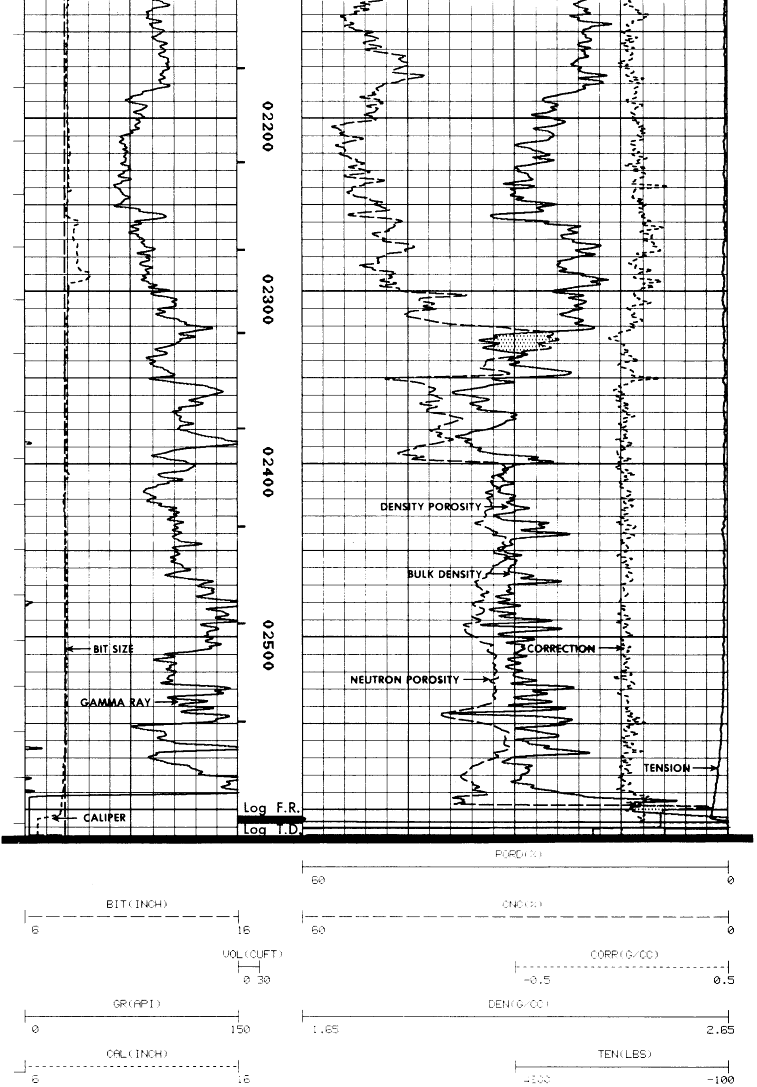
```
           DISPLAY SCALE CHANGES

                *** 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
```









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 CORR	2616 TO 2408	7.875	INCH
CHI SMTH	2616 TO 2408	ACTIVE	
M	2616 TO 2408	0.000	
MATRIX	2616 TO 2408	SANDSTONE	
O.D.	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

DISPLAY SCALE CHANGES

*** NONE ***

COMPANY: OREGON NATURAL GAS CORP.   RUN: 1
WELL NAME: 43B - 10   TRIP: 1
SERVICE: KC287B   FILE: 1   DATE: 09/18/82   TIME: 15:24:29
REVISION: FSYSAL REV GS08 VER+2

REPEAT SECTION

MODE: RECORD

PORD(%) 60 — 0

[illegible] 60 — 0

BIT(INCH) 6 — 16

VOL(CUFT) 0 30

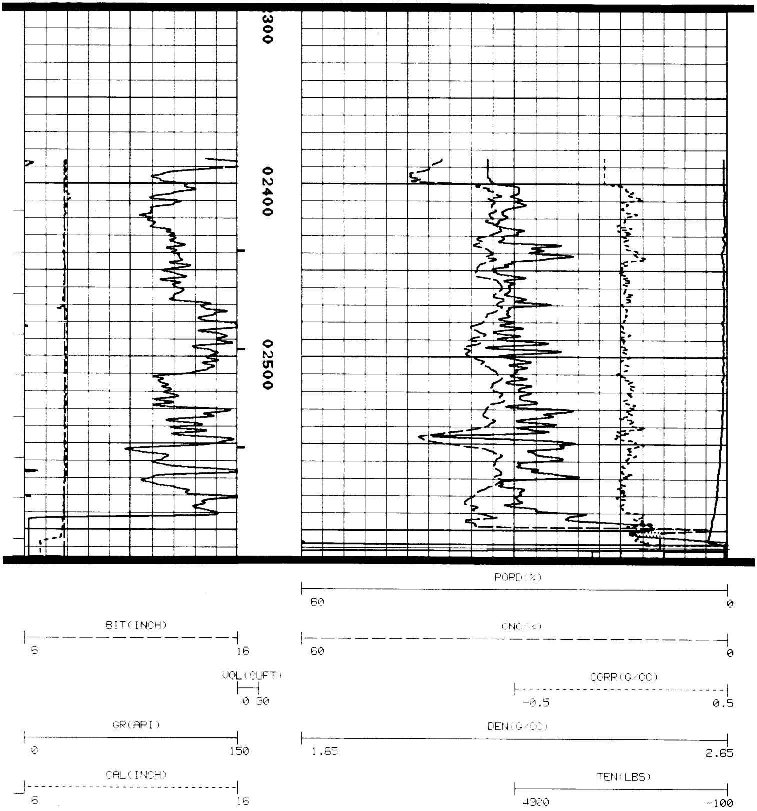
CORR(G/CC) -0.5 — 0.5

GR(API) 0 — 150

DEN(G/CC) 1.65 — 2.65

CAL(INCH) 6 — 16

TEN(LBS) 4900 — -100



```
*****************************************
*                                       *
*  CALIBRATION/VERIFICATION SUMMARIES   *
*  DATE 09/18/88         TIME 17:21:14  *
*  RUN   1               TRIP 1         *
*                                       *
*****************************************


     LOG NAME CDL    ASSET NO. 72541    UNIT NO. HL 6406
 CALIBRATION ENTERED ON  09/13/88 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                                                            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 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                                                          -0.055  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 16:48:31

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. 6398
   CALIBRATION ENTERED ON  09/18/88 AT 11:53:10

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

     DATE 09/18/88         CALIBRATION           TIME 11:53:10

CAL    2391.2  4060.8   -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    2972.2    E       -2.593    0.0263       8.088       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            3435
                  SOURCE NUMBER   517520

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                                           0.1688        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 08/23/88         CALIBRATION           TIME 19:46:18

GR      3197.6  6839.2    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  5623.4    0.000    0.0978      71.706     225.643 API

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

GR      1752.8  5529.0    0.000    0.0978      70.283     221.657 API

   CURVE DELAYS
```