Schlumberger

Company: **ENCANA OIL & GAS (USA) INC.**

Well: **NP EF09E−27 (P27 595)**
Field: **NORTH PARACHUTE**
County: **GARFIELD** State: **COLORADO**

RESERVOIR SATURATION TOOL
SIGMA MODE
GR−CCL

LOCATION

County: GARFIELD
Field: NORTH PARACHUTE
Location: SHL: 728' FSL & 594' FEL
Well: NP EF09E−27 (P27 595)
Company: ENCANA OIL & GAS (USA) INC.

SHL: 728' FSL & 594' FEL
BHL: 1663' FSL & 680' FEL

Elev.: K.B. 6673.50 ft
G.L. 6650.00 ft
D.F. 6672.50 ft

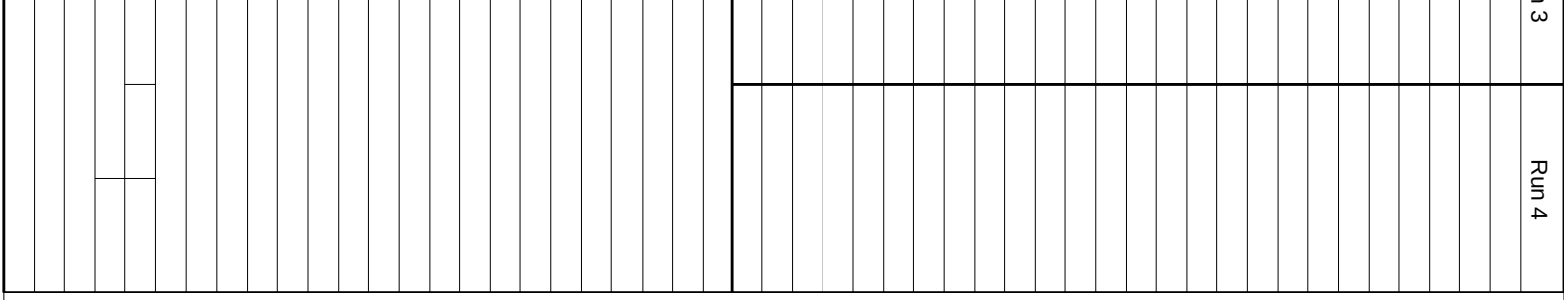
Permanent Datum: GROUND LEVEL Elev.: 6650.00 ft
Log Measured From: KELLY BUSHING 23.50 ft above Perm. Datum
Drilling Measured From: KELLY BUSHING

API Serial No.	Section	Township	Range
05−045−20299−00	27	5S	95W

Logging Date		15−Aug−2012					
Run Number		1					
Depth Driller		11265 ft					
Schlumberger Depth		11177 ft					
Bottom Log Interval		11156 ft					
Top Log Interval		3000 ft					
Casing Fluid Type		FRESH WATER					
Salinity							
Density		8.4 lbm/gal					
Fluid Level		100 ft					
BIT/CASING/TUBING STRING							
Bit Size		7.875 in					
From		7553 ft					
To		11265 ft					
Casing/Tubing Size		4.500 in					
Weight		11.6 lbm/ft					
Grade		P−110					
From		23.5 ft					
To		11251 ft					
Maximum Recorded Temperatures		291 degF					
Logger On Bottom	Time	15−Aug−2012	9:00				
Unit Number	Location	391	GRAND JUNCTION				
Recorded By		KIRSTIE BUNTING					
Witnessed By		JOHN MILLER					

		Run 1	Run 2	Run
PVT DATA	Oil Density			
	Water Salinity			
	Gas Gravity			
	Bo			
	Bw			
	1/Bg			
	Bubble Point Pressure			
	Bubble Point Temperature			
Solution GOR				
Maximum Deviation				
CEMENTING DATA				
Primary/Squeeze		Primary		
Casing String No				
Lead Cement Type				
Volume				
Density				
Water Loss				
Additives				
Tail Cement Type				
Volume				
Density				
Water Loss				
Additives				
Expected Cement Top				

Logging Date							
Run Number							
Depth Driller							
Schlumberger Depth							
Bottom Log Interval							
Top Log Interval							
Casing Fluid Type							
Salinity							
Density							
Fluid Level							
BIT/CASING/TUBING STRING							
Bit Size							
From							
To							
Casing/Tubing Size							
Weight							
Grade							
From							
To							
Maximum Recorded Temperatures							
Logger On Bottom	Time						
Unit Number	Location						
Recorded By							
Witnessed By							



DEPTH SUMMARY LISTING

Date Created: 15−AUG−2012 9:56:44

Depth System Equipment

Depth Measuring Device		Tension Device		Logging Cable	
Type:	IDW−B	Type:	CMTD−B/A	Type:	1−25ZT
Serial Number:	6214	Serial Number:	5006	Serial Number:	111306
Calibration Date:	04−24−2012	Calibration Date:	08−14−2012	Length:	16000 FT
Calibrator Serial Number:	33	Calibrator Serial Number:	174878		
Calibration Cable Type:	1−25P	Number of Calibration Points:	10	Conveyance Method:	Wireline
Wheel Correction 1:	−3	Calibration RMS:	5	Rig Type:	LAND
Wheel Correction 2:	−4	Calibration Peak Error:	7		

Depth Control Parameters

Log Sequence:	First Log In the Well
Rig Up Length At Surface:	200.00 FT
Rig Up Length At Bottom:	200.00 FT
Rig Up Length Correction:	0.00 FT
Stretch Correction:	0.00 FT
Tool Zero Check At Surface:	

Depth Control Remarks

1. ALL SCHLUMBERGER DEPTH CONTROL PROCEDURES UTILIZED
2. PRIMARY DEPTH CONTROL : IDW
3. SECONDARY DEPTH CONTROL: DRUM COUNTER (SWPT)
4.
5.
6.

OTHER SERVICES1	OTHER SERVICES2
OS1: SLIM CEMENT MAPPING	OS1:
OS2: TOOL	OS2:
OS3: CBL−VDL	OS3:
OS4: GR−CCL	OS4:
OS5:	OS5:
REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
FIRST RUN IN HOLE CORRELATED TO DOWN LOG	
TOOL RAN AS PER TOOL SKETCH	
TOTAL DEPTH TAGGED = 11177 FT	
STRETCH CORRECTION = 5 FT	
MAXIMUM RECORDED TEMPERATURE = 291 DEGF	
MAXIMUM RECORDED PRESSURE = 4670 PSIA	

RST FLASKED	
SANDSTONE MATRIX USED	
BIT SIZE ZONED	
8.750: 23.5’−7553’	
7.875: 7553’−11265’	
THANK YOU FOR CHOOSING E&P WIRELINE A SCHLUMBERGER COMPANY	
SLB CREW: KBUNTING, WFLOYD, WAZIZ, KJOHNS, CARNOLD	

RUN 1		RUN 2	
SERVICE ORDER #:	CADB−00012	SERVICE ORDER #:	
PROGRAM VERSION:	19C0−187	PROGRAM VERSION:	
FLUID LEVEL:	100 ft	FLUID LEVEL:	

LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

RUN 1 RUN 2

SURFACE EQUIPMENT

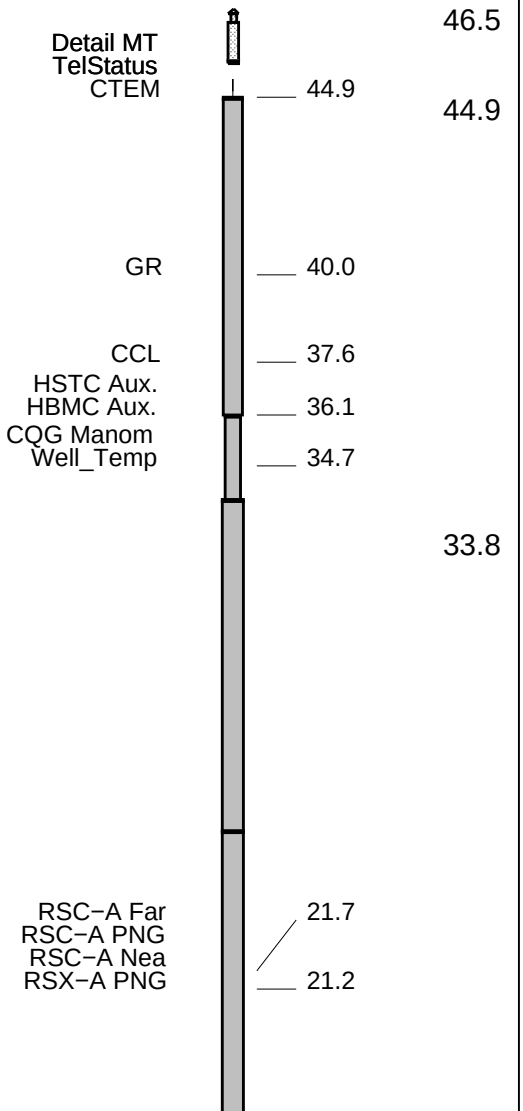
WITM−A
PSC_16MHZ

DOWNHOLE EQUIPMENT

MH−22
MH−22

HBMS−B
PSC−A
HUDH−A
HSTC−A 2880
HBMC−A
GR
CCL
HBMC
HTPS−A
HCQG_E_Mano
RTD_Thermometer

RST−CF
UDFH−RSCH−A
RSC−E 429
UDFH−RSS−A 210
UDFH−RSXH−A
RSX−E 436



AH−BNS

Tension HV 0.0
TOOL ZERO

0.2

MAXIMUM STRING DIAMETER 2.13 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN FEET

Schlumberger

MAIN PASS RST SIGMA

MAXIS Field Log

Input DLIS Files

DEFAULT	RST_HBMS_008LUP	FN:7	PRODUCER	15−Aug−2012 08:52	11185.5 FT	2930.5 FT

Output DLIS Files

DEFAULT	RST_HBMS_009PUP	FN:8	PRODUCER	15−Aug−2012 11:13	11190.5 FT	2911.5 FT

OP System Version: 19C0−187

RST−CF	SRPC−5095−H2−2011−OP19	HBMS−B	19C0−187

Changed Parameter Summary

DLIS Name	New Value	Previous Value	Depth & Time
BS	7.875 IN	8.750 IN	11190.5 11:13:19
	8.750 IN	7.875 IN	7553.0 11:15:59

PIP SUMMARY

Time Mark Every 60 S

Crossover in sand
From RST_CIRF_FIL to RST_CIRN_FIL

WINR Gas Flag

From WINR to RST_CIRF_FIL

RST Weighted Inelastic Ratio (WINR_RST)
0.4 (----) 0

Minitron Arc Detection (MARC)
0 (----) 5

RST Porosity (TPHI)
0.5 (V/V) 0

RST Capture to Inelastic Ratio Far (CIRF_FIL)
7 (----) 0

RST Borehole Salinity (BSAL)
450 (PPK) -50

Discriminated CCL (CCLD)
3 (V) -1

RST Sigma (SIGM)
60 (CU) 0

Gamma Ray (GR)
0 (GAPI) 150

Tension (TENS)
0 2000

RST Inelastic Ratio (IRAT_FIL)
0.75 (----) 0

RST Capture to Inelastic Ratio Near (CIRN_FIL)
2.5 (----) 0

GR

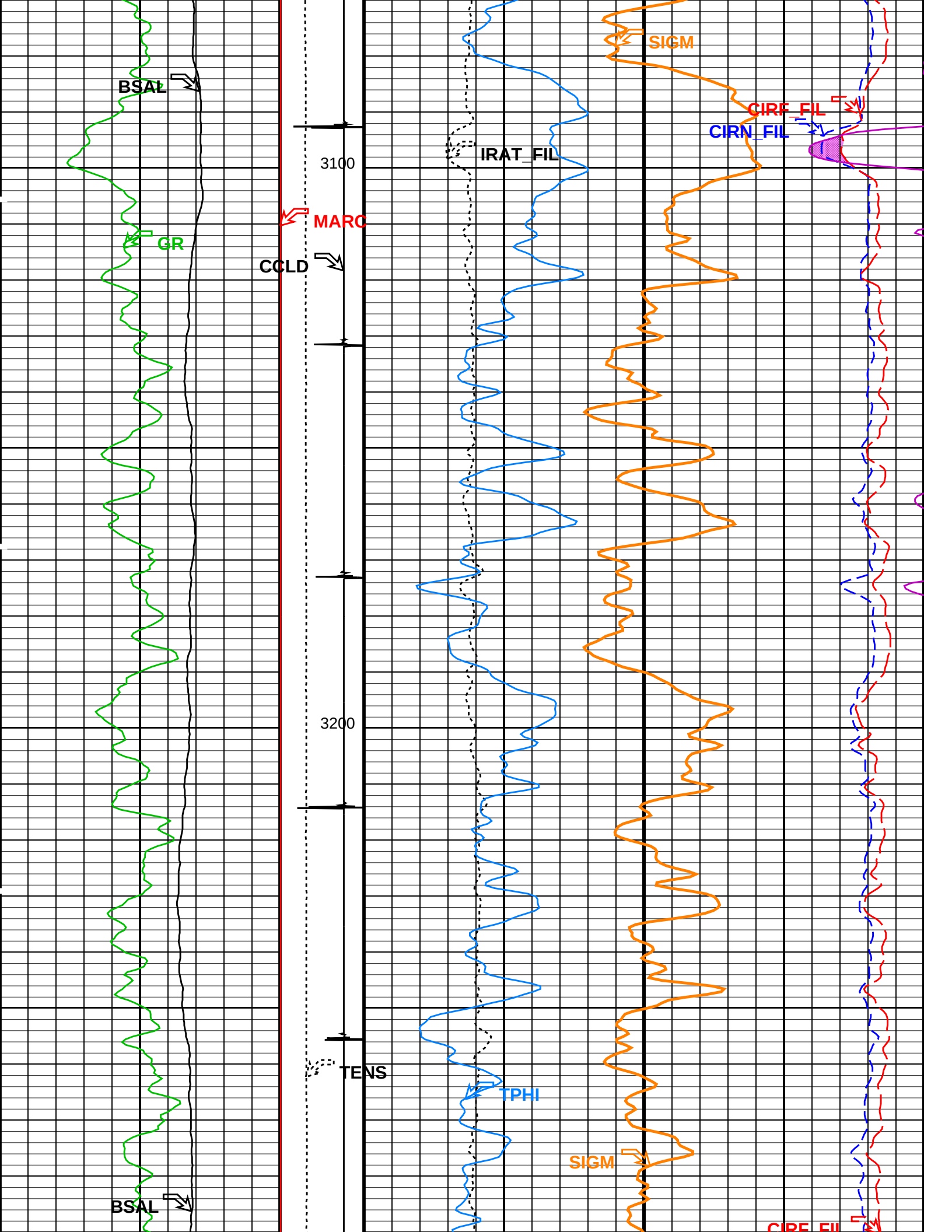
CCLD

Last Reading ALL SENSORS 3000 FT

3000

TENS

TPHI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CIRN_FIL
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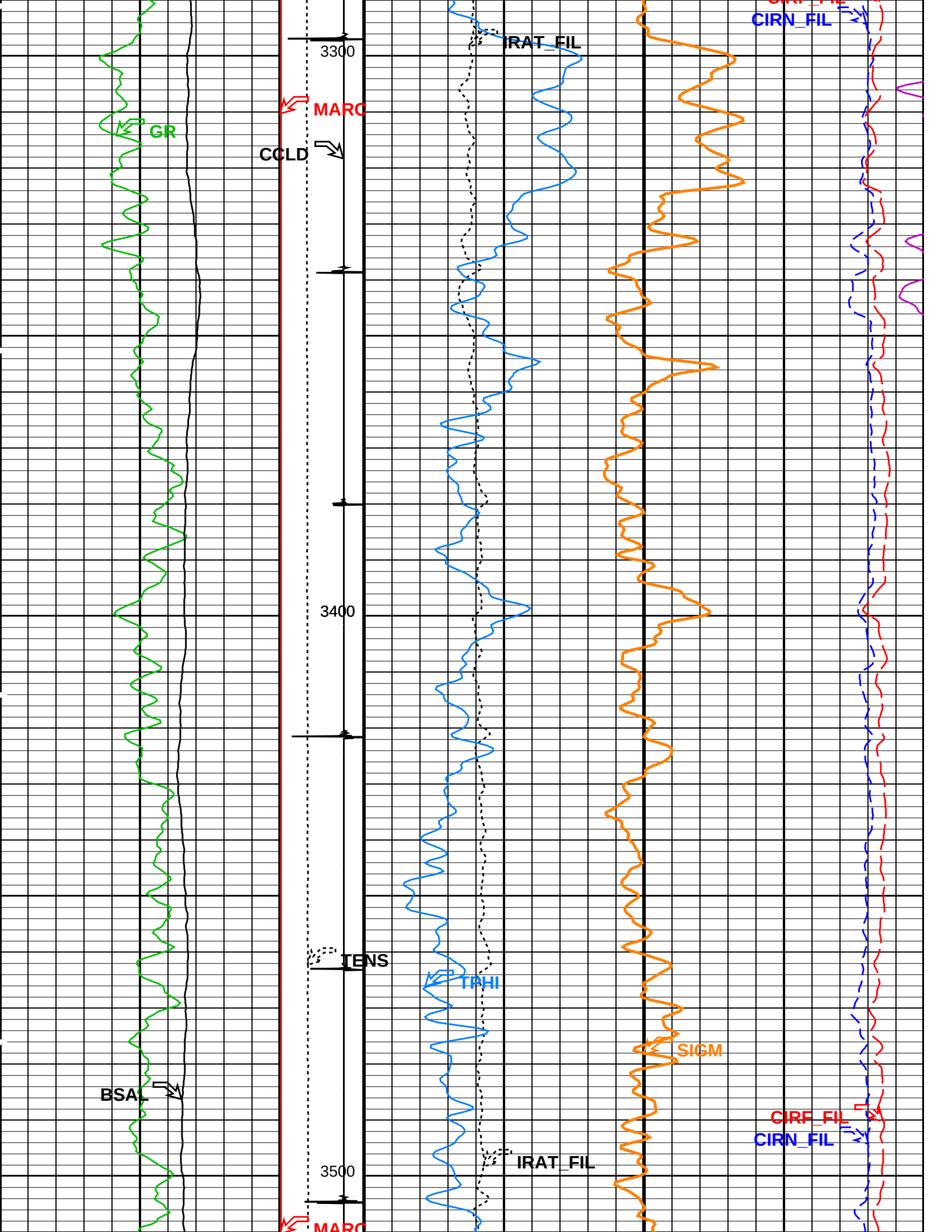
CIRF_FIL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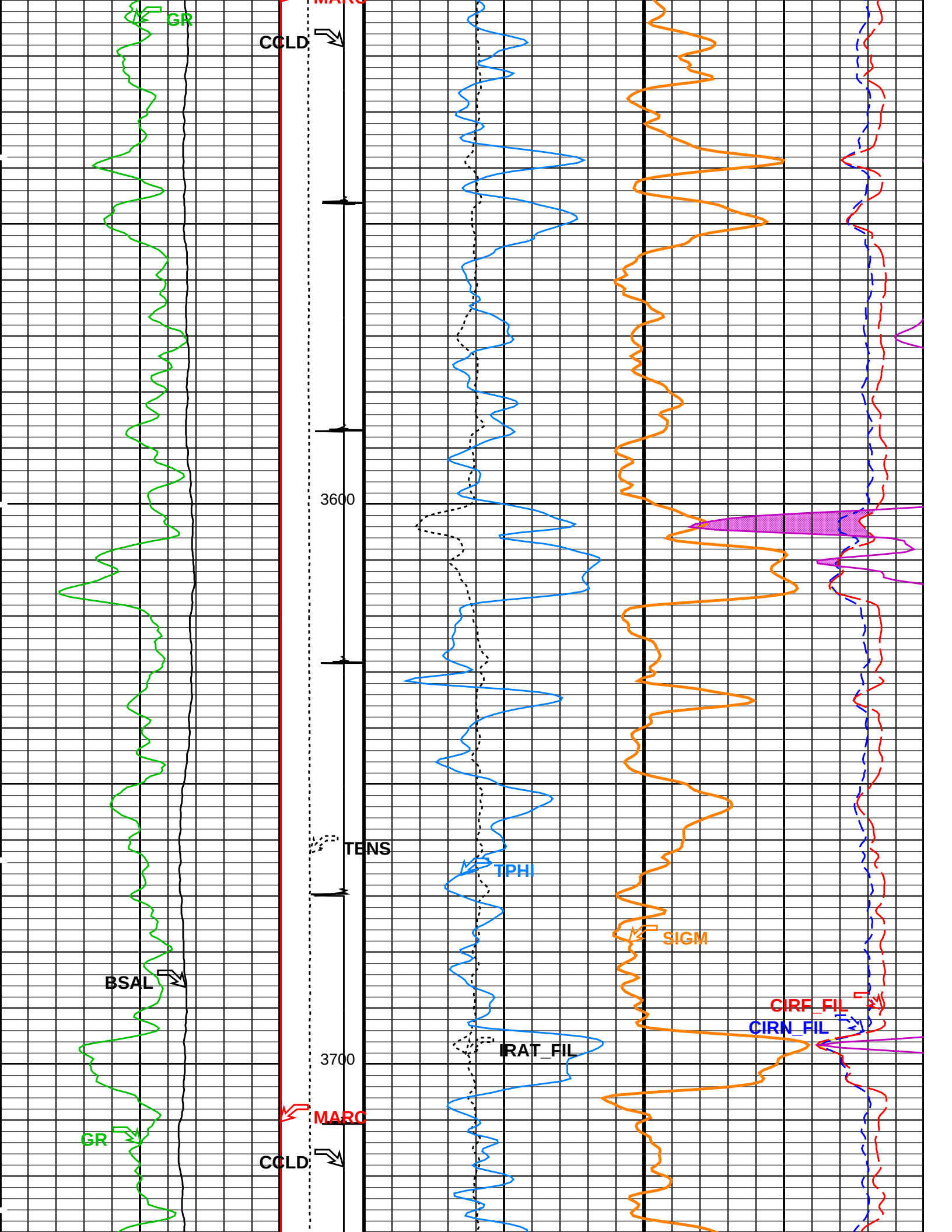
IRAT_FIL
MARC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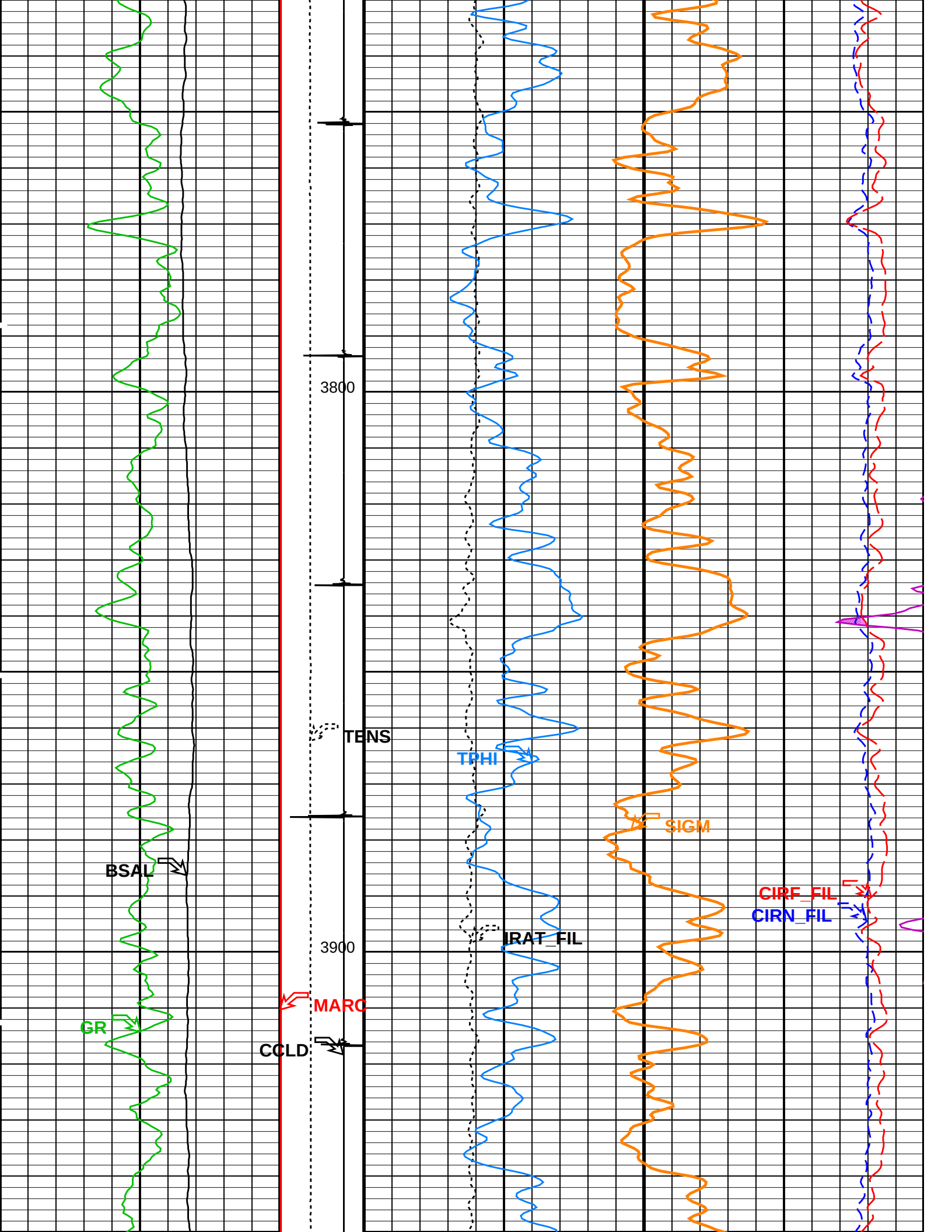
GR
CCLD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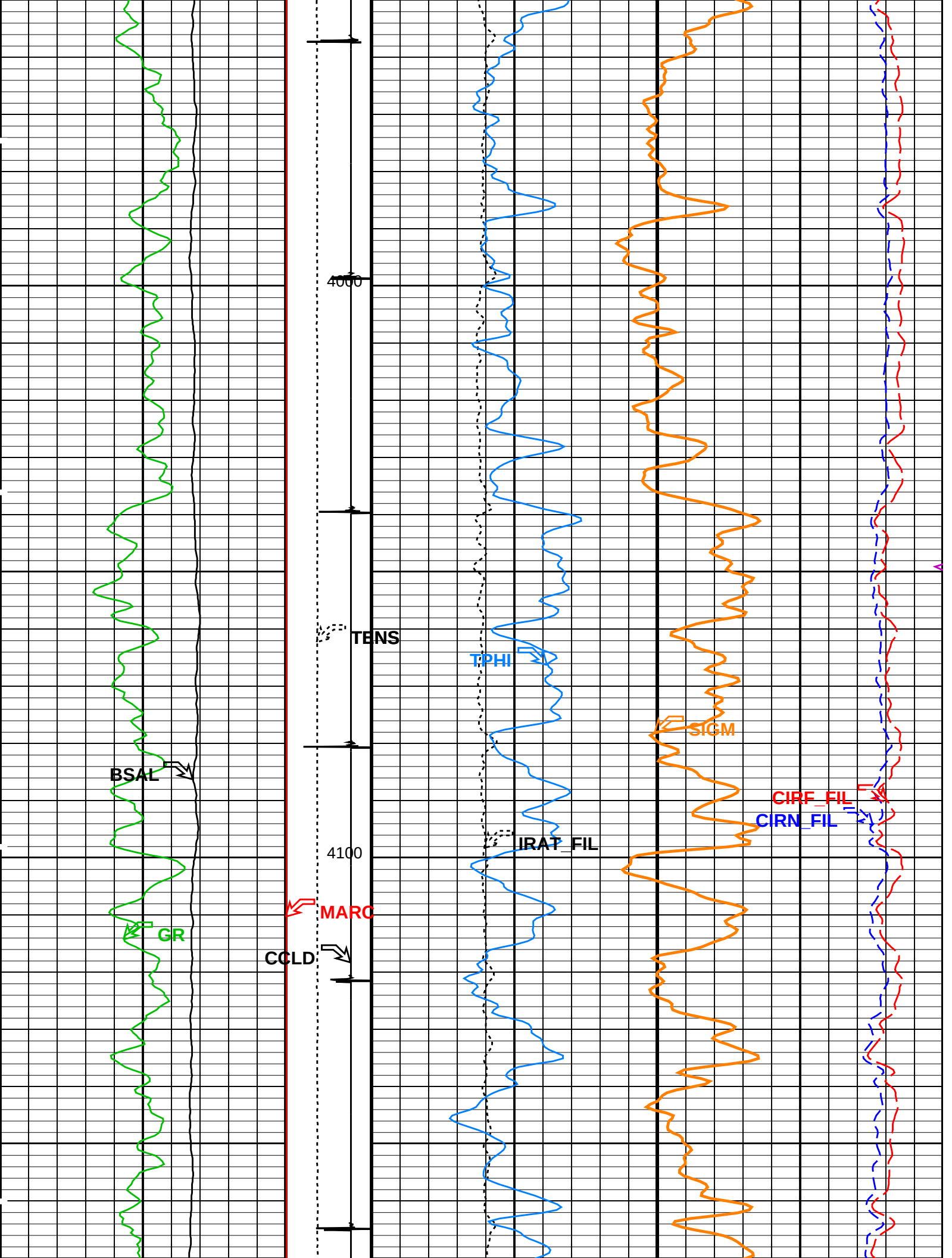
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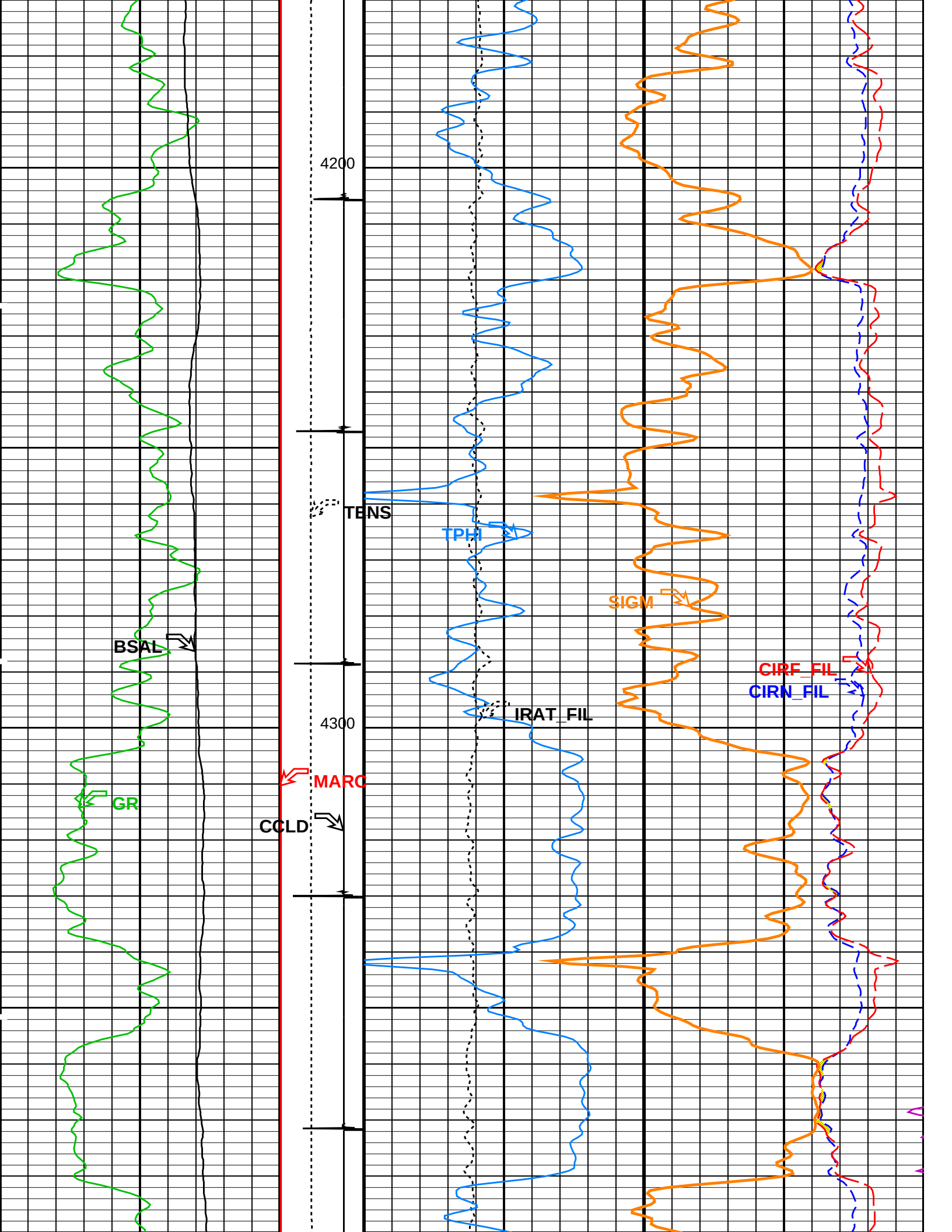
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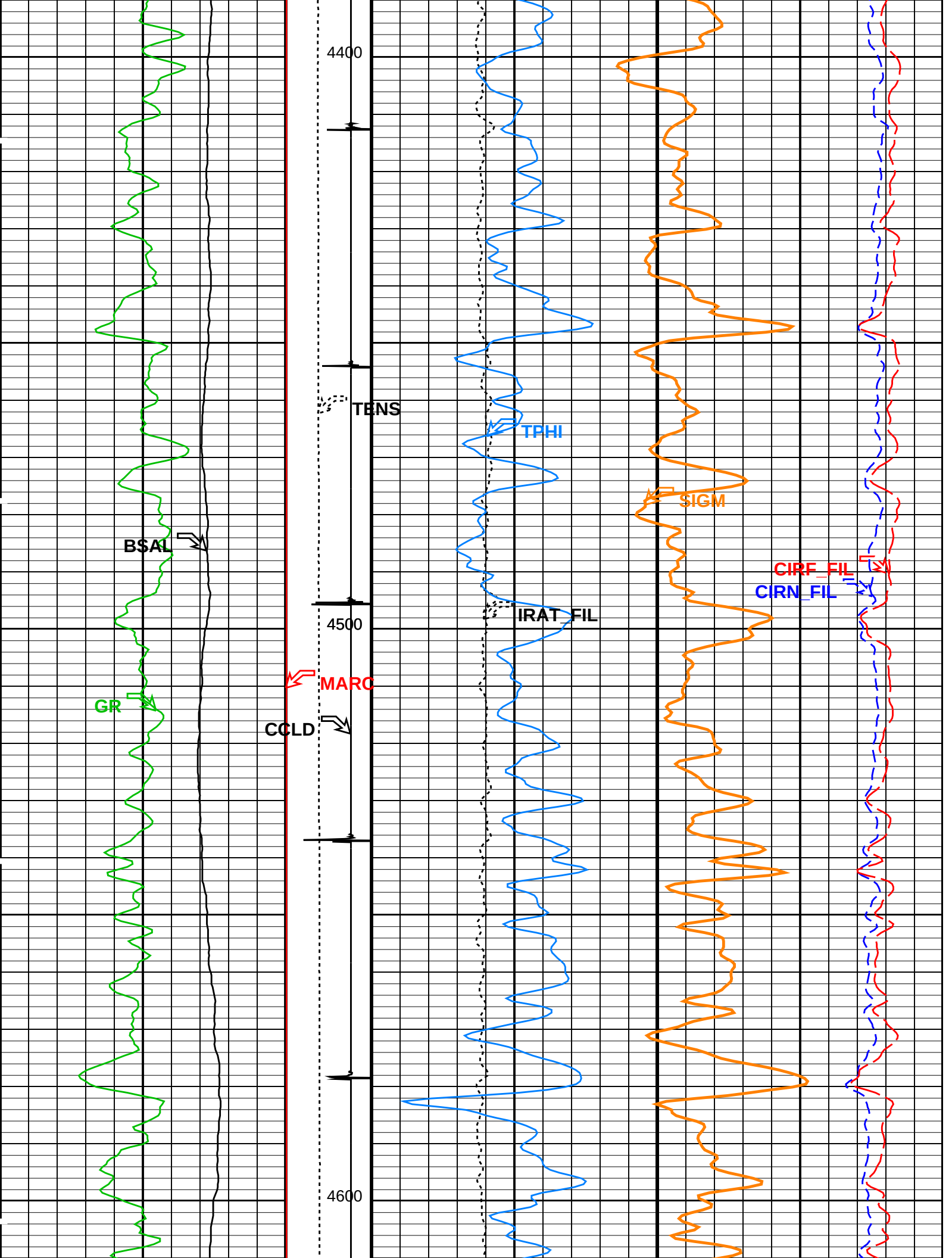
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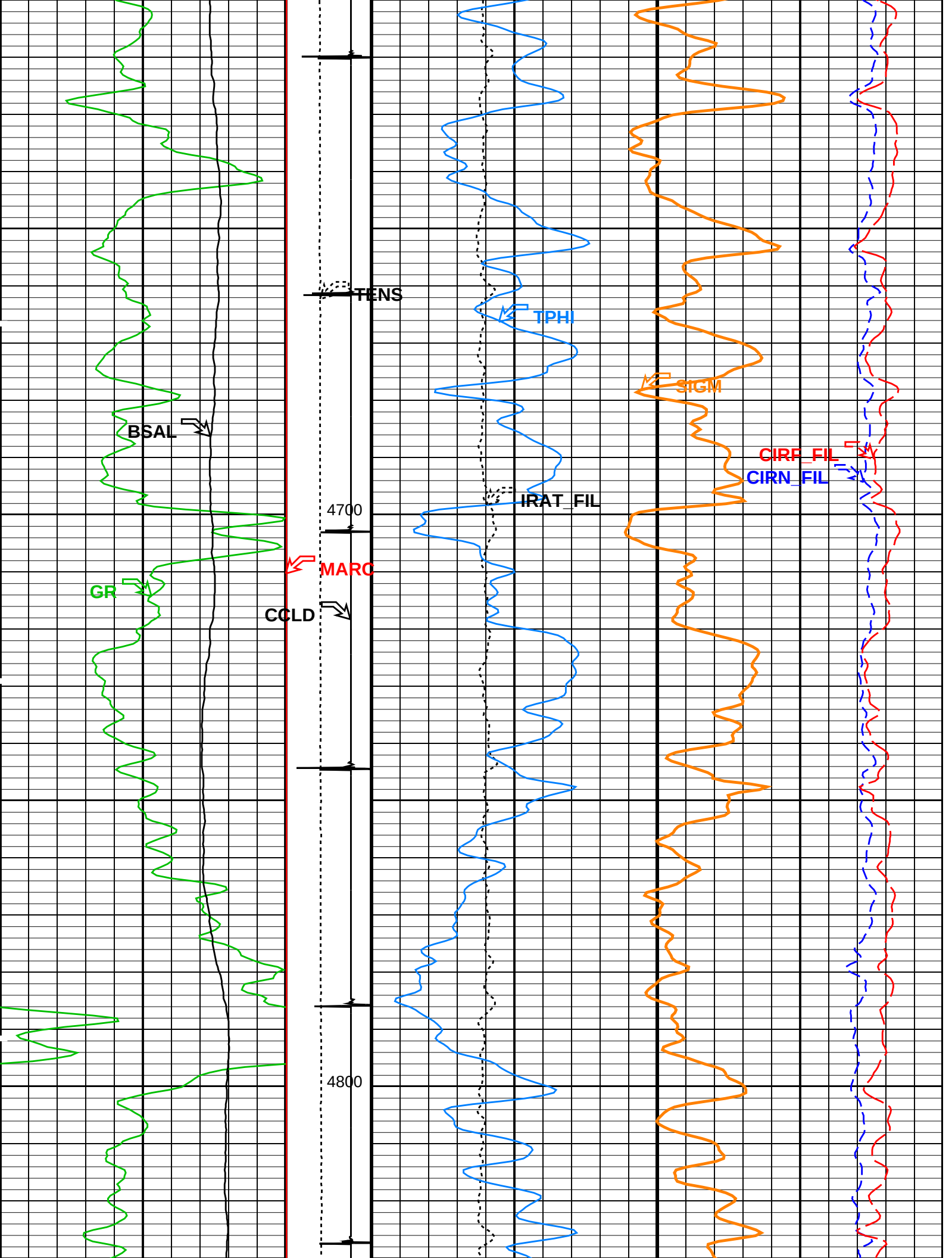
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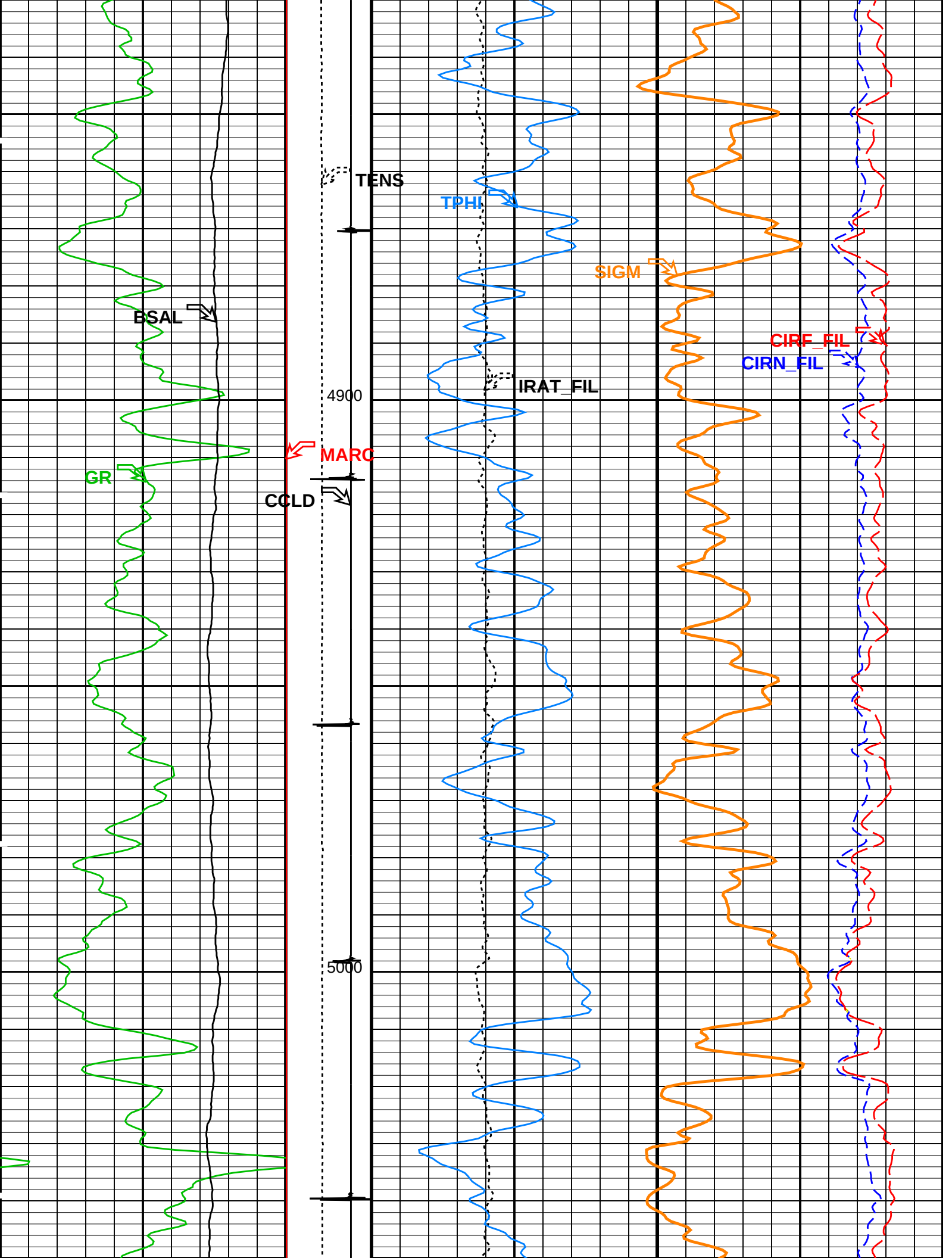
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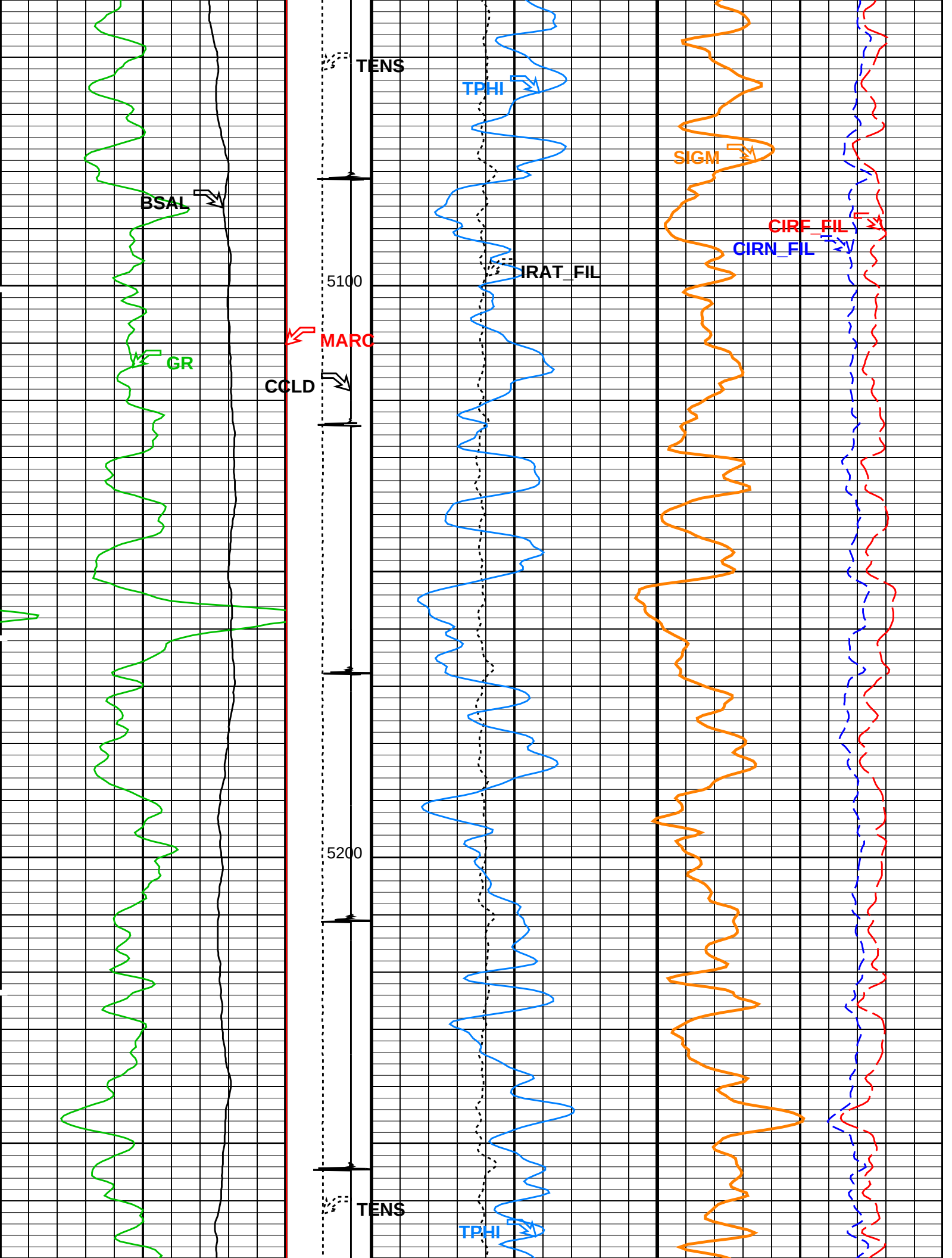
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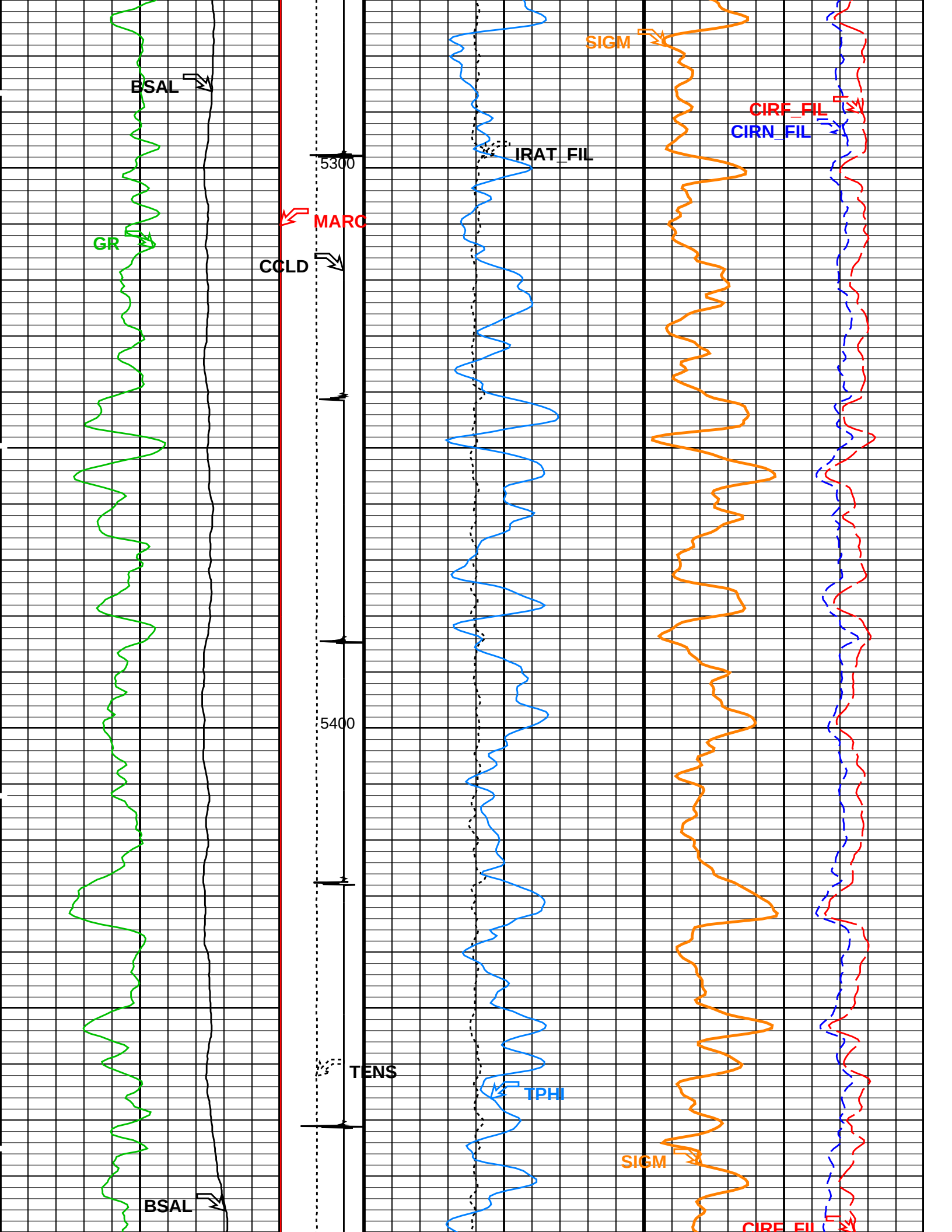
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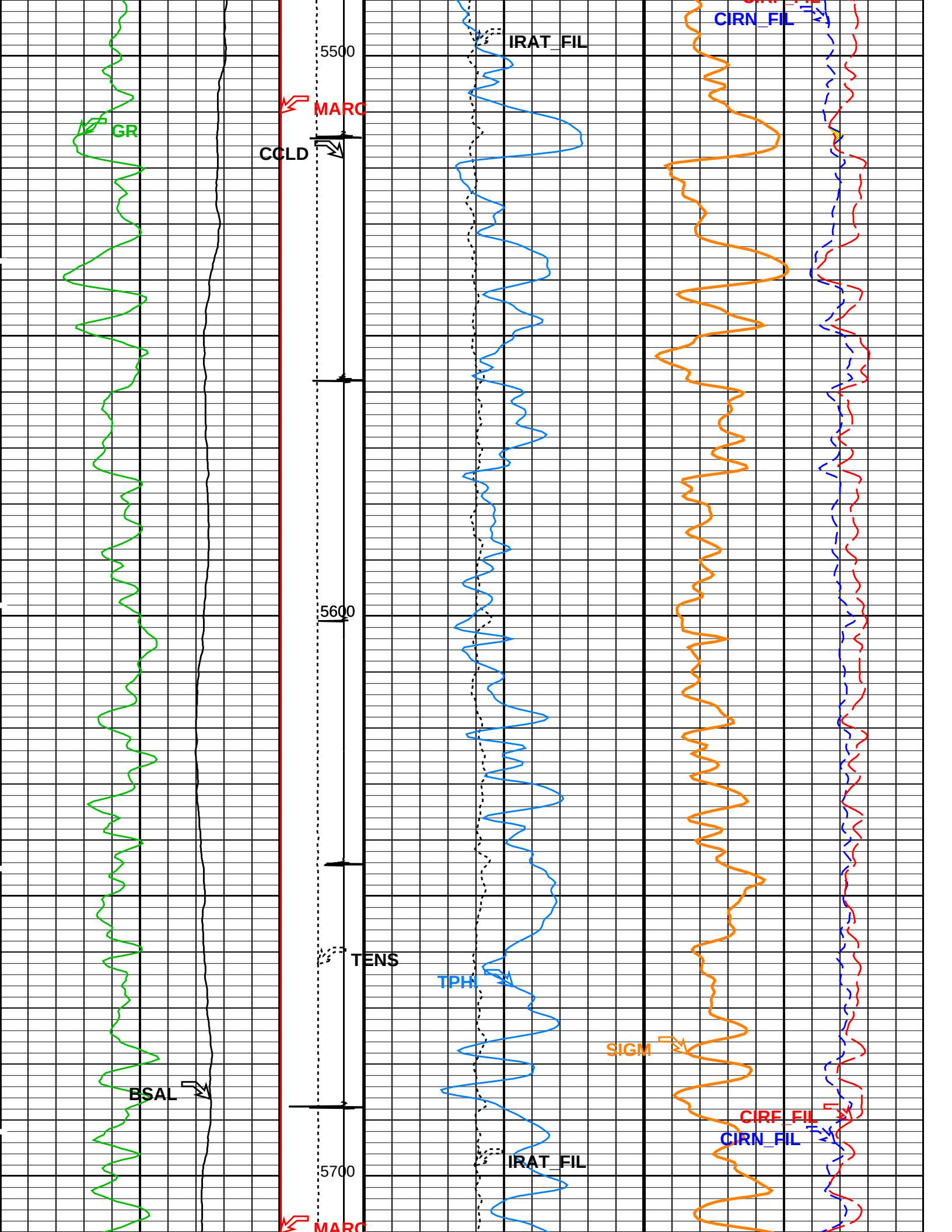
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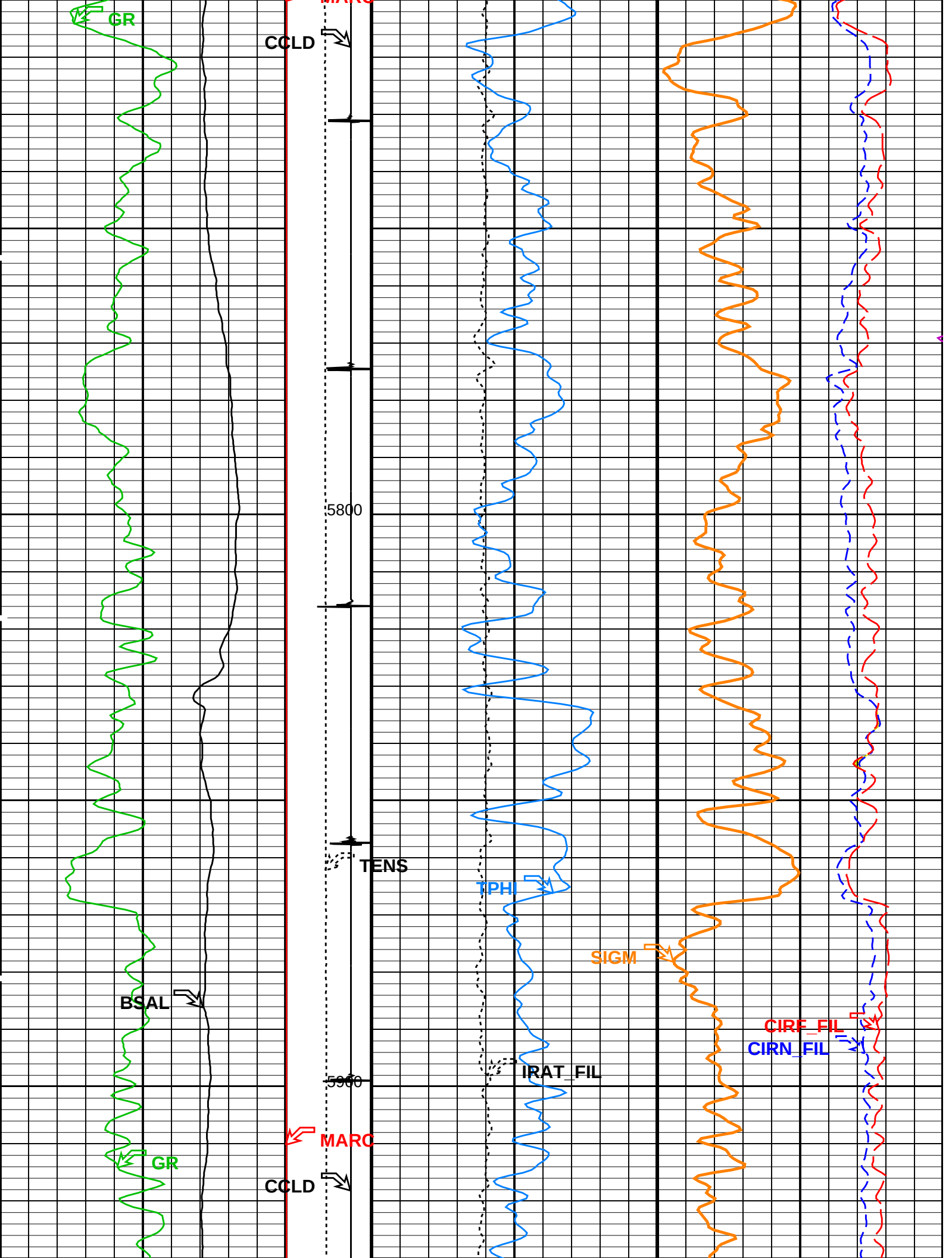
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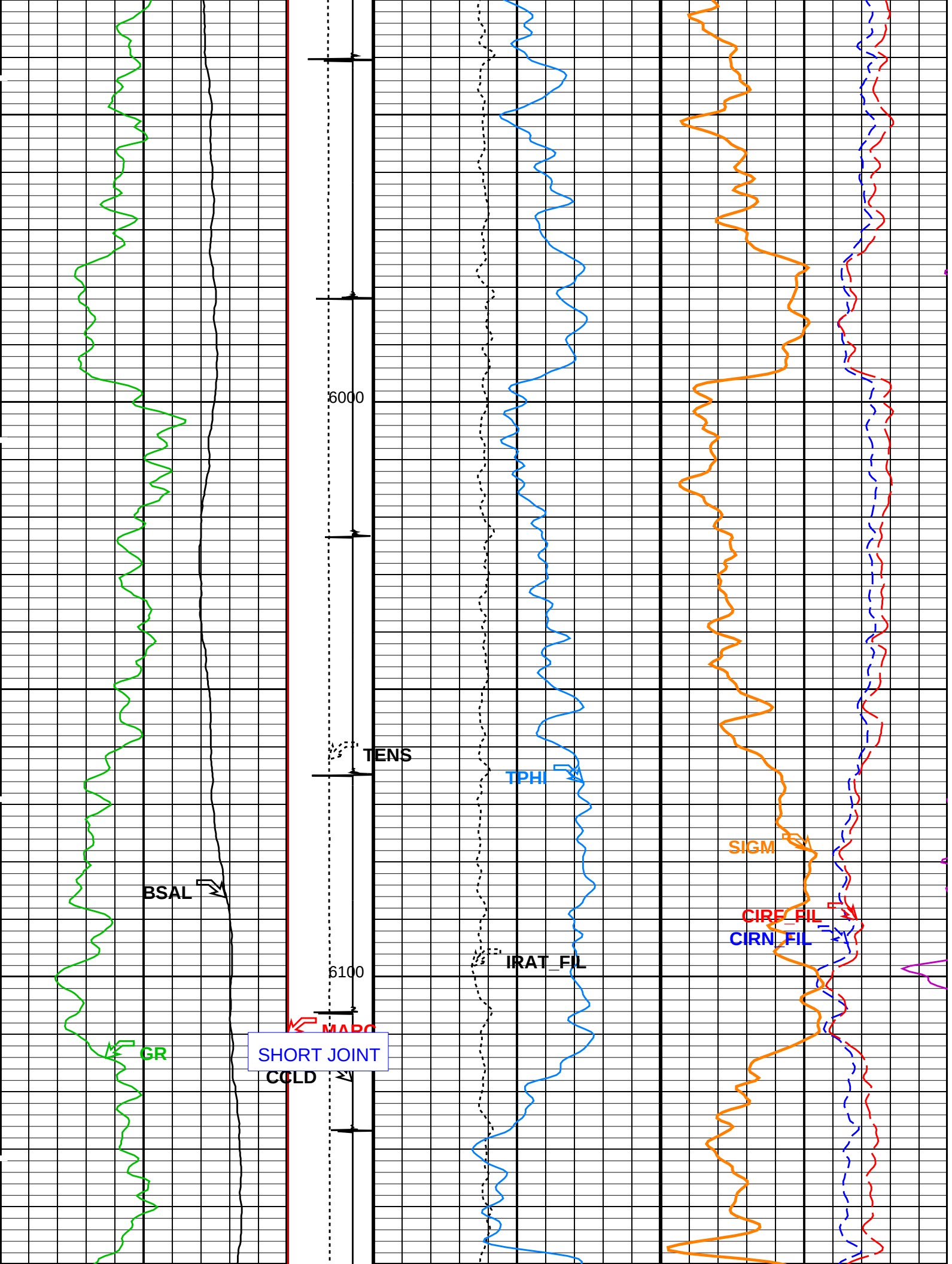
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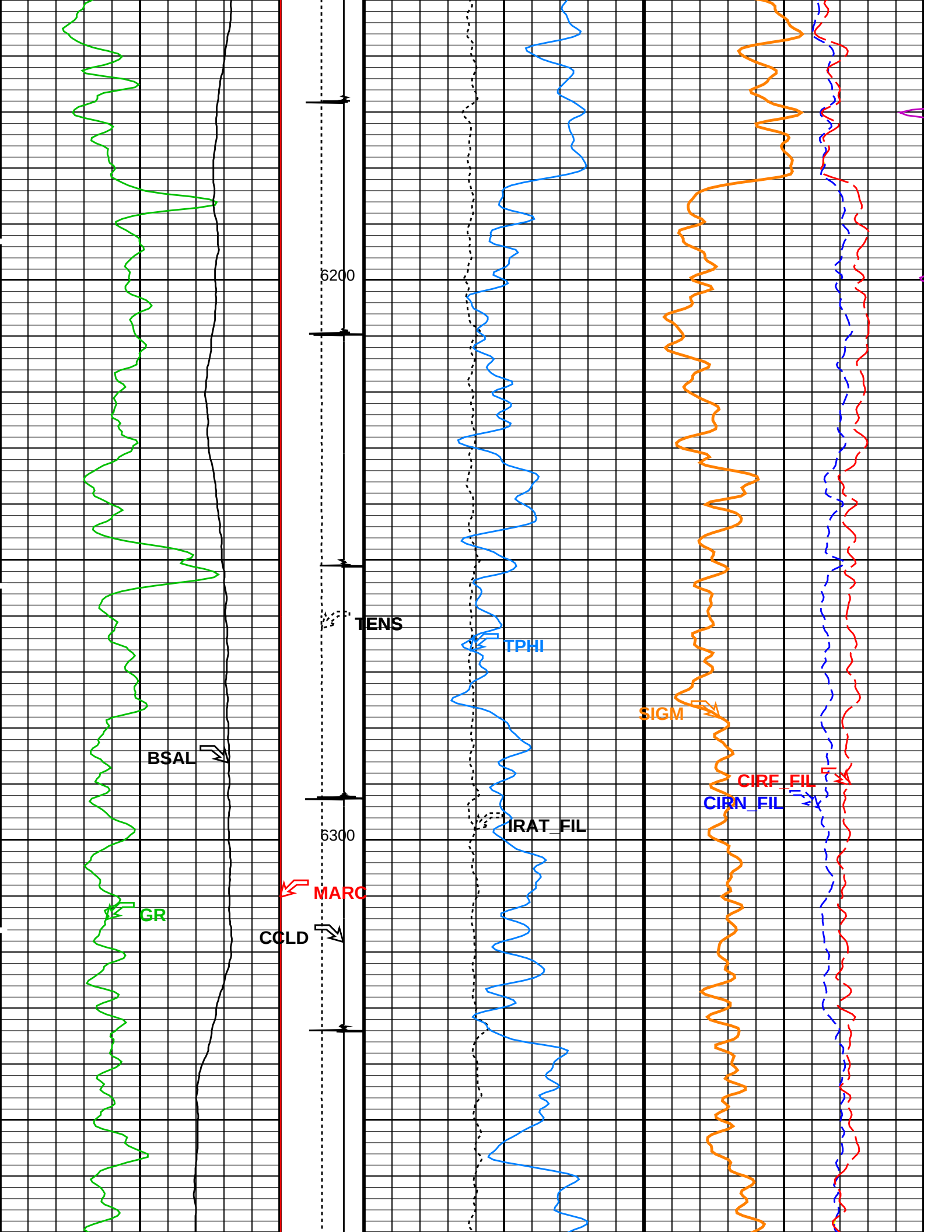
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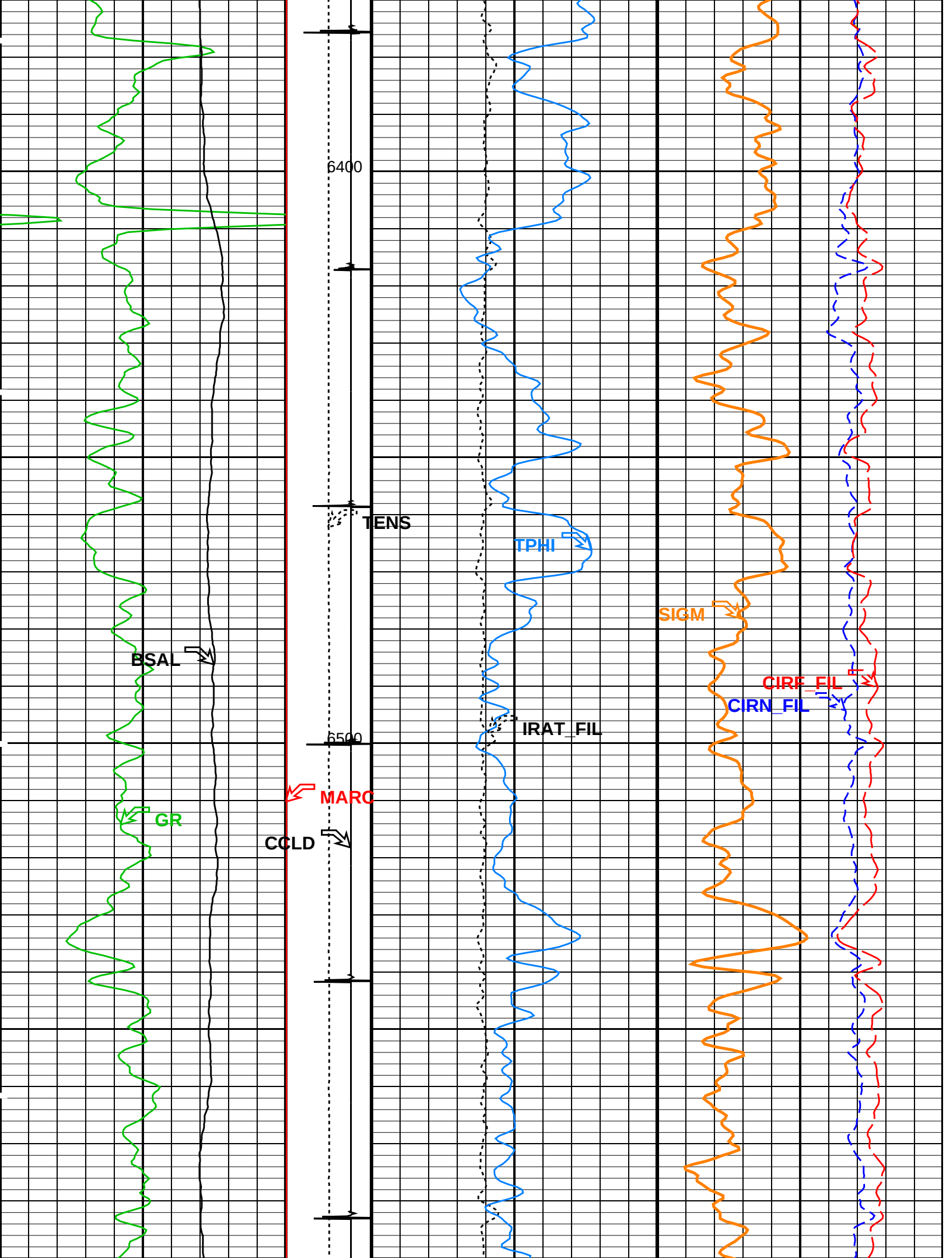
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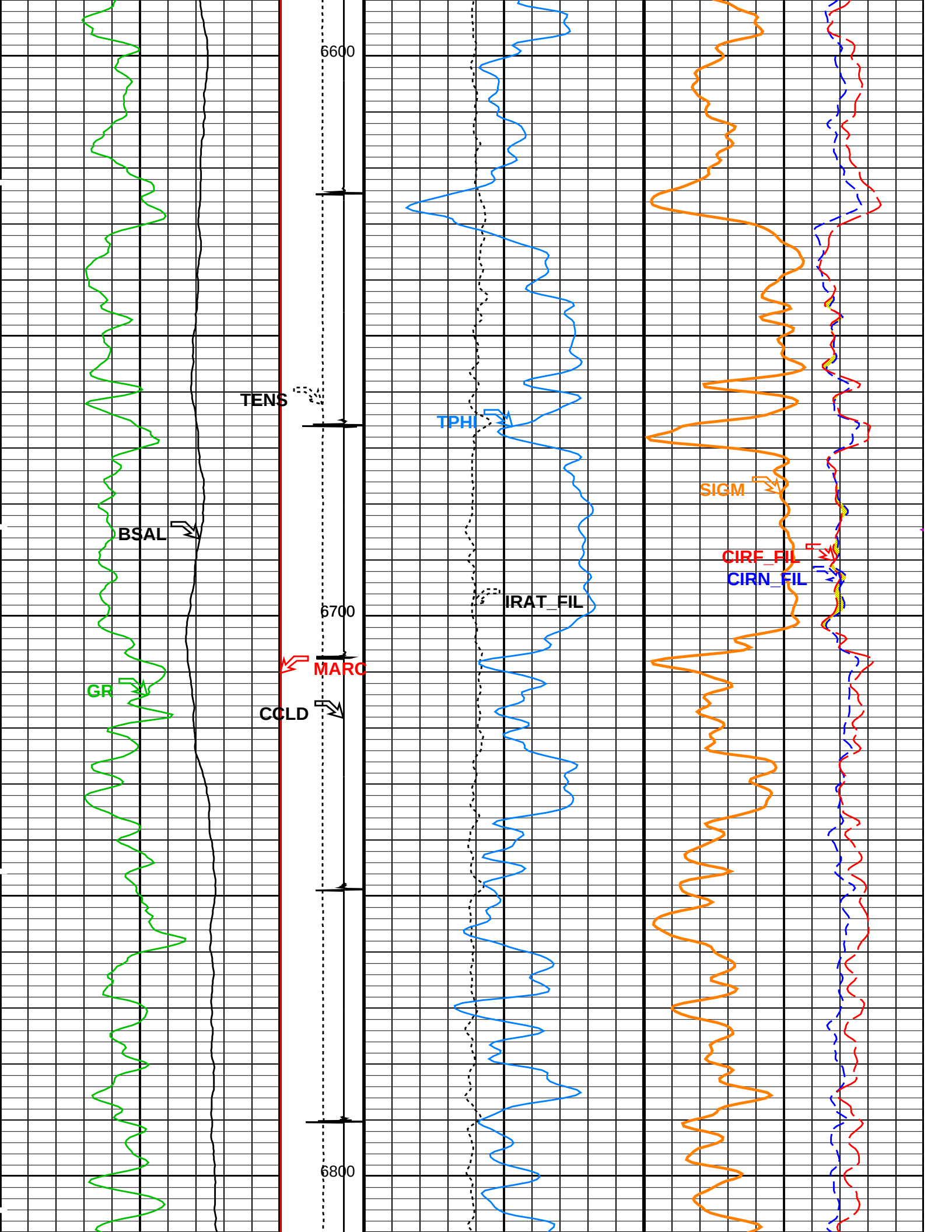
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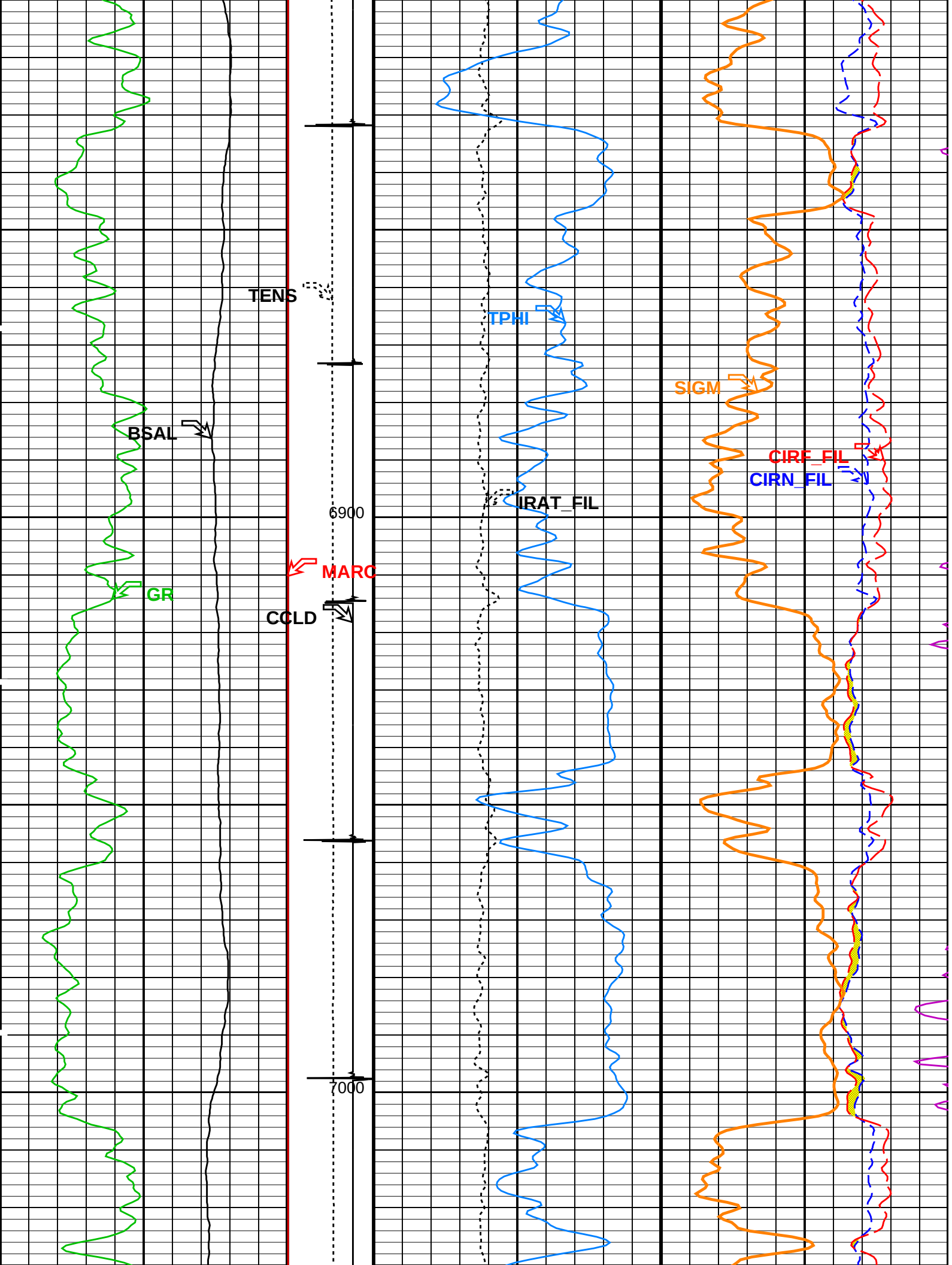
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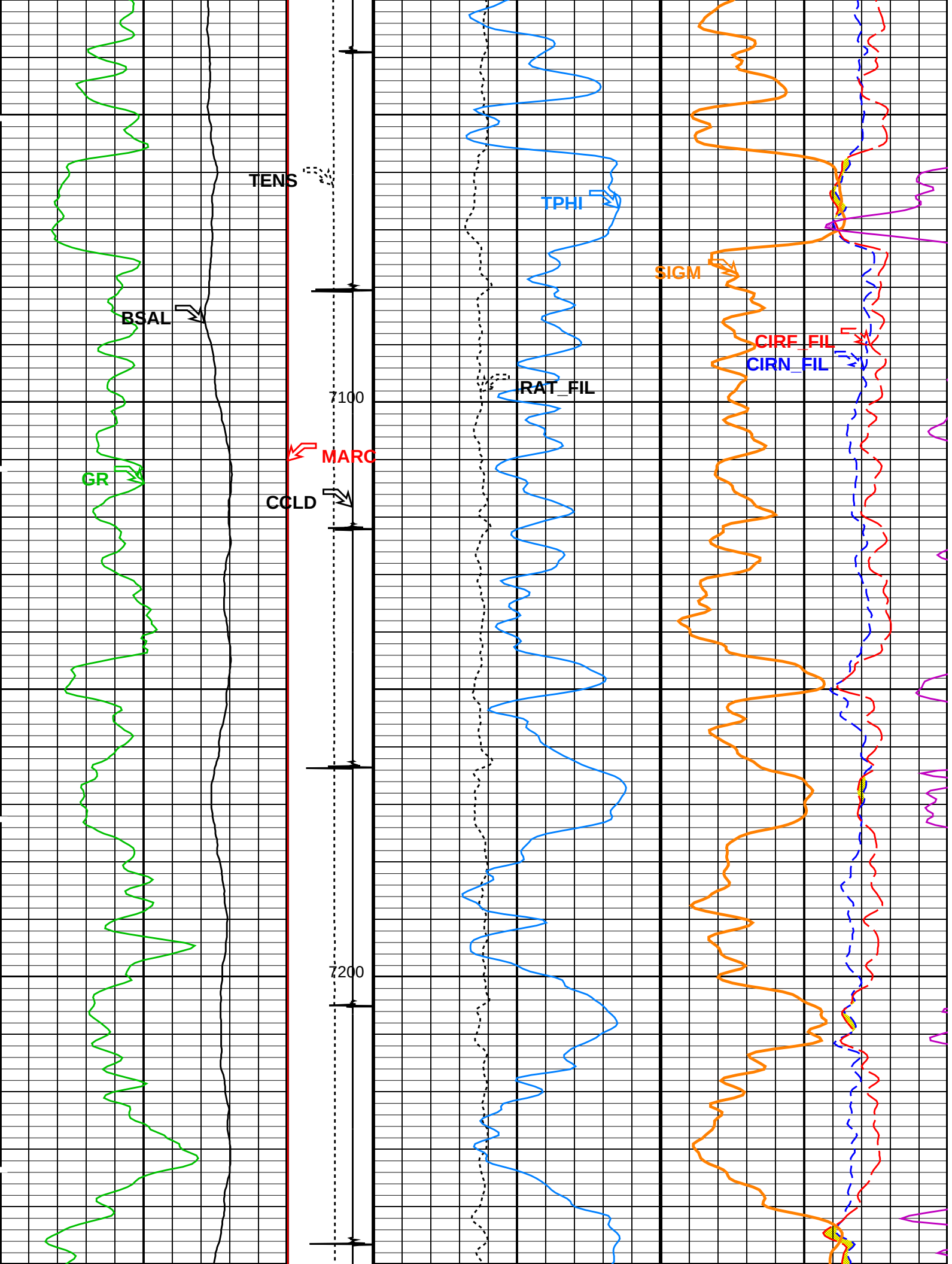
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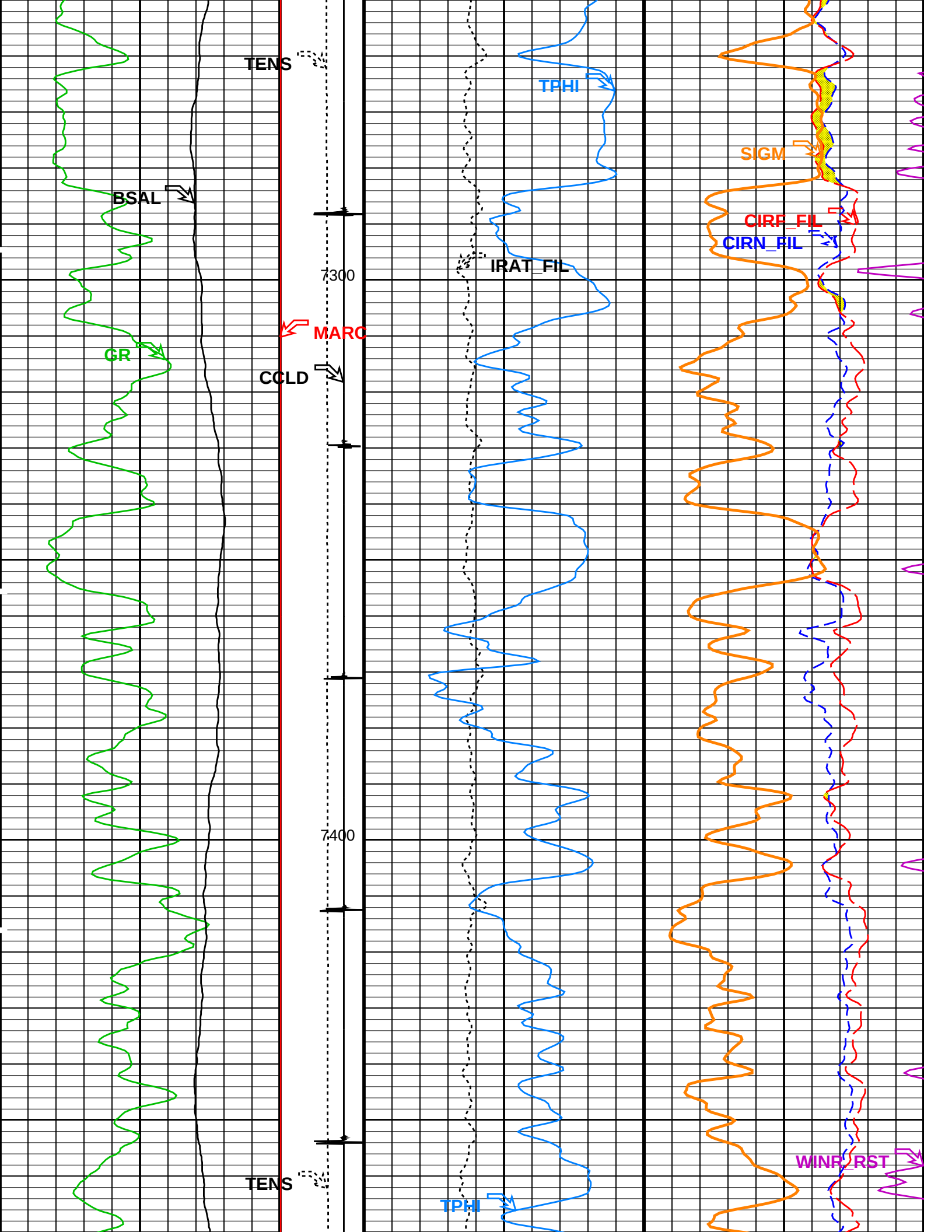
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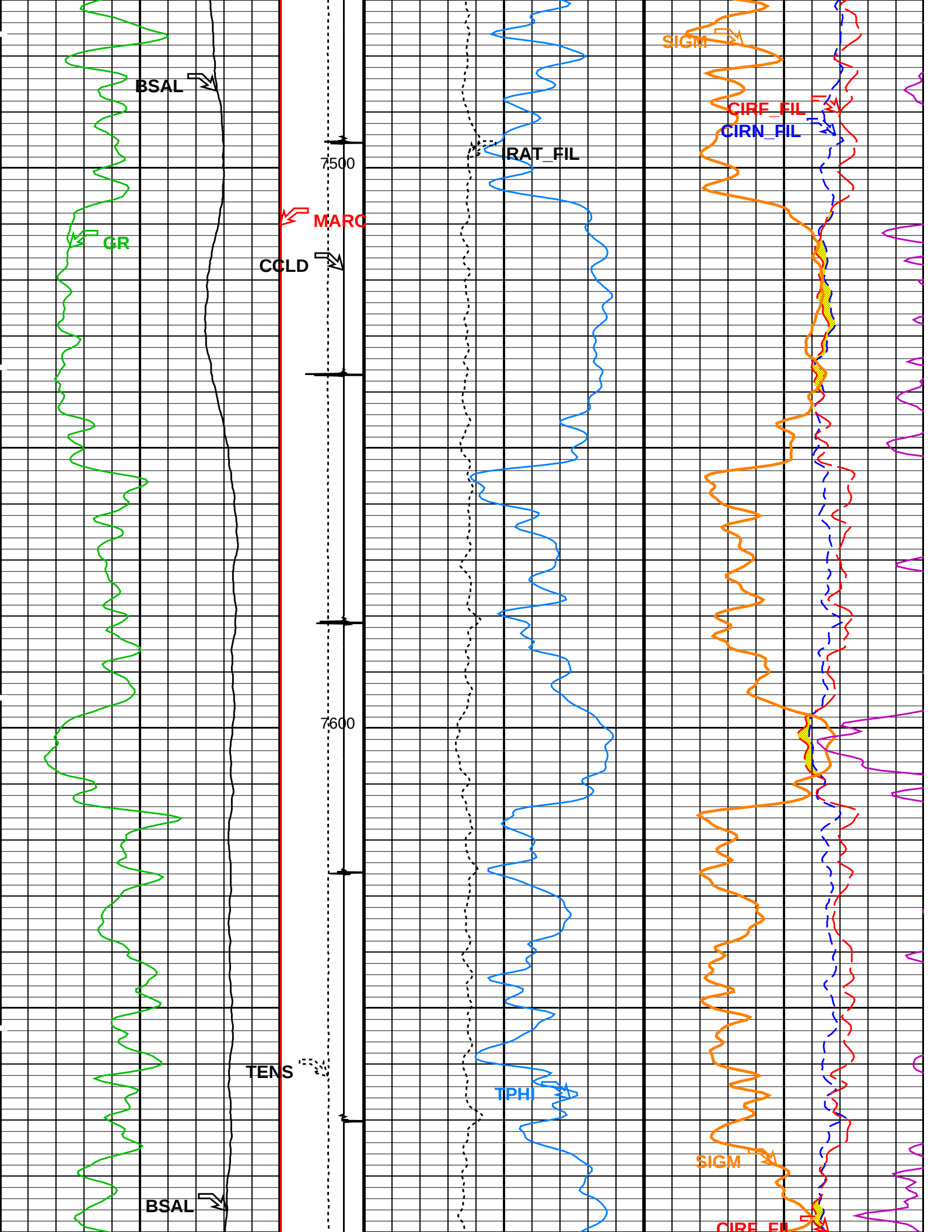
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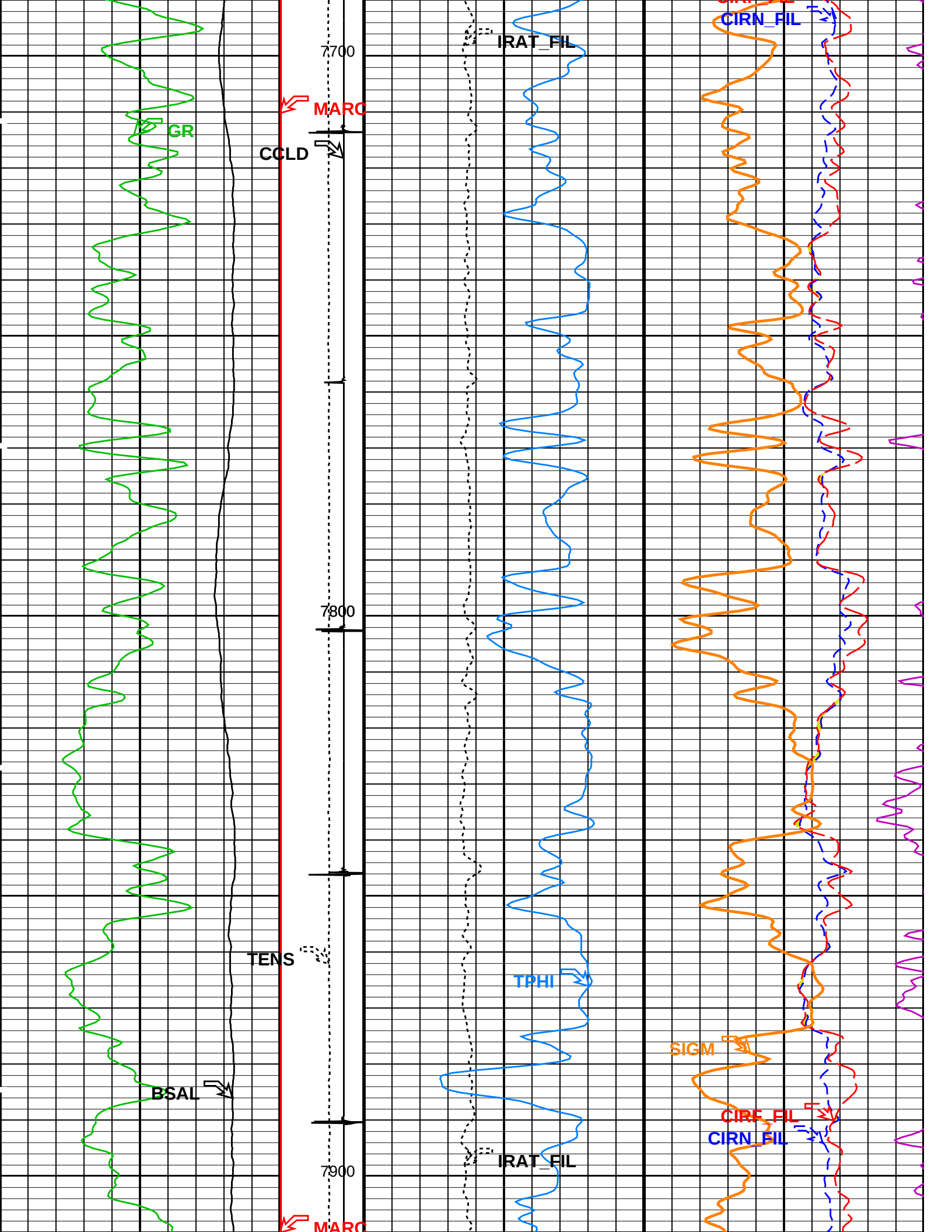
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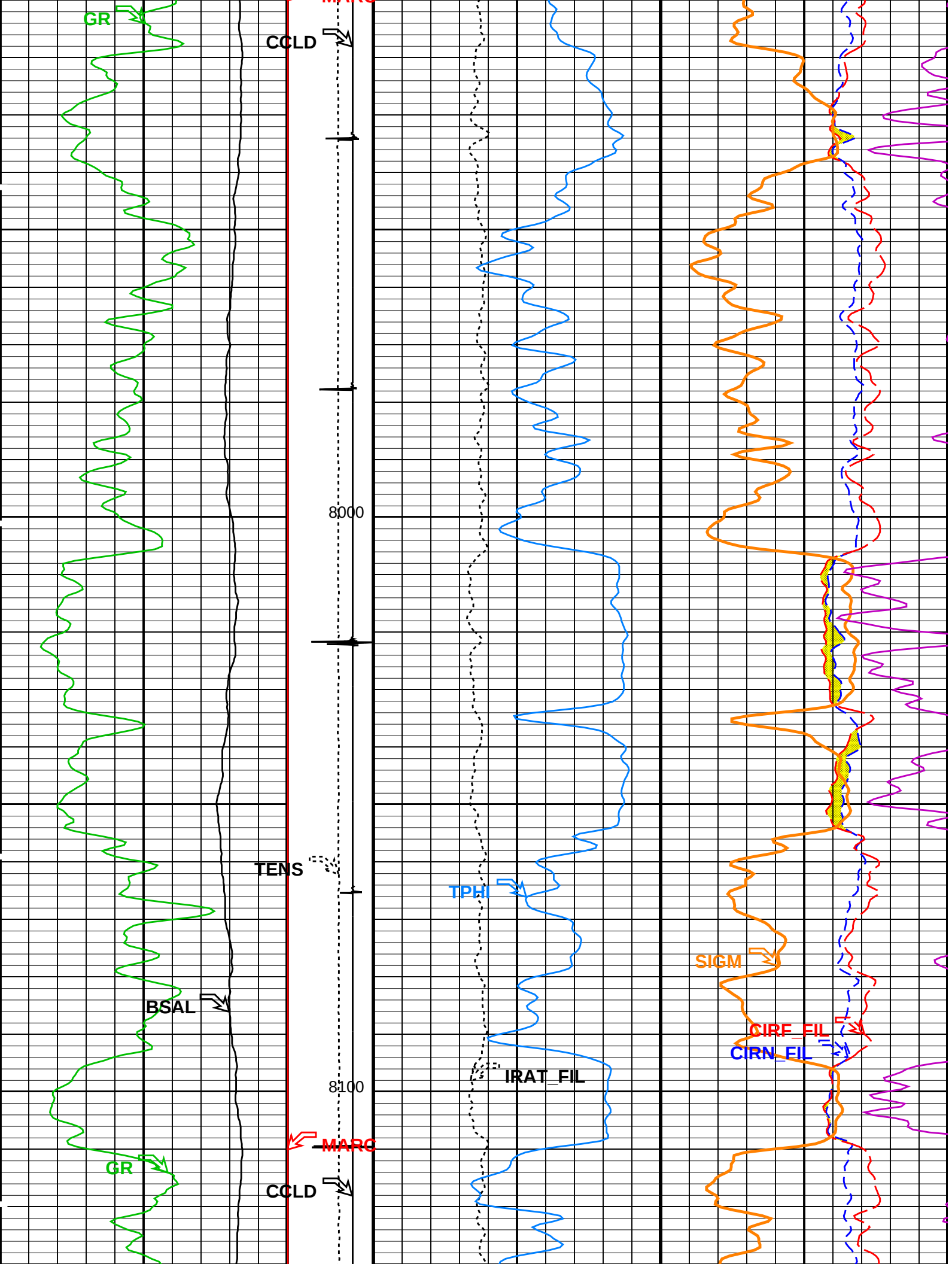
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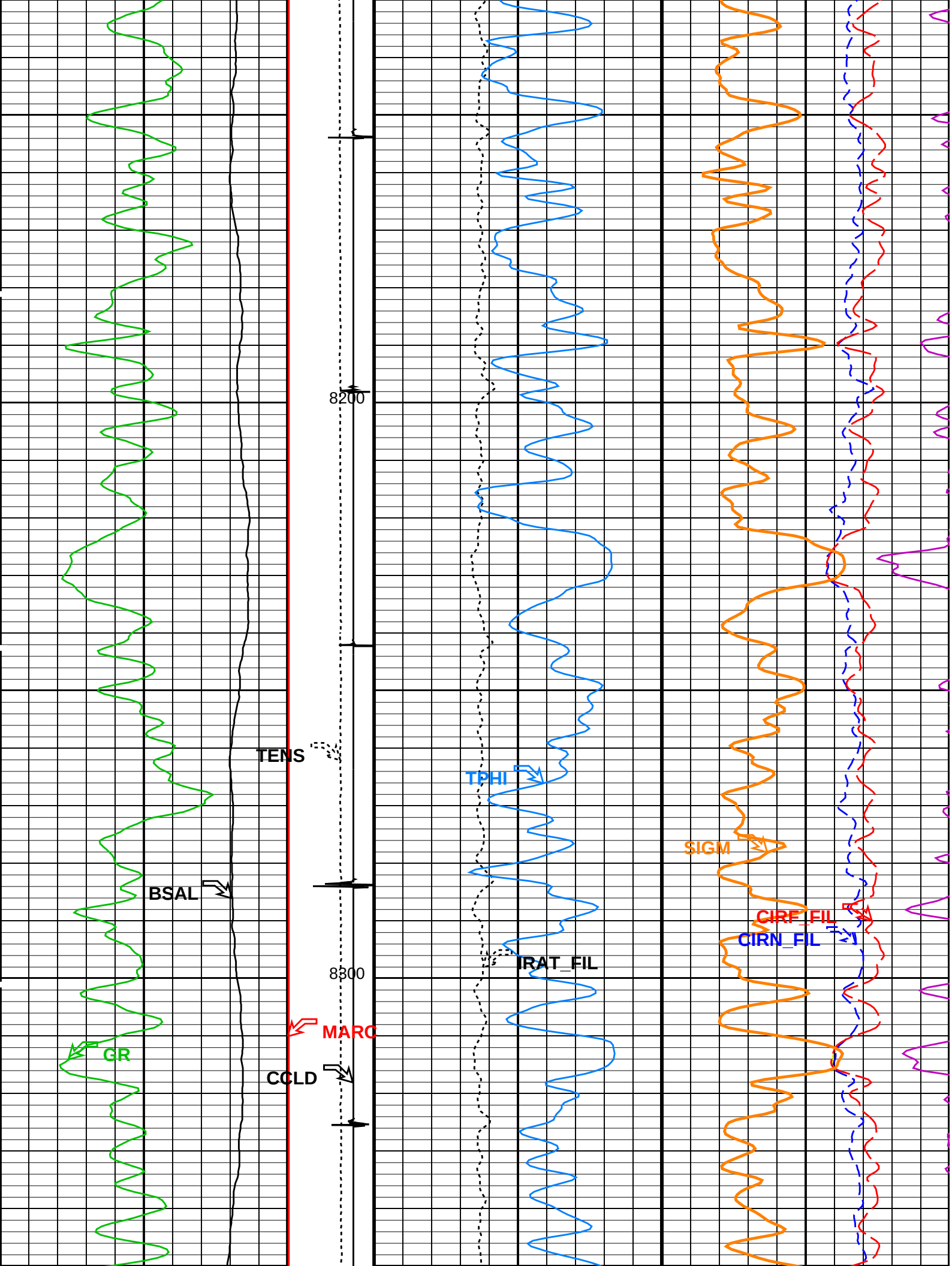
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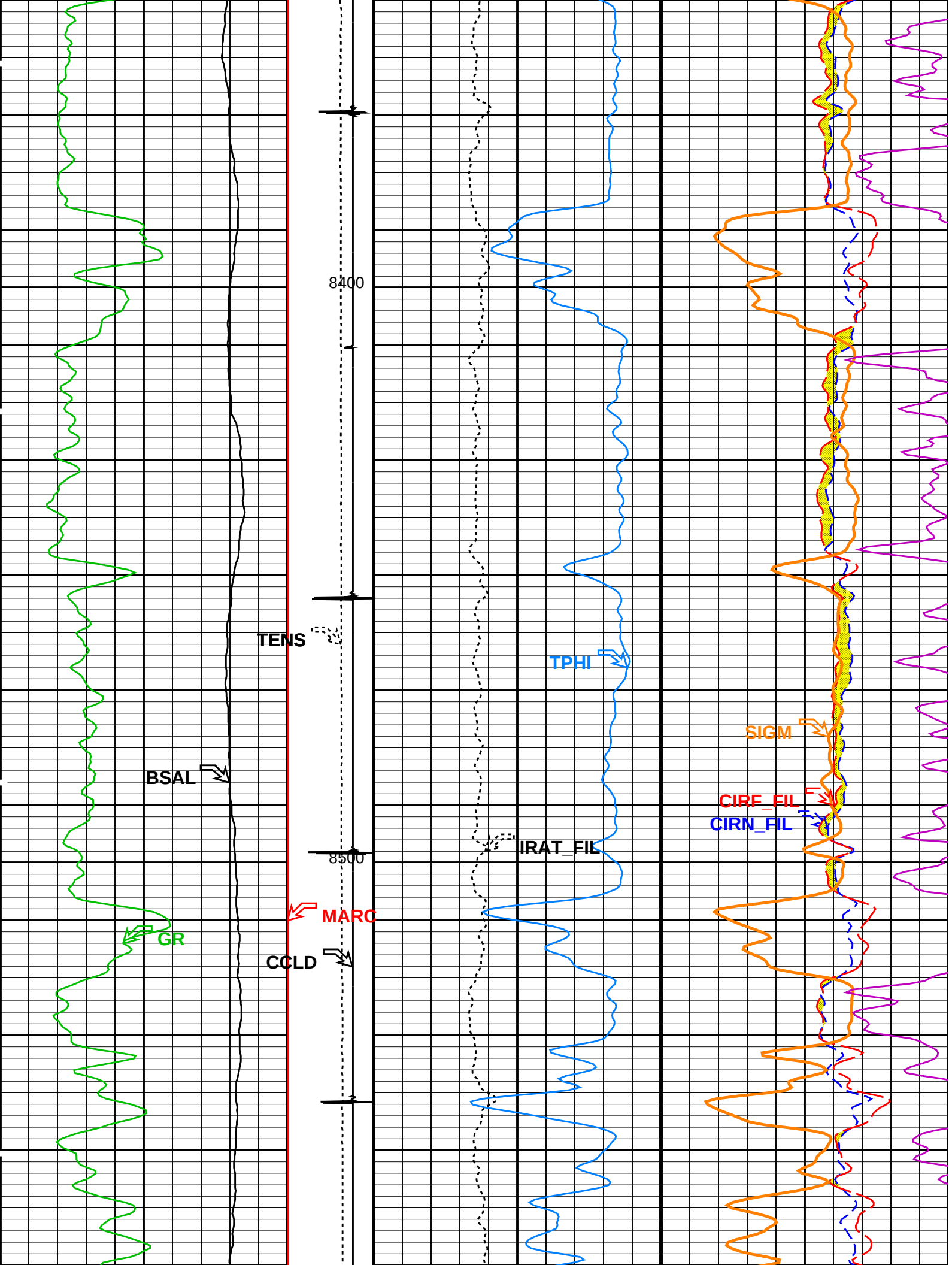
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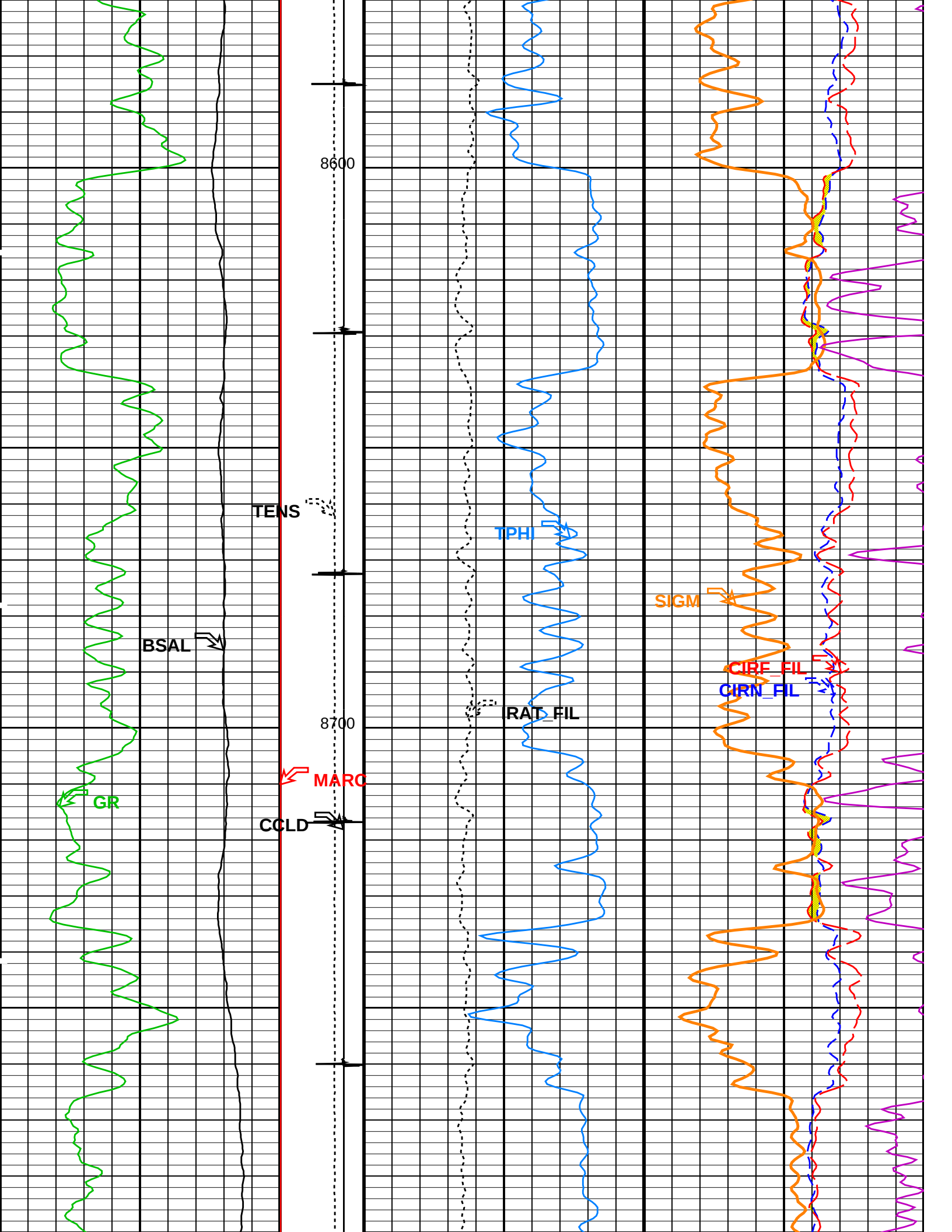
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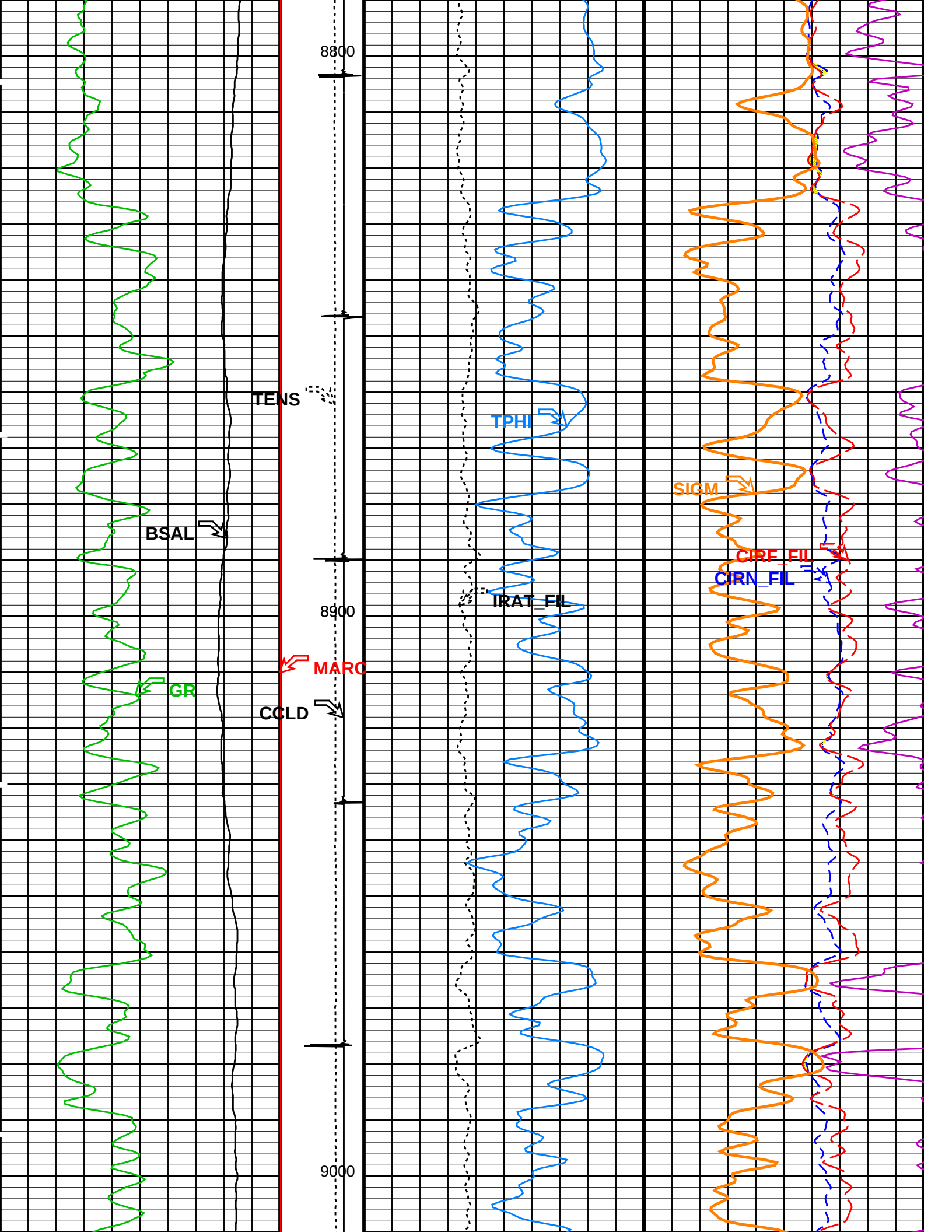
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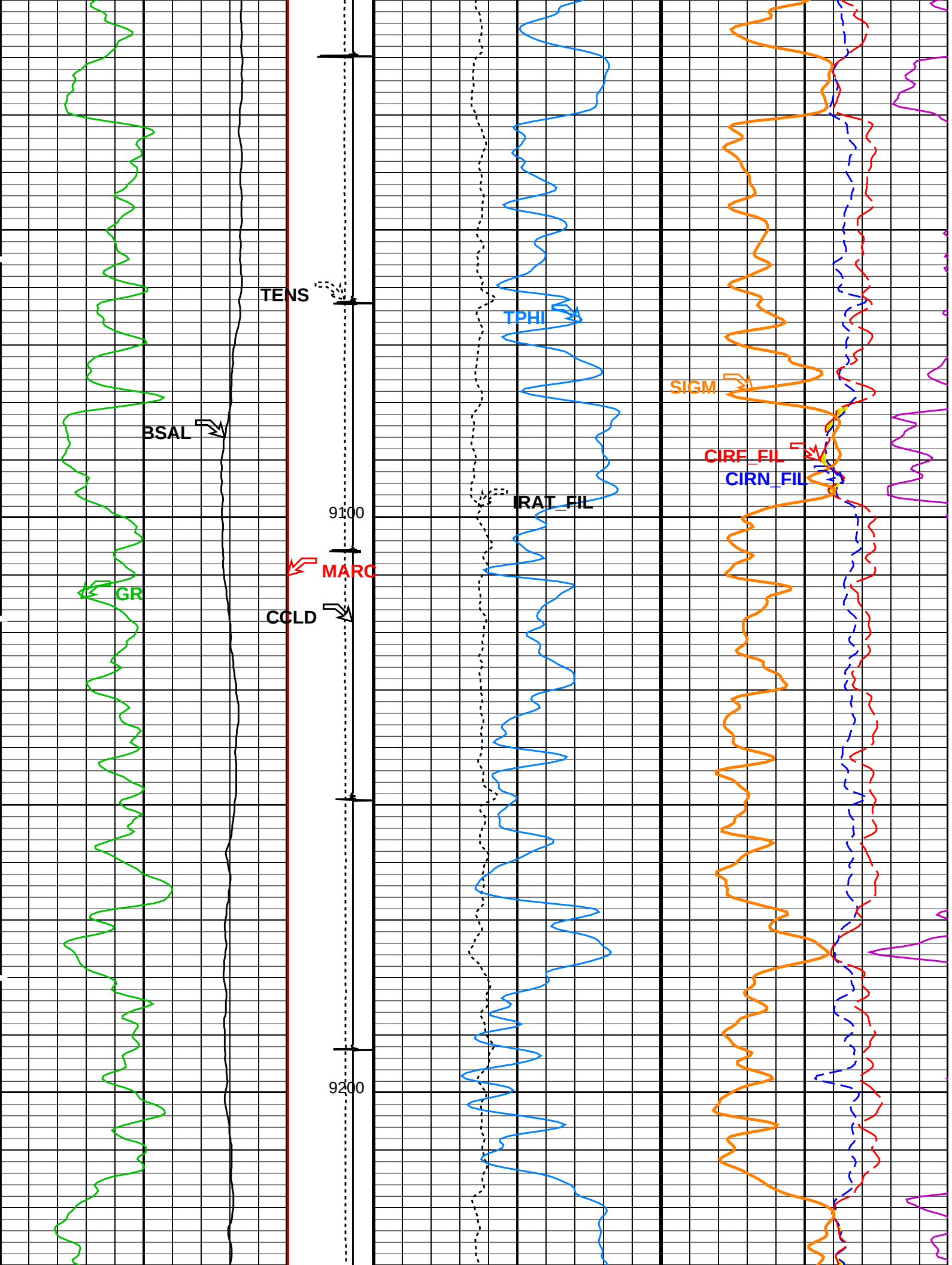
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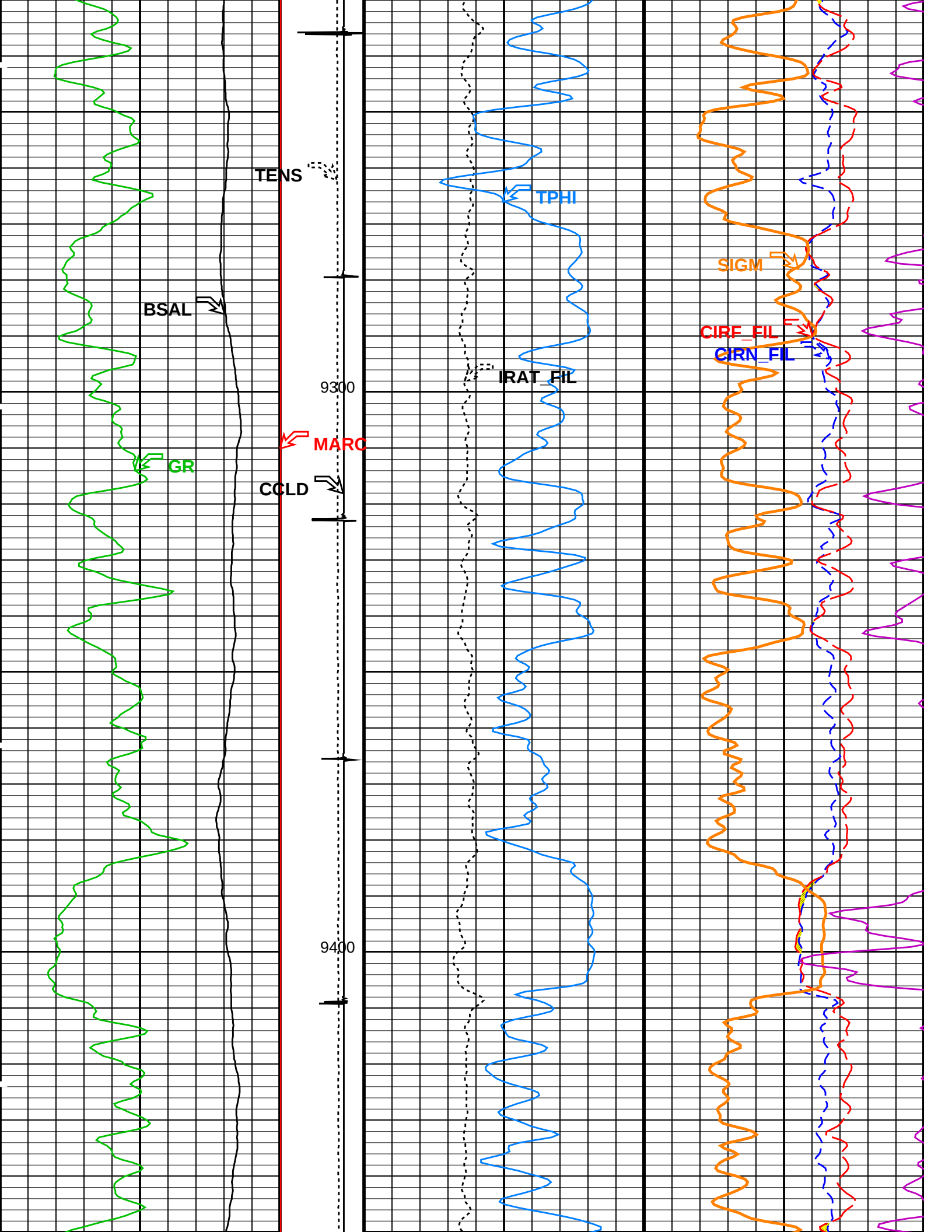
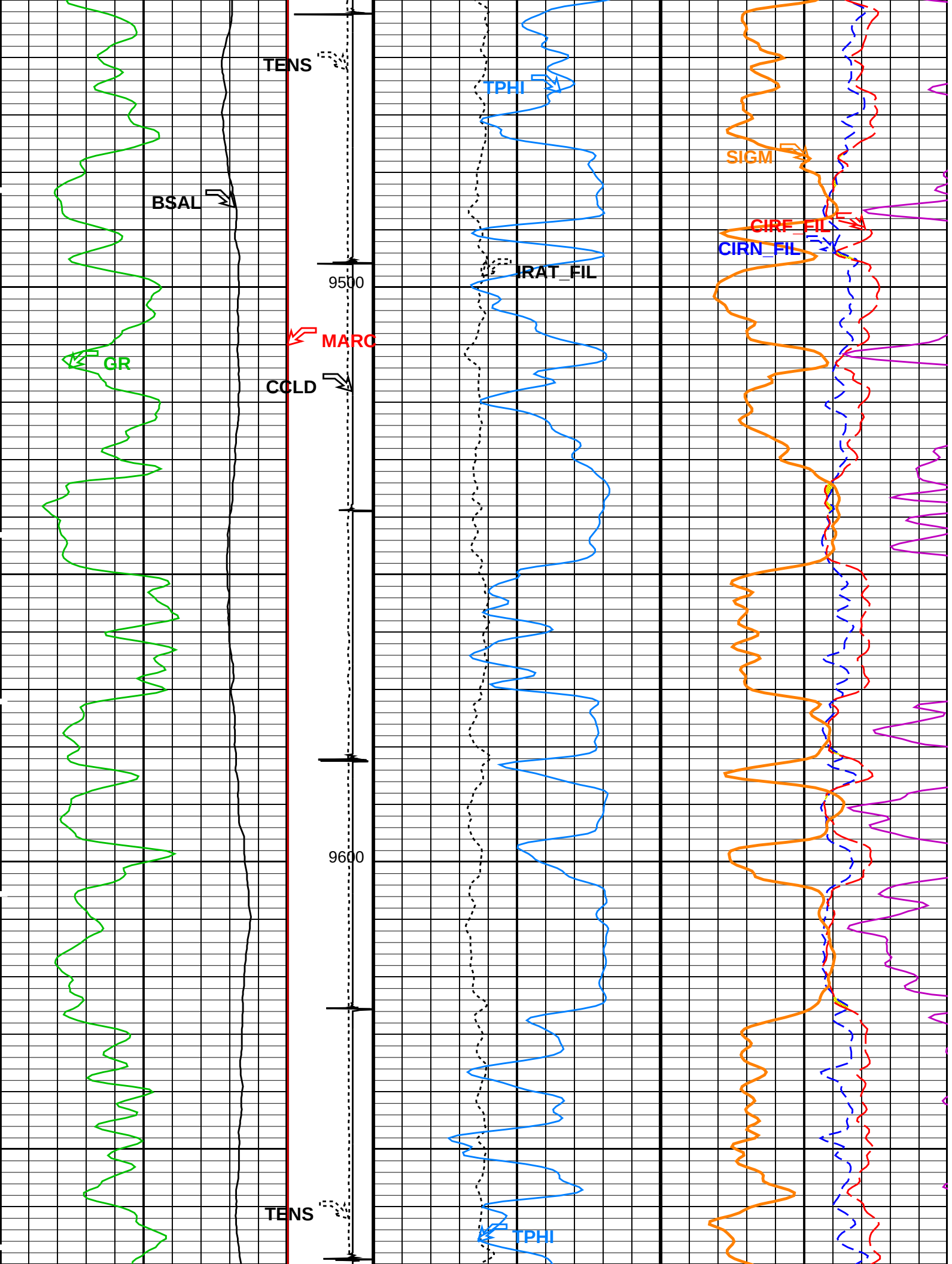
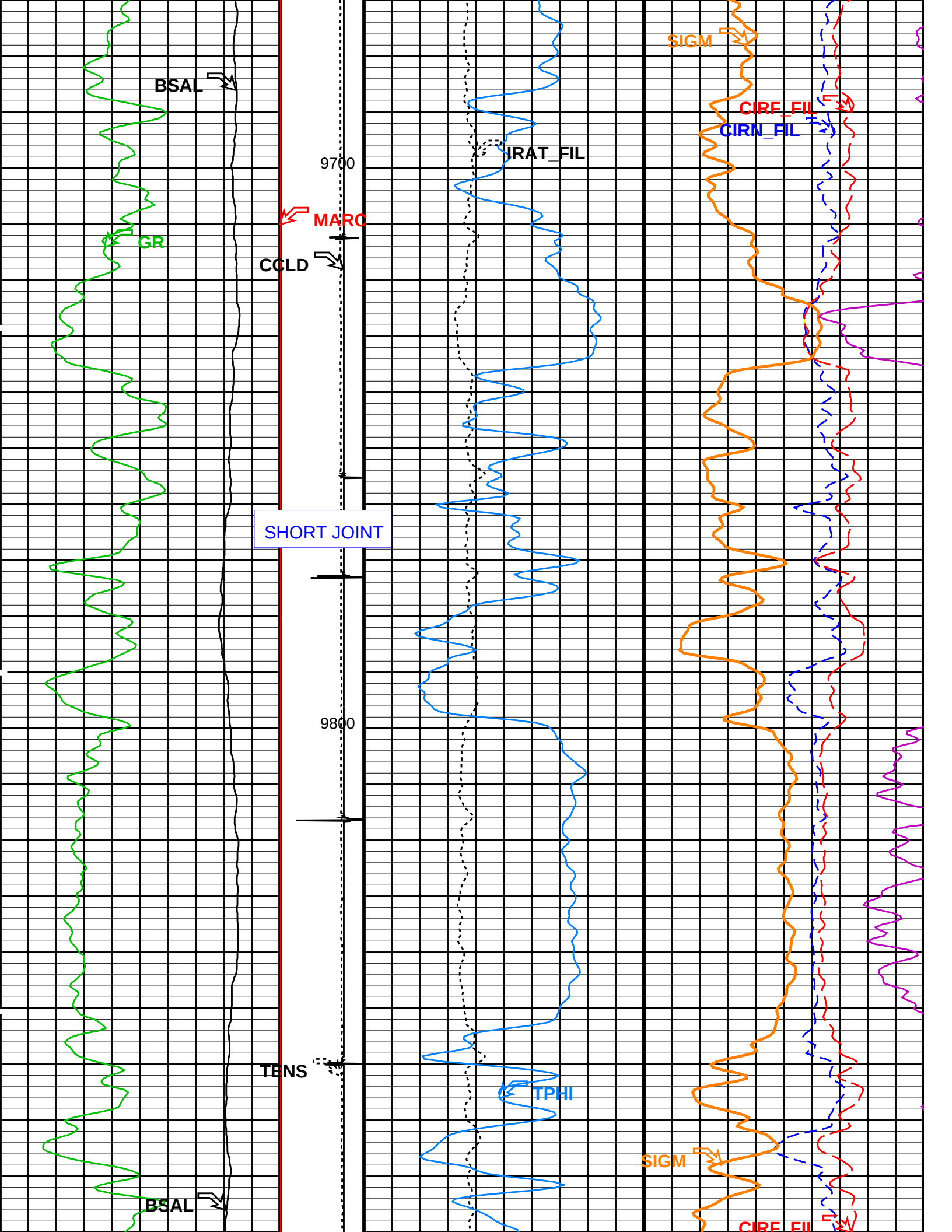
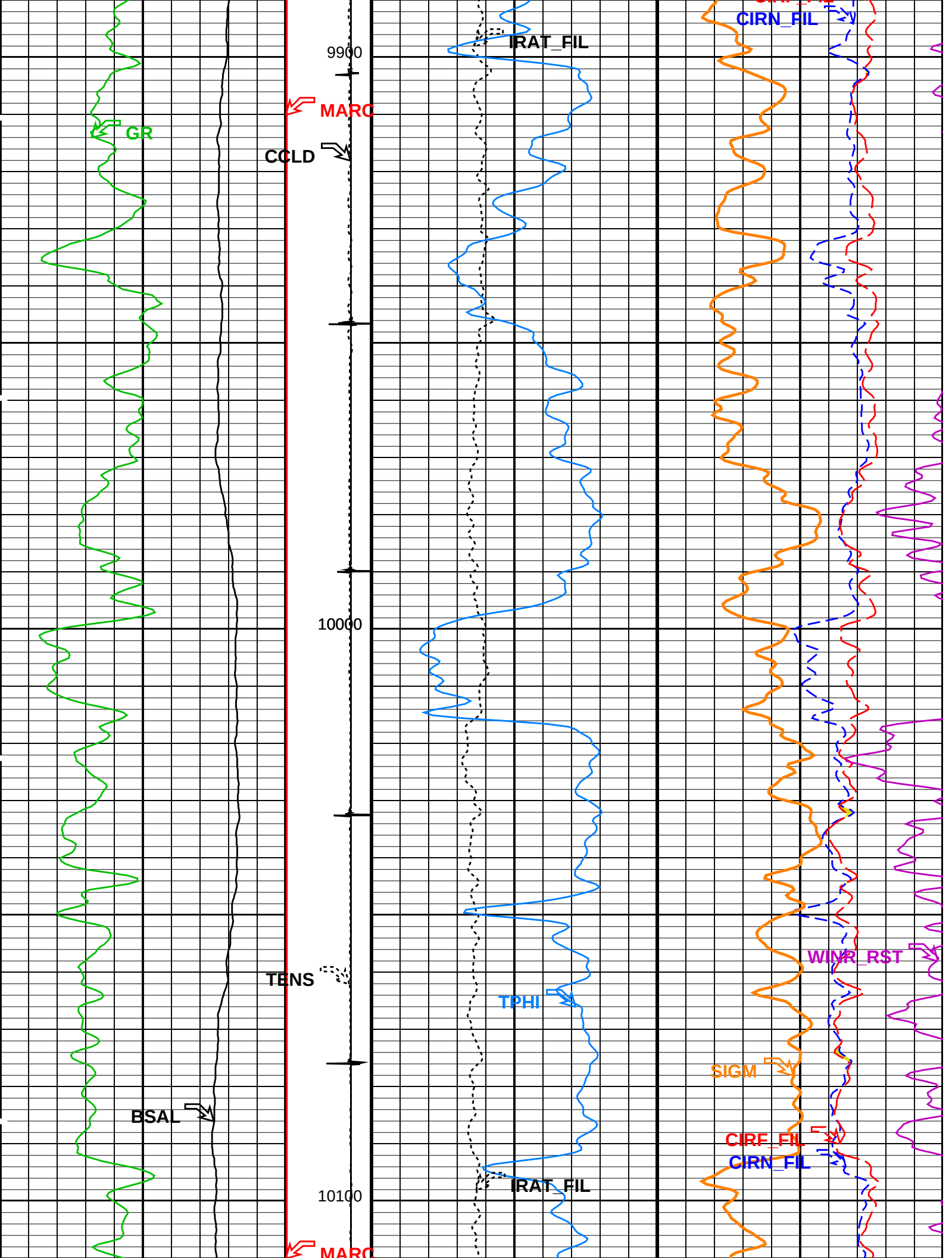
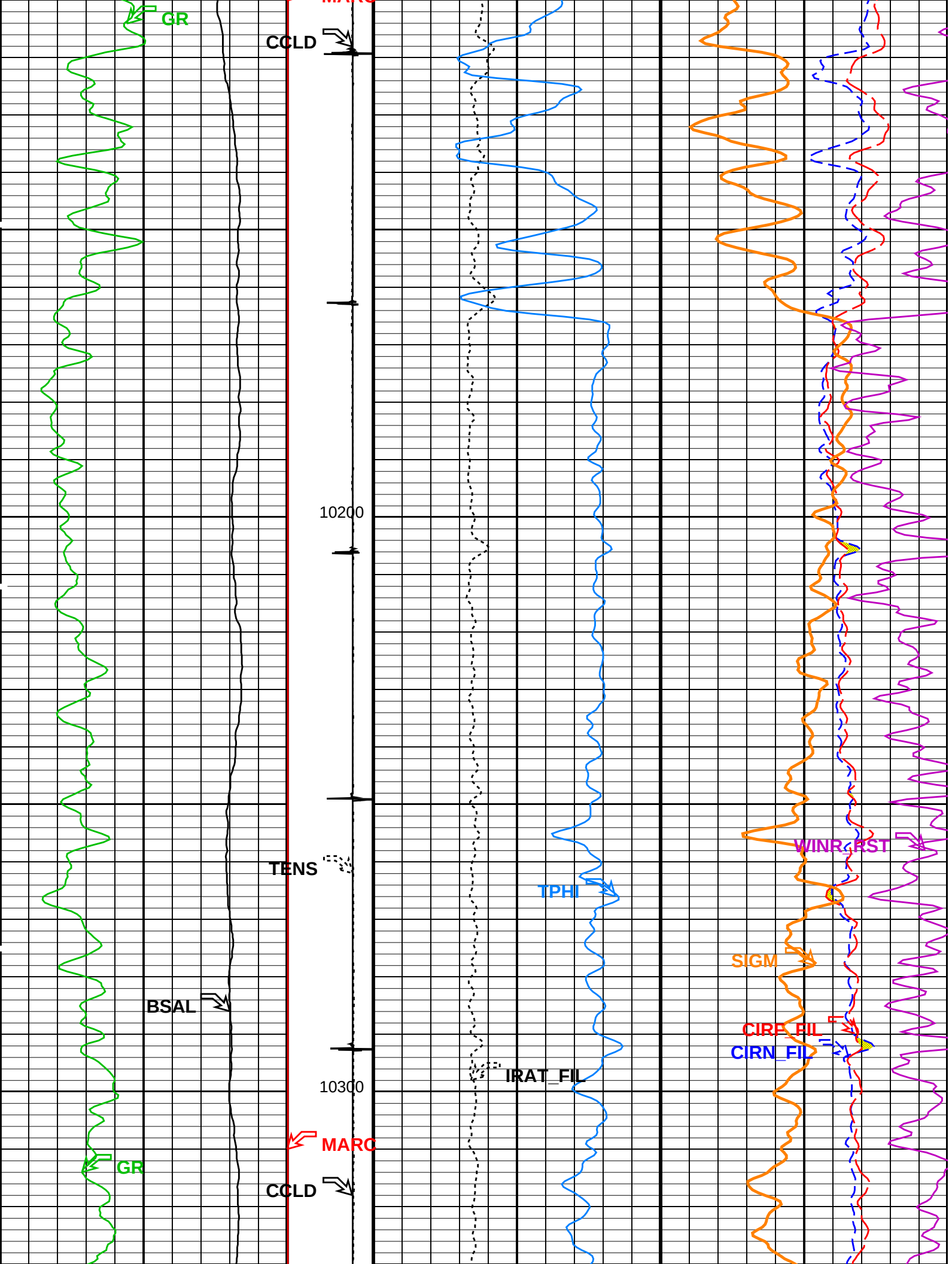
CCLD
9200

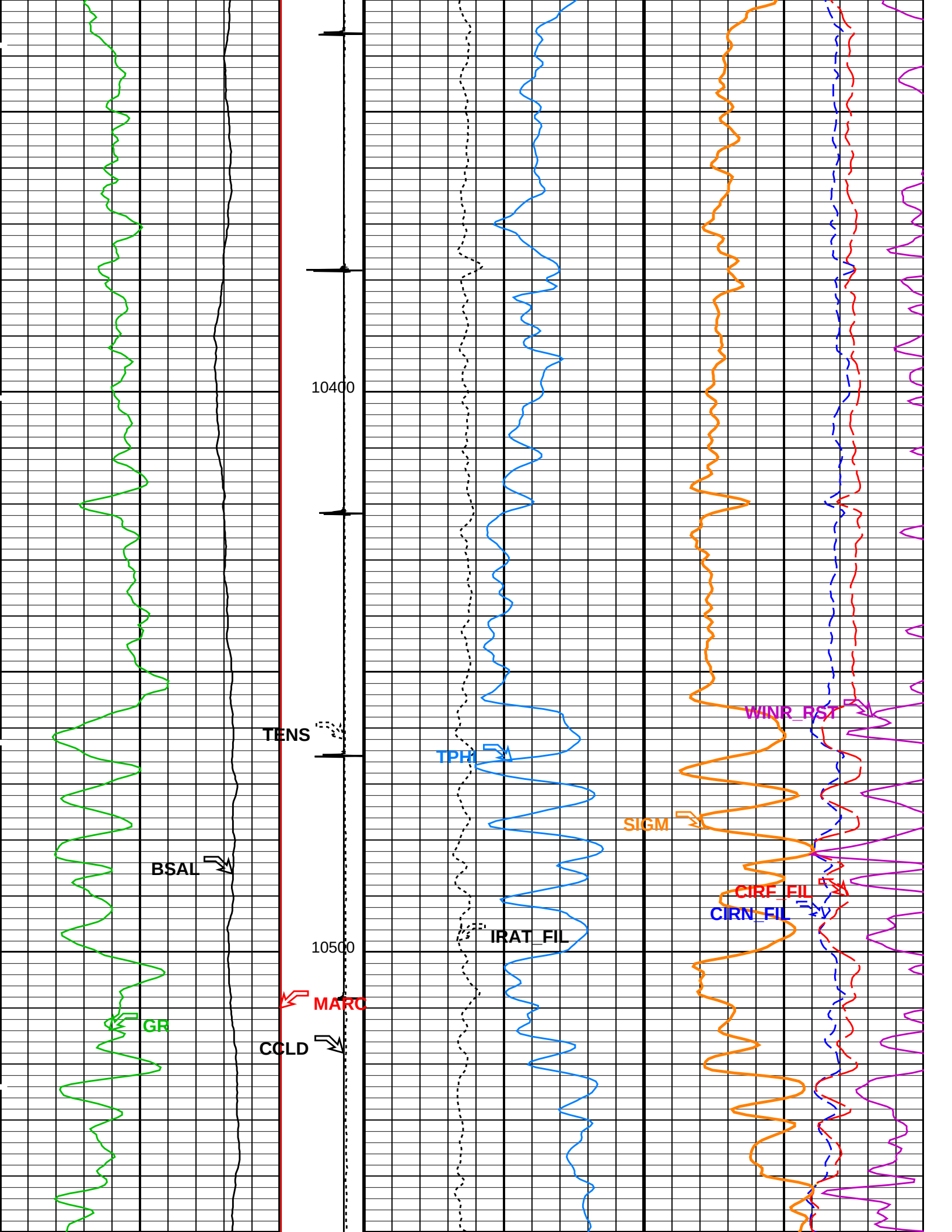

TENS
TPHI
SIGM
BSAL
CIRF_FIL
CIRN_FIL
IRAT_FIL
9300
MARC
GR
CCLD
9400

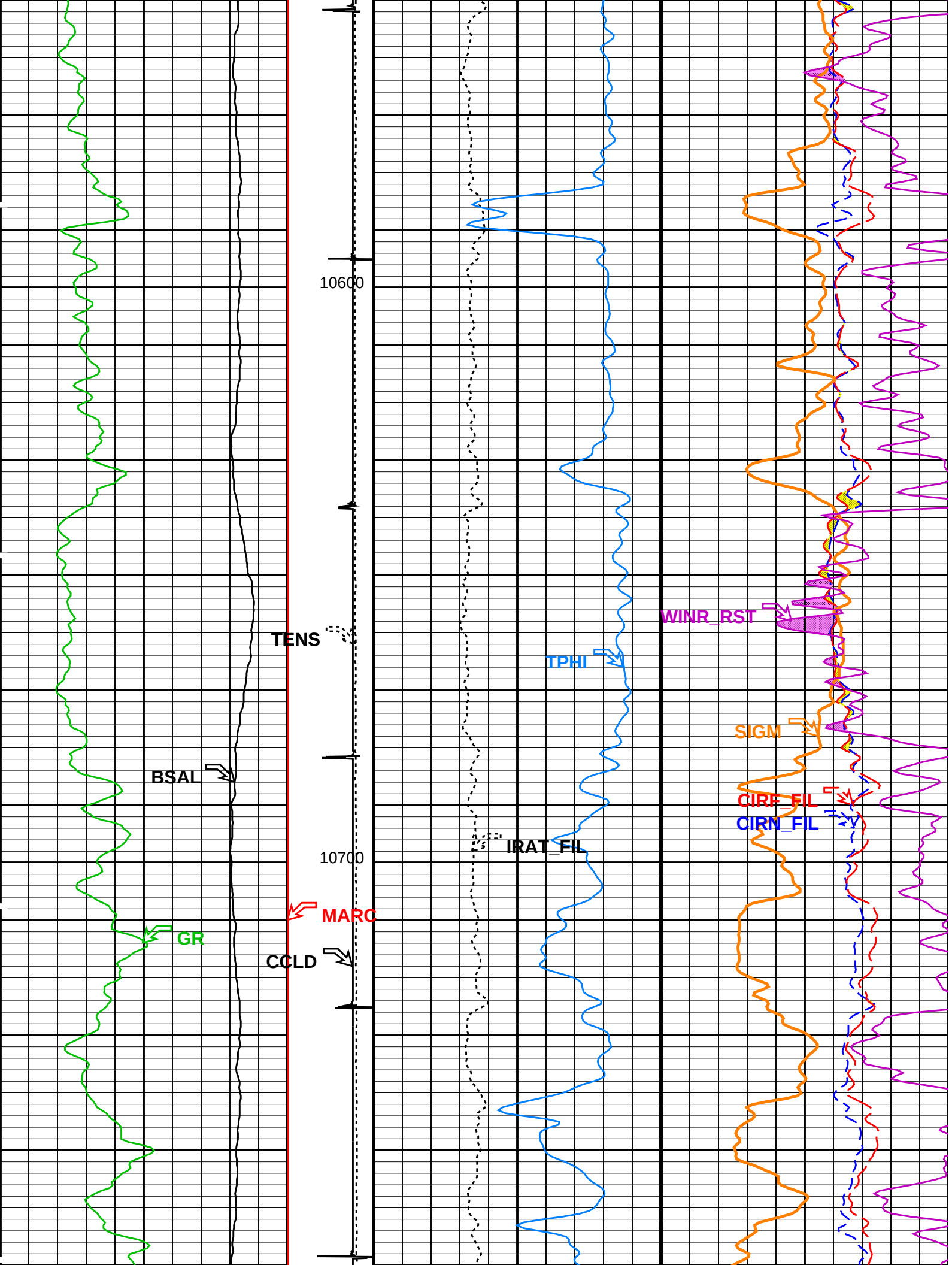

TENS
TPHI
SIGM
BSAL
CIRF_FIL
CIRN_FIL
IRAT_FIL
9500
MARC
GR
CCLD
9600
TENS
TPHI

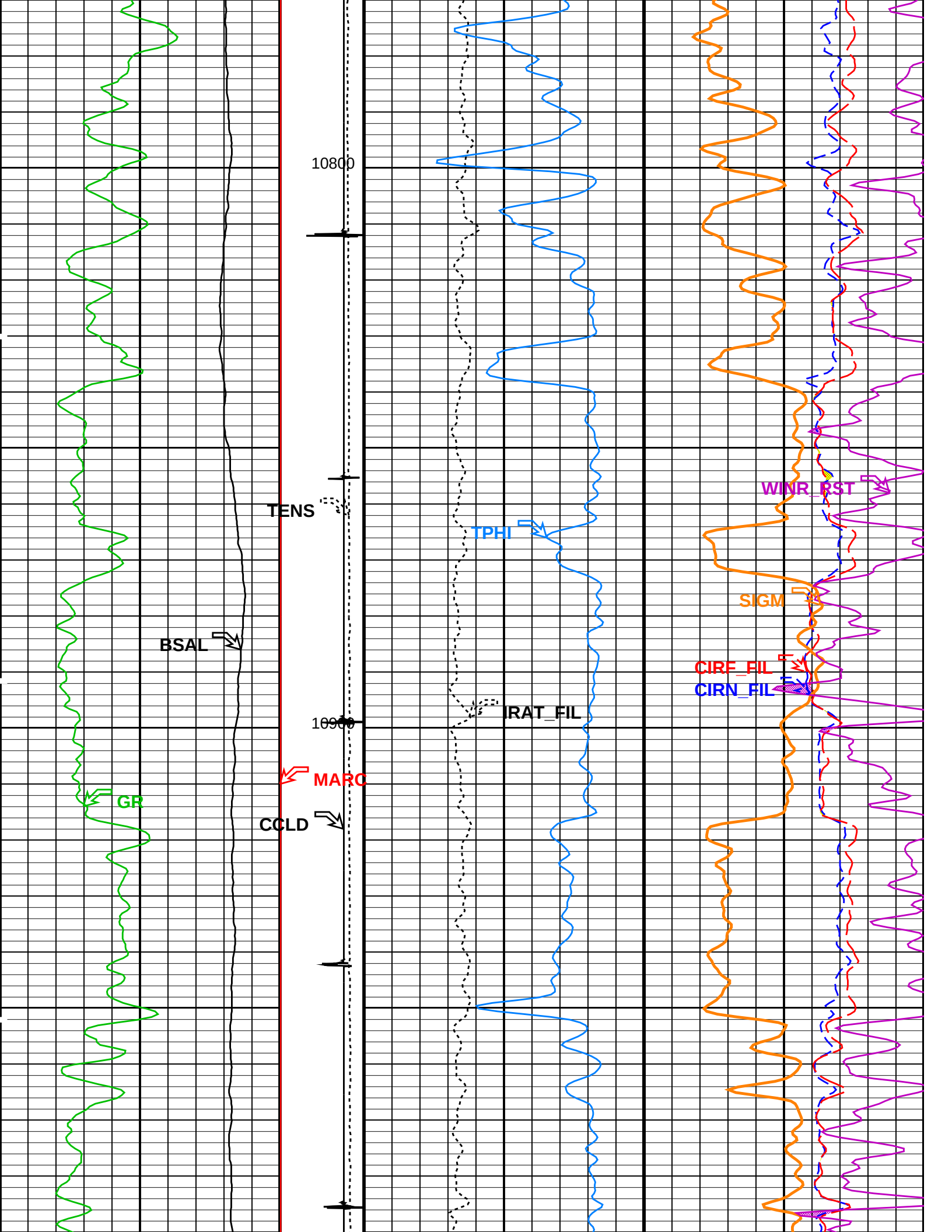

BSAL
GR
9700
MARC
CCLD
IRAT_FIL
SIGM
CIRF_FIL
CIRN_FIL
SHORT JOINT
9800
TENS
TPHI
BSAL
SIGM
CIRF_FIL

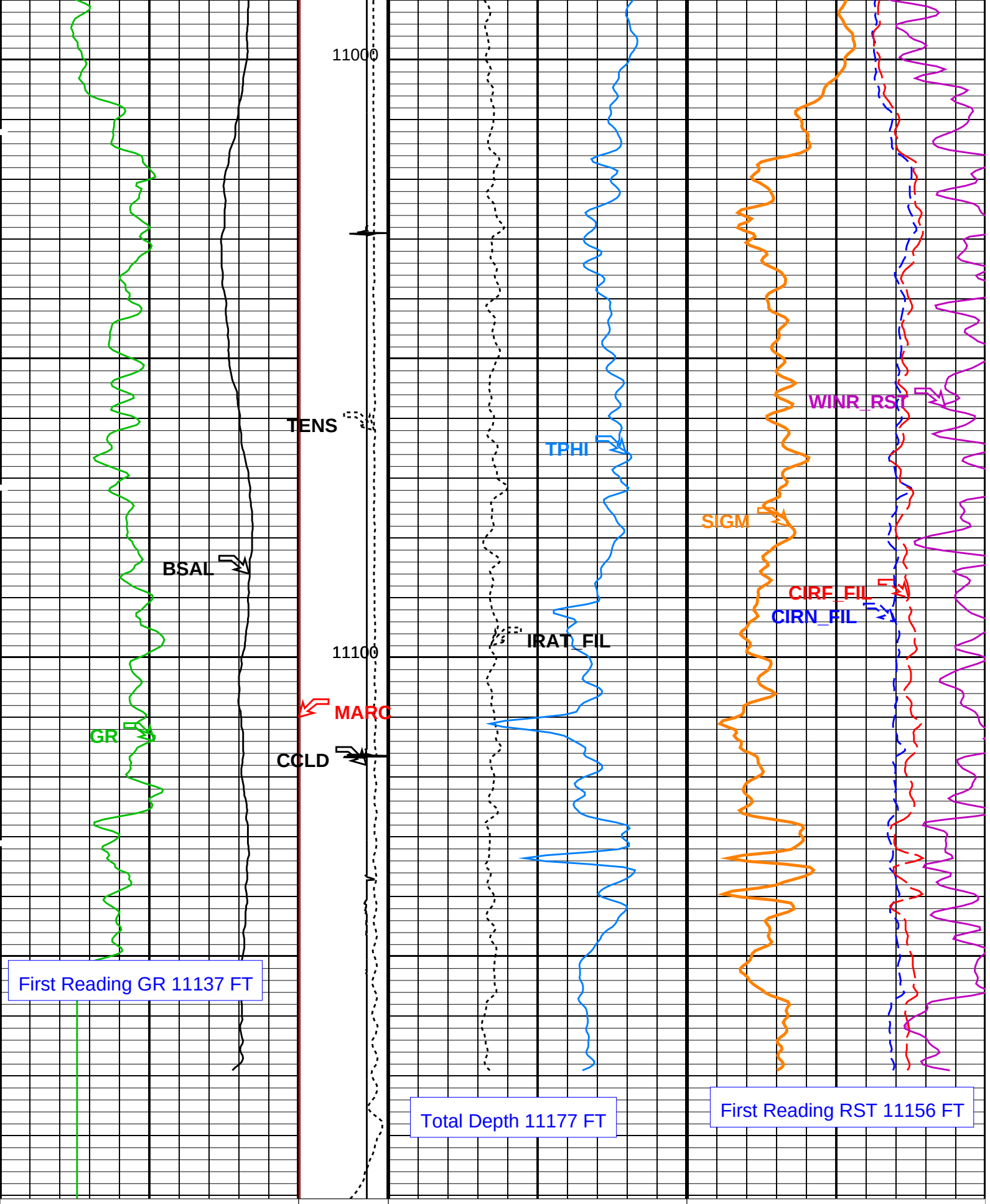

CIRN_FIL
IRAT_FIL
9900
MARC
GR
CCLD
10000
TENS
TPHI
WINR_RST
SIGM
BSAL
CIRF_FIL
CIRN_FIL
IRAT_FIL
10100
MARC


GR
CCLD
10200
TENS
BSAL
10300
MARC
GR
CCLD
TPHI
IRAT_FIL
WINR_RST
SIGM
CIRF_FIL
CIRN_FIL

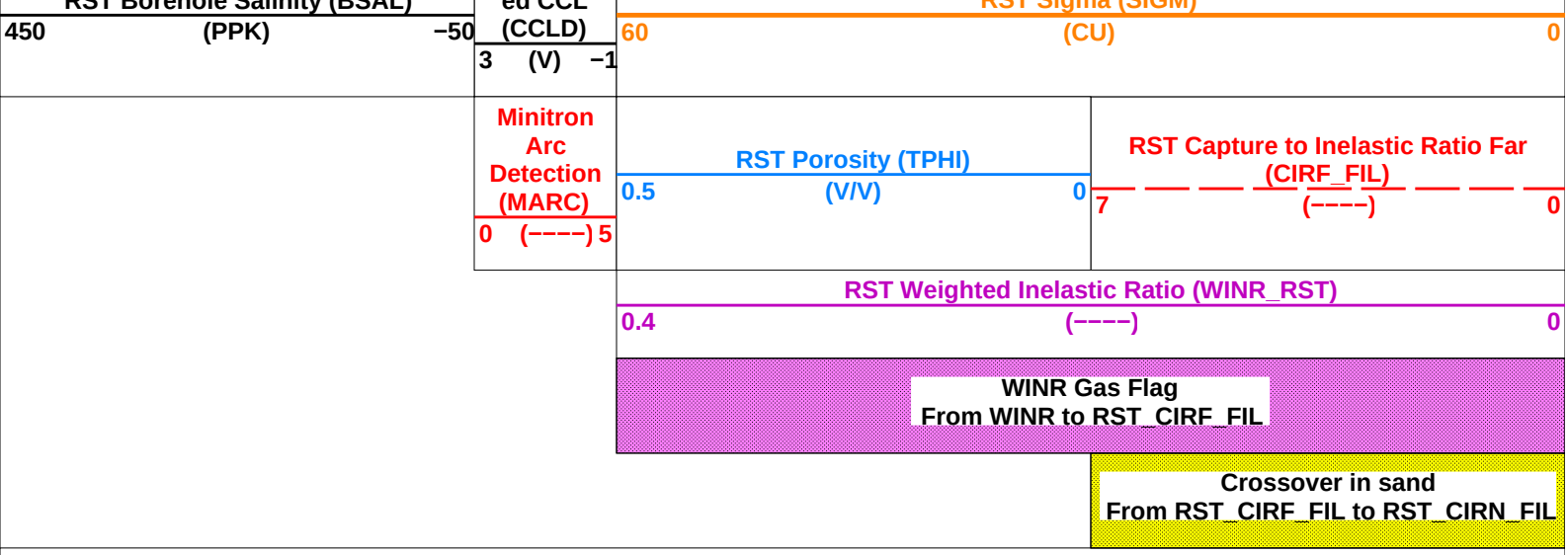

10400
10500
TENS
BSAL
GR
MARC
CCLD
TPHI
IRAT_FIL
SIGM
WINR_RST
CIRF_FIL
CIRN_FIL


10600
10700
TENS
BSAL
GR
MARC
CCLD
TPHI
IRAT_FIL
WINR_RST
SIGM
CIRF_FIL
CIRN_FIL


10800
TENS
BSAL
GR
MARC
CCLD
TPHI
IRAT_FIL
WINR_RST
SIGM
CIRF_FIL
CIRN_FIL



Gamma Ray (GR)	Tension (TENS)	RST Inelastic Ratio (IRAT_FIL)	RST Capture to Inelastic Ratio Near (CIRN_FIL)
0 (GAPI) 150	(LBF) 0 2000	0.75 (----) 0	2.5 (----) 0
RST Borehole Salinity (BSAL)	Discriminated CCL	RST Sigma (SIGM)	



PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	RST−CF: Flasked Reservoir Saturation Pro Tool C		
	Tractor Available in Tool String	NO	
AIRB	RST Air Borehole	No	
BHS	Borehole Status	CASED	
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
BSALOPT	RST Borehole Salinity Option	Unknown	
BSFL	RST Borehole Salinity Filter Length	51	
CSID	Casing Size I.D.	4	IN
DFPC	RST Depth Filter Processing Constant	One	
DFPC_TDTL	RST Depth Filter Processing Constant (TDT−like)	Two	
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
NORM_IRAT_RST	RST Normalized Inelastic Ratio	0.48	
NORM_SIGM_RST	RST Normalized Sigma	30	CU
PTIER	RST Tiered Presentation Selection	0_Customer	
PVL_PSNT_PRST	PVL Peak Signal/Noise Threshold	3	
RGAI	Near/Far Gain Calibration Ratio	1	
SHT	Surface Hole Temperature	68	DEGF
TIER_IC	RST IC Acquisition Mode	0_CO_Yield_and_Spectrolith	
TIER_SIGM	RST Sigma Acquisition Mode	0_RST_Sigma	
WOFSL_PRST	RST WFL−Off Subcycle Length	0	
WONSL_PRST	RST WFL−On Subcycle Length	0	
WSCOM_PRST	RST Station Log Comment		
	HBMS−B: High Temperature PSP Basic Measurement Sonde		
BHS	Borehole Status	CASED	
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
CSID	Casing Size I.D.	4	IN
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
PBPO	PSP Basic Sub Position	2	
PCCG	PSP Basic Sub CCL Gain	DB12	
PSTP	PSP Telemetry Cartridge position on CAN Bus	1	
SHT	Surface Hole Temperature	68	DEGF
	System and Miscellaneous		
ALTDPCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	8.750	IN
BSAL	Borehole Salinity	−50000.00	PPM
CSIZ	Current Casing Size	4.500	IN
CWEI	Casing Weight	11.60	LB/F
DFD	Drilling Fluid Density	8.40	LB/G
DO	Depth Offset for Playback	5.0	FT
FLEV	Fluid Level	−50000.00	FT
MST	Mud Sample Temperature	−50000.00	DEGF
PBVSADP	Use alternate depth channel for playback	NO	

PP	Playback Processing	RECOMPUTE	
RMFS	Resistivity of Mud Filtrate Sample	−50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	11177	FT
TDD	Total Depth − Driller	11265.00	FT
TDL	Total Depth − Logger	11177.00	FT
TWS	Temperature of Connate Water Sample	100.00	DEGF

Format: RST_SIGMA_S5 Vertical Scale: 5" per 100' Graphics File Created: 15−Aug−2012 11:13

OP System Version: 19C0−187

RST−CF	SRPC−5095−H2−2011−OP19	HBMS−B	19C0−187

Input DLIS Files

DEFAULT	RST_HBMS_008LUP	FN:7	PRODUCER	15−Aug−2012 08:52	11185.5 FT	2930.5 FT

Output DLIS Files

DEFAULT	RST_HBMS_009PUP	FN:8	PRODUCER	15−Aug−2012 11:13

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REPEAT PASS RST SIGMA

MAXIS Field Log

Input DLIS Files

DEFAULT	RST_HBMS_004LUP	FN:3	PRODUCER	15−Aug−2012 08:21	6186.5 FT	5738.0 FT
DEFAULT	RST_HBMS_009PUP	FN:8	PRODUCER	15−Aug−2012 11:13	11190.5 FT	2911.5 FT

Output DLIS Files

DEFAULT	RST_HBMS_010PUP	FN:9	PRODUCER	15−Aug−2012 11:19	6186.5 FT	5714.0 FT

OP System Version: 19C0−187

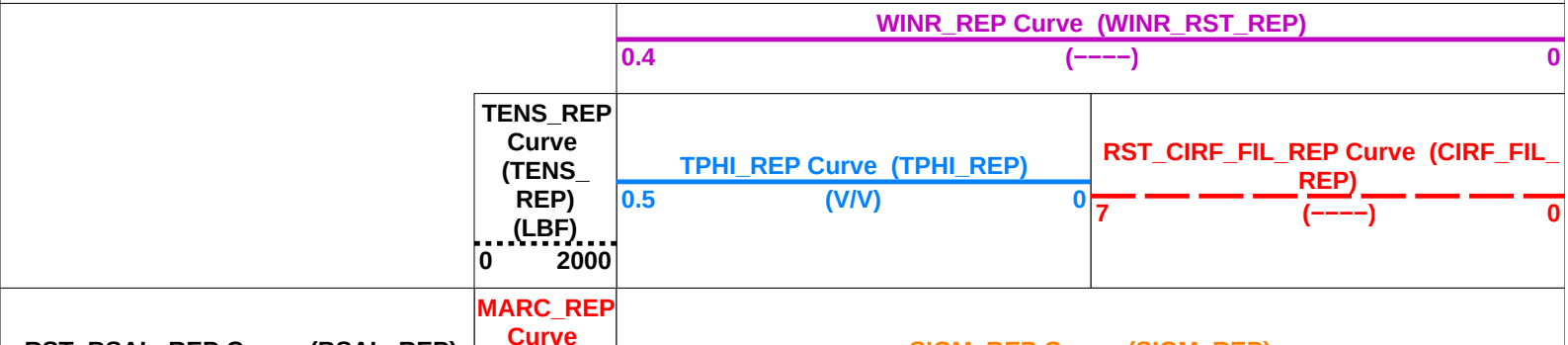
RST−CF	SRPC−5095−H2−2011−OP19	HBMS−B	19C0−187

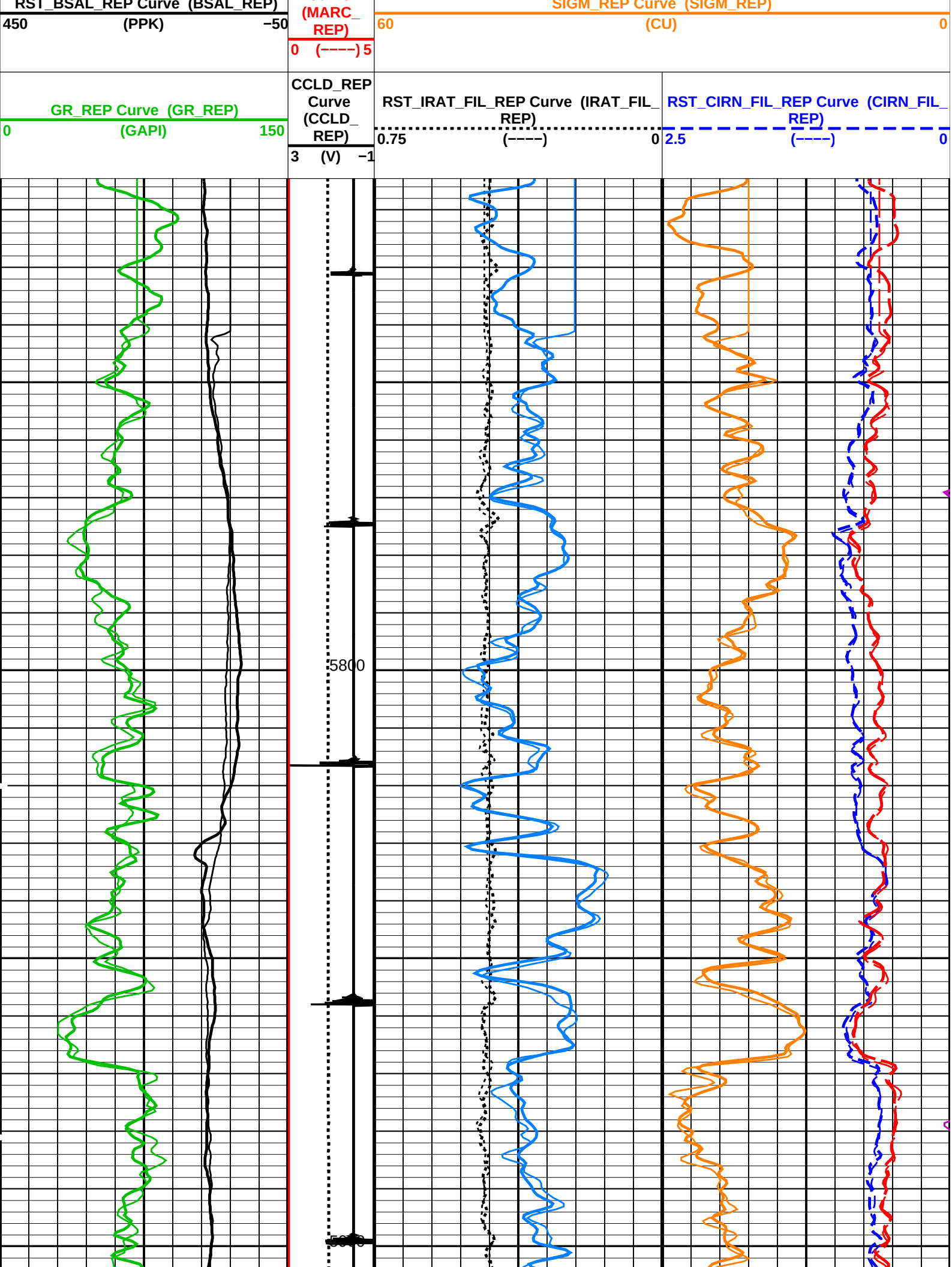
Changed Parameter Summary

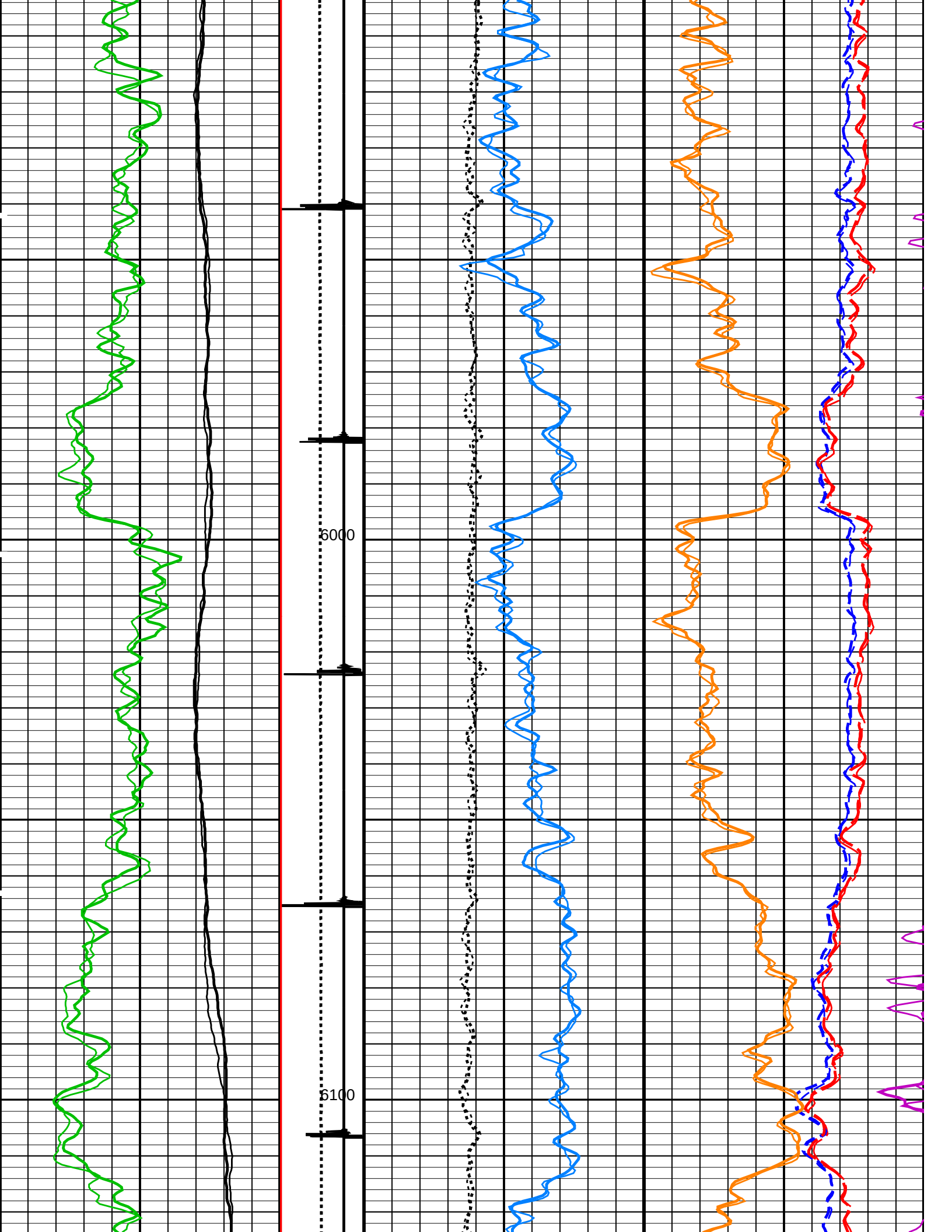
DLIS Name	New Value	Previous Value	Depth & Time
BS	8.750 IN	8.750 IN	6186.5 11:19:30

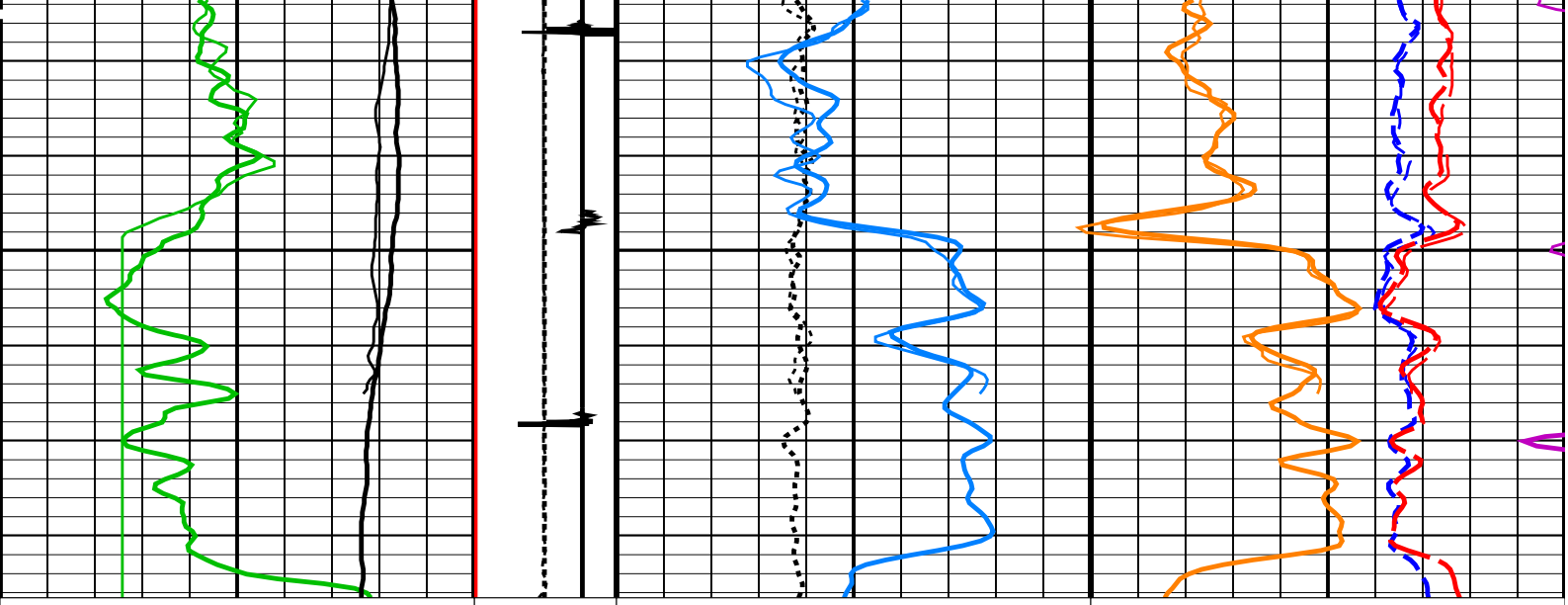
PIP SUMMARY

Time Mark Every 60 S




RST_BSAL_REP Curve (BSAL_REP)
450 (PPK) −50
(MARC_ REP)
0 (−−−−) 5
SIGM_REP Curve (SIGM_REP)
60 (CU) 0
GR_REP Curve (GR_REP)
0 (GAPI) 150
CCLD_REP Curve (CCLD_ REP)
3 (V) −1
RST_IRAT_FIL_REP Curve (IRAT_FIL_ REP)
0.75 (−−−−) 0
RST_CIRN_FIL_REP Curve (CIRN_FIL_ REP)
2.5 (−−−−) 0
5800


6000
6100



PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	RST−CF: Flasked Reservoir Saturation Pro Tool C		
	Tractor Available in Tool String	NO	
AIRB	RST Air Borehole	No	
BHS	Borehole Status	CASED	
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
BSALOPT	RST Borehole Salinity Option	Unknown	
BSFL	RST Borehole Salinity Filter Length	51	
CSID	Casing Size I.D.	4	IN
DFPC	RST Depth Filter Processing Constant	One	
DFPC_TDTL	RST Depth Filter Processing Constant (TDT−like)	Two	
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
NORM_IRAT_RST	RST Normalized Inelastic Ratio	0.48	
NORM_SIGM_RST	RST Normalized Sigma	30	CU
PTIER	RST Tiered Presentation Selection	0_Customer	
PVL_PSNT_PRST	PVL Peak Signal/Noise Threshold	3	
RGAI	Near/Far Gain Calibration Ratio	1	
SHT	Surface Hole Temperature	68	DEGF
TIER_IC	RST IC Acquisition Mode	0_CO_Yield_and_Spectrolith	
TIER_SIGM	RST Sigma Acquisition Mode	0_RST_Sigma	
WOFSL_PRST	RST WFL−Off Subcycle Length	0	

WONSL_PRST	RST WFL−On Subcycle Length	0	
WSCOM_PRST	RST Station Log Comment		
HBMS−B: High Temperature PSP Basic Measurement Sonde			
BHS	Borehole Status	CASED	
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
CSID	Casing Size I.D.	4	IN
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
PBPO	PSP Basic Sub Position	2	
PCCG	PSP Basic Sub CCL Gain	DB12	
PSTP	PSP Telemetry Cartridge position on CAN Bus	1	
SHT	Surface Hole Temperature	68	DEGF
System and Miscellaneous			
ALTDPCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	8.750	IN
BSAL	Borehole Salinity	−50000.00	PPM
CSIZ	Current Casing Size	4.500	IN
CWEI	Casing Weight	11.60	LB/F
DFD	Drilling Fluid Density	8.40	LB/G
DO	Depth Offset for Playback	0.0	FT
DORL	Depth Offset for Repeat Analysis	0.0	FT
FLEV	Fluid Level	−50000.00	FT
MST	Mud Sample Temperature	−50000.00	DEGF
PBVSADP	Use alternate depth channel for playback	NO	
PP	Playback Processing	RECOMPUTE	
RMFS	Resistivity of Mud Filtrate Sample	−50000.0000	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	11177	FT
TDD	Total Depth − Driller	11265.00	FT
TDL	Total Depth − Logger	11177.00	FT
TWS	Temperature of Connate Water Sample	100.00	DEGF

Format: RST_SIGMA_S5_REP Vertical Scale: 5" per 100' Graphics File Created: 15−Aug−2012 11:19

OP System Version: 19C0−187

RST−CF	SRPC−5095−H2−2011−OP19	HBMS−B	19C0−187

Input DLIS Files

DEFAULT	RST_HBMS_004LUP	FN:3	PRODUCER	15−Aug−2012 08:21	6186.5 FT	5738.0 FT
DEFAULT	RST_HBMS_009PUP	FN:8	PRODUCER	15−Aug−2012 11:13	11190.5 FT	2911.5 FT

Output DLIS Files

DEFAULT	RST_HBMS_010PUP	FN:9	PRODUCER	15−Aug−2012 11:19

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PBMS COEFFICIENTS

MAXIS Field Log

Client:		Tool:	PSP
Field:		Sub Type:	PBMS
Well:		Sensor:	GR
Run date:			

PBMS Gamma Ray

Sonde Serial NB	**RESISTORS FOR GR SENSOR N.34384,TOOL HBMS−BA2880. SENSOR S/N:**
Sensor Serial NB	**34384**
Calib Date ddmmyy	**160206**
Matrix Size	**12**
Coeff CRC	**D8B5**

GR HV Rt

	Rt**0	Rt**1
Rt0**	**+.200000000000e+04**	**+.173000000000e+04**

Client: **Tool:** **PSP**
Field: **Sub Type:** **PBMS**
Well: **Sensor:** **WellTemp RTD**
Run date:

PBMS RTD Well Thermometer

Sonde Serial NB	**COEFFICIENTS FOR RTD THERMOMETER PBMS−B.2880 S/N:**
Sensor Serial NB	**2880**
Calib Date ddmmyy	**260408**
Matrix Size	**16**
Coeff CRC	**A3AF**

WTemp Coeff

	Tt**0	Tt**1	Tt**2
Tt0**	**−.104337336008E+04**	**+.798824971753E+03**	**−.251944021281E+03**

	Tt**3	Tt**4	Tt**5
Tt0**	**+.406192777109E+02**	**−.240958437264E+01**	**0.0**

Client:		**Tool:**	**PSP**
Field:		**Sub Type:**	**PBMS**
Well:		**Sensor:**	**CQG**
Run date:			

PBMS Quartz Gauge type F

Sonde Serial NB	**COEFFICIENTS FOR CQG PBMS−B.2880 S/N:**
Sensor Serial NB	**2880**
Calib Date ddmmyy	**260408**
Matrix Size	**66**
Coeff CRC	**66B8**

Pres Coeff

	Fb0**	**Fb**1**	**Fb**2**
Fc0**	+.694668499013E+04	+.138137467574E−01	−.206148488488E−06
Fc1**	−.104285125976E+01	−.125721589078E−04	−.971577899959E−10
Fc2**	+.101045175546E−05	+.480801816357E−10	+.889110474366E−15
Fc3**	+.127326781620E−11	+.130693902354E−15	0.0
Fc4**	**0.0**	**0.0**	**0.0**
Fc5**	0.0	0.0	0.0

	Fb3**	**Fb**4**	**Fb**5**
Fc0**	−.802395356069E−10	−.148392899370E−14	−.162952476494E−19
Fc1**	+.114970383999E−15	+.186330526680E−19	0.0
Fc2**	0.0	0.0	0.0
Fc3**	0.0	0.0	0.0
Fc4**	0.0	0.0	0.0
Fc5**	0.0	0.0	0.0

PBMS Quartz Gauge type F

Sonde Serial NB	**:**
Sensor Serial NB	**2880**
Calib Date ddmmyy	**260408**
Matrix Size	**66**
Coeff CRC	**3690**

Temp Coeff

	Fc0**	**Fc**1**	**Fc**2**
Fb0**	+.114978632240E+03	−.318843725686E−03	+.651766172344E−08

Fb**1	−.590205352250E−02	+.168686572404E−07	+.162345150354E−12
Fb**2	−.362996279263E−07	+.407654559315E−12	+.452411391342E−17
Fb**3	−.276281361281E−12	+.871817059405E−17	0.0
Fb**4	0.0	0.0	0.0
Fb**5	0.0	0.0	0.0

	Fc**3	Fc**4	Fc**5
Fb**0	+.199118144093E−13	−.260997933236E−18	+.618908211390E−21
Fb**1	+.250084591851E−17	+.455070709200E−21	0.0
Fb**2	0.0	0.0	0.0
Fb**3	0.0	0.0	0.0
Fb**4	0.0	0.0	0.0
Fb**5	0.0	0.0	0.0

PBMS Quartz Gauge type F

Sonde Serial NB :
Sensor Serial NB 2880
Calib Date ddmmyy 260408
Matrix Size 16
Coeff CRC 71B5

Clock Freq Coeff

	(Fb'−Fc')**0	(Fb'−Fc')**1	(Fb'−Fc')**2
(Fb'−Fc')**0	+.310736316923E+05	+.273670214709E−02	+.731815197856E−06

	(Fb'−Fc')**3	(Fb'−Fc')**4	(Fb'−Fc')**5
(Fb'−Fc')**0	−.654219198492E−10	−.150585137208E−15	−.117697151708E−19

PBMS Quartz Gauge type F

Sonde Serial NB :
Sensor Serial NB 2880
Calib Date ddmmyy 260408
Matrix Size 16
Coeff CRC ECB5

Clock Temp Coeff

	(Fb'−Fc')**0	(Fb'−Fc')**1	(Fb'−Fc')**2
(Fb'−Fc')**0	+.116053417872E+03	−.554118045908E−02	−.348241454518E−07

	(Fb'−Fc')**3	(Fb'−Fc')**4	(Fb'−Fc')**5
(Fb'−Fc')**0	+.207992675474E−12	−.353168788938E−17	−.345142848607E−21

Company:	**ENCANA OIL & GAS (USA) INC.**
Well:	**NP EF09E−27 (P27 595)**
Field:	**NORTH PARACHUTE**
County:	**GARFIELD**
State:	**COLORADO**

Schlumberger

RESERVOIR SATURATION TOOL
SIGMA MODE
GR−CCL