STEP energy services

MICRO LOG

Company BEREXCO LLC
Well HINES UNIT #27X
Field FAIRPORT
County RUSSELL
State KANSAS
Country USA
API No. 15-167-24098-0000

File No : TUL-70413
Company : BEREXCO LLC
Well : HINES UNIT #27X
Field : FAIRPORT
County : RUSSELL
State : KANSAS
Country : USA
API No : 15-167-24098-0000

Location :
2010' FSL & 1320' FEL
S/2 N/2 N/2 SE

LSD : **Sect :** 17 **Twp :** 11S **Rge :** 15W

Permanent Datum:	GL	**Elevations:**		**Services:**	
Drilling Measured From:	KB	**KB**	1876.00 Ft	CNT	PIT
Log Measured From:	KB	**DF**	1875.00 Ft	LDT	
Above Permanent Datum:	6.00 Ft	**GL**	1870.00 Ft	MLT	

Date	12-11-2019			
Run Number	1			
Depth--Driller	3525.0 Ft			
Depth--Logger	3524.0 Ft			
First Reading	3501.0 Ft			
Last Reading	265.0 Ft			
Casing--Driller	265.0 Ft			
Casing--Logger	265.0 Ft			
Bit Size	7.875 In			
Casing Size	8.625 In			
Hole Fluid Type	WBM			
Density	9.0			
Fluid Loss	8.0			
PH/Viscosity	9.0	63.0		
Sample Source	MEASURED			
RM@Measured Temp.	2.000 @ 50 F			
RMF@Measured Temp	1.600 @ 50 F			
RMC@Measured Temp.	2.400 @ 50 F			
Source RMF/RMC	CALCULATED	CALCULATED		
RM@BHT	0.960 @ 111 F			
Time Circulation Stopped				
Max Recorded Temp.	111 F			
Equipment/Base	1022	TULSA, OK		
Recorded By	SHELDON TYLER			
Witnessed By	JERRY SMITH			

The customer is hereby warned that by providing the log data herein, STEP Energy Services does not agree to provide any interpretation of log data, conversion of log data to physical rock parameters or recommendations; STEP Energy Services does not guarantee or warrant either expressly or impliedly, the accuracy of any interpretation of log data, conversion of log data to physical rock parameters or recommendations which may be given by STEP Energy Services personnel. Any interpretation, conversion or recommendation is not part of the consideration for the agreement between the parties and is not part of any part of the charge by STEP Energy Services for its services. Any user of the log data is warned that said user is not entitled to rely on intepretations, conversions or recommendations as aforesaid.

Bitsize Intervals

Size (In)	Bottom (Ft)
7.875	3525.00

Casing Strings

Size (In)	Weight (Lbs)	Bottom (Ft)	Top (Ft)
8.625	32.00	265.00	0.00

Run Number	1	
Date	12-11-2019	
Date/Time On Bottom		
Depth to Fluid	0.0 Ft	
Salinity	3800.000	
RMF@BHT	0.770 @ 111 F	
RMC@BHT	1.150 @ 111 F	

Run Number 1

Comments

ALL PRESENTATIONS AS PER CUSTOMER REQUEST
GRT, CNT, LDT, MLT AND PIT RUN IN COMBINATION
CALIPERS ORIENTED ON X-Y AXIS
2.71 G/CC USED TO CALCULATE POROSITY
ANNULAR HOLE VOLUME CALCULATED USING 5.5" PRODUCTION CASING
PHIN IS CALIPER CORRECTED

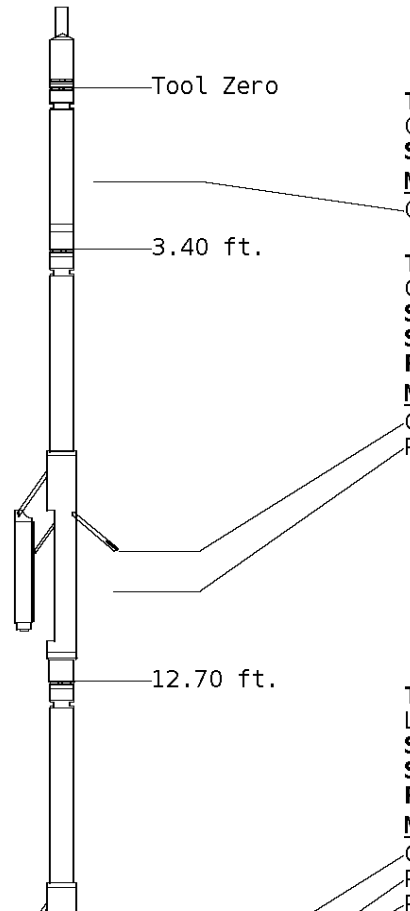
CUSTOMER REQUESTED REPEAT PULLED TO 3100'
CUSTOMER REQUESTED DETAIL PULLED TO 2300'

GRT: GRP, GRX
CNT: PHIN, CLCNIN, PHXN
LDT: PORL, LCORN, PECLN, LDENN, PORLLS, CLLDIN, PRXL, PECLX, LDENNX, LCORX
MLT: NOR_RF, INV_RF, MSCLPIN
PIT: ILD, ILM, SPU, SFLAEC, CIRD

OPERATORS:
B. BROWN
S.KEELEY

Tool String Schematic

Total Tool Length - 53.15 **ft.**
Maximum Outside diameter - 6.00 **in.**
Net Weight in Air - 943.00 **lbs.**



Tool: GRT-B **Length:** 3.40 **ft.** **O.D.** 3.60 **in.**
Gamma Ray Controller
Sonde ID :GRT-BA-14

Measure Point	Tool Offset	Stack Offset	Bottom Offset
GRP	2.00	2.00	51.15

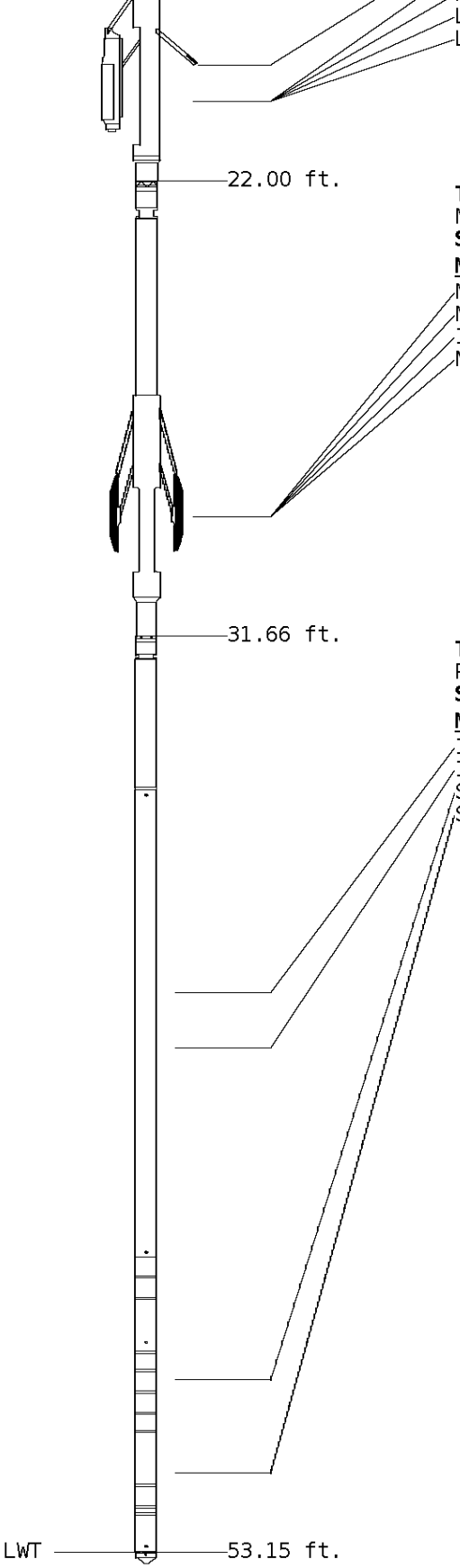
Tool: CNT-AA **Length:** 9.30 **ft.** **O.D.** 4.36 **in.**
Compensated Neutron A Pad on NDT-A
Sonde ID :NDT-BB-146
Source ID :N-1044
Pad ID :CNP-AA-115

Measure Point	Tool Offset	Stack Offset	Bottom Offset
CLCN	6.00	9.40	43.75
PHIN	6.80	10.20	42.95

Tool: LDT-DA **Length:** 9.30 **ft.** **O.D.** 4.80 **in.**
Litho Density D Pad on NDT-A
Sonde ID :NDT-AE-003
Source ID :63558B
Pad ID :LDP-DA-50

Measure Point	Tool Offset	Stack Offset	Bottom Offset
CLLD	6.00	18.70	34.45
PEL	7.00	19.70	33.45
PES	7.40	20.10	33.05

LDEN	7.20	19.90	33.25
LCOR	7.20	19.90	33.25



Tool: MST-DA **Length:** 9.66 **ft.** **O.D.** 6.00 **in.**
Micro Spherically Focused (IC)
Sonde ID :MST-DA-024

Measure Point	Tool Offset	Stack Offset	Bottom Offset
MSFL	7.60	29.60	23.55
MSCLP	7.60	29.60	23.55
INV	7.60	29.60	23.55
NOR	7.60	29.60	23.55

Tool: PIT-CA **Length:** 21.49 **ft.** **O.D.** 3.62 **in.**
Phased Dual Induction w/ RM & D
Sonde ID :PIT-CA-069

Measure Point	Tool Offset	Stack Offset	Bottom Offset
ILD	8.92	40.58	12.56
ILM	10.10	41.76	11.39
SFLU	17.49	49.15	4.00
SP	20.60	52.26	0.88

Well File: BEREXCO_HINES_27X_DEC11_MSTK **Scale:** 1:240 **Format:** MST-240
Segment: V1.D1.S5 Reprocess MAIN **Acquired:** 2019-12/12 01:40 3.4.1-13968
Reference: 0 **Processed:** 2019-12/12 02:53 3.4.1-13968

BIT SIZE INCHES (IN)	
6	16

CALIPER MICRO INCHES (IN)	
16	26

16 26
6 16

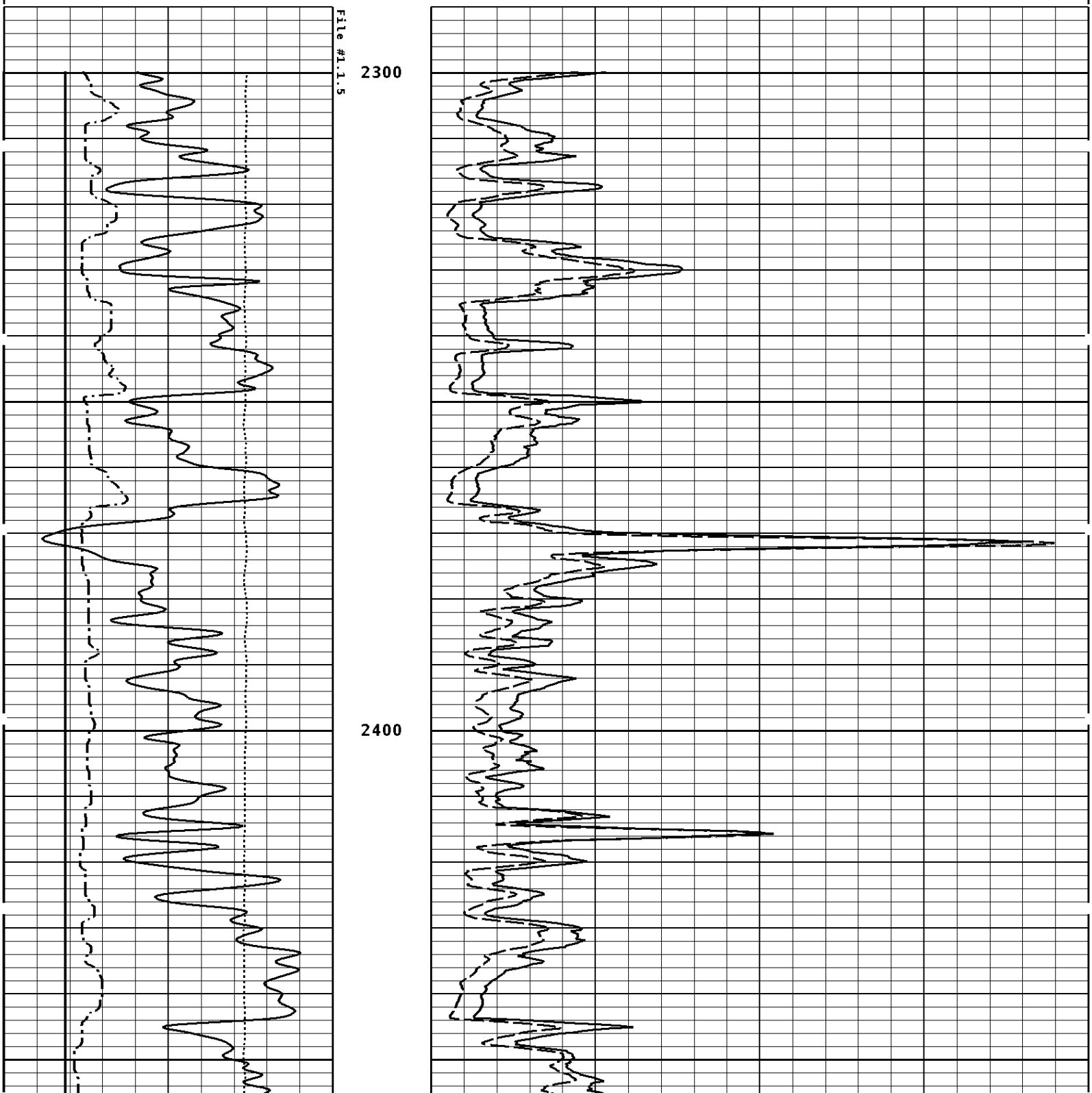
TENSION
LBS
10000 0

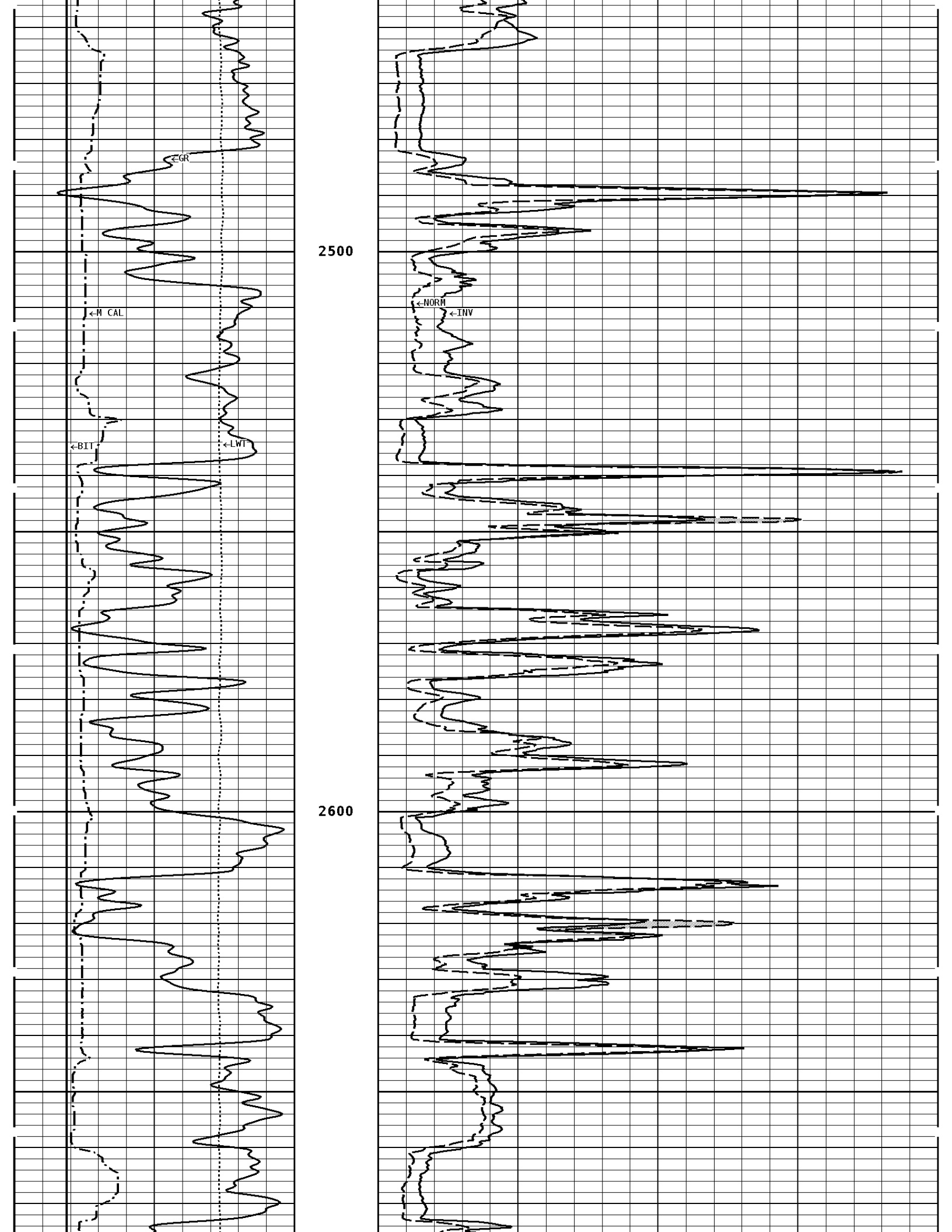
GAMMA RAY
API UNITS
150 300
0 150

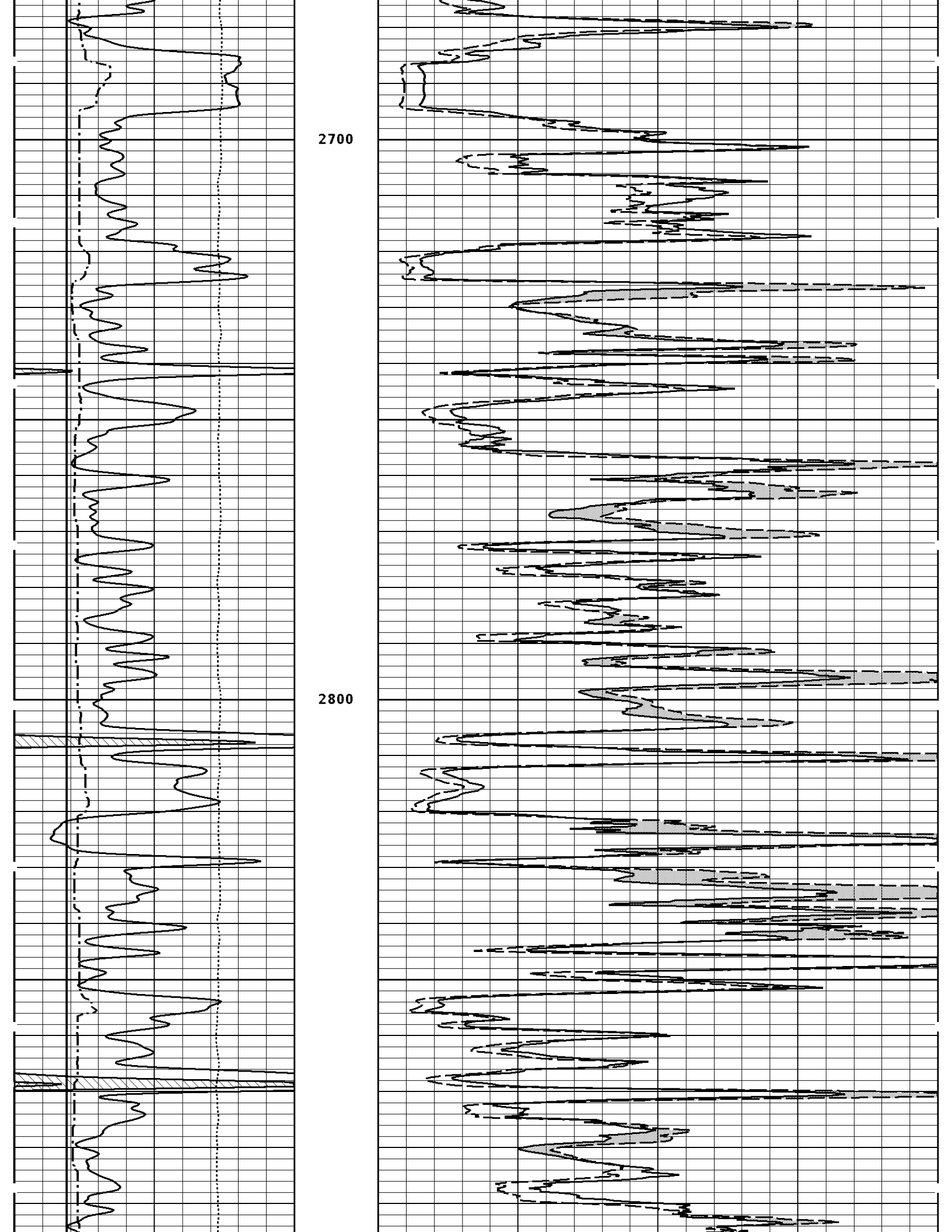
INVERSE
OHMM
0 40

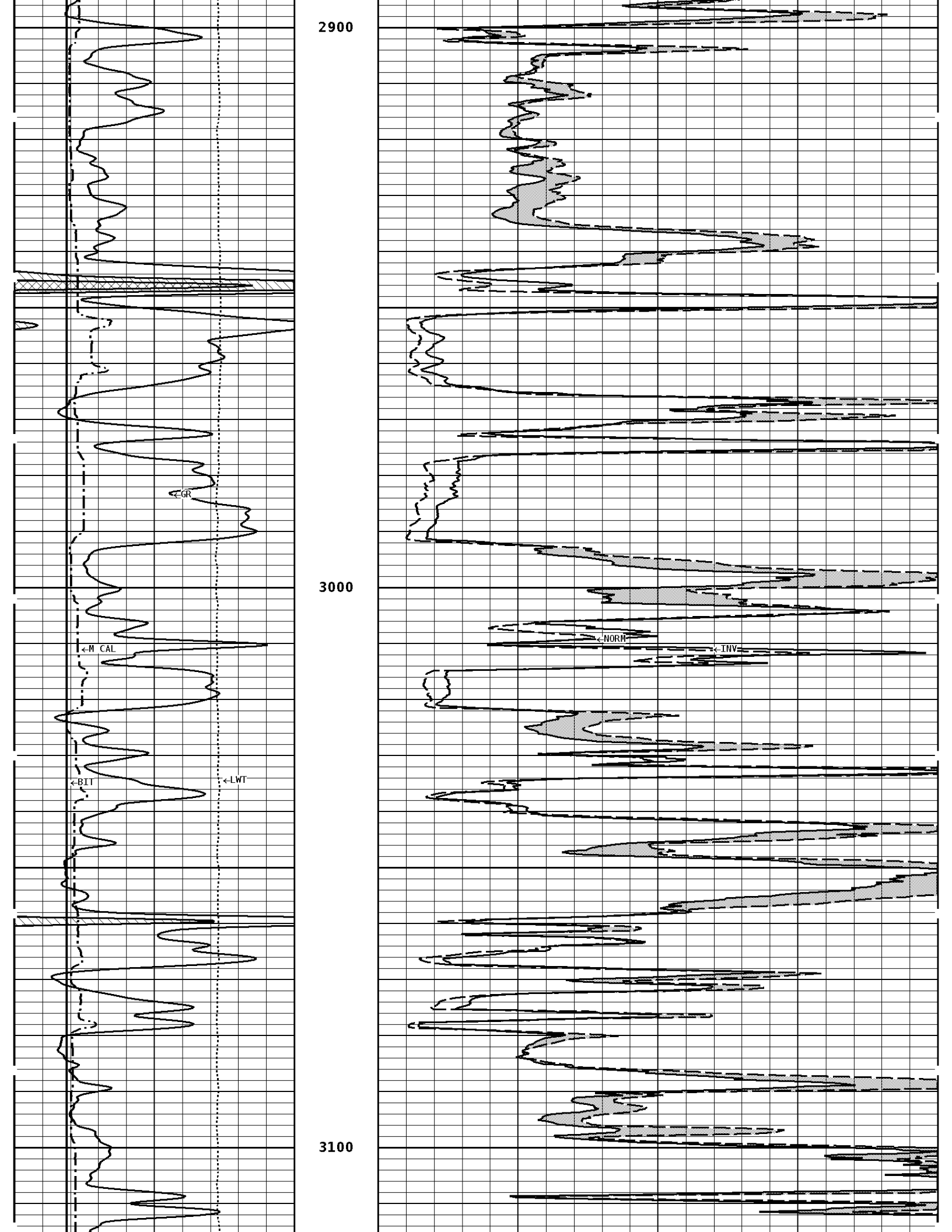
NORMAL
OHMM
0 40

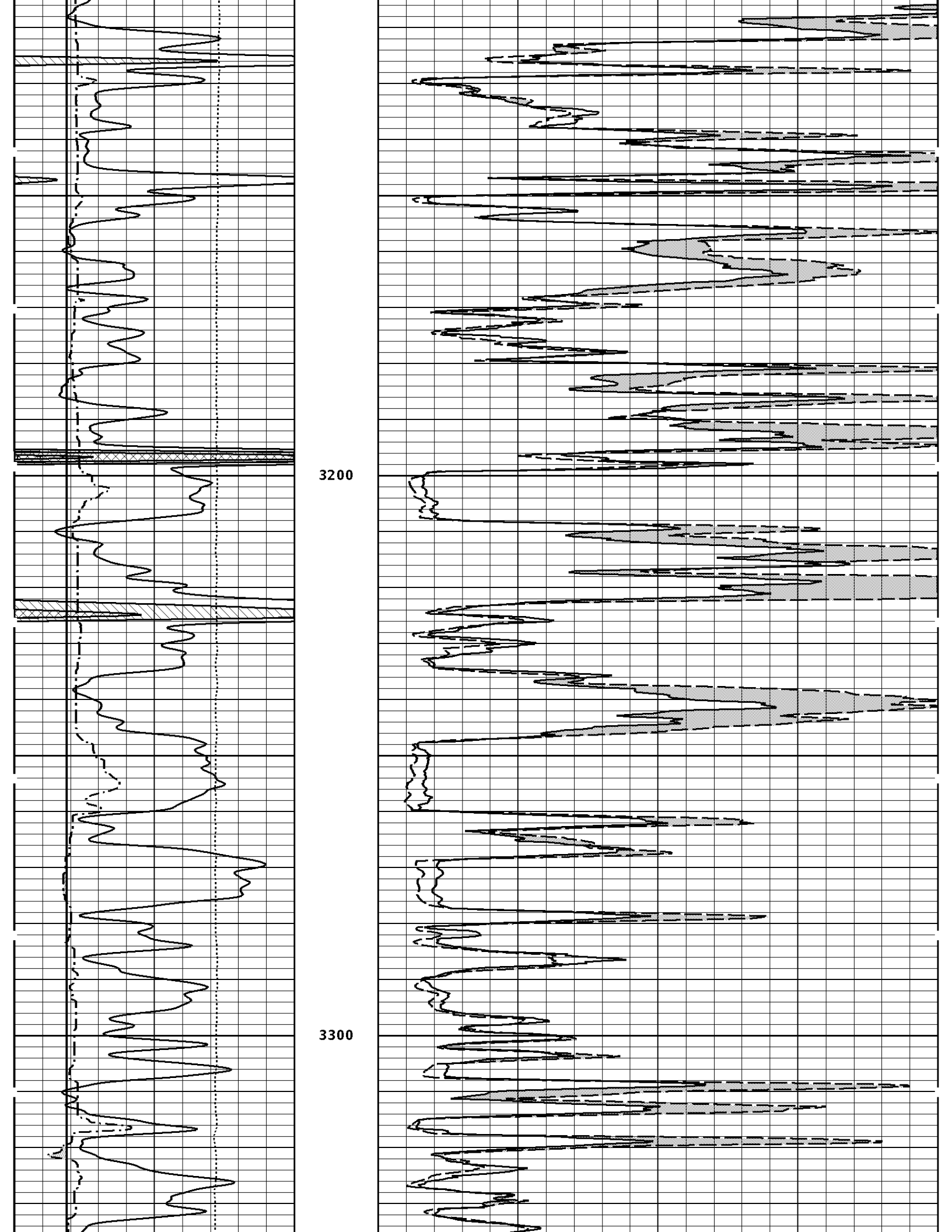
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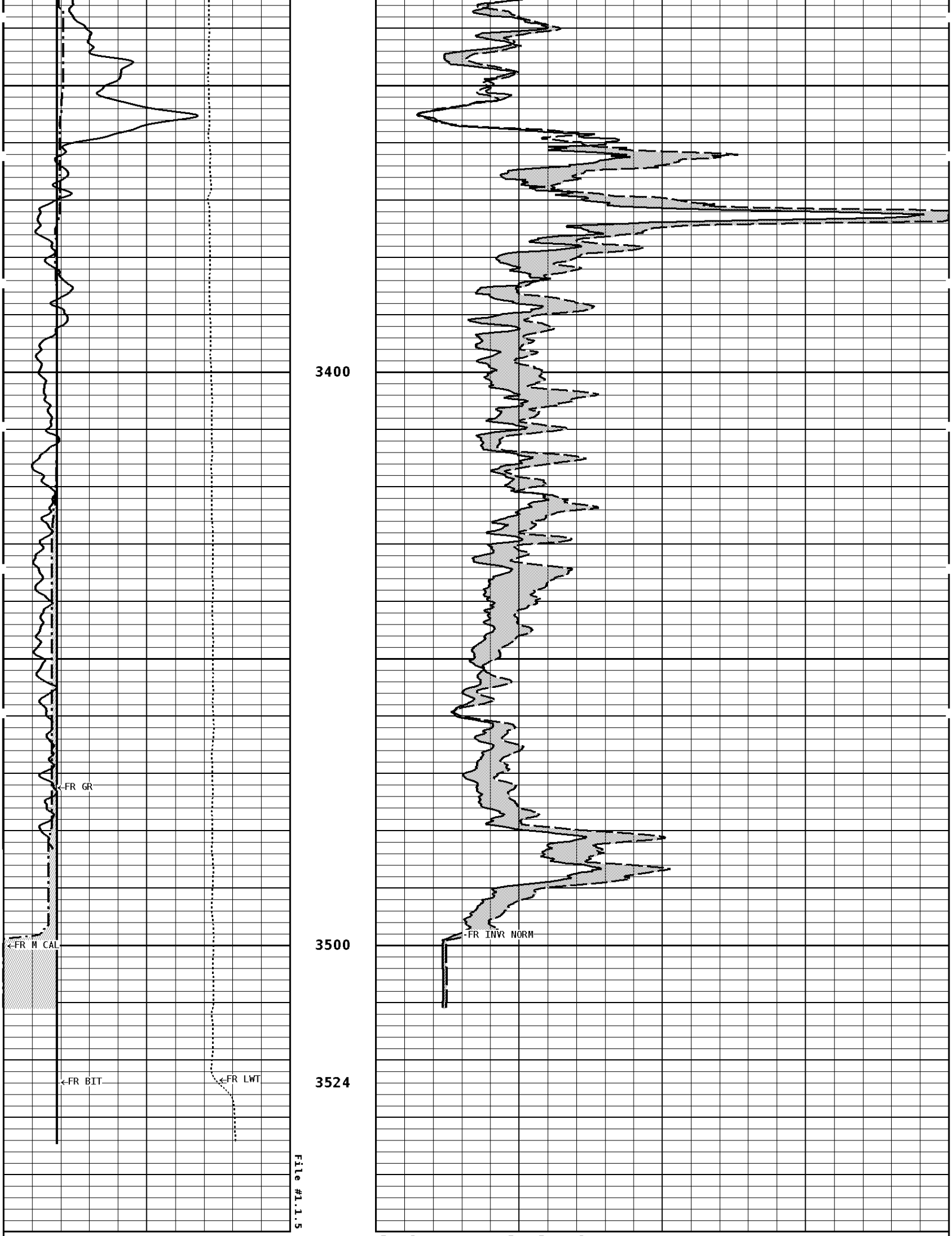



←GR
2500
←M CAL
←NORM
←INV
←BIT
←LWT
2600


2700
2800


2900
3000
3100
GR
M CAL
BIT
LWT
NORM
INV


3200
3300



1:240 MAIN SECTION

GAMMA RAY
API UNITS
150 300
0 150

TENSION
LBS
10000 0

CALIPER MICRO
INCHES (IN)
16 26
6 16

BIT SIZE
INCHES (IN)
6 16

NORMAL
OHMM
0 40

INVERSE
OHMM
0 40

*** Borehole Zone Factors ***

Zone 1 99999.0 to 0.0 Feet

Drill Bit Size	7.875	in
MSTNG Normal Correction	0.00	ohmm
MSTNG Inverse Correction	1.50	ohmm

Well File: BEREXCO_HINES_27X_DEC11_MSTK **Scale:** 1:240 **Format:** MST-240
Segment: V1.D1.S3 Reprocess REPEAT **Acquired:** 2019-12/12 01:07 3.4.1-13968
Reference: 0 **Processed:** 2019-12/12 01:28 3.4.1-13968

BIT SIZE
INCHES (IN)
6 16

CALIPER MICRO
INCHES (IN)
16 26
6 16

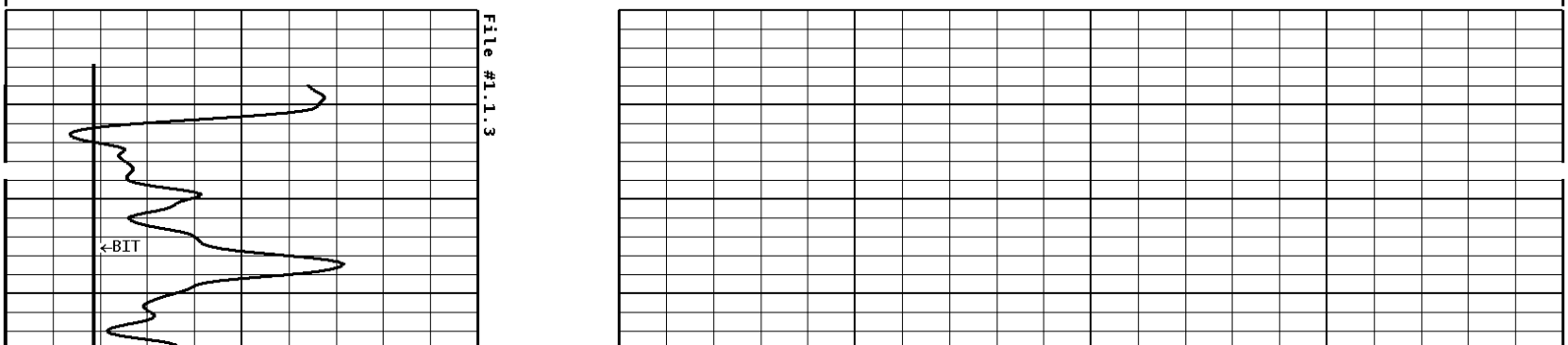
TENSION
LBS
10000 0

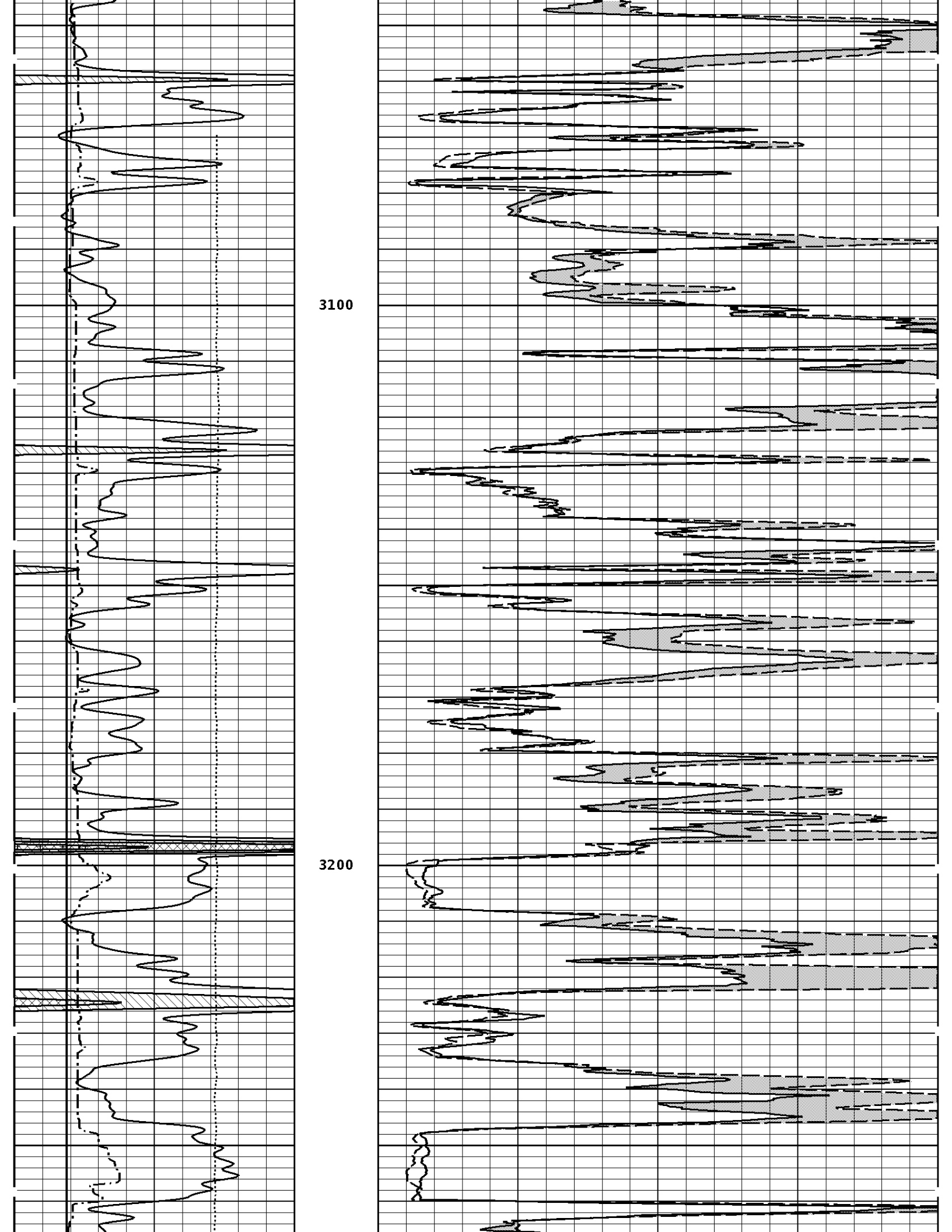
INVERSE
OHMM
0 40

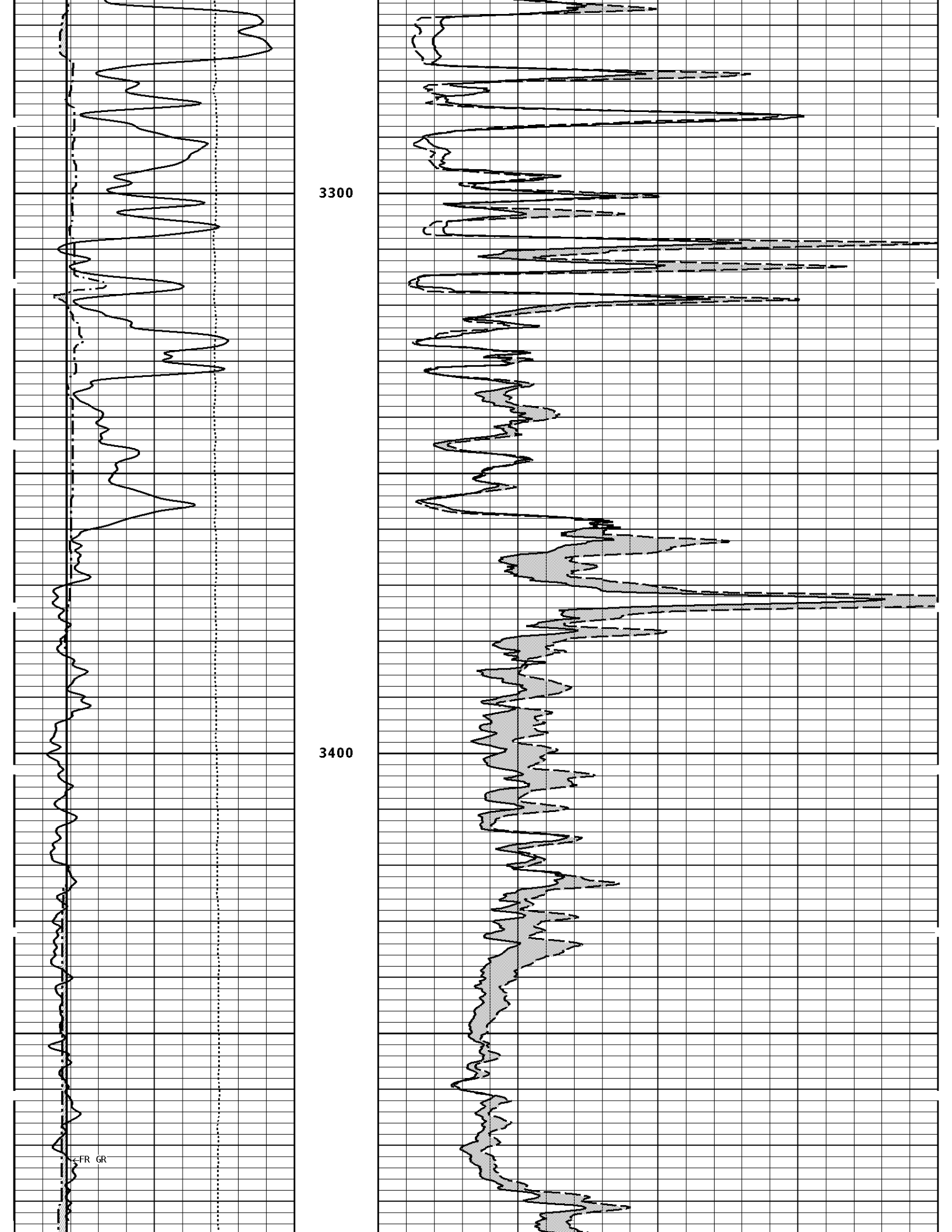
GAMMA RAY
API UNITS
150 300
0 150

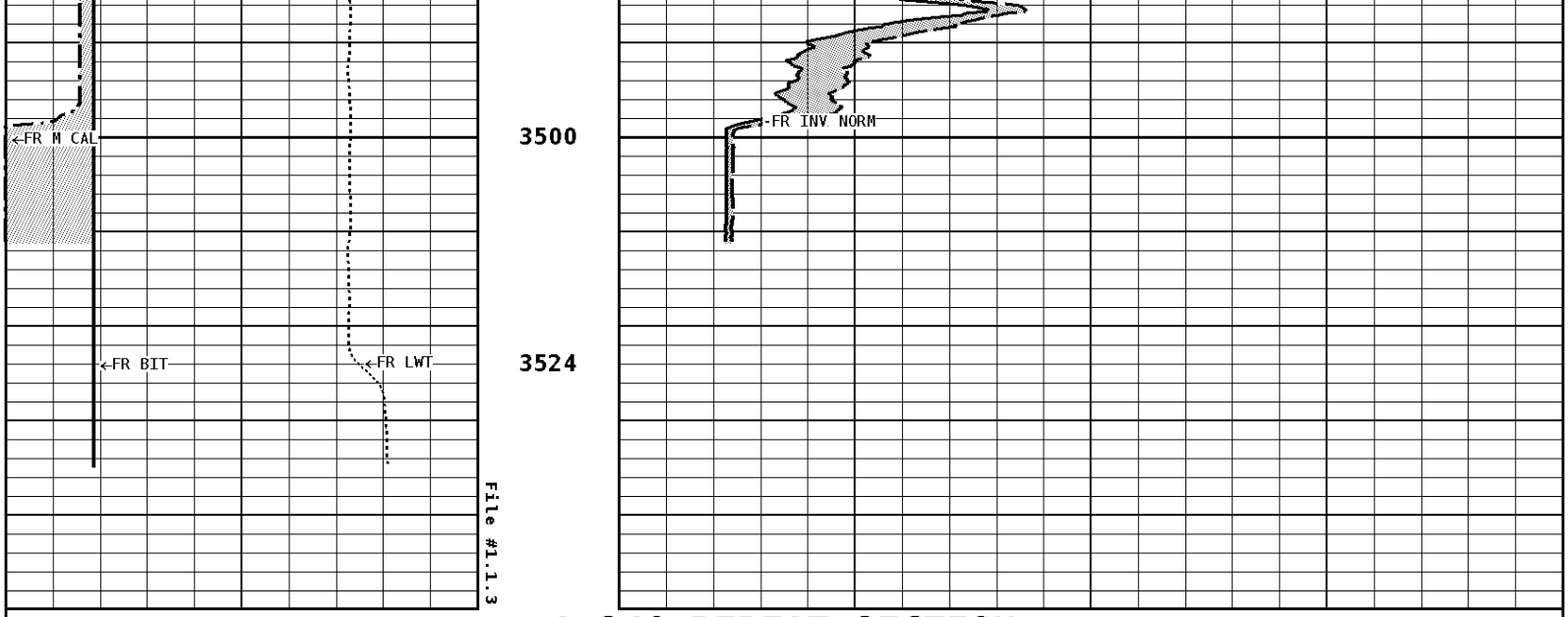
NORMAL
OHMM
0 40

1:240 REPEAT SECTION




3100
3200


3300
3400
FR GR



1:240 REPEAT SECTION

GAMMA RAY
API UNITS
150 — 300
0 — 150

TENSION
LBS
10000 — 0

CALIPER MICRO
INCHES (IN)
16 — 26
6 — 16

BIT SIZE
INCHES (IN)
6 — 16

NORMAL
OHMM
0 — 40

INVERSE
OHMM
0 — 40

* Borehole Zone Factors *

Zone 1 99999.0 to 0.0 Feet

Drill Bit Size	7.875	in
MSTNG Normal Correction	0.00	ohmm
MSTNG Inverse Correction	1.50	ohmm

* Calibration Summary *

Shop Calibration
GRT-B

Performed : 01-NOV-2019 Time : 10:40
Sensor Suite : GR-GR5 ID : GRT-BA-14

	Measured Background	Measured Jig	Units	Calibrated Jig	Units
GR	64	323	CPS	160	GRAPI

Shop Calibration
MST-DA

Performed : 07-OCT-2019 Time : 23:16
Sensor Suite : CALI-MSN ID : MST-DA-024

	Jig - Measured Ring#1	Jig - Measured Ring#2	Jig - Calibrated Ring#1	Jig - Calibrated Ring#2	Units
CL # 1	7.0	11.4	6.0	12.0	IN.

Performed : 27-SEP-2019 Time : 13:20
Sensor Suite : MSTDA-NI ID : MST-DA-024

Internal

	Measured			Calibrated		
	Zero	Reference	Units	Zero	Reference	Units
INV-V	0.0	29853.4		0.00	1546.00	MV
NOR-V	0.0	29711.1		0.00	1646.00	MV
IN-C	0.0	58914.6		0.00	15.46	UA
INV-R					32.34	OHMM
NOR-R					58.67	OHMM

STEP energy services

Company: BEREXCO LLC

Well: HINES UNIT #27X

Location: 2010' FSL & 1320' FEL

Logged: 12-11-2019

K.B. Elev: 1876.0 Ft