

Company: ENCANA OIL & GAS (USA) INC

Well: SHIDELER FEE 6-3A (031E)

Field: MAMM CREEK

County: GARFIELD State: COLORADO

RESERVOIR SATURATION LOG
SIGMA MODE
GR-CCL

County: GARFIELD

Field: MAMM CREEK

Location: SHL: 176 FSL & 2071 FEL

Well: SHIDELER FEE 6-3A (031E)

Company: ENCANA OIL & GAS (USA) INC

LOCATION			
SHL: 176 FSL & 2071 FEL	Elev.: K.B.	7129.00 ft	
BHL: 38 FNL & 2232 FEL	G.L.	7107.00 ft	
	D.F.	7128.00 ft	
Permanent Datum:	GROUND LEVEL	Elev.: 7107.00 ft	
Log Measured From:	KELLY BUSHING	22.00 ft above Perm. Datum	
Drilling Measured From:	KELLY BUSHING		
API Serial No.	Section	Township	Range
05-045-21741-0C	31	7S	92W

Logging Date	9-Feb-2013		
Run Number	1		
Depth Driller	8530 ft		
Schlumberger Depth	8395 ft		
Bottom Log Interval	8361 ft		
Top Log Interval	2000 ft		
Casing Fluid Type	FRESH WATER		
Salinity			
Density	8.4 lbm/gal		
Fluid Level	60 ft		
BIT/CASING/TUBING STRING			
Bit Size	7.875 in		
From	6890 ft		
To	8530 ft		
Casing/Tubing Size	4.500 in		
Weight	11.6 lbm/ft		
Grade	S-80		
From	22 ft		
To	8472 ft		
Maximum Recorded Temperatures	239 degF		
Logger On Bottom	9-Feb-2013	16:45	
Unit Number	391	GRAND JUNCTION	
Recorded By	JASON BARRY		
Witnessed By	SHANE		

PVT DATA				Run 1	Run 2	Run
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						
Unit Number						
Recorded By						
Witnessed By						

DEPTH SUMMARY LISTING

Date Created: 29-JAN-2013 10:07:01

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:	3421	Serial Number:	112136
Calibration Date:	24-APR-2012	Calibration Date:	29-JAN-2013	Length:	19500 FT
Calibrator Serial Number:		Calibrator Serial Number:	174878		
Calibration Cable Type:	1-25ZT	Number of Calibration Points:	10	Conveyance Method:	Wireline
Wheel Correction 1:	-3	Calibration RMS:	13	Rig Type:	LAND
Wheel Correction 2:	-4	Calibration Peak Error:	23		

Depth Control Parameters

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

Depth Control Remarks

1. ALL SCHLUMBERGER DEPTH CONTROL POLICIES APPLIED
2. IDW USED AS PRIMARY DEPTH REFERENCE
3. SWPT DRUM COUNTER USED AS SECONDARY DEPTH REFERENCE
- 4.
- 5.
- 6.

DISCLAIMER

THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE OF AND RELIANCE UPON THE RECORDED-DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED-DATA.

OTHER SERVICES1	OTHER SERVICES2
OS1: SLIM CEMENT MAPPING	OS1:
OS2: LOG	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	
ENTRANCE TIME: 16:00	
TIME AT TD: 16:45	
EXIT TIME: 19:00	

MAXIMUM RECORDED TEMPERATURE: 237 DEG F					
MAXIMUM RECORDED PRESSURE: 3573 PSIA					
SHORT JOINTS: 6381 FT & 7372 FT					
SANDSTONE MATRIX USED					
THANK YOU FOR CHOOSING E&P WIRELINE, A SCHLUMBERGER COMPANY					
CREW: K BUNTING J BARRY W AZIZ B RANSBOTTOM K JOHNS					
<div> <div>RUN 1</div> <div> <div>SERVICE ORDER #:</div> <div>PROGRAM VERSION:</div> <div>FLUID LEVEL:</div> </div> <div> <div>C920-00027</div> <div>19C0-187</div> <div>60 ft</div> </div> </div>			<div> <div>RUN 2</div> <div> <div>SERVICE ORDER #:</div> <div>PROGRAM VERSION:</div> <div>FLUID LEVEL:</div> </div> </div>		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT	DESCRIPTION
-----------	-------------

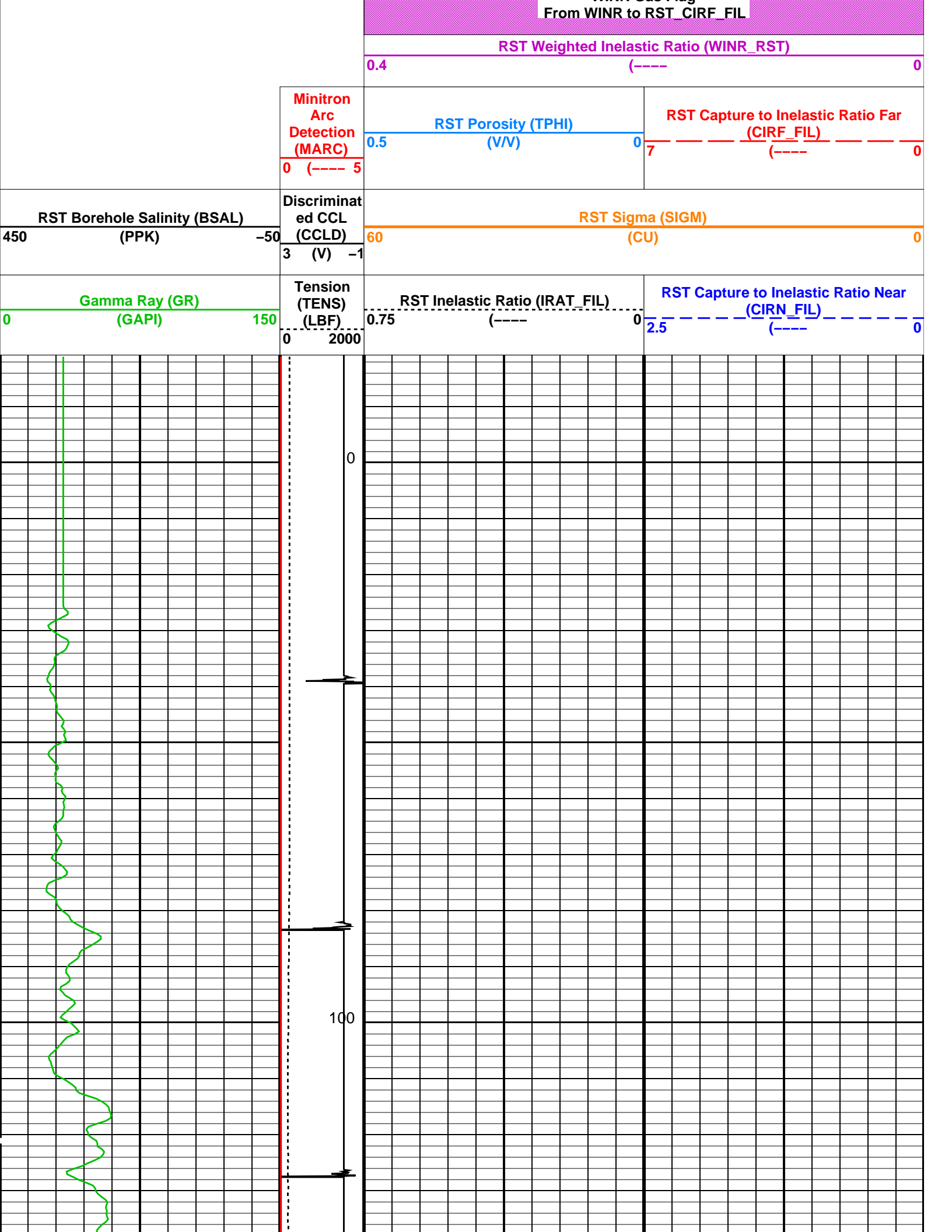
	RUN 1	RUN 2
1	1	1
2	1	1
3	1	1
4	1	1
5	1	1
6	1	1
7	1	1
8	1	1
9	1	1
10	1	1
11	1	1
12	1	1
13	1	1
14	1	1
15	1	1
16	1	1
17	1	1
18	1	1
19	1	1
20	1	1
21	1	1
22	1	1
23	1	1
24	1	1
25	1	1
26	1	1
27	1	1
28	1	1
29	1	1
30	1	1
31	1	1
32	1	1
33	1	1
34	1	1
35	1	1
36	1	1
37	1	1
38	1	1
39	1	1
40	1	1
41	1	1
42	1	1
43	1	1
44	1	1
45	1	1
46	1	1
47	1	1
48	1	1
49	1	1
50	1	1
51	1	1
52	1	1
53	1	1
54	1	1
55	1	1
56	1	1
57	1	1
58	1	1
59	1	1
60	1	1
61	1	1
62	1	1
63	1	1
64	1	1
65	1	1
66	1	1
67	1	1
68	1	1
69	1	1
70	1	1
71	1	1
72	1	1
73	1	1
74	1	1
75	1	1
76	1	1
77	1	1
78	1	1
79	1	1
80	1	1
81	1	1
82	1	1
83	1	1
84	1	1
85	1	1
86	1	1
87	1	1
88	1	1
89	1	1
90	1	1
91	1	1
92	1	1
93	1	1
94	1	1
95	1	1
96	1	1
97	1	1
98	1	1
99	1	1
100	1	1

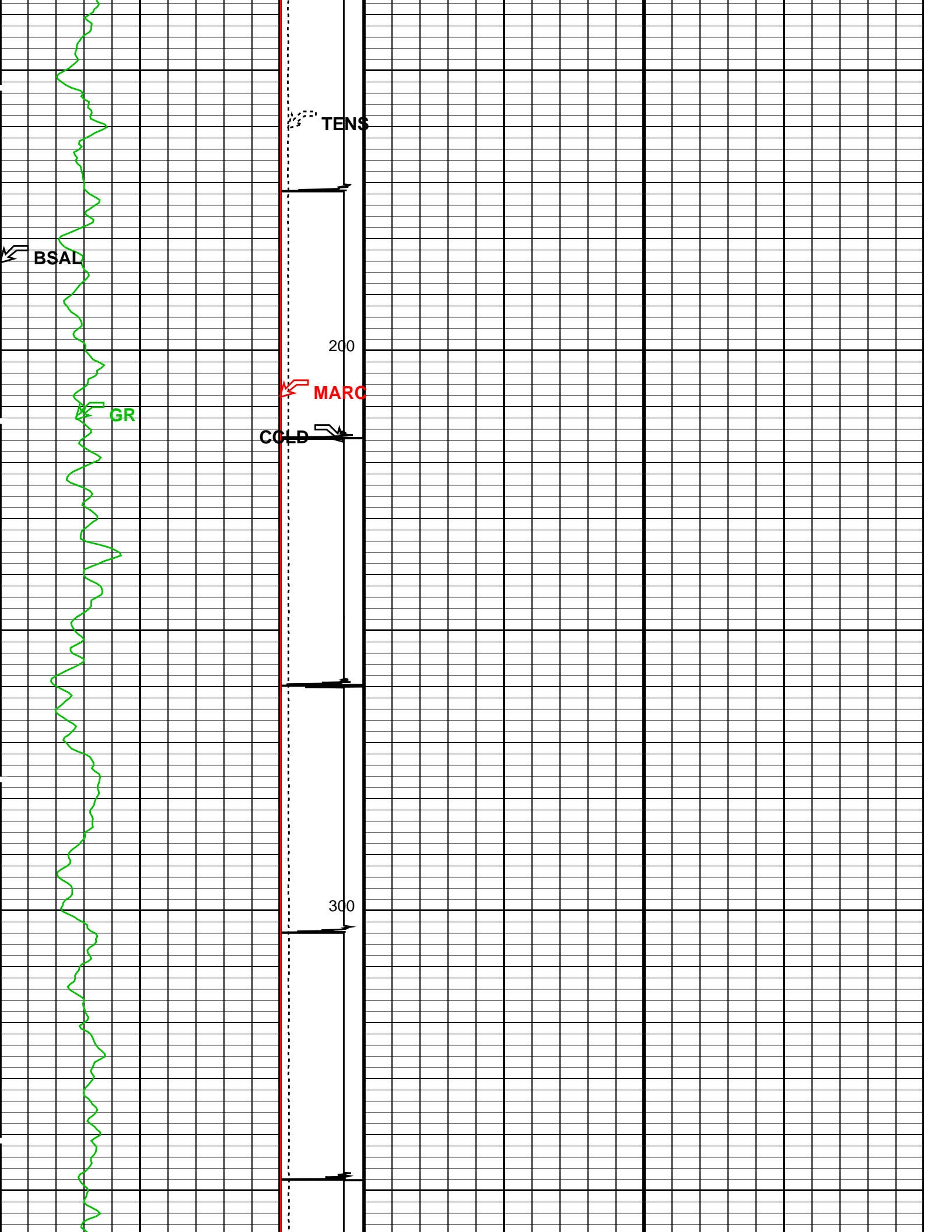
WITM-A PSC_16MHZ	SURFACE EQUIPMENT	
---------------------	-------------------	--

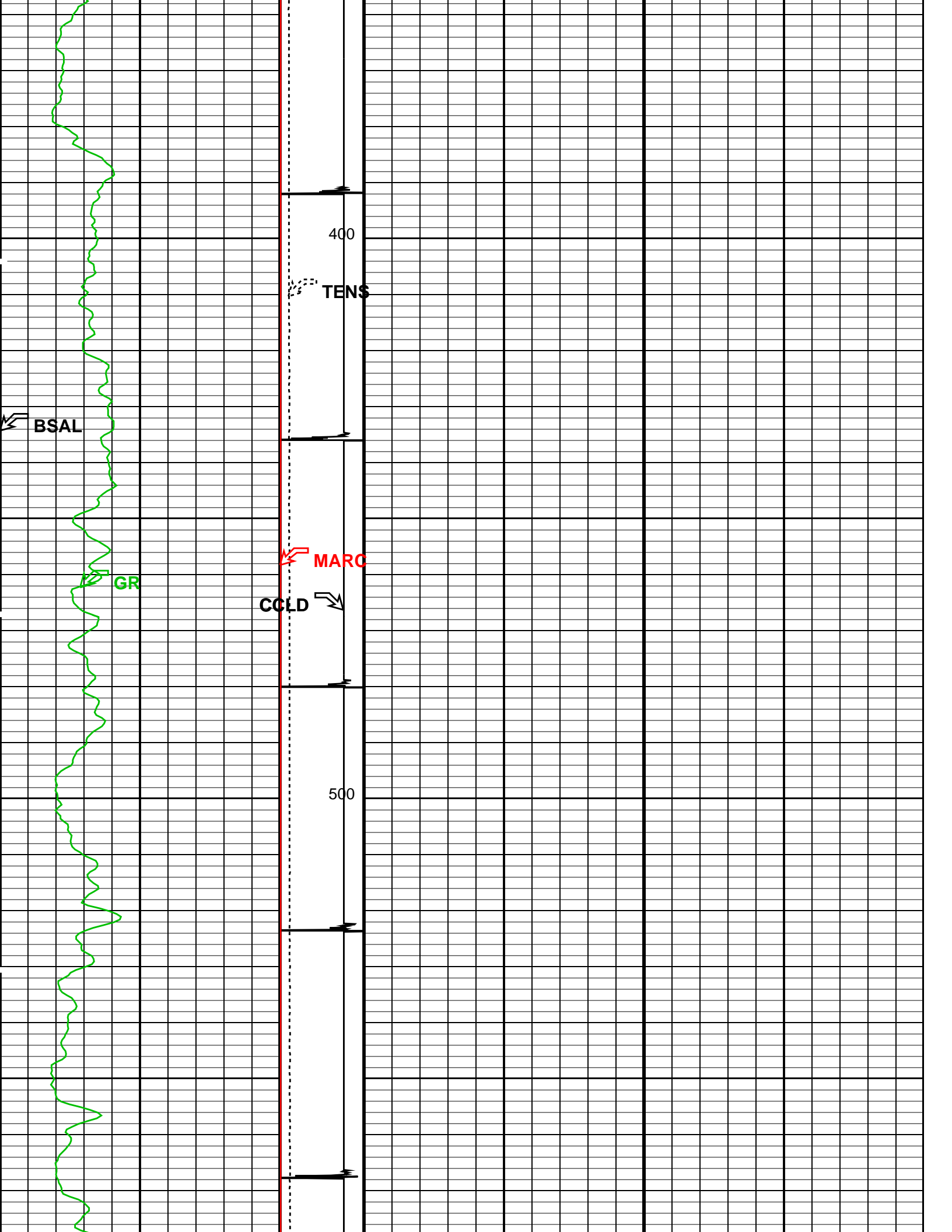
DOWNHOLE EQUIPMENT

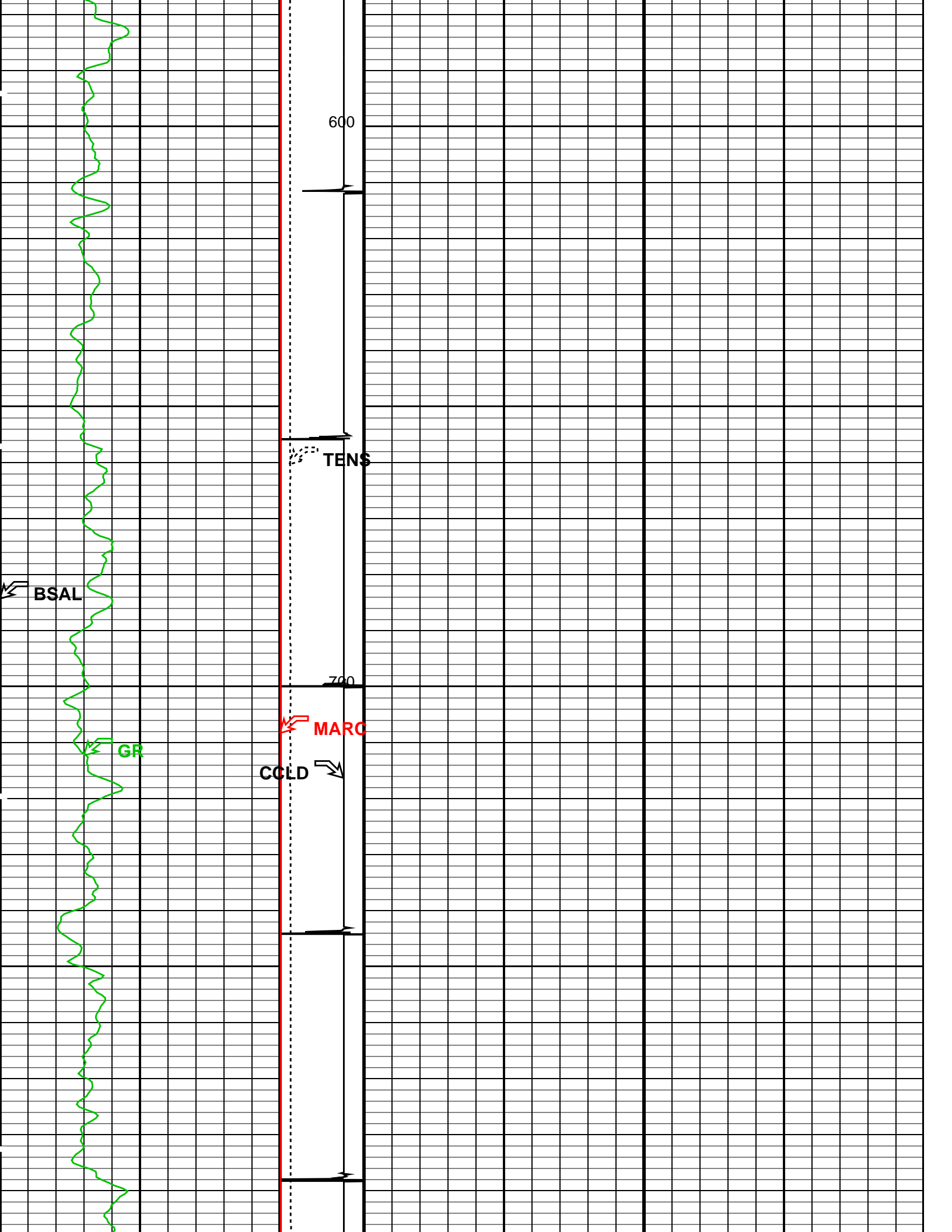
Device	Measurement	Value
MH-22		53.4
MH-22		
Detail MT		
TelStatus		
CTEM		
AH-38		51.8
PSPT		51.5
PSC-A		
PSPT-A 1772		
PSTC-A		
PBMS-A	GR	47.8
10k Sapphire_Mano		
RTD_Thermometer		
GR	Well_Temp	44.8
CCL	Manometer	44.6
PBMS 928	CCL	44.0
	PBMS PSTC	43.3
RST-C		43.3
RSCH-A 469		
RSC-E		
RSS-A 461		
RSXH-A 493		
RSX-E		
	RSC-A Far	34.2
	RSC-A PNG	
	RSC-A Nea	
	RSX-A PNG	33.7

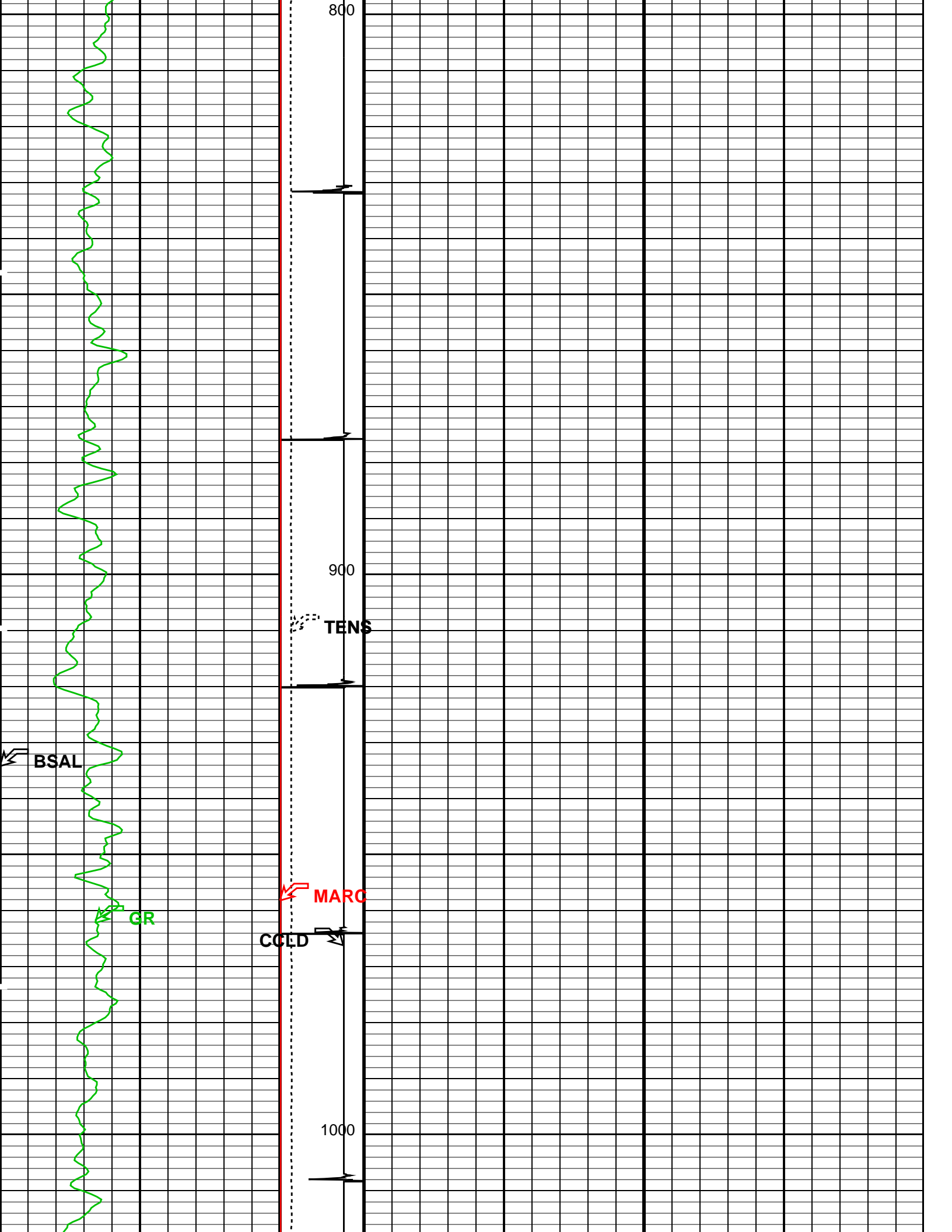
WINR Gas Flag

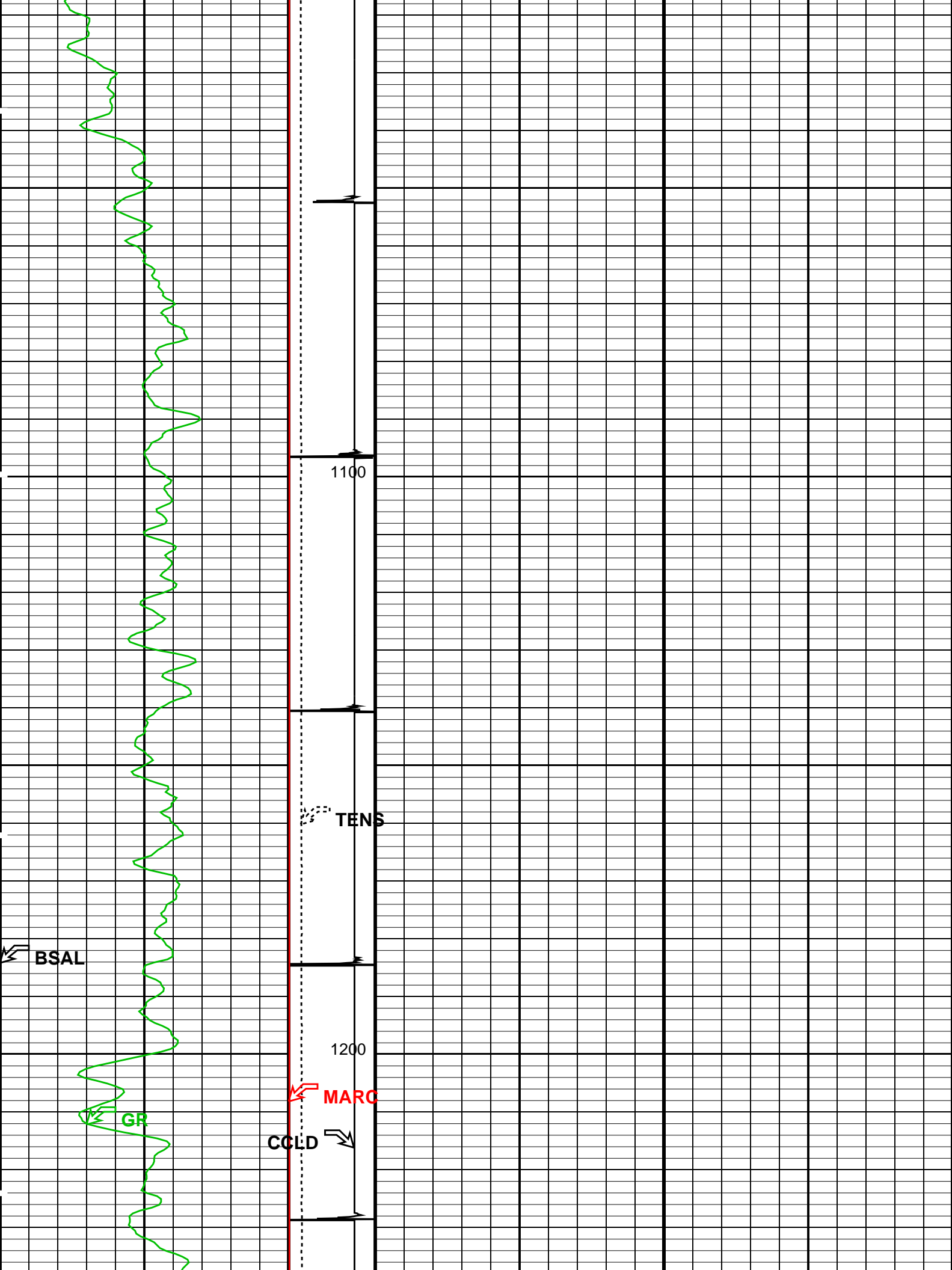


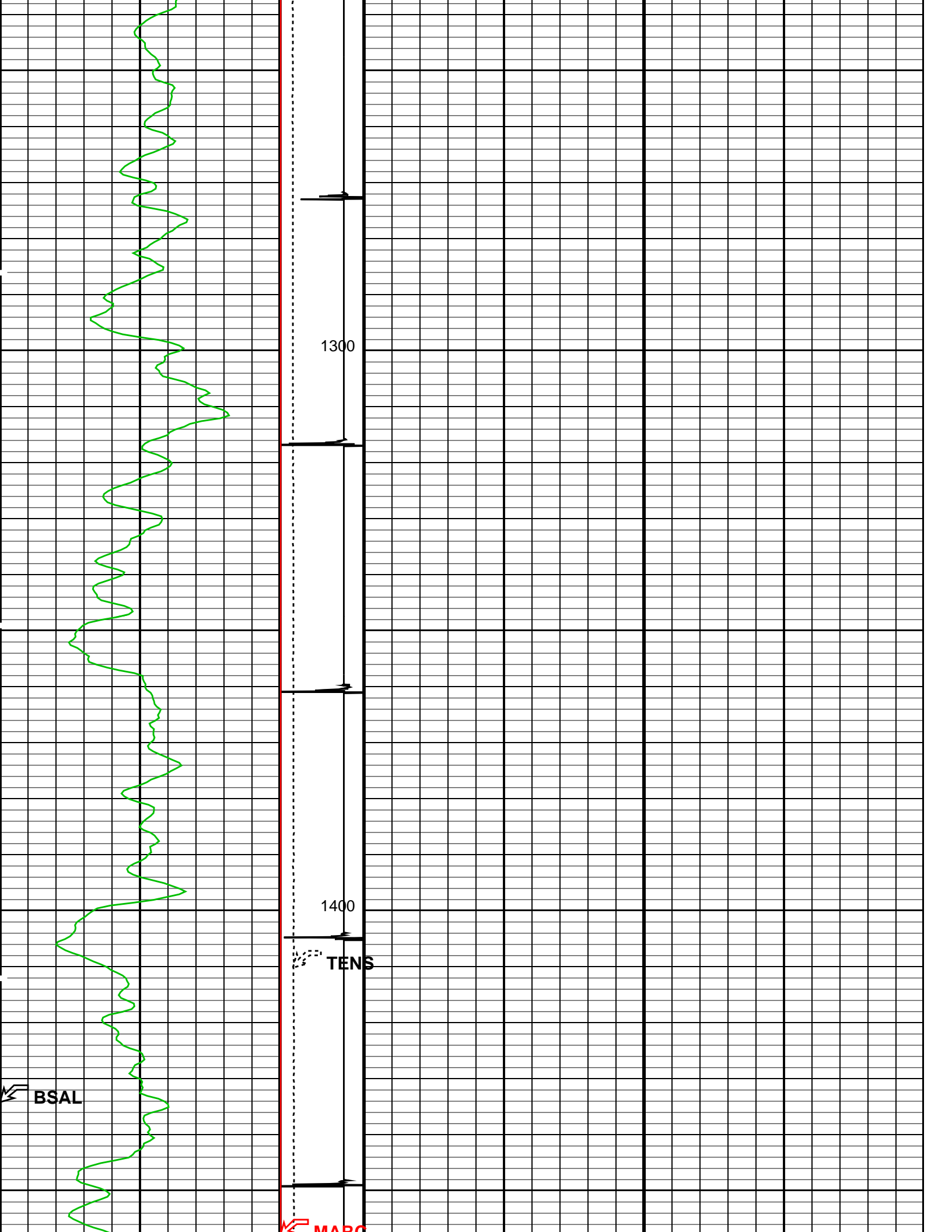


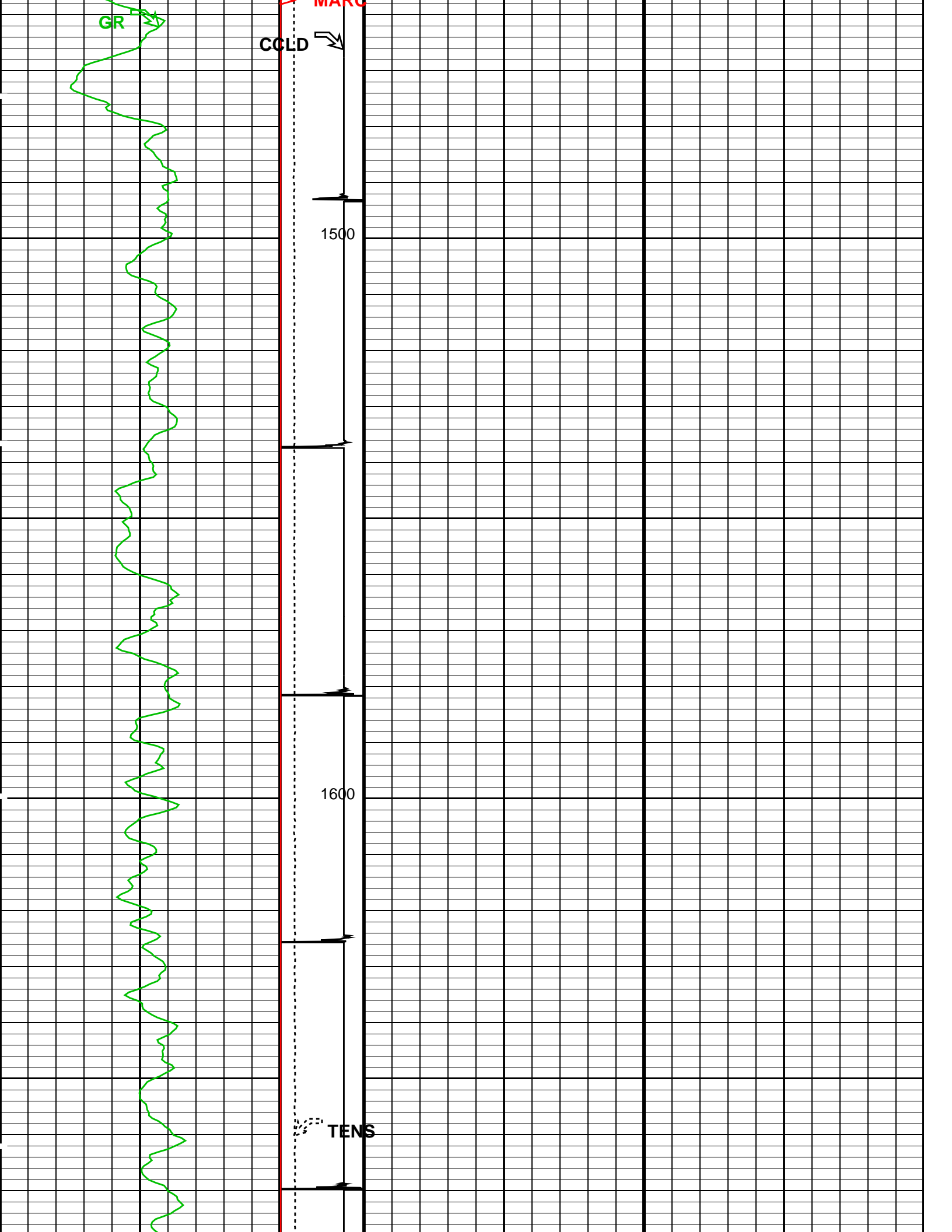


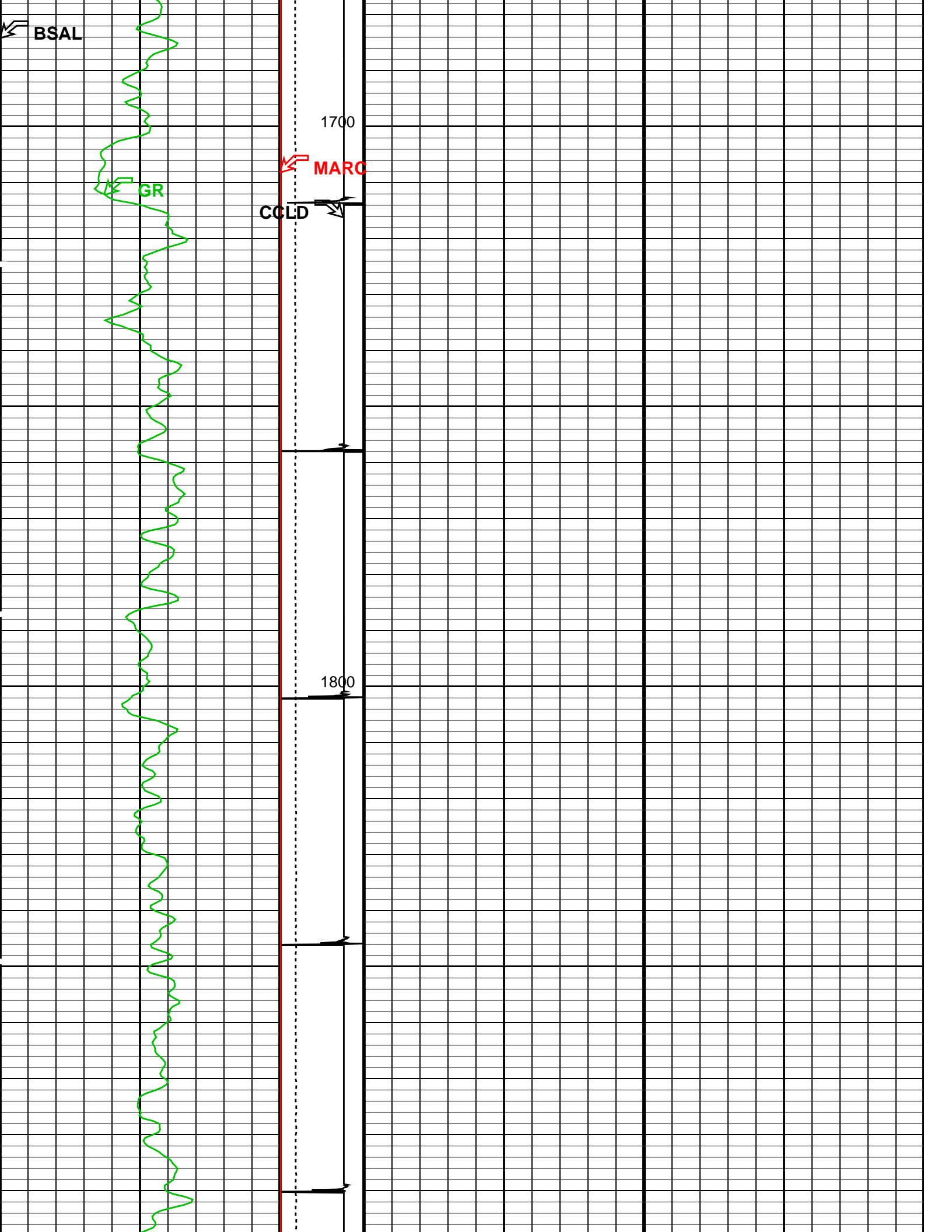


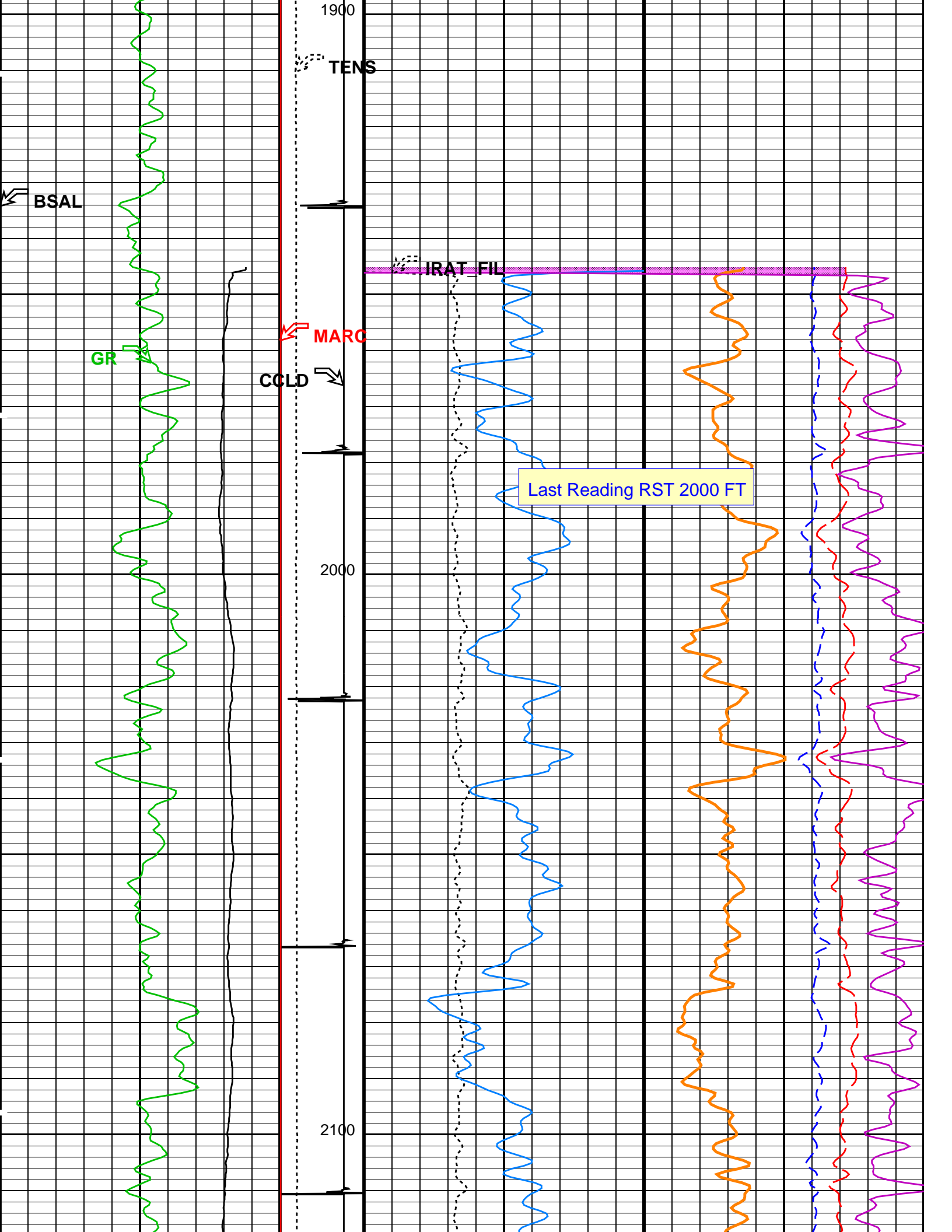


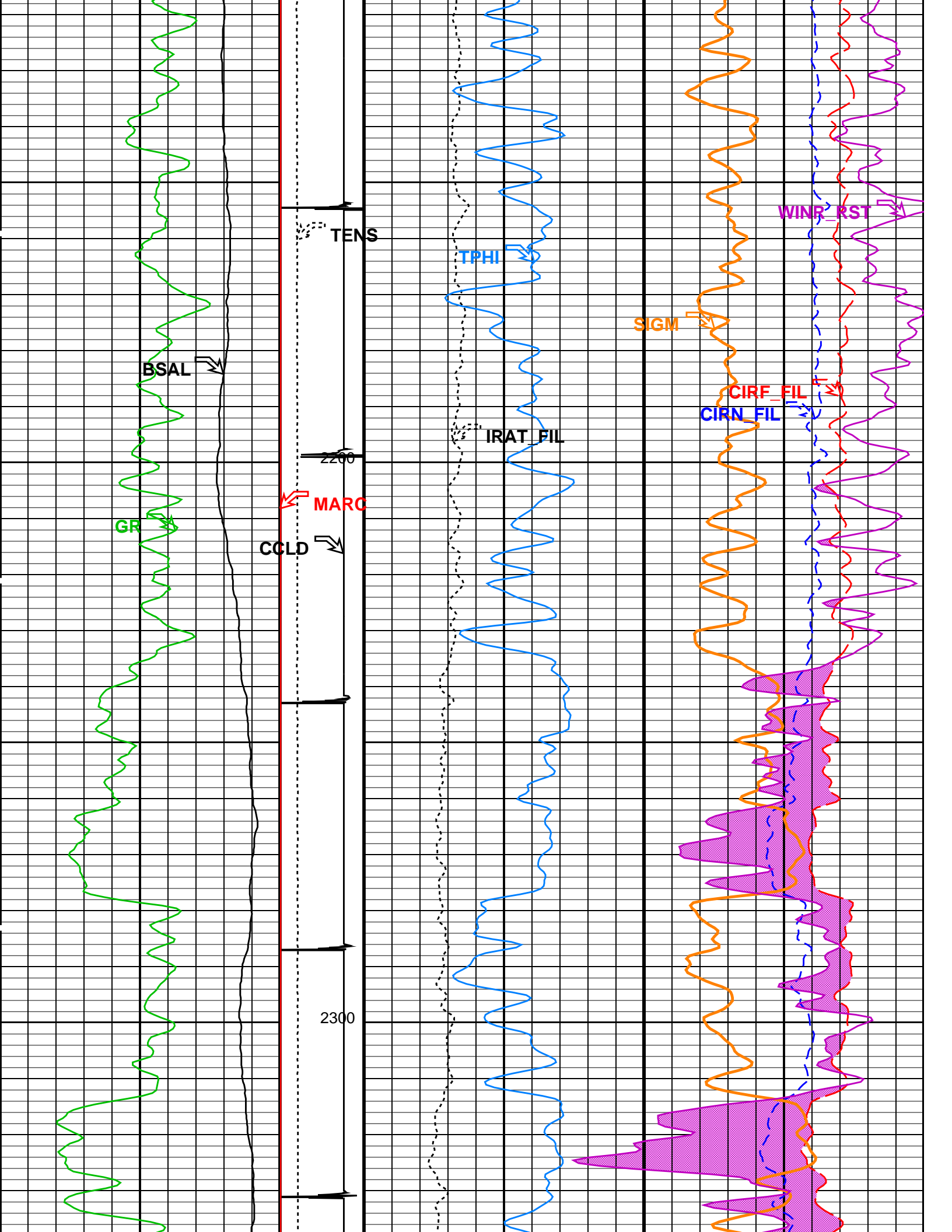


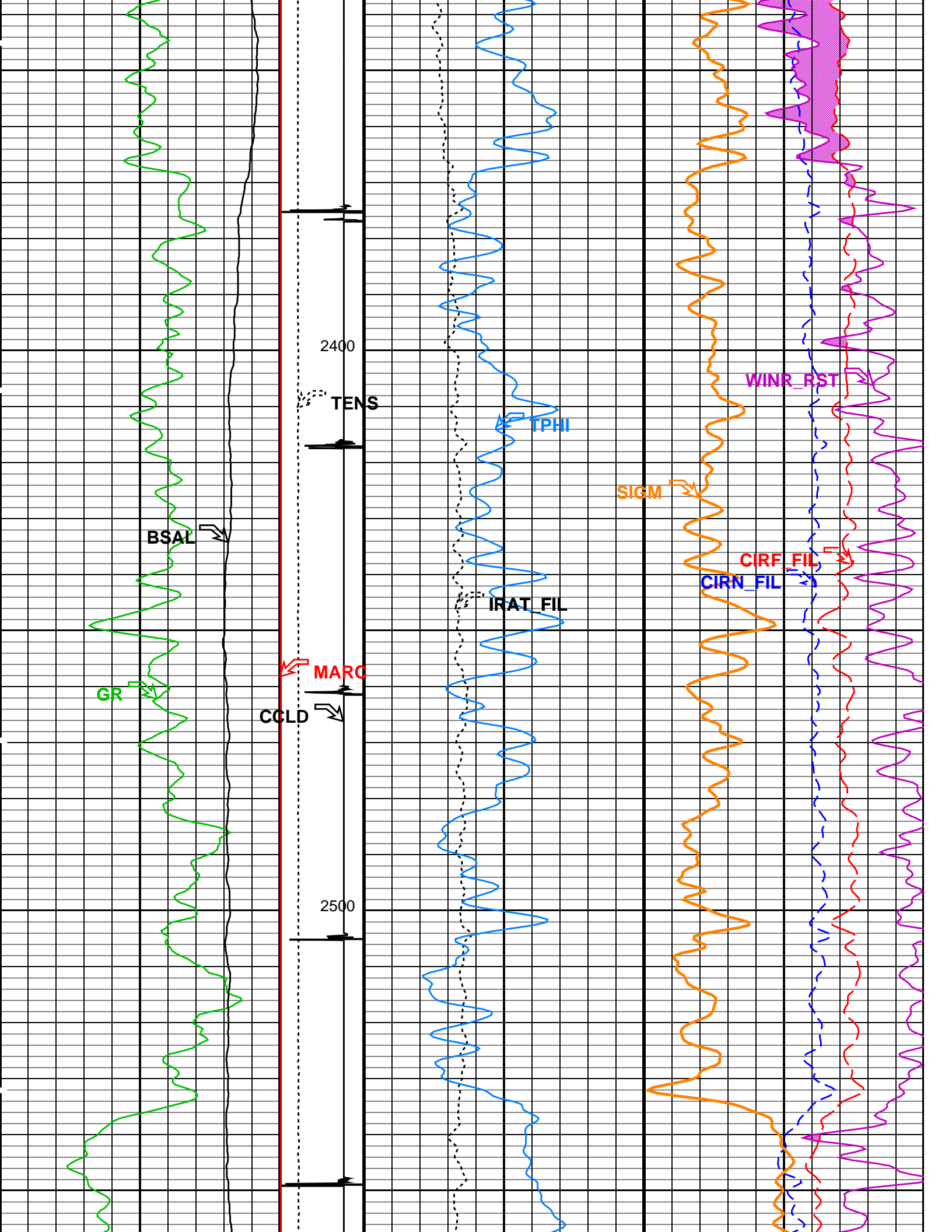


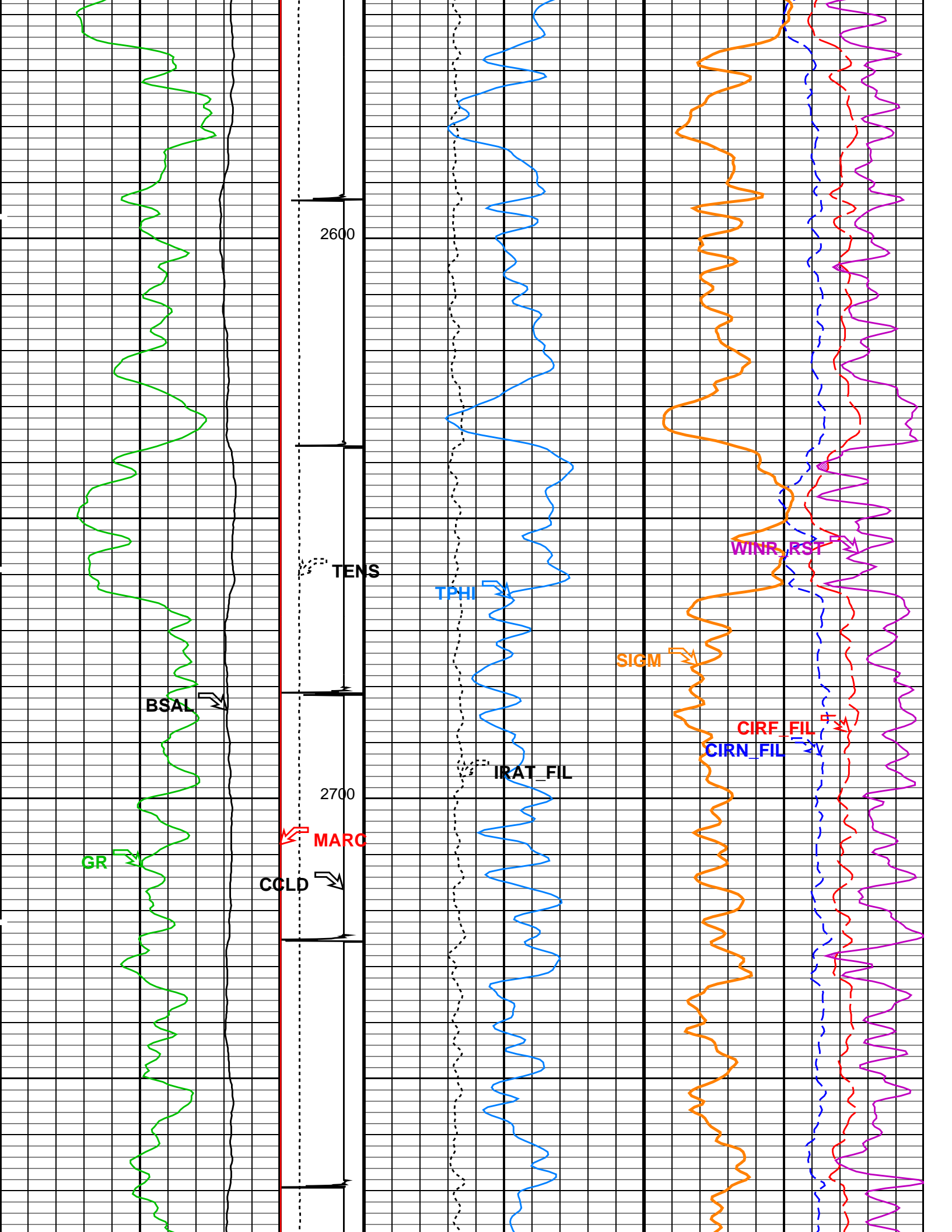


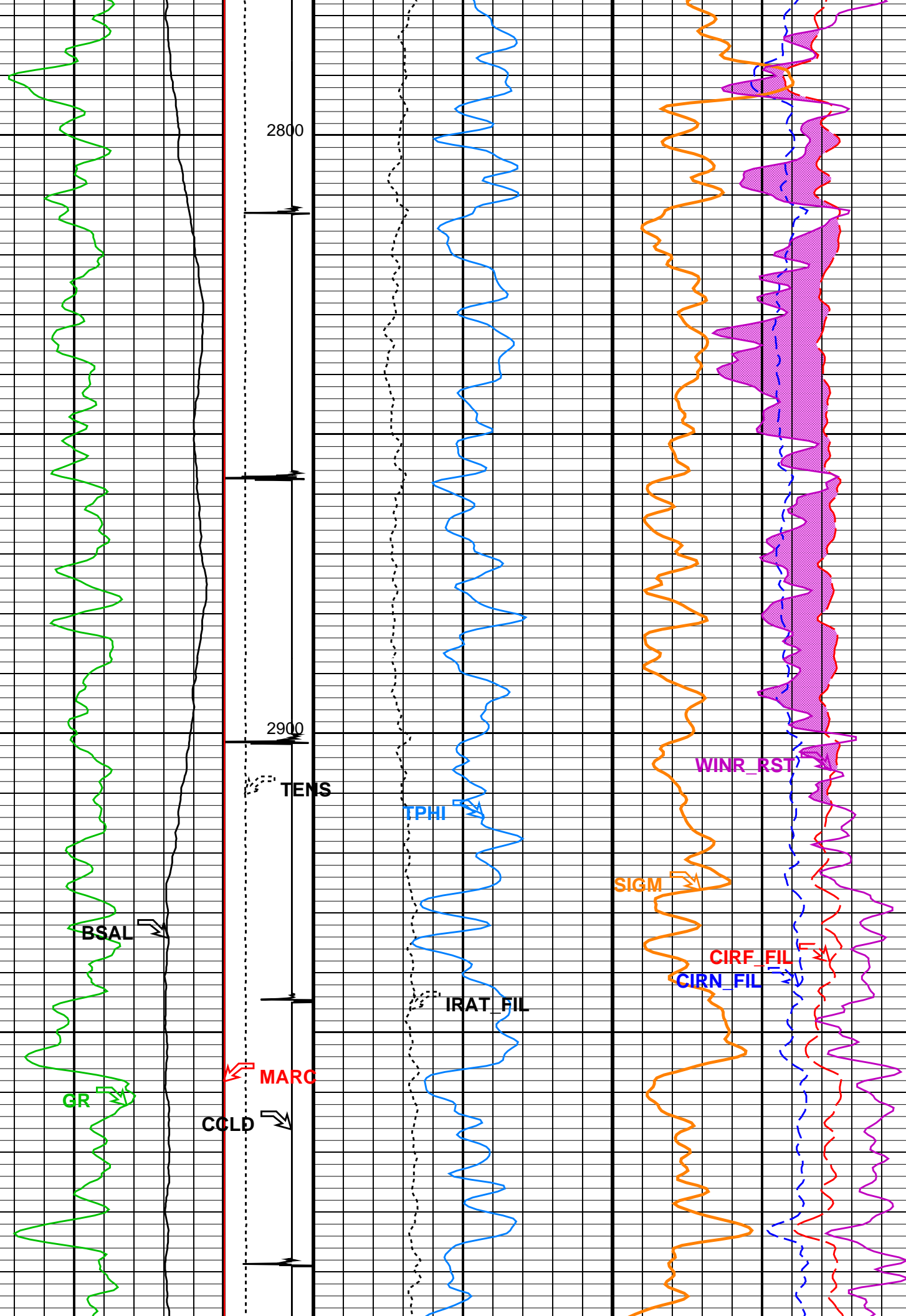


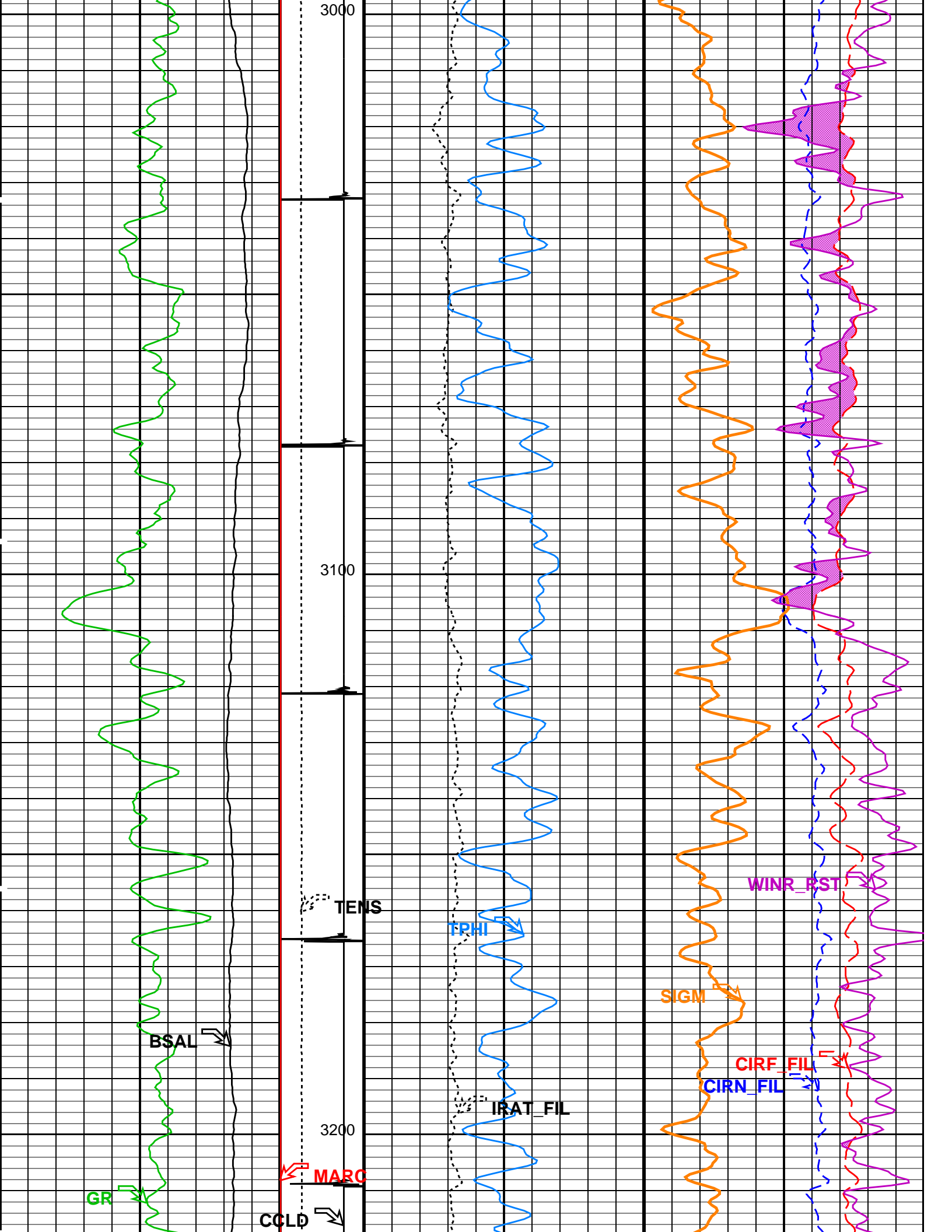


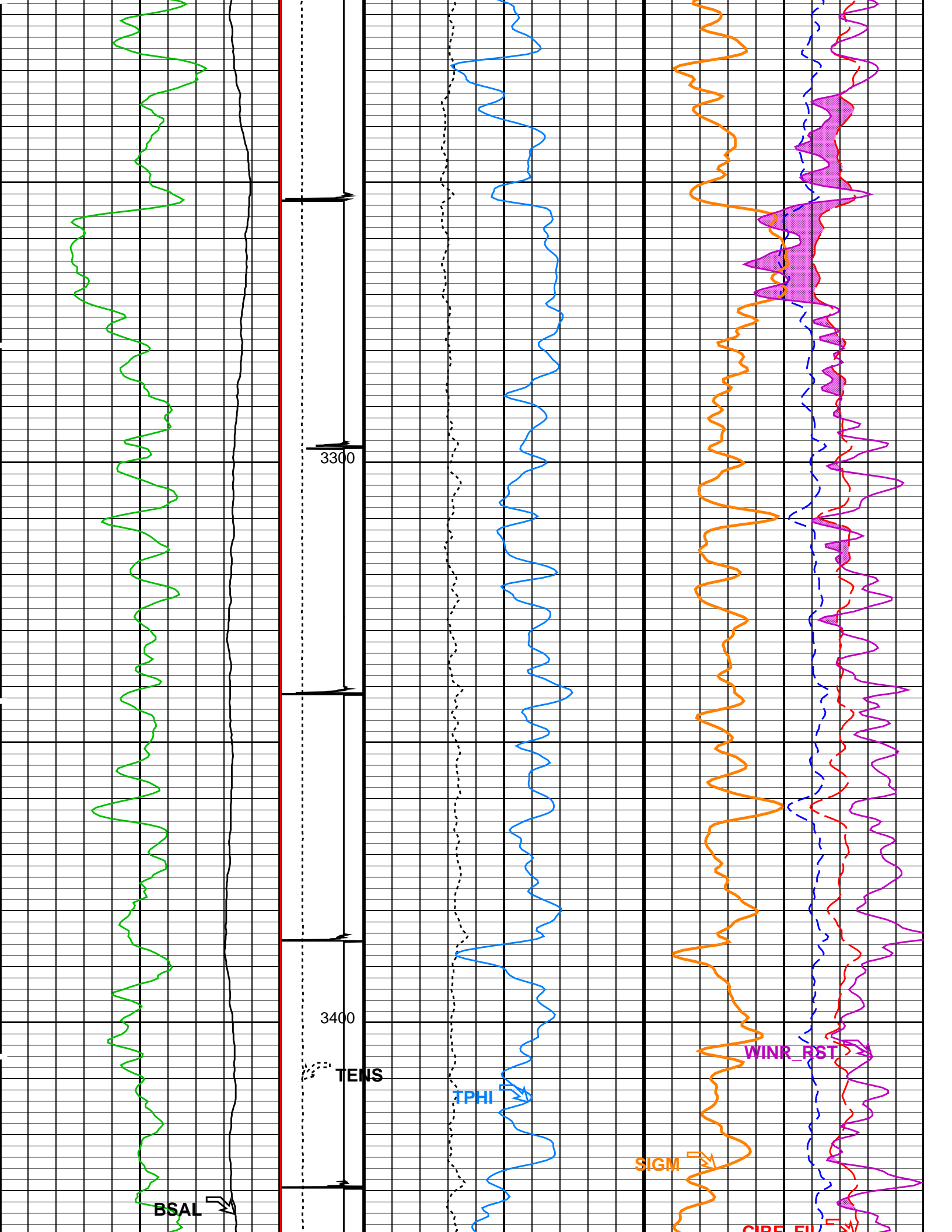


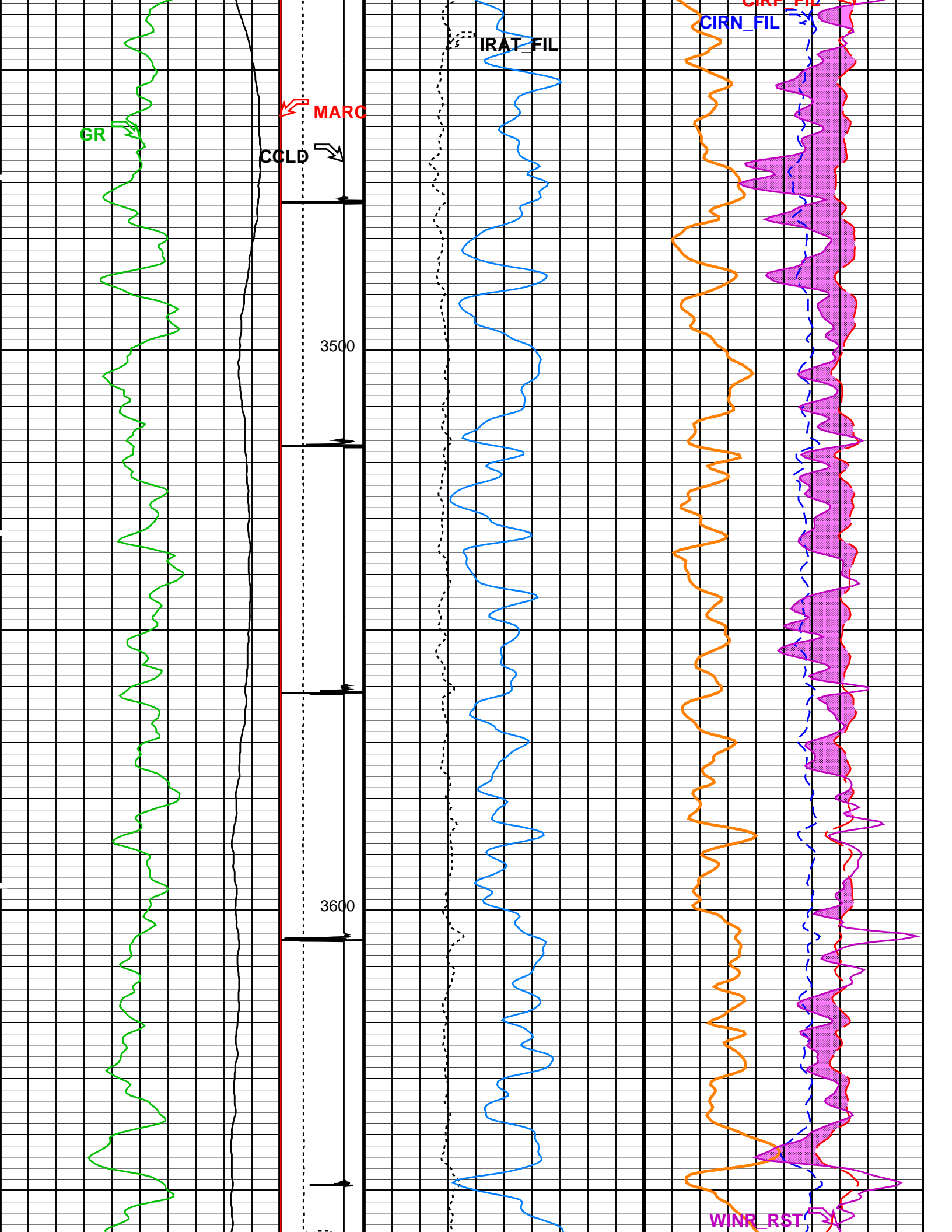


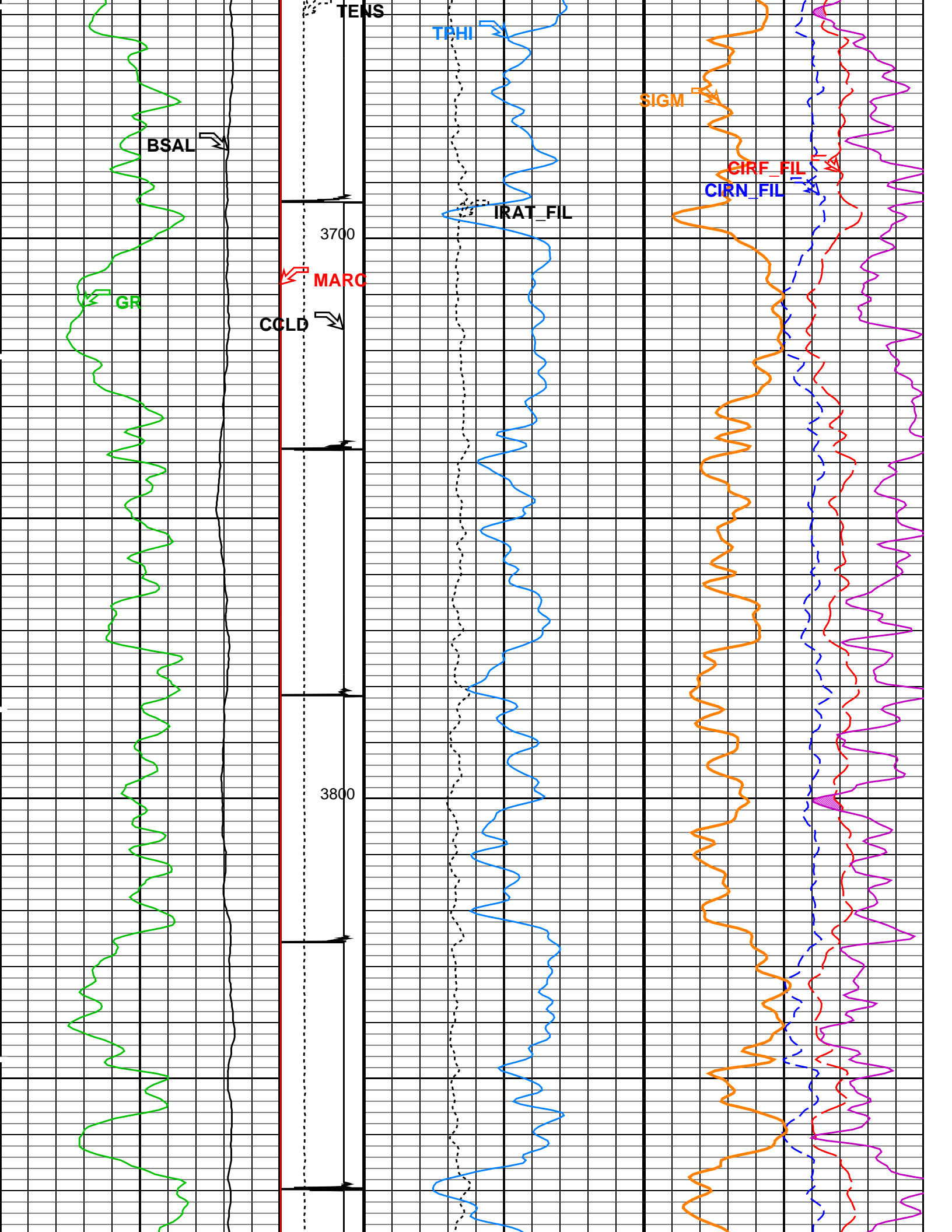


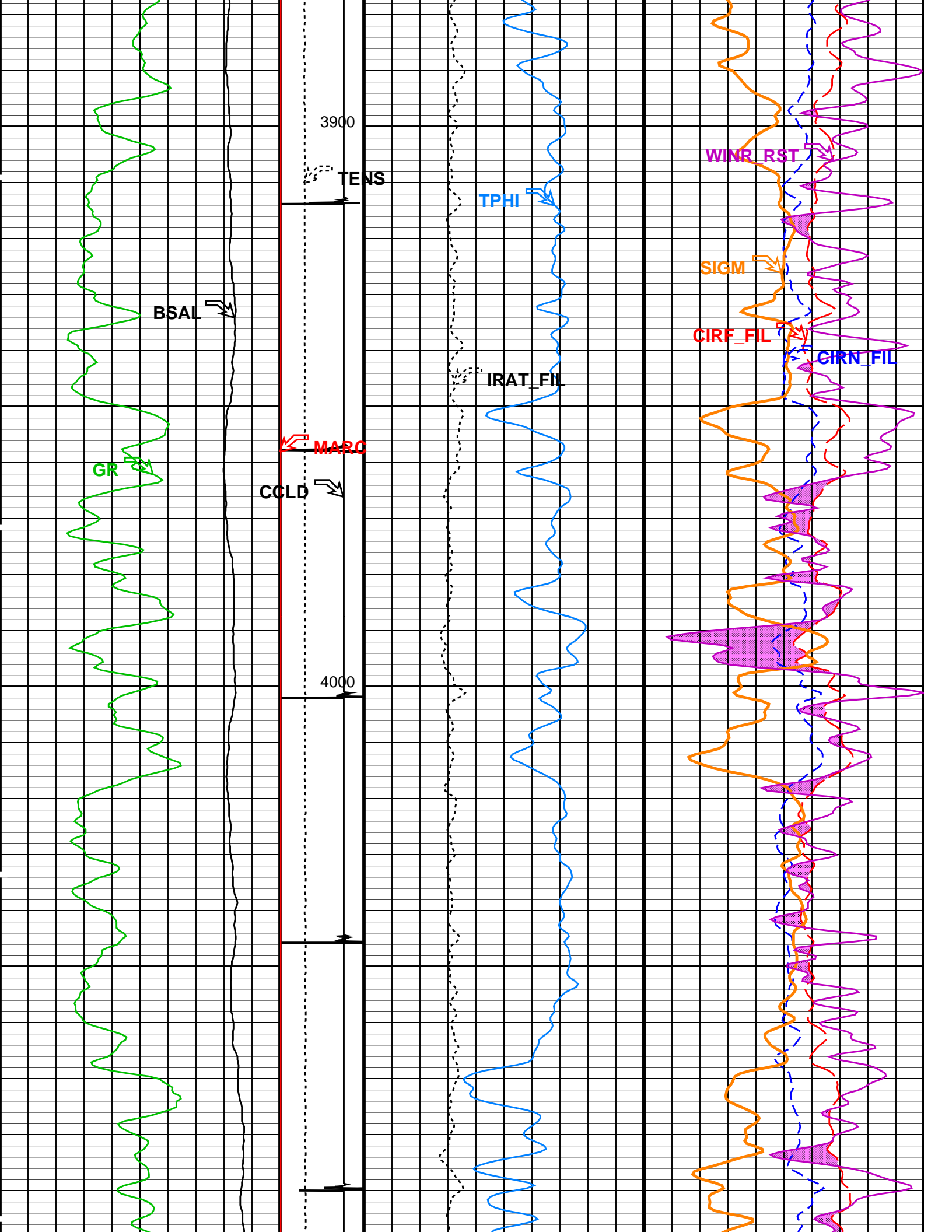


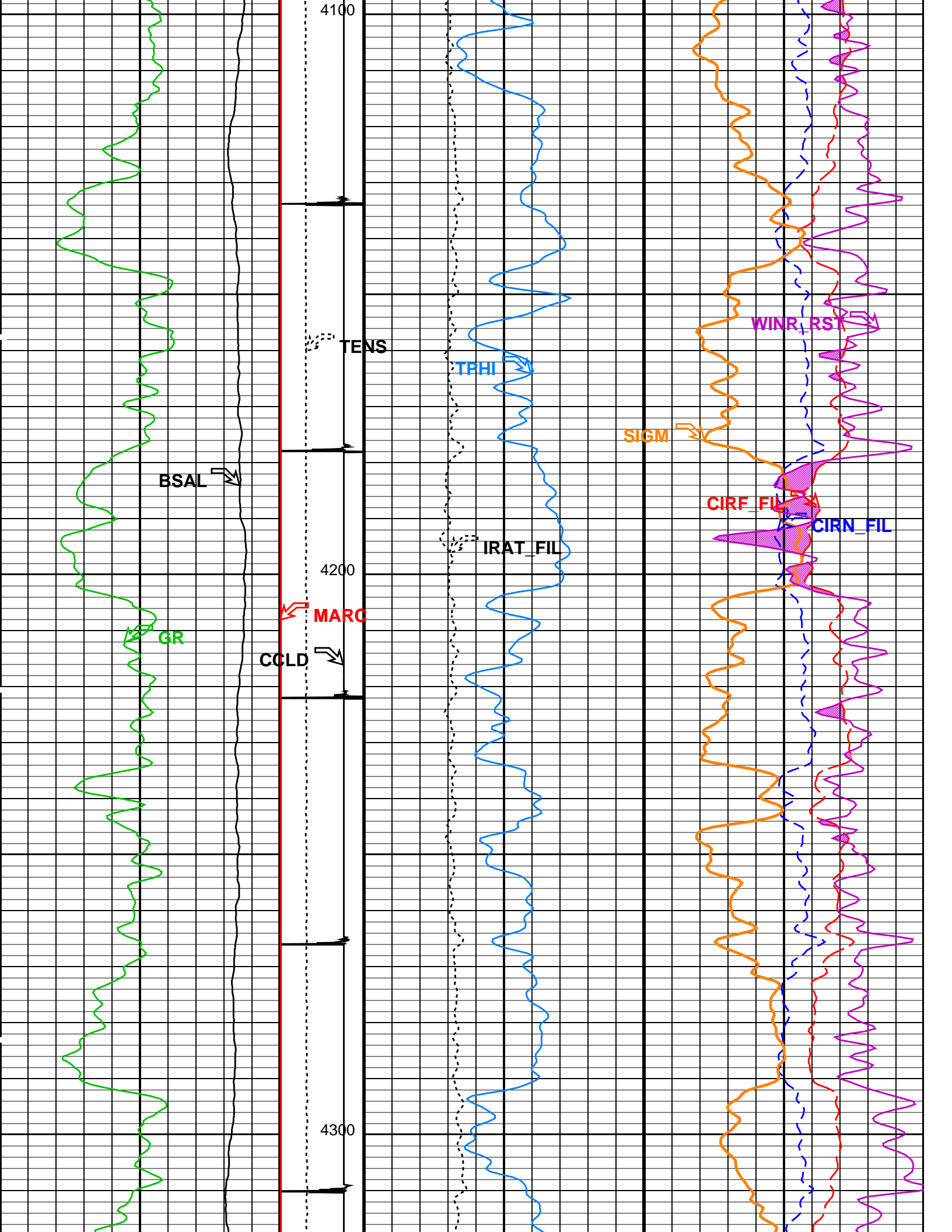


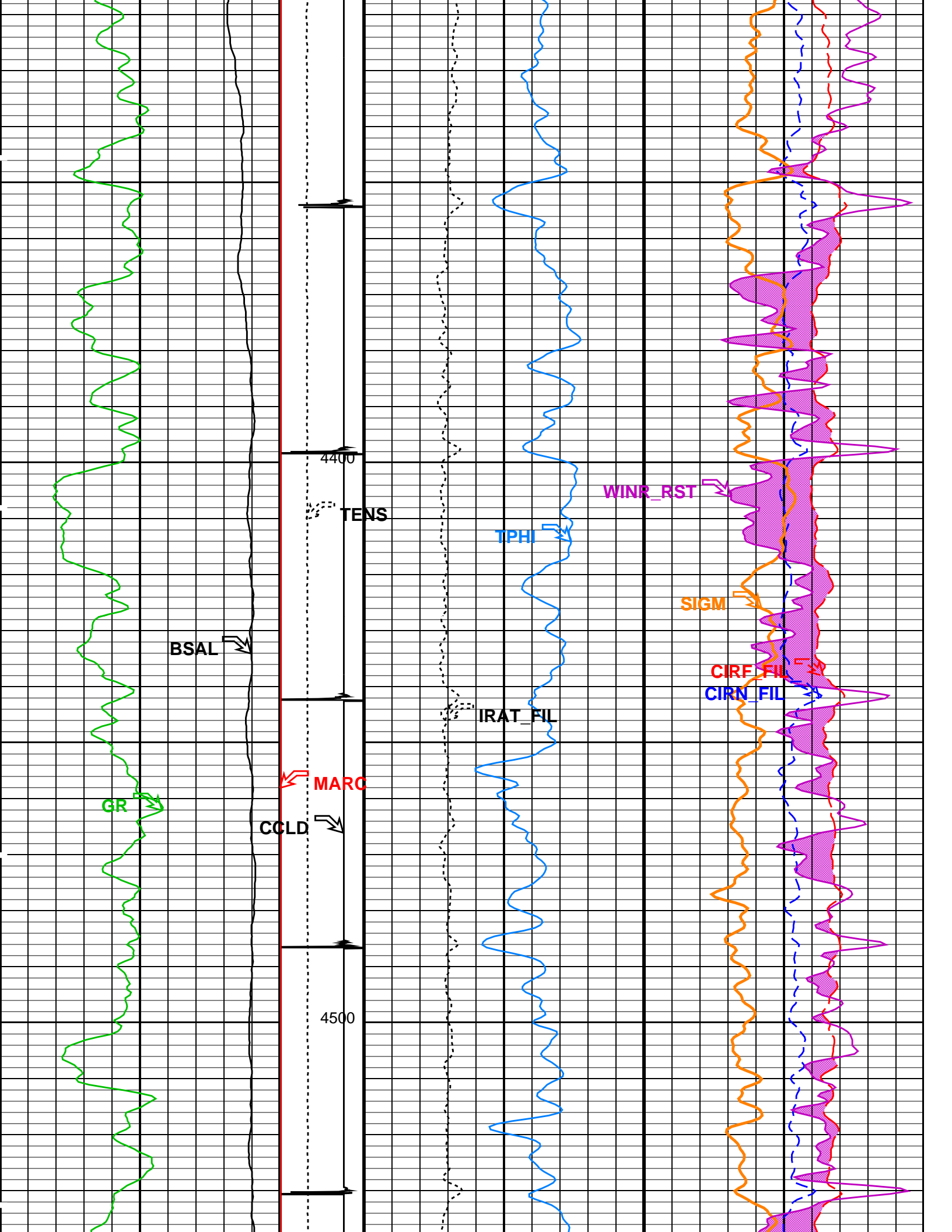


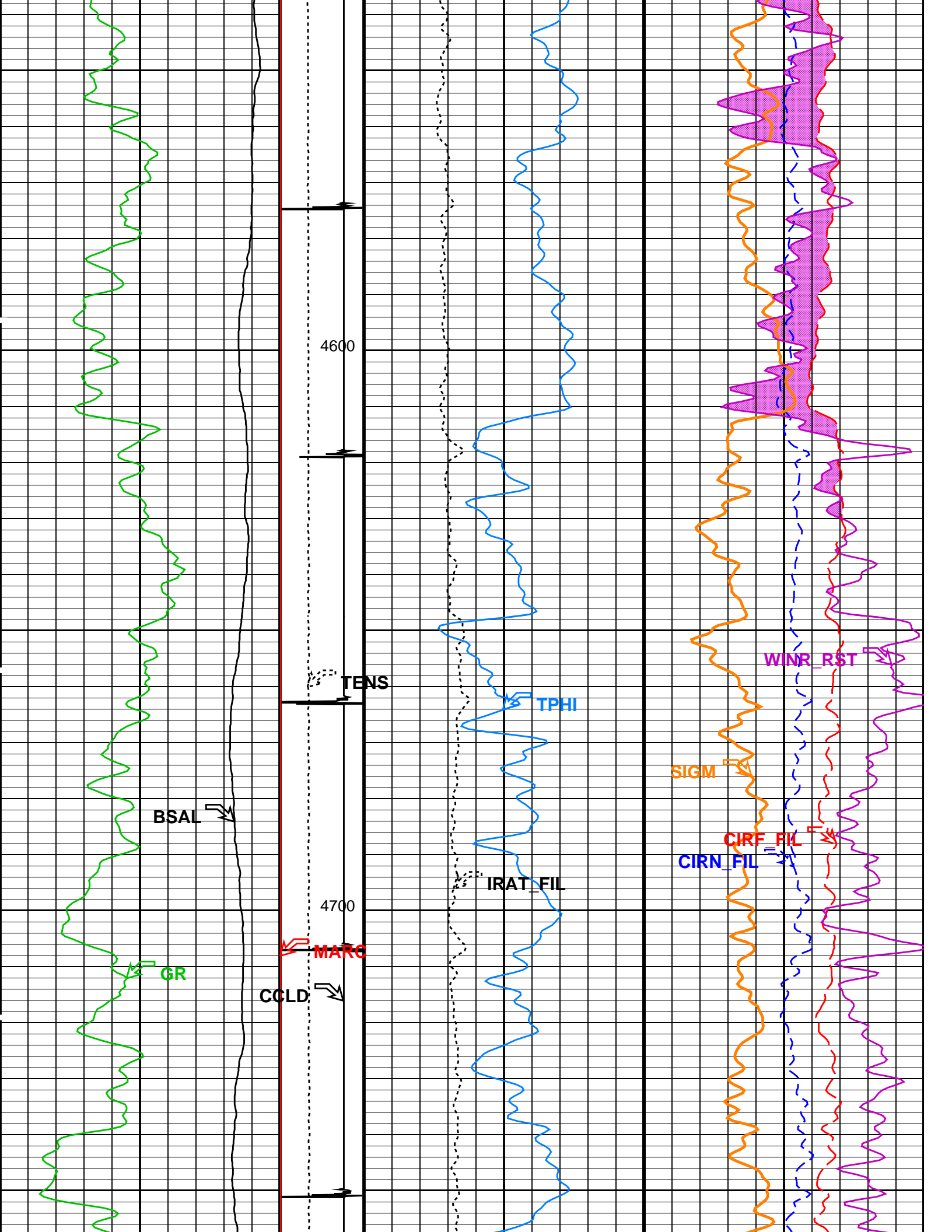


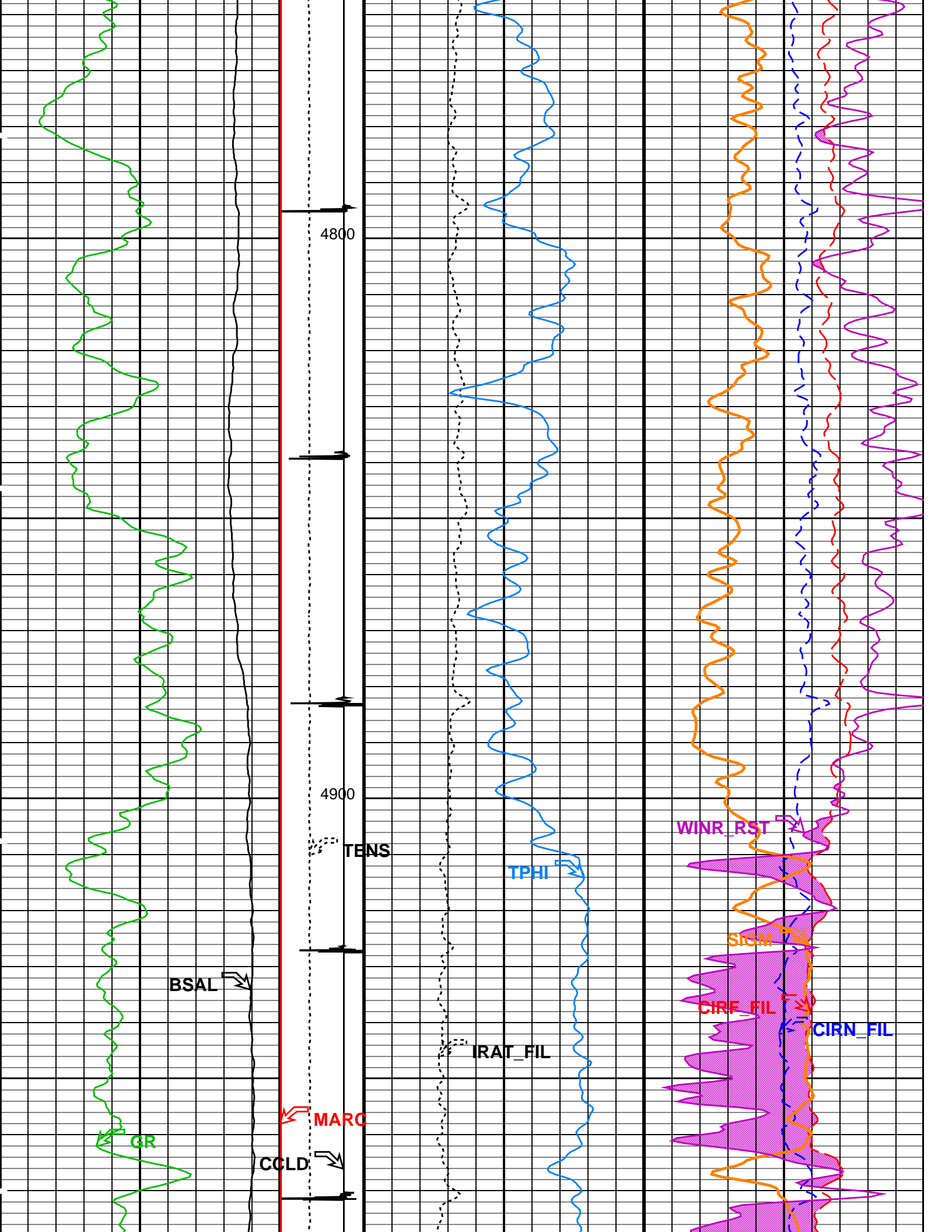


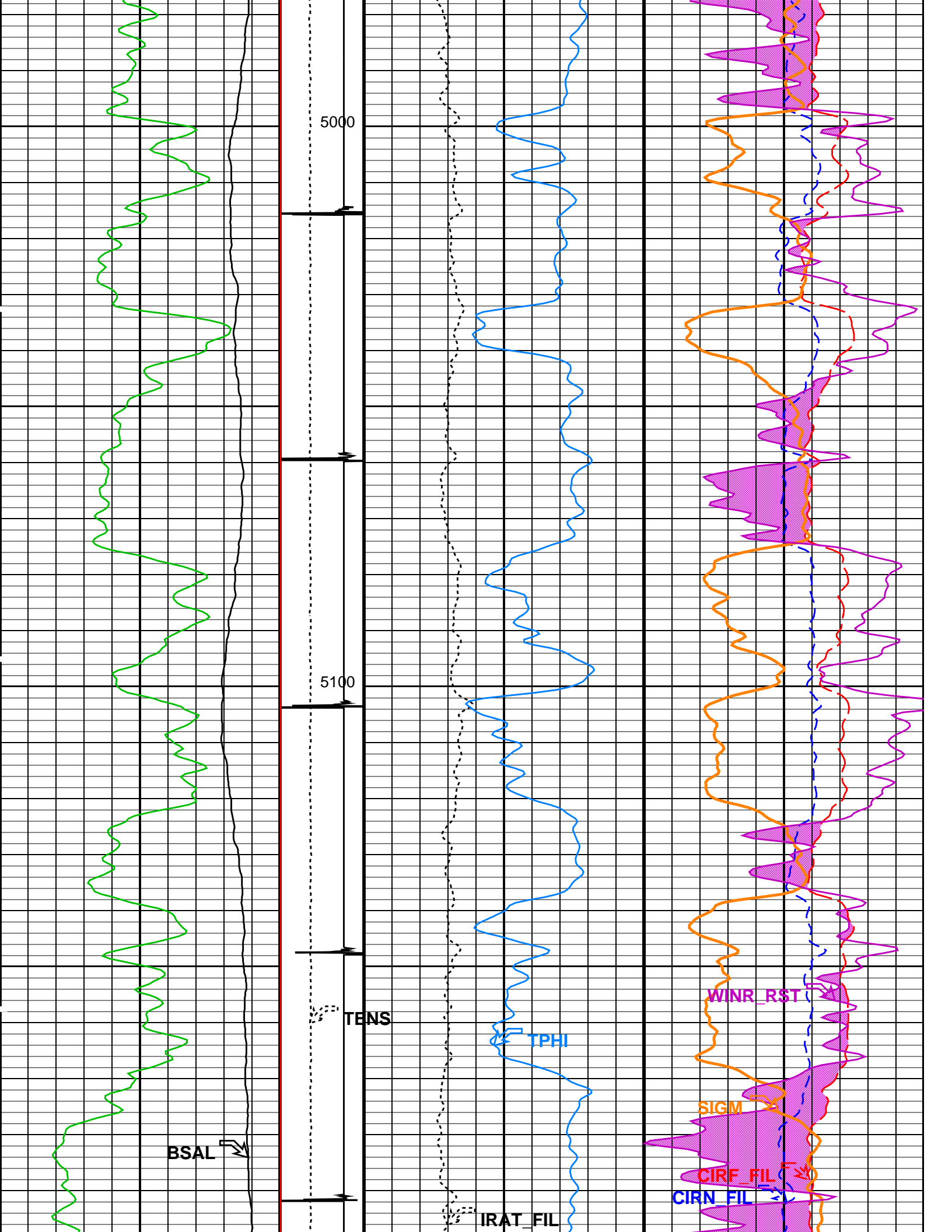


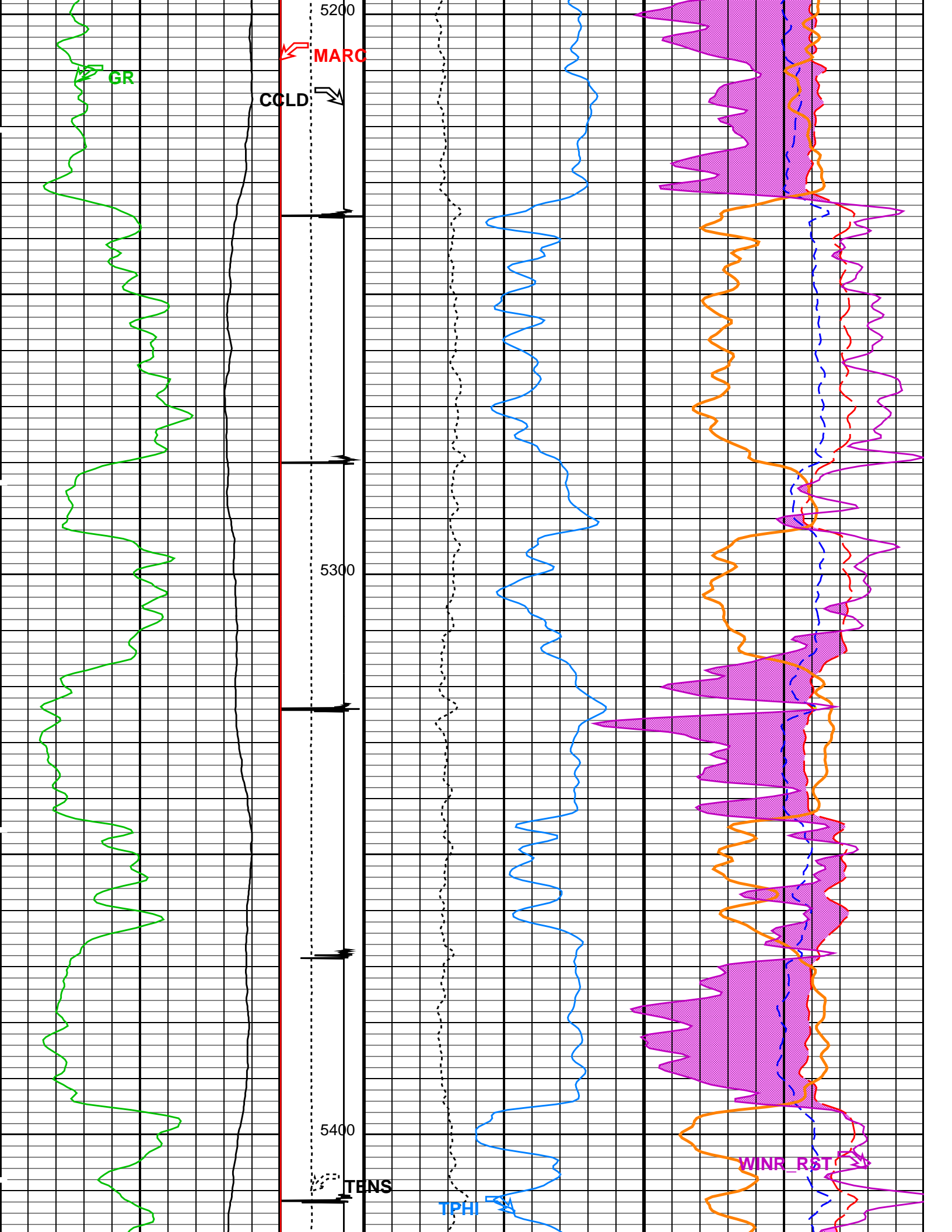


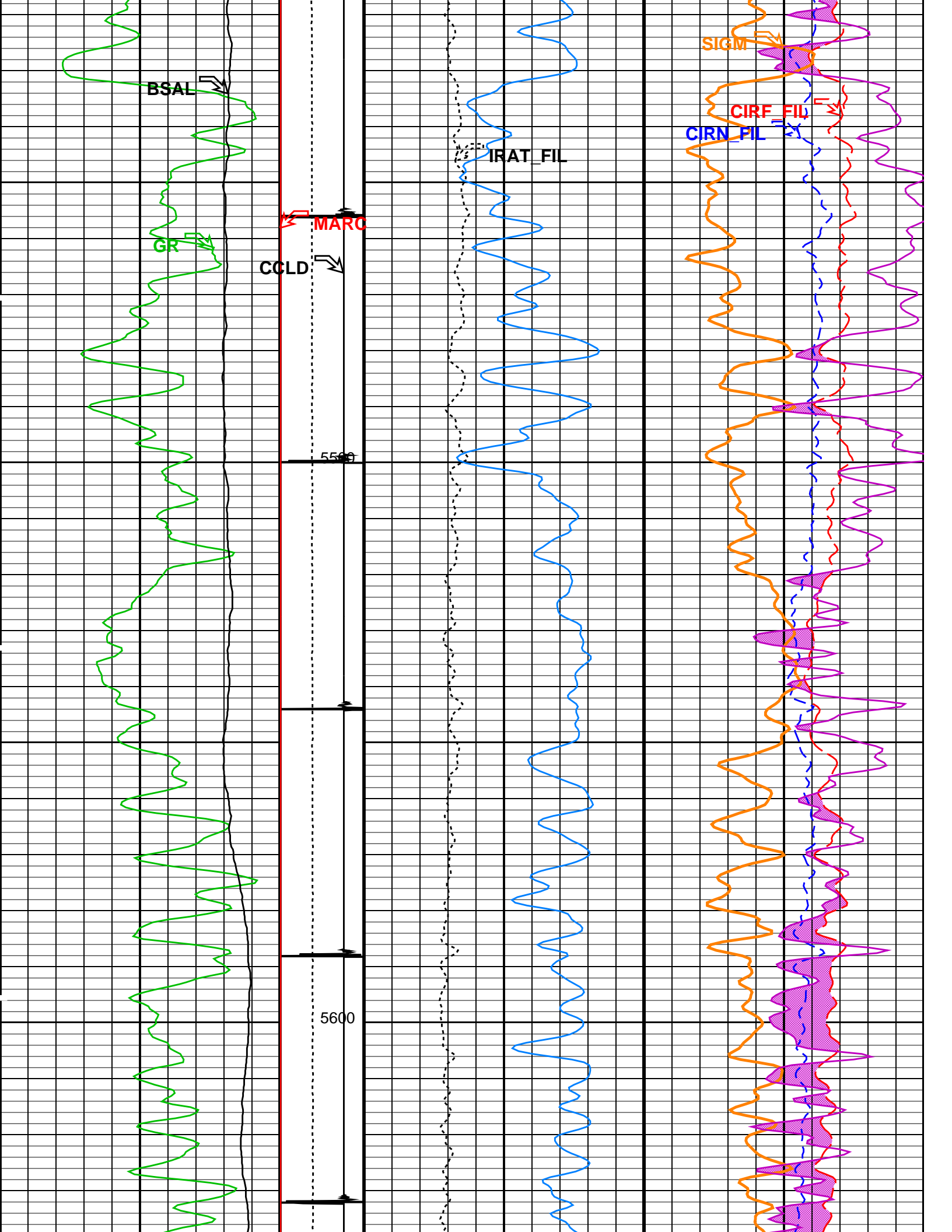


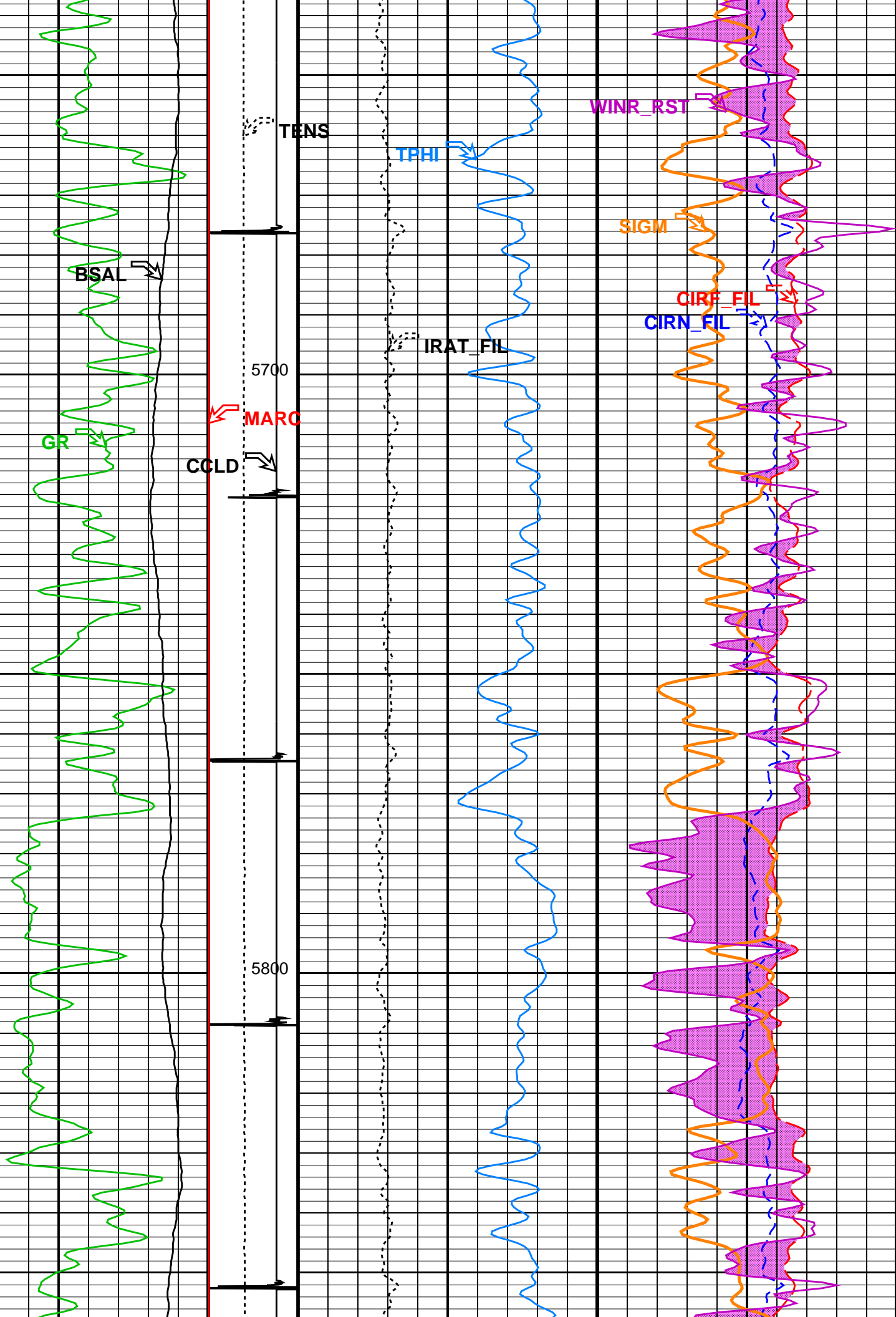


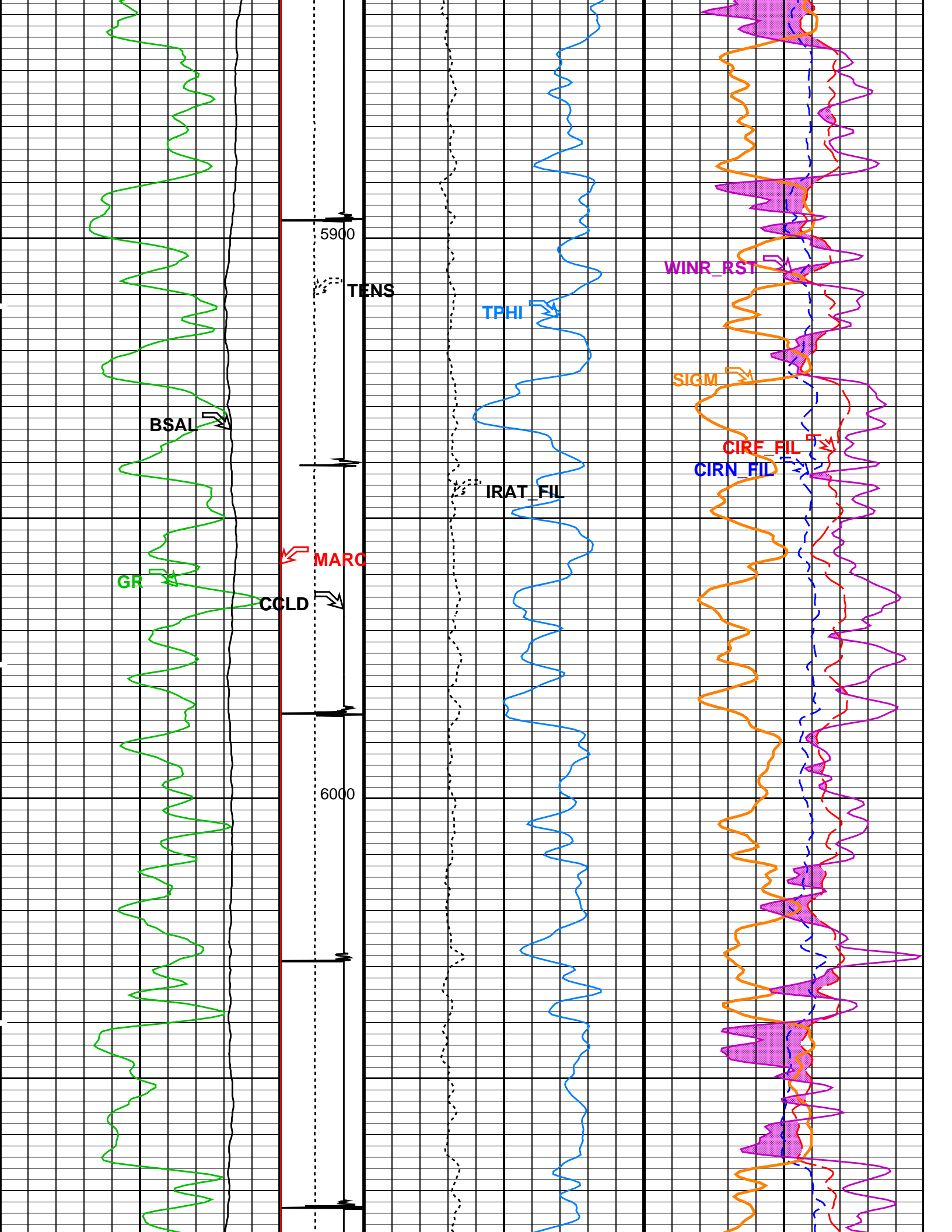


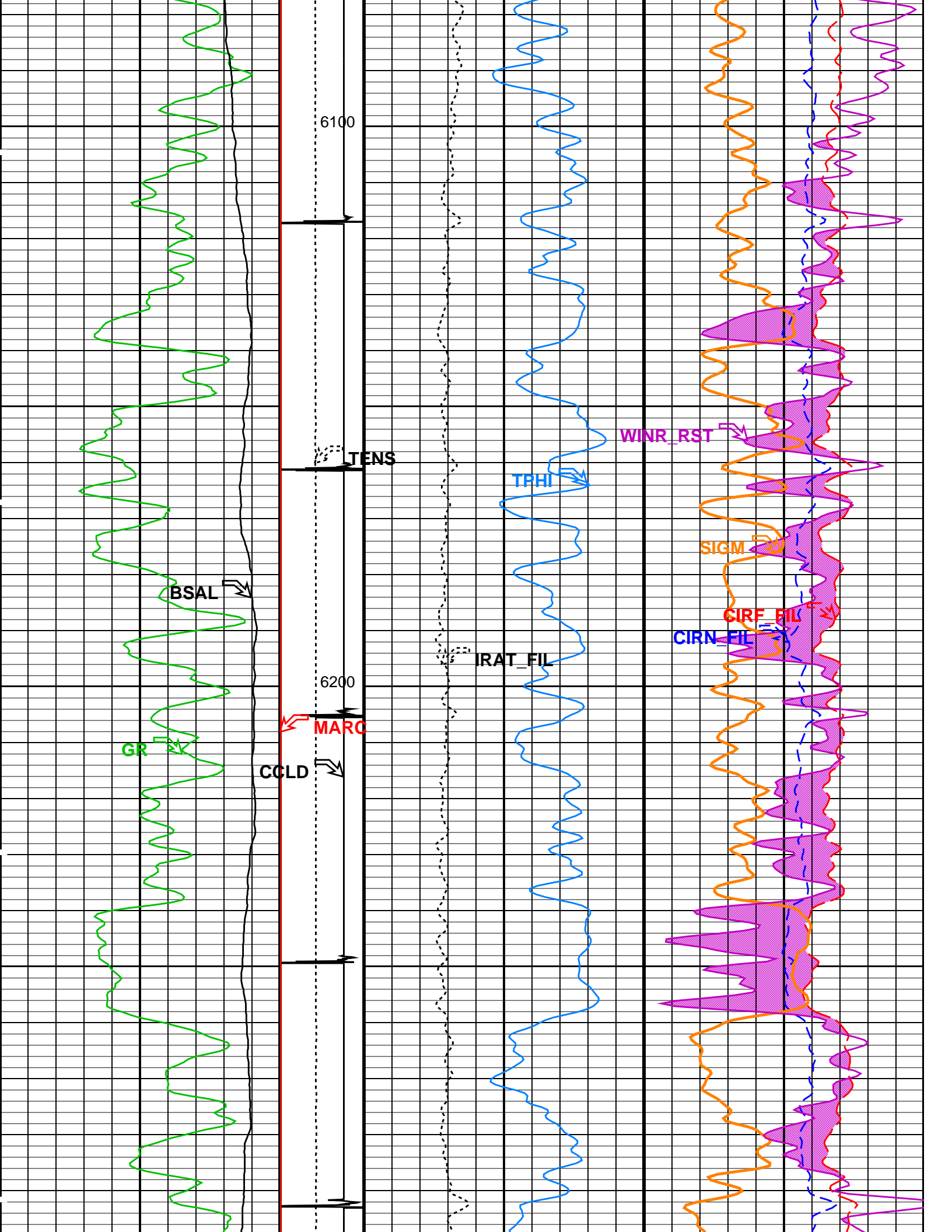


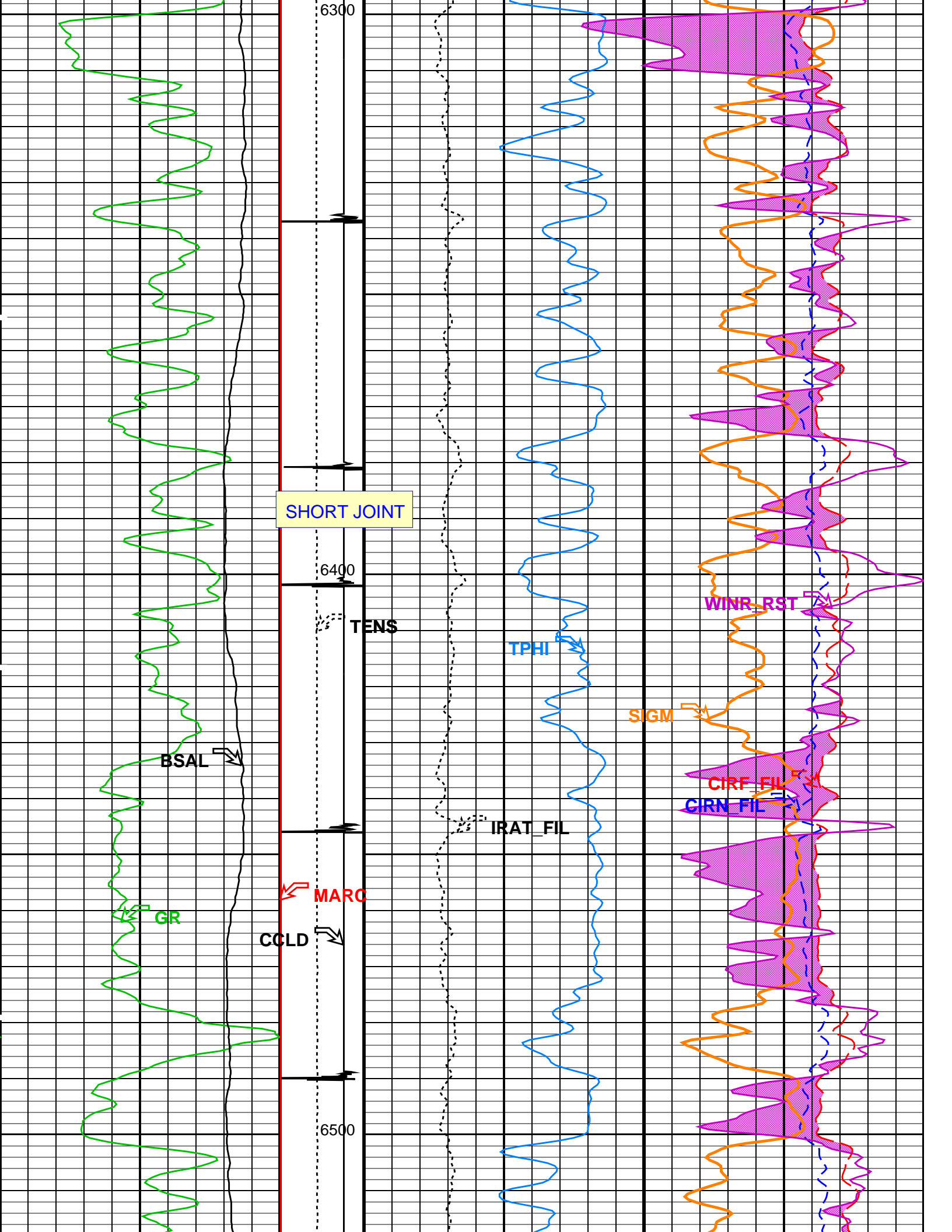


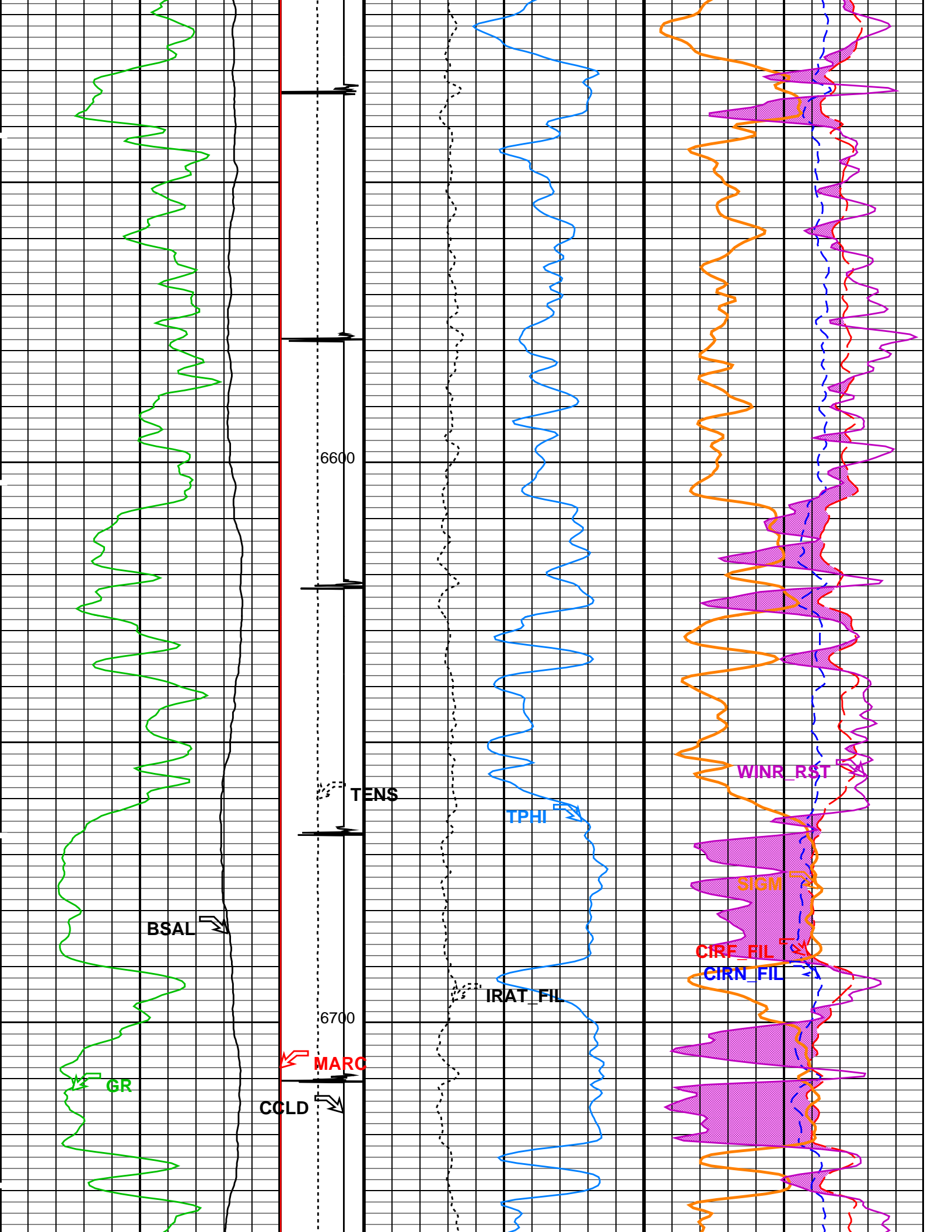


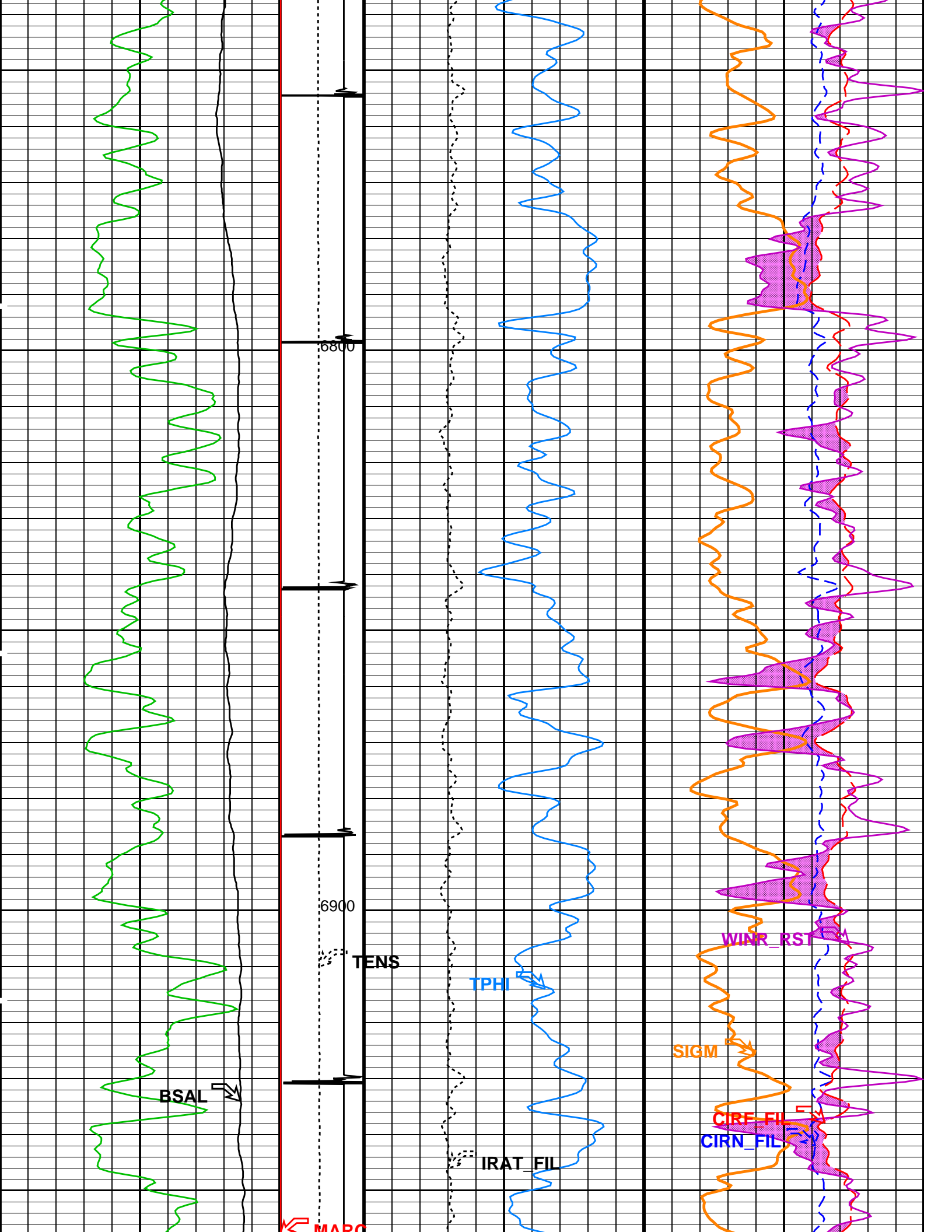


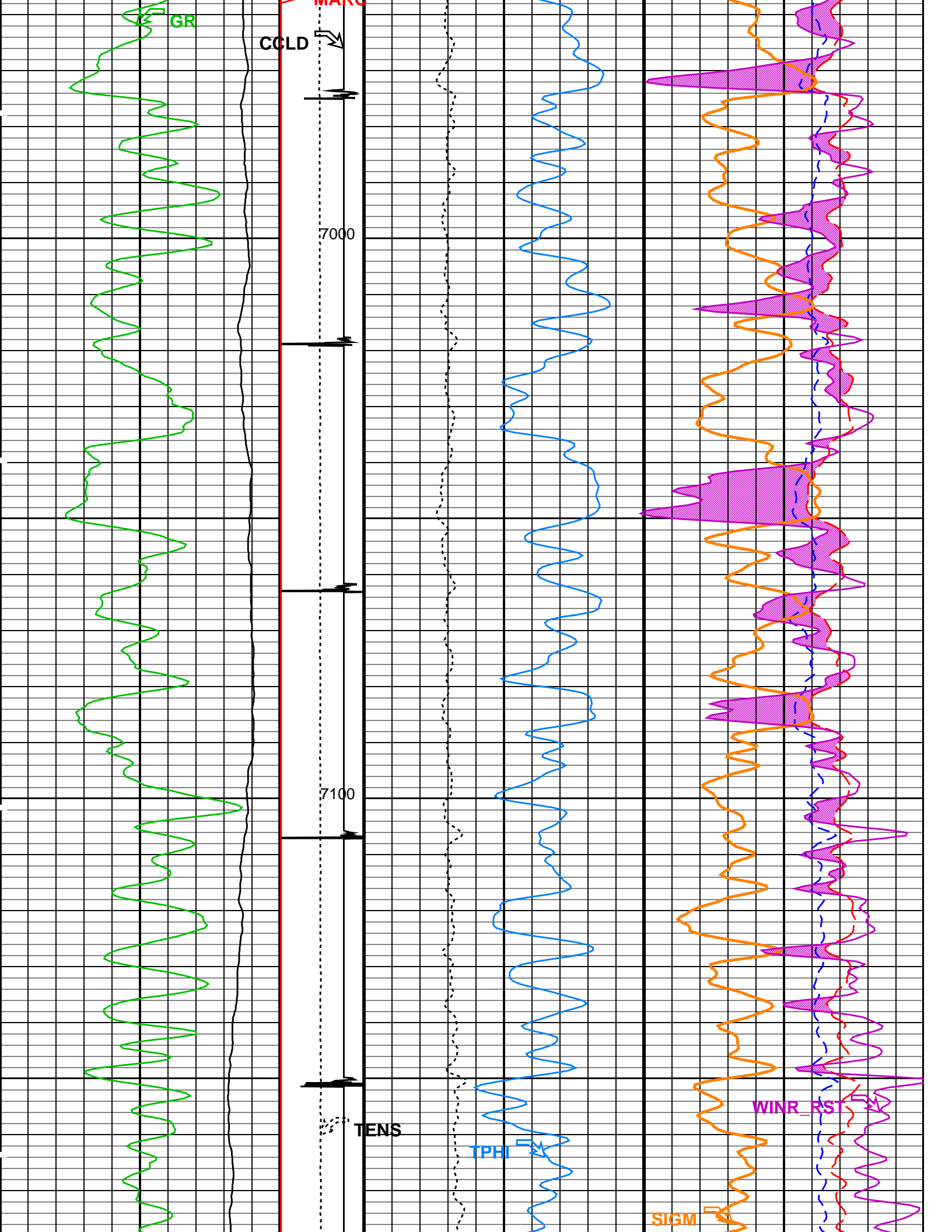


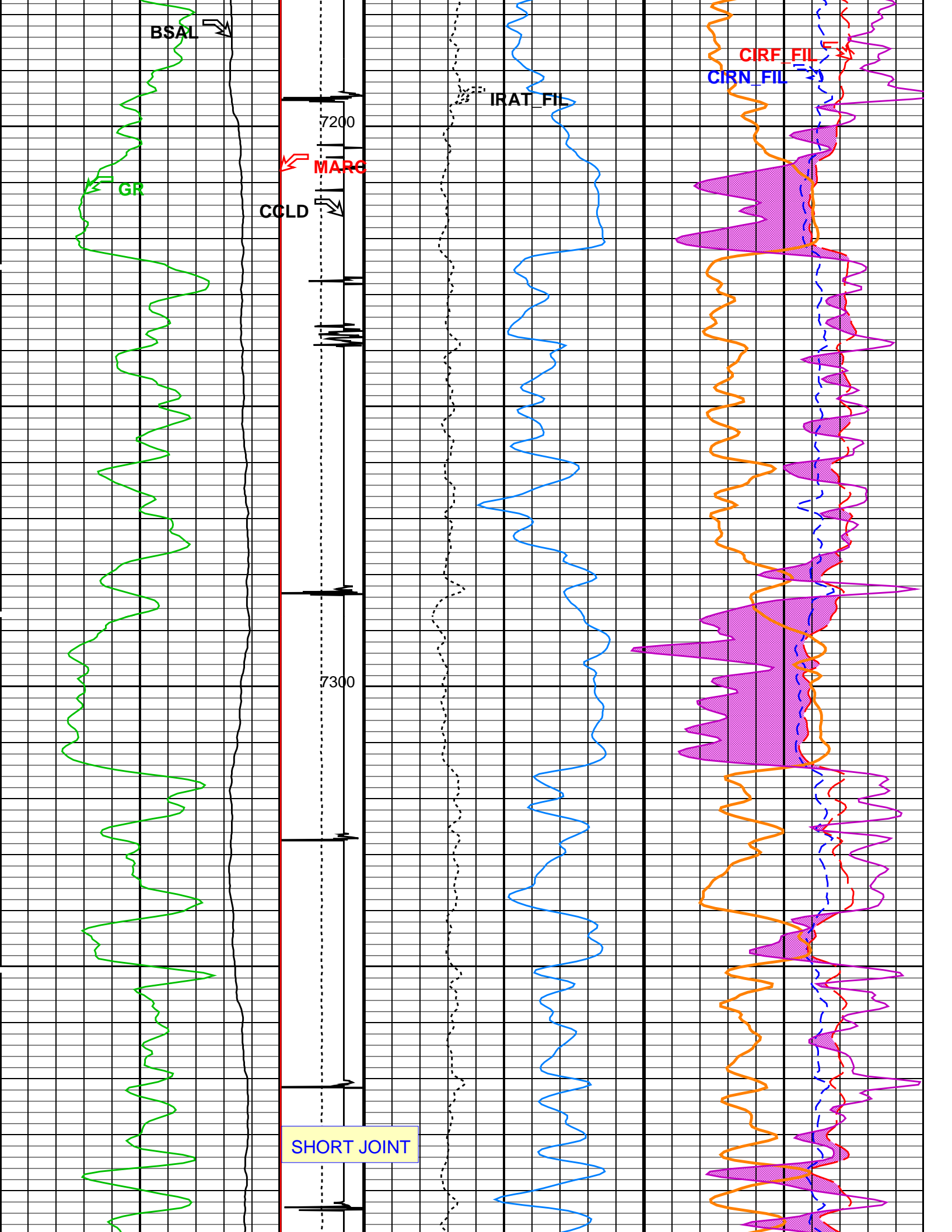


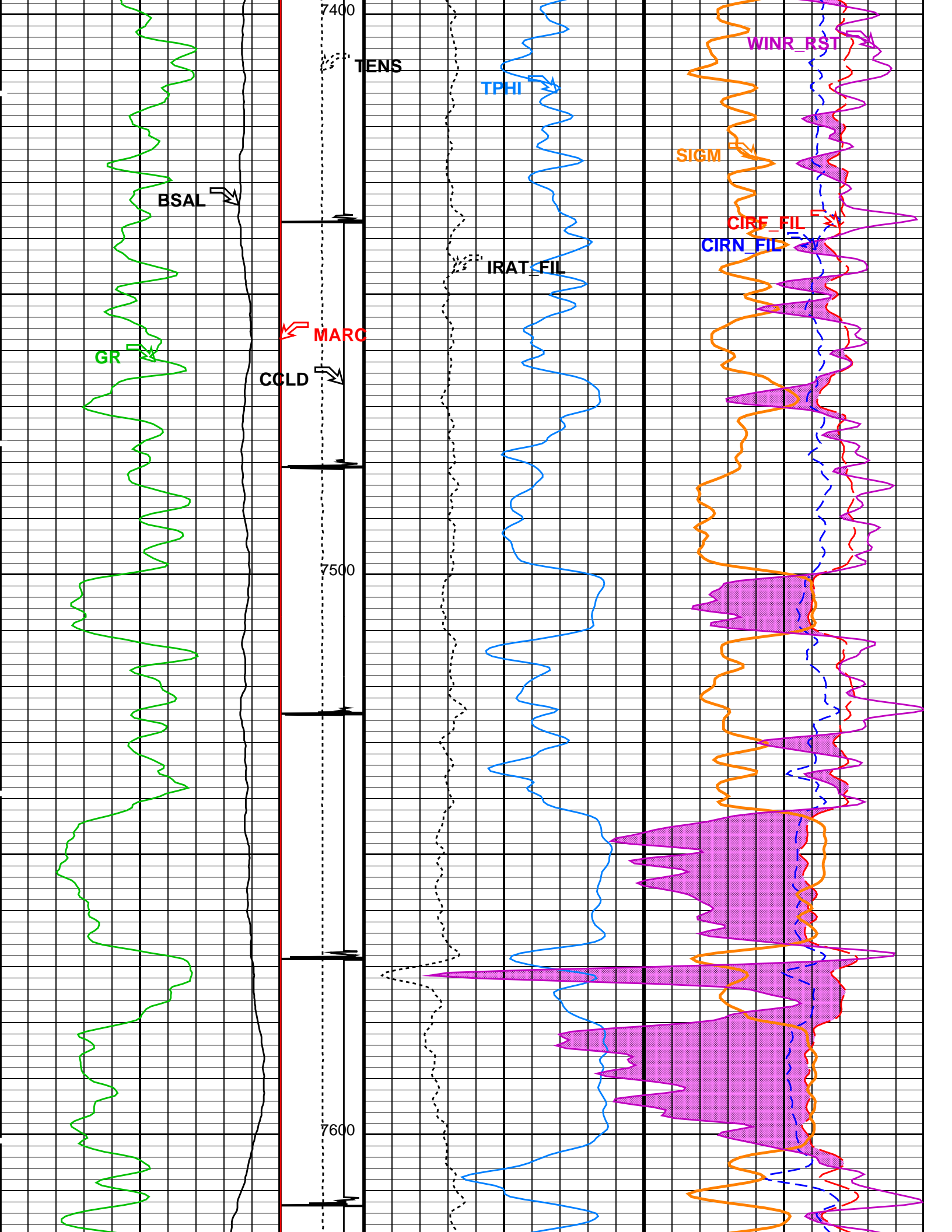


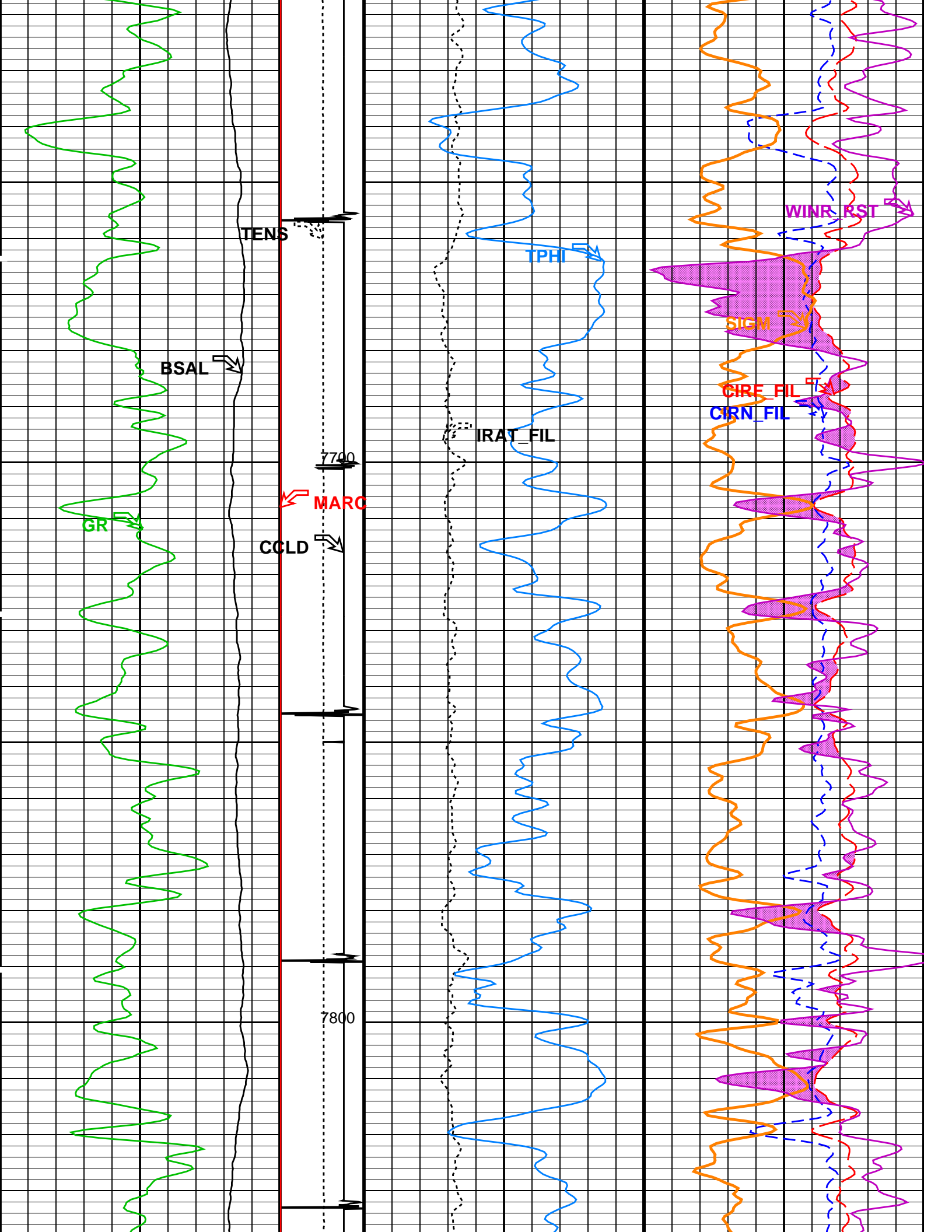


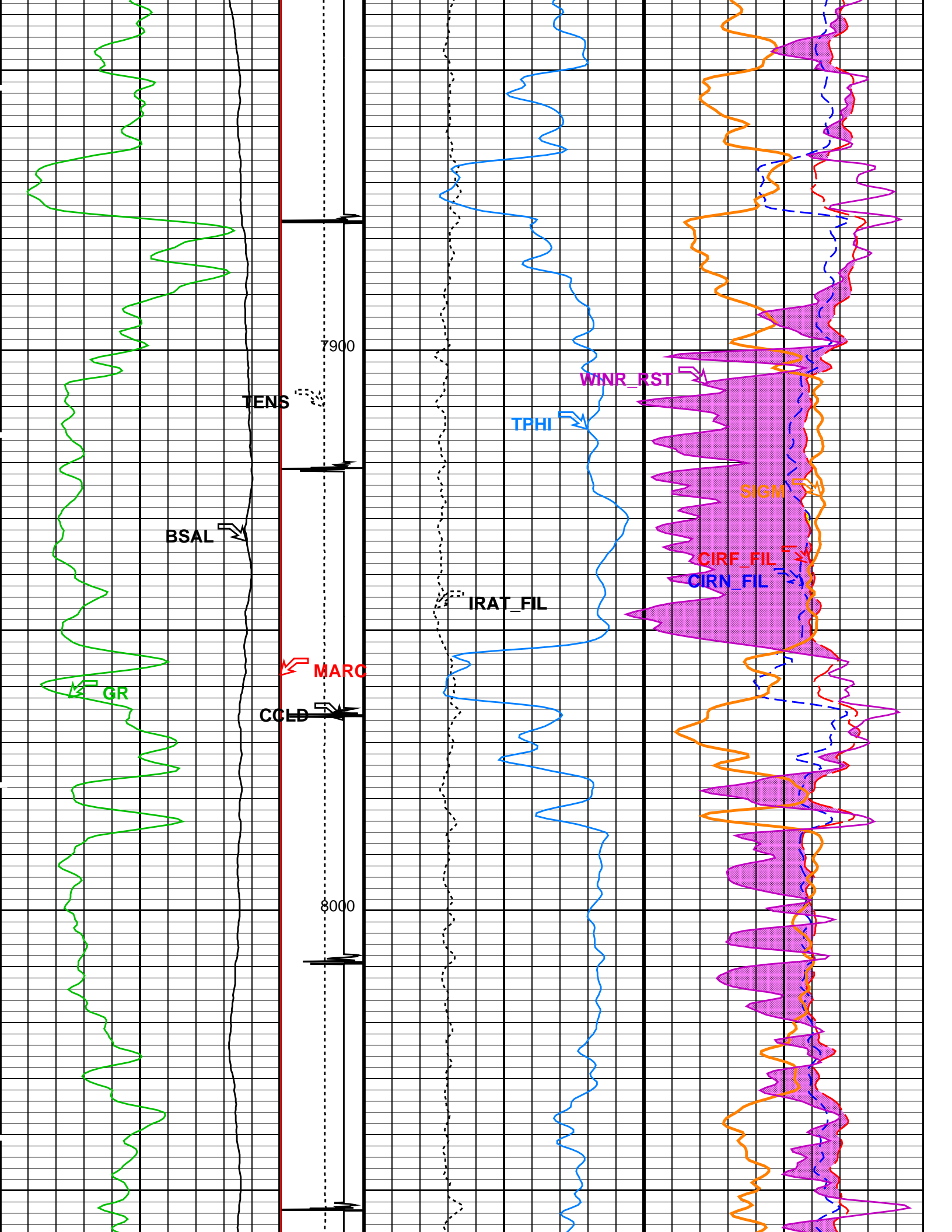


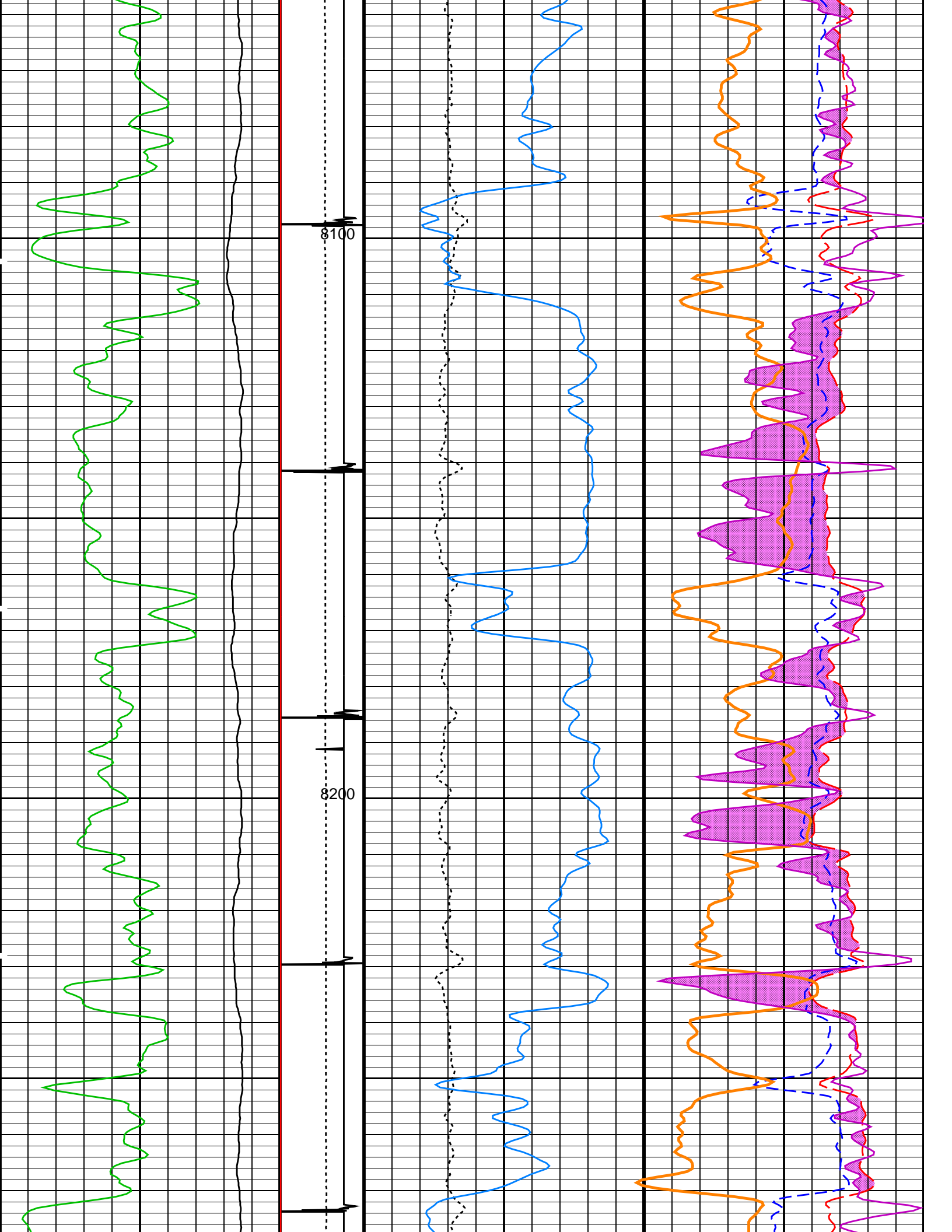


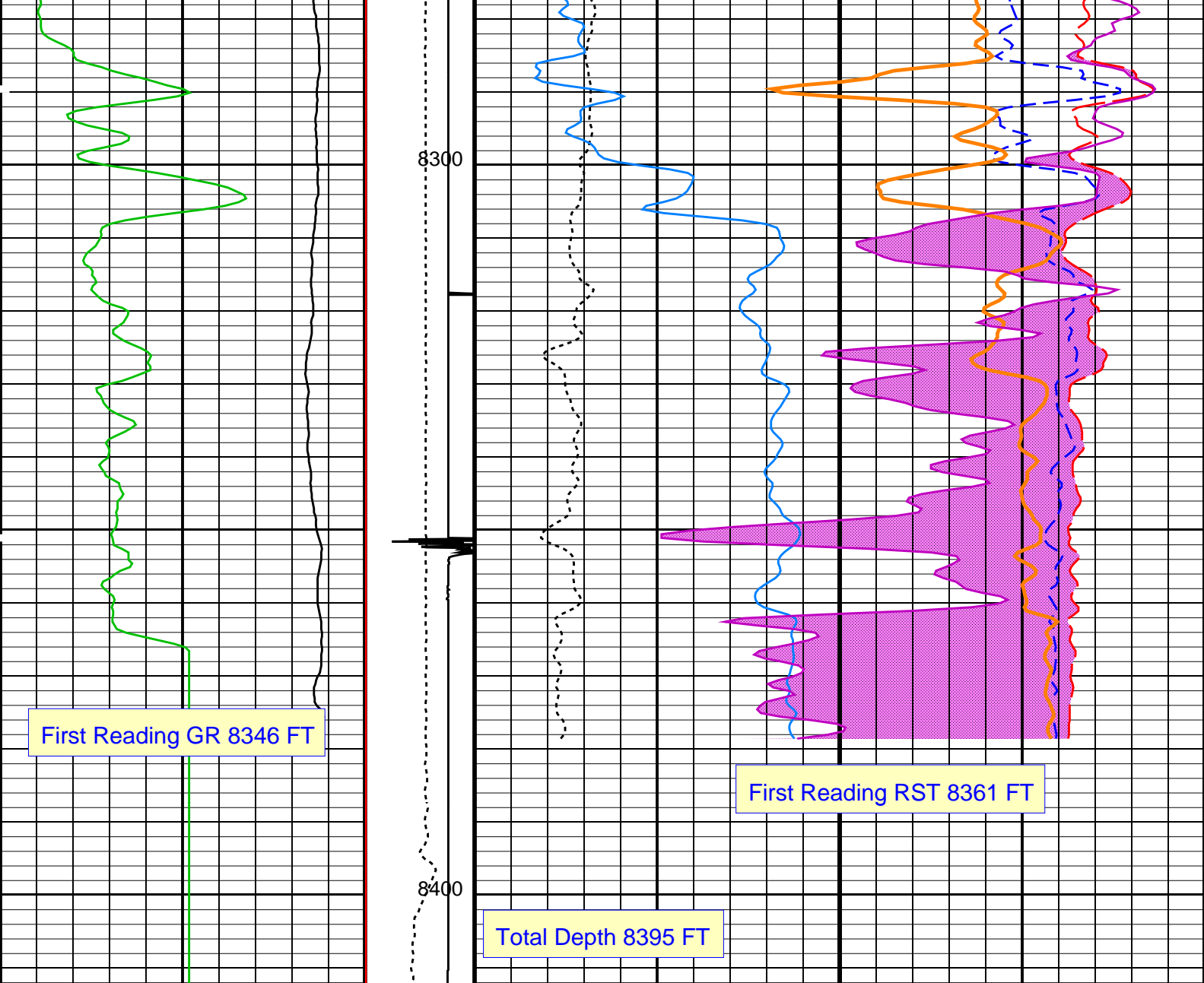












Gamma Ray (GR) (GAPI)		Tension (TENS) (LBF)		RST Inelastic Ratio (IRAT_FIL) (-----)		RST Capture to Inelastic Ratio Near (CIRN_FIL) (-----)	
0 150		0 2000		0.75 (-----) 0		2.5 (-----) 0	
RST Borehole Salinity (BSAL) (PPK)		Discriminat ed CCL (CCLD) (V)		RST Sigma (SIGM) (CU)			
450 -50		3 -1		60		0	
Minitron Arc Detection (MARC)		RST Porosity (TPHI) (V/V)		RST Capture to Inelastic Ratio Far (CIRF_FIL) (-----)			
0 (-----) 5		0.5 (V/V) 0		7 (-----) 0			
		RST Weighted Inelastic Ratio (WINR_RST) (-----)					
		0.4 (-----) 0					
		WINR Gas Flag From WINR to RST CIRF_FIL					
						Crossover in sand From RST CIRF_FIL to RST CIRN_FIL	

PIP SUMMARY

Parameters

DLIS Name	Description	Value	
SCMT-CB: Slim Cement Mapping Tool, 1-11/16 OD			
BILI	Bond Index Level for Zone Isolation	0.8	
BISS	Bond Index Source Selection for BIQL	BI	
CB3D	SCMT CBL 3 ft Peak Detection Mode	PEAK	
CB3G	SCMT CBL 3 ft Peak Detection T0_Delay and Noise Gate	224.559	US
CB3T	SCMT CBL 3 ft Fixed Threshold Level	20	MV
CB5D	SCMT CBL 5 ft Peak Detection Mode	PEAK	
CB5G	SCMT CBL 5 ft Peak Detection T0_Delay and Noise Gate	338.559	US
CB5T	SCMT CBL 5 ft Fixed Threshold Level	20	MV
CBLG	CBL Gate Width	45	US
CBRA	CBL LQC Reference Amplitude in Free Pipe	80	MV
CMCF	CBL Cement Type Compensation Factor	1	
CMTC	SCMT Slow Channel Multiplexer Mode	SCAN	
CMTM	SCMT Operating Mode	LOG	
CMTF	SCMT Tool position on CAN	5	
CSCS	SCMT Slow Channel Index	VCC	
CTHI	Casing Thickness	0.255617	IN
DTF	Delta-T Fluid	189	US/F
FATT	Acoustic Attenuation due to Fluid	0	DB/F
FCF	CBL Fluid Compensation Factor	0.924277	
GOBO	Good Bond	1.55185	MV
MAPD	SCMT MAP Peak Detection Mode	PEAK	
MAPG	SCMT MAP Peak Detection T0_Delay and Noise Gate	167.559	US
MAPT	SCMT MAP Fixed Threshold Level	30	MV
MATT	Maximum Attenuation	16.5449	DB/F
MCCF	MAP Cement Type Compensation Factor	1	
MCI	Minimum Cemented Interval for Isolation	1.25	FT
MMSA	MAP Minimum Sonic Amplitude	4.32284	MV
MSA	Minimum Sonic Amplitude	0.579149	MV
PEDE	Peak Detection On/Off Switch in Playback	OFF	
RBC	Relative Bearing Correction Allow/Disallow	ALLOW	
VDLG	VDL Manual Gain	5	
ZCMT	Acoustic Impedance of Cement	6.8	MRAY
RST-C: Reservoir Saturation Pro Tool C			
AIRB	Tractor Available in Tool String	NO	
BHS	RST Air Borehole	No	
BHT	Borehole Status	CASED	
BSALOPT	Bottom Hole Temperature (used in calculations)	212	DEGF
BSFL	RST Borehole Salinity Option	Unknown	
CSID	RST Borehole Salinity Filter Length	51	
DFPC	Casing Size I.D.	3.998	IN
DFPC_TDTL	RST Depth Filter Processing Constant	One	
GCSE	RST Depth Filter Processing Constant (TDT-like)	Two	
GDEV	Generalized Caliper Selection	BS	
GGRD	Average Angular Deviation of Borehole from Normal	0	DEG
GRSE	Geothermal Gradient	0.01	DF/F
GTSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
ISSBAR	Generalized Temperature Selection	LINEAR_ESTIMATE	
MATR	Barite Mud Switch	NOBARITE	
NORM_IRAT_RST	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
NORM_SIGM_RST	RST Normalized Inelastic Ratio	0.48	
PTIER	RST Normalized Sigma	30	CU
PVL_PSNT_PRST	RST Tiered Presentation Selection	0_Customer	
RGAI	PVL Peak Signal/Noise Threshold	3	
SHT	Near/Far Gain Calibration Ratio	1	
TIER_IC	Surface Hole Temperature	68	DEGF
TIER_SIGM	RST IC Acquisition Mode	0_CO_Yield_and_Spectrolith	
WOFSL_PRST	RST Sigma Acquisition Mode	0_RST_Sigma	
WONSL_PRST	RST WFL-Off Subcycle Length	0	
WSCOM_PRST	RST WFL-On Subcycle Length	0	
PSPT: Production Services Logging Platform			
BHS	Borehole Status	CASED	
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
CSID	Casing Size I.D.	3.998	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	PBMS Tool position on CAN	2	
PCCG	PBMS CCL Gain	DB24	
PSTP	PSTC Tool Position on CAN Bus	1	
SHT	Surface Hole Temperature	68	DEGF
System and Miscellaneous			
ALTDPCCHAN	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	2.0	FT
FLEV	Fluid Level	60.00	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	8395	FT
TDD	Total Depth - Driller	8530.00	FT
TDL	Total Depth - Logger	8395.00	FT
TWS	Temperature of Connate Water Sample	100.00	DEGF

Format: RST_SIGMA_S5 Vertical Scale: 5" per 100' Graphics File Created: 09-Feb-2013 19:09

OP System Version: 19C0-187

SCMT-CB	SRPC-5214-H2-2012-OP1!	RST-C	SRPC-5214-H2-2012-OP1!
PSPT	SRPC-5214-H2-2012-OP1!		

Input DLIS Files

DEFAULT	SCMT_RST_PSP_012LUP	FN:11	PRODUCER	09-Feb-2013 16:44	8410.5 FT	22.7 FT
---------	---------------------	-------	----------	-------------------	-----------	---------

Output DLIS Files

DEFAULT	SCMT_RST_PSP_015PUP	FN:14	PRODUCER	09-Feb-2013 19:09
---------	---------------------	-------	----------	-------------------

Schlumberger

REPEAT ANALYSIS RST SIGMA

MAXIS Field Log

Input DLIS Files

DEFAULT	SCMT_RST_PSP_010LUP	FN:9	PRODUCER	09-Feb-2013 16:26	6514.0 FT	6169.5 FT
DEFAULT	SCMT_RST_PSP_015PUP	FN:14	PRODUCER	09-Feb-2013 19:09	8412.5 FT	-19.5 FT

Output DLIS Files

DEFAULT	SCMT_RST_PSP_016PUP	FN:15	PRODUCER	09-Feb-2013 19:17	6516.0 FT	6127.0 FT
---------	---------------------	-------	----------	-------------------	-----------	-----------

OP System Version: 19C0-187

SCMT-CB	SRPC-5214-H2-2012-OP1!	RST-C	SRPC-5214-H2-2012-OP1!
PSPT	SRPC-5214-H2-2012-OP1!		

Changed Parameter Summary

DLIS Name	New Value	Previous Value	Depth & Time
BS	8.750 IN	8.750 IN	6516.0 19:17:13

PIP SUMMARY

Time Mark Every 60 S

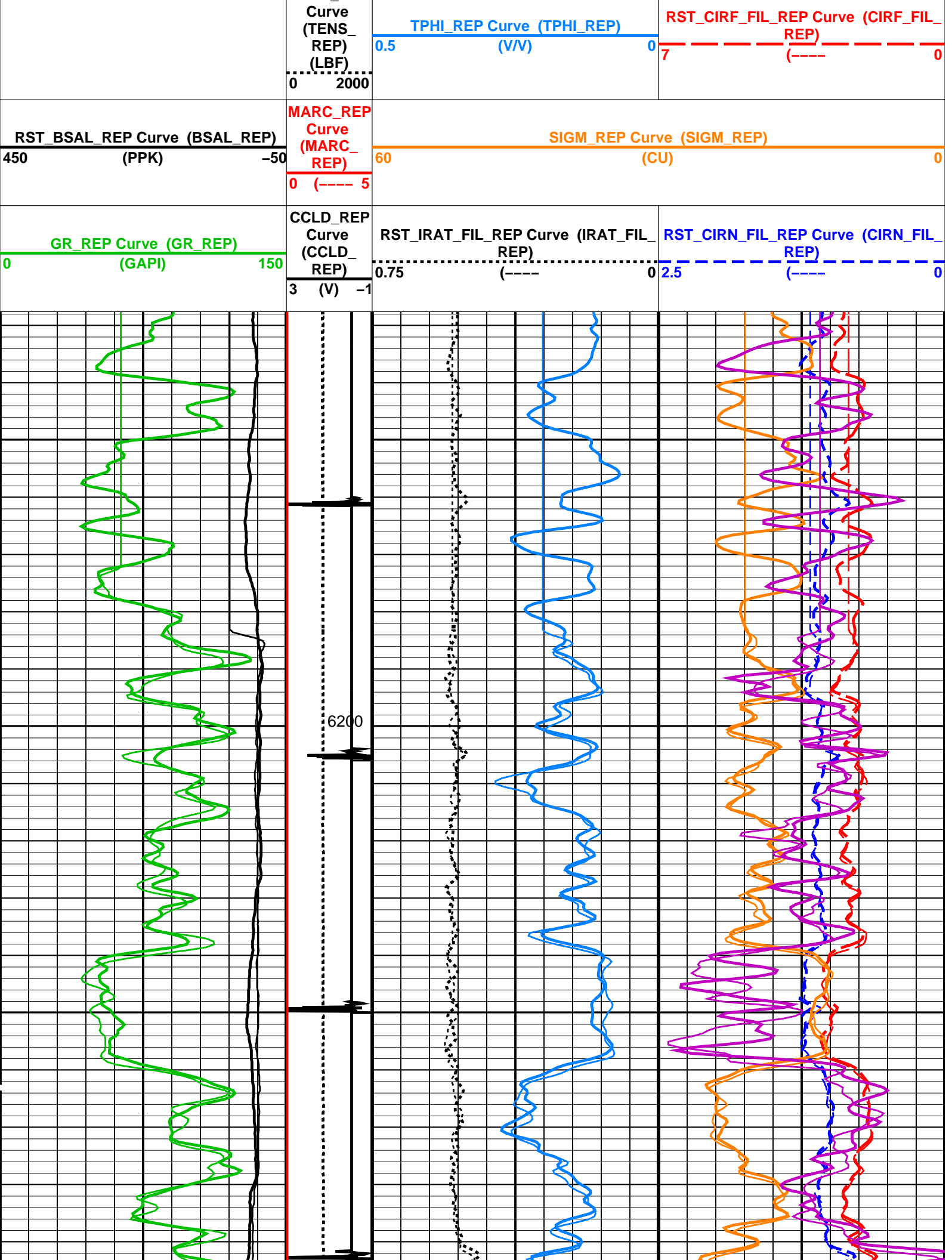
WINR_REP Curve (WINR_RST_REP)

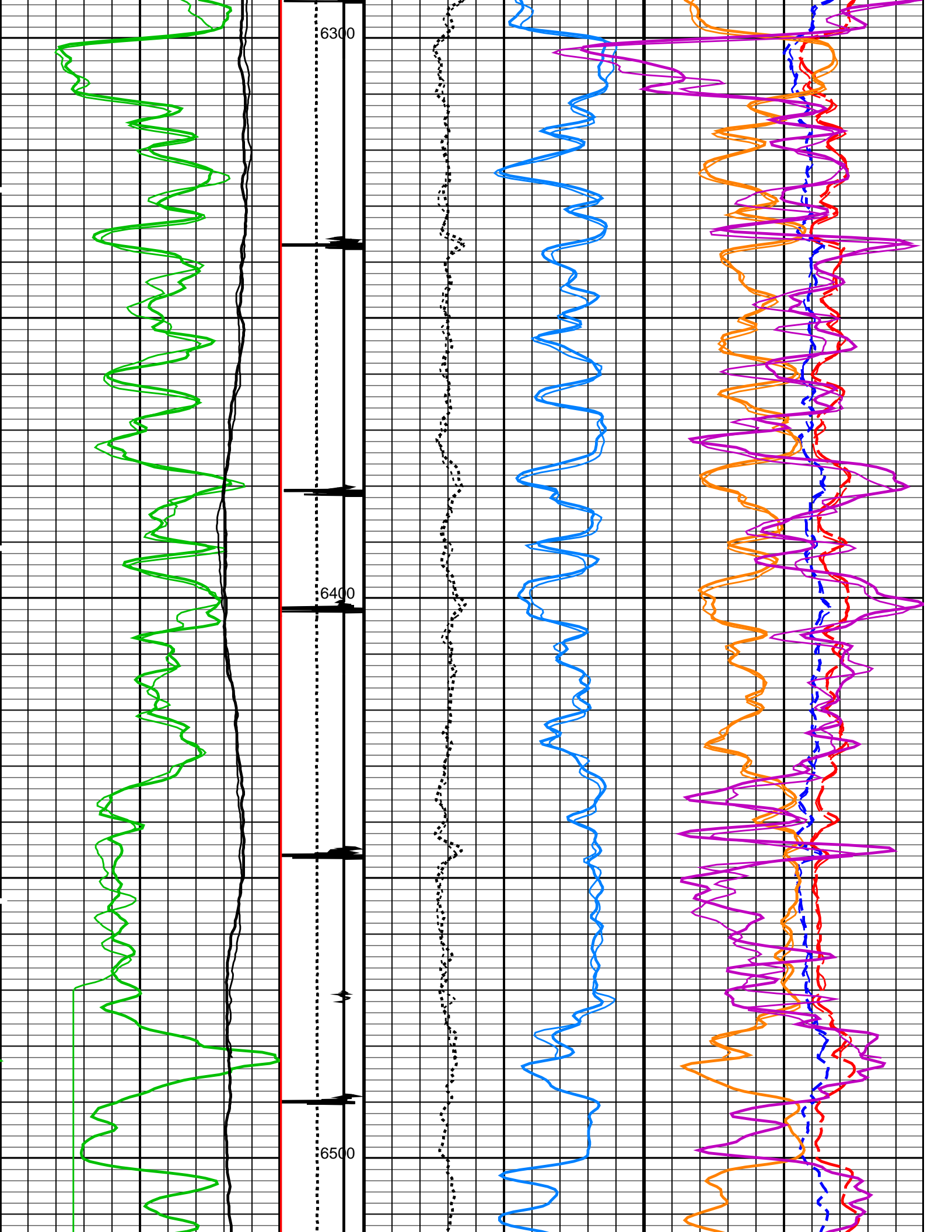
0.4

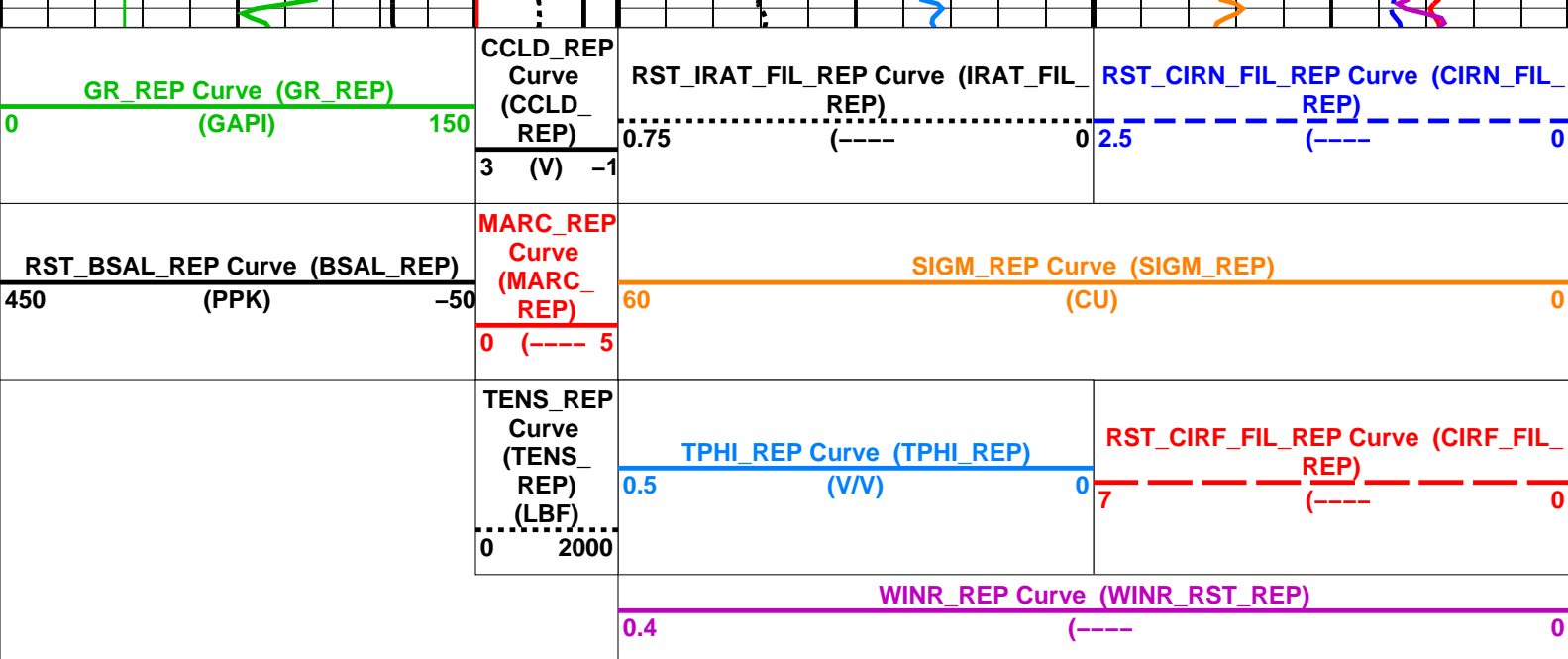
(----

0

TENS REP







PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
SCMT-CB: Slim Cement Mapping Tool, 1-11/16 OD			
BILI	Bond Index Level for Zone Isolation	0.8	
BISS	Bond Index Source Selection for BIQL	BI	
CB3D	SCMT CBL 3 ft Peak Detection Mode	PEAK	
CB3G	SCMT CBL 3 ft Peak Detection T0_Delay and Noise Gate	224.559	US
CB3T	SCMT CBL 3 ft Fixed Threshold Level	20	MV
CB5D	SCMT CBL 5 ft Peak Detection Mode	PEAK	
CB5G	SCMT CBL 5 ft Peak Detection T0_Delay and Noise Gate	338.559	US
CB5T	SCMT CBL 5 ft Fixed Threshold Level	20	MV
CBLG	CBL Gate Width	45	US
CBRA	CBL LQC Reference Amplitude in Free Pipe	80	MV
CMCF	CBL Cement Type Compensation Factor	1	
CMTC	SCMT Slow Channel Multiplexer Mode	SCAN	
CMTM	SCMT Operating Mode	LOG	
CMTF	SCMT Tool position on CAN	5	
CSCS	SCMT Slow Channel Index	VCC	
CTHI	Casing Thickness	0.255617	IN
DTF	Delta-T Fluid	189	US/F
FATT	Acoustic Attenuation due to Fluid	0	DB/F
FCF	CBL Fluid Compensation Factor	0.924277	
GOBO	Good Bond	1.55185	MV
MAPD	SCMT MAP Peak Detection Mode	PEAK	
MAPG	SCMT MAP Peak Detection T0_Delay and Noise Gate	167.559	US
MAPT	SCMT MAP Fixed Threshold Level	30	MV
MATT	Maximum Attenuation	16.5449	DB/F
MCCF	MAP Cement Type Compensation Factor	1	
MCI	Minimum Cemented Interval for Isolation	1.25	FT
MMSA	MAP Minimum Sonic Amplitude	4.32284	MV
MSA	Minimum Sonic Amplitude	0.579149	MV
PEDE	Peak Detection On/Off Switch in Playback	OFF	
RBC	Relative Bearing Correction Allow/Disallow	ALLOW	
VDLG	VDL Manual Gain	5	
ZCMT	Acoustic Impedance of Cement	6.8	MRAY
RST-C: Reservoir Saturation Pro Tool C			
AIRB	Tractor Available in Tool String	NO	
BHS	RST Air Borehole	No	
BHT	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.	3.998	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		
PSPT: Production Services Logging Platform			
BHS	Borehole Status	CASED	
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
CSID	Casing Size I.D.	3.998	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	PBMS Tool position on CAN	2	
PCCG	PBMS CCL Gain	DB24	
PSTP	PSTC Tool Position on CAN Bus	1	
SHT	Surface Hole Temperature	68	DEGF
System and Miscellaneous			
ALTDPCCHAN	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	2.0	FT
DORL	Depth Offset for Repeat Analysis	0.0	FT
FLEV	Fluid Level	60.00	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	8395	FT
TDD	Total Depth - Driller	8530.00	FT
TDL	Total Depth - Logger	8395.00	FT
TWS	Temperature of Connate Water Sample	100.00	DEGF

Format: RST_SIGMA_S5_REP Vertical Scale: 5" per 100' Graphics File Created: 09-Feb-2013 19:17

OP System Version: 19C0-187

SCMT-CB	SRPC-5214-H2-2012-OP1!	RST-C	SRPC-5214-H2-2012-OP1!
PSPT	SRPC-5214-H2-2012-OP1!		

Input DLIS Files

DEFAULT	SCMT_RST_PSP_010LUP	FN:9	PRODUCER	09-Feb-2013 16:26	6514.0 FT	6169.5 FT
DEFAULT	SCMT_RST_PSP_015PUP	FN:14	PRODUCER	09-Feb-2013 19:09	8412.5 FT	-19.5 FT

Output DLIS Files

DEFAULT	SCMT_RST_PSP_016PUP	FN:15	PRODUCER	09-Feb-2013 19:17
---------	---------------------	-------	----------	-------------------

Schlumberger

PBMS COEFFICIENTS

Client: ENCANA OIL & GAS (USA) INC

Field: MAMM CREEK

Well: SHIDELER FEE 6–3A (031E)

Run date: 9–Feb–2013

Tool: PSP

Sub Type: PBMS

Sensor: Clock Model

PBMS Digitalization Clock

Sonde Serial NB

Sensor Serial NB1772

Calib Date ddmmyy250102

Matrix Size16

Coeff CRC279D

Clock Coeff

	Temp**0	Temp**1	Temp**2
Temp**0	–.161517143435E+03	–.455833634022E+01	–.104938566503E+00
	Temp**3	Temp**4	Temp**5
Temp**0	+.665806803953E–03	+.215816423936E–05	0.0

Client: ENCANA OIL & GAS (USA) INC

Field: MAMM CREEK

Well: SHIDELER FEE 6–3A (031E)

Run date: 9–Feb–2013

Tool: PSP

Sub Type: PBMS

Sensor: Sapphire

PBMS Sapphire 10kPsi Gauge

Sonde Serial NB

Sensor Serial NB1772

Calib Date ddmmyy250102

Matrix Size66

Coeff CRC7015

COEFFICIENTS FOR SAPPHIRE PBMS–A.1772 S/N:

Pres Coeff

	Tt**0	Tt**1	Tt**2
Tp**0	–.301728254764E+05	+.213698779657E+05	–.667784145806E+04
Tp**1	+.222783691269E+05	–.154949942910E+05	+.506915258152E+04
Tp**2	–.219998557234E+03	+.903672682639E+02	–.973284421881E+01
Tp**3	+.373083861809E+01	–.914930924512E+00	0.0

Tp**4	0.0	0.0	0.0
Tp**5	0.0	0.0	0.0
	Tt**3	Tt**4	Tt**5
Tp**0	+.999867705458E+03	−.587093588268E+02	0.0
Tp**1	−.790152285056E+03	+.481404114544E+02	0.0
Tp**2	0.0	0.0	0.0
Tp**3	0.0	0.0	0.0
Tp**4	0.0	0.0	0.0
Tp**5	0.0	0.0	0.0

PBMS Sapphire 10kPsi Gauge

Sonde Serial NB
Sensor Serial NB
Calib Date ddmmyy
Matrix Size
Coeff CRC

:
1772
250102
66
8D09

Temp Coeff

	Tp**0	Tp**1	Tp**2
Tt**0	+.232726172867E+04	+.748146006300E+01	−.308596169368E+01
Tt**1	−.145543937674E+04	−.3823444629538E+01	+.886665691754E+00
Tt**2	+.319573055861E+03	+.722043926946E+00	−.543588515298E−01
Tt**3	−.247026874426E+02	−.512988254724E−01	0.0
Tt**4	0.0	0.0	0.0
Tt**5	0.0	0.0	0.0
	Tp**3	Tp**4	Tp**5
Tt**0	+.711608702827E+00	−.763411838100E−01	0.0
Tt**1	−.147911019947E+00	+.159378916834E−01	0.0
Tt**2	0.0	0.0	0.0
Tt**3	0.0	0.0	0.0
Tt**4	0.0	0.0	0.0
Tt**5	0.0	0.0	0.0

PBMS Gamma Ray

Sonde Serial NB RESISTORS FOR GR SENSOR N.33401, TOOL PBMS-AA1772. SENSOR S/N:
Sensor Serial NB 33401
Calib Date ddmmyy 021101
Matrix Size 12
Coeff CRC 1F7D

GR HV Rt

Rt**0

Rt**1

Rt**0

+.150000000000e+04

+.236000000000e+04

Client: ENCANA OIL & GAS (USA) INC
Field: MAMM CREEK
Well: SHIDELER FEE 6-3A (031E)
Run date: 9-Feb-2013

Tool: PSP
Sub Type: PBMS
Sensor: WellTemp RTD

PBMS RTD Well Thermometer

Sonde Serial NB
Sensor Serial NB 1772
Calib Date ddmmyy 250102
Matrix Size 16
Coeff CRC 0B6D

WTemp Coeff

Tt**0

Tt**1

Tt**2

Tt**0

- .578338733285E+03

+ .354557410577E+03

- .963404561888E+02

Tt**3

Tt**4

Tt**5

Tt**0

+ .167992041034E+02

- .106406976994E+01

0.0

Company: ENCANA OIL & GAS (USA) INC



Well: SHIDELER FEE 6-3A (031E)

Field: MAMM CREEK

County: GARFIELD

State: COLORADO

RESERVOIR SATURATION LOG
SIGMA MODE
GR-CCL