Schlumberger

FORMATION MICROSCANNER MONITOR LOG

COUNTY	COOS
FIELD	WILD CAT
LOCATION	511.9N & 2151.7W
WELL	"COOS COUNTY FOREST" #7-1
COMPANY	CARBON ENERGY INT.

COMPANY CARBON ENERGY INT.

WELL "COOS COUNTY FOREST" #7-1

FIELD WILD CAT

COUNTY COOS **STATE** OREGON

LOCATION
511.9N & 2151.7W
FROM SE CORNER OF:

Other Services:
DITD/GR
LDT/CNL/GR
FMS
MSCT

API SERIAL NO.	SECT.	TWP.	RANGE
36-011-0027	7	27S	13W

Permanent Datum GL **Elev.** 530.0 F

Log Measured From KB 18.0 F **above Perm. Datum**

Drilling Measured From KB

Elev.: K.B.548.0 F
D.F.547.0 F
G.L.530.0 F

Date	15-OCT-1993		
Run No.	ONE		
Depth Driller	3804.0 F		
Depth Logger (Schl.)	3779.0 F		
Btm. Log Interval	3777.0 F		
Top Log Interval	380.0 F		
Casing-Driller	9 5/8 @ 380.0 F	@	@
Casing-Logger	380.0 F		
Bit Size	8 3/4 @ 3804.0 F	@	@
Type Fluid in Hole	FRESH		
Dens. | **Visc.**	9.10 LB/G | 46.0 S		
pH | **Fld. Loss**	| 6.8 C3		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp.	6.300 OHMM @ 62.0 DEGF	@	@
Rmf @ Meas. Temp.	7.250 OHMM @ 60.0 DEGF	@	@
Rmc @ Meas. Temp.	3.780 OHMM @ 60.0 DEGF	@	@
Source: Rmf | **Rmc**	MEASURED | MEASURED		
Rm @ BHT	3.988 OHMM @ 102. DEGF	@	@
TIME **Circulation Ended**	06:30 15-OCT-93		
TIME **Logger on Bottom**	21:30 15-OCT-93		
Max. Rec. Temp.	102. DEGF		
Equip. | **Location**	8504 | SACRAMENTO		
Recorded By	M.DEMSKIE		
Witnessed By	S.PAPPA/JOHN		

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

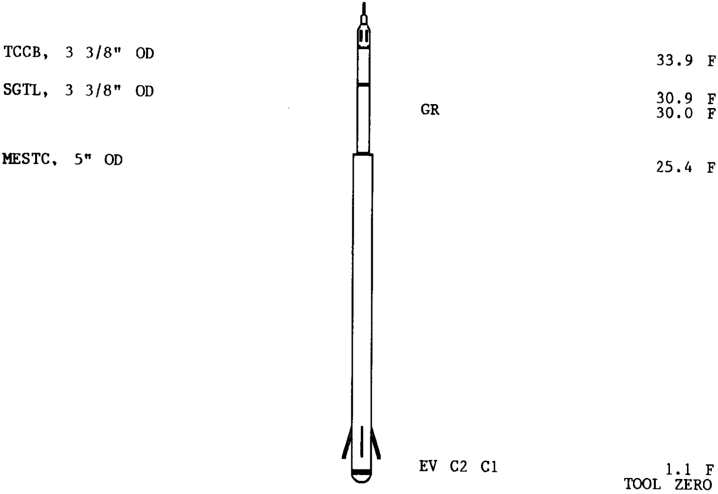
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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.	624380			
Drilling Fluid Level	100.0 F			
Salinity				
Rmf @ BHT	4.456 OHMM	@ 102. DEGF		@
Rmc @ BHT	2.323 OHMM	@ 102. DEGF		@
Logging Speed	1800.0 F/HR			
EQUIPMENT DATA				
Tool Number 1	MEAC-A			
Tool Number 2	MEDS-C			
Tool Number 3	SGC-SA			
Tool Number 4	TCM-AB 1516			
Tool Number 5				
Tool Number 6				
Tool Number 7				
Tool Number 8				
Tool Number 9				
Tool Number 10				
Tool Number 11				
Tool Number 12				

REMARKS:

CORRELATED TO SWS INDUCTION LOG
THANK YOU FOR CHOOSING SCHLUMBERGER
SOME WELLSITE INFORMATION NOT AVAILABLE AT WELL

LOGGING TOOL STRING SKETCH



TOTAL TOOL STRING LENGTH IS 38.2 F.
TOTAL TOOL STRING WEIGHT IS 594. LB IN AIR.

MAIN LOG

SPEED CORRECTION NOT APPLIED

ACCUMULATED INTEGRATION VALUES SUMMARY:

Integrated Hole Volume: 725.972 F3 FROM 1703.50 F TO 380.000 F
Integrated Cement Volume: 374.204 F3 FROM 1703.50 F TO 380.000 F
(ASSUMING 7.00000 IN O.D. CASING)

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

Curve	Left	Right
ANOR(M/S2)	9.0000	11.000
FNOR(OER)	.20000	.70000

Curve	Left	Right
AZIM(DEG)	-40.00	360.00
DEVI(DEG)	0.0	50.000
GR(GAPI)	0.0	150.00
P1AZ(DEG)	-40.00	360.00

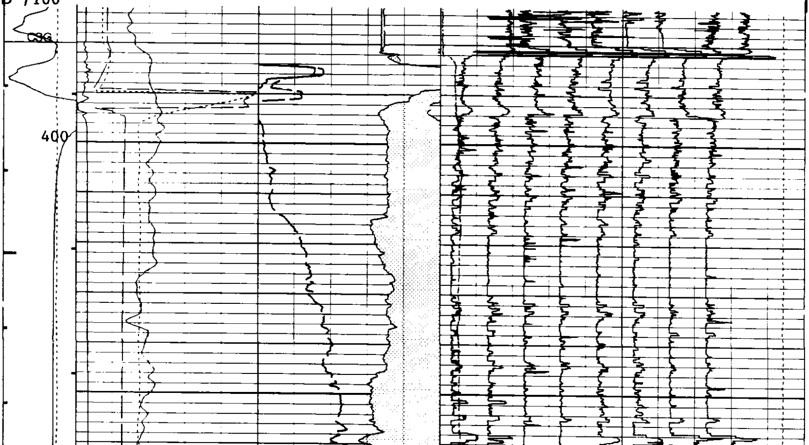
Curve	Left	Right
AZ(M/S2)	0.0	10.000
C2(IN)	6.0000	11.000
C1(IN)	6.0000	11.000

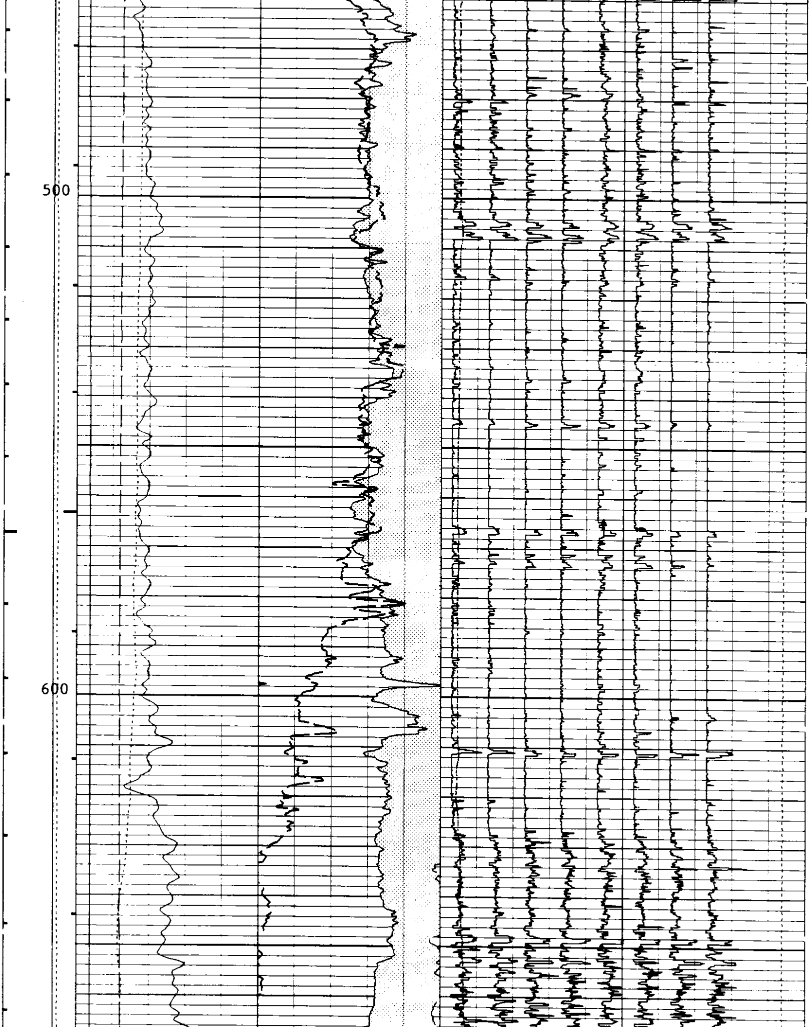
Curve	Left	Right
EV(V)	0.0	5.0000
TENS(LBF)	10000.	0.0
MRB8	-1000.	19000.
MRB7	-3000.	17000.
MRB6	-5000.	15000.
MRB5	-7000.	13000.
MRB4	-9000.	11000.
MRB3	-11000	9000.0
MRB2	-13000	7000.0
MRB1	-15000	5000.0

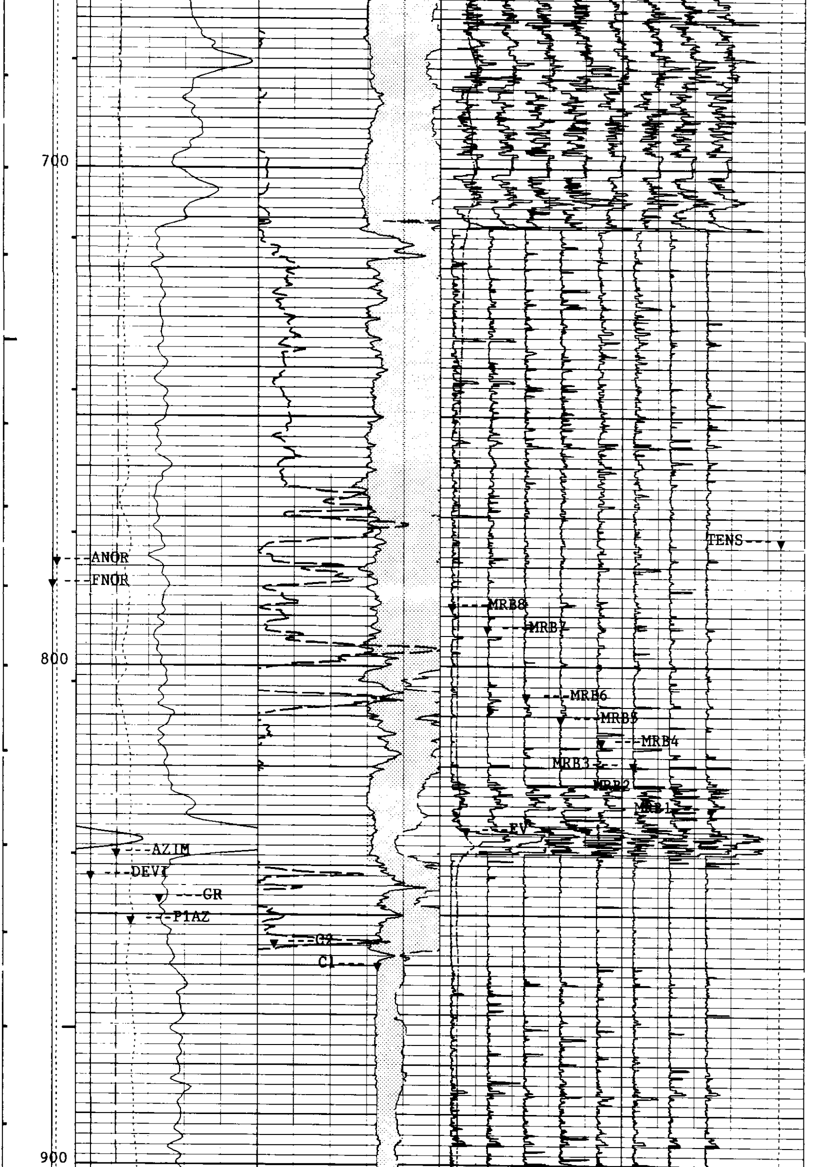
C2A - C1A

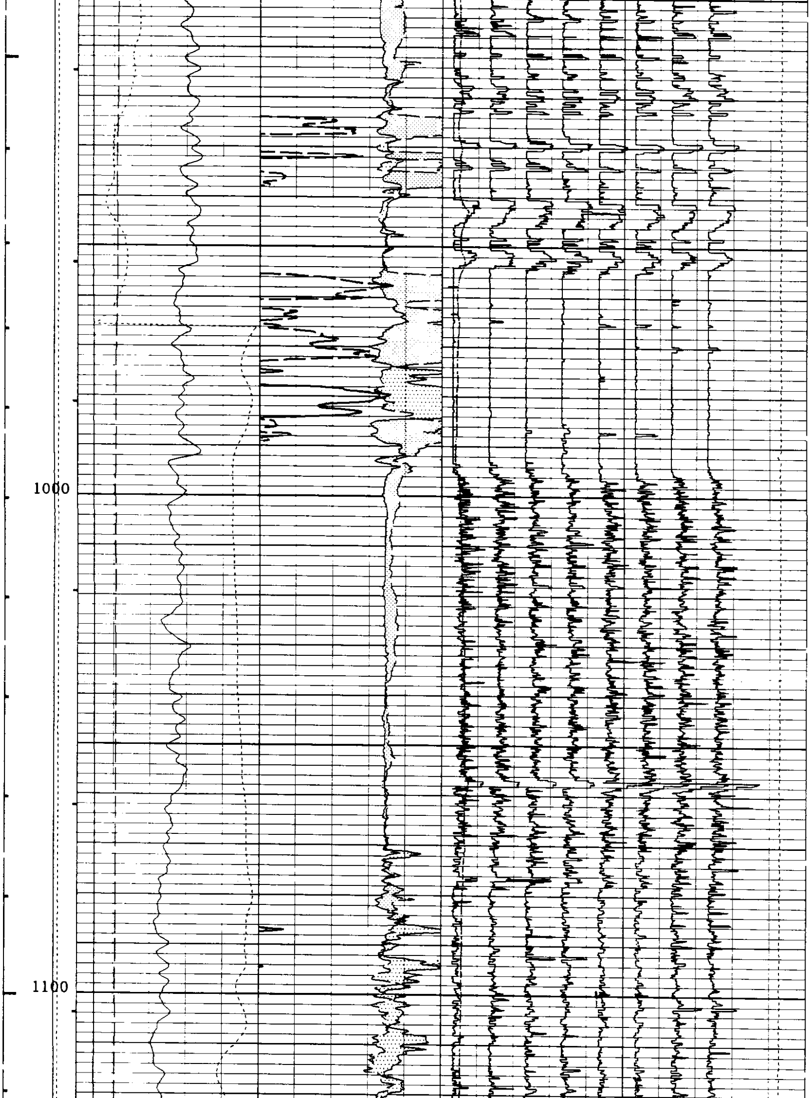
C1A - C2A

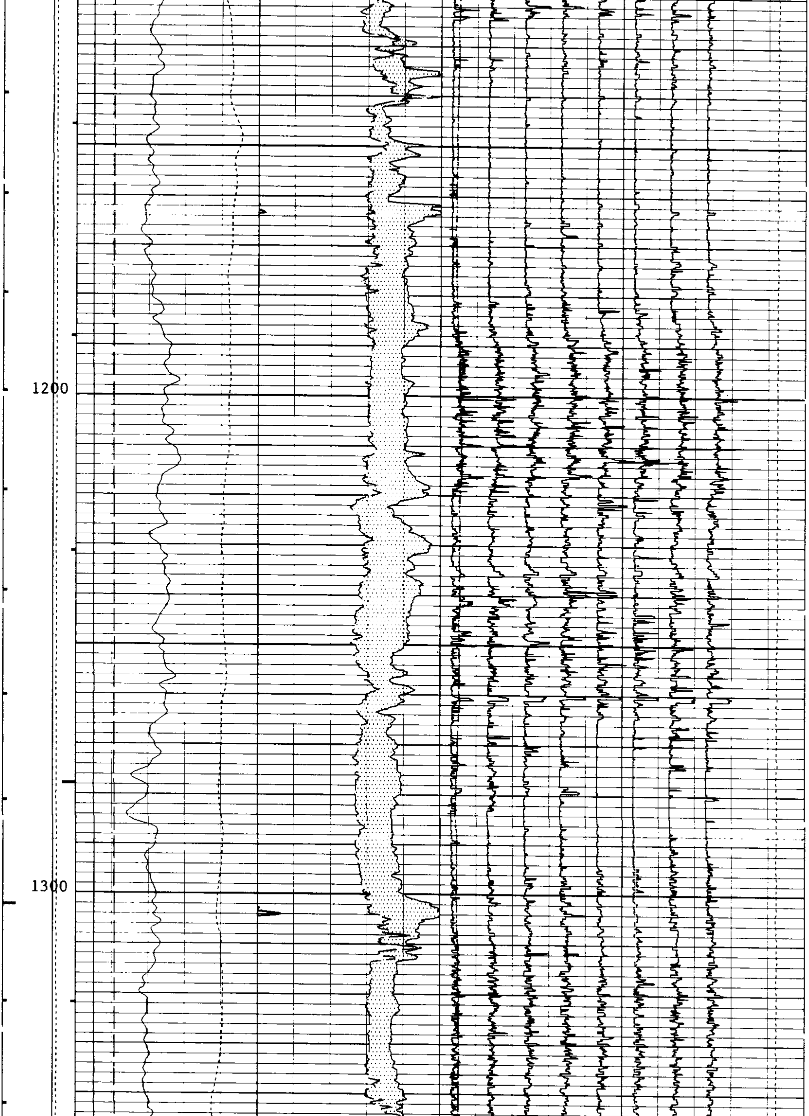
CP 38.2 FILE 6 16-OCT-1993 00:35 (UP)

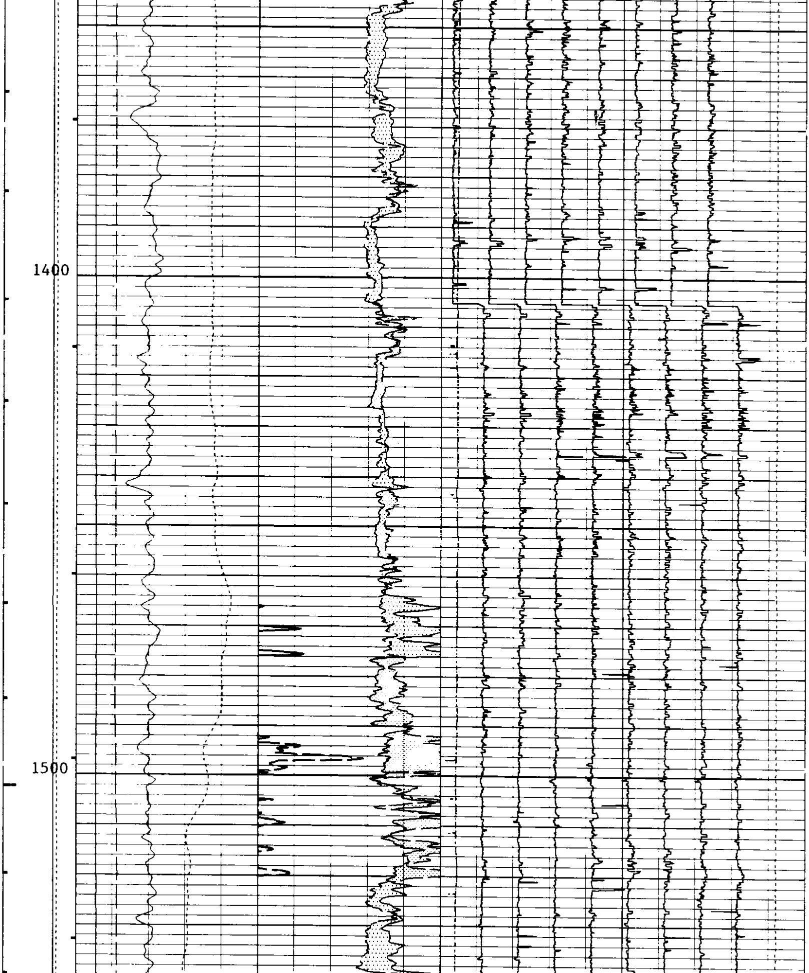


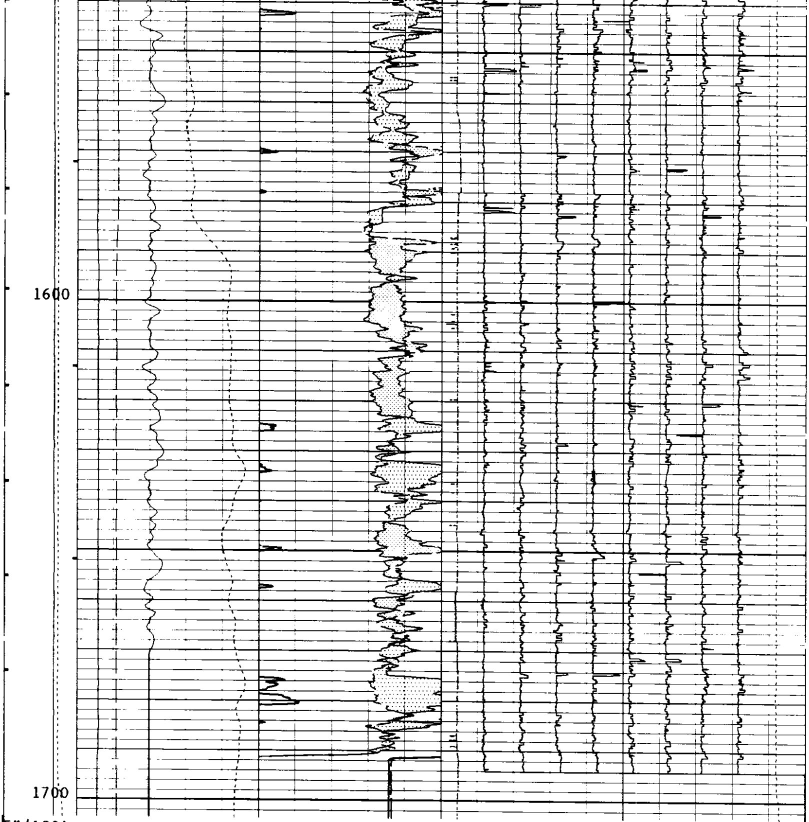












5"/100'

CP 38.2 FILE 6 16-OCT-1993 00:03 (UP)

C2A - C1A

C1A - C2A

ANOR(M/S2)
9.0000 11.000

FNOR(OER)
.20000 .70000

Curve	Left	Right
AZIM(DEG)	-40.00	360.00
DEVI(DEG)	0.0	50.000
GR(GAPI)	0.0	150.00
P1AZ(DEG)	-40.00	360.00

Curve	Left	Right
AZ(M/S2)	0.0	10.000
C2(IN)	6.0000	11.000
C1(IN)	6.0000	11.000

Curve	Left	Right
EV(V)	0.0	5.0000
TENS(LBF)	10000.	0.0
MRB8	-1000.	19000.
MRB7	-3000.	17000.
MRB6	-5000.	15000.
MRB5	-7000.	13000.
MRB4	-9000.	11000.
MRB3	-11000	9000.0
MRB2	-13000	7000.0
MRB1	-15000	5000.0

SENSOR MEASURE POINT TO TOOL ZERO

TENS	-2.9	FEET	GR	30.0	FEET
C2	1.1	FEET	C1	1.1	FEET
MRPD	1.1	FEET	MDRB	1.1	FEET
MRPB	1.1	FEET	MRPC	1.1	FEET
AX	1.1	FEET	MRPA	1.1	FEET
AZ	1.1	FEET	AY	1.1	FEET
FY	1.1	FEET	FX	1.1	FEET
FCAX	1.1	FEET	FZ	1.1	FEET
FCAZ	1.1	FEET	FCAY	1.1	FEET
FTIM	1.1	FEET			

PARAMETERS

PARAMETER	VALUE	UNIT
PADT - Presentation Allow Disallow Threshold	.500000	DEG
NCJT - NGT Calibration Jig Type	GSRY	
FCSR - Fast Channel Sample Rate	0.1"	
AFMO - Accelerometer Filtering Mode	HAMM	
ICMO - Inclinometry Computation Mode	AUTO	
MDEC - Magnetic Field Declination	19.0000	DEG
GLM - GPIT Logging Mode	DIPM	
ICSD - Inclinometry Computation Stop Depth	380.000	F
RBS - Resistivity Button Selection	AUTO	
PTYP - Platform Type	MEC	
MLM - MEST Logging Mode	DIPM	
SOFF - Stand Off	-1.00000	IN
CSR - Curves Sampling Rate	.6"	
ODFO - Output Data Format	RAW	
XMOD - EMEX Voltage Regulation Mode	AUTO	
XGAI - Gain Setting	2	
XOFF - Offset Setting	0	
FCD - Future Casing Diameter	7.00000	IN
SPCR - Speed Correction Constant	DISA	
BS - Bit Size	8.75000	IN
BHS - BoreHole Status (Open or Cased)	OPEN	

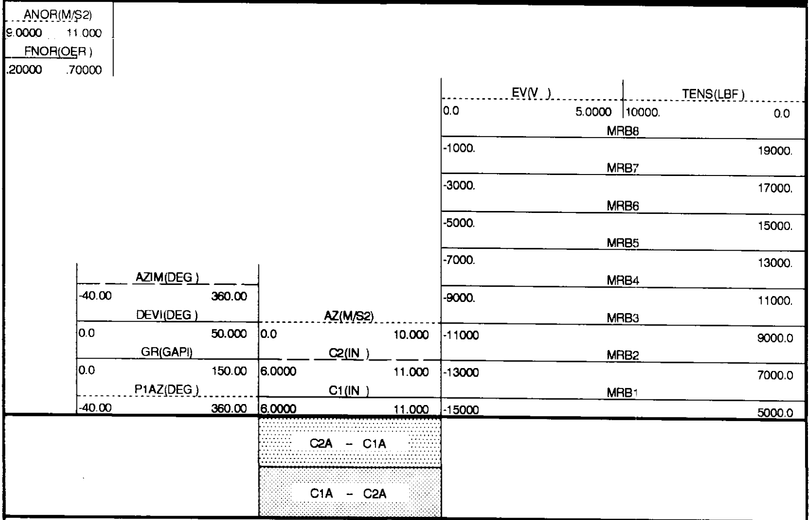
SPEED CORRECTION NOT APPLIED

ACCUMULATED INTEGRATION VALUES SUMMARY:

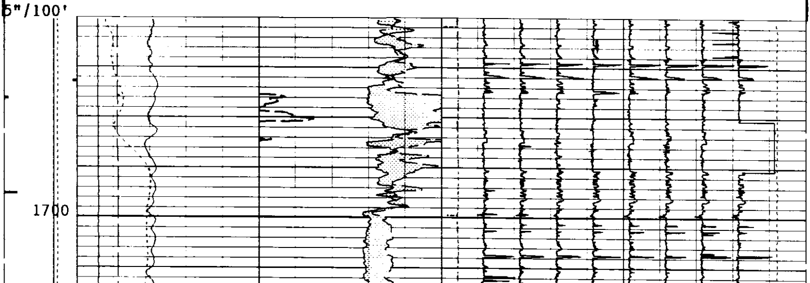
```
Integrated Hole Volume:    1018.79 F3    FROM 3779.00 F    TO 1660.00 F
Integrated Cement Volume: 453.357 F3    FROM 3779.00 F    TO 1660.00 F
  (ASSUMING 7.00000 IN   O.D. CASING)
```

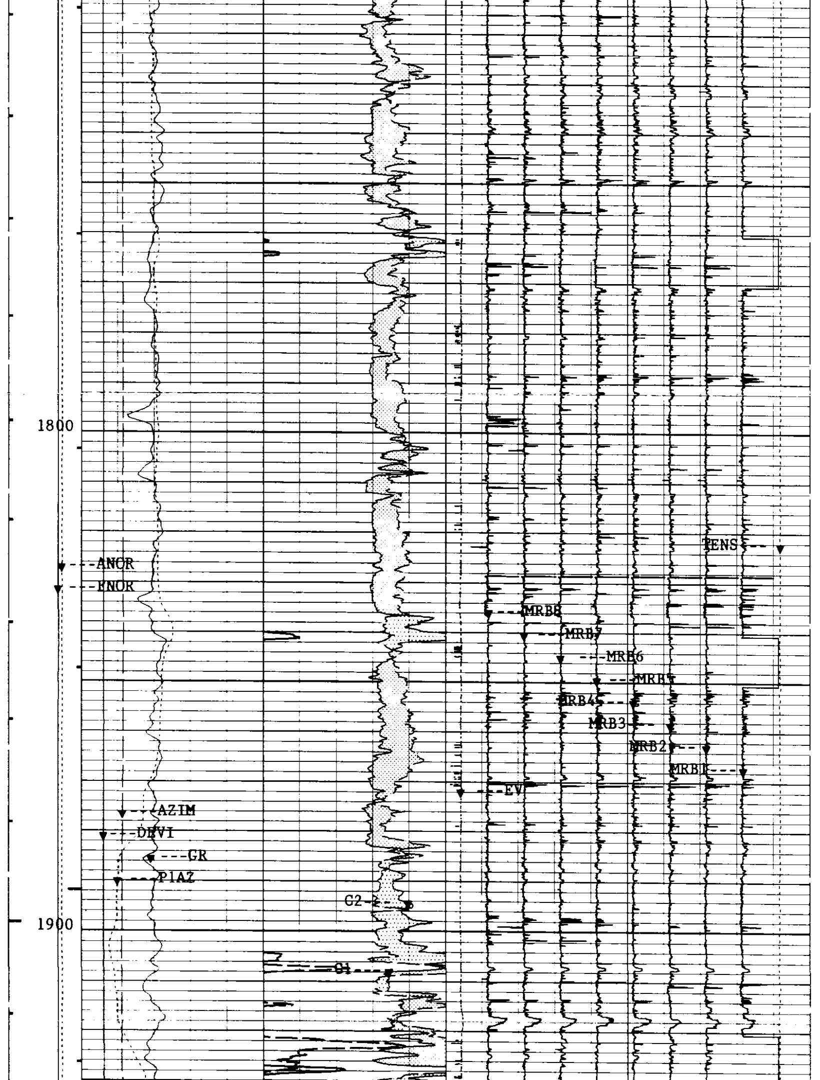
EVENT MARK SUMMARY:

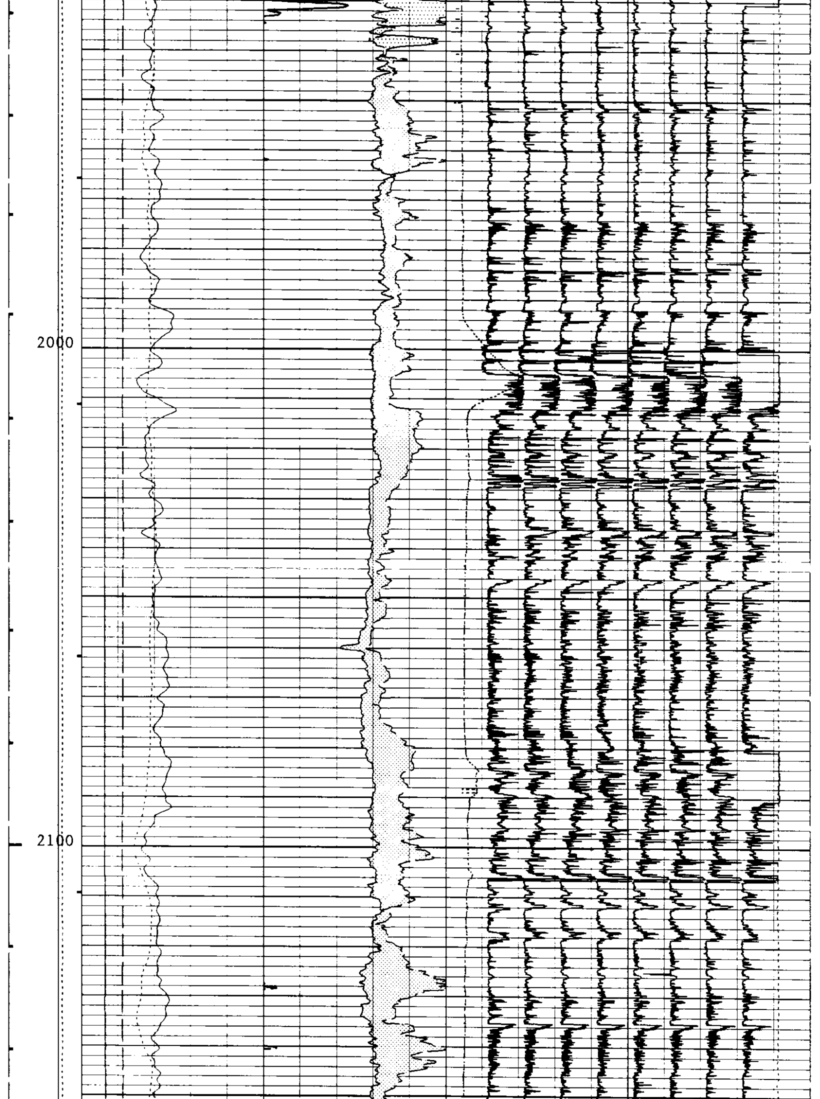
OUTPUT	INTERVAL BETWEEN PIPS	DEPTH TRACK EDGE
Integrated Hole Volume	10.0000 F3	LEFT EDGE
Integrated Cement Volume	10.0000 F3	RIGHT EDGE

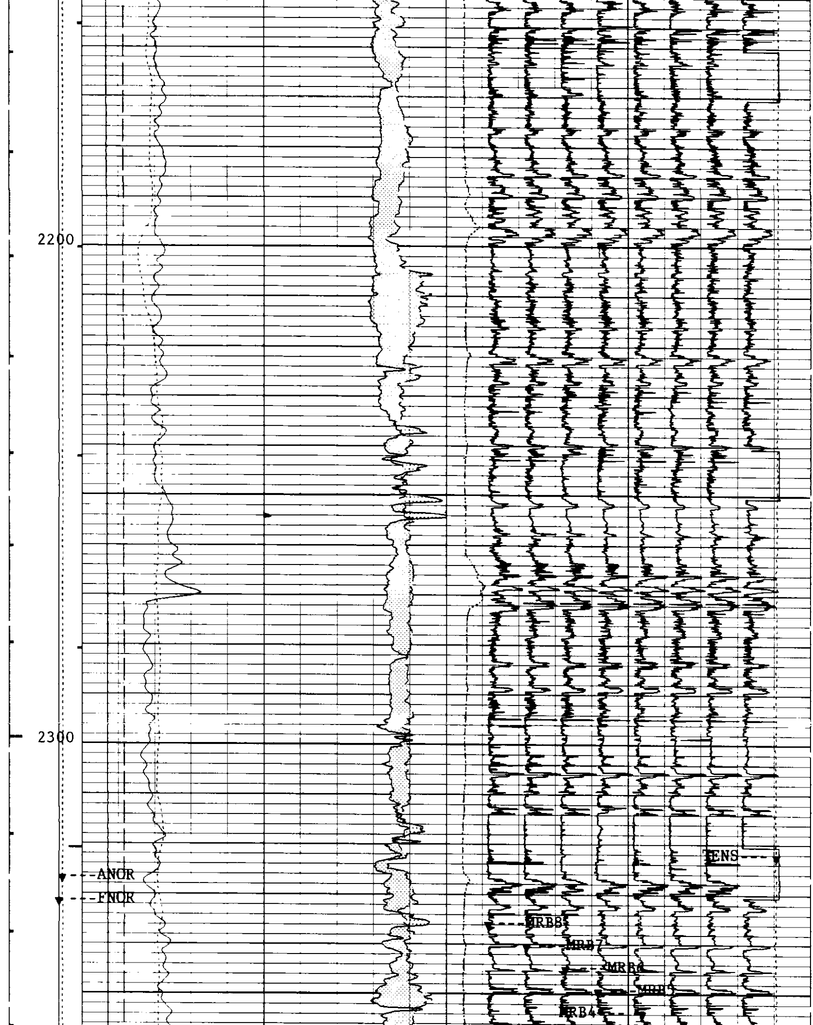


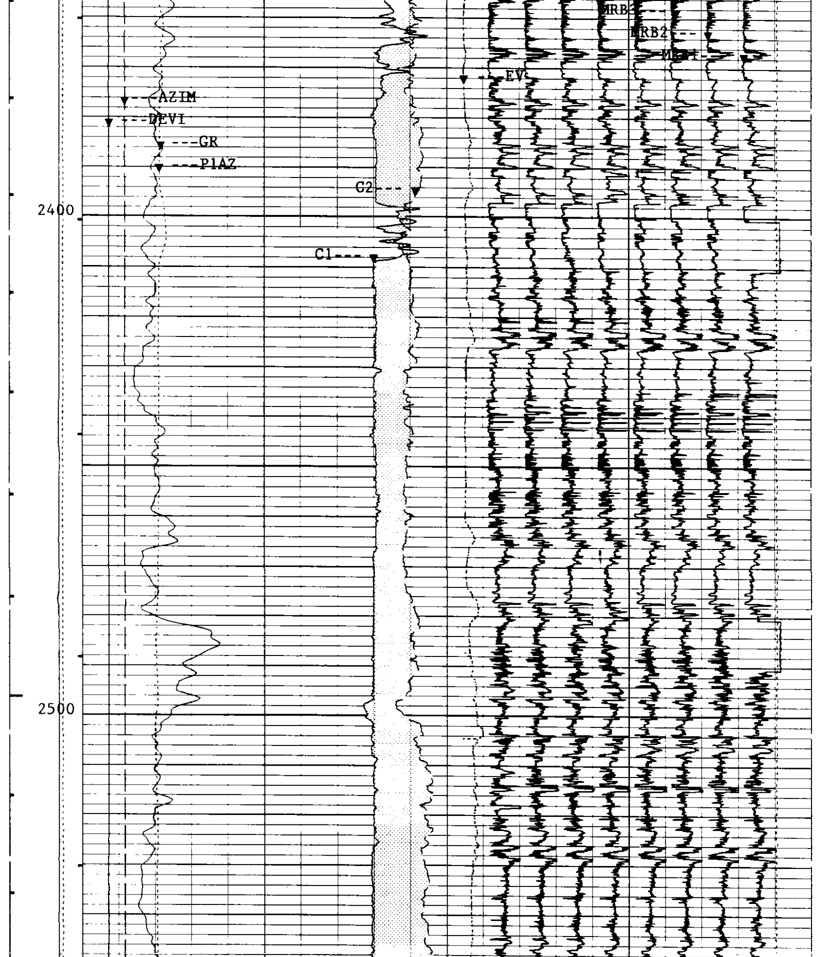
CP 38.2 FILE 5 15-OCT-1993 23:59 (UP)

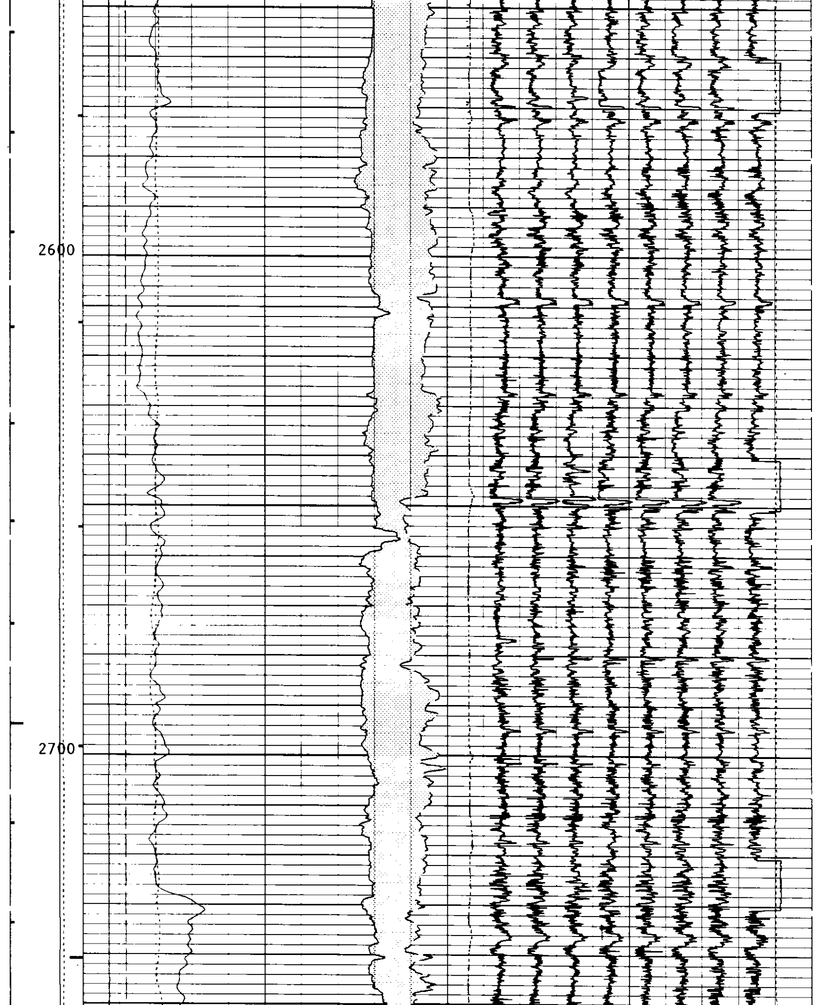


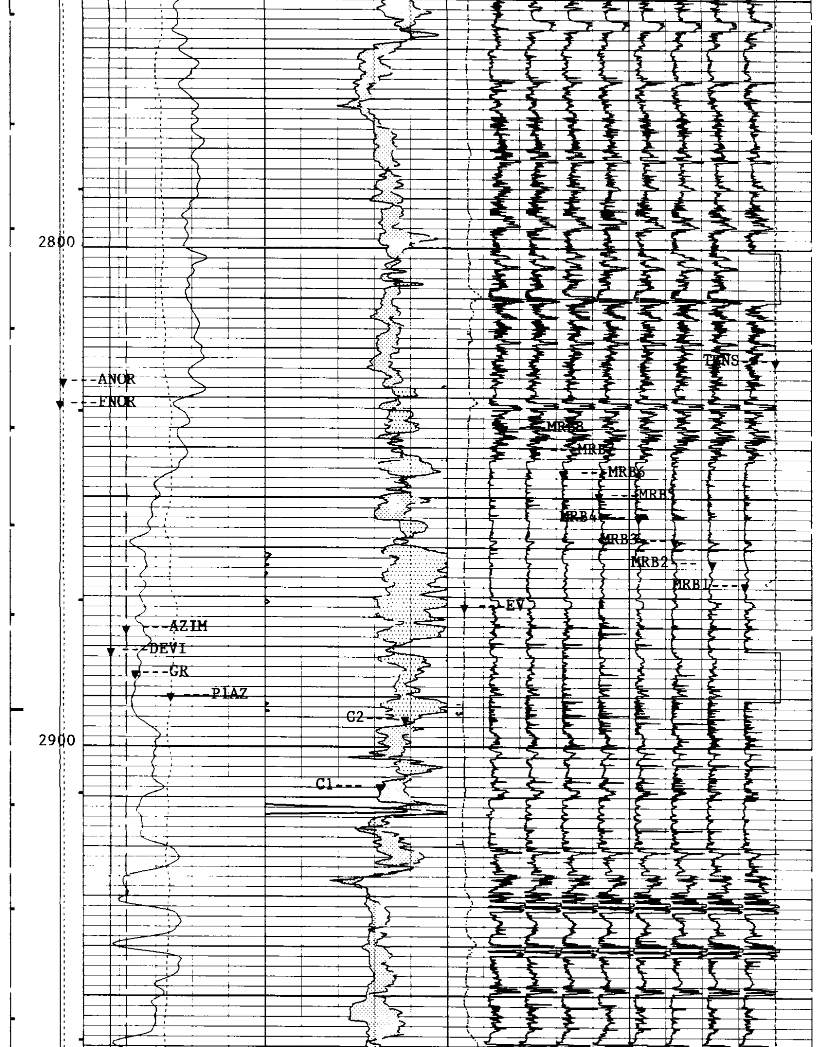


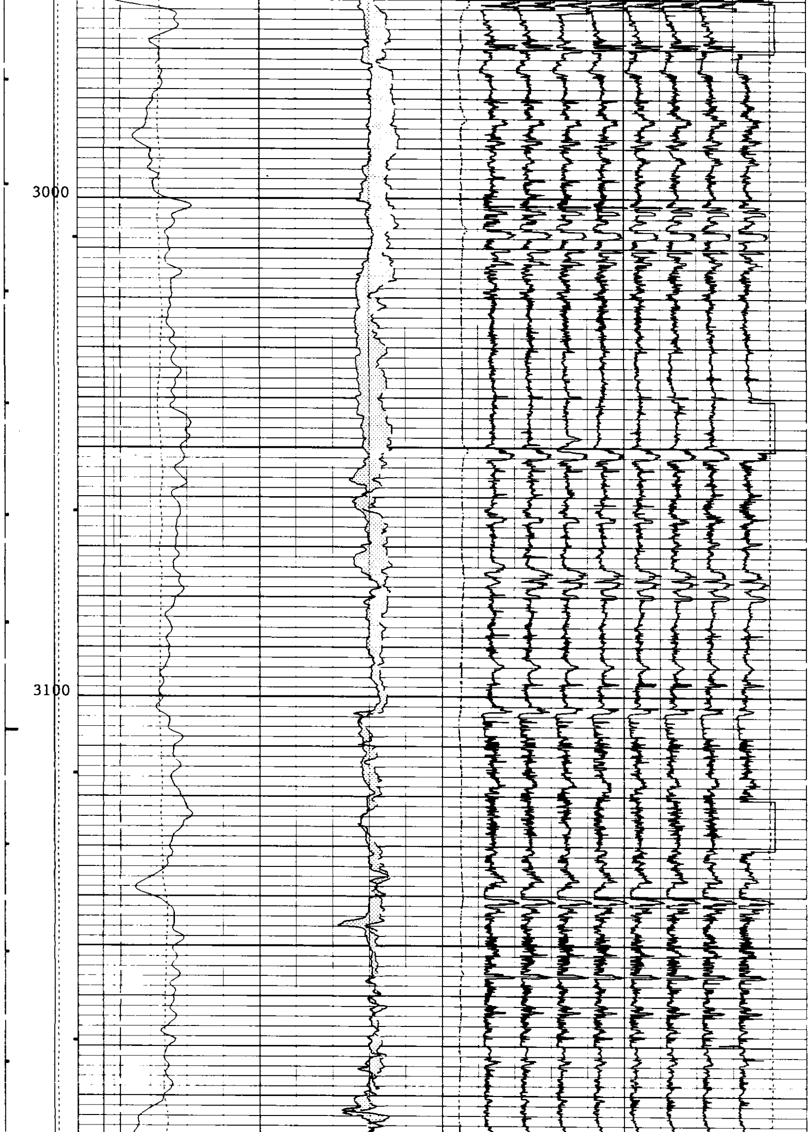


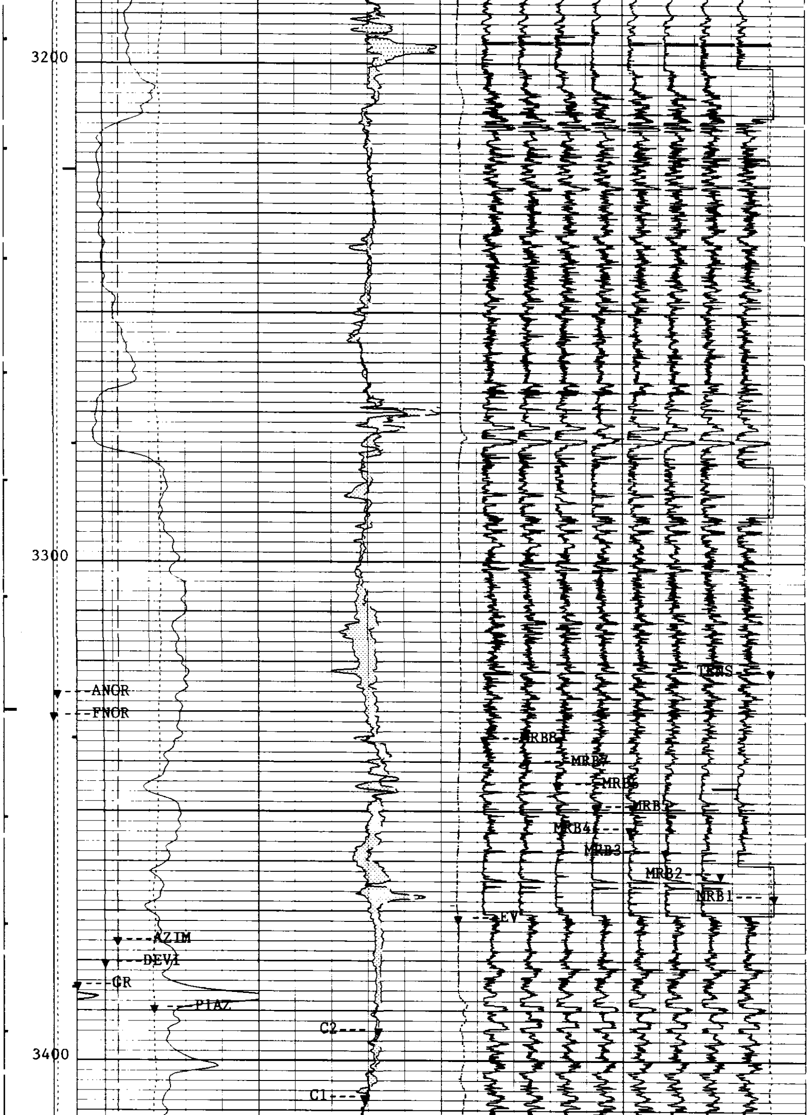


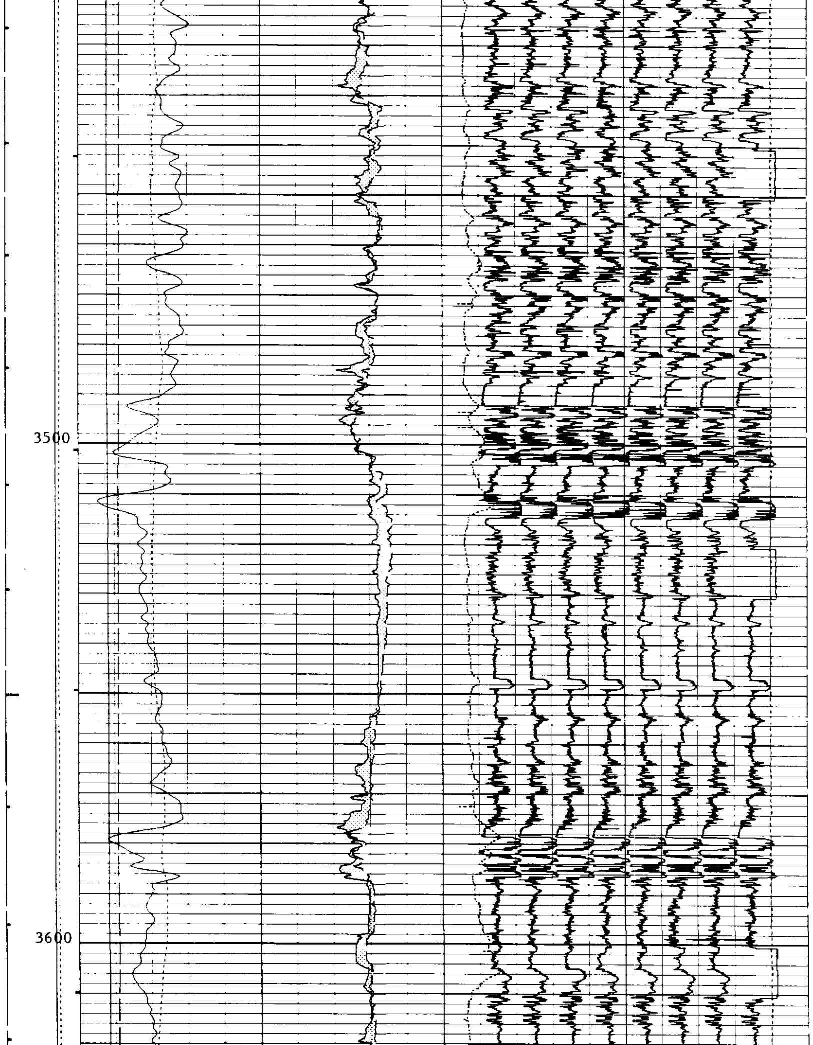


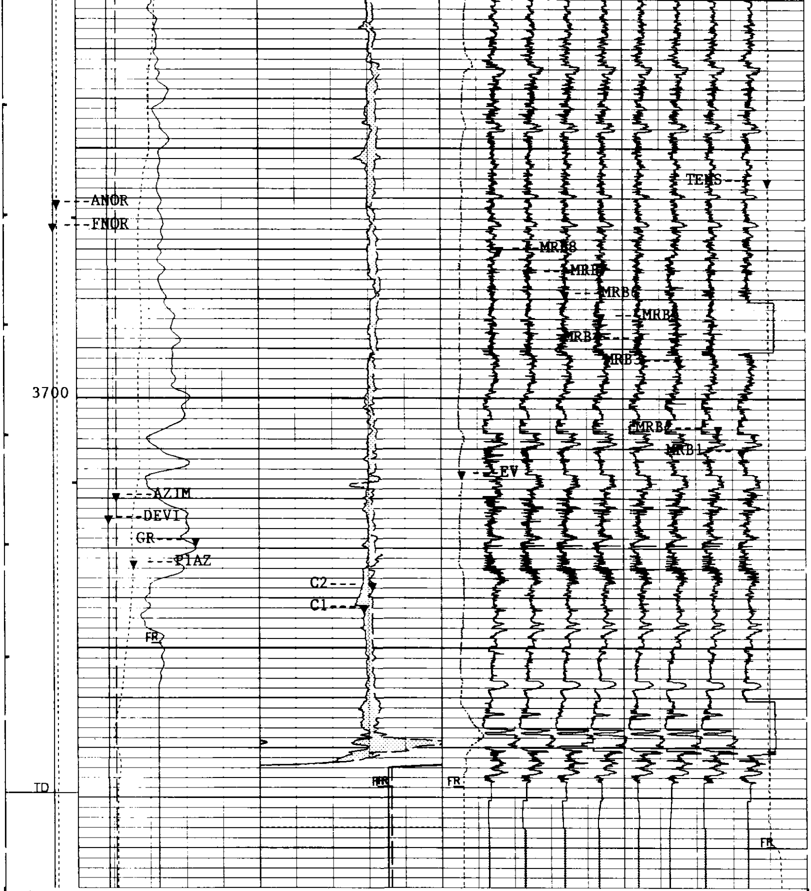






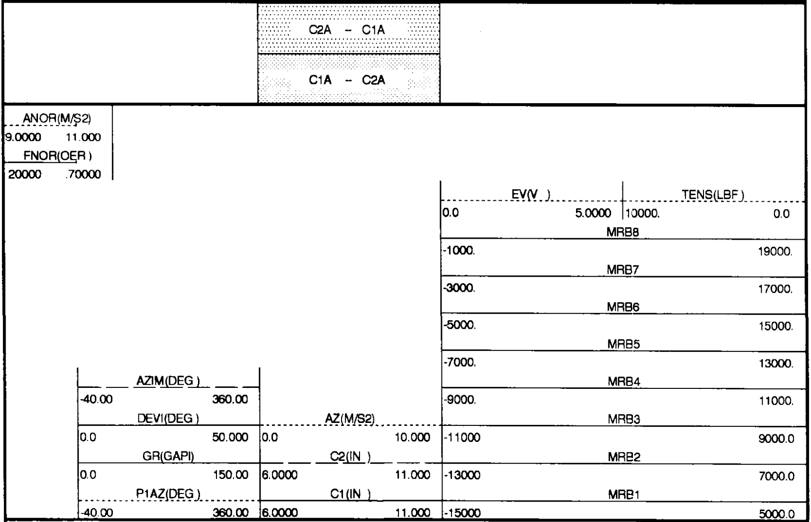






5"/100'

CP 38.2 FILE 5 15-OCT-1993 22:30 (UP)



SENSOR MEASURE POINT TO TOOL ZERO

TENS	-10.9	FEET	GR	30.0	FEET
C2	1.1	FEET	C1	1.1	FEET
MRPD	1.1	FEET	MDRB	1.1	FEET
MRPB	1.1	FEET	MRPC	1.1	FEET
AX	1.1	FEET	MRPA	1.1	FEET
AZ	1.1	FEET	AY	1.1	FEET
FY	1.1	FEET	FX	1.1	FEET
FCAX	1.1	FEET	FZ	1.1	FEET
FCAZ	1.1	FEET	FCAY	1.1	FEET
FTIM	1.1	FEET			

PARAMETERS

PARAMETER	VALUE	UNIT
PADT - Presentation Allow Disallow Threshold	.500000	DEG
NCJT - NGT Calibration Jig Type	GSRY	
FCSR - Fast Channel Sample Rate	0.1"	
AFMO - Accelerometer Filtering Mode	HAMM	
ICMO - Inclinometry Computation Mode	AUTO	
MDEC - Magnetic Field Declination	19.0000	DEG
GLM - GPIT Logging Mode	DIPM	
ICSD - Inclinometry Computation Stop Depth	380.000	F
RBS - Resistivity Button Selection	AUTO	
PTYP - Platform Type	MEC	
MLM - MEST Logging Mode	1800	
SOFF - Stand Off	-1.00000	IN
CSR - Curves Sampling Rate	.6"	
ODFO - Output Data Format	RAW	
XMOD - EMEX Voltage Regulation Mode	AUTO	
XGAI - Gain Setting	2	
XOFF - Offset Setting	0	
FCD - Future Casing Diameter	7.00000	IN
SPCR - Speed Correction Constant	DISA	
DSCA - Deviation Scale	40	DEG
SBUT - Set of Buttons Selected	ALL	

INT - Correlation Interval Length	4.00000	F
STEP - Step Length between Correlations	2.00000	F
SPAN - Span of Correlation Sample	4	
SANG - S Wave Arrival Angle	40.0000	
DPAD - Disallowed Pad	AUTO	
DMAX - Maximum Dip Plotted	90	DEG
ELRA - Electrical Radius	.500000	IN
SDFA - Side-By-Side Distance Factor	.900000	
HQUA - High Quality Dip	14	
LQUA - Low Quality Dip	6	
STDI - Structural Dip	0.0	DEG
STDA - Structural Azimuth Value	0.0	DEG
CSBL - CSB Number of Levels	2	
BS - Bit Size	8.75000	IN
BHS - BoreHole Status (Open or Cased)	OPEN	

REPEAT SECTION

SPEED CORRECTION NOT APPLIED

ACCUMULATED INTEGRATION VALUES SUMMARY:

```
Integrated Hole Volume:   63.0924 F3    FROM 3779.00 F     TO 3633.00 F
Integrated Cement Volume: 25.4513 F3    FROM 3779.00 F     TO 3633.00 F
  (ASSUMING 7.00000 IN   O.D. CASING)
```

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

ANOR(M/S2)	
9.0000	11.000
FNOR(OER)	
.20000	.70000

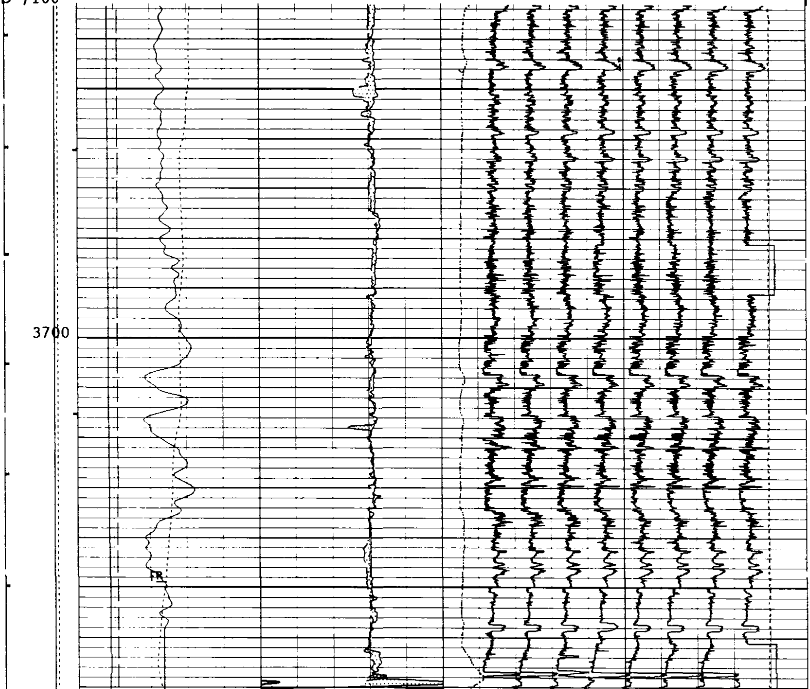
EV(V)		TENS(LBF)	
0.0	5.0000	10000.	0.0
MRE8			
-1000.			19000.
MRE7			
-3000.			17000.
MRE6			
-5000.			15000.
MRE5			

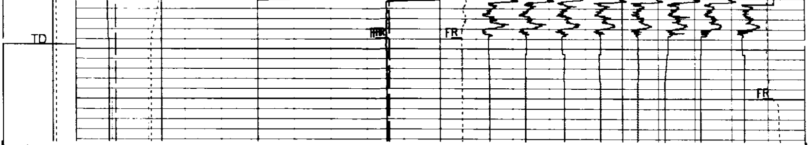
		-7000. 13000.
AZIM(DEG)		MRE4
-40.00 360.00		-9000. 11000.
DEVI(DEG)	AZ(M/S2)	MRE3
0.0 50.000	0.0 10.000	-11000 9000.0
GR(GAPI)	C2(IN)	MRE2
0.0 150.00	6.0000 11.000	-13000 7000.0
P1AZ(DEG)	C1(IN)	MRE1
-40.00 360.00	6.0000 11.000	-15000 5000.0

▨	C2A - C1A
▨	C1A - C2A

CP 38.2 FILE 3 15-OCT-1993 22:11 (UP)

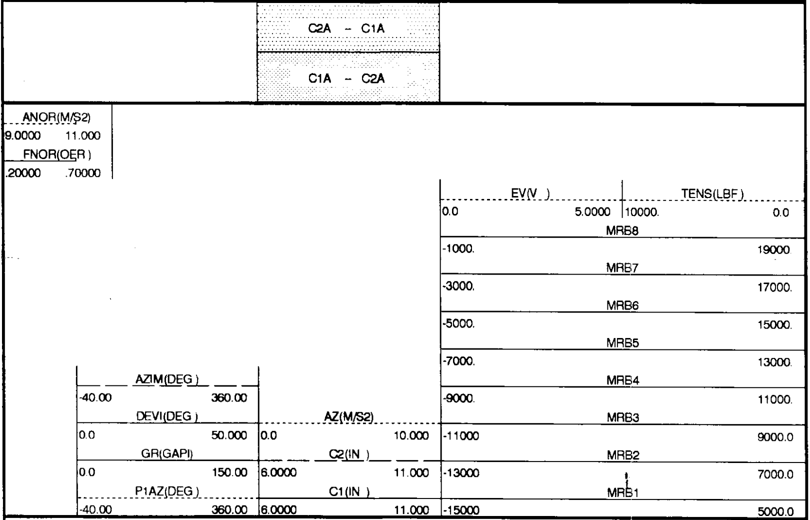
5"/100'





5"/100'

CP 38.2 FILE 3 15-OCT-1993 22:03 (UP)



SENSOR MEASURE POINT TO TOOL ZERO

TENS	-10.9	FEET	GR	30.0	FEET
C2	1.1	FEET	C1	1.1	FEET
MRPD	1.1	FEET	MDRB	1.1	FEET
MRPB	1.1	FEET	MRPC	1.1	FEET
AX	1.1	FEET	MRPA	1.1	FEET
AZ	1.1	FEET	AY	1.1	FEET
FY	1.1	FEET	FX	1.1	FEET
FCAX	1.1	FEET	FZ	1.1	FEET
FCAZ	1.1	FEET	FCAY	1.1	FEET
FTIM	1.1	FEET			

PARAMETERS

NAME	VALUE	UNIT	NAME	VALUE	UNIT

```
PADT .500000     DEG                   NCJT GSRY
FCSR 0.1"                              AFMO HAMM
ICMO AUTO                              MDEC 19.0000     DEG
GLM  DIPM                              ICSD 380.000     F
RBS  AUTO                              PTYP MEC
MLM  1800                              SOFF -1.00000    IN
CSR  .6"                               ODFO RAW
XMOD AUTO                              XGAI 2
XOFF 0                                 FCD  7.00000     IN
SPCR DISA                              DSCA 40          DEG
SBUT ALL                               INT  4.00000     F
STEP 2.00000     F                     SPAN 4
SANG 40.0000                           DPAD AUTO
DMAX 90          DEG                   ELRA .500000     IN
SDFA .900000                           HQUA 14
LQUA 6                                 STDI 0.0         DEG
STDA 0.0         DEG                   CSBL 2
BS   8.75000     IN                    BHS  OPEN
```

CALIBRATION SUMMARY

```
                 BEFORE SURVEY CALIBRATION SUMMARY


  PERFORMED:     15-OCT-1993 20:54
  PROGRAM FILE: TDIP    (VERSION    38.2    92/10/12  92/10/12)


SGTL              DETECTOR CALIBRATION SUMMARY

              MEASURED
            BKGD     JIG          CALIBRATED          UNITS
    GR       19      185             165              GAPI

BACK: 15-OCT-1993 20:49   JIG: 15-OCT-1993 20:52   COMP: 15-OCT-1993 20:52


MEST              CALIPER CALIBRATION SUMMARY

              MEASURED                      CALIBRATED
            SMALL    LARGE              SMALL      LARGE        UNITS
    C1      8.70    12.46               8.00       12.00         IN
    C2      8.57    12.44               8.00       12.00         IN

SMALL: 15-OCT-1993 20:46 LARGE: 15-OCT-1993 20:48 COMP: 15-OCT-1993 20:48


GPIC              CALIBRATION SUMMARY

 MAGNETOMETER MANUFACTURER CODE:              3
 MAGNETOMETER SERIAL NUMBER:                 87
 MAGNETOMETER REFERENCE TEMPERATURE :        20.0  DEGC


GPIC              CALIBRATION SUMMARY

 ACCELEROMETER MANUFACTURER CODE:             3
 ACCELEROMETER SERIAL NUMBER:               336
 ACCELEROMETER REFERENCE TEMPERATURE :       20.0  DEGC

   CP 38.2           FILE    7       15-OCT-1993 20:54
```

COMPANY	CARBON ENERGY INT.			SCHL.	FR	3777.0 F
WELL	"COOS COUNTY FOREST" #7-1			SCHL.	TD	3779.0 F
				DRLR.	TD	3804.0 F
FIELD	WILD CAT			Elev:	KB	548.0 F
					DF	547.0 F
COUNTY	COOS	**STATE**	OREGON		GL	530.0 F

Schlumberger

FORMATION MICROSCANNER
MONITOR LOG