

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

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) (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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Form	ACO1 - Well Completion
Operator	Fossil Energy, LLC
Well Name	PATRIOT 1
Doc ID	1486187

Tops

Name	Top	Datum
Anhydrite	893'	+955
Tarkio Lm	2468'	-620
3rd Sand	2494'	-648
Topeka	2717'	-869
Heeb. Sh.	2935'	-1088
Toronto	2956'	-1107
Lansing	2988'	-1138
BKc.	3236'	-1387
Arbuckle	3280'	-1435
TD	3350'	-1500'

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Perforations

Shots Per Foot	Perforation Top	Perforation Bottom	BridgePlugType	BridgePlugSet At	Material Record
4	3281	3286			
4	3291	3293			
4	3220	3226			
4	3197	3204			
4	3011	3016			
4	2983	2988			



Company: Fossil Energy, LLC
Lease: Patriot #1

SEC: 17 TWN: 12S RNG: 15W
 County: RUSSELL
 State: Kansas
 Drilling Contractor: Southwind Drilling, Inc - Rig 1
 Elevation: 1841 GL
 Field Name: Fairport
 Pool: Infield
 Job Number: 376
 API #: 15-167-24093-00-00

Operation:
 Uploading recovery & pressures

DATE
 August
10
 2019

DST #1 **Formation: LKC "A-C"** **Test Interval: 2968 - 3025'** **Total Depth: 3025'**
 Time On: 14:46 08/10 Time Off: 22:30 08/10
 Time On Bottom: 16:28 08/10 Time Off Bottom: 20:03 08/10

Electronic Volume Estimate:
 384'

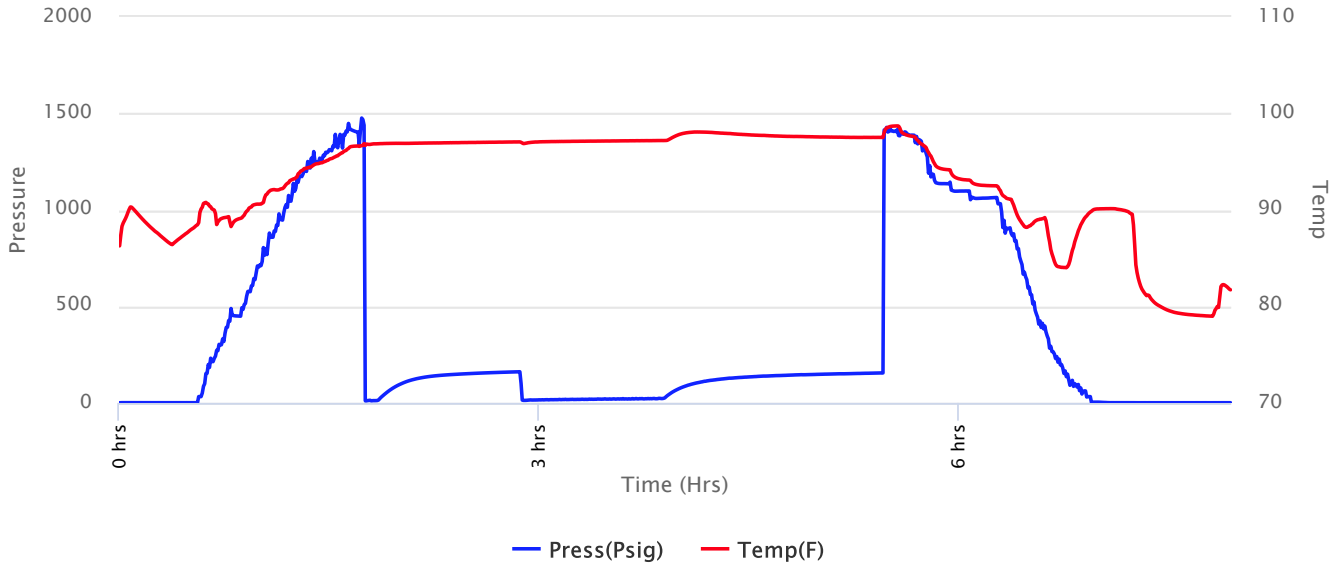
1st Open
 Minutes: 5
 Current Reading: 3.3" at 5 min
 Max Reading: 3.3"

1st Close
 Minutes: 60
 Current Reading: 0" at 60 min
 Max Reading: 0"

2nd Open
 Minutes: 60
 Current Reading: 46.6" at 60 min
 Max Reading: 46.6"

2nd Close
 Minutes: 90
 Current Reading: 0" at 90 min
 Max Reading: 0"

Inside Recorder





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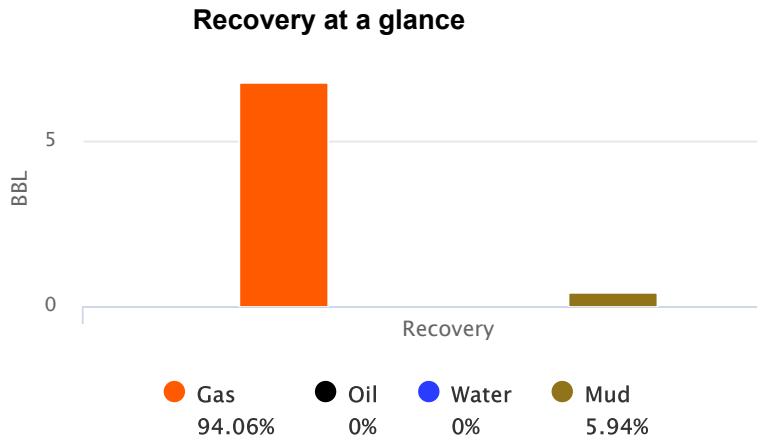
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Recovered		Description of Fluid	Gas %	Oil %	Water %	Mud %
Foot	BBLs					
475	6.75925	G	100	0	0	0
30	0.4269	M	0	0	0	100

Total Recovered: 505 ft
 Total Barrels Recovered: 7.18615

Reversed Out
 NO

Initial Hydrostatic Pressure	1404	PSI
Initial Flow	11 to 15	PSI
Initial Closed in Pressure	162	PSI
Final Flow Pressure	14 to 24	PSI
Final Closed in Pressure	155	PSI
Final Hydrostatic Pressure	1403	PSI
Temperature	99	°F
Pressure Change Initial Close / Final Close	3.9	%



GIP cubic foot volume: 37.94981



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BUCKET MEASUREMENT:

1st Open: Surface blow building to 3"
1st Close: No BB
2nd Open: 3" blow building to BOB 10 1/2 min.
2nd Close: No BB

REMARKS:

Tool Sample: 0% Gas .1% Oil 0% Water 99.9% Mud



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Down Hole Makeup

Heads Up: 7.74000000000002 FT	Packer 1: 2963.23 FT
Drill Pipe: 2948.23 FT <i>ID-3 1/2</i>	Packer 2: 2968.23 FT
Weight Pipe: 0 FT <i>ID-2 7/8</i>	Top Recorder: 2952.65 FT
Collars: 0 FT <i>ID-2 1/4</i>	Bottom Recorder: 3008 FT
Test Tool: 28.74 FT <i>ID-3 1/2-FH</i> <i>Safety Joint</i>	Well Bore Size: 7 7/8
Total Anchor: 56.77	Surface Choke: 1"
<u>Anchor Makeup</u>	Bottom Choke: 5/8"
Packer Sub: 1 FT	
Perforations: (top): 4 FT <i>4 1/2-FH</i>	
Change Over: 1 FT	
Drill Pipe: (in anchor): 31.77 FT <i>ID-3 1/2</i>	
Change Over: 1 FT	
Perforations: (below): 18 FT <i>4 1/2-FH</i>	



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Mud Properties

Mud Type: Chemical **Weight:** 8.9 **Viscosity:** 50 **Filtrate:** 8.3 **Chlorides:** 6,500 ppm



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Gas Volume Report

1st Open			
Time	Orifice	PSI	MCF/D

2nd Open			
Time	Orifice	PSI	MCF/D



MICRORESISTIVITY LOG

Company FOSSIL ENERGY, LLC
Well PATRIOT #1
Field FAIRPORT
County RUSSELL
State KANSAS

Company FOSSIL ENERGY, LLC
Well PATRIOT #1
Field FAIRPORT
County RUSSELL
State KANSAS

Location: API #: 15-167-24093-00-00
 1690' FSL & 1650' FEL
 SEC 17 TWP 12S RGE 15W
Permanent Datum GROUND LEVEL Elevation 1835'
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING
Other Services CNL/CDL DIL
Elevation 1845'
K.B. N/A
D.F. N/A
G.L. 1835'

Date	8/12/2019
Run Number	ONE
Depth Driller	3350'
Depth Logger	3345'
Bottom Logged Interval	3344'
Top Log Interval	2195'
Casing Driller	8.625" @ 562'
Casing Logger	562'
Bit Size	7.875"
Type Fluid in Hole	CHEMICAL
Salinity, ppm CL	6500
Density / Viscosity	9.0 51
pH / Fluid Loss	11.3 8.8
Source of Sample	FLOWLINE
Rm @ Meas. Temp	0.35 @ 73
Rmt @ Meas. Temp	0.26 @ 73
Rmc @ Meas. Temp	0.47 @ 73
Source of Rmf / Rmc	CHARTS
Rm @ BHT	0.23 @ 110
Operating Rig Time	3 HOURS
Max Rec. Temp. F	110
Equipment Number	P-24
Location	HAYS
Recorded By	IAN MABB
Witnessed By	RANDY KILIAN

<<< 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.
 GORHAM, KS.
 EAST TO 177 ST, NORTH 7 MILES, TO DECKER RD,
 WEST 1/2 MILE, NORTH 1 1/2 & EAST INTO

Log Measured From: KELLY BUSHING 10 Ft. Above Permanent Datum

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

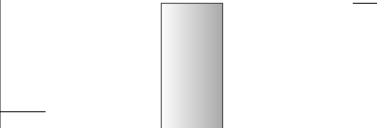
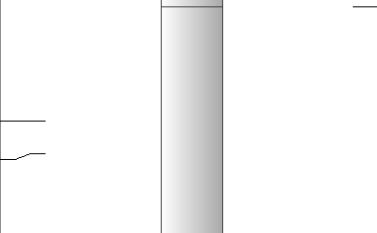
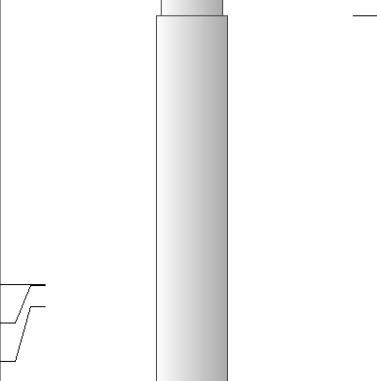
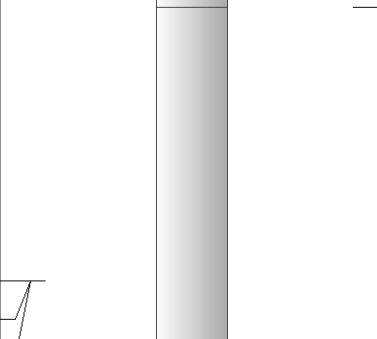
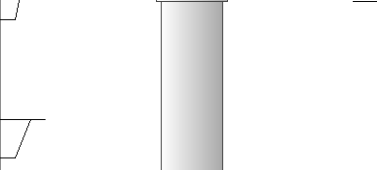
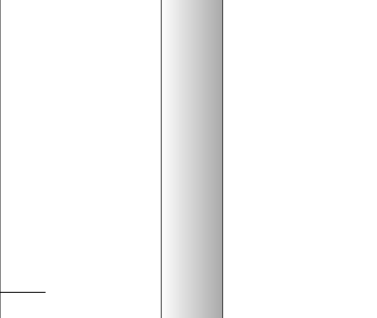
Your Pioneer Energy Services Crew Engineer: IAN MABB Operator: Operator: Operator:	This Log Record Was Witnessed By Primary Witness: RANDY KILIAN Secondary Witness: Secondary Witness: Secondary Witness:
---	--

Log Variables

DatabaseC:\ProgramData\Warrior\Data\fossil_energy_patriot_1.db
 Dataset field/well/stackmel/pass3.1/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	110	5.5	0	1	2	2.71
NPORSEL	PERFS	SNDERR mmho/m	SNDERRM mmho/m	SPSHIFT mV	SRFTEMP degF	SZCOR	TDEPTH ft
Limestone	0	2	-4	-120	-120	Off	0

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.58		GR-M&W (233-M&W)	3.00	3.50	50.00
CNLSC CNSSC	37.48 36.73		CNT-M&W (207-MW)	5.50	3.50	100.00
LSD DCAL SSD	28.43 28.42 27.93		CDL-M&W (96-916)	8.50	4.00	250.00
MCAL MI MN	19.83 19.83 19.83		ML-PSIML (PSI-01) GO Micro log tools converted to Simplec electronics	7.58	4.00	65.00
RLL3F RLL3	15.80 15.80					
CILD	8.00		DIL-PSI HIGH TEMP (1039)	18.50	3.50	220.00

CILM 4.70

SP 0.20

Dataset: fossil_energy_patriot_1.db: field/well/stackmel/pass3.1
 Total length: 43.08 ft
 Total weight: 685.00 lb
 O.D.: 4.00 in

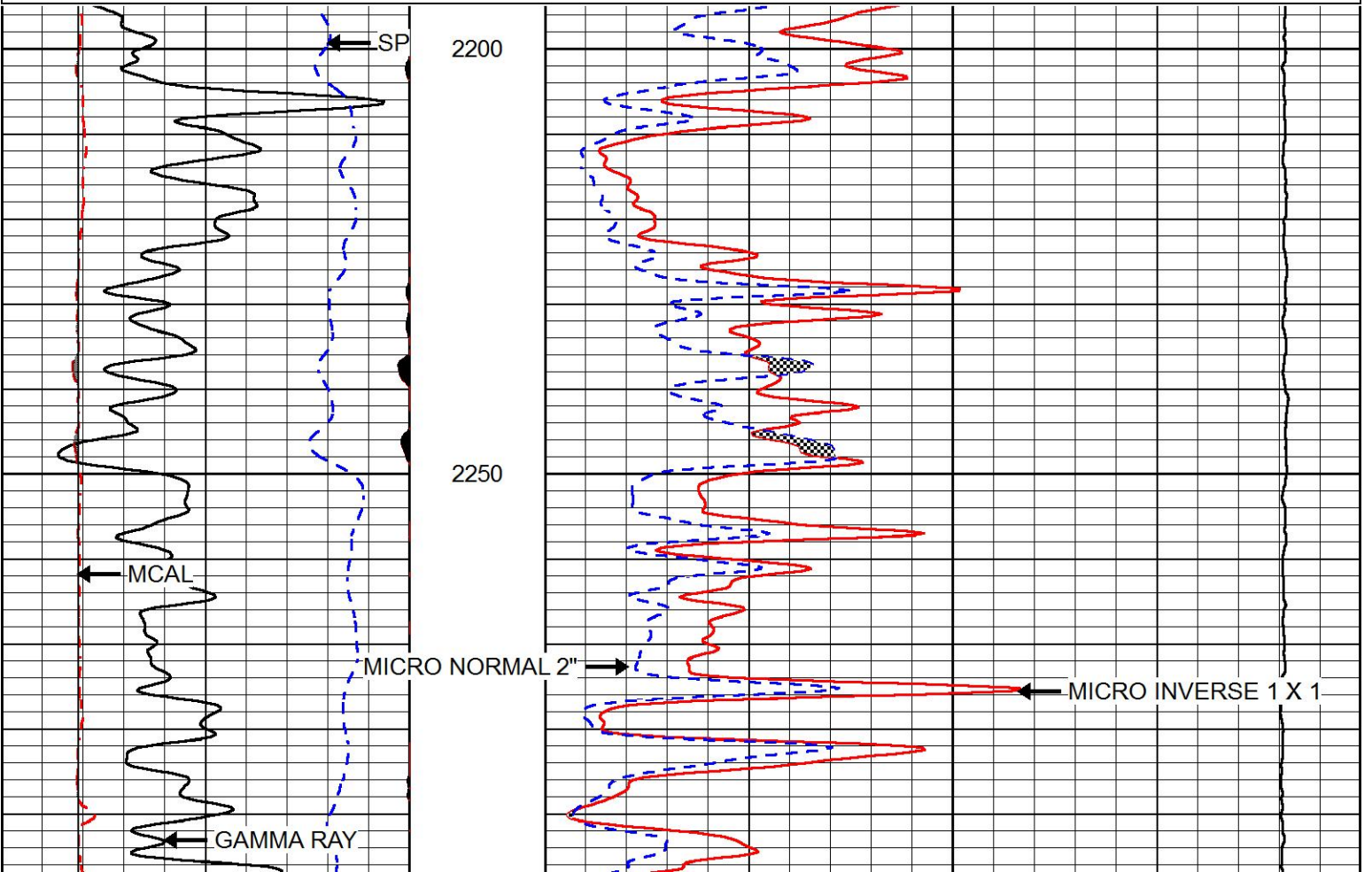


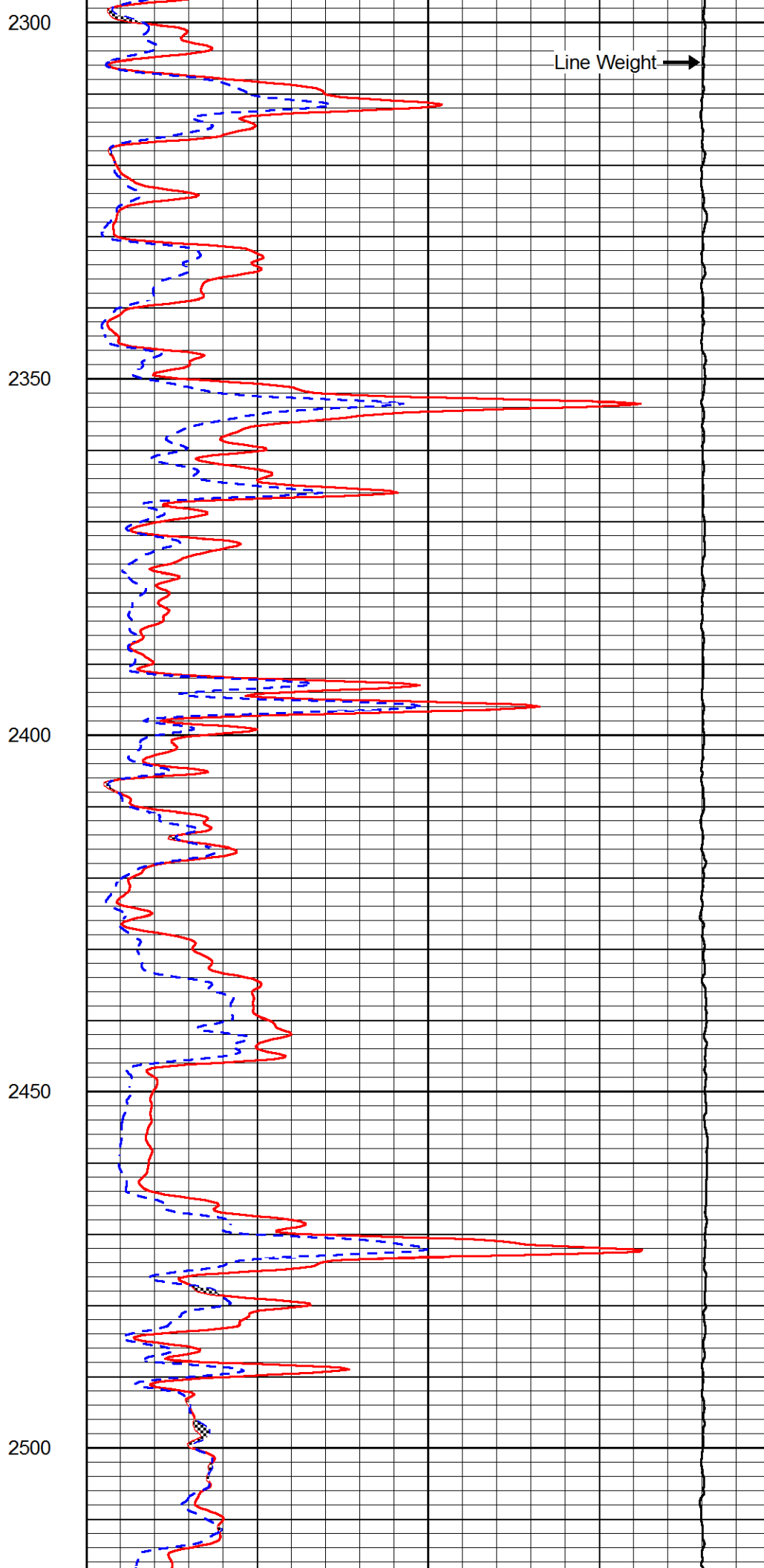
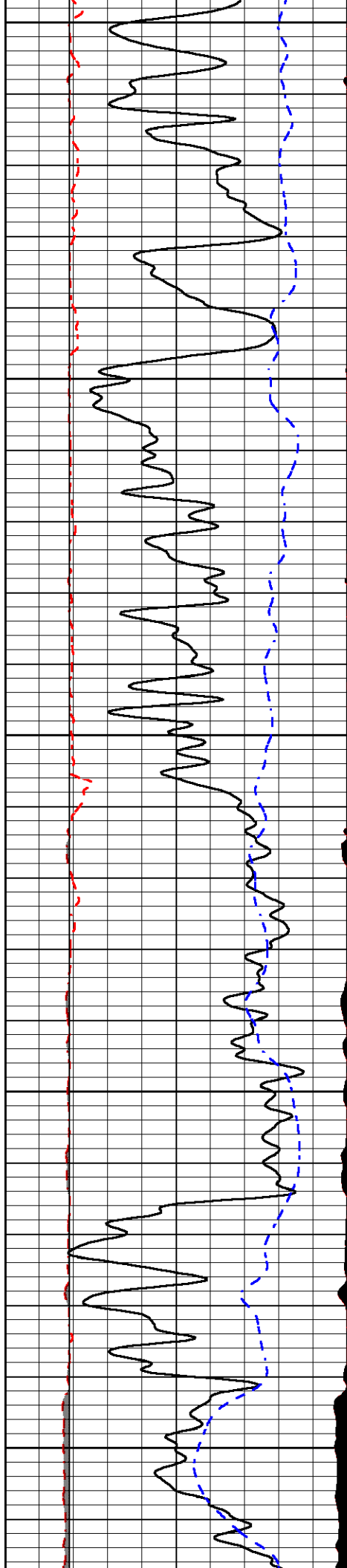
MAIN PASS

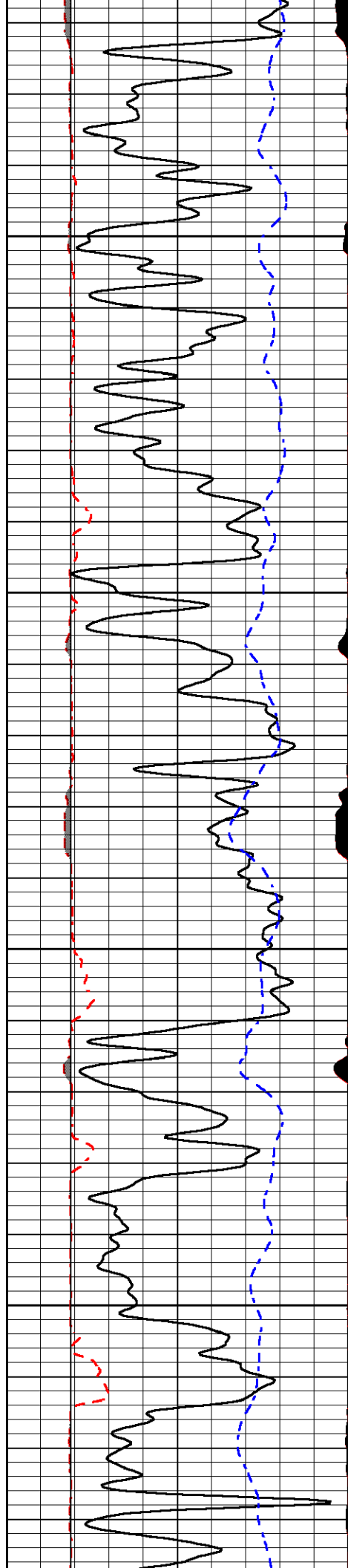
Database File fossil_energy_patriot_1.db
 Dataset Pathname stackmel/pass3.1
 Presentation Format _micro
 Dataset Creation Mon Aug 12 03:15:54 2019
 Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
6	MCAL (in)	16
2.875	mcals (in)	7.875
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
10000	Line Weight (lb)	0





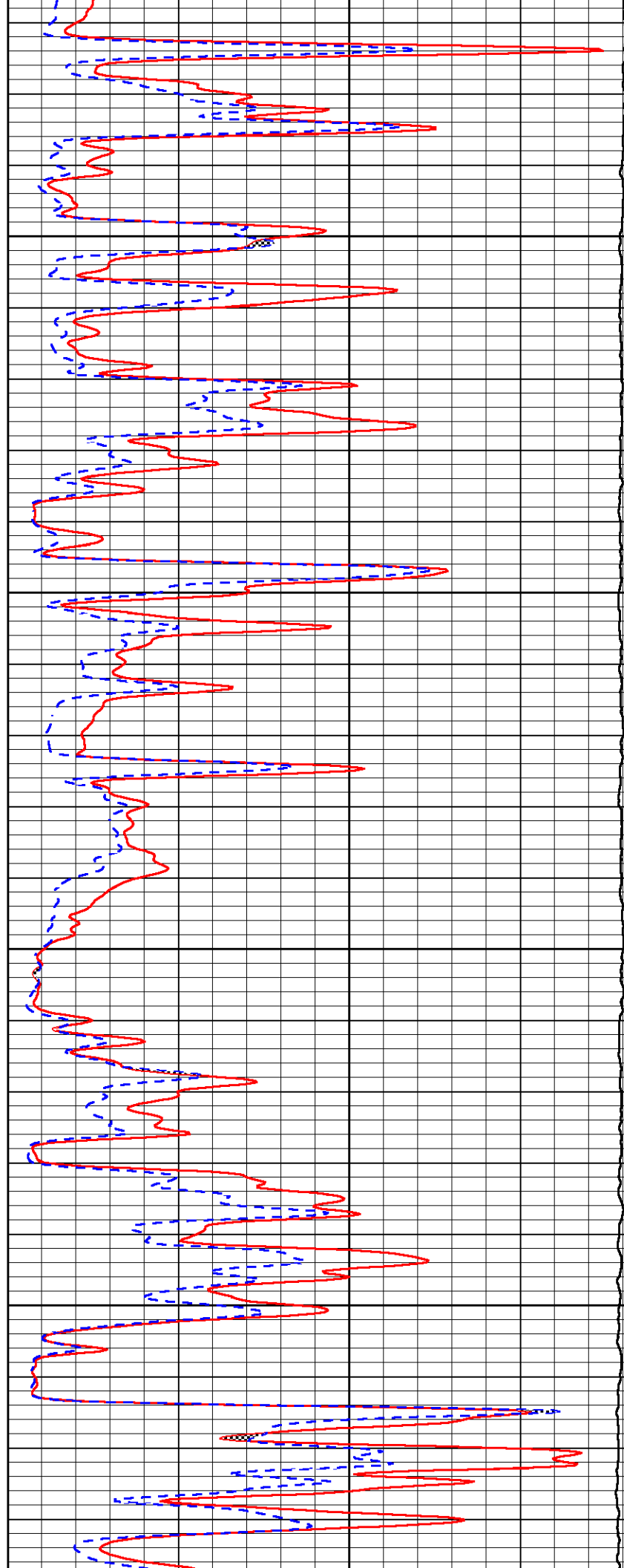


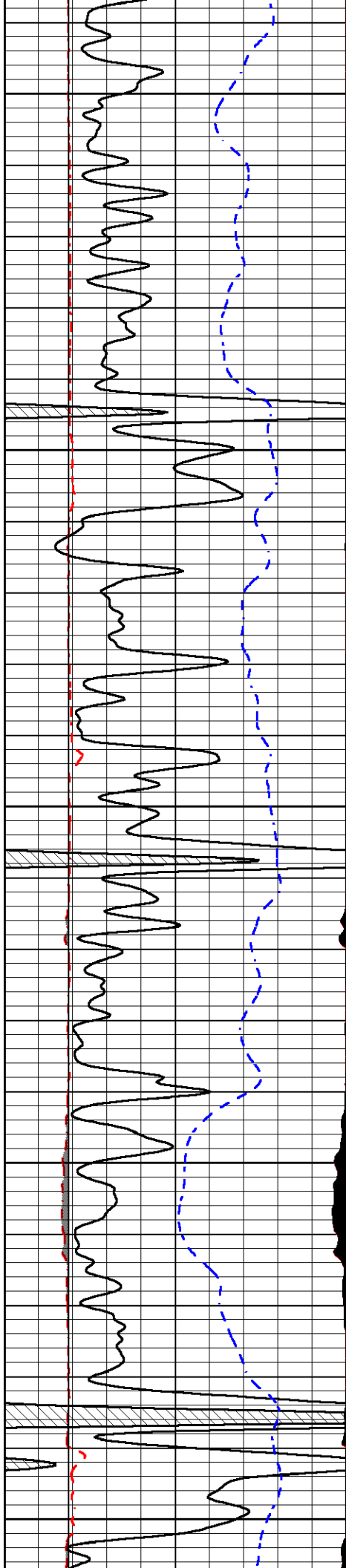
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2600

2650

2700





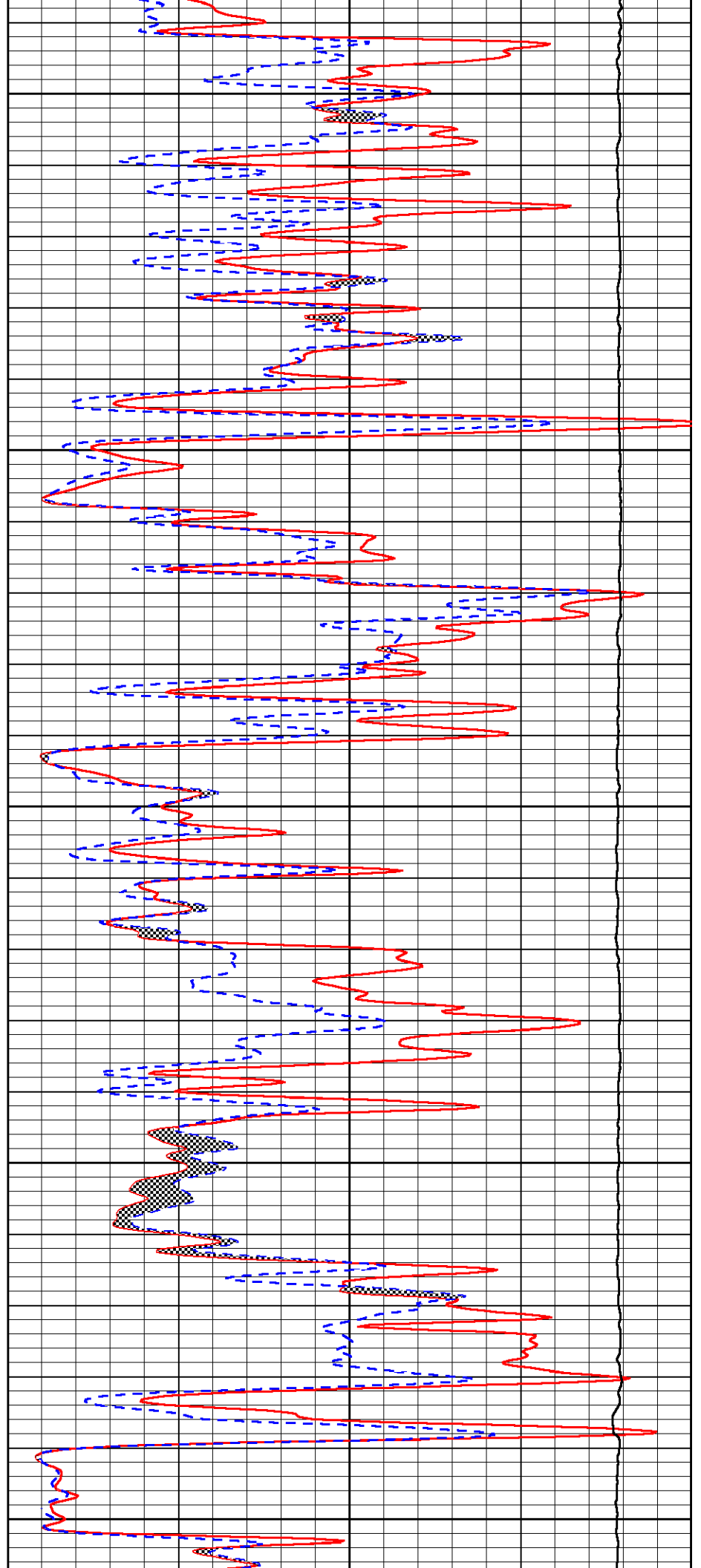
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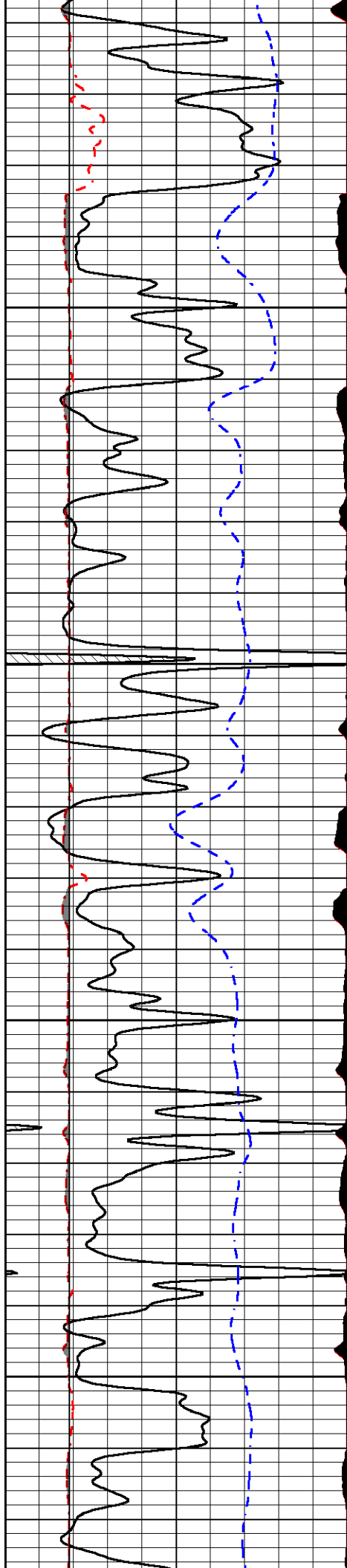
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2850

2900

2950



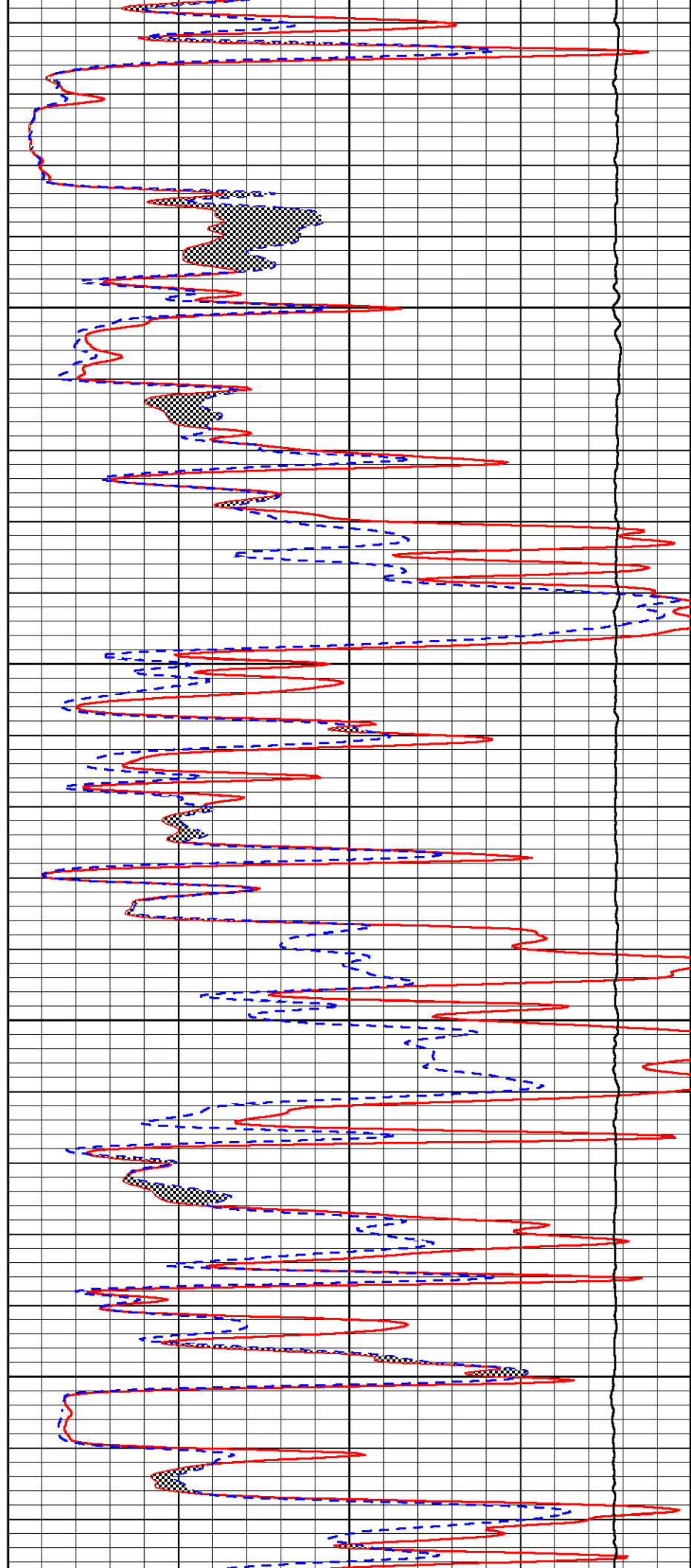


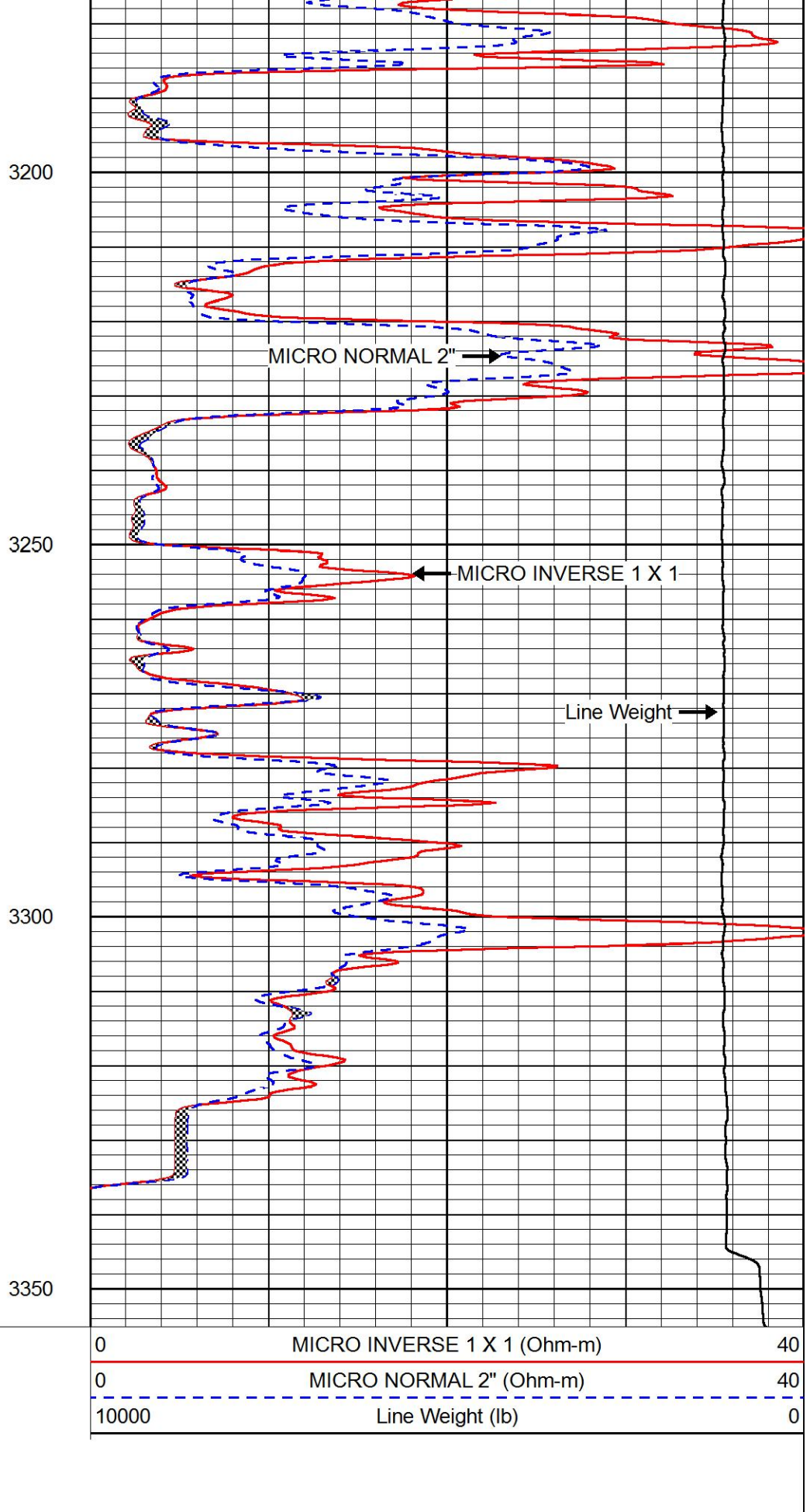
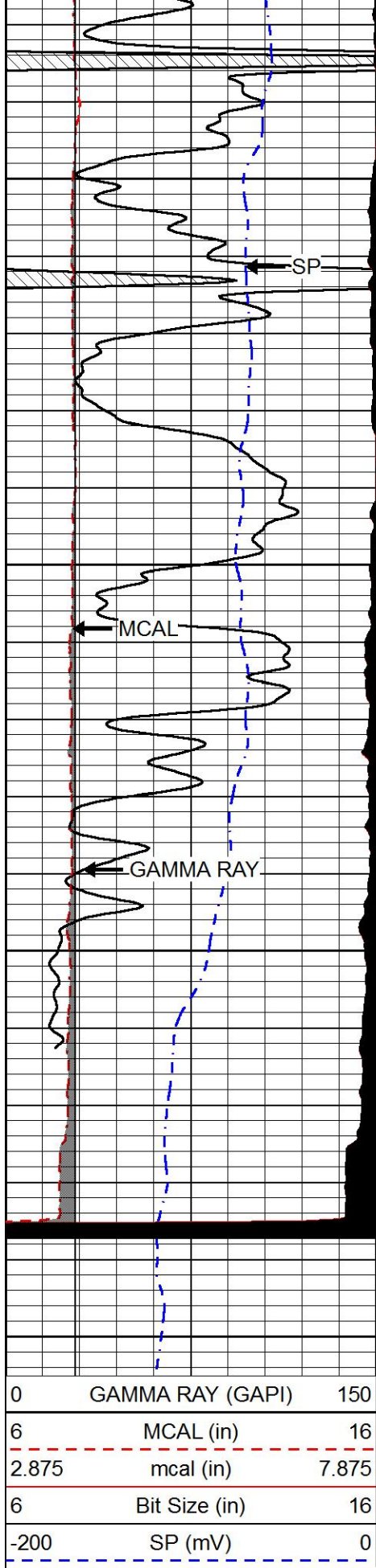
3000

3050

3100

3150



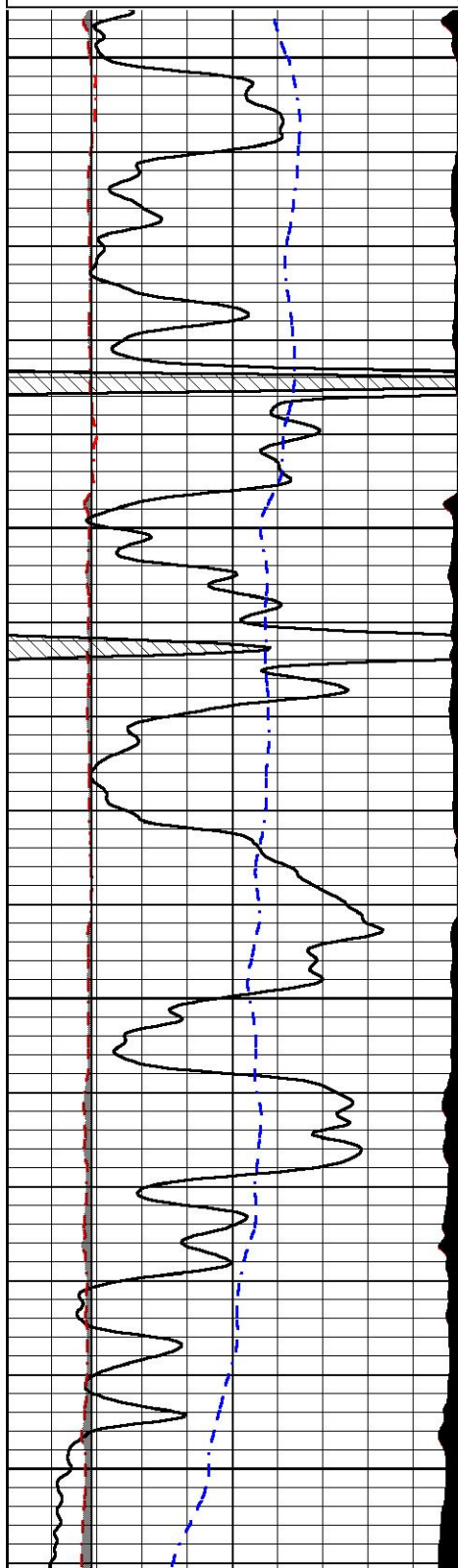


REPEAT SECTION

Database File fossil_energy_patriot_1.db
Dataset Pathname stackmel/pass2.1
Presentation Format _micro
Dataset Creation Mon Aug 12 03:17:38 2019
Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
6	MCAL (in)	16
2.875	mcal (in)	7.875
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
10000	Line Weight (lb)	0

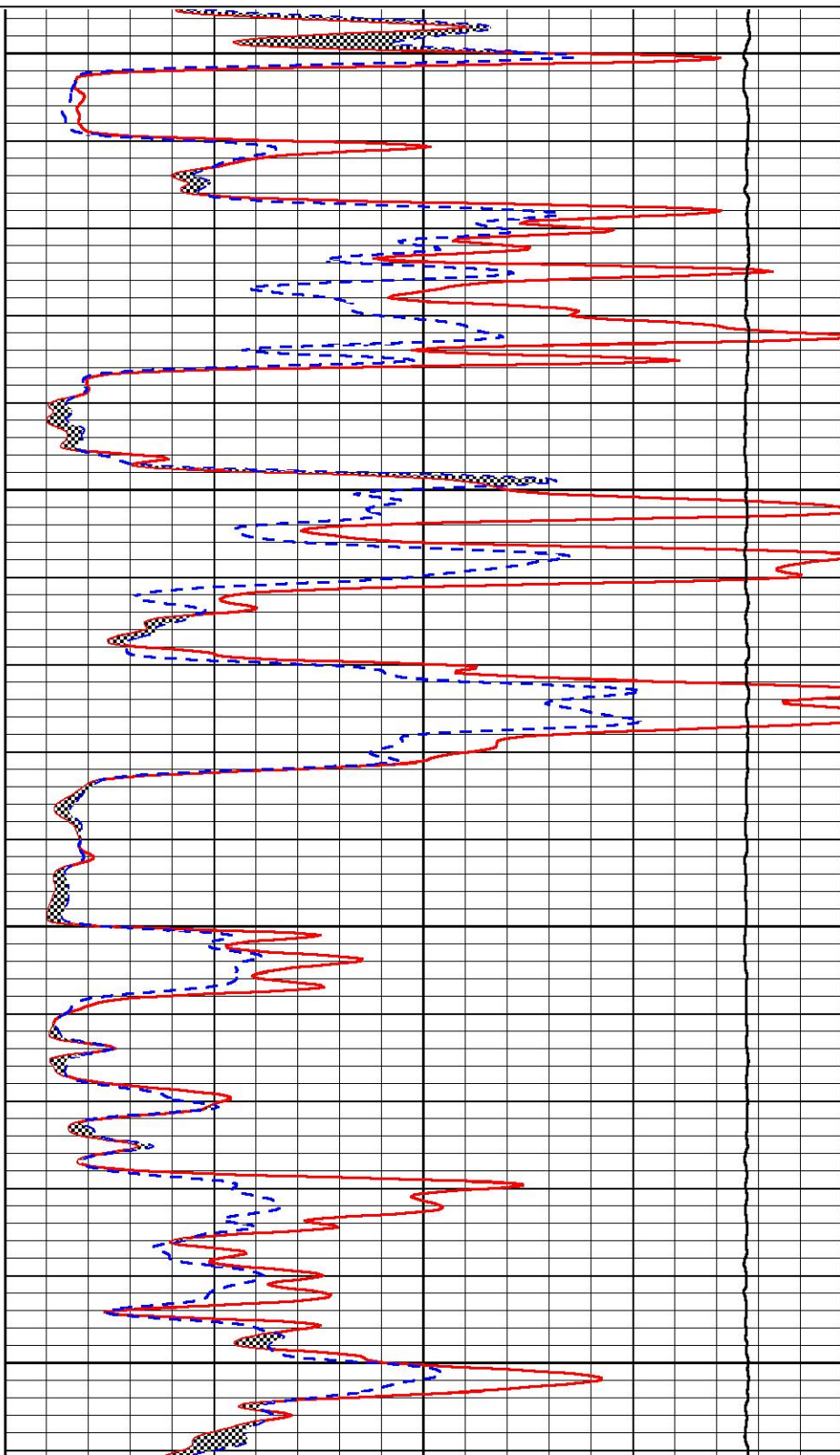


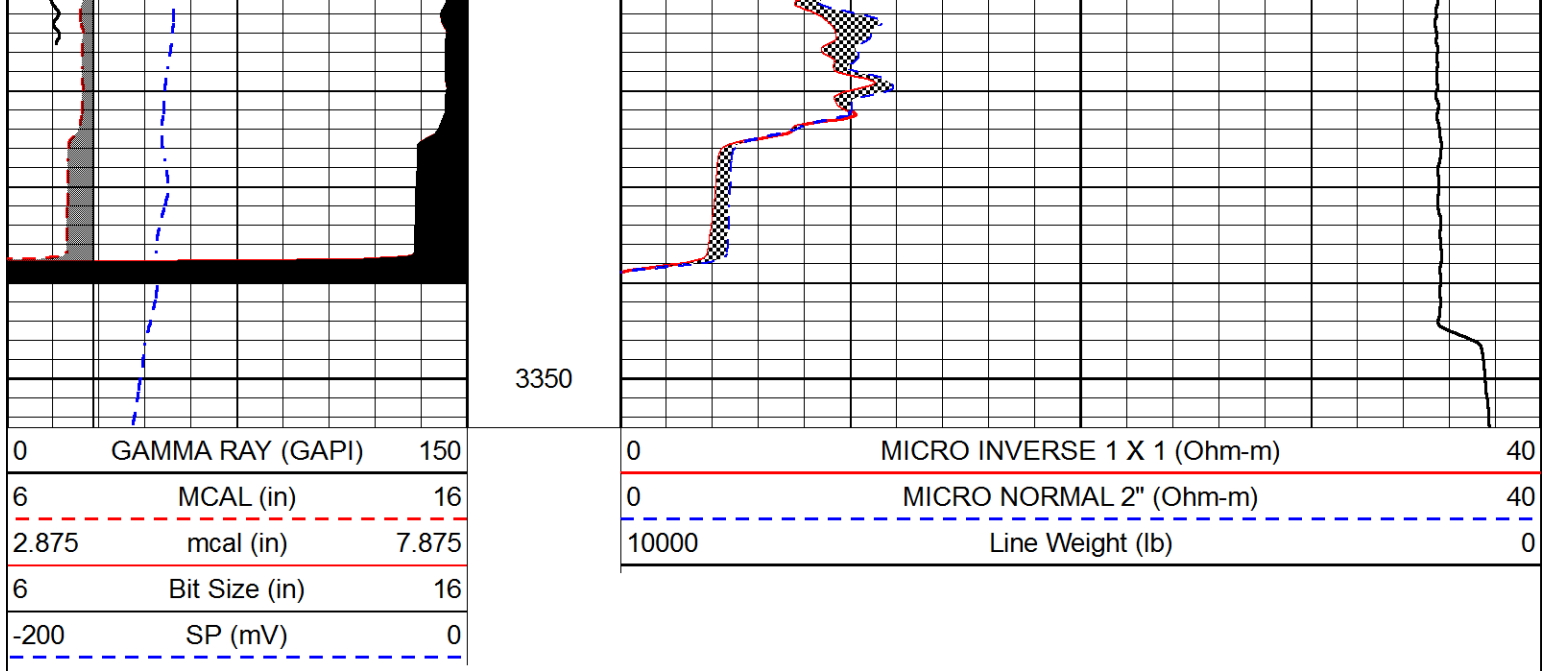
3150

3200

3250

3300





Calibration Report

Database File fossil_energy_patriot_1.db
 Dataset Pathname stackmel/pass3.1
 Dataset Creation Mon Aug 12 03:15:54 2019

Dual Induction Calibration Report

Serial-Model: 1039-PSI HIGH TEMP
 Calibration Performed: Tue Jul 09 07:46:05 2019

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	167.000	835.000	0.000	255.800	mmho/m	0.430	-51.000
Medium	0.000	1348.000	142.000	255.800	mmho/m	0.365	-49.000

Microlog Calibration Report

Serial-Model: PSI-01-PSIML
 Performed: Thu Aug 01 07:57:13 2019

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	18000.0000	-0.7000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	18000.0000	-0.6000
Caliper	1.0001	1.1397	6.5000	18.5000	in	70.0000	-64.2000

Compensated Density Calibration Report

Serial-Model: 96-916-M&W
 Source / Verifier: 16955B / 2ci
 Master Calibration Performed: Wed Mar 27 11:00:53 2019

Master Calibration

Density Far Detector Near Detector

Magnesium	1.755	g/cc	8943.64	10054.60	cps
Aluminum	2.655	g/cc	1595.61	6242.82	cps

Spine Angle = 74.54

Density/Spine Ratio = 0.503

	Size		Reading
Small Ring	6.00	in	1.75
Large Ring	16.00	in	1.46

Compensated Neutron Calibration Report

Serial Number: 207-MW
 Tool Model: M&W
 Calibration Performed: WED FEB 13 10:30:30 2019

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: 233-M&W
 Tool Model: M&W
 Calibration Performed: Fri Feb 07 01:42:40 2014

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
 Calibrator Reading: 1.0 cps

Sensitivity: 0.5500 GAPI/cps



DUAL COMP POROSITY LOG

Pioneer Energy Services

Company **FOSSIL ENERGY, LLC**
 Well **PATRIOT #1**
 Field **FAIRPORT**
 County **RUSSELL** State **KANSAS**

Company **FOSSIL ENERGY, LLC**
 Well **PATRIOT #1**
 Field **FAIRPORT**
 County **RUSSELL**
 State **KANSAS**

Location: **API #: 15-167-24093-00-00**
1690' FSL & 1650' FEL
 SEC 17 TWP 12S RGE 15W
 Permanent Datum **GROUND LEVEL** Elevation **1835'**
 Log Measured From **KELLY BUSHING**
 Drilling Measured From **KELLY BUSHING**
 Other Services **DIL/MEL**

Date	8/12/2019
Run Number	ONE
Type Log	CNL/CDL
Depth Driller	3350'
Depth Logger	3345'
Bottom Logged Interval	3344'
Top Logged Interval	2195'
Type Fluid In Hole	CHEMICAL
Salinity, PPM CL	6500
Density	9.0
Level	FULL
Max. Rec. Temp. F	110
Operating Rig Time	3 HOURS
Equipment -- Location	P-24 HAYS
Recorded By	IAN MABB
Witnessed By	RANDY KILIAN

Run No.	Bit	Borehole Record			Casing Record		
		From	To	Size	Wgt.	From	To
ONE	12.25"	0'	562'	8.625"	23#	0'	562'
TWO	7.875"	562'		TD			

<<< 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.
 GORHAM, KS.
 EAST TO 177 ST, NORTH 7 MILES, TO DECKER RD,
 WEST 1/2 MILE, NORTH 1 1/2 & EAST INTO

Log Measured From: **KELLY BUSHING** 10 Ft. Above Permanent Datum

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

Your Pioneer Energy Services Crew

Engineer: **IAN MABB**
 Operator:
 Operator:
 Operator:

This Log Record Was Witnessed By

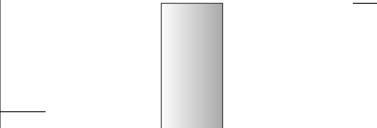
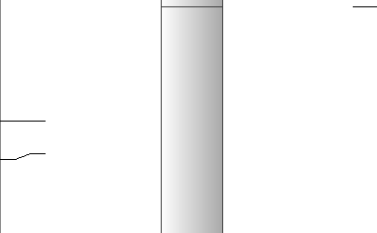
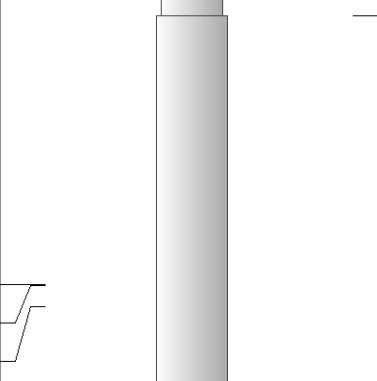
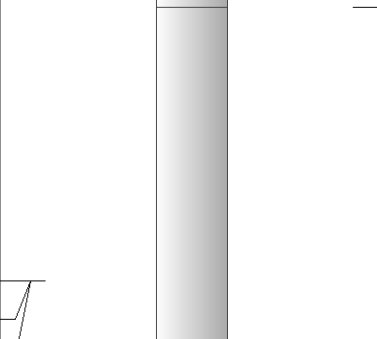
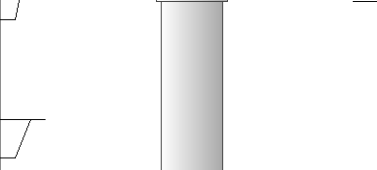
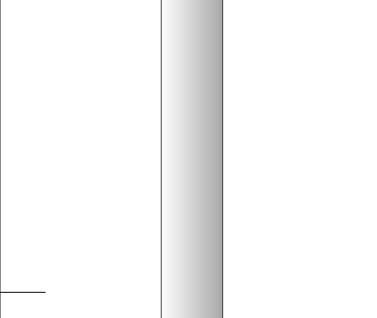
Primary Witness: **RANDY KILIAN**
 Secondary Witness:
 Secondary Witness:
 Secondary Witness:

Log Variables

DatabaseC:\ProgramData\Warrior\Data\fossil_energy_patriot_1.db
 Dataset field/well/stackmel/pass3.1/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	110	5.5	0	1	2	2.71
NPORSEL	PERFS	SNDERR mmho/m	SNDERRM mmho/m	SPSHIFT mV	SRFTEMP degF	SZCOR	TDEPTH ft
Limestone	0	2	-4	-120	-120	Off	0

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.58		GR-M&W (233-M&W)	3.00	3.50	50.00
CNLSC CNSSC	37.48 36.73		CNT-M&W (207-MW)	5.50	3.50	100.00
LSD DCAL SSD	28.43 28.42 27.93		CDL-M&W (96-916)	8.50	4.00	250.00
MCAL MI MN	19.83 19.83 19.83		ML-PSIML (PSI-01) GO Micro log tools converted to Simplec electronics	7.58	4.00	65.00
RLL3F RLL3	15.80 15.80					
CILD	8.00		DIL-PSI HIGH TEMP (1039)	18.50	3.50	220.00

CILM 4.70

SP 0.20

Dataset: fossil_energy_patriot_1.db: field/well/stackmel/pass3.1
 Total length: 43.08 ft
 Total weight: 685.00 lb
 O.D.: 4.00 in

PIONEER

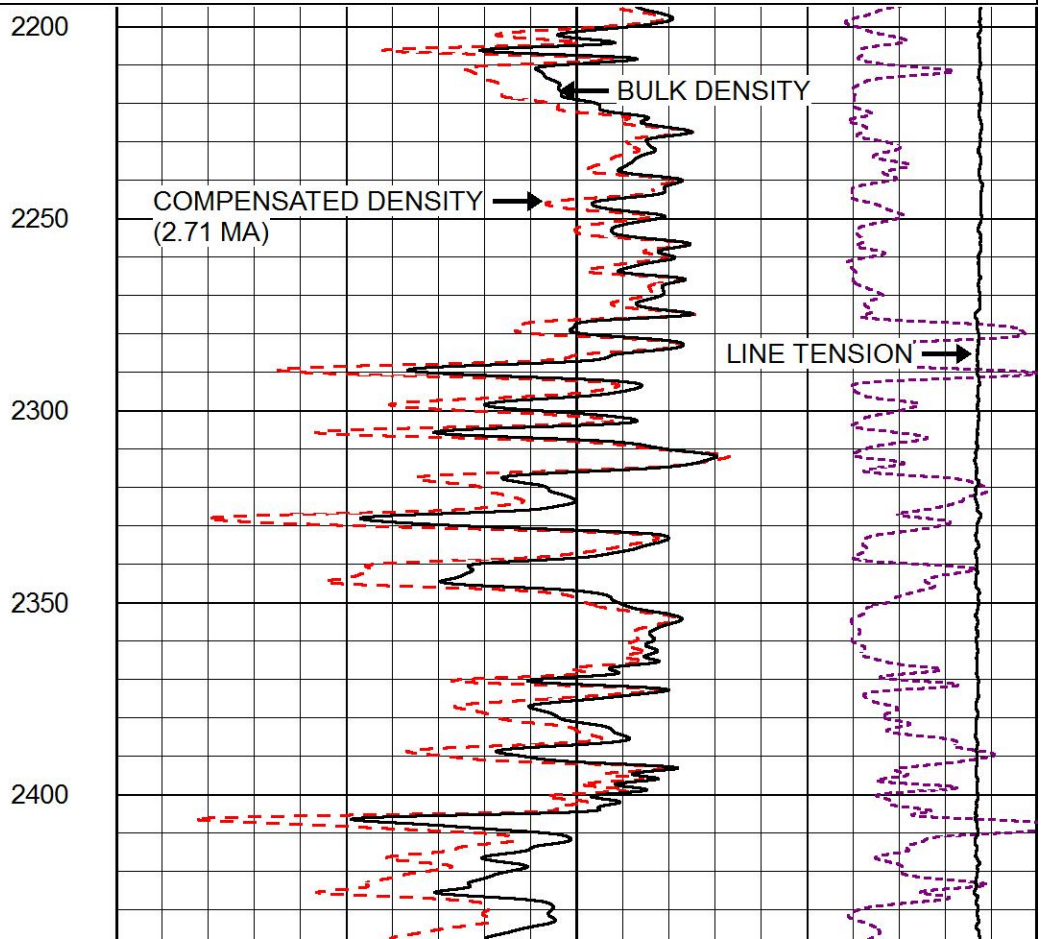
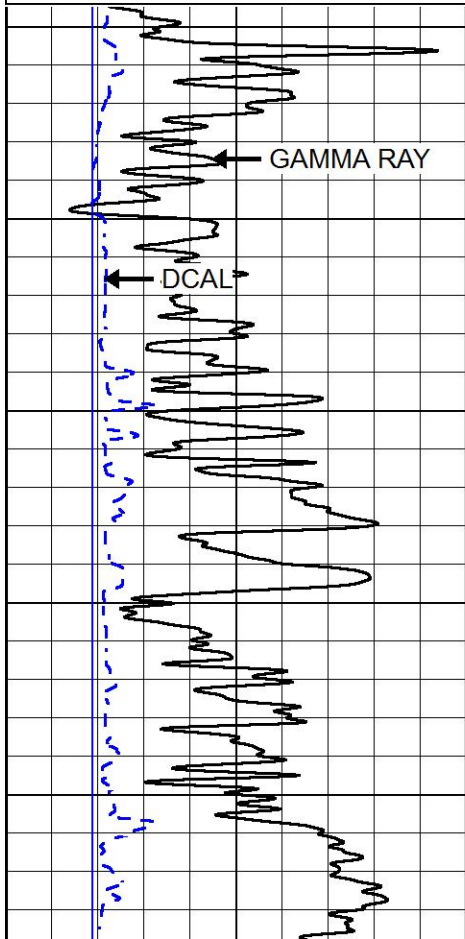
Pioneer Energy Services

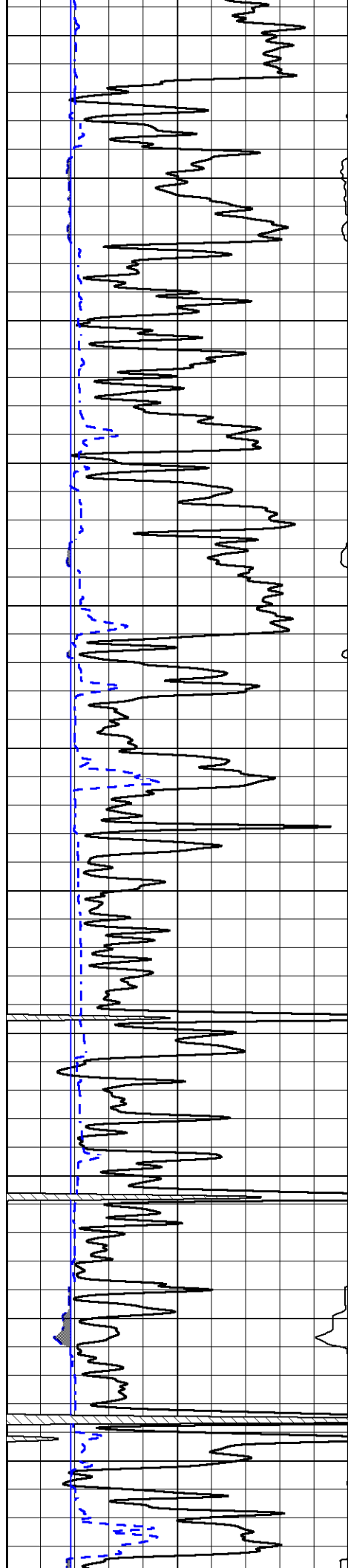
MAIN PASS

Database File fossil_energy_patriot_1.db
 Dataset Pathname stackmel/pass3.1
 Presentation Format _cdl
 Dataset Creation Mon Aug 12 03:15:54 2019
 Charted by Depth in Feet scaled 1:600

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

30	COMPENSATED DENSITY (2.71 MA)	(pu)	-10
2	BULK DENSITY (g/cc)		3
15000	LINE TENSION (lb)		0
	-0.25 CORRECTION (g/cc)		0.25





2450

2500

2550

2600

2650

2700

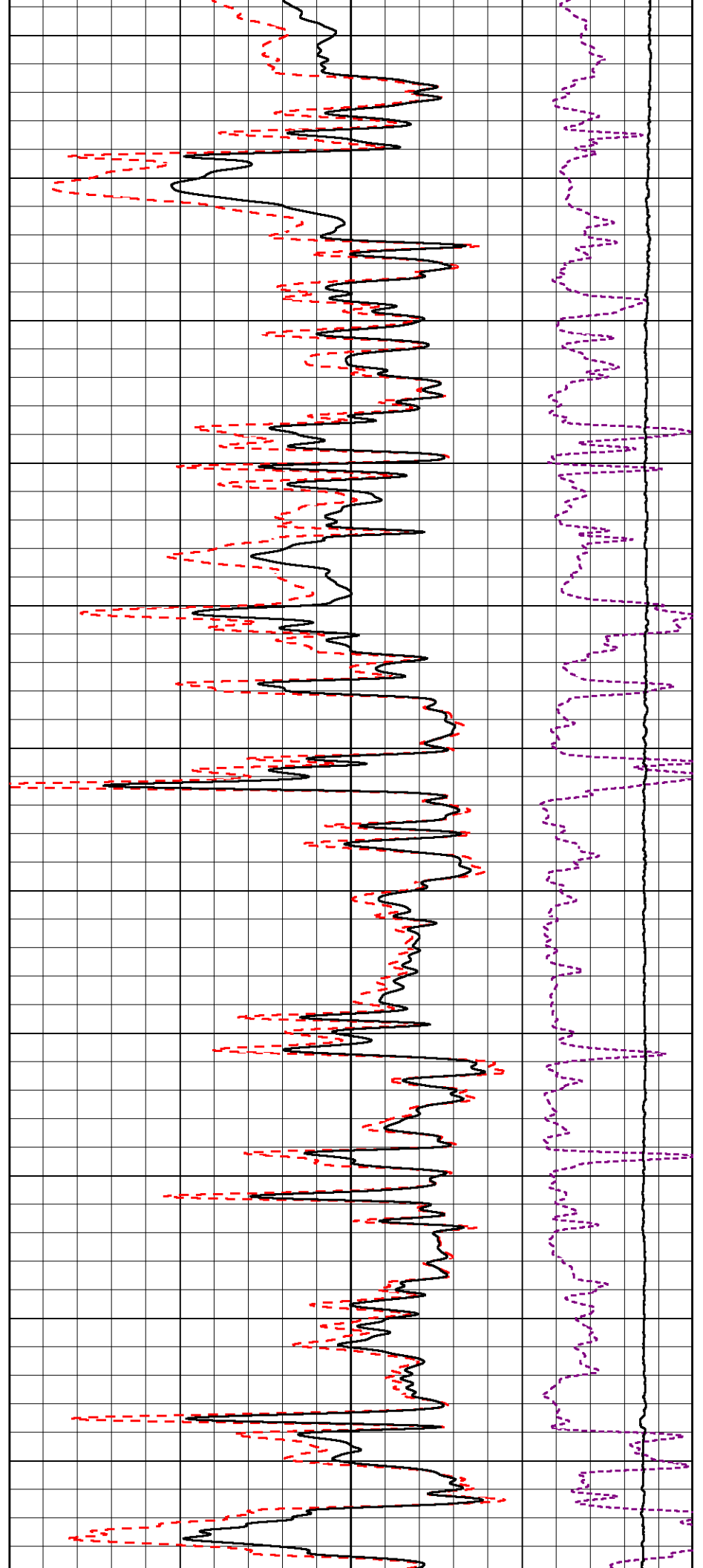
2750

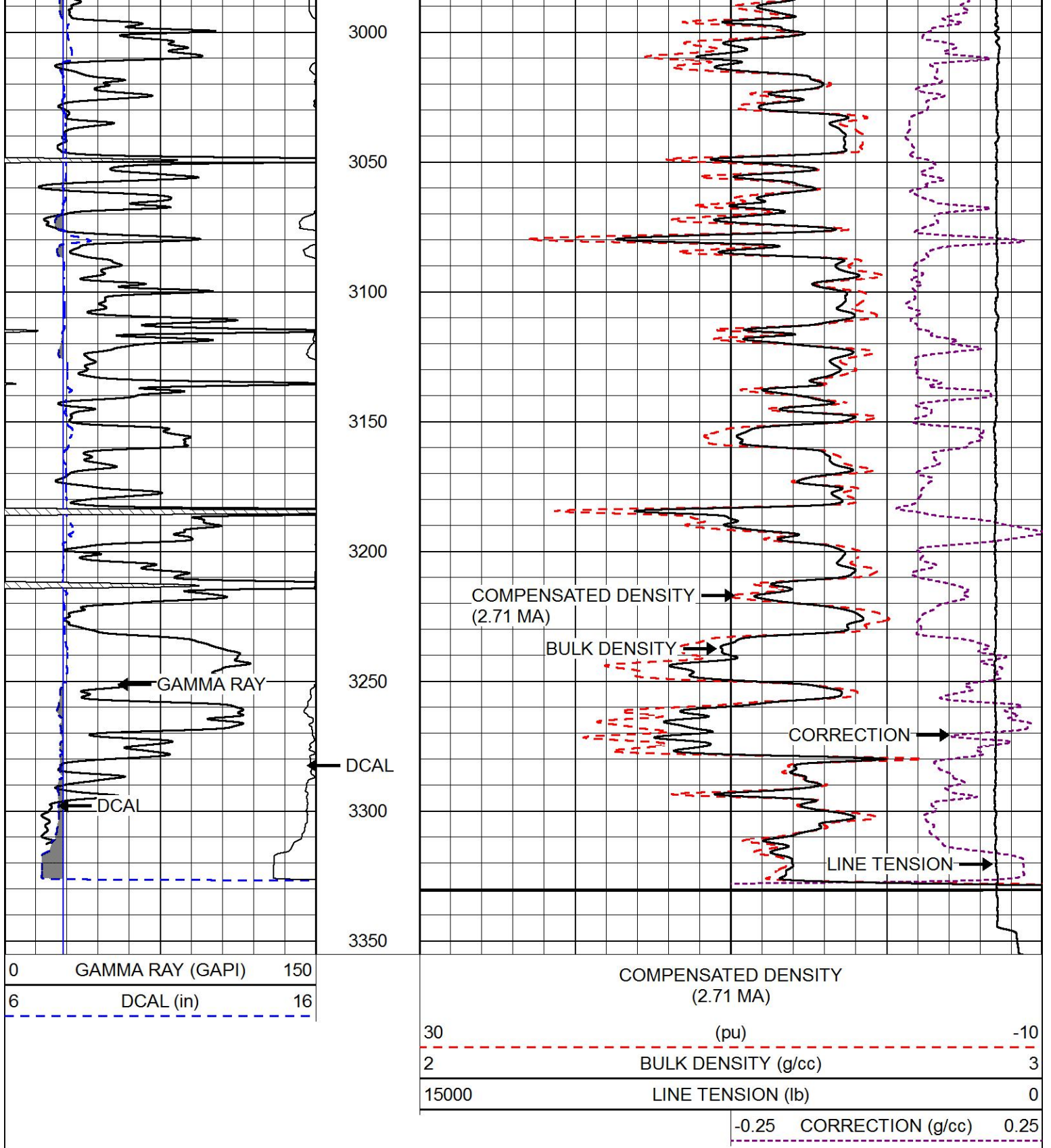
2800

2850

2900

2950



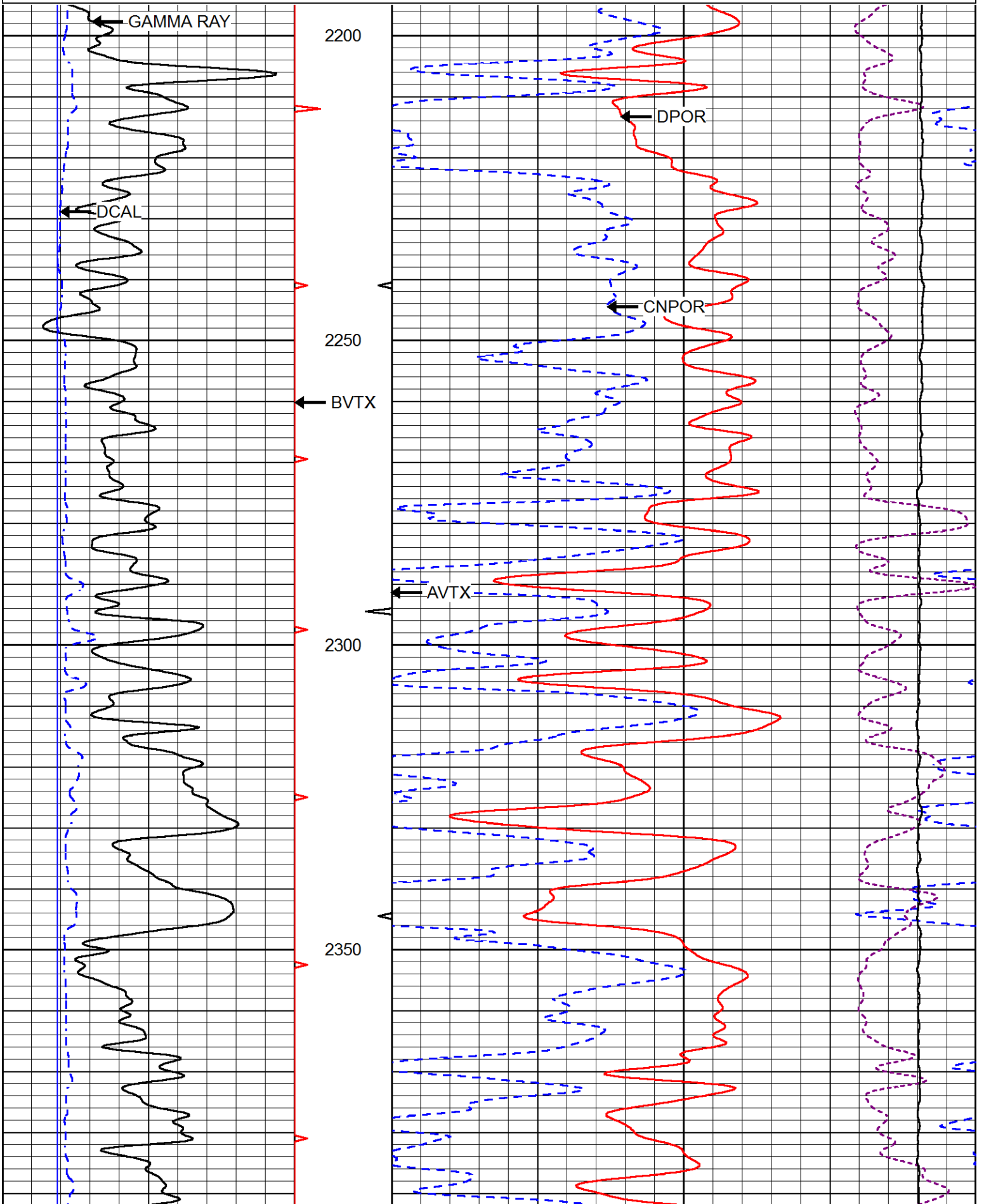


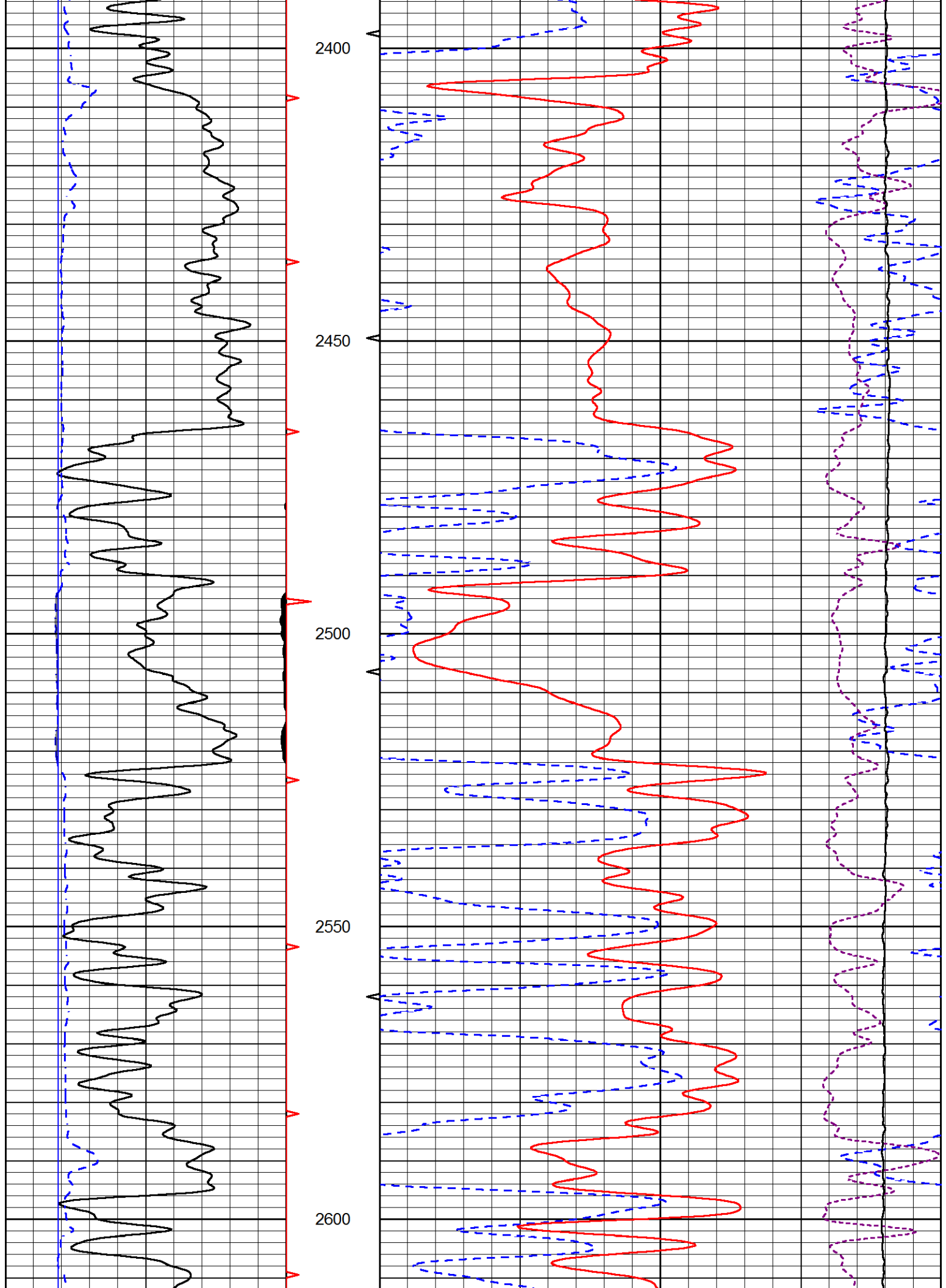
MAIN PASS

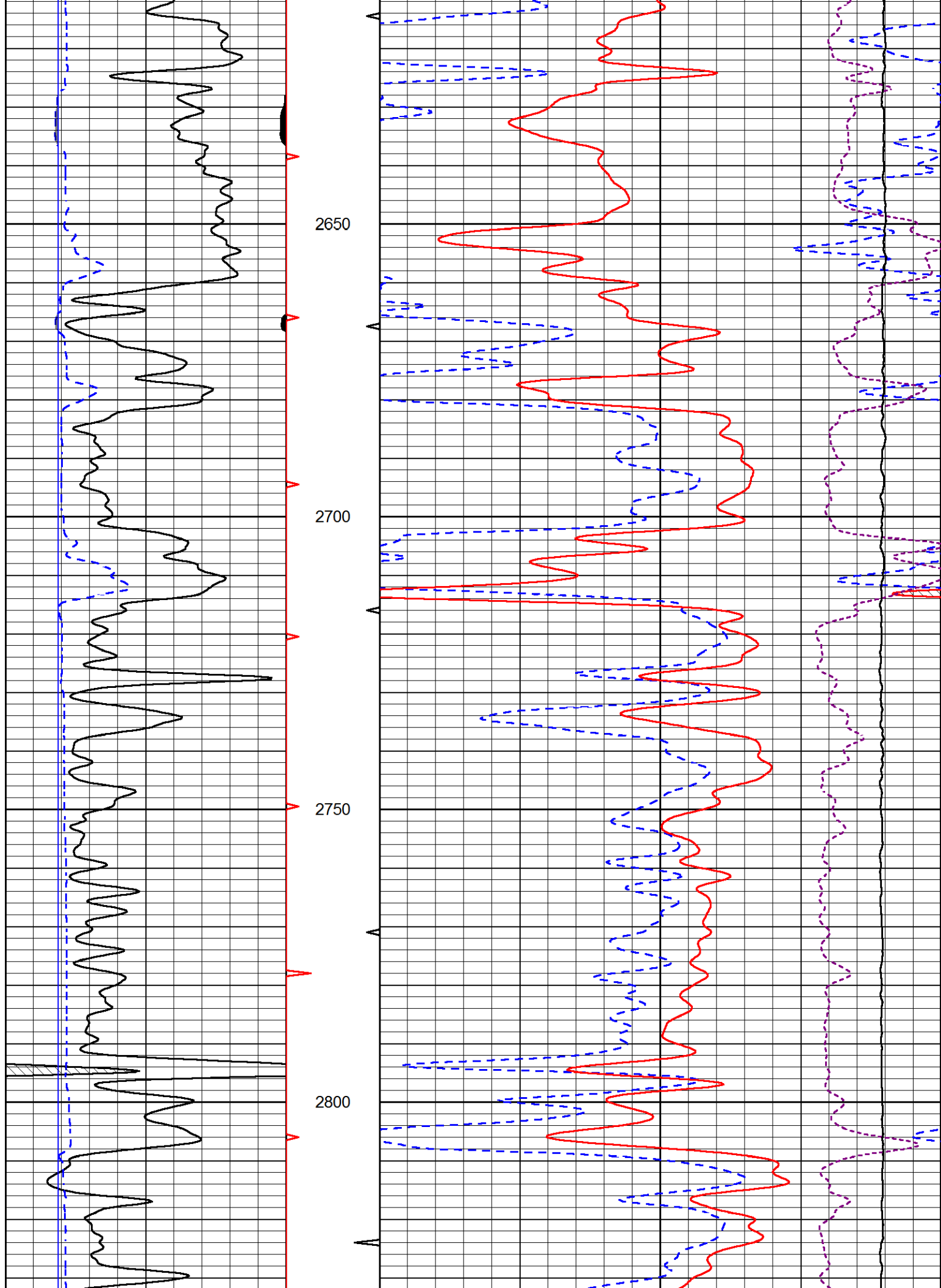
Database File fossil_energy_patriot_1.db
 Dataset Pathname stackmel/pass3.1
 Presentation Format _CNDLS~1
 Dataset Creation Mon Aug 12 03:15:54 2019
 Charted by Depth in Feet scaled 1:240

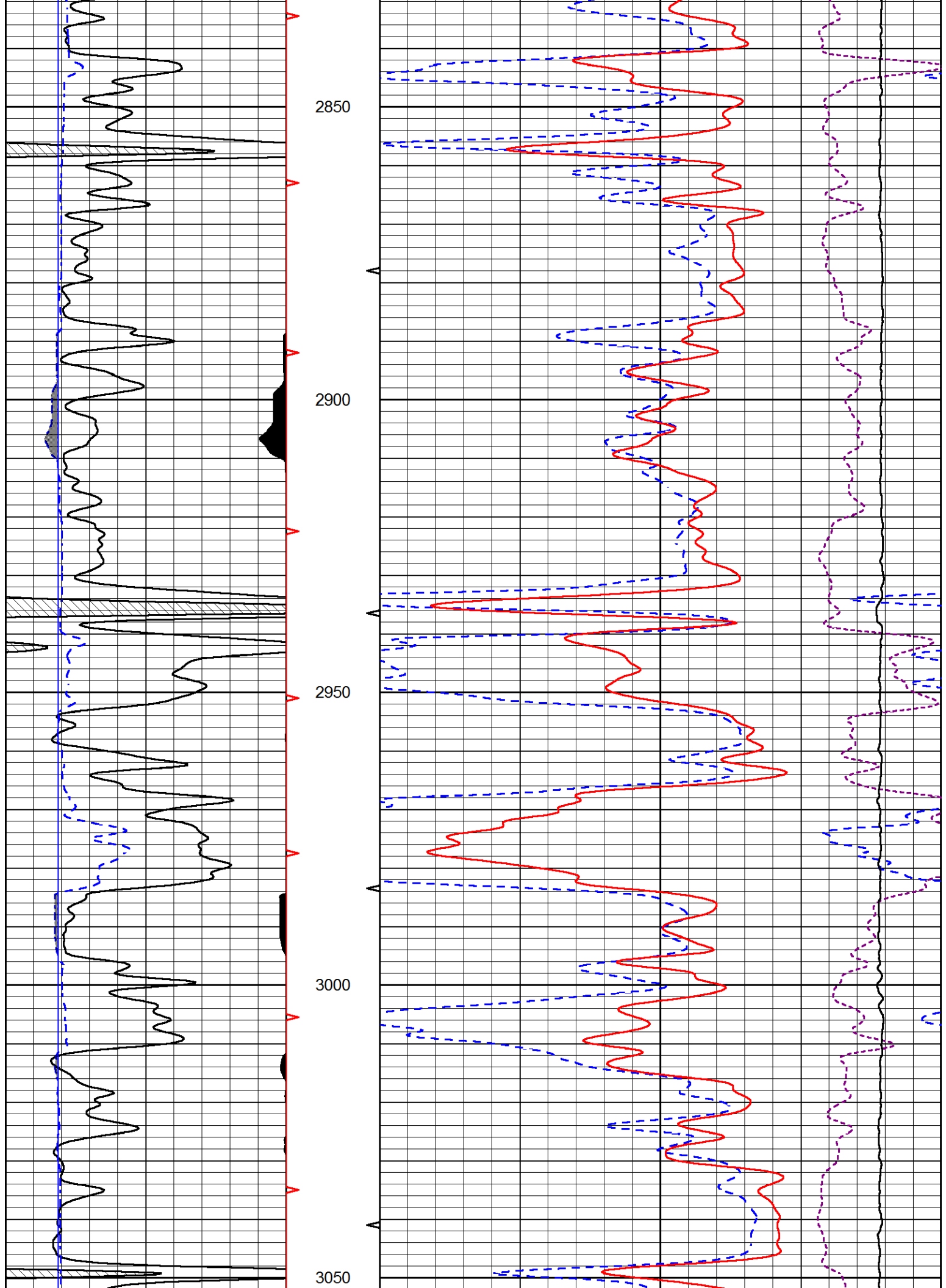
0	GAMMA RAY (GAPI)	150
6	DCAL (in)	16

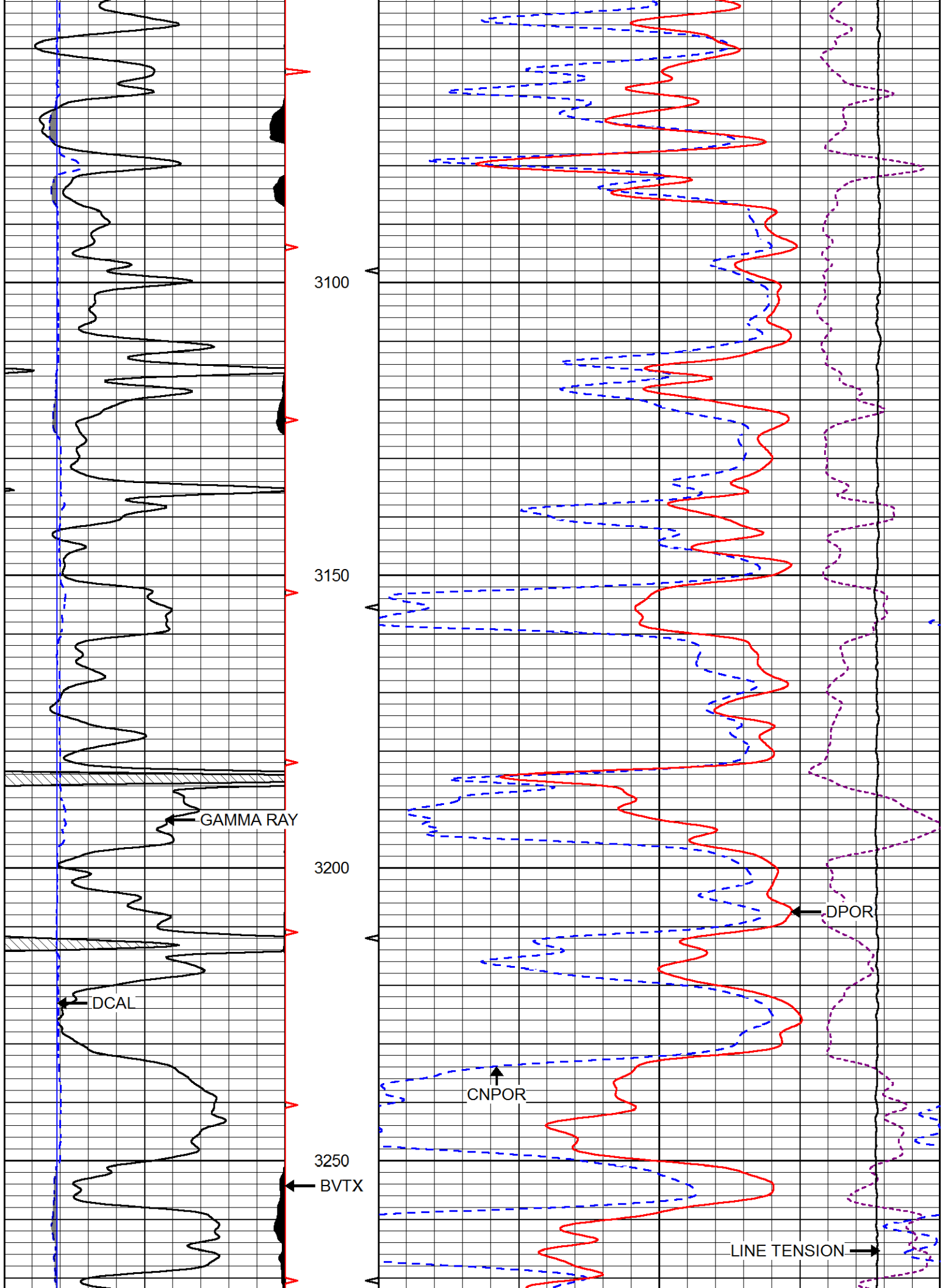
30	CNPOR (pu)	-10
30	DPOR (pu)	-10
10000	LINE TENSION (lb)	0
	-0.25 CORRECTION (g/cc)	0.25

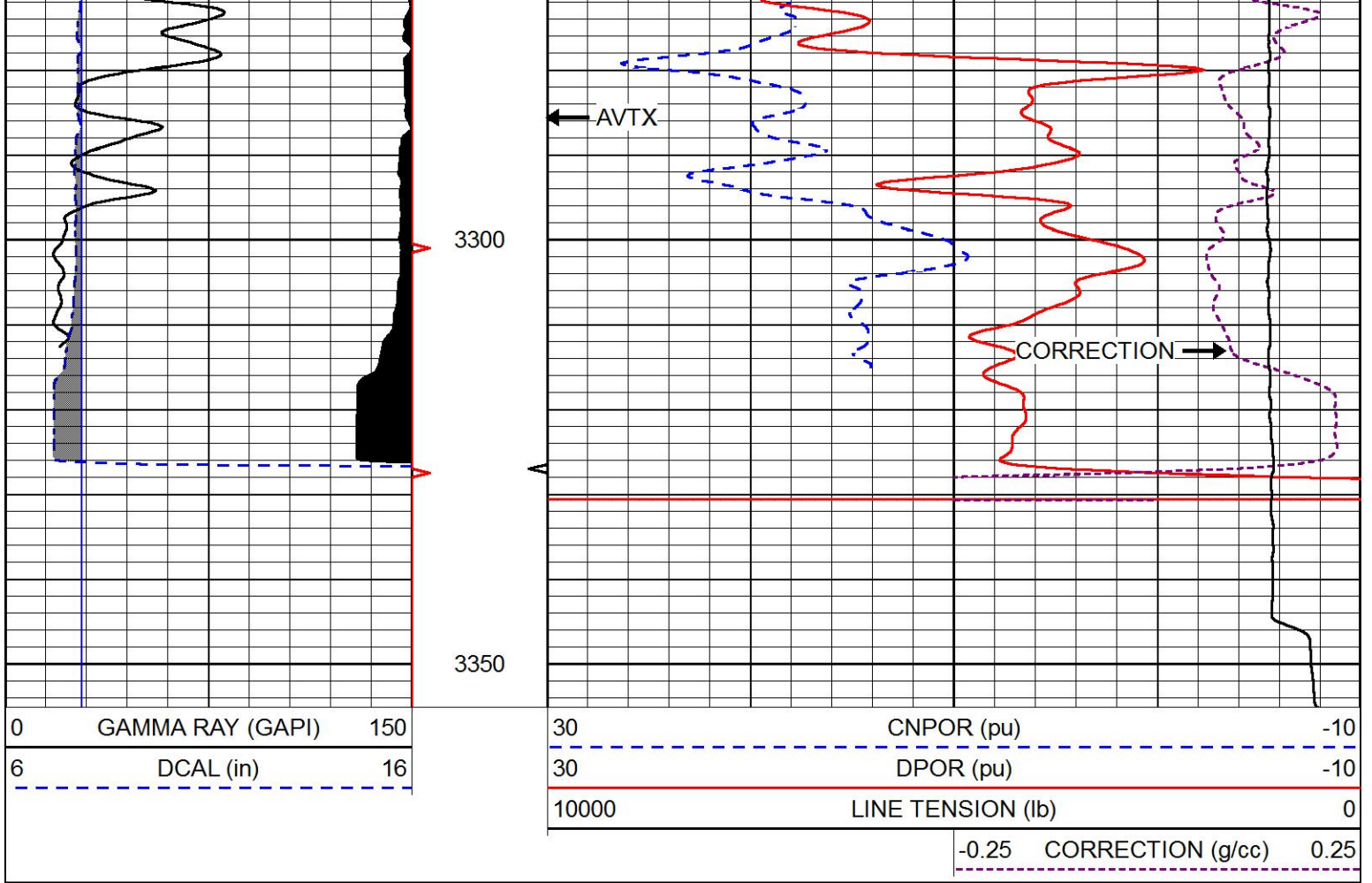






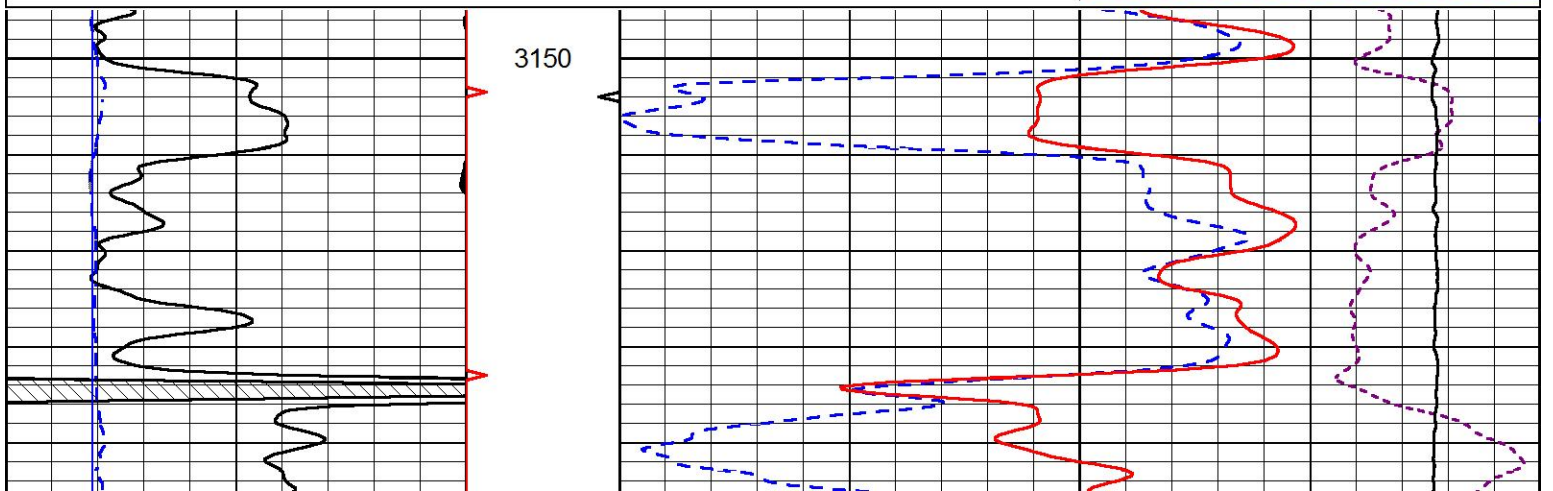
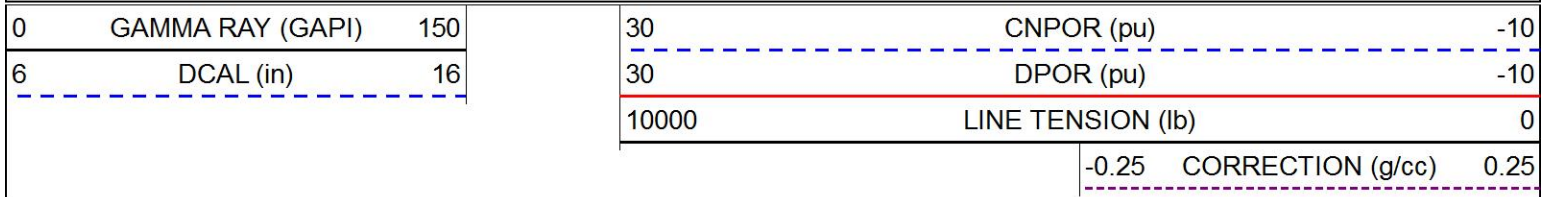


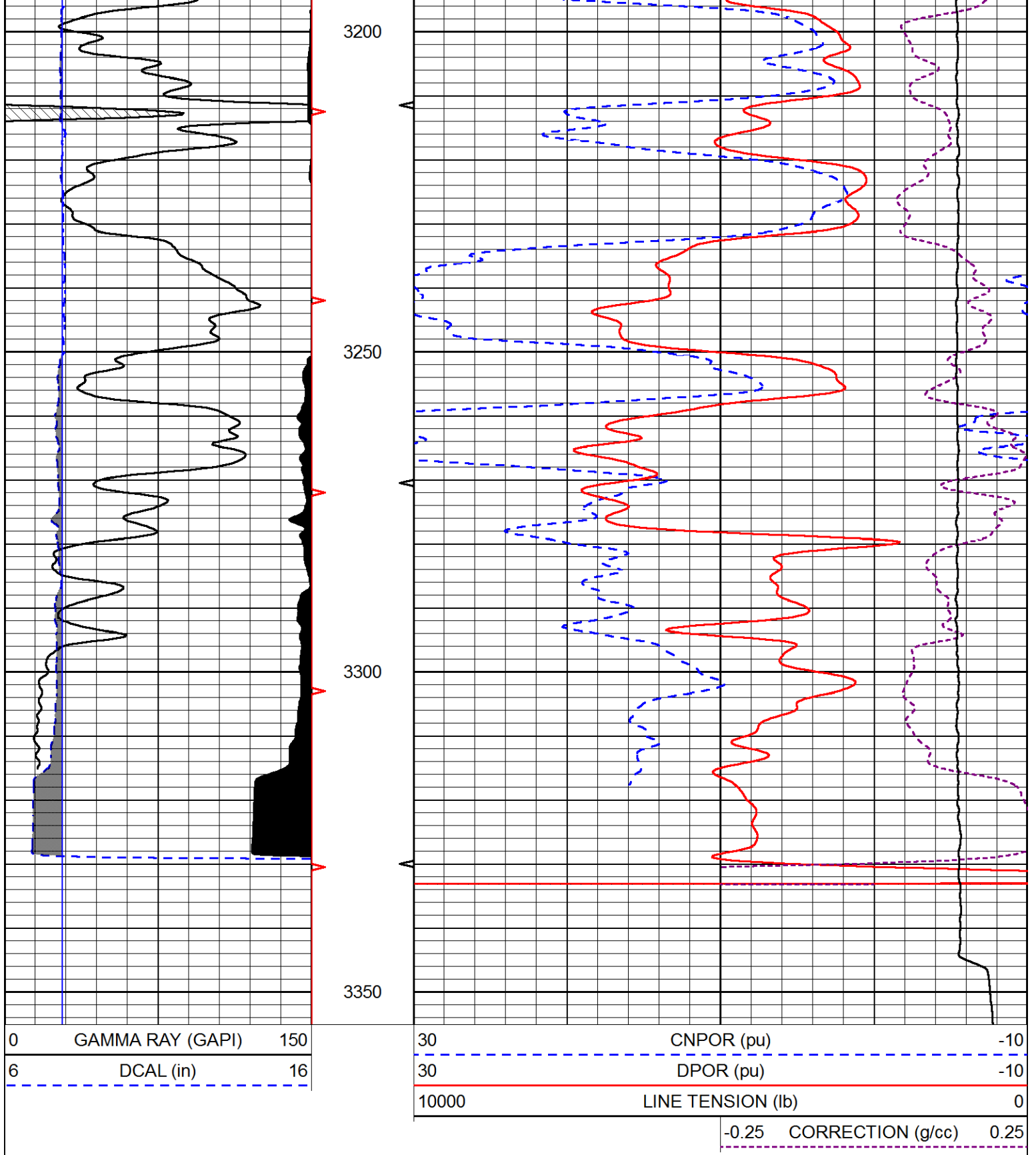




REPEAT SECTION

Database File fossil_energy_patriot_1.db
 Dataset Pathname stackmel/pass2.1
 Presentation Format _CNDLS~1
 Dataset Creation Mon Aug 12 03:17:38 2019
 Charted by Depth in Feet scaled 1:240





Calibration Report

Database File fossil_energy_patriot_1.db
 Dataset Pathname stackmel/pass3.1
 Dataset Creation Mon Aug 12 03:15:54 2019

Dual Induction Calibration Report

Serial-Model: 1039-PSI HIGH TEMP
 Calibration Performed: Tue Jul 09 07:46:05 2019

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	167.000	835.000	0.000	255.800	mmho/m	0.430	-51.000
Medium	0.000	1348.000	142.000	255.800	mmho/m	0.365	-49.000

Microlog Calibration Report

Serial-Model: PSI-01-PSIML
 Performed: Thu Aug 01 07:57:13 2019

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	18000.0000	-0.7000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	18000.0000	-0.6000
Caliper	1.0001	1.1397	6.5000	18.5000	in	70.0000	-64.2000

Compensated Density Calibration Report

Serial-Model: 96-916-M&W
 Source / Verifier: 16955B / 2ci
 Master Calibration Performed: Wed Mar 27 11:00:53 2019

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	8943.64	10054.60	cps
Aluminum	2.655	g/cc	1595.61	6242.82	cps
Spine Angle = 74.54		Density/Spine Ratio = 0.503			
	Size		Reading		
Small Ring	6.00	in	1.75		
Large Ring	16.00	in	1.46		

Compensated Neutron Calibration Report

Serial Number: 207-MW
 Tool Model: M&W
 Calibration Performed: WED FEB 13 10:30:30 2019

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: 233-M&W
 Tool Model: M&W
 Calibration Performed: Fri Feb 07 01:42:40 2014

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
 Calibrator Reading: 1.0 cps

 <p>PIONEER Pioneer Energy Services</p>	<table><tr><td>Company</td><td>FOSSIL ENERGY, LLC</td></tr><tr><td>Well</td><td>PATRIOT #1</td></tr><tr><td>Field</td><td>FAIRPORT</td></tr><tr><td>County</td><td>RUSSELL</td></tr><tr><td>State</td><td>KANSAS</td></tr></table>	Company	FOSSIL ENERGY, LLC	Well	PATRIOT #1	Field	FAIRPORT	County	RUSSELL	State	KANSAS
Company	FOSSIL ENERGY, LLC										
Well	PATRIOT #1										
Field	FAIRPORT										
County	RUSSELL										
State	KANSAS										

Randall Kilian Corporation

Geologist



**Certified Petroleum
Geologist #3351
License #224**

3951 Eveningglow Way
Castle Rock, CO 80104
Phone: 720-733-0420
Cell: 785-635-1349

E-mail: rkgeo53@hotmail.com

GEOLOGIST'S WELL REPORT

COMPANY FOSSIL ENERGY, LLC (34992)

WELL Patriot #1

FIELD Fairport

LOCATION (legal) N $\frac{1}{2}$ SE NW SE

(footages) 1690' FSL & 1650' FEL

Section 17 TWP 12S RGE 15W

(Map) 8 $\frac{1}{2}$ mi N of Gorham, Ks

COUNTY Russell STATE Kansas

ELEVATION: 1845' K.B., 1835' G.L.

Depths measured from Kelly Bushing

A. P. I. NUMBER 15-167-24093

GEOLOGY BY Randall Kilian

PERTINENT WELL DATA

CONTRACTOR Southwind Drilling, Inc. (33350)

RIG #1 HYDRAULICS AZ-900 8x6x109
Cecil Farmer TP

DRILL PIPE X-H 6 $\frac{1}{4}$ " COLLARS 16 (483')

CASING: SURFACE 8 5/8" @ 563' w/ 375 sx 60/40 Poz

PRODUCTION 5 $\frac{1}{2}$ " @ 3342' w/ 145 sx Common 10%
salt, PC @ 910'

DRILLING FLUID. COMPANY KDT Drilling Fluids
(Chris Keas)

TYPE: Chemical

REMARKS: Full service Big rain 8-11-19

DRILL STEM TESTS: COMPANY Diamond Testing, LLC
(Tim Venters)

NUMBER OF TESTS One (1)

ELECTIC LOGS: COMPANY Pioneer Energy Services

DETAIL (5") 2400' - RTD

TYPE DI, Comp N-D, Micro

DRILLING TIME FROM 2450' TO RTD

SAMPLE TIME FROM 2450' TO RTD

SUPERVISION FROM 2450' TO RTD

VERTICAL DEVIATION 3/4@ 565', 1 @ 1953', 1 $\frac{1}{4}$ @
3025', 1 @ 3350'

PLUGGING REPORT 30 sx Rat, 15 sx Mouse

RESERVE PIT 500 bbls., Ch1. 29,000, Ca. 1100

DRILL STEM TESTS

NO	INTERVAL	IFP/TIME	ISIP/TIME	FFP/TIME	FSIP/TIME	IHP/FHP	RECOVERY
1	LKc A-C 2968- 3025'	11# 15# 5"	162# 60"	14# 24# 60"	155# 30	1404# 1403#	475' GIP 30' Mud w/ s.o.
2							
3							
4							
5							
6							
7							
8							

MUD RECORD

CHK	DEPTH	WT	VIS	FIL	CHL	YP
1	2391'					
2	2424'	8.5	58	7.4	2k	20
3	2670'	8.5	48			
4	2960'	9.0	48			
5	2990'	8.9	50	8.2	6.5k	15
6	3121'	9.0	51	8.8	6.5k	15
7	3260'	9.2	48			
8						
9						
10						
11						

Displaced

LCM 2#

LCM 2#

LCM 1 1/2#

LCM 1 1/2#

BIT RECORD

NO	SIZE	MAKE	TYPE	DEPTHOUT	FEET	HOURS
1	12 1/2"	BDC		565'	565'	5 3/4
2	7 7/8"	JZ	RA23	2785'	3350'	59 3/4
3						
4						
5						
6						
7						
8						

FORMATION TOPS & STRUCTURAL GEOLOGY

R 15 W

REFERRED TO:

- A: SHIELDS OIL PRODUCERS
Kuhn #1 NE NW SE 17
- B: _____
- C: _____
- D: _____
- E: _____

T
12
S



STRATIGRAPHIC SUBJECT WELL STRUCTURAL POSITION
MARKERS SAMPLES E. LOGS DATUM A B C D E

Anhydrite	893'	890'	+ 955	+ 948					
Base	936'	932'	+ 913						
Tarkio Lm	2468'	2465'	- 620	- 624					
3rd Sand	2494'	2493'	- 648	- 655					
Topeka	2717'	2714'	- 869	- 875					
Heeb. Sh.	2935'	2933'	-1088	-1092					
Toronto	2956'	2952'	-1107	-1112					
Lansing	2988'	2983'	-1138	-1144					
BKc.	3236'	3232'	-1387						
Arbuckle	3280'	3280'	-1435						
ID	3350'	3345'	-1500	-1248					

pipe strap 5.00' short.

*Structural position of subject well as compared to referred well.

SUMMARY

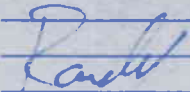
The Patriot #1 well was drilled with Southwind Drilling, Inc. tools rig #1 beginning August 6, 2019 and drilling was completed August 12, 2019.

The drill site is located in the Fairport Field, a nearly 100 year old field. The primary pay zones are the LKc A & C zones. These zones are pressure depleted with 162# SIP remaining. However, with the positive structural position and high quality permeability, commercial reserves remain. Based upon all data, 8 zones may be capable of contributing to the ultimate production of this well.

Recommended perfs; Arbuckle 3280-93', LKc L 3220-26', and LKc K 3196-3203'. These perfs are recommended based upon sample oil shows.

LKc C 3011-16', LKc A 2983-88', Toronto 2954-59', Topeka 2717-20'. The Tarkio 3rd Sand should be tested at some point 2492-2501'.

Respectfully,



Randall Kilian

DRILLING TIME (min/ft)

1/2 1 2 3 4 5678910

φ & SHOWS
POOR
FAIR
GOOD
DST

LITHOLOGY (LAGGED)

REMARKS

80

ASH 90

900

10

20

30

Base 40

2450

60

Tarkin 70

80

3rd sd 90

2500

Mud 2.224
V15-SB Y.P.-20
WT: 8.5 CM.-24
WT: 7.1 CM.-24

Geo. loc. time
4:00 PM 8-9-19.

SS-gry in. gran. friable
mica GSD in good interstr.

ls - tan - grey fossil

sh - blk

sh - slt - grey - ben - gen

ls - off white - lt grey - tan - fossil
sl - cherty

ls - slate

sh - dark grey

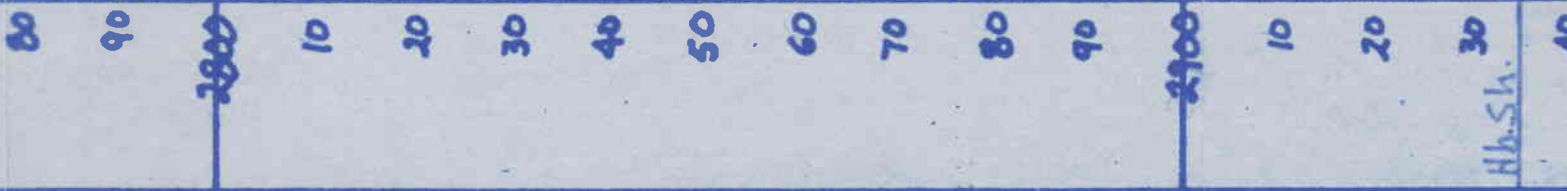
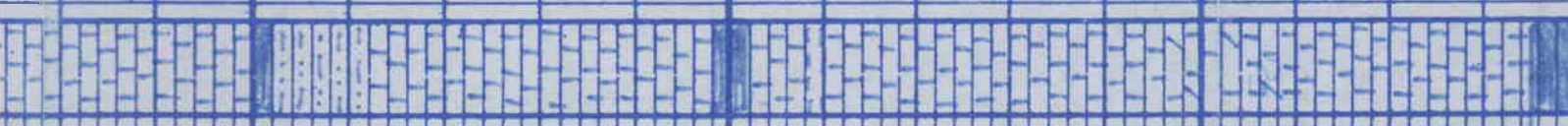
sh - blk, carb

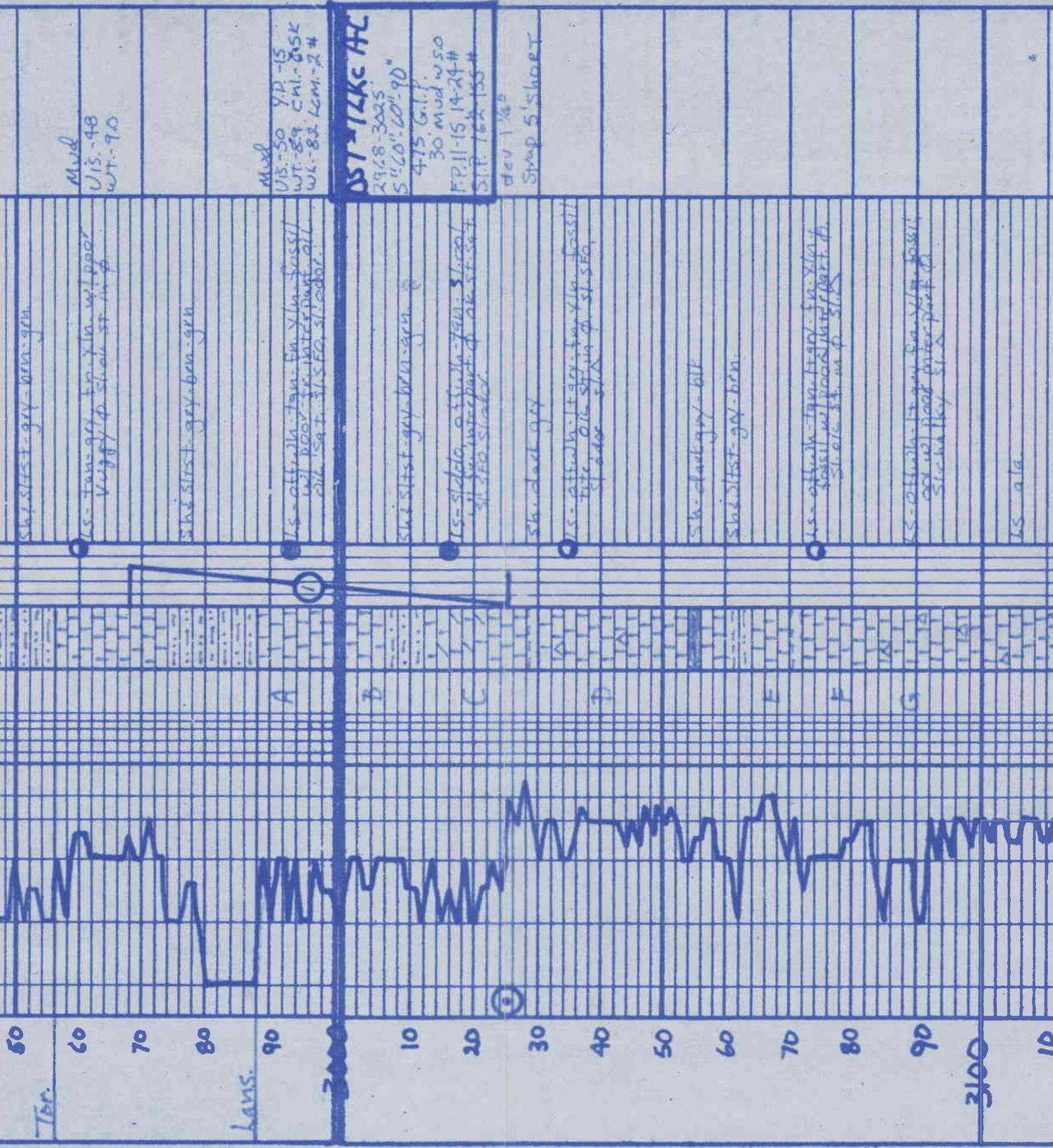
ls - off white, lt grey - fossil
tan - Xla

ls - sl - slate, off white, tan - Xla - fossil
sh - blk, carb

ls - off white - grey - tan - Xla - fossil
sl - cherty

sh - blk, carb, fissile





Mud
U13-98
WT-90

Mud
U13-50 Y.P.-15
WT-89 C.M.-GSK
WT-82 L.M.-24

OST-17Kc A/C
2968-3025
5" 60" 10" 90"
475 G.I.P.
30 mud w.50
F.P. 11-15 14-24#
S.P. 162-155#
dev 1 1/20
Strap 5' shoot

sh. siltst - grey-brn. grn.

ls - tan-grey to xln. w/ poor
veggy p. sh. siltst. m.p.

sh. siltst - grey-brn. grn.

ls - off-white to tan. xln. fossil
w/ poor siltstone part. all
sh. siltst. siltstone.

sh. siltst - grey-brn. grn.

ls - siltstone, off-white to tan. siltstone
siltstone part of sh. siltst.

sh. clayey grey

ls - off-white to grey. tan. xln. fossil
w/ poor siltstone part. sh. siltst.
m.p. siltstone.

sh. clayey grey - blk

sh. siltst - grey-brn.

ls - off-white to grey. tan. xln. fossil
w/ poor siltstone part. sh. siltst.
m.p. siltstone.

ls - off-white to grey. tan. xln. fossil
w/ poor siltstone part. sh. siltst.
m.p. siltstone.

ls. etc.

60
60
70
80
90
10
20
30
40
50
60
70
80
90
100
10

Top.

lans.

A

B

C

D

E

F

G

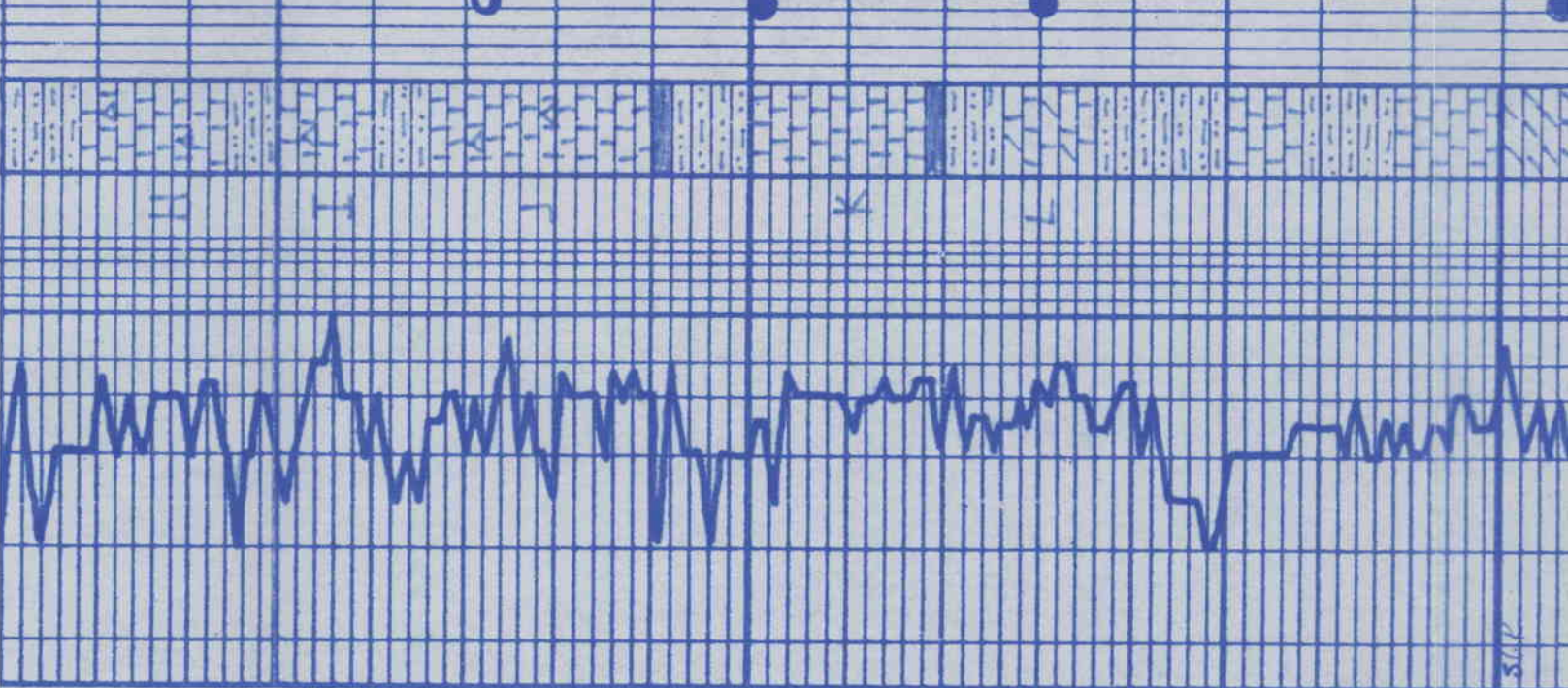
11

10

Vis. - 51 Y.P. - 15
 wt. - 9.0 cmi. - 65K
 km. - 8.8 km. - 1.5#

Sh. siltst. - gry-brn.
 ls. - tan-gr. - tan. - 14. gry. fm. xln. fossil. siltst.
 sh. siltst. - gry-brn.
 ls. - oolitic - tan-gr. - fm. xln. fossil. siltst. shaly siltst.
 sh. siltst. - gry-brn-gm.
 ls. - oolitic - tan-gr. - fm. xln. fossil. w/ poor inter. siltst. shaly siltst.
 sh. blk. fossil.
 sh. siltst. - gry-brn-gm.
 ls. - tan-gr. - fm. xln. fossil. w/ poor inter. part of blk. sat. siltst.
 sh. blk. carb.
 sh. siltst. - gry-brn.
 ls. - siltst. - tan-gr. - fm. xln. w/ poor inter. part of blk. sat. siltst.
 sh. siltst. - gry-brn-gm.
 ls. - tan-gr. - fm. xln. fossil. siltst.
 sh. siltst. - gry-brn-gm. - maroon
 ls. - tan-gr. - tan. Δ
 Dolg. - tan. - fm. xln. - fine. - to inter. - blk. - siltst.

Mud
 Vis. - 48
 wt. - 9.2 1/2 #
 km. - 1.5 #



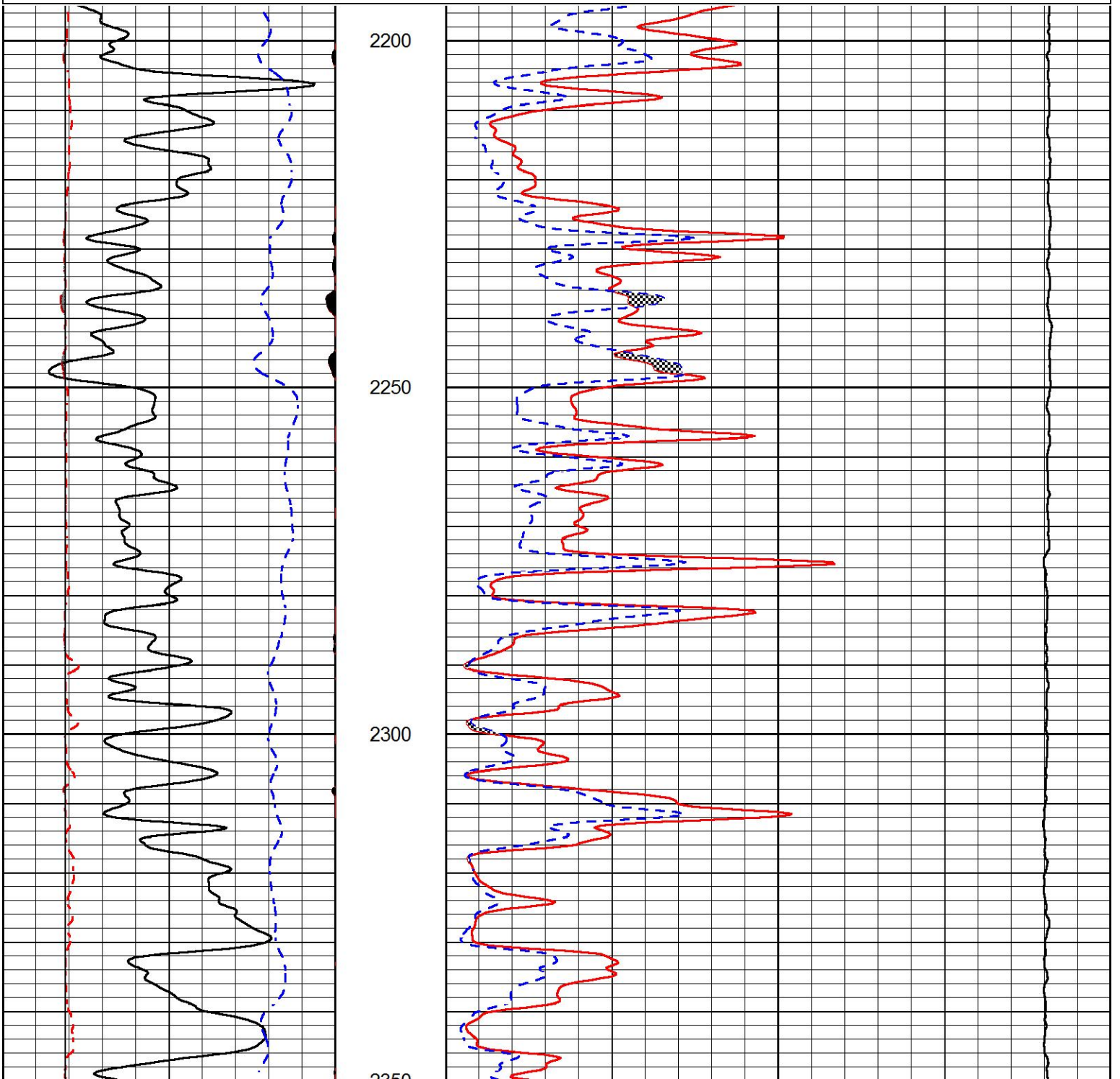
30 40 50 60 70 80 90
 3000
 10 20 30 40 50 60 70
 BK
 ARR. 80 300

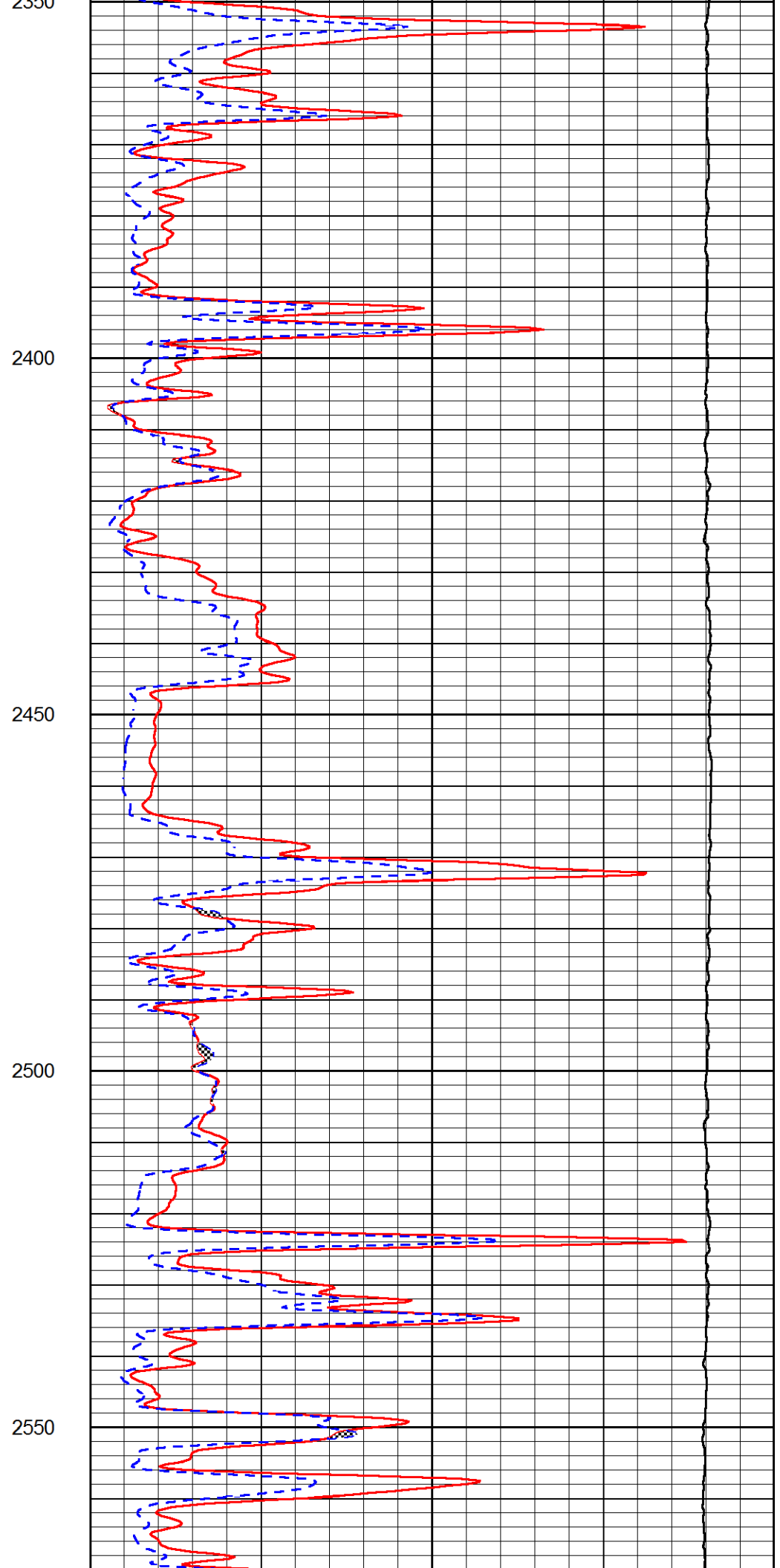
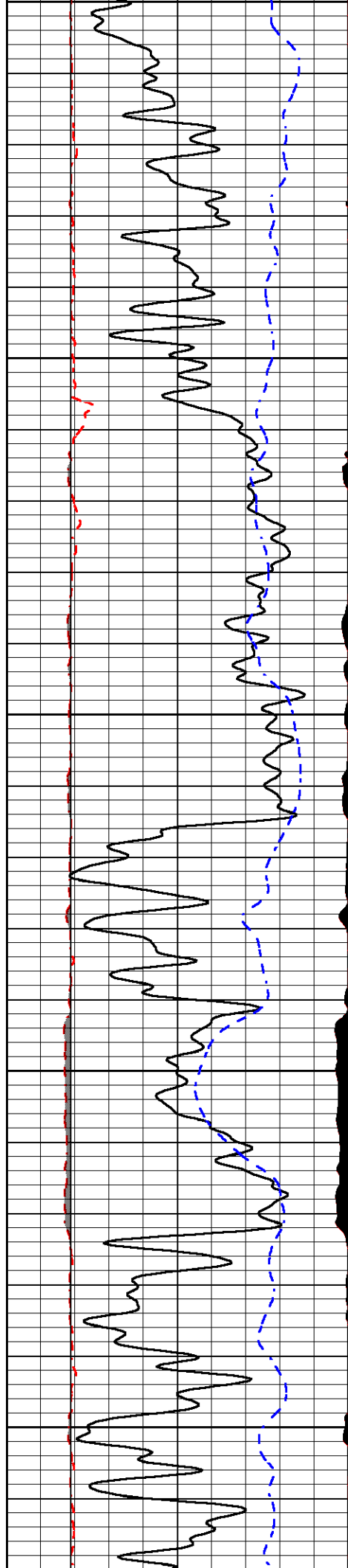
MAIN PASS

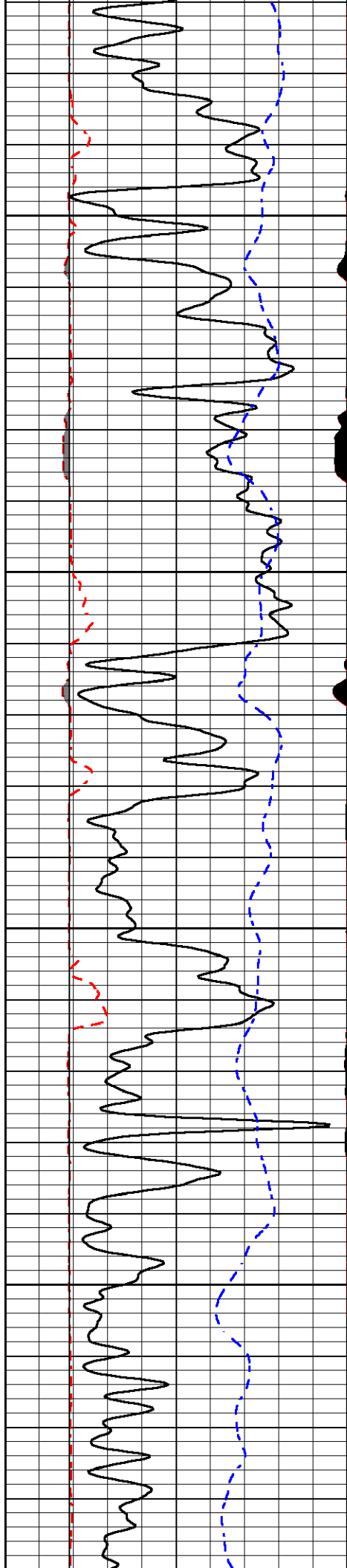
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 Dataset Pathname stackmel/pass3.1
 Presentation Format _micro
 Dataset Creation Mon Aug 12 03:15:54 2019
 Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
6	MCAL (in)	16
2.875	mcal (in)	7.875
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
10000	Line Weight (lb)	0





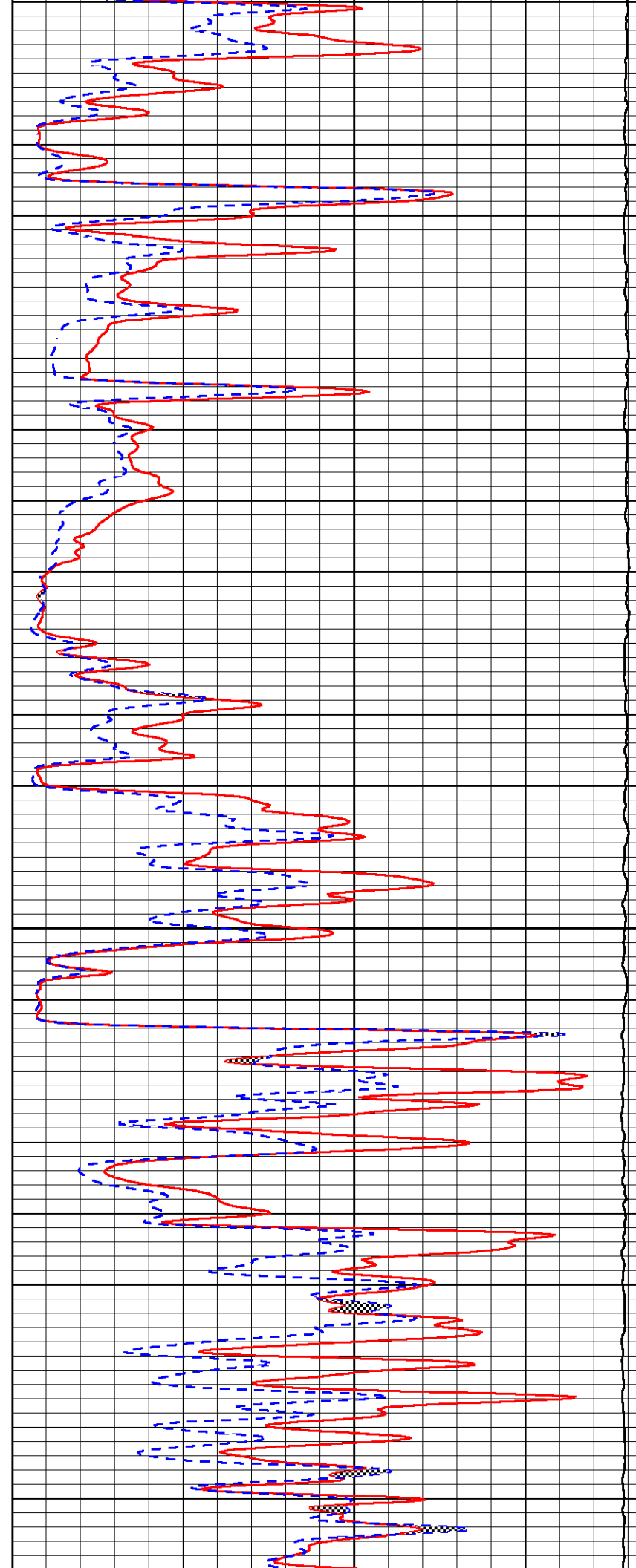


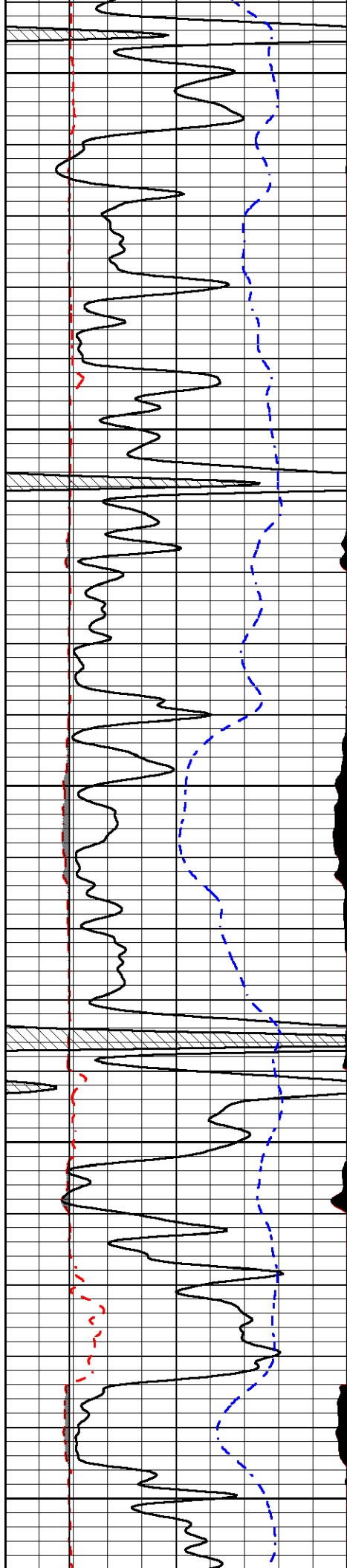
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2650

2700

2750





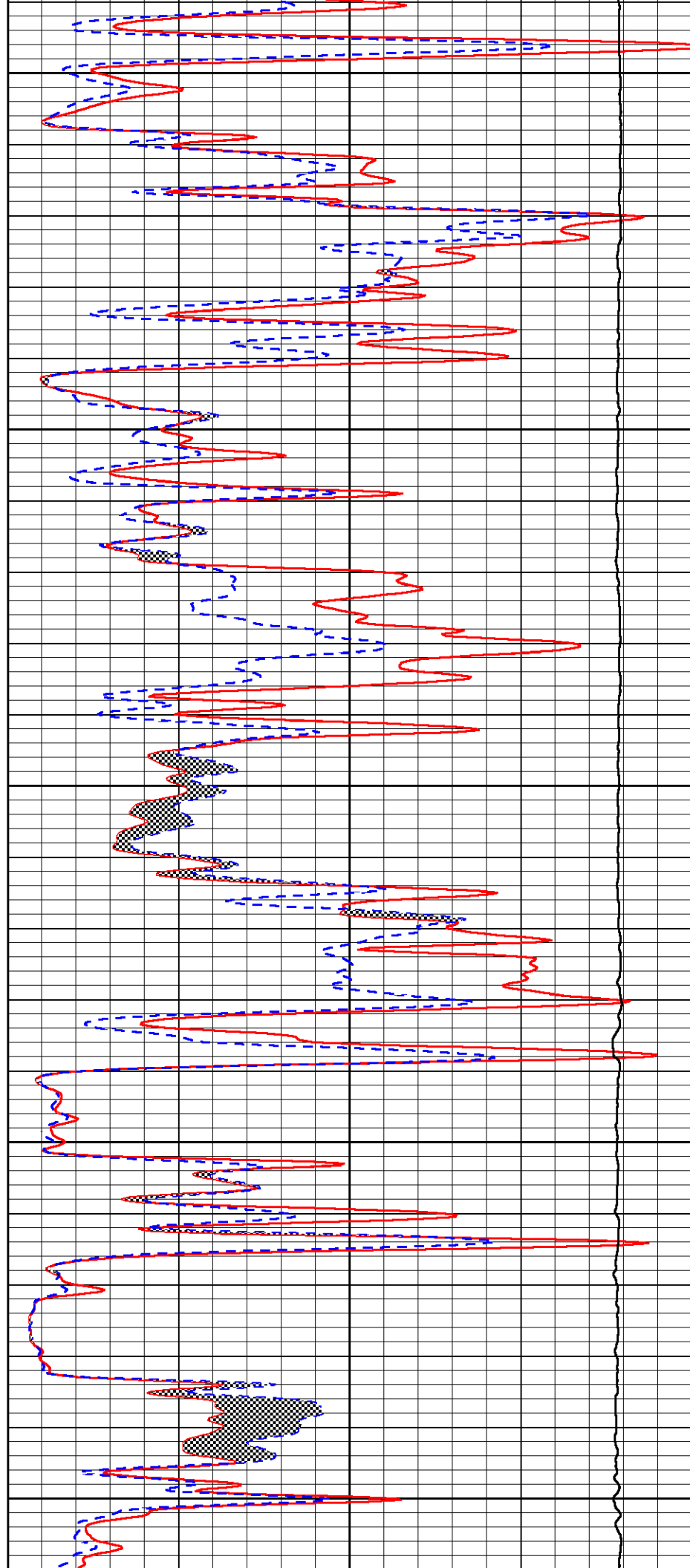
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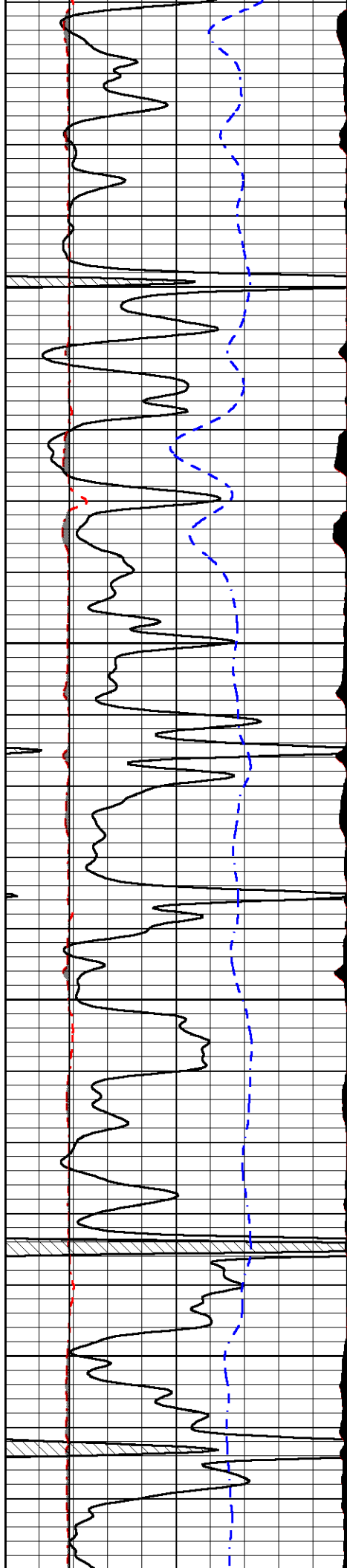
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2900

2950

3000



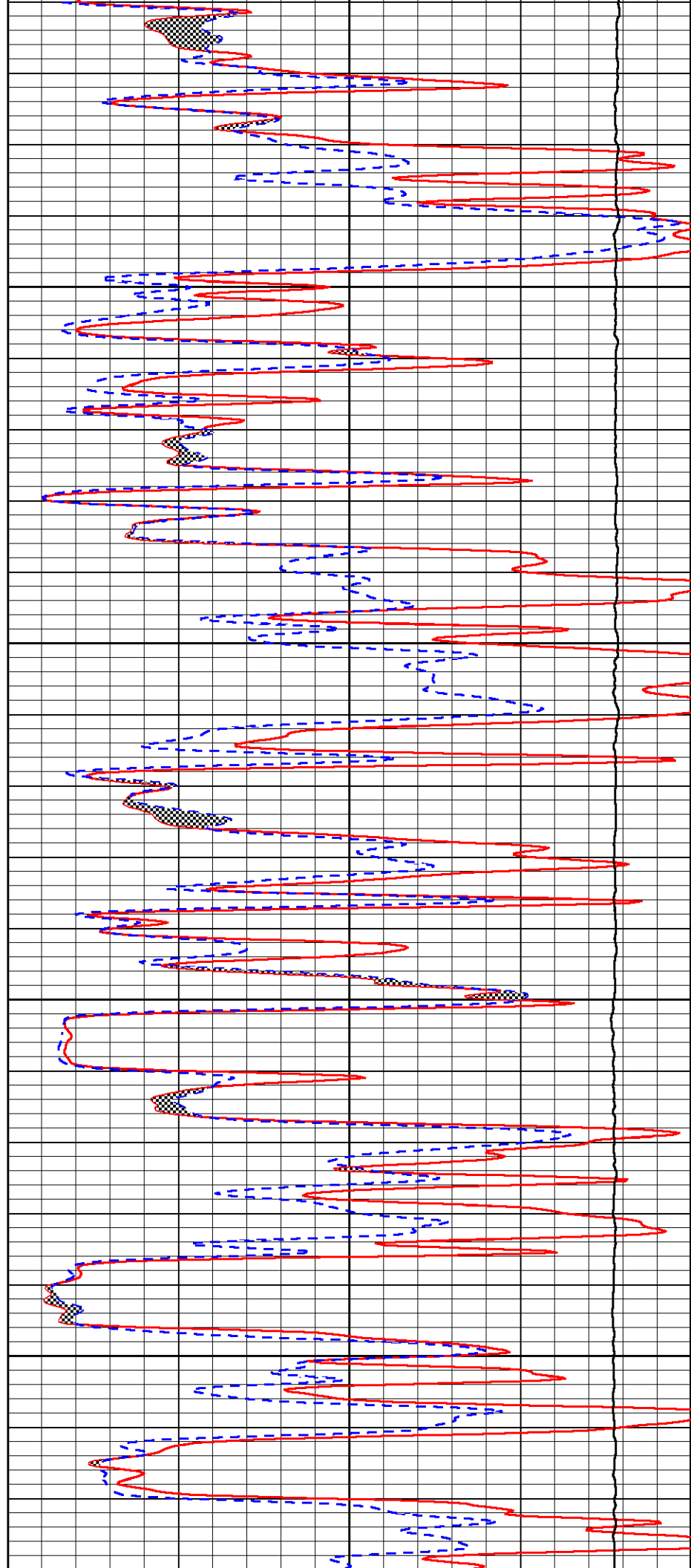


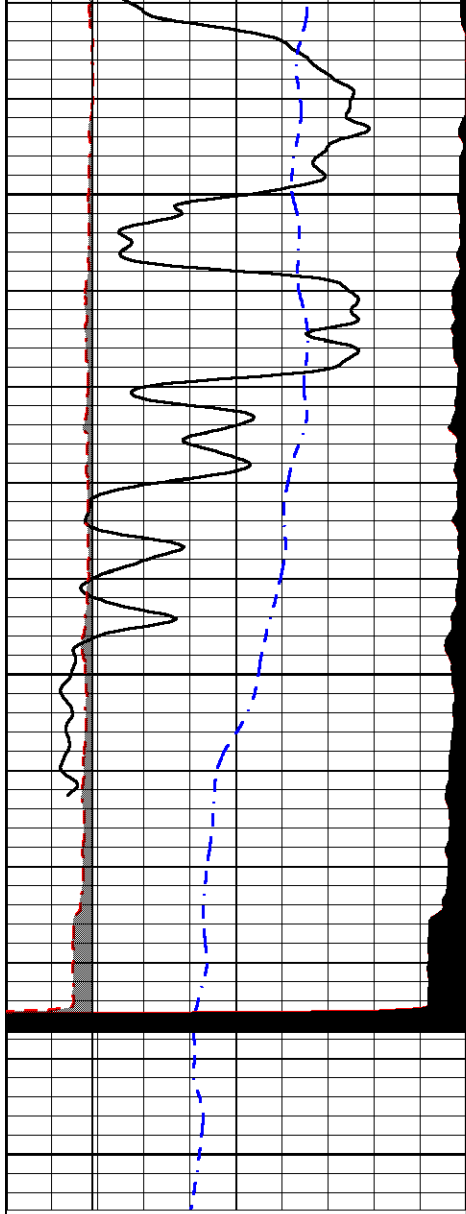
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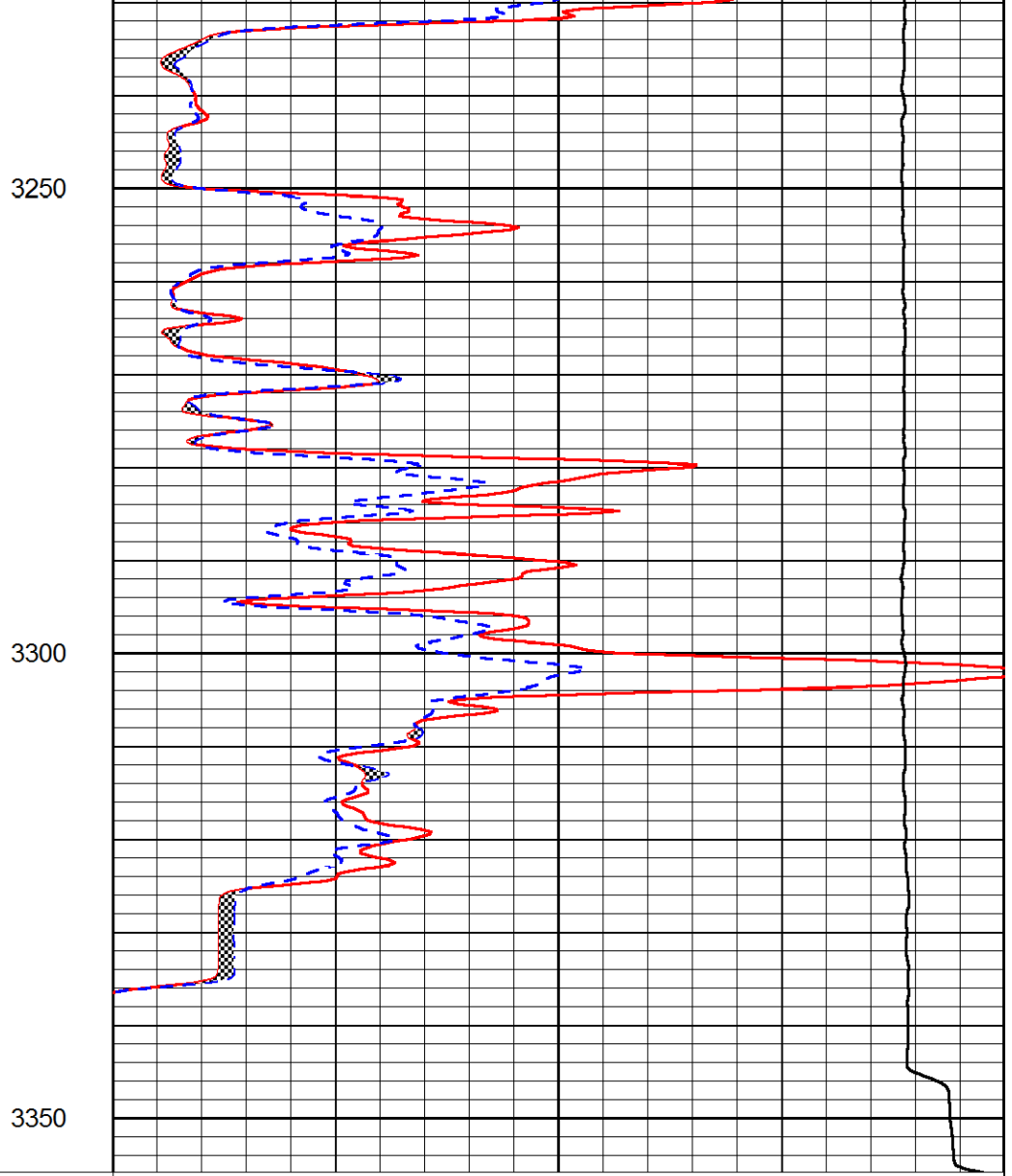
3150

3200





0	GAMMA RAY (GAPI)	150
6	MCAL (in)	16
2.875	mcal (in)	7.875
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
10000	Line Weight (lb)	0

GLOBAL OIL FIELD SERVICES, LLC

3417

REMIT TO 24 S. Lincoln
Russell, KS 67665

SERVICE POINT: Russell, KS

DATE <u>8-7-19</u>	SEC.	TWP.	RANGE	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
LEASE <u>Public</u>	WELL# <u>1</u>	LOCATION <u>202 Gordon, US to</u>			COUNTY <u>Russell</u>	STATE <u>KS</u>	<u>10:30am</u>
OLD OR NEW (CIRCLE ONE)			<u>Beatty rd W 1/2 and S 1/2 E 1/4</u>				

CONTRACTOR Southwind #1

TYPE OF JOB Surface

HOLE SIZE 12 1/4 T.D. 565

CASING SIZE 8 5/8 DEPTH 549

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX. MINIMUM

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG. 35 ft

PERFS

DISPLACEMENT 3 3/4 bbl

EQUIPMENT

PUMP TRUCK CEMENTER Heath

4109 HELPER Tom

BULK TRUCK

411 DRIVER Tanner

BULK TRUCK

DRIVER

OWNER

CEMENT AMOUNT ORDERED 375sr 60/40 3%CC

2% gel

COMMON @

POZMIX @

GEL @

CHLORIDE @

ASC @

HANDLING @

MILEAGE @

TOTAL

REMARKS:
Run 13 hrs at 8 5/8 and landing & est circulation and mix 375sr and release plug - disp 3 3/4 bbl at 1120 and shut in @ 500psi.

Cement did circulate to surface

CHARGE TO: Fossil

STREET

CITY STATE ZIP

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

PRINTED NAME

SIGNATURE

SERVICE

DEPTH OF JOB

PUMP TRUCK CHARGE

EXTRA FOOTAGE @

MILEAGE @

MANIFOLD @

TOTAL

PLUG & FLOAT EQUIPMENT

8 5/8 Rubber Plug @

TOTAL

SALES TAX (If Any)

TOTAL CHARGES

DISCOUNT IF PAID IN 30 DAYS

GLOBAL OIL FIELD SERVICES, LLC

13783

REMIT TO 24 S. Lincoln
Russell, KS 67665

SERVICE POINT: Russell KS

DATE <u>8-12-19</u>	SEC <u>7</u>	TWP. <u>12S</u>	RANGE <u>15W</u>	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
LEASE <u>Pittman</u>	WELL #. <u>1</u>	LOCATION <u>2 1/2 miles E of Fort RD 1W</u>		COUNTY <u>Russell</u>	STATE <u>KS</u>		
OLD OR NEW (CIRCLE ONE)				<u>1/2 Seal</u>			

CONTRACTOR <u>South Wind Drilling #1</u>	OWNER <u>Fossil Energy</u>
TYPE OF JOB <u>Pile Job</u>	
HOLE SIZE <u>8</u>	T.D. <u>3345'</u>
CASING SIZE <u>5 1/2</u>	DEPTH <u>3346.39</u>
TUBING SIZE	DEPTH
DRILL PIPE	DEPTH
TOOL	DEPTH
PRES. MAX	MINIMUM
MEAS. LINE	SHOE JOINT <u>2209'</u>
CEMENT LEFT IN CSG.	
PERFS	
DISPLACEMENT <u>79 bbl</u>	
EQUIPMENT	
PUMP TRUCK # <u>409</u>	CEMENTER HELPER <u>Cody Tom</u>
BULK TRUCK # <u>411</u>	DRIVER <u>Jason</u>
BULK TRUCK #	DRIVER

CEMENT AMOUNT ORDERED <u>190SKS CO 10% salt</u>	
<u>2% bbl 5% G. Lignite</u>	
COMMON	@
POZMIX	@
GEL	@
CHLORIDE	@
ASC	@
HANDLING MILEAGE	@
TOTAL	

REMARKS:

Run 79 jts of 5 1/2 casing in the hole. Hook up head pipe circulation pump 1700. Mud Flush + 200 bbl KCL + Pigged 200 ft in pipe. 15 min on mud hole + 145 bbl cement as per record. Dig + dump 79 1/2 cu yd of 13 cu yd.

CHARGE TO: Fossil Energy
STREET _____
CITY _____ STATE _____ ZIP _____

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

PRINTED NAME _____
SIGNATURE [Signature]

DEPTH OF JOB	
PUMP TRUCK CHARGE	
EXTRA FOOTAGE	@
MILEAGE	@
MANIFOLD	@
TOTAL	

PLUG & FLOAT EQUIPMENT	
<u>24 calender 5/8 10 centralizer 5/8</u>	
<u>500' mud flush</u>	@
<u>KCL</u>	@
<u>5 1/2 inch down + Plug</u>	@
<u>5 1/2 Port + collar</u>	@
TOTAL	

SALES TAX (If Any) _____
TOTAL CHARGES _____
DISCOUNT _____ IF PAID IN 30 DAYS