Schlumberger

BOREHOLE COMPENSATED SONIC LOG

COUNTY	COLUMBIA
FIELD	MIST GAS
LOCATION	1779.79'W AND 886.17'S
WELL	"COLUMBIA COUNTY" #31-34-
COMPANY	ARCO OIL AND GAS COMPANY

COMPANY ARCO OIL AND GAS COMPANY

WELL "COLUMBIA COUNTY" #31-34-65

FIELD MIST GAS

COUNTY COLUMBIA **STATE** OREGON

LOCATION	1779.79'W AND 886.17'S OF NE CORNER			Other Services: BHC LDT-CNL-GR
API SERIAL NO.	SECT. 34	TWP. 6N	RANGE 5W	

Permanent Datum	GL	Elev.	902.5 F	Elev.:K.B. 912.5 F
Log Measured From	KB	10.0 F	above Perm. Datum	D.F. 911.5 F
Drilling Measured From	KB			G.L. 902.5 F

Date		04-OCT-87			
Run No.		ONE			
Depth Driller		2344.0 F			
Depth Logger (Schl.)		2336.0 F			
Btm. Log Interval		2330.0 F			
Top Log Interval		472.0 F			
Casing-Driller		9 5/8" @ 472.0 F	@	@	@
Casing-Logger		472.0 F			
Bit Size		8 1/2"			
Type Fluid in Hole		POLYMER			
Dens.	Visc.	10.60 LB/G	43.0 S		
pH	Fld. Loss	8.4	6.0 C3		
Source of Sample		FLOWLINE			
Rm @ Meas. Temp.		2.550 OHMM @ 73.0 DEGF		@	
Rmf @ Meas. Temp.		3.390 OHMM @ 54.0 DEGF		@	
Rmc @ Meas. Temp.		5.290 OHMM @ 54.0 DEGF		@	
Source: Rmf	Rmc	MEASURED	MEASURED		
Rm @ BHT		2.061 OHMM @ 92.0 DEGF		@	
TIME Circulation Ended		06:00 10-5			
TIME Logger on Bottom		08:39 10-5			
Max. Rec. Temp.		92.0 DEGF			
Equip.	Location	8504	SACRAMENTO		
Recorded By		SCOTT PILCH			
Witnessed By		MIKE ANDERSON			

FOLD HERE 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.	526354	
Drilling Fluid Level		
Salinity		
Rmf @ BHT	2.089 OHMM @ 92.0 DEGF	@
Rmc @ BHT	3.260 OHMM @ 92.0 DEGF	@
Logging Speed	4000.0 F/HR	
Equipment Data		
Tool Number 1	DIS-EC 2179	
Tool Number 2	DIC-DA 2230	
Tool Number 3	MCD-DA 1237	
Tool Number 4	SLS-RC 525	
Tool Number 5	SLC-FA 1321	
Tool Number 6	IEM-BD 304	
Tool Number 7	SLM-DA 443	
Tool Number 8		
Tool Number 9		
Tool Number 10		
Tool Number 11		
Tool Number 12		

REMARKS:

INDUCTION AND SONIC RUN IN COMBINATION.
SONIC CENTRALIZED WITH 2 CME-Z'S AND 1 FIN.
1.5" STAND-OFF USED ON DIL.
MCD CALIPER COLLAPSED DUE TO HOLE DEVIATION.
MAXIMUM DEVIATION 30 DEGREES.
THANK YOU FOR USING SCHLUMBERGER.
CREW: GLEN KINION AND STEVE SALVATO

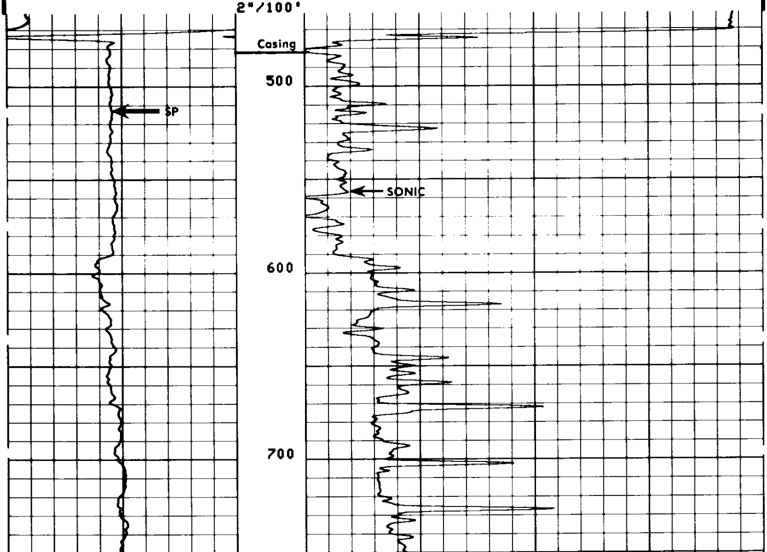
CEMENT VOLUME
HOLE VOLUME =
FROM 2350.0 TO 472.0 FEET

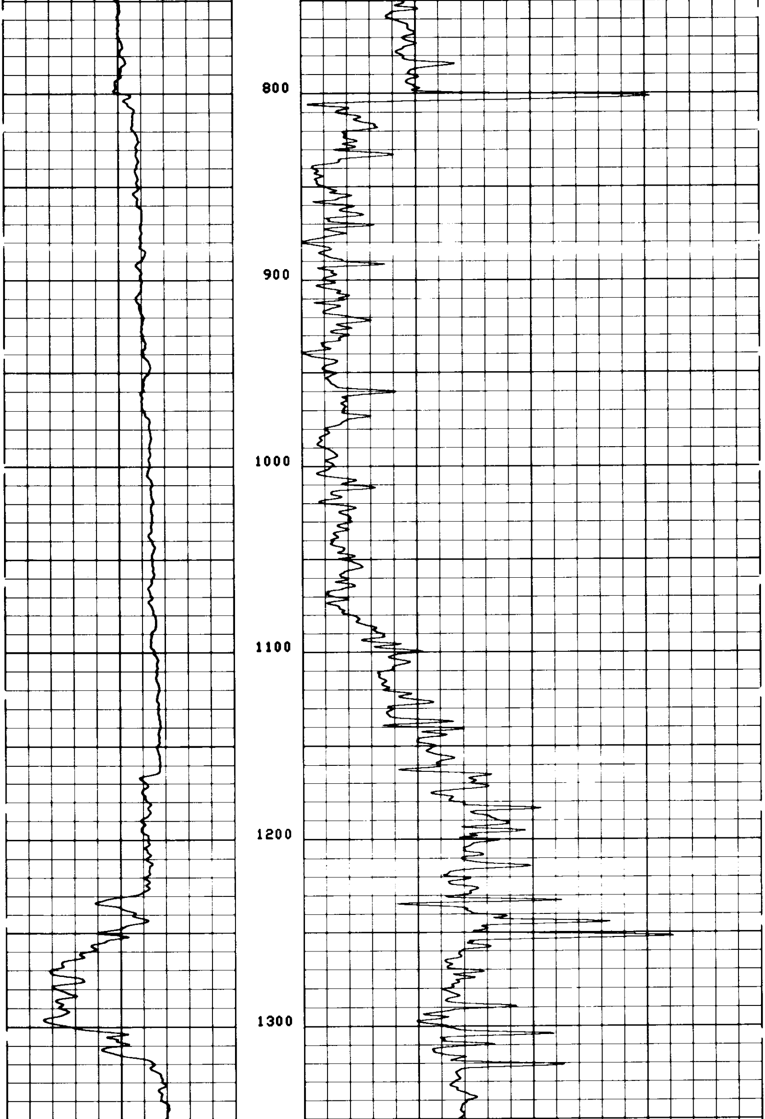
SP (MV)			DT (US/F)	
-120.0	-20.00		150.00	50.000

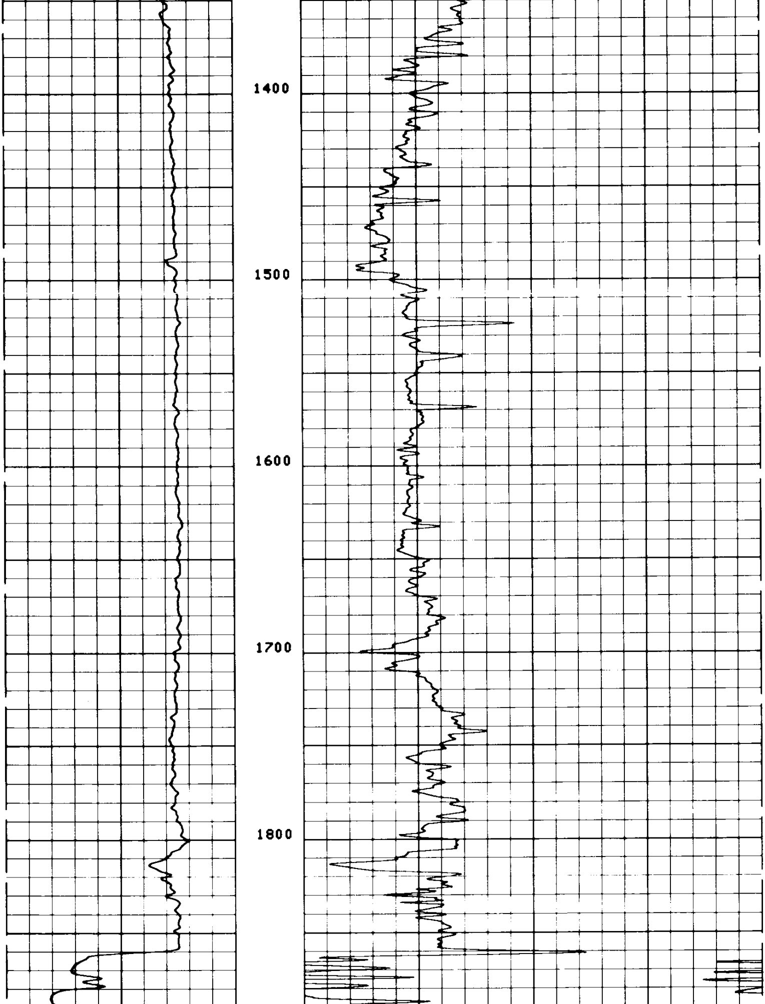
CP 30.22 FILE 33 05-OCT-87 14:39

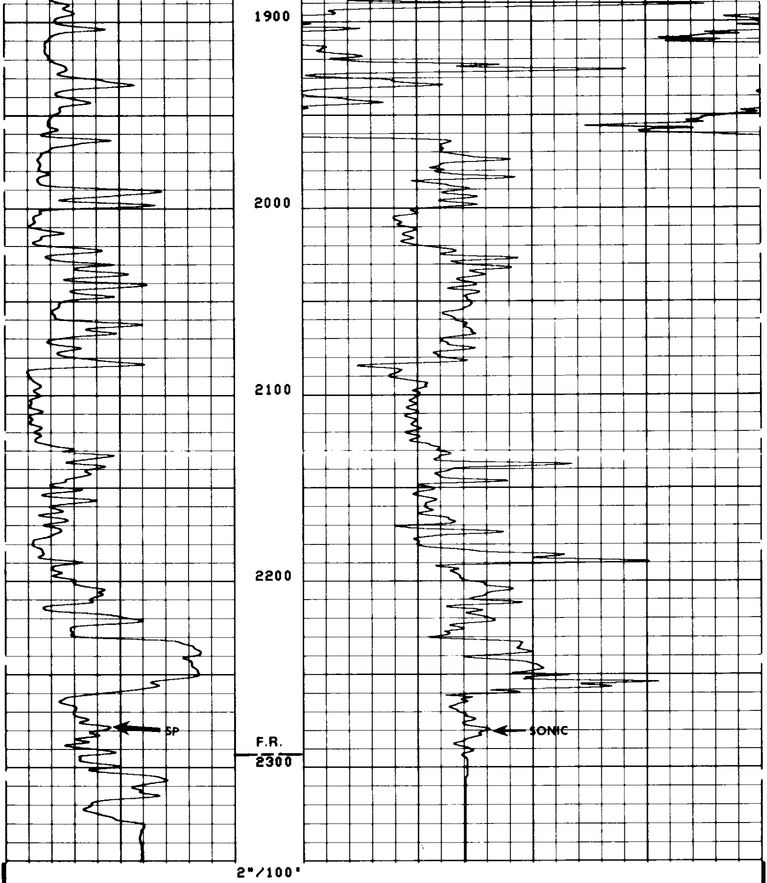
INPUT FILES
6

DATA ACQUIRED
05-OCT-87 09:13









CP 30.22 FILE 33 05-OCT-87 14:36

INPUT FILES
6

DATA ACQUIRED
05-OCT-87 08:39

SP (MV)			DT (US/F)	
-120.0	-20.00		150.00	50.000

SENSOR MEASURE POINT TO TOOL ZERO

SRAT	41.4	FEET	AMPL	43.8	FEET
TT1	42.8	FEET	CBL	43.8	FEET
TT3	40.1	FEET	TT2	43.8	FEET
TO	43.8	FEET	TT4	39.1	FEET
SLTT	43.8	FEET	TT	43.8	FEET
CALI	31.8	FEET	SCBL	43.8	FEET
ILM	5.8	FEET	ILD	9.4	FEET
SP	2.5	FEET	SFL	6.4	FEET
TENS	2.5	FEET	SPAR	2.5	FEET
NDIS	2.5	FEET			

PARAMETERS

NAME	VALUE	UNIT	NAME	VALUE	UNIT
BS	8.50000	IN	BHS	OPEN	
SPFS	R-H		FPHI	SPHI	
DTM	56.0000	US/F	CDTS	100.000	
DDEL	200	US	DTF	189.000	US/F
DWCO	512		DSIN	5	US
SBR	1.00000	OHMM	DSEC	3.80000	MMHO
DD	0.0	F	MSEC	7.40000	MMHO
PP	NORM				

DATA NOT RECORDED

EVENT MARK SUMMARY:

OUTPUT	INTERVAL BETWEEN PIPS	DEPTH TRACK EDGE
ITT	.00100000 S	RIGHT EDGE

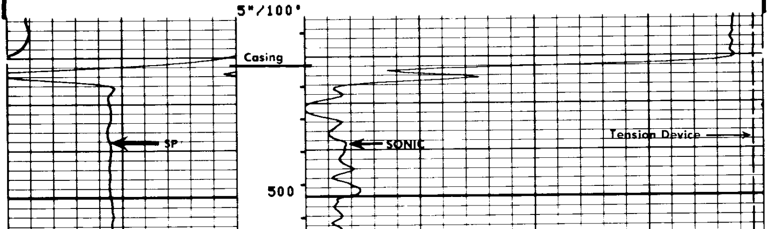
CEMENT VOLUME =
HOLE VOLUME =
FROM 2350.0 TO 472.0 FEET

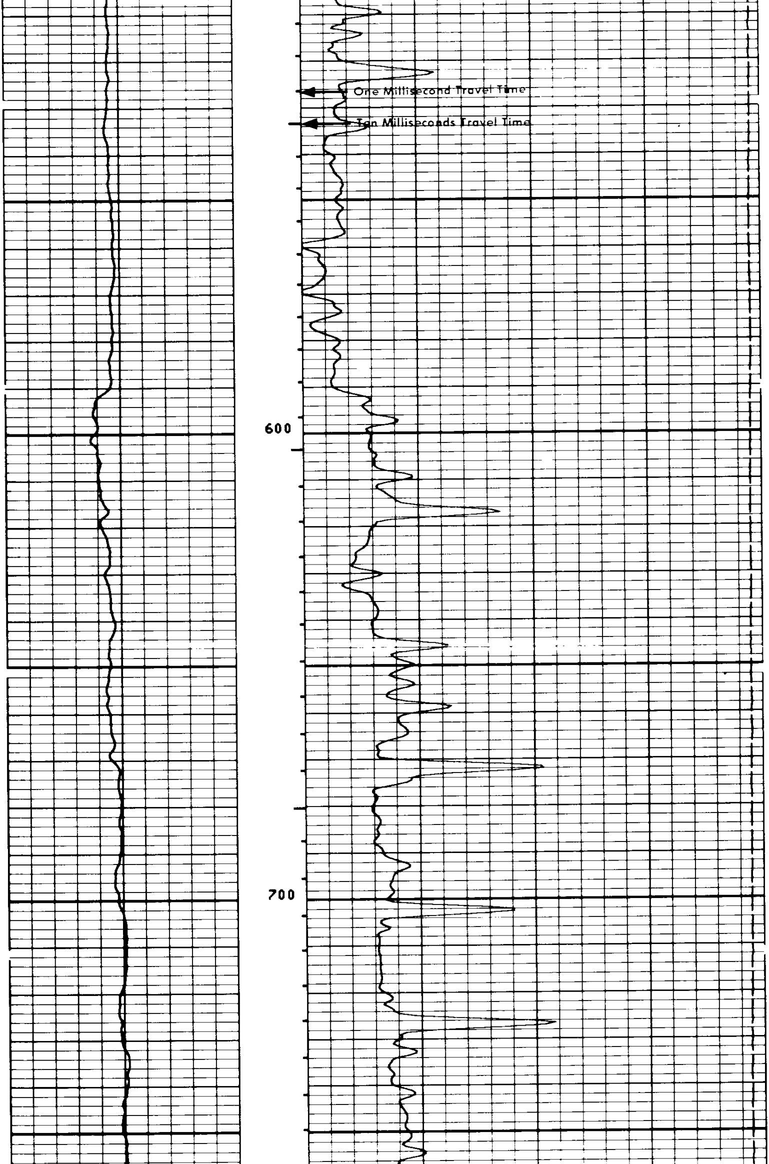
				TENS(LB)	
				10500.	500.00
SP (MV)			DT (US/F)		
-120.0	-20.00		150.00		50.000

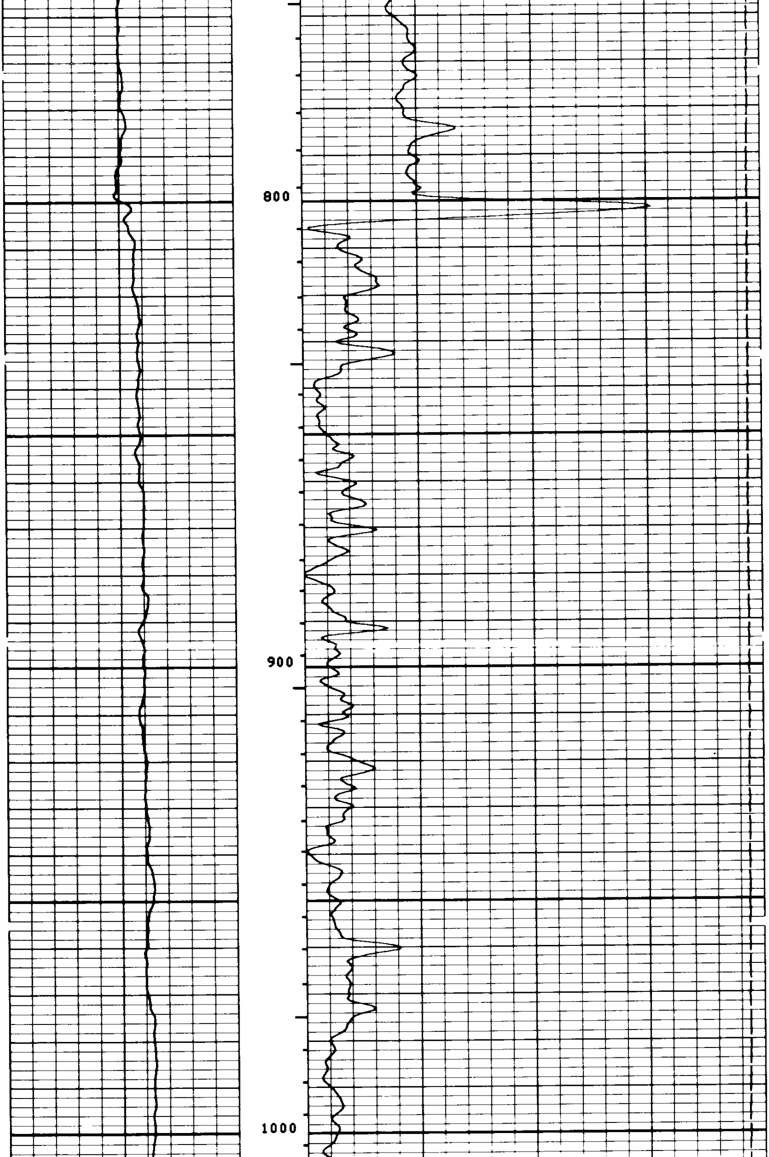
CP 30.22 FILE 32 05-OCT-87 14:34

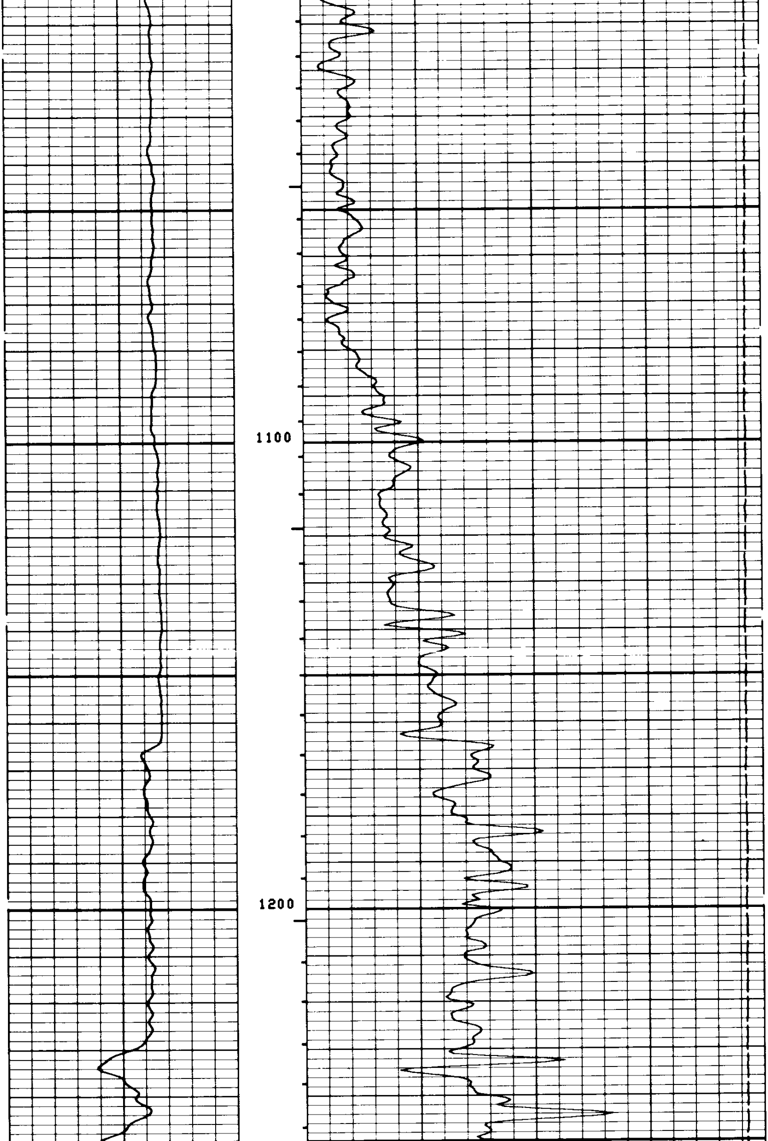
INPUT FILES
6

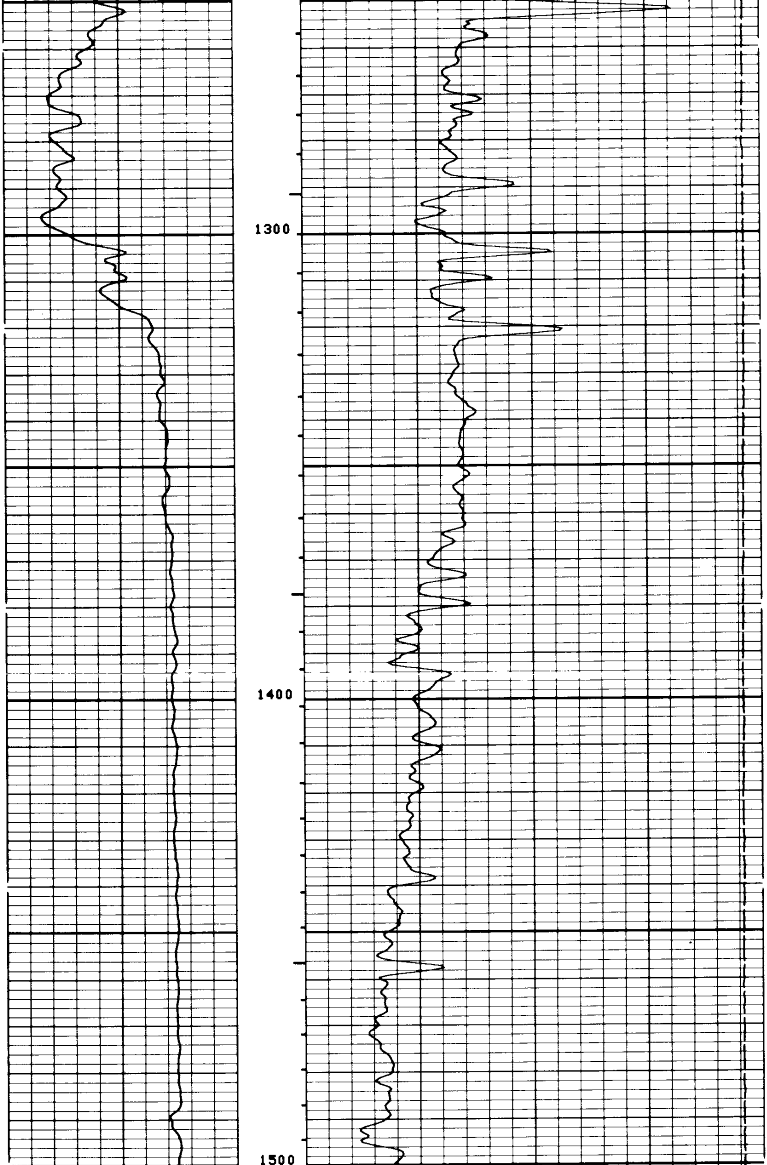
DATA ACQUIRED
05-OCT-87 09:13

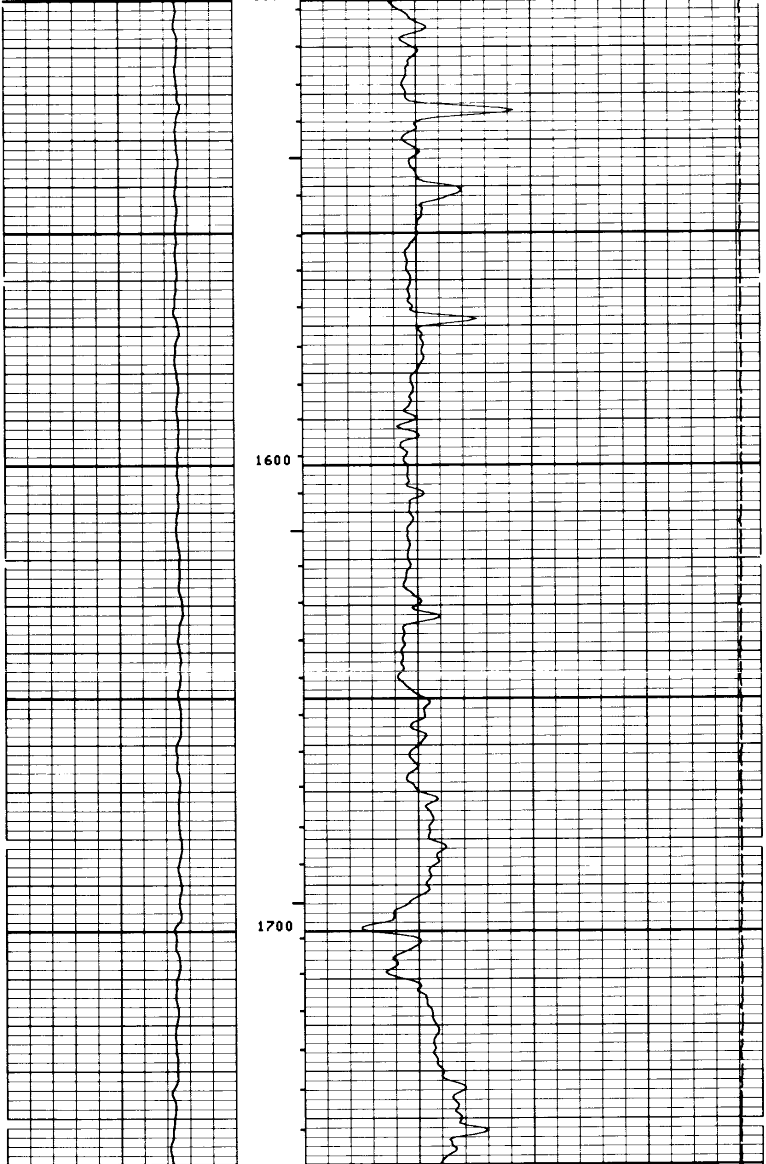


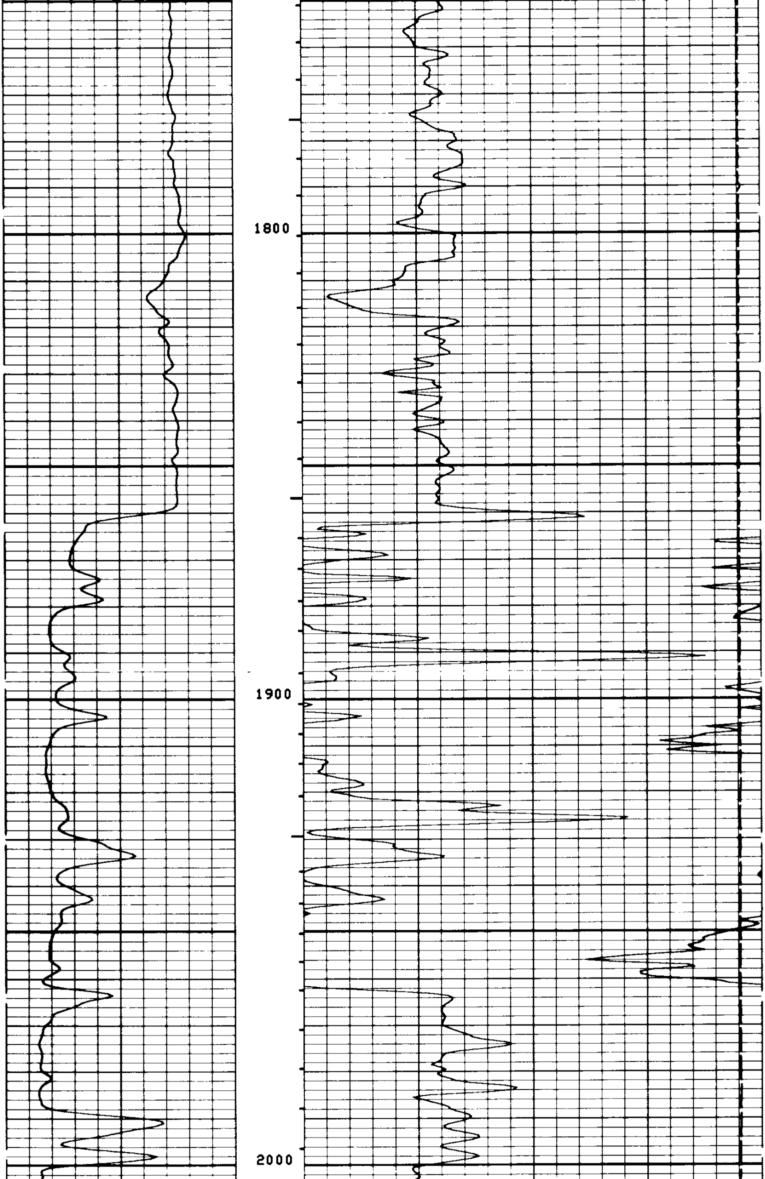


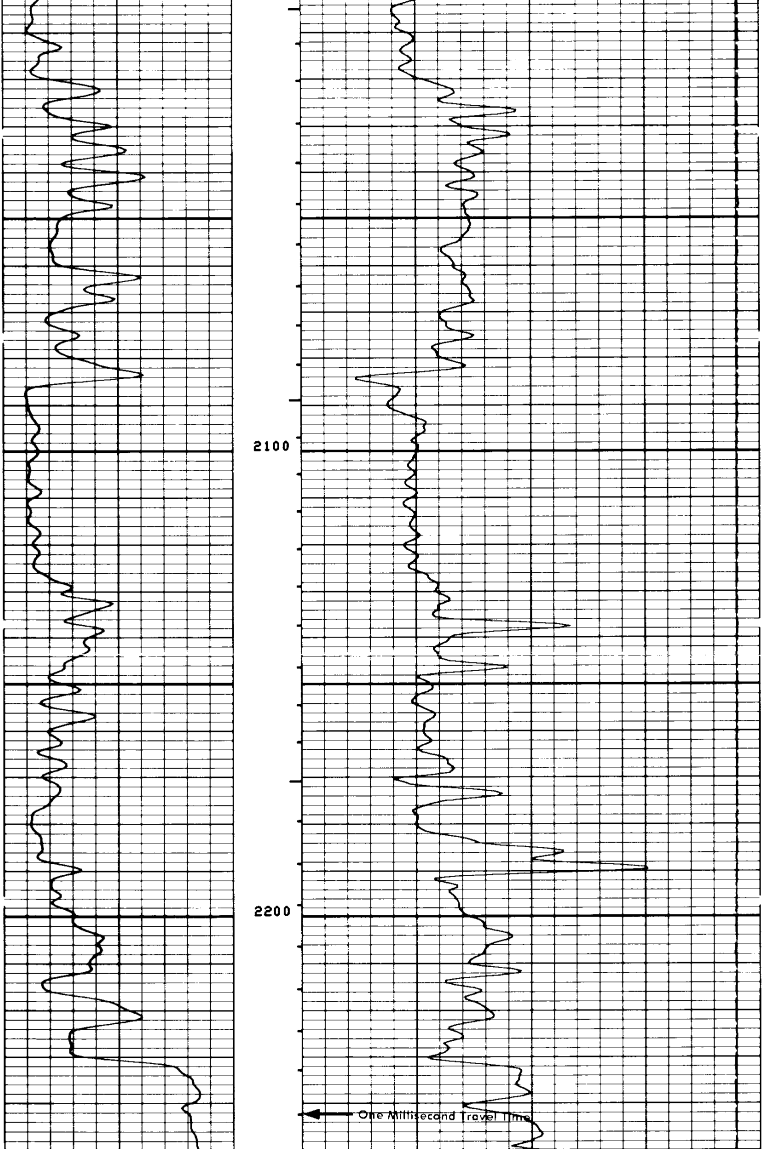


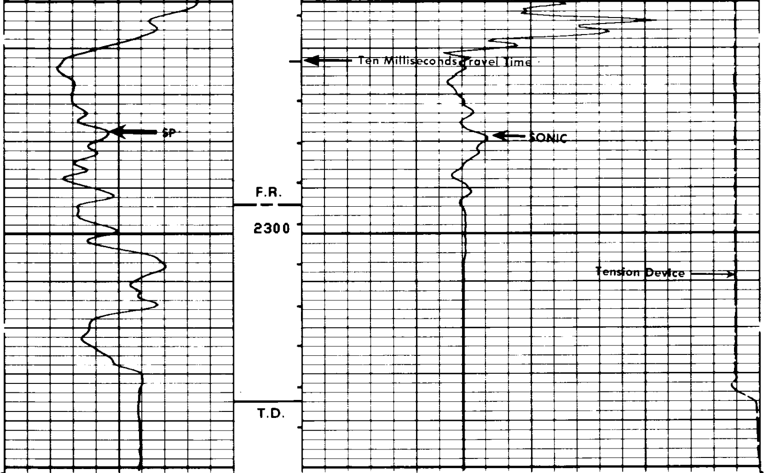












5"/100'

CP 30.22 FILE 32 05-OCT-87 14:29

INPUT FILES
6

DATA ACQUIRED
05-OCT-87 08:39

TENS(LB)
10500. 500.00

SP (MV)
-120.0 -20.00

DT (US/F)
150.00 50.000

SENSOR MEASURE POINT TO TOOL ZERO

SRAT	41.4	FEET	AMPL	43.8	FEET
TT1	42.8	FEET	CBL	43.8	FEET
TT3	40.1	FEET	TT2	43.8	FEET
T0	43.8	FEET	TT4	39.1	FEET
SLTT	43.8	FEET	TT	43.8	FEET
CALI	31.8	FEET	SCBL	43.8	FEET
ILM	5.8	FEET	ILD	9.4	FEET
SP	2.5	FEET	SFL	6.4	FEET
TENS	2.5	FEET	SPAR	2.5	FEET
NOIS	2.5	FEET			

PARAMETERS

NAME	VALUE	UNIT	NAME	VALUE	UNIT
BS	8.50000	IN	BHS	OPEN	
SPFS	R-H		FPHI	SPHI	
DTM	56.0000	US/F	CDTS	100.000	
DDEL	200	US	DTF	189.000	US/F
DWCO	512		DSIN	5	US
SBR	1.00000	OHMM	DSEC	3.80000	MMHO
DO	0.0	F	MSEC	7.40000	MMHO
PP	NORM				

DATA NOT RECORDED

EVENT MARK SUMMARY:

OUTPUT	INTERVAL BETWEEN PIPS	DEPTH TRACK EDGE
ITT	.00100000 S	RIGHT EDGE

CEMENT VOLUME =
HOLE VOLUME =
FROM 2052.5 TO 1842.0 FEET

TENS(LB)
10500. 500.00

SP (MV)
-120.0 -20.00

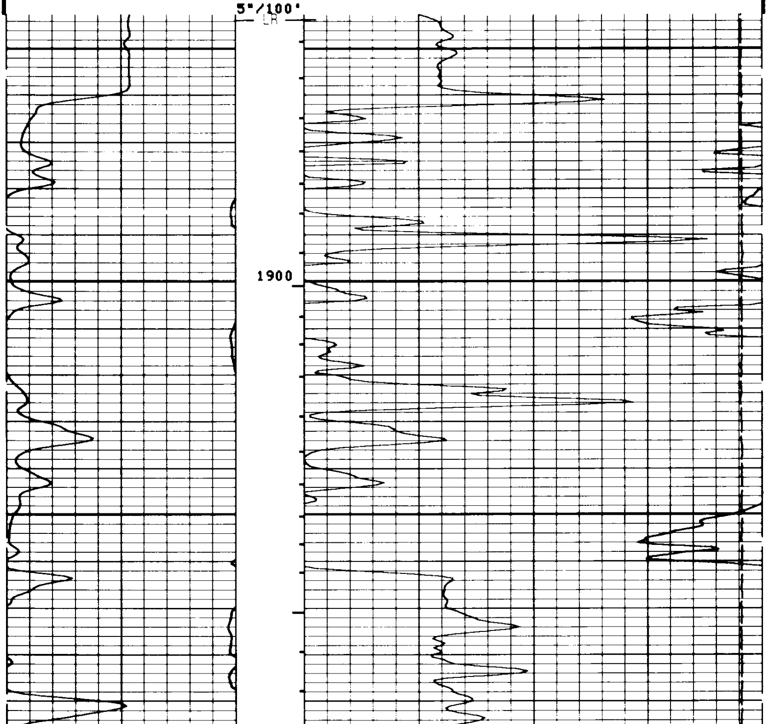
DT (US/F)
150.00 50.000

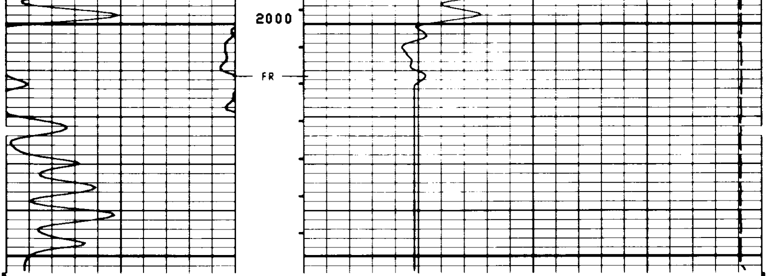
REPEAT SECTION

CP 30.22 FILE 31 05-OCT-87 14:29

INPUT FILES
5

DATA ACQUIRED
05-OCT-87 08:21





5"/100'

CP 30.22 FILE 31 05-OCT-87 14:28

INPUT FILES
5

DATA ACQUIRED
05-OCT-87 08:15

TENS(LB)
10500. 500.00

SP (MV)
-120.0 -20.00

DT (US/F)
150.00 50.000

SENSOR MEASURE POINT TO TOOL ZERO

SRAT	41.4	FEET	AMPL	43.8	FEET
TT1	42.8	FEET	CBL	43.8	FEET
TT3	40.1	FEET	TT2	43.8	FEET
T0	43.8	FEET	TT4	39.1	FEET
SLTT	43.8	FEET	TT	43.8	FEET
CALI	31.8	FEET	SCBL	43.8	FEET
ILM	5.8	FEET	ILD	9.4	FEET
SP	2.5	FEET	SFL	6.4	FEET
TENS	2.5	FEET	SPAR	2.5	FEET
NOIS	2.5	FEET			

PARAMETERS

NAME	VALUE	UNIT	NAME	VALUE	UNIT
BS	8.50000	IN	BHS	OPEN	
SPFS	R-H		FPHI	SPHI	
DTM	56.0000	US/F	CDTS	100.000	
DDEL	200	US	DTF	189.000	US/F
DWCO	512		DSIN	5	US
SBR	1.00000	OHMM	DSEC	3.80000	MMHO
DO	0.0	F	MSEC	7.40000	MMHO
PP	NORM				

DATA NOT RECORDED

EVENT MARK SUMMARY:

OUTPUT	INTERVAL BETWEEN PIPS	DEPTH TRACK EDGE
ITT	.00100000 S	RIGHT EDGE

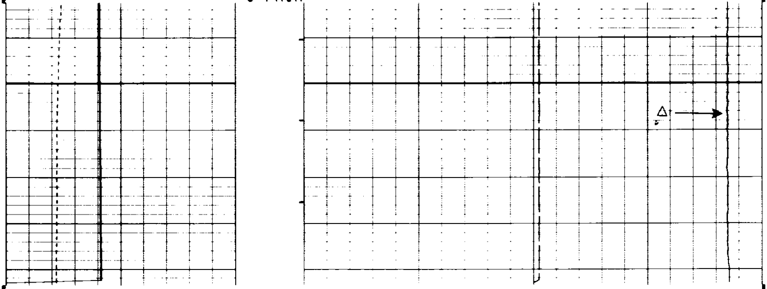
CALI(IN)
6.0000 16.000
SP (MV)
-150.0 0.0

TENS(LB)
11000. 1000.0
DT (US/F)
150.00 50.000

Sonic Check in Casing

CP 30.22 FILE 1 05-OCT-87 07:54

5"/MIN



5"/MIN

CP 30.22 FILE 1 05-OCT-87 07:54

CALI(IN)
6.0000 16.000
SP (MV)
-150.0 0.0

TENS(LB)
11000. 1000.0
DT (US/F)
150.00 50.000

SENSOR MEASURE POINT TO TOOL ZERO

SRAT	41.4	FEET	AMPL	43.8	FEET
TT1	42.8	FEET	CBL	43.8	FEET
TT3	40.1	FEET	TT2	43.8	FEET
T0	43.8	FEET	TT4	39.1	FEET
SLTT	43.8	FEET	TT	43.8	FEET
CALI	31.8	FEET	SCBL	43.8	FEET
ILM	5.8	FEET	ILD	9.4	FEET
SP	2.5	FEET	SFL	6.4	FEET
TENS	-6.5	FEET	SPAR	2.5	FEET
NOIS	-6.5	FEET			

PARAMETERS

NAME	VALUE	UNIT	NAME	VALUE	UNIT
BS	8.50000	IN	BHS	OPEN	
SPFS	R-H		FPHI	SPHI	
DTM	56.0000	US/F	CDTS	100.000	
DDEL	200	US	DTF	189.000	US/F
DWCO	512		DSIN	5	US
SBR	1.00000	OHMM	DSEC	3.80000	MMHO
SPEE	6000	F/HR	MSEC	7.40000	MMHO

COMPANY	ARCO OIL AND GAS COMPANY		
WELL	"COLUMBIA COUNTY" #31-34-65		
FIELD	MIST GAS		
COUNTY	COLUMBIA	**STATE**	OREGON

SCHL.	**FR**	**2330.0 F**
SCHL.	**TD**	**2336.0 F**
DRLR.	**TD**	**2344.0 F**
Elev:	**KB**	**912.5 F**
	DF	**911.5 F**
	GL	**902.5 F**

Schlumberger

BOREHOLE COMPENSATED

SONIC LOG