



FILE NO: _____
 COMPANY: **MERIT ENERGY COMPANY**
 WELL: **CARRIE 15-1**
 FIELD: **WILDCAT**
 COUNTY: **FINNEY** STATE: **KANSAS**
 API NO: 15-093-21978-00-00

Ver. 4.15
 LOCATION: 1632 FEL & 2315 FNL
 SEC 15 TWP 23S RGE 35W
 OTHER SERVICES: DAL/GR, HDIL/GR, ZDLCN/GR, ZDLCN/HDIL/GR, ML/GR

PERMANENT DATUM: GL ELEVATION 3020.6 FT
 LOG MEASURED FROM: KB 12 FT ABOVE P.D.
 DRILL. MEAS. FROM: KB
 ELEVATIONS: KB 3033 FT, DF 3032 FT, GL 3021 FT

DATE	05-Mar-2020	RUN	1	TRIP	1
SERVICE ORDER	US166109	DEPTH DRILLER	5000 FT	DEPTH LOGGER	5001 FT
BOTTOM LOGGED INTERVAL	5001 FT	TOP LOGGED INTERVAL	3800 FT	CASING DRILLER	8.625 IN @ 1832 FT
CASING LOGGER	1828 FT	BIT SIZE	7.875 IN	TYPE OF FLUID IN HOLE	OBM
DENSITY	9.35 LB/G	VISCOSITY	52 CP	PH	11
FLUID LOSS	6.4 C3	SOURCE OF SAMPLE	PIT	RM AT MEAS. TEMP.	3.038 OHMM @ 75 DEGF
RM AT MEAS. TEMP.	2.278 OHMM @ 75 DEGF	RM AT MEAS. TEMP.	3.797 OHMM @ 75 DEGF	SOURCE OF R/MF	RMC
RM AT MEAS. TEMP.	2.024 OHMM @ 116 DEGF	RM AT BHT	5 HRS	TIME SINCE CIRCULATION	116 DEGF
MAX. RECORDED TEMP.	HL-6670	EQUIP. NO.	HL-6670	LOCATION	OKC, OK
RECORDED BY	S. Yassa	WITNESSED BY	MR. M. Lange		

IN MAKING INTERPRETATIONS OF LOGS OUR EMPLOYEES WILL GIVE THE CUSTOMER THE BENEFIT OF THEIR BEST JUDGEMENT. BUT SINCE ALL INTERPRETATIONS ARE OPINIONS BASED ON INFERENCES FROM ELECTRICAL OR OTHER MEASUREMENTS, WE CANNOT, AND WE DO NOT GUARANTEE THE ACCURACY OR CORRECTNESS OF ANY INTERPRETATION. WE SHALL NOT BE LIABLE OR RESPONSIBLE FOR ANY LOSS, COST, DAMAGES, OR EXPENSES WHATSOEVER INCURRED OR SUSTAINED BY THE CUSTOMER RESULTING FROM ANY INTERPRETATION MADE BY ANY OF OUR EMPLOYEES.

REMARKS

RUN 1 TRIP 1: 1 OPERATION IN WELL
 HDIL/DAL/ML/ZDL/CN/GR RUN IN COMBINATION

CVOL CALCULATED FOR PROPOSED 5.5" CASING
 CALIPER VERIFIED IN CASING

ZDL & CN RUN ON LIMESTONE MATRIX
 RHO MATRIX: 2.68 G/CC

HDIL RUN WITH 0.5" STANDOFFS
 ABC TO CALCULATED: MUD CONDUCTIVITY

ACOUSTIC POROSITY RUN ON LIMESTONE MATRIX

WELLBORE RUGOSITY WILL AFFECT THE ACCURACY OF MEASUREMENTS

CREW: D.HUTCHISON, K.REED
 RIG: DUKE RIG 9

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	1	TTRM	3981 XA	10045153	FREE
1	1	COMREM	3514 XC	12367091	FREE
1	1	DGR	1329 XA	179184	FREE
1	1	CN	2446 XA	10162846	DECENTRALIZED
1	1	ZDL	2234 XA	10495112	PAD DEVICE
1	1	DKJT	3939 XA	186262	FREE
1	1	DAL	1677EA/1680MA	10192401/151555	CENTRALIZED
1	1	CENT	4341XA	177195	CENTRALIZED
1	1	HDIL	1515 EA/MA	10059243/179553	1.5" STANDOFFS
1	1	ML	1243XA	10676690	PAD DEVICE

MAIN LOG 5"/100FT

ECLIPS 7.0i ECLIPS General Release Rel 7.0i Thu Jun 08 20:36:10 CDT 2017

Updates: 1,32 Patches: 7

Plotted: Fri Mar 6 01:11:40 2020

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/MERIT_CARRIE_15_1/GSALM_DAL02.prm
 LOGGING MODE: DEPTH DIRECTION: UP
 TOP DEPTH: 1723.250 ft BOTTOM DEPTH: 5007.500 ft

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
TENSION	FILTER ()	medium (1)		TOP	BOTTOM
GR	FILTER ()	medium (1)		"	"
	FILTER (.h)	medium (1)		"	"
SL	FILTER	medium (1)		"	"
CN	FILTER (.h)	medium (1)		"	"
CALIPER	FILTER ()	medium (1)		"	"
	FILTER (.h)	medium (1)		"	"
ZDL HIGH RES	FILTER (hrd1*)	light		"	"
	FILTER (hrd1s*)	light		"	"
	FILTER (hrd2*)	light		"	"
	FILTER (hrd2s*)	light		"	"
	FILTER (soft*)	light		"	"
ML	FILTER ()	light (2a)		"	"

BOREHOLE & CEMENT

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CASING - BOREHOLE & CEMENT VOLUME	CASING O.D.	5.500	in	TOP	BOTTOM
	CASING THICKNESS	0.000	in	"	"
X-Y COMBINED CALIPER PROCESSING	X-Y Caliper	X-Axis		"	"
BIT SIZE	BIT SIZE	7.875	in	"	"
MUD SAMPLE RESISTIVITY	MUD SAMPLE TEMP	77.0	degF	"	"
	MUD SAMPLE RES	1.000	ohm.m	"	"
BOREHOLE TEMP from GRADIENT	Known BH REF TEMP	77.0	degF	"	"
	at BH REF DEPTH	0.0	ft	"	"
	with TEMP GRADIENT	1.200	0.01 degF/ft	"	"
MUD DENSITY	MUD DENSITY	9.35	lbm/gal	"	"
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (calml*)	USE CALIPER		"	"
	CALIPER/FIXED DIA. (cnbh*)	USE CALIPER		"	"
	CALIPER/FIXED DIA. (sibh*)	USE CALIPER		"	"
	CALIPER/FIXED DIA. (zdbh*)	USE CALIPER		"	"
BOREHOLE CORR DIAMETER	FIXED DIAMETER (cnbh*)	7.875	in	"	"
	FIXED DIAMETER (sibh*)	7.875	in	"	"
BH MUD RESISTIVITY SOURCE	RMUD SOURCE	TOOL MEASURED		"	"

SL PROCESSING					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
SL BOREHOLE	OPEN/CASED HOLE	OPEN HOLE		TOP	BOTTOM
	K COMPOUND WEIGHT %	0.00	pct	"	"
	K MUD COMPOUND TYPE	KCL		"	"
SL AUTOGAIN	AUTO GAIN (1329XA 1)	ON		"	"
SL SPECTRUM CALIBRATION	MODE	AUTOMATIC		"	"

CN PROCESSING					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
2446 CN MATRIX	2446 MATRIX	LIMESTONE		TOP	BOTTOM
CN SALINITY CORRECTION	SALINITY CORR (2446)	SAL & BHSIZE ON		"	"
	SALINITY	950	ppm	"	"
CN TOOL STANDOFF	ENABLE STANDOFF CORR	OFF		"	"
	STANDOFF AMOUNT	0.00	in	"	"
CN CASING & CEMENT CORRECTION	CORRECTION	OFF		"	"
	BIT SIZE BEHIND CSNG	7.875	in	"	"

ZDL PROCESSING					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
DENSITY POROSITY	RHOmatrix	2.710	g/cm3	TOP	BOTTOM
	RHOfluid	1.000	g/cm3	"	"

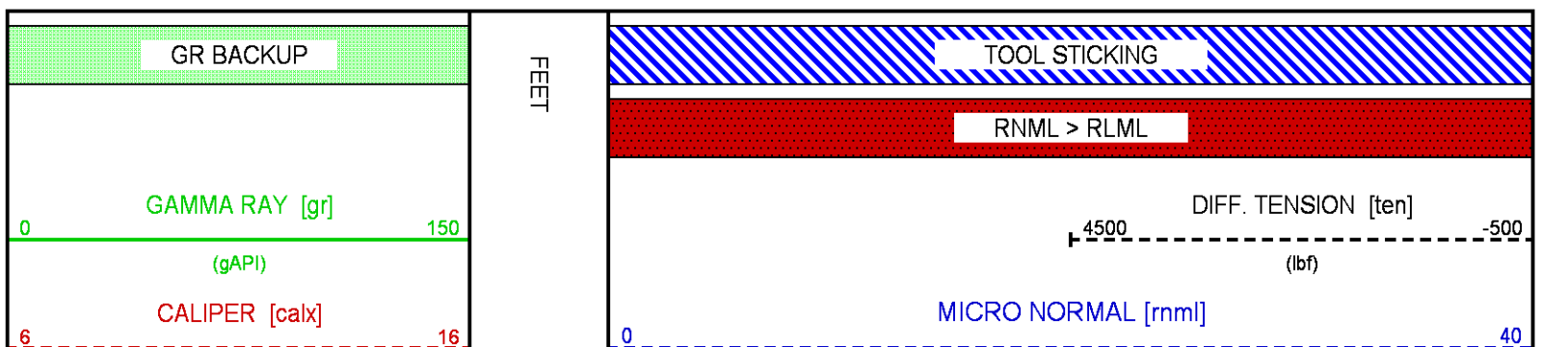
ML PARMS					
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
ML BOREHOLE CORRECTION	BOREHOLE CORR	ON		TOP	BOTTOM

CURVE DESCRIPTION REPORT		
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CALX	Mar 5 21:33:50 2020	CALIPER FROM X-AXIS OF XY CALIPER(S)
F1:GR	Mar 5 21:33:50 2020	GAMMA RAY
F1:RLML	Mar 5 21:33:50 2020	1-INCH LATERAL RESISTIVITY
F1:RNML	Mar 5 21:33:50 2020	2-INCH NORMAL RESISTIVITY
F1:TEN	Mar 5 21:33:50 2020	DIFFERENTIAL TENSION

CURVE MEASURE POINT OFFSET							
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CALX	-71.00	RLML	-1.50	TEN	0.00		
GR	-88.12	RNML	-1.50				

Presentation : cpu6728:ML5IN.fvpdf [5"/100' Scale]
Plot Interval : 3800 - 5006.25 Feet

Data File 1 : F1 : cpu6728:/dat1a/MERIT_CARRIE_15_1/MAIN.xtf
Created On : Mar 5 21:33:50 2020
Company : MERIT ENERGY COMPANY
Well : CARRIE 15-1
Field : WILDCAT
File Interval : 1621.75 - 5007.5 Feet
OCT : GSALM_DA



(in)

3800

3900

4000

GR

CAL

(m.ohm)

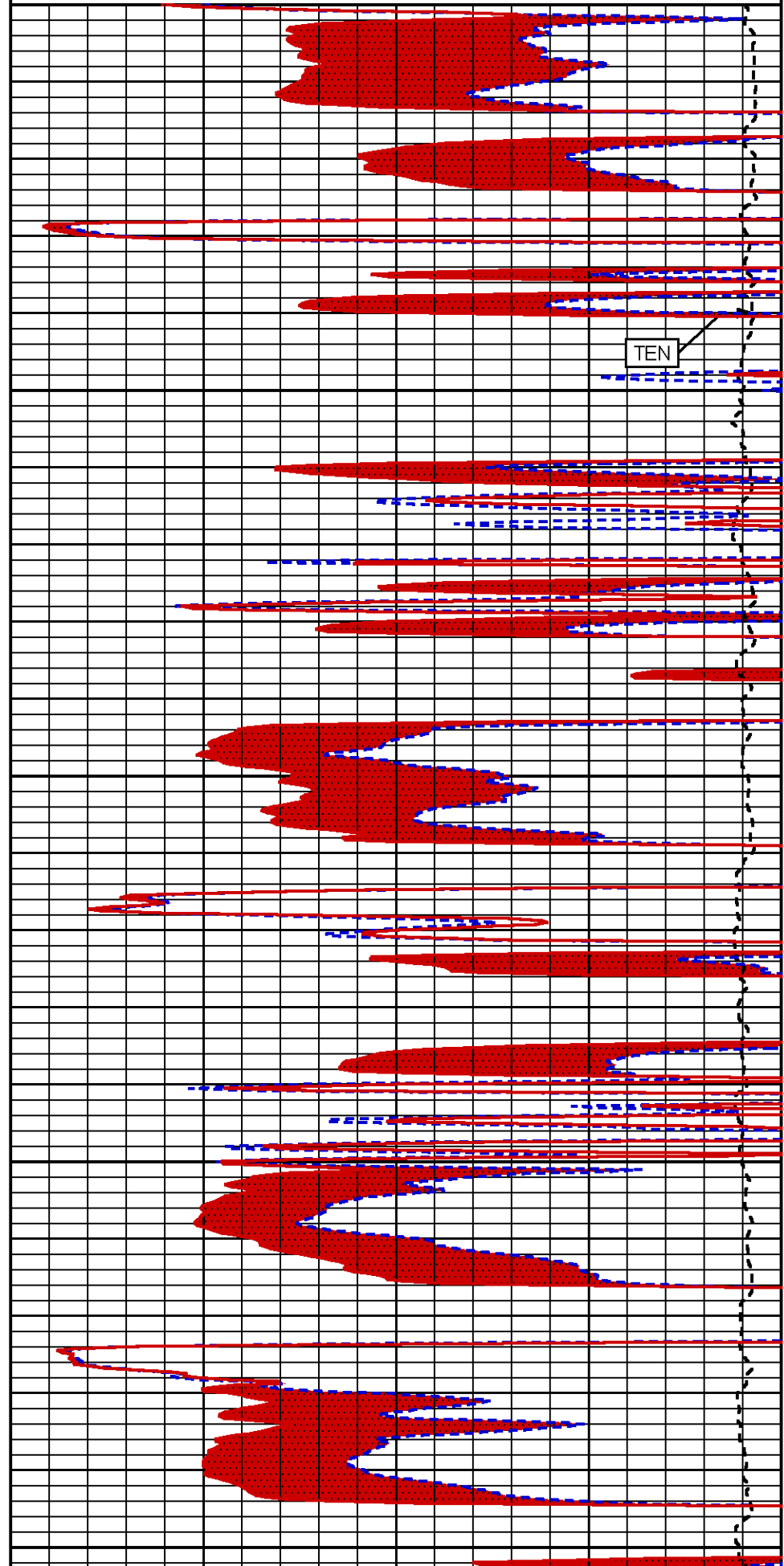
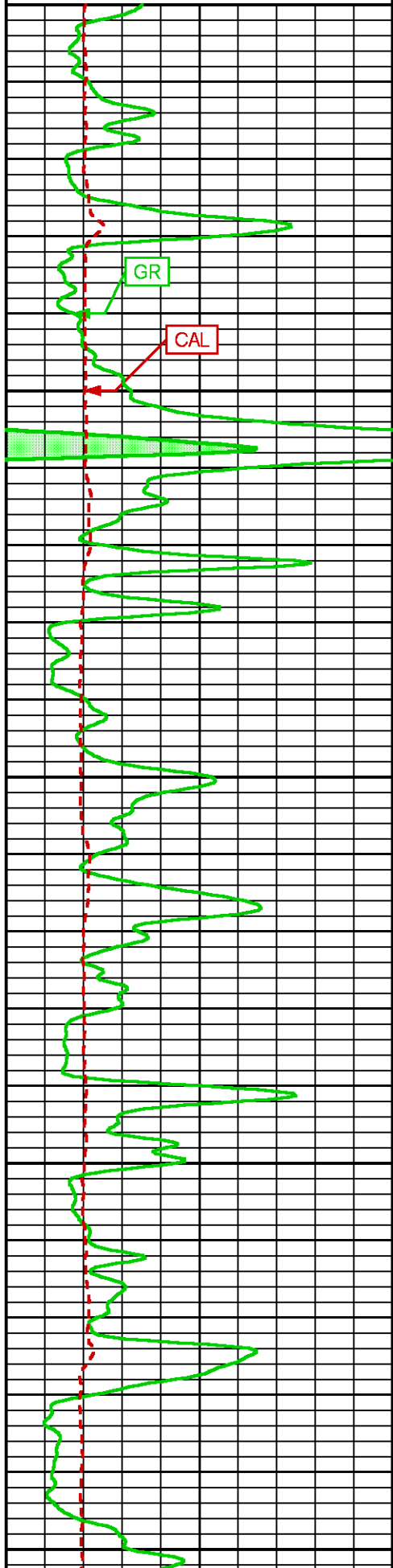
MICRO INVERSE [rImI]

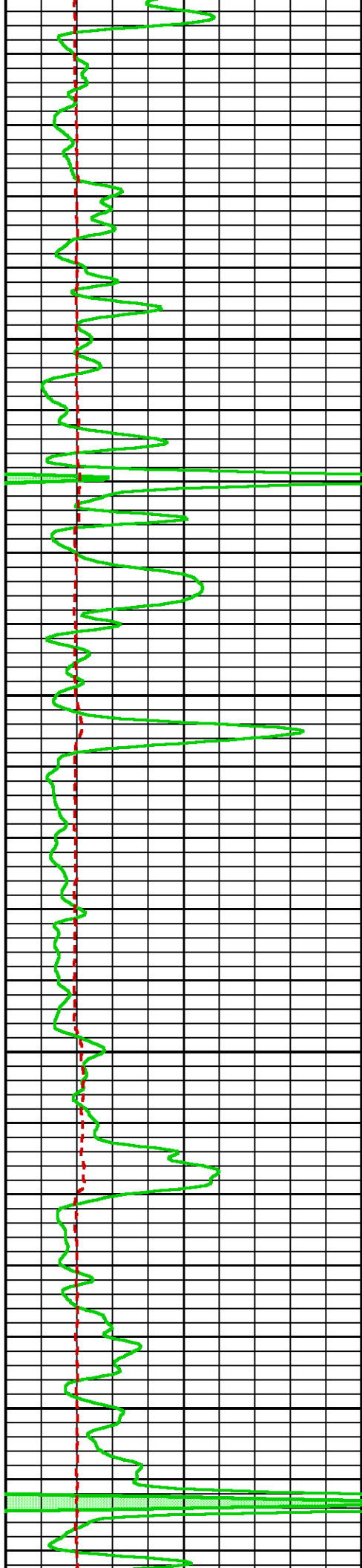
0

40

(m.ohm)

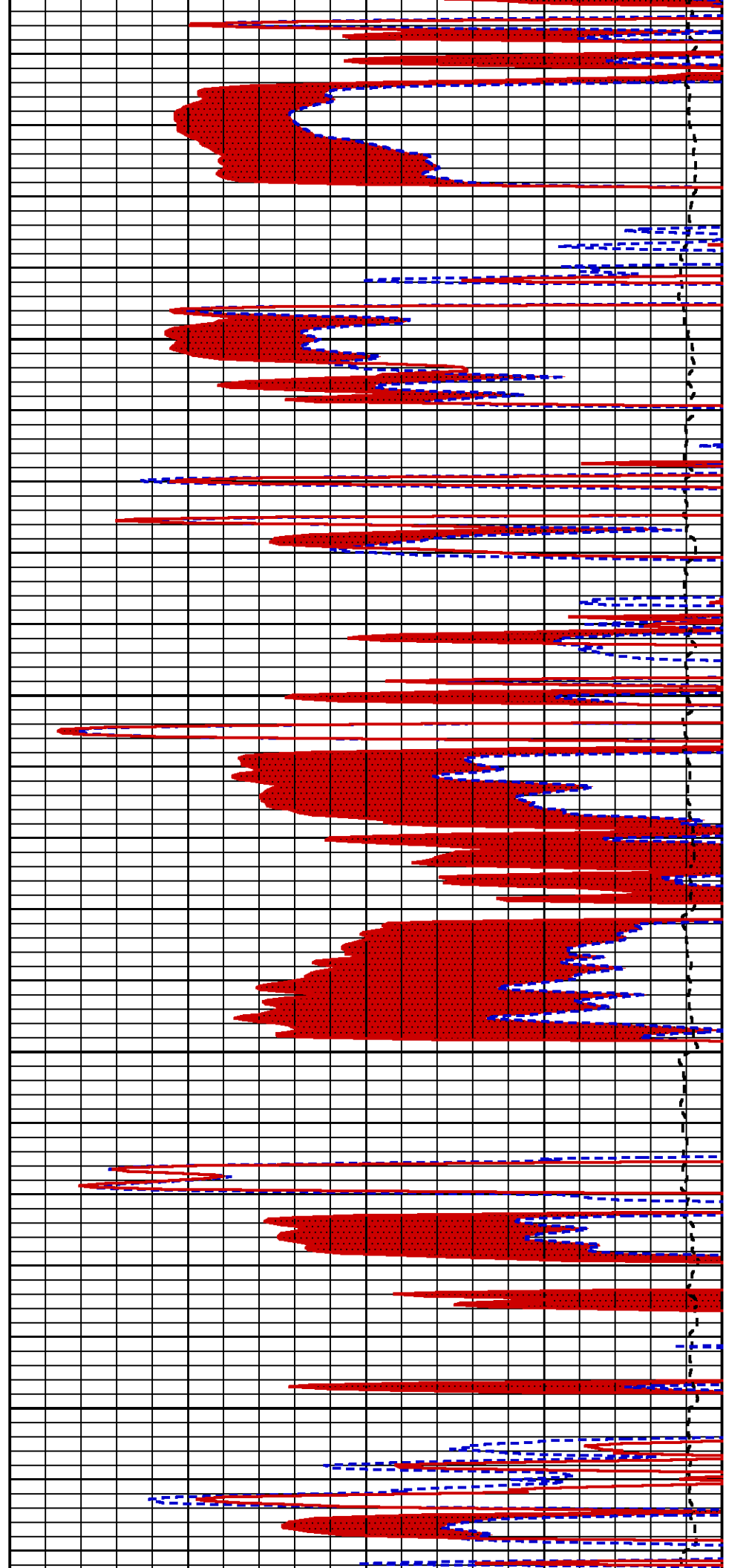
TEN

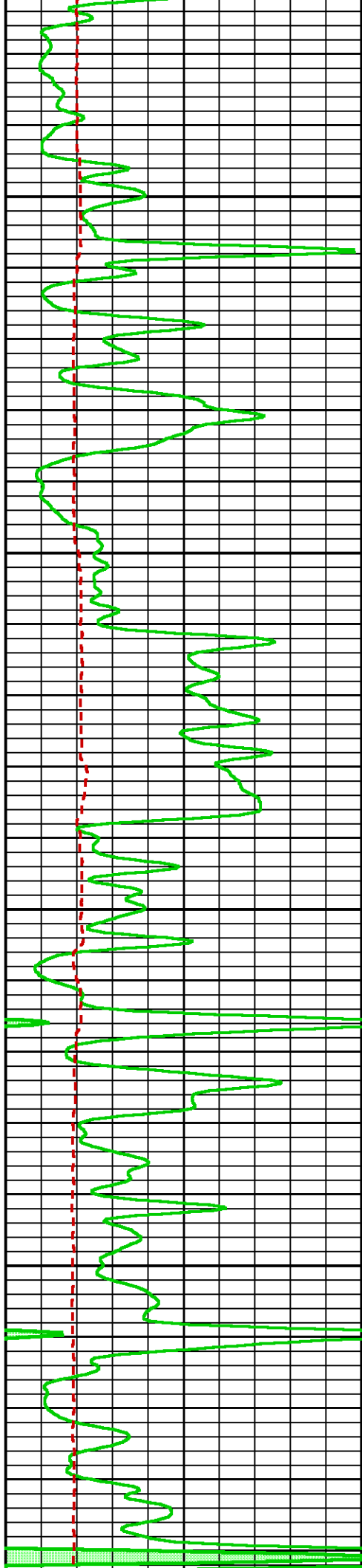




4100

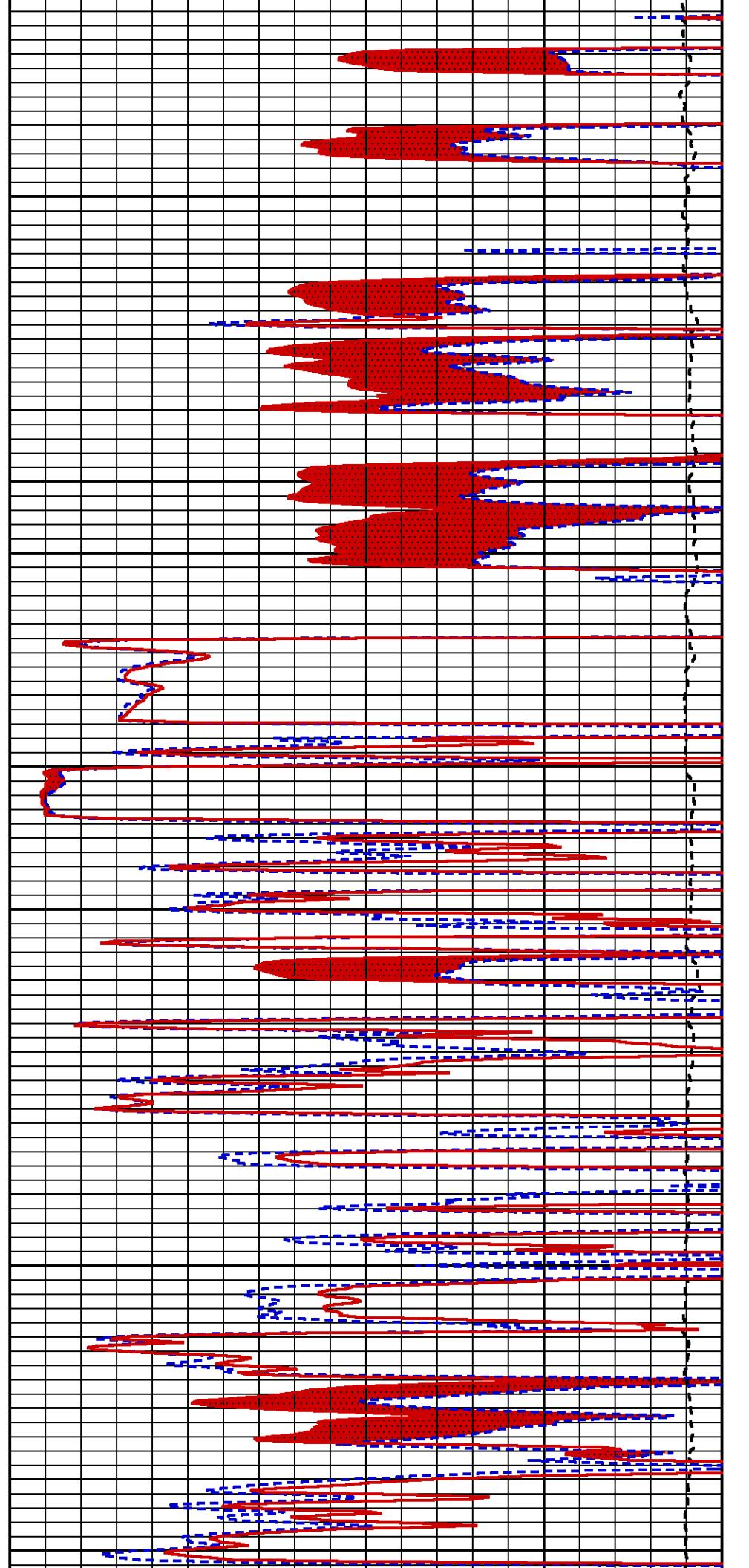
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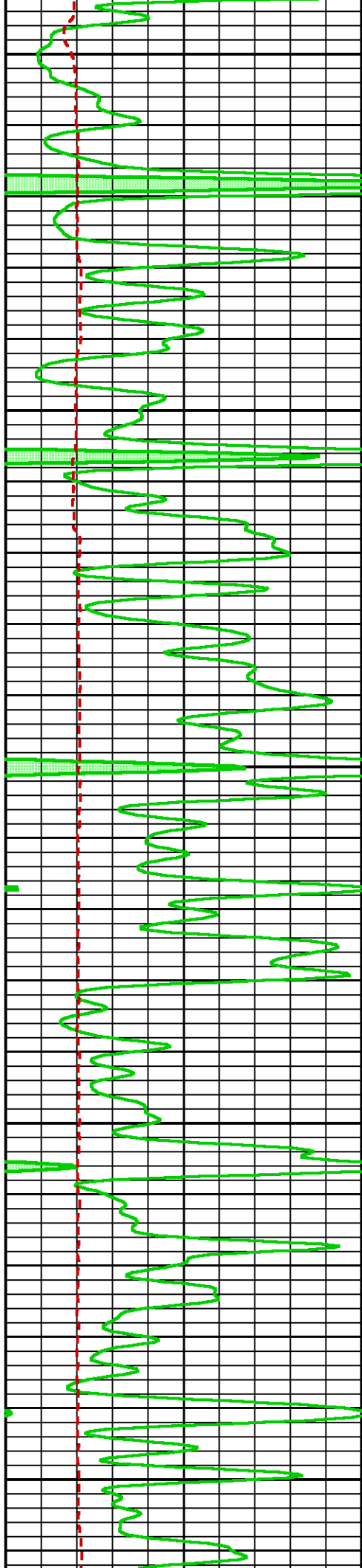




4300

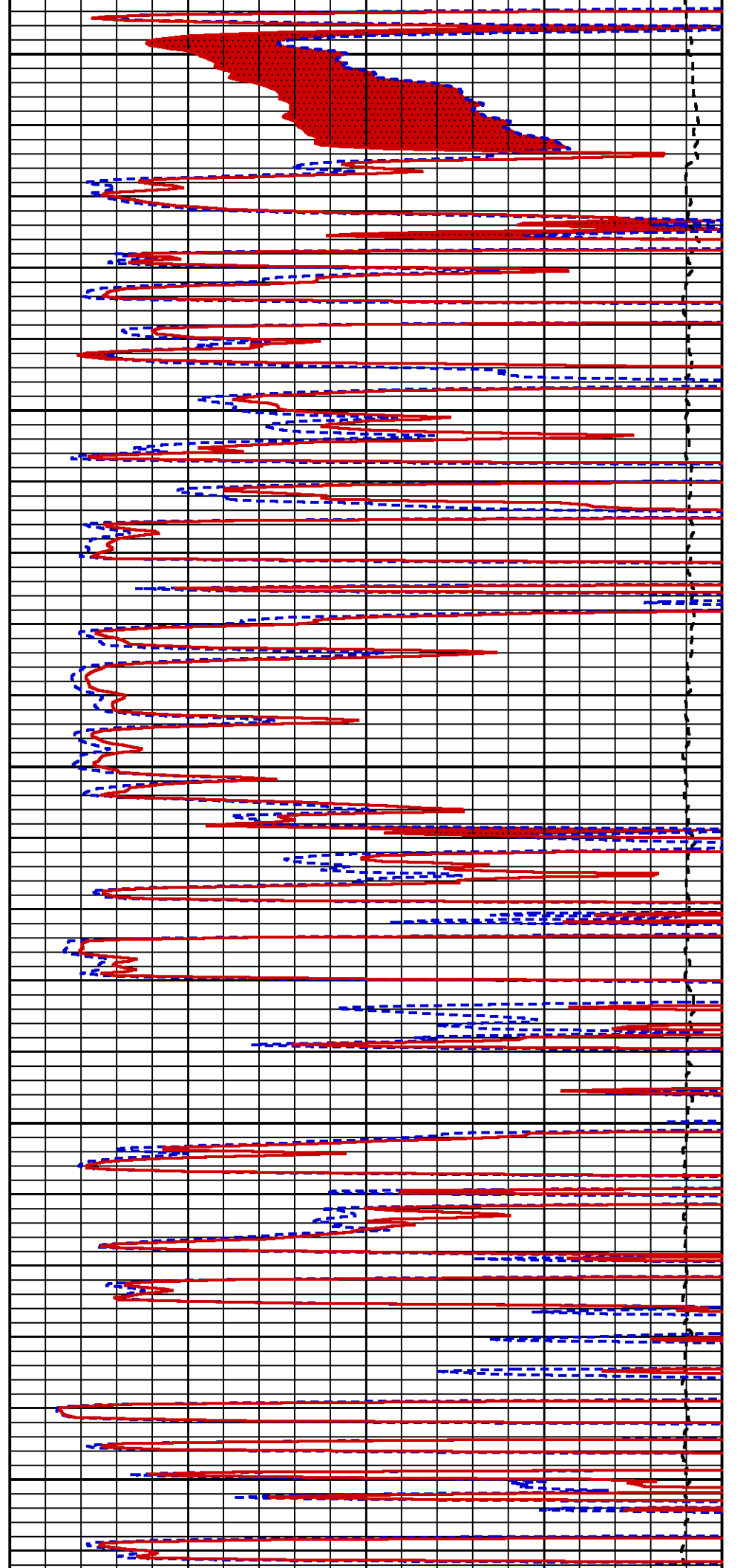
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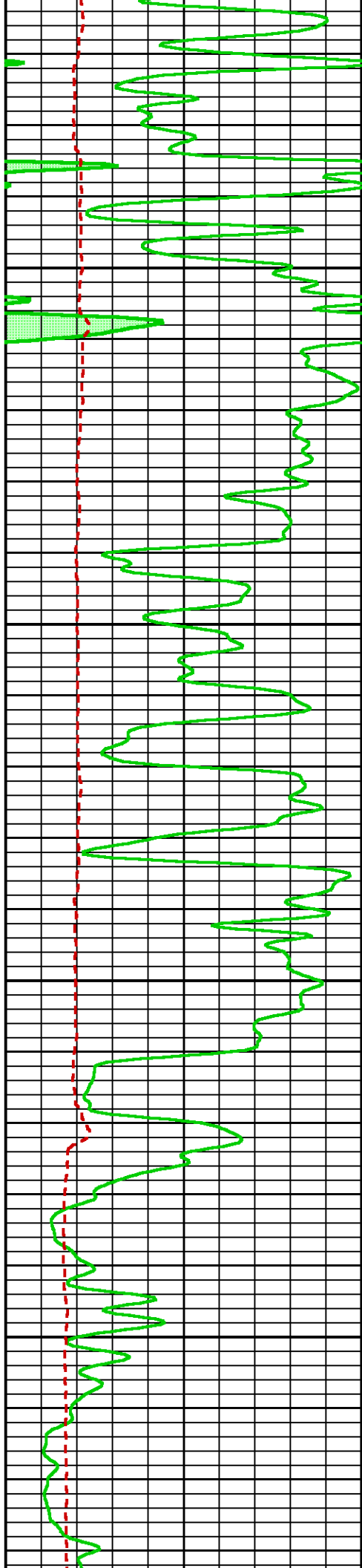




4500

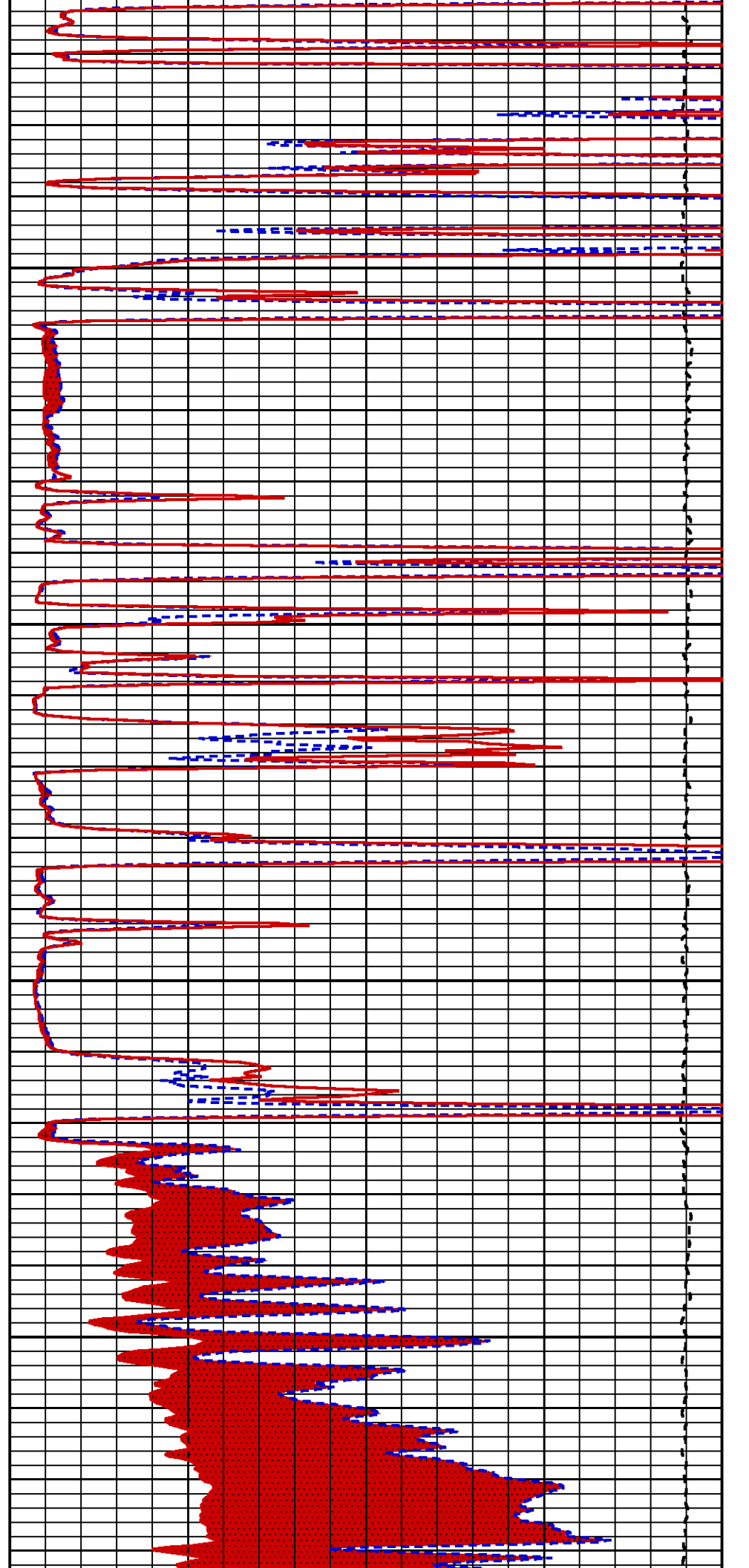
4600

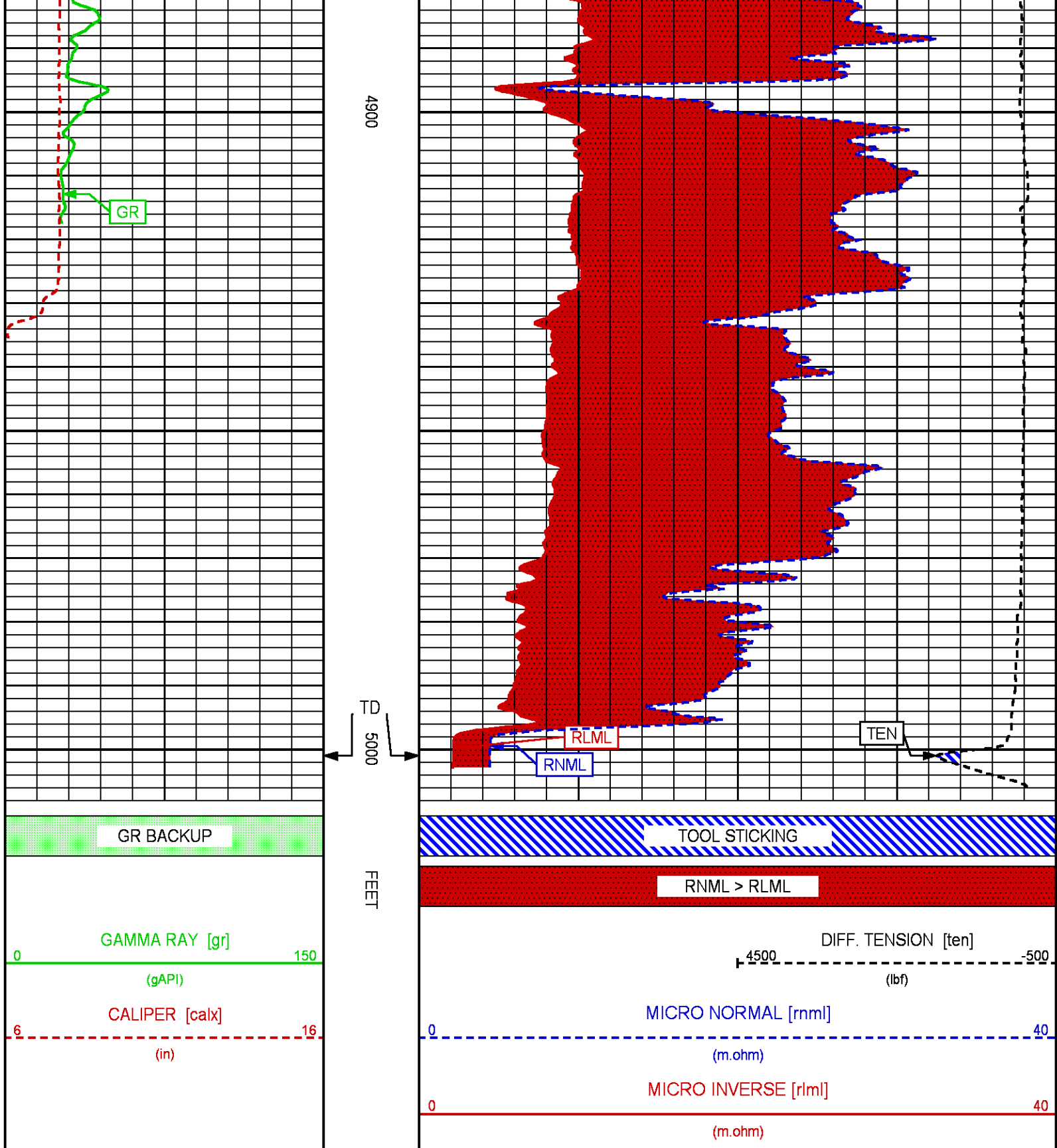




4700

4800





REPEAT LOG

PARAMETER AND FILTER SUMMARY REPORT

FILE: /dat1a/MERIT_CARRIE_15_1/GSALM_DAL01.prm
 LOGGING MODE: DEPTH DIRECTION: UP
 TOP DEPTH: 4625.250 ft BOTTOM DEPTH: 5011.000 ft

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
TENSION	FILTER ()	medium (1)		TOP	BOTTOM
GR	FILTER ()	medium (1)		"	"
	FILTER (.h)	medium (1)		"	"
	FILTER	medium (1)		"	"
CN	FILTER (.h)	medium (1)		"	"
CALIPER	FILTER ()	medium (1)		"	"
	FILTER (.h)	medium (1)		"	"
ZDL HIGH RES	FILTER (hrd1*)	light		"	"
	FILTER (hrd1s*)	light		"	"
	FILTER (hrd2*)	light		"	"
	FILTER (hrd2s*)	light		"	"
ML	FILTER (soft*)	light		"	"
	FILTER ()	light (2a)		"	"

BOREHOLE & CEMENT

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
CASING - BOREHOLE & CEMENT VOLUME	CASING O.D.	5.500	in	TOP	BOTTOM
	CASING THICKNESS	0.000	in	"	"
X-Y COMBINED CALIPER PROCESSING	X-Y Caliper	X-Axis		"	"
BIT SIZE	BIT SIZE	7.875	in	"	"
MUD SAMPLE RESISTIVITY	MUD SAMPLE TEMP	77.0	degF	"	"
	MUD SAMPLE RES	1.000	ohm.m	"	"
BOREHOLE TEMP from GRADIENT	Known BH REF TEMP	77.0	degF	"	"
	at BH REF DEPTH	0.0	ft	"	"
	with TEMP GRADIENT	1.200	0.01 degF/ft	"	"
MUD DENSITY	MUD DENSITY	9.35	lbm/gal	"	"
BOREHOLE CORR DIAMETER SOURCE	CALIPER/FIXED DIA. (calml*)	USE CALIPER		"	"
	CALIPER/FIXED DIA. (cnbh*)	USE CALIPER		"	"
	CALIPER/FIXED DIA. (sibh*)	USE CALIPER		"	"
	CALIPER/FIXED DIA. (zdbh*)	USE CALIPER		"	"
BOREHOLE CORR DIAMETER	FIXED DIAMETER (cnbh*)	7.875	in	"	"
	FIXED DIAMETER (sibh*)	7.875	in	"	"
BH MUD RESISTIVITY SOURCE	RMUD SOURCE	TOOL MEASURED		"	"

SL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
SL BOREHOLE	OPEN/CASED HOLE	OPEN HOLE		TOP	BOTTOM
	K COMPOUND WEIGHT %	0.00	pct	"	"
	K MUD COMPOUND TYPE	KCL		"	"
SL AUTOGAIN	AUTO GAIN (1329XA 1)	ON		"	"
SL SPECTRUM CALIBRATION	MODE	AUTOMATIC		"	"

CN PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
2446 CN MATRIX	2446 MATRIX	LIMESTONE		TOP	BOTTOM
CN SALINITY CORRECTION	SALINITY CORR (2446)	SAL & BHSIZE ON		"	"
	SALINITY	950	ppm	"	"
CN TOOL STANDOFF	ENABLE STANDOFF CORR	OFF		"	"
	STANDOFF AMOUNT	0.00	in	"	"
CN CASING & CEMENT CORRECTION	CORRECTION	OFF		"	"
	BIT SIZE BEHIND CSNG	7.875	in	"	"

ZDL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)	
DENSITY POROSITY	BH Matrix	2.710	g/cm ³	TOP	BOTTOM

DENSITY POROSITY RHOmatrix 2.710 g/cm3 TOP BOTTOM
 RHOfluid 1.000 g/cm3 " "

ML PARMS

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (ft)
ML BOREHOLE CORRECTION	BOREHOLE CORR	ON		TOP BOTTOM

CURVE DESCRIPTION REPORT

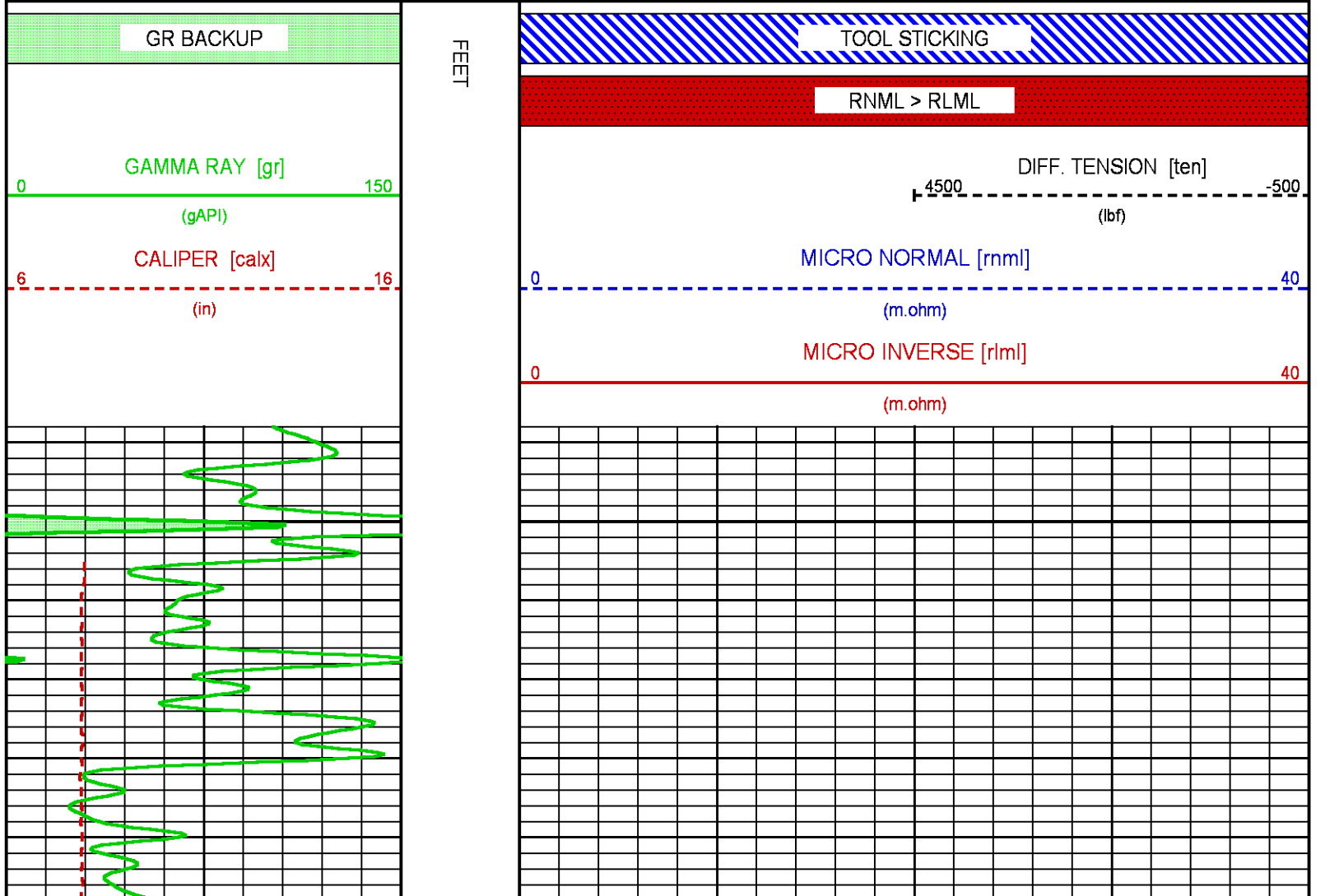
CURVE NAME	CREATION DATE	CURVE DESCRIPTION
F1:CALX	Mar 5 21:14:15 2020	CALIPER FROM X-AXIS OF XY CALIPER(S)
F1:GR	Mar 5 21:14:15 2020	GAMMA RAY
F1:RLML	Mar 5 21:14:15 2020	1-INCH LATERAL RESISTIVITY
F1:RNML	Mar 5 21:14:15 2020	2-INCH NORMAL RESISTIVITY
F1:TEN	Mar 5 21:14:15 2020	DIFFERENTIAL TENSION

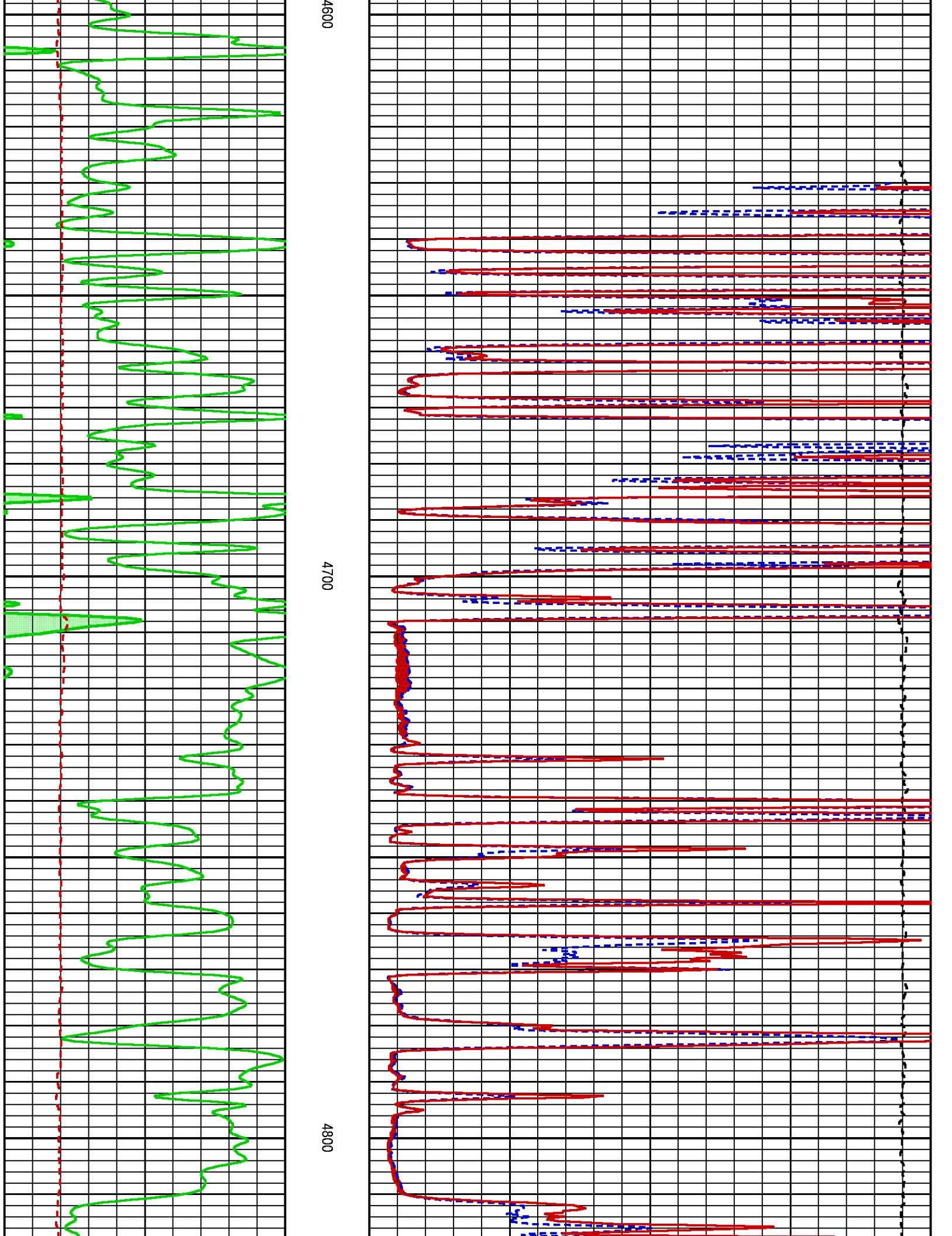
CURVE MEASURE POINT OFFSET

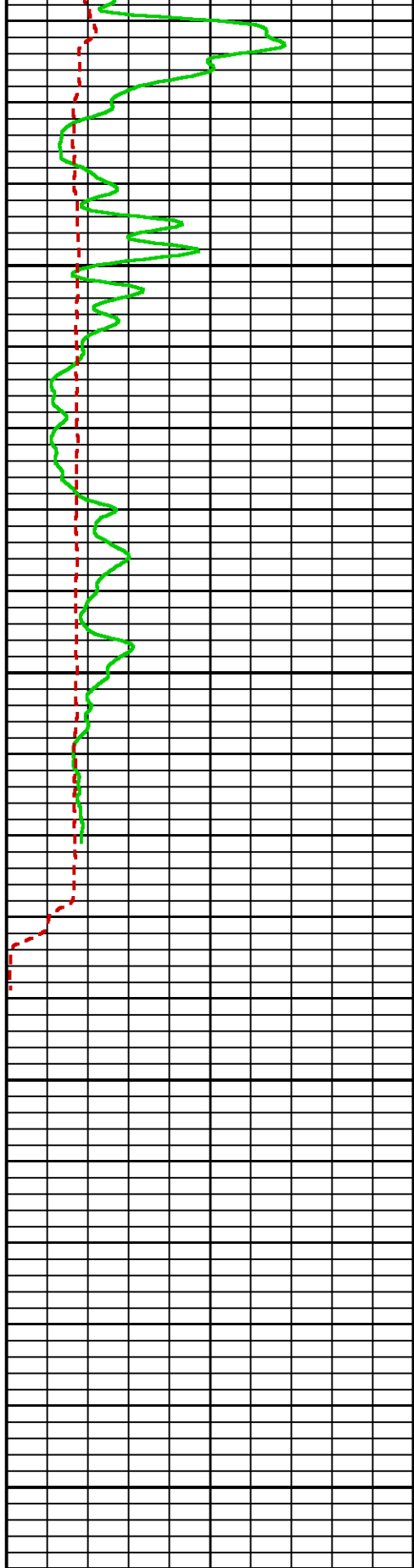
CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)	CURVE	OFFSET (ft)
CALX	-71.00	RLML	-1.50	TEN	0.00		
GR	-88.12	RNML	-1.50				

Presentation : cpu6728:ML_5IN_RPT.fvpdf [5"/100' Scale]
Plot Interval : 4538 - 5009.75 Feet

Data File 1 : F1 : cpu6728:/dat1a/MERIT_CARRIE_15_1/RPEAT.xtf
Created On : Mar 5 21:14:15 2020
Company : MERIT ENERGY COMPANY
Well : CARRIE 15-1
Field : WILDCAT
File Interval : 4523.5 - 5011 Feet
OCT : GSALM_DA







4900

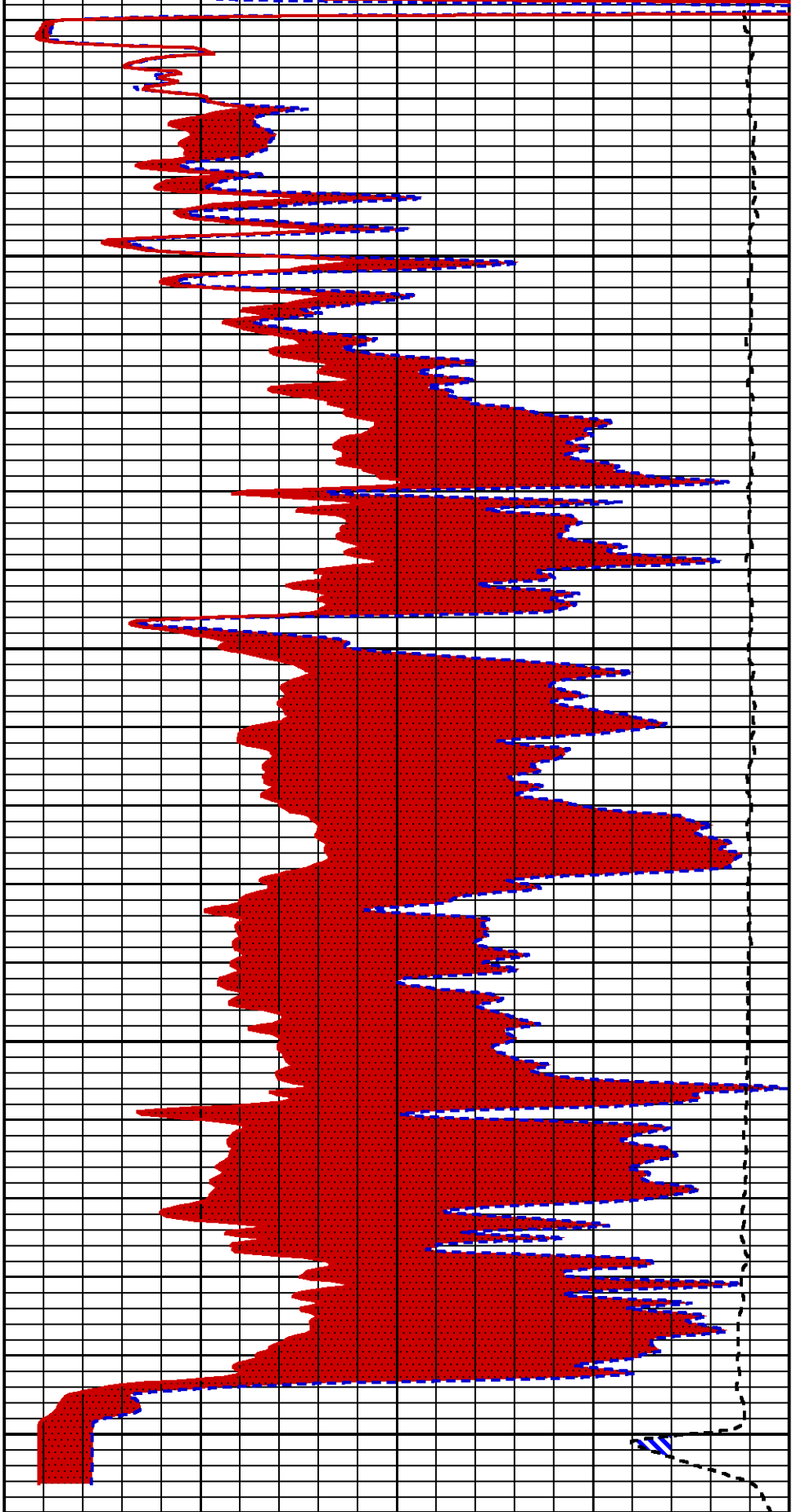
5000

FEET

GR BACKUP

GAMMA RAY [gr]

0 150



TOOL STICKING

RNML > RLML

4500 -500

DIFF. TENSION [ten]

(gAPI)	MICRO NORMAL [rnmI]	(lbf)
CALIPER [calx]	0	40
(in)	(m.ohm)	
6	MICRO INVERSE [rlmI]	40
16	0	
	(m.ohm)	

CALIBRATION / VERIFICATION SUMMARY

Source File: /dat1a/MERIT_CARRIE_15_1/GSALM_DAL1p1

GR PRIMARY CALIBRATION SUMMARY

TOOL #:	1329XA 179184	DATE/TIME PERFORMED:	Thu Jan 30 11:02:11 2020		
UNIT #:	3882TD HL6728	CALB JIG #:	4702NK DA_228		
	BACKGROUND CALBRTR ON (cts/s)	CR DIFF (cts/s)	MULT	BACKGROUND CALBRTR ON (gAPI)	CALBRTR (gAPI)
GR	206.22	1100.38	0.168	34.60	150.36
		894.2			
		830.0 890.0			

GR PRIMARY VERIFICATION SUMMARY

TOOL #:	1329XA 179184	DATE/TIME PERFORMED:	Thu Jan 30 11:09:45 2020	
UNIT #:	3882TD HL6728	VERI JIG #:	4702NK DA_228	
	BACKGROUND CALBRTR ON (cts/s)	MULT	BACKGROUND CALBRTR ON (gAPI)	DIFF. (gAPI)
GR	201.56	0.168	33.81	150.36
	1097.87		184.17	150.36
				140.00 160.00

ML PRIMARY CALIBRATION SUMMARY

TOOL #:	1243XA 10676890	DATE/TIME PERFORMED:	Thu Mar 5 20:55:12 2020				
UNIT #:	3882TD HL6728						
	Raw Low (mV/mA)	Raw High (mV/mA)	Mult	Add	K-factor	Eng Low (ohm.m)	Eng High (ohm.m)
NORMAL	0.50	148.6	1.010	-0.009	0.417	0.21	62.5
	0.45 0.55 135.0 165.0					0.19 0.23 59.2 66.0	
LATERAL	0.51	149.1	1.006	-0.011	0.333	0.17	50.0
	0.45 0.55 135.0 165.0					0.15 0.19 46.0 55.0	

ML AFTER LOG VERIFICATION SUMMARY

TOOL #:	1243XA 10676890	DATE/TIME PERFORMED:	Thu Mar 5 22:58:19 2020	DAYS SINCE CAL:	0	
UNIT #:	3882TD HL6728					
	Raw Low (mV/mA)	Raw High (mV/mA)	Mult	Add	Eng Low (ohm.m)	Eng High (ohm.m)
NORMAL	0.50	148.6	1.010	-0.009	0.21	62.5
	0.45 0.55 135.0 165.0				0.19 0.23 59.2 66.0	
LATERAL	0.51	149.1	1.006	-0.011	0.17	50.0
	0.45 0.55 135.0 165.0				0.15 0.19 46.0 55.0	

INSTRUMENT CONFIGURATION

Source File: /dat1a/MERIT_CARRIE_15_1/GSALM_DAL1do

HIGH DEFINITION INDUCTION TOOL
 Diameter : 3.62"
 Length : 27.13'
 Weight : 415 lbs
 Series : 1515XA
 Mnemonic : HDIL
 Measure Point: 13.91': SP MP
 Measure Point: 7.44': XMTR MP

SP MP 25.50'

XMTR MP 19.03'

WTS MINILOG
 Diameter : 4.00"
 Length : 11.25'
 Weight : 258 lbs
 Series : 1243XA
 Mnemonic : ML
 Measure Point: 1.63': MP

MP 1.97'

BIT - BLUE 3-3/8

0.00'

TOTAL LENGTH: 109.88"
 TOTAL WEIGHT: 1964 lbs
 MAX DIAMETER: 0'4.88"



COMPANY MERIT ENERGY COMPANY
 WELL CARRIE 15-1
 FIELD WILDCAT
 COUNTY FINNEY STATE OKLAHOMA

FILE NO: _____
 API NO: 15-093-21978-00-00

LOCATION:
1632 FEL & 2315 FNL
 SEC 15 TWP 23S RGE 35W

ELEVATIONS:
 KB 3033 FT
 DF 3032 FT
 GL 3021 FT
 DATE 05-Mar-2020