QUAD NEUTRON

Thru Casing

Company EMBER RESOURCES

Well AMBER ENTICE 9-15-26-26

Field ENTICE

Country CANADA **Province** ALBERTA

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UWI: 100/09-15-02626W4/00

Surface Location: 09-15-26-26W4

Well License: 0240505

Other Services

Permanent Datum	Kelly Bushing	Elevation	Elevation
Log Measured From	Ground Level	3.4 m above P.D.	K.B. 946.6 m
Drilling Measured From			G.L. 943.20 m

Date	03-Sep-2015	Correlation Log Name	N/A
Job Code #	150902-VB2	Correlation Log Date	N/A
AFE #		Cement Top	
Depth Driller	826.10 m	Type Fluid	DRY
PBTD Logger	817 m	Fluid Level	676
Btm Log Interval	814 m	Wellhead Pressure	98 KPA kPa
Top Log Interval	2.614 m	Max. Temp.	28.3 °C
Date / Time RIH		Maximum Deviation	N/A
Rig Time (hh:mm)		Hoist Unit #	Unit 3
Recorded By	Vince Benoit	Location	Calgary
Witnessed By	JAMES		

Wellbore Information

Type	Size (mm)	WT (kg/m)	From (m)	To (m)	Grade
PIPE	177.80	25.3	0.00	60.80	H-40
PIPE	114.30	14.14	0.00	826.10	J-55

Comments

Recorded Longitude / Latitude:

Quad Neutron

TOOL DIAGRAM

AMBER ENTICE 9-15-26-26

Sensor	Offset (m)	Schematic	Description	Len (m)	OD (mm)	Wt (kg)
			CableHeadSub QuadV2 to GOI Cable Head Sub	0.24	43.00	1.00
UHT	4.07					
UBRM	4.07					
GR	3.78					
FGR	3.26					
			QUADV2_TEL13 Quad V2 Telemetry Combo A	1.97	43.00	20.00
CCL	2.41					
LNG						
SNG						
SNN						
LNN			QUADV2_MN020 Quad V2 MN Section	2.13	43.00	20.00
BHT						
BBRM			QUADV2_BHT0 Sensors For Processing	0.00	43.00	
	0.00					

Dataset:	Quad
Total Length:	4.34 m
Total Weight:	41.00 kg
O.D.	43.00 mm

Low Compaction | Quad Neutron | Thru Casing

MD Main Pass

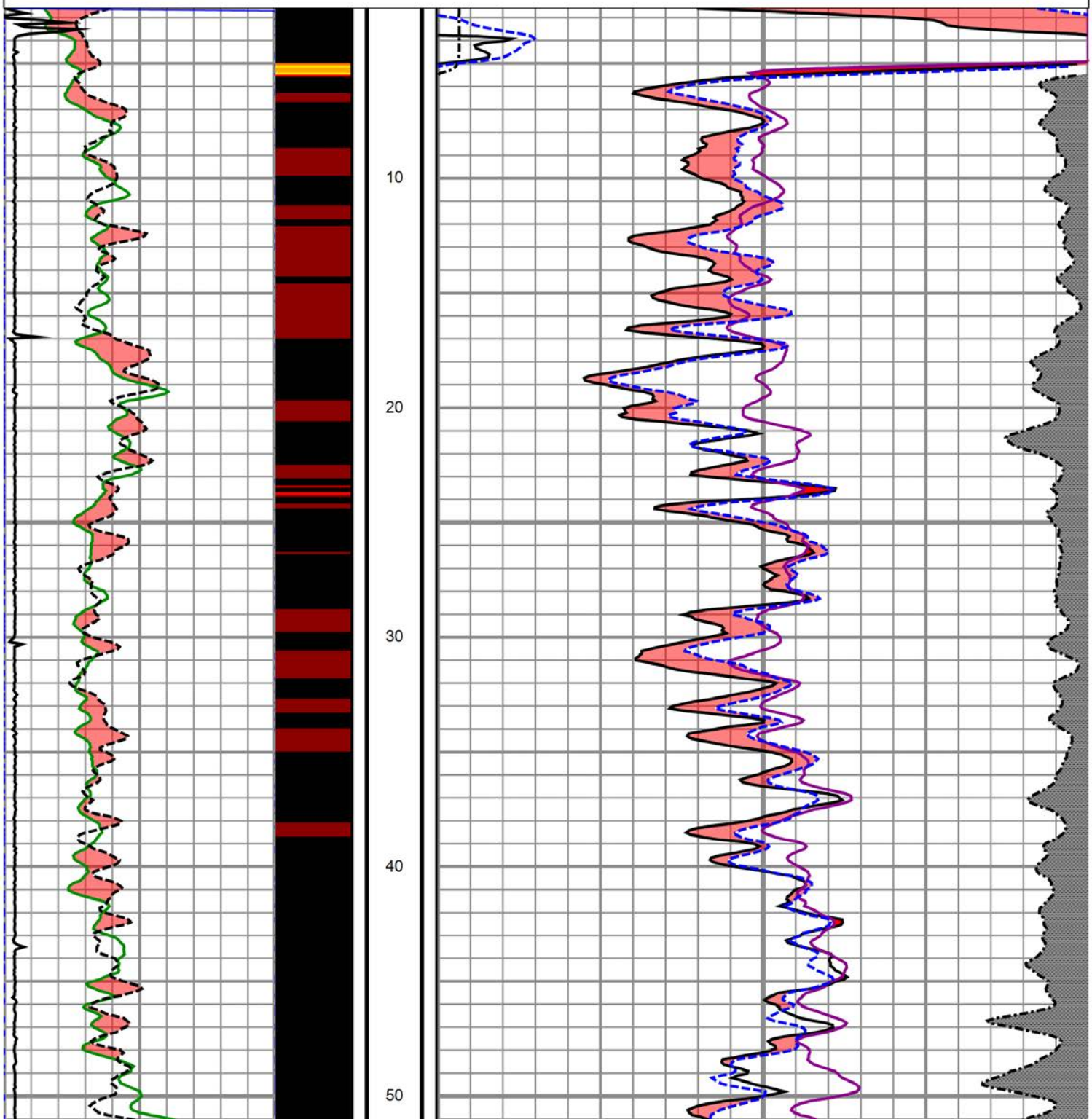
AMBER ENTICE 9-15-26-26

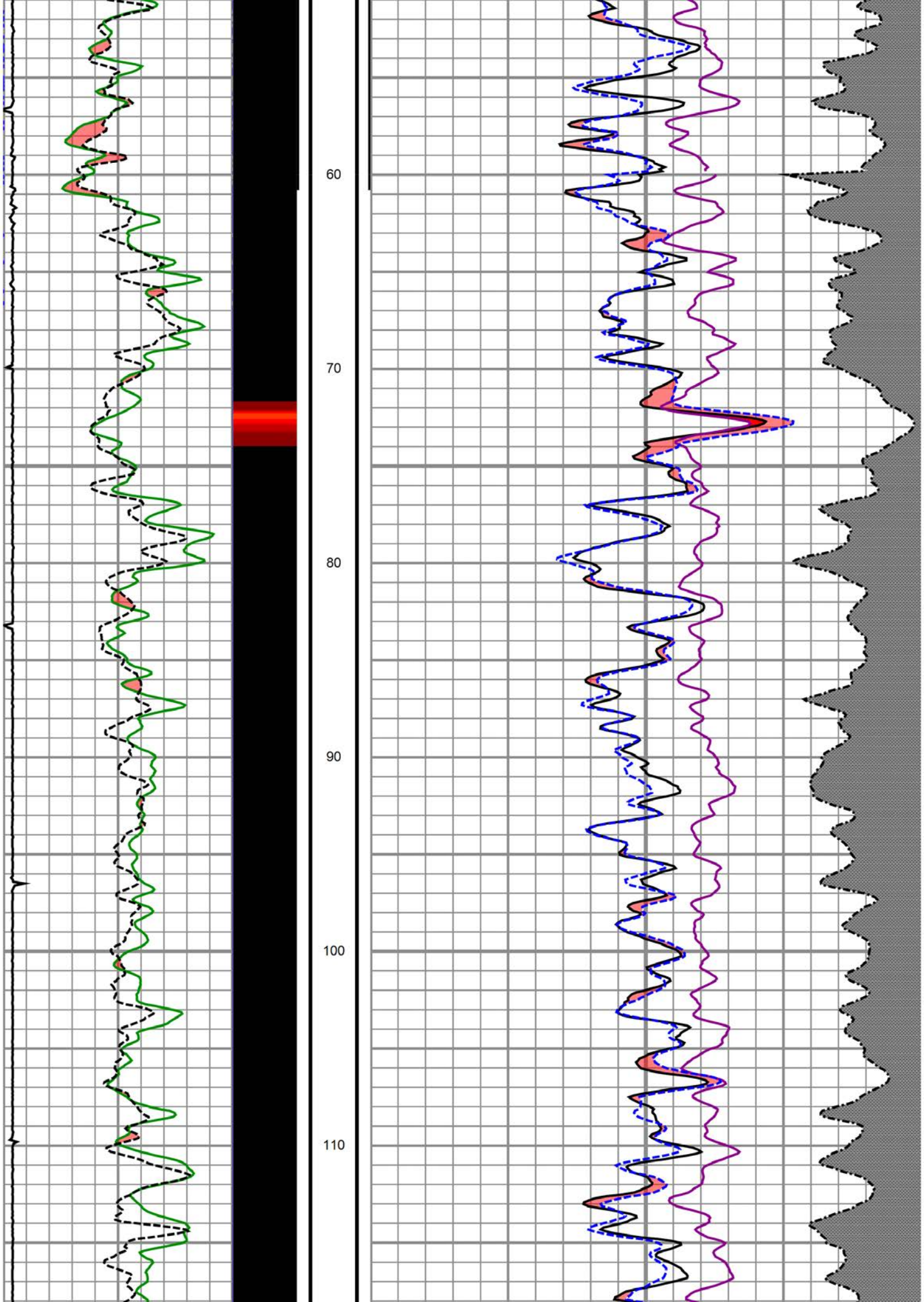
Measured Depth | 2.6 - 814.0 m

Database File: X:\DATA\JOB DATA\2015\09_SEP\150903-VB2 EMBER 9-15-26-26\150903-VB2 PROC AK
Presentation Format: QN GAS.prs
Dataset Printed: 2015-09-04 12:16:38 AM
Depth in Meters scaled 1:240

Primary Pass:pass2.las
Processing:QN-M
Charted by: akalistratov@roke.ca
v4.11.7

Gamma Ray [GR]			SGAS	DEPTH		Total Porosity [QTP]	
0		150			60		0
Filtered Gamma Ray [FGR]					60	Relative Density Porosity [DPORn]	0
-15		98			60	Quad Clay [QC]	0
0	UBRM	45000			60	Dual Neutron [DDN]	0
Casing Collar Locator [CCL]						Light Bulk Density	
0		80000				Light Hydrocarbon	
High Perm							

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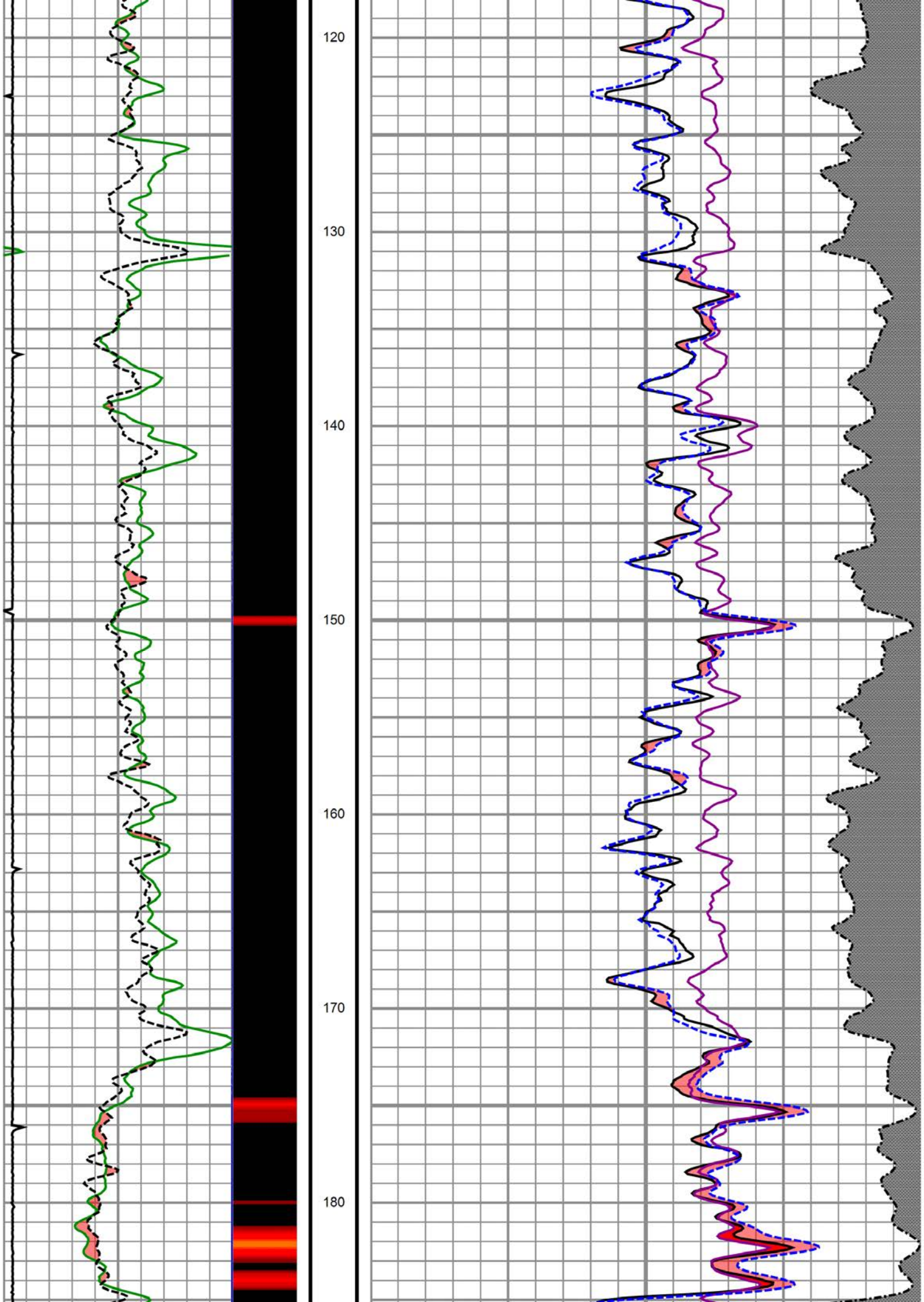
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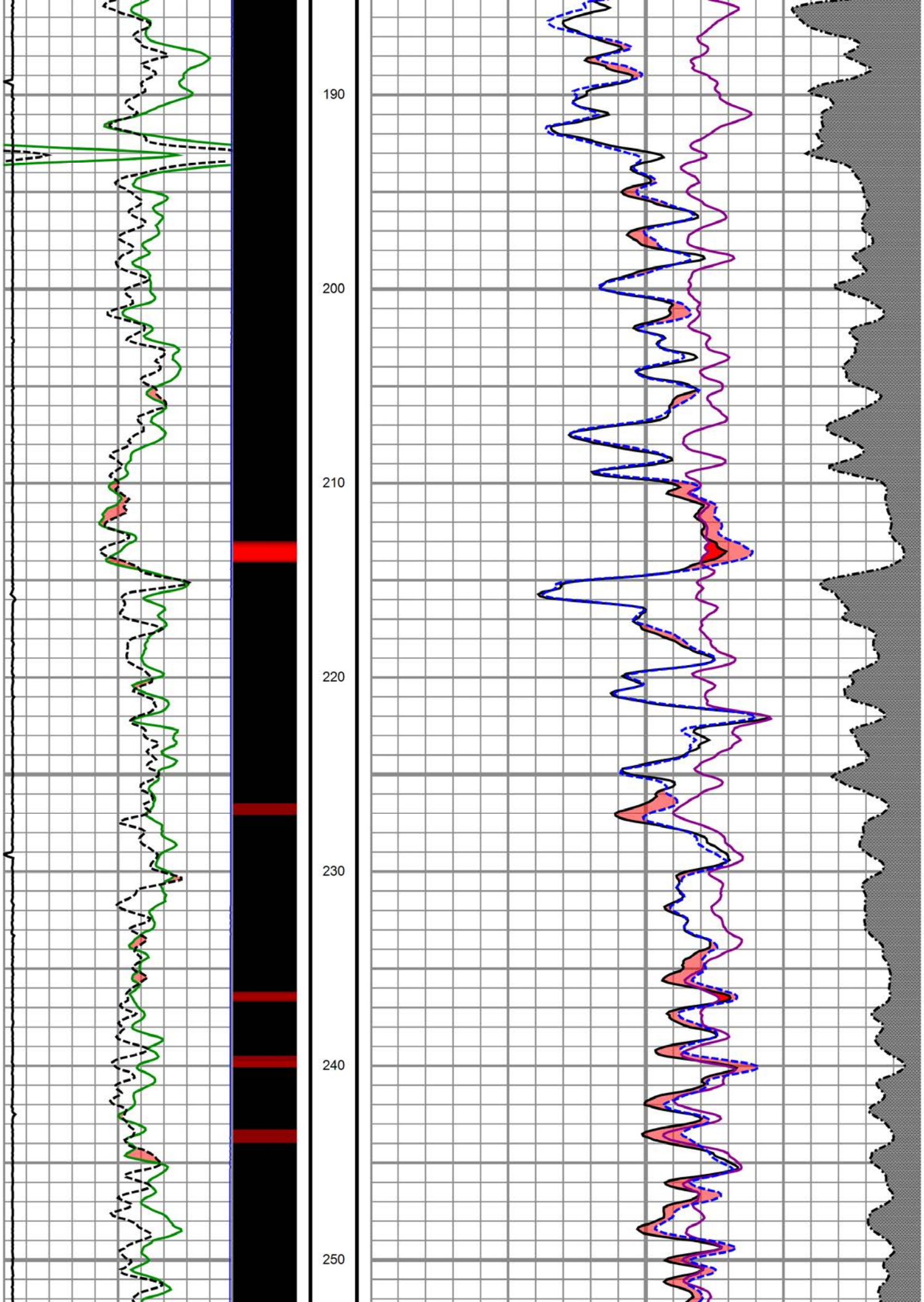
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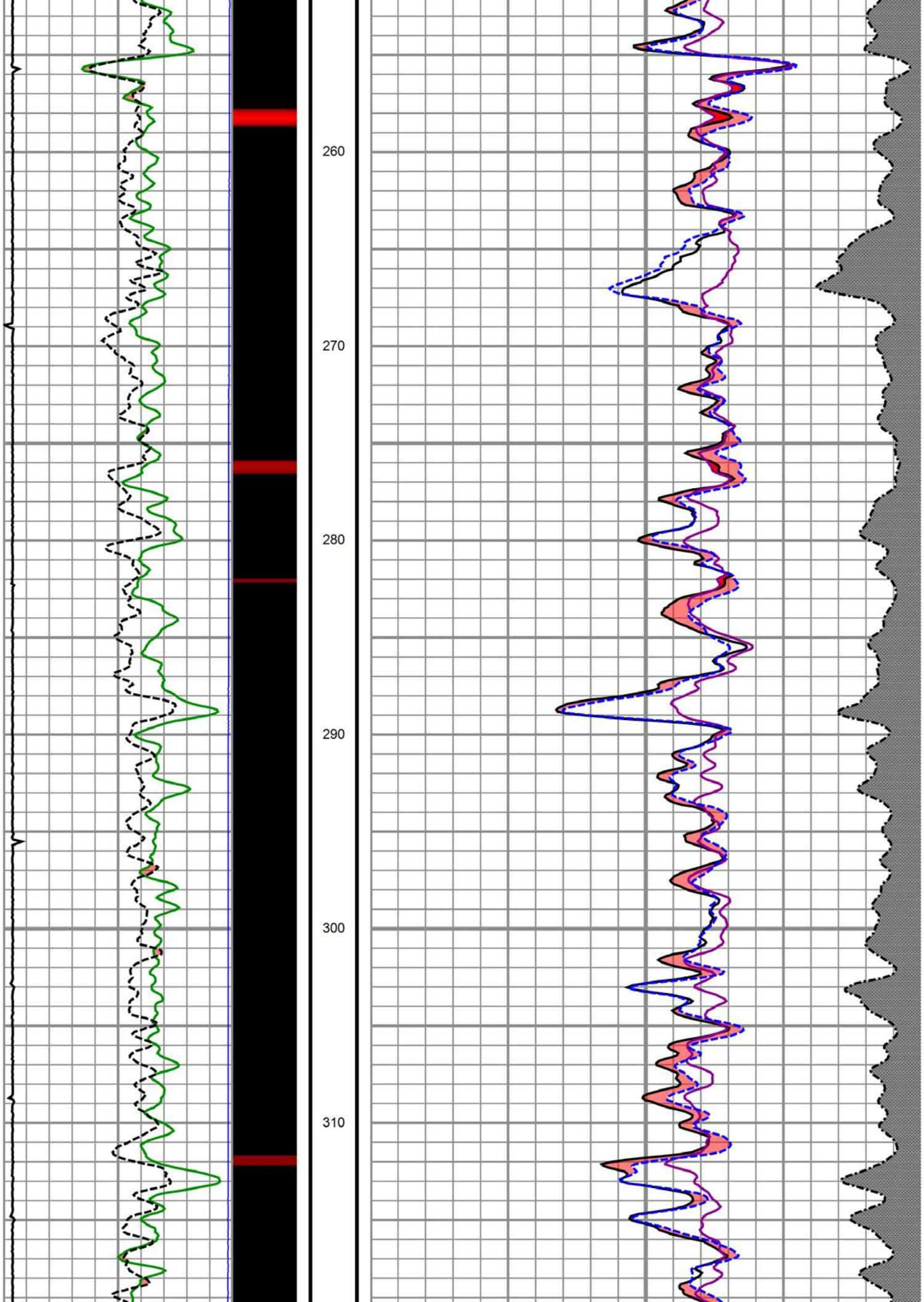
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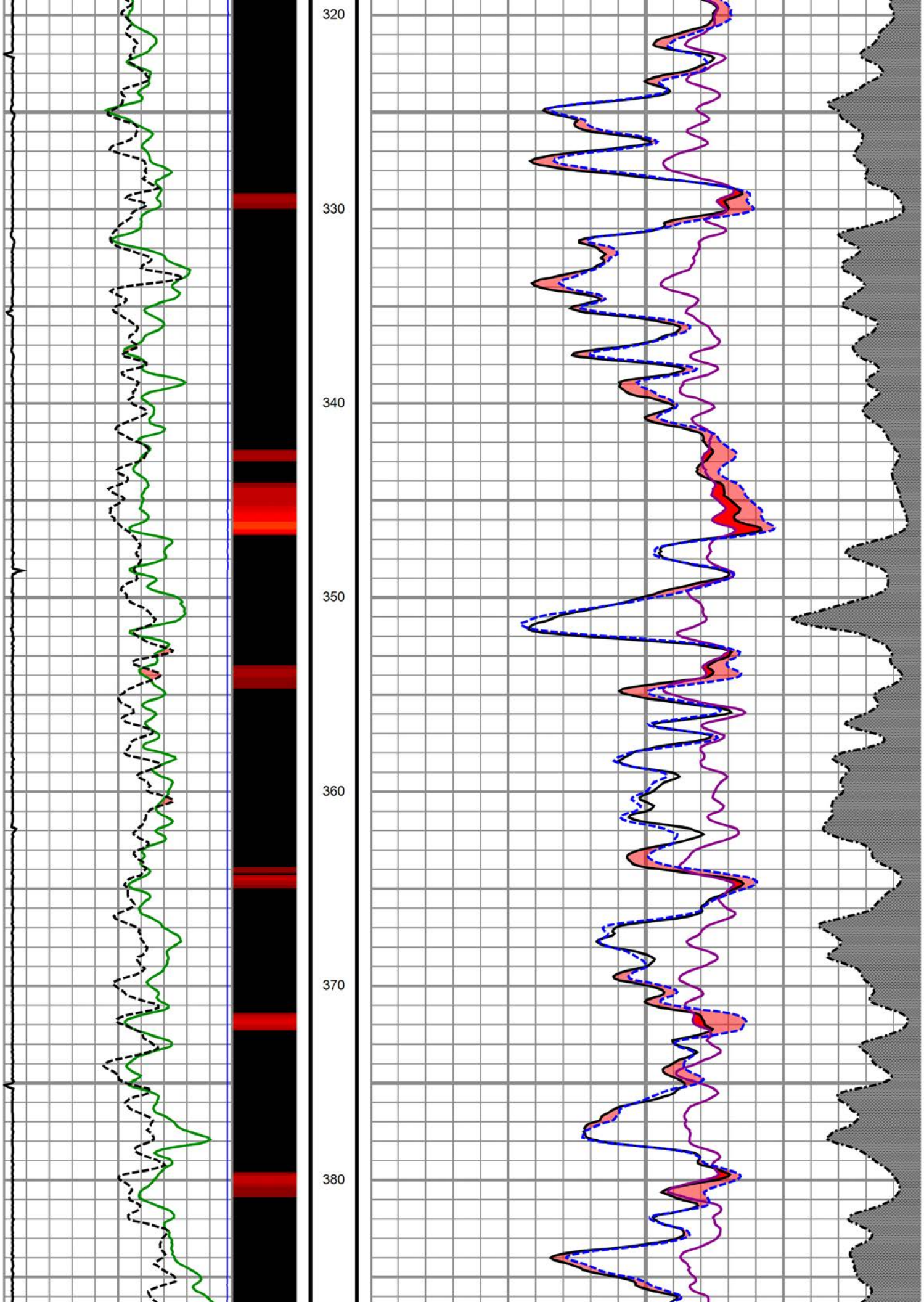
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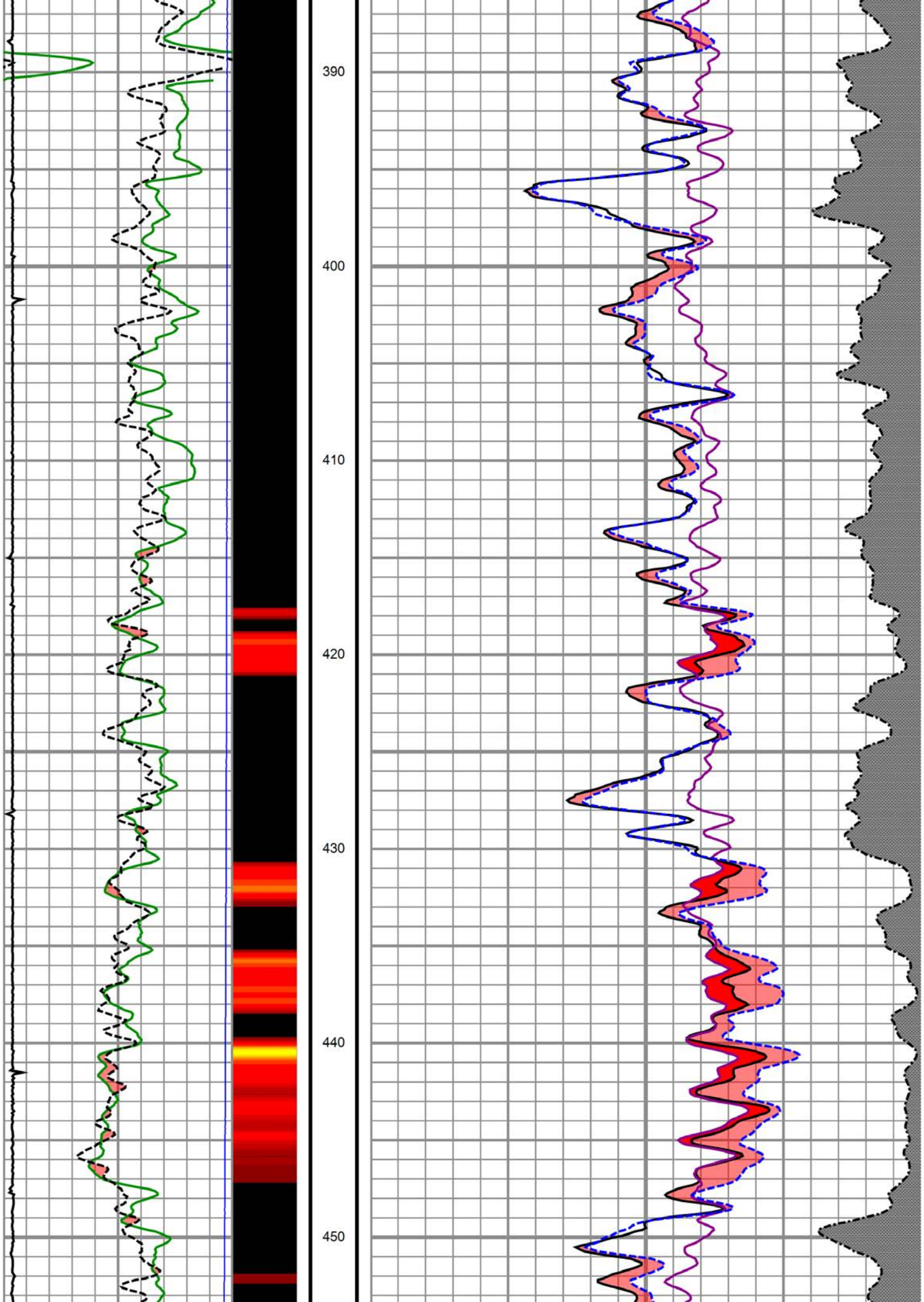
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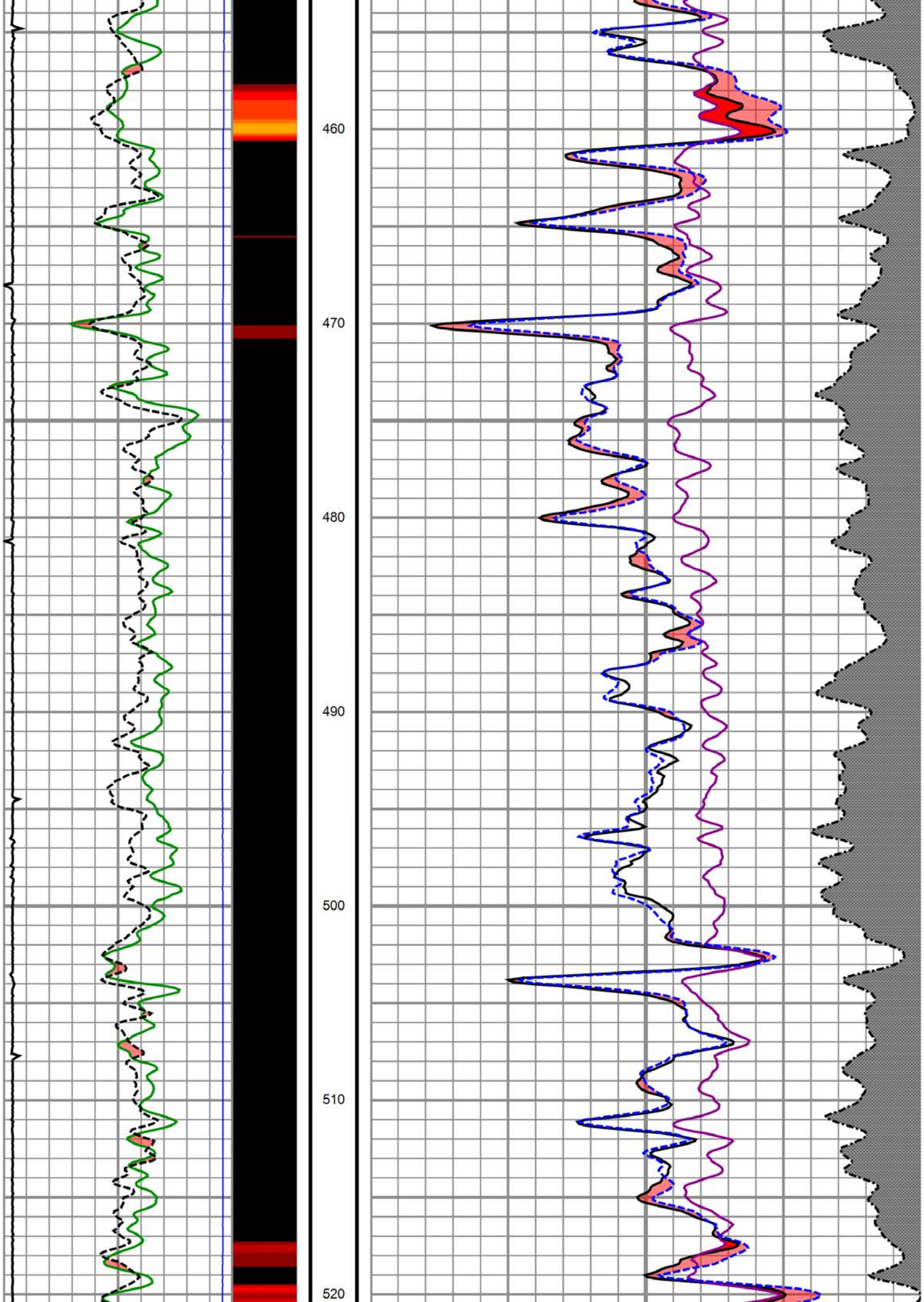
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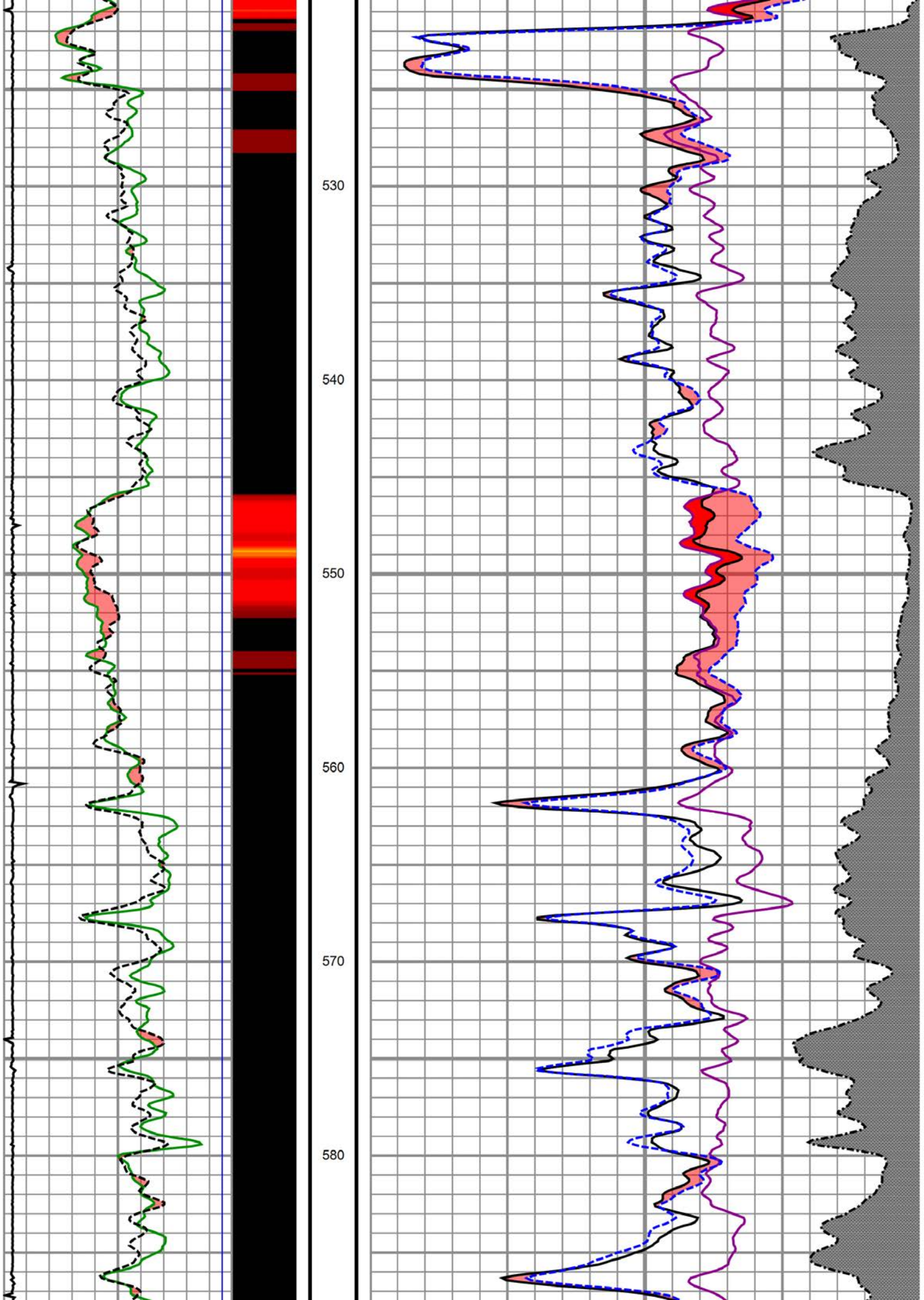
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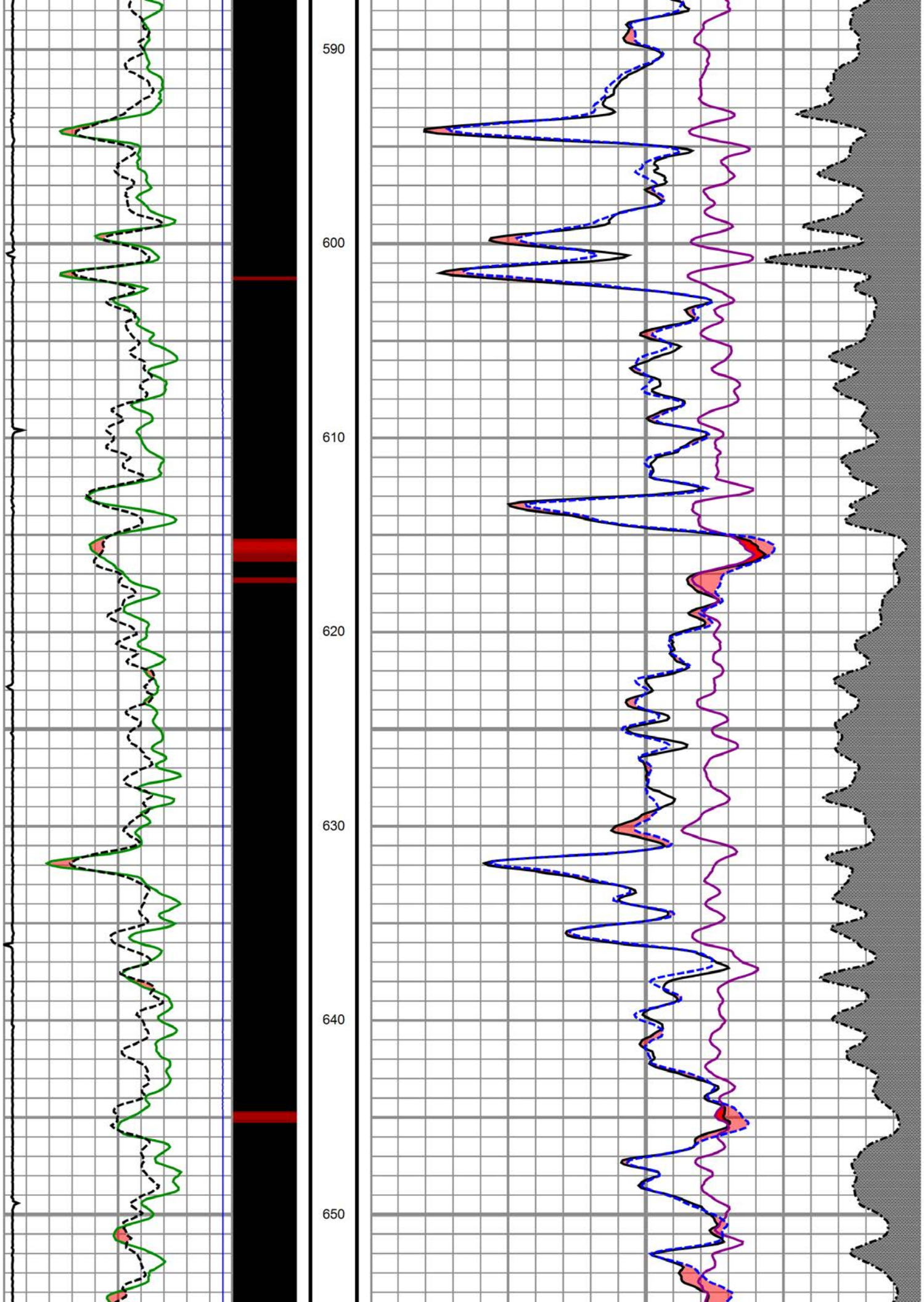
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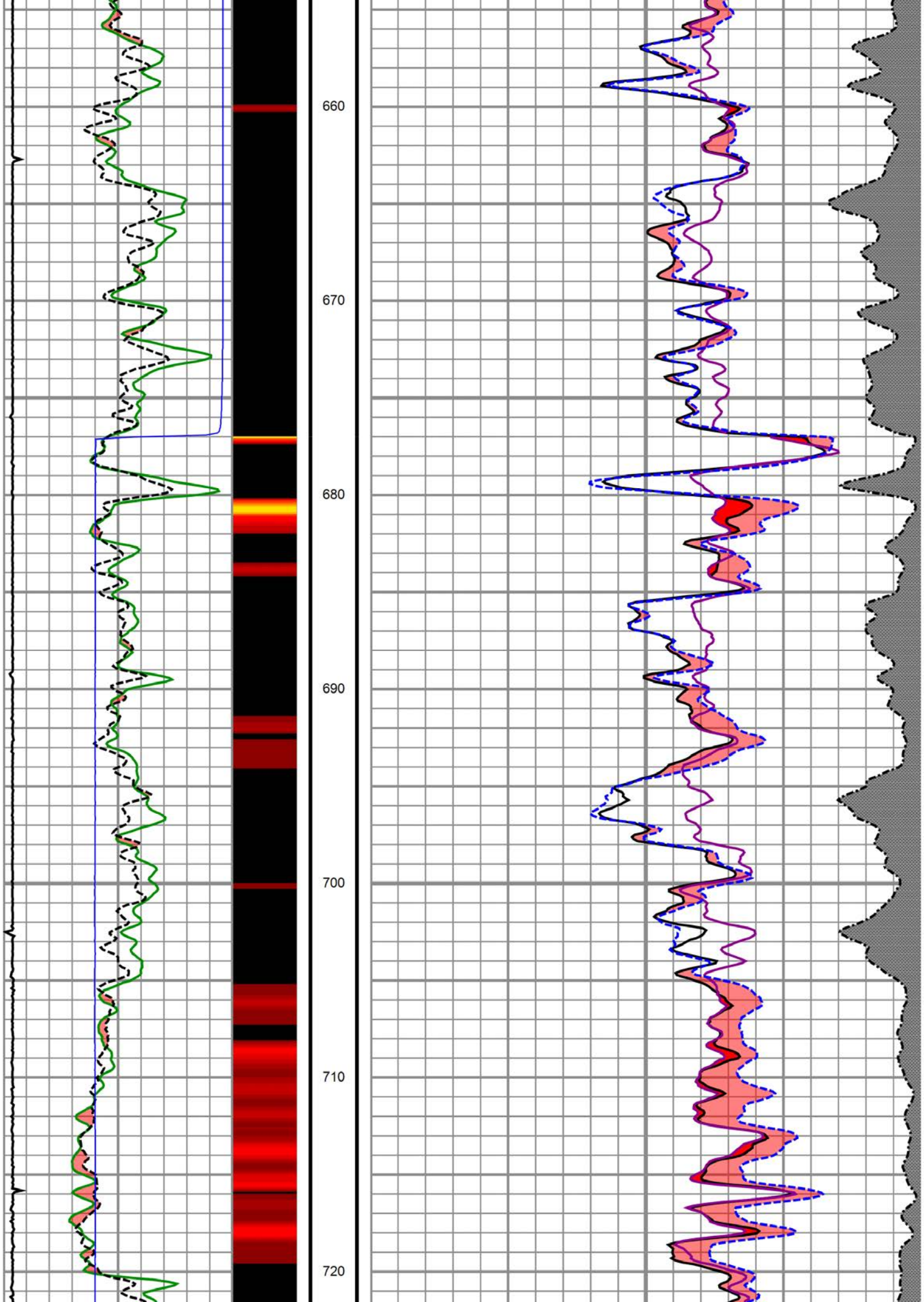
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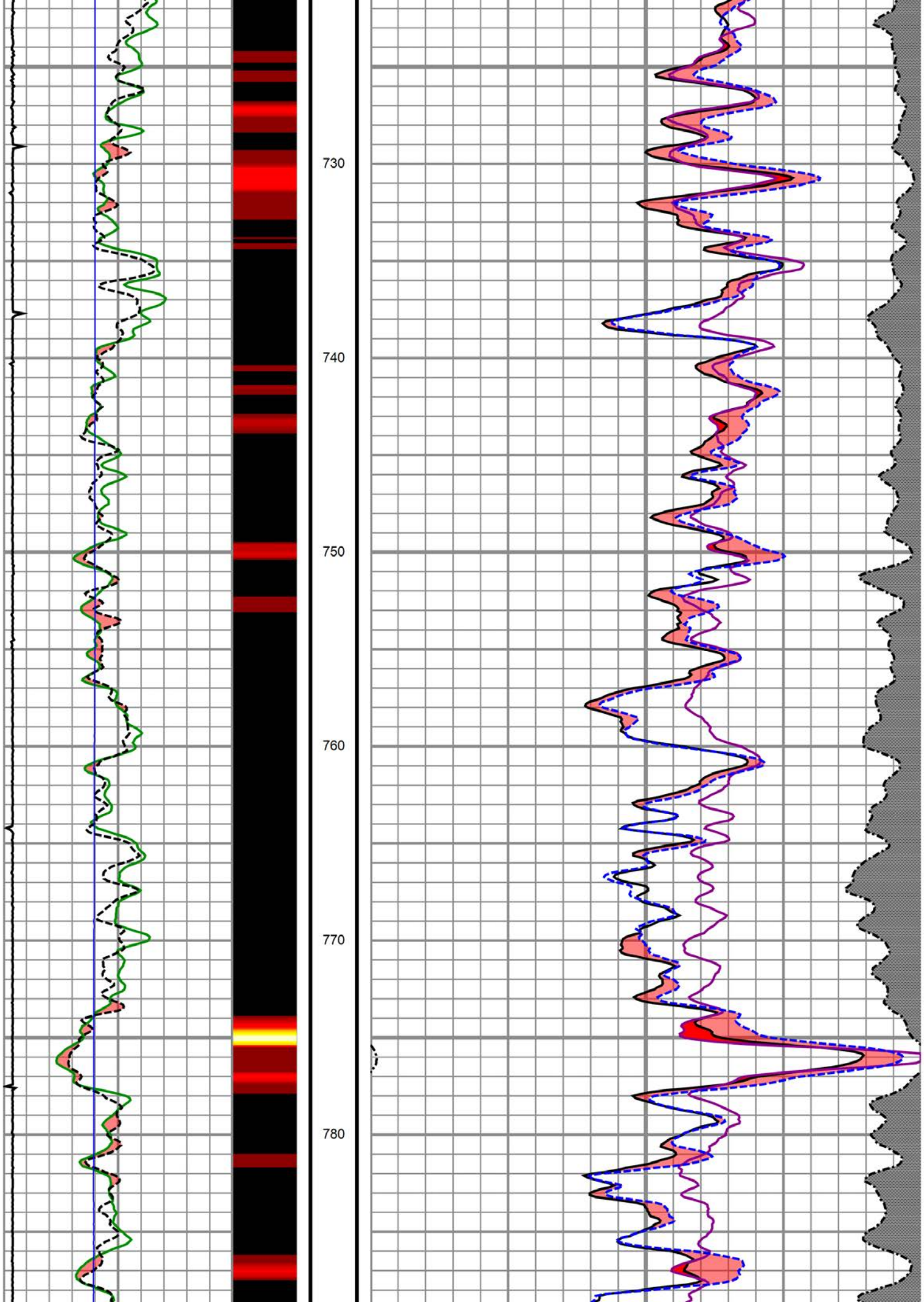
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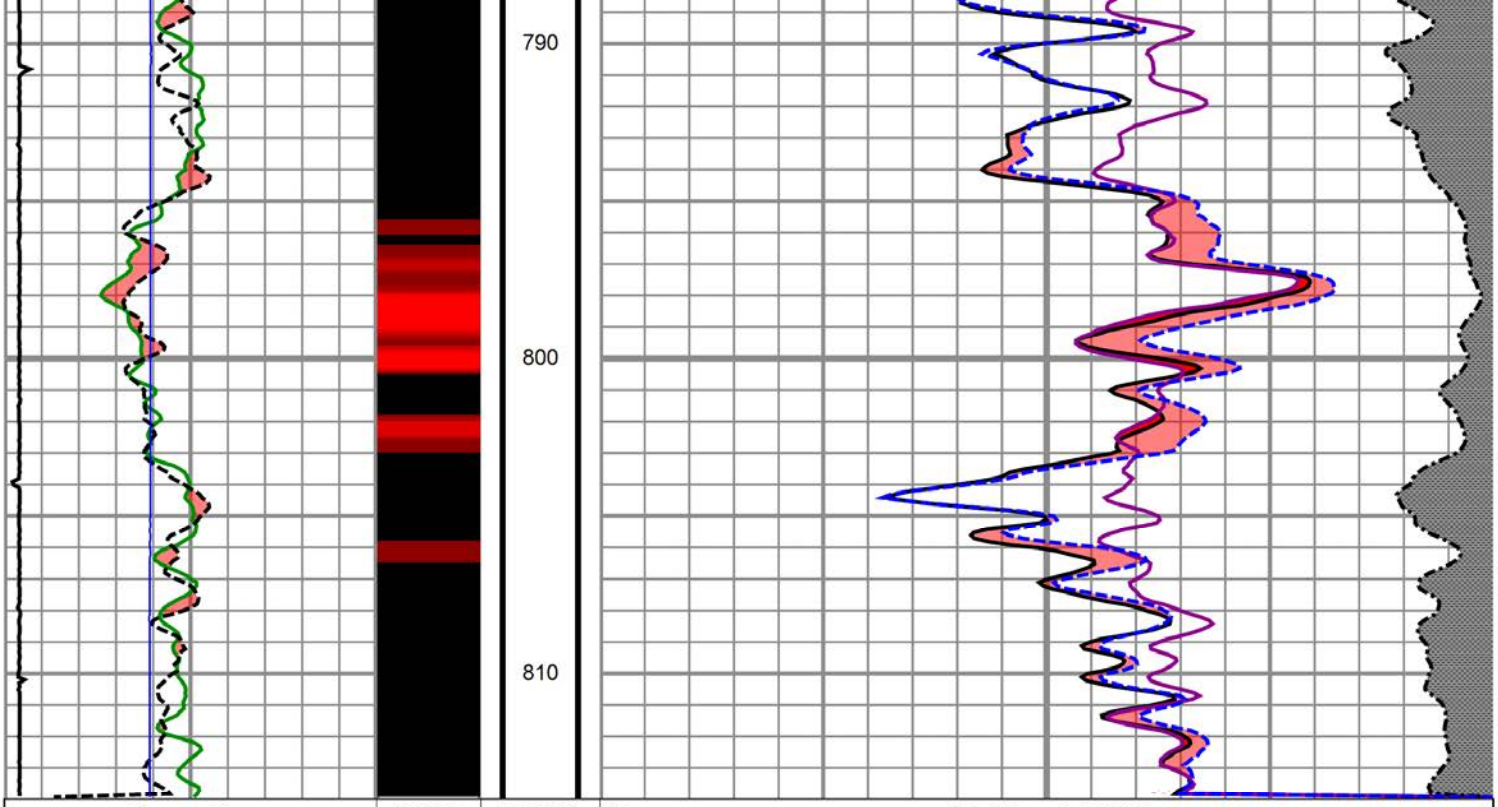

Gamma Ray [GR]			SGAS	DEPTH		
0		150			60	Total Porosity [QTP] 0
Filtered Gamma Ray [FGR]					60	Relative Density Porosity [DPORn] 0
-15		98			60	Quad Clay [QC] 0
0	UBRM	45000			60	Dual Neutron [DDN] 0
Casing Collar Locator [CCL]						Light Bulk Density
0		80000				Light Hydrocarbon
High Perm						

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MD Main Pass

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Measured Depth

Calibrations

Curve	Gain	Shift	Filter	Offset
GR	0.909	0	1	3.81
UBRM	1.032868	0	0	4.23
CCL	1	0	0	2.42

Curve	Gain	Shift	Filter	Offset
FGR	1.7	0	1	3.28
UHT	0.004052	-160.49	1	4.23

Curve	Gain	Min	Max	Filter	Offset
LNG	0.97	1.012	1.096	1.5	1.43
LNN	1.05	1.006	1.077	1.2	0.88
SNG	0.9	0.942	0.991	1.8	1.31
SNN	0.97	0.938	1.115	1.5	0.99

Zone 1

Top: 2.61 m | Bottom: 60.00 m | low compaction | nuclear caliper gain:1 | water:30 kppm | oil:15 API | f-factor:20 | ce gain:0 | clay tie:58

Curve	A	B	Gain	Shift	Curve	WT	Cutoff	Min	Max
QTP	65	-6	1	0	DGR	0	10	0	65
QL	30.25	-35.5	1.1	-8	GR	0	20	0	60
DDN	2.16	-20.9	0.9	-2	DDN	25	4	0	60
QC	0.0012	-2	0.3	-2	QC	0	2	0	100
SNNp	-134	56	-134	56	PROP	0	0	0	60
LNNp	-15	39.5392	-15	39.53924	CE	0	3	0	60
SNGp	-129	89.6952	-129	89.69516	COAL	1	42	0	60
LNGp	-22	55.306	-22	55.30599	calcite	1	15	0	60
FGR	1	0	1	0	CEp	75	4	0	100
CEp	1	0	2.2	25					
SNNpost	1	0	1	0					
SNGpost	1	0	1	0					
CNL	1	0	1	3					
IntCounts	1	0	1	0					

Saturation	QLce	ddn:0	clay:20	boundwater:0	waterfreeoil:0.65	boundoil:0.2	filter:0.3	swak:False
	coll maxclay:False	coll swqcfp:True	use snnp-lnnp:False	snnp-lnnp:0				
Lithology	shale:6	silt (bliquid):15	sand:0	collector:6	calcite min:-2	calcite max:-7	coal porosity:42	hcoal:65
	use:qc	lgrshale:65	lgrsand:40	lgrcollcut:1	carbonate:False	dolasmud:False	minclayfe:20	qtpqlfe:20
	fe100:20	nofe:20						

Zone 2

Top: 60.00 m | Bottom: 677.00 m | low compaction | nuclear caliper gain:1 | water:30 kppm | oil:15 API | f-factor:20 | ce gain:0 | clay tie:342

Curve	A	B	Gain	Shift	Curve	WT	Cutoff	Min	Max
QTP	65	-2	1	4	DGR	0	10	0	65
QL	30.25	-23	1.1	4.5	GR	0	20	0	60
DDN	2.4	-20.5	1	0.5	DDN	25	4	0	60
QC	0.0024	-1.5	0.6	-1.5	QC	0	2	0	100

QC	0.0024	1.0	0.0	1.0	QC	0	2	0	100
SNNp	-134	56	-134	56	PROP	0	0	0	60
LNNp	-15	37.0715	-15	37.07154	CE	0	3	0	60
SNGp	-129	87.2641	-129	87.26411	COAL	1	42	0	60
LNGp	-21	53.6286	-21	53.6286	calcite	1	15	0	60
FGR	1	0	1	0	CEp	75	4	0	100
CEp	1	0	2.2	23					
SNNpost	1	0	1	0					
SNGpost	1	0	1	0					
CNL	1	0	1	3					
IntCounts	1	0	1	0					
Saturation	QLce	ddn:0	clay:20	boundwater:0	waterfreeoil:0.65	boundoil:0.2	filter:0.3	swak:False	
	coll maxclay:False	coll swqcfp:True	use snnp-lnnp:False	snnp-lnnp:0					
Lithology	shale:6	silt (bliquid):15	sand:0	collector:6	calcite min:-2	calcite max:-7	coal porosity:42	hcoal:65	
	use:qc	lgrshale:115	lgrsand:40	lgrcollcut:1	carbonate:False	dolasmud:False	minclayfe:20	qtpqlfe:20	
	fe100:20	nofe:20							

Zone 4

Top: 677.00 m	Bottom: 814.00 m	low compaction	nuclear caliper gain:1		water:30 kppm	oil:15 API	f-factor:20	ce gain:0	clay tie:766
Curve	A	B	Gain	Shift	Curve	WT	Cutoff	Min	Max
QTP	65	-9	1	-3	DGR	0	10	0	65
QL	30.25	-32	1.1	-4.5	GR	0	20	0	60
DDN	2.4	-28.5	1	-7.5	DDN	25	4	0	60
QC	0.0014	-1.5	0.35	-1.5	QC	0	2	0	100
SNNp	-104	56	-104	56	PROP	0	0	0	60
LNNp	-9	40.457	-9	40.45697	CE	0	3	0	60
SNGp	-109	87.2347	-109	87.23473	COAL	1	42	0	60
LNGp	-15	59.2012	-15	59.20124	calcite	1	15	0	60
FGR	1	0	1	0	CEp	75	4	0	100
CEp	1	0	2.2	23					
SNNpost	1	0	1	0					
SNGpost	1	0	1	0					
CNL	1	0	1	3					
IntCounts	1	0	1	0					
Saturation	QLce	ddn:0	clay:20	boundwater:0	waterfreeoil:0.65	boundoil:0.2	filter:0.3	swak:False	
	coll maxclay:False	coll swqcfp:True	use snnp-lnnp:False	snnp-lnnp:0					
Lithology	shale:6	silt (bliquid):15	sand:0	collector:6	calcite min:-2	calcite max:-7	coal porosity:42	hcoal:65	
	use:qc	lgrshale:85	lgrsand:30	lgrcollcut:1	carbonate:False	dolasmud:False	minclayfe:20	qtpqlfe:20	
	fe100:20	nofe:20							