BAKER HUGHES

Baker Atlas

RESERVOIR PERFORMANCE MONITOR

File No: CH07264	Company	WPX ENERGY	
API No: 05045182540000	Well	YOUBERG RWF 434-23	
	Field	RULISON	
	County	GARFIELD	State: COLORADO

23 6S 94W
RWF 33-23 PAD
NABORS 577

Location
SHL: 1349' FSL, 2306' FEL
BHL: 219' FSL, 2097' FEL

SEC 23 TWP 6S RGE 94W

Other Services
BOND LOG

Permanent Datum	GL	Elevation	5501.5 ft
Log Measured From	KB	26 ft	Above P. D.
Drill Measured From	KELLY BUSHING		

Elevations
KB 5527.5 ft
DF
GL 5501.5 ft

Date	29/MAY/13		
Run	ONE		
Service Order	575090		
Depth Driller	8176 ft		
Depth Logger	8148 ft		
Bottom Logged Interval	8145 ft		
Top Logged Interval	4043 ft		
Time Started	1230		
Time Finished	1830		
Operator Rig Time	6 HRS		
Type of Fluid in Hole	WATER		
Fluid Density	NA		
Salinity	NA		
Fluid Level	76 ft		
Logged Cement Top	NA		
Wellhead Pressure	0 psi		
Maximum Hole Deviation	NA		
Nominal Logging Speed	10 fpm		
Maximum Recorded Temperature	230 degF		
Reference Log	BAKER HUGHES BOND LOG		
Reference Log Date	28/MAY/13		
Equipment No. / Location	4271	GRAND JCT	
Recorded By	FLOYD RENEAU		
Witnessed By	JEFF DUCY		

- FOLD HERE

In making interpretations of logs, our employees will give the customer the benefit of their best judgement. But since all interpretations are opinions based on inferences from electrical or other measurements, we cannot, and we do not guarantee the accuracy or correctness of any interpretation. We shall not be liable or responsible for any loss, cost, damages, or expenses whatsoever incurred or sustained by the customer resulting from any interpretation made by any of our employees.

Casing Record

Size	Weight	Grade	From	To
9.625 in			0 ft	1115 ft
4.5 in	11.6 lbm/ft	I-80	0 ft	8176 ft

Borehole Record

Bit Size	From	To
13.5 in	0 ft	1115 ft
8.75 in	1115 ft	8176 ft

Remarks

All data on this log is shifted and depth matched using the Gamma Ray curve to the Baker Hughes bond log dated 5/28/2013 at the client's request.

The amount of linear shift is 12 feet.

Logged in PNC-3D mode.

BHT = 230°F

SJ = 4816'-4840'

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	RPM	8281FA	10401926	FREE
1	1	RPM	8281PA	10203151	FREE
1	1	RPM	8281EA	10423671	FREE
1	1	GR	8262XA	10076055	FREE
1	1	TEL/CCL	8248ED	10296408	FREE
1	1	PCM	8250EA	10397894	FREE

MAIN SECTION
PNC 3-D MODE

SPL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
PNC Porosity	Borehole	Cased		4029.781	8167.531
PNC Porosity	Borehole Size	7.875	inch	4029.781	8167.531
PNC Porosity	Casing Size	4.500	inch	4029.781	8167.531
PNC Porosity	Gas Filled	Non Gas Filled		4029.781	8167.531
PNC Porosity	Matrix	Sandstone		4029.781	8167.531

DEPTH OFFSETS

(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES
8248ED	-15.320	FLTM
8248ED	-13.320	CCL CHV
8262XA	-10.189	GR
8281XA	-0.662	HVC3Q0 SEQ3 AMA3 AML3 BKX CXS
		CPT3Q0 CPT3Q2 CPT3Q3 CPT3Q4 ET3 IXS
		MCS3 MCS3Q0 QCAL3 RGN3 RICX SDA3
		SDL3 SGA3 SGL3 STA3 XS ASPEC3
		AMB3 AMF3 CHF3 IXSC IXSN RATO23

		RICXC RIN13C RIN23 RIN23C SD3D SG3D SGB3 SGF3 WDTH3 CXSR IXSR XSR RICXR
8281XA	-0.250	HVC2Q0 SEQ2 AMA2 AMB2 AMF2 AML2 BKL CHF2 CLS CPT2Q0 CPT2Q2 CPT2Q3 CPT2Q4 ET2 ILS LS MCS2 MCS2Q0 QCAL2 RGN2 RICL RONE23 RTWO23 SDA2 SDL2 SGA2 SGB2 SGF2 SGK2 SGL2 STA2 ASPEC2 ILSC ILSN WDTH2 RICLC CLSR ILSR LSR RICLR
8281XA	0.000	CPRS HVC1Q0 MV SEQ SEQ1 AMA1 AMB1 AME1 AMF1 AML1 BKS CHF1 CSS CORB CORF CPT1Q0 CPT1Q2 CPT1Q2A CPT1Q2B CPT1Q2C CPT1Q3 CPT1Q4 CPT1Q5 ET1 G1 G2 GE1S GE2S ISS MCS1 MCS1Q0 QA1 QCAL1 QM1 RATO RATO13 RBOR RGN1 RICS RIN RONE RPOR RTWO RIN13 RONE13 RTWO13 SALB SC1 SDA1 SDL1 SGA1 SGB1 SGBC SGE1 SGF1 SGFC SGK1 SGL1 SS SS2 STA1 PD1S PD2S PD3S MD1S MD2S MD3S DG1S DG2S DG3S PD1M PD2M PD3M MD1M MD2M MD3M DG1M DG2M DG3M MVS MA MVM FILV IAM TA PVM PVS IAS SSTAT QPD1 QPD2 QPD3 QMD1 QMD2 QMD3 QDG1 QDG2 QDG3 QMA QTA QFILV QMV QPV QIA DERR DCNT QPK1 QSA1 PKS1 ASPEC1 H0C FE2XC ISSC RINC ISSN RDEN WDTH1 RICSC CSSR G1R G2R ISSR SSR SS2R RATOR RATO13R RBORR RICSR RINR RIN13R RONER RPORR RTWOR
SYSTEM	0.000	TEN TTEN

Created by : RPM9, v5.3.1.0
Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY
Well : YOUBERG RWF 434-23
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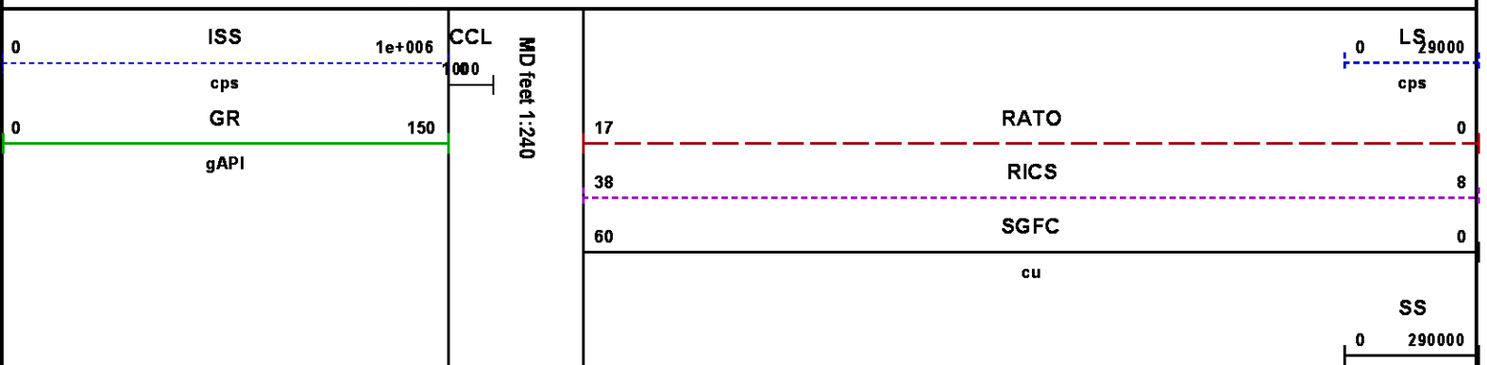

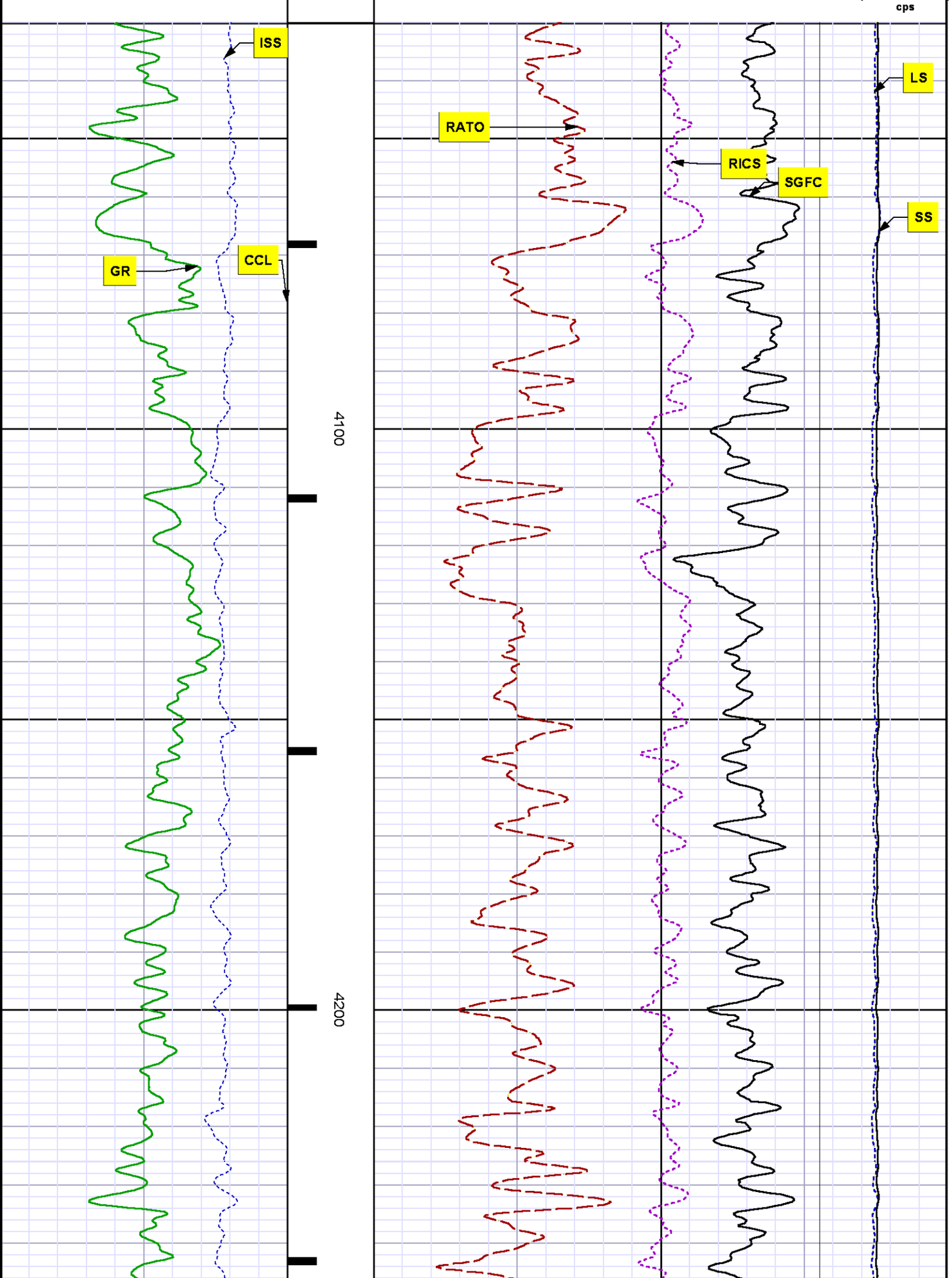
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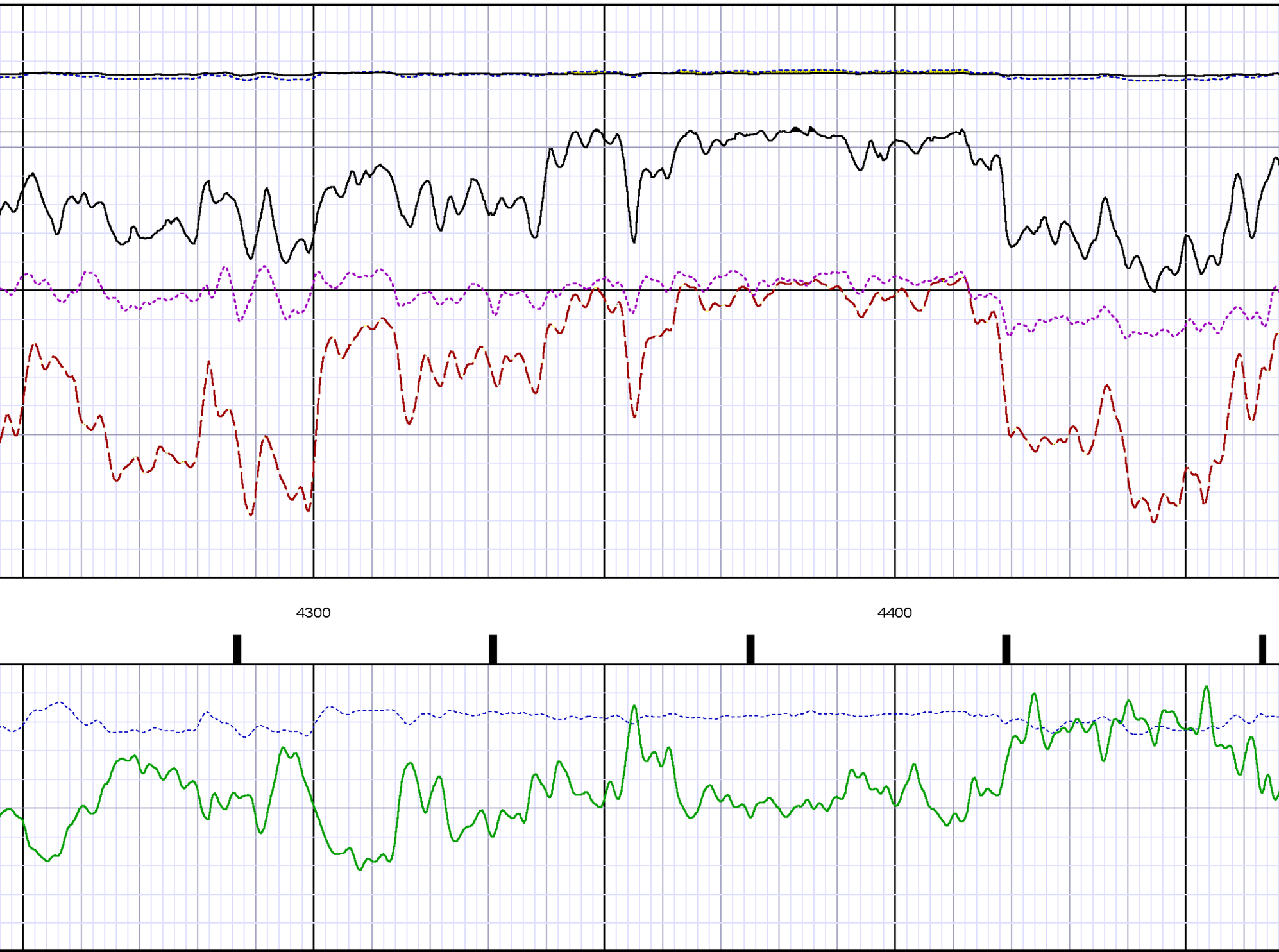
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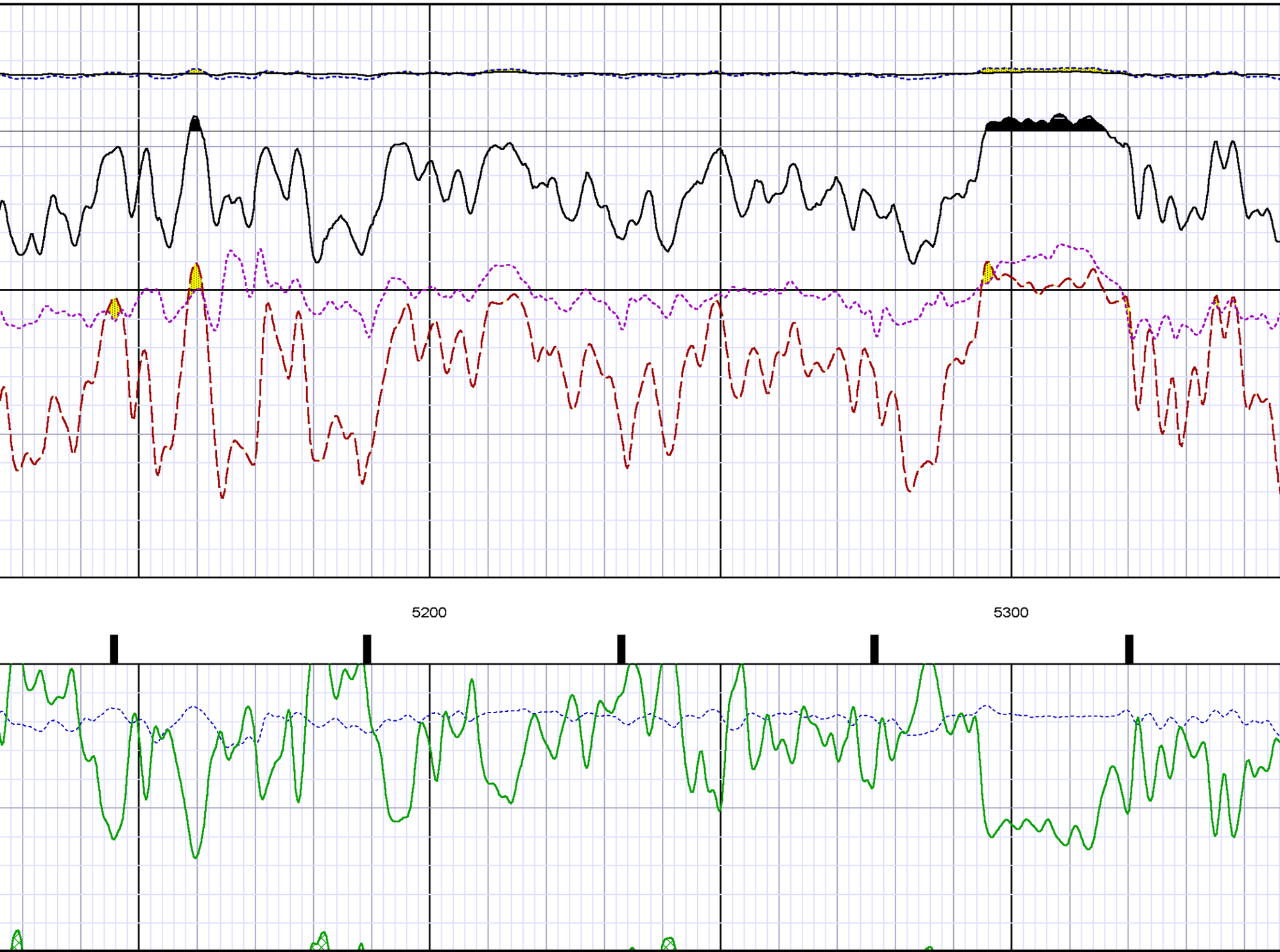
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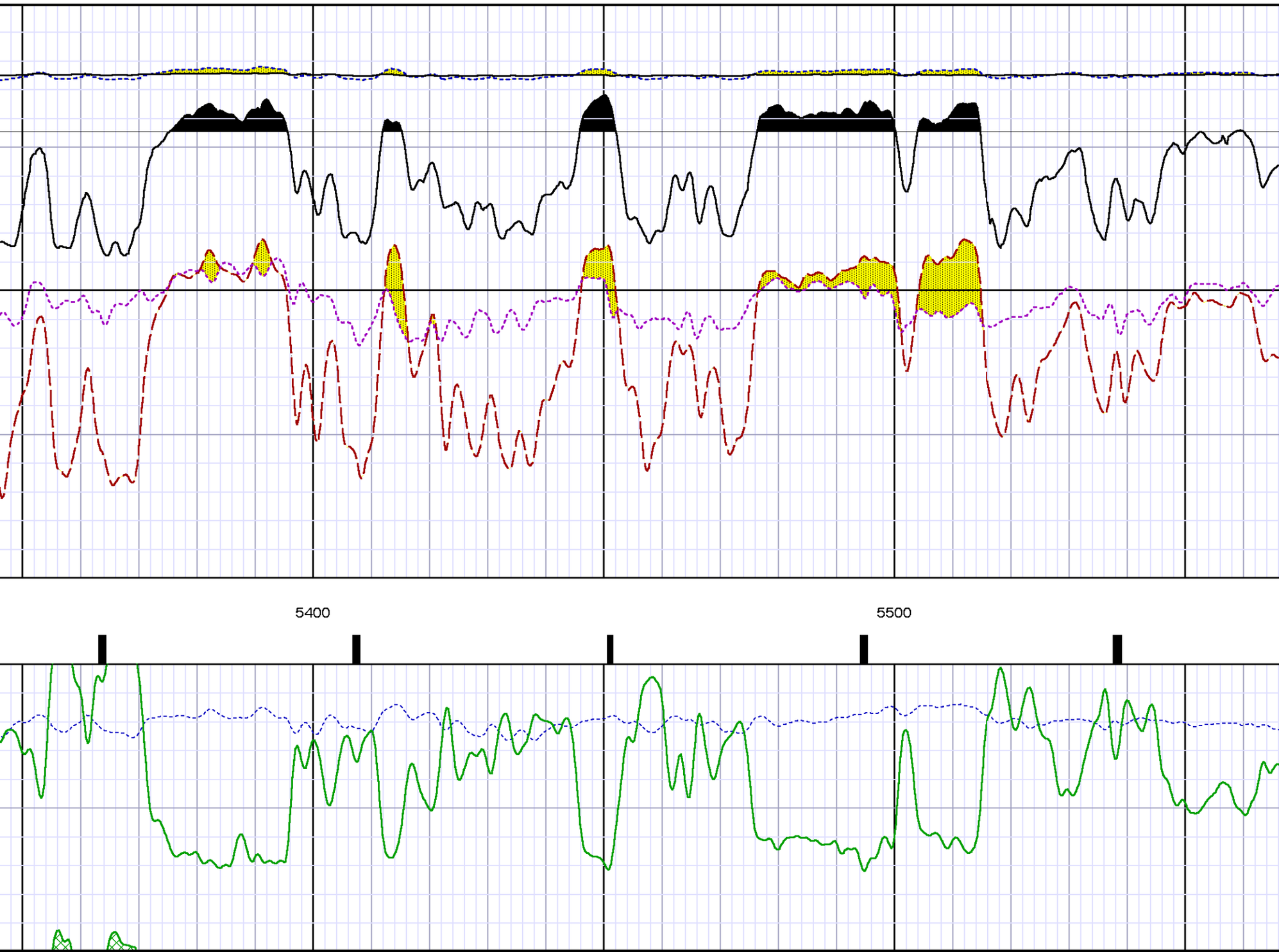
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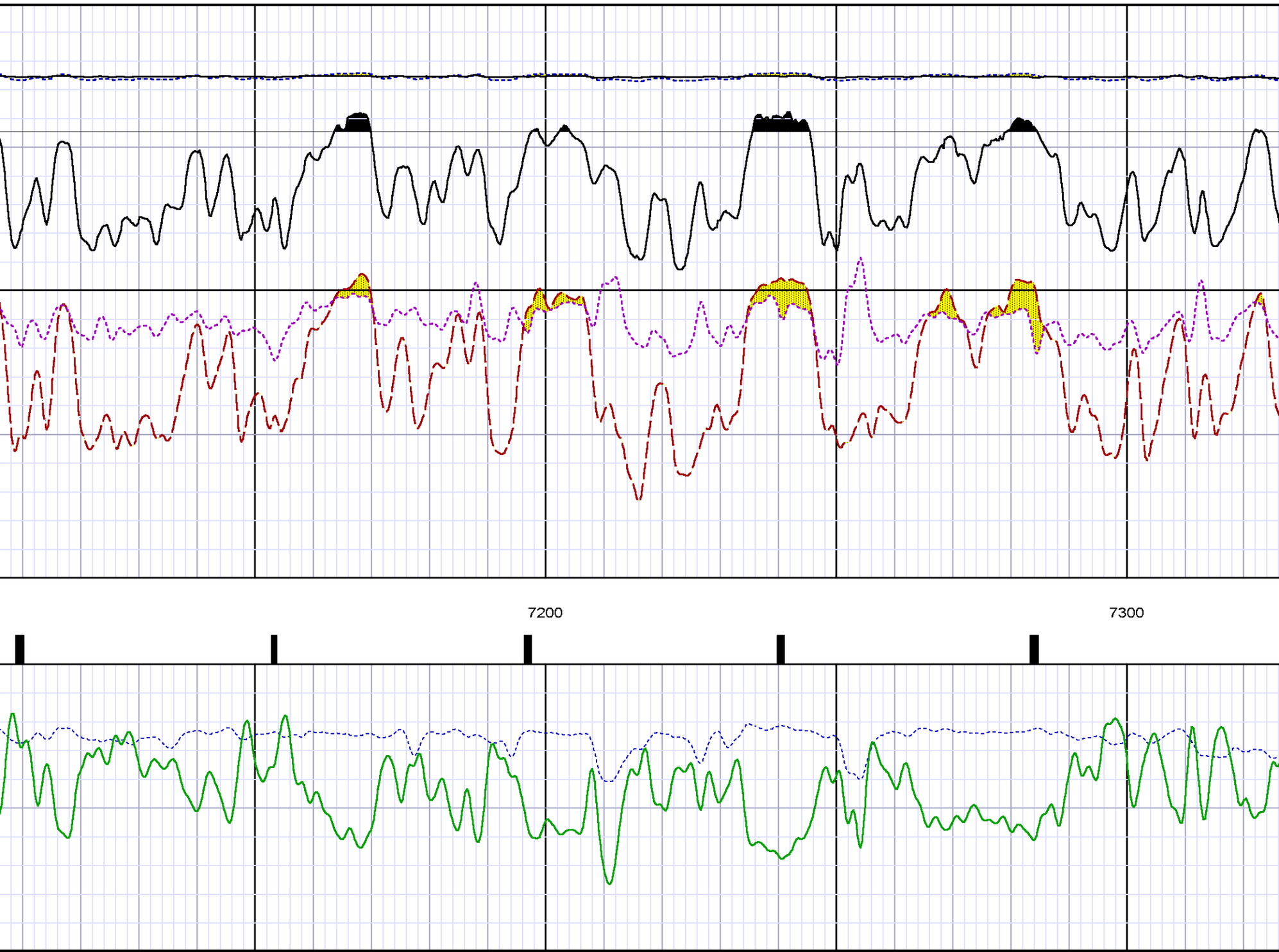
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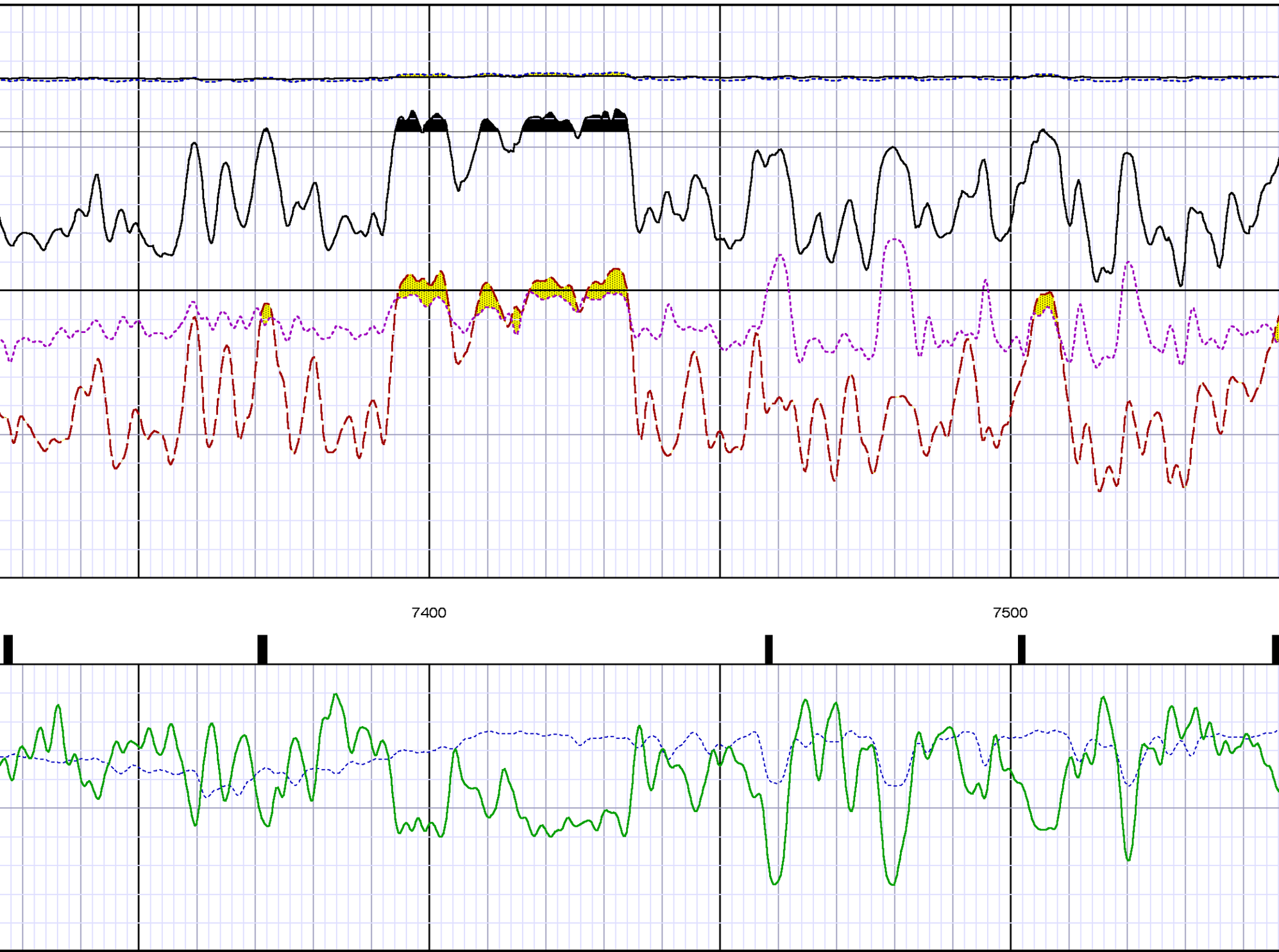
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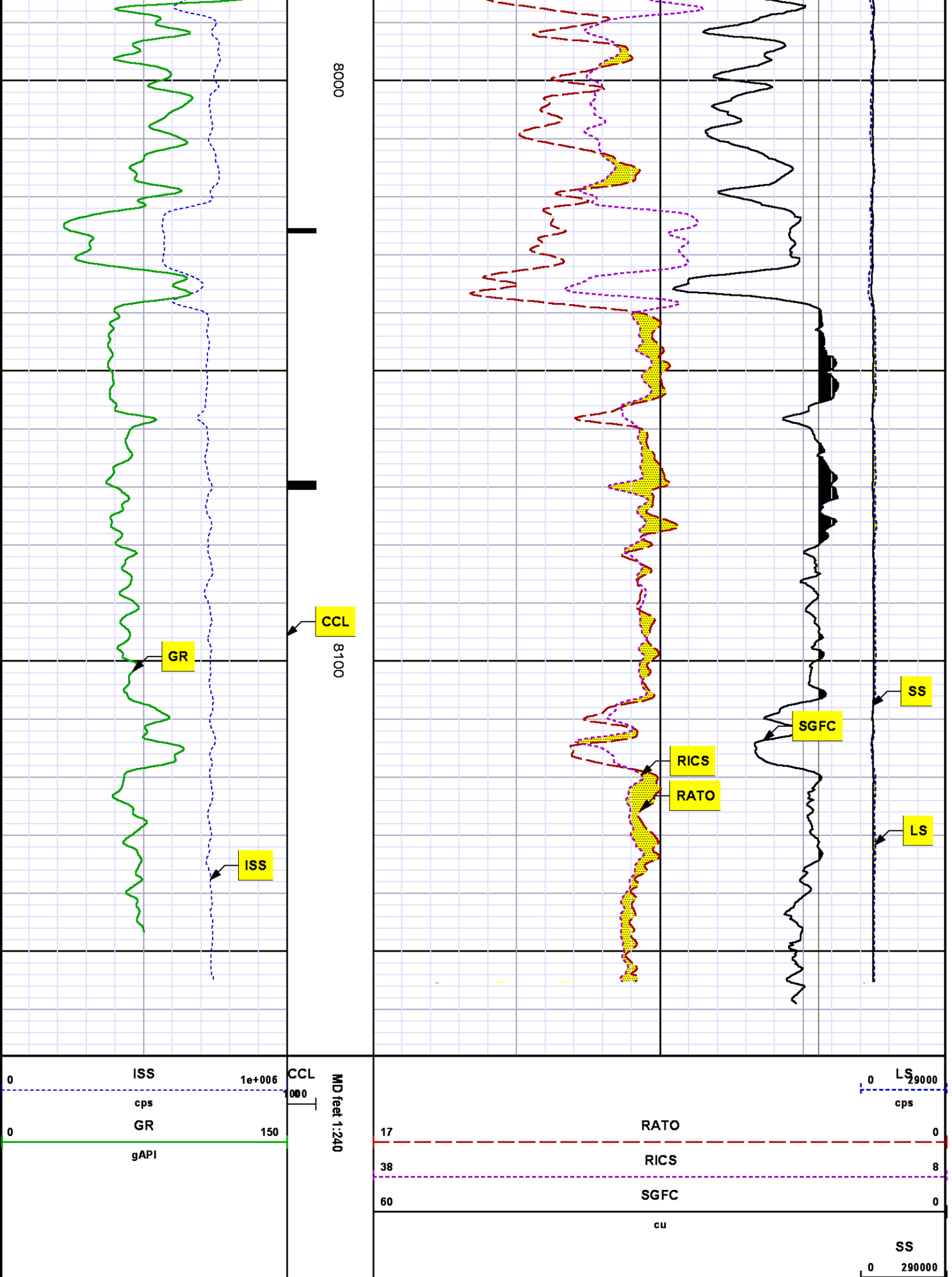
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CCL
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RATO
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RICS
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SGFC
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SS
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290000

cps

REPEAT SECTION
PNC 3-D MODE

SPL PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
PNC Porosity	Borehole	Cased		7306.009	7611.260
PNC Porosity	Borehole Size	7.875	inch	7306.009	7611.260
PNC Porosity	Casing Size	4.500	inch	7306.009	7611.260
PNC Porosity	Gas Filled	Non Gas Filled		7306.009	7611.260
PNC Porosity	Matrix	Sandstone		7306.009	7611.260

DEPTH OFFSETS

(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES
8248ED	-15.320	FLTM
8248ED	-13.320	CCL CHV
8262XA	-10.189	GR
8281XA	-0.662	HVC3Q0 SEQ3 AMA3 AML3 BKX CXS CPT3Q0 CPT3Q2 CPT3Q3 CPT3Q4 ET3 IXS MCS3 MCS3Q0 QCAL3 RGN3 RICX SDA3 SDL3 SGA3 SGL3 STA3 XS ASPEC3 AMB3 AMF3 CHF3 IXSC IXSN RATO23 RICXC RIN13C RIN23 RIN23C SD3D SG3D SGB3 SGF3 WDTH3 CXSR IXSR XSR RICXR
8281XA	-0.250	HVC2Q0 SEQ2 AMA2 AMB2 AMF2 AML2 BKL CHF2 CLS CPT2Q0 CPT2Q2 CPT2Q3 CPT2Q4 ET2 ILS LS MCS2 MCS2Q0 QCAL2 RGN2 RICL RONE23 RTWO23 SDA2 SDL2 SGA2 SGB2 SGF2 SGK2 SGL2 STA2 ASPEC2 ILSC ILSN WDTH2 RICLC CLSR ILSR LSR RICLR
8281XA	0.000	CPRS HVC1Q0 MV SEQ SEQ1 AMA1 AMB1 AME1 AMF1 AML1 BKS CHF1

		CSS CORB CORF CPT1Q0 CPT1Q2 CPT1Q2A
		CPT1Q2B CPT1Q2C CPT1Q3 CPT1Q4 CPT1Q5 ET1
		G1 G2 GE1S GE2S ISS MCS1
		MCS1Q0 QA1 QCAL1 QM1 RATO RATO13
		RBOR RGN1 RICS RIN RONE RPOR
		RTWO RIN13 RONE13 RTWO13 SALB SC1
		SDA1 SDL1 SGA1 SGB1 SGBC SGE1
		SGF1 SGFC SGK1 SGL1 SS SS2
		STA1 PD1S PD2S PD3S MD1S MD2S
		MD3S DG1S DG2S DG3S PD1M PD2M
		PD3M MD1M MD2M MD3M DG1M DG2M
		DG3M MVS MA MVM FILV IAM
		TA PVM PVS IAS SSTAT QPD1
		QPD2 QPD3 QMD1 QMD2 QMD3 QDG1
		QDG2 QDG3 QMA QTA QFILV QMV
		QPV QIA DERR DCNT QPK1 QSA1
		PKS1 ASPEC1 H0C FE2XC ISSC RINC
		ISSN RDEN WDTH1 RICSC CSSR G1R
		G2R ISSR SSR SS2R RATOR RATO13R
		RBORR RICSR RINR RIN13R RONER RPORR
		RTWOR
SYSTEM	0.000	TEN TTEN

Created by : RPM9, v5.3.1.0

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

Well : YOUBERG RWF 434-23

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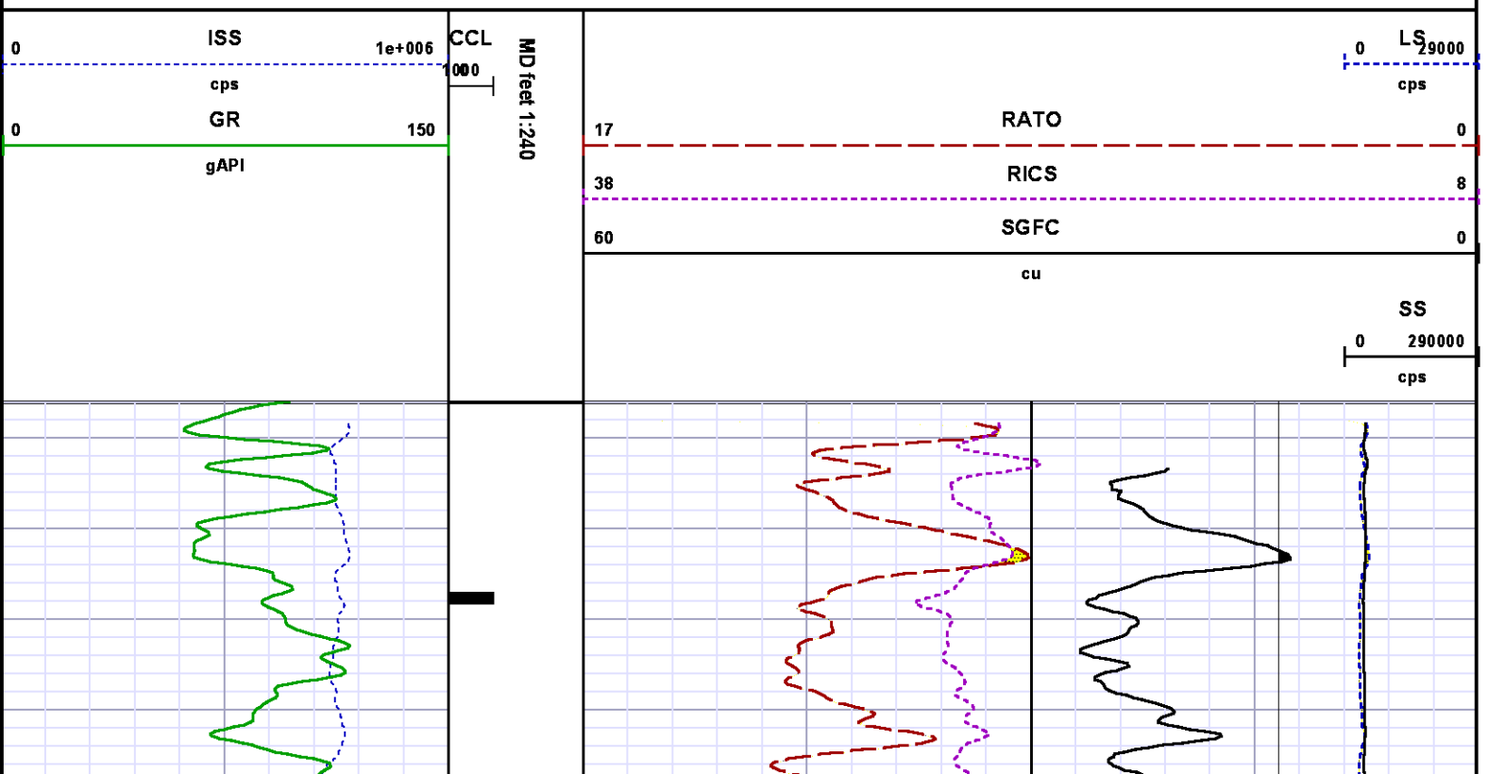

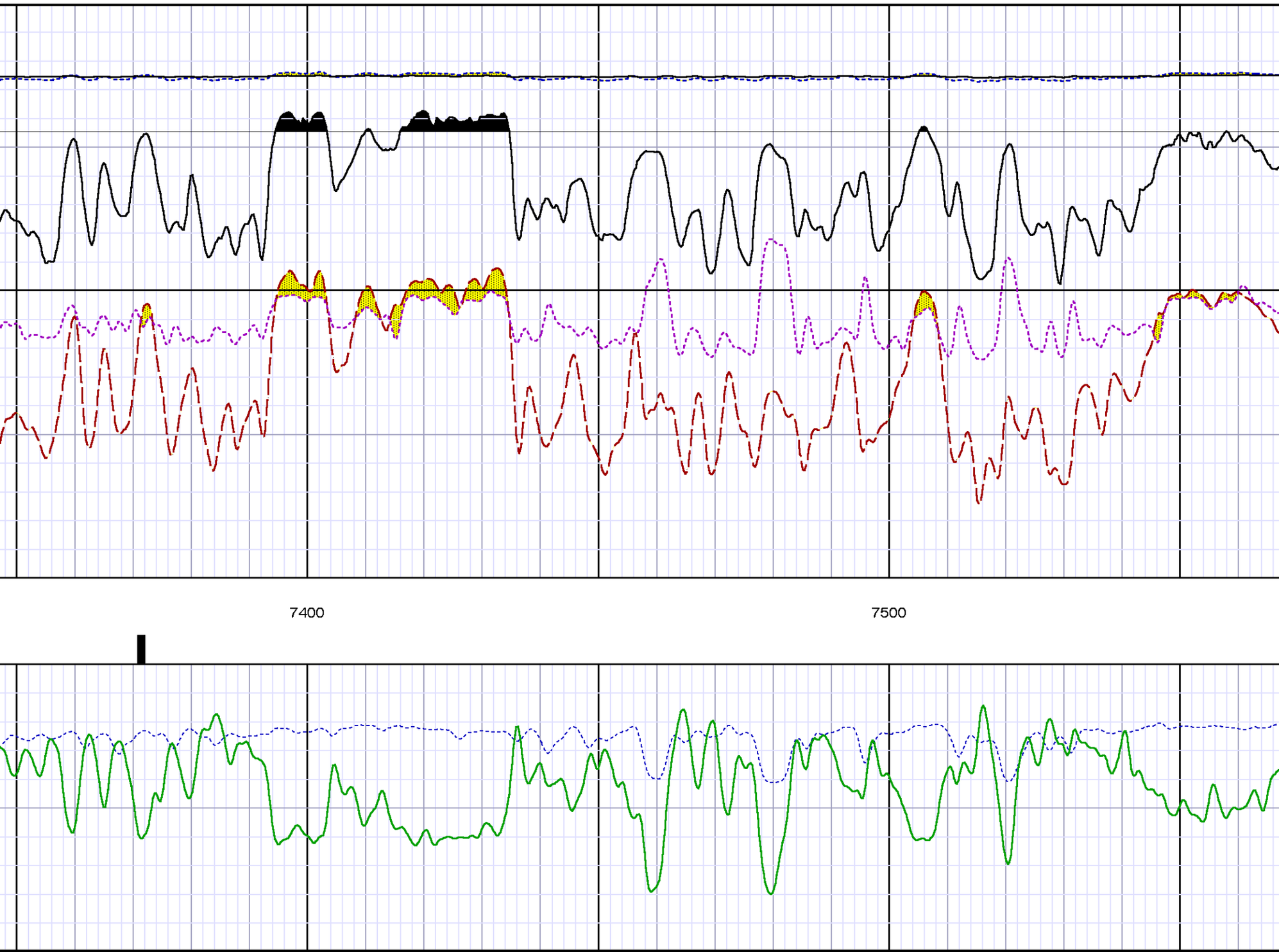
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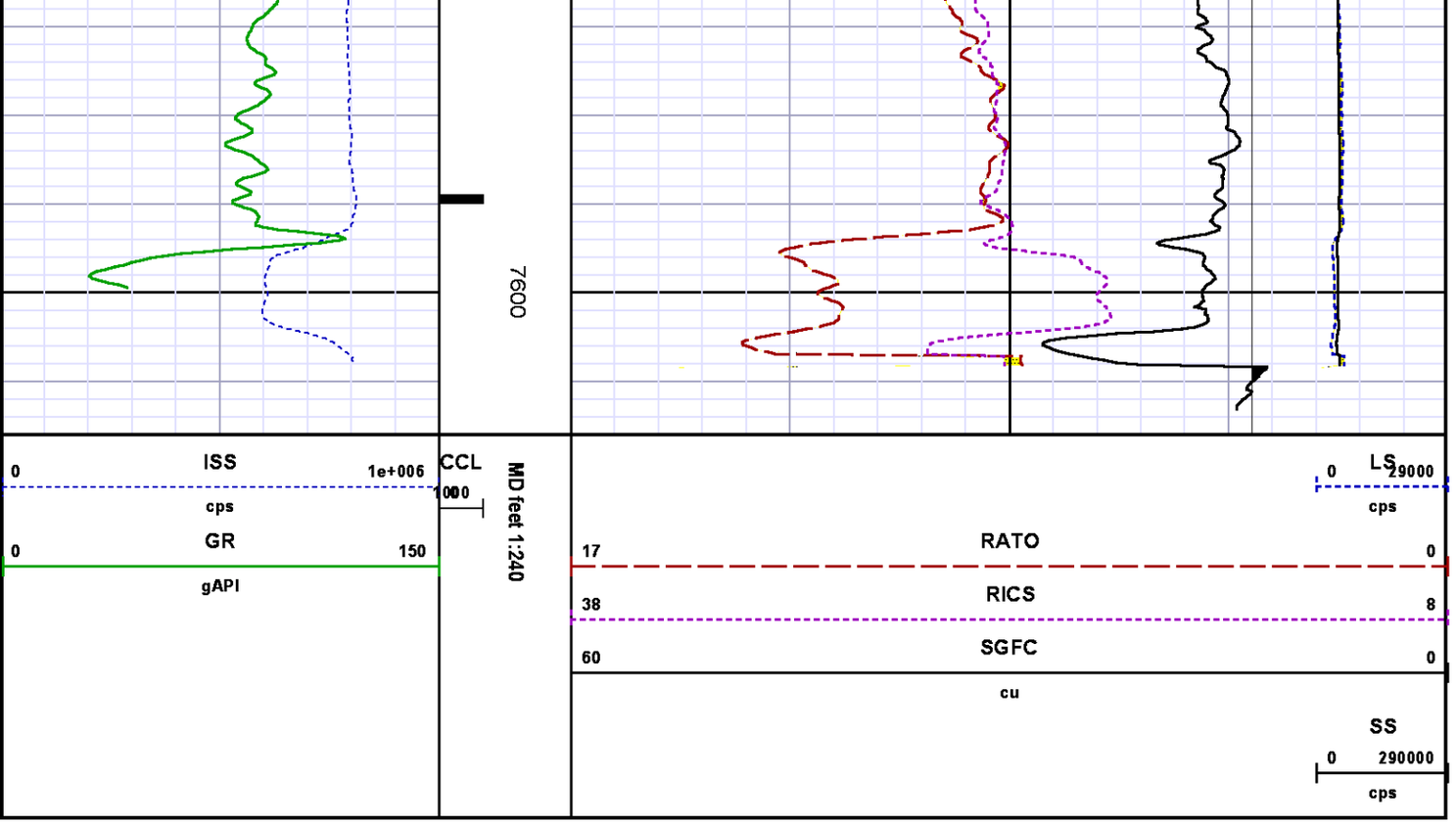

CALIBRATION SUMMARY

GAMMA RAY

Calibration File: C:\case\calver\GR\055M3.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Thu May 23 15:50:01 2013 TOOL SERIES: 8262XA ASSET: 055 SEQ: M3

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
JIG WA612	81.82	380.87	0.602	49.25	229.25	180.00

Verification File: C:\case\calver\GR\055M3.VP

PRIMARY VERIFICATION

DATE/TIME PERFORMED: Thu May 23 15:52:39 2013 TOOL SERIES: 8262XA ASSET: 055 SEQ: M3

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
JIG WA612	83.76	386.09	0.602	50.41	232.39	181.98

PNC

Calibration File: C:\case\calver\PNC\151M8.cal

PNC 3D CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sat May 18 22:08:31 2013 **TOOL SERIES:** 8281XA **ASSET:** 151 **SEQ:** M8

Calibrator #	Source #
SHOP BARREL	8281AA 11765055

	ISS	Mtr Vlts (V)	SS Gain	LS Gain	XLS Gain	EA Temp (degF)	Sync Delay (usec)	RCAL
Raw Data	808654	131.00	2277.00	2368.00	2444.00	103.38	7.00	0.9655
Interpolated	1300000	154.83	2268.54	2367.73	2435.35			

	ISS	BKS	BKL	BKX	SGA1	SDA1	SGA2	SDA2
Raw Data	808654	6654.28	1021.75	147.72	25.84	0.14	24.35	0.29
					25.35 26.40	0.00 0.20	23.60 24.80	0.00 0.40

	ISS	ILS	IXS	SS	SS2	LS	CSS	CLS
Raw Data	808654	163648.69	25271.68	87594.75	31179.34	8008.51	53072.60	12804.65
Fit Quality %		0.66	0.79	0.96	0.97	0.57	0.94	0.56

	ISS	RBOR	RIN ISS/ILS	RIN13 ISS/IXS	RICS ISS/CSS	RATO SS/LS	RTWO SS2/LS	RONE CSS/CLS
Raw Data	808654	1.44	4.94	32.00	15.24	10.94	3.89	4.14
		1.42 1.45	3.55 5.52	22.20 32.70	10.99 16.34	10.06 11.10	3.57 3.95	3.76 4.22
Fit Quality %		0.04	0.20	0.21	0.03	0.25	0.26	0.25
Reduced	1400653	1.43	4.94	32.00	15.26	10.94	3.89	4.14
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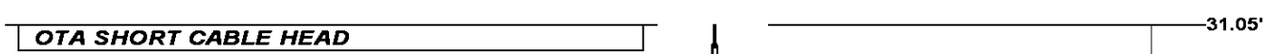
TOOL DIAGRAM

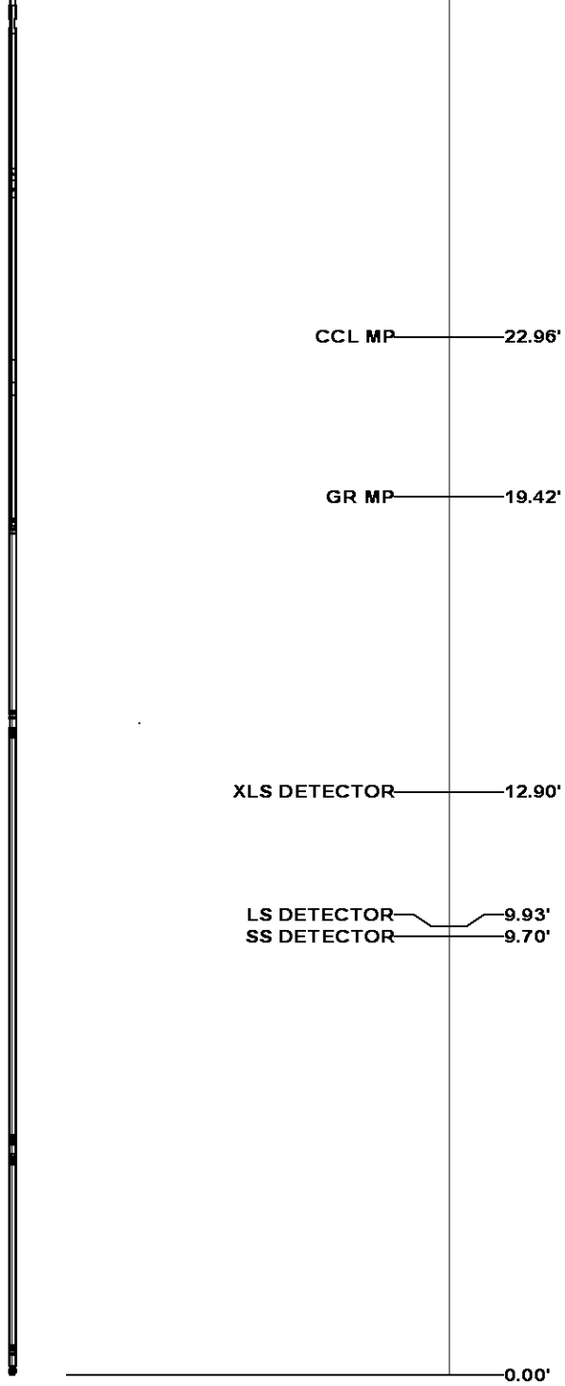


PCM POWER SUPPLY	
Series	8250EA
Mnemonic	PCM
Diameter	1.70"
Weight	18.00 lb
Length	3.86'
Temp Rating	350.00 °F

TELEMETRY / CCL	
Series	8248EA
Mnemonic	PCM
Diameter	1.70"
Weight	20.00 lb
Length	4.46'
Measure Point	1.00' CCL MP
Temp Rating	350.00 °F
Press Rating	15000.00 PSI

GAMMA RAY	
Series	8262XA
Mnemonic	GR
Diameter	1.70"
Weight	15.00 lb
Length	3.17'

RESERVOIR PERFORMANCE MONITOR	
Series	8281XA
Mnemonic	RPM
Diameter	1.70"
Weight	75.00 lb
Length	18.58'
Measure Point	9.49' SS DETECTOR
Measure Point	9.72' LS DETECTOR
Measure Point	12.69' XLS DETECTOR
Temp Rating	350.00 °F
Press Rating	20000.00 PSI



Total Length: 31.05'
Total Weight: Not Available
Max Diameter: 0' 1.70"

BAKER HUGHES

Baker Atlas

CASE

Company	WPX ENERGY		File No:
Well	YOUBERG RWF 434-23		CH07264
Field	RULISON		API No:
County	GARFIELD	State COLORADO	05045182540000

Location	Elevations	
SHL: 1349' FSL, 2306' FEL	KB 5527.5 ft	23 6S 94W
BHL: 219' FSL, 2097' FEL	DF	RWF 33-23 PAD
	GL 5501.5 ft	NABORS 577

SEC 23 TWP 6S RGE 94W