HALLIBURTON

ARRAY COMP RESISTIVITY
SPECTRAL DENSITY
DUAL SPACED
EPITHERMAL NEUTRON
LOG

COMPANY **EQT PRODUCTION COMPANY**

WELL **WV 512513**

FIELD **WESTON**

COUNTY **DODDRIDGE** STATE **WEST VIRGINIA**

API No. 4701705912

Location LAT: 39.27225 N; LONG: 80.77147 W
DISTRICT: WEST UNION
QUAD: WEST UNION 7.5'

Other Services:
CSNG
BHPT

Permanent Datum	GL	Elev. 1180.0 ft	Elev.: K.B. 1190.0 ft
Log measured from	KB	10.0 ft above perm. Datum	D.F. 1189.0 ft
Drilling measured from	KB		G.L. 1180.0 ft

Date		04-Jun-10					
Run No.		2					
Depth - Driller		6762.00 ft					
Depth - Logger		6766.0 ft					
Bottom - Logged Interval		6755.59 ft					
Top - Logged Interval		3212.0 ft					
Casing - Driller		9.625 in	@ 3192.0 ft	@		@	
Casing - Logger		3212.0 ft					
Bit Size		8.500 in		@		@	
Type Fluid in Hole		AIR					
Density	Viscosity	0.3 ppg	0.00 s/qt				
PH	Fluid Loss	0.00 pH	0.0 cptm				
Source of Sample		NA					
Rm @ Meas. Temperature		0.000 ohmm	@ 0.00 degF	@		@	
Rmf @ Meas. Temperature		0.00 ohmm	@ 0.00 degF	@		@	
Rmc @ Meas. Temperature		0.000 ohmm	@ 0.00 degF	@		@	
Source Rmf	Rmc	NA	NA				
Rm @ BHT		0.00 ohmm	@ 120.0 degF	@		@	
Time Since Circulation		11.0 hr					
Time on Bottom		05-Jun-10 00:00					
Max. Rec. Temperature		120.0 degF	@ 6766.0 ft	@		@	
Equipment	Location	11034103	CARM.				
Recorded By		J.SERNA					
Witnessed By		R.BLOOD					

Fold here

Service Ticket No.: 7414275 API Serial No.: 4701705912 PGM Version: WL INSITE R3.0.3 (Build 5)

CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE

	Sample No.	Type Log	Depth
Date			
Depth-Driller			
Type Fluid in Hole			
Density	Viscosity		
Ph	Fluid Loss		
Source of Sample			
Rm @ Meas. Temp	@		
Rmf @ Meas. Temp.	@		
Rmc @ Meas. Temp.	@		
Source Rmf	Rmc		
Rm @ BHT	@		
Rmf @ BHT	@		
Rmc @ BHT	@		

RESISTIVITY SCALE CHANGES

	Scale Up Hole	Scale Down Hole

RESISTIVITY EQUIPMENT DATA

	Run No.	Tool Type & No.	Pad Type	Tool Pos.	Other
	TWO	ACRT I853S410	NA	1.5" S.O.	NA

EQUIPMENT DATA

	GAMMA		ACOUSTIC		DENSITY		NEUTRON	
	Run No.	TWO	Run No.		Run No.	TWO	Run No.	TWO
	Serial No.	070	Serial No.		Serial No.	I073P423	Serial No.	789_S415
	Model No.	GTET	Model No.		Model No.	SDLT	Model No.	DSEN
	Diameter	3.63"	No. of Cent.		Diameter	4.5"	Diameter	3.63"
	Detector Model No.	GTET	Spacing		Log Type	GAM-GAM	Log Type	NEU-NEU
	Type	SCINT.			Source Type	CS-137	Source Type	AM241BE
	Length	8"	LSA [Y/N]		Serial No.	5227GW	Serial No.	DSN-415
	Distance to Source	27'	FWDA [Y/N]		Strength	1.78 CI	Strength	15 CI

LOGGING DATA

GENERAL				GAMMA		ACOUSTIC			DENSITY			NEUTRON		
Run	Depth		Speed	Scale		Scale		Matrix	Scale		Matrix	Scale		Matrix
No.	From	To	ft/min	L	R	L	R		L	R		L	R	
TWO	6766'	3212'	REC	0	200				.3	-.1	2.71	.3	-.1	LIME

DIRECTIONAL INFORMATION

Maximum Deviation @	KOP @

Remarks: AHV CALCULATED FOR 5.5-INCH CASING

HES CREW: CUNNINGHAM, NICK

DRILLING RIG: HIGHLANDS DRILLING RIG #7

TOOL CONFIG.: GTET/CSNG/BHPT/DSEN/SDLT/ACRT *DECENT. ON DSEN, 1 WEAR RING ON CSNG, 2 1.5-INCH S.O. ON ACRT

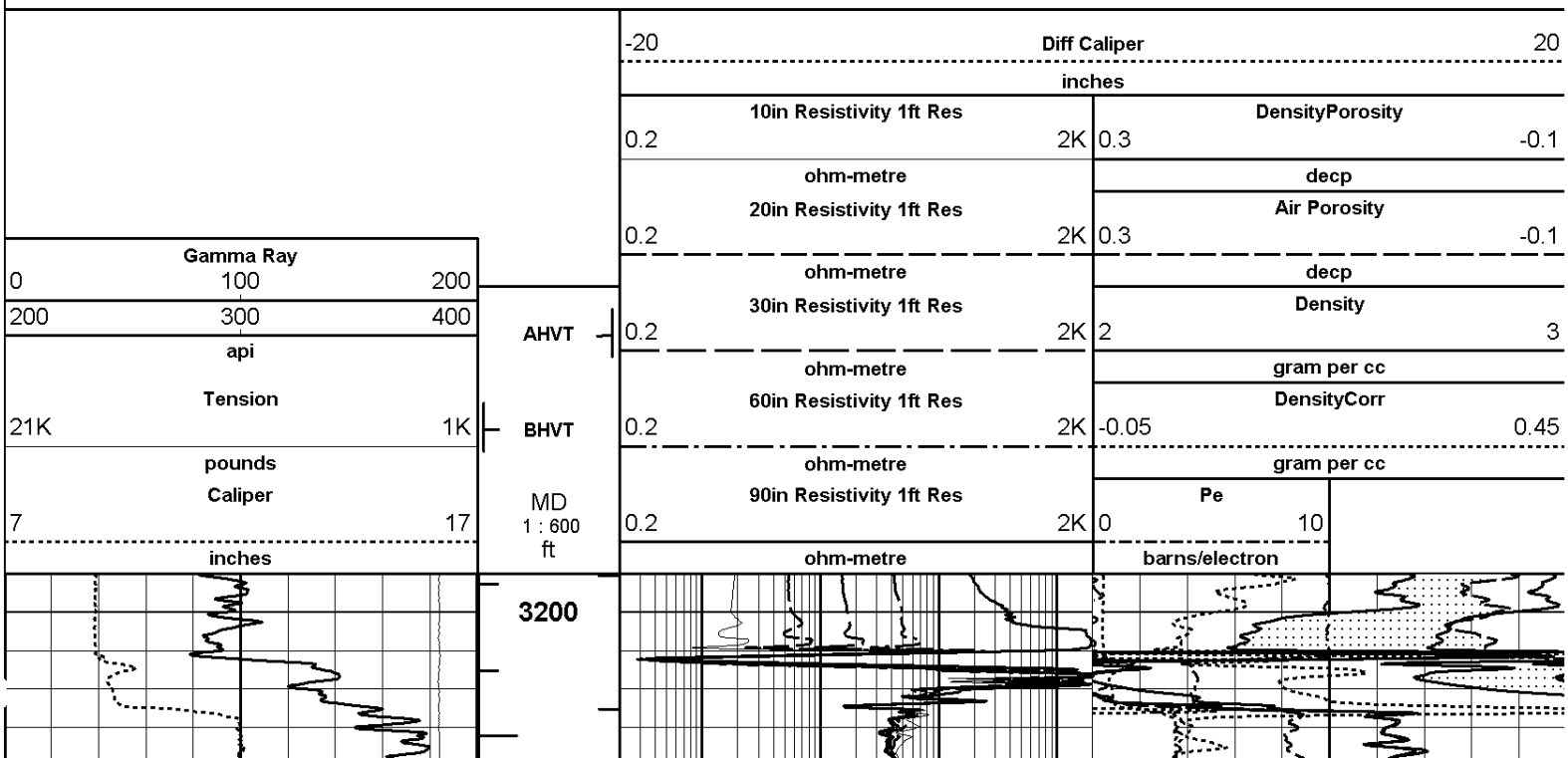
NO PRE/POST CALIBRATIONS PERFORMED

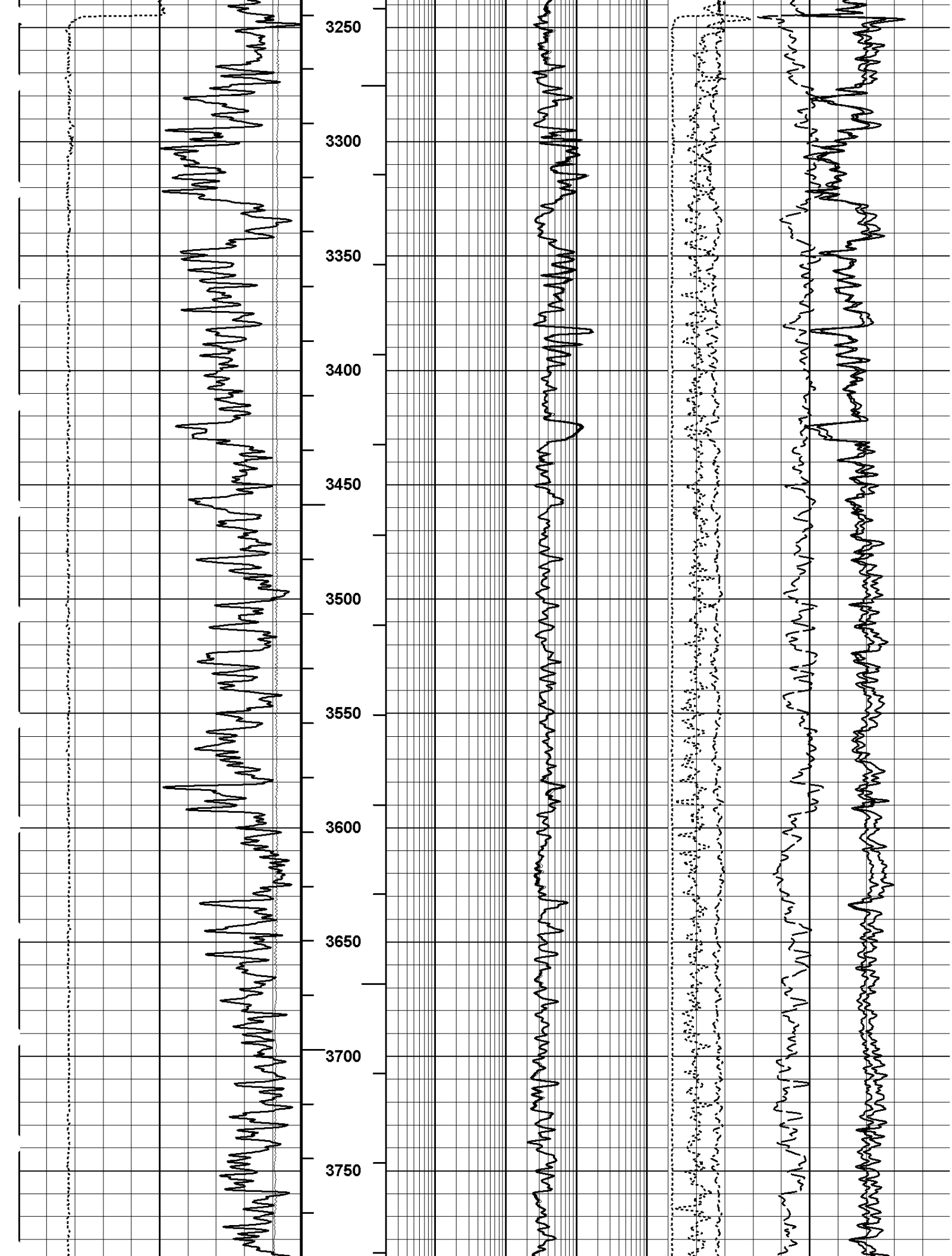
RUN 2 TIES INTO RUN 3 PERFORMED ON 31-MAY-2010

HALLIBURTON

Plot Time: 05-Jun-10 01:50:00
Plot Range: 3190 ft to 6771.92 ft
Data: 4701705912_0604\Well Based\DAQ-0001-003*
Plot File: \\-LOCAL-\4701705912_0531\0001 triplecombobhpt\(not saved)\2in_IIIC_ACRT_M_jmack

MAIN PASS 2" = 100'

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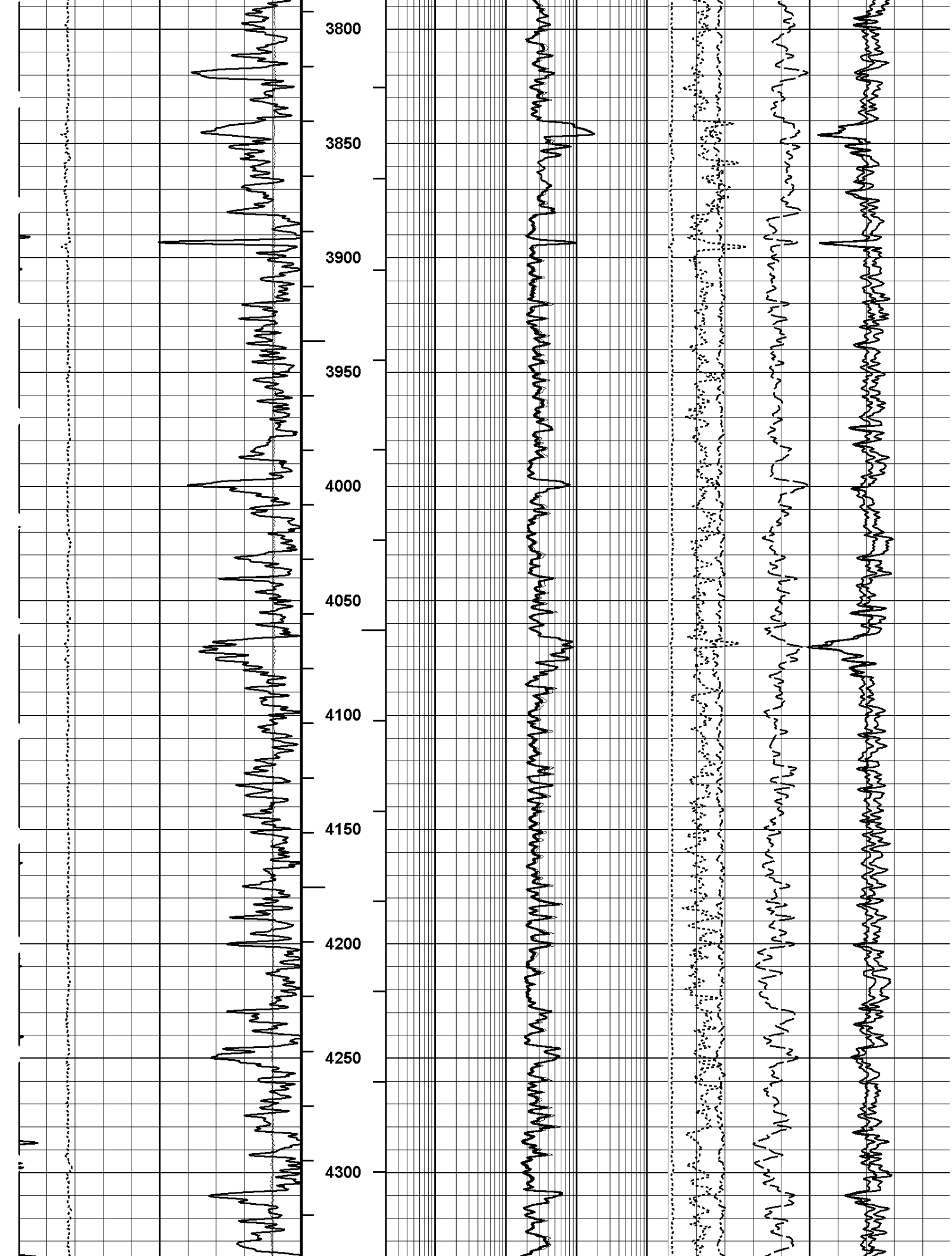
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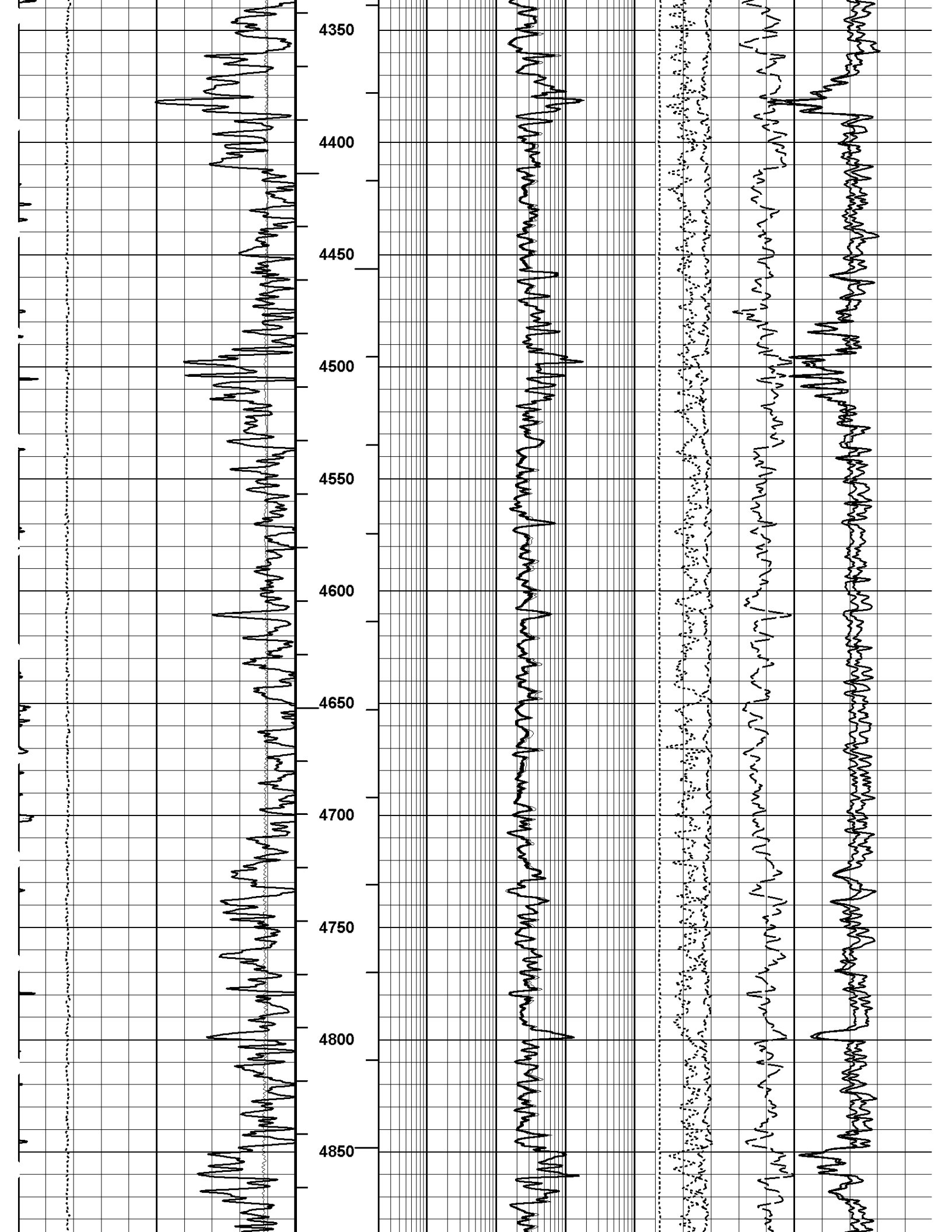
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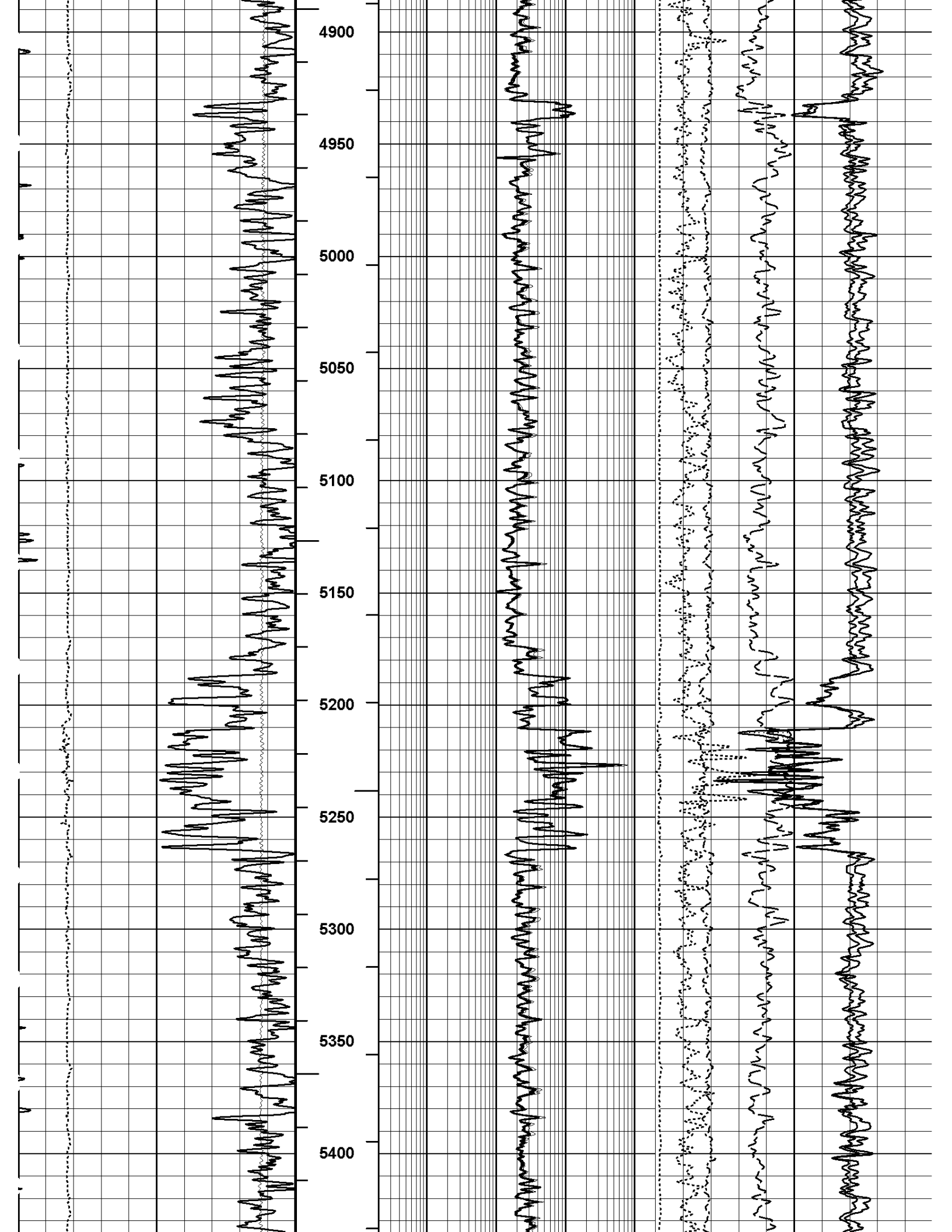
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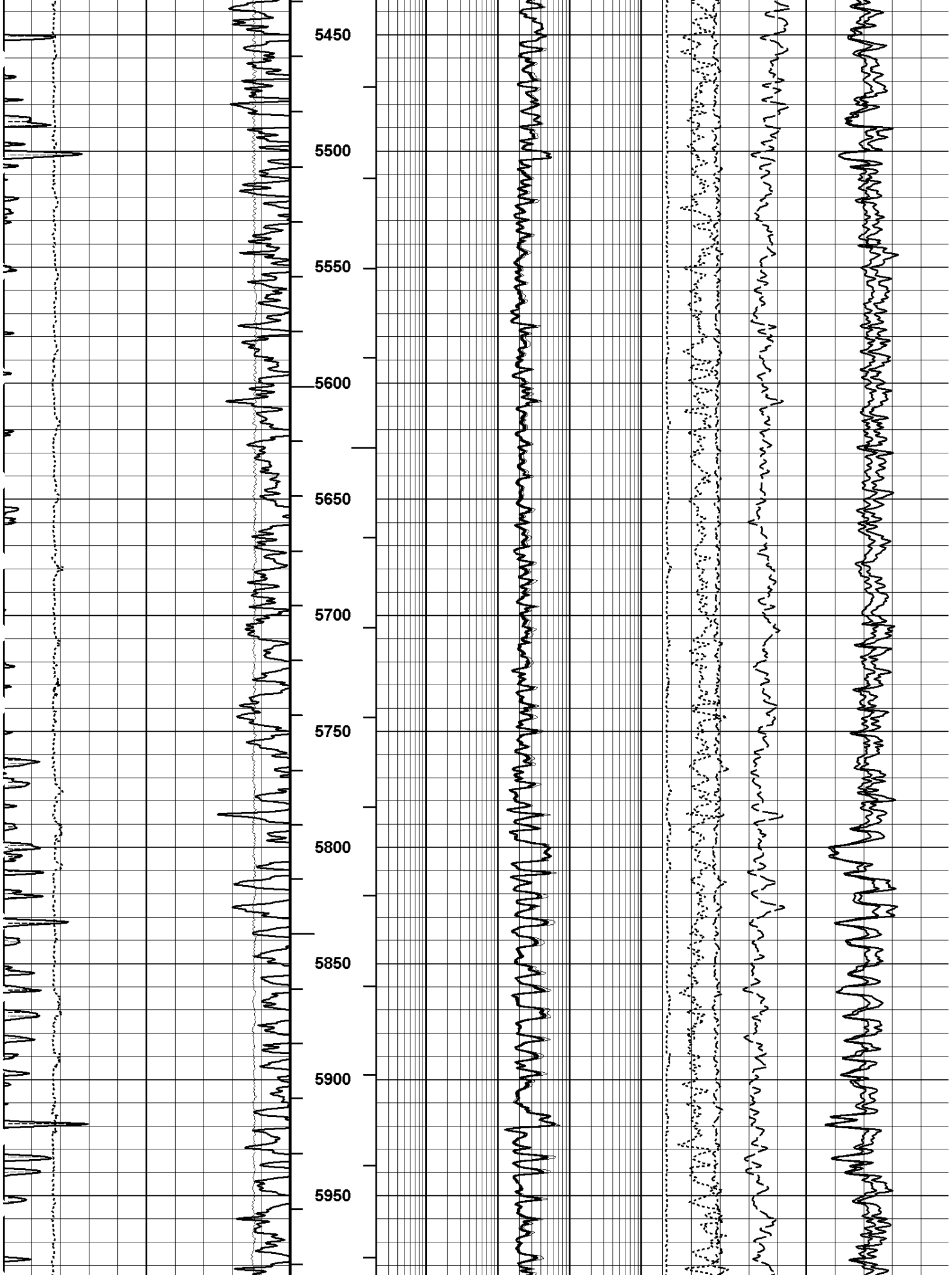
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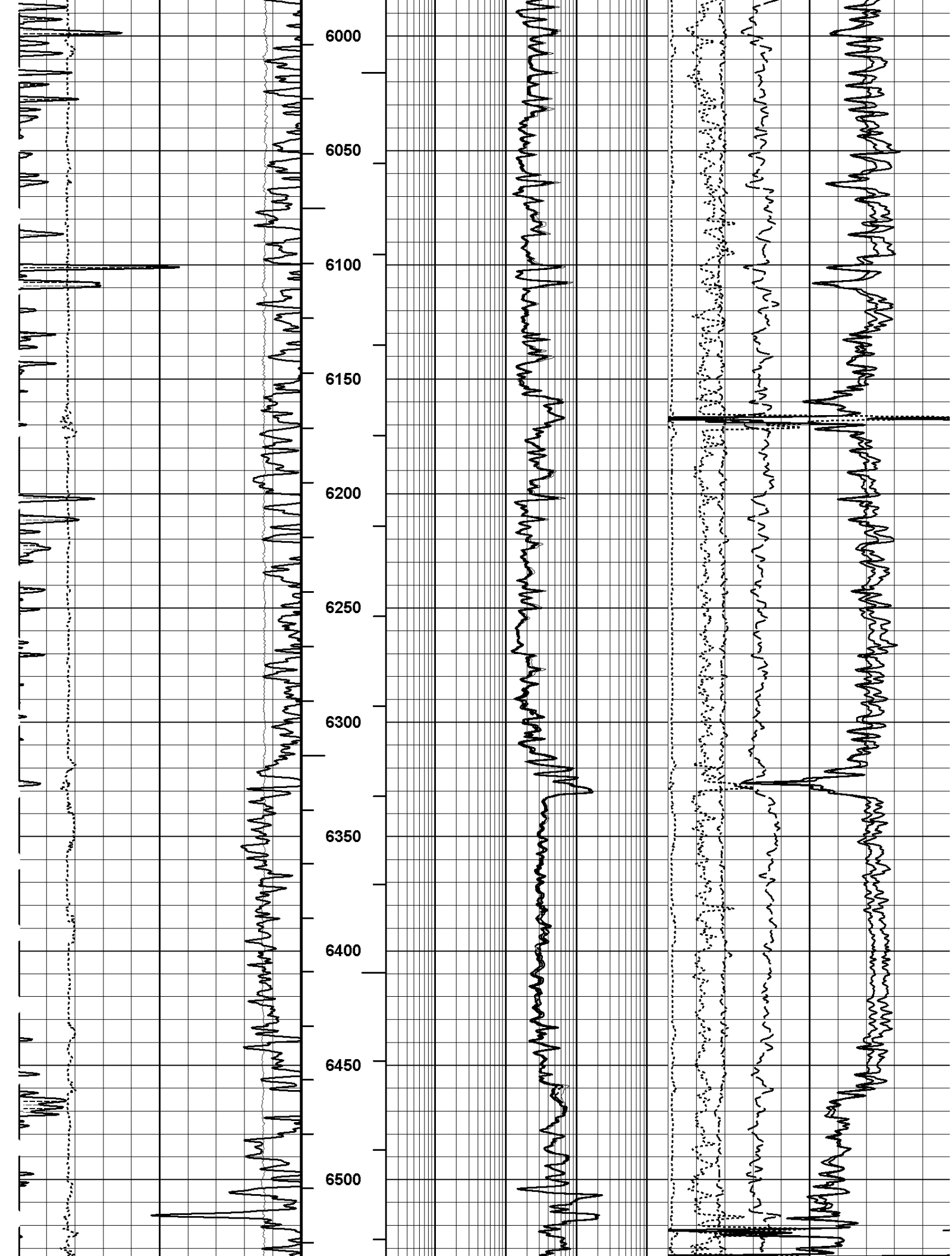
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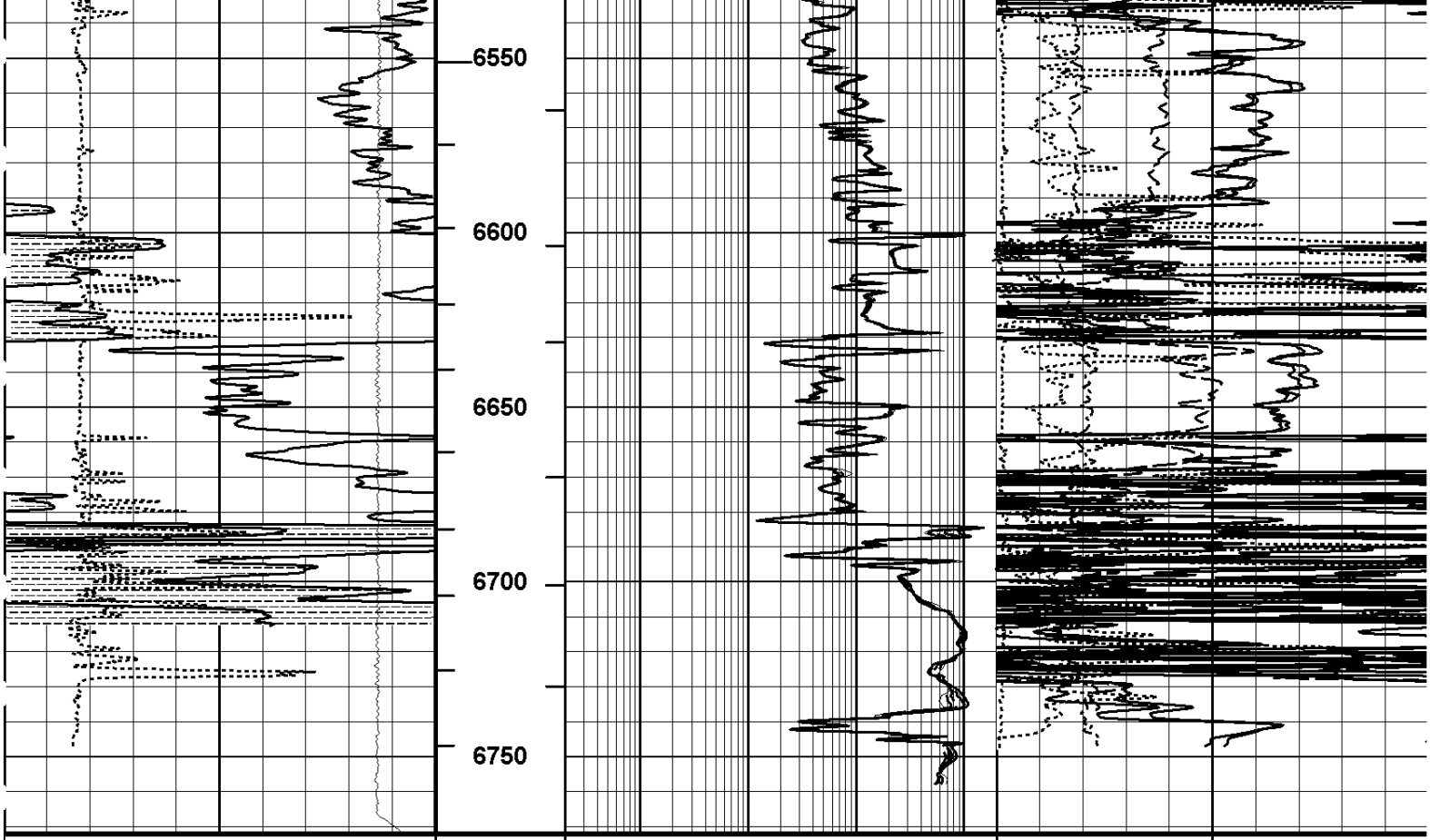


Caliper		MD	90in Resistivity 1ft Res		Pe	
7	17	1 : 600 ft	0.2	2K	0	10
inches			ohm-metre		barns/electron	
Tension			60in Resistivity 1ft Res		DensityCorr	
21K	1K	BHVT	0.2	2K	-0.05	0.45
pounds			ohm-metre		gram per cc	
Gamma Ray			30in Resistivity 1ft Res		Density	
0 100	200	AHVT	0.2	2K	2	3
200 300	400		ohm-metre		gram per cc	
api			20in Resistivity 1ft Res		Air Porosity	
			0.2	2K	0.3	-0.1
			ohm-metre		decp	
			10in Resistivity 1ft Res		DensityPorosity	
			0.2	2K	0.3	-0.1
			ohm-metre		decp	
			-20	Diff Caliper		20
			inches			

HALLIBURTON

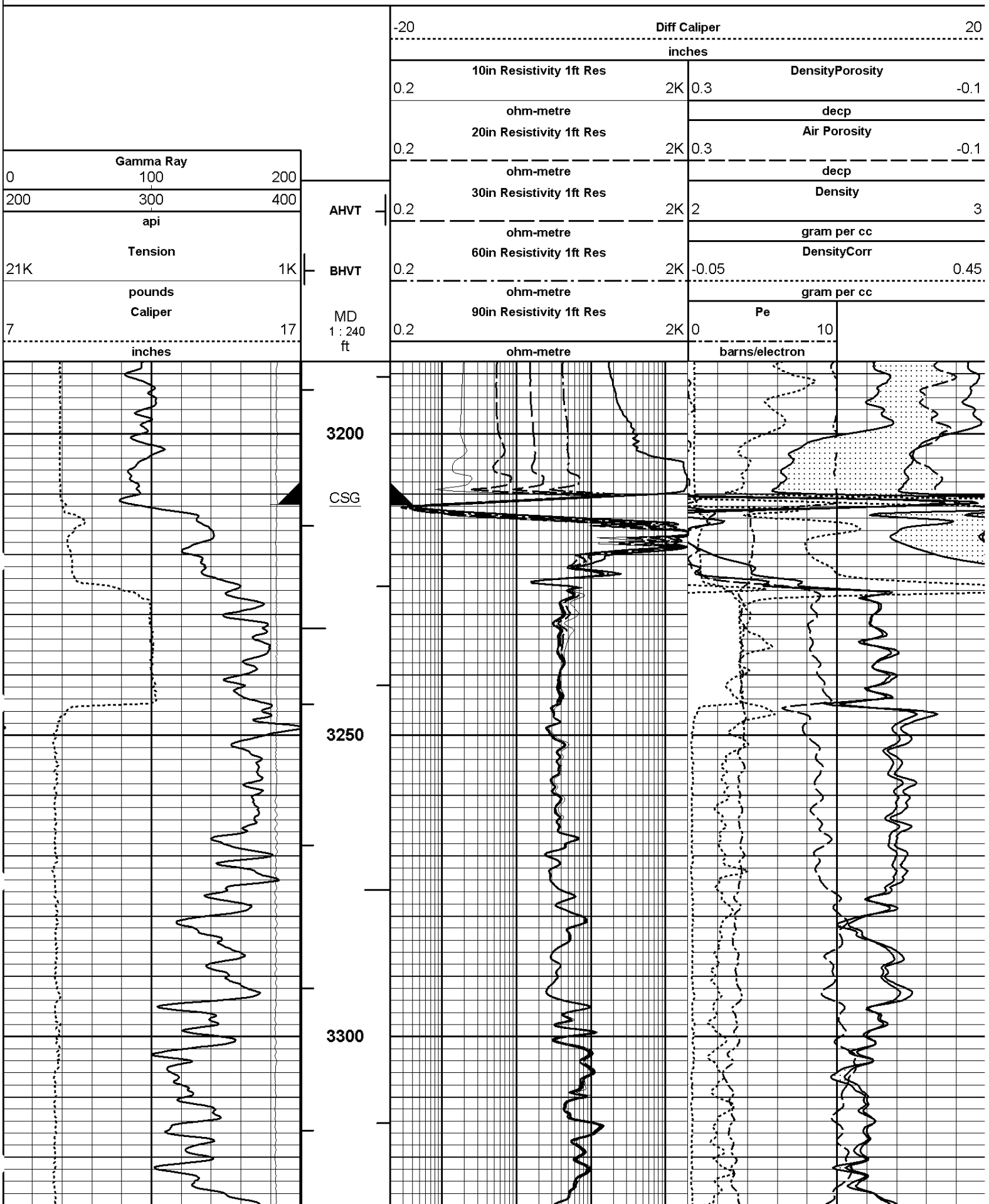
Plot Time: 05-Jun-10 01:50:22
Plot Range: 3190 ft to 6771.92 ft
Data: 4701705912_0604\Well Based\DAQ-0001-003*
Plot File: \\-LOCAL-\4701705912_0531\0001 triplecombobhpt\(not saved)\2in_IIIC_ACRT_M_jmack

MAIN PASS 2" = 100'

HALLIBURTON

Plot Time: 05-Jun-10 01:50:22
Plot Range: 3188 ft to 6771.92 ft
Data: 4701705912_0604\Well Based\DAQ-0001-003*
Plot File: \\-LOCAL-\4701705912_0531\0001 triplecombobhpt\(not saved)\5in_IIIC_ACRT_M_jmack

MAIN PASS 5" = 100'


-20
Diff Caliper
20
inches
10in Resistivity 1ft Res
0.2
2K
ohm-metre
20in Resistivity 1ft Res
0.2
2K
ohm-metre
30in Resistivity 1ft Res
0.2
2K
ohm-metre
60in Resistivity 1ft Res
0.2
2K
ohm-metre
90in Resistivity 1ft Res
0.2
2K
ohm-metre
DensityPorosity
0.3
-0.1
decp
Air Porosity
0.3
-0.1
decp
Density
2
3
gram per cc
DensityCorr
-0.05
0.45
gram per cc
Pe
0
10
barns/electron
Gamma Ray
0
100
200
200
300
400
api
Tension
21K
1K
pounds
Caliper
7
17
inches
AHVT
BHVT
MD
1 : 240
ft
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CSG
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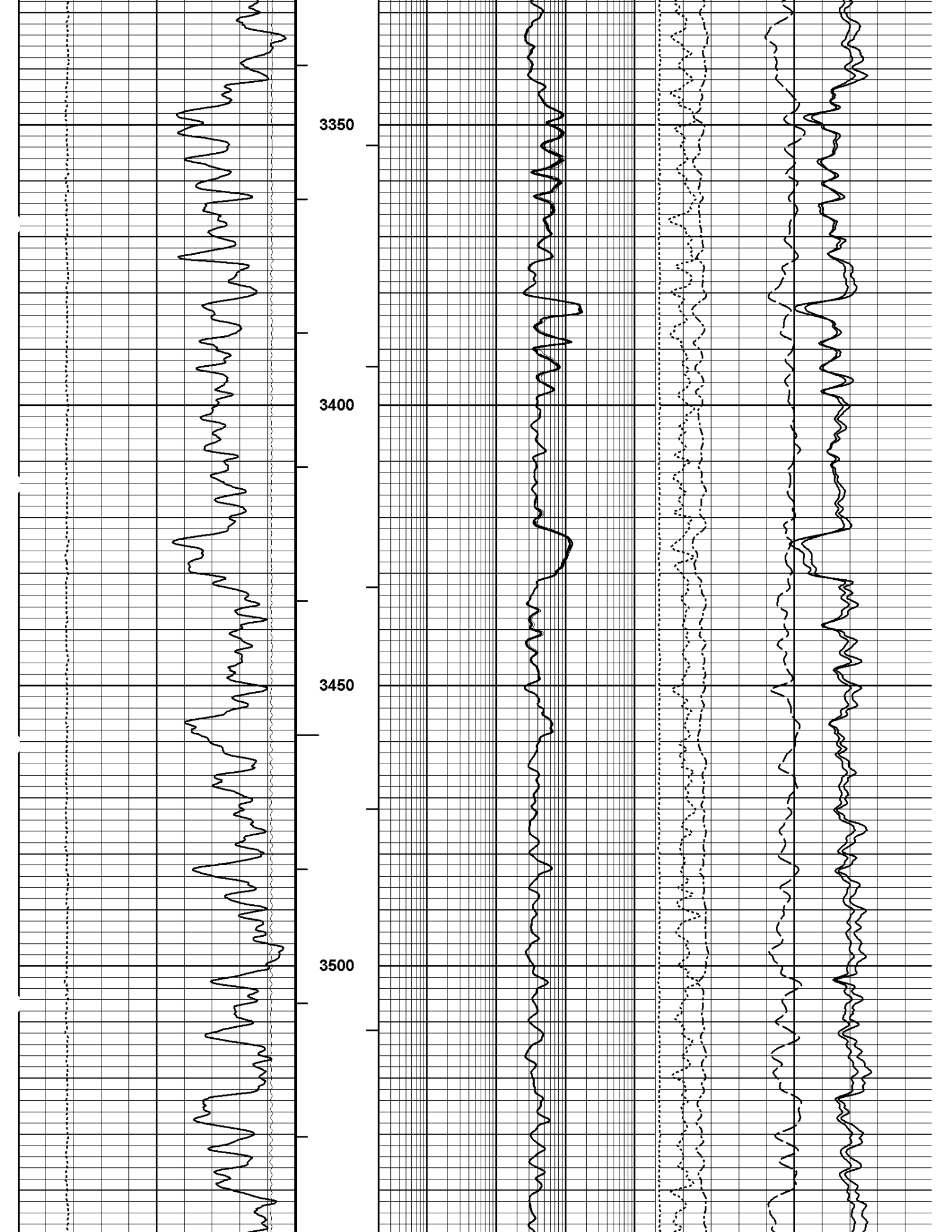
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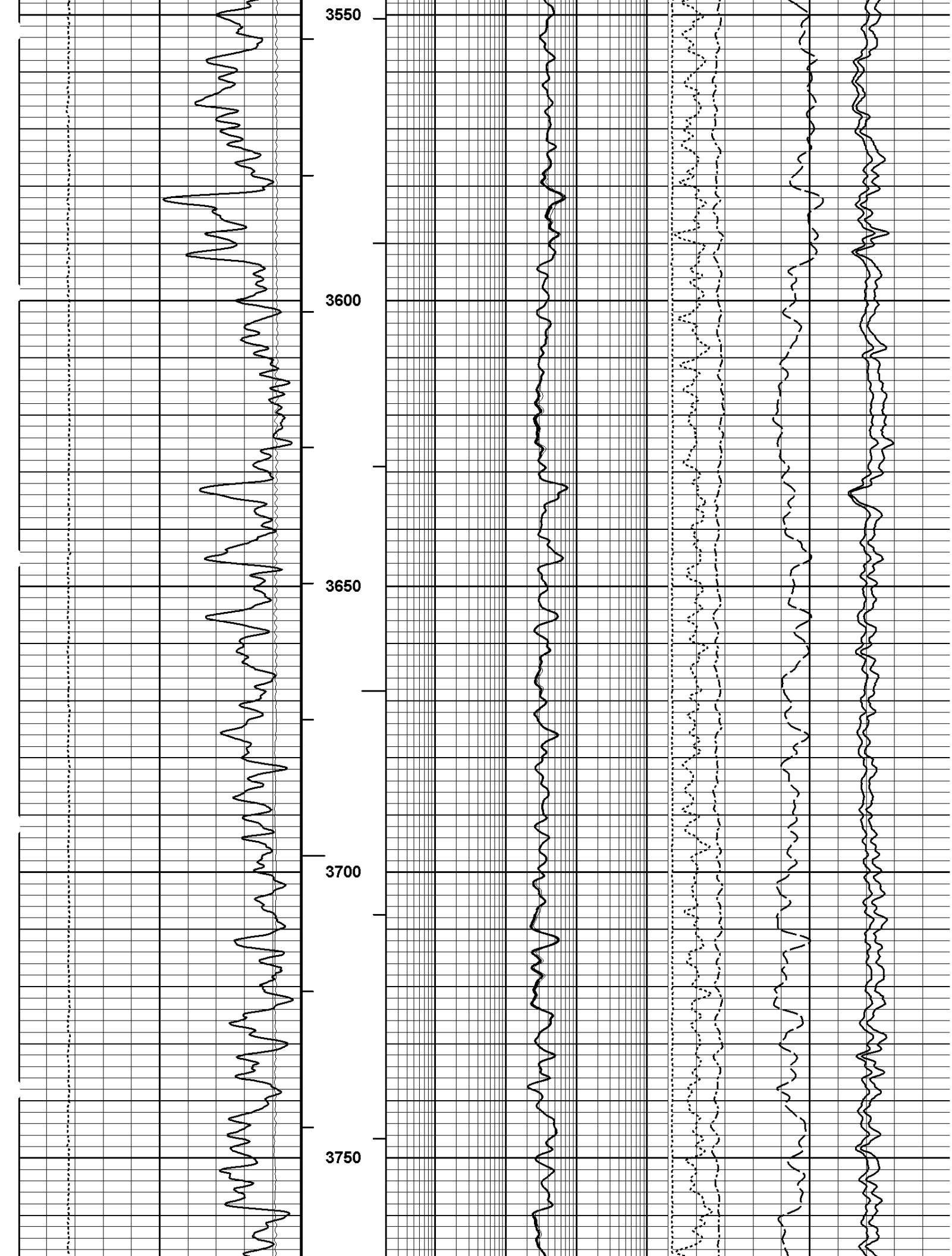
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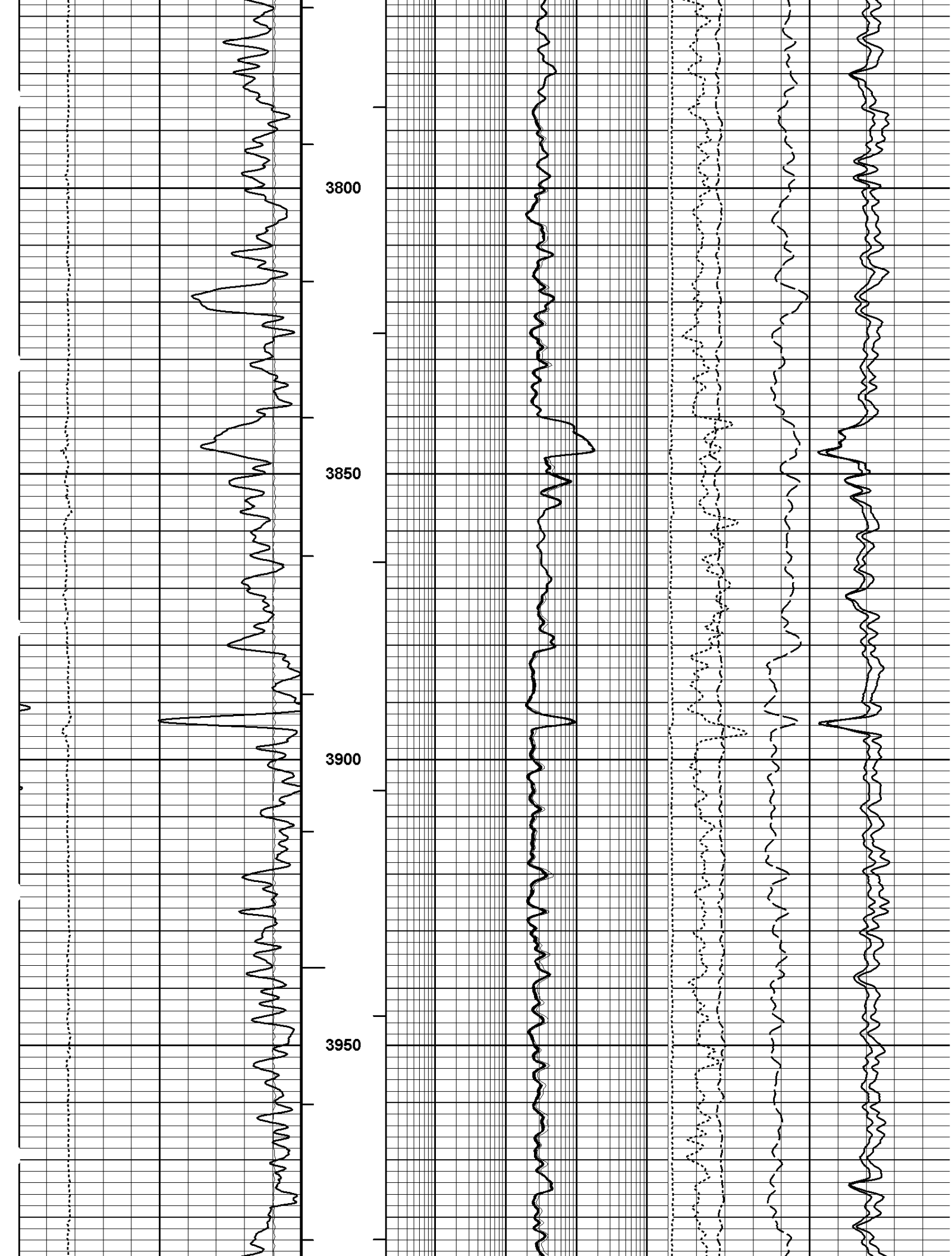
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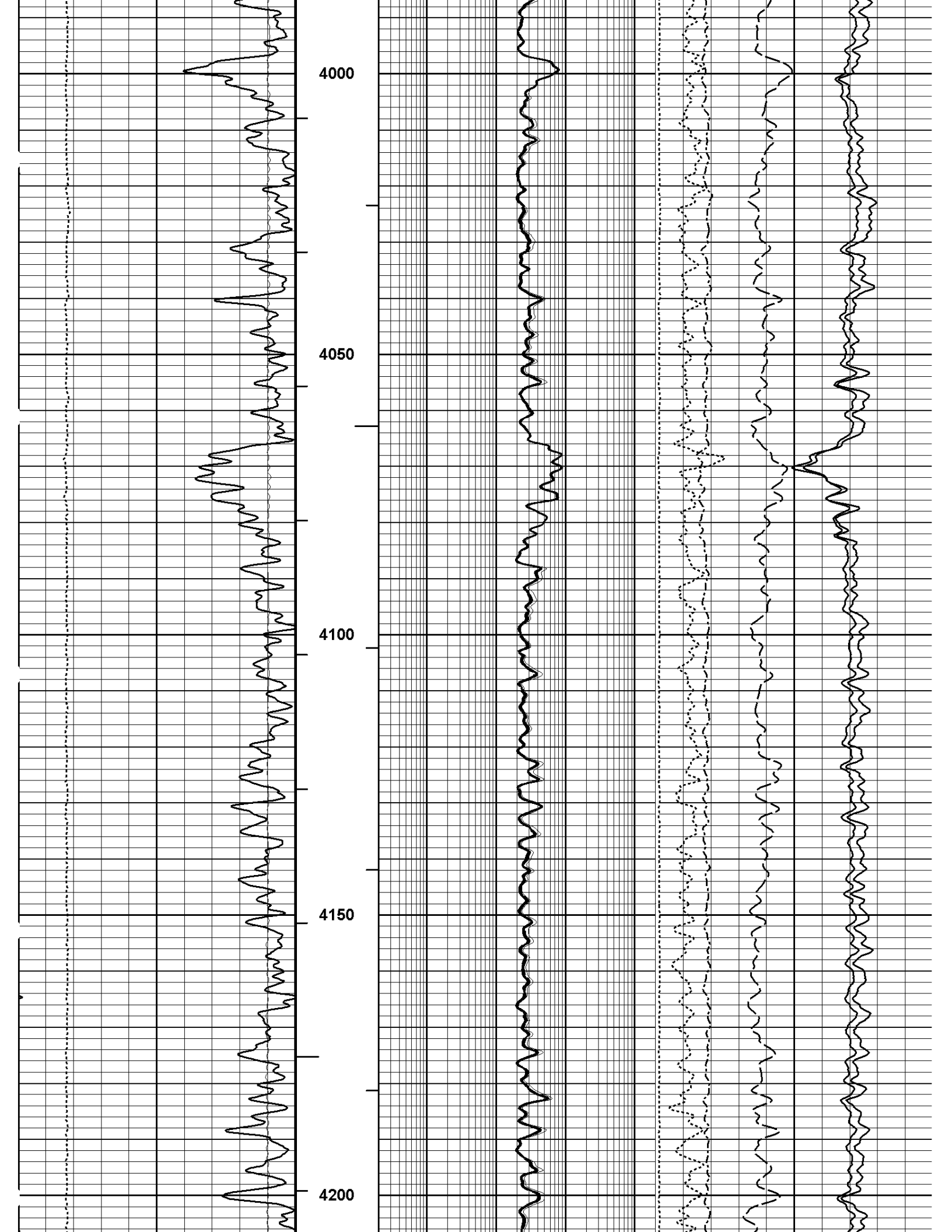
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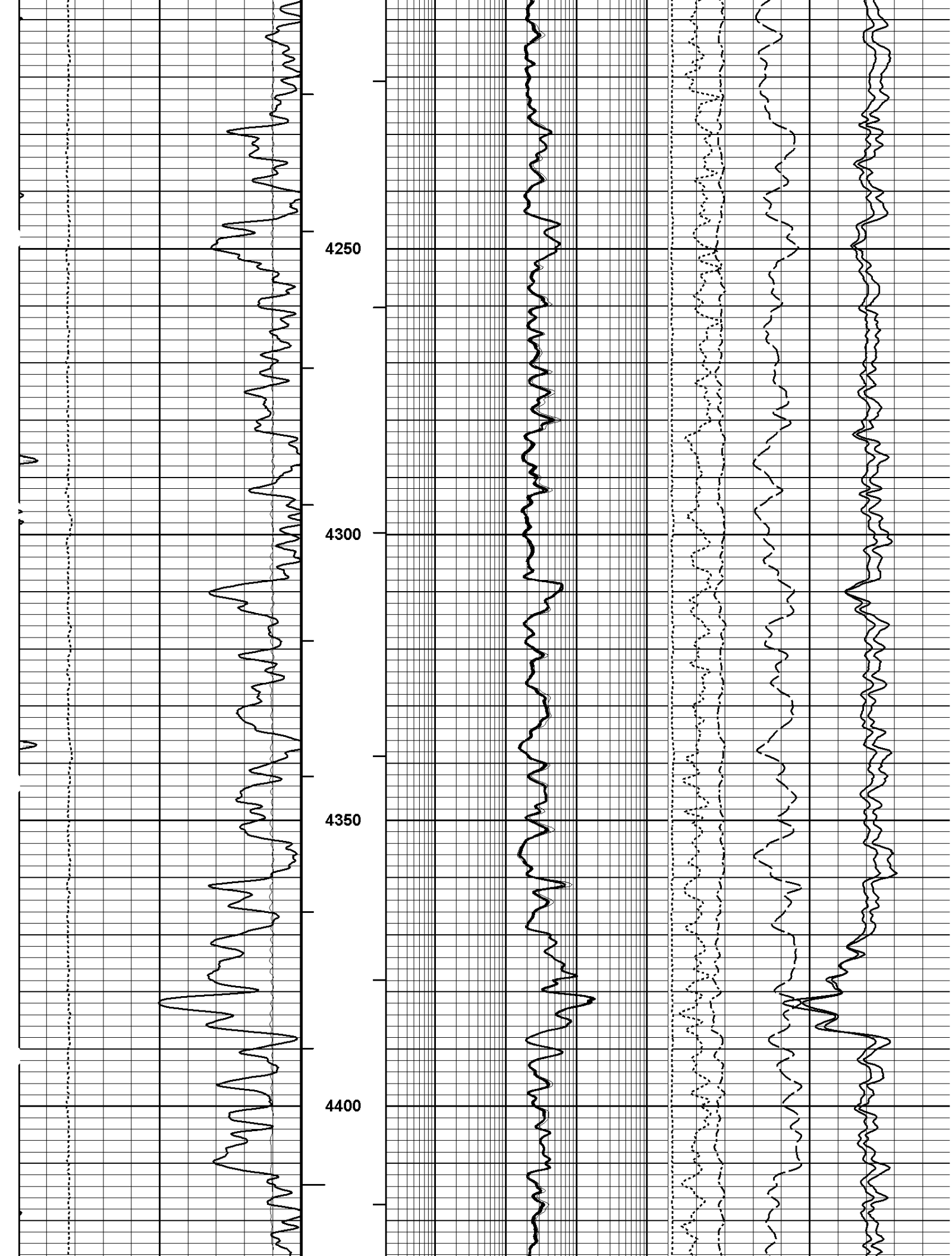
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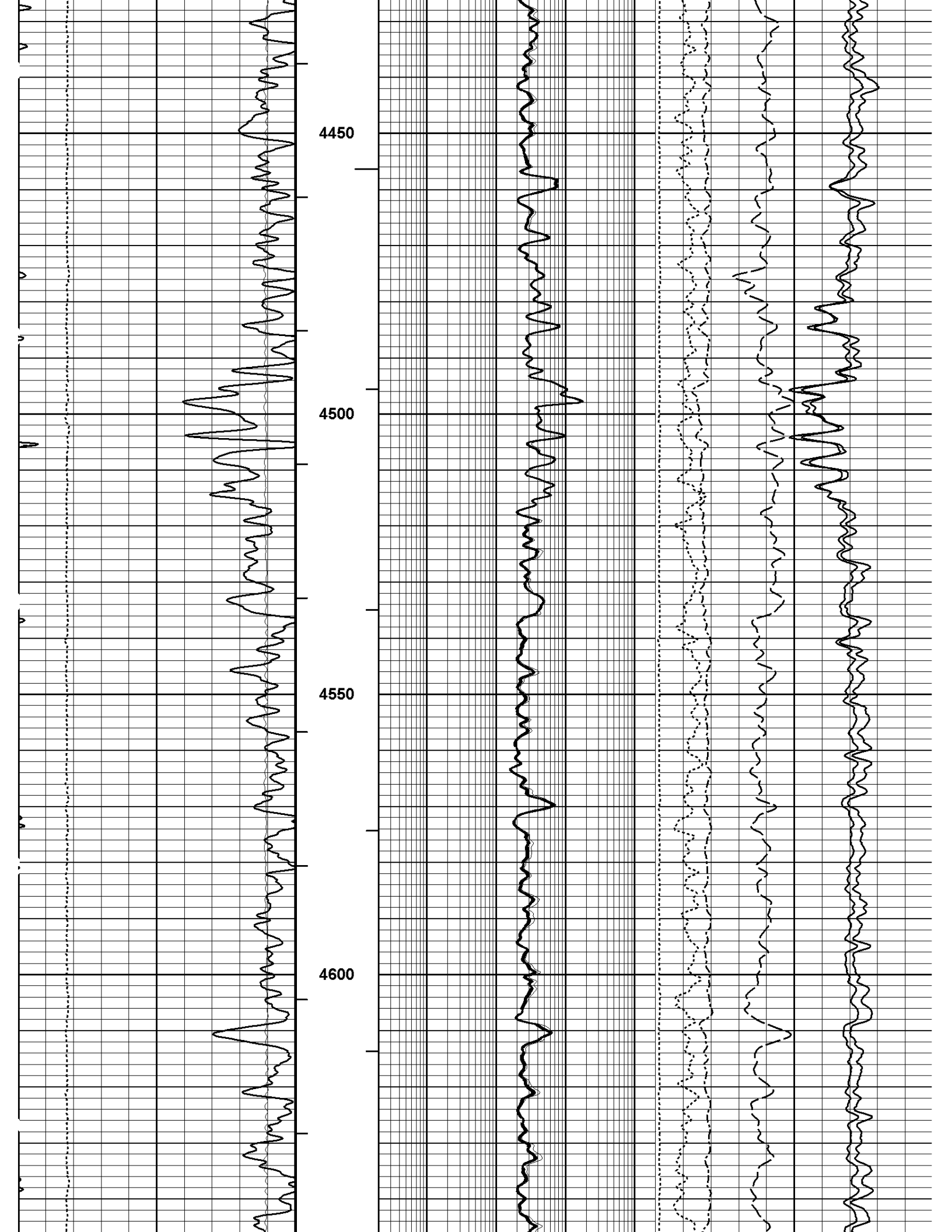
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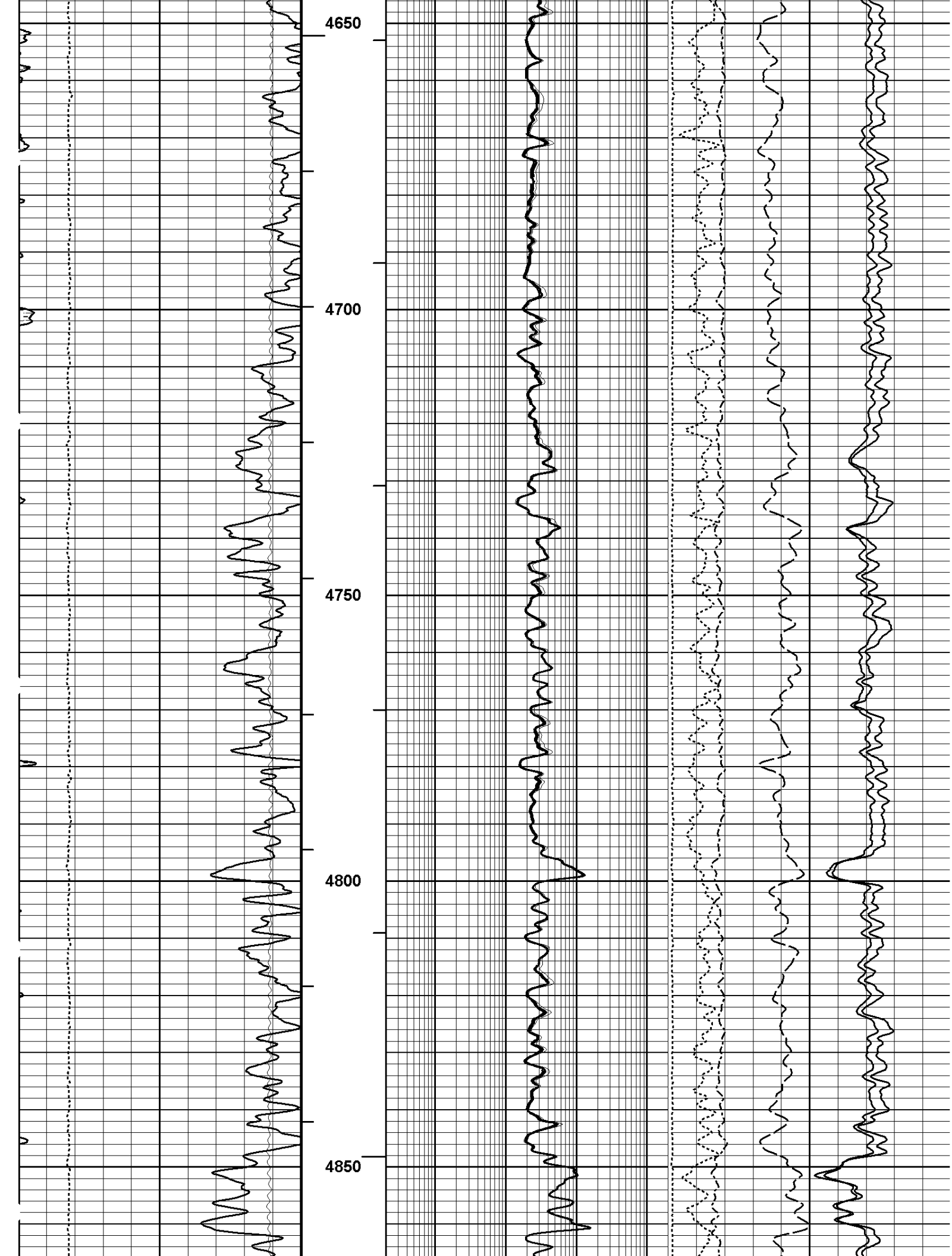
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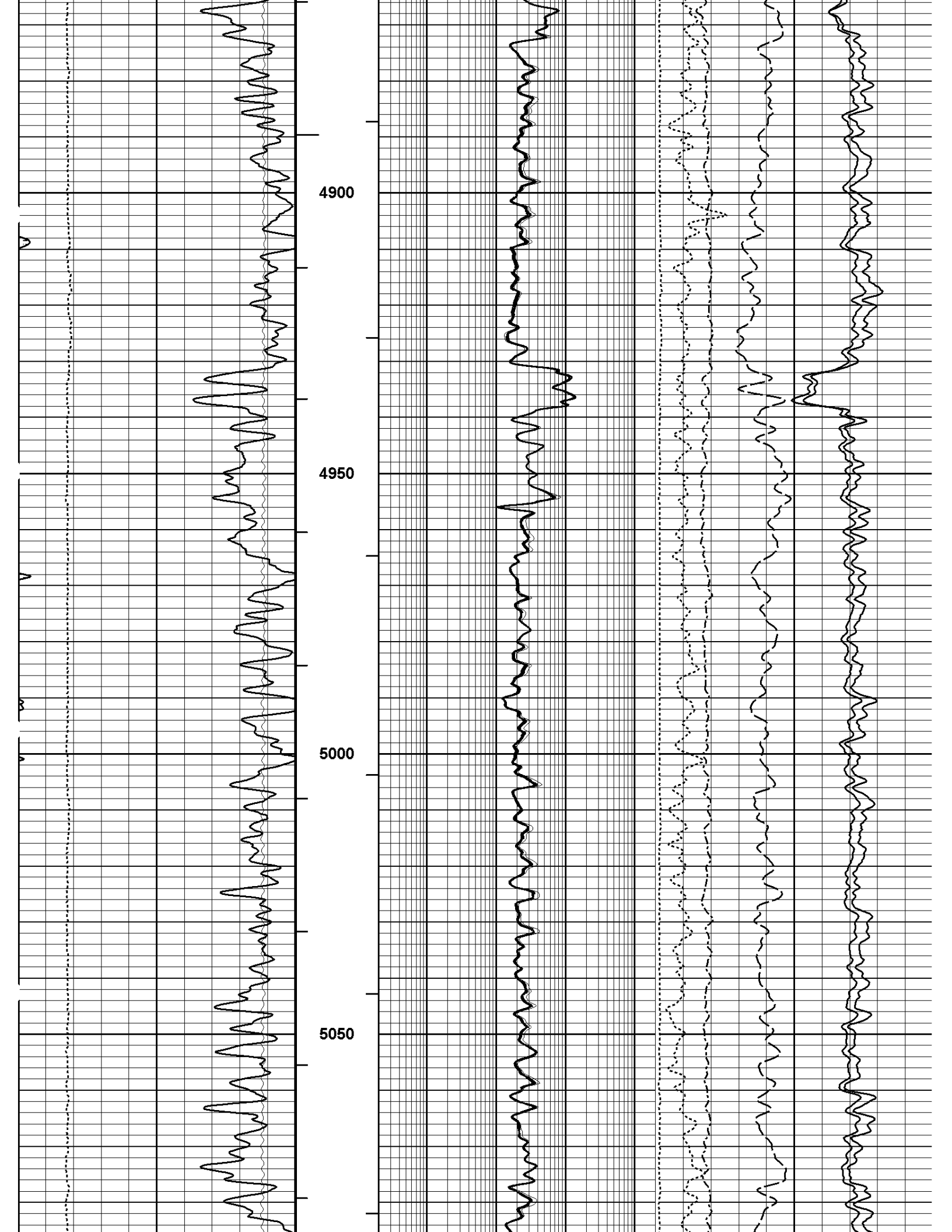
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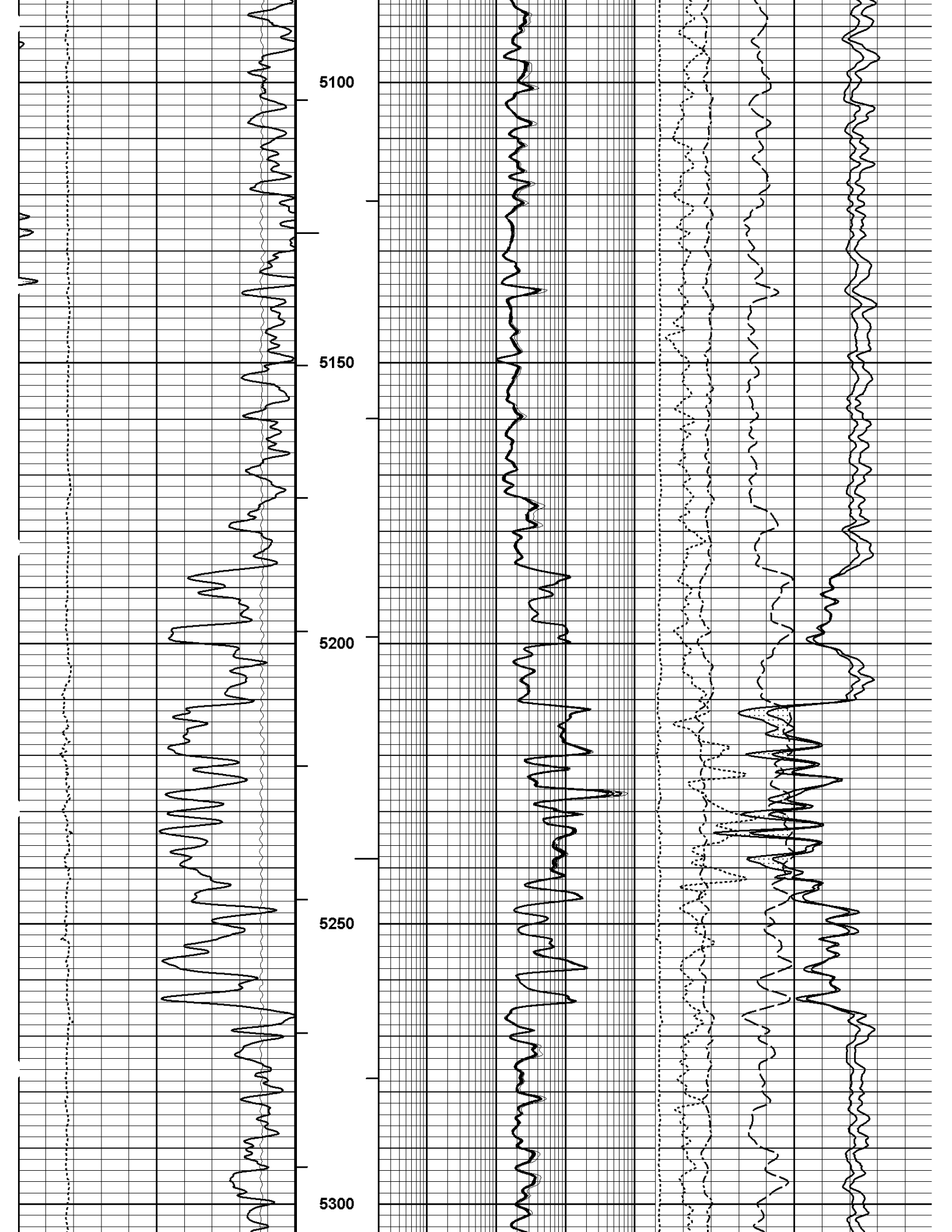
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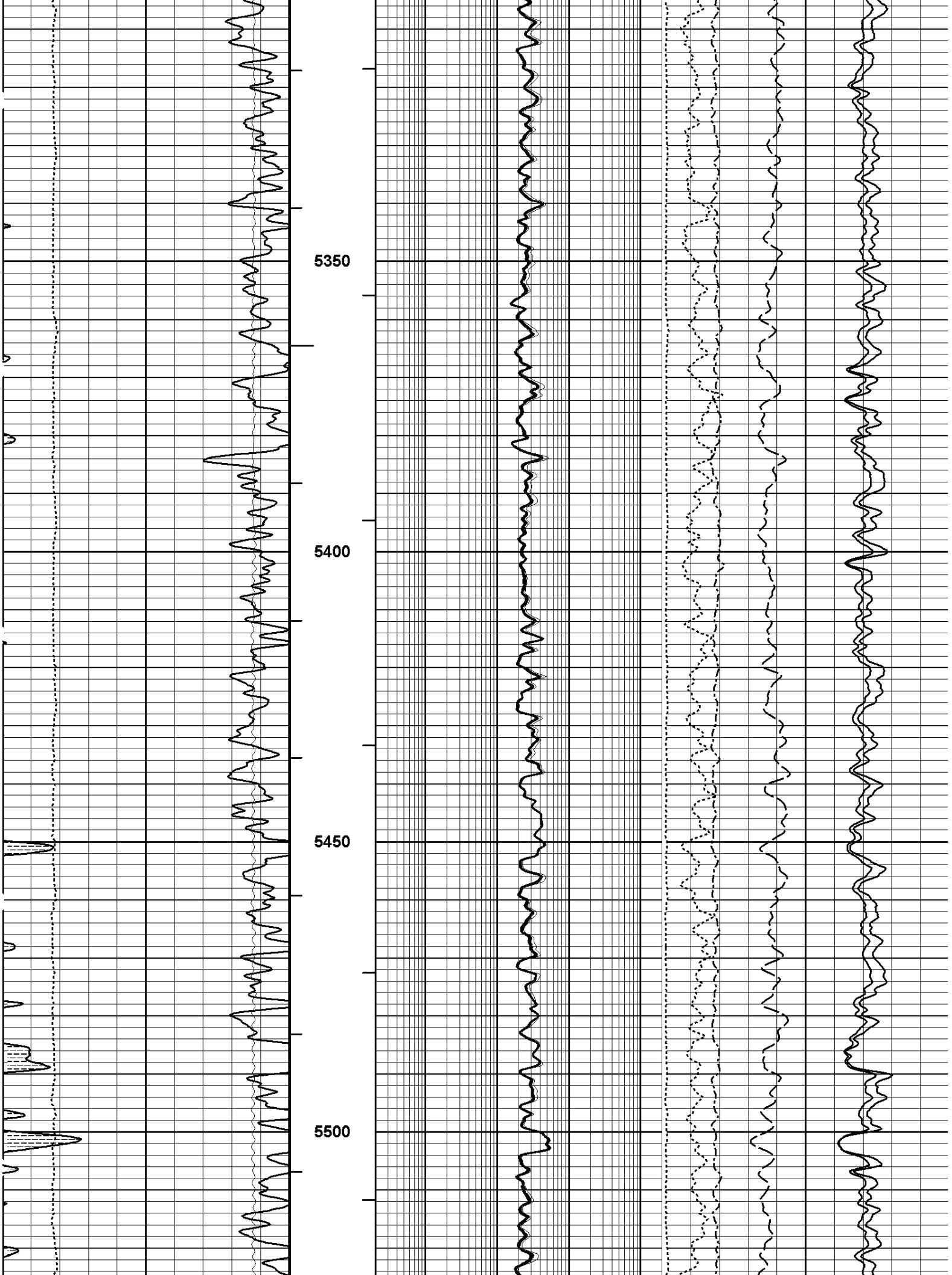
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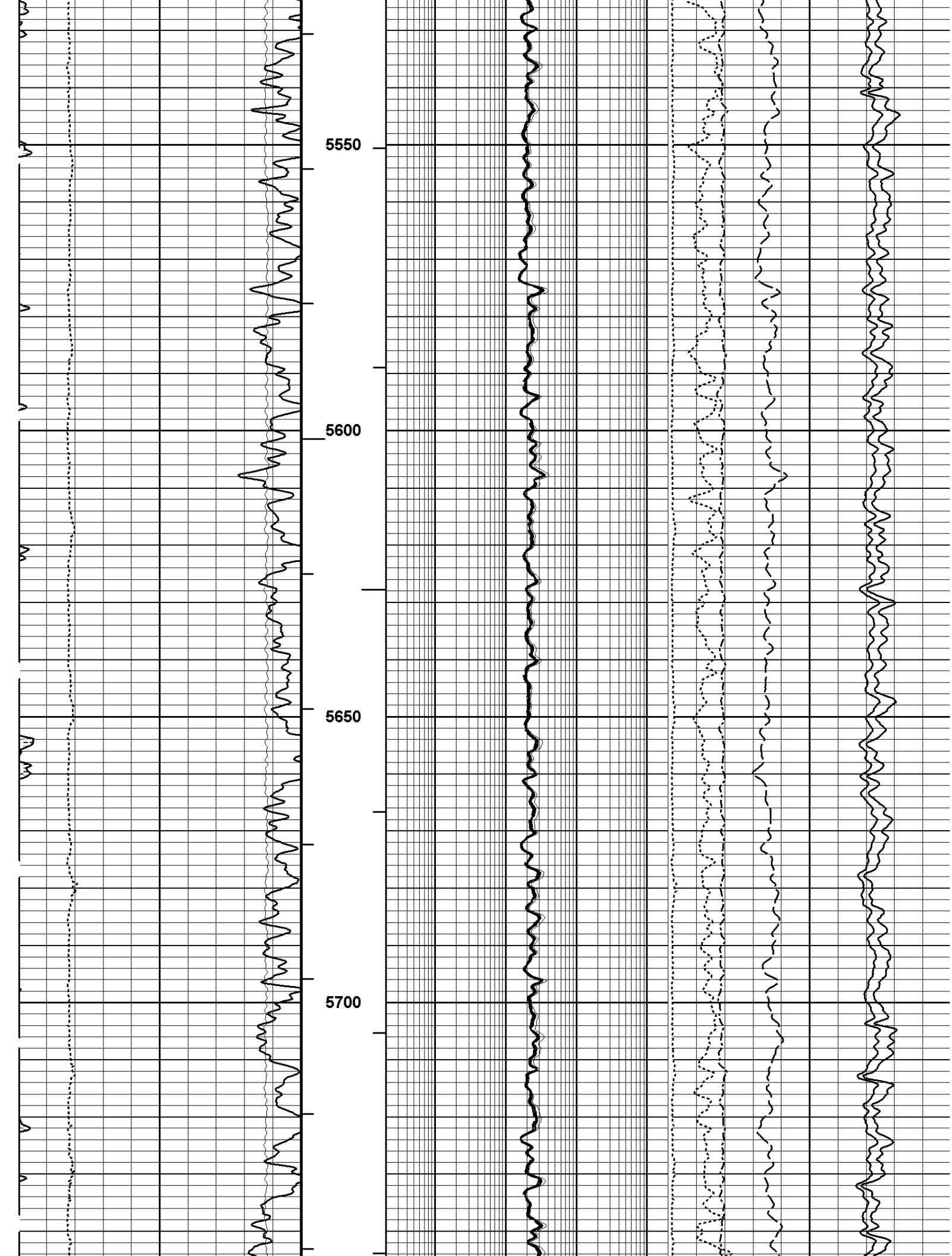
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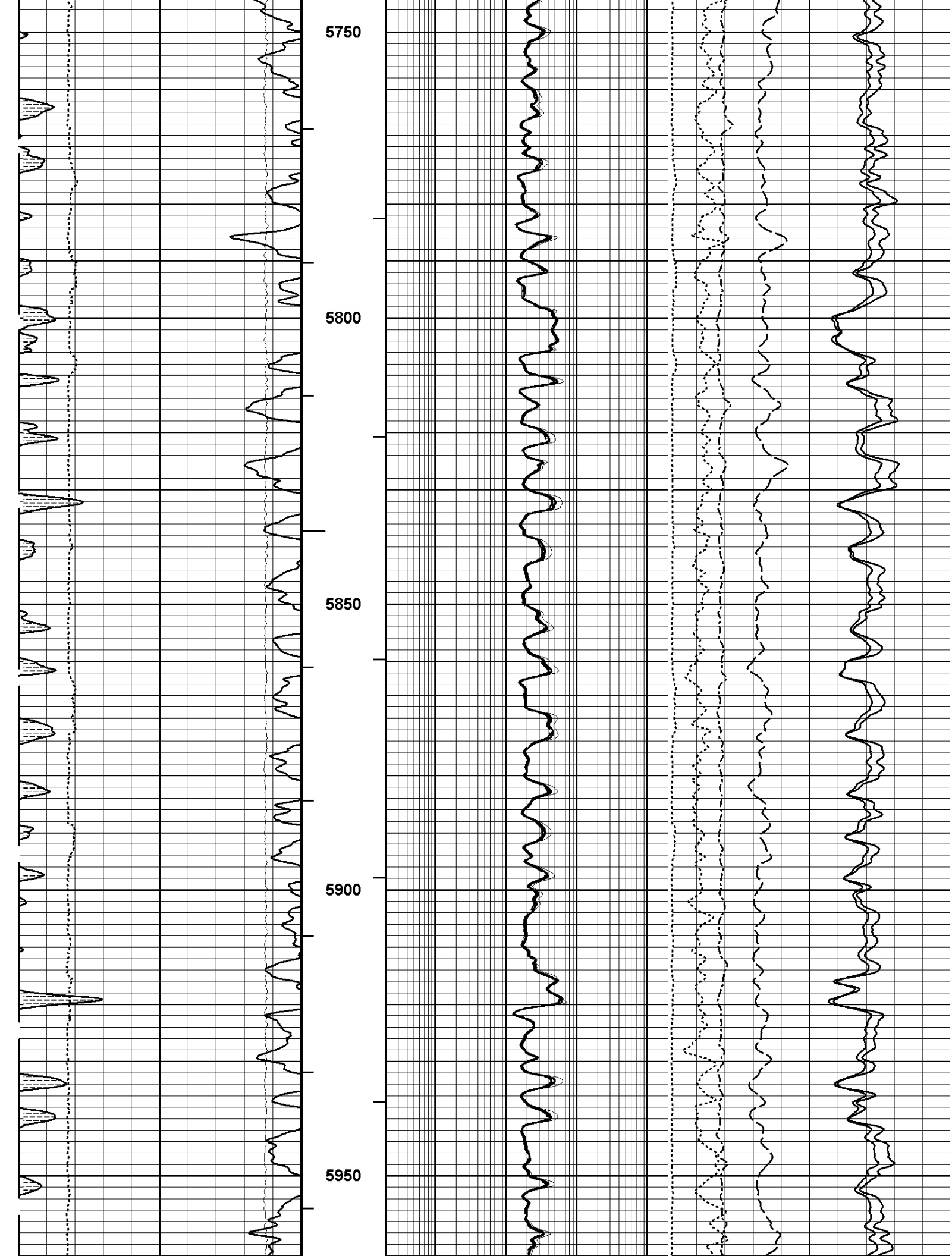
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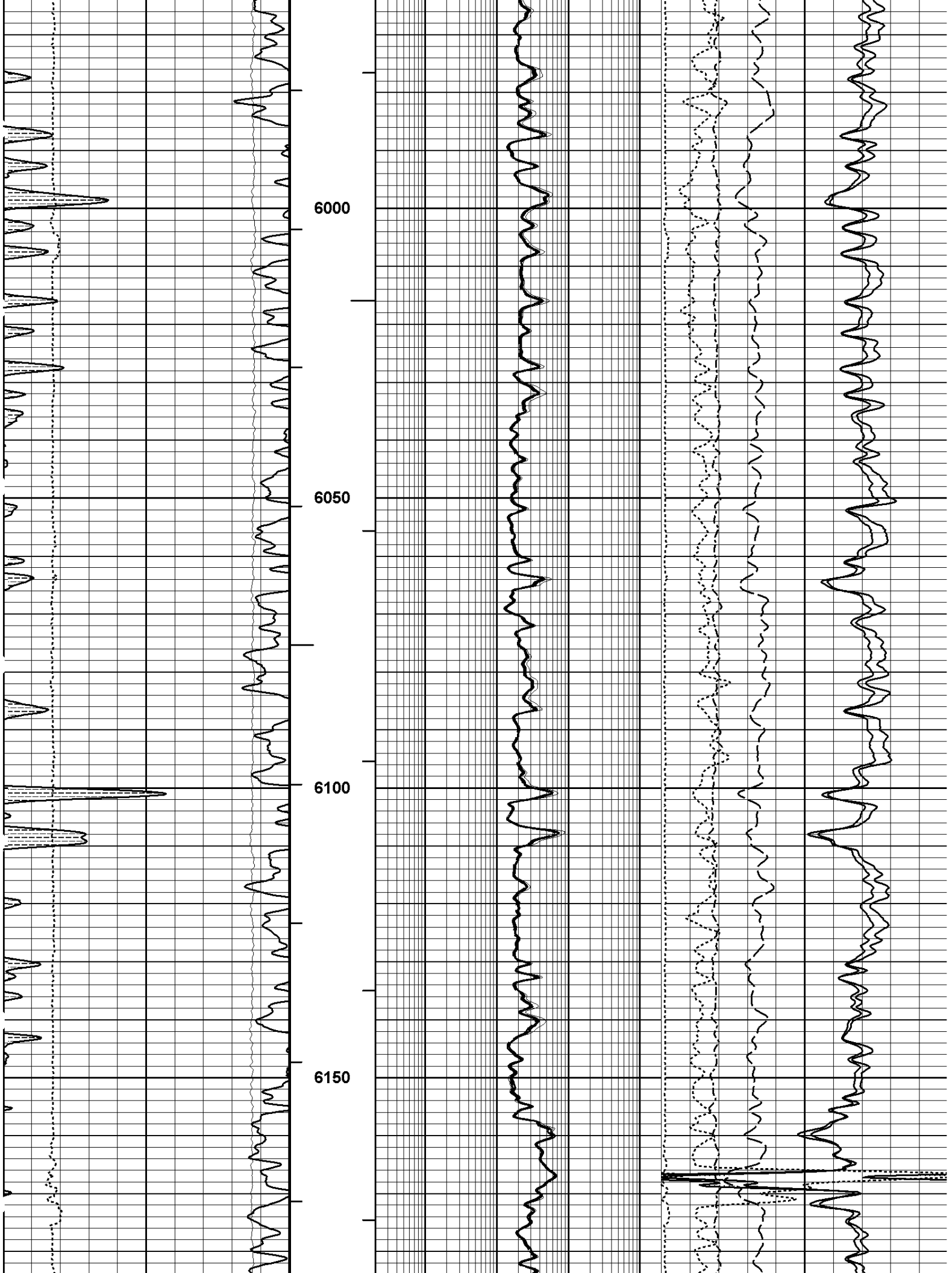
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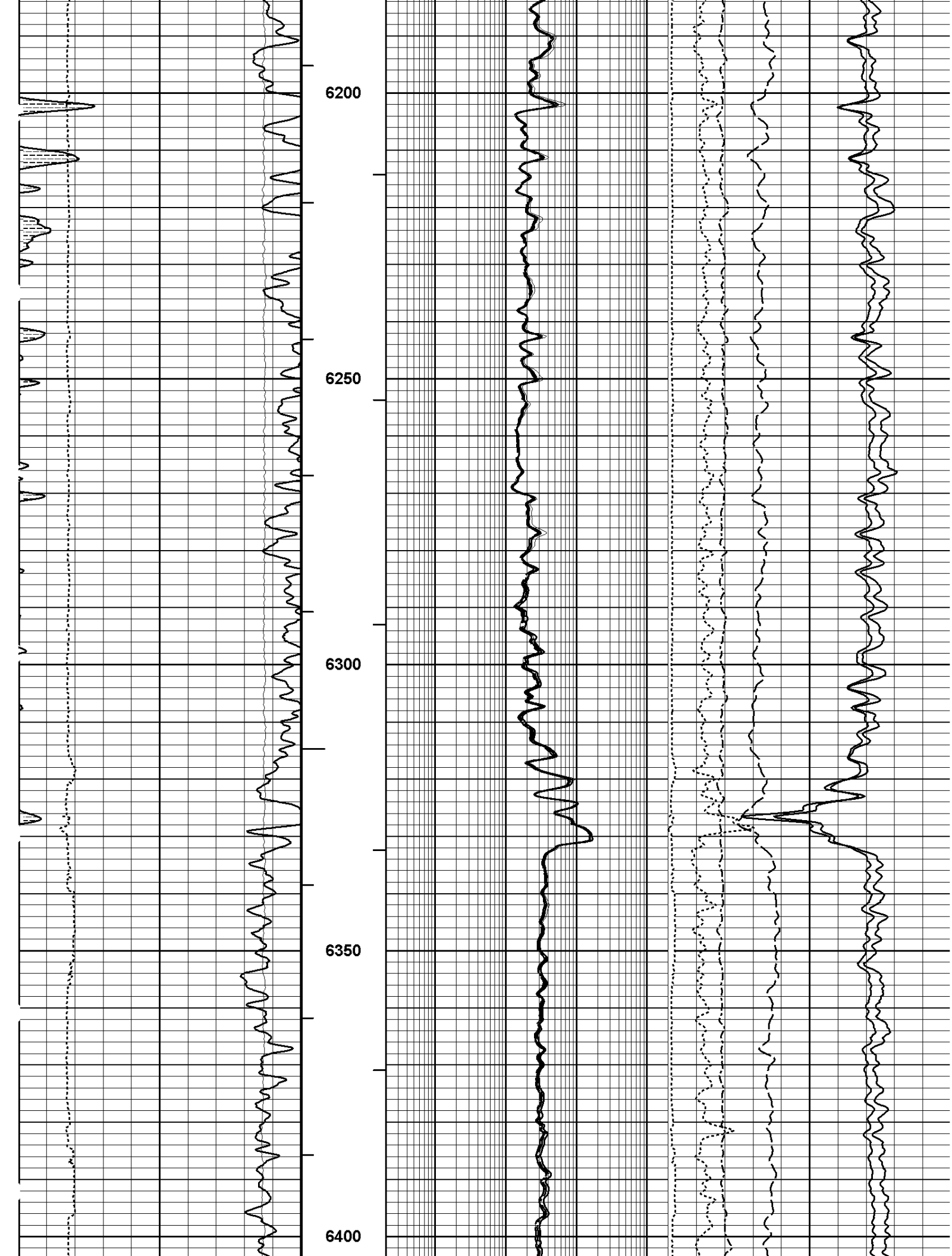
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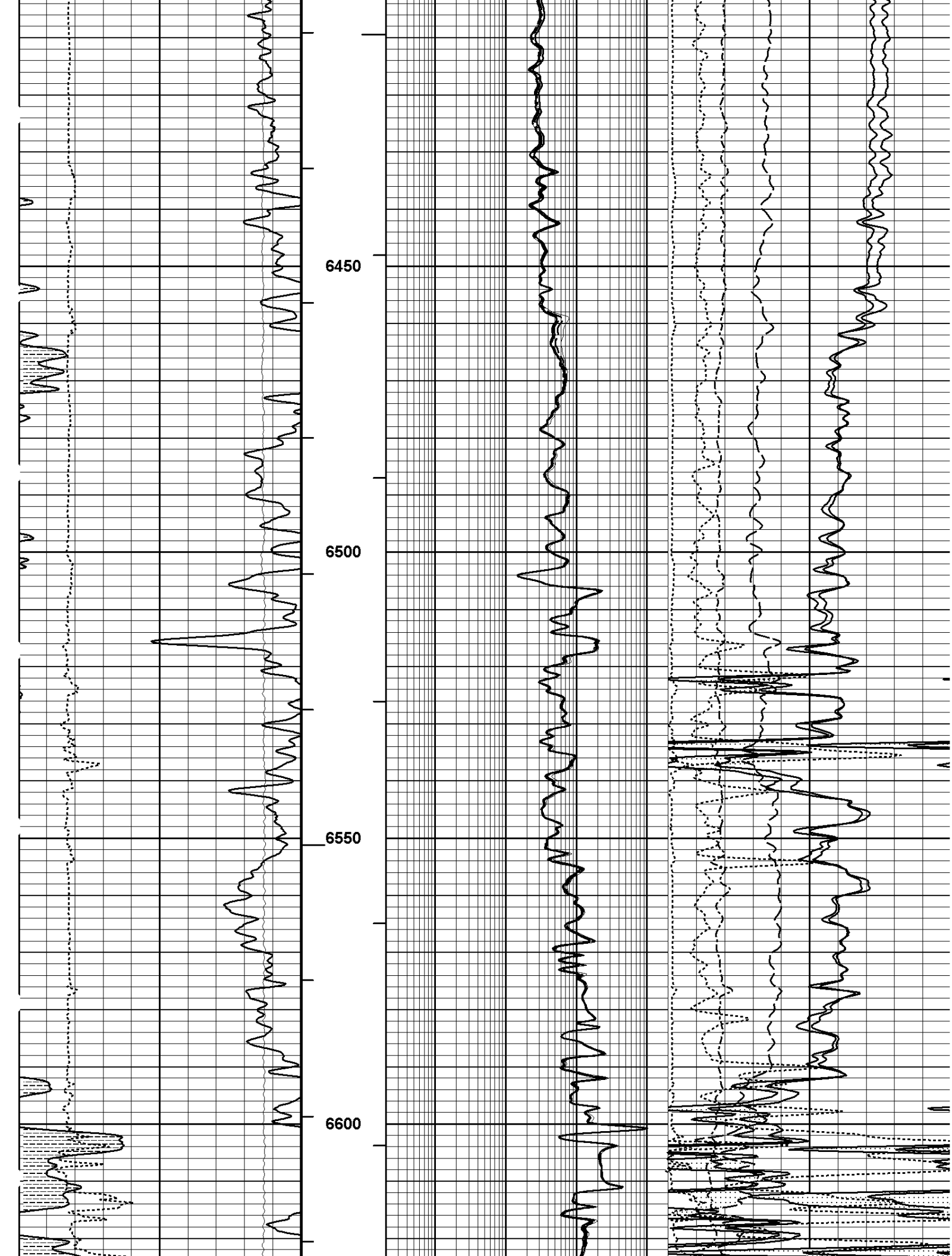
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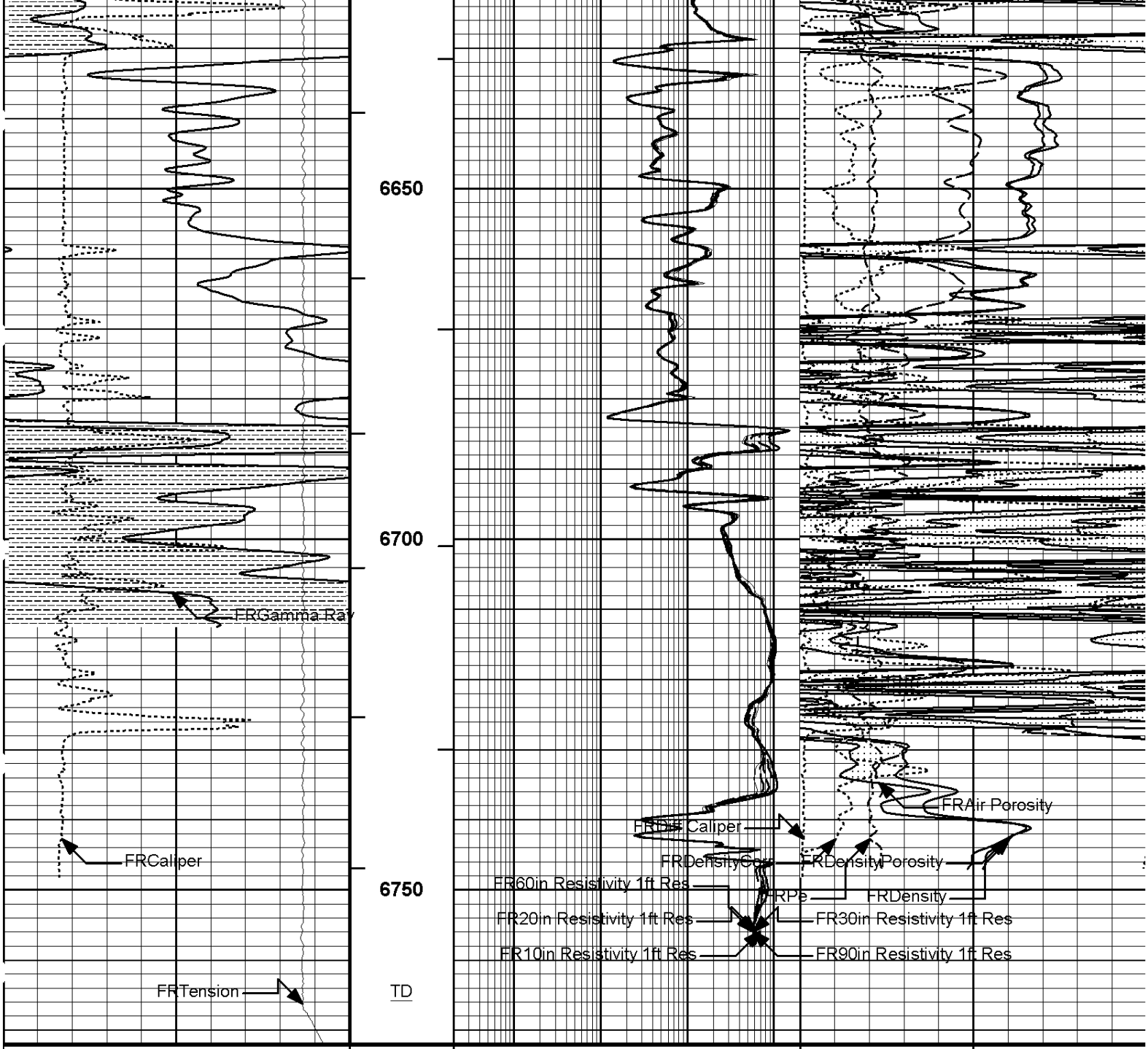


Caliper	MD	**90in Resistivity 1ft Res**
7 — 17	1 : 240	0.2 — 2K
inches	ft	ohm-metre
Tension		**60in Resistivity 1ft Res**
21K — 1K	BHVT	0.2 — 2K
pounds		ohm-metre
Gamma Ray		**30in Resistivity 1ft Res**
0 — 100 — 200	AHVT	0.2 — 2K
200 — 300 — 400		ohm-metre
api		**20in Resistivity 1ft Res**
		0.2 — 2K
		ohm-metre
		10in Resistivity 1ft Res
		0.2 — 2K
		ohm-metre

Pe
0 — 10
barns/electron
DensityCorr
-0.05 — 0.45
gram per cc
Density
2 — 3
gram per cc
Air Porosity
0.3 — -0.1
decp
DensityPorosity
0.3 — -0.1
decp

-20 — **Diff Caliper** — 20

inches

HALLIBURTON

Plot Time: 05-Jun-10 01:50:31

Plot Range: 3188 ft to 6771.92 ft

Data: 4701705912_0604\Well Based\DAQ-0001-003*

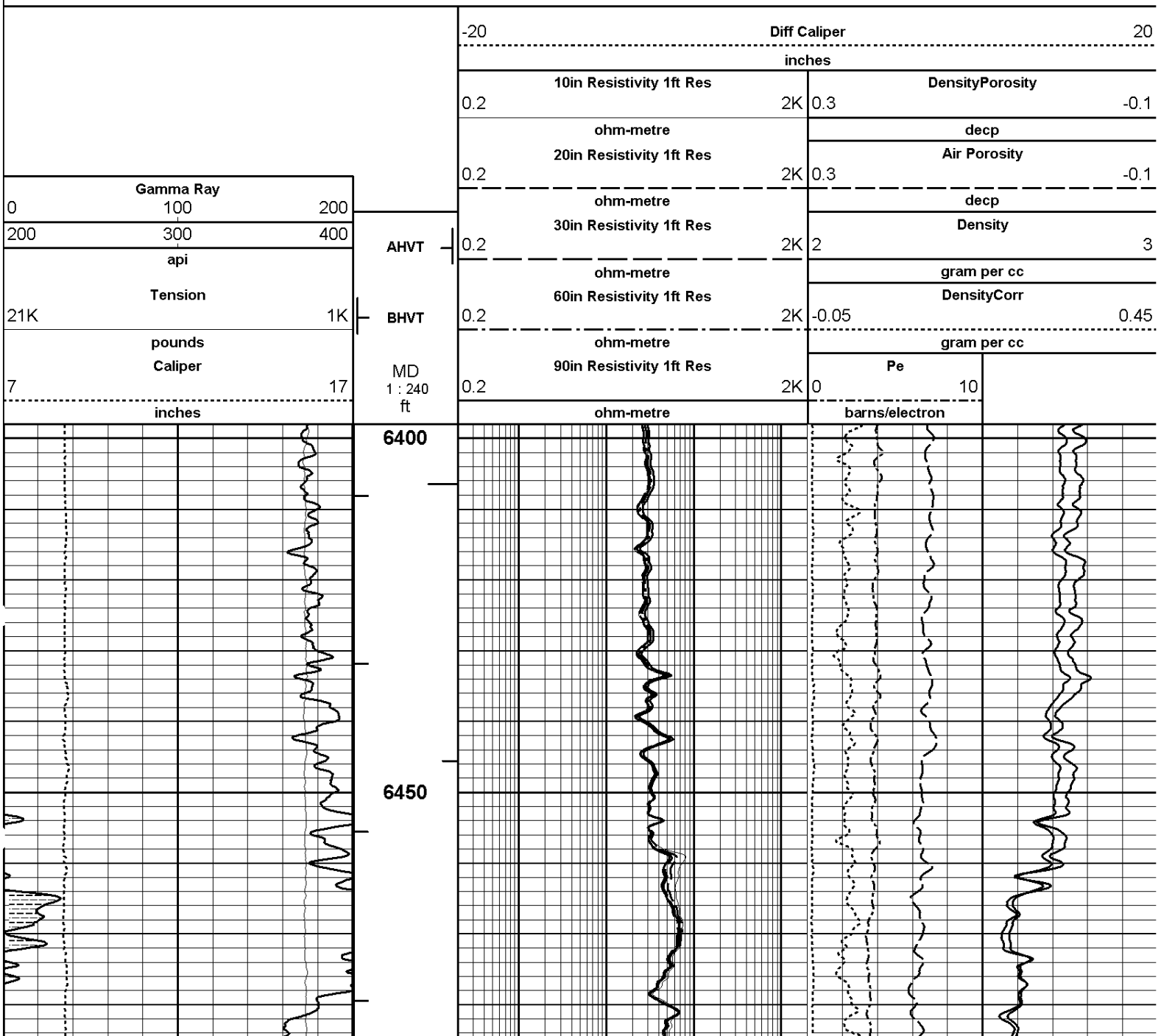
Plot File: \\-LOCAL-\4701705912_0531\0001 triplecombobhpt\(not saved)\5in_IIIC_ACRT_M_jmack

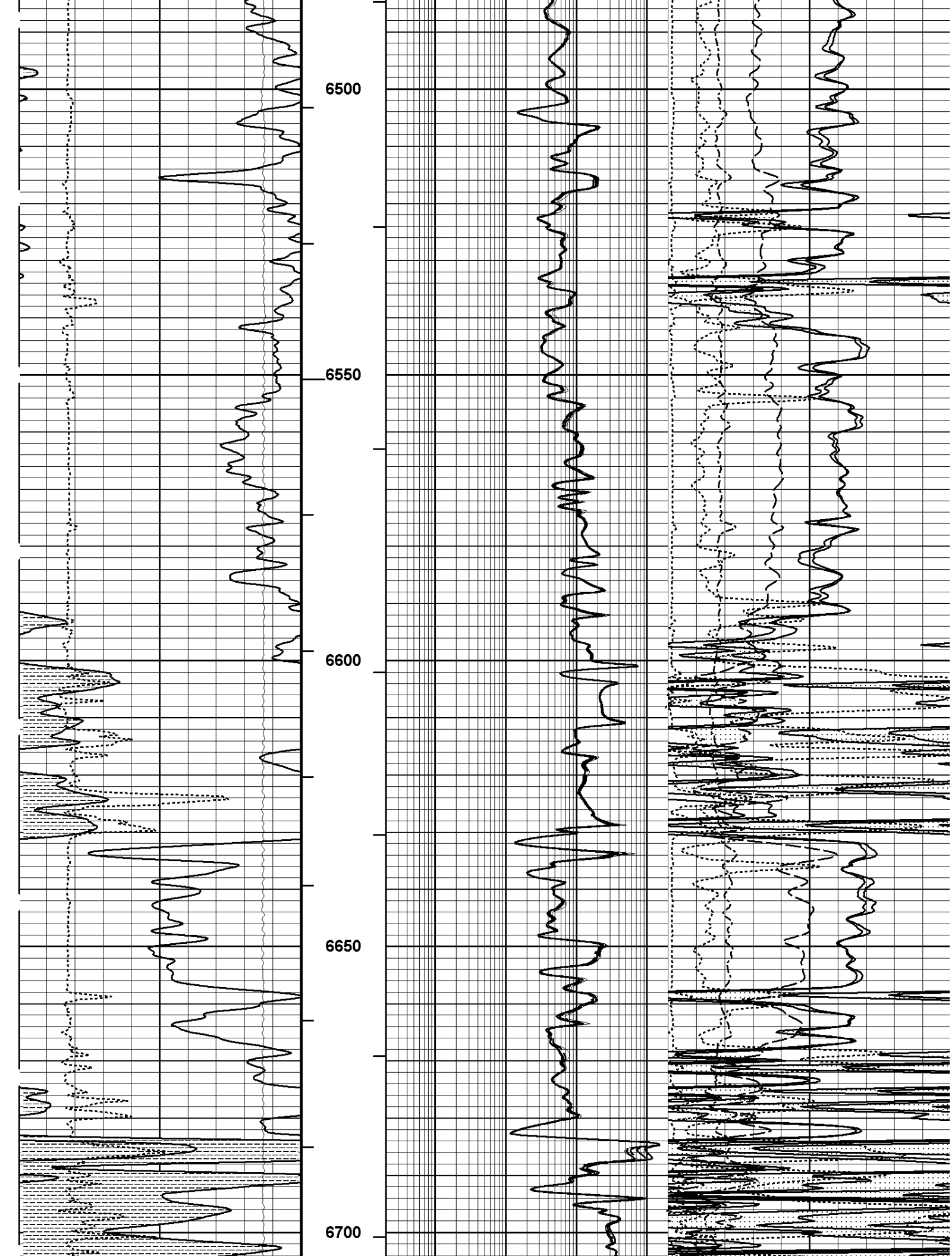
MAIN PASS 5" = 100'

HALLIBURTON

Plot Time: 05-Jun-10 01:50:31
Plot Range: 6398 ft to 6773.92 ft
Data: 4701705912_0604\Well Based\DAQ-0001-002*
Plot File: \\-LOCAL-\4701705912_0531\0001 triplecombobhpt\(not saved)\5in_IIIC_ACRT_R_jmack

REPEAT PASS 5" = 100'

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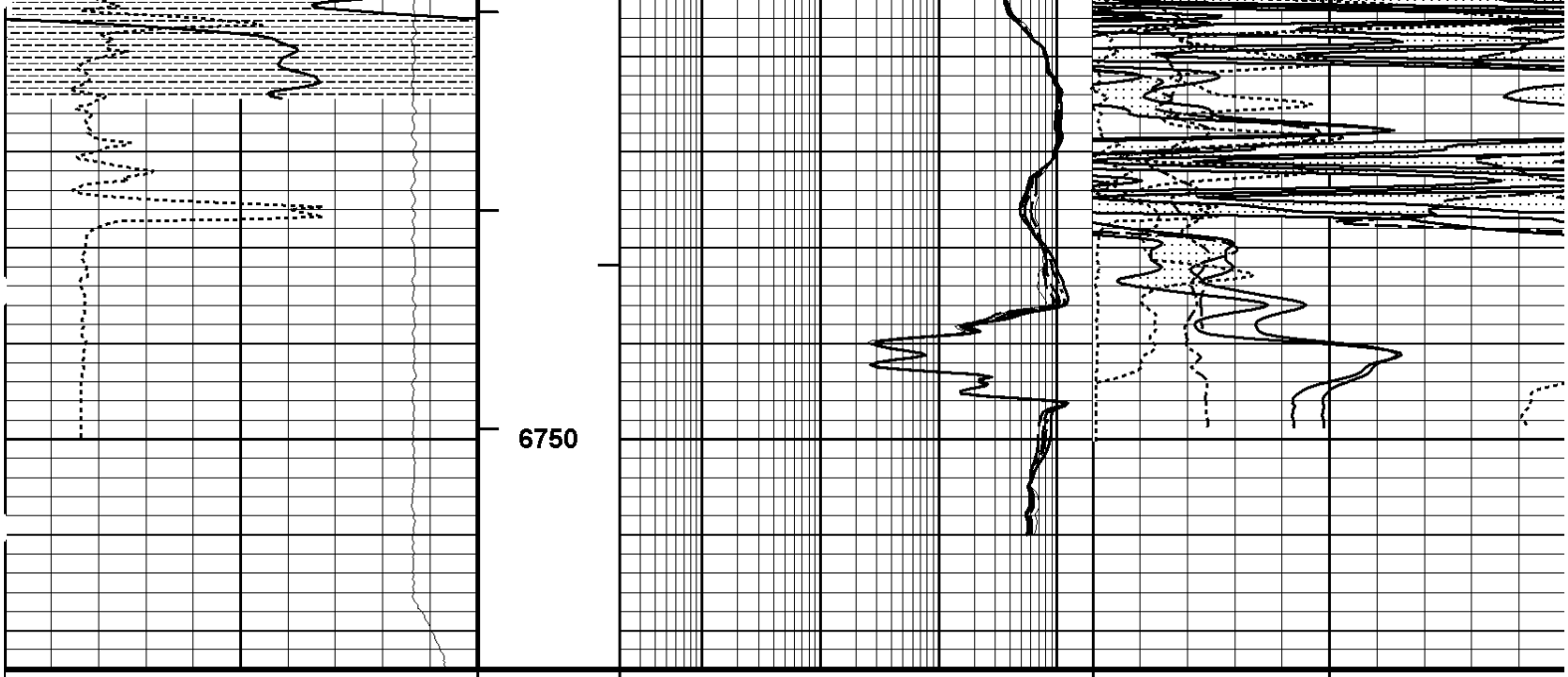


Caliper			MD	90in Resistivity 1ft Res		Pe	
7		17	1 : 240 ft	0.2	2K	0	10
inches				ohm-metre		barns/electron	
Tension				60in Resistivity 1ft Res		DensityCorr	
21K		1K	BHVT	0.2	2K	-0.05	0.45
pounds				ohm-metre		gram per cc	
Gamma Ray				30in Resistivity 1ft Res		Density	
0	100	200	AHVT	0.2	2K	2	3
200	300	400		ohm-metre		gram per cc	
api				20in Resistivity 1ft Res		Air Porosity	
				0.2	2K	0.3	-0.1
				ohm-metre		decp	
				10in Resistivity 1ft Res		DensityPorosity	
				0.2	2K	0.3	-0.1
				ohm-metre		decp	
				-20	Diff Caliper		20
				inches			

HALLIBURTON

Plot Time: 05-Jun-10 01:50:37
Plot Range: 6398 ft to 6773.92 ft
Data: 4701705912_0604\Well Based\DAQ-0001-002*
Plot File: \\-LOCAL-\4701705912_0531\0001 triplecombobhpt\(not saved)\5in_IIIC_ACRT_R_jmack

REPEAT PASS 5" = 100'

HALLIBURTON

PARAMETERS REPORT

Depth (ft)	Tool Name	Mnemonic	Description	Value	Units
TOP					
	SHARED	BS	Bit Size	8.500	in
	SHARED	UBS	Use Bit Size instead of Caliper for all applications.	No	
	SHARED	MDWT	Borehole Fluid Weight	0.300	ppg
	SHARED	OBM	Oil Based Mud System?	No	
	SHARED	RMUD	Mud Resistivity	2.000	ohmm

SHARED	TRM	Temperature of Mud	75.0	degF
SHARED	CSD	Logging Interval is Cased?	No	
SHARED	ICOD	AHV Casing OD	5.500	in
SHARED	ST	Surface Temperature	84.0	degF
SHARED	TD	Total Well Depth	6762.00	ft
SHARED	BHT	Bottom Hole Temperature	200.0	degF
SHARED	SVTM	Navigation and Survey Master Tool	NONE	
SHARED	AZTM	High Res Z Accelerometer Master Tool	GTET	
SHARED	TEMM	Temperature Master Tool	NONE	
SHARED	BHSM	Borehole Size Master Tool	NONE	
Rwa / CrossPlot	XPOK	Process Crossplot?	Yes	
Rwa / CrossPlot	FCHO	Select Source of F	Density	
Rwa / CrossPlot	AFAC	Archie A factor	0.6200	
Rwa / CrossPlot	MFAC	Archie M factor	2.1500	
Rwa / CrossPlot	RMFR	Rmf Reference	0.10	ohmm
Rwa / CrossPlot	TMFR	Rmf Ref Temp	75.00	degF
Rwa / CrossPlot	RWA	Resistivity of Formation Water	0.05	ohmm
Rwa / CrossPlot	ADP	Use Air Porosity to calculate CrossplotPhi	Yes	
GTET	GROK	Process Gamma Ray?	Yes	
GTET	GRSO	Gamma Tool Standoff	0.000	in
GTET	GEOK	Process Gamma Ray EVR?	No	
GTET	POTA	Potassium	0.00	%
GTET	MDTP	Mud Type	Natural	
GTET	TPOS	Tool Position	Standoff	
CSNG	CGOK	Process CSNG Data?	Yes	
CSNG	CENT	Is Tool Centralized?	No	
CSNG	MUDT	Mud Type?	Natural	
CSNG	KPCT	Percent K in Mud by Weight?	0.00	%
CSNG	GBOK	Gamma Enviromental Corrections?	Yes	
CSNG	BARF	Barite Correction Factor	1.00	
BHPT-I	CASO	Compute BHPT Results	Yes	
BHPT-I	TTMP	Internal Tool Temperature	0.0	degF
BHPT-I	TOLP	Tool Pressure	0.00	
BHPT-I	UFIN	Use fixed inclination?	Yes	
BHPT-I	DEVF	Fixed Inclination Value	0.0	deg
BHPT-I	TEME	Process High Resolution Temperature Tool?	Yes	
DSEN-I	DSEE	Process DSEN?	Yes	
DSEN-I	DEOK	Process DSEN EVR?	No	
DSEN-I	NLIT	Neutron Lithology	Limestone	
SDLT	DNOK	Process Density?	Yes	
SDLT	DNOK	Process Density EVR?	No	
SDLT	AD	Is Hole Air Drilled?	Yes	
SDLT	CB	Logging Calibration Blocks?	No	
SDLT	SPVT	SDLT Pad Temperature Valid?	Yes	
SDLT	DTWN	Disable temperature warning	No	
SDLT	MDTP	Weighted Mud Correction Type?	None	
SDLT	DMA	Formation Density Matrix	2.710	g/cc
SDLT	DFL	Formation Density Fluid	1.000	g/cc
SDLT	CLOK	Process Caliper Outputs?	Yes	
SDLT	MLOK	Process MicroLog Outputs?	Yes	
ACRt	RTOK	Process ACRt?	Yes	

ACRt	MNSO	Minimum Tool Standoff	1.50	in
ACRt	TCS1	Temperature Correction Source	FP Lwr & FP Upr	
ACRt	TPOS	Tool Position	Free Hanging	
ACRt	RMOP	Rmud Source	Gradient	
ACRt	RMIN	Minimum Resistivity for MAP	0.20	ohmm
ACRt	RMIN	Maximum Resistivity for MAP	200.00	ohmm
ACRt	THQY	Threshold Quality	0.50	

BOTTOM

Data: 4701705912_0604\0001 air triple combo w csng bhpt\IDLE **Date: 04-Jun-10 22:15:29**

HALLIBURTON

CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION

Tool Name: GTET - 070 **Reference Calibration Date:** 09-Apr-10 07:39:31

Engineer: J.SERNA **Calibration Date:** 17-May-10 04:37:58

Software Version: WL INSITE R3.0.3 (Build 5) **Calibration Version:** 1

Calibrator Source S/N: TB 286

Calibrator API Reference:240.00 api

Measurement	Measured	Calibrated	Units
Background	37.1	37.2	api
Background + Calibrator	280.8	281.4	api
Calibrator	244.3	244.2	api

DUAL SPACED EPITHERMAL NEUTRON SHOP CALIBRATION

Tool Name: DSEN-I - 789_S415 **Reference Calibration Date:** 14-Apr-10 18:25:49

Engineer: L. BUTLER JR. **Calibration Date:** 14-Apr-10 19:10:36

Software Version: WL INSITE R3.0.3 (Build 5) **Calibration Version:** 1

Logging Source S/N: DSN-415

Water Bath Near Value: 2422.00

Water Bath Far Value: 199.00

Snow Block S/N: 103

PRIMARY CALIBRATOR

	Short Space		Long Space		
Measurement	**Measured**	**Calibrated**	**Measured**	**Calibrated**	**Units**
Count Rate	2435.75	2422.00	199.06	199.00	CPS
Detector Gain	1.2580	1.2509	1.4204	1.4200	

FIELD BLOCK CHECK

	Short Space		Long Space		
Measurement	**Measured**	**Calibrated**	**Measured**	**Calibrated**	**Units**
Count Rate	4481.03	4455.74	4711.96	4710.62	CPS
Porosity	0.46	0.46	0.09	0.09	decp

SPECTRAL DENSITY SHOP CALIBRATION

Tool Name: SDLT - I073P423 **Reference Calibration Date:** 08-Apr-10 11:26:18

Engineer: L. BUTLER JR. **Calibration Date:** 12-May-10 15:13:36

Software Version: WL INSITE R3.0.3 (Build 5) **Calibration Version:** 1

Logging Source S/N: 5227GW

Aluminum Block S/N: CARM. Density: 2.609g/cc Pe: 3.240

Magnesium Block S/N: CARM. Density: 1.683g/cc Pe: 2.594

DENSITY CALIBRATION SUMMARY

Measurement	Previous Value	New Value	Control Limit
Near Bar Gain	0.9883	0.9808	0.90 - 1.10
Near Dens Gain	0.9853	0.9804	0.90 - 1.10
Near Peak Gain	0.9837	0.9807	0.90 - 1.10
Near Lith Gain	0.9635	0.9664	0.90 - 1.10
Far Bar Gain	1.0077	1.0088	0.90 - 1.10
Far Dens Gain	1.0004	0.9994	0.90 - 1.10
Far Peak Gain	0.9947	0.9926	0.90 - 1.10
Far Lith Gain	0.9717	0.9713	0.90 - 1.10
Near Bar Offset	-0.0094	0.0628	NONE
Near Dens Offset	-0.0307	0.0145	NONE
Near Peak Offset	-0.0425	-0.0167	NONE
Near Lith Offset	0.1076	0.0859	NONE
Far Bar Offset	-0.1877	-0.1973	NONE
Far Dens Offset	-0.1378	-0.1260	NONE
Far Peak Offset	-0.1276	-0.1086	NONE
Far Lith Offset	0.0099	0.0126	NONE
Near Bar Background	868.61	864.52	700 - 1450
Near Dens Background	283.45	283.33	230 - 480
Near Peak Background	124.04	122.44	100 - 210
Near Lith Background	154.15	153.53	125 - 260
Far Bar Background	544.95	544.07	450 - 900
Far Dens Background	213.56	214.02	175 - 345
Far Peak Background	85.09	85.61	70 - 140
Far Lith Background	88.49	87.73	75 - 145

CALIBRATION BLOCK SUMMARY

Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
MAGNESIUM				
Density (g/cc)	1.684	1.683	-0.001	+/- 0.015
Pe	2.612	2.590	-0.022	+/- 0.150
ALUMINUM				
Density (g/cc)	2.609	2.609	-0.000	+/- 0.01500
Pe	3.243	3.237	-0.006	+/- 0.150

TOOL SUMMARY

Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	0.0003	+/- 0.0110	-0.0006	+/- 0.0140
Magnesium Block	0.0015	+/- 0.0110	-0.0014	+/- 0.0140
Aluminum Block	-0.0012	+/- 0.0110	0.0009	+/- 0.0140
Resolution	9.14	6.00 - 11.50	8.85	6.00 - 11.50
Internal Verifier(B+D+P+L)	1424	1200 - 2700	931	800 - 1700

PASS/FAIL SUMMARY

Background Quality Check:	Passed
Background Range Check:	Passed
Background Resolution Check:	Passed
Background Verification Check:	Passed
Magnesium Quality Check:	Passed
Aluminum Quality Check:	Passed
Gains Check:	Passed
Changes in Calibration Blocks:	Passed

DENSITY CALIPER SHOP CALIBRATION

Tool Name:	**SDLT - I073P423**	**Reference Calibration Date:**	**15-Apr-10 09:29:51**
Engineer:	**L. BUTLER JR.**	**Calibration Date:**	**15-Apr-10 09:34:55**
Software Version:	**WL INSITE R3.0.3 (Build 5)**	**Calibration Version:**	**1**

CALIBRATION COEFFICIENTS

Measurement	Previous Value	New Value	Control Limit On New Value
Pad Offset	-2490.47	-2509.69	-7000.00 - -1000.00
Pad Gain	0.0003901	0.0003889	0.000200 - 0.000600
Arm Offset	-2094.02	-2152.02	-5000.00 - 3000.00
Arm Gain	0.0004712	0.0004797	0.000300 - 0.000700
Arm Power	-0.000000001	-0.000000638	-0.000010 - 0.000010

The ring diameter is computed from: DIAMETER = PAD EXTENSION + ARM EXTENSION + TOOL DIAMETER

Tool Diameter: 4.50 in

CALIBRATION RINGS

Measurement	Current Reading (Previous Coeff.)	Calibrated (New Coeff.)	Change	Control Limit On New Value
PAD EXTENSION:				
Small Ring (in)	2.01	2.00	-0.01	+/- 0.20
Medium Ring (in)	3.77	3.75	-0.02	+/- 0.20
RING DIAMETER:				
Small Ring (in)	6.50	6.50	0.00	+/- 0.20
Medium Ring (in)	8.23	8.25	0.02	+/- 0.20
Large Ring (in)	15.00	15.00	0.00	+/- 0.20

PASS/FAIL SUMMARY

Calibration-Coefficients Range Check:	Passed
Ring-Measurement Check:	Passed

PASS/FAIL SUMMARY

Calibration-Coefficients Range Check:	Passed

ARRAY COMPENSATED TRUE RESISTIVITY SHOP CALIBRATION

Tool Name:	**ACRt - I853S410**	**Reference Calibration Date:**	**20-May-10 10:57:05**
Engineer:	**J.SERNA**	**Calibration Date:**	**20-May-10 11:03:42**
Software Version:	**WL INSITE R3.0.3 (Build 5)**	**Calibration Version:**	**1**

TYPICAL GAIN RANGE

Subarray	R12KHz			R36KHz			R72KHz		
	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper
A1 (80")	0.95	1.0015	1.05	0.95	1.0063	1.05	0.95	1.0039	1.05
A2 (50")	0.95	1.0075	1.05	0.95	1.0127	1.05	0.95	1.0132	1.05
A3 (29")	0.95	1.0020	1.05	0.95	1.0070	1.05	0.95	1.0062	1.05

A4 (17")	0.95	0.9949	1.05	0.95	0.9984	1.05	0.95	1.0013	1.05
A5 (10")	N/A	N/A	N/A	0.95	0.9977	1.05	0.95	1.0004	1.05
A6 (6")	N/A	N/A	N/A	0.95	0.9800	1.05	0.95	0.9829	1.05

TYPICAL SONDE OFFSET RANGE

Subarray	R12KHz			R36KHz			R72KHz		
	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper
A1 (80")	-5	-1.431	2	-6	-4.273	-2	-8	-4.871	-2
A2 (50")	-7	-3.328	-2	-6	-4.194	-2	-7	-4.139	-2
A3 (29")	-27	-6.634	-9	-9	-1.927	-3	-7	-2.629	-1
A4 (17")	-180	-107.738	-60	-45	-33.856	-15	-39	-25.634	-13
A5 (10")	N/A	N/A	N/A	-150	-71.456	-50	-80	-34.056	-10
A6 (6")	N/A	N/A	N/A	175	253.917	525	90	134.020	270

TRANSMITTER CURRENT GAIN

Signal	Lower	R	Upper
12K	0.6	0.9681	1.3
36K	1.0	1.2617	2.0
72K	1.0	1.4573	2.0

R-MUD VERIFICATION

Signal	Lower (ohm-m)	Measured (ohm-m)	Upper (ohm-m)
Mud Cell	0.95	1.002	1.05

CALIBRATION SUMMARY

Sensor	Shop	Field	Post	Difference	Tolerance	Units
GTET-070						
Gamma Ray Calibrator	244.2	----------	----------	0.0	+/- 9.00	api
DSEN-I-789_S415						
Short Space Porosity	0.46	----------	----------	0.00	+/- 0.7	decp
Long Space Porosity	0.09	----------	----------	0.00	+/- 0.3	decp
SDLT-I073P423						
Near(B+D+P+L)	1423.820	----------	----------	0.000	+/-13.324	cps
Far(B+D+P+L)	931.427	----------	----------	0.000	+/-14.968	cps
Pad Extension	3.75	----------	----------	0.00	+/-0.20	in
Ring Diameter	8.25	----------	----------	0.00	+/-0.20	in
ACRt-I853S410						
Mud Cell	1.002	----------	----------	0.000	----------	ohm-m

Data: 4701705912_0604\0001 air triple combo w csng bhpt\IDLE **Date: 04-Jun-10 22:16:15**

HALLIBURTON

CUSTOMER EVENT LOG

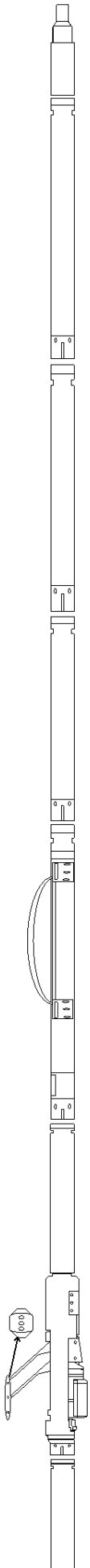
Event Type	Time & Date	Depth (ft)	Event Description
	04-Jun-10 22:41:19	3031.25	Logging 001 04-Jun-10 22:41 Dn @3031.3f
	04-Jun-10 23:31:34	6773.80	Halting 001 04-Jun-10 22:41 Dn @3031.3f
	04-Jun-10 23:32:54	6774.25	Logging 002 04-Jun-10 23:32 Up @6774.3f
	04-Jun-10 23:47:59	6328.62	Halting 002 04-Jun-10 23:32 Up @6774.3f
	04-Jun-10 23:57:33	6772.25	Logging 003 04-Jun-10 23:57 Up @6772.3f
	05-Jun-10 01:37:17	2636.24	Halting 003 04-Jun-10 23:57 Up @6772.3f

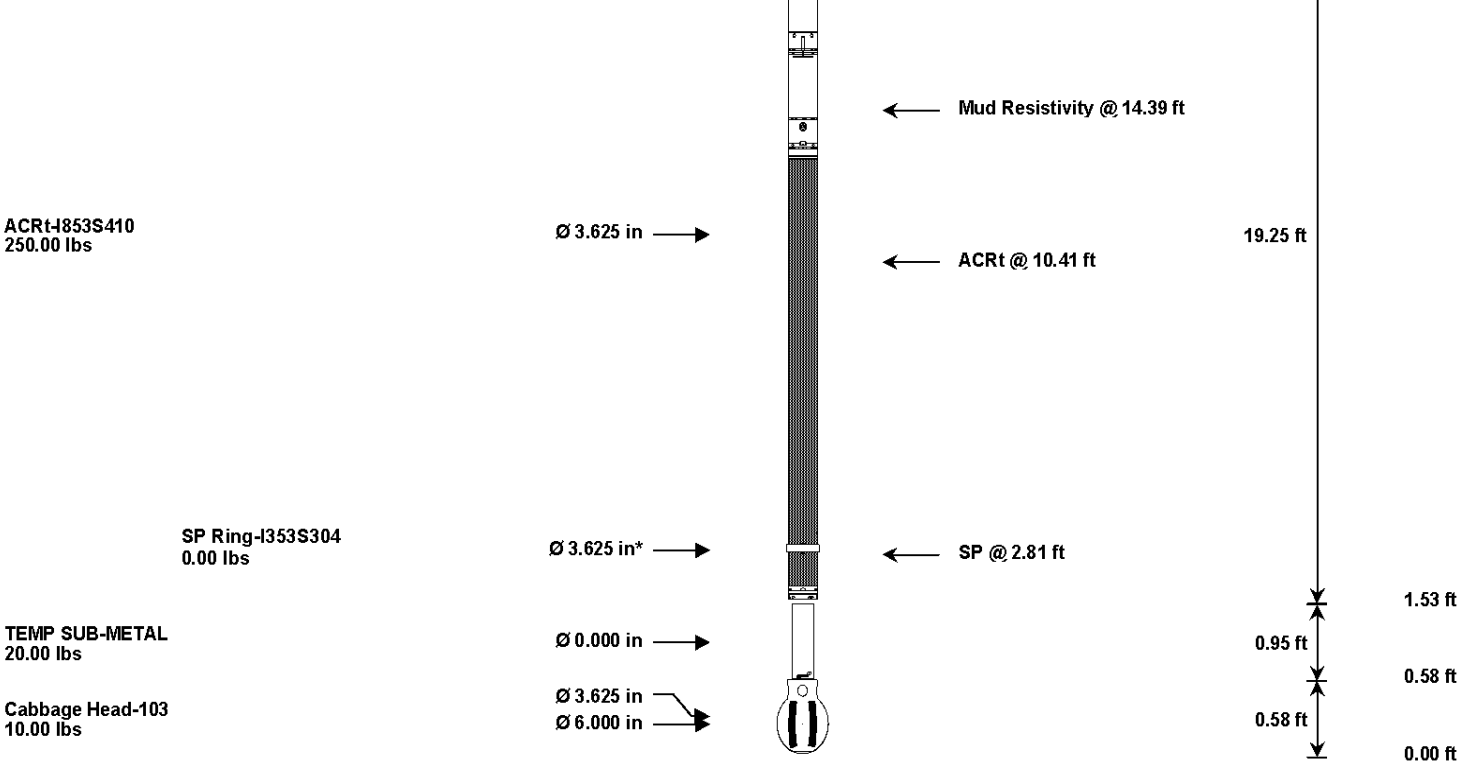
Data: 4701705912_0604\0001 air triple combo w csng bhpt\HWI0855 **Date: 05-Jun-10 01:42:05**

HALLIBURTON

TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Sensors @ Delays	Length	Accumulated Length
					67.82 ft
Cable Head Tension-Hostile 30.00 lbs		Ø 3.625 in	Load Cell @ 65.74 ft	3.08 ft	
					64.74 ft
GTET-070 165.00 lbs		Ø 3.625 in	GammaRay @ 58.67 ft	8.52 ft	
					56.22 ft
CSNG-023 114.00 lbs		Ø 3.625 in	CSNG @ 50.59 ft	8.17 ft	
					48.05 ft
BHPT-I-11420829 140.00 lbs		Ø 3.375 in	Temperature @ 43.86 ft Resistivity @ 43.73 ft Pressure @ 43.48 ft Audio @ 42.54 ft	6.77 ft	
					41.28 ft
	DSN Decentralizer- 789_S415 6.60 lbs	Ø 3.625 in*			
DSEN-I-789_S415 174.00 lbs		Ø 3.625 in	DSEN Far @ 34.34 ft DSEN Near @ 33.59 ft	9.69 ft	
					31.59 ft
SDLT-I073P423 360.00 lbs		Ø 4.500 in Ø 4.750 in	SDL Microlog @ 23.78 ft SDL Caliper @ 23.60 ft SDL @ 23.59 ft	10.81 ft	
					20.78 ft





Mnemonic	Tool Name	Serial Number	Weight (lbs)	Length (ft)		Accumulated Length (ft)	Max.Log. Speed (fpm)
CHT	Cable Head with Load Cell	Hostile	30.00	3.08		64.74	300.00
GTET	Gamma Telemetry Tool	070	165.00	8.52		56.22	60.00
CSNG	Compensated Spectral Natural Gamma	023	114.00	8.17		48.05	15.00
BHPT	Borehole Properties Tool - Insite	11420829	140.00	6.77		41.28	100.00
DSEN-IB	Dual Spaced Epithermal Neutron	789_S415	174.00	9.69		31.59	60.00
DCNT	DSN Decentralizer	789_S415	6.60	5.13	*	34.92	300.00
SDLT	Spectral Density Tool	I073P423	360.00	10.81		20.78	60.00
ACRt	Array Compensated True Resistivity	I853S410	250.00	19.25		1.53	300.00
SP	SP Ring	I353S304	0.00	0.25	*	2.81	300.00
TMSB	TEM SUB METAL	METAL	20.00	0.95		0.58	100.00
CBHD	Cabbage Head	103	10.00	0.58		0.00	300.00
Total			**1,269.60**	**67.82**			

* Not included in Total Length and Length Accumulation.

Data: 4701705912_0604\0001 air triple combo w csng bhpt\IDLE **Date: 04-Jun-10 21:20:22**

COMPANY	EQT PRODUCTION COMPANY
WELL	WV 512513
FIELD	WESTON
COUNTY	DODDRIDGE
STATE	WEST VIRGINIA

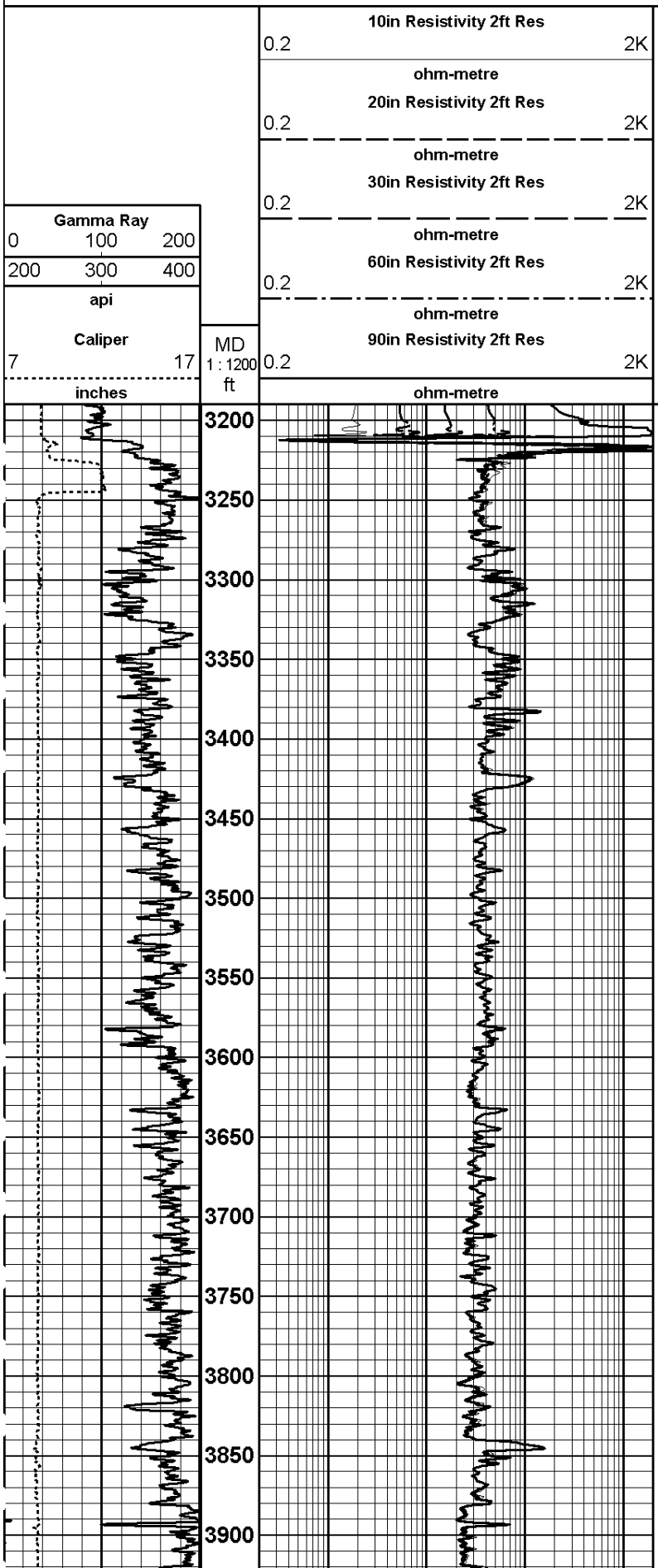
HALLIBURTON

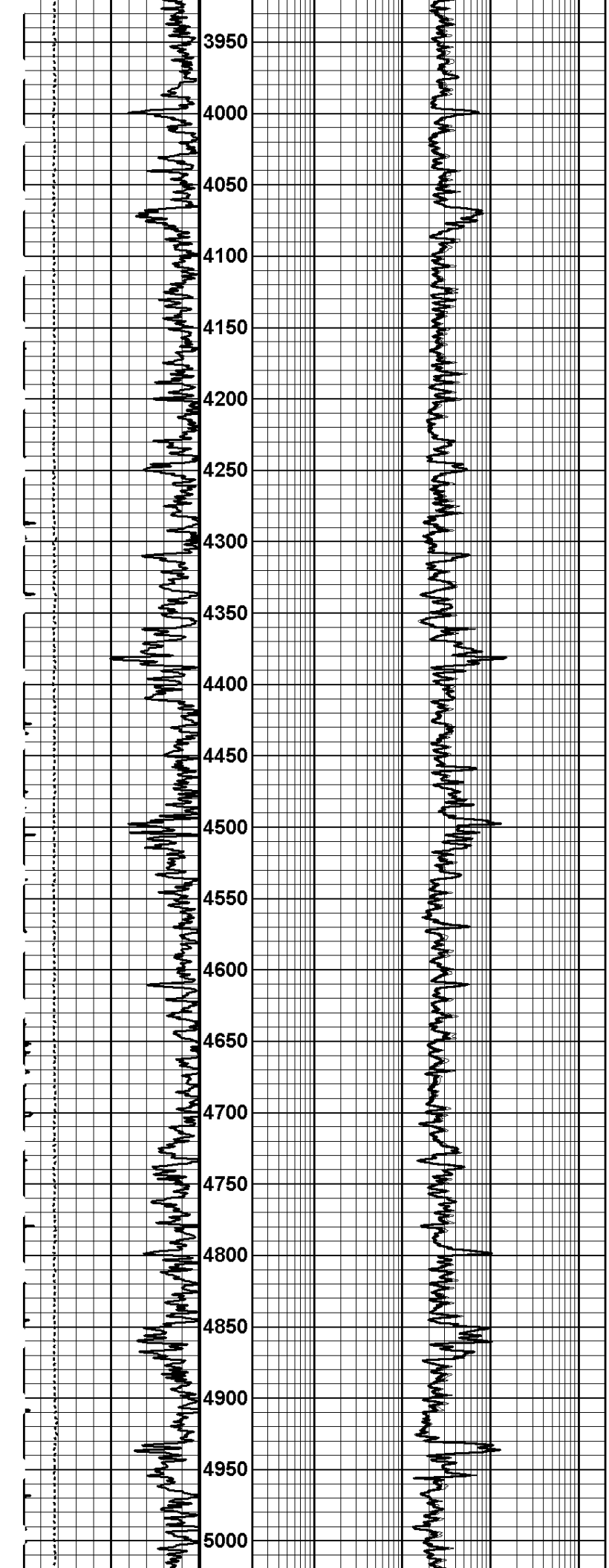
ARRAY COMP RESISTIVITY
SPECTRAL DENSITY
DUAL SPACED
EPITHERMAL NEUTRON
LOG

HALLIBURTON

Plot Time: 05-Jun-10 01:50:37
Plot Range: 3190 ft to 6771.92 ft
Data: 4701705912_0604\Well Based\DAQ-0001-003*
Plot File: \\-LOCAL-\4701705912_0531\0001 triplecombobhpt\(not saved)\1in_ACRT_M_jmack

MAIN PASS 1" = 100'

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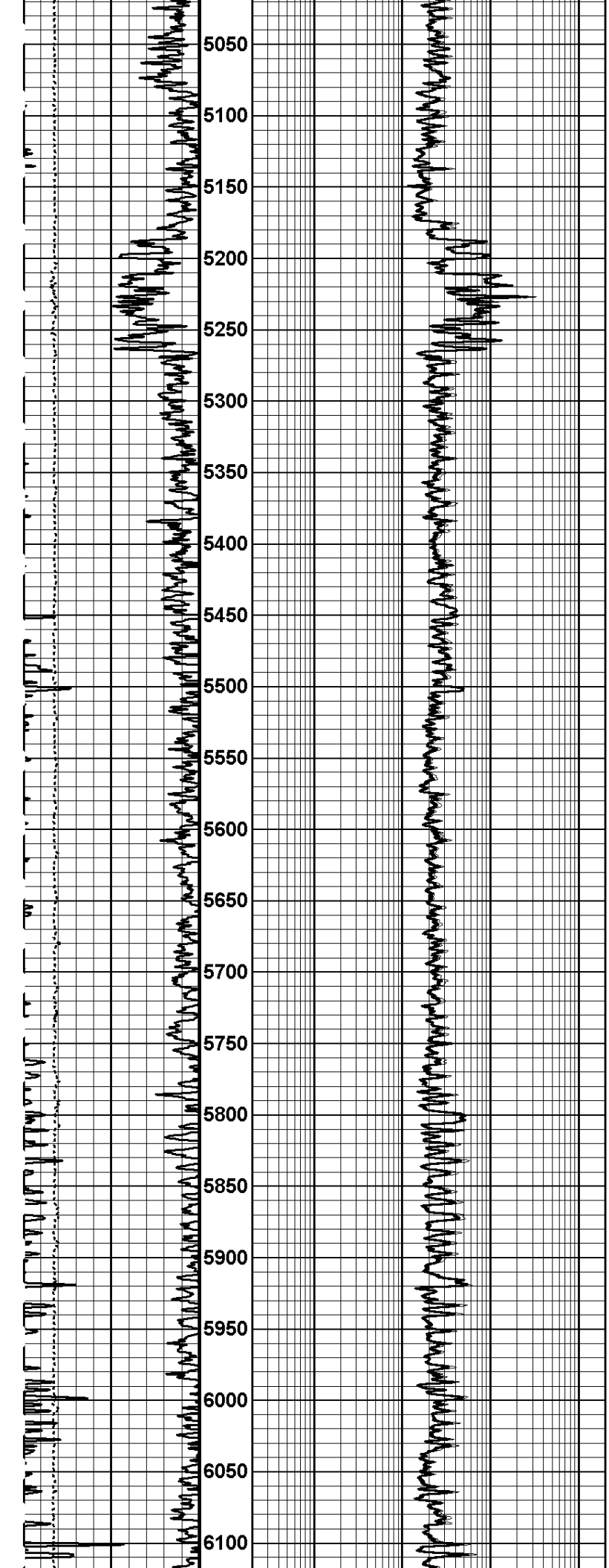
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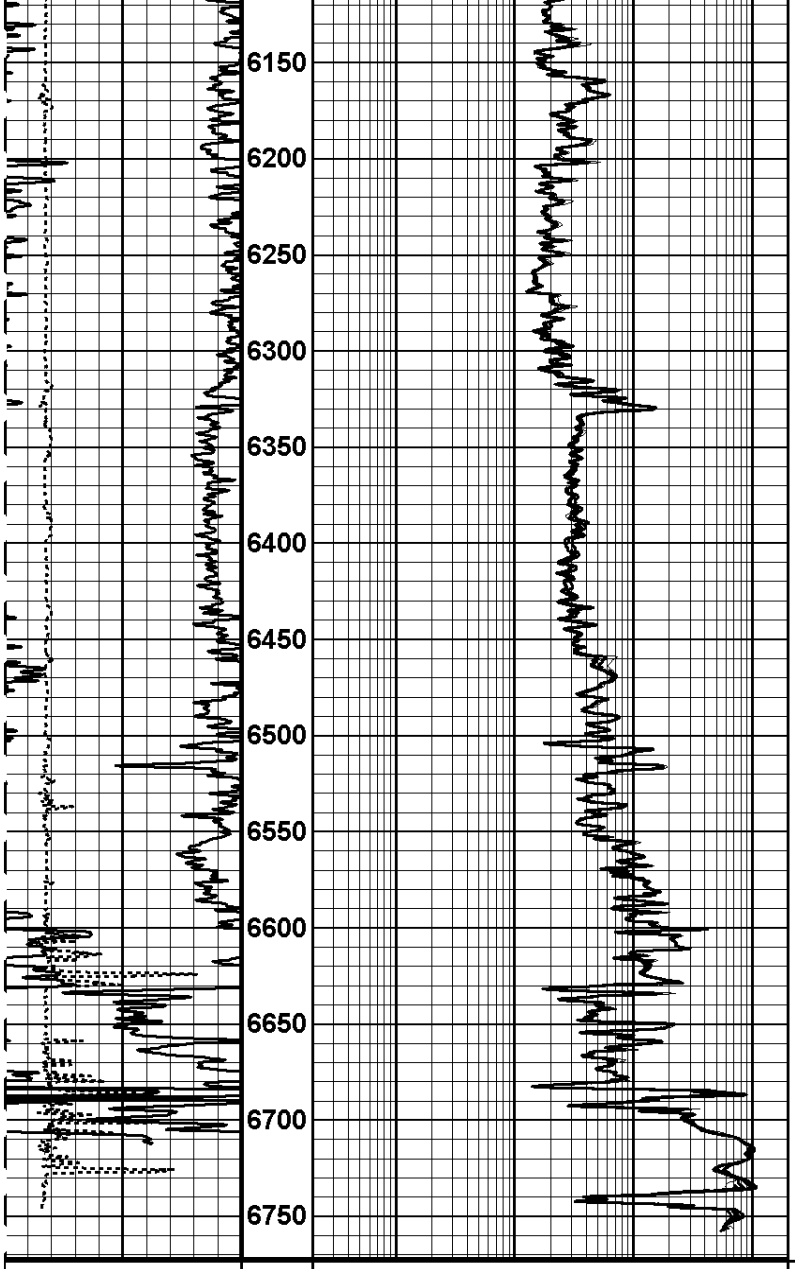

Caliper	MD	90in Resistivity 2ft Res
7 — 17	1 : 1200 ft	0.2 — 2K
inches		ohm-metre
Gamma Ray		60in Resistivity 2ft Res
0 — 100 — 200		0.2 — 2K
200 — 300 — 400		ohm-metre
api		30in Resistivity 2ft Res
		0.2 — 2K
		ohm-metre
		20in Resistivity 2ft Res
		0.2 — 2K
		ohm-metre
		10in Resistivity 2ft Res
		0.2 — 2K
		ohm-metre

HALLIBURTON

Plot Time: 05-Jun-10 01:50:40
Plot Range: 3190 ft to 6771.92 ft
Data: 4701705912_0604\Well Based\DAQ-0001-003*
Plot File: \\-LOCAL-\4701705912_0531\0001 triplecombobhpt\(not saved)\1in_ACRT_M_jmack

MAIN PASS 1" = 100'