



**SUPERIOR
Hays,
Kansas**

MICRO 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		RAG	Elevation
NW - NE - NE - SW			
SEC 24 TWP 4S RGE 21W			
Permanent Datum	GROUND LEVEL	Elevation	2160
Log Measured From	KELLY BUSHING 5' A.G.L.		
Drilling Measured From	KELLY BUSHING		K.B. 2165 D.F. 2163 G.L. 2160
Date	3/2/10		
Run Number	TWO		
Depth Driller	3727		
Depth Logger	3728		
Bottom Logged Interval	3726		
Top Log Interval	3100		
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.

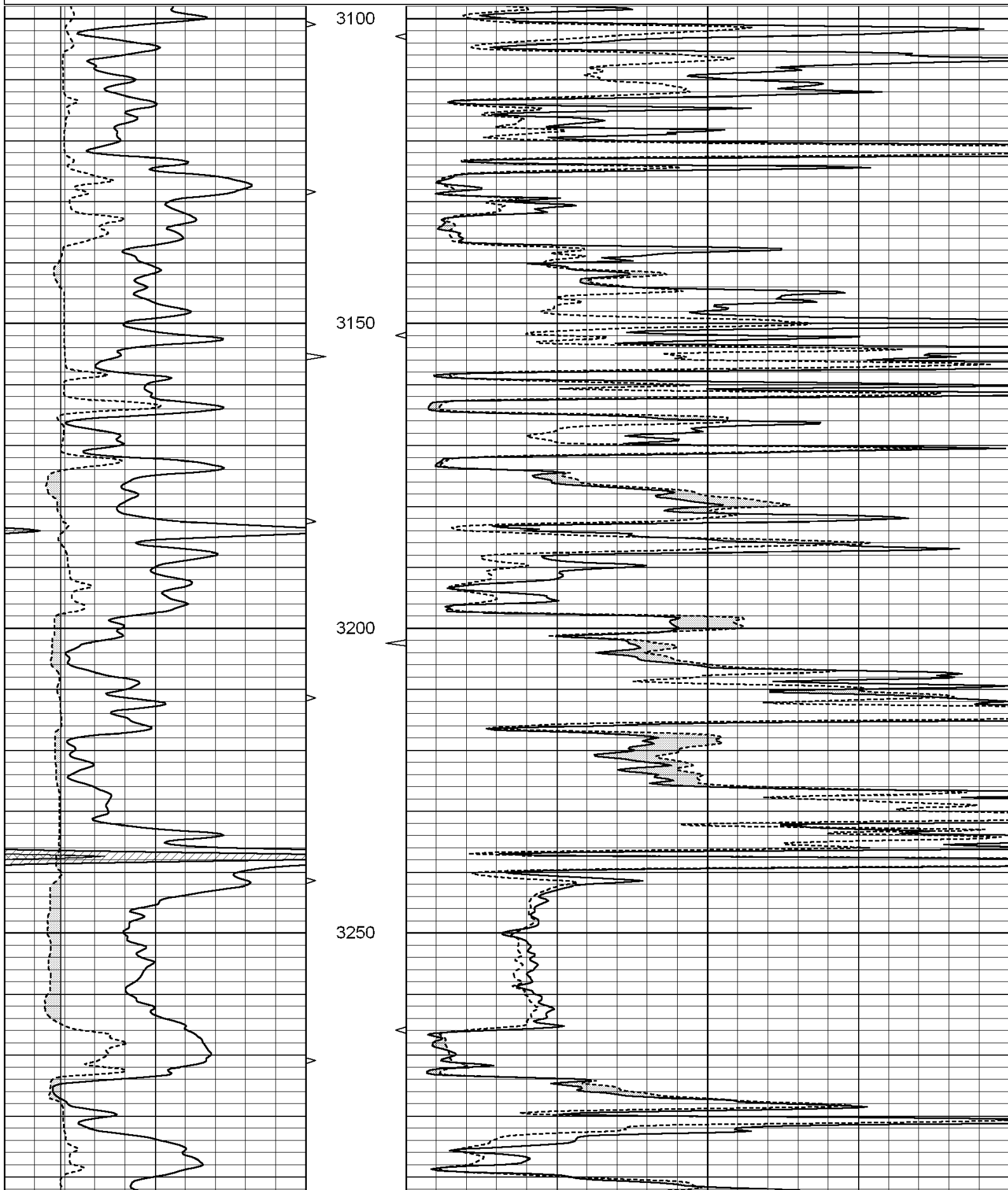
Comments

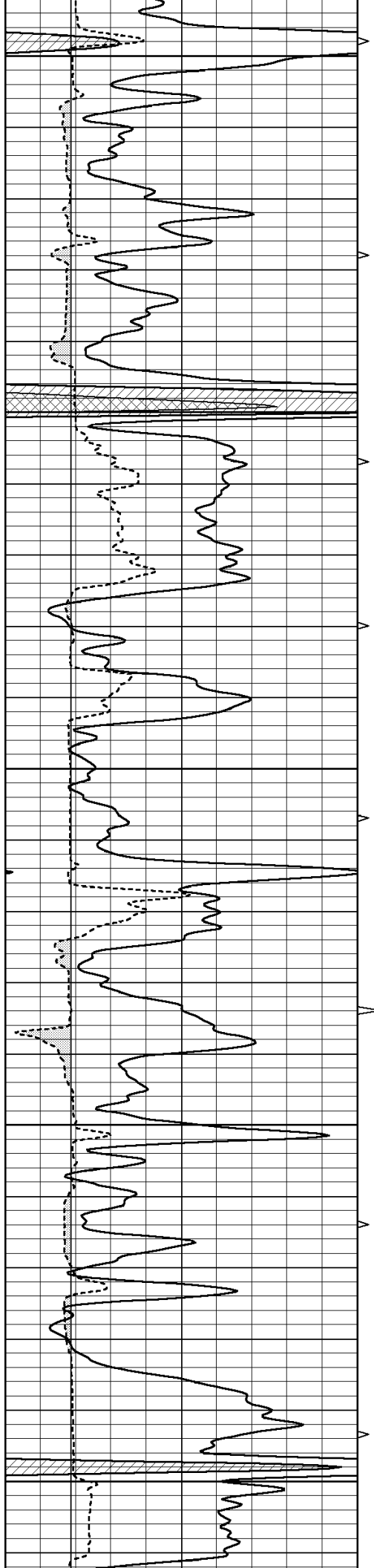
THANK YOU FOR USING SUPERIOR WELL SERVICE (785) 628-6395
DIRECTIONS
LOGAN, KS - 3 MILES WEST TO RD 1600 - 1 MILE NORTH - 1/2 MILE WEST
NORTH INTO

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	0	MEL2.0 (Ohm-m)	40
			TBHV			
			0 (ft3) 10			





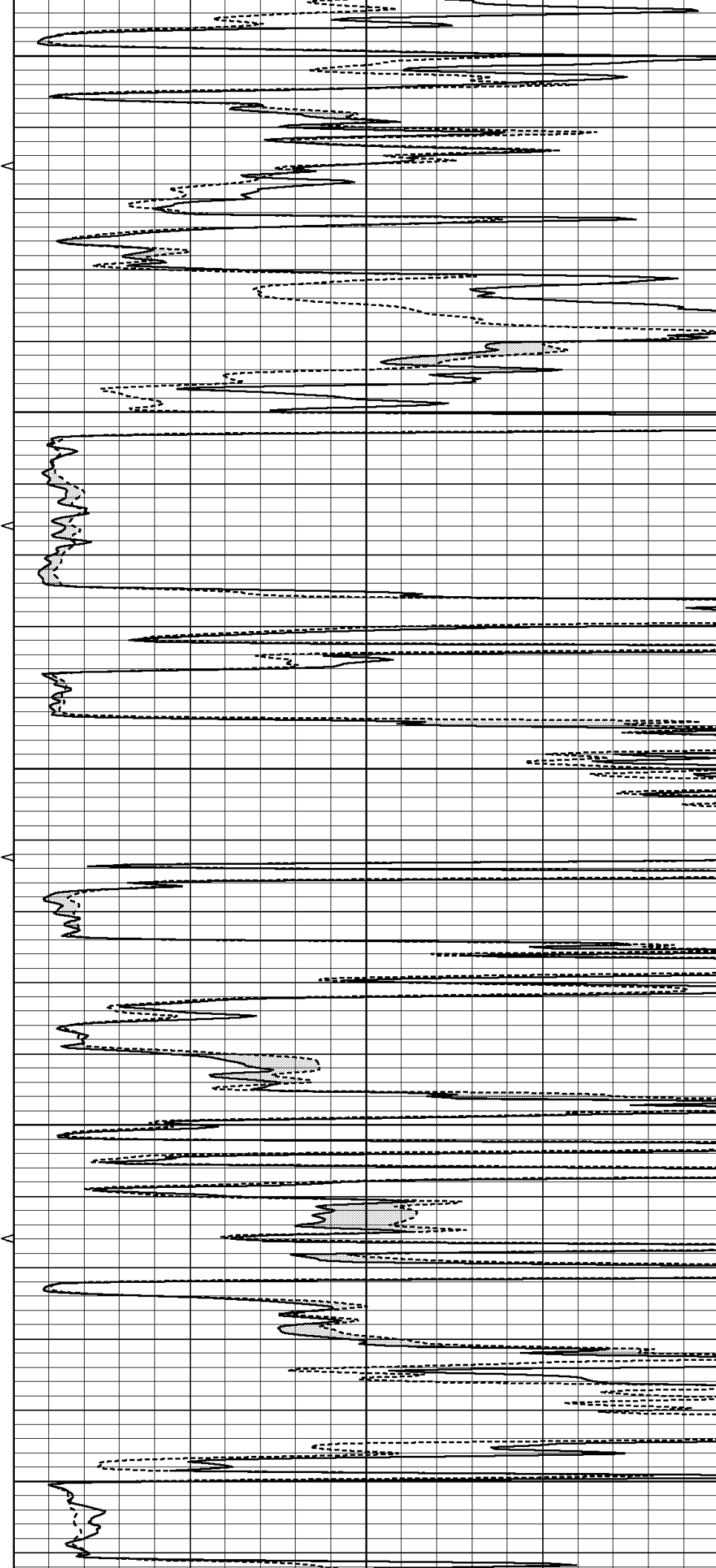
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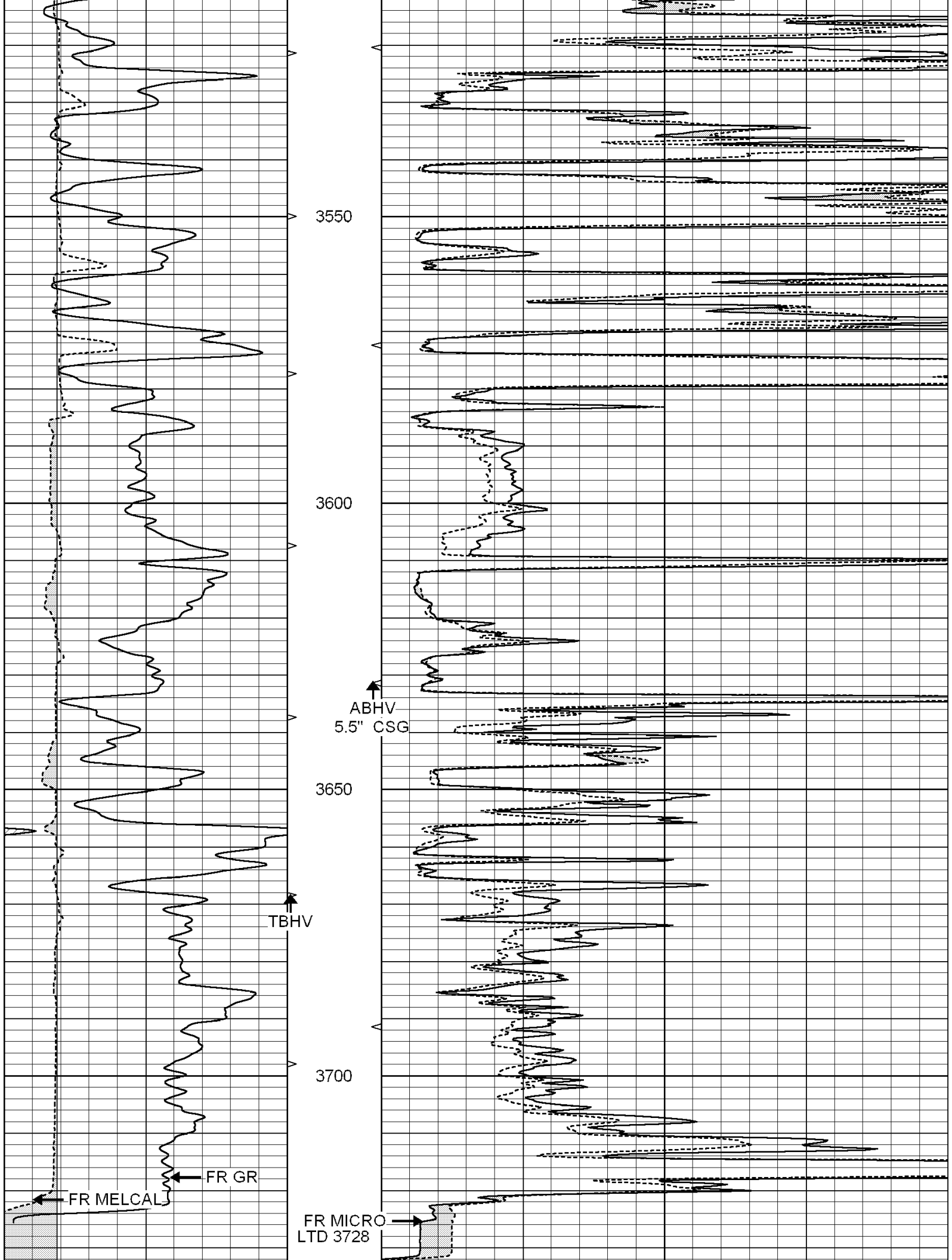
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6	CALIPER (in)	16	10 (ft3) 0	0	MEL2.0 (Ohm-m)	40
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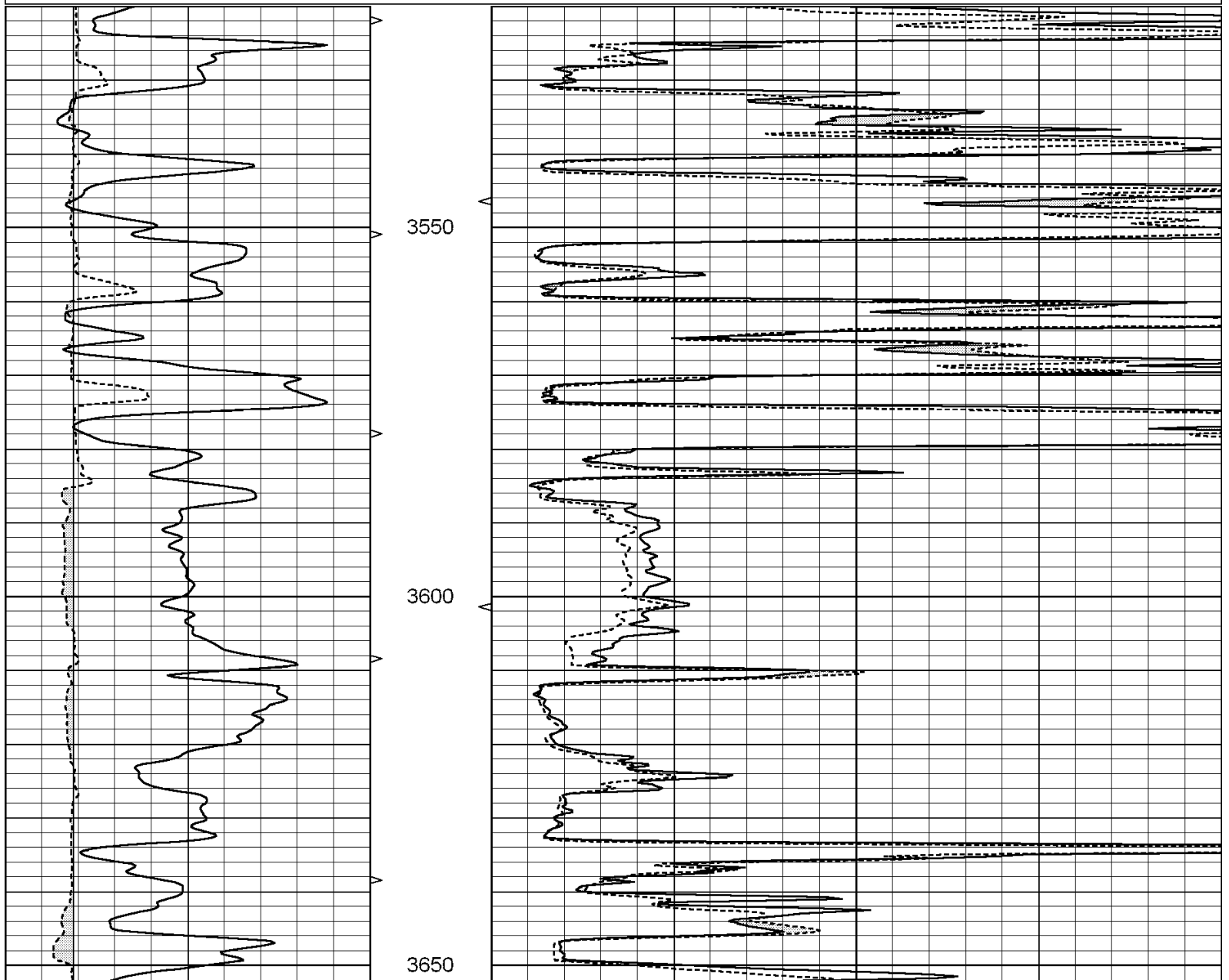


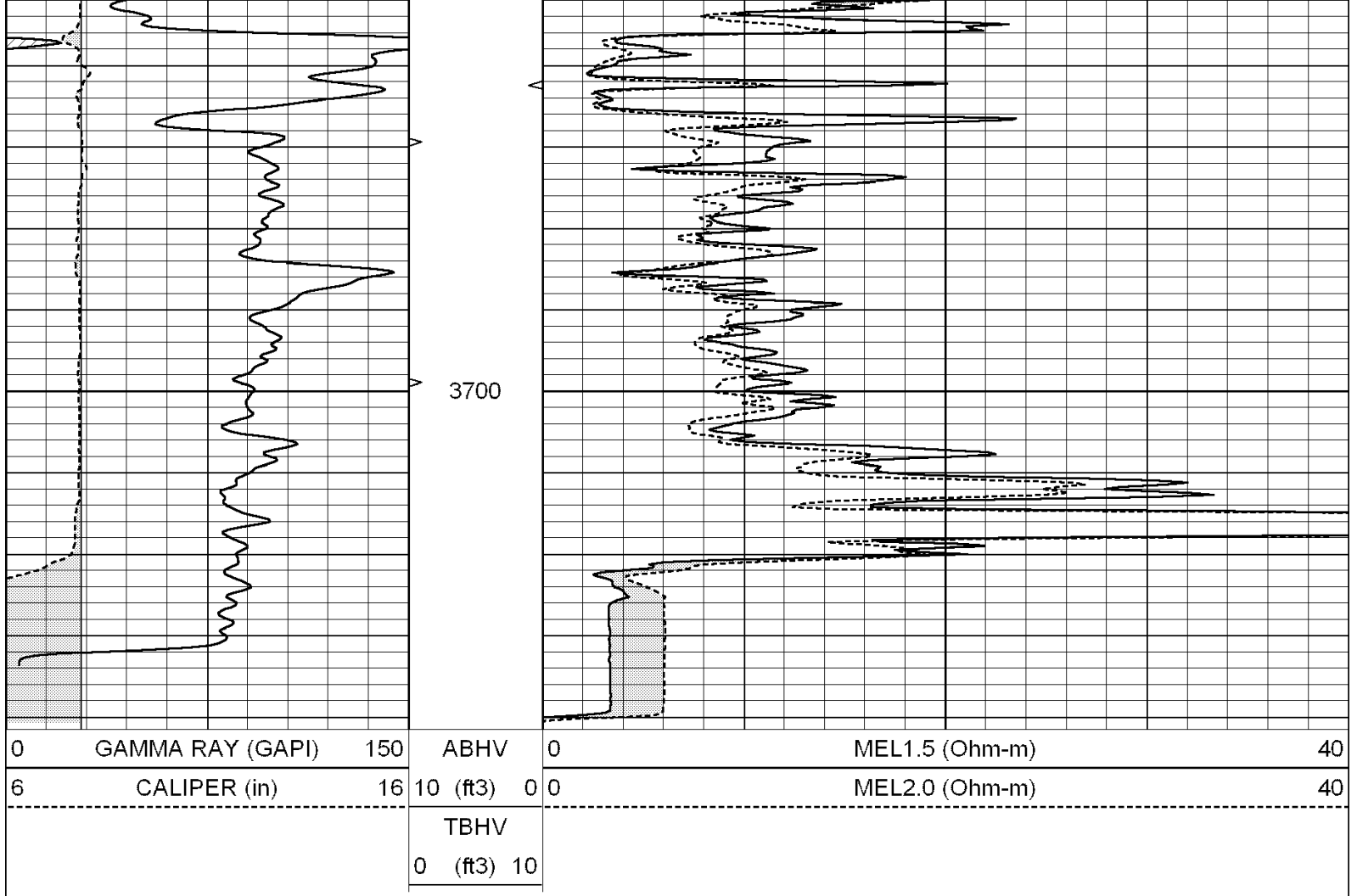
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REPEAT SECTION

Database File: 004867rag.db
Dataset Pathname: pass4.1
Presentation Format: _micro
Dataset Creation: Tue Mar 02 14:12:43 2010 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	0	MEL2.0 (Ohm-m)	40
			TBHV			
			0 (ft3) 10			





Calibration Report			
Database File:	004867rag.db		
Dataset Pathname:	pass5		
Dataset Creation:	Tue Mar 02 14:15:40 2010 by Log Open-Cased 090629		
MICRO Calibration Report			
Serial Number:	MICRO6		
Tool Model:	PROBE		
Performed:	Tue Feb 02 18:42:12 2010		
Caliper Calibration:	Gain=5.239	Offset=0.259	
References	Low Cal	High Cal	
	8.000	14.000	
	Readings	1.401	2.546
1.5" Calibration:	Gain=40.781	Offset=-1.051	
References	Low Cal	High Cal	
	0.000	20.000	
	Readings	0.008	1.200
2" Calibration:	Gain=40.739	Offset=-0.193	
References	Low Cal	High Cal	
	0.000	20.000	
	Readings	0.008	0.888
Gamma Ray Calibration Report			
Serial Number:	GR6		

Tool Model:	OPEN
Performed:	Tue Nov 10 08:32:36 2009

Calibrator Value:	150.0	GAPI
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Background Reading:	0.0	cps
Calibrator Reading:	276.0	cps

Sensitivity:	0.5235	GAPI/cps
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