

1312351

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
--	---

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD:	Size:	Set At:	Packer At:	Liner Run: <input type="checkbox"/> Yes <input type="checkbox"/> No
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Date of First, Resumed Production, SWD or ENHR.	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____
---	--

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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GLOBAL CEMENTING, L.L.C.

2624

REMIT TO 18048 170RD
RUSSELL, KS 67665

SERVICE POINT: Russell KS

DATE <u>4-15-2016</u>	SEC. <u>31</u>	TWP. <u>8 N</u>	RANGE <u>10 W</u>	CALLED OUT	ON LOCATION <u>9:35am</u>	JOB START	JOB FINISH <u>1:30</u>
LEASE <u>WARRIOR LOWERY</u>	WELL # <u>#1</u>	LOCATION <u>Zudich 2W 6N 1W 1/2 S</u>	COUNTY <u>ROOK'S</u>	STATE <u>KANSAS</u>			
OLD OR <input checked="" type="radio"/> NEW (CIRCLE ONE)							

CONTRACTOR W-W DRIG R. #12 "CALVEN"

TYPE OF JOB Cement Surface

HOLE SIZE 12 1/4 T.D. 263'

CASING SIZE 8 5/8 New # DEPTH 263'

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX 250# MINIMUM

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG. 15-20'

PERFS

DISPLACEMENT 15.80 / BBL

EQUIPMENT

PUMP TRUCK CEMENTER Glen G.

P-2 HELPER Cody H.

BULK TRUCK

B-5 DRIVER BRANDON S.

BULK TRUCK DRIVER

OWNER

CEMENT AMOUNT ORDERED 175 SX Comm

38CC

22GEL

COMMON @

POZMIX @

GEL @

CHLORIDE @

ASC @

HANDLING @

MILEAGE @

TOTAL

REMARKS:

REN 6 NEW JOINTS OF # 8 5/8 CSG

SET @ Received Circulation

Cement w/ 175 SX Comm 302.

Displaced 1 BBL H₂O

SHUT IN @ 300 #.

THANK'S

Cement Did Circulate

CHARGE TO: AMERICAN PATRIOT Oil LLC.

STREET

CITY STATE ZIP

Global Cementing, L.L.C.,
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME Calvin P. Theastiel

SIGNATURE Calvin P. Theastiel

SERVICE

DEPTH OF JOB

PUMP TRUCK CHARGE

EXTRA FOOTAGE @

MILEAGE @

MANIFOLD @

TOTAL

PLUG & FLOAT EQUIPMENT

@

@

@

@

@

TOTAL

SALES TAX (If Any)

TOTAL CHARGES

DISCOUNT IF PAID IN 30 DAYS



**Computer Processed
Interpretation**

Company AMERICAN PATRIOT OIL, LLC
 Well APO #18 WALLER LOWRY #1
 Field WILDCAT
 County ROOKS
 State KANSAS

Company AMERICAN PATRIOT OIL, LLC
 Well APO #18 WALLER LOWRY #1
 Field WILDCAT
 County ROOKS State KANSAS

Location: API #: 15-163-24312-00-00
 1,670' FNL & 931' FWL
 SEC 31 TWP 8S RGE 19W
 Permanent Datum GROUND LEVEL Elevation 2040'
 Log Measured From KELLY BUSHING
 Drilling Measured From KELLY BUSHING
 Other Services
 DIL/CNL/CDL
 MEL
 Elevation
 K.B. 2048'
 D.F. N/A
 G.L. 2040'

Date Recorded	4/28/2016
Depth Logger	3576'
	Curve Definitions
SW	Water Saturation
SXO	Water Saturation In The Flushed Zone
VCL	Volume Of Clay
PHIE	Density - Neutron Crossplot Shale Corrected
BVW	Bulk Volume Water
BVWSXO	Bulk Volume Water In Flushed Zone
DCAL	Caliper
SPC	SP Corrected For Baseline
DGA	Apparent Grain Density
Payflag	If: PHIE> 2, VCL< 40, SPC> -10, SW< 50 & DCAL< 11
Recorded By	J. LONG
Witnessed By	MARC DOWNING
Analysis By	TIM MARTIN

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

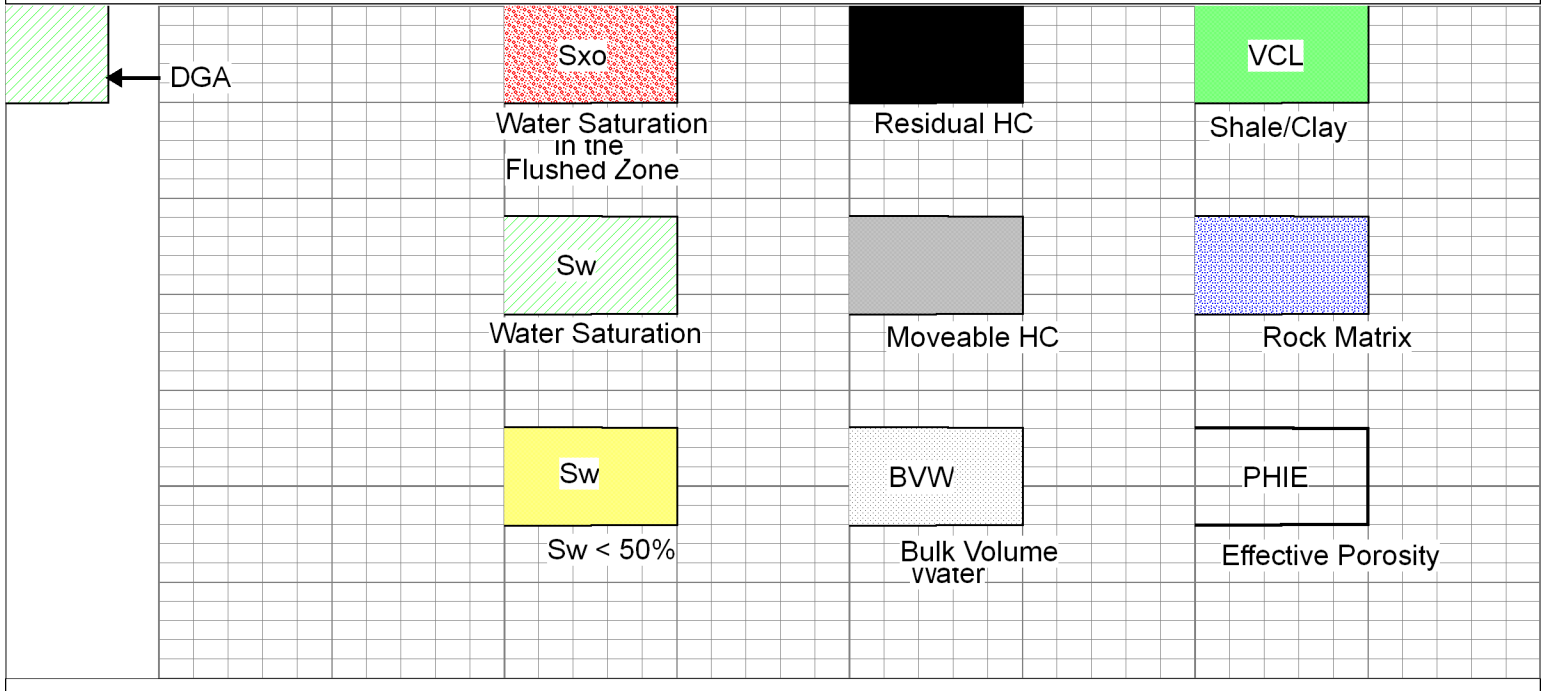
N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.
 DAMAR, 5 EAST, 1/4 SOUTH, EAST INTO

Log Measured From: KELLY BUSHING 8 Ft. Above Permanent Datum

THANK YOU FOR USING PIONEER ENERGY SERVICES
www.pioneerenergy.com 785-625-3858

Your Pioneer Energy Services Crew	This Log Record Was Witnessed By
Engineer: J. LONG Operator: Operator: Operator: T. MARTIN	Primary Witness: MARC DOWNING Secondary Witness: Secondary Witness: Secondary Witness:

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 Dataset Pathname litho
 Presentation Format 2wxplt
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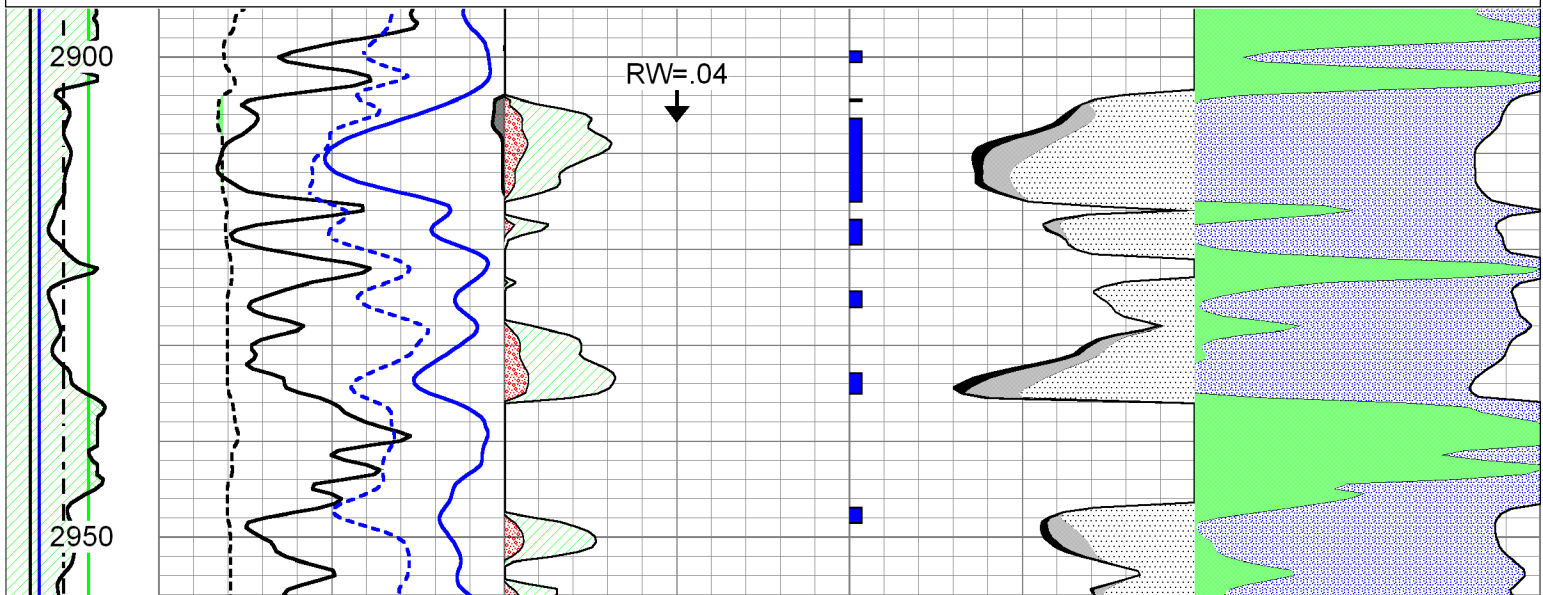


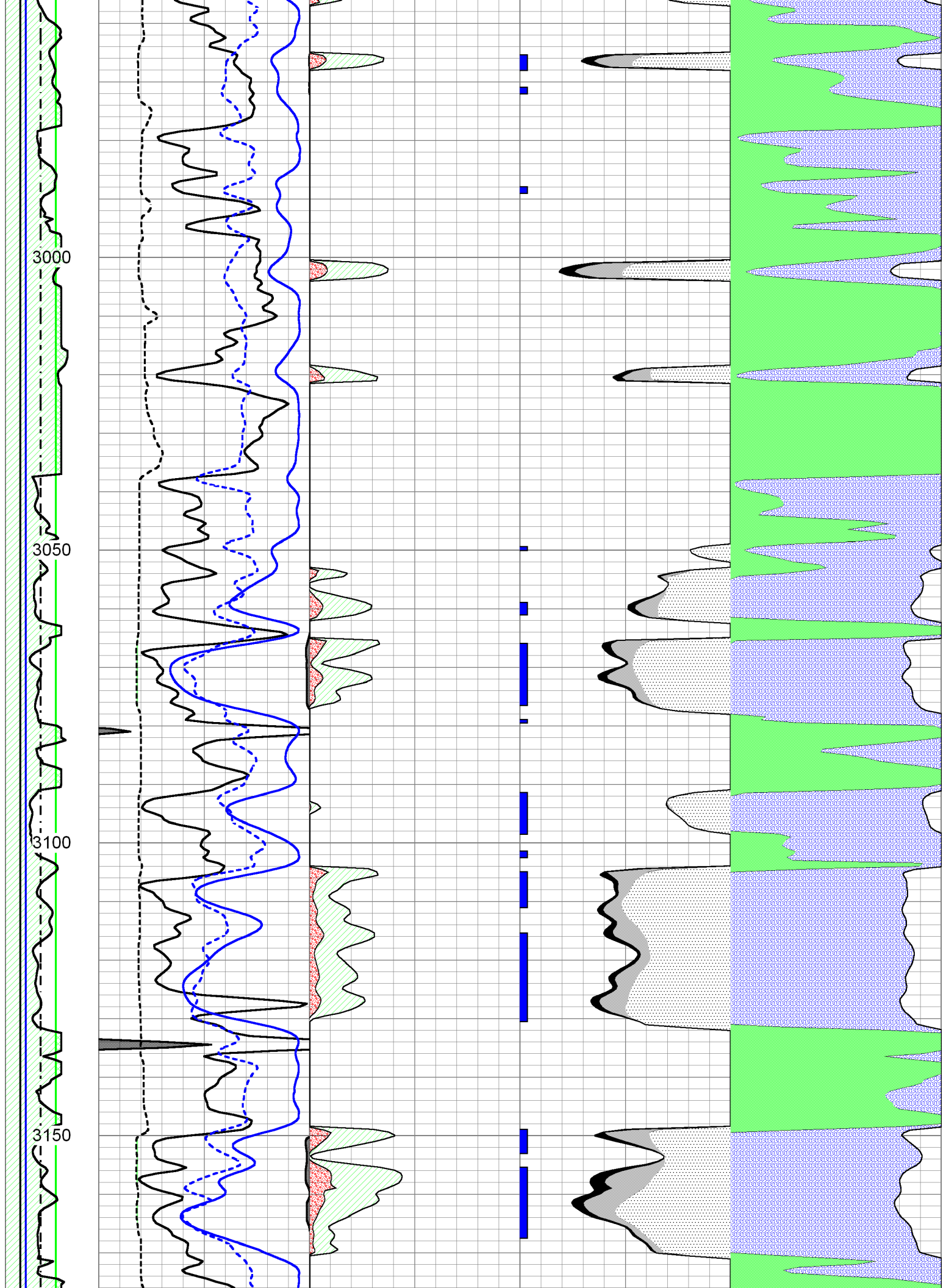
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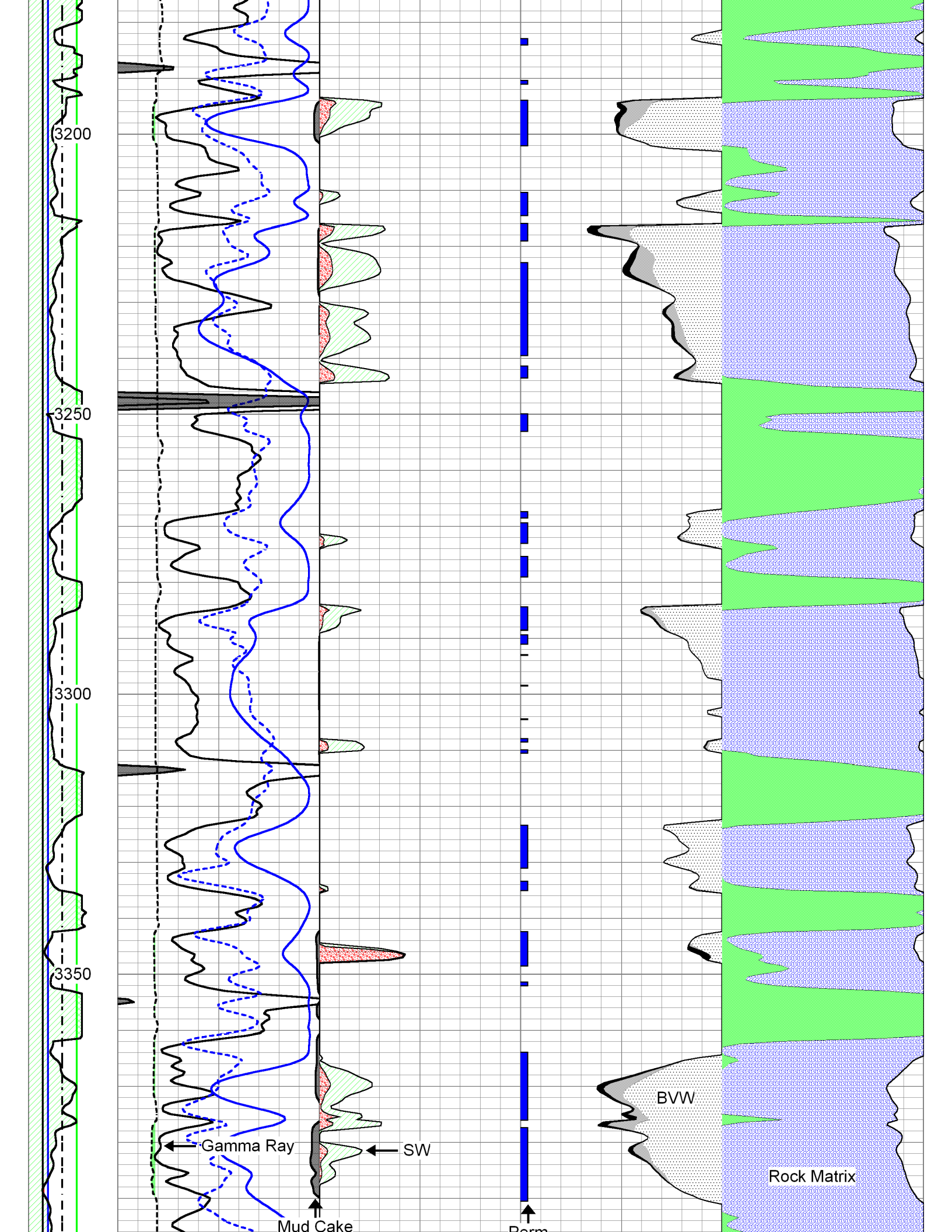
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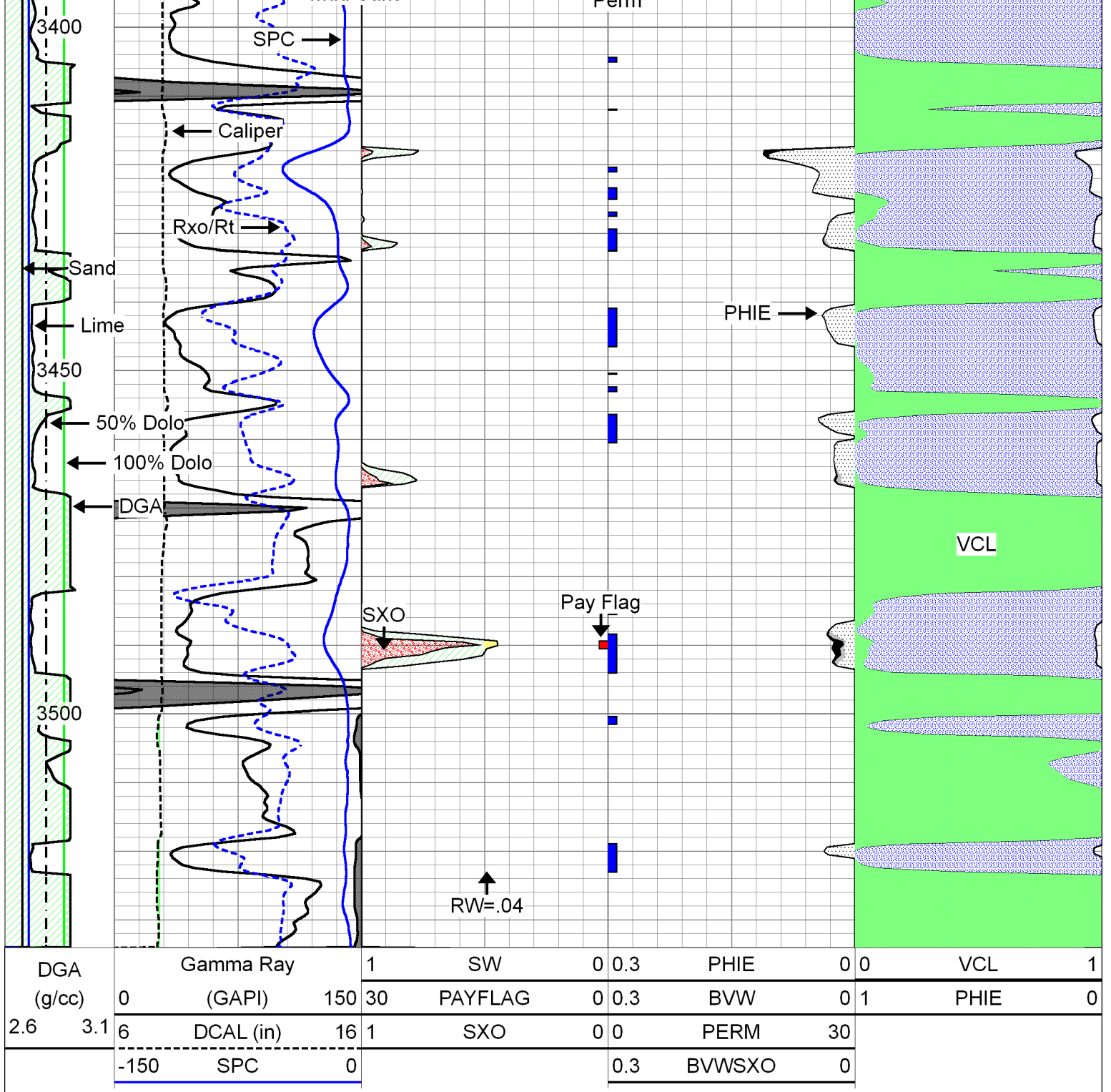
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 Dataset Pathname MEL/amcpi
 Presentation Format calc
 Dataset Creation Fri Apr 29 11:57:27 2016
 Charted by Depth in Feet scaled 1:240

DGA	Gamma Ray	1	SW	0	0.3	PHIE	0	0	VCL	1
(g/cc)	(GAPI)	150	PAYFLAG	0	0.3	BVW	0	1	PHIE	0
2.6 3.1	DCAL (in)	16	1	SXO	0	0	PERM	30		
	-150 SPC	0				0.3	BVWSXO	0		









Company AMERICAN PATRIOT OIL, LLC
 Well APO #18 WALLER LOWRY #1
 Field WILDCAT
 County ROOKS
 State KANSAS



DUAL COMP POROSITY LOG

Company AMERICAN PATRIOT OIL, LLC
 Well APO #18 WALLER LOWRY #1
 Field WILDCAT
 County ROOKS
 State KANSAS

Company AMERICAN PATRIOT OIL, LLC
 Well APO #18 WALLER LOWRY #1
 Field WILDCAT
 County ROOKS
 State KANSAS

Location: API #: 15-163-24312-00-00
 1,670' FNL & 931' FWL
 SEC 31 TWP 8S RGE 19W

Other Services
 DIL
 MEL

Date	4/28/2016
Run Number	ONE
Type Log	CNL/CDL
Depth Driller	3578'
Depth Logger	3576'
Bottom Logged Interval	3548'
Top Logged Interval	250'
Type Fluid In Hole	CHEMICAL
Salinity, PPM CL	4800
Density	9.4
Level	FULL
Max. Rec. Temp. F	112
Operating Rig Time	2 1/2 HOURS
Equipment -- Location	108 COLBY
Recorded By	J. LONG
Witnessed By	MARC DOWNING

Borehole Record		Casing Record					
Run No.	Bit	From	To	Size	Wgt.	From	To
ONE	12.25"	00'	263'	8.625"	23#	00'	263'
TWO	7.875"	263'	TD				

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Comments
 N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.
 DAMAR, 5 EAST, 1/4 SOUTH, EAST INTO

Log Measured From: KELLY BUSHING 8 Ft. Above Permanent Datum

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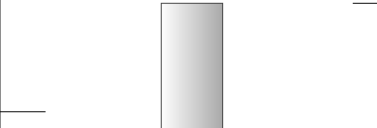
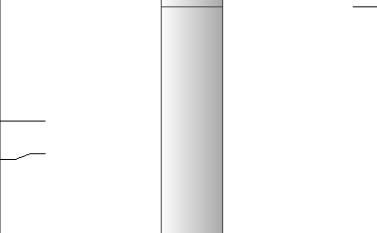
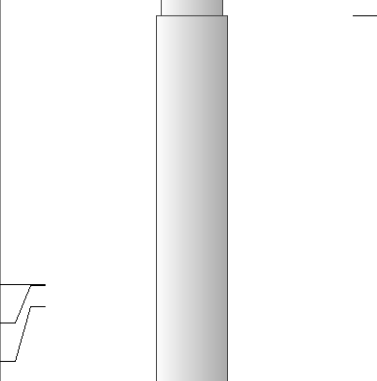
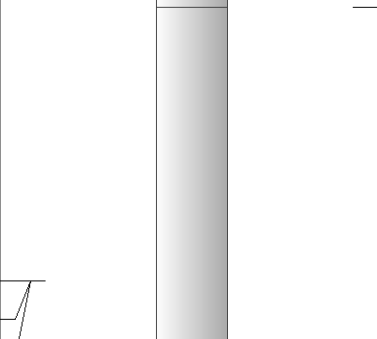
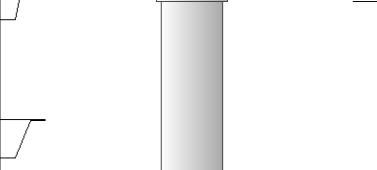
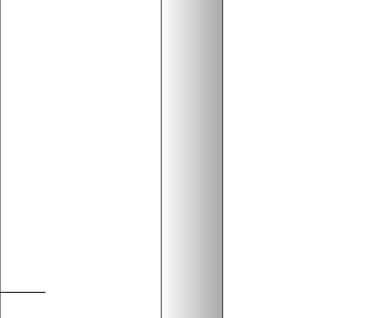
Your Pioneer Energy Services Crew Engineer: J. LONG Operator: T. MARTIN Operator: Operator:	This Log Record Was Witnessed By Primary Witness: MARC DOWNING Secondary Witness: Secondary Witness: Secondary Witness:
---	---

Log Variables

DatabaseC:\ProgramData\Warrior\Data\lmpatriot_apo_18_wallerlowry_1.db
Dataset field/well/stackmel/pass4.1/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	112	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	-620	54	Off	3576

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.58		GR-M&W (89-M&W)	3.00	3.50	50.00
CNLSC CNSSC	37.48 36.73		CNT-M&W (tk10-MW)	5.50	3.50	100.00
LSD DCAL SSD	28.43 28.42 27.93		CDL-M&W (71-914)	8.50	4.00	250.00
MCAL MI MN	19.83 19.83 19.83		ML-PSI STKBL ML (PSI-02) Stackable Microlog Tools	7.58	4.00	65.00
RLL3 RLL3F	15.80 15.79					
CILD	8.00		DIL-M&W (1987)	18.50	3.50	220.00

CILM 4.70

SP 0.20

Dataset: ampatriot_apo_18_wallerlowry_1.db: field/well/stackmel/pass4.1
 Total length: 43.08 ft
 Total weight: 685.00 lb
 O.D.: 4.00 in

PIONEER

Pioneer Energy Services

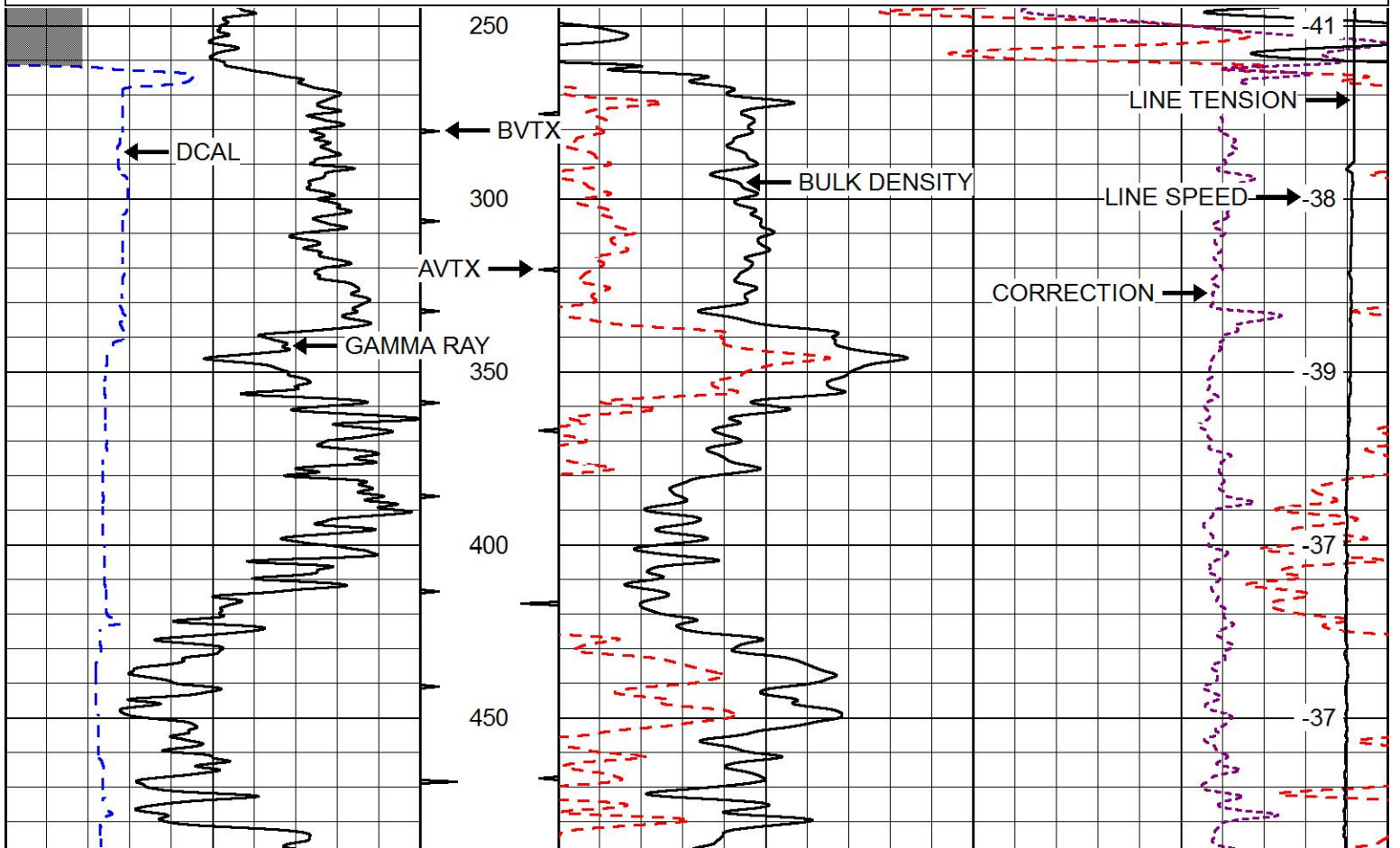
MAIN PASS

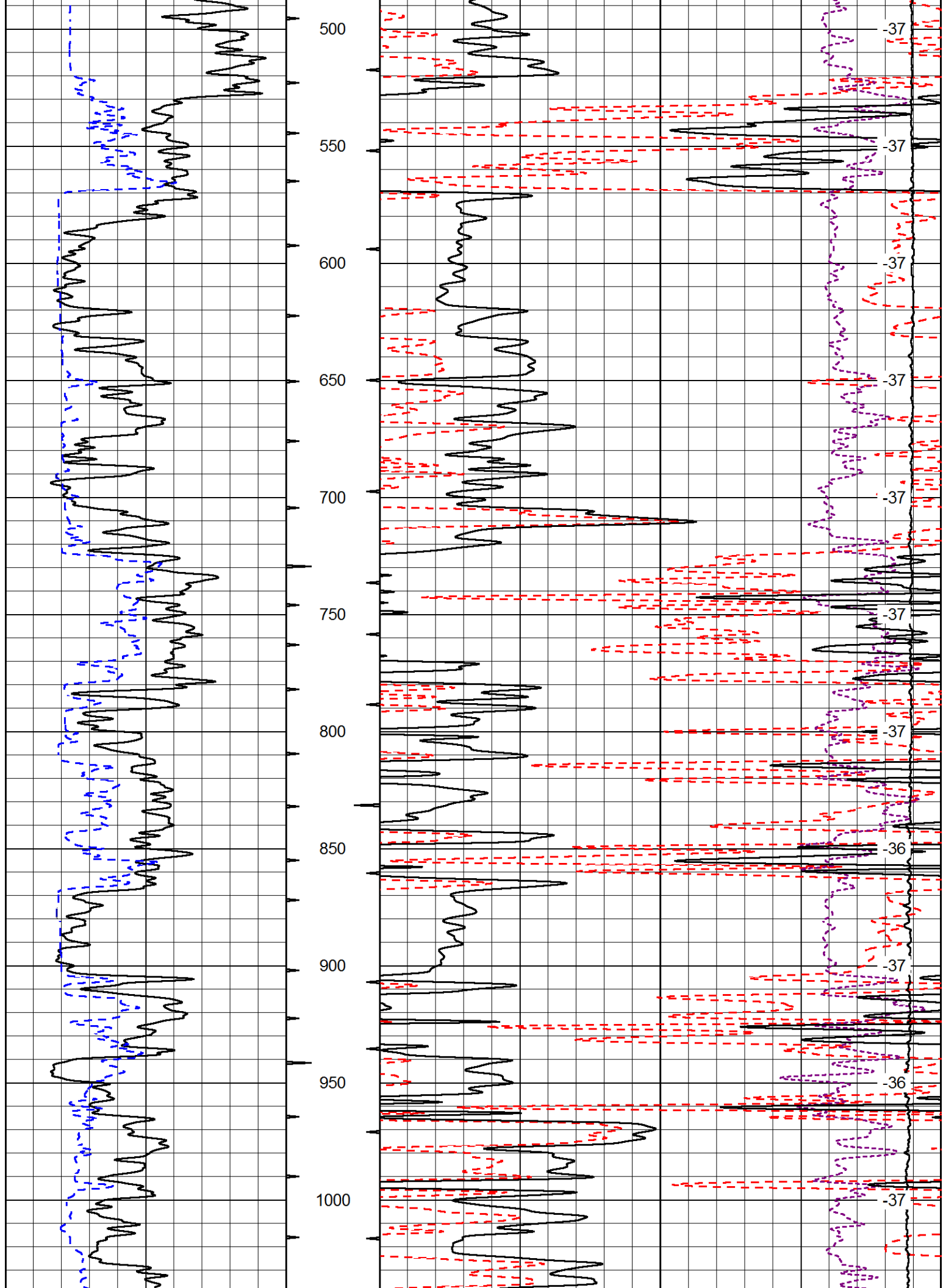
2" SCALE BULK DENSITY

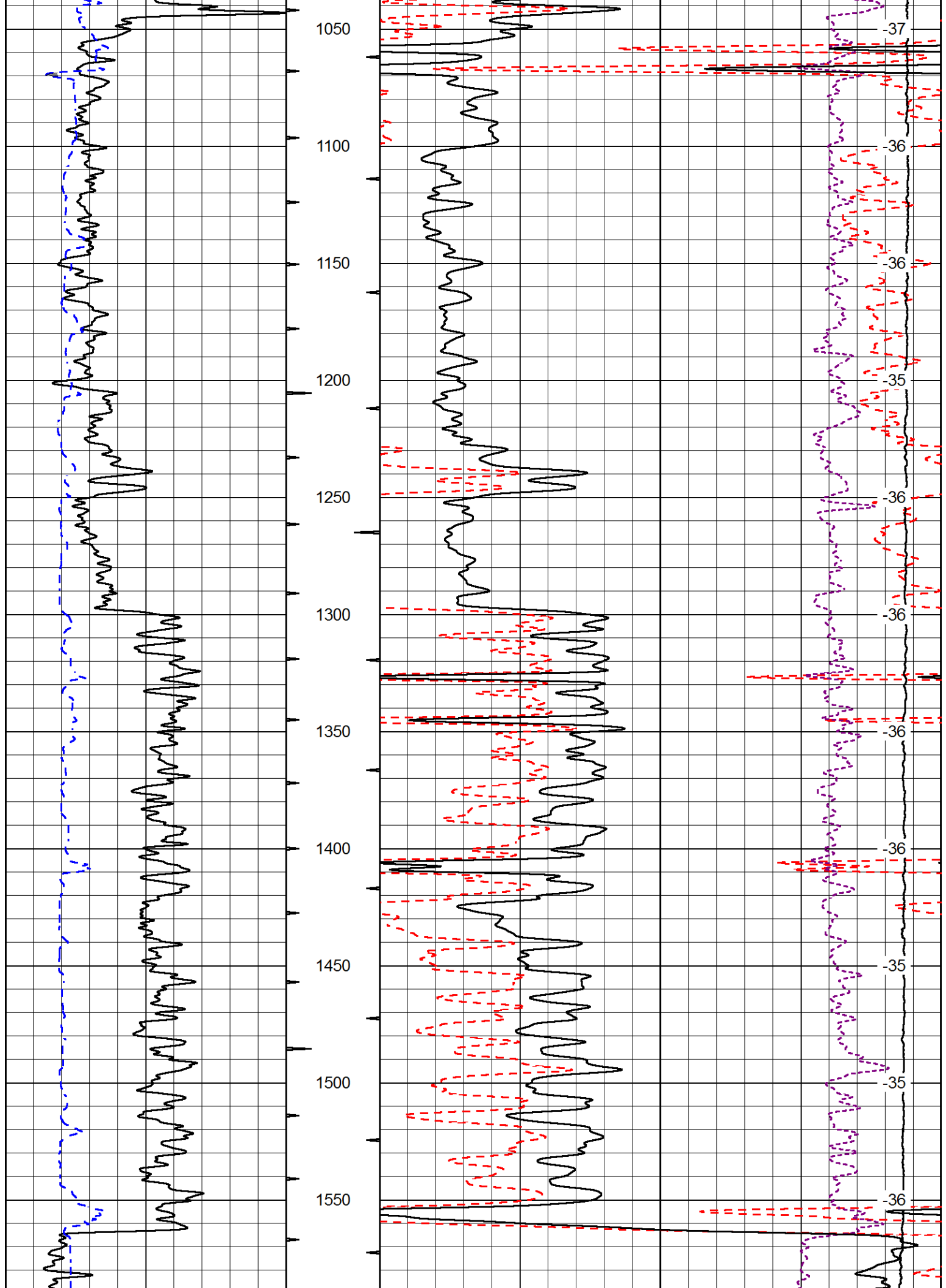
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 Presentation Format cdl
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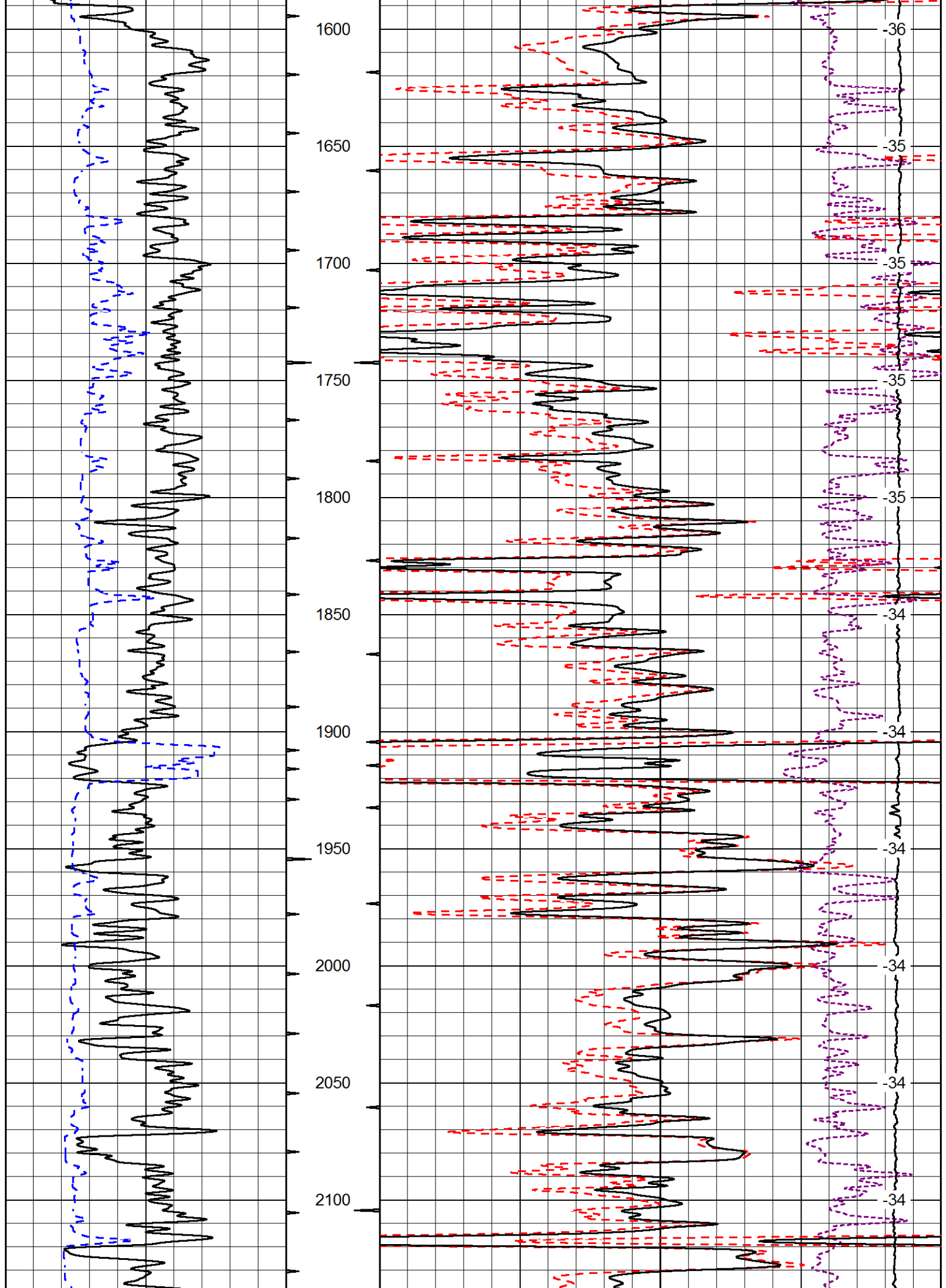
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6	CALIPER (in)	16

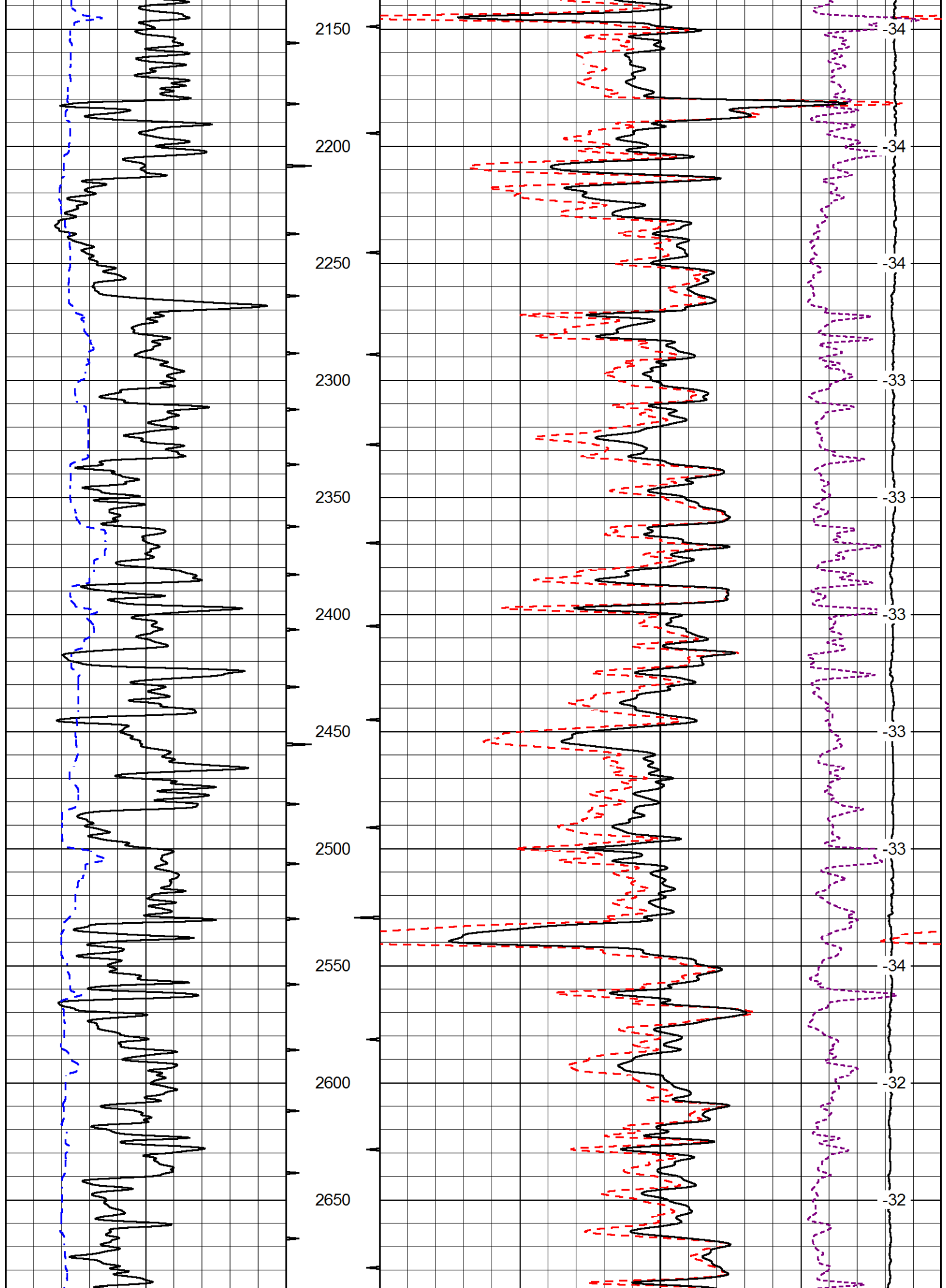
30	COMPENSATED DENSITY (pu)	-10
2	BULK DENSITY (g/cc)	3
15000	LINE TENSION (lb)	0
-0.25	CORRECTION (g/cc)	0.25
	LINE SPEED (ft/min)	

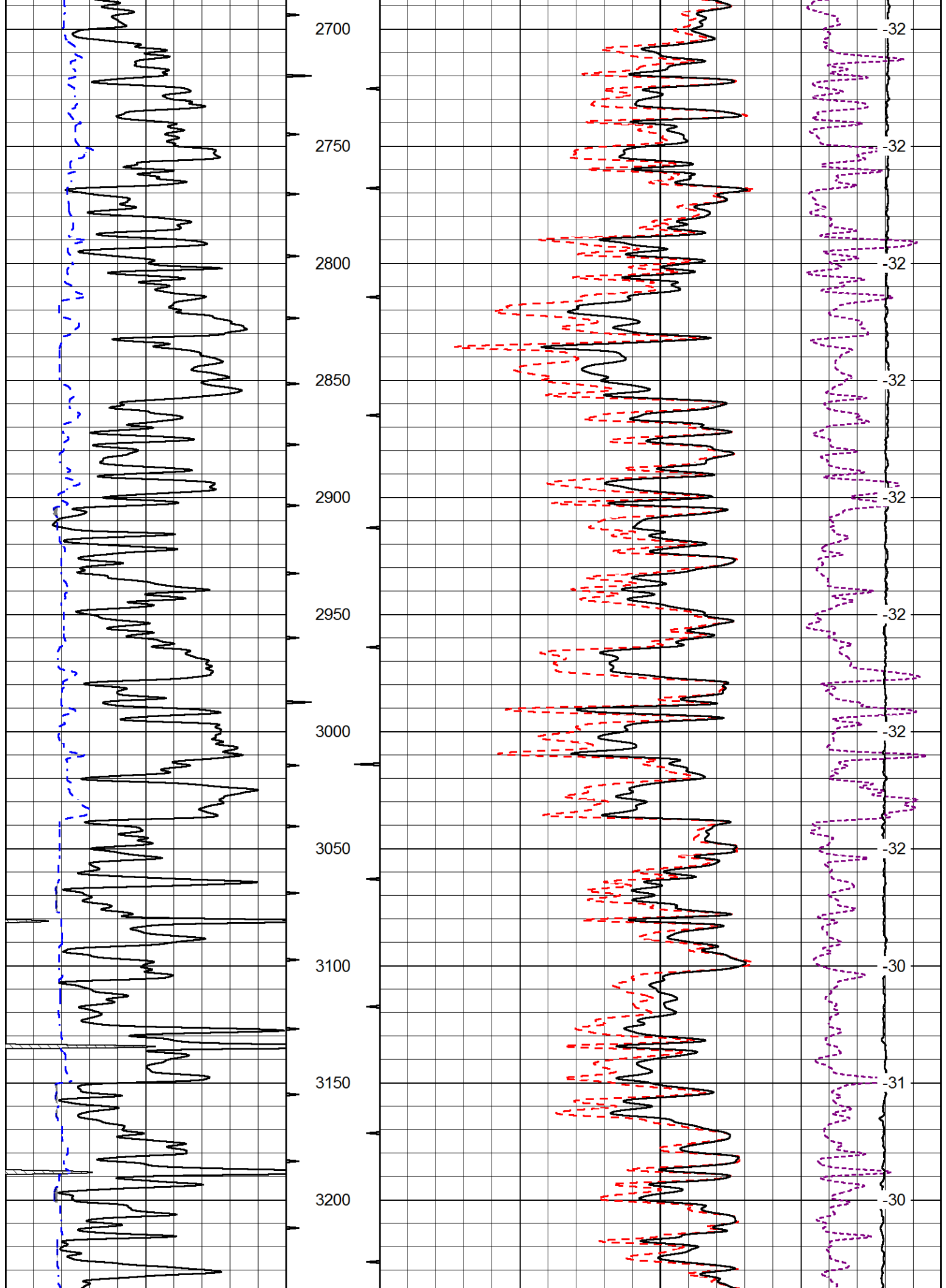


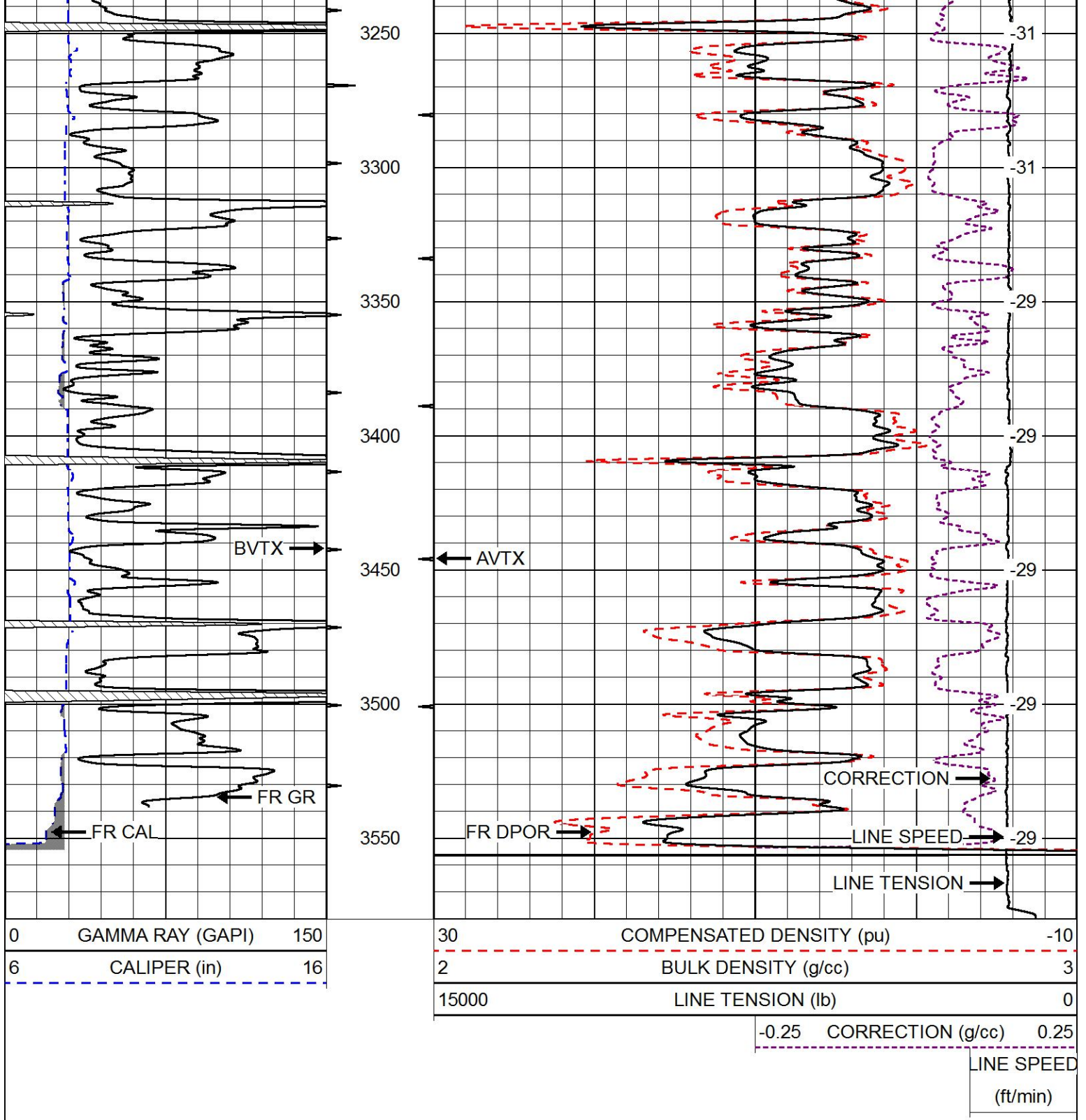












MAIN PASS

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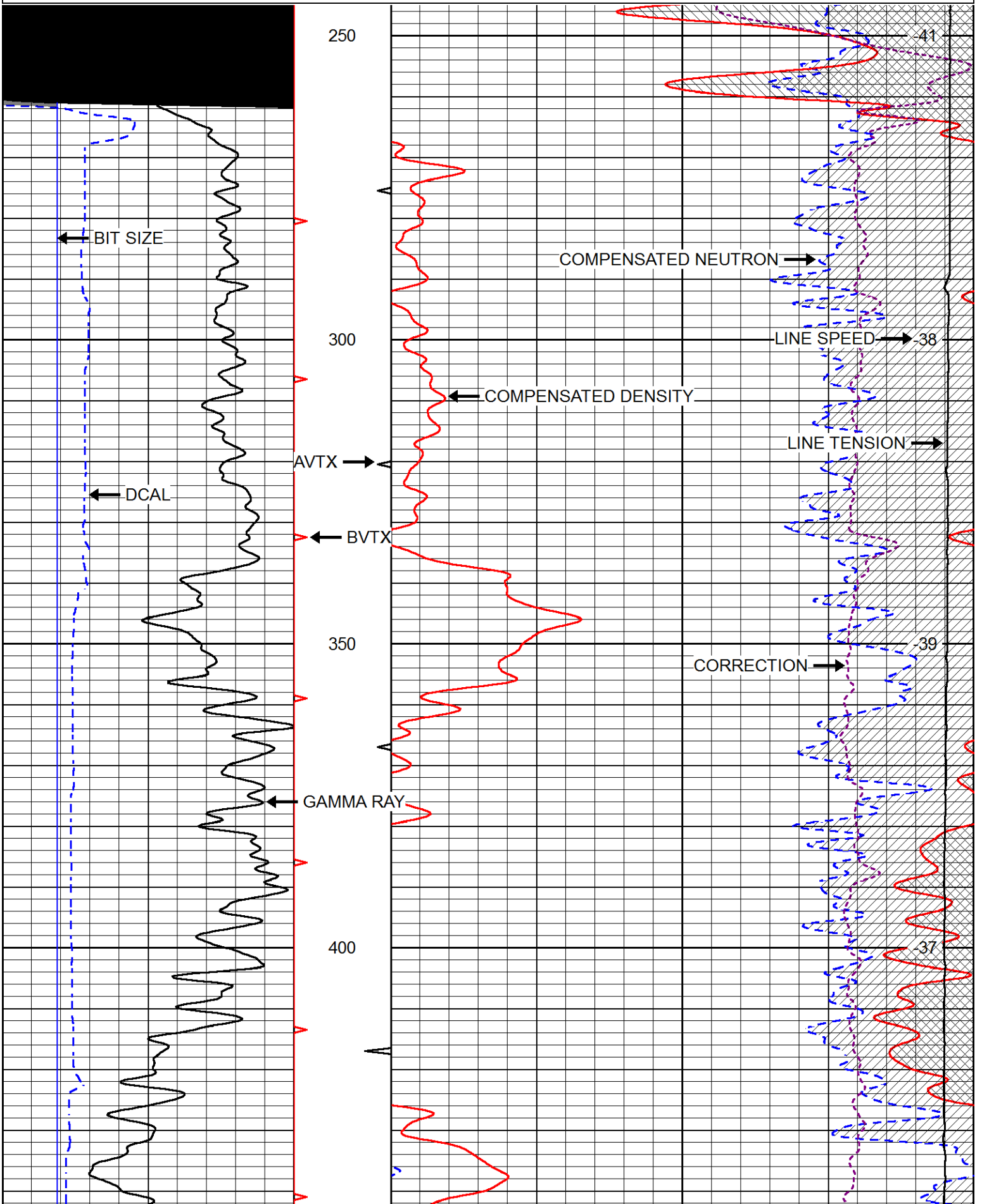


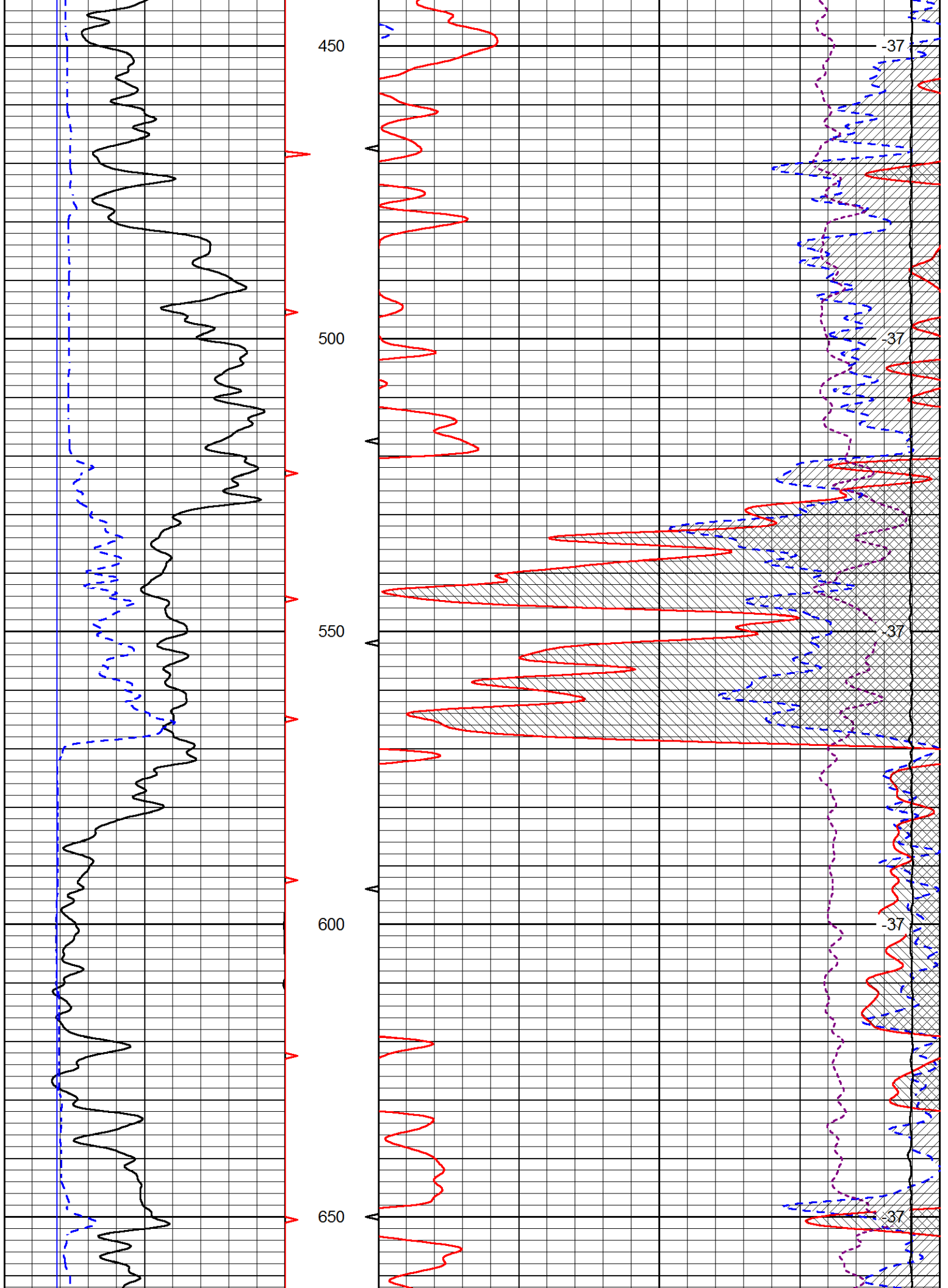
6 BIT SIZE (in) 16

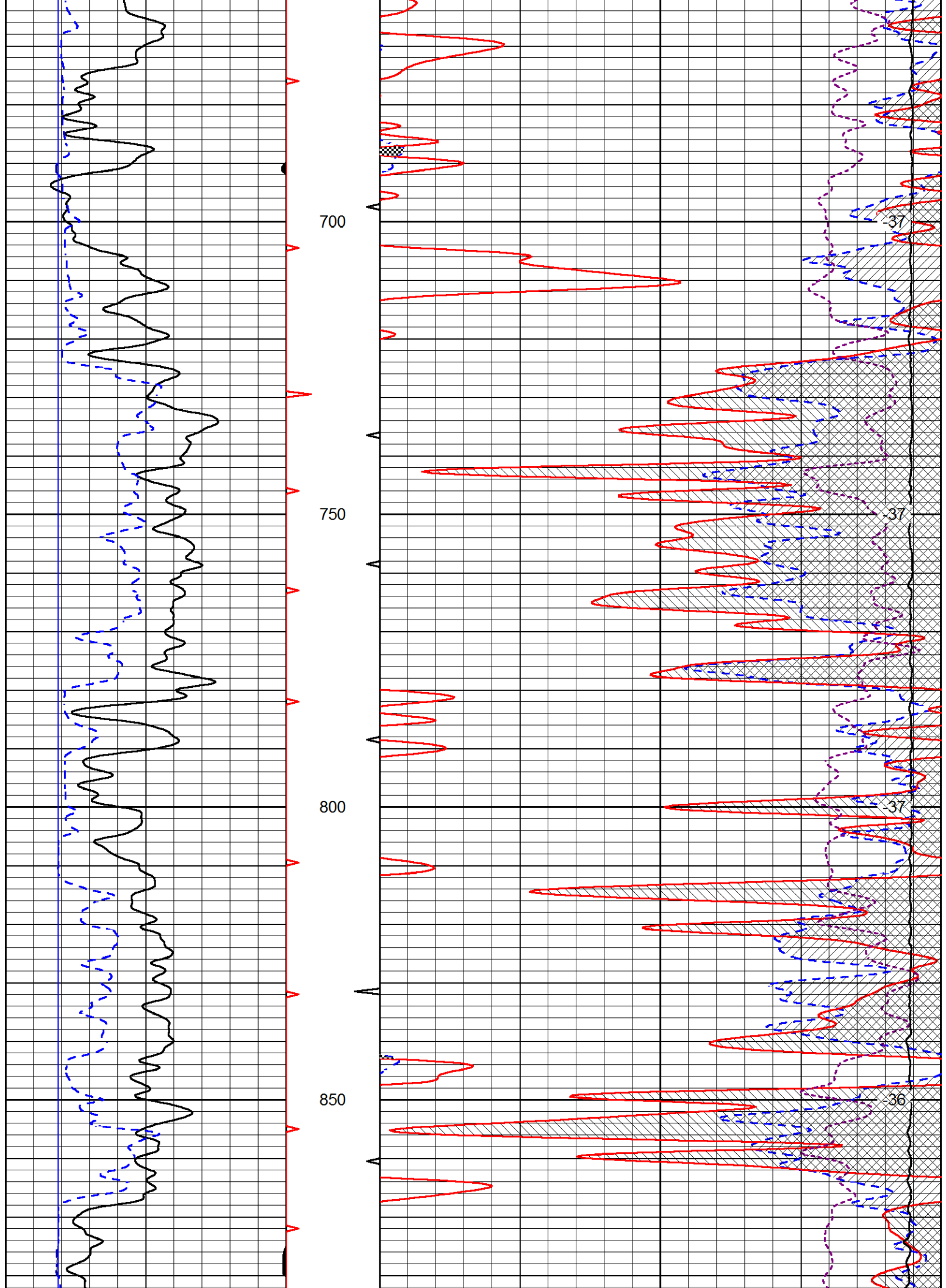
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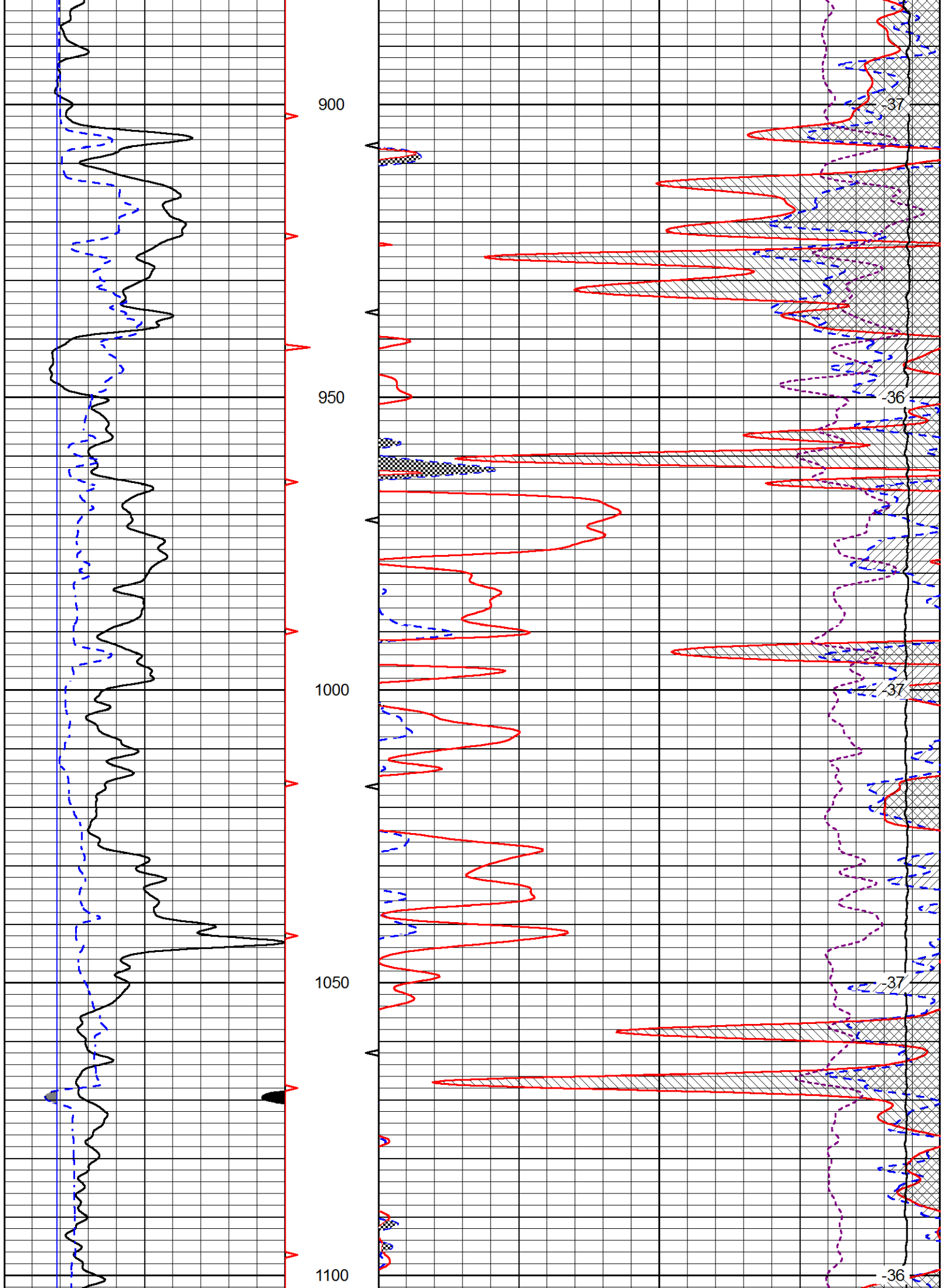
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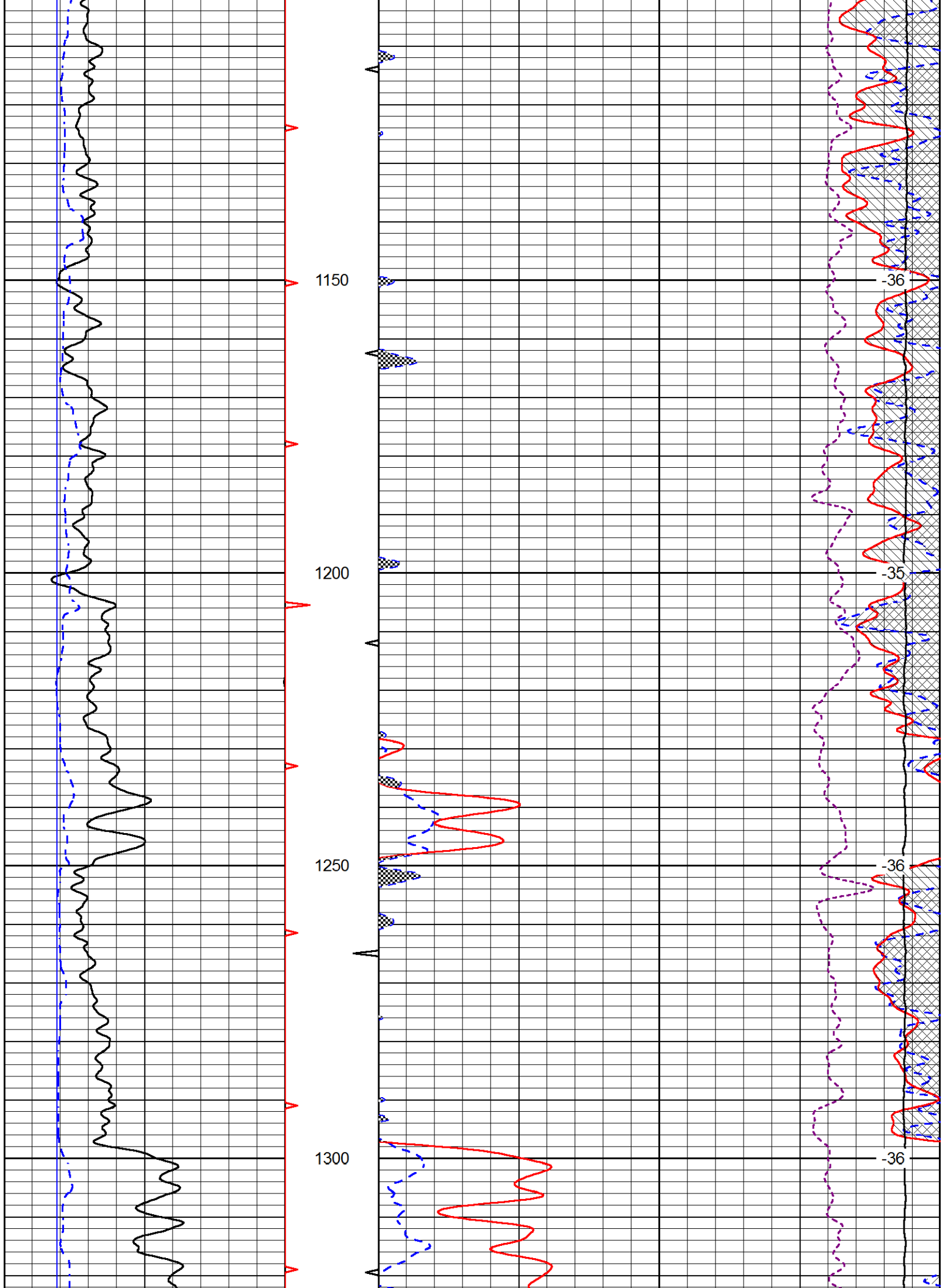
LINE SPEED (ft/min)

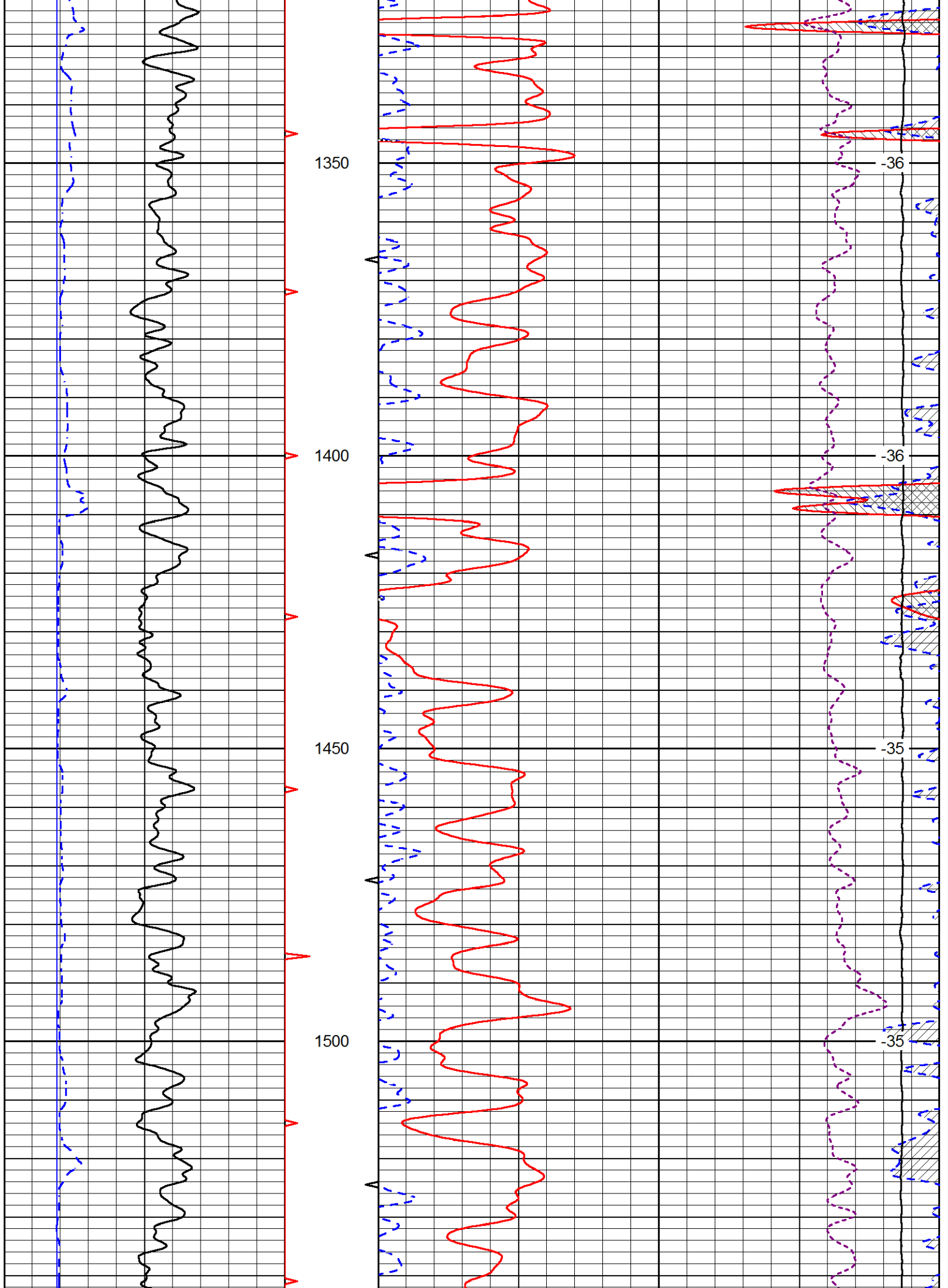


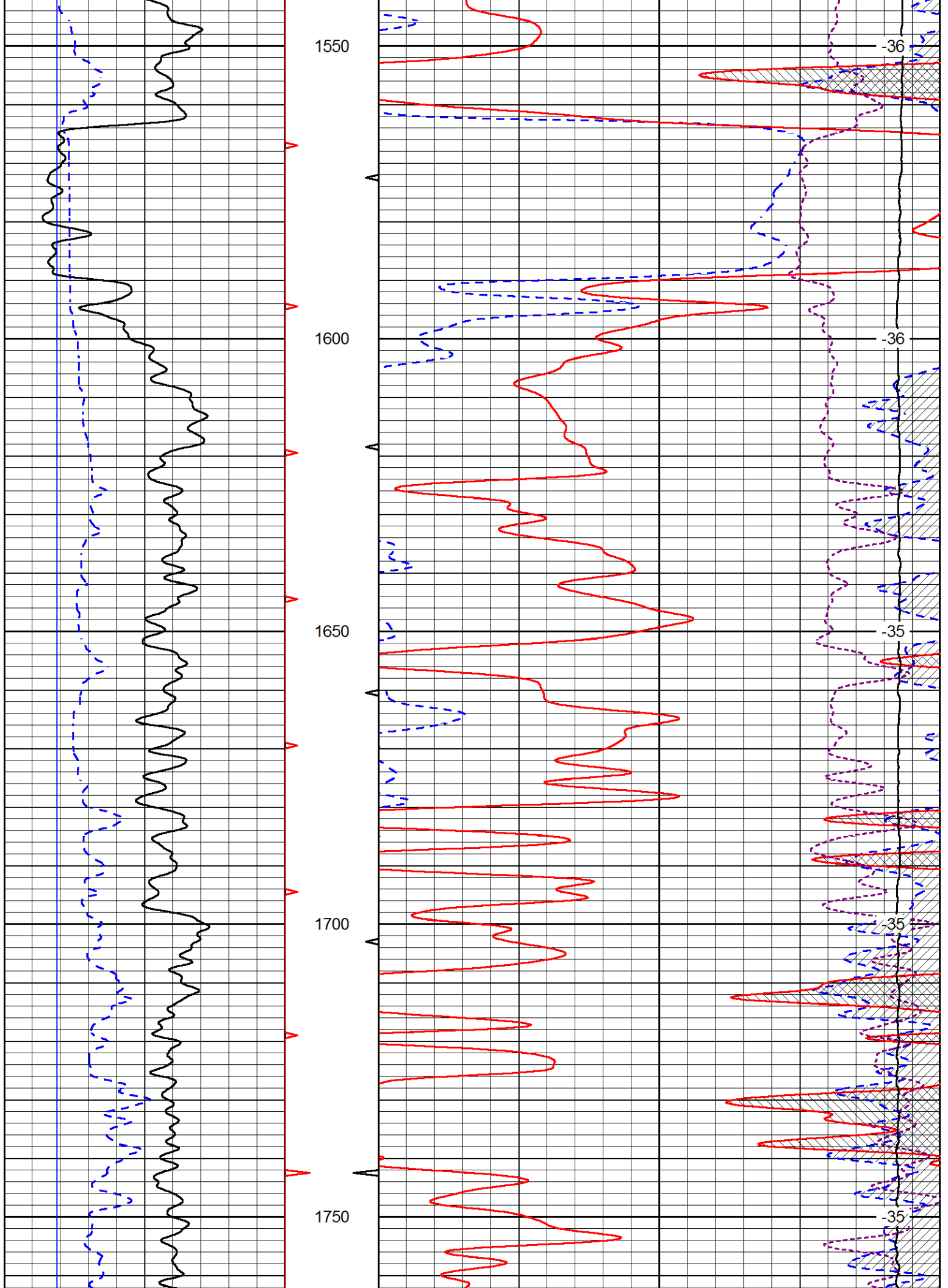


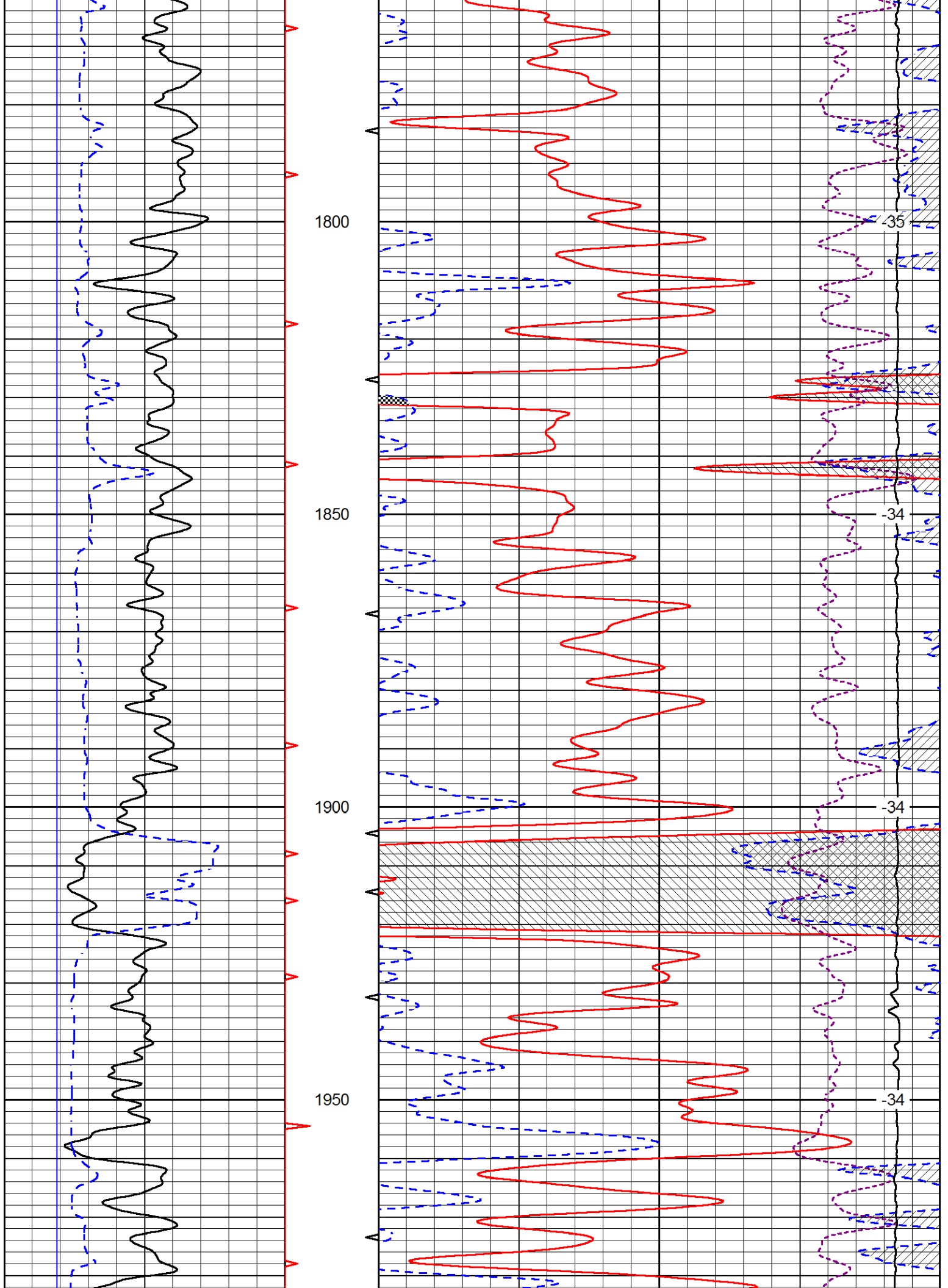


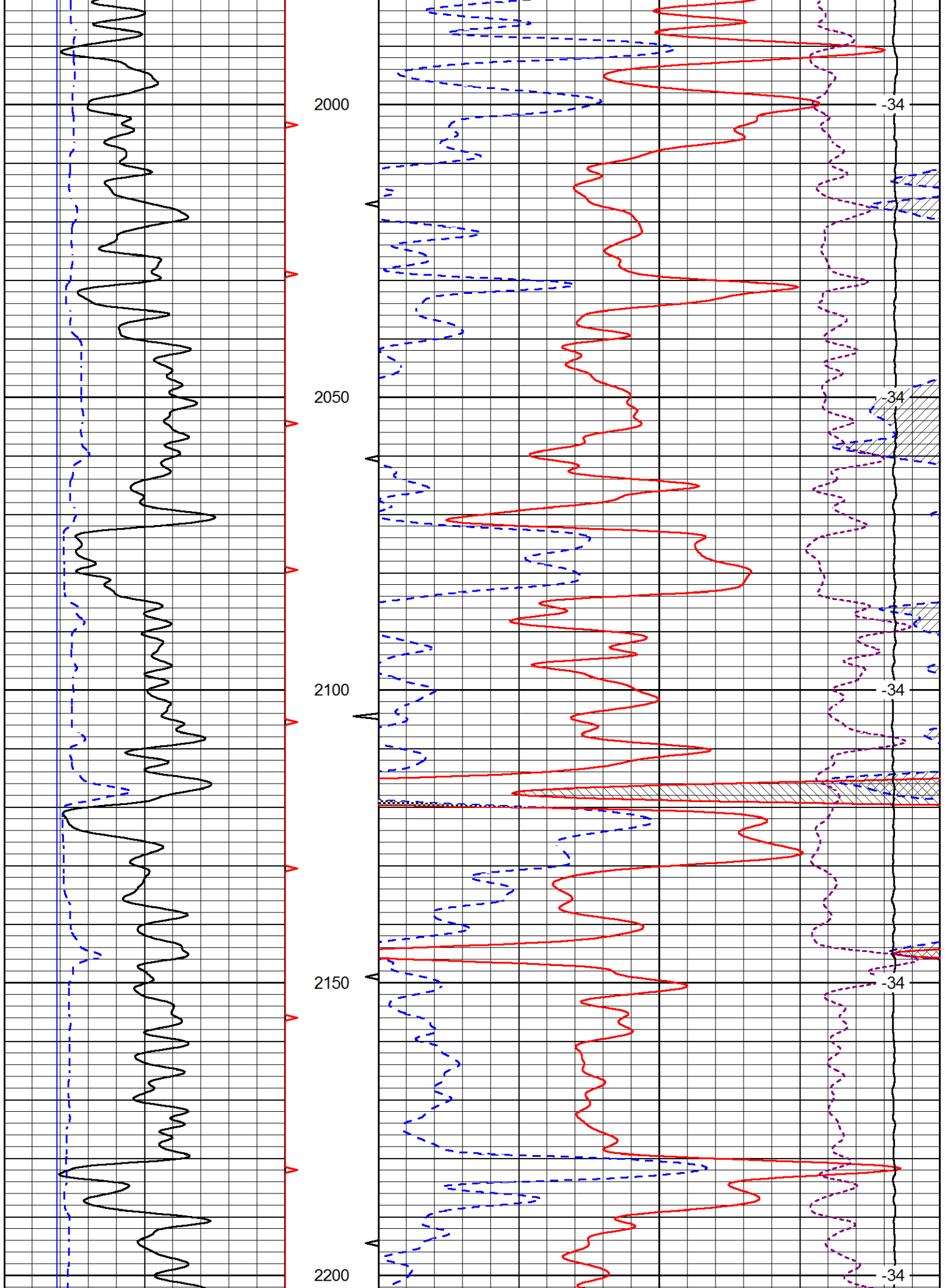


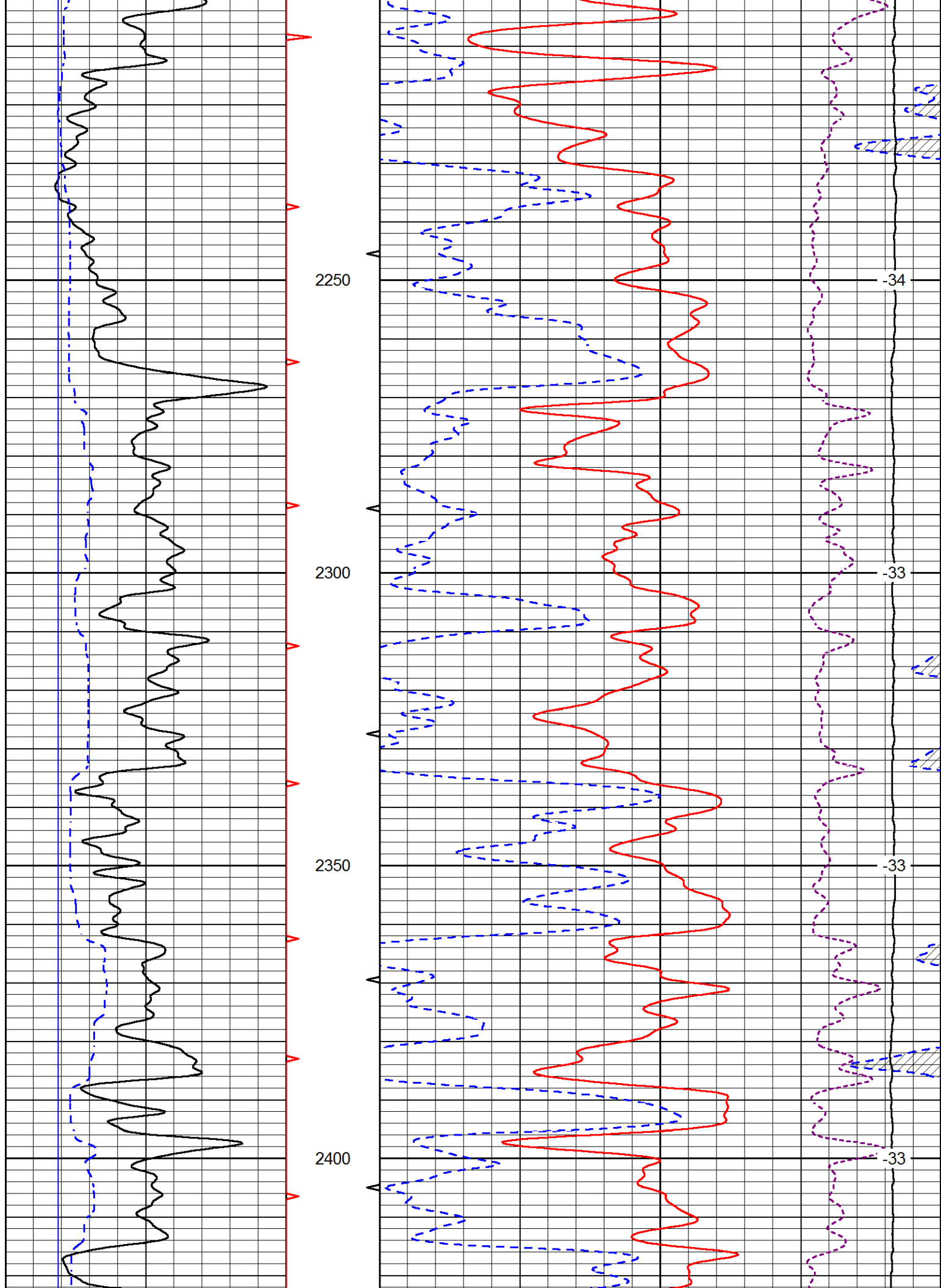


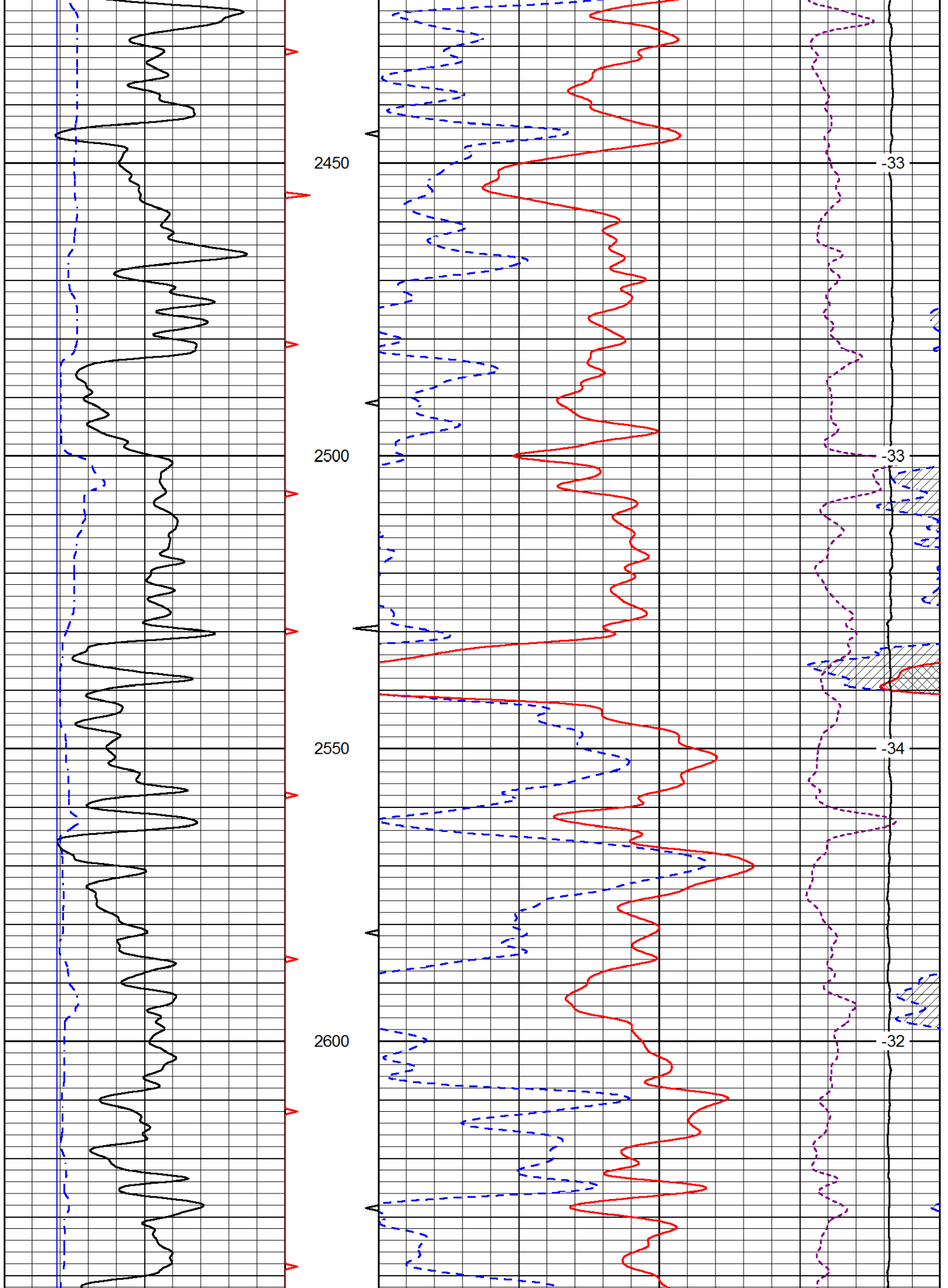


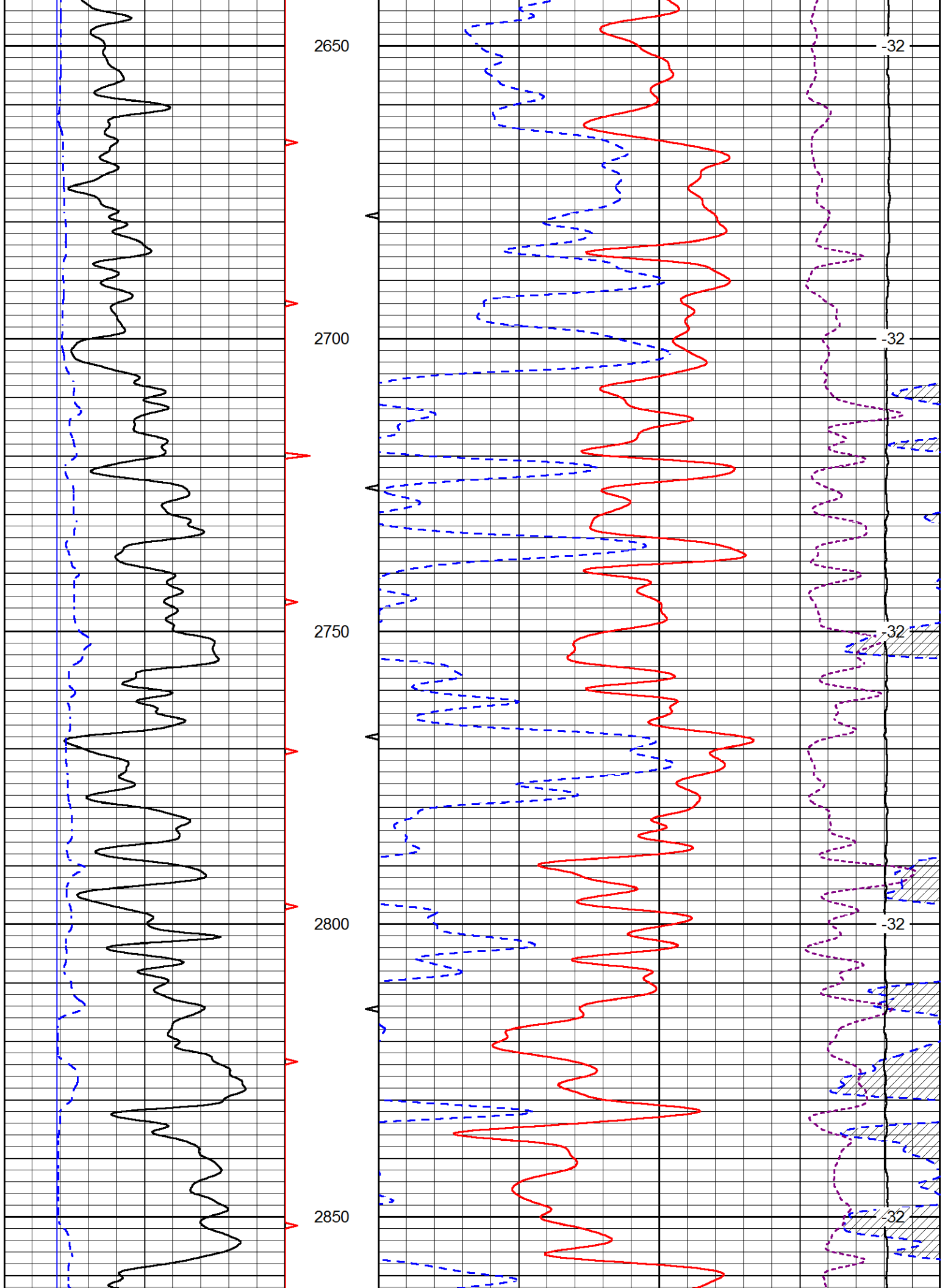


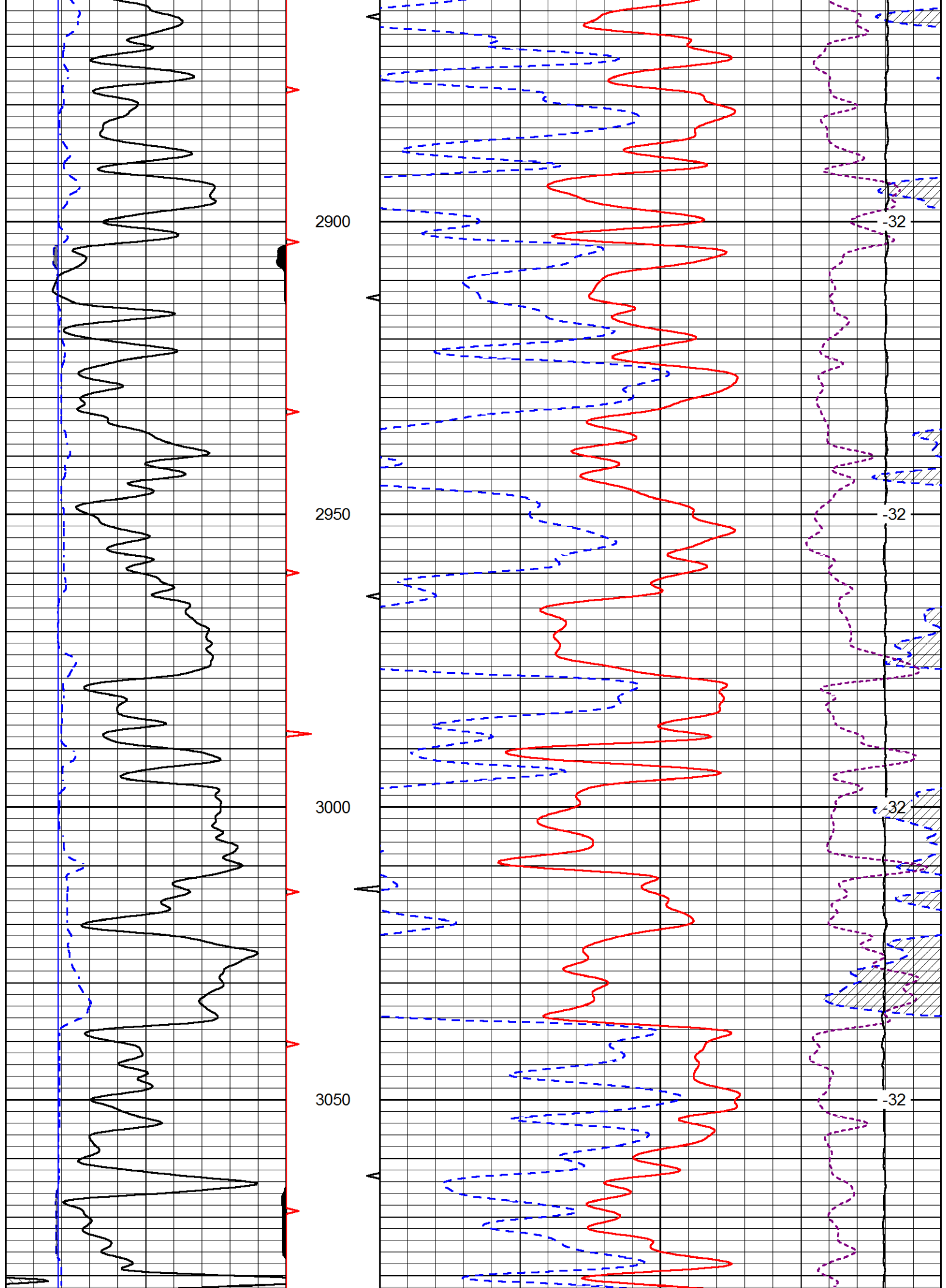


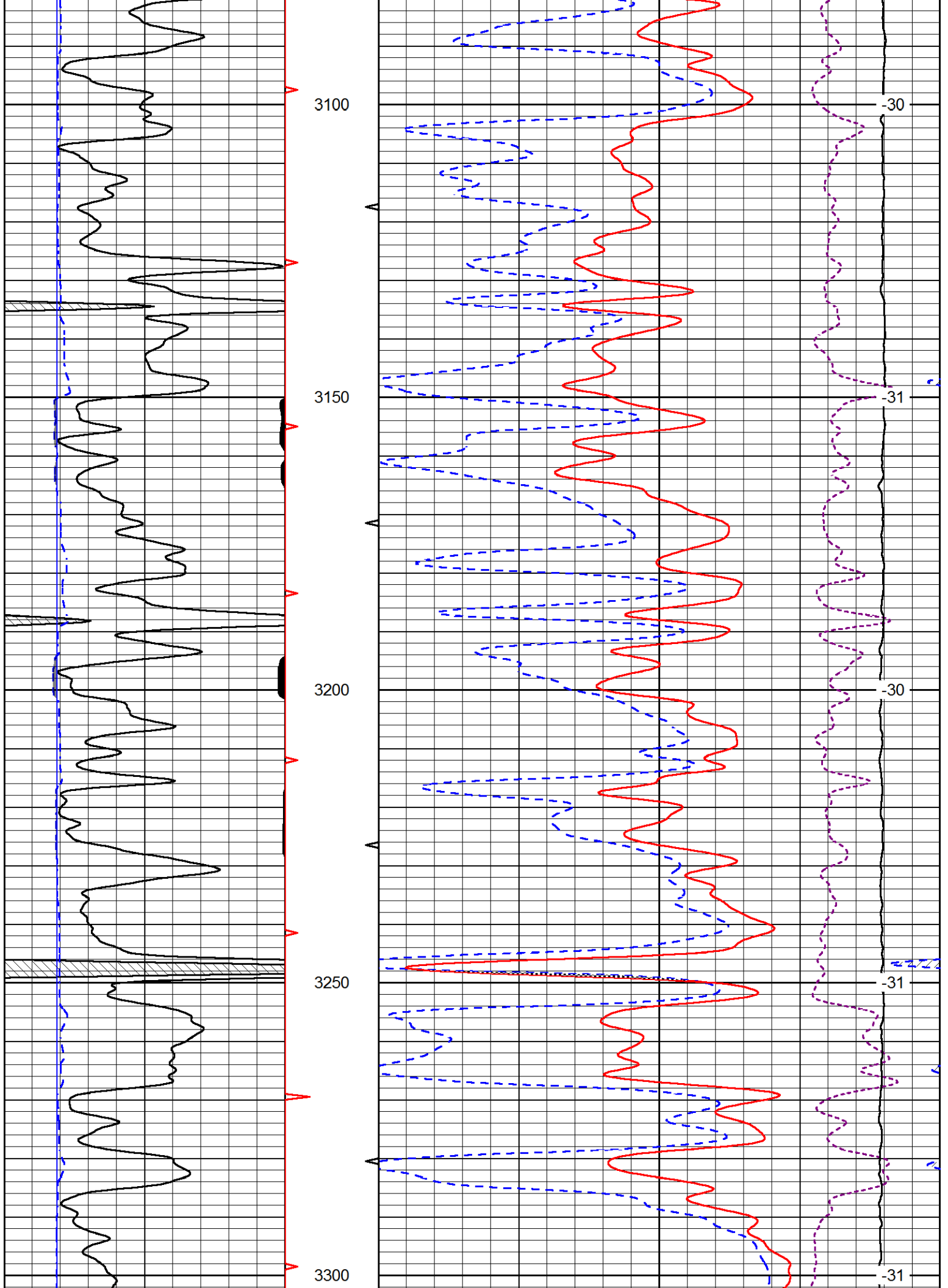


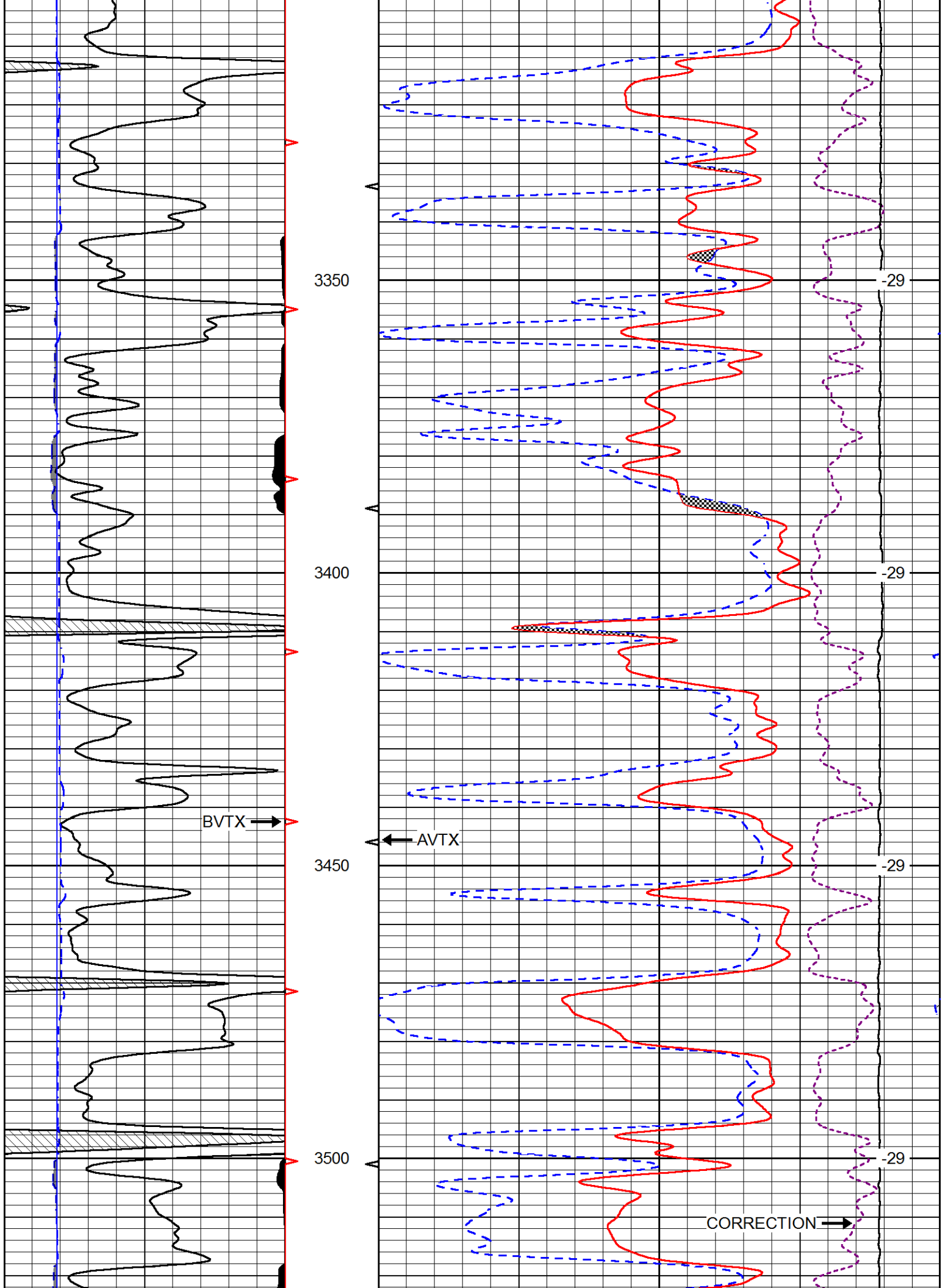


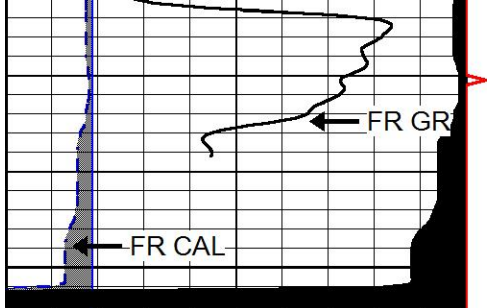




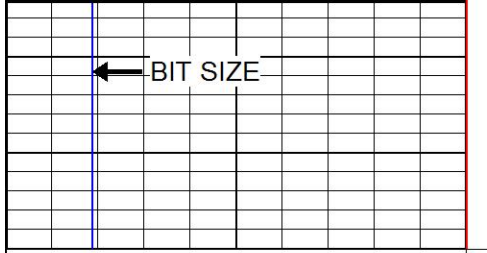




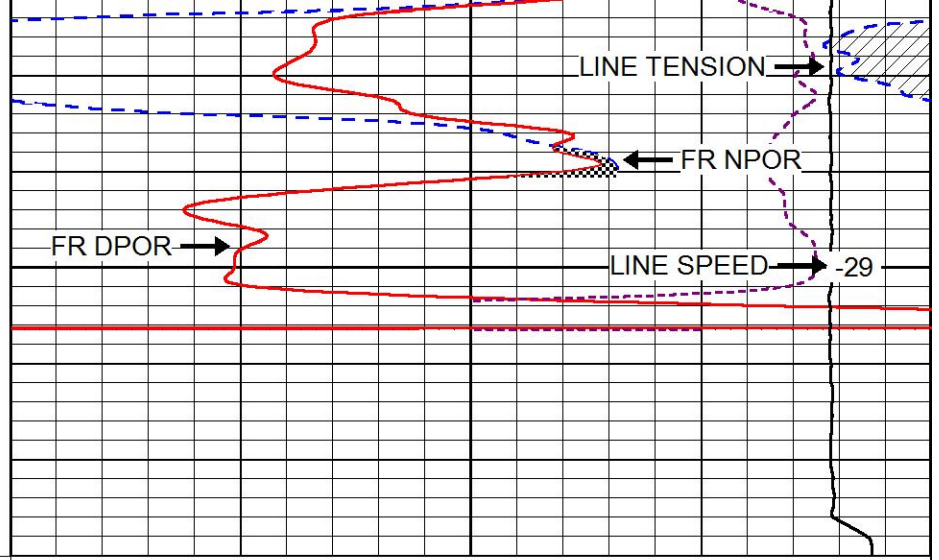




3550



0	GAMMA RAY (GAPI)	150
6	CALIPER (in)	16
6	BIT SIZE (in)	16



30	COMPENSATED NEUTRON (pu)	-10
30	COMPENSATED DENSITY (2.71 ma) (pu)	-10
15000	LINE TENSION (lb)	0

-0.25	CORRECTION (g/cc)	0.25
	LINE SPEED (ft/min)	



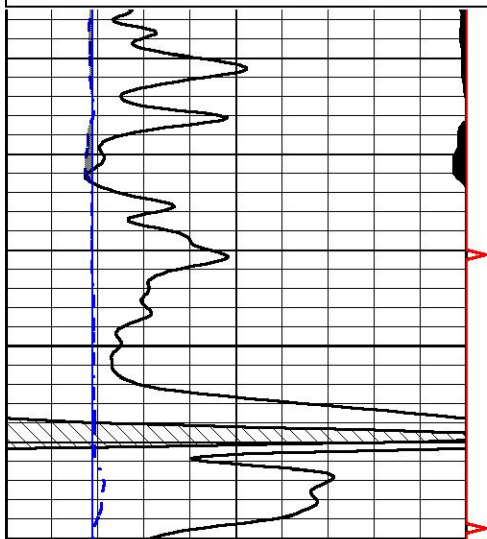
REPEAT SECTION

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 Charted by: Depth in Feet scaled 1:240

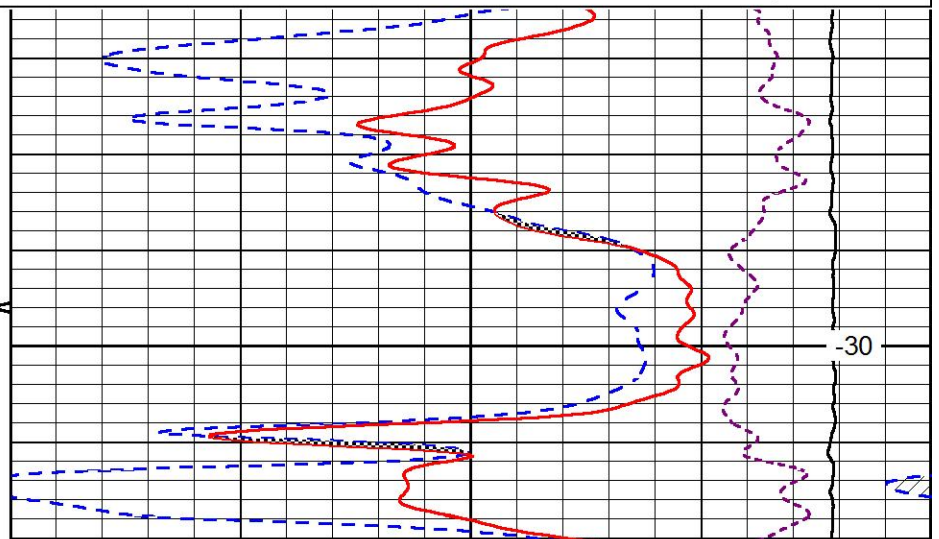
0	GAMMA RAY (GAPI)	150
6	CALIPER (in)	16
6	BIT SIZE (in)	16

30	COMPENSATED NEUTRON (pu)	-10
30	COMPENSATED DENSITY (2.71 ma) (pu)	-10
15000	LINE TENSION (lb)	0

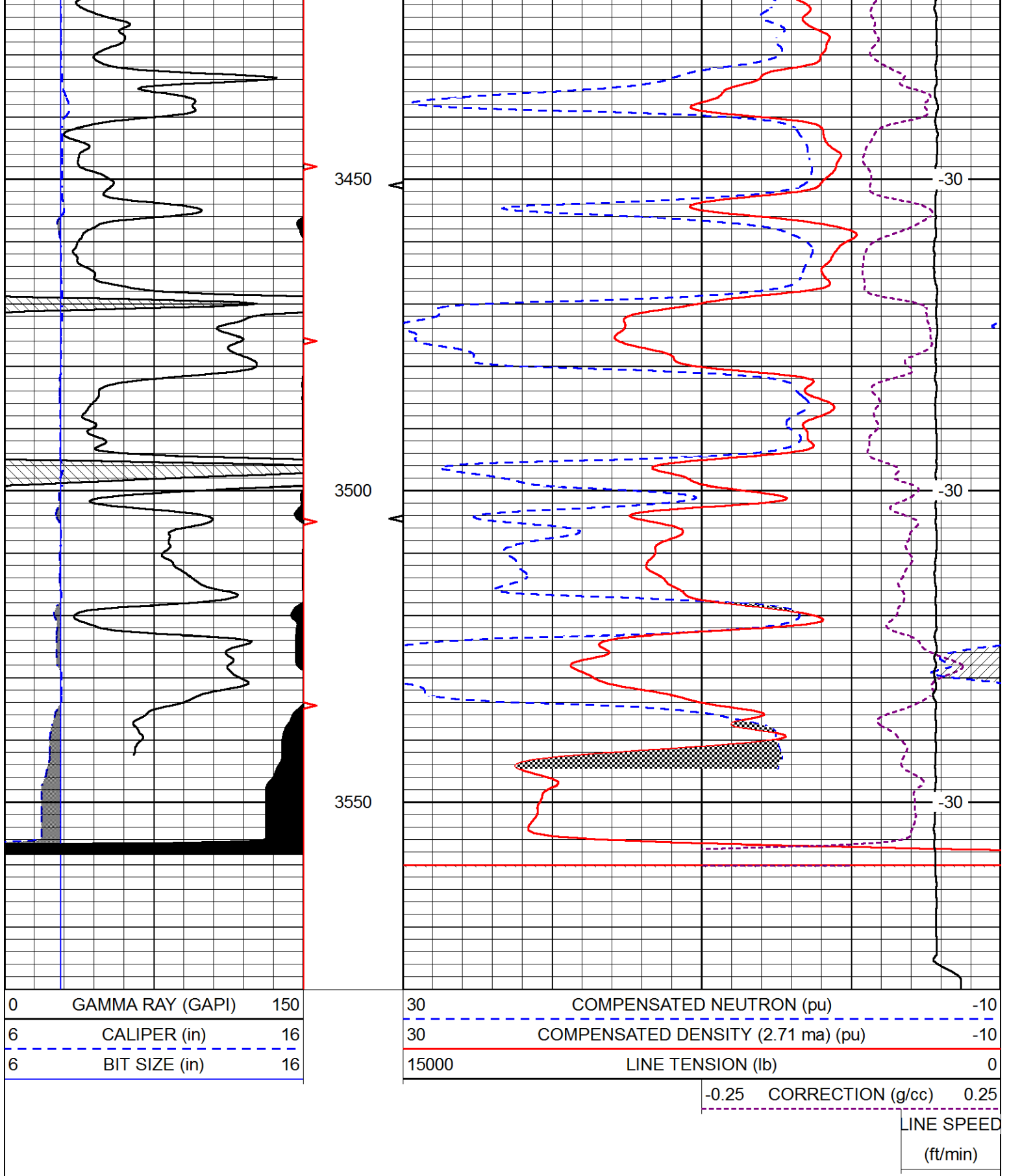
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	LINE SPEED (ft/min)	



3400



-30



Calibration Report

Database File ampatriot_apo_18_wallerlowry_1.db
 Dataset Pathname stackmel/pass4.1
 Dataset Creation Thu Apr 28 17:00:34 2016

Dual Induction Calibration Report

Serial-Model:
Calibration Performed:

1987-M&W
Thu Mar 31 15:53:34 2016

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	178.615	710.235	0.000	255.800	mmho/m	0.530	-38.000
Medium	161.982	1441.110	0.000	255.800	mmho/m	0.440	-110.500

Microlog Calibration Report

Serial-Model:
Performed:

PSI-02-PSI STKBL ML
Thu Apr 14 22:34:04 2016

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0031	0.0043	0.0000	10.0000	Ohm-m	10308.9000	-0.2000
Inverse	0.0000	0.0013	0.0000	10.0000	Ohm-m	7967.2700	0.4000
Caliper	1.0020	1.0834	5.5000	16.5000	in	135.1560	-131.1700

Compensated Density Calibration Report

Serial-Model:
Source / Verifier:
Master Calibration Performed:

71-914-M&W
/
Thu Mar 31 16:30:19 2016

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	4314.49	5307.52	cps
Aluminum	2.670	g/cc	822.19	3456.36	cps
Spine Angle = 75.49			Density/Spine Ratio = 0.534		
	Size		Reading		
Small Ring	4.00	in	1.16		
Large Ring	14.00	in	1.57		

Compensated Neutron Calibration Report

Serial Number: tk10-MW
Tool Model: M&W
Calibration Performed: Wed Mar 30 10:04:05 2016

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: 89-M&W
Tool Model: M&W
Calibration Performed: Thu Mar 31 15:29:33 2016

Calibrator Value: 1000.0 GAPI

Background Reading:	0.0	cps
Calibrator Reading:	6.2	cps
Sensitivity:	0.5200	GAPI/cps



PIONEER
Pioneer Energy Services

Company	AMERICAN PATRIOT OIL, LLC
Well	APO #18 WALLER LOWRY #1
Field	WILDCAT
County	ROOKS
State	KANSAS



PIONEER
Pioneer Energy Services

**DUAL INDUCTION
LOG**

Company **AMERICAN PATRIOT OIL, LLC**
Well **APO #18 WALLER LOWRY #1**
Field **WILDCAT**
County **ROOKS** State **KANSAS**

Location: API #: 15-163-24312-00-00
1,670' FNL & 931' FWL
SEC 31 TWP 8S RGE 19W
Permanent Datum **GROUND LEVEL** Elevation **2040'**
Log Measured From **KELLY BUSHING**
Drilling Measured From **KELLY BUSHING**
Other Services
CNL/CDL
MEL
Elevation
K.B. 2048'
D.F. N/A
G.L. 2040'

Date	4/28/2016
Run Number	ONE
Depth Driller	3578'
Depth Logger	3576'
Bottom Logged Interval	3575'
Top Log Interval	00'
Casing Driller	8.625" @ 263'
Casing Logger	262'
Bit Size	7.875"
Type Fluid in Hole	CHEMICAL
Salinity, ppm CL	4800
Density / Viscosity	9.4 62
pH / Fluid Loss	10.5 7.2
Source of Sample	FLOWLINE
Rm @ Meas. Temp	.75 @ 65
Rmt @ Meas. Temp	.56 @ 65
Rmc @ Meas. Temp	1.01 @ 65
Source of Rmf / Rmc	CHARTS
Rm @ BHT	.44 @ 112
Operating Rig Time	2 1/2 HOURS
Max Rec. Temp. F	112
Equipment Number	108
Location	COLBY
Recorded By	J. LONG
Witnessed By	MARC DOWNING

<<< Fold Here >>>

All interpretations are opinions based on inferences from electrical or other measurements and Pioneer Wireline Services, LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Pioneer 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.
DAMAR, 5 EAST, 1/4 SOUTH, EAST INTO

Log Measured From: **KELLY BUSHING** 8 Ft. Above Permanent Datum

THANK YOU FOR USING PIONEER ENERGY SERVICES
www.pioneerenergy.com 785-625-3858

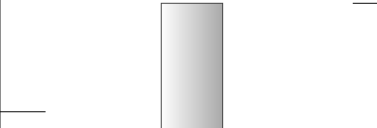
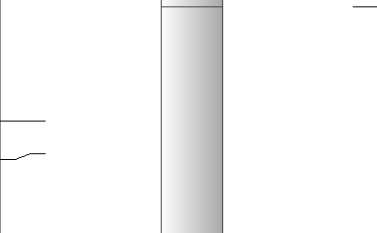
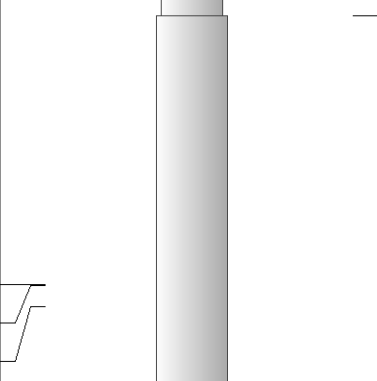
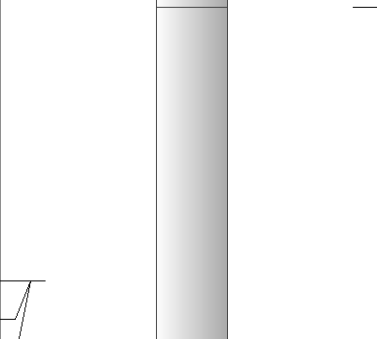
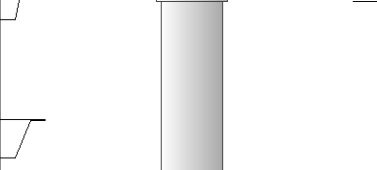
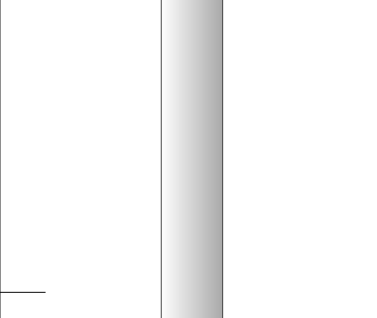
Your Pioneer Energy Services Crew	This Log Record Was Witnessed By
Engineer: J. LONG	Primary Witness: MARC DOWNING
Operator: T. MARTIN	Secondary Witness:
Operator:	Secondary Witness:
Operator:	Secondary Witness:

Log Variables

DatabaseC:\ProgramData\Warrior\Data\lampatriot_apo_18_wallerlowry_1.db
Dataset field/well/stackmel/pass4.1/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	112	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	-620	54	Off	3576

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.58		GR-M&W (89-M&W)	3.00	3.50	50.00
CNLSC CNSSC	37.48 36.73		CNT-M&W (tk10-MW)	5.50	3.50	100.00
LSD DCAL SSD	28.43 28.42 27.93		CDL-M&W (71-914)	8.50	4.00	250.00
MCAL MI MN	19.83 19.83 19.83		ML-PSI STKBL ML (PSI-02) Stackable Microlog Tools	7.58	4.00	65.00
RLL3 RLL3F	15.80 15.79					
CILD	8.00		DIL-M&W (1987)	18.50	3.50	220.00

CILM 4.70

SP 0.20

Dataset: ampatriot_apo_18_wallerlowry_1.db: field/well/stackmel/pass4.1
 Total length: 43.08 ft
 Total weight: 685.00 lb
 O.D.: 4.00 in



MAIN PASS

2" SCALE RESISTIVITY

Database File ampatriot_apo_18_wallerlowry_1.db
 Dataset Pathname stackmel/pass4.2
 Presentation Format dil2in
 Dataset Creation Thu Apr 28 17:01:04 2016
 Charted by Depth in Feet scaled 1:600

0 GAMMA RAY (GAPI) 150
 -200 SP (mV) 0

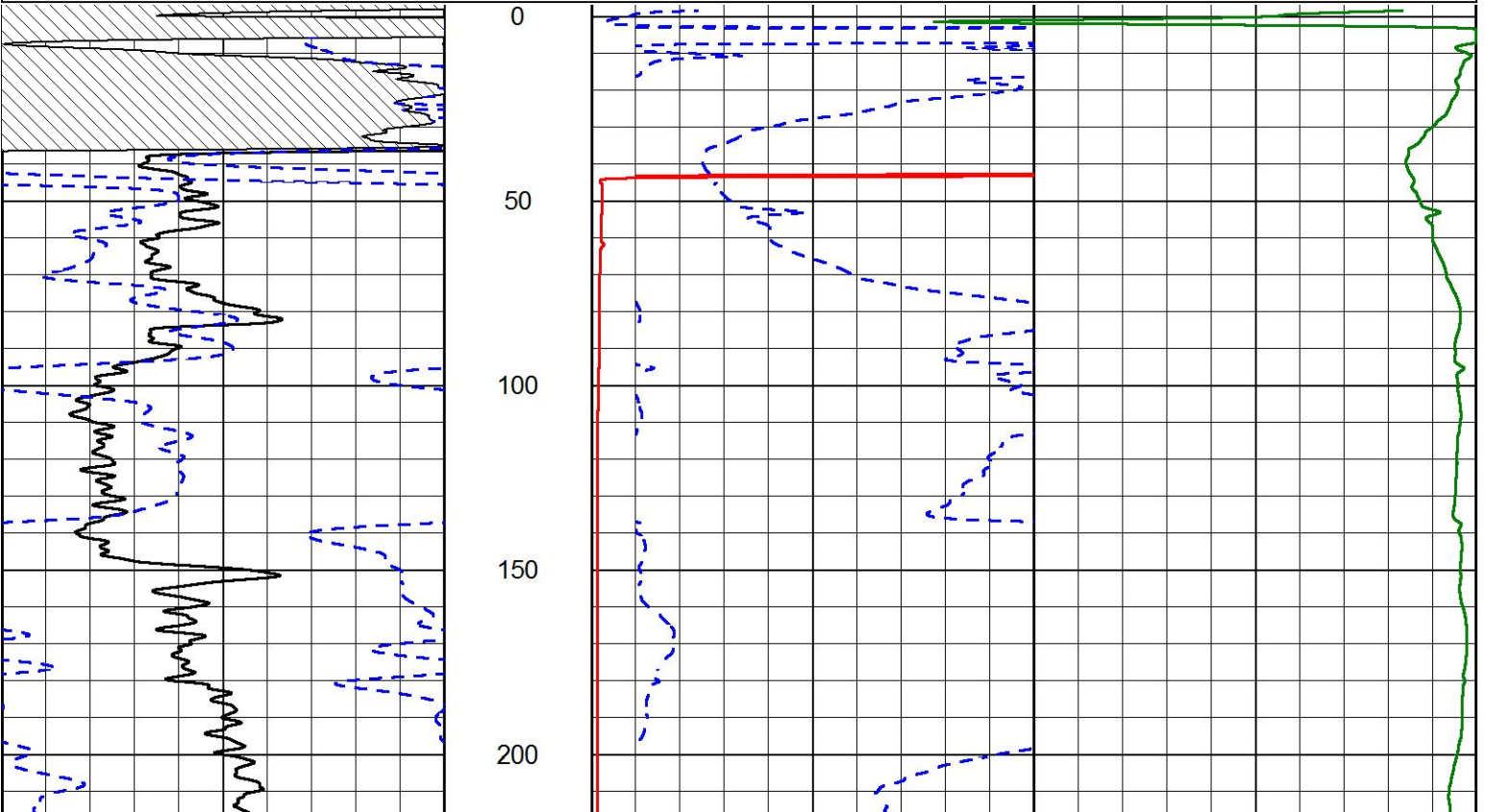
1000 CONDUCTIVITY (mmho/m) 0

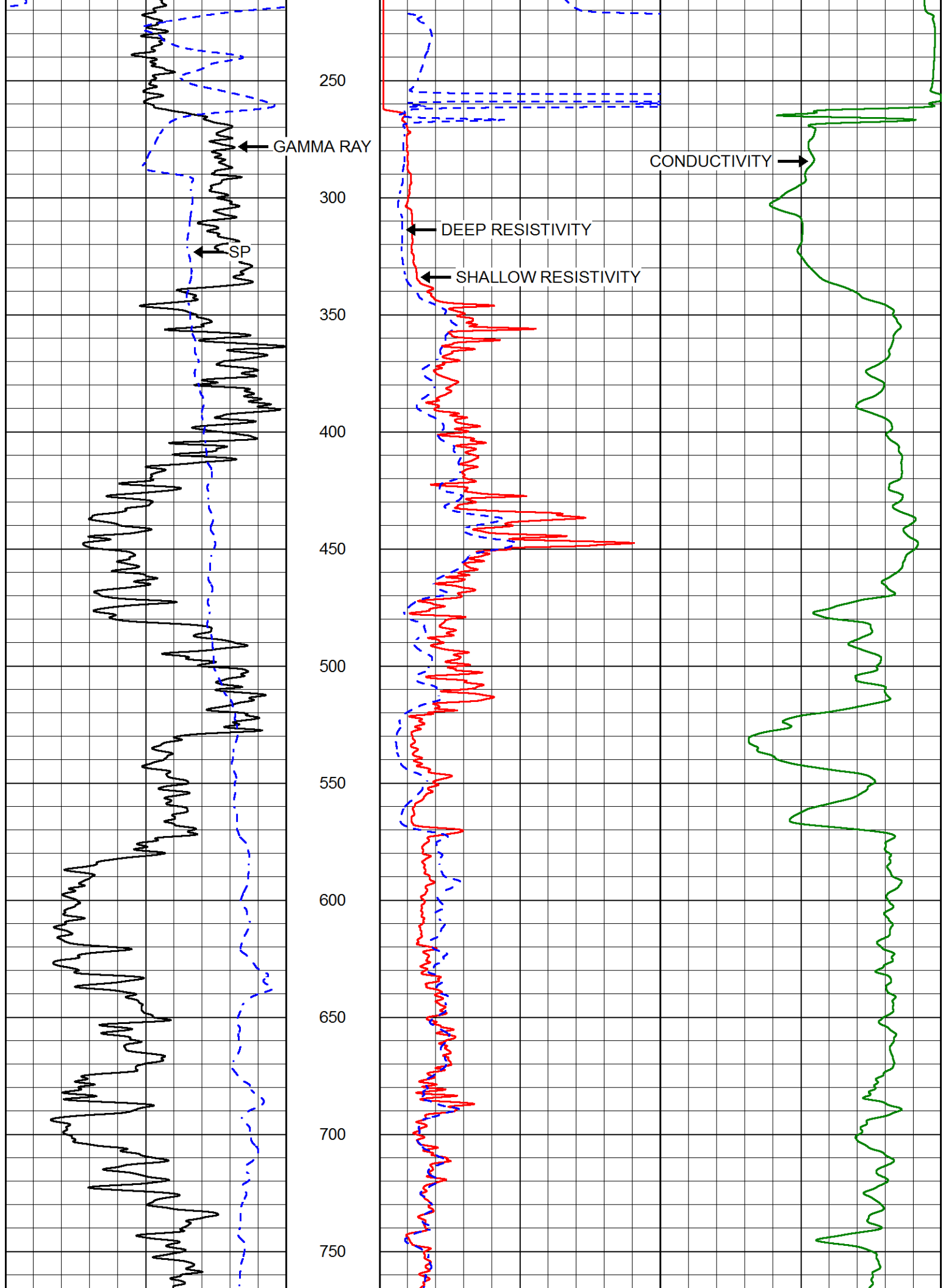
SHALLOW RESISTIVITY
 0 (Ohm-m) 50

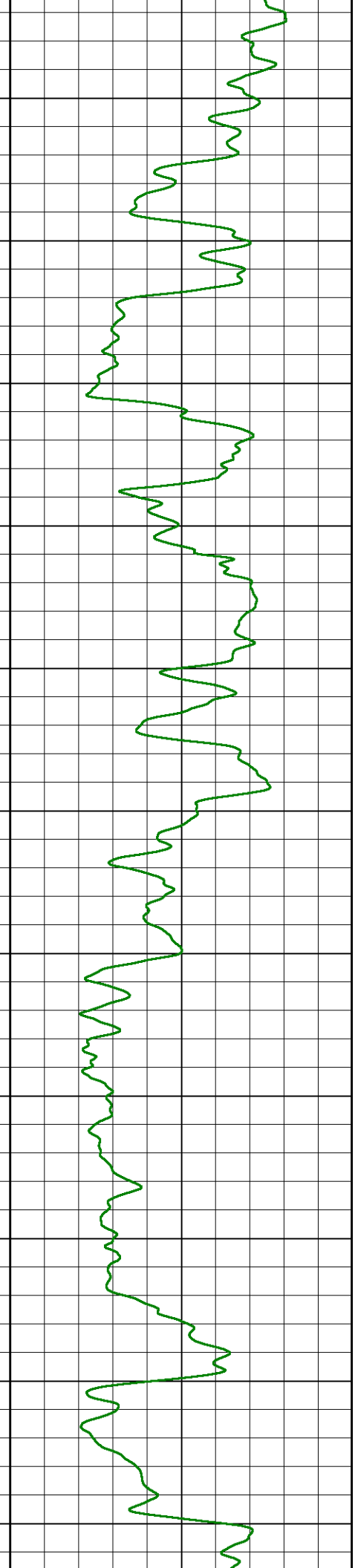
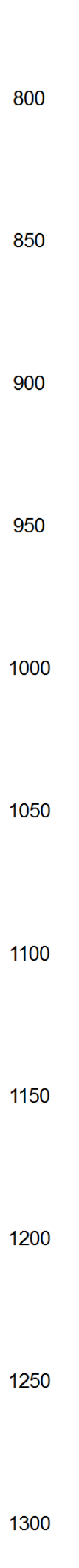
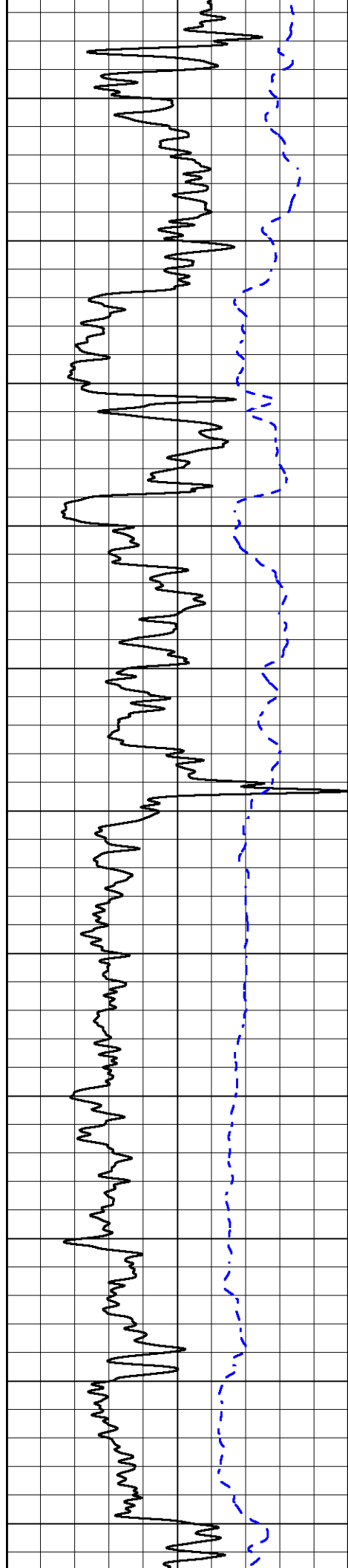
DEEP RESISTIVITY (Ohm-m) 50

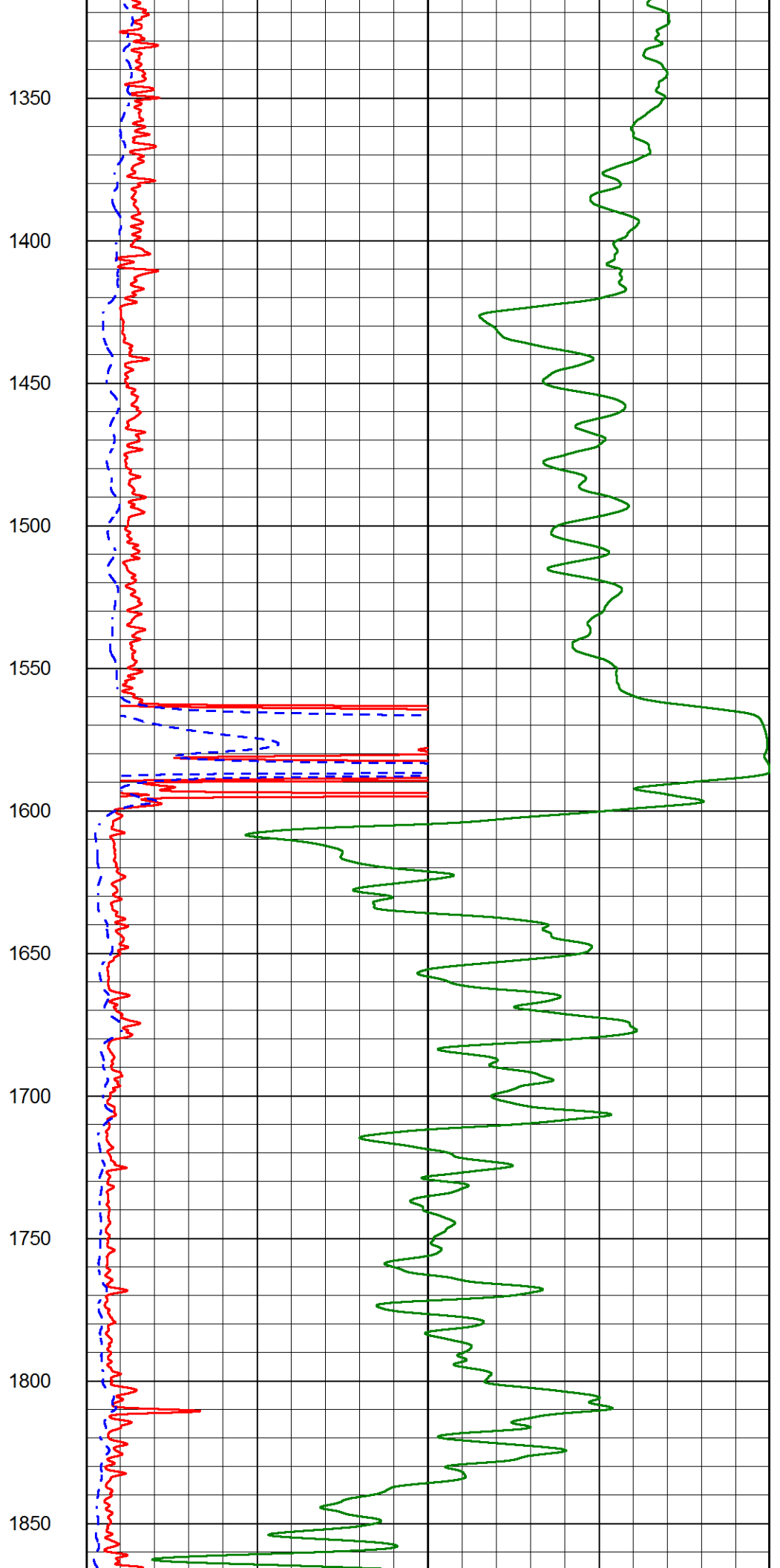
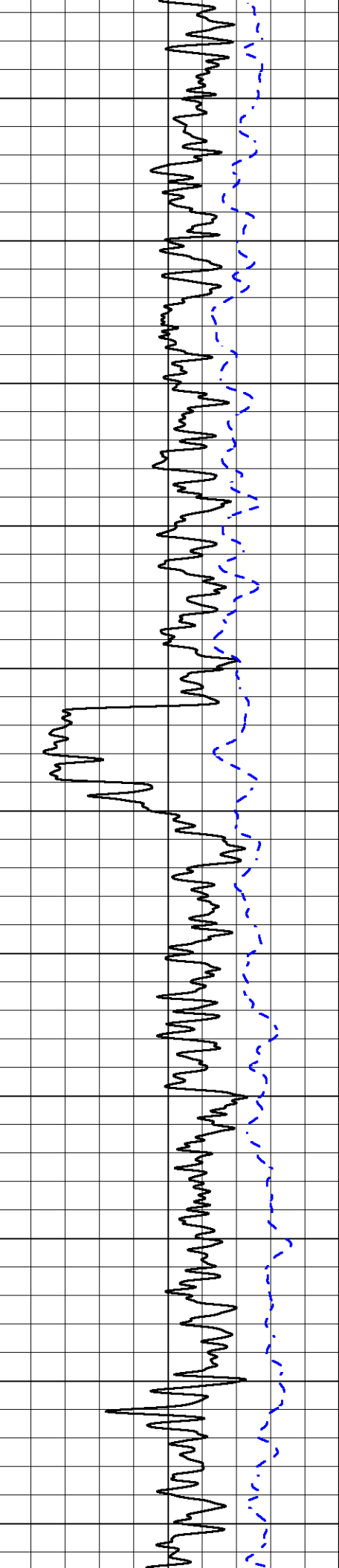
SHALLOW RESISTIVITY
 50 (Ohm-m) 500

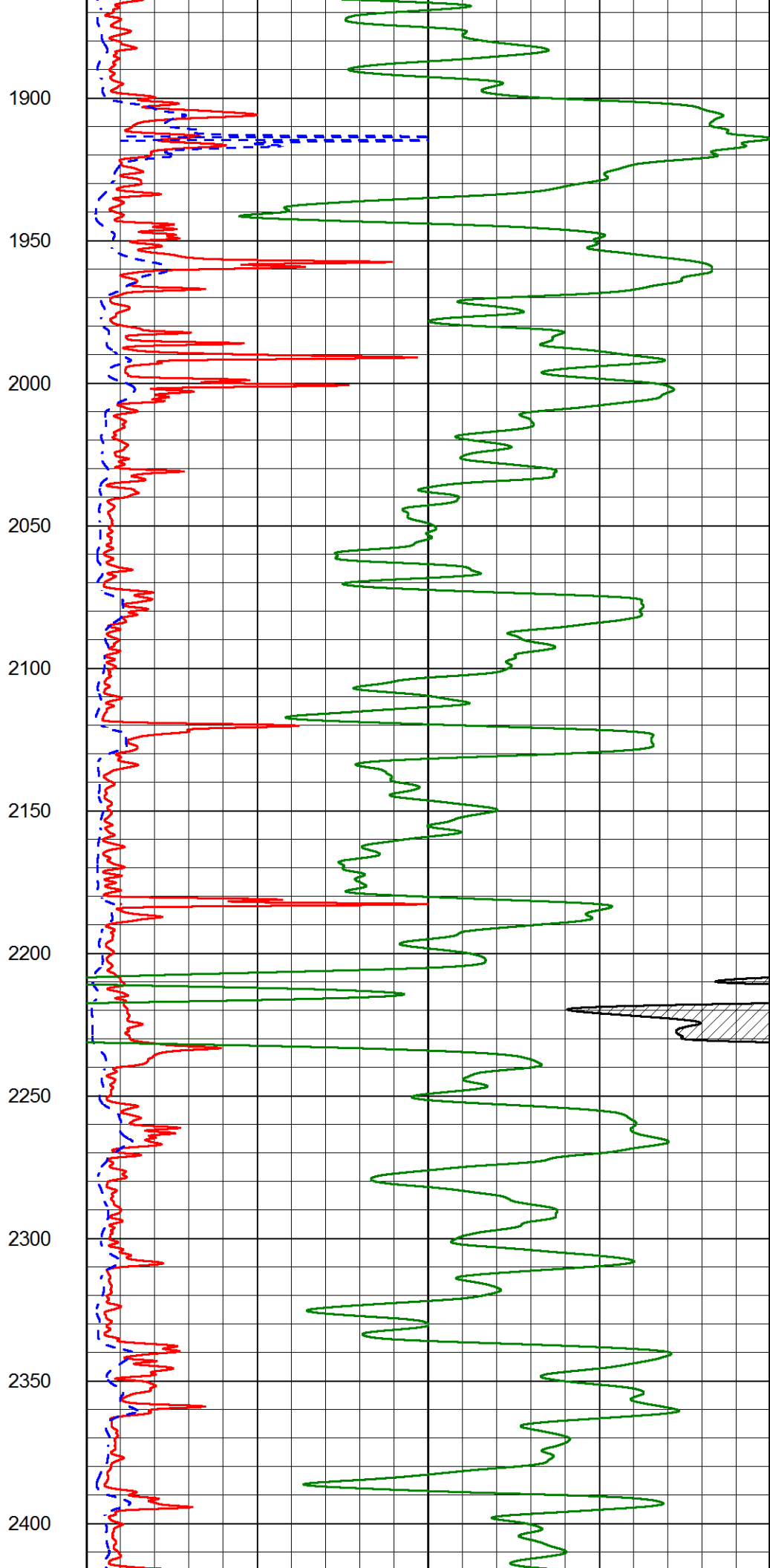
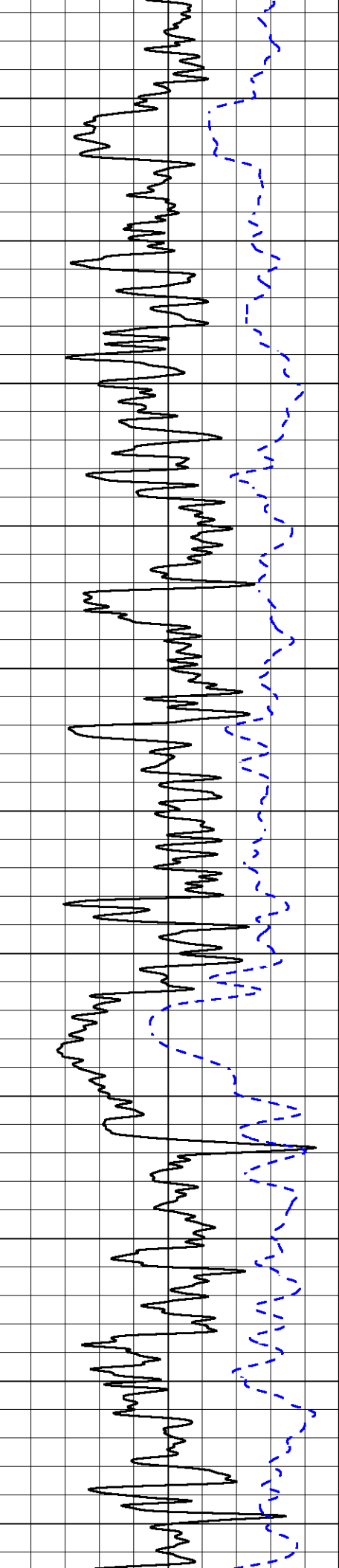
DEEP RESISTIVITY
 50 (Ohm-m) 500

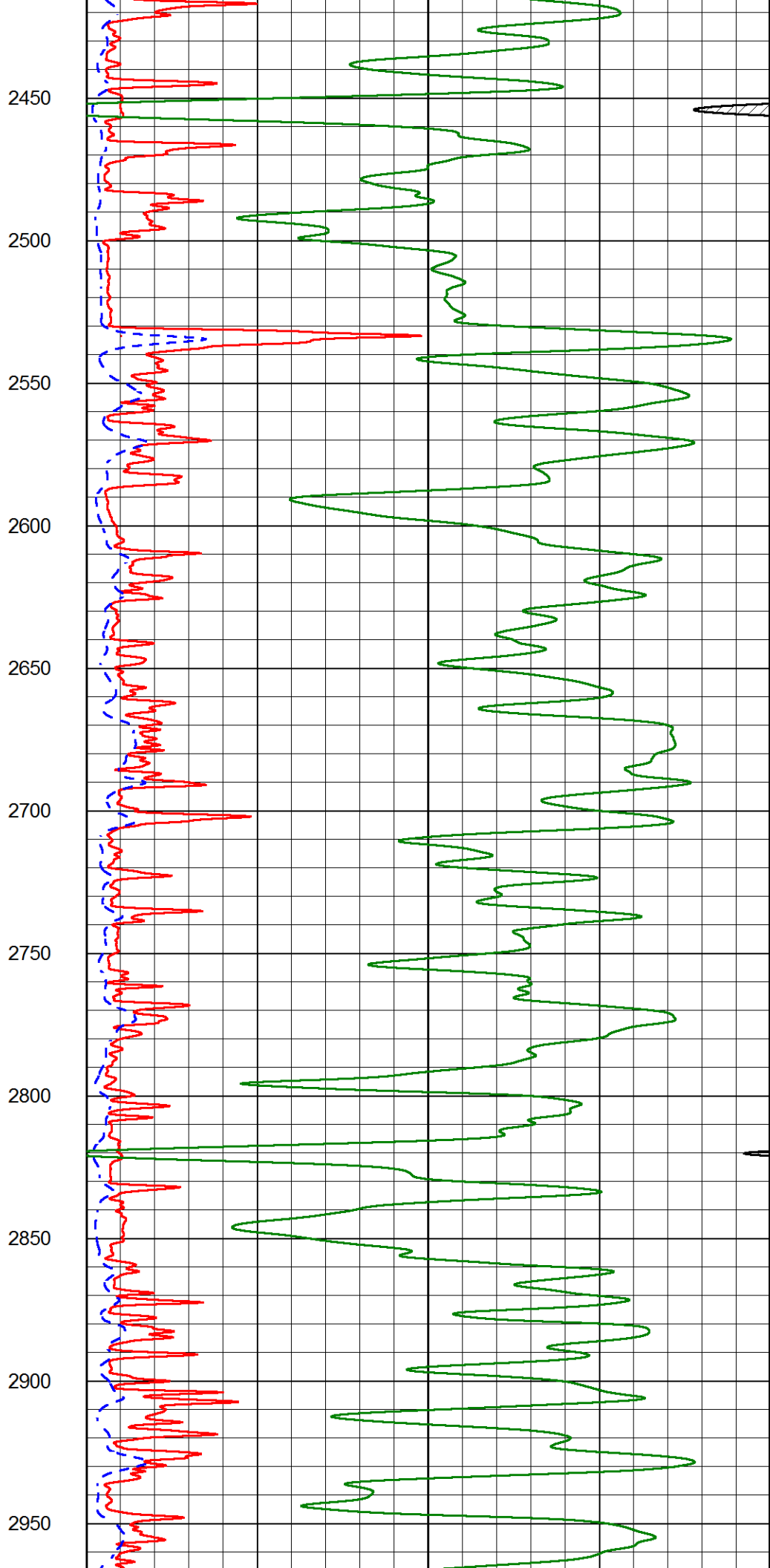
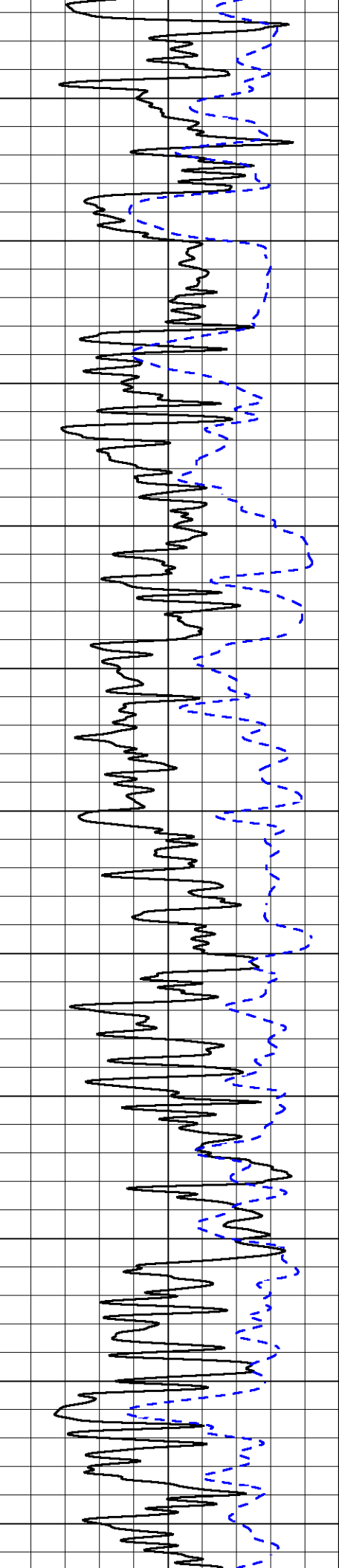


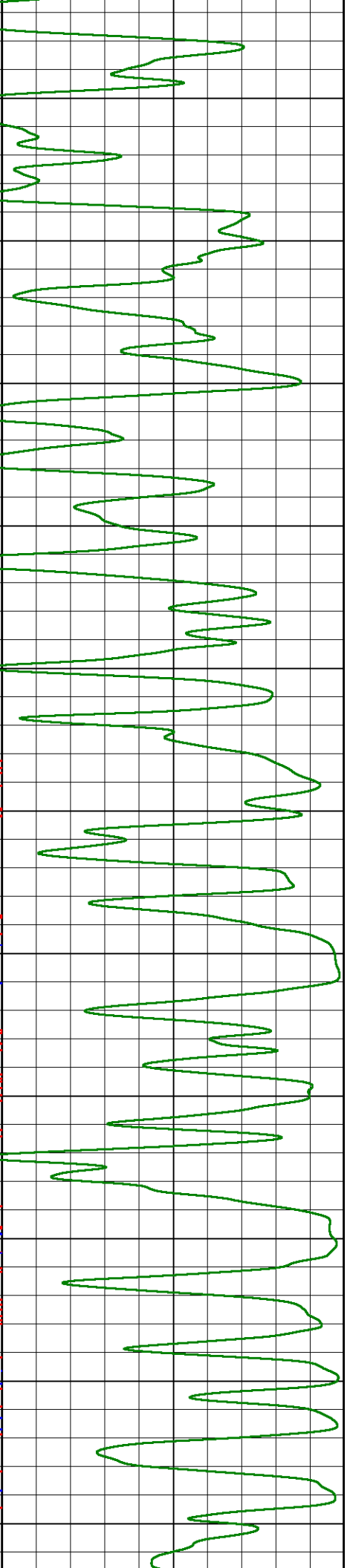
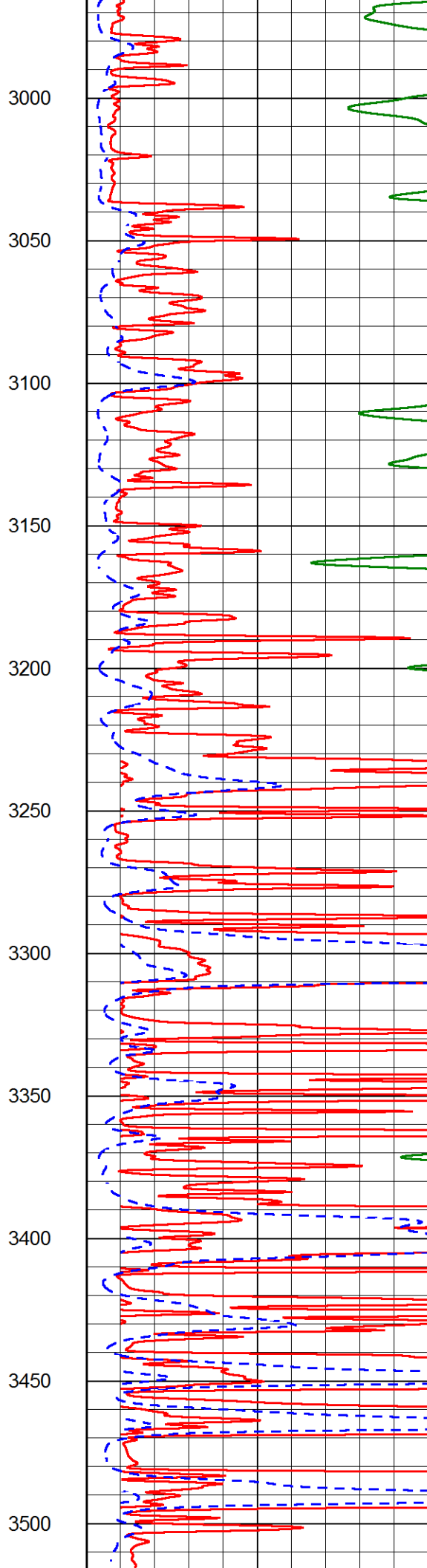
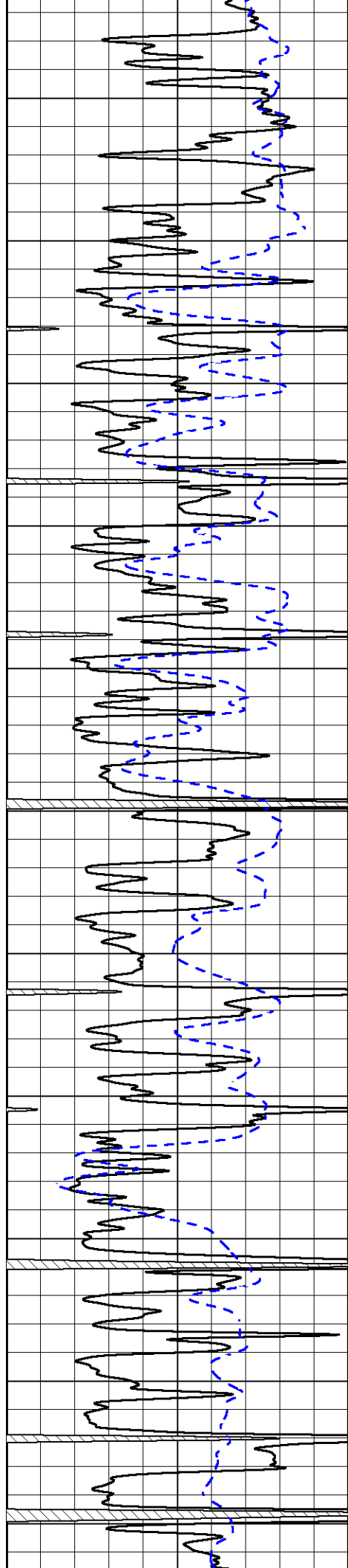


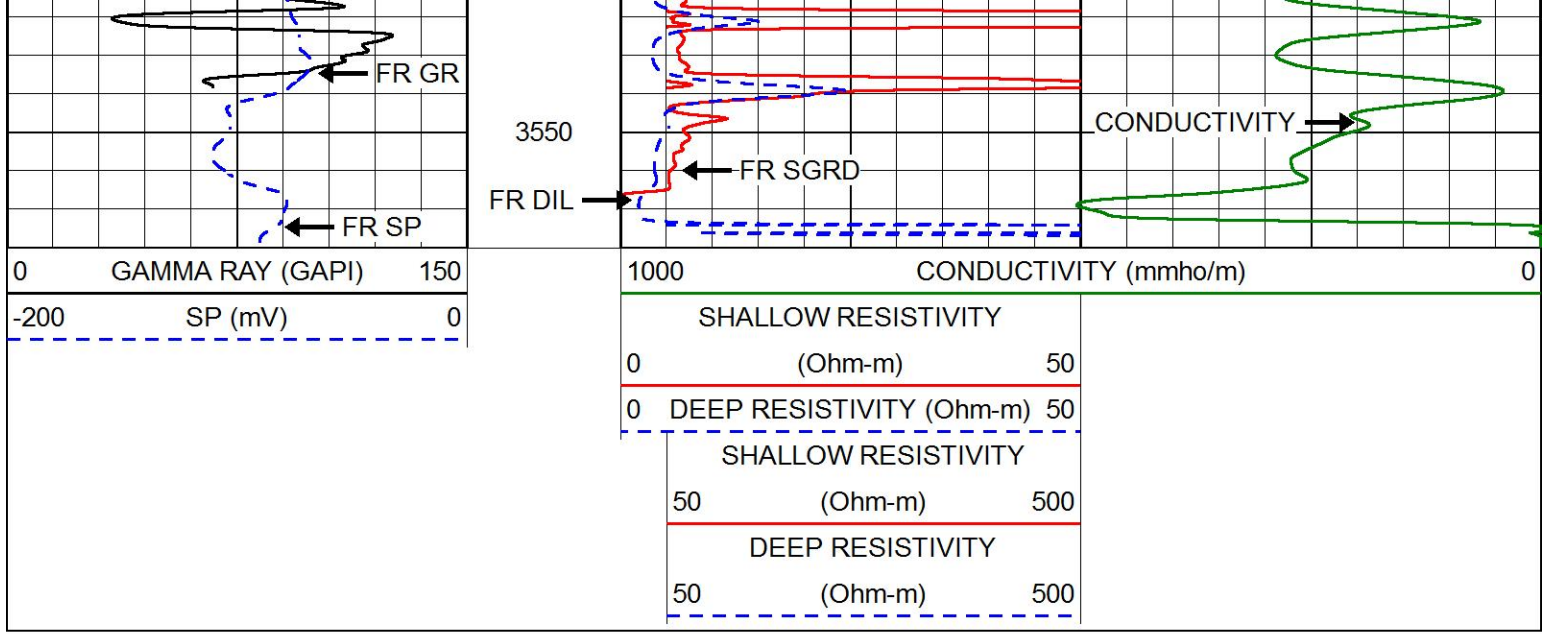






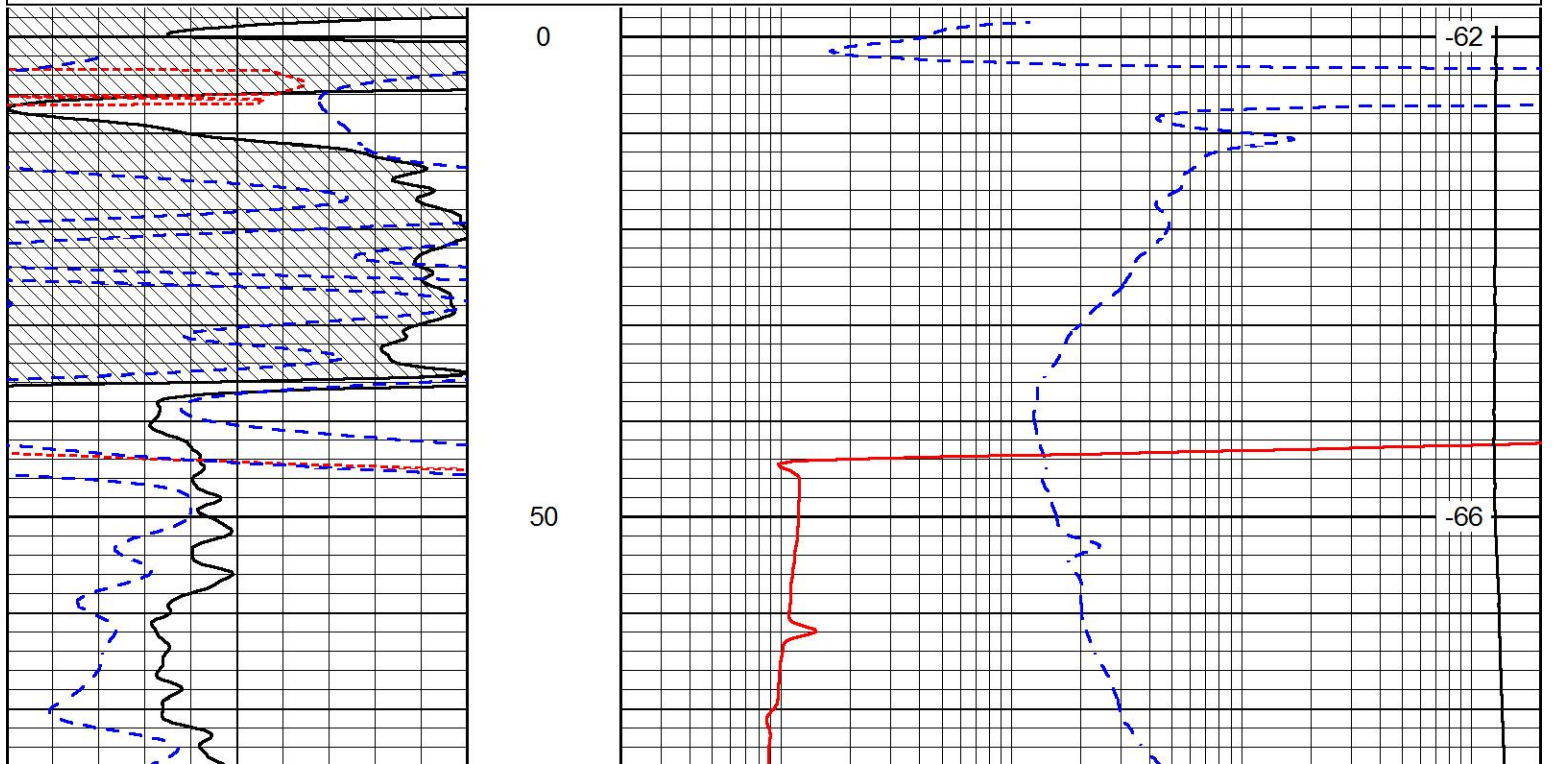
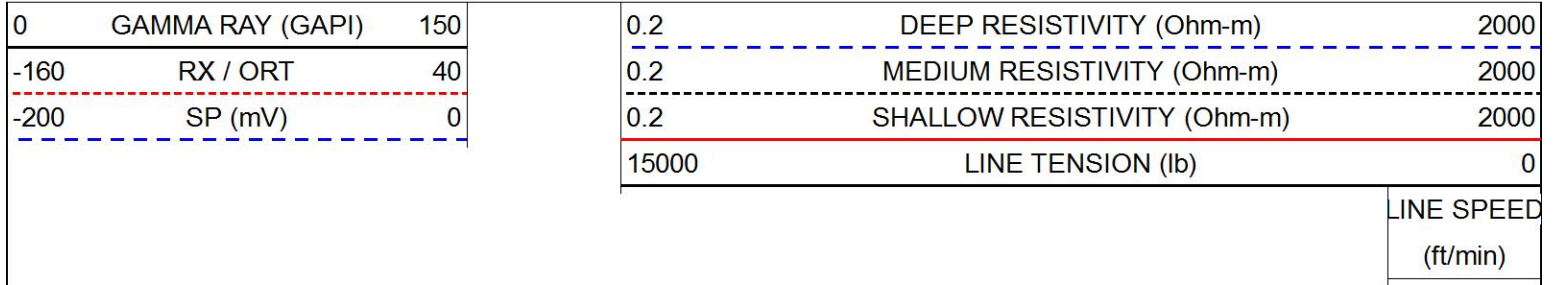


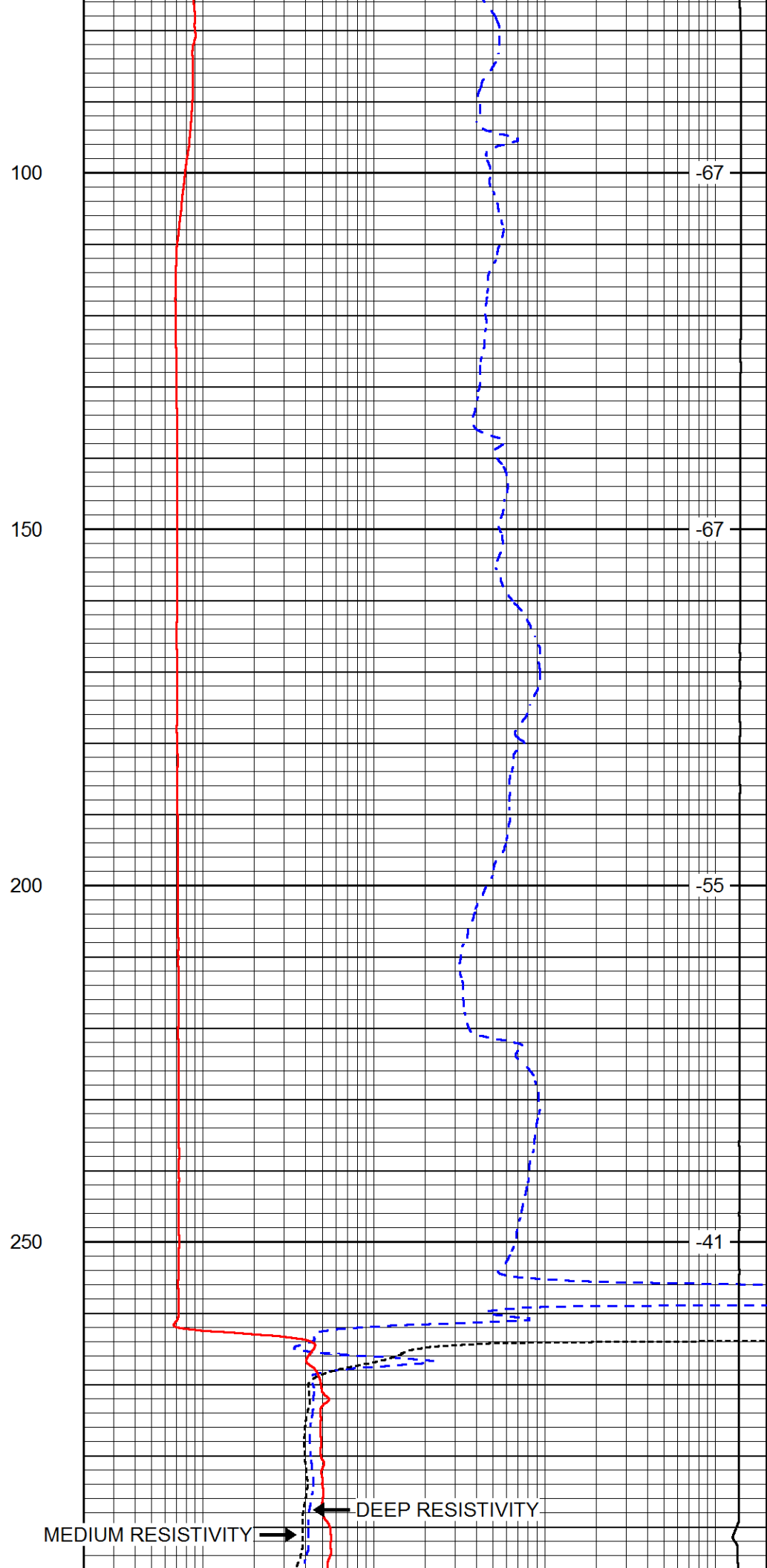
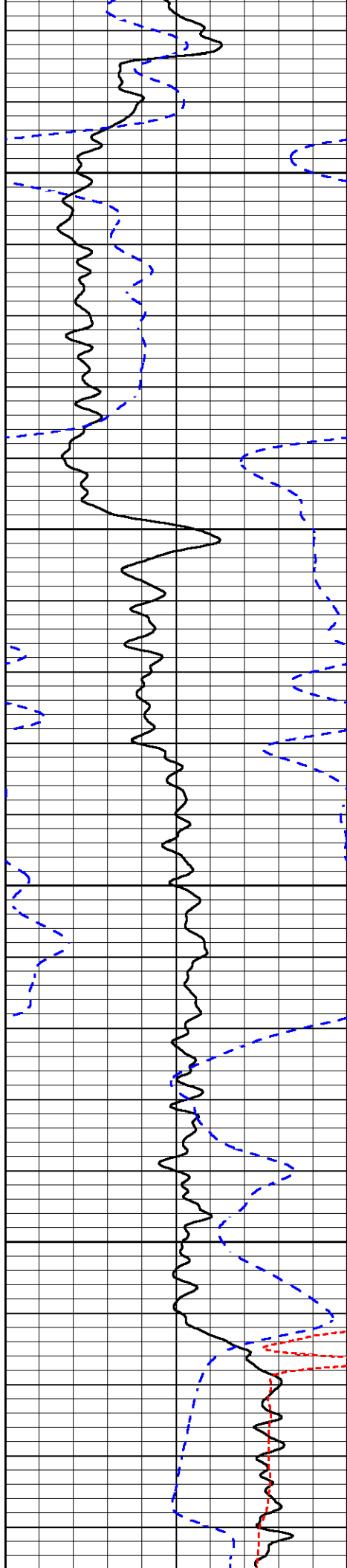


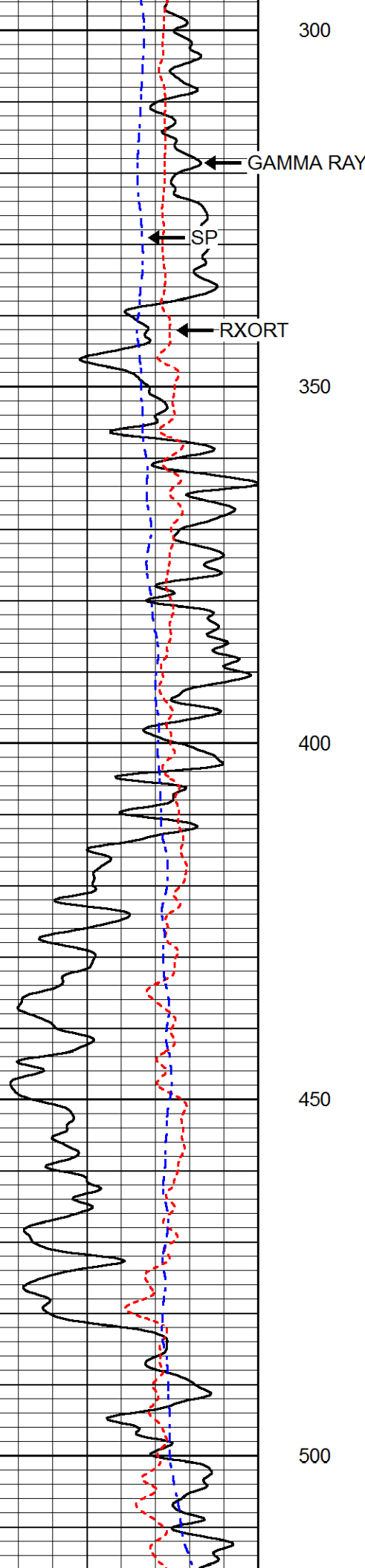


MAIN PASS

Database File: ampatriot_apo_18_wallerlowry_1.db
 Dataset Pathname: stackmel/pass4.1
 Presentation Format: dil
 Dataset Creation: Thu Apr 28 17:00:34 2016
 Charted by: Depth in Feet scaled 1:240

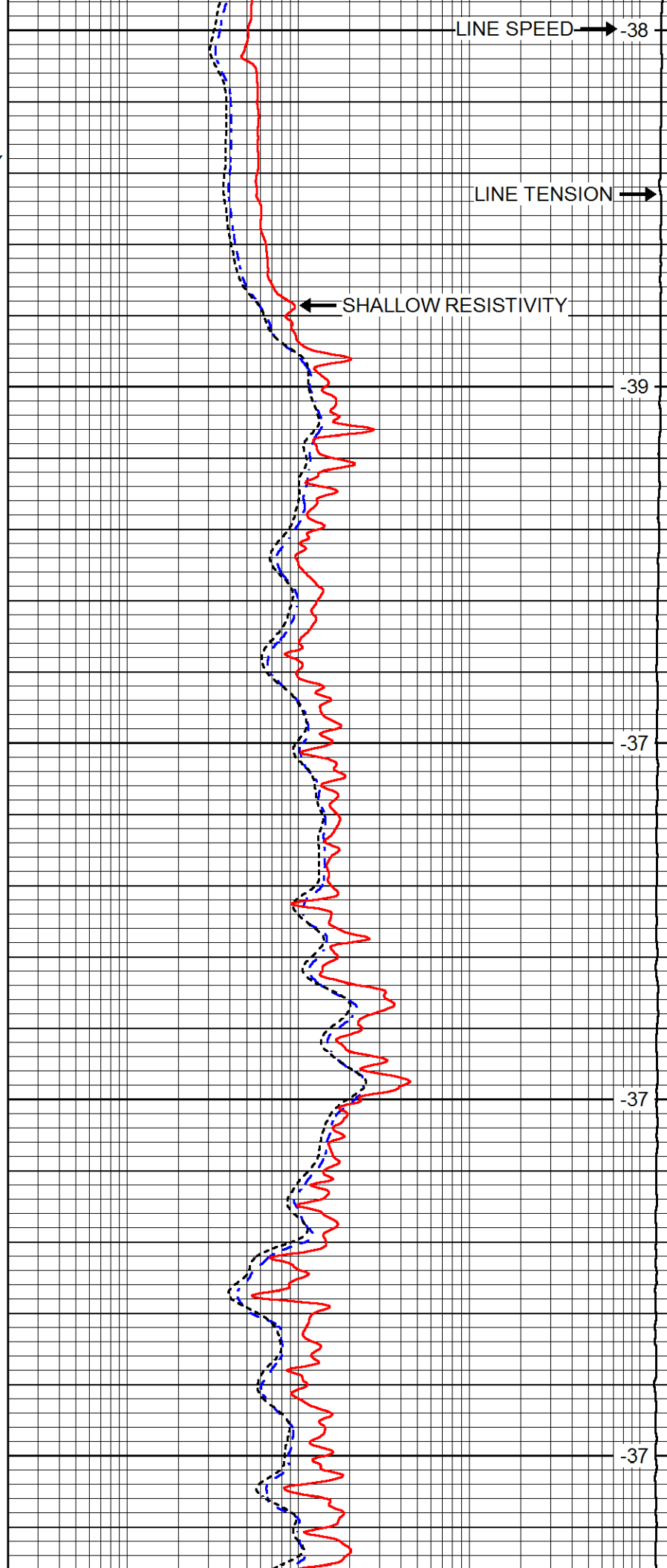


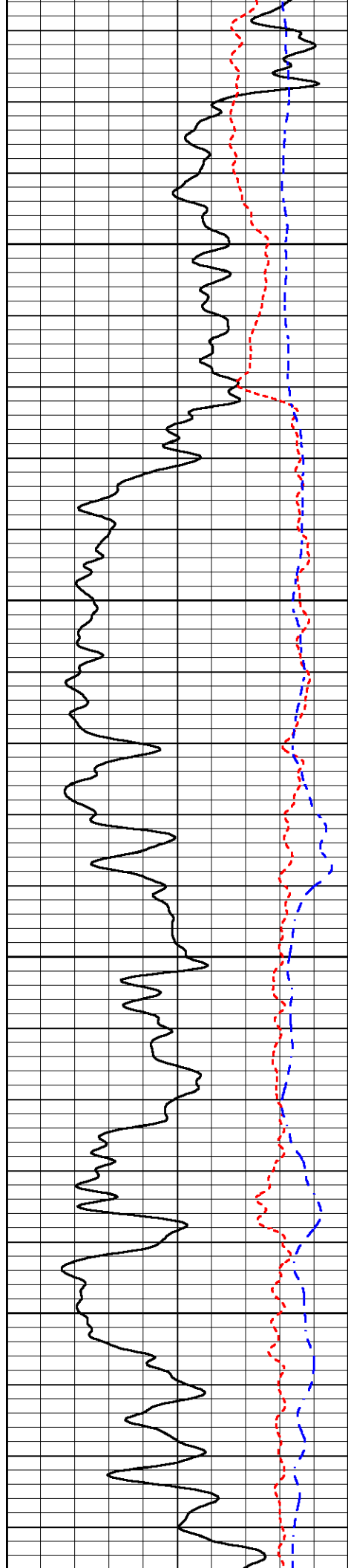




300
350
400
450
500

LINE SPEED → -38
LINE TENSION →
SHALLOW RESISTIVITY
-39
-37
-37
-37



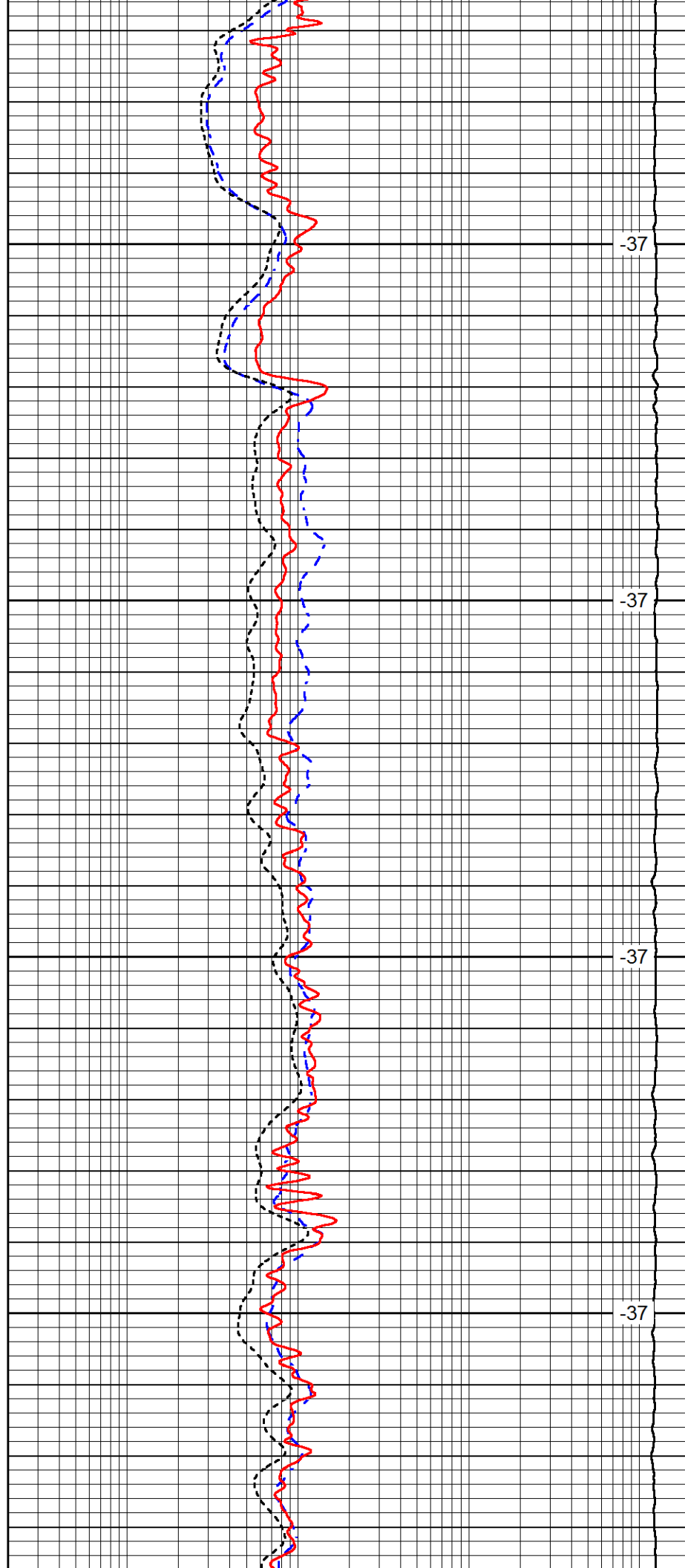


550

600

650

700

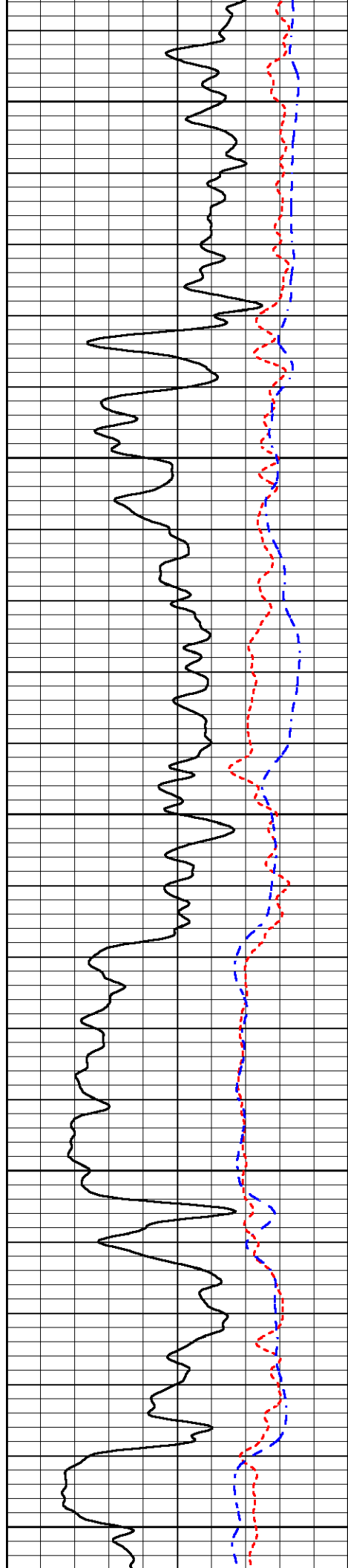


-37

-37

-37

-37



750

800

850

900

950

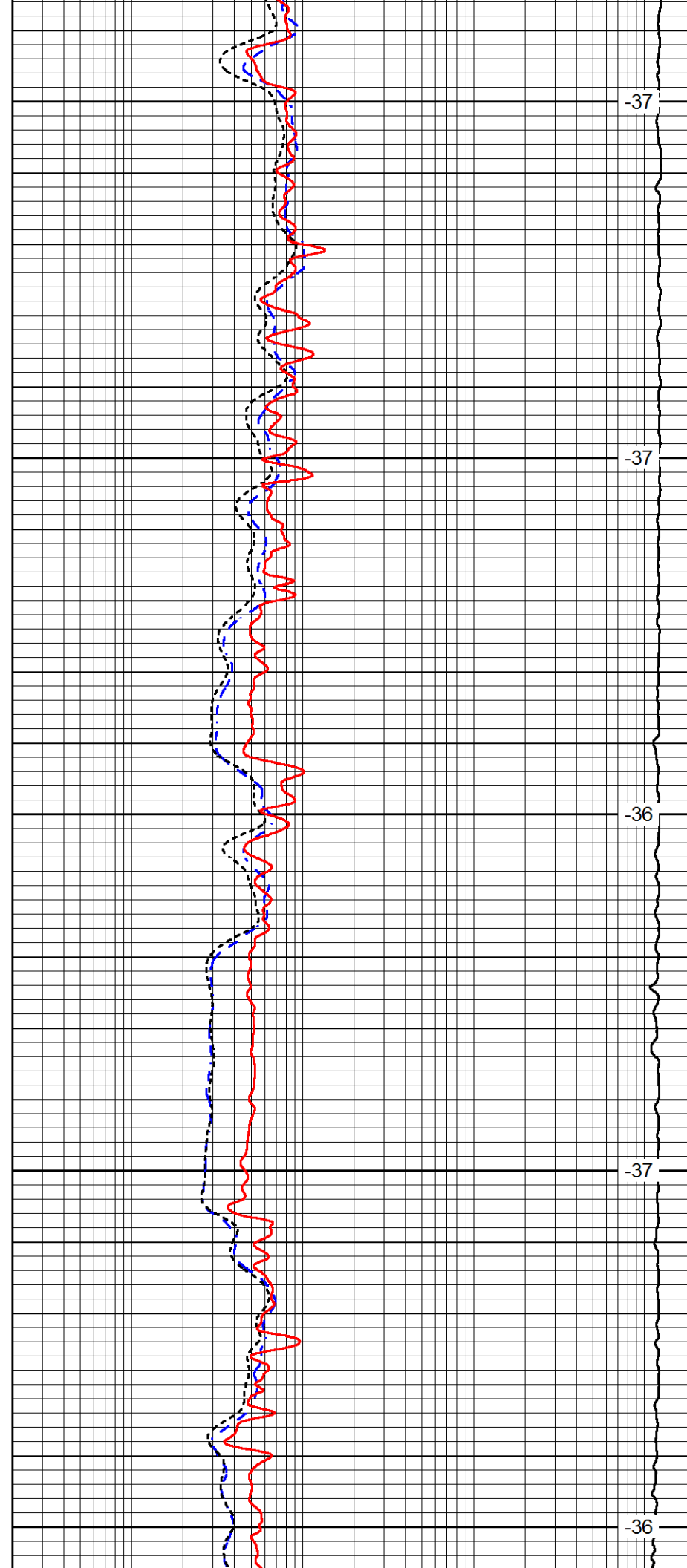
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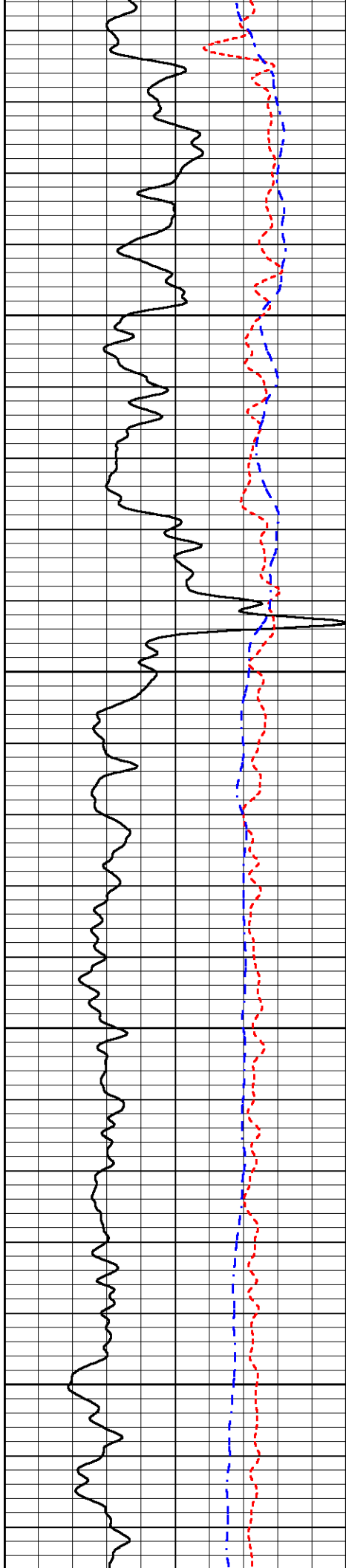
-37

-36

-37

-36



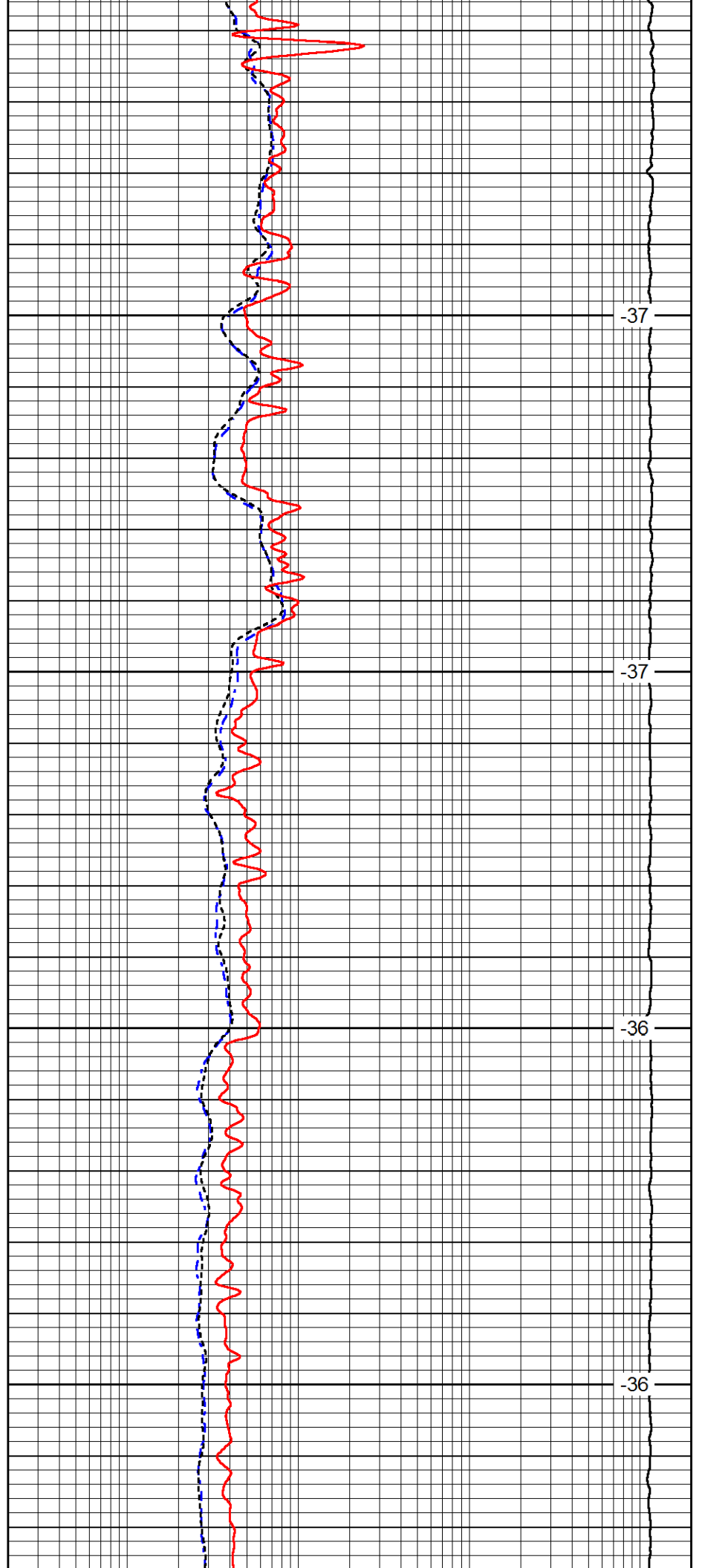


1000

1050

1100

1150

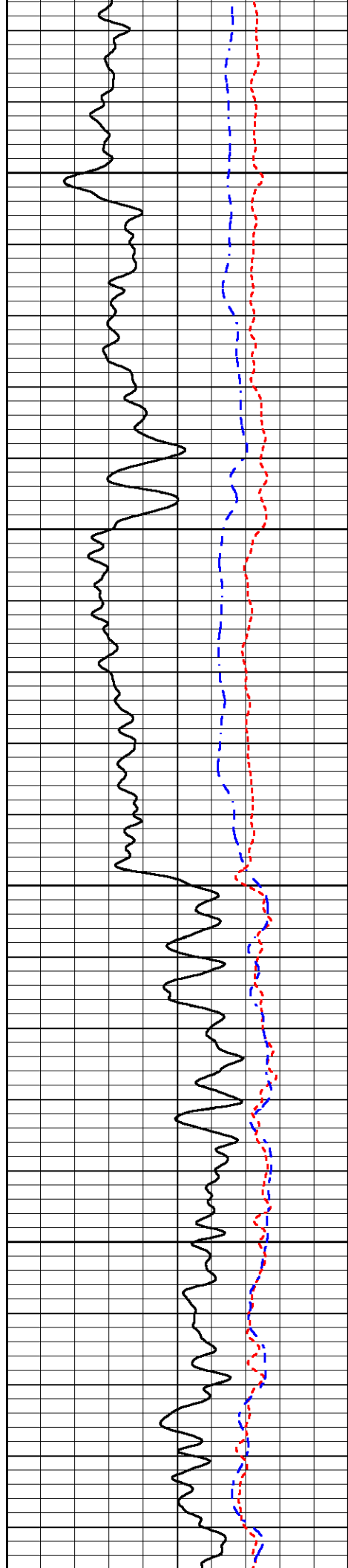


-37

-37

-36

-36



1200

-35

1250

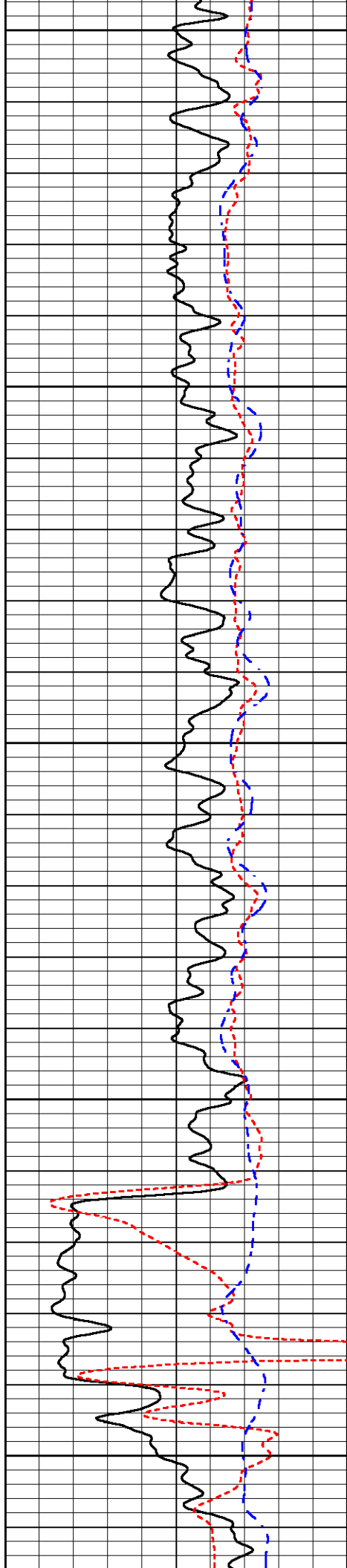
-36

1300

-36

1350

-36



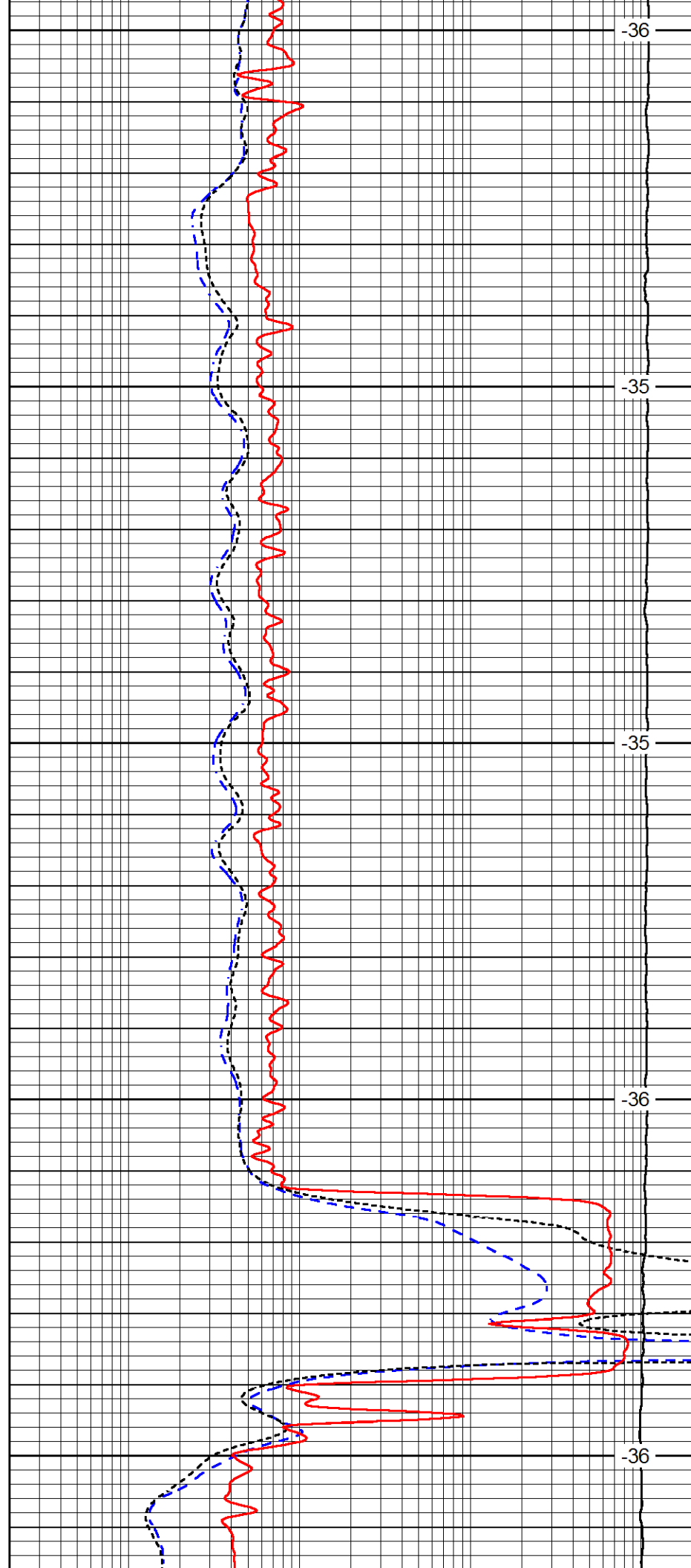
1400

1450

1500

1550

1600



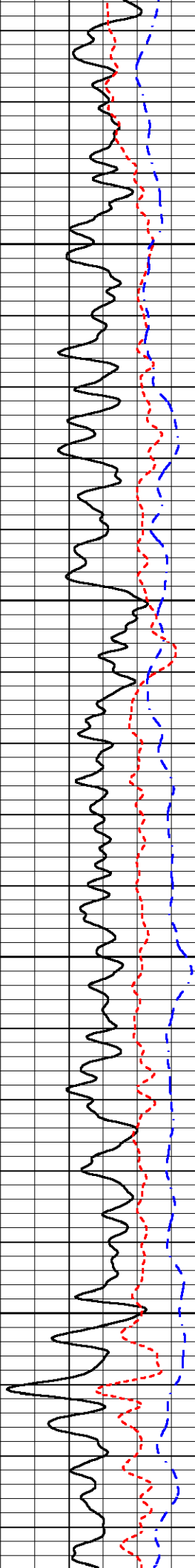
-36

-35

-35

-36

-36

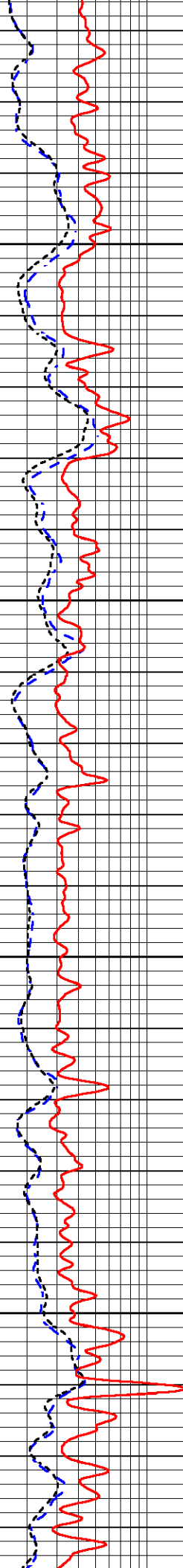


1650

1700

1750

1800

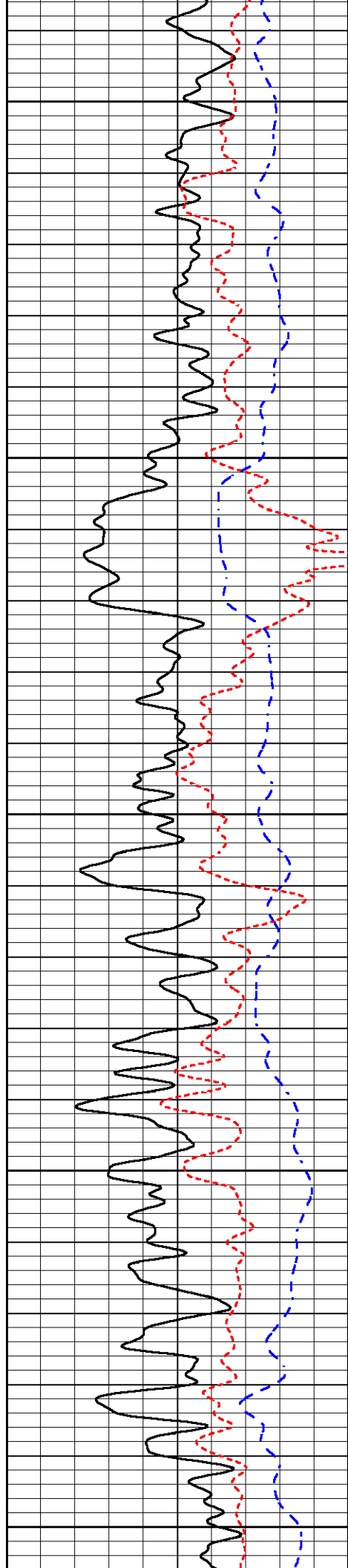


-35

-35

-35

-35



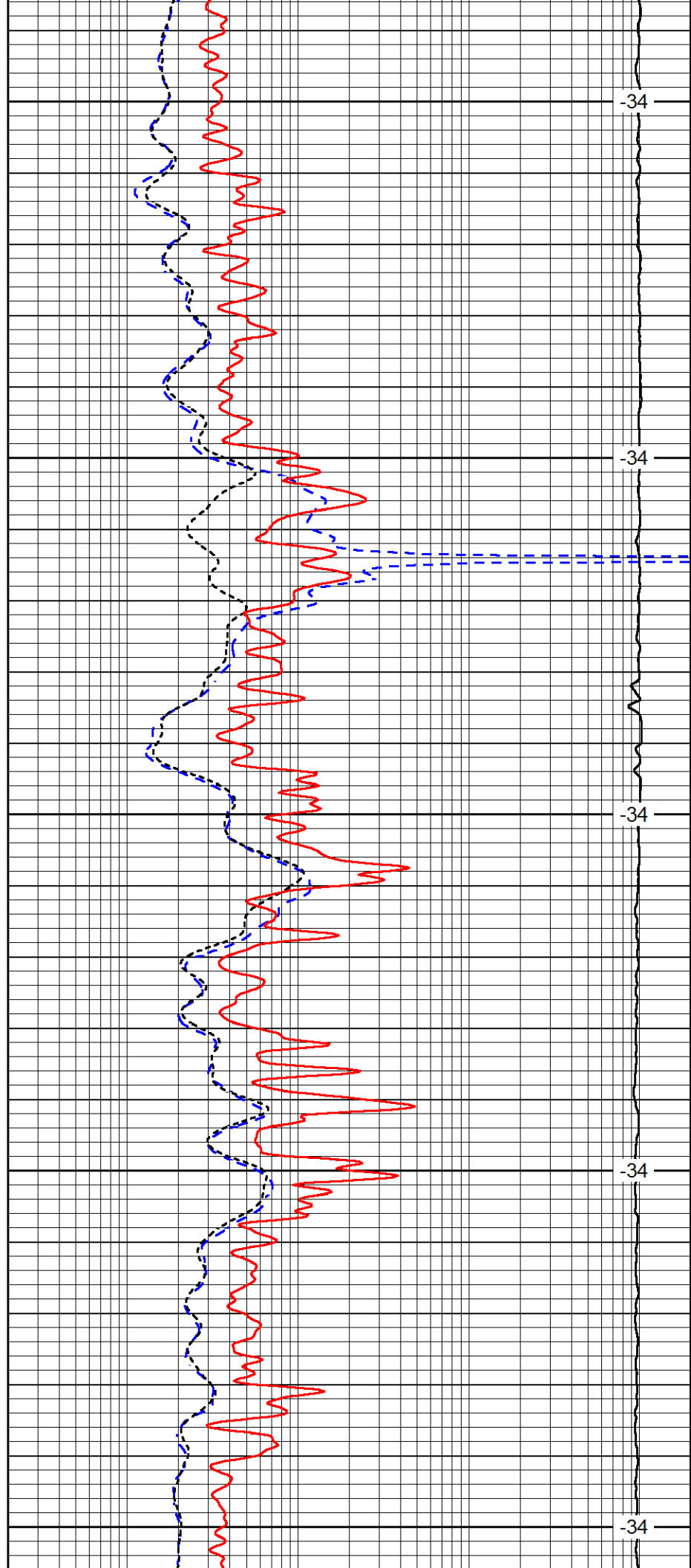
1850

1900

1950

2000

2050



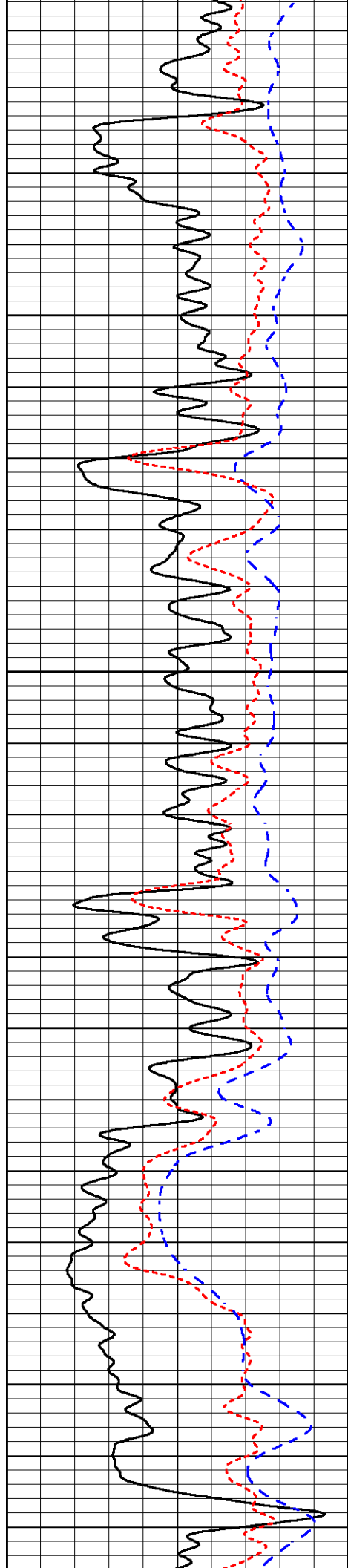
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34

34

34

34

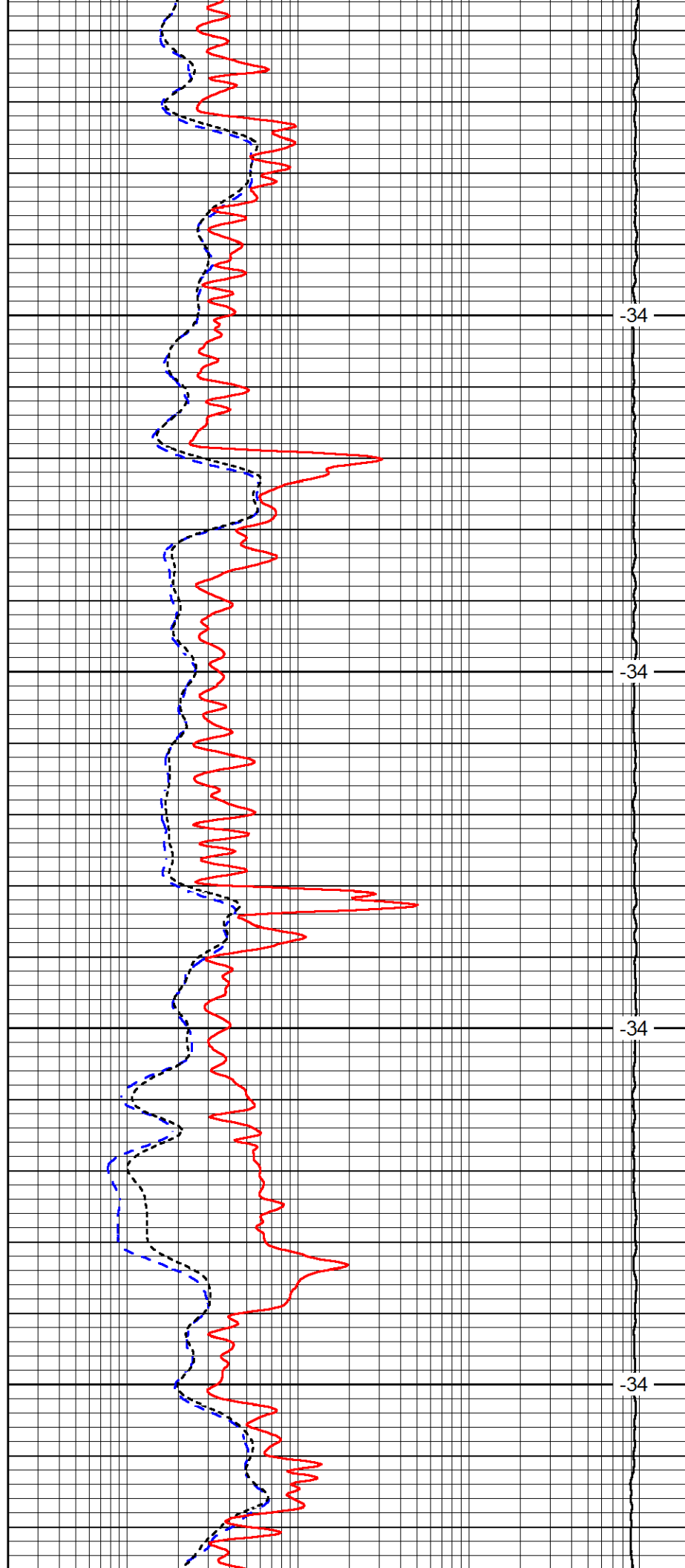


2100

2150

2200

2250

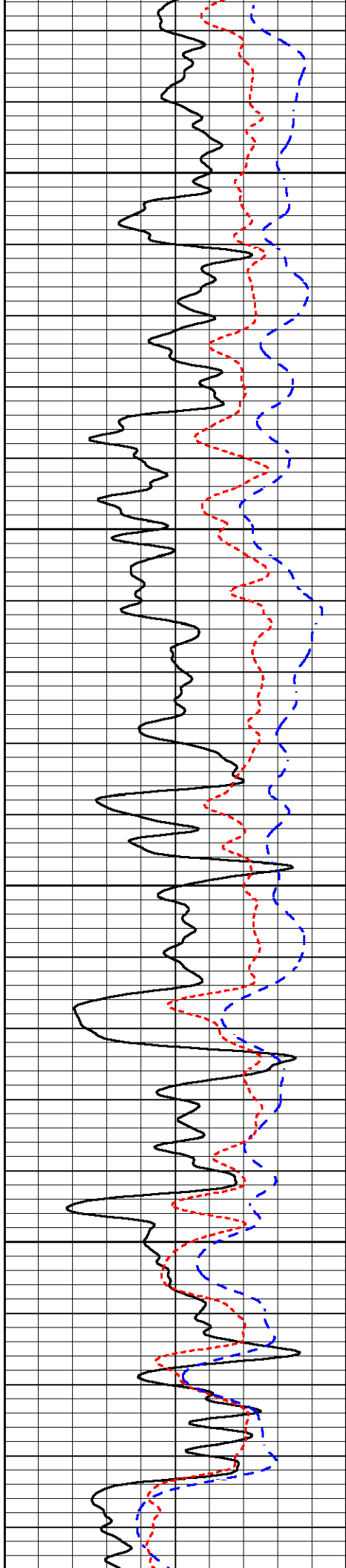


-34

-34

-34

-34

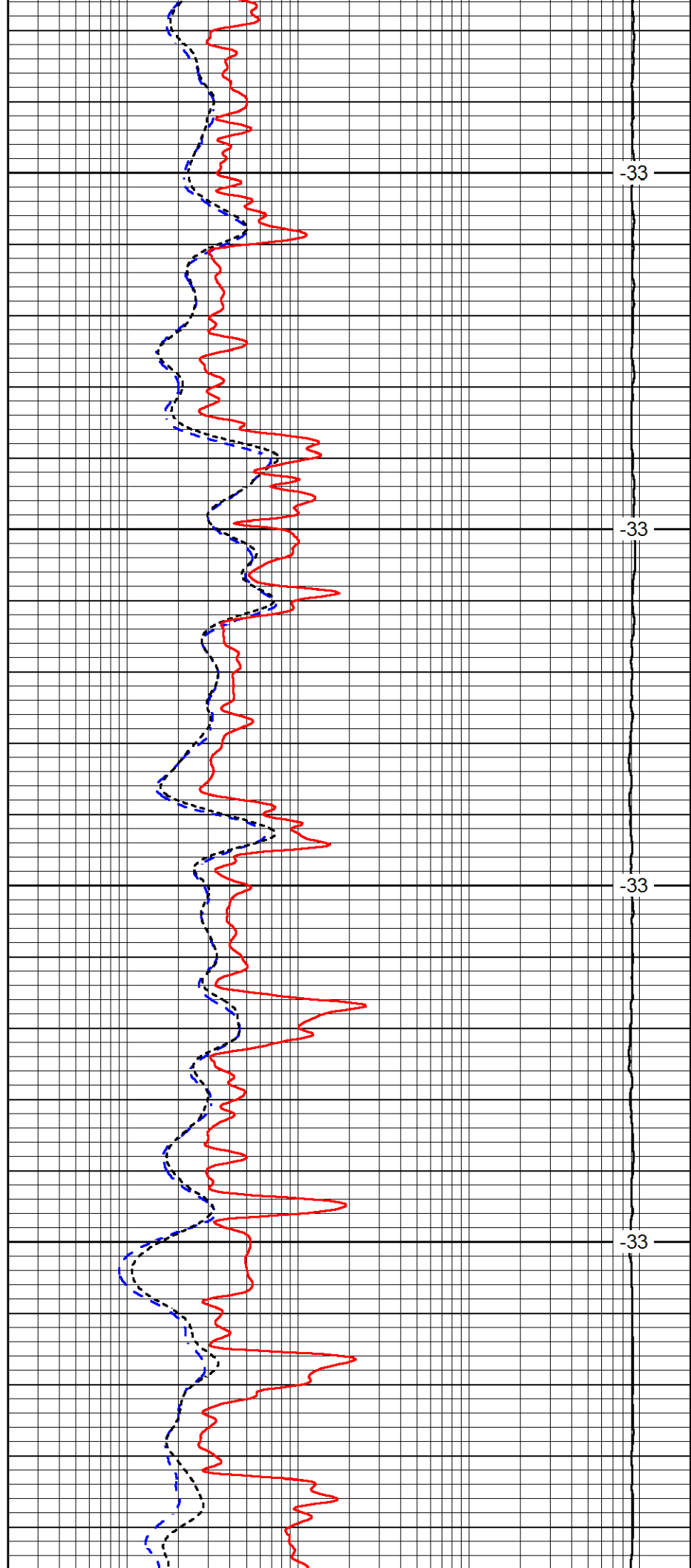


2300

2350

2400

2450

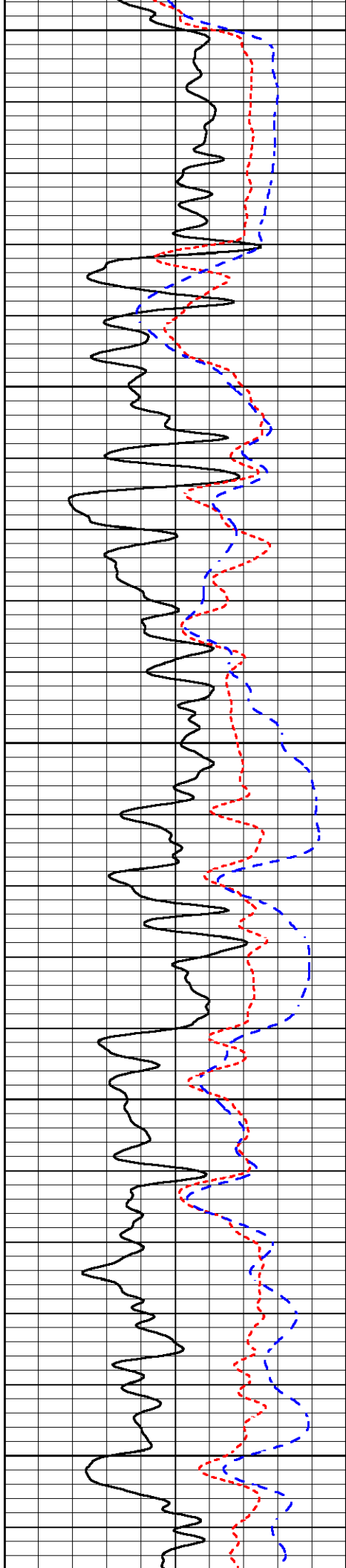


-33

-33

-33

-33



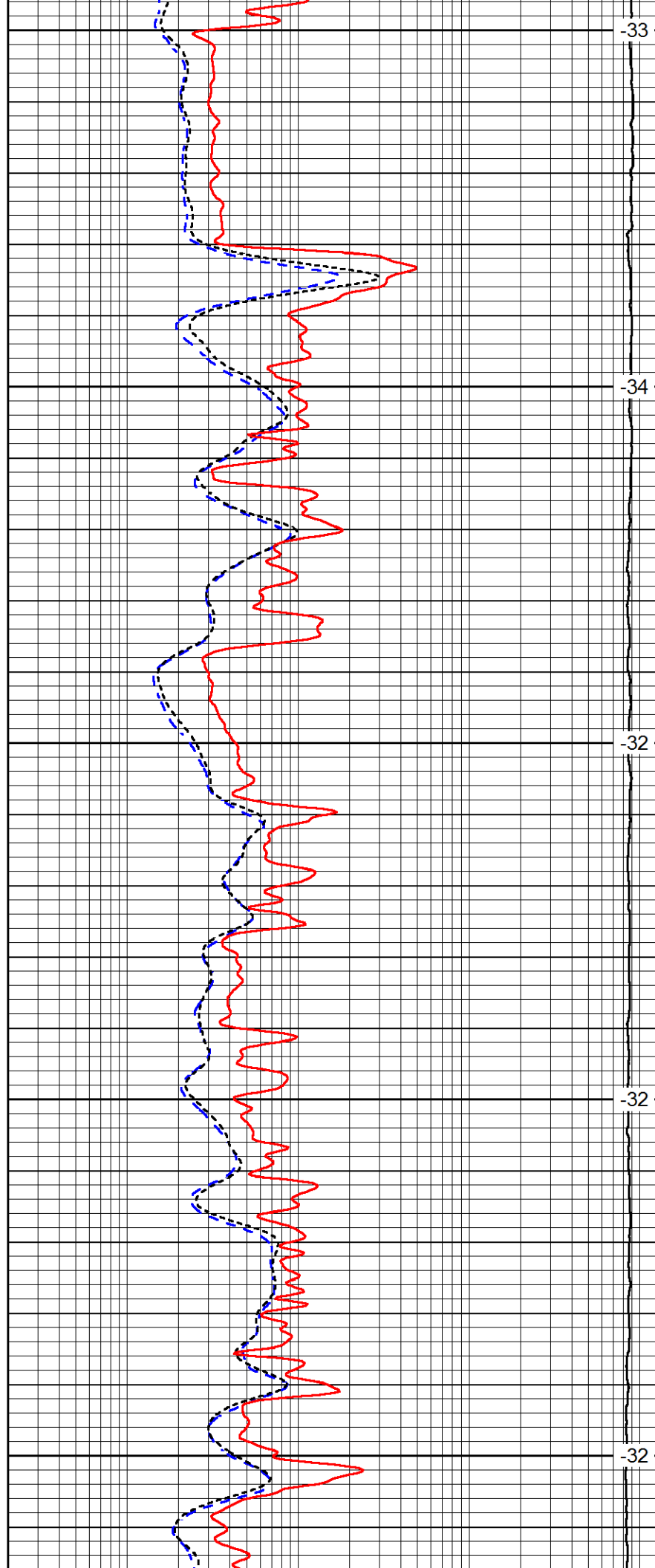
2500

2550

2600

2650

2700



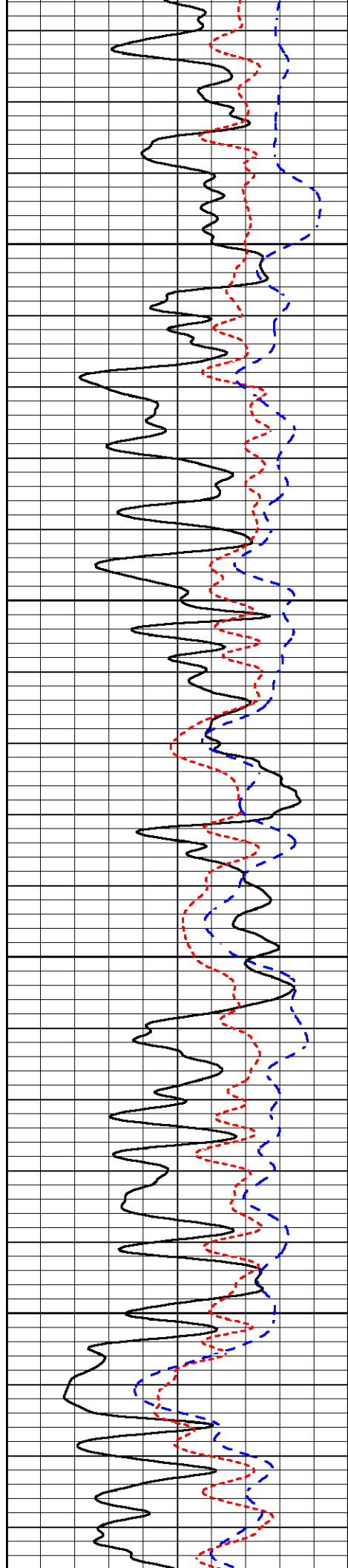
-33

-34

-32

-32

-32

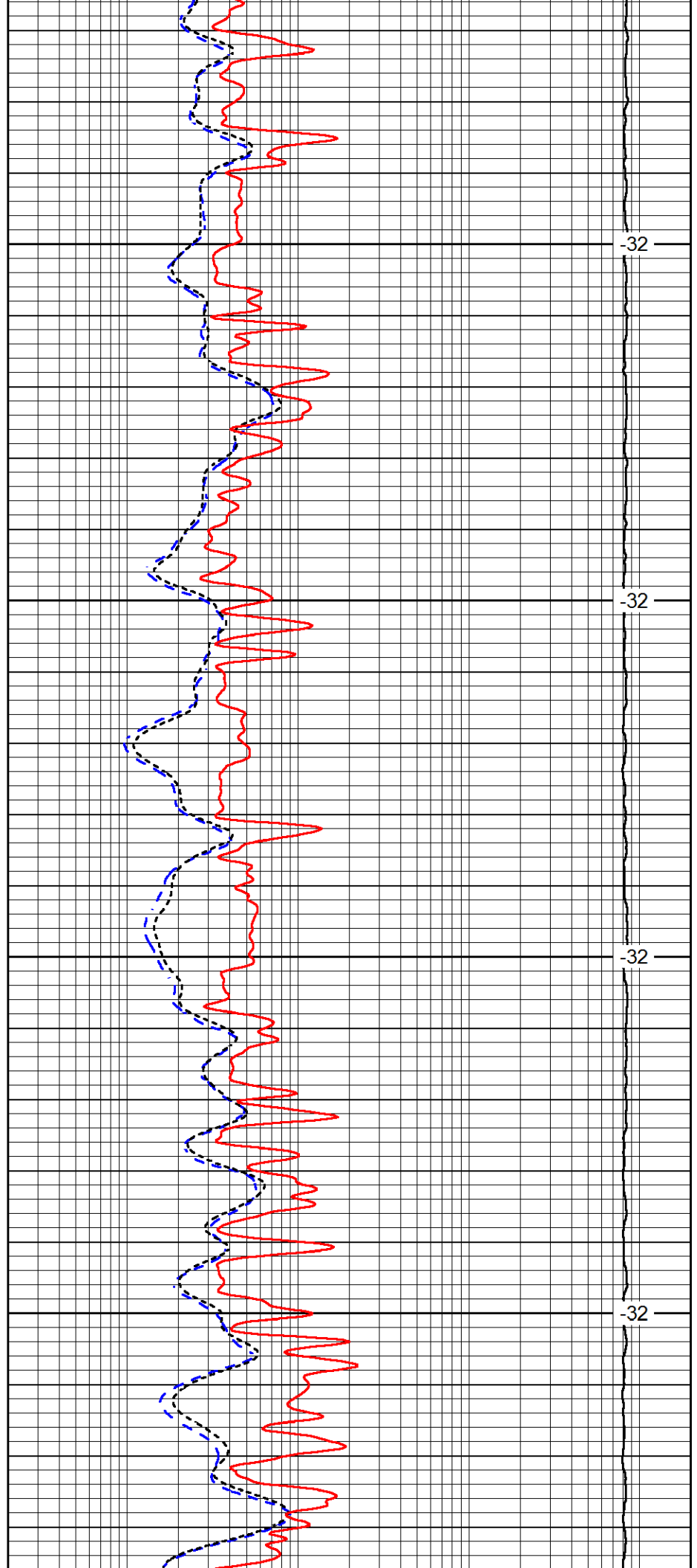


2750

2800

2850

2900

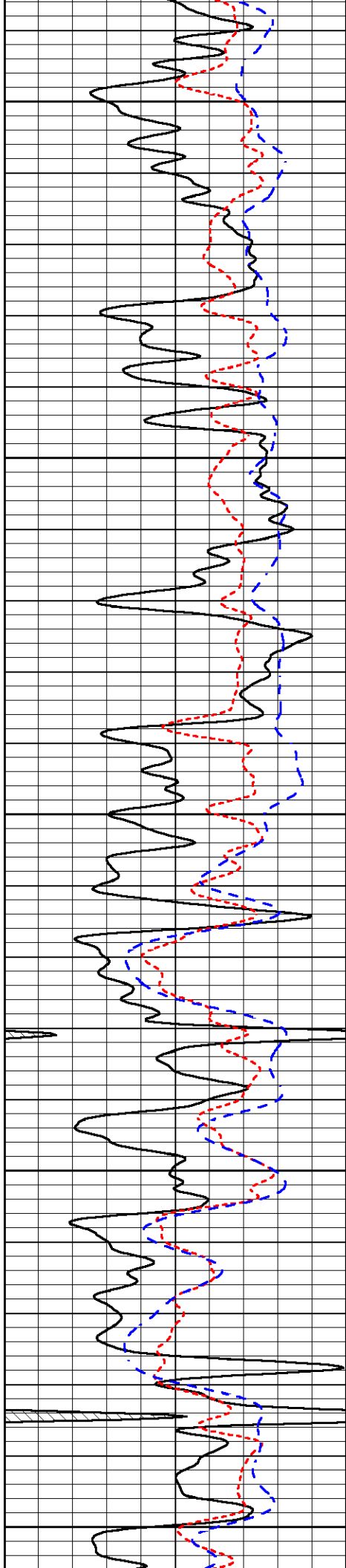


-32

-32

-32

-32



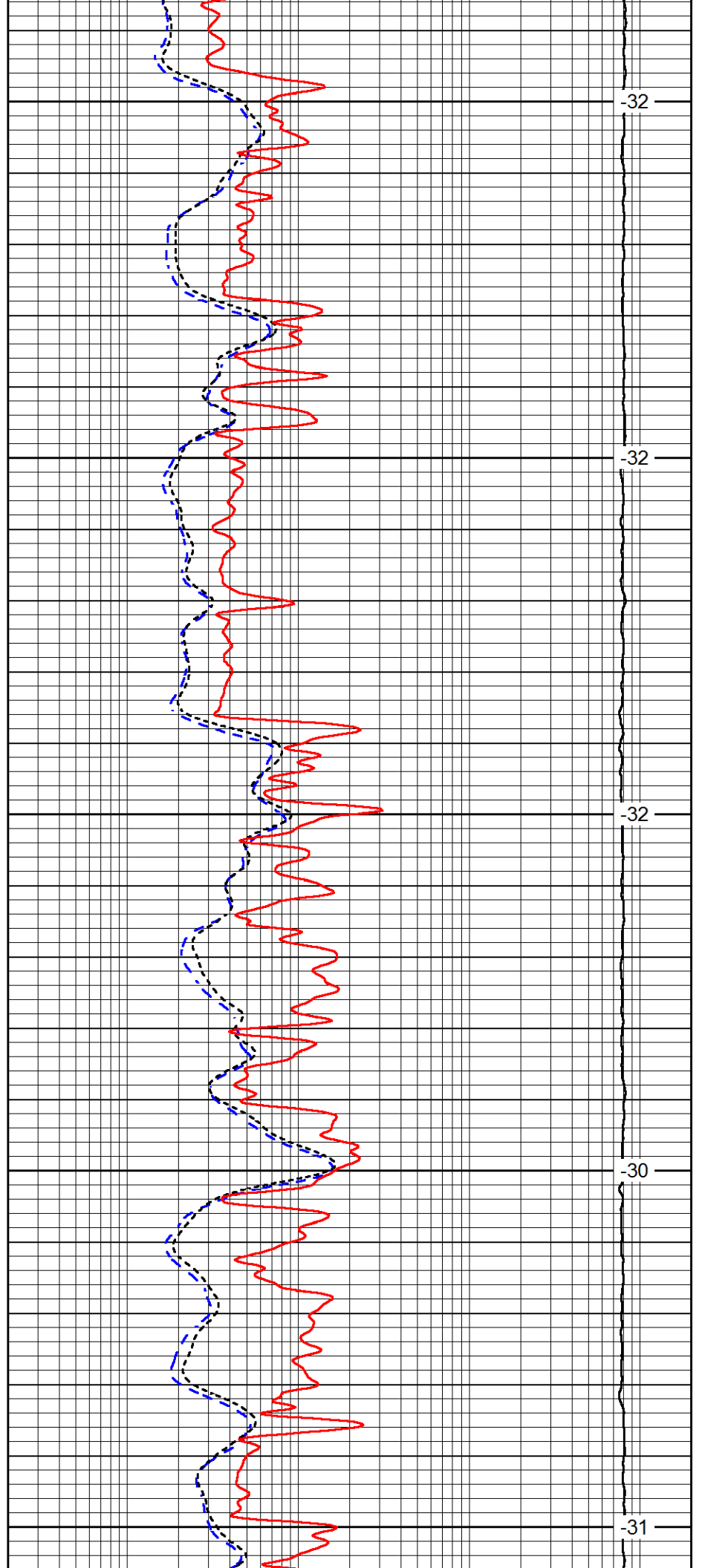
2950

3000

3050

3100

3150



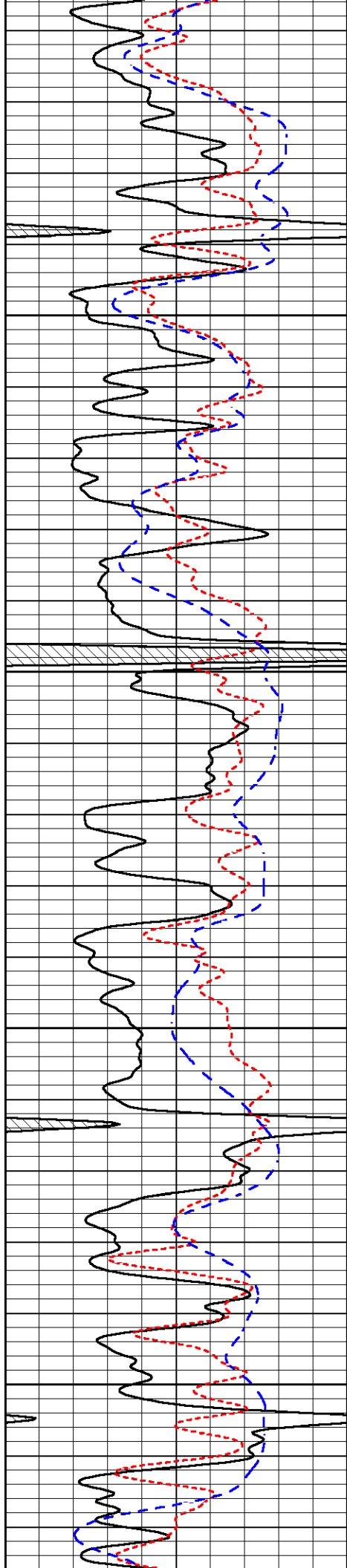
32

32

32

30

31

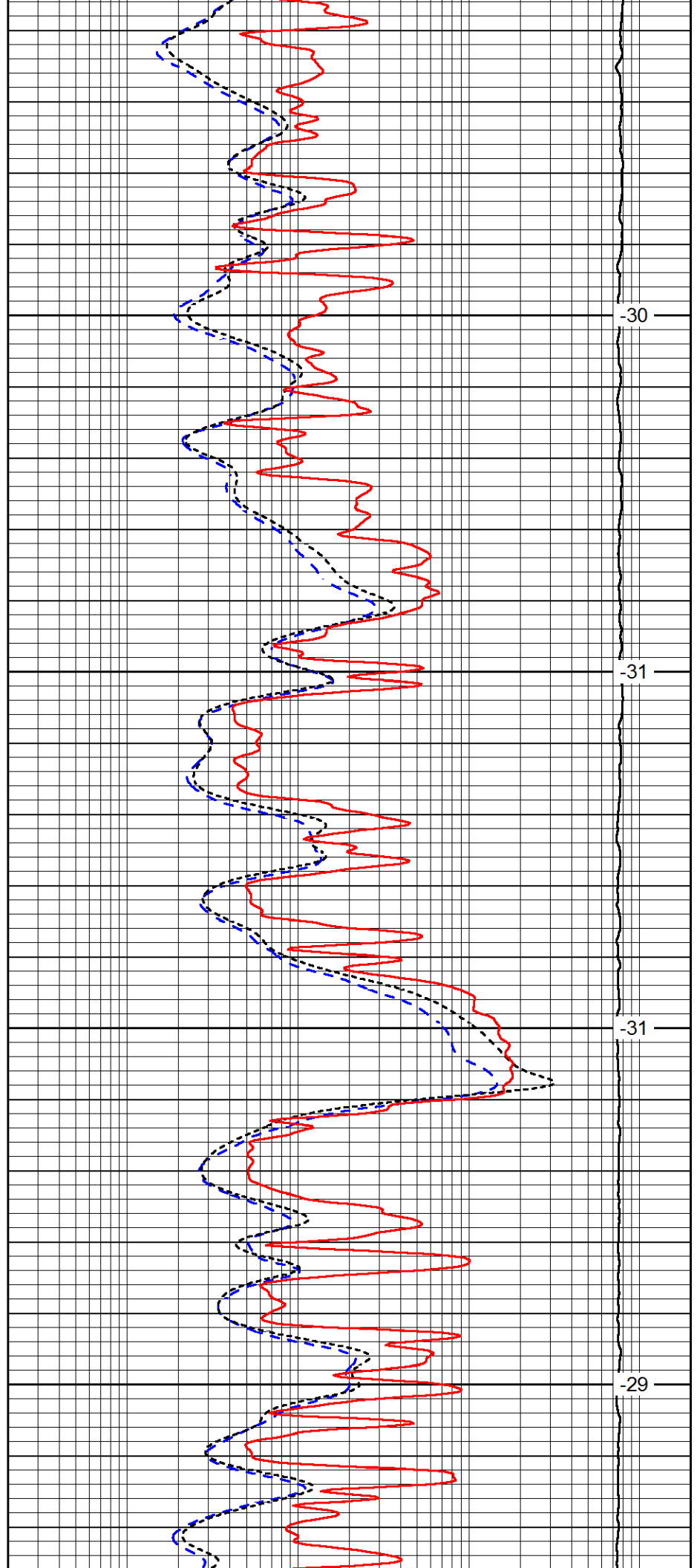


3200

3250

3300

3350

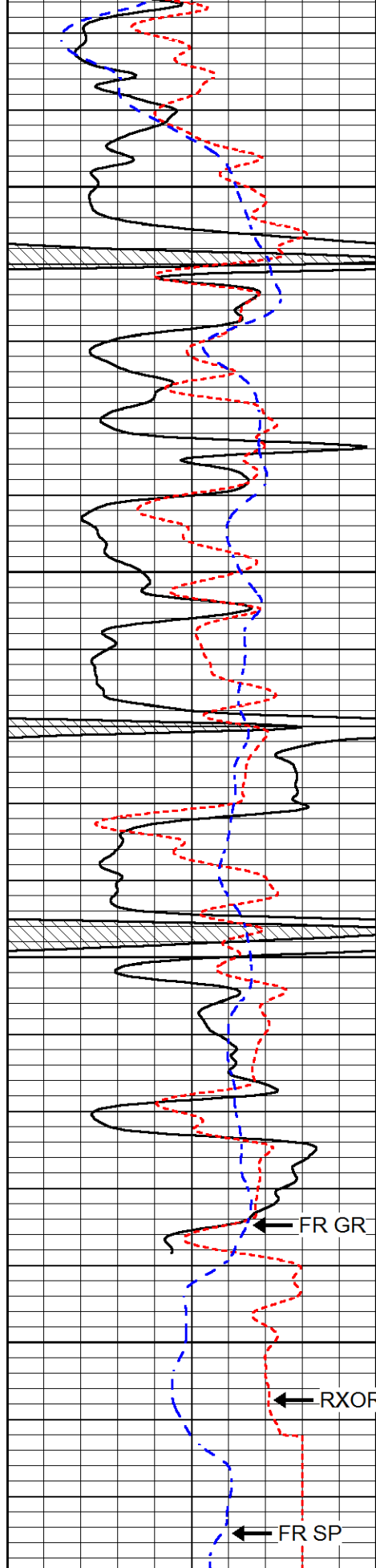


30

31

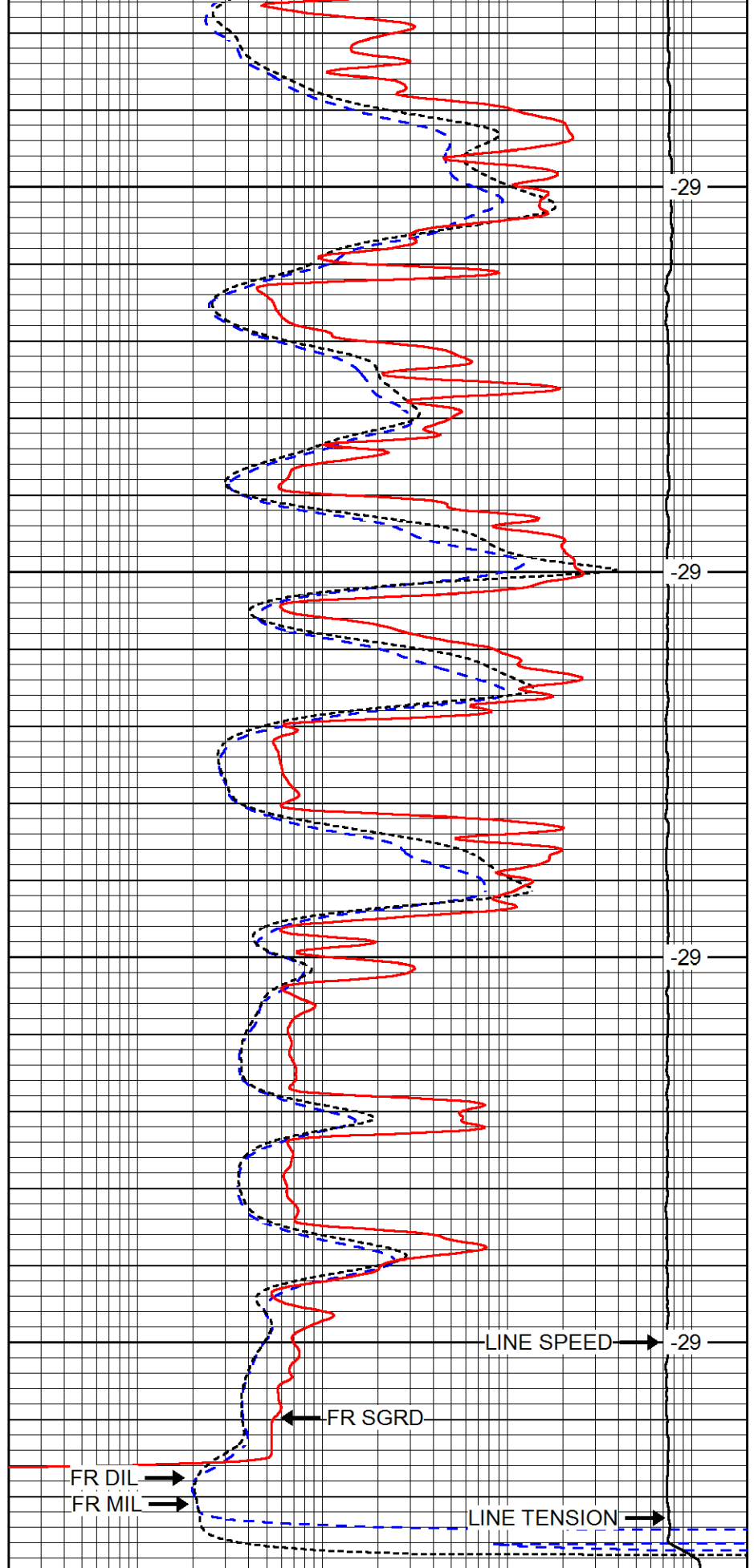
31

29



0	GAMMA RAY (GAPI)	150
-160	RX / ORT	40
-200	SP (mV)	0

3400
3450
3500
3550



0.2	DEEP RESISTIVITY (Ohm-m)	2000
0.2	MEDIUM RESISTIVITY (Ohm-m)	2000
0.2	SHALLOW RESISTIVITY (Ohm-m)	2000

15000

LINE TENSION (lb)

0

LINE SPEED

(ft/min)



REPEAT SECTION

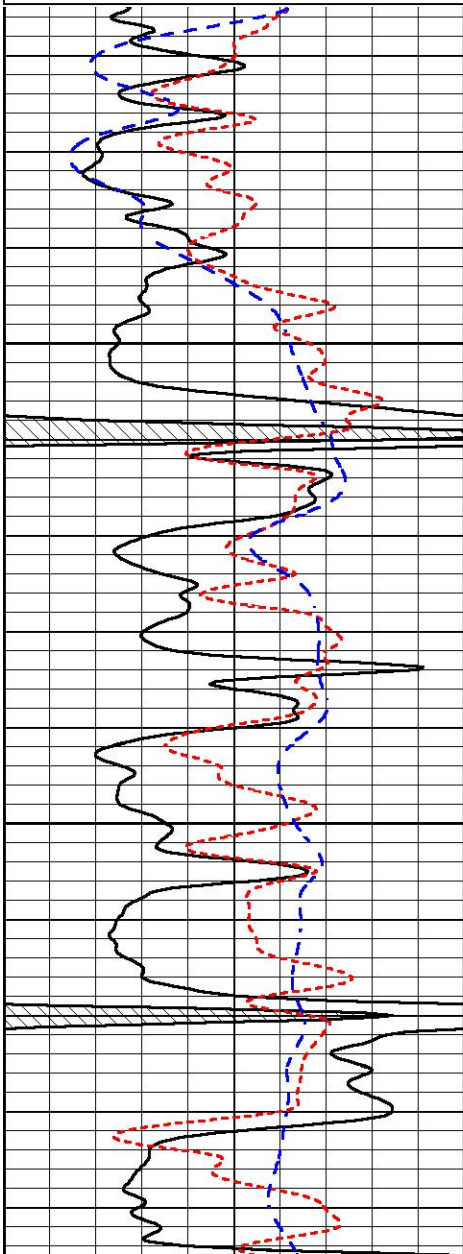
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 Dataset Pathname stackmel/pass3.1
 Presentation Format dil
 Dataset Creation Thu Apr 28 15:55:11 2016
 Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-160	RX / ORT	40
-200	SP (mV)	0

0.2	DEEP RESISTIVITY (Ohm-m)	2000
0.2	MEDIUM RESISTIVITY (Ohm-m)	2000
0.2	SHALLOW RESISTIVITY (Ohm-m)	2000
15000	LINE TENSION (lb)	0

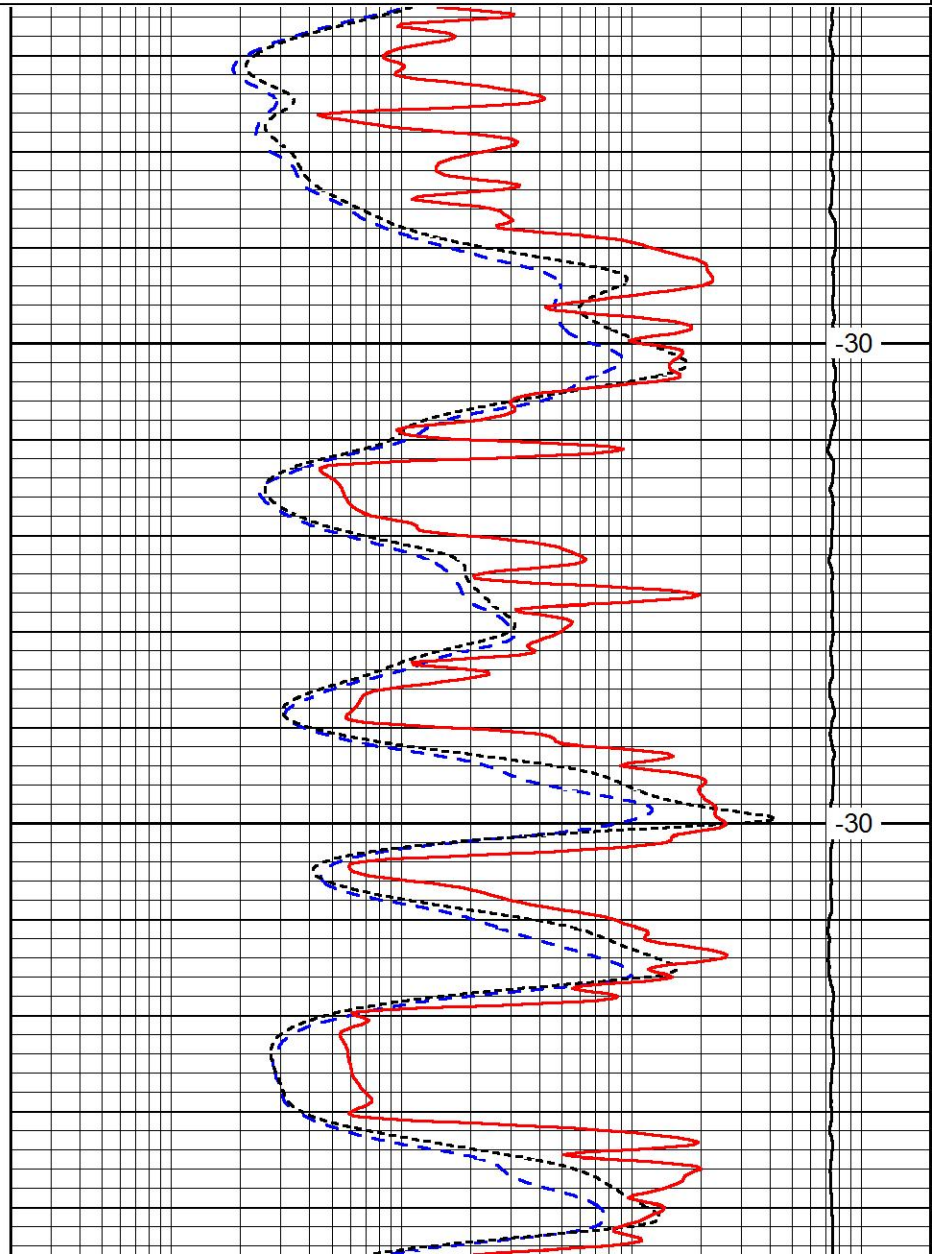
LINE SPEED

(ft/min)



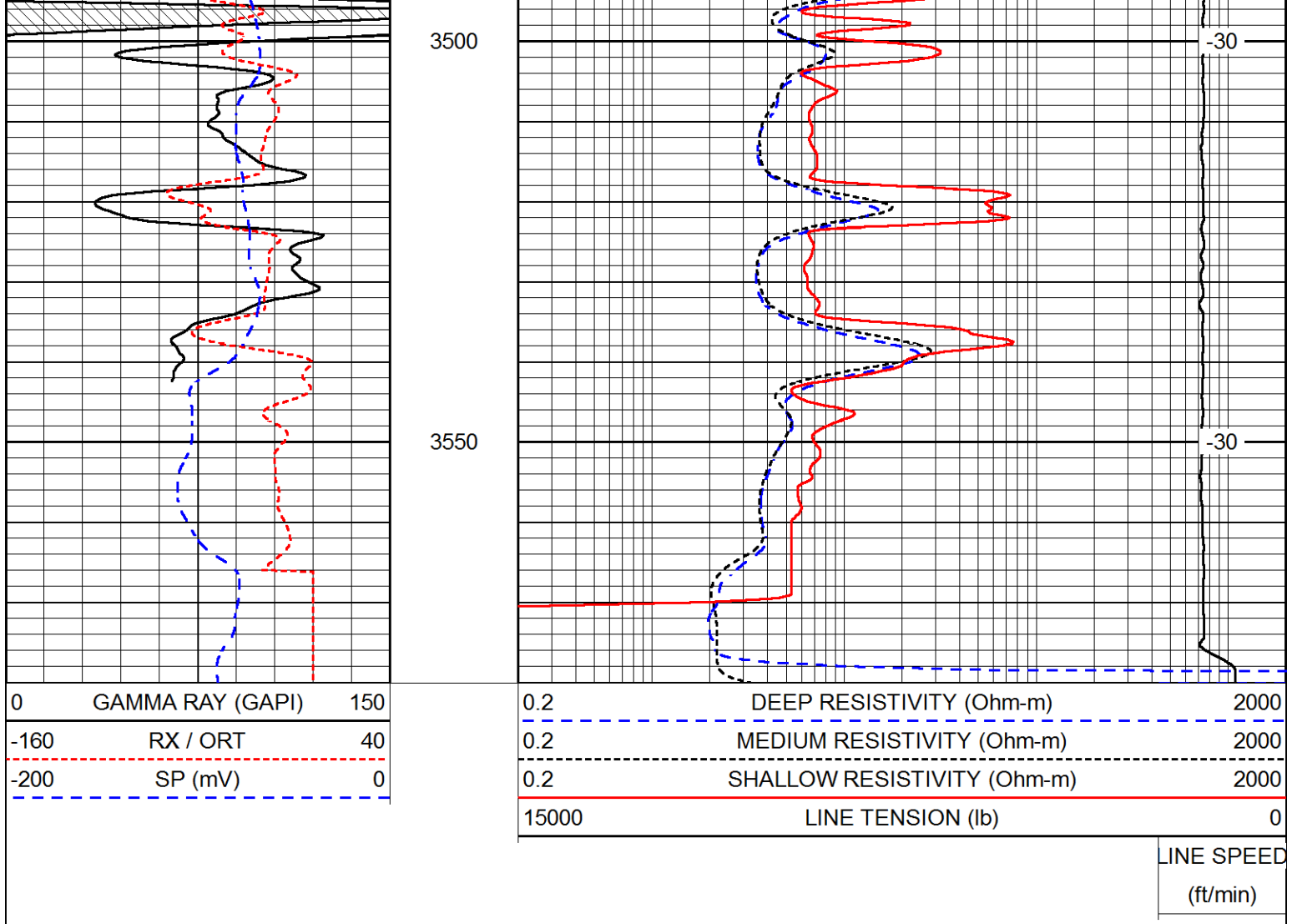
3400

3450



30

30



Calibration Report

Database File: ampatriot_apo_18_wallerlowry_1.db
 Dataset Pathname: stackmel/pass4.1
 Dataset Creation: Thu Apr 28 17:00:34 2016

Dual Induction Calibration Report

Serial-Model: 1987-M&W
 Calibration Performed: Thu Mar 31 15:53:34 2016

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop	mmho/m	Gain	Offset
Deep	178.615	710.235	0.000	255.800	mmho/m	0.530	-38.000
Medium	161.982	1441.110	0.000	255.800	mmho/m	0.440	-110.500

Microlog Calibration Report

Serial-Model: PSI-02-PSI STKBL ML
 Performed: Thu Apr 14 22:34:04 2016

	Readings		References			Results	
	Zero	Cal	Zero	Cal	Ohm-m	m	b
Normal	0.0031	0.0043	0.0000	10.0000	Ohm-m	10308.9000	-0.2000
Inverse	0.0000	0.0013	0.0000	10.0000	Ohm-m	7967.2700	0.4000

Compensated Density Calibration Report

Serial-Model: 71-914-M&W
 Source / Verifier: /
 Master Calibration Performed: Thu Mar 31 16:30:19 2016

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	4314.49	5307.52	cps
Aluminum	2.670	g/cc	822.19	3456.36	cps
Spine Angle = 75.49			Density/Spine Ratio = 0.534		
	Size		Reading		
Small Ring	4.00	in	1.16		
Large Ring	14.00	in	1.57		

Compensated Neutron Calibration Report

Serial Number: tk10-MW
 Tool Model: M&W
 Calibration Performed: Wed Mar 30 10:04:05 2016

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: 89-M&W
 Tool Model: M&W
 Calibration Performed: Thu Mar 31 15:29:33 2016

Calibrator Value: 1000.0 GAPI

Background Reading: 0.0 cps
 Calibrator Reading: 6.2 cps

Sensitivity: 0.5200 GAPI/cps



Company AMERICAN PATRIOT OIL, LLC
 Well APO #18 WALLER LOWRY #1
 Field WILDCAT
 County ROOKS
 State KANSAS



PIONEER
Pioneer Energy Services

**DUAL INDUCTION
LOG**

Company **AMERICAN PATRIOT OIL, LLC**
Well **APO #18 WALLER LOWRY #1**
Field **WILDCAT**
County **ROOKS** State **KANSAS**

Company **AMERICAN PATRIOT OIL, LLC**
Well **APO #18 WALLER LOWRY #1**
Field **WILDCAT**
County **ROOKS**
State **KANSAS**

Location: **API #: 15-163-24312-00-00**
1,670' FNL & 931' FWL
SEC 31 TWP 8S RGE 19W
Permanent Datum **GROUND LEVEL Elevation 2040'**
Log Measured From **KELLY BUSHING**
Drilling Measured From **KELLY BUSHING**
Other Services
**CNL/CDL
MEL**
Elevation
K.B. 2048'
D.F. N/A
G.L. 2040'

Date	4/28/2016
Run Number	ONE
Depth Driller	3578'
Depth Logger	3576'
Bottom Logged Interval	3575'
Top Log Interval	00'
Casing Driller	8.625" @ 263'
Casing Logger	262'
Bit Size	7.875"
Type Fluid in Hole	CHEMICAL
Salinity, ppm CL	4800
Density / Viscosity	9.4 62
pH / Fluid Loss	10.5 7.2
Source of Sample	FLOWLINE
Rm @ Meas. Temp	.75 @ 65
Rmt @ Meas. Temp	.56 @ 65
Rmc @ Meas. Temp	1.01 @ 65
Source of Rmf / Rmc	CHARTS
Rm @ BHT	.44 @ 112
Operating Rig Time	2 1/2 HOURS
Max Rec. Temp. F	112
Equipment Number	108
Location	COLBY
Recorded By	J. LONG
Witnessed By	MARC DOWNING

<<< Fold Here >>>

All interpretations are opinions based on inferences from electrical or other measurements and Pioneer Wireline Services, LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Pioneer 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.
DAMAR, 5 EAST, 1/4 SOUTH, EAST INTO

Log Measured From: KELLY BUSHING 8 Ft. Above Permanent Datum

THANK YOU FOR USING PIONEER ENERGY SERVICES
www.pioneerenergy.com 785-625-3858

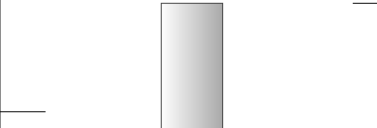
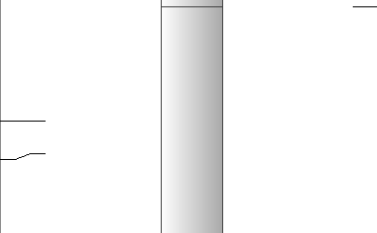
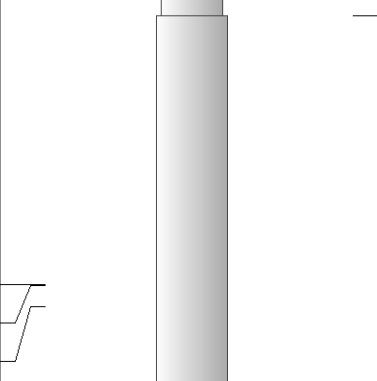
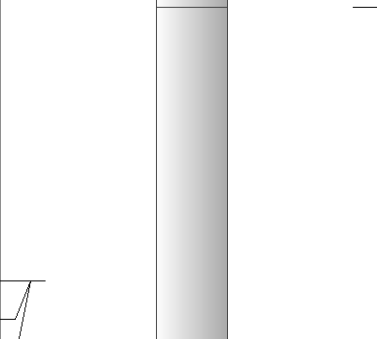
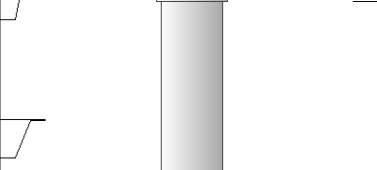
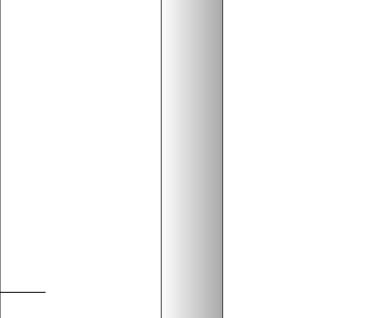
Your Pioneer Energy Services Crew	This Log Record Was Witnessed By
Engineer: J. LONG	Primary Witness: MARC DOWNING
Operator: T. MARTIN	Secondary Witness:
Operator:	Secondary Witness:
Operator:	Secondary Witness:

Log Variables

DatabaseC:\ProgramData\Warrior\Data\lampatriot_apo_18_wallerlowry_1.db
 Dataset field/well/stackmel/pass4.1/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	112	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	-620	54	Off	3576

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.58		GR-M&W (89-M&W)	3.00	3.50	50.00
CNLSC CNSSC	37.48 36.73		CNT-M&W (tk10-MW)	5.50	3.50	100.00
LSD DCAL SSD	28.43 28.42 27.93		CDL-M&W (71-914)	8.50	4.00	250.00
MCAL MI MN	19.83 19.83 19.83		ML-PSI STKBL ML (PSI-02) Stackable Microlog Tools	7.58	4.00	65.00
RLL3 RLL3F	15.80 15.79					
CILD	8.00		DIL-M&W (1987)	18.50	3.50	220.00

CILM 4.70

SP 0.20

Dataset: ampatriot_apo_18_wallerlowry_1.db: field/well/stackmel/pass4.1
 Total length: 43.08 ft
 Total weight: 685.00 lb
 O.D.: 4.00 in



MAIN PASS

2" SCALE RESISTIVITY

Database File ampatriot_apo_18_wallerlowry_1.db
 Dataset Pathname stackmel/pass4.2
 Presentation Format dil2in
 Dataset Creation Thu Apr 28 17:01:04 2016
 Charted by Depth in Feet scaled 1:600

0 GAMMA RAY (GAPI) 150
 -200 SP (mV) 0

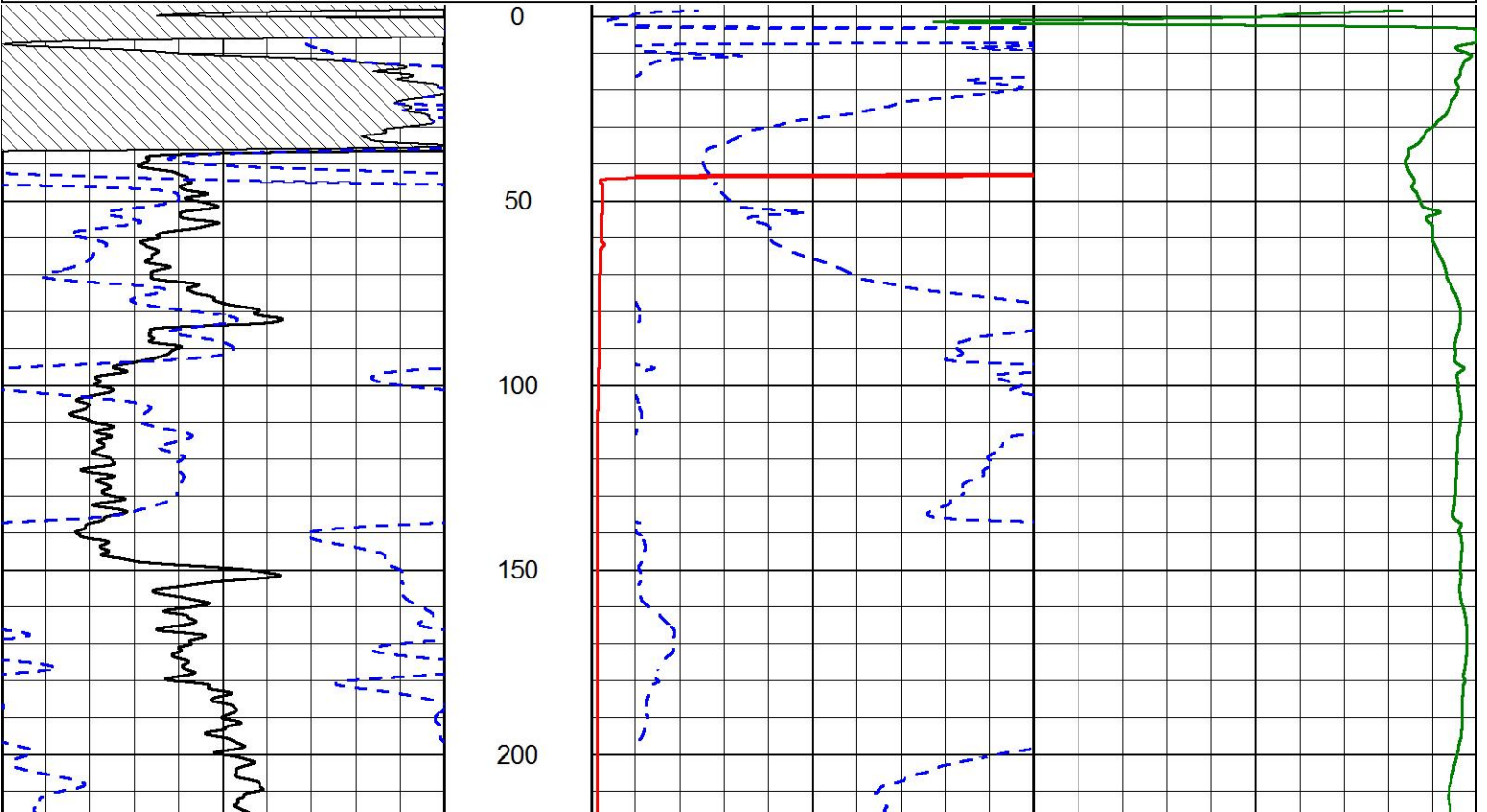
1000 CONDUCTIVITY (mmho/m) 0

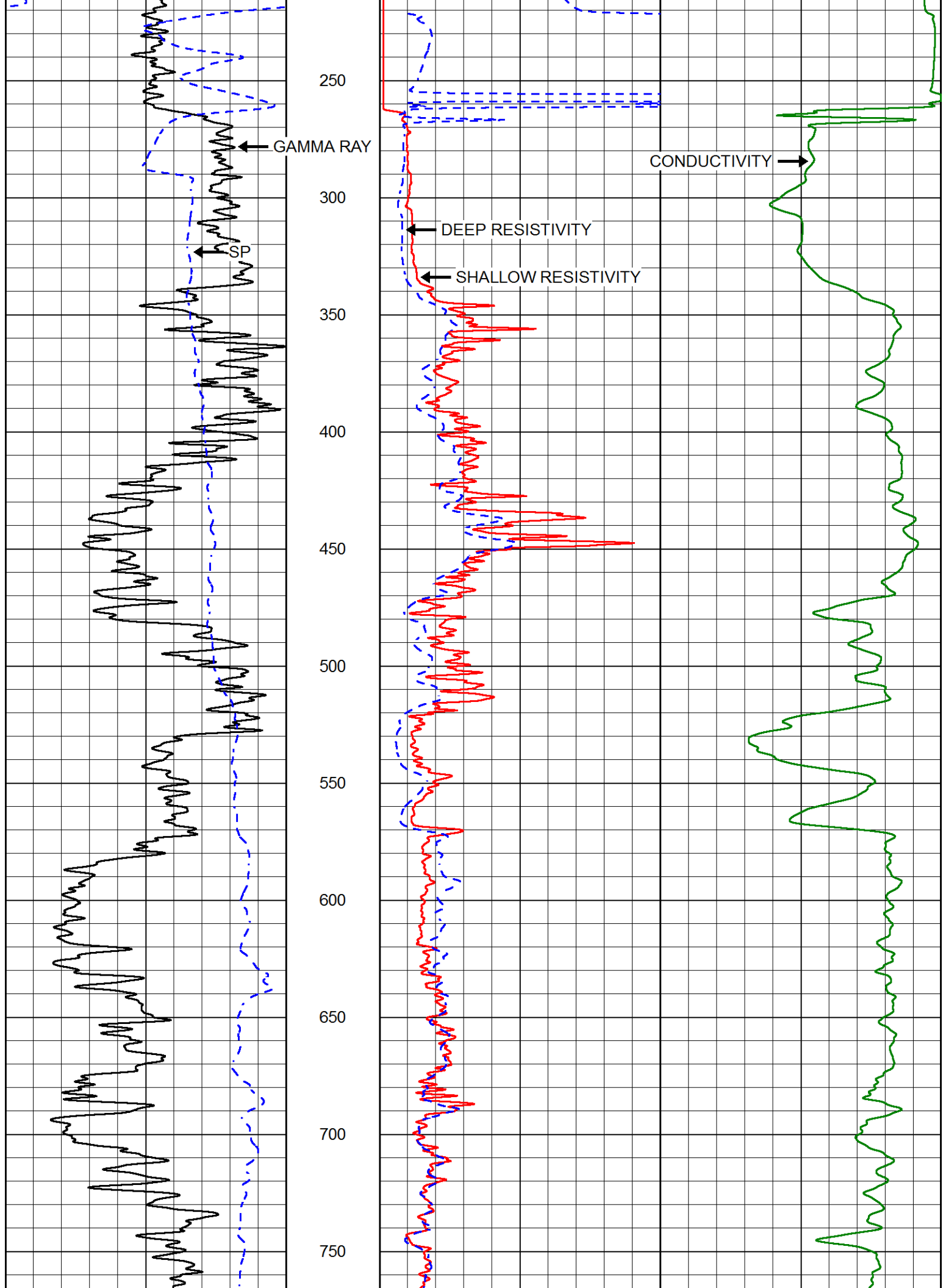
SHALLOW RESISTIVITY
 0 (Ohm-m) 50

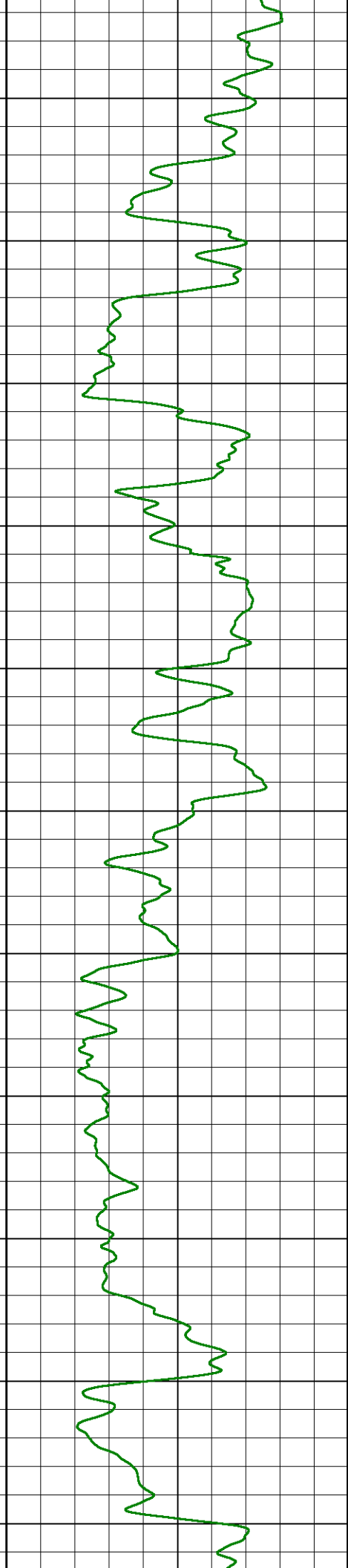
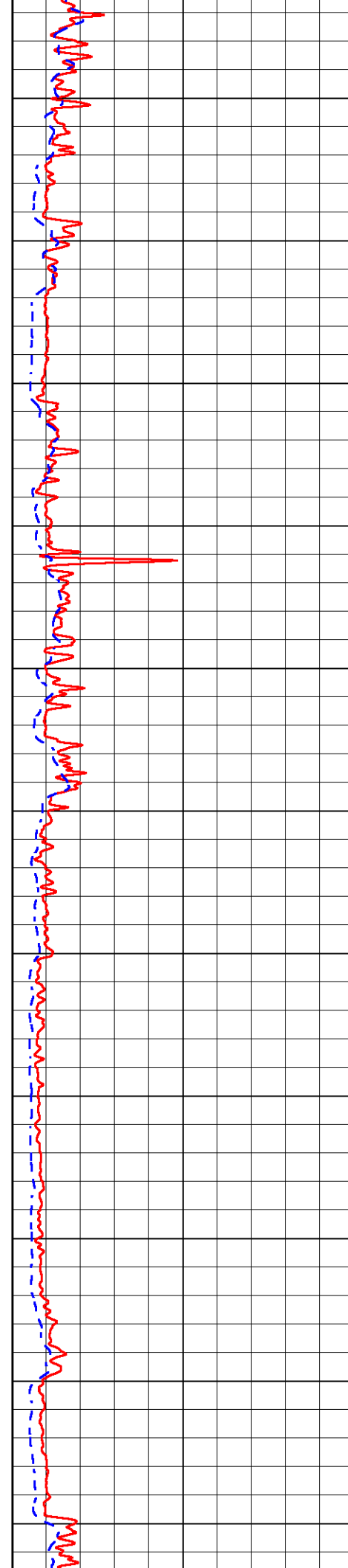
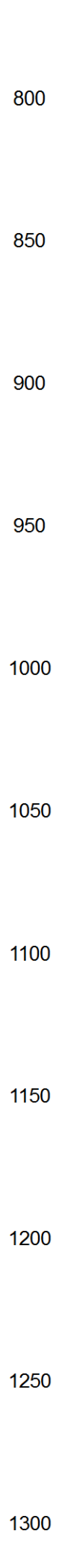
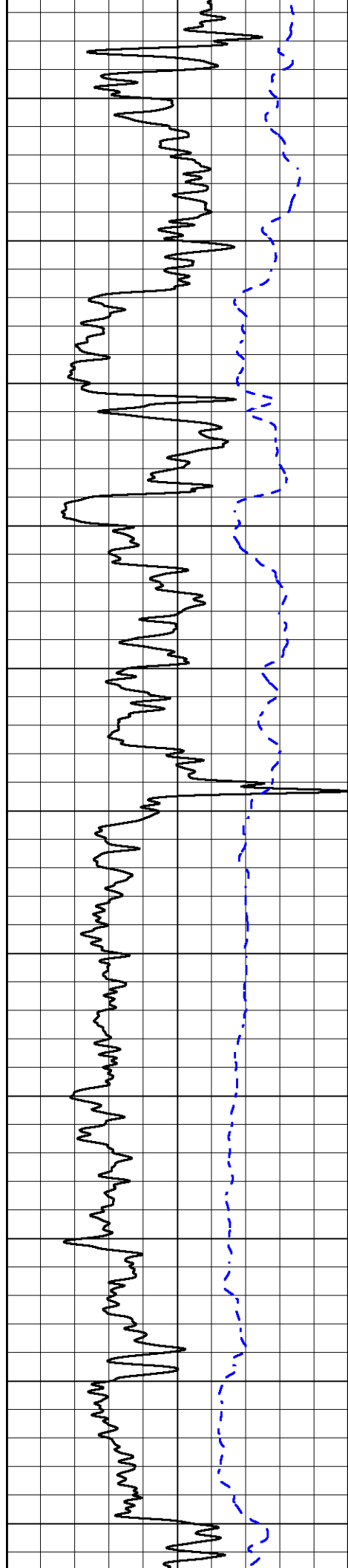
DEEP RESISTIVITY (Ohm-m) 50

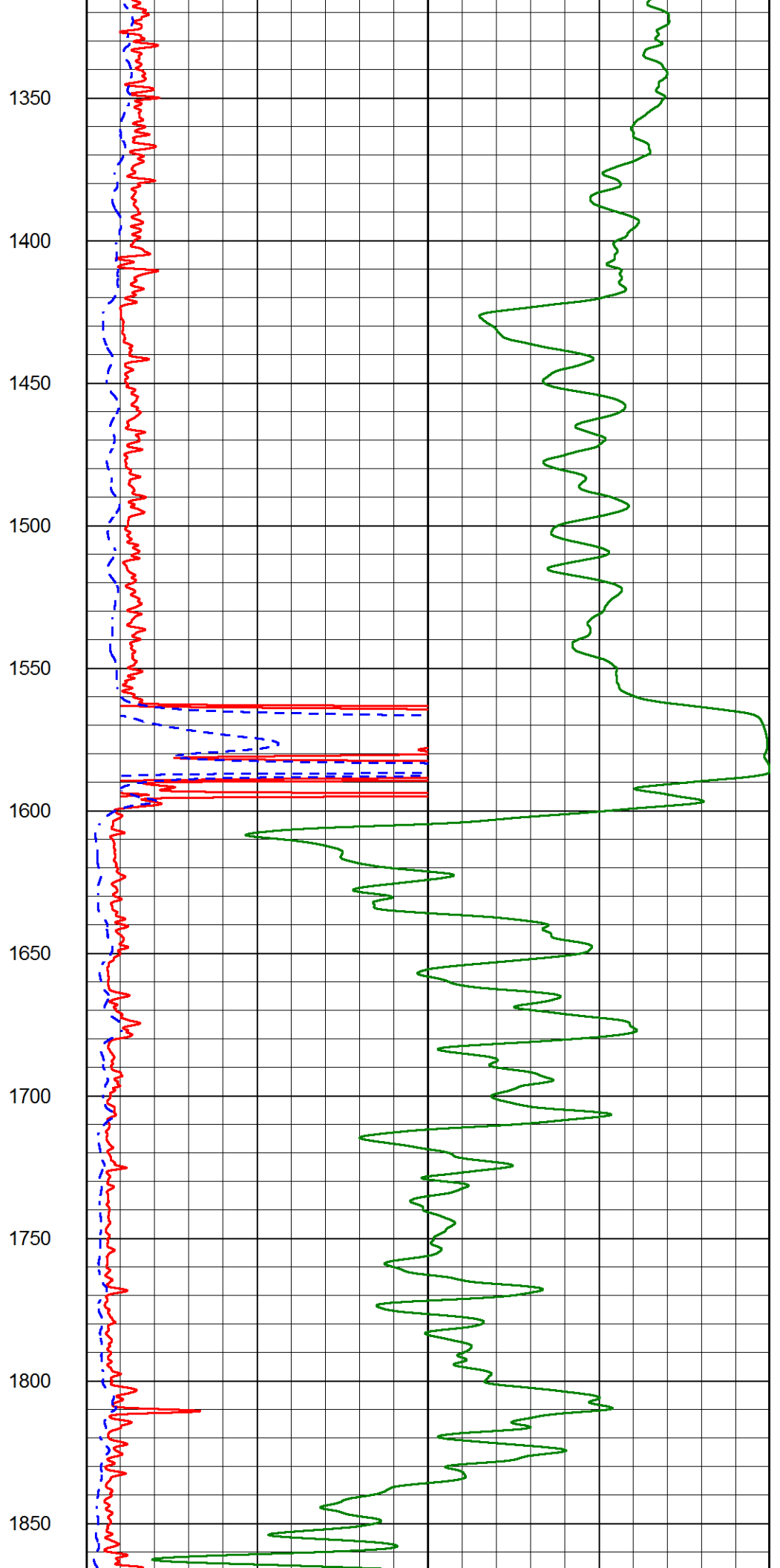
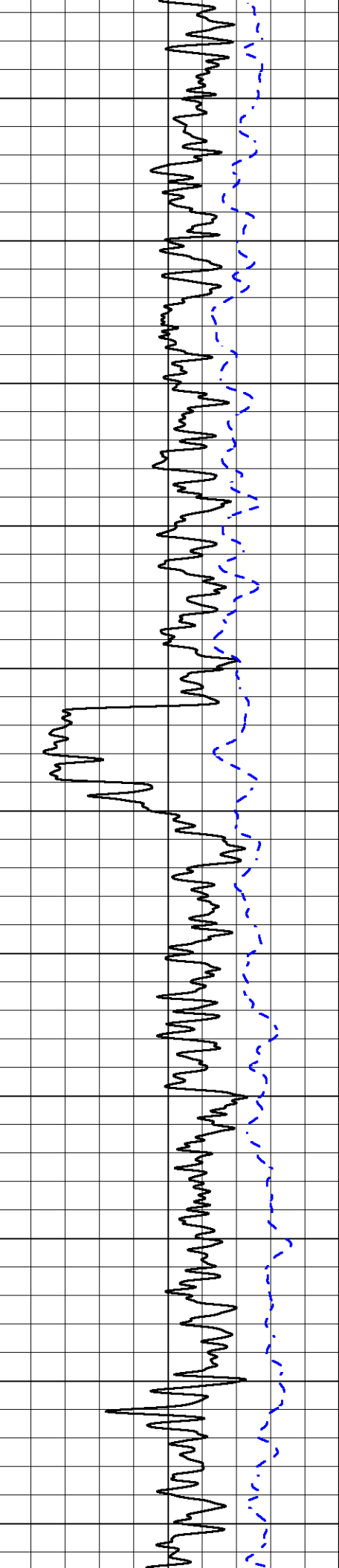
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 50 (Ohm-m) 500

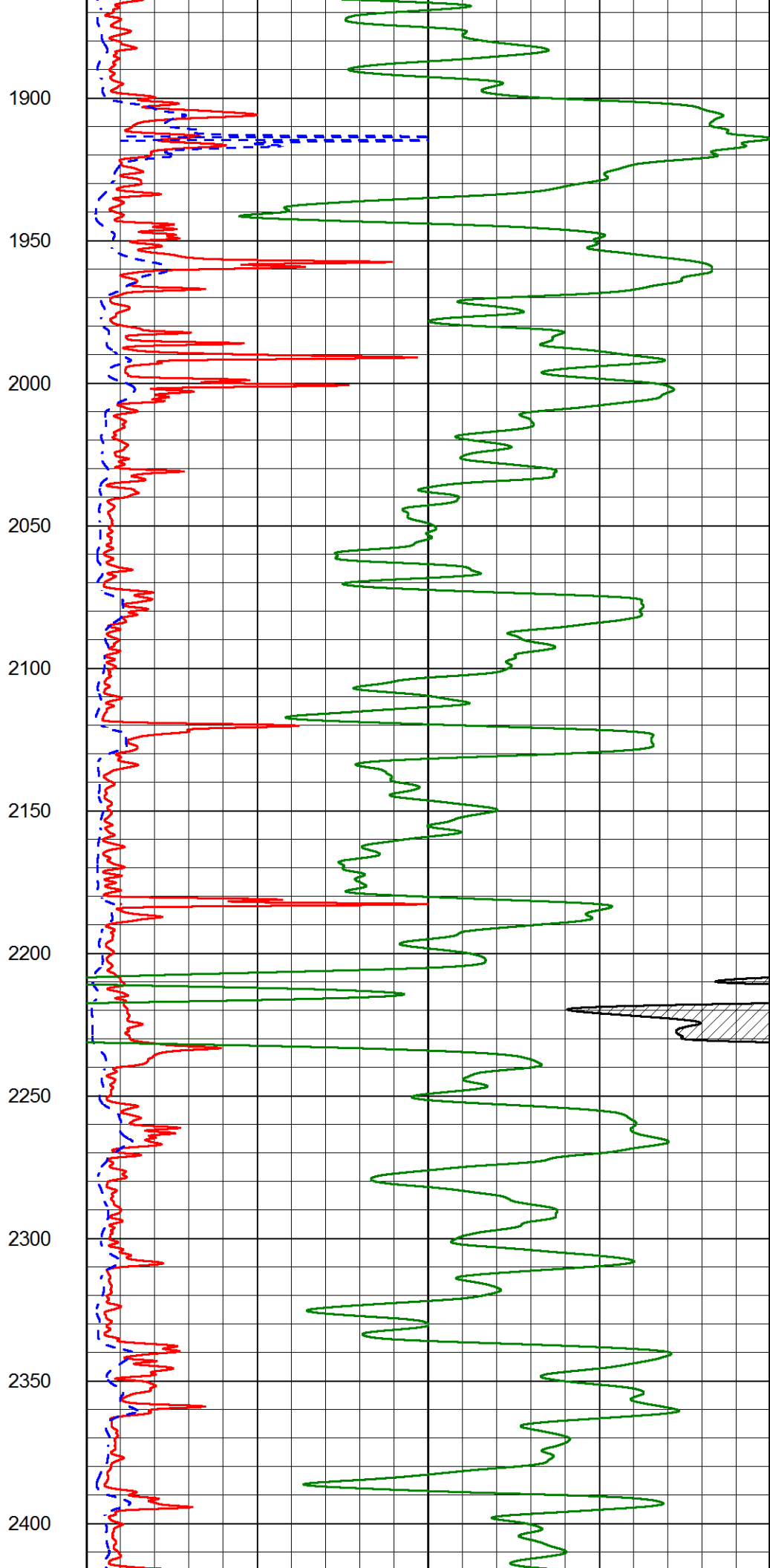
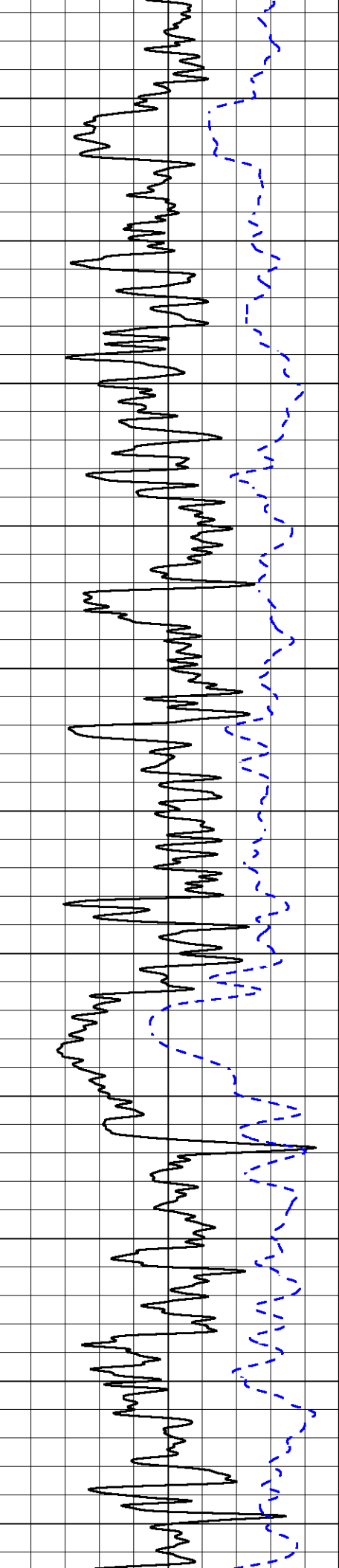
DEEP RESISTIVITY
 50 (Ohm-m) 500

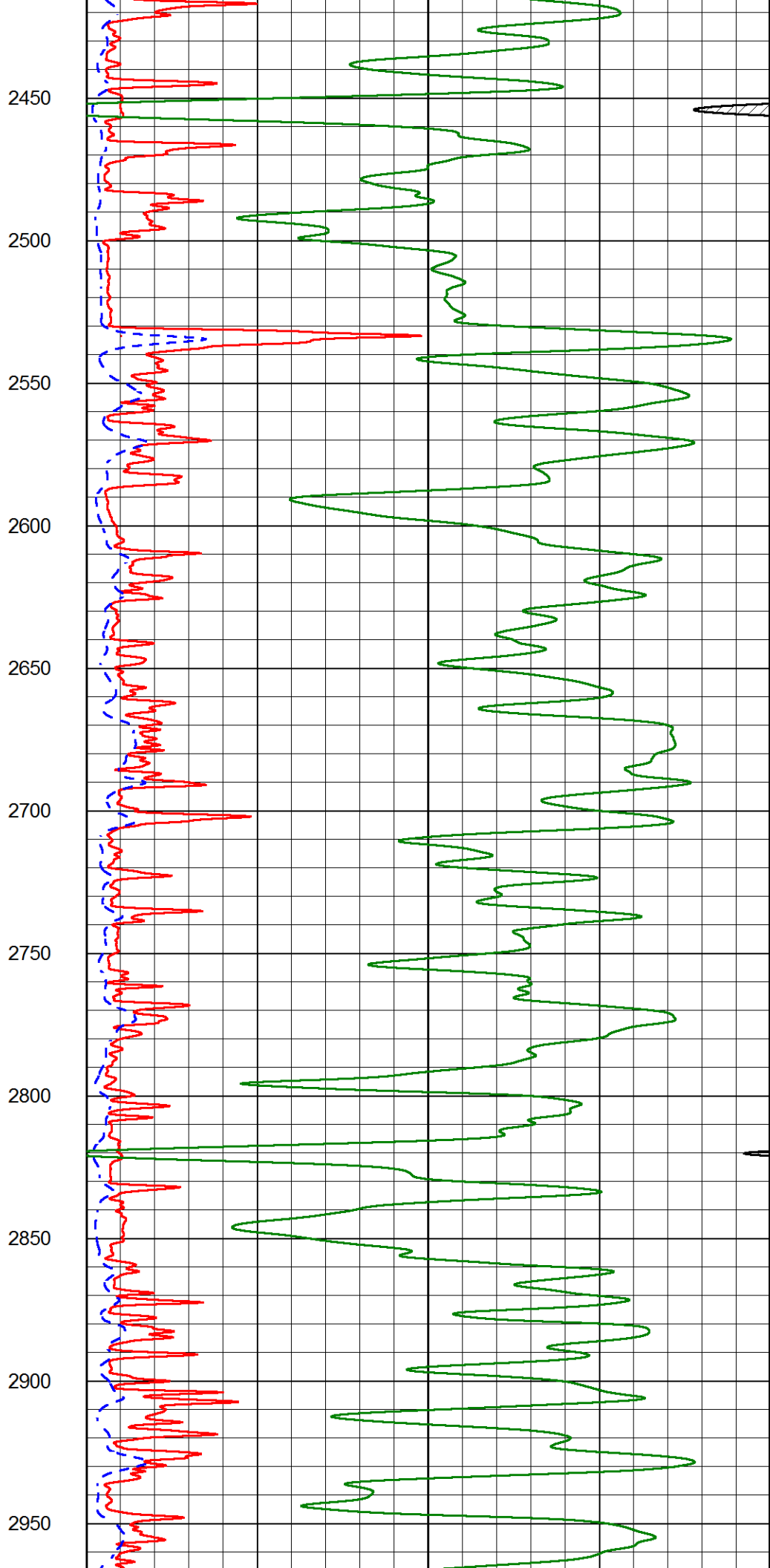
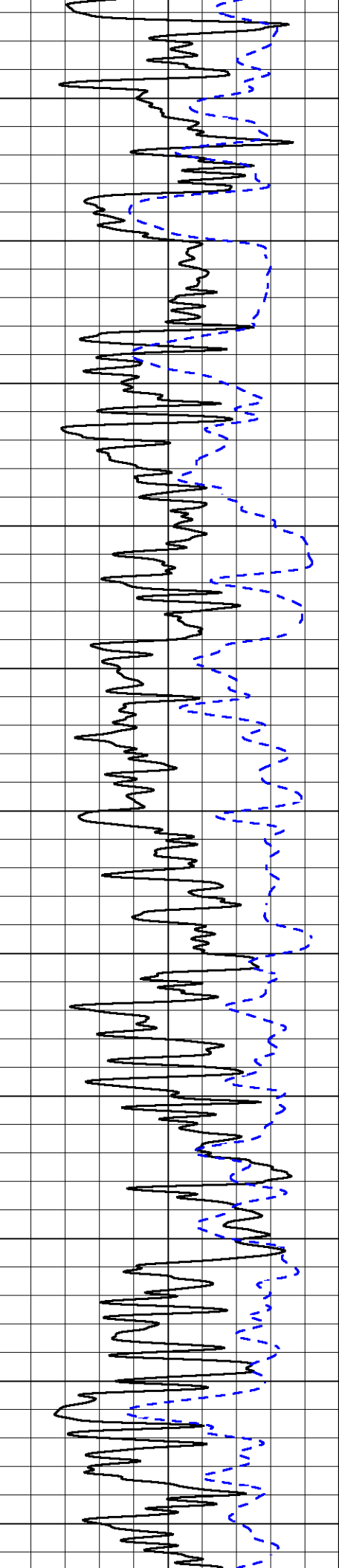


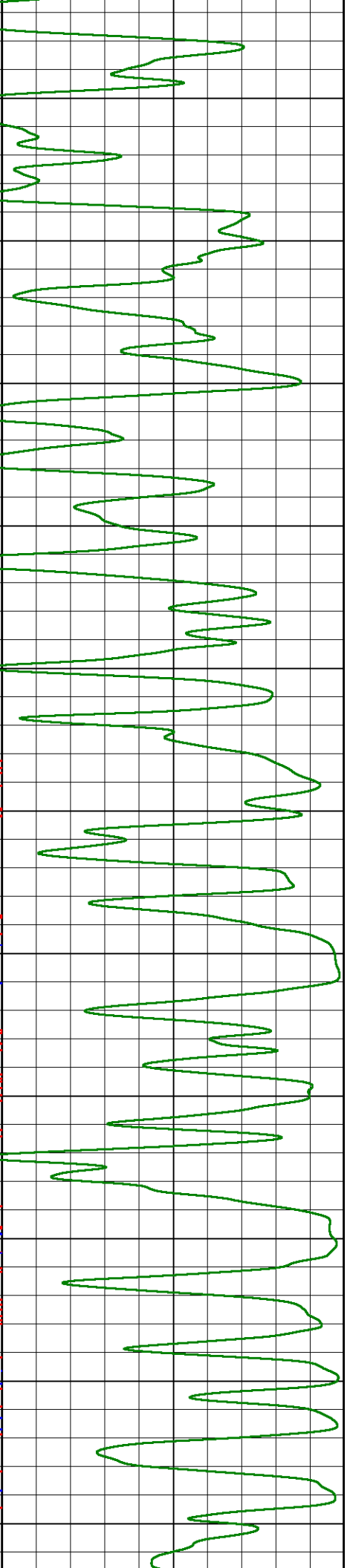
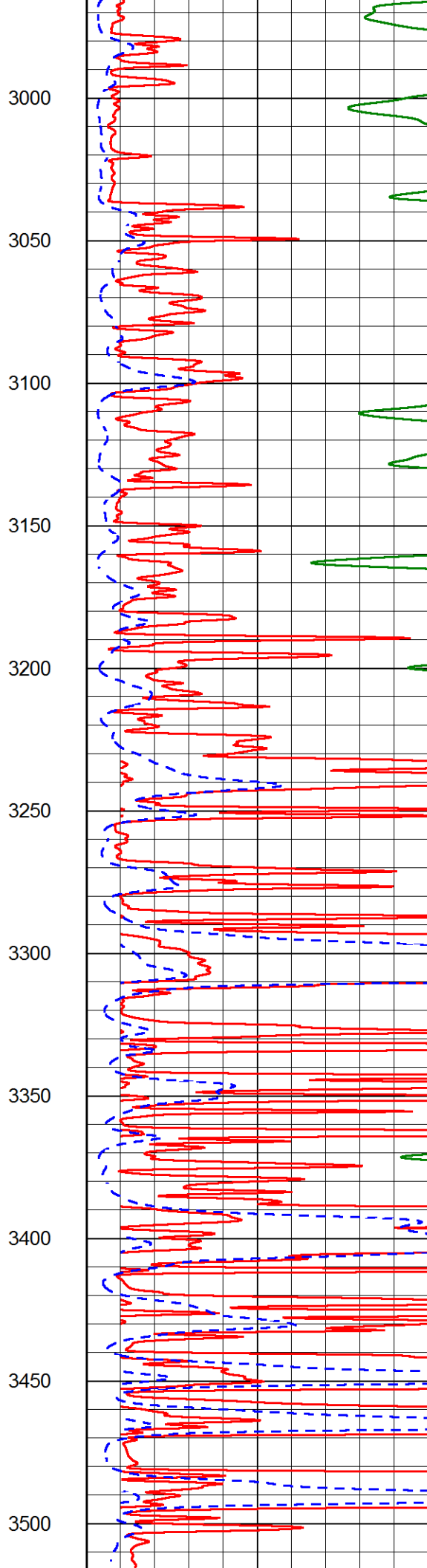
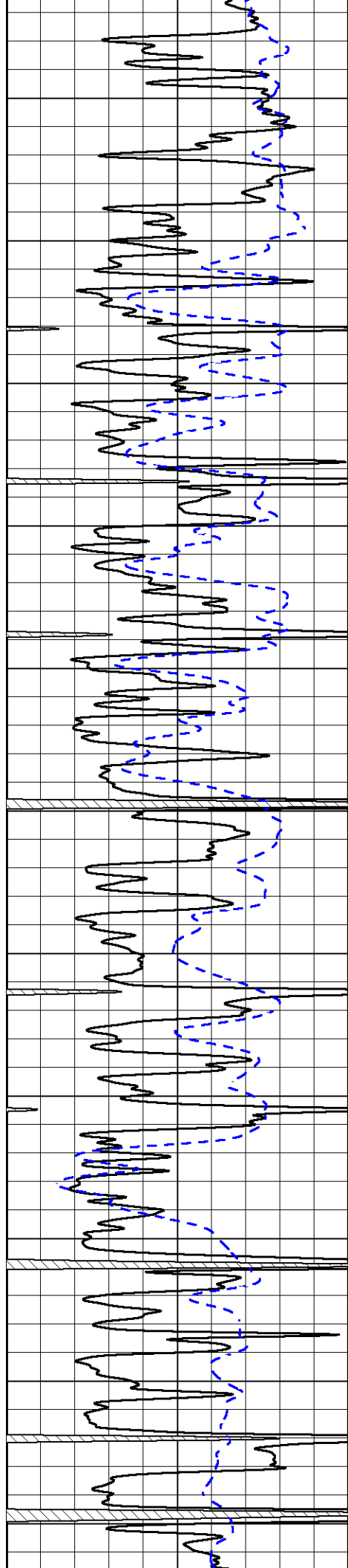


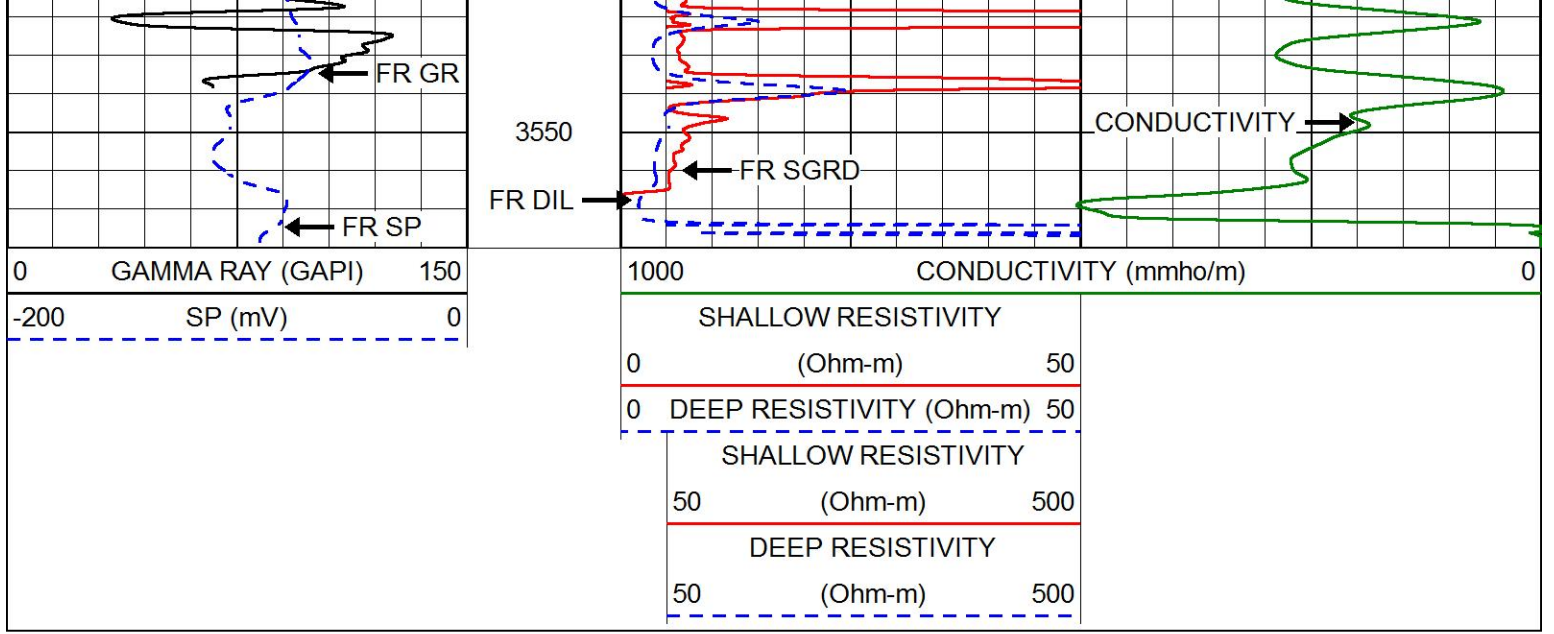






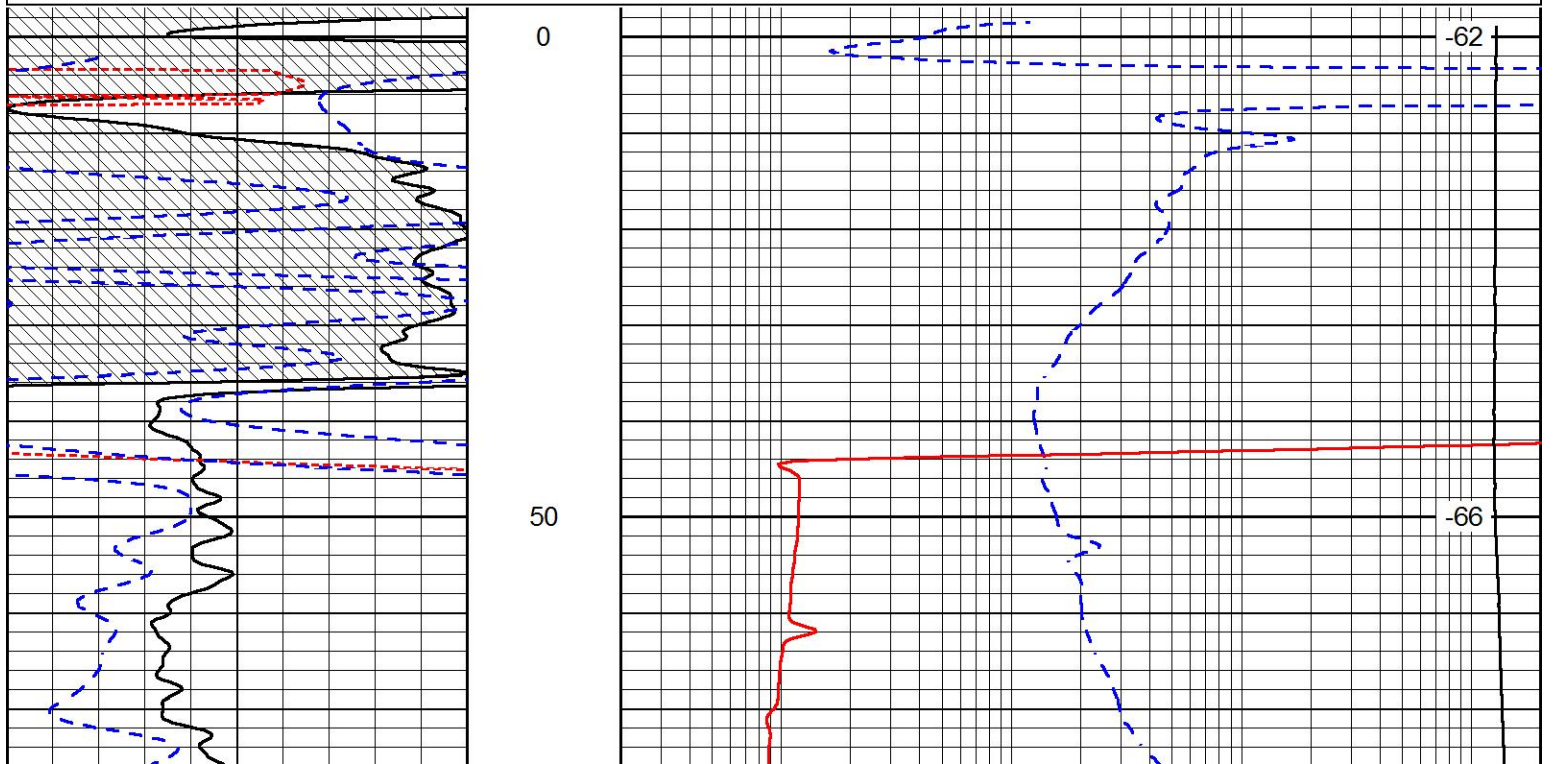
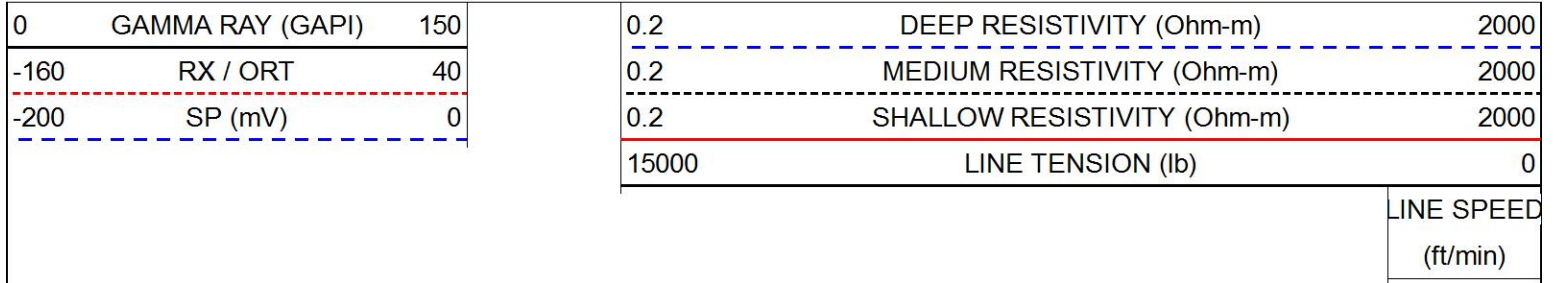


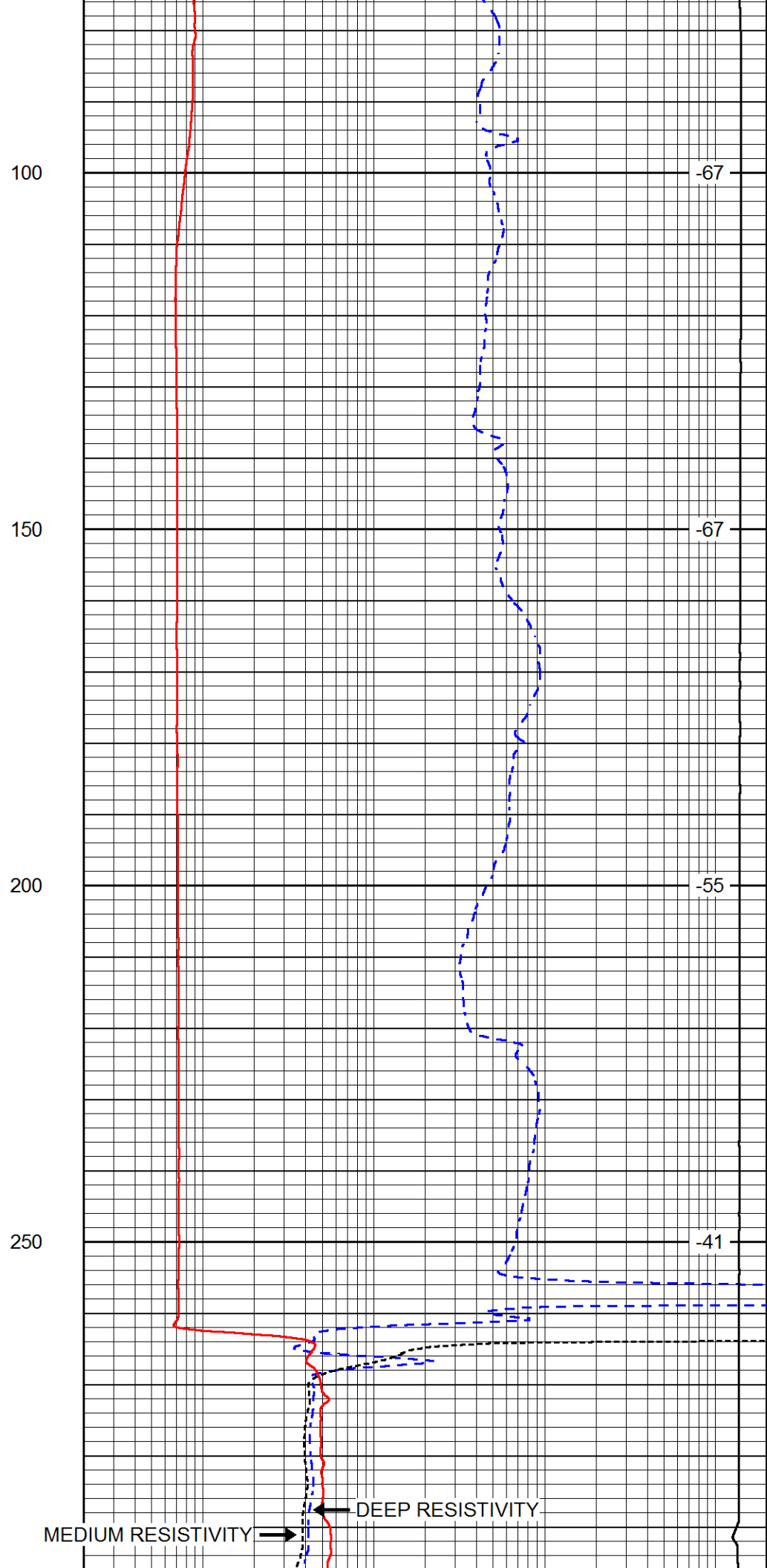
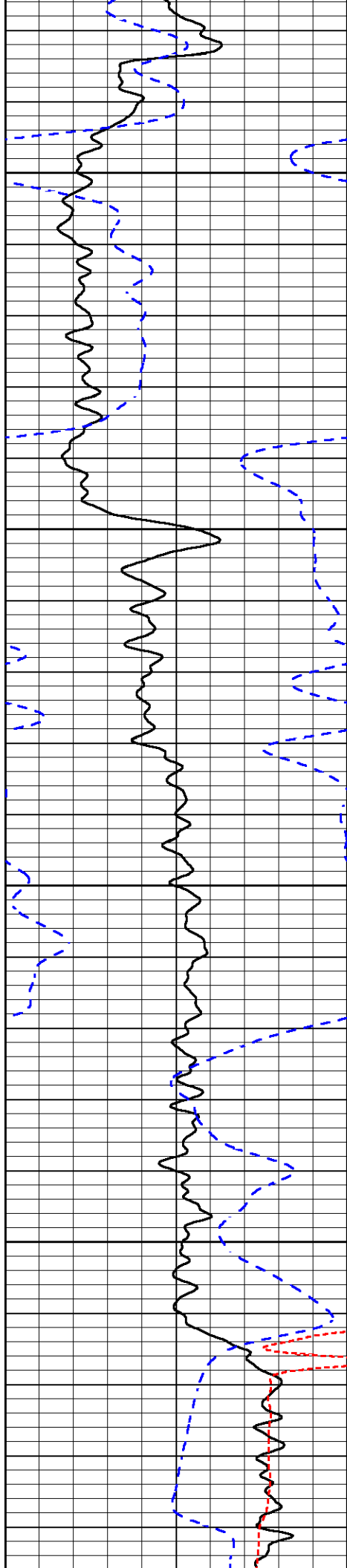


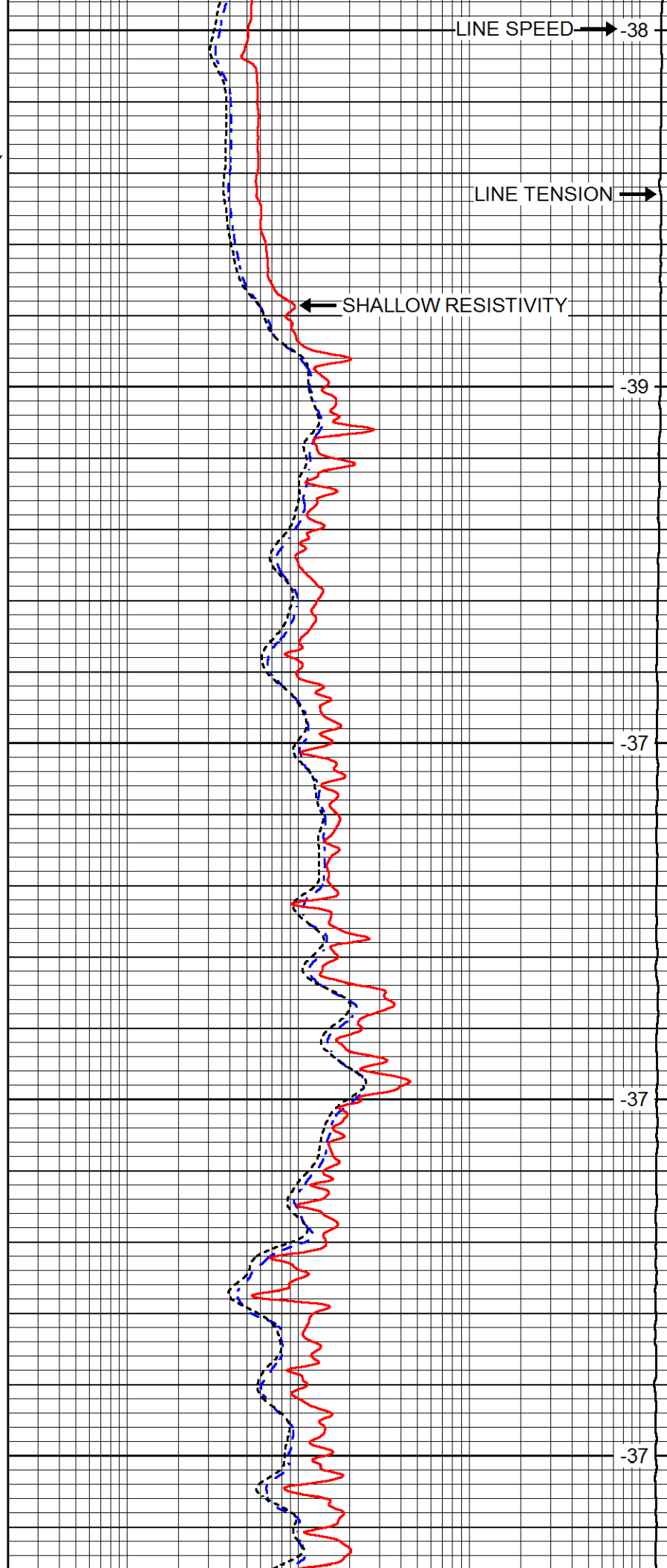
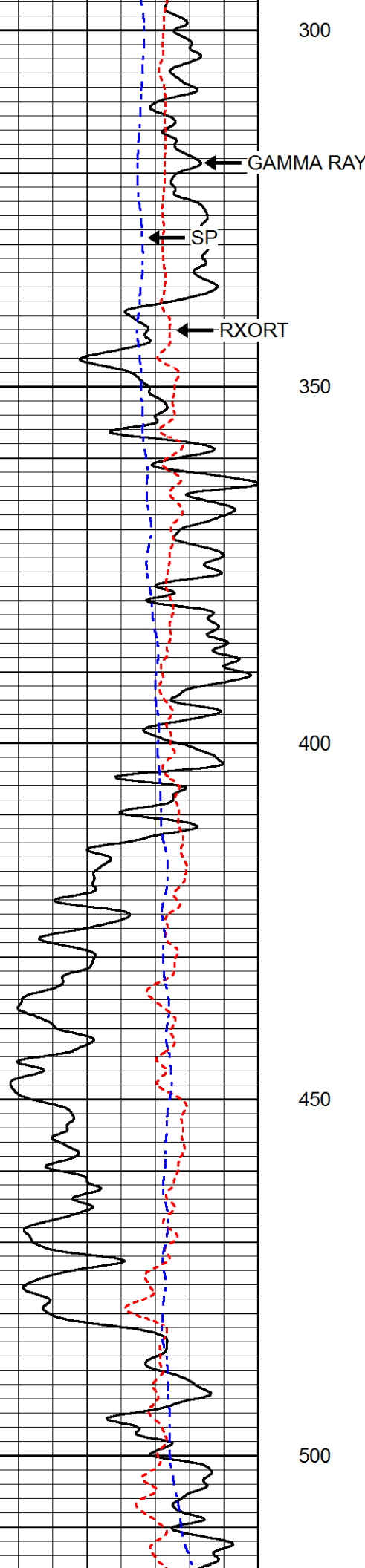


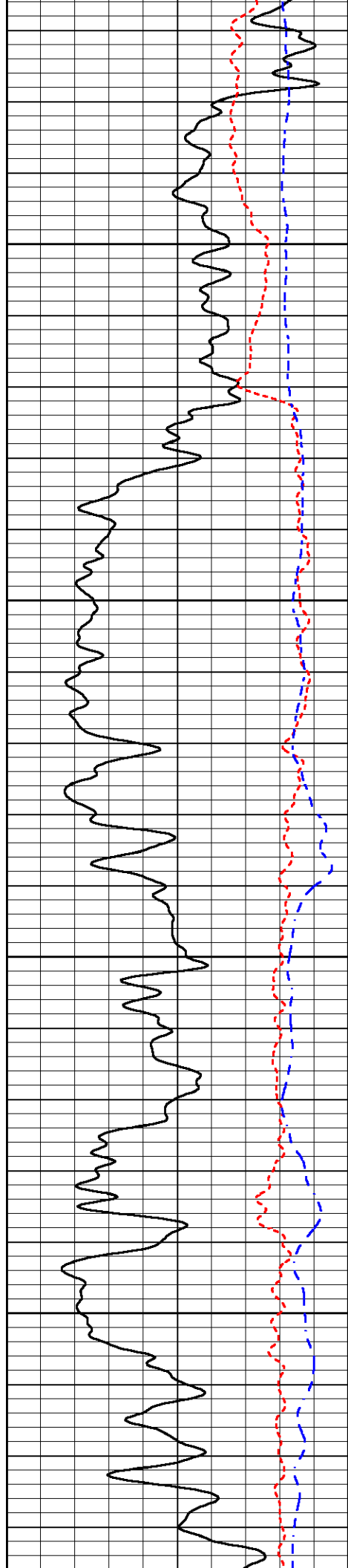
MAIN PASS

Database File: ampatriot_apo_18_wallerlowry_1.db
 Dataset Pathname: stackmel/pass4.1
 Presentation Format: dil
 Dataset Creation: Thu Apr 28 17:00:34 2016
 Charted by: Depth in Feet scaled 1:240







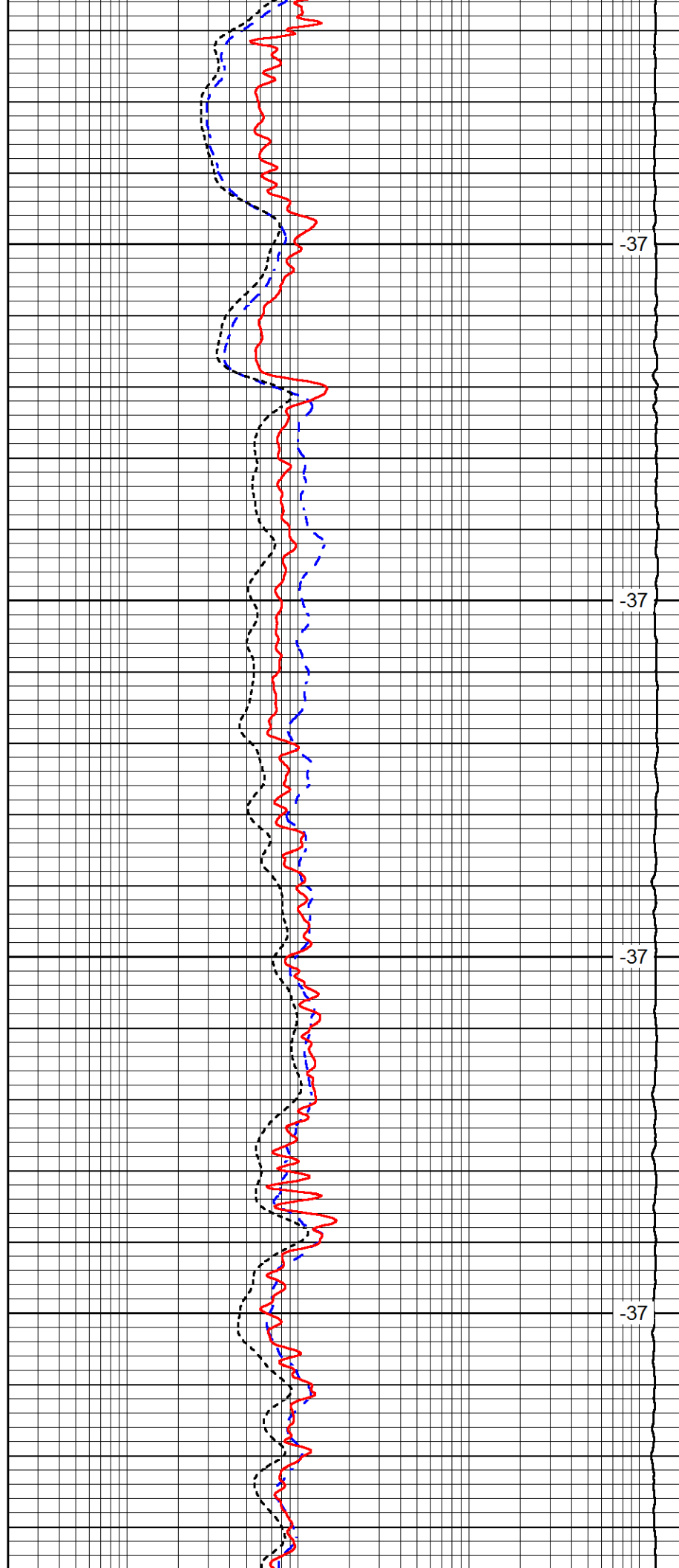


550

600

650

700

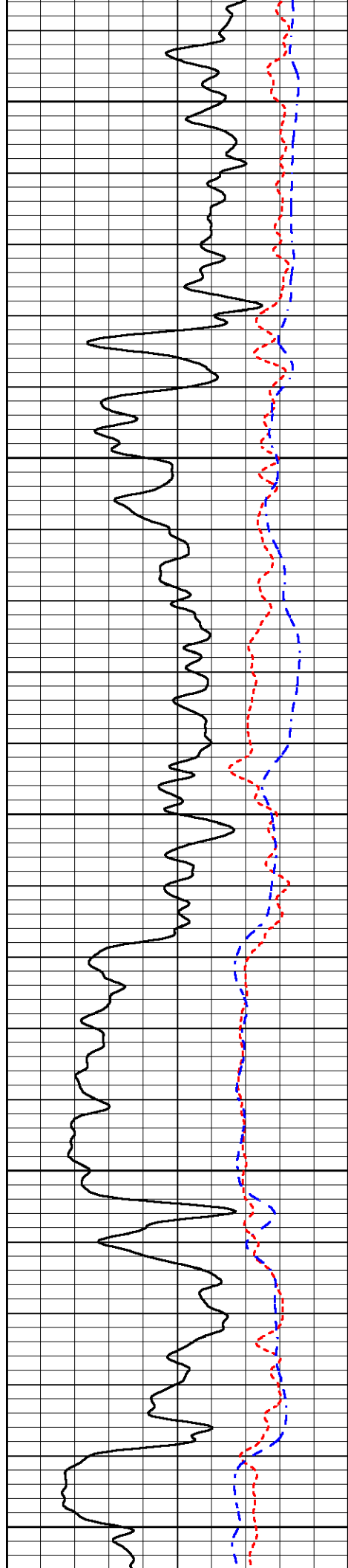


-37

-37

-37

-37



750

800

850

900

950

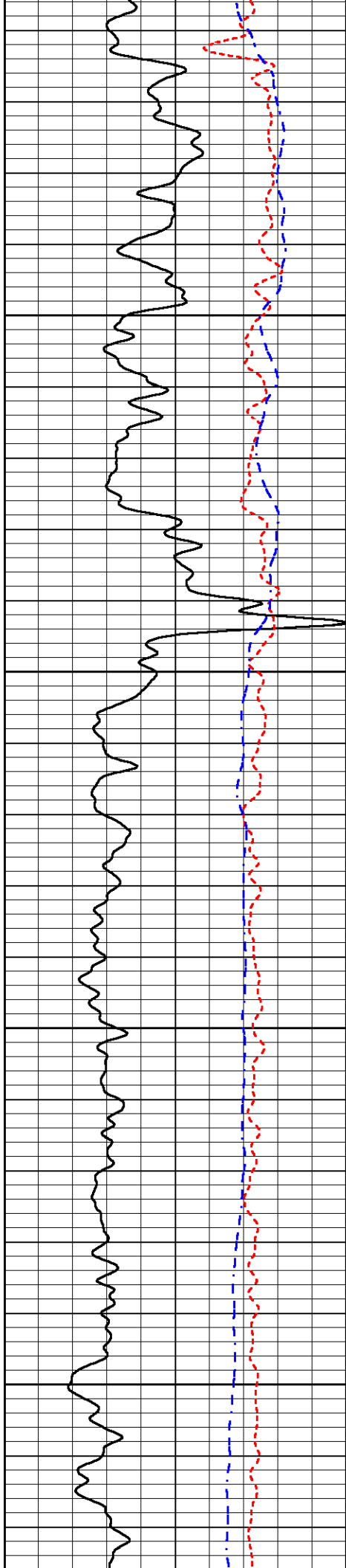
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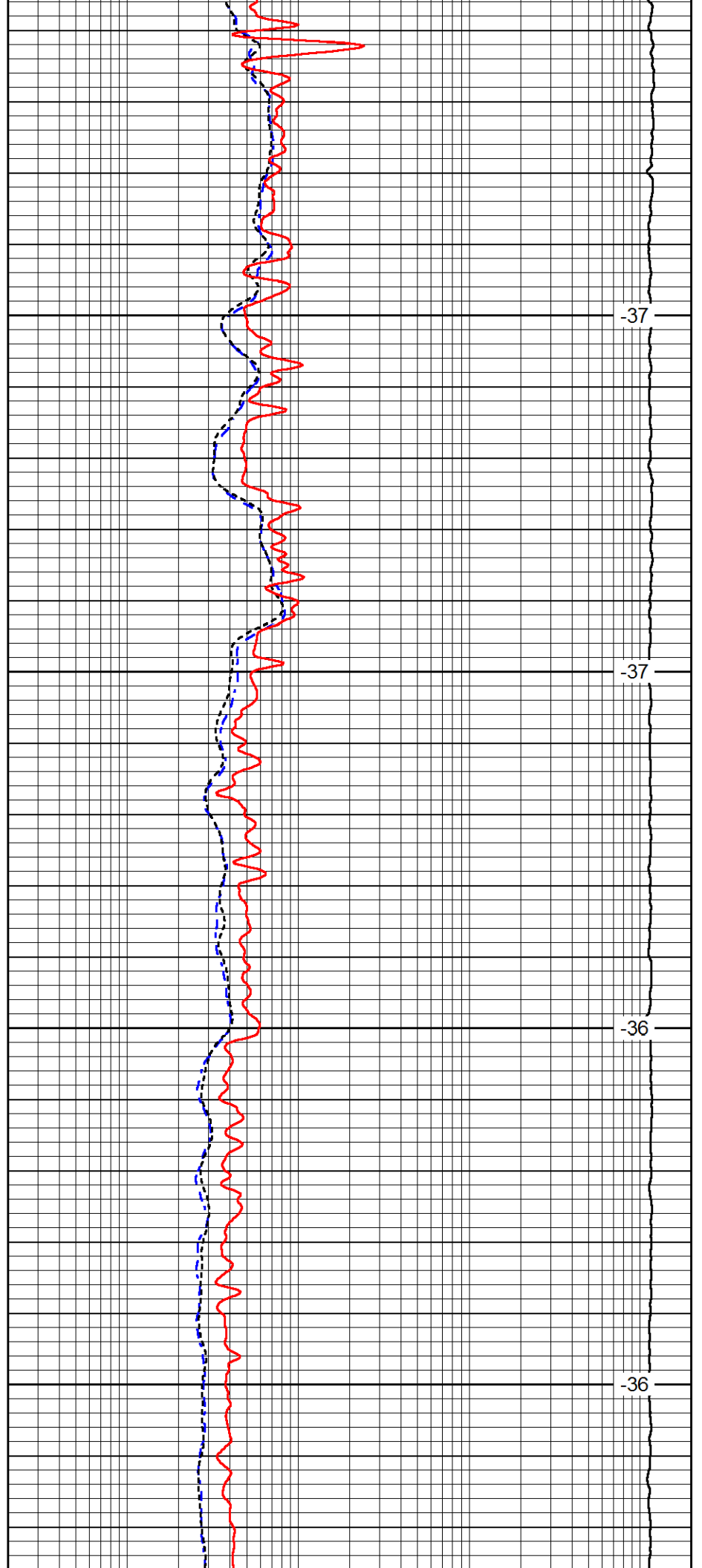


1000

1050

1100

1150

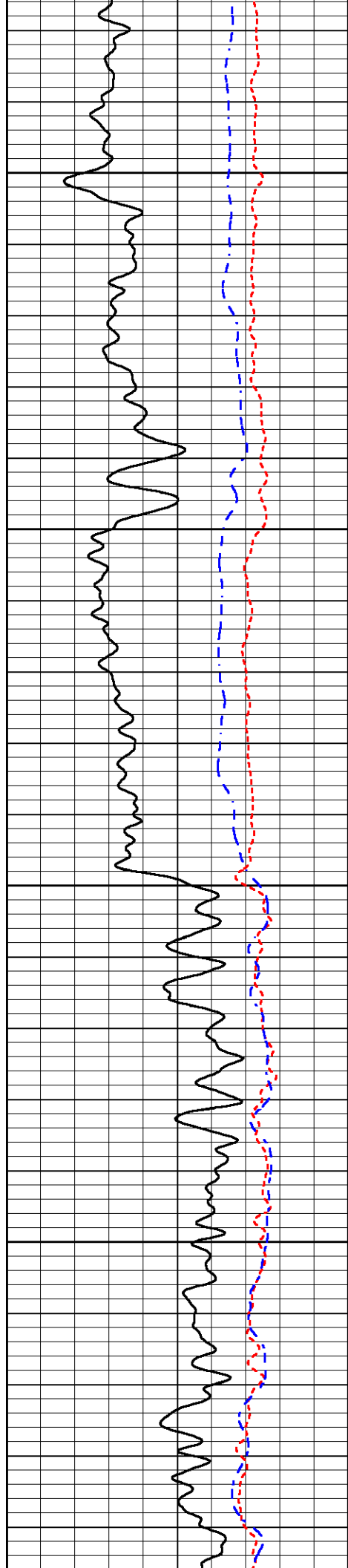


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-37

-36

-36



1200

-35

1250

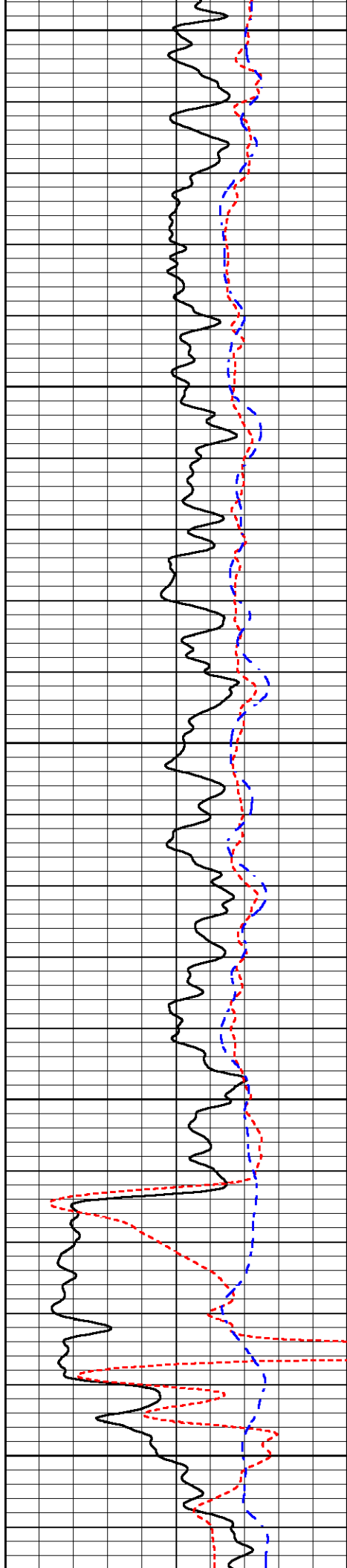
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1300

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1350

-36



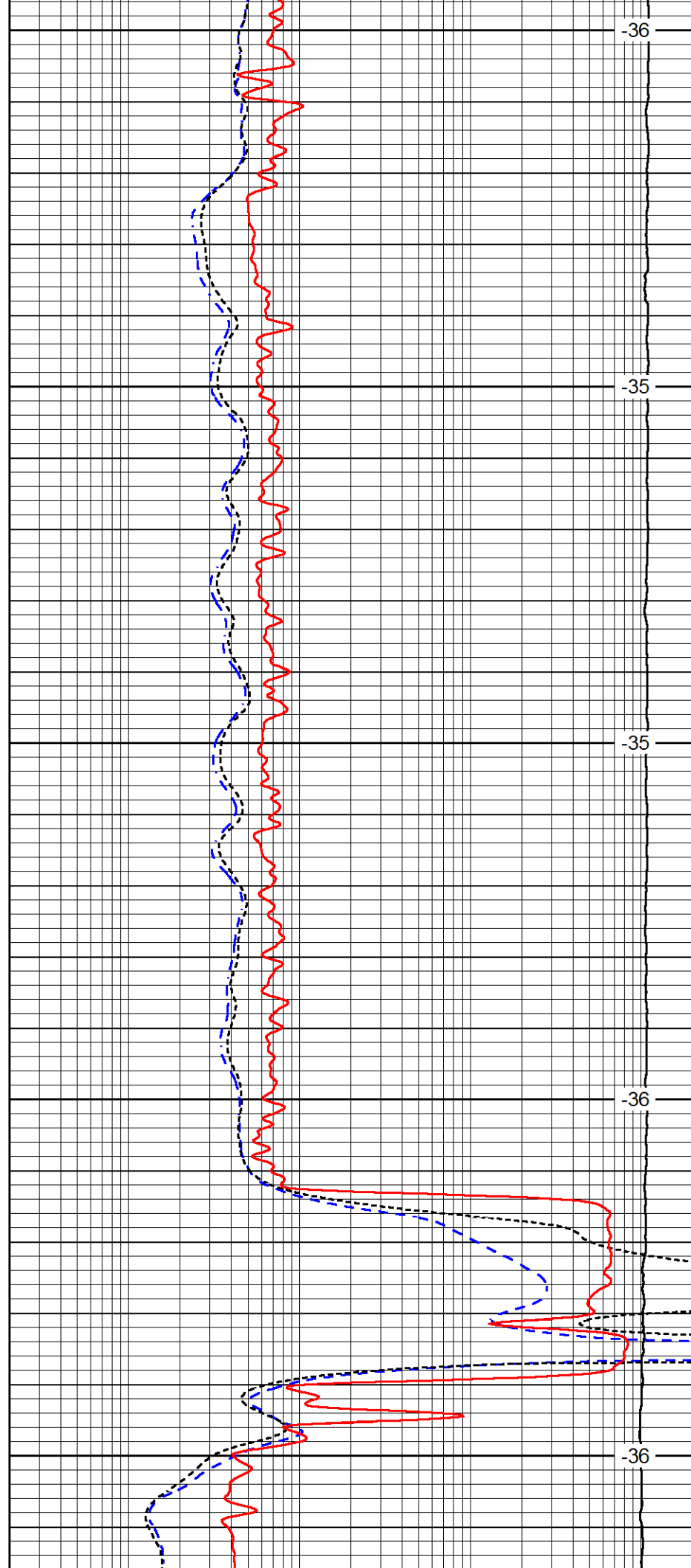
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1450

1500

1550

1600



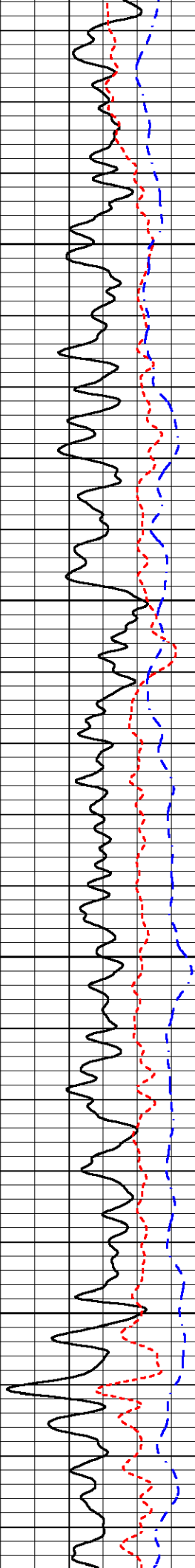
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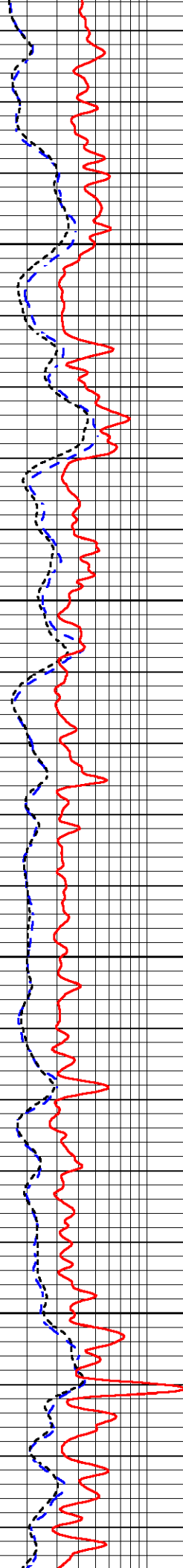


1650

1700

1750

1800

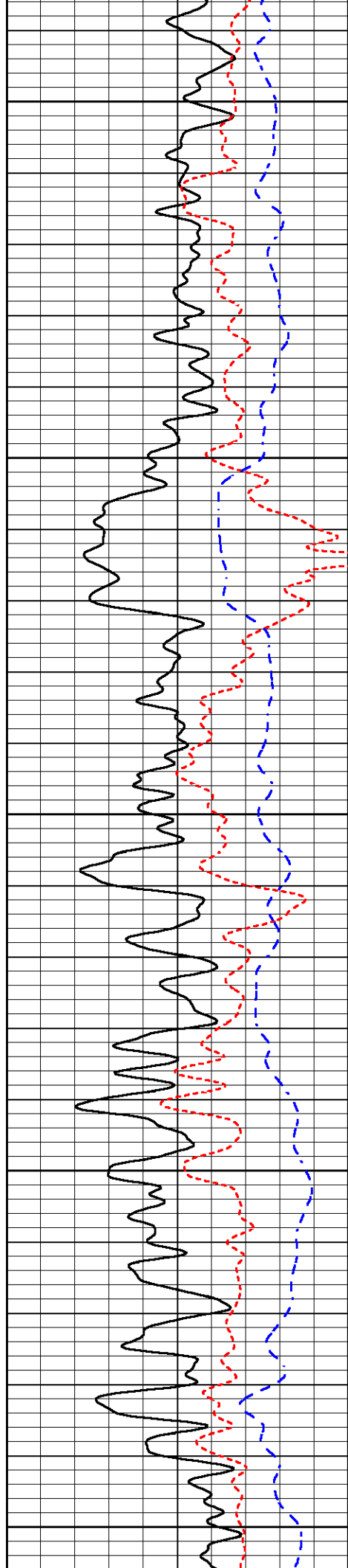


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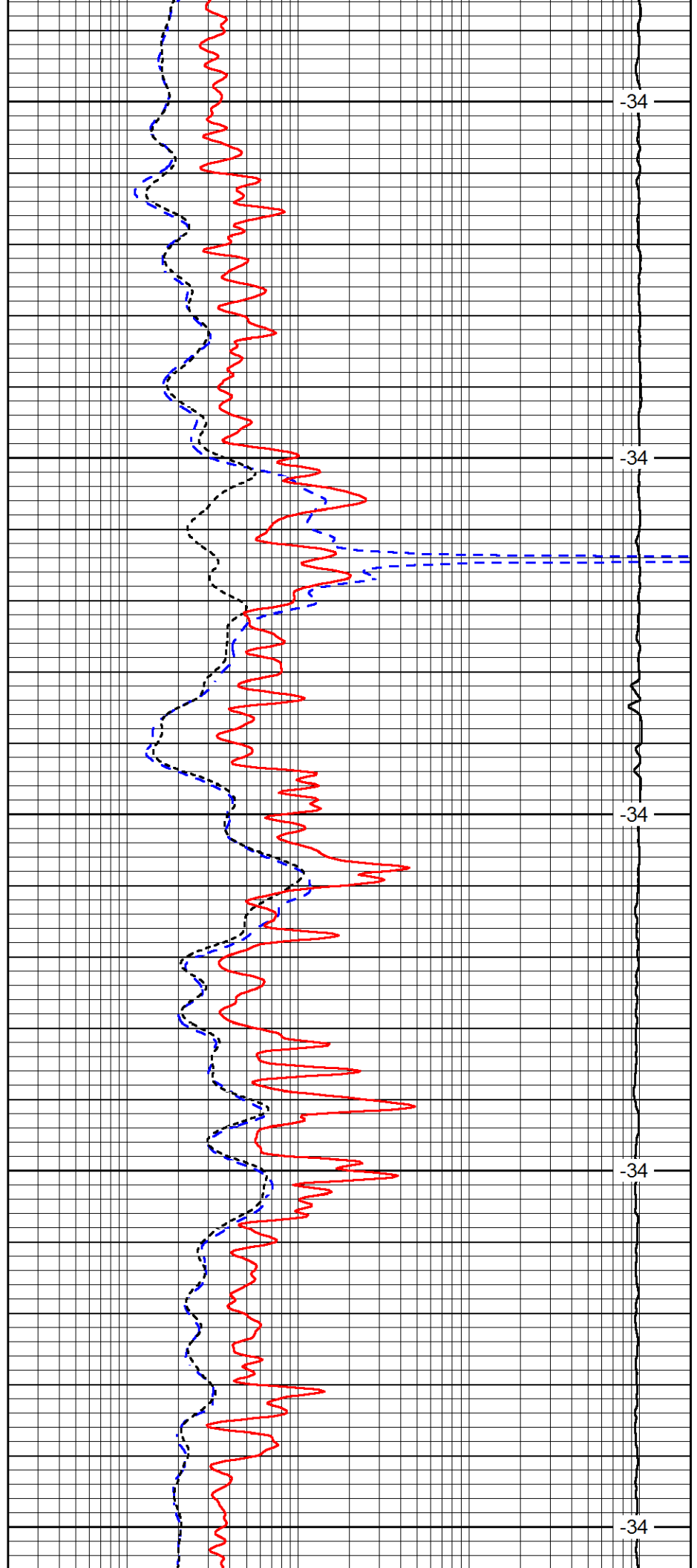
1850

1900

1950

2000

2050



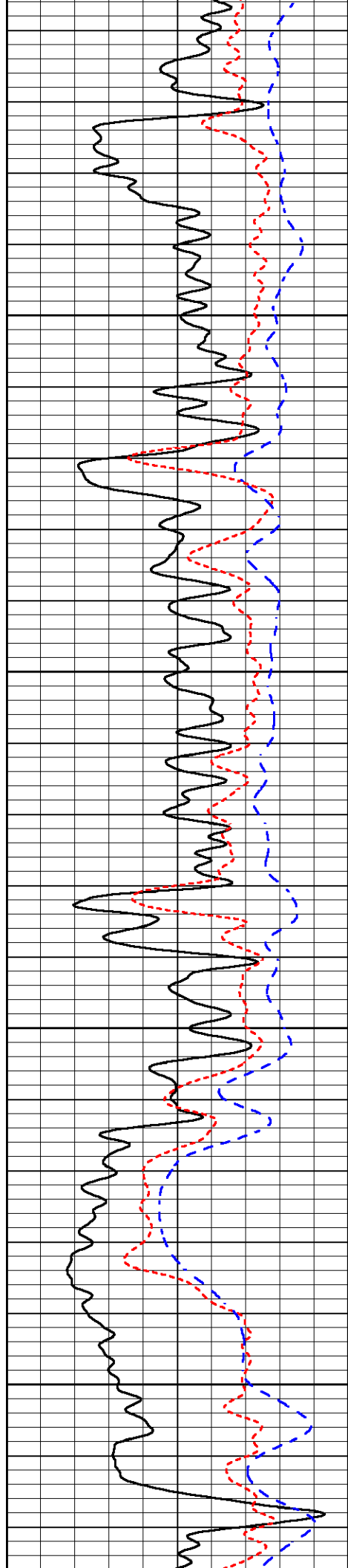
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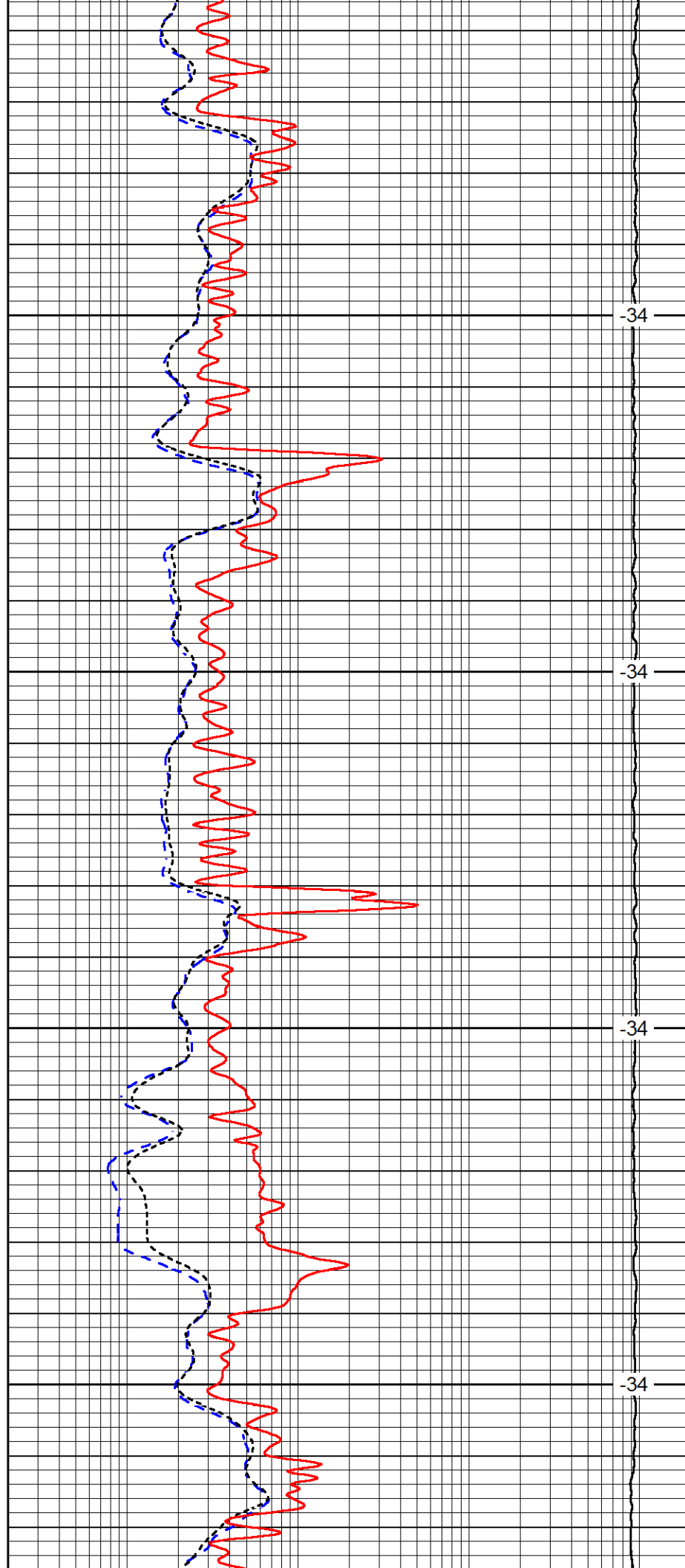


2100

2150

2200

2250

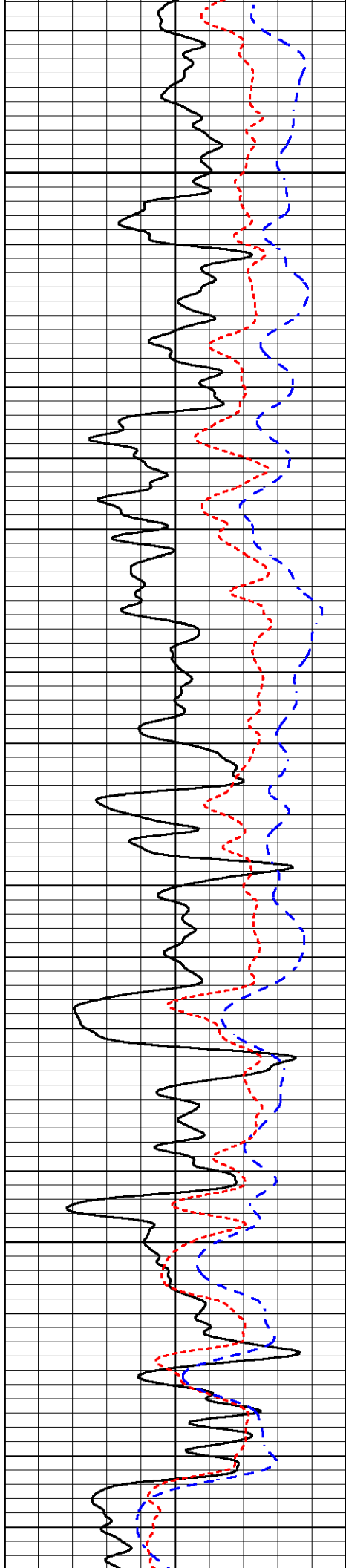


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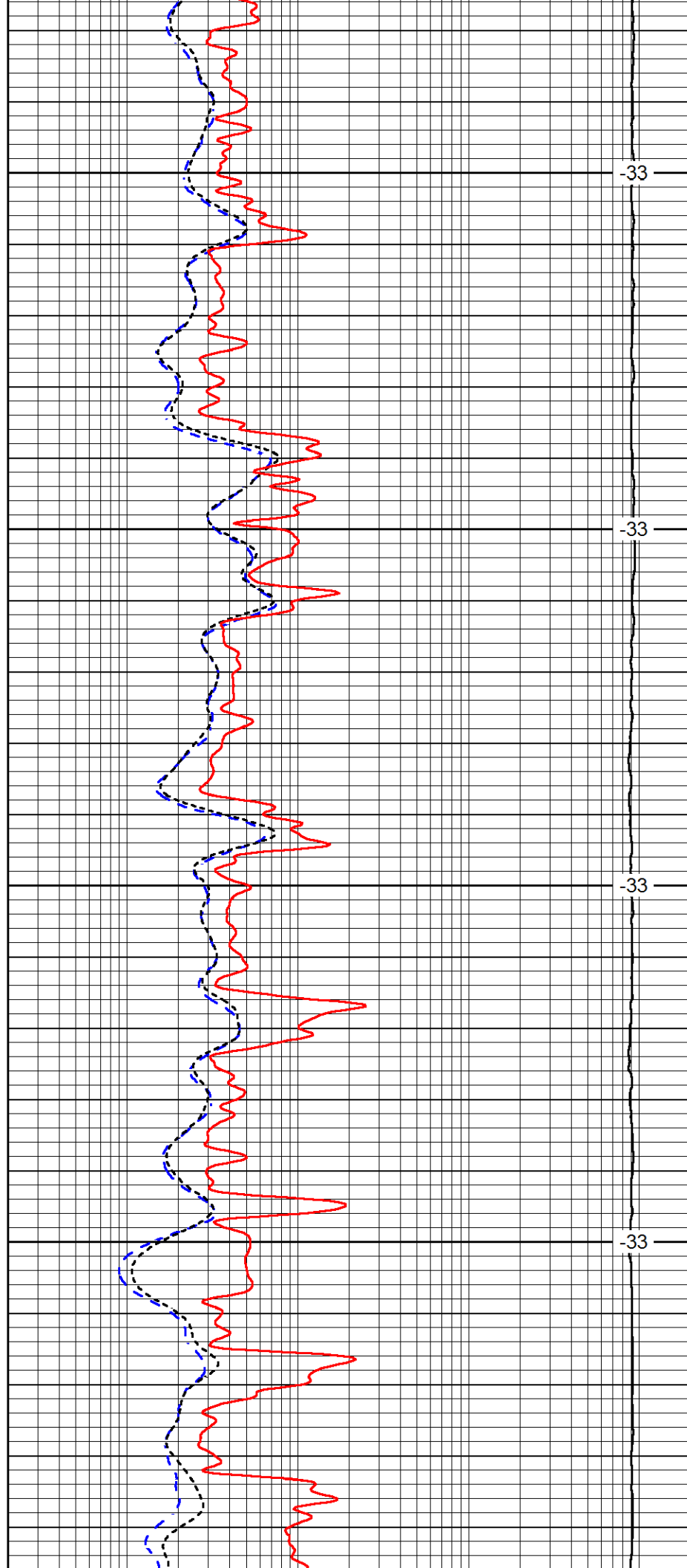


2300

2350

2400

2450

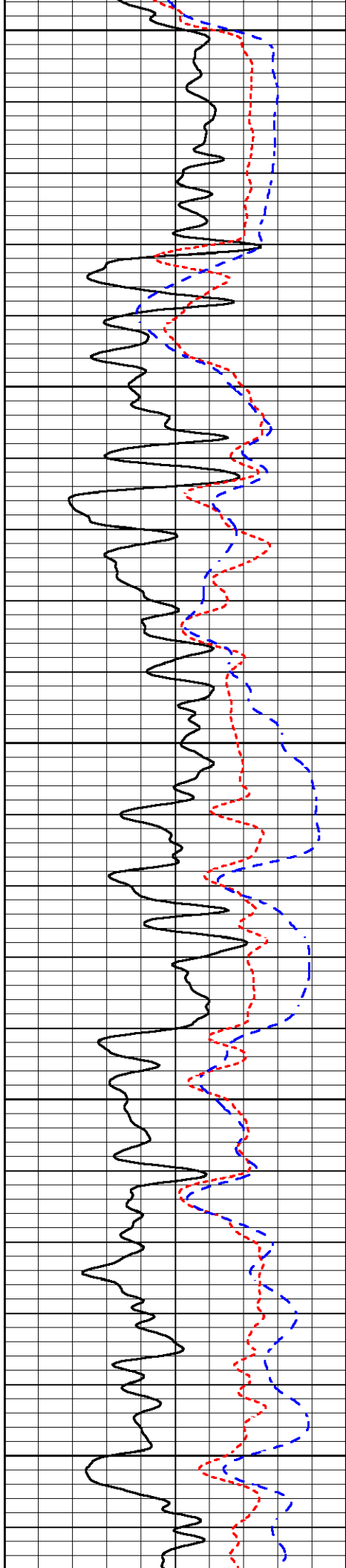


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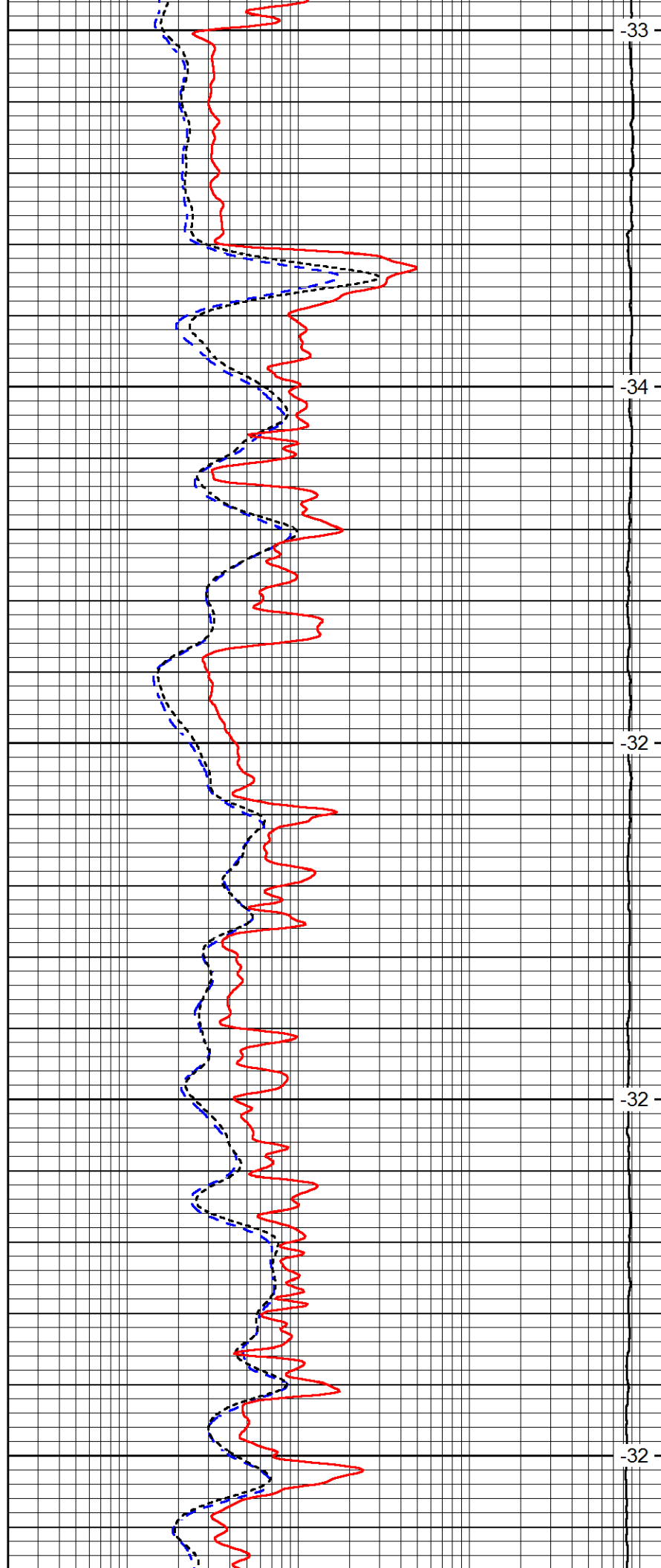
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2550

2600

2650

2700



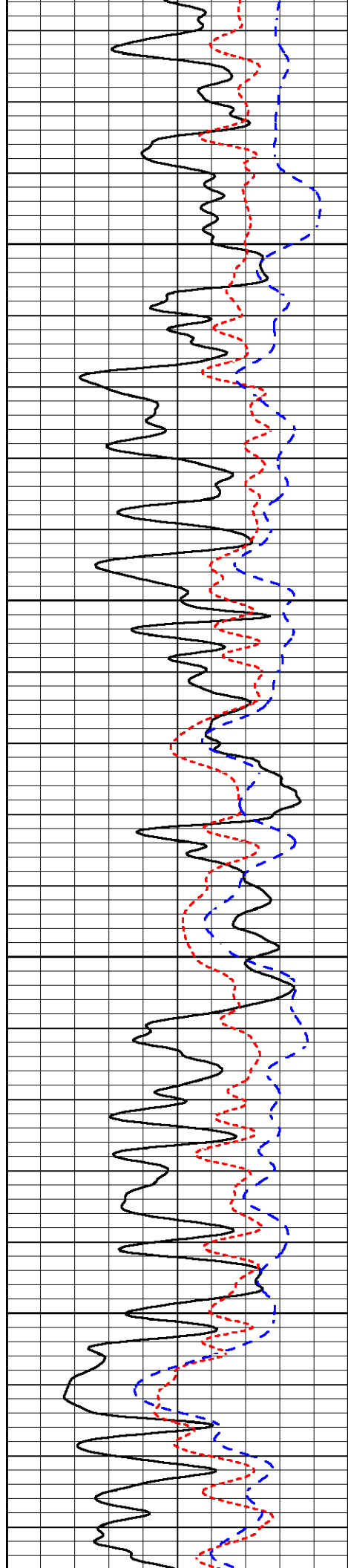
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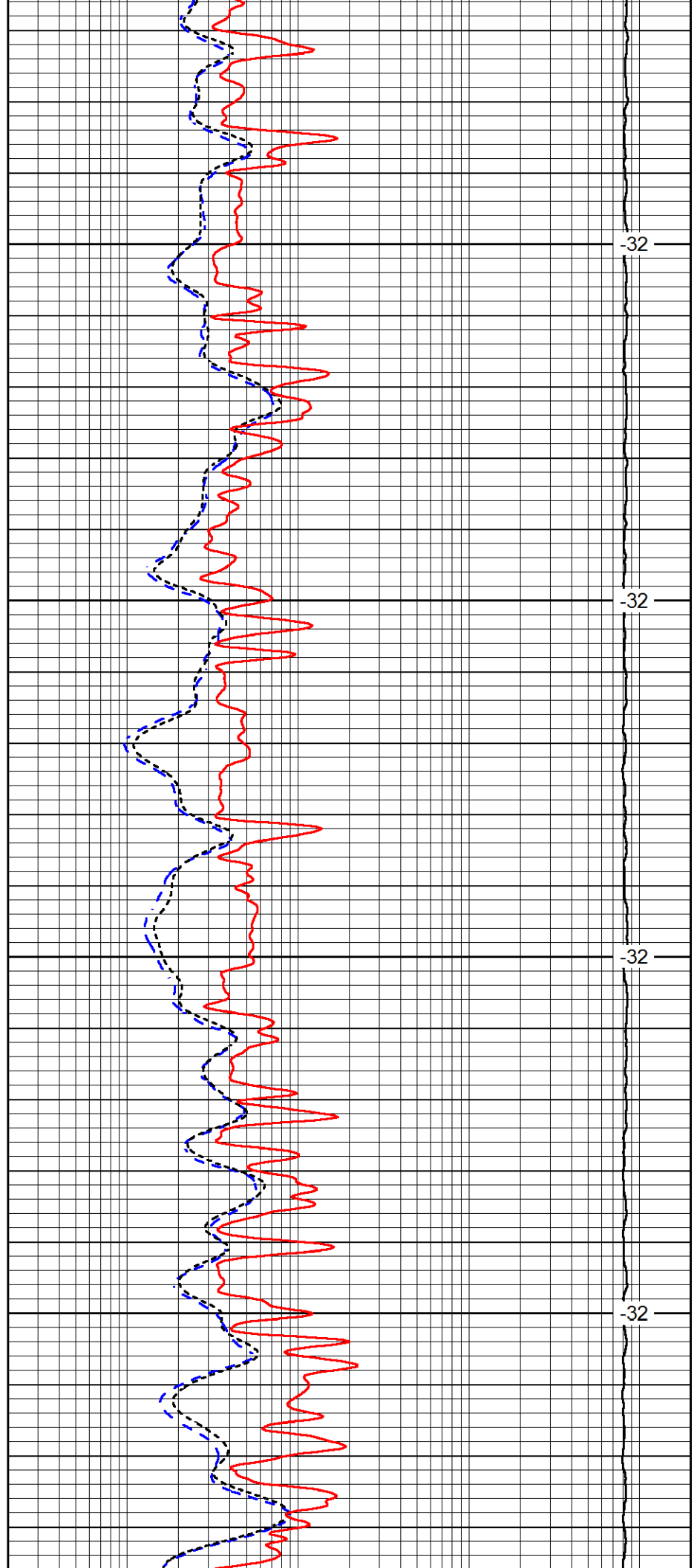


2750

2800

2850

2900

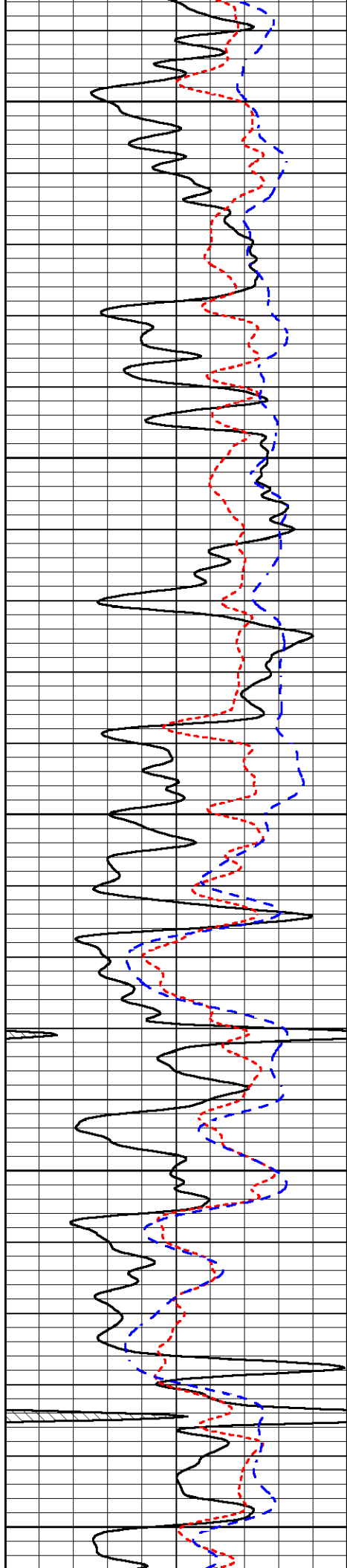


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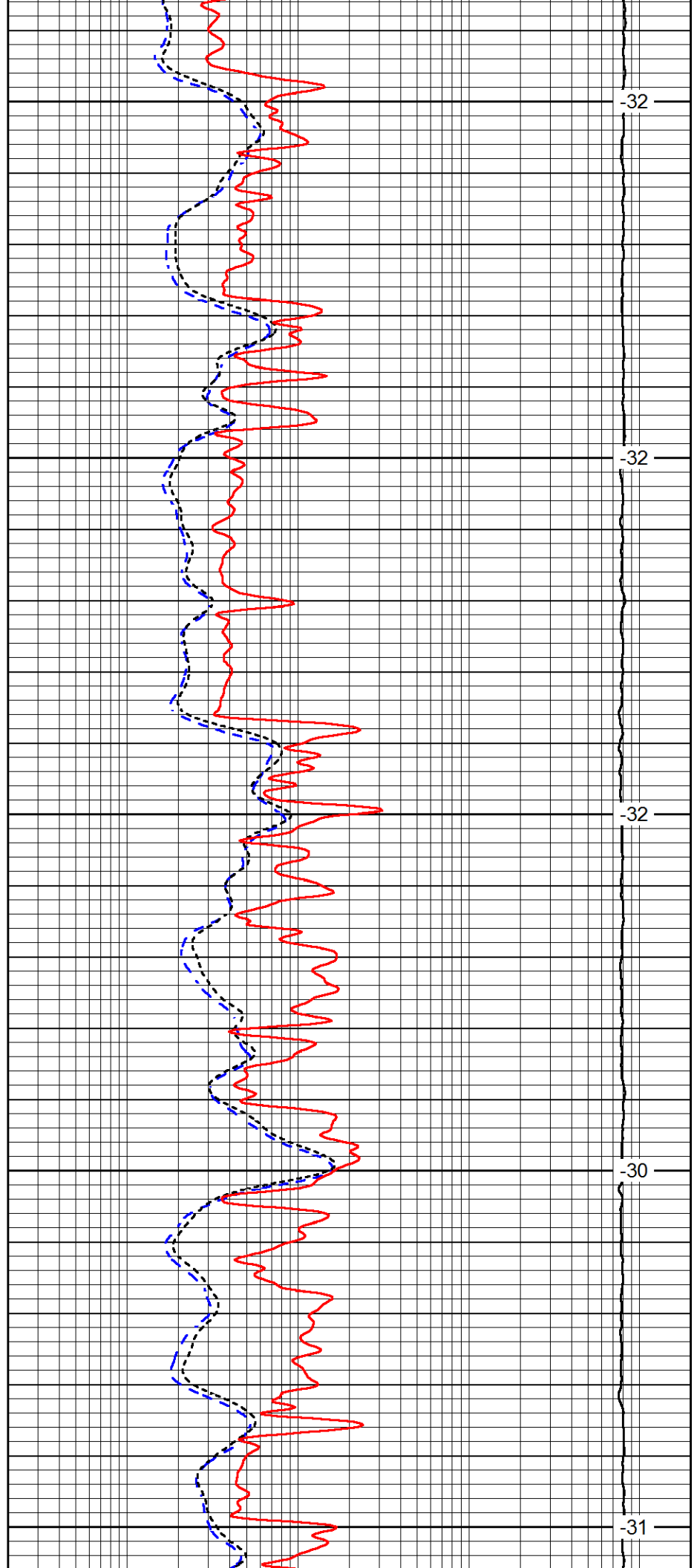
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3000

3050

3100

3150



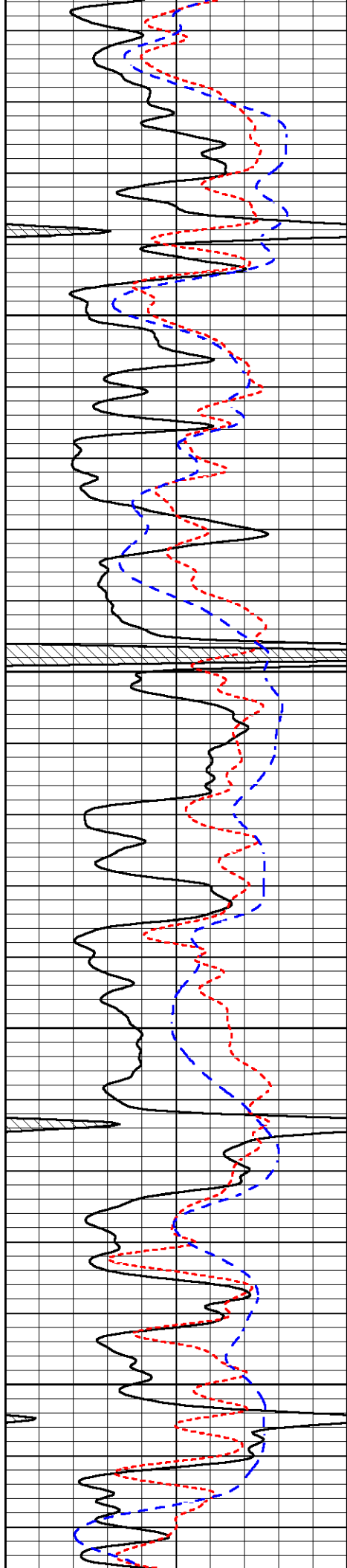
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-32

-32

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-31

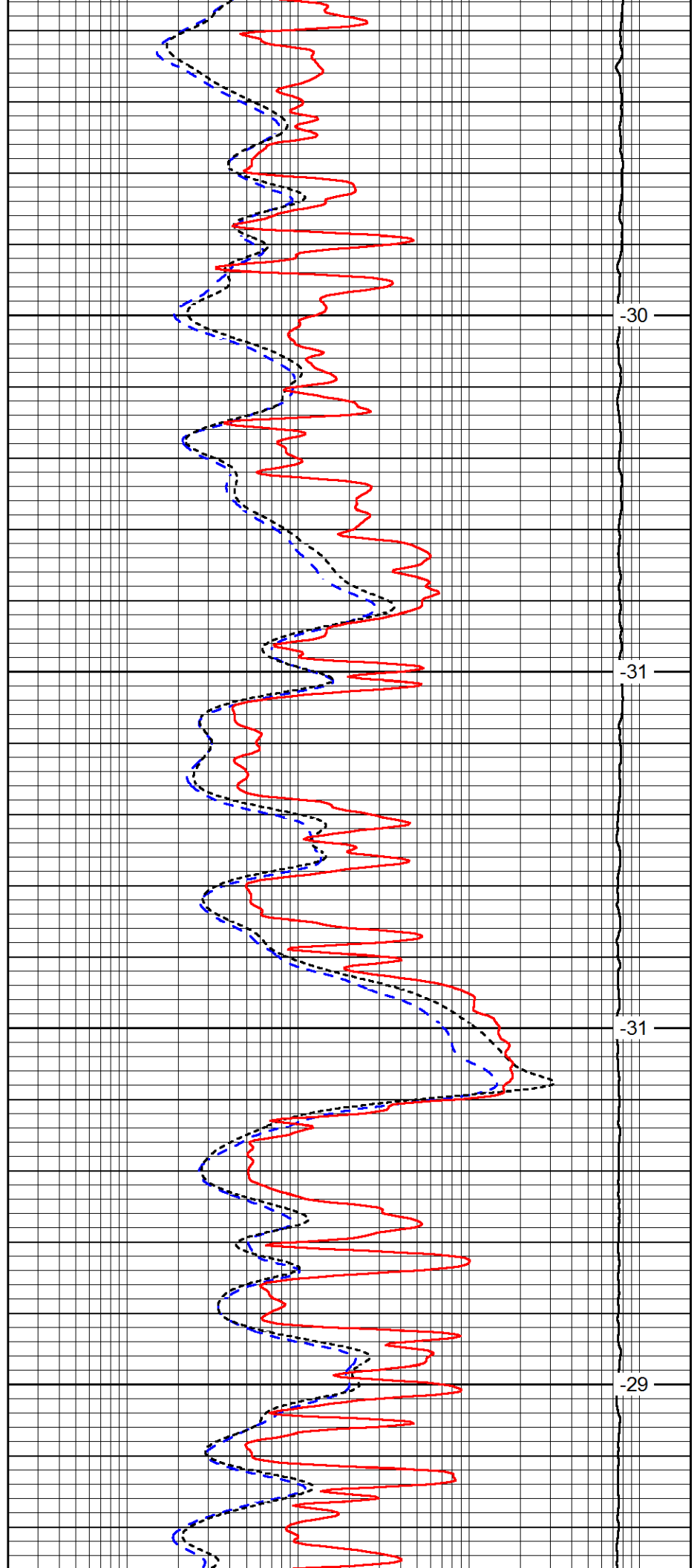


3200

3250

3300

3350

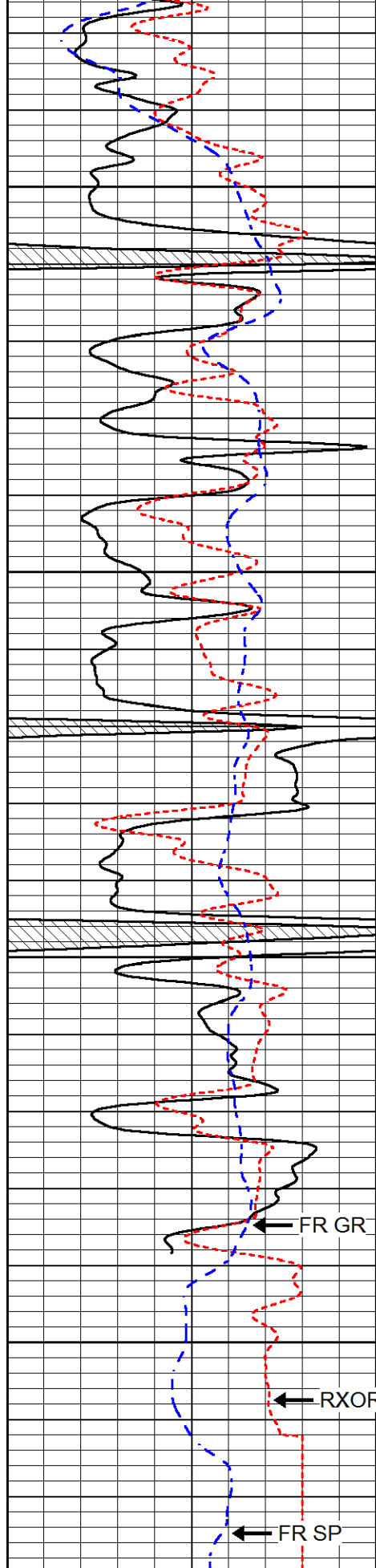


30

31

31

29



0	GAMMA RAY (GAPI)	150
-160	RX / ORT	40
-200	SP (mV)	0

3400

3450

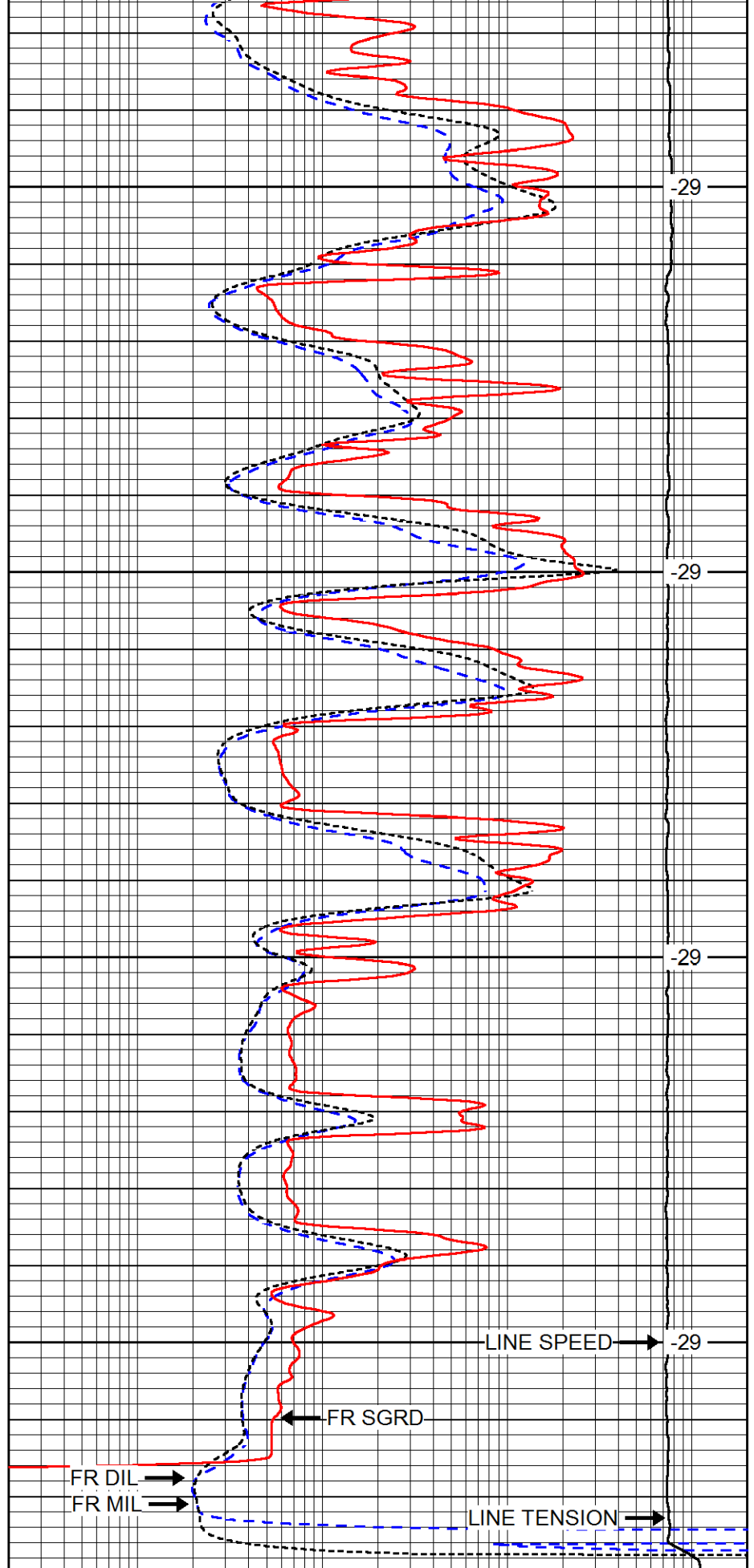
3500

3550

FR GR

RXORT

FR SP



29

29

29

29

FR SGRD

FR DIL

FR MIL

LINE SPEED

LINE TENSION

0.2	DEEP RESISTIVITY (Ohm-m)	2000
0.2	MEDIUM RESISTIVITY (Ohm-m)	2000
0.2	SHALLOW RESISTIVITY (Ohm-m)	2000

15000

LINE TENSION (lb)

0

LINE SPEED

(ft/min)



REPEAT SECTION

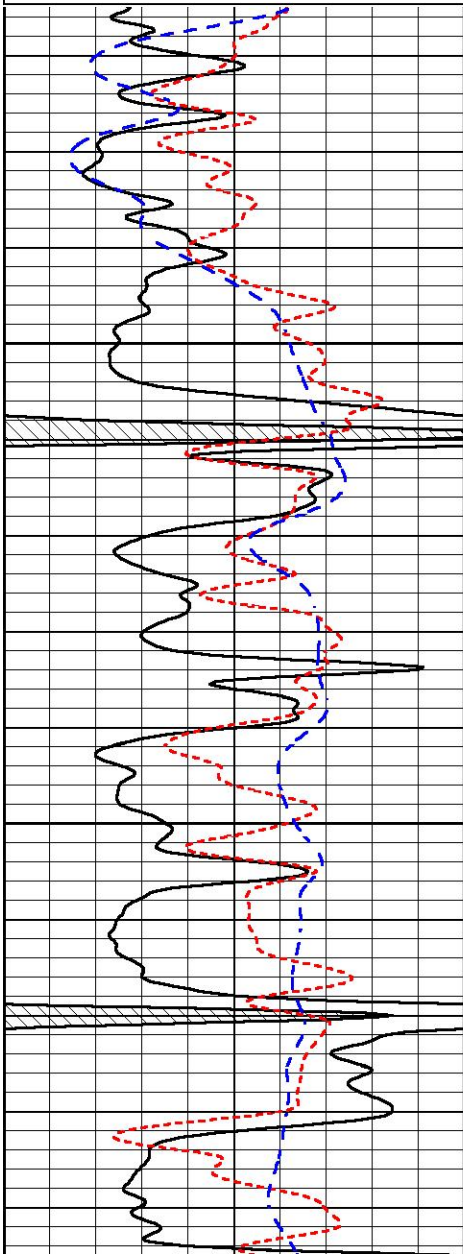
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 Dataset Pathname stackmel/pass3.1
 Presentation Format dil
 Dataset Creation Thu Apr 28 15:55:11 2016
 Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-160	RX / ORT	40
-200	SP (mV)	0

0.2	DEEP RESISTIVITY (Ohm-m)	2000
0.2	MEDIUM RESISTIVITY (Ohm-m)	2000
0.2	SHALLOW RESISTIVITY (Ohm-m)	2000
15000	LINE TENSION (lb)	0

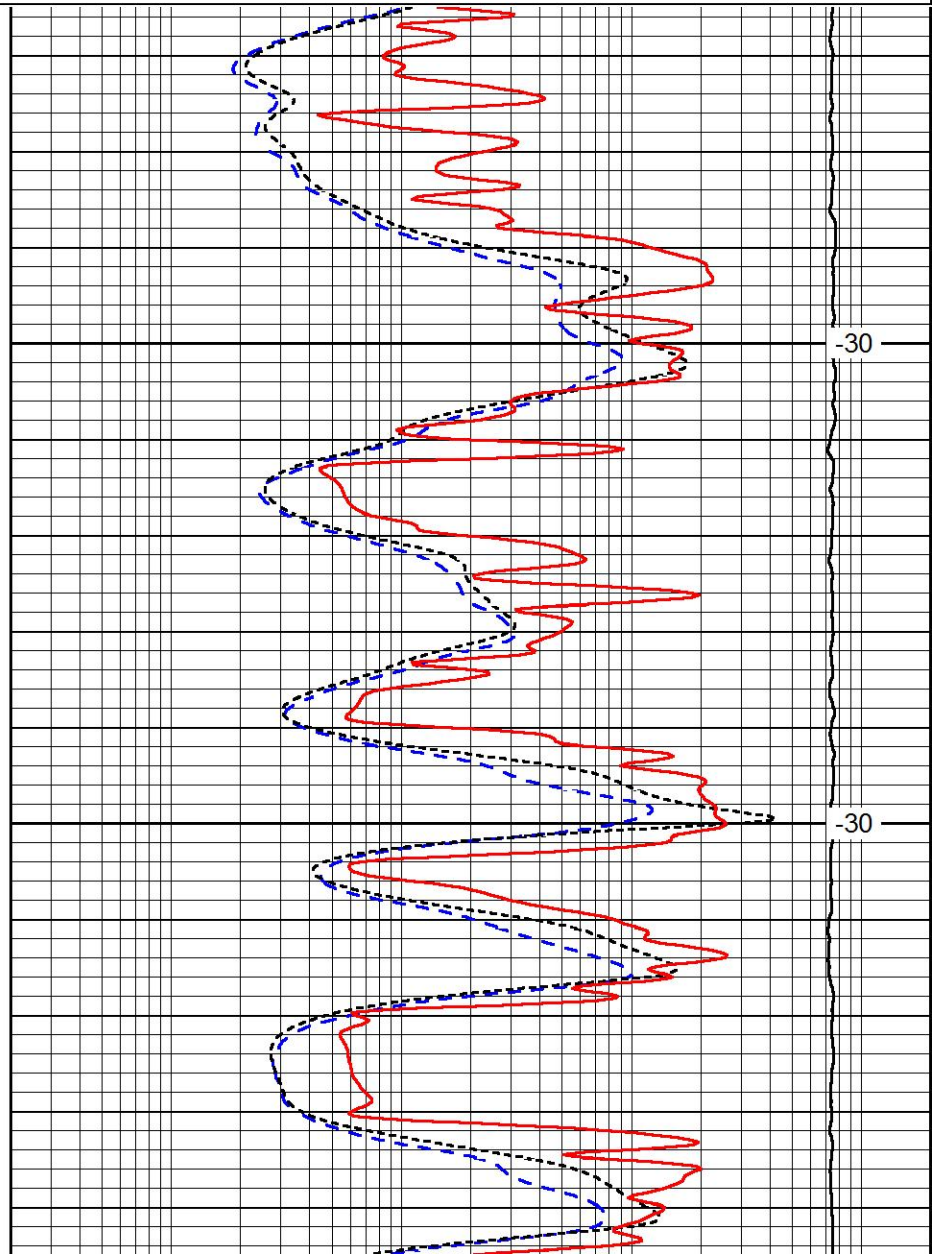
LINE SPEED

(ft/min)



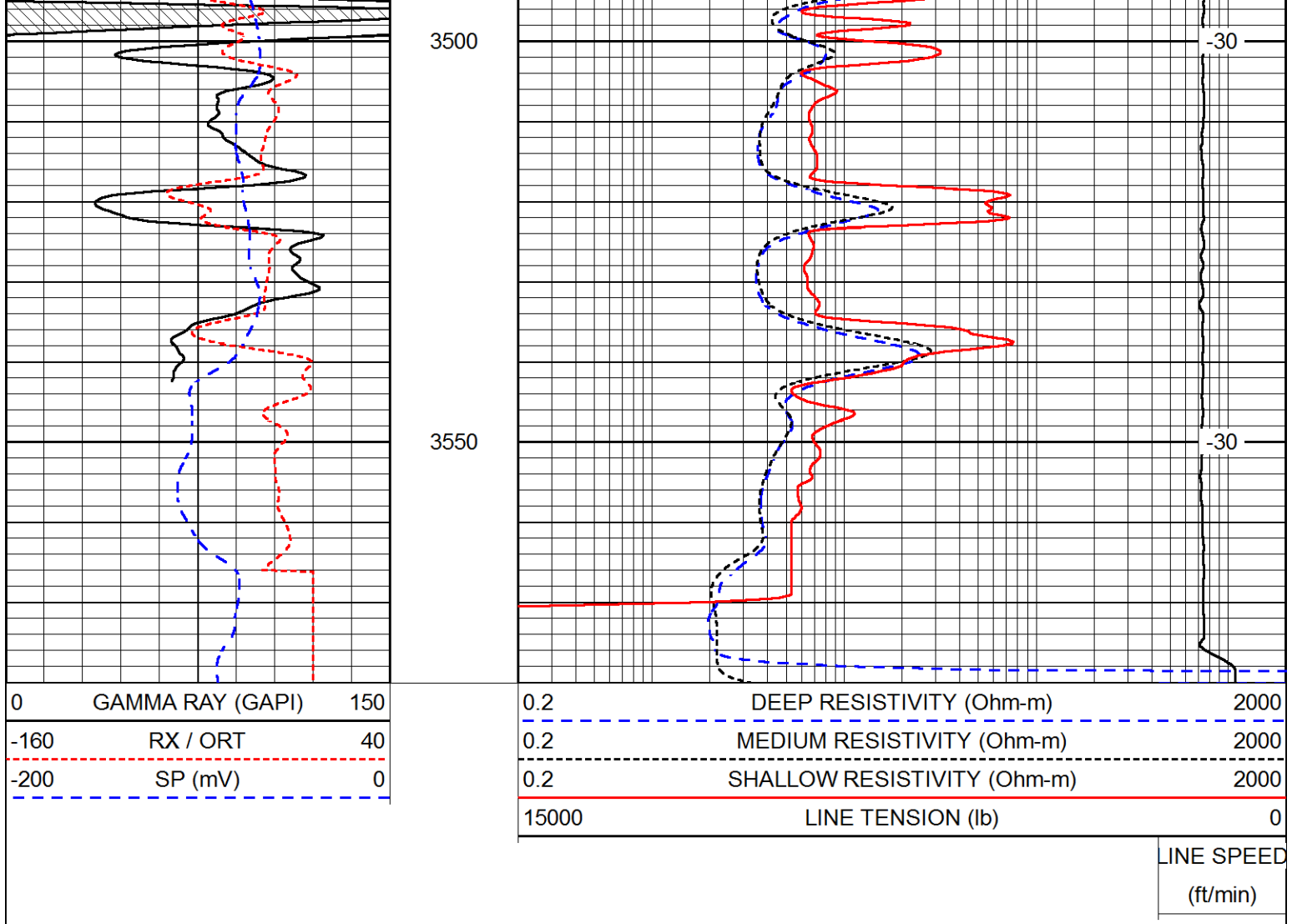
3400

3450



30

30



Calibration Report

Database File: ampatriot_apo_18_wallerlowry_1.db
 Dataset Pathname: stackmel/pass4.1
 Dataset Creation: Thu Apr 28 17:00:34 2016

Dual Induction Calibration Report

Serial-Model: 1987-M&W
 Calibration Performed: Thu Mar 31 15:53:34 2016

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop	mmho/m	Gain	Offset
Deep	178.615	710.235	0.000	255.800	mmho/m	0.530	-38.000
Medium	161.982	1441.110	0.000	255.800	mmho/m	0.440	-110.500

Microlog Calibration Report

Serial-Model: PSI-02-PSI STKBL ML
 Performed: Thu Apr 14 22:34:04 2016

	Readings		References			Results	
	Zero	Cal	Zero	Cal	Ohm-m	m	b
Normal	0.0031	0.0043	0.0000	10.0000	Ohm-m	10308.9000	-0.2000
Inverse	0.0000	0.0013	0.0000	10.0000	Ohm-m	7967.2700	0.4000

Compensated Density Calibration Report

Serial-Model: 71-914-M&W
 Source / Verifier: /
 Master Calibration Performed: Thu Mar 31 16:30:19 2016

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	4314.49	5307.52	cps
Aluminum	2.670	g/cc	822.19	3456.36	cps
Spine Angle = 75.49			Density/Spine Ratio = 0.534		
	Size		Reading		
Small Ring	4.00	in	1.16		
Large Ring	14.00	in	1.57		

Compensated Neutron Calibration Report

Serial Number: tk10-MW
 Tool Model: M&W
 Calibration Performed: Wed Mar 30 10:04:05 2016

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: 89-M&W
 Tool Model: M&W
 Calibration Performed: Thu Mar 31 15:29:33 2016

Calibrator Value: 1000.0 GAPI

Background Reading: 0.0 cps
 Calibrator Reading: 6.2 cps

Sensitivity: 0.5200 GAPI/cps



Company AMERICAN PATRIOT OIL, LLC
 Well APO #18 WALLER LOWRY #1
 Field WILDCAT
 County ROOKS
 State KANSAS



MICRORESISTIVITY LOG

Company AMERICAN PATRIOT OIL, LLC
 Well APO #18 WALLER LOWRY #1
 Field WILDCAT
 County ROOKS State KANSAS

Location: API #: 15-163-24312-00-00
 1,670' FNL & 931' FWL
 SEC 31 TWP 8S RGE 19W
 Permanent Datum GROUND LEVEL Elevation 2040'
 Log Measured From KELLY BUSHING
 Drilling Measured From KELLY BUSHING
 Other Services CNL/CDL DIL
 Elevation K.B. 2048'
 D.F. N/A
 G.L. 2040'

Date	4/28/2016
Run Number	ONE
Depth Driller	3578'
Depth Logger	3576'
Bottom Logged Interval	3575'
Top Log Interval	250'
Casing Driller	8.625" @ 263'
Casing Logger	262'
Bit Size	7.875"
Type Fluid in Hole	CHEMICAL
Salinity, ppm CL	4800
Density / Viscosity	9.4 62
pH / Fluid Loss	10.5 7.2
Source of Sample	FLOWLINE
Rm @ Meas. Temp	.75 @ 65
Rmt @ Meas. Temp	.56 @ 65
Rmc @ Meas. Temp	1.01 @ 65
Source of Rmf / Rmc	CHARTS
Rm @ BHT	.44 @ 112
Operating Rig Time	2 1/2 HOURS
Max Rec. Temp. F	112
Equipment Number	108
Location	COLBY
Recorded By	J. LONG
Witnessed By	MARC DOWNING

<<< Fold Here >>>

All interpretations are opinions based on inferences from electrical or other measurements and Pioneer Wireline Services, LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Pioneer 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.
 DAMAR, 5 EAST, 1/4 SOUTH, EAST INTO

Log Measured From: KELLY BUSHING 8 Ft. Above Permanent Datum

THANK YOU FOR USING PIONEER ENERGY SERVICES
www.pioneerenergy.com 785-625-3858

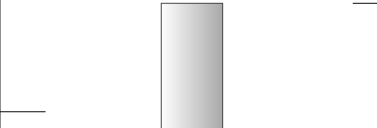
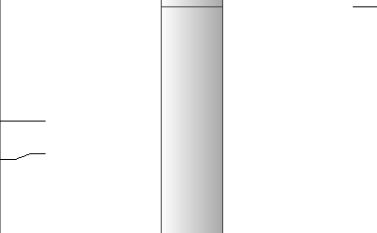
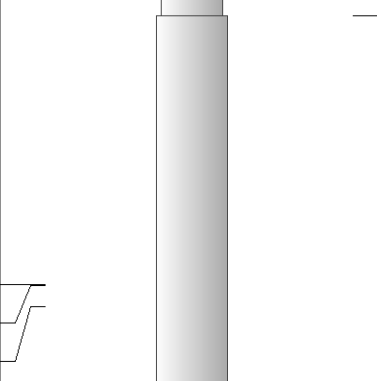
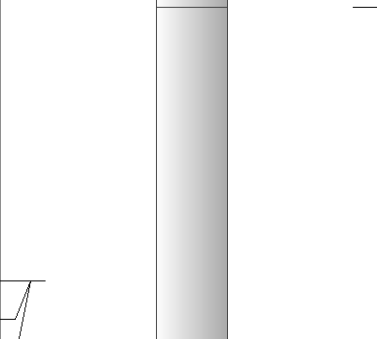
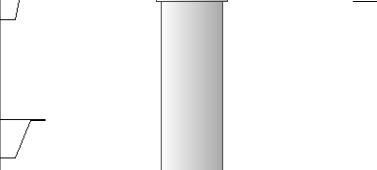
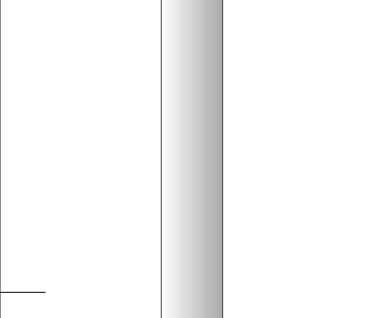
Your Pioneer Energy Services Crew Engineer: J. LONG Operator: T. MARTIN Operator: Operator:	This Log Record Was Witnessed By Primary Witness: MARC DOWNING Secondary Witness: Secondary Witness: Secondary Witness:
---	---

Log Variables

DatabaseC:\ProgramData\Warrior\Data\lampatriot_apo_18_wallerlowry_1.db
Dataset field/well/stackmel/pass4.1/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	112	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	-620	54	Off	3576

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.58		GR-M&W (89-M&W)	3.00	3.50	50.00
CNLSC CNSSC	37.48 36.73		CNT-M&W (tk10-MW)	5.50	3.50	100.00
LSD DCAL SSD	28.43 28.42 27.93		CDL-M&W (71-914)	8.50	4.00	250.00
MCAL MI MN	19.83 19.83 19.83		ML-PSI STKBL ML (PSI-02) Stackable Microlog Tools	7.58	4.00	65.00
RLL3 RLL3F	15.80 15.79					
CILD	8.00		DIL-M&W (1987)	18.50	3.50	220.00

CILM 4.70

SP 0.20

Dataset: ampatriot_apo_18_wallerlowry_1.db: field/well/stackmel/pass4.1
 Total length: 43.08 ft
 Total weight: 685.00 lb
 O.D.: 4.00 in

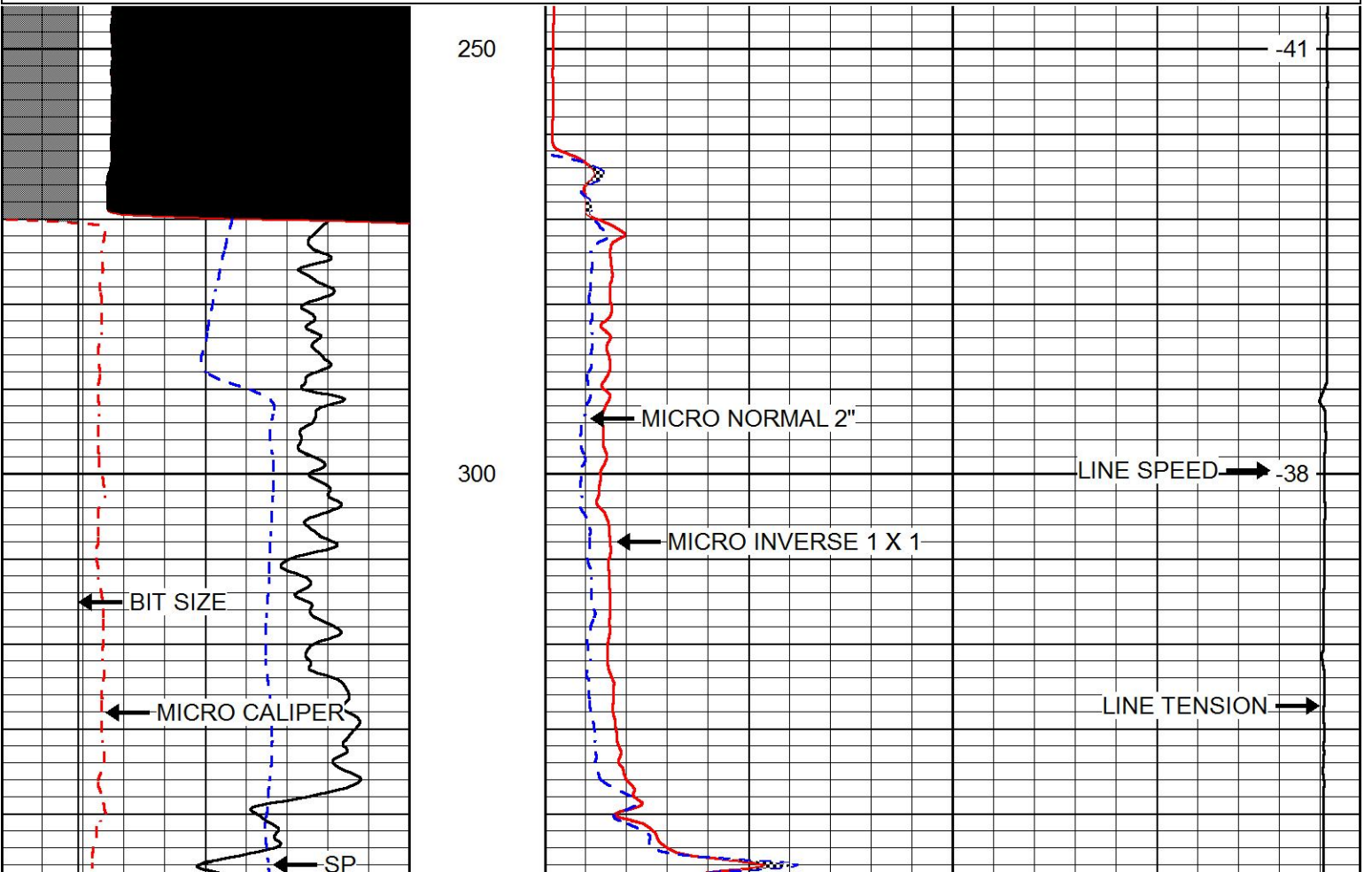


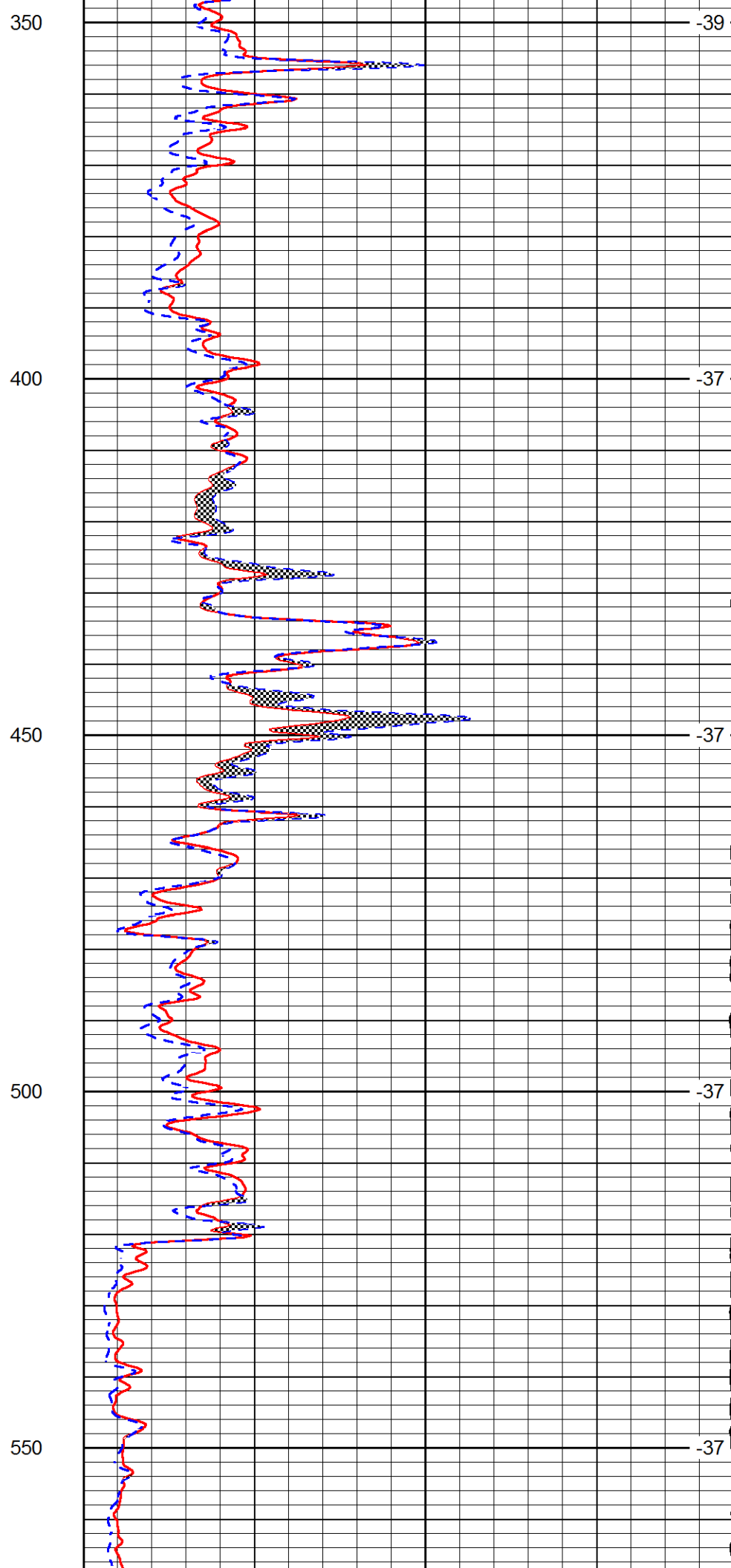
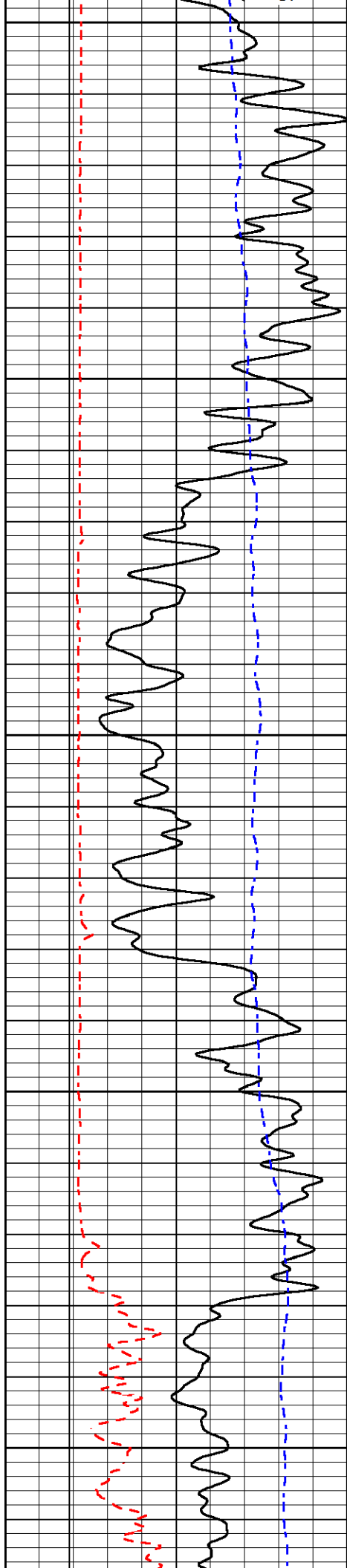
MAIN PASS

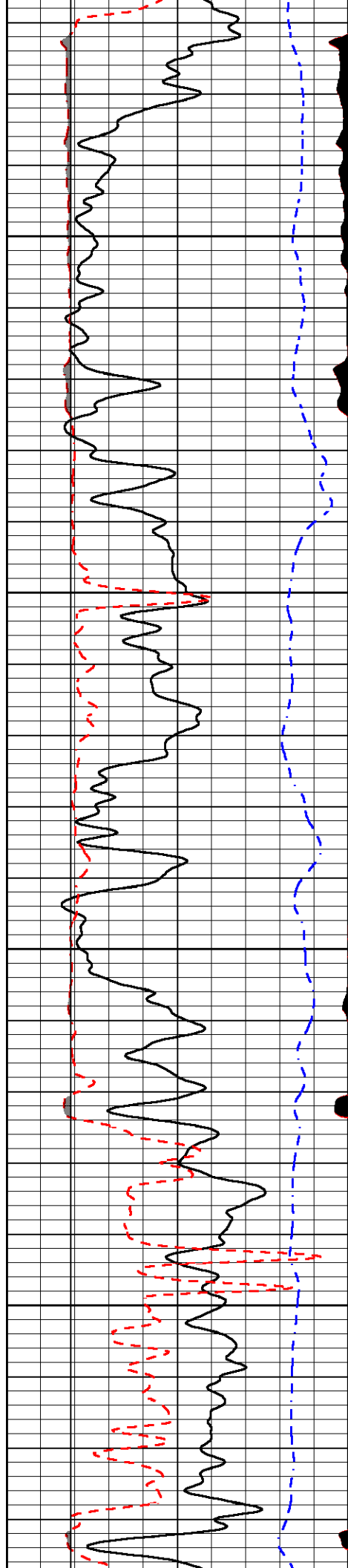
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 Dataset Pathname stackmel/pass4.1
 Presentation Format micro
 Dataset Creation Thu Apr 28 17:00:34 2016
 Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
6	MICRO CALIPER (in)	16
6	BIT SIZE (in)	16
-200	SP (mV)	0

0	MICRO INVERSE 1 X 1 (Ohm-m)	40
0	MICRO NORMAL 2" (Ohm-m)	40
15000	LINE TENSION (lb)	0
	LINE SPEED (ft/min)	





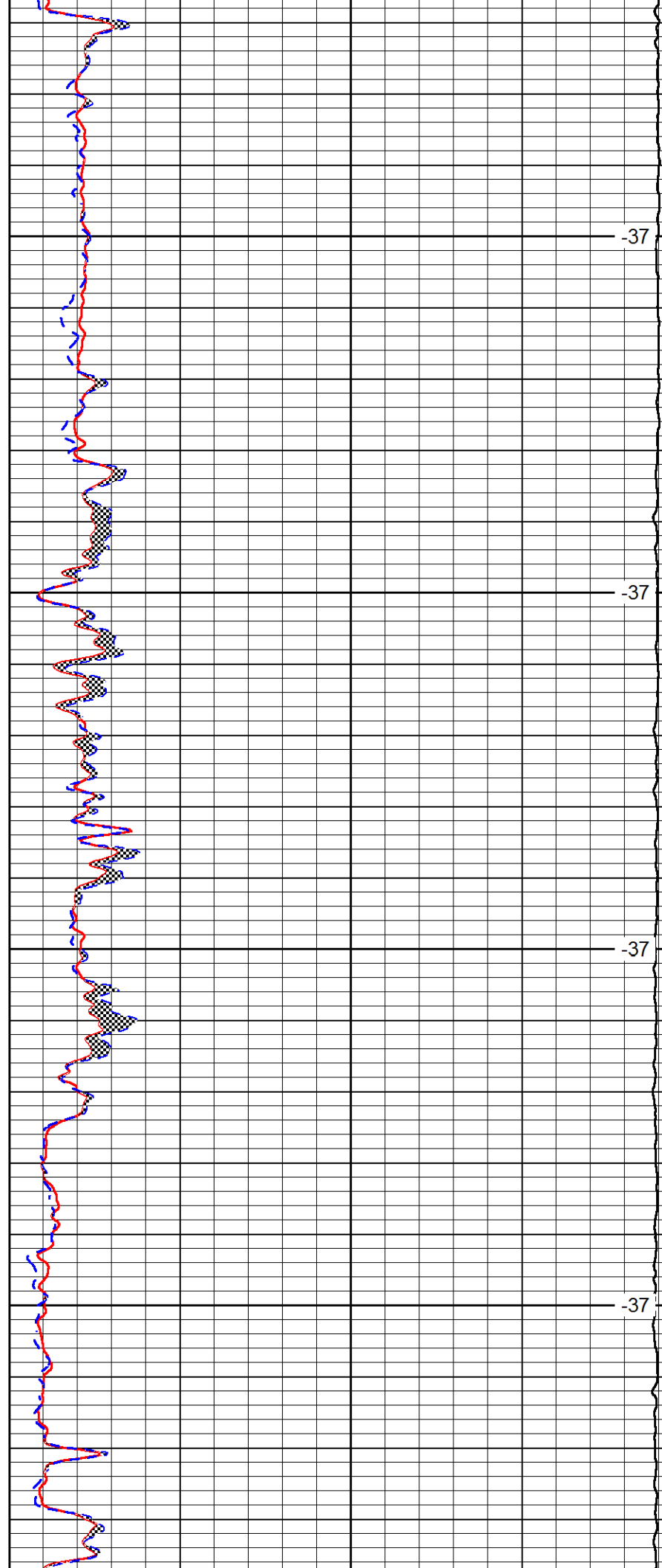


600

650

700

750

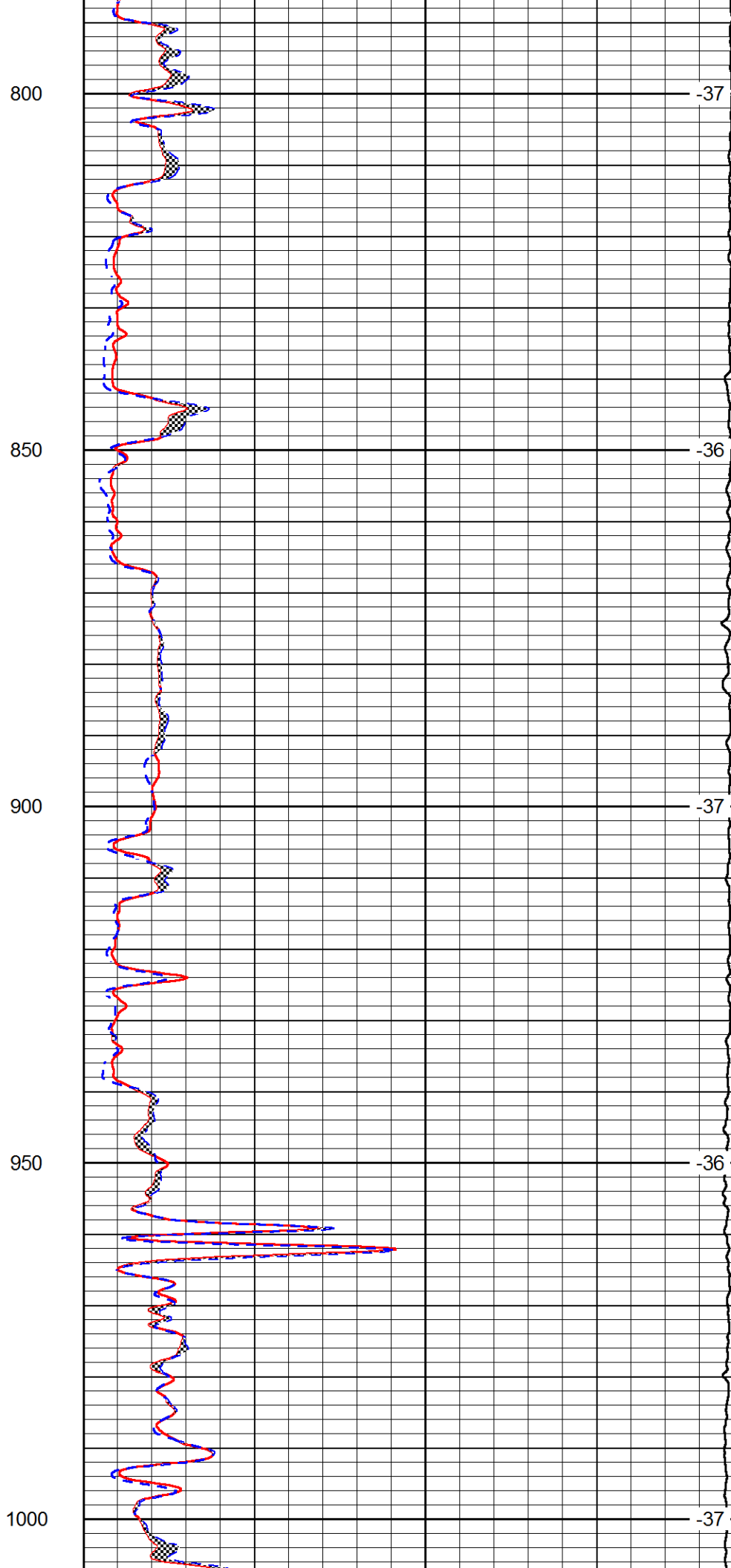
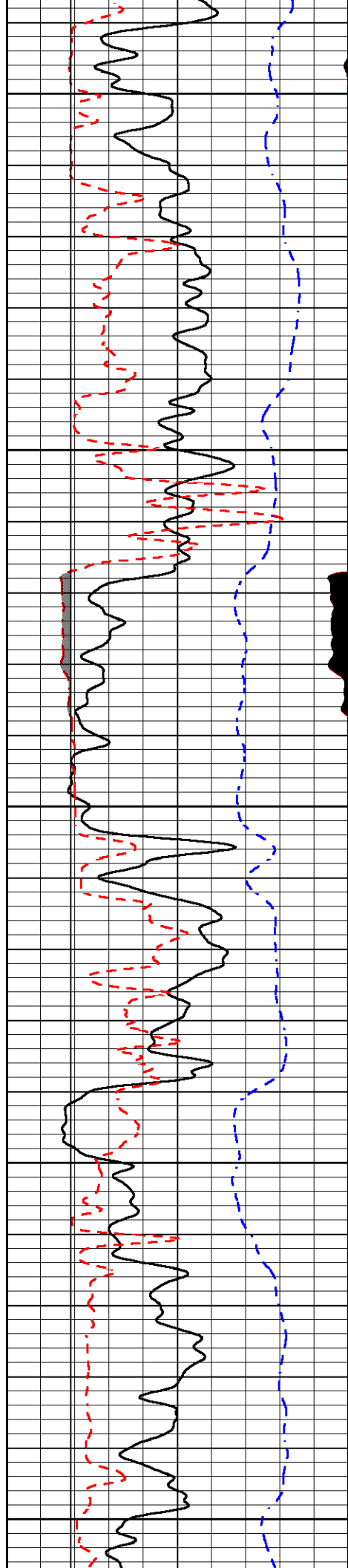


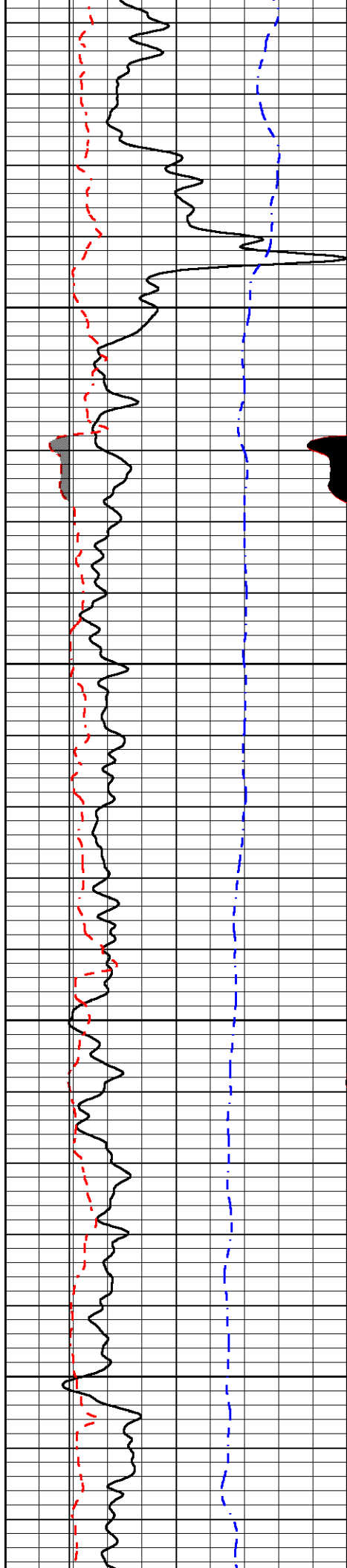
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-37

-37



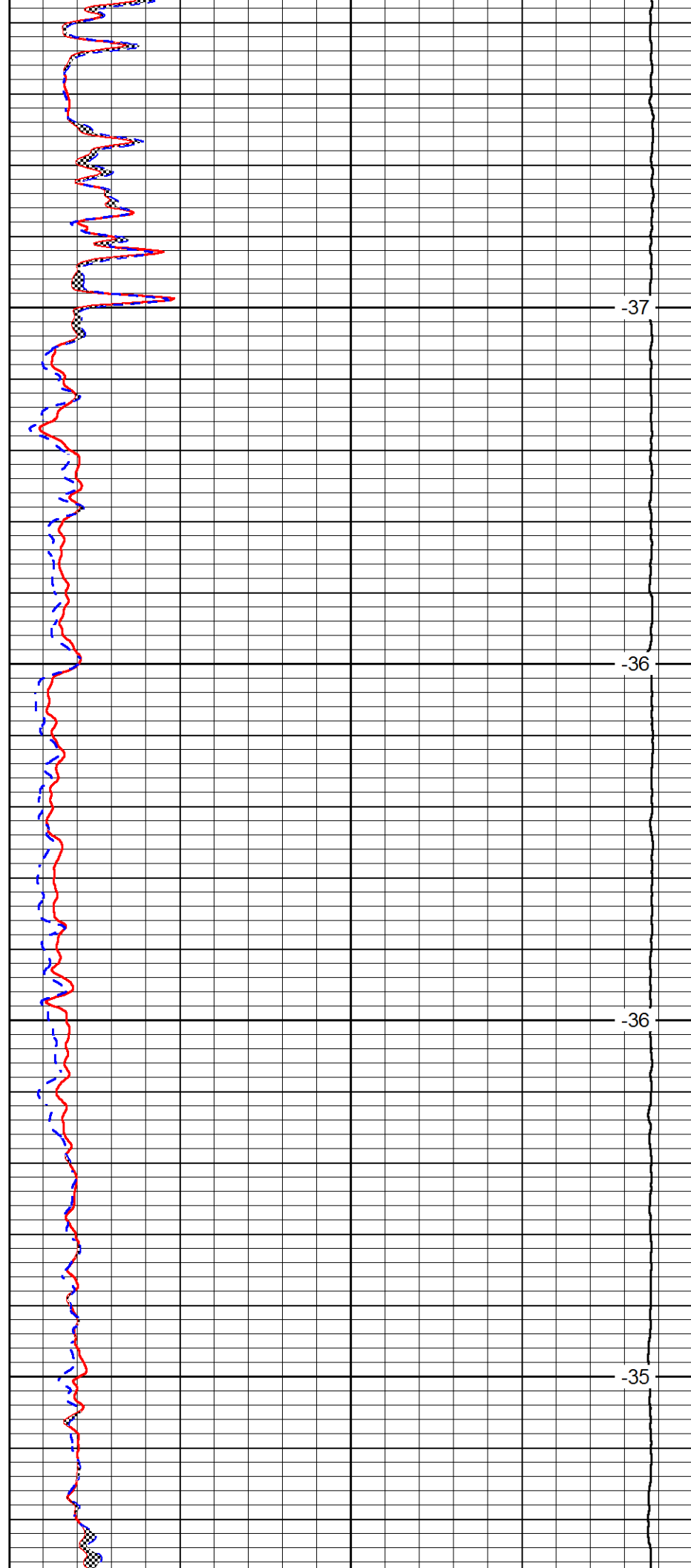


1050

1100

1150

1200

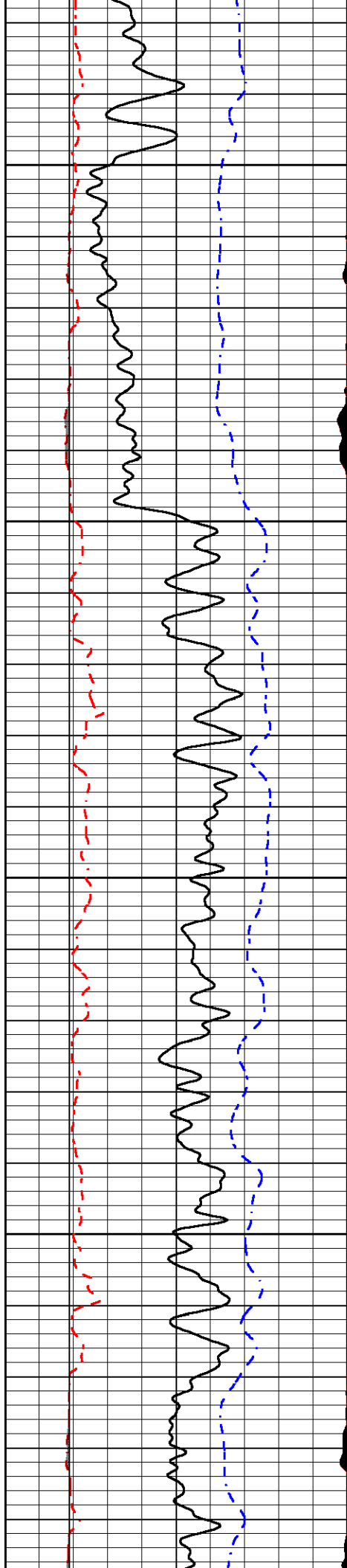


-37

-36

-36

-35

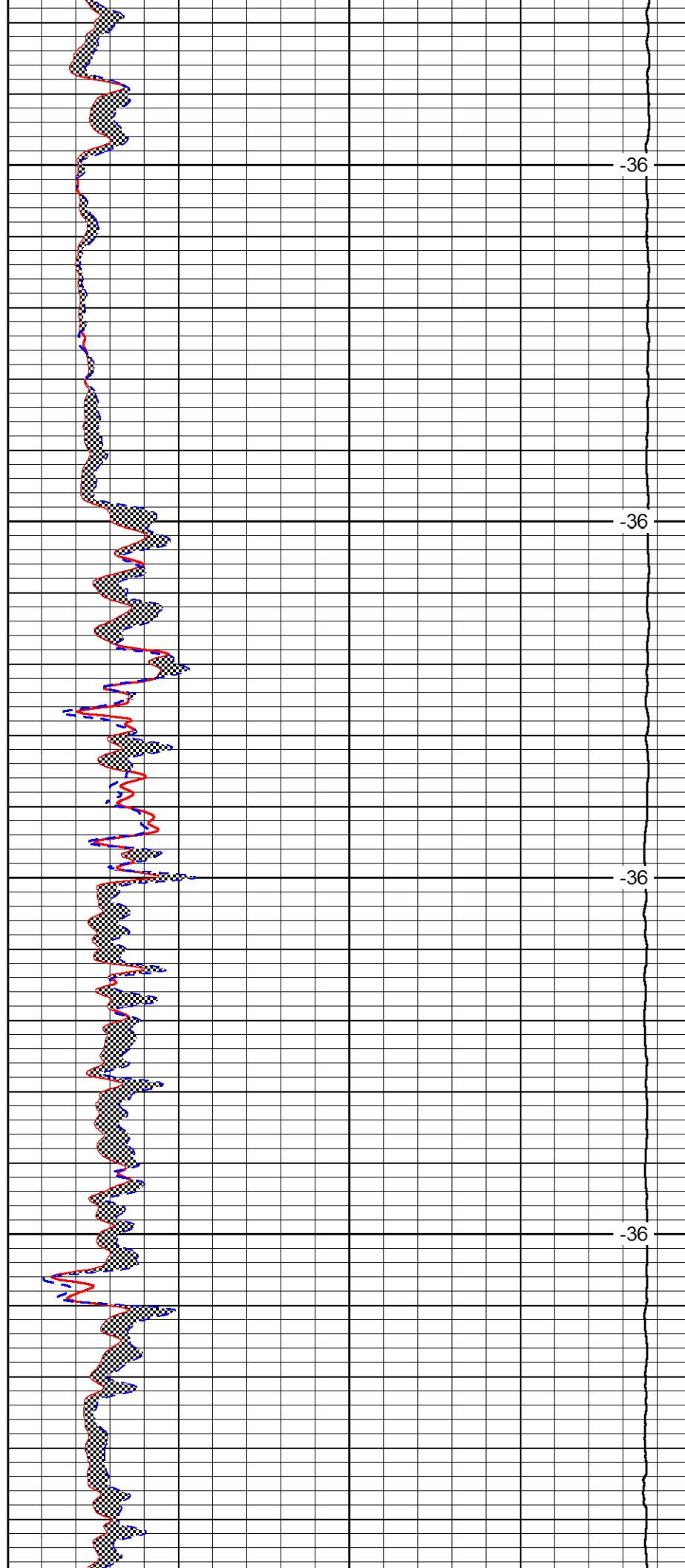


1250

1300

1350

1400

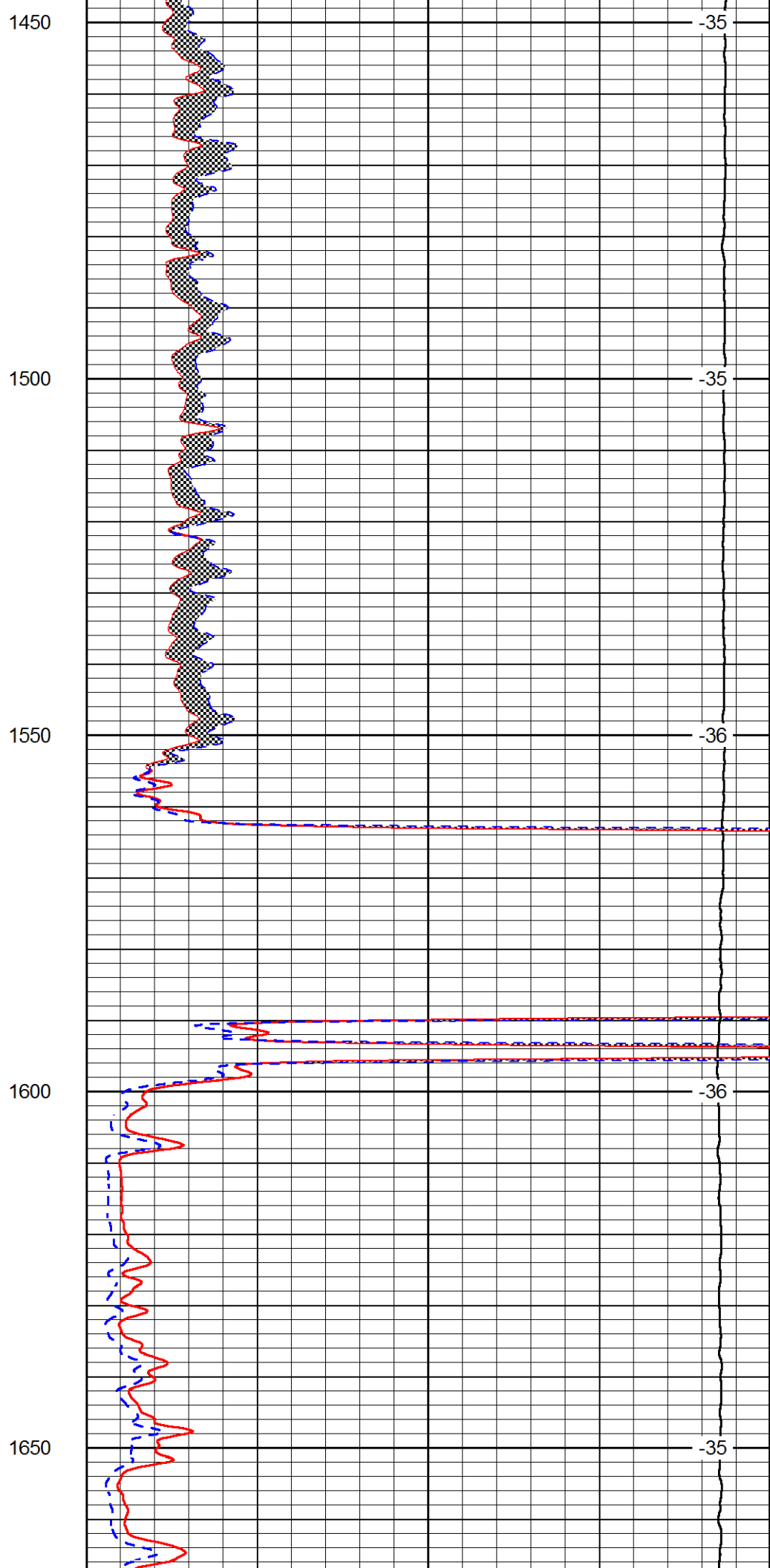
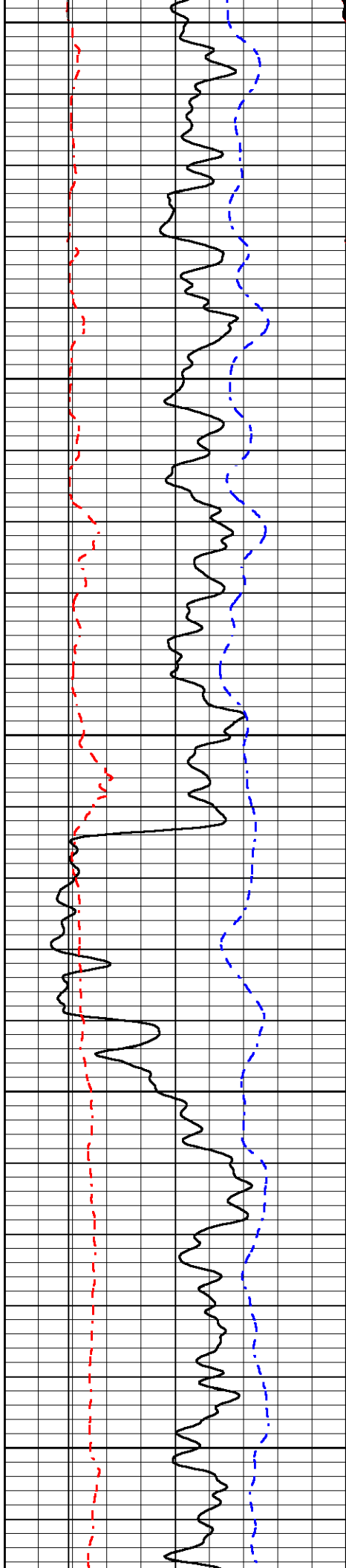


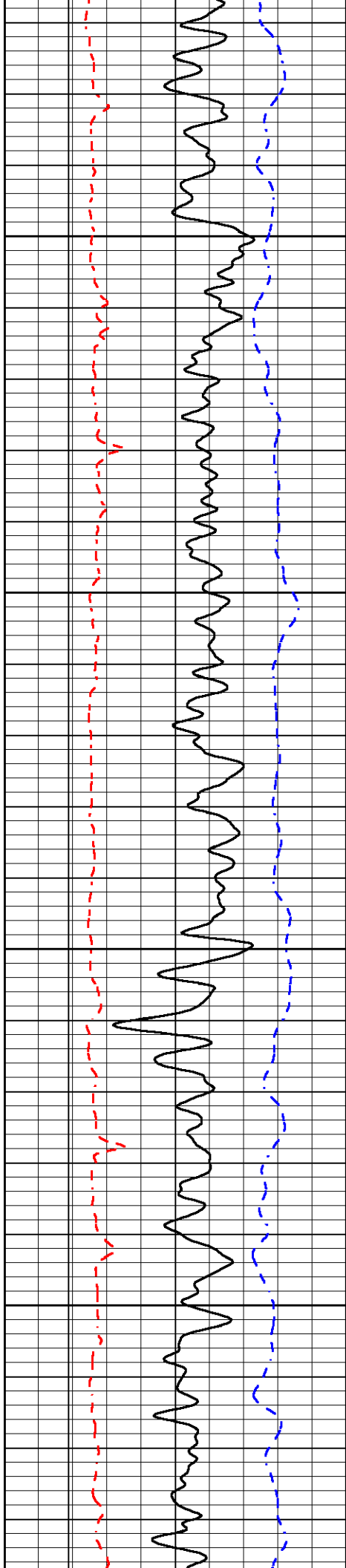
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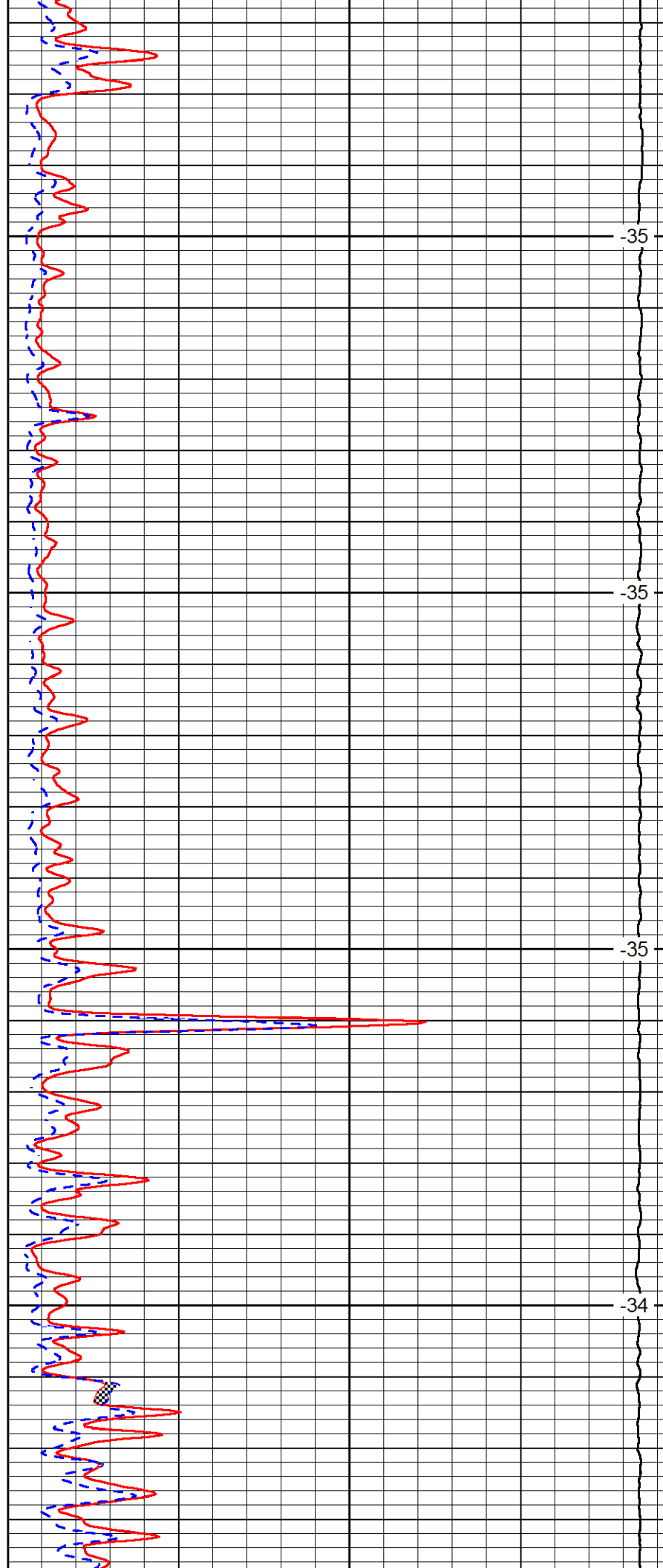


1700

1750

1800

1850

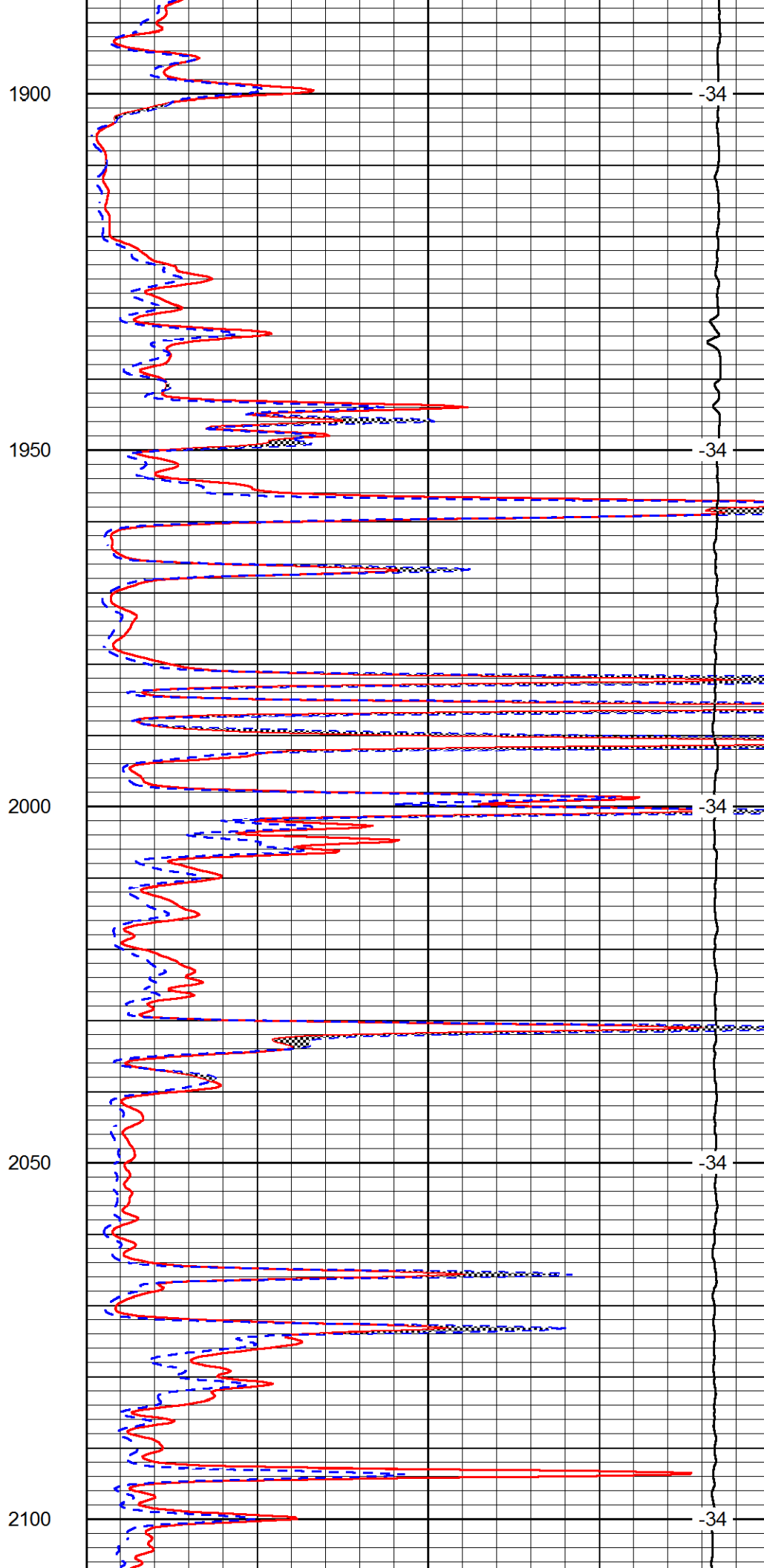
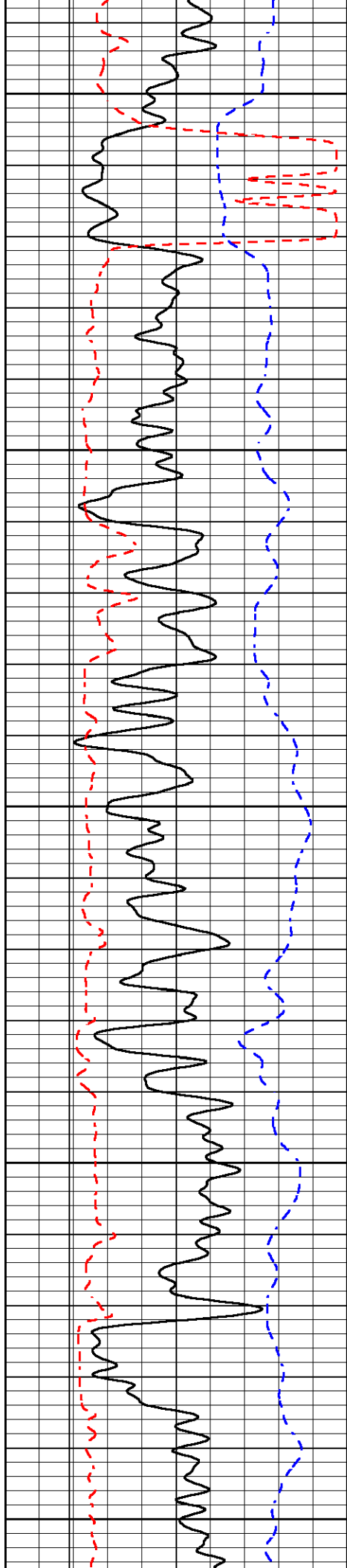


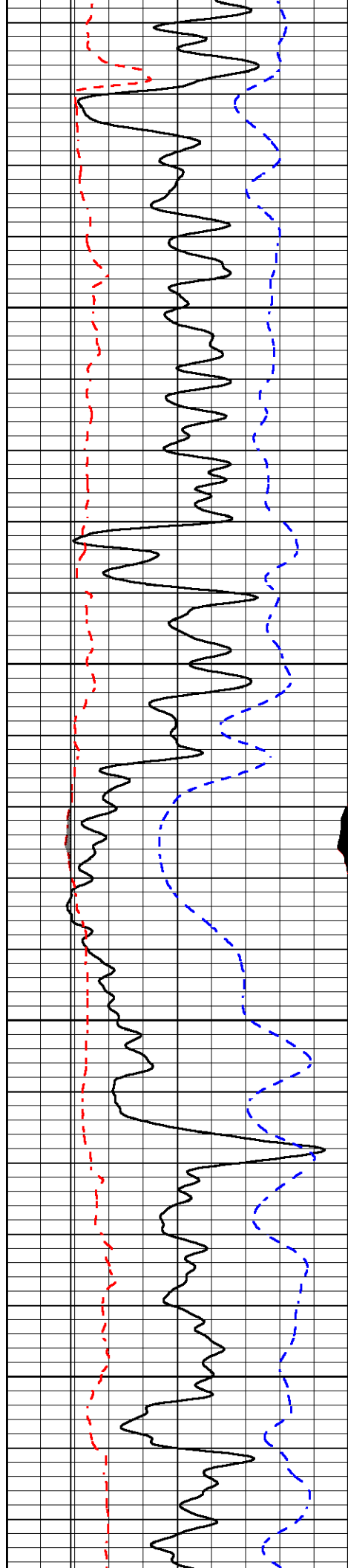
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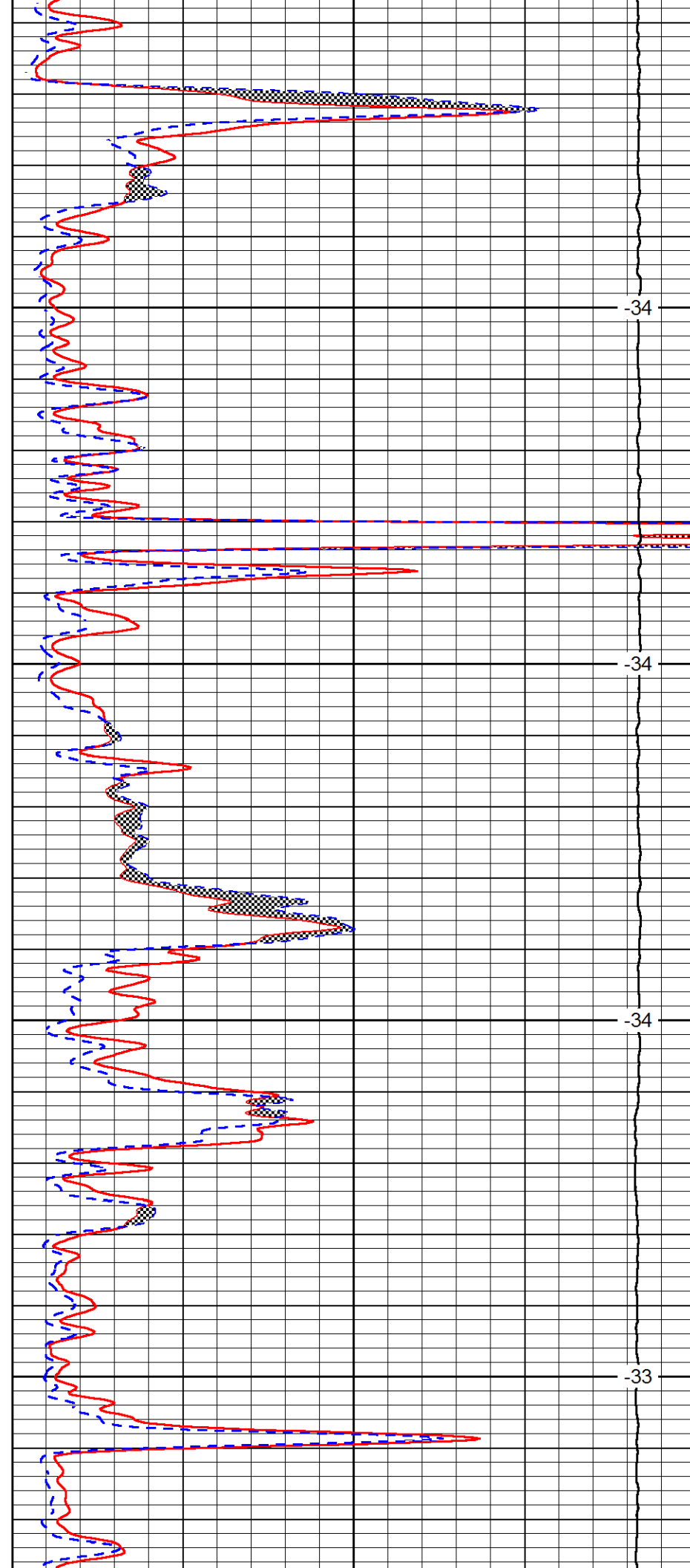


2150

2200

2250

2300

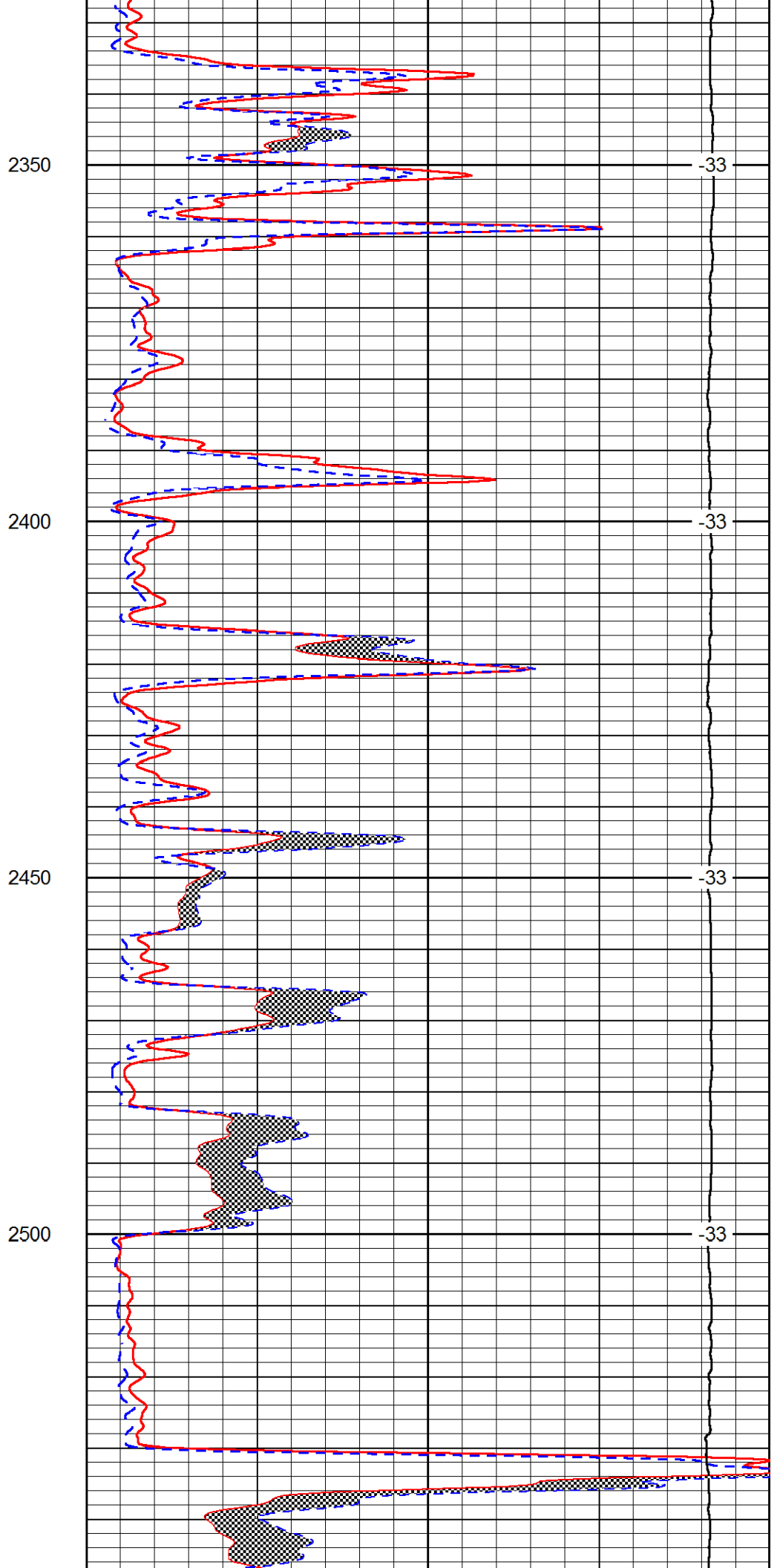
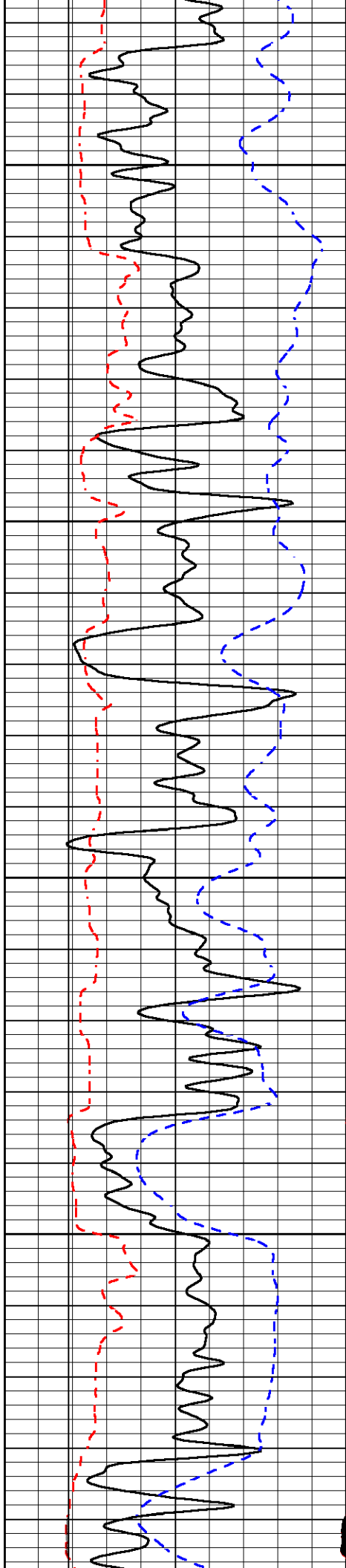


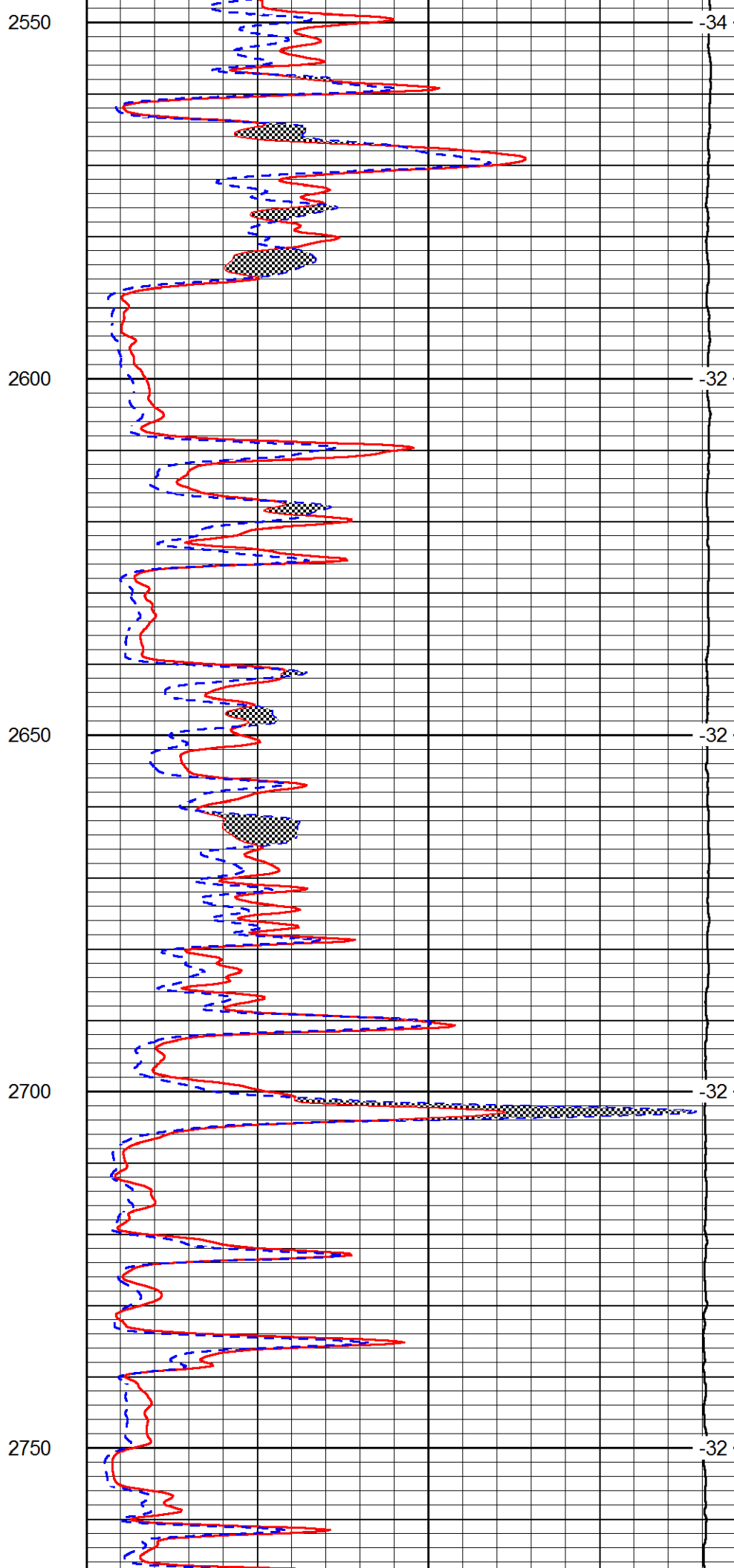
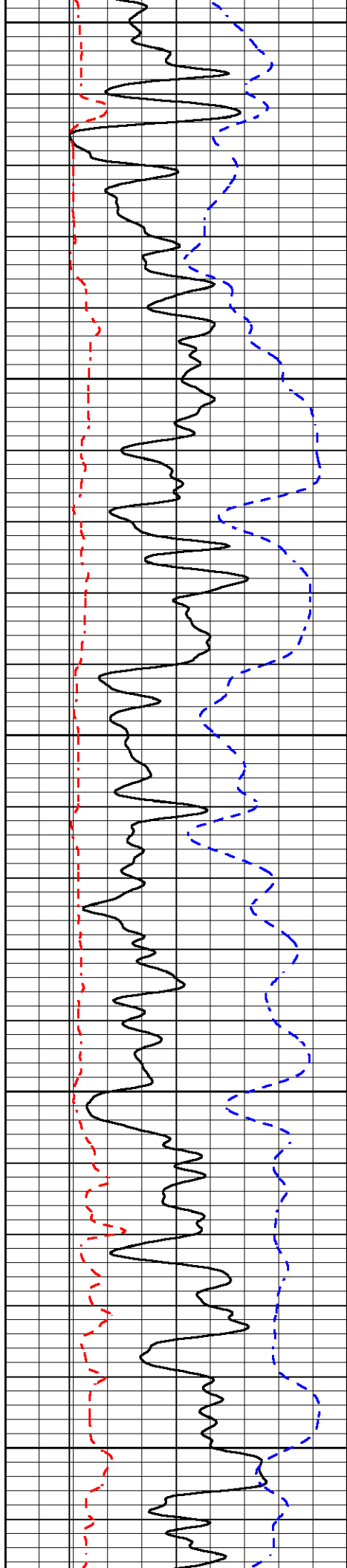
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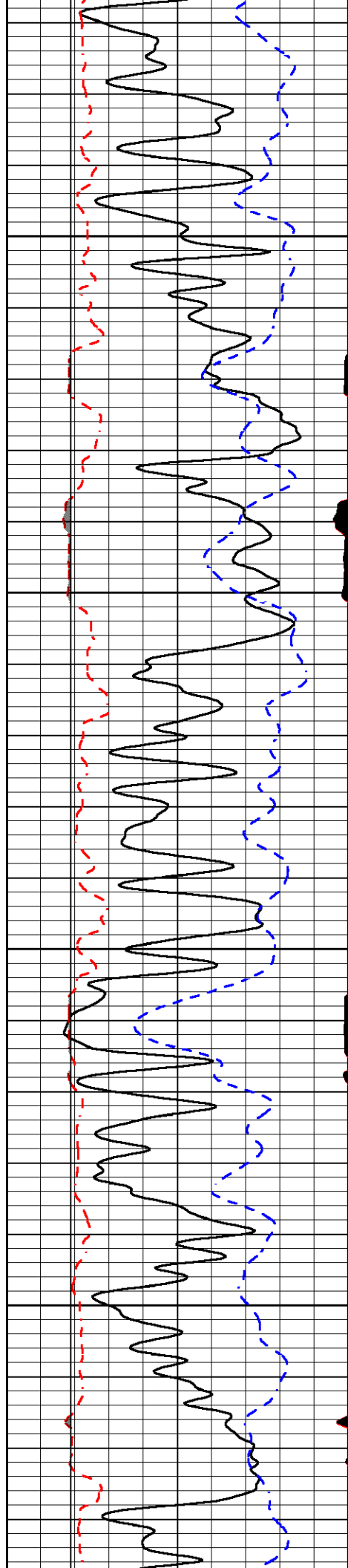
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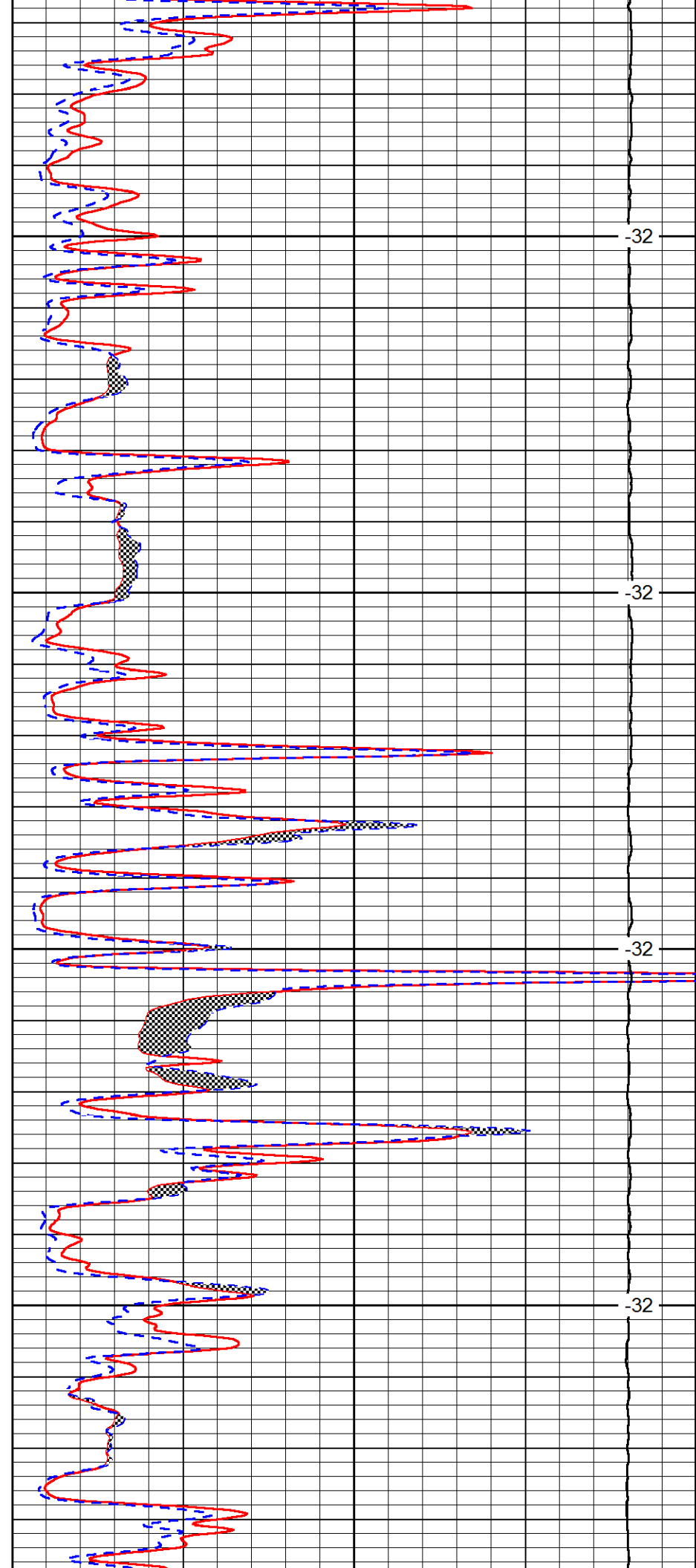


2800

2850

2900

2950

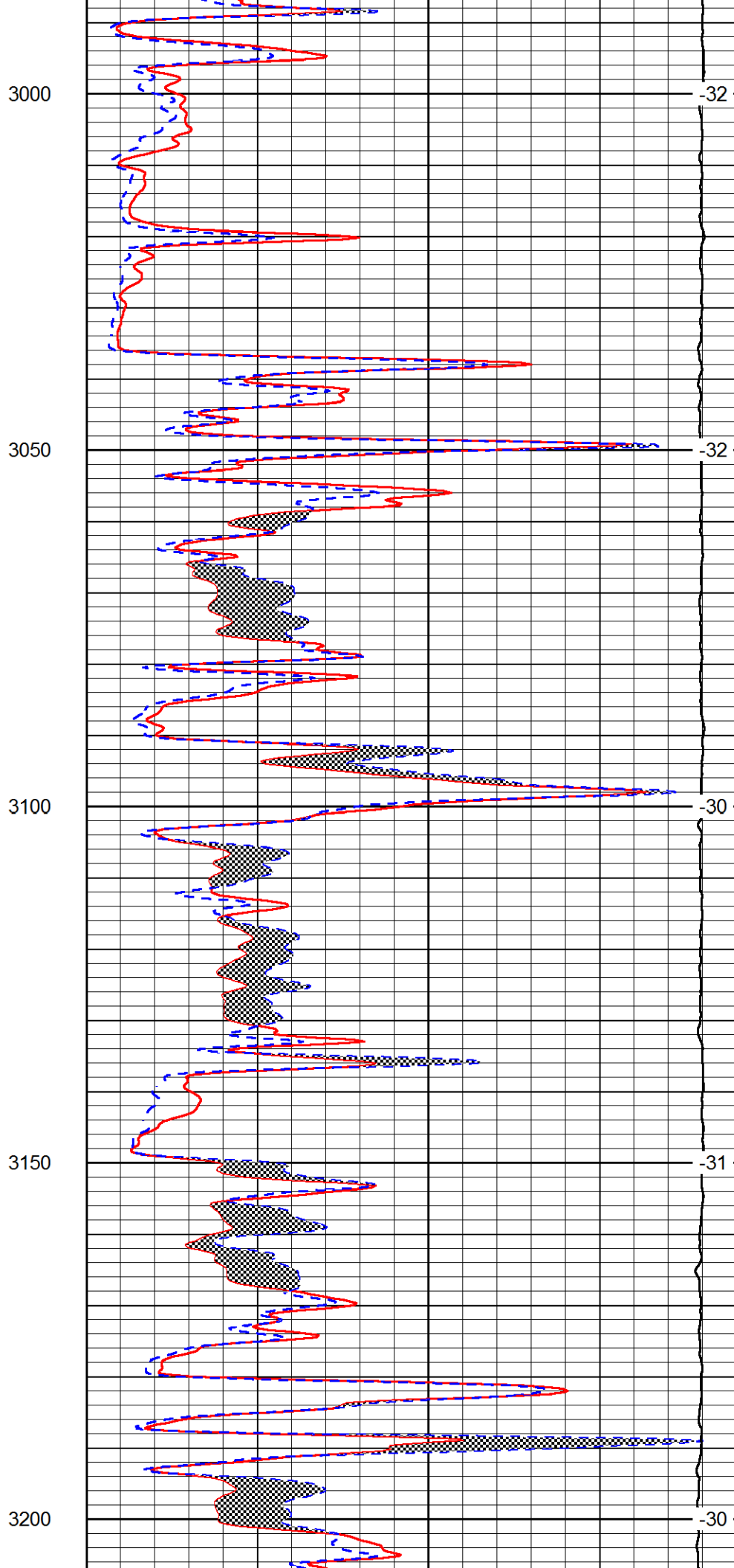
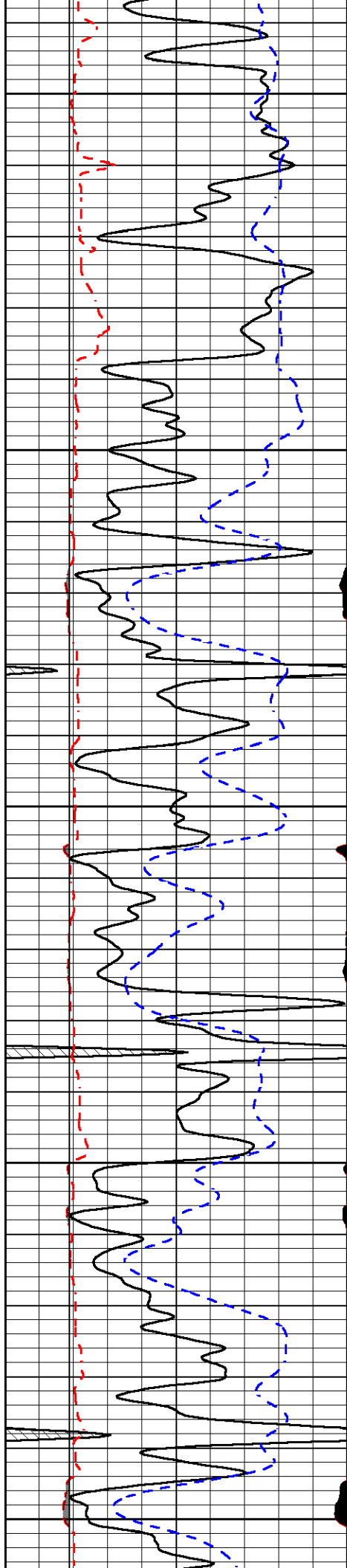


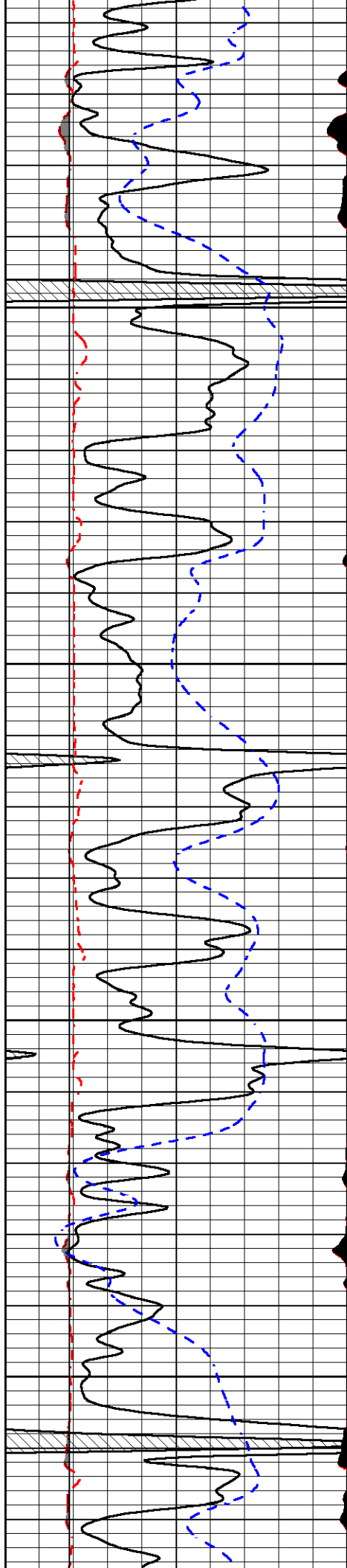
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-32



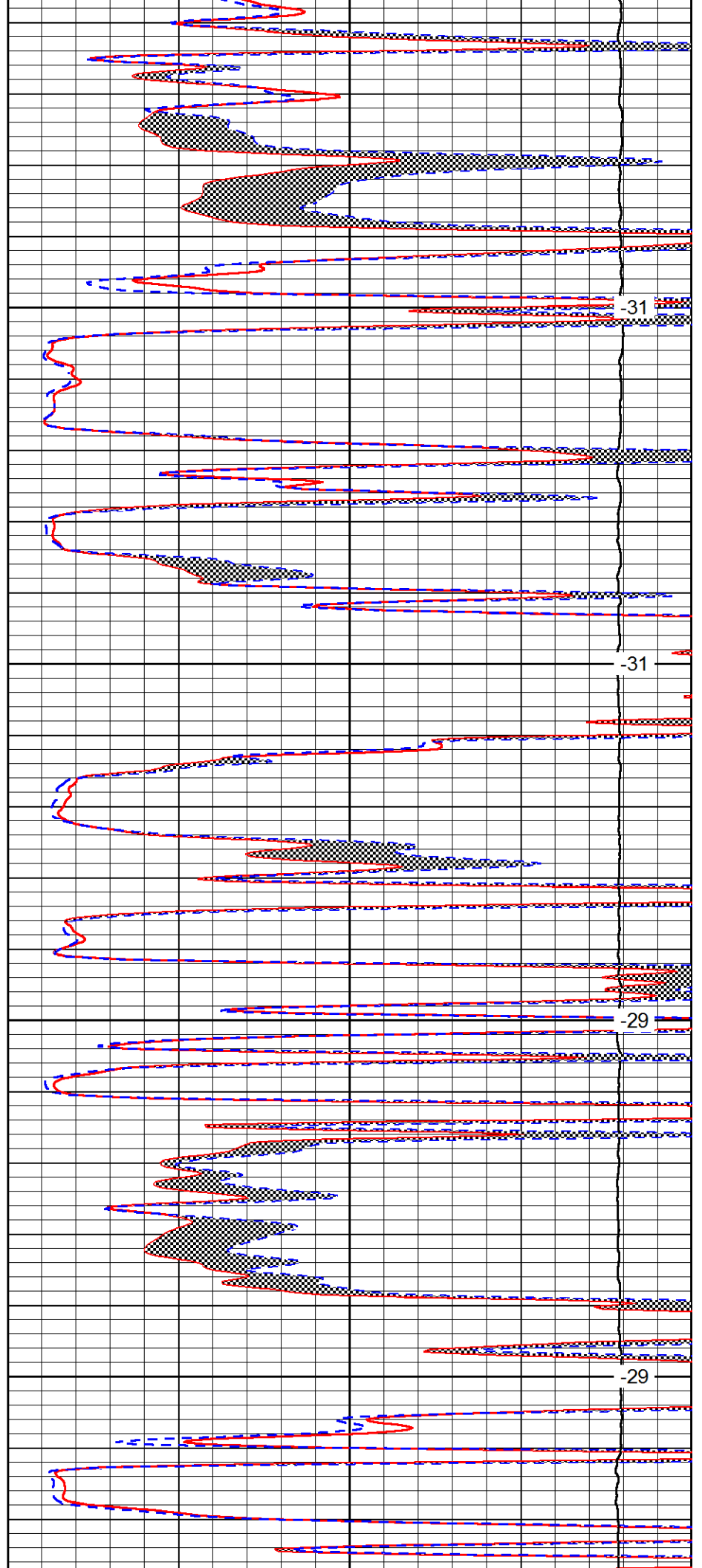


3250

3300

3350

3400

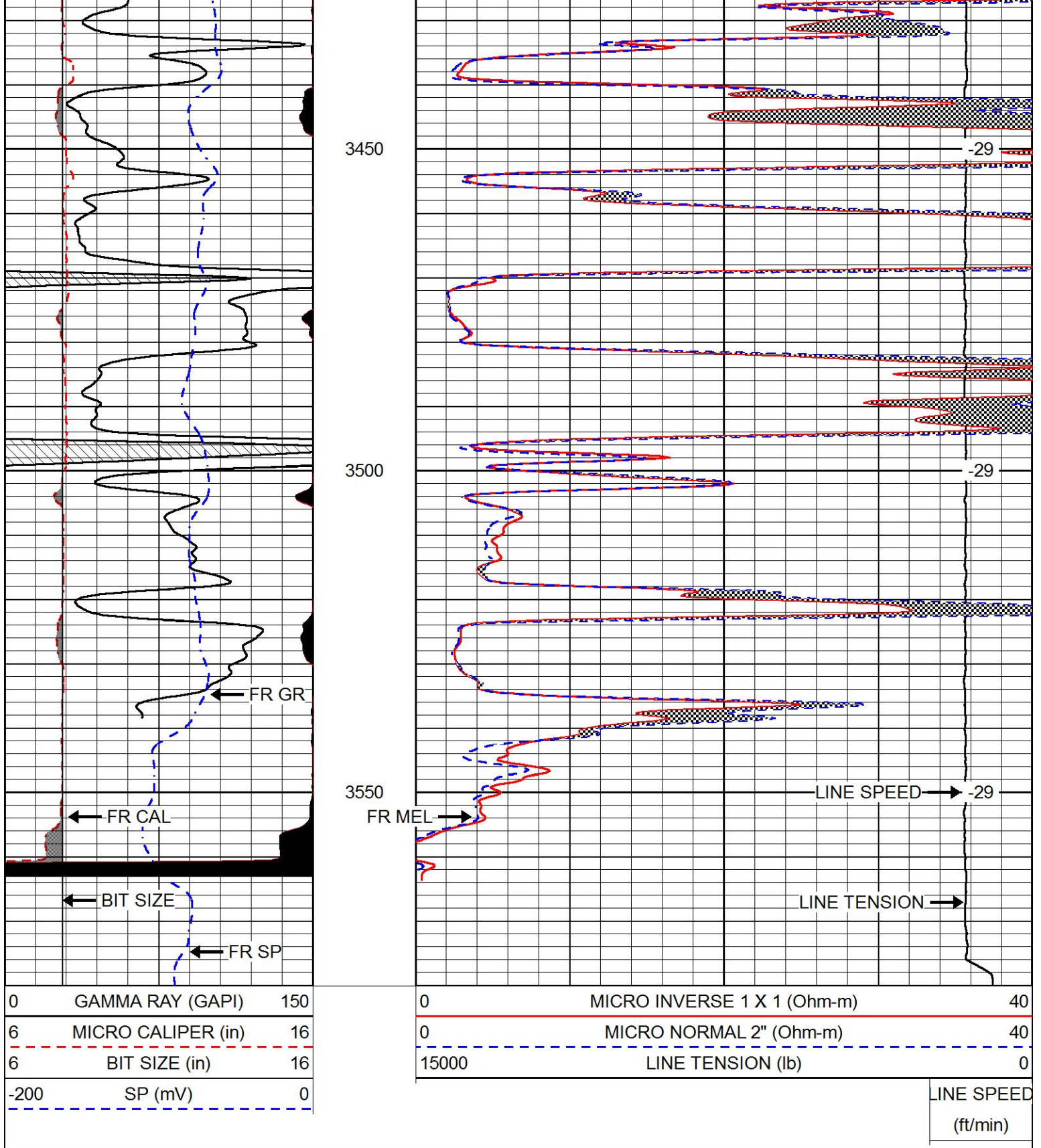


-31

-31

-29

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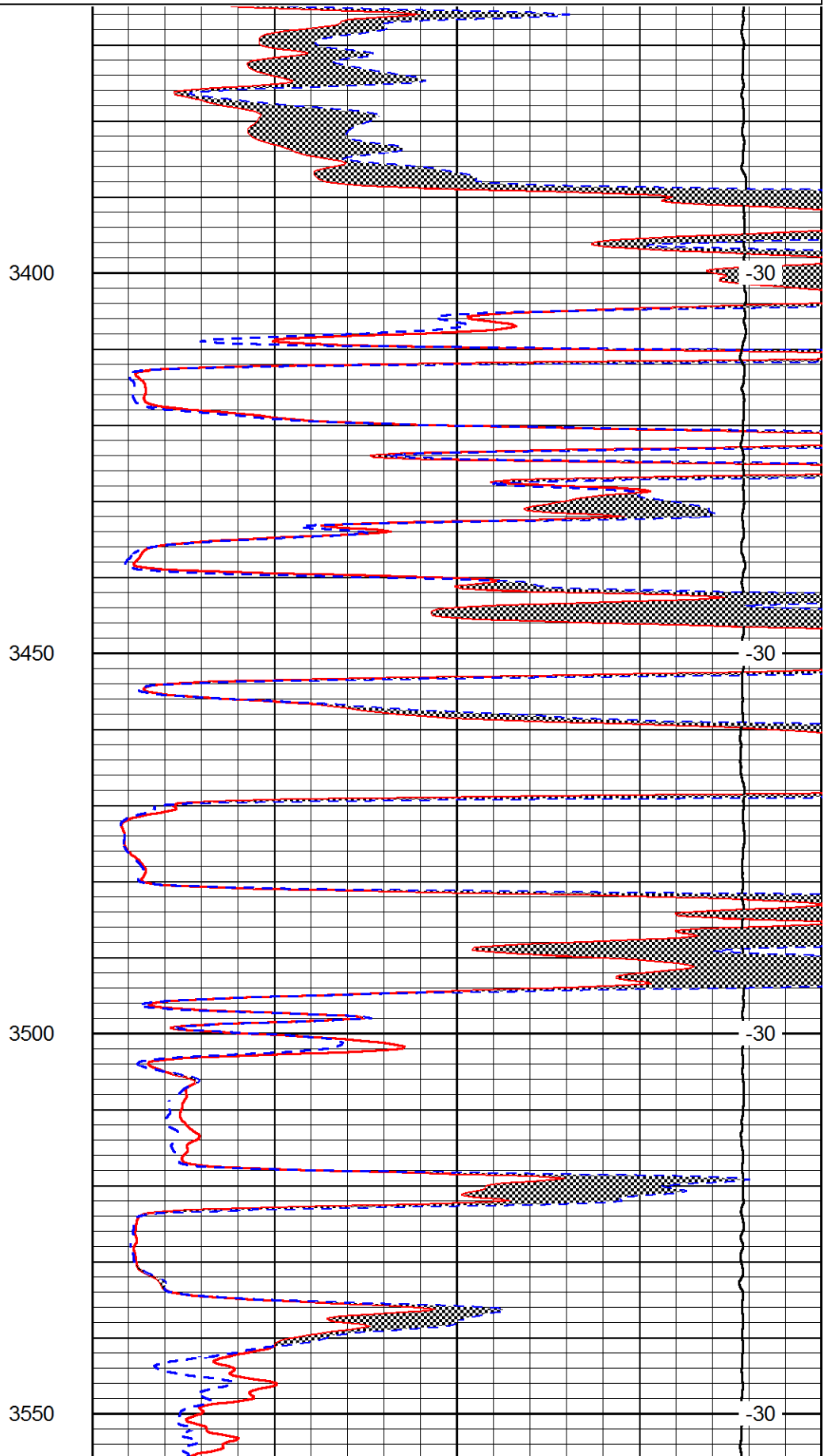
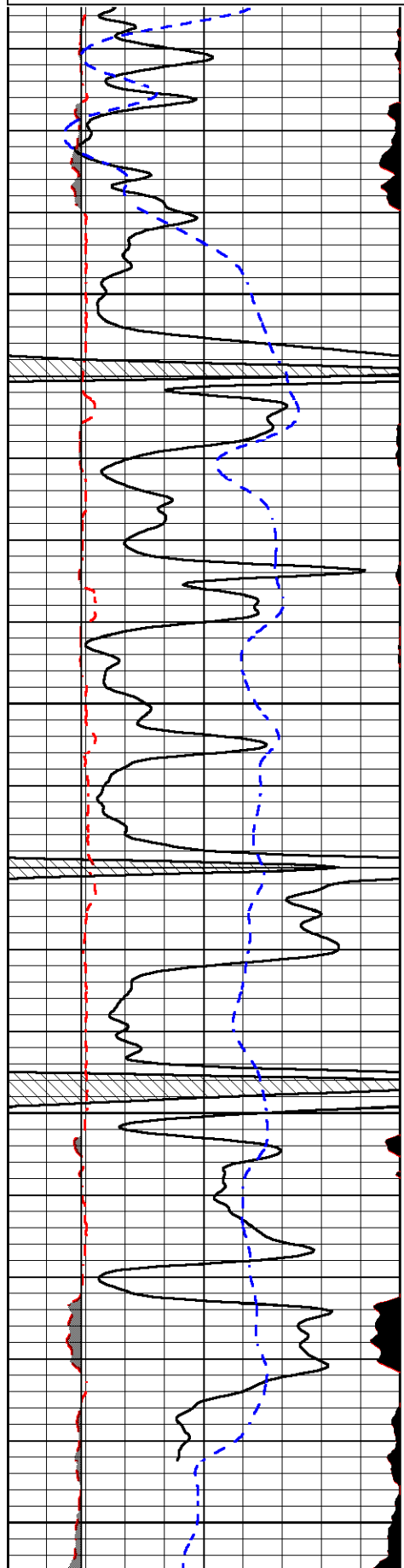


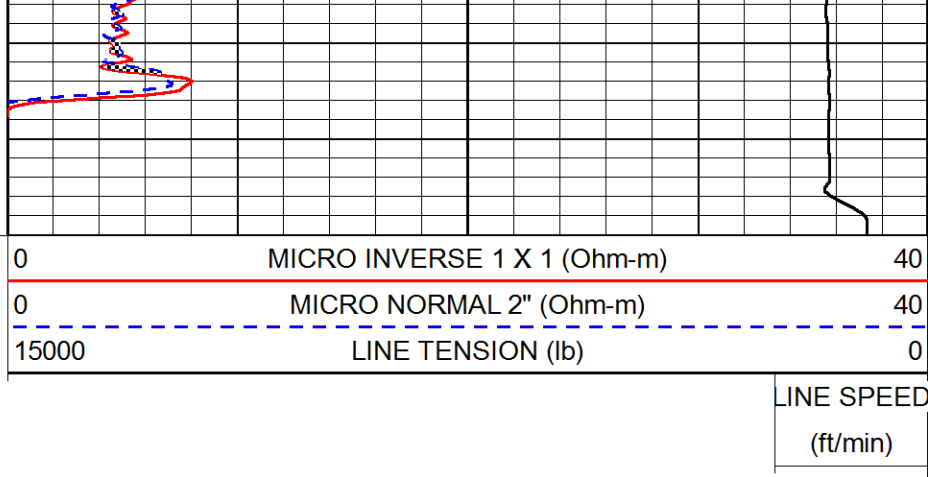
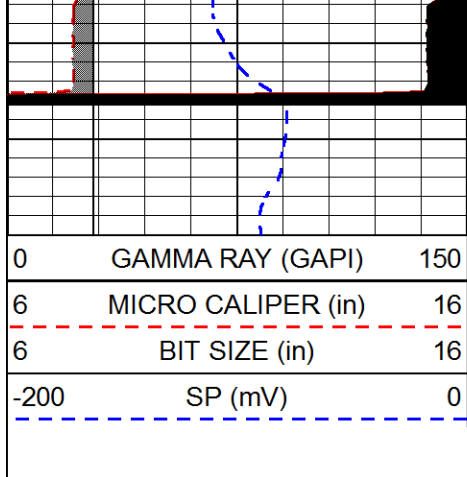
REPEAT SECTION

Database File ampatriot_apo_18_wallerlowry_1.db
 Dataset Pathname stackmel/pass3.1
 Presentation Format micro
 Dataset Creation Thu Apr 28 15:55:11 2016
 Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
6	MICRO CALIPER (in)	16
6	BIT SIZE (in)	16
-200	SP (mV)	0

0	MICRO INVERSE 1 X 1 (Ohm-m)	40
0	MICRO NORMAL 2" (Ohm-m)	40
15000	LINE TENSION (lb)	0
	LINE SPEED (ft/min)	





Calibration Report

Database File: ampatriot_apo_18_wallerlowry_1.db
 Dataset Pathname: stackmel/pass4.1
 Dataset Creation: Thu Apr 28 17:00:34 2016

Dual Induction Calibration Report

Serial-Model: 1987-M&W
 Calibration Performed: Thu Mar 31 15:53:34 2016

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	178.615	710.235	0.000	255.800	mmho/m	0.530	-38.000
Medium	161.982	1441.110	0.000	255.800	mmho/m	0.440	-110.500

Microlog Calibration Report

Serial-Model: PSI-02-PSI STKBL ML
 Performed: Thu Apr 14 22:34:04 2016

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0031	0.0043	0.0000	10.0000	Ohm-m	10308.9000	-0.2000
Inverse	0.0000	0.0013	0.0000	10.0000	Ohm-m	7967.2700	0.4000
Caliper	1.0020	1.0834	5.5000	16.5000	in	135.1560	-131.1700

Compensated Density Calibration Report

Serial-Model: 71-914-M&W
 Source / Verifier: /
 Master Calibration Performed: Thu Mar 31 16:30:19 2016

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	4314.49	5307.52	cps
Aluminum	2.670	g/cc	822.19	3456.36	cps

Spine Angle = 75.49

Density/Spine Ratio = 0.534

Size

Reading

	Size		Reading
Small Ring	4.00	in	1.16
Large Ring	14.00	in	1.57


Compensated Neutron Calibration Report

Serial Number:	tk10-MW
Tool Model:	M&W
Calibration Performed:	Wed Mar 30 10:04:05 2016

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:	89-M&W
Tool Model:	M&W
Calibration Performed:	Thu Mar 31 15:29:33 2016
Calibrator Value:	1000.0 GAPI
Background Reading:	0.0 cps
Calibrator Reading:	6.2 cps
Sensitivity:	0.5200 GAPI/cps

 <p>PIONEER Pioneer Energy Services</p>	Company	AMERICAN PATRIOT OIL, LLC
	Well	APO #18 WALLER LOWRY #1
	Field	WILDCAT
	County	ROOKS
	State	KANSAS

Marc A. Downing
Geologic Report
Consulting Petroleum Geologist
Drilling Time and Sample Log

Operator **American Patriot Oil, LLC**
 Lease **APO 18 Waller Lowry No. 1**
 API # **15-163-24312-0000**
 Field **Wildcat**
 Location **1670' FNL & 931' FWL**
 Sec. **31** Twp. **8s** Rge. **19w**
 County **Rooks** State **Kansas**

Formation	Sample tops	Log Tops	Datum	Struct Comp
Top Anhydrite	1564	1563	+485	-11
Base Anhydrite	1590	1590	+458	NA
Topeka	3040	3037	-989	-15
Heebner	3249	3246	-1198	-17
Toronto	3271	3268	-1220	-17
LKC	3288	3285	-1237	-17
BKC	3507	3503	-1455	-19
Arbuckle	Not Reached			
Total Depth	3578	3576	-1528	

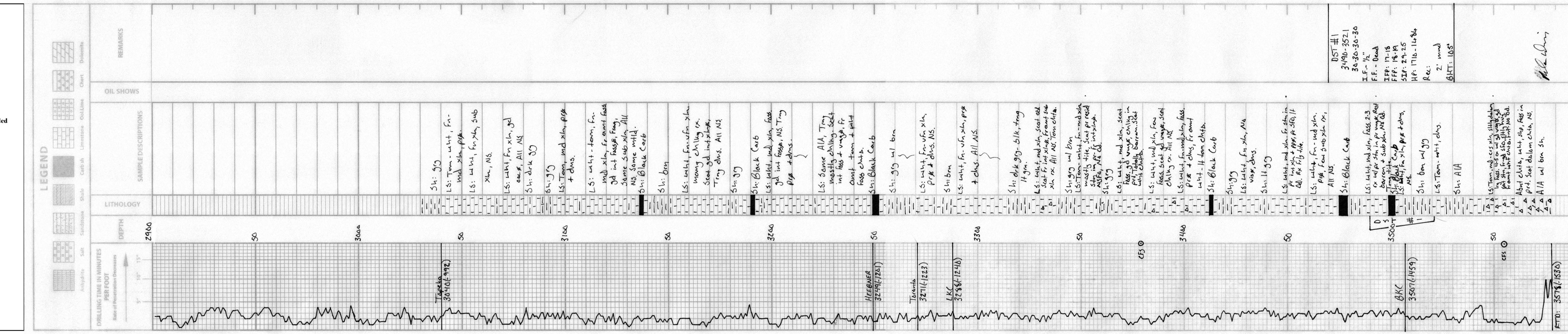
Reference Well For Structural Comparison **Black Petroleum Inc. Lowry #1**
 NE NW NW
 Sec. 31-8s-19w

Drilling Contractor **WW Drilling, Rig #12**
 Commenced **4-15-16** Completed **4-29-16**
 Samples Saved From **3000** To **RTD**
 Drilling Time Kept From **2900** To **RTD**
 Samples Examined From **3000** To **RTD**
 Geological Supervision From **2900** To **RTD**

Elevation **2048**
 KB
 DF
 GL **2040**
 Casing Record Surface
8 5/8" @ 250'
 Production **None**
 Electrical Surveys **CNDL, DIL, MEL**

Summary and Recommendations
 Due to structural position, DST recovery, and log evaluation, it was decided to plug and abandon the well.

Respectfully Submitted,
 Marc A. Downing



GLOBAL CEMENTING, L.L.C.

2624

REMIT TO 18048 170RD
RUSSELL, KS 67665

SERVICE POINT: Russell KS

DATE <u>4-15-2016</u>	SEC. <u>31</u>	TWP. <u>8 N</u>	RANGE <u>10 W</u>	CALLED OUT	ON LOCATION <u>9:35am</u>	JOB START	JOB FINISH <u>1:30</u>
LEASE <u>WARRIOR LOWERY</u>	WELL # <u>#1</u>	LOCATION <u>Zudich 2W 6N 1W 1/2 S</u>	COUNTY <u>ROOK'S</u>	STATE <u>KANSAS</u>			
OLD OR <input checked="" type="radio"/> NEW (CIRCLE ONE)							

CONTRACTOR W-W DRIG R. #12 "CALVEN"

TYPE OF JOB Cement Surface

HOLE SIZE 12 1/4 T.D. 263'

CASING SIZE 8 5/8 New # DEPTH 263'

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX 250# MINIMUM

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG. 15-20'

PERFS

DISPLACEMENT 15.80 / BBL

EQUIPMENT

OWNER

CEMENT AMOUNT ORDERED 175 SX Comm

38CC

22GEL

COMMON @

POZMIX @

GEL @

CHLORIDE @

ASC @

HANDLING @

MILEAGE @

TOTAL

PUMP TRUCK CEMENTER Glen G.

P-2 HELPER Cody H.

BULK TRUCK

B-5 DRIVER BRANDON S.

BULK TRUCK DRIVER

REMARKS:

REN 6 NEW JOINTS OF # 8 5/8 CSG

SET @ Received CIRCULATION

Cement w/ 175 SX Comm 302.

Displaced 1 BBL H₂O

SHUT IN @ 300 #.

THANK'S

Cement DID CIRCULATE

CHARGE TO: AMERICAN PATRIOT Oil LLC.

STREET

CITY STATE ZIP

SERVICE

DEPTH OF JOB

PUMP TRUCK CHARGE

EXTRA FOOTAGE @

MILEAGE @

MANIFOLD @

TOTAL

PLUG & FLOAT EQUIPMENT

@

@

@

@

@

TOTAL

Global Cementing, L.L.C.,
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME Calvin P. Theastiel

SIGNATURE Calvin P. Theastiel

SALES TAX (If Any)

TOTAL CHARGES

DISCOUNT IF PAID IN 30 DAYS



DIAMOND TESTING, LLC
 P.O. Box 157
HOISINGTON, KANSAS 67544
 (620) 653-7550 • (800) 542-7313
 APO#18DST#1STRADDLE

Company American Patriot Oil, LLC Lease & Well No. APO #18 Waller Lowry No. 1
 Elevation 2045 EGL Formation Lansing/Kansas City "L" Effective Pay Ft. Ticket No. P0108
 Date 4-28-16 Sec. 31 Twp. 8S Range 19W County Rooks State Kansas
 Test Approved By Marc Downing Diamond Representative Michael Carroll

Formation Test No. 1 Interval Tested from 3,490 ft. to 3,521 ft. Total Depth 3,576 ft.
 Packer Depth 3,485 ft. Size 6 3/4 in. Packer Depth 3,521 ft. Size 6 3/4 in.
 Packer Depth 3,490 ft. Size 6 3/4 in. Packer Depth ft. Size in.
 Depth of Selective Zone Set 3,521 ft.

Top Recorder Depth (Inside) 3,478 ft. Recorder Number 5950 Cap. 5,000 psi.
 Bottom Recorder Depth (Outside) ft. Recorder Number Cap. psi.
 Below Straddle Recorder Depth 3,556 ft. Recorder Number 0230 Cap. 5,000 psi.

Drilling Contractor WW Drilling, LLC - Rig 12 Drill Collar Length 121 ft I.D. 2 1/4 in.
 Mud Type Chemical Viscosity 62 Weight Pipe Length ft I.D. in.
 Weight 9.4 Water Loss 7.2 cc. Drill Pipe Length 3,336 ft I.D. 3 1/2 in.
 Chlorides 4,800 P.P.M. Test Tool Length 33 ft Tool Size 3 1/2-IF in.
 Jars: Make Sterling Serial Number 11 Anchor Length 31' perf. w/55' tail pipe Size 4 1/2-FH in.
 Did Well Flow? No Reversed Out No Surface Choke Size 1 in. Bottom Choke Size 5/8 in.
 Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2-XH in.

Blow: 1st Open: Weak, surface blow increasing to 1/2 in., then decreasing to a weak, surface blow. No blow back during shut-in.
 2nd Open: No blow. No build. No blow back during shut-in.

Recovered 2 ft. of mud = .009840 bbls. (Grind out: 100%-mud)
 Recovered ft. of
 Recovered ft. of
 Recovered ft. of
 Recovered ft. of
 Recovered ft. of

Remarks Tool Sample Grind Out: 100%-mud with oil specks
Below Straddle Psi: 1,400

Time Set Packer(s) 11:04 P.M. Time Started off Bottom 1:04 A.M. Maximum Temperature 105°
 Initial Hydrostatic Pressure.....(A) 1710 P.S.I.
 Initial Flow Period.....Minutes 30 (B) 17 P.S.I. to (C) 18 P.S.I.
 Initial Closed In Period.....Minutes 30 (D) 29 P.S.I.
 Final Flow Period.....Minutes 30 (E) 18 P.S.I. to (F) 19 P.S.I.
 Final Closed In Period.....Minutes 30 (G) 25 P.S.I.
 Final Hydrostatic Pressure.....(H) 1686 P.S.I.



Hoisington, Kansas

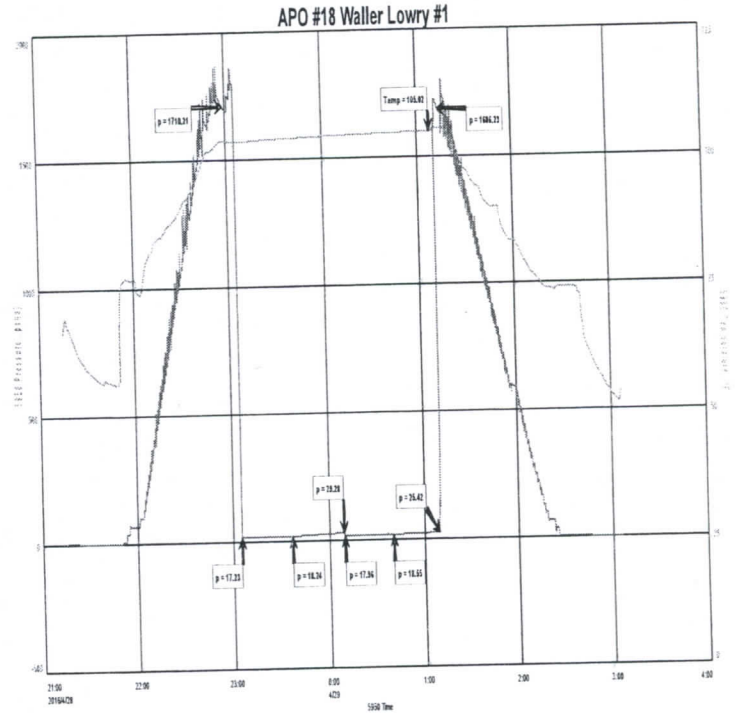
Michael Carroll
 620-617-0368
 carroll.dtlc@gmail.com

General Information

Company Name American Patriot Oil, LLC

Contact	Douglas Stewart
Well Name	APO #18 Waller Lowry #1
Unique Well ID	Dst #1 L/KC "L" 3490-3521' Straddle
Surface Location	Sec 31-8s-19w Rooks County
Field	Wildcat
Well Type	Vertical
Test Type	Drill Stem Test
Well Operator	American Patriot Oil, LLC

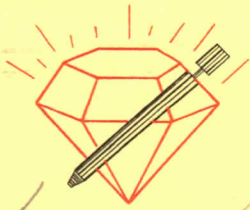
Formation	Dst #1 L/KC "L" 3490-3521' Straddle
Well Fluid Type	01 Oil
Test Purpose	Initial Test
Start Test Date	2016/04/28
Start Test Time	21:15:00
Final Test Time	03:10:00
Job Number	P0108
Report Date	2016/04/28
Prepared By	Michael Carroll



TEST RECOVERY

Remarks Recovery: 2' Mud 100% M

Tool Sample: 100% M With Oil Specks



DIAMOND TESTING, LLC
 P.O. Box 157
 HOISINGTON, KANSAS 67544-0157
 (800) 542-7313

TIME ON: 2115 4-28
 TIME OFF: 0310 4-29

DRILL-STEM TEST TICKET

FILE: AP0#18135#1

Company AMERICAN PATRIOT OIL LLC Lease & Well No. AP0#18 WALKER LOWRY
 Contractor WN Rig 12 Charge to AMERICAN PATRIOT OIL LLC
 Elevation 2045 EST Formation LANS/KC "L" Effective Pay _____ Ft. Ticket No. P0108
 Date 4-28-16 Sec. 21 Twp. 8 S Range 19 W County HOOKS State KANSAS
 Test Approved By _____ Diamond Representative MICHAEL CARROLL

Formation Test No. 1 Interval Tested from 3490 ft. to 3521 ft. Total Depth 3516 ft.
 Packer Depth 3485 ft. Size 6 3/4 in. Packer depth 3521 ft. Size 6 3/4 in.
 Packer Depth 3490 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.
 Depth of Selective Zone Set _____

Top Recorder Depth (Inside) 3478 ft. Recorder Number 5950 Cap. 5K P.S.I.
 Bottom Recorder Depth (Outside) _____ ft. Recorder Number _____ Cap. _____ P.S.I.
 Below Straddle Recorder Depth 3556 ft. Recorder Number 0290 Cap. 5K P.S.I.

Mud Type CHEM Viscosity 62 Drill Collar Length 121 ft. I.D. 2 1/4 in.
 Weight 9.4 Water Loss 7.2 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in.
 Chlorides 4800 P.P.M. Drill Pipe Length 3336 ft. I.D. 3 1/2 in.
 Jars: Make STERLING Serial Number 14) 11 Test Tool Length 33 ft. Tool Size 3 1/2-IF in.
 Did Well Flow? No Reversed Out No Anchor Length 31' (55' TAIL) ft. Size 4 1/2-FH in.
 Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: W38-BUILT TO 1/2" THEN DECREASED TO W38 No BB
 2nd Open: No Blow - No Buils No BB

Recovered 2 ft. of MUD 100% M
 Recovered 2 ft. of TOTAL FLUID
 Recovered _____ ft. of _____
 Recovered _____ ft. of _____

Recovered _____ ft. of _____
 Recovered _____ ft. of _____
 Remarks: TOOK SAMPLE: 100% M WITH PIN SPECKS
KNOW STRADDLE PSI: 1400

Price Job
Other Charges <u>190 MILKS</u>
Insurance
Total

Time Set Packer(s) 11:04 A.M. Time Started Off Bottom 1:04 P.M. Maximum Temperature 105°F
 Initial Hydrostatic Pressure..... (A) 1710 P.S.I.
 Initial Flow Period..... Minutes 30 (B) 17 P.S.I. to (C) 18 P.S.I.
 Initial Closed In Period..... Minutes 30 (D) 29 P.S.I.
 Final Flow Period..... Minutes 30 (E) 18 P.S.I. to (F) 19 P.S.I.
 Final Closed In Period..... Minutes 30 (G) 25 P.S.I.
 Final Hydrostatic Pressure..... (H) 1686 P.S.I.

Diamond Testing, LLC shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statement or opinion concerning the result of any test. Tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.