

LOGGING DATE: 03-JUN-2000	LOGGING TIME: 08:23:00	LOGGING USER: JLN	LOGGING INSTRUMENT: BHC SONIC GR/SP
LOGGING DEPTH: 2317.1	LOGGING INTERVAL: 20.00	LOGGING RATE: 115.8	LOGGING SCALE: 2" = 100'
LOGGING START: 2317.1	LOGGING STOP: 2317.1	LOGGING TOTAL: 0.00	LOGGING STATUS: OK
LOGGING COMMENTS: 2317.1	LOGGING COMMENTS: 2317.1	LOGGING COMMENTS: 2317.1	LOGGING COMMENTS: 2317.1

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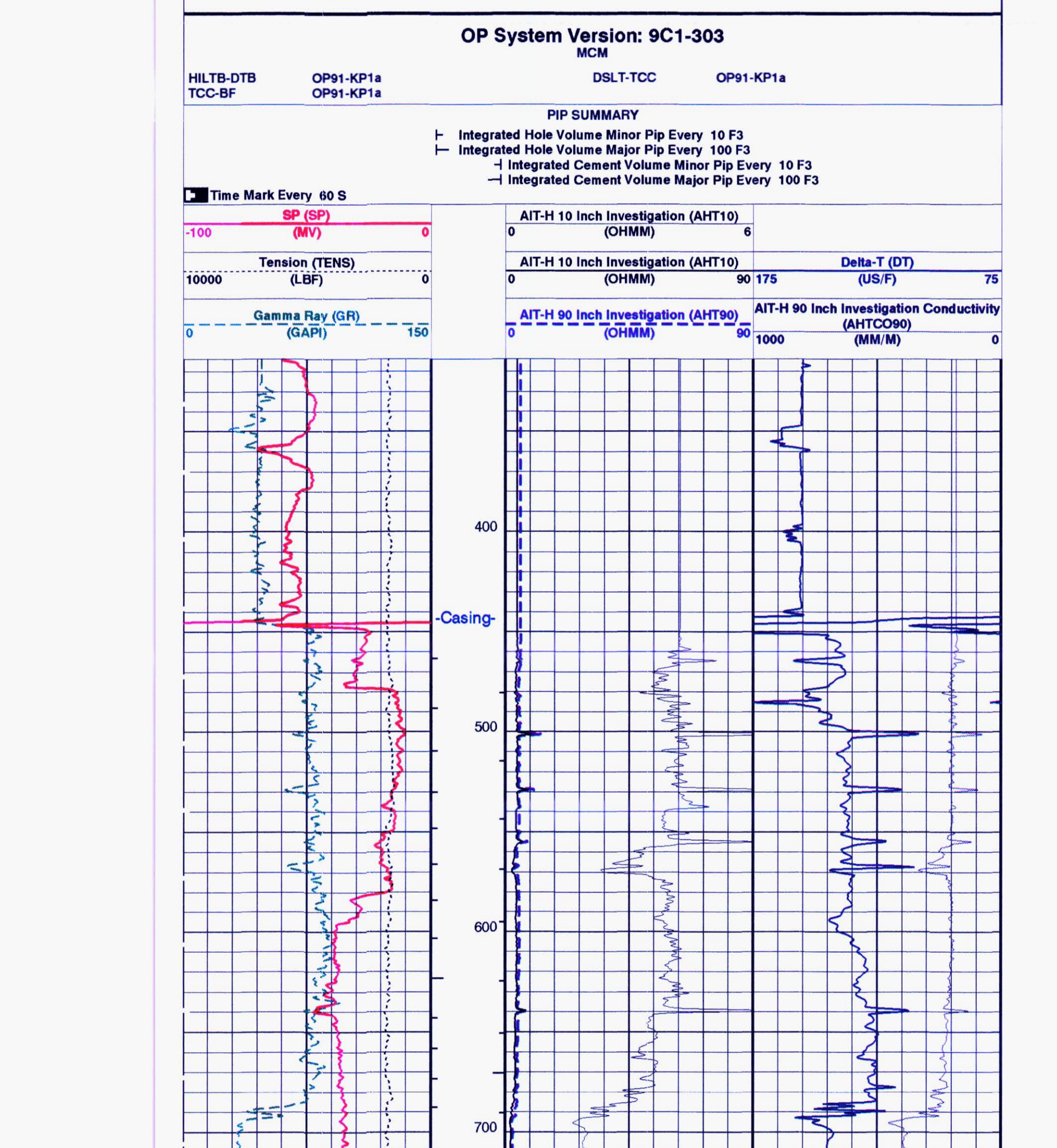
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OTHER SERVICES1:	OTHER SERVICES2:
OS1: HMS GR	OS1:
OS2:	OS2:
OS3:	OS3:
OS4:	OS4:
OS5:	OS5:

REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
CASING 8.5/8" 32 LB/FT	

SERVICE ORDER #	9C1-303	SERVICE ORDER #	
PROGRAM VERSION:	0 R	PROGRAM VERSION:	
LOGGED INTERVAL:	START	LOGGED INTERVAL:	START
	STOP		STOP

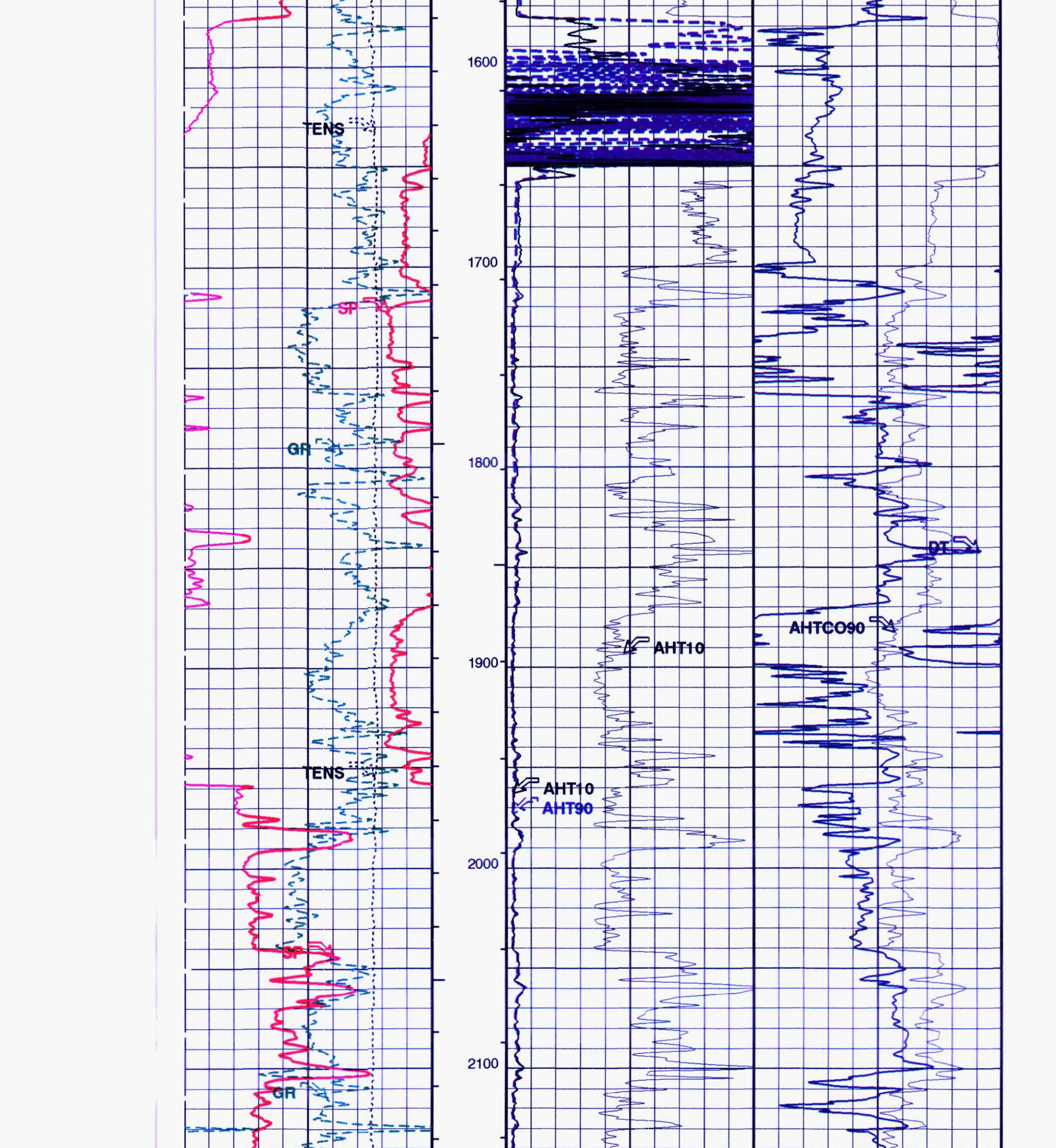
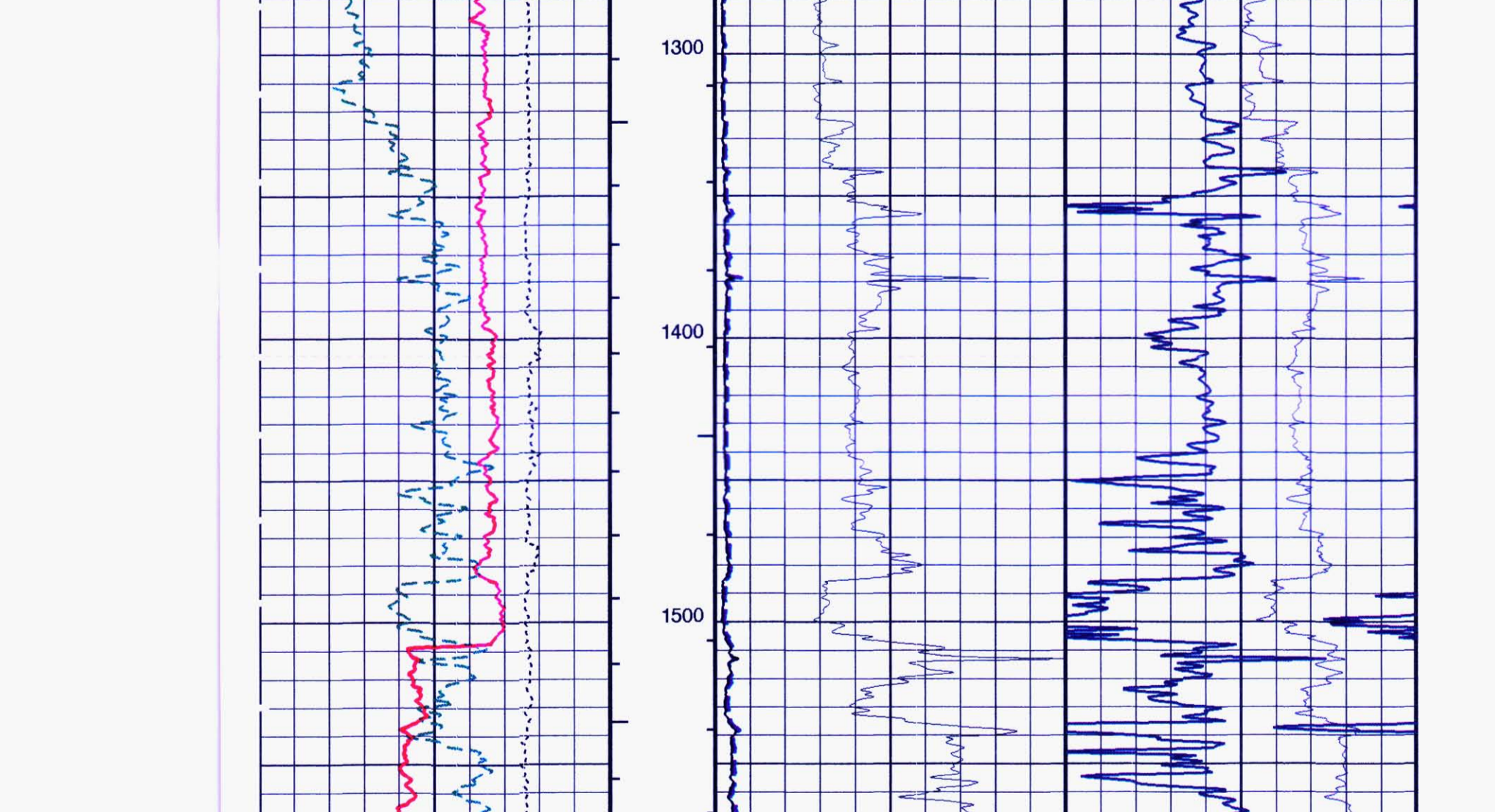
EQUIPMENT DESCRIPTION	
RUN 1	RUN 2
SURFACE EQUIPMENT	
WTM (CTS)-A	
GSR-LUY	
NCR-B	
CNS-AB	
NCS-VB	



Input DLIS Files	Output DLIS Files
DEFAULT HILTB.011 FN:1 PRODUCER 03-Jun-2000 20:59 2328.0 FT 305.0 FT	DEFAULT HILTB.013 FN:10 PRODUCER 03-Jun-2000 21:06 2336.0 FT 313.5 FT

Integrated Hole/Cement Volume Summary	
Hole Volume = 787.74 F3	Cement Volume = 478.64 F3 (assuming 5.50 IN casing O.D.)
Computed from 2317.0 FT to 444.0 FT using data channel(s) HCAL	

OP System Version: 9C1-303	
HILTB-DTB	OP91-KP1a
TCC-BF	OP91-KP1a



Parameters		
DLIS Name	Description	Value
ABHM	Array Induction Borehole Correction Mode	2 Compute Standoff
ABHV	Array Induction Borehole Correction Code Version Number	870
ABLM	Array Induction Basic Logs Mode	6 One_Two_and_Four
ABLD	Array Induction Basic Logs Code Version Number	973
ABPO	Array Induction Basic Logs Processing Option	Standard_Processing
ABCE	Array Induction Casing Detection Enable	Yes
ABCN	Array Induction Tool Centering Flag (in Borehole)	Eccentered
ABCD	Array Induction Casing Shoe Estimated Depth	-50000
ABFV	Array Induction Response Set Version for Four R Resolution	30.66.23.11
ABHR	Array Induction Mud Resistivity Factor	1.5
ABHRV	Array Induction Response Set Version for One R Resolution	30.66.23.11
ABRV	Array Induction Radial Profiling Code Version Number	700
ABRVP	Array Induction Response Set Version for Four R Resolution	30.66.23.11
ABSTA	Array Induction Tool Standoff	1.5
ABTRV	Array Induction Response Set Version for Two R Resolution	30.66.23.11
BHT	Bottom Hole Temperature (used in calculations)	212
BS	Bit Size	7.875
DFD	Drilling Fluid Density	10.0
DO	Depth Offset for Logical Unit 1	8.0
DORL	Depth Offset for Logical Unit 2	8.0
DTM	Delta-T Computation Mode	FULL
FEX	Form Factor Exponent	1
FNM	Form Factor Numerator	1
GCSE	Generalized Caliper Selection	HCAL
GRD	Generalized Angular Deviation of Borehole from Normal	0
GRDF	Geothermal Gradient	0.01
GRSE	Generalized Mud Resistivity Selection	AITH_REJUST
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE
HSCM	HLL T Speed Correction Mode	NO
HSTI	HLL T Uses HLLT Acceleration	NO
MODE	Sonic HLLT Temperature	99.00
MST	Mud Sample Temperature	99.00
PP	Playback Processing	NORMAL
SHT	Surface Hole Temperature	0
SPW	SP Next Value	0
TD	Total Depth	2317

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COMPANY: NORTHWEST NATURAL GAS	BOTTOM LOG INTERVAL: 2309 ft
WELL: OM 43A-22-65	SCHLUMBERGER DEPTH: 2317 ft
FIELD: MIST	DEPTH DRILLER: 2317 ft
COUNTY: COLUMBIA	KELLY BUSHNIG: 872.23 ft
STATE: OREGON	DRILL FLOOR: 871.23 ft
	GROUND LEVEL: 862.23 ft