ATLAS WIRELINE SERVICES

Western Atlas International

DUAL INDUCTION FOCUSED LOG ®

GAMMA RAY

FILE NO.

API NO.

5" 100'

COMPANY NORTHWEST NATURAL GAS ~~OREGON NATURAL GAS DEVELOPMENT CORP.~~

WELL IW33AC-3

FIELD MIST

COUNTY COLUMBIA STATE OR.

LOCATION:
1469.94' N & 1706.49' W
FROM THE SW CORNER OF:

SEC3 TWP6N RGE5W

OTHER SERVICES
COL/CN/GR
DIPLOG

PERMANENT DATUM GL ELEV. 1075.1

LOGGING MEASURED FROM KB 11.5 FT. ABOVE P.D.

DRILLING MEASURED FROM KB

ELEVATIONS
KB 1086.6'
DF --
GL 1075.1'

FINAL PRINT

DATE	11-29-90				
RUN	1				
SERVICE ORDER	65504				
DEPTH-DRILLER	2621'				
DEPTH-LOGGER	2621'				
BOTTOM LOGGED INTERVAL	2619'				
TOP LOGGED INTERVAL	572'				
CASING - DRILLER	17 1/2"	@ 572'	@	@	@
CASING - LOGGER	572'				
BIT SIZE	12 1/4"				
TYPE FLUID IN HOLE	GEL				
DENSITY / VISCOSITY	8	40			
PH / FLUID LOSS	8.5	5.8			
SOURCE OF SAMPLE	FLOWLINE				
RM AT MEAS. TEMP.	3.40	@ 65 DEG. F	@	@	@
RMF AT MEAS. TEMP.	2.50	@ 65 DEG. F	@	@	@
RMC AT MEAS. TEMP.	4.20	@ 65 DEG. F	@	@	@
SOURCE OF RMF / RMC	M	M			
RM AT BHT	2.125	@ 104 DEG. F	@	@	@
TIME SINCE CIRCULATION	4 HRS				
MAX. REC. TEMP. DEG. F	104 DEG F				
EQUIP. NO. / LOC.	6399	BAKS.			
RECORDED BY	M. HINDS				
WITNESSED BY	MR. ROTH/THOMAS				

FOLD HERE

IN MAKING INTERPRETATIONS OF LOGS OUR EMPLOYEES WILL GIVE CUSTOMERS 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)

BHV COMPUTED FOR 8.625" CASING

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIAL NO.	SERIES NO.	POSITION
1	1	DIFL	77837	1503XA	1.5 SO
1	1	AC	79726/VEMT1	1609/1603	CENT
1	1	GR	72384	1309XA	CENT
1	1	CAL	38088	4209XA	4/ARM

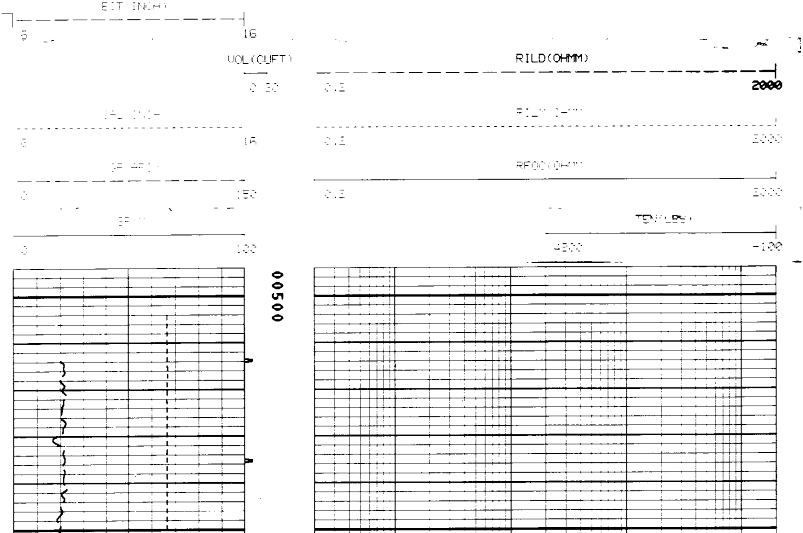
MAIN LOG

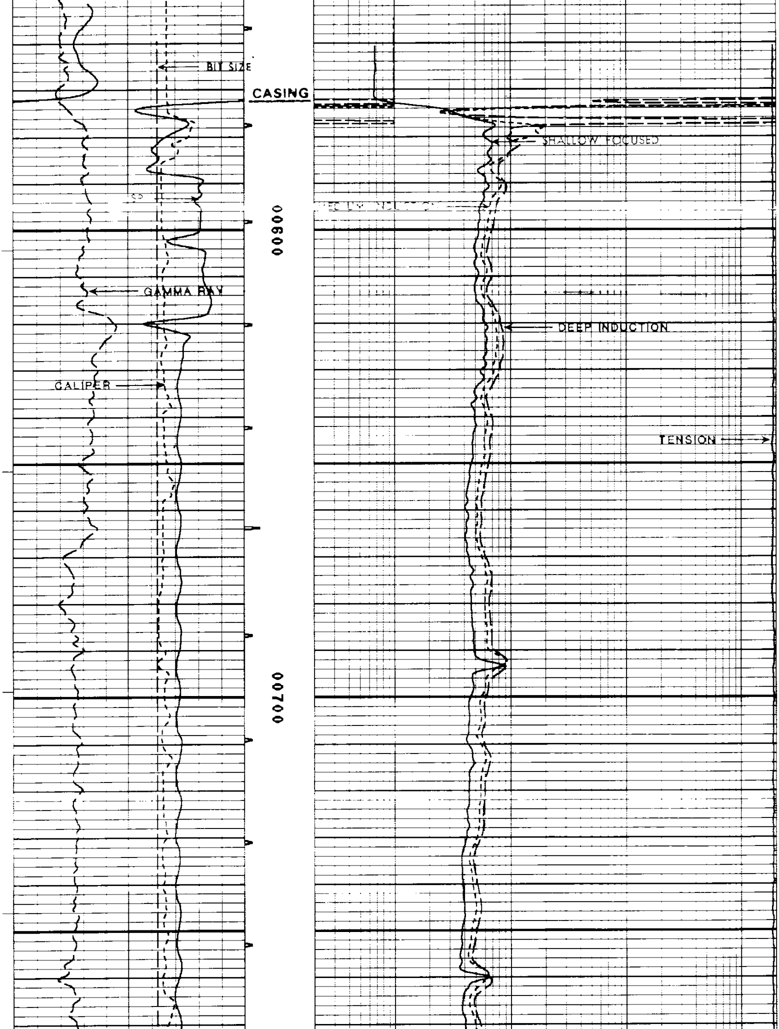
COMPANY: [illegible] NATURAL GAS DEVELOPMENT CORP. RUN: 1

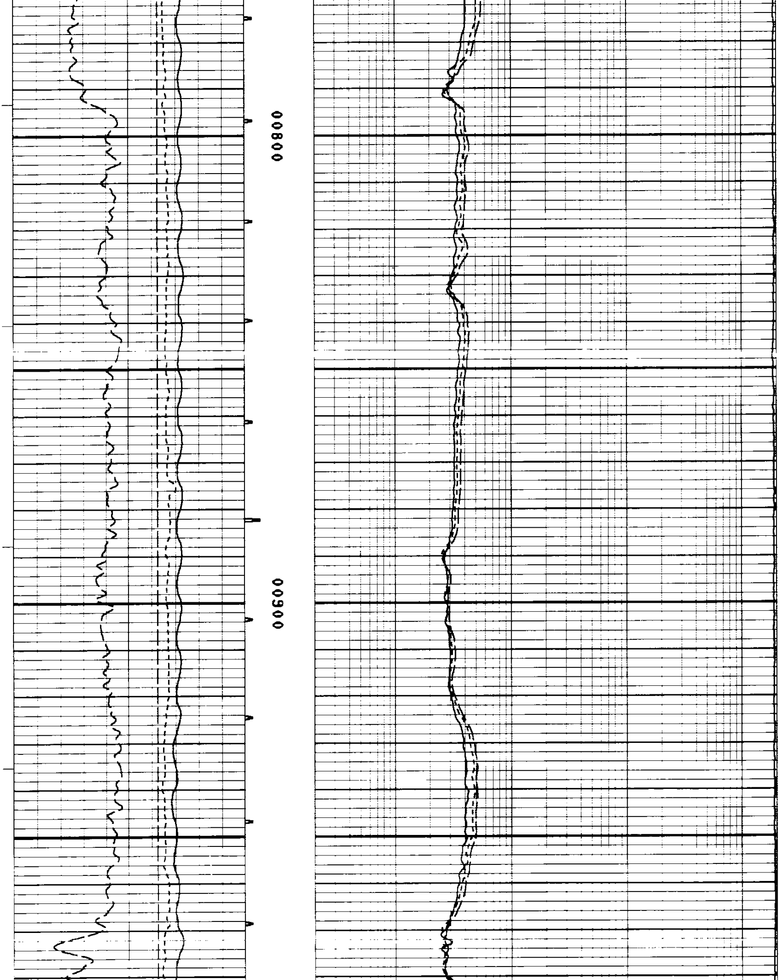
WELL NAME: [illegible] TRIP: 1

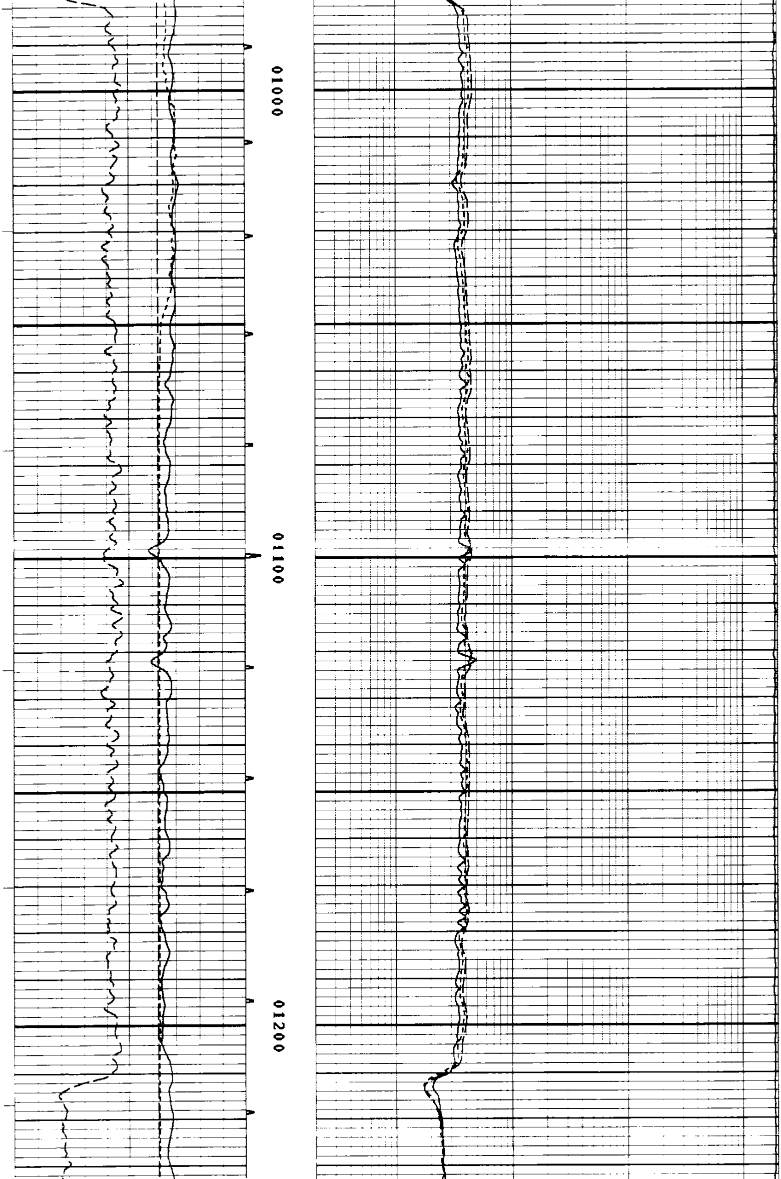
SERVICE: [illegible] FILE: 4 DATE: [illegible] TIME: [illegible]

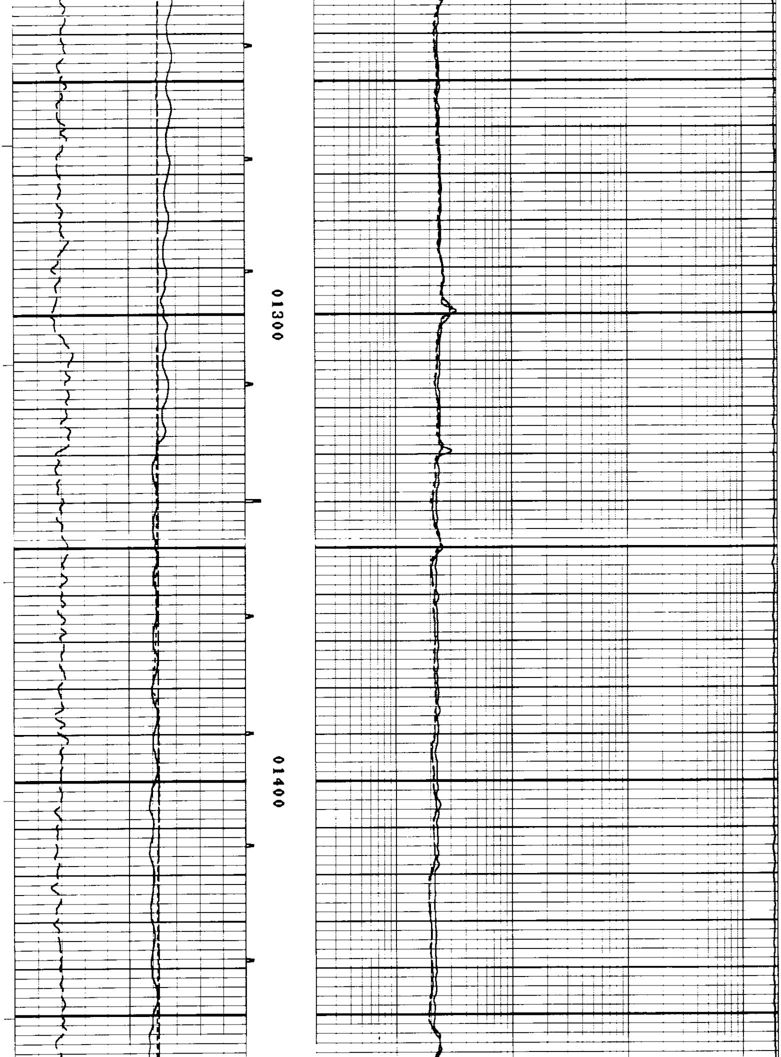
REVISION: F3/S256 REV:G002 VER:2.0 MODE: [illegible]

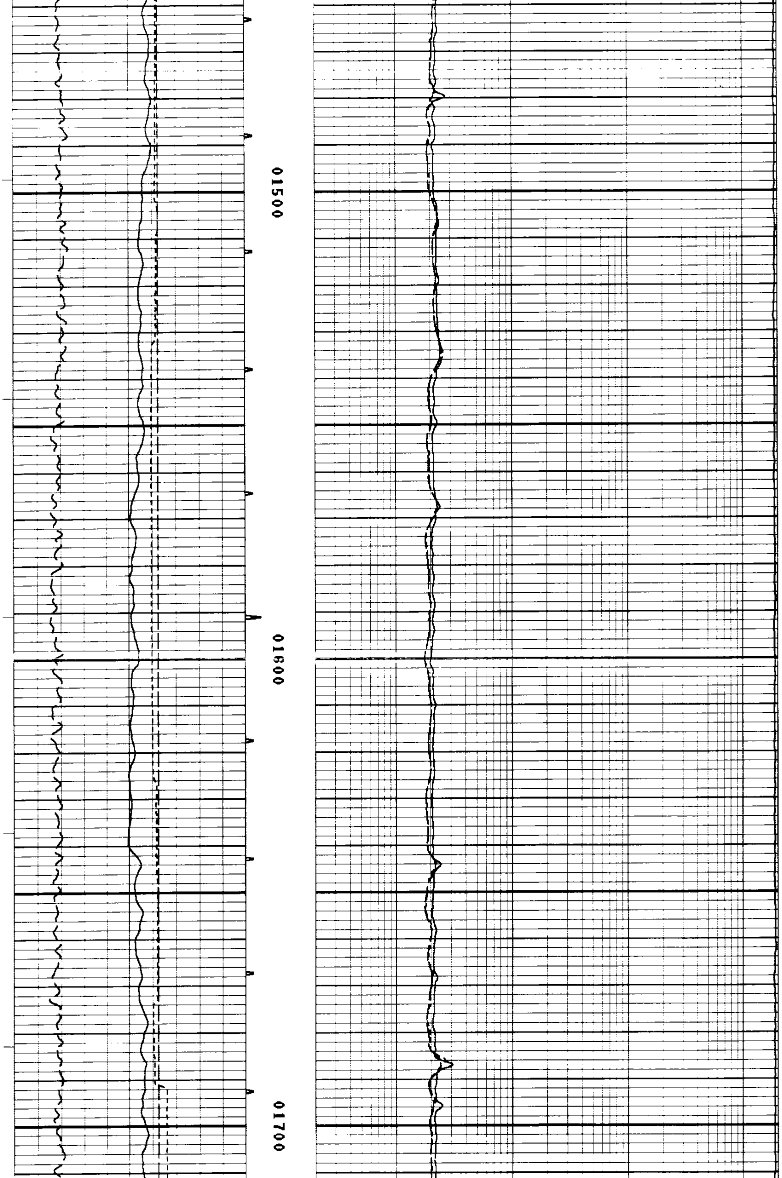


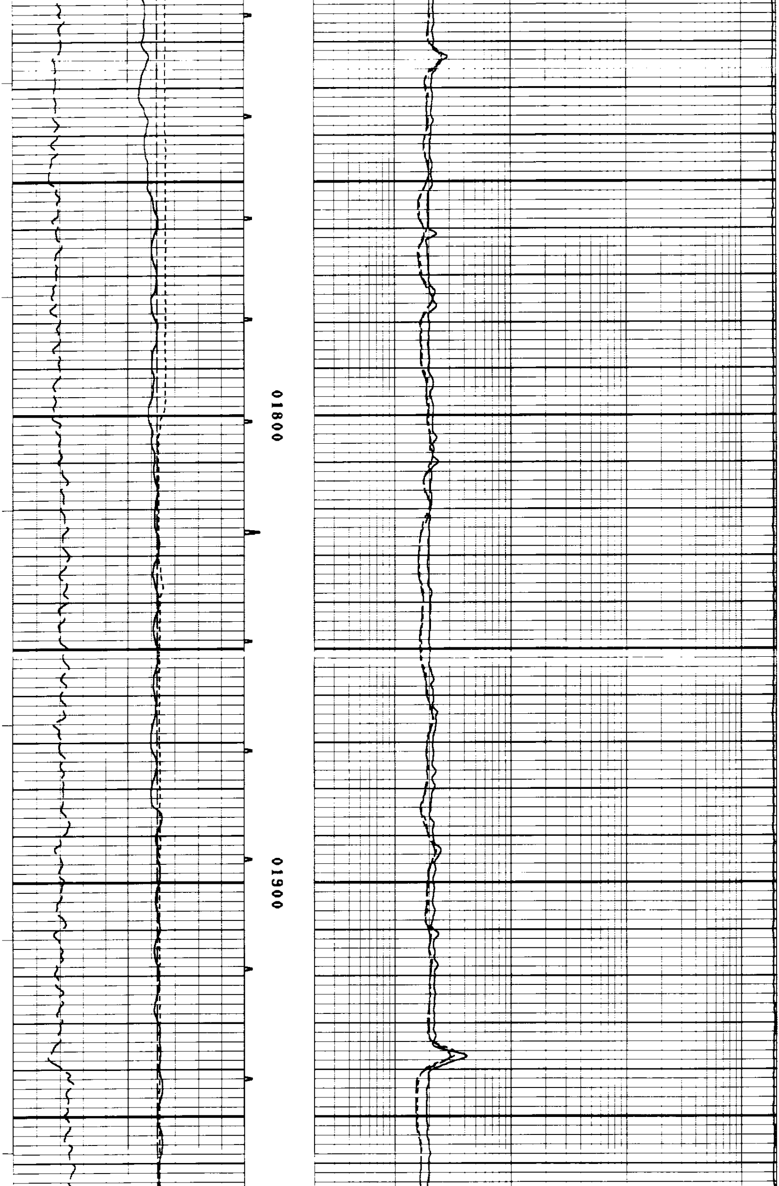


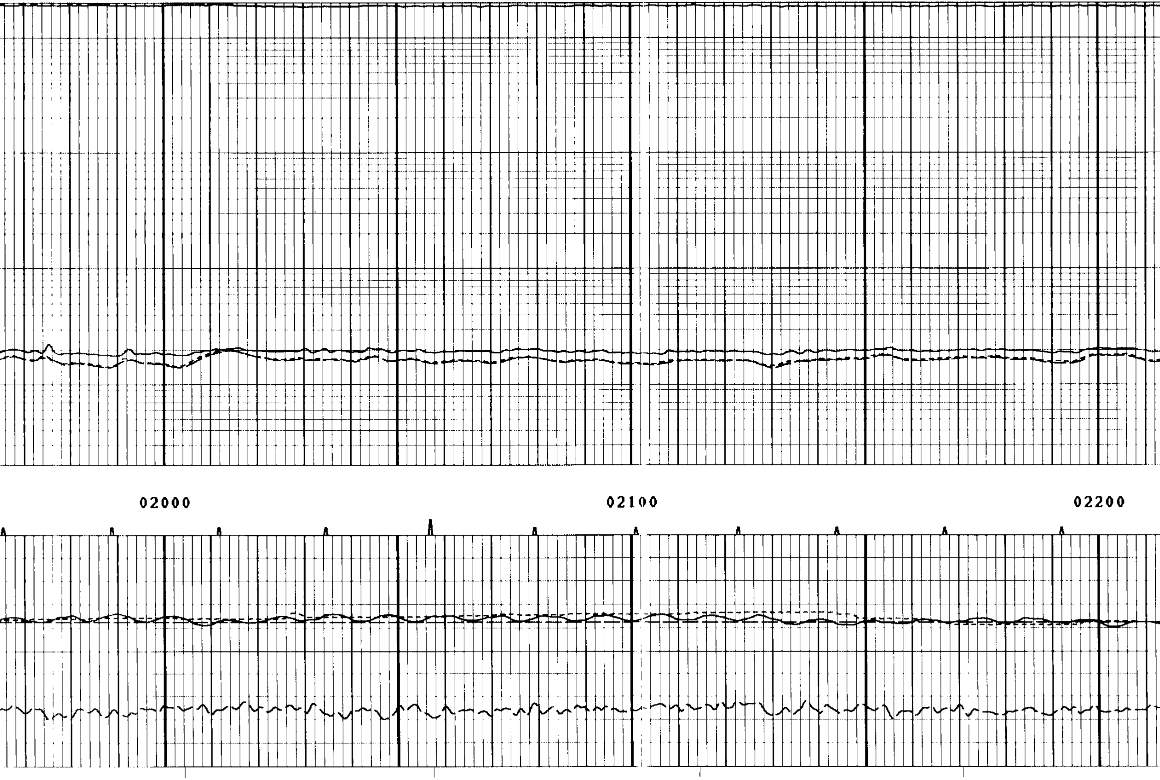


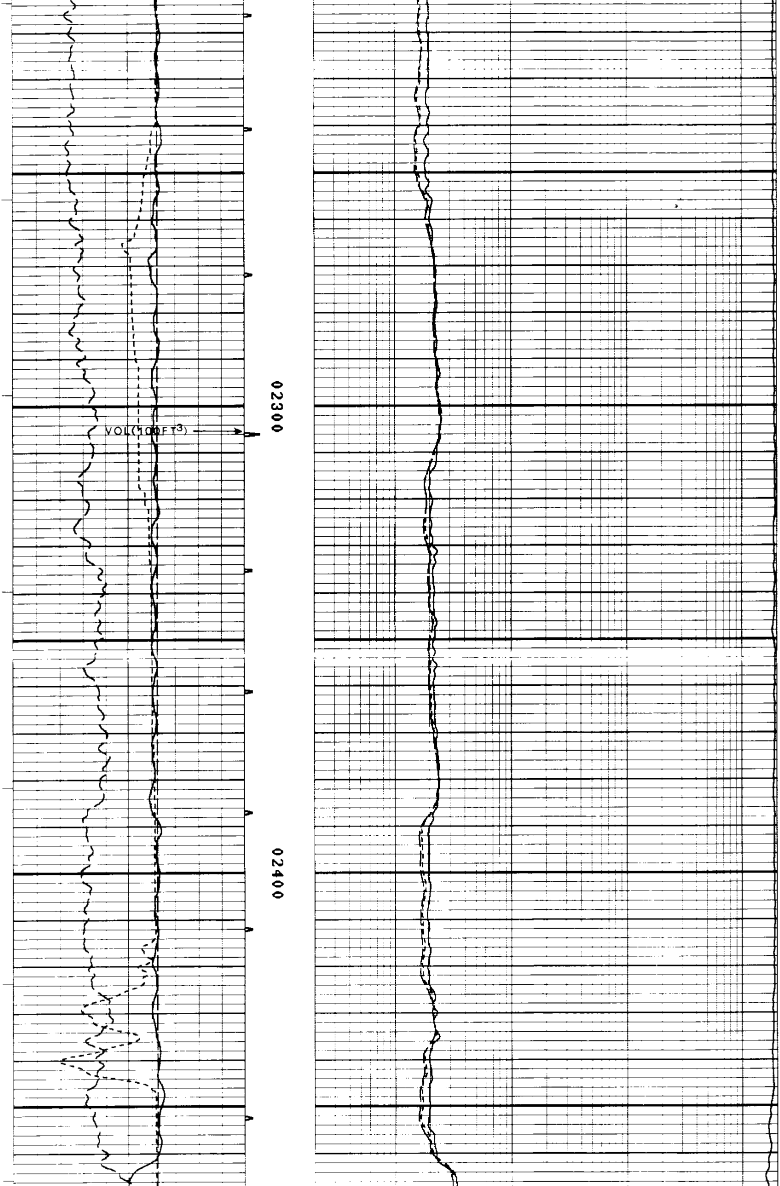


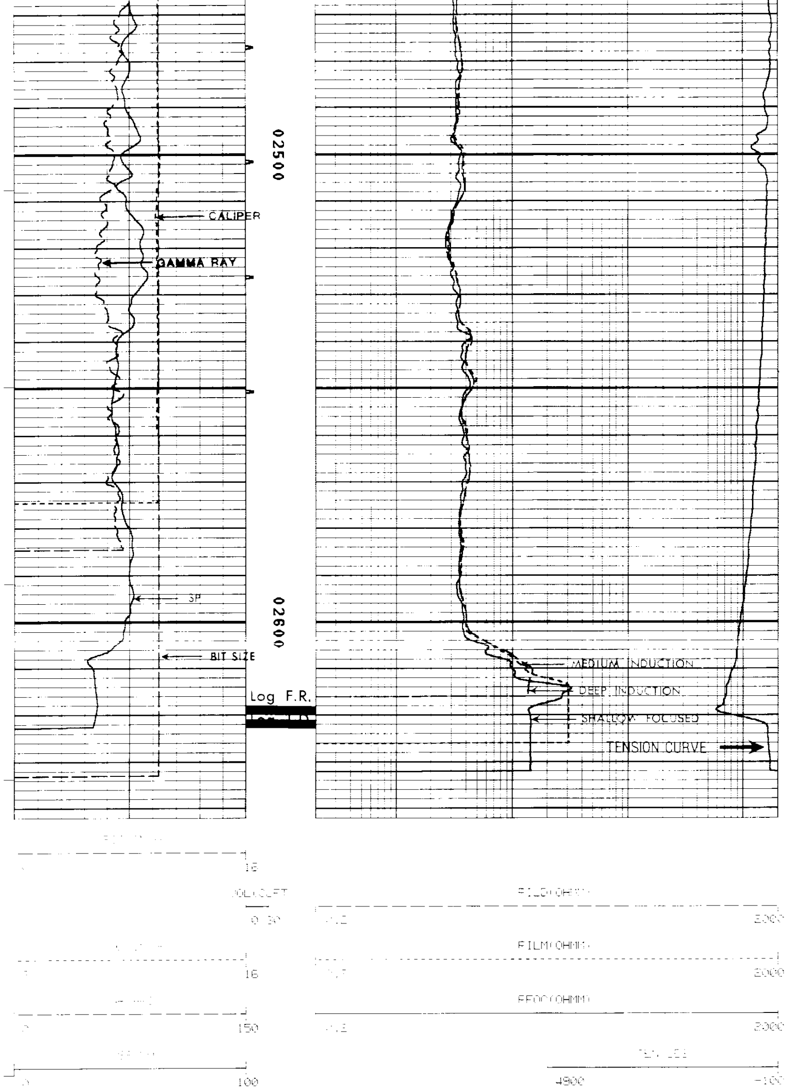












FILE: 4

REPEAT SECTION

FILE: 3

FILTER DELAY REPORT

CURVE	FILTER DELAY	UNITS
CFOC	[illegible]	[illegible]
CILD	[illegible]	[illegible]
CILM	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
GR	[illegible]	[illegible]
CAL	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]

CONSTANTS

NAME	DEPTH INTERVAL	VALUE	UNITS
A	3835 TO [illegible]	[illegible]	
DEL-T F	3835 TO [illegible]	[illegible]	MICS/FT
DEL-T M	[illegible]	[illegible]	MICS/FT
DEL-T S	[illegible]	[illegible]	MICS/FT
[illegible]	[illegible]	[illegible]	
O.D.	[illegible]	1.625	INCH
PORA	[illegible]	[illegible]	

[illegible] SCALE CHANGES

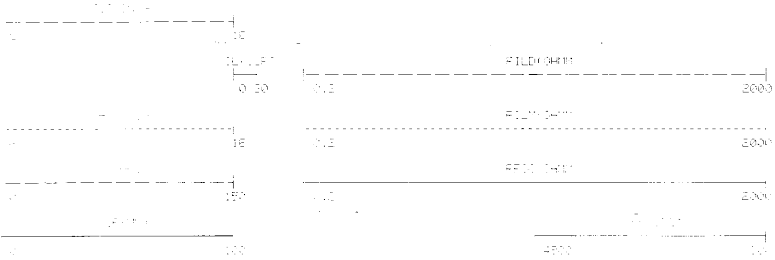
••• [illegible] •••

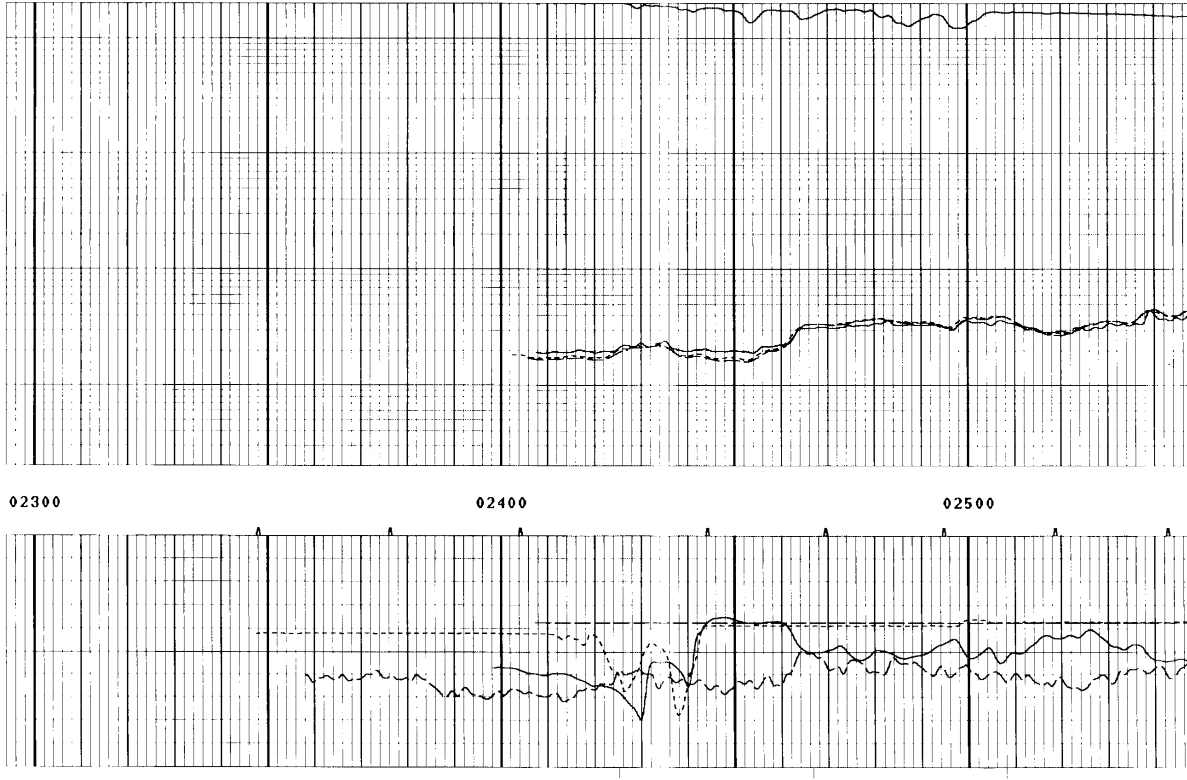
COMPANY: OREGON NATURAL GAS DEVELOPMENT [illegible] RUN: 1

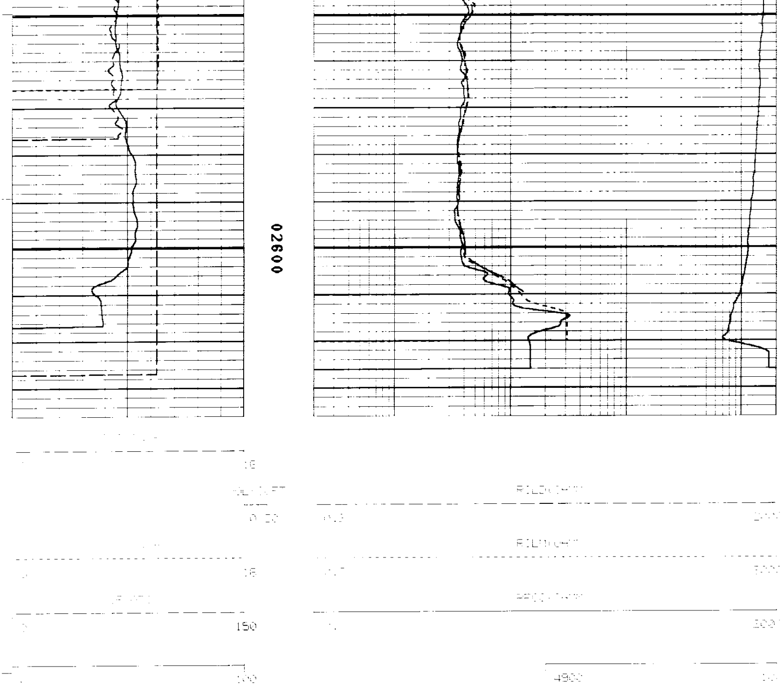
WELL NAME: [illegible] TRIP: 1

SERVICE: [illegible] FILE: 3 DATE: [illegible] TIME: [illegible]

REVISION: [illegible] 0002 VER:2.0 MODE: RECORD







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********************************************
*                                          *
*  CALIBRATION/VERIFICATION SUMMARIES      *
*  DATE 11/29/90          TIME 13:43:23    *
*  RUN  1                 TRIP 1           *
*                                          *
********************************************


      LOG NAME DIFL   ASSET NO. 77837    UNIT NO. B⊠B⍰A=B◦@□
   CALIBRATION ENTERED ON  11/29/90 AT 11:09:48

CURVE   MILLIVOLTS     SCALING FACTORS    ENGINEERING VALUES   UNITS
          LOW    HIGH    ADD.    MULT.        LOW        HIGH
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      DATE 11/21/90         CALIBRATION          TIME 18:45:20

CILD       1.1   524.4   -0.376    1.8629      0.500     500.000 MMHO
CILM      -4.3   495.4    4.470    2.2562      0.500     500.000 MMHO
CFOC       4.1   498.4   -3.130    2.4633      1.000     500.000 MMHO

      DATE 11/21/90    PRIMARY VERIFICATION      TIME 18:54:07

CILD       0.3   517.4   -0.376    1.8629     -0.143     492.126 MMHO
CILM      -0.2   498.6    4.470    2.2562      4.385     503.342 MMHO
CFOC       6.7   503.3   -3.130    2.4633      3.893     504.988 MMHO

      DATE 11/29/90   BEFORE LOG VERIFICATION    TIME 11:48:48
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ILD        4.0   508.3   -3.347    1.8157      -0.143    492.128 MMHO
ILM        0.0   493.4    4.347    2.2811       4.385    503.343 MMHO
SFLU       6.1   495.3   -2.818    2.5003       3.683    504.988 MMHO

     DATE 11/29/90     AFTER LOG VERIFICATION     TIME 13:16:40

ILD        0.3   521.0   -3.347    1.8157      -3.044    507.977 MMHO
ILM       -0.3   522.0    4.347    2.2811       4.301    512.750 MMHO
SFLU       5.2   491.1   -2.818    2.5003       3.429    501.425 MMHO


       LOG NAME GR      ASSET NO. 72384     UNIT NO. XP$ΓCDXXDD
   CALIBRATION ENTERED ON  11/29/90 AT 11:10:30

CURVE    COUNTS/SEC.     SCALING FACTORS     ENGINEERING VALUES    UNITS
           LOW    HIGH    ADD.     MULT.         LOW        HIGH
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     DATE 11/21/90           CALIBRATION           TIME 10:21:14

GR         62.6   256.9     0.000     0.7720       0.000     150.000 API

                         PRIMARY VERIFICATION            NOT DONE

                        BEFORE LOG VERIFICATION          NOT DONE
     DATE 11/29/90     AFTER LOG VERIFICATION     TIME 13:31:21

GR         95.3   278.4     0.000     0.7720      73.572     214.925 API


       LOG NAME CAL     ASSET NO. 38088     UNIT NO. XP$ΓCDXXDD
   CALIBRATION ENTERED ON  11/29/90 AT 11:11:15

CURVE    MILLIVOLTS      SCALING FACTORS     ENGINEERING VALUES    UNITS
           LOW    HIGH    ADD.     MULT.         LOW        HIGH
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     DATE 11/21/90           CALIBRATION           TIME 10:58:36

CAL     4750.9 10054.9     0.626     0.0083       6.000      12.000 INCH

                         PRIMARY VERIFICATION            NOT DONE

     DATE 11/29/90    BEFORE LOG VERIFICATION     TIME 11:53:41

CAL        E     10786.1     0.626     0.0083       E           12.827 INCH

     DATE 11/29/90     AFTER LOG VERIFICATION     TIME 13:13:38

CAL        E     10616.1     0.626     0.0083       E           12.635 INCH
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