



NABORS

**COMPLETION
& PRODUCTION
SERVICES CO.**

MICRO LOG

Company HUTCHINSON OIL COMPANY		Company HUTCHINSON OIL COMPANY	
Well OSBORNE #2 B		Well OSBORNE #2 B	
Field SANDAGO WEST		Field SANDAGO WEST	
County STAFFORD		County STAFFORD	
State KANSAS		State KANSAS	
Location: API # : 15-185-23799-0000		Other Services CDL/CNL DIL/SON	
Permanent Datum Log Measured From Drilling Measured From		2293' FSL & 894' FEL E/2 - NW - NE - SE SEC 12 TWP 21S RGE 12W GROUND LEVEL Elevation 1812 KELLY BUSHING 11' A.G.L. KELLY BUSHING	
Date	4/12/13	Elevation	K.B. 1823 D.F. 1821 G.L. 1812
Run Number	TWO		
Depth Driller	3520		
Depth Logger	3522		
Bottom Logged Interval	3504		
Top Log Interval	2700		
Casing Driller	8 5/8" @ 604'		
Casing Logger	603		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 5000 PPM	
Density / Viscosity	9.1/5.1		
pH / Fluid Loss	10.0/8.2		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.80 @ 65F		
Rmt @ Meas. Temp	.60 @ 65F		
Rmc @ Meas. Temp	.96 @ 65F		
Source of Rmt / Rmc	MEASUREMENT		
Rm @ BHT	.46 @ 112F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	112F		
Equipment Number	4010		
Location	HAYS, KANSAS		
Recorded By	JASON CAPPELLUCCI		
Witnessed By	JEFFERY BURK		

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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 interpretation, 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 set out in our current Price Schedule.

Comments

THANK YOU FOR USING NABORS, HAYS, KS. (785) 628-6395
DIRECTIONS:
ELLINWOOD KS. - S. ON MAIN STREET TO CURVE WEST - 1/2 W. TO RD 100
S. TO RD. 190TH - 1 E. - 1/4 N. - W. INTO

Database File:

010870ddn.db

Dataset Pathname:

pass6.1

Presentation Format:

_micro

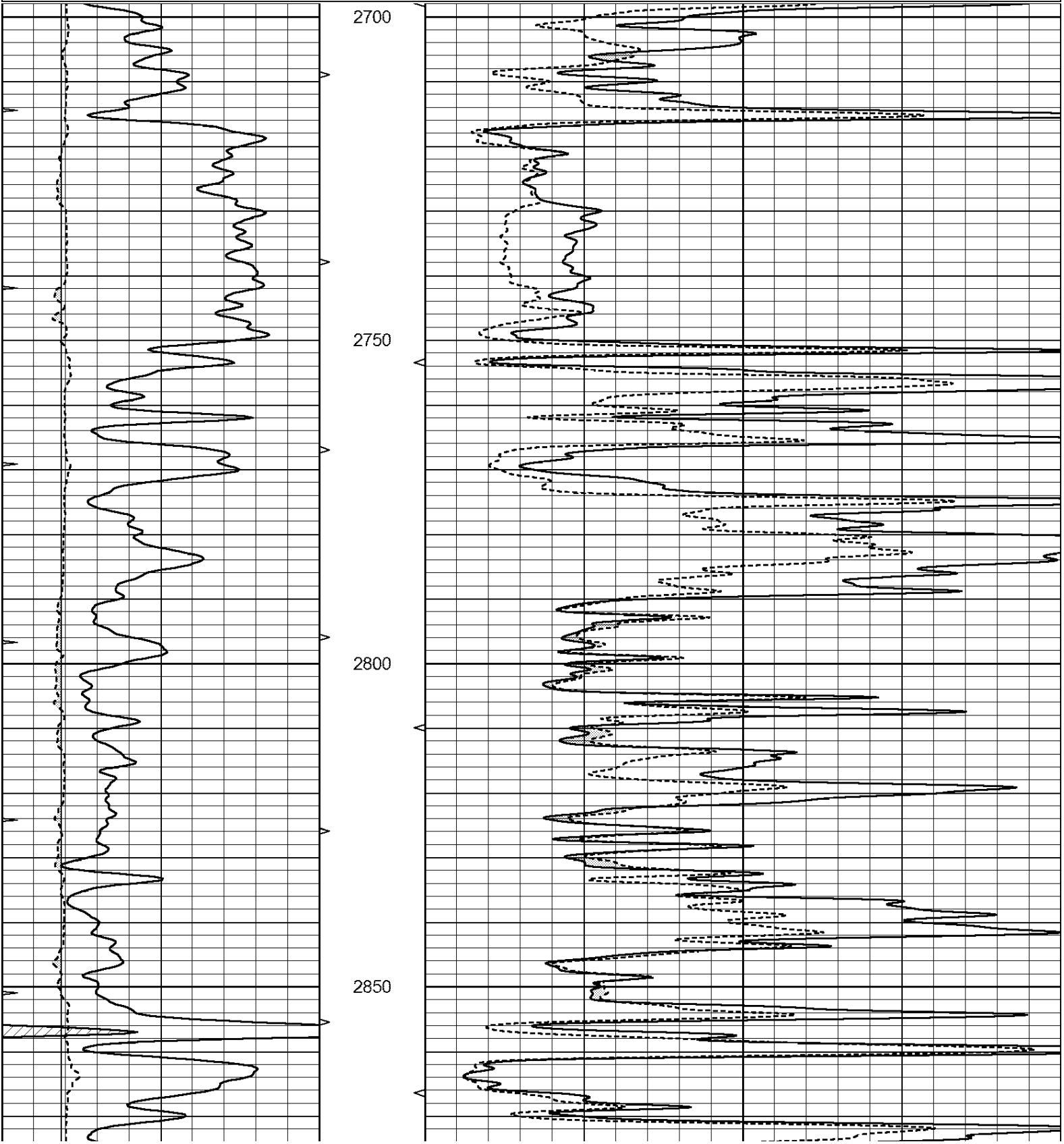
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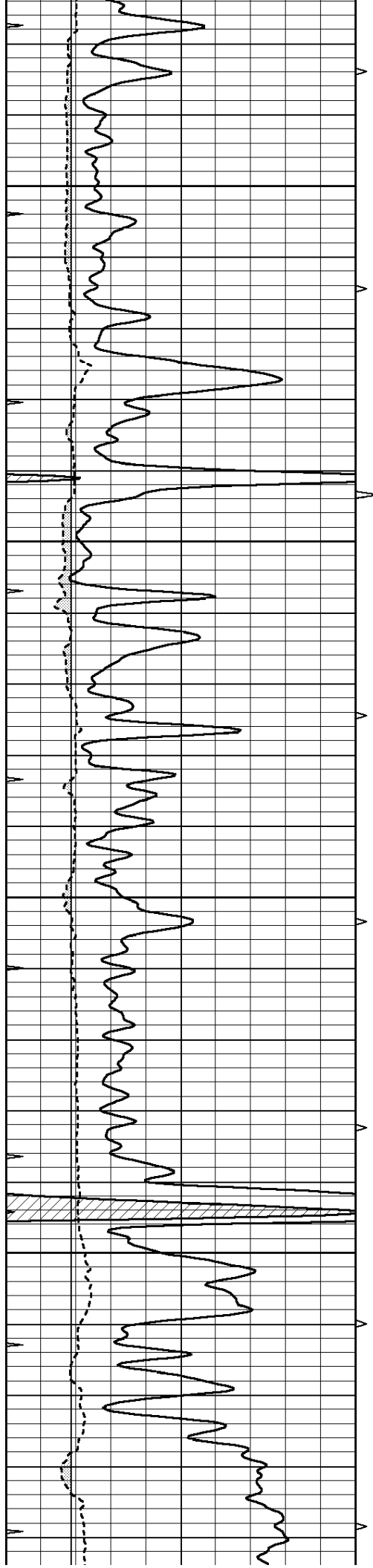
Fri Apr 12 09:45:42 2013

Charted by:

Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	ABHV	0	MEL1.5 (Ohm-m)	40
6	CALIPER (in)	16	10 (ft3)	0 0	MEL2.0 (Ohm-m)	40
0	MINMK	20	TBHV			
			0 (ft3)	10		



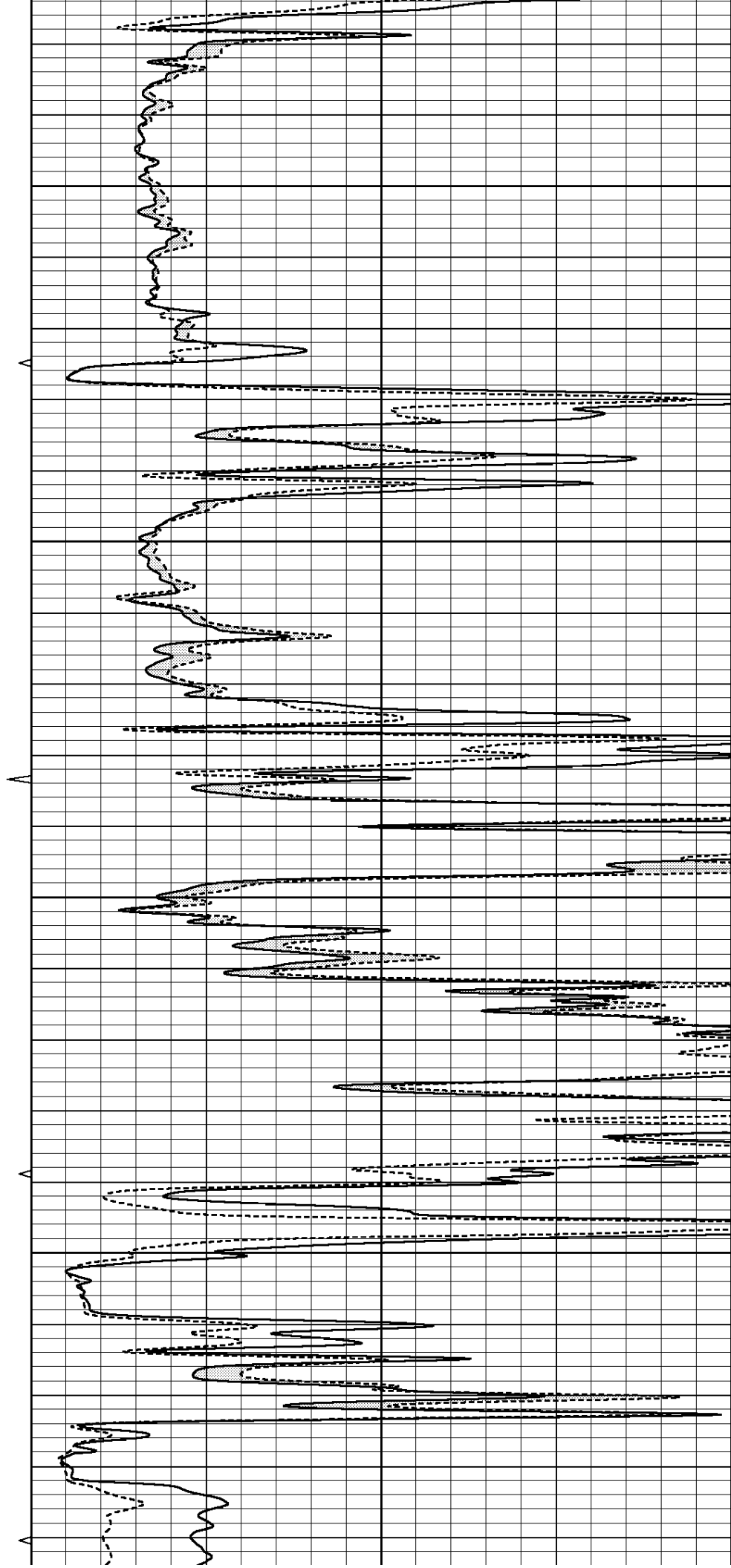


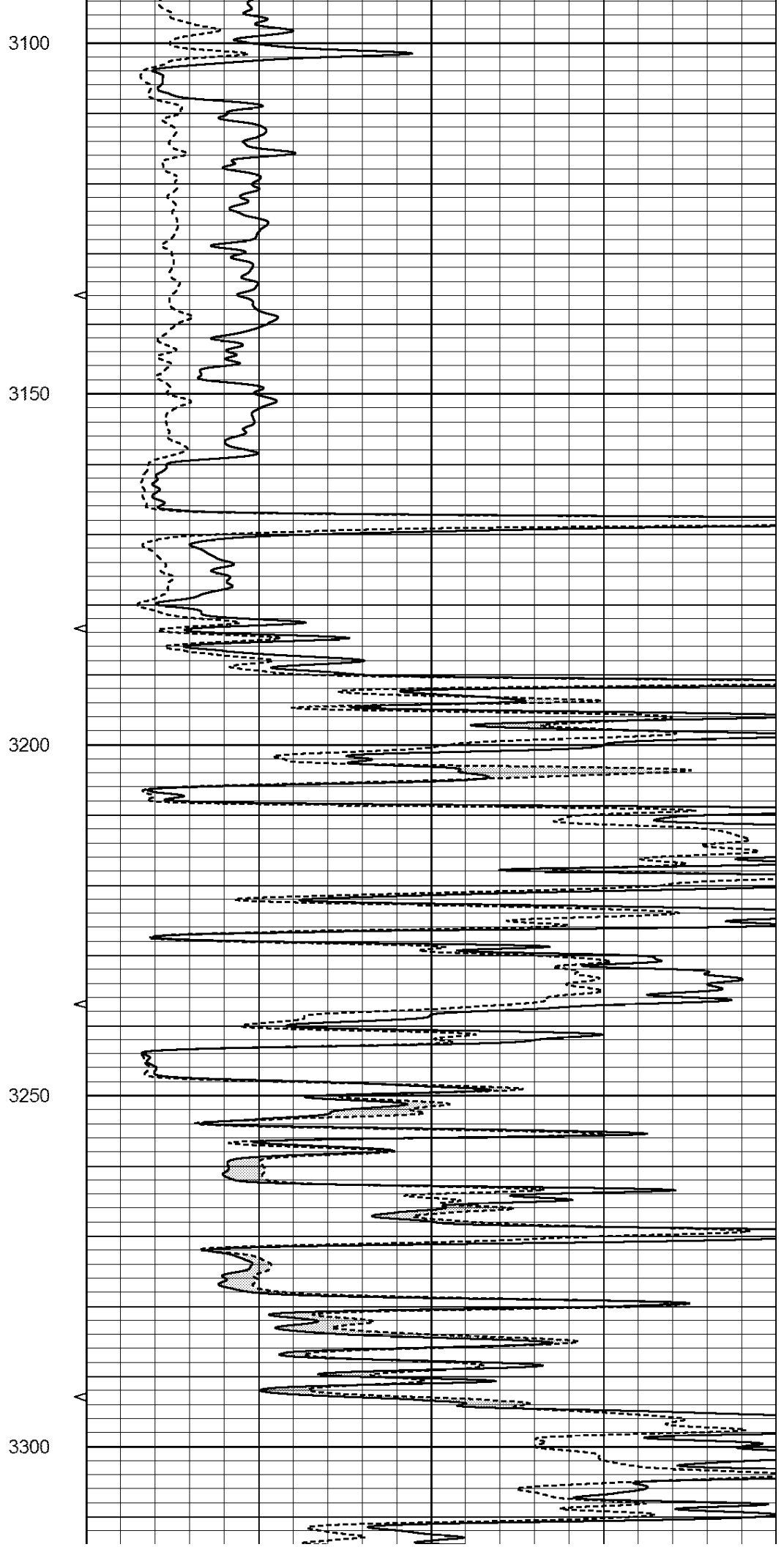
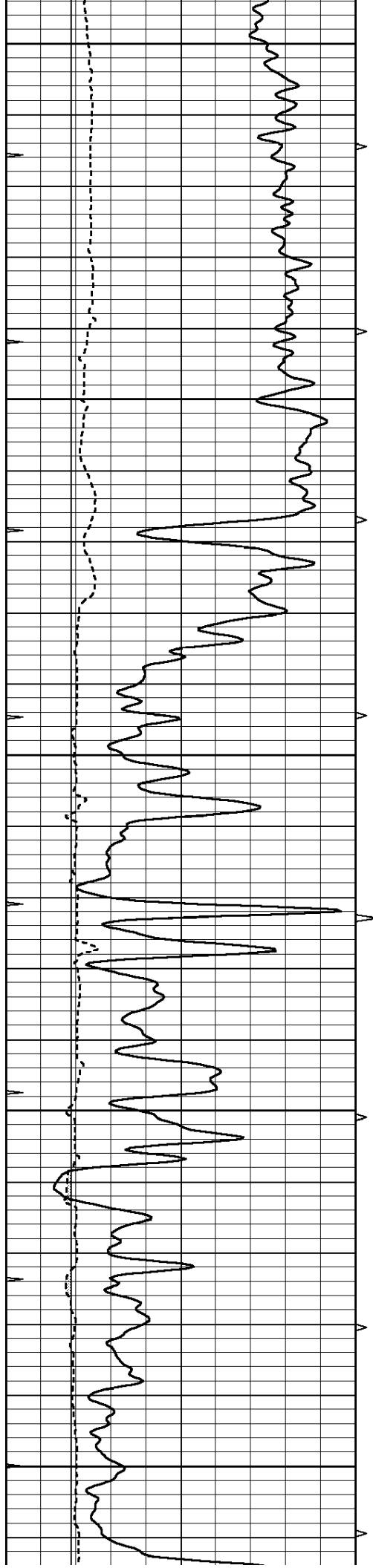
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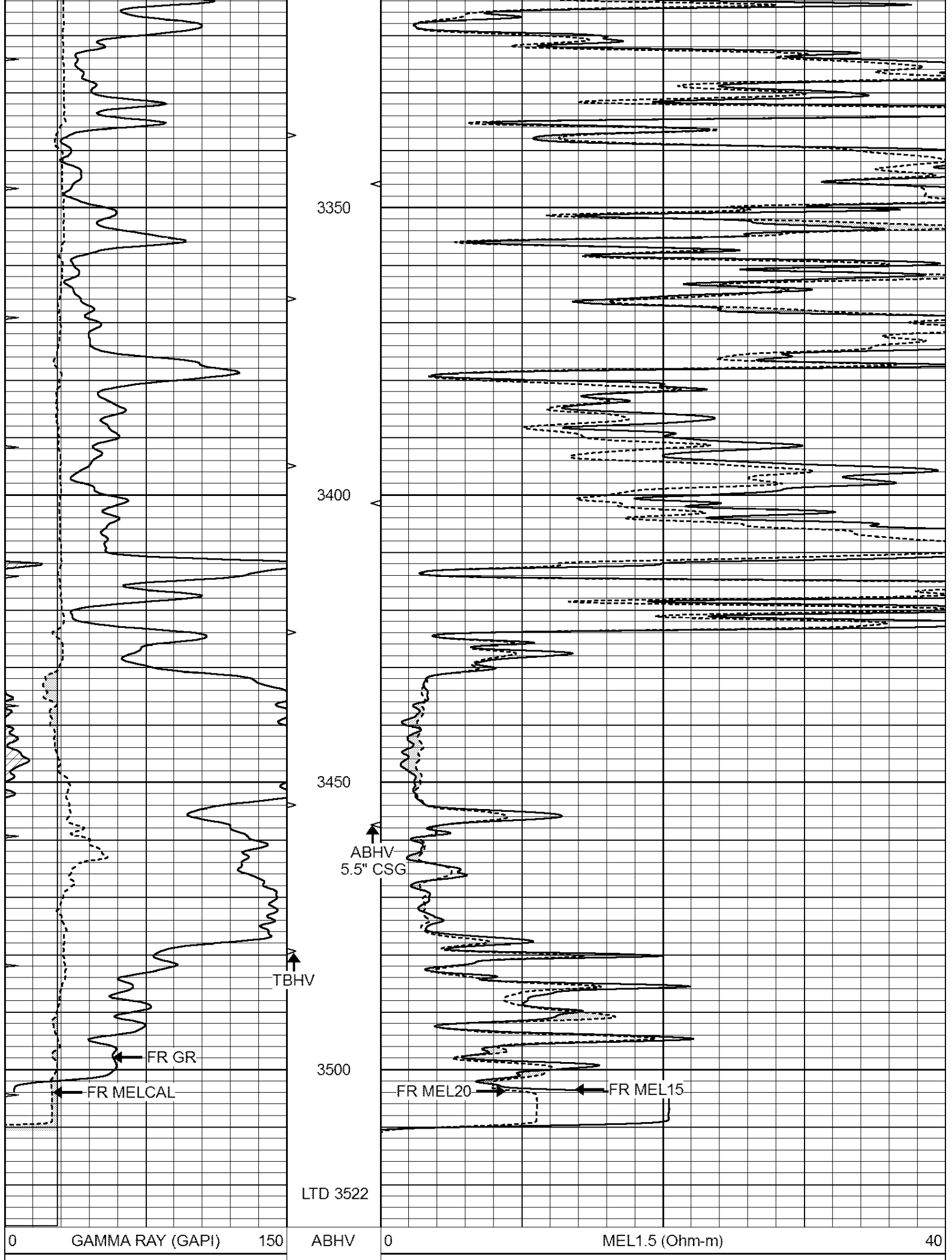
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3000

3050







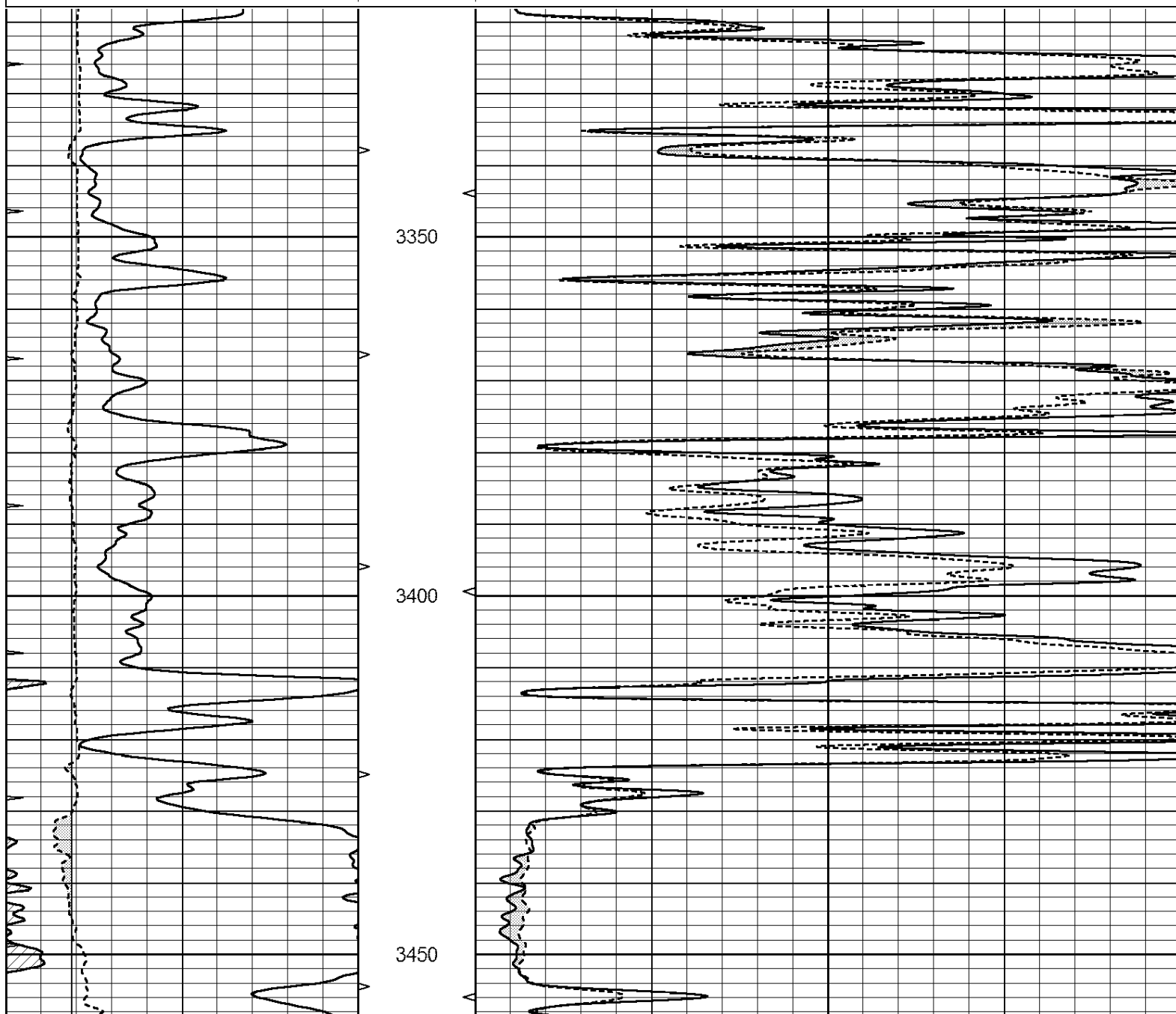
6	CALIPER (in)	16	10 (ft3)	0	0	MEL2.0 (Ohm-m)	40
0	MINMK	20	TBHV				
			0 (ft3)	10			

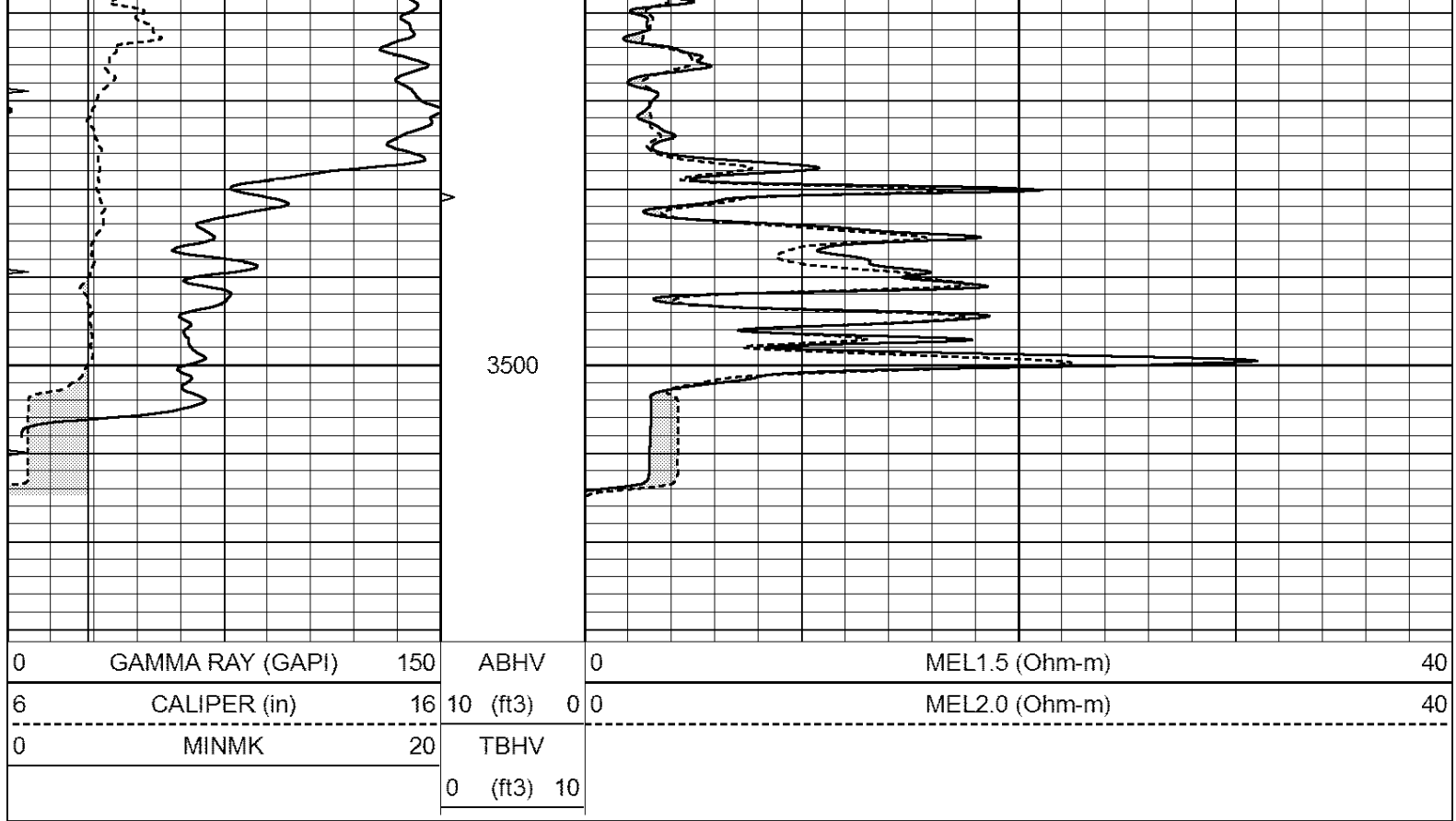

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REPEAT SECTION

Database File: 010870ddn.db
 Dataset Pathname: pass5.1
 Presentation Format: _micro
 Dataset Creation: Fri Apr 12 09:34:08 2013 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	ABHV	0	MEL1.5 (Ohm-m)	40
6	CALIPER (in)	16	10 (ft3)	0	MEL2.0 (Ohm-m)	40
0	MINMK	20	TBHV			
			0 (ft3)	10		





Calibration Report	
Database File:	010870ddn.db
Dataset Pathname:	pass5.1
Dataset Creation:	Fri Apr 12 09:34:08 2013 by Calc Open-Cased 090629

MICRO Calibration Report			
Serial Number:		MICRO6	
Tool Model:		PROBE	
Performed:		Tue Jan 15 17:57:23 2013	
Caliper Calibration:		Gain=5.542	Offset=-1.120
References	Low Cal	High Cal	
	8.000	14.000	
Readings	1.431	2.513	
1.5" Calibration:		Gain=45.075	Offset=-0.700
References	Low Cal	High Cal	
	0.000	20.000	
Readings	0.004	1.196	
2" Calibration:		Gain=41.041	Offset=0.000
References	Low Cal	High Cal	
	0.000	20.000	
Readings	0.006	0.913	

Gamma Ray Calibration Report			
Serial Number:		#8	
Tool Model:		OPEN	
Performed:		Mon Jun 13 16:56:43 2011	
Calibrator Value:		150.0	GAPI
Background Reading:		0.0	cps

Calibrator Reading:	175.0	cps
Sensitivity:	0.8371	GAPI/cps