Schlumberger

Cement Bond Log
Variable Density

COUNTY	Columbia
FIELD	Mist
LOCATION	303.79'S and 1768.59'E
WELL	Columbia County #23-22
COMPANY	Oregon Natural Gas

COMPANY Oregon Natural Gas

WELL Columbia County #23-22

FIELD Mist

COUNTY Columbia **STATE** Oregon

LOCATION 303.79'S and 1768.59'E
from West 1/4 corner

Other Services:
CBL-GR
PERF-EJ

API SERIAL NO.	SECT.	TWP.	RANGE
	22	6N	5W

Permanent Datum	Ground Level	**Elev.**	565.8 F	**Elev.: K.B.** 577.2 F
Log Measured From	Kelly Bushing	11.4 F	**above Perm. Datum**	**D.F.**
Drilling Measured From	Kelly Bushing			**G.L.** 565.8 F

Date	17-JAN-1996			
Run No.	ONE			
Depth Driller	1530.0 F			
Depth Logger (Schl.)	1530.0 F			
Btm. Log Interval	1523.0 F			
Top Log Interval	250.0 F			
Type Fluid in Hole	WATER			
Salinity NaCl				
Density	8.50 LB/G			
Fluid Level				
Max. Rec. Temp.				
Deviation				
Logger on Bottom	12:25 17-JAN-1996			
Equip. / **Location**	8305	Evanston WY		
Recorded By	Scott Pilch			
Witnessed By	Clayton Roth/Todd Thomas			
BOREHOLE RECORD				
Bit Size	7 7/8"			
Depth				
CASING & TUBING RECORD				
Size	5 1/2"			
Weight	15.5000 LB/F			
Casing Top-Driller				
Casing Top-Logger				
Casing Shoe-Driller	1530.0 F			
Casing-Logger	1530.0 F			

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

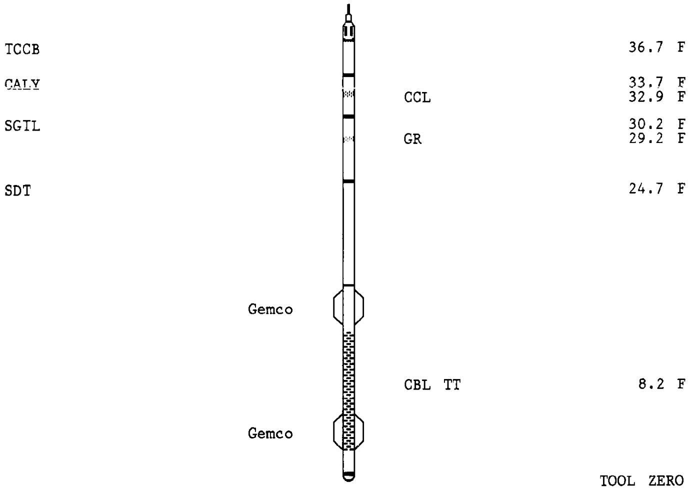
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, 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.	532864	
Logging Speed	3000.0 F/HR	
EQUIPMENT DATA		
Tool Number 1	SLS-WC 1412	
Tool Number 2	SDC-CB 17	
Tool Number 3	TCC-B 212	
Tool Number 4	CAL-Y 200	
Tool Number 5	SGC-SA 680	
Tool Number 6	TCM-AB 425	
Tool Number 7	STM-CB 528	
Tool Number 8		
Tool Number 9		
Tool Number 10		
Tool Number 11		
Tool Number 12		

REMARKS:

Correlated to SWS DIL run 16-December-1983.
COULD ONLY GET TO 1530 WITH THIS TOOL.

LOGGING TOOL STRING SKETCH



TOTAL TOOL STRING LENGTH IS 40.2 F.
TOTAL TOOL STRING WEIGHT IS 617. LB IN AIR.

Main Log

TENS(LBF)
5000.0 0.0

TT(US)
400.00 200.00

GR(GAPI)
0.0 150.00

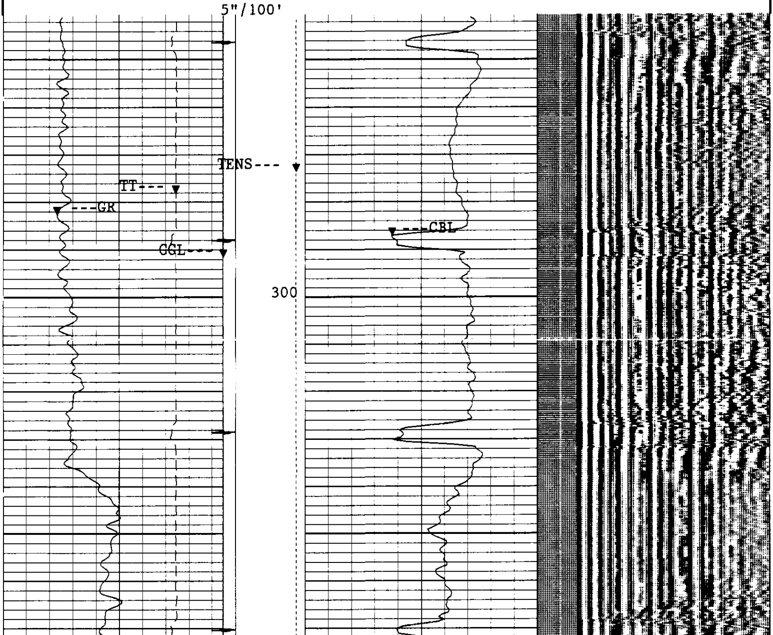
CCL
-19.00 1.0000

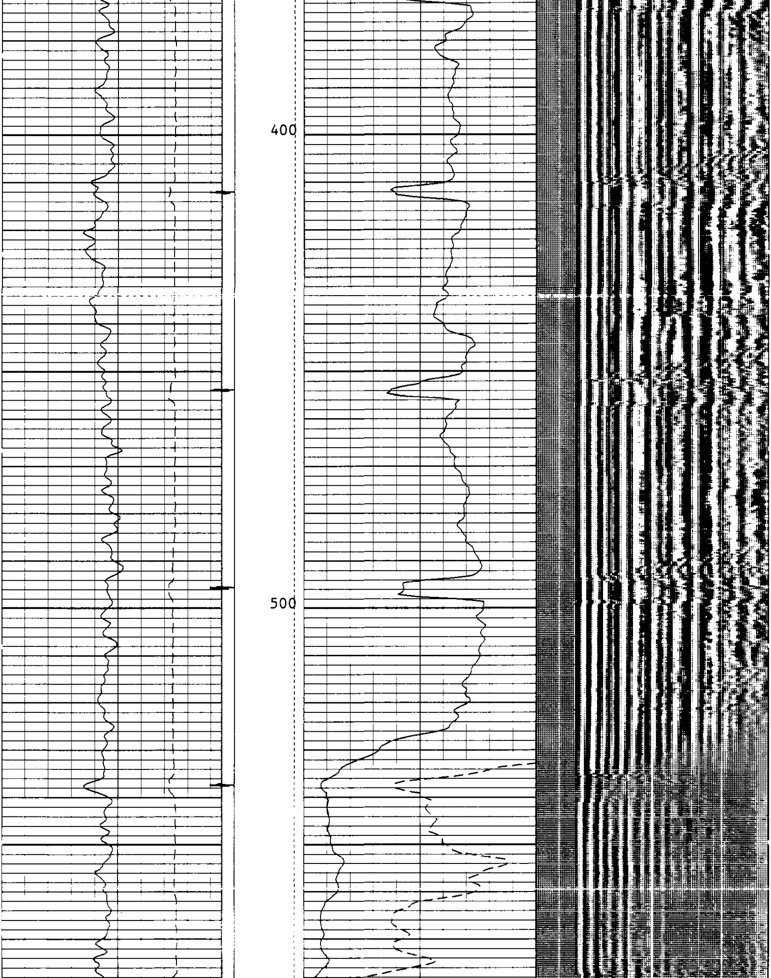
CBL(MV)
0.0 20.000

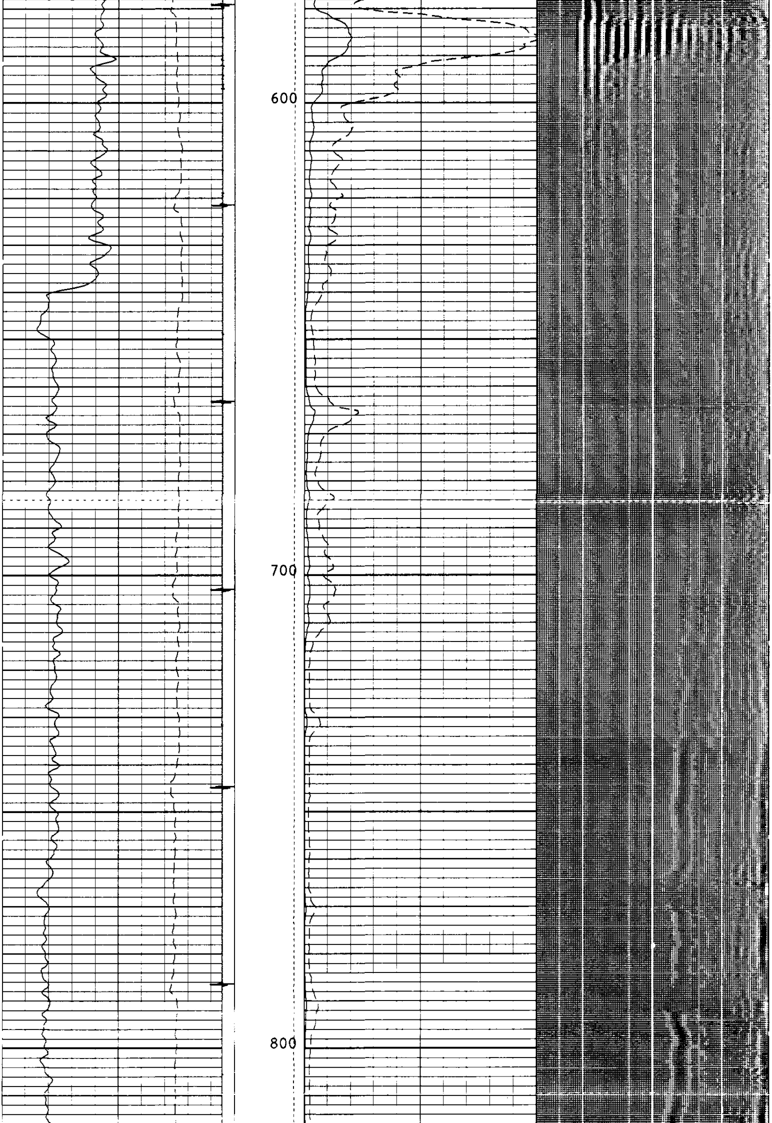
CBL(MV)
0.0 100.00

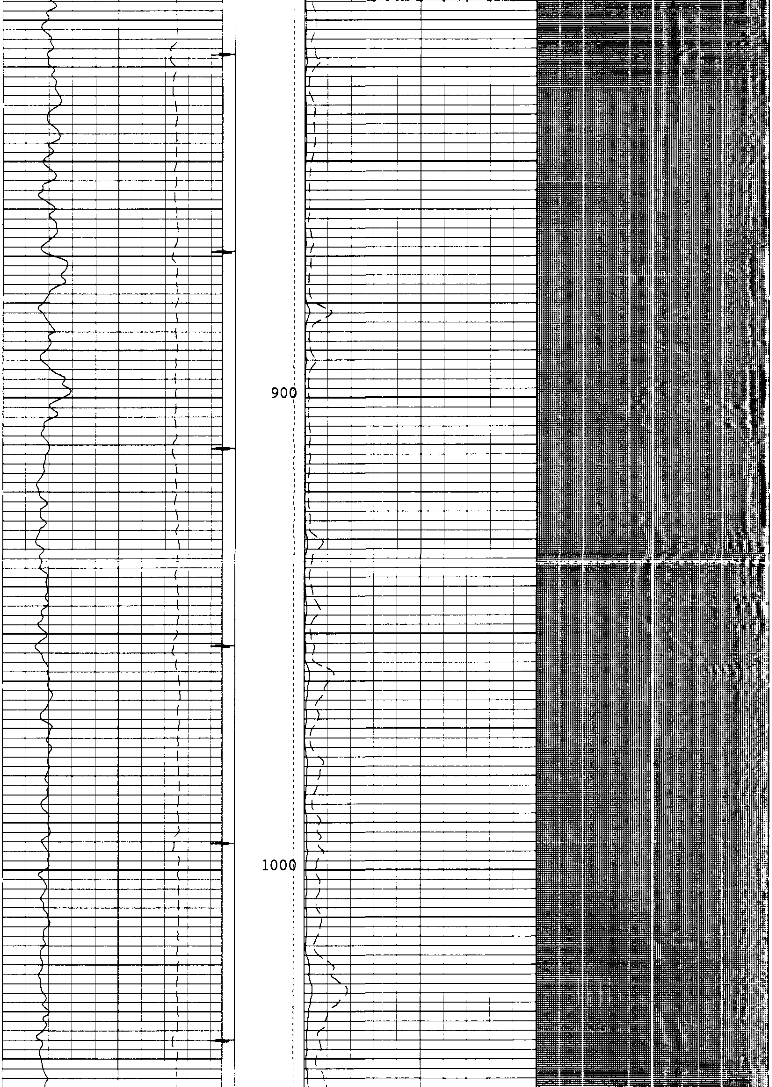
VDL(US)
200.00 1200.0

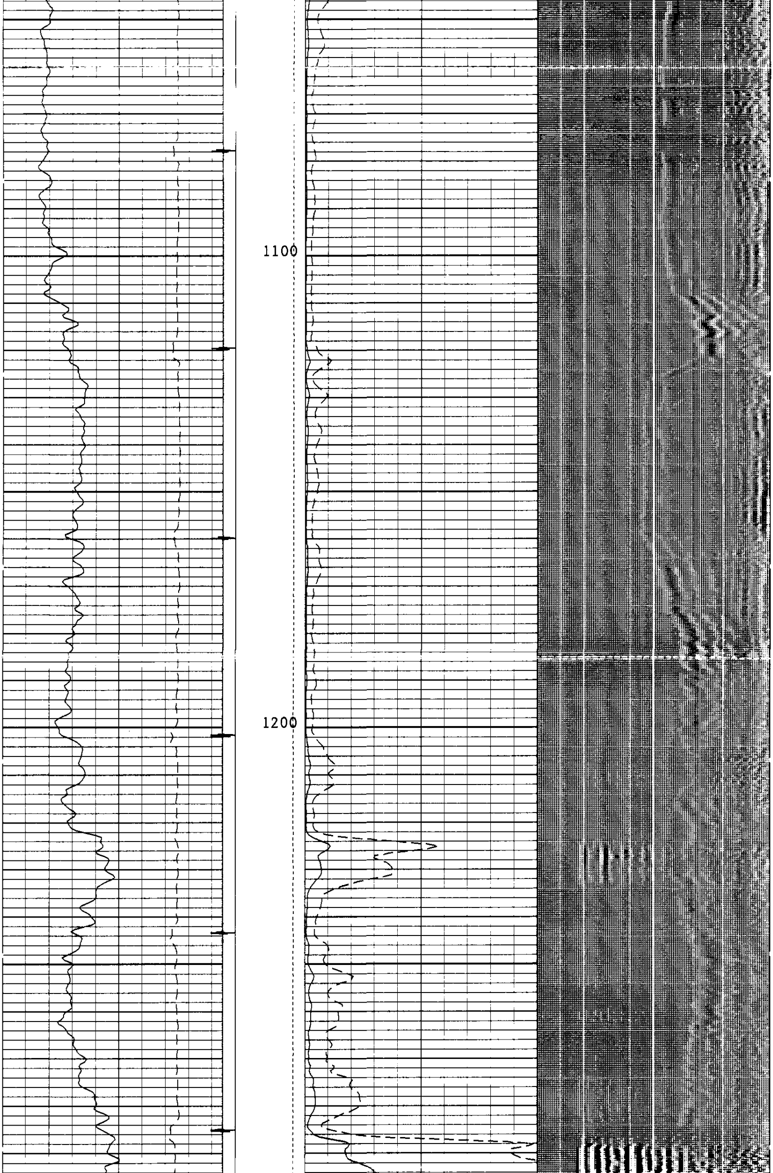
CP 44.2 FILE 10 17-JAN-1996 12:56 (UP)

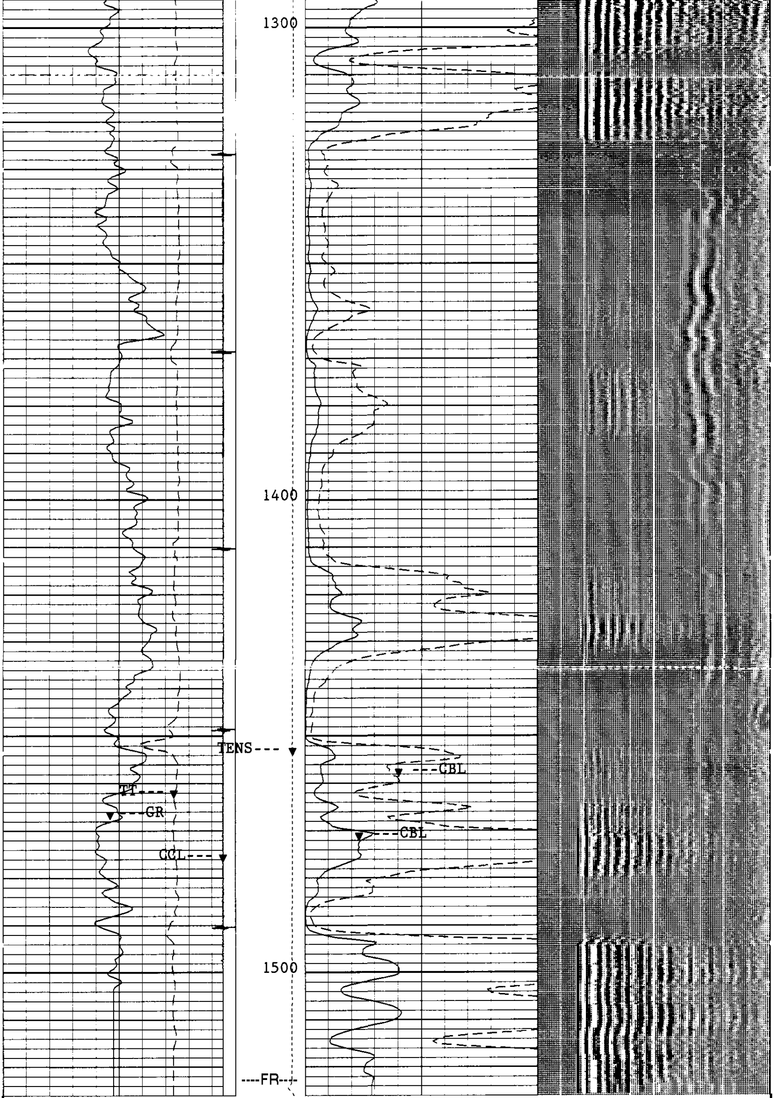












5"/100' --TD=1530--

CP 44.2 FILE 10 17-JAN-1996 12:24 (UP)

Curve	Left scale	Right scale
TENS(LBF)	5000.0	0.0
TT(US)	400 00	200 00
GR(GAPI)	0.0	150.00
CCL	-19.00	1.0000
CB_(MV)	0.0	20 000
CBL(MV)	0.0	100.00
VDL(US)	200.00	1200.0

SENSOR MEASURE POINT TO TOOL ZERO

SGTL	29.2	FEET	SDT	8.2	FEET
CALY	32.9	FEET	DTT	6.2	FEET

PARAMETERS

PARAMETER	VALUE	UNIT
SMB - Sonic Memory Board	ALLO	
VDLR - Defn not found	2IN	
VDLO - Defn not found	D3	
NCJT - NGT Calibration Jig Type	GSRY	
CSTR - Compressive Strength of Cement	1500.00	PSIA
CWEI - Casing Weight	15.5000	LB/F
TOCA - TO Correction Status	DISA	
MODE - Firing Mode, or Computation Mode	CBL	
DETE - Detection	E1	
MGAI - Maximum Gain	4000.00	
AGC - Automatic Gain Control Status	ALLO	
GAI - Manual Gain	40.0000	
SGAD - Sliding Gate Status	ALLO	
SGW - Sliding Gate Width	80	US
NMSG - Near Minimum Sliding Gate	240	US
AMSG - Auxiliary Minimum Sliding Gate	180	US
CBLG - CBL Gate Width	45	US
SLC - Sonic Logging Cartridge	C	
SLS - Sonic Logging Sonde	WA	
SPLE - Spacer Length	0	IN
RATE - Firing Rate	15	HZ
SOAD - Sonic Outputs Status	AUTO	
DDEL - Digitizing Delay	0	US
DSIN - Digitizer Sample Interval	10	US
DWCO - Digitizer Word Count	500	
RMOD - Receiver Mode	B	
WFM - Waveform Mode	VDL	
WMOD - Waveform Firing Mode	BHC	
WAGC - Waveform AGC Allow/Disallow	ALLO	
WGDT - Waveform Gain Delta-T	240.000	US/F
WGAI - Waveform Manual Gain	20.0000	
VDLM - VDL Firing Mode	UTFR	
VDLG - VDL Manual Gain	40.0000	
FCF - CBL Fluid Compensation Factor	1.00000	
BS - Bit Size	7.87500	IN
BHS - BoreHole Status (Open or Cased)	CASE	
CSIZ - Casing Size	5.50000	IN

Repeat Section

TENS(LBF) 5000.0 0.0

TT(US) 400.00 200.00

GR(GAPI) 0.0 150.00

CCL -19.00 1.0000

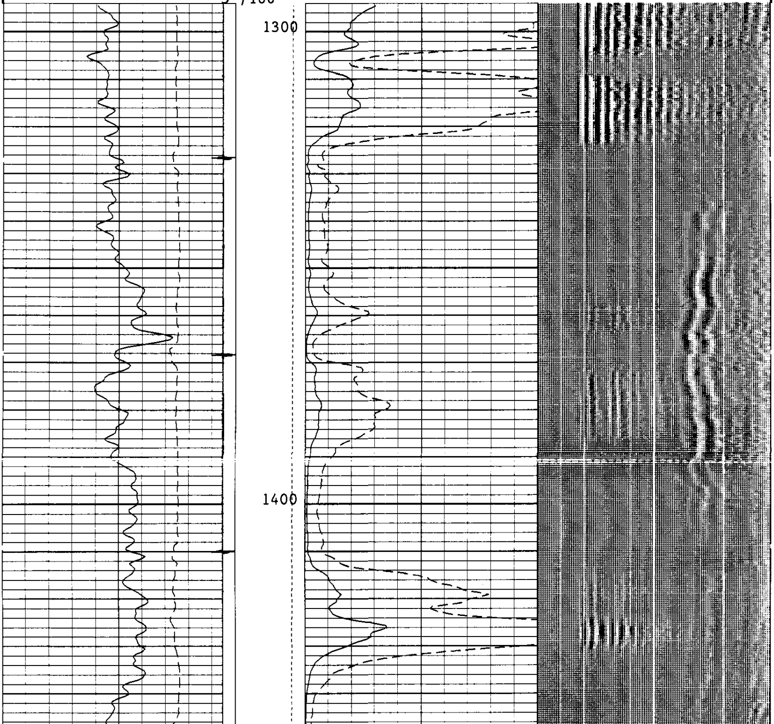
CBL(MV) 0.0 20.000

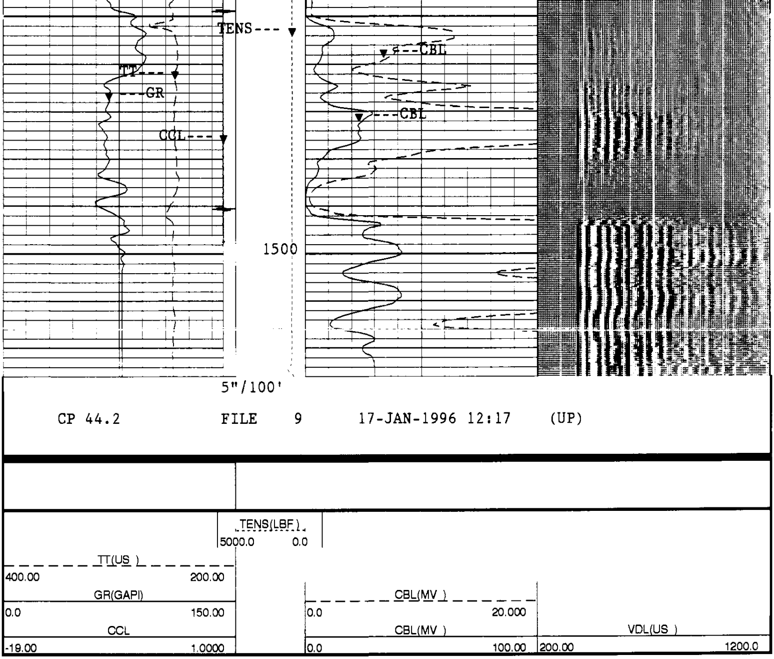
CBL(MV) 0.0 100.00

VDL(US) 200.00 1200.0

CP 44.2 FILE 9 17-JAN-1996 12:23 (UP)

5"/100'





5"/100'

CP 44.2 FILE 9 17-JAN-1996 12:17 (UP)

COMPANY Oregon Natural Gas

WELL Columbia County #23-22

FIELD Mist

COUNTY Columbia **STATE** Oregon

SCHL.	**FR**	1523.0 F
SCHL.	**TD**	1530.0 F
DRLR.	**TD**	1530.0 F
Elev:	**KB**	577.2 F
	DF	
	GL	565.8 F

Schlumberger

Cement Bond Log
Variable Density