

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)</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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Form	ACO1 - Well Completion
Operator	Mustang Energy Corporation
Well Name	YOUNGER 2
Doc ID	1430670

All Electric Logs Run

Micro
Dual Induction
Neutron/Density
Cement Bond log

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886

Phone 785-483-2025
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 1067

Date	11-15-18	Sec.	25	Twp.	13	Range	20	County	Ellis	State	KS	On Location		Finish	1:00 AM
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Lease Younger Well No. 2 Location Yocemento + 1/2 2 3/4 S W 1/2

Contractor Disoray #1 Owner To Quality Oilwell Cementing, Inc.
Type Job Surface You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.

Hole Size 12 1/4 T.D. 306 Charge To Mustang Energy
Csg. 8 5/8 Depth 305 Street

Tbg. Size Depth City State

Tool Depth The above was done to satisfaction and supervision of owner agent or contractor.

Cement Left in Csg. 10' Shoe Joint Cement Amount Ordered 170 8 5/8 3 1/2 2 1/2 GEL

Meas Line Displace 18 1/2 BCL

EQUIPMENT			
Pumptrk	No.	Cement Helper	Common <u>135</u>
Bulktrk	No.	Driver	Poz. Mix <u>35</u>
Bulktrk	No.	Driver	Gel. <u>3</u>
Bulktrk	No.	Driver	Calcium <u>6</u>

JOB SERVICES & REMARKS

Remarks:	Hulls
Rat Hole	Salt
Mouse Hole	Flowseal
Centralizers	Kol-Seal
Baskets	Mud CLR 48
D/V or Port Collar	CFL-117 or CD110 CAF 38
<u>8 5/8 on bottom Est Circulation</u>	Sand
<u>Mix Used + Displace.</u>	Handling <u>180 179</u>
	Mileage

FLOAT EQUIPMENT

<u>Cement Circulated.</u>	Guide Shoe
	Centralizer
	Baskets
	AFU Inserts
	Float Shoe
	Latch Down

Pumptrk Charge Surface
Mileage 15

X Signature <u>Chf. Myfield</u>	Tax
	Discount
	Total Charge

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 972

Date	Sec.	Twp.	Range	County	State	On Location	Finish
11-20-18	25	13	20	Ellis	KS		1:00 PM
Lease Younger				Location Yocemento 3W to 160 2S Winto		Well No. #2	
Contractor Discovery #1				Owner To Quality Oilwell Cementing, Inc.			
Type Job Production String				You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.			
Hole Size 7 7/8		T.D. 3923		Charge To Mustang Energy			
Csg. 5 1/2		Depth 3920		Street			
Tbg. Size		Depth		City State			
Tool Port collar		Depth 1531		The above was done to satisfaction and supervision of owner agent or contractor.			
Cement Left in Csg. 20.94		Shoe Joint 20.94		Cement Amount Ordered 180 com 10% salt			
Meas Line 17		Displace 92 3/4 bbl		5% Gildner			
EQUIPMENT				Common 180			
Pumptrk	No.	Cementer		Poz. Mix			
		Helper Brett		Gel.			
Bulktrk	No.	Driver		Calcium			
		Driver Glenn		Hulls			
Bulktrk	No.	Driver		Salt 14			
		Driver Tony		Flowseal			
JOB SERVICES & REMARKS				Kol-Seal 750#			
Remarks:				Mud CLR 48 - 500 gal			
Rat Hole - 30 sx				CFL-117 or CD110 CAF 38 - 20 bbl KCL			
Mouse Hole - 15 sx				Sand			
Centralizers - 1, 2, 4, 6, 8, 10, 58 + 60				Handling 201			
Baskets - 59				Mileage			
Port Collar Jt 59 @ 1531				5 1/2 FLOAT EQUIPMENT			
Ran 3920' 5 1/2 + Est circulation				Guide Shoe			
Plugged Rat + Mouse hole; Pumped				Centralizer - 8			
135 sx down				Baskets - 1			
Pumped 500 gal + 10 bbl KCL				AFU Inserts			
Mixed 135 sx down 5 1/2				Float Shoe - 1			
Displaced 92 3/4 bbl H ₂ O; 1st 10 bbl KCL				Latch Down - 1			
Lift pressure @ 800 lbs				Port Collar - 1			
Landed @ 1500 lbs				Pumptrk Charge Prod String			
Plug Held				Mileage 15			
Signature <i>Rd Fin</i>				Tax			
				Discount			
				Total Charge			

Thank You

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025

Home Office P.O. Box 32 Russell, KS 67665

No. 1088

Cell 785-324-1041

Date	Sec.	Twp.	Range	County	State	On Location	Finish
12/14/18				Ellis	KS		1109pm

Lease Location *Wadsworth Hwy 40 2nd North 25*

Contractor <i>Express</i>	Well No.	Owner
Type Job <i>Port Collar</i>		To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.
Hole Size <i>2 7/8</i>	T.D.	Charge To <i>MUSTANG ENERAL</i>
Csg. <i>5/2</i>	Depth	Street
Tbg. Size <i>2 7/8</i>	Depth	City State
Tool <i>Port Collar</i>	Depth <i>1538</i>	The above was done to satisfaction and supervision of owner agent or contractor.
Cement Left in Csg.	Shoe Joint	Cement Amount Ordered <i>350 80% QMDC 1/4 # F10</i>

Meas Line	Displace <i>836</i>	<i>5 gal</i>
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EQUIPMENT		
Pumptrk <i>20</i>	No. <i>2019</i>	Cementer Helper
Bulktrk	No. <i>David</i>	Driver
Bulktrk <i>19</i>	No. <i>John</i>	Driver

JOB SERVICES & REMARKS	
Remarks: <i>KCL Van Stock</i>	Hulls
Rat Hole	Salt
Mouse Hole	Flowseal
Centralizers	Kol-Seal
Baskets	Mud CLR 48
D/V or Port Collar	CFL-117 or CD110 CAF 38
<i>Phy set @ 3558 Test to burst</i>	Sand
<i>Circulate hole clean Open tool</i>	Handling
<i>Est. circulation min. 5 gal @ 175SK 1</i>	Mileage

FLOAT EQUIPMENT	
<i>Cement Circulated Displaced 80</i>	Guide Shoe
<i>Close Tool Pressure to 1000psi</i>	Centralizer
<i>Run 5 joints & wash clean</i>	Baskets
	AFU Inserts
	Float Shoe
<i>175SK & 5 gal</i>	Latch Down

	Pumptrk Charge	Tax
	Mileage	Discount
		Total Charge

X Signature *[Signature]*

Perf-Tech WIRELINE SERVICES, INC.		DAUL RECEIVER CEMENT BOND LOG	
Company: MUSTANG ENERGY CORPORATION Well: YOUNGER #2 Field: IRVIN County: ELLIS State: KANSAS Location: 990 FSL & 330 FEL AP# #: 15051-26940-0000 Other Services:	Company: MUSTANG ENERGY CORPORATION Well: YOUNGER #2	SEC 25 TWP 13S R0E 20W Permanent Datum: 2206 Log Measured From: KELLY BUSHING 8' A.O.L. Drilling Measured From: KELLY BUSHING Date: DEC 11 2018 Run Number: ONE Bottom Logbit: 3898' Bottom Logbit Interval: 3897'-3899'	Elevation: K 2214' DT: 2206' GI: 2206'
Open Hole Size: 2800' Estimated Cement Top: 2810' True Well Depth: //' Equipment Number: PF 26 Logged By: HAYS Witnessed By: BOB KLAUS Run Number: ONE TWS: 7.875" Casing Record: Size 8.58" Sockets Strips: 22# Production String: 5.112" Produced From: 3920'	Recorder: BOB KLAUS Recorder From: 306' Recorder To: 3920' Tubing Record: Size 8.58" Tubing Record From: 00' Tubing Record To: 3920'	Max. Recorded Temp: 119F Estimated Cement Top: 2810'	Gamma Ray (GAPI) 150 0 3' AMPLITUDE (mV) 100 200 475 3' TRAVEL TIME (usec) 235 9 Collar Locator -1

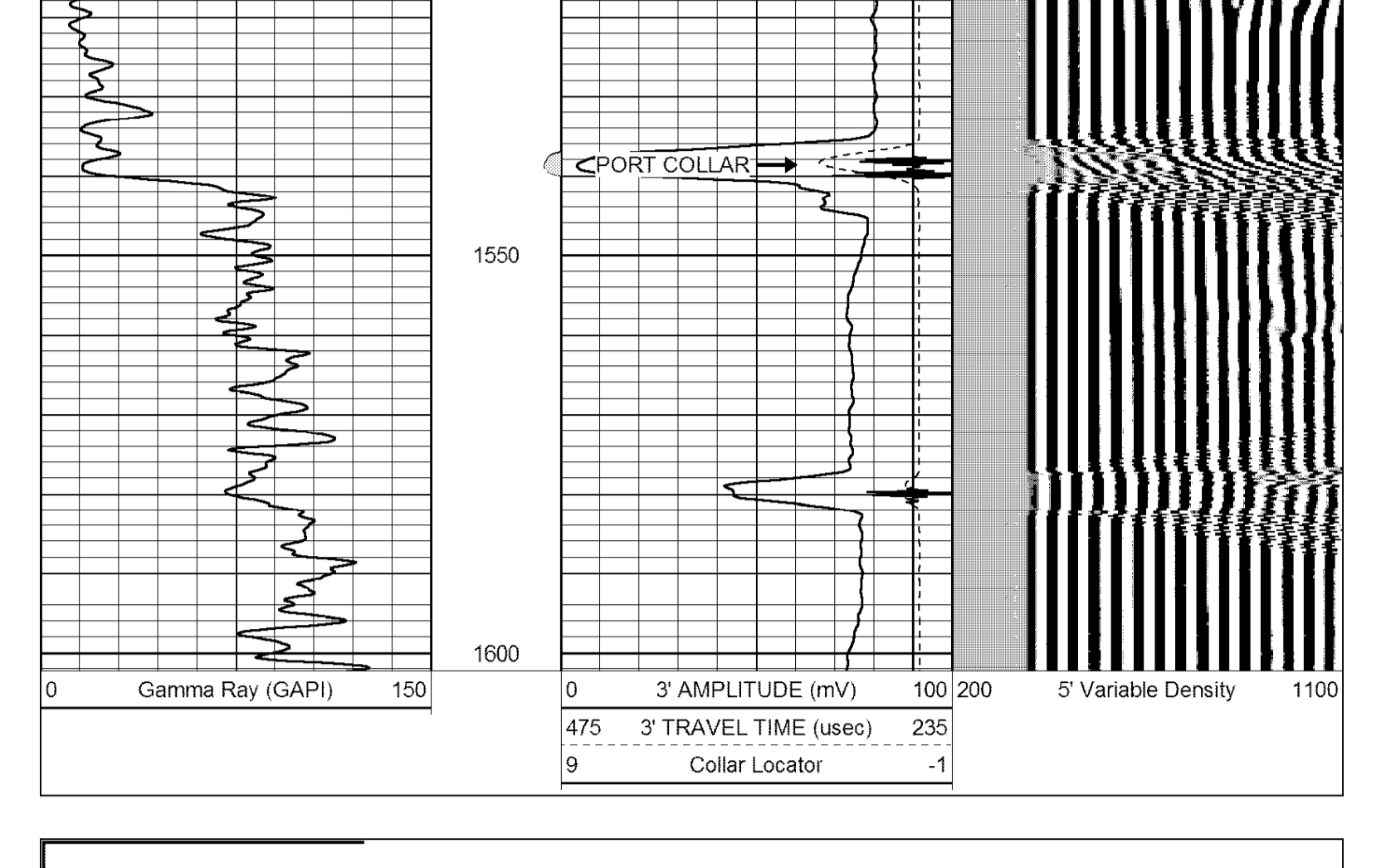
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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, 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. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

THANK YOU FOR USING
 PERF-TECH WIRELINE SERVICES, INC.
 785-628-3969

DIRECTIONS: HAYS, KS.
 WEST on HWY 40 to 160 Rd,
 2 SOUTH, WEST into



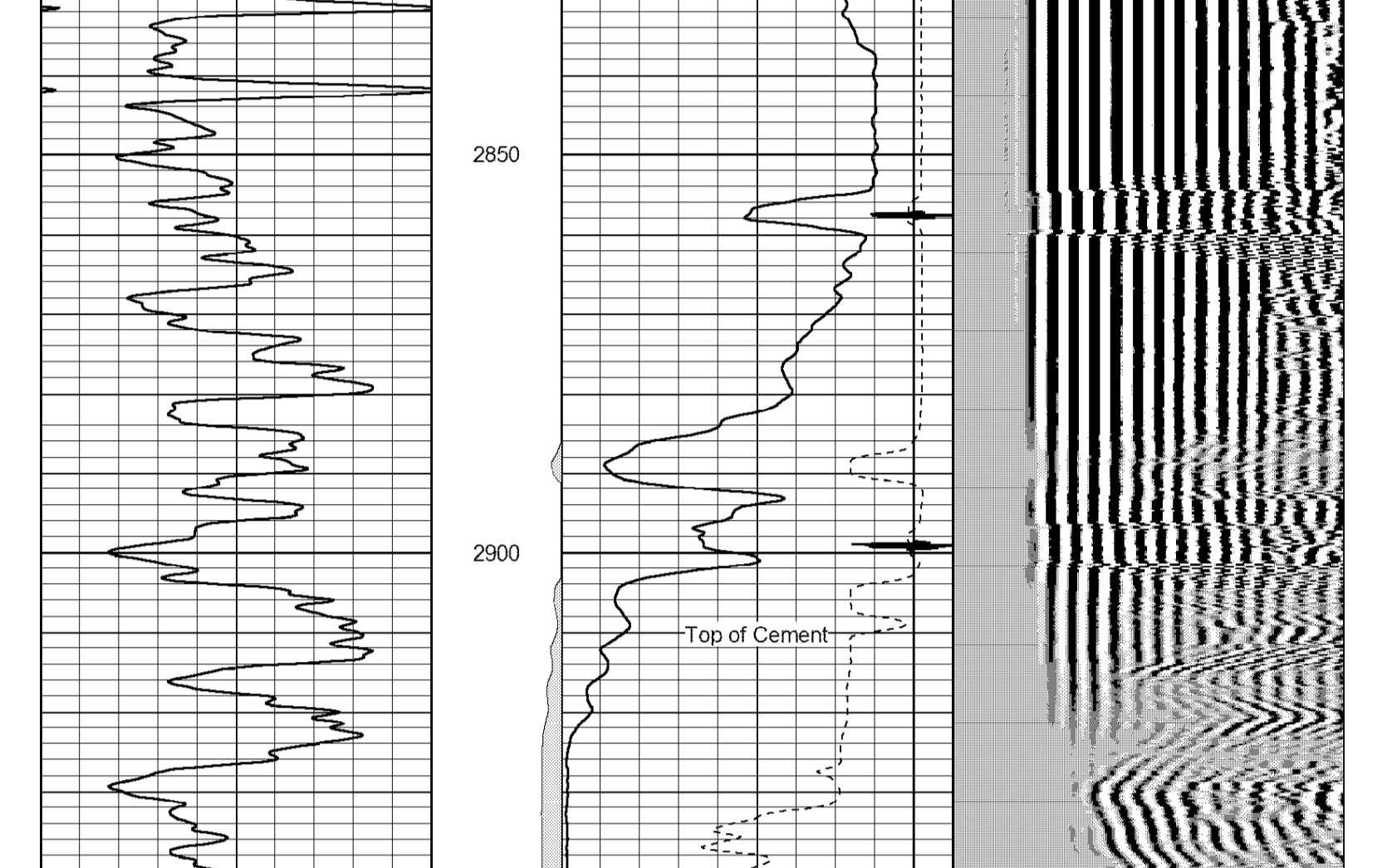
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 785-628-3969

DIRECTIONS: HAYS, KS.
 WEST on HWY 40 to 160 Rd,
 2 SOUTH, WEST into



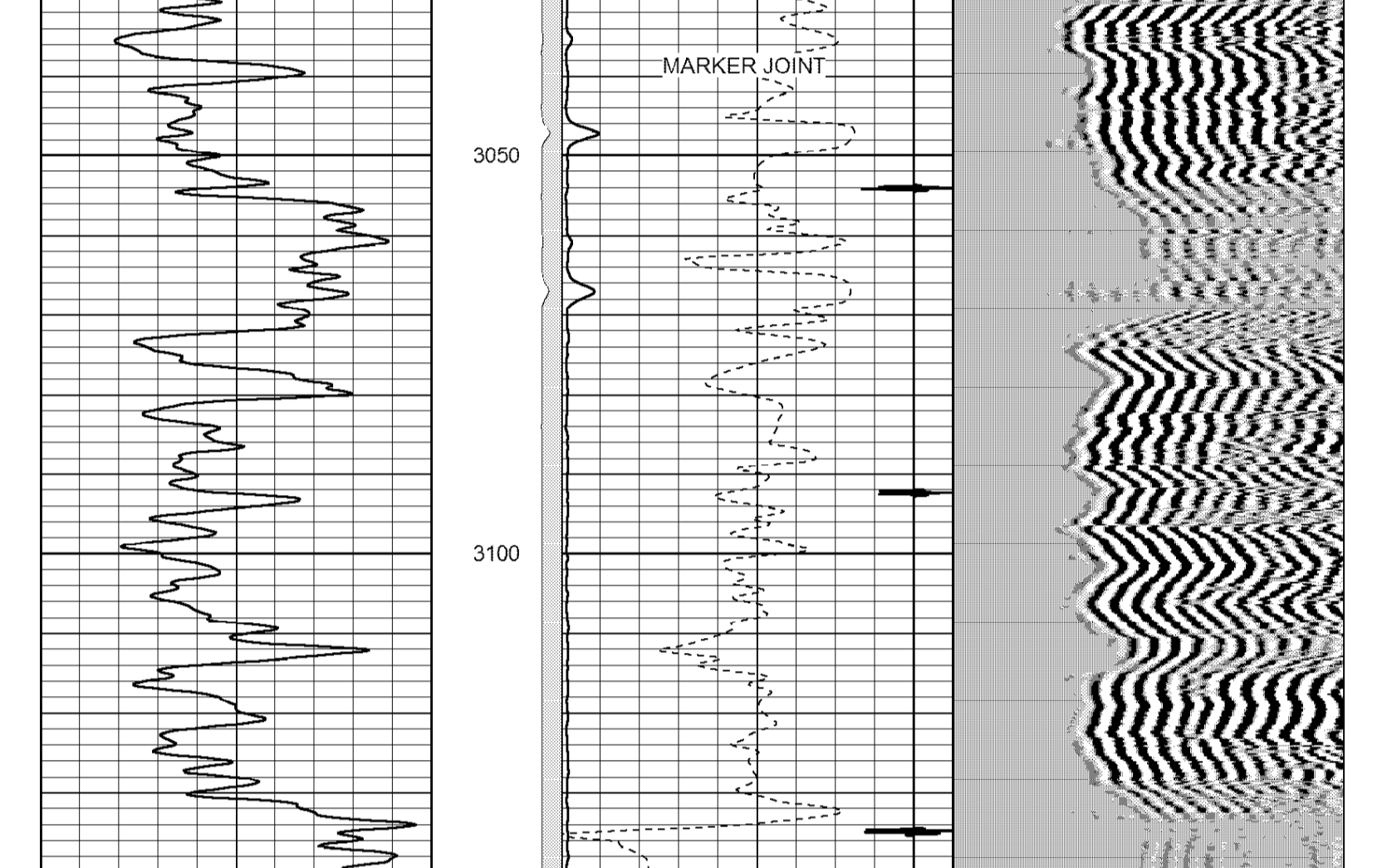
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 WEST on HWY 40 to 160 Rd,
 2 SOUTH, WEST into



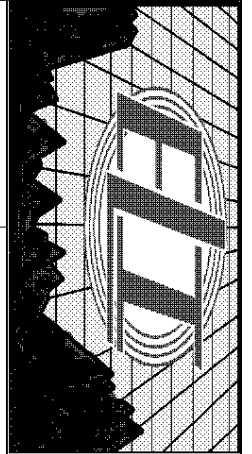
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Comments

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 PERF-TECH WIRELINE SERVICES, INC.
 785-628-3969

DIRECTIONS: HAYS, KS.
 WEST on HWY 40 to 160 Rd,
 2 SOUTH, WEST into



**COMPENSATED
DENSITY/NEUTRON
LOG**

Company MUSTANG ENERGY CORPORATION
 Well YOUNGER #2
 Field IRVIN
 County ELLIS
 State KANSAS

Company MUSTANG ENERGY CORPORATION
 Well YOUNGER #2
 Field IRVIN
 County ELLIS
 State KANSAS

Location: API #: 15-051-26940-0000
 990' FSL & 330' FEL
 SEC 25 TWP 13S RGE 20W
 Permanent Datum GROUND LEVEL Elevation 2206
 Log Measured From KELLY BUSHING 8' A.G.L.
 Drilling Measured From KELLY BUSHING
 Other Services DILMEL
 Elevation K.B. 2214
 D.F. 2212
 G.L. 2206

Date	11/19/18		
Run Number	ONE		
Depth Driller	3920		
Depth Logger	3923		
Bottom Logged Interval	3899		
Top Log Interval	3100		
Casing Driller	8 5/8" @ 306		
Casing Logger	304		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 4000 PPM	
Density / Viscosity	9.153		
pH / Fluid Loss	10.5/8.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.60@60		
Rmt @ Meas. Temp	.45@60		
Rmc @ Meas. Temp	.72@60		
Source of Rmf / Rmc	MEASURED		
Rm @ BHT	.31 @ 115F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	///		
Maximum Recorded Temperature	115F		
Equipment Number	1523		
Location	HAYS, KANSAS		
Recorded By	JASON CAPPELLUCCI		
Witnessed By	JASON ALM		

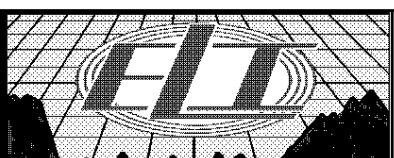
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Comments

THANK YOU FOR USING ELI WIRELINE, HAYS, KS. (785) 628-6395

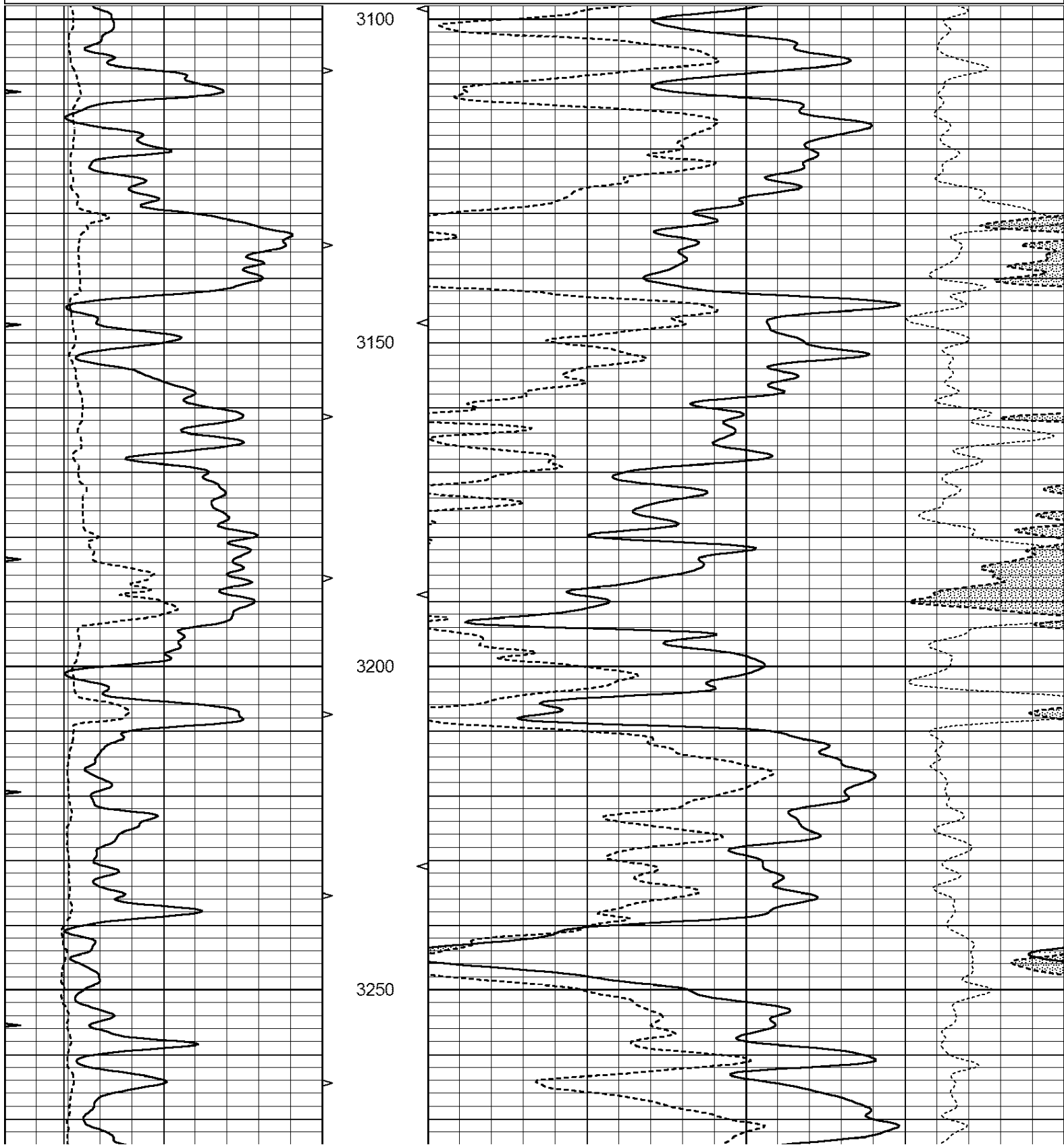
DIRECTIONS
 OLD HWY 40 & YOCEMENTO AVE - 3 WEST TO RD. 160 - 2 1/2 SOUTH - WEST INTO

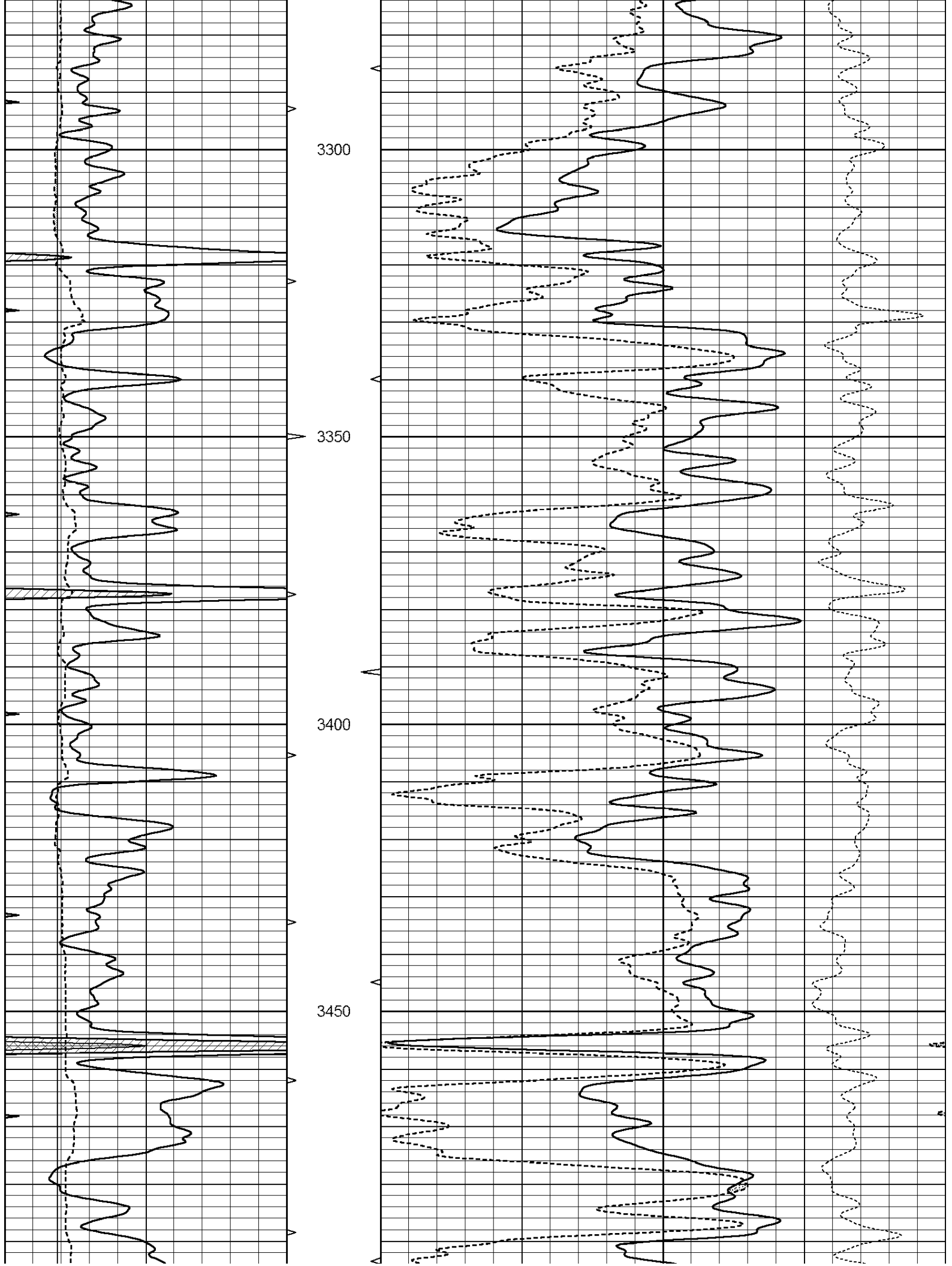


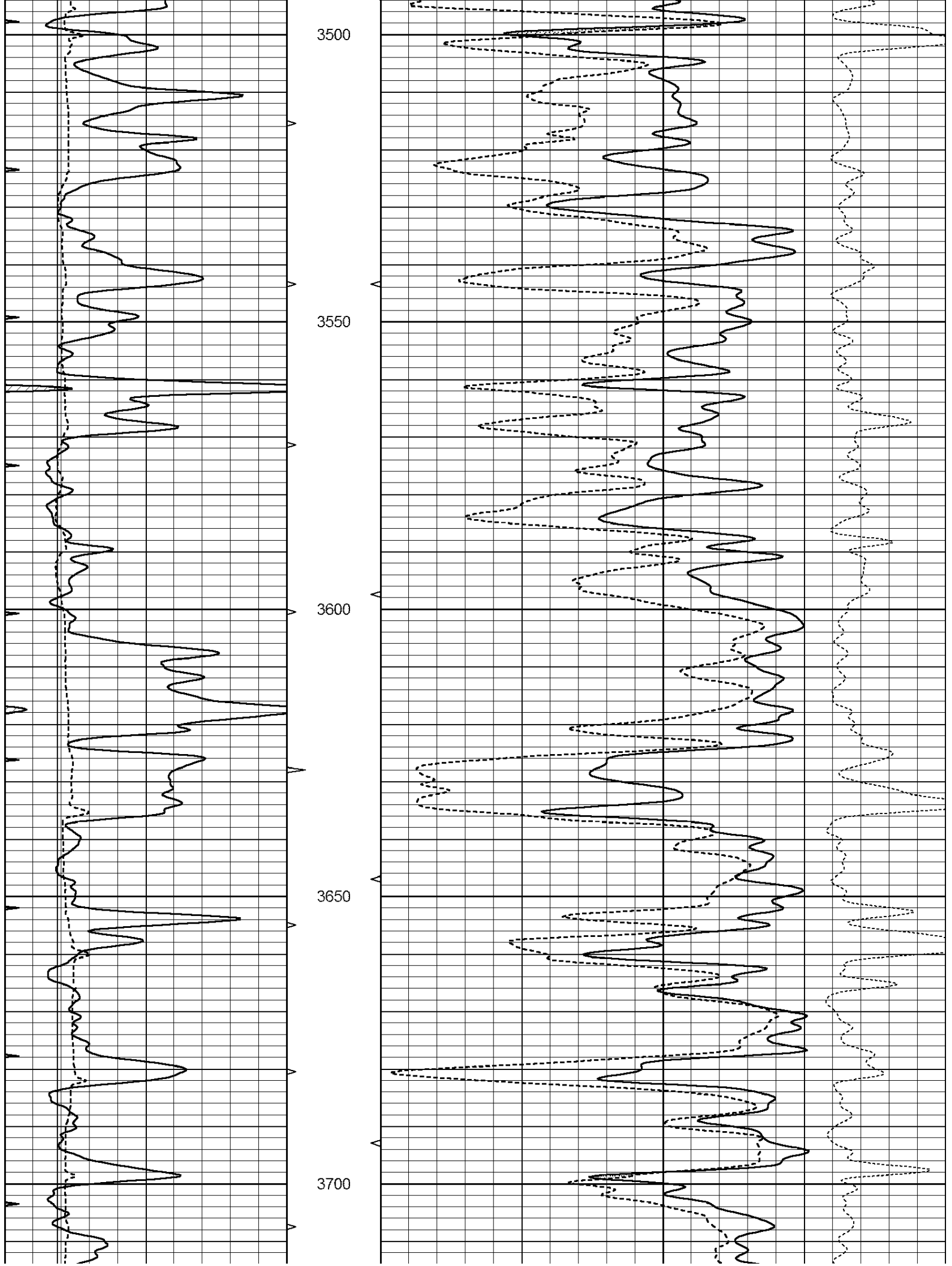
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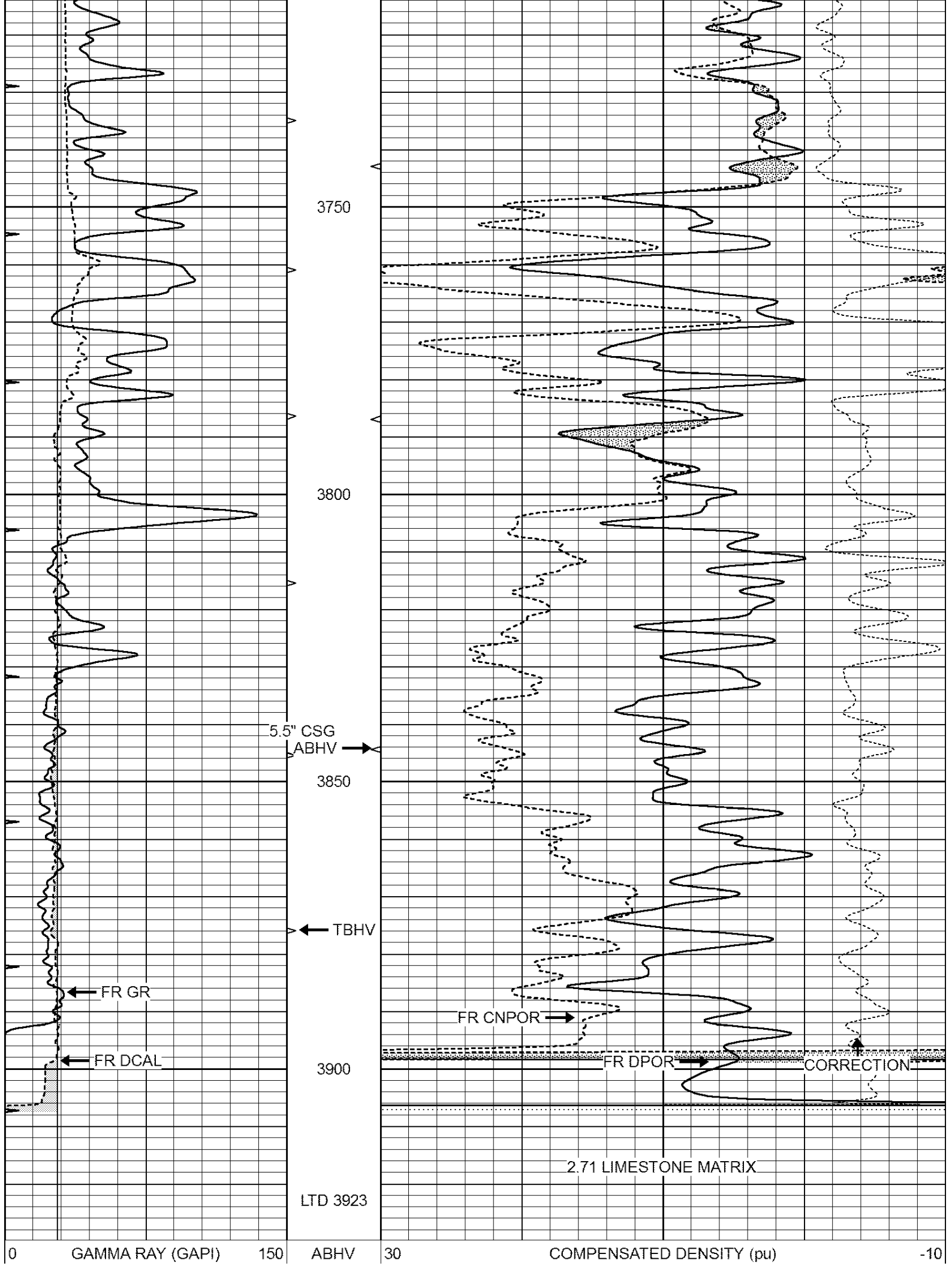
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 Dataset Pathname: pass4.1
 Presentation Format: den_neu
 Dataset Creation: Mon Nov 19 21:27:16 2018 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3)	0 30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3)	10		

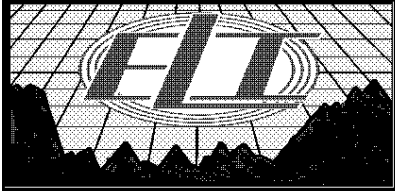








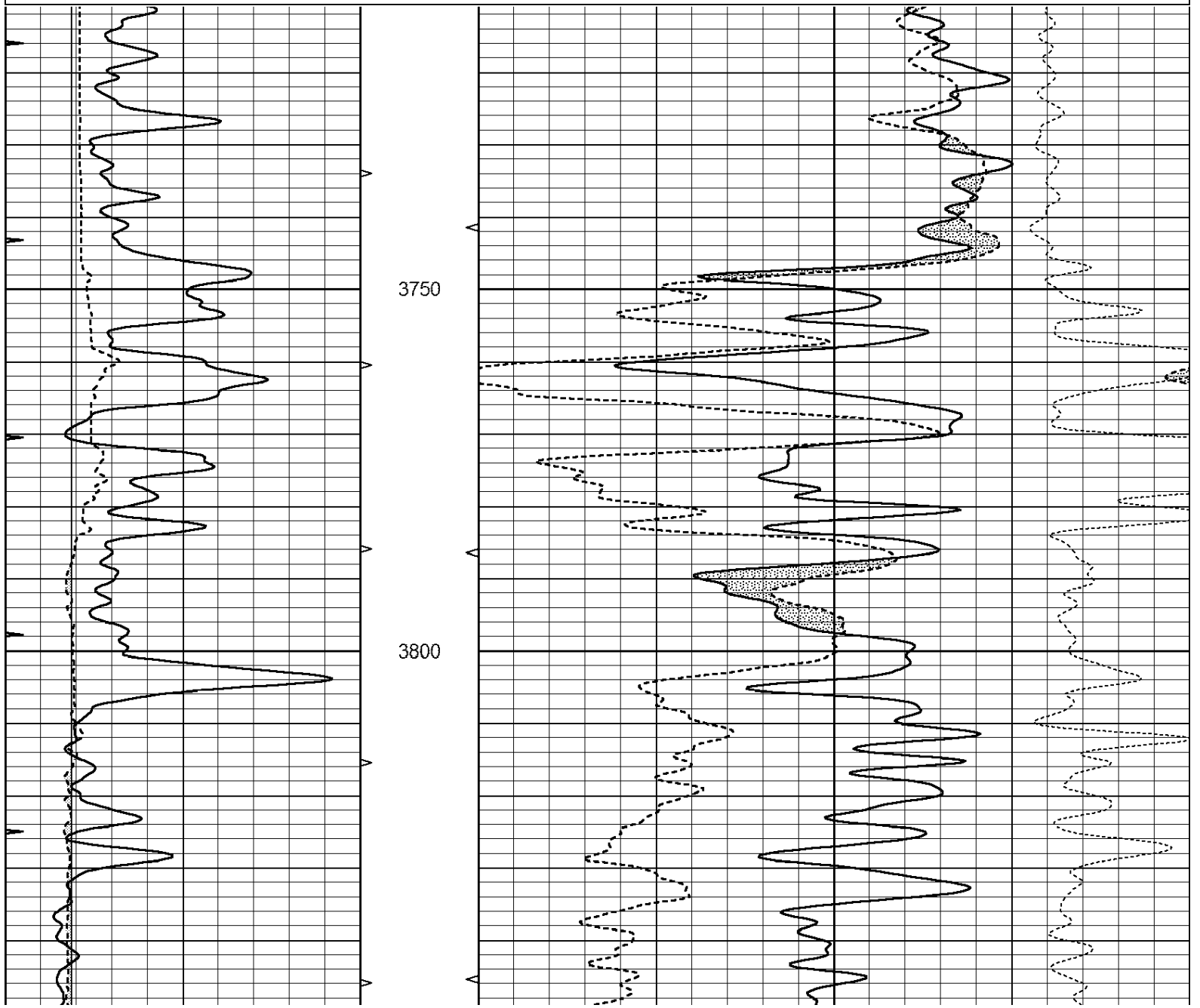
6	CALIPER (in)	16	10 (ft3)	0	30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV			-0.25	CORRECTION (g/cc) 0.25
			0 (ft3)	10			

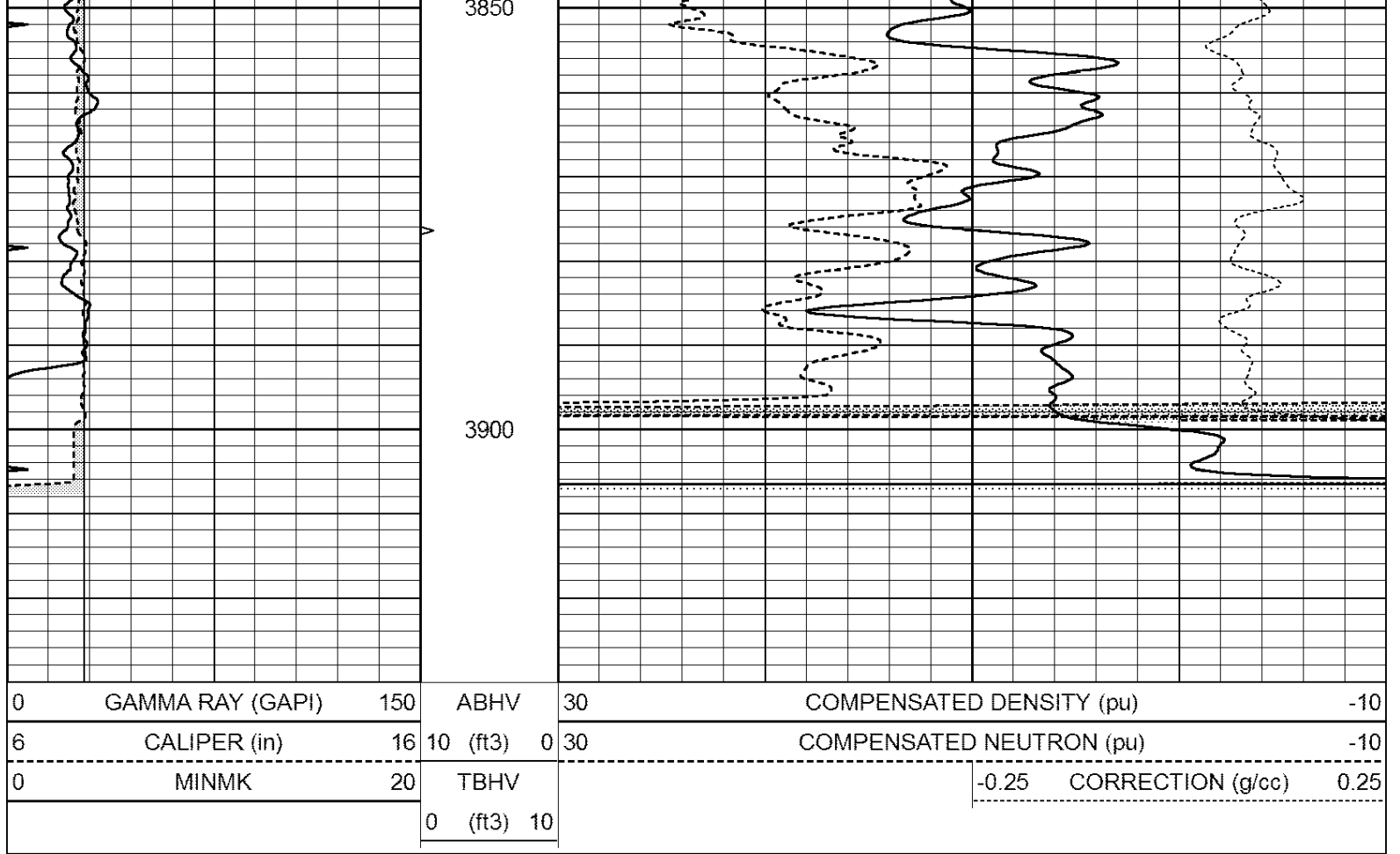


REPEAT SECTION

Database File: 3160ddn.db
 Dataset Pathname: pass3.1
 Presentation Format: den_neu
 Dataset Creation: Mon Nov 19 21:12:13 2018 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10	
6	CALIPER (in)	16	10 (ft3)	0	30	COMPENSATED NEUTRON (pu) -10	
0	MINMK	20	TBHV			-0.25	CORRECTION (g/cc) 0.25
			0 (ft3)	10			





Calibration Report

Database File: 3160ddn.db
 Dataset Pathname: pass3.1
 Dataset Creation: Mon Nov 19 21:12:13 2018 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: PROBE8-DILG
 Surface Cal Performed: Mon Sep 10 14:28:35 2018
 Downhole Cal Performed: Mon Sep 10 14:28:38 2018
 After Survey Verification Performed: Mon Sep 10 14:28:40 2018

Surface Calibration

Loop:	Readings				References		Results	
	Air	Loop	V		Air	Loop	m	b
Deep	0.015	0.648	V	0.000	400.000	mmho/m	620.000	0.000
Medium	0.029	0.796	V	0.000	464.000	mmho/m	590.000	-12.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.017	0.657	V	0.000	400.000	mmho/m	625.153	-10.619
Medium	0.016	0.757	V	0.000	464.000	mmho/m	625.992	-9.739

Downhole Calibration

	Readings				References		Results	
	Zero	Cal	V		Zero	Cal	m'	b'
Deep	0.000	0.000	mmho/m	2.011	405.777	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	7.590	503.393	mmho/m	1.000	0.000
LL3		7.500	V		1500.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-7.200	V		3800.000	mmho-m		

After Survey Verification			Readings		Targets		Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000
Medium	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000
LL3		1.000	Ohm-m		1.000	Ohm-m		
		0.000	Ohm-m		0.000	Ohm-m		
		1.000	mmho-m		1.000	mmho-m		

Litho Density Calibration Report
Serial: 006 Model: PRB

Master Calibration		Performed Thu Sep 27 12:07:11 2018			
	Background	Magnesium	Aluminum	Sandstone	
Window 1	1185.6	7077.4	2520.9	8182.4	cps
Window 2	1116.8	5910.1	2163.2	6739.4	cps
Window 3	880.1	3145.8	1325.0	3461.2	cps
Window 4	289.5	295.8	290.8	295.3	cps
Long Space	0.0	4793.3	1046.5	5622.7	cps
Short Space	2.9	1608.0	1038.9	1622.7	cps
Rho		1.7100	2.5960	1.3800	g/cc
Pe		0.0000	2.5700	1.5500	
Rib Angle	: 44.0	Rib Slope	: 0.965	Density/Spine Ratio	: 0.560
Spine Angle	: 74.0	Spine Slope	: 3.484	Spine Intercept	: -17.2

Before Survey Verification		Performed Wed Dec 31 18:00:00 1969			
Window 1	0.0	0.0	0.0	0.0	cps
Window 2	0.0	0.0	0.0	0.0	cps
Window 3	0.0	0.0	0.0	0.0	cps
Window 4	0.0	0.0	0.0	0.0	cps
Long Space	0.0	0.0	0.0	0.0	cps
Short Space	0.0	0.0	0.0	0.0	cps
Measured Rho		0.0000	0.0000	0.0000	g/cc
Measured Correction		0.0000	0.0000	0.0000	g/cc
Measured Pe			0.0000	0.0000	

After Survey Verification		Performed Wed Dec 31 18:00:00 1969			
Window 1	0.0	0.0	0.0	0.0	cps
Window 2	0.0	0.0	0.0	0.0	cps
Window 3	0.0	0.0	0.0	0.0	cps
Window 4	0.0	0.0	0.0	0.0	cps
Long Space	0.0	0.0	0.0	0.0	cps
Short Space	0.0	0.0	0.0	0.0	cps
Measured Rho		0.0000	0.0000	0.0000	g/cc
Measured Correction		0.0000	0.0000	0.0000	g/cc
Measured Pe			0.0000	0.0000	

Compensated Neutron Calibration Report

Serial Number: 6I
Tool Model: G

CALIBRATION

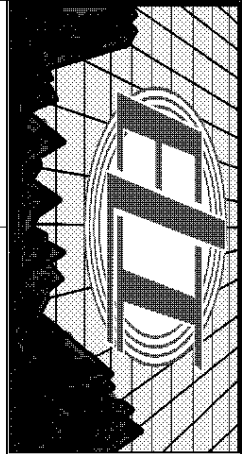
Detector	Readings	Target	Normalization
Short Space	1.00 cps	1.00 cps	1.0000
Long Space	1.00 cps	1.00 cps	1.0000

PRE-SURVEY VERIFICATION			
	Detector	Readings	Measured Target
1)	Short Space	cps	
	Long Space	cps	pu pu
2)	Short Space	cps	
	Long Space	cps	pu
3)	Short Space	cps	
	Long Space	cps	pu

POST-SURVEY VERIFICATION			
	Detector	Readings	Measured Target
1)	Short Space	cps	
	Long Space	cps	pu pu
2)	Short Space	cps	
	Long Space	cps	pu pu
3)	Short Space	cps	
	Long Space	cps	pu pu

Gamma Ray Calibration Report

Serial Number:	GR6	
Tool Model:	OPEN	
Performed:	Mon Sep 10 14:29:23 2018	
Calibrator Value:	150.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	276.0	cps
Sensitivity:	0.5500	GAPI/cps



MICRO LOG

Company MUSTANG ENERGY CORPORATION
 Well YOUNGER #2
 Field IRVIN
 County ELLIS
 State KANSAS

Company MUSTANG ENERGY CORPORATION
 Well YOUNGER #2
 Field IRVIN
 County ELLIS
 State KANSAS

Location: API # : 15-051-26940-0000
 990' FSL & 330' FEL
 SEC 25 TWP 13S RGE 20W
 Permanent Datum GROUND LEVEL Elevation 2206
 Log Measured From KELLY BUSHING 8' A.G.L.
 Drilling Measured From KELLY BUSHING
 Other Services CDL/CNL DIL
 Elevation K.B. 2214 D.F. 2212 G.L. 2206

Date	11/19/18		
Run Number	TWO		
Depth Driller	3920		
Depth Logger	3923		
Bottom Logged Interval	3921		
Top Log Interval	3100		
Casing Driller	8 5/8" @ 306		
Casing Logger	304		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 4000 PPM	
Density / Viscosity	9.153		
pH / Fluid Loss	10.5/8.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.60@60		
Rmt @ Meas. Temp	.45@60		
Rmc @ Meas. Temp	.72@60		
Source of Rmf / Rmc	MEASURED		
Rm @ BHT	.31 @ 115F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	///		
Maximum Recorded Temperature	115F		
Equipment Number	1523		
Location	HAYS, KANSAS		
Recorded By	JASON CAPPELLUCCI		
Witnessed By	JASON ALM		

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, 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. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

THANK YOU FOR USING ELI WIRELINE, HAYS, KS. (785) 628-6395

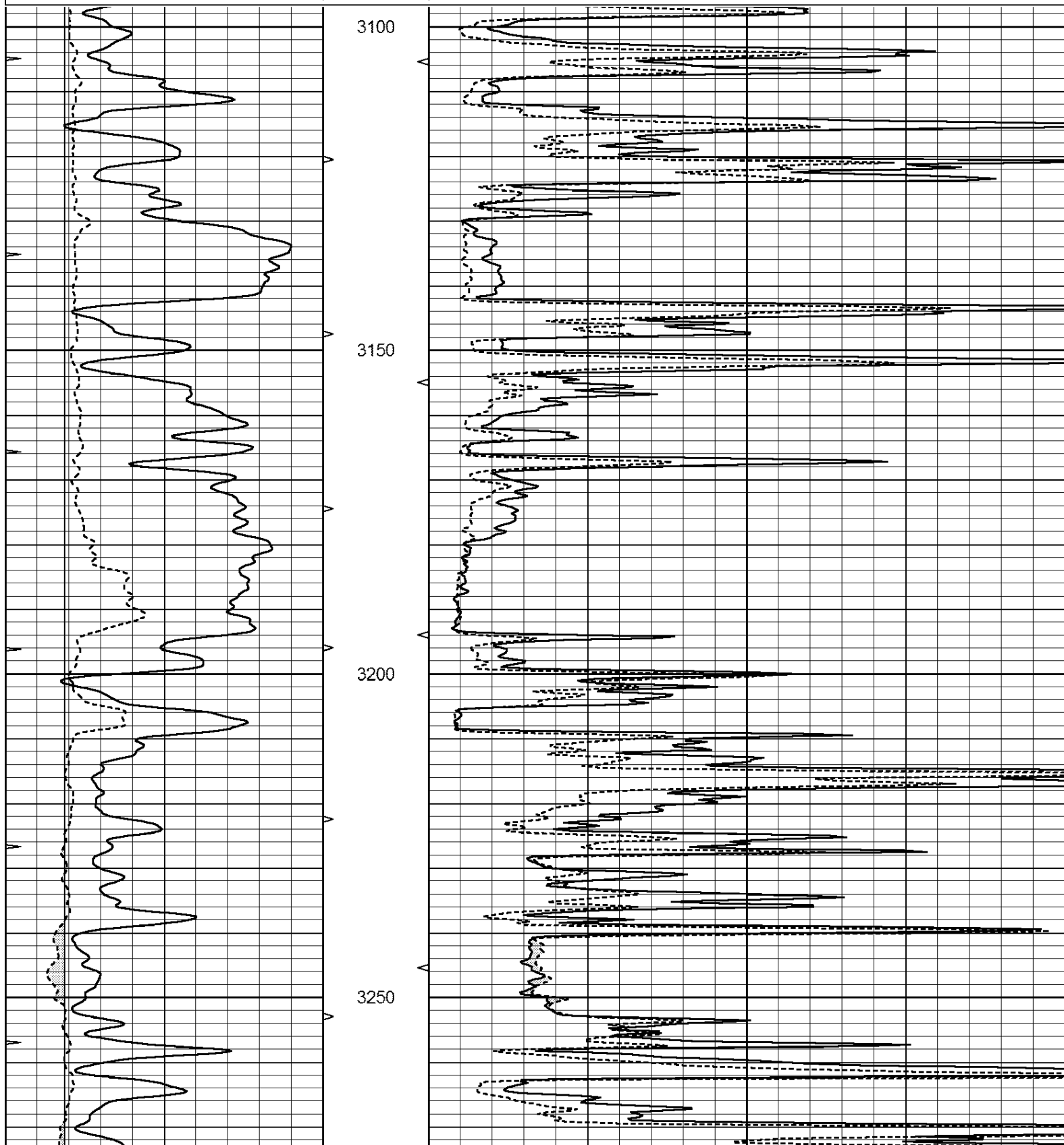
DIRECTIONS
 OLD HWY 40 & YOCEMENTO AVE - 3 WEST TO RD. 160 - 2 1/2 SOUTH - WEST INTO

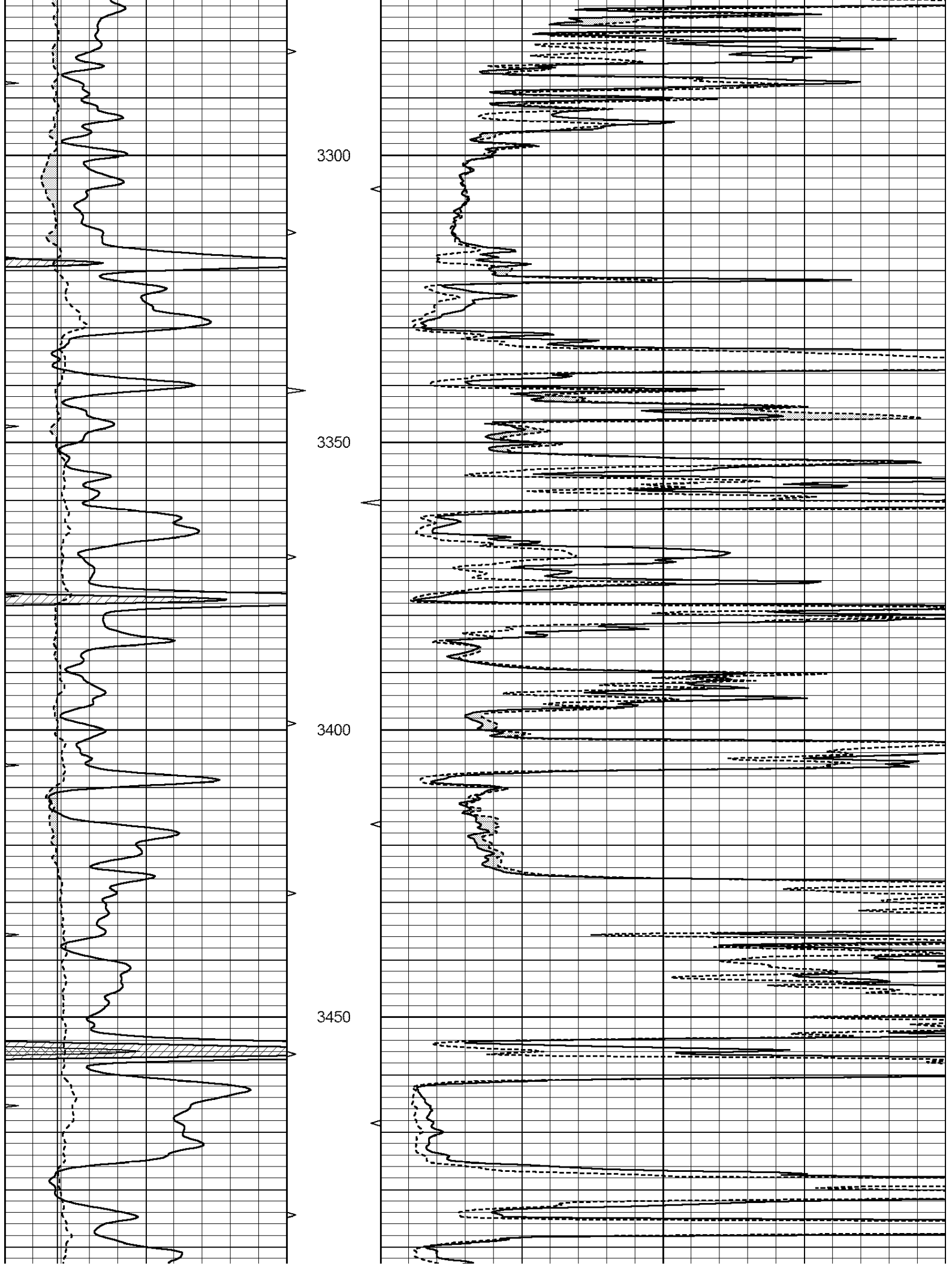


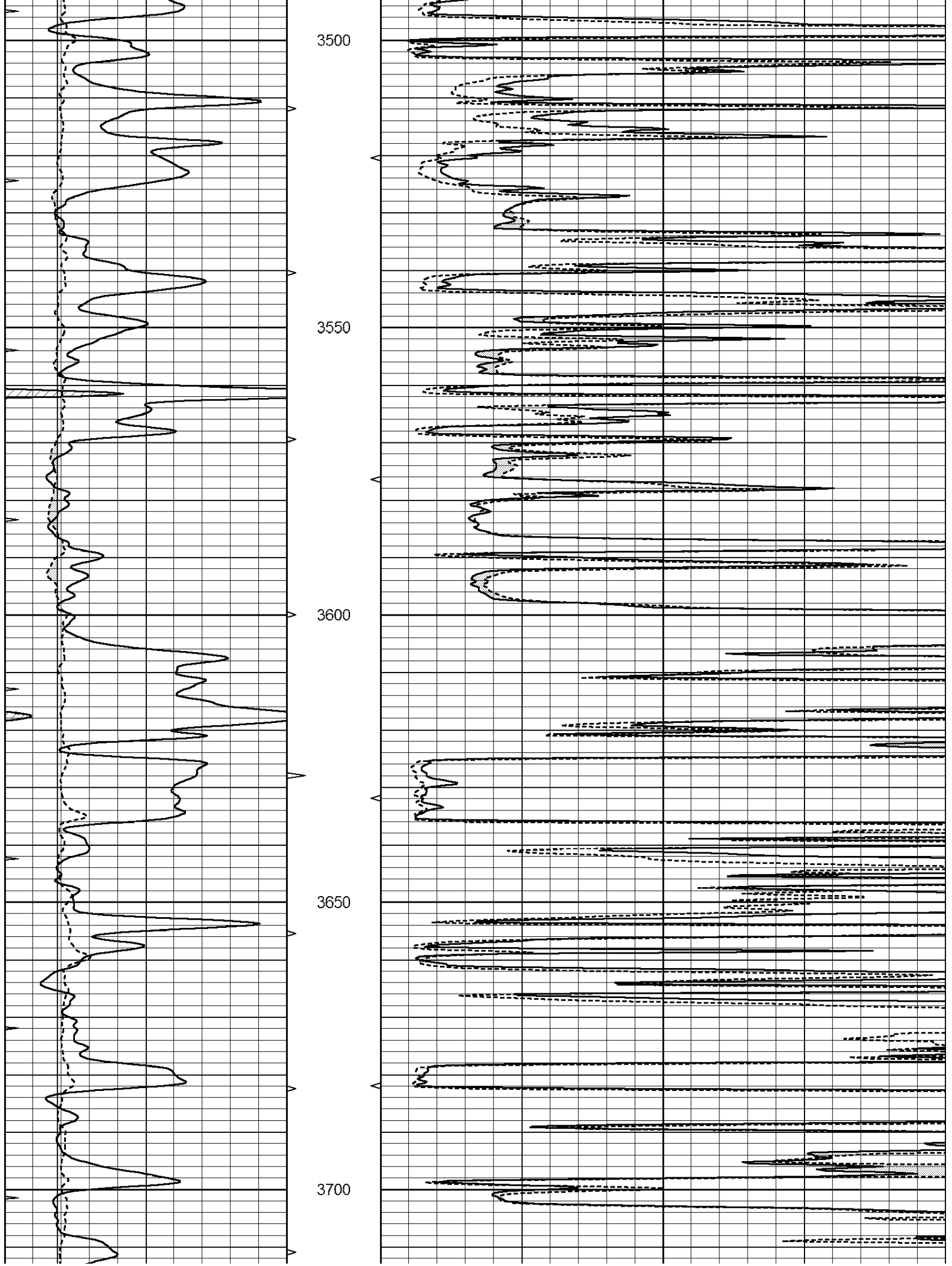
MAIN SECTION

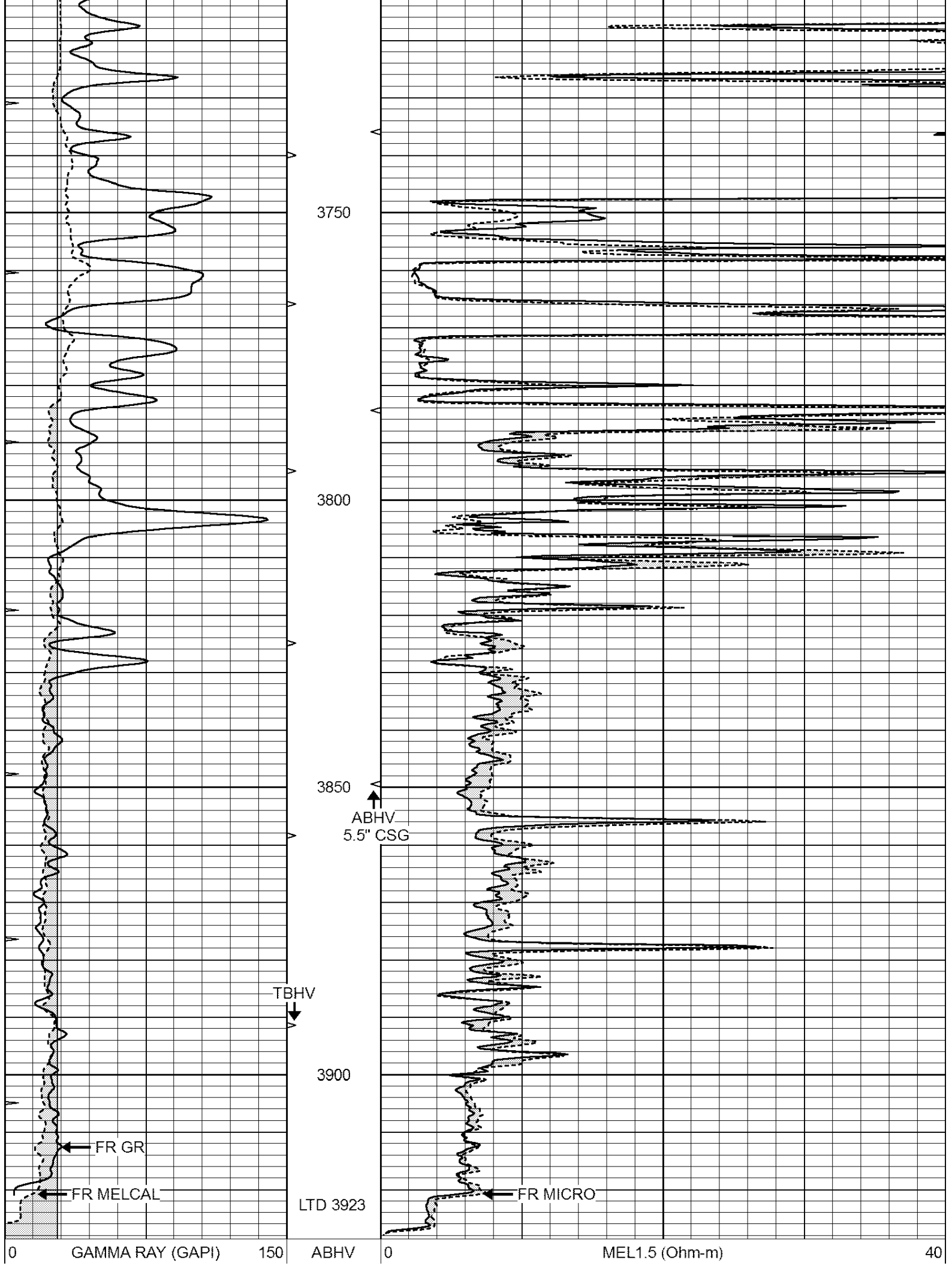
Database File: 3160ddn.db
 Dataset Pathname: pass7.1
 Presentation Format: _micro
 Dataset Creation: Mon Nov 19 23:17:25 2018 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	ABHV	0	MEL1.5 (Ohm-m)	40
6	CALIPER (in)	16	10 (ft3)	0	MEL2.0 (Ohm-m)	40
0	MINMK	20	TBHV			
			0 (ft3)	10		

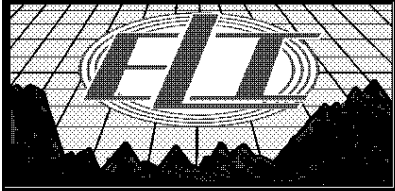








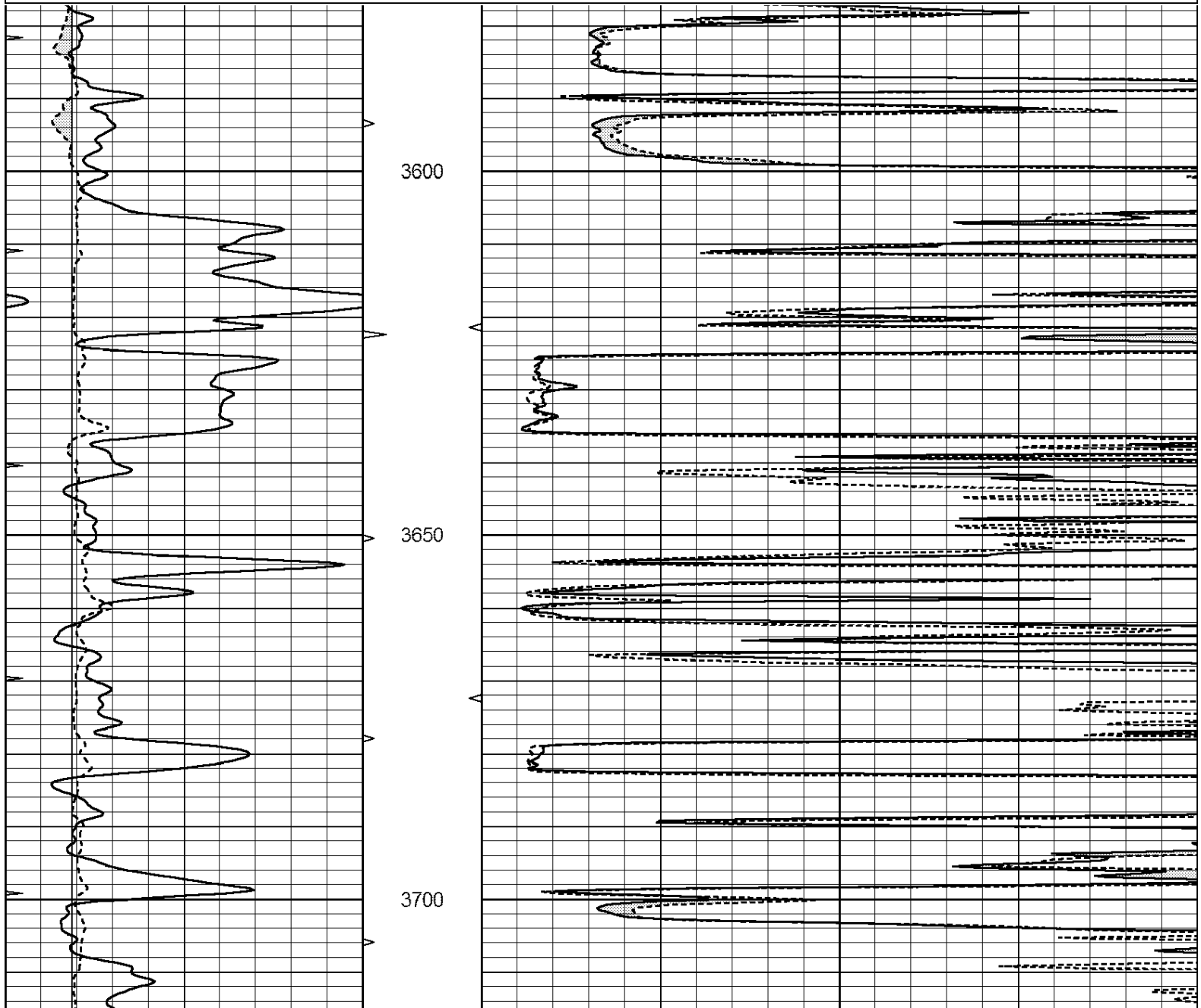
6	CALIPER (in)	16	10 (ft3)	0	0	MEL2.0 (Ohm-m)	40
0	MINMK	20	TBHV				
			0 (ft3)	10			

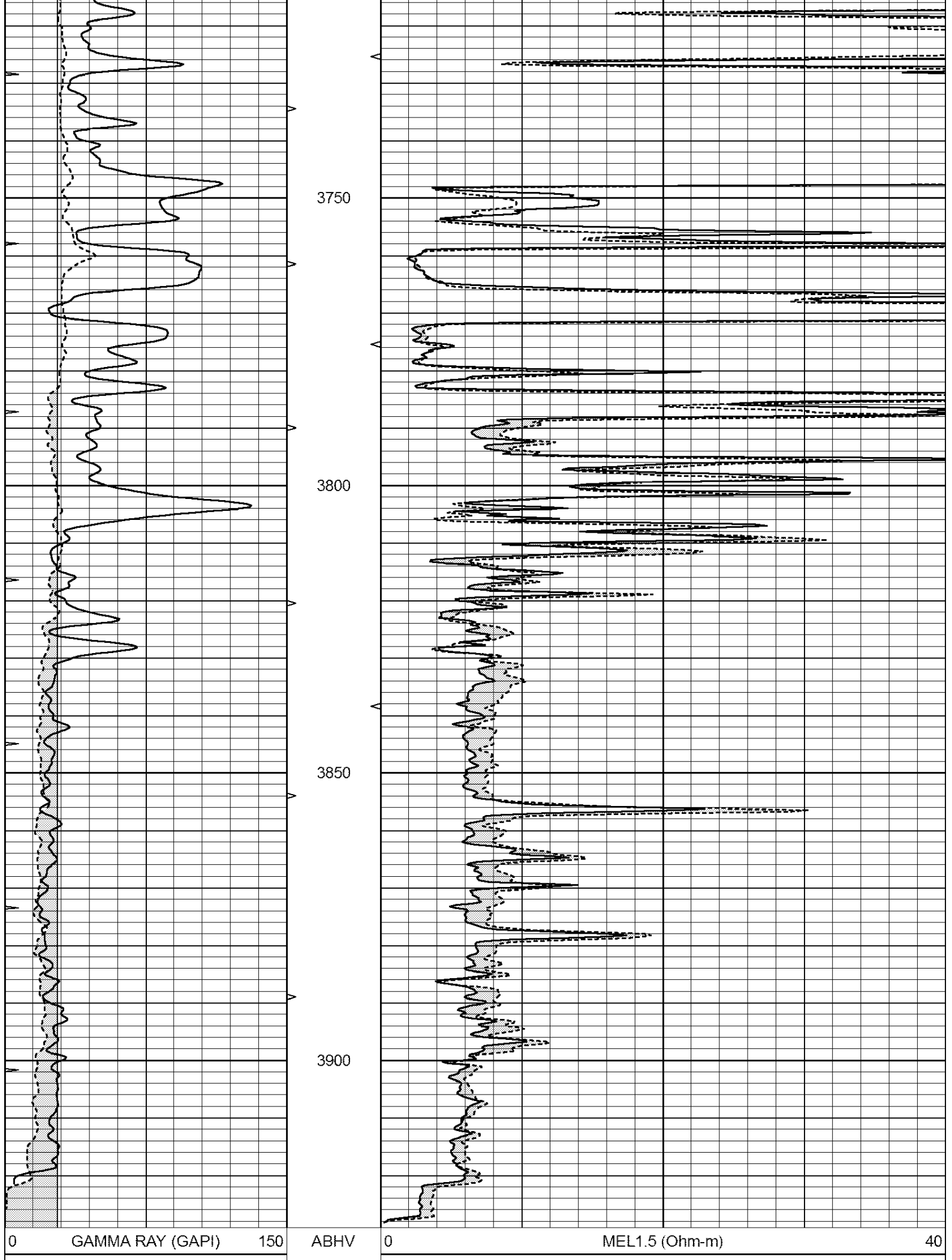


REPEAT SECTION

Database File: 3160ddn.db
 Dataset Pathname: pass6.1
 Presentation Format: _micro
 Dataset Creation: Mon Nov 19 23:06:07 2018 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	ABHV	0	0	MEL1.5 (Ohm-m)	40
6	CALIPER (in)	16	10 (ft3)	0	0	MEL2.0 (Ohm-m)	40
0	MINMK	20	TBHV				
			0 (ft3)	10			





6	CALIPER (in)	16	10 (ft3)	0 0	MEL2.0 (Ohm-m)	40
0	MINMK	20	TBHV			
			0 (ft3)	10		

Calibration Report

Database File: 3160ddn.db
 Dataset Pathname: pass6.1
 Dataset Creation: Mon Nov 19 23:06:07 2018 by Calc Open-Cased 090629

MICRO Calibration Report

Serial Number: MICRO3
 Tool Model: PROBE
 Performed: Fri Nov 09 06:01:34 2018

Caliper Calibration: Gain=5.761 Offset=-24.602

	Low Cal	High Cal
References	7.000	14.000
Readings	5.339	6.500

1.5" Calibration: Gain=120.000 Offset=0.400

	Low Cal	High Cal
References	0.000	20.000
Readings	0.004	0.228

2" Calibration: Gain=110.553 Offset=0.220

	Low Cal	High Cal
References	0.000	20.000
Readings	0.005	0.175

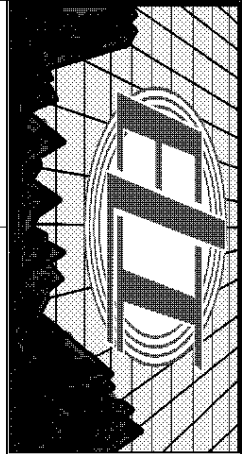
Gamma Ray Calibration Report

Serial Number: GR5
 Tool Model: OPEN
 Performed: Sun Sep 30 12:56:34 2018

Calibrator Value: 1.0 GAPI

Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps

Sensitivity: 0.6000 GAPI/cps



**DUAL
INDUCTION
LOG**

Company MUSTANG ENERGY CORPORATION
 Well YOUNGER #2
 Field IRVIN
 County ELLIS
 State KANSAS

Company MUSTANG ENERGY CORPORATION
 Well YOUNGER #2
 Field IRVIN
 County ELLIS
 State KANSAS

Location: API # : 15-051-26940-0000
 990' FSL & 330' FEL
 SEC 25 TWP 13S RGE 20W
 Permanent Datum GROUND LEVEL Elevation 2206
 Log Measured From KELLY BUSHING 8' A.G.L.
 Drilling Measured From KELLY BUSHING
 Other Services
 CDL/CNL
 MEL
 Elevation
 K.B. 2214
 D.F. 2212
 G.L. 2206

Date	11/19/18		
Run Number	ONE		
Depth Driller	3920		
Depth Logger	3923		
Bottom Logged Interval	3921		
Top Log Interval	00		
Casing Driller	8 5/8" @ 306		
Casing Logger	304		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 4000 PPM	
Density / Viscosity	9.153		
pH / Fluid Loss	10.5/8.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.60@60		
Rmt @ Meas. Temp	.45@60		
Rmc @ Meas. Temp	.72@60		
Source of Rmf / Rmc	MEASURED		
Rm @ BHT	.31 @ 115F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	///		
Maximum Recorded Temperature	115F		
Equipment Number	1523		
Location	HAYS, KANSAS		
Recorded By	JASON CAPPELLUCCI		
Witnessed By	JASON ALM		

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Comments

THANK YOU FOR USING ELI WIRELINE, HAYS, KS. (785) 628-6395

DIRECTIONS
 OLD HWY 40 & YOCEMENTO AVE - 3 WEST TO RD. 160 - 2 1/2 SOUTH - WEST INTO



MAIN SECTION

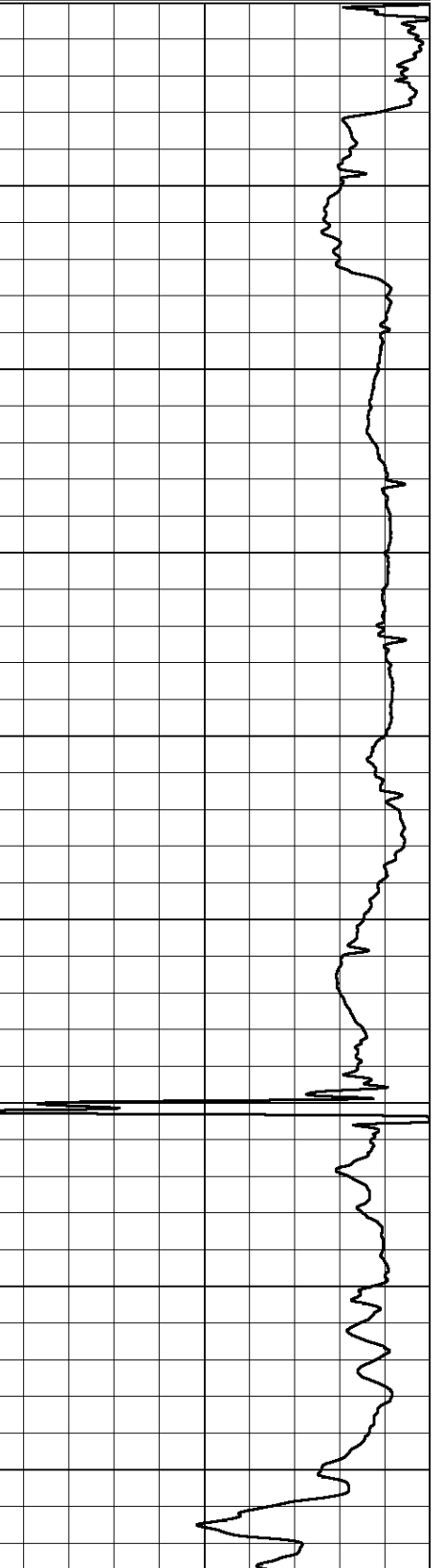
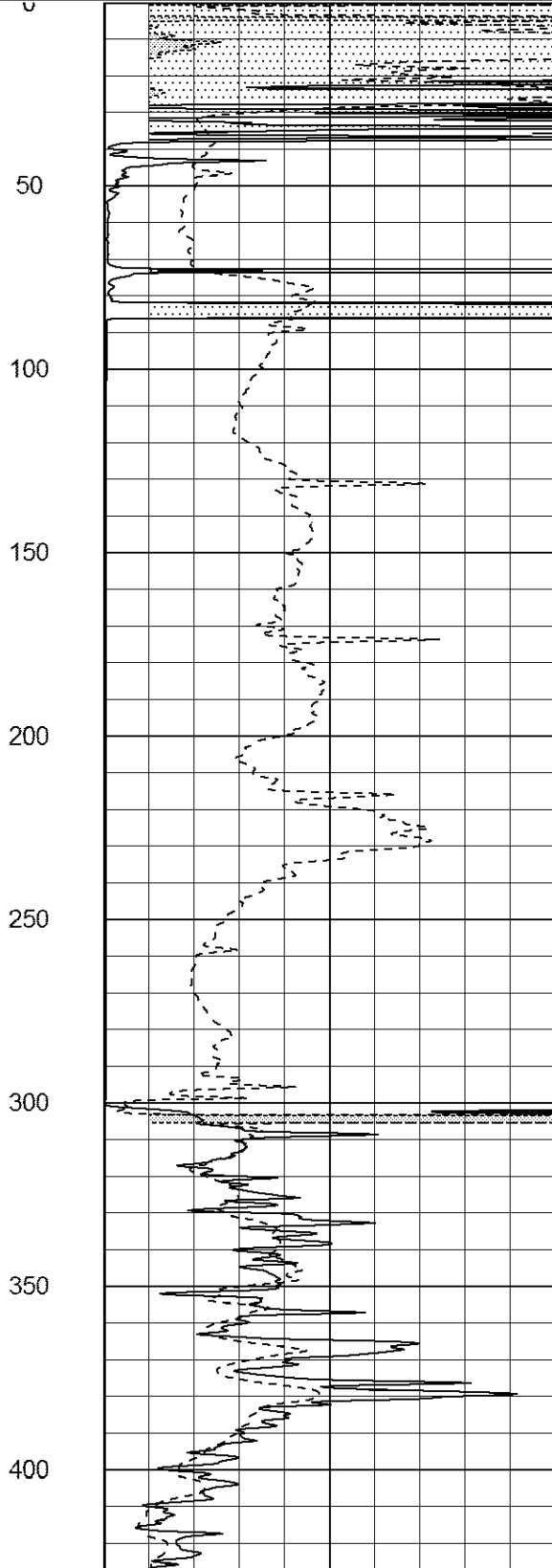
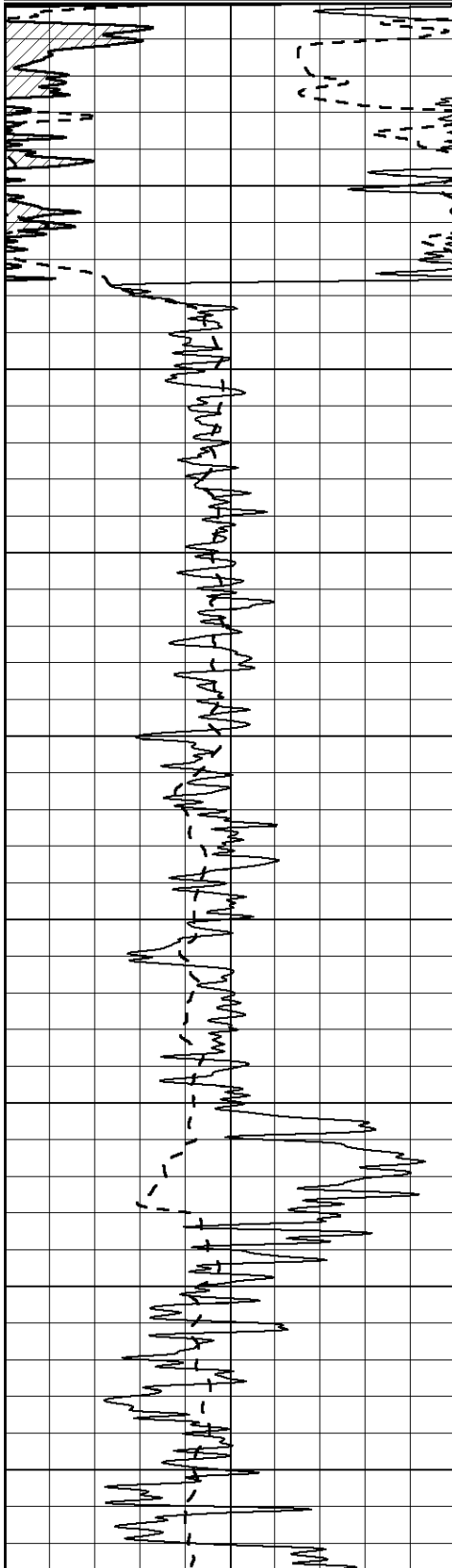
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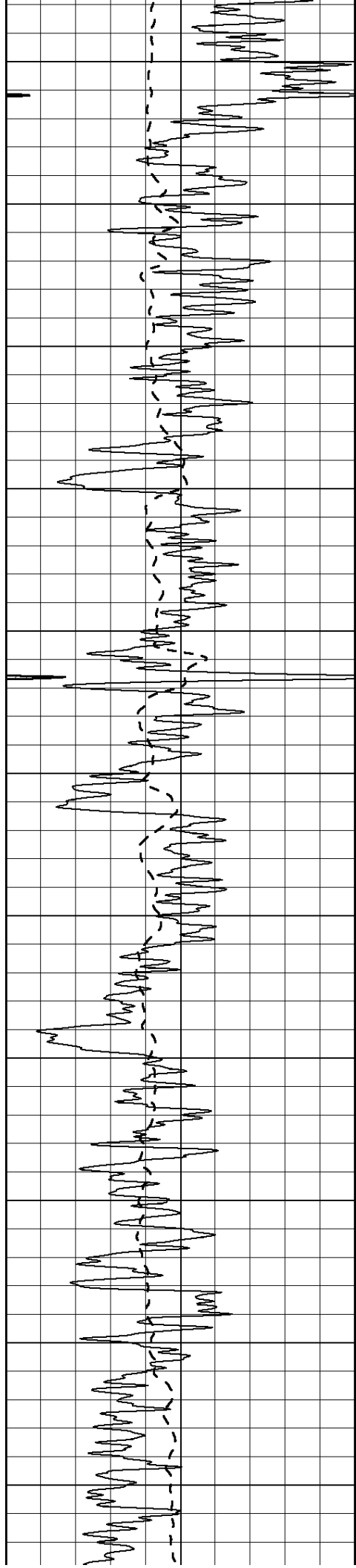
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-100	SP (mV)	100

0	RLL3 (Ohm-m)	50
0	RILD (Ohm-m)	50

1000	CILD (mmho/m)	0
------	---------------	---

50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500





450

500

550

600

650

700

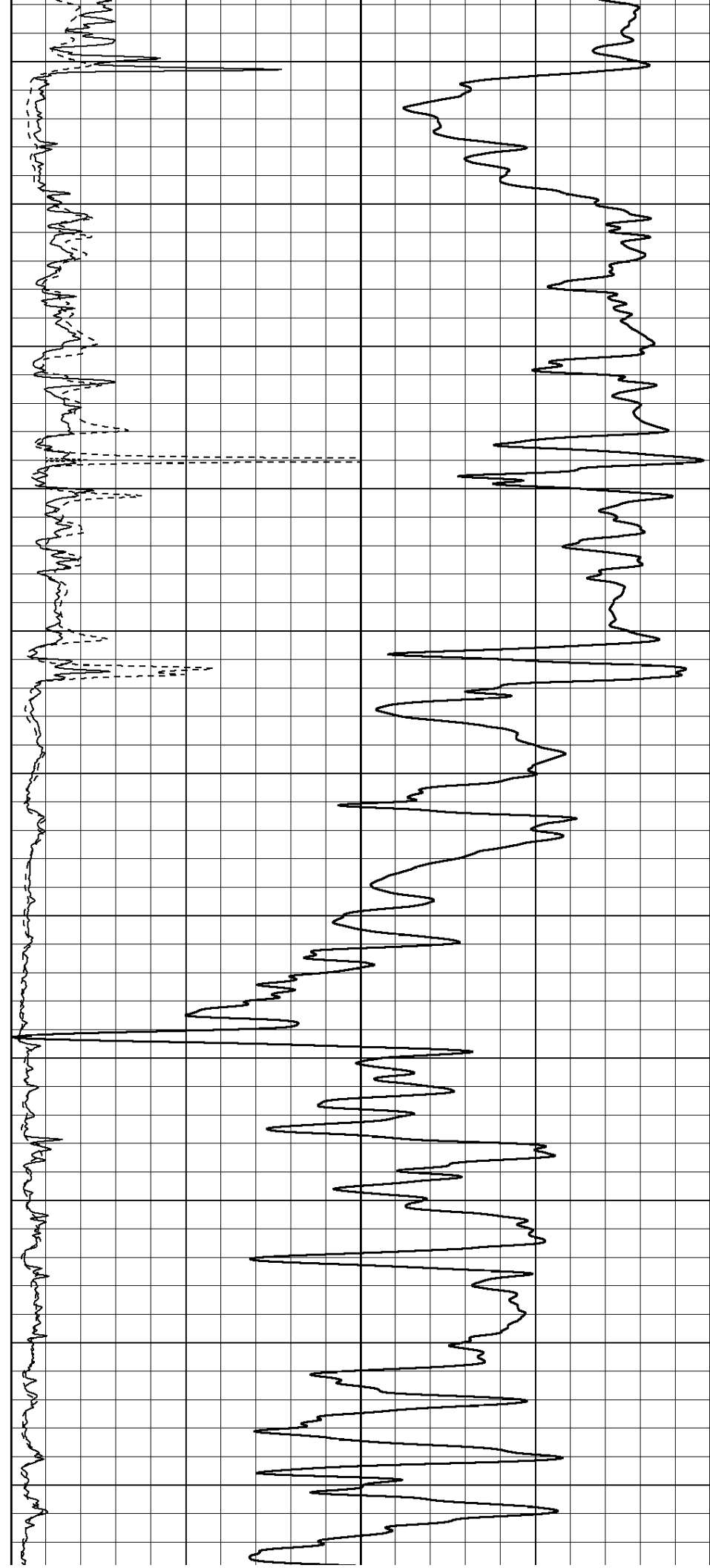
750

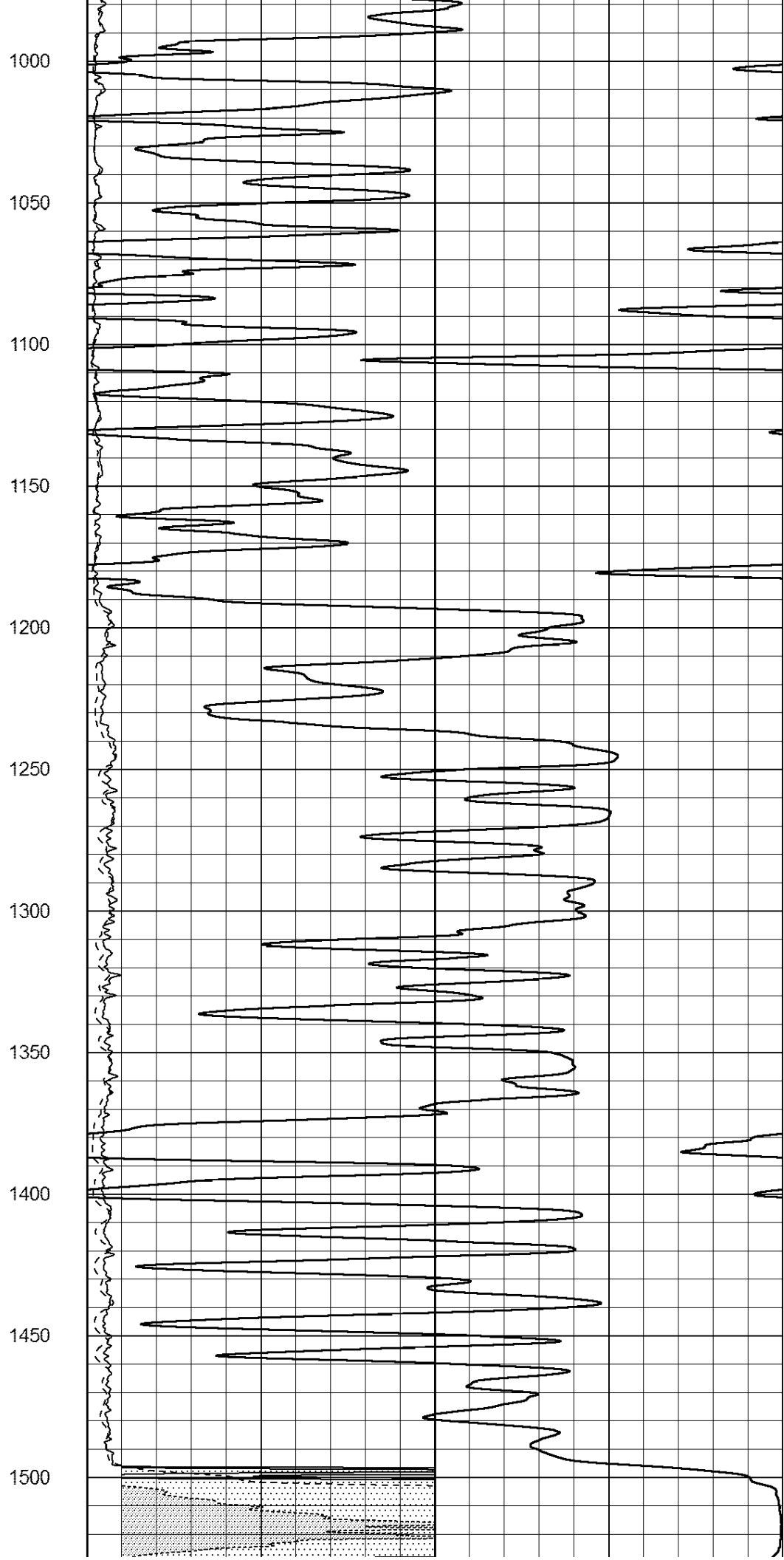
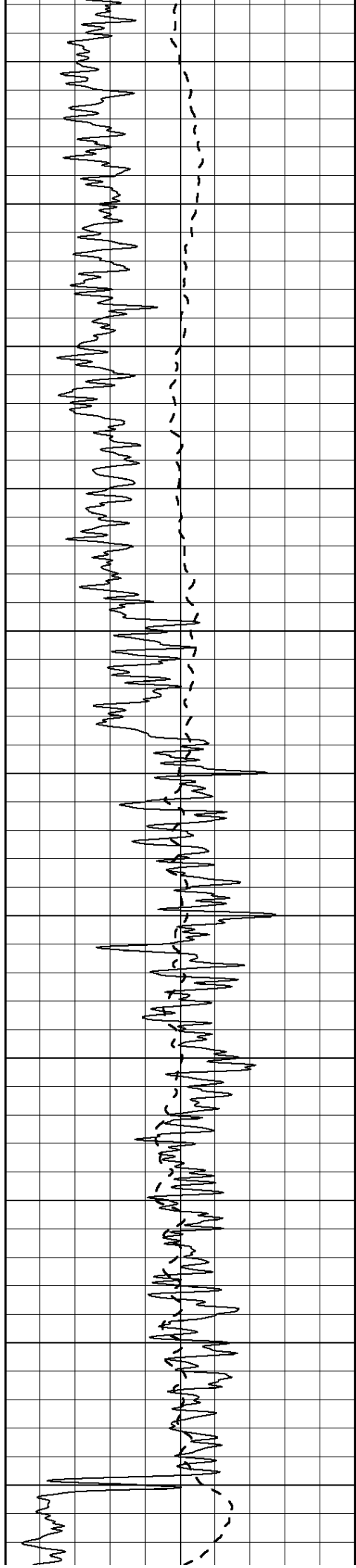
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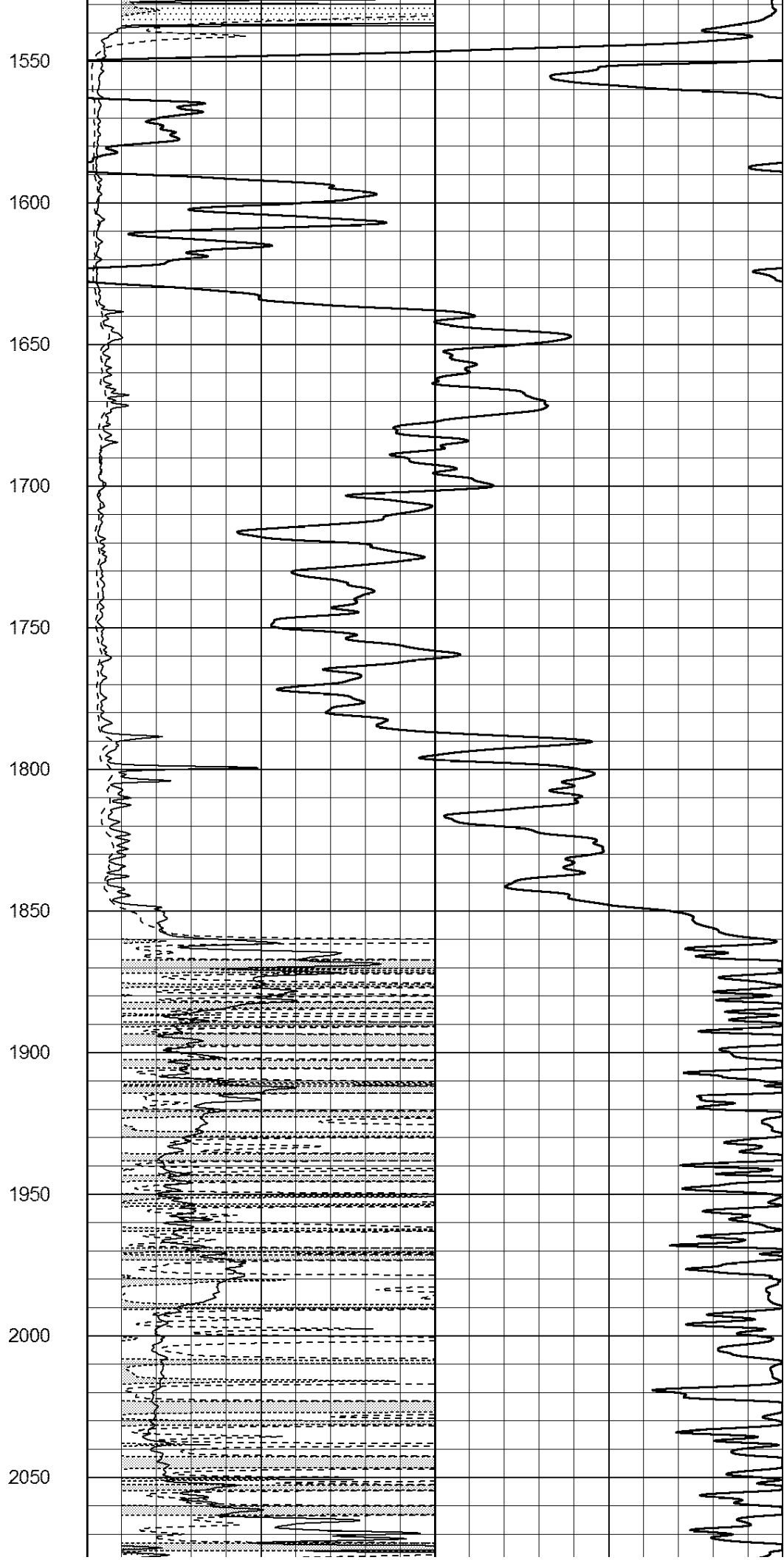
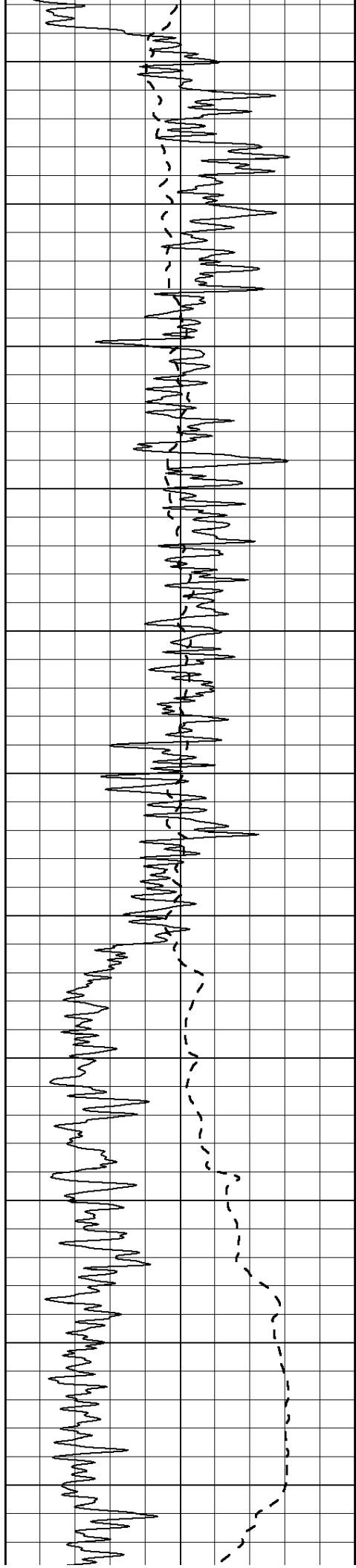
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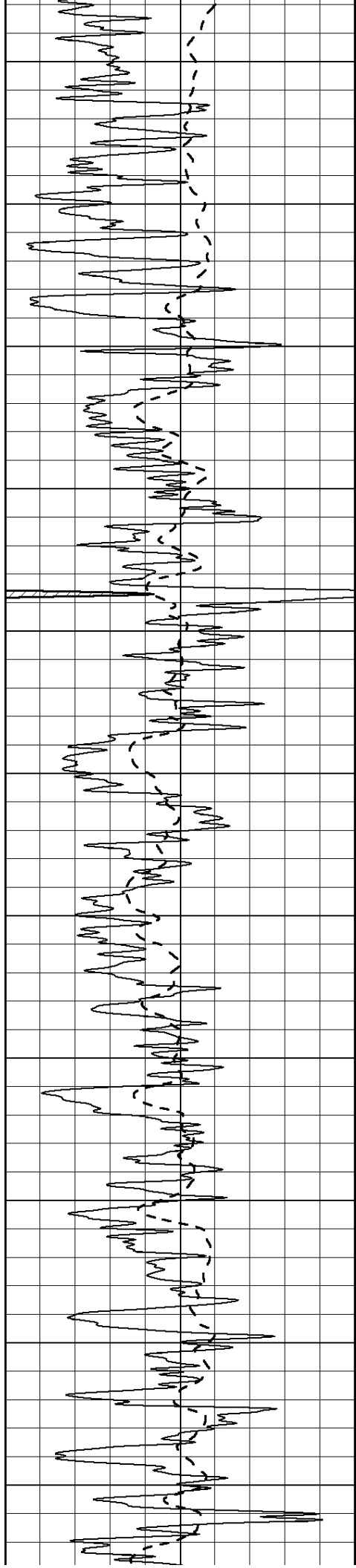
900

950









2100

2150

2200

2250

2300

2350

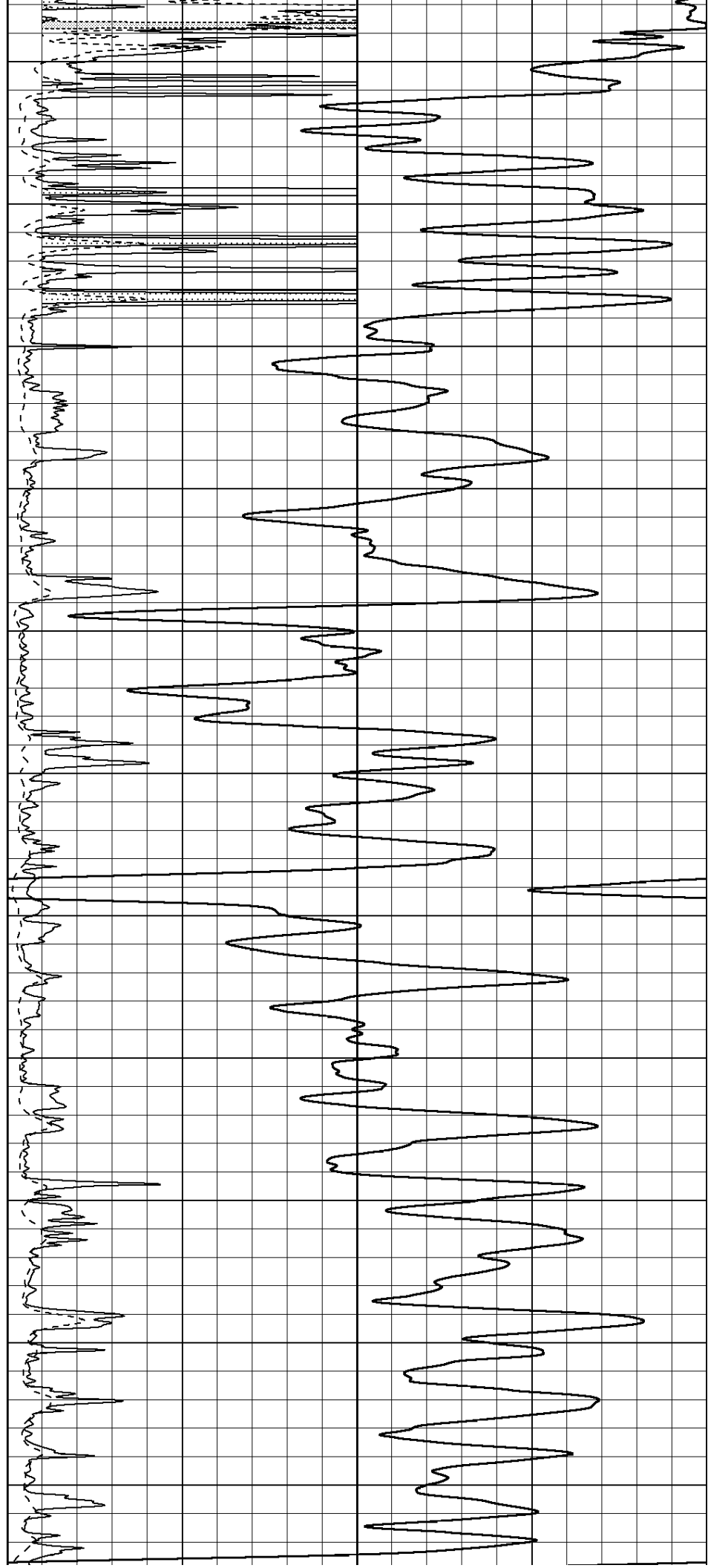
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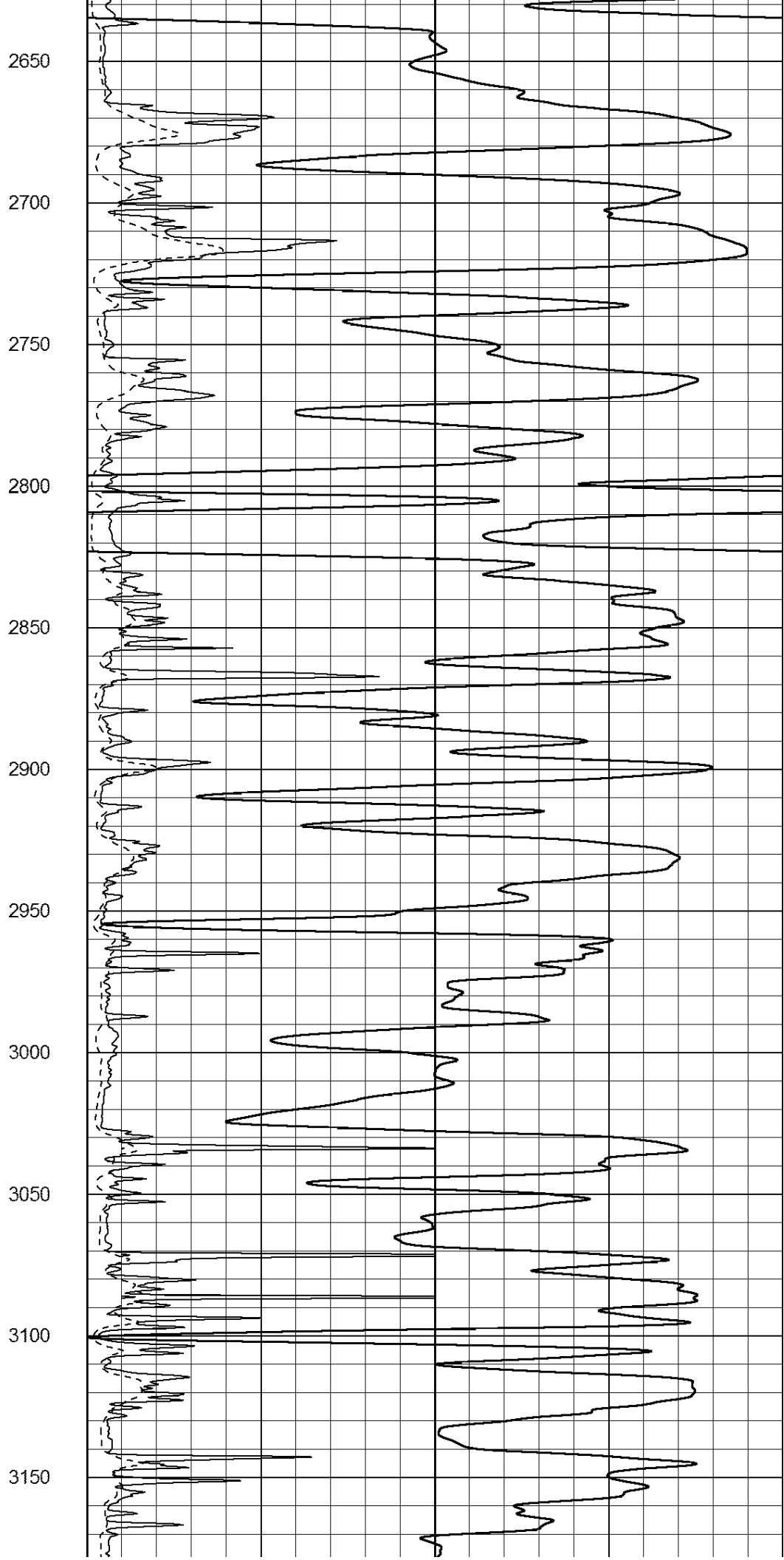
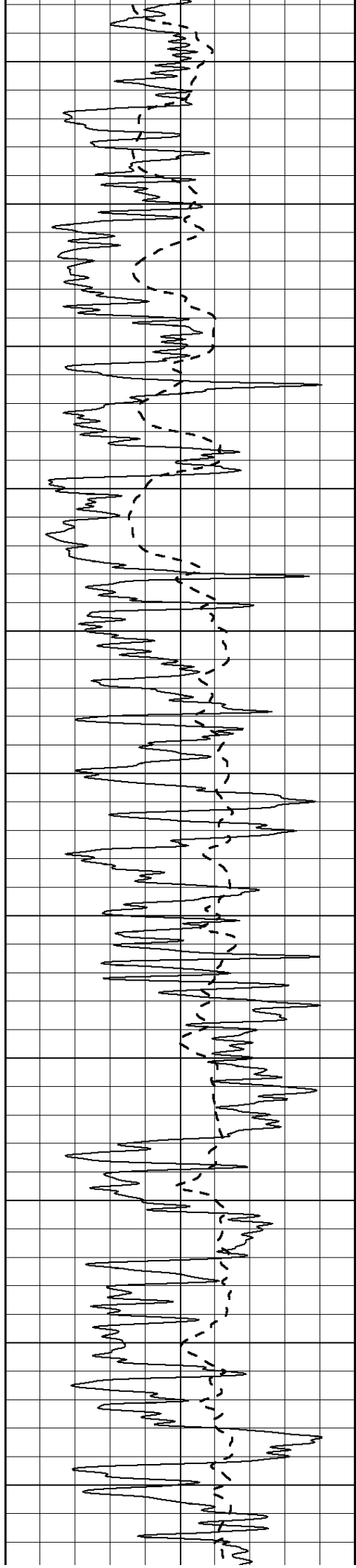
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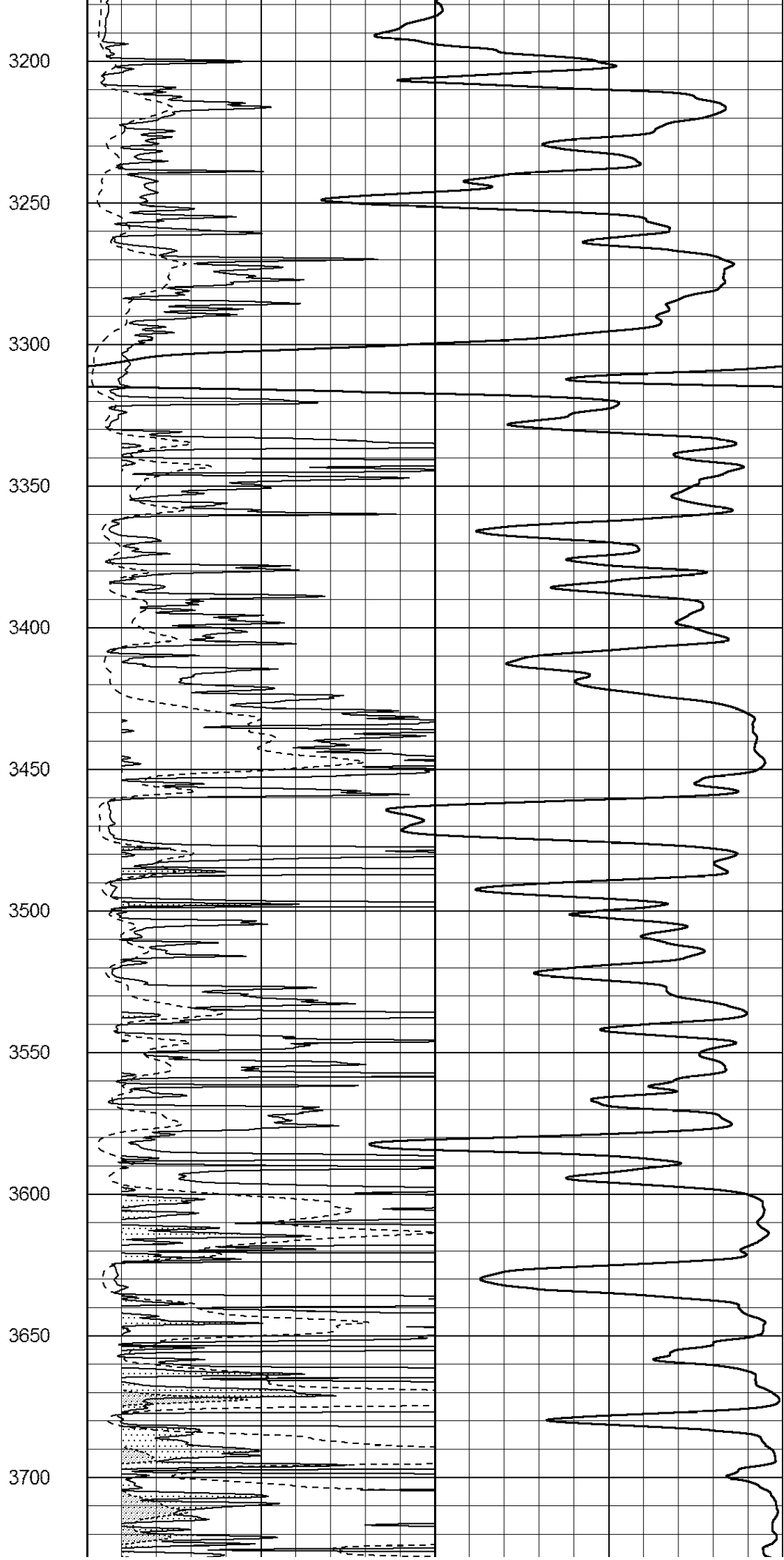
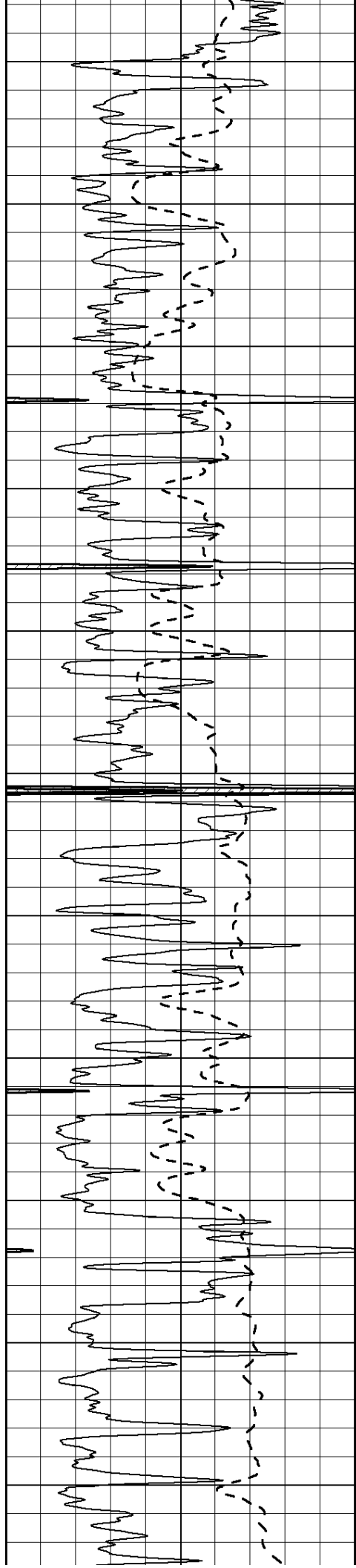
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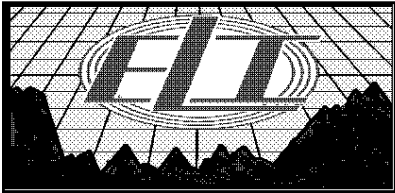
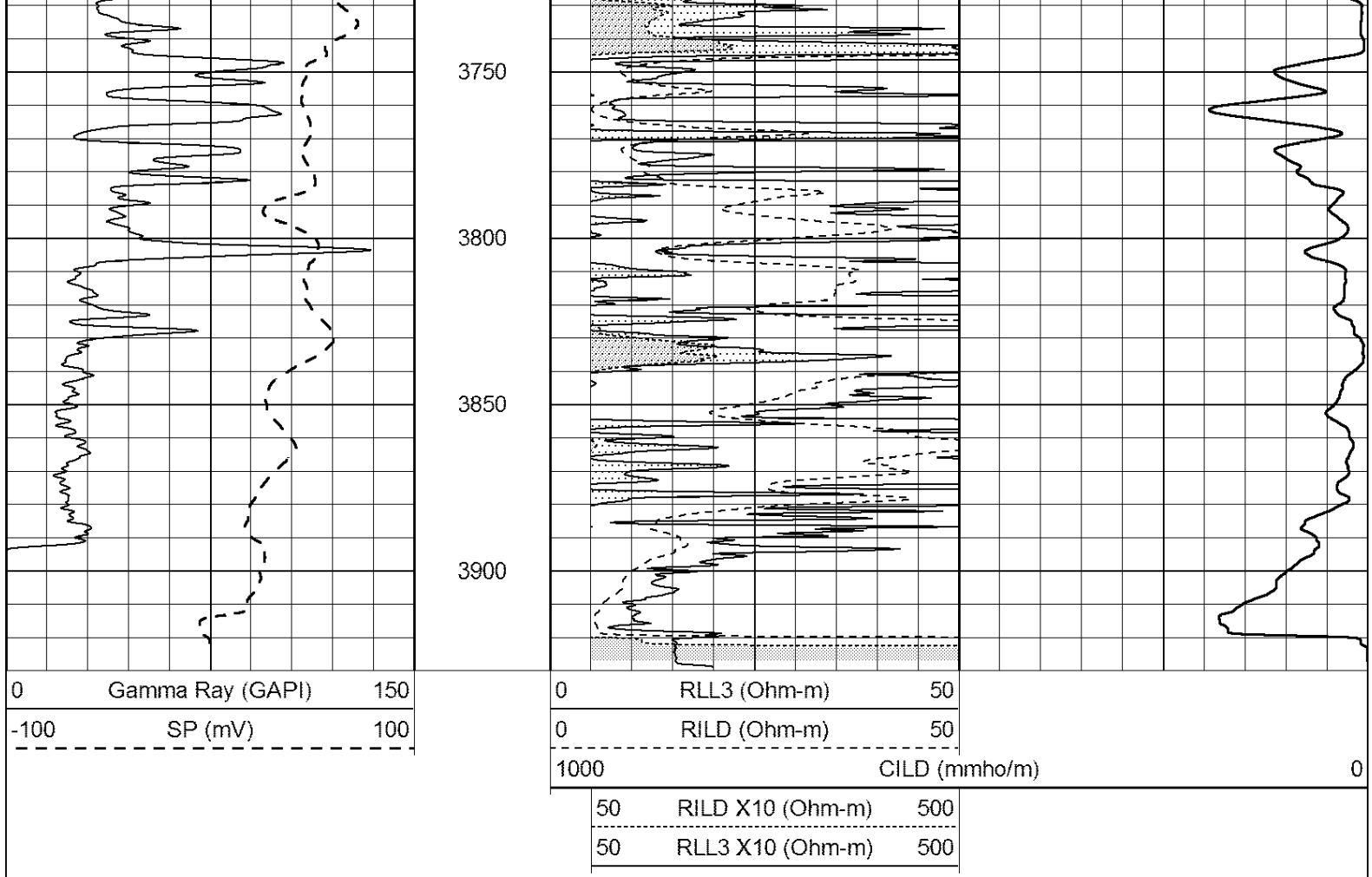
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2600





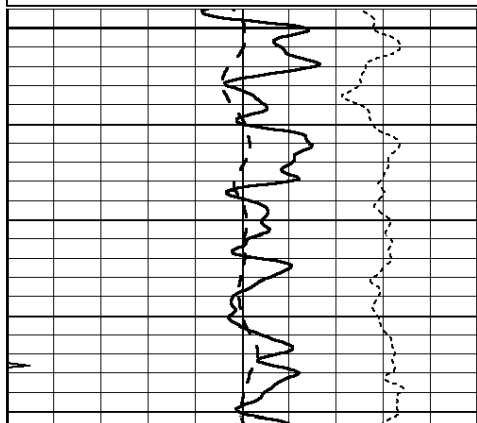




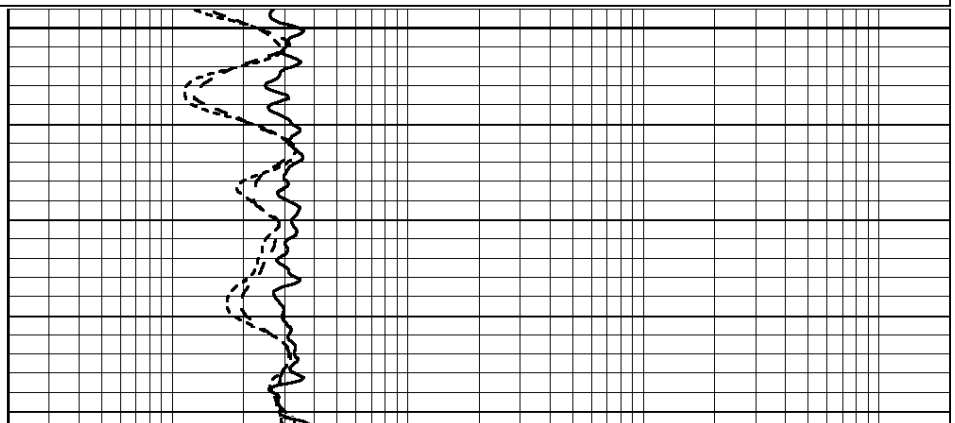
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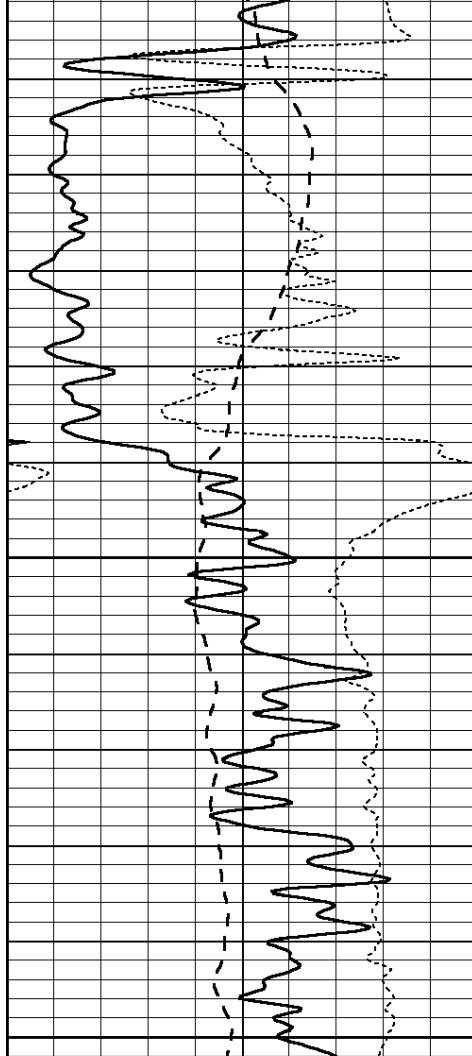
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 Presentation Format: _dil
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 Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	0.2	SHALLOW GUARD (Ohm-m)	2000
-100	SP (mV)	100	0.2	DEEP INDUCTION (Ohm-m)	2000
-250	Rxo/Rt	50	0.2	MEDIUM INDUCTION (Ohm-m)	2000
0	MINMK	20			



1450



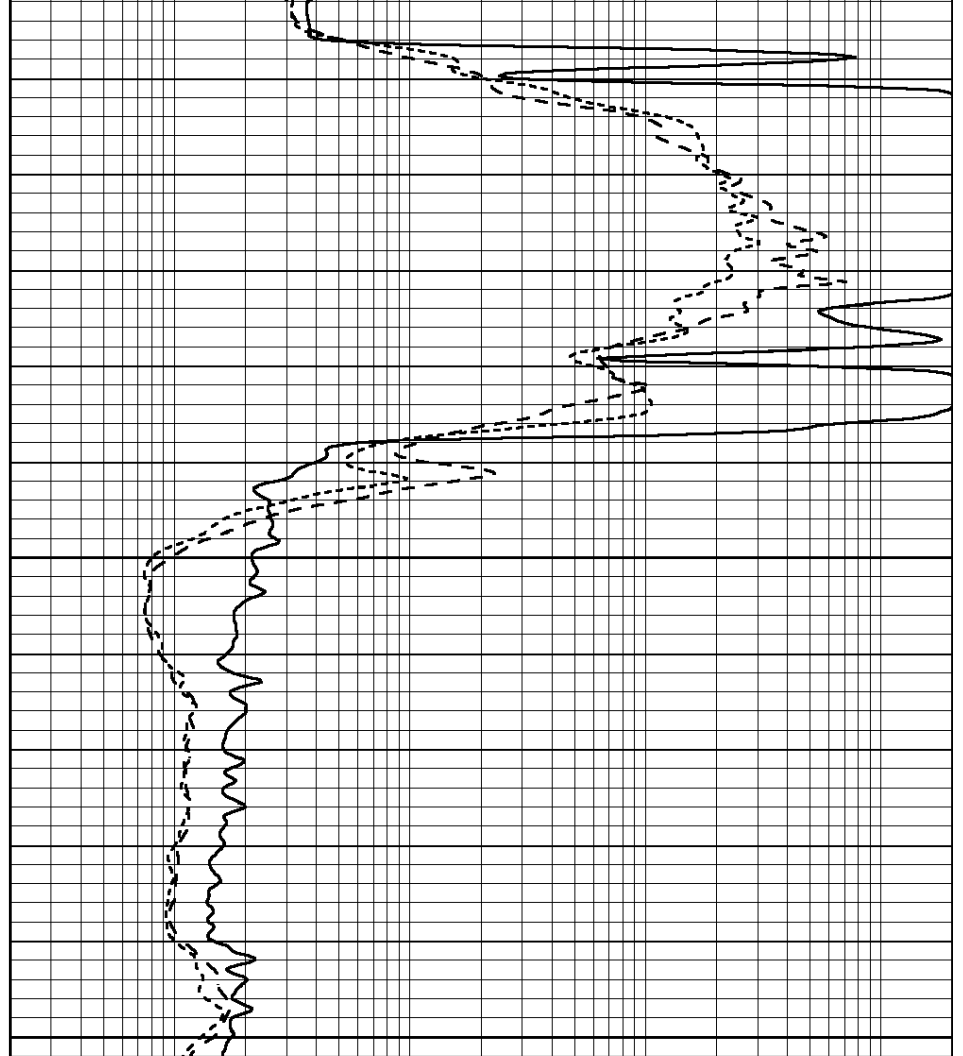


0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

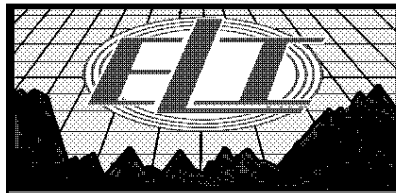
1500

1550

1600



0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

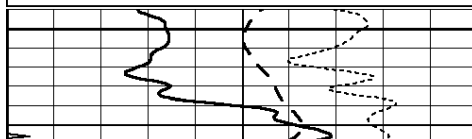


MAIN SECTION

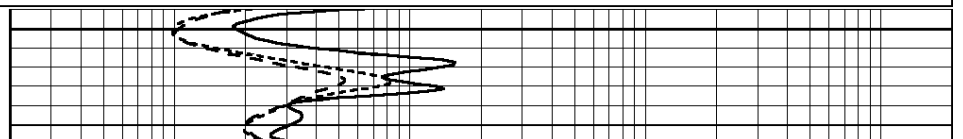
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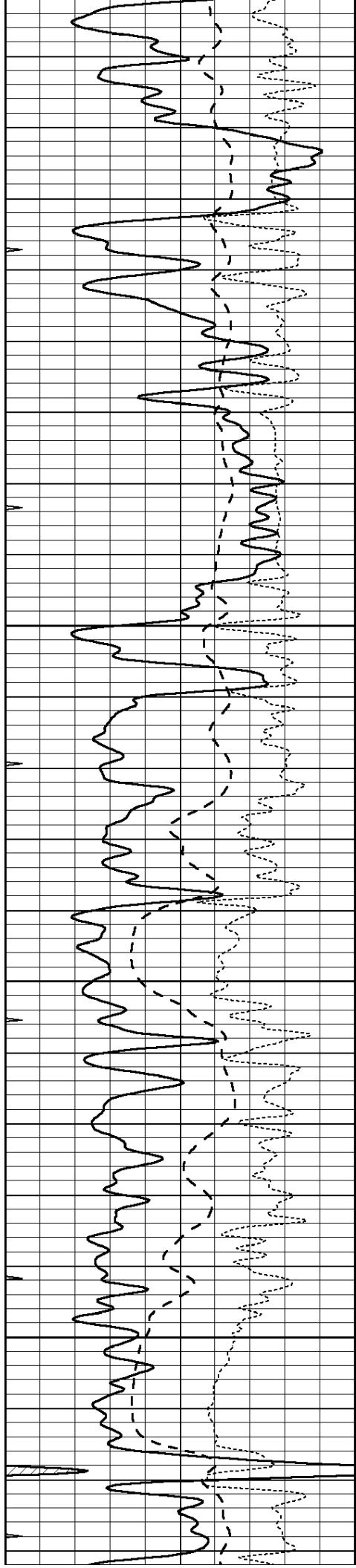
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-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



3100



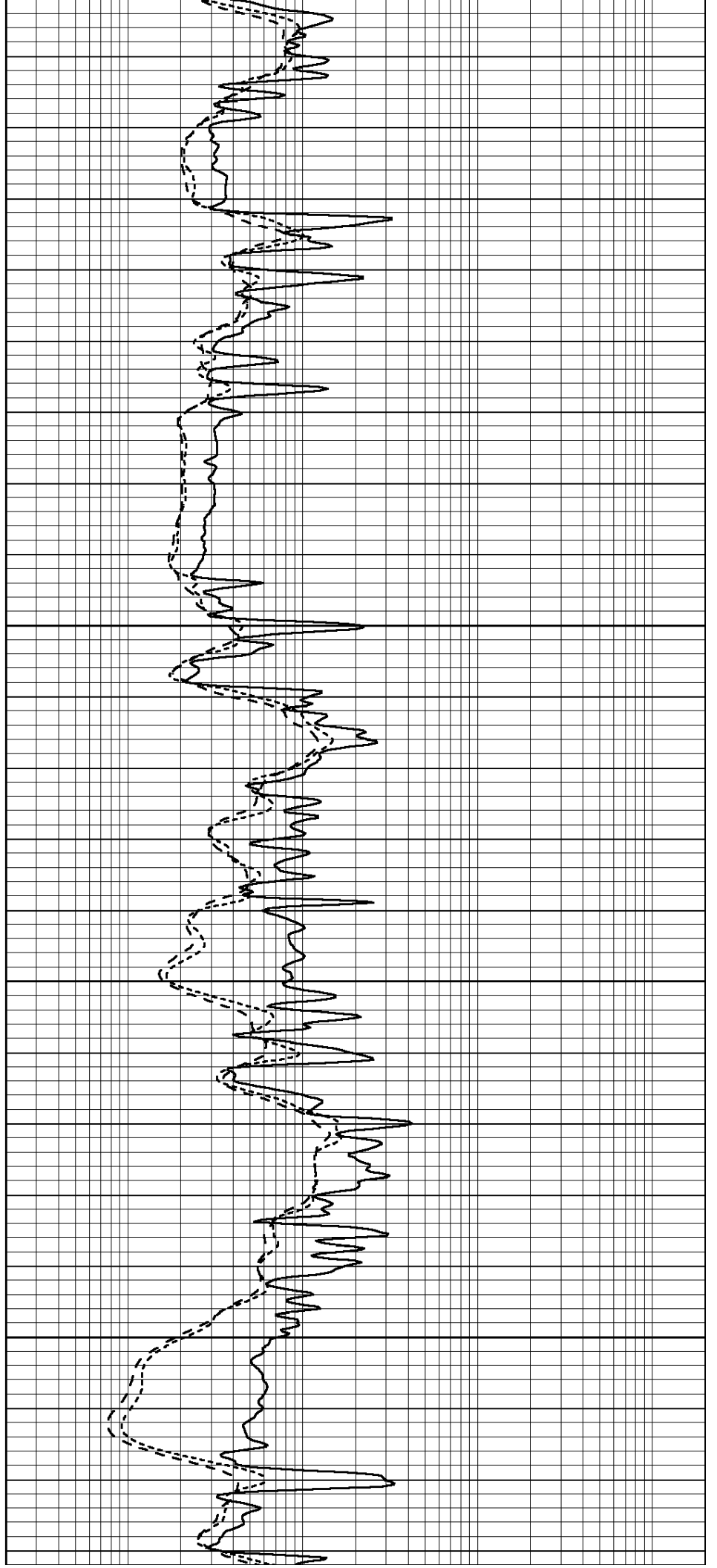


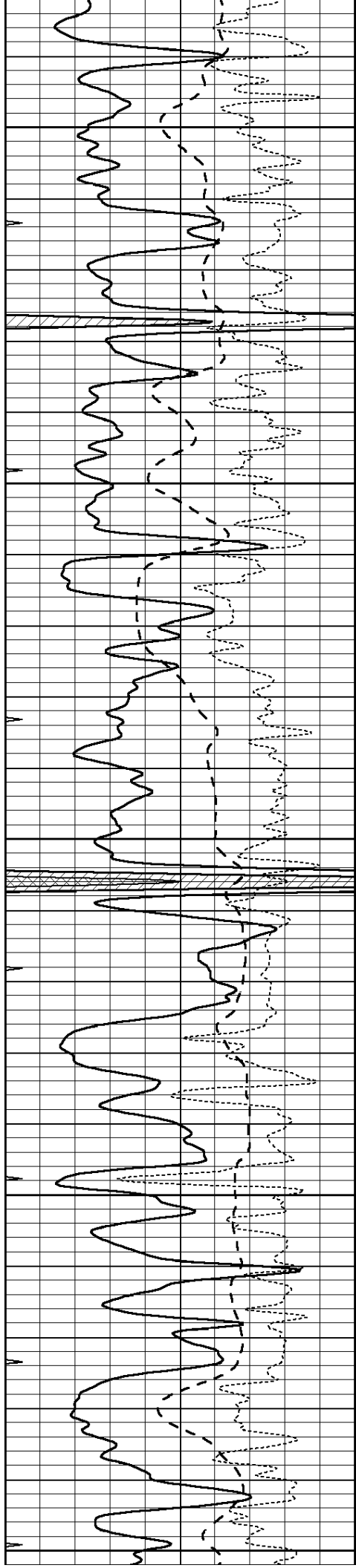
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3200

3250

3300





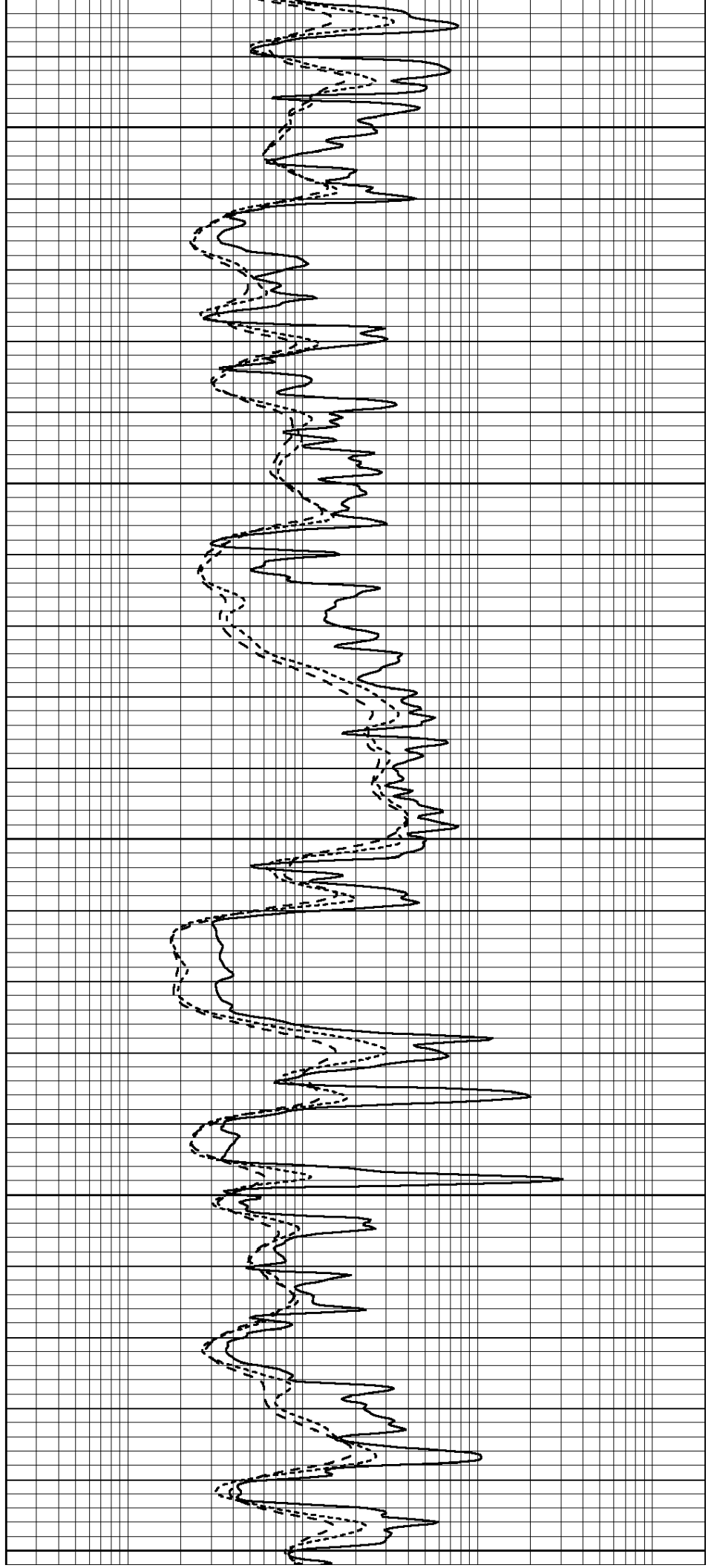
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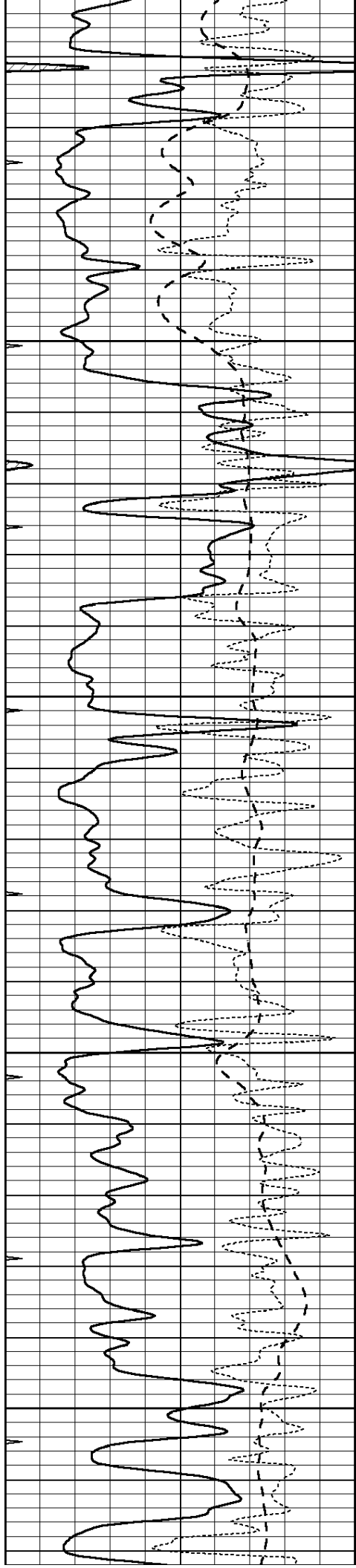
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3450

3500

3550



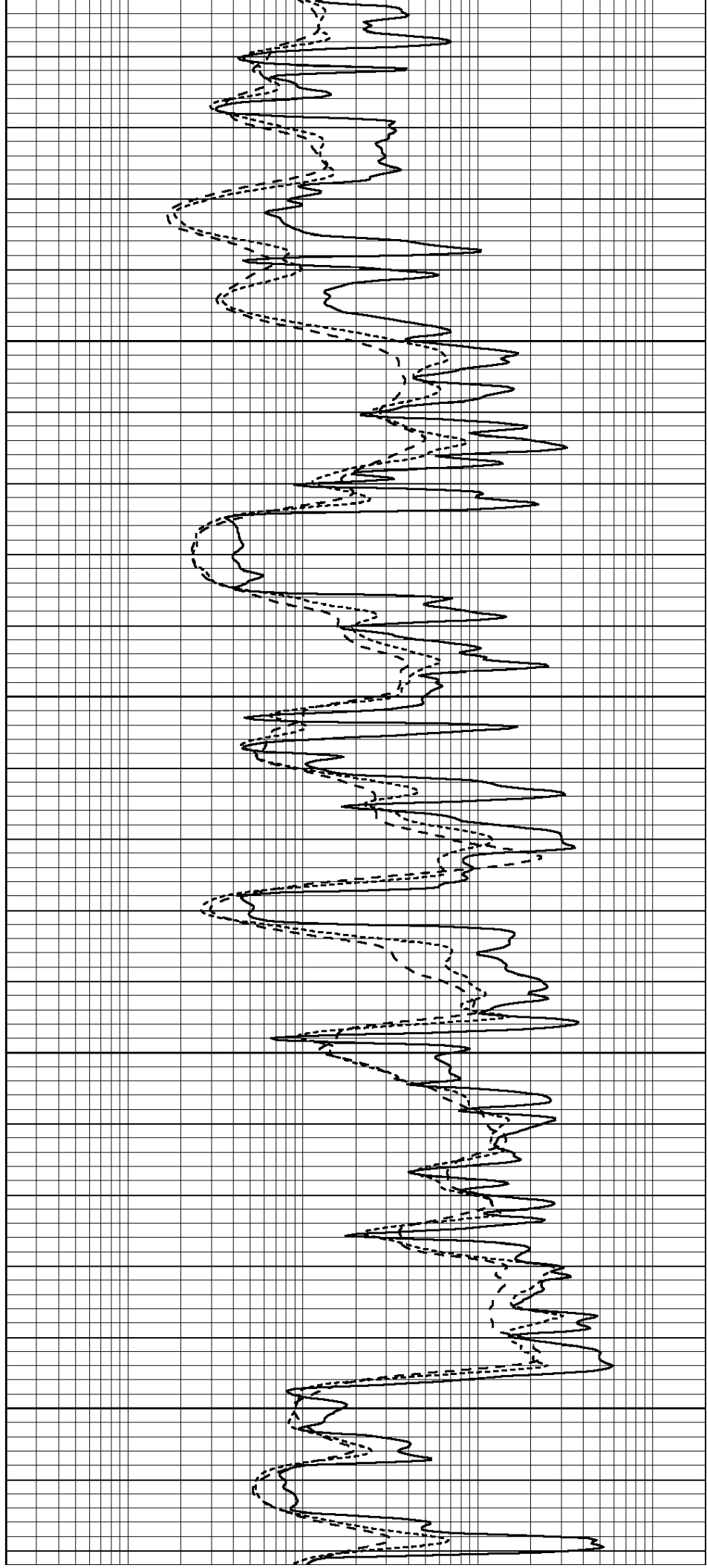


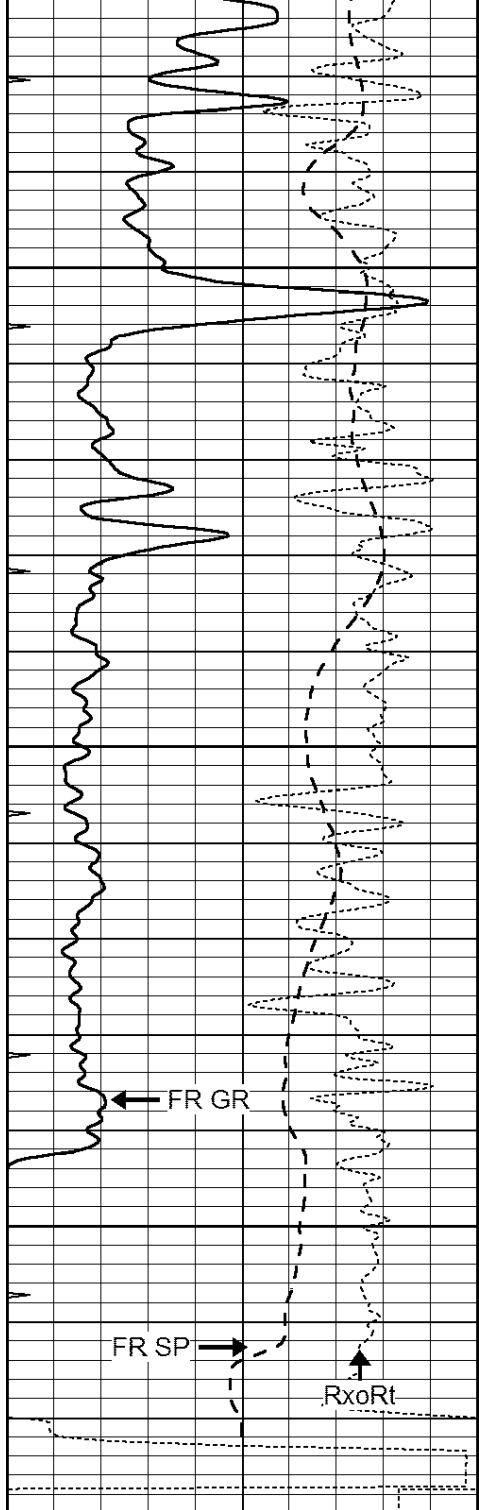
3600

3650

3700

3750





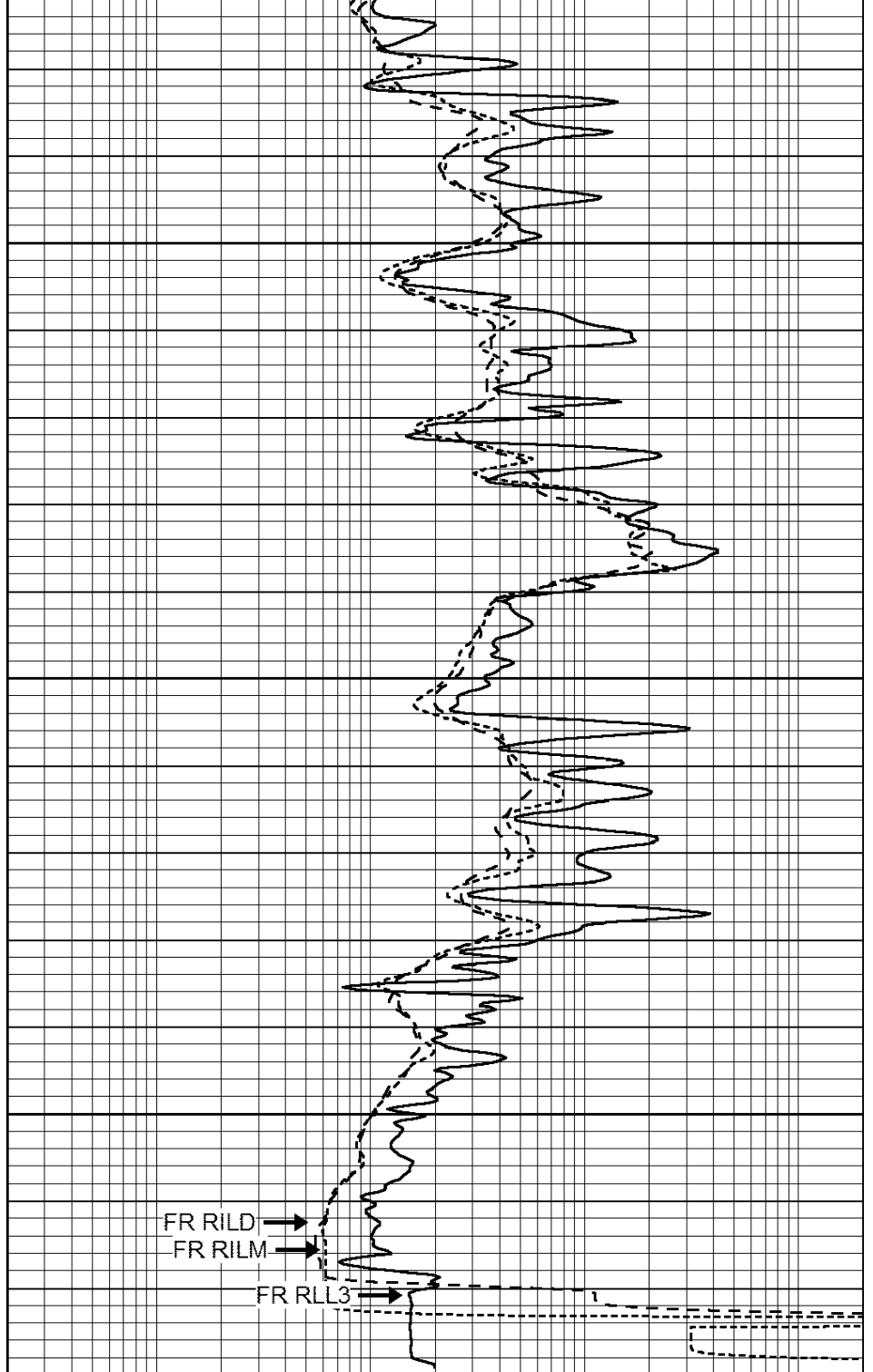
3800

3850

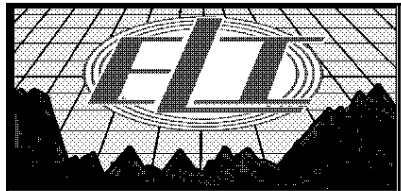
3900

LTD 3923

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20



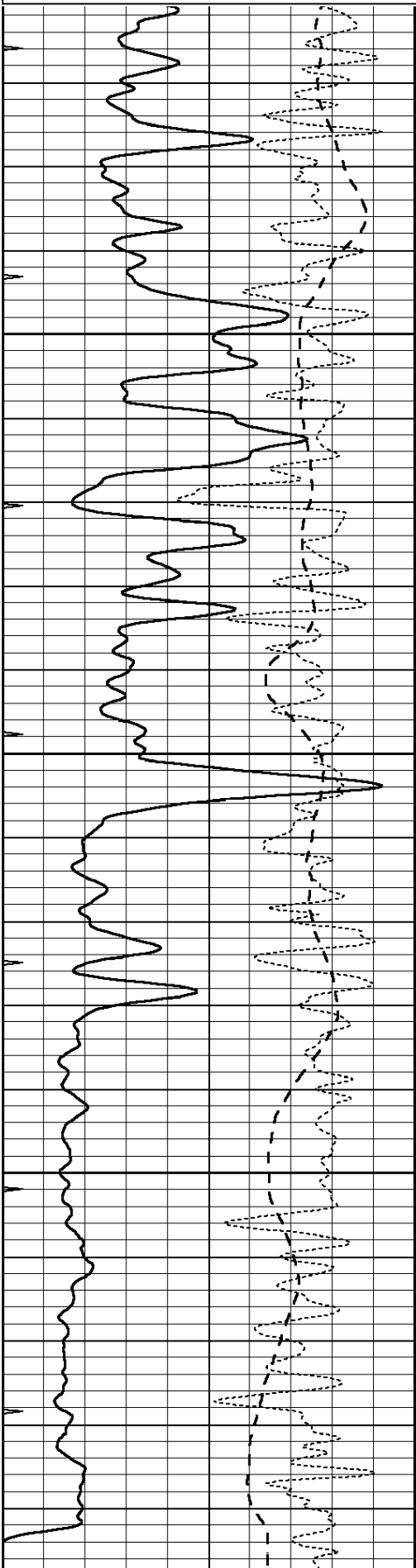
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



REPEAT SECTION

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

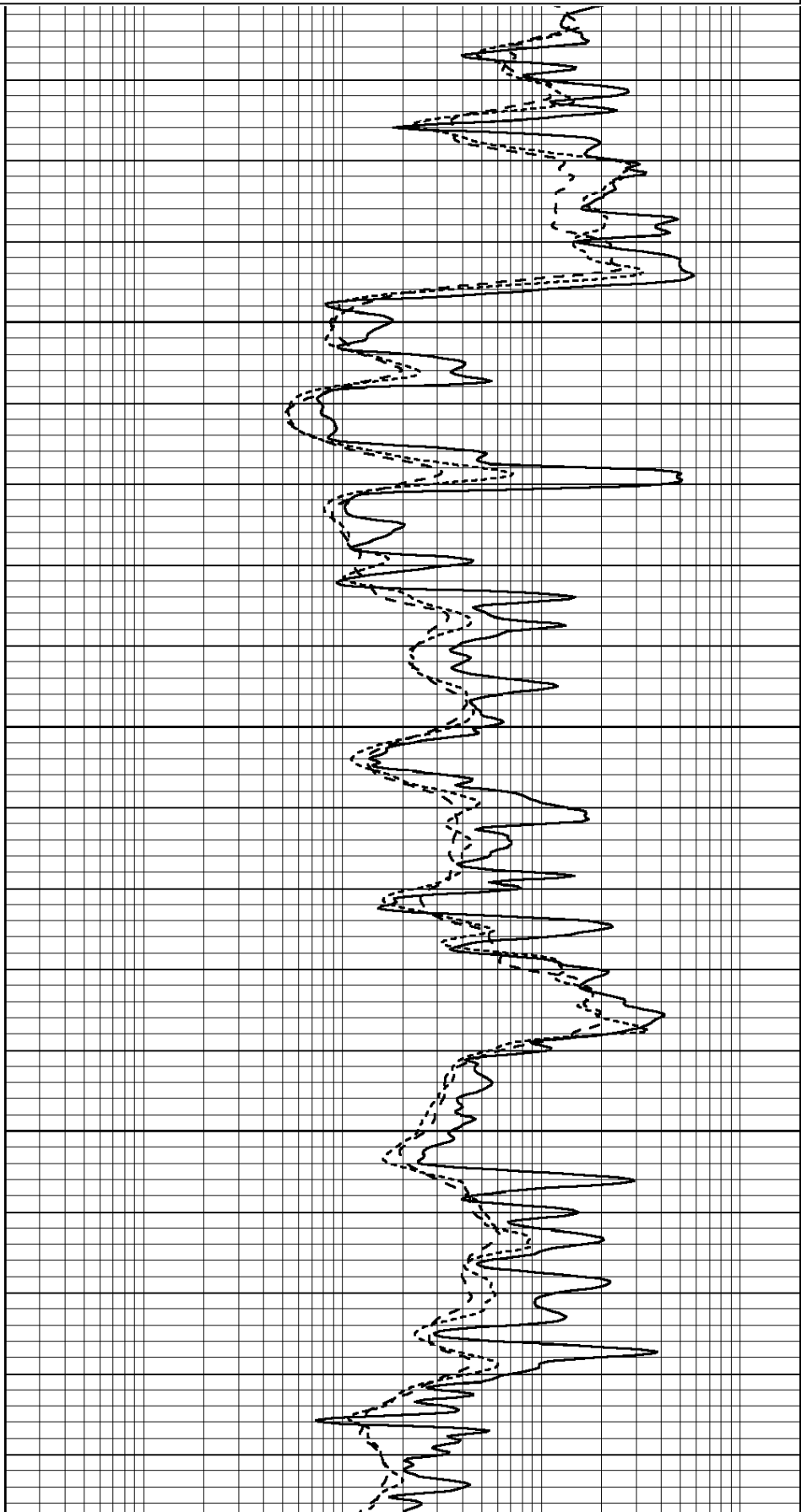
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

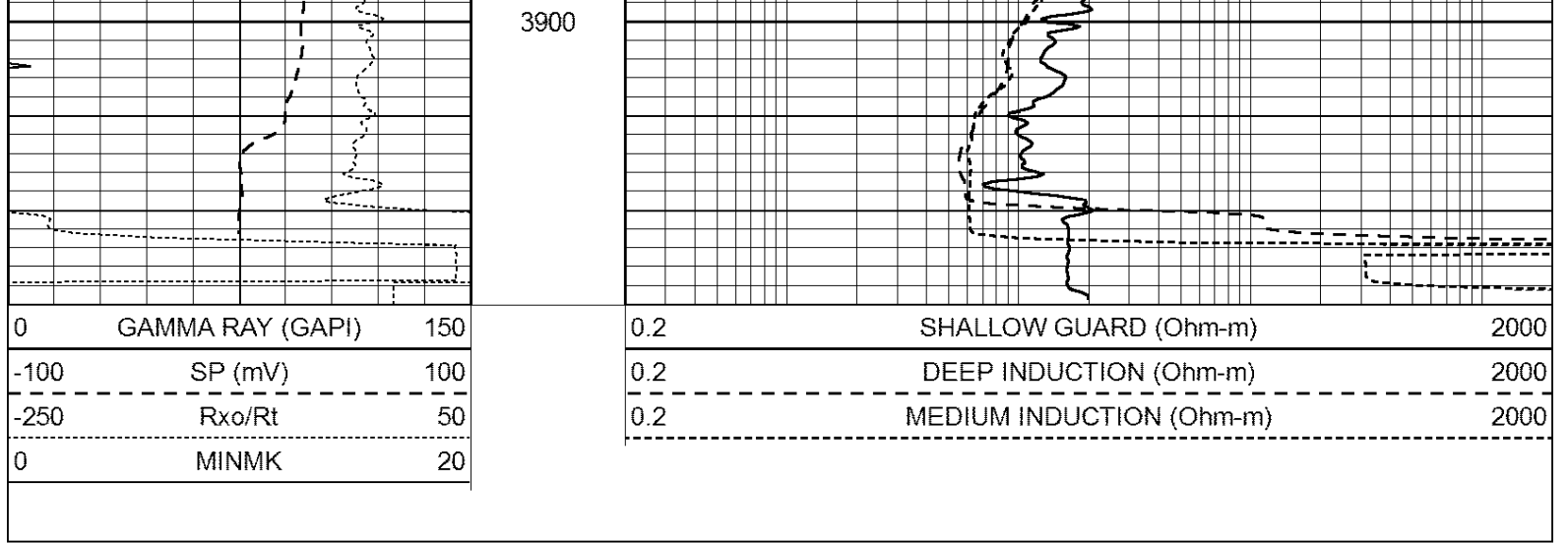


3750

3800

3850





Calibration Report

Database File: 3160ddn.db
 Dataset Pathname: pass3.1
 Dataset Creation: Mon Nov 19 21:12:13 2018 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: PROBE8-DILG
 Surface Cal Performed: Mon Sep 10 14:28:35 2018
 Downhole Cal Performed: Mon Sep 10 14:28:38 2018
 After Survey Verification Performed: Mon Sep 10 14:28:40 2018

Surface Calibration

Loop:	Readings				References		Results	
	Air	Loop			Air	Loop	m	b
Deep	0.015	0.648	V	0.000	400.000	mmho/m	620.000	0.000
Medium	0.029	0.796	V	0.000	464.000	mmho/m	590.000	-12.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.017	0.657	V	0.000	400.000	mmho/m	625.153	-10.619
Medium	0.016	0.757	V	0.000	464.000	mmho/m	625.992	-9.739

Downhole Calibration

	Readings				References		Results	
	Zero	Cal			Zero	Cal	m'	b'
Deep	0.000	0.000	mmho/m	2.011	405.777	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	7.590	503.393	mmho/m	1.000	0.000
LL3		7.500	V		1500.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-7.200	V		3800.000	mmho-m		

After Survey Verification

	Readings				Targets		Results	
	Zero	Cal			Zero	Cal	m'	b'
Deep	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000
Medium	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000
LL3		1.000	Ohm-m		1.000	Ohm-m		
		0.000	Ohm-m		0.000	Ohm-m		
		1.000	mmho-m		1.000	mmho-m		

Master Calibration

Performed Thu Sep 27 12:07:11 2018

	Background	Magnesium	Aluminum	Sandstone	
Window 1	1185.6	7077.4	2520.9	8182.4	cps
Window 2	1116.8	5910.1	2163.2	6739.4	cps
Window 3	880.1	3145.8	1325.0	3461.2	cps
Window 4	289.5	295.8	290.8	295.3	cps
Long Space	0.0	4793.3	1046.5	5622.7	cps
Short Space	2.9	1608.0	1038.9	1622.7	cps
Rho		1.7100	2.5960	1.3800	g/cc
Pe		0.0000	2.5700	1.5500	
Rib Angle	: 44.0	Rib Slope	: 0.965	Density/Spine Ratio	: 0.560
Spine Angle	: 74.0	Spine Slope	: 3.484	Spine Intercept	: -17.2

Before Survey Verification

Performed Wed Dec 31 18:00:00 1969

Window 1	0.0	0.0	0.0	0.0	cps
Window 2	0.0	0.0	0.0	0.0	cps
Window 3	0.0	0.0	0.0	0.0	cps
Window 4	0.0	0.0	0.0	0.0	cps
Long Space	0.0	0.0	0.0	0.0	cps
Short Space	0.0	0.0	0.0	0.0	cps
Measured Rho		0.0000	0.0000	0.0000	g/cc
Measured Correction		0.0000	0.0000	0.0000	g/cc
Measured Pe			0.0000	0.0000	

After Survey Verification

Performed Wed Dec 31 18:00:00 1969

Window 1	0.0	0.0	0.0	0.0	cps
Window 2	0.0	0.0	0.0	0.0	cps
Window 3	0.0	0.0	0.0	0.0	cps
Window 4	0.0	0.0	0.0	0.0	cps
Long Space	0.0	0.0	0.0	0.0	cps
Short Space	0.0	0.0	0.0	0.0	cps
Measured Rho		0.0000	0.0000	0.0000	g/cc
Measured Correction		0.0000	0.0000	0.0000	g/cc
Measured Pe			0.0000	0.0000	

Compensated Neutron Calibration Report

Serial Number: 6I
Tool Model: G

CALIBRATION

Detector	Readings	Target	Normalization
Short Space	1.00 cps	1.00 cps	1.0000
Long Space	1.00 cps	1.00 cps	1.0000

PRE-SURVEY VERIFICATION

	Detector	Readings	Measured	Target
1)	Short Space	cps		
	Long Space	cps	pu	pu
2)	Short Space	cps		
	Long Space	cps	pu	

3)	Short Space Long Space	cps cps	pu	
POST-SURVEY VERIFICATION				
	Detector	Readings	Measured	Target
1)	Short Space Long Space	cps cps	pu	pu
2)	Short Space Long Space	cps cps	pu	pu
3)	Short Space Long Space	cps cps	pu	pu
Gamma Ray Calibration Report				
	Serial Number:	GR6		
	Tool Model:	OPEN		
	Performed:	Mon Sep 10 14:29:23 2018		
	Calibrator Value:	150.0	GAPI	
	Background Reading:	0.0	cps	
	Calibrator Reading:	276.0	cps	
	Sensitivity:	0.5500	GAPI/cps	

Geological Report

Younger #2

990' FSL & 330' FEL

Sec. 25 T13s R20w

Ellis County, Kansas



Mustang Energy Corporation

General Data

Well Data: Mustang Energy Corporation
Younger #2
990' FSL & 330' FEL
Sec. 25 T13s R20w
Ellis County, Kansas
API # 15-051-26940-0000

Drilling Contractor: Discovery Drilling, Inc. Rig #1

Geologist: Jason T Alm

Spud Date: November 14, 2018

Completion Date: November 20, 2018

Elevation: 2206' Ground Level
2214' Kelly Bushing

Directions: Yocemento KS, West on Hwy 40 to 160 Rd. South
2 ½ mi. West into location.

Casing: 306' 8 5/8" surface casing
3922' 5 1/2" production casing

Samples: 10' wet and dry, 3200' to RTD

Drilling Time: 3100' to RTD

Electric Logs: ELI "Jason Cappellucci"
CDL/CNL, DIL, MEL

Drillstem Tests: None

Problems: None

Remarks: None

Formation Tops

Formation	Mustang Energy Corp Younger #2 Sec. 25 T13s R20w 990' FSL & 330' FEL
Anhydrite	1496' +718
Base	1538' +676
Topeka	3209' -995
Heebner	3454' -1240
Toronto	3476' -1262
Lansing	3496' -1282
BKC	3747' -1533
Marmaton	3784' -1570
Arbuckle	3806' -1592
LTD	3923' -1709
RTD	3920' -1706

Significant Sample Zone Descriptions

Topeka 30'

(3239' -1025):

Ls – Fine crystalline with fair to good scattered pinpoint vuggy and inter-crystalline porosity, light to good oil stain with light to fair saturation, fair show of free oil, fair odor, spotted yellow fluorescents.

Plattsmouth

(3379' -1165):

Ls – Fine crystalline, oolitic packstone in part with fair oomoldic and oolitic porosity, light to fair oil stain with light spotted saturation, slight show of free oil when broken, light odor, dull yellow fluorescents.

LKC “E” zone

(3569' -1355):

Ls – Fine crystalline, oolitic, mottled with gray shale in part with fair oolitic and inter-crystalline porosity, light to fair oil stain and saturation, slight show of free oil when broken, light odor, dull yellow fluorescents.

LKC “J” zone

(3683' -1469):

Ls – Fine crystalline, oolitic packstone in part with fair oomoldic and scattered oolitic porosity, light to fair oil stain with light spotted saturation, fair show of free oil, good odor, some barren rocks.

Arbuckle Upper

(3806' -1592):

Dolo – Fine sucrosic crystalline with fair inter-crystalline and scattered vuggy porosity, good oil stain and saturation in porosity, good show of free oil, good odor, fair to bright yellow fluorescents.

Arbuckle Lower (3829' -1615):

Dolo – Fine to medium rhombic crystalline with fair to good scattered inter-crystalline and vuggy porosity, fair oil stain and saturation in porosity, fair show of free oil, good odor, fair yellow fluorescents.

Structural Comparison

	Mustang Energy Corp Younger #2 Sec. 25 T13s R20w 990' FSL & 330' FEL	Tomlinson Operating Younger #1 Sec. 25 T13s R20w 1650' FSL & 990' FEL		Kimbark Oil & Gas Orth #1 Sec. 30 T13s R19w 990' FSL & 330' FWL	
Formation					
Anhydrite	1496' +718	1490' +716	(+2)	NA	NA
Base	1538' +676	NA	NA	NA	NA
Topeka	3209' -995	3198' -992	(-3)	NA	NA
Heebner	3454' -1240	3441' -1235	(-5)	3456' -1237	(-3)
Toronto	3476' -1262	3464' -1258	(-4)	3478' -1259	(-3)
Lansing	3496' -1282	3484' -1278	(-4)	3499' -1280	(-2)
BKC	3747' -1533	3741' -1535	(+2)	3744' -1525	(-7)
Marmaton	3784' -1570	3778' -1572	(+2)	3782' -1563	(-7)
Arbuckle	3806' -1592	3818' -1612	(+20)	3846' -1627	(+35)

Summary

The location for the Younger #2 was found via 3-D seismic survey. The new well ran structurally higher than expected on lower datums. No Drill Stem Tests were conducted. After all gathered data had been examined the decision was made to run 5 ½ inch production casing to further evaluate the Younger #2 well.

Recommended Perforations

Primary:

Arbuckle Lower	3829' – 3833'	Not Tested
Arbuckle Upper	3812' – 3218'	Not Tested

Secondary:

LKC J zone	3688' – 3690'	Not Tested
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Before Abandonment:

LKC K zone	3700' – 3703'	Not Tested
LKC E zone	3570' – 3575'	Not Tested

Respectfully Submitted,

Jason T Alm
Hard Rock Consulting, Inc.