Schlumberger

DUAL INDUCTION-SFL-SONIC

COUNTY	COLUMBIA
FIELD	MIST
LOCATION	575E & 556W
WELL	BEAVER CREEK 31-34-75 RD#1
COMPANY	NAHAMA & WEAGANT ENERGY CO.

COMPANY NAHAMA & WEAGANT ENERGY CO.

WELL ~~BEAVER CREEK~~ "Adams" 31-34-75 RD#1

FIELD MIST

COUNTY COLUMBIA **STATE** OREGON

LOCATION	575'E & 556'W FROM N 1/4 COR			**Other Services:** DIL-BHC-GR
API SERIAL NO.	**SECT.**	**TWP.**	**RANGE**	
36-000-00282	34	7N	5W	

Permanent Datum	G.L.	**Elev.**	1626.0 F	**Elev.: K.B.** 1637.0 F
Log Measured From	KB	11.0 F	**above Perm. Datum**	**D.F.** 1636.0 F
Drilling Measured From	DB			**G.L.** 1626.0 F

Date	1-JUL-93					
Run No.	ONE					
Depth Driller	3419.0 F					
Depth Logger (Schl.)	3420.0 F					
Btm. Log Interval	3414.0 F					
Top Log Interval	502.0 F					
Casing-Driller	9 5/8	@ 502.0 F	@		@	
Casing-Logger	502.0 F					
Bit Size	7 7/8	@ 3419.0 F	@		@	
Type Fluid in Hole	POLYMER					
Dens. / **Visc.**	9.50 LB/G	34.0 S				
pH / **Fld. Loss**	8.5	6.6 C3				
Source of Sample	FLOWLINE					
Rm @ Meas. Temp.	3.350 OHMM	@ 66.0 DEGF		@		
Rmf @ Meas. Temp.	2.510 OHMM	@ 63.0 DEGF		@		
Rmc @ Meas. Temp.	2.640 OHMM	@ 63.0 DEGF		@		
Source: Rmf / **Rmc**	MEASURED	MEASURED				
Rm @ BHT	2.446 OHMM	@ 93.0 DEGF		@		
TIME **Circulation Ended**	09:00 1-JUL-93					
TIME **Logger on Bottom**	16:34 1-JUL-93					
Max. Rec. Temp.	93.0 DEGF					
Equip. / **Location**	8271	4408				
Recorded By	R.THORPE					
Witnessed By	ROB LUCAS					

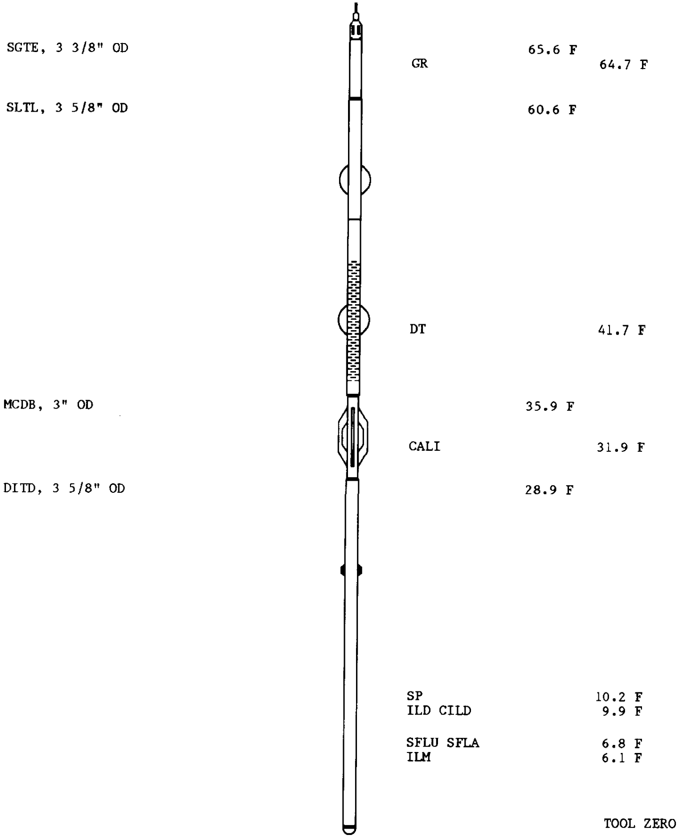
The well name location and borehole reference data were furnished by the customer

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 interpretations made by any of our officers agents or employees These interpretations are also subject to Clause 4 of our General Terms and Conditions as set out in our current Price Schedule.

Run No.	ONE			
Service Order No.	624484			
Drilling Fluid Level	0.0 F			
Salinity	300.0 PPM			
Rmf @ BHT	1.757 OHMM	@	93.0 DEGF	@
Rmc @ BHT	1.848 OHMM	@	93.0 DEGF	@
Logging Speed	3600.0 F/HR			
EQUIPMENT DATA				
Tool Number 1	DIS-EC 1342			
Tool Number 2	DIC-DA 1386			
Tool Number 3	MCD-DA 668			
Tool Number 4	SLC-MA 88			
Tool Number 5	SLS-WC 1335			
Tool Number 6	SGC-JC 3205			
Tool Number 7	IEM-BD 685			
Tool Number 8	SLM-DA 1329			
Tool Number 9	NLM-BC 418			
Tool Number 10				
Tool Number 11				
Tool Number 12				

REMARKS:

LOGGING TOOL STRING SKETCH



TOTAL TOOL STRING LENGTH IS 69.2 F.
TOTAL TOOL STRING WEIGHT IS 993. LB IN AIR.

MAIN LOG

```
ACCUMULATED INTEGRATION VALUES SUMMARY:

Integrated Hole Volume:   879.508 F3    FROM 3420.00 F    TO 502.000 F
Integrated Cement Volume: 557.281 F3    FROM 3420.00 F    TO 502.000 F
  (ASSUMING 4.50000 IN   O.D. CASING)
Integrated Transit Time:  .373768 S     FROM 3420.00 F    TO 502.000 F
```

```
EVENT MARK SUMMARY:

OUTPUT                          INTERVAL         DEPTH TRACK
                                BETWEEN PIPS     EDGE

Integrated Hole Volume          10.0000 F3       LEFT EDGE
Integrated Cement Volume        10.0000 F3       RIGHT EDGE
```

TENS(LBF)
20500. 500.00
DT(US/F)
175.00 75.000

SP(MV)
-50.00 100.00
CALI(IN)
6.0000 16.000
RWA(OHMM)
0.0 3.0000

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

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CP 38.2          FILE    18       01-JUL-1993 18:41

                 INPUT FILE(S)    CREATION DATE
                      12          01-JUL-1993 16:34

                 5"/100'
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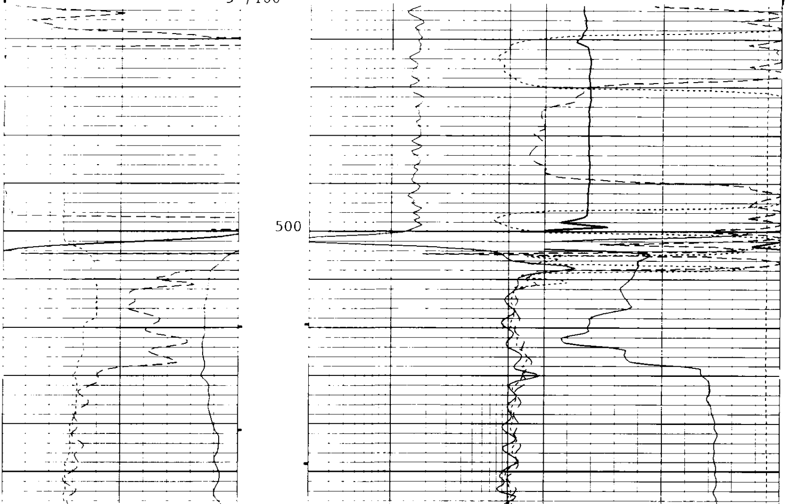
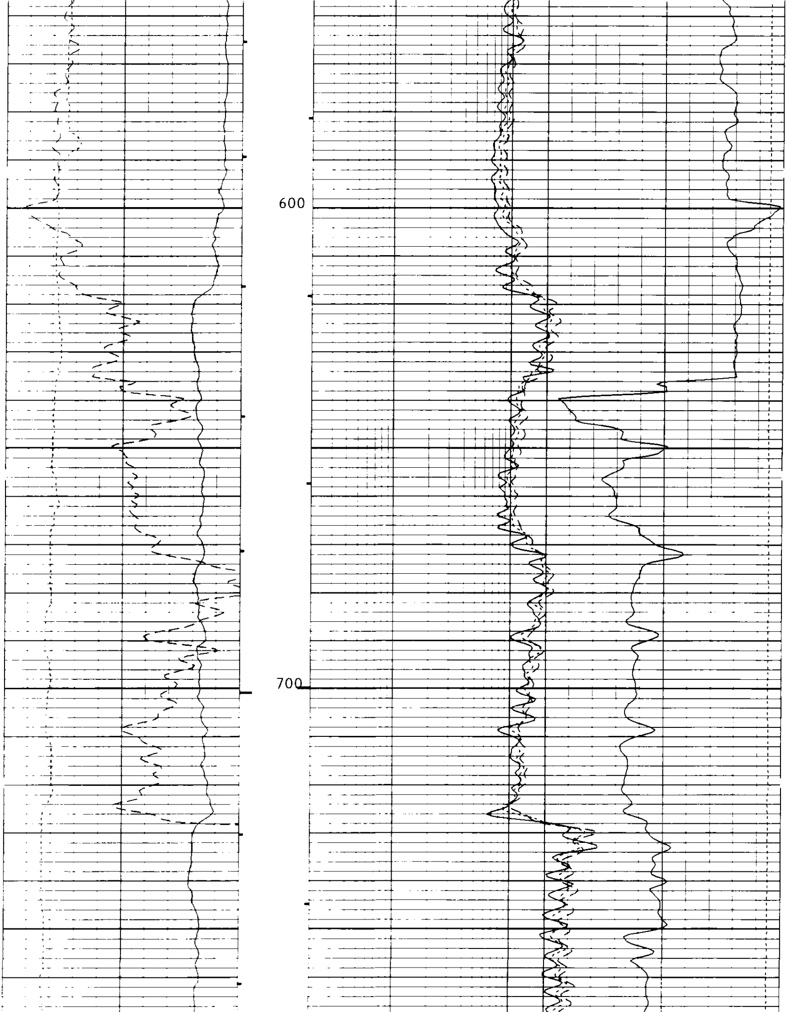
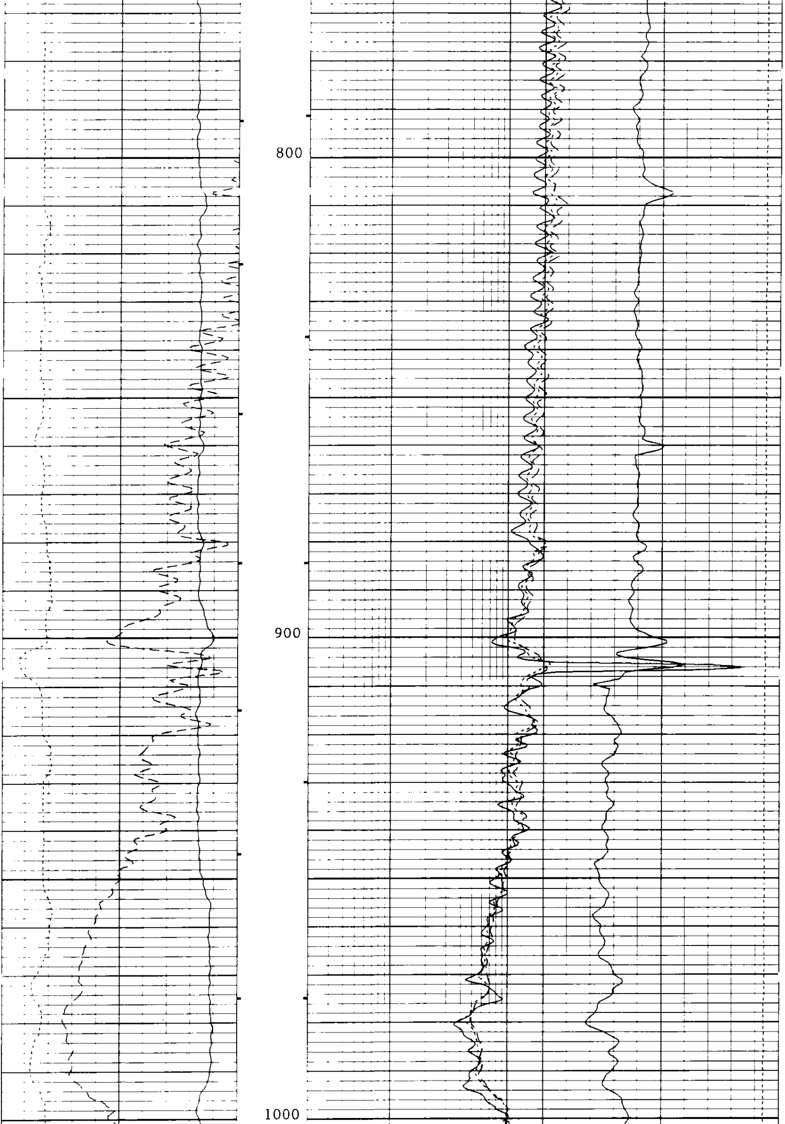
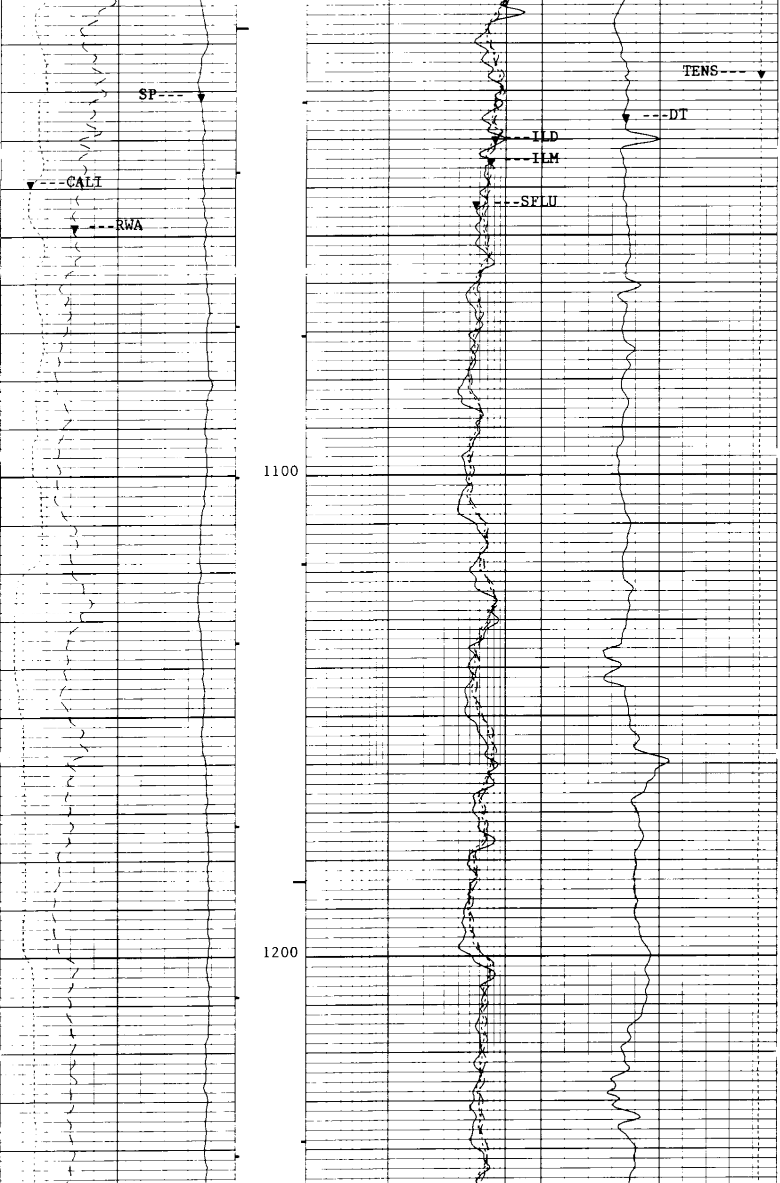
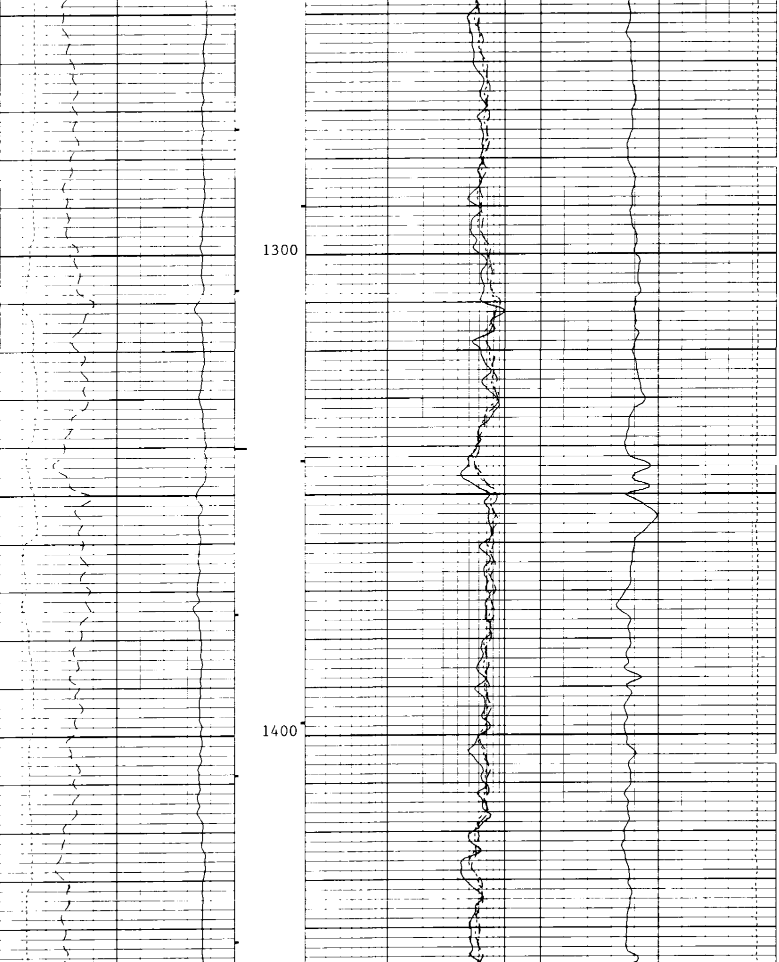
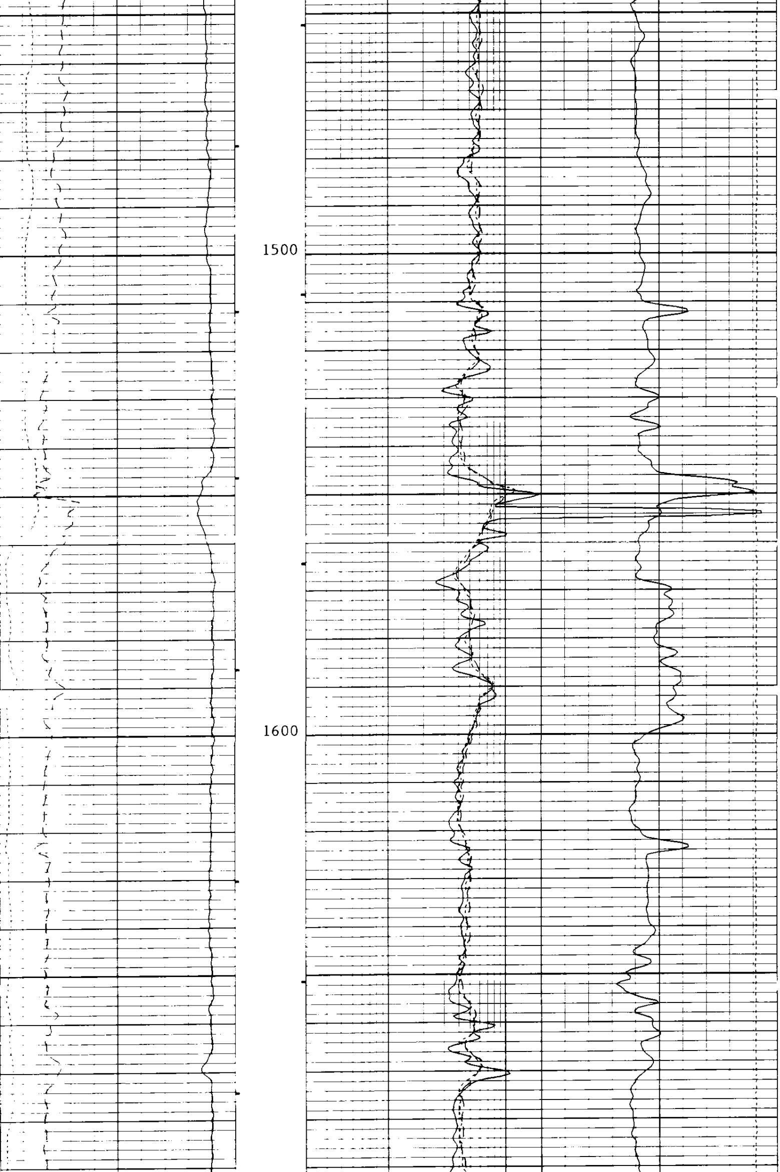


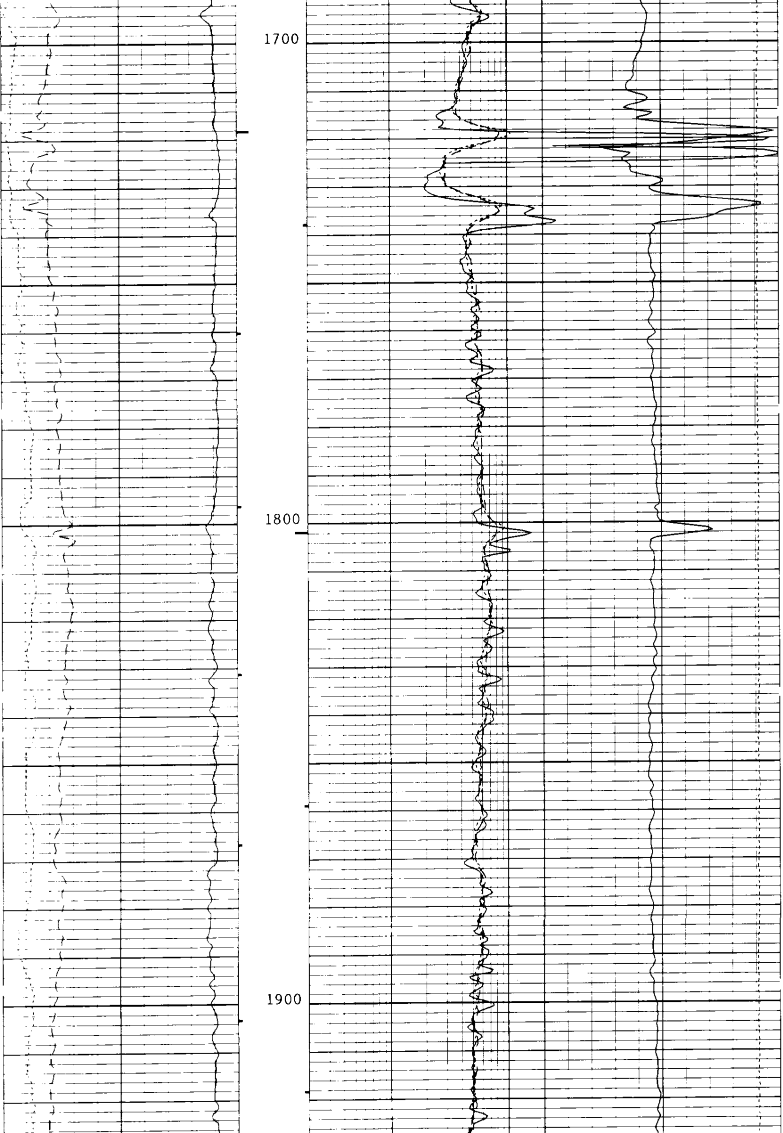


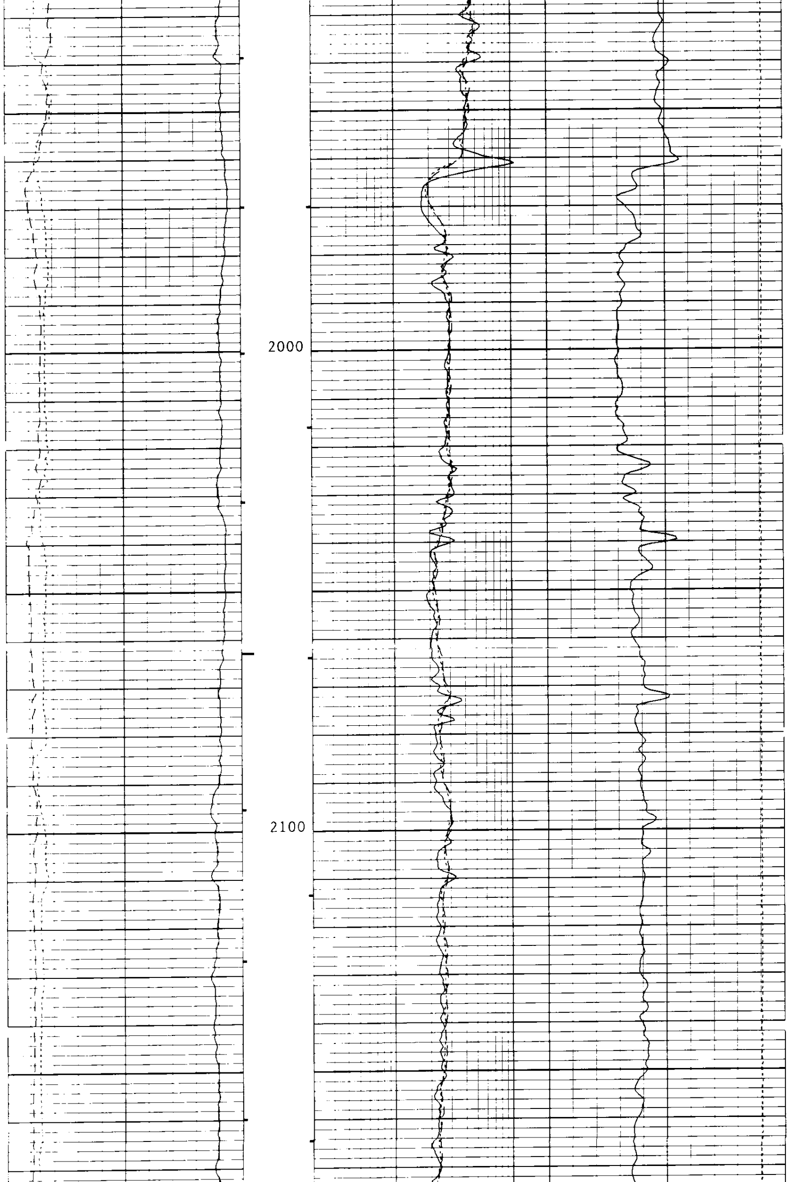


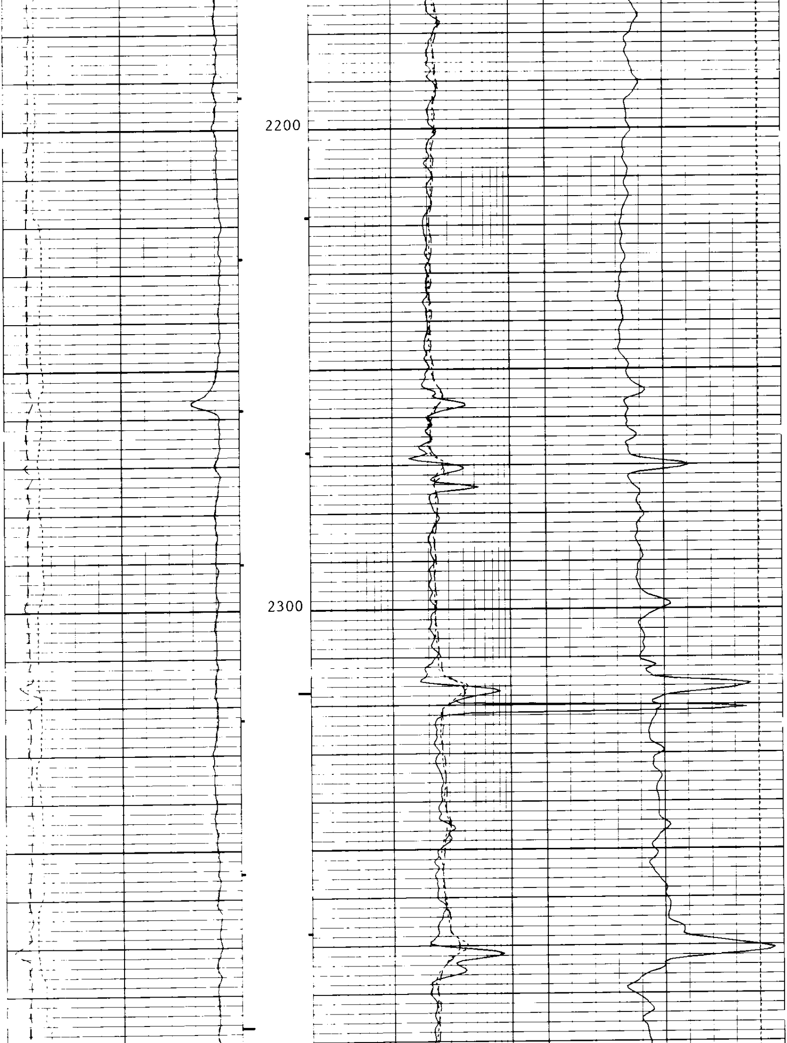


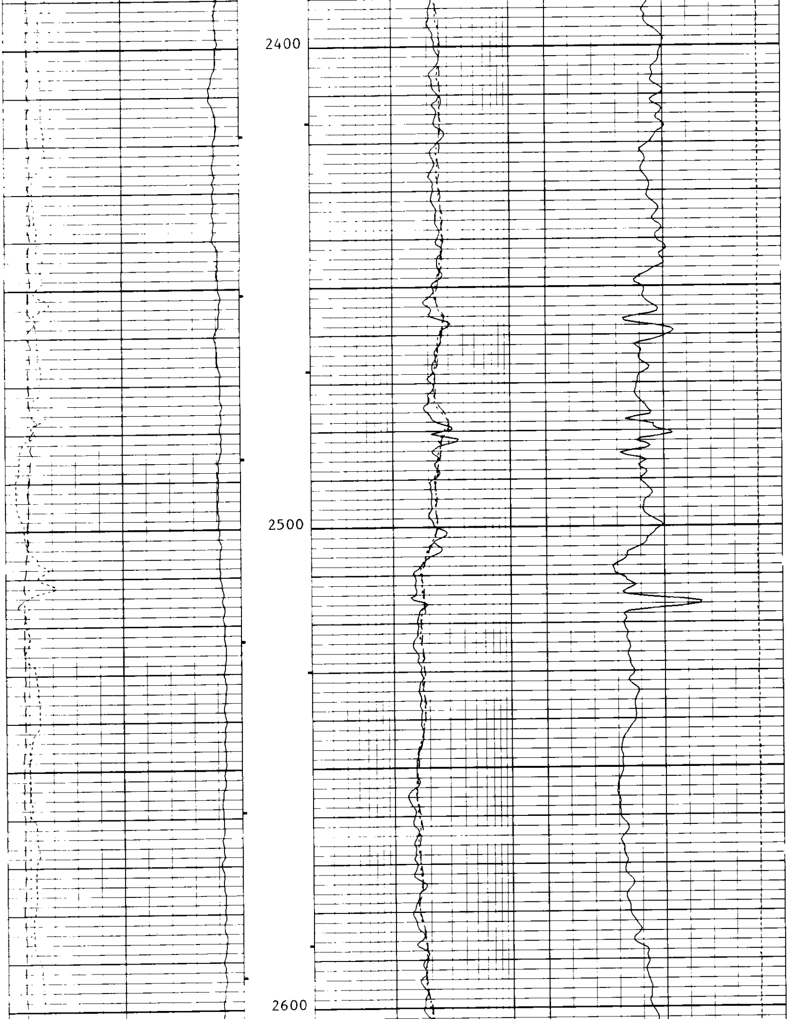


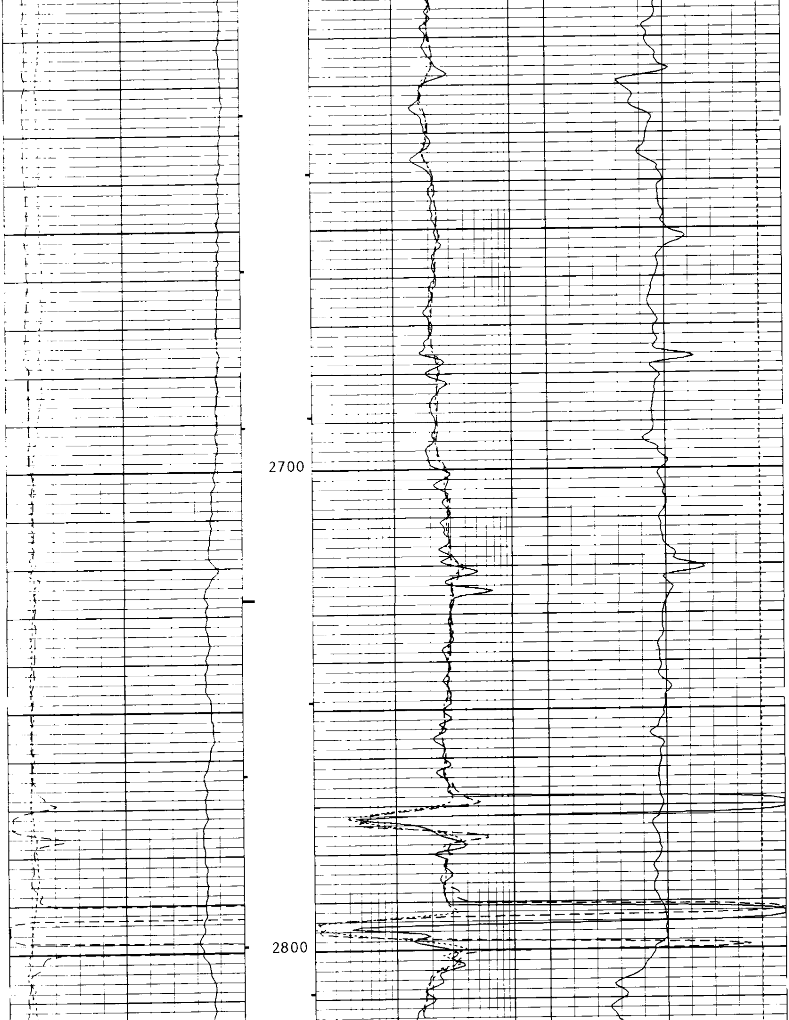


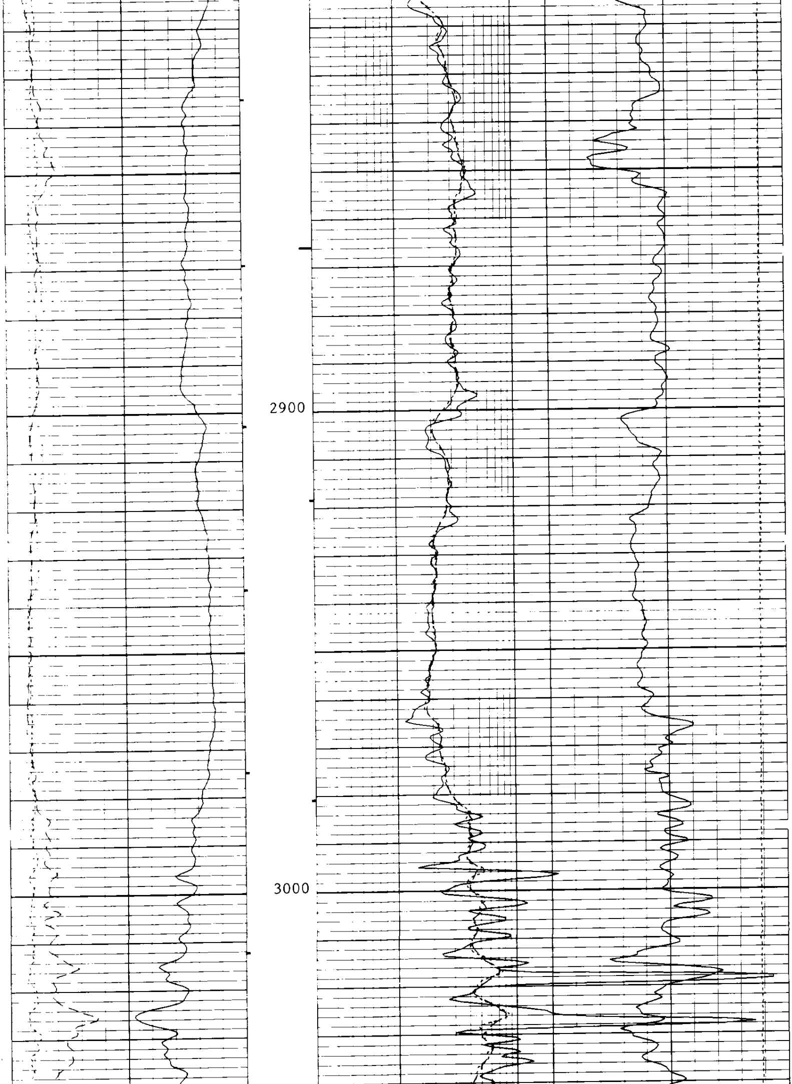


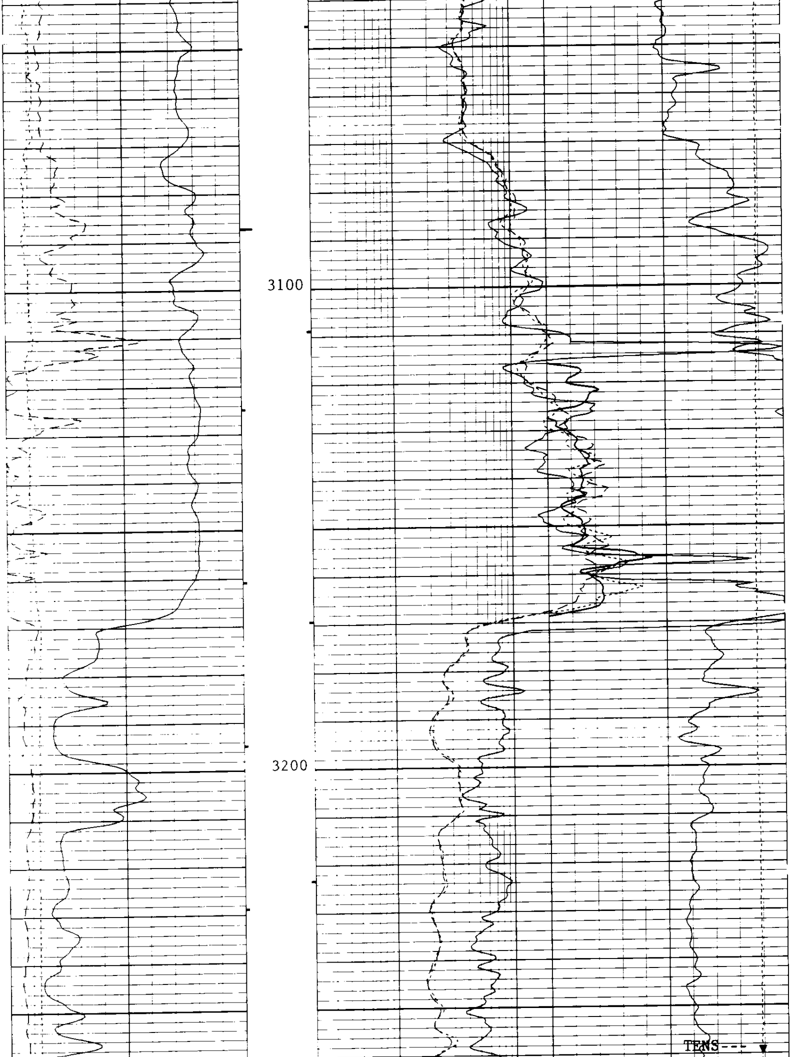


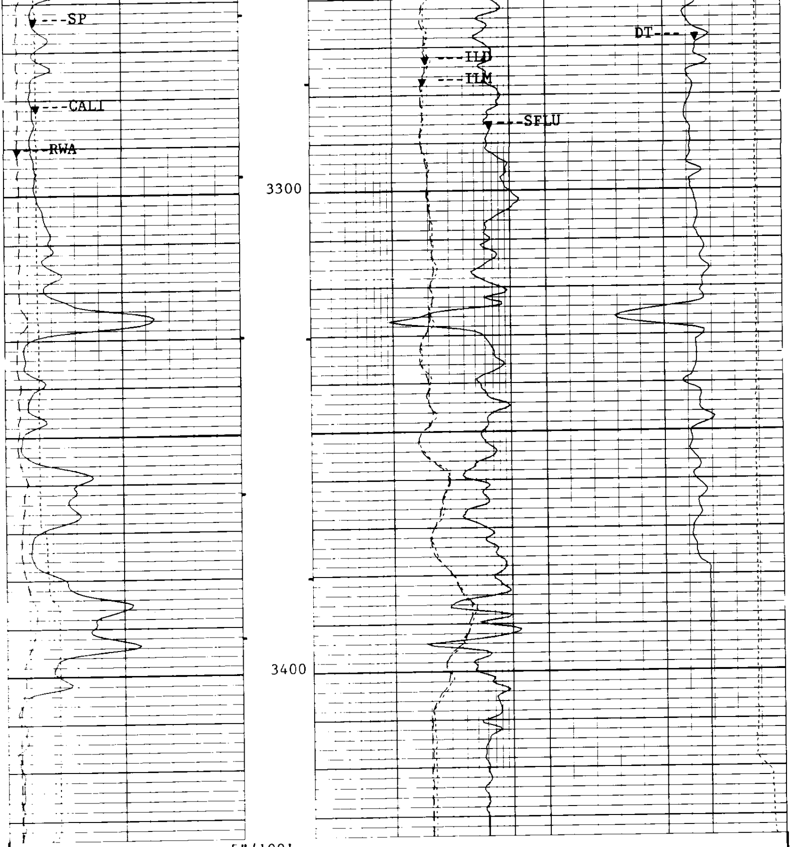












5"/100'

CP 38.2

FILE 18

01-JUL-1993 18:26

INPUT FILE(S)
12

CREATION DATE
01-JUL-1993 16:34

Curve	Left	Right
TENS(LBF)	20500.	500.00
DT(US/F)	175.00	75.000
SP(MV)	-50.00	100.00
CALI(IN)	6.0000	16.000
RWA(OHMM)	0.0	3.0000
ILD(OHMM)	.20000	2000.0
ILM(OHMM)	.20000	2000.0
SFLU(OHMM)	20000	2000.0

SENSOR MEASURE POINT TO TOOL ZERO

SRAT	41.7	FEET
CBFS	43.1	FEET
TT2	44.1	FEET
TT4	39.3	FEET
TT	44.1	FEET
CBSL	44.1	FEET
CALI	31.9	FEET
ILM	6.1	FEET
SP	2.5	FEET
TENS	2.5	FEET
NOIS	2.5	FEET

AMPL	44.1	FEET
CBL	44.1	FEET
TT1	43.1	FEET
TT3	40.3	FEET
TO	44.1	FEET
TTSL	44.1	FEET
GR	62.7	FEET
ILD	9.9	FEET
SFL	6.8	FEET
SPAR	2.5	FEET

PARAMETERS

NAME	VALUE	UNIT
SMB	DISA	
TOCA	DISA	
DG	/5	
NMSG	180	US
AMPL	2	
WFM	1	
TOD	DISA	
DTM	56.0000	US/F
SPFS	R-H	
DO	0.0	F
MSEC	7.00000	MM/M
DSEC	5.10000	MM/M
NCJT	GSRY	
DWCO	512	
DDEL	200	US
BHS	OPEN	

NAME	VALUE	UNIT
VDLR	2IN	
RATE	15	HZ
DETE	E2	
CBLG	35	US
CBL	UT	
SS	FAST	
DTF	189.000	US/F
CDTS	100.000	
PP	NORM	
WMUD	9.50000	LB/G
SBR	1.00000	OHMM
FCD	4.50000	IN
FPHI	SPHI	
DSIN	5	US
BS	7.87500	IN

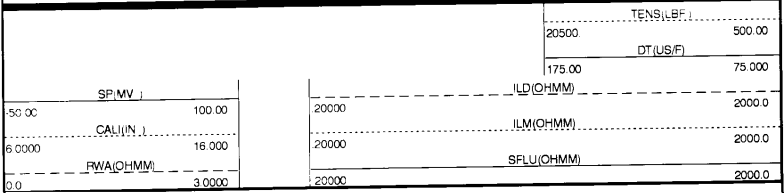
REPEAT SECTION

ACCUMULATED INTEGRATION VALUES SUMMARY:

Integrated Hole Volume: 102.378 F3 FROM 3077.50 F TO 2760.00 F
Integrated Cement Volume: 67.3113 F3 FROM 3077.50 F TO 2760.00 F
(ASSUMING 4.50000 IN O.D. CASING)
Integrated Transit Time: .0415120 S FROM 3077.50 F TO 2760.00 F

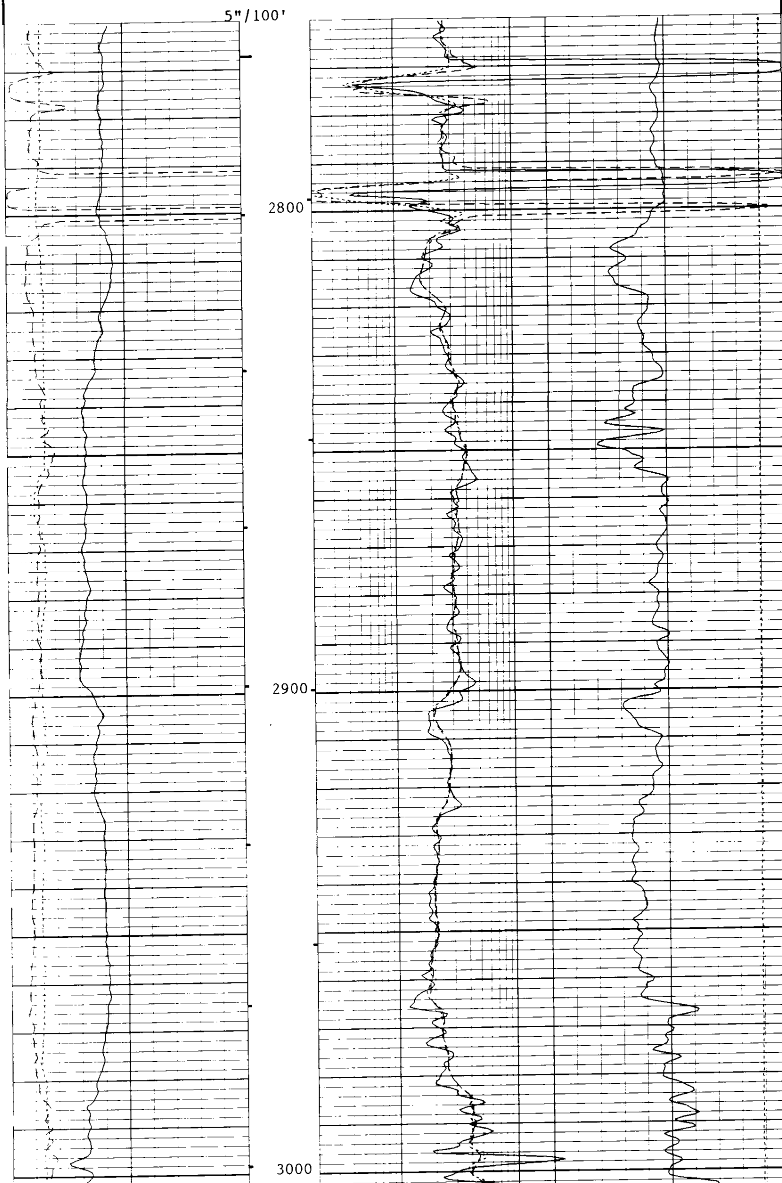
EVENT MARK SUMMARY:

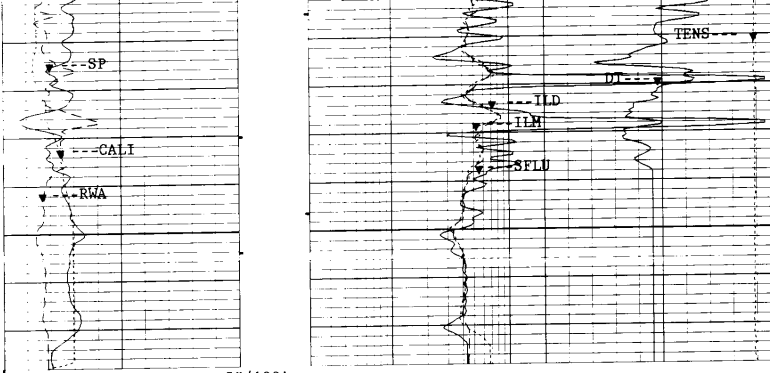
OUTPUT	INTERVAL BETWEEN PIPS	DEPTH TRACK EDGE
Integrated Hole Volume	10.0000 F3	LEFT EDGE
Integrated Cement Volume	10.0000 F3	RIGHT EDGE



CP 38.2 FILE 17 01-JUL-1993 18:24

INPUT FILE(S) CREATION DATE
11 01-JUL-1993 16:24





5"/100'

CP 38.2

FILE 17 01-JUL-1993 18:23

INPUT FILE(S) CREATION DATE
11 01-JUL-1993 16:24

Curve	Left	Right
TENS(LBF)	20500.	500.00
DT(US/F)	175.00	75.000
SP(MV)	-50.00	100.00
CALI(IN)	6.0000	16.000
RWA(OHMM)	0.0	3.0000
ILD(OHMM)	.20000	2000.0
ILM(OHMM)	.20000	2000.0
SFLU(OHMM)	.20000	2000.0

SENSOR MEASURE POINT TO TOOL ZERO

SRAT	41.7	FEET	AMPL	44.1	FEET
CBFS	43.1	FEET	CBL	44.1	FEET
TT2	44.1	FEET	TT1	43.1	FEET
TT4	39.3	FEET	TT3	40.3	FEET
TT	44.1	FEET	T0	44.1	FEET
CBSL	44.1	FEET	TTSL	44.1	FEET
CALI	31.9	FEET	GR	62.7	FEET
ILM	6.1	FEET	ILD	9.9	FEET
SP	2.5	FEET	SFL	6.8	FEET
TENS	2.5	FEET	SPAR	2.5	FEET
NOIS	2.5	FEET			

PARAMETERS

NAME	VALUE	UNIT	NAME	VALUE	UNIT

```
    SMB  DISA                               VDLR 2IN
    TOCA DISA                               RATE 15          HZ
    DG   /5                                 DETE E2
    NMSG 180          US                    CBLG 35          US
    AMPL 2                                  CBL  UT
    WFM  1                                  SS   FAST
    TOD  DISA                               DTF  189.000     US/F
    DTM  56.0000      US/F                  CDTS 100.000
    SPFS R-H                                PP   NORM
    DO   0.0          F                     WMUD 9.50000     LB/G
    MSEC 7.00000      MM/M                  SBR  1.00000     OHMM
    DSEC 5.10000      MM/M                  FCD  4.50000     IN
    NCJT GSRY                               FPHI SPHI
    DWCO 512                                DSIN 5           US
    DDEL 200          US                    BS   7.87500     IN
    BHS  OPEN
```

CALIBRATION SUMMARY

```
              AFTER SURVEY TOOL CHECK SUMMARY


   PERFORMED:     01-JUL-1993 17:31
   PROGRAM FILE: ISN     (VERSION    38.2    92/10/12  92/10/12)


 DITD                      TOOL  CHECK

                    ZERO                    PLUS
             BEFORE        AFTER       BEFORE     AFTER     UNITS
    ILD        0.0           .2        494.6      493.9     MM/M
    ILM        -.0          -.2        495.2      493.9     MM/M
    SFL        0.0          -.3        500.0      489.3     MM/M

 ILD SONDE ERROR CORRECTION :        5.1 MM/M
 ILM SONDE ERROR CORRECTION :        7.0 MM/M

 BEFORE SURVEY:            ZERO: 01-JUL-1993 13:44  PLUS: 01-JUL-1993 13:45
 AFTER SURVEY CHECK:       ZERO: 01-JUL-1993 17:30  PLUS: 01-JUL-1993 17:30

    CP 38.2          FILE   15      01-JUL-1993 17:31



              BEFORE SURVEY CALIBRATION SUMMARY


   PERFORMED:     01-JUL-1993 13:50
   PROGRAM FILE: ISN     (VERSION    38.2    92/10/12  92/10/12)


 DITD             ELECTRONICS CALIBRATION SUMMARY

              MEASURED                   CALIBRATED
            ZERO    PLUS             ZERO        PLUS          UNITS
    ILD      .38    521.8            0.0         494.6          MM/M
    ILM      .60    513.3            0.0         495.2          MM/M
    SFL     1.30    500.6            0.0         500.0          MM/M

 ILD SONDE ERROR CORRECTION :        5.1 MM/M
 ILM SONDE ERROR CORRECTION :        7.0 MM/M

 ZERO: 01-JUL-1993 13:44  PLUS: 01-JUL-1993 13:45  COMP: 01-JUL-1993 13:45


 SGTE             DETECTOR CALIBRATION SUMMARY
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               MEASURED
             BKGD     JIG           CALIBRATED          UNITS
    GR        38      197               165             GAPI

  BACK: 01-JUL-1993 12:59   JIG: 01-JUL-1993 13:02  COMP: 01-JUL-1993 13:02


  MCDB             CALIPER CALIBRATION SUMMARY

               MEASURED                          CALIBRATED
             SMALL   LARGE                    SMALL     LARGE       UNITS
   CALI      7.41   12.05                     8.00      12.00         IN

  SMALL: 01-JUL-1993 12:57 LARGE: 01-JUL-1993 12:58 COMP: 01-JUL-1993 12:58

     CP 38.2          FILE    4      01-JUL-1993 13:49



                   SHOP SUMMARY


   PERFORMED:     29-JUN-1993 09:20
   PROGRAM FILE:  SHOP   (VERSION    38.2    92/10/12  92/10/12)


  DITD             ELECTRONICS CALIBRATION SUMMARY

                 TEST LOOP CALIBRATION             TOOL CHECK
              MEASURED        CALIBRATED           CALIBRATED
            ZERO    PLUS     ZERO      PLUS      ZERO      PLUS   UNITS
     ILD    -5.0    520.0     0.0      500.0      0.0      494.6  MM/M
     ILM    -8.0    508.5     0.0      500.0      0.0      495.2  MM/M
  ILD  SONDE ERROR CORRECTION :        5.1 MM/M
  ILM  SONDE ERROR CORRECTION :        7.0 MM/M

                        (IS:1342, IC:1386)

     CP 38.2          FILE    3      29-JUN-1993 09:20
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COMPANY	NAHAMA & WEAGANT ENERGY CO.		**SCHL. FR**	3414.0 F
			SCHL. TD	3420.0 F
WELL	BEAVER CREEK 31-34-75 RD#1		**DRLR. TD**	3419.0 F
			Elev: KB	1637.0 F
FIELD	MIST		**DF**	1636.0 F
COUNTY	COLUMBIA	**STATE** OREGON	**GL**	1626.0 F

Schlumberger

DUAL INDUCTION-SFL-SONIC