CC 24-19-65

Schlumberger

DUAL INDUCTION-SFL-SONIC

COUNTY	COLUMBIA
FIELD	MIST
LOCATION	1579'N & 1370'E
WELL	"JR BURGER JOHNSTON" #24-19-65
COMPANY	NAHAMA AND WEAGANT ENERGY CO

COMPANY NAHAMA AND WEAGANT ENERGY CO.

WELL CC "JR BURGER JOHNSTON" #24-19-65

FIELD MIST

COUNTY COLUMBIA **STATE** OREGON

LOCATION 1579'N & 1370'E

FROM SW CORNER OF:

Other Services: DIL/BHC/GR

API SERIAL NO.	SECT.	TWP.	RANGE
36-009-00315	19	6N	5W

Permanent Datum	GL	Elev. 628.3 F		Elev.: K.B.638.3 F
Log Measured From	KB	1C.0 F above Perm. Datum		D.F.637.3 F
Drilling Measured From	KB			G.L.628.3 F

Date	14-AUG-1993			
Run No.	ONE			
Depth Driller	3044.0 F			
Depth Logger (Schl.)	3029.0 F			
Btm. Log Interval	3023.0 F			
Top Log Interval	502.0 F			
Casing-Driller	8 5/8 @ 502.0 F		@	@
Casing-Logger	502.0 F			
Bit Size	7 7/8 @ 3044.0 F		@	@
Type Fluid in Hole	GEL/POLYMER			
Dens. / **Visc.**	9.50 LB/G	40.0 S		
pH / **Fld. Loss**	7.0	5.6 C3		
Source of Sample	FLOWLINE			
Rm @ Meas. Temp.	2.650 OHMM @ 68.0 DEGF		@	
Rmf @ Meas. Temp.	3.400 OHMM @ 61.0 DEGF		@	
Rmc @ Meas. Temp.	2.490 OHMM @ 61.0 DEGF		@	
Source: Rmf / **Rmc**	MEASURED	MEASURED		
Rm @ BHT	2.008 OHMM @ 92.0 DEGF		@	
TIME **Circulation Ended**	00:30 14-AUG-93			
TIME **Logger on Bottom**	3:55 14-AUG-93			
Max. Rec. Temp.	92.0 DEGF			
Equip. / **Location**	8271	SACHAMENTO		
Recorded By	MIKE DEMSKII			
Witnessed By	R.LUCAS/B.PINOTTI			

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.	CNE	
Service Order No.	62437'	
Drilling Fluid Level	5.0 F	
Salinity	60C.C PPM	
Rmf @ BHT	2.335 OHMM @ 92.0 DEGF	@
Rmc @ BHT	1.7'C CHMM @ 92.0 DEGF	@
Logging Speed	36CC.C F/HR	
EQUIPMENT DATA		
Tool Number 1	DIS-EC 1422	
Tool Number 2	DIC-DA ''49	
Tool Number 3	SLS-WA	
Tool Number 4	SLC-MA	
Tool Number 5	MCD-DB	
Tool Number 6	SGC-JC	
Tool Number 7	IEM-BD 1317	
Tool Number 8	SLM-DA 443	
Tool Number 9	NLM-BD 1126	
Tool Number 10		
Tool Number 11		
Tool Number 12		

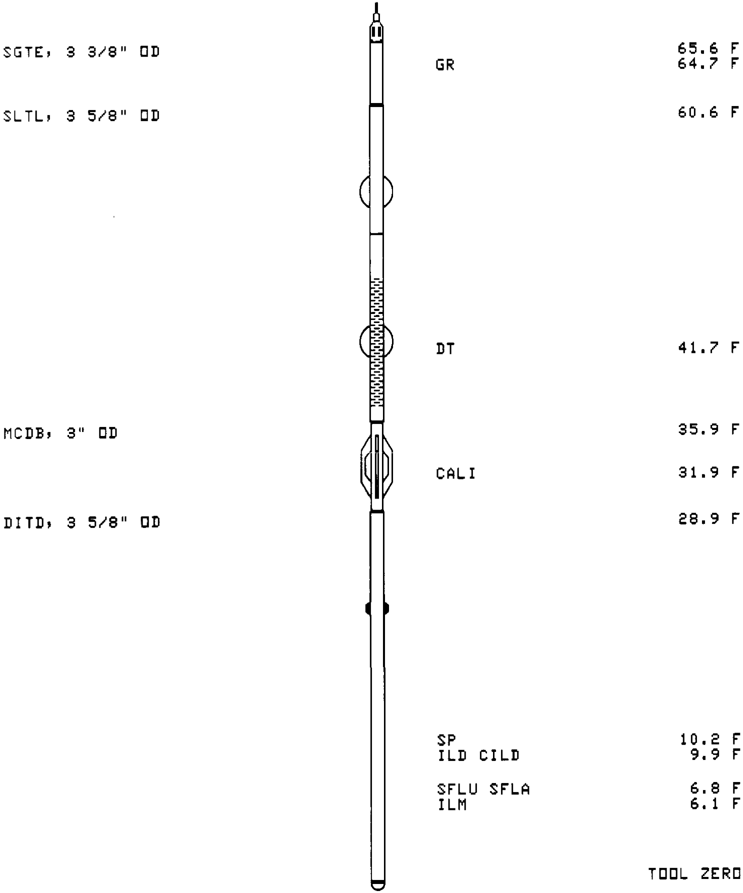
REMARKS:

TWO 1.5" STANDOFFS RUN ON INDUCTION TOOL

TWO CMEZ CENTRALIZERS RUN ON SONIC TOOL

1 1.5" STANDOFF RUN ON SONIC TOOL
DISCREPANCY BETWEEN DRILLER'S TD AND LOGGER'S TD DUE TO FILL

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:    916.895 F3     FROM 3038.50 F      TO 502.000 F
Integrated Cement Volume: 636.748 F3     FROM 3038.50 F      TO 502.000 F
  (ASSUMING 4.50000 IN   O.D. CASING)
Integrated Transit Time:  .290651 S       FROM 3038.50 F      TO 502.000 F
```

EVENT MARK SUMMARY:

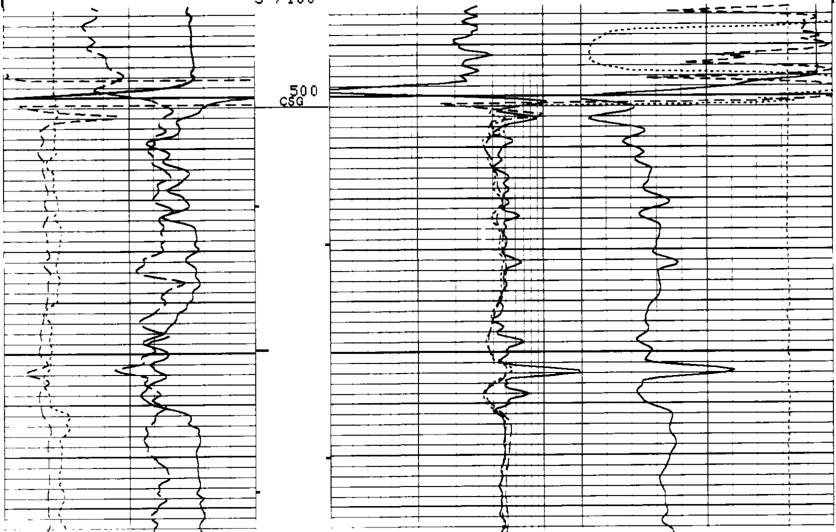
```
OUTPUT                          INTERVAL        DEPTH TRACK
                                BETWEEN PIPS    EDGE

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

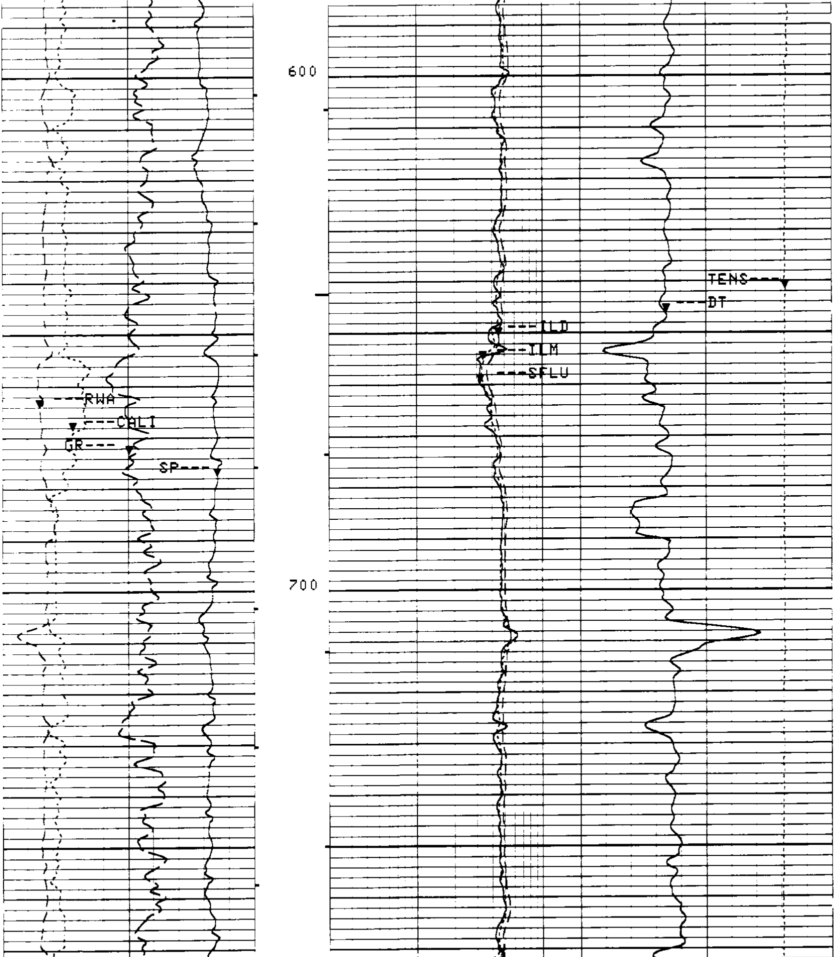
TENS(LBF)
10000. 0.0
DT(US/F)
150.00 50.000

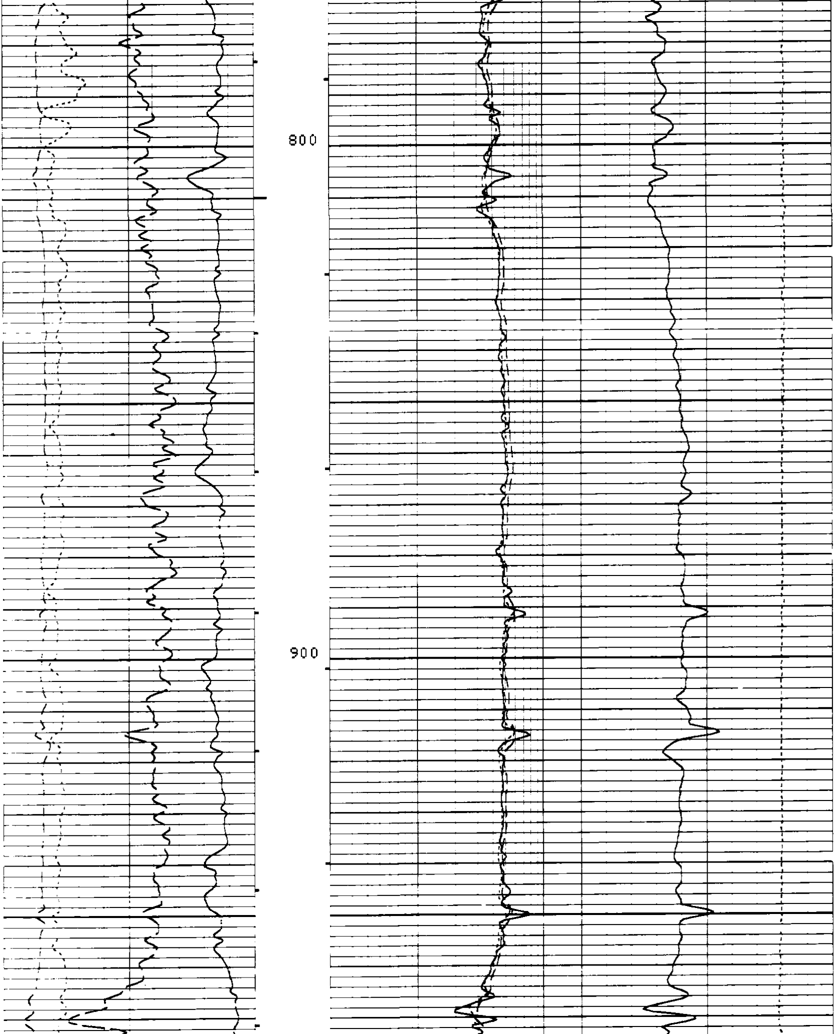
RWA(OHMM)
0.0 3.0000
CALI(IN)
6.0000 16.000
GR(GAPI)
0.0 150.00
SP(MV)
-100.0 0.0

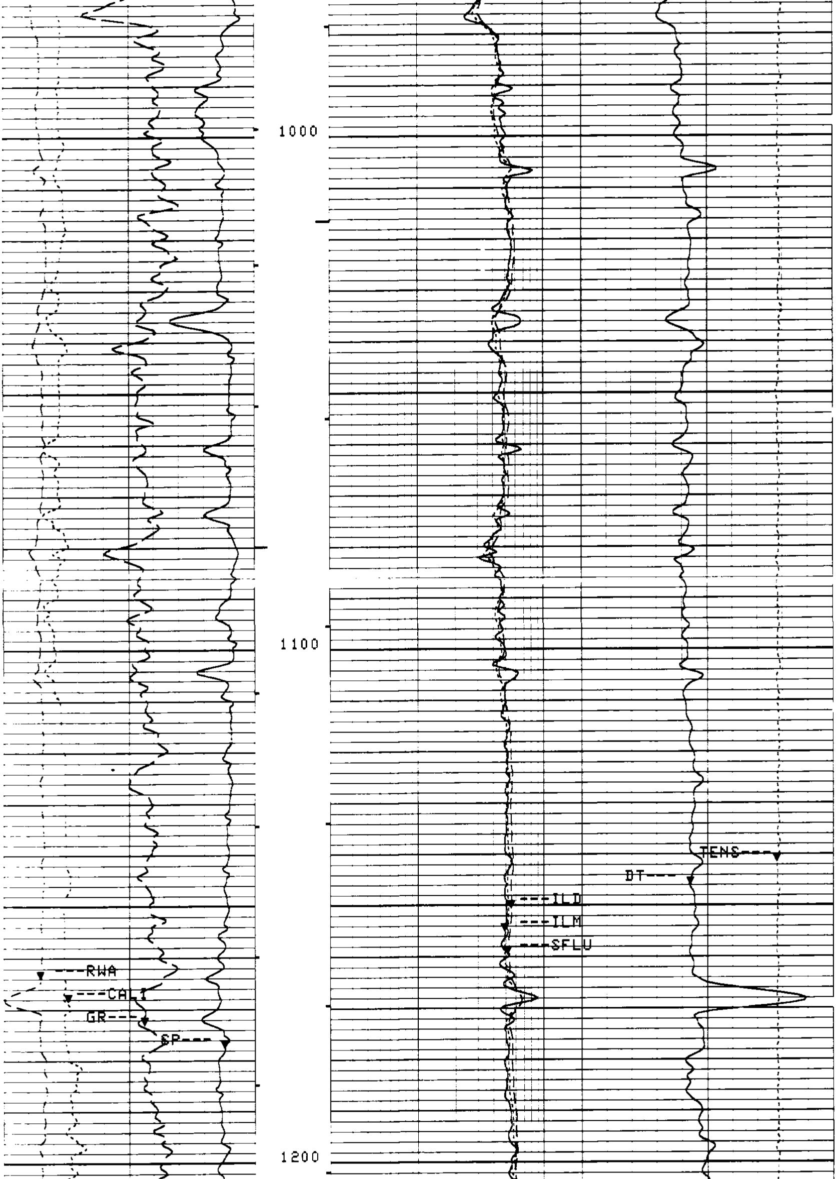
ILD(OHMM)
.20000 2000.0
ILM(OHMM)
.20000 2000.0
SFLU(OHMM)
.20000 2000.0

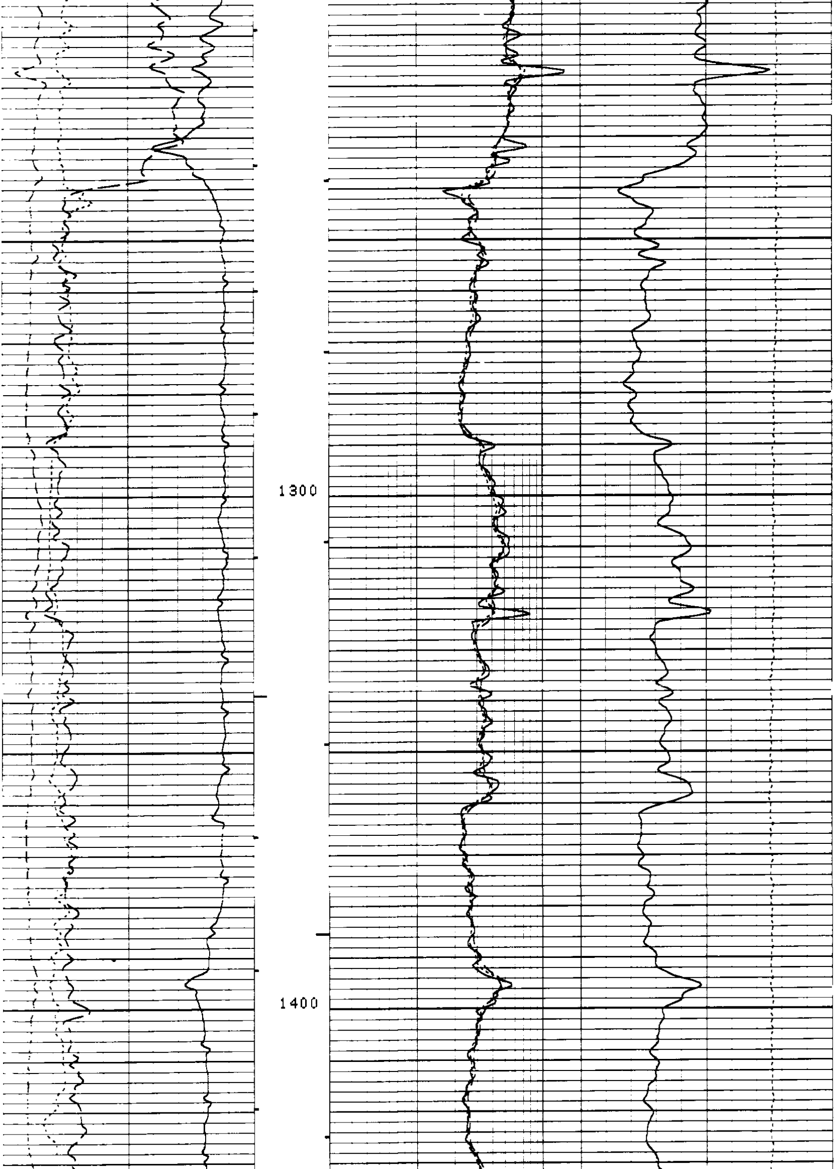
```
CP 38.2                FILE    4       14-AUG-1993 07:42

                       INPUT FILE(S)   CREATION DATE
                            6          14-AUG-1993 06:49

                       5"/100'
```

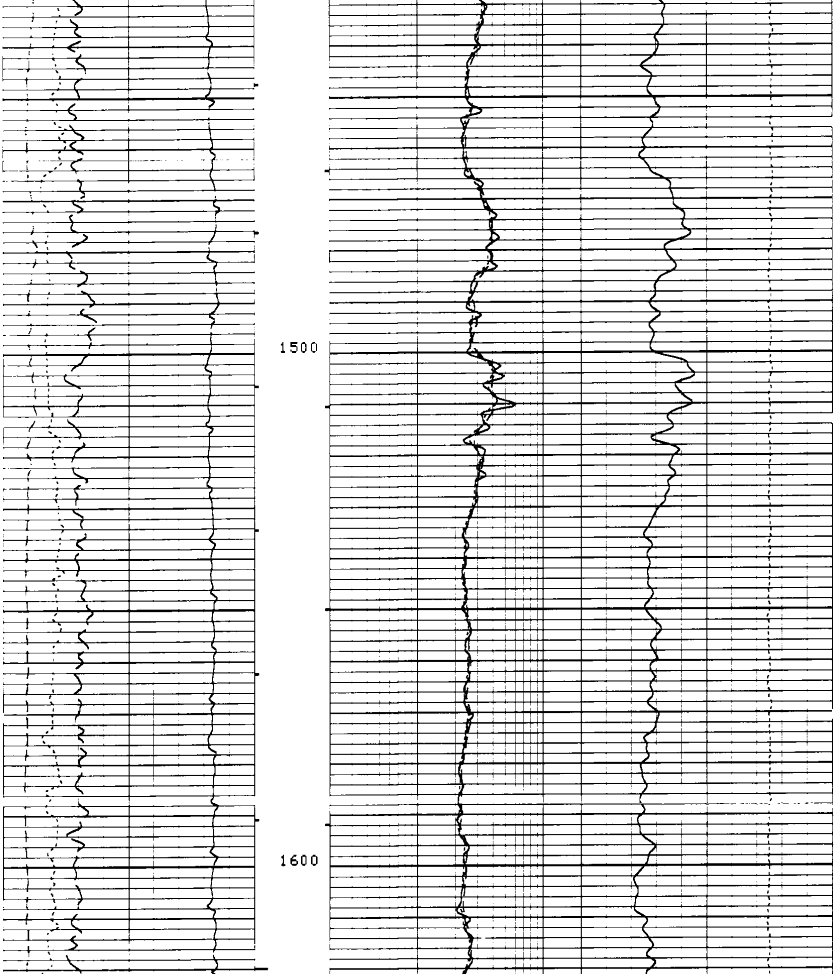


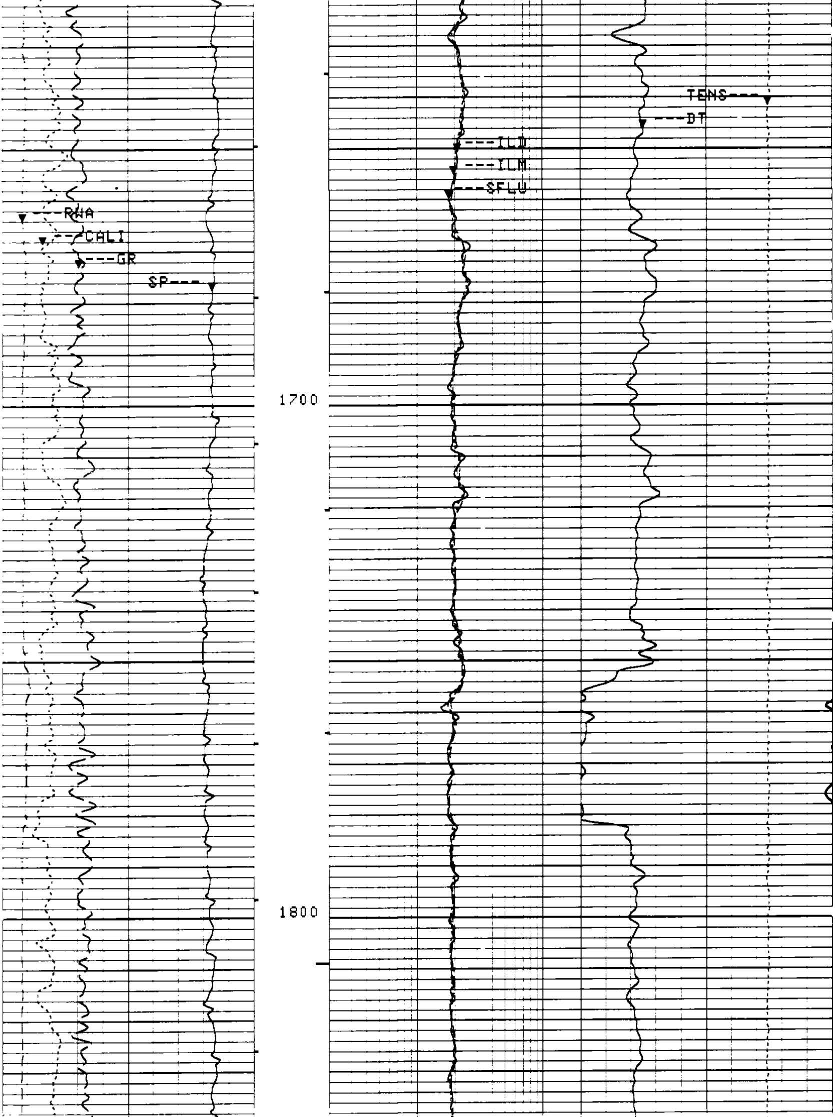


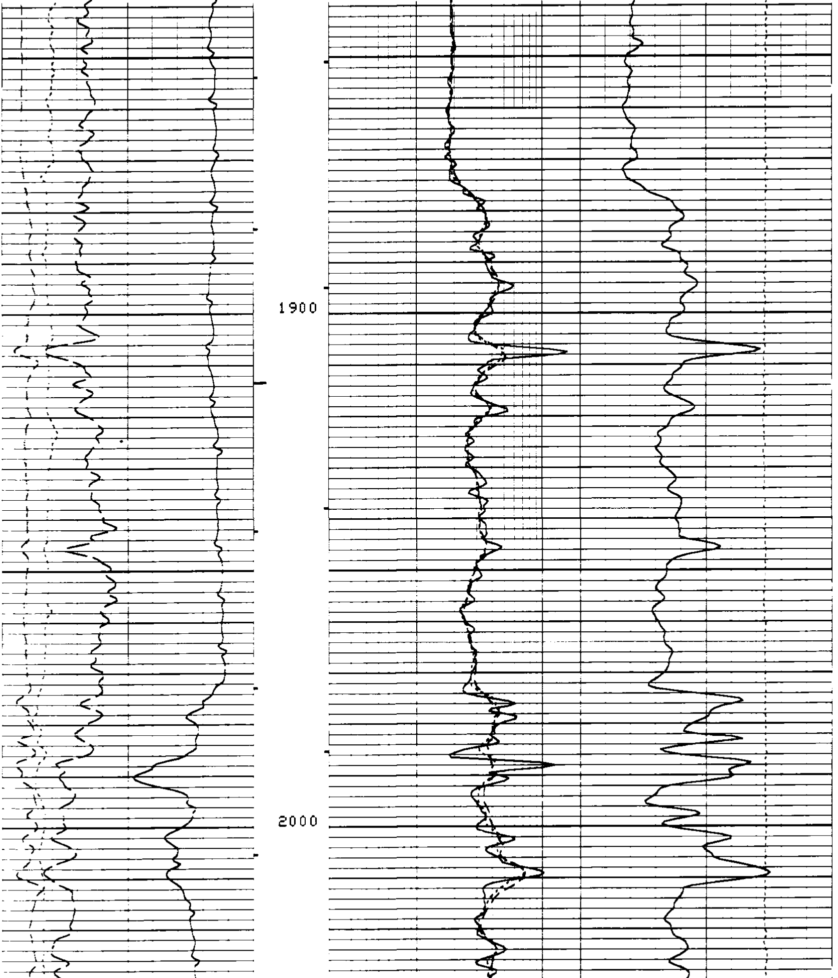


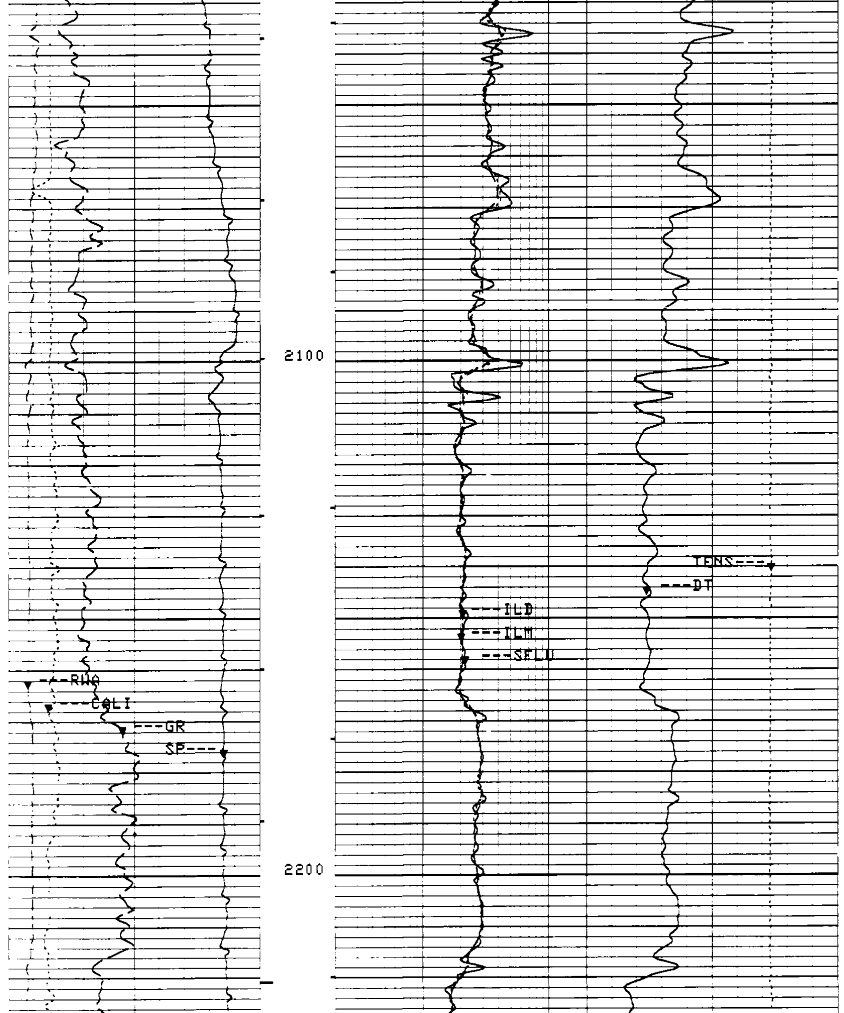


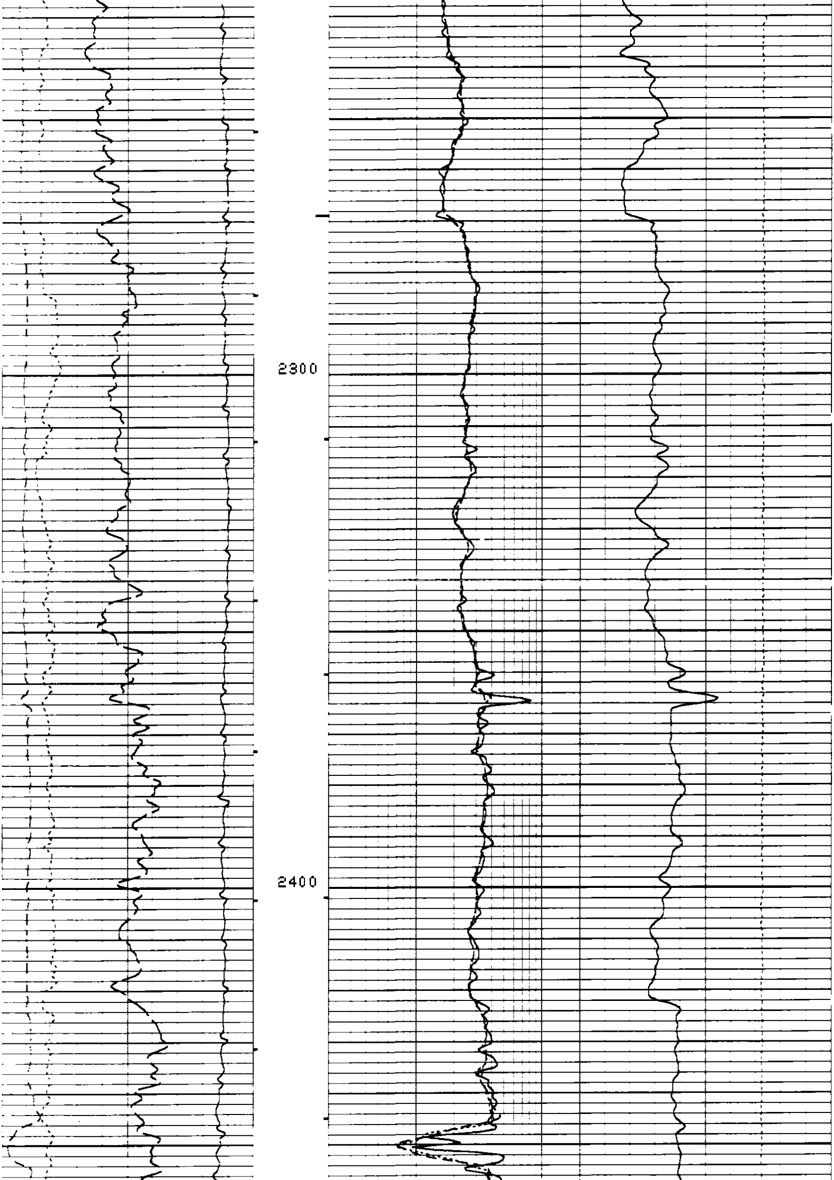


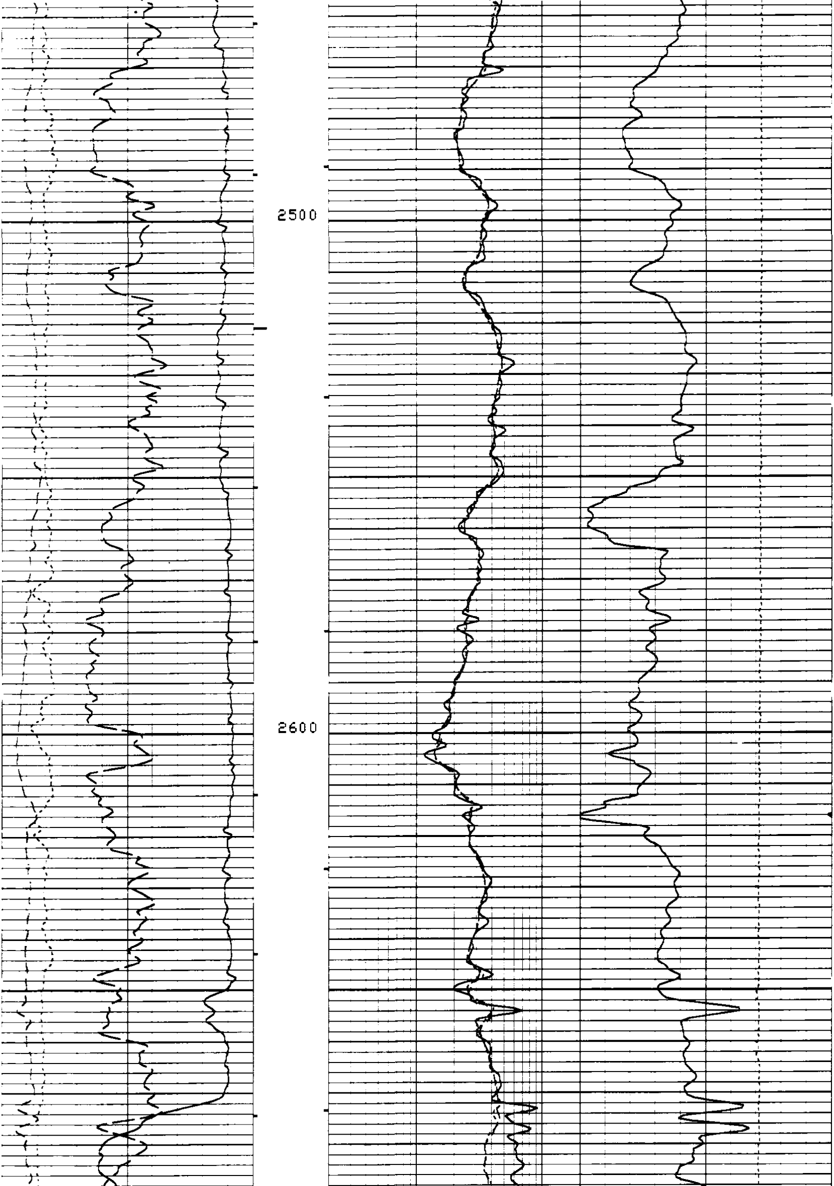


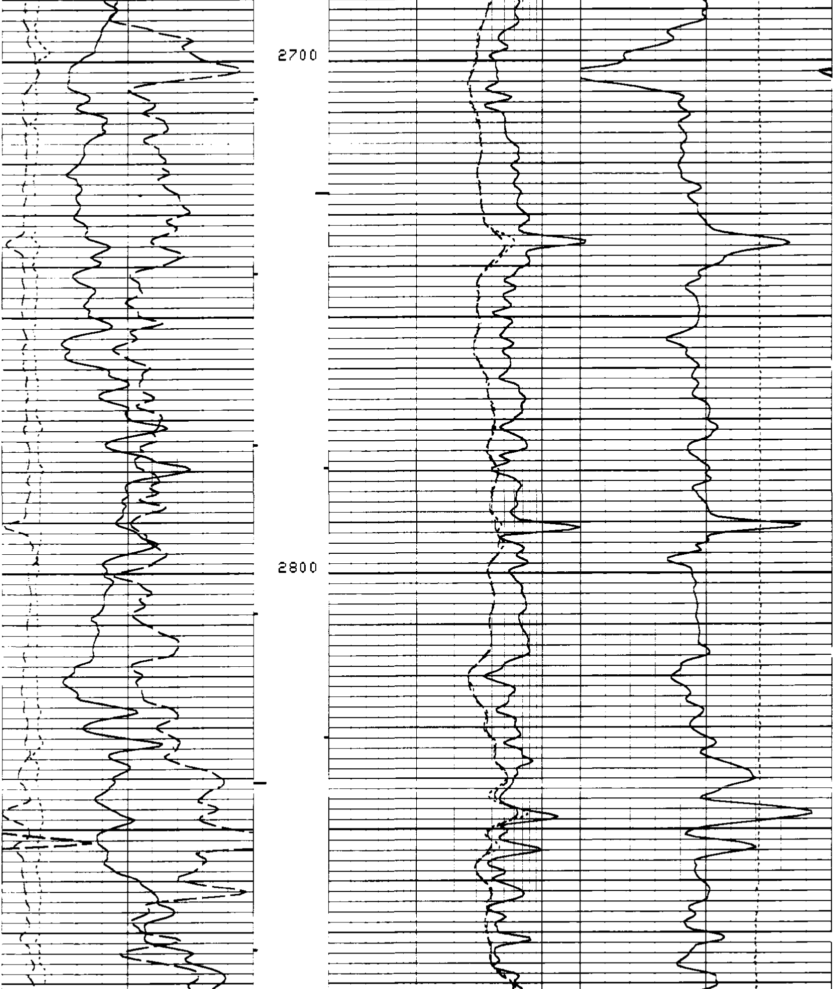


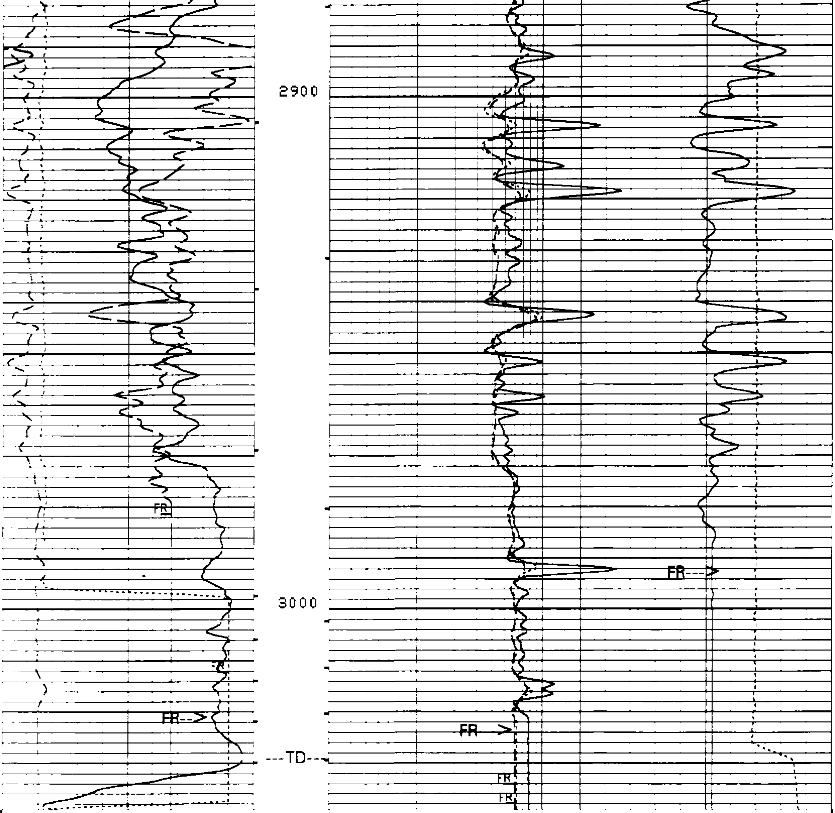












5"/100'

CP 38.2 FILE 4 14-AUG-1993 07:37

INPUT FILE(S) 6
CREATION DATE 14-AUG-1993 06:49

Curve	Left scale	Right scale
TENS(LBF)	10000.	0.0
DT(US/F)	150.00	50.000
RWA(OHMM)	0.0	3.0000
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

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                    TO   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

PARAMETER	VALUE	UNIT
SPDR - Spontaneous Potential Drift	.0100000	
SMB - Sonic Memory Board	DISA	
VDLR - Defn not found	2IN	
TOCA - TO Correction Status	DISA	
RATE - Firing Rate	15	HZ
DG - Downhole Gain	AUTO	
DETE - Detection	E2	
NMSG - Near Minimum Sliding Gate	180	US
CBLG - CBL Gate Width	35	US
AMPL - Sonic Amplitude	2	
CBL - Cement Bond Log Amplitude	UT	
WFM - Waveform Mode	1	
SS - Sweep Speed	FAST	
TOD - TO Delay	DISA	
DTF - Delta-T Fluid	189.000	US/F
DTM - Delta-T Matrix	56.0000	US/F
CDTS - Correction for Delta-T Shale, Empirical	100.000	
SPFS - Sonic Porosity Formula Select	R-H	
PP - Playback Processing	NORM	
DO - Depth Offset for Logical Unit LI1	0.0	F
WMUD - Weight of Mud	9.50000	LB/G
MSEC - Medium Sonde Error Correction	6.70000	MM/M
SBR - Shoulder Bed Resistivity	1.00000	OHMM
DSEC - Deep Sonde Error Correction	4.20000	MM/M
FCD - Future Casing Diameter	4.50000	IN
NCJT - NGT Calibration Jig Type	GSRY	
FPHI - Formation Factor Formula Porosity	SPHI	
DWCO - Digitizer Word Count	512	
DSIN - Digitizer Sample Interval	5	US
DDEL - Digitizing Delay	200	US
BS - Bit Size	7.87500	IN
BHS - BoreHole Status (Open or Cased)	OPEN	

REPEAT SECTION

```
ACCUMULATED INTEGRATION VALUES SUMMARY:

Integrated Hole Volume:   167.448 F3    FROM 3036.50 F    TO 2601.50 F
Integrated Cement Volume: 119.404 F3    FROM 3036.50 F    TO 2601.50 F
  (ASSUMING 4.50000 IN   O.D. CASING)
Integrated Transit Time:  .0441670 S    FROM 3036.50 F    TO 2601.50 F
```

```
EVENT MARK SUMMARY:

OUTPUT                         INTERVAL        DEPTH TRACK
                               BETWEEN PIPS    EDGE
```

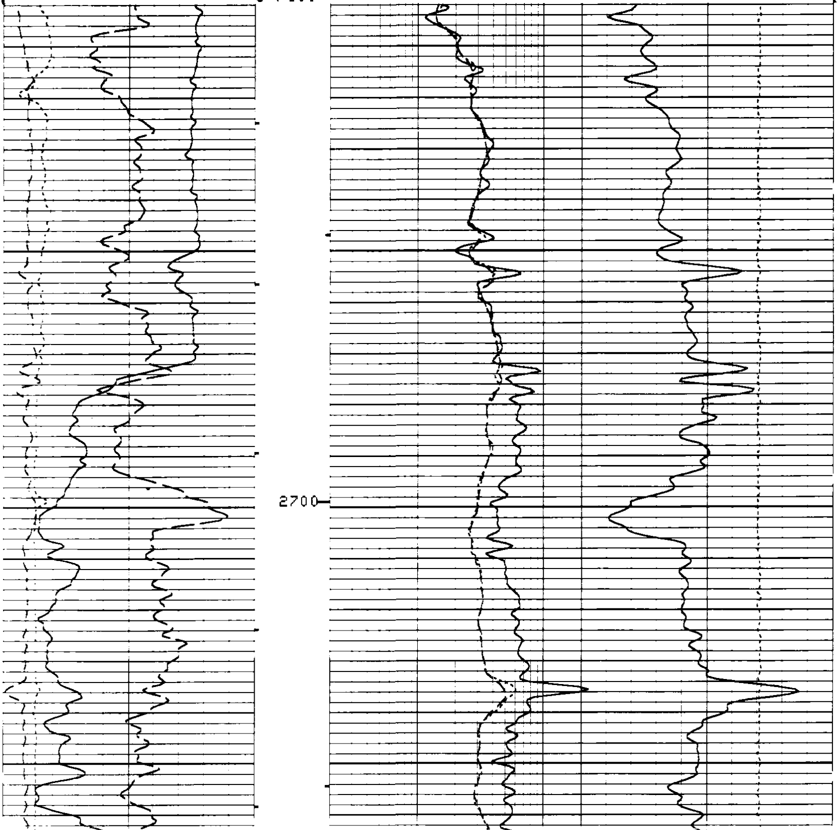
Integrated Hole Volume 10.0000 F3 LEFT EDGE
Integrated Cement Volume 10.0000 F3 RIGHT EDGE

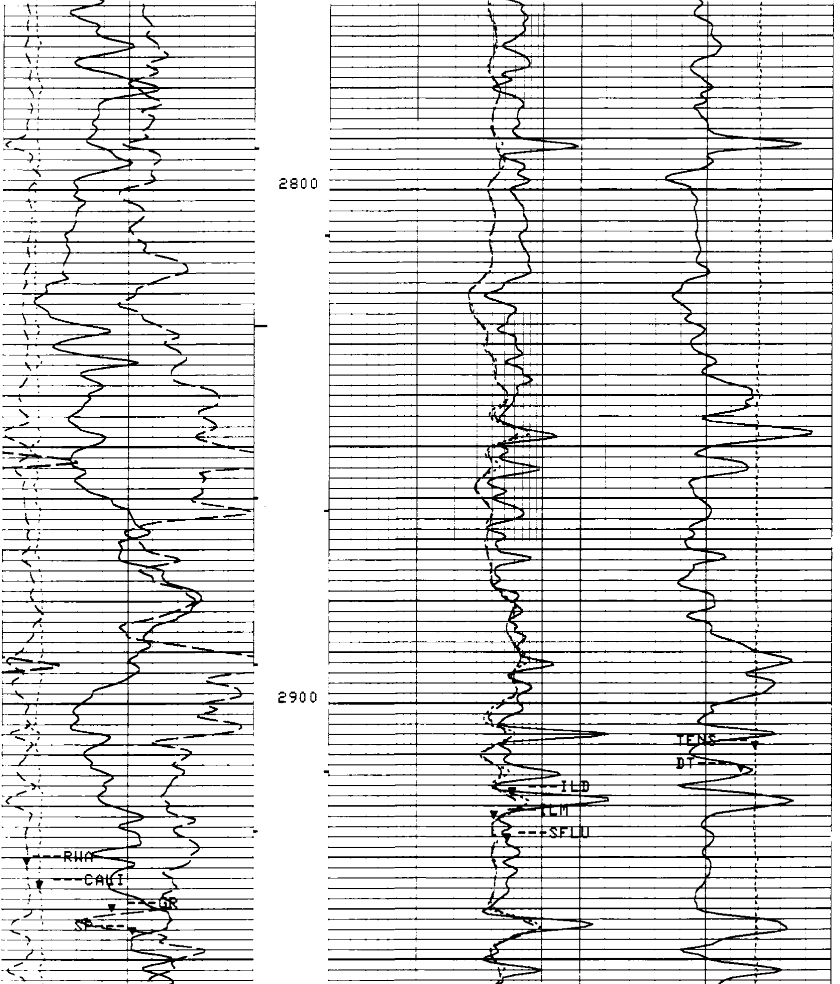
TENS(LBF)	10000.	0.0
DT(US/F)	150.00	50.000
RWA(OHMM)	0.0	3.0000
CALI(IN)	6.0000	16.000
GR(GAPI)	0.0	150.00
SP(MV)	-160.0	-60.00
ILD(OHMM)	.20000	2000.0
ILM(OHMM)	.20000	2000.0
SFLU(OHMM)	.20000	2000.0

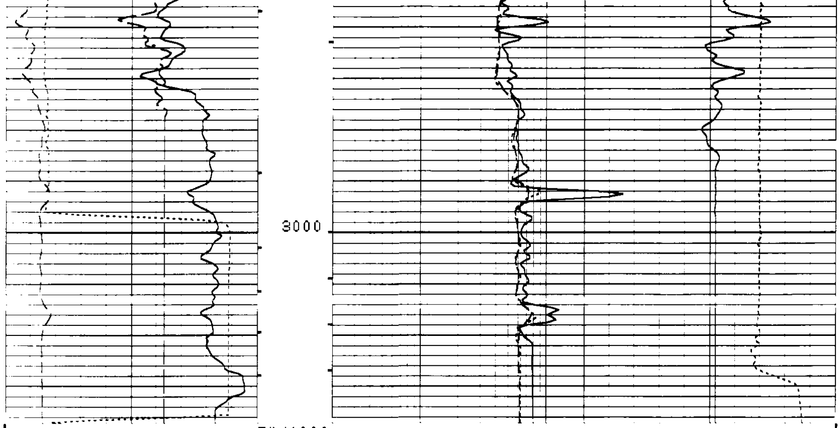
CP 38.2 FILE 2 14-AUG-1993 07:27

INPUT FILE(S) CREATION DATE
5 14-AUG-1993 06:49

5"/100'







5"/100'

CP 38.2 FILE 2 14-AUG-1993 07:26

INPUT FILE(S) CREATION DATE
5 14-AUG-1993 06:49

TENS(LBF)
10000. 0.0
DT(US/F)
150.00 50.000

RWA(OHMM)
C.C 3.0000
CALI(IN)
6.CCCC 16.000
GR(GAPI)
C.C 150.00
SP(MV)
-'6C.C -60.00

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	AUTO		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 6.70000      MM/M                         SBR  1.00000      OHMM
     DSEC 4.20000      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:     14-AUG-1993 04:51
   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           -.1          502.7        501.7      MM/M
   ILM         0.0            .1          498.9        496.2      MM/M
   SFL         0.0            .1          500.0        498.8      MM/M

 ILD SONDE ERROR CORRECTION :        4.2 MM/M
 ILM SONDE ERROR CORRECTION :        6.7 MM/M

 BEFORE SURVEY:            ZERO: 14-AUG-1993 03:49  PLUS: 14-AUG-1993 03:49
 AFTER SURVEY CHECK:       ZERO: 14-AUG-1993 04:50  PLUS: 14-AUG-1993 04:51

   CP 38.2            FILE    8       14-AUG-1993 04:51
                BEFORE SURVEY CALIBRATION SUMMARY
   PERFORMED:     14-AUG-1993 03:50
   PROGRAM FILE: ISN    (VERSION    38.2    92/10/12  92/10/12)
 DITD            ELECTRONICS CALIBRATION SUMMARY

              MEASURED                           CALIBRATED
            ZERO    PLUS                     ZERO        PLUS         UNITS
   ILD       .29    511.4                    0.0         502.7         MM/M
   ILM       .02    528.3                    0.0         498.9         MM/M
   SFL       .06    525.0                    0.0         500.0         MM/M

 ILD SONDE ERROR CORRECTION :        4.2 MM/M
 ILM SONDE ERROR CORRECTION :        6.7 MM/M

 ZERO: 14-AUG-1993 03:49  PLUS: 14-AUG-1993 03:49  COMP: 14-AUG-1993 03:49
 SGTE            DETECTOR CALIBRATION SUMMARY

              MEASURED
            BKGD    JIG        CALIBRATED         UNITS
    GR       46     207           165             GAPI

 BACK: 14-AUG-1993 02:40   JIG: 14-AUG-1993 02:45  COMP: 14-AUG-1993 02:45
 MCDB            CALIPER CALIBRATION SUMMARY

              MEASURED                           CALIBRATED
            SMALL   LARGE                    SMALL       LARGE        UNITS
  CALI      7.24    11.96                    8.00        12.00         IN

 SMALL: 14-AUG-1993 02:37 LARGE: 14-AUG-1993 02:38 COMP: 14-AUG-1993 02:38

   CP 38.2            FILE    4       14-AUG-1993 03:50
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```
                    SHOP SUMMARY

    PERFORMED:      12-AUG-1993 10:18
    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    -3.3     502.0    0.0        500.0     0.0        502.7   MM/M
     ILM    -7.0     518.6    0.0        500.0     0.0        498.9   MM/M
  ILD  SONDE ERROR CORRECTION :        4.2 MM/M
  ILM  SONDE ERROR CORRECTION :        6.7 MM/M

                          (IS:1422, IC:1149)

     CP 38.2             FILE    9      12-AUG-1993 10:18
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COMPANY	NAHAMA AND WEAGANT ENERGY CO.			**SCHL.**	**FR**	3023.0 F
				SCHL.	**TD**	3029.0 F
WELL	"JR BURGER JOHNSTON" #24-19-65			**DRLR.**	**TD**	3044.0 F
				Elev:	**KB**	638.3 F
FIELD	MIST				**DF**	637.3 F
COUNTY	COLUMBIA	**STATE**	OREGON		**GL**	628.3 F

DUAL INDUCTION-SFL-SONIC

Schlumberger