



**SUPERIOR
Hays,
Kansas**

**RADIATION
GUARD LOG**

Company	CRAWFORD OIL & GAS CO. LLC		
Well	CRAWFORD BROTHERS #1-24		
Field	WILDCAT		
County	NORTON	State	KANSAS
Location:	API # : 15-137-20513-00-00		Other Services
2621' FSL & 2288' FWL NW - NE - NE - SW		MEL	
SEC 24 TWP 4S RGE 21W		Elevation	
Permanent Datum	GROUND LEVEL	Elevation	2160
Log Measured From	KELLY BUSHING 5' A.G.L.	D.F.	2163
Drilling Measured From	KELLY BUSHING	G.L.	2160
Date	3/2/10		
Run Number	CNE		
Depth Driller	3727		
Depth Logger	3728		
Bottom Logged Interval	3727		
Top Log Interval	0		
Casing Driller	8 5/8" @ 219		
Casing Logger	218		
Bit Size	7 7/8		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES	3,900 PPM
Density / Viscosity	9.2/52		
pH / Fluid Loss	11.0/6.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	0.95 @ 78F		
Rmf @ Meas. Temp	0.71 @ 78F		
Rmc @ Meas. Temp	1.14 @ 78F		
Source of Rmf / Rmc	MEASURED		
Rm @ BHT	0.65 @ 114F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	114F		
Equipment Number	680		
Location	HAYS, KS.		
Recorded By	JEFF GRONEWEG		
Witnessed By	LARRY FRIEND		

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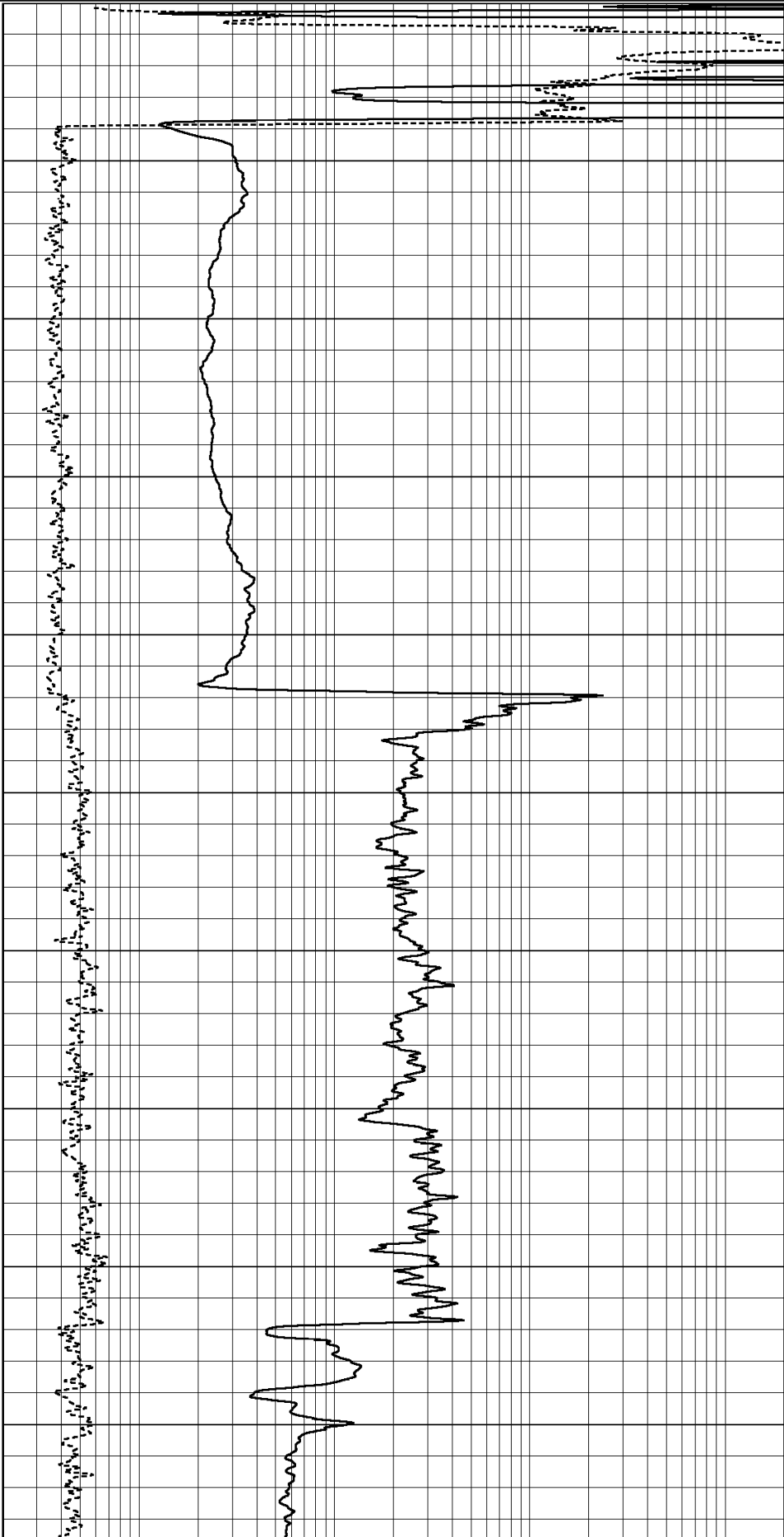
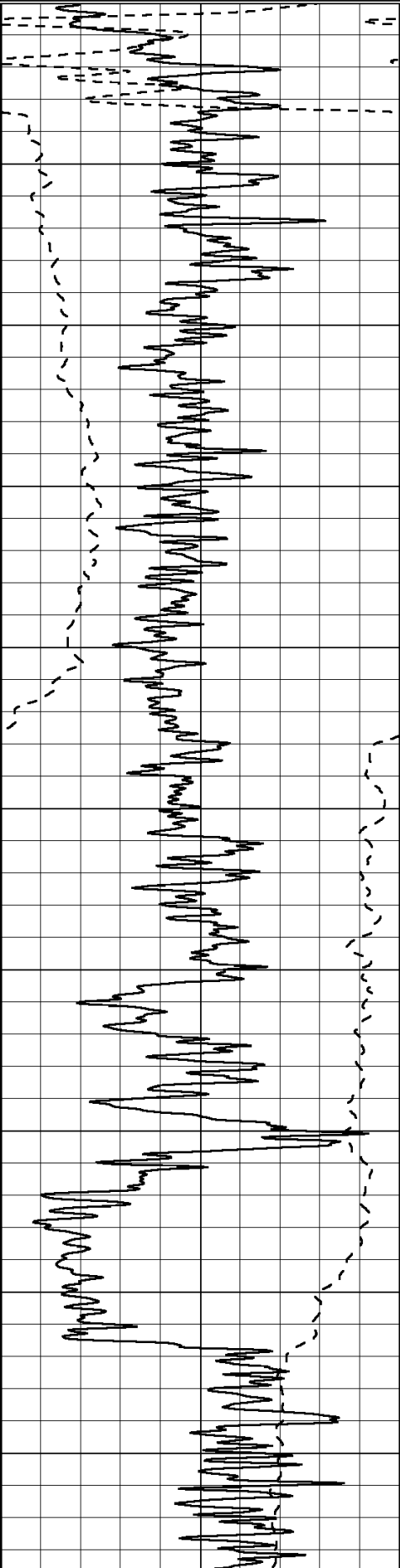
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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.

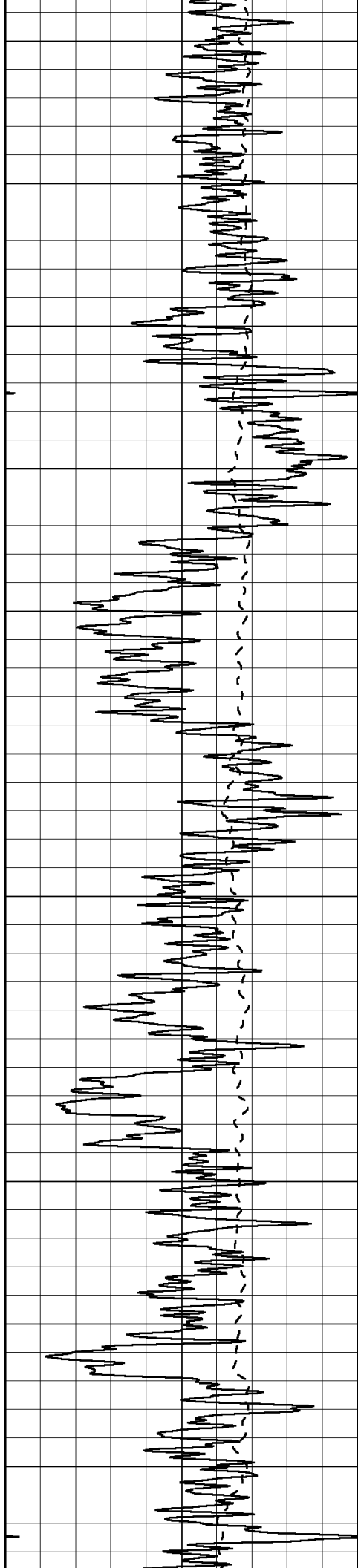
Comments

THANK YOU FOR USING SUPERIOR WELL SERVICE (785) 628-6395
DIRECTIONS
LOGAN, KS - 3 MILES WEST TO RD 1600 - 1 MILE NORTH - 1/2 MILE WEST
NORTH INTO

Database File: 004867rag.db
Dataset Pathname: pass3.2
Presentation Format: rag2
Dataset Creation: Tue Mar 02 14:05:59 2010 by Calc Open-Cased 090629

0	GAMMA RAY (GAPI)	150	ABHV (ft3)	0.2	GUARD (Ohm-m)	2000
-100	SP (mV)	100		0	NEUTRON (NAPI)	1000
			TBHV (ft3)			





500

550

600

650

700

750

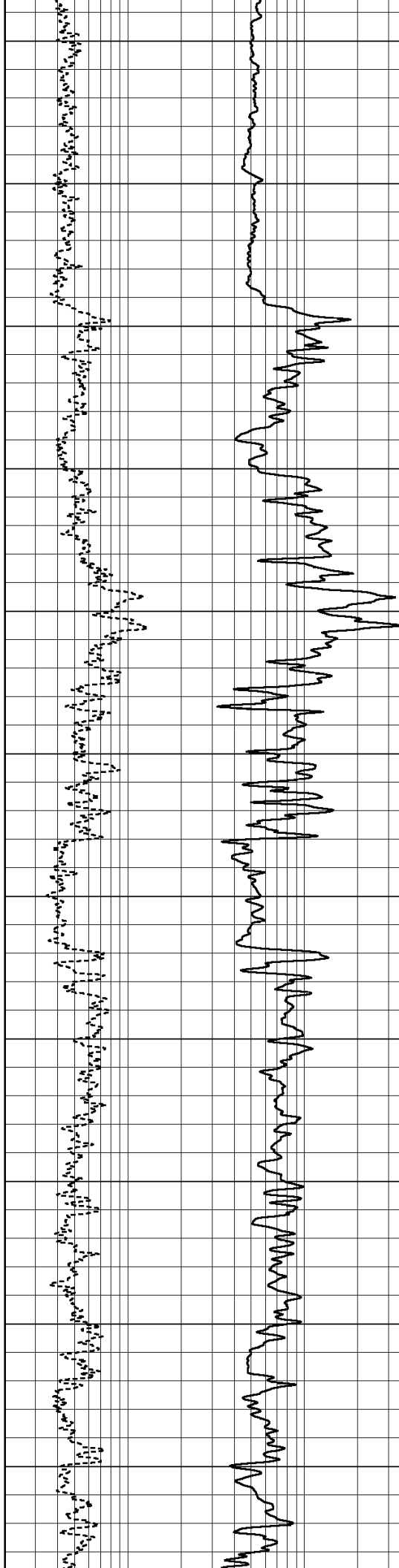
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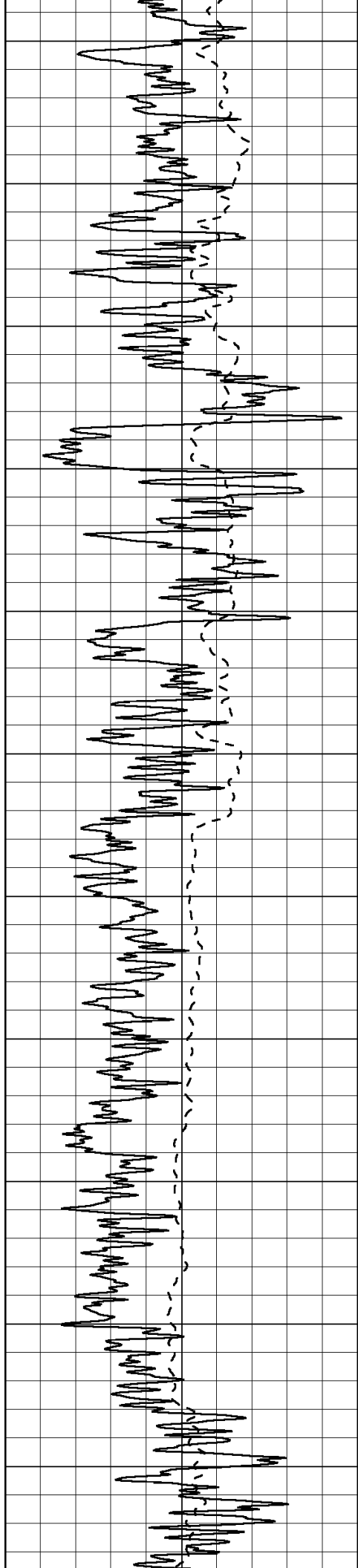
850

900

950

1000





1050

1100

1150

1200

1250

1300

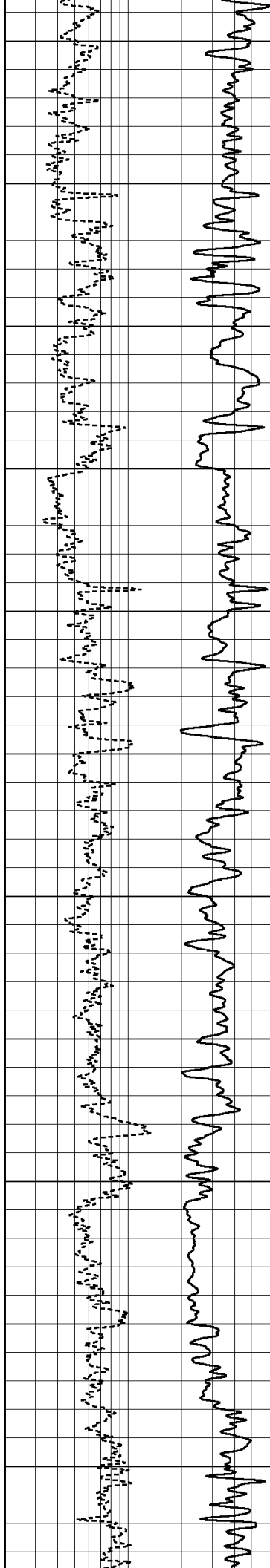
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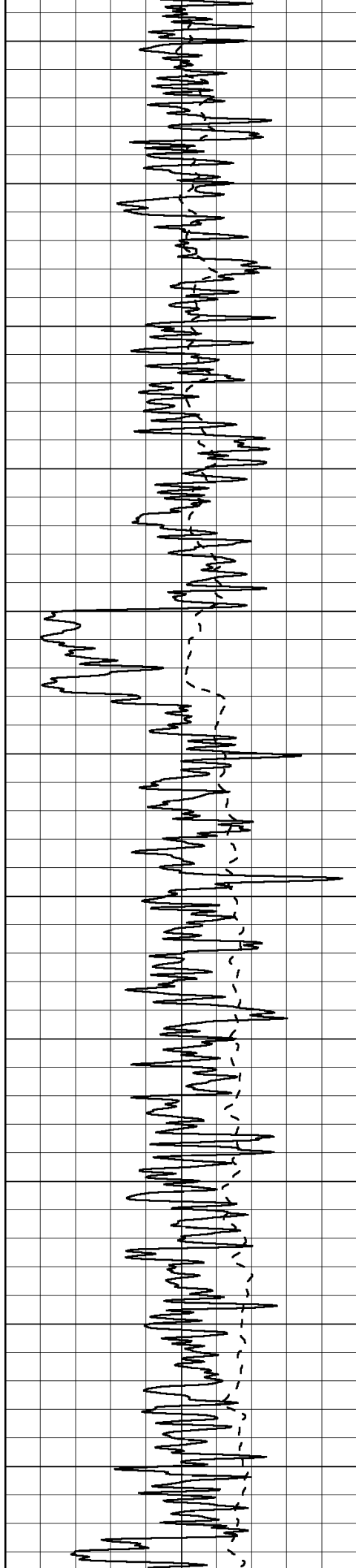
1400

1450

1500

1550





1600

1650

1700

1750

1800

1850

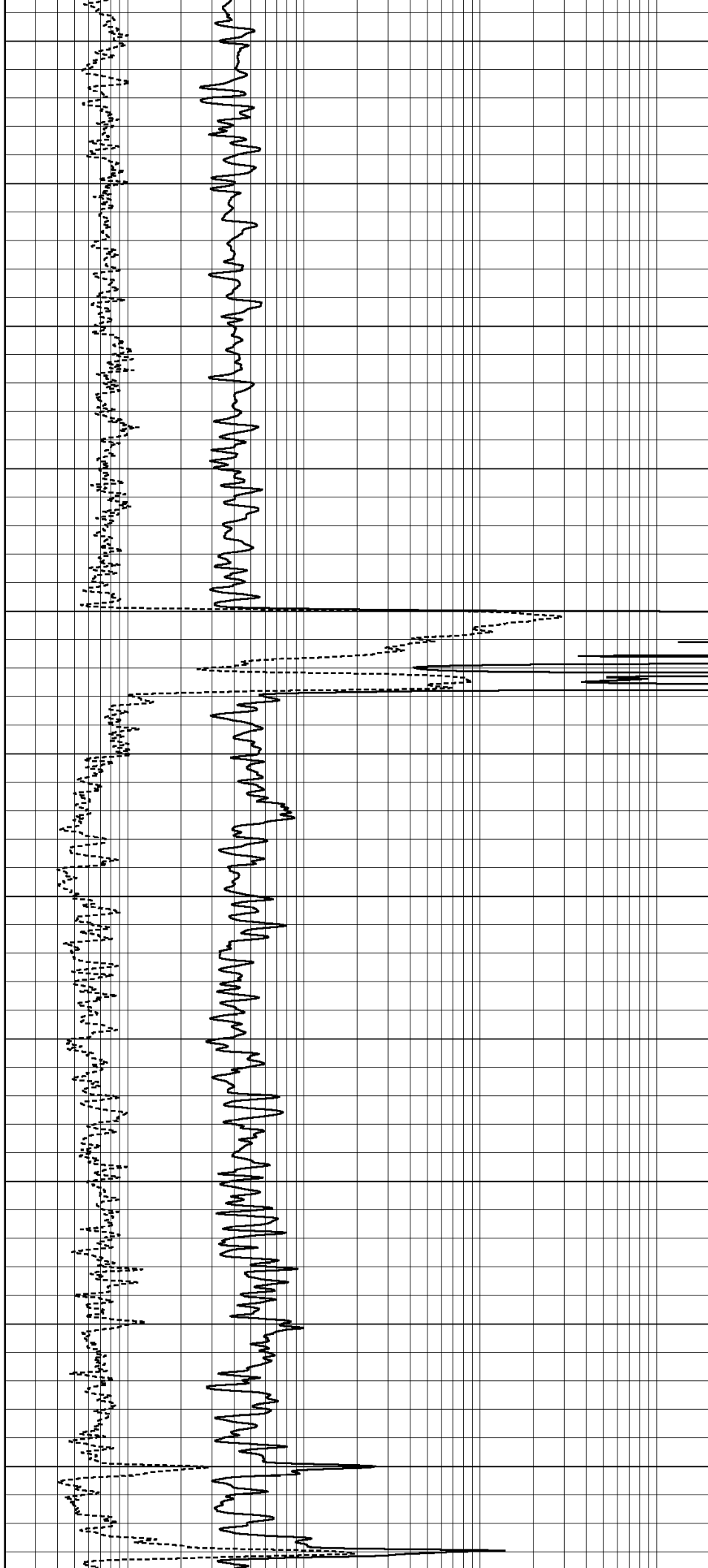
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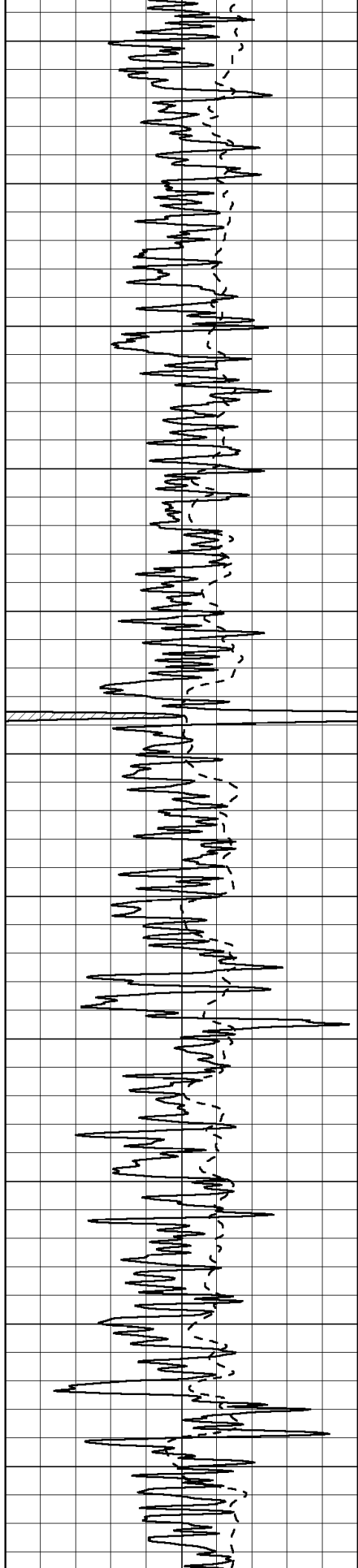
1950

2000

2050

2100





2150

2200

2250

2300

2350

2400

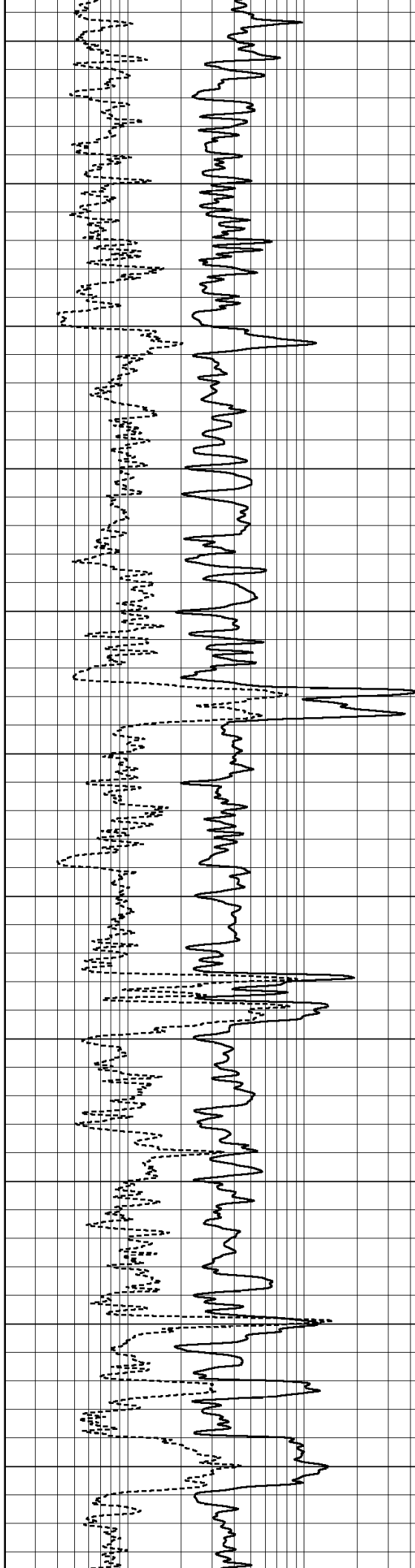
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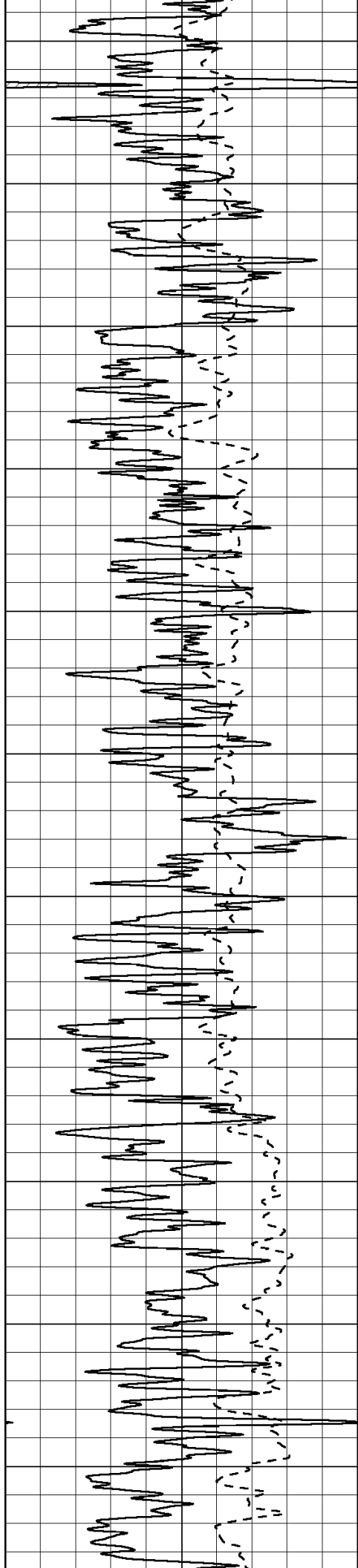
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2550

2600

2650





2700

2750

2800

2850

2900

2950

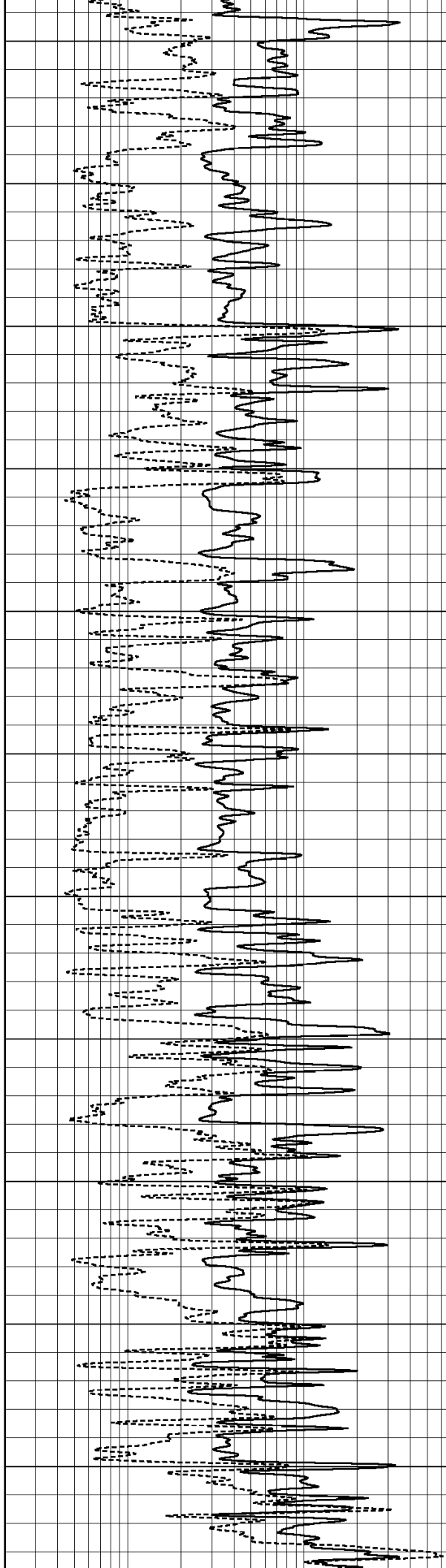
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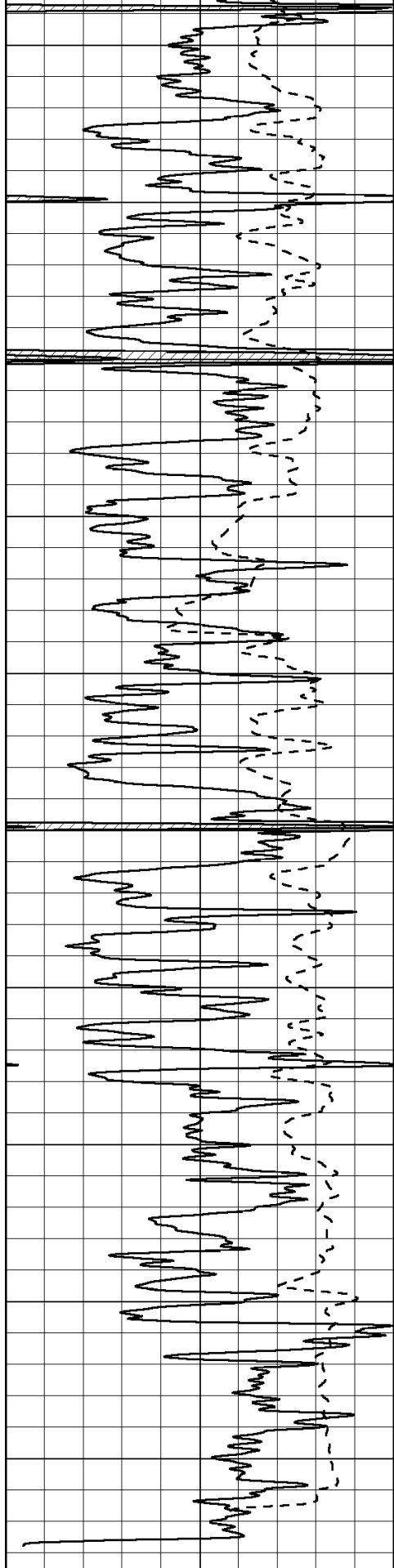
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3100

3150

3200

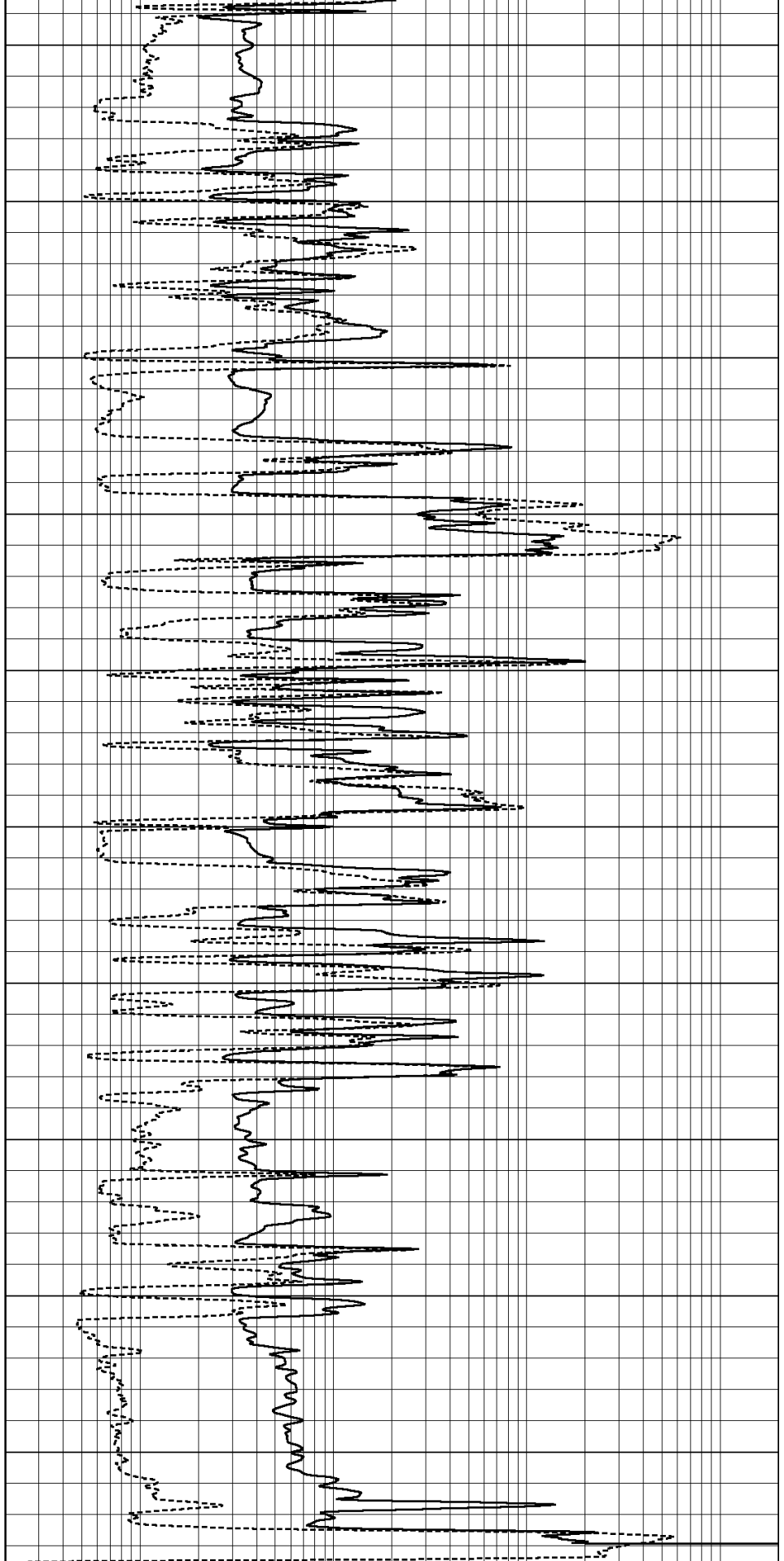




0 GAMMA RAY (GAPI) 150
-100 SP (mV) 100

TBHV (ft3)

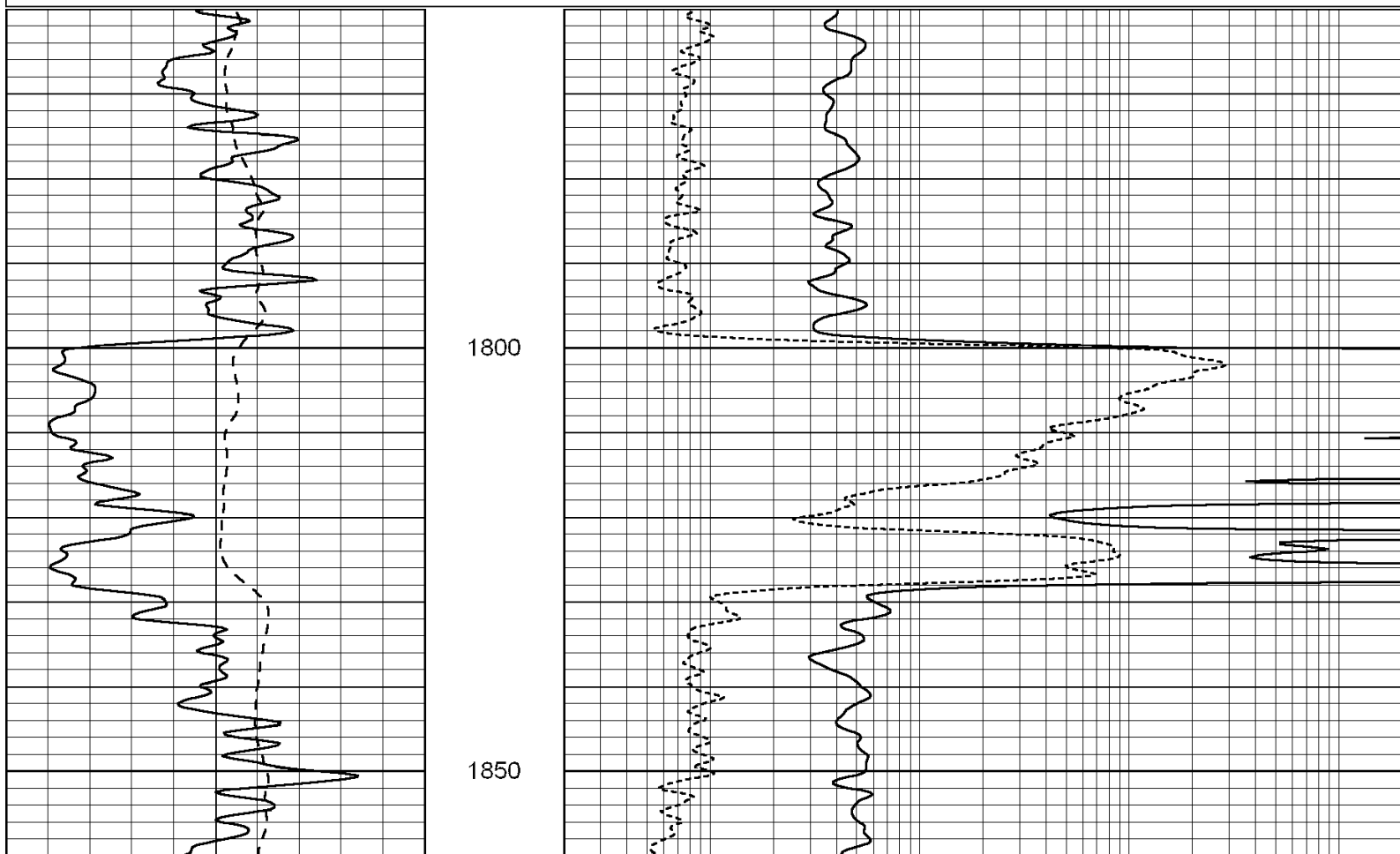
3250
3300
3350
3400
3450
3500
3550
3600
3650
3700



0.2 GUARD (Ohm-m) 2000
0 NEUTRON (NAPI) 1000

Database File: 004867rag.db
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 Presentation Format: rag2
 Dataset Creation: Tue Mar 02 14:05:59 2010 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	ABHV (ft3)	0.2	GUARD (Ohm-m)	2000
-100	SP (mV)	100		0	NEUTRON (NAPI)	1000
			TBHV (ft3)			

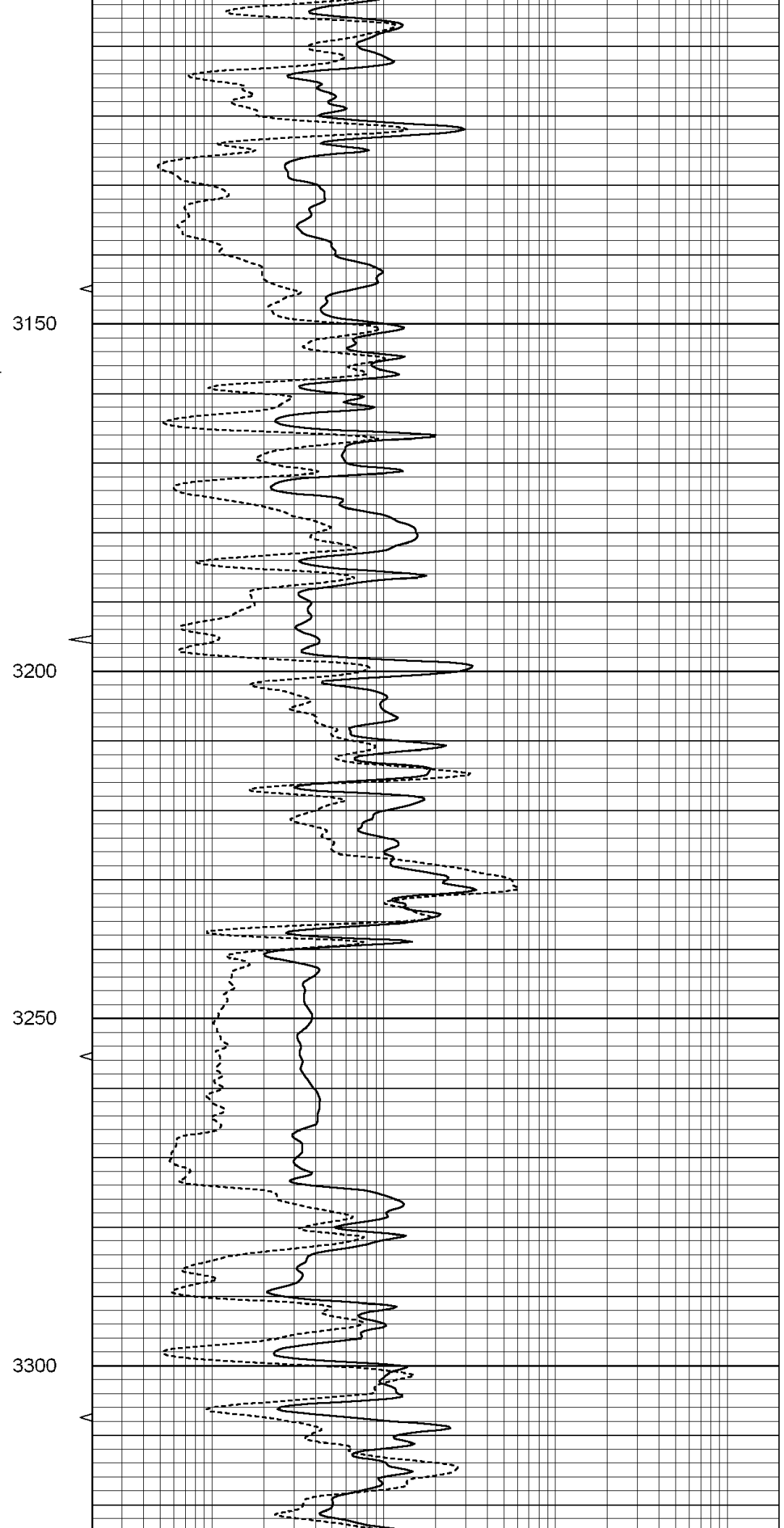
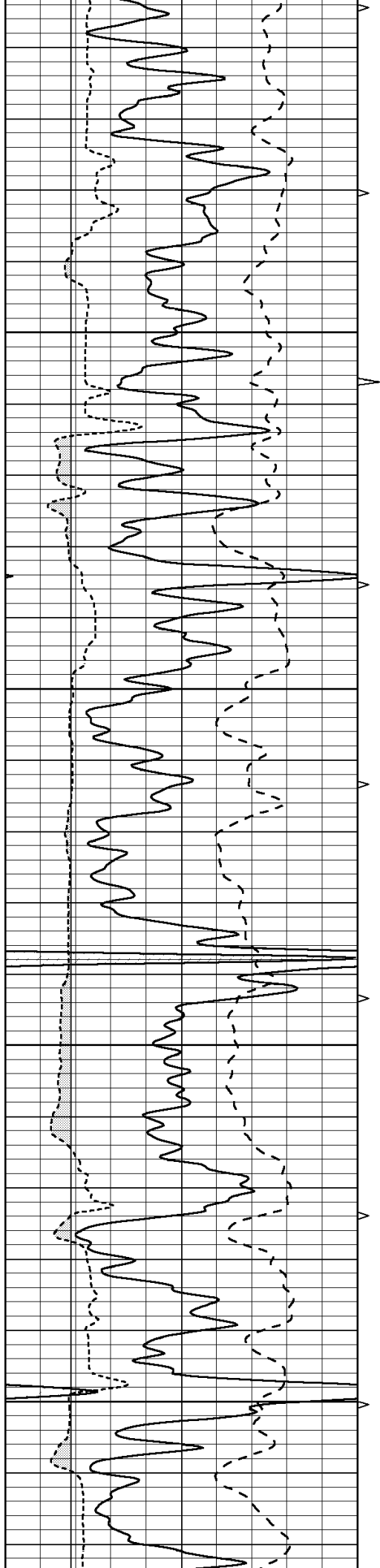


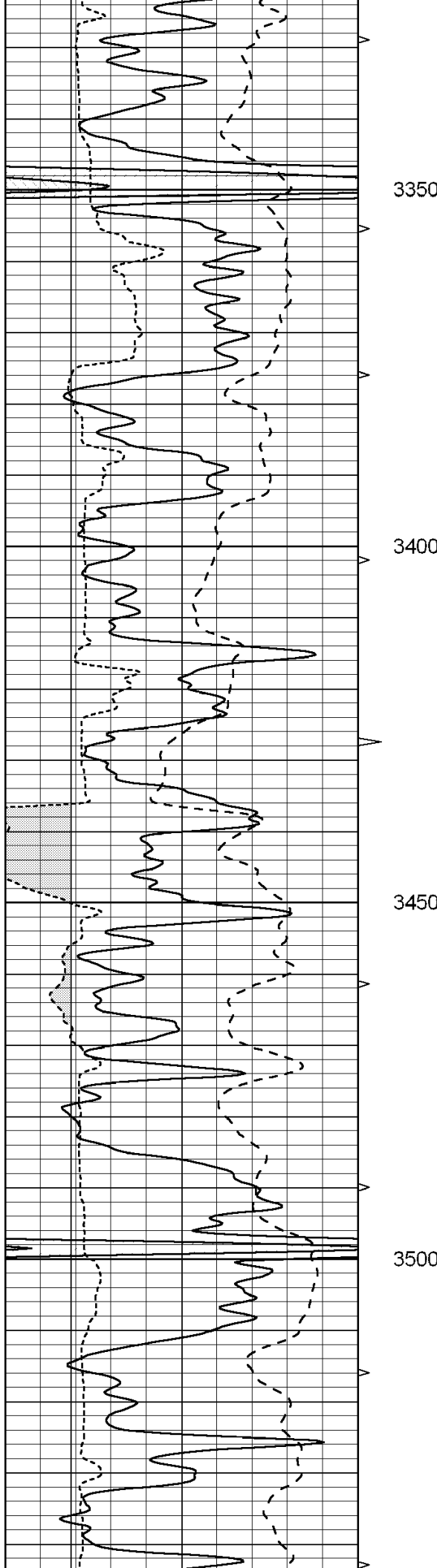
0	GAMMA RAY (GAPI)	150	ABHV (ft3)	0.2	GUARD (Ohm-m)	2000
-100	SP (mV)	100		0	NEUTRON (NAPI)	1000
			TBHV (ft3)			

Database File: 004867rag.db
 Dataset Pathname: pass3.1
 Presentation Format: rag
 Dataset Creation: Tue Mar 02 13:07:34 2010 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	ABHV	0.2	GUARD (Ohm-m)	2000
-100	SP (mV)	100	10 (ft3)	0	NEUTRON (NAPI)	1000
6	CALIPER (in)	16	TBHV			
			0 (ft3)	10		





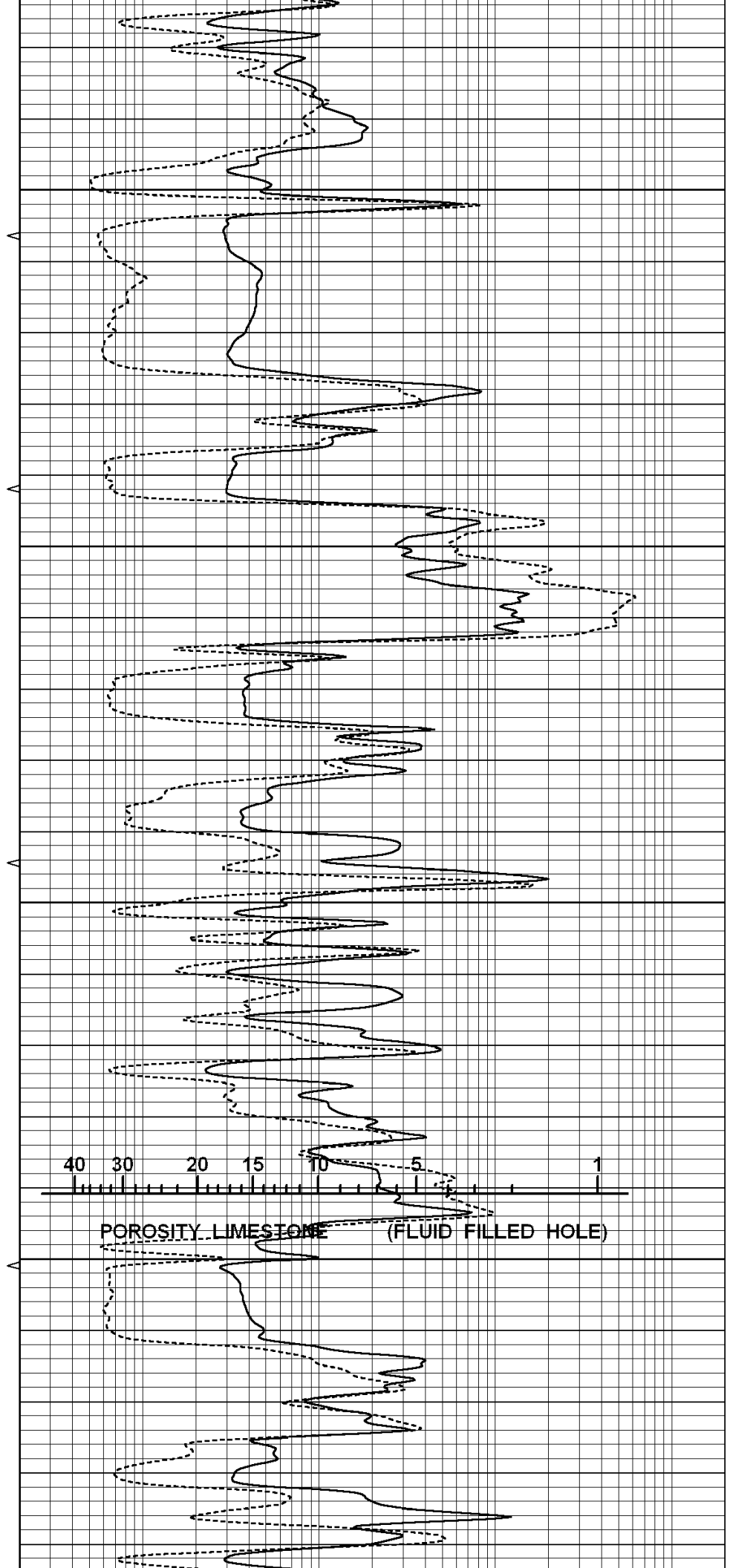


3350

3400

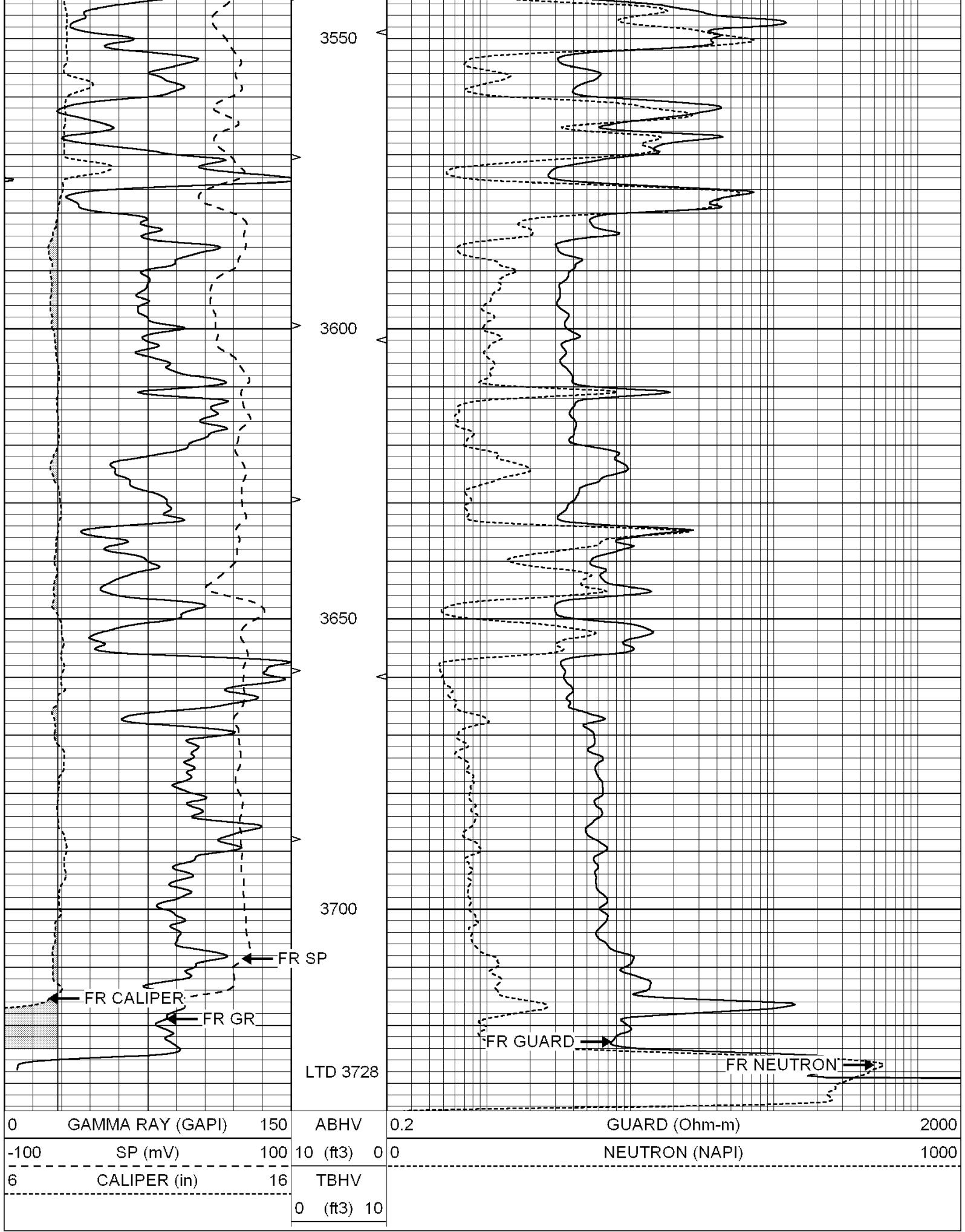
3450

3500



40 30 20 15 10 5 1

POROSITY LIMESTONE (FLUID FILLED HOLE)





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REPEAT SECTION

Database File: 004867rag.db
Dataset Pathname: pass2.2
Presentation Format: rag
Dataset Creation: Tue Mar 02 13:17:02 2010 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	ABHV	0.2	GUARD (Ohm-m)	2000
-100	SP (mV)	100	10 (ft3)	0	NEUTRON (NAPI)	1000
6	CALIPER (in)	16	TBHV			
			0 (ft3)	10		

