



**MIDWEST SURVEYS**  
 LOGGING - PERFORATING - CONSULTING SERVICES  
 P.O. Box 68, Osawatomie, KS 66064  
 913 / 755 - 2128

**GAMMA RAY / NEUTRON / CCL**

File No.

API # 15-003-25,883

Company **Haas Petroleum, LLC.**

Well **Zastrow No. 21-HP**

Field **Garnett Shoestring**

County **Anderson** State **Kansas**

Location

815' FNL & 1125' FWL  
 NE-SE-NW-NW

Other Services  
 Perforate

Sec. 13 Twp. 20s Rge. 20e  
 Permanent Datum GL Elevation 952'  
 Log Measured From GL  
 Drilling Measured From GL

Elevation  
 K.B. NA  
 D.F. NA  
 G.L. 952'

Date	07-24-2013
Run Number	One
Depth Driller	820.0
Depth Logger	786.3
Bottom Logged Interval	785.3
Top Log Interval	20.0
Fluid Level	Full
Type Fluid	Water
Density / Viscosity	NA
Salinity - PPM Cl	NA
Max Recorded Temp	NA
Estimated Cement Top	0.0
Equipment No.	102
Location	Osawatomie
Recorded By	Gary Windisch
Witnessed By	John Haas

RUN No.	BORE-HOLE RECORD			CASING RECORD			
	BIT	FROM	TO	SIZE	WGT.	FROM	TO
One	9.875"	0.0	20.0	7.00"	17.0 #	0.0	20.0
Two	5.625"	20.0	820.0	2.875"	6.5 #	0.0	790.25

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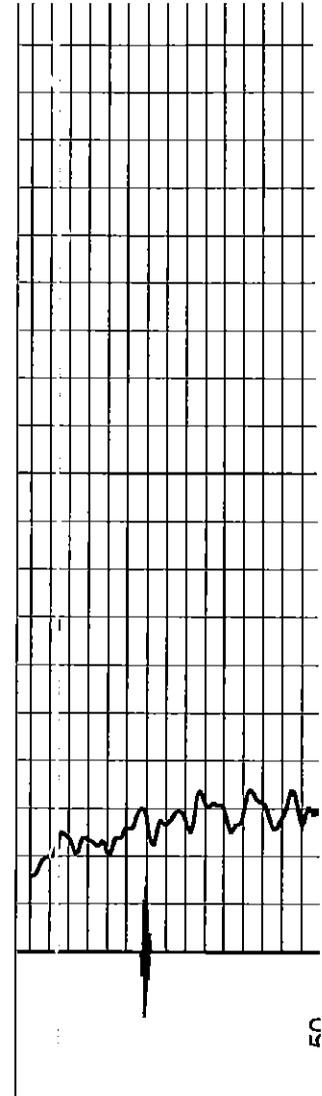
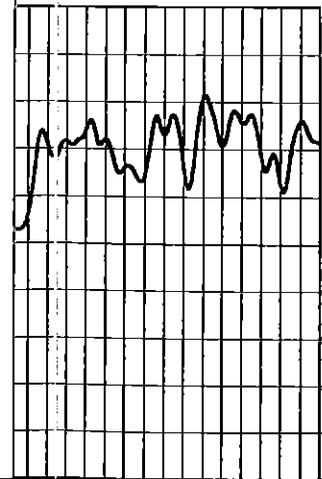
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

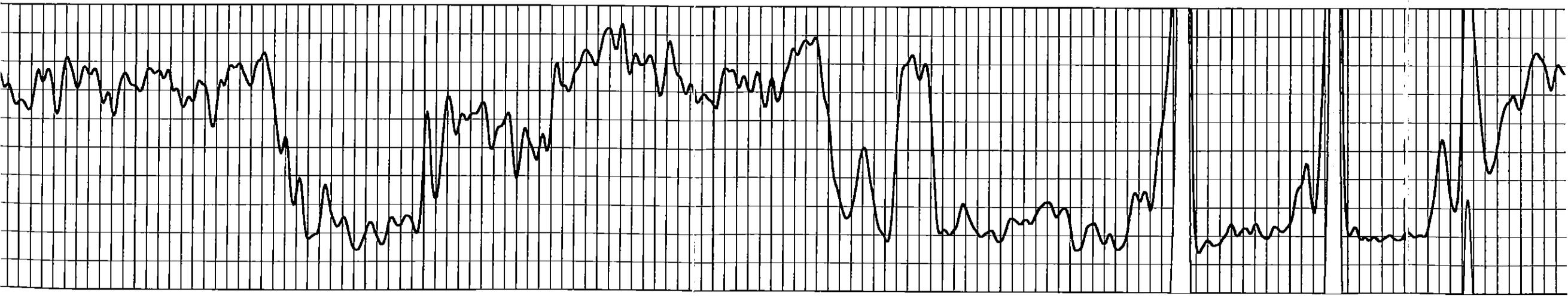
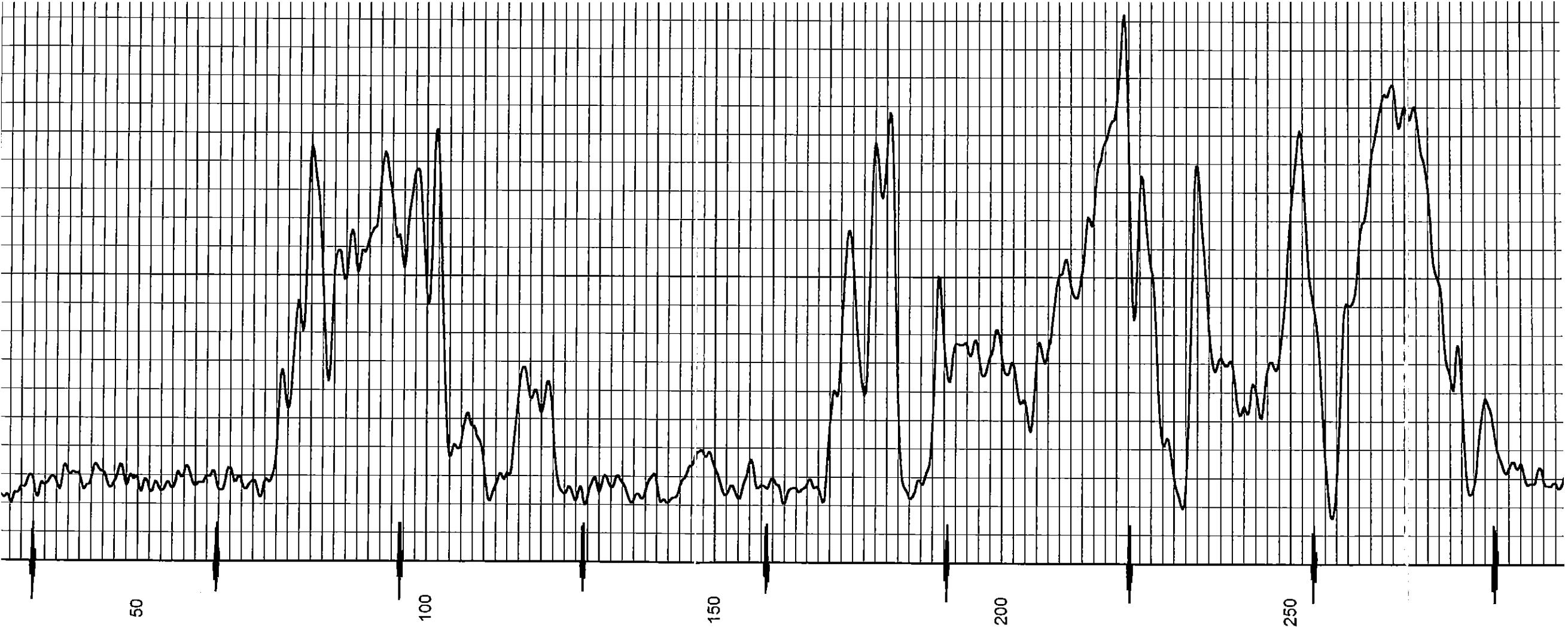
Drilling Contractor :  
 Town Oilfield Services, Inc.

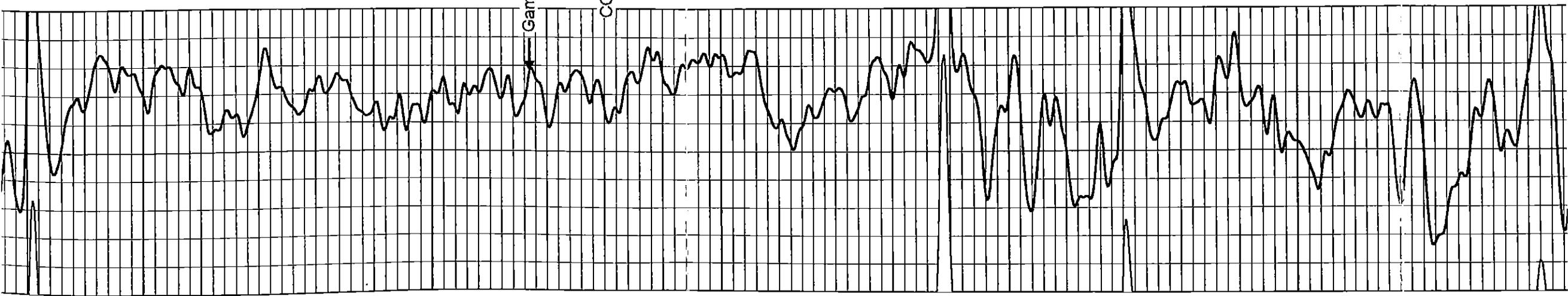
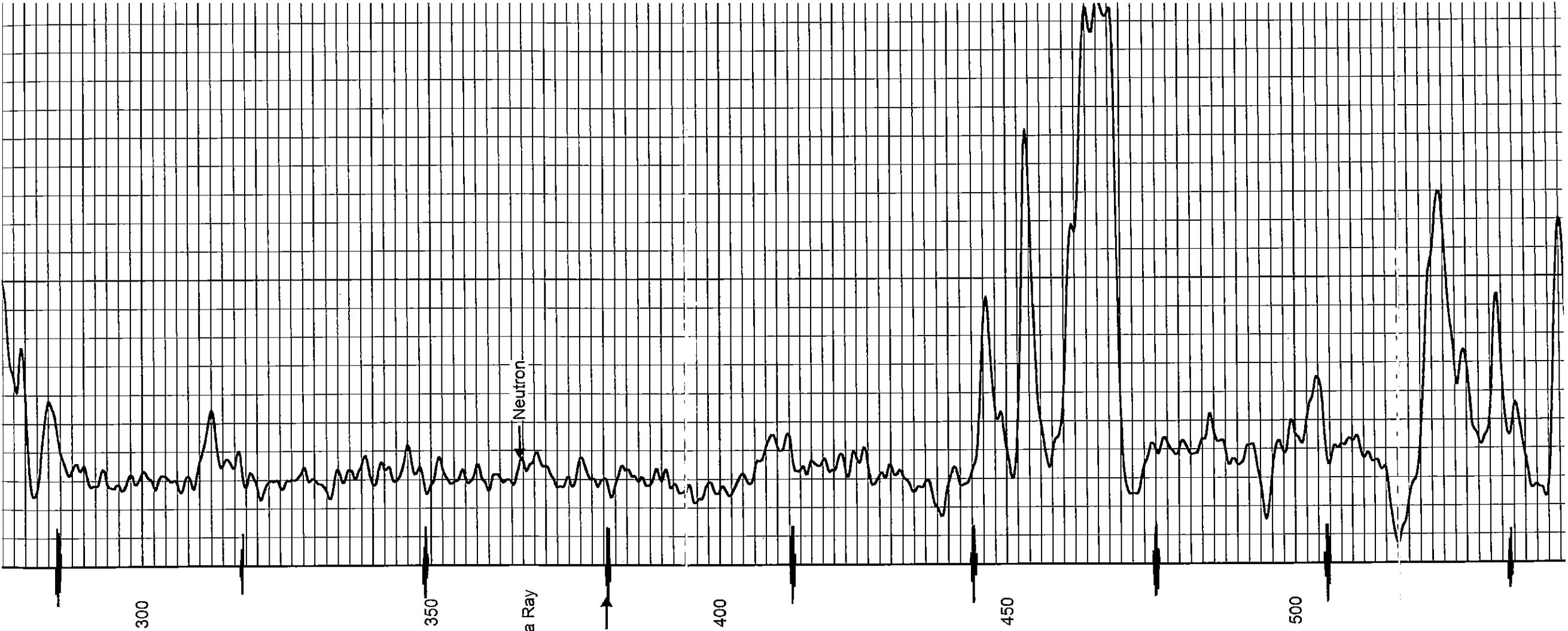
Database File: zastrow21hp.db  
 Dataset Pathname: pass1  
 Presentation Format: gr-n-ccl  
 Dataset Creation: Wed Jul 24 14:19:26 2013 by Log SCH 111116  
 Charted by: Depth in Feet scaled 1:240

0 Gamma Ray (cps) 150  
 150 Gamma Ray (cps) 300  
 -1 CCL 1 100  
 Neutron (cps) 1900



50





Neutron

Gamma Ray

CCL

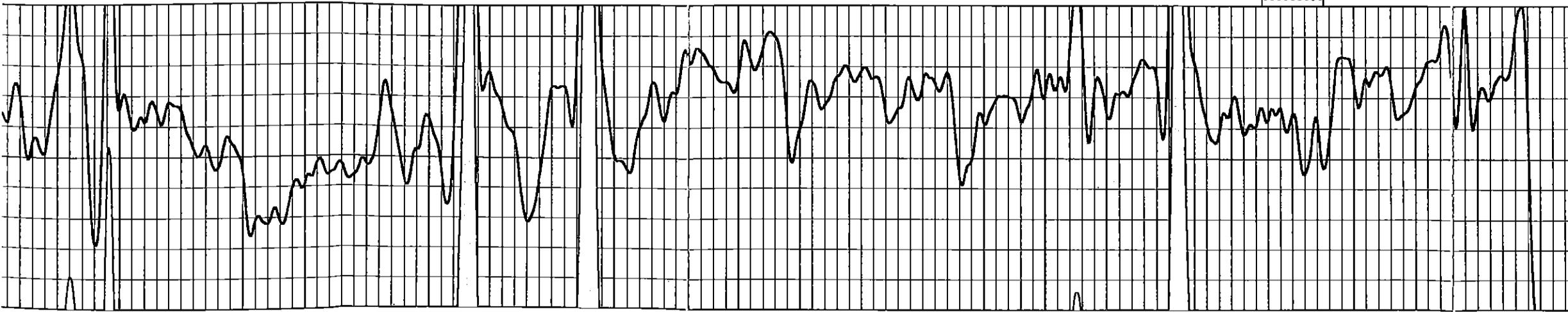
300

350

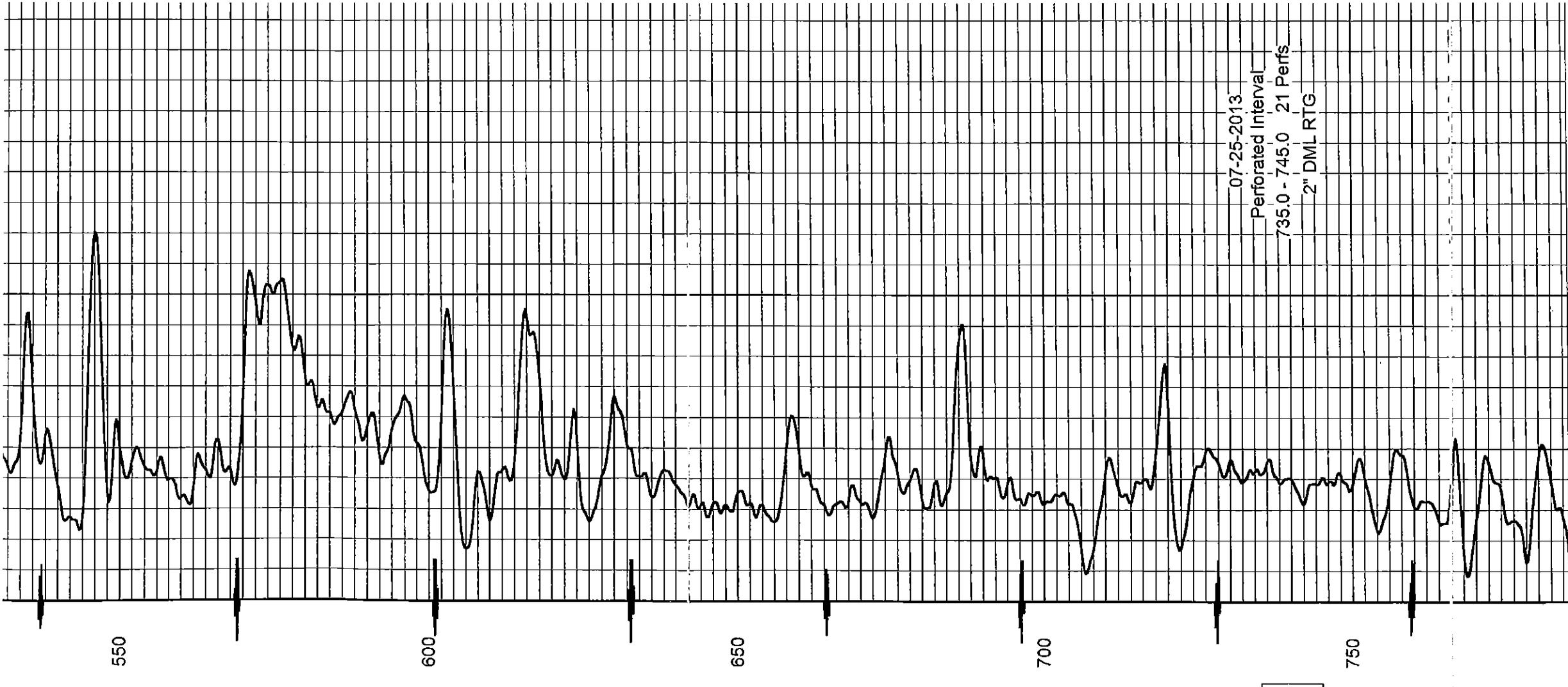
400

450

500



0  
150  
Gamma Ray (cps)  
Gamma Ray (cps)  
150  
300



-1 CCL 1  
100  
Neutron (cps)  
190

07-25-2013  
Perforated Interval  
735.0 - 745.0 21 Perfs  
2" DML RTG