



Micro Electric Log

Company Berexco, LLC.
Well Bailey OE #3-27
Field Amazon East Ditch
County Finney State Kansas

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Field Amazon East Ditch
County Finney
State Kansas

Location: 1490' FNL & 983' FWL
NWNE SWNW
SEC 27 TWP 22S RGE 34W
Permanent Datum G.L. Elevation 2940 ft.
Log Measured From K.B. , 12 ft. above perm. datum
Drilling Measured From K.B.
Other Services
CNL, LDT
IAT
Elevation
K.B. 2952 ft.
D.F. 2950 ft.
G.L. 2940 ft.

Date 25-Feb-2019

Run Number	One		
Depth Driller	4850'		
Depth Logger	4840'		
Bottom Logged Interval	4803'		
Top Log Interval	3600'		
Casing Driller	8.625" @ 1774'	@	@
Casing Logger	1774'		
Bit Size	7.875"	@	@
Type Fluid in Hole	WBM		
Density / Viscosity	9.4 / 53		
pH / Fluid Loss	10.5 / 7.2		
Source of Sample	Mud Tank		
Rm @ Meas. Temp	0.898 @ 75 °F	@	@
Rmf @ Meas. Temp	0.673 @ 75 °F	@	@
Rmc @ Meas. Temp	1.22 @ 75 °F	@	@
Source of Rmf / Rmc	Calculated		
Rm @ BHT	0.106 @ 94 °F	@	@
Time Circulation Stopped	8:00		
Time Logger on Bottom	11:30		
Maximum Recorded Temperature	94 °F		
Equipment Number	10002		
Location	OKC		
Recorded By	B. Oetting		
Witnessed By	E. Grieves		

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Equipment and Log Data

Service Order: 12734

Gamma		Density		Neutron		Sonic		IAT/DLL	
Run No.	One	Run No.	One	Run No.	One	Run No.	One	Run No.	One
Serial No.	5939	Serial No.	112	Serial No.	2542	Serial No.		Serial No.	106
O.D.	3.375 in.	Source No.	50129B	Source No.	87624G	Centralizers		Standoffs	2 @ 0.5"
		O.D.	4.5 in.	O.D.	3.375 in.	O.D.	3.375 in.	O.D.	3.875 in.

Logging Pass Data

General		Gamma		Density		Neutron		Sonic		IAT/DLL	
		Scales		Scales		Scales		Scales		Scales	
Run	Depths	Left	Right	Left	Right	Matrix	Left	Right	Matrix	Left	Right
One	TD CSG	0	150	0.3	-0.1	2.71 g/cc	0.3	-0.1	Lime	0.2	2000

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

Toolstring ran as per diagram
Density is presented on a 2.71g/cc Matrix, Neutron is presented on a Limestone Matrix,
Chlorides 3400 ppm
Annular volume computed using 5.5" Casing
Washouts and borehole rugosity affect data quality and repeatability

LCM reported 2 #/bbl could cause MEL to show increased separation
More separation shown on Main Pass than RepeatPass

YOUR CREW TODAY: J. Washington, R. Valdez

THANK YOU FOR CHOOSING ALLIED HORIZONTAL WIRELINE. OKLAHOMA CITY. (405) 445-7135.

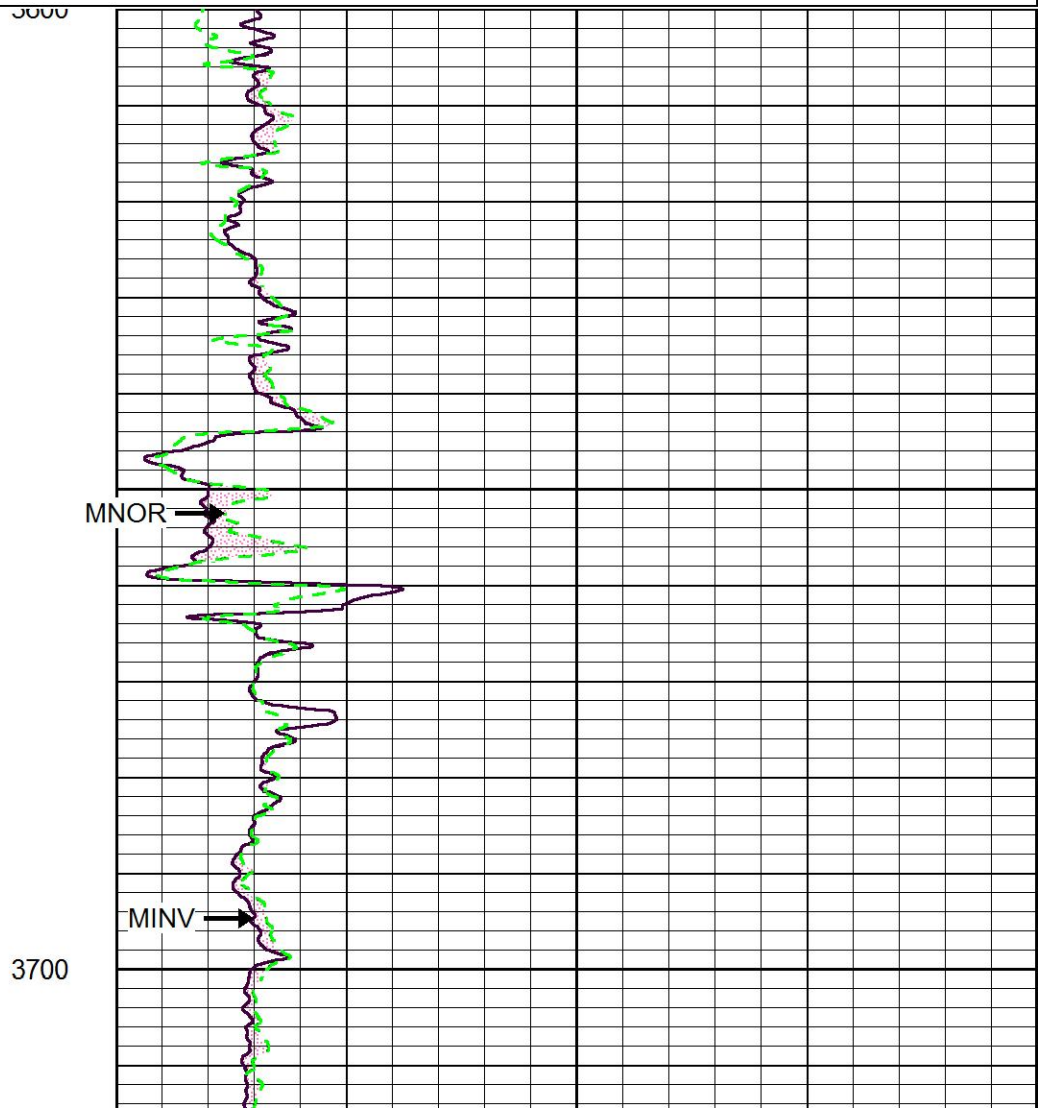
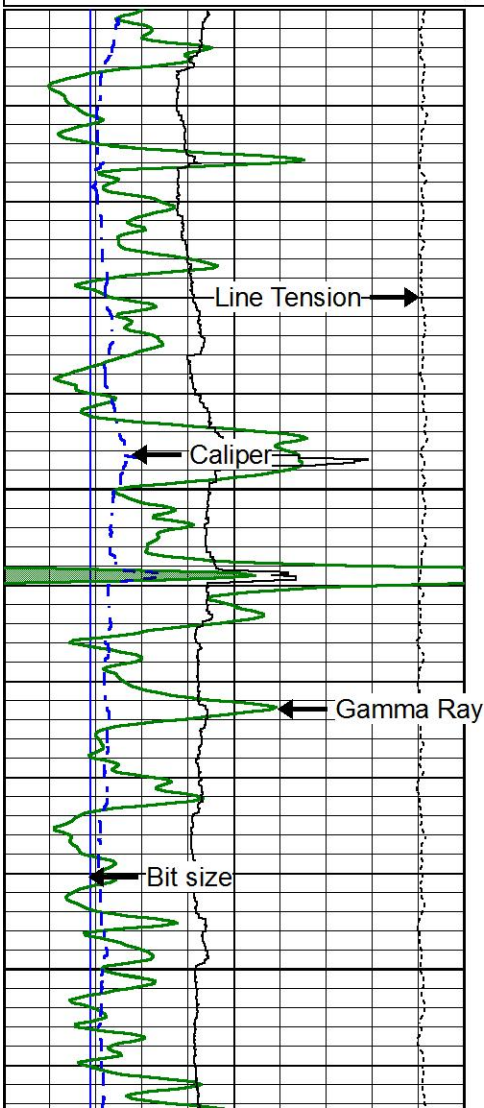


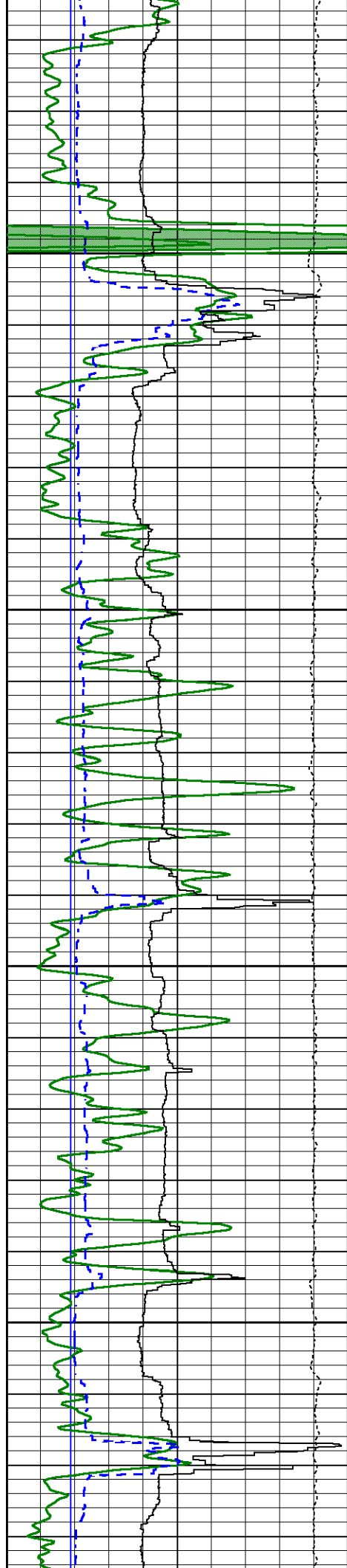
Main Pass

Database File berexco_bailey_oe_3-27.db
Dataset Pathname pass7
Presentation Format OKC-ME~1
Dataset Creation Mon Feb 25 15:47:25 2019
Charted by Depth in Feet scaled 1:240

6	Bit size (in)	16
10000	Line Tension (lb)	0
0	Gamma Ray (GAPI)	150
6	Caliper (in)	16
6	MCAL (in)	16

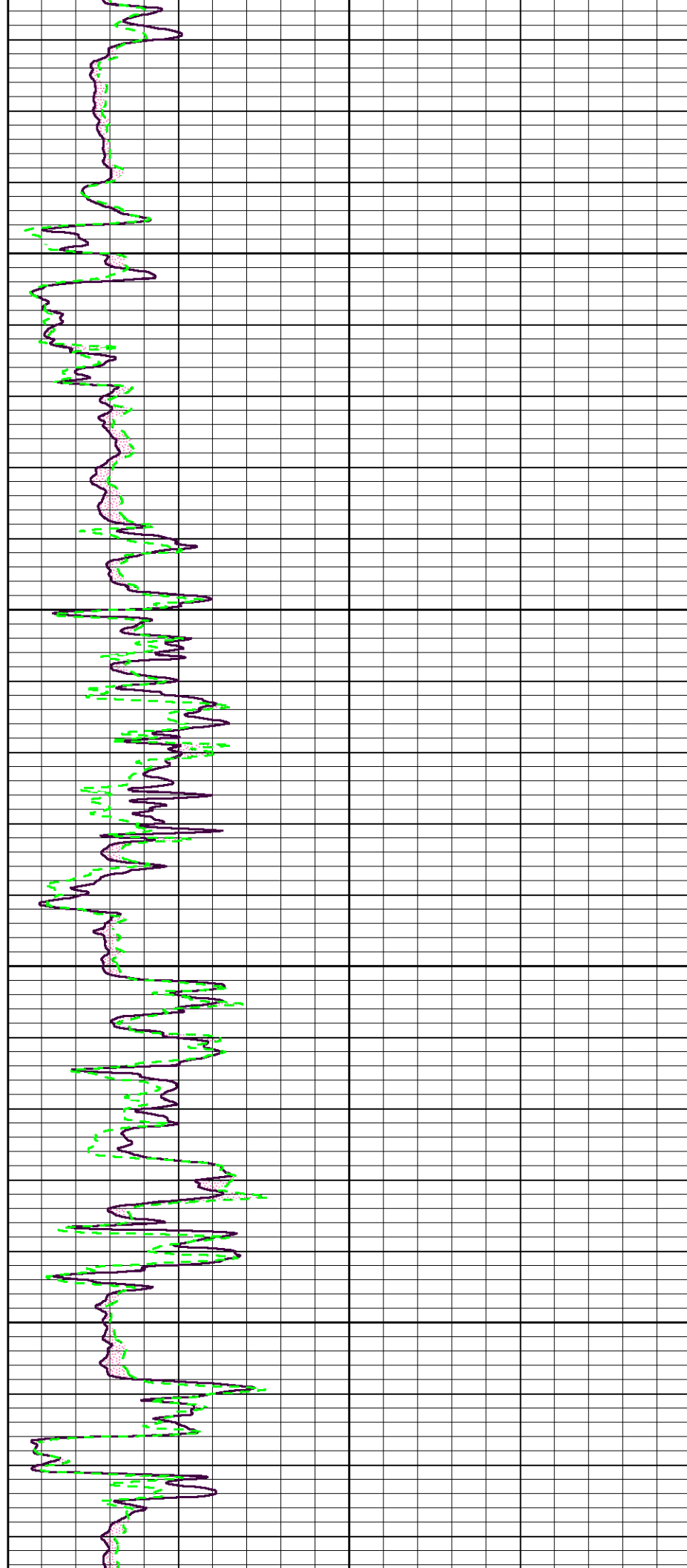
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0	MNOR (Ohm-m)	40

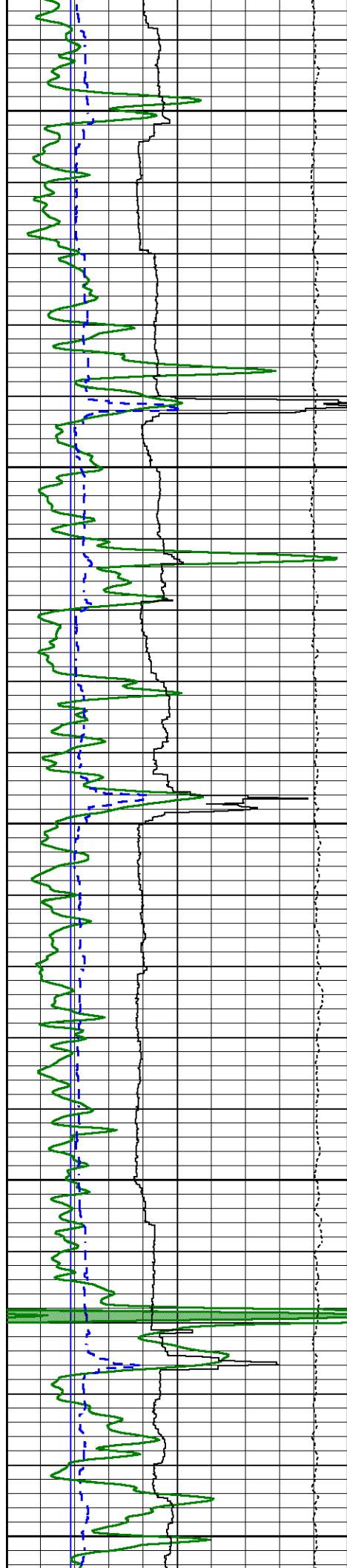




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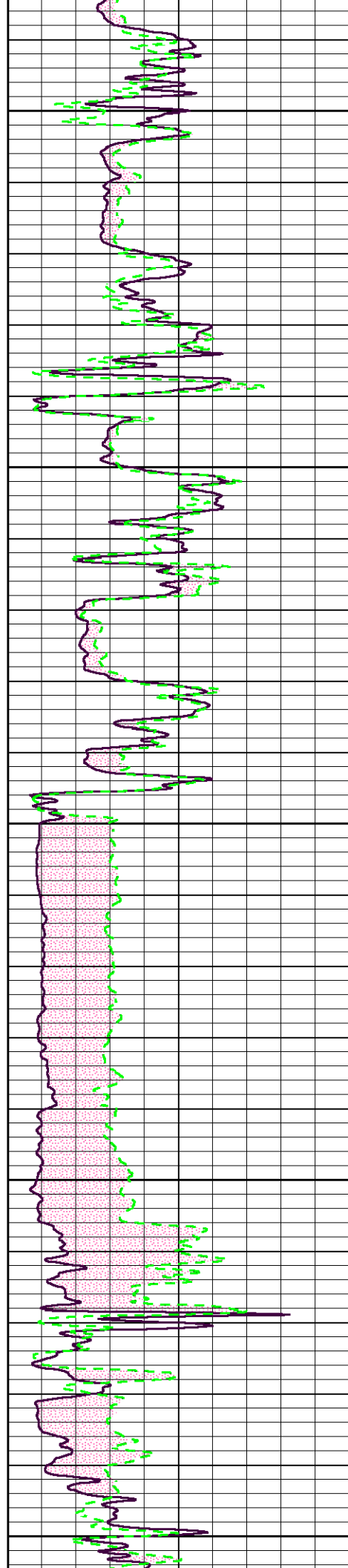
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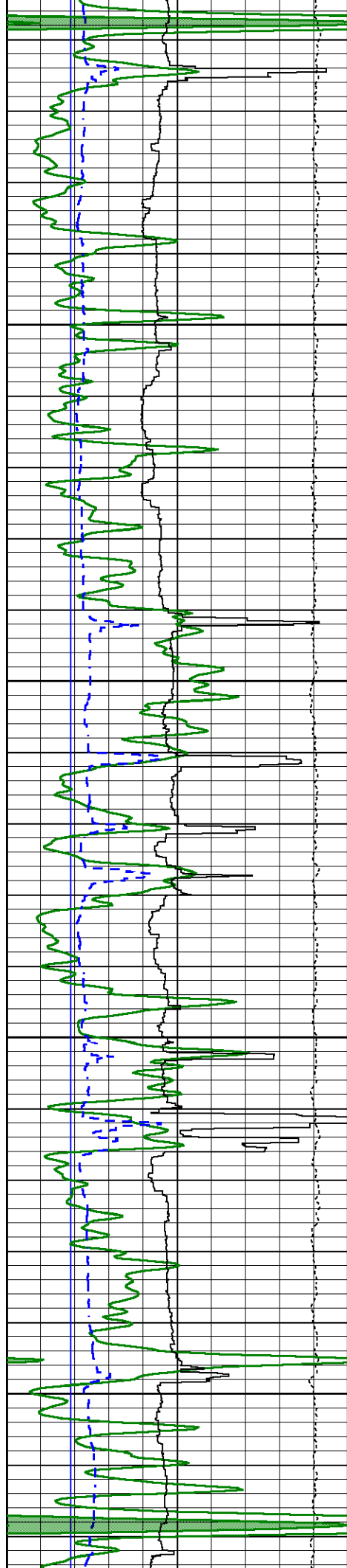




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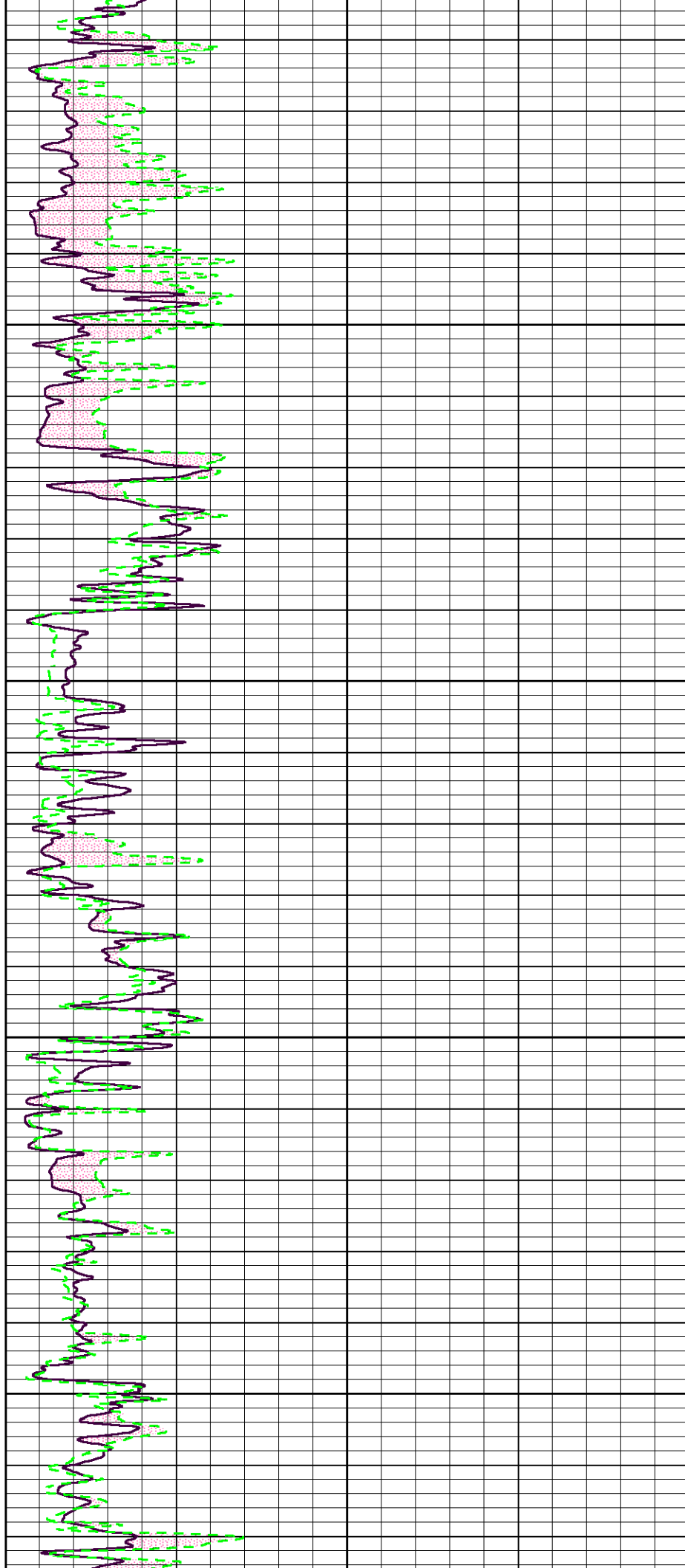
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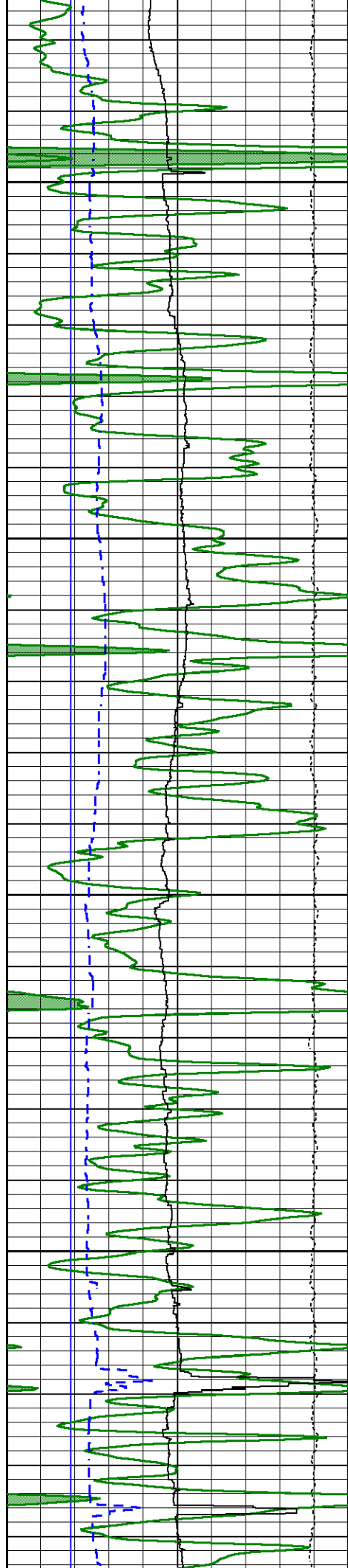




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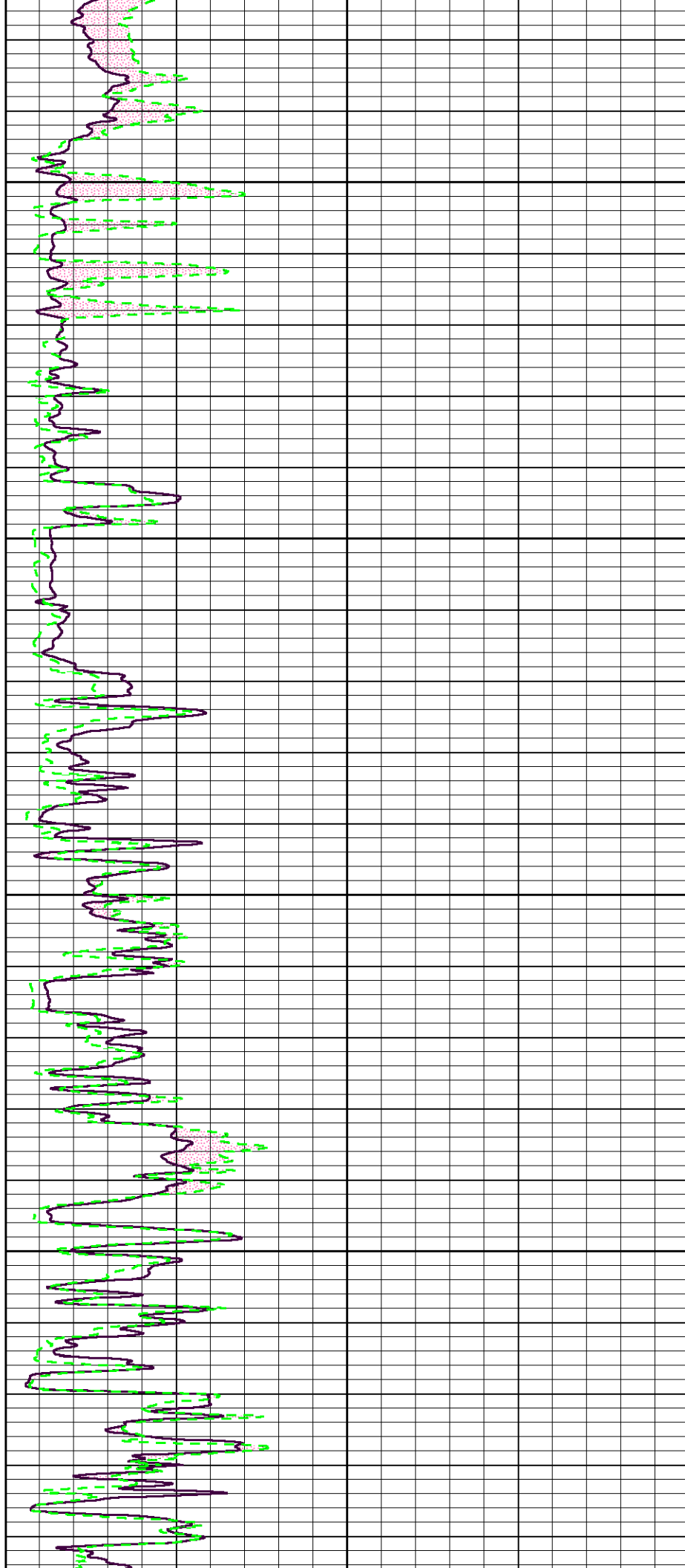
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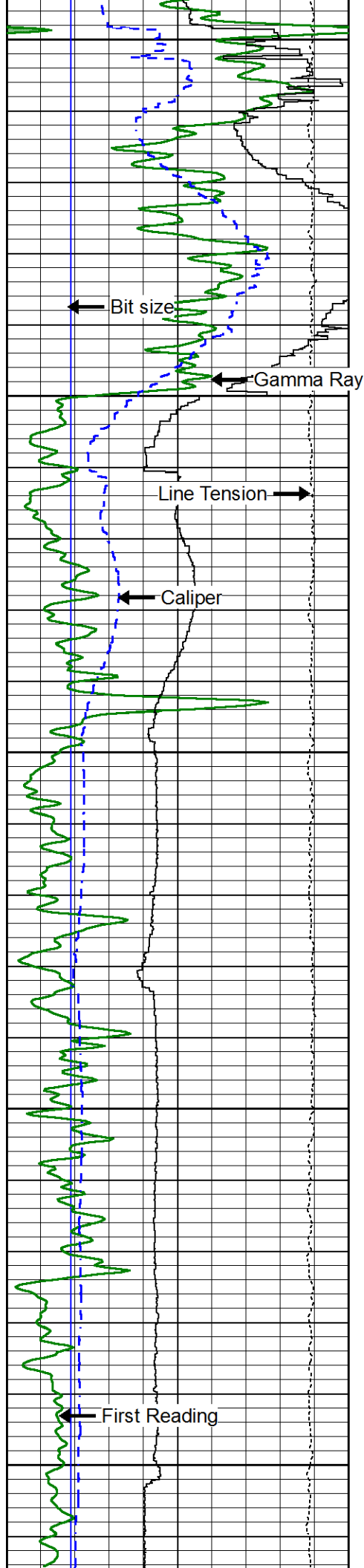




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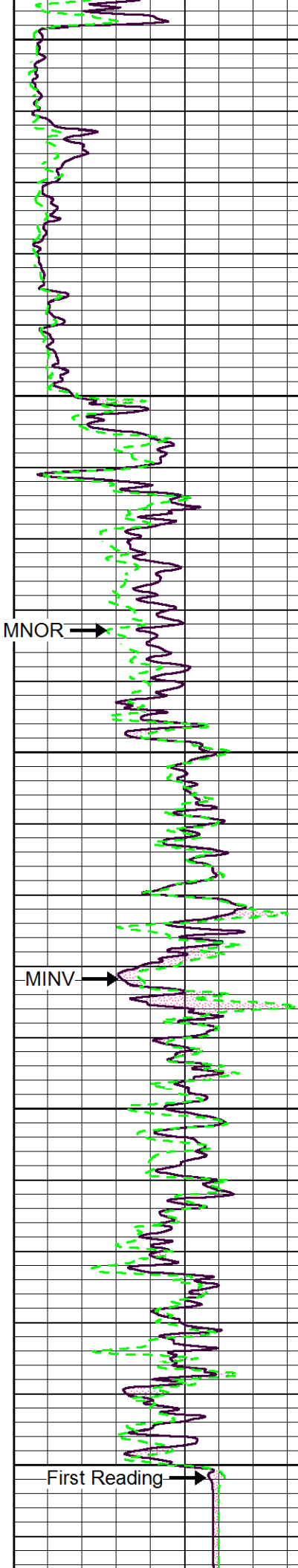




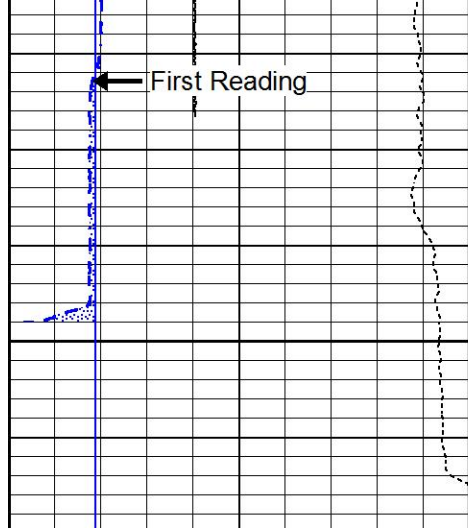
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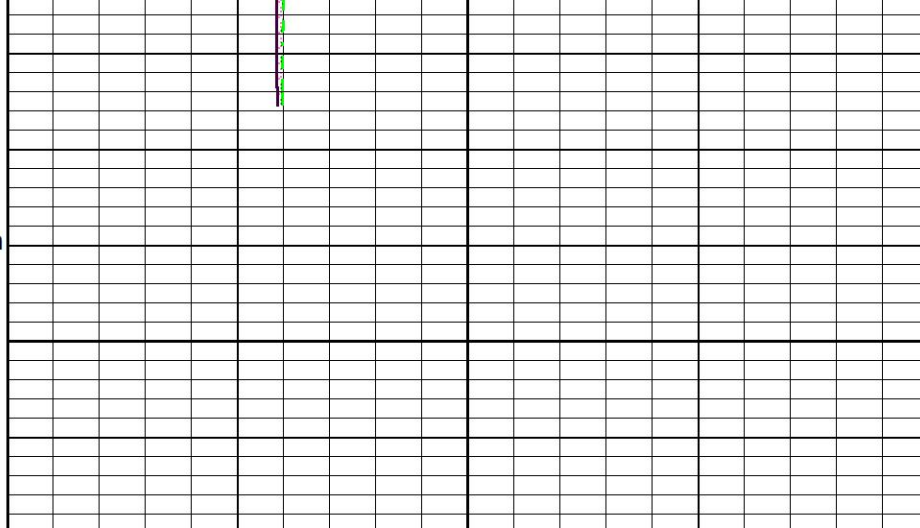
4800



First Reading



Total Depth



6	Bit size (in)	16
10000	Line Tension (lb)	0
0	Gamma Ray (GAPI)	150
6	Caliper (in)	16
6	MCAL (in)	16

0	MINV (Ohm-m)	40
0	MNOR (Ohm-m)	40

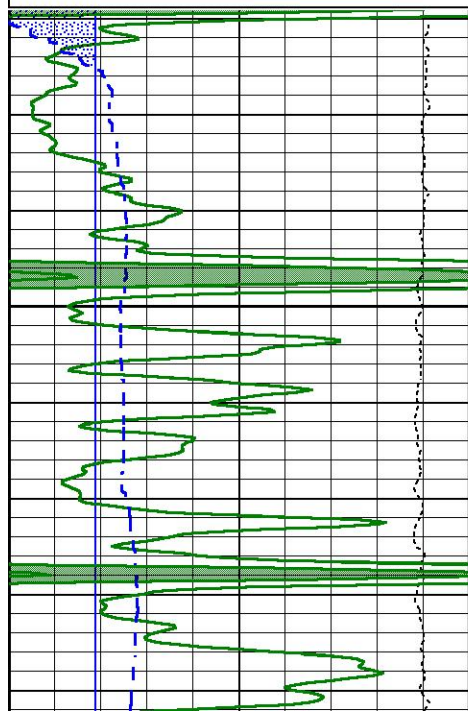


Repeat Pass

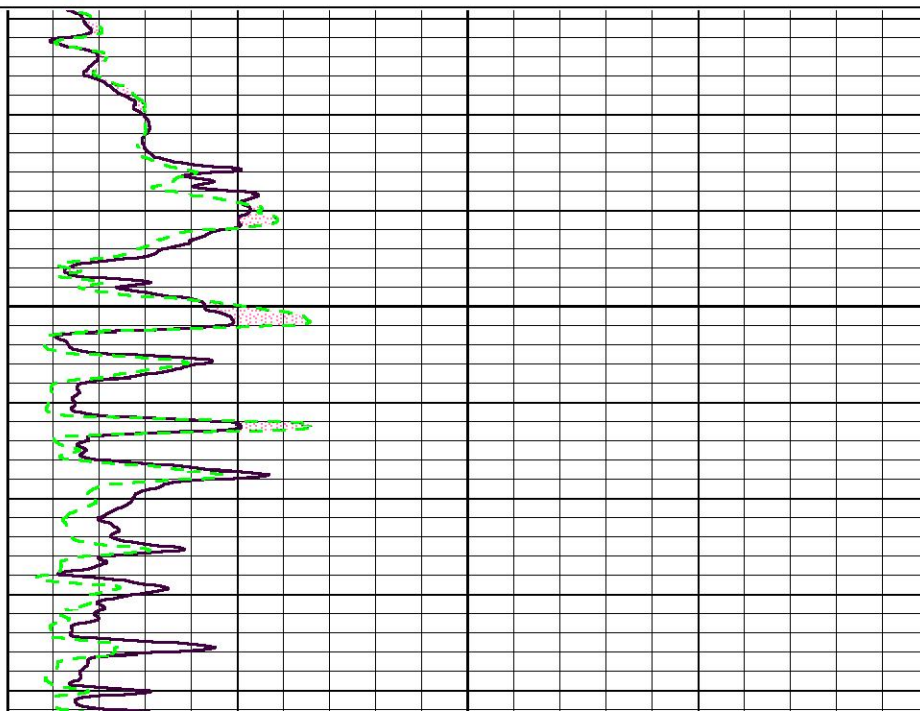
Database File berexco_bailey_oe_3-27.db
 Dataset Pathname pass3.6
 Presentation Format okc-mel-base
 Dataset Creation Mon Feb 25 16:01:08 2019 by Calc Sondex
 Charted by Depth in Feet scaled 1:240

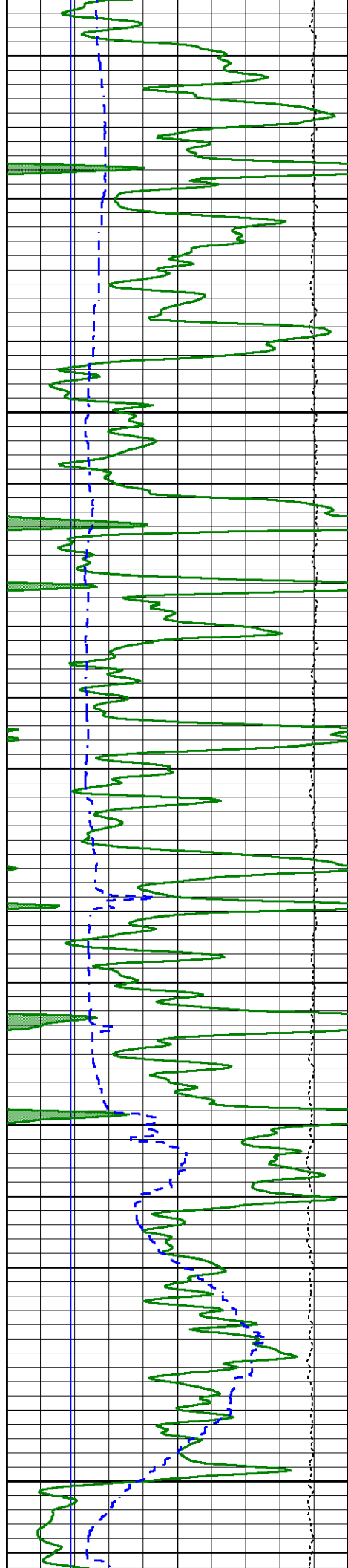
6	Bit size (in)	16
10000	Line Tension (lb)	0
0	Gamma Ray (GAPI)	150
6	Caliper (in)	16

0	MINV (Ohm-m)	40
0	MNOR (Ohm-m)	40



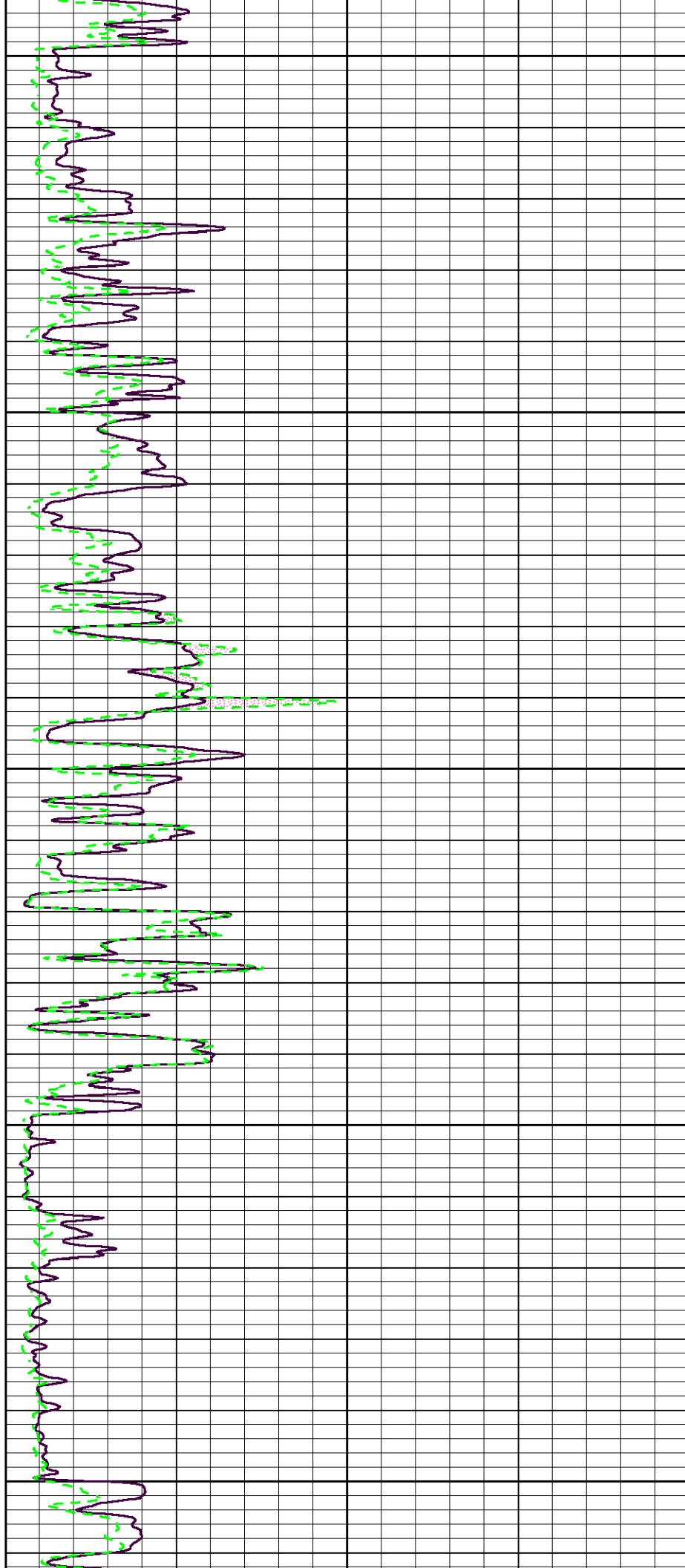
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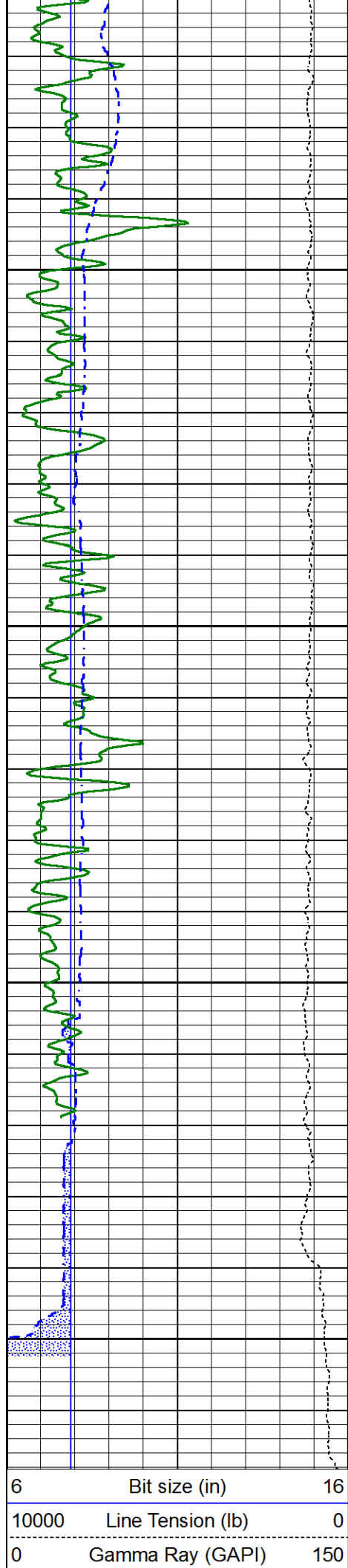




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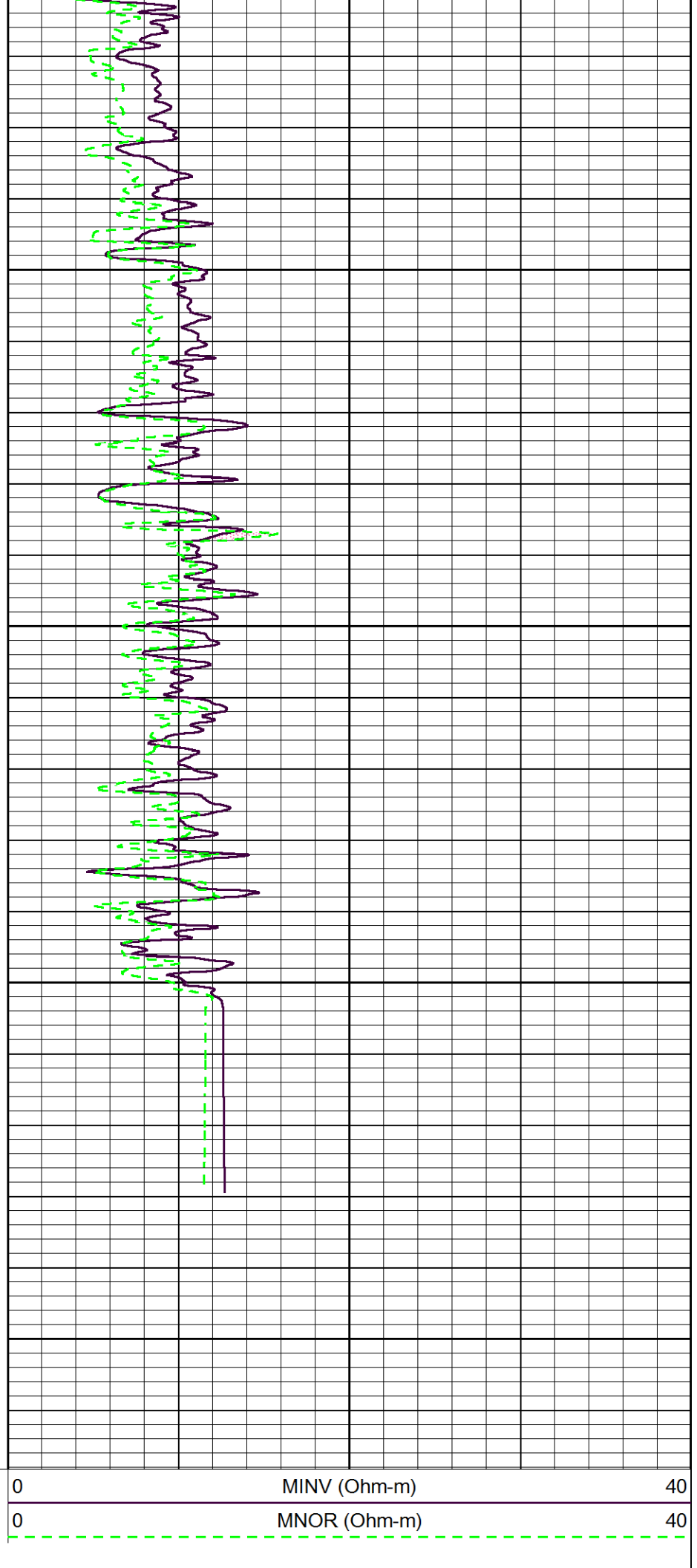
4600





4700

4800



0	MINV (Ohm-m)	40
0	MNOR (Ohm-m)	40

6	Caliper (in)	16
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Log Variables

DatabaseC:\Sondex\Sondex Warrior\Data\berexco_bailey_oe_3-27.db

Dataset field/well/run1/pass5/_vars_

Top - 1774.00 ft

FRMSALIN kppm 0	MUDSALIN kppm 0	DEVI deg 0	SRFTEMP degF 68	SO in 0.25	DE-CENT Yes	CASED? Yes	CASEWGHT lb/ft 24
NPORSEL Limestone	AIR_HOLE? No	MudWgt lb/gal 9.4	FLUIDDEN g/cc 1	MATRXDEN g/cc 2.71	SPSHIFT mV 0	CASETHCK in 0	CASEOD in 8.625
PERFS 0	TDEPTH ft 4850	BOTTEMP degF 110	BOREID in 12.25				

1774.00 ft - Bottom

FRMSALIN kppm 0	MUDSALIN kppm 0	DEVI deg 0	SRFTEMP degF 68	SO in 0.25	DE-CENT Yes	CASED? No	CASEWGHT lb/ft 15.5
NPORSEL Limestone	AIR_HOLE? No	MudWgt lb/gal 9.4	FLUIDDEN g/cc 1	MATRXDEN g/cc 2.71	SPSHIFT mV 0	CASETHCK in 0	CASEOD in 5.5
PERFS 0	TDEPTH ft 4850	BOTTEMP degF 110	BOREID in 7.875				

Calibration Report

Database File berexco_bailey_oe_3-27.db
Dataset Pathname pass5
Dataset Creation Mon Feb 25 12:20:11 2019 by Log Sondex

Induction Array Tool Calibration Report

Serial Number: B10106
Tool Model: 002

Master Calibration Performed: Tue Nov 28 10:59:51 2018
Temperature: 68.7 degF

Sonde Error:

Array	1	2	3	4	5	6	7	
Real	192.8	-11.9	-39.2	-13.2	-1.7	1.8	6.3	mmho/m
Imaginary	-65.1	-116.4	-28.7	-0.7	-6.9	-21.0	-0.3	mmho/m

Loop Gain:

Array	1	2	3	4	5	6	7	
Loop (real)	537.7	678.5	1295.3	1394.1	1144.8	712.8	404.8	mmho/m
Loop (imaginary)	73.3	92.5	389.8	419.5	344.5	214.5	121.8	mmho/m
Real	751.4	713.1	1269.0	1383.2	1170.0	744.4	431.8	mmho/m
Imaginary	7.4	-22.6	351.2	413.7	341.5	200.9	128.1	mmho/m
Gain (real)	0.963	0.936	0.990	0.998	0.977	0.960	0.951	
Gain (imaginary)	1.012	0.986	1.026	1.012	0.989	0.967	0.948	

Before Survey Verification Performed: Tue Aug 04 09:42:06 2015

Sonde 1 Temperature:		83.1 degF		Sonde 2 Temperature:		79.2 degF	
Array 1 Temperature:		81.6 degF					
Array	1	2	3	4	5	6	7
TxIR	-0.0	-0.0	0.1	0.1	0.1	0.1	0.1
TxIX	-0.0	-0.0	-0.2	-0.2	-0.2	-0.2	-0.2
Tx Magnitude	0.0	0.0	0.2	0.2	0.2	0.2	0.2
Gain	50.5	64.5	54.5	66.5	80.2	108.5	158.9
RxCR	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
RxCX	0.1	0.1	0.1	0.1	0.2	0.1	0.1
RxC Magnitude	0.1	0.1	0.1	0.1	0.2	0.1	0.1
Tool Module Parameters							
Software Version:		8.0.0.4					
Borehole Size Source:		CALI					
Mud Resistivity Source:		MUDRES					
Mud Resistivity At Surface:		N/A					
Mud Resistivity Surface Temperature:		N/A					
Borehole Corrections:		Automatic					
Minimum Standoff:		0.4 in					
Litho Density Tool Calibration Report							
Serial Number:		B10112S50129B					
Tool Model:		002					
Caliper Calibration Performed:		Fri Jan 18 17:23:35 2019					
		Diameter			Reading		
Small Ring:	9.000	in			1790.600	cps	
Large Ring:	13.000	in			2200.200	cps	
Gain:	0.0098						
Offset:	-8.4863						
Master Calibration Performed:		Fri Jan 18 14:46:32 2019					
Source Number:		50129B					
Medium:		Water					
Al Block Density:		2.6027 g/cc					
	Background	Al Block	Al Block + Fe				
SS1	704.1	4883.0	4756.3		cps		
SS2	1949.6	30593.7	29601.7		cps		
SSTOTAL	4605.5	49303.4	47172.0		cps		
LITH	93.3	547.6	374.8		cps		
LL	183.4	852.0	880.0		cps		
LU	528.9	1098.5	1129.5		cps		
LS	712.3	1950.4	2009.5		cps		
LSTOTAL	1340.9	4848.2	4509.7		cps		
SSHV	1584.3	1588.9	1589.5		V		
LSHV	1516.3	1520.9	1522.0		V		
SSFF	-0.009	0.008	0.002				
LSFF	0.002	-0.009	-0.008				
Before Survey Verification Performed:		Fri Jan 18 12:24:18 2019					
After Survey Verification Performed:		Fri Jan 18 12:26:48 2019					
	Master Background	Before Survey Background	After Survey Background				
SS1	704.1	729.3	739.0		cps		

SS2	1949.6	2097.0	2081.2	cps
SSTOTAL	4605.5	4887.8	4867.8	cps
LITH	93.3	102.0	104.9	cps
LL	183.4	204.5	199.1	cps
LU	528.9	587.0	578.5	cps
LS	712.3	791.5	777.7	cps
LSTOTAL	1340.9	1480.8	1478.2	cps
SSHV	1584.3	1456.7	1456.8	V
LSHV	1516.3	1408.7	1409.0	V
SSFF	-0.009	0.007	0.009	
LSFF	0.002	0.008	-0.001	

Tool Module Parameters				
Software Version:	8.0.0.6			
Borehole Size Source:	CALI			
Pad Type:	2			

Compensated Neutron Tool Calibration Report

Serial Number:	10012542
Tool Model:	009

Master Calibration Performed:	Fri Jan 04 14:52:52 2019			
Source Number:	87624G			
Short Spacing Counts:	6709.01	cps		
Long Spacing Counts:	255.50	cps		
High Voltage:	1342.39	V		
Target Ratio:	27.2000			
Ratio:	26.2583			
K-Factor:	1.0359			

Before Survey Verification Performed:	Fri Jan 04 15:03:09 2019			
After Survey Verification Performed:	Fri Jan 04 15:04:18 2019			
Verifier Number:	6489			
Verifier Values	Master Cal	Before Survey	After Survey	
Short Spacing Counts:	256.34	255.21	253.84	cps
Long Spacing Counts:	249.52	244.92	245.49	cps
High Voltage:	1342.40	1342.41	1342.41	V
Ratio:	1.0273	1.0420	1.0340	

Tool Module Parameters				
Software Version:	8.0.0.5			
Borehole Size Source:	CALI			
Clip Crossplot Porosity:	YES			
Lithology Identification Parameters:				
	Calcite	Quartz	Dolomite	
Uma:	13.77	4.79	9.03	barns/cc
RHOMA:	2.71	2.65	2.88	g/cc

Micro Electric Log Calibration Report

Serial Number:	10022649
Tool Model:	003

Caliper Calibration Performed:	Mon Nov 13 12:40:50 2017			
	Pad Arm		Backup Arm	
	Radius	Reading	Radius	Reading
Small Lip:	9.000 in	1817.200	9.000 in	1677.000

Small Jig:	9.000	in	1847.200	9.000	in	1877.000
Large Jig:	13.000	in	2371.600	13.000	in	2315.300
Gain:			0.0076			0.0063
Offset:			-5.0900			-1.5092
Pad Calibration						
Gain:			Inverse			Normal
Offset:			0.5000			1.0000
			0.0000			0.0000
Tool Module Parameters						
Software Version:						8.0.0.4
Gamma Ray Calibration Report						
Serial Number:						10015939
Tool Model:						001
Performed:						Mon Nov 13 12:01:40 2017
Calibrator Value:			156.0			GAPI
Background Reading:			117.4			cps
Calibrator Reading:			567.2			cps
Sensitivity:			0.3468			GAPI/cps
Borehole Fluid Resistivity Calibration Report						
Serial Number:						P004
Tool Model:						002
Master Calibration Performed:						Wed May 25 15:17:37 2016
Resistivity Polynomial Equation:						
						$0.1429x^3 - 0.4495x^2 + 1.2097x - 0.2854$
Temperature Calibration:						
			Reference			Reading
			71.60	degF		559.80
			167.00	degF		659.50
					bits	bits
Head Tension Unit Calibration Report						
Serial Number:						00001
Tool Model:						011
Performed:						Tue Nov 29 12:33:39 2016
Point #			Reference			Reading
1			-19894.000	lb		8957.860
2			-15010.000	lb		13965.100
3			-9998.000	lb		19076.100
4			-5007.000	lb		24133.000
5			-1009.000	lb		28232.100
6			1017.000	lb		30185.400
7			5040.000	lb		34439.700
8			9970.000	lb		39346.900
9			14955.000	lb		44466.000
10			19770.000	lb		49397.800
						cps

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)



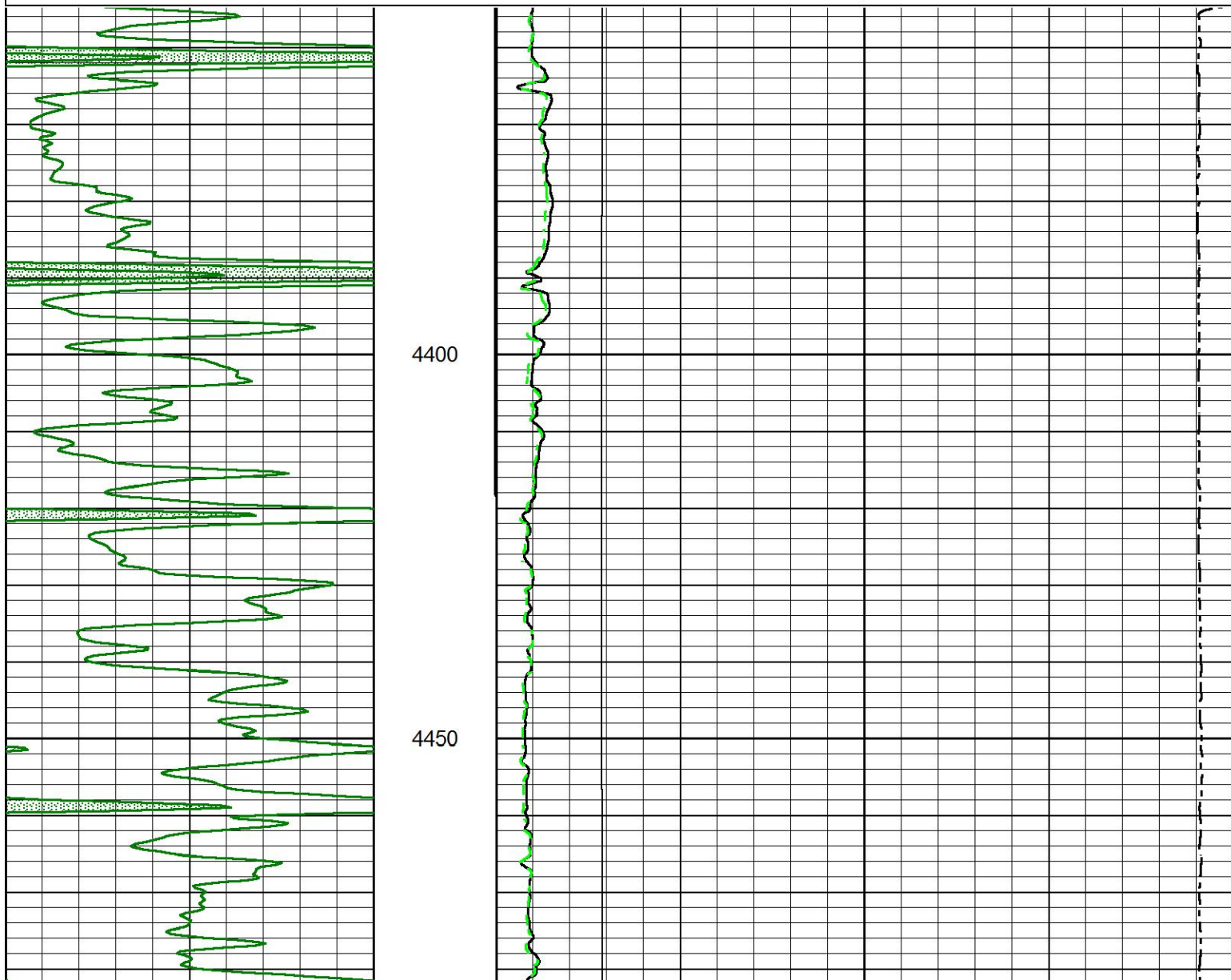
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 Well Bailey OE #3-27
 Field Amazon East Ditch
 County Finney
 State Kansas

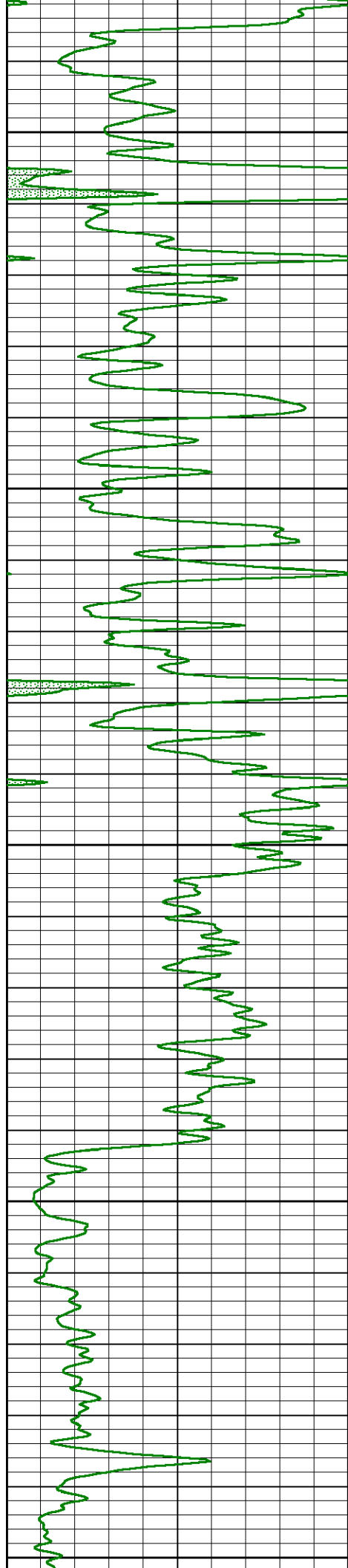


Mud Log Pass

Database File berexco_bailey_oe_3-27.db
 Dataset Pathname pass4.3
 Presentation Format OKC-MU~1
 Dataset Creation Mon Feb 25 13:54:28 2019 by Calc Sondex
 Charted by Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150	MUTEMP	0	MINV (Ohm-m)	40
			(degF)	0	MNOR (Ohm-m)	40
			0 100	0	MUDRES (Ohm-m)	5
					10000 Tension (lb)	0





4500

4550

4600

4650

4700

