Schlumberger

DUAL INDUCTION

CSU

COMPANY: REICHHOLD ENERGY CORPORATION

WELL: COLUMBIA COUNTY #4(REDRILL #1)

FIELD: MIST
COUNTY: COLUMBIA
STATE: OREGON
NATION: USA
LOCATION: 867'S & 1149'W OF NE COR

SEC: 15 TWP: 6N RGE: 5W WB&M

PERMANENT DATUM: GL
ELEV. OF PERM. DATUM: 753.6'
LOG MEASURED FROM: KB
11.4' ABOVE PERM. DATUM
DRLG. MEASURED FROM: KB

ELEVATIONS-
KB: 765.0'
DF:
GL: 753.6'

DATE: 20 JUL 82
RUN NO: 1

DEPTH-DRILLER: 2896.0'
DEPTH-LOGGER: 2891.0'
BTM. LOG INTERVAL: 2885.0'
TOP LOG INTERVAL: 400.0'

CASING-DRILLER: 401'
CASING-LOGGER: 400'
CASING: 7

BIT SIZE: 6.25

OTHER SERVICES-
BHC
HDT

PROGRAM
TAPE NO:
20.2
SERVICE
ORDER NO:
303905

TYPE FLUID IN HOLE: LIGNOSULFONATE(BAROID)
DENSITY: 10.4 LB/G
VISCOSITY: 63.0 S
PH: 10.5
FLUID LOSS: 4.3 C3
SOURCE OF SAMPLE: FLOWLINE
RM: 1.630 OHMM AT 82.0 DF
RMF: 1.160 OHMM AT 70.0 DF
RMC: 1.130 OHMM AT 69.0 DF
SOURCE RMF/RMC: MEASURED/MEASURED
RM AT BHT: 1.343 OHM AT 101. DF
RMF AT BHT: 0.827 OHM AT 101. DF
RMC AT BHT: 0.795 OHM AT 101. DF

TIME CIRC. STOPPED: 1515
TIME LOGGER ON BTM.: 1900

MAX. REC. TEMP: 101.0 DF

LOGGING UNIT NO: 8076
LOGGING UNIT LOC: SACRAMENTO
RECORDED BY: MAYER
WITNESSED BY: ALGER

REMARKS:

EQUIPMENT NUMBERS-

DIS 457 DIC 342 IEM 231

ALL INTERPRETATIONS ARE OPINIONS BASED ON INFERENCES FROM ELECTRICAL OR OTHER MEASUREMENTS AND WE CANNOT, AND DO NOT GUARANTEE THE ACCURACY OR CORRECTNESS OF ANY INTERPRETATIONS, AND WE SHALL NOT, EXCEPT IN THE CASE OF GROSS OR WILLFUL NEGLIGENCE ON OUR PART, BE LIABLE OR RESPONSIBLE FOR ANY LOSS, COSTS, DAMAGES OR EXPENSES INCURRED OR SUSTAINED BY ANYONE RESULTING FROM ANY INTERPRETATION MADE BY ANY OF OUR OFFICERS, AGENTS OR EMPLOYEES. THESE INTERPRETATIONS ARE ALSO SUBJECT TO OUR GENERAL TERMS AND CONDITIONS AS SET OUT IN OUR CURRENT PRICE SCHEDULE.

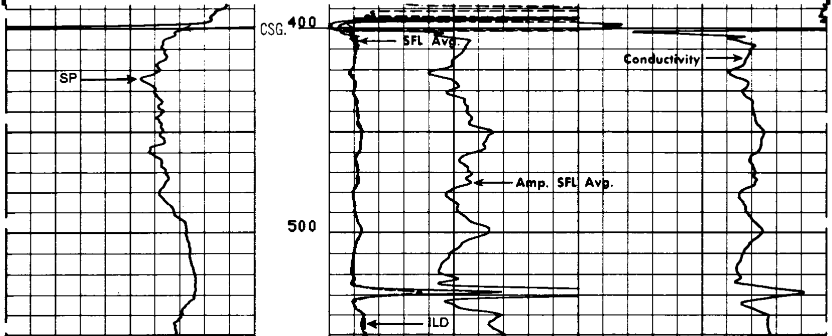
FILE

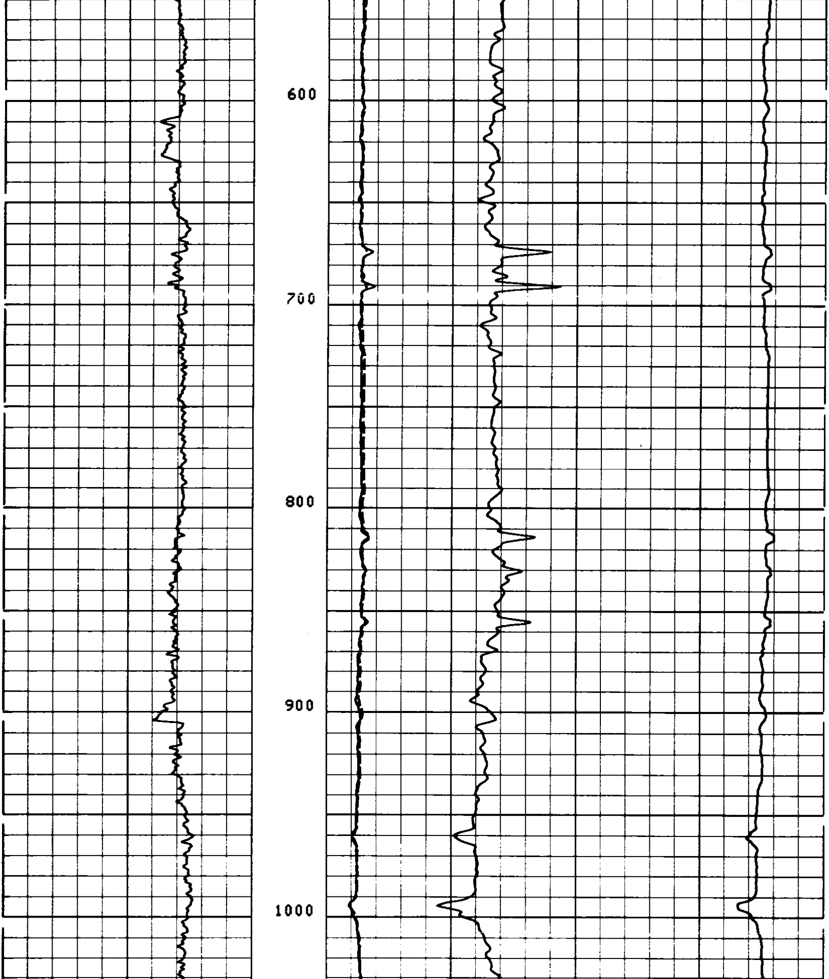
9

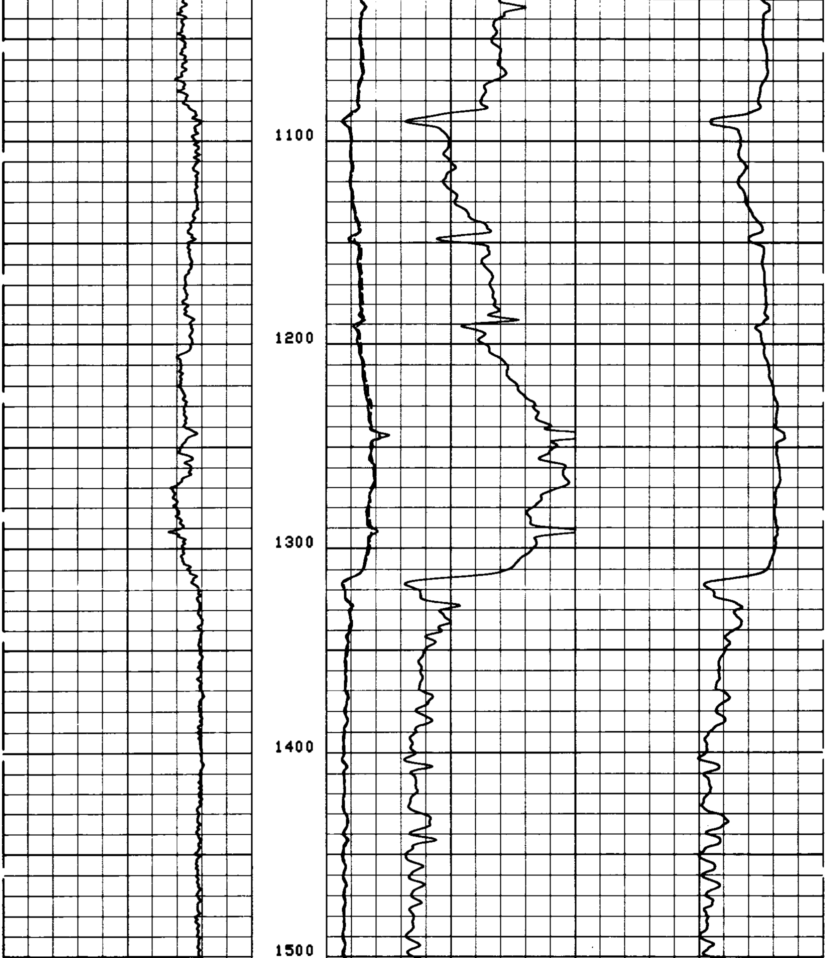
		ILD (OHMM) 0.0 30.00 SFLA(OHMM) 0.0 6.000 SFLA(OHMM) 0.0 30.00	
SP (MV) -110.0 -10.00			CILD(MMHO) 1000. 0.0

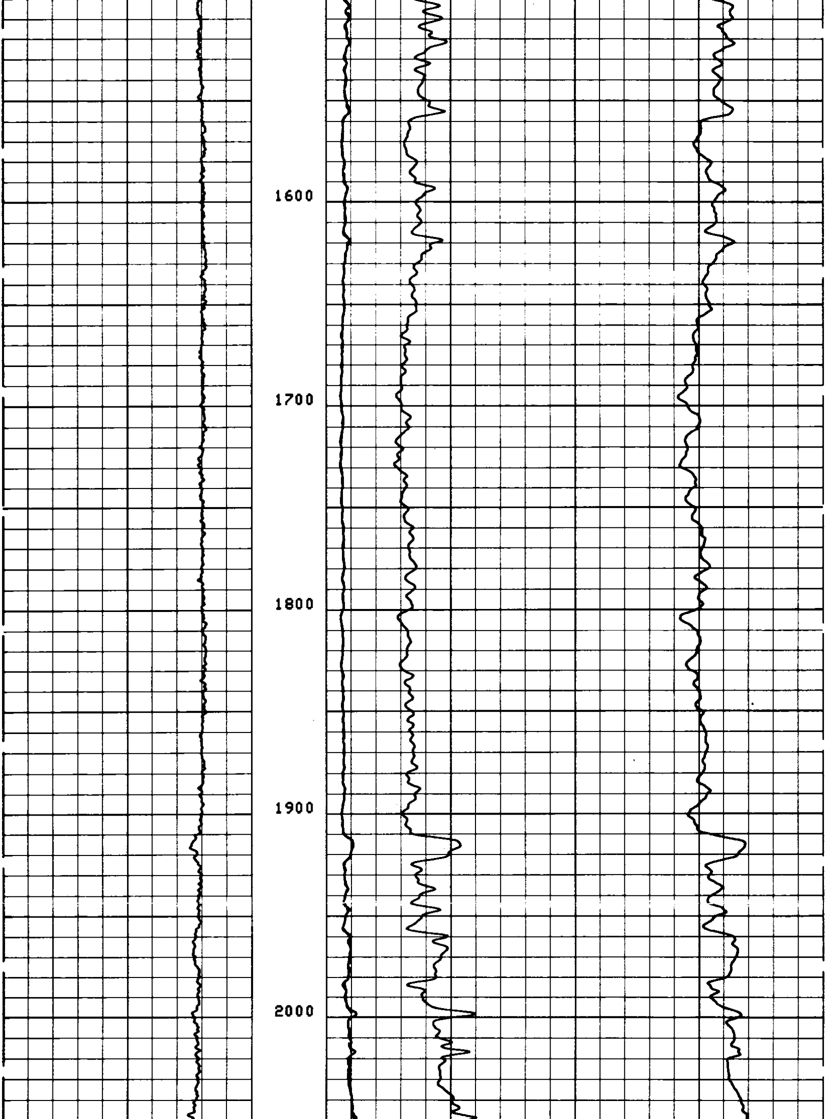
FILE

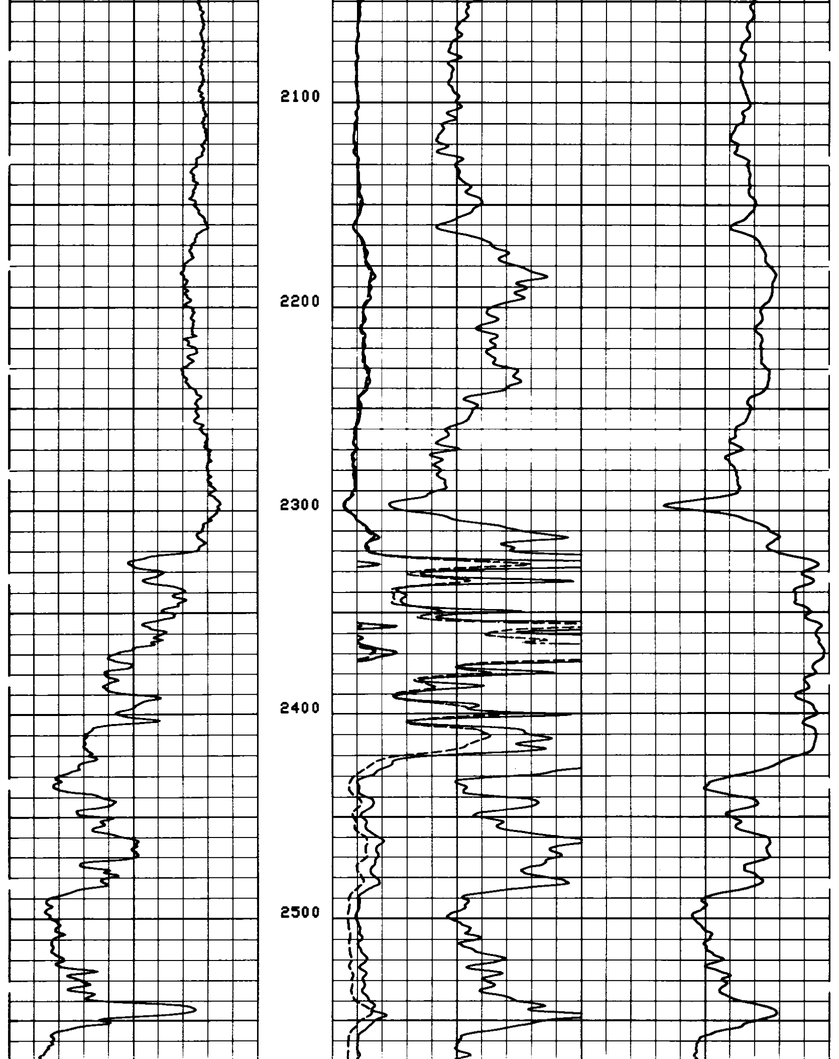
9

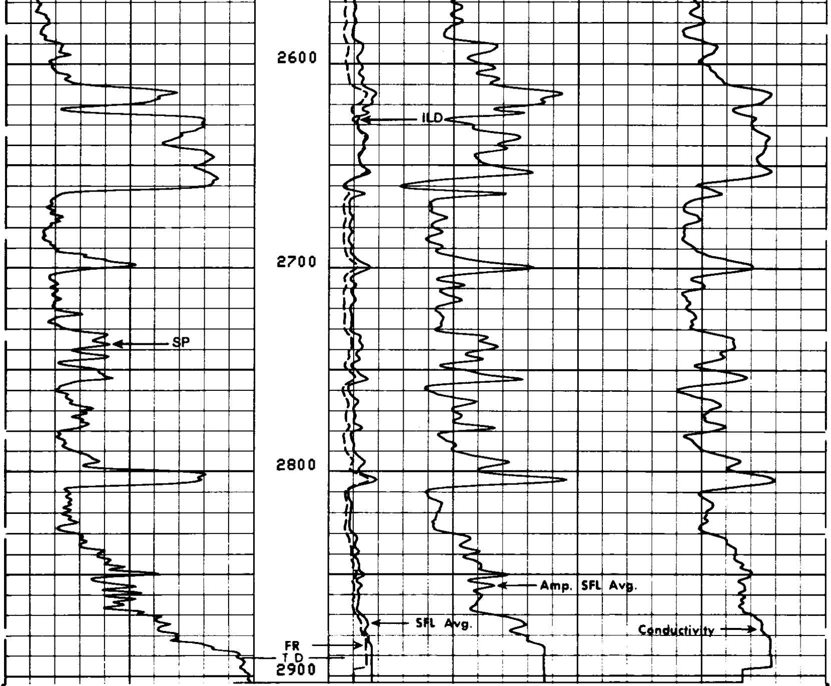












FILE

9

SP (MV)		ILD (OHMM)		CILD(MMHO)	
		0.0	30.00		
		SFLA(OHMM)			
		0.0	6.000		
		SFLA(OHMM)			
-110.0	-10.00	0.0	30.00	1000.	0.0

SENSOR MEASURE POINT TO TENSION REFERENCE POINT

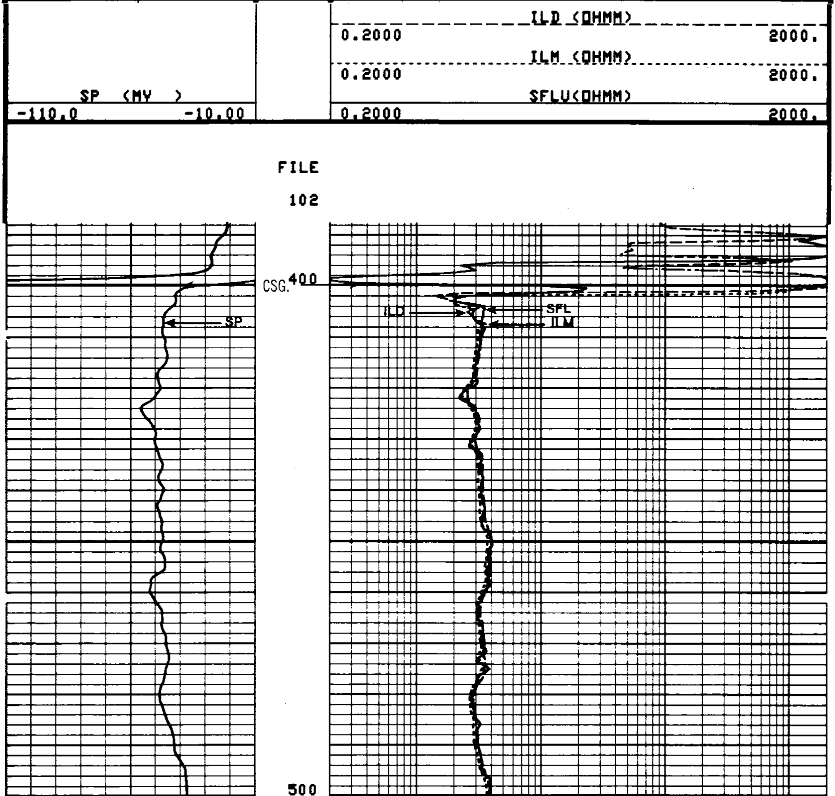
AMPL	41.4	FEET	DT	38.9	FEET
SRAT	38.9	FEET	CBL	41.4	FEET
CALI	29.3	FEET	TT	41.4	FEET
SFL	3.9	FEET	ILD	6.9	FEET
SP	.0	FEET	ILM	3.3	FEET
TENS	.0	FEET	SPAR	.0	FEET
NOIS	33.2	FEET			

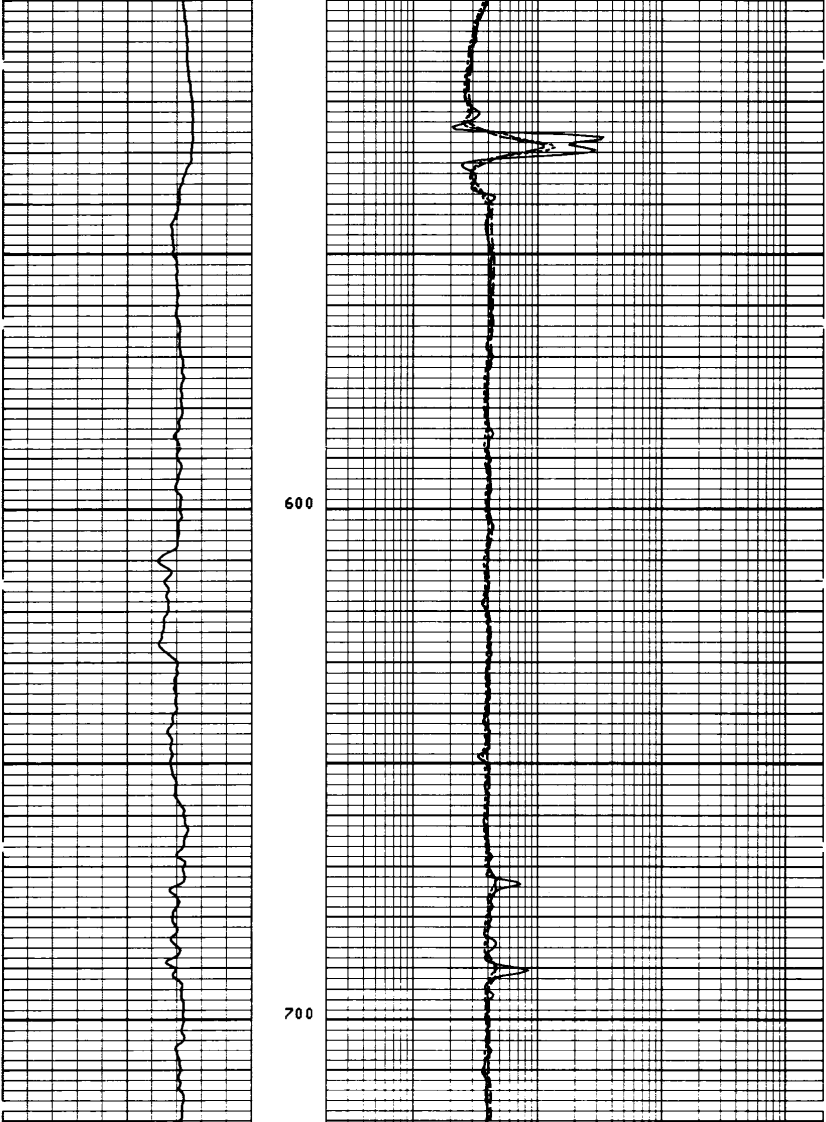
PARAMETERS

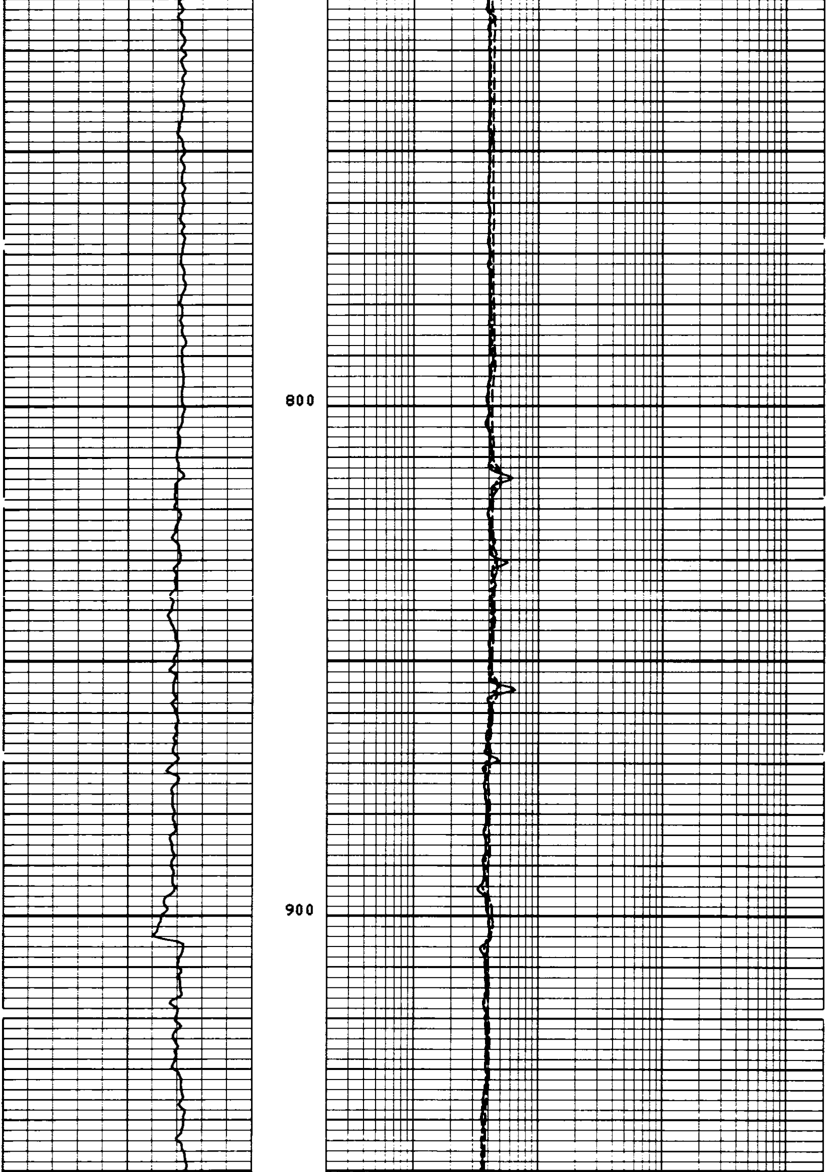
NAME	VALUE	UNIT	NAME	VALUE	UNIT
CDTS	145.0		BS	6.250	IN
DTF	189.0	US/F	DTM	55.60	US/F
SBR	1.000	OHMM	DSEC	9.600	MMHO
FPHI	SPHI		MSEC	7.900	MMHO
DO	0.0		BHS	OPEN	

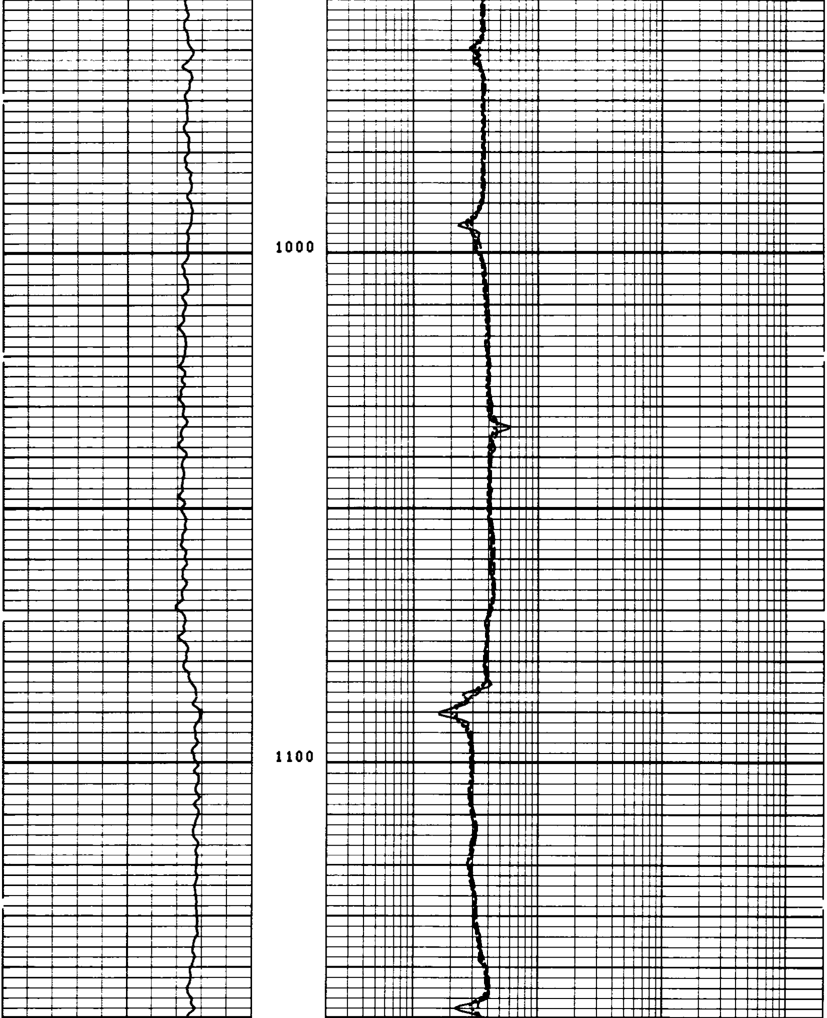
DETAIL LOG

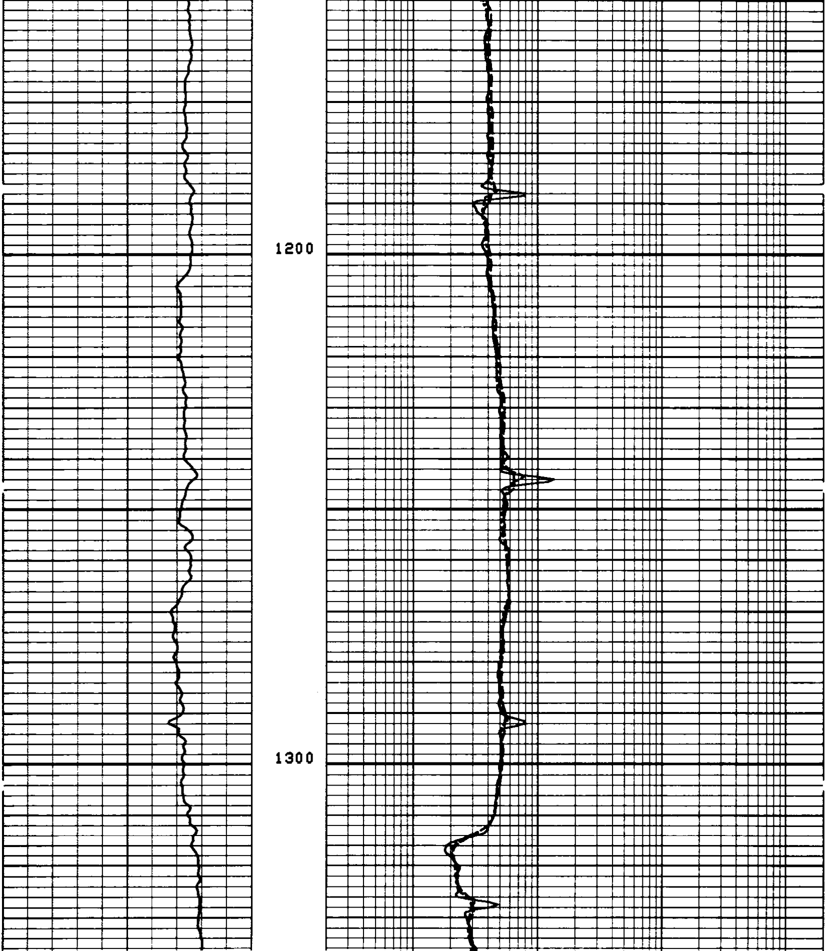
5" = 100

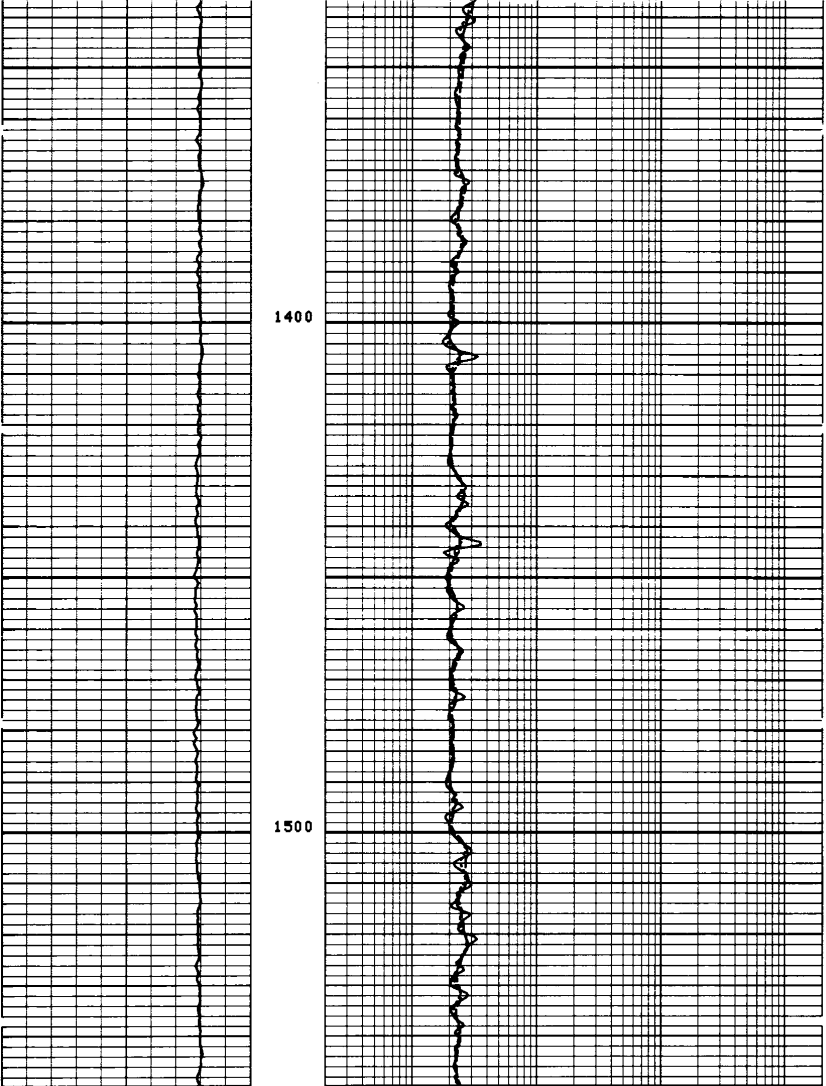


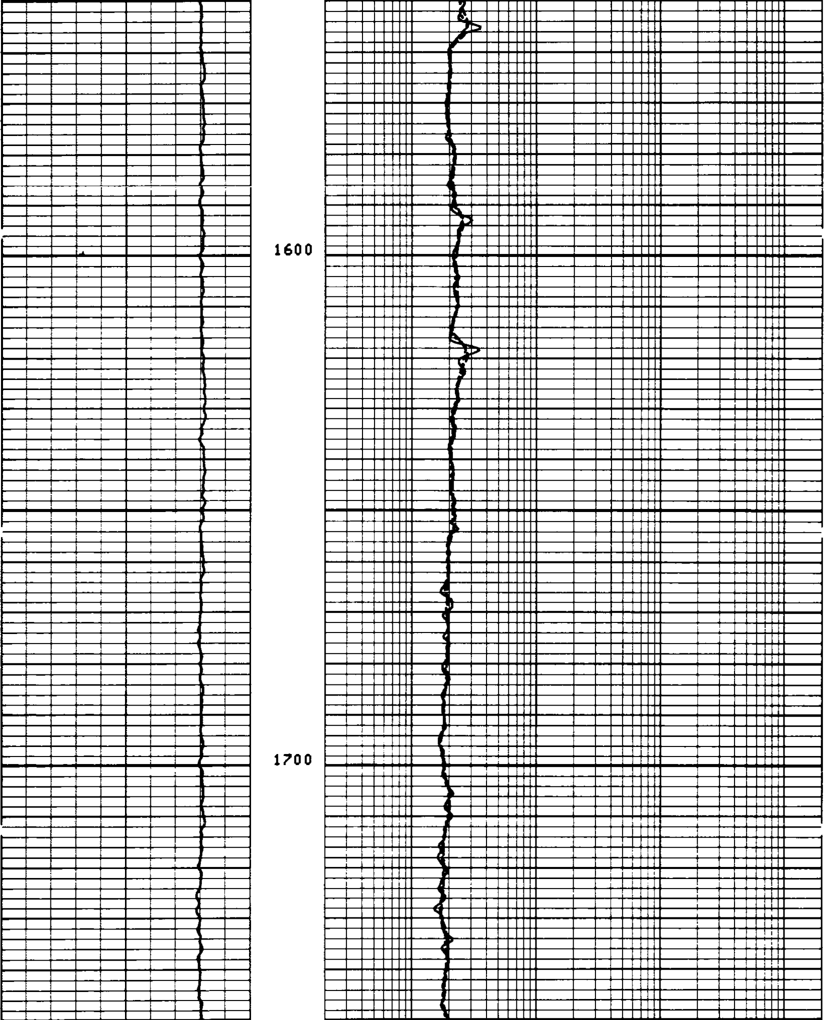


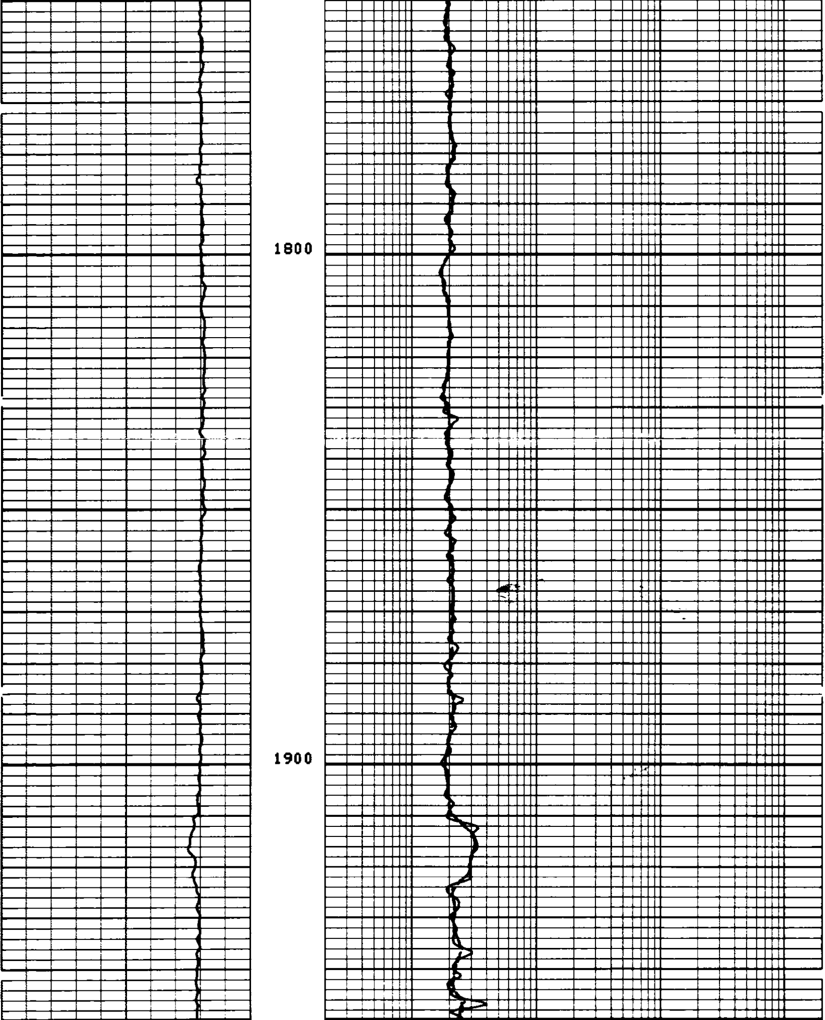


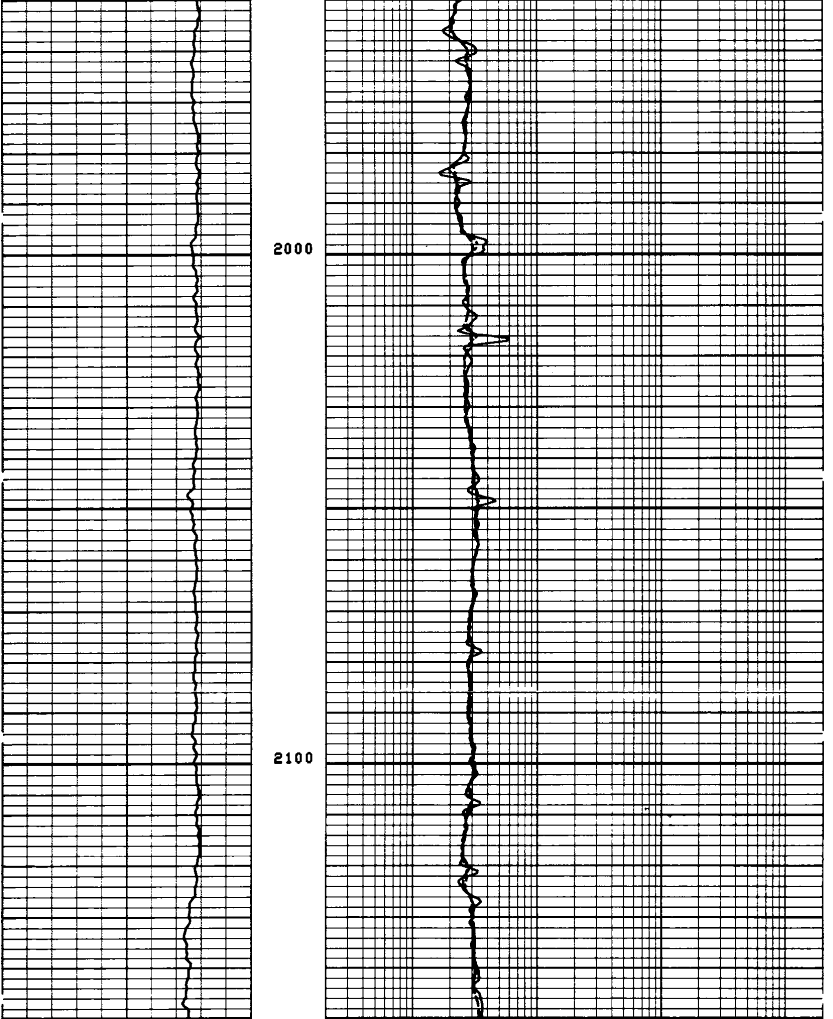


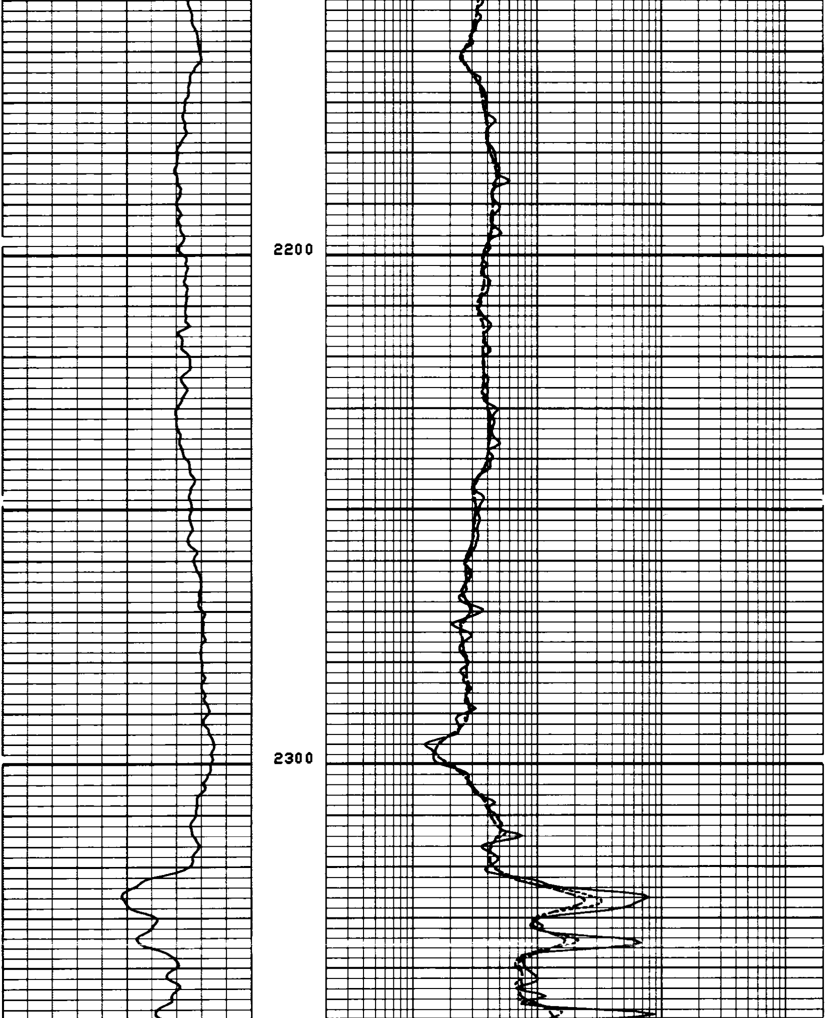


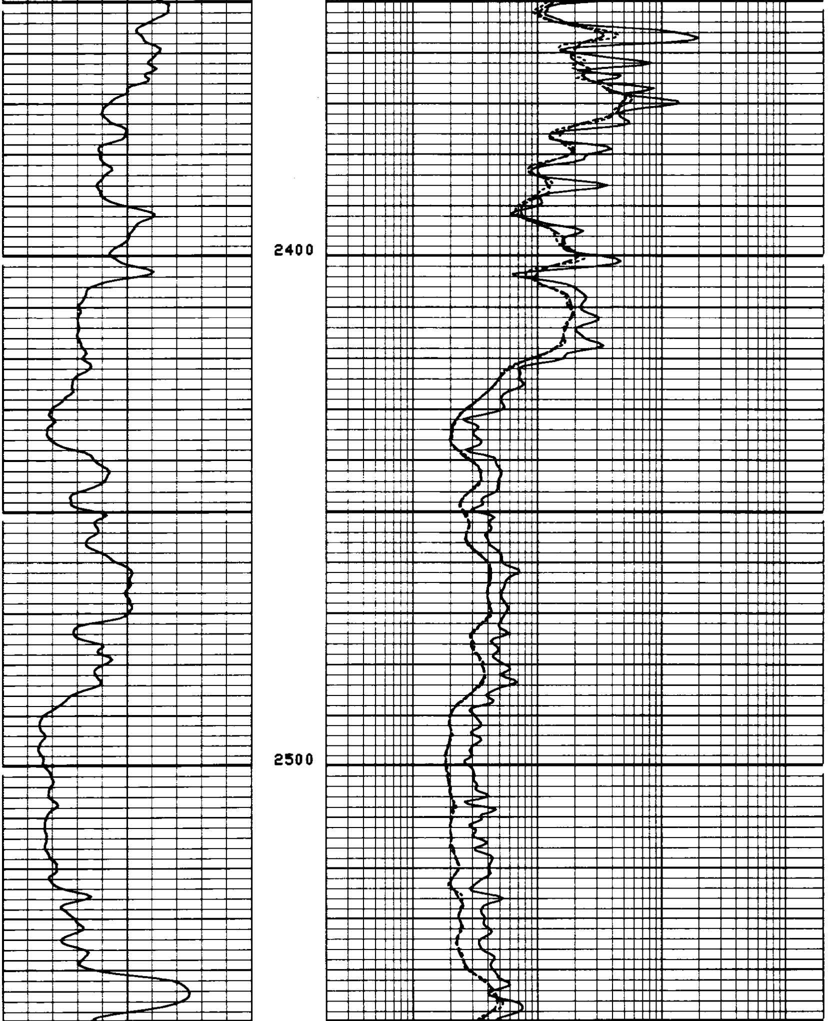


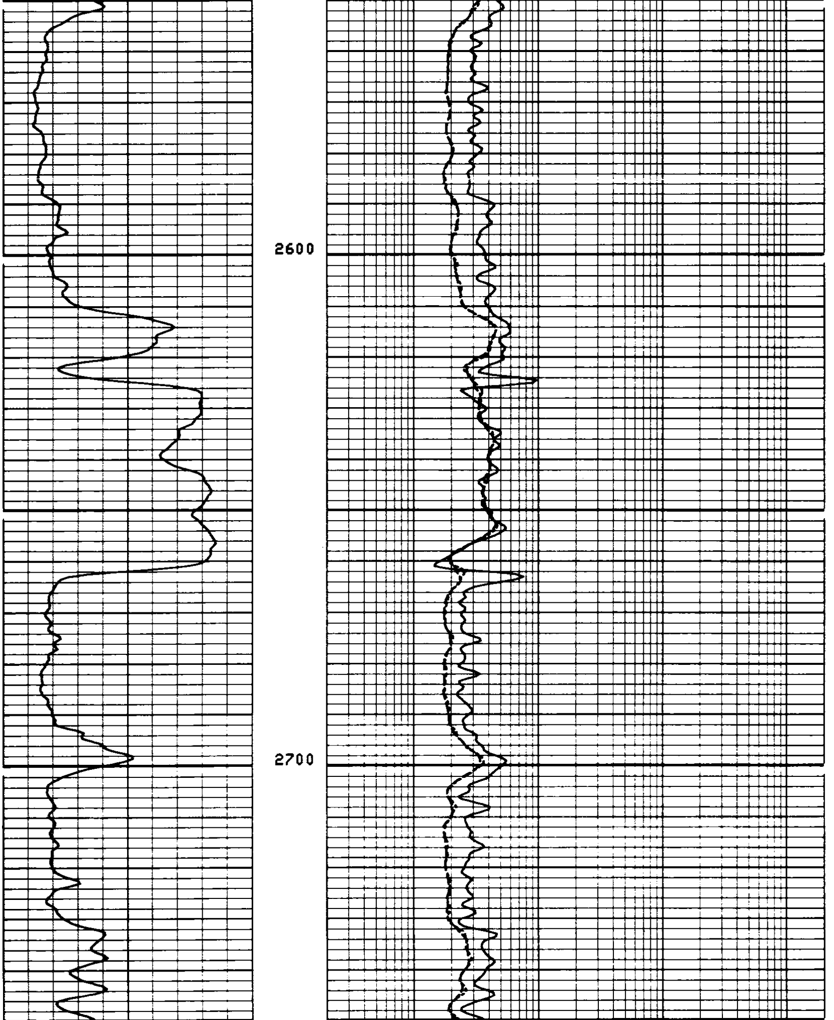


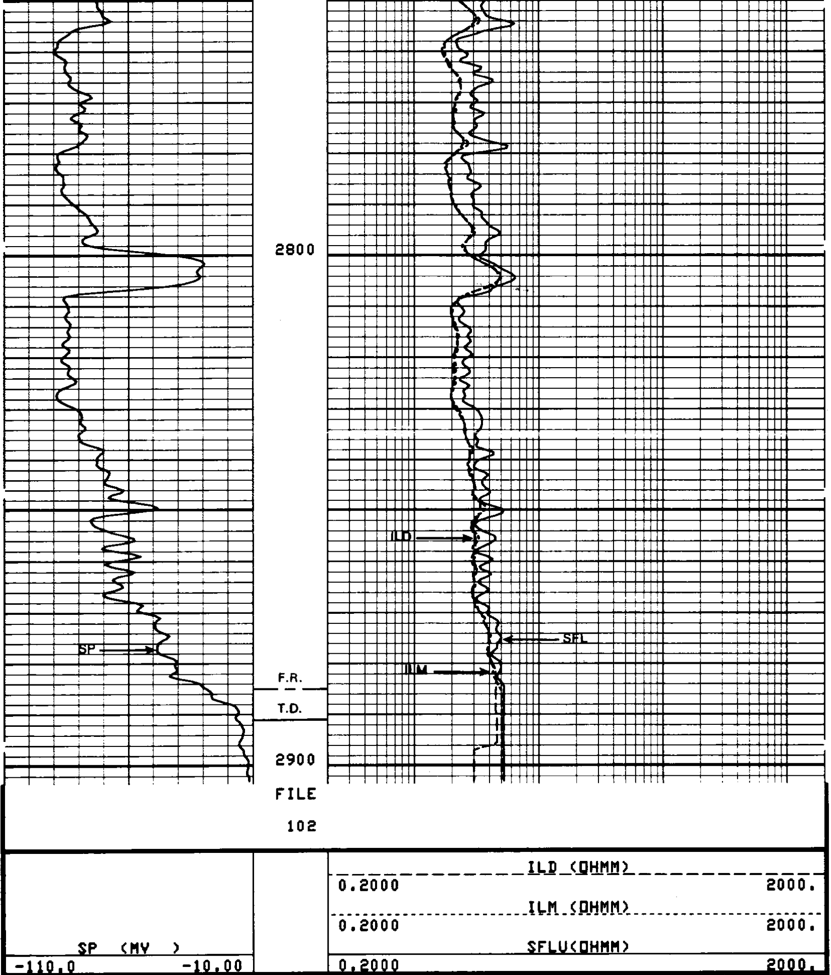












SENSOR MEASURE POINT TO TENSION REFERENCE POINT

AMPL	41.4	FEET	DT	38.9	FEET
SRAT	38.9	FEET	CBL	41.4	FEET
CALI	29.3	FEET	TT	41.4	FEET
SFL	3.9	FEET	ILD	6.9	FEET
SP	.0	FEET	ILM	3.3	FEET
TENS	.0	FEET	SPAR	.0	FEET
NOIS	33.2	FEET			

PARAMETERS

NAME	VALUE	UNIT	NAME	VALUE	UNIT
CDTS	145.0		BS	6.250	IN
DTF	189.0	US/F	DTM	55.60	US/F
SBR	1.000	OHMM	DSEC	9.600	MMHO
FPHI	SPHI		MSEC	7.900	MMHO
DO	0.0		BHS	OPEN	

REPEAT SECTION

SP (MV)
-110.0 -10.00

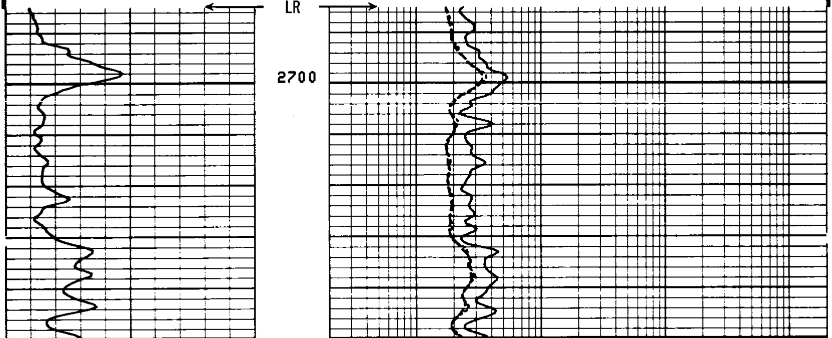
ILD (OHMM)
0.2000 2000.

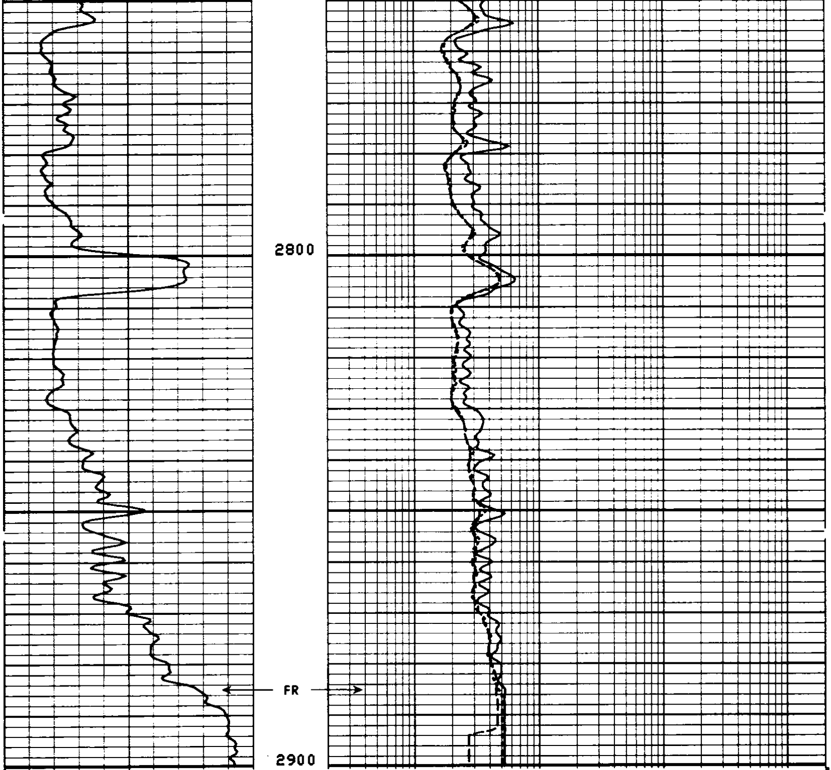
ILM (OHMM)
0.2000 2000.

SFLU(OHMM)
0.2000 2000.

FILE

101





FILE

101

ILD (OHMM)
0.2000 2000.

ILM (OHMM)
0.2000 2000.

SP (MV)
-110.0 -10.00

SFLU(OHMM)
0.2000 2000.

SENSOR MEASURE POINT TO TENSION REFERENCE POINT

AMPL	41.4	FEET	DT	38.9	FEET
SRAT	38.9	FEET	CBL	41.4	FEET
CALI	29.3	FEET	TT	41.4	FEET
SFL	3.9	FEET	ILD	6.9	FEET
SP	.0	FEET	ILM	3.3	FEET
TENS	.0	FEET	SPAR	.0	FEET
NOIS	33.2	FEET			

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                              PARAMETERS

      NAME  VALUE    UNIT                  NAME  VALUE    UNIT

      CDTS  145.0                          BS    6.250    IN
      DTF   189.0    US/F                  DTM   55.60    US/F
      SBR   1.000    OHMM                  DSEC  9.600    MMHO
      FPHI  SPHI                           MSEC  7.900    MMHO
      DO    0.0                            BHS   OPEN
```

CALIBRATION RECORD

```
              AFTER SURVEY TOOL CHECK SUMMARY


   PERFORMED:      82/07/20
   PROGRAM FILE: ISN     (VERSION    20.2    81/ 1/30)


  DITD                     TOOL  CHECK

                     ZERO                         PLUS
           BEFORE         AFTER          BEFORE      AFTER     UNITS
     ILD     0.0           -0.0           506.6       508.9     MMHO
     ILM     0.0            0.0           503.0       501.7     MMHO
     SFL     0.0            0.0           500.0       482.2     MMHO

  ILD  SONDE ERROR CORRECTION :         9.6    MMHO
  ILM  SONDE ERROR CORRECTION :         7.9    MMHO
                         FILE

                          11


              BEFORE SURVEY CALIBRATION SUMMARY


   PERFORMED:      82/07/20
   PROGRAM FILE: ISN     (VERSION    20.2    81/ 1/30)


  DITD               ELECTRONICS CALIBRATION SUMMARY

                MEASURED                     CALIBRATED
             ZERO    PLUS                  ZERO       PLUS          UNITS
     ILD      3.8    549.6                  0.0       506.6          MMHO
     ILM      4.1    524.4                  0.0       503.0          MMHO
     SFL      0.9    500.5                  0.0       500.0          MMHO

  ILD  SONDE ERROR CORRECTION :         9.6    MMHO
  ILM  SONDE ERROR CORRECTION :         7.9    MMHO


               SHOP SUMMARY


   PERFORMED:      82/07/02
   PROGRAM FILE: SHOP   (VERSION    20.2    81/ 1/30)


  DITD               ELECTRONICS CALIBRATION SUMMARY
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                  TEST LOOP CALIBRATION              TOOL CHECK
              MEASURED            CALIBRATED           CALIBRATED
           ZERO      PLUS      ZERO        PLUS      ZERO        PLUS    UNITS
   ILD     -8.1      529.1     0.0         500.0     0.0         506.5   MMHO
   ILM     -6.1      511.2     0.0         500.0     0.0         503.0   MMHO
 ILD  SONDE ERROR CORRECTION :          9.6     MMHO
 ILM  SONDE ERROR CORRECTION :          7.9     MMHO

                         (IS:457   , IC:342   )
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CALIBRATION RECORD

COMPANY REICHHOLD ENERGY CORPORATION

WELL COLUMBIA COUNTY #4 (REDRILL #1)

FIELD MIST

COUNTY COLUMBIA STATE OREGON

SCHL. FR 2885.0
SCHL. TD 2891.0
DRLR. TD 2896.0

Elev: KB 765.0
DF N A
GL 753.6