

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	Raney Oil Company, LLC
Well Name	PRAY 4
Doc ID	1471653

All Electric Logs Run

micro
dual induction
sonic
Comp. Density

810 E 7TH
 PO Box 92
 EUREKA, KS 67045
 (620) 583-5561



Cement or Acid Field Report
 Ticket No. **4424**
 Foreman Kevin McCoy
 Camp EUREKA

Date	Cust. ID #	Lease & Well Number	Section	Township	Range	County	State	
4-9-19	1258	PRAY # 4	36	335	6E	Cowley	Ks	
Customer <u>RANEY OIL COMPANY LLC</u>			Safety Meeting KM AM CG		Unit # 104	Driver ALAN M.	Unit #	Driver
Mailing Address <u>4665 BAUER BROOK CT.</u>					112	CARB G.		
City <u>LAWRENCE</u>	State <u>Ks</u>	Zip Code <u>66049</u>						

Job Type SURFACE Hole Depth 315' K.B. Slurry Vol. 48 BBL Tubing _____
 Casing Depth 312' KB Hole Size 12 1/4 Slurry Wt. 15" Drill Pipe _____
 Casing Size & Wt. 8 5/8" 24" Cement Left in Casing 15' Water Gal/SK 6.5 Other _____
 Displacement 18.8 BBL Displacement PSI _____ Bump Plug to _____ BPM _____

Remarks: Safety Meeting: Rig up to 8 5/8 CASING. BREAK CIRCULATION w/ 10 BBL FRESH WATER. MIXED 200 SKS CLASS 'A' CEMENT w/ 3% CADZ, 2% GEL, 1/4" FLOSEAL/SK @ 15" GAL, YIELD 1.35 = 48 BBL SLURRY. DISPLACE w/ 18.8 BBL FRESH WATER. SHUT CASING IN. GOOD CEMENT RETURNS TO SURFACE = 10 BBL SLURRY TO PIT. JOB COMPLETE. RIG DOWN.

Code	Qty or Units	Description of Product or Services	Unit Price	Total
C 101	1	Pump Charge	890.00	890.00
C 107	60	Mileage	4.20	252.00
C 200	200 SKS	CLASS 'A' CEMENT	15.75	3150.00
C 205	565*	CADZ 3%	.63*	355.95
C 206	375*	GEL 2%	.21*	78.75
C 209	50*	FLOSEAL 1/4"/SK	2.35*	117.50
C 108.8	9.4 TONS	Ton Mileage, 60 miles	1.40	787.60
<u>THANK YOU</u>			Sub TOTAL	5633.90
			Sales Tax 6.5%	240.64
Authorization: <u>[Signature]</u> Title _____			Total	5874.44

I agree to the payment terms and conditions of services provided on the back of this job ticket. Any amendments to payment terms must be in writing on the front of this job ticket or in the Customer's records at ELITE's office.

810 E 7TH
 PO Box 92
 EUREKA, KS 67045
 (620) 583-5561



Cement or Acid Field Report
 Ticket No. **4430**
 Foreman Kevin McCoy
 Camp EUREKA

Date	Cust. ID #	Lease & Well Number	Section	Township	Range	County	State	
4-16-19	1258	PRAY # 4	36	33S	6E	Cowley	Ks	
Customer Raney Oil Company LLC			Unit #		Driver		Unit #	Driver
Mailing Address 4665 BAUER BROOK CT.			104		ALAN M.			
City LAWRENCE			110		CALEB G.			
State KS			Zip Code 66049					

Job Type Longstring Hole Depth 3556' KB Slurry Vol. 65 BBL TOTAL Tubing _____
 Casing Depth 3551.30' K.B. Hole Size 7 7/8 Slurry Wt. 13.8* Drill Pipe _____
 Casing Size & Wt. 5 1/2" 17# Cement Left in Casing 45.95' Water Gal/SK 9.0 Other _____
 Displacement 84 BBL Displacement PSI 1000 Bump Plug to 1500 PSI BPM _____

Remarks: Safety Meeting: 5 1/2" 17# casing w/ Basket shoe set @ 3551.30' K.B. Rig up to 5 1/2
Casing. Drop BRASS BALL. Set BASKET shoe @ 900 PSI. Pump 15 BBL fresh water ahead.
Mixed 200 SKS THICK Set Cement w/ 2# Phenoseal / SK, 1/4% CFL-115 @ 13.8#/GAL, yield
1.65 = 59 BBL slurry. wash out Pump & Lines. Shut down. Release LATCH down Plug.
Displace Plug to seat w/ 84 BBL fresh water (First 40 BBL was city water w/ KCL)
FINAL Pumping Pressure 1000 PSI. Bump Plug to 1500 PSI. WAIT 2 MINS. Release
PRESSURE. FLOAT & Plug Held. Good CIRCULATION @ ALL times while Cementing.
Job Complete. Rig down.

Plugged RAT Hole w/ 20 SKS
CENTRALIZERS ON #1, 4, 5, 6, 9, 10, 11, 18, 28, 38 BASKETS 1 in the middle of #3 ON TOP OF #7 #29

Code	Qty or Units	Description of Product or Services	Unit Price	Total
C 102	1	Pump Charge	1100.00	1100.00
C 107	60	Mileage	4.20	252.00
C 201	220 SKS	THICK Set Cement } 200 SKS ON Longstring	20.50	4510.00
C 208	440#	Phenoseal 2#/SK } 20 SKS IN R.H.	1.30#	572.00
C 211	50*	CFL-115 1/4% Fluid Loss	11.00	550.00
C 108B	12.1 TONS	TON Mileage 60 miles	1.40	1016.40
C 222	5 gals	KCL (IN First 40 BBL OF Displacement water)	30.00	150.00
C 761	1	5 1/2 Type BASKET Shoe	1355.00	1355.00
C 421	1	5 1/2 LATCH down Plug	242.00	242.00
C 604	3	5 1/2 Cement BASKETS	236.00	708.00
C 504	10	5 1/2 x 7 7/8 CENTRALIZERS	50.00	500.00
C 781	1	5 1/2 Stop Ring	32.00	32.00
			Sub TOTAL	10,987.40
			6.5% Sales Tax	560.24
			Total	11,547.64

Authorization Roger Martin Title Geo

I agree to the payment terms and conditions of services provided on the back of this job ticket. Any amendments to payment terms must be in writing on the front of this job ticket or in the Customer's records at ELITE's office.

Conservation Division
266 N. Main St., Ste. 220
Wichita, KS 67202-1513



Phone: 316-337-6200
Fax: 346-337-6211
<http://kcc.ks.gov/>

Dwight D. Keen, Chair
Shari Feist Albrecht, Commissioner
Susan K. Duffy, Commissioner

Laura Kelly, Governor

September 12, 2019

Thomas Raney
Raney Oil Company, LLC
4665 BAUER BROOK CT.
LAWRENCE, KS 66049-9013

Re: ACO-1
API 15-035-24702-00-00
PRAY 4
SW/4 Sec.31-33S-06E
Cowley County, Kansas

Dear Thomas Raney:

K.A.R. 82-3-107 provides for all completion information to be filed within 120 days of the spud date. Subsection(e)(2) of that regulation states "All rights to confidentiality shall be lost if the filings are not timely."

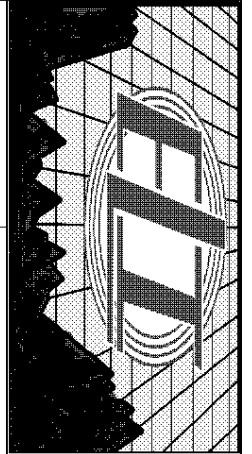
The above referenced well was spudded on 04/08/2019 and the ACO-1 was received on September 12, 2019 (not within the 120 days timely requirement).

Therefore, your request for confidential treatment of data contained within the ACO-1 filing cannot be granted at this time.

If you should have any questions, please do not hesitate to contact me at (316)337-6200.

Sincerely,

Production Department



**COMPENSATED
DENSITY / NEUTRON
PE LOG**

Company RANEY OIL COMPANY, LLC.
Well PRAY #4
Field CABIN VALLEY
County COWLEY
State KANSAS

Company RANEY OIL COMPANY, LLC.
Well PRAY #4
Field CABIN VALLEY
County COWLEY State KANSAS

Location: API # : 15-035-24702-0000
351' FSL & 2458' FWL
SE - SE - SW/4
SEC 31 TWP 33S RGE 6E

Permanent Datum GROUND LEVEL Elevation 1259
Log Measured From KELLY BUSHING 13' A.G.L.
Drilling Measured From KELLY BUSHING

Other Services
DIL/MEL
SONIC
Elevation
K.B. 1272
D.F. 1270
G.L. 1259

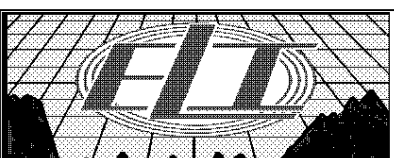
Date	4/16/19
Run Number	ONE
Depth Driller	3556
Depth Logger	3558
Bottom Logged Interval	3534
Top Log Interval	1800
Casing Driller	8 5/8"@307'
Casing Logger	312
Bit Size	7 7/8"
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.3/49
pH / Fluid Loss	11.0/7.2
Source of Sample	FLOWLINE
Rim @ Meas. Temp	1.10@80F
Rmf @ Meas. Temp	.825@80F
Rmc @ Meas. Temp	1.32@80F
Source of Rmf / Rmc	MEASUREMENT
Rim @ BHT	.786@112F
Time Circulation Stopped	2 HOURS
Time Logger on Bottom	12:45 A.M.
Maximum Recorded Temperature	112F
Equipment Number	922339
Location	HAYS, KANSAS
Recorded By	JEFF LUEBBERS
Witnessed By	ROGER MARTIN

<<< Fold Here >>>

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

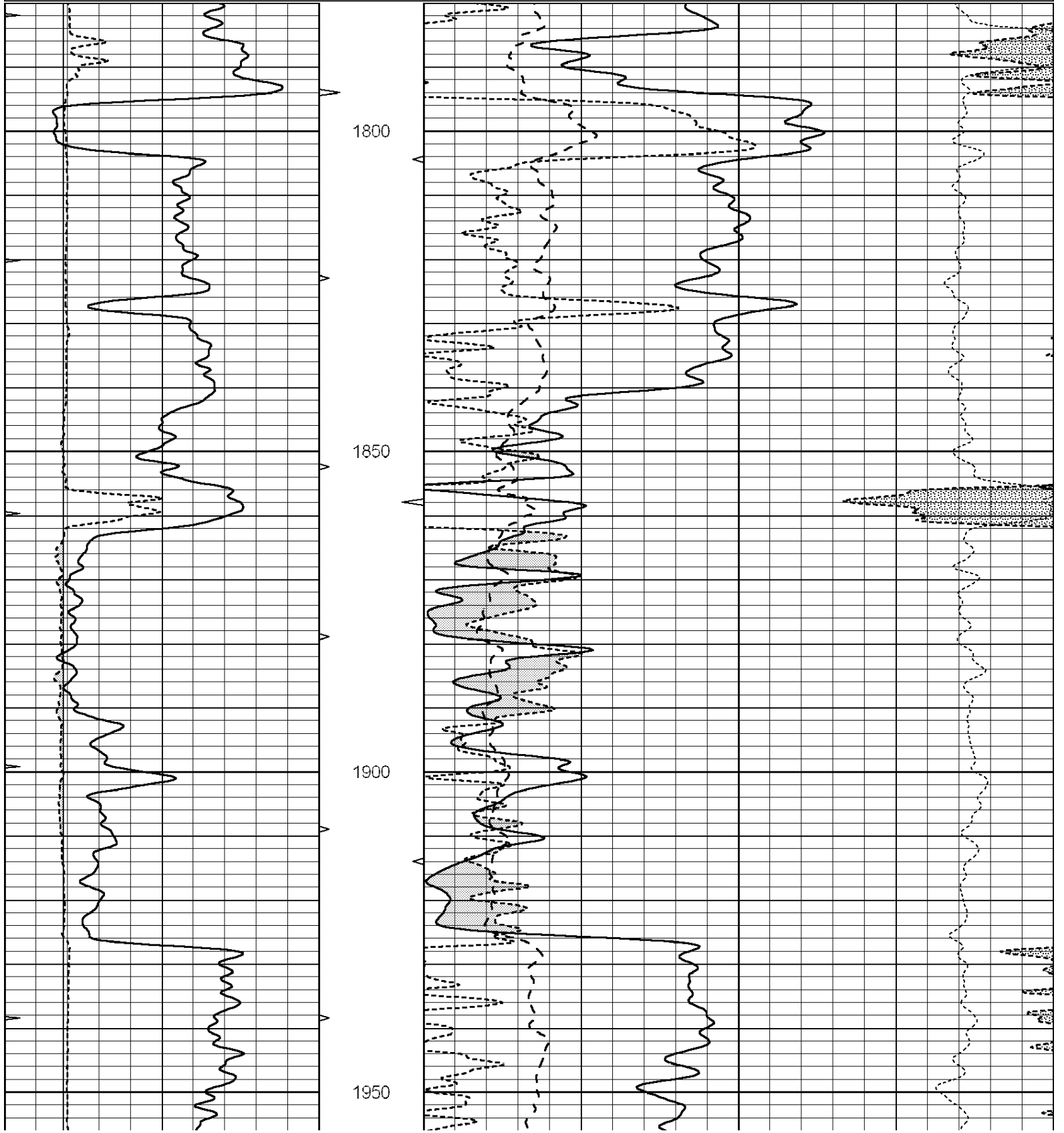
THANK YOU FOR USING ELI WIRELINE HAYS, KANSAS (785) 628-6395
DIRECTIONS
WINFIELD, KS., E. ON HWY 160 TO "COWLEY CR #1", 5S. TO "RD. 212", 3E. TO " 181ST.", 3S. FOLLOW
CURVES E. & S. TO GATE

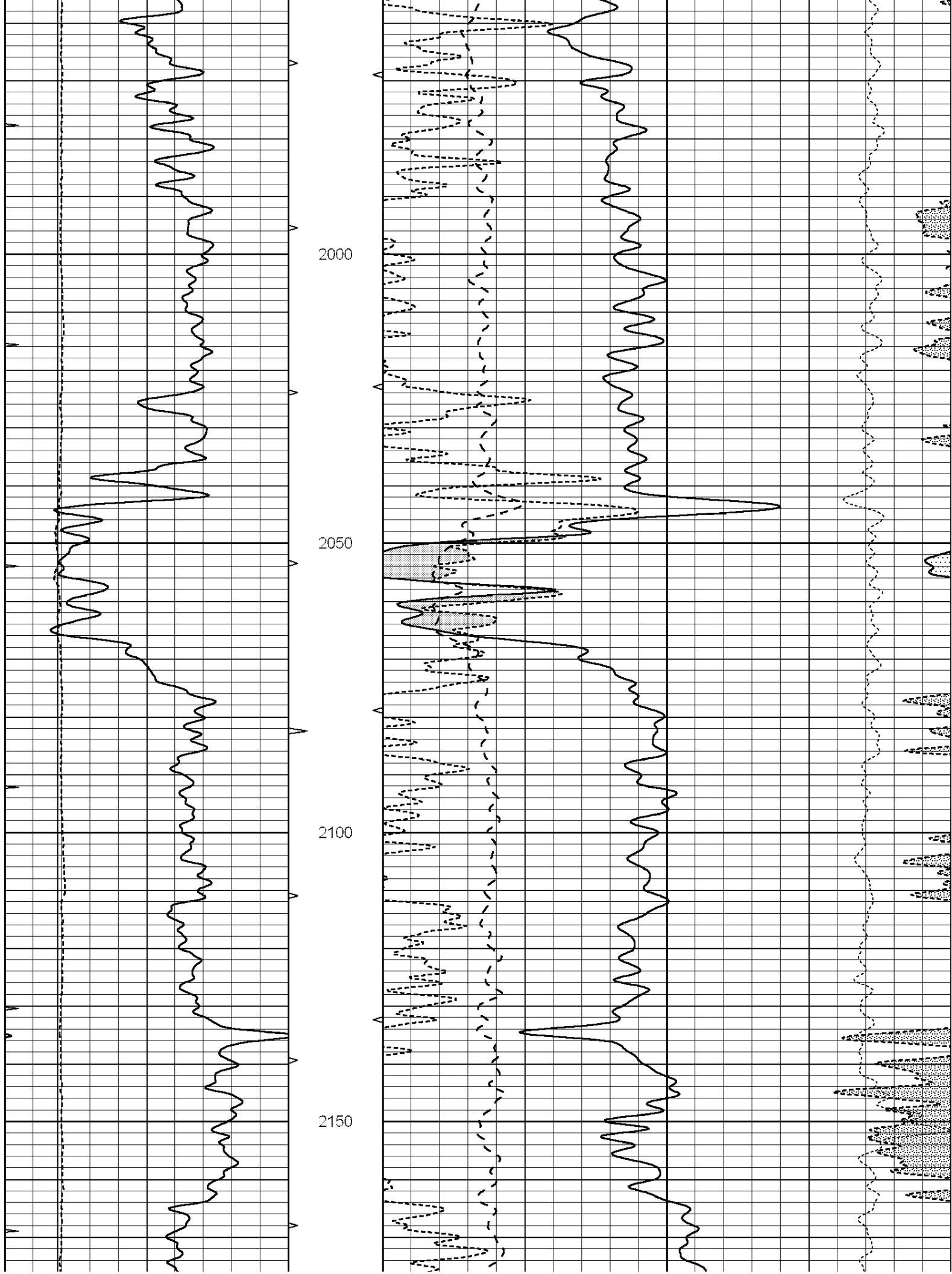


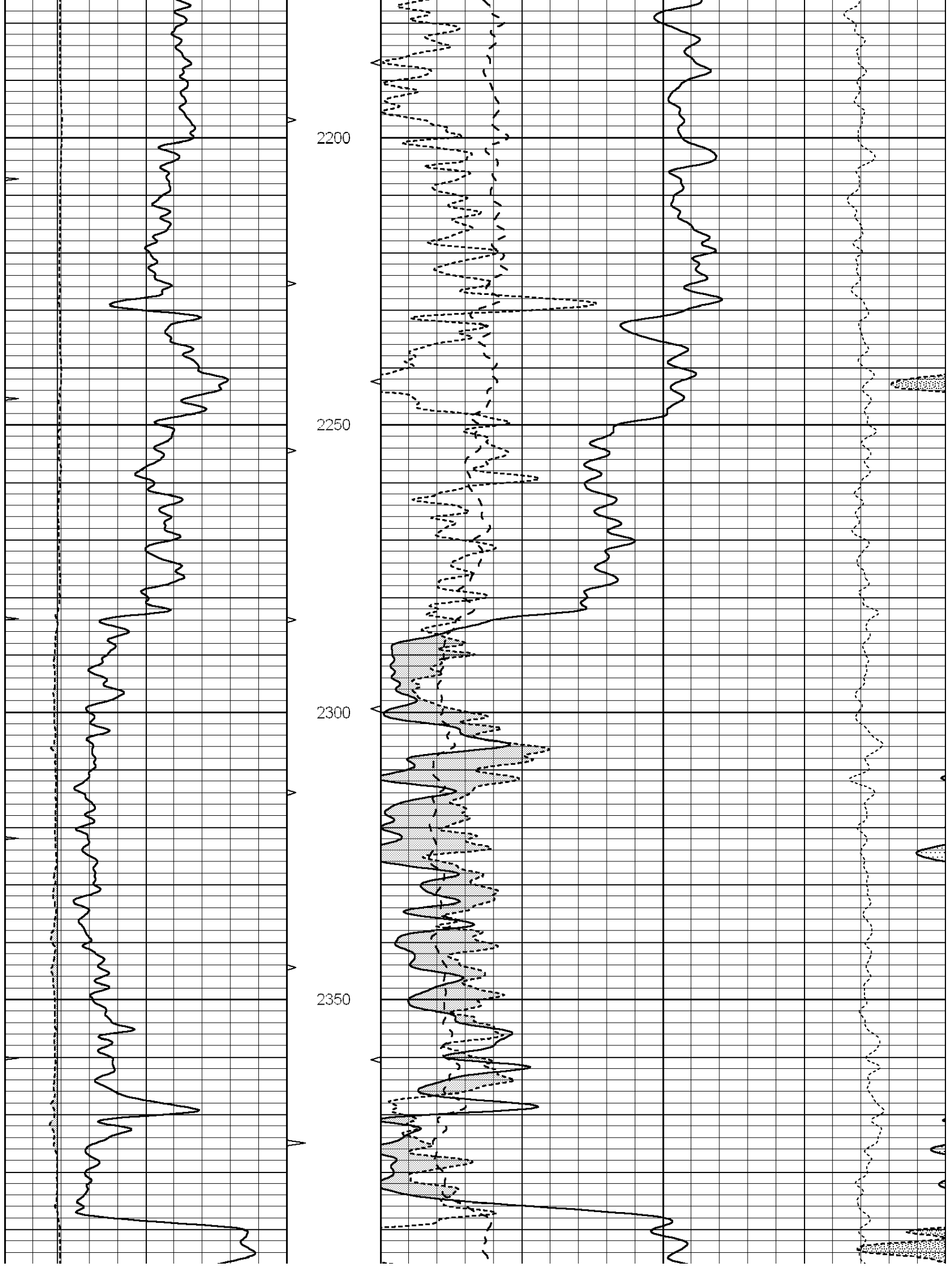
MAIN SECTION

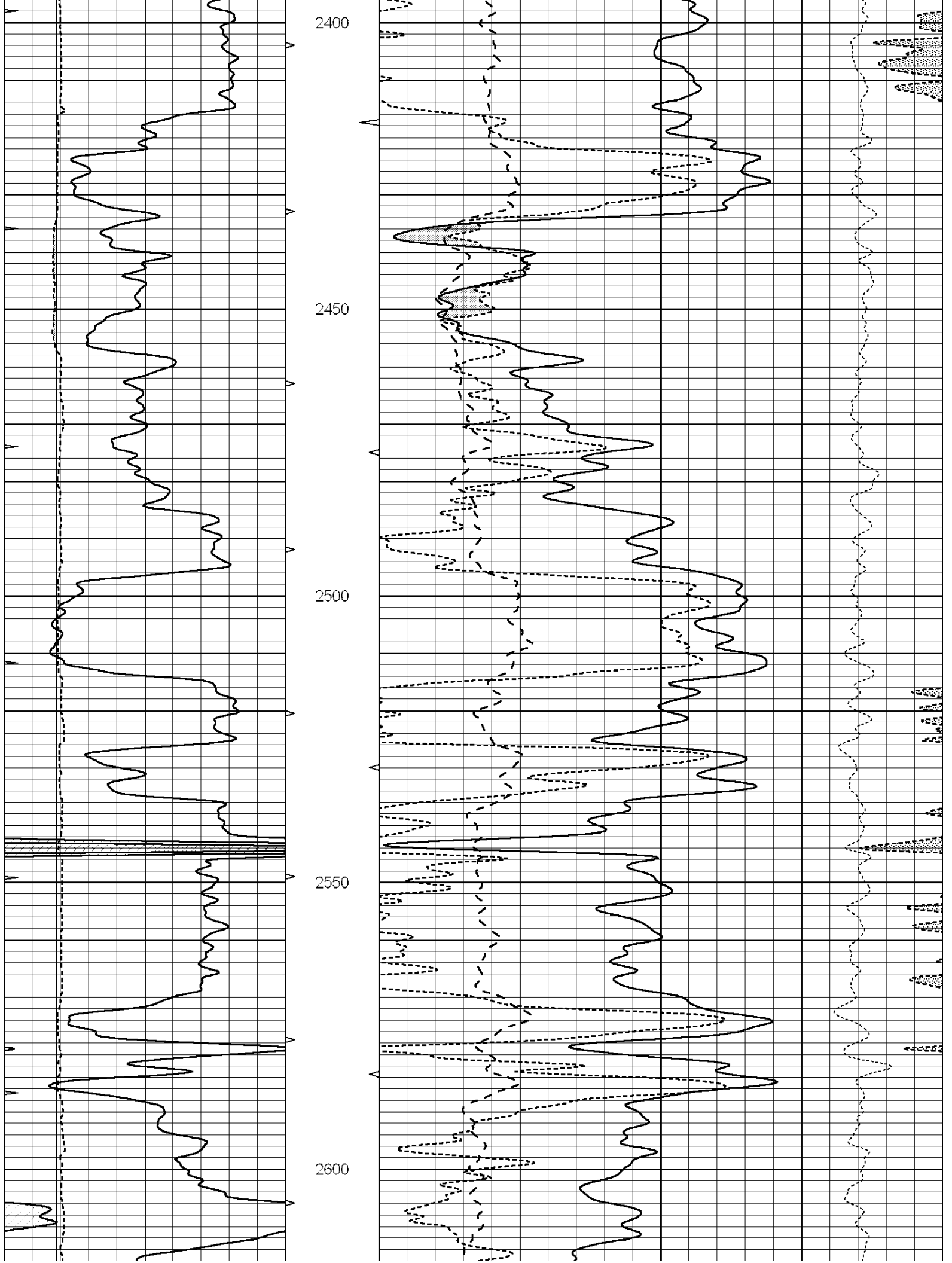
Database File: 3612pe.db
 Dataset Pathname: pass3.3
 Presentation Format: ldt_neu
 Dataset Creation: Wed Apr 17 02:00:13 2019 by Calc SOC 120430
 Charted by: Depth in Feet scaled 1:240

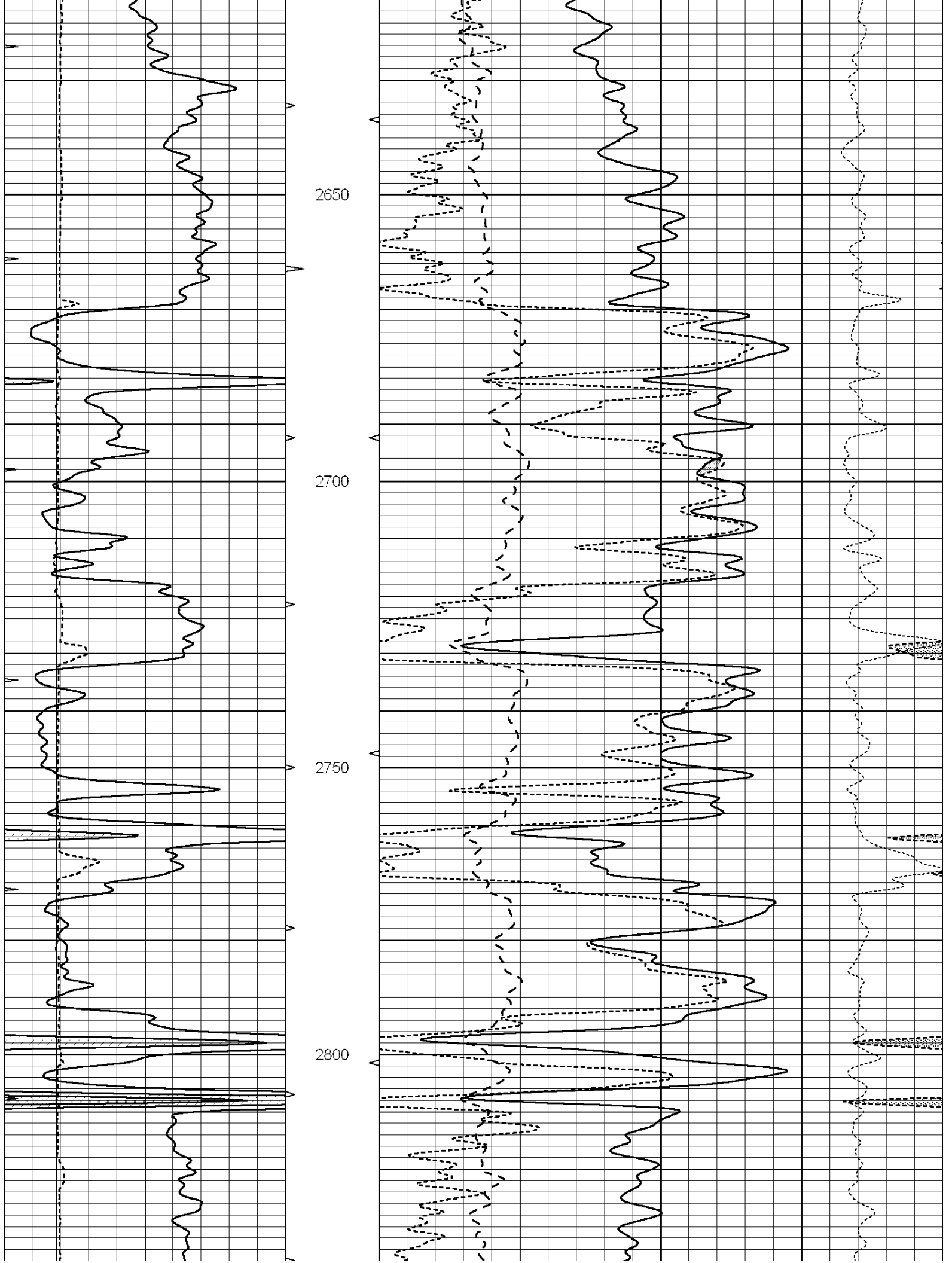
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)		-10
6	CALIPER (in)	16	10 (ft3)	0	COMPENSATED NEUTRON (pu)		-10
0	MINMK	20	TBHV	0	PE	10	-0.25 CORRECTION (g/cc) 0.25
			0 (ft3)	10			

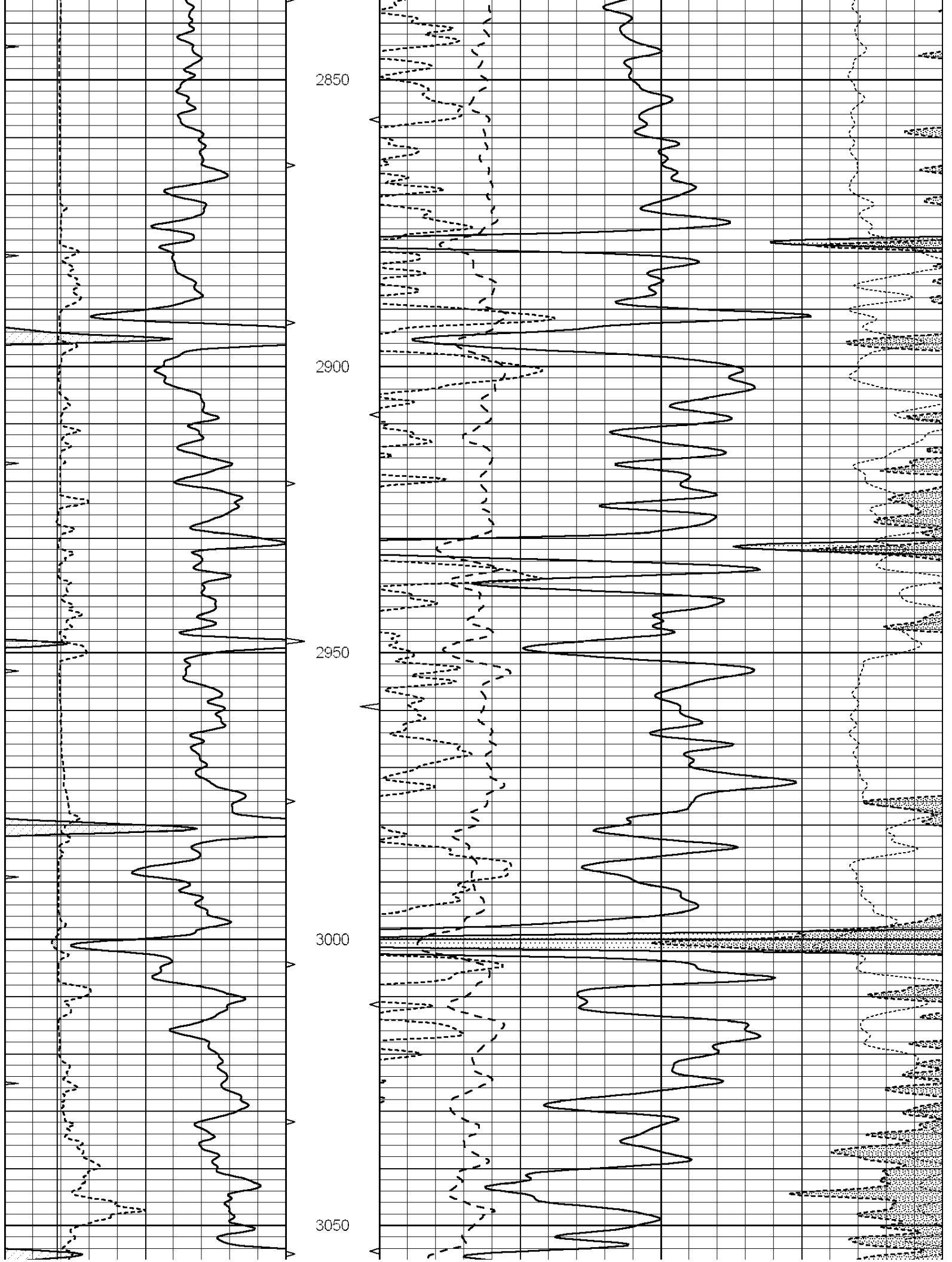


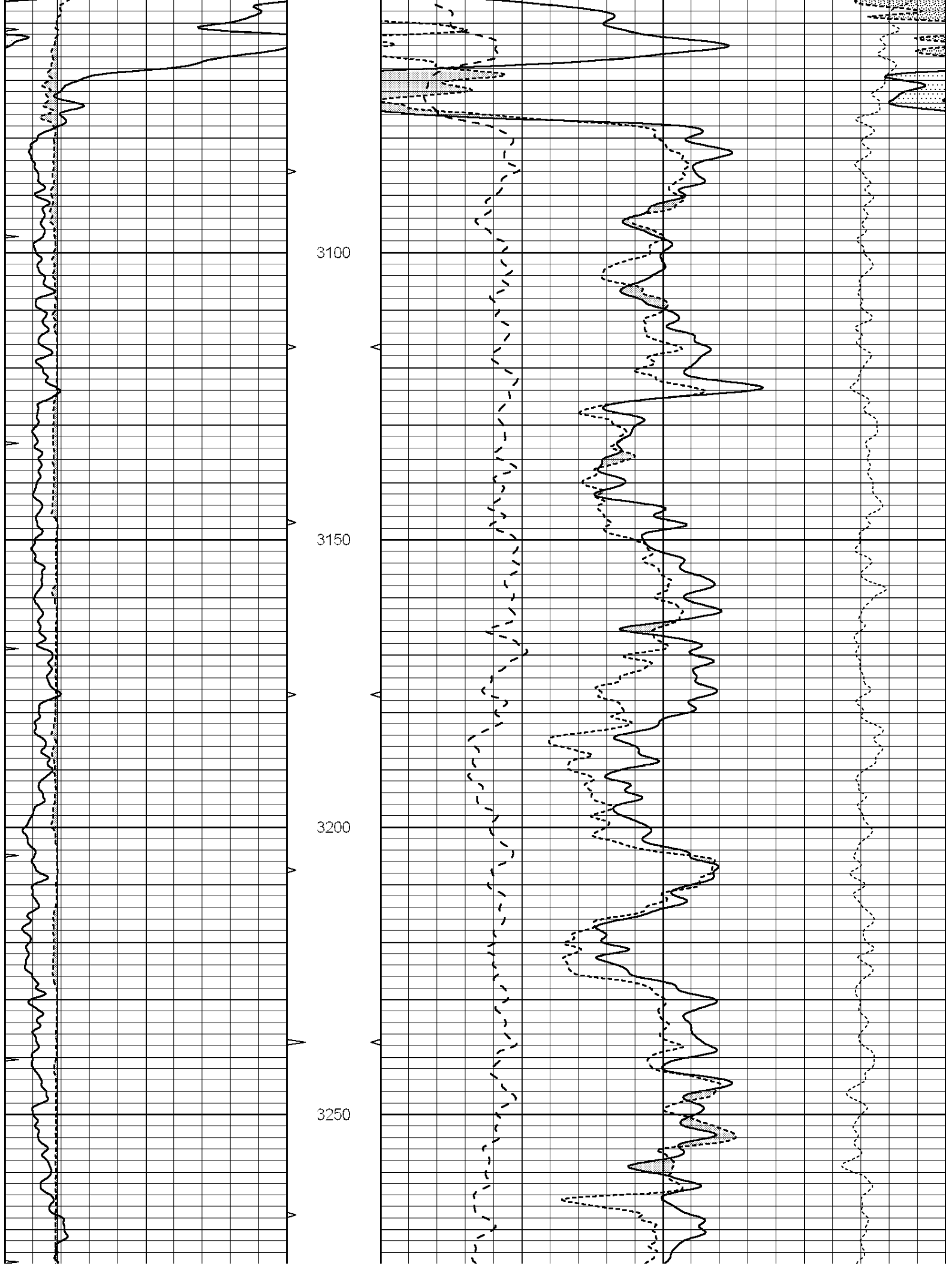


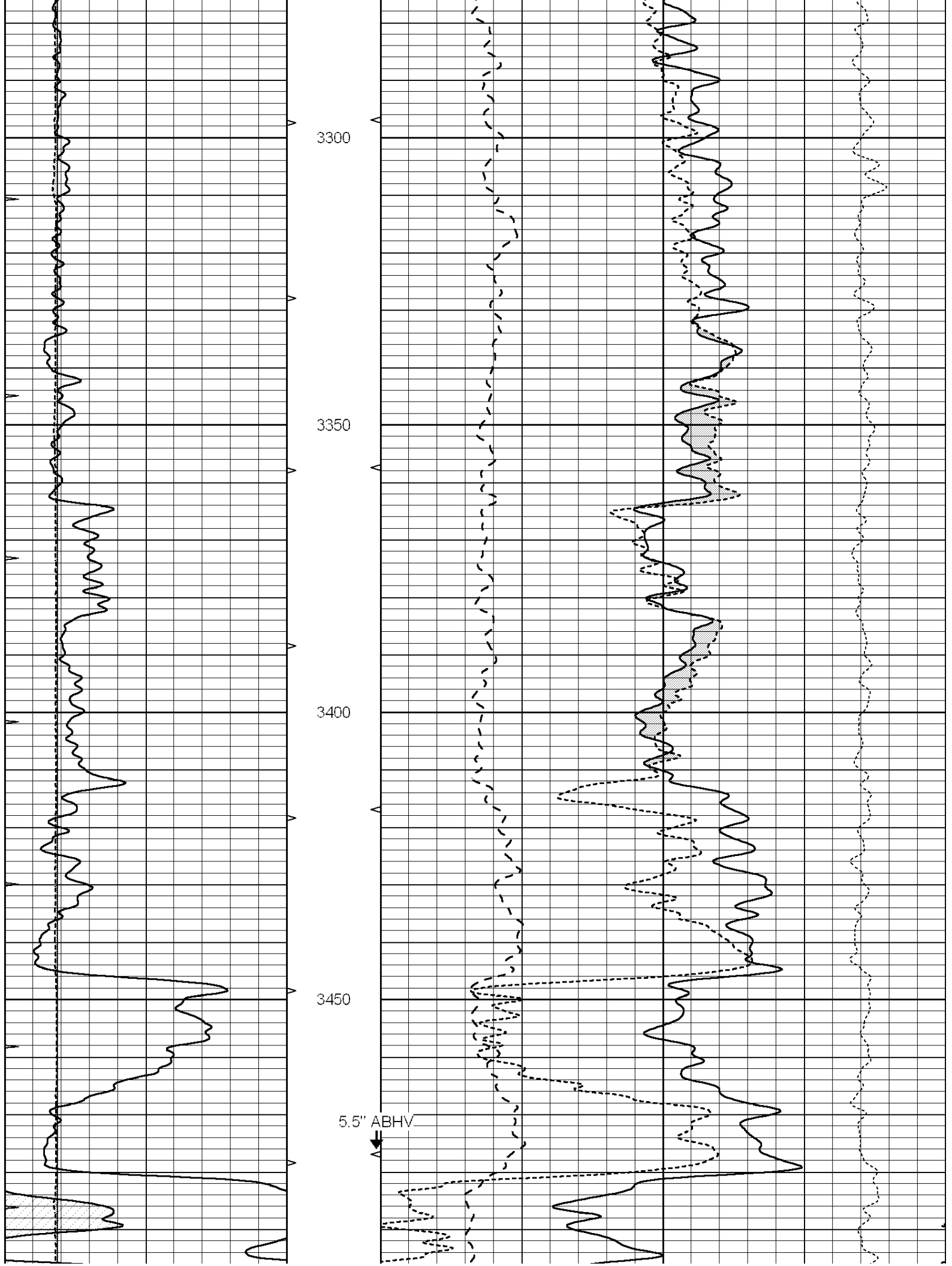


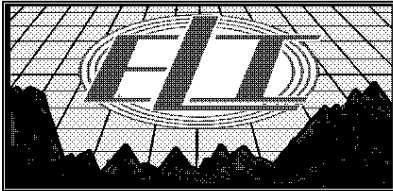
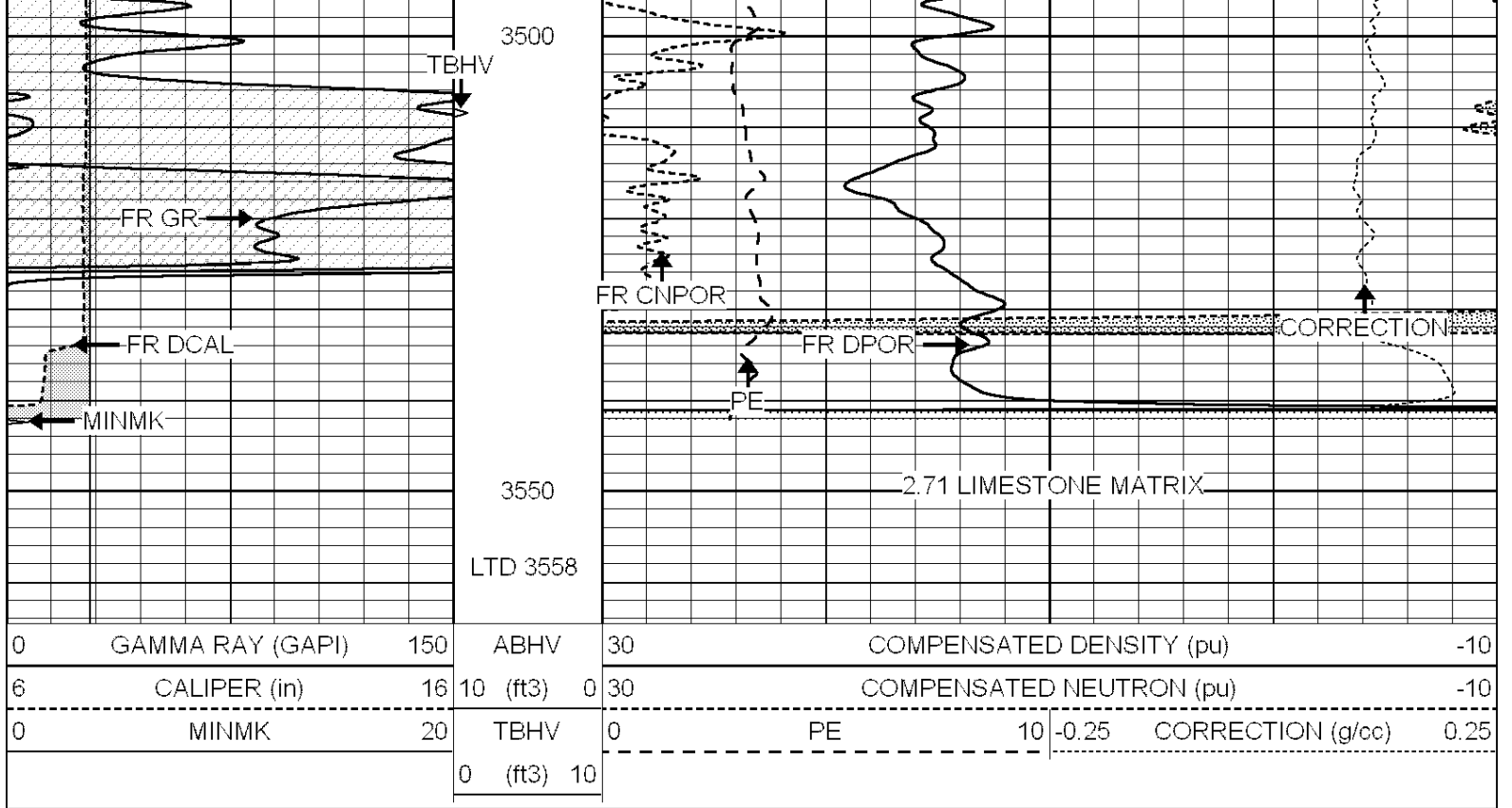








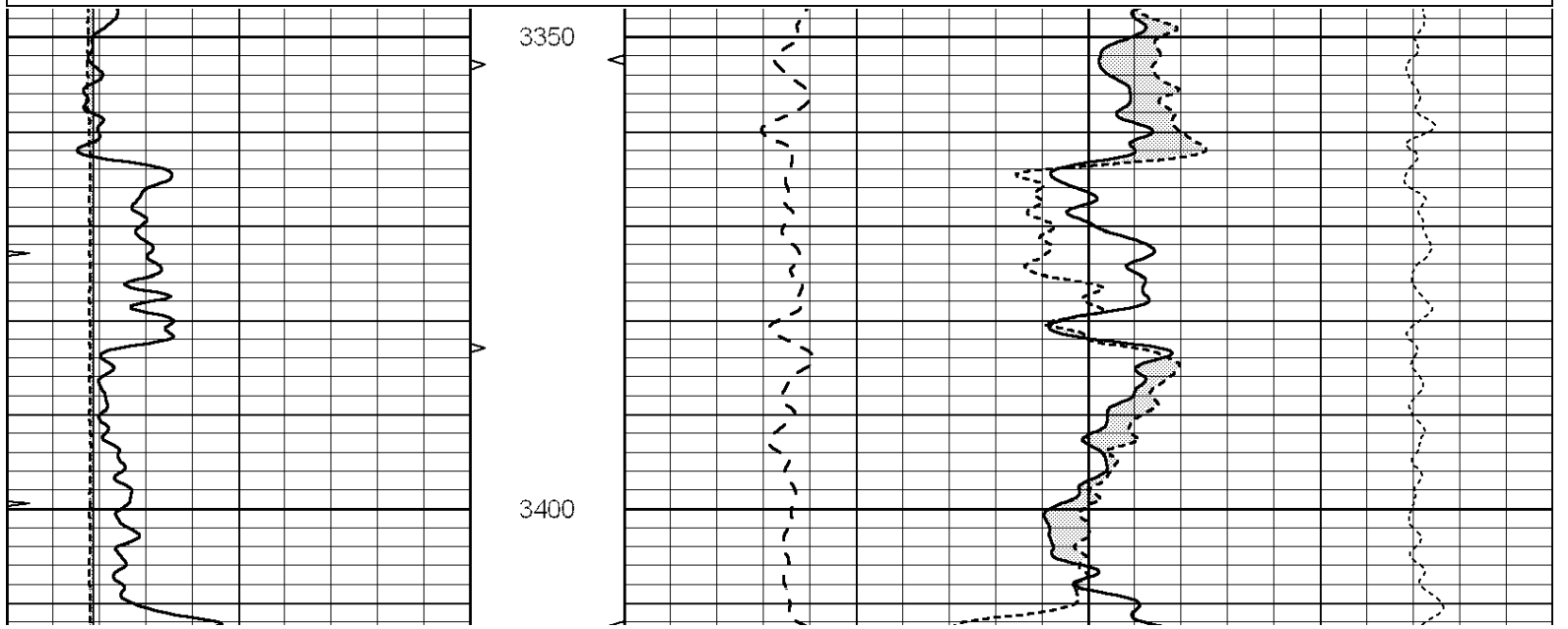


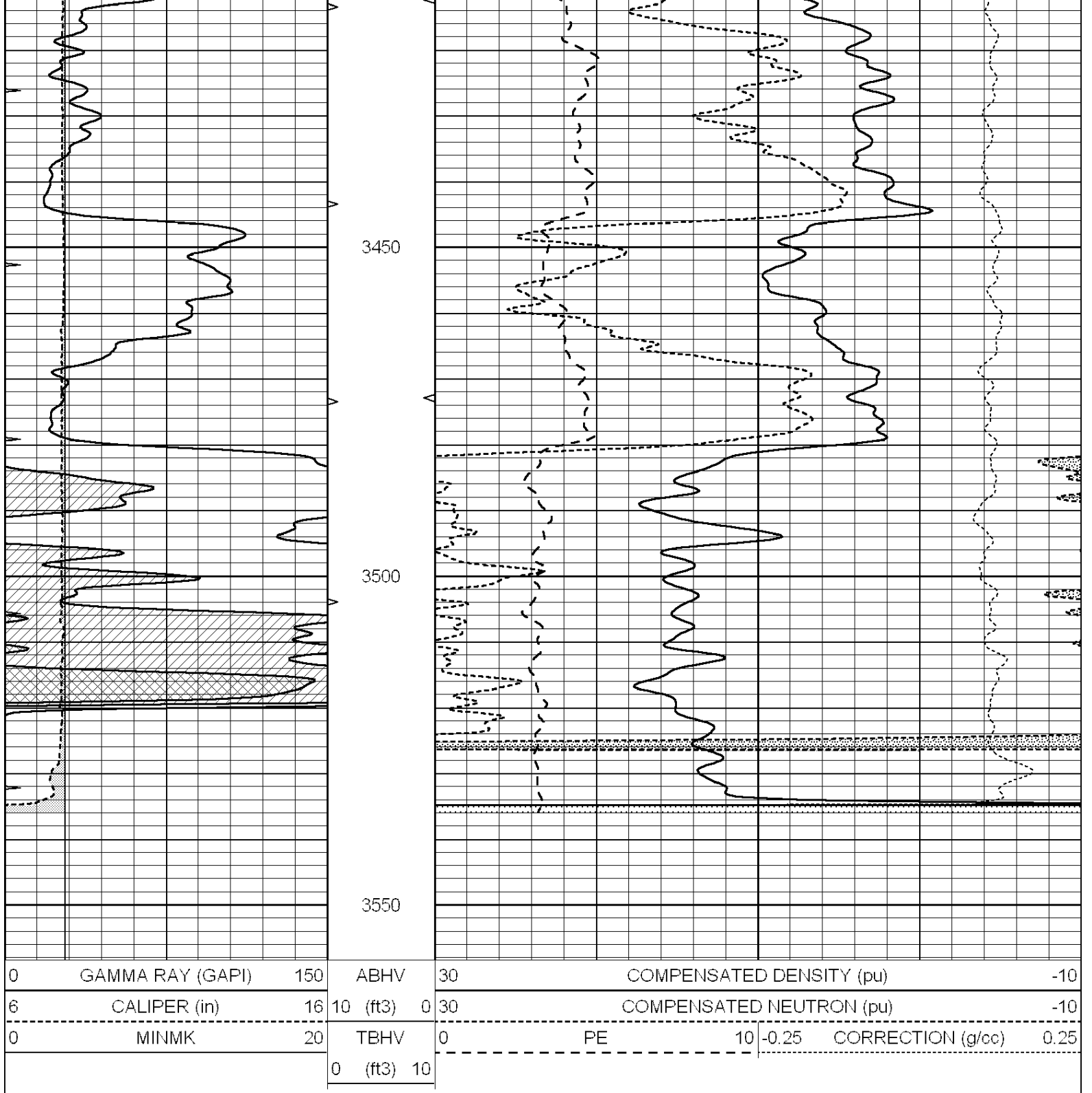


REPEAT SECTION

Database File: 3612pe.db
 Dataset Pathname: pass2.4
 Presentation Format: ldt_neu
 Dataset Creation: Wed Apr 17 02:14:35 2019 by Calc SOC 120430
 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	PE	10 -0.25 CORRECTION (g/cc) 0.25
			0 (ft3)	10		





Calibration Report

Database File: 1598ddn.db
 Dataset Pathname: pass4
 Dataset Creation: Wed Aug 30 02:13:00 2017 by Log SOC 120430

Dual Induction Calibration Report

Serial-Model: PROBE7-DILG
 Surface Cal Performed: Wed Aug 30 00:06:33 2017
 Downhole Cal Performed: Mon Jul 28 12:02:56 2008
 After Survey Verification Performed: Mon Jul 28 12:02:56 2008

Surface Calibration

Readings

References

Results

Loop:	Air	Loop		Air	Loop		m	b
Deep	-0.014	0.629	V	0.000	400.000	mmho/m	620.000	0.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	675.000	-44.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.011	0.610	V	0.000	400.000	mmho/m	667.135	-7.256
Medium	0.005	0.712	V	0.000	464.000	mmho/m	655.677	-3.102

Downhole Calibration								
	Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	14.508	388.384	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	166.367	504.400	mmho/m	1.000	0.000
LL3		7.500	V		1400.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-7.200	V		4000.000	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: 002 Model: PRB

Master Calibration		Performed Mon Aug 21 11:27:42 2017						
	Background	Magnesium	Aluminum	Sandstone				
Window 1	837.1	10632.5	2945.1	12110.1				cps
Window 2	772.0	9117.4	2570.1	10197.3				cps
Window 3	631.7	4669.0	1481.9	5042.9				cps
Window 4	187.0	187.5	185.9	189.9				cps
Long Space	0.0	8345.4	1798.1	9425.3				cps
Short Space	1.1	1927.9	1285.9	2050.2				cps
Rho		1.7100	2.5960	1.3800				g/cc
Pe		0.0000	2.5700	1.5500				
Rib Angle	: 45.2	Rib Slope	: 1.008	Density/Spine Ratio				: 0.558
Spine Angle	: 75.2	Spine Slope	: 3.790	Spine Intercept				: -19.6

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: 070808
Tool Model: Probe

PRE-SURVEY VERIFICATION

Detector	Readings	Measured	Target
Short Space	cps		
Long Space	cps	pu	pu

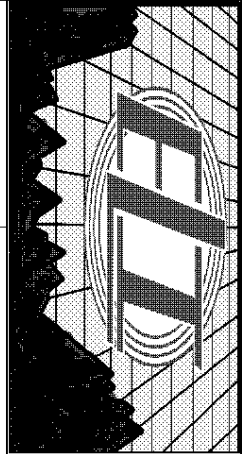
POST-SURVEY VERIFICATION

Detector	Readings	Measured	Target
Short Space	cps		
Long Space	cps	pu	pu

Gamma Ray Calibration Report

Serial Number: 070558
Tool Model: OPEN_GR
Performed: Wed May 31 00:09:32 2017

Calibrator Value: 1.0 GAPI
Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps
Sensitivity: 0.2800 GAPI/cps



**COMPENSATED
DENSITY / NEUTRON
PE LOG**

Company RANEY OIL COMPANY, LLC.
Well PRAY #4
Field CABIN VALLEY
County COWLEY
State KANSAS

Company RANEY OIL COMPANY, LLC.
Well PRAY #4
Field CABIN VALLEY
County COWLEY State KANSAS

Location: API # : 15-035-24702-0000
351' FSL & 2458' FWL
SE - SE - SW/4
SEC 31 TWP 33S RGE 6E
Permanent Datum GROUND LEVEL Elevation 1259
Log Measured From KELLY BUSHING 13' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
DIL/MEL
SONIC
Elevation
K.B. 1272
D.F. 1270
G.L. 1259

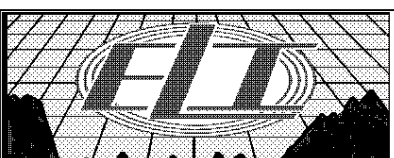
Date	4/16/19		
Run Number	ONE		
Depth Driller	3556		
Depth Logger	3558		
Bottom Logged Interval	3534		
Top Log Interval	1800		
Casing Driller	8 5/8"@307'		
Casing Logger	312		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 1,600 PPM	
Density / Viscosity	9.3/49		
pH / Fluid Loss	11.0/7.2		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	1.10@80F		
Rmf @ Meas. Temp	.825@80F		
Rmc @ Meas. Temp	1.32@80F		
Source of Rmf / Rmc	MEASUREMENT		
Rim @ BHT	.786@112F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	12:45 A.M.		
Maximum Recorded Temperature	112F		
Equipment Number	922339		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	ROGER MARTIN		

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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

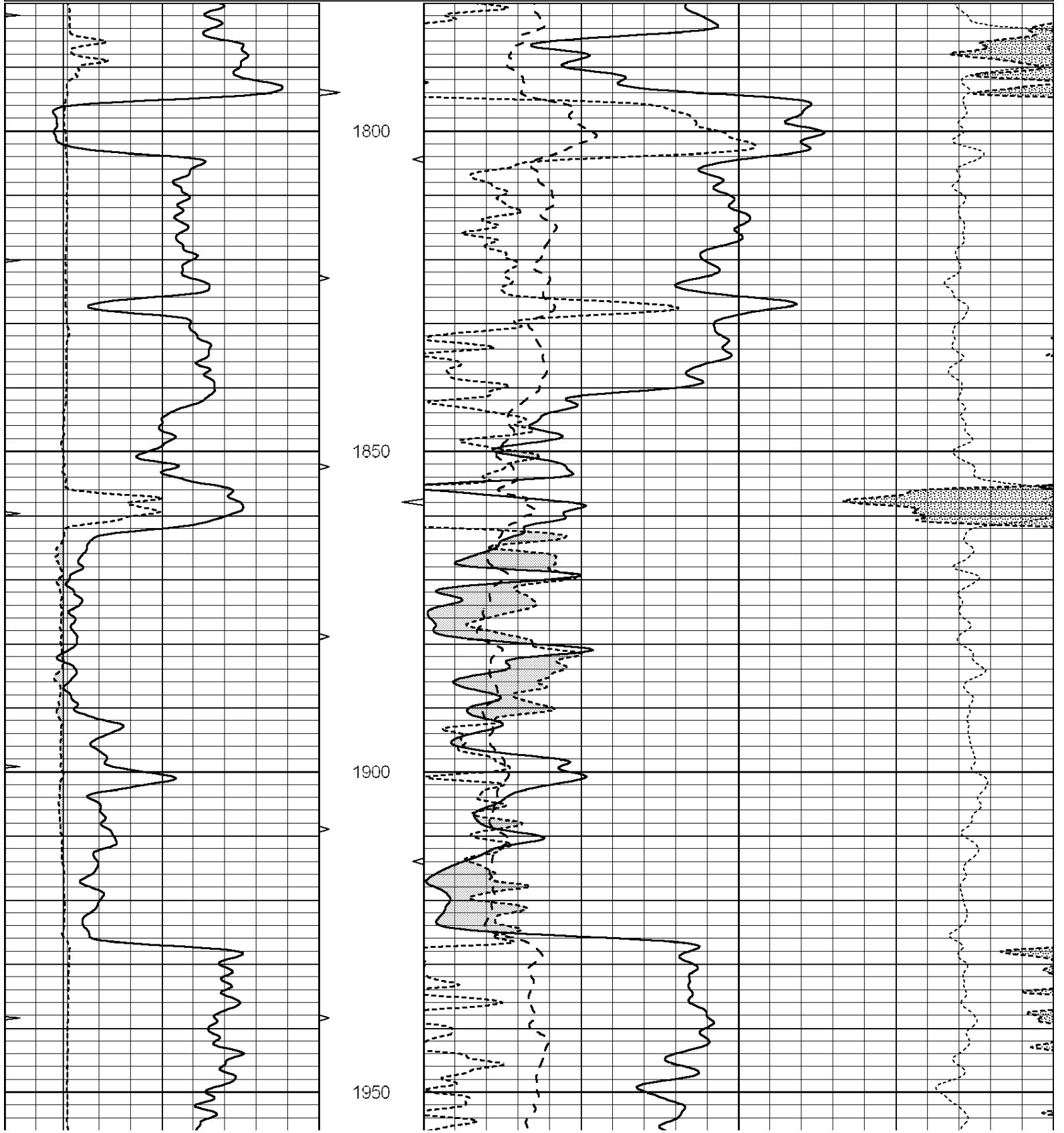
THANK YOU FOR USING ELI WIRELINE HAYS, KANSAS (785) 628-6395
DIRECTIONS
WINFIELD, KS., E. ON HWY 160 TO "COWLEY CR #1", 5S. TO "RD. 212", 3E. TO " 181ST.", 3S. FOLLOW
CURVES E. & S. TO GATE

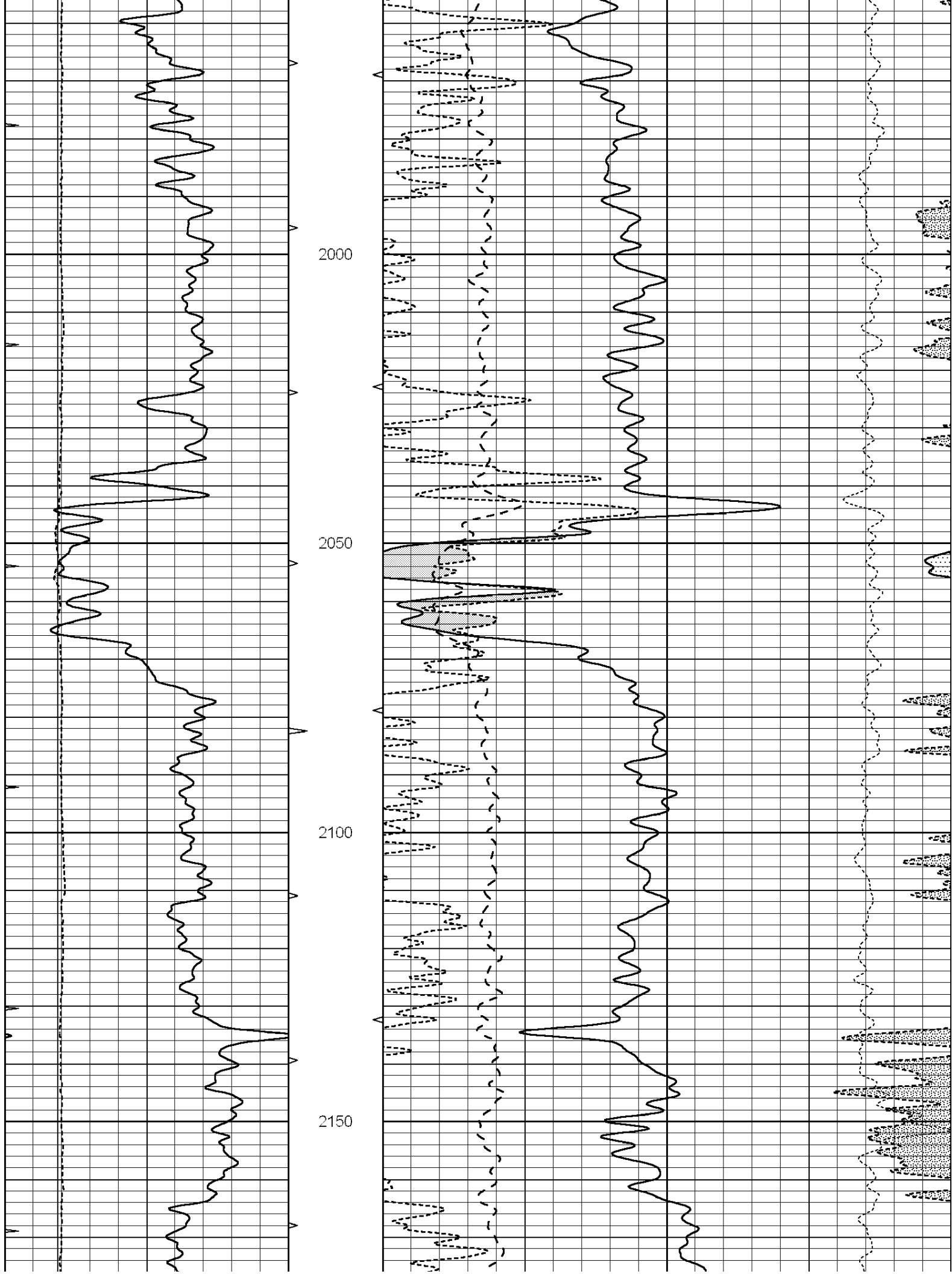


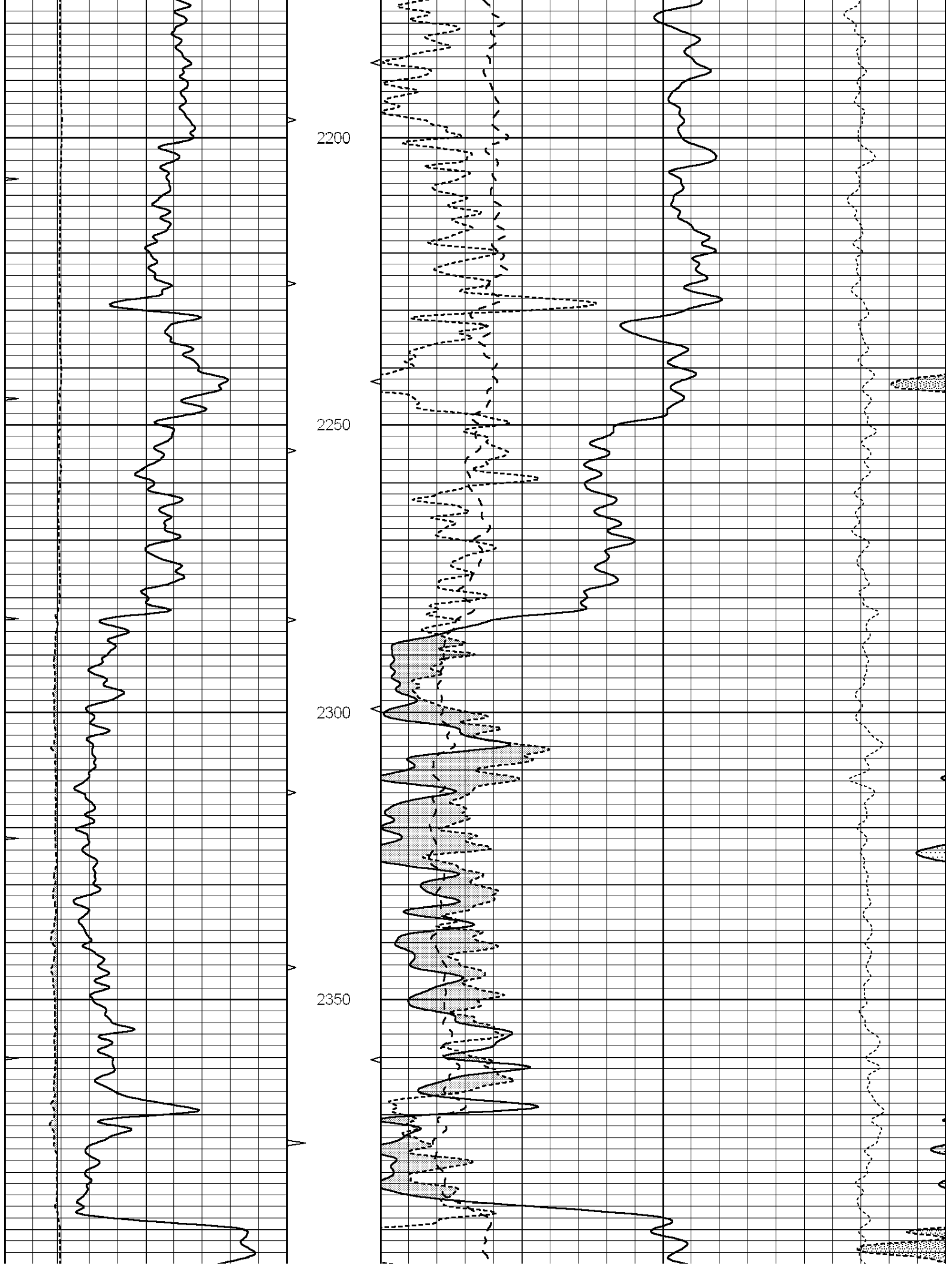
MAIN SECTION

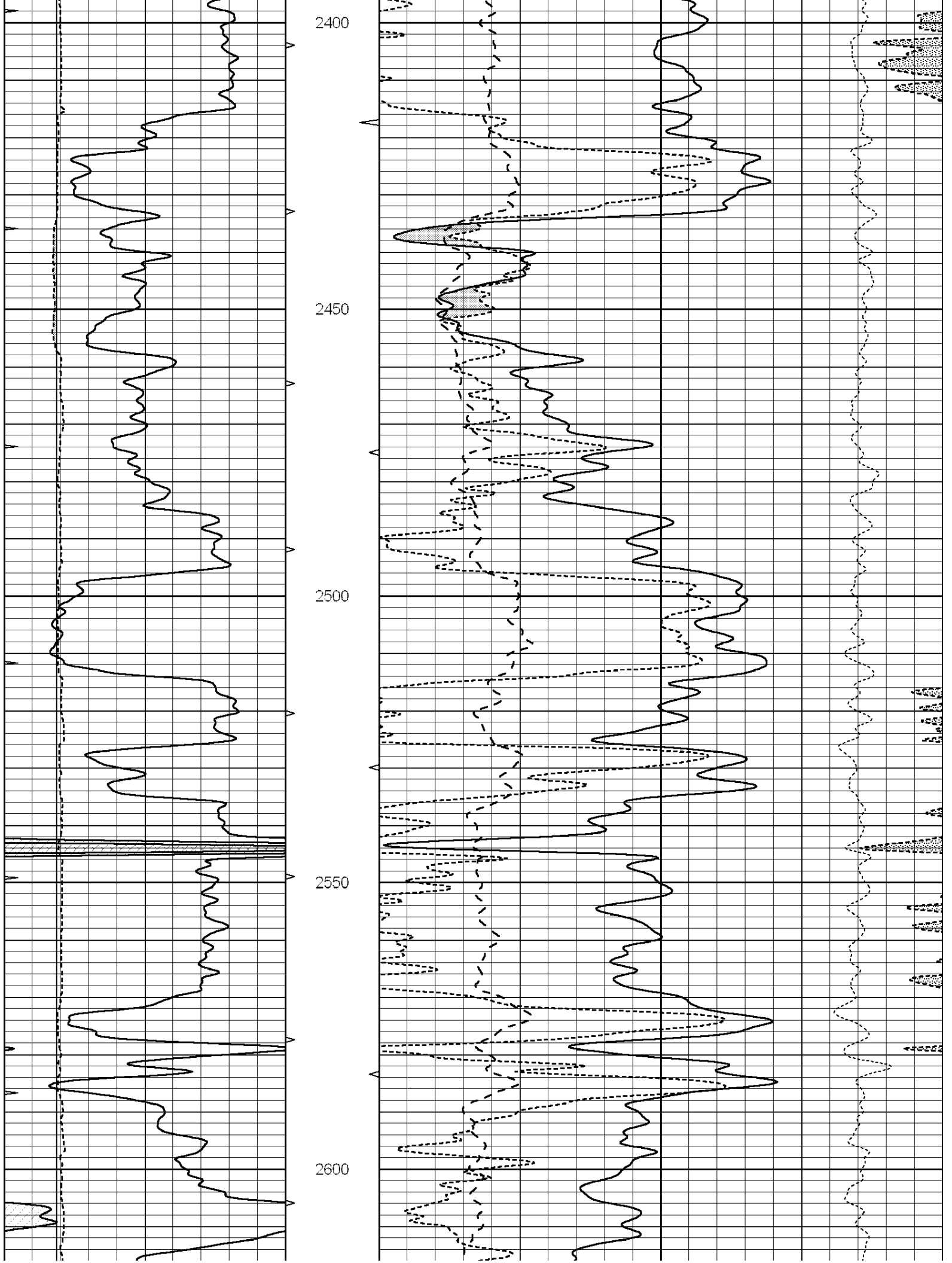
Database File: 3612pe.db
 Dataset Pathname: pass3.3
 Presentation Format: ldt_neu
 Dataset Creation: Wed Apr 17 02:00:13 2019 by Calc SOC 120430
 Charted by: Depth in Feet scaled 1:240

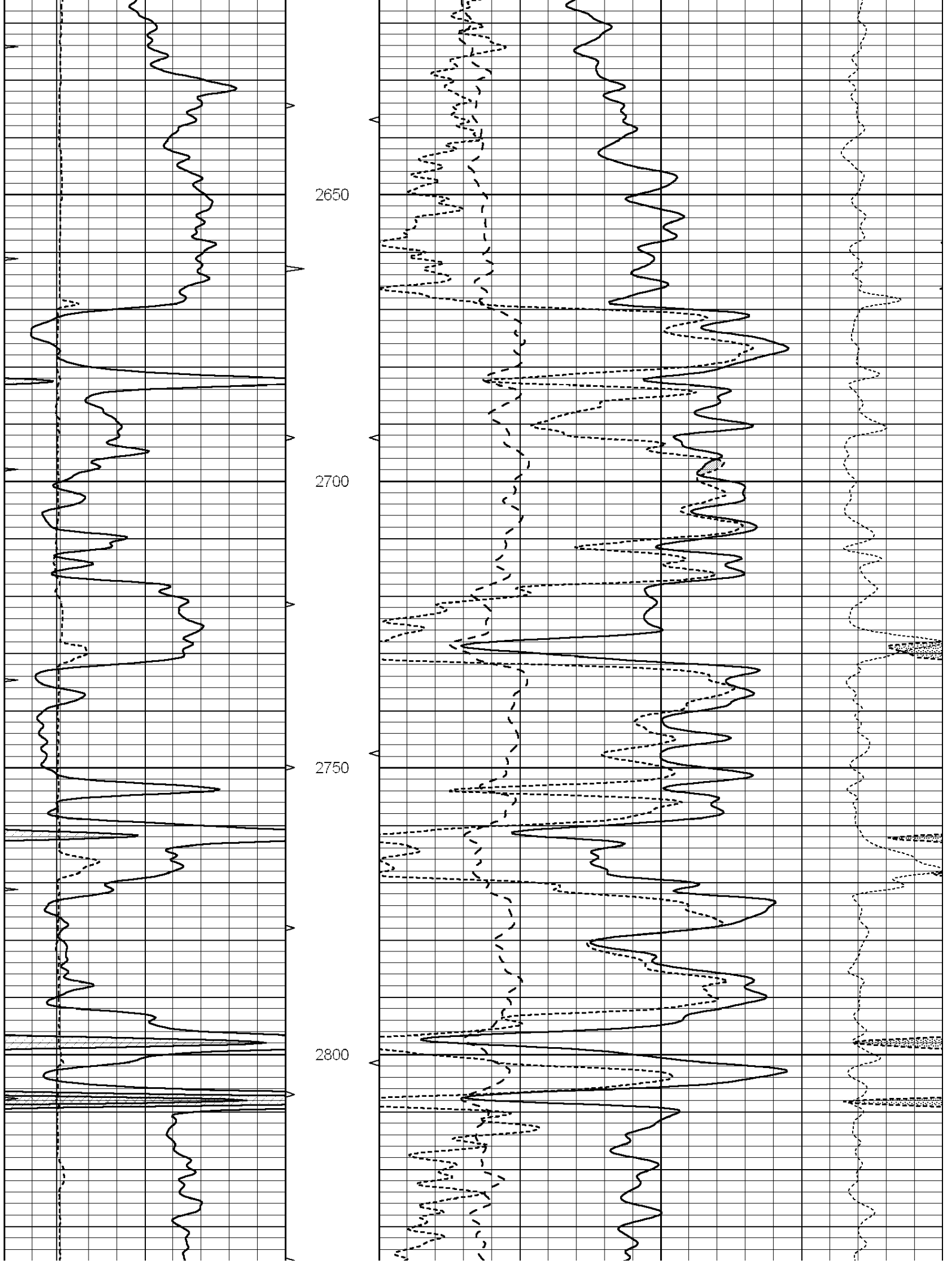
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)			-10	
6	CALIPER (in)	16	10 (ft3)	0	30	COMPENSATED NEUTRON (pu)			-10
0	MINMK	20	TBHV	0	PE	10	-0.25	CORRECTION (g/cc)	0.25
			0 (ft3)	10					

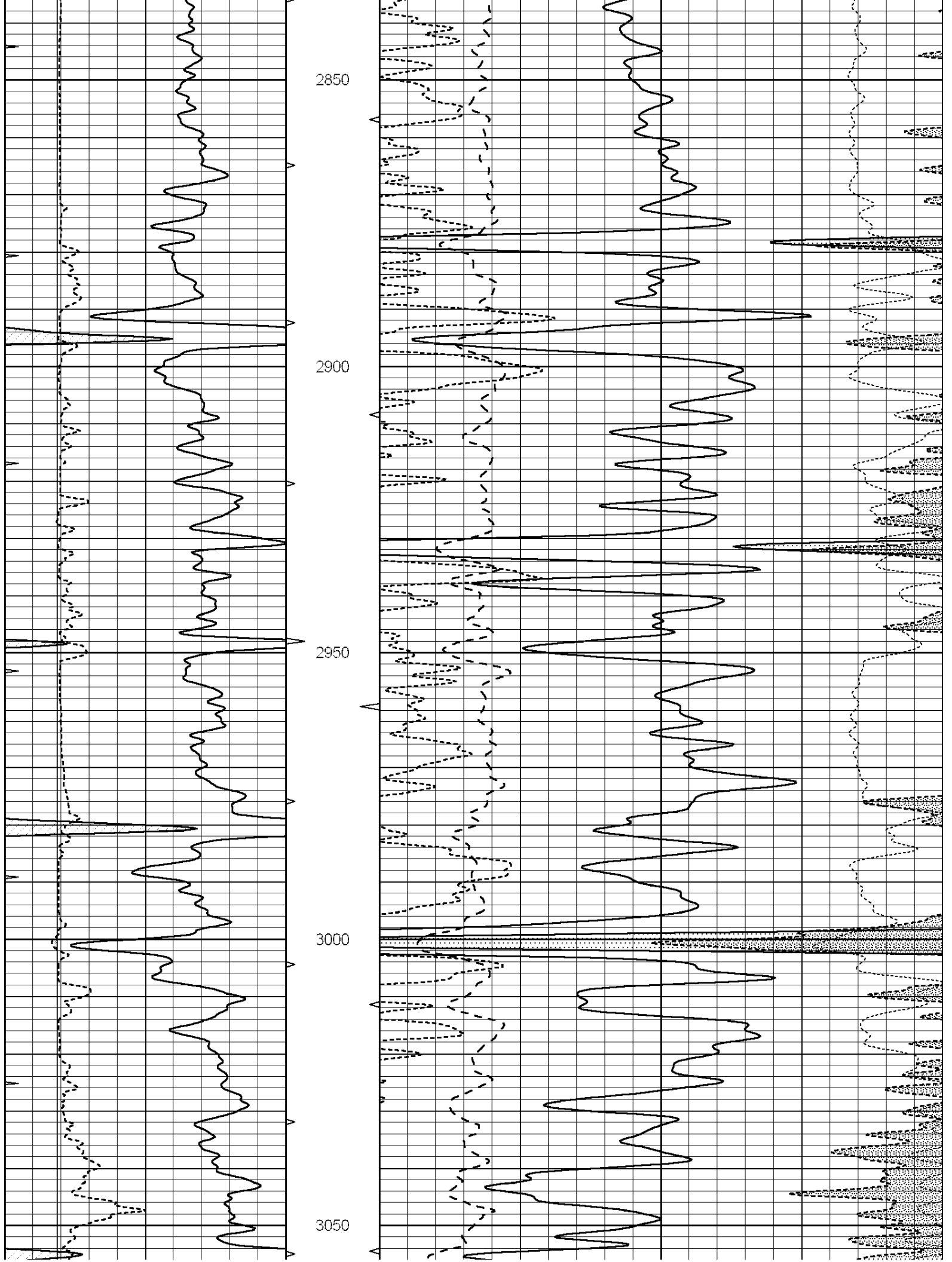


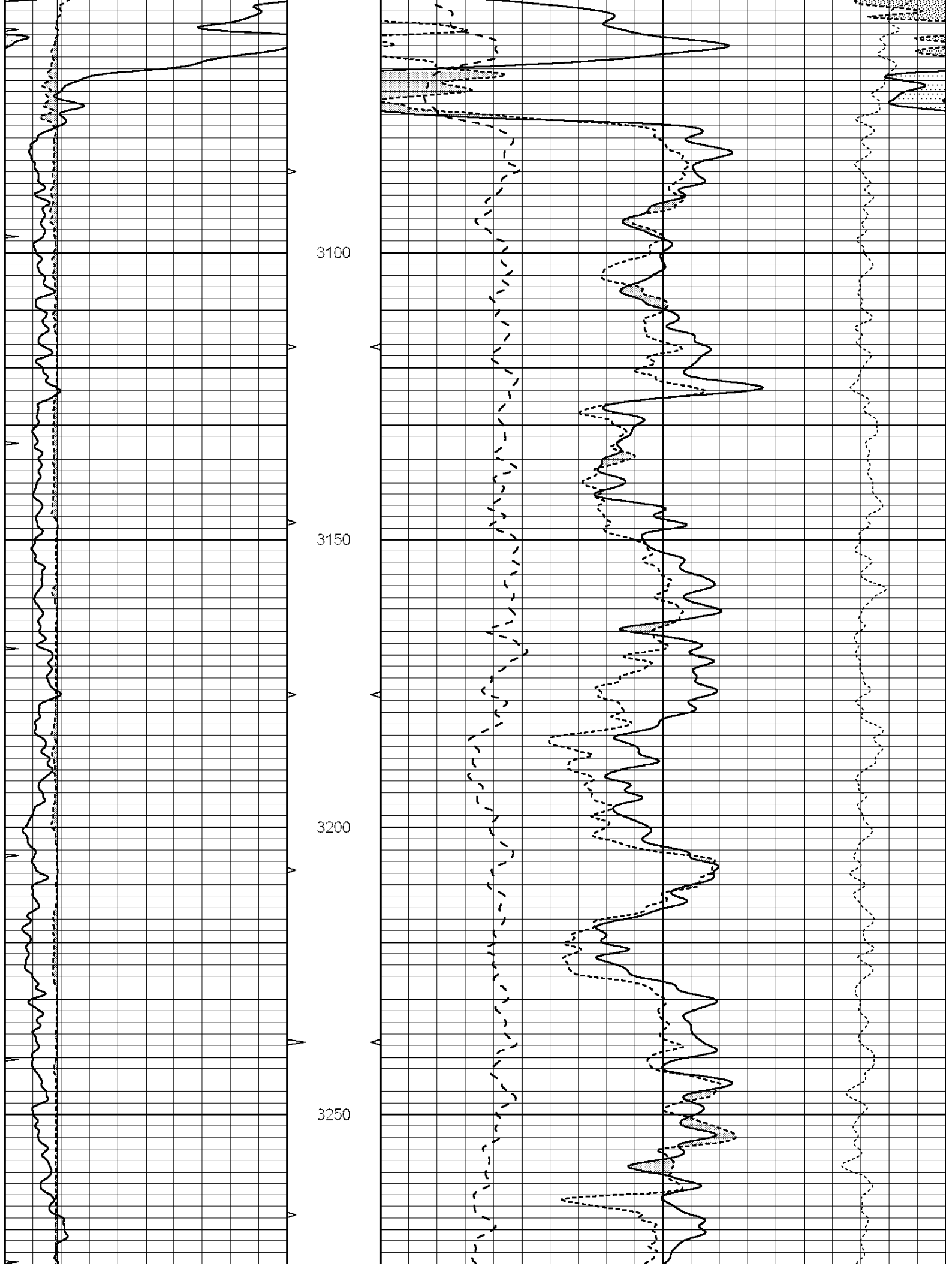


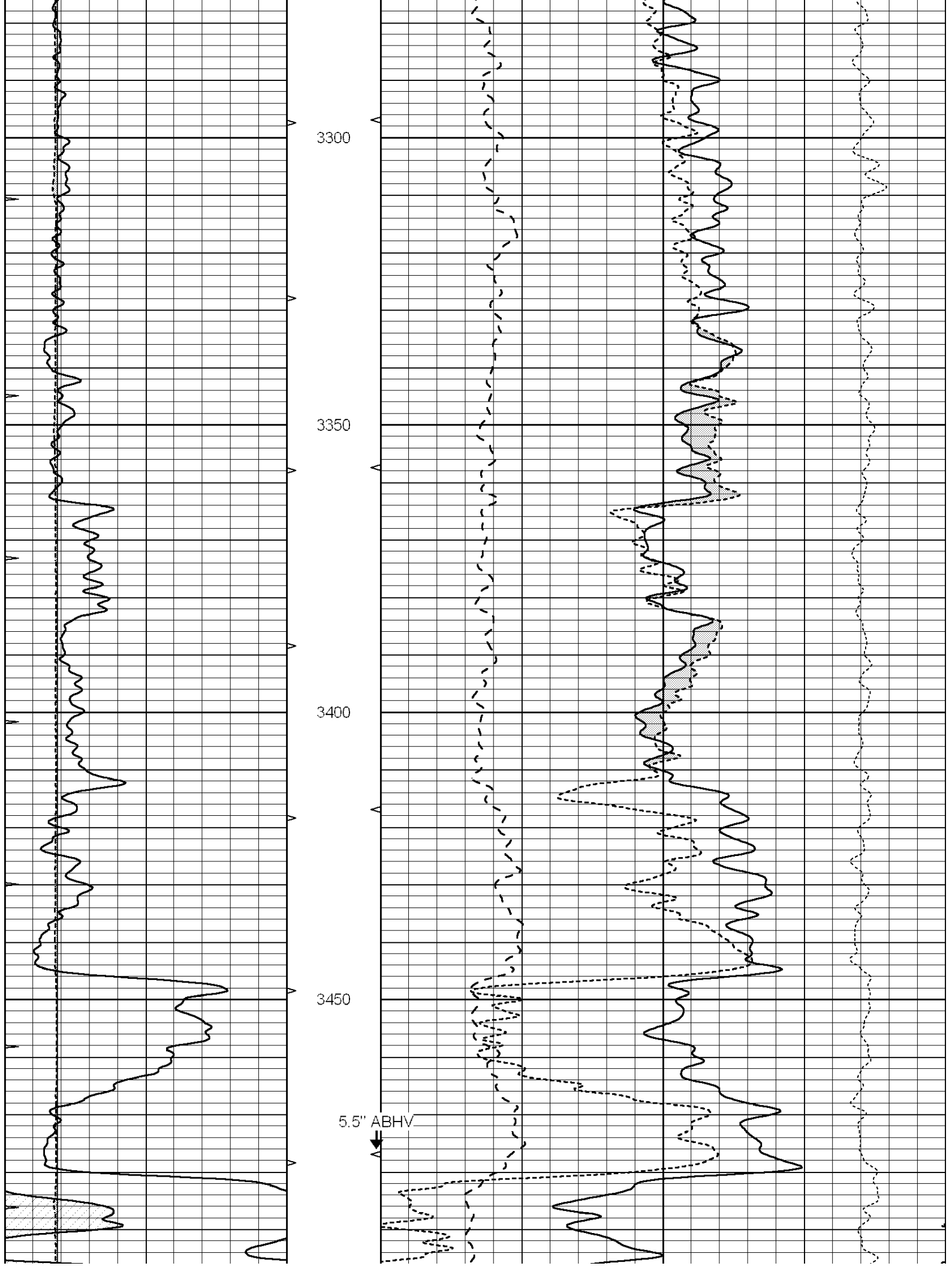


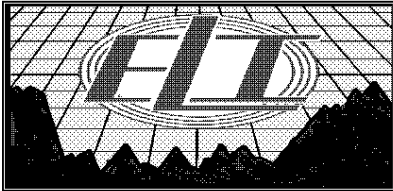
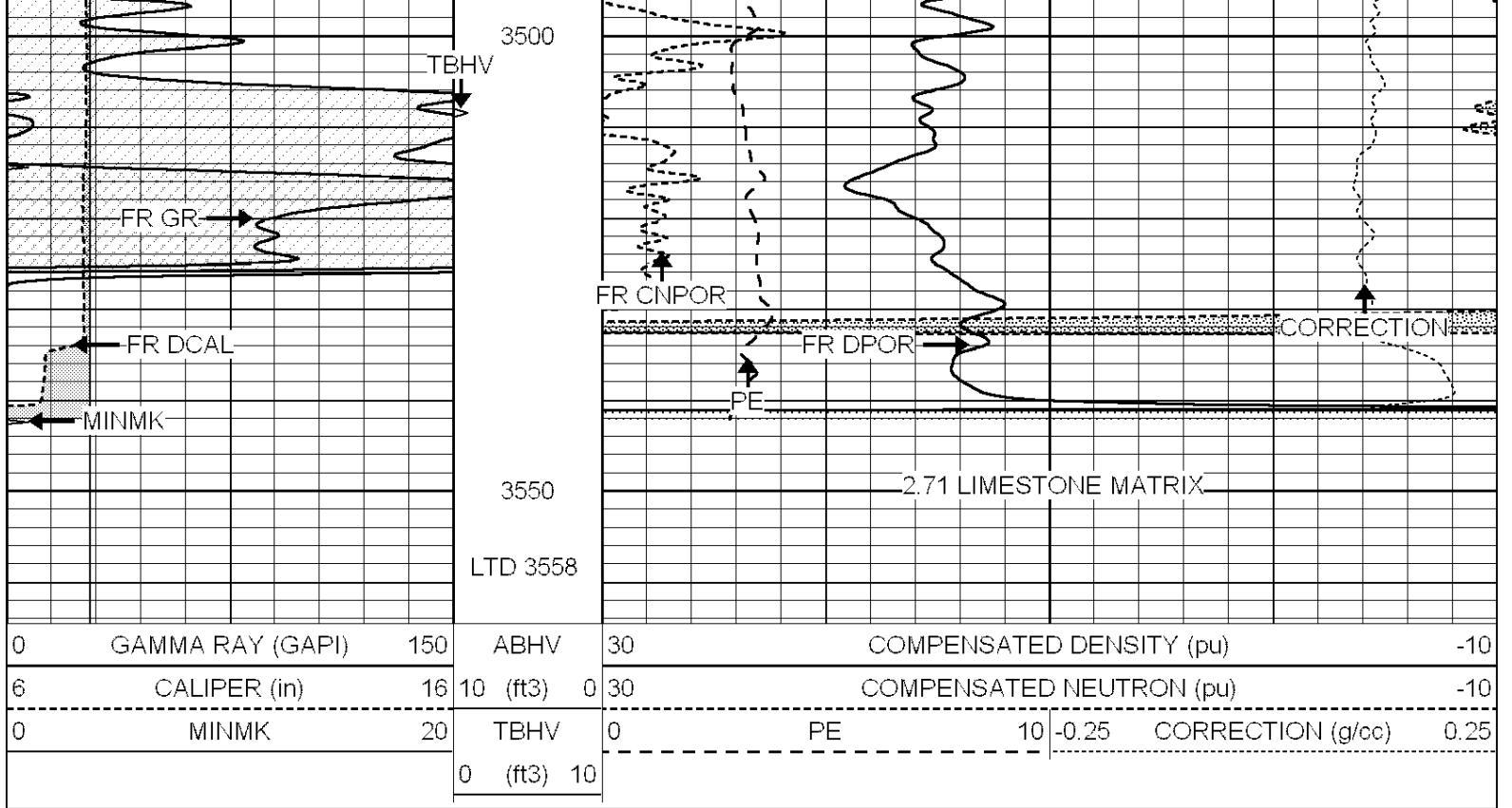








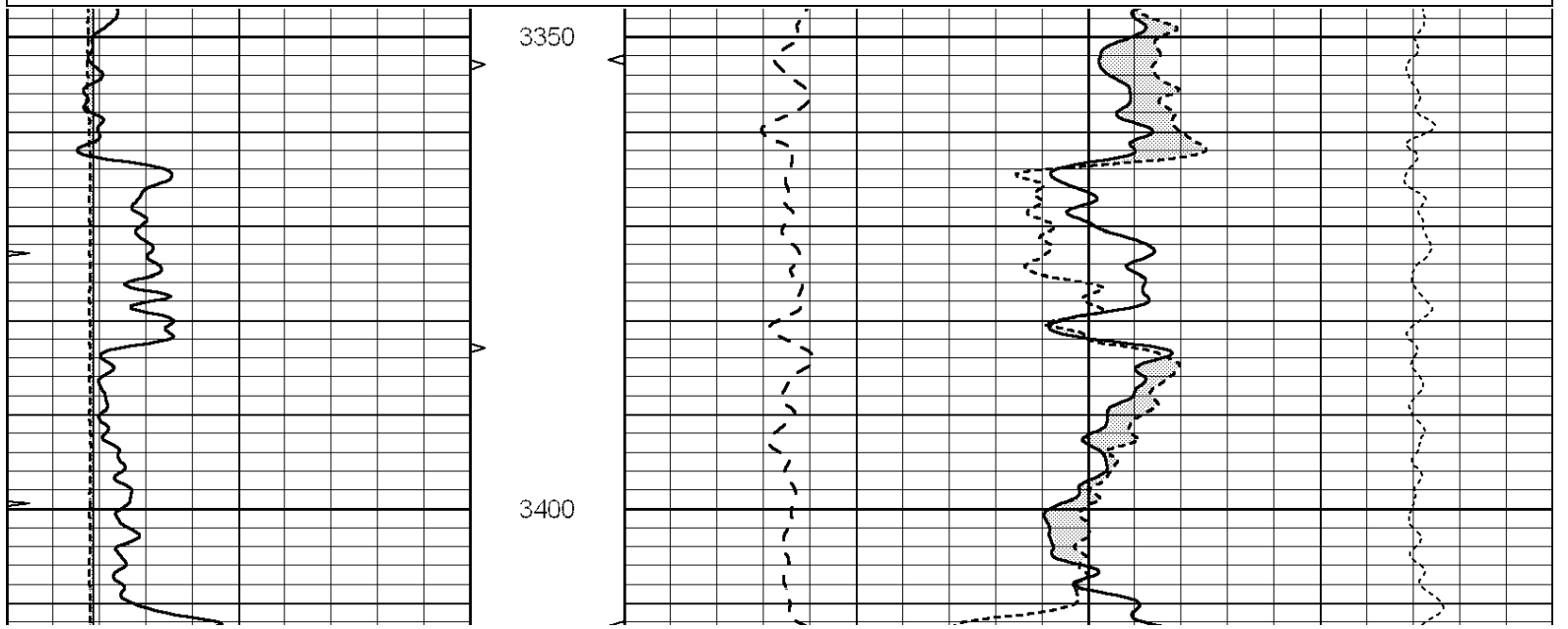


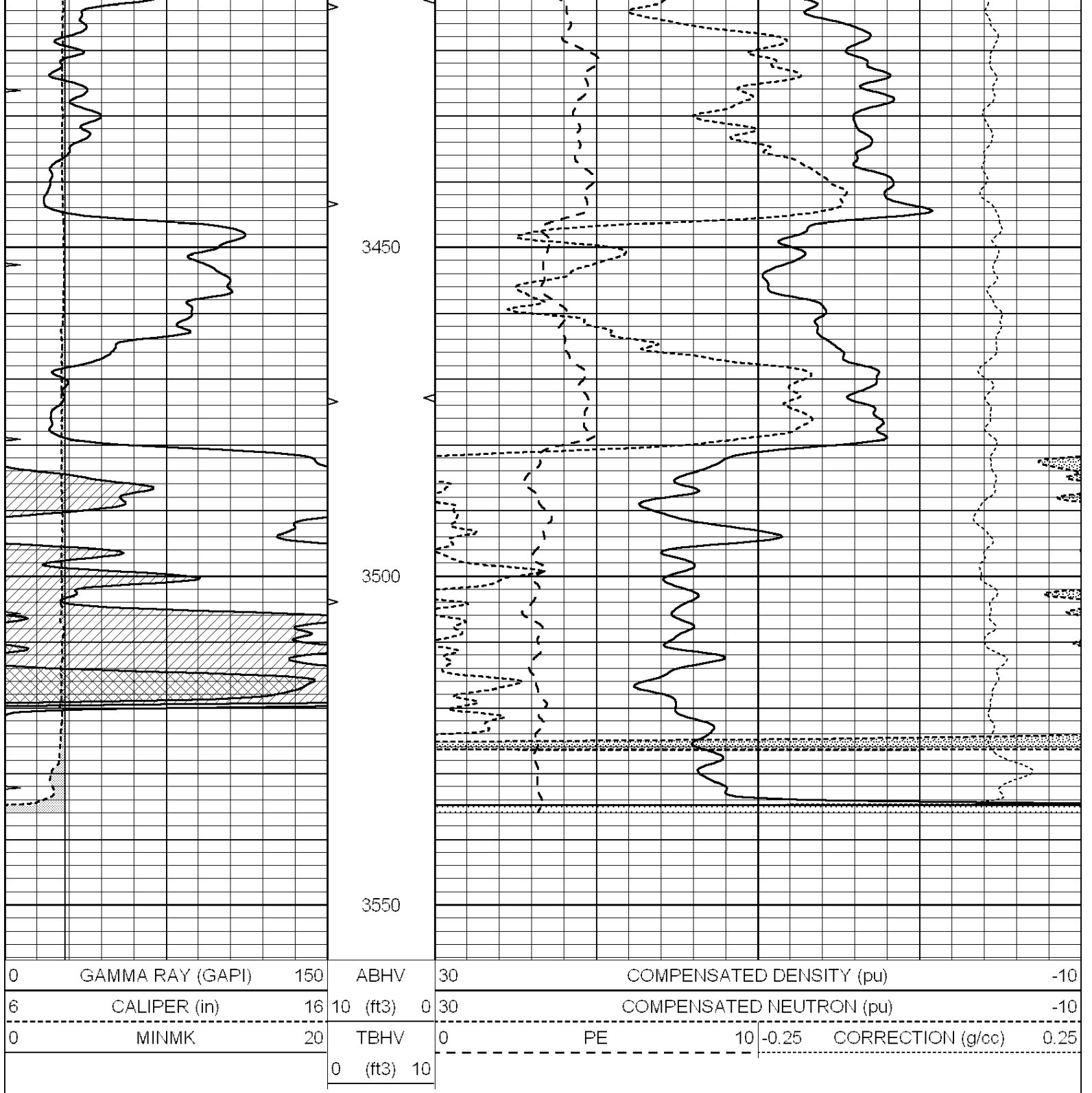


REPEAT SECTION

Database File: 3612pe.db
 Dataset Pathname: pass2.4
 Presentation Format: ldt_neu
 Dataset Creation: Wed Apr 17 02:14:35 2019 by Calc SOC 120430
 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	PE	10 -0.25 CORRECTION (g/cc) 0.25
			0 (ft3)	10		





Calibration Report

Database File: 1598ddn.db
 Dataset Pathname: pass4
 Dataset Creation: Wed Aug 30 02:13:00 2017 by Log SOC 120430

Dual Induction Calibration Report

Serial-Model: PROBE7-DILG
 Surface Cal Performed: Wed Aug 30 00:06:33 2017
 Downhole Cal Performed: Mon Jul 28 12:02:56 2008
 After Survey Verification Performed: Mon Jul 28 12:02:56 2008

Surface Calibration

Readings

References

Results

Loop:	Air	Loop		Air	Loop		m	b
Deep	-0.014	0.629	V	0.000	400.000	mmho/m	620.000	0.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	675.000	-44.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.011	0.610	V	0.000	400.000	mmho/m	667.135	-7.256
Medium	0.005	0.712	V	0.000	464.000	mmho/m	655.677	-3.102

Downhole Calibration								
	Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	14.508	388.384	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	166.367	504.400	mmho/m	1.000	0.000
LL3		7.500	V		1400.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-7.200	V		4000.000	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: 002 Model: PRB

Master Calibration		Performed Mon Aug 21 11:27:42 2017						
	Background	Magnesium	Aluminum	Sandstone				
Window 1	837.1	10632.5	2945.1	12110.1				cps
Window 2	772.0	9117.4	2570.1	10197.3				cps
Window 3	631.7	4669.0	1481.9	5042.9				cps
Window 4	187.0	187.5	185.9	189.9				cps
Long Space	0.0	8345.4	1798.1	9425.3				cps
Short Space	1.1	1927.9	1285.9	2050.2				cps
Rho		1.7100	2.5960	1.3800				g/cc
Pe		0.0000	2.5700	1.5500				
Rib Angle	: 45.2	Rib Slope	: 1.008	Density/Spine Ratio				: 0.558
Spine Angle	: 75.2	Spine Slope	: 3.790	Spine Intercept				: -19.6

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: 070808
Tool Model: Probe

PRE-SURVEY VERIFICATION

Detector	Readings	Measured	Target
Short Space	cps		
Long Space	cps	pu	pu

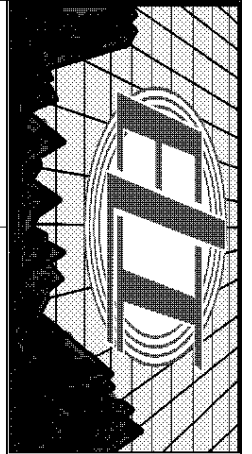
POST-SURVEY VERIFICATION

Detector	Readings	Measured	Target
Short Space	cps		
Long Space	cps	pu	pu

Gamma Ray Calibration Report

Serial Number: 070558
Tool Model: OPEN_GR
Performed: Wed May 31 00:09:32 2017

Calibrator Value: 1.0 GAPI
Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps
Sensitivity: 0.2800 GAPI/cps



**COMPENSATED
DENSITY / NEUTRON
PE LOG**

Company RANEY OIL COMPANY, LLC.
Well PRAY #4
Field CABIN VALLEY
County COWLEY
State KANSAS

Company RANEY OIL COMPANY, LLC.
Well PRAY #4
Field CABIN VALLEY
County COWLEY State KANSAS

Location: API # : 15-035-24702-0000
351' FSL & 2458' FWL
SE - SE - SW/4
SEC 31 TWP 33S RGE 6E

Permanent Datum GROUND LEVEL Elevation 1259
Log Measured From KELLY BUSHING 13' A.G.L.
Drilling Measured From KELLY BUSHING

Other Services
DIL/MEL
SONIC
Elevation
K.B. 1272
D.F. 1270
G.L. 1259

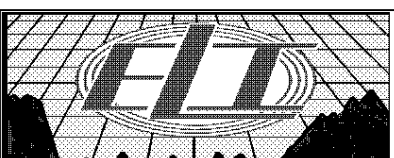
Date	4/16/19
Run Number	ONE
Depth Driller	3556
Depth Logger	3558
Bottom Logged Interval	3534
Top Log Interval	1800
Casing Driller	8 5/8"@307'
Casing Logger	312
Bit Size	7 7/8"
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.3/49
pH / Fluid Loss	11.0/7.2
Source of Sample	FLOWLINE
Rim @ Meas. Temp	1.10@80F
Rmf @ Meas. Temp	.825@80F
Rmc @ Meas. Temp	1.32@80F
Source of Rmf / Rmc	MEASUREMENT
Rim @ BHT	.786@112F
Time Circulation Stopped	2 HOURS
Time Logger on Bottom	12:45 A.M.
Maximum Recorded Temperature	112F
Equipment Number	922339
Location	HAYS, KANSAS
Recorded By	JEFF LUEBBERS
Witnessed By	ROGER MARTIN

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Comments

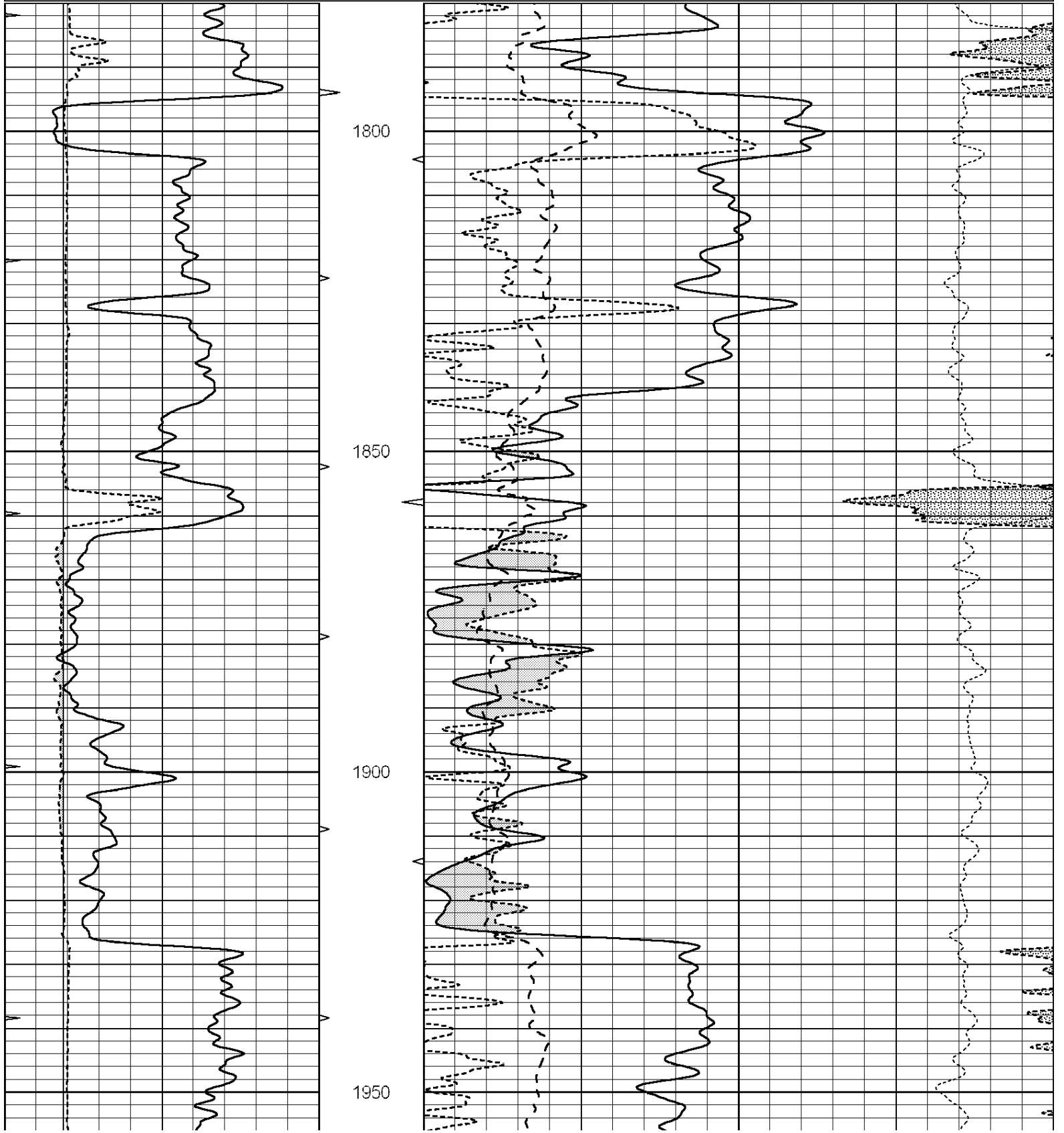
THANK YOU FOR USING ELI WIRELINE HAYS, KANSAS (785) 628-6395
DIRECTIONS
WINFIELD, KS., E. ON HWY 160 TO "COWLEY CR #1", 5S. TO "RD. 212", 3E. TO " 181ST.", 3S. FOLLOW
CURVES E. & S. TO GATE

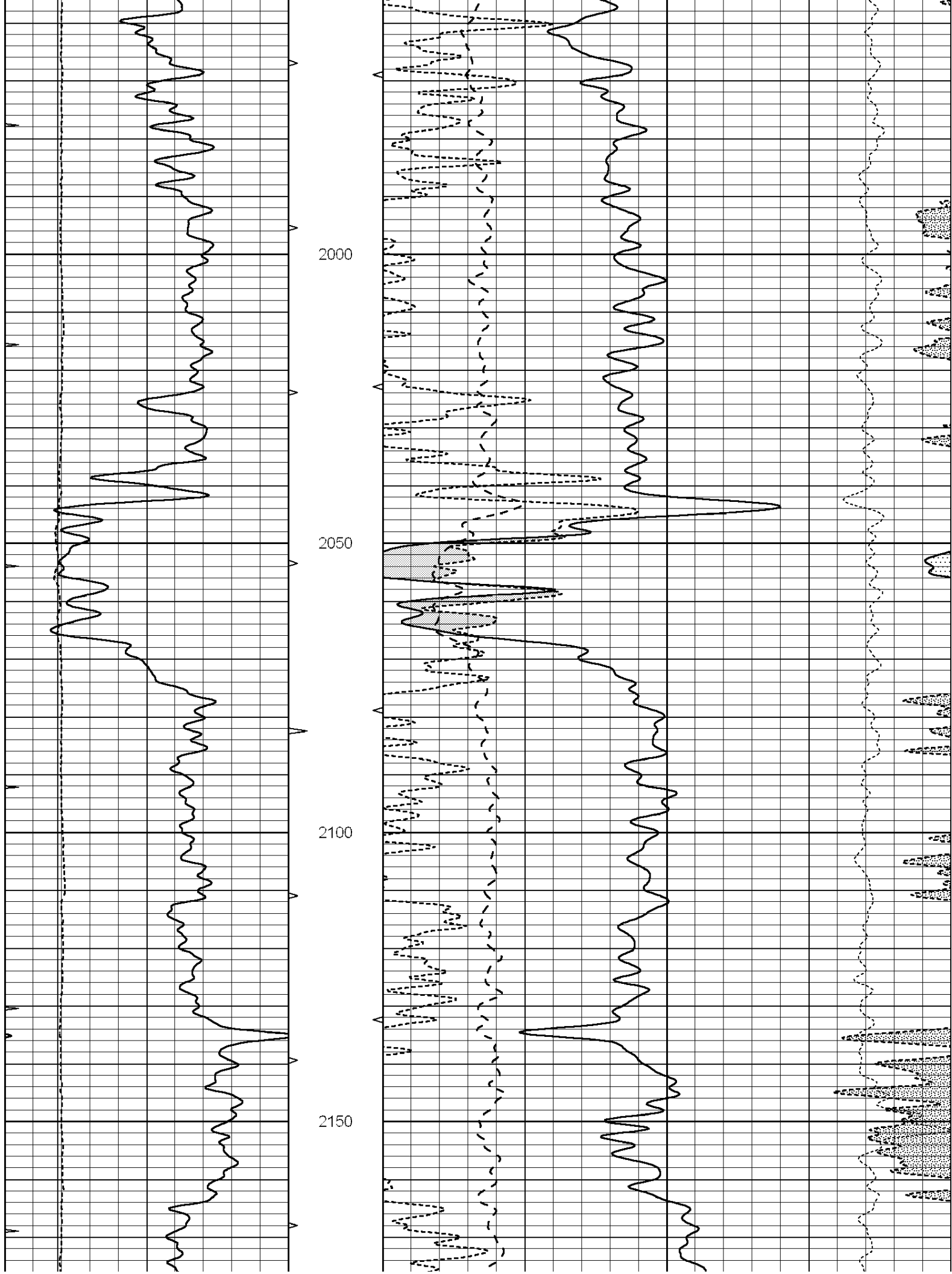


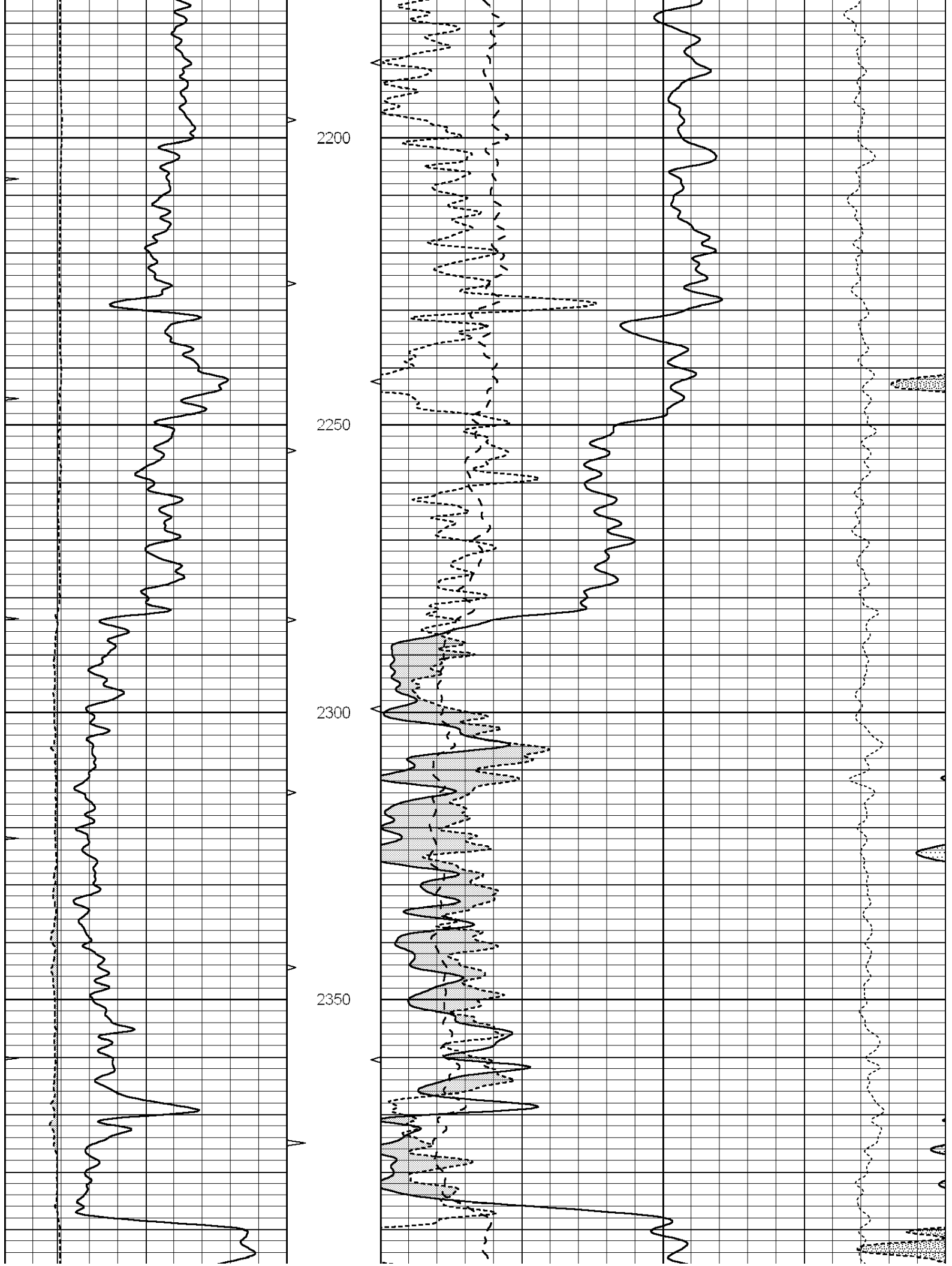
MAIN SECTION

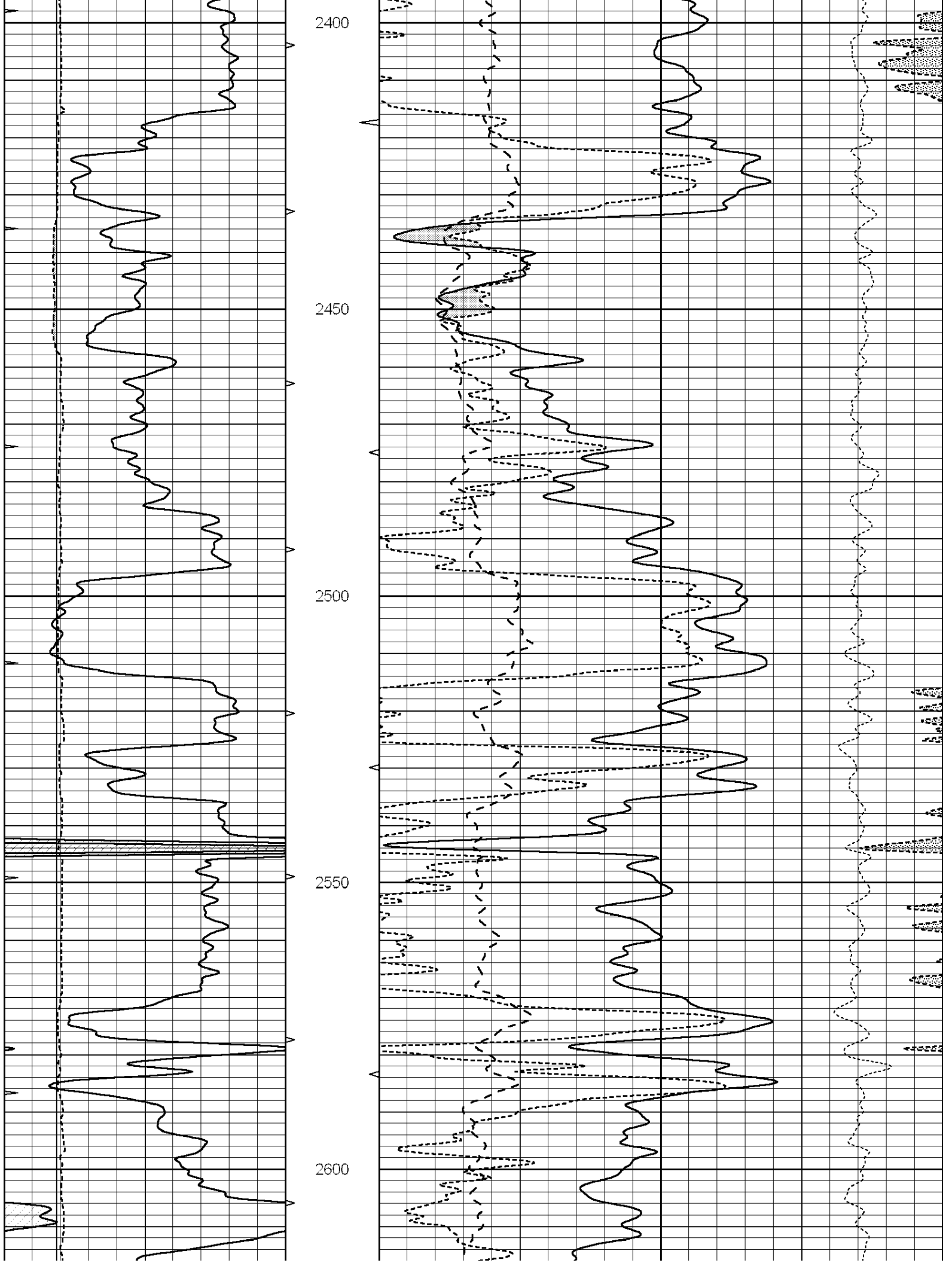
Database File: 3612pe.db
 Dataset Pathname: pass3.3
 Presentation Format: ldt_neu
 Dataset Creation: Wed Apr 17 02:00:13 2019 by Calc SOC 120430
 Charted by: Depth in Feet scaled 1:240

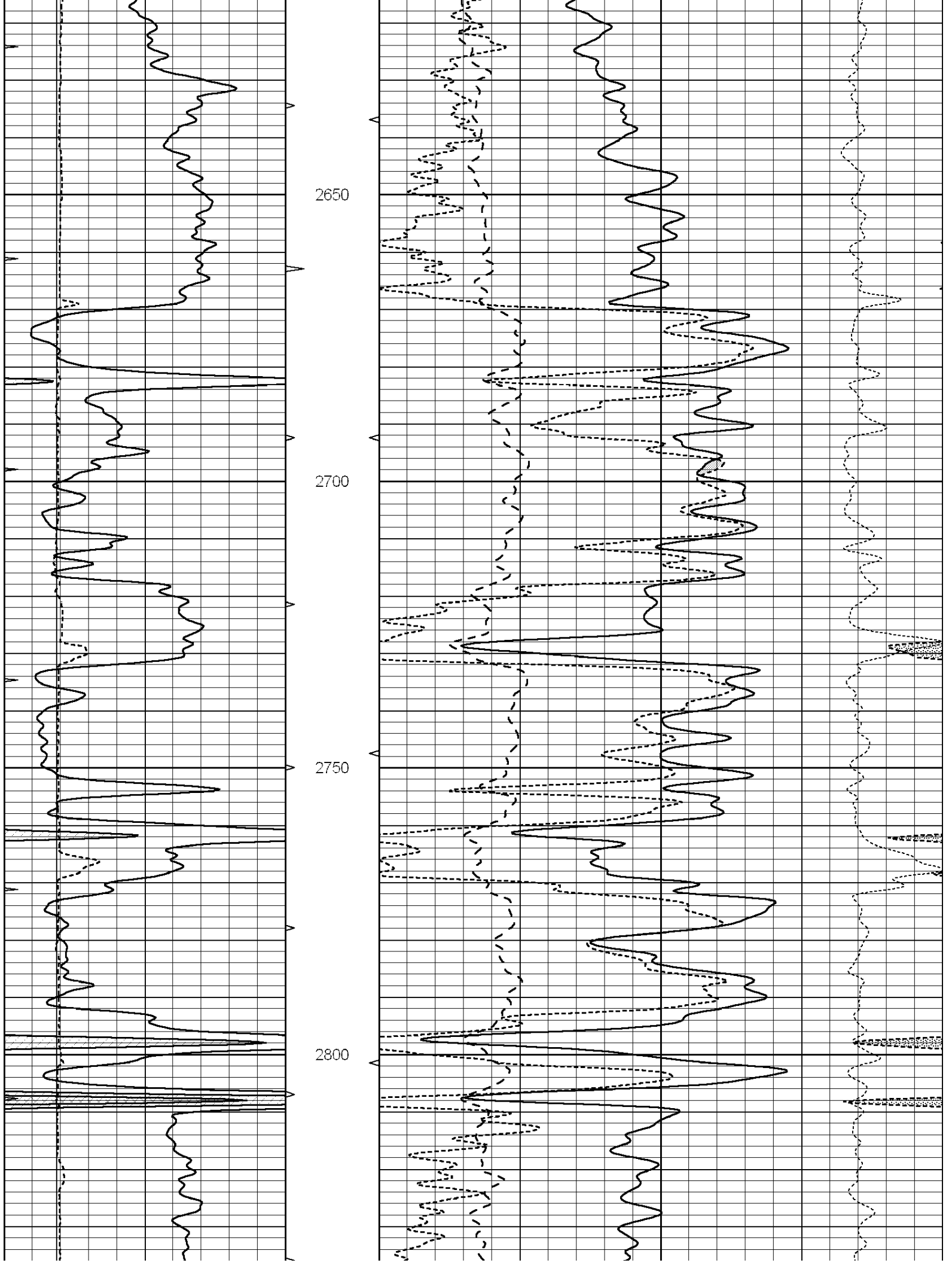
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)		-10
6	CALIPER (in)	16	10 (ft3)	0	COMPENSATED NEUTRON (pu)		-10
0	MINMK	20	TBHV	0	PE	10	-0.25 CORRECTION (g/cc) 0.25
			0 (ft3)	10			

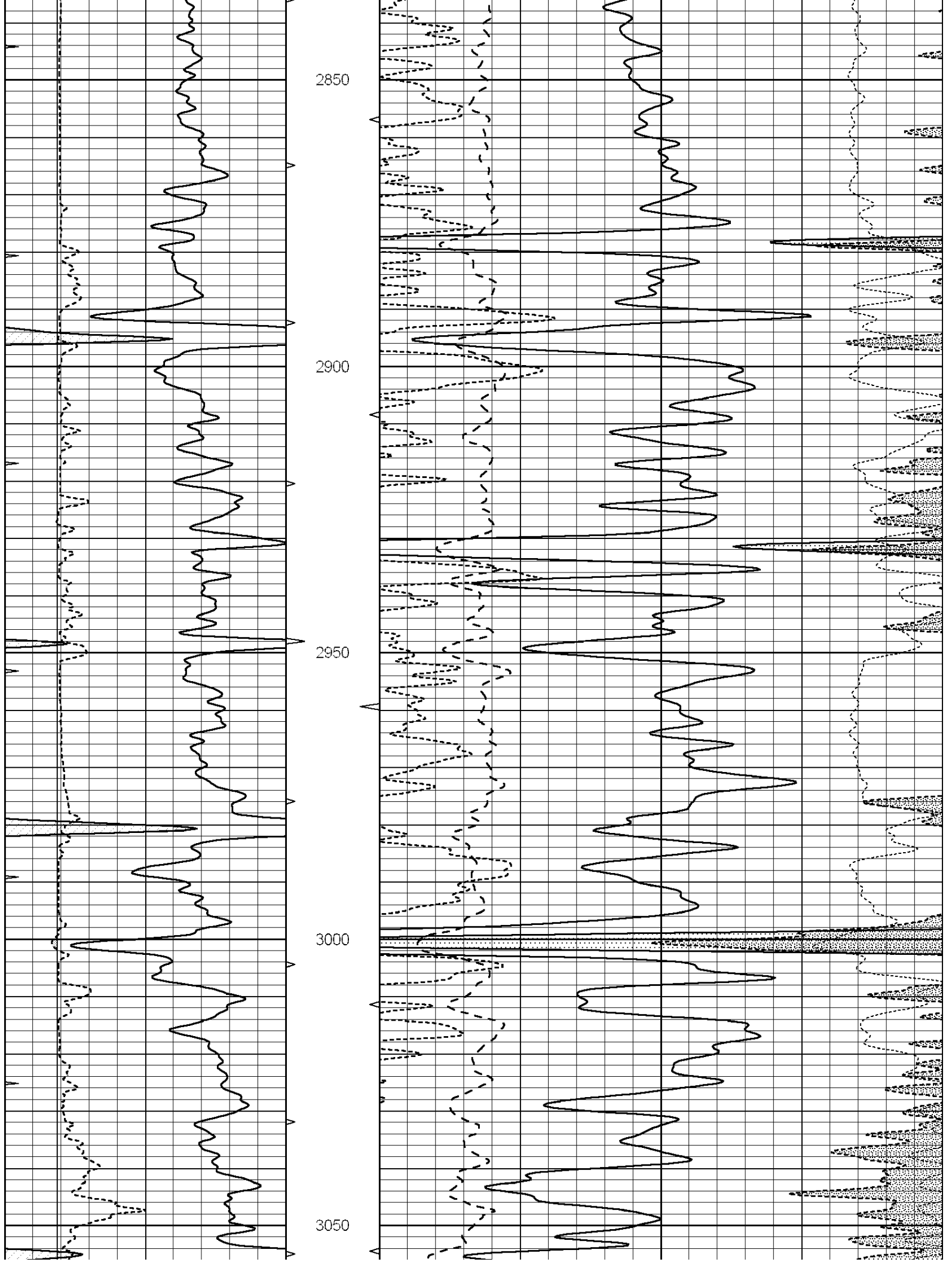


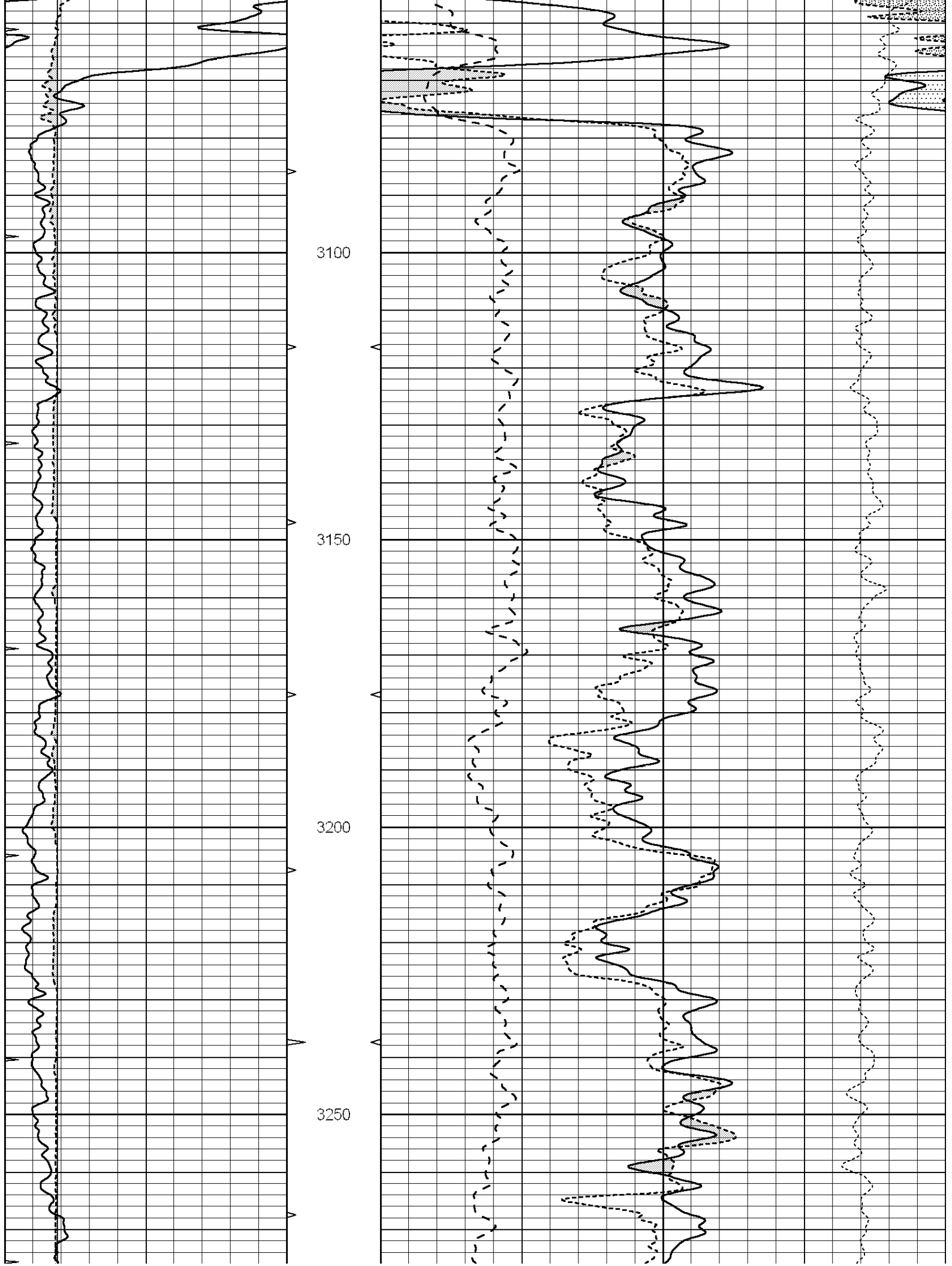


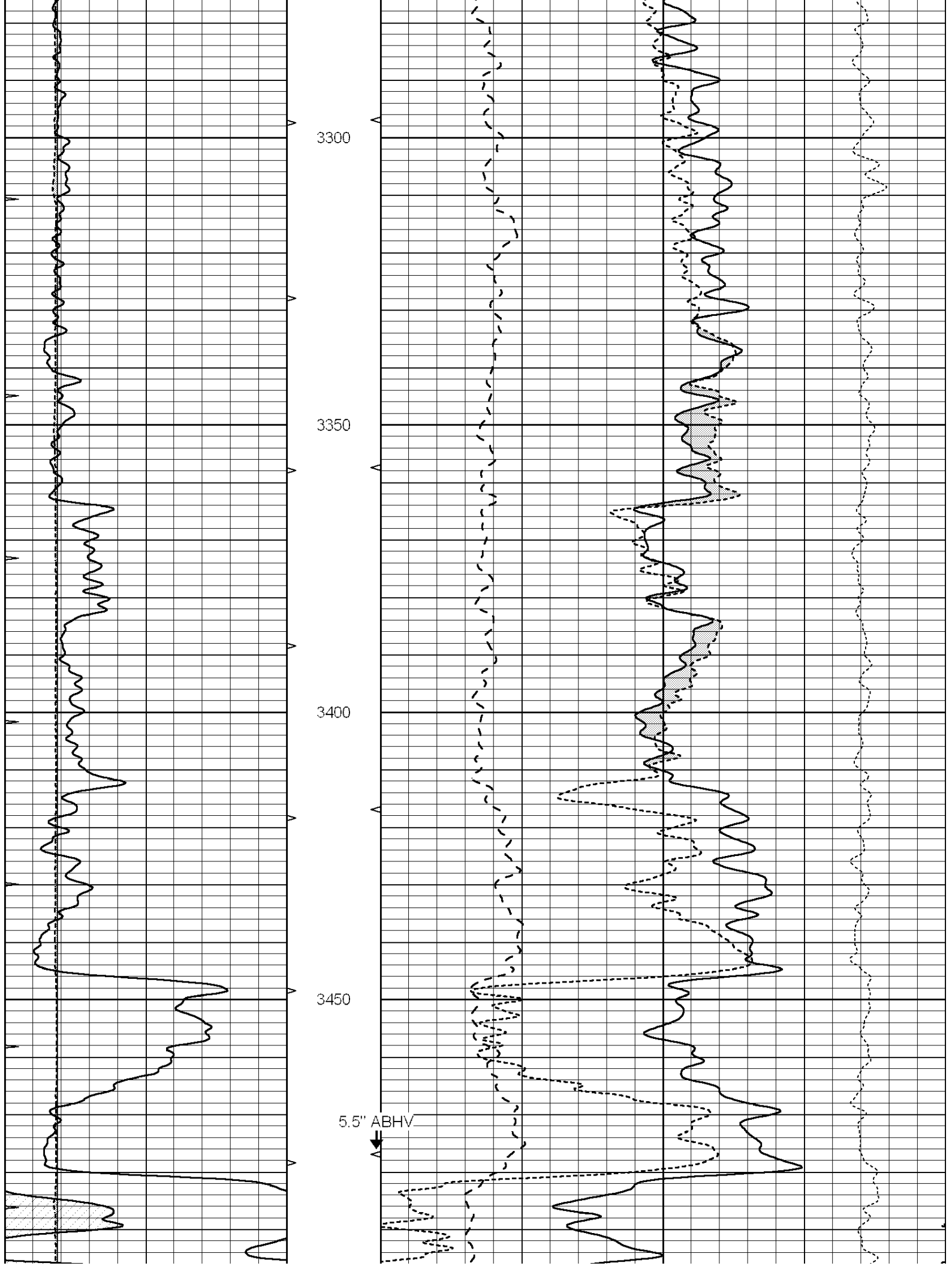


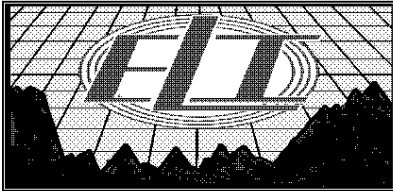
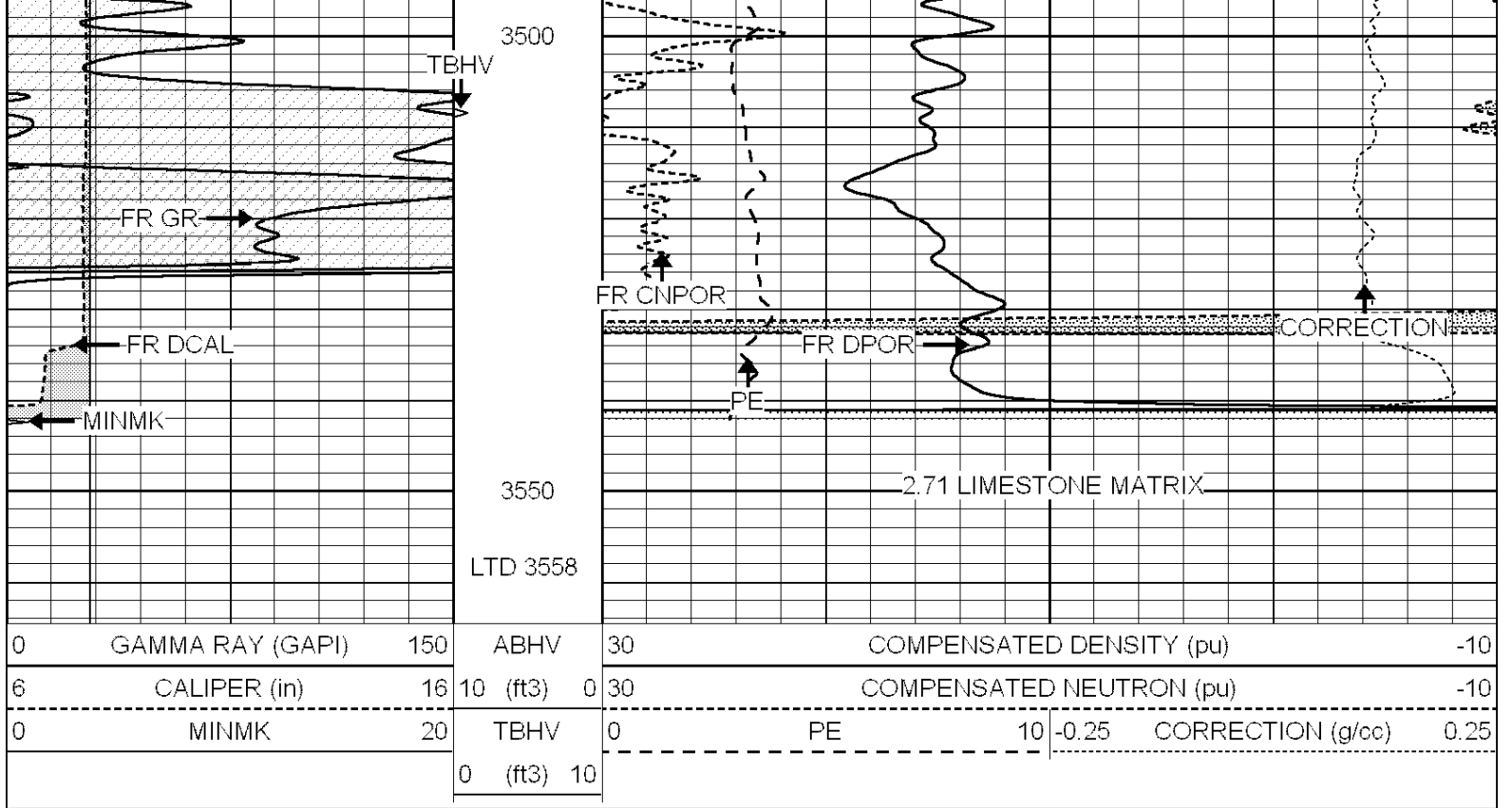








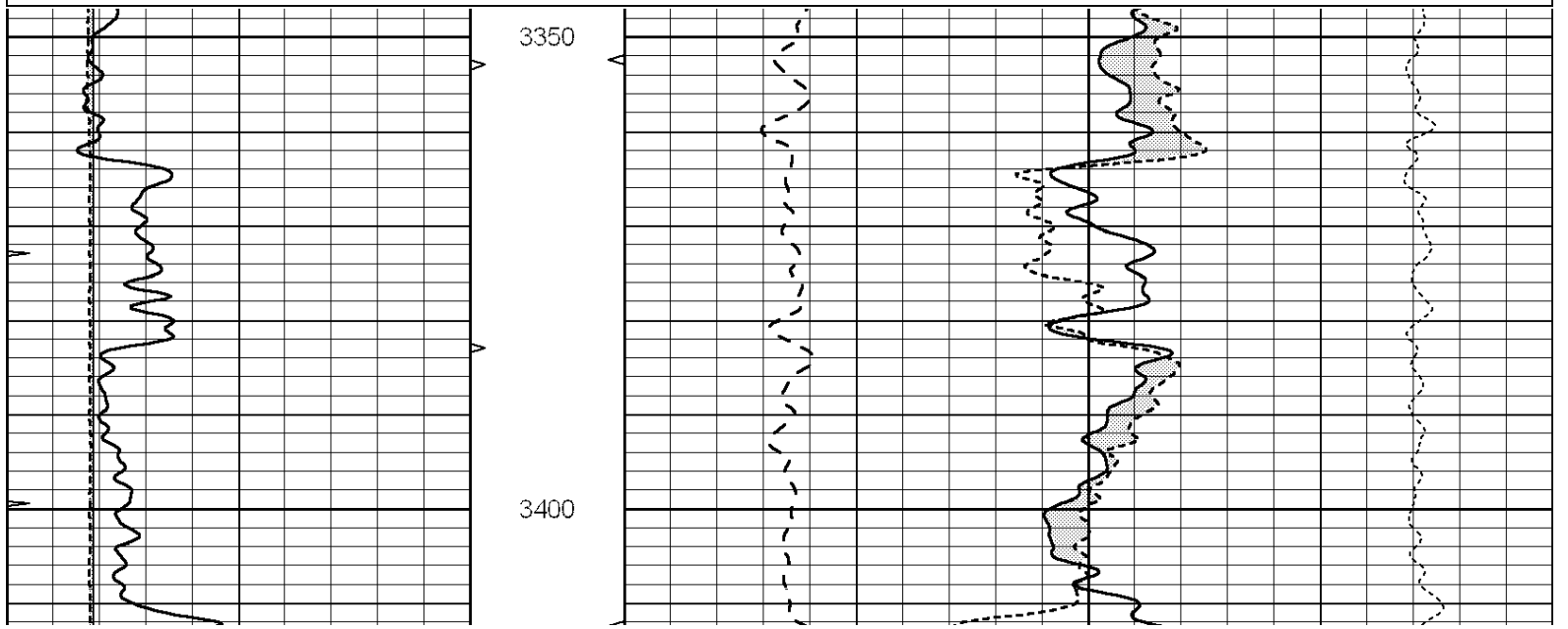


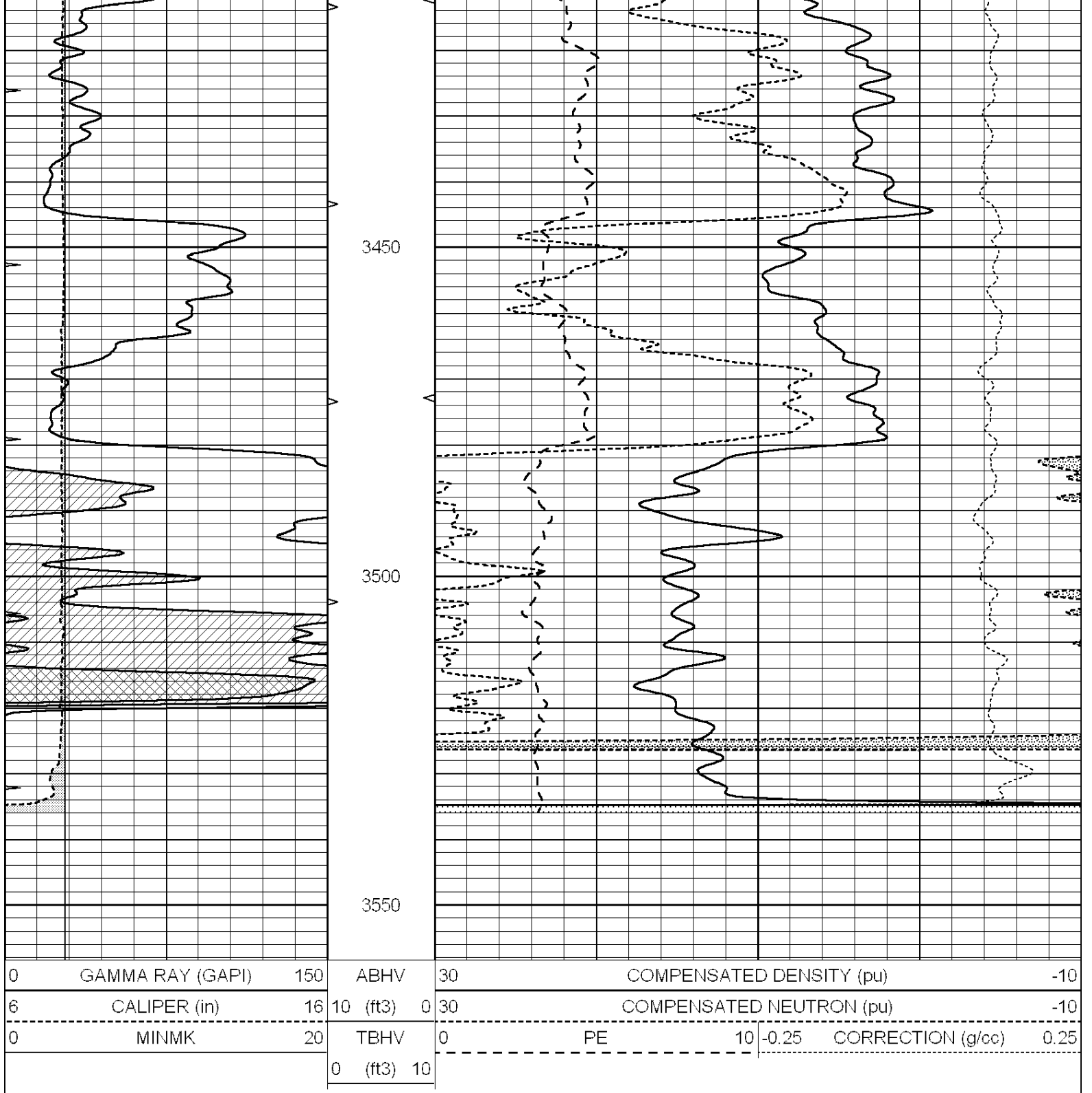


REPEAT SECTION

Database File: 3612pe.db
 Dataset Pathname: pass2.4
 Presentation Format: ldt_neu
 Dataset Creation: Wed Apr 17 02:14:35 2019 by Calc SOC 120430
 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	PE	10 -0.25
			0 (ft3)	10		CORRECTION (g/cc) 0.25





Calibration Report

Database File: 1598ddn.db
 Dataset Pathname: pass4
 Dataset Creation: Wed Aug 30 02:13:00 2017 by Log SOC 120430

Dual Induction Calibration Report

Serial-Model: PROBE7-DILG
 Surface Cal Performed: Wed Aug 30 00:06:33 2017
 Downhole Cal Performed: Mon Jul 28 12:02:56 2008
 After Survey Verification Performed: Mon Jul 28 12:02:56 2008

Surface Calibration

Readings

References

Results

Loop:	Air	Loop		Air	Loop		m	b
Deep	-0.014	0.629	V	0.000	400.000	mmho/m	620.000	0.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	675.000	-44.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.011	0.610	V	0.000	400.000	mmho/m	667.135	-7.256
Medium	0.005	0.712	V	0.000	464.000	mmho/m	655.677	-3.102

Downhole Calibration								
	Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	14.508	388.384	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	166.367	504.400	mmho/m	1.000	0.000
LL3		7.500	V		1400.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-7.200	V		4000.000	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: 002 Model: PRB

Master Calibration		Performed Mon Aug 21 11:27:42 2017					
	Background	Magnesium	Aluminum	Sandstone			
Window 1	837.1	10632.5	2945.1	12110.1			cps
Window 2	772.0	9117.4	2570.1	10197.3			cps
Window 3	631.7	4669.0	1481.9	5042.9			cps
Window 4	187.0	187.5	185.9	189.9			cps
Long Space	0.0	8345.4	1798.1	9425.3			cps
Short Space	1.1	1927.9	1285.9	2050.2			cps
Rho		1.7100	2.5960	1.3800			g/cc
Pe		0.0000	2.5700	1.5500			
Rib Angle	: 45.2	Rib Slope	: 1.008	Density/Spine Ratio			: 0.558
Spine Angle	: 75.2	Spine Slope	: 3.790	Spine Intercept			: -19.6

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: 070808
Tool Model: Probe

PRE-SURVEY VERIFICATION

Detector	Readings	Measured	Target
Short Space	cps		
Long Space	cps	pu	pu

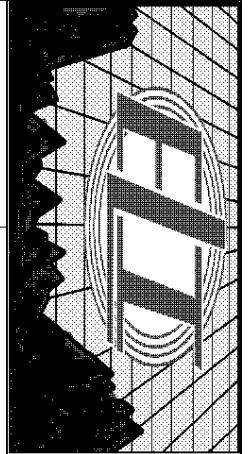
POST-SURVEY VERIFICATION

Detector	Readings	Measured	Target
Short Space	cps		
Long Space	cps	pu	pu

Gamma Ray Calibration Report

Serial Number: 070558
Tool Model: OPEN_GR
Performed: Wed May 31 00:09:32 2017

Calibrator Value: 1.0 GAPI
Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps
Sensitivity: 0.2800 GAPI/cps



SONIC LOG

Company	RANEY OIL COMPANY, LLC.	
Well	PRAY #4	
Field	CABIN VALLEY	
County	COWLEY	State KANSAS
Location:	API # : 15-035-24702-0000	Other Services CDL/CNL/PE DIL/MEL
Permanent Datum	GROUND LEVEL	Elevation 1259
Log Measured From	351' FSL & 2458' FWL SE - SE - SW/4	K.B. 1272 D.F. 1270 G.L. 1259
Drilling Measured From	KELLY BUSHING	

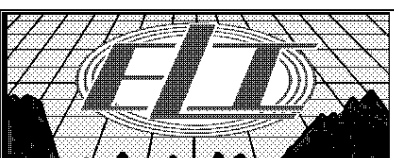
Date	4/16/19
Run Number	TWO
Depth Driller	3556
Depth Logger	3558
Bottom Logged Interval	3550
Top Log Interval	300
Casing Driller	8 5/8"@307'
Casing Logger	312
Bit Size	7 7/8"
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.3/49
pH / Fluid Loss	11.0/7.2
Source of Sample	FLOWLINE
Rim @ Meas. Temp	1.10@80F
Rmf @ Meas. Temp	.825@80F
Rmc @ Meas. Temp	1.32@80F
Source of Rmf / Rmc	MEASUREMENT
Rim @ BHT	.786@112F
Time Circulation Stopped	4 HOURS
Time Logger on Bottom	3:15 A.M.
Maximum Recorded Temperature	112F
Equipment Number	922339
Location	HAYS, KANSAS
Recorded By	JEFF LUEBBERS
Witnessed By	ROGER MARTIN

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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

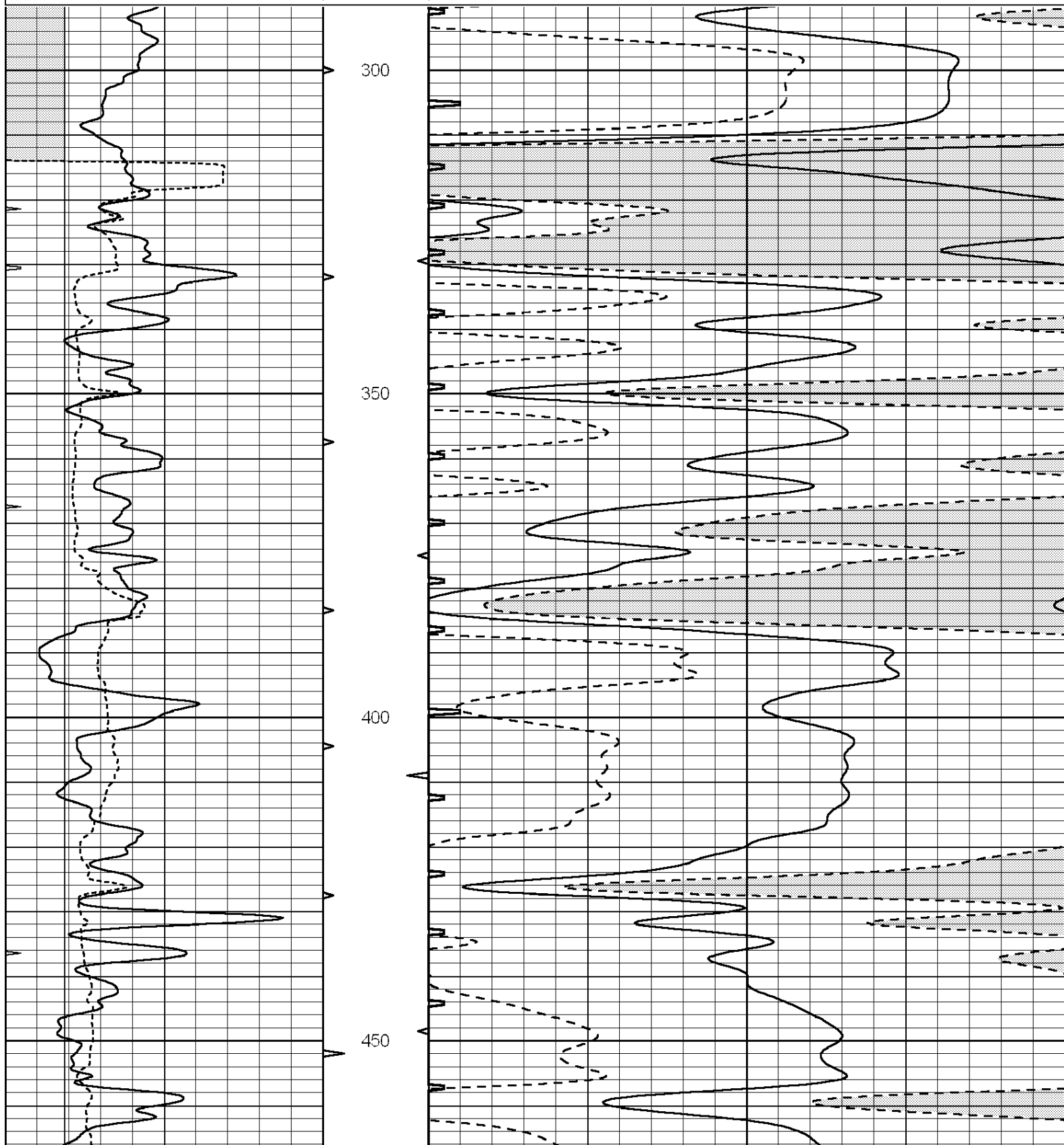
THANK YOU FOR USING ELI WIRELINE HAYS, KANSAS (785) 628-6395
 DIRECTIONS
 WINFIELD, KS., E. ON HWY 160 TO "COWLEY CR #1", 5S. TO "RD. 212", 3E. TO " 181ST.", 3S. FOLLOW
 CURVES E. & S. TO GATE

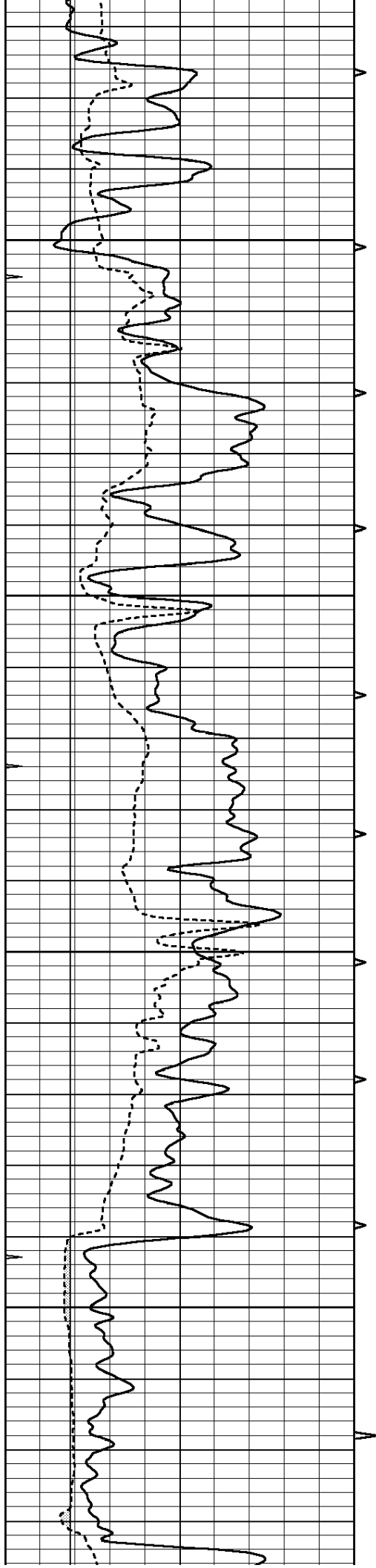


MAIN SECTION

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 Dataset Pathname: pass6.3
 Presentation Format: slt
 Dataset Creation: Wed Apr 17 04:02:37 2019 by Calc SOC 120430
 Charted by: Depth in Feet scaled 1:240

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6	CALIPER (in)	16	10 (ft3)	0	30	SONIC POROSITY (pu)
0	MINMK	20	TBHV	0	ITT (msec)	20
			0 (ft3)	10		



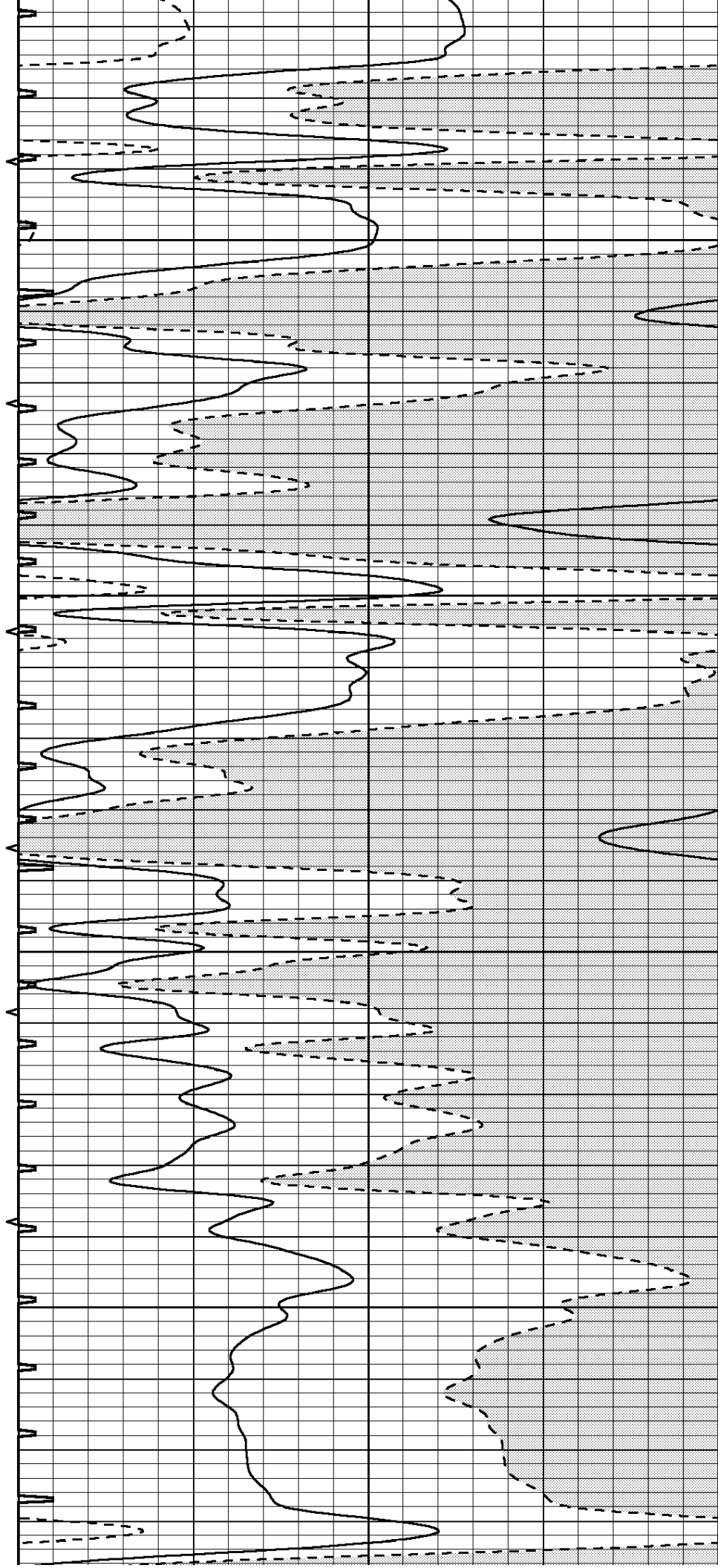


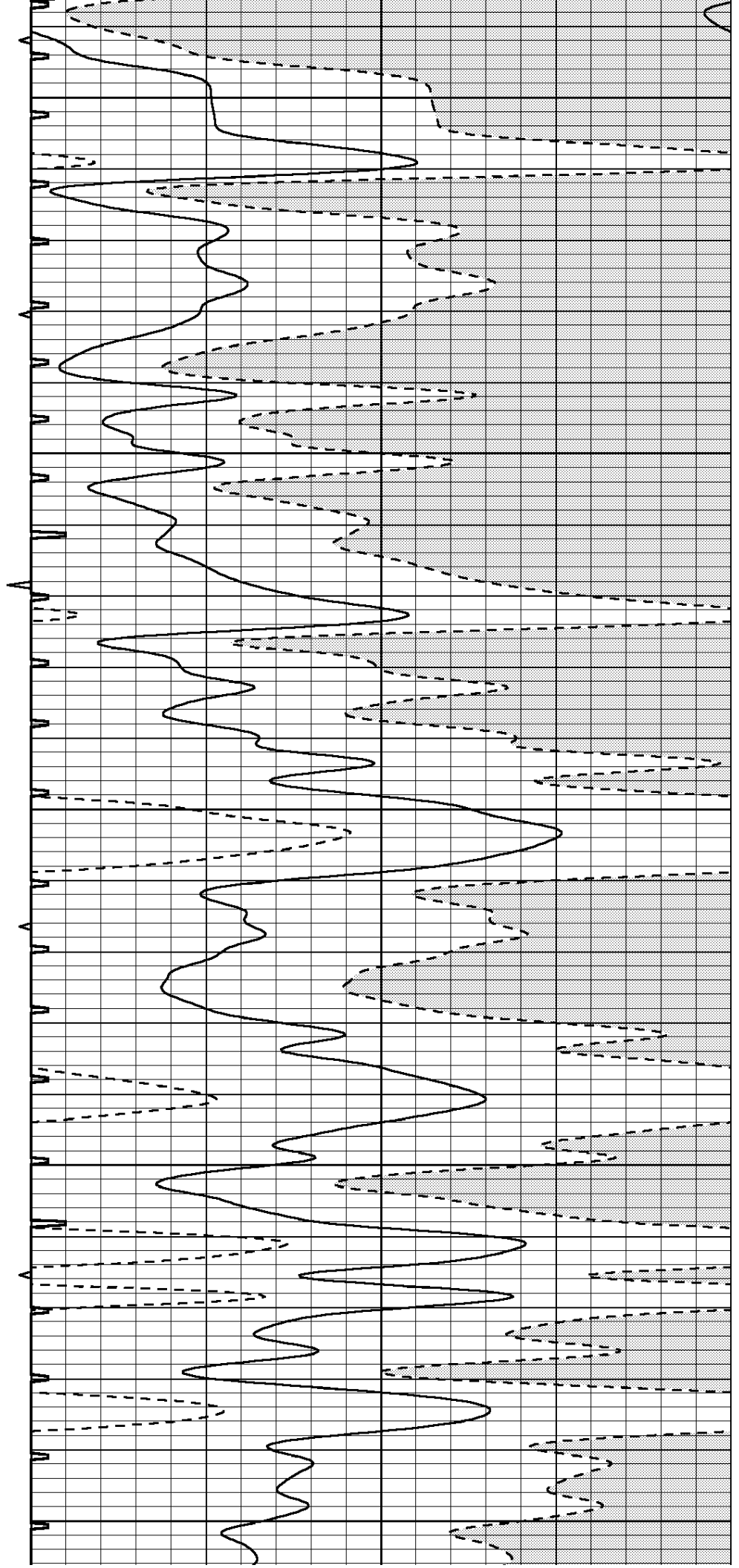
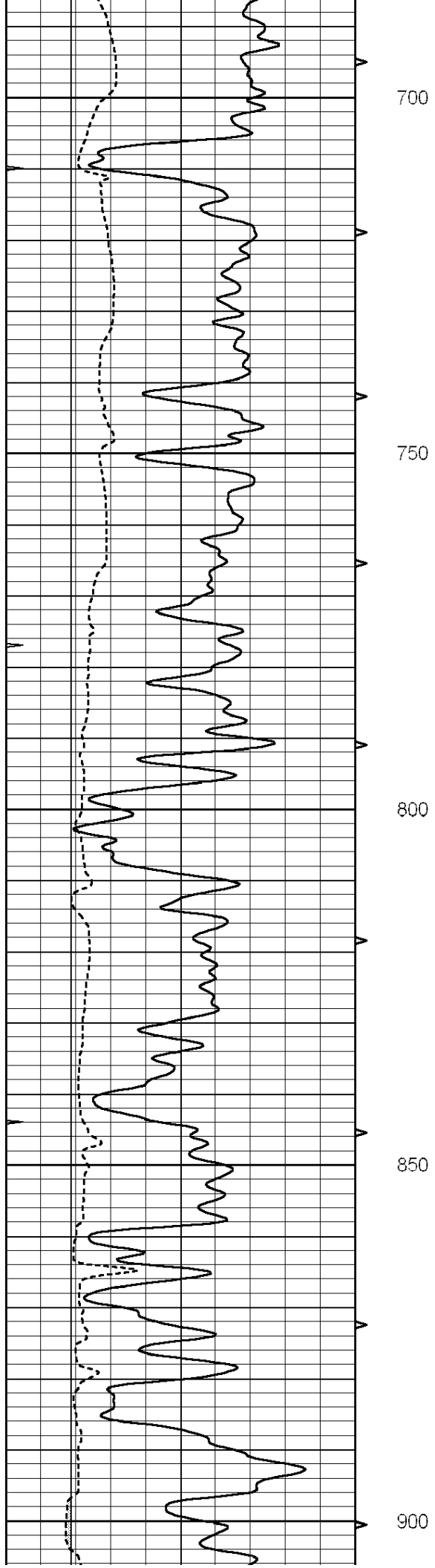
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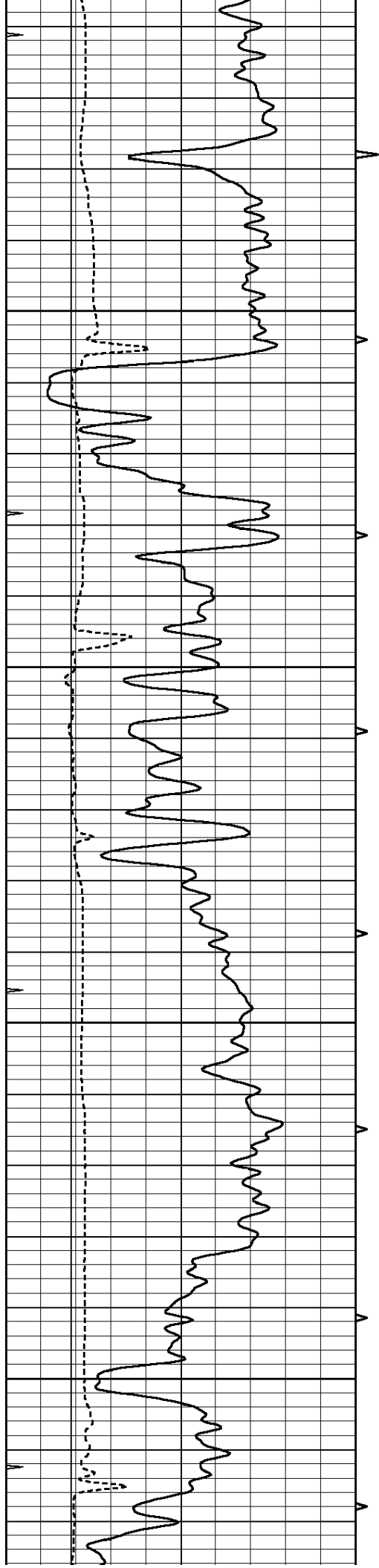
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600

650





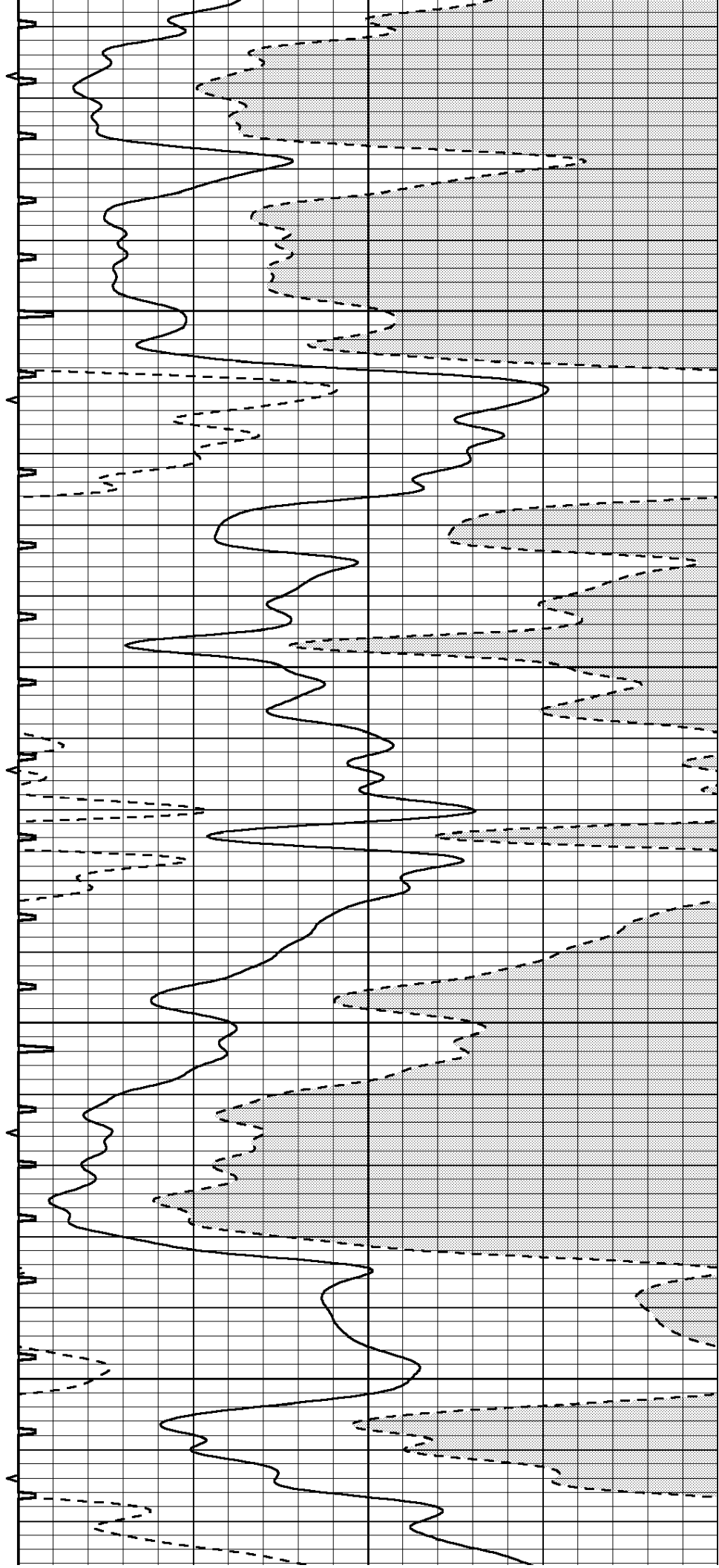


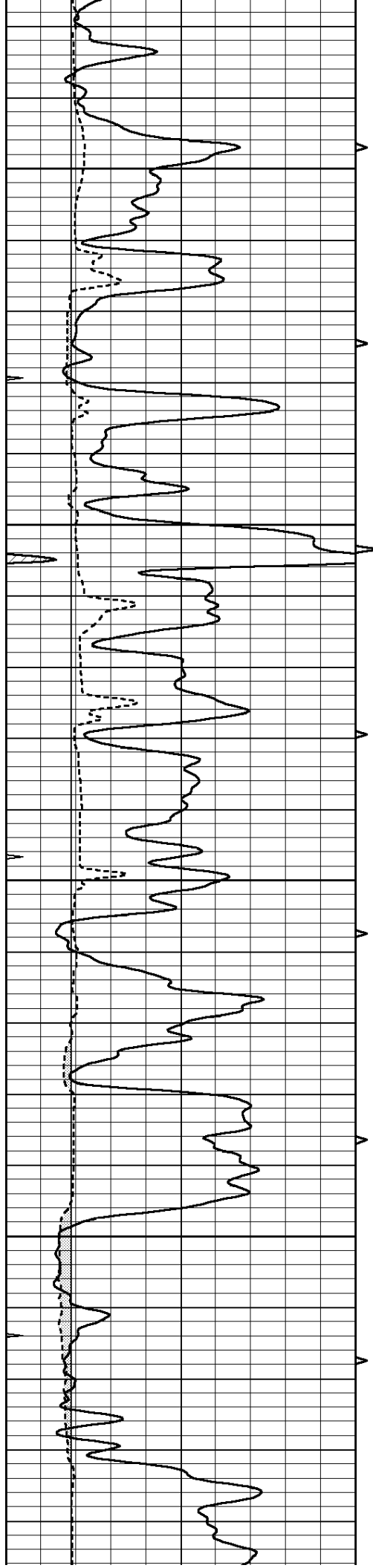
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1000

1050

1100



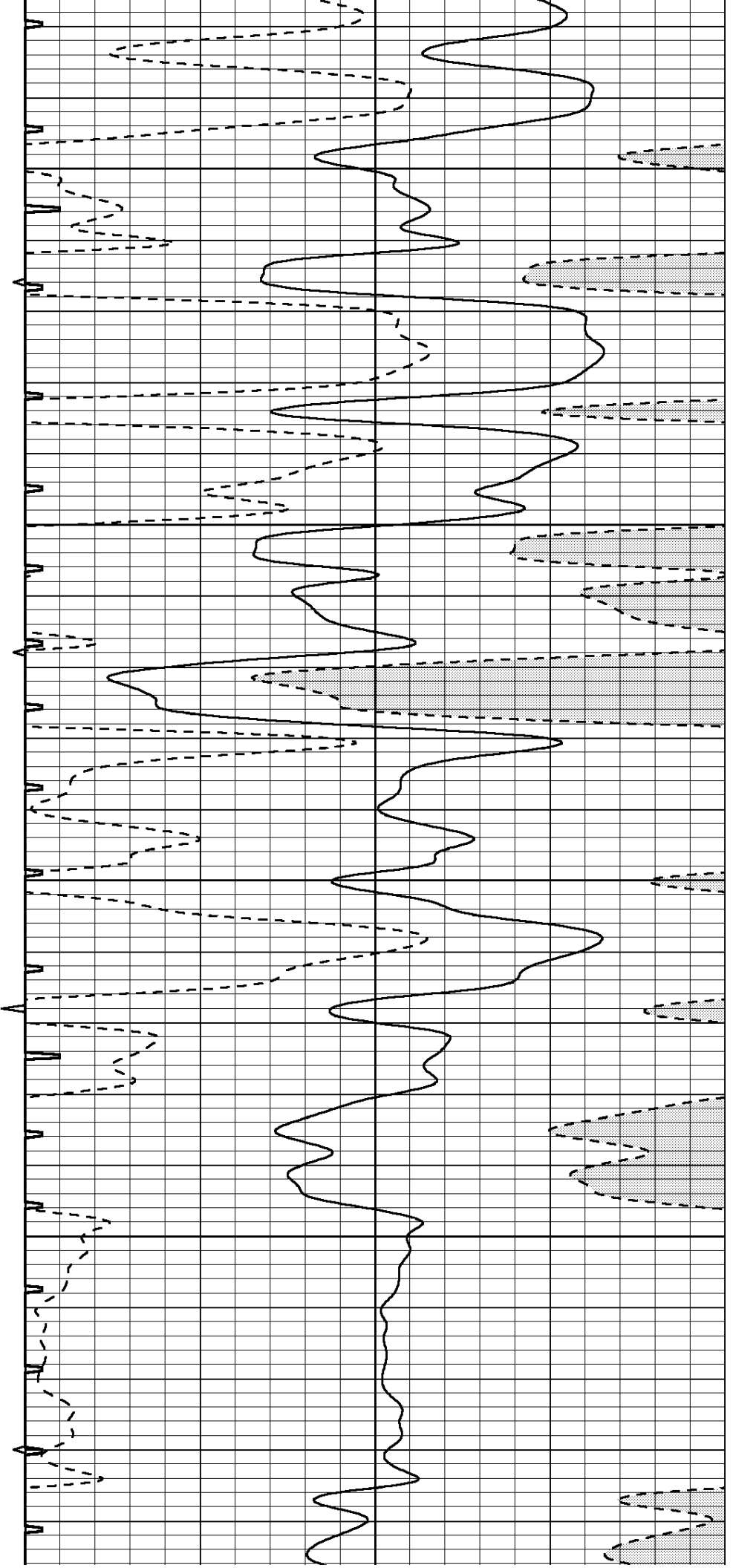


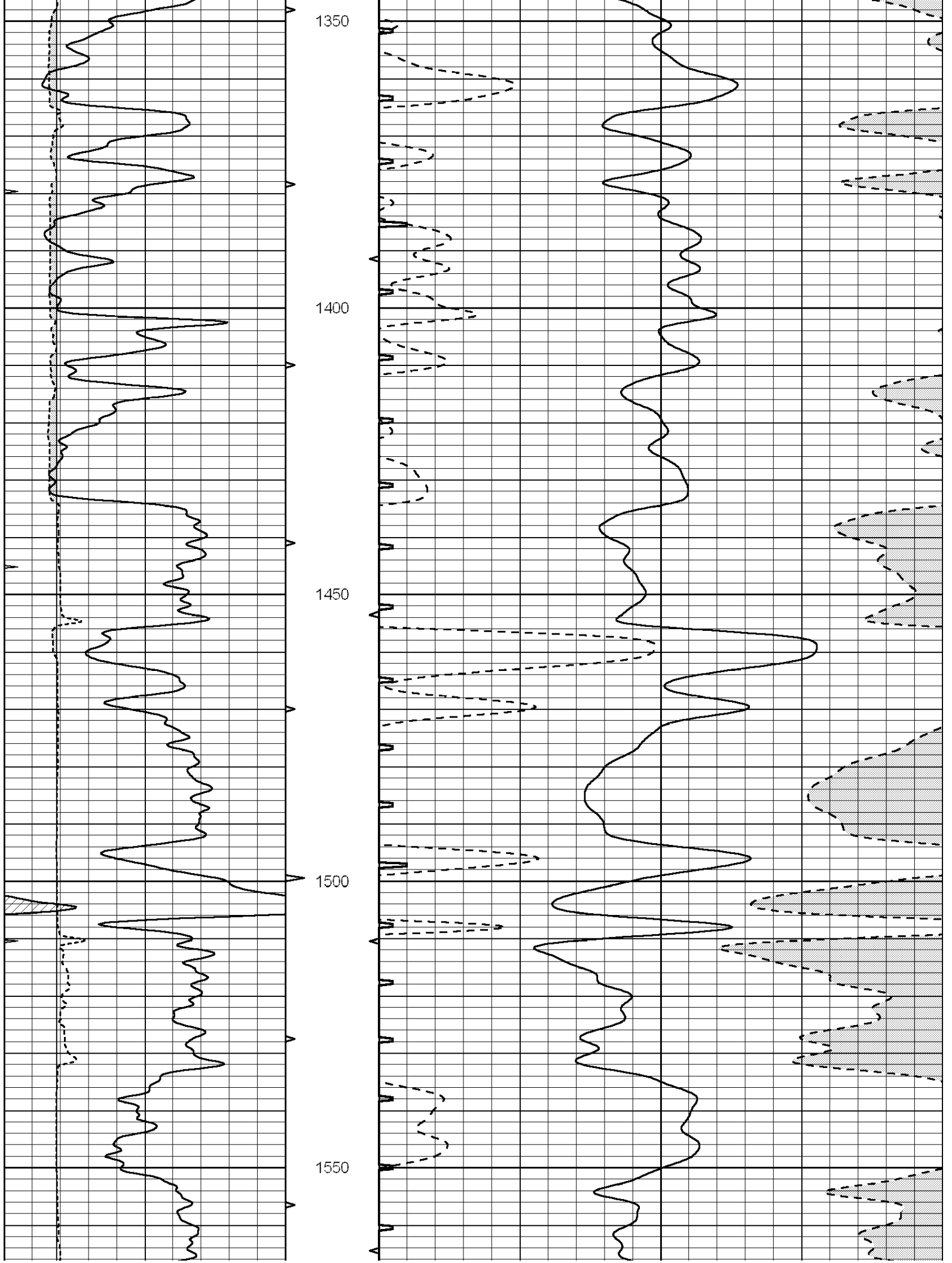
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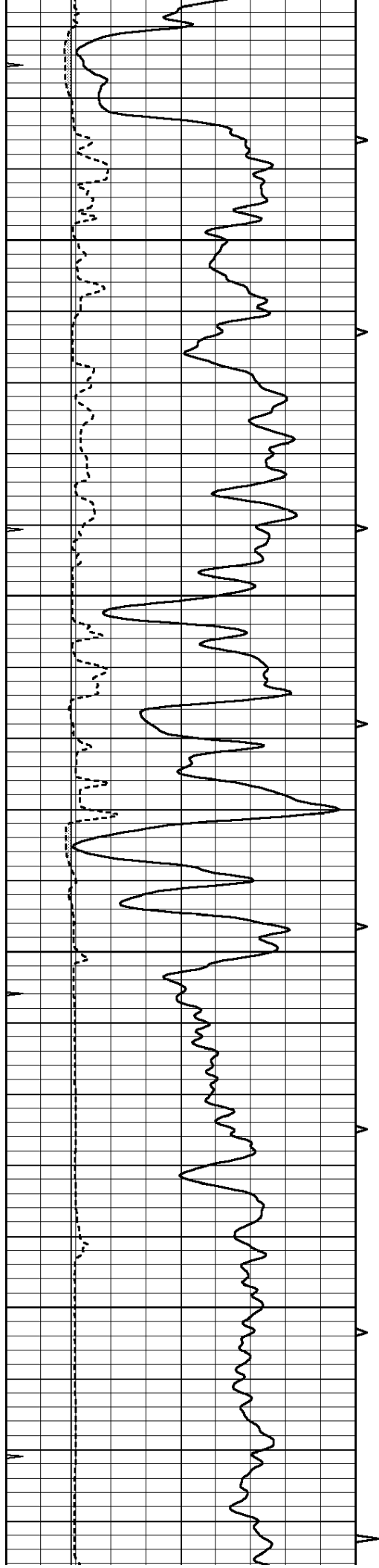
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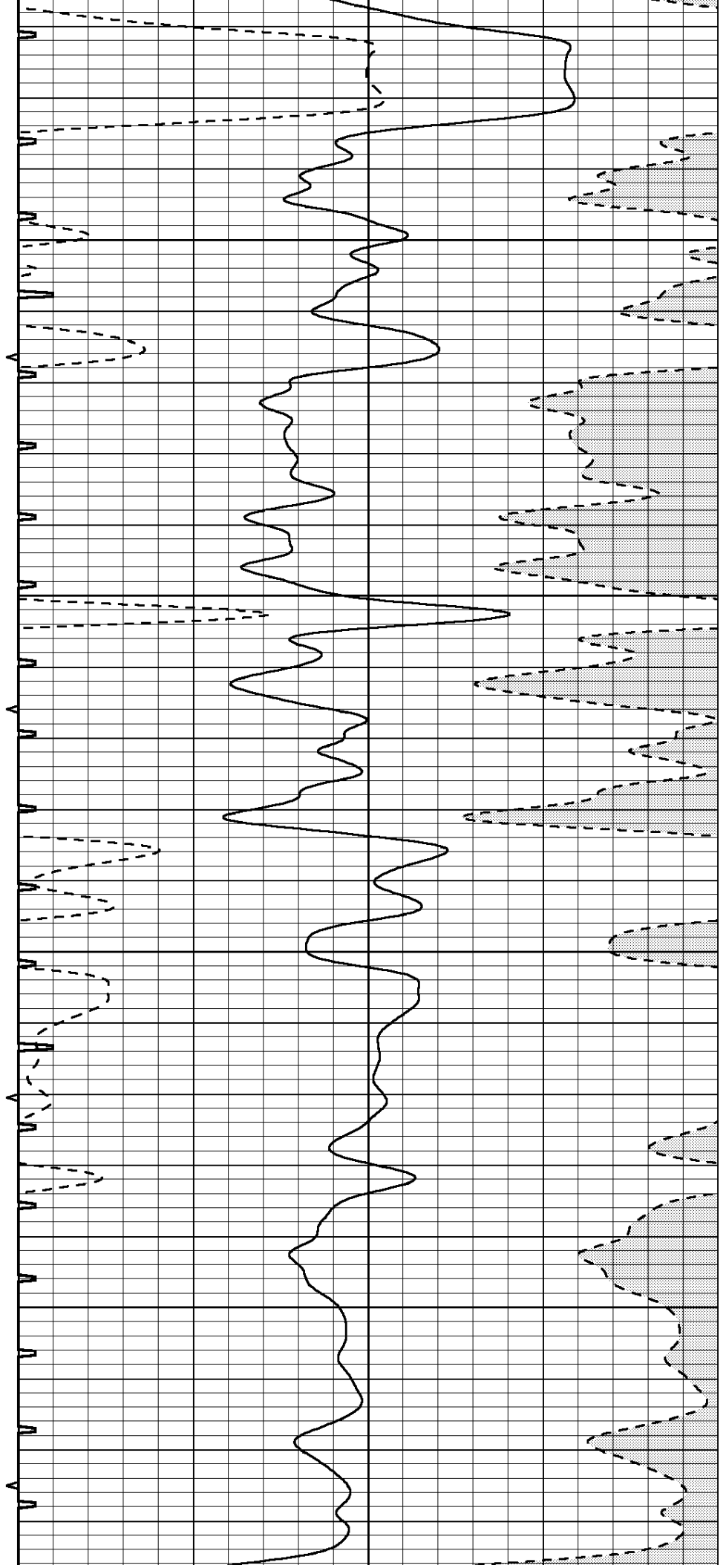


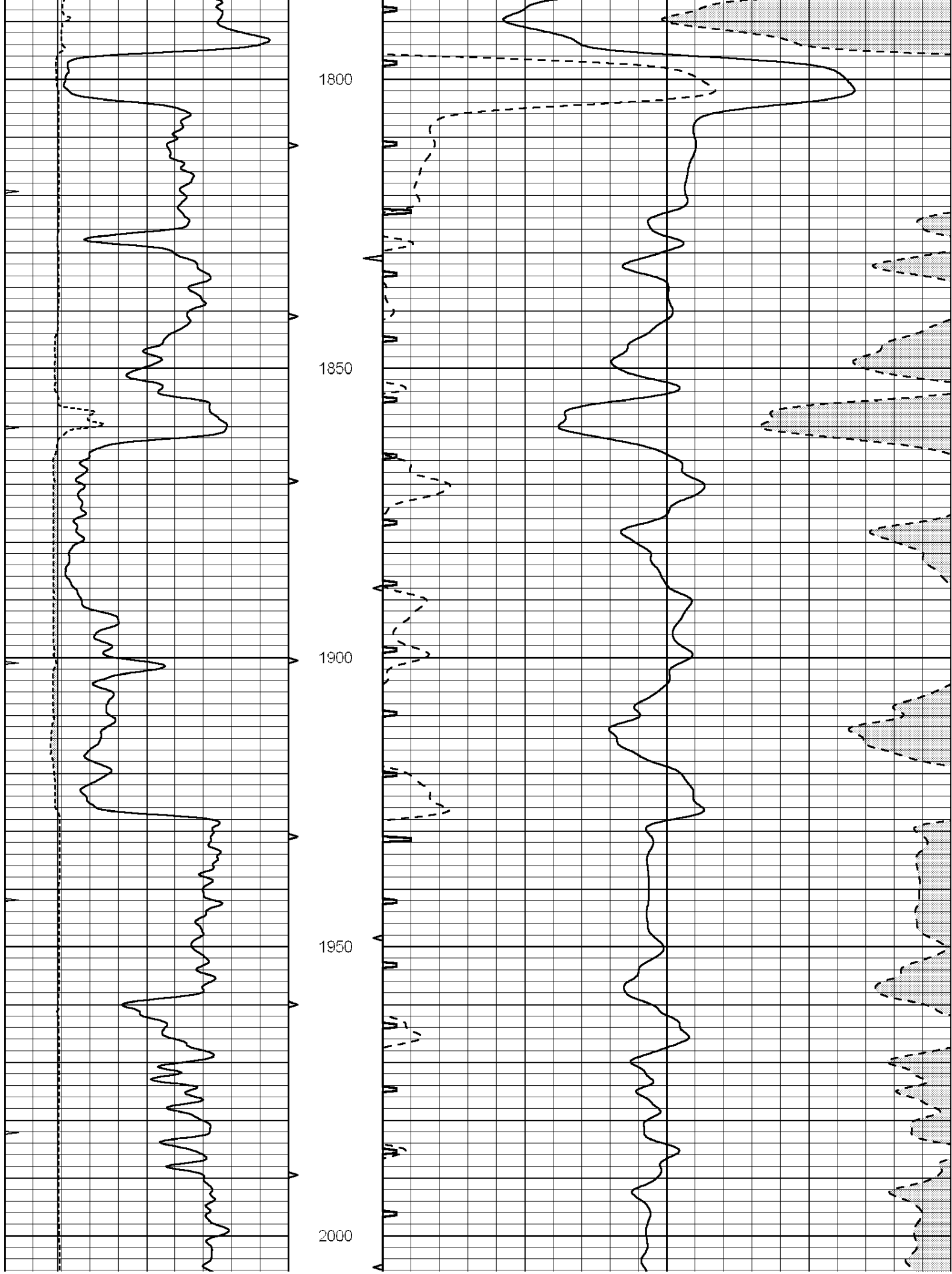
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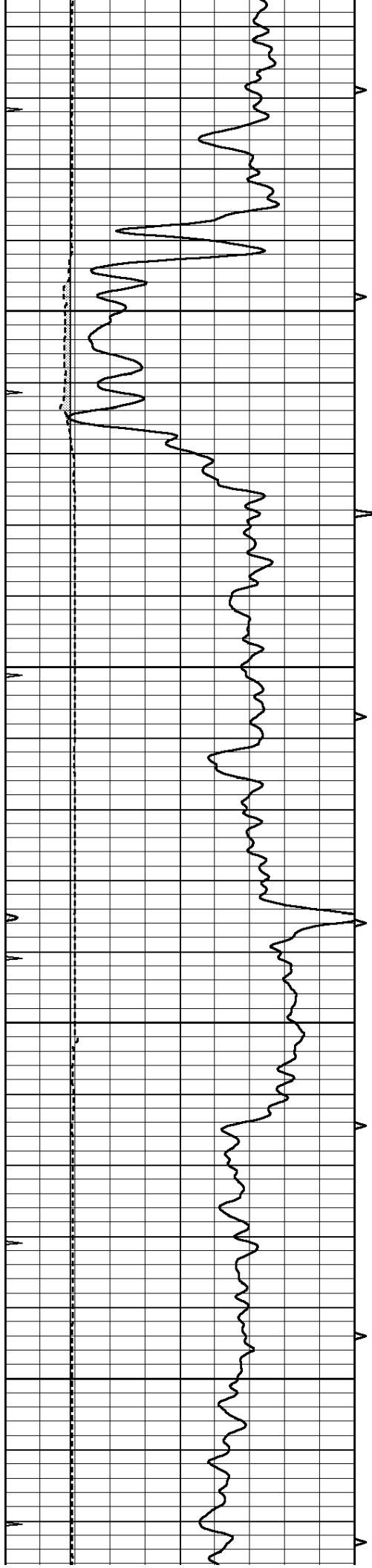
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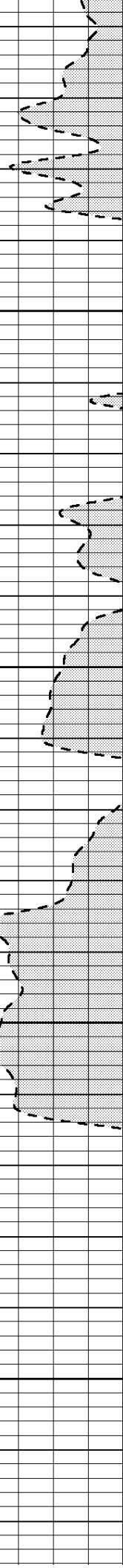
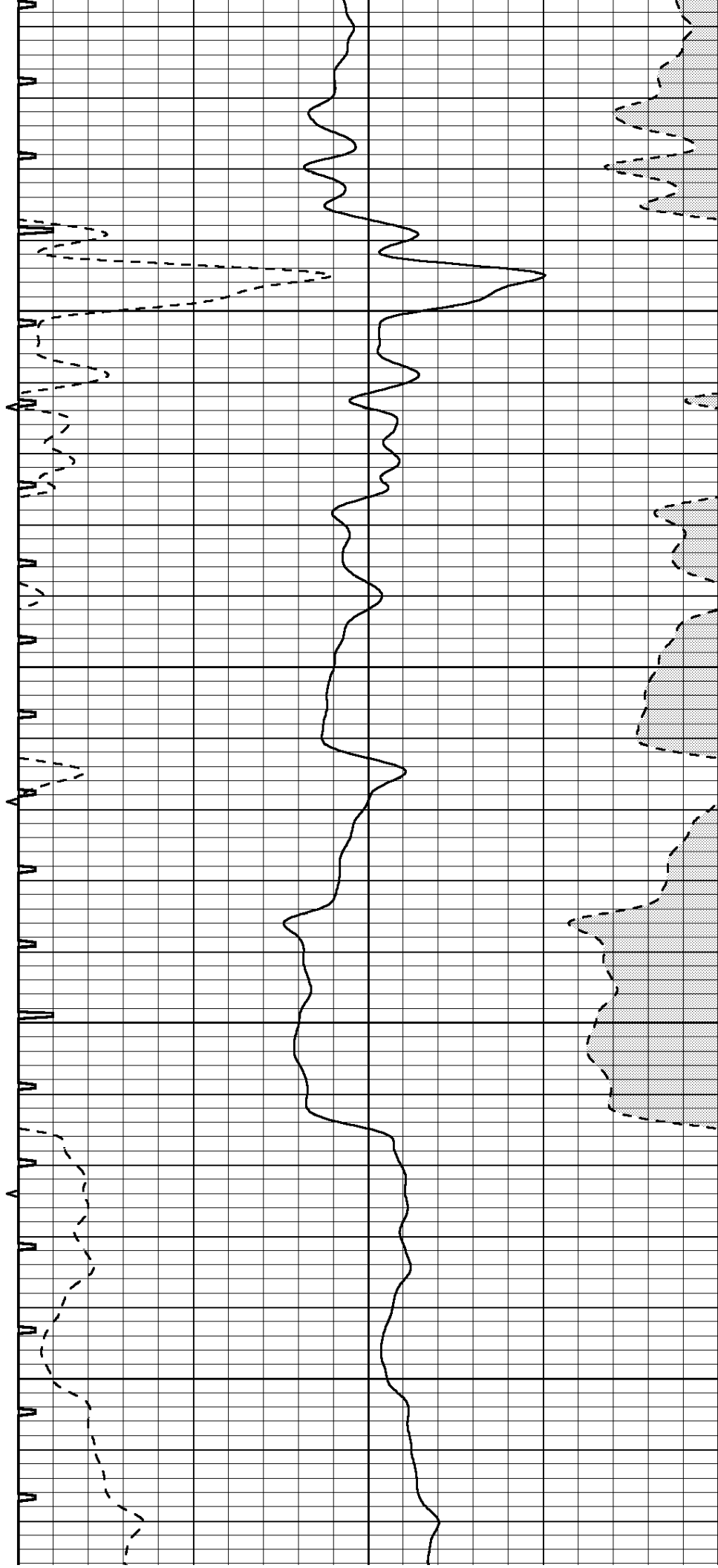


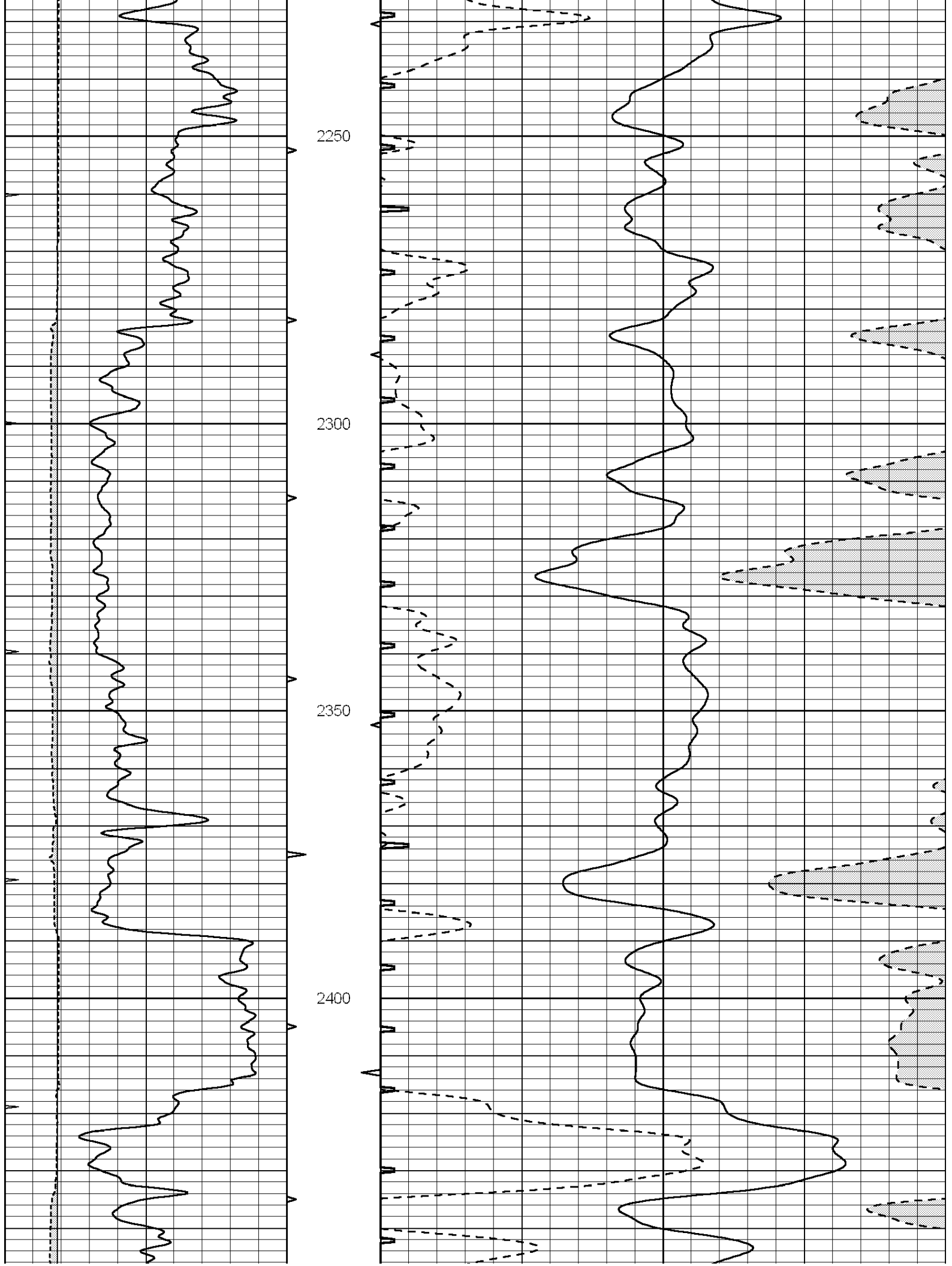
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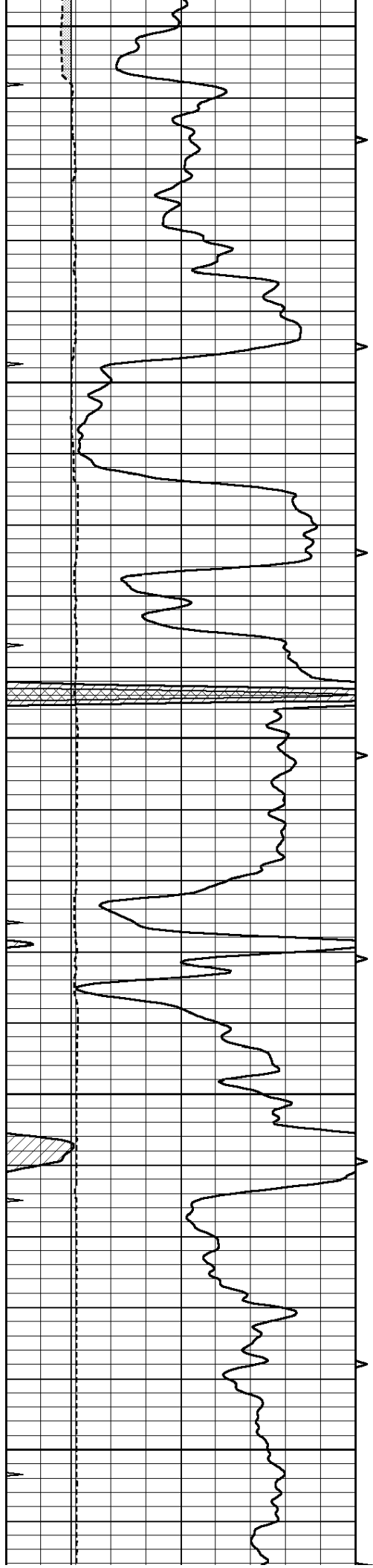
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2200







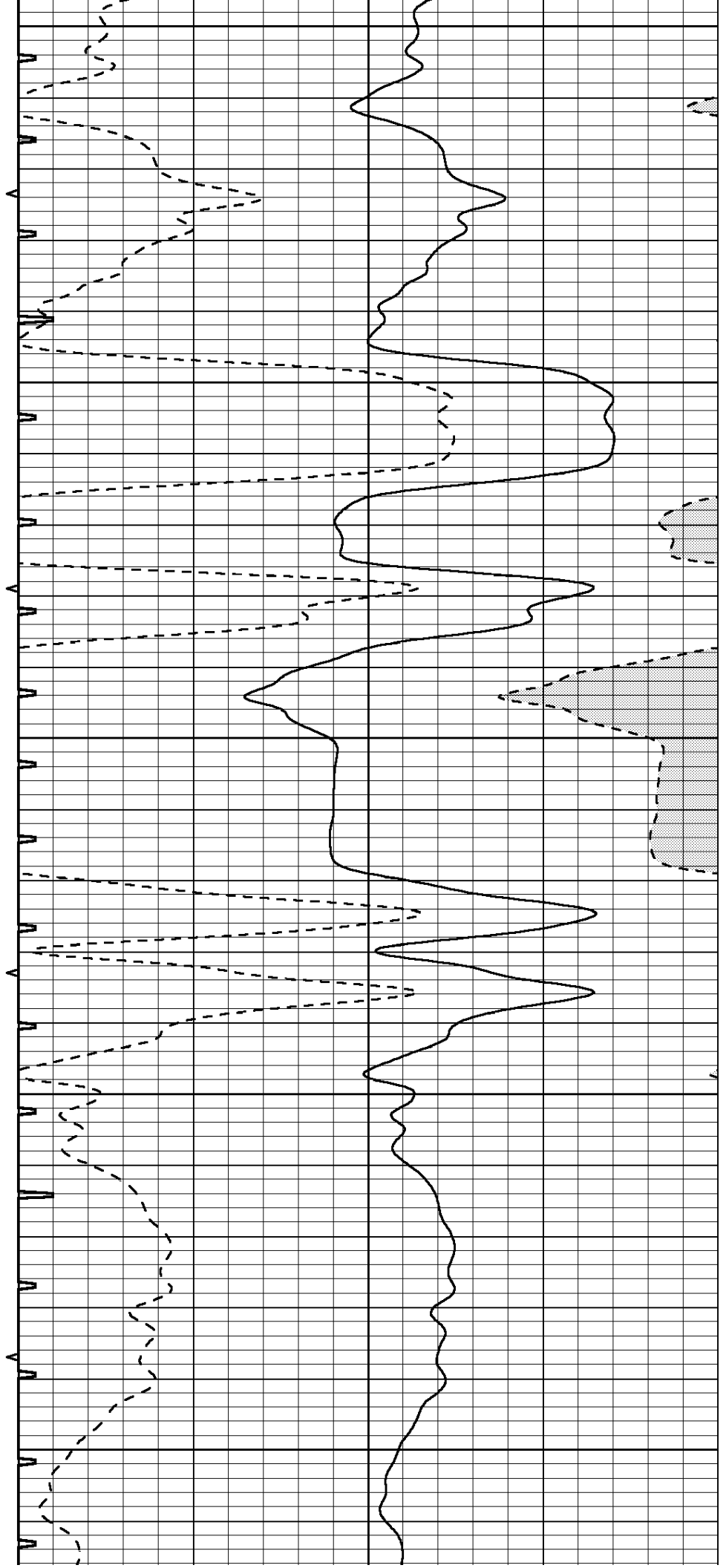
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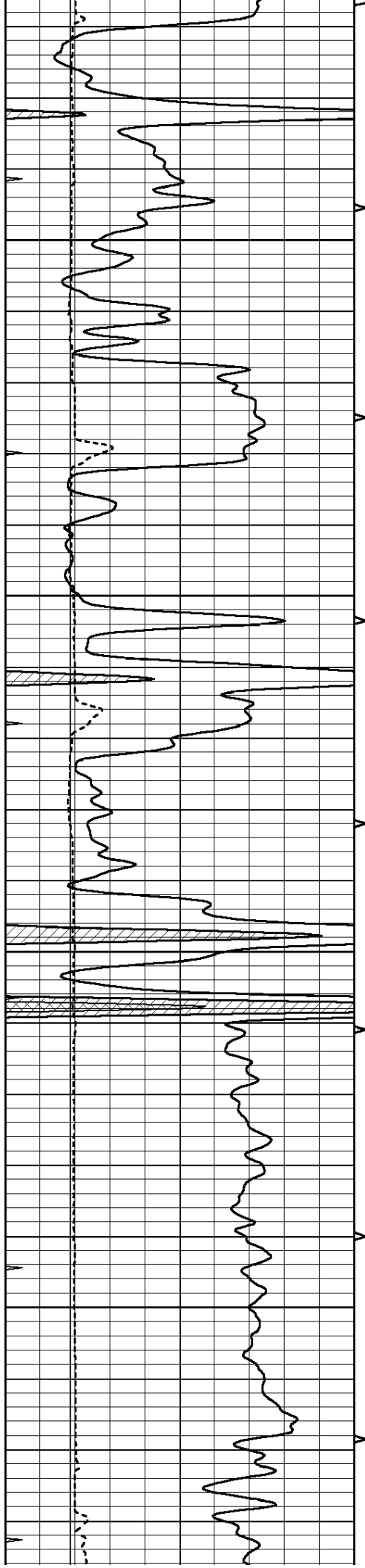
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2550

2600

2650



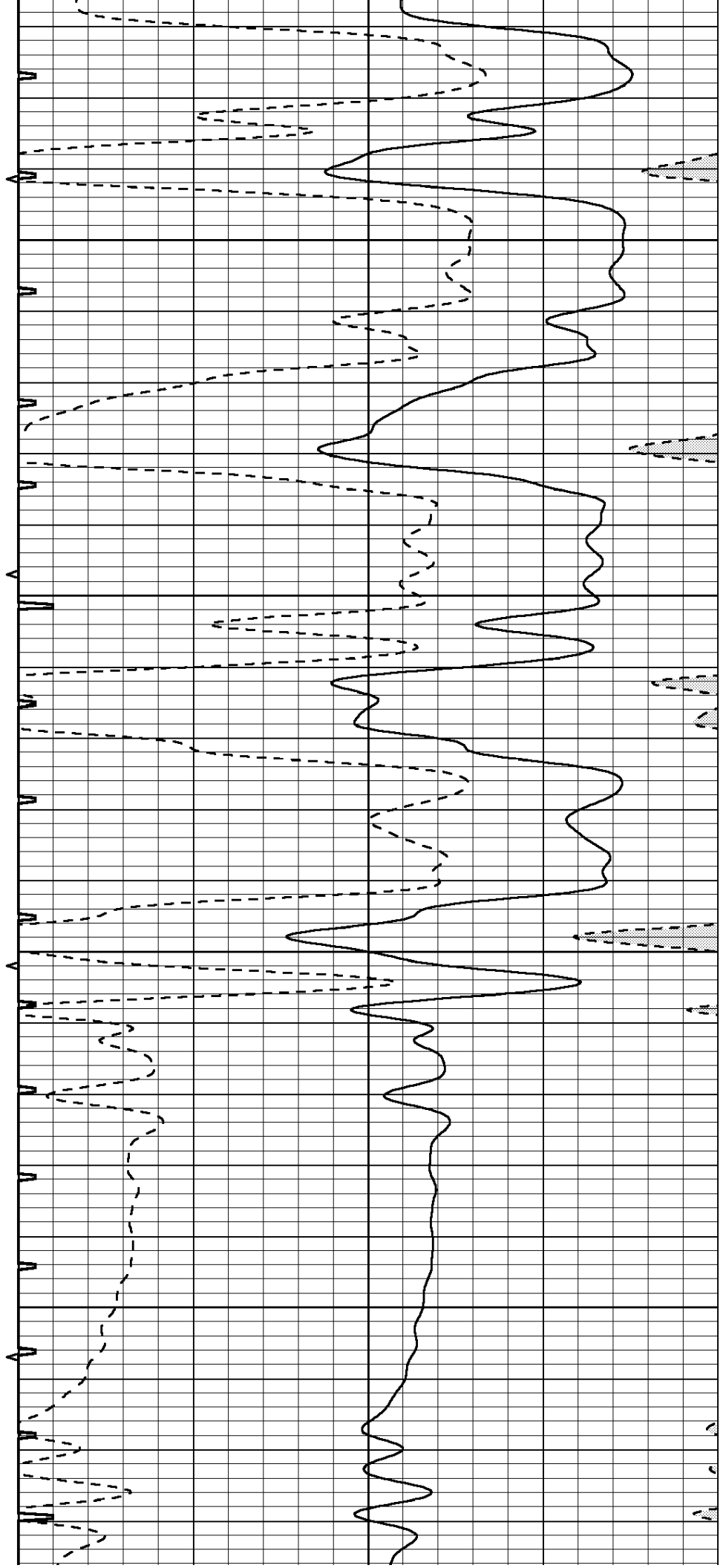


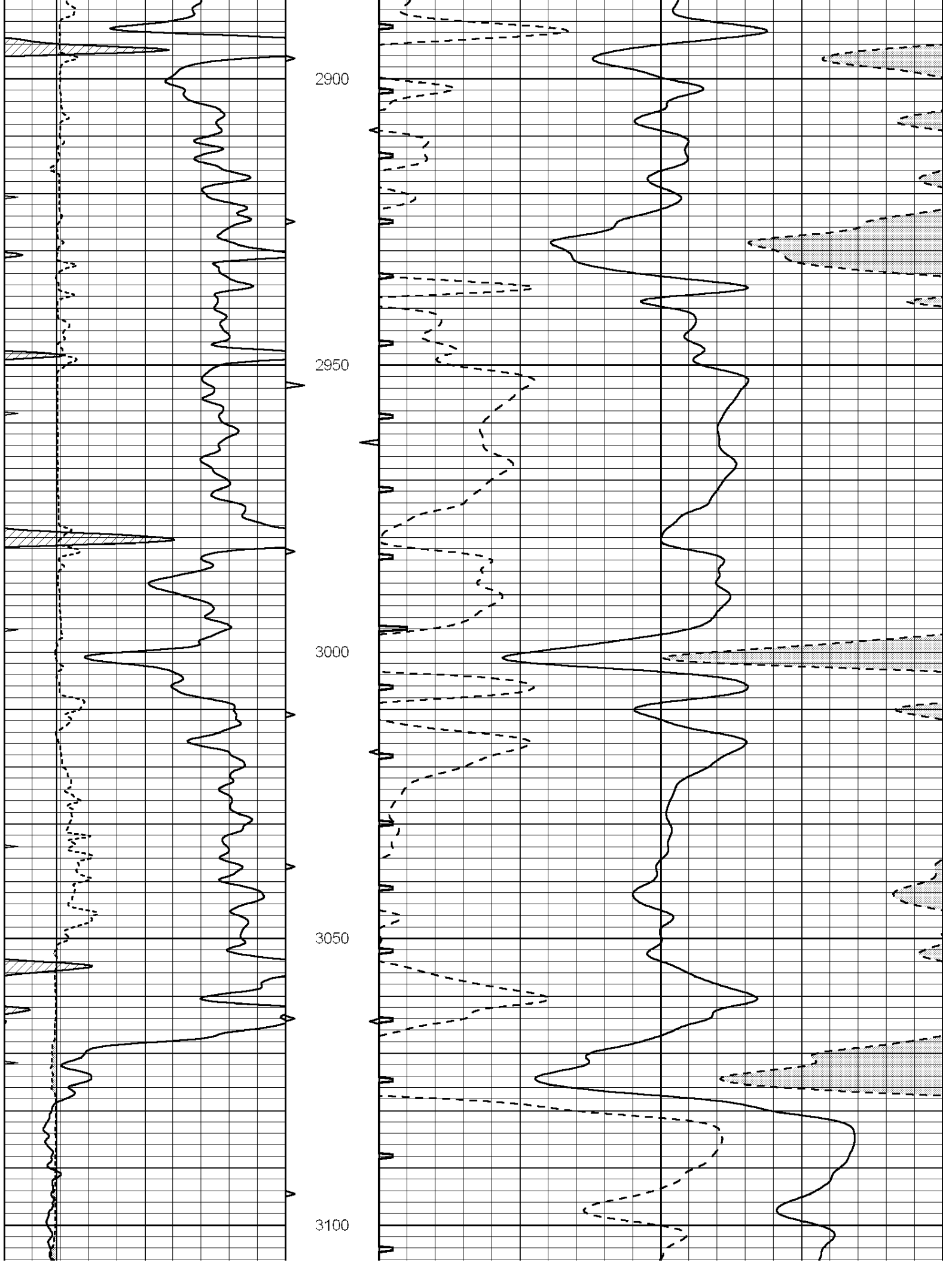
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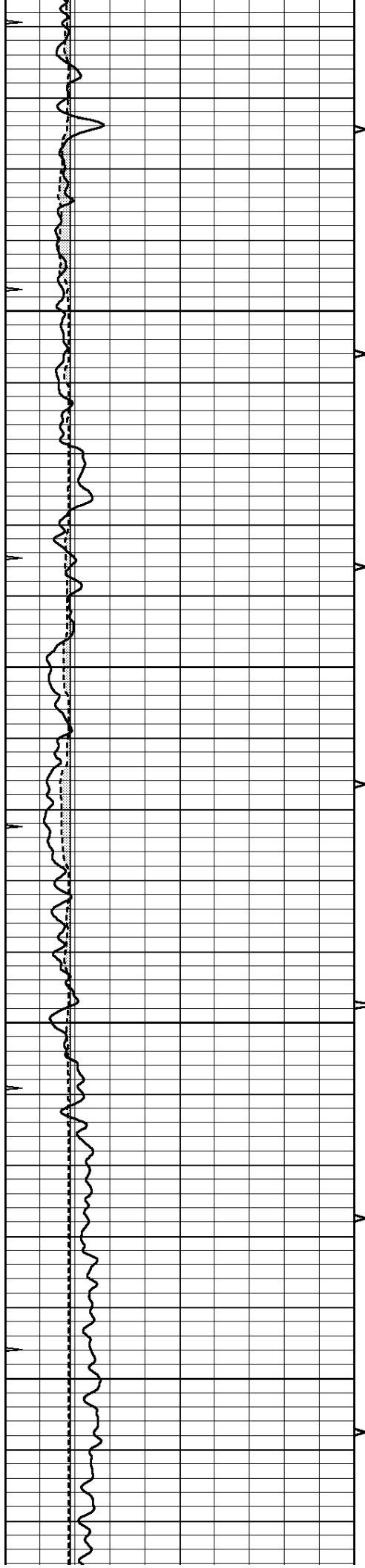
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2850





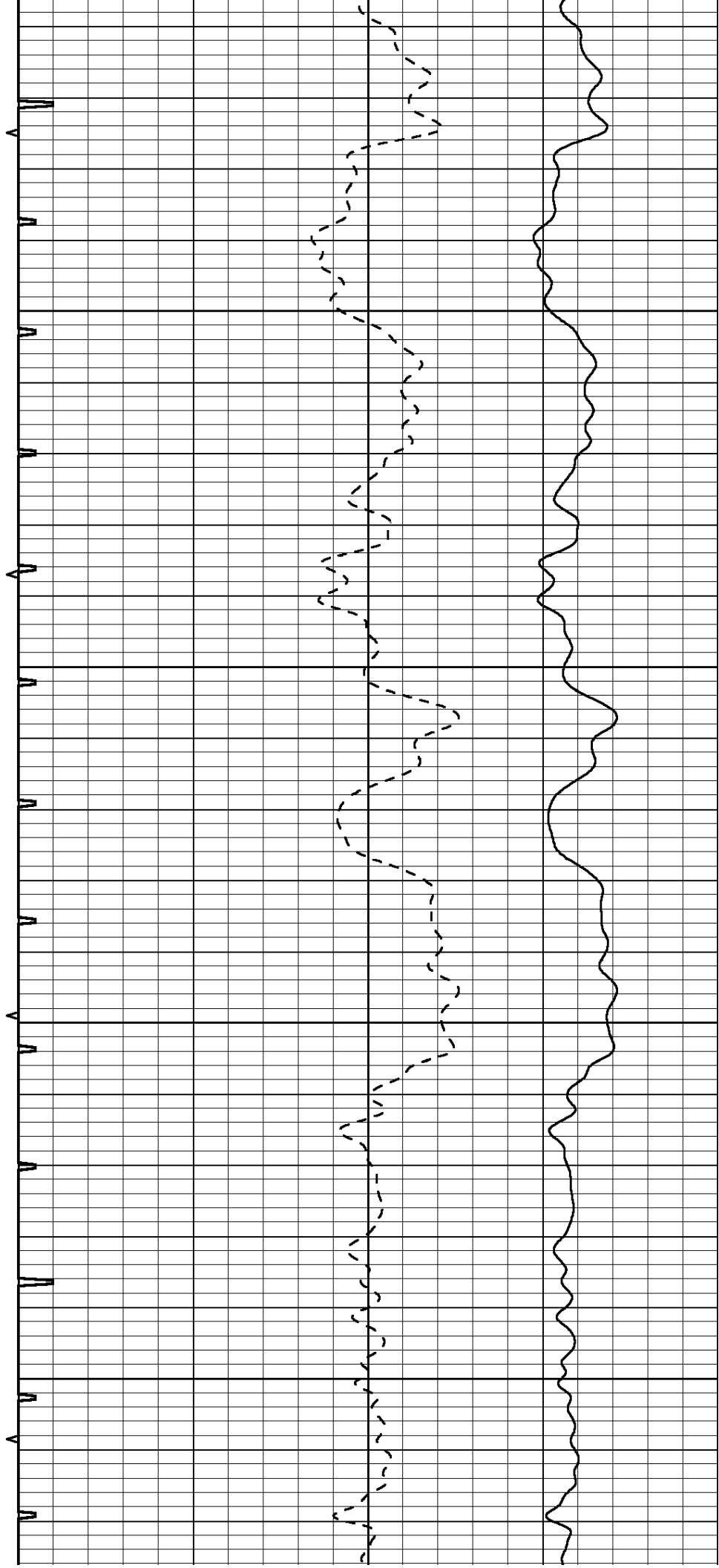


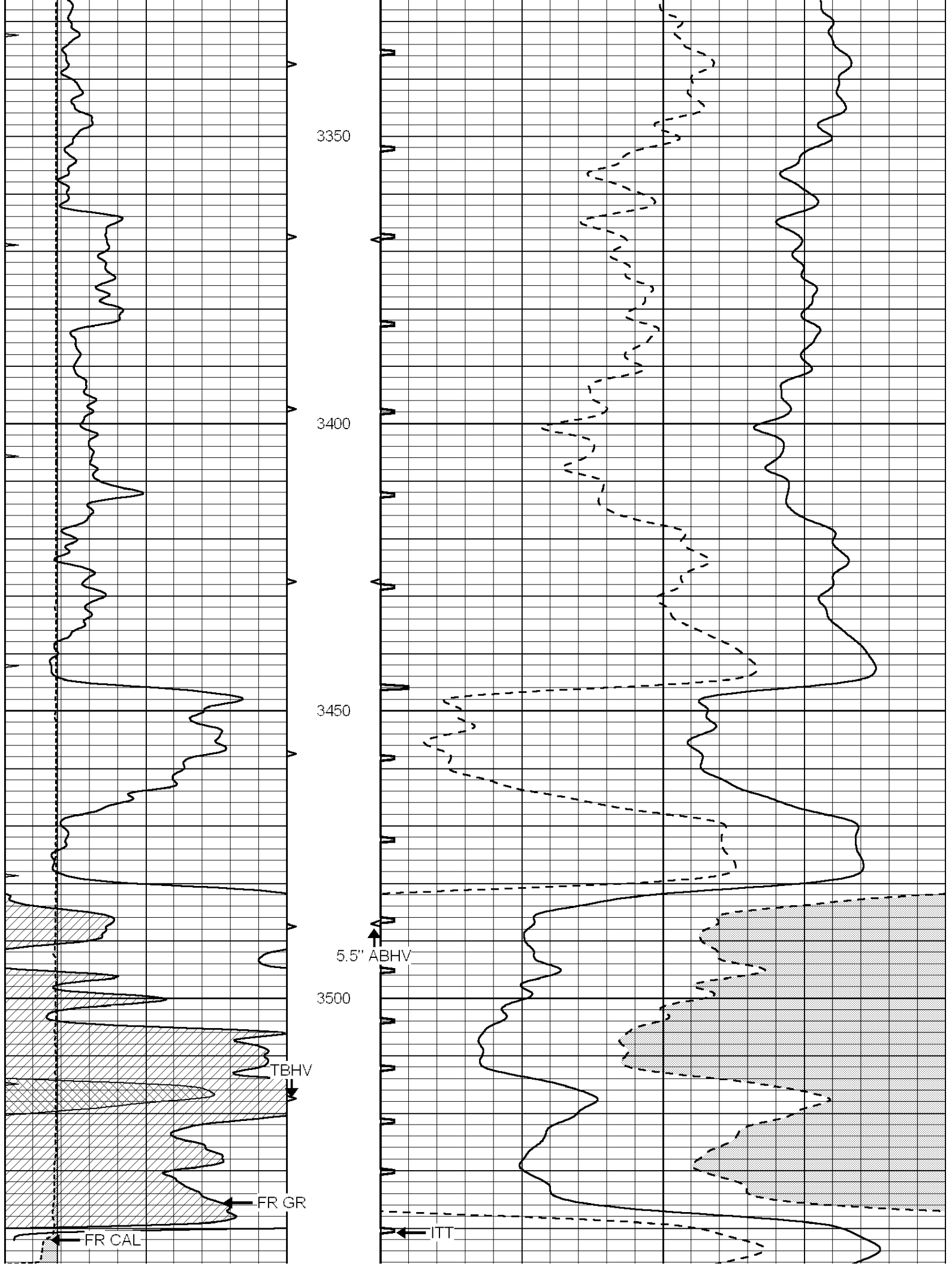
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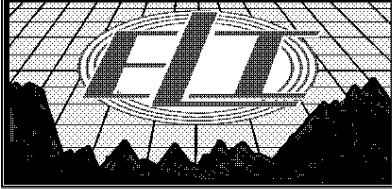
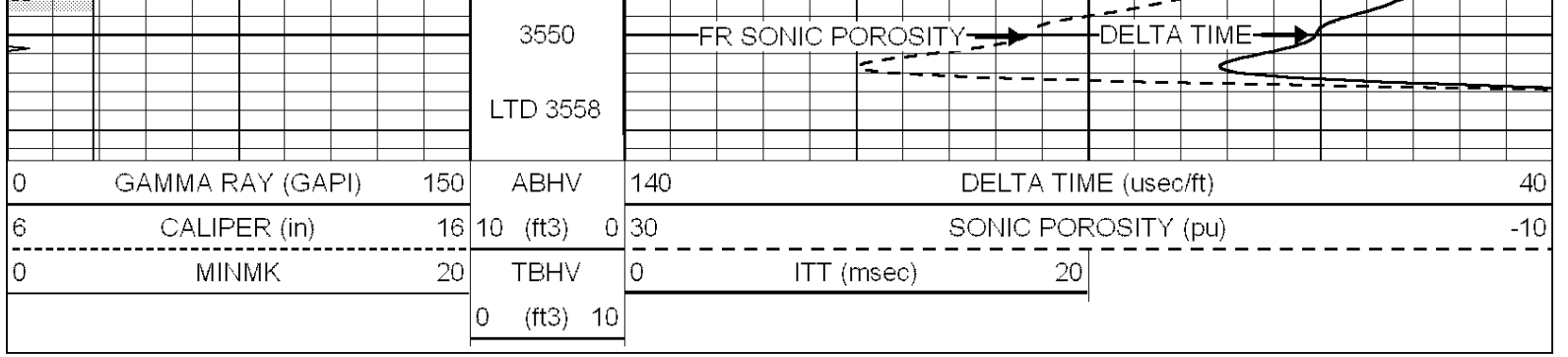
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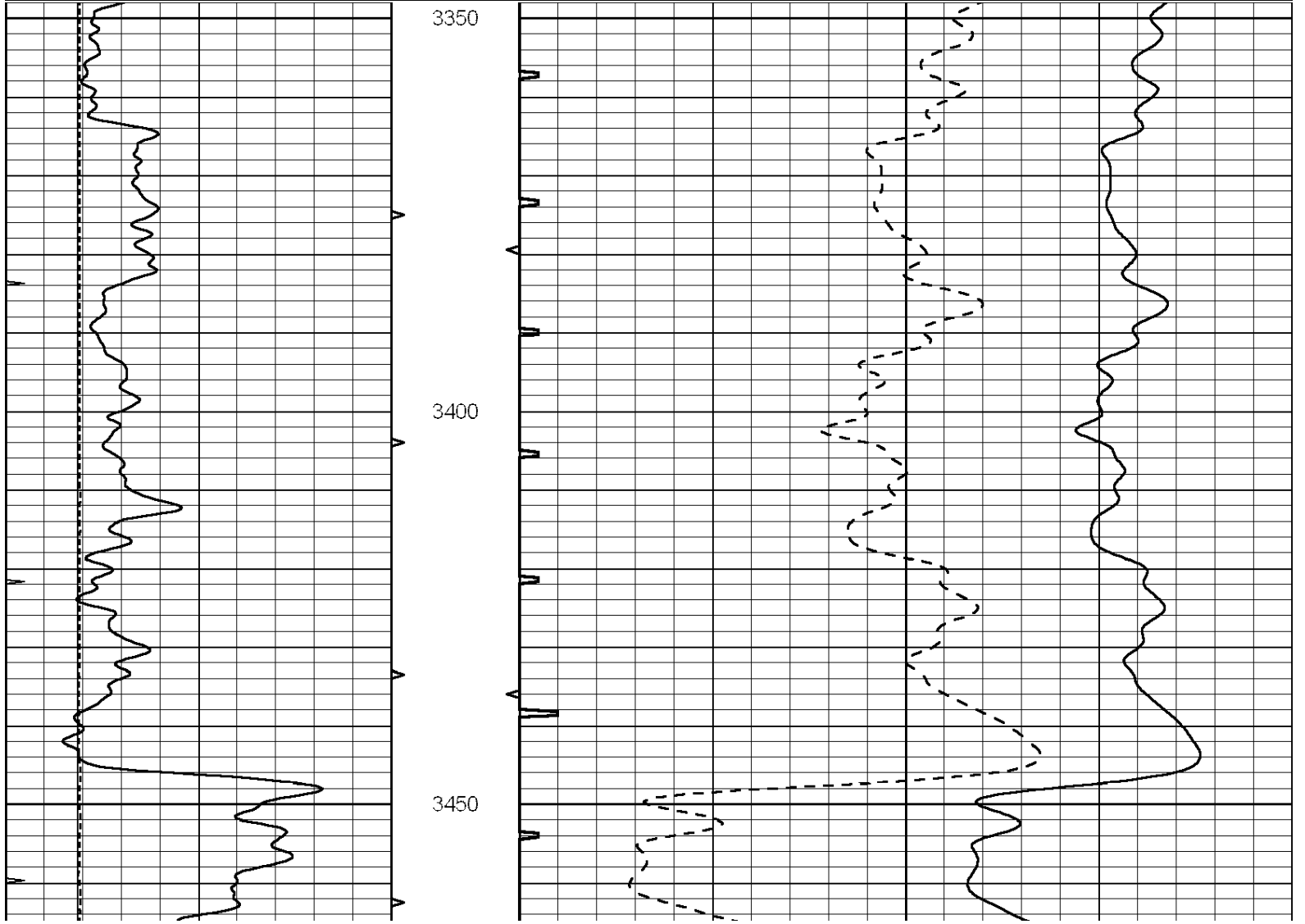
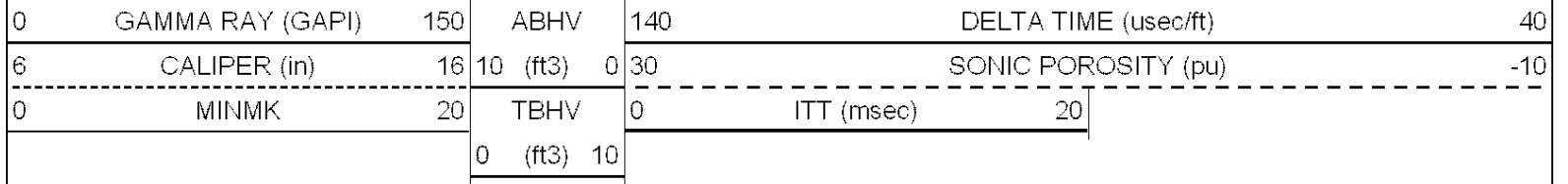


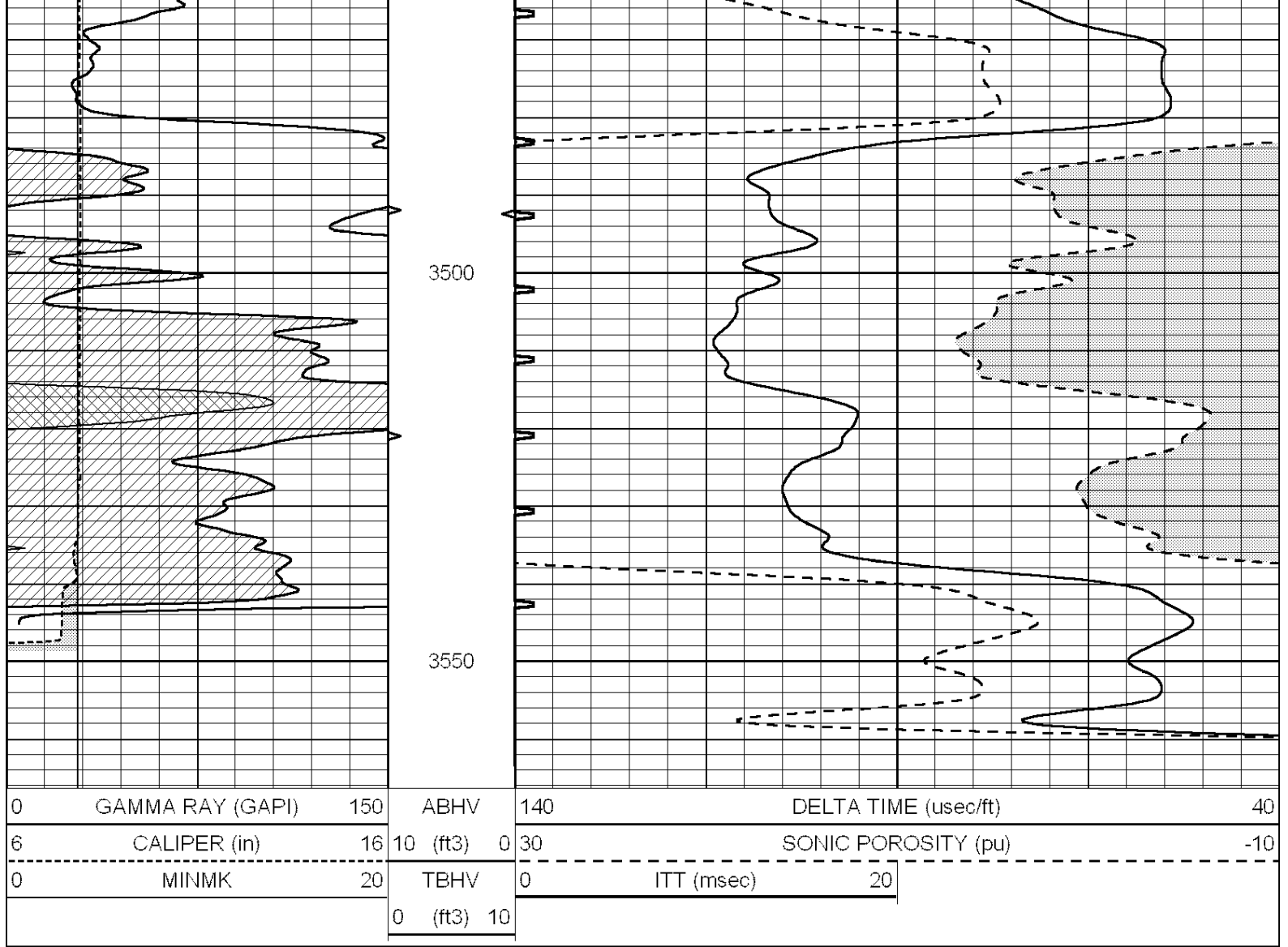




REPEAT SECTION

Database File: 3612pe.db
 Dataset Pathname: pass5.1
 Presentation Format: slt
 Dataset Creation: Wed Apr 17 02:53:48 2019 by Calc SOC 120430
 Charted by: Depth in Feet scaled 1:240





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6	CALIPER (in)	16	10 (ft3)	0	30	SONIC POROSITY (pu)	-10
0	MINMK	20	TBHV	0	ITT (msec)	20	
			0 (ft3)	10			

From: Roger Martin rmrockhand@gmail.com 
Subject: Final geo-report TIF
Date: May 28, 2019 at 4:48 PM
To: Ann Raney annraney@icloud.com



Tom,
Please find attached:
TIF file with DST reports/charts & a couple rock pic's attached (PDF file to follow in another email)
Roger

ROGER L. MARTIN

INDEPENDENT PETROLEUM GEOLOGIST 316 350 6070

From: Ann Raney annraney@icloud.com
 Subject: RaneyPray4FINAL.PDF
 Date: September 16, 2019 at 4:05 PM
 To: annraney@me.com



ROGER L. MARTIN
 INDEPENDENT PETROLEUM GEOLOGIST 316-250-6970

GEOLOGIST'S REPORT
 DRILLING TIME AND SAMPLE LOG

COMPANY RANEY OIL COMPANY, LLC.
 LEASE PRAY #4
 FIELD CABIN VALLEY
 LOCATION 315' FSL & 2458' FWL (2777'FEL) (~SE-SE-SW/4)
 SECTION 31 TOWNSHIP 33S RANGE 06E
 COUNTY COWLEY STATE KANSAS

ELEVATIONS
 KB 1272' GL 1259'
 Measurements Are All
 From KB: 1272'
 API 15-035-24702-00-00

CONTRACTOR DUKE DRILLING, RIG #7
 SPUD 04/08/2019 COMP 04/16/2019
 RTD 3556' (-2284) LTD 3558' (-2286)
 ELECTRICAL SURVEYS
ELI: CDL/CNL/PE & DIL; & MEL & SONIC
4 DST's by TRILOBITE TESTING

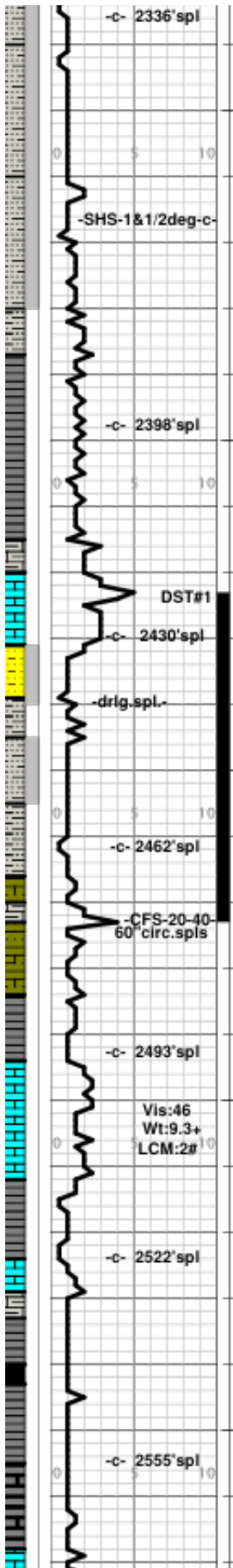
CASING
 SURFACE New 8&5/8"x24# set @ 310'KB
w/200sxClassA;3%CaCl;2%gel;1/4#Floceal
 PRODUCTION New 5&1/2"x17#/ft set@
-3551'KB w/200sx ELITE#4430; see REMARKS

FORMATION TOPS	LOG	SAMPLES	CHRONOLOGY
HEEBNER SH	1497' (-225)		04/08/19: 7am: MURU-mix mud; drill RH; Spud 12&1/4" hole @ 9:30pm; Bit#1:HTC:12&1/4"#5275116;jet:5-14 WOB:4-8K; RPM:120; ROP-52.5/hr
STALNAKER SS	1862' (-590)		04/09/19: Drid to 315'; SHS;TOH@-6:00am Running 8&5/8" surf.csg @-7:00am
LAYTON SS	2283' (-1011)	2280' (-1008)	Deviation/Straight Hole Survey (SHS)-3/4deg@315'
KANSAS CITY	2422' (-1150)	2420' (-1148)	Ran 7/8s new 8&5/8"x24# csg (295.61') set @ 310'KB w/200sx Class A, 3%CaCl, 2%gel, 1/4#Floceal/sk; cmt did circ; plug dwn @ 8:45am on 04/09/19; by ELITE
DODDS CREEK SS	2434' (-1162)	2431' (-1159)	Drid plug @ 4:45pm on 04/09/19
MARMATON	2670' (-1398)	2669' (-1397)	04/10/19: Drlg @-1200' @-7:00am; Bit#2:HTC:7&7/8" DP506 (PDC) jets:5-15; WOB:4-8K; RPM:120; PP:550; GPM:343 (BPM-8.17) SPM:56; ROP:90.76/hr(TFPH76) MoWt:9.0; Vis:29; SHS:1deg @ 491' & 1deg @804'
PAWNEE	2732' (-1460)	2731' (-1459)	04/11/19: CFS/SHS@2250@-6:00am; Drlg@-6:45am
FT.SCOTT	2769' (-1497)	2769' (-1497)	Bit#2:AA;WOB:6K;RPM:120; PP:650; GPM:343; SPM:56 ROP:80.6/hr; (TFPH:75) SHS:3/4deg @ 1239'
CHEROKEE	2806' (-1534)	2806' (-1534)	3/4deg @ 1617'; 1deg @ 1930'; 1&1/4deg @ 2243'
EROSIONAL MISSISSIPPIAN	3059' (-1787)	3059' (-1787)	04/12/19: CTCH@2473' after DST#1; (Drid 223-24hrs) Bit#2:WOB:6-10K;RPM:120;PSI:700;GPM:343;SPM:56 ROP:65.89/hr (TFPH:63.81) SHS:1&1/4deg@2473'
MISSISSIPPIAN CHERT POROSITY	3068' (-1796)	3069' (-1797)	04/13/19: Drlg@3195@-6:00am (Drid-722'24hrs)
MISSISSIPPIAN LIMESTONE	3077' (-1805)	3076' (-1804)	Bit#2;WOB:6-10K;RPM:120;PSI:750;GPM:343;SPM:56; ROP:59.7/hr (TFPH:58.35) SHS:1deg@2805'
KINDERHOOK SH	3480' (-2208)	3479' (-2207)	04/14/19: Drlg @3440'@-7:00am; (DST#2@3210') (Drid-245-24hrs) Bit#2:AA; WOB:12-16K; RPM:120; PSI:725; GPM:343; SPM:56; ROP-60/hr;TFPH-59.3
CHATTANOOGA/WOODFORD SH	3500' (-2228)	3500' (-2228)	Lost-50bbis Drlg.Md@3350'-3370'; SHS:1deg@3210'
ARBUCKLE	3537' (-2265)	3535' (-2263)	04/15/19: CFS @ 3539' @-7:00am; (DST#3@3510') (Drid-99-24hrs) Bit#2:HOB:54&3/4hrs; WOB:12-16K; RPM:120;PSI:625; SPM:50; ROP-59/hr;TFPH-58.25
TOTAL DEPTH (LTD/RTD)	3558' (-2286)	3556' (-2284)	SHS: 1&3/4deg@3510' 04/16/19:CTCH@RTD:3556' LTD:3558' see Remarks

REMARKS:

04/16/19: CTGH @ RTD:3556' / LTD:3558' after DST#4; & E-Logs; ELI: 1st run; DIL & CDL/CNL/PE: 2nd run; SONIC & MEL (SHS: 1.83/4 deg @ RTD:3556') LDDP to run csg. Ran 83 jts new 5.81/2" x 1.7#/ft; L/S 8Rnd LTC production casing; (Tally=3447.80'+-3.50' Basket Shoe) = 3551.30' Total. Tagged bottom with landing joint; Set Basket Shoe/csg @ -3551'KB; @ 900 PSI. Pumped 15bbl fresh water ahead; Mixed 200sx Thick Set cement w/ 2# Phenoseal/sk, 1/4% CFL-115 @ 13.8#/gal. Yield=1.65--59bbl slurry. Wash out pump & lines; shut down, Released latch down plug; Displaced plug to seat w/ 84 bbbls of fresh water (first 40 bbbls was city water w/ KCl). Final pumping pressure ~-1000 PSI. Bump Plug to -1500 PSI; wait 2 minutes; Released pressure; Float & Plug Held. Good circ throughout cementing. Plug Down @ -10:30pm on 04/16/19. Plugged Rat Hole w/20sx. (By ELITE:Ticket#4430) Set slips & released rig @ -11:00pm on 04/16/19. PBTD@ -3502'. Centralizers on Jt#1[cent#1@-3502'] & Jt#4[cent#2@-3370'] & Jt#5[cent#3@-3315'] & Jt#6[cent#4@-3280']; Jt#9[cent#5@-3145']; Jt#10[cent#6@-3100']; Jt#18[cent#8@-2757'] Jt#28[cent#9@-2330']; Jt#38[cent#10@-1890']. Baskets - middle of Jt#3[bskt#1@-3435'] top of Jt#7[bskt#2@-3233'] & top of Jt#29[bskt#3@-2293']. Production casing set for a completion in the Mississippian System (DST#2 interval). Recommend review of Ft.Scott, Pawnee, & Dodds Creek SS before abandonment. Respectfully submitted.
Roger L. Martin, Geologist @ Well-site (print length=87")

POROSITY	DRILLING TIME MIN/FT	DST	SAMPLE DESCRIPTION	REMARKS
			connection2180 Vis:51 Wt:9.2 LCM:2#	
			{2212'spl} Pred SH:dk-gy-bk, subcarb to carb; sm calc.	No Shows of Oil (NSO) in Kelly Down (KD) wet samples(spls) & re-washed & dried spls by &RLM; examined from ~500' to 2180'KD.
			-2200 {2243'KD.spl} SH:AA; incrs calc- sm Lmy.	
			(connecton)-c-	
			{2243'circ.spls} Trc Sd Clust:gy-tn; Vfn-InGr'd, pr-Fr-visibl-Poro; NS;NF;NC. Rare(Rz) LS:LI-gy, micro-xln(ux) & argl-Mdst; Vpr-NVP; NS; & Silts-Mdst:gy, sm micac, sm sndy, Vsl pyrct.	
			-CFS-20-40"SHS-c-	
			{2260'drlg&circ.spls} incrs Silts-Mdst:LI-gy, calc, w/ Trc Sd Clust:AA; NS; & SH:AA.	
			-2250 -CFS-20-40"spls	
			{2269'drlg&circ.spls} Abndt Silts-Mdst:AA; incrs calc-Lmy, micac; & SH:gy-bk-fiss, subcarb- Rr-carb.	
			-CFS-20-40"spls-c-	
			2275'circ&2295'drlg.spls} V-abndt Silts-Mdst: LI-md-gy, micac, sm calc, sm sndy; Trc Sd Clust:AB; NS; NF; NC.	
			{2295'+20min.circ.spl} SS: Abndt (>30%) Sd Clust: LI-gy-wh-bf, Vfn-InGr'd, Very rare (Vir) prt mdGr'd, Rnd'd-Subanglr, micac, silty, shly, well cmt'd to fribl w/ Fr-Gd Porosity (Poro) No Show (NS) No Fluorecence (NF) No Cut (NC) No Odor (NO). (40min.spl) Sd Clust:AA; incrs fribl w/ Fr-Gd Poro; NS; NF; NC; NO.	2280' (-1008) LAYTON SS NSO
			-CFS-20-40"spls	
			{2306'KellyDown(KD)spl} ~20% Sd Clust:AA; NS; NF; NC; NO; (&SH:AA).	
			-2300 -c- {2306'spl}	
			{2336'KD.spl} VAbndt (~90%) Sd Clusters: bf-gy-wh, pred VfnGr'd, silty, micac, subfribl to fribl w/ Fr-Gd Poro; NS; NF; NC; & sm Vfn-InGr'd, Rnd'd-subanglr w/ Fr-VGd Poro; NS; NF; NC; NO.	
			{2367'KD.spl} VAbndt Sd Clust:AA; gy-wh-bf, incrs Vfn-InGr'd w/ Fr-VGd-IGr-Poro; NS; NF; NC; NO; sm VfnGr'd-	
				Mud-Co Report#4 04/11/19@10:15am Drlg @ 2287' Wt:9.3+ Vis:43 PV:12 YP:13 pH:11.0 WL:7.2 CT:1/32" Alka:1.0 Cl:1,100ppm Ca:60 Solids:7.1% LCM: 2#/bbl



2336' spl
 -c- 2336' spl
 silty-shly w/ pr-visbl-Poro; NS; NF; NC; NO.

2350
 [2398'KD.spl] SS- decrs to <30% Sd-Clust:AA; abndt Vln-fnGr'd, micac-silty, Vrr prt-md-Crs-Gr'd; well cmt'd to fribl w/ sm Fr-VGd Poro; NS; NF; NC; NO; sm Sndy-Silts (&SH:AA).

SHS-1&1/2deg-c
 [2430'KD.spl] incrs to ~50% Sd Clust:AA & Sndy-Silts; pred gy, Vln-fnGr'd; Vrr prt mdGr'd, micac; sm Fr-VGd Poro; & sm Vpr-pr-visbl-Poro; NS; NF; NC; NO.

2400
 [2430'KD.spl.cont'd] & SH: dk-gy-bk

2398' spl
 -c- 2398' spl

DST#1
 [2440'drig.spl] LS:wh-gy-tn, dn & prt chlky; & ux-fnX; pred Vpr-NVP; NS.

2430' spl
 -c- 2430' spl

drig.spl
 [2462'KD&2473'drig&+20min.spls] SS- Sd Clust: Lt-gy-bf-wh, w/ sm tn-STN; pred VlnGr'd, & sm Vln-fnGr'd, Rnd'd-subanglr, well cmt'd to fribl; ~40%>30% w/ Fr-VGd Poro w/ SI-Fr-SFO & mol-sat- yel-wh-FLR & Lt-tn-STN, & SI-Fr-Cut, Fr Odor.

2450
 [2473'+40min.circ.spl] SS-10% Sd Clust:AA; fribl w/ Fr-Gd-IGr-Poro w/ SI-Fr SFO & Cut, mol-sat-FLR & STN, SI Odor; Abndt Silty-Sd Clust.& Sndy-Silts: Lt-gy-wh, pred Vpr-pr-visbl-Poro & pred barren.

2462' spl
 -c- 2462' spl
 [2473'+60min.circ.spl] Pred Silts: Lt-md-gy, sm Sndy, micac; (sm SH:AA)
 (Vrr Sd Clust:AA; Trc SFO-FLR-STN-Cut)
 sm argil-LS-Mdst-silty-micac.

CFS-20-40 60' circ.spls
 [2493'KD.spl] sm argil-silty-LS-Mdst-micac.
 Pred Silts: Lt-gy, micac, sm calc & sm Mdst.

2493' spl
 -c- 2493' spl
 [2524'KD.spl] Silts:AA & SH:gy-bk-subcarb to bk-carb;

2500
 Vis:46
 Wt:9.3+
 LCM:2#
 [2524'KD.spl-cont'd] Abndt LS:wh-tn-gy, prt chlky, prt dn, & ux-fnX; & Wkst-Pkst; pred Vpr-pr-visbl-Poro w/ NSO; sm dull MNRL.FLR w/ NC;

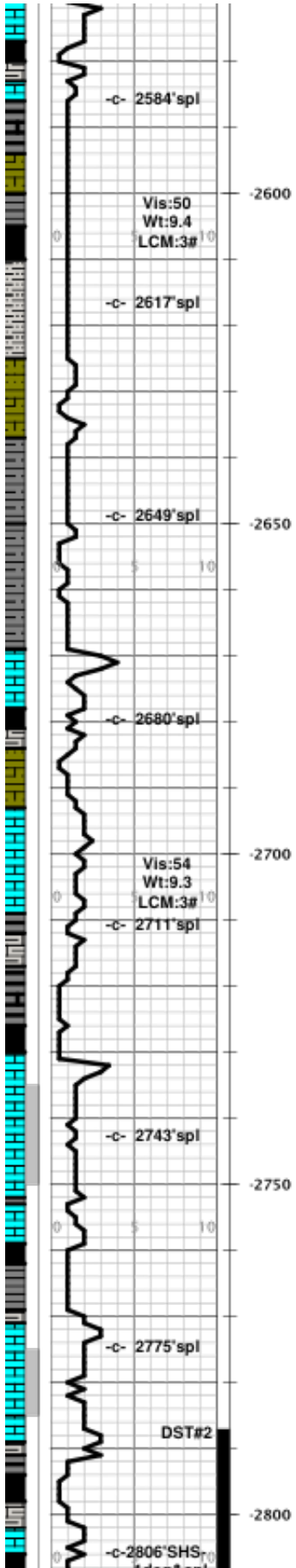
2522' spl
 -c- 2522' spl
 [2524'KD.spl-cont'd] ~30% SH:gy-bk-subcarb & sl-incrs-bk-carb.

2555' spl
 -c- 2555' spl
 [2555'KD.spl] sm LS:dk-Lt-gy, dn & argil-Mdst & ux-dn, Vpr-NVP; NS.

[2555'KD.cont'd] Abndt (~60% ~70%) SH:dk-gy-bk, sm calc & Lmy, Vrr pyrtc, subcarb to Rr-carb.

2586'KD.spl] ~30%--40% LS:av-tn-wh, pred dn; pr-NVP:

2420' (-1148) KANSAS CITY		
2431' (-1159) DODDS CRK SS (SI-Fr SFO) (Slight to Fair Show Free Oil)		
(SI-Fr SFO)		
		DST#1-DoddsCrkSd 2423'--2473' 30-45-30-60min IF:Wk--Strong blow BOB--11min. cont'd build--65" ISI: 2&1/2"Blow Back (BB) FF: Strong Blow thru-out -->185"
		FSI: Strong BB; built to 35" Rec: ?GIP 95'GOSWCM (9%Gas, 7%Oil, 7%Water,77%M) 245'GOSMCW (1%Gas, 1%Oil, 87%Water, 11%M) 335' Total Fluid Tool Spl: 4%Oil, 68%Water;28%Mud Rw:0.144@34deg.F Corrected Rw:0.054 ohms@102degF Cl-125,000ppm IHP:1222
		IFP: 31--115 ISIP: 739 FFP: 91--153 FSIP: 741 FHP: 1175 Temp:102deg.F



sm chlky; NSO.

{2617'KD.spl} Sl incrs bk-carb-SH; & LS:gy-bn, dn-ux; Vpr-NVP; NS.

{2649'KD.spl} VAbndt SH:bk-subcarb, sm calc & Lmy; & bk-carb;

{2649'KD.spl.cont'd} & Silts-Mdst: Lt-md-gy, & gn-gy, sm calc; Vpr-NVP; NSO.

{2680'KD.spl} SH:dk-gy-bk, Rr-bk-carb; & Silts: gn-gy, Vtnly Sndy.

{2710'KD.spl} Abndt (~50%) LS:dk-Lt-gy-tn-wh, prt dn-ux, prt chlky; Vrr Vpr-pr-visbl-Poro: pp-vug & IGr.Poro w/ NSO; & SH:AA- bk-carb.

{2743'KD.spl} incrs SH:gy-bk, sm calc, sm subcarb to carb; & sm Silts:gn-gy.

{2743'KD.spl.cont'd} & LS:AA, & dn-argil, & tn-bn-gy-wh, ux-tnX, pred Vpr-NVP; NSO.

{2775'KD.spl} LS:gy-tn-wh, pred dn-ux, sm prt chlky; sm argil-shly; pred Vpr-NVP w/ NSO.

{2775'KD.spl.cont'd} Abndt SH:AA; dk-gy-bk-subcarb to carb, sm Vcarb.

{2775'KD.spl.cont'd} Very rare {Vrr} LS:cm-tn-gy, ux-tnXln, w/ Vpr-pr-visbl-Poro: pin-point(pp) u-IXP w/ VSI-SFO & VSI-milky-Cut, Trc FLR & STN w/ VSI-milky-Cut, VSI Odor.

{2806'KD.spl} LS:AA, pred dn & argil w/ Vpr-NVP; Vrr (<5%) SFO-FLR-STN-Cut;

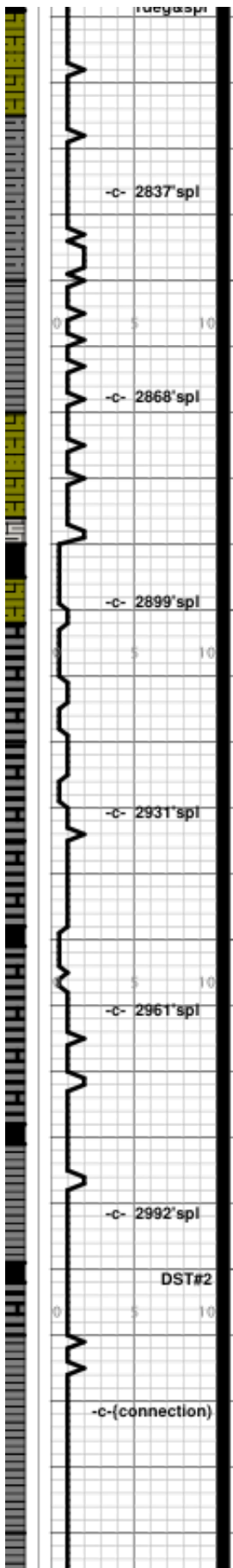
{2806'KD.spl.cont'd} SH:AA; incrs bk-carb- Vcarb.

{2806'KD&circ.spls} LS:gy-tn-wh, pred dn-ux, & prt chlky, sm ux-tnXln, & mot-Wkst-Pkist; Vrr (<5%) Vpr-pr-visbl-Poro: pp & IGr & IXP w/ spt'd FLR & STN & VSI-SI-SFO & milky Cut, Trc Odor; Vsl Cherty: gy-tn-vit, sharp.

{2837'KD.spl} decrs LS:AA; pred dn & argil (Trc LS w/Poro-Trc SFO-FLR-STN-Cut-AA) SH:bk-carb-Vcarb;

{2837'KD.spl.cont'd} LS:gy-tn-wh, pred dn & argil Mdst & ux-dn; pred Vpr-NVP & Barren.

	04/12/19@10:30am Drig @ 2572' Wt:9.4 Vis:50 PV:17 YP:16 pH:11.0 WL:7.2 CT:1/32" Alka:1.2 Cl:2,200ppm Ca:60 Solids:7.7% LCM: 3#/bbl ECD: 9.73 #/gal.
2669' (-1397) MARMATON	
2731' (-1459) PAWNEE (VSISFO)	
2769' (-1497) FORT SCOTT (VSI-SISFO)	
2806' (-1534) CHEBAKEE	



{2868'KD.spl} Pred Silts-Mdst & SH:AA.

-c- 2837'spl

-2850

{2899'KD.spl} VAbndt SH: sharp incrs bk-subcarb to Vcarb.

-c- 2868'spl

-2900

2931'KD.spl] SH:gy-bk, & gn-gy, sm calc & Lmy; & sm LS: gy-ln, dn-ux & argil-shly-Mdst; pred Vpr-NVP w/ NSO.

-c- 2899'spl

2961'KD.spl] SH:AA; sm calc & Lmy & subcarb to carb; Rr bk-Vcarb; sm LS:gy, dn-ux & argil-Mdst, sm pyrct.

-c- 2931'spl

-2950

2991'KD.spl] SH & Mdst: Lt-md-dk-gy, sm micac.

-c- 2961'spl

-c- 2992'spl

-3000

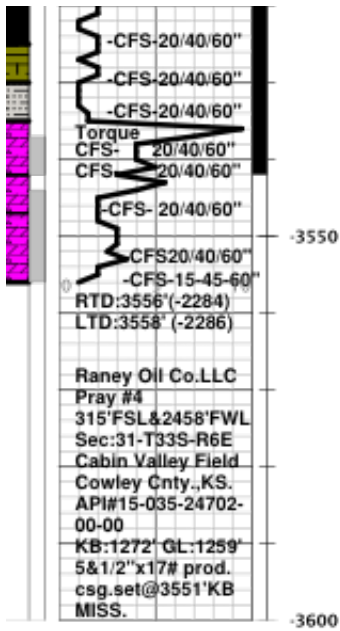
3055'KD.spl] Very rare (Vrr) Coal, & sm bk carb SH.

DST#2

3055'KD.spl.conf'd] Pred SH: gy-bk, & dk-Lt-gn-gy, & bk carb.

-c-(connection)

3085'KD.spl] Pred SH: mm-rd-violet; Lt-dk-gn-gy, sm bk.



3530'circ.spls) SH:pred bk subcarb to V.carb & Pyrite.

3534'circ.spls) Pred SH:AA; Vrr Sd Clusters: cm-gy, Vfn-fnG'd, silty, pr-Fr Poro Trc O.STN.

3539'circ.spls)ARB]DOLO:cm-gy, ux-fnXln, pred dn to pr visbl IXP; Vrr SI-FrSFO&Cut, Spt'd O.STN;Vsl Odr.

3542'circ.spls)DOLO:fn-gy, fn-mdXln-Rhombic-2ndReX Vrr euhedral X's Vrr Fr-Gd IXP & vug Poro w/ SI-FrSFO-STN-FLR-Cut, Vsl Odr; SI Cherty. (After DST#4)

3547'circ.spls)Dolo:bf-fn,cm,ux-mdXln-sucro-Rhombc 2nd ReX; Fr-Gd IXP & vug Poro; pred Barren; Trc SFO-FLR-STN-Cut, Trc Odr. (3553'&3556'circ.spls)Dolo:bf-fn-gy, fn-MdXln, sm Rhombic & sucro w/ abndt Fr-Gd IXP & vug Poro, >89%Barren (Trc SFO-STN-FLR-Cut:AA) Cherty; wh-blu-gy, opq to transl, sm mot-fos, sm Qtz-c- 2nd ReX.

3535' (-2263)
ARBUCKLE
 (SI-Fr SFO)

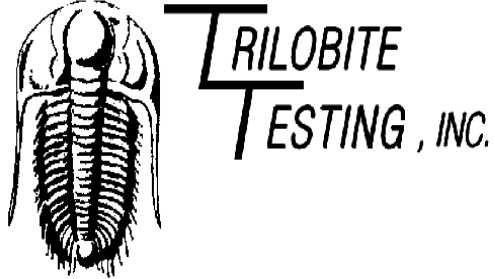
(Trc SFO)

RTD:3556'(-2284)
 LTD:3558' (-2286)

Raney Oil Co.LLC
 Pray #4
 315'FSL&2458'FWL
 Sec:31-T33S-R6E
 Cabin Valley Field
 Cowley Cnty.,KS.
 API#15-035-24702-00-00
 KB:1272' GL:1259'
 5&1/2"x17# prod.
 csg.set@3551'KB
 for MISS.

FSI: NBB
 Rec: 75' Mud
 Tool Sample:
 ~100%Drig.Mud
 IHP: 1683
 IFP: 20--40
 ISIP: 1366
 FFP: 42--60
 FSIP: 1358
 FHP: 1666
 Temp:109deg.F

Mud-Co Report#8
 04/15/19@11:45am
 DST#4 @ 3542'
 Wt:9.3 Vis:49
 PV:14 YP:15
 pH:11.0 WL:7.2
 CT:1/32" Alka:1.0
 Cl:1,600ppm Ca:60
 Solids:6.3%
 LCM: 4.5#/bbl
 ECD: 9.58#/gal



DRILL STEM TEST REPORT

Prepared For: **Raney Oil Co., Inc.**

4665 Bauer Brook Court
Lawrence, KS 66049-9013

ATTN: Thomas Raney/Roger M

Pray #4

31-33S-6E Cowley,KS

Start Date: 2019.04.11 @ 22:20:00

End Date: 2019.04.12 @ 04:53:39

Job Ticket #: 63941 DST #: 1

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

Printed: 2019.04.18 @ 16:02:28



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Raney Oil Co., Inc.
 4665 Bauer Brook Court
 Lawrence, KS 66049-9013
 ATTN: Thomas Raney/Roger M

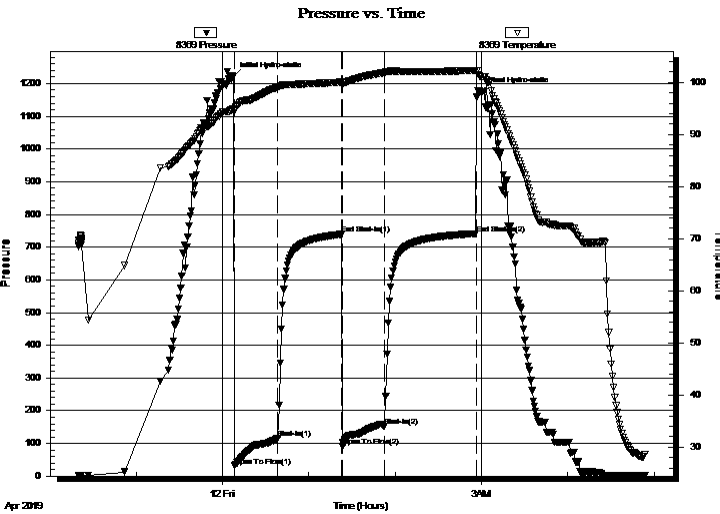
31-33S-6E Cowley, KS
Pray #4
 Job Ticket: 63941 **DST#: 1**
 Test Start: 2019.04.11 @ 22:20:00

GENERAL INFORMATION:

Formation: **Dodd Creek Sand**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 00:08:20
 Time Test Ended: 04:53:39
 Interval: **2423.00 ft (KB) To 2473.00 ft (KB) (TVD)**
 Total Depth: 2473.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Jimmy Ricketts
 Unit No: 80
 Reference Elevations: 1272.00 ft (KB)
 1259.00 ft (CF)
 KB to GR/CF: 13.00 ft

Serial #: 8369 Outside
 Press@RunDepth: 153.28 psig @ 2424.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2019.04.11 End Date: 2019.04.12 Last Calib.: 1899.12.30
 Start Time: 22:20:01 End Time: 04:53:40 Time On Btm: 2019.04.12 @ 00:07:30
 Time Off Btm: 2019.04.12 @ 02:59:39

TEST COMMENT: IF - BOB in 11 minutes Built to 65"
 IS - 2 1/2" blow back
 FF - BOB immediately built to 180"
 FS - BOB Built to 35"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1222.14	94.94	Initial Hydro-static
1	31.02	94.61	Open To Flow (1)
31	115.09	99.11	Shut-In(1)
76	739.30	100.04	End Shut-In(1)
77	91.03	99.90	Open To Flow (2)
106	153.28	101.91	Shut-In(2)
169	740.93	102.31	End Shut-In(2)
173	1175.27	101.11	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
245.00	GOSMCW 1%G 1%O 87%W 7 11%M	1.77
95.00	GSOSWCM 9%G 7%O 7% W & 77%M	1.33
0.00	TS - VSOMCW 4%O 68%W & 28%M	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Raney Oil Co., Inc.

31-33S-6E Cowley,KS

4665 Bauer Brook Court
Lawrence, KS 66049-9013

Pray #4

Job Ticket: 63941

DST#: 1

ATTN: Thomas Raney/Roger M

Test Start: 2019.04.11 @ 22:20:00

Tool Information

Drill Pipe:	Length: 2219.00 ft	Diameter: 3.80 inches	Volume: 31.13 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 21000.00 lb
Drill Collar:	Length: 183.00 ft	Diameter: 2.25 inches	Volume: 0.90 bbl	Weight to Pull Loose: 53000.00 lb
			<u>Total Volume: 32.03 bbl</u>	Tool Chased 4.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	2423.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	50.00 ft			
Tool Length:	78.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			2396.00	
Shut In Tool	5.00			2401.00	
Hydraulic tool	5.00			2406.00	
Jars	5.00			2411.00	
Safety Joint	3.00			2414.00	
Packer	5.00			2419.00	28.00 Bottom Of Top Packer
Packer	4.00			2423.00	
Stubb	1.00			2424.00	
Recorder	0.00	8369	Outside	2424.00	
Recorder	0.00	8846	Inside	2424.00	
Perforations	10.00			2434.00	
Change Over Sub	0.50			2434.50	
Blank Spacing	31.00			2465.50	
Change Over Sub	0.50			2466.00	
Perforations	2.00			2468.00	
Bullnose	5.00			2473.00	50.00 Bottom Packers & Anchor
Total Tool Length:	78.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Raney Oil Co., Inc.

31-33S-6E Cowley,KS

4665 Bauer Brook Court
Lawrence, KS 66049-9013

Pray #4

Job Ticket: 63941

DST#: 1

ATTN: Thomas Raney/Roger M

Test Start: 2019.04.11 @ 22:20:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity: 125000 ppm

Viscosity: 43.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.18 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1100.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
245.00	GOSMCW 1%G 1%O 87%W 7 11%M	1.770
95.00	GSOSWCM 9%G 7%O 7% W & 77%M	1.333
0.00	TS - VSOMCW 4%O 68%W & 28%M	0.000

Total Length: 340.00 ft Total Volume: 3.103 bbl

Num Fluid Samples: 0

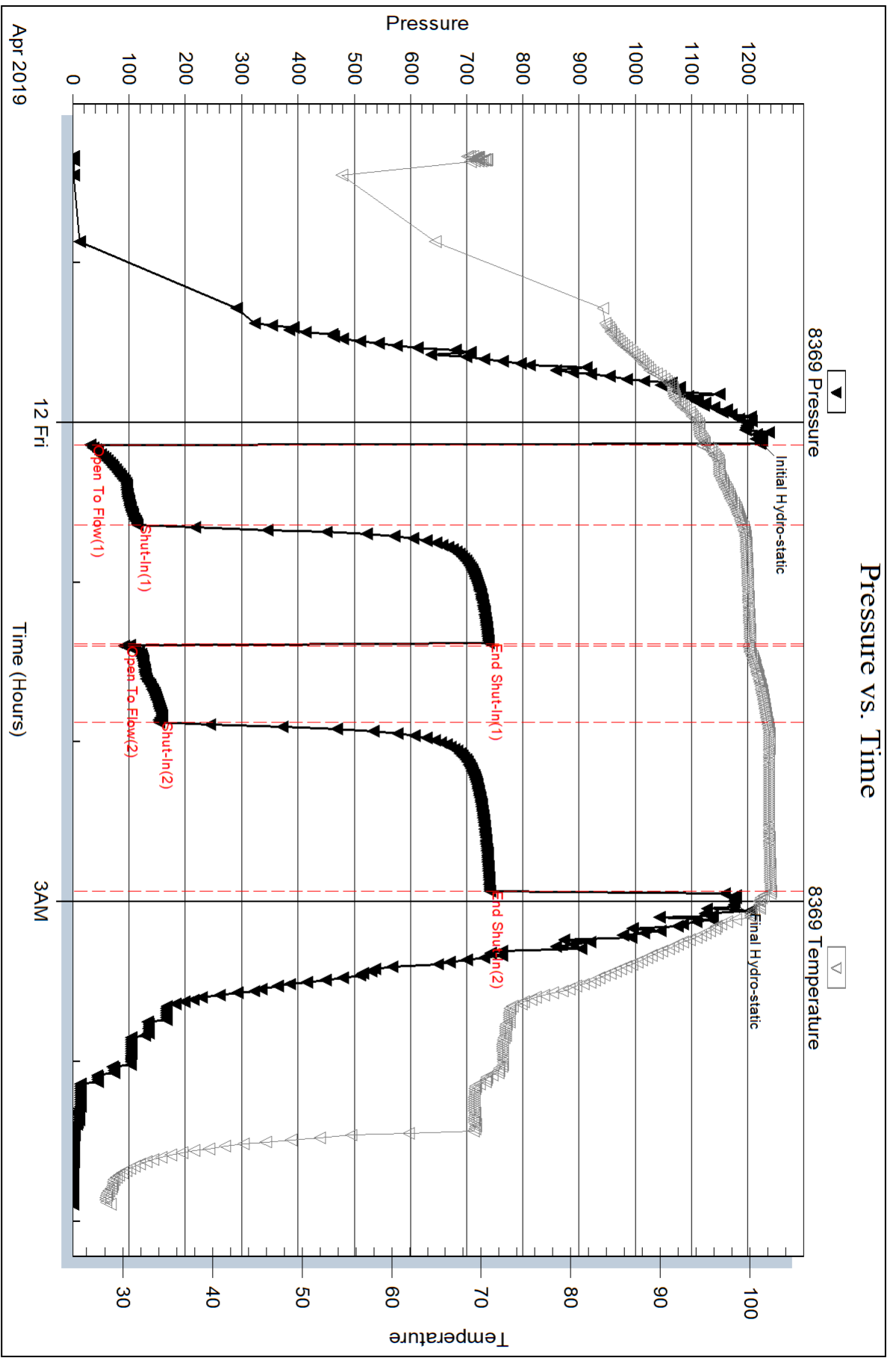
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



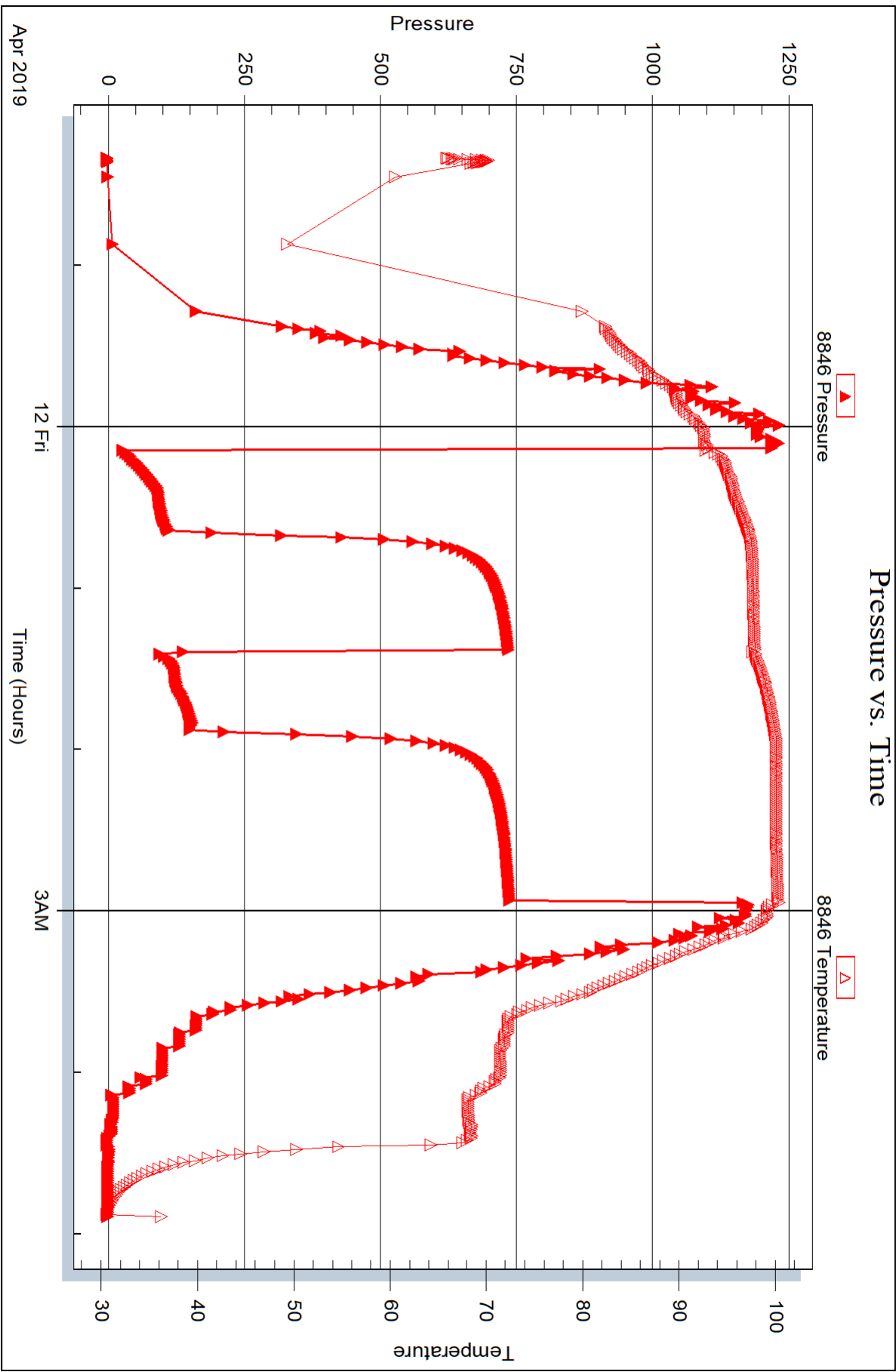
Serial #: 8846

Inside

Raney Oil Co., Inc.

Play #4

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Raney Oil Co., Inc.**

4665 Bauer Brook Court
Lawrence, KS 66049-9013

ATTN: Thomas Raney/Roger M

Pray #4

31-33S-6E Cowley,KS

Start Date: 2019.04.13 @ 12:07:00

End Date: 2019.04.13 @ 19:36:09

Job Ticket #: 63942 DST #: 2

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

Printed: 2019.04.18 @ 16:00:09



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Raney Oil Co., Inc.

31-33S-6E Cowley, KS

4665 Bauer Brook Court
Lawrence, KS 66049-9013

Pray #4

Job Ticket: 63942

DST#: 2

ATTN: Thomas Raney/Roger M

Test Start: 2019.04.13 @ 12:07:00

GENERAL INFORMATION:

Formation: **Mississippian**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:50:20

Time Test Ended: 19:36:09

Test Type: Conventional Bottom Hole (Initial)

Tester: Jimmy Ricketts

Unit No: 80

Interval: 2787.00 ft (KB) To 3210.00 ft (KB) (TVD)

Reference Elevations: 1272.00 ft (KB)

Total Depth: 3210.00 ft (KB) (TVD)

1259.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 13.00 ft

Serial #: 8369 Outside

Press@RunDepth: 317.86 psig @ 3173.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.04.13

End Date:

2019.04.13

Last Calib.: 2019.04.13

Start Time: 12:07:01

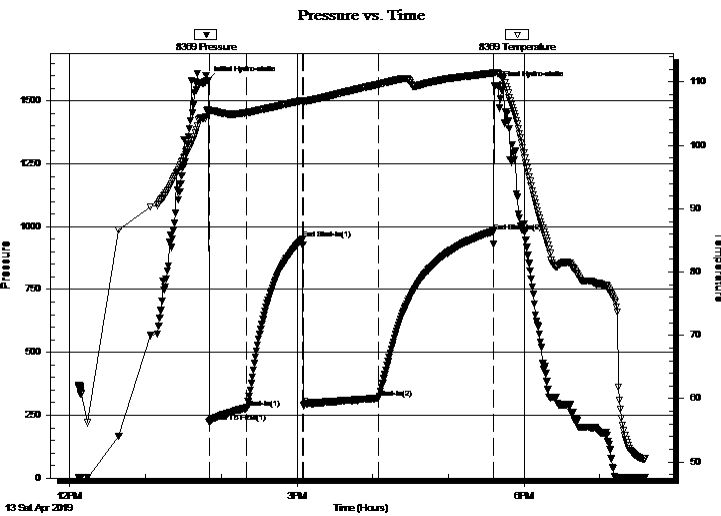
End Time:

19:36:10

Time On Btm: 2019.04.13 @ 13:49:10

Time Off Btm: 2019.04.13 @ 17:37:39

TEST COMMENT: IF - Weak blow building to 11"
FF - BOB in 22 min Built to 35"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1581.22	105.55	Initial Hydro-static
2	223.29	105.22	Open To Flow (1)
32	278.36	105.16	Shut-In(1)
76	949.43	107.09	End Shut-In(1)
77	288.41	106.89	Open To Flow (2)
136	317.86	109.65	Shut-In(2)
227	980.69	111.41	End Shut-In(2)
229	1561.18	111.46	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
230.00	GVSOCM 2%G 4%O & 94%M	1.56
0.00	TS - GVSOCM 7%G 3%O & 90%M	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Raney Oil Co., Inc.

31-33S-6E Cowley,KS

4665 Bauer Brook Court
Lawrence, KS 66049-9013

Pray #4

Job Ticket: 63942

DST#: 2

ATTN: Thomas Raney/Roger M

Test Start: 2019.04.13 @ 12:07:00

Tool Information

Drill Pipe:	Length: 2591.00 ft	Diameter: 3.80 inches	Volume: 36.34 bbl	Tool Weight: 2800.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 28000.00 lb
Drill Collar:	Length: 183.00 ft	Diameter: 2.25 inches	Volume: 0.90 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 37.24 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	2787.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	423.00 ft			
Tool Length:	451.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			2760.00	
Shut In Tool	5.00			2765.00	
Hydraulic tool	5.00			2770.00	
Jars	5.00			2775.00	
Safety Joint	3.00			2778.00	
Packer	5.00			2783.00	28.00 Bottom Of Top Packer
Packer	4.00			2787.00	
Stubb	1.00			2788.00	
Perforations	8.00			2796.00	
Change Over Sub	0.50			2796.50	
Blank Spacing	376.00			3172.50	
Change Over Sub	0.50			3173.00	
Recorder	0.00	8369	Outside	3173.00	
Recorder	0.00	8846	Inside	3173.00	
Perforations	32.00			3205.00	
Bullnose	5.00			3210.00	423.00 Bottom Packers & Anchor
Total Tool Length:	451.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Raney Oil Co., Inc.

31-33S-6E Cowley,KS

4665 Bauer Brook Court
Lawrence, KS 66049-9013

Pray #4

Job Ticket: 63942

DST#: 2

ATTN: Thomas Raney/Roger M

Test Start: 2019.04.13 @ 12:07:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.18 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1700.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
230.00	GVSOCM 2%G 4%O & 94%M	1.559
0.00	TS - GVSOCM 7%G 3%O & 90%M	0.000

Total Length: 230.00 ft Total Volume: 1.559 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

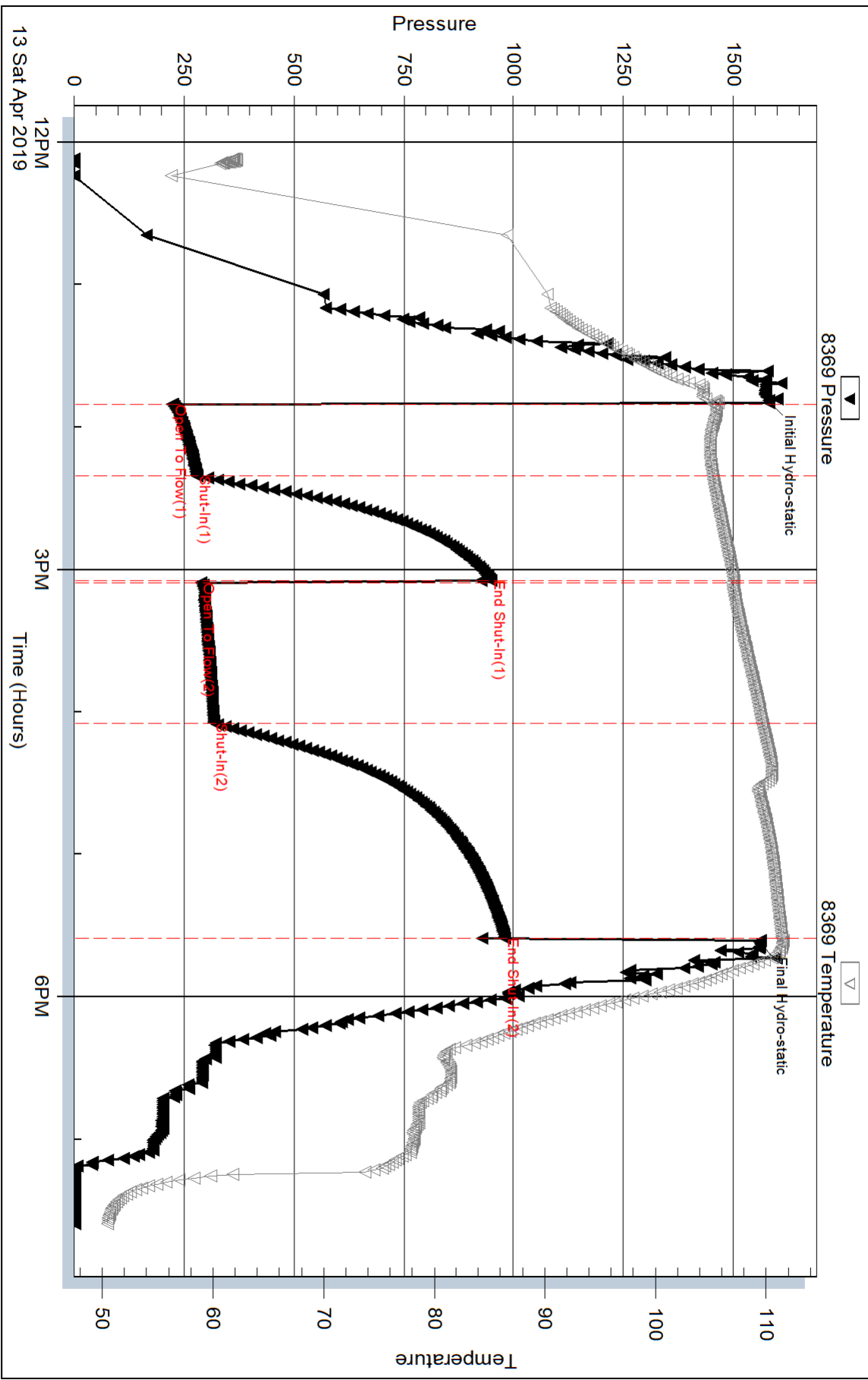
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



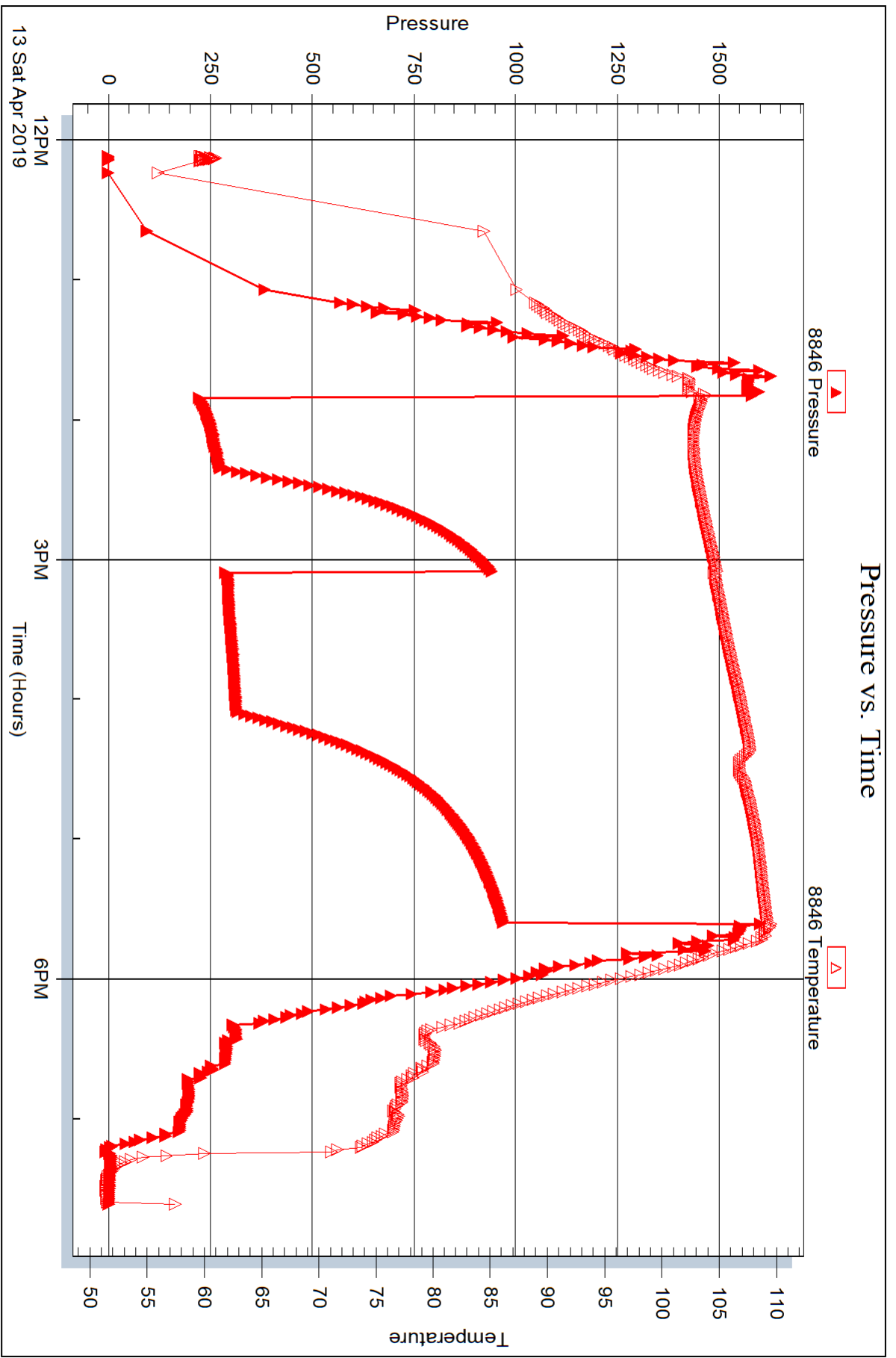
Serial #: 8846

Inside

Raney Oil Co., Inc.

Play #4

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 63942

Printed: 2019.04.18 @ 16:00:10



DRILL STEM TEST REPORT

Prepared For: **Raney Oil Co., Inc.**

4665 Bauer Brook Court
Lawrence, KS 66049-9013

ATTN: Thomas Raney/Roger M

Pray #4

31-33S-6E Cowley,KS

Start Date: 2019.04.14 @ 12:35:00

End Date: 2019.04.14 @ 20:52:50

Job Ticket #: 63943 DST #: 3

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

Printed: 2019.04.18 @ 15:59:27



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Raney Oil Co., Inc.

31-33S-6E Cowley, KS

4665 Bauer Brook Court
Lawrence, KS 66049-9013

Pray #4

Job Ticket: 63943

DST#: 3

ATTN: Thomas Raney/Roger M

Test Start: 2019.04.14 @ 12:35:00

GENERAL INFORMATION:

Formation: **Lower Mississippian**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:28:10

Time Test Ended: 20:52:50

Test Type: Conventional Bottom Hole (Initial)

Tester: Jimmy Ricketts

Unit No: 80

Interval: 3212.00 ft (KB) To 3510.00 ft (KB) (TVD)

Reference Elevations: 1272.00 ft (KB)

Total Depth: 3510.00 ft (KB) (TVD)

1259.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 13.00 ft

Serial #: 8369 Outside

Press@RunDepth: 236.78 psig @ 3213.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.04.14

End Date:

2019.04.14

Last Calib.: 2019.04.14

Start Time: 12:35:01

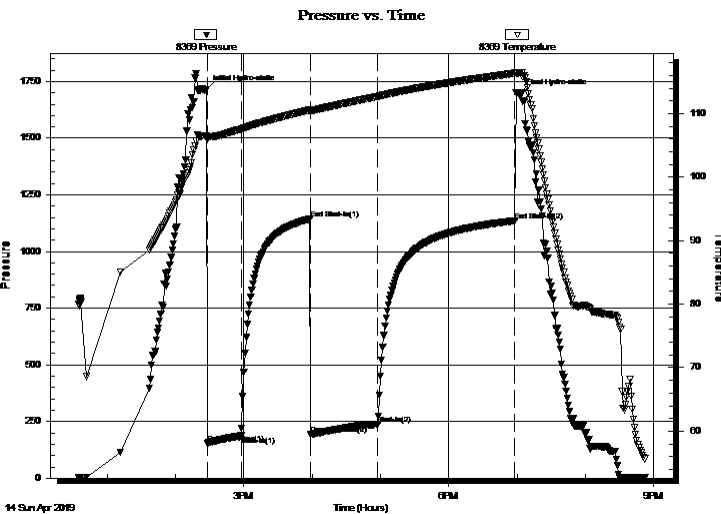
End Time:

20:52:50

Time On Btm: 2019.04.14 @ 14:26:50

Time Off Btm: 2019.04.14 @ 19:02:00

TEST COMMENT: IF - Weak blow building to 5"
FF Weak blow building to 5"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1713.14	106.55	Initial Hydro-static
2	154.77	105.85	Open To Flow (1)
31	187.11	107.56	Shut-In(1)
92	1143.48	110.60	End Shut-In(1)
92	191.83	110.35	Open To Flow (2)
151	236.78	112.69	Shut-In(2)
272	1135.10	116.37	End Shut-In(2)
276	1697.48	116.41	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	Mud cut Water 89%W 11%M	0.59
75.00	Drilling Mud 100%M	0.48
0.00	TS - HMCW 52%W & 48%M	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Raney Oil Co., Inc.

31-33S-6E Cowley, KS

4665 Bauer Brook Court
Lawrence, KS 66049-9013

Pray #4

Job Ticket: 63943

DST#: 3

ATTN: Thomas Raney/Roger M

Test Start: 2019.04.14 @ 12:35:00

Tool Information

Drill Pipe:	Length: 3032.00 ft	Diameter: 3.80 inches	Volume: 42.53 bbl	Tool Weight: 2800.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 183.00 ft	Diameter: 2.25 inches	Volume: 0.90 bbl	Weight to Pull Loose: 73000.00 lb
			<u>Total Volume: 43.43 bbl</u>	Tool Chased 1.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3212.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	298.00 ft			
Tool Length:	326.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3185.00	
Shut In Tool	5.00			3190.00	
Hydraulic tool	5.00			3195.00	
Jars	5.00			3200.00	
Safety Joint	3.00			3203.00	
Packer	5.00			3208.00	28.00 Bottom Of Top Packer
Packer	4.00			3212.00	
Stubb	1.00			3213.00	
Recorder	0.00	8369	Outside	3213.00	
Recorder	0.00	8846	Inside	3213.00	
Perforations	8.00			3221.00	
Change Over Sub	0.50			3221.50	
Blank Spacing	251.00			3472.50	
Change Over Sub	0.50			3473.00	
Perforations	32.00			3505.00	
Bullnose	5.00			3510.00	298.00 Bottom Packers & Anchor
Total Tool Length:	326.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Raney Oil Co., Inc.

31-33S-6E Cowley,KS

4665 Bauer Brook Court
Lawrence, KS 66049-9013

Pray #4

Job Ticket: 63943

DST#: 3

ATTN: Thomas Raney/Roger M

Test Start: 2019.04.14 @ 12:35:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

41000 ppm

Viscosity: 45.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1800.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
120.00	Mud cut Water 89%W 11%M	0.590
75.00	Drilling Mud 100%M	0.478
0.00	TS - HMCW 52%W & 48%M	0.000

Total Length: 195.00 ft

Total Volume: 1.068 bbl

Num Fluid Samples: 0

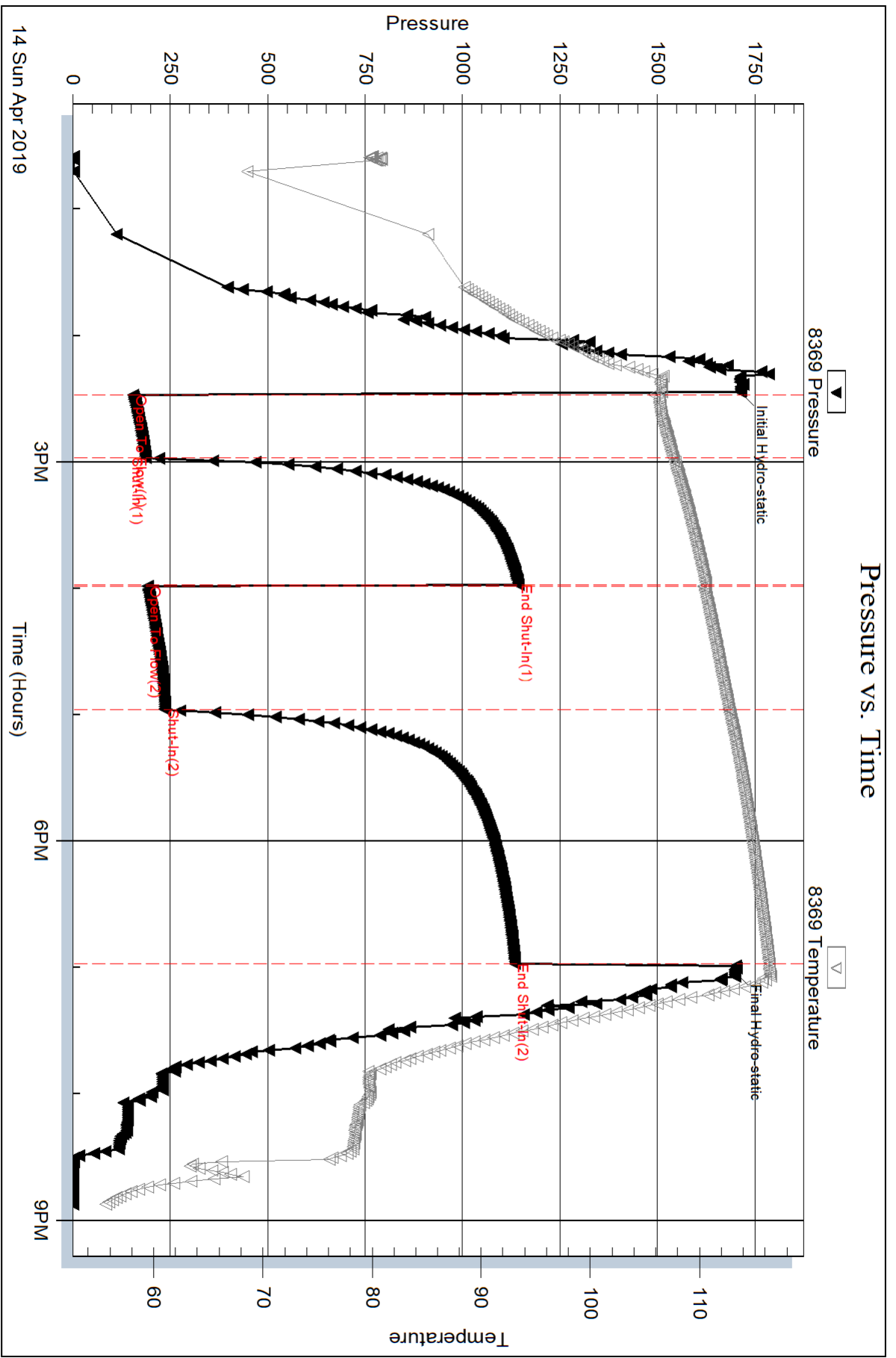
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



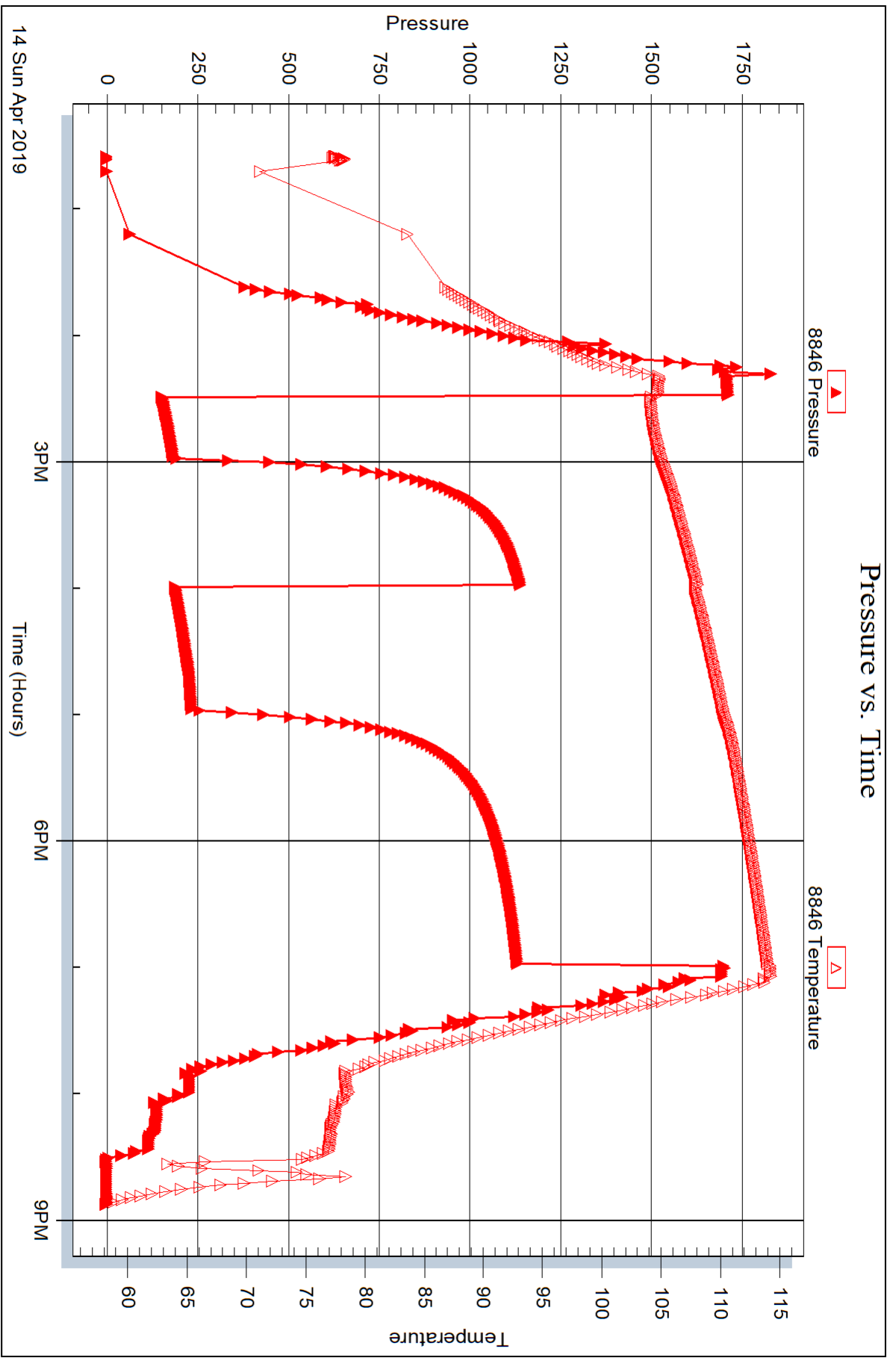
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Inside

Raney Oil Co., Inc.

Play #4

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 63943

Printed: 2019.04.18 @ 15:59:28



DRILL STEM TEST REPORT

Prepared For: **Raney Oil Co., Inc.**

4665 Bauer Brook Court
Lawrence, KS 66049-9013

ATTN: Thomas Raney/Roger M

Pray #4

31-33S-6E Cowley,KS

Start Date: 2019.04.15 @ 09:20:00

End Date: 2019.04.15 @ 14:57:39

Job Ticket #: 63944 DST #: 4

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

Printed: 2019.04.18 @ 15:35:23



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Raney Oil Co., Inc.

31-33S-6E Cowley, KS

4665 Bauer Brook Court
Lawrence, KS 66049-9013

Pray #4

Job Ticket: 63944

DST#: 4

ATTN: Thomas Raney/Roger M

Test Start: 2019.04.15 @ 09:20:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:09:40

Time Test Ended: 14:57:39

Test Type: Conventional Bottom Hole (Initial)

Tester: Jimmy Ricketts

Unit No: 80

Interval: 3477.00 ft (KB) To 3542.00 ft (KB) (TVD)

Reference Elevations: 1272.00 ft (KB)

Total Depth: 3542.00 ft (KB) (TVD)

1259.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 13.00 ft

Serial #: 8369 Outside

Press@RunDepth: 59.98 psig @ 3478.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.04.15 End Date: 2019.04.15

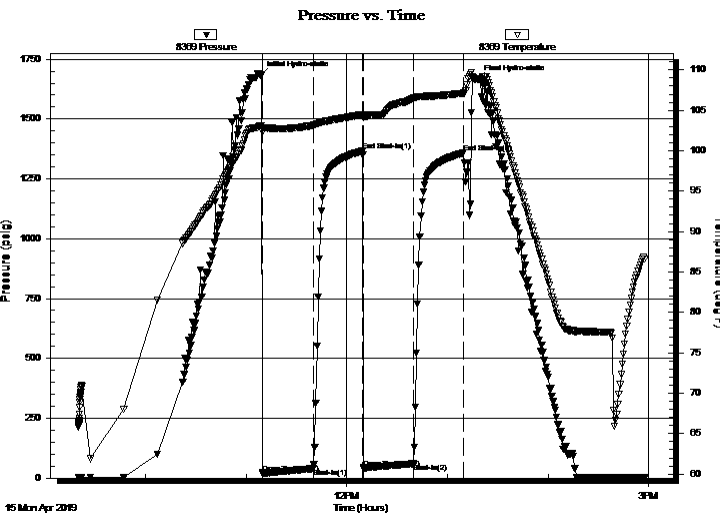
Last Calib.: 1899.12.30

Start Time: 09:20:01 End Time: 14:57:40

Time On Btm: 2019.04.15 @ 11:08:10

Time Off Btm: 2019.04.15 @ 13:17:30

TEST COMMENT: IF - Weak blow building to 2 inches during initial flow period.
FF - Weak blow building to 2 inches during final flow period.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1682.75	103.10	Initial Hydro-static
2	19.85	102.70	Open To Flow (1)
32	40.26	103.12	Shut-In(1)
62	1365.73	104.49	End Shut-In(1)
62	42.24	104.07	Open To Flow (2)
92	59.98	106.52	Shut-In(2)
122	1357.75	107.12	End Shut-In(2)
130	1666.04	108.89	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
75.00	Drilling Mud 100%M	0.37
0.00	TS - Drilling Mud 100% M	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Raney Oil Co., Inc.

31-33S-6E Cowley,KS

4665 Bauer Brook Court
Lawrence, KS 66049-9013

Pray #4

Job Ticket: 63944

DST#: 4

ATTN: Thomas Raney/Roger M

Test Start: 2019.04.15 @ 09:20:00

Tool Information

Drill Pipe:	Length: 3282.00 ft	Diameter: 3.80 inches	Volume: 46.04 bbl	Tool Weight: 2300.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 183.00 ft	Diameter: 2.25 inches	Volume: 0.90 bbl	Weight to Pull Loose: 102000.0 lb
			<u>Total Volume: 46.94 bbl</u>	Tool Chased 1.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3477.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	65.00 ft			
Tool Length:	93.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3450.00	
Shut In Tool	5.00			3455.00	
Hydraulic tool	5.00			3460.00	
Jars	5.00			3465.00	
Safety Joint	3.00			3468.00	
Packer	5.00			3473.00	28.00 Bottom Of Top Packer
Packer	4.00			3477.00	
Stubb	1.00			3478.00	
Recorder	0.00	8369	Outside	3478.00	
Recorder	0.00	8846	Inside	3478.00	
Perforations	26.00			3504.00	
Change Over Sub	0.50			3504.50	
Blank Spacing	31.00			3535.50	
Change Over Sub	0.50			3536.00	
Perforations	1.00			3537.00	
Bullnose	5.00			3542.00	65.00 Bottom Packers & Anchor
Total Tool Length:	93.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Raney Oil Co., Inc.

31-33S-6E Cowley,KS

4665 Bauer Brook Court
Lawrence, KS 66049-9013

Pray #4

Job Ticket: 63944

DST#: 4

ATTN: Thomas Raney/Roger M

Test Start: 2019.04.15 @ 09:20:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1600.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
75.00	Drilling Mud 100%M	0.369
0.00	TS - Drilling Mud 100% M	0.000

Total Length: 75.00 ft Total Volume: 0.369 bbl

Num Fluid Samples: 0

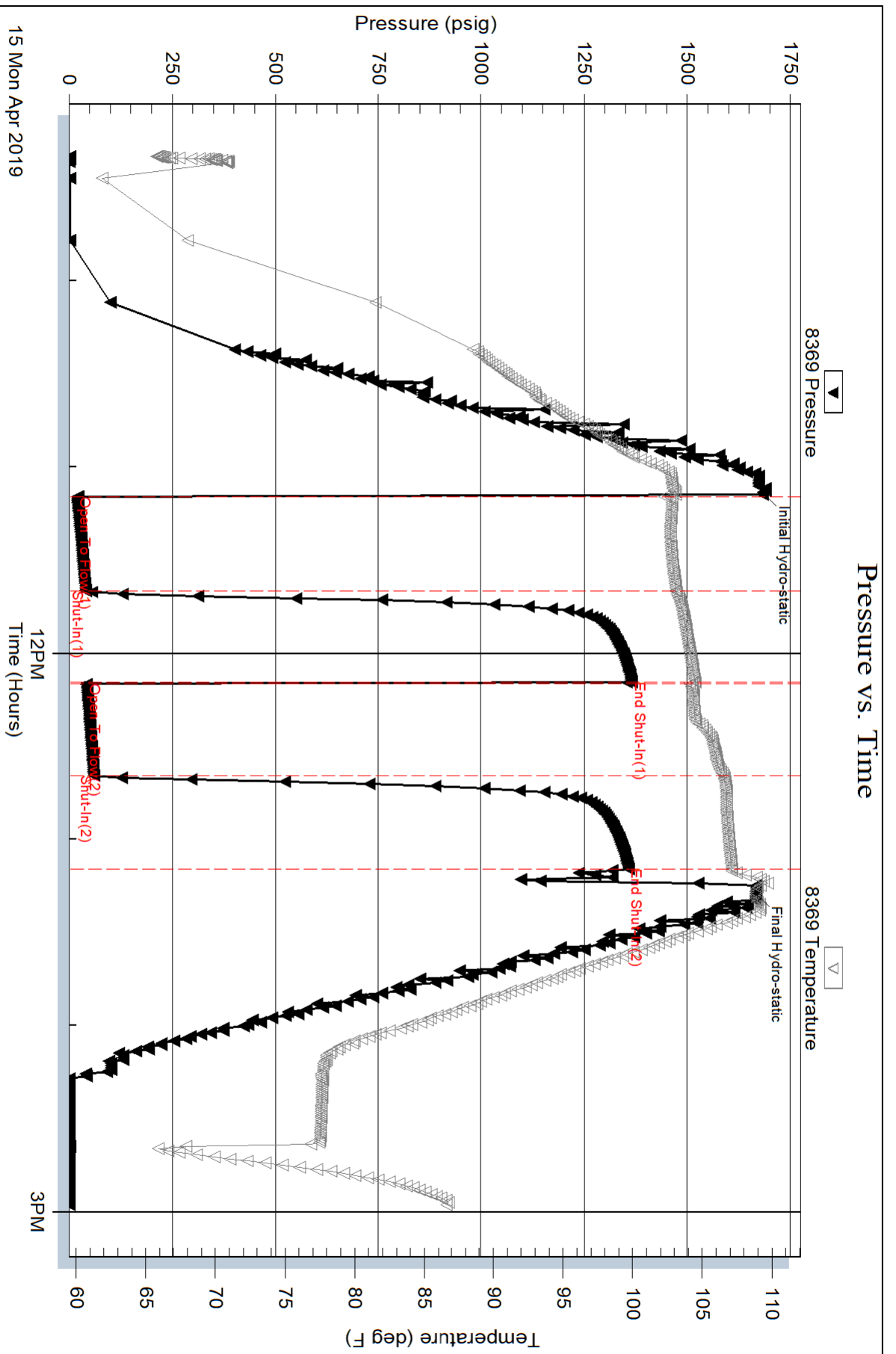
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



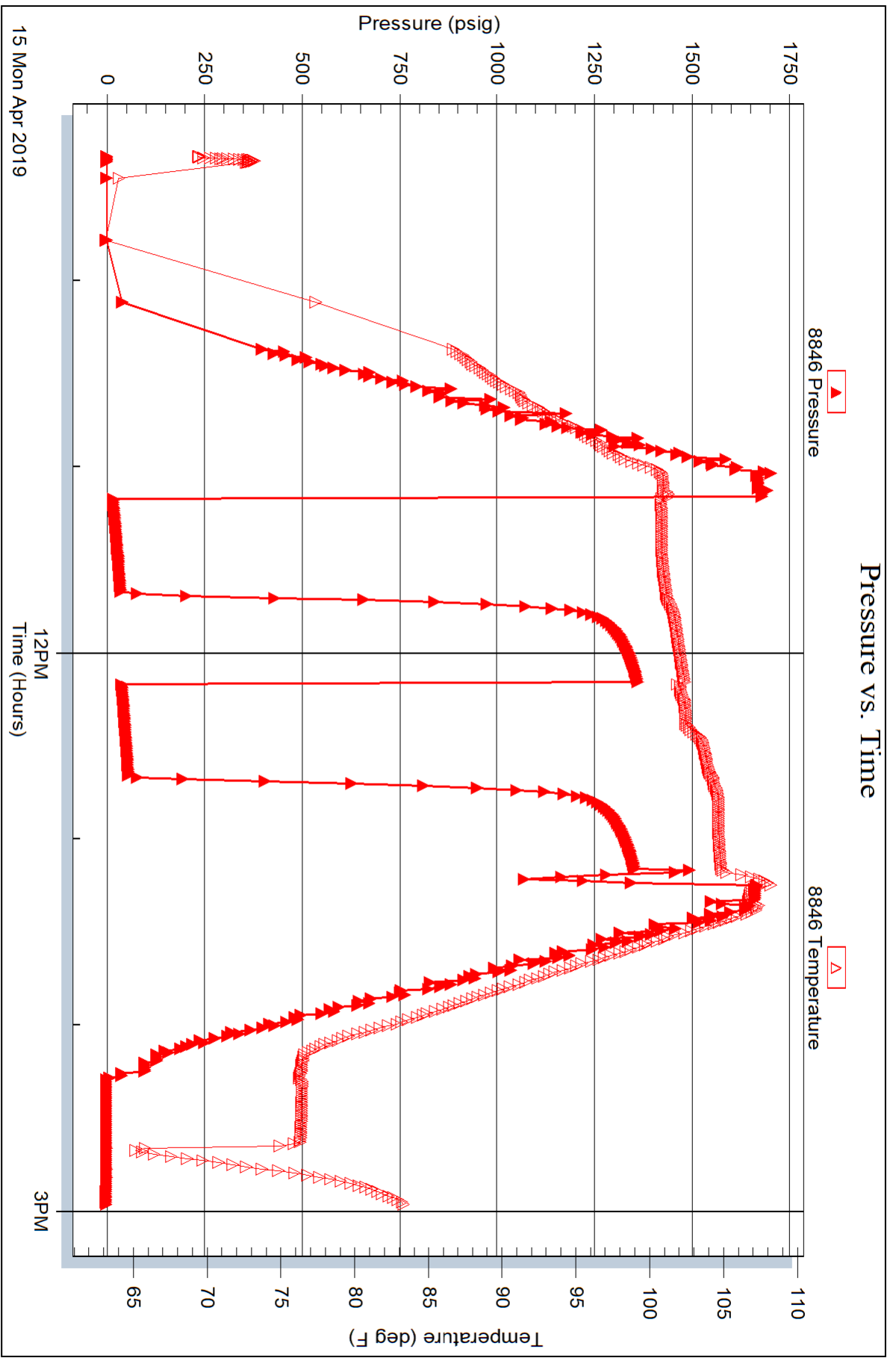
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Inside

Raney Oil Co., Inc.

Play #4

DST Test Number: 4



Triobite Testing, Inc

Ref. No: 63944

Printed: 2019.04.18 @ 15:35:24



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63941

Well Name & No. Pray #4 Test No. 1 Date 4-12-19
 Company Raney Oil, Co., Inc. Elevation 1272 KB 1259 GL
 Address 4665 Bayer Brook Court, Lawrence, Ks. 66049-9013
 Co. Rep / Geo. Thomas Raney / Roger Martin Rig Duke Drilling #7
 Location: Sec. 31 Twp 33 S Rge. 6 E Co. Cowley State Ks

Interval Tested 2423-2473 Zone Tested Padd Creek Sand
 Anchor Length 50' Drill Pipe Run 2219 Mud Wt. 9.3
 Top Packer Depth 2418 Drill Collars Run 183 Vis 43
 Bottom Packer Depth 2423 Wt. Pipe Run 0 WL 7.2
 Total Depth ~~2470~~ 2473 Chlorides 1100 ppm System LCM

Blow Description IF-weak blow building to strong blow 11 min into FFP continuing to build to 65 inches, TS- 2 1/2 inch blow back during FFP
FF-Strong blow throughout FFP, continuing to build to 185 inches
FS-Strong blow back during FFP

Rec	Feet of	%gas	%oil	%water	%mud
245	605 new	1	1	87	11
95	6505 new	9	7	7	77
TS	6505 new		4	68	28

Rec Total 335 BHT 102 Gravity 0.144 @ 34.2 F Chlorides 125,000 ppm

(A) Initial Hydrostatic 1222 Test 1200 T-On Location 2040
 (B) First Initial Flow 31 Jars 250 T-Started 2220
 (C) First Final Flow 115 Safety Joint 75 T-Open 0008
 (D) Initial Shut-In 739 Circ Sub T-Pulled 0256
 (E) Second Initial Flow 91 Hourly Standby T-Out 0445
 (F) Second Final Flow 153 Mileage 284rt RT 140 Comments _____
 (G) Final Shut-In 741 Sampler _____
 (H) Final Hydrostatic 1175 Straddle _____

Initial Open 30 Shale Packer _____
 Initial Shut-In 45 Shale Packer _____
 Final Flow 30 Extra Packer _____
 Final Shut-In 63 Extra Recorder _____
 Sub Total 1809 Day Standby _____
 Total 1809 Accessibility _____
 MP/DST Disc't _____
 Sub Total 1809

Approved By _____ Our Representative Jimmy Roberts

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63942

Well Name & No. Pray #4 Test No. 2 Date 4-13-19
 Company Raney Oil Co., Inc. Elevation 1272 KB 1259 GL
 Address 4665 Bauer Brook Court, Lawrence, Ks. 66049-9013
 Co. Rep / Geo. Thomas Raney / Roger Martin Rig Duke Drilling #7
 Location: Sec. 31 Twp 33 S Rge. 6 E Co. Cowley State KS

Interval Tested 2787-3210 Zone Tested Mississippian
 Anchor Length 423' Drill Pipe Run 2591 Mud Wt. 9.3
 Top Packer Depth 2782 Drill Collars Run 183 Vis 54
 Bottom Packer Depth 2787 Wt. Pipe Run 0 WL 7.2
 Total Depth 3210 Chlorides 1700 ppm System LCM
 Blow Description IF-weak blow building to 11 inches IFF
FF-weak blow building to strong blow 22 mins. into FFP
continuing to build to 30 inches.

Rec	Feet of	%gas	%oil	%water	%mud
<u>230</u>	<u>GVSOCM</u>	<u>2</u>	<u>4</u>	<u>94</u>	
<u>TS</u>	<u>GVSOCM</u>	<u>7</u>	<u>3</u>	<u>90</u>	

Rec Total 230 BHT 111 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>1581</u>	<input checked="" type="checkbox"/> Test <u>1200</u>	T-On Location <u>1100</u>
(B) First Initial Flow <u>223</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>1207</u>
(C) First Final Flow <u>278</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>1350</u>
(D) Initial Shut-In <u>949</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>1735</u>
(E) Second Initial Flow <u>288</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>1920</u>
(F) Second Final Flow <u>318</u>	<input checked="" type="checkbox"/> Mileage <u>140</u> <u>RT 140</u>	Comments _____
(G) Final Shut-In <u>981</u>	<input type="checkbox"/> Sampler _____	<input type="checkbox"/> Ruined Shale Packer _____
(H) Final Hydrostatic <u>1561</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Packer _____
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Extra Copies _____
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Packer _____	Sub Total <u>0</u>
Final Flow <u>60</u>	<input type="checkbox"/> Extra Recorder _____	Total <u>1665</u>
Final Shut-In <u>90</u>	<input type="checkbox"/> Day Standby _____	MP/DST Disc't _____
	<input type="checkbox"/> Accessibility _____	
	Sub Total <u>1665</u>	

Approved By Roger Martin Our Representative Jimmy Dicketh

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63943

Well Name & No. Pray #4 Test No. 3 Date 4-14-19
 Company Raney Oil Co., Inc. Elevation 1272 KB 1259 GL
 Address 4665 Bauer Brook Court, Lawrence, KS. 66049-9013
 Co. Rep / Geo. Thomas Raney / Roger Martin Rig Duke Drilling #7
 Location: Sec. 31 Twp 33 S Rge. 6 E Co. Cowley State KS

Interval Tested 3212 - 3510 Zone Tested Mississippian Lower
 Anchor Length 298' Drill Pipe Run 3032 Mud Wt. 9.2
 Top Packer Depth 3207 Drill Collars Run 183 Vis 45
 Bottom Packer Depth 3212 Wt. Pipe Run 0 WL 7.2
 Total Depth 3516 Chlorides 1800 ppm System LCM
 Blow Description IF - weak blow building to 5 inches IFP
FF - weak blow building to 5 inches FFP

Rec	Feet of	%gas	%oil	%water	%mud
<u>1201</u>	<u>MCOW MCOW</u>			<u>89</u>	<u>11</u>
<u>75</u>	<u>Drilling mud</u>				<u>100</u>
<u>TS</u>	<u>Heavy mud cut water</u>			<u>52</u>	<u>48</u>

Rec Total 195 BHT 116 Gravity _____ API RW 0.211 @ 58.8° F Chlorides 41,000 ppm

(A) Initial Hydrostatic <u>1713</u>	<input checked="" type="checkbox"/> Test <u>1200</u>	T-On Location <u>1200</u>
(B) First Initial Flow <u>155</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>1235</u>
(C) First Final Flow <u>187</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>1428</u>
(D) Initial Shut-In <u>1143</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>1858</u>
(E) Second Initial Flow <u>192</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>2030</u>
(F) Second Final Flow <u>237</u>	<input checked="" type="checkbox"/> Mileage <u>140</u> <u>RT 140</u>	Comments _____
(G) Final Shut-In <u>1135</u>	<input type="checkbox"/> Sampler _____	_____
(H) Final Hydrostatic <u>1697</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Final Flow <u>60</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Shut-In <u>120</u>	<input type="checkbox"/> Day Standby _____	Total <u>1665</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1665</u>	

Approved By Roger Martin Our Representative Jimmy Richerts

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63944

Well Name & No. Prqy #4 Test No. 4 Date 4-15-19
 Company Raney Oil Co., Inc. Elevation 1272 KB 1259 GL
 Address 4665 Bauer Brook Court, Lawrence, KS 66049-9013
 Co. Rep / Geo. Thomas Raney / Roger Martin Rig Duke drilling #7
 Location: Sec. 31 Twp 33 S Rge. 6 E Co. Cowley State KS.

Interval Tested 3477 - 3542 Zone Tested Ar-buckle
 Anchor Length 65' Drill Pipe Run 3282 Mud Wt. 9.3
 Top Packer Depth 3472 Drill Collars Run 183 Vis 49
 Bottom Packer Depth 3477 Wt. Pipe Run 0 WL 7.2
 Total Depth 3542 Chlorides 1600 ppm System LCM
 Blow Description IF-Weak blow building to 2 inches IFP
FF-Weak blow building to 2 inches FFP

Rec	Feet of	%gas	%oil	%water	%mud
<u>75</u>	<u>Drilling Mud</u>			<u>100%</u>	
<u>TS</u>	<u>Drilling Mud</u>			<u>100%</u>	

Rec Total 75 BHT 109 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1683 Test 1200 T-On Location Yes
 (B) First Initial Flow 20 Jars 250 T-Started 0920
 (C) First Final Flow 40 Safety Joint 75 T-Open 1110
 (D) Initial Shut-In 1366 Circ Sub _____ T-Pulled 1310
 (E) Second Initial Flow 42 Hourly Standby _____ T-Out 1500
 (F) Second Final Flow 60 Mileage None Comments _____
 (G) Final Shut-In 1358 Sampler _____
 (H) Final Hydrostatic 1666 Straddle _____
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____

Initial Open 30 Shale Packer _____
 Initial Shut-In 30 Extra Packer _____
 Final Flow 30 Extra Recorder _____ Sub Total 0
 Final Shut-In 30 Day Standby _____ Total 1525
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1525

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