FORM 925327 (5-80)

Western Atlas International
A Litton/Dresser Company
Atlas Wireline Services

Dual Induction Focused Log

FILE NO.

API NO.

5" = 100'

COMPANY ORECON NATURAL GAS CORPORATION
WELL IW 22D 10
FIELD MIST
COUNTY COLUMBIA STATE ORECON

LOCATION: 285' N. & 2516' E. OF W/4 CORNER OF:
SEC 10 TWP 6N RGE 5W

Other Services
BHC/AL
CDLC/CN/GR
DIP

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

Elev. 798.2'
KB
DF 787.3'
GL

Date	8 22 88	8 28 88		
Run No.	ONE	TWO		
Service Order	159041	159044		
Depth—Driller	2117'	2770		
Depth—Logger	2110'	2762'		
Bottom Logged Interval	2108'	2760'		
Top Logged Interval	450'	2100'		
Casing—Driller	13 3/8" @ 452'	8 5/8" @ 2[illegible]	@	@
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	FOWLINE		
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	0.72 @ 106 °F	0.80 @ 110 °F	@ °F	@ °F
Time Since Circ.	2 HRS.	2.5 HRS.		
Max. Rec. Temp. Deg. F	106 °F	110 °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	

CONFIDENTIAL/FINAL.

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	DIFL	33304	1503	1.5 SO
1	1	AC	79725	1609	CENT.
1	1	GR			
1	1	CAL	79090	4209	VAR

REMARKS RUN (2)

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIAL NO.	SERIES NO.	POSITION
2	2	DIFL	33304	1503	1.5 SO
2	2	AC	79726	1609	CENT.
2	2	GR			
2	2	CAL	79090	4202	VAR.

CURVE DELAYS

CURVE	DELAY	UNITS
CFOC	0	FT,IN
CILM	6,0	FT,IN
CILD	9,3	FT,IN
SP	9,3	FT,IN
GR	39,6	FT,IN
CAL	46,6	FT,IN
ACQ	27,0	FT,IN
AC	27,0	FT,IN

PARAMETERS

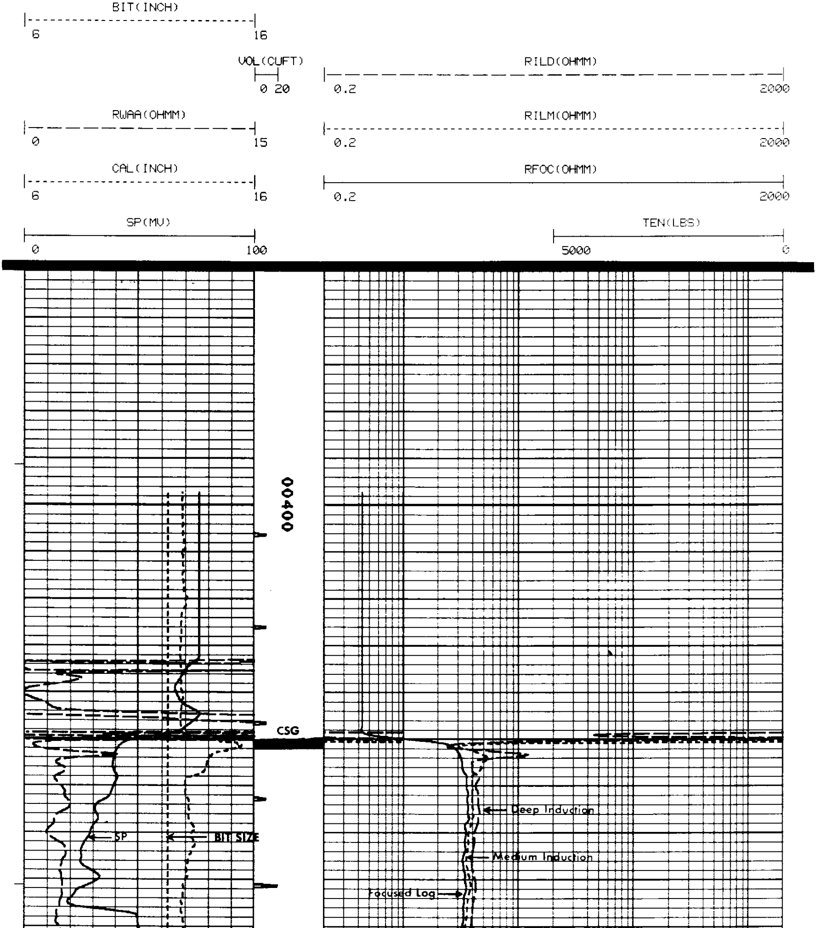
NAME	DEPTH INTERVAL	VALUE	UNITS
A	574 TO 451	0.620	
M	574 TO 451	2.150	
O.D.	574 TO 451	8.625	INCH
DEL-T F	574 TO 451	185.000	MICS/FT
DEL-T M	574 TO 451	54.000	MICS/FT
DEL-T S	574 TO 451	110.000	MICS/FT

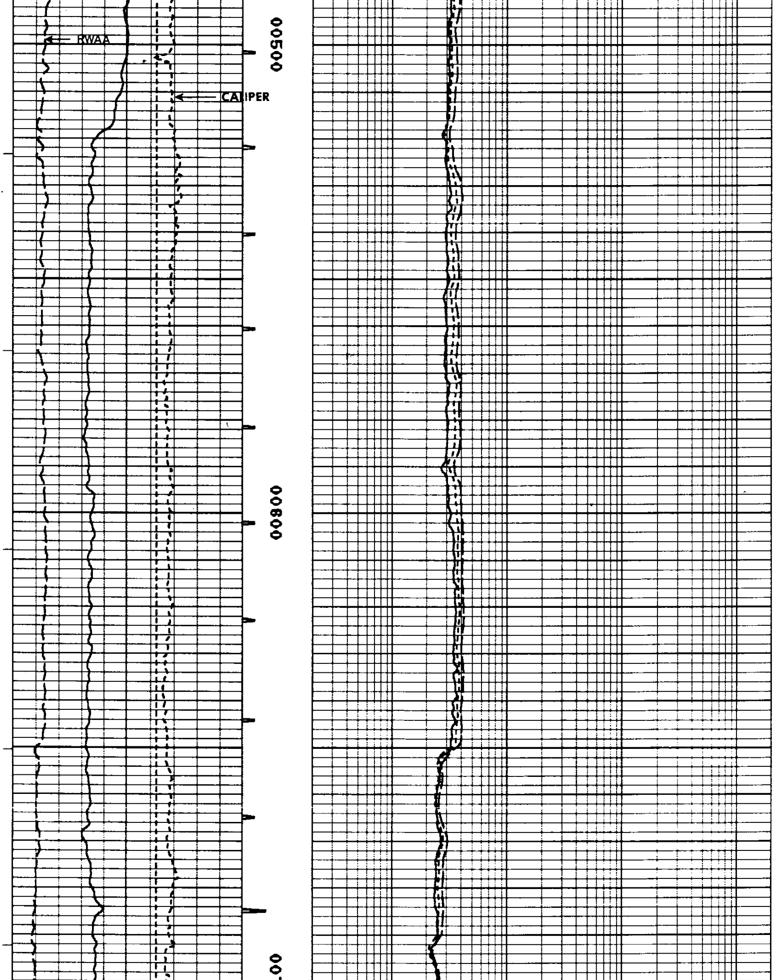
COMPANY: OREGON NATURAL GAS CORP. RUN: :

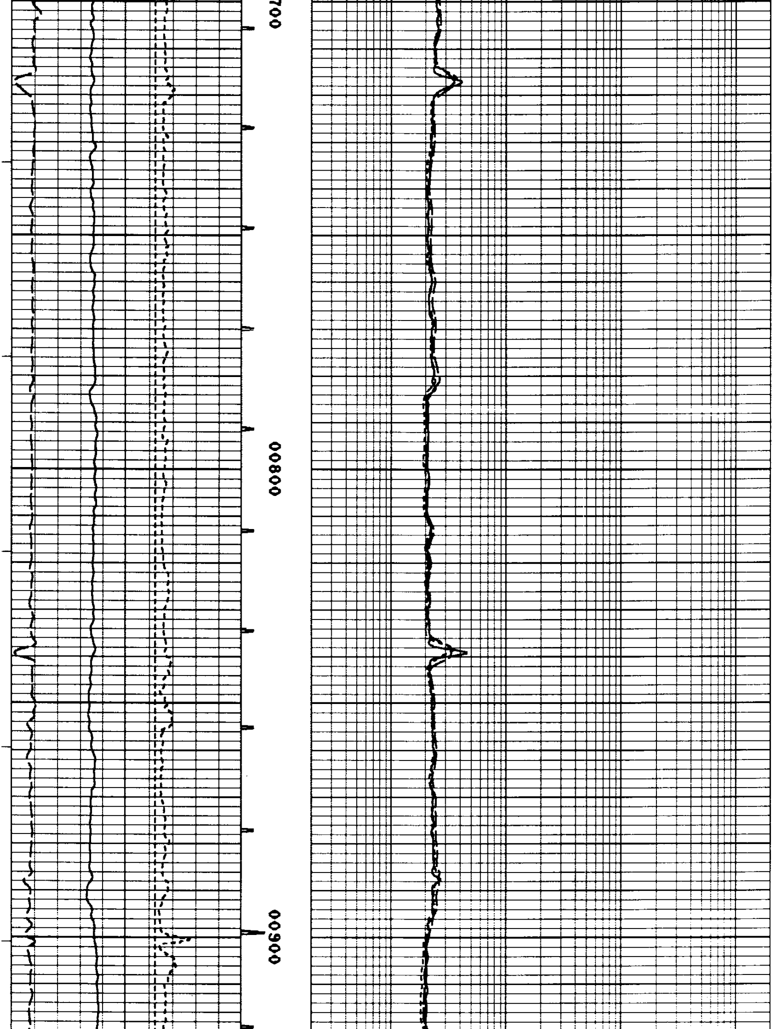
WELL NAME: IW 22D-10 TRIP: 1

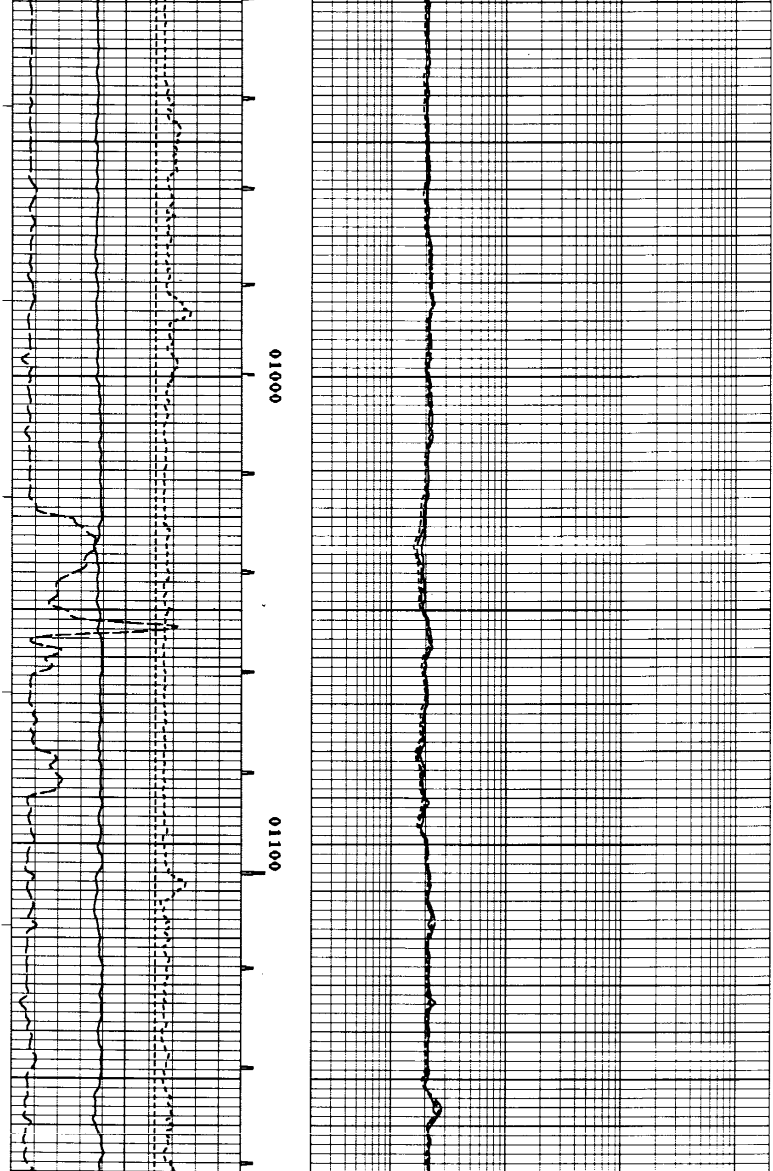
SERVICE: KC214N FILE: 3 DATE: 08/22/88 TIME: 16:14:28

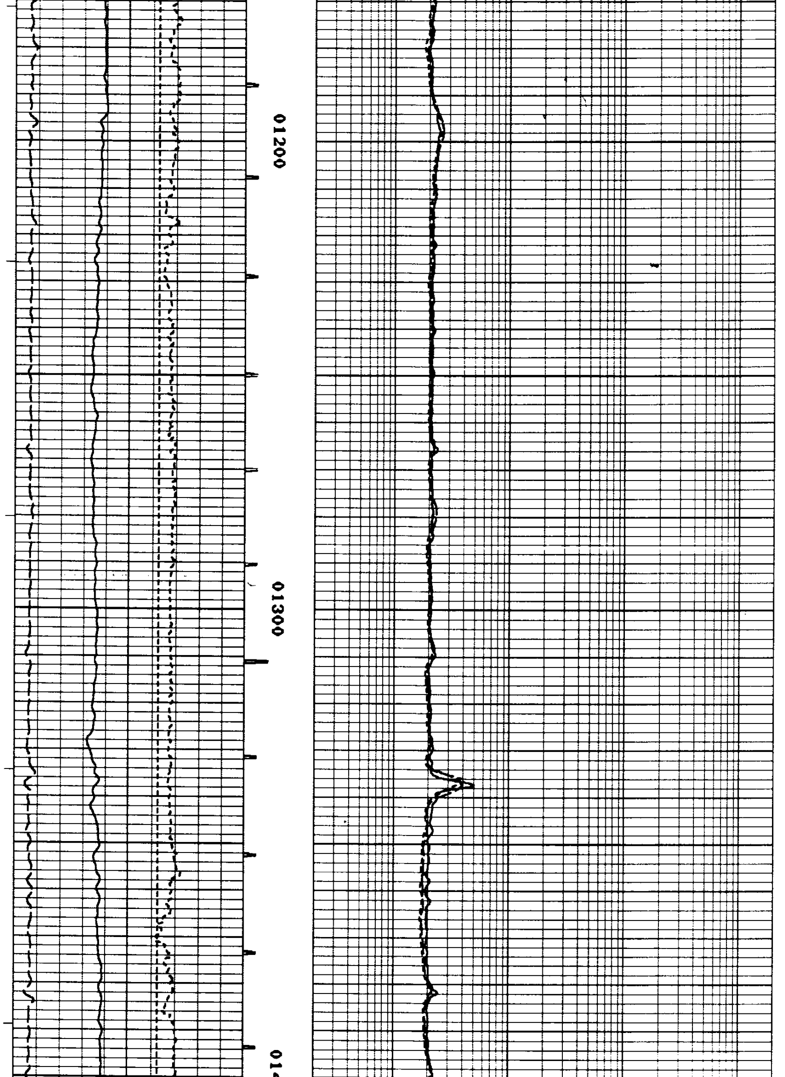
REVISION: FSYSAL REV GS08 VER+2 MODE: RECORD

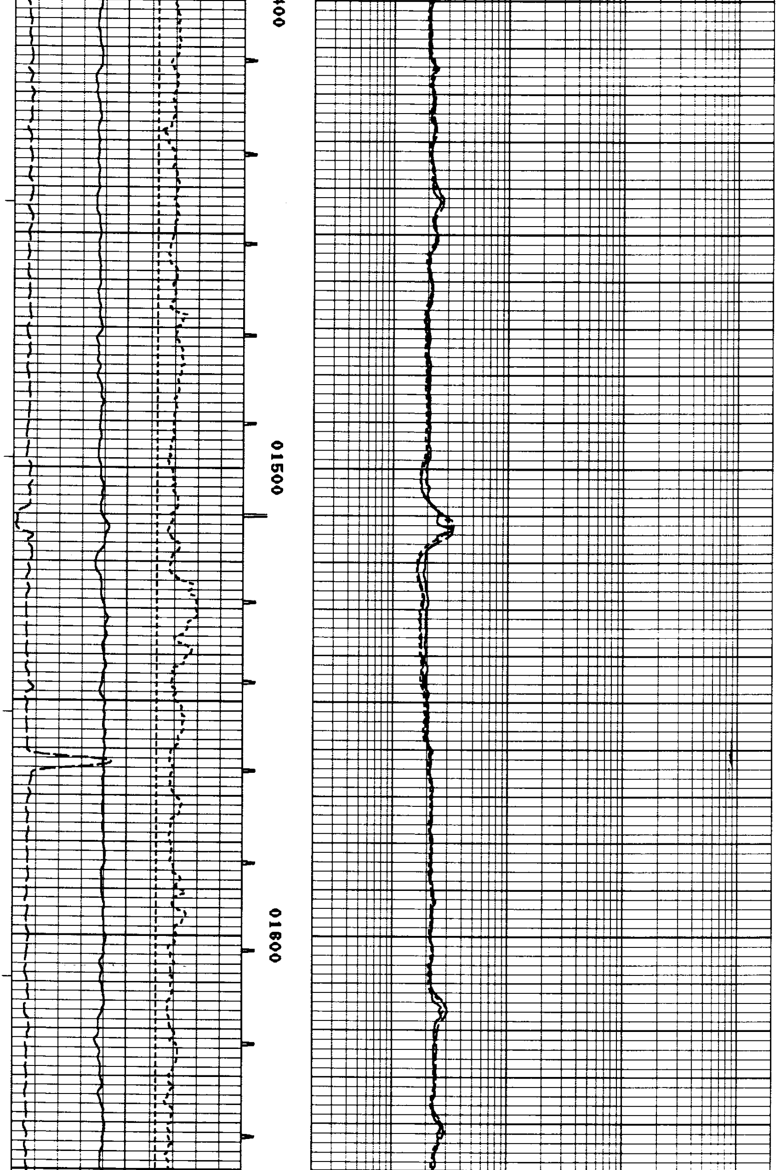


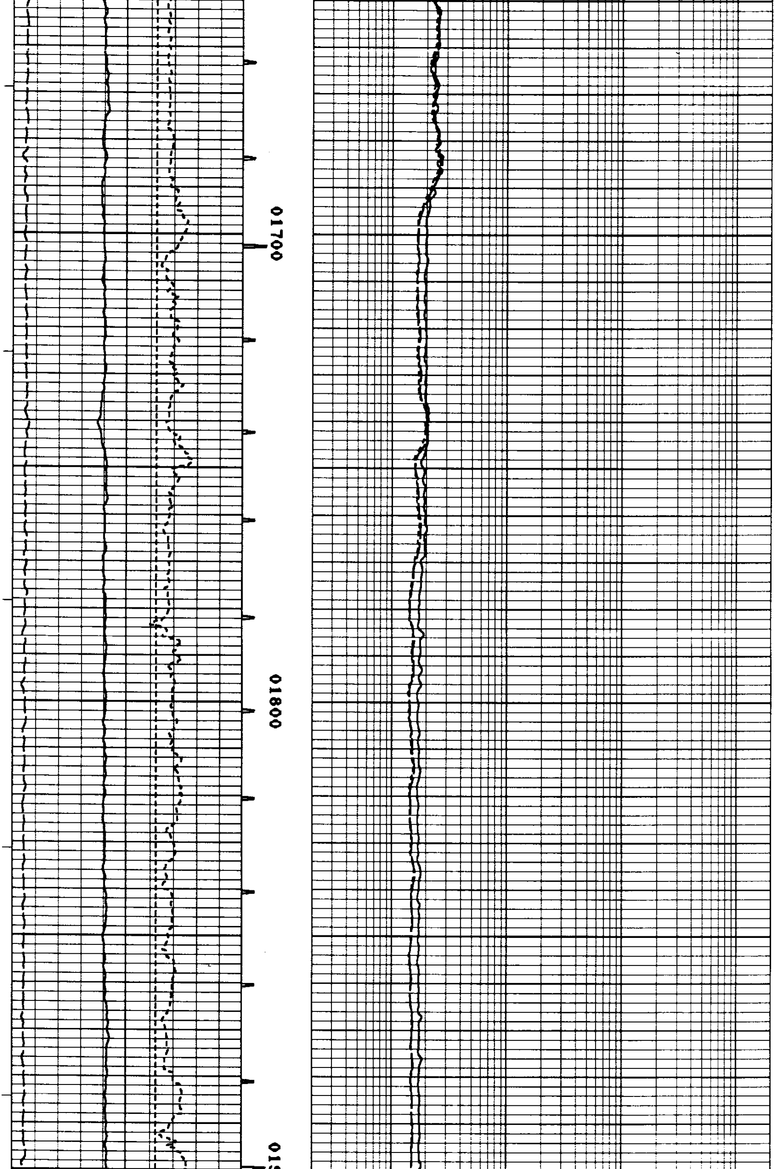


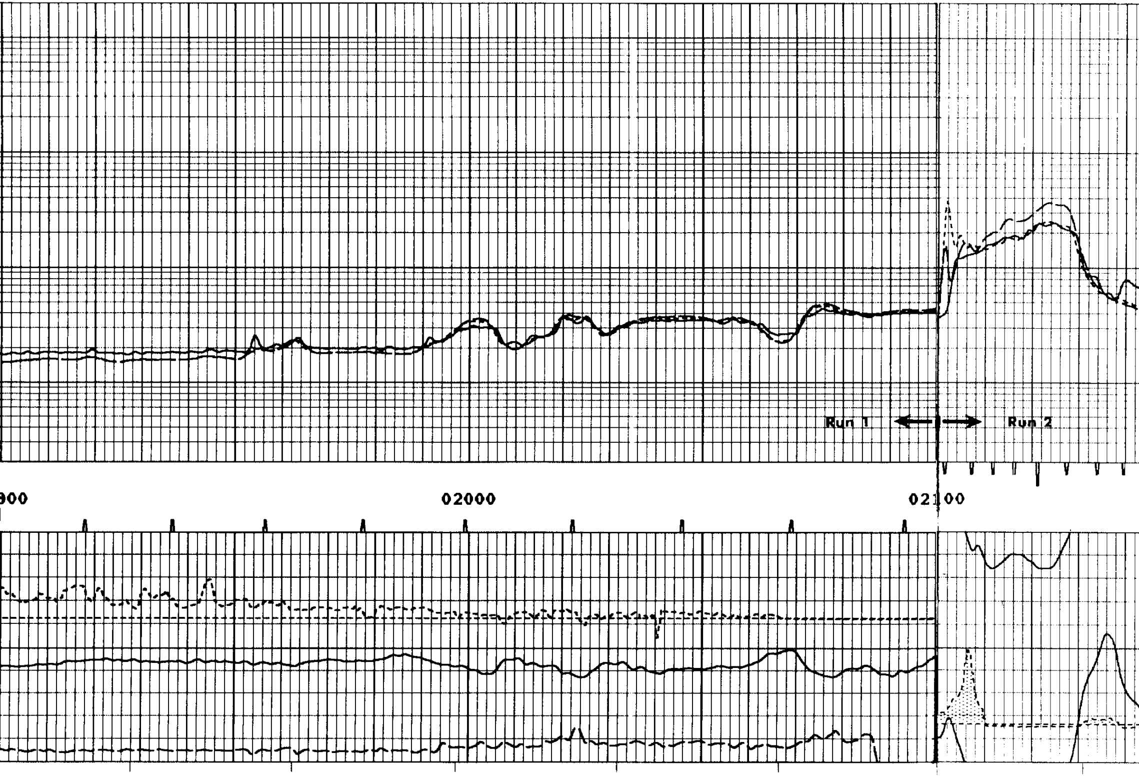


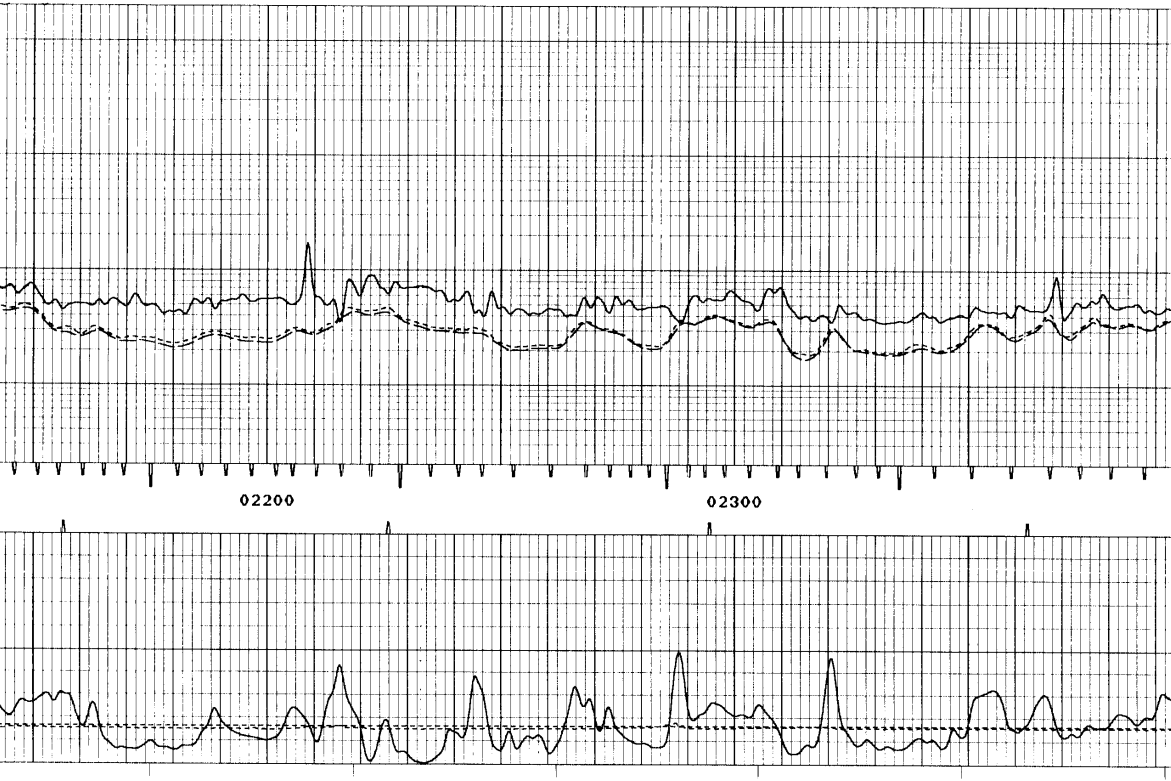


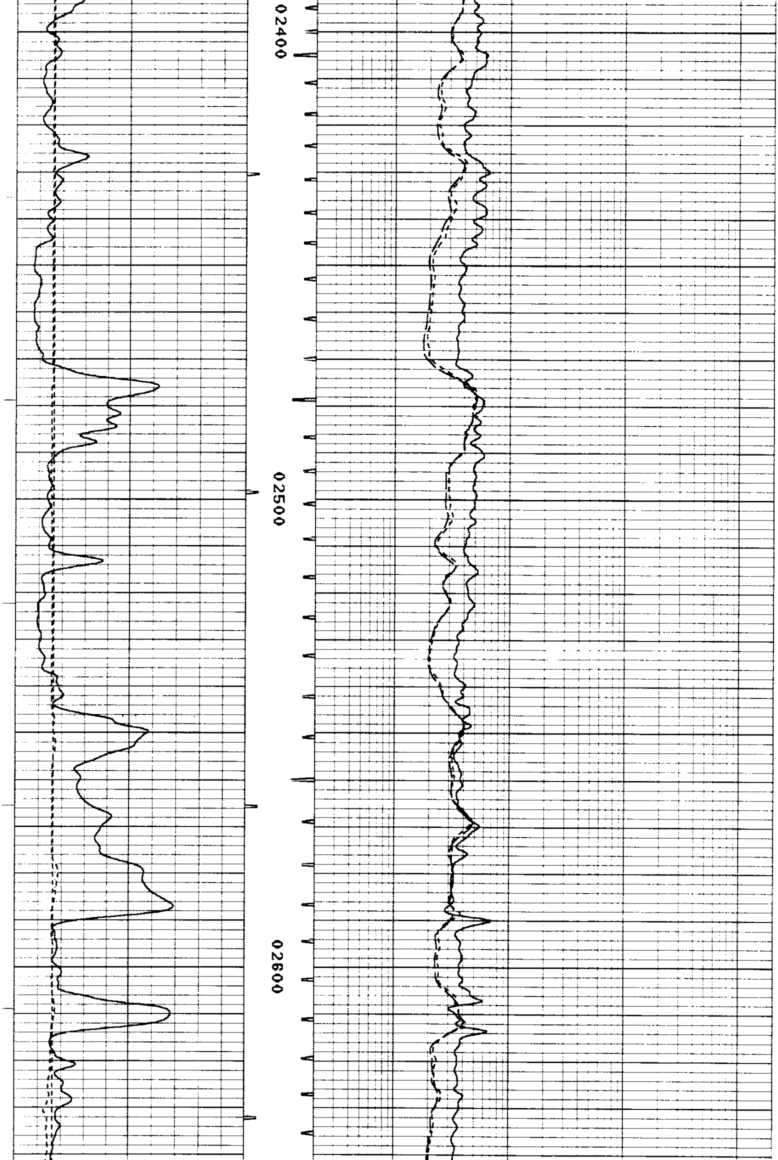


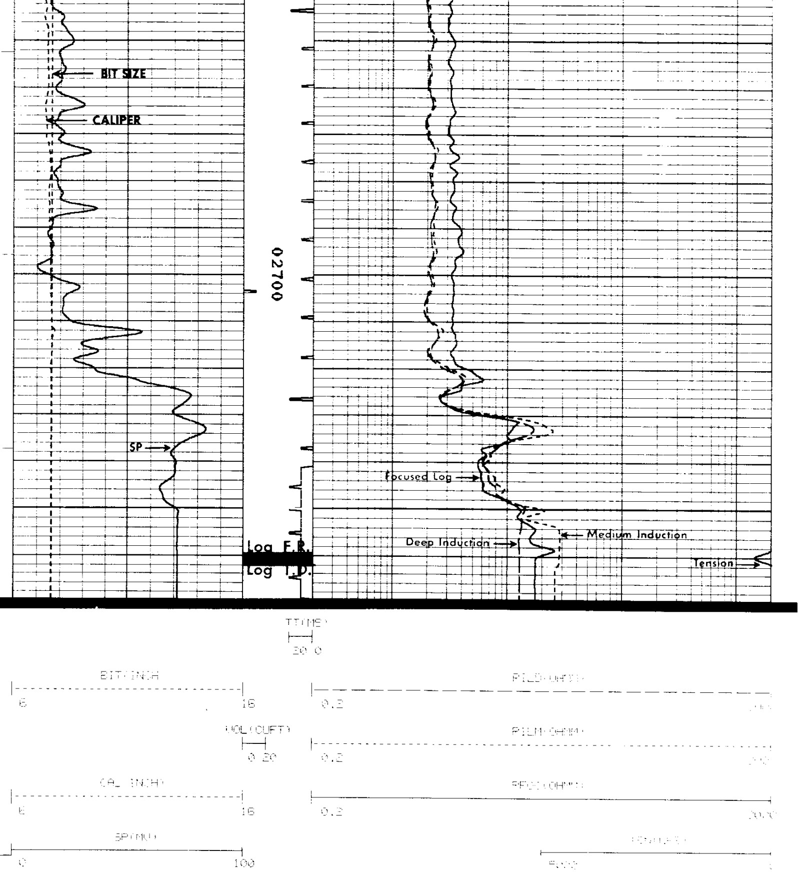












CURVE DELAYS

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CURVE   DELAY   UNITS
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 RFOC       0   FT,IN
 CILM     6.3   FT,IN
 CILD     3.3   FT,IN
 SP       9.3   FT,IN
 GR      38.8   FT,IN
 CAL     46.6   FT,IN
 ACQ     27.0   FT,IN
 AC      27.0   FT,IN
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                    PARAMETERS

  NAME     DEPTH INTERVAL    VALUE      UNITS
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 A          2770 TO  2562       0.620

            2770 TO  2562       2.150

 [illegible] 2770 TO  2562      8.500  INCH

DEL-T F     2770 TO  2562     185.000  MICS/FT

DEL-T M     2770 TO  2562      54.000  MICS/FT

DEL-T S     2770 TO  2562     110.000  MICS/FT




           DISPLAY SCALE CHANGES

                *** NONE ***
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COMPANY:     OREGON NATURAL GAS CORP.                         RUN:  2

WELL NAME:   IW 22D-10                                        TRIP: 2

SERVICE:     [illegible]214N        FILE:   2        DATE:  09 22 88       TIME:  [illegible]

REVISION:    FSYSAL REV G508 VER+2                            MODE: [illegible]
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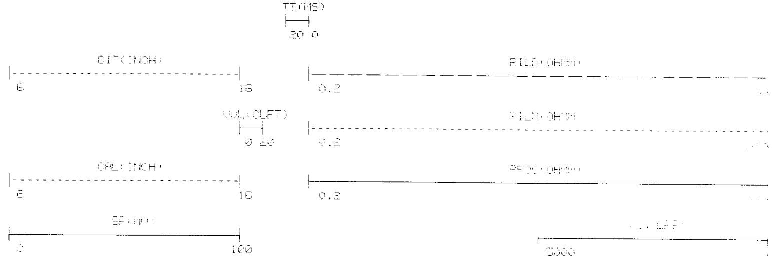
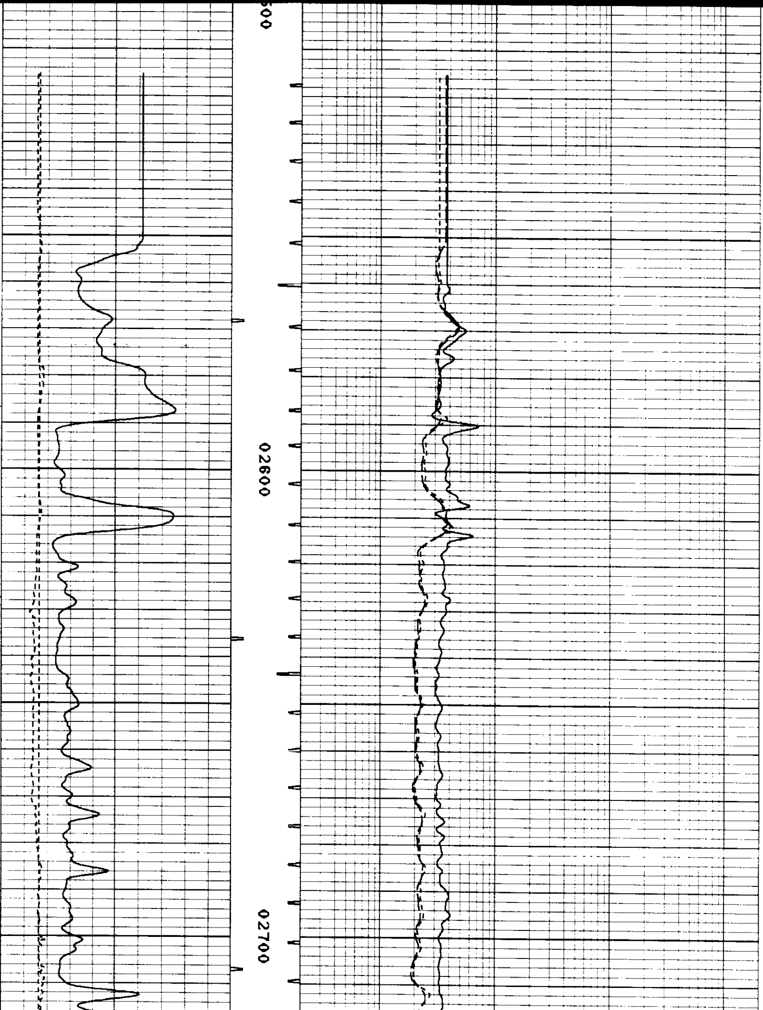
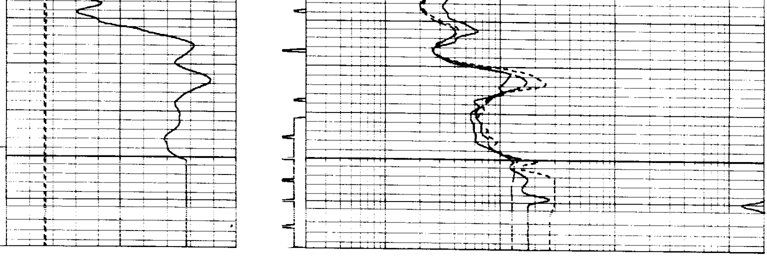
REPEAT SECTION

Run 2







RILD(OHMM)

0.2 2000

RWAA(OHMM)

0 15

RILM(OHMM)

0.2 2000

CAL(INCH)

6 16

RFOC(OHMM)

0.2 2000

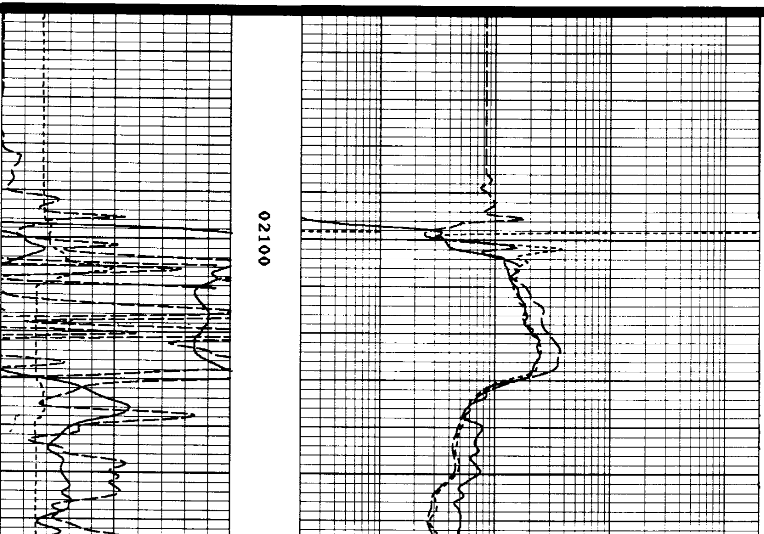
SP(MV)

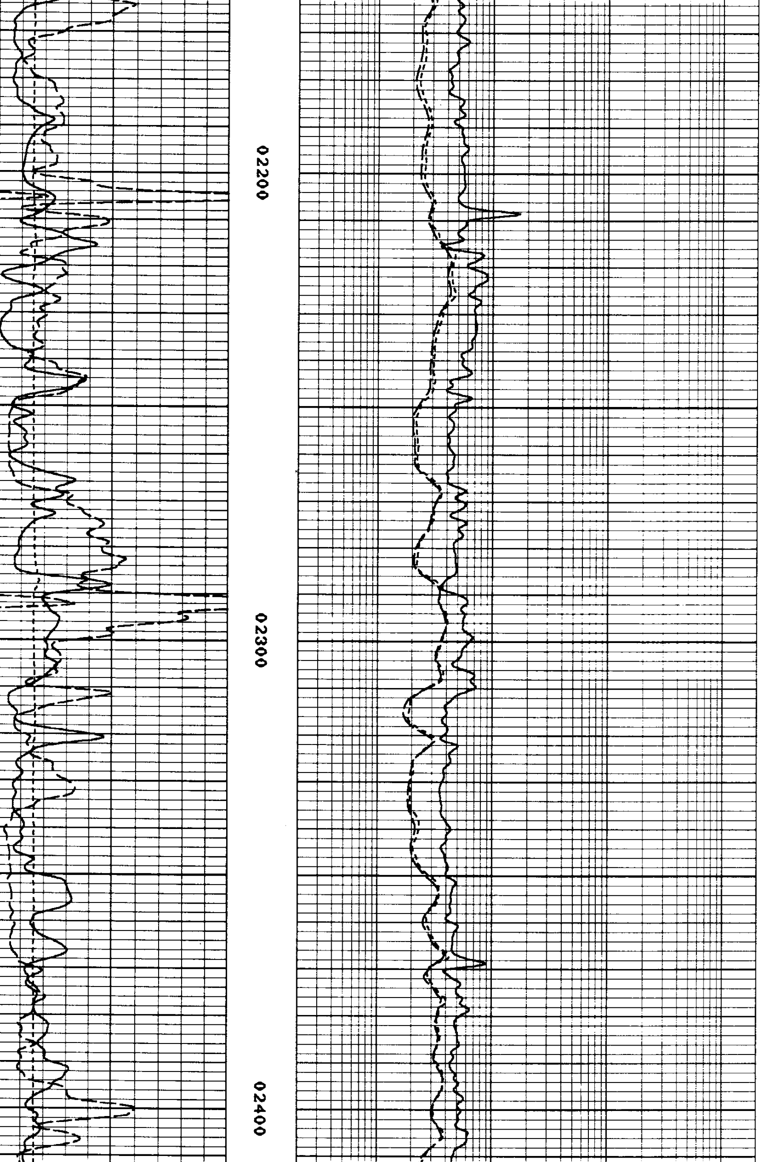
0 100

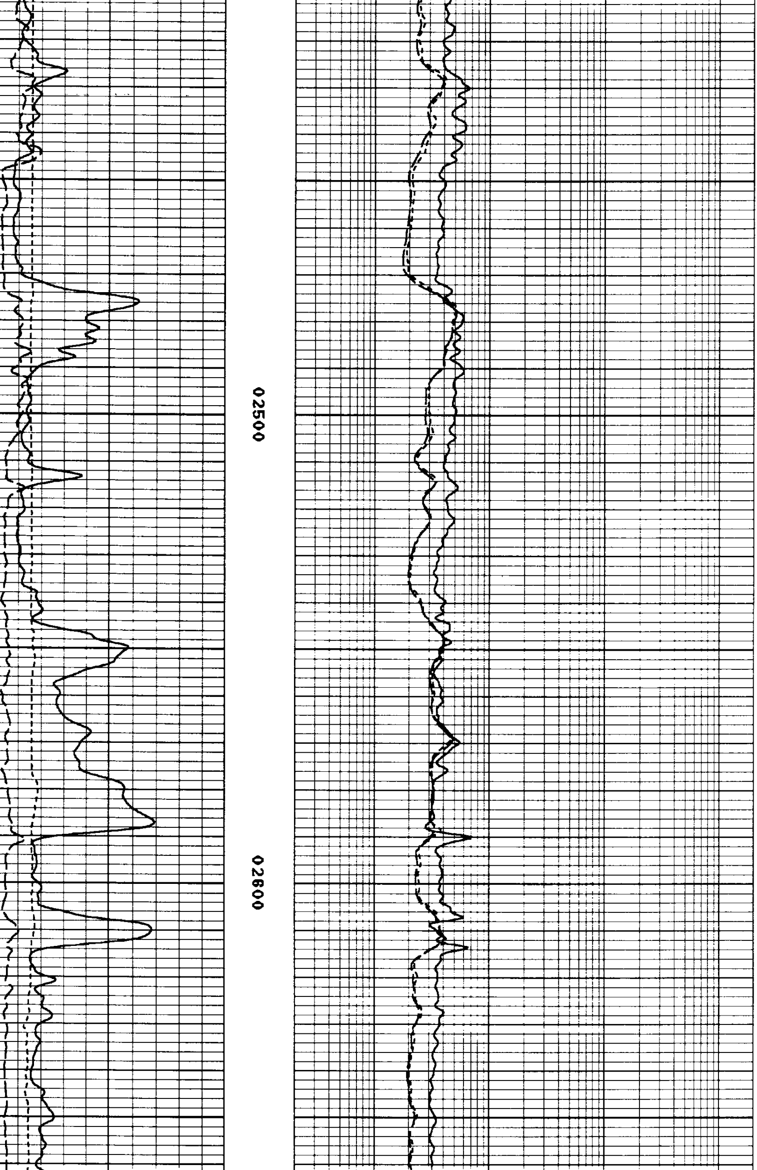
DIFL WITH RWAA

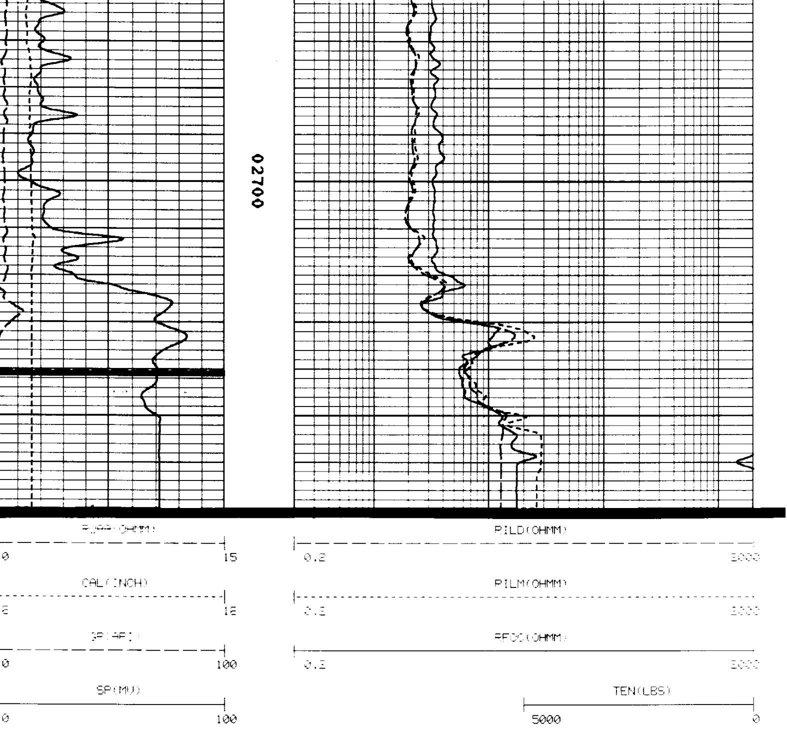
TEN(LBS)

5000 0









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*****************************************
*                                       *
*  CALIBRATION/VERIFICATION SUMMARIES   *
*  DATE 08/28/88          TIME 22:40:39 *
*  RUN  2                 TRIP 2        *
*                                       *
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     LOG NAME DIFL    ASSET NO. 33304    UNIT NO. 6406
  CALIBRATION ENTERED ON  08/28/88 AT 20:13:56

CURVE   MILLIVOLTS      SCALING FACTORS    ENGINEERING VALUES    UNITS
          LOW    HIGH    ADD.     MULT.         LOW        HIGH
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     DATE 08/16/88          CALIBRATION          TIME 14:02:34
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 CILD      -0.3    493.7    1.250     1.9747        1.000      500.000 MMHO
 CILM      -2.3    509.0    3.079     2.2026        1.000      500.000 MMHO
 CFOC       2.5    497.0   -1.559     2.4625        1.000      500.000 MMHO

      DATE 08/16/88    PRIMARY VERIFICATION       TIME 14:03:57

 CILD      -0.1    491.7    1.250     1.9747        1.191      498.200 MMHO
 CILM      -0.0    506.4    3.079     2.2026        3.133      497.327 MMHO
 CFOC       4.7    503.8   -1.559     2.4625        3.186      506.895 MMHO

      DATE 08/28/88   BEFORE LOG VERIFICATION     TIME 21:36:40

 CILD      -0.1    495.9    1.234     1.9581        1.191      498.200 MMHO
 CILM       0.0    509.1    3.020     2.1910        3.133      497.327 MMHO
 CFOC       4.8    495.6   -1.693     2.5038        3.186      506.895 MMHO

      DATE 08/28/88    AFTER LOG VERIFICATION     TIME 22:24:28

 CILD       0.0    497.2    1.234     1.9581        1.281      499.648 MMHO
 CILM       0.1    508.0    3.020     2.1910        3.193      495.240 MMHO
 CFOC       4.8    494.9   -1.693     2.5038        3.229      506.144 MMHO

             *** GR   NOT CALIBERATED ***



       LOG NAME CAL     ASSET NO. 79090    UNIT NO. 6406
   CALIBRATION ENTERED ON  08/28/88 AT 20:12:27

 CURVE   MILLIVOLTS      SCALING FACTORS    ENGINEERING VALUES   UNITS
          LOW    HIGH    ADD.     MULT.          LOW        HIGH
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      DATE 07/24/88          CALIBRATION          TIME 09:49:45

 CAL     3452.0  8259.3    1.692    0.0091       6.000      12.000 INCH

                         PRIMARY VERIFICATION            NOT DONE

                        BEFORE LOG VERIFICATION          NOT DONE

      DATE 08/28/88    AFTER LOG VERIFICATION     TIME 22:36:50

 CAL       E      4871.5   1.692    0.0091       E           7.773 INCH

    CURVE DELAYS

CURVE   DELAY  UNITS
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 CFOC       0  FT,IN
 CILM     6,0  FT,IN
 CILD     9,3  FT,IN
 SP       9,3  FT,IN
 GR      39,6  FT,IN
 CAL     46,6  FT,IN
 ACQ     27,0  FT,IN
 AC      27,0  FT,IN




                PARAMETERS

  NAME    DEPTH INTERVAL    VALUE      UNITS
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A           2116 TO  1916      0.620

M           2116 TO  1916      2.150

O.D.        2116 TO  1916      8.625  INCH

DEL-T F     2116 TO  1916    185.000  MICS/FT

DEL-T M     2116 TO  1916     54.000  MICS/FT

DEL-T S     2116 TO  1916    110.000  MICS/FT
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DISPLAY SCALE CHANGES

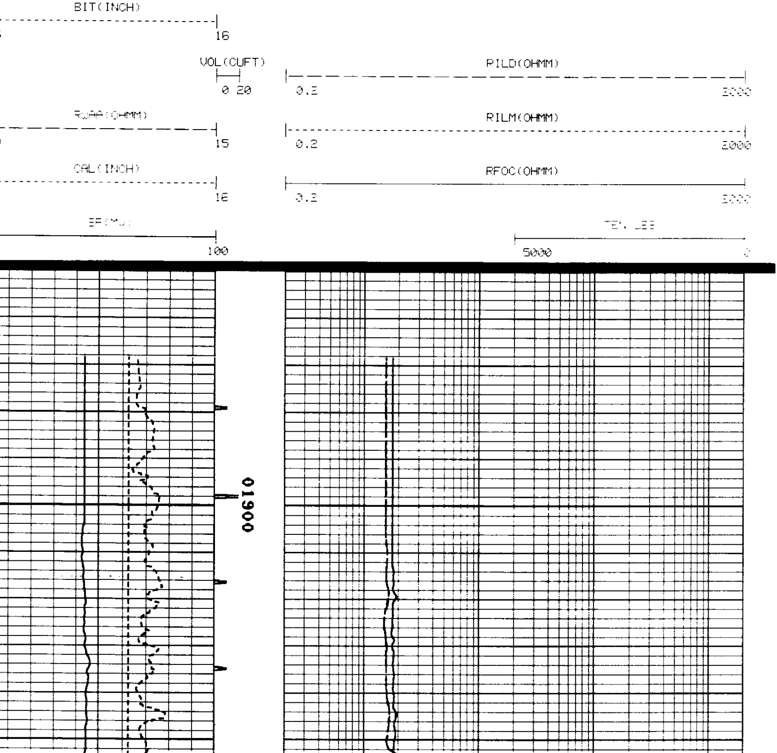
*** NONE ***

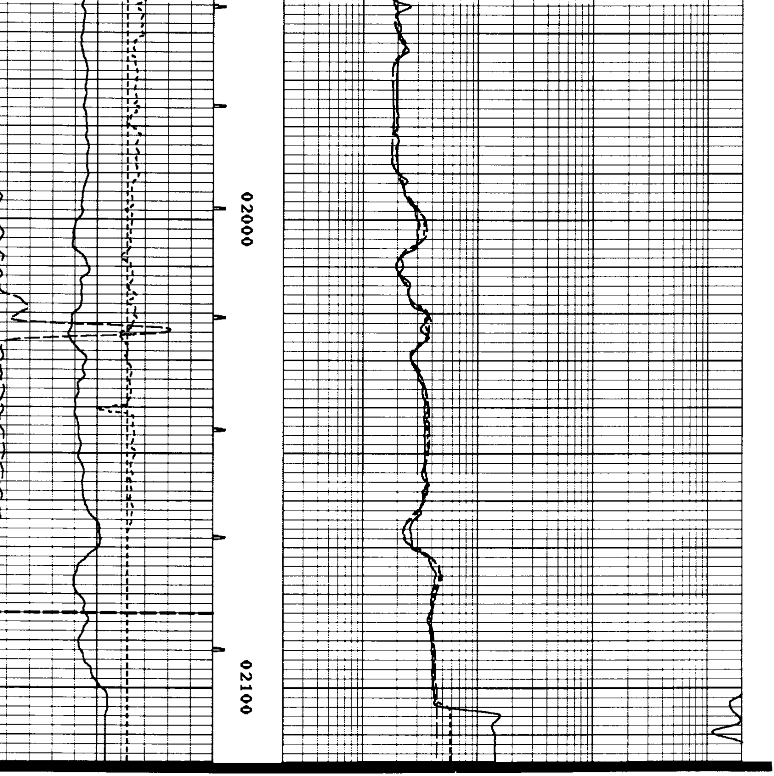
COMPANY: OREGON NATURAL GAS CORP.
WELL NAME: IW 22D-10
SERVICE: KC214N FILE: 2
REVISION: FSYSAL REV GS08 VER+2

RUN: 1
TRIP: 1
DATE: 08/22/88 TIME: 16:06:23
MODE: RECORD

REPEAT SECTION

Run 1





BIT(INCH) 16

VOL(CUFT) 0 20

RILD(OHMM) 0.2 2000

RWAA(OHMM) 15

RILM(OHMM) 0.2 2000

CAL(INCH) 16

RFOC(OHMM) 0.2 2000

SP(MV) 100

TEN(LBS) 5000 0

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          *  CALIBRATION/VERIFICATION SUMMARIES  *
          *  DATE 08/22/88         TIME 16:58:32  *
          *  RUN  1                TRIP 1         *
          *                                       *
          *****************************************



     LOG NAME DIFL    ASSET NO. 33304    UNIT NO. 6406
  CALIBRATION ENTERED ON  08/22/88 AT 15:03:14

CURVE   MILLIVOLTS      SCALING FACTORS     ENGINEERING VALUES    UNITS
          LOW    HIGH    ADD.     MULT.        LOW         HIGH
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     DATE 08/16/88          CALIBRATION           TIME 14:02:34

CILD      -0.3    492.7    1.250     1.9747      1.000      500.000 MMHO
CILM      -2.3    509.0    3.079     2.2026      1.000      500.000 MMHO
CFOC       2.5    497.0   -1.559     2.4625      1.000      500.000 MMHO

     DATE 08/16/88     PRIMARY VERIFICATION       TIME 14:03:57

CILD      -0.1    491.7    1.250     1.9747      1.191      498.200 MMHO
CILM      -0.0    506.4    3.079     2.2026      3.133      497.327 MMHO
CFOC       4.7    503.8   -1.559     2.4625      3.186      506.895 MMHO

     DATE 08/22/88    BEFORE LOG VERIFICATION     TIME 15:47:05

CILD       0.1    495.3    1.121     1.9610      1.191      498.200 MMHO
CILM       0.1    503.9    2.965     2.2138      3.133      497.327 MMHO
CFOC       4.6    499.2   -1.497     2.4848      3.186      506.895 MMHO

     DATE 08/22/88     AFTER LOG VERIFICATION     TIME 16:53:18

CILD       0.2    497.9    1.121     1.9610      1.315      501.229 MMHO
CILM       0.2    506.9    2.965     2.2138      3.204      500.336 MMHO
CFOC       4.7    498.2   -1.497     2.4848      3.302      505.839 MMHO

             *** GR    NOT CALIBRATED ***



     LOG NAME CAL     ASSET NO. 79090    UNIT NO. 6406
  CALIBRATION ENTERED ON  08/22/88 AT 15:04:54

CURVE   MILLIVOLTS      SCALING FACTORS     ENGINEERING VALUES    UNITS
          LOW    HIGH    ADD.     MULT.        LOW         HIGH
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     DATE 07/24/88          CALIBRATION           TIME 09:49:45

CAL    3452.0  8259.3    1.692     0.0091      6.000       12.000 INCH

                       PRIMARY VERIFICATION            NOT DONE

                      BEFORE LOG VERIFICATION          NOT DONE

     DATE 08/22/88     AFTER LOG VERIFICATION     TIME 16:57:59

CAL        E     8910.6    1.692     0.0091      E            12.813 INCH
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