FORM 925317

Dresser Atlas

DRESSER

Dual Induction Focused Log

R

FILE NO.

API NO

5" 100'

Confidential

COMPANY OREGON NATURAL GAS CORPORATION

WELL IW 33 C 3

FIELD MIST

COUNTY COLUMBIA STATE OREGON

LOCATION 1602.75' N. & 2511.21' W. FROM S.E. CORNER OF:

SEC 3 TWP 6N RGE 5W

Other Services
BHC AL
CDLC CN GR
DIP

Permanent Datum GL Elev 1027.1'
Log Measured from KB , 13.5 Ft. Above Permanent Datum
Drilling Measured from KB

Elev.
KB 1040.6'
DF
GL 1027.1'

Date	1-7-87				1 12 87			
Run No	ONE				TWO			
Service Order	22815				22819			
Depth - Driller	2535'				2771'			
Depth - Logger	2534'				2772'			
Bottom Logged Interval	2532'				2770'			
Top Logged Interval	495'				2519'			
Casing - Driller	13 3/8" @ 498'		@		8 5/8" @ 2519'		@	
Casing - Logger	495'				2519'			
Bit Size	12 1/4"				7 5/8"			
Type Fluid in Hole	ORZAN/DRISPAC				KCL/POLYMER			
Density and Viscosity	9.8	52			8.0	39		
pH and Fluid Loss	9.2	4.8cc		cc	8.0	- cc		cc
Source of Sample	FLOWLINE				FLOWLINE			
Rm @ Meas Temp	2.65 @ 50 °F		@	°F	.40 @ 50 °F		@	°F
Rmf @ Meas. Temp.	3.45 @ 50 °F		@	°F	.75 @ 50 °F		@	°F
Rmc @ Meas. Temp.	1.85 @ 50 °F		@	°F	.15 @ 50 °F		@	°F
Source of Rmf and Rmc	M	M			M	M		
Rm @ BHT	1.32 @ LESS THAN 100 °F				.21 @ 92 °F		@	°F
Time Since Circ.	4 HRS.				4 HRS.			
Max. Rec. Temp. Deg. F	LESS THAN 100 °F				92 °F			°F
Equip. No. and Location	6406	SAC.			6406	SAC.		
Recorded By	M. HINDS				M. HINDS			
Witnessed By	MR. THOMAS				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 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.

REMARKS RUN (1)

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIAL NO.	SERIES NO.	POSITION
1	1	DIFL	72831	1503	CENT.
1	1	AC	79725	1609	CENT.
1	1	GR			
1	1	CAL	57674	4202	VARIABLE

RUN	TRIP	TOOL	SERIAL NO.	SERIES NO.	POSITION
2	1	DIFL	72831	1503	CENT.
	1	AC	79725	1609	CENT.
	1	GR			
	1	CAL	57674	4202	VARIABLE

COMPANY: OREGON NATURAL GAS CORP.

WELL NAME: 33 C-3

SERVICE: KC214N FILE: 3 DATE: 01/07/87

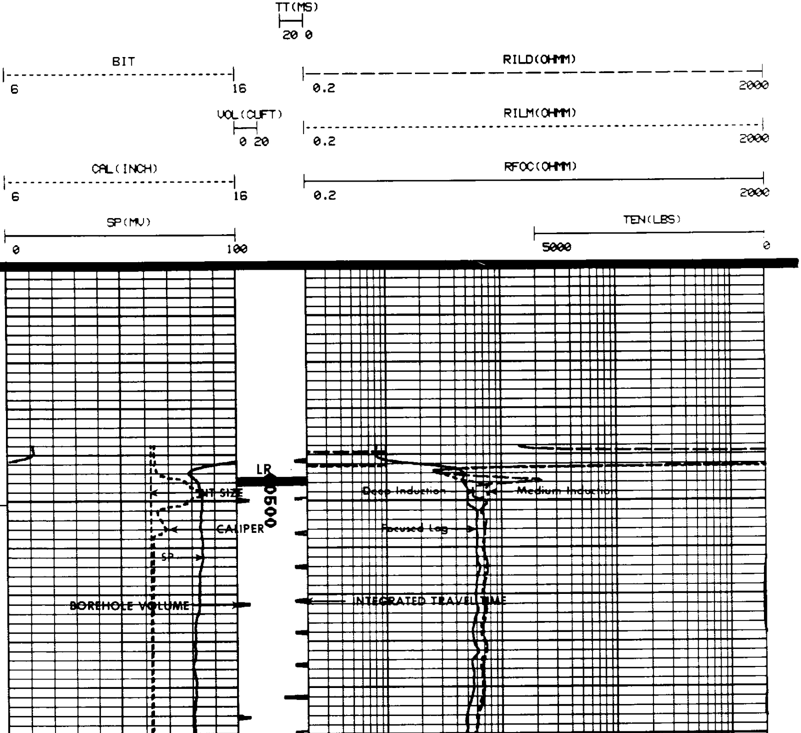
REVISION: FSYSAL OV3 D007 VER 7

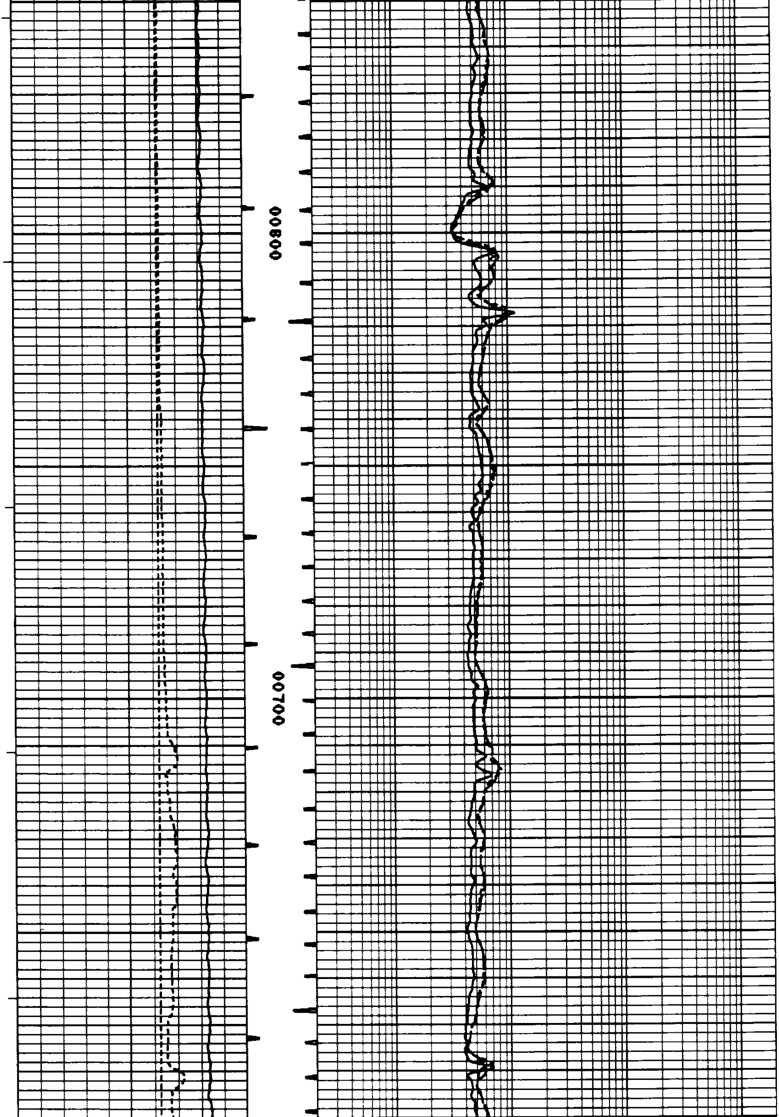
RUN: 1

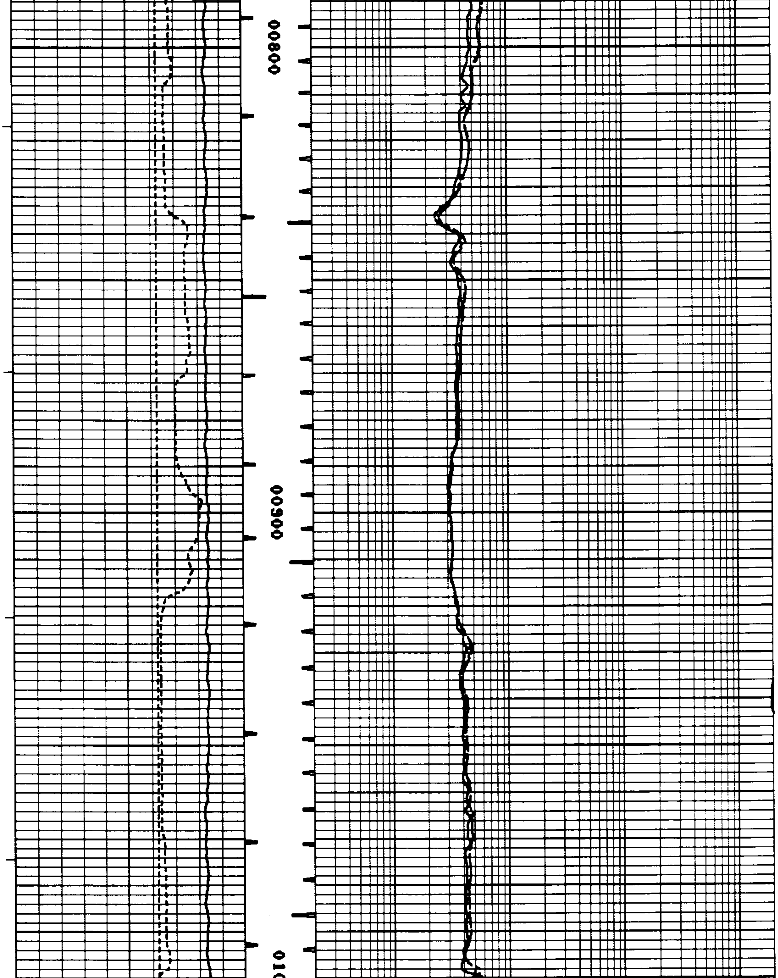
TRIP: 1

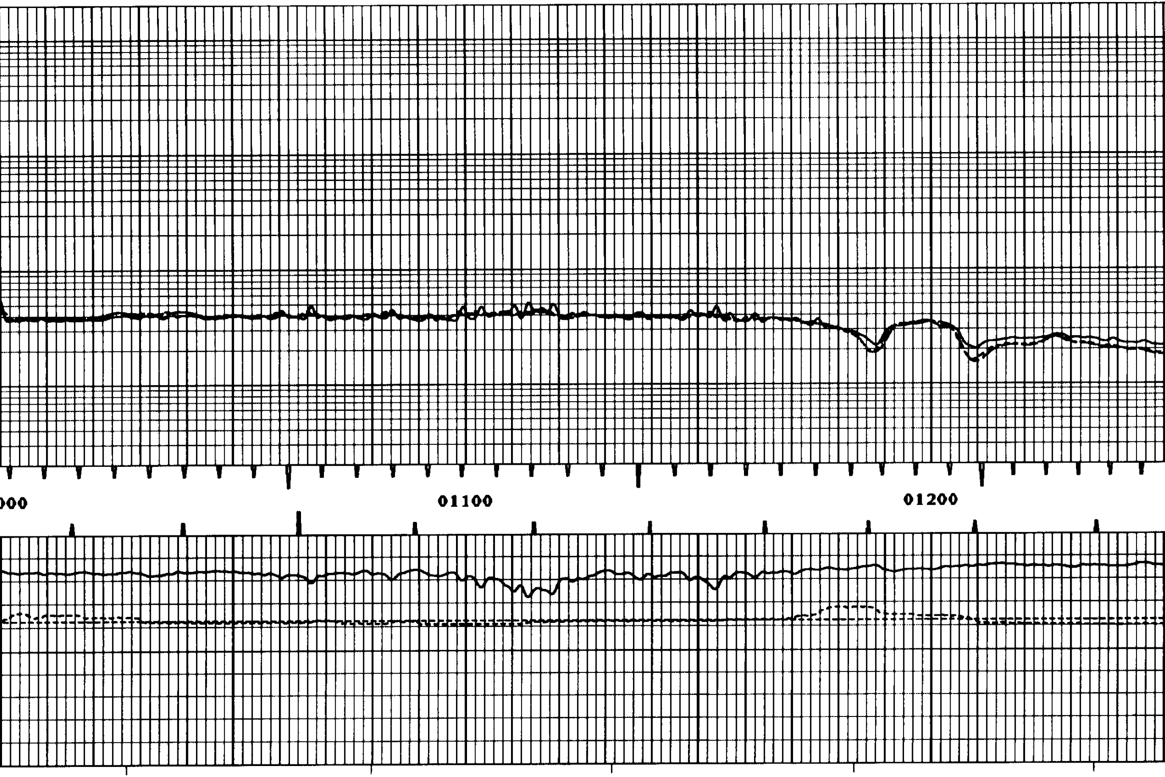
TIME: 02:00:51

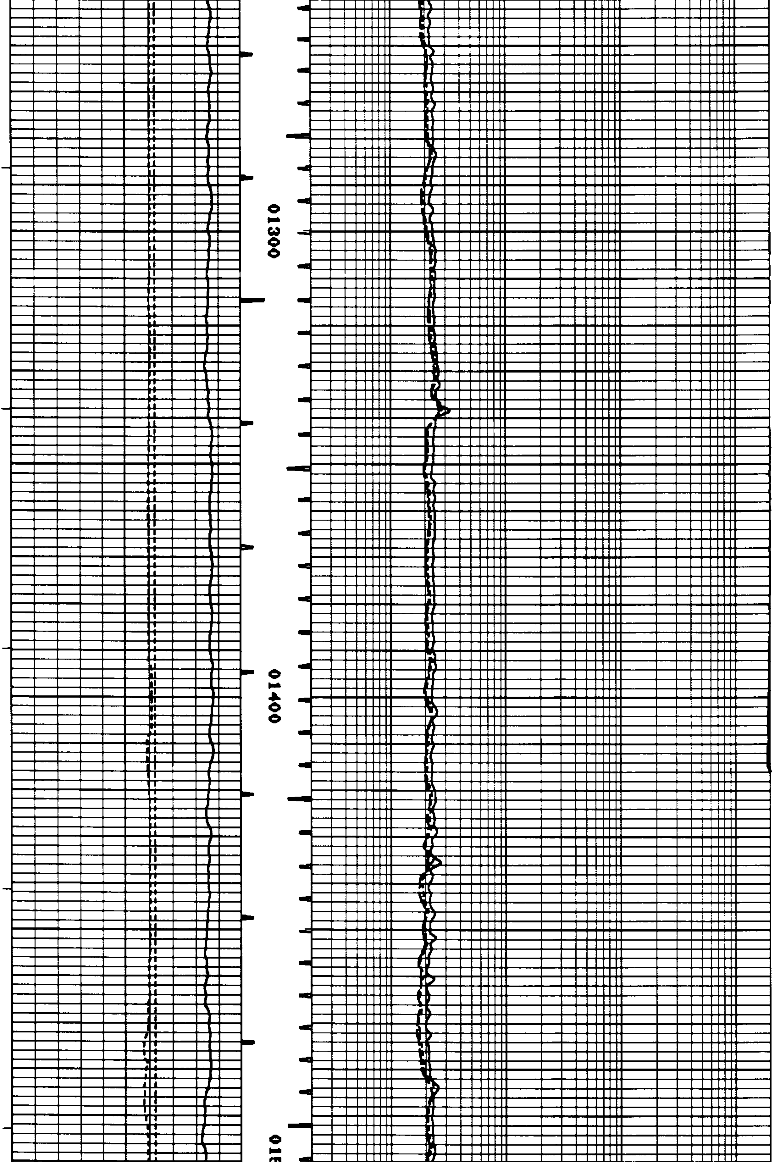
MODE: RECORD

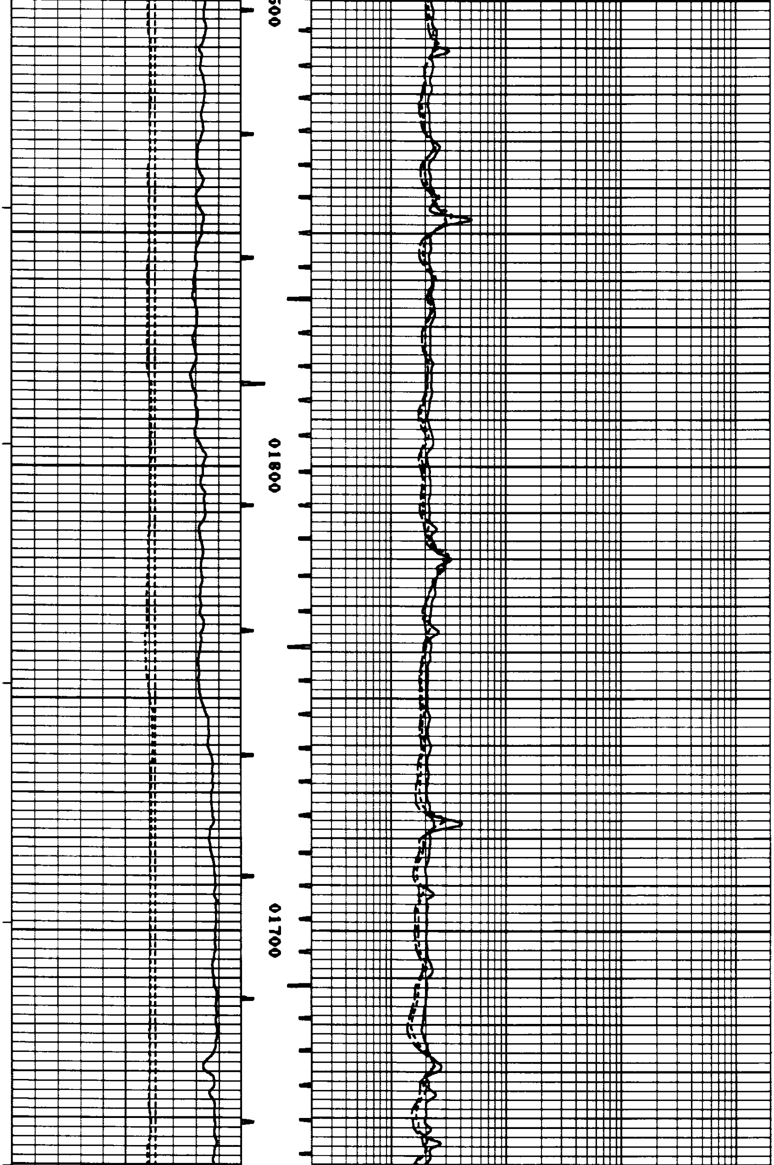


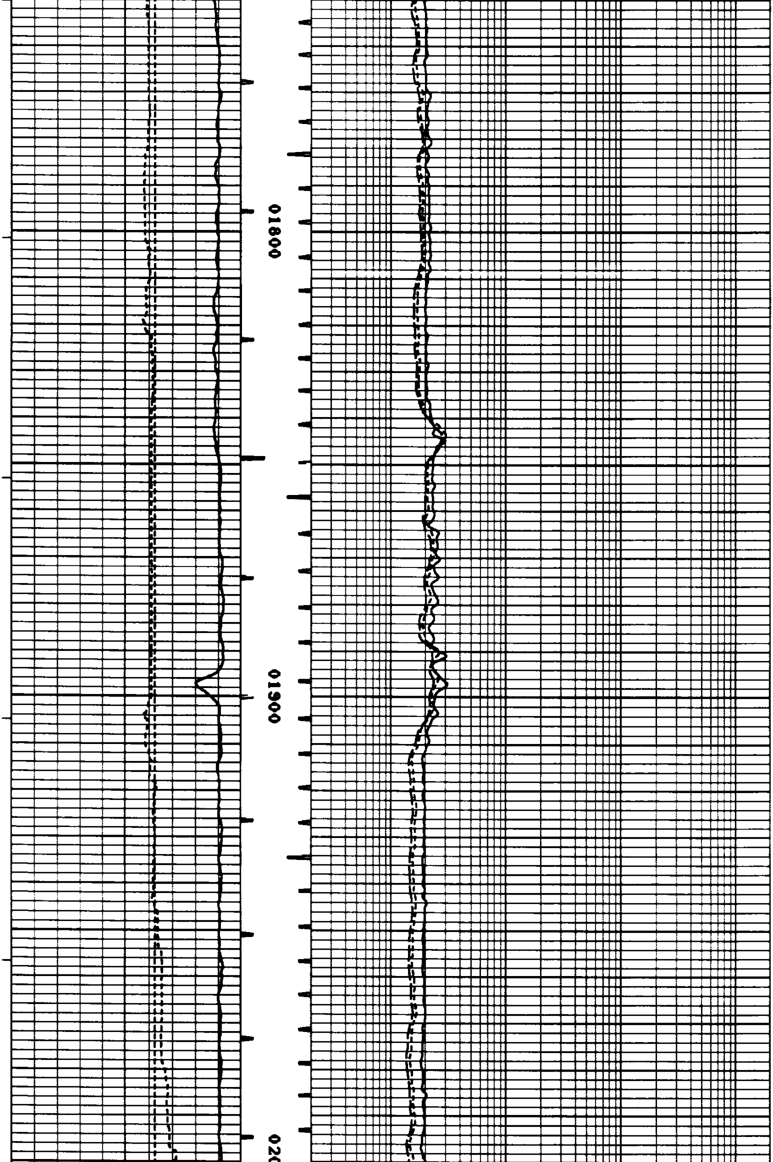


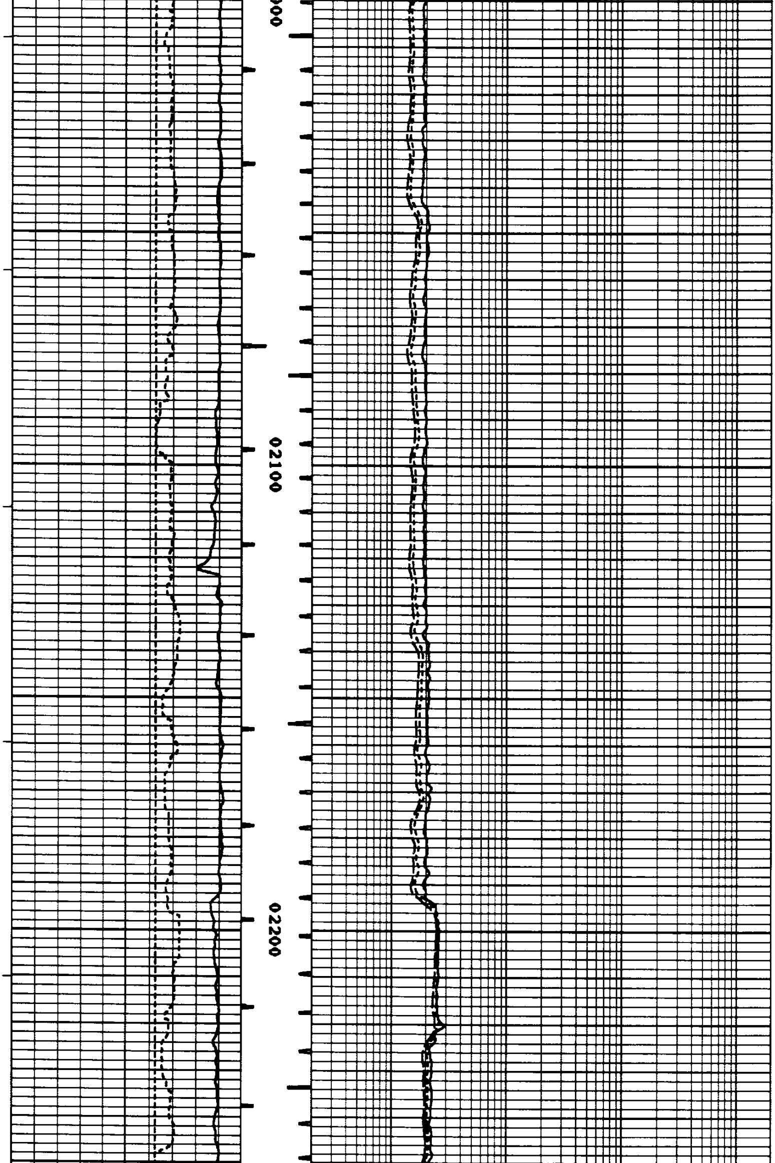


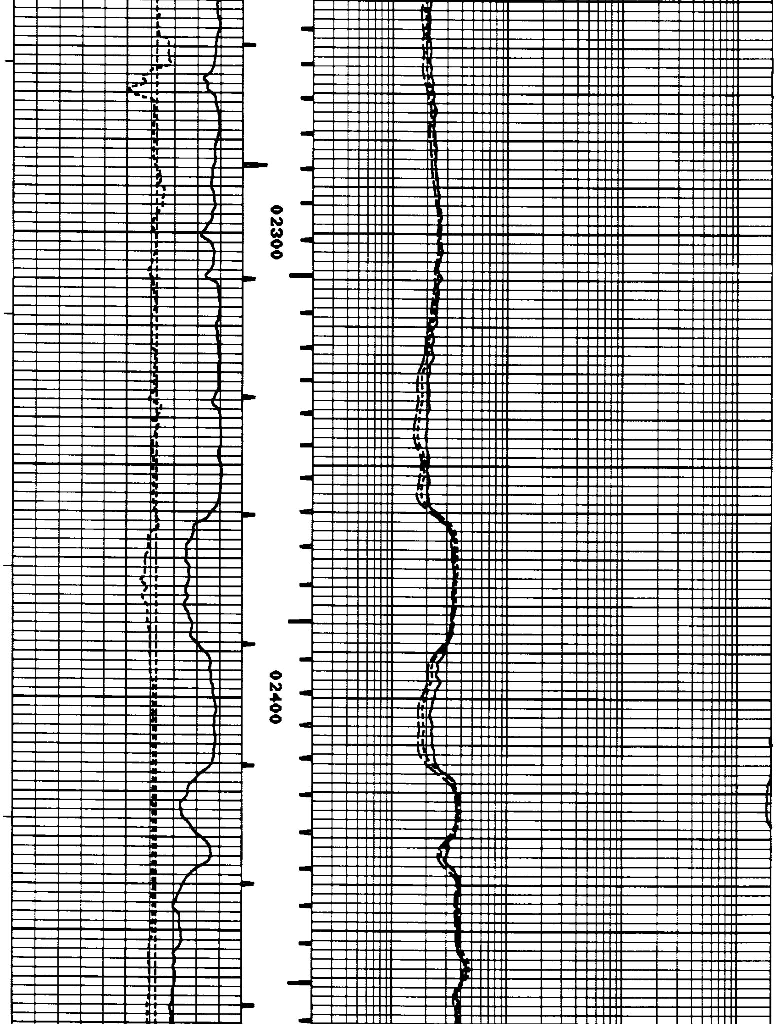


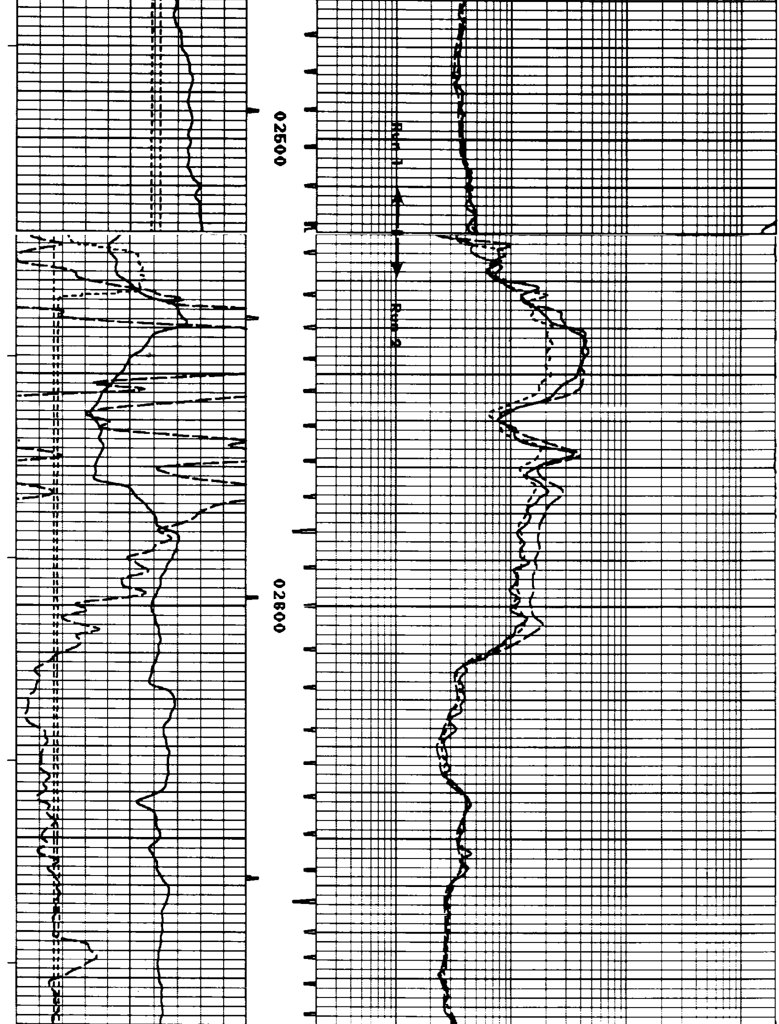


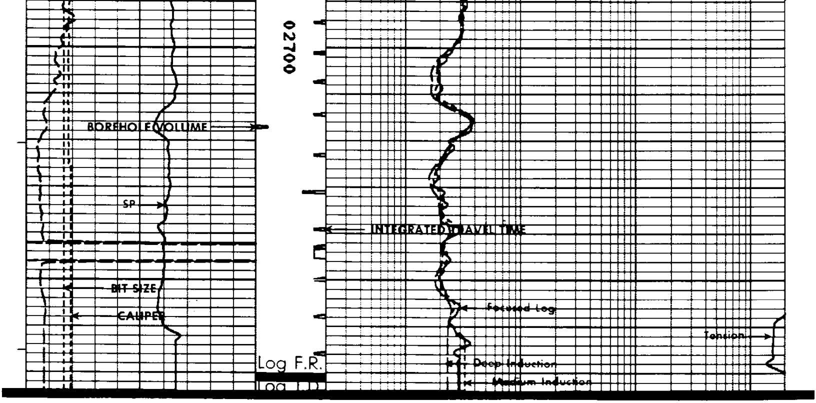












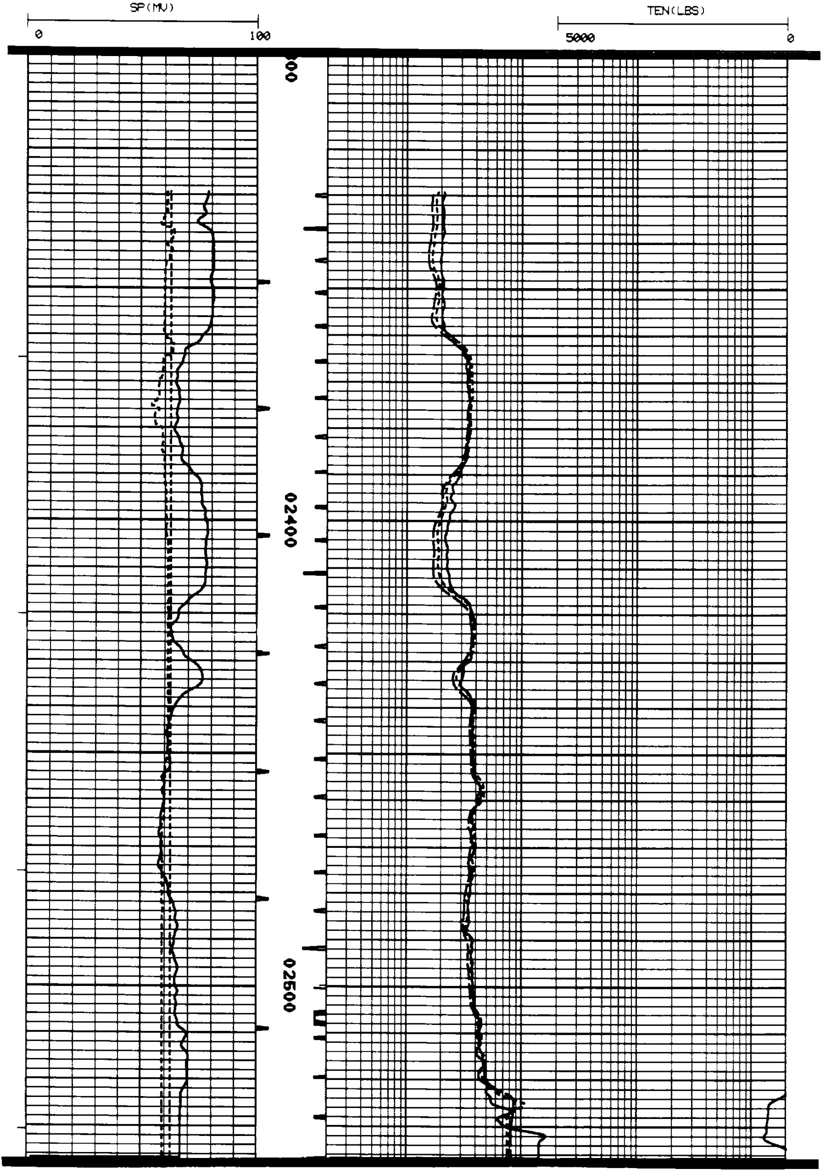
BIT 6 — 16
TT(MS) 20 — 0
VOL(CUFT) 0 — 20
RILD(OHMM) 0.2 — 2000
RWAA(OHMM) 0 — 5
RILM(OHMM) 0.2 — 2000
CAL(INCH) 6 — 16
RFOC(OHMM) 0.2 — 2000
SP(MV) 0 — 50
TEN(LBS) 5000 — 0

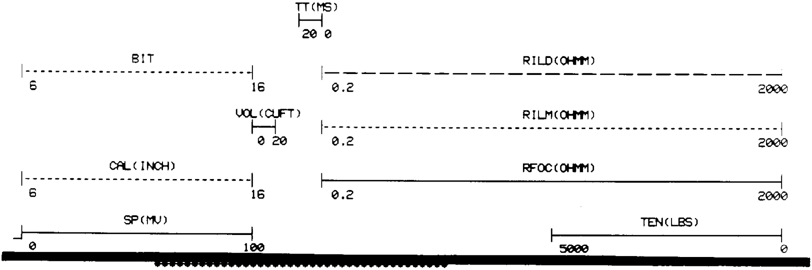
COMPANY: OREGON NATURAL GAS CORP. RUN: 1
WELL NAME: OM 33 C-3 TRIP: 1
SERVICE: KC214N FILE: 2 DATE: 01/07/87 TIME: 01:54:05
REVISION: FSYSAL OV3 D007 VER 7 MODE: RECORD

REPEAT SECTION

Run 1

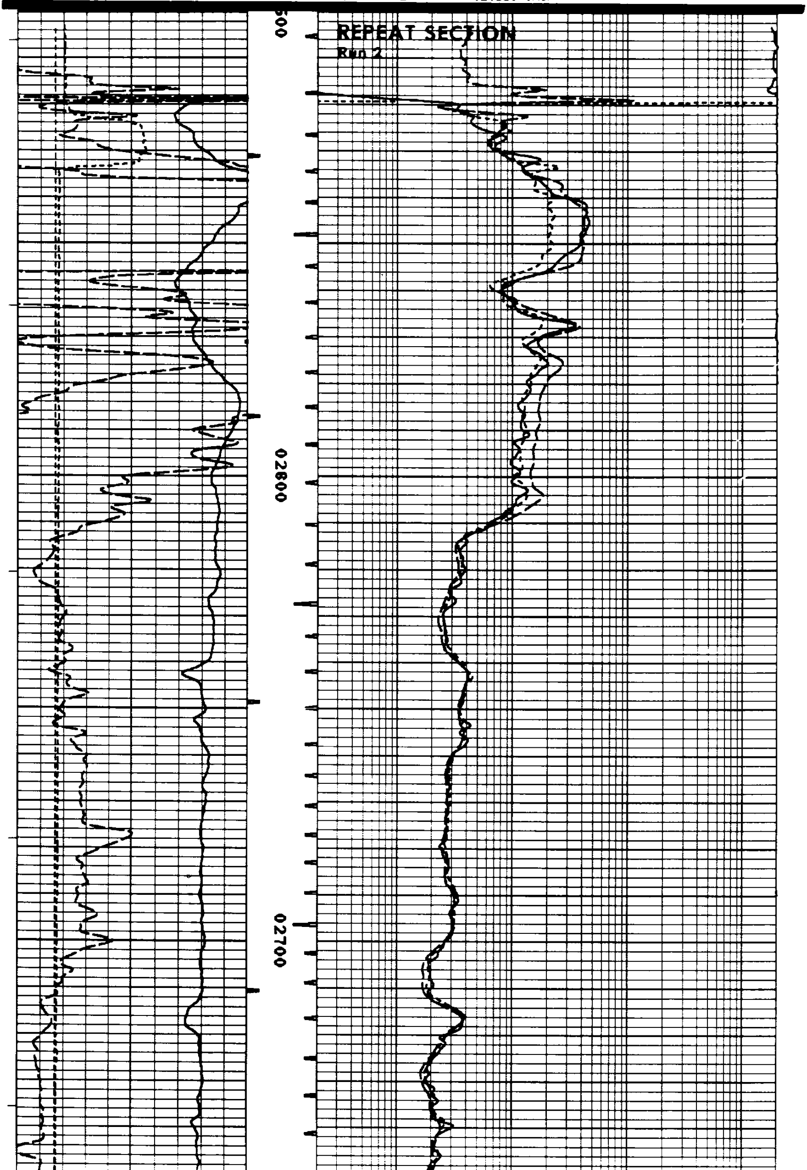
TT(MS) 20 — 0
BIT 6 — 16
RILD(OHMM) 0.2 — 2000
VOL(CUFT) 0 — 20
RILM(OHMM) 0.2 — 2000
CAL(INCH) 6 — 16
RFOC(OHMM) 0.2 — 2000

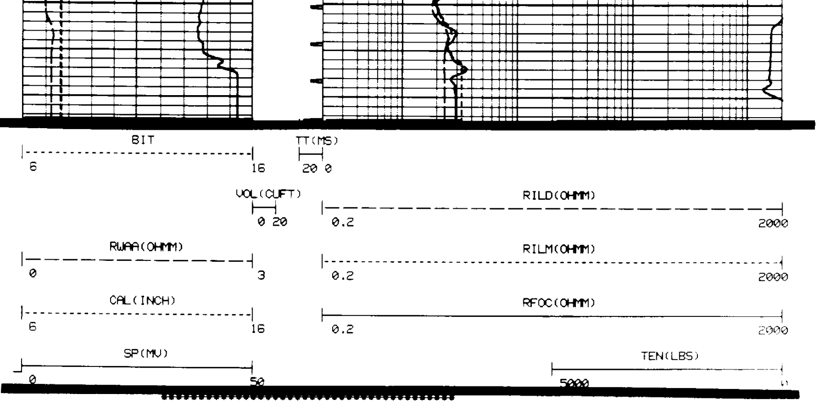




```
*************************************
*                                   *
*  CALIBRATION/VERIFICATION SUMMARIES *
*  DATE 01/07/87        TIME 02:43:58 *
*  RUN   1              TRIP 1      *
*                                   *
*************************************


     LOG NAME DIFL    ASSET NO. 72831    UNIT NO. 6406
   CALIBRATION ENTERED ON 01/06/87 AT 22:17:22

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

       DATE 12/10/86          CALIBRATION          TIME 11:06:36

  CILD      3.5   486.3   -1.873     2.0164         1.000     500.000 MMHO
  CILM     -1.4   536.9    2.167     2.0926         1.000     500.000 MMHO
  CFOC      5.3   517.3   -4.154     2.3781         1.000     500.000 MMHO

       DATE 12/10/86     PRIMARY VERIFICATION      TIME 11:07:38

  CILD     -0.5   489.5   -1.873     2.0164        -2.296     503.190 MMHO
  CILM     -0.7   545.8    2.167     2.0926         1.578     508.934 MMHO
  CFOC      6.0   523.4   -4.154     2.3781         1.669     505.946 MMHO

       DATE 01/07/87    BEFORE LOG VERIFICATION    TIME 01:40:13

  CILD     -0.3   489.0   -1.873     2.0164        -2.103     502.583 MMHO
  CILM     -0.3   544.1    2.167     2.0926         1.907     507.232 MMHO
  CFOC      6.0   507.7   -4.237     2.4256         1.744     500.479 MMHO

       DATE 01/07/87     AFTER LOG VERIFICATION    TIME 02:42:18

  CILD     -0.2   493.6   -1.873     2.0164        -2.009     508.347 MMHO
  CILM     -0.2   549.1    2.167     2.0926         2.032     512.216 MMHO
  CFOC      6.2   507.9   -4.237     2.4256         1.884     500.722 MMHO

           *** GR    NOT CALIBRATED ***


     LOG NAME CAL     ASSET NO. 57674    UNIT NO. 6406
   CALIBRATION ENTERED ON 01/06/87 AT 22:18:33

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

       DATE 10/09/86          CALIBRATION          TIME 02:46:38

  CAL     2608.6  6533.1    2.012    0.0117         6.000      12.000 INCH

                         PRIMARY VERIFICATION           NOT DONE

       DATE 01/07/87    BEFORE LOG VERIFICATION    TIME 01:33:57

  CAL        E    7293.5    2.012    0.0117         E          13.163 INCH

       DATE 01/07/87     AFTER LOG VERIFICATION    TIME 02:43:22
```

CAL E 7154.3 1.612 0.0117 E 12.550 INCH





```
*****************************************
*                                       *
*  CALIBRATION/VERIFICATION SUMMARIES   *
*  DATE 01/09/87         TIME 06:15:04  *
*  RUN  3                TRIP 3         *
*                                       *
*****************************************


      LOG NAME DIFL    ASSET NO. 72831    UNIT NO. 6406
   CALIBRATION ENTERED ON 01/09/87 AT 04:35:25

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

     DATE 12/10/86         CALIBRATION          TIME 11:06:36

CILD      3.5   486.3   -1.873    2.0164      1.000     500.000 MMHO
CILM     -1.4   536.9    2.167    2.0926      1.000     500.000 MMHO
CFOC      5.3   517.3   -4.154    2.3781      1.000     500.000 MMHO

     DATE 12/10/86    PRIMARY VERIFICATION      TIME 11:07:38

CILD     -0.5   489.5   -1.873    2.0164     -2.296     503.190 MMHO
CILM     -0.7   545.8    2.167    2.0926      1.578     508.934 MMHO
CFOC      6.0   523.4   -4.154    2.3781      1.669     505.946 MMHO

     DATE 01/09/87   BEFORE LOG VERIFICATION    TIME 05:33:43

CILD      0.6   493.0   -1.873    2.0164     -1.363     507.589 MMHO
CILM      0.1   547.7    2.167    2.0926      2.289     510.818 MMHO
CFOC      6.0   523.3   -4.154    2.3781      1.699     505.886 MMHO

     DATE 01/09/87    AFTER LOG VERIFICATION    TIME 06:13:00

CILD      0.7   495.2   -1.873    2.0164     -1.319     510.320 MMHO
CILM      0.1   549.6    2.167    2.0926      2.306     512.702 MMHO
CFOC      6.1   521.4   -4.154    2.3781      1.791     503.984 MMHO

           *** GR   NOT CALIBRATED ***


      LOG NAME CAL     ASSET NO. 57674    UNIT NO. 6406
   CALIBRATION ENTERED ON 01/09/87 AT 04:50:33

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

     DATE 10/09/86         CALIBRATION          TIME 02:46:38

CAL    2608.6  6533.1   2.012    0.0117     6.000      12.000 INCH

                    PRIMARY VERIFICATION            NOT DONE
```

```
     DATE 01/09/87   BEFORE LOG VERIFICATION    TIME 05:20:12

CAL      E     4036.1    2.012    0.0117       E          8.182 INCH

     DATE 01/09/87    AFTER LOG VERIFICATION    TIME 06:13:50

CAL      E     3900.7    2.012    0.0117       E          7.975 INCH
```

Dresser Atlas DRESSER