Schlumberger

CEMENT BOND LOG

CSU

COMPANY: ARCO EXPLOR. AND TECHNOLOGY COMPANY

WELL: COLUMBIA COUNTY #32-32

FIELD: WILDCAT
COUNTY: COLUMBIA
STATE: OREGON
NATION: USA
LOCATION: 1237'W & 1840'S OF
THE NE CORNER OF...
SEC: 32 TWP: 6N RGE: 5W

OTHER SERVICES-
CET
CEQL

PERMANENT DATUM: GL
ELEV. OF PERM. DATUM: 828.0 F
LOG MEASURED FROM: KB
14.5 F ABOVE PERM. DATUM
DRLG. MEASURED FROM: KB

ELEVATIONS-
KB: 842.5 F
DF:
GL: 828.0 F

PROGRAM
TAPE NO:
26.2
SERVICE
ORDER NO:
272113

DATE: 10 NOV 85
RUN NO: 1

RECEIVED
FEB 18 1986
DOGAMI
Portland

DEPTH-DRILLER: 2700.0 F
DEPTH-LOGGER: 2057.0 F
BTM. LOG INTERVAL: 2049.0 F
TOP LOG INTERVAL: 300.0 F

CASING-DRILLER:	418 F	
CASING-LOGGER:	418 F	
CASING:	9.625	5.5
WEIGHT:	36.00 LB/F	17.00 LB/F
BIT SIZE:	12.25	8.5
DEPTH:	418 F	2700 F

TYPE FLUID IN HOLE: WATER
DENSITY:
VISCOSITY:
PH:
FLUID LOSS:
SOURCE OF SAMPLE:
RM: AT
RMF: AT
RMC: AT
SOURCE RMF/RMC: /
RM AT BHT: AT
RMF AT BHT: AT
RMC AT BHT: AT

TIME CIRC. STOPPED:
TIME LOGGER ON BTM.:

MAX. REC. TEMP:

LOGGING UNIT NO: 5892
LOGGING UNIT LOC: BAKERSFIELD PROD. SERV.
RECORDED BY: HODENFIELD
WITNESSED BY: ADLER & ANDERSON

REMARKS:

LOG CORRELATED TO SCHLUM DENS/NEU, NOV.7, 85.
CEMENT TYPE; CLASS "G".

EQUIPMENT NUMBERS-

NLM-BC 69	SLM-DA 1158	SLC-FA 1009	SLS-WA 1225
CNC-A 1542	CAL-R 1222		

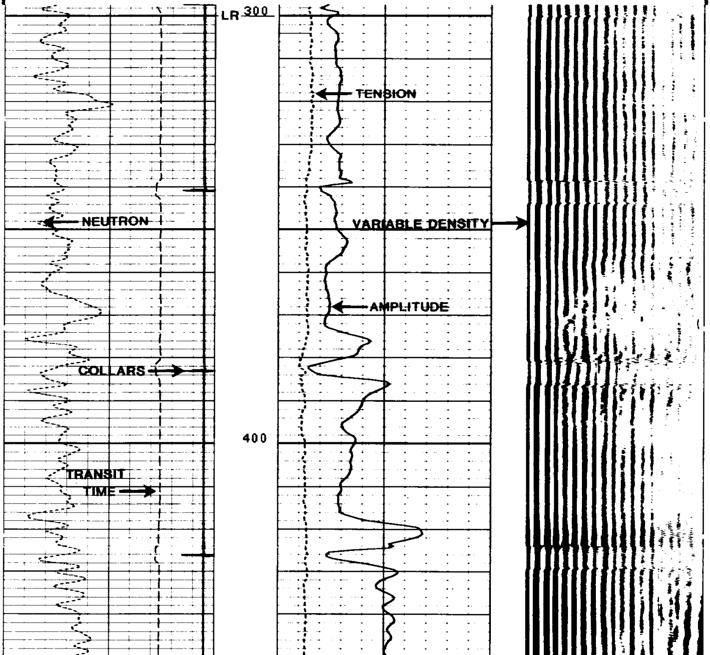
ALL INTERPRETATIONS ARE OPINIONS BASED ON INFERENCES FROM ELECTRICAL OR OTHER MEASUREMENTS AND WE CANNOT, AND DO NOT GUARANTEE THE ACCURACY OR CORRECTNESS OF ANY INTERPRETATIONS, AND WE SHALL NOT, EXCEPT IN THE CASE OF GROSS OR WILLFUL NEGLIGENCE ON OUR PART, BE LIABLE OR RESPONSIBLE FOR ANY LOSS, COSTS, 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.

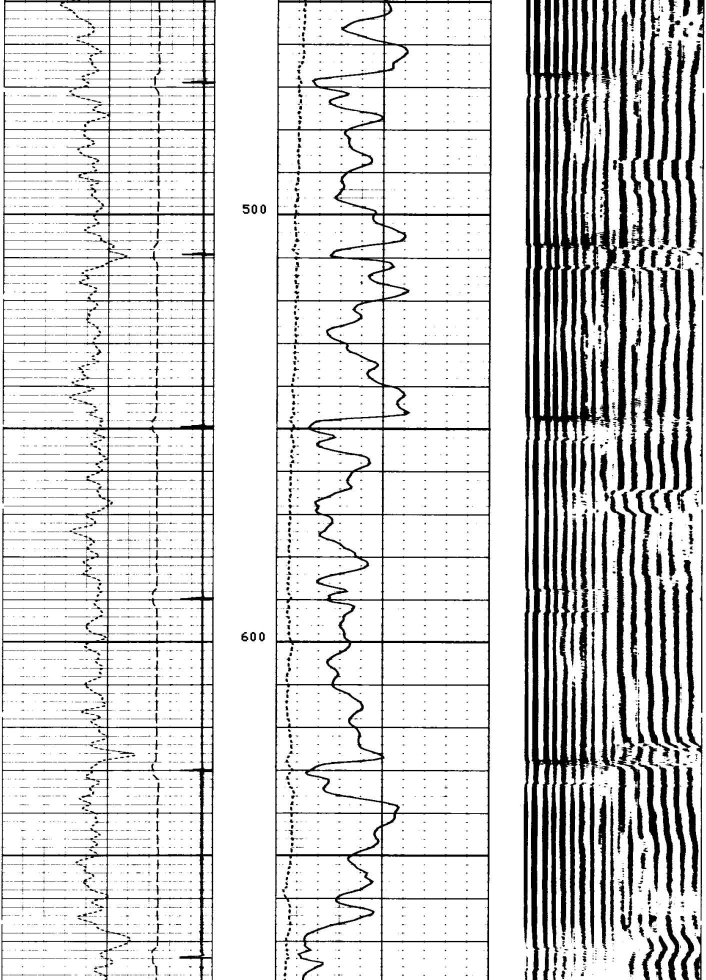
FILE 5 10-NOV-85 16:53

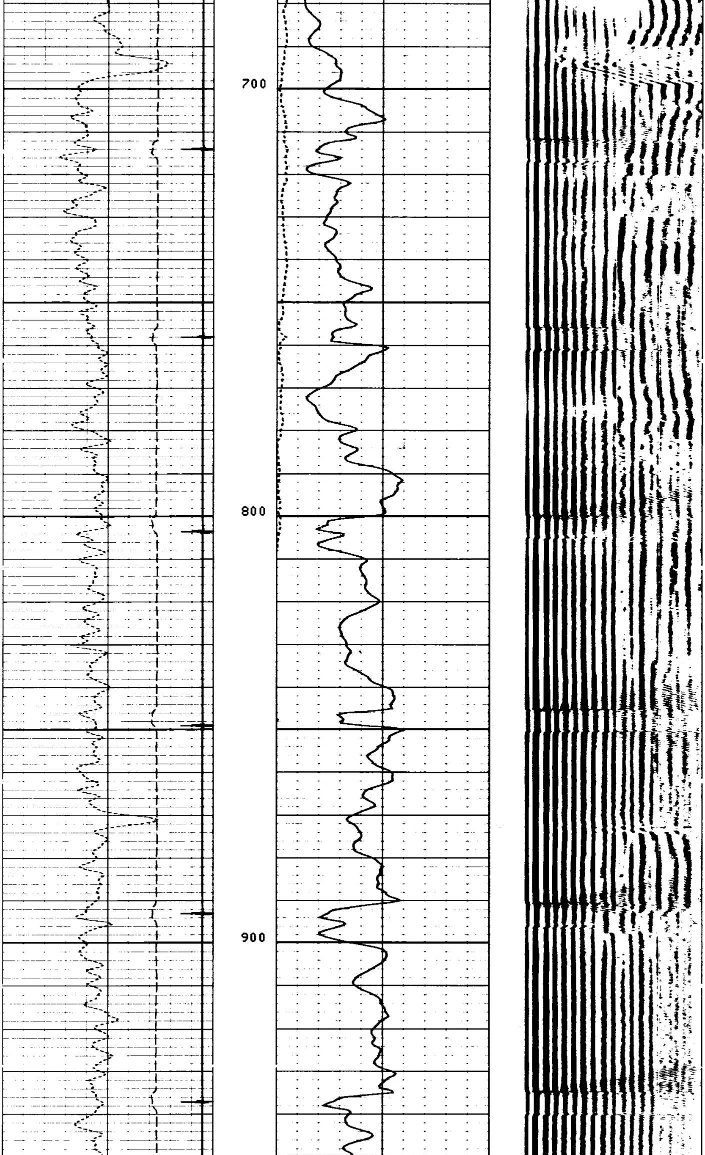
NPHI	.80000	0.0	TENS(LB)	1000.0	0.0			
TT2 (US)	400.00	200.00	CBL (MV)	50.000	100.00			
CCL	-19.00	1.0000	CBL (MV)	0.0	50.000	VDL	200.00	1200.0

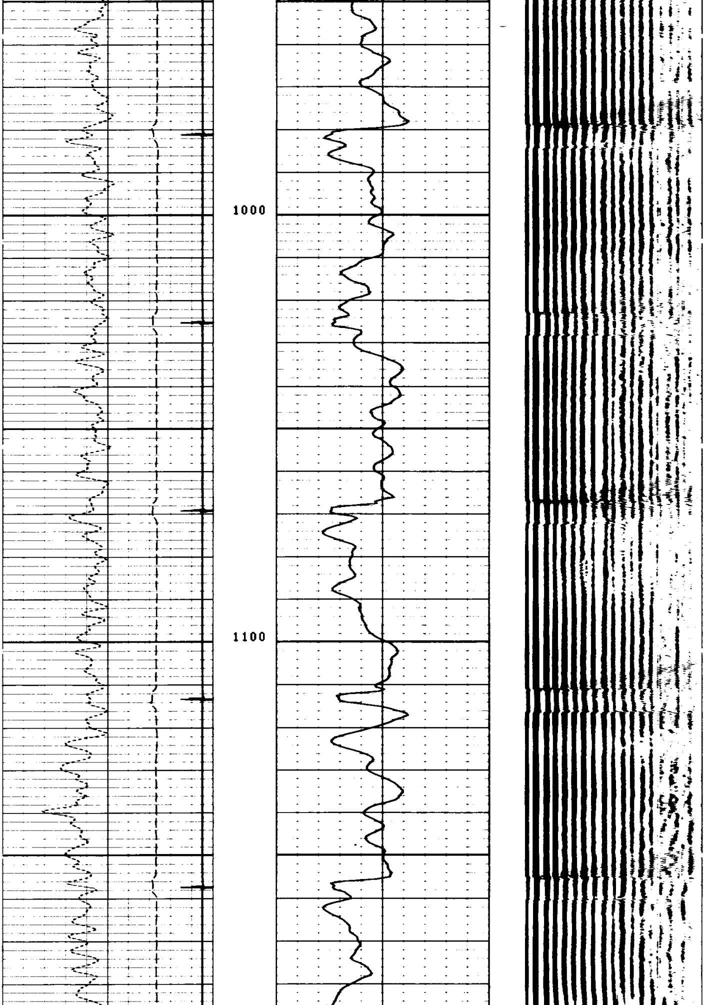
FILE 3 10-NOV-85 16:31

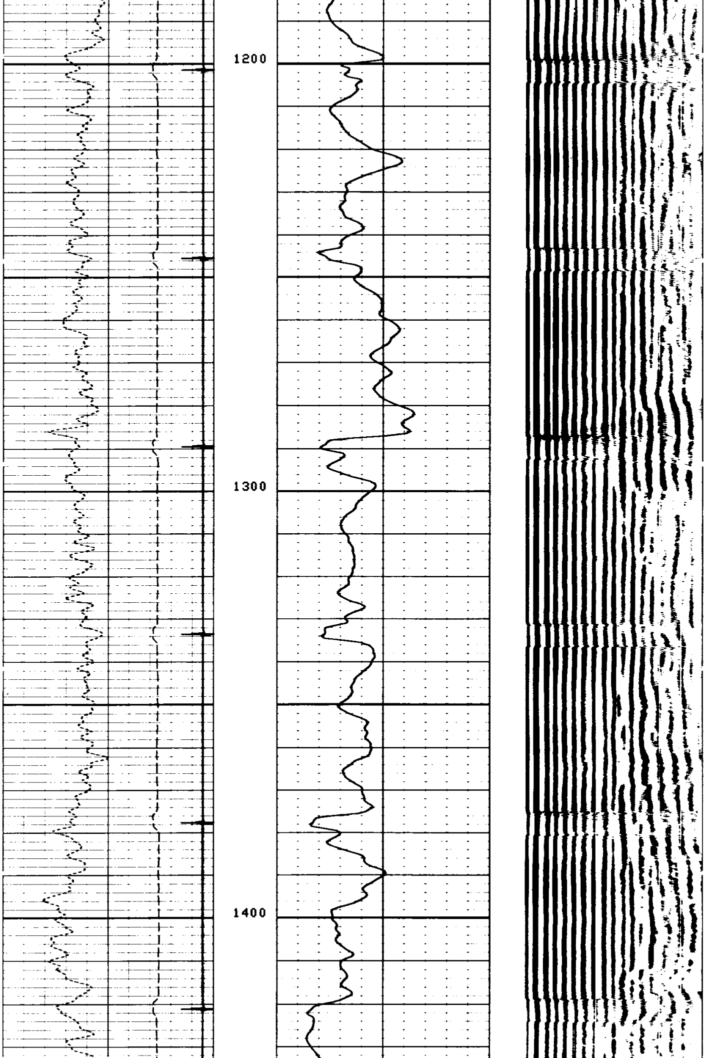
MAIN LOG

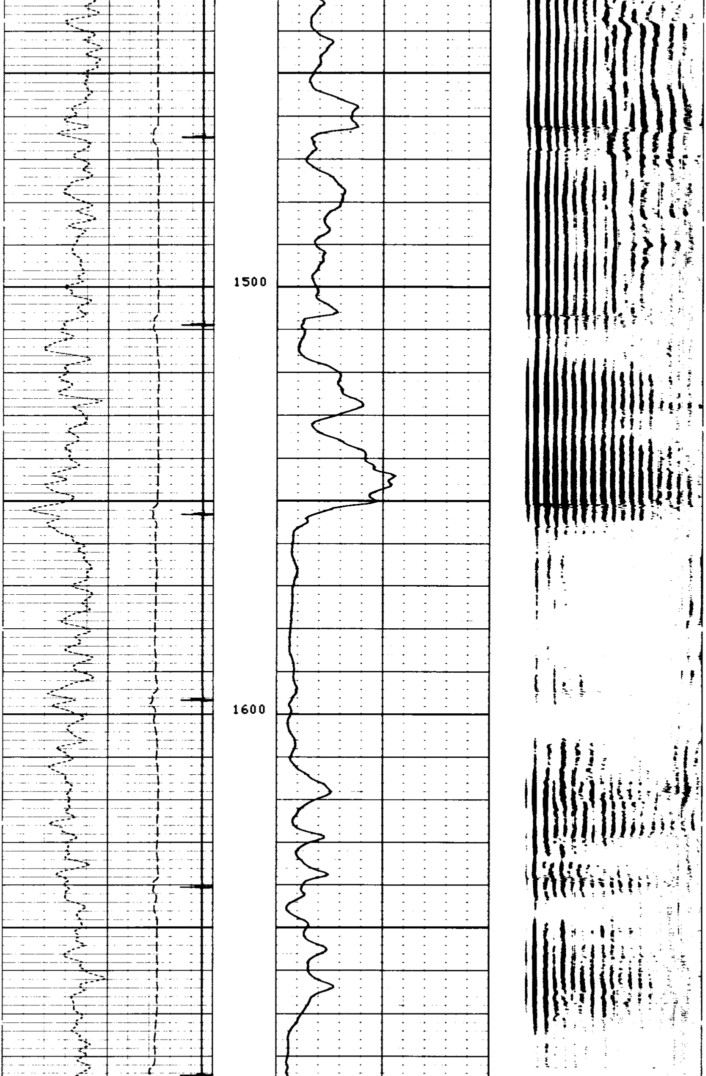


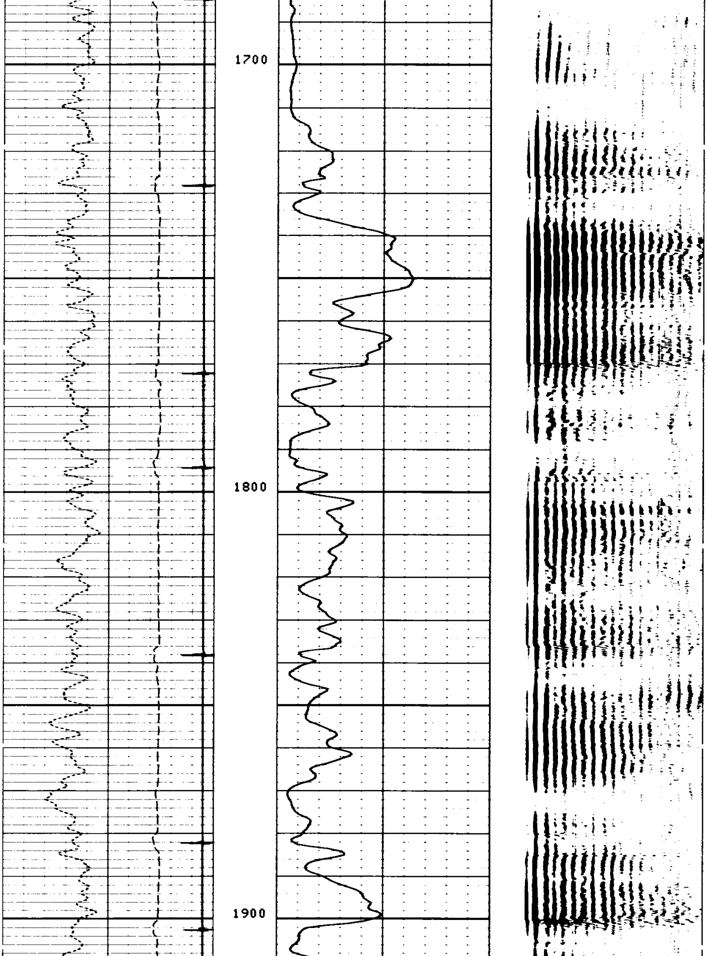


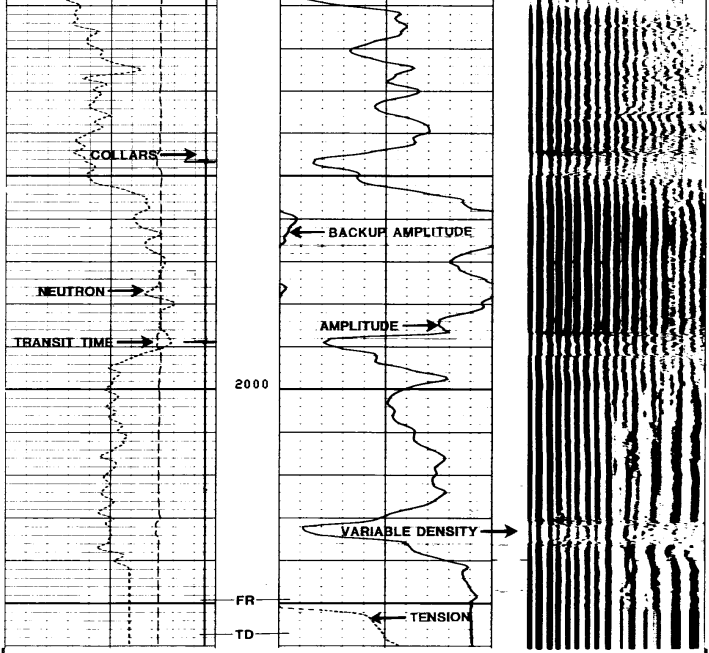












FILE 3 10-NOV-85 15:52 **MAIN LOG**

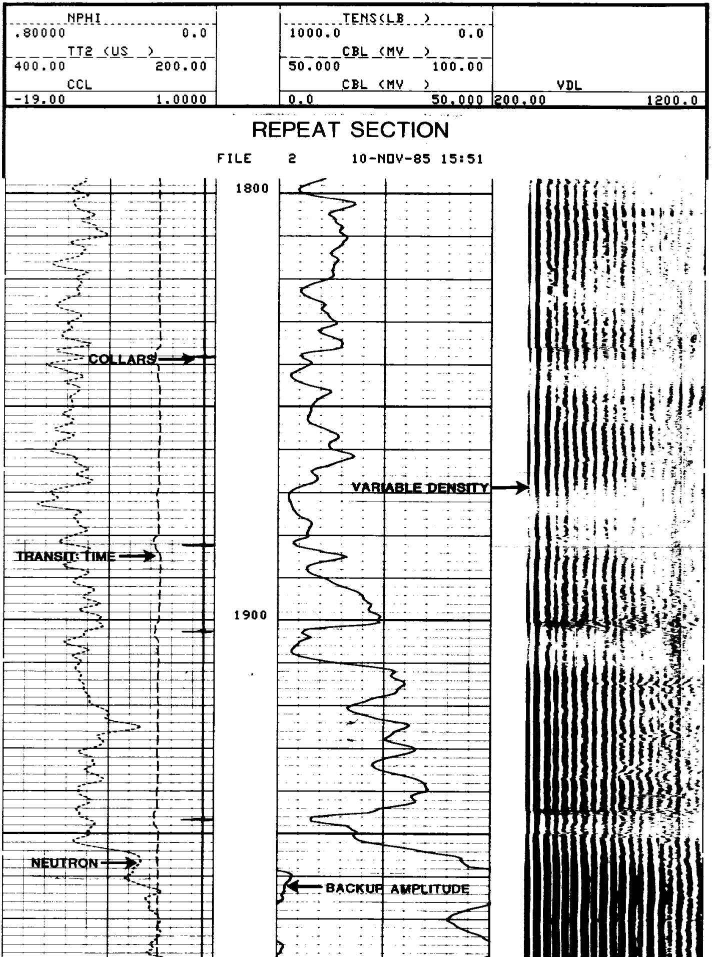
NPHI .80000 0.0	TENS(LB) 1000.0 0.0	
TT2 (US) 400.00 200.00	CBL (MV) 50.000 100.00	
CCL -19.00 1.0000	CBL (MV) 0.0 50.000	VDL 200.00 1200.0

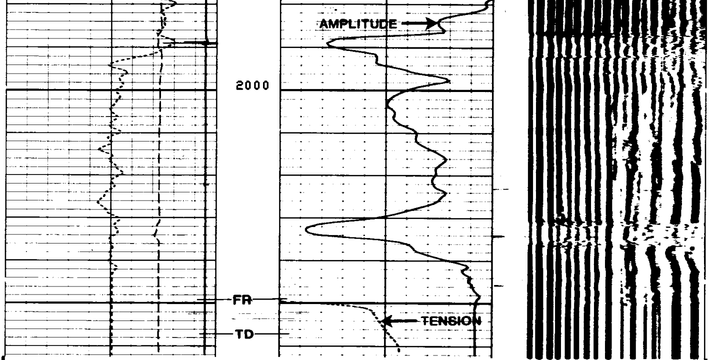
SENSOR MEASURE POINT TO TOOL ZERO

CBL	8.6	FEET	AMPL	8.6	FEET
TT3	8.6	FEET	TT4	8.6	FEET
TT1	8.6	FEET	TT2	8.6	FEET
NCNL	27.1	FEET	SRAT	8.6	FEET
TENS	8.6	FEET	FCNL	27.1	FEET
NRAT	27.1	FEET	CCL	34.3	FEET
NOIS	0.0	FEET			

PARAMETERS

NAME	VALUE	UNIT	NAME	VALUE	UNIT
BILI	.700000		MSA	3.00000	MV
CSTR	1800.00	PSIA	CWEI	15.0000	LB/F
WSV1	WF1		DWS	16	
DSIN	5	US	DDEL	200	US
CDTS	100.000		DWCO	512	
DTF	189.000	US/F	DTM	56.0000	US/F
HC	BS		PSNR	2.30600	
CSIZ	5.50000	IN	MATR	SAND	
BS	8.50000	IN	BHS	CASE	





FILE 2 10-NOV-85 15:44 **REPEAT SECTION**

NPHI	.80000	0.0
TT2 (US)	400.00	200.00
CCL	-19.00	1.0000
TENS(LB)	1000.0	0.0
CBL (MV)	50.000	100.00
CBL (MV)	0.0	50.000
VDL	200.00	1200.0

SENSOR MEASURE POINT TO TOOL ZERO

CBL	8.6	FEET	AMPL	8.6	FEET
TT3	8.6	FEET	TT4	8.6	FEET
TT1	8.6	FEET	TT2	8.6	FEET
NCNL	27.1	FEET	SRAT	8.6	FEET
TENS	8.6	FEET	FCNL	27.1	FEET
NRAT	27.1	FEET	CCL	34.3	FEET
NOIS	0.0	FEET			

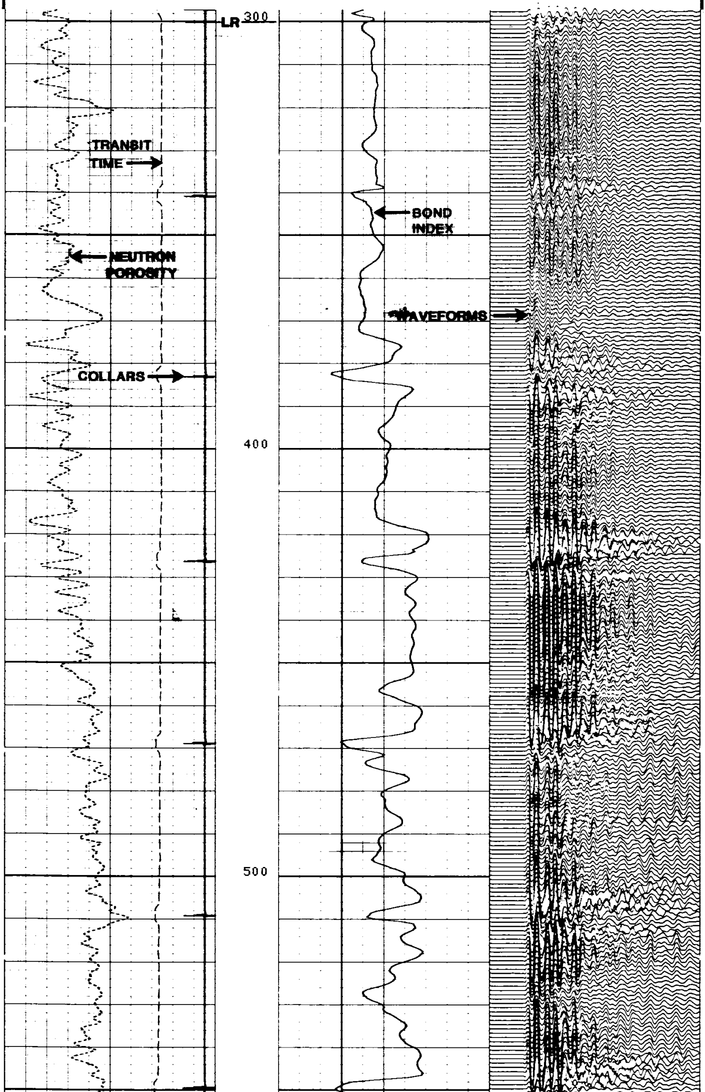
PARAMETERS

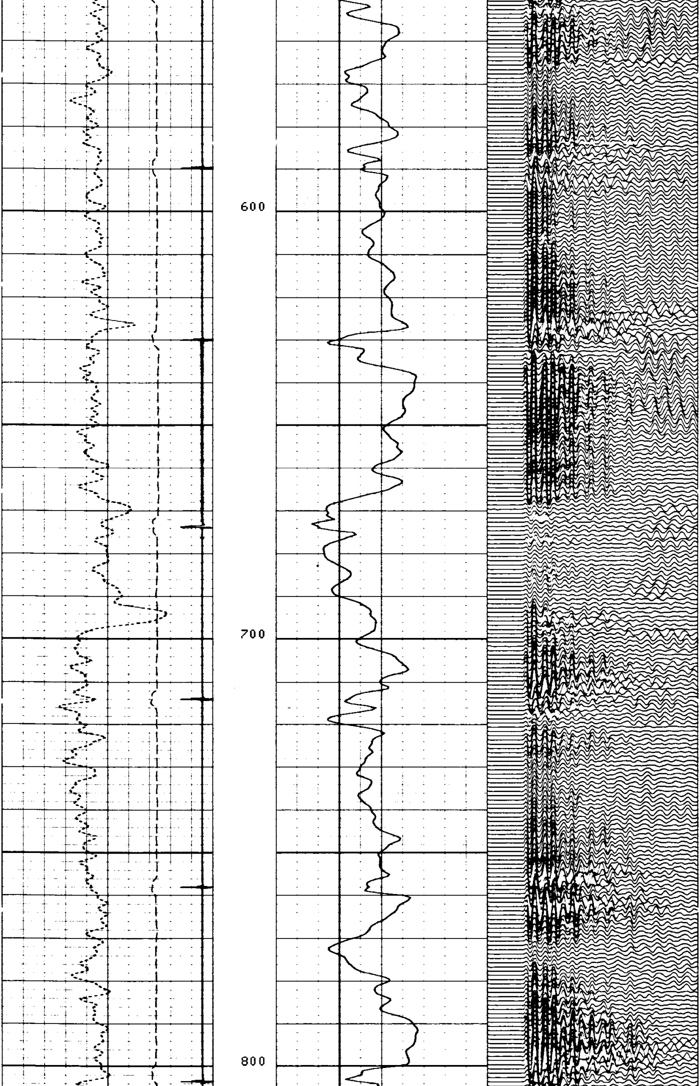
NAME	VALUE	UNIT	NAME	VALUE	UNIT
BILI	.700000		MSA	2.50000	MV
CSTR	1800.00	PSIA	CWEI	15.0000	LB/F
WSV1	WF1		DWS	16	
DSIN	5	US	DDEL	200	US
CDTS	100.000		DWCO	512	
DTF	189.000	US/F	DTM	56.0000	US/F
HC	BS		PSNR	2.30600	
CSIZ	5.50000	IN	MATR	SAND	
BS	8.50000	IN	BHS	CASE	

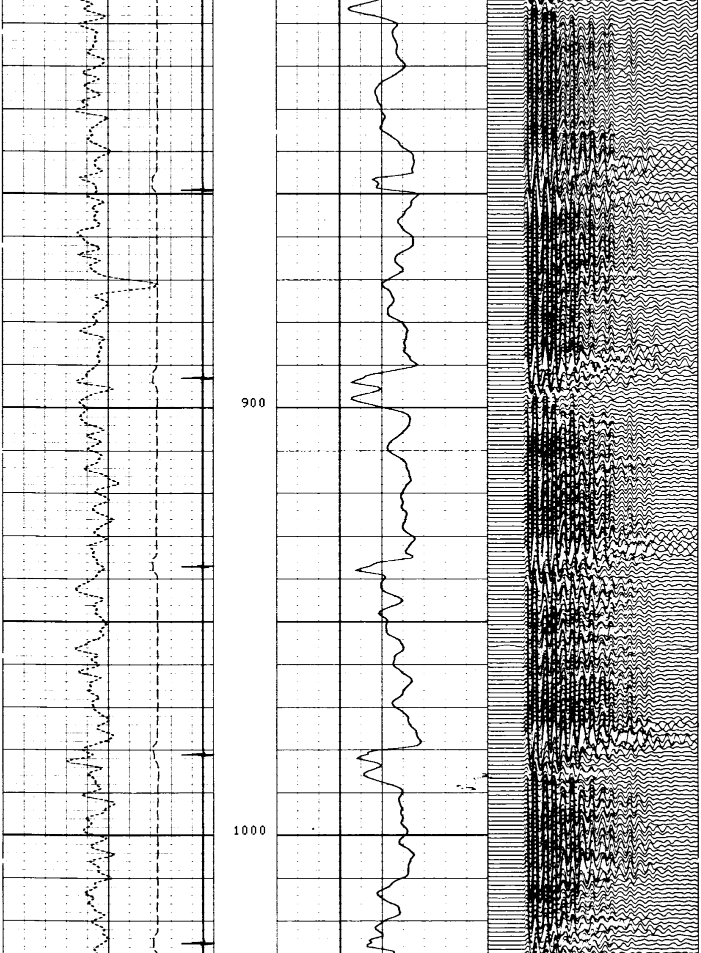
NPHI	.80000	0.0
TT2 (US)	400.00	200.00
CCL	-19.00	1.0000
BILI	1.0000	0.0
BI	1.0000	0.0
WAVE	200.00	1200.0

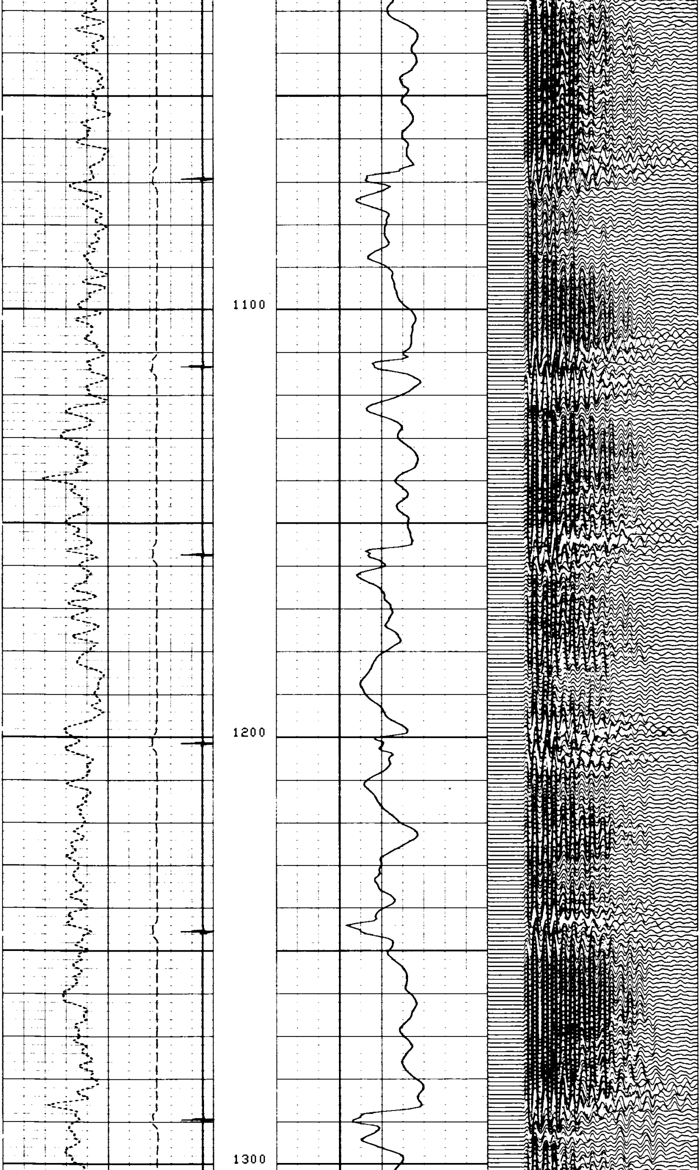
MAIN LOG

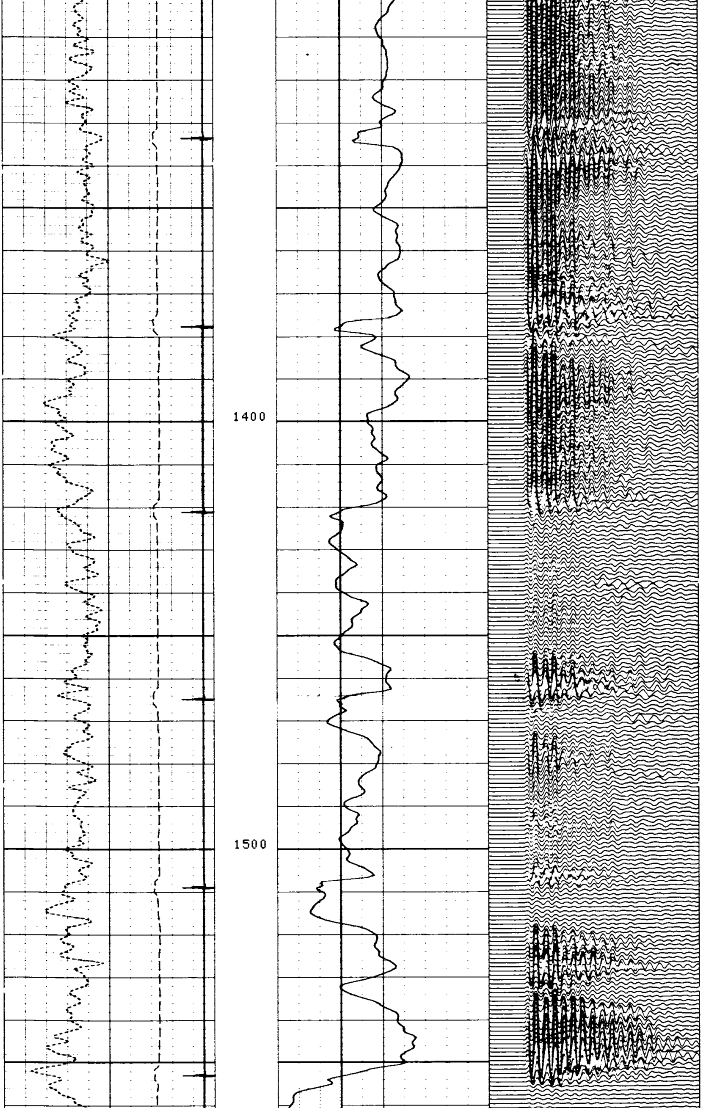
FILE 3 10-NOV-85 16:31

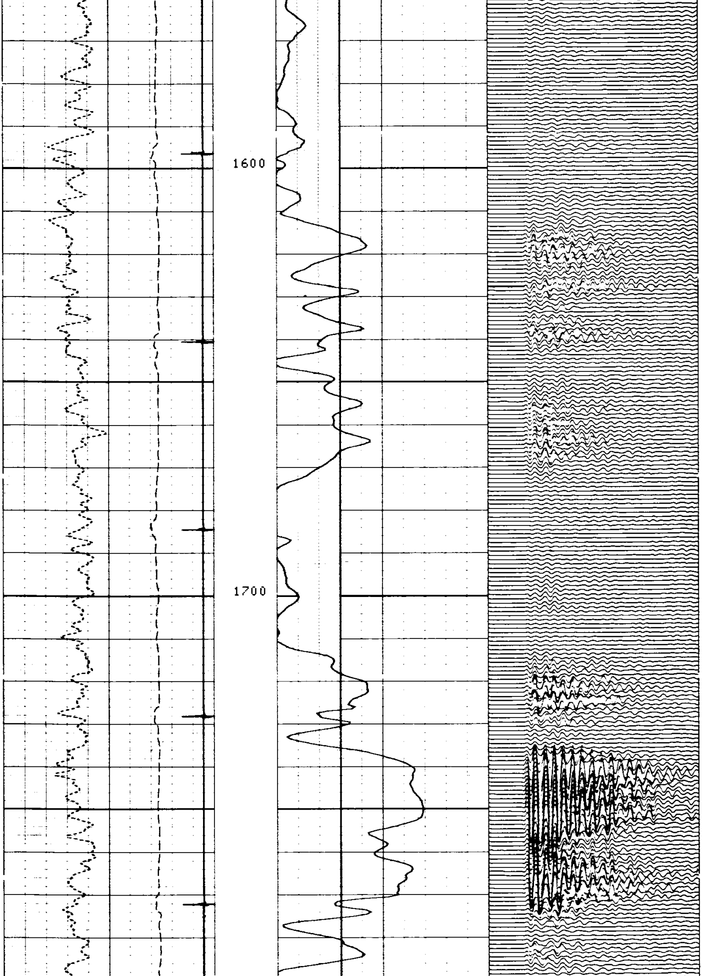


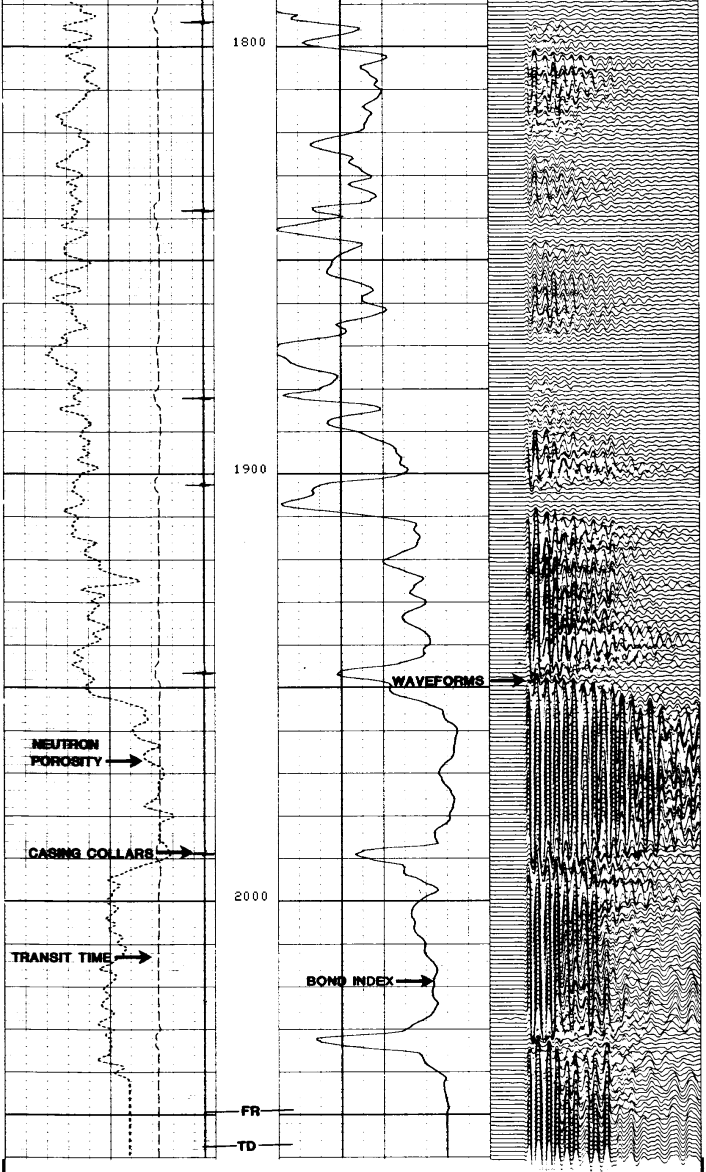












FILE 3 10-NOV-85 15:52

MAIN LOG

NPHI
.80000 0.0
TT2 (US)
400.00 200.00
CCL
-19.00 1.0000

BILI
1.0000 0.0
BI
1.0000 0.0

WAVE
200.00 1200.0

SENSOR MEASURE POINT TO TOOL ZERO

CBL	8.6	FEET	AMPL	8.6	FEET
TT3	8.6	FEET	TT4	8.6	FEET
TT1	8.6	FEET	TT2	8.6	FEET
NCNL	27.1	FEET	SRAT	8.6	FEET
TENS	8.6	FEET	FCNL	27.1	FEET
NRAT	27.1	FEET	CCL	34.3	FEET
NOIS	0.0	FEET			

PARAMETERS

NAME	VALUE	UNIT	NAME	VALUE	UNIT
BILI	.700000		MSA	3.00000	MV
CSTR	1800.00	PSIA	CWEI	15.0000	LB/F
WSV1	WF1		DWS	16	
DSIN	5	US	DDEL	200	US
CDTS	100.000		DWCO	512	
DTF	189.000	US/F	DTM	56.0000	US/F
HC	BS		PSNR	2.30600	
CSIZ	5.50000	IN	MATR	SAND	
BS	8.50000	IN	BHS	CASE	

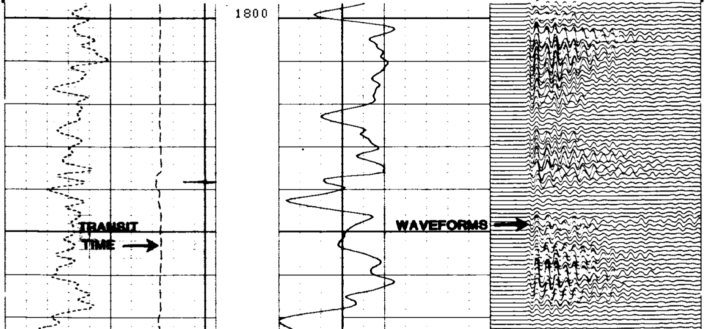
NPHI
.80000 0.0
TT2 (US)
400.00 200.00
CCL
-19.00 1.0000

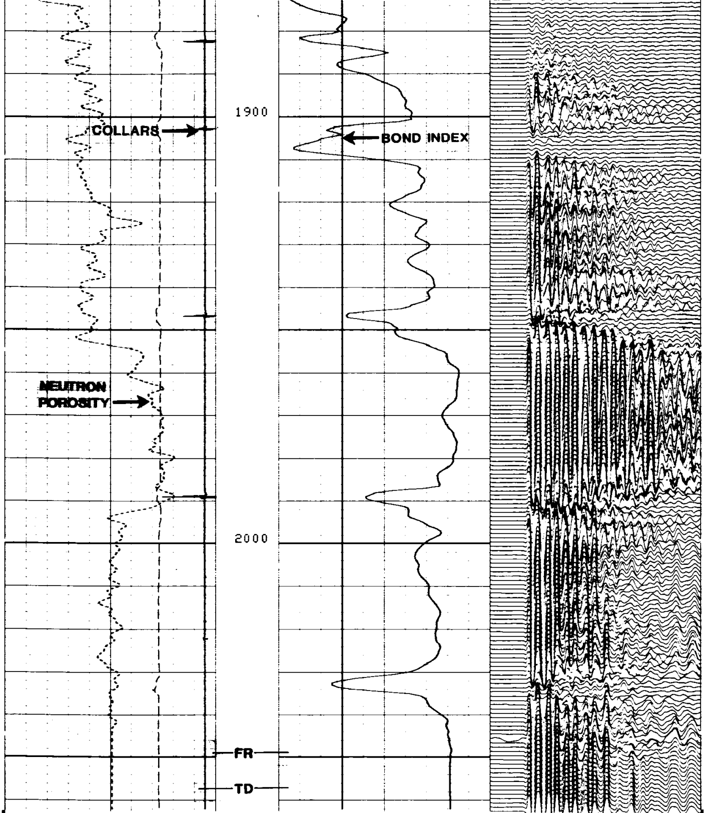
BILI
1.0000 0.0
BI
1.0000 0.0

WAVE
200.00 1200.0

REPEAT SECTION

FILE 2 10-NOV-85 15:51





FILE 2 10-NOV-85 15:44 **REPEAT SECTION**

NPHI .80000 0.0 TT2 (US) 400.00 200.00 CCL -19.00 1.0000		BILI 1.0000 0.0 BI 1.0000 0.0	WAVE 200.00 1200.0

SENSOR MEASURE POINT TO TOOL ZERO

CBL	8.6	FEET	AMPL	8.6	FEET
TT3	8.6	FEET	TT4	8.6	FEET
TT1	8.6	FEET	TT2	8.6	FEET
NCNL	27.1	FEET	SRAT	8.6	FEET
TENS	8.6	FEET	FCNL	27.1	FEET
NRAT	27.1	FEET	CCL	34.3	FEET
NOIS	0.0	FEET			

```
                                PARAMETERS

        NAME  VALUE     UNIT   .                  NAME  VALUE     UNIT

        BILI .700000                              MSA  2.50000    MV
        CSTR 1800.00    PSIA                      CWEI 15.0000    LB/F
        WSV1 WF1                                  DWS  16
        DSIN 5          US                        DDEL 200        US
        CDTS 100.000                              DWCO 512
        DTF  189.000    US/F                      DTM  56.0000    US/F
        HC   BS                                   PSNR 2.30600
        CSIZ 5.50000    IN                        MATR SAND
        BS   8.50000    IN                        BHS  CASE
```

```
                  BEFORE SURVEY CALIBRATION SUMMARY


   PERFORMED:      85/11/10
   PROGRAM FILE: CBLWA  (VERSION    26.2    85/01/26)


 CNTA                  DETECTOR CALIBRATION SUMMARY

                  TANK                              JIG
             INPUT  CALIBRATED              MEASURED    CALIBRATED
   NRAT     2.30600  2.158                   2.369        2.217

                        FILE     1        10-NOV-85 15:00
```

```
                  BEFORE SURVEY CALIBRATION SUMMARY


   PERFORMED:      85/11/10
   PROGRAM FILE: CBLWA  (VERSION    26.2    85/01/26)


 CNTA                  DETECTOR CALIBRATION SUMMARY

                  TANK                              JIG
             INPUT  CALIBRATED              MEASURED    CALIBRATED
   NRAT     2.30600  2.158                   2.304        2.156

                        FILE     5        10-NOV-85 16:50
```

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                   SHOP SUMMARY


   PERFORMED:     85/10/27
   PROGRAM FILE: SHOP   (VERSION    26.2    83/11/17)


 CNTA                  DETECTOR CALIBRATION SUMMARY

                  TANK                            JIG
          MEASURED  CALIBRATED          MEASURED   CALIBRATED

   NRAT     2.316        2.158            2.328        2.169

                        (CNC:1542, CNB:0000)
```