The Perforators LLC

Cement Bond Gamma Ray CCL Log

Company	Duco Well Service
Well	Reinholt 12-6
Field	Denver-Julesburg
County	Adams
State	CO

Company Duco Well Service
Well Reinholt 12-6
Field Denver-Julesburg
County Adams **State** CO

Location: API #:
NW/NE
SEC 12 TWP 1S RGE 68W

Other Services
CICR
Cement
Perforate
Spartan Booster

Permanent Datum	Ground Level	Elevation	5061'
Log Measured From	Kelly Bushing 11' Above Ground Level		
Drilling Measured From	Kelly Bushing		

K.B. 5072'
D.F. ----
G.L. 5061'

Date	8-7-19
Run Number	One
Depth Driller	N/A
Depth Logger	4825'
Bottom Logged Interval	4824'
Top Log Interval	Surface
Open Hole Size	N/A
Type Fluid	Water
Density / Viscosity	N/A
Max. Recorded Temp.	N/A
Estimated Cement Top	3764'
Time Well Ready	16:00
Time Logger on Bottom	16:15
Equipment Number	T943
Location	Roosevelt
Recorded By	Funk
Witnessed By	Mr. Rector

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
One	12 1/4"	0	N/A				
Two	7 7/8"	0	N/A				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	8 5/8"	24#	0	197'
Prot. String				
Production String	4 1/2"	10.5#	0	5110'
Liner				

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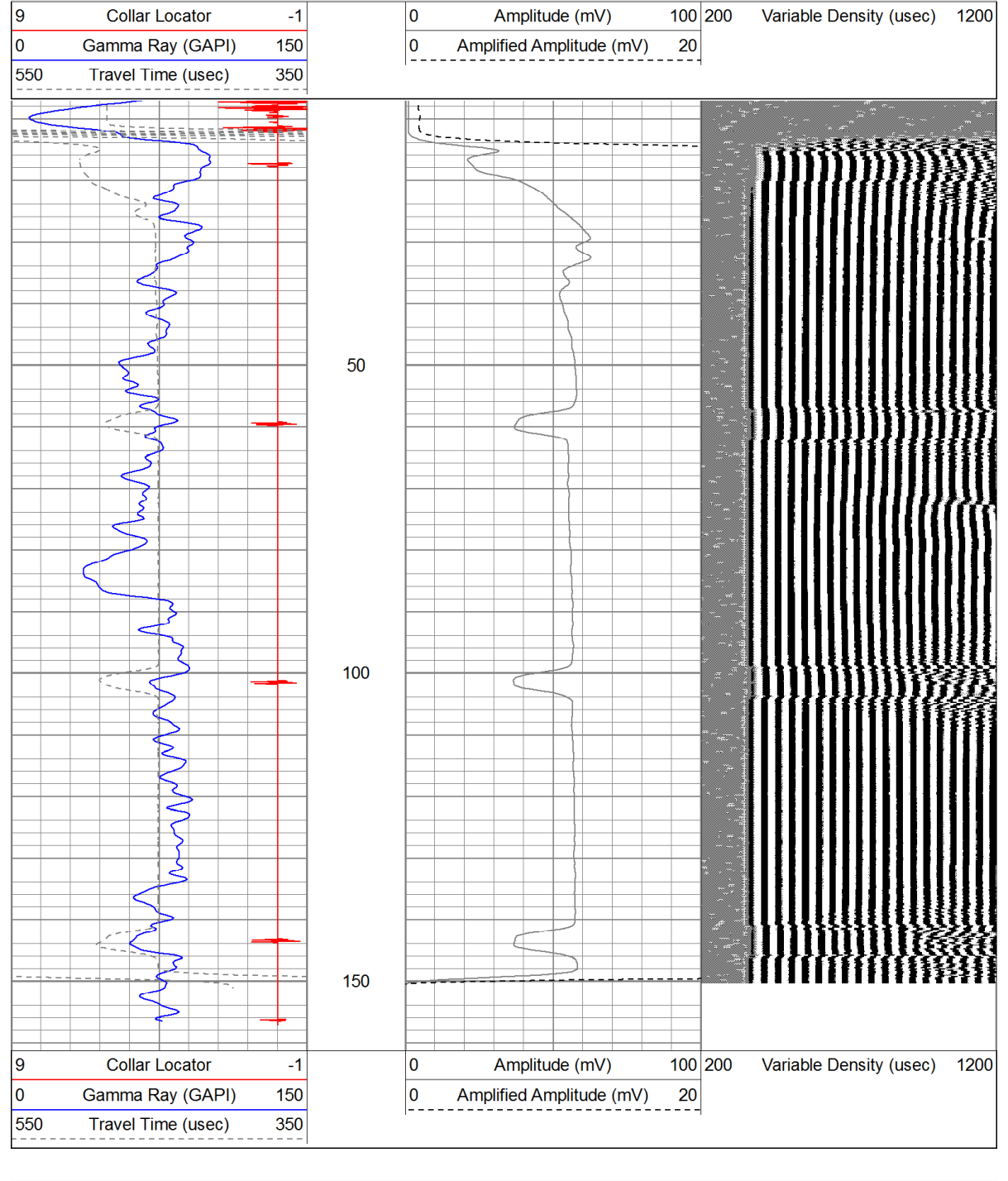
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

CBL not depth correlated.

Database File	reinholt 12-6.db
Dataset Pathname	Denver-Julesburg/Reinholt_12-6/run1/pass5
Presentation Format	cbl
Dataset Creation	Wed Aug 07 17:12:42 2019
Charted by	Depth in Feet scaled 1:240



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Main Pass

Database File	reinholt 12-6.db
Dataset Pathname	Denver-Julesburg/Reinholt_12-6/run1/pass2
Presentation Format	cbl
Dataset Creation	Wed Aug 07 16:16:35 2019
Charted by	Depth in Feet scaled 1:240

9 Collar Locator -1
0 Gamma Ray (GAPI) 150
550 Travel Time (usec) 350
0 Amplitude (mV) 100
0 Amplified Amplitude (mV) 20
200 Variable Density (usec) 1200
100
150
200
250
300

9 Collar Locator -1	0 Amplitude (mV) 100	200 Variable Density (usec) 1200		
0 Gamma Ray (GAPI) 150	0 Amplified Amplitude (mV) 20			
550 Travel Time (usec) 350				

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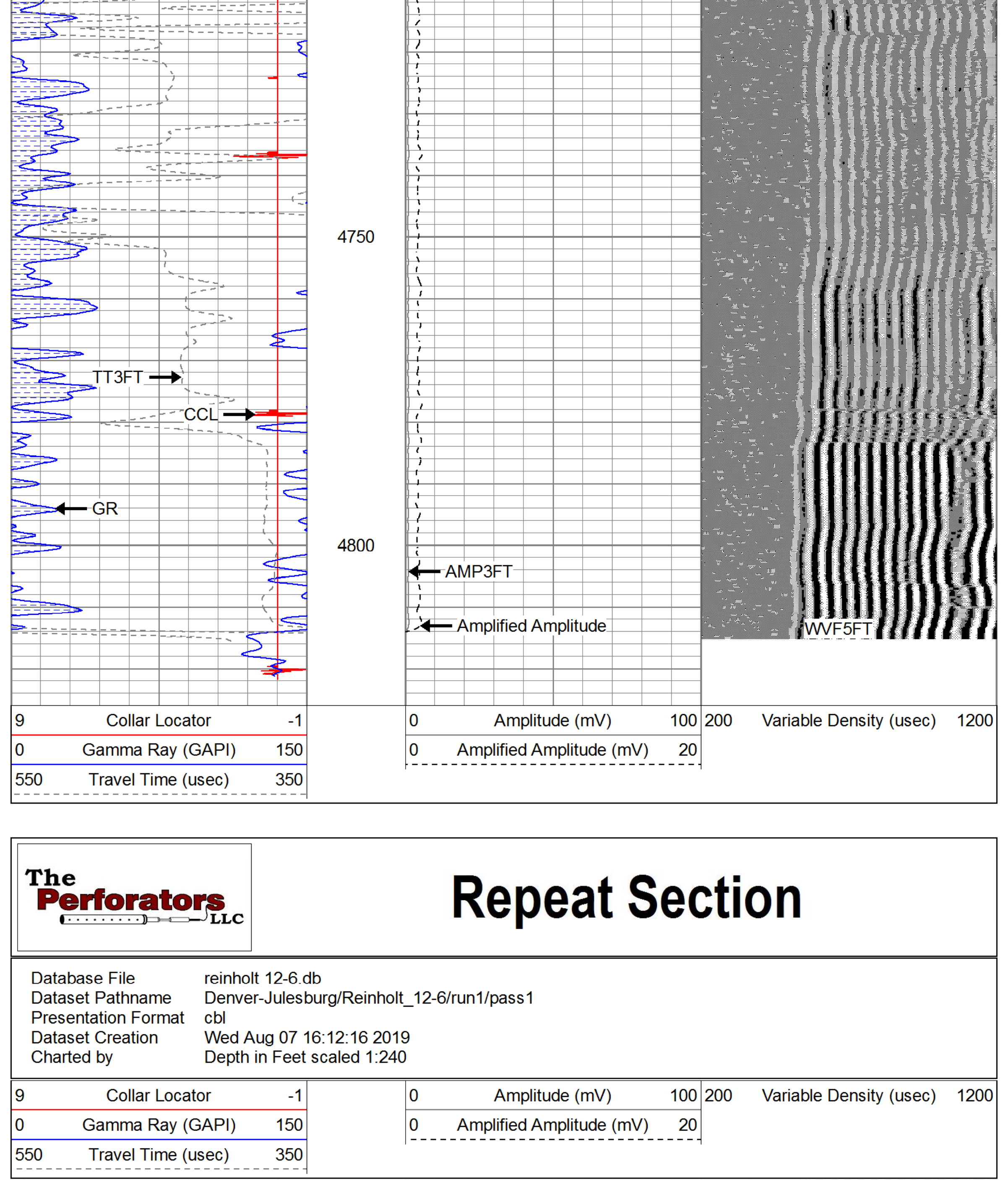
Repeat Section

Database File reinholt 12-6.db
Dataset Pathname Denver-Julesburg/Reinholt_12-6/run1/pass1
Presentation Format cbl
Dataset Creation Wed Aug 07 16:12:16 2019
Charted by Depth in Feet scaled 1:240

9 Collar Locator -1	0 Amplitude (mV) 100	200 Variable Density (usec) 1200
0 Gamma Ray (GAPI) 150	0 Amplified Amplitude (mV) 20	
550 Travel Time (usec) 350		



9 Collar Locator -1	0 Amplitude (mV) 100	200 Variable Density (usec) 1200
0 Gamma Ray (GAPI) 150	0 Amplified Amplitude (mV) 20	
550 Travel Time (usec) 350		

Calibration Report

Database File reinholt 12-6.db
Dataset Pathname Denver-Julesburg/Reinholt_12-6/run1/pass5
Dataset Creation Wed Aug 07 17:12:42 2019

Gamma Ray Calibration Report

Serial Number:	970903	
Tool Model:	P	
Performed:	Tue Apr 18 10:15:17 2017	
Calibrator Value:	200.0	GAPI
Background Reading:	54.0	cps
Calibrator Reading:	250.0	cps
Sensitivity:	1.0204	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	020406	
Tool Model:	P	
Calibration Casing Diameter:	5.500	in
Calibration Depth:	343.417	ft

Master Calibration, performed Wed Aug 07 15:59:19 2019:

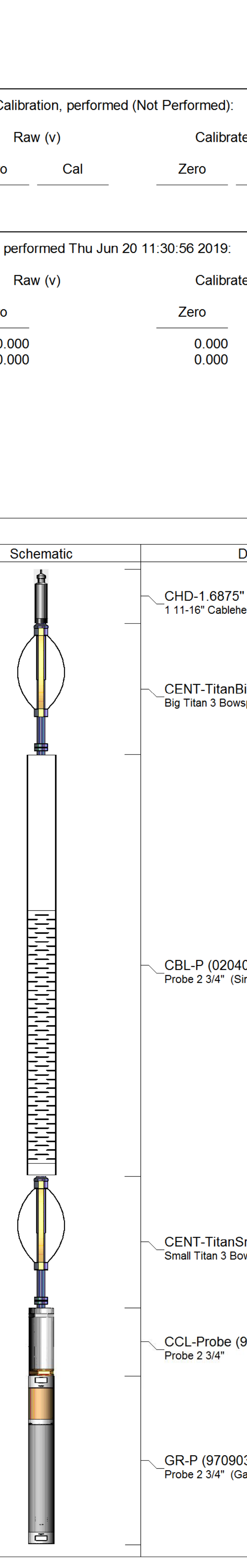
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.024	1.169	0.500	81.921	71.118	-1.190
CAL						
5'	0.024	2.341	1.000	71.921	30.602	0.272
SUM						
S1						
S2						
S3						
S4						
S5						
S6						
S7						
S8						

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL						

Air Zero Calibration, performed Thu Jun 20 11:30:56 2019:

	Raw (v)	Calibrated (v)	Results
	Zero	Zero	Offset
3'	0.000	0.000	0.000
5'	0.000	0.000	0.000
SUM			
S1			
S2			
S3			
S4			
S5			
S6			
S7			
S8			

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
CHD	20.25		CHD-1.6875" 1 11-16" Cablehead	1.13	1.69	5.00
CENT	19.13		CENT-TitanBig Big Titan 3 Bowspring Centralizer	2.73	2.75	25.00
WVF3FT	11.90		CBL-P (020406) Probe 2 3/4" (Single Pin)	8.75	2.75	45.00
WVF5FT	10.90					
CENT	7.65		CENT-TitanSmall Small Titan 3 Bowspring Centralizer	2.73	1.69	5.00
CCL	4.08		CCL-Probe (970903) Probe 2 3/4"	1.42	2.75	7.50
GR	2.50		GR-P (970903) Probe 2 3/4" (Gamma Ray)	3.50	2.75	34.00

Dataset: reinholt 12-6.db: Denver-Julesburg/Reinholt_12-6/run1/pass5
Total length: 20.25 ft
Total weight: 121.50 lb
O.D.: 2.75 in