Schlumberger

DUAL INDUCTION-SFL-SONIC
5 INCH LOG

COUNTY COLUMBIA
FIELD MIST
LOCATION 575' E & 556' W FROM
WELL "BEAVER CREEK" #31-34-75
COMPANY NAHAMA AND WEAGANT ENERGY CO

SCANNED

COMPANY	NAHAMA AND WEAGANT ENERGY CO.
WELL	ADAMS "~~BEAVER CRE~~EK" #31-34-75
FIELD	MIST
COUNTY	COLUMBIA **STATE** OREGON

LOCATION
575' E & 556' W FROM
N 1/4 CORNER OF SEC 34

API SERIAL NO.	SECT.	TWP.	RANGE
36-009-00282	34	7N	5W

Other Services:
DITD
SLTQ
SGTE
TVD
SHDT

Permanent Datum	GL	Elev.	1627.0 F	Elev.: K.B.1637.0 F
Log Measured From	KB	10.0 F	above Perm. Datum	D.F.1636.0 F
Drilling Measured From	KB			G.L.1627.0 F

Date	28-JUN-92			
Run No.	ONE			
Depth Driller	3414.0 F			
Depth Logger (Schl.)	3412.0 F			
Btm. Log Interval	3406.0 F			
Top Log Interval	501.0 F			
Casing-Driller	9 5/8 IN @ 494.0 F	@	@	
Casing-Logger	501.0 F			
Bit Size	8 1/2 IN @ 3414.0 F	@	@	
Type Fluid in Hole	GEL/POLYMER			
Dens. / Visc.	9.80 LB/G	41.0 S		
pH / Fld. Loss	8.0	5.0 C3		
Source of Sample	FLOWLINE			
Rm @ Meas. Temp.	3.810 OHMM @ 74.0 DEGF		@	
Rmf @ Meas. Temp.	5.650 OHMM @ 50.0 DEGF		@	
Rmc @ Meas. Temp.	3.000 OHMM @ 50.0 DEGF		@	
Source: Rmf / Rmc	MEASURED	MEASURED		
Rm @ BHT	3.117 OHMM @ 92.0 DEGF		@	
TIME Circulation Ended	05:30 ON 28 JUNE 92			
TIME Logger on Bottom	08:30 ON 28 JUNE 92			
Max. Rec. Temp.	92.0 DEGF			
Equip. / Location	8504	SACRAMENTO		
Recorded By	DAN MILLER			
Witnessed By	J.VAUGHAN/B.PINOTTI			

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

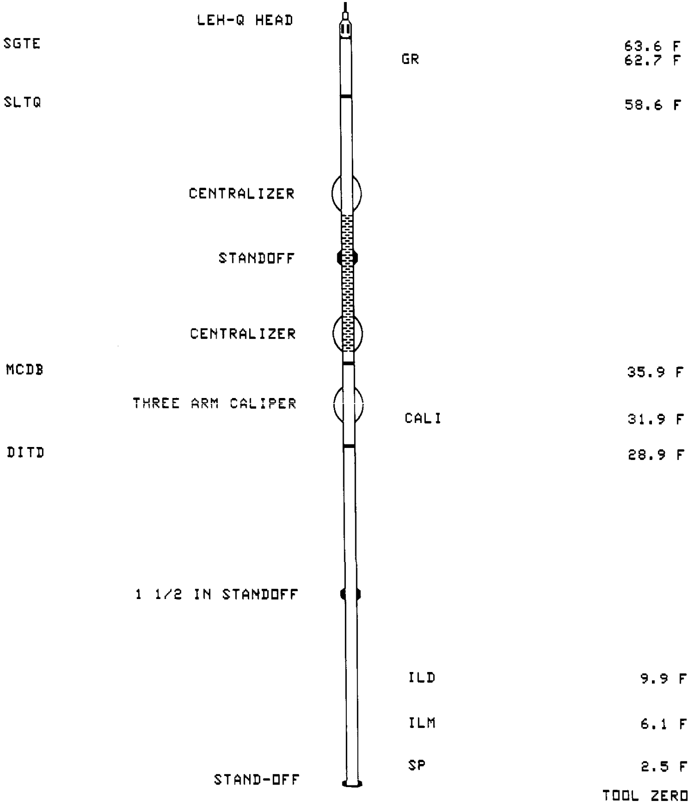
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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.	ONE	
Service Order No.	595052	
Drilling Fluid Level		
Salinity	300.0 PPM	
Rmf @ BHT	3.253 OHMM @ 92.0 DEGF	@
Rmc @ BHT	1.727 OHMM @ 92.0 DEGF	@
Logging Speed	3600.0 F/HR	
EQUIPMENT DATA		
Tool Number 1	DIS-EC 298	
Tool Number 2	DIC-DA 1078	
Tool Number 3	MCD-B 1190	
Tool Number 4	SLS-WA 178	
Tool Number 5	SLC-MA 189	
Tool Number 6	SGT-E 567	
Tool Number 7		
Tool Number 8		
Tool Number 9		
Tool Number 10		
Tool Number 11		
Tool Number 12		

REMARKS:

A 1.5" STANDOFF RUN ON DUAL INDUCTION
2 CMEZ CENTRALIZERS AND A STANDOFF RUN ON SONIC
MAX DEVIATION = 12.75 DEG
REPEAT DONE FROM 3200' TO 3000' DUE TO HOLE CONDITIONS
SP RUN ON -150 0 DUE TO HIGH ACTIVITY
OF SP BELOW BASALT

LOGGING TOOL STRING SKETCH



TOTAL TOOL STRING LENGTH IS 66.6 F.
TOTAL TOOL STRING WEIGHT IS 957. LB IN AIR.

MAIN LOG

```
ACCUMULATED INTEGRATION VALUES SUMMARY:

Integrated Hole Volume:   1253.45 F3    FROM 3412.00 F    TO 501.000 F
Integrated Transit Time:  .376686 S     FROM 3412.00 F    TO 501.000 F
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EVENT MARK SUMMARY:

OUTPUT                        INTERVAL        DEPTH TRACK
                              BETWEEN PIPS    EDGE

Integrated Hole Volume        10.0000 F3      LEFT EDGE
Integrated Transit Time       .00100000 S     RIGHT EDGE
```

TENS(LBF)
10000.   0.0
DT(US/F)
175.00   75.000

RWA(OHMM)
0.0   3.0000
CALI(IN)
6.0000   16.000
SP(MV)
-150.0   0.0

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

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CP 32.6          FILE     7         28-JUN-1992 09:53

                 INPUT FILE(S)      CREATION DATE
                      4             28-JUN-1992 08:31

                 5"/100'
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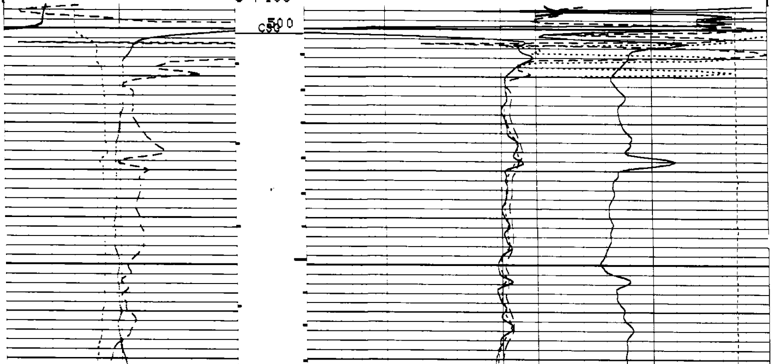
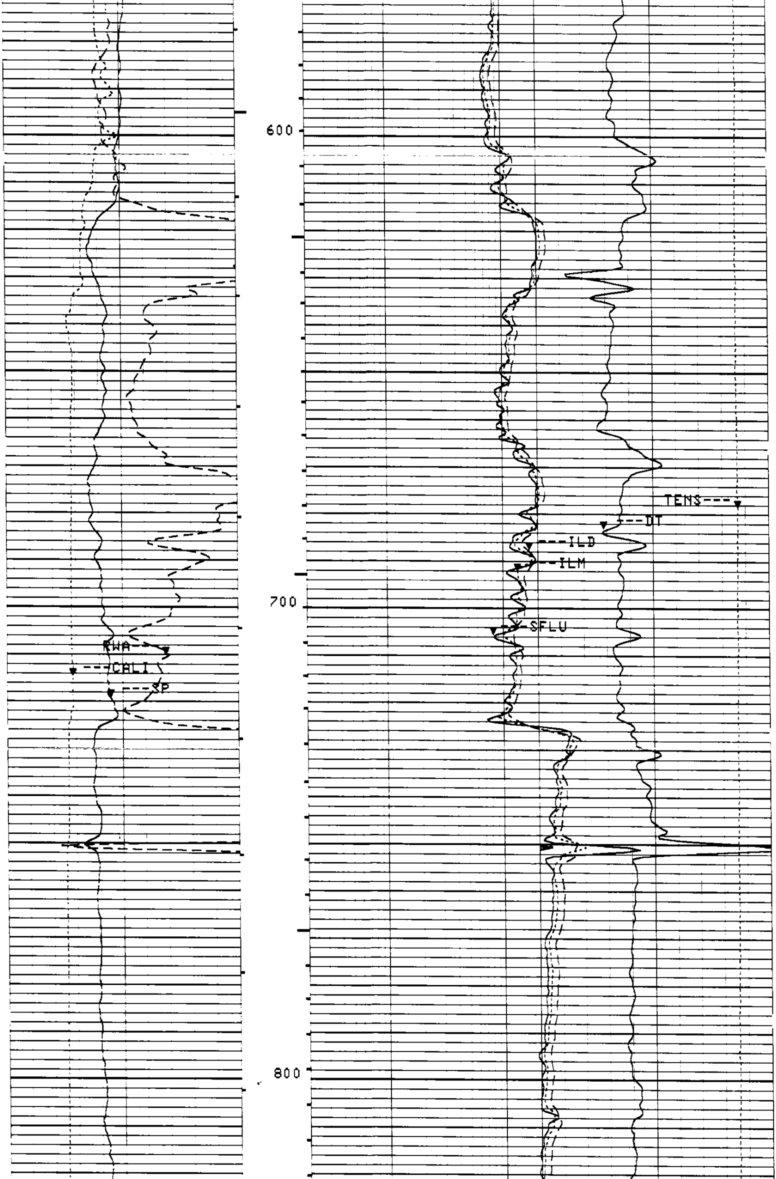
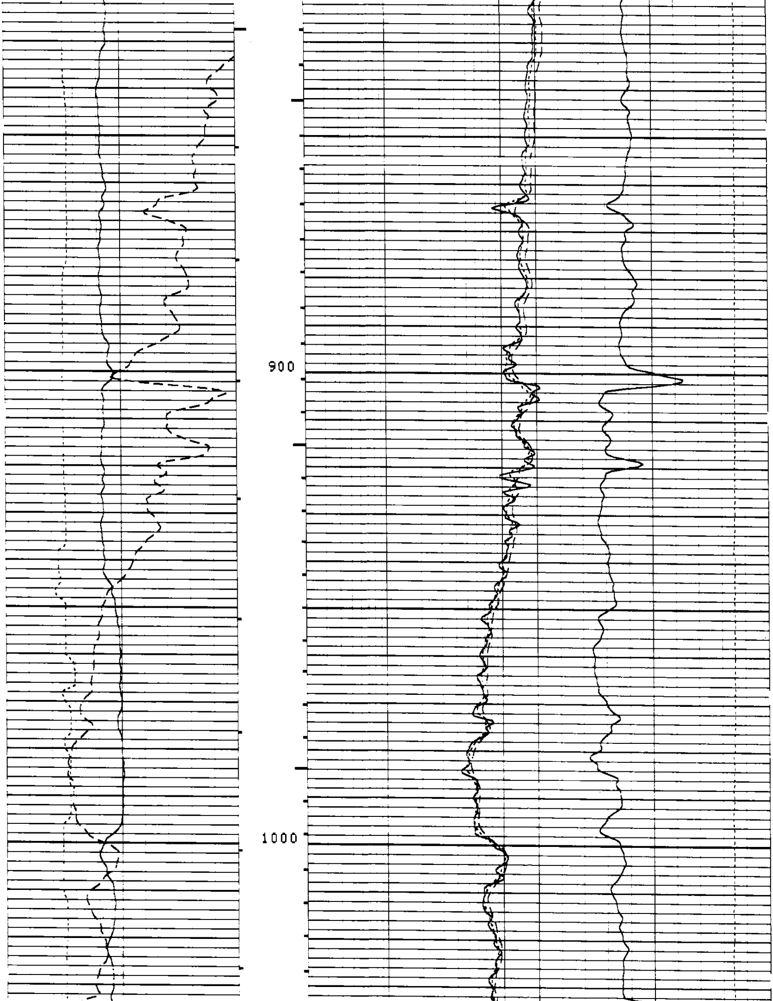
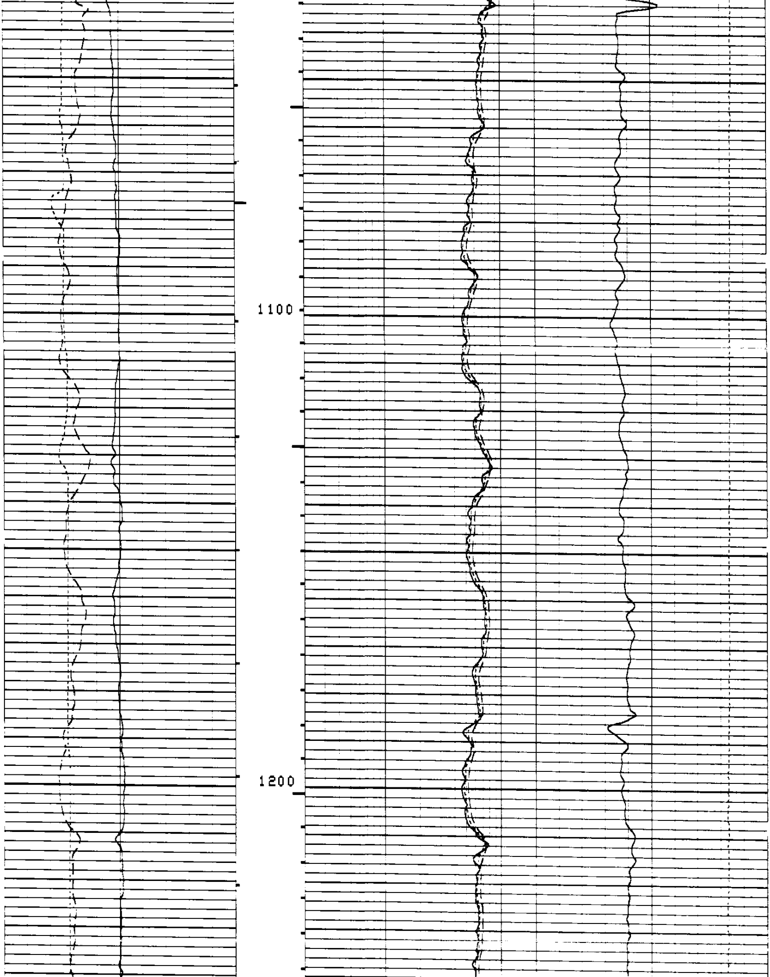
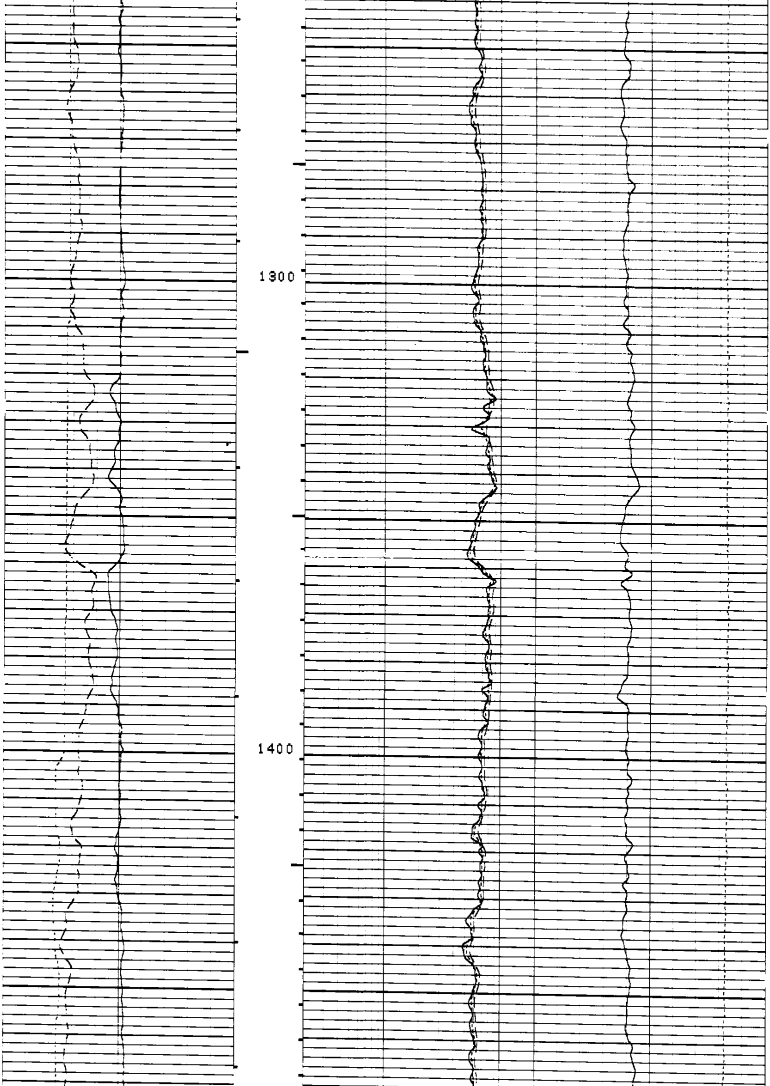
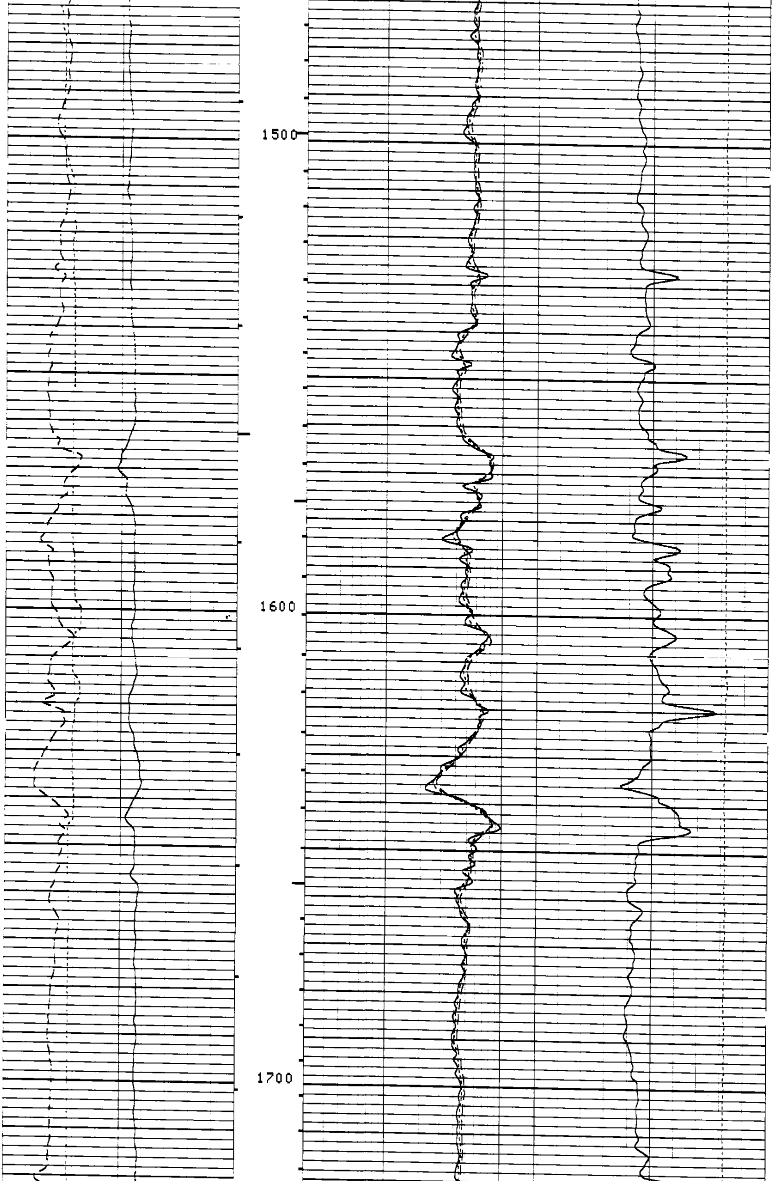


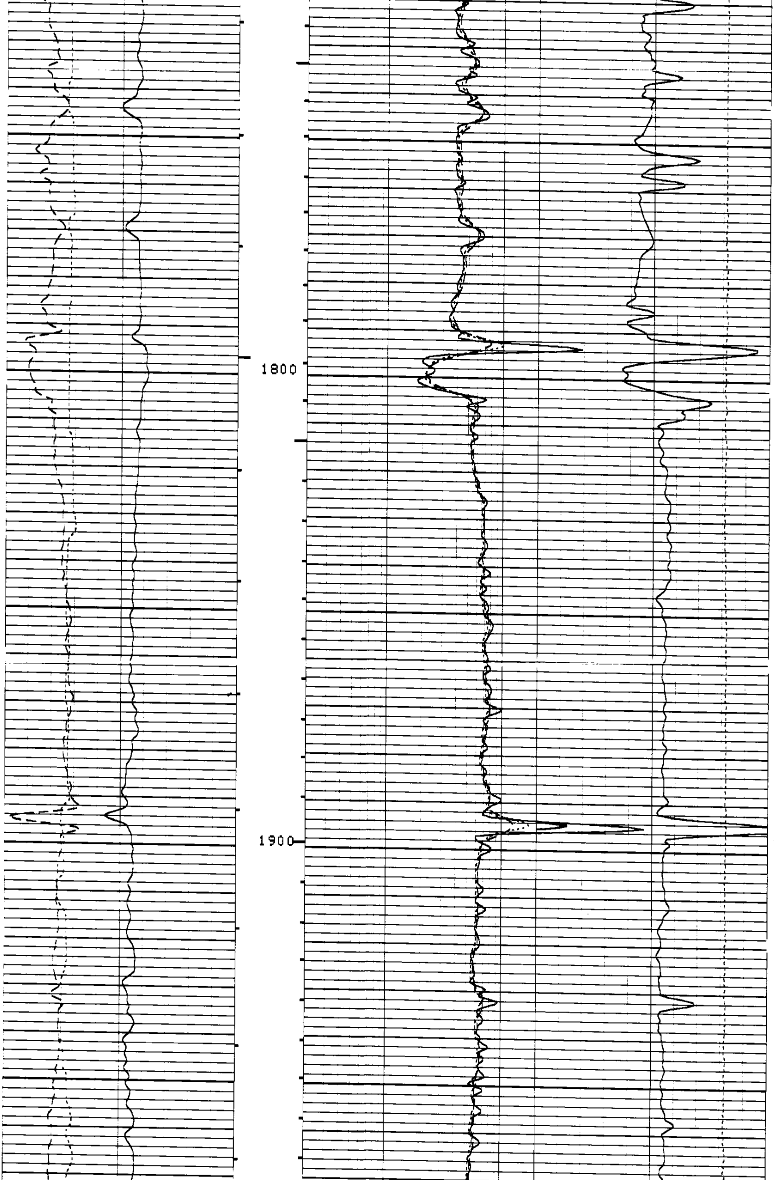


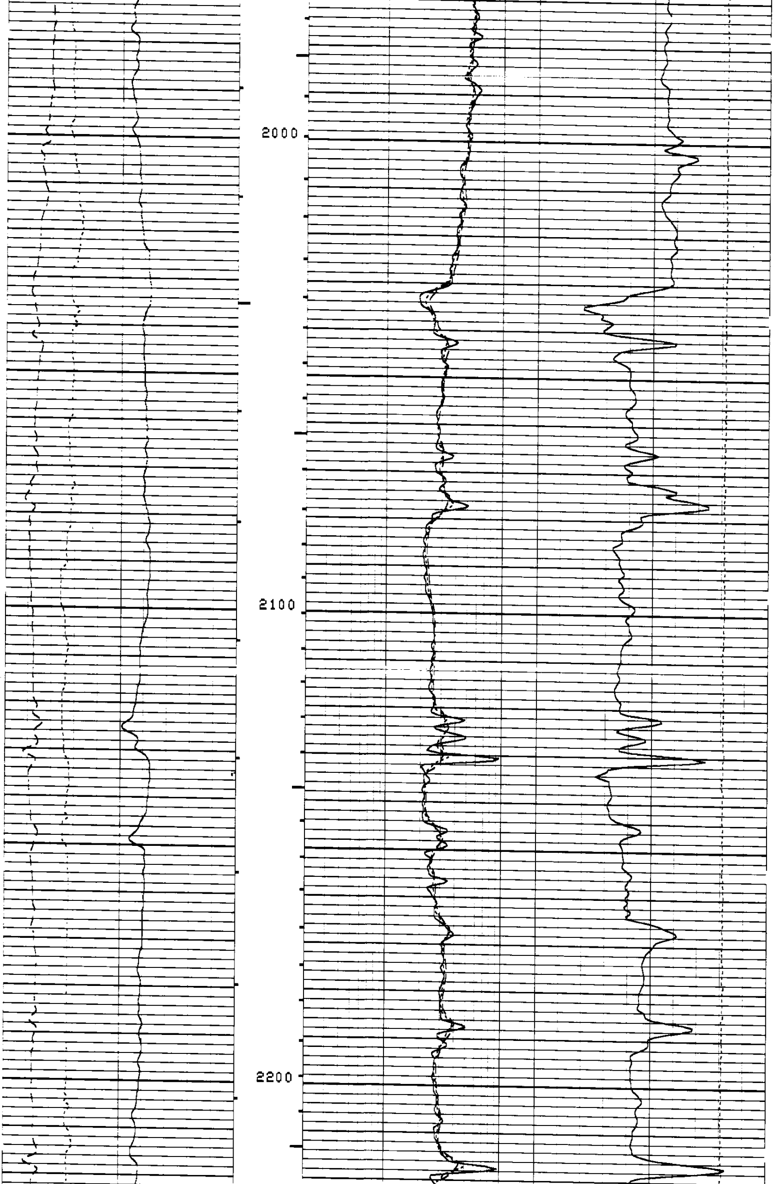


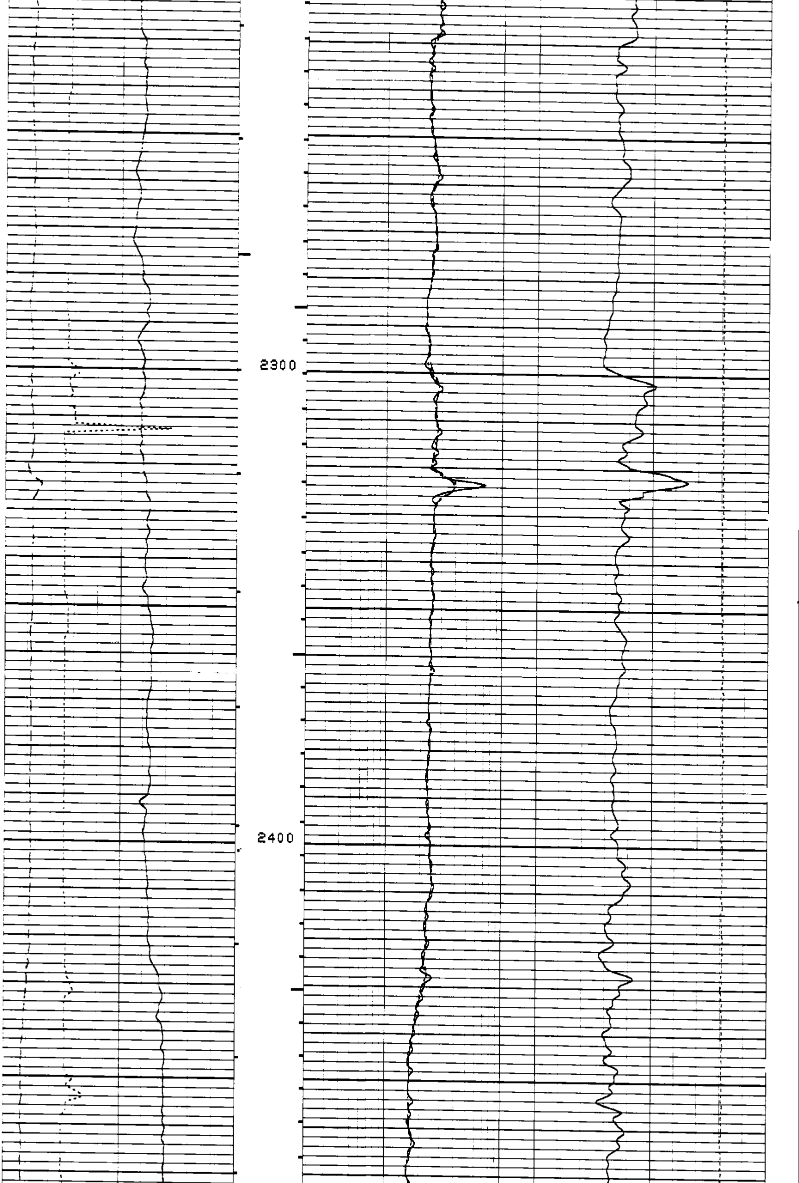


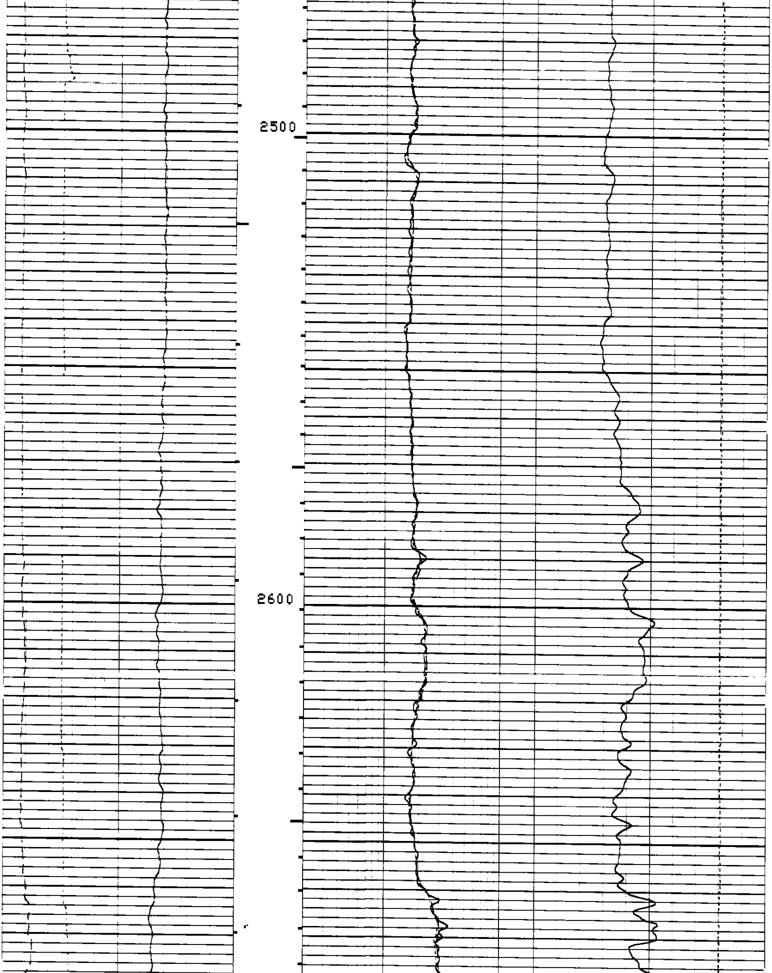


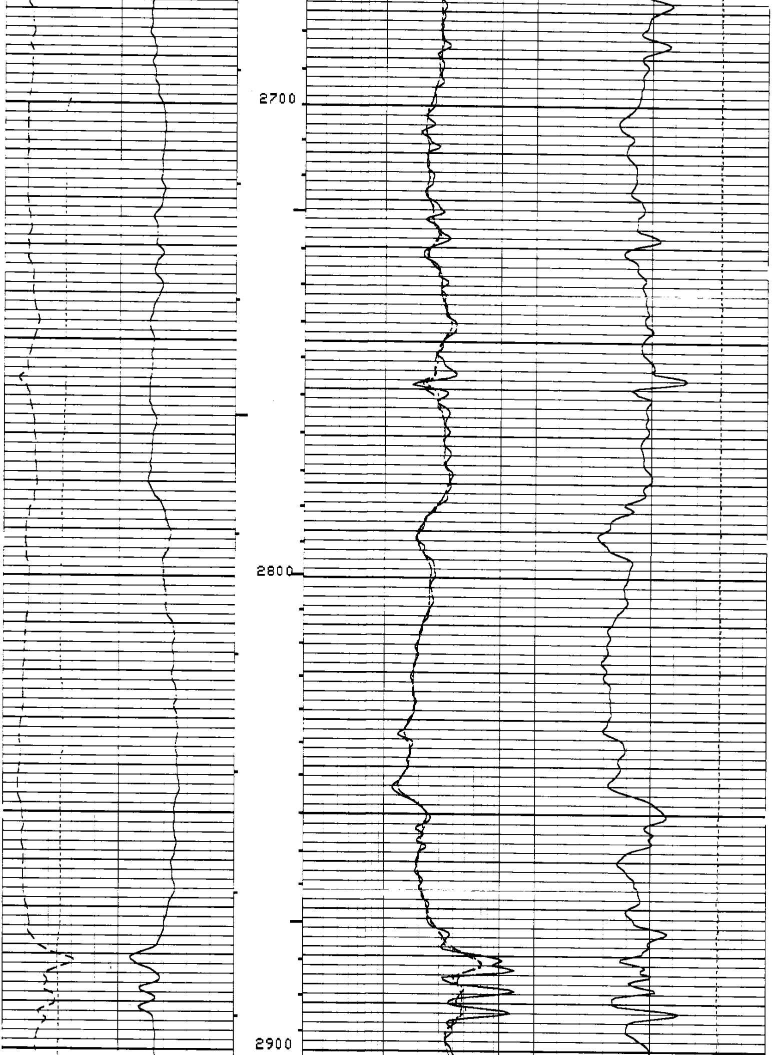


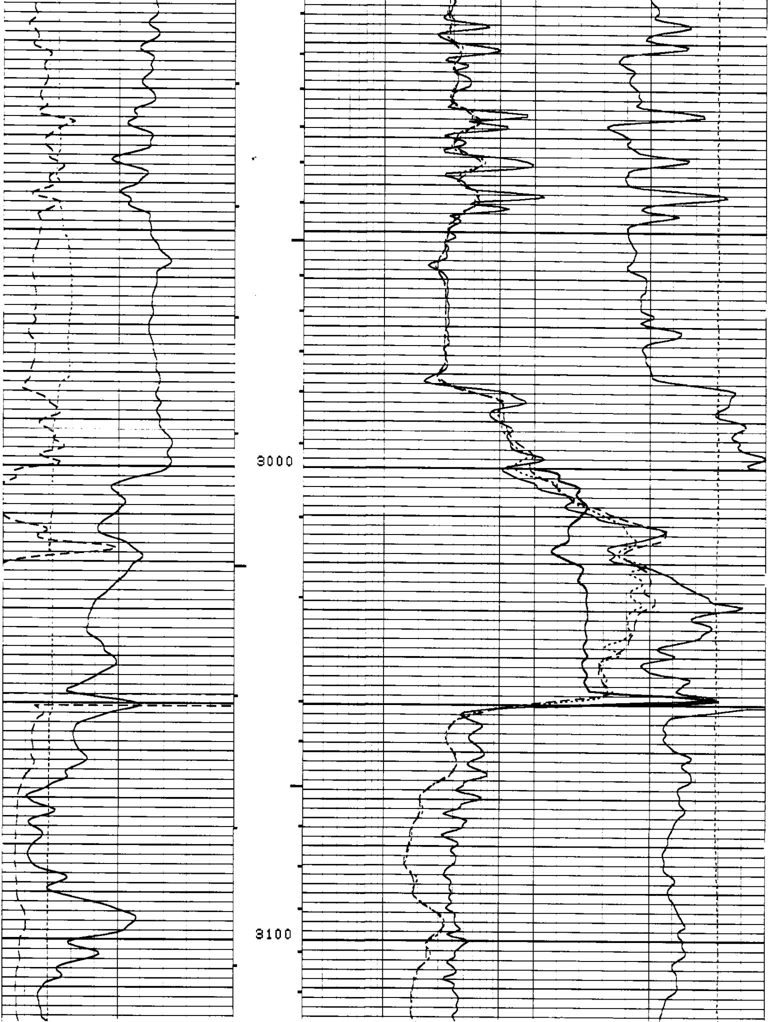


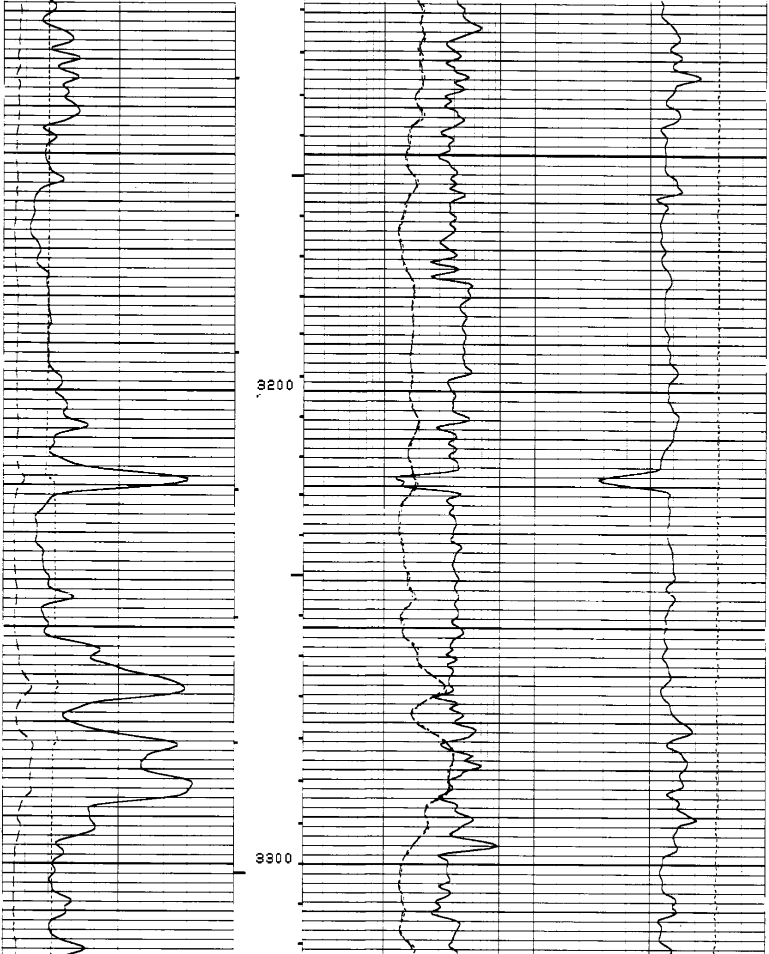


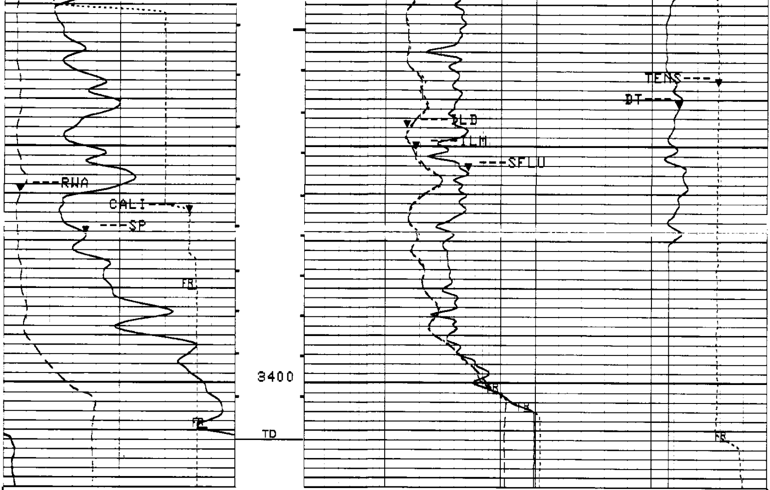












5"/100'

CP 32.6 FILE 7 28-JUN-1992 09:35

INPUT FILE(S) 4

CREATION DATE 28-JUN-1992 08:31

TENS(LBF)	10000.	0.0
DT(US/F)	175.00	75.000
RWA(OHMM)	0.0	3.0000
CALI(IN)	6.0000	16.000
SP(MV)	-150.0	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	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	0.0	FEET	SPAR	2.5	FEET
NOIS	2.5	FEET			

PARAMETERS

NAME	VALUE	UNIT	NAME	VALUE	UNIT

```
SMB  DISA                        TOCA DISA
RATE 15          HZ              DG   /5
DETE E2                          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   RECO                        DO   0.0         F
WMUD 9.50000     LB/G            MSEC 6.00000     MM/M
SBR  1.00000     OHMM            DSEC 6.30000     MM/M
FCD  4.50000     IN              NCJT GSRY
FPHI SPHI                        DWCO 512
DSIN 5           US              DDEL 200         US
BS   7.87500     IN              BHS  OPEN
```

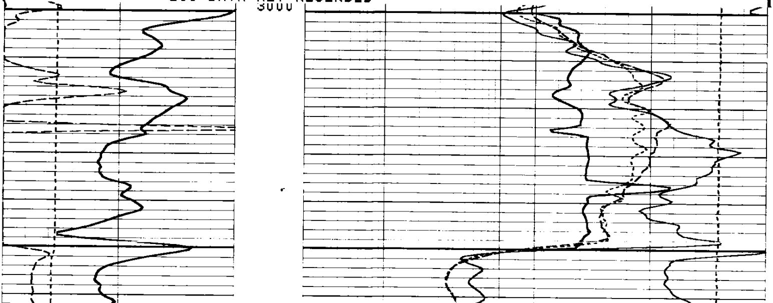
REPEAT SECTION

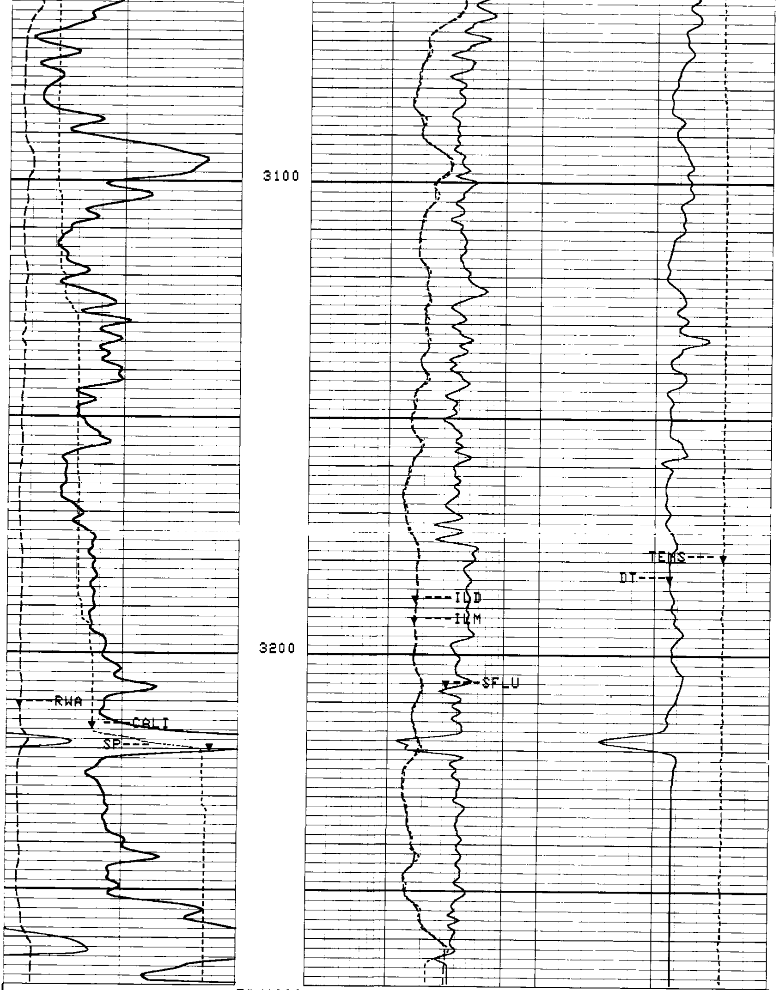
Track 1	Tracks 2–3
	TENS(LBF) 10000. — 0.0
	DT (US/F) 175.00 — 75.000
RWA (OHMM) 0.0 — 3.0000	ILD (OHMM) .20000 — 2000.0
CALI(IN) 6.0000 — 16.000	ILM (OHMM) .20000 — 2000.0
SP (MV) -100.0 — 0.0	SFLU(OHMM) .20000 — 2000.0

CP 32.6 FILE 3 28-JUN-1992 08:31 (UP)

5"/100'

*** LIS DATA NOT RECORDED ***





5"/100'

*** LIS DATA NOT RECORDED ***

CP 32.6 FILE 3 28-JUN-1992 08:25 (UP)

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

TENS(LBF)
10000. 0.0
DT (US/F)
175.00 75.000
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
SMB - SONIC MEMORY BOARD	DISA	
TOCA - TO CORRECTION STATUS	DISA	
RATE - FIRING RATE	15	HZ
DG - DOWNHOLE GAIN	/5	
DETE - DETECTION	E2	
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	
WMUD - WEIGHT OF MUD	9.50000	LB/G
MSEC - MEDIUM SONDE ERROR CORRECTION	6.00000	MM/M
SBR - SHOULDER BED RESISTIVITY	1.00000	OHMM
DSEC - DEEP SONDE ERROR CORRECTION	6.30000	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	

CALIBRATION SUMMARY

```
                SHOP SUMMARY

  PERFORMED:    26-MAY-1992 10:09
  PROGRAM FILE: SHOP   (VERSION    32.6    91/08/23  91/08/23)

DITD            ELECTRONICS CALIBRATION SUMMARY

               TEST LOOP CALIBRATION            TOOL CHECK
            MEASURED         CALIBRATED         CALIBRATED
          ZERO    PLUS     ZERO     PLUS      ZERO     PLUS    UNITS
   ILD    -5.2    537.1     0.0     500.0      0.0     502.7   MM/M
   ILM    -6.0    521.1     0.0     500.0      0.0     501.7   MM/M
ILD  SONDE ERROR CORRECTION :      6.3 MM/M
ILM  SONDE ERROR CORRECTION ;      6.0 MM/M

                       (IS:298 , IC:1078)

   CP 32.6            FILE    1       26-MAY-1992 10:09
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               AFTER SURVEY TOOL CHECK SUMMARY

  PERFORMED:    28-JUN-1992 09:25
  PROGRAM FILE: ISN    (VERSION    32.6    91/08/23  91/08/23)

DITD                    TOOL  CHECK

                   ZERO                       PLUS
            BEFORE      AFTER        BEFORE     AFTER     UNITS
   ILD        0.0         -.3        501.2      496.3     MM/M
   ILM        0.0          .0        504.3      500.2     MM/M
   SFL        0.0          .1        500.0      497.0     MM/M

ILD SONDE ERROR CORRECTION :       6.3 MM/M
ILM SONDE ERROR CORRECTION :       6.0 MM/M

BEFORE SURVEY:           ZERO: 28-JUN-1992 08:22  PLUS: 28-JUN-1992 08:22
AFTER SURVEY CHECK:      ZERO: 28-JUN-1992 09:25  PLUS: 28-JUN-1992 09:25

   CP 32.6            FILE    6       28-JUN-1992 09:25
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```
               BEFORE SURVEY CALIBRATION SUMMARY

  PERFORMED:    28-JUN-1992 08:23
  PROGRAM FILE: ISN    (VERSION    32.6    91/08/23  91/08/23)

DITD            ELECTRONICS CALIBRATION SUMMARY

             MEASURED                     CALIBRATED
           ZERO    PLUS                 ZERO      PLUS        UNITS
   ILD      .76   550.6                 0.0      501.2         MM/M
   ILM      .60   533.4                 0.0      504.3         MM/M
   SFL     1.33   533.5                 0.0      500.0         MM/M

ILD SONDE ERROR CORRECTION :       6.3 MM/M
ILM SONDE ERROR CORRECTION :       6.0 MM/M

ZERO: 28-JUN-1992 08:22  PLUS: 28-JUN-1992 08:22  COMP: 28-JUN-1992 08:22

SGTE            DETECTOR CALIBRATION SUMMARY

             MEASURED
           BKGD    JIG        CALIBRATED          UNITS
    GR      29     178           165              GAPI
```

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BACK: 28-JUN-1992 04:27   JIG: 28-JUN-1992 04:30   COMP: 28-JUN-1992 04:30


MCDB              CALIPER CALIBRATION SUMMARY

             MEASURED                          CALIBRATED
           SMALL   LARGE                     SMALL      LARGE         UNITS
  CALI     6.54    11.76                     8.00       12.00          IN

SMALL: 28-JUN-1992 04:24 LARGE: 28-JUN-1992 04:25 COMP: 28-JUN-1992 04:25

   CP 32.6           FILE    2       28-JUN-1992 08:23
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COMPANY	NAHAMA AND WEAGANT ENERGY CO.			**SCHL.**	**FR**	**3406.0 F**
				SCHL.	**TD**	**3412.0 F**
WELL	"BEAVER CREEK" #31-34-75			**DRLR.**	**TD**	**3414.0 F**
FIELD	MIST			**Elev:**	**KB**	**1637.0 F**
					DF	**1636.0 F**
COUNTY	COLUMBIA	**STATE**	OREGON		**GL**	**1627.0 F**

Schlumberger

DUAL INDUCTION-SFL-SONIC

5 INCH LOG