Schlumberger

2" & 5" BOREHOLE COMPENSATED SONIC

CSU Field Log

```
COMPANY:     ARCO OIL AND GAS COMPANY

WELL:        C.F.I. #33-9

FIELD:       MIST
COUNTY:      COLUMBIA
STATE:       OREGON
NATION:      U.S.A
LOCATION:    1706' NORTH AND 2536' WEST
             FROM SOUTHEAST CORNER
SEC: 9           TWP: 5N            RGE: 4W


PERMANENT DATUM:          G.L            ELEVATIONS
ELEV. OF PERM. DATUM: 1110.3 F             KB: 1122.3 F
LOG MEASURED FROM:        K.B              DF:
     12.0 F     ABOVE PERM. DATUM          GL: 1110.3 F
DRLG. MEASURED FROM:      K.B


DATE:             6 SEP 86
RUN NO:           2


DEPTH-DRILLER:       3243.0 F
DEPTH-LOGGER:        3234.0 F
BTM. LOG INTERVAL:   3194.0 F
TOP LOG INTERVAL:    1768.0 F

CASING-DRILLER:      1773.0 F
CASING-LOGGER:       1768.0 F
CASING:             7
   WEIGHT:          26.0000 LB/F
BIT SIZE:           6.25
   DEPTH:            3243.0 F
```

```
OTHER SERVICES-
   DITD
   LDT CNL GR


PROGRAM
TAPE NO:
   28.2A
SERVICE
ORDER NO:
   524307
```

```
TYPE FLUID IN HOLE:   LIGNO-SULFONATE
DENSITY:              10.20 LB/G
VISCOSITY:            39.0 S
PH:                    9.5
FLUID LOSS:            5.6 C3
SOURCE OF SAMPLE:     FLOWLINE
RM:                    2.310 OHMM AT 88.0 DEGF
RMF:                   1.950 OHMM AT 72.0 DEGF
RMC:                   2.760 OHMM AT 72.0 DEGF
SOURCE RMF/RMC:       M /M
RM AT BHT:             1.908 OHMM AT 108. DEGF
RMF AT BHT:            1.340 OHMM AT 108. DEGF
RMC AT BHT:            1.896 OHMM AT 108. DEGF
```

TIME CIRC. STOPPED: 15:15
TIME LOGGER ON BTM.: 18:11

MAX. REC. TEMP: 108.0 DEGF

LOGGING UNIT NO: 8128
LOGGING UNIT LOC: SACRAMENTO
RECORDED BY: HARPER/PILCH
WITNESSED BY: M. ANDERSON

REMARKS:

DUAL RAN IN COMBINATION WITH SONIC

EQUIPMENT NUMBERS-

DIS 567	DIC 552	SLC	SLS RC

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.

CP 28.2A FILE 7 06-SEP-86 19:01
DATA ACQUIRED 06-SEP-86 18:05

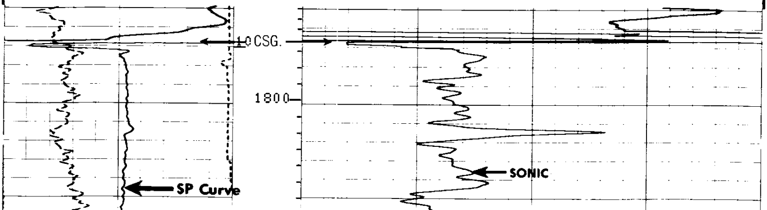
EVENT MARK SUMMARY:

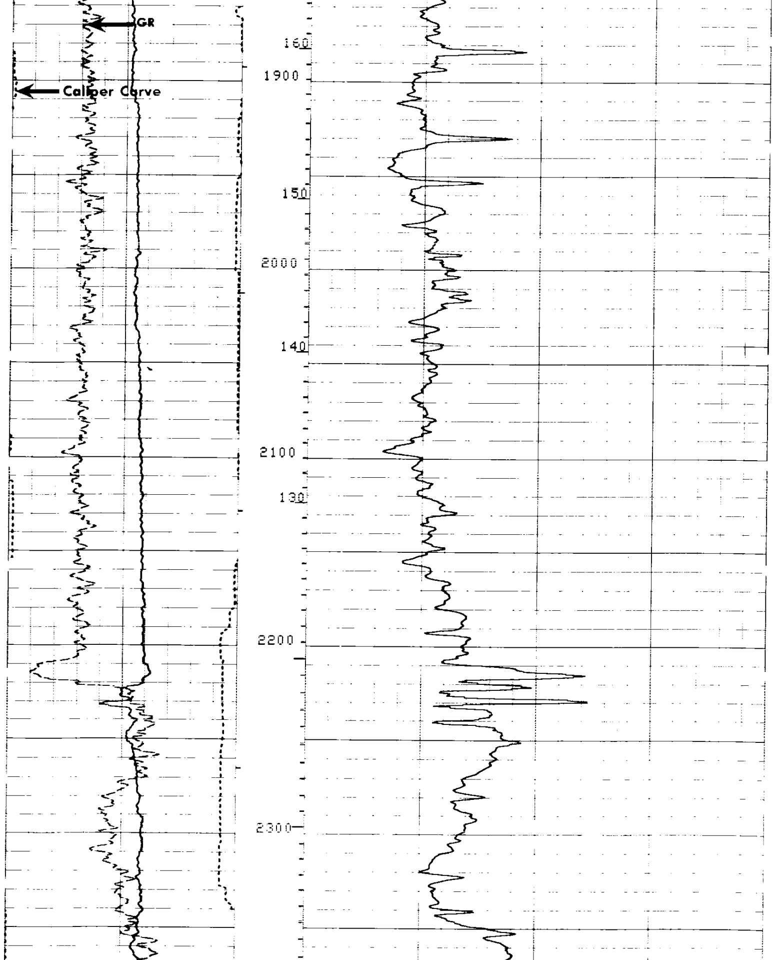
OUTPUT	INTERVAL BETWEEN PIPS	DEPTH TRACK EDGE
IHV	10.0000 F3	LEFT EDGE
ITT	.00100000 S	RIGHT EDGE

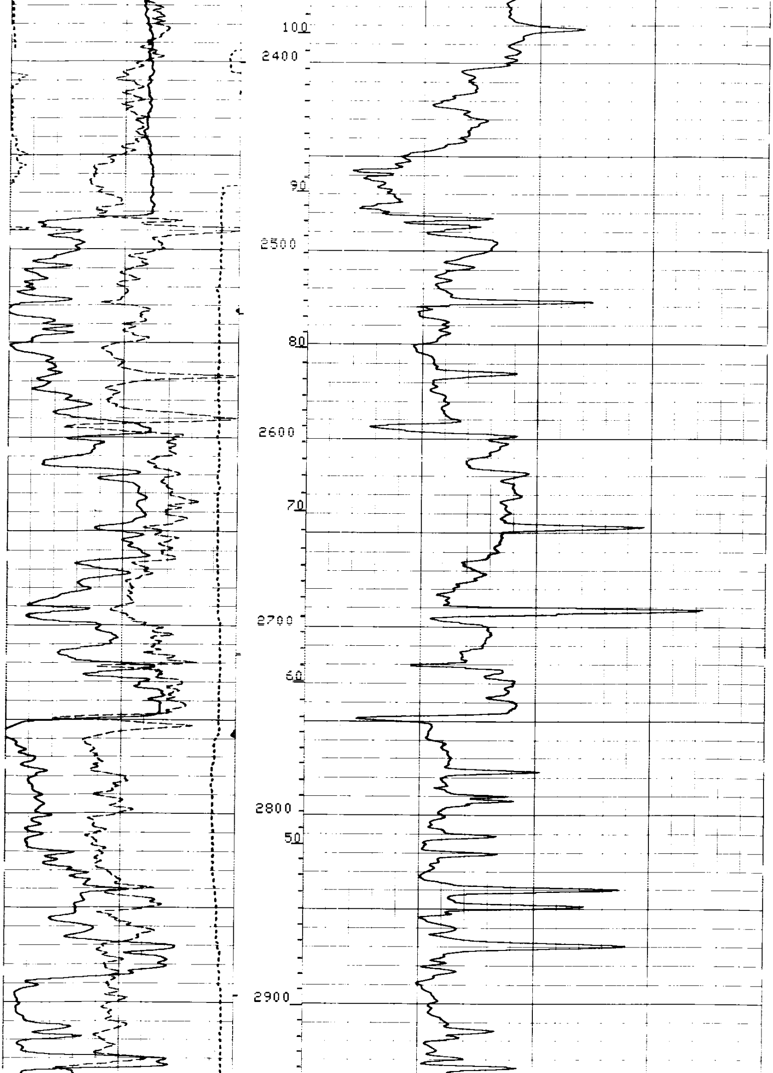
CALI(IN)
4.0000 14.000
GR (GAPI)
0.0 150.00
SP (MV)
-80.00 20.000

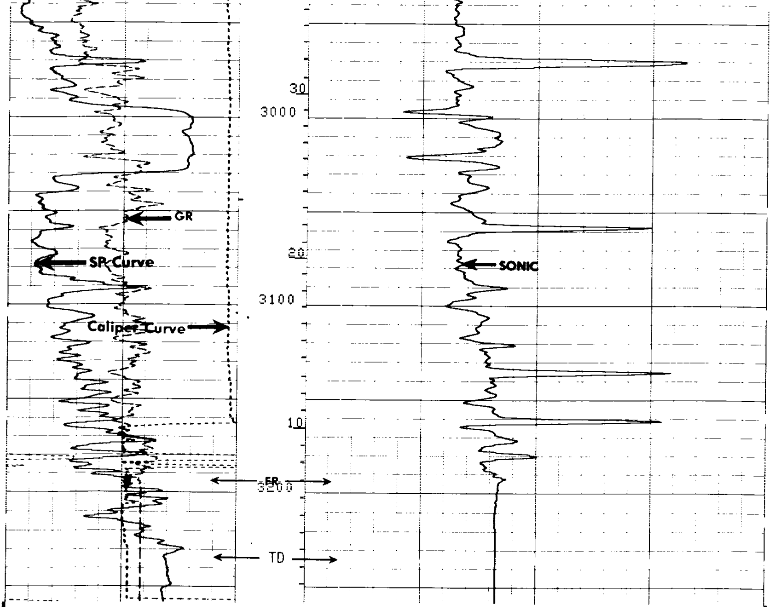
DT (US/F)
150.00 50.000

CP 28.2A FILE 8 06-SEP-86 18:50
DATA ACQUIRED 06-SEP-86 18:38









CP 28.2A FILE 8 06-SEP-86 18:48
DATA ACQUIRED 06-SEP-86 18:10

CALI(IN)
4.0000 14.000
GR (GAPI)
0.0 150.00
SP (MV)
-80.00 20.000

DT (US/F)
150.00 50.000

SENSOR MEASURE POINT TO TOOL ZERO

SRAT	41.4	FEET	AMPL	43.9	FEET
TT1	42.9	FEET	CBL	43.9	FEET
TT3	40.2	FEET	TT2	43.9	FEET
TO	43.9	FEET	TT4	39.2	FEET
SLTT	43.9	FEET	TT	43.9	FEET
GR	64.1	FEET	SCBL	43.9	FEET
ILD	9.4	FEET	CALI	31.8	FEET
SFL	6.4	FEET	ILM	5.8	FEET
SPAR	2.5	FEET	SP	2.5	FEET
NOIS	2.5	FEET	TENS	2.5	FEET

PARAMETERS

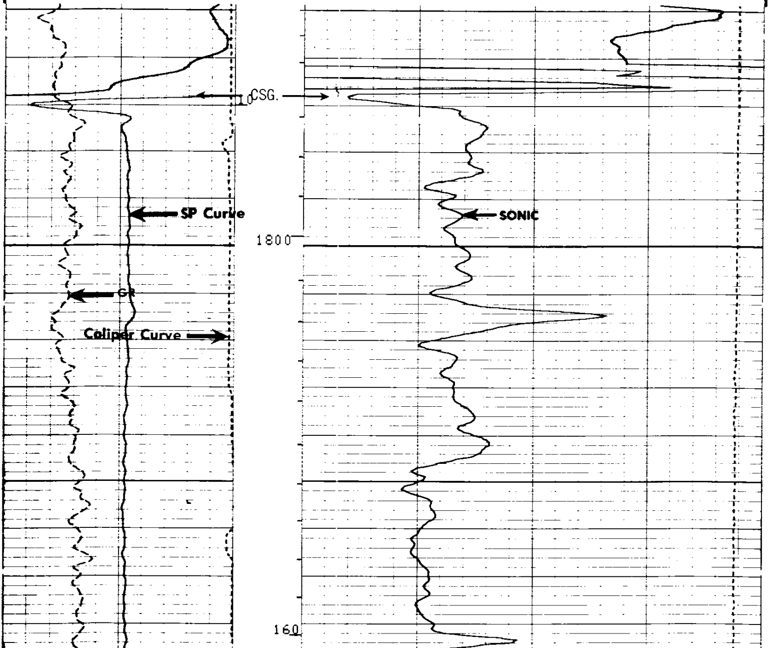
NAME	VALUE	UNIT	NAME	VALUE	UNIT

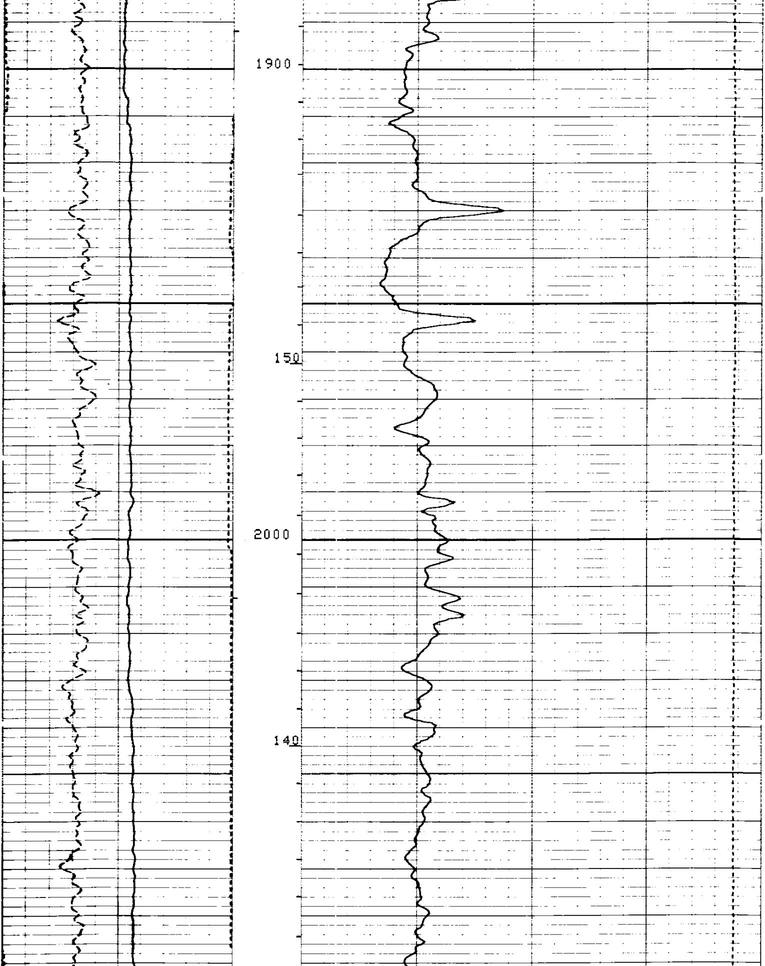
```
CDTS  100.000                          SPFS  R-H
DTF   189.000        US/F              DTM   56.0000        US/F
DSIN  5              US                DDEL  200            US
WMUD  10.2000        LB/G              DWCO  512
SBR   1.00000        OHMM              DSEC  10.5000        MMHO
FPHI  SPHI                             MSEC  6.60000        MMHO
BS    6.25000        IN                BHS   OPEN
PP    NORM                             DO    0.0            F

                        TAPE NOT MADE
```

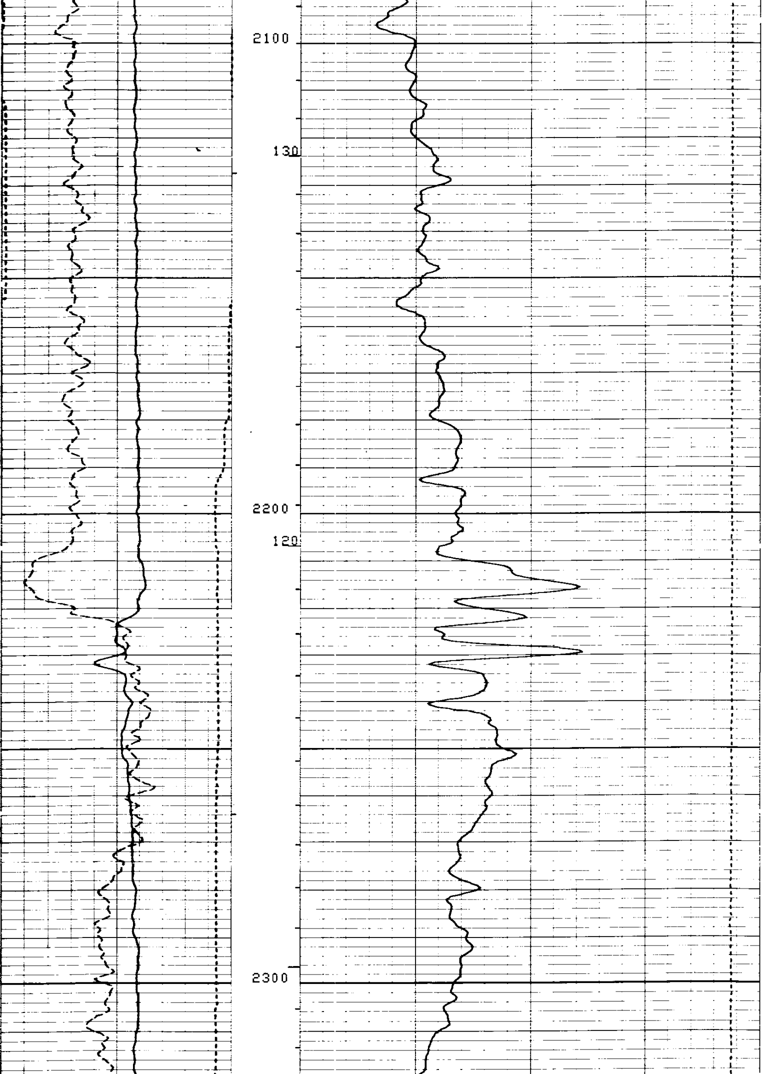
```
EVENT MARK SUMMARY:

OUTPUT   INTERVAL          DEPTH TRACK
         BETWEEN PIPS      EDGE

IHV      10.0000 F3        LEFT EDGE
ITT      .00100000 S       RIGHT EDGE
```

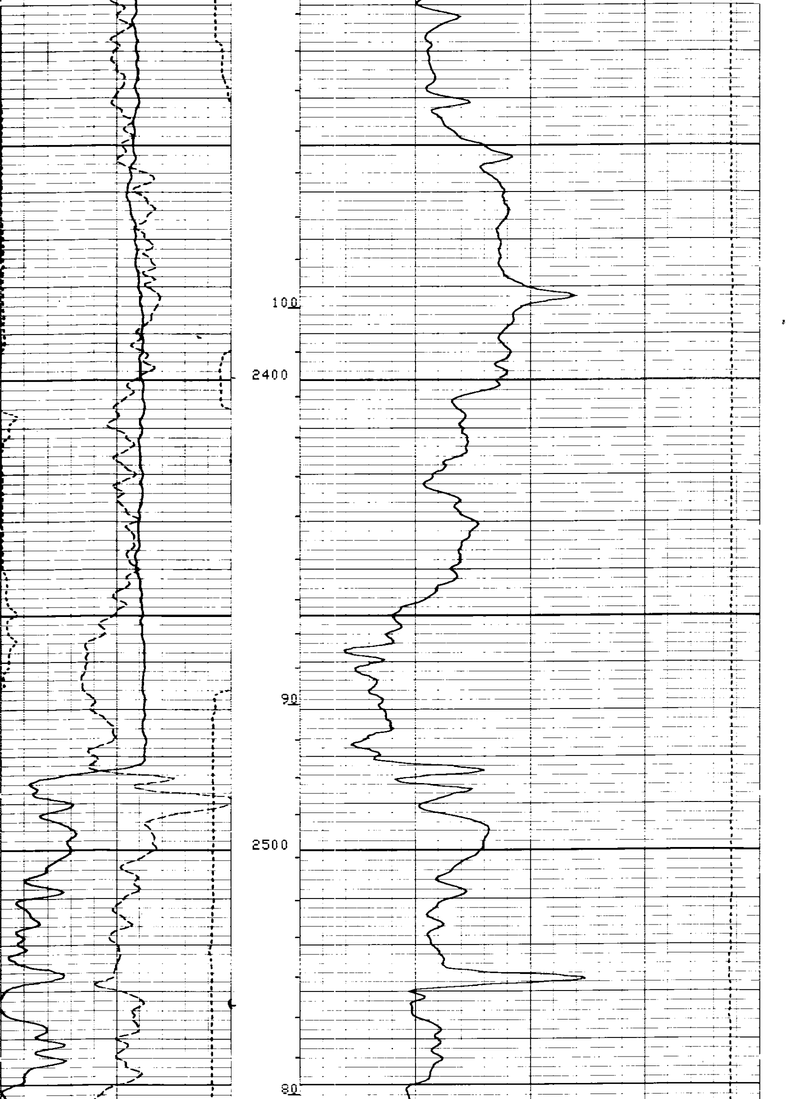
```
      GR  (GAPI)
0.0              150.00
     CALI(IN  )                                                TENS(LB  )
4.0000           14.000                             10000.                 0.0
      SP   (MV  )                                   DT   (US/F)
-80.00           20.000      150.00                                        50.000
```

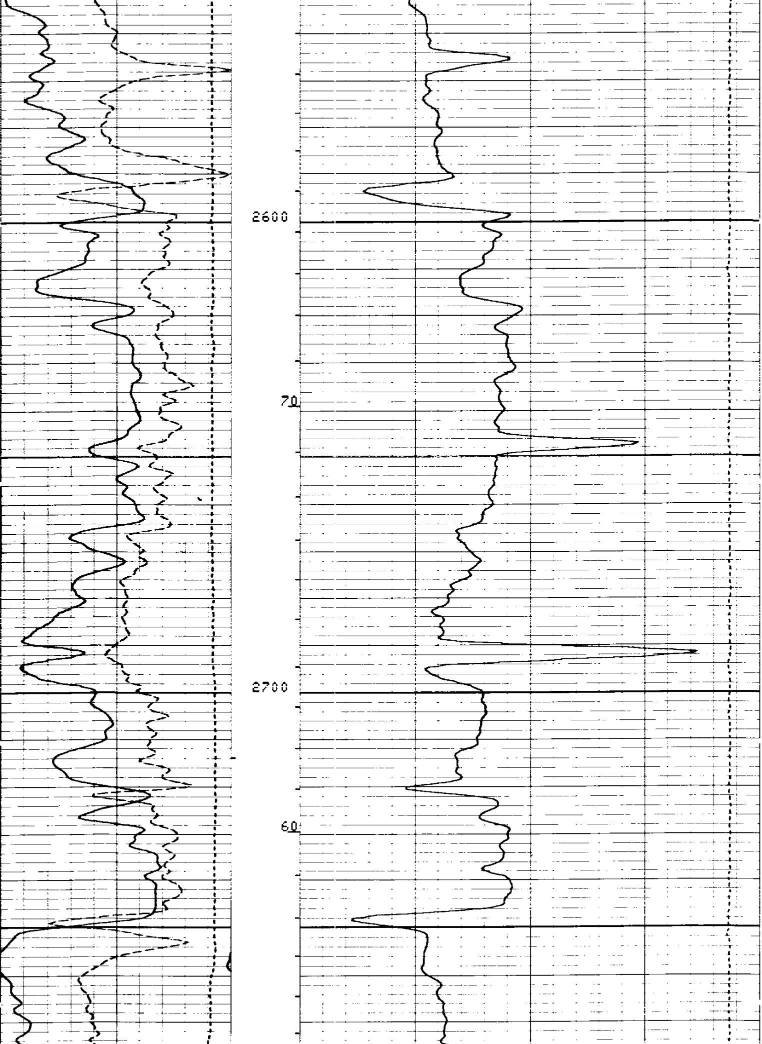
CP 28.2A   FILE   8   06-SEP-86 18:38

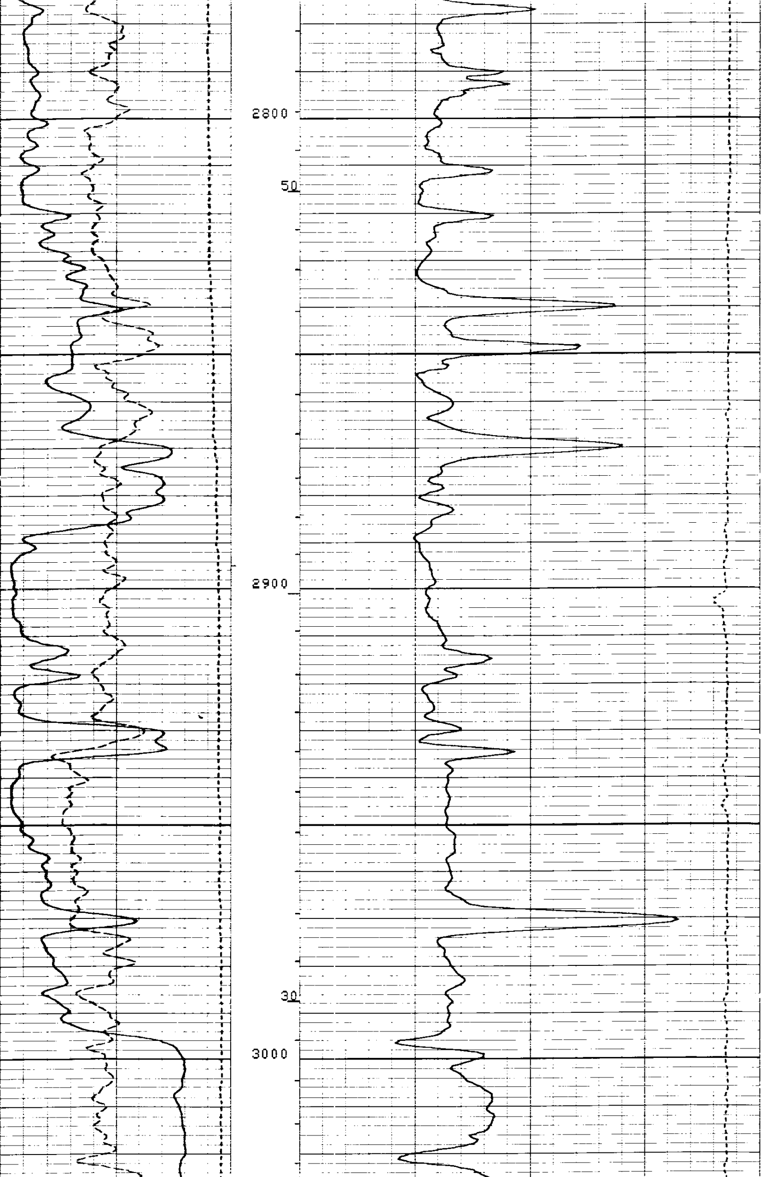


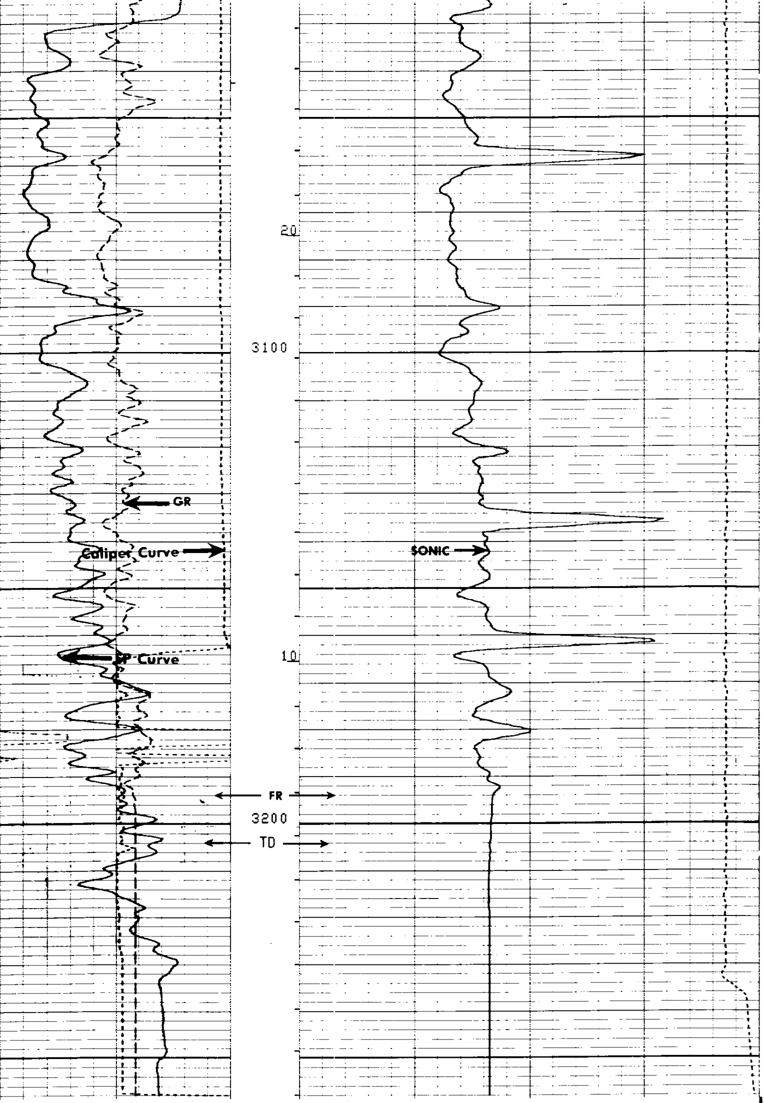












CP 28.2A FILE 8 06-SEP-86 18:10

GR (GAPI)			TENS(LB)	
0.0	150.00		10000.	0.0
CALI(IN)				
4.0000	14.000			
SP (MV)		DT (US/F)		
-80.00	20.000	150.00		50.000

SENSOR MEASURE POINT TO TOOL ZERO

SRAT	41.4	FEET	AMPL	43.9	FEET
TT1	42.9	FEET	CBL	43.9	FEET
TT3	40.2	FEET	TT2	43.9	FEET
T0	43.9	FEET	TT4	39.2	FEET
SLTT	43.9	FEET	TT	43.9	FEET
GR	64.1	FEET	SCBL	43.9	FEET
ILD	9.4	FEET	CALI	31.8	FEET
SFL	6.4	FEET	ILM	5.8	FEET
SPAR	2.5	FEET	SP	2.5	FEET
NOIS	2.5	FEET	TENS	2.5	FEET

PARAMETERS

NAME	VALUE	UNIT	NAME	VALUE	UNIT
CDTS	100.000		SPFS	R-H	
DTF	189.000	US/F	DTM	56.0000	US/F
DSIN	5	US	DDEL	200	US
WMUD	10.2000	LB/G	DWCO	512	
SBR	1.00000	OHMM	DSEC	10.5000	MMHO
FPHI	SPHI		MSEC	6.60000	MMHO
BS	6.25000	IN	BHS	OPEN	

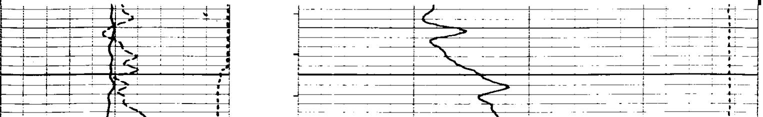
EVENT MARK SUMMARY:

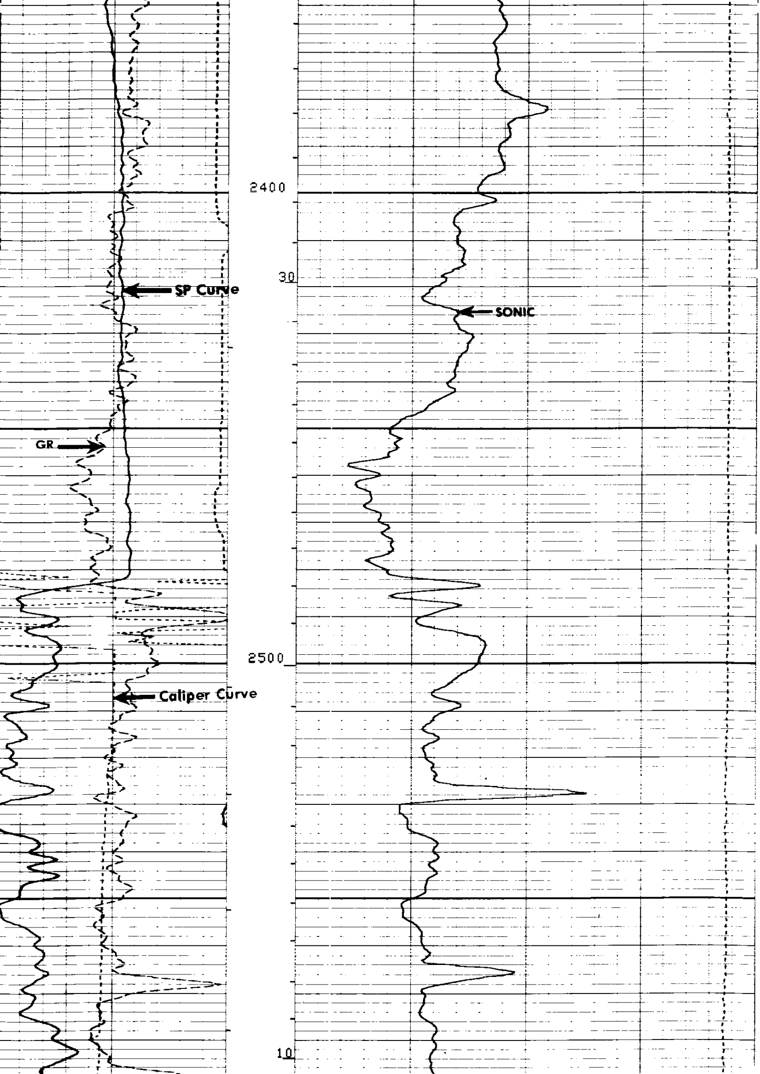
OUTPUT	INTERVAL BETWEEN PIPS	DEPTH TRACK EDGE
IHV	10.0000 F3	LEFT EDGE
ITT	.00100000 S	RIGHT EDGE

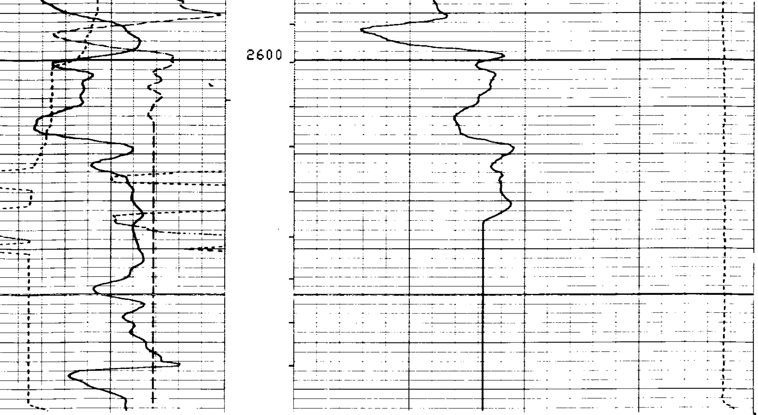
GR (GAPI)			TENS(LB)	
0.0	150.00		10000.	0.0
CALI(IN)				
4.0000	14.000			
SP (MV)		DT (US/F)		
-100.0	0.0	150.00		50.000

REPEAT SECTION REPEAT SECTION REPEAT SECTION

CP 28.2A FILE 7 06-SEP-86 18:57
DATA ACQUIRED 06-SEP-86 18:05







CP 28.2A

FILE 7 06-SEP-86 18:56
DATA ACQUIRED 06-SEP-86 17:59

GR (GAPI) 0.0 150.00 CALI(IN) 4.0000 14.000 SP (MV) -100.0 0.0		TENS(LB) 10000. 0.0
	DT (US/F) 150.00 50.000	

SENSOR MEASURE POINT TO TOOL ZERO

SRAT	41.4	FEET	AMPL	43.9	FEET
TT1	42.9	FEET	CBL	43.9	FEET
TT3	40.2	FEET	TT2	43.9	FEET
T0	43.9	FEET	TT4	39.2	FEET
SLTT	43.9	FEET	TT	43.9	FEET
GR	64.1	FEET	SCBL	43.9	FEET
ILD	9.4	FEET	CALI	31.8	FEET
SFL	6.4	FEET	ILM	5.8	FEET
SPAR	2.5	FEET	SP	2.5	FEET
NOIS	2.5	FEET	TENS	2.5	FEET

PARAMETERS

NAME	VALUE	UNIT	NAME	VALUE	UNIT
CDTS	100.000		SPFS	R-H	
DTF	189.000	US/F	DTM	56.0000	US/F
DSIN	5	US	DDEL	200	US
WMUD	10.2000	LB/G	DWCO	512	
SBR	1.00000	OHMM	DSEC	10.5000	MMHO
FPHI	SPHI		MSEC	6.60000	MMHO
BS	6.25000	IN	BHS	OPEN	
PP	NORM		DO	0.0	F

TAPE NOT MADE

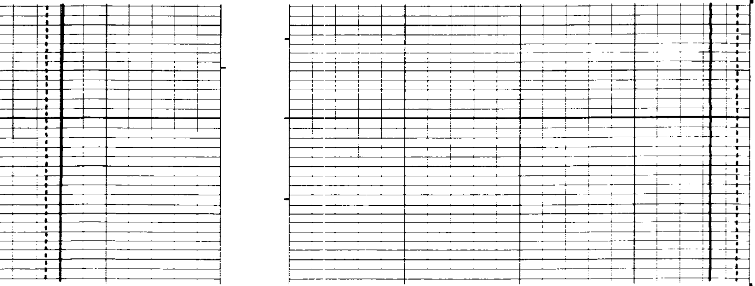
EVENT MARK SUMMARY:

OUTPUT	INTERVAL BETWEEN PIPS	DEPTH TRACK EDGE
IHV	10.0000 F3	LEFT EDGE
ITT	.00100000 S	RIGHT EDGE

CALI(IN)
4.0000 14.000
SP (MV)
-80.00 20.000

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

CP 28.2A FILE 4 06-SEP-86 17:46



CP 28.2A FILE 4 06-SEP-86 17:45

CALI(IN)
4.0000 14.000
SP (MV)
-80.00 20.000

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

SENSOR MEASURE POINT TO TOOL ZERO

SRAT	41.4	FEET	AMPL	43.9	FEET
TT1	42.9	FEET	CBL	43.9	FEET
TT3	40.2	FEET	TT2	43.9	FEET
T0	43.9	FEET	TT4	39.2	FEET
SLTT	43.9	FEET	TT	43.9	FEET
GR	64.1	FEET	SCBL	43.9	FEET
ILD	9.4	FEET	CALI	31.8	FEET
SFL	6.4	FEET	ILM	5.8	FEET
SPAR	2.5	FEET	SP	2.5	FEET
NOIS	2.5	FEET	TENS	2.5	FEET

PARAMETERS

NAME	VALUE	UNIT	NAME	VALUE	UNIT
CDTS	100.000		SPFS	R-H	
DTF	189.000	US/F	DTM	56.0000	US/F
DSIN	5	US	DDEL	200	US
WMUD	10.2000	LB/G	DWCO	512	
SBR	1.00000	OHMM	DSEC	10.5000	MMHO
FPHI	SPHI		MSEC	6.60000	MMHO
BS	6.25000	IN	BHS	OPEN	