Schlumberger

5" DUAL INDUCTION SFL GR

CSU

COMPANY: ARCO EXPLORATION AND TECH.

WELL: CROWN ZELLER GA[illegible]23-15

FIELD: PITTSBURG
COUNTY: COLUMBIA
STATE: OREGON
NATION: USA
LOCATION: 841.09'S & 1799.72'E
OF W 1/4 COR
SEC: 15 TWP: 5N RGE: 5W

PERMANENT DATUM: GL
ELEV. OF PERM. DATUM: 720.9 F
LOG MEASURED FROM: KB
20.0 F ABOVE PERM. DATUM
DRLG. MEASURED FROM: KB

ELEVATIONS-
KB: 740.9 F
DF:
GL: 720.9 F

DATE: 7 DEC 85
RUN NO: 1

DEPTH-DRILLER: 2770.0 F
DEPTH-LOGGER: 2751.0 F
BTM. LOG INTERVAL: 2745.0 F
TOP LOG INTERVAL: 420.0 F

CASING-DRILLER: 420.0 F
CASING-LOGGER: 420.0 F
CASING: 9 5/8
WEIGHT:
BIT SIZE: 8 3/4
DEPTH:

RECEIVED
JAN 21 1986
DOGAMI
Portland

OTHER SERVICES-
FDC CNL GR
HDT
SLT

PROGRAM
TAPE NO:
28.2A
SERVICE
ORDER NO:
432363

TYPE FLUID IN HOLE: MULTI DESCO
DENSITY: 9.00 LB/G
VISCOSITY: 40.0 S
PH: 8.5
FLUID LOSS: 8.0 C3
SOURCE OF SAMPLE: FLOWLINE
RM: 2.330 OHMM AT 60.0 DEGF
RMF: 2.950 OHMM AT 44.0 DEGF
RMC: 3.090 OHMM AT 49.0 DEGF
SOURCE RMF/RMC: MEAS/MEAS
RM AT BHT: 1.609 OHMM AT 90.0 DEGF
RMF AT BHT: 1.551 OHMM AT 90.0 DEGF
RMC AT BHT: 1.784 OHMM AT 90.0 DEGF

TIME CIRC. STOPPED: 20:00 12/6
TIME LOGGER ON BTM.: 0230 12/7

MAX. REC. TEMP: 90.0 DEGF

LOGGING UNIT NO:	8126
LOGGING UNIT LOC:	SACRAMENTO
RECORDED BY:	KUNKLER
WITNESSED BY:	ANDERSON

REMARKS:

CHLORIDES: 300 PPM
1.5 IN. STANDOFFS USED ON DIL
2 CMEZ'S USED ON SONIC
REPEAT TAKEN OVER ZONE OF INTEREST AT 2300'.

EQUIPMENT NUMBERS-

DIS 1422	DIC 1149	SLS 375	SLC 1259
MCD 1186	SGT 466		

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.

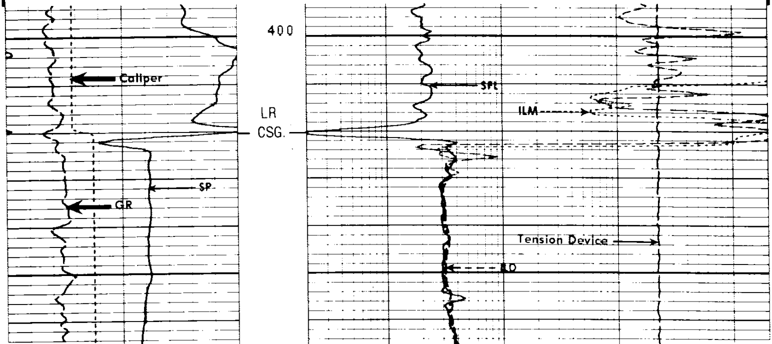
CP 28.2A FILE 13 07-DEC-85 03:45
DATA ACQUIRED NA

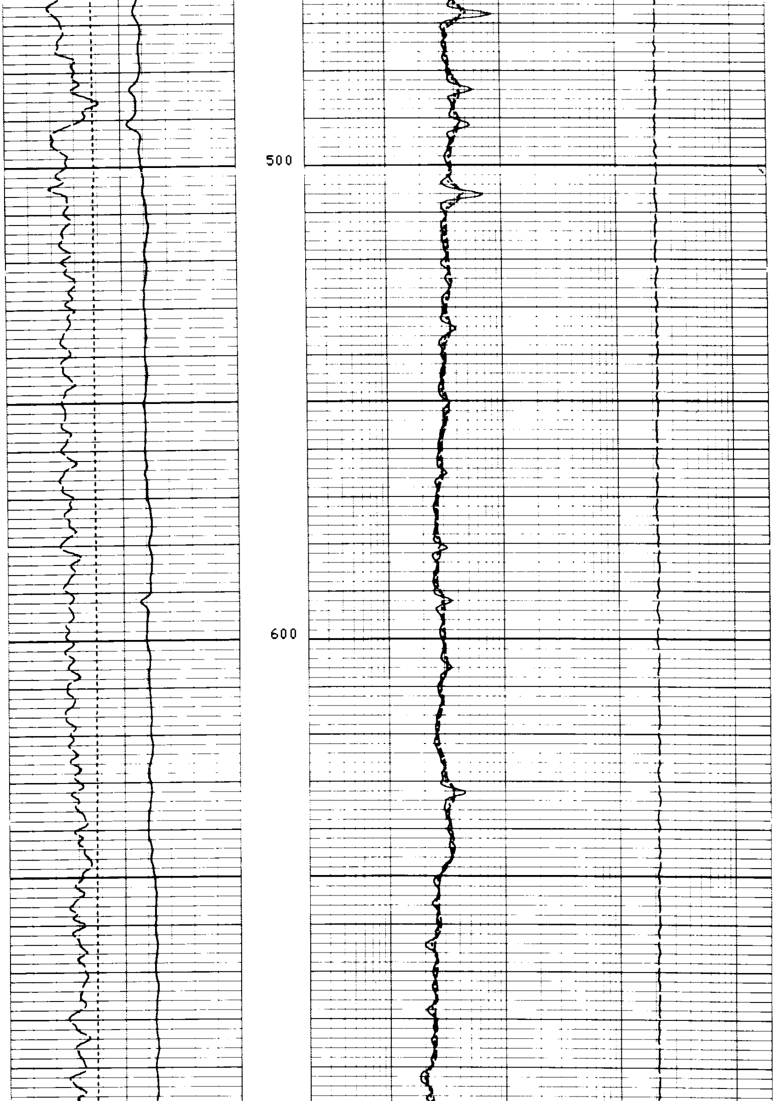
TENS(LB)
10000. 0.0

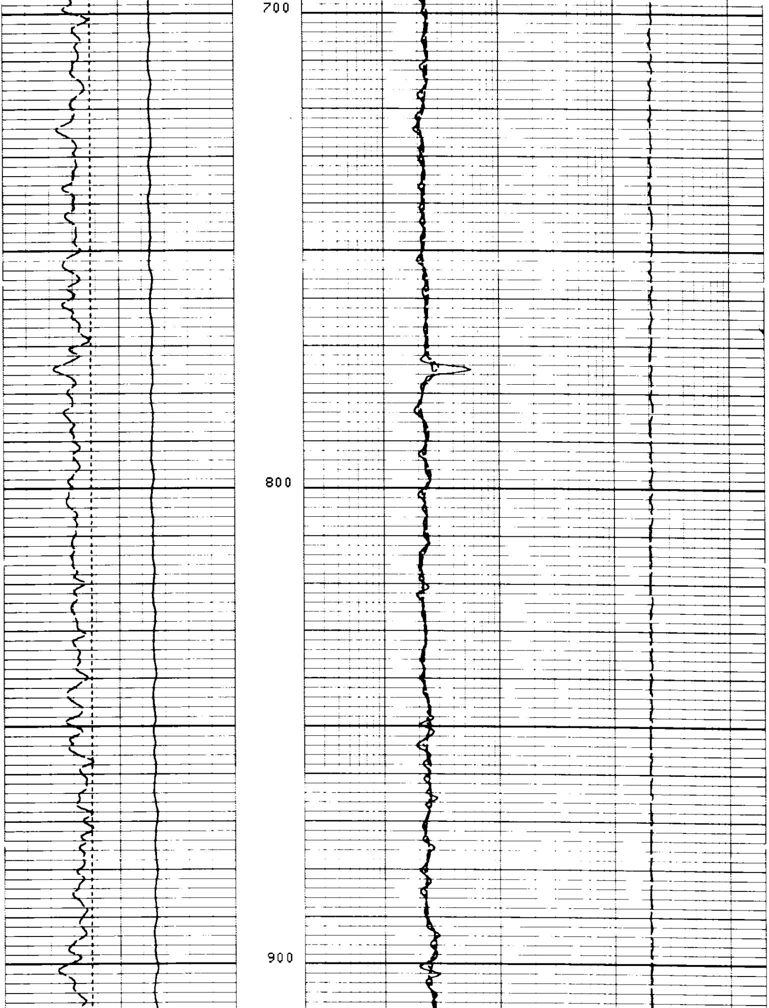
CALI(IN)
6.0000 16.000
GR (GAPI)
0.0 150.00
SP (MV)
-100.0 0.0

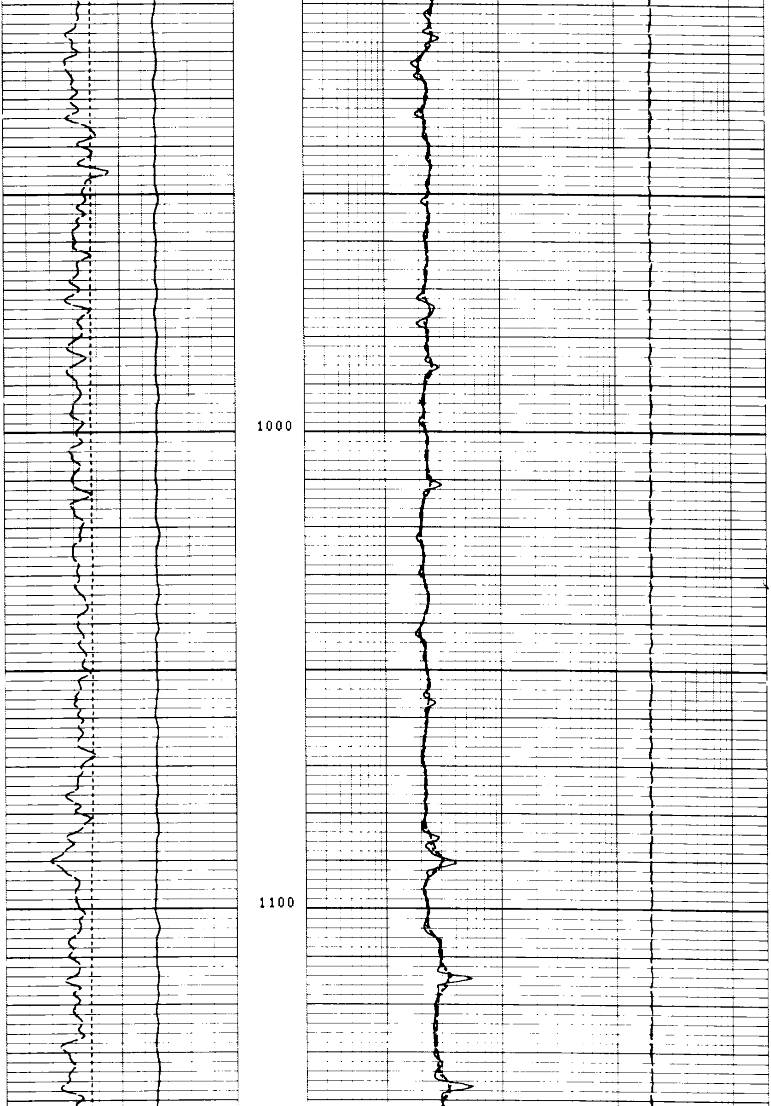
ILD (OHMM)
.20000 2000.0
ILM (OHMM)
.20000 2000.0
SFLU(OHMM)
.20000 2000.0

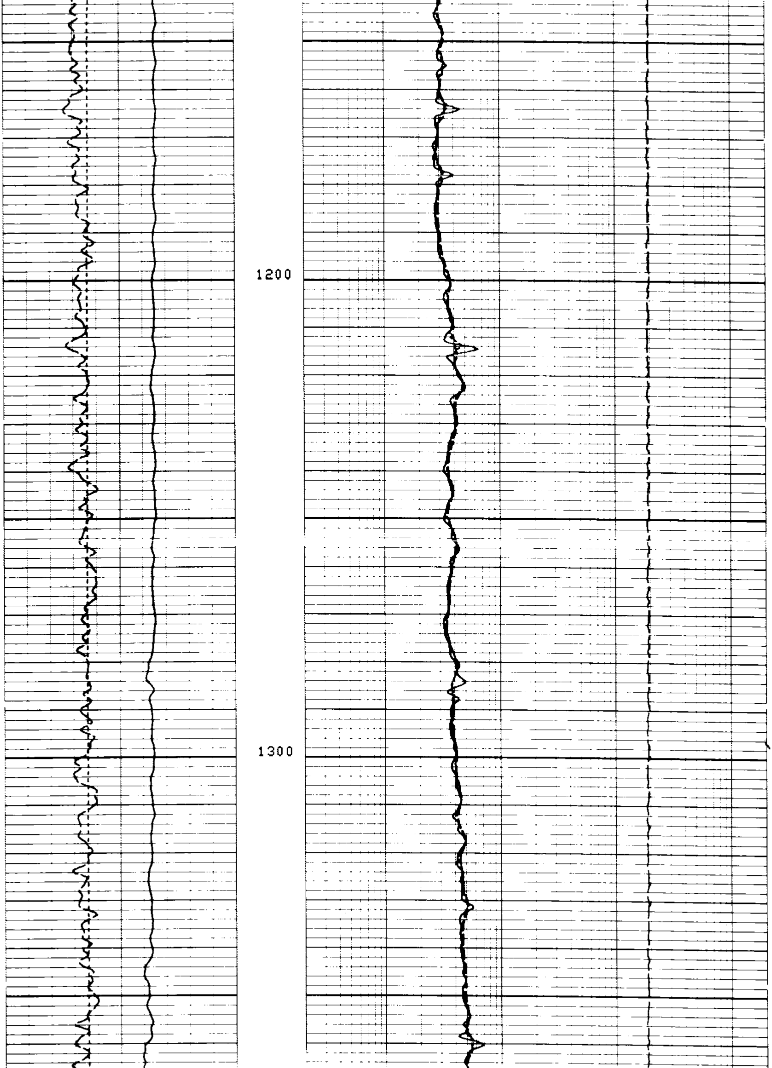
CP 28.2A FILE 9 07-DEC-85 03:14

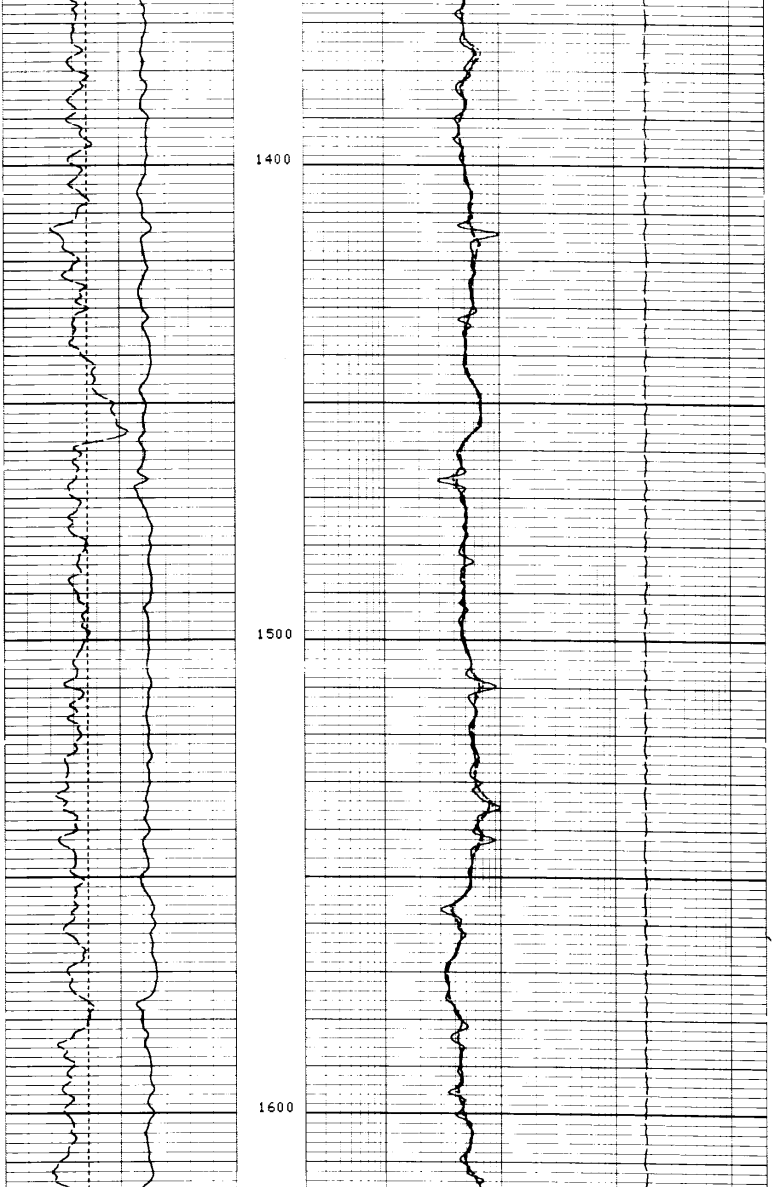


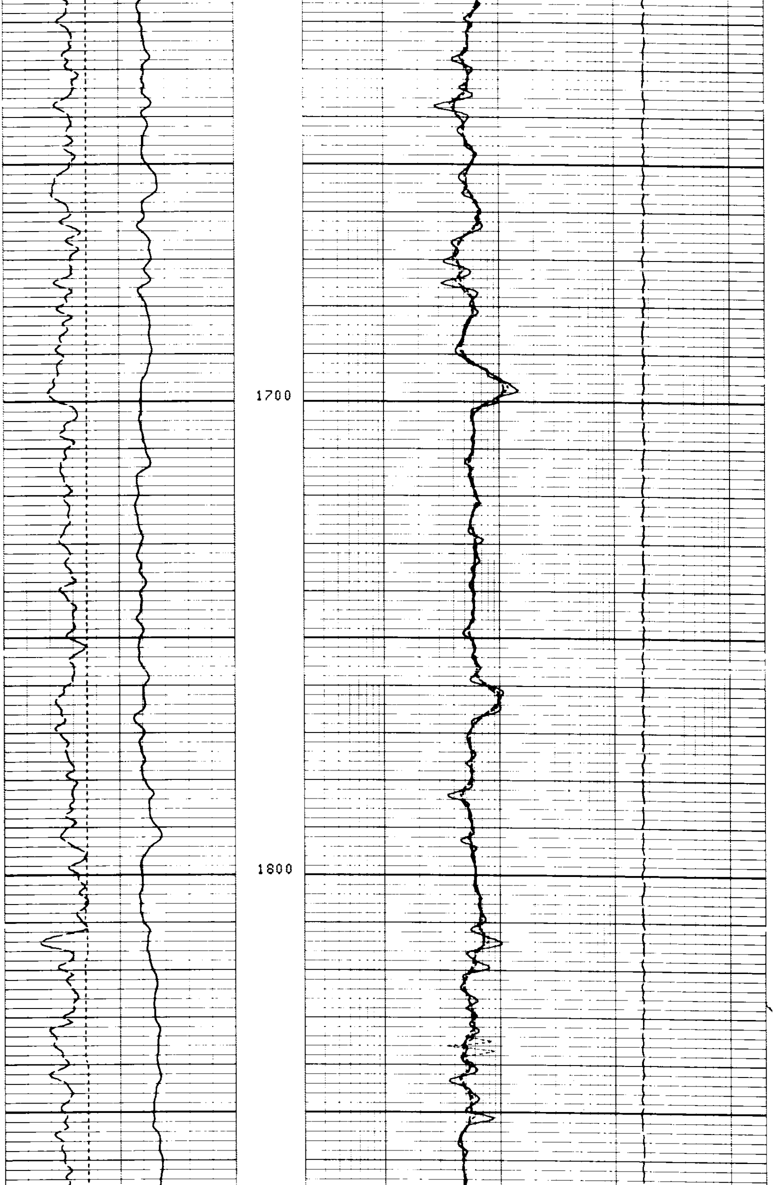


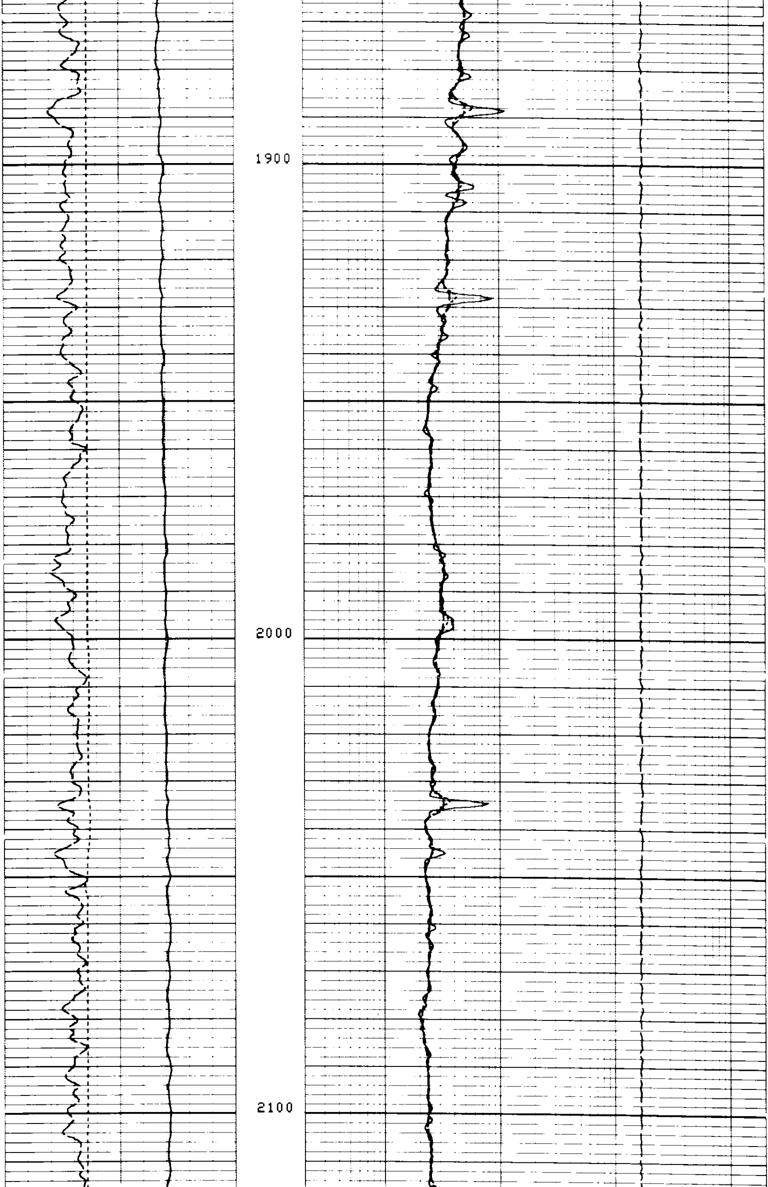


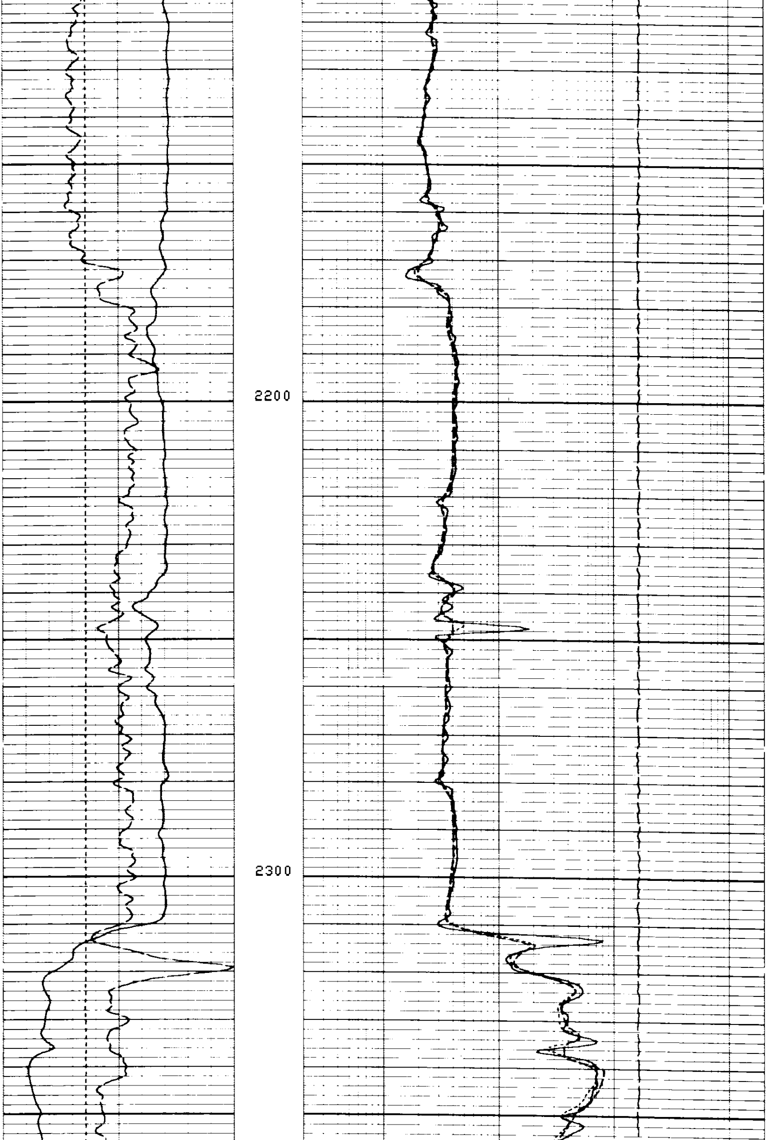


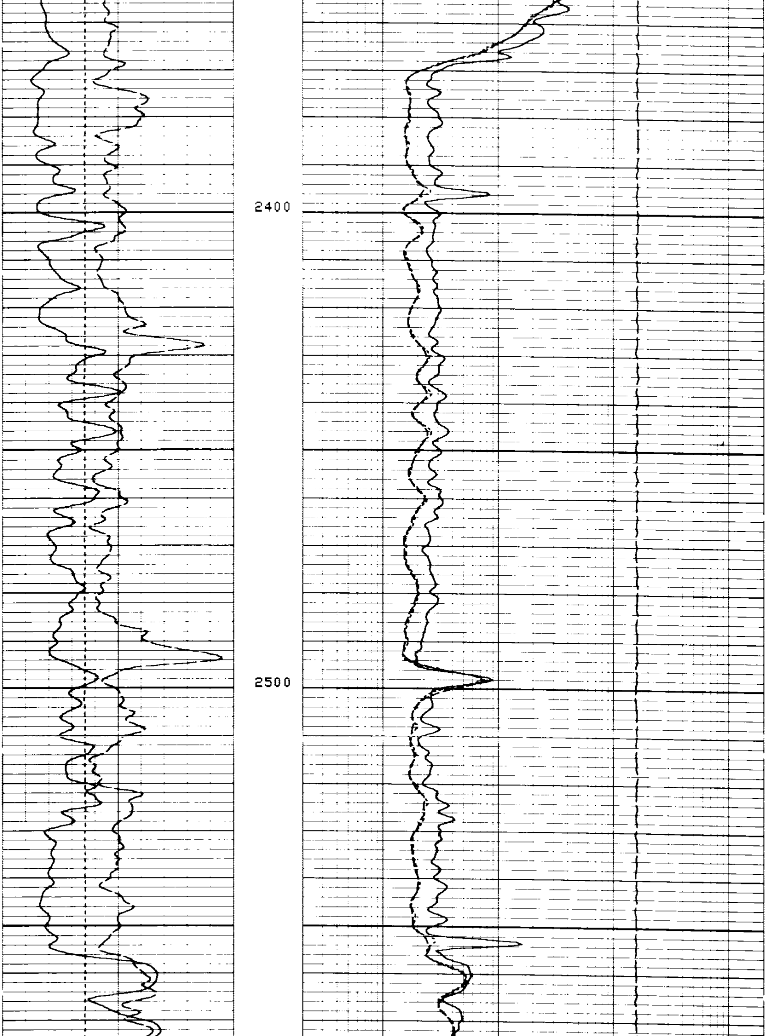


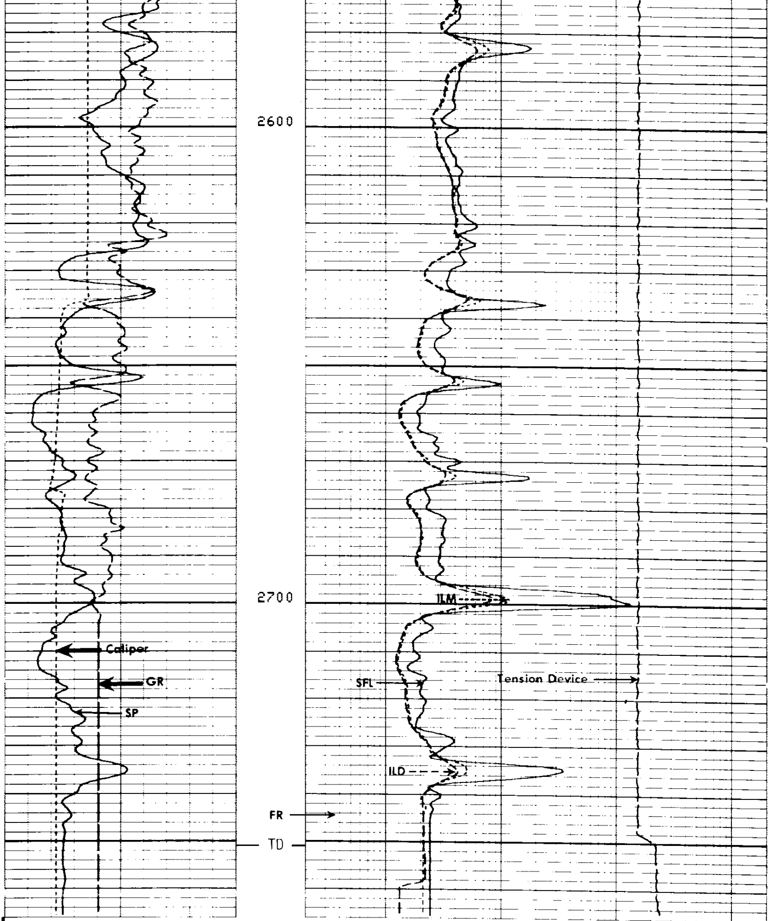












CP 28.2A FILE 9 07-DEC-85 02:29

TENS(LB)
10000. 0.0

CALI(IN)
6.0000 16.000

ILD (OHMM)
.20000 2000.0

GR (GAPI)
0.0 150.00

ILM (OHMM)
.20000 2000.0

SP (MV)
-100.0 0.0

SFLU(OHMM)
.20000 2000.0

SENSOR MEASURE POINT TO TOOL ZERO

SRAT	34.6	FEET	AMPL	37.1	FEET
TT1	36.1	FEET	CBL	37.1	FEET
TT3	33.3	FEET	TT2	37.1	FEET
T0	37.1	FEET	TT4	32.3	FEET
SLTT	37.1	FEET	TT	37.1	FEET
GR	64.1	FEET	SCBL	37.1	FEET
ILD	9.4	FEET	CALI	56.2	FEET
SFL	6.4	FEET	ILM	5.8	FEET
SPAR	2.5	FEET	SP	2.5	FEET
NOIS	2.5	FEET	TENS	2.5	FEET

PARAMETERS

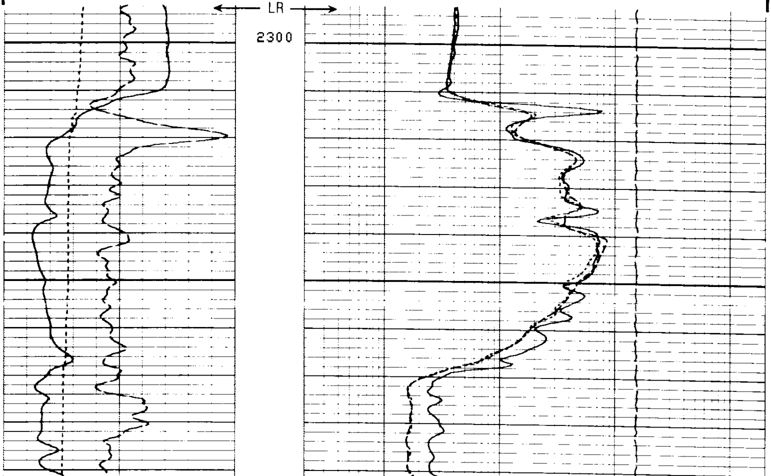
NAME	VALUE	UNIT	NAME	VALUE	UNIT
CDTS	100.000		SPFS	R-H	
DTF	189.000	US/F	DTM	56.0000	US/F
DSIN	5	US	DDEL	200	US
WMUD	8.00000	LB/G	DWCD	512	
SBR	1.00000	OHMM	DSEC	4.50000	MMHO
BHS	OPEN		MSEC	4.50000	MMHO
BS	8.00000	IN			

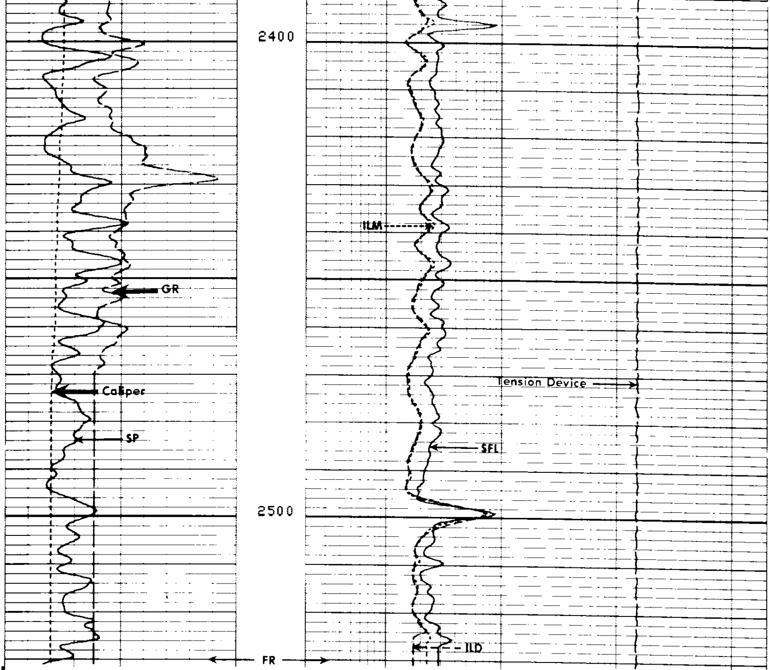
CALI(IN)
6.0000 16.000
GR (GAPI)
0.0 150.00
SP (MV)
-100.0 0.0

TENS(LB)
10000. 0.0
ILD (OHMM)
.20000 2000.0
ILM (OHMM)
.20000 2000.0
SFLU(OHMM)
.20000 2000.0

REPEAT SECTION

CP 28.2A FILE 7 07-DEC-85 02:14





CP 28.2A FILE 7 07-DEC-85 02:08

CALI(IN)	6.0000	16.000
GR (GAPI)	0.0	150.00
SP (MV)	-100.0	0.0
TENS(LB)	10000.	0.0
ILD (OHMM)	.20000	2000.0
ILM (OHMM)	.20000	2000.0
SFLU(OHMM)	.20000	2000.0

SENSOR MEASURE POINT TO TOOL ZERO

SRAT	34.6	FEET	AMPL	37.1	FEET
TT1	36.1	FEET	CBL	37.1	FEET
TT3	33.3	FEET	TT2	37.1	FEET
T0	37.1	FEET	TT4	32.3	FEET
SLTT	37.1	FEET	TT	37.1	FEET
GR	64.1	FEET	SCBL	37.1	FEET
ILD	9.4	FEET	CALI	56.2	FEET
SFL	6.4	FEET	ILM	5.8	FEET
SPAR	2.5	FEET	SP	2.5	FEET
NOIS	2.5	FEET	TENS	2.5	FEET

PARAMETERS

NAME	VALUE	UNIT	NAME	VALUE	UNIT

```
     CDTS 100.000                                   SPFS R-H
     DTF  189.000     US/F                          DTM  56.0000      US/F
     DSIN 5           US                            DDEL 200          US
     WMUD 8.00000     LB/G                          DWCO 512
     SBR  1.00000     OHMM                          DSEC 4.50000      MMHO
     BHS  OPEN                                      MSEC 4.50000      MMHO
     BS   8.00000     IN
```

```
                BEFORE SURVEY CALIBRATION SUMMARY


   PERFORMED:     07-DEC-85 02:05
   PROGRAM FILE: ISN     (VERSION     28.2A    85/07/10)


 DITD                 ELECTRONICS CALIBRATION SUMMARY

              MEASURED                         CALIBRATED
           ZERO      PLUS                   ZERO        PLUS          UNITS
    ILD    -1.59     541.0                  0.0         502.7          MMHO
    ILM    -1.59     515.7                  0.0         500.6          MMHO
    SFL    -2.78     505.8                  0.0         500.0          MMHO

 ILD SONDE ERROR CORRECTION :         4.5 MMHO
 ILM SONDE ERROR CORRECTION :         4.5 MMHO


 SGTE                 DETECTOR CALIBRATION SUMMARY

              MEASURED
           BKGD     JIG          CALIBRATED          UNITS
     GR     29      189             165              GAPI


 MCDB                 CALIPER CALIBRATION SUMMARY

              MEASURED                         CALIBRATED
           SMALL    LARGE                   SMALL       LARGE         UNITS
   CALI    6.47     12.6                    6.00        12.0           IN

    CP 28.2A            FILE    6       07-DEC-85 02:05

                AFTER SURVEY TOOL CHECK SUMMARY


   PERFORMED:     07-DEC-85 03:16
   PROGRAM FILE: ISN     (VERSION     28.2A    85/07/10)


 DITD                          TOOL  CHECK

                     ZERO                           PLUS
             BEFORE           AFTER           BEFORE       AFTER      UNITS
    ILD        0.0              .4            502.7        501.1      MMHO
    ILM        0.0              .4            500.6        498.9      MMHO
    SFL        0.0              .5            500.0        493.1      MMHO

 ILD SONDE ERROR CORRECTION :         4.5 MMHO
 ILM SONDE ERROR CORRECTION :         4.5 MMHO

    CP 28.2A            FILE    11      07-DEC-85 03:16

                  SHOP SUMMARY


   PERFORMED:     20-NOV-85 04:21
   PROGRAM FILE: SHOP    (VERSION     28.2A    85/07/10)


 DITD                 ELECTRONICS CALIBRATION SUMMARY

                 TEST LOOP CALIBRATION                   TOOL CHECK
            MEASURED              CALIBRATED             CALIBRATED
          ZERO      PLUS       ZERO        PLUS        ZERO        PLUS     UNITS
    ILD   -4.4      534.2      0.0         500.0       0.0         503.2    MMHO
    ILM   -6.6      513.5      0.0         500.0       0.0         500.5    MMHO
 ILD  SONDE ERROR CORRECTION :          3.7 MMHO
 ILM  SONDE ERROR CORRECTION :          6.4 MMHO

                        (IS:1422, IC:1149)
```