



MIDWEST WIRELINE

DUAL COMP POROSITY LOG

Company **ARP Operating, LLC**
 Well **Dechant #1**
 Field **Wildcat**
 County **Ness** State **Kansas**

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Location: **API #: 15-135-26095-00-00**
1800' FNL & 1220' FWL
 SEC 1 TWP 20S RGE 22W
 Permanent Datum **Ground Level** Elevation **2245'**
 Log Measured From **Kelly Bushing**
 Drilling Measured From **Kelly Bushing**
 Other Services **DIL MEL**

Date	2/3/2021						
Run Number	One						
Type Log	CNL/CDL						
Depth Driller	4425'						
Depth Logger	4423'						
Bottom Logged Interval	4394'						
Top Logged Interval	3700'						
Type Fluid In Hole	Chemical						
Salinity, PPM CL	6000						
Density	9.3						
Level	Full						
Max. Rec. Temp. F	120 Deg/F						
Operating Rig Time	2 Hours						
Equipment -- Location	P-24 HAYS						
Recorded By	J. Henrickson						
Witnessed By	Sean Deenihan						
Borehole Record							
Run No.	Bit	From	To	Size	Wgt.	From	To
One	12.25"	0	335'	8.625"	24#	0	335'
Two	7.875"	335'					
Casing Record							

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All interpretations are opinions based on inferences from electrical or other measurements and Midwest Wireline Services, LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Midwest Wireline Services, LLC will not 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.

Comments

N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.

Bazine Kansas
 South to 60 Rd, 1 West, South Into

Log Measured From: Kelly Bushing 5 Ft. Above Permanent Datum

THANK YOU FOR USING MIDWEST WIRELINE LLC
 785-625-3858

Your Midwest Wireline Crew	This Log Record Was Witnessed By
Engineer: J. Henrickson	Primary Witness: Sean Deenihan
Operator:	Secondary Witness:
Operator:	Secondary Witness:
Operator:	Secondary Witness:

Log Variables

DatabaseC:\ProgramData\Warrior\Data\arp_dechant_1.db
Dataset field/well/stackml/pass3.1/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	120	5.5	0	1	2	2.71
NPORSEL	PERFS	SNDERR mmho/m	SNDERRM mmho/m	SPSHIFT mV	SRFTEMP degF	SZCOR	TDEPTH ft
Limestone	0	0	0	360	55	Off	4423

Variable Description

A : Cement Factor (a)
BOREID : Borehole I.D.
BOTTEMP : Bottom Hole Temperature
CASEOD : Casing O.D.
CASETHCK : Casing Thickness
FLUIDDEN : Fluid Density
M : Cement Exp (m)
MATRXDEN : Matrix Density

NPORSEL : Neutron Porosity Curve Select
PERFS : Perforation Flag
SNDERR : Deep Sonde Error Correction
SNDERRM : Medium Sonde Error Correction
SPSHIFT : S.P. Baseline Offset
SRFTEMP : Surface Temperature
SZCOR : CN Size Cor. ?
TDEPTH : Total Depth

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.58		GR-M&W (233-M&W)	3.00	3.50	50.00
CNLSC	37.48		CNT-M&W (207-MW)	5.50	3.50	100.00
CNSSC	36.73					
LSD	28.43		CDL-M&W (817-947)	8.50	4.00	250.00
DCAL	28.42					
SSD	27.93					
ML-PSIML			ML-PSIML (PSI-01) GO Micro log tools converted to Simplec electronics	7.58	4.00	65.00
MCAL	19.83		MI	19.83	19.83	
MI	19.83					
MN	19.83					
RLL3F	15.80	RLL3	15.80			
RLL3	15.80					

CILD 8.00

CILM 4.70

SP 0.20

DIL-PSI HIGH TEMP (952-828)

18.50

3.50

220.00

Dataset: arp_dechant_1.db: field/well/stackml/pass3.1
 Total length: 43.08 ft
 Total weight: 685.00 lb
 O.D.: 4.00 in



MIDWEST WIRELINE

Main Pass

Database File arp_dechant_1.db
 Dataset Pathname stackml/pass3.1
 Presentation Format _cdl
 Dataset Creation Wed Feb 03 23:21:57 2021
 Charted by Depth in Feet scaled 1:600

0	GAMMA RAY (GAPI)	150
6	DCAL (in)	16

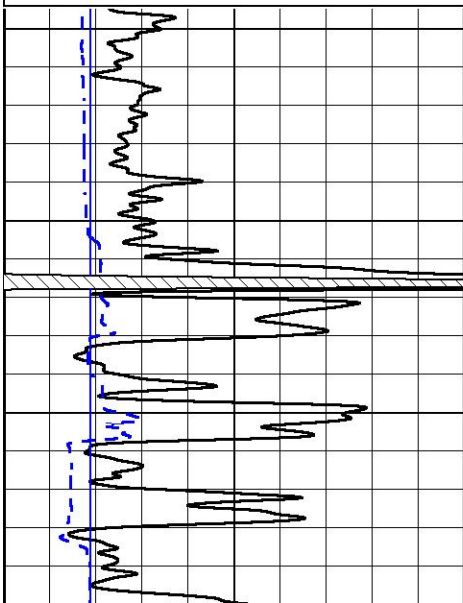
COMPENSATED DENSITY (2.65 MA)

30 (pu) -10

BULK DENSITY (g/cc) 3

15000 LINE TENSION (lb) 0

-0.25 CORRECTION (g/cc) 0.25

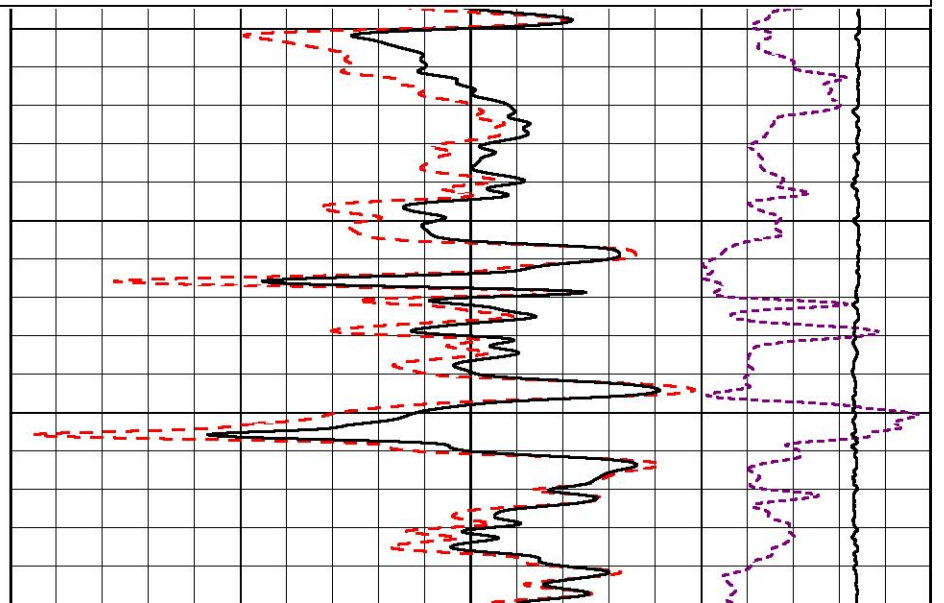


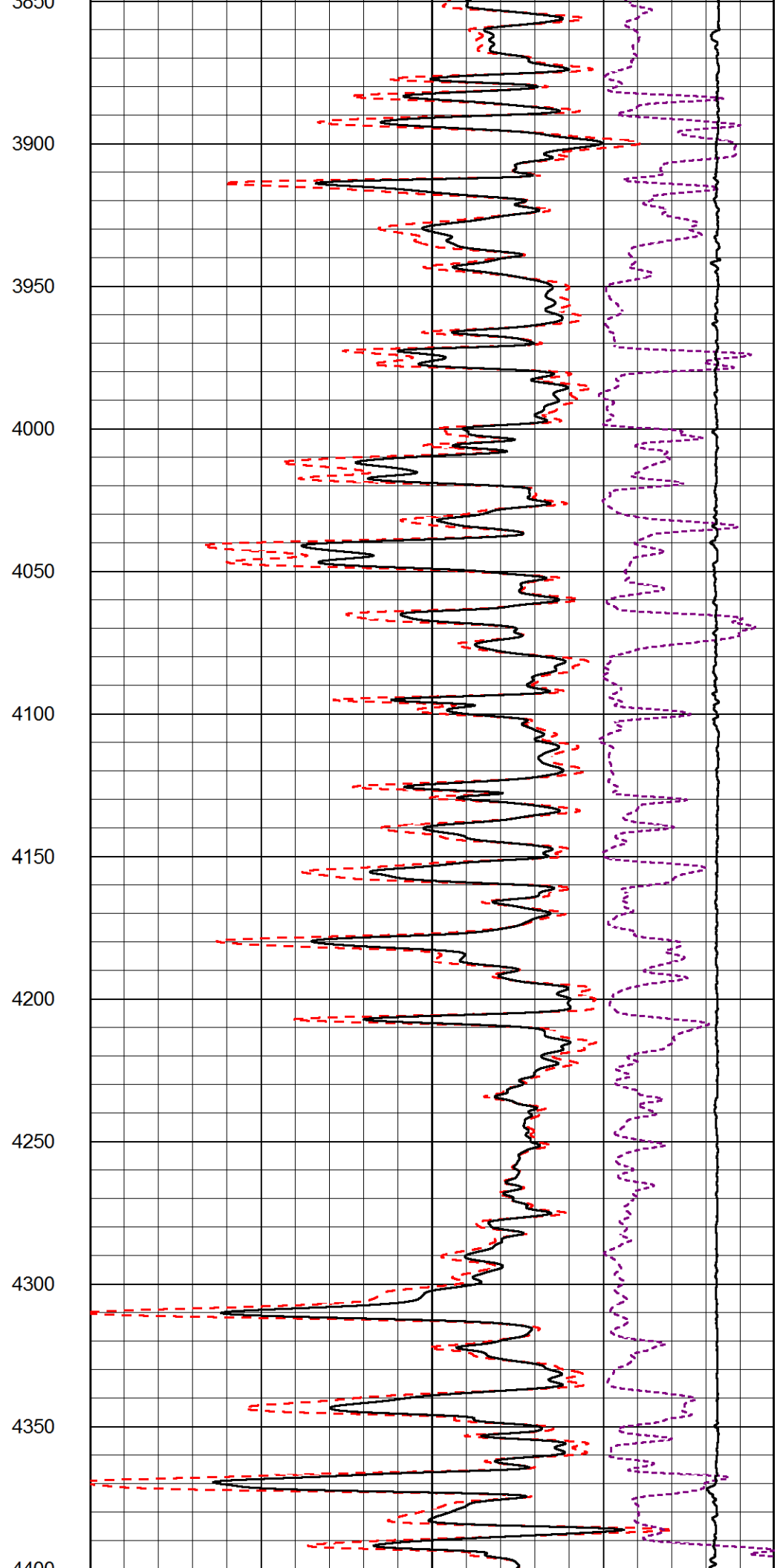
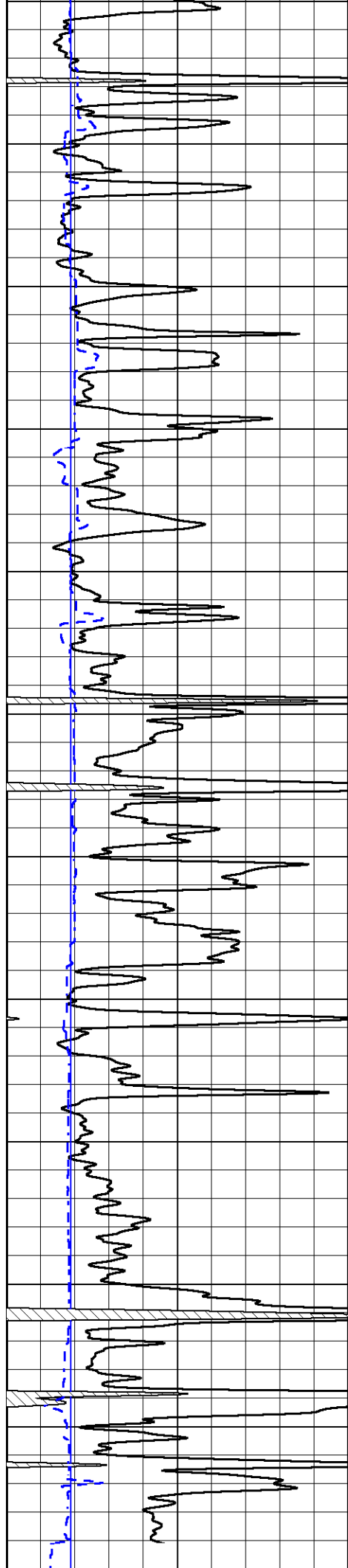
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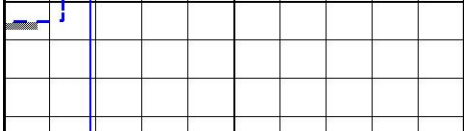
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3800

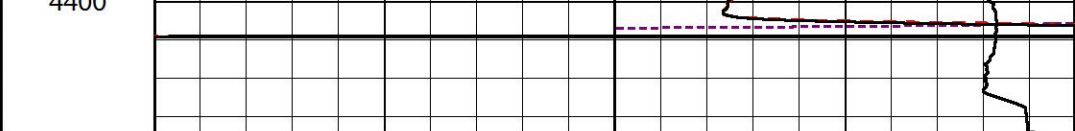
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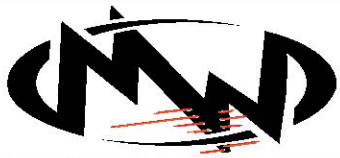


4400



0	GAMMA RAY (GAPI)	150
6	DCAL (in)	16

COMPENSATED DENSITY (2.65 MA)		
30	(pu)	-10
2	BULK DENSITY (g/cc)	3
15000	LINE TENSION (lb)	0
-0.25	CORRECTION (g/cc)	0.25



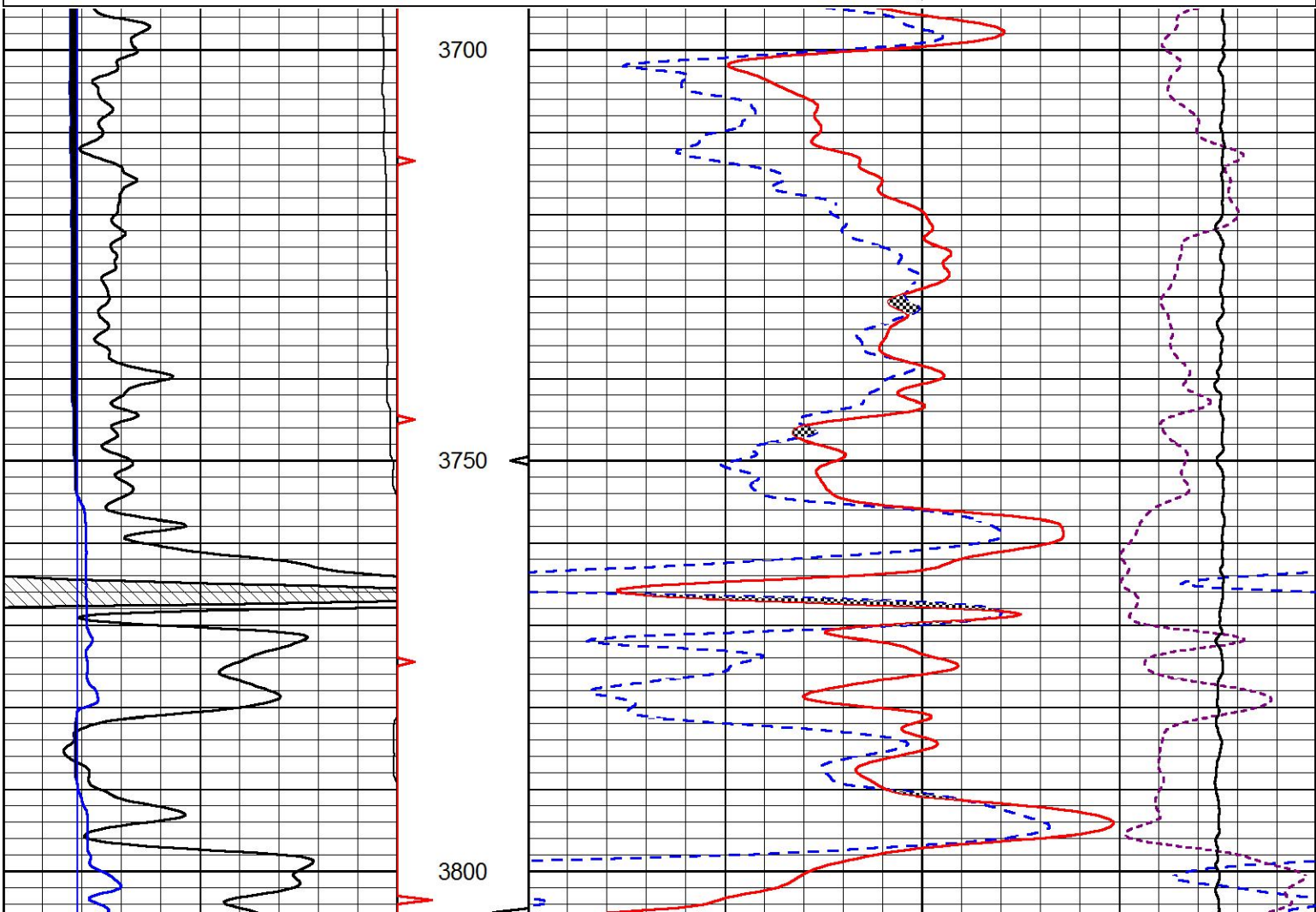
MIDWEST WIRELINE

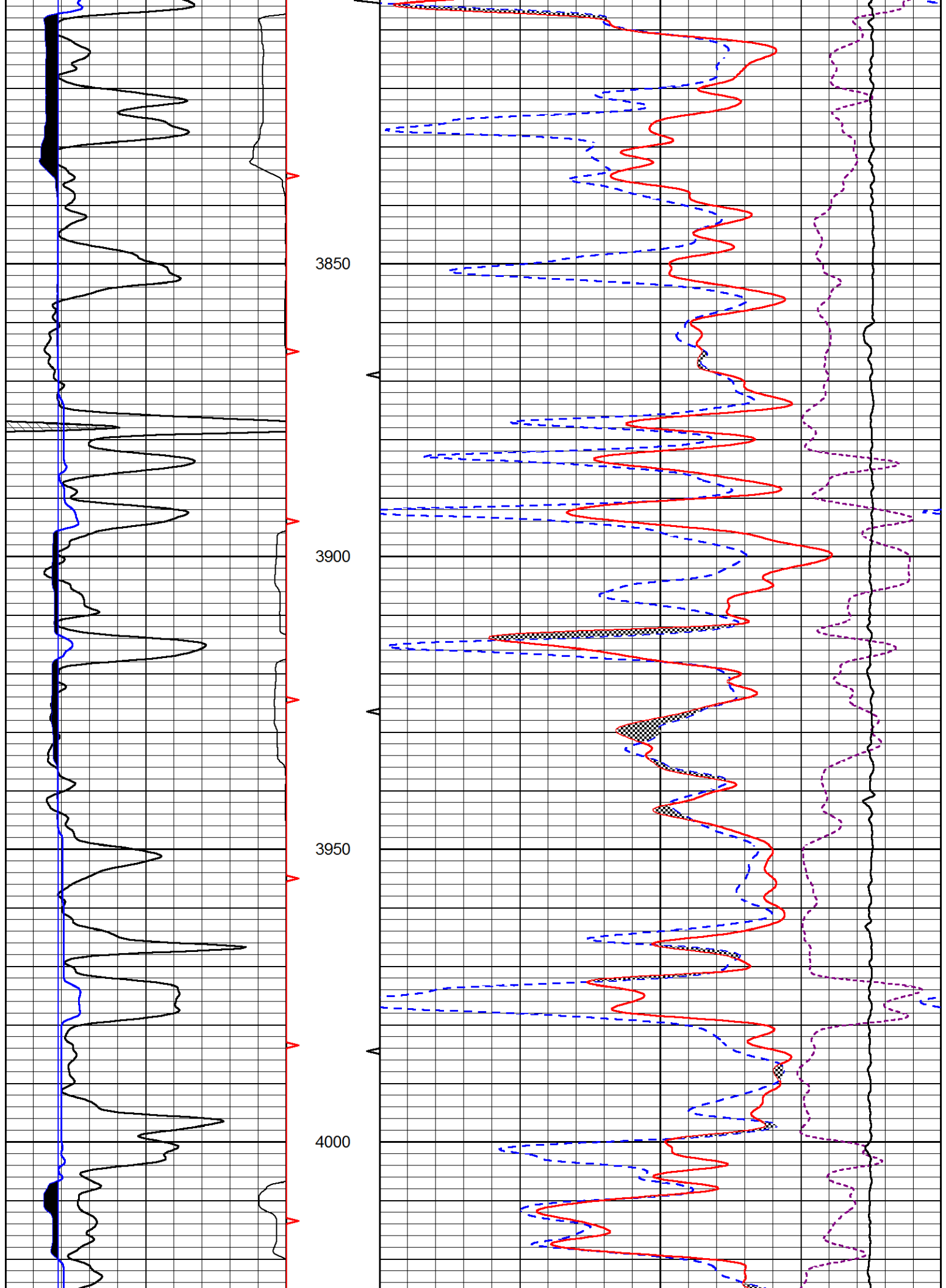
Main Pass

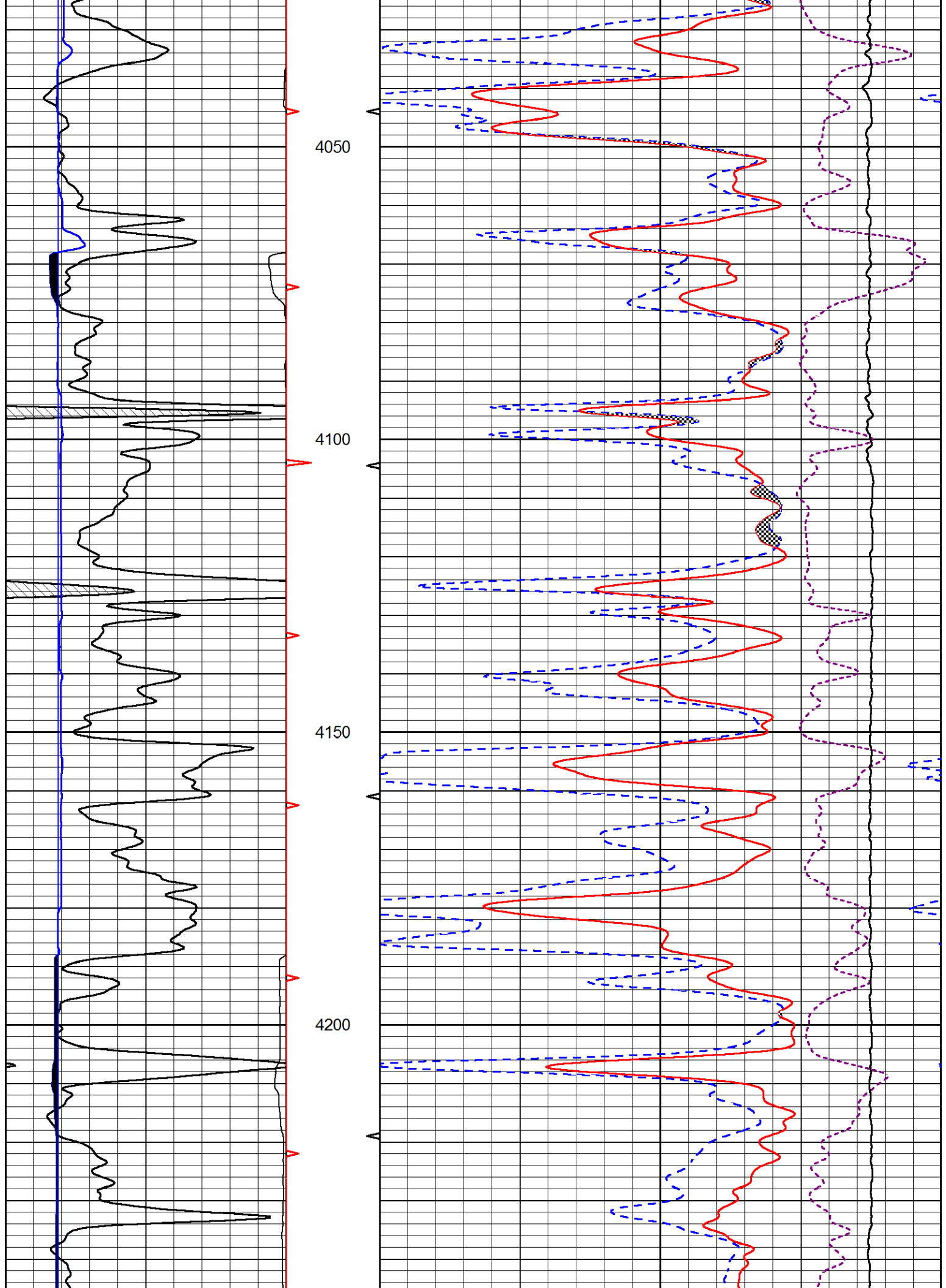
Database File arp_dechant_1.db
 Dataset Pathname stackml/pass3.1
 Presentation Format _CNDLS~1
 Dataset Creation Wed Feb 03 23:21:57 2021
 Charted by Depth in Feet scaled 1:240

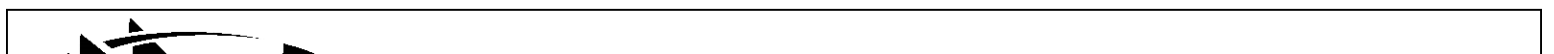
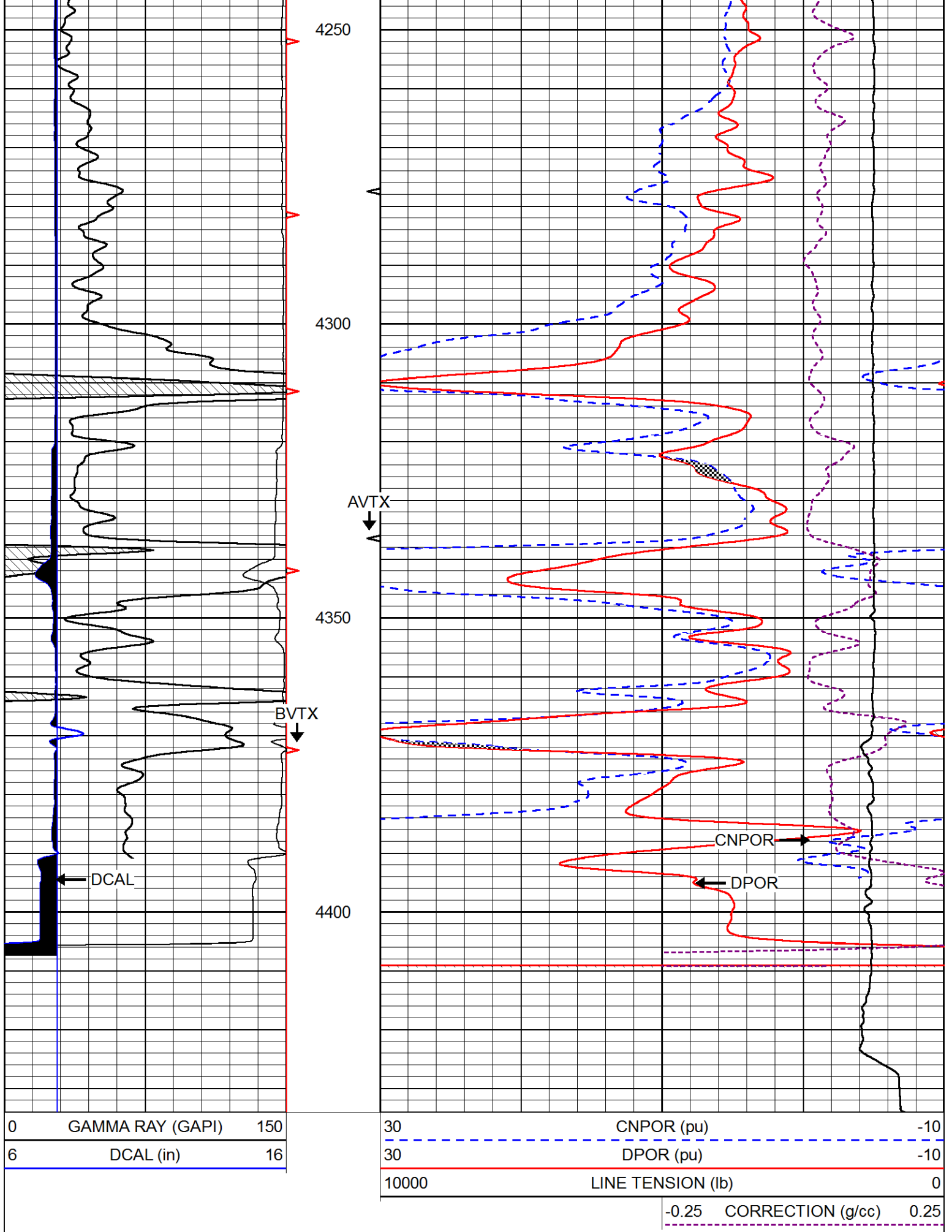
0	GAMMA RAY (GAPI)	150
6	DCAL (in)	16

30	CNPOR (pu)	-10
30	DPOR (pu)	-10
10000	LINE TENSION (lb)	0
-0.25	CORRECTION (g/cc)	0.25











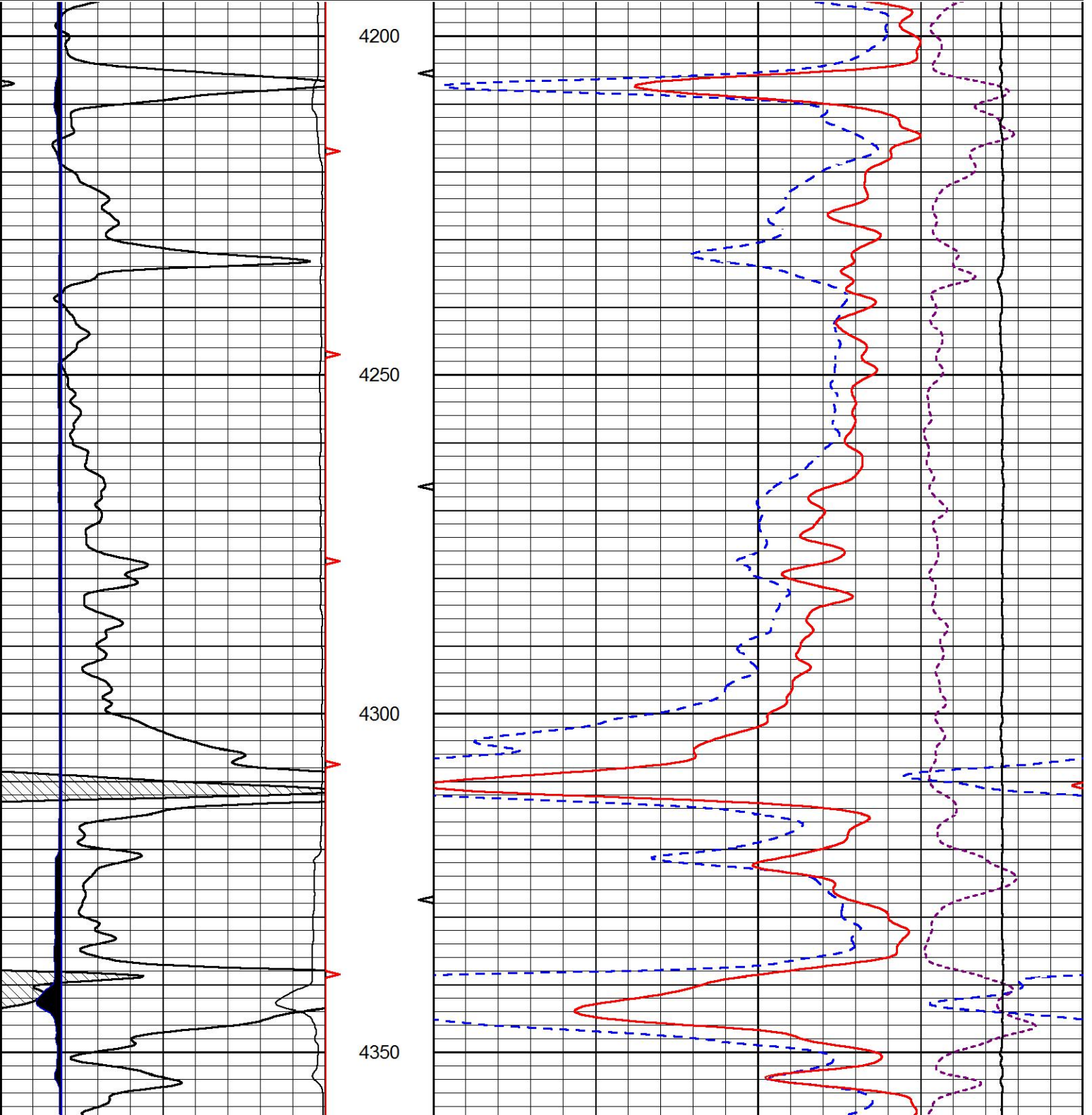
Repeat Section

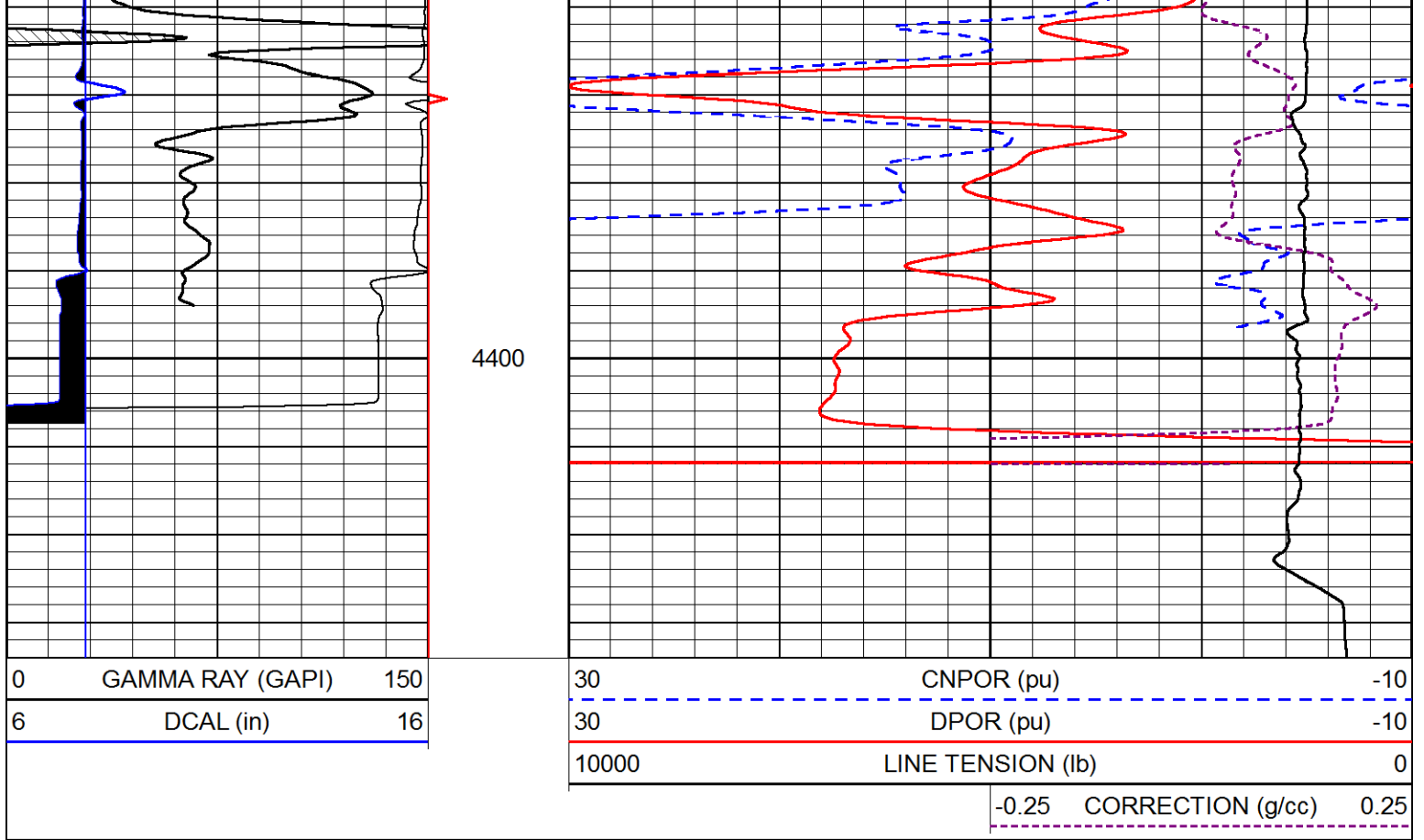
MIDWEST WIRELINE

Database File arp_dechant_1.db
 Dataset Pathname stackml/pass2.1
 Presentation Format _cndlspec
 Dataset Creation Wed Feb 03 22:58:10 2021
 Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
6	DCAL (in)	16

30	CNPOR (pu)	-10
30	DPOR (pu)	-10
10000	LINE TENSION (lb)	0
-0.25	CORRECTION (g/cc)	0.25





Calibration Report

Database File arp_dechant_1.db
 Dataset Pathname stackml/pass3.1
 Dataset Creation Wed Feb 03 23:21:57 2021

Dual Induction Calibration Report

Serial-Model: 952-828-PSI HIGH TEMP
 Calibration Performed: Sun Jan 17 01:42:03 2021

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	167.000	835.000	0.000	255.000	mmho/m	0.455	-33.500
Medium	0.000	1348.000	142.000	255.000	mmho/m	0.325	-31.000

Microlog Calibration Report

Serial-Model: PSI-01-PSIML
 Performed: Sun Jan 17 01:42:11 2021

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	15000.0000	-0.4000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	17000.0000	0.0000
Caliper	1.0033	1.0841	5.0000	16.5000	in	142.3500	-138.6000

Compensated Density Calibration Report

Serial-Model: 817-947-M&W
 Source / Verifier: 16055D / 2ci

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	6127.15	5922.31	cps
Aluminum	2.670	g/cc	1141.85	3762.09	cps
Spine Angle = 74.89			Density/Spine Ratio = 0.526		
	Size		Reading		
Small Ring	4.50	in	1.02		
Large Ring	14.50	in	1.23		

Compensated Neutron Calibration Report

Serial Number: 207-MW
Tool Model: M&W
Calibration Performed: WED FEB 13 10:30:30 2019

Detector	Readings	Target	Normalization
Short Space	6240.00 cps	1000.00 cps	1.6025
Long Space	460.00 cps	1000.00 cps	1.9500

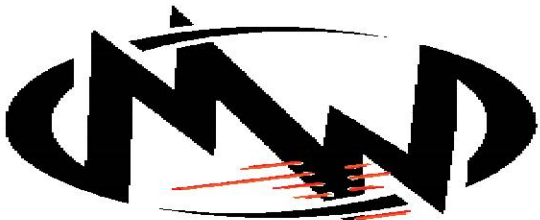
Gamma Ray Calibration Report

Serial Number: 233-M&W
Tool Model: M&W
Calibration Performed: Sun Sep 20 22:10:24 2020

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.5500 GAPI/cps



MIDWEST WIRELINE

Company ARP Operating, LLC
Well Dechant #1
Field Wildcat
County Ness
State Kansas