

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1

January 2018

Form must be Typed

Form must be Signed

All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

New Well Re-Entry Workover

Oil WSW SWD

Gas DH EOR

OG GSW

CM (Coal Bed Methane)

Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

Deepening Re-perf. Conv. to EOR Conv. to SWD
 Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or Date Reached TD Completion Date or
Recompletion Date Recompletion Date

API No.: _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE NW SE SW

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

Confidentiality Requested

Date: _____

Confidential Release Date: _____

Wireline Log Received Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

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 Geologist Report / Mud Logs <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
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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				

1. Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
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)*

Date of first Production/Injection or Resumed Production/Injection:	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> <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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PAGE 1 of 1	CUST NO 1001584	YARD # 1718	INVOICE DATE 09/26/2019
INVOICE NUMBER 93055743			

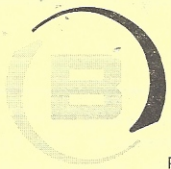
Pratt (620) 672-1201
 B GARNER THOMAS E.
 I 305 E 7TH AVE
 L SAINT JOHN
 L KS US 67576
 T
 O ATTN: ACCOUNTS PAYABLE

J LEASE NAME ELWELL #4
 O LOCATION
 B COUNTY STAFFORD
 S STATE KS
 I JOB DESCRIPTION Cement-New Well Casing/Pi
 T JOB CONTACT
 E

JOB #	EQUIPMENT #	PURCHASE ORDER NO.	TERMS	DUE DATE
41191119			Net - 30 days	10/26/2019

	QTY	U of M	UNIT PRICE	INVOICE AMOUNT
<i>For Service Dates: 09/25/2019 to 09/25/2019</i>				
0041191119				
171818294A Cement-New Well Casing/Pi 09/25/2019 NEW / PRODUCTION CASING				
Mud Flush	1,000.00	GAL	0.75	750.00 T
60/40 Poz	50.00	SK	13.50	675.00 T
AA2 Premium Cement	170.00	SK	13.50	2,295.00 T
Celloflake	43.00	LB	2.00	86.00 T
C-41P	80.00	LB	2.00	160.00 T
Salt	951.00	LB	0.25	212.75 T
Cement Friction Reducer	80.00	LB	3.00	240.00 T
Gypsum	800.00	LB	0.50	400.00 T
C-17	80.00	LB	12.00	960.00 T
BES: C-MagChem 10 CR	480.00	LB	1.50	720.00 T
Cement Gel	86.00	LB	0.25	21.50 T
Gilsonite	850.00	LB	0.50	425.00 T
Light Vehicle Mileage	25.00	MI	2.50	62.50 T
Heavy Equipment Mileage	50.00	MI	4.00	200.00 T
Plug Container Utilization Charge	1.00	EA	125.00	125.00 T
Depth Charge, 4001'-5000'	1.00	HR	1,250.00	1,250.00 T
Blending & Mixing Service Charge	220.00	SK	0.70	154.00 T
Cementing Shoe Basket Type, 5 1/2" (Blue)	1.00	EA	969.00	969.00 T
Latch Down Plug & Baffle, 5 1/2" (Blue)	1.00	EA	228.00	228.00 T
5 1/2" Basket (Blue)	2.00	EA	165.30	330.60 T
Turbolizer, 5 1/2" (Blue)	10.00	EA	62.70	627.00 T
Service Supervisor Charge	1.00	EA	75.00	75.00 T
Driver Charge	3.00	EA	35.00	105.00 T

PLEASE REMIT TO:	SEND OTHER CORRESPONDENCE TO:	SUB TOTAL	11,071.35
BASIC ENERGY SERVICES, LP	BASIC ENERGY SERVICES, LP	TAX	466.89
PO BOX 841903	801 CHERRY ST, STE 2100	INVOICE TOTAL	11,538.24
DALLAS, TX 75284-1903	FORT WORTH, TX 76102		



BASICSM
ENERGY SERVICES

10244 NE Hwy. 61
P.O. Box 8613
Pratt, Kansas 67124
Phone 620-672-1201

PRESSURE PUMPING & WIRELINE

1 of 2
TTMH
40

FIELD SERVICE TICKET
1718 18294 A

DATE _____ TICKET NO. _____

DATE OF JOB: 9-25-19		DISTRICT: Pratt		NEW WELL <input checked="" type="checkbox"/>		OLD WELL <input type="checkbox"/>		PROD <input type="checkbox"/>		INJ <input type="checkbox"/>		WDW <input type="checkbox"/>		CUSTOMER ORDER NO.:	
CUSTOMER: THOMAS GARNER inc				LEASE: Elwell				WELL NO.: 4							
ADDRESS:				COUNTY: Pratt STAFFORD				STATE: KI							
CITY:				STATE:				SERVICE CREW: MATTAI, MCGILW, HAROLD							
AUTHORIZED BY:				JOB TYPE: 2-42 5/2" long string											
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED		DATE	AM	PM	TIME				
86779	1							9-25-19			3:00				
						ARRIVED AT JOB					6:00				
19860	0.5					START OPERATION					12:11				
						FINISH OPERATION					1:15				
						RELEASED					2:00				
						MILES FROM STATION TO WELL					25				

CONTRACT CONDITIONS: (This contract must be signed before the job is commenced or merchandise is delivered).

The undersigned is authorized to execute this contract as an agent of the customer. As such, the undersigned agrees and acknowledges that this contract for services, materials, products, and/or supplies includes all of and only those terms and conditions appearing on the front and back of this document. No additional or substitute terms and/or conditions shall become a part of this contract without the written consent of an officer of Basic Energy Services LP.

SIGNED: _____
(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT
CC 151	MUD 21454	SAI	1,000		1,500 00
BC 132	60/40 P02	SA	50	27.00	1,350 00
BC 145	AA-2 Premium CMT	SA	170	28.80	4,890 00
CC 102	CELLULOSIC	lb	43	4.00	172 00
CC 105	C-41 P	lb	80	4.00	320 00
CC 111	SALT	lb	85	5.40	462 50
CC 112	CMT Friction Reducer	lb	80	6.00	480 00
CC 113	GYPSUM	lb	800	1.00	800 00
CC 187	C-17	lb	80	23.00	1,920 00
CC 189	MAG chem 10 C	lb	480	3.00	1,440 00
CC 200	CMT gel	lb	86	0.50	43 00
CC 201	SILSUNITO	lb	850	1.00	850 00
Me 101	light Veh miles	mi	25	5.00	125 00
Me 102	heavy Veh miles	mi	50	8.00	400 00
CC 504	Plug cost	ea	1	250.00	250 00
CC 5	depth charge 400' - 500'	hr	1	2,500.00	2,500 00
CC 240	blend + mix	SA	220	1.40	308 00

SUB TOTAL

CHEMICAL / ACID DATA:			

SERVICE & EQUIPMENT	%TAX ON \$
MATERIALS	%TAX ON \$
TOTAL	

SERVICE REPRESENTATIVE: Mike Mattai	THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: <i>X [Signature]</i>
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(WELL OWNER OPERATOR CONTRACTOR OR AGENT)

FIELD SERVICE ORDER NO.

Customer THOMAS GARNER INC		Lease No.		Date 9-25-19	
Lease Elwell		Well # 4			
Field Order # 18244	Station Pratt	Casing 5 1/2	Depth 4055	County Pratt	State KS
Type Job Z-42 5 1/2" long string			Formation RTD	Legal Description 25-24S 13W	

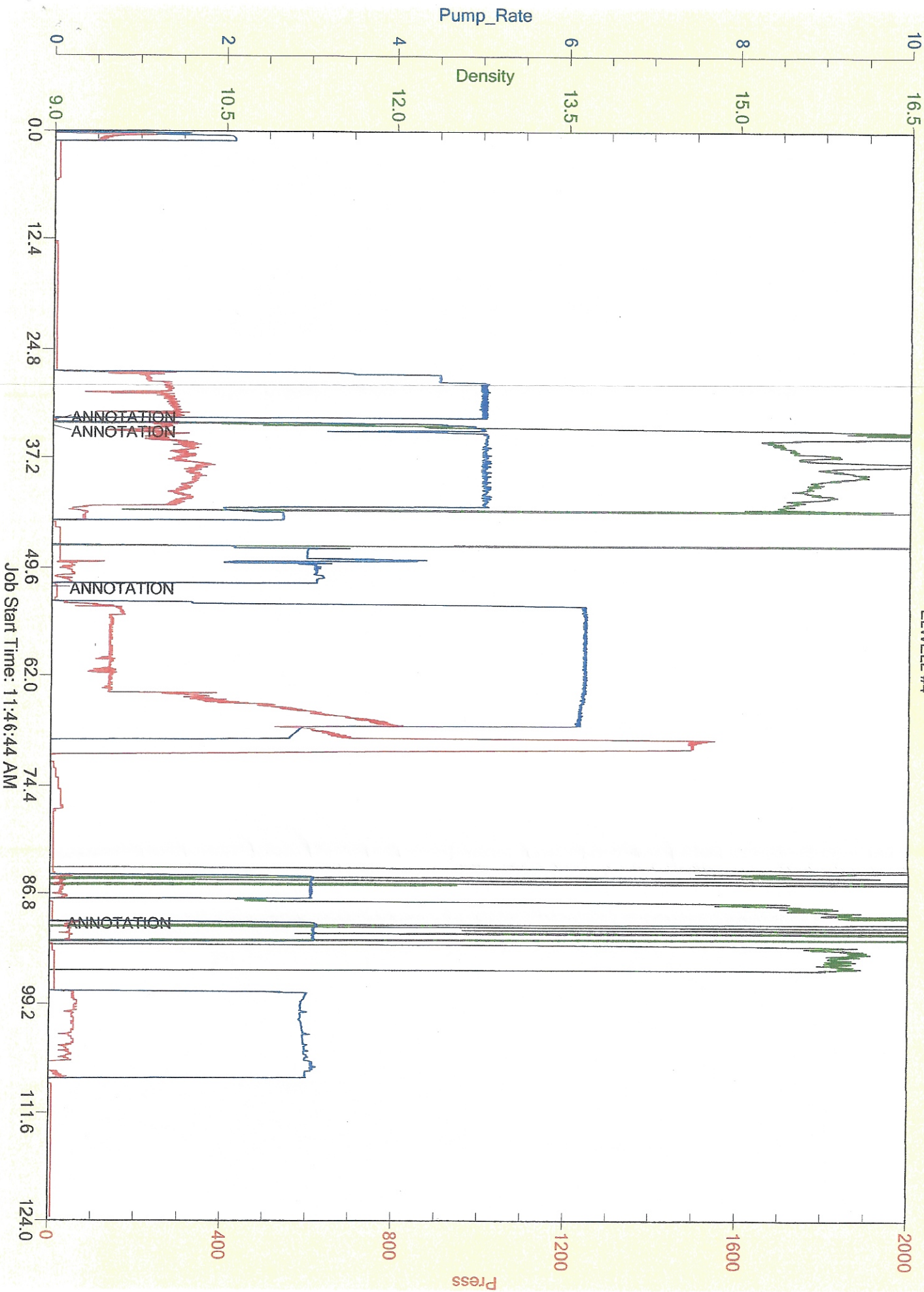
PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size 5 1/2	Tubing Size	Shots/Ft		Acid 170 SV AA-2	RATE	PRESS	ISIP	
Depth 4048	Depth	From	To	Pre Pad 50 SV 60/100 P32	Max		5 Min.	
Volume 46.3	Volume	From	To	Pad	Min		10 Min.	
Max Press 2005	Max Press	From	To	Frac	Avg		15 Min.	
Well Connection	Annulus Vol.	From	To		HHP Used		Annulus Pressure	
Plug Depth 4054.33	Packer Depth	From	To	Flush 96	Gas Volume		Total Load	

Customer Representative Thomas Garner	Station Manager Westman	Treater MATTIA
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Service Units 8335	77694	86779	70909	14506				
Driver Names MATTIA	M. Garner		Harold					

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
6:00					ON location / Safety meeting
8:05					Run 5 1/2 csg w. Baker Shov. 13.67 Shov
					Baker Shov. 1,3 Tubing 1,3,5,7,9,11,13,15
10:00					Csg on bottom
10:09					Hook to csg / Break over w Rig
11:40	400				Set Baker Shov, Pump 100 bbl mud
12:11	220		12	4.5	Pump 100 gal. mud flush
12:16	220		5	4.5	Pump 5 bbl water
12:18	230		45	5	Mix 170 SV, AA-2
12:31			4		Wash Pump + Lin / Drop Plug
12:38	140			6.2	START d. placement
12:40	300		62	6.2	1st Pressure
12:52	550		86	3	SLOW RATE
12:54	1500		96		Plug down / released + hold
1:10					Plug rat + mouse hole
					Give them 50B
					JOB COMPLETE
					THANK YOU!
					M. W. Garner
					M. W. Harold

THOMAS GARNER, INC
ELWELL #4



Job Start Time: 11:46:44 AM



PAGE	CUST NO	YARD #	INVOICE DATE
1 of 1	1001584	1718	09/18/2019
INVOICE NUMBER			
93050617			

Pratt (620) 672-1201
 B GARNER THOMAS E.
 I 305 E 7TH AVE
 L SAINT JOHN
 L KS US 67576
 T
 O ATTN: ACCOUNTS PAYABLE

J LEASE NAME ELWELL 4
 O LOCATION
 B COUNTY STAFFORD
 S STATE KS
 I JOB DESCRIPTION Cement-New Well Casing/Pi
 T JOB CONTACT
 E

JOB #	EQUIPMENT #	PURCHASE ORDER NO.	TERMS	DUE DATE
41190382	20920		Net - 30 days	10/18/2019

	QTY	U of M	UNIT PRICE	INVOICE AMOUNT
<i>For Service Dates: 09/17/2019 to 09/17/2019</i>				
0041190382				
171818140A Cement-New Well Casing/Pi 09/17/2019 SURFACE CASING				
60/40 Poz	350.00	SK	10.53	3,685.50 T
Celloflake	88.00	LB	1.56	137.28 T
Calcium Chloride	903.00	LB	0.39	352.17 T
Light Vehicle Mileage	25.00	MI	1.95	48.75
Heavy Equipment Mileage	50.00	MI	3.12	156.00
Plug Container Utilization Charge	1.00	EA	97.50	97.50
Depth Charge, 0'-1000'	1.00	HR	468.00	468.00
Blending & Mixing Service Charge	1.00	SK	191.10	191.10
Top Rubber Cement Plug, 8 5/8"	1.00	EA	87.75	87.75
Service Supervisor Charge	1.00	EA	75.00	75.00
Driver Charge	3.00	EA	35.00	105.00

PLEASE REMIT TO:	SEND OTHER CORRESPONDENCE TO:	SUB TOTAL	5,404.05
BASIC ENERGY SERVICES, LP	BASIC ENERGY SERVICES, LP	TAX	313.12
PO BOX 841903	801 CHERRY ST, STE 2100	INVOICE TOTAL	5,717.17
DALLAS, TX 75284-1903	FORT WORTH, TX 76102		

Customer <i>THOMAS GARNER INC.</i>	Lease No.	Date <i>9-17-19</i>
Lease <i>ELWELL</i>	Well # <i>4</i>	
Field Order # <i>18140</i>	Station <i>PRATT, Ks.</i>	Casing <i>8 5/8"</i>
Type Job <i>8 5/8" S.P.</i>	Depth <i>437'</i>	County <i>STAFFORD</i>
	Formation	State <i>Ks.</i>
		Legal Description <i>23-245-13W</i>

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size <i>8 5/8"</i>	Tubing Size <i>5 1/2"</i>	Shots/Ft <i>350</i>	Acid <i>60/40 POZ</i>	Pre Pad <i>@ 1.21 CVFT³</i>	RATE	PRESS	ISIP	
Depth <i>433'</i>	Depth	From	To	Pad	Max		5 Min.	
Volume	Volume	From	To	Frac	Min		10 Min.	
Max Press <i>5000 PSI</i>	Max Press	From	To	Flush <i>25.5 BBL</i>	Avg		15 Min.	
Well Connection	Annulus Vol.	From	To		HHP Used		Annulus Pressure	
Plug Depth <i>423'</i>	Packer Depth	From	To		Gas Volume		Total Load	

Customer Representative <i>TOM GARNER</i>	Station Manager <i>J.W.</i>	Treater <i>K. LESLEY</i>
Service Units <i>916817 84980 20920 19960 21010</i>		
Driver Names <i>LESLEY MARQUEZ DIAZ</i>		

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
<i>1:15 AM</i>					<i>ON LOCATION - SAFETY MEETING</i>
<i>3:00 AM</i>					<i>RUN 10 JTS. 8 5/8" x 2 1/2"</i>
<i>3:45 AM</i>					<i>CSG. ON BOTTOM</i>
<i>4:00 AM</i>					<i>HOOK UP TO CSG./BREAK CIRC. W/RIG</i>
			<i>5</i>	<i>5</i>	<i>H2O AHEAD</i>
			<i>75</i>	<i>5</i>	<i>MIX 350 SKS @ 14.8 PPG</i>
					<i>SHOT DOWN - DROP T.R. PLUG</i>
			<i>0</i>	<i>5</i>	<i>START DISPLACEMENT</i>
			<i>15</i>	<i>4</i>	<i>SLOW RATE</i>
<i>4:30 AM</i>			<i>25.5</i>	<i>3</i>	<i>PLUG @ DESIRED DEPTH</i>
					<i>CIRC. THRU JOB</i>
					<i>CIRC. 10 BBL TO PIT</i>
<i>5:00 AM</i>					<i>JOB COMPLETE,</i>
					<i>THANKS -</i>
					<i>KEVIN LESLEY</i>

Bob's Hauling Service Inc.

P.O. Box 277

St John ,Ks. 67576

Phone 1-620-549-3228-Office

Phone 1-620-793-4017 - Bob's Mobile

Invoice

Date	Invoice #
9/23/2019	28617

Bill To
Dropzone Investments, Inc. C/O Tom Garner 305 East 7th St John, Kansas 67576

Project	Terms	PO Number
Elmore	Net 30	

Item	Qty	Description	Rate	Amount
Vac Truck	6	Haul 4 loads (320 bbls) salt water from reserve pit to SWD -- 3 trucks -- service date -- 9/20/19	87.50	525.00
SWD Charge	4	SWD Charge	20.00	80.00
<i>Thanks Bob</i>				
<i>fl</i>				

Thank you for your business.	E-mail	Total	\$605.00
	bobshaulingservice@gmail.com		

Bob's Hauling Service Inc.

Invoice

P.O. Box 277

St John ,Ks. 67576

Phone 1-620-549-3228-Office

Phone 1-620-793-4017 - Bob's Mobile

Date	Invoice #
9/30/2019	28707

Bill To
Dropzone Investments, Inc. C/O Tom Garner 305 East 7th St John, Kansas 67576

Project	Terms	PO Number
Elmore <i>Ewell</i>	Net 30	

Item	Qty	Description	Rate	Amount
Vac Truck	4	160 bbls water from reserve pit -- haul to SWD -- service date -- 9/30/19	87.50	350.00
SWD Charge	2	SWD Charge	20.00	40.00
<i>Thanks Bob</i>				
<i>M</i>				

Thank you for your business.	E-mail	Total	\$390.00
	bobshaulingservice@gmail.com		

Bob's Hauling Service Inc.

P.O. Box 277

St John ,Ks. 67576

Phone 1-620-549-3228-Office

Phone 1-620-793-4017 - Bob's Mobile

Invoice

Date	Invoice #
9/25/2019	28629

Bill To
Dropzone Investments, Inc. C/O Tom Garner 305 East 7th St John, Kansas 67576

Project	Terms	PO Number
Elmore	Net 30	

Item	Qty	Description	Rate	Amount
Vac Truck	4.5	Haul 3 loads (240 bbls) of water from reserve pit -- haul to SWD -- 2 trucks -- service date -- 9/24/19	87.50	393.75
SWD Charge	3	SWD Charge	20.00	60.00
<i>Thanks Bob</i>				
<i>M</i>				

Thank you for your business.	E-mail	Total	\$453.75
	bobshaulingservice@gmail.com		

2,176.70



DRILL STEM TEST REPORT

Prepared For: **Thomas Garner Inc**

305 E. 7th
St. John, KS. 67576

ATTN: Joshua Austin

Elwell #4

23-24s-13w Stafford,KS

Start Date: 2019.09.20 @ 23:32:05

End Date: 2019.09.21 @ 07:12:20

Job Ticket #: 64942 DST #: 1

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2019.09.26 @ 15:35:39



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Thomas Garner Inc

23-24s-13w Stafford, KS

305 E. 7th
St. John, KS. 67576

Elwell #4

Job Ticket: 64942

DST#: 1

ATTN: Joshua Austin

Test Start: 2019.09.20 @ 23:32:05

GENERAL INFORMATION:

Formation: **LKC D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:01:20

Time Test Ended: 07:12:20

Test Type: Conventional Bottom Hole (Initial)

Tester: Matt Smith

Unit No: 68

Interval: 3565.00 ft (KB) To 3596.00 ft (KB) (TVD)

Reference Elevations: 1917.00 ft (KB)

Total Depth: 3596.00 ft (KB) (TVD)

1906.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 8931

Inside

Press@RunDepth: 72.02 psig @ 3566.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.09.20

End Date: 2019.09.21

Last Calib.: 2019.09.21

Start Time: 23:32:10

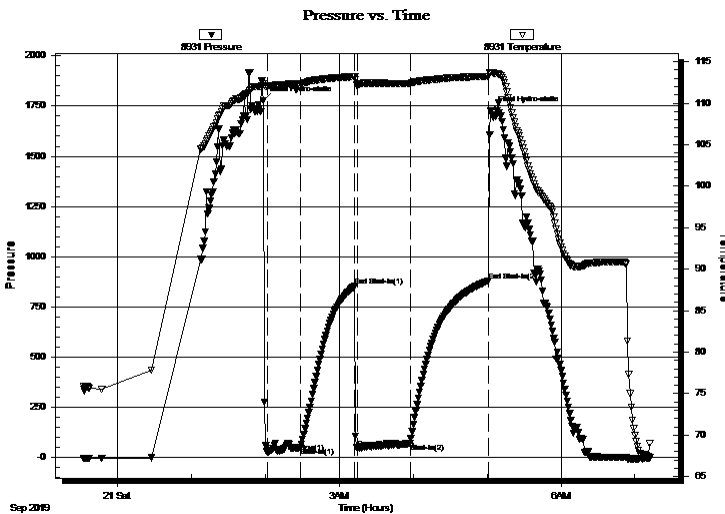
End Time: 07:12:19

Time On Btm: 2019.09.21 @ 01:58:05

Time Off Btm: 2019.09.21 @ 05:03:05

TEST COMMENT: IF: Strong Blow . B.O.B. in 4 mins. Built to 77.26".
IS: No Blow .
FF: Strong Blow . B.O.B., immediate. Built to 130.44".
FS: No Blow .

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1777.53	112.35	Initial Hydro-static
4	28.65	112.09	Open To Flow (1)
31	49.67	112.33	Shut-In(1)
75	855.12	113.19	End Shut-In(1)
77	46.05	112.16	Open To Flow (2)
120	72.02	112.38	Shut-In(2)
184	879.87	113.25	End Shut-In(2)
185	1725.00	113.71	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	GOWCM 45%g 30%o 8%w 17%m	0.46
60.00	GOWCM 54%g 25%o 6%w 15%m	0.46
60.00	GOCM 25%g 30%o 45%m	0.46
0.00	2286' GIP	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Thomas Garner Inc

23-24s-13w Stafford,KS

305 E. 7th
St. John, KS. 67576

Elwell #4

Job Ticket: 64942

DST#: 1

ATTN: Joshua Austin

Test Start: 2019.09.20 @ 23:32:05

Tool Information

Drill Pipe:	Length: 3344.00 ft	Diameter: 3.80 inches	Volume: 46.91 bbl	Tool Weight: 2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 214.00 ft	Diameter: 2.80 inches	Volume: 1.63 bbl	Weight to Pull Loose: 72000.00 lb
			<u>Total Volume: 48.54 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	3565.00 ft			Final 68000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	31.00 ft			
Tool Length:	51.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3546.00	
Shut In Tool	5.00			3551.00	
Hydraulic tool	5.00			3556.00	
Packer	4.00			3560.00	20.00 Bottom Of Top Packer
Packer	5.00			3565.00	
Stubb	1.00			3566.00	
Recorder	0.00	8931	Inside	3566.00	
Recorder	0.00	8788	Outside	3566.00	
Perforations	27.00			3593.00	
Bullnose	3.00			3596.00	31.00 Bottom Packers & Anchor
Total Tool Length:	51.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Thomas Garner Inc

23-24s-13w Stafford,KS

305 E. 7th
St. John, KS. 67576

Elwell #4

Job Ticket: 64942

DST#: 1

ATTN: Joshua Austin

Test Start: 2019.09.20 @ 23:32:05

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

3400 ppm

Viscosity: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.76 in³

Gas Cushion Type:

Resistivity: 3400.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	GOWCM 45%g 30%o 8%w 17%m	0.457
60.00	GOWCM 54%g 25%o 6%w 15%m	0.457
60.00	GOCM 25%g 30%o 45%m	0.457
0.00	2286' GIP	0.000

Total Length: 180.00 ft

Total Volume: 1.371 bbl

Num Fluid Samples: 0

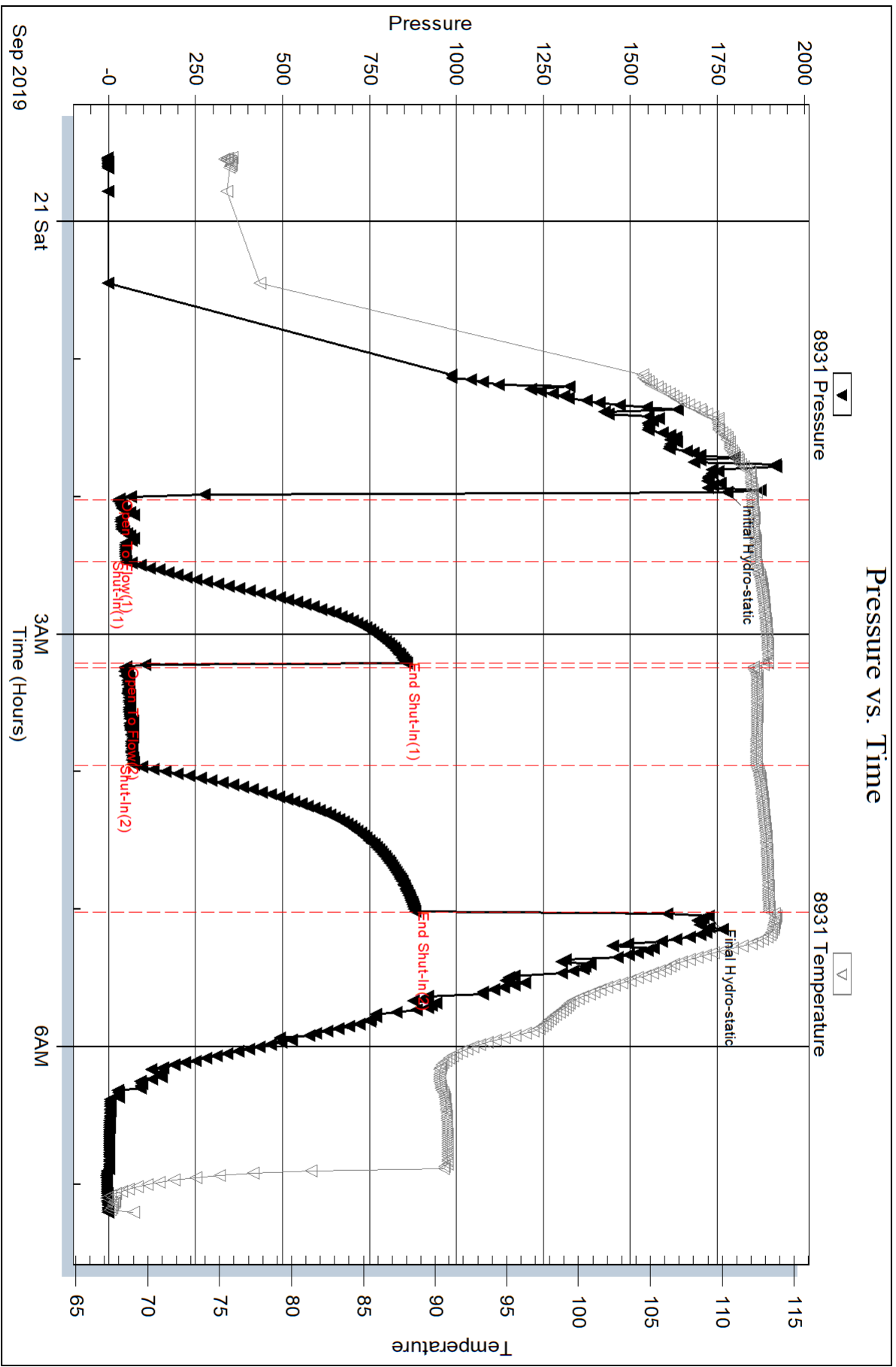
Num Gas Bombs: 0

Serial #: None

Laboratory Name:

Laboratory Location:

Recovery Comments:

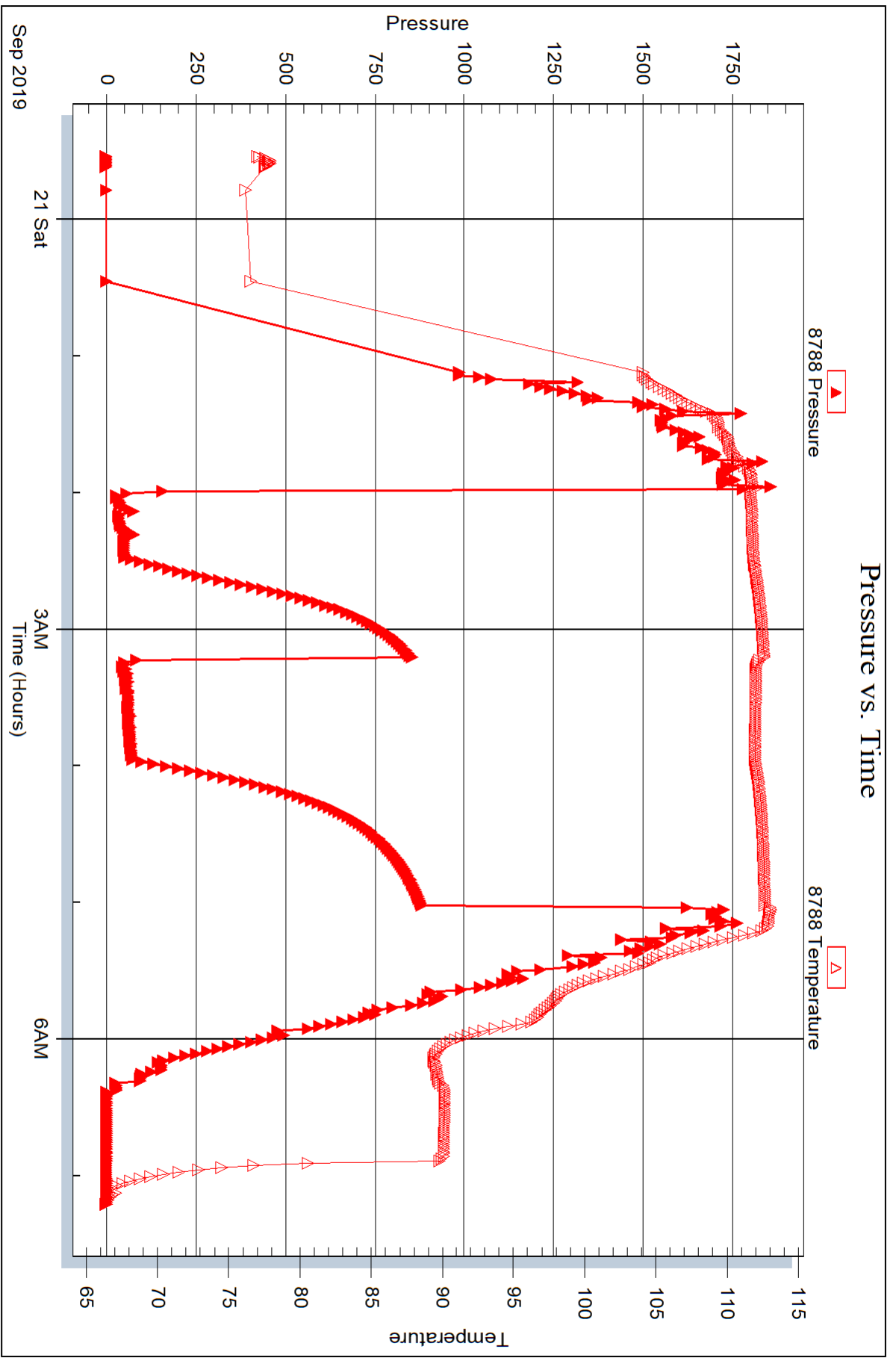


Serial #: 8788

Outside Thomas Garner Inc

Ewell #4

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Thomas Garner Inc**

305 E. 7th
St. John, KS. 67576

ATTN: Joshua Austin

Elwell #4

23-24s-13w Stafford,KS

Start Date: 2019.09.21 @ 18:06:32

End Date: 2019.09.22 @ 00:35:47

Job Ticket #: 64943 DST #: 2

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2019.09.26 @ 15:33:49



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Thomas Garner Inc

23-24s-13w Stafford, KS

305 E. 7th
St. John, KS. 67576

Elwell #4

Job Ticket: 64943

DST#: 2

ATTN: Joshua Austin

Test Start: 2019.09.21 @ 18:06:32

GENERAL INFORMATION:

Formation: **LKC H**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:45:32

Time Test Ended: 00:35:47

Test Type: Conventional Bottom Hole (Reset)

Tester: Matt Smith

Unit No: 68

Interval: 3652.00 ft (KB) To 3675.00 ft (KB) (TVD)

Reference Elevations: 1917.00 ft (KB)

Total Depth: 3675.00 ft (KB) (TVD)

1906.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 8931

Inside

Press@RunDepth: 33.44 psig @ 3653.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.09.21

End Date:

2019.09.22

Last Calib.:

2019.09.22

Start Time: 18:06:37

End Time:

00:35:46

Time On Btm:

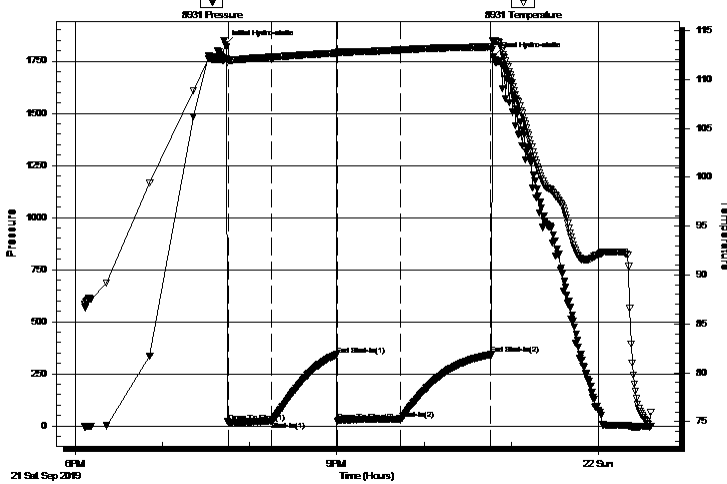
2019.09.21 @ 19:43:17

Time Off Btm:

2019.09.21 @ 22:47:47

TEST COMMENT: IF: Strong Blow . B.O.B. in 20 mins. Built to 15.52".
IS: No Blow .
FF: Strong Blow . B.O.B. in 11 mins. Built to 18.95".
FS: No Blow .

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1828.01	112.13	Initial Hydro-static
3	18.41	111.89	Open To Flow (1)
32	22.05	112.28	Shut-In(1)
77	341.62	112.68	End Shut-In(1)
78	22.99	112.72	Open To Flow (2)
121	33.44	113.01	Shut-In(2)
183	342.09	113.32	End Shut-In(2)
185	1769.75	113.94	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	GSOCM 15%g 5%o 80%m	0.15
0.00	574' GIP	0.00

* Recovery from multiple tests

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Thomas Garner Inc

23-24s-13w Stafford,KS

305 E. 7th
St. John, KS. 67576

Elwell #4

Job Ticket: 64943

DST#: 2

ATTN: Joshua Austin

Test Start: 2019.09.21 @ 18:06:32

Tool Information

Drill Pipe:	Length: 3439.00 ft	Diameter: 3.80 inches	Volume: 48.24 bbl	Tool Weight:	2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	24000.00 lb
Drill Collar:	Length: 214.00 ft	Diameter: 2.80 inches	Volume: 1.63 bbl	Weight to Pull Loose:	75000.00 lb
			<u>Total Volume: 49.87 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial	68000.00 lb
Depth to Top Packer:	3652.00 ft			Final	68000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	23.00 ft				
Tool Length:	43.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3633.00	
Shut In Tool	5.00			3638.00	
Hydraulic tool	5.00			3643.00	
Packer	4.00			3647.00	20.00 Bottom Of Top Packer
Packer	5.00			3652.00	
Stubb	1.00			3653.00	
Recorder	0.00	8931	Inside	3653.00	
Recorder	0.00	8788	Outside	3653.00	
Perforations	19.00			3672.00	
Bullnose	3.00			3675.00	23.00 Bottom Packers & Anchor
Total Tool Length:	43.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Thomas Garner Inc

23-24s-13w Stafford,KS

305 E. 7th
St. John, KS. 67576

Elwell #4

Job Ticket: 64943

DST#: 2

ATTN: Joshua Austin

Test Start: 2019.09.21 @ 18:06:32

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

7800 ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.57 in³

Gas Cushion Type:

Resistivity: 7800.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
20.00	GSOCM 15%g 5%o 80%m	0.152
0.00	574' GIP	0.000

Total Length: 20.00 ft Total Volume: 0.152 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #: None

Laboratory Name:

Laboratory Location:

Recovery Comments:

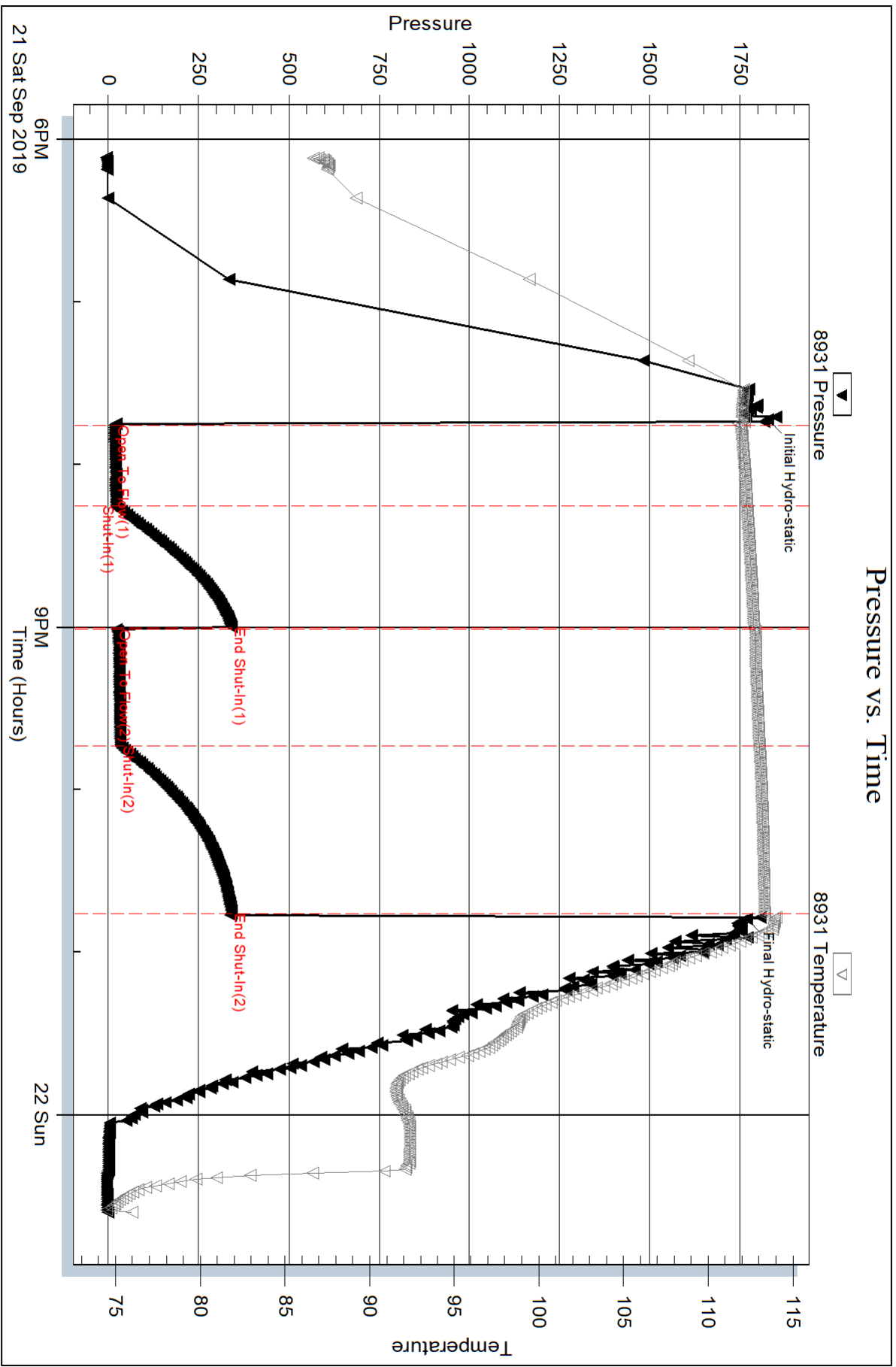
Serial #: 8931

Inside

Thomas Garner Inc

Ewell #4

DST Test Number: 2

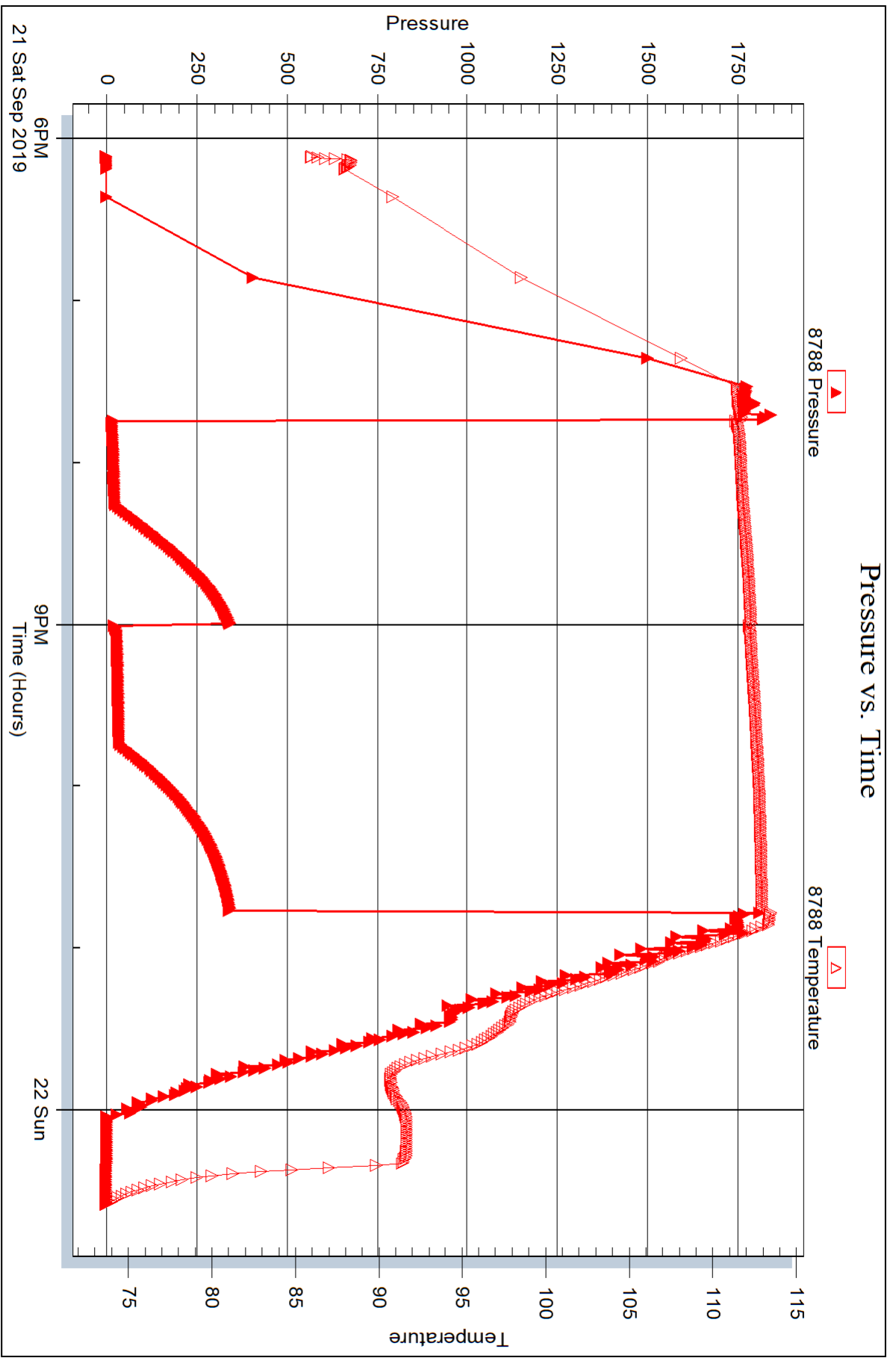


Serial #: 8788

Outside Thomas Garner Inc

Ewell #4

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 64943

Printed: 2019.09.26 @ 15:33:50



DRILL STEM TEST REPORT

Prepared For: **Thomas Garner Inc**

305 E. 7th
St. John, KS. 67576

ATTN: Joshua Austin

Elwell #4

23-24s-13w Stafford,KS

Start Date: 2019.09.22 @ 08:30:57

End Date: 2019.09.22 @ 15:08:57

Job Ticket #: 64944 DST #: 3

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2019.09.26 @ 15:32:28



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Thomas Garner Inc

23-24s-13w Stafford,KS

305 E. 7th
St. John, KS. 67576

Elwell #4

Job Ticket: 64944

DST#: 3

ATTN: Joshua Austin

Test Start: 2019.09.22 @ 08:30:57

GENERAL INFORMATION:

Formation: **LKC I - J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:08:57

Time Test Ended: 15:08:57

Test Type: Conventional Bottom Hole (Reset)

Tester: Matt Smith

Unit No: 68

Interval: 3675.00 ft (KB) To 3620.00 ft (KB) (TVD)

Reference Elevations: 1917.00 ft (KB)

Total Depth: 32720.00 ft (KB) (TVD)

1906.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 8931

Inside

Press@RunDepth: 101.80 psig @ 3676.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.09.22 End Date: 2019.09.22

Last Calib.: 2019.09.22

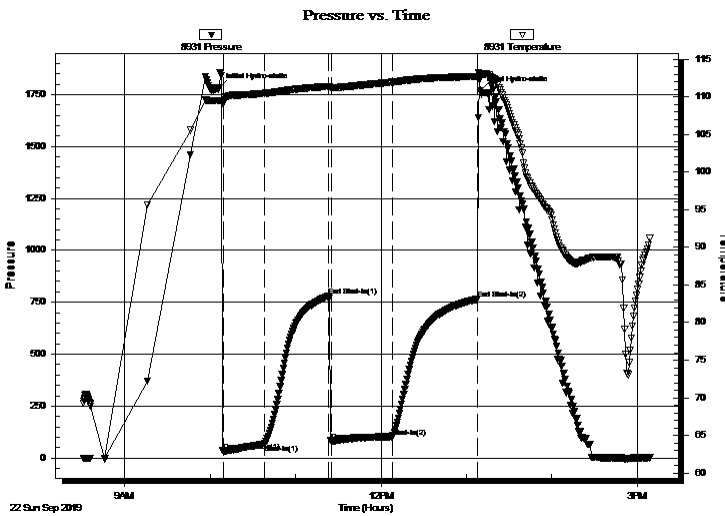
Start Time: 08:31:02 End Time: 15:08:56

Time On Btm: 2019.09.22 @ 10:06:12

Time Off Btm: 2019.09.22 @ 13:09:57

TEST COMMENT: IF: Strong Blow . B.O.B. in 5 mins. Built to 28.37".
IS: No Blow .
FF: Strong Blow . B.O.B. in 7 mins. Built to 30.96".
FS: No Blow .

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1784.63	109.45	Initial Hydro-static
3	30.70	109.07	Open To Flow (1)
32	66.84	110.45	Shut-In(1)
77	779.11	111.38	End Shut-In(1)
79	81.97	111.22	Open To Flow (2)
122	101.80	111.95	Shut-In(2)
182	764.25	112.71	End Shut-In(2)
184	1770.29	113.02	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	GOWCM 17%g 33%o 5%w 45%m	0.46
60.00	GOWCM 45%g 30%o 10%w 15%m	0.46
60.00	GOWCM 33%g 27%o 20%w 20%m	0.46
30.00	GV SOCM 5%g 2%o 93%m	0.23
0.00	736' GIP	0.00

* Recovery from multiple tests

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Thomas Garner Inc

23-24s-13w Stafford,KS

305 E. 7th
St. John, KS. 67576

Elwell #4

Job Ticket: 64944

DST#: 3

ATTN: Joshua Austin

Test Start: 2019.09.22 @ 08:30:57

Tool Information

Drill Pipe:	Length: 3471.00 ft	Diameter: 3.80 inches	Volume: 48.69 bbl	Tool Weight:	2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	24000.00 lb
Drill Collar:	Length: 214.00 ft	Diameter: 2.80 inches	Volume: 1.63 bbl	Weight to Pull Loose:	74000.00 lb
			<u>Total Volume: 50.32 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial	70000.00 lb
Depth to Top Packer:	3675.00 ft			Final	70000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	45.00 ft				
Tool Length:	65.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			
Tool Comments:					

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Change Over Sub	1.00			3656.00	
Shut In Tool	5.00			3661.00	
Hydraulic tool	5.00			3666.00	
Packer	4.00			3670.00	20.00 Bottom Of Top Packer
Packer	5.00			3675.00	
Stubb	1.00			3676.00	
Recorder	0.00	8931	Inside	3676.00	
Recorder	0.00	8788	Outside	3676.00	
Perforations	4.00			3680.00	
Change Over Sub	1.00			3681.00	
Blank Spacing	32.00			3713.00	
Change Over Sub	1.00			3714.00	
Perforations	3.00			3717.00	
Bullnose	3.00			3720.00	45.00 Bottom Packers & Anchor

Total Tool Length: 65.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Thomas Garner Inc

23-24s-13w Stafford,KS

305 E. 7th
St. John, KS. 67576

Elwell #4

Job Ticket: 64944

DST#: 3

ATTN: Joshua Austin

Test Start: 2019.09.22 @ 08:30:57

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

6200 ppm

Viscosity: 65.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.97 in³

Gas Cushion Type:

Resistivity: 6200.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
60.00	GOWCM 17%g 33%o 5%w 45%m	0.457
60.00	GOWCM 45%g 30%o 10%w 15%m	0.457
60.00	GOWCM 33%g 27%o 20%w 20%m	0.457
30.00	GVSOCM 5%g 2%o 93%m	0.228
0.00	736' GIP	0.000

Total Length: 210.00 ft Total Volume: 1.599 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #: None

Laboratory Name:

Laboratory Location:

Recovery Comments: Tried to get RW. When dumping out oil cut it all dumped out.

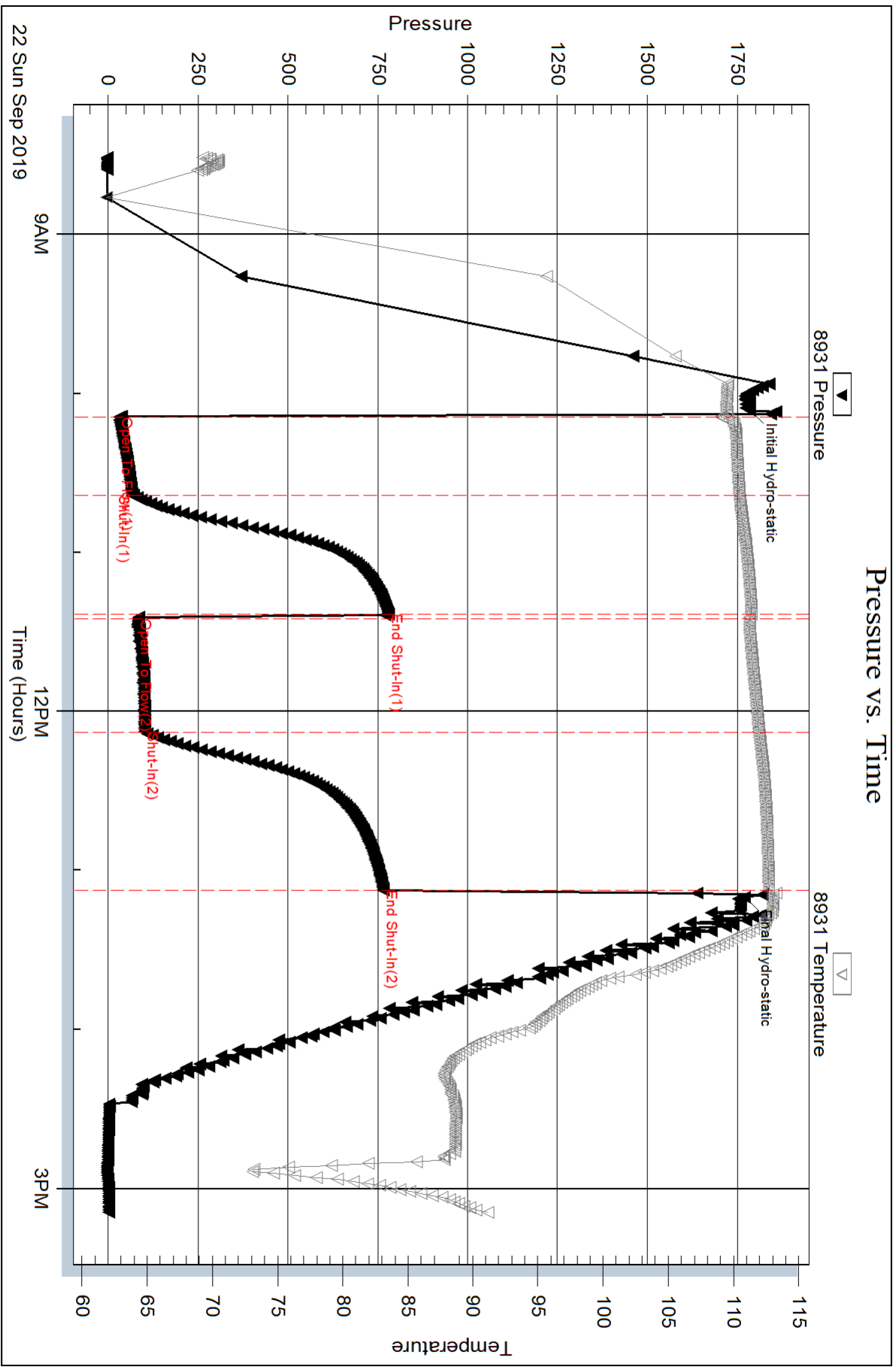
Serial #: 8931

Inside

Thomas Garner Inc

Ewell #4

DST Test Number: 3



Triobite Testing, Inc

Ref. No: 64944

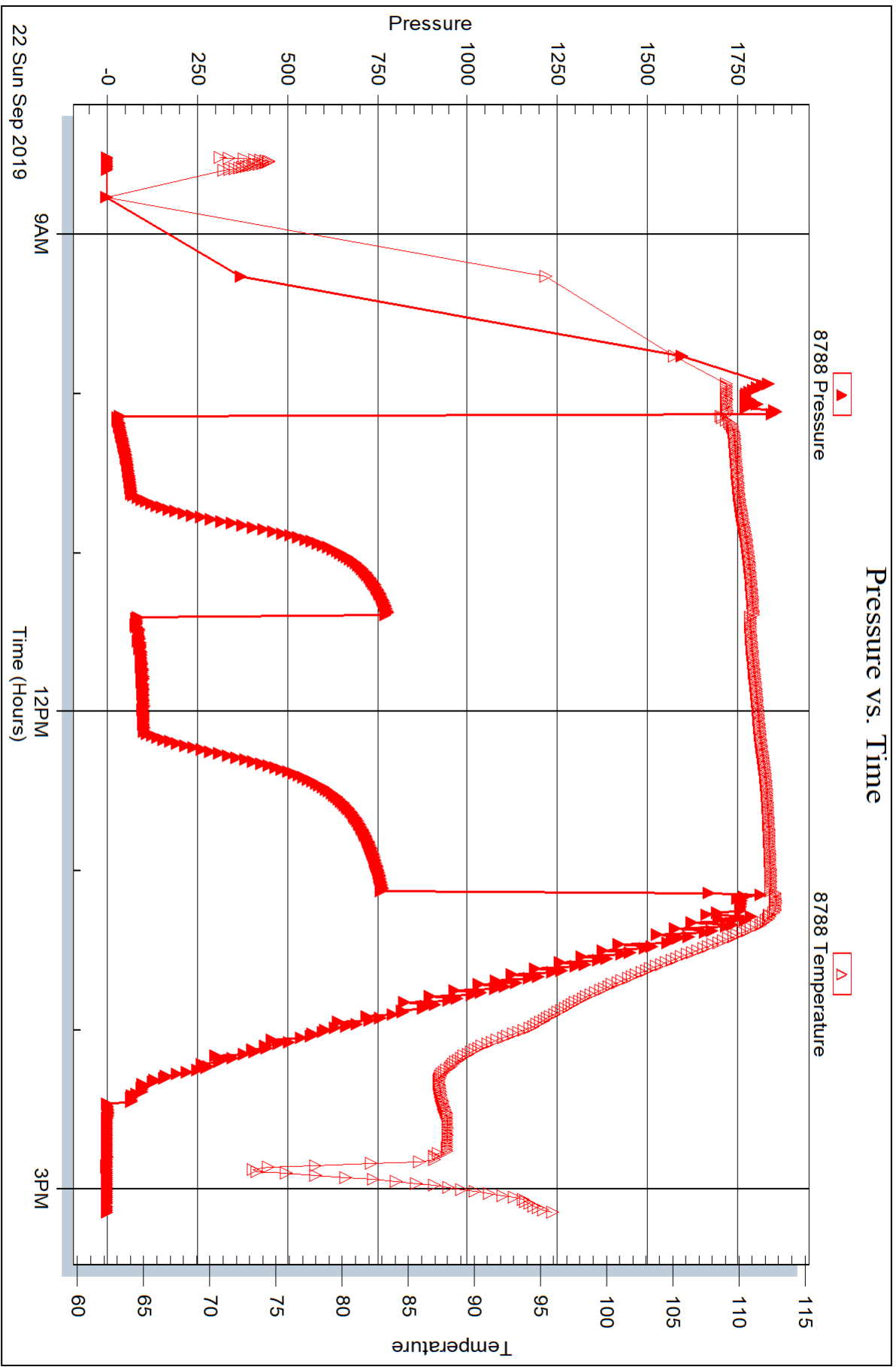
Printed: 2019.09.26 @ 15:32:29

Serial #: 8788

Outside Thomas Garner Inc

Ewell #4

DST Test Number: 3



Triobite Testing, Inc

Ref. No: 64944

Printed: 2019.09.26 @ 15:32:30



DRILL STEM TEST REPORT

Prepared For: **Thomas Garner Inc**

305 E. 7th
St. John, KS. 67576

ATTN: Joshua Austin

Elwell #4

23-24s-13w Stafford,KS

Start Date: 2019.09.24 @ 01:29:08

End Date: 2019.09.24 @ 10:33:23

Job Ticket #: 64945 DST #: 4

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2019.09.26 @ 15:28:29



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Thomas Garner Inc

23-24s-13w Stafford, KS

305 E. 7th
St. John, KS. 67576

Elwell #4

Job Ticket: 64945

DST#: 4

ATTN: Joshua Austin

Test Start: 2019.09.24 @ 01:29:08

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:48:08

Time Test Ended: 10:33:23

Test Type: Conventional Bottom Hole (Reset)

Tester: Matt Smith

Unit No: 68

Interval: 4048.00 ft (KB) To 4055.00 ft (KB) (TVD)

Reference Elevations: 1917.00 ft (KB)

Total Depth: 4055.00 ft (KB) (TVD)

1906.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 8931

Inside

Press@RunDepth: 737.45 psig @ 4049.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.09.24

End Date:

2019.09.24

Last Calib.:

2019.09.24

Start Time: 01:29:13

End Time:

10:33:23

Time On Btm:

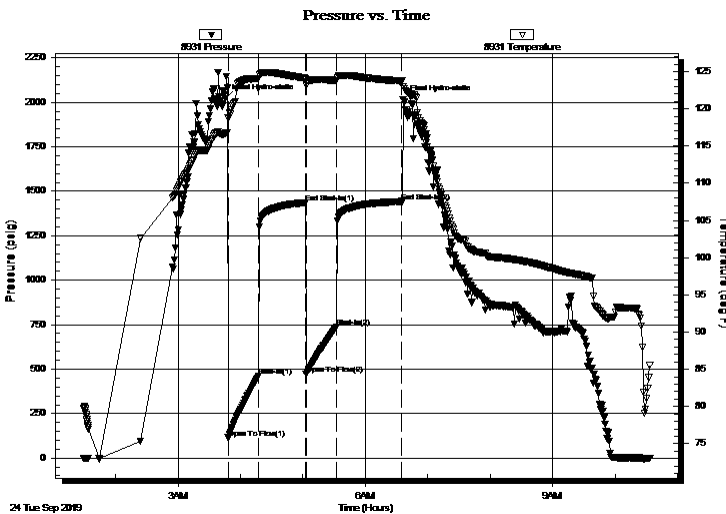
2019.09.24 @ 03:45:23

Time Off Btm:

2019.09.24 @ 06:36:23

TEST COMMENT: IF: Strong Blow . B.O.B. in 2 mins. Built to 138.52".
IS: Fair Blow . Built to 4.62".
FF: Strong Blow . B.O.B. in 1 1/2 mins. Built to 104".
FSI: No Blow .

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2021.65	116.71	Initial Hydro-static
3	113.67	118.77	Open To Flow (1)
32	460.67	124.09	Shut-In(1)
78	1435.90	124.10	End Shut-In(1)
78	470.86	123.53	Open To Flow (2)
107	737.45	123.80	Shut-In(2)
170	1442.29	123.72	End Shut-In(2)
171	2015.55	123.01	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	GOWCM 15%g 58%o 15%w 12%m	0.46
1910.00	Clean Oil /gassy 100%o	25.80
0.00	430' GIP	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Thomas Garner Inc

23-24s-13w Stafford,KS

305 E. 7th
St. John, KS. 67576

Elwell #4

Job Ticket: 64945

DST#: 4

ATTN: Joshua Austin

Test Start: 2019.09.24 @ 01:29:08

Tool Information

Drill Pipe:	Length: 3824.00 ft	Diameter: 3.80 inches	Volume: 53.64 bbl	Tool Weight: 2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 214.00 ft	Diameter: 2.80 inches	Volume: 1.63 bbl	Weight to Pull Loose: 84000.00 lb
			<u>Total Volume: 55.27 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	4048.00 ft			Final 78000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	7.00 ft			
Tool Length:	27.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4029.00	
Shut In Tool	5.00			4034.00	
Hydraulic tool	5.00			4039.00	
Packer	4.00			4043.00	20.00 Bottom Of Top Packer
Packer	5.00			4048.00	
Stubb	1.00			4049.00	
Recorder	0.00	8931	Inside	4049.00	
Recorder	0.00	8788	Outside	4049.00	
Perforations	3.00			4052.00	
Bullnose	3.00			4055.00	7.00 Bottom Packers & Anchor
Total Tool Length:	27.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Thomas Garner Inc

23-24s-13w Stafford,KS

305 E. 7th
St. John, KS. 67576

Elwell #4

Job Ticket: 64945

DST#: 4

ATTN: Joshua Austin

Test Start: 2019.09.24 @ 01:29:08

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

37 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

7400 ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 10.36 in³

Gas Cushion Type:

Resistivity: 7400.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	GOWCM 15%g 58%o 15%w 12%m	0.457
1910.00	Clean Oil /gassy 100%o	25.805
0.00	430' GIP	0.000

Total Length: 1970.00 ft Total Volume: 26.262 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

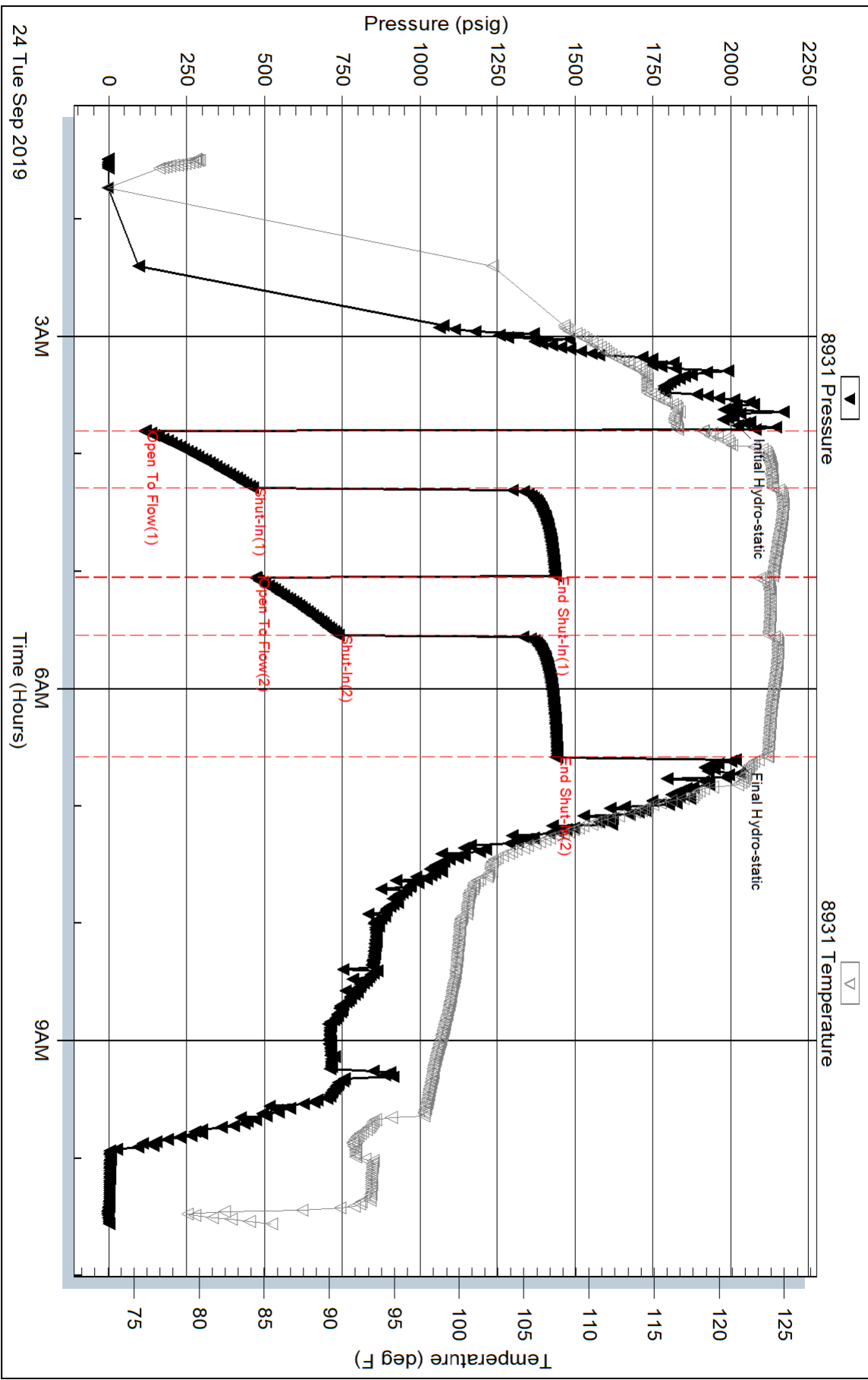
Serial #: None

Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity w as 39 @ 80 Degrees. Corrected to 37 @ 60 Degrees.

Pressure vs. Time

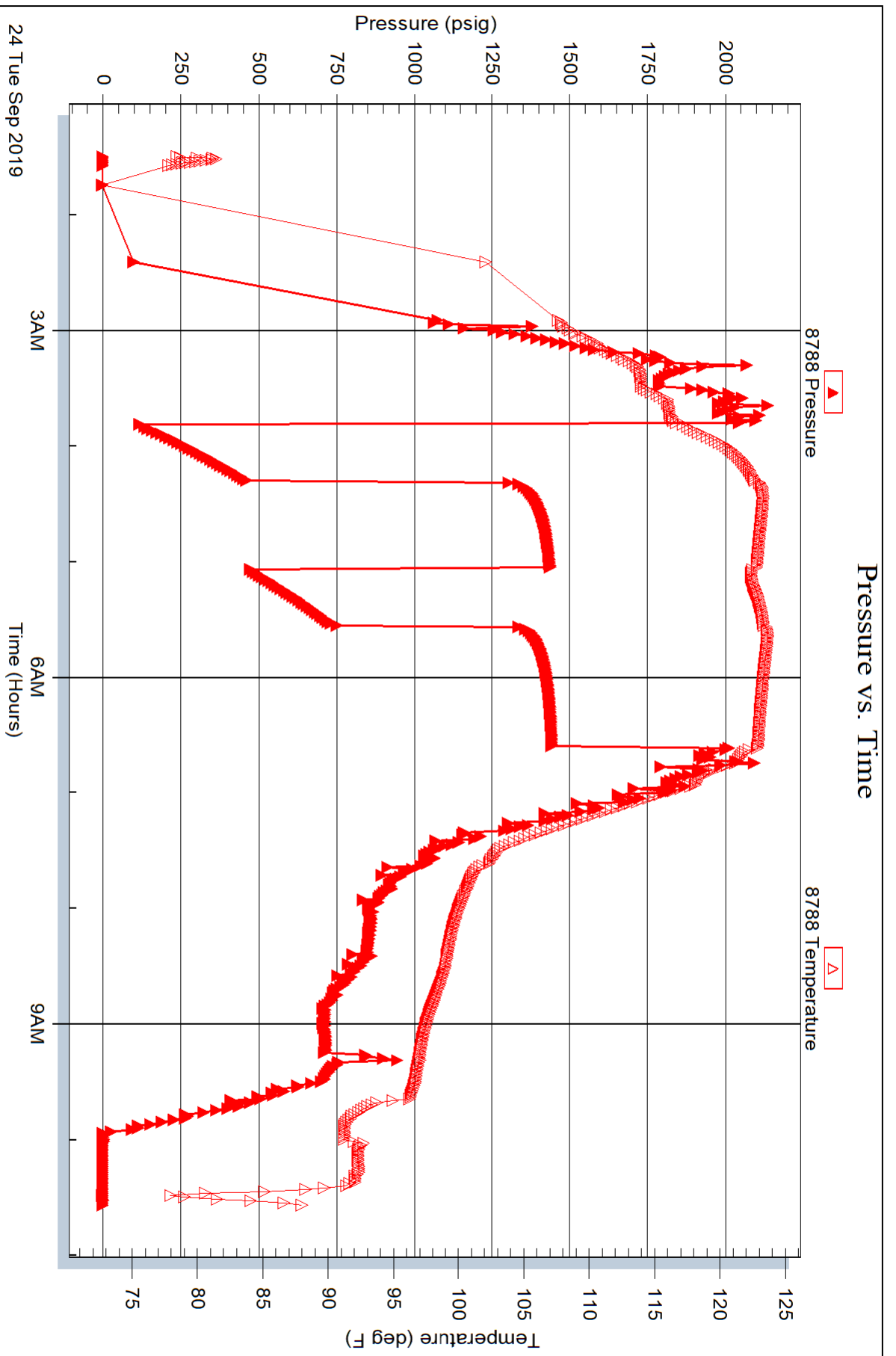


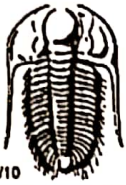
Serial #: 8788

Outside Thomas Garner Inc

Ewell #4

DST Test Number: 4





TRIOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 64942

Well Name & No. Elwell #4 Test No. 1 Date 9/20/19
 Company Thomas Garner, Inc. Elevation 1917 KB 1906 GL
 Address 305 E. 7th St. John, KS. 67576
 Co. Rep / Geo. Joshua Austin Rig Sterling #4
 Location: Sec. 23 Twp 24S Rge. 13W Co. Stafford Cu. State KS.

Interval Tested 3565 - 3596 Zone Tested Lansing "D" Zone
 Anchor Length 31 Drill Pipe Run 33'44" Mud Wt. 9.0
 Top Packer Depth 3560 Drill Collars Run 214' Vls 59
 Bottom Packer Depth 3565 Wt. Pipe Run 8 WL 8.8
 Total Depth 3596 Chlorides 3400 ppm System LCM TR

Blow Description IF: Strong Blow, B.O.B. in 4-mins, Built to 77.26".
ISI: No Blow.
FF: Strong Blow, B.O.B., immediate, Built to 130.44".
FSS: No Blow.

Rec	Feet of	%gas	%oil	%water	%mud
<u>21284</u>	<u>G.I.P.</u>	<u>100</u>			
<u>60</u>	<u>GOCM</u>	<u>25</u>	<u>30</u>		<u>45</u>
<u>60</u>	<u>GOWCM</u>	<u>54</u>	<u>25</u>	<u>6</u>	<u>15</u>
<u>60</u>	<u>GOWCM</u>	<u>45</u>	<u>30</u>	<u>8</u>	<u>17</u>

Rec Total 180' Fluid BHT 112° Gravity N/A API RW N/A @ — °F Chlorides 3400 ppm

(A) Initial Hydrostatic 1718 Test 1200 T-On Location 2124
 (B) First Initial Flow 29 Jars _____ T-Started 2332
 (C) First Final Flow 50 Safety Joint _____ T-Open 0201
 (D) Initial Shut-In 855 Circ Sub _____ T-Pulled 0505
 (E) Second Initial Flow 46 Hourly Standby _____ T-Out 0712
 (F) Second Final Flow 72 Mileage (42) → 42 Comments Back @ 10:30 - 10:45
 (G) Final Shut-In 880 Sampler _____
 (H) Final Hydrostatic 1725 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1242 EM Tool _____
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Sub Total 0
 Total 1242 MP/DST Disc't _____

Approved By _____ Our Representative Matthew Smith

Triobite Testing Inc. shall not be liable for damaged of any kind of 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 statements or opinion concerning the results 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.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 64943

Well Name & No. Elwell #4 Test No. 2 Date 9/21/19
 Company Thomas Garner, Inc. Elevation 1917 KB 1906 GL
 Address 305 E. 7th St. John, KS. 67576
 Co. Rep / Geo. Joshua Austin Rig Sterling #4
 Location: Sec. 23 Twp 24s Rge. 13w Co. Stafford Co. State KS.

Interval Tested 3652 - 3675 Zone Tested Lansing "H" Zone
 Anchor Length 23' Drill Pipe Run 3439 Mud Wt. 9.2
 Top Packer Depth 3647 Drill Collars Run 214 Vis 58
 Bottom Packer Depth 3652 Wt. Pipe Run 0 WL 9.6
 Total Depth 3675 Chlorides 7800 ppm System LCM VR
 Blow Description IF: Strong Blow. B.O.B. in 20-mins. Built to 15.52"
ISI: No Blow.
FF: Strong Blow. B.O.B. in 11-mins. Built to 18.95"
FSI: NO Blow.

Rec	Feet of	%gas	%oil	%water	%mud
574	G.I.P.	100%			
20	G50 LCM	15%	5%		80%
		%gas	%oil	%water	%mud
		%gas	%oil	%water	%mud
		%gas	%oil	%water	%mud

Rec Total 20' fluid BHT 112° Gravity N/A API RW N/A @ - °F Chlorides 7,800 ppm

(A) Initial Hydrostatic <u>1828</u>	<input checked="" type="checkbox"/> Test <u>1200</u>	T-On Location <u>1742</u>
(B) First Initial Flow <u>18</u>	<input type="checkbox"/> Jars	T-Started <u>1806</u>
(C) First Final Flow <u>22</u>	<input type="checkbox"/> Safety Joint	T-Open <u>1945</u>
(D) Initial Shut-In <u>342</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>2250</u>
(E) Second Initial Flow <u>23</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>0035</u>
(F) Second Final Flow <u>33</u>	<input checked="" type="checkbox"/> Mileage <u>42</u> → 42	Comments
(G) Final Shut-In <u>342</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1770</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> EM Tool
	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Shale Packer
	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Packer
	<input type="checkbox"/> Extra Recorder	<input type="checkbox"/> Extra Copies
	<input type="checkbox"/> Day Standby	Sub Total <u>0</u>
	<input type="checkbox"/> Accessibility	Total <u>1242</u>
Sub Total <u>1242</u>		MP/DST Disc't

Initial Open 30
 Initial Shut-In 45
 Final Flow 45
 Final Shut-In 60

Approved By _____ Our Representative Joshua Austin

TriLOBite Testing Inc. shall not be liable for damaged of any kind of 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 statements or opinion concerning the results 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.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 64944

Well Name & No. Elwell # 4 Test No. 3 Date 9/22/19
 Company Thomas Garner, Inc. Elevation 1917 KB 1906 GL
 Address 305 E. 7th St. John, KS. 67576
 Co. Rep / Geo. Joshua Austin Rig Sterling #4
 Location: Sec. 23 Twp 24S Rge. 13W Co. Stafford Co. State KS.

Interval Tested 3675 - 3720 Zone Tested Lansing "I & J" Zone
 Anchor Length 45' Drill Pipe Run 3471 Mud Wt. 9.25
 Top Packer Depth 3670 Drill Collars Run 214 Vis 65
 Bottom Packer Depth 3675 Wt. Pipe Run 6 WL 8.0
 Total Depth 3720 Chlorides 6200 ppm System LCM JK

Blow Description IF! Strong Blow, B.O.B. in 5-mins, Burt to 28.37"
ISI, No Blow.
FF! Strong Blow, B.O.B. in 7-mins, Burt to 30.96"
FSI, No Blow.

Rec	Feet of	%gas	%oil	%water	%mud
736	G.I.P.	100			
30	GDCM GVSOCM	5	2		93
60	GOWCM	33	27	20	20
60	GOWCM	45	30	10	15
60	GOWCM	17	33	5	45

Rec Total 210' BHT 109° Gravity N/A API RW N/A @ - °F Chlorides 6200 ppm

(A) Initial Hydrostatic 1785 Test 1200 T-On Location 0802
 (B) First Initial Flow 31 Jars _____ T-Started 0830
 (C) First Final Flow 67 Safety Joint _____ T-Open 1008
 (D) Initial Shut-In 779 Circ Sub _____ T-Pulled 1312
 (E) Second Initial Flow 82 Hourly Standby _____ T-Out 1508
 (F) Second Final Flow 102 Mileage (42) → 42 Comments _____
 (G) Final Shut-In 764 Sampler _____
 (H) Final Hydrostatic 1770 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1242 MP/DST Disc't _____

Initial Open 30
 Initial Shut-In 45
 Final Flow 45
 Final Shut-In 60

Sub Total 1242
 Total 1242

Approved By _____ Our Representative [Signature]
 TriLOBITE TESTING Inc. shall not be liable for damaged of any kind of 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 statements or opinion concerning the results 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.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 64945

Well Name & No. Elwell #4 Test No. 4 Date 9/24/19
 Company Thomas Garner, Inc. Elevation 1917 KB 1906 GL
 Address 305 E. 7th St. John, KS. 67576
 Co. Rep / Geo. Joshua Austin Rig Sterling #4
 Location: Sec. 23 Twp 24S Rge. 13W Co. Stafford Co. State KS.

Interval Tested 4048 - 4055 Zone Tested Arbuckle
 Anchor Length 7' Drill Pipe Run 3824 Mud Wt. 9.4
 Top Packer Depth 4043 Drill Collars Run 214 Vls 60
 Bottom Packer Depth 4048 Wt. Pipe Run 2 WL 10.4
 Total Depth 4055 Chlorides 7400 ppm System LCM TK

Blow Description IF: Strong Blow, B.O.B. in 2 mins. Built to 138.52"
ISI: Fair Blow, Built to 4.62"
FF: Strong Blow, B.O.B. in 1 1/2 mins. Built to 104"
FSI: No Blow.

Rec	Feet of	%gas	%oil	%water	%mud
<u>430'</u>	<u>G.I.P.</u>	<u>100</u>			
<u>1910</u>	<u>Clean Oil/Gassy</u>		<u>100</u>		
<u>60'</u>	<u>GOWCM</u>	<u>15</u>	<u>58</u>	<u>15</u>	<u>12</u>

Rec Total 1970' Shud BHT 117° Gravity 37@60° API RW N/A @ F Chlorides 7400 ppm

(A) Initial Hydrostatic 2022 Test 1200 T-On Location 0115
 (B) First Initial Flow 114 Jars _____ T-Started 0129
 (C) First Final Flow 461 Safety Joint _____ T-Open 0358
 (D) Initial Shut-In 1436 Circ Sub 50 T-Pulled 0640
 (E) Second Initial Flow 471 Hourly Standby _____ T-Out 1033
 (F) Second Final Flow 737 Mileage (42) 42 Comments Dropped the Bar.
 (G) Final Shut-In 1442 Sampler _____ Reversed out to perf.
 (H) Final Hydrostatic 2016 Straddle _____

Initial Open 30 Shale Packer _____ EM Tool _____
 Initial Shut-In 45 Extra Packer _____ Ruined Shale Packer _____
 Final Flow 30 Extra Recorder _____ Ruined Packer _____
 Final Shut-In 60 Day Standby _____ Extra Copies _____
 Sub Total 0
 Total 1292
 Sub Total 1292 MP/DST Disc't _____

Approved By _____ Our Representative Matthew A. Smith

Tribolite Testing Inc. shall not be liable for damaged of any kind of 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 statements or opinion concerning the results 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.



DUAL INDUCTION LOG

Pioneer Energy Services

Company **THOMAS GARNER, INC.**
 Well **ELWELL #4**
 Field **ST. JOHN**
 County **STAFFORD** State **KANSAS**

Company **THOMAS GARNER, INC.**
 Well **ELWELL #4**
 Field **ST. JOHN**
 County **STAFFORD**
 State **KANSAS**

Location: API #: 15-185-24057-00-00
 W2 SE SW NE
 2310' FNL & 1800' FEL
 SEC 23 TWP 24S RGE 13W
 Permanent Datum **GROUND LEVEL** Elevation **1906'**
 Log Measured From **KELLY BUSHING**
 Drilling Measured From **KELLY BUSHING**

Other Services
 CNL/CDL
 MEL/BHCS

Elevation
 K.B. 1917'
 D.F. N/A
 G.L. 1906'

Date	9/24/2019
Run Number	ONE
Depth Driller	4055'
Depth Logger	4056'
Bottom Logged Interval	4055'
Top Log Interval	400'
Casing Driller	8.625" @ 433'
Casing Logger	432'
Bit Size	7.875"
Type Fluid in Hole	CHEMICAL
Salinity, ppm CL	8400
Density / Viscosity	9.4 51
pH / Fluid Loss	9.5 7.4
Source of Sample	FLOWLINE
Rm @ Meas. Temp	0.55 @ 74
Rmt @ Meas. Temp	0.41 @ 74
Rmc @ Meas. Temp	0.74 @ 74
Source of Rmf / Rmc	CHARTS
Rm @ BHT	0.35 @ 117
Operating Rig Time	4.5 HOURS
Max Rec. Temp. F	117 DEG F
Equipment Number	P-108
Location	HAYS
Recorded By	J. HENRICKSON
Witnessed By	JOSH AUSTIN

<<< 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.

ST. JOHN, 281/50, 1.5 E, S INTO

Log Measured From: **KELLY BUSHING** 11 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. HENRICKSON	Operator:	Primary Witness: JOSH AUSTIN	Secondary Witness: BRYCE GARNER
Operator:	Operator:	Secondary Witness:	Secondary Witness:

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	44.50		GR-M&W (89-M&W)	3.00	3.50	50.00
CNLSC CNSSC	41.40 40.65		CNT-M&W (tk10-MW)	5.50	3.50	100.00
LSD DCAL SSD	32.35 32.33 31.85		CDL-M&W (979-229)	8.50	4.00	250.00
MCAL MI MN	20.87 20.87 20.87		ML-PSI UDM ML (UDM-01) Stackable Microlog Tools	11.50	4.00	215.00
RLL3 RLL3F	15.80 15.79		DIL-M&W (PSI 988)	18.50	3.50	220.00
CILD	8.00					
CILM	4.70					
SP	0.20					

Dataset: thomas garner_elwell_#4.db: field/well/stkml/pass3.1
 Total length: 47.00 ft
 Total weight: 835.00 lb
 O.D.: 4.00 in

Log Variables

DatabaseC:\ProgramData\Warrior\Data\thomas garner_elwell_#4.db
 Dataset field/well/stkml/pass3.1/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	117	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	125	70	Off	4056



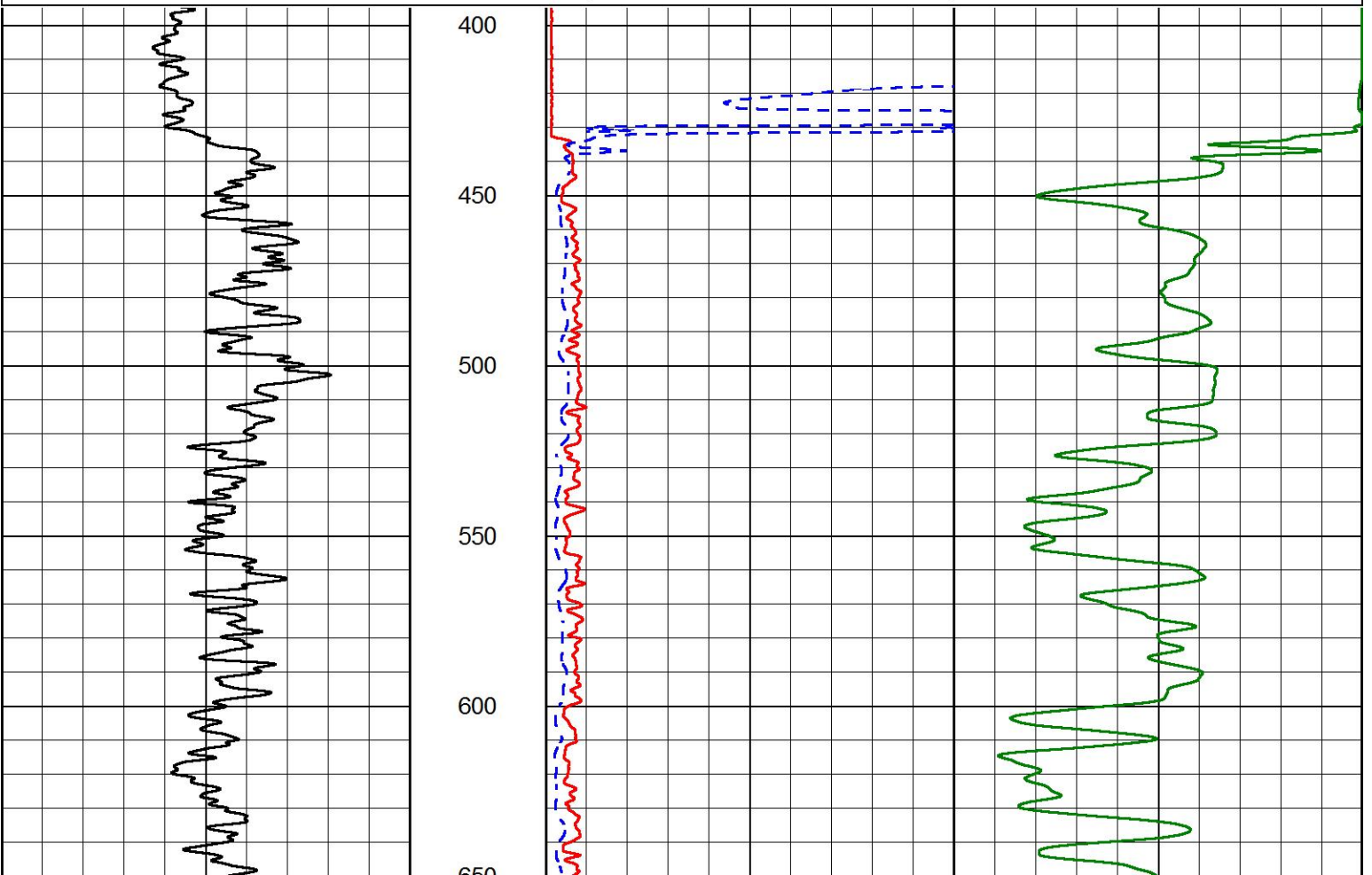
PIONEER
Pioneer Energy Services

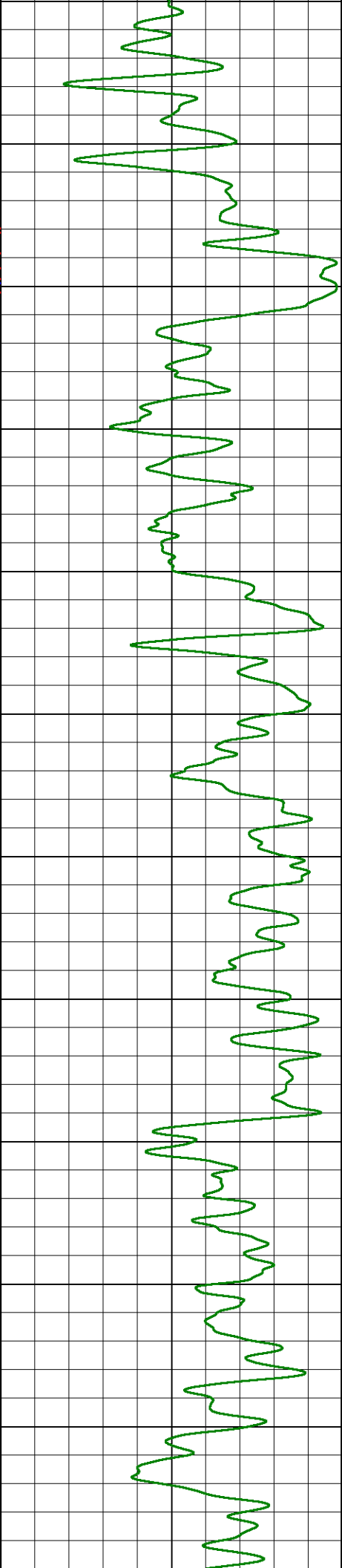
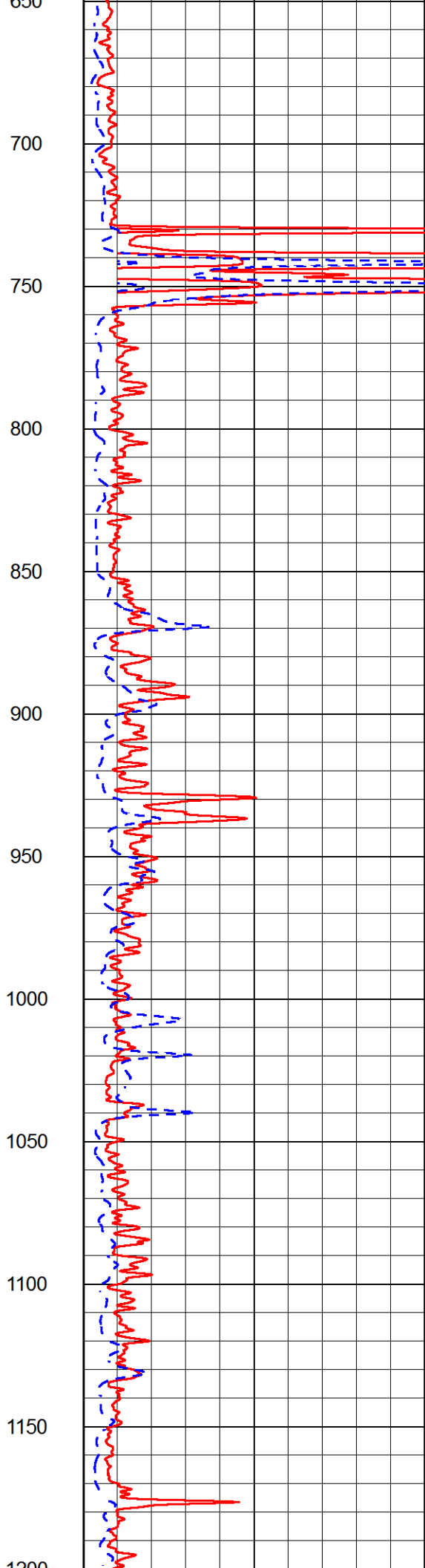
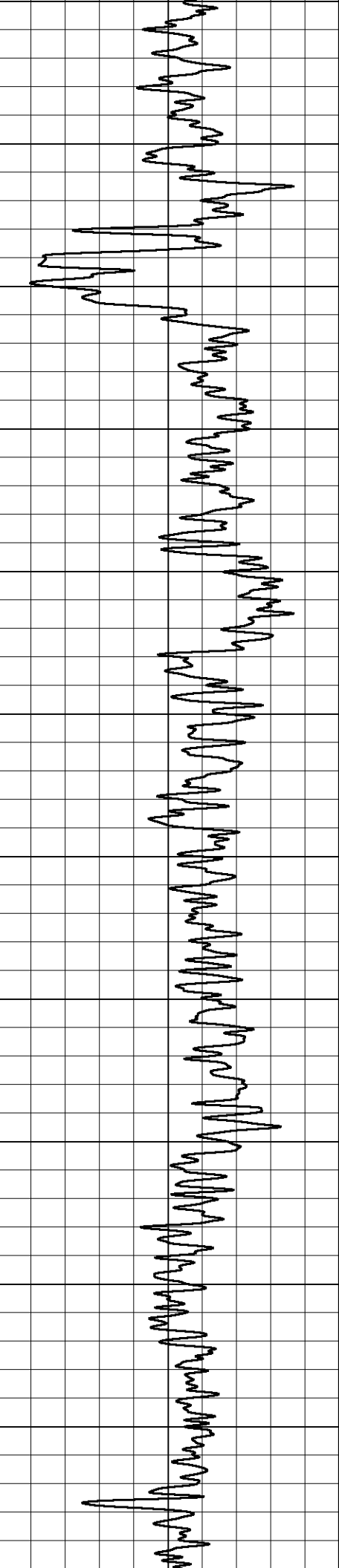
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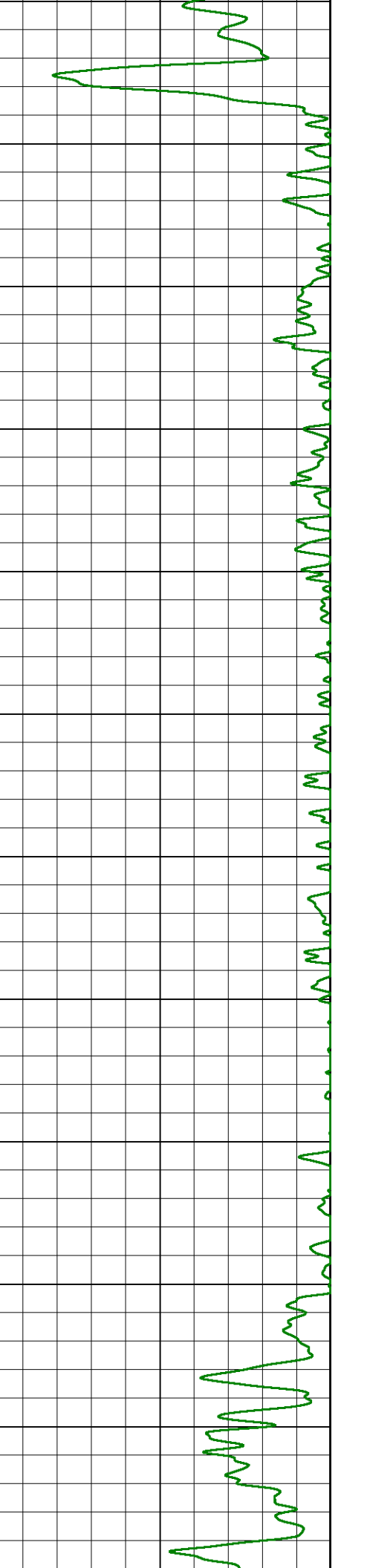
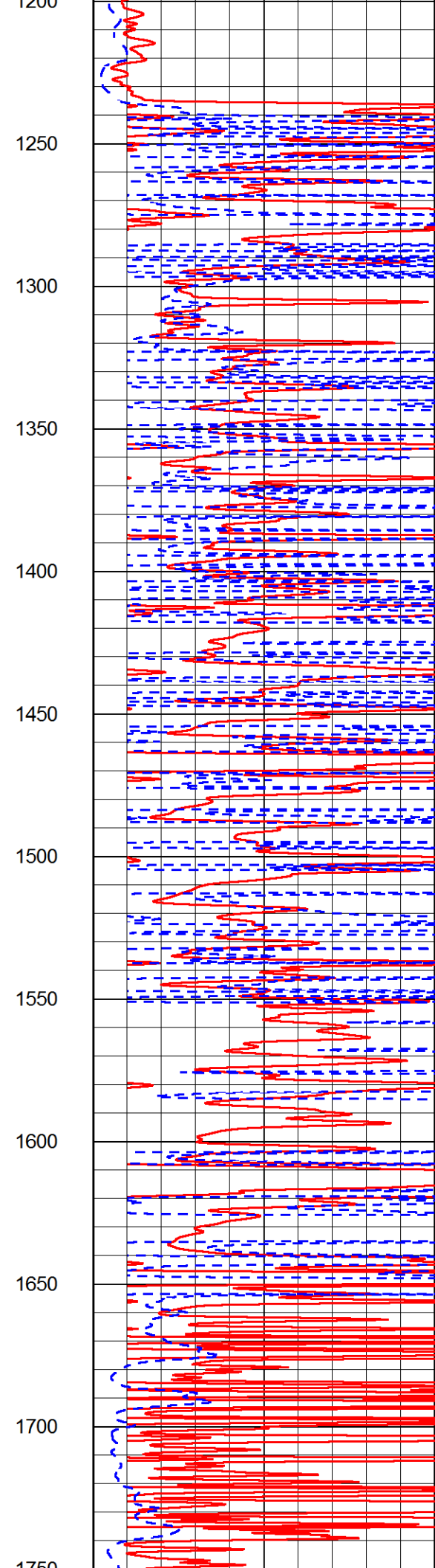
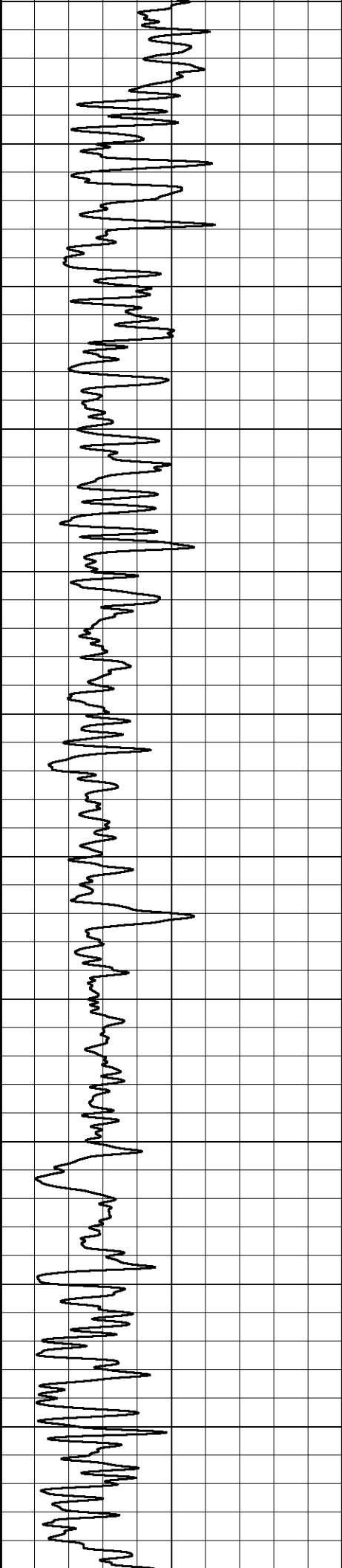
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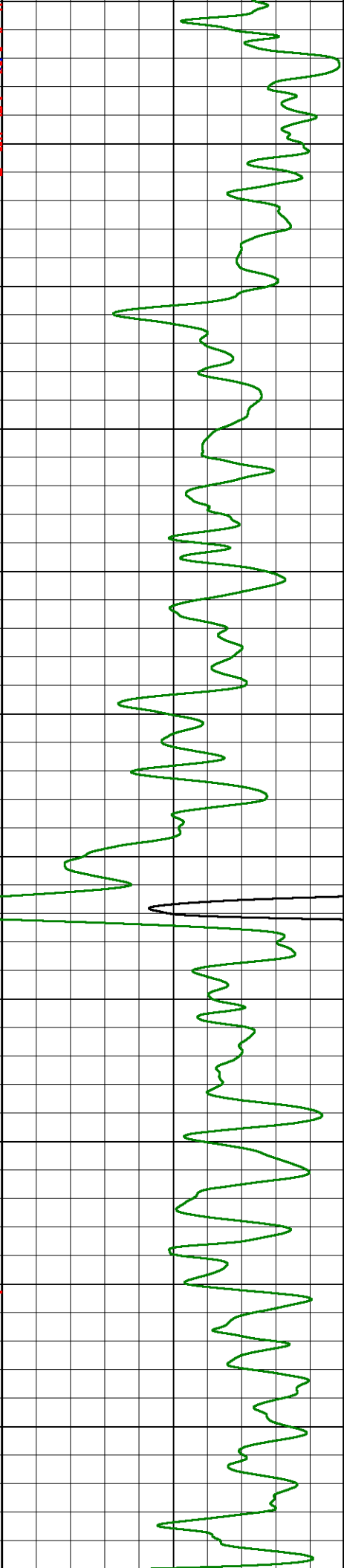
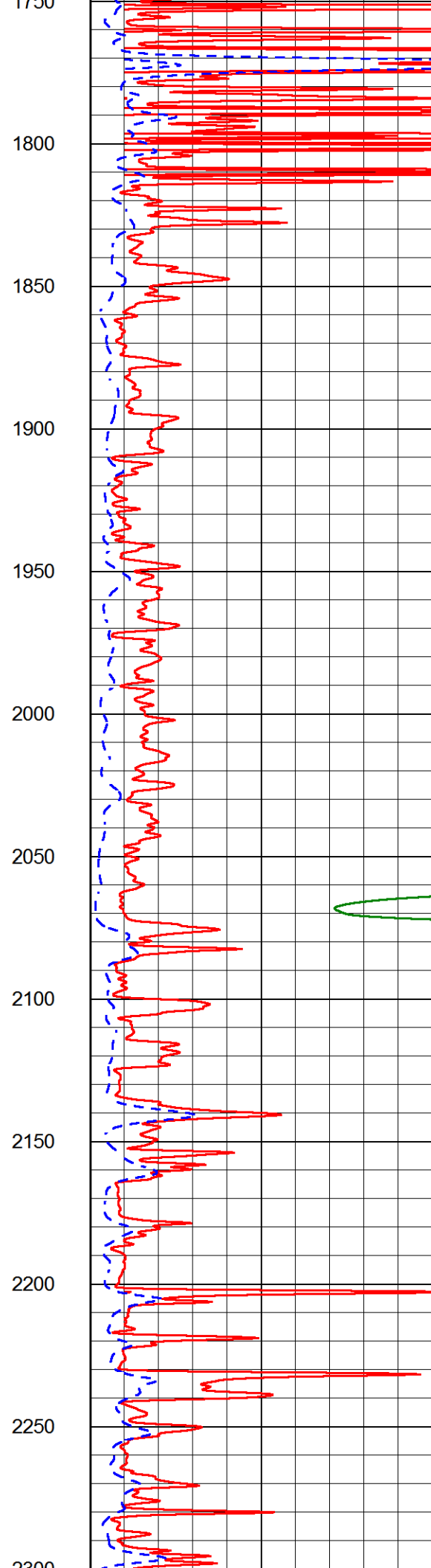
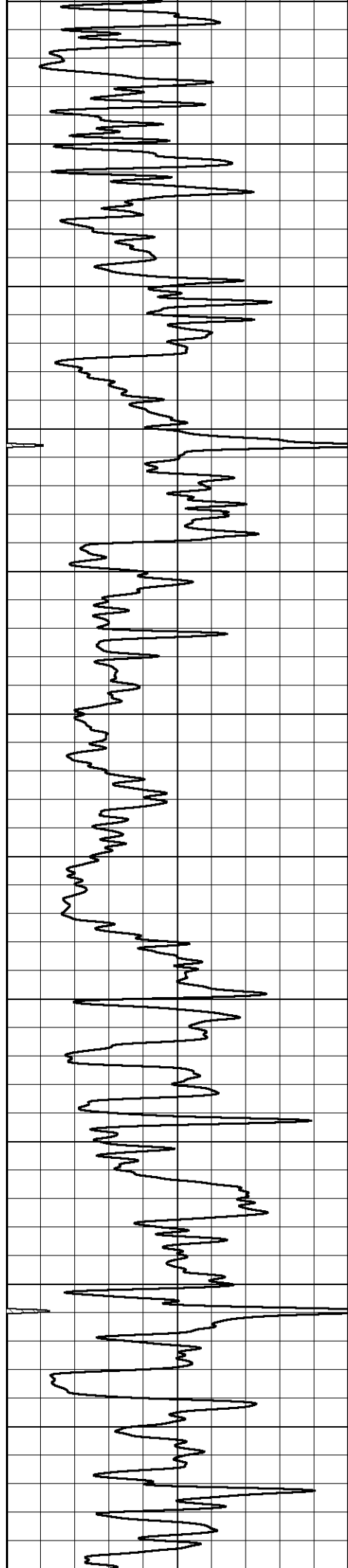
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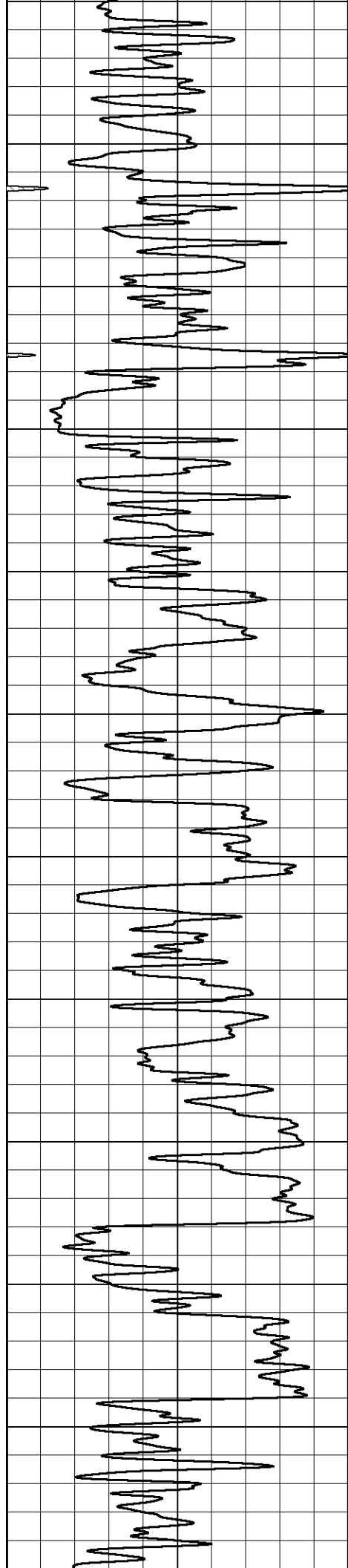
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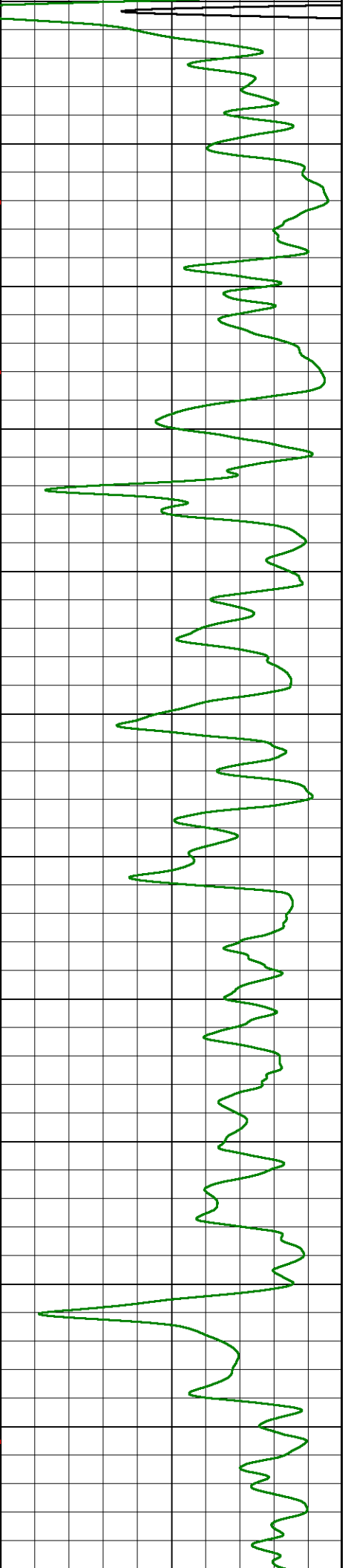
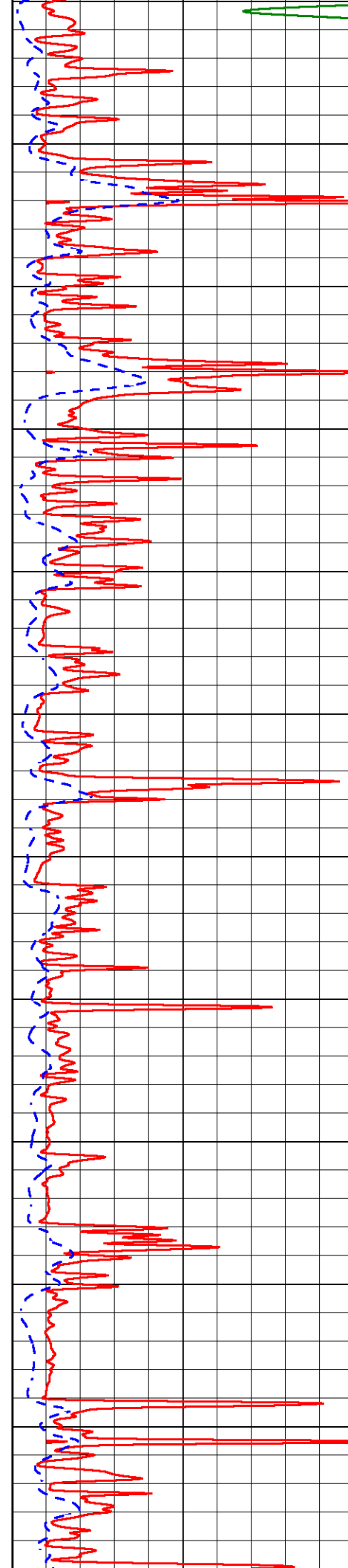


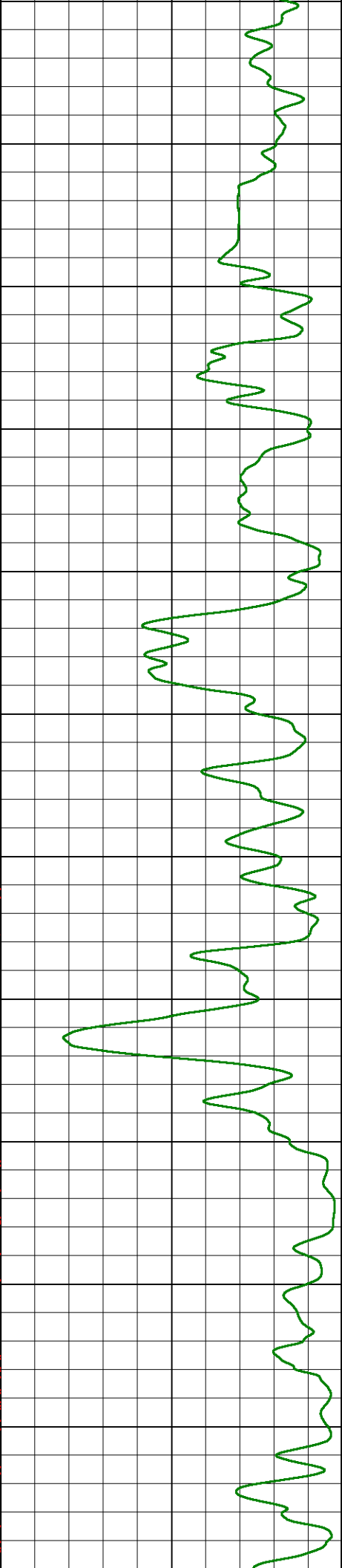
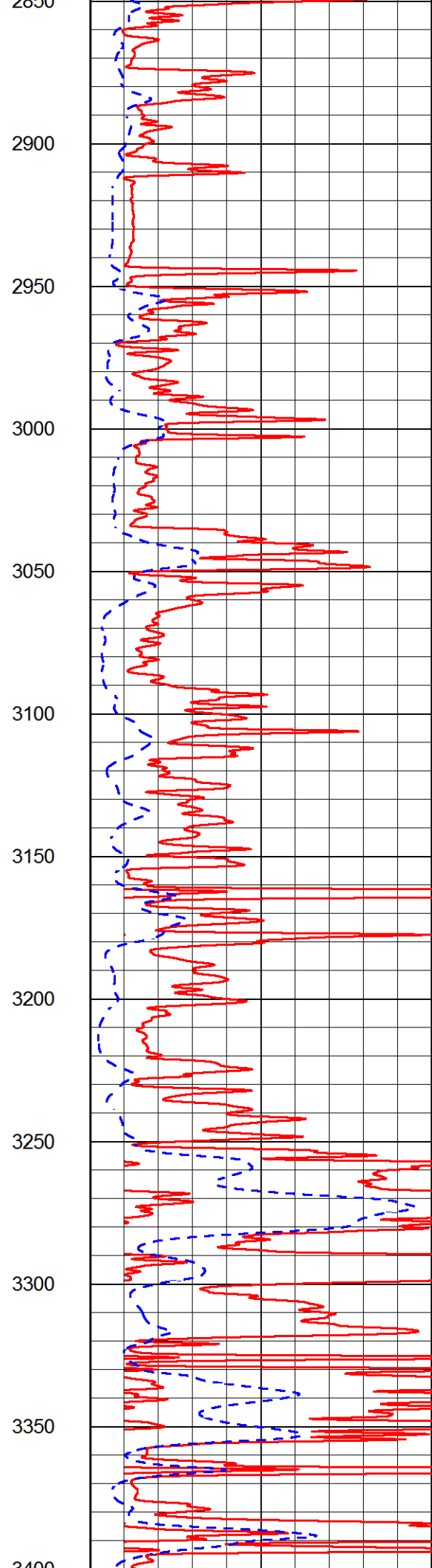
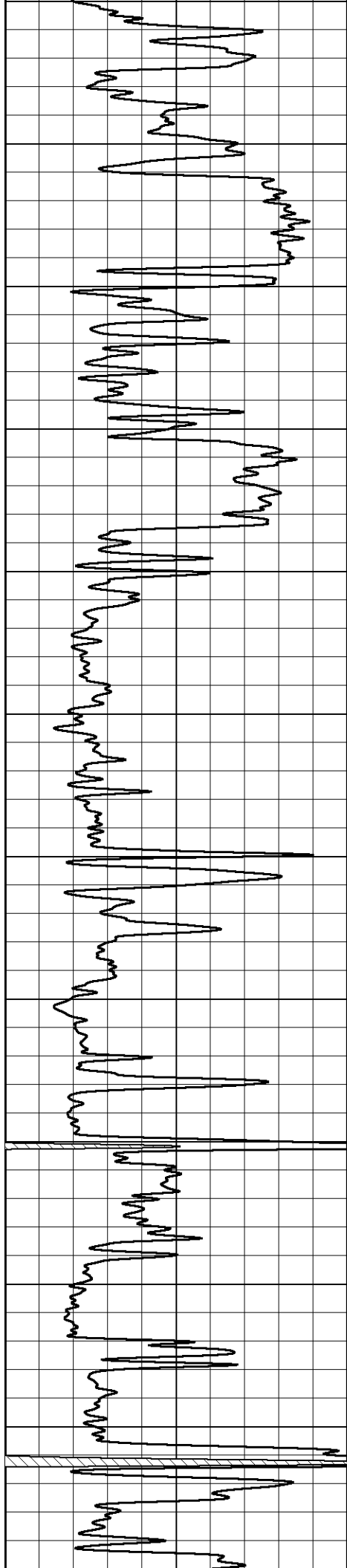


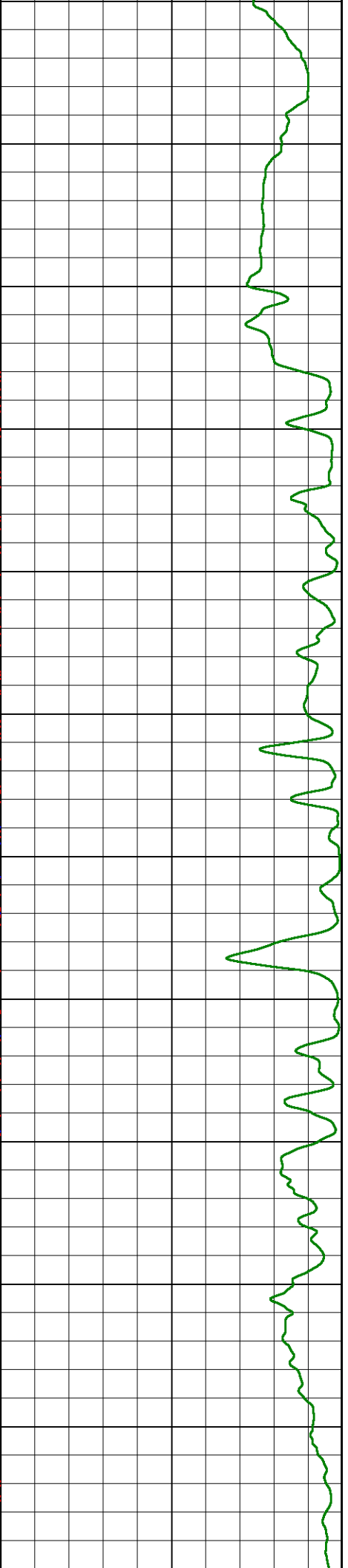
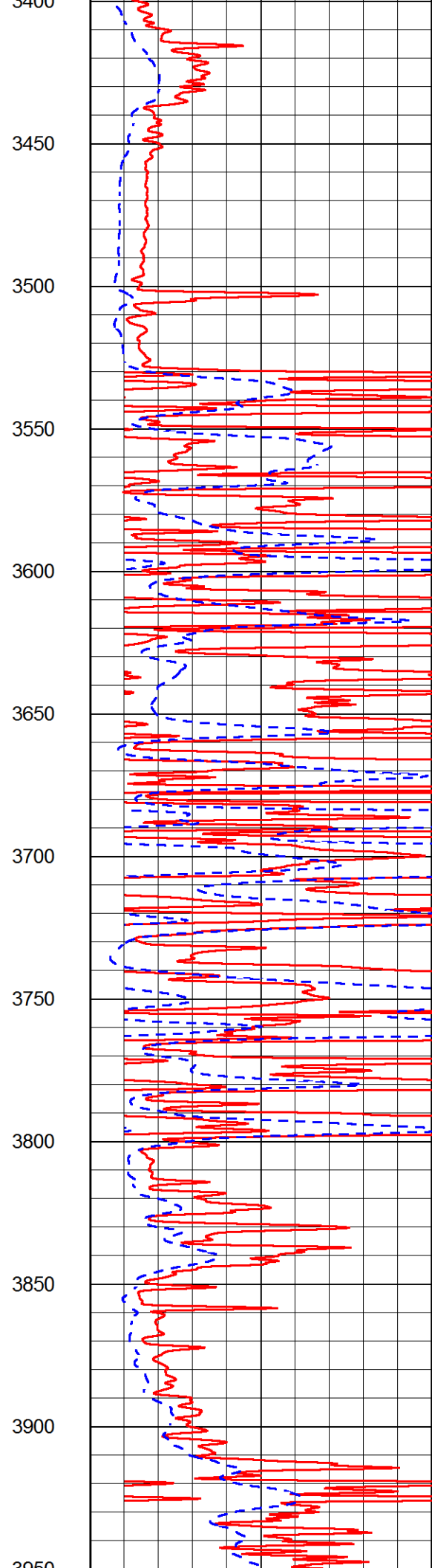
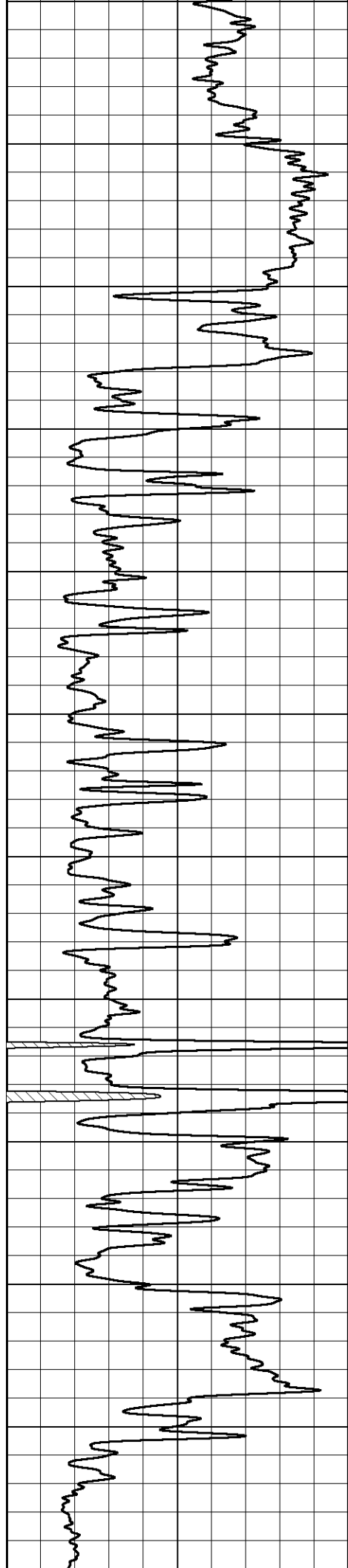


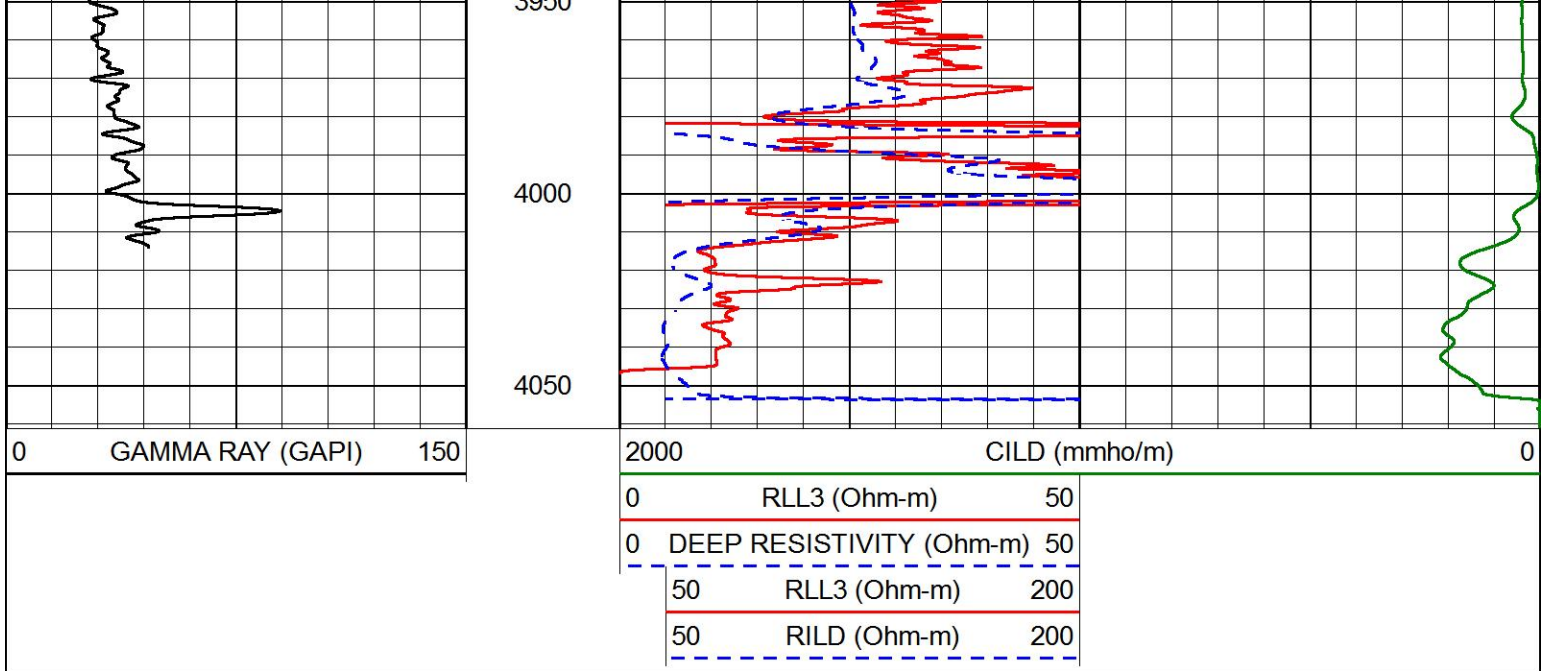


2300
2350
2400
2450
2500
2550
2600
2650
2700
2750
2800
2850





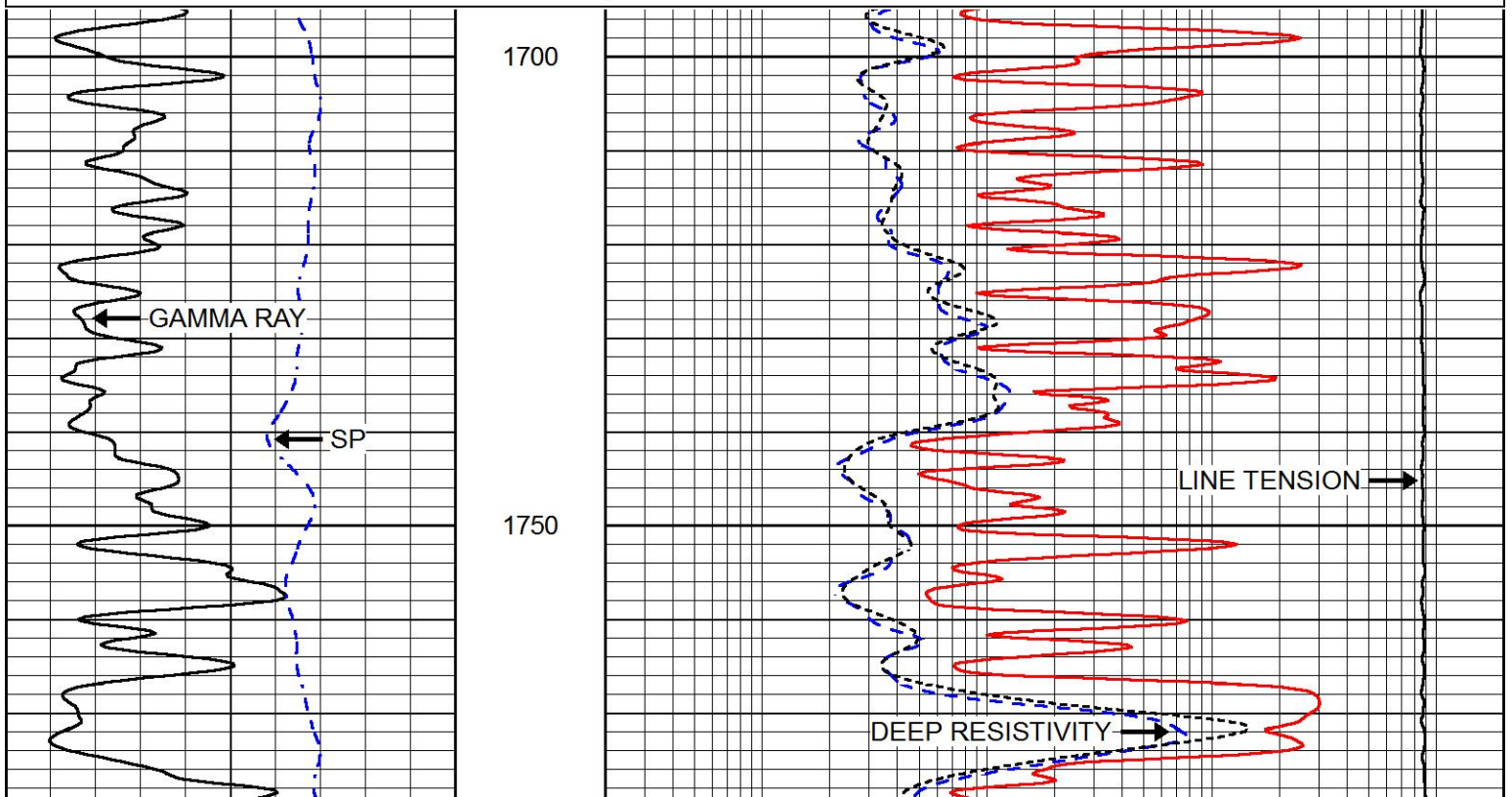


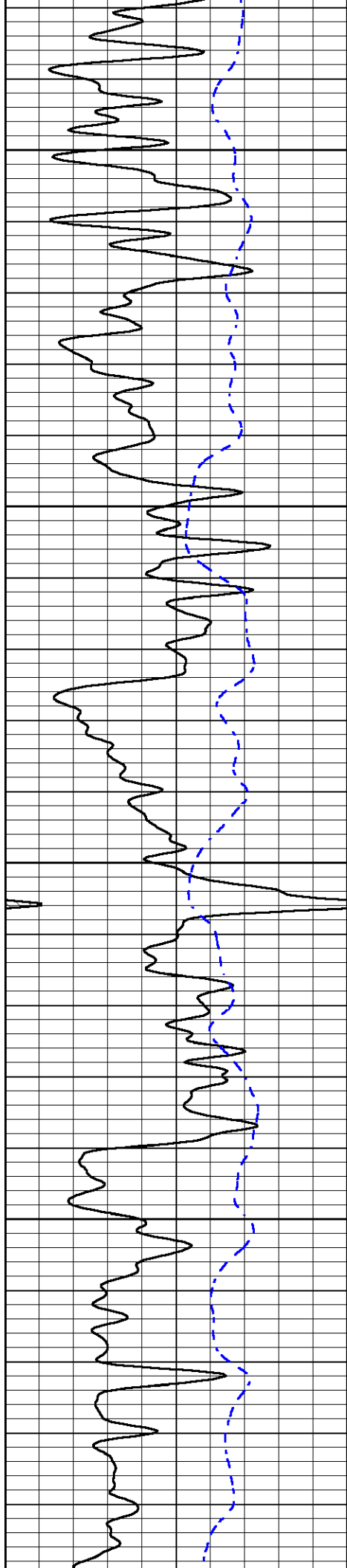


MAIN PASS

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			15000	LINE TENSION (lb)	0



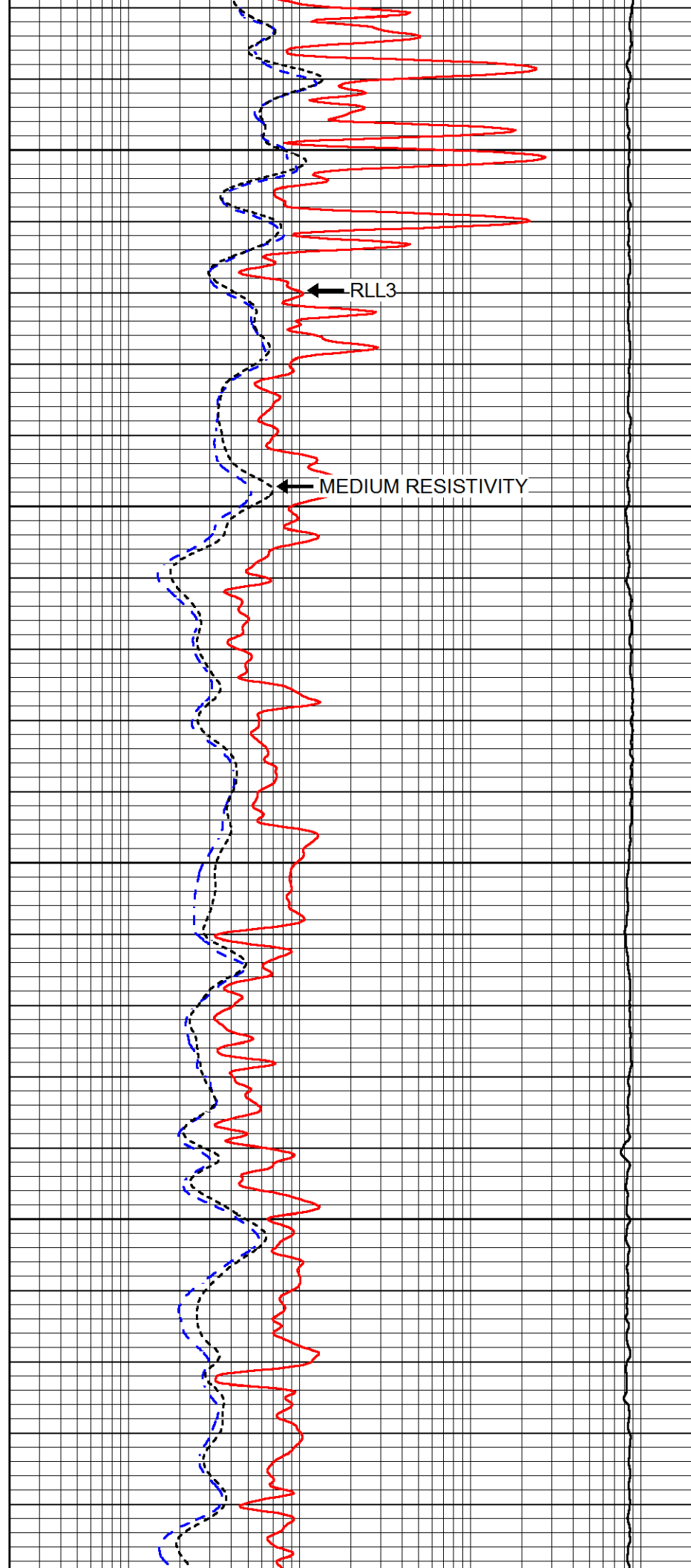


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1850

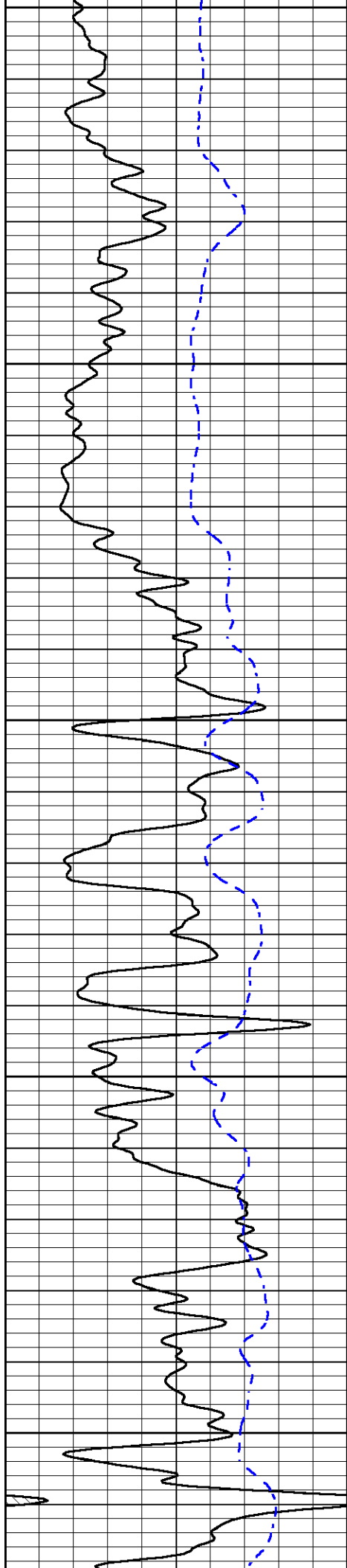
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1950



RLL3

MEDIUM RESISTIVITY



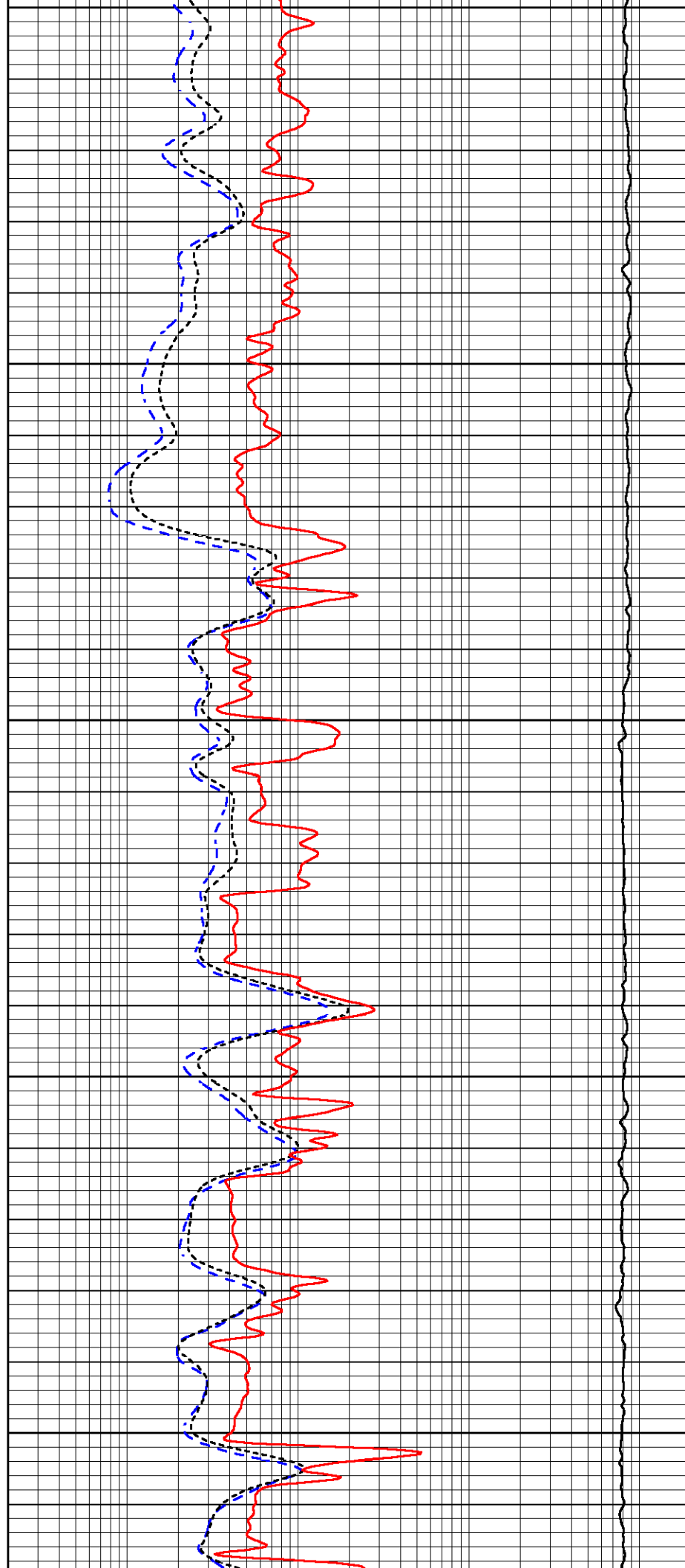
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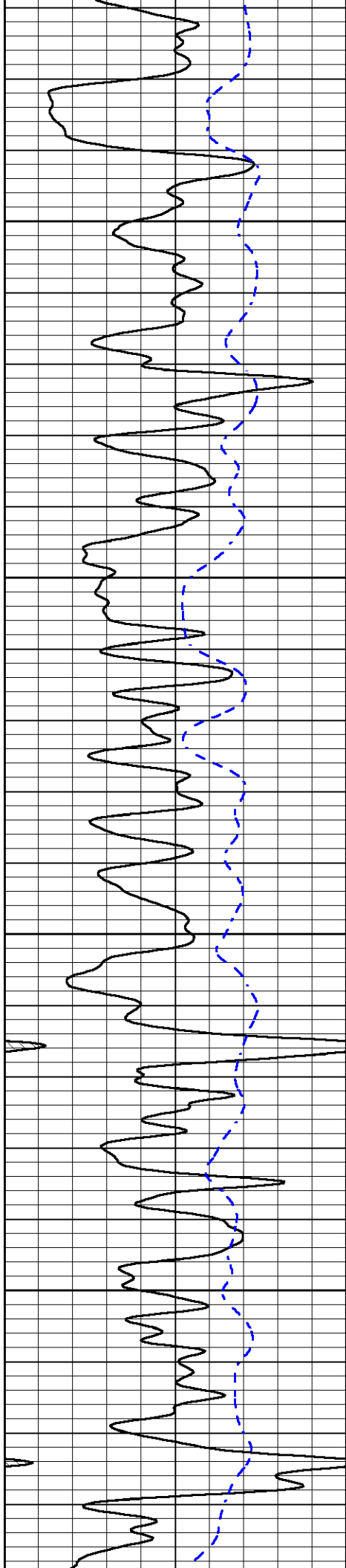
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2150

2200



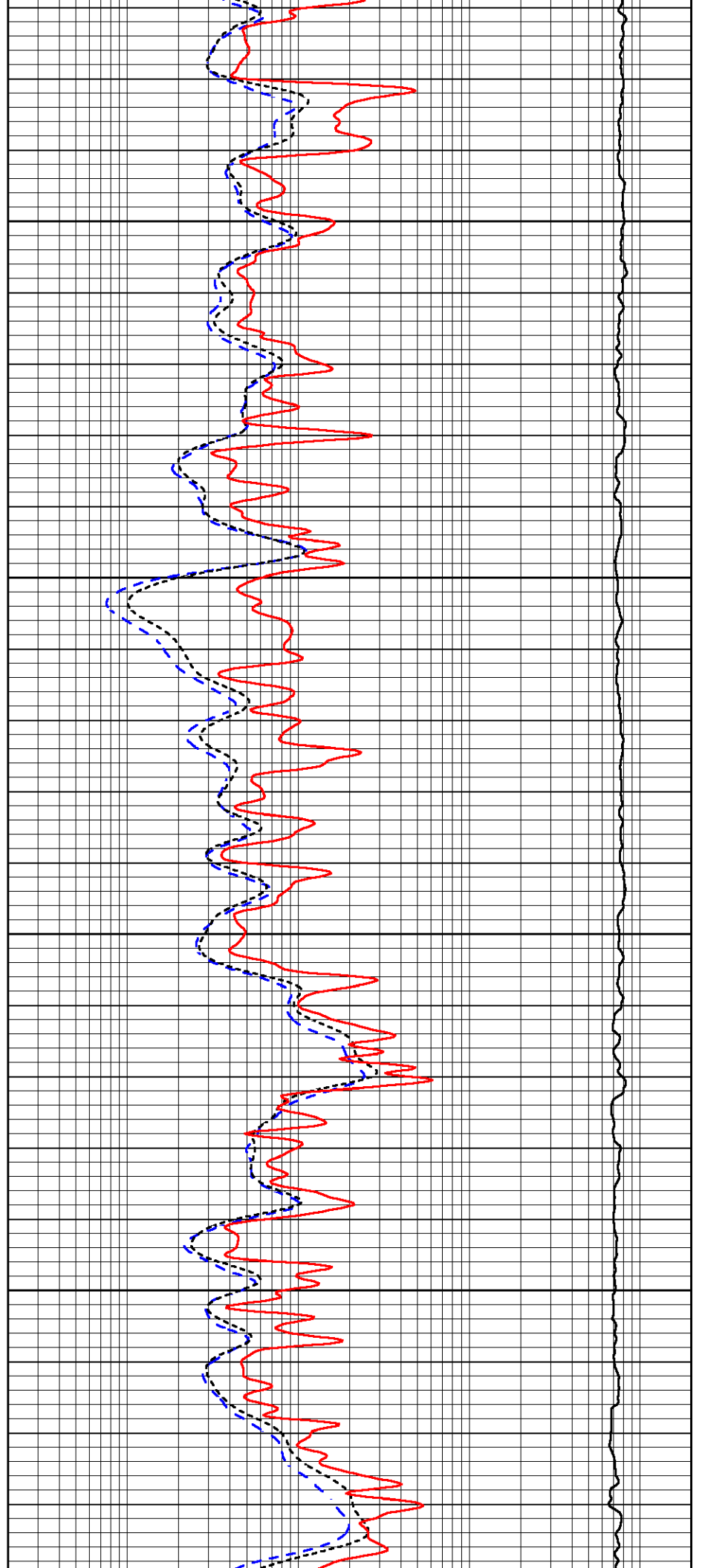


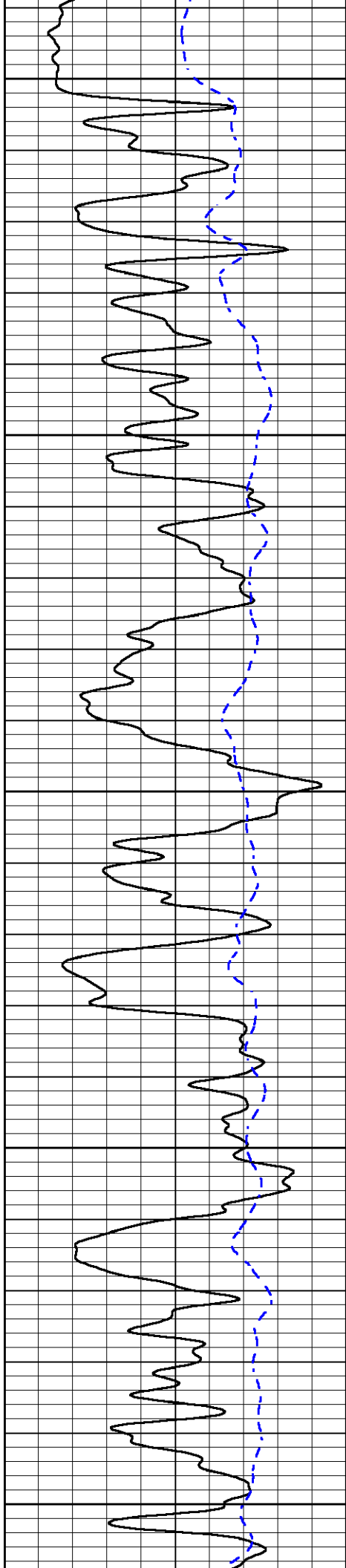
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2350

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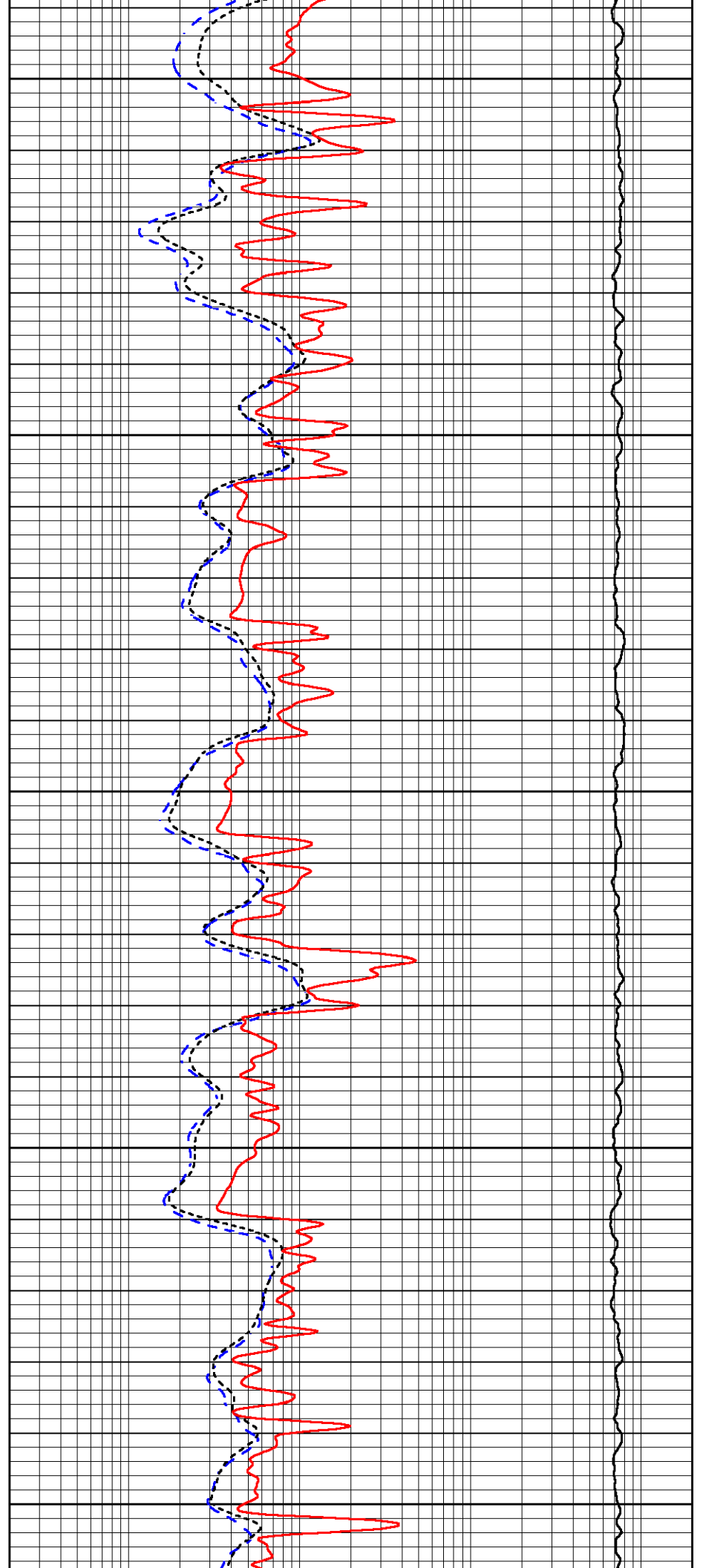
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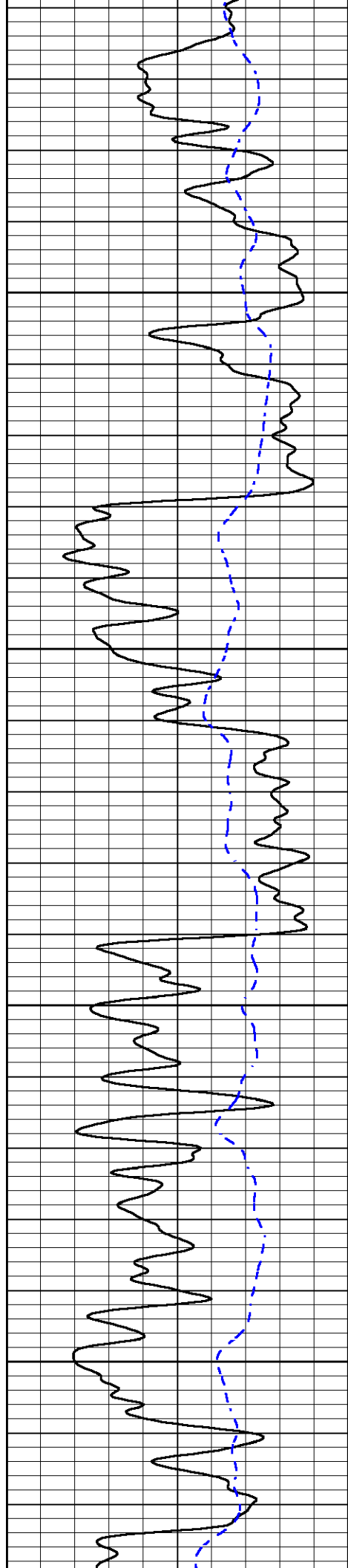
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2550

2600

2650



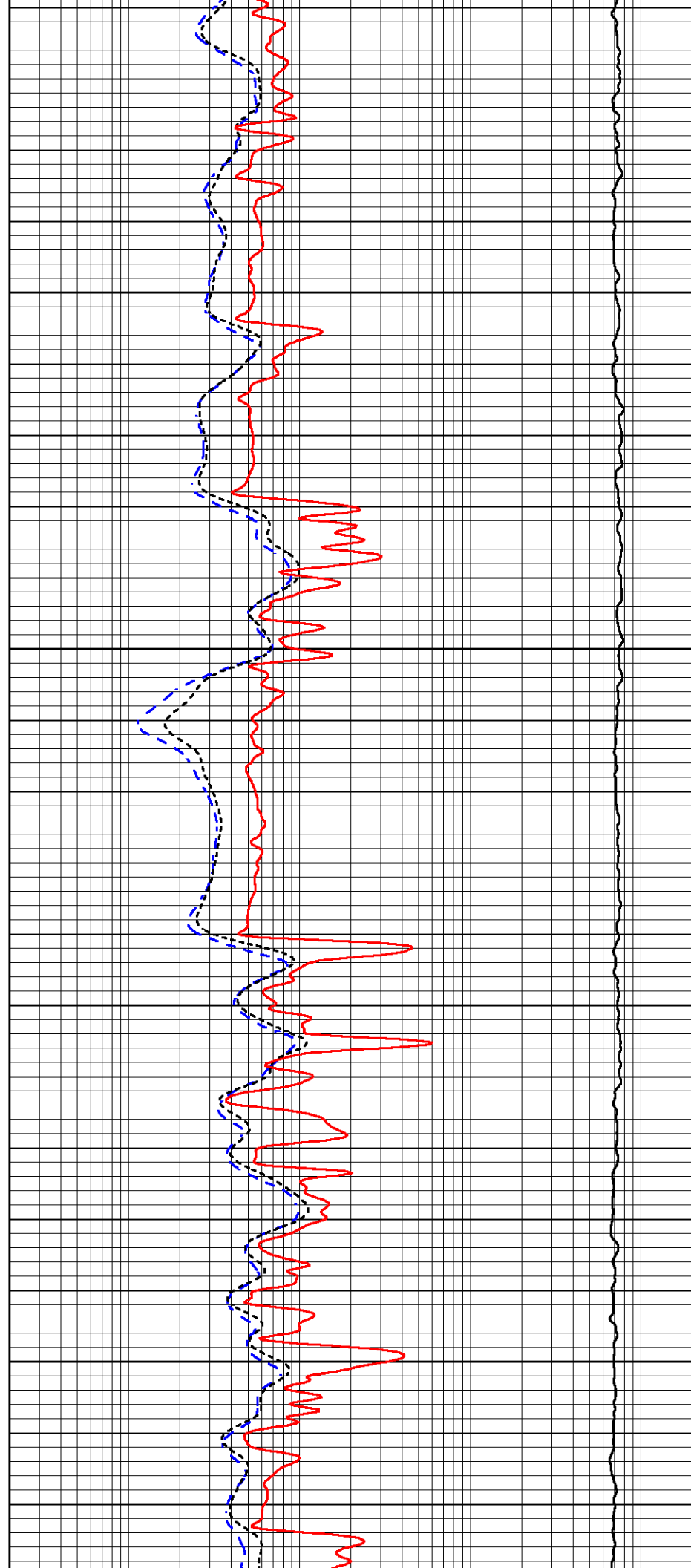


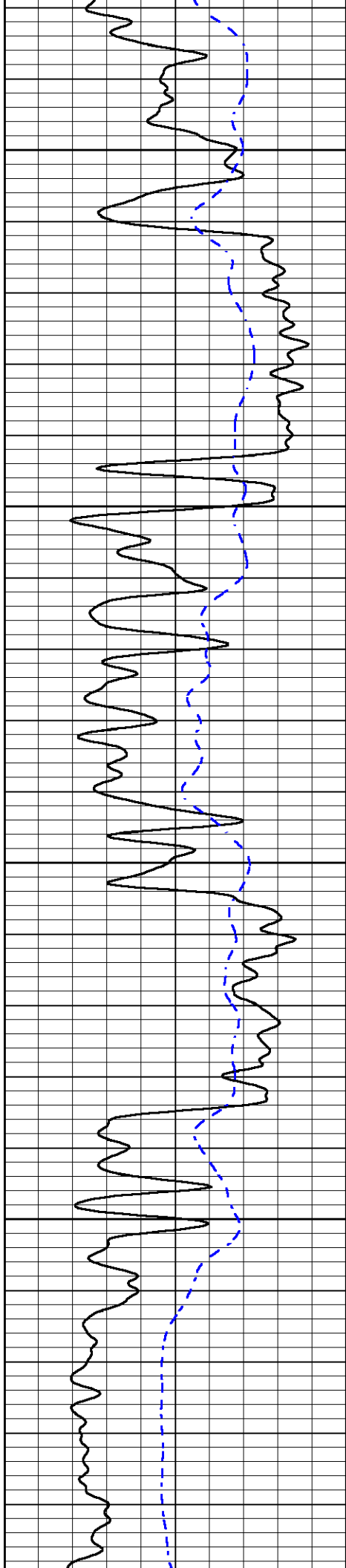
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2750

2800

2850



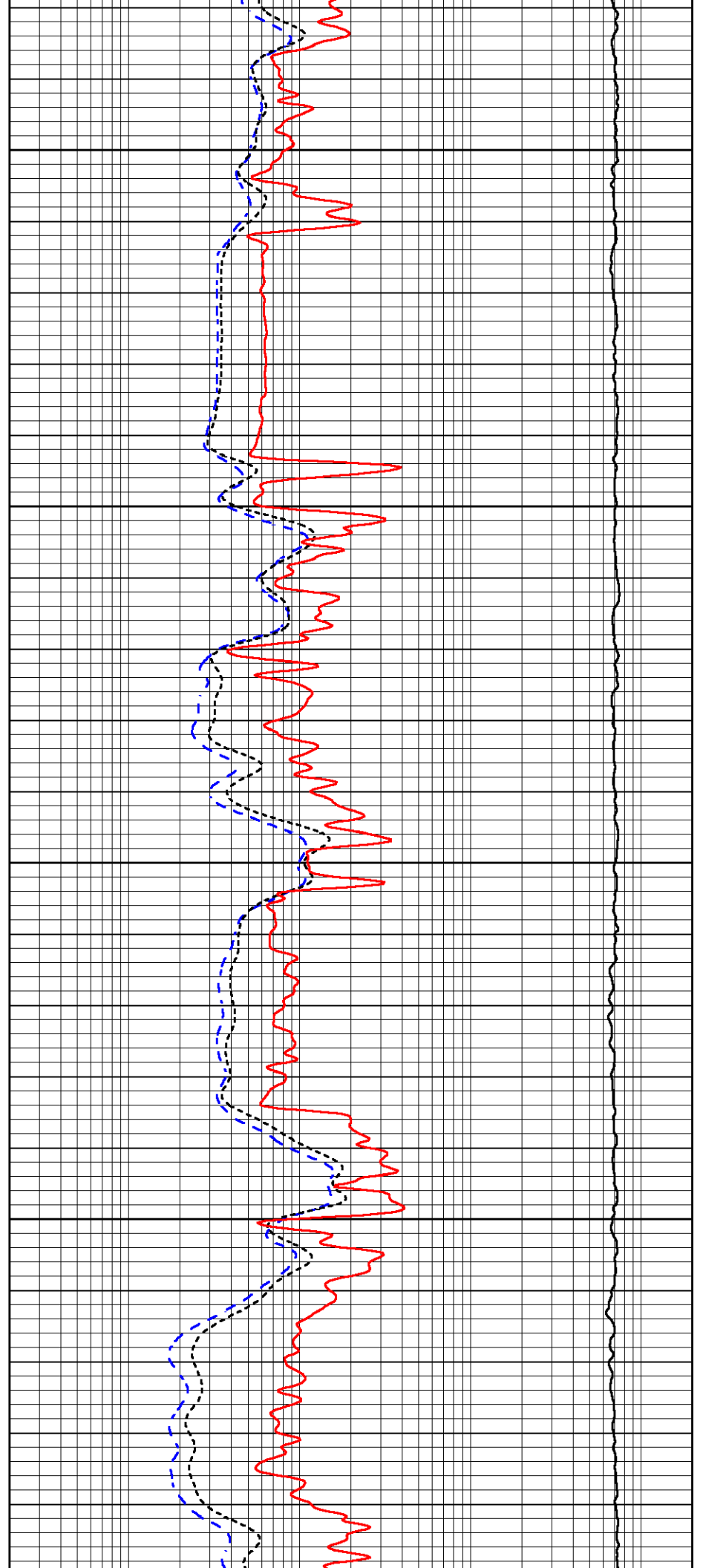


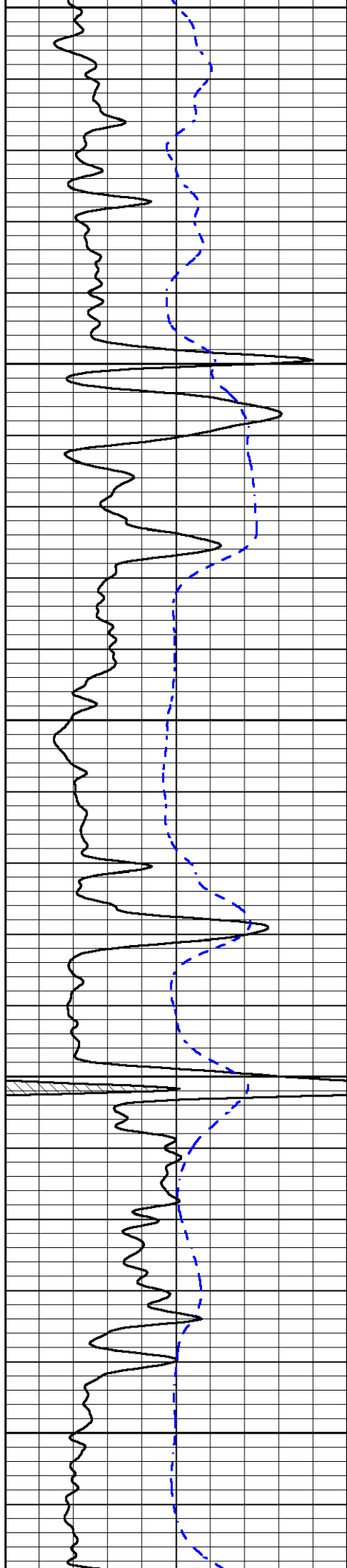
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2950

3000

3050





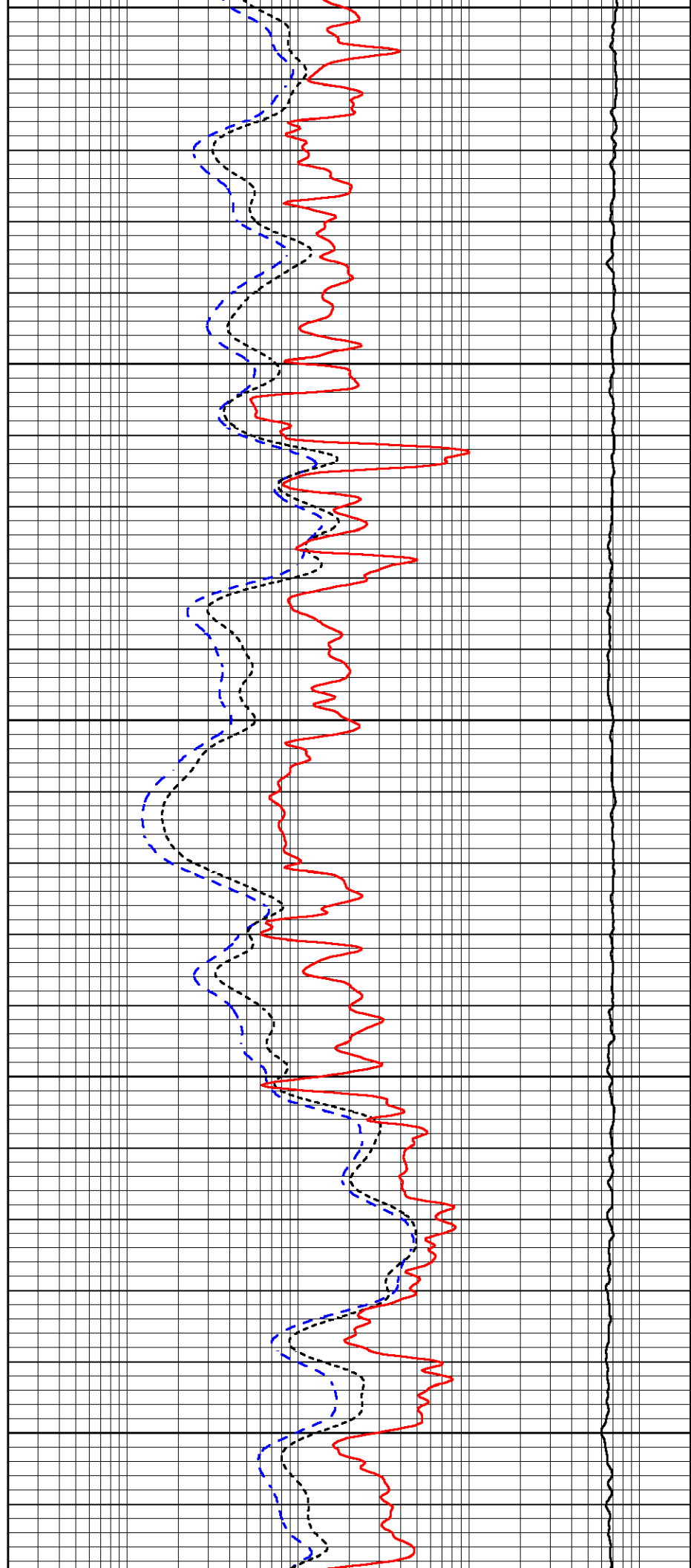
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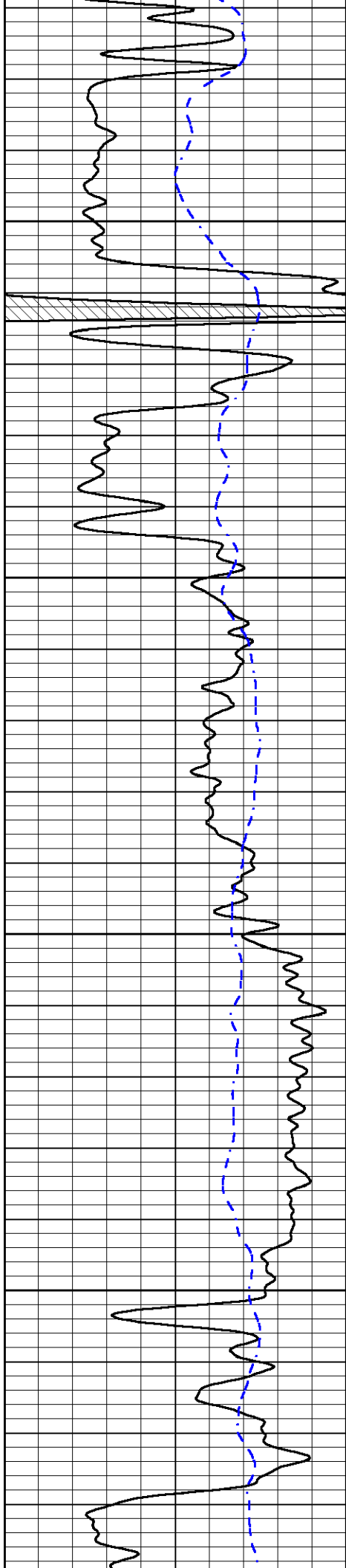
3150

3200

3250

3300



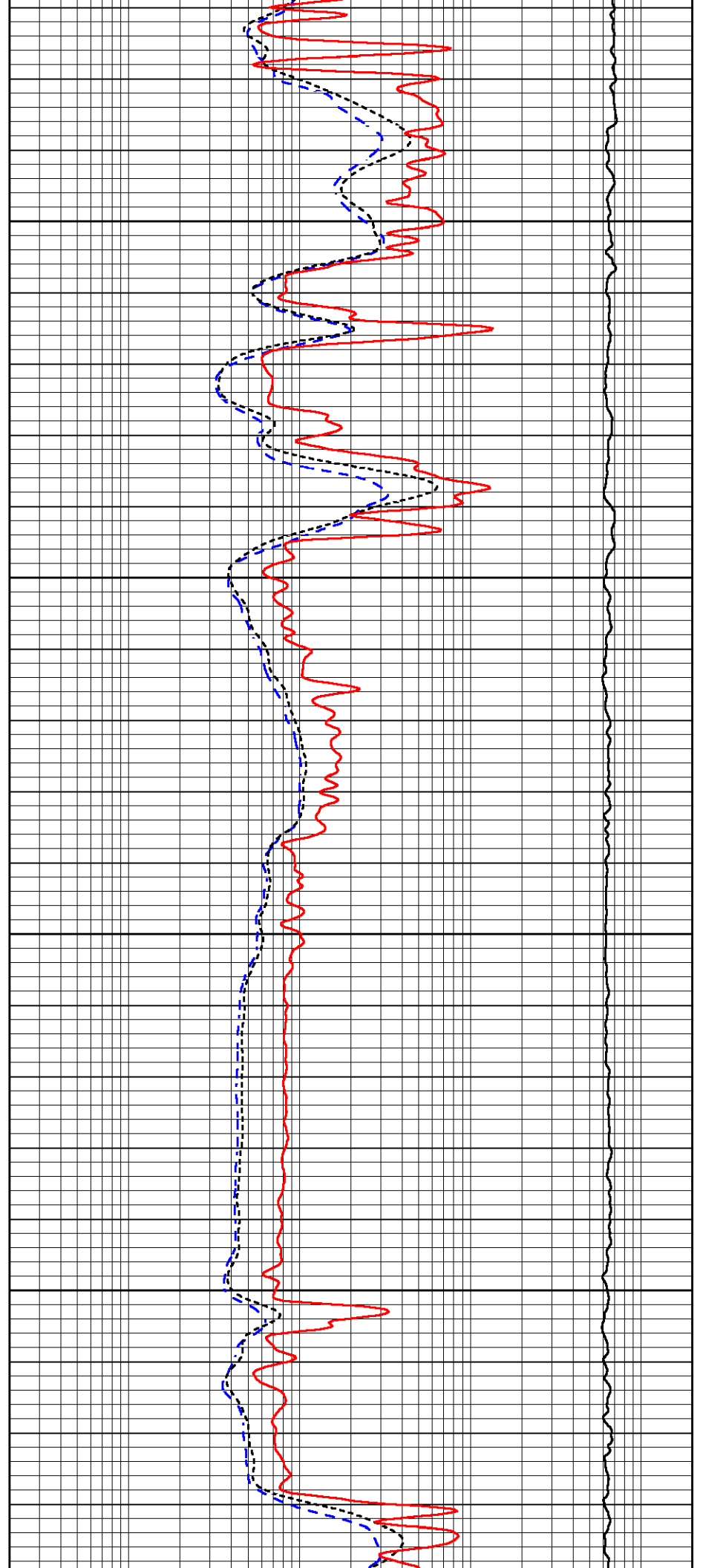


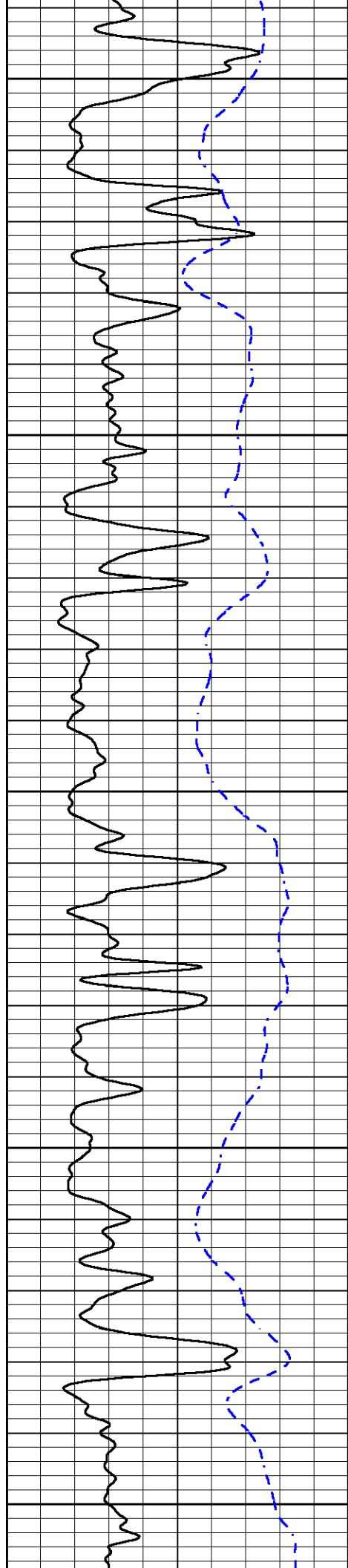
3350

3400

3450

3500





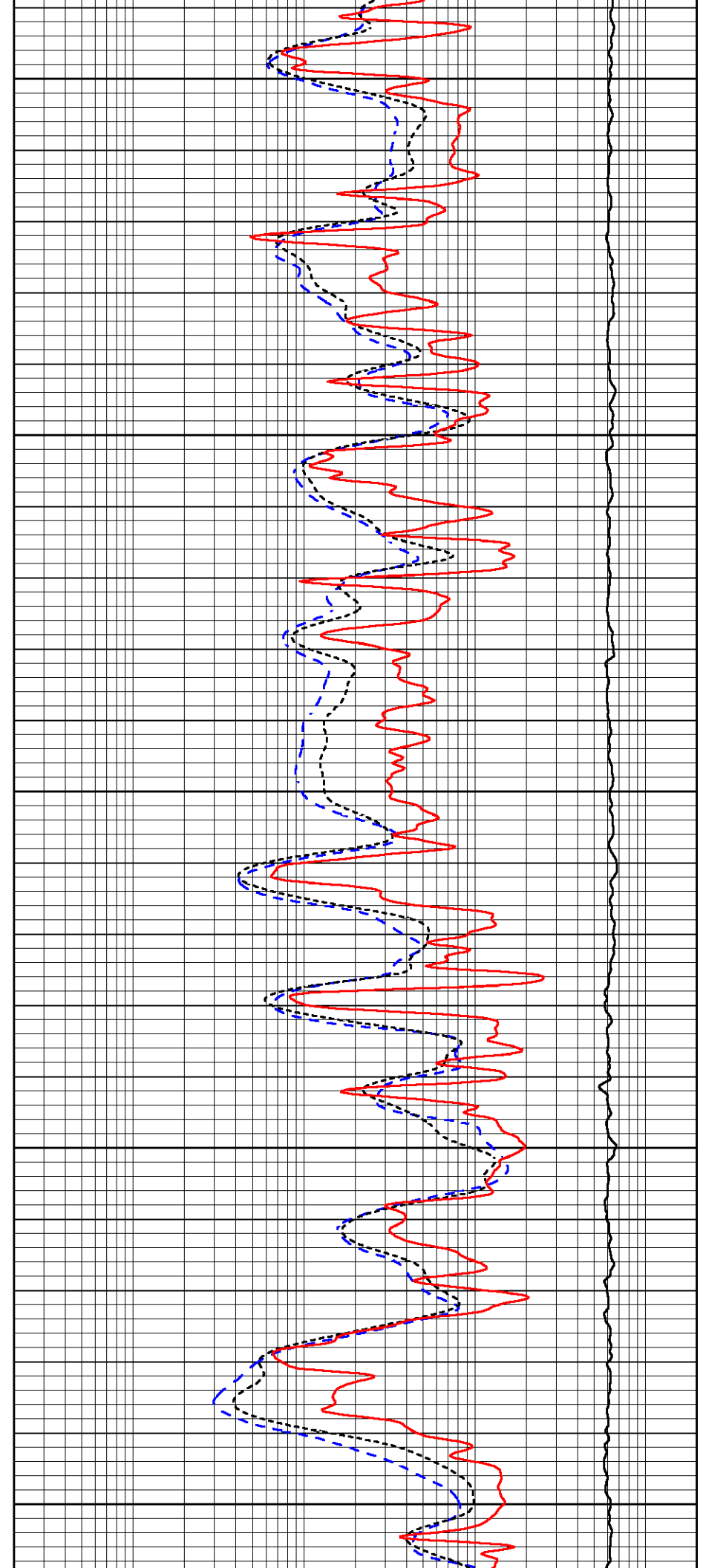
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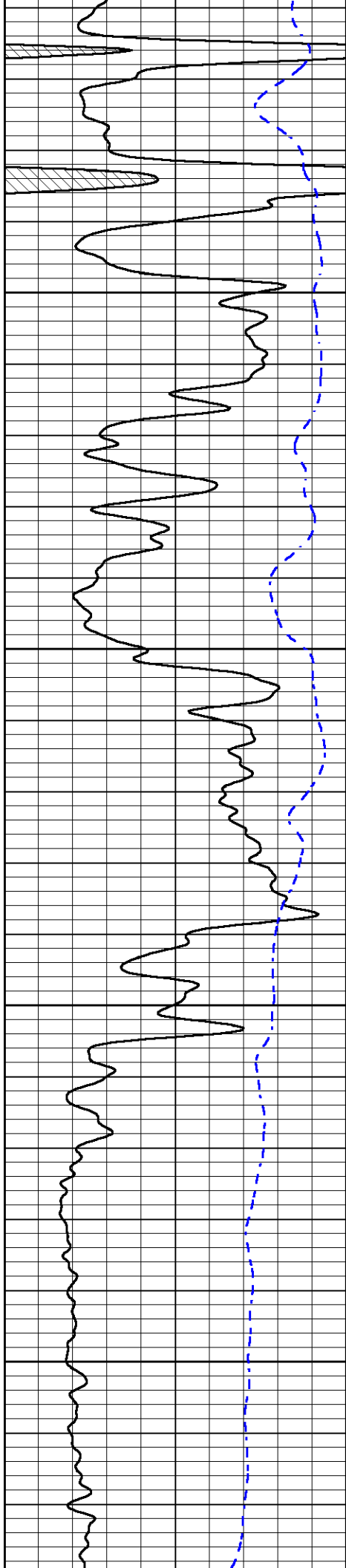
3600

3650

3700

3750



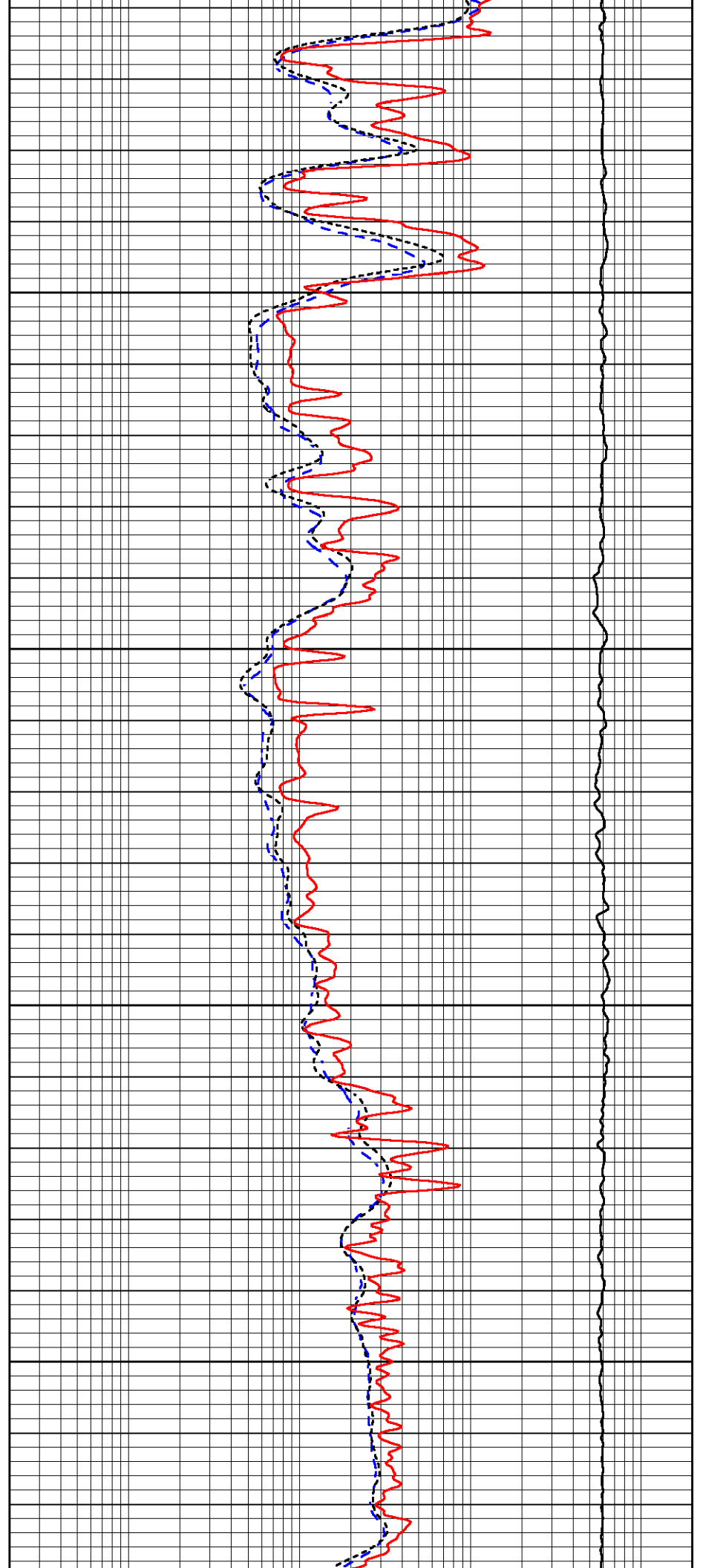


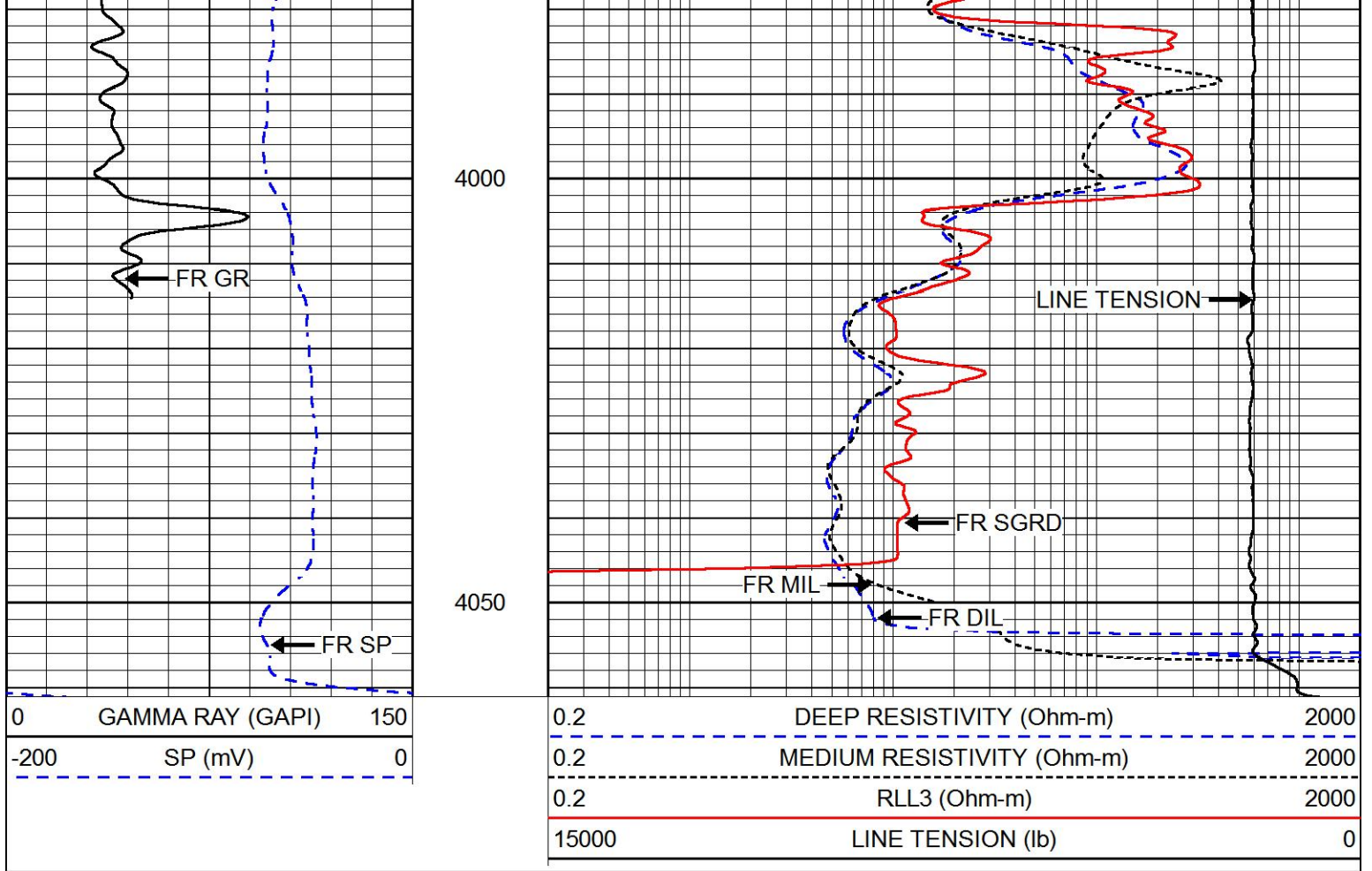
3800

3850

3900

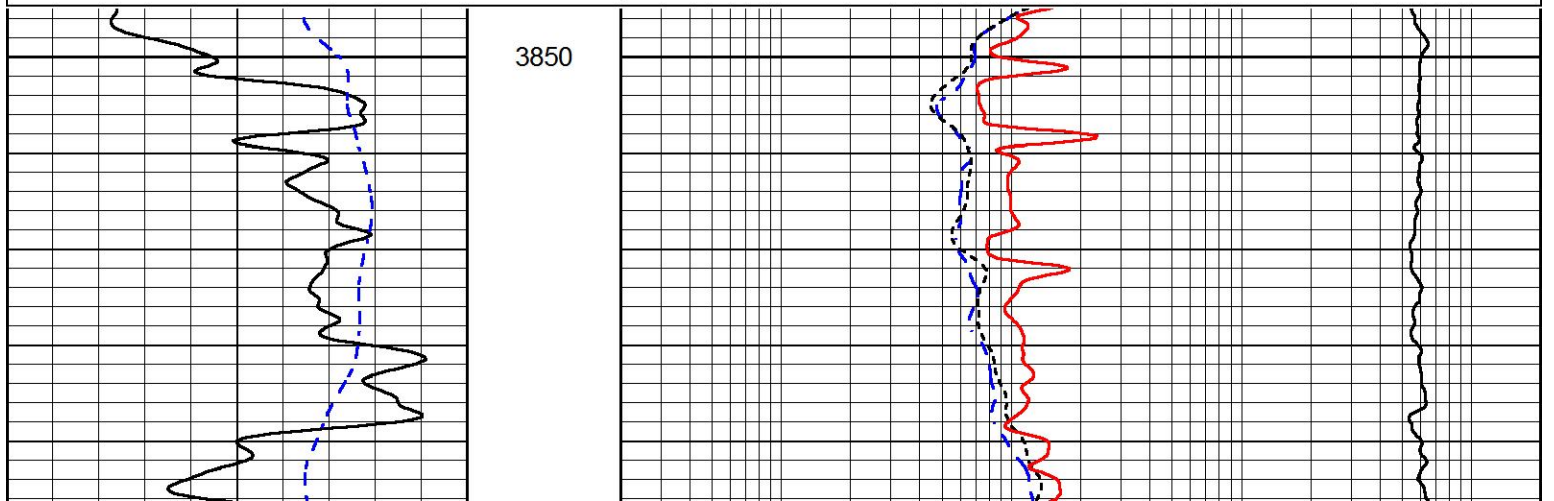
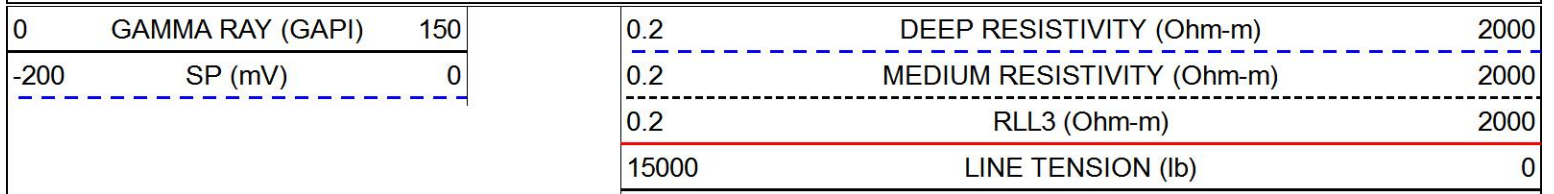
3950

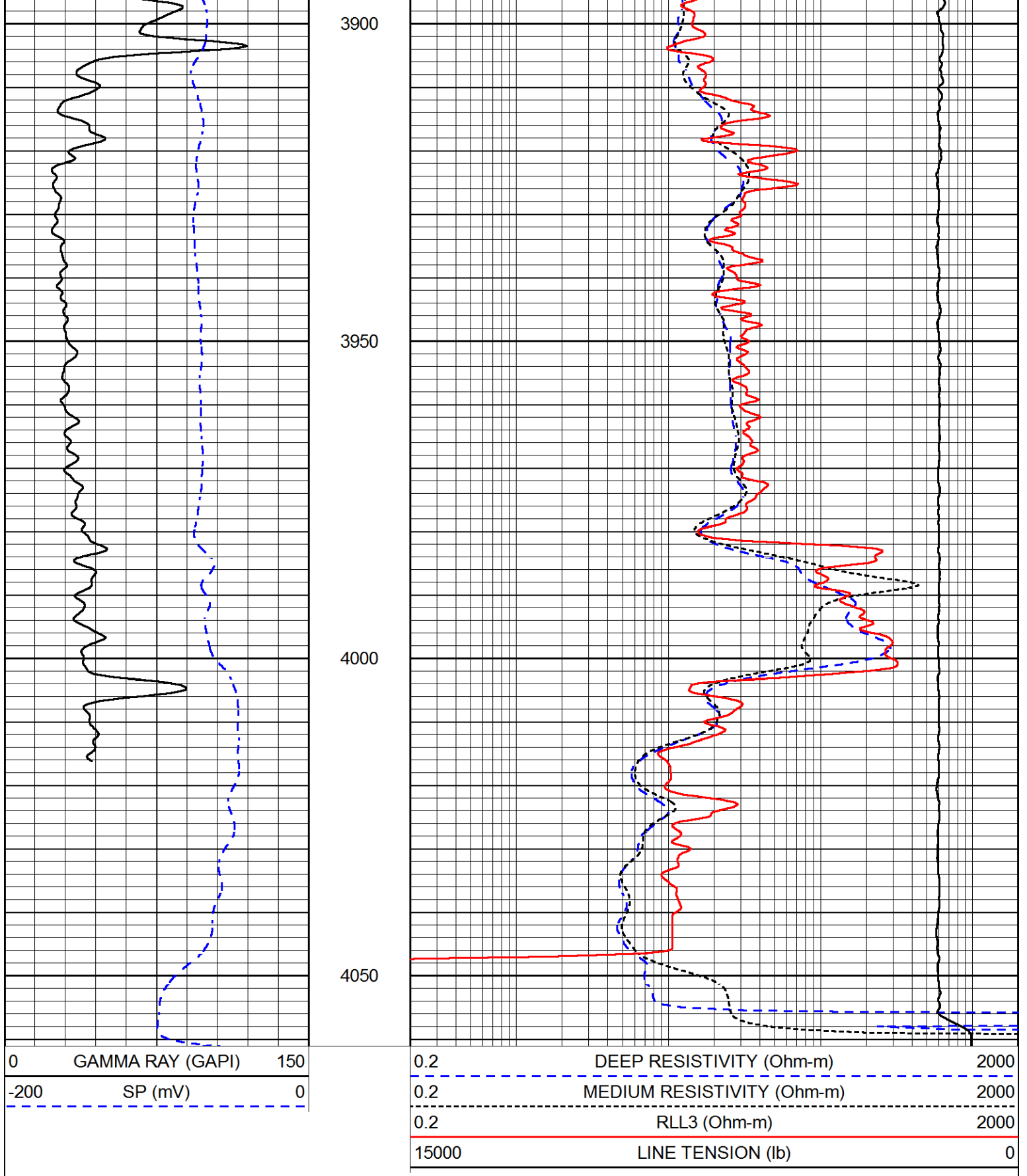




REPEAT SECTION

Database File thomas garner_elwell_#4.db
 Dataset Pathname stkml/pass2.1
 Presentation Format dil
 Dataset Creation Tue Sep 24 20:07:39 2019
 Charted by Depth in Feet scaled 1:240





Calibration Report

Database File thomas garner_elwell_#4.db
 Dataset Pathname stkml/pass3.1
 Dataset Creation Tue Sep 24 20:43:09 2019

Dual Induction Calibration Report

Serial-Model: PSI 988-M&W
 Calibration Performed: Tue Nov 20 10:50:10 2018

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	178.615	710.235	0.000	255.800	mmho/m	0.525	-43.500
Medium	161.982	1441.110	0.000	255.800	mmho/m	0.380	-17.500

Microlog Calibration Report

Serial-Model: UDM-01-PSI UDM ML
 Performed: Fri May 31 06:10:42 2019

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	26000.0000	0.0000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	20500.0000	0.0000
Caliper	0.7239	0.9274	8.0000	22.0000	in	68.7820	-41.7914

Compensated Density Calibration Report

Serial-Model: 979-229-M&W
 Source / Verifier: 21170B /
 Master Calibration Performed: Tue Jul 23 10:17:03 2019

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	7680.82	9959.08	cps
Aluminum	2.690	g/cc	1424.07	6427.19	cps
Spine Angle = 75.43			Density/Spine Ratio = 0.537		
	Size		Reading		
Small Ring	4.00	in	1.15		
Large Ring	14.00	in	1.02		

Compensated Neutron Calibration Report

Serial Number: tk10-MW
 Tool Model: M&W
 Calibration Performed: Wed Nov 16 11:21:36 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: Tue Apr 11 17:08:01 2017

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	THOMAS GARNER, INC.
Well	ELWELL #4
Field	ST. JOHN
County	STAFFORD
State	KANSAS



DUAL COMP POROSITY LOG

Pioneer Energy Services

Company THOMAS GARNER, INC.
 Well ELWELL #4
 Field ST. JOHN
 County STAFFORD State KANSAS

Company THOMAS GARNER, INC.
 Well ELWELL #4
 Field ST. JOHN
 County STAFFORD
 State KANSAS

Location: API #: 15-185-24057-00-00
 W2 SE SW NE
 2310' FNL & 1800' FEL
 SEC 23 TWP 24S RGE 13W
 Permanent Datum GROUND LEVEL Elevation 1906'
 Log Measured From KELLY BUSHING
 Drilling Measured From KELLY BUSHING
 Other Services
 DIL
 MEL/BHCS
 Elevation
 K.B. 1917'
 D.F. N/A
 G.L. 1906'

Date	9/24/2019						
Run Number	ONE						
Type Log	CNL/CDL						
Depth Driller	4055'						
Depth Logger	4056'						
Bottom Logged Interval	4026'						
Top Logged Interval	400'						
Type Fluid In Hole	CHEMICAL						
Salinity, PPM CL	8400						
Density	9.4						
Level	FULL						
Max. Rec. Temp. F	117 DEGF						
Operating Rig Time	4.5 HOURS						
Equipment -- Location	P-108 HAYS						
Recorded By	J. HENRICKSON						
Witnessed By	JOSH AUSTIN						
Borehole Record							
Run No.	Bit	From	To	Size	Wgt.	From	To
ONE	12.25"	00'	433'	8.625"	23#	00'	433'
TWO	7.875"	433'	TD				
Casing Record							

<<< 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.

ST. JOHN, 281/50, 1.5 E, S INTO

Log Measured From: KELLY BUSHING 11 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. HENRICKSON	Operator:	Primary Witness: JOSH AUSTIN	Secondary Witness: BRYCE GARNER
Operator:	Operator:	Secondary Witness:	Secondary Witness:

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	44.50		GR-M&W (89-M&W)	3.00	3.50	50.00
CNLSC CNSSC	41.40 40.65		CNT-M&W (tk10-MW)	5.50	3.50	100.00
LSD DCAL SSD	32.35 32.33 31.85		CDL-M&W (979-229)	8.50	4.00	250.00
MCAL MI MN	20.87 20.87 20.87		ML-PSI UDM ML (UDM-01) Stackable Microlog Tools	11.50	4.00	215.00
RLL3 RLL3F	15.80 15.79					
CILD	8.00		DIL-M&W (PSI 988)	18.50	3.50	220.00
CILM	4.70					
SP	0.20					

Dataset: thomas garner_elwell_#4.db: field/well/stkml/pass3.1
 Total length: 47.00 ft
 Total weight: 835.00 lb
 O.D.: 4.00 in

Log Variables

DatabaseC:\ProgramData\Warrior\Data\thomas garner_elwell_#4.db
 Dataset field/well/stkml/pass3.1/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	117	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	125	70	Off	4056



PIONEER

Pioneer Energy Services

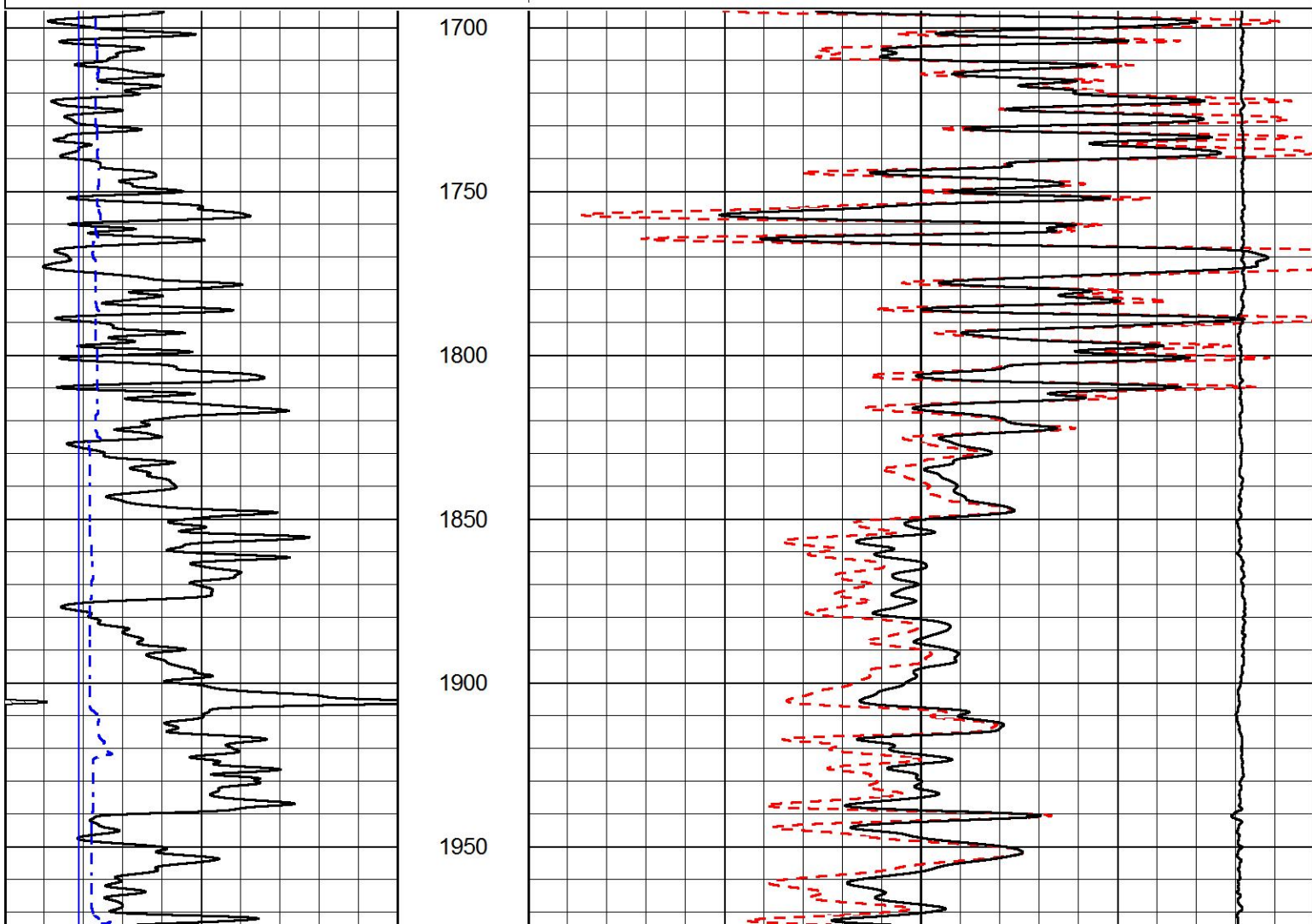
2" SCALE BULK DENSITY

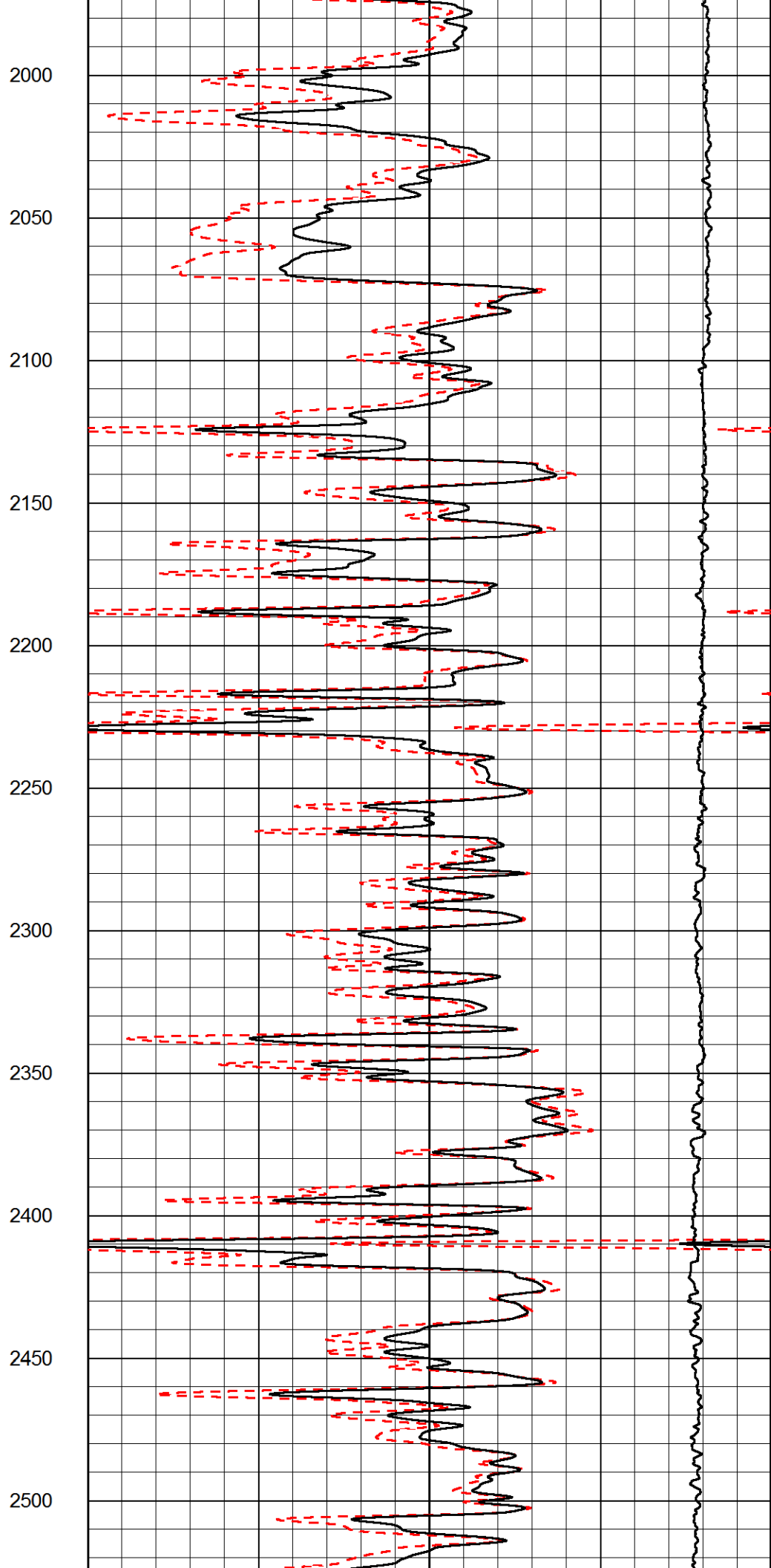
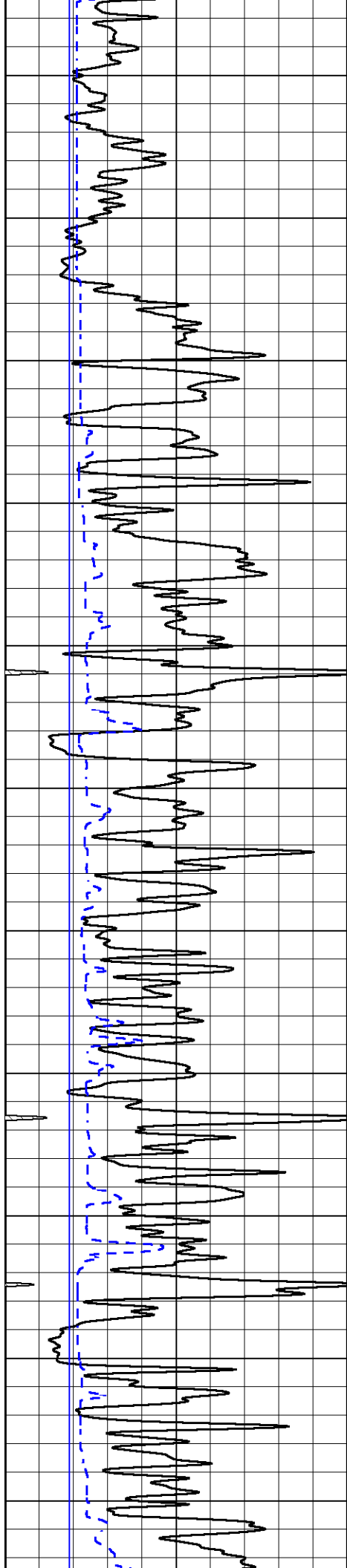
MAIN PASS

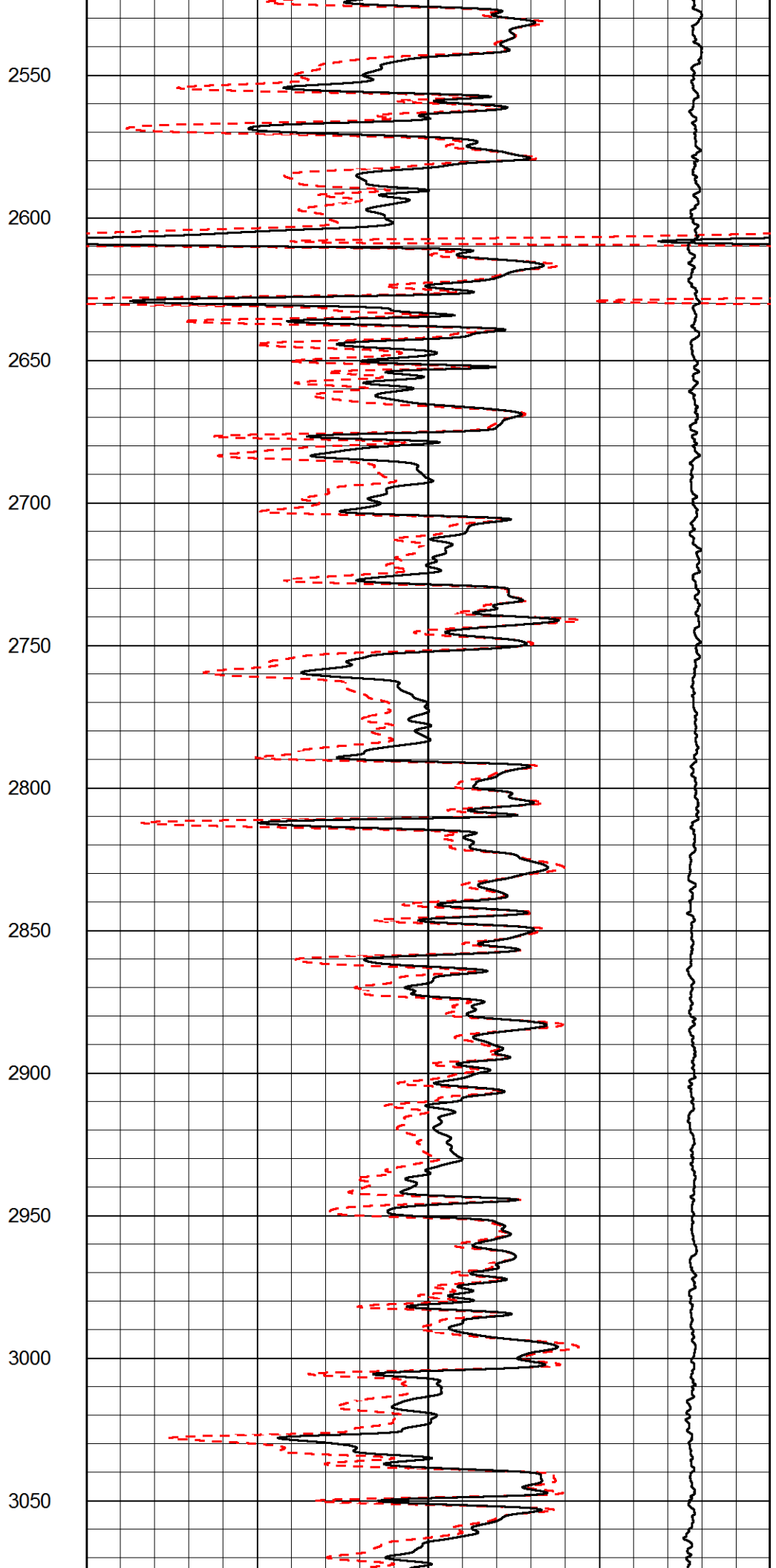
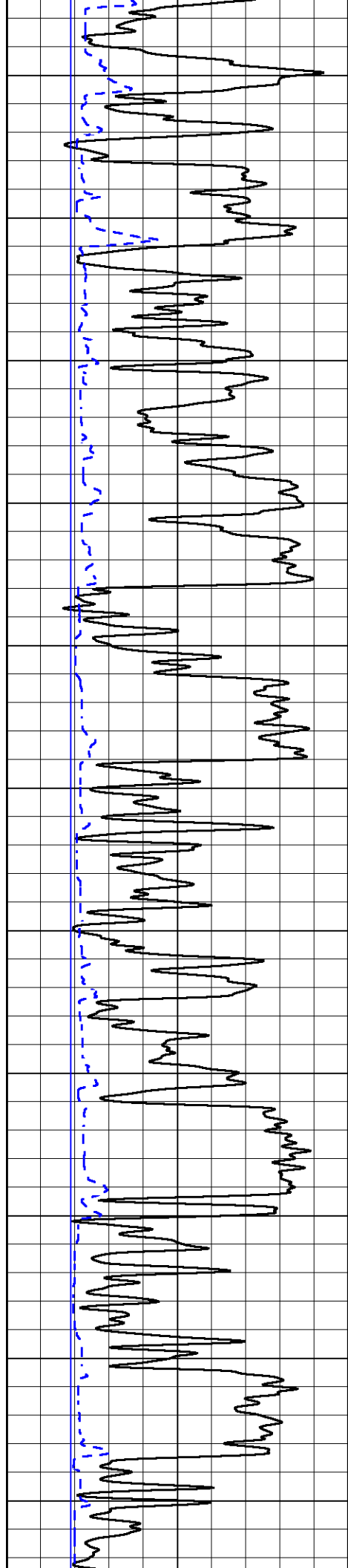
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 Presentation Format cdl
 Dataset Creation Tue Sep 24 20:42:49 2019
 Charted by Depth in Feet scaled 1:600

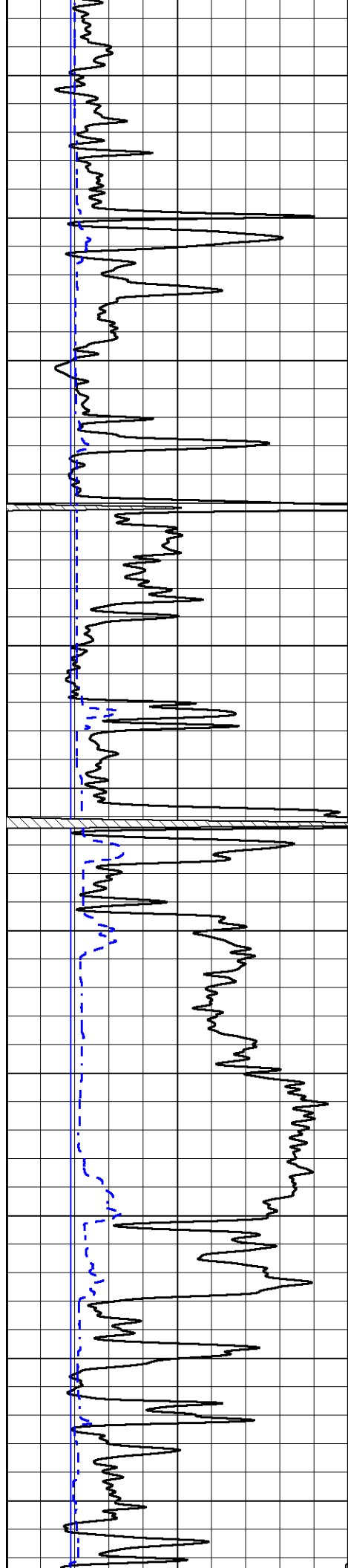
0	GAMMA RAY (GAPI)	150
6	CALIPER (in)	16

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









3100

3150

3200

3250

3300

3350

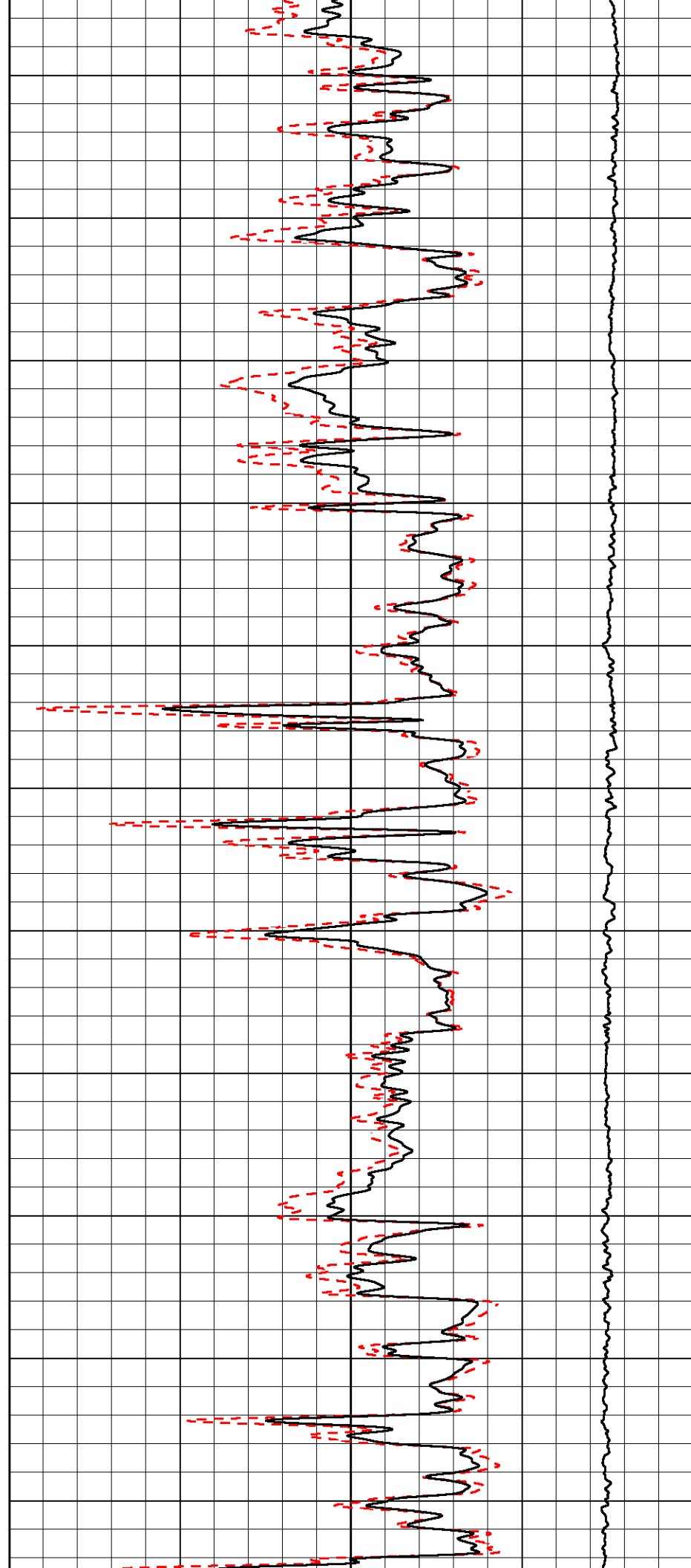
3400

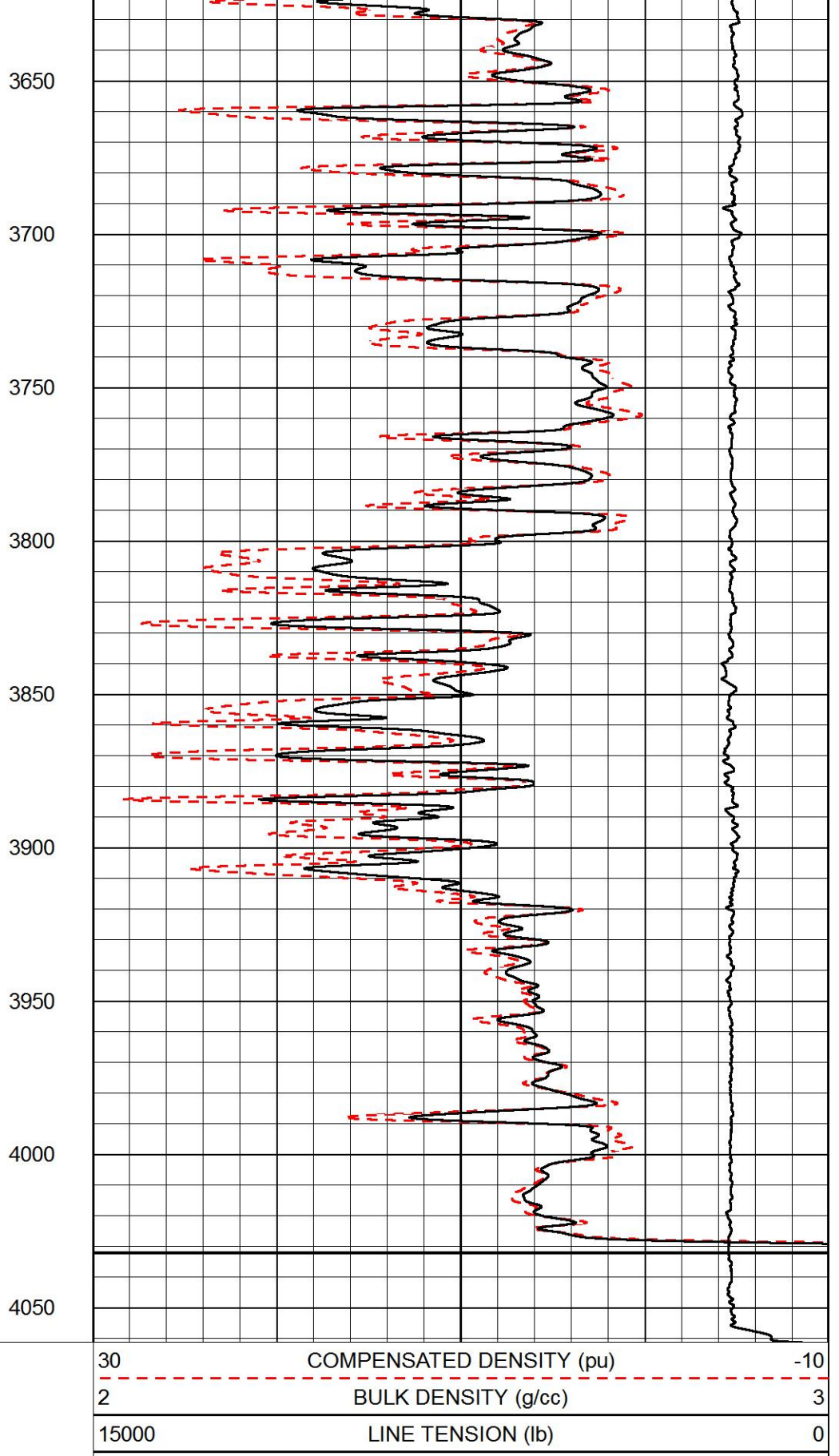
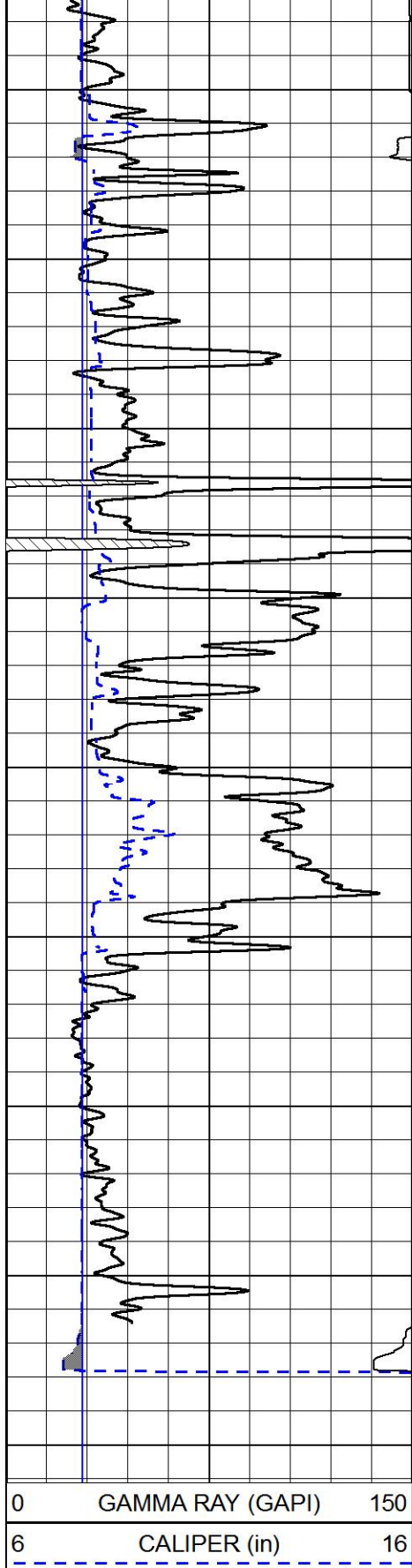
3450

3500

3550

3600

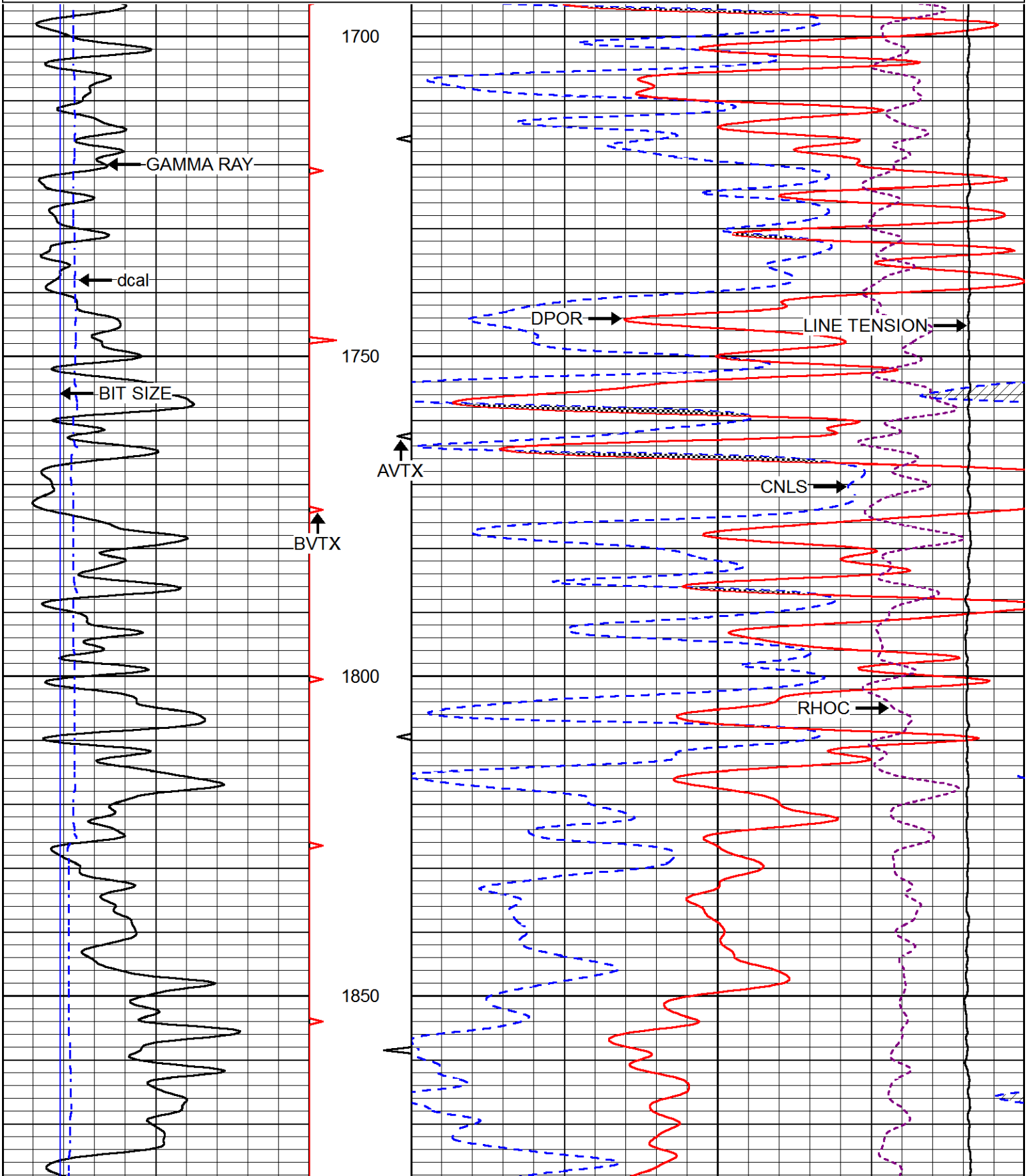


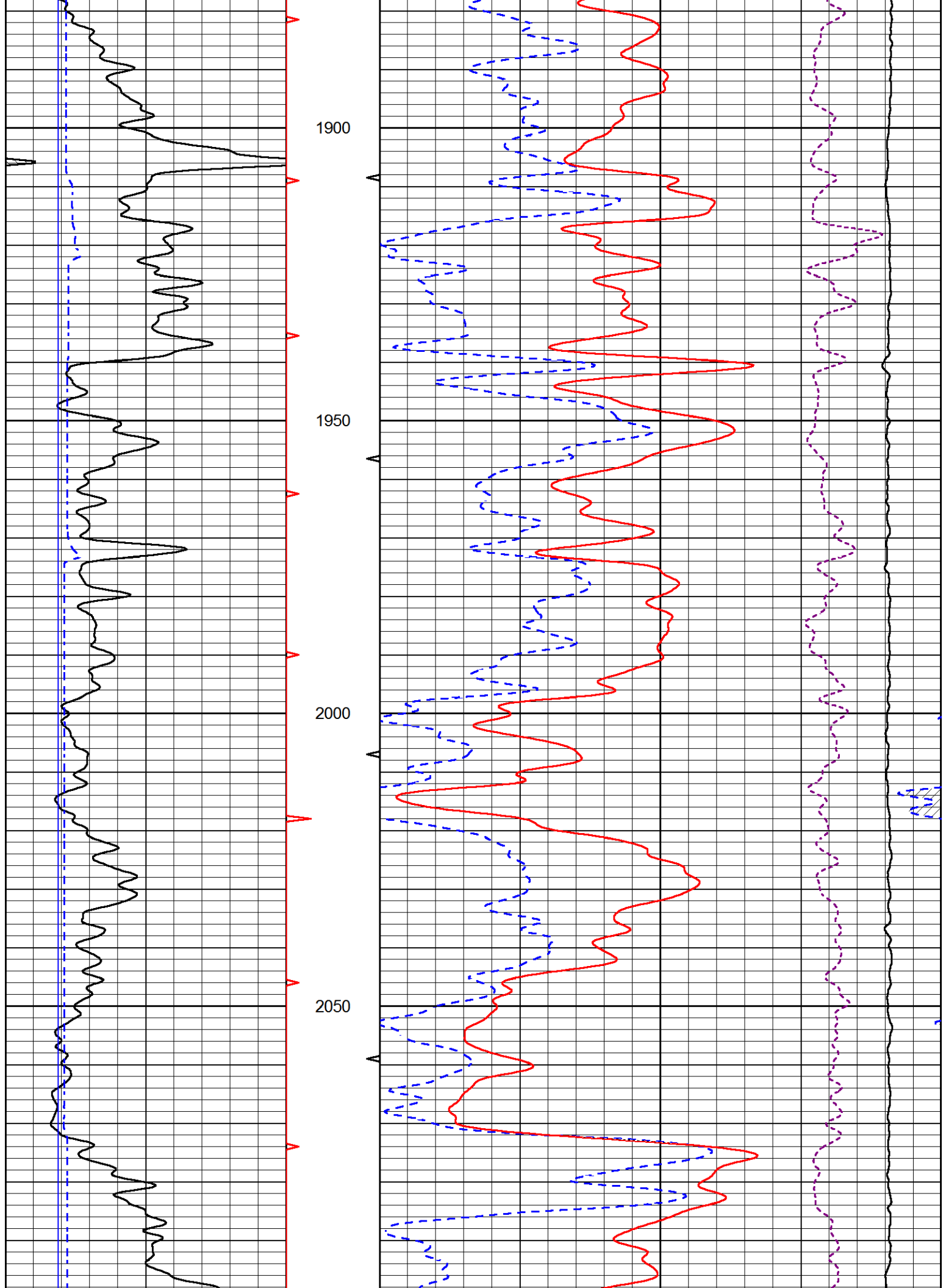


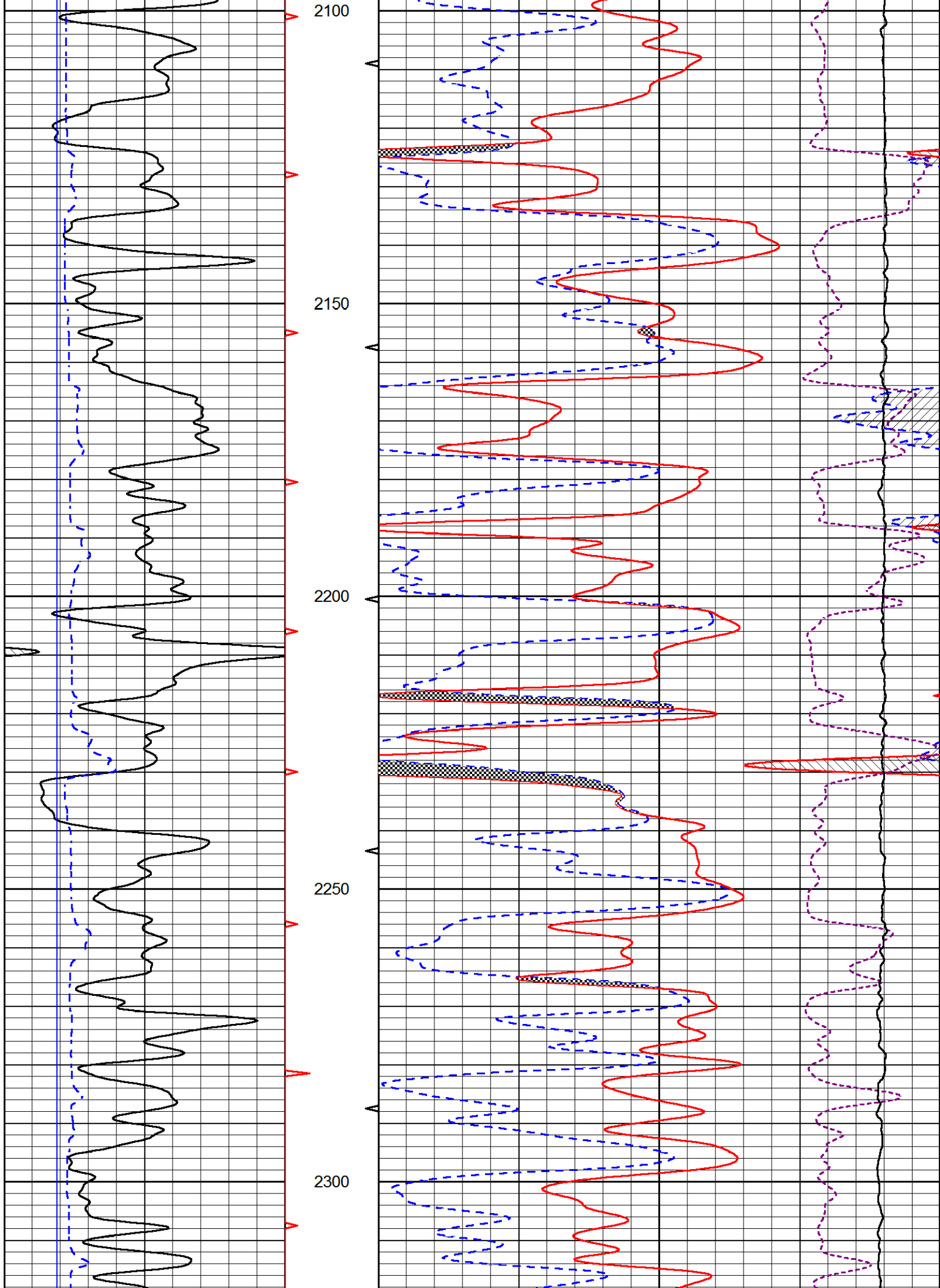
MAIN PASS

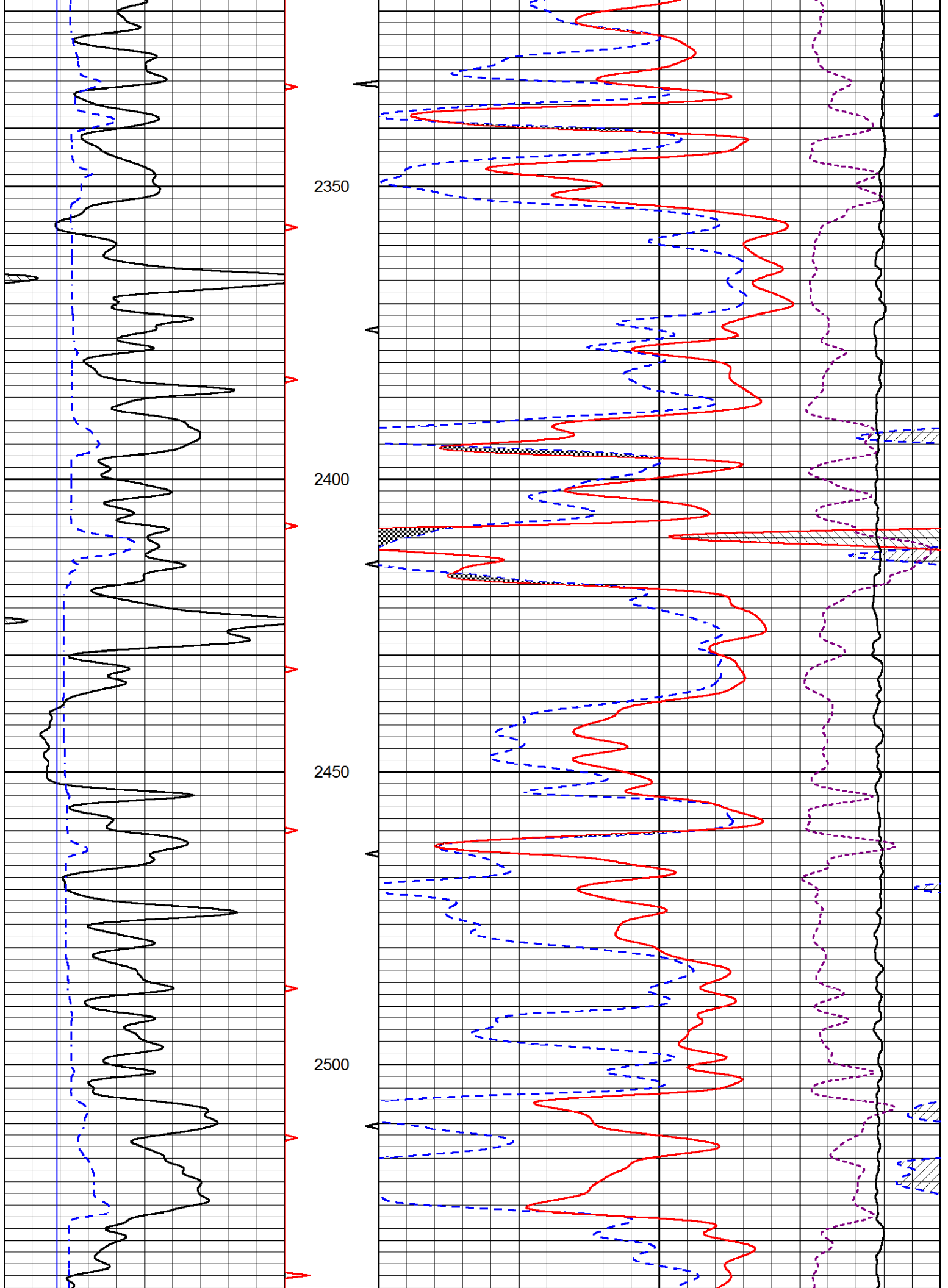
0	GAMMA RAY (GAPI)	150
6	dcal (in)	16
6	BIT SIZE (in)	16

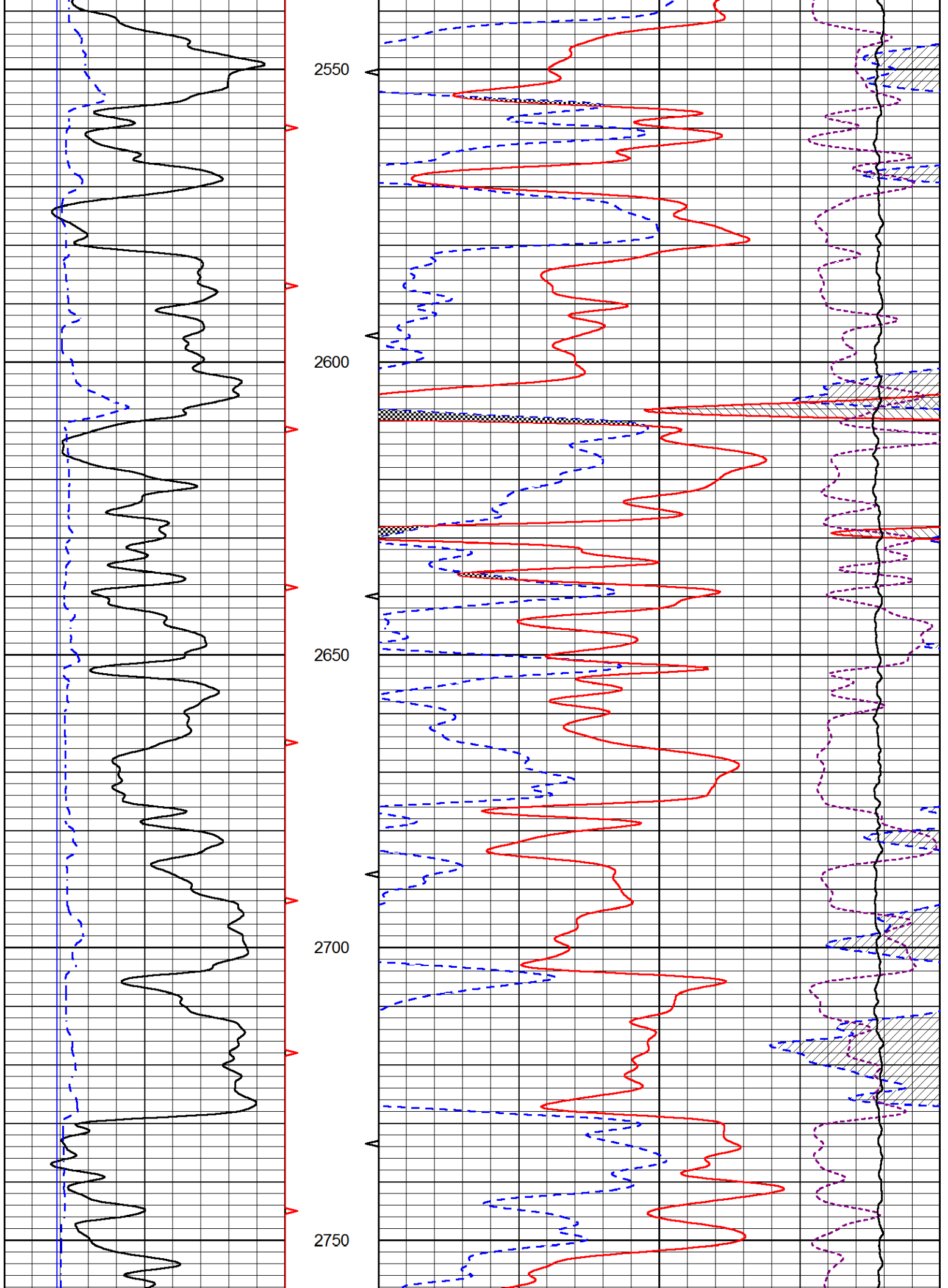
30	CNLS (pu)	-10
30	DPOR (pu)	-10
15000	LINE TENSION (lb)	0
	RHOC (g/cc)	0.25

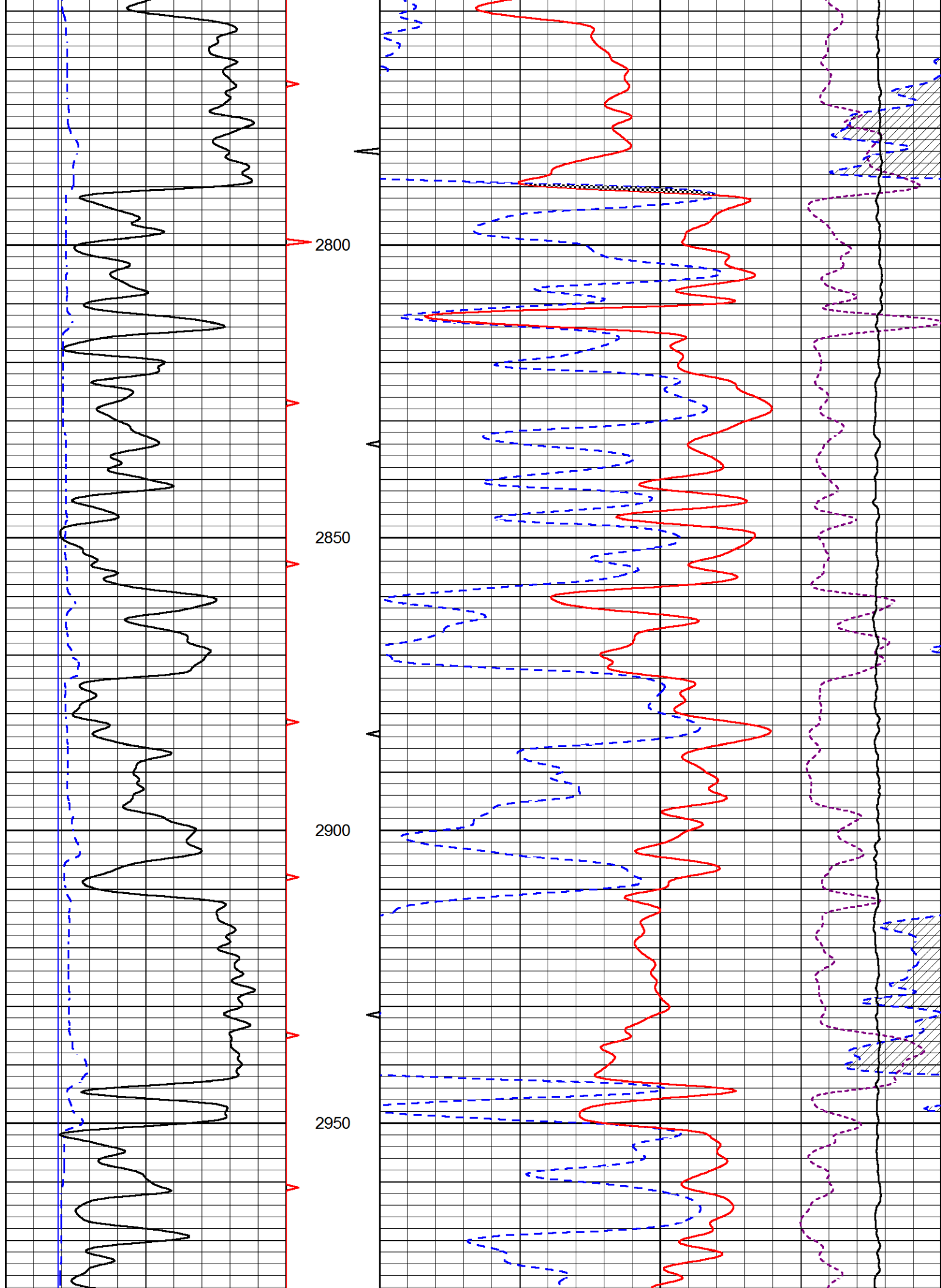


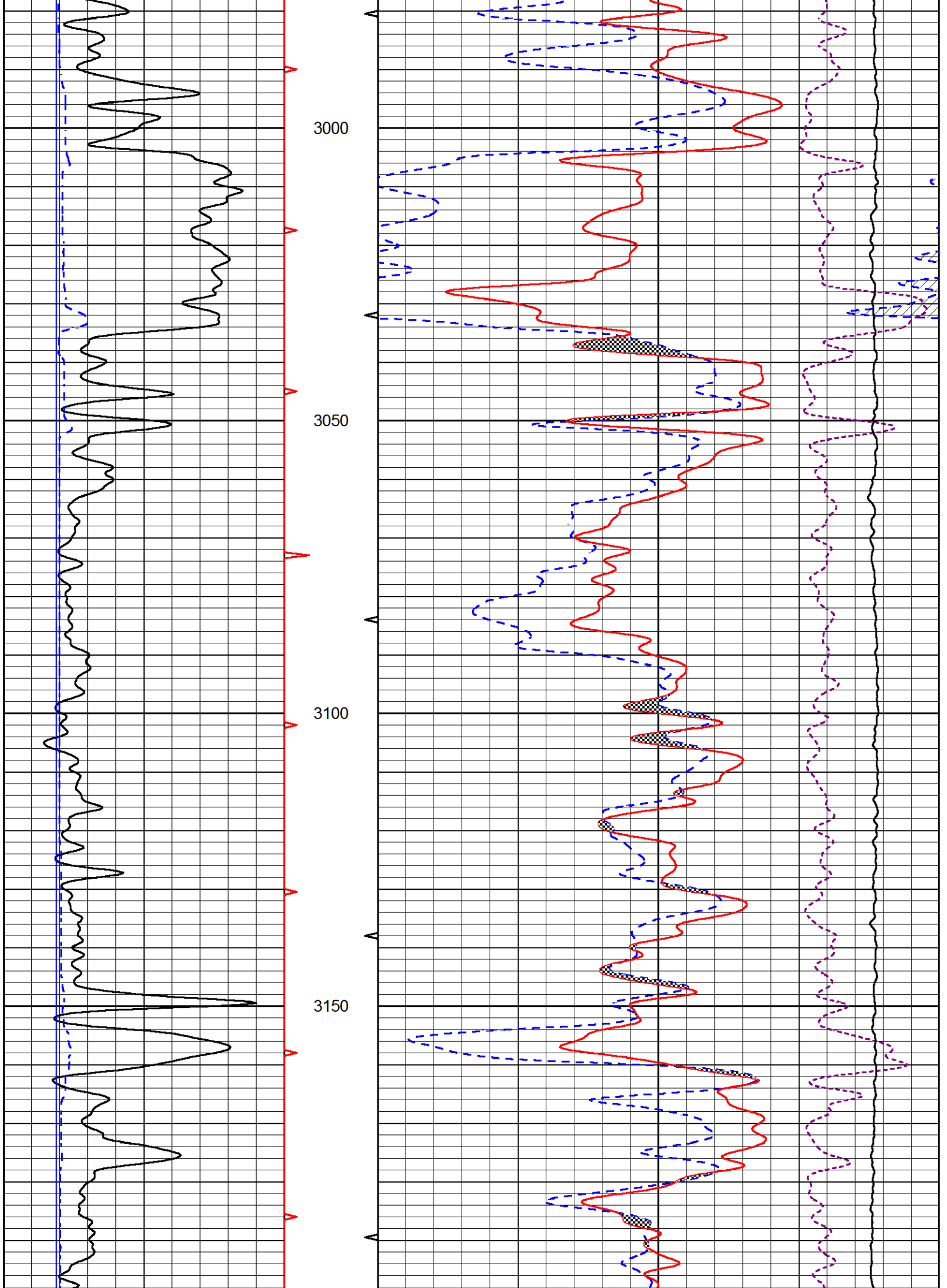


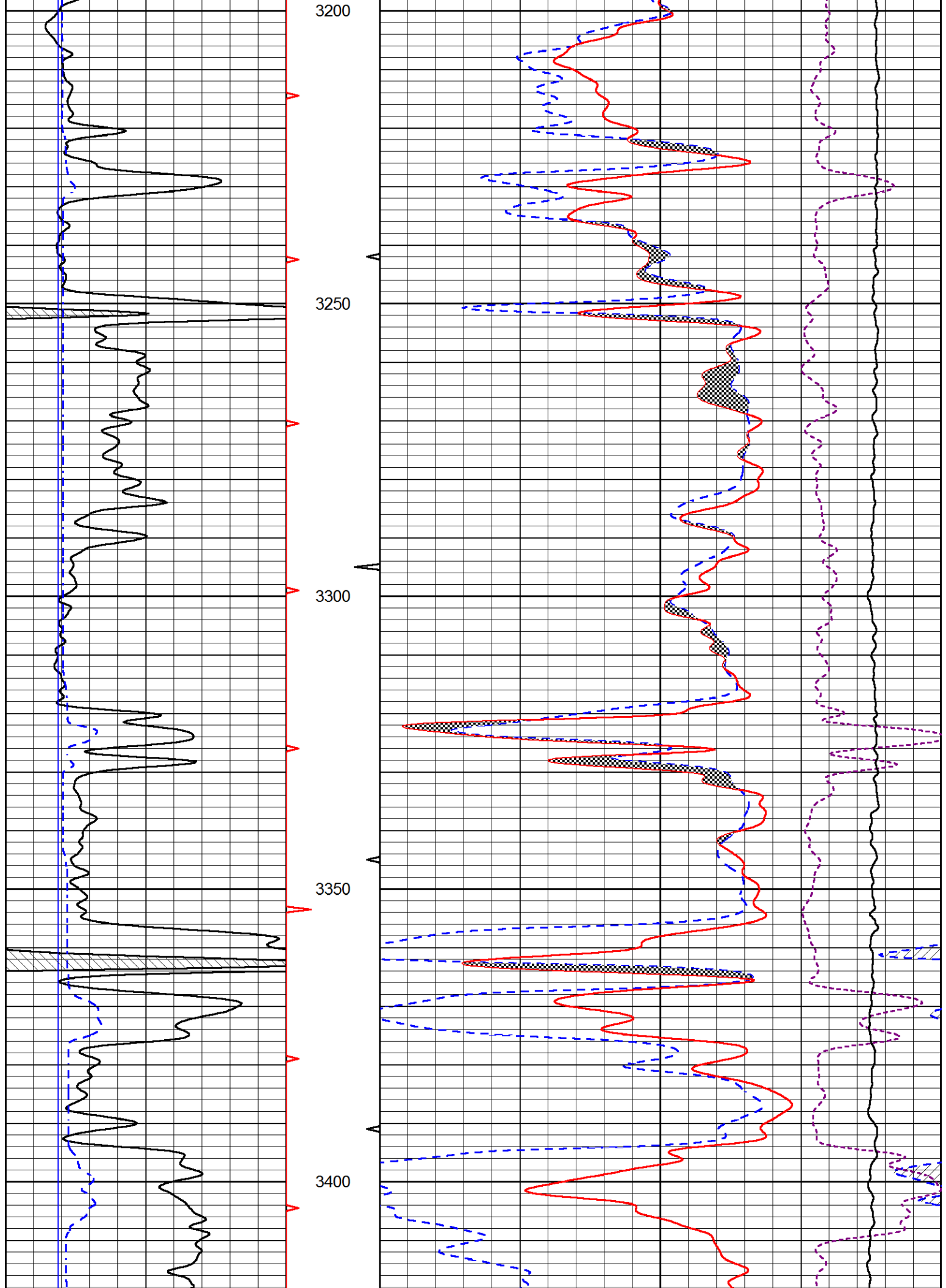


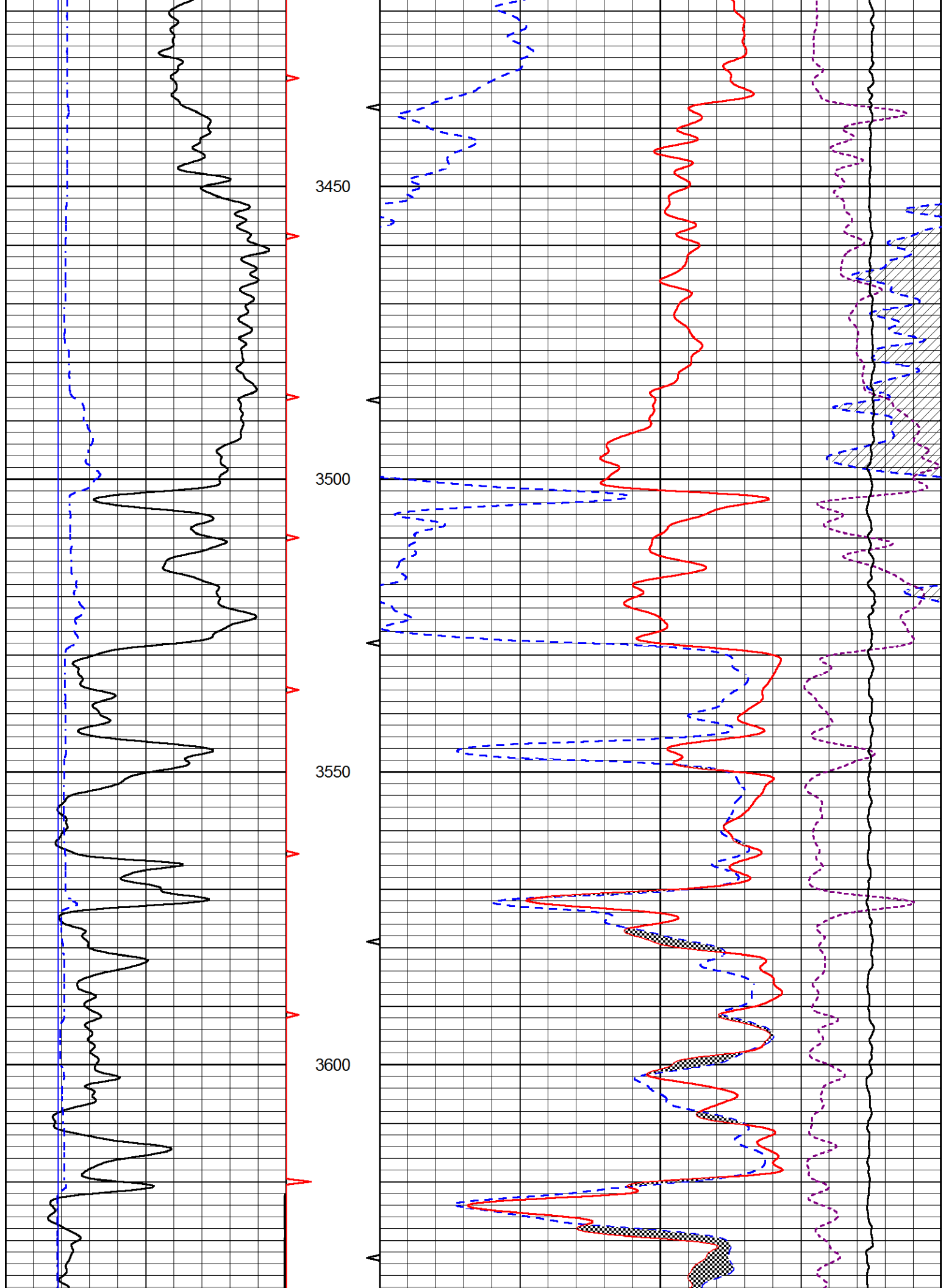


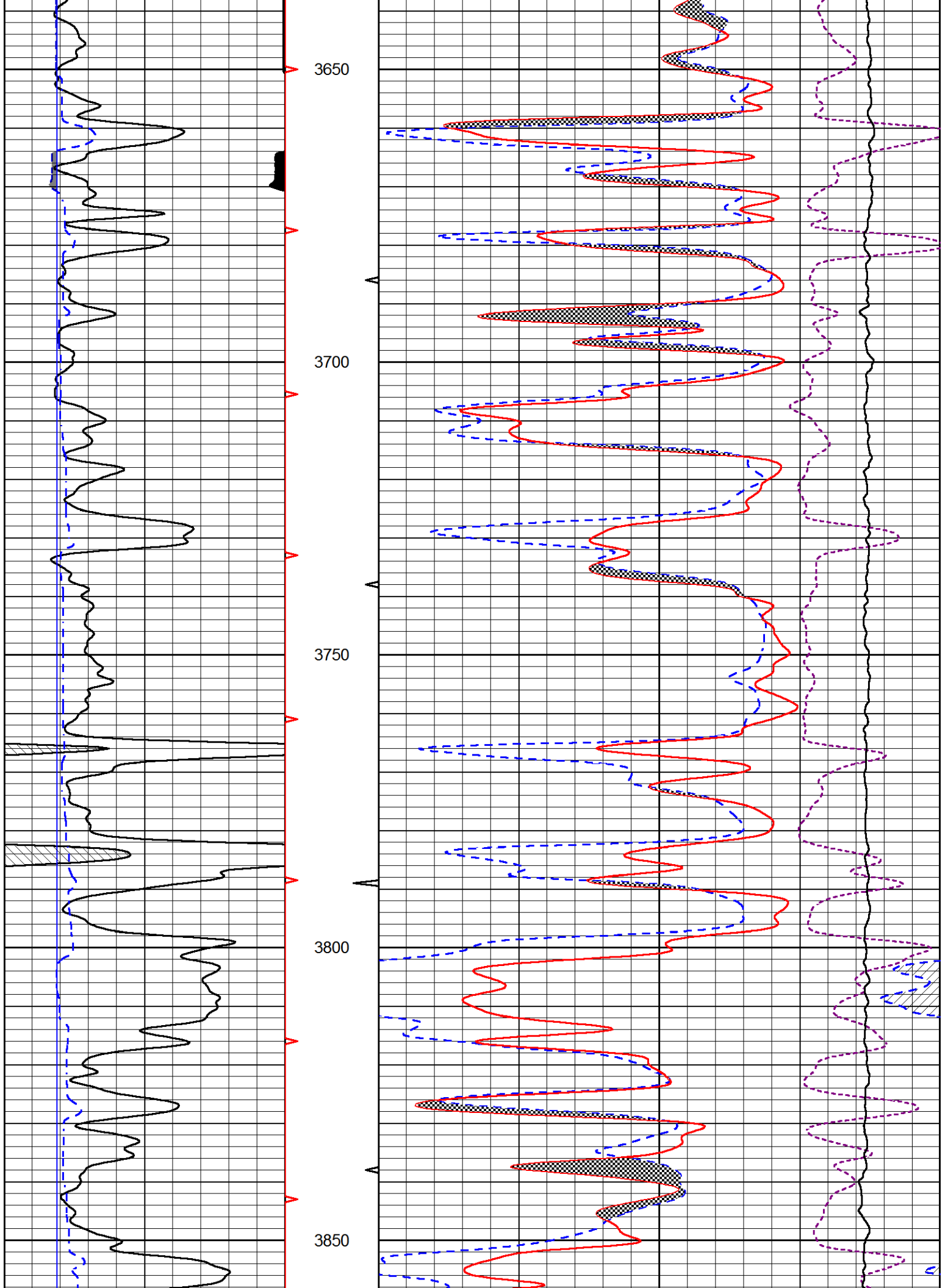


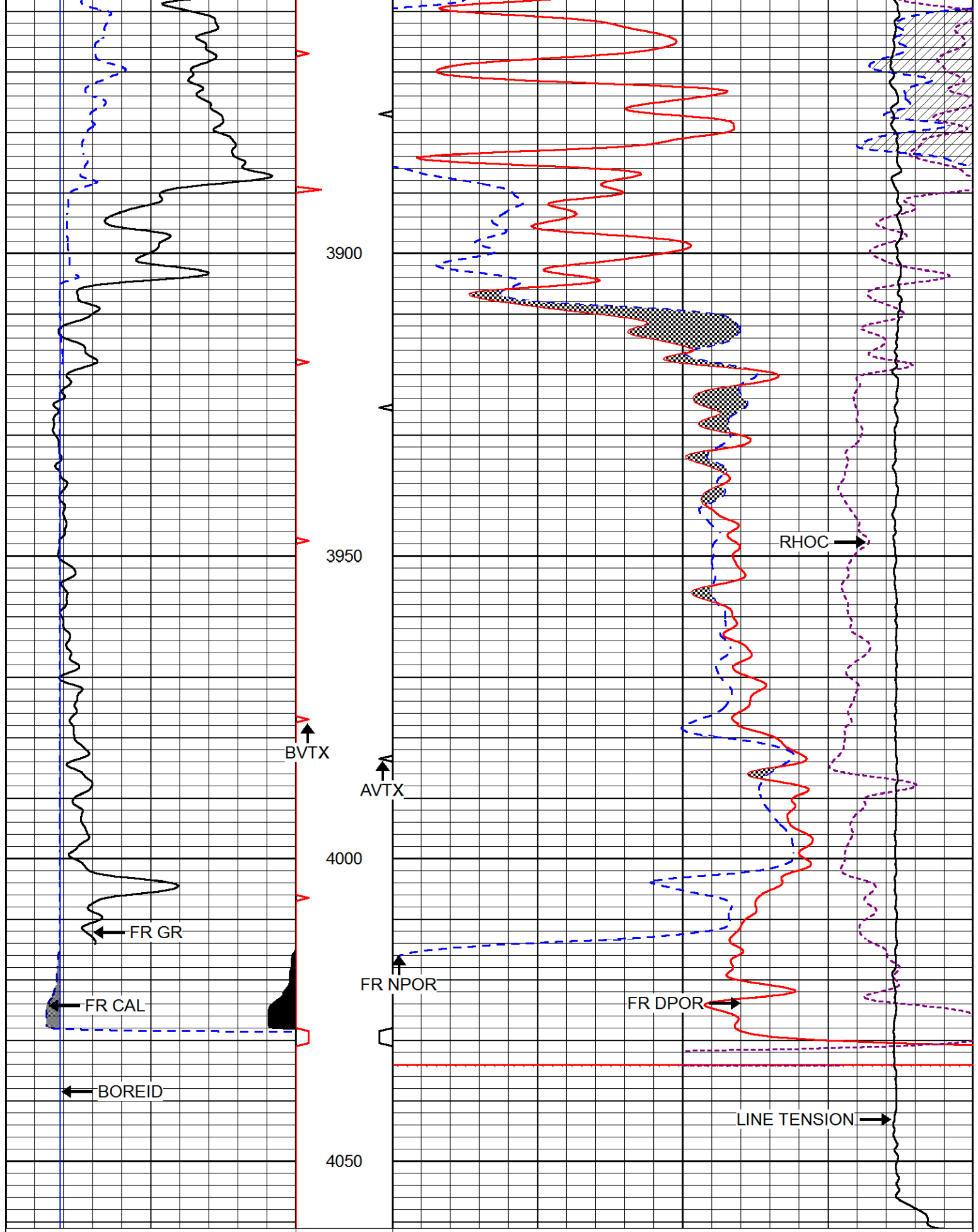












0	GAMMA RAY (GAPI)	150
6	dcal (in)	16
6	BIT SIZE (in)	16

30	CNLS (pu)	-10
30	DPOR (pu)	-10
15000	LINE TENSION (lb)	0
-0.25	RHOC (g/cc)	0.25



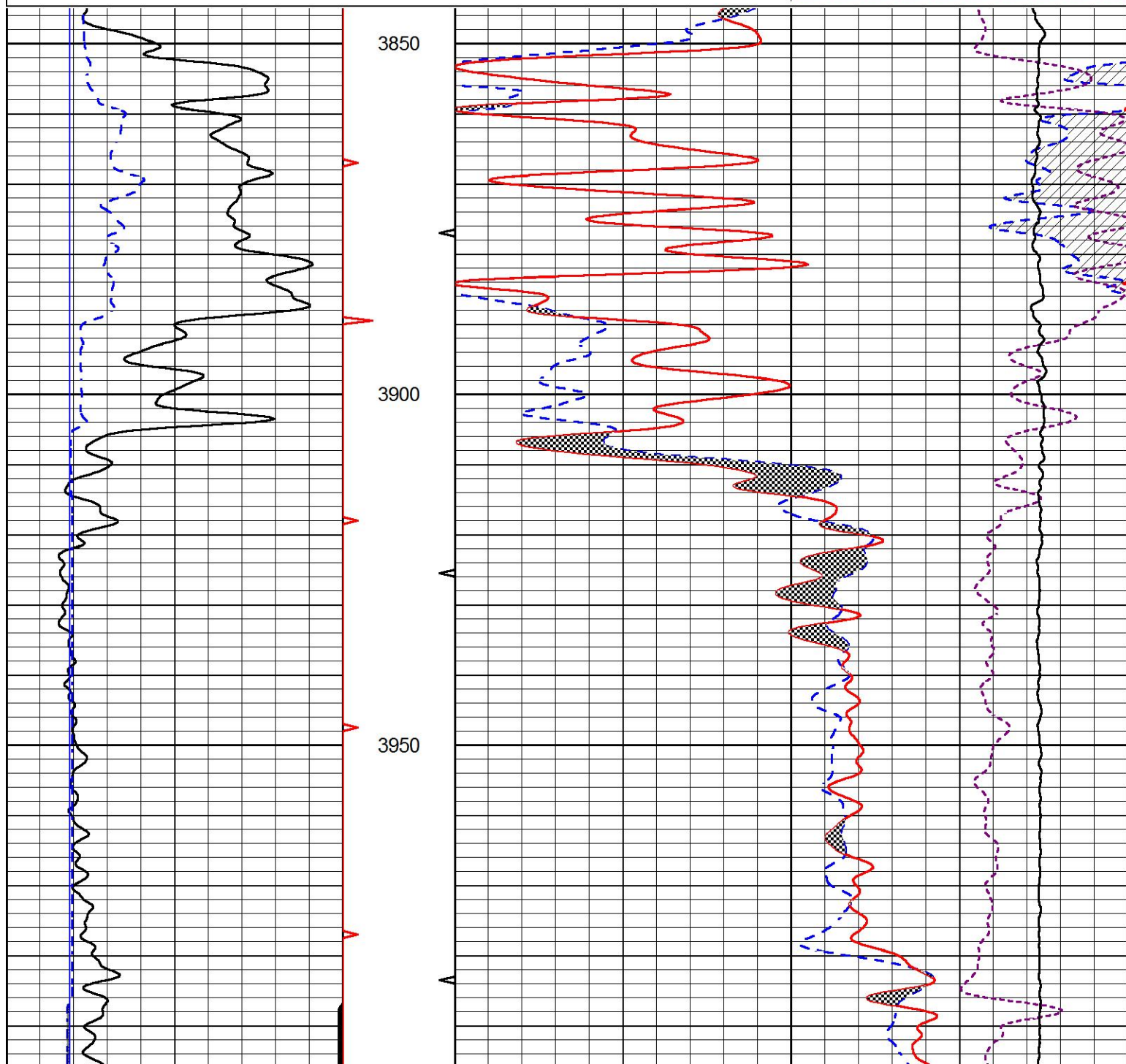
REPEAT SECTION

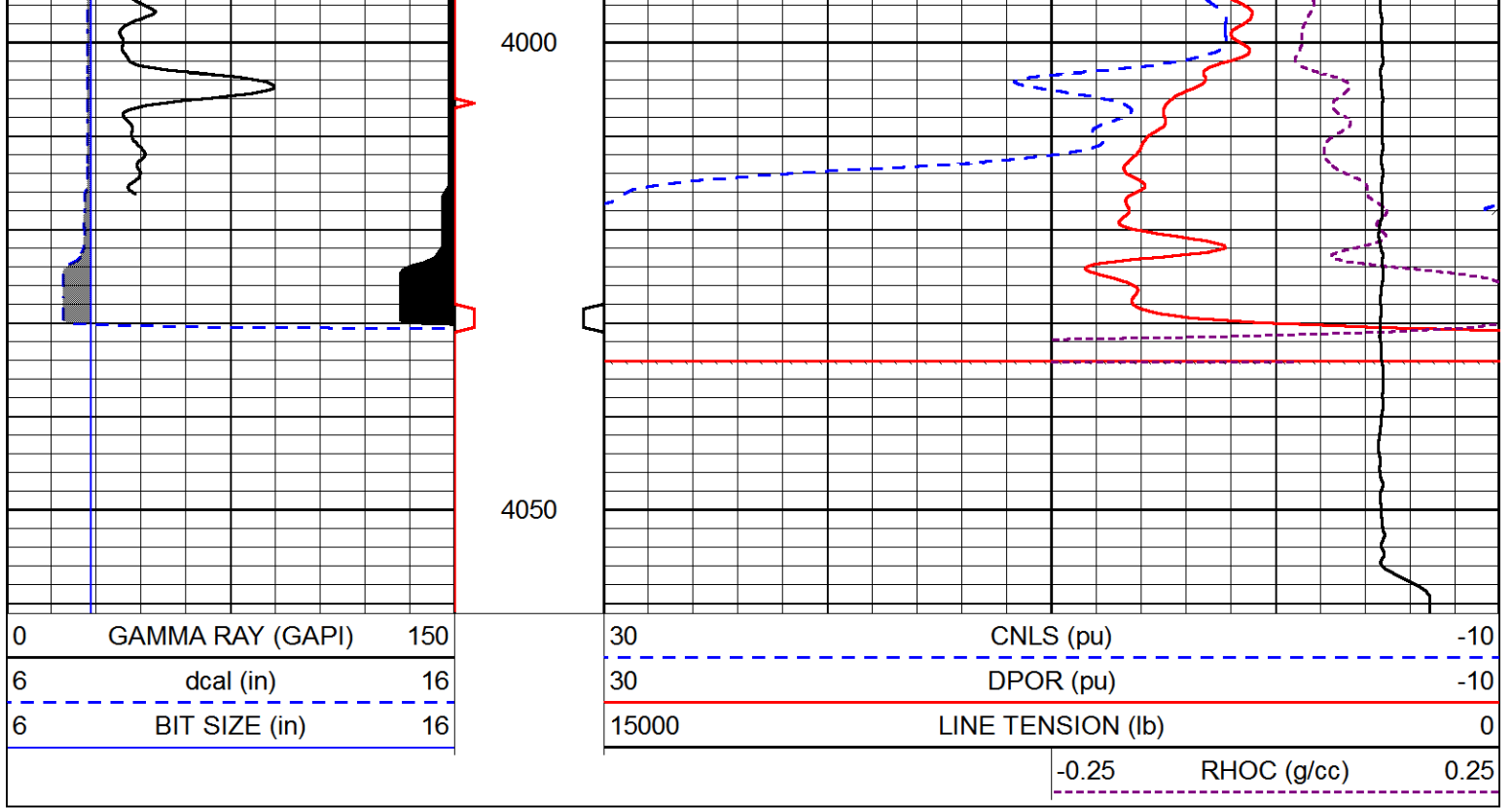
Database File thomas garner_elwell_#4.db
 Dataset Pathname stkml/pass2.1
 Presentation Format cndlspec
 Dataset Creation Tue Sep 24 20:07:39 2019
 Charted by Depth in Feet scaled 1:240

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

30	CNLS (pu)	-10
30	DPOR (pu)	-10
15000	LINE TENSION (lb)	0

-0.25 RHOC (g/cc) 0.25





Calibration Report

Database File thomas garner_elwell_#4.db
 Dataset Pathname stkml/pass3.1
 Dataset Creation Tue Sep 24 20:43:09 2019

Dual Induction Calibration Report

Serial-Model: PSI 988-M&W
 Calibration Performed: Tue Nov 20 10:50:19 2018

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	178.615	710.235	0.000	255.800	mmho/m	0.525	-43.500
Medium	161.982	1441.110	0.000	255.800	mmho/m	0.380	-17.500

Microlog Calibration Report

Serial-Model: UDM-01-PSI UDM ML
 Performed: Fri May 31 06:10:42 2019

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	26000.0000	0.0000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	20500.0000	0.0000
Caliper	0.7239	0.9274	8.0000	22.0000	in	68.7820	-41.7914

Compensated Density Calibration Report

Serial-Model: 979-229-M&W
 Source / Verifier: 21170B /
 Master Calibration Performed: Tue Jul 23 10:17:03 2019

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	7680.82	9959.08	cps
Aluminum	2.690	g/cc	1424.07	6427.19	cps
Spine Angle = 75.43			Density/Spine Ratio = 0.537		
	Size		Reading		
Small Ring	4.00	in	1.15		
Large Ring	14.00	in	1.02		

Compensated Neutron Calibration Report

Serial Number: tk10-MW
 Tool Model: M&W
 Calibration Performed: Wed Nov 16 11:21:36 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: Tue Apr 11 17:08:01 2017

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 THOMAS GARNER, INC.
 Well ELWELL #4
 Field ST. JOHN
 County STAFFORD
 State KANSAS



MICRORESISTIVITY LOG

Pioneer Energy Services

Company **THOMAS GARNER, INC.**
 Well **ELWELL #4**
 Field **ST. JOHN**
 County **STAFFORD** State **KANSAS**

Location: API #: 15-185-24057-00-00
 W2 SE SW NE
 2310' FNL & 1800' FEL
 SEC 23 TWP 24S RGE 13W
 Permanent Datum **GROUND LEVEL** Elevation **1906'**
 Log Measured From **KELLY BUSHING**
 Drilling Measured From **KELLY BUSHING**
 Other Services
CNL/CDL
DIL/BHCS
 Elevation
 K.B. 1917'
 D.F. N/A
 G.L. 1906'

Date	9/24/2019
Run Number	ONE
Depth Driller	4055'
Depth Logger	4056'
Bottom Logged Interval	4055'
Top Log Interval	1700'
Casing Driller	8.625" @ 433'
Casing Logger	432'
Bit Size	7.875"
Type Fluid in Hole	CHEMICAL
Salinity, ppm CL	8400
Density / Viscosity	9.4 51
pH / Fluid Loss	9.5 7.4
Source of Sample	FLOWLINE
Rm @ Meas. Temp	0.55 @ 74
Rmt @ Meas. Temp	0.41 @ 74
Rmc @ Meas. Temp	0.74 @ 74
Source of Rmf / Rmc	CHARTS
Rm @ BHT	0.35 @ 117
Operating Rig Time	4.5 HOURS
Max Rec. Temp. F	117 DEG F
Equipment Number	P-108
Location	HAYS
Recorded By	J. HENRICKSON
Witnessed By	JOSH AUSTIN

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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.

ST. JOHN, 281/50, 1.5 E, S INTO

Log Measured From: **KELLY BUSHING** 11 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. HENRICKSON	Operator:	Primary Witness: JOSH AUSTIN	Secondary Witness: BRYCE GARNER
Operator:	Operator:	Secondary Witness:	Secondary Witness:

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	44.50		GR-M&W (89-M&W)	3.00	3.50	50.00
CNLSC CNSSC	41.40 40.65		CNT-M&W (tk10-MW)	5.50	3.50	100.00
LSD DCAL SSD	32.35 32.33 31.85		CDL-M&W (979-229)	8.50	4.00	250.00
MCAL MI MN	20.87 20.87 20.87		ML-PSI UDM ML (UDM-01) Stackable Microlog Tools	11.50	4.00	215.00
RLL3 RLL3F	15.80 15.79		DIL-M&W (PSI 988)	18.50	3.50	220.00
CILD	8.00		CILM	4.70		
SP	0.20					

Dataset: thomas garner_elwell_#4.db: field/well/stkml/pass3.1
 Total length: 47.00 ft
 Total weight: 835.00 lb
 O.D.: 4.00 in

Log Variables

DatabaseC:\ProgramData\Warrior\Data\thomas garner_elwell_#4.db
 Dataset field/well/stkml/pass3.1/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	117	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	125	70	Off	4056

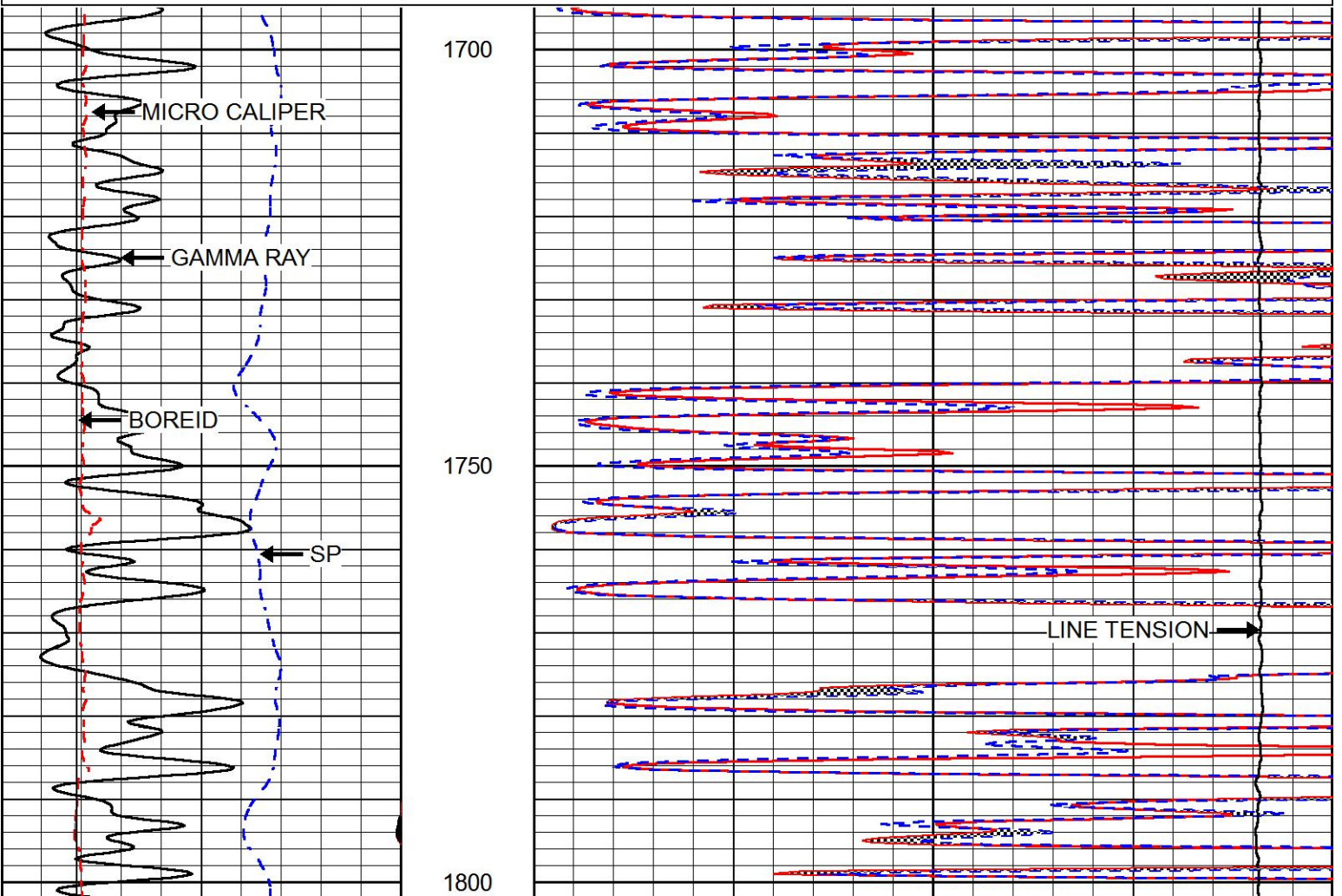


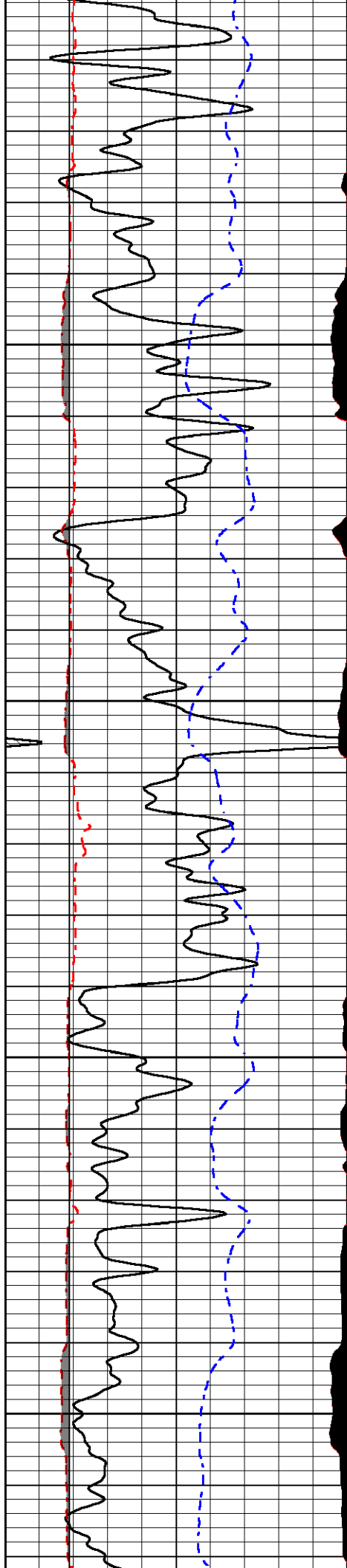
MAIN PASS

Database File thomas garner_elwell_#4.db
 Dataset Pathname stkml/pass3.1
 Presentation Format micro
 Dataset Creation Tue Sep 24 20:43:09 2019
 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



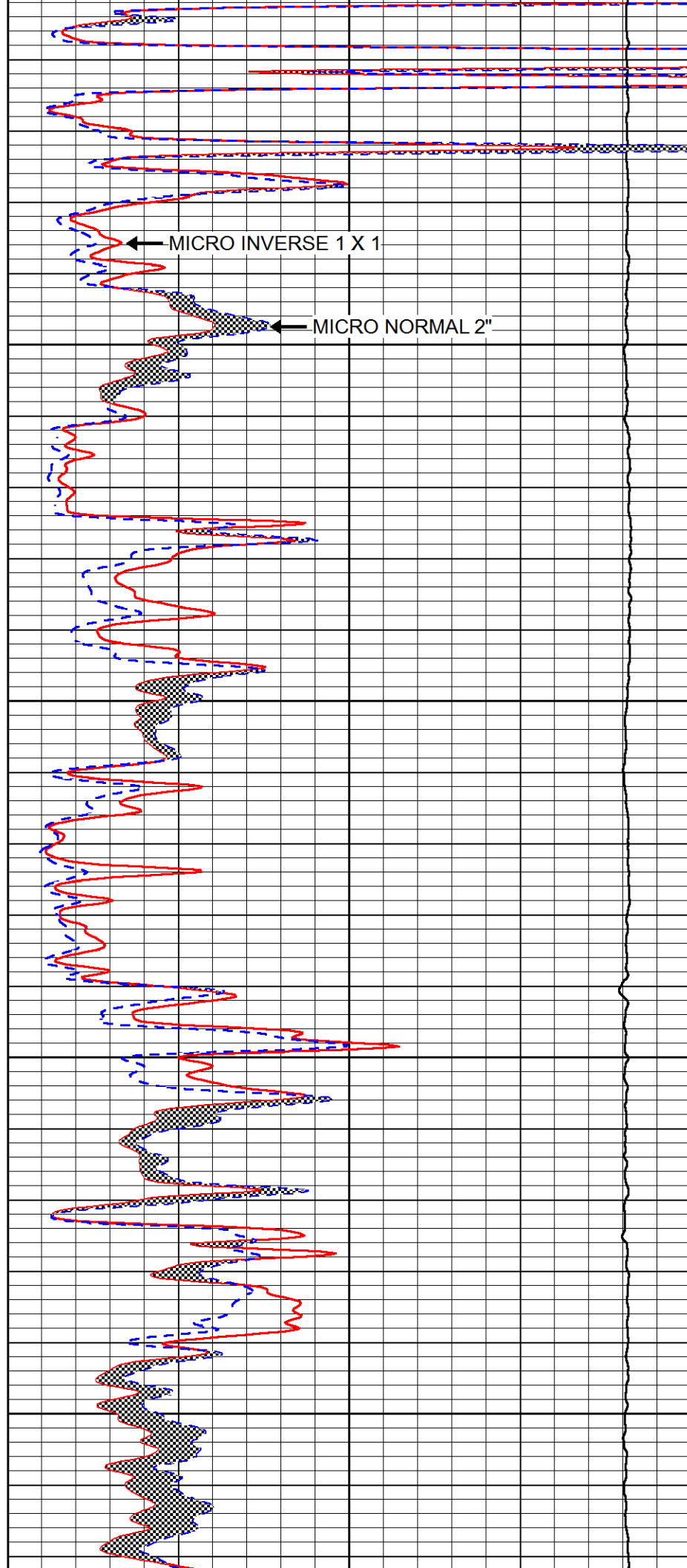


1850

1900

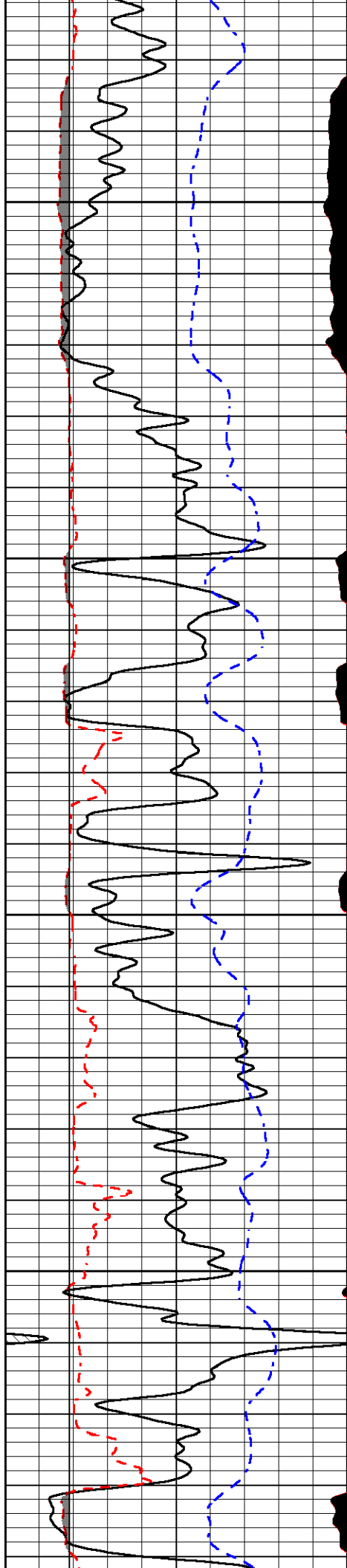
1950

2000



← MICRO INVERSE 1 X 1

← MICRO NORMAL 2''

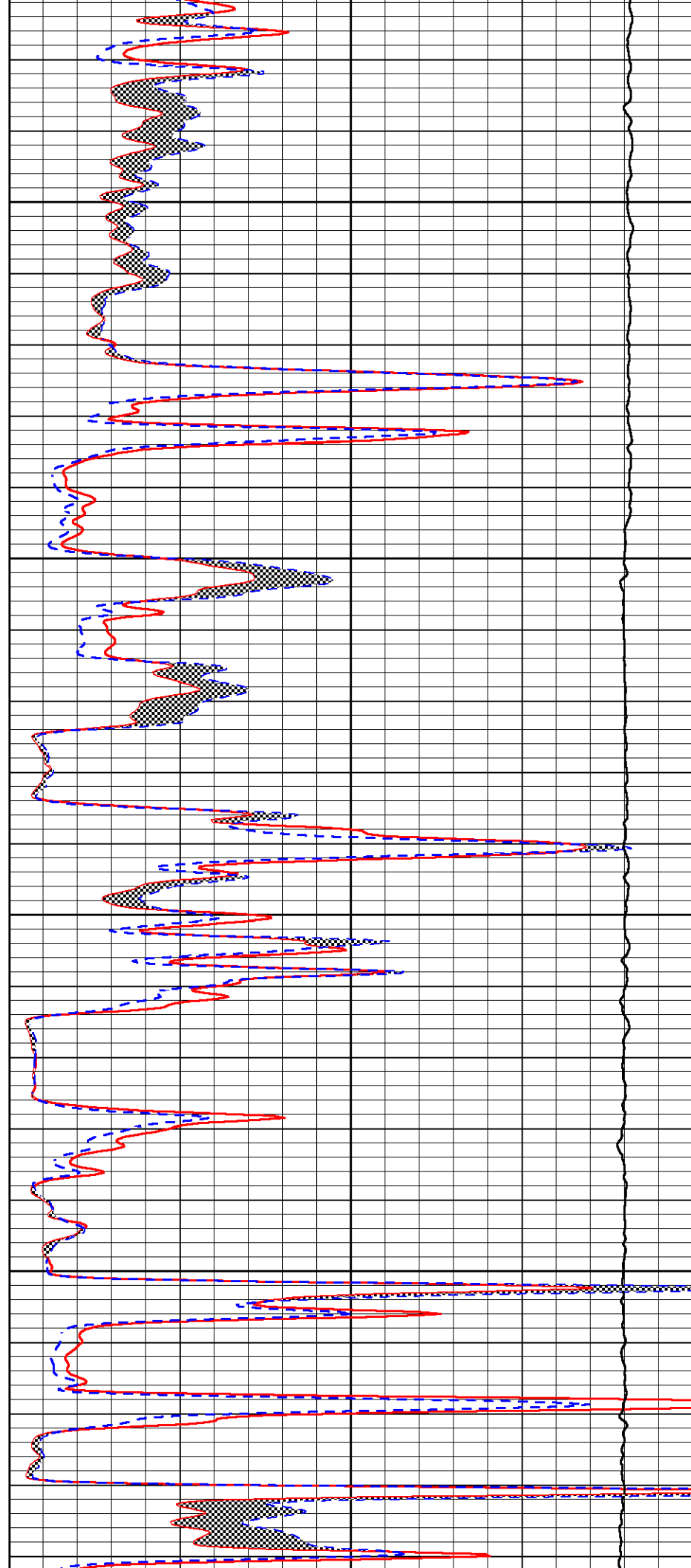


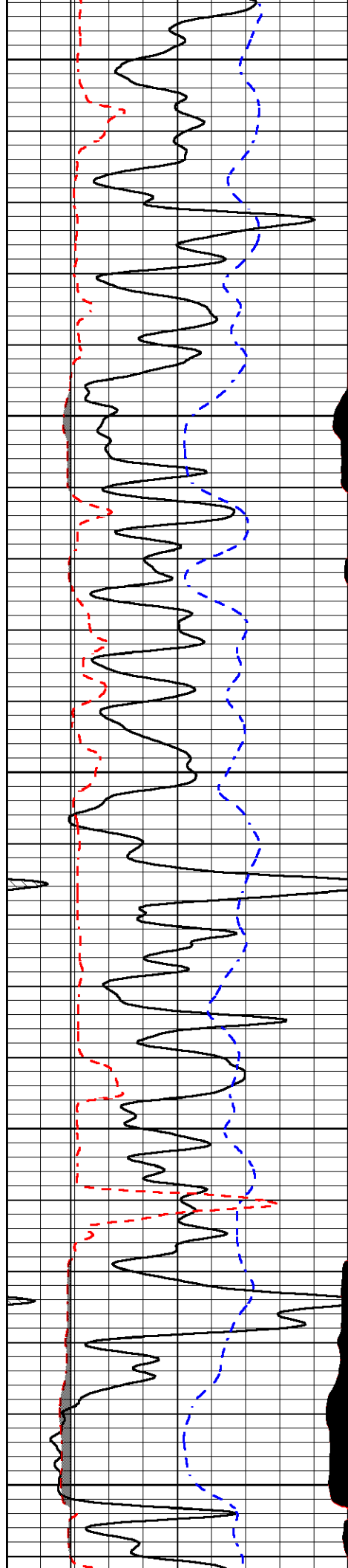
2050

2100

2150

2200





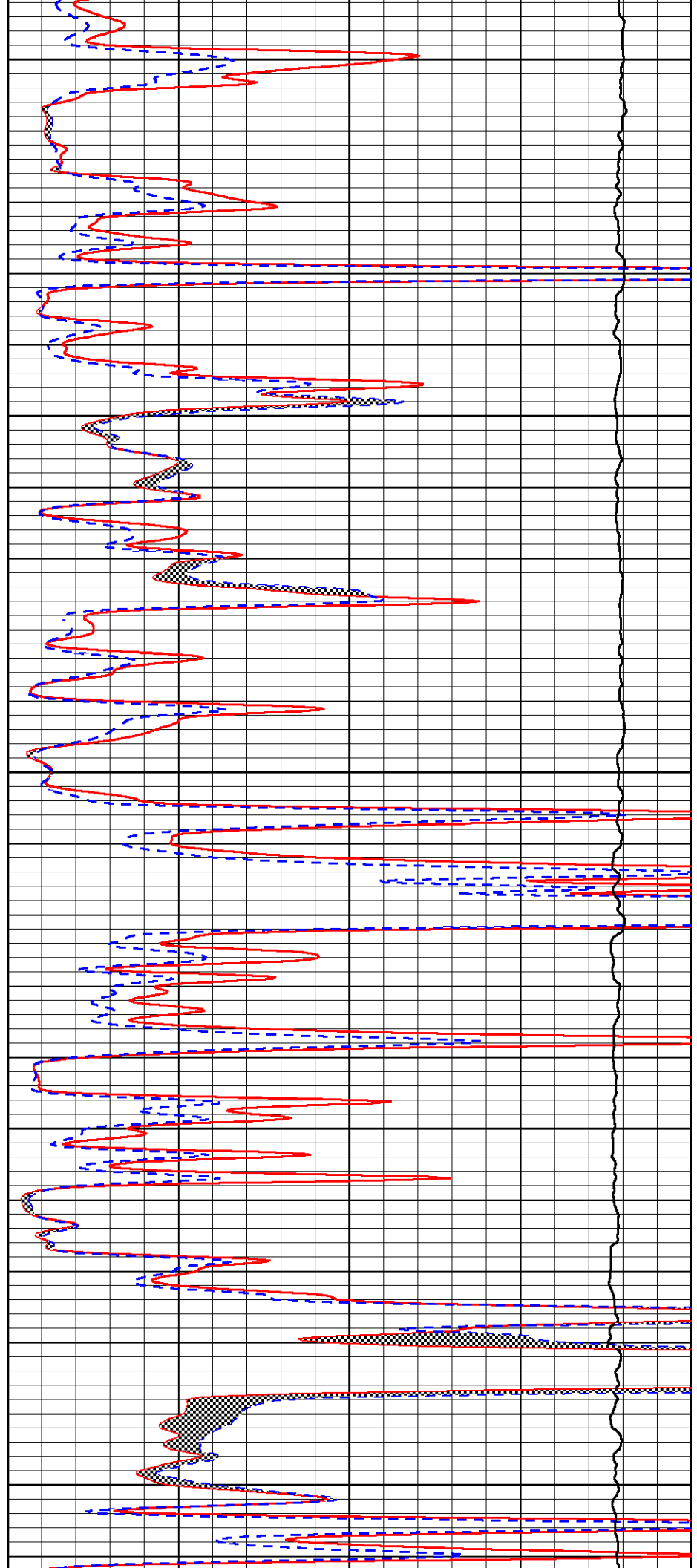
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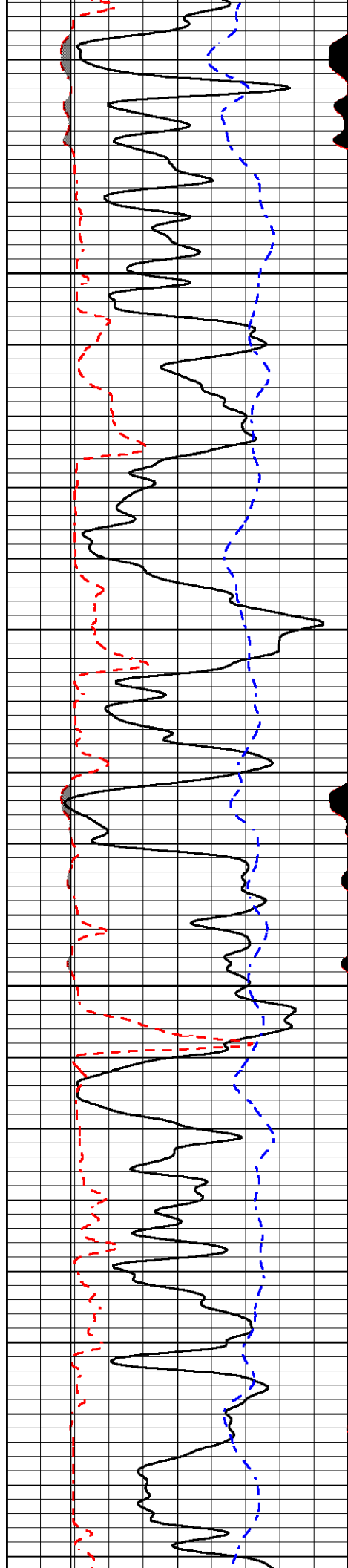
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2350

2400

2450



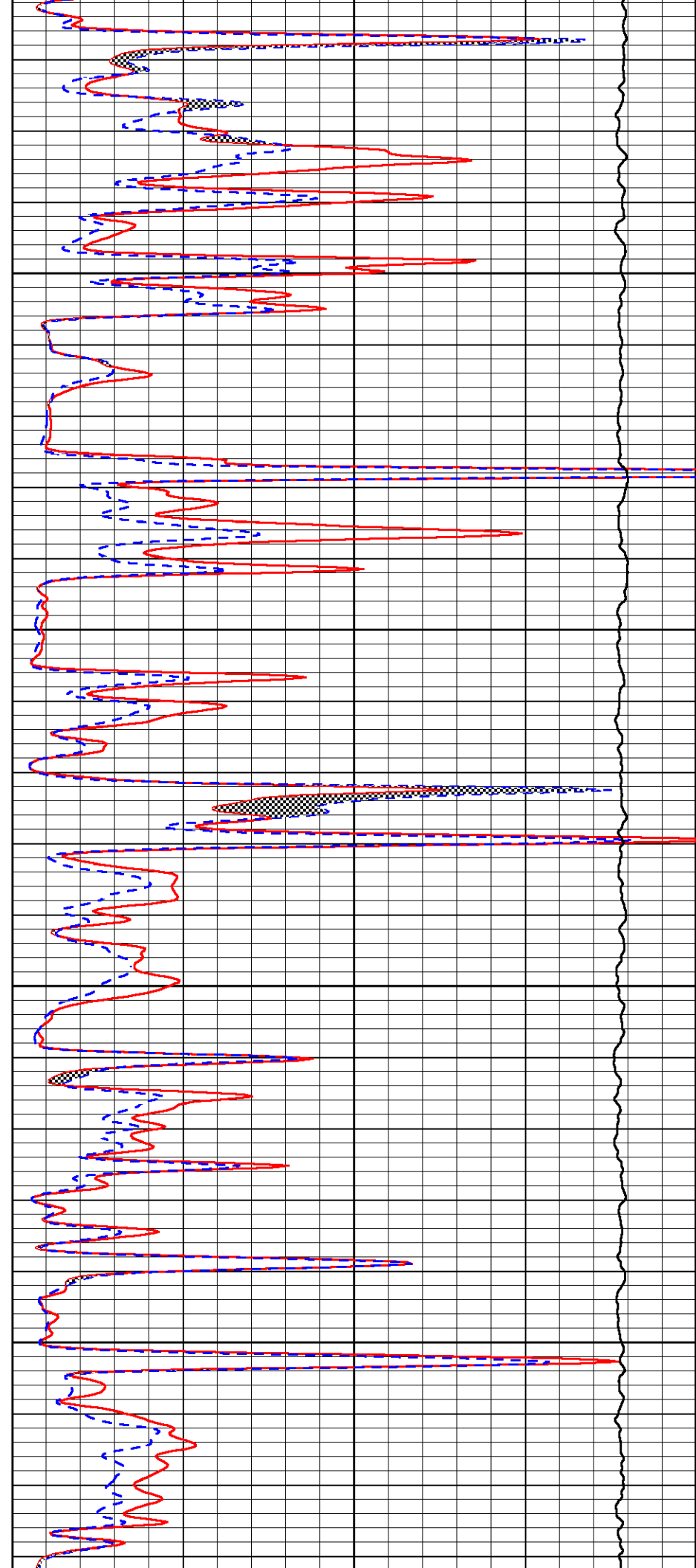


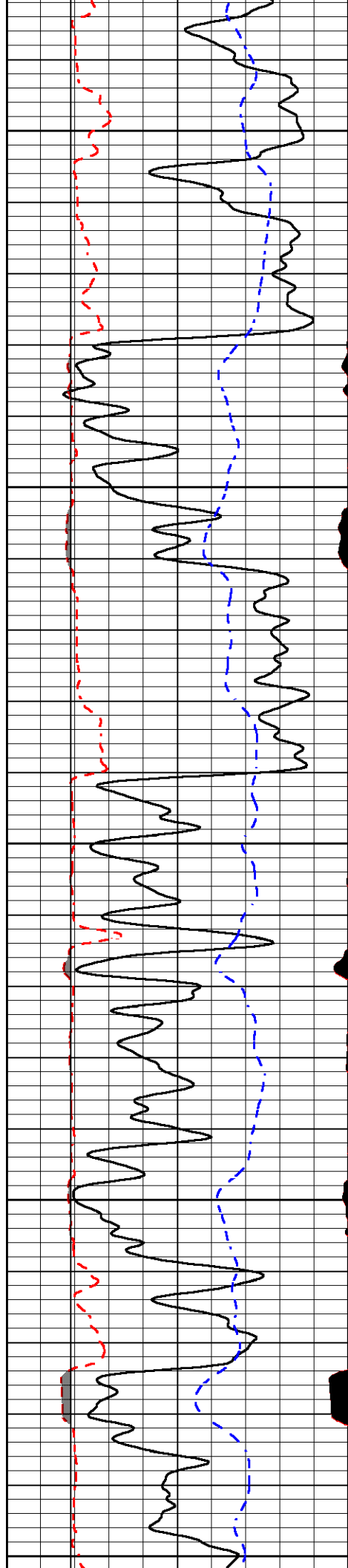
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2550

2600

2650





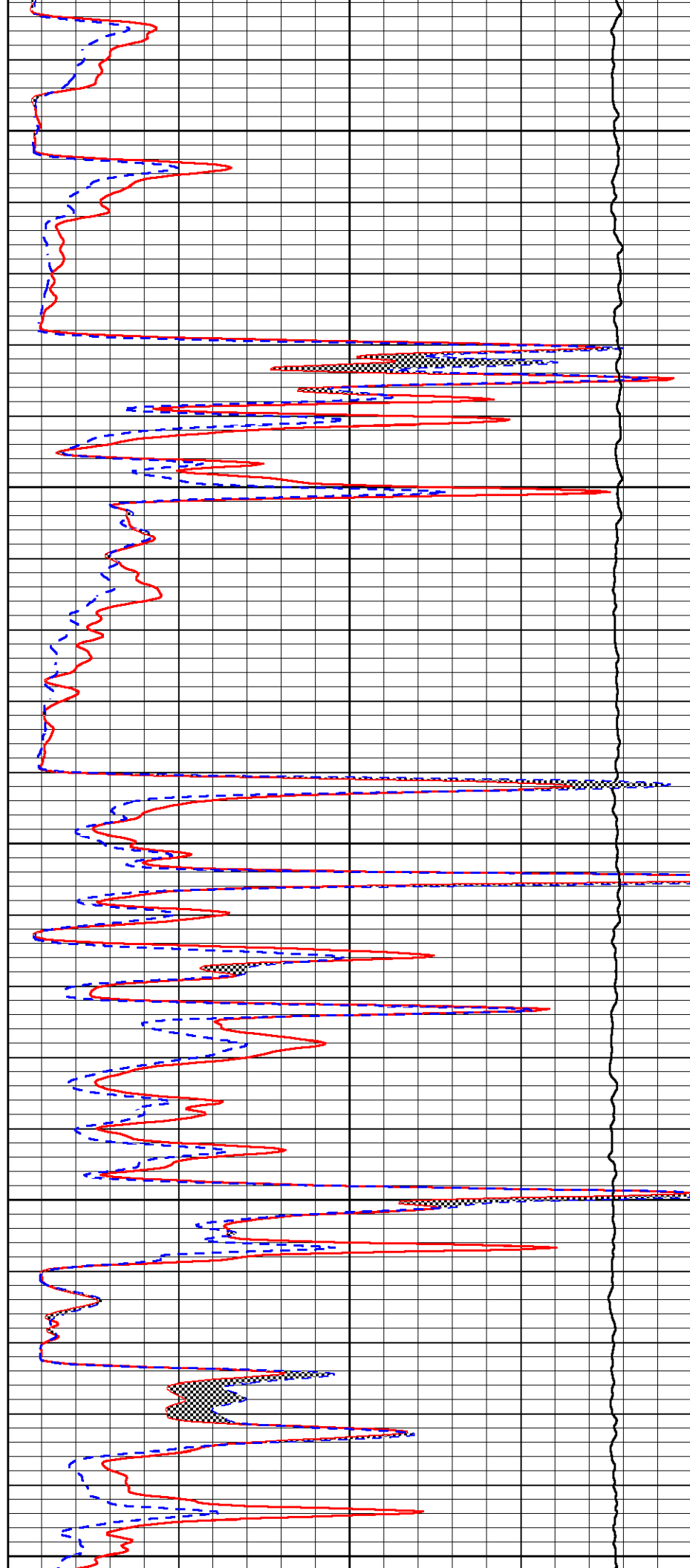
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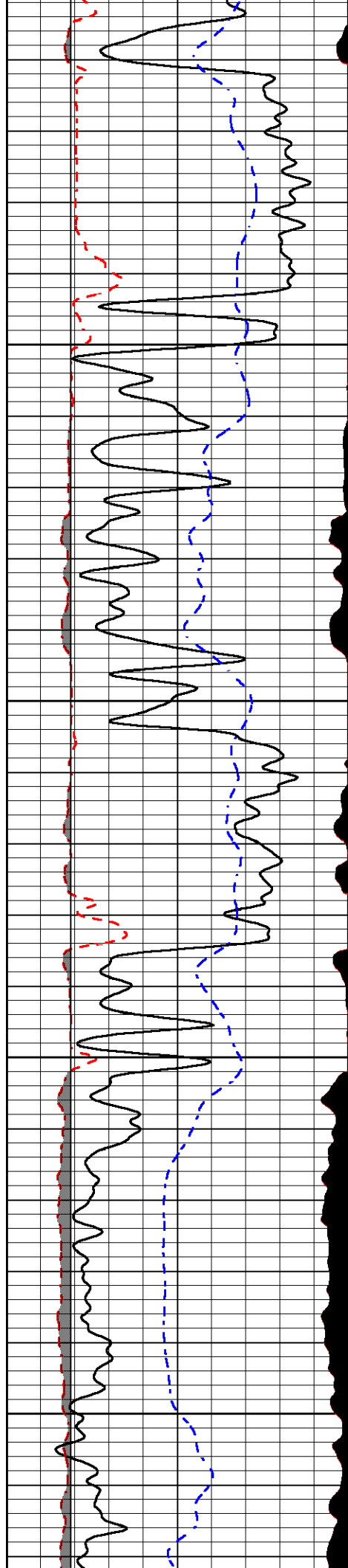
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2800

2850

2900



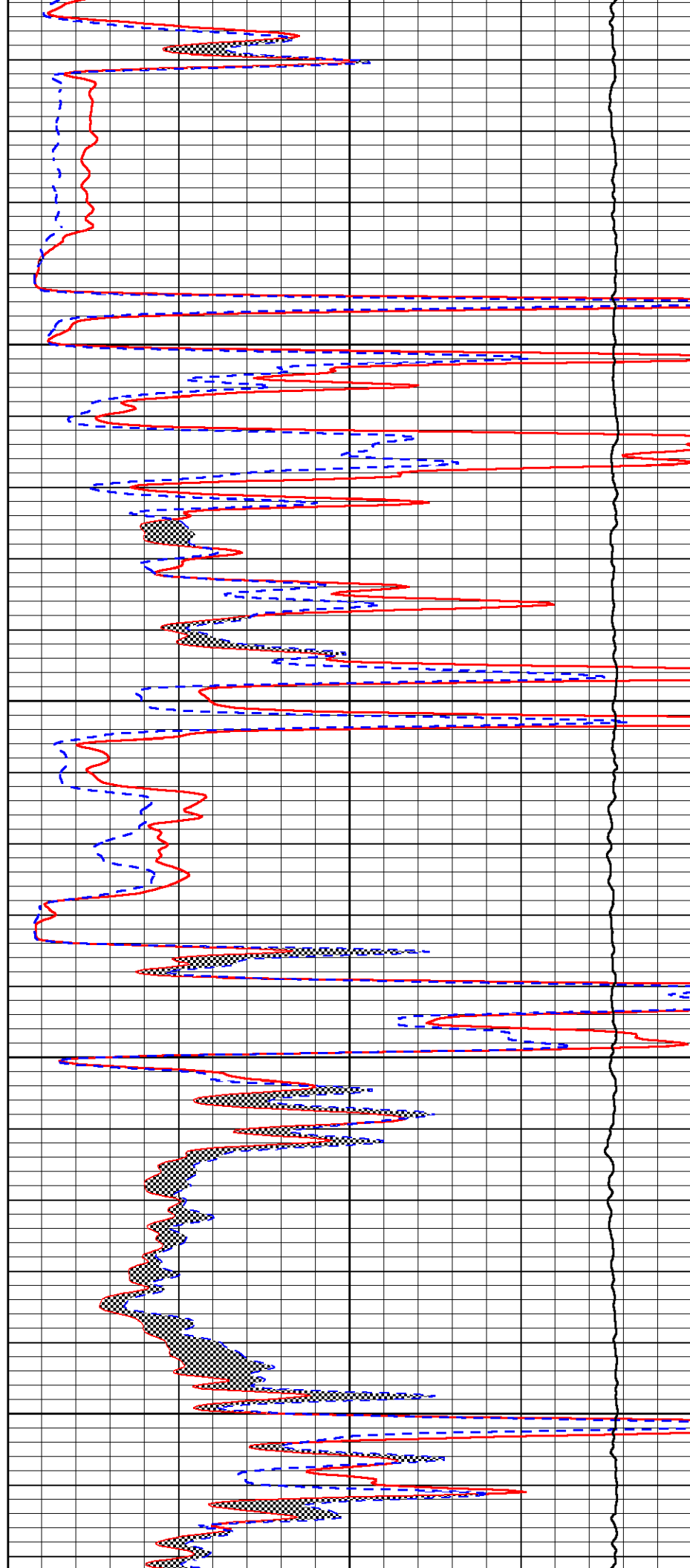


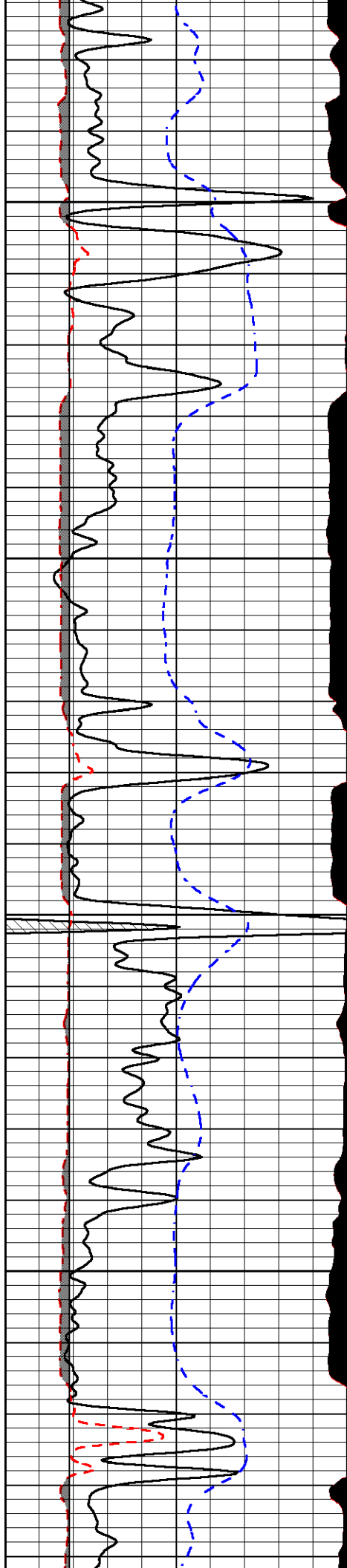
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3000

3050

3100



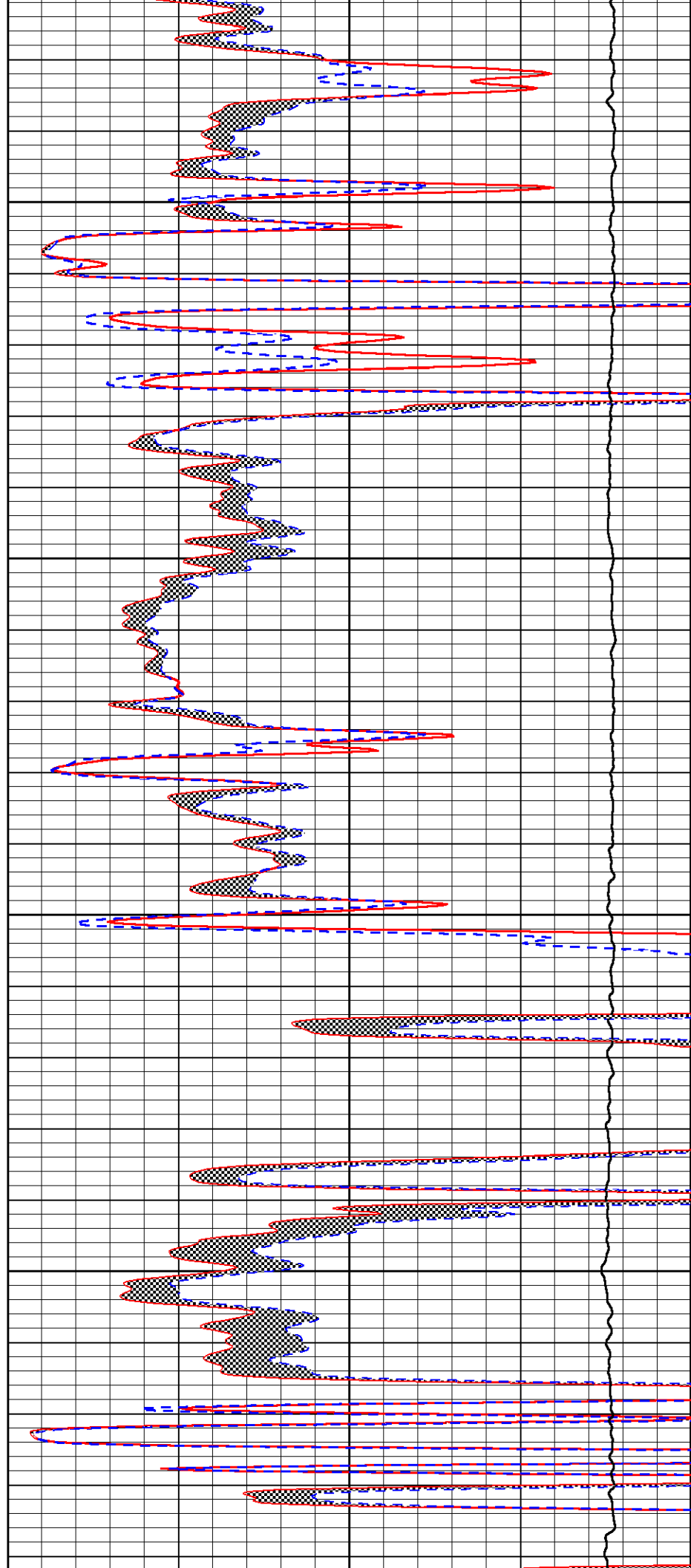


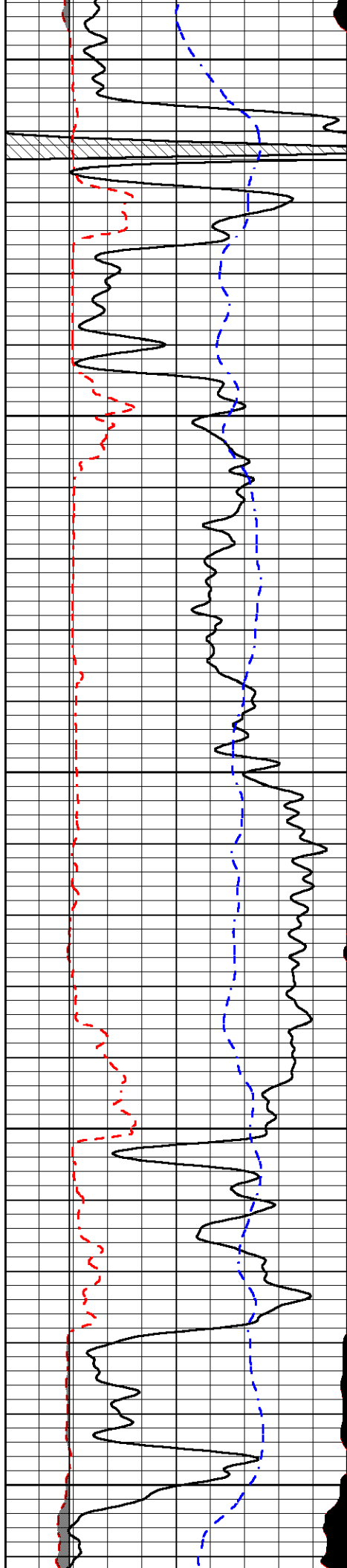
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3200

3250

3300





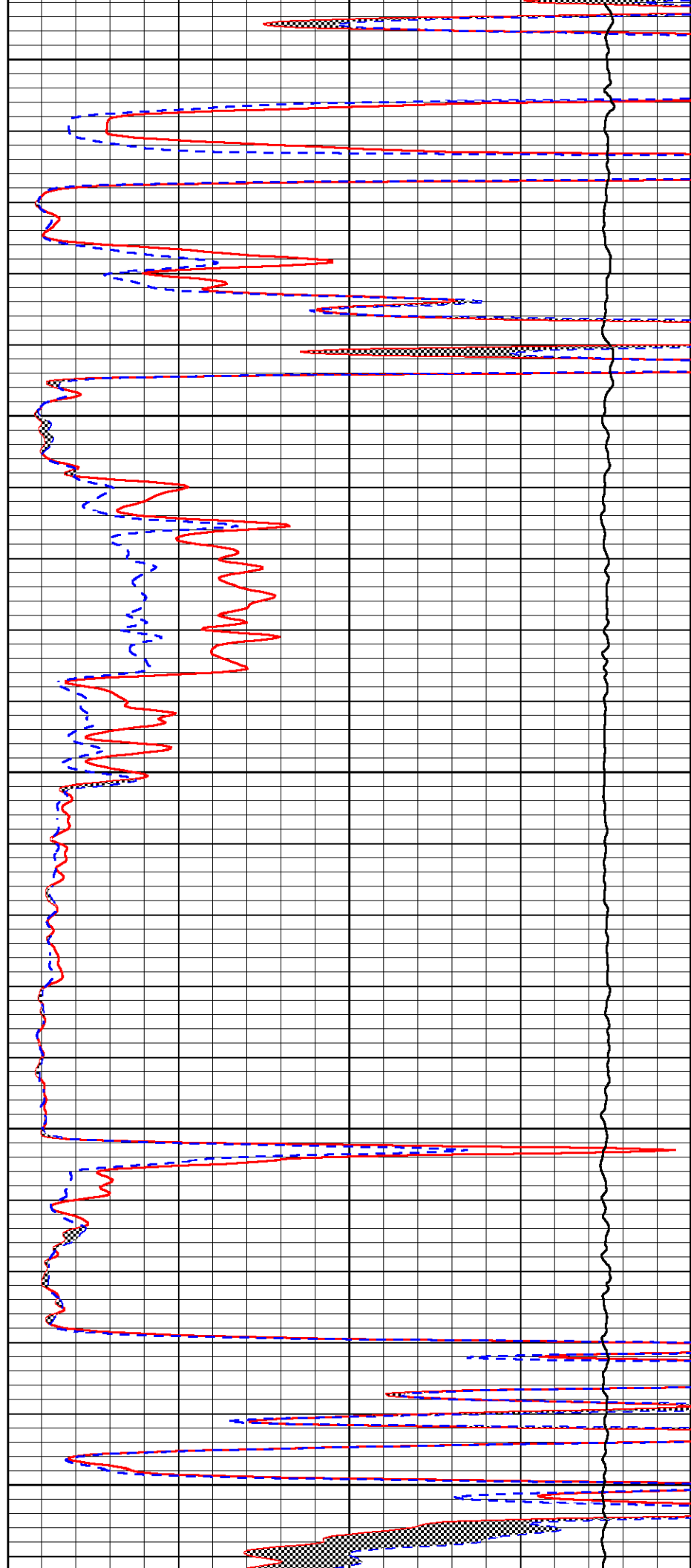
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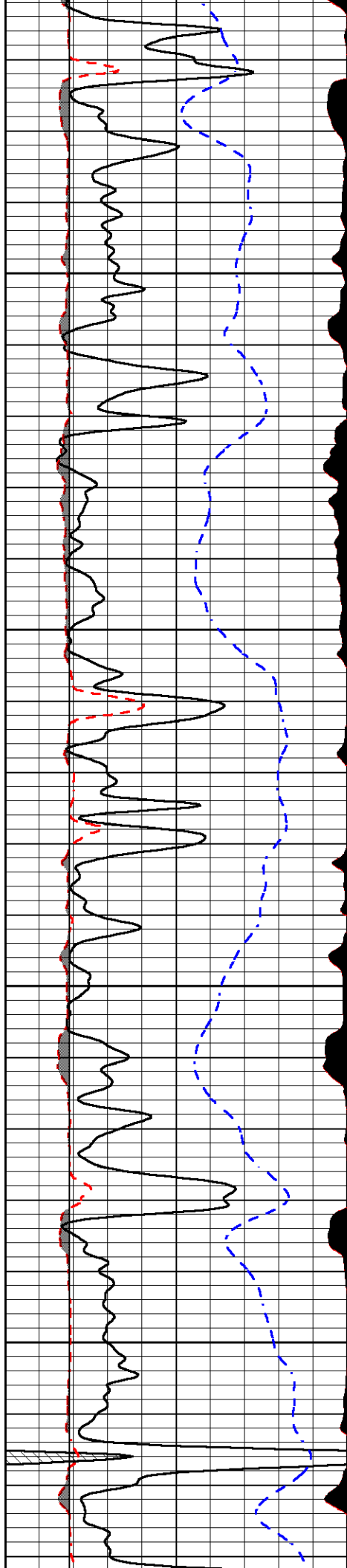
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3450

3500

3550



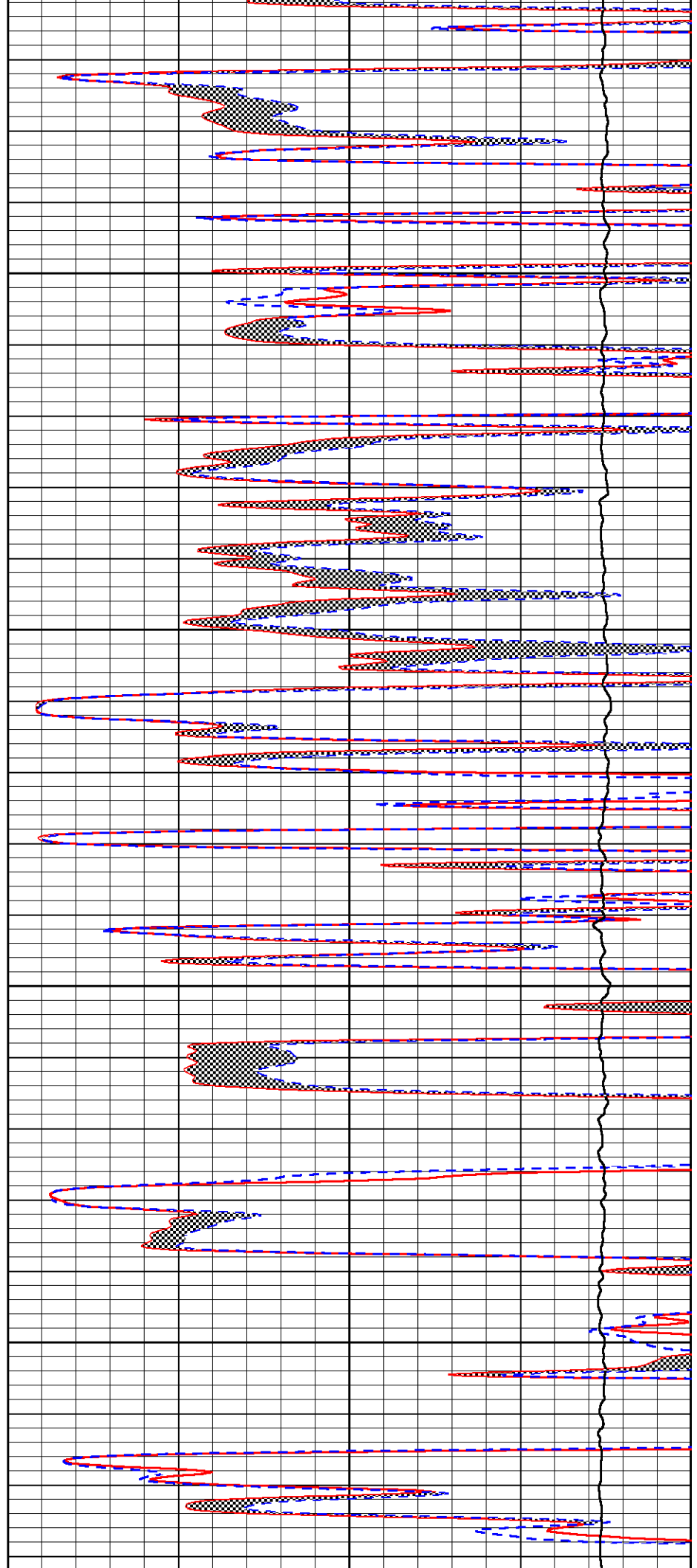


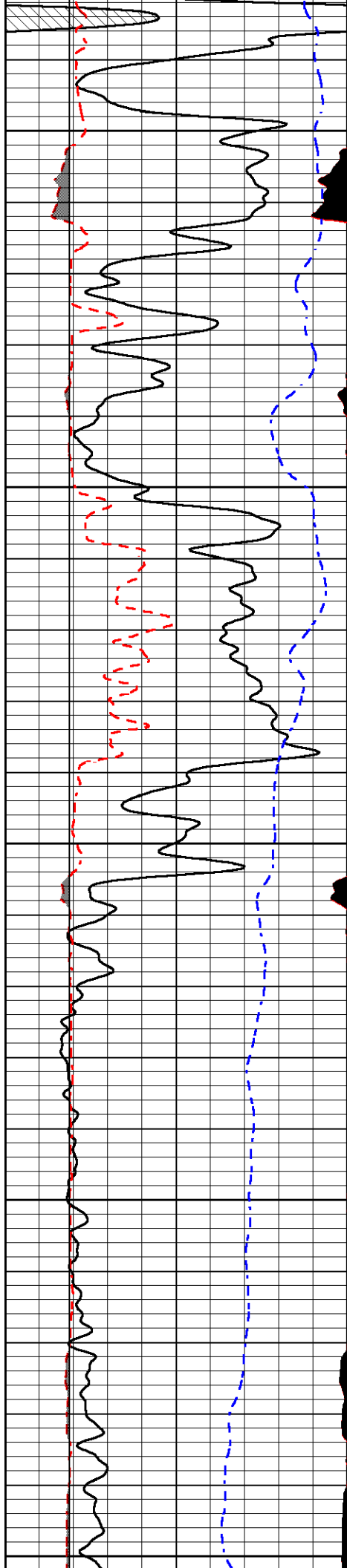
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3650

3700

3750





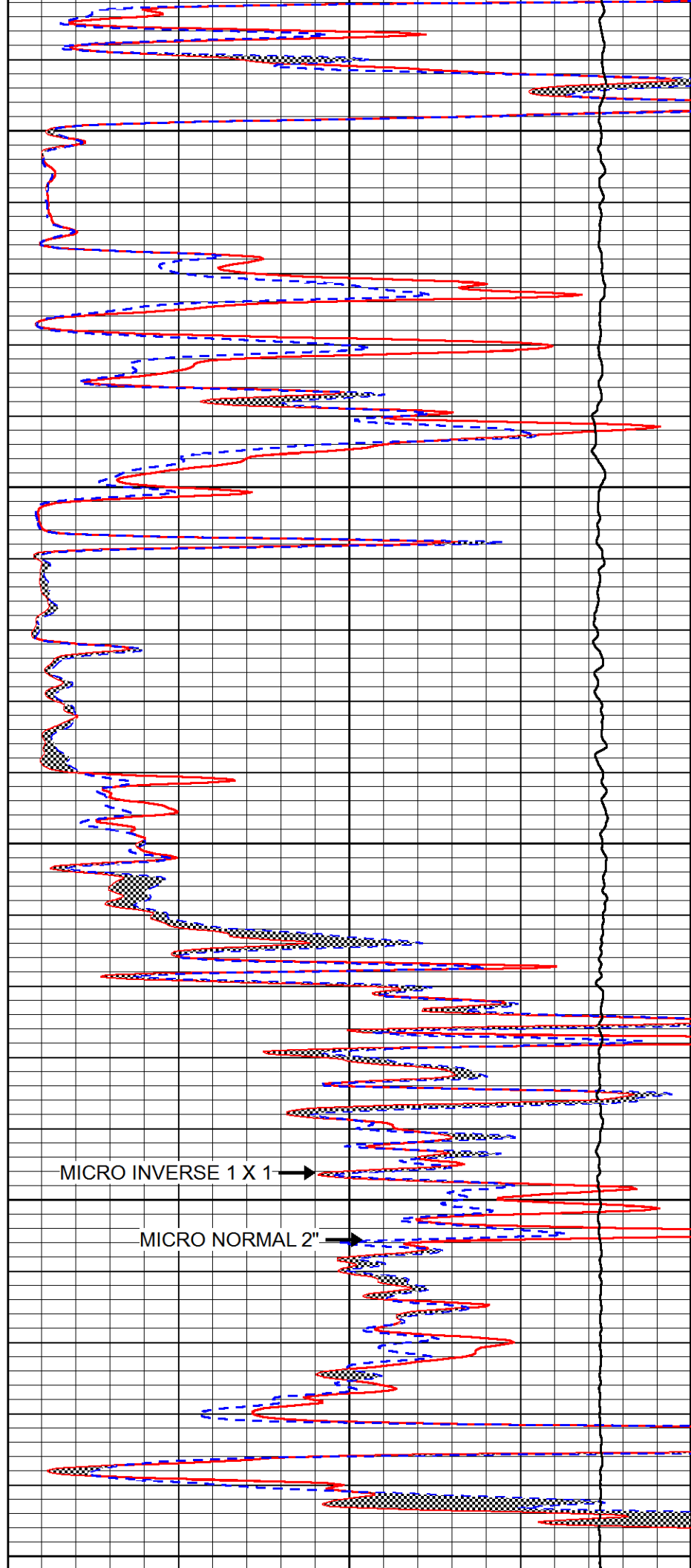
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3850

3900

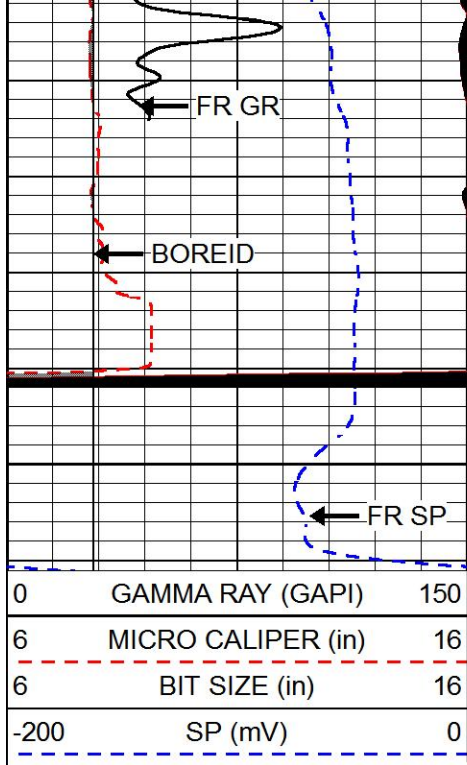
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4000

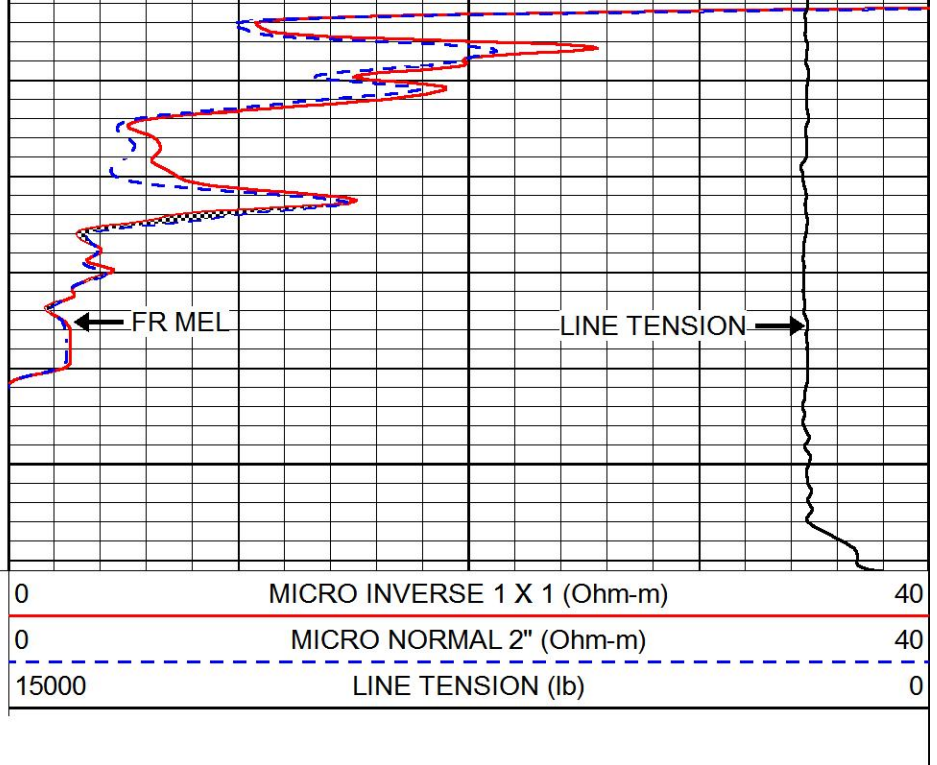


MICRO INVERSE 1 X 1 →

MICRO NORMAL 2'' →

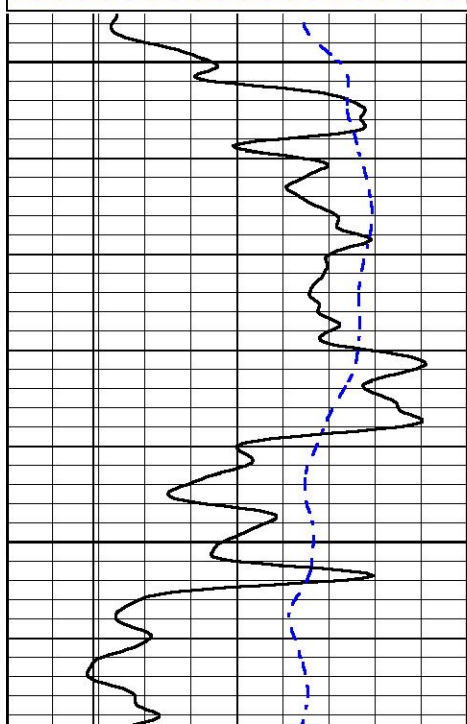
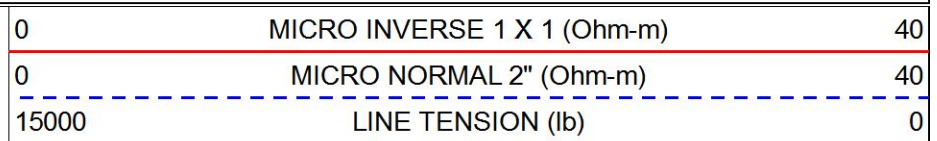
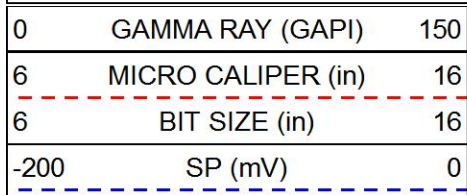


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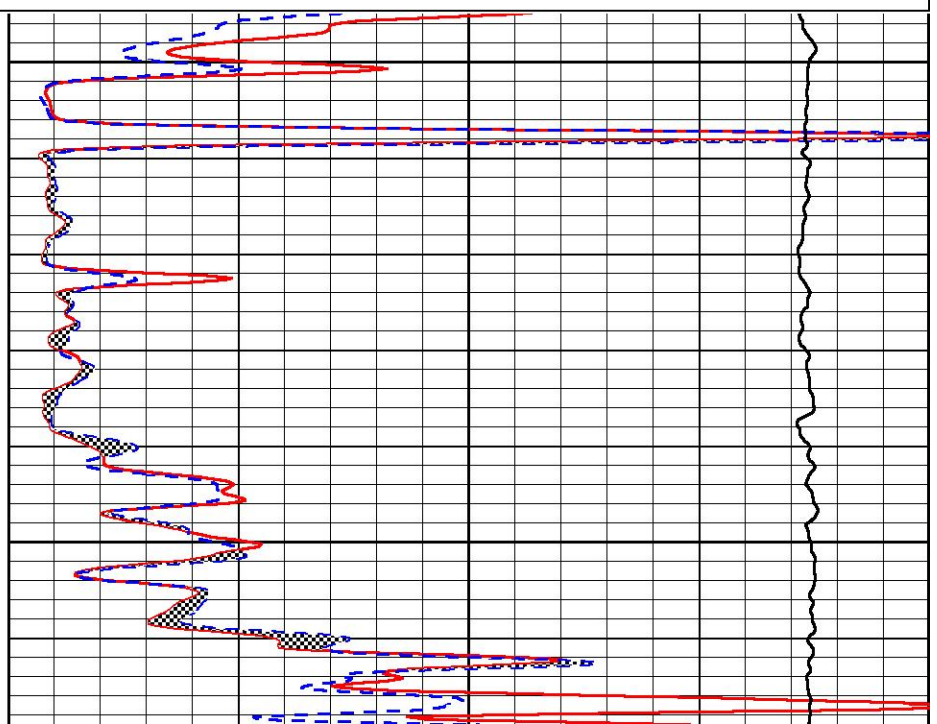
REPEAT SECTION

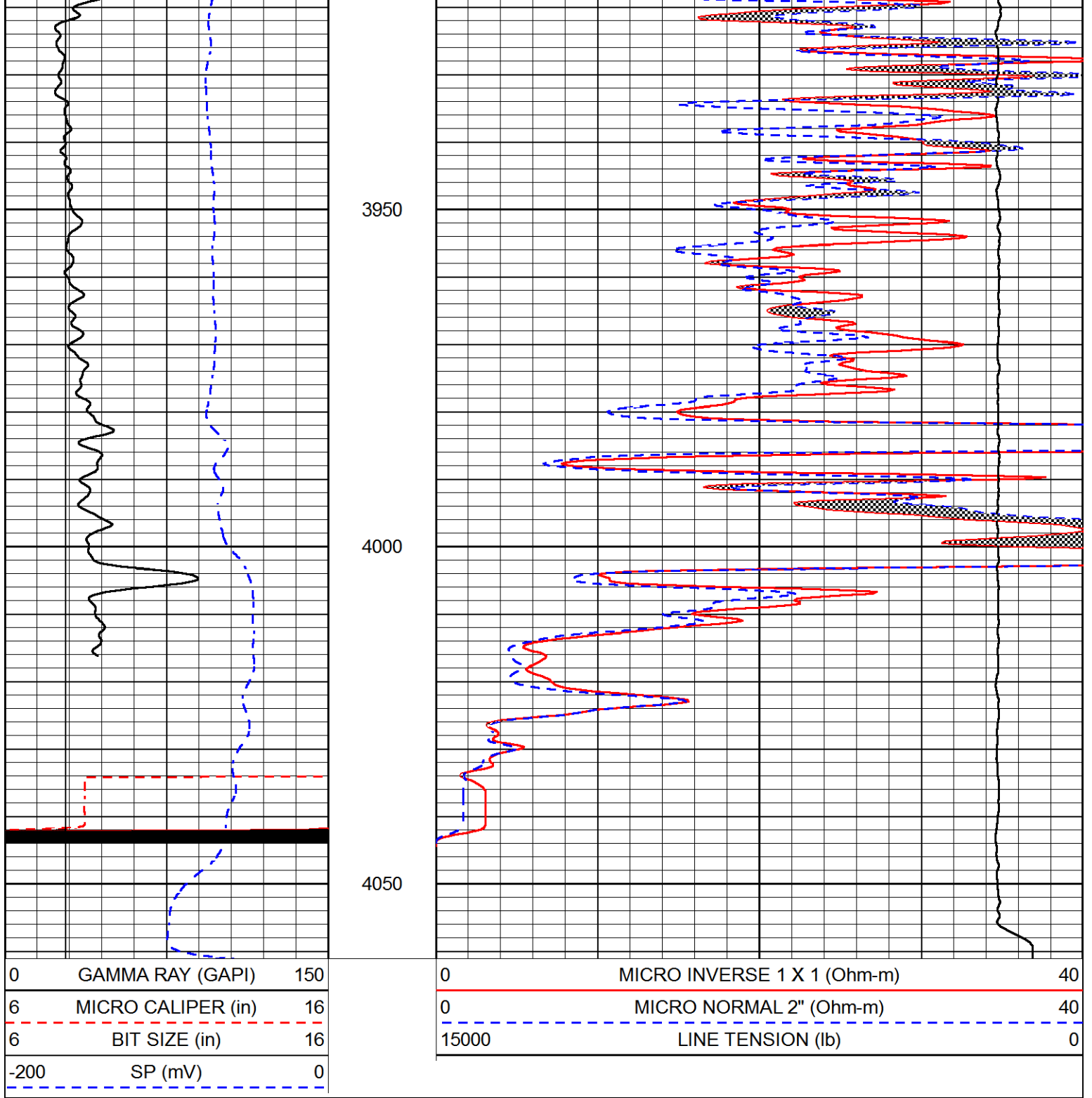
Database File thomas garner_elwell_#4.db
 Dataset Pathname stkml/pass2.1
 Presentation Format micro
 Dataset Creation Tue Sep 24 20:07:39 2019
 Charted by Depth in Feet scaled 1:240



3850

3900





Calibration Report

Database File thomas garner_elwell_#4.db
 Dataset Pathname stkml/pass3.1
 Dataset Creation Tue Sep 24 20:43:09 2019

Dual Induction Calibration Report

Serial-Model: PSI 988-M&W
 Calibration Performed: Tue Nov 20 10:50:19 2018

Loop:	Readings		References		Results	
	Air	Loop	Air	Loop	Gain	Offset
Deep	178.615	710.235	0.000	255.800	0.525	-13.500

Depth 178.013 710.255 0.000 255.800 mmho/m 0.380 -43.500
 Medium 161.982 1441.110 0.000 255.800 mmho/m 0.380 -17.500

Microlog Calibration Report

Serial-Model: UDM-01-PSI UDM ML
 Performed: Fri May 31 06:10:42 2019

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	26000.0000	0.0000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	20500.0000	0.0000
Caliper	0.7239	0.9274	8.0000	22.0000	in	68.7820	-41.7914

Compensated Density Calibration Report

Serial-Model: 979-229-M&W
 Source / Verifier: 21170B /
 Master Calibration Performed: Tue Jul 23 10:17:03 2019

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	7680.82	9959.08	cps
Aluminum	2.690	g/cc	1424.07	6427.19	cps
Spine Angle = 75.43			Density/Spine Ratio = 0.537		
	Size		Reading		
Small Ring	4.00	in	1.15		
Large Ring	14.00	in	1.02		

Compensated Neutron Calibration Report

Serial Number: tk10-MW
 Tool Model: M&W
 Calibration Performed: Wed Nov 16 11:21:36 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: Tue Apr 11 17:08:01 2017

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: [Pioneer Energy Services, Inc.](#)

Well: ELWELL #4

Field: ST. JOHN

County: STAFFORD

State: KANSAS



Joshua R. Austin

Petroleum Geologist

report for

Thomas Garner, Inc.



COMPANY: Thomas Garner, Inc.

LEASE: ELWELL #4

FIELD: St. John

LOCATION: W2-SE-SW-NE (2310' FNL & 1800' FEL)

SEC: 23 TWSP: 24 S RGE: 13 W

COUNTY: Stafford STATE: Kansas

KB: 1917' GL: 1906'

API # 15-185-24057-00-00

CONTRACTOR: Sterling Drilling Company (Rig #4)

Spud: 09/16/2019

Comp: 9/25/2019

RTD: 4055'

LTD: 4056'

Mud Up: 2979'

Type Mud: Chemical was displaced

Samples Saved From: 3100' to RTD

Drilling Time Kept From: 1600' to RTD

Samples Examined From: 3100' to RTD

Geological Supervision From: 1900' to RTD

Geologist on Well: Josh Austin

Surface Casing: 8 5/8" @ 433'

Production Casing: 5 1/2" @ 4048'

Electronic Surveys: Pioneer Energy Services

NOTES

On the basis of the positive structural position, drill stem test and after reviewing the electric logs it was recommended by all parties involved in the Elwell #4 to run 5 1/2 production casing to further test the following zones:

Arbuckle: Open hole complete

Viola: 3904-3909

LKC 'J': 3707-3712

LKC 'I': 3694-3696

LKC 'H': 3665-3669

LKC 'D': 3673-3677

Before plugging the well the Douglas Sand should be shot from 3399-3403' and the shallow gas zones need to be evaluated.

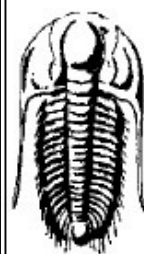
evaluated as well.

Respectfully Submitted By:

Joshua Austin

Thomas Garner, Inc well comparison sheet

DRILLING WELL				* COMPARISON WELL				* COMPARISON WELL				* COMPARISON WELL				
Elwell #4				H.V. Elwell #1				Elwell #3				H.V. Elwell #2 (SWD)				
				SW-SW-NE				SW-NE-SW-NE				SE-SW-NE				
1917 KB				1911 KB				1906 KB				1914 KB				
				Structural Relationship				Structural Relationship				Structural Relationship				
Formation	Sample	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Sample	Log	Log	Sub-Sea	Sample	Log	Log	Sub-Sea	Sample	Log
Anhydrite	739	1178	737	1180	800	1111										
Heebner	3358	-1441	3357	-1440	3354	-1443	2	3	3358	-1452	11	12	3366	-1452	11	12
Toronto	3380	-1463	3376	-1459	3371	-1460	-3	1	3377	-1471	8	12	3387	-1473	10	14
Douglas	3399	-1482	3394	-1477	3390	-1479	-3	2	3396	-1490	8	13	3405	-1491	9	14
Brown Lime	3502	-1585	3502	-1585	3495	-1584	-1	-1	3502	-1596	11	11	3513	-1599	14	14
Lansing	3530	-1613	3528	-1611	3530	-1619	6	8	3531	-1625	12	14	3540	-1626	13	15
BKC	3802	-1885	3798	-1881									3808	-1894	9	13
Viola	3890	-1973	3888	-1971	3885	-1974	1	3	3894	-1988	15	17	3907	-1993	20	22
Simpson	4007	-2090	4006	-2089	4003	-2092	2	3	4019	-2113	23	24	4028	-2114	24	25
Arbuckle	4048	-2131	N/A	N/A	4065	-2154	23		4067	-2161	30		4071	-2157	26	
Total Depth	4055	-2138	4056	-2139	4102	-2191			4064	-2158			4086	-2172		



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Thomas Garner Inc

23-24s-13w Stafford Co. Ks.

305 E 7th
St. John, KS. 67576

Elwell #4

ATTN: Joshua Austin

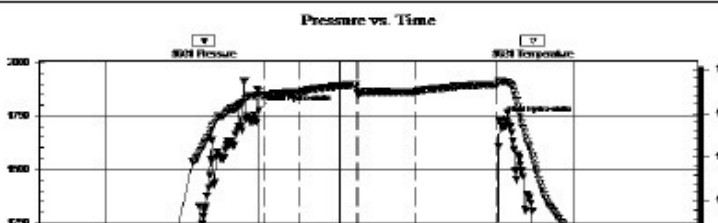
Job Ticket: 64942 DST#: 1
Test Start: 2019.09.20 @ 23:32:05

GENERAL INFORMATION:

Formation: Lansing "D" Zone	Test Type: Conventional Bottom Hole (Initial)
Deviated: No Whipstock: ft (KB)	Tester: Matt Smith
Time Tool Opened: 02:01:20	Unit No: 56
Time Test Ended: 07:12:20	
Interval: 3565.00 ft (KB) To 3596.00 ft (KB) (TVD)	Reference Elevations: 1917.00 ft (KB)
Total Depth: 3596.00 ft (KB) (TVD)	1906.00 ft (CF)
Hole Diameter: 7.88 inches	Hole Condition: Fair
	KB to GR/CF: 11.00 ft

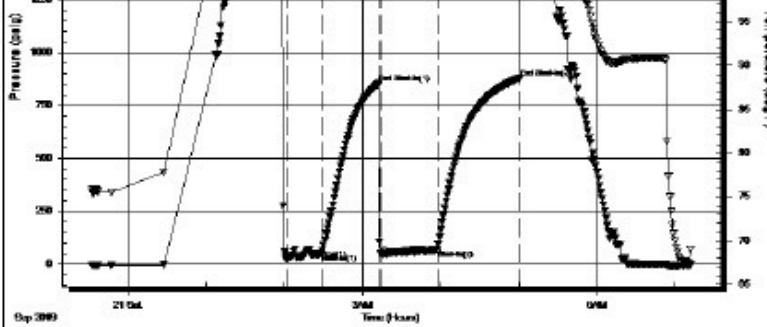
Serial #: 8931 Inside	
Press@RunDepth: 72.02 psig @ 3566.00 ft (KB)	Capacity: 8000.00 psig
Start Date: 2019.09.20 End Date: 2019.09.21	Last Calib.: 2019.09.21
Start Time: 23:32:10 End Time: 07:12:19	Time On Btn: 2019.09.21 @ 01:58:05
	Time Off Btn: 2019.09.21 @ 05:03:05

TEST COMMENT: IF: Strong Blow . B.O.B. in 4 mins. Built to 77.26".
 IST: No Blow .
 FF: Strong Blow . B.O.B., immediate. Built to 130.44".
 FST: No Blow .



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1777.53	112.35	Initial Hydro-static
4	28.65	112.09	Open To Flow (1)
31	49.67	112.33	Shut-In(1)
75	85.12	113.19	End Shut In(1)



75	655.12	113.19	End Shut-In (1)
77	46.05	112.16	Open To Flow (2)
120	72.02	112.38	Shut-In(2)
184	879.87	113.25	End Shut-In(2)
185	1725.00	113.71	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	GOWCM 45%g 30%o 8%w 17%m	0.46
60.00	GOWCM 54%g 25%o 6%w 15%m	0.46
60.00	GOCM 25%g 30%o 45%m	0.46
0.00	G.I.P. 100%g	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Thomas Garner Inc
 305 E. 7th
 St. John, KS. 67576
 ATTN: Joshua Austin

23-24s-13w Stafford Co. Ks.
Elwell #4
 Job Ticket: 64943 DST#: 2
 Test Start: 2019.09.21 @ 18:06:32

GENERAL INFORMATION:

Formation: **Lansing "H" Zone**
 Deviated: **No Whipstock:** ft (KB)
 Time Tool Opened: 19:45:32
 Time Test Ended: 00:35:47

Test Type: **Conventional Bottom Hole (Reset)**
 Tester: **Matt Smith**
 Unit No: **68**

Interval: **3652.00 ft (KB) To 3675.00 ft (KB) (TVD)**
 Total Depth: **3675.00 ft (KB) (TVD)**
 Hole Diameter: **7.88 inches** Hole Condition: **Fair**

Reference Elevations: **1917.00 ft (KB)**
1906.00 ft (CF)
 KB to GR/CF: **11.00 ft**

Serial #: 8931

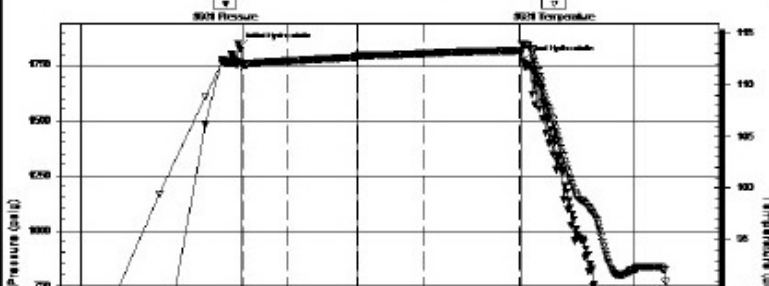
Inside

Press@RunDepth: **33.44 psig @ 3653.00 ft (KB)**
 Start Date: **2019.09.21** End Date: **2019.09.22**
 Start Time: **18:06:37** End Time: **00:35:46**

Capacity: **8000.00 psig**
 Last Calib.: **2019.09.22**
 Time On Btm: **2019.09.21 @ 19:43:17**
 Time Off Btm: **2019.09.21 @ 22:47:47**

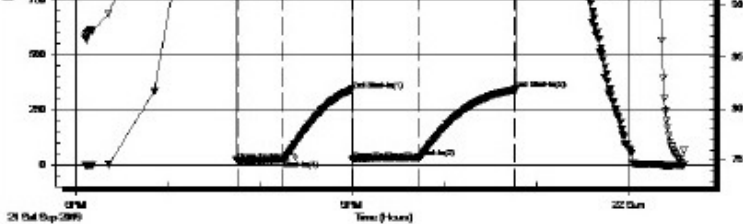
TEST COMMENT: IF: Strong Blow . B.O.B. in 20 mins. Built to 15.52".
 IS: No Blow .
 FF: Strong Blow . B.O.B. in 11 mins. Built to 18.95".
 FSt No Blow .

Pressure vs. Time



PRESSURE SUMMARY

Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	1828.01	112.13	Initial Hydro-static
3	18.41	111.89	Open To Flow (1)
32	22.05	112.28	Shut-In(1)
77	341.62	112.68	End Shut-In(1)
78	22.99	112.72	Open To Flow (2)
121	33.44	113.01	Shut-In(2)
182	242.00	113.22	End Shut In(2)



183 342.09 113.32 End Shut-In(2)
 185 1769.75 113.94 Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	GSOCM 15%g 5%o 80%m	0.15
0.00	G.I.P. 100%g	0.00

* Recovery from multiple tests

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Thomas Garner Inc

23-24s-13w Stafford Co. Ks.

305 E 7th
St. John, KS. 67576

Elwell #4

ATTN: Joshua Austin

Job Ticket: 64944

DST#: 3

Test Start: 2019.09.22 @ 08:30:57

GENERAL INFORMATION:

Formation: Lansing "I & J" Zone

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:08:57

Time Test Ended: 15:08:57

Test Type: Conventional Bottom Hole (Reset)

Tester: Matt Smith

Unit No: 68

Interval: 3675.00 ft (KB) To 3620.00 ft (KB) (TVD)

Total Depth: 32720.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1917.00 ft (KB)

1906.00 ft (CF)

KB to GR/CF: 11.00 ft

Serial #: 8931

Inside

Press@RunDepth: 101.80 psig @ 3676.00 ft (KB)

Start Date: 2019.09.22

End Date:

2019.09.22

Capacity: 8000.00 psig

Last Calib.: 2019.09.22

Start Time: 08:31:02

End Time:

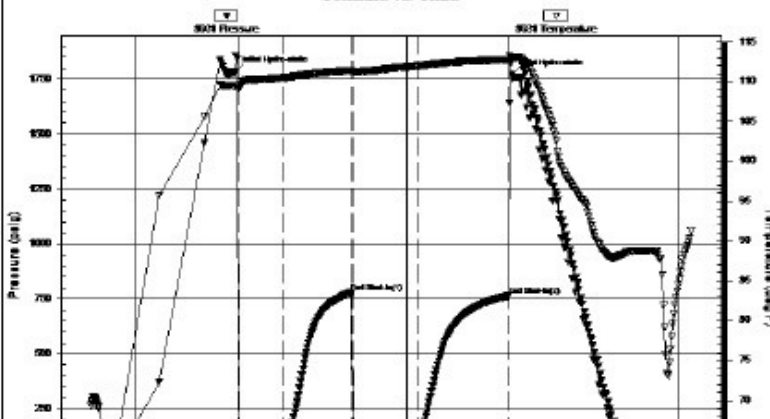
15:08:56

Time On Btm: 2019.09.22 @ 10:06:12

Time Off Btm: 2019.09.22 @ 13:09:57

TEST COMMENT: IF: Strong Blow . B.O.B. in 5 mins. Built to 28.37".
 IS: No Blow .
 FF: Strong Blow . B.O.B. in 7 mins. Built to 30.96".
 FS: No Blow .

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1784.63	109.45	Initial Hydro-static
3	30.70	109.07	Open To Flow (1)
32	66.84	110.45	Shut-In(1)
77	779.11	111.38	End Shut-In(1)
79	81.97	111.22	Open To Flow (2)
122	101.80	111.95	Shut-In(2)
182	764.25	112.71	End Shut-In(2)
184	1770.29	113.02	Final Hydro-static



Recovery

Length (ft)	Description	Volume (bbl)
60.00	GOWCM 17%g 33%o 5%w 45%m	0.46
60.00	GOWCM 45%g 30%o 10%w 15%m	0.46
60.00	GOWCM 33%g 27%o 20%w 20%m	0.46
30.00	GVSOCM 5%g 2%o 93%m	0.23
0.00	736' G.I.P. 100%g	0.00

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
--	----------------	-----------------	------------------



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Thomas Garner Inc

305 E 7th
St. John, KS. 67576

ATTN: Joshua Austin

23-24s-13w Stafford Co. Ks.

Elwell #4

Job Ticket: 64945 DST#: 4

Test Start: 2019.09.24 @ 01:29:08

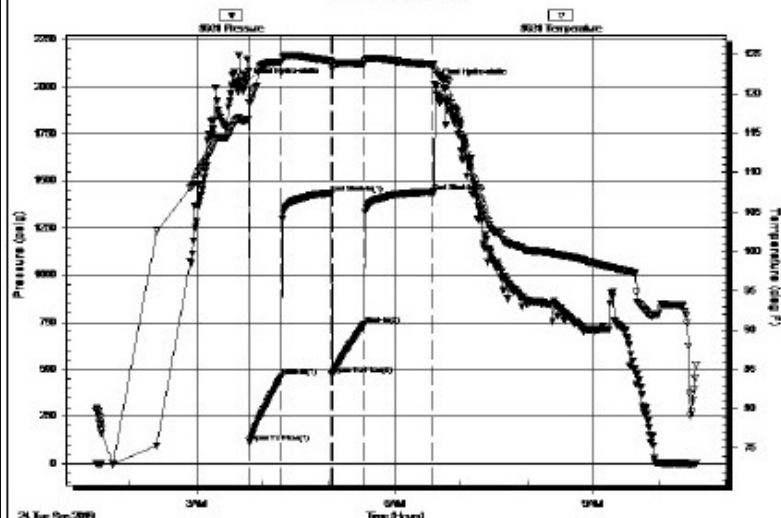
GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: **No Whipstock:** ft (KB)
 Time Tool Opened: 03:48:08
 Time Test Ended: 10:33:23
 Interval: **4048.00 ft (KB) To 4055.00 ft (KB) (TVD)**
 Total Depth: **4055.00 ft (KB) (TVD)**
 Hole Diameter: **7.88 inches** Hole Condition: **Fair**
 Test Type: **Conventional Bottom Hole (Reset)**
 Tester: **Matt Smith**
 Unit No: **68**
 Reference Elevations: **1917.00 ft (KB)**
 1906.00 ft (CF)
 KB to GR/CF: **11.00 ft**

Serial #: 8931 **Inside**
 Press@RunDepth: **737.45 psig @ 4049.00 ft (KB)** Capacity: **8000.00 psig**
 Start Date: **2019.09.24** End Date: **2019.09.24** Last Calib.: **2019.09.24**
 Start Time: **01:29:13** End Time: **10:33:23** Time On Btm: **2019.09.24 @ 03:45:23**
 10:33:23 Time Off Btm: **2019.09.24 @ 06:36:23**

TEST COMMENT: IF: Strong Blow . B.O.B. in 2 mins. Built to 138.52".
 IS: Fair Blow . Built to 4.62".
 FF: Strong Blow . B.O.B. in 1 1/2 mins. Built to 104".
 FSI: No Blow .

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2021.65	116.71	Initial Hydro-static
3	113.67	118.77	Open To Flow (1)
32	460.67	124.09	Shut-In(1)
78	1435.90	124.10	End Shut-In(1)
78	470.86	123.53	Open To Flow (2)
107	737.45	123.80	Shut-In(2)
170	1442.29	123.72	End Shut-In(2)
171	2015.55	123.01	Final Hydro-static

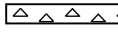

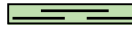



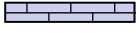


Recovery

Length (ft)	Description	Volume (bbl)
60.00	GOWCM 15%g 58%o 15%w 12%m	0.46
1910.00	Clean Oil /gassy 100%o	25.80
0.00	430 GIP	0.00

Gas Rates




	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

ROCK TYPES

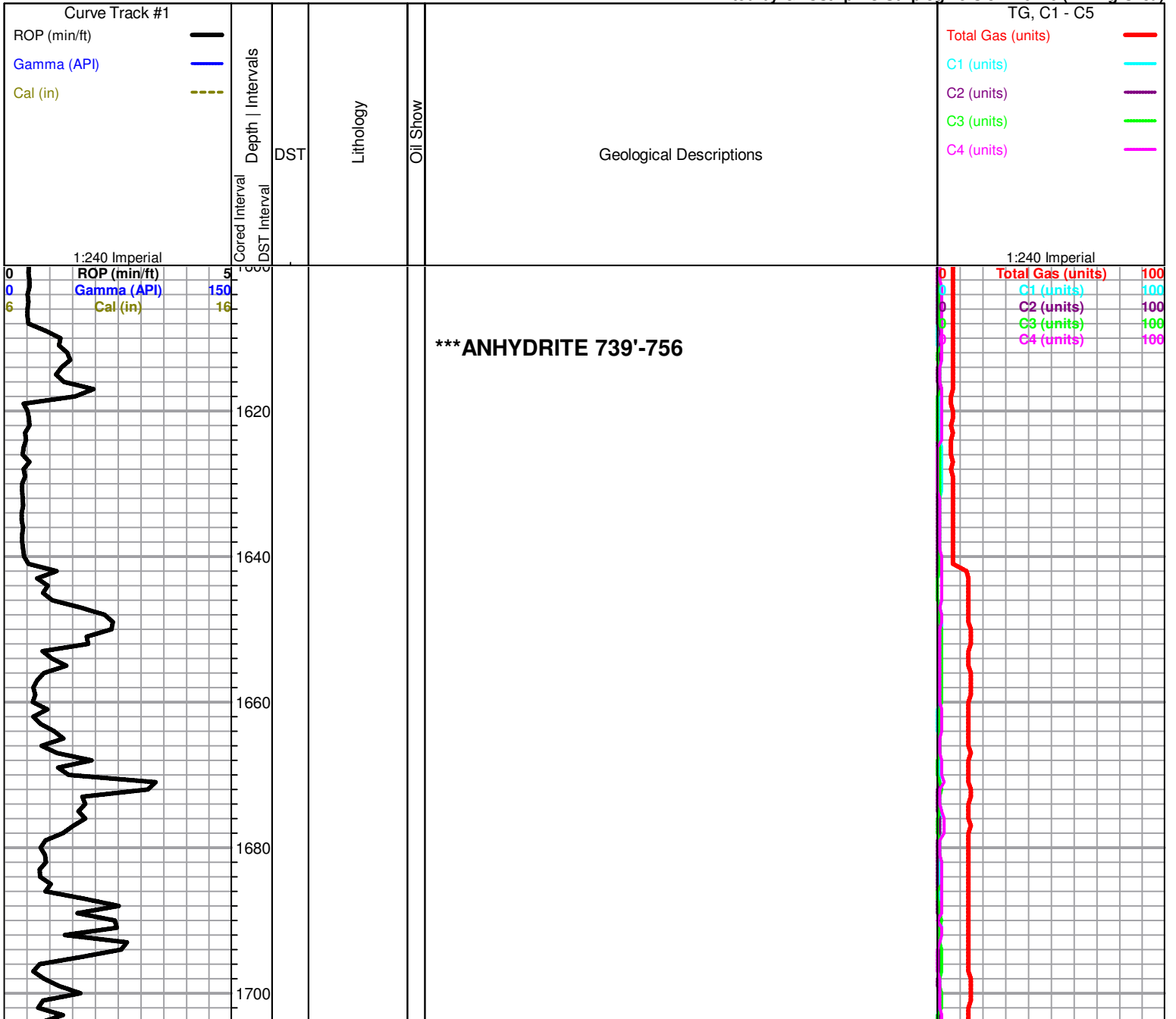
 Cht	 Dolsec	 shale, grn	 Carbon Sh	 Ss
 Chtcong1	 Lmst fw7>	 shale, gry	 shale, red	

OTHER SYMBOLS

DST

-  DST Int
-  DST alt
-  Core
-  tail pipe

Printed by GEOstrip VC Striplog version 4.0.7.0 (www.grsi.ca)



1720
1740
1760
1780
1800
1820
1840
1860
1880
1900
1920

0
0
6

ROP (min/ft)
Gamma (API)
Cal (in)

5
150
16

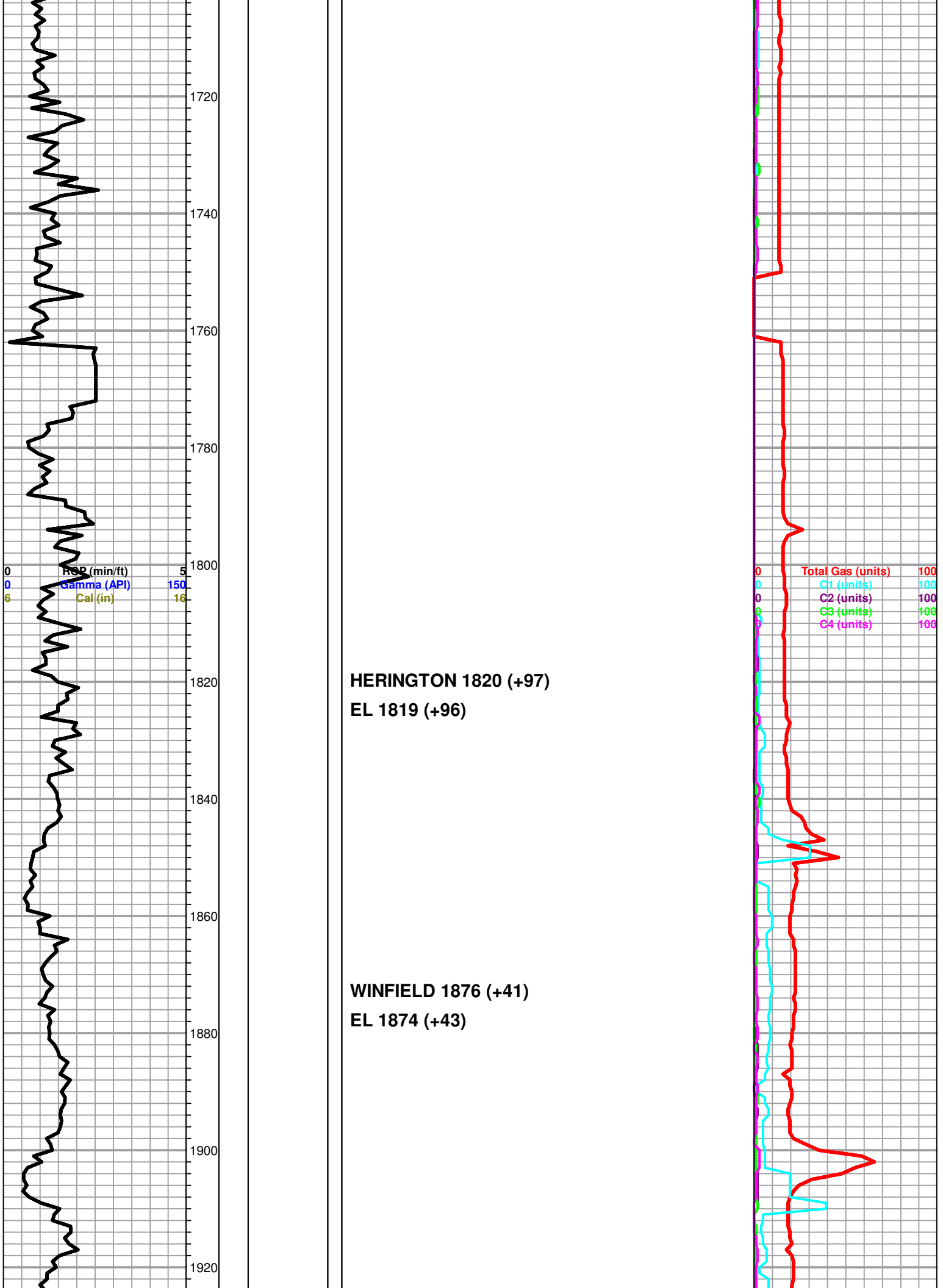
HERINGTON 1820 (+97)
EL 1819 (+96)

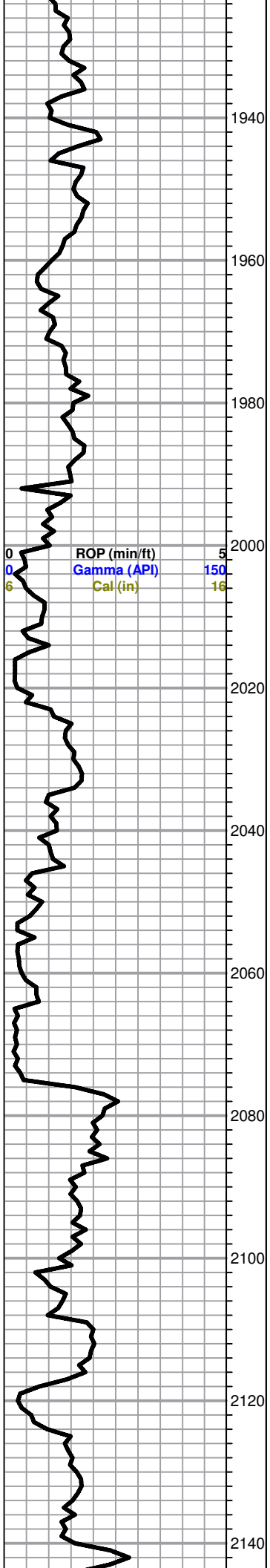
WINFIELD 1876 (+41)
EL 1874 (+43)

0
0
8

Total Gas (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)

100
100
100
100
100





TOWANDA 1940 (-23)

EL 1939 (-22)

FT. RILEY 1976 (-59)

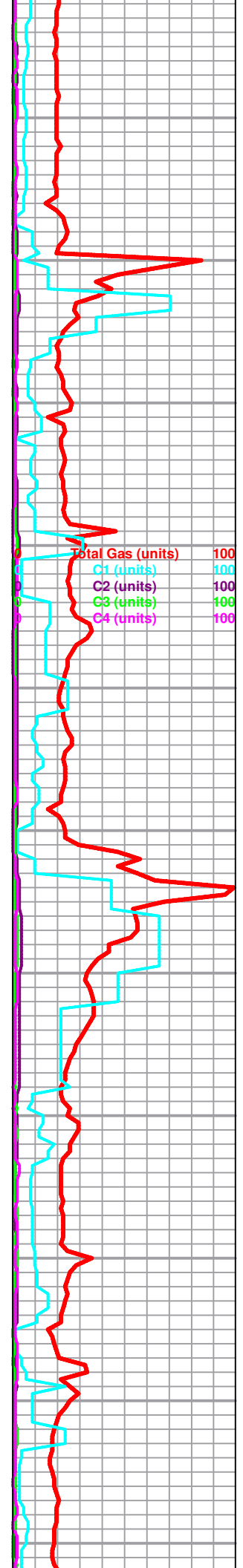
EL 1974 (-57)

B/ FLORENCE 2075 (-158)

EL 2084 (-167)

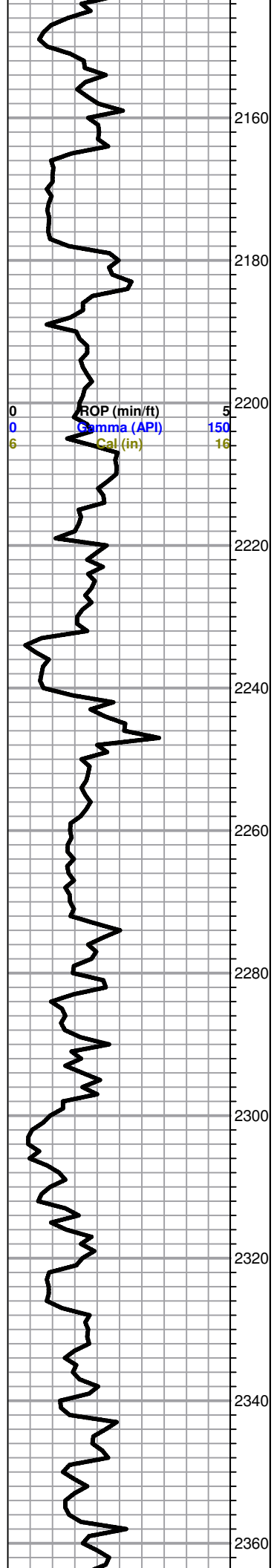
WREFORD 2133 (-216)

EL 2134 (-217)



2160
2180
2200
2220
2240
2260
2280
2300
2320
2340
2360

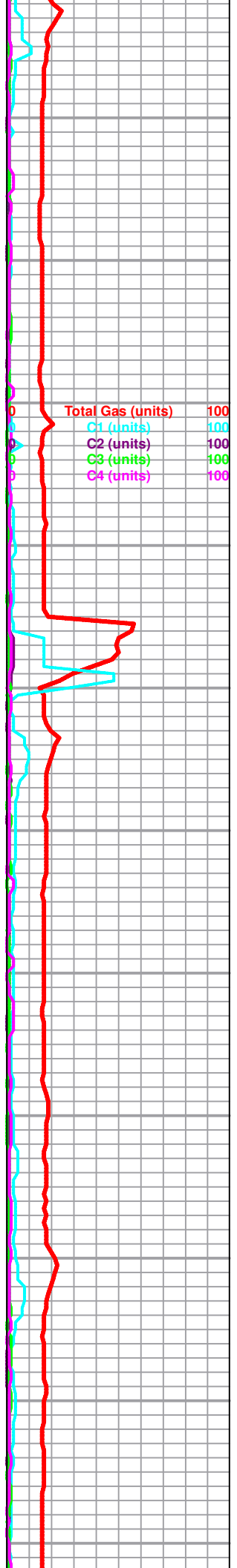
ROP (min/ft) 5
Gamma (API) 150
Cal (in) 16



COTTONWOOD 2306 (-389)
EL 2494 (-577)

NEVA 2357 (-440)
EL 2352 (-435)

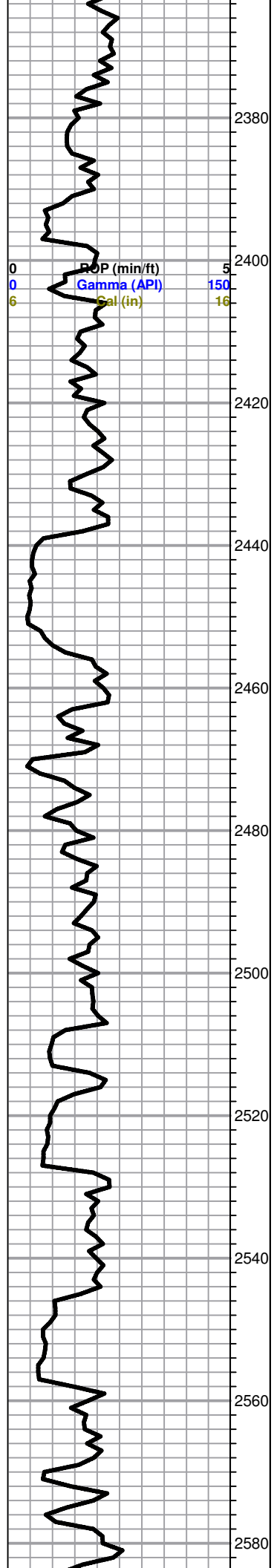
Total Gas (units) 100
C1 (units) 100
C2 (units) 100
C3 (units) 100
C4 (units) 100



2380
2400
2420
2440
2460
2480
2500
2520
2540
2560
2580

0 5
0 150
6 16

ROP (min/ft)
Gamma (API)
Cal (in)

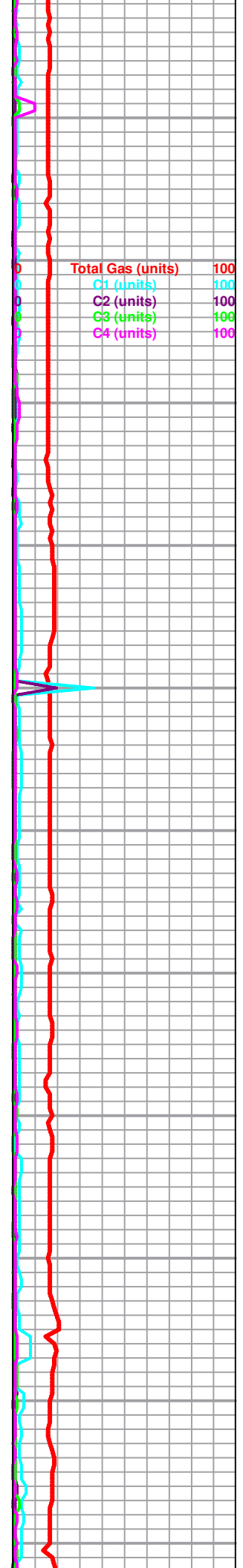


RED EAGLE 2485 (-568)
EL 2490 (-573)

INDIAN CAVE 2583 (-666)

0 100
0 100
0 100
0 100

Total Gas (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)

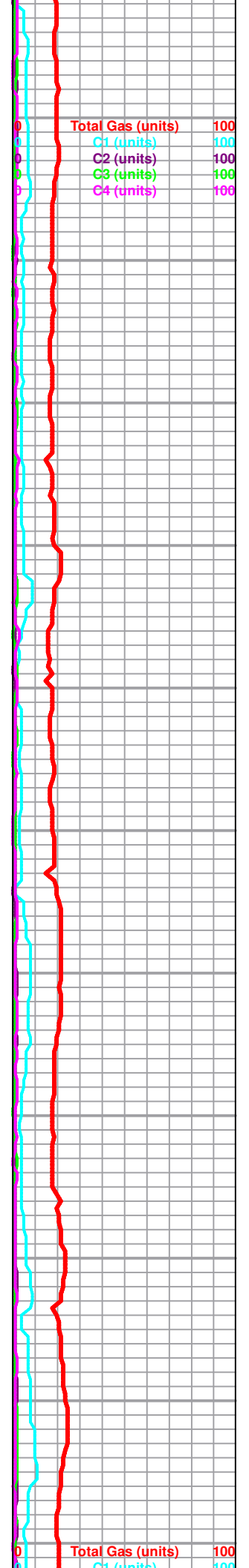
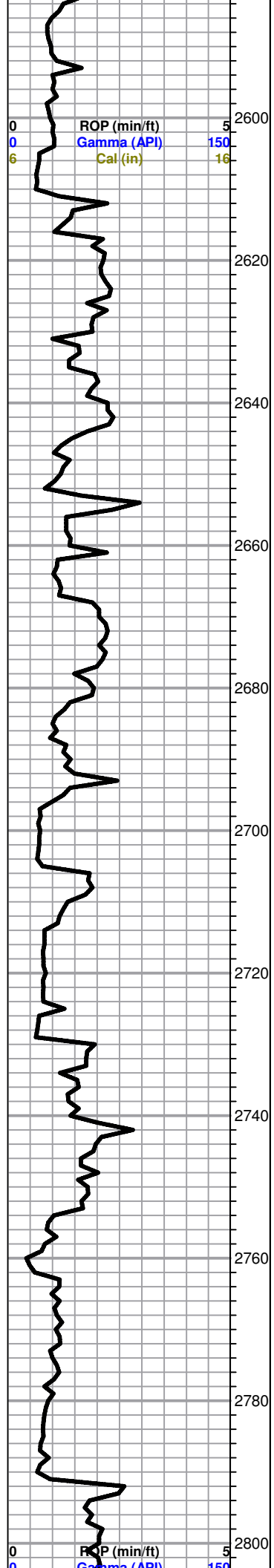


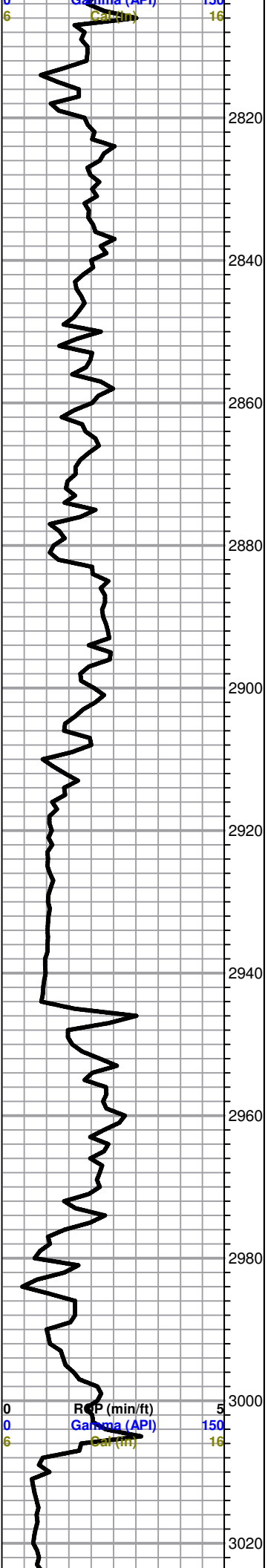
INDIAN CAVE 2585 (-663)
EL 2580 (-663)

WABAUNSEE 2610 (-693)
EL 2610 (-693)

TARKIO 2730 (-813)
EL 2729 (-814)

ELMONT 2791 (-874)
EL 2790 (-873)

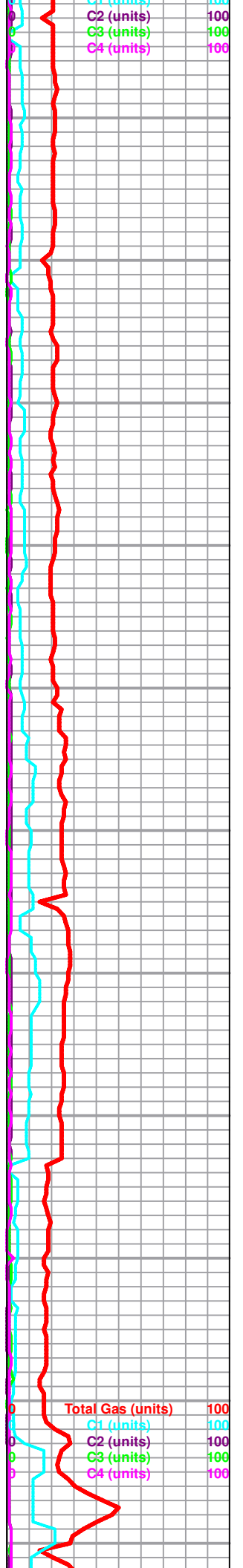




BERN 2876 (-959)
EL 2874 (-957)

HOWARD 2945 (-1028)
EL 2943 (-1026)

SEVERY 3007 (-1090)
EL 3004 (-1087)



3040
3060
3080
3100
3120
3140
3160
3180
3200
3220
3240

**TOPEKA 3040 (-1123)
EL 3035 (-1118)**

WET & DRY SAMPLES 3100'-RTD

Limestone; cream-buff, fine xln, fossiliferous, scattered porosity, no shows

Limestone; cream-grey, fine xln, chalky in part, granular in part, scattered porosity, few fossiliferous pcs, plus white chalk

Limestone; as above, plus fossiliferous, Chert

Shale; grey-green, micaceous in part

Limestone; buff-tan, fine xln, dense, cherty, no visible porosity, no shows

Limestone; cream-tan, fine xln, dense, slightly fossiliferous, few scattered porosity, no shows

Limestone; cream, fine xln, "sandy/granular", scattered porosity, no shows

Limestone; as above

Shale; grey-green

Limestone; grey, fine xln, mottled in part, poor visible porosity, no shows

ROP (min/ft) 5
Gamma (API) 150
Cal (in) 16

Total Gas (units) 100
C1 (units) 100
C2 (units) 100
C3 (units) 100
C4 (units) 100

