

Company: Esso Australia Pty Ltd.

Well: A-1L
Field: Tuna
Rig: Prod 4 / Crane
Country: Australia

PLT GR/CCL/Gradio/IL-Spinner/FB-Spinner
Dual DEFT/ Pressure/ Temperature
18-12-2009

Rig: Prod 4 / Crane
Field: Tuna
Location: Gippsland
Well: A-1L
Company: Esso Australia Pty Ltd.

LOCATION	
Gippsland	Elev.: K.B. 32.90 m
Basin	G.L. -59.00 m
Bass Strait	D.F. 32.90 m
Permanent Datum:	M.S.L.
Log Measured From:	K.B.
Drilling Measured From:	K.B.
State: Victoria	Max. Well Deviation 59.5 deg
	Longitude 148° 25' 05.29"E
	Latitude 38° 10' 16.00"S

Logging Date	18-Dec-2009		
Run Number	1		
Depth Driller	3244 m		
Schlumberger Depth	2973 m		
Bottom Log Interval	2973 m		
Top Log Interval	1928 m		
Casing Fluid Type	Production Fluids		
Salinity			
Density			
Fluid Level	2033 m		
BIT/CASING/TUBING STRING			
Bit Size	8.500 in		
From	1942.5 m		
To	3244 m		
Casing/Tubing Size	7.000 in		
Weight	23 lbm/ft		
Grade	K-55		
From	1936.37 m		
To	3224.6 m		
Maximum Recorded Temperatures	211 degF		
Logger On Bottom	18-Dec-2009	11:00	
Unit Number	889	Prod 4 / AUSSL	
Recorded By	Owen Darby		
Witnessed By	David Madden		

PVT DATA				Run 1	Run 2	R
Oil Density						
Water Salinity						
Gas Gravity						
Bo						
Bw						
1/Bg						
Bubble Point Pressure						
Bubble Point Temperature						
Solution GOR						
Maximum Deviation	59.5 deg					
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						

Date Created: 26-DEC-2009 10:21:53

Logging Cable

Type:	2-32ZT
Serial Number:	207505
Length:	6401 M
Conveyance Method:	Wireline
Rig Type:	Offshore Fixed

Log Sequence:	Subsequent Trip To the Well
Reference Log Name:	Tuna A1
Reference Log Run Number:	1
Reference Log Date:	2-Feb-2009
Subsequent Trip Down Log Correction:	

1. Correlated to ExxonMobil solar composite log provided by client
2. Used IDW as primary depth control
3. Used Z-Chart as secondary depth control
- 4.
- 5.
- 6.

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 SERVICES2
OS1:
OS2:
OS3:
OS4:
OS5:

REMARKS: RUN NUMBER 2

Objective:

Make up full PLT toolstring incorporating GR/CCL/Gradio/IL-Spinner/FB-Spinner/

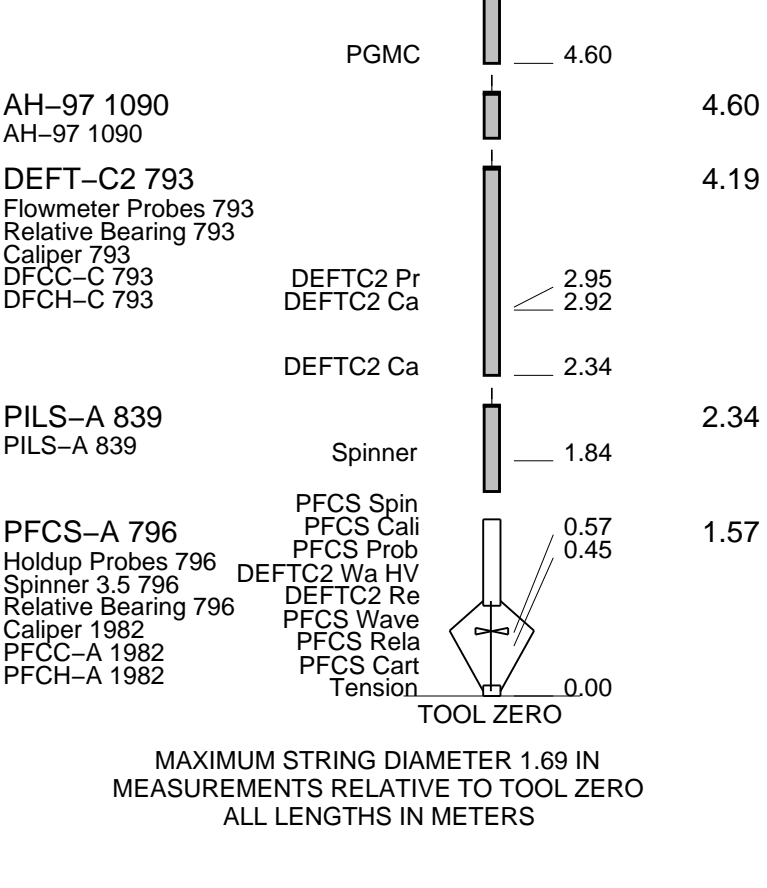
Pressure/Temperature
Static:
Conduct a downwards logging pass over the interval 1928m to HUD (2973m MDKB)

@ 10m/min (1970ft/hr). Complete spinner calibration passes.
Complete an upwards logging pass over the interval HUD (2973m) to 1928m MDKB.
Flowing:
RIH to HUD and flow well to test separator, wait for well to stabilise.
Conduct two up passes one up @ 5m/min (980ft/hr) over interval 2880 – 2973m
one @ 10m/min (1970ft/hr). Complete two down passes over same interval @
10m/min (1970ft/hr) & 20m/min (3940ft/hr). Stop flowing well and pull up to
inside tubing @ 2520m MDKB.
Conduct an up pass @ 5m/min (980ft/hr) and one down pass @ 10m/min (1970ft/hr)
Crew:
Nathan Simmons & Peter Lawrence

RUN 1			RUN 2		
SERVICE ORDER #:			SERVICE ORDER #:		
PROGRAM VERSION:			PROGRAM VERSION:		
FLUID LEVEL:			FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION					
RUN 1			RUN 2		

SURFACE EQUIPMENT					
WITM-A 1835					
PSC_16MHZ 1835					
DOWNHOLE EQUIPMENT					
AH-SWBS-B 785					
AH-SWBS-B 785					
AH-SWBS-B 786					
AH-SWBS-B 786					
AH-SWBS-B 787					
AH-SWBS-B 787					
AH-SWBS-B 788					
AH-SWBS-B 788					
AH-SWBS-B 789					
AH-SWBS-B 789					
MH-SWHS-A 759					
MH-SWHS-A 759					
PSPT-A/B 1835					
PSC-A 1835					
PSPT-B 1835					
PSTC 1835					
PBMS-B 1835					
CQG_F_Mano 1835					
RTD Thermometer 1835					
GR 1835					
CCL 1835					
PBMS 1835					
AH-210 1072					
AH-210 1072					
PGMC-A/B 1937					
PGMC-B 1937					
Accelero					
PSOI_Gradio 876					



Client: Esso Australia Pty Ltd

Well: TNA A1L

Field: Tuna

State: Victoria

Country: Australia

Rig Name: Platform

Reference Datum: Mean Sea Level

Elevation: 32.9 m

Drawing Date: 12/20/2009

API #:

Production String	(in)		(m)	Well Schematic	(m)	(in)		Casing String
	OD	ID	MD		MD	OD	ID	
Tubing	3.500		14.0		14.0	13.375		Casing String
					14.0	13.375	9.625	Liner Hanger
SSSV	3.500		449.0					
Gas Lift Mandrel	3.500		1194.0					
Gas Lift Mandrel	3.500		1205.0					
Landing Nipple	3.500		1221.0		903.0	13.375		Casing Shoe
Landing Nipple	3.500		1697.0					
Dual Packer	9.625	3.500	1924.0					
Landing Nipple	3.500		1928.0					
Landing Nipple	3.500		1942.0					
					1936.0	7.000		Casing String
					1936.0	9.625	7.000	Liner Hanger
Tubing patch	3.500	2.250	2408.0		2405.0			Perforation Zone
Blast Joint	3.500		2401.0		2037.0	9.625		Casing Shoe



Schlumberger Job Event Summary

Before Calibration Completed	17-Dec-2009 18:13							
PLT Toolstring								
After Calibration Completed	17-Dec-2009 18:15							
PLT Toolstring								
Simulated Log	18-Dec-2009 7:06 000:49							FCS_ILS_DEFT_GMS_009LUP
OP checked PLT Toolstring								
Log Pass (down)	18-Dec-2009 9:18 001:48	1876.2	-	2955.0				FCS_ILS_DEFT_GMS_011LDP
PLT shut-in down pass @ 1970ft/hr	1928 - 2935m MDKB							
Log Pass (down)	18-Dec-2009 11:15 000:10	2871.2	-	2977.4				FCS_ILS_DEFT_GMS_014LDP
PLT shut-in down pass @ 1970ft/hr	2880 - 2974m MDKB							
Log Pass (up)	18-Dec-2009 12:40 003:24	2976.1	-	1896.5				FCS_ILS_DEFT_GMS_021LUP
PLT shut-in up pass @ 980ft/hr	1928 - 2974m MDKB							
Log Pass (down)	20-Dec-2009 7:16 001:16	-8.7	-	2977.1				FCS_ILS_DEFT_GMS_035LDP
PLT Flowing up pass @ 980ft/hr	2880 - 2974m MDKB							

Log	Pass (down)	20-Dec-2009 12:22	000:10	2865.9 -	2975.9	FCS_ILS_DEFT_GMS_039LDP
	PLT Flowing down pass @ 1970ft/hr	2880 - 2974m	MDKB			
Log	Pass (up)	20-Dec-2009 12:50	000:06	2975.8 -	2857.8	FCS_ILS_DEFT_GMS_043LUP
	PLT Flowing down pass @ 1970ft/hr	2880 - 2974m	MDKB			
Log	Pass (up)	20-Dec-2009 14:40	002:04	2530.9 -	1911.2	FCS_ILS_DEFT_GMS_047LUP
	PLT Flowing up pass @ 980ft/hr	1928 - 2520m	MDKB			
Log	Pass (down)	20-Dec-2009 16:44	001:03	1911.2 -	2537.6	FCS_ILS_DEFT_GMS_048LDP
	PLT Flowing up pass @ 1970ft/hr	1928 - 2520m	MDKB			

Schlumberger

PLT Flowing down log @ 1970ft/hr 1928 – 2520m MDKB

MAXIS Field Log

Input DLIS Files

DEFAULT	Flip_FCS_ILS_DEFT_055LUP	PRODUCER	20-Dec-2009 18:35	2537.6 M	1911.2 M
---------	--------------------------	----------	-------------------	----------	----------

Output DLIS Files

DEFAULT	FCS_ILS_DEFT_GMS_063PUP	FN:61	PRODUCER	20-Dec-2009 19:05	2538.8 M	1918.9 M
---------	-------------------------	-------	----------	-------------------	----------	----------

OP System Version: 17C0-154

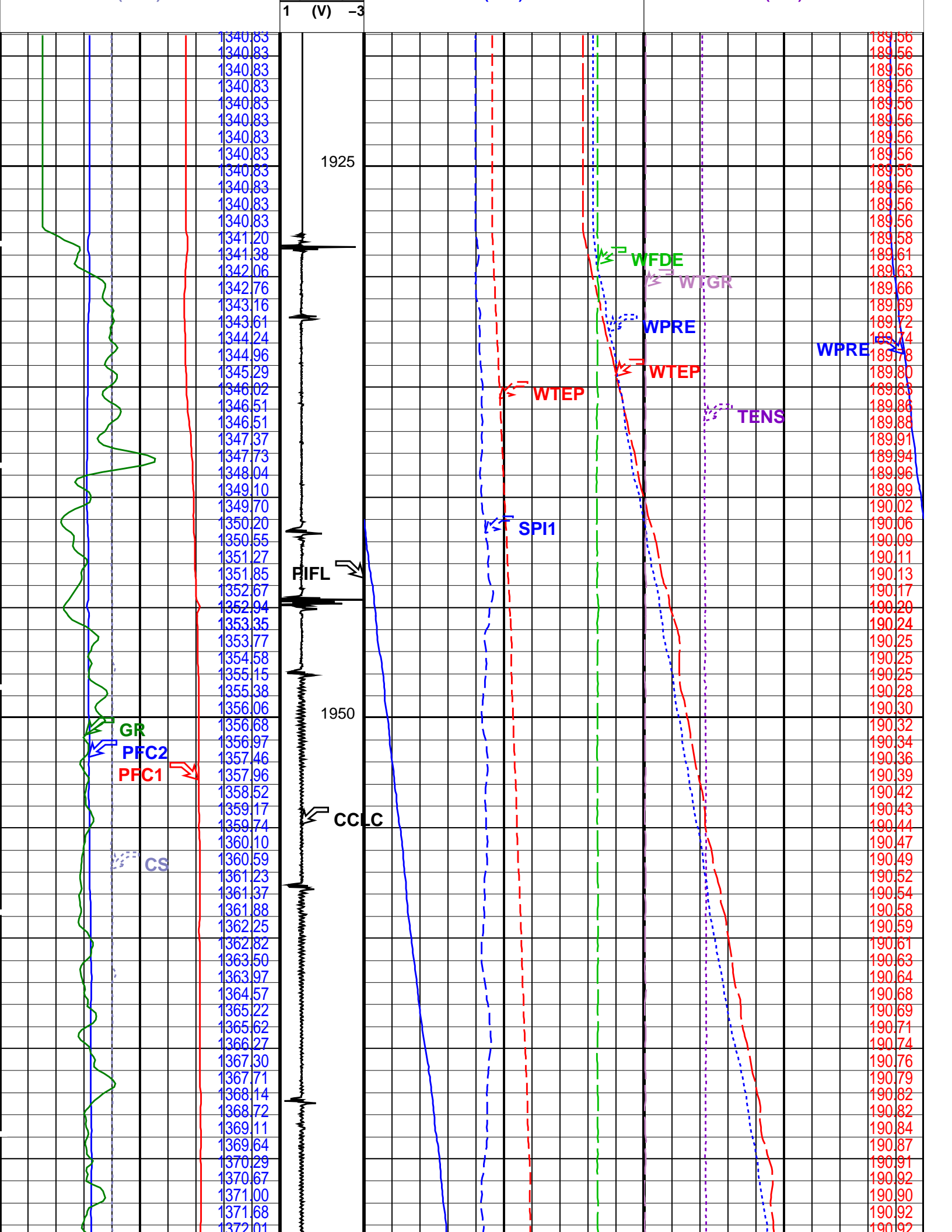
PFCS-A	17C0-154	PILS-A	17C0-154
DEFT-C2	17C0-154	PGMC-A/B	17C0-154
PSPT-A/B	17C0-154		

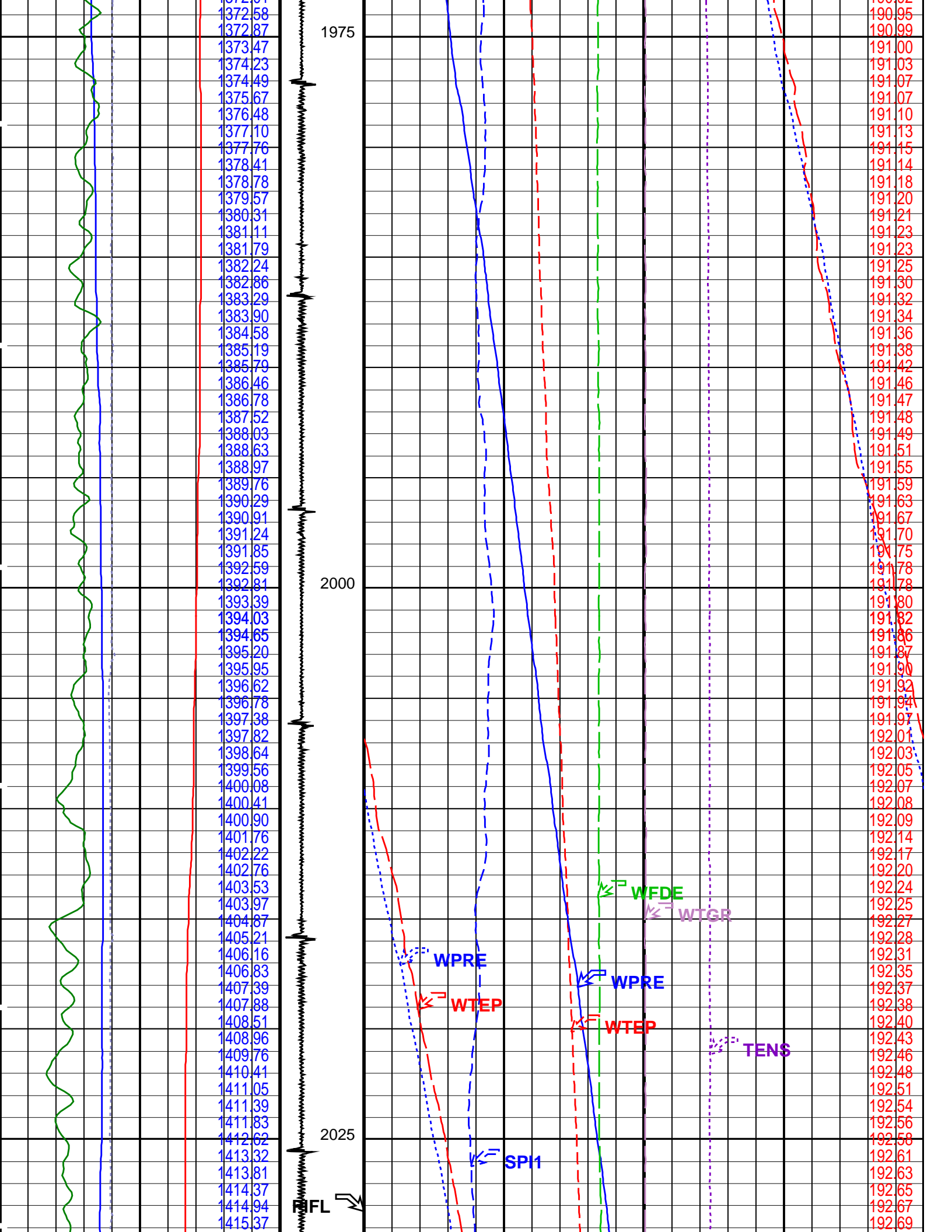
PIP SUMMARY

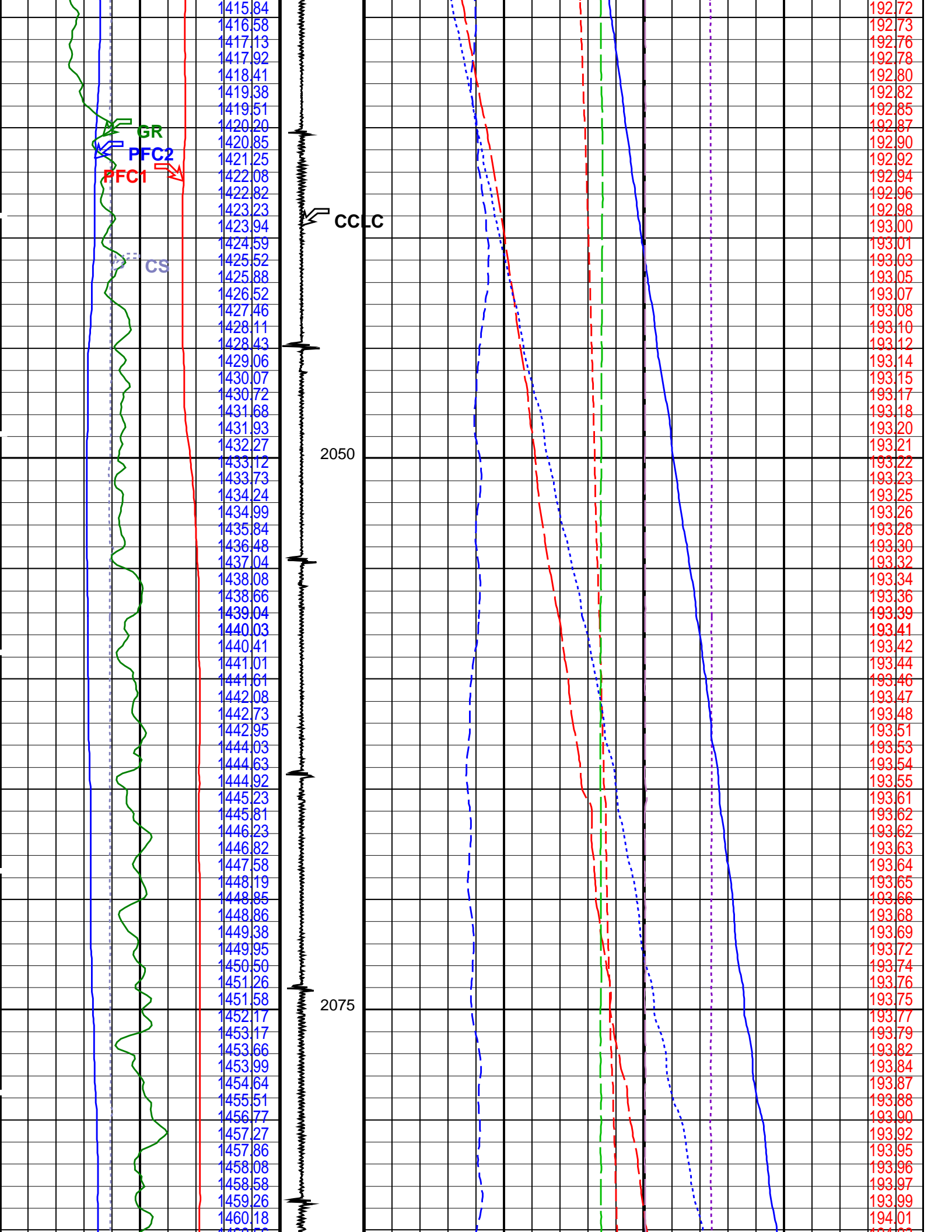
☒ Time Mark Every 60 S

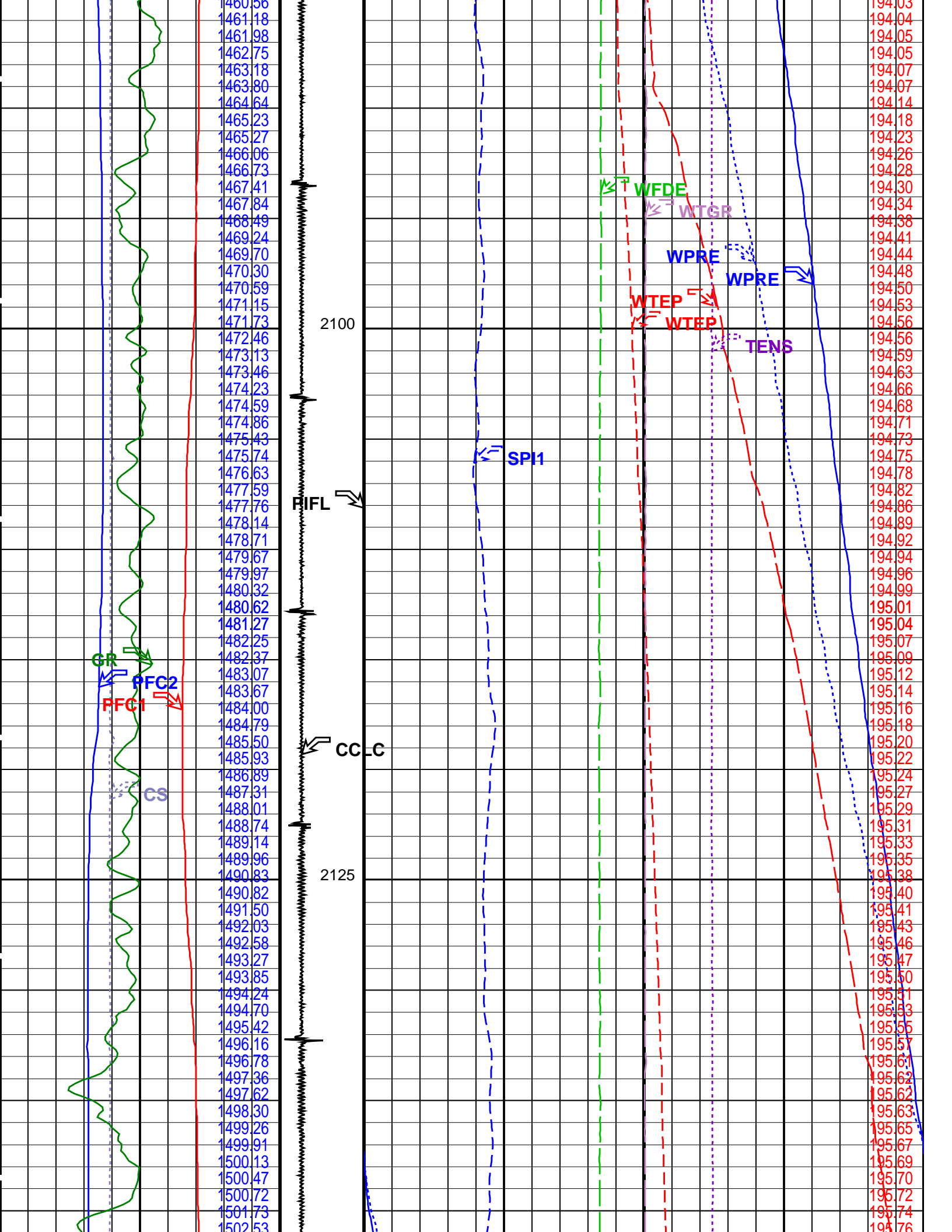
			Well Temperature (WTEP) (DEGF)	
			Well Temperature Gradient (WTGR) (DC/M)	
			0	10
			Well Fluid Density (WFDE) (G/C3)	
			0	2
			Amplified Well Pressure (WPRES) (PSIA)	
			0	100
			Well Pressure (WPRES) (PSIA)	
			3150	3300
			Well Temperature (WTEP) (DEGF)	
			0	4
			Well Temperature (WTEP) (DEGF)	
			185	205
			Filtered Auxiliary Spinner 1 (SPI1) (RPS)	
			0	150
			Tension (TENS) (LBF)	
			0	2500

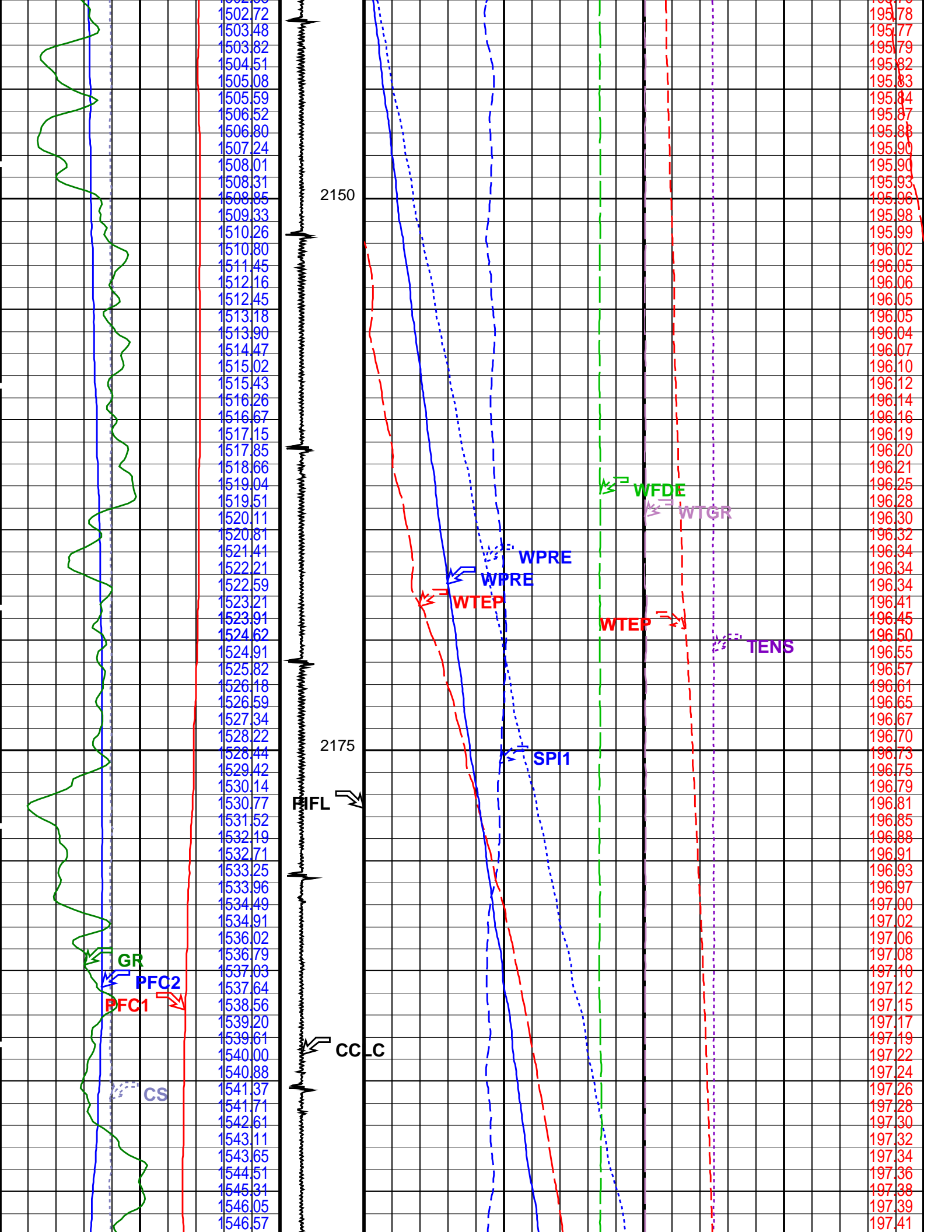
Well Pressure (WPRES) (PSIA)		Perfo Zone From PERFO CURVE to D3T	Cable Speed (CS) (F/HR)		Computed CCL (CCLC)		
Gamma Ray (GR) (GAPI)			PFCS Y Caliper (PFC2) (IN)				
0 150			0 10				
PFCS X Caliper (PFC1) (IN)			10 0				
0 5000		Computed CCL (CCLC)	Filtered Auxiliary Spinner 1 (SPI1) (RPS)				
0 5000			0 150				
0 5000			0 150				
0 5000			0 150				

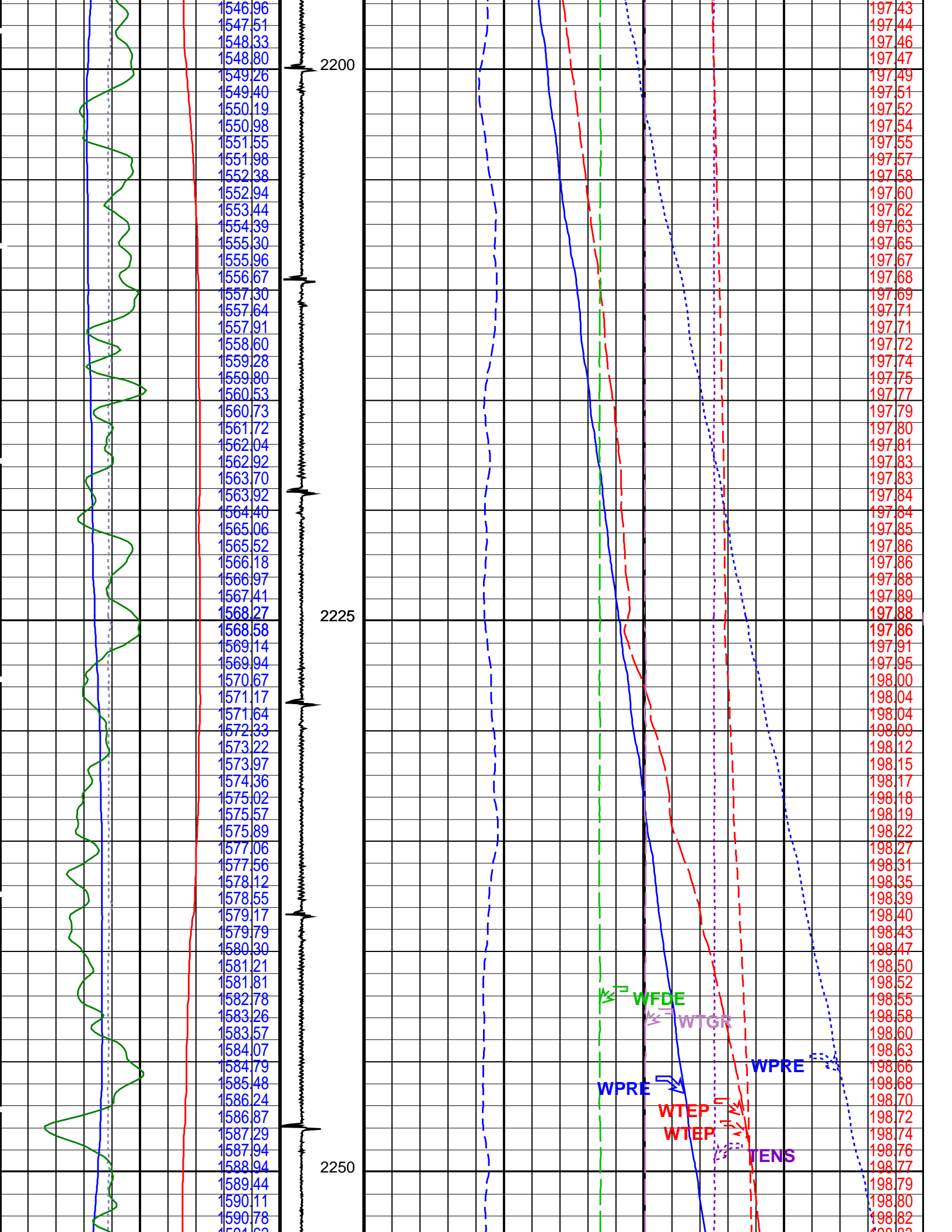


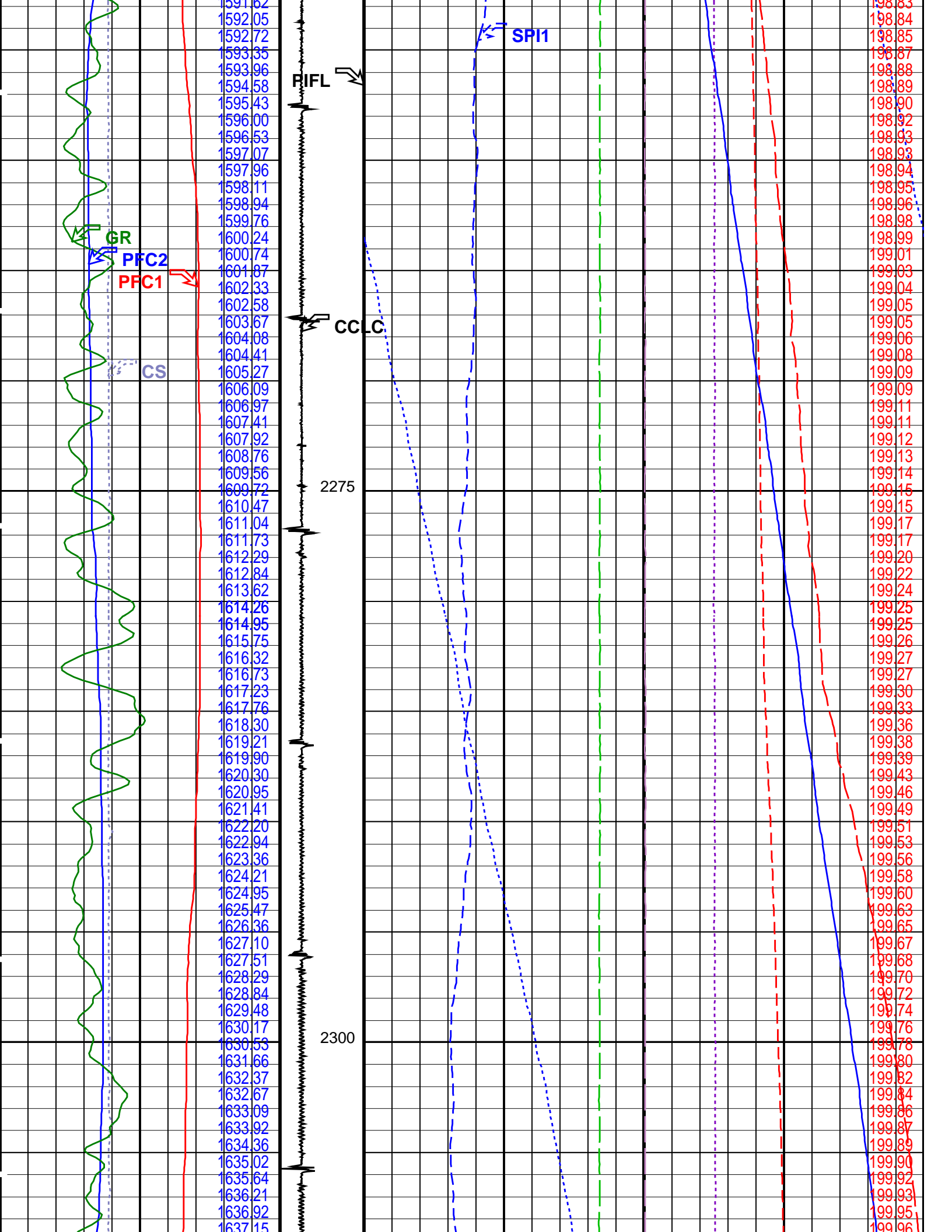


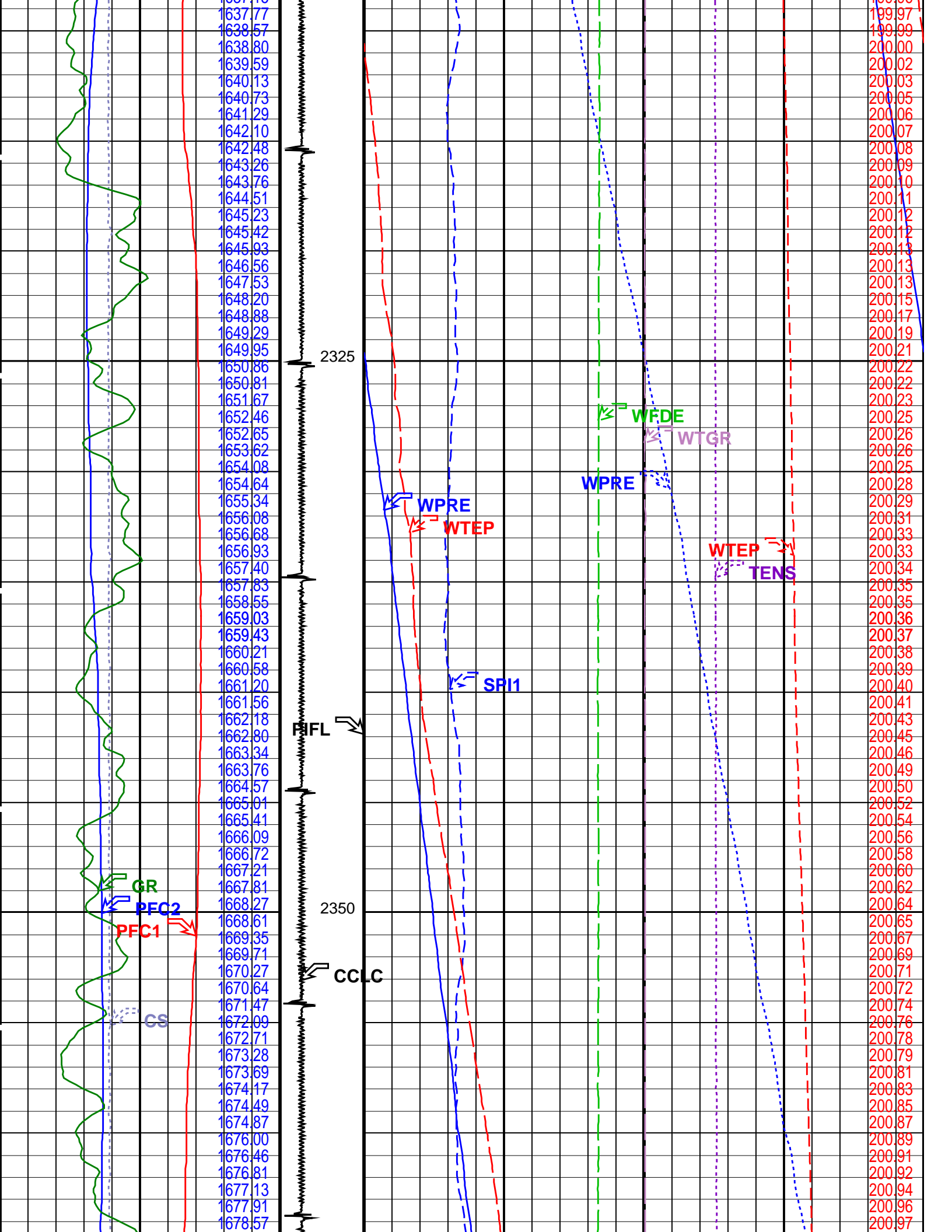


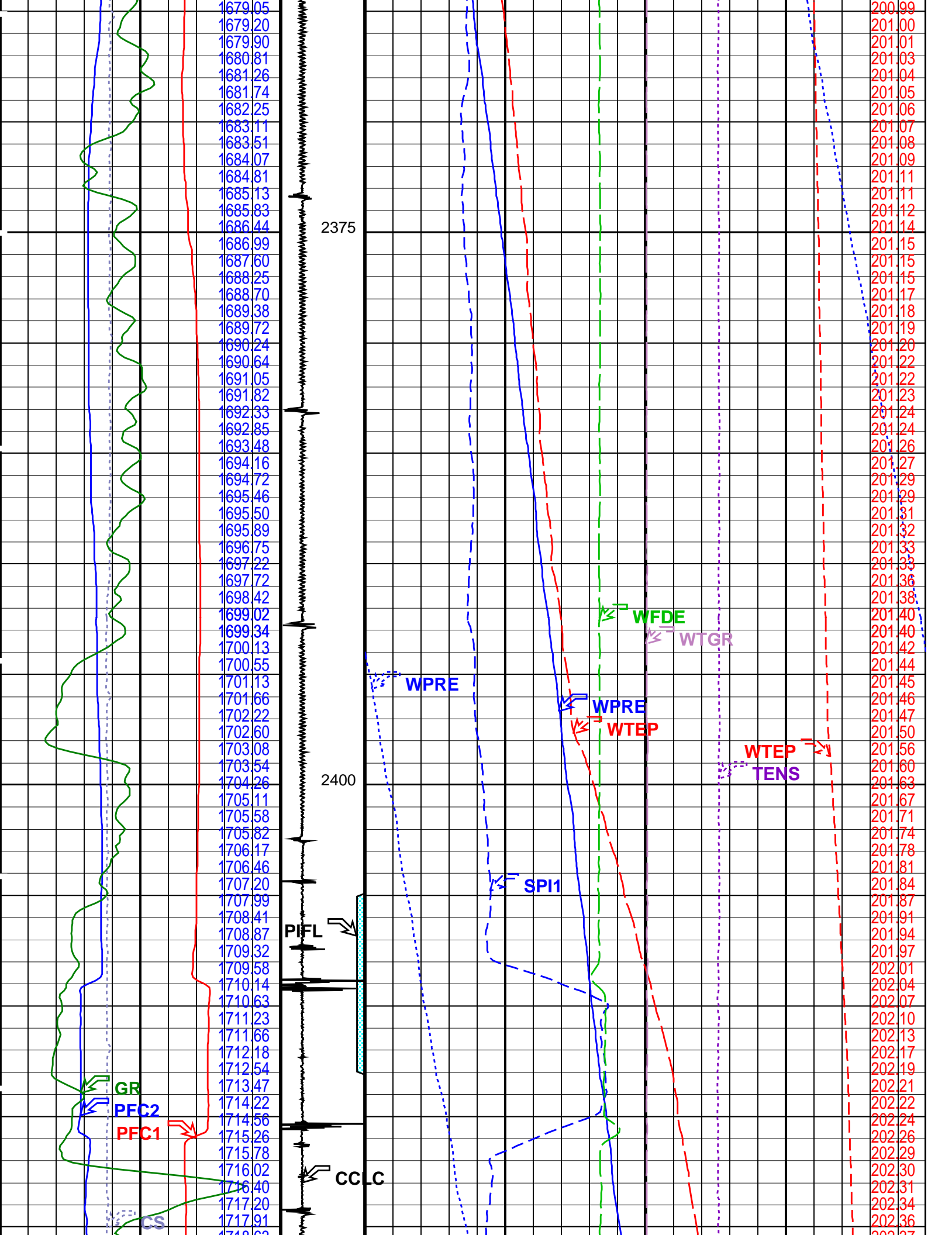


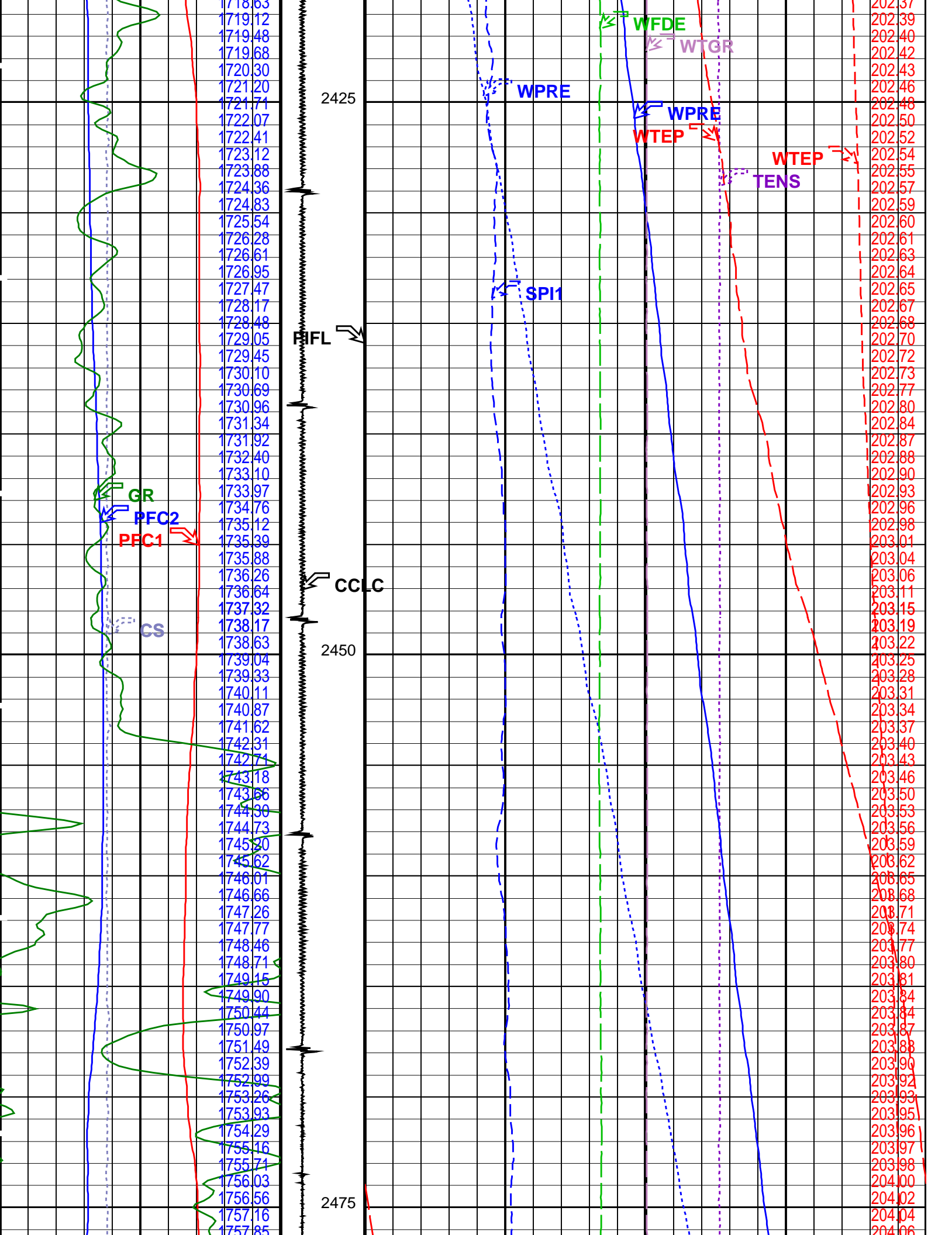


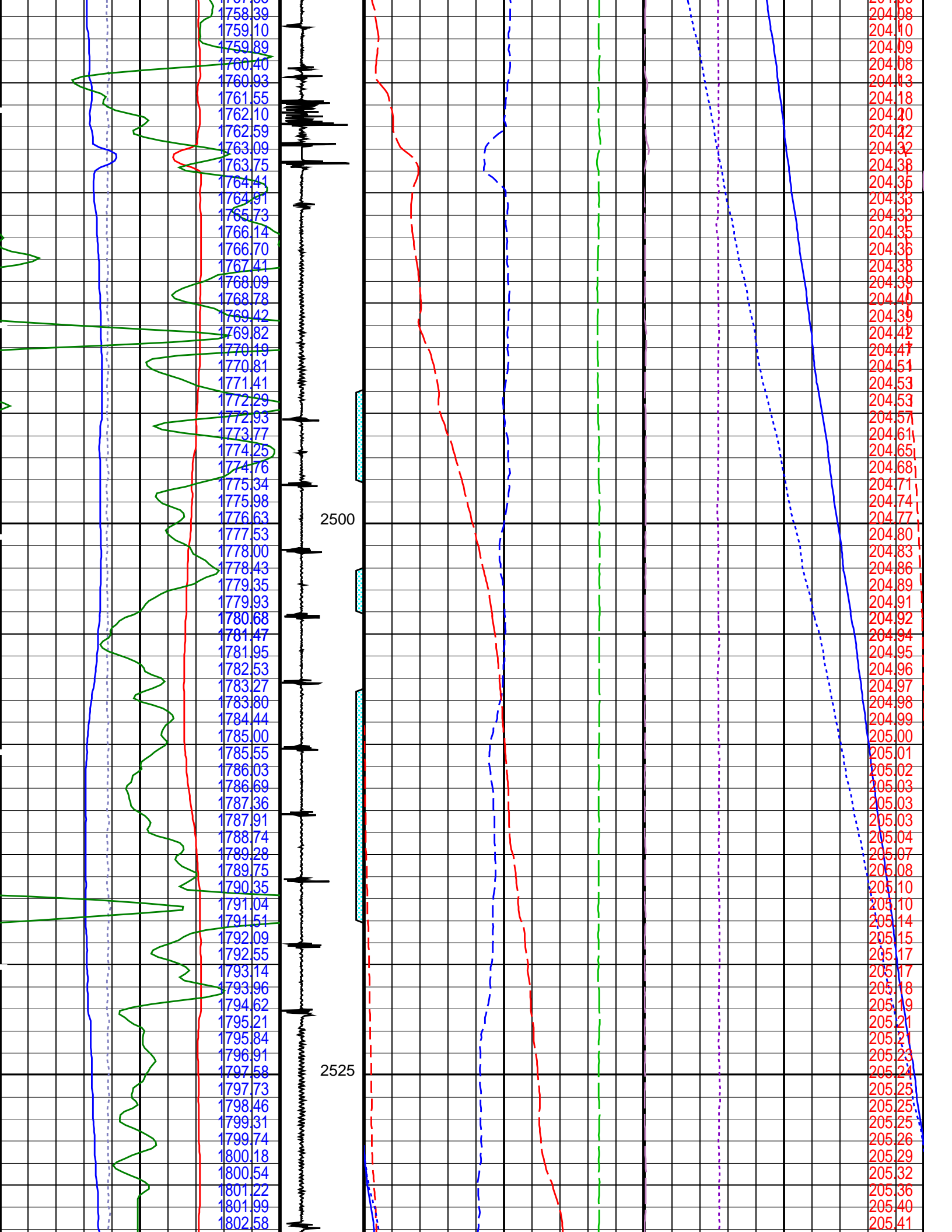




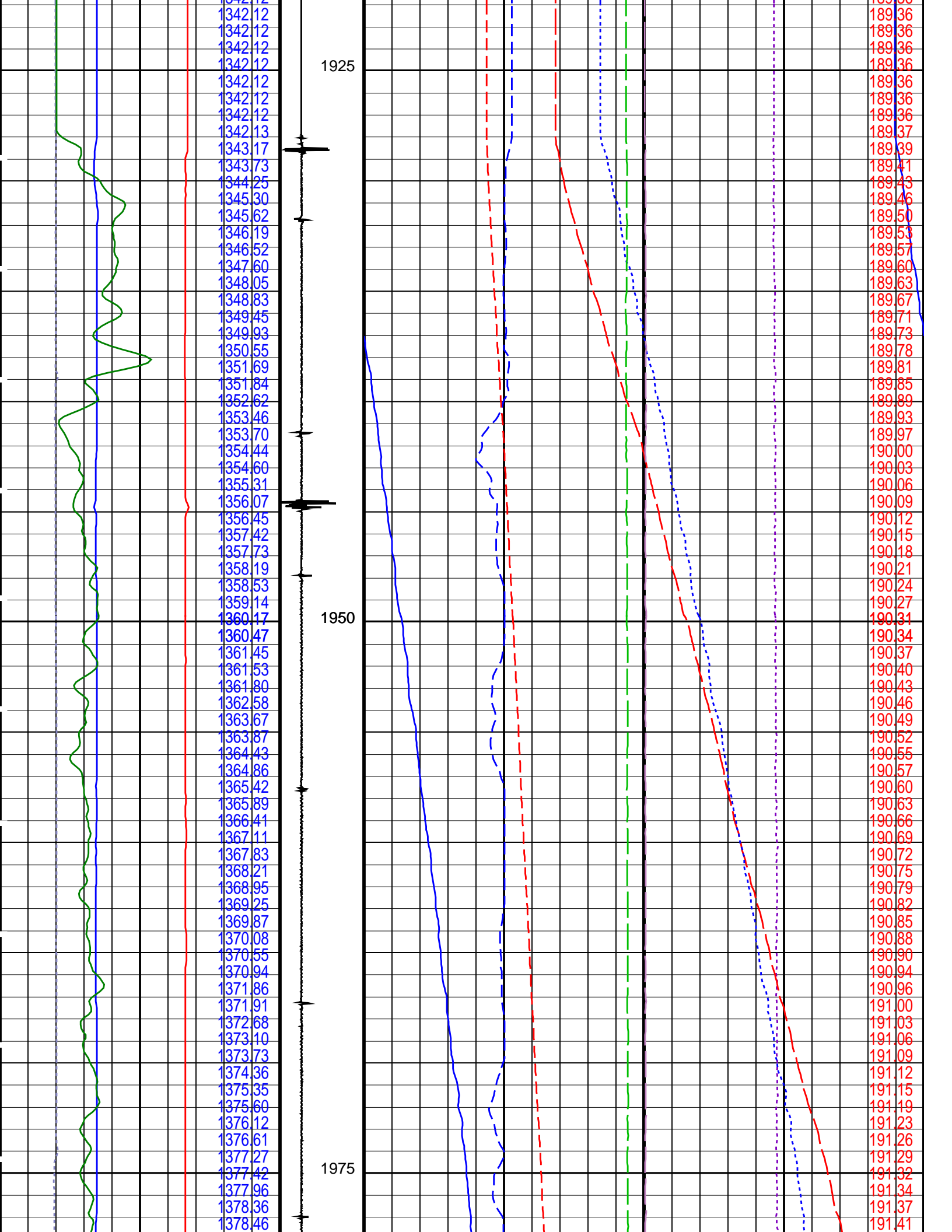


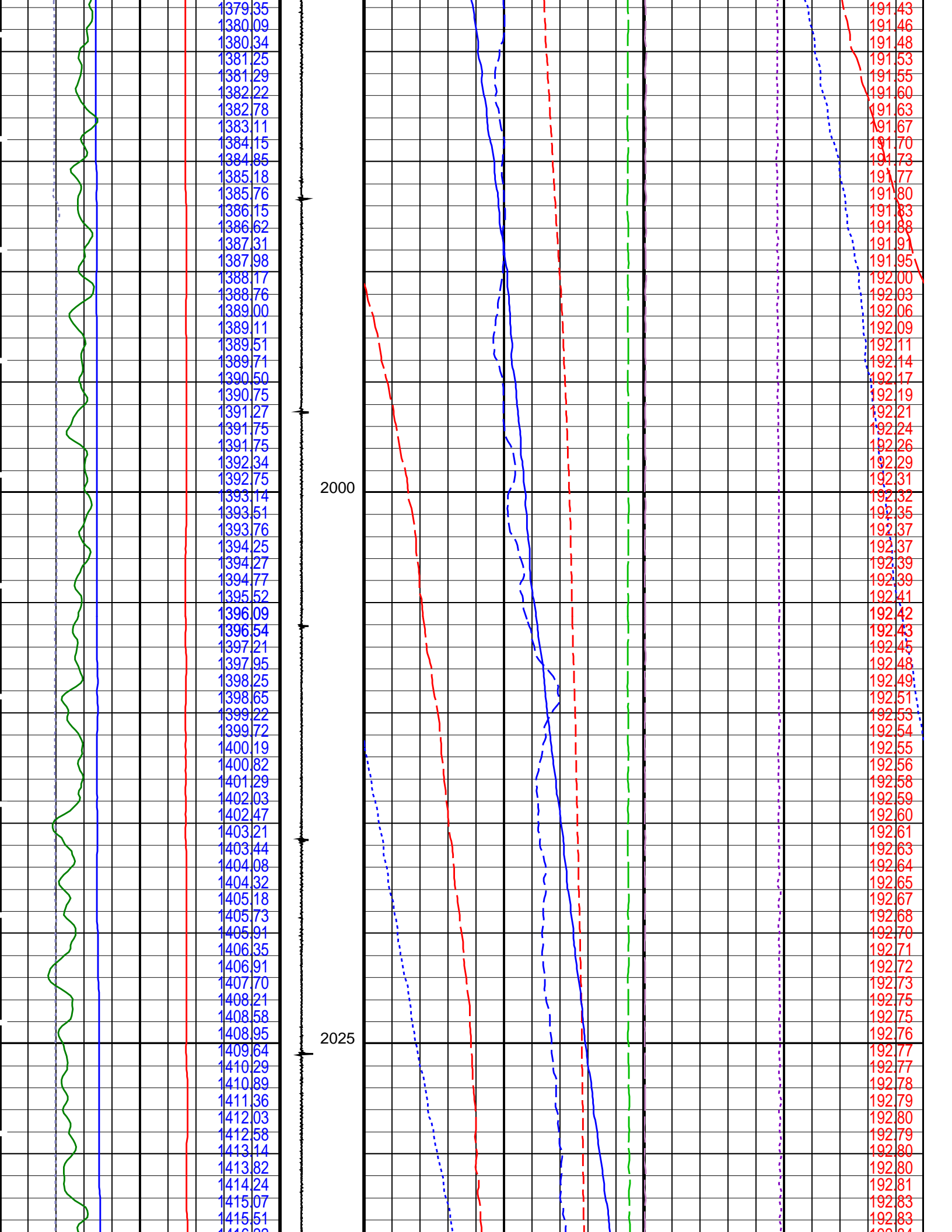


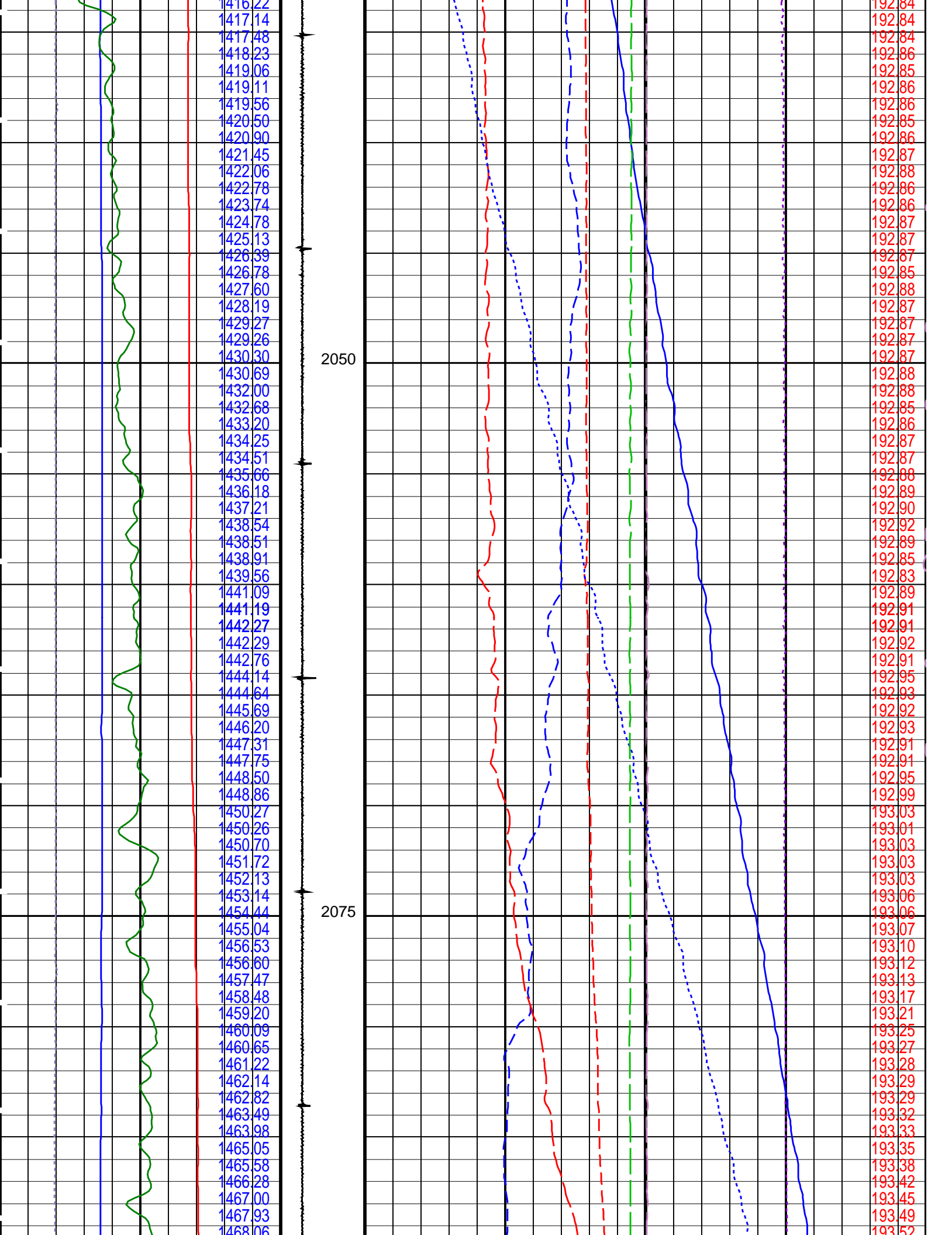


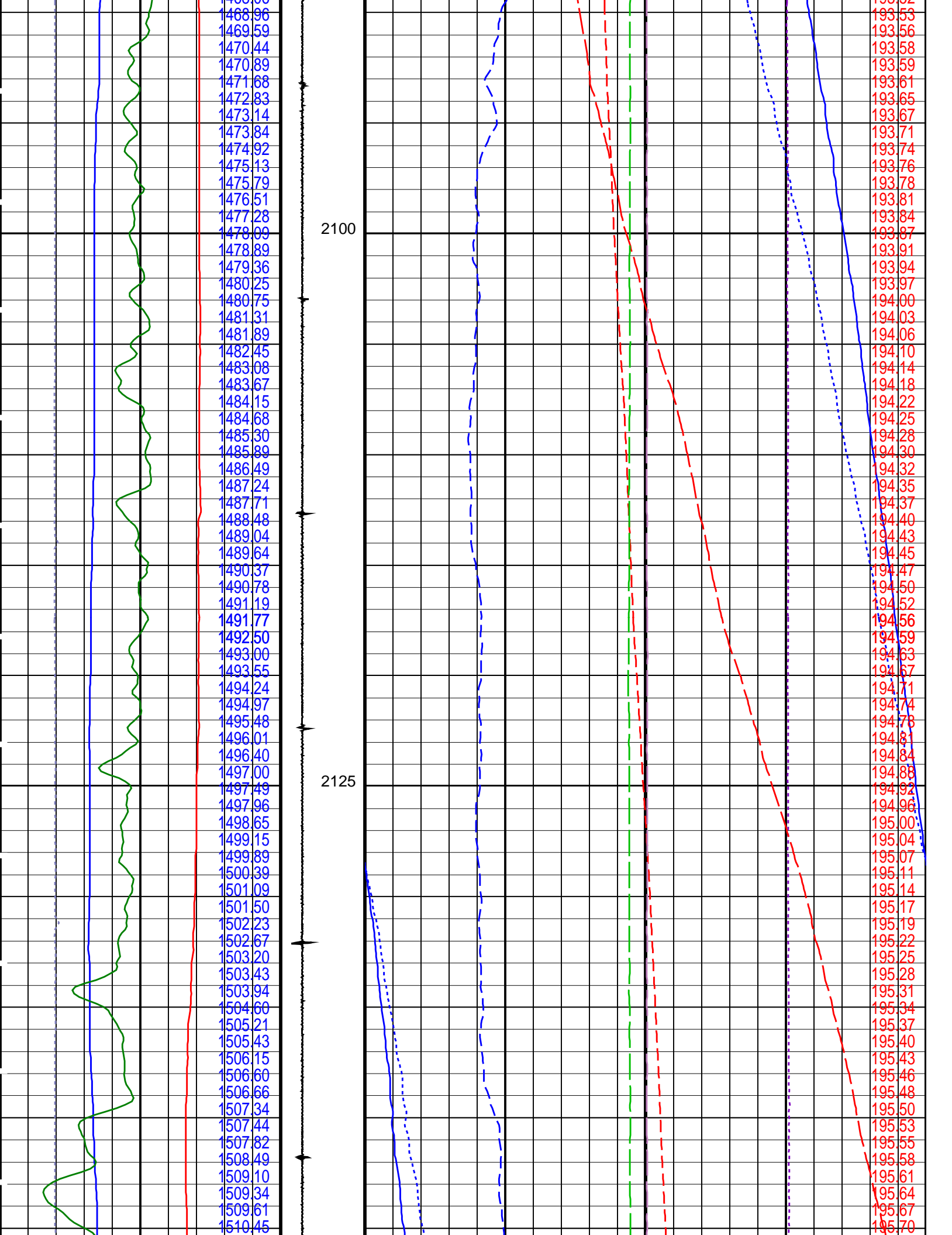


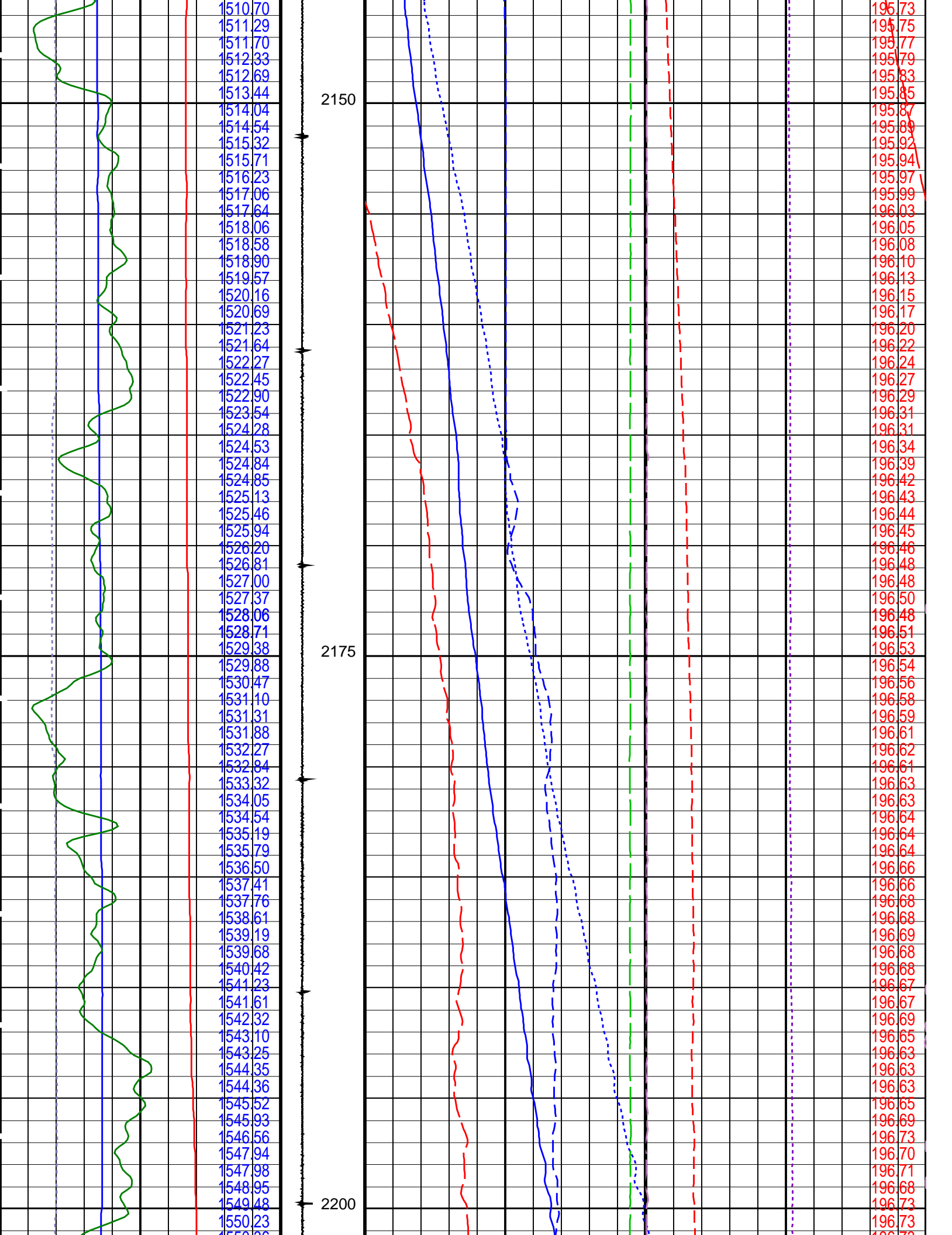
189.36
189.36
189.36
189.36

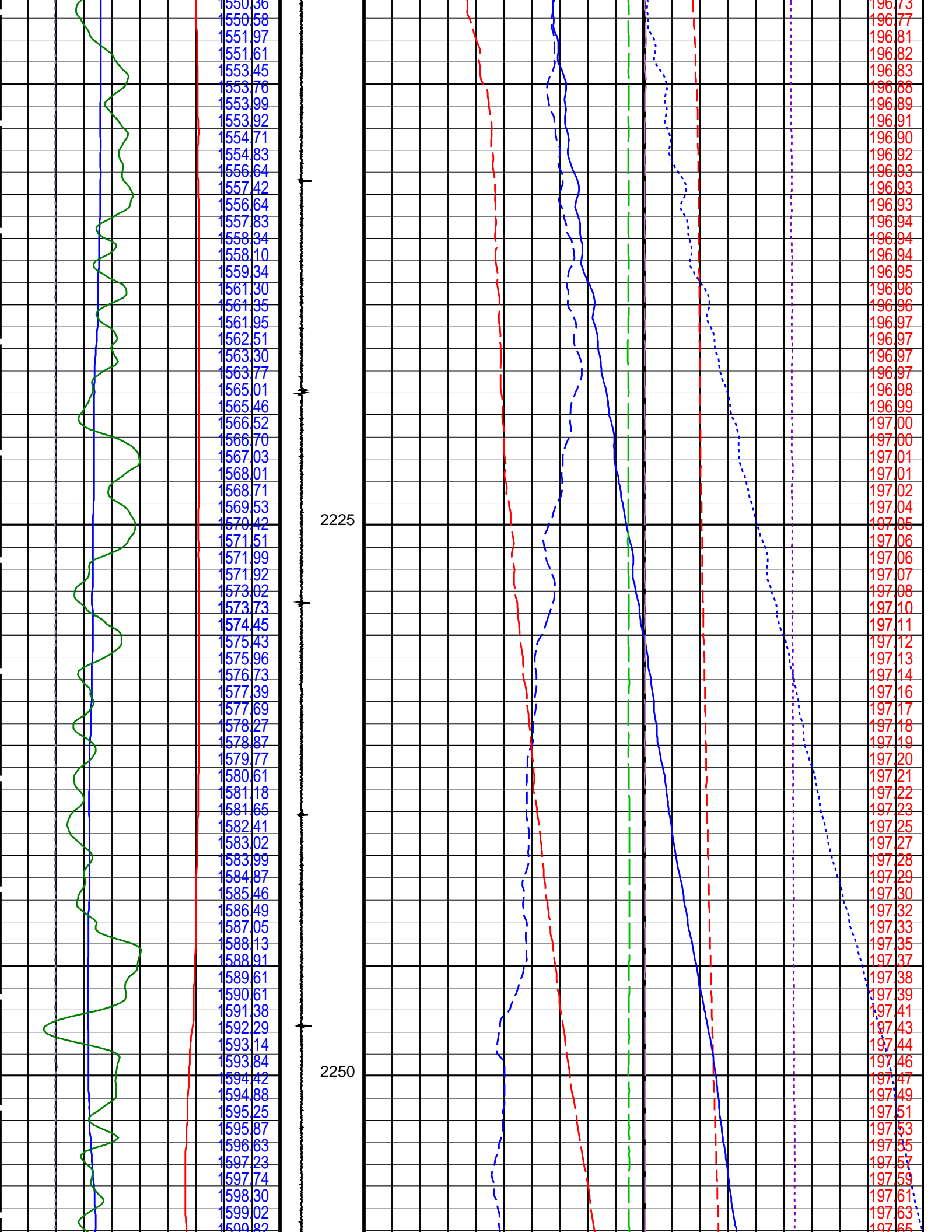


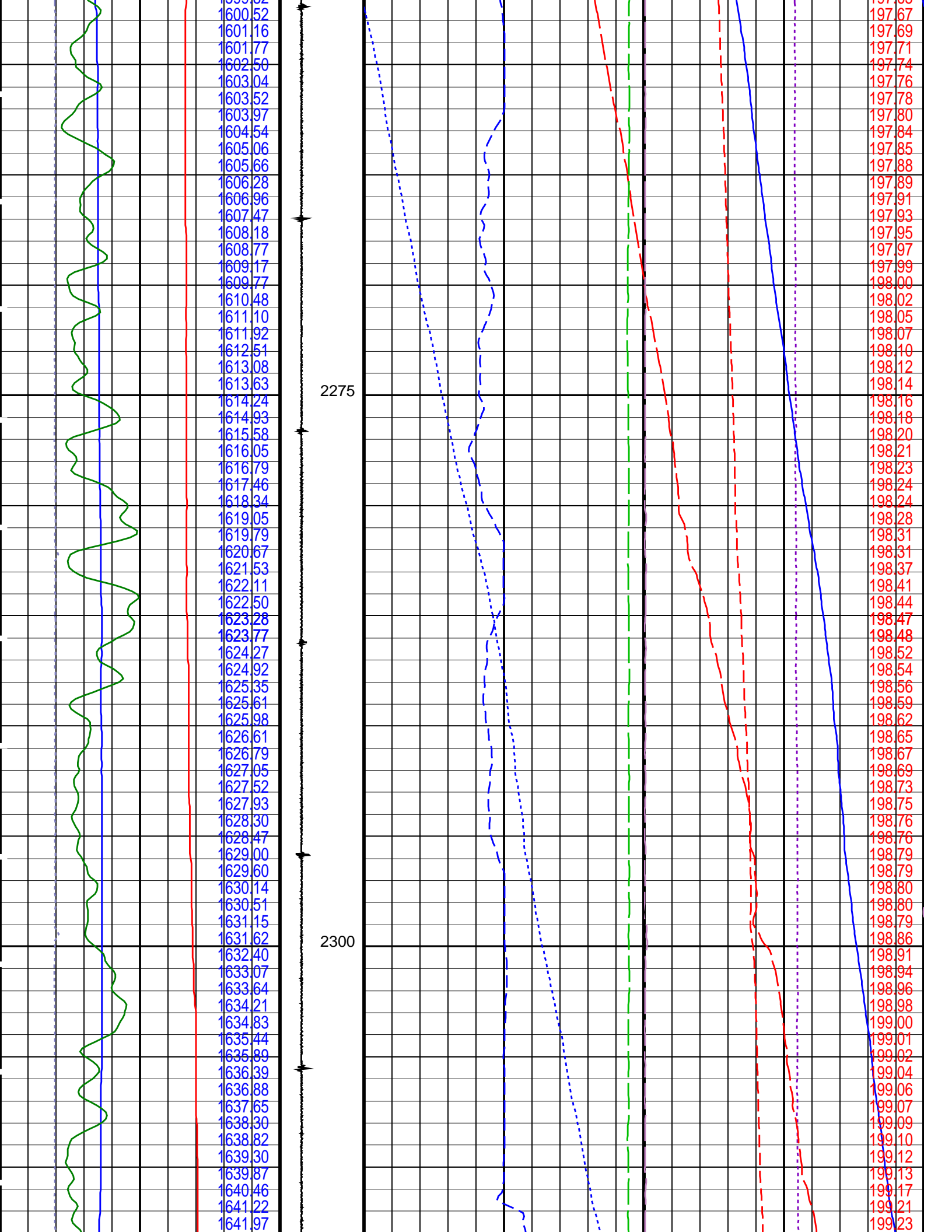


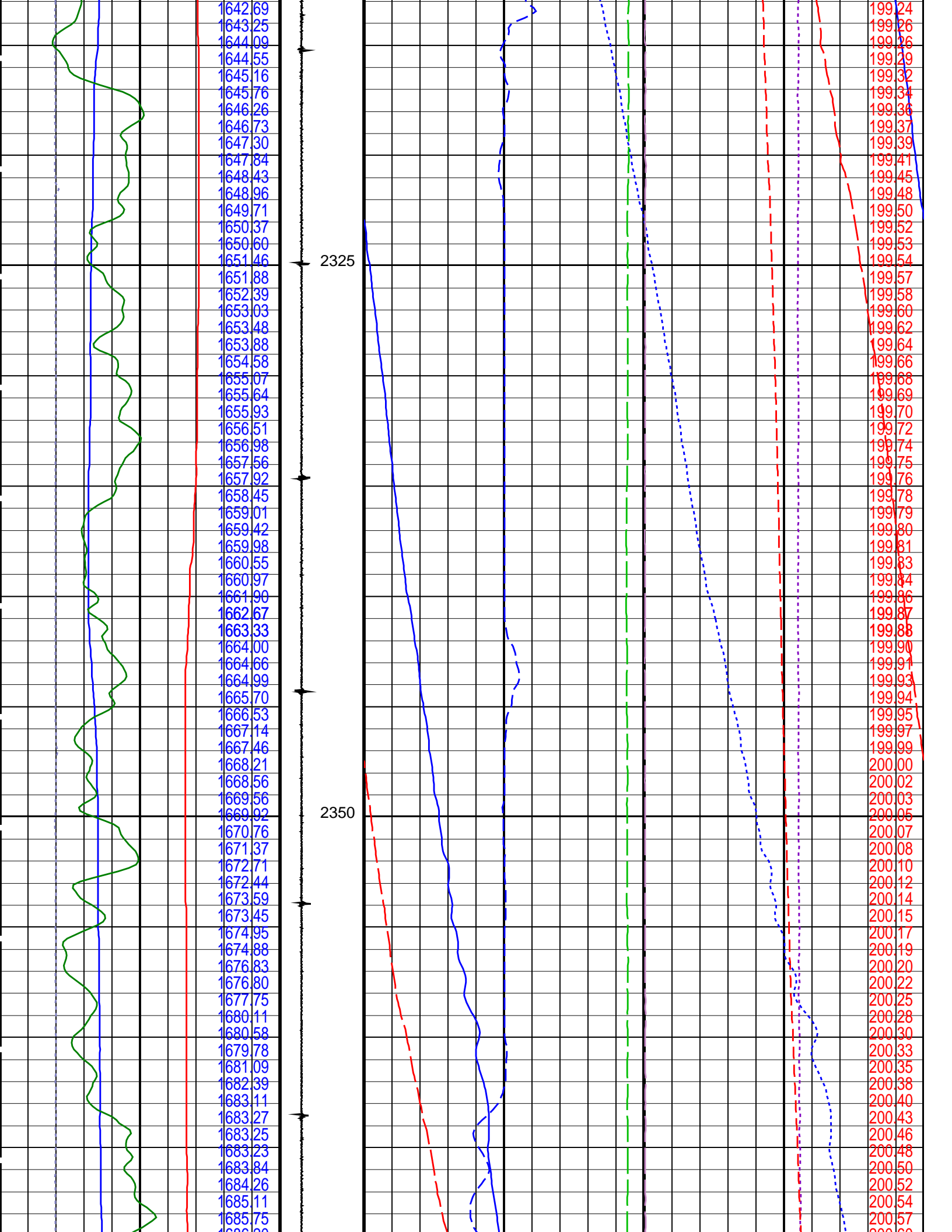


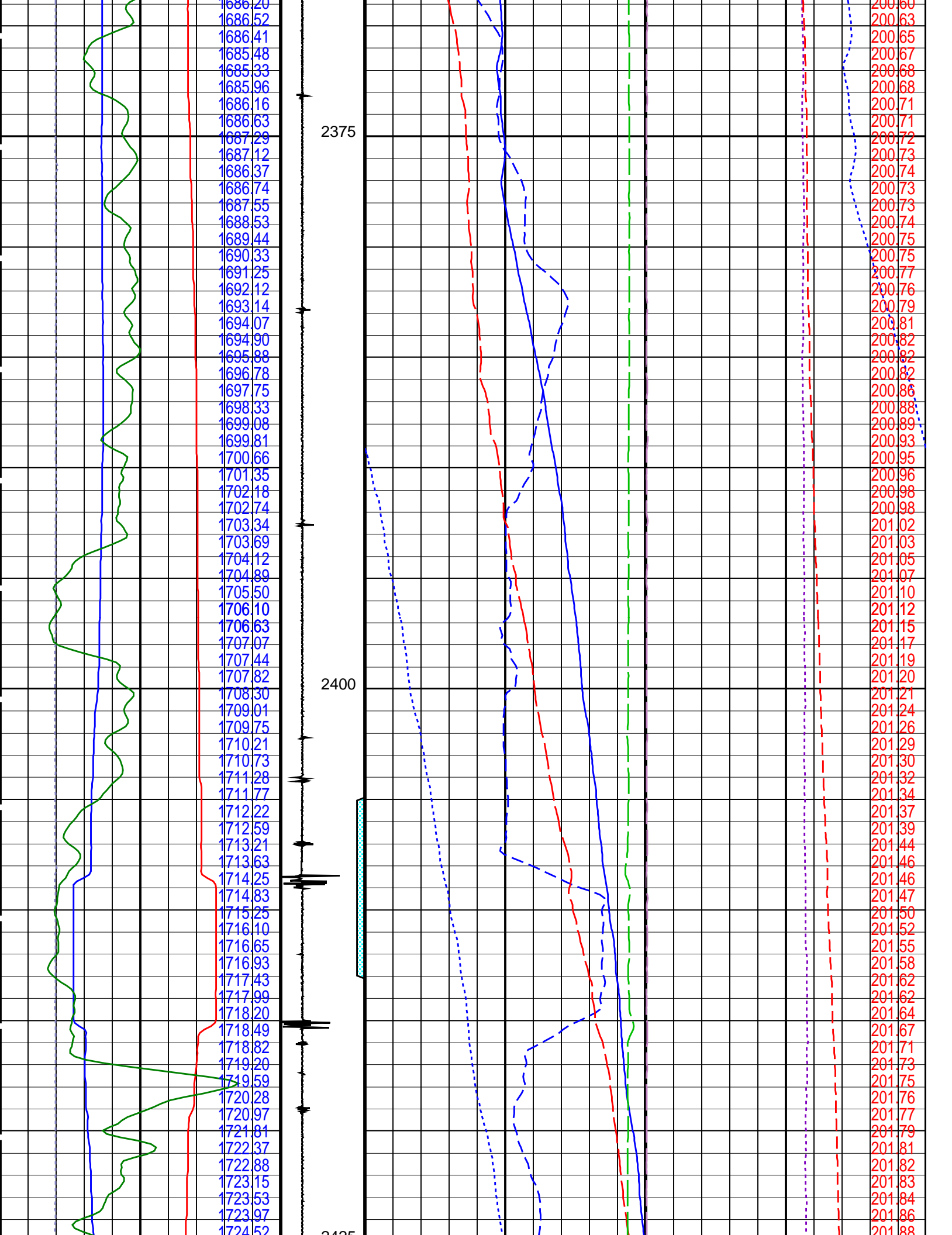


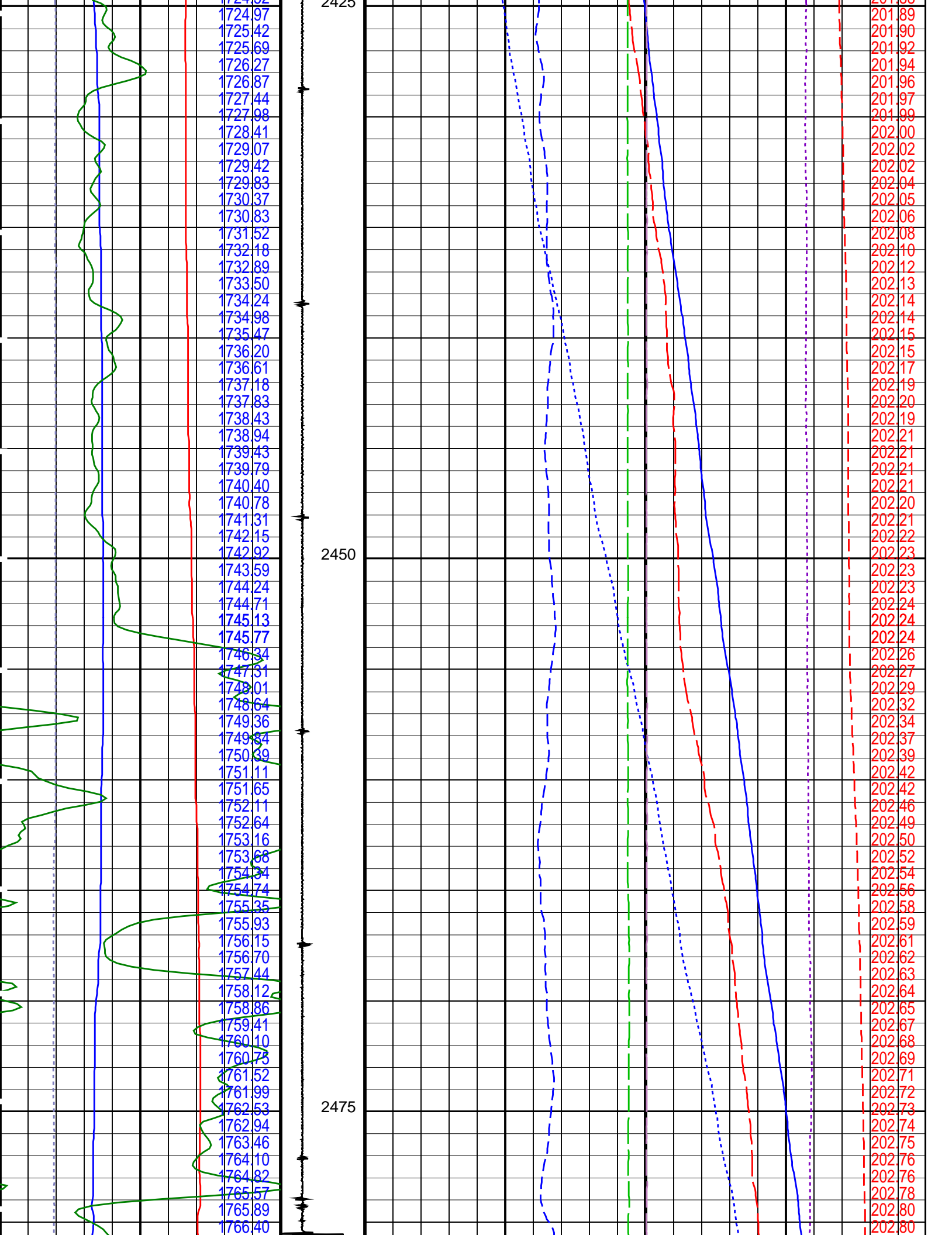


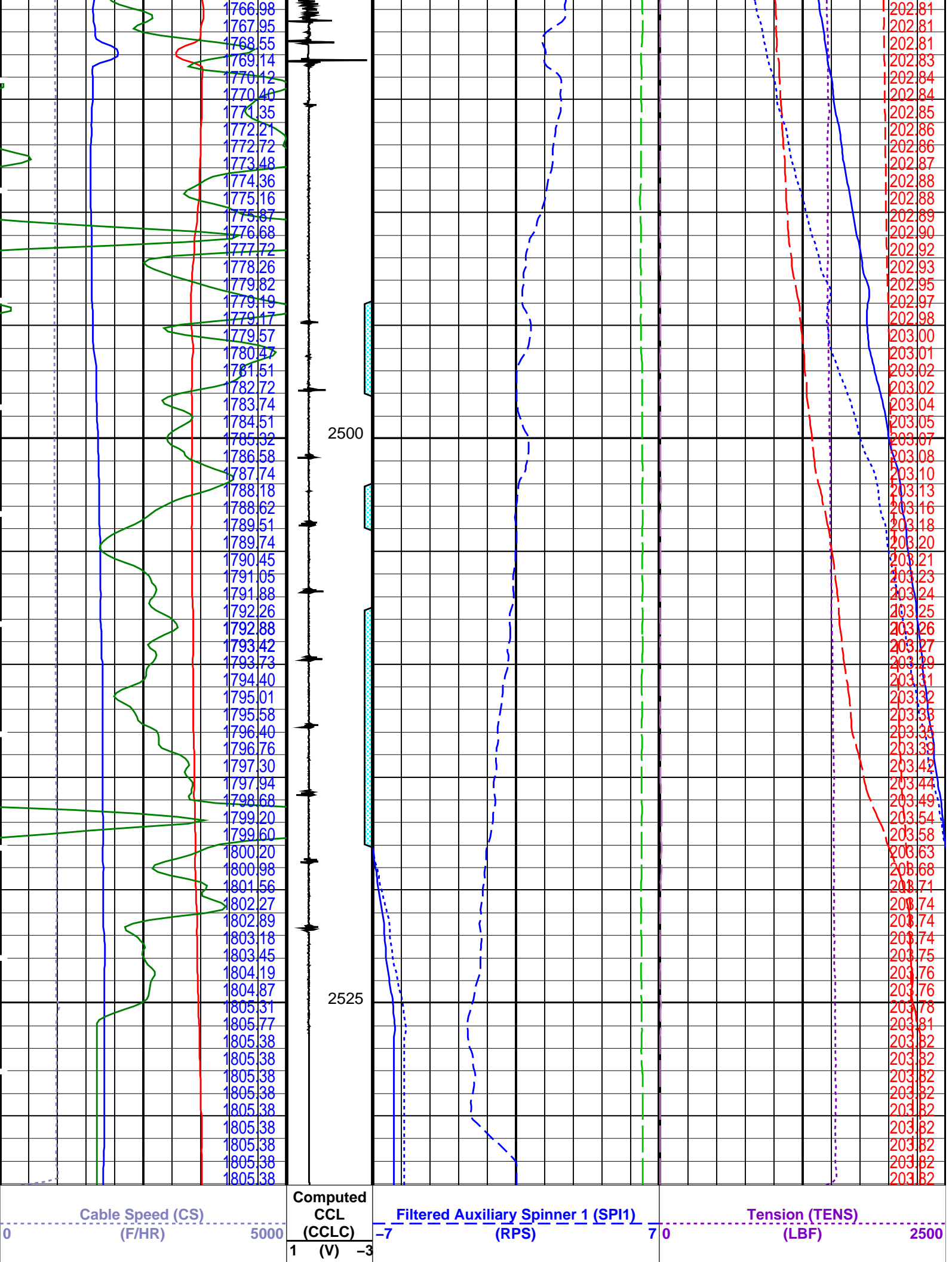












PFCS X Caliper (PFC1)		Perfo Zone From PERFO_ CURVE to D3T	Well Temperature (WTEP)	
10	(IN)		185	205
PFCS Y Caliper (PFC2)			Well Temperature (WTEP)	
0	(IN)		0	4
Gamma Ray (GR)			Well Pressure (WPRE)	
0	(GAPI)		3150	3300
Well Pressure (WPRE)			Amplified Well Pressure (WPRE)	
(PSIA)			0	100
			Well Fluid Density (WFDE)	
			0	2
			Well Temperature Gradient (WTGR)	
			0	10
			Well Temperature (WTEP)	
			(DEGF)	

PIP SUMMARY		
Time Mark Every 60 S		
Format: PSP_1	Vertical Scale: 1:200	Graphics File Created: 20-Dec-2009 18:28

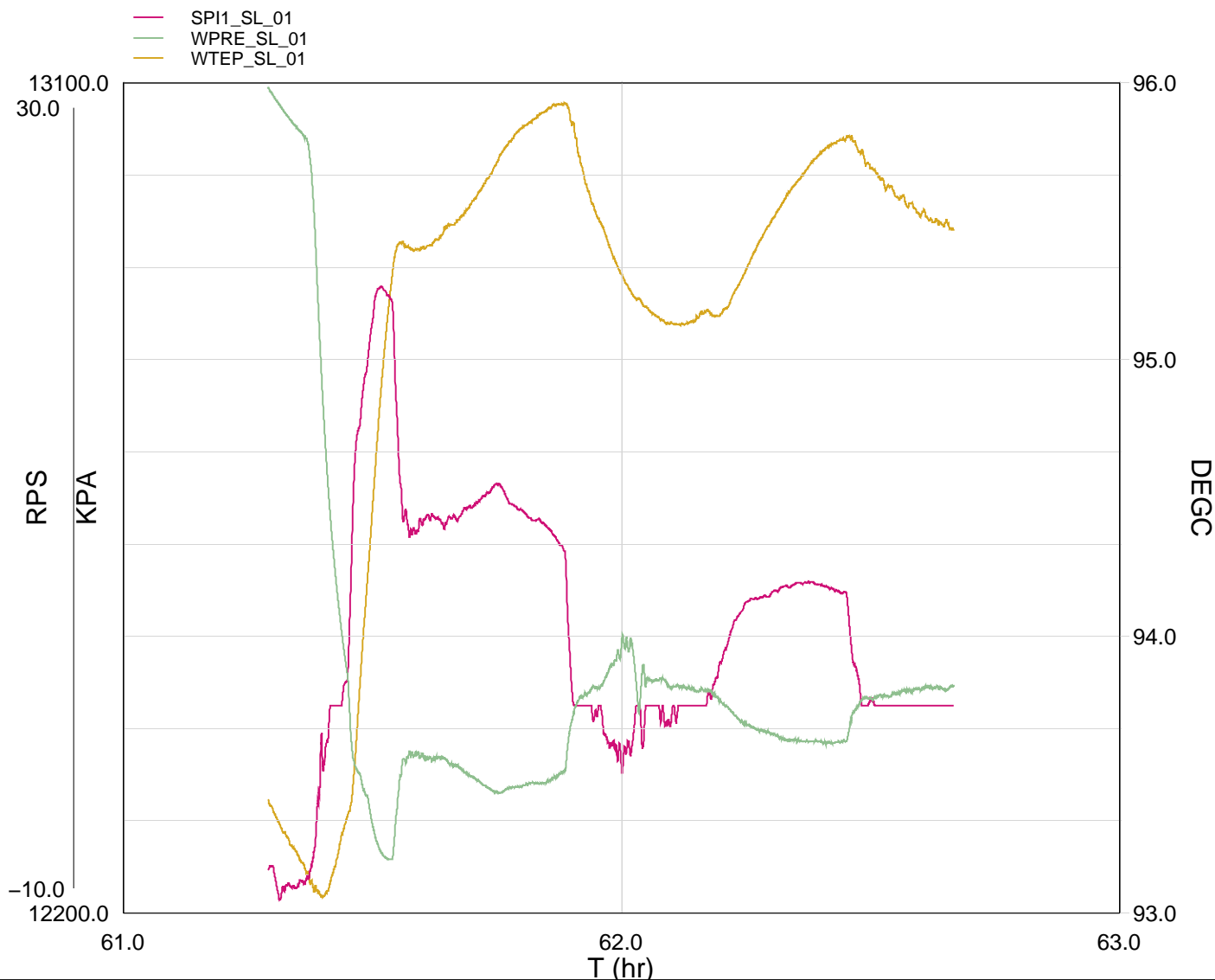
OP System Version: 17C0-154			
PFCS-A	17C0-154	PILS-A	17C0-154
DEFT-C2	17C0-154	PGMC-A/B	17C0-154
PSPT-A/B	17C0-154		

Parameters			
DLIS Name	Description	Value	
PFCS-A: PSP Flow and caliper Tool			
AMOD	Spinner Filter Averaging Mode	LINEAR_AVERAGE	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
SDCF	Spinner Depth Constant Filter	6	
SPI1	Auxiliary Spinner 1 Flowmeter Sonde	PILS-A	
PILS-A: PSP In Line Spinner Flowmeter			
AMOD	Spinner Filter Averaging Mode	LINEAR_AVERAGE	
SDCF	Spinner Depth Constant Filter	6	
SPI1	Auxiliary Spinner 1 Flowmeter Sonde	PILS-A	
PGMC-A/B: PSP Gradiomanometer Measurement Module			
PDSH	Gradio Correction Density Shift	0.1	G/C3
PSPT-A/B: Production Services Logging Platform			
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
System and Miscellaneous			
DO	Depth Offset for Playback	2.1	M
PP	Playback Processing	NORMAL	

Input DLIS Files						
DEFAULT	FCS_ILS_DEFT_GMS_047LUP	FN:46	PRODUCER	20-Dec-2009 14:40	2530.9 M	1911.2 M
Output DLIS Files						
DEFAULT	FCS_ILS_DEFT_GMS_054PUP	FN:53	PRODUCER	20-Dec-2009 18:28		



Well flowing record
2520m MDKB



Schlumberger

**PLT Flowing down log @ 3940ft/hr
2880 – 2973m MDKB**

Input DLIS Files

DEFAULT Flip_FCS_ILS_DEFT_037LUP PRODUCER 20-Dec-2009 15:18

Output DLIS Files

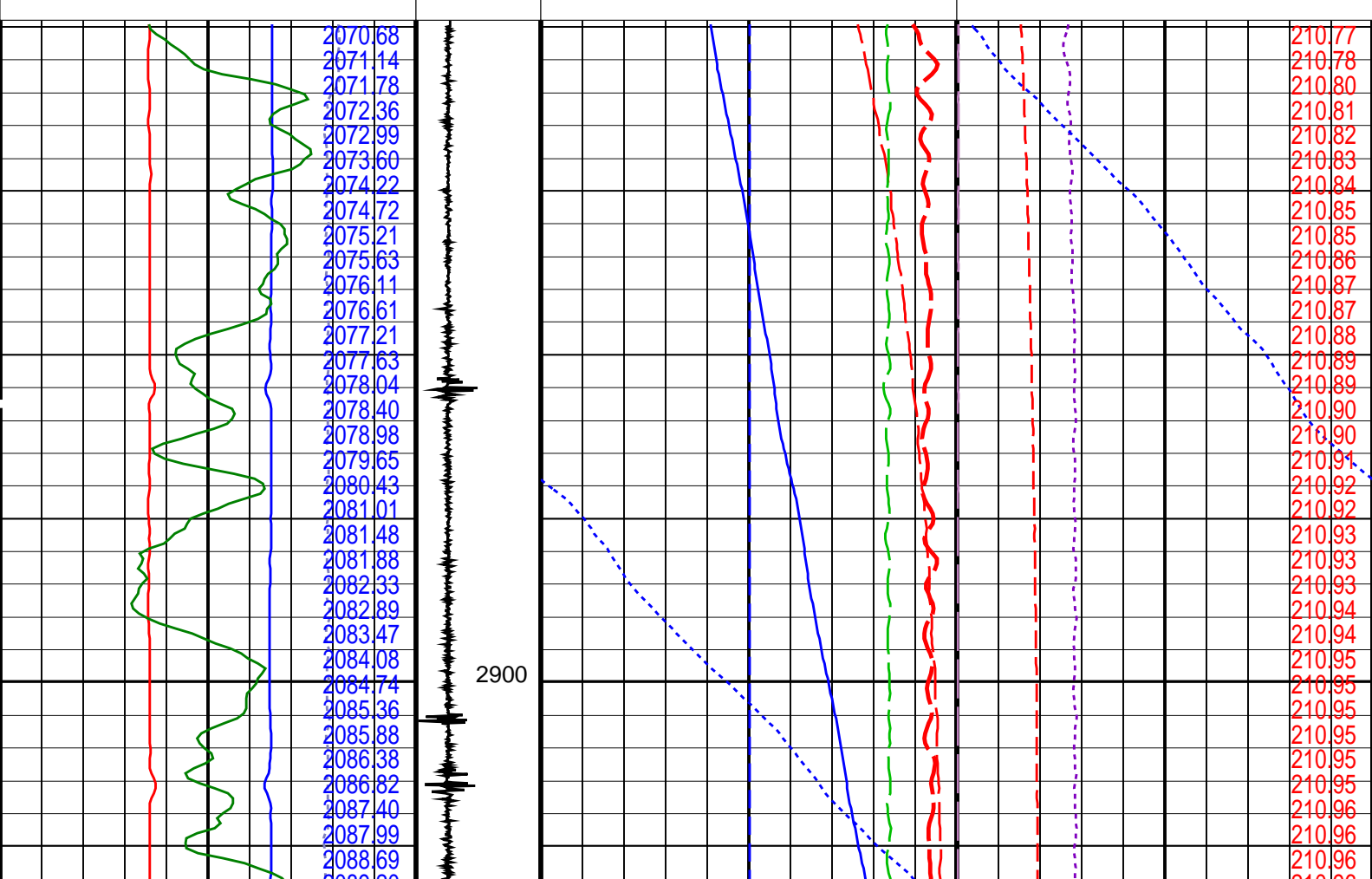
DEFAULT FCS_ILS_DEFT_GMS_045PUP FN:40 PRODUCER 20-Dec-2009 15:38 2975.0 M 2879.8 M

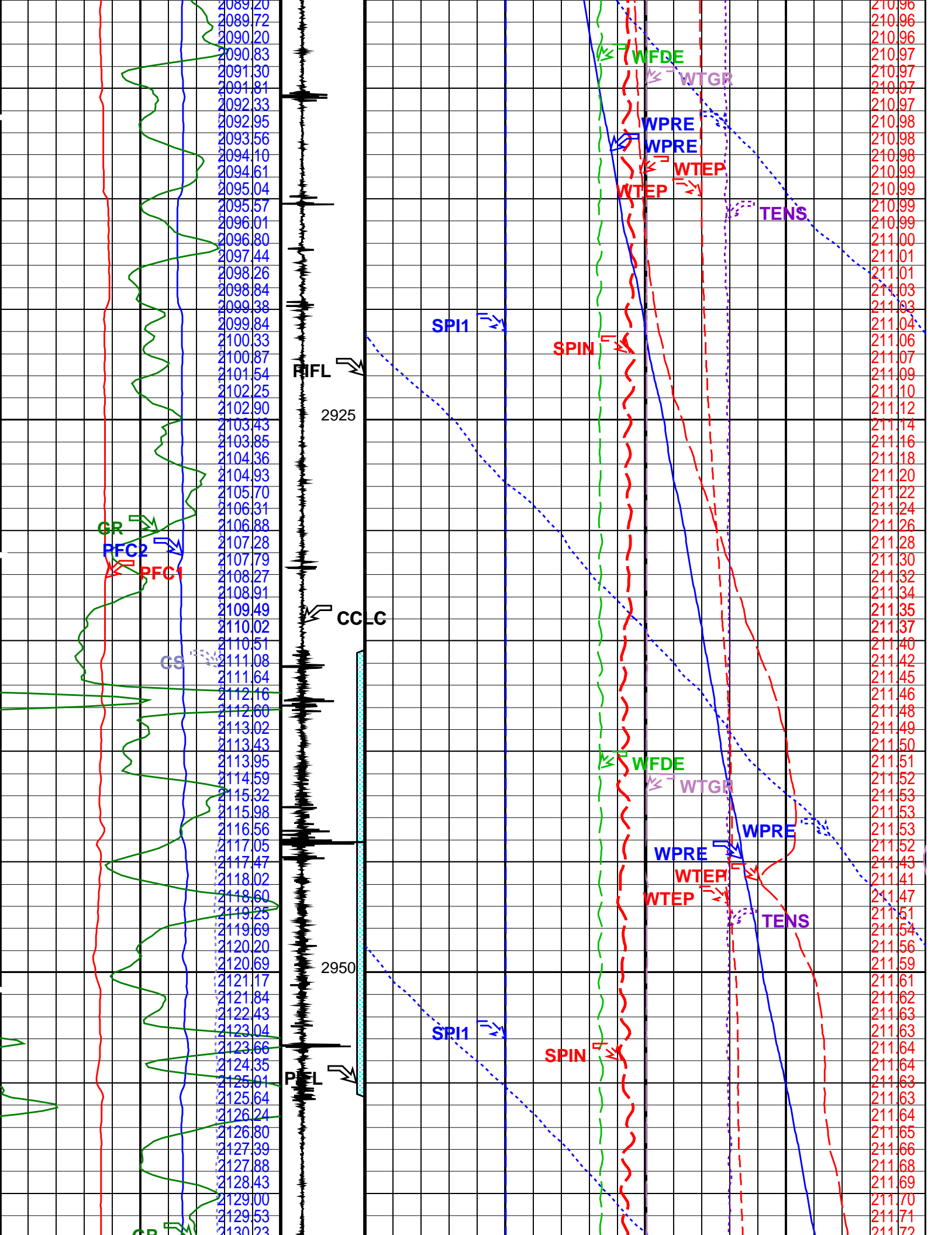
PFCS-A	17C0-154	PILS-A	17C0-154
DEFT-C2	17C0-154	PGMC-A/B	17C0-154
PSPT-A/B	17C0-154		

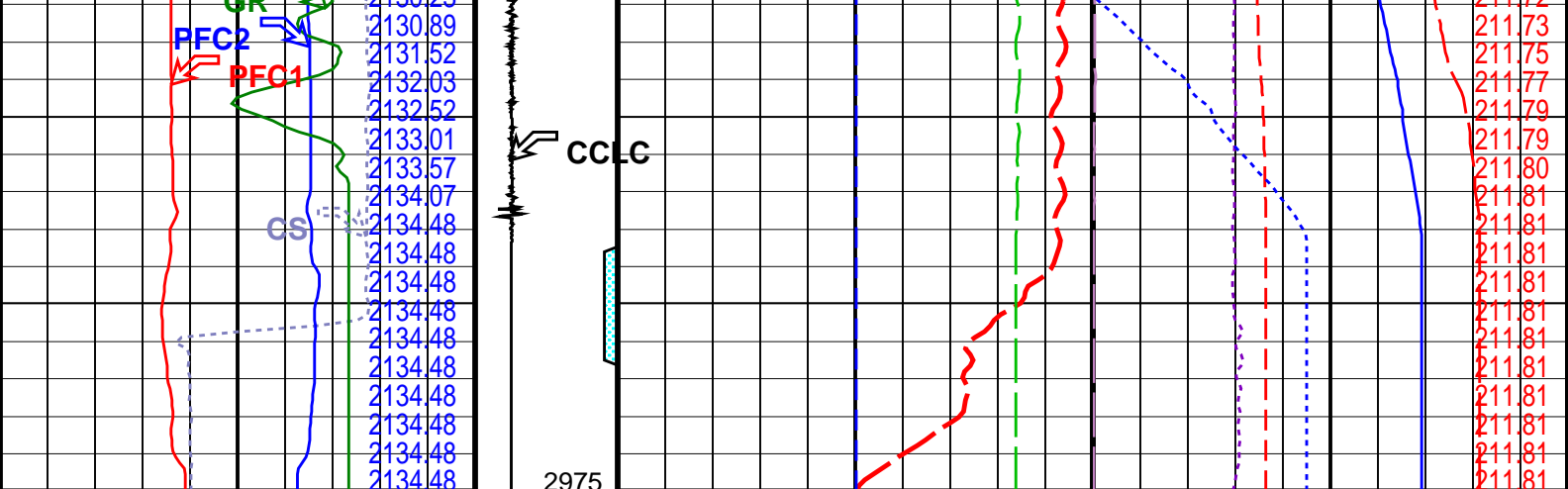
PIP SUMMARY

Time Mark Every 60 S

				Well Temperature (WTEP) (DEGF)	
		Well Fluid Density (WFDE) (G/C3)		0 2	
		Amplified Well Pressure (WPRE) (PSIA)		0 20	
Well Pressure (WPRE) (PSIA)		2050 2150			
Gamma Ray (GR) (GAPI)		0 150		Well Temperature (WTEP) (DEGF)	
PFCS Y Caliper (PFC2) (IN)		0 10		205 215	
PFCS X Caliper (PFC1) (IN)		10 0		Well Temperature Gradient (WTGR) (DC/M)	
		Perfo Zone From PERFO_CURVE to D3T		-7 7 0 10	
Cable Speed (CS) (F/HR)		0 5000		Filtered Auxiliary Spinner 1 (SPI1) (RPS)	
		Computed CCL (CCLC) (V)		-7 7 0 2500	
				Filtered Main Spinner (SPIN) (RPS)	
				Tension (TENS) (LBF)	







Cable Speed (CS) (F/HR)		Computed CCL (CCLC) (V)	Filtered Main Spinner (SPIN) (RPS)	Tension (TENS) (LBF)
0 5000		1 -3	-7 7	0 2500
PFC1 X Caliper (PFC1) (IN)	10 0	Perfo Zone From PERFO CURVE to D3T	Filtered Auxiliary Spinner 1 (SPI1) (RPS)	Well Temperature Gradient (WTGR) (DC/M)
PFC1 Y Caliper (PFC2) (IN)	0 10		-7 7	0 10
Gamma Ray (GR) (GAPI)	0 150			Well Temperature (WTEP) (DEGF)
Well Pressure (WPRE) (PSIA)				205 215
				Well Temperature (WTEP) (DEGF)
				0 2
				Well Pressure (WPRE) (PSIA)
				2050 2150
				Amplified Well Pressure (WPRES) (PSIA)
				0 20
				Well Fluid Density (WFDE) (G/C3)
				0 2
				Well Temperture (WTEP) (DEGF)

PIP SUMMARY

Time Mark Every 60 S

Format: PSP_1 Vertical Scale: 1:200

Graphics File Created: 20-Dec-2009 15:38

OP System Version: 17C0-154

PFCS-A	17C0-154	PILS-A	17C0-154
DEFT-C2	17C0-154	PGMC-A/B	17C0-154
PSPT-A/B	17C0-154		

Parameters

DLIS Name	Description	Value
PFCS-A: PSP Flow and caliper Tool		
AMOD	Spinner Filter Averaging Mode	LINEAR_AVERAGE
GDEV	Average Angular Deviation of Borehole from Normal	0 DEG
SDCF	Spinner Depth Constant Filter	6
SPI1	Auxiliary Spinner 1 Flowmeter Sonde	PILS-A
SPIN	Main Spinner Flowmeter Sonde	PFCS-A_3.5
PILS-A: PSP In Line Spinner Flowmeter		
AMOD	Spinner Filter Averaging Mode	LINEAR_AVERAGE
SDCF	Spinner Depth Constant Filter	6
SPI1	Auxiliary Spinner 1 Flowmeter Sonde	PILS-A
SPIN	Main Spinner Flowmeter Sonde	PFCS-A_3.5

Input DLIS Files				
DEFAULT	Flip_FCS_ILS_DEFT_037LUP	PRODUCER	20-Dec-2009 15:18	

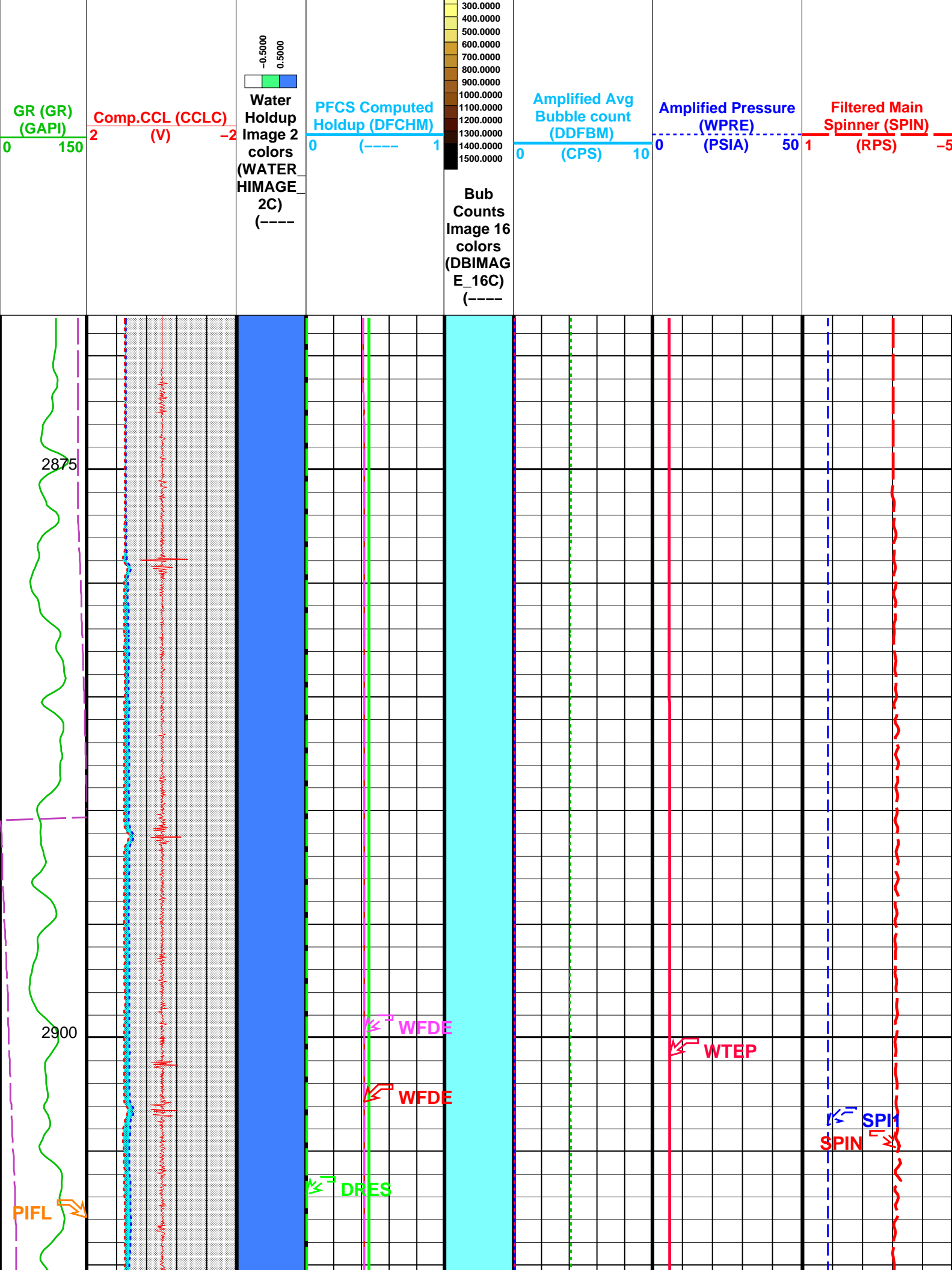
Output DLIS Files				
DEFAULT	FCS_ILS_DEFT_GMS_045PUP	FN:40	PRODUCER	20-Dec-2009 15:38

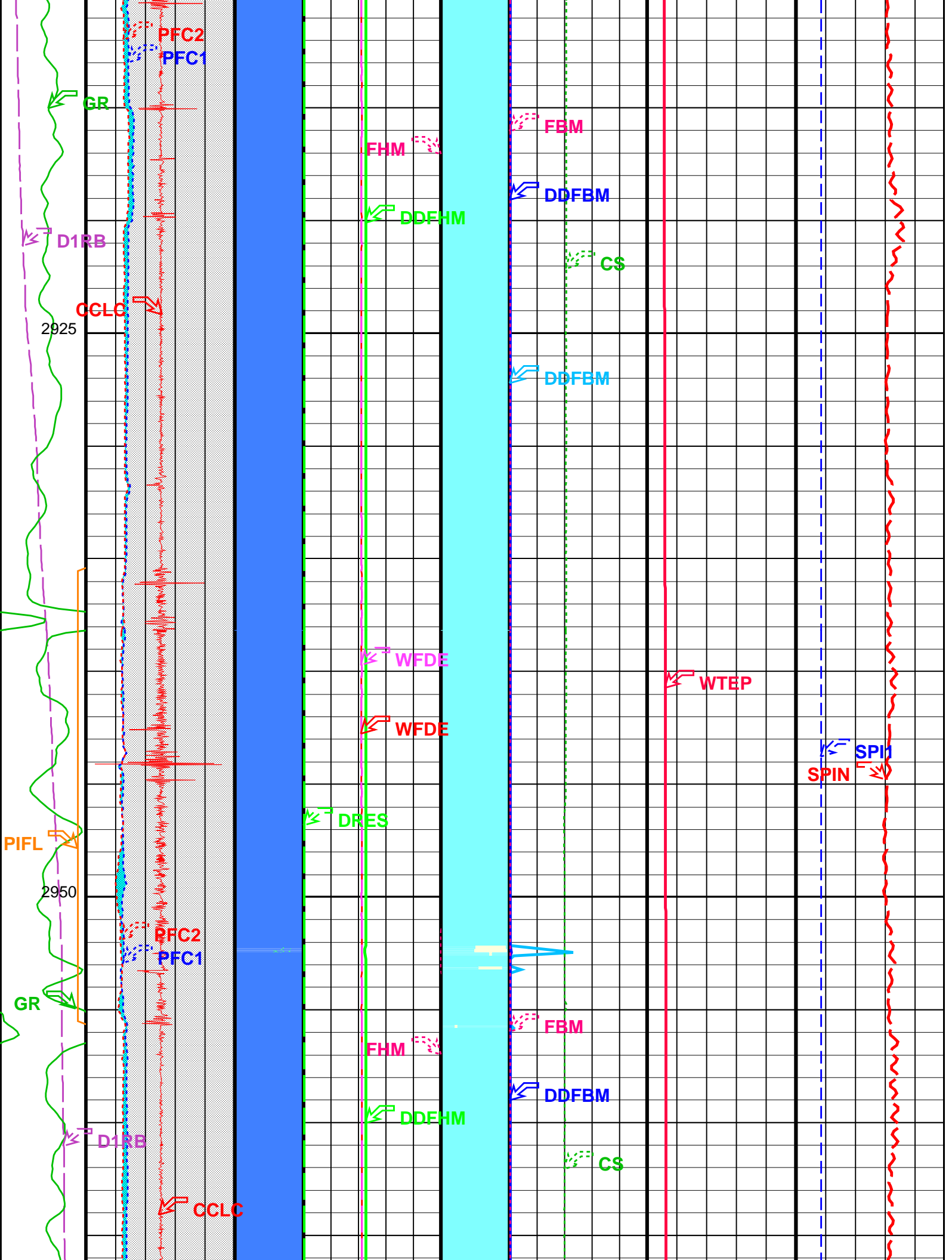


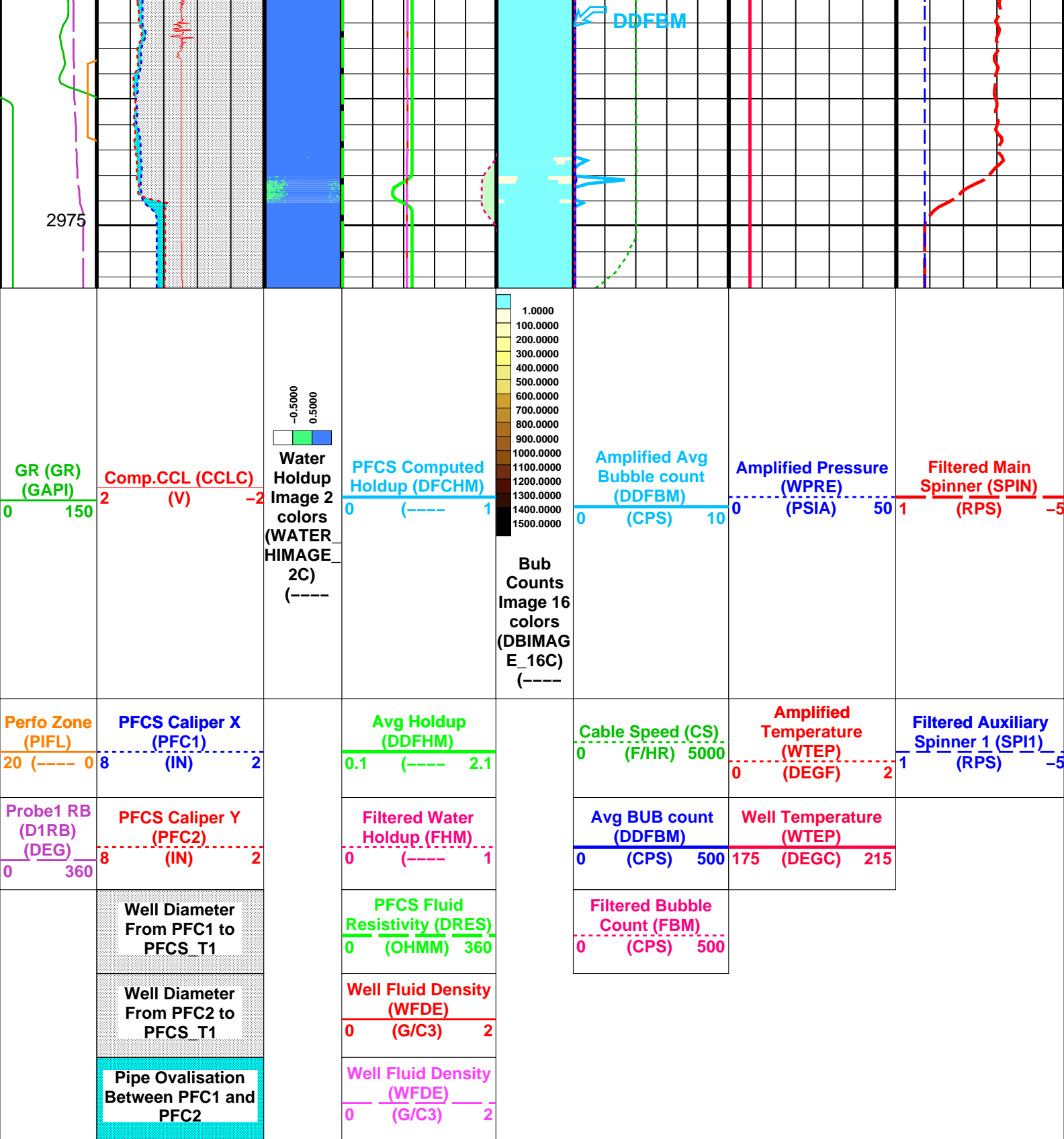
Input DLIS Files						
DEFAULT	FCS_ILS_DEFT_GMS_040LUP	FN:39	PRODUCER	20-Dec-2009 12:32	2975.9 M	2866.6 M
Output DLIS Files						
DEFAULT	FCS_ILS_DEFT_GMS_129PUP	FN:6	PRODUCER	21-Dec-2009 17:57	2977.4 M	2868.2 M

PFCS-A	17C0-154	PILS-A	17C0-154
DEFT-C2	17C0-154	PGMC-A/B	17C0-154
PSPT-A/B	17C0-154		

	<div> <div>Pipe Ovalisation Between PFC1 and PFC2</div> <div>Well Diameter From PFC2 to PFCS_T1</div> <div>Well Diameter From PFC1 to PFCS_T1</div> </div>		<div> <div>Well Fluid Density (WFDE) 0 (G/C3) 2</div> <div>Well Fluid Density (WFDE) 0 (G/C3) 2</div> <div>PFCS Fluid Resistivity (DRES) 0 (OHMM) 360</div> </div>		<div> <div>Filtered Bubble Count (FBM) 0 (CPS) 500</div> </div>			
<div> <div>Probe1 RB (D1RB) (DEG) 0 360</div> </div>	<div> <div>PFCS Caliper Y (PFC2) 8 (IN) 2</div> </div>		<div> <div>Filtered Water Holdup (FHM) 0 (----) 1</div> </div>		<div> <div>Avg BUB count (DDFBM) 0 (CPS) 500</div> </div>	<div> <div>Well Temperature (WTEP) 175 (DEGF) 215</div> </div>		
<div> <div>Perfo Zone (PIFL) 20 (----) 0</div> </div>	<div> <div>PFCS Caliper X (PFC1) 8 (IN) 2</div> </div>		<div> <div>Avg Holdup (DDFHM) 0.1 (----) 2.1</div> </div>		<div> <div>Cable Speed (CS) 0 (F/HR) 5000</div> </div>	<div> <div>Amplified Temperature (WTEP) 0 (DEGF) 2</div> </div>	<div> <div>Filtered Auxiliary Spinner 1 (SPI1) 1 (RPS) -5</div> </div>	
				<div> <div>1.0000</div> <div>100.0000</div> <div>200.0000</div> </div>				







OP System Version: 17C0-154

PFCS-A	17C0-154	PILS-A	17C0-154
DEFT-C2	17C0-154	PGMC-A/B	17C0-154
PSPT-A/B	17C0-154		

Parameters

DLIS Name	Description	Value
-----------	-------------	-------

PFCS-A: PSP Flow and caliper Tool		
-----------------------------------	--	--

AMOD	Spinner Filter Averaging Mode	LINEAR_AVERAGE	
CSID	Casing Size I.D.	4	IN
DDRC	Dual DEFT DELTA RB COMPUTATION	D1RB2-D1RB	
DDRS	Dual DEFT RB Source	D1RB	
DFBD	DEFT Blank Disallowed Probes	NO	
DFFI	DEFT Flip Image	NO	
DFII	DEFT Image Interpolation	YES	
DFIRS	DEFT Image Rotation Selection	TOP_MIDDLE	
DFPP	Probes Arm Position	C	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
PFGC	PFCS Geometrical coefficient	1200	
PFRE1	Downhole Resistor Probe 1	3000	OHMS
PFRE2	Downhole Resistor Probe 2	3000	OHMS
PFRE3	Downhole Resistor Probe 3	3000	OHMS
PFRE4	Downhole Resistor Probe 4	7000	OHMS
SDCF	Spinner Depth Constant Filter	6	
SPI1	Auxiliary Spinner 1 Flowmeter Sonde	PILS-A	
SPIN	Main Spinner Flowmeter Sonde	PFCS-A_3.5	
PILS-A: PSP In Line Spinner Flowmeter			
AMOD	Spinner Filter Averaging Mode	LINEAR_AVERAGE	
SDCF	Spinner Depth Constant Filter	6	
SPI1	Auxiliary Spinner 1 Flowmeter Sonde	PILS-A	
SPIN	Main Spinner Flowmeter Sonde	PFCS-A_3.5	
DEFT-C2: DEFT_C Tool			
CSID	Casing Size I.D.	4	IN
DDRC	Dual DEFT DELTA RB COMPUTATION	D1RB2-D1RB	
DDRS	Dual DEFT RB Source	D1RB	
DFBD	DEFT Blank Disallowed Probes	NO	
DFFI	DEFT Flip Image	NO	
DFII	DEFT Image Interpolation	YES	
DFIRS	DEFT Image Rotation Selection	TOP_MIDDLE	
DFPP2	Probes Arm Position (2nd tool)	D	
PFGC	PFCS Geometrical coefficient	1200	
PGMC-A/B: PSP Gradiomanometer Measurement Module			
CSID	Casing Size I.D.	4	IN
PDSH	Gradio Correction Density Shift	0	G/C3
PSPT-A/B: Production Services Logging Platform			
CSID	Casing Size I.D.	4	IN
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
BORDYN: BorDyn (Well Test Validation)			
CSID	Casing Size I.D.	4	IN
System and Miscellaneous			
CSIZ	Current Casing Size	7.000	IN
DO	Depth Offset for Playback	1.5	M
PP	Playback Processing	NORMAL	

Input DLIS Files

DEFAULT	FCS_ILS_DEFT_GMS_040LUP	FN:39	PRODUCER	20-Dec-2009 12:32	2975.9 M	2866.6 M
---------	-------------------------	-------	----------	-------------------	----------	----------

Output DLIS Files

DEFAULT	FCS_ILS_DEFT_GMS_129PUP	FN:6	PRODUCER	21-Dec-2009 17:57
---------	-------------------------	------	----------	-------------------

Schlumberger

**PLT Flowing down log @ 1970ft/hr
2880 – 2973m MDKB**

MAXIS Field Log

Input DLIS Files

DEFAULT	Flip_FCS_ILS_DEFT_036LUP		PRODUCER	21-Dec-2009 15:49
---------	--------------------------	--	----------	-------------------

Output DLIS Files

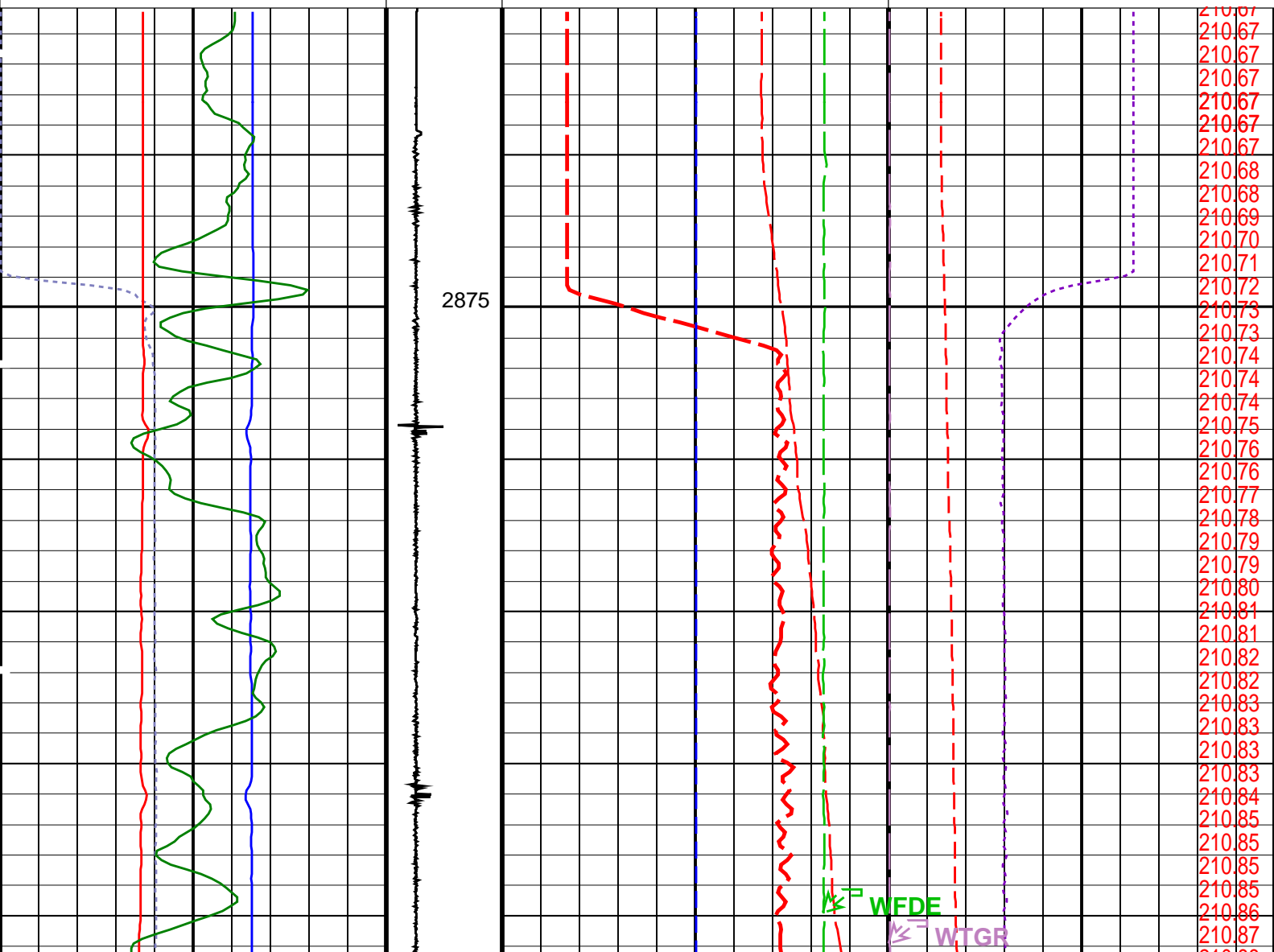
DEFAULT	FCS_ILS_DEFT_GMS_127PUP	FN:4	PRODUCER	21-Dec-2009 17:45	2975.2 M	2865.1 M
---------	-------------------------	------	----------	-------------------	----------	----------

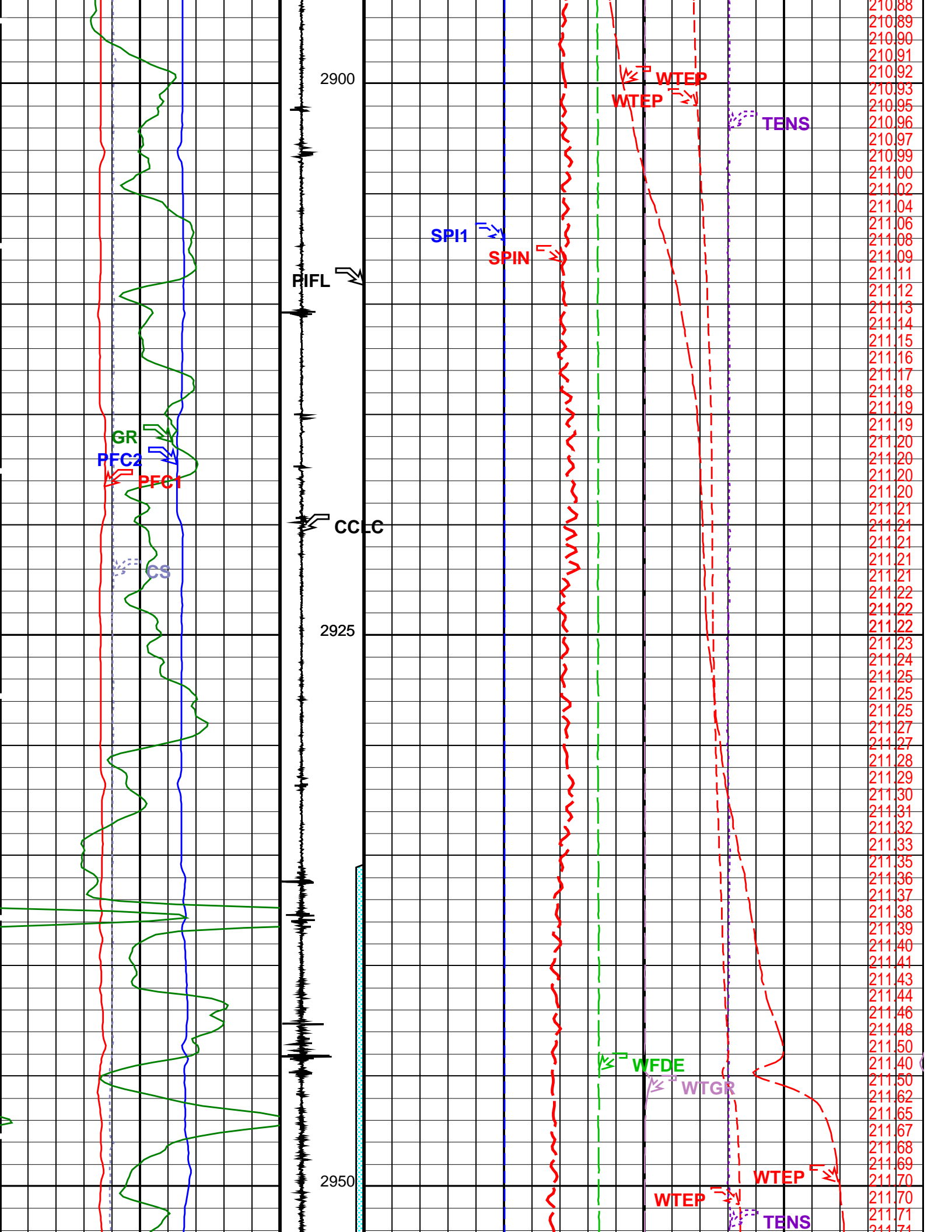
PFCS-A	17C0-154	PILS-A	17C0-154
DEFT-C2	17C0-154	PGMC-A/B	17C0-154
PSPT-A/B	17C0-154		

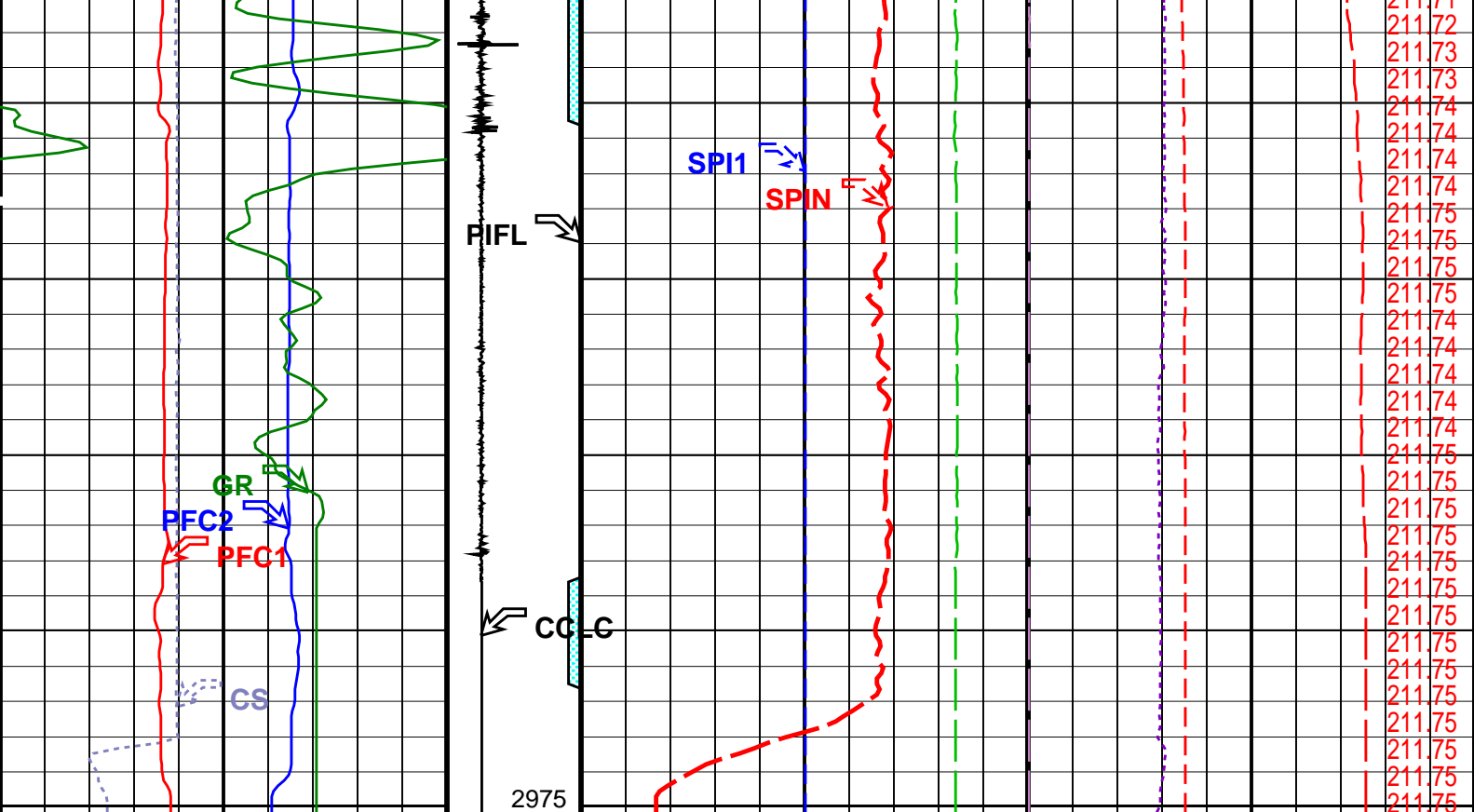
PIP SUMMARY

Time Mark Every 60 S

		Well Temperature (WTEP) (DEGF)	
		Well Fluid Density (WFDE) (G/C3)	
		Well Temperature (WTEP) (DEGF)	
		Well Temperature (WTEP) (DEGF)	
Gamma Ray (GR) (GAPI)	0 150	Filtered Auxiliary Spinner 1 (SPI1) (RPS)	-5 5
PFCS Y Caliper (PFC2) (IN)	0 10	Well Temperature Gradient (WTGR) (DC/M)	0 10
PFCS X Caliper (PFC1) (IN)	10 0	Computed CCL (CCLC) (V)	1 -3
Cable Speed (CS) (F/HR)	0 5000	Filtered Main Spinner (SPIN) (RPS)	-1 5
		Tension (TENS) (LBF)	







Cable Speed (CS) (F/HR)		0	5000
PFCS X Caliper (PFC1) (IN)		10	0
PFCS Y Caliper (PFC2) (IN)		0	10
Gamma Ray (GR) (GAPI)		0	150
Computed CCL (CCLC) (V)		1	-3
Filtered Main Spinner (SPIN) (RPS)		-1	5
Filtered Auxiliary Spinner 1 (SPI1) (RPS)		-5	5
Tension (TENS) (LBF)		0	2500
Well Temperature Gradient (WTGR) (DC/M)		0	10
Well Temperature (WTEP) (DEGF)		205	215
Well Temperature (WTEP) (DEGF)		0	2
Well Fluid Density (WFDE) (G/C3)		0	2
Well Temperature (WTEP) (DEGF)			

Time Mark Every 60 S

Format: PSP_1 Vertical Scale: 1:200 Graphics File Created: 21-Dec-2009 17:45

OP System Version: 17C0-154			
PFCS-A	17C0-154	PILS-A	17C0-154
DEFT-C2	17C0-154	PGMC-A/B	17C0-154
PSPT-A/B	17C0-154		

Parameters		
DLIS Name	Description	Value
PFCS-A	PSP Flow and caliper Tool	
AMOD	Spinner Filter Averaging Mode	LINEAR_AVERAGE
GDEV	Average Angular Deviation of Borehole from Normal	0 DEG

GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
SDCF	Spinner Depth Constant Filter	6	
SPI1	Auxiliary Spinner 1 Flowmeter Sonde	PILS-A	
SPIN	Main Spinner Flowmeter Sonde	PFCS-A_3.5	
PILS-A: PSP In Line	Spinner Flowmeter		
AMOD	Spinner Filter Averaging Mode	LINEAR_AVERAGE	
SDCF	Spinner Depth Constant Filter	6	
SPI1	Auxiliary Spinner 1 Flowmeter Sonde	PILS-A	
SPIN	Main Spinner Flowmeter Sonde	PFCS-A_3.5	
PGMC-A/B: PSP Gradiomanometer Measurement Module			
PDSH	Gradio Correction Density Shift	0	G/C3
PSPT-A/B: Production Services Logging Platform			
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
System and Miscellaneous			
DO	Depth Offset for Playback	-0.7	M
PP	Playback Processing	NORMAL	

Input DLIS Files

DEFAULT Flip_FCS_ILS_DEFT_036LUP PRODUCER 21-Dec-2009 15:49

Output DLIS Files

DEFAULT FCS_ILS_DEFT_GMS_127PUP FN:4 PRODUCER 21-Dec-2009 17:45

Schlumberger

**PLT Flowing up log @ 980ft/hr
2880 – 2973m MDKB**

MAXIS Field Log

Company: Esso Australia Pty Ltd.

Well: A-1L

Input DLIS Files

FCS_ILS_DEFT_GMS_038LUP FN:37 20-Dec-2009 13:31 2974.2 M 2865.9 M

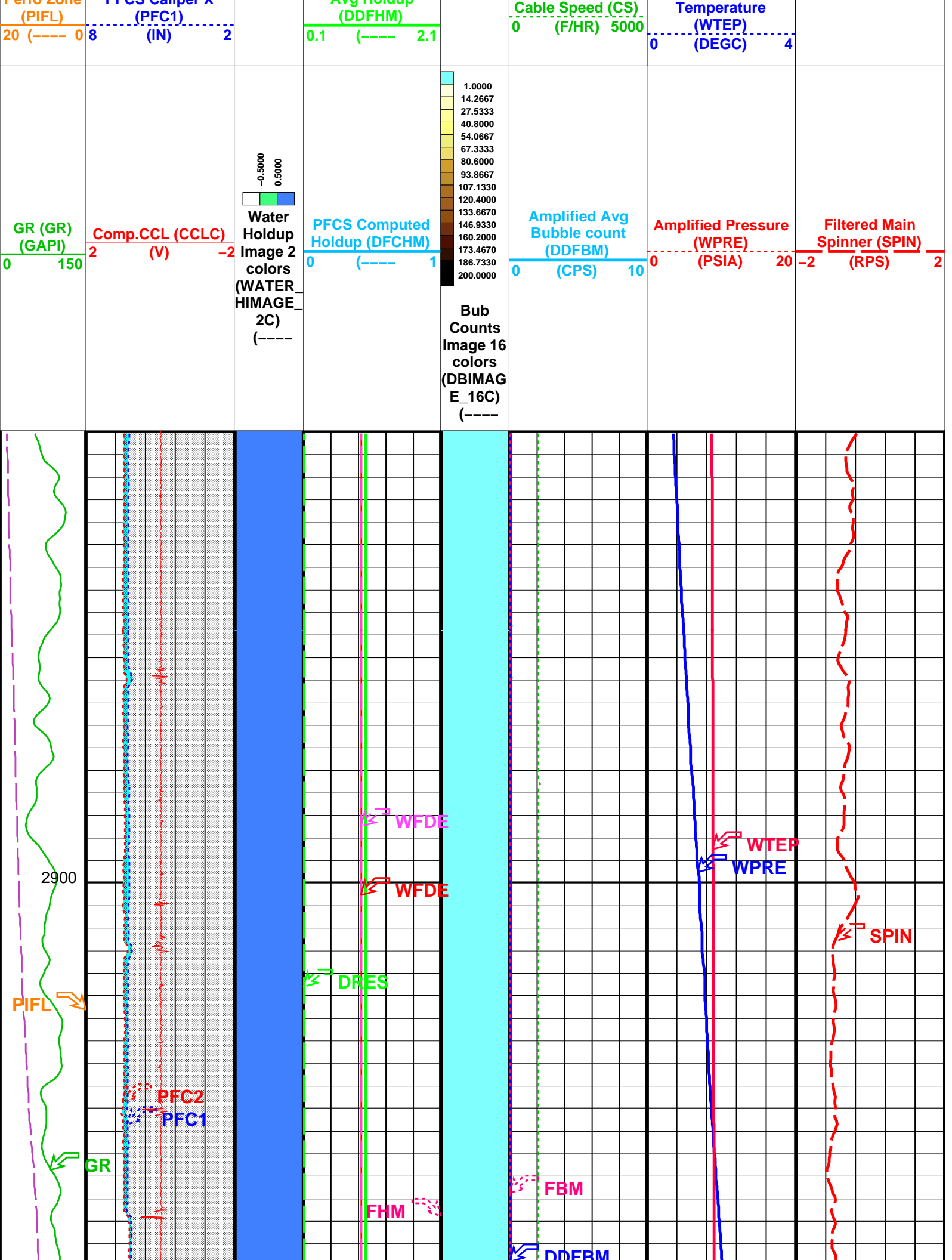
Output DLIS Files

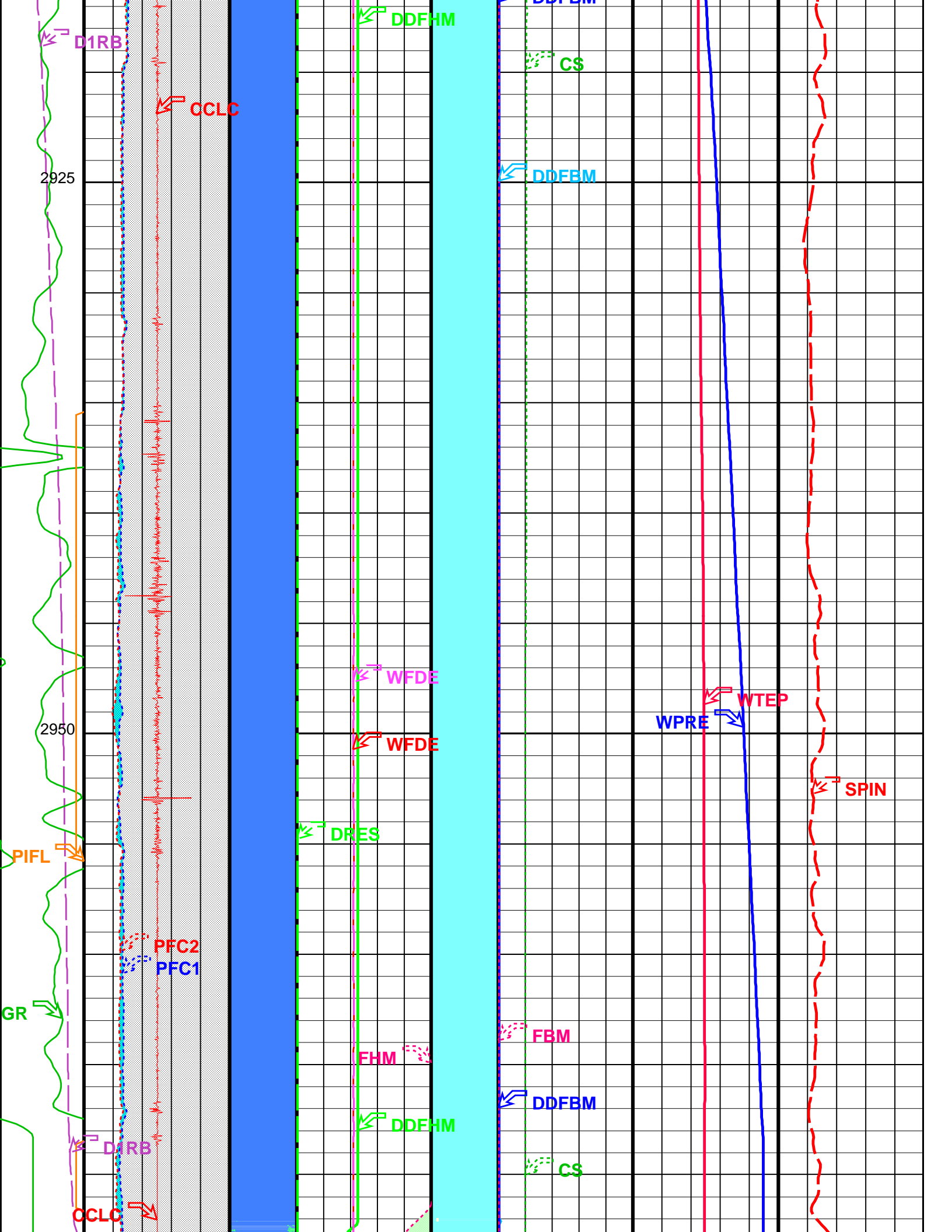
DEFAULT FCS_ILS_DEFT_GMS_035PUP FN:32 PRODUCER 20-Dec-2009 15:13 2975.5 M 2879.9 M

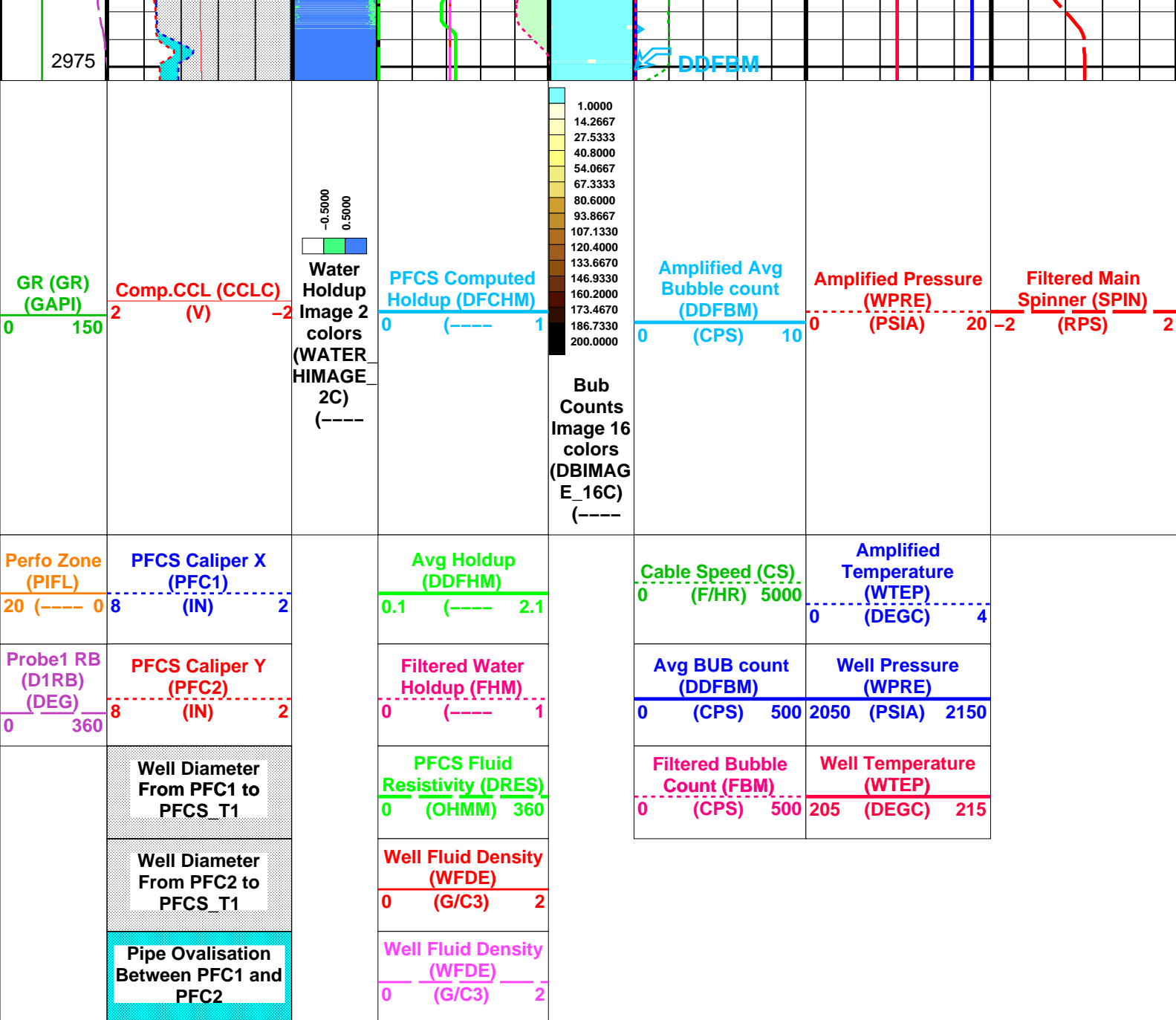
OP System Version: 17C0-154

PFCS-A	17C0-154	PILS-A	17C0-154
DEFT-C2	17C0-154	PGMC-A/B	17C0-154
PSPT-A/B	17C0-154		

	Pipe Ovalisation Between PFC1 and PFC2	Well Fluid Density (WFDE) 0 (G/C3) 2		
	Well Diameter From PFC2 to PFCS_T1	Well Fluid Density (WFDE) 0 (G/C3) 2		
	Well Diameter From PFC1 to PFCS_T1	PFCS Fluid Resistivity (DRES) 0 (OHMM) 360	Filtered Bubble Count (FBM) 0 (CPS) 500	Well Temperature (WTEP) 205 (DEGC) 215
Probe1 RB (D1RB) (DEG)	PFCS Caliper Y (PFC2) 8 (IN) 2	Filtered Water Holdup (FHM) 0 (----) 1	Avg BUB count (DDFBM) 0 (CPS) 500	Well Pressure (WPRE) 2050 (PSIA) 2150
Perfo Zone	PFCS Caliper X	Avg Holdup		Amplified







Format: PFCS_Image_DL Vertical Scale: 1:200 Graphics File Created: 20-Dec-2009 15:13

OP System Version: 17C0-154

PFCS-A	17C0-154	PILS-A	17C0-154
DEFT-C2	17C0-154	PGMC-A/B	17C0-154
PSPT-A/B	17C0-154		

Parameters

DLIS Name	Description	Value
PFCS-A: PSP Flow and caliper Tool		
AMOD	Spinner Filter Averaging Mode	LINEAR_AVERAGE
CSID	Casing Size I.D.	4 IN
DDRC	Dual DEFT DELTA RB COMPUTATION	D1RB2-D1RB
DDRS	Dual DEFT RB Source	D1RB
DFBD	DEFT Blank Disallowed Probes	NO
DFFI	DEFT Flip Image	NO
DFII	DEFT Image Interpolation	YES
DFIRS	DEFT Image Rotation Selection	TOP_MIDDLE
DFPP	Probes Arm Position	C
GDEV	Average Angular Deviation of Borehole from Normal	0 DEG
PFGC	PFCS Geometrical coefficient	1200
PFRE1	Downhole Resistor Probe 1	3000 OHMS
PFRE2	Downhole Resistor Probe 2	3000 OHMS

PFRE3	Downhole Resistor Probe 3	3000	OHMS
PFRE4	Downhole Resistor Probe 4	3000	OHMS
SDCF	Spinner Depth Constant Filter	6	
SPIN	Main Spinner Flowmeter Sonde	PFCS-A_3.5	
PILS-A: PSP In Line	Spinner Flowmeter		
AMOD	Spinner Filter Averaging Mode	LINEAR_AVERAGE	
SDCF	Spinner Depth Constant Filter	6	
SPIN	Main Spinner Flowmeter Sonde	PFCS-A_3.5	
DEFT-C2: DEFT_C Tool			
CSID	Casing Size I.D.	4	IN
DDRC	Dual DEFT DELTA RB COMPUTATION	D1RB2-D1RB	
DDRS	Dual DEFT RB Source	D1RB	
DFBD	DEFT Blank Disallowed Probes	NO	
DFFI	DEFT Flip Image	NO	
DFII	DEFT Image Interpolation	YES	
DFIRS	DEFT Image Rotation Selection	TOP_MIDDLE	
DFPP2	Probes Arm Position (2nd tool)	D	
PFGC	PFCS Geometrical coefficient	1200	
PGMC-A/B: PSP Gradiomanometer Measurement Module			
CSID	Casing Size I.D.	4	IN
PDSH	Gradio Correction Density Shift	0	G/C3
PSPT-A/B: Production Services Logging Platform			
CSID	Casing Size I.D.	4	IN
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
BORDYN: BorDyn (Well Test Validation)			
CSID	Casing Size I.D.	4	IN
System and Miscellaneous			
CSIZ	Current Casing Size	7.000	IN
DO	Depth Offset for Playback	1.2	M
PP	Playback Processing	NORMAL	

Input DLIS Files

FCS_ILS_DEFT_GMS_038LUP	FN:37	20-Dec-2009 13:31	2974.2 M	2865.9 M
-------------------------	-------	-------------------	----------	----------

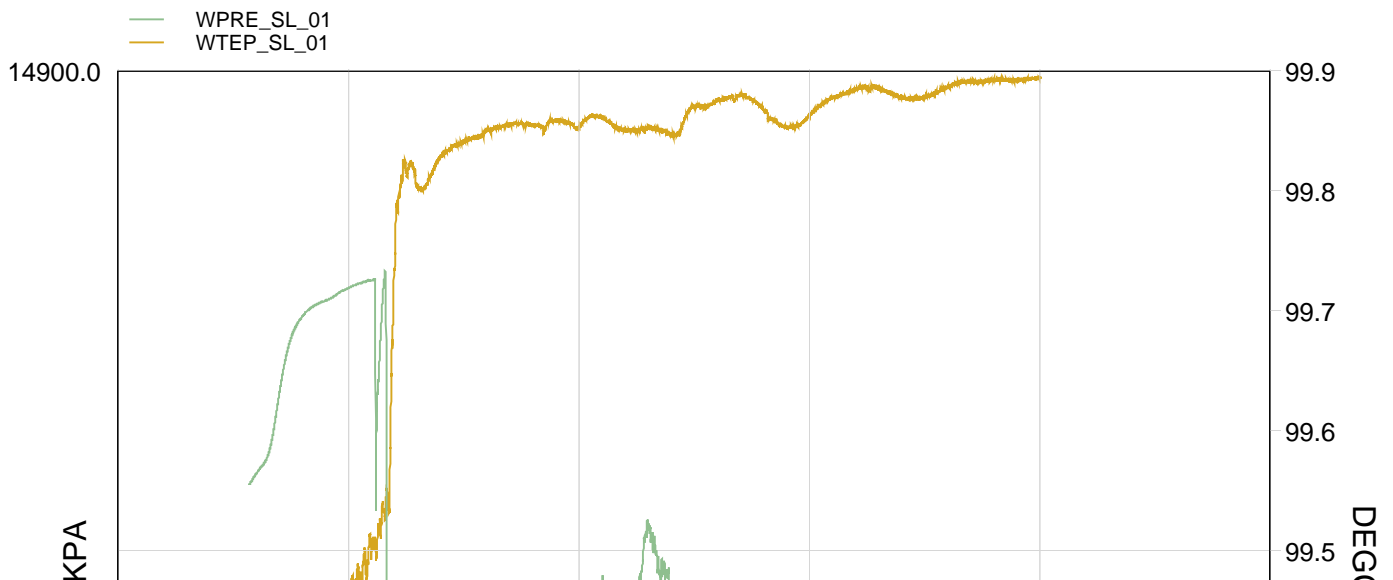
Output DLIS Files

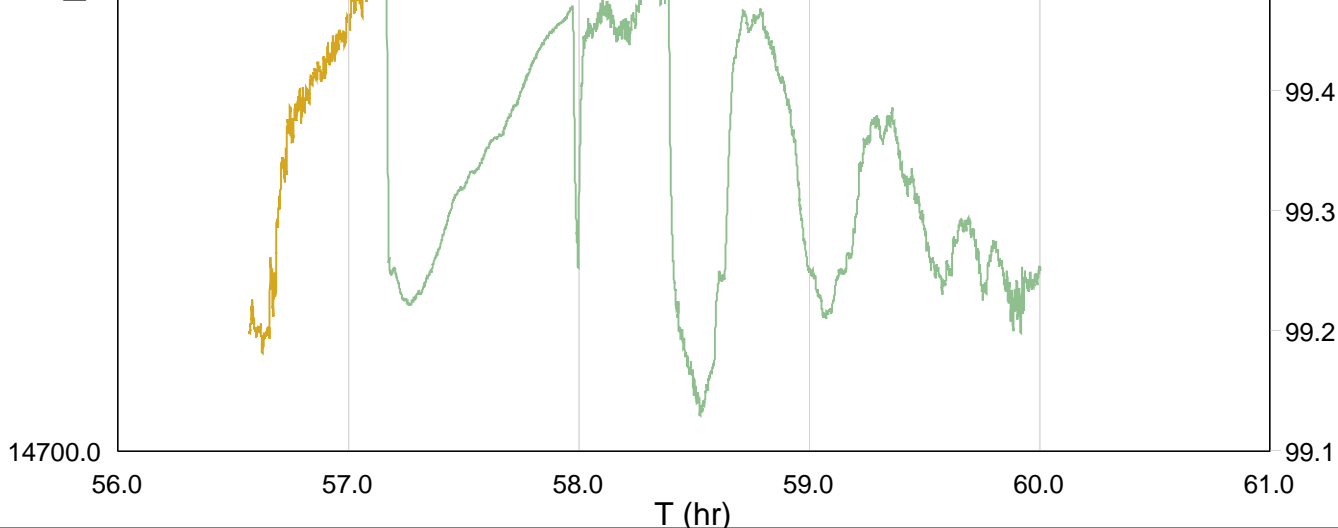
DEFAULT	FCS_ILS_DEFT_GMS_035PUP	FN:32	PRODUCER	20-Dec-2009 15:13
---------	-------------------------	-------	----------	-------------------

Schlumberger

Well flowing record 2973m MDKB

MAXIS Field Log





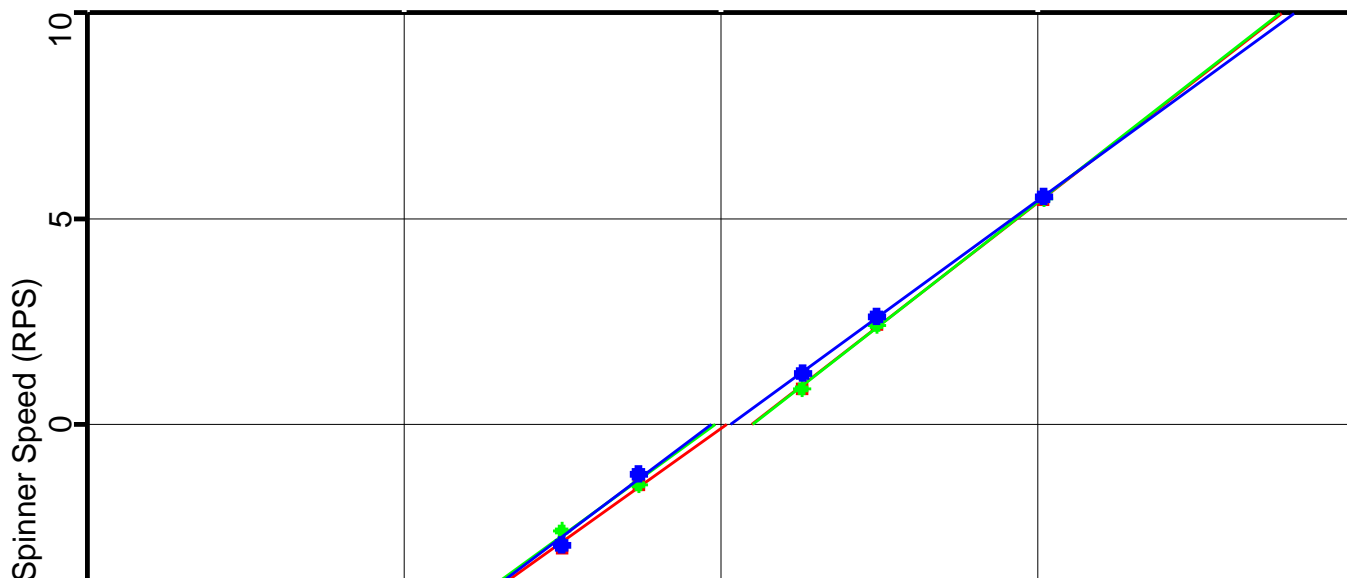
Schlumberger

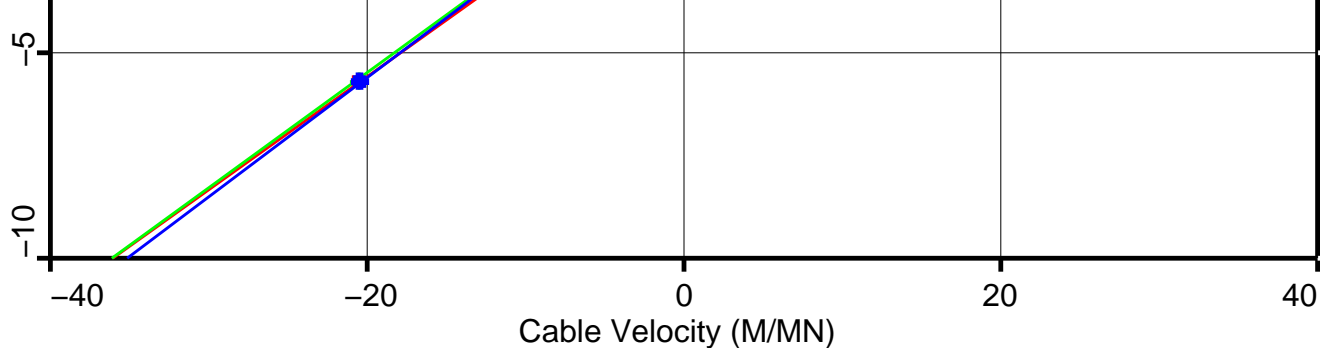
Spinner Calibration

MAXIS Field Log

Production Logging Quicklook Spinner Calibration

	Zone Depth (M)	Fluid Vel. (M/MN)	Positive Spinner			Negative Spinner		
			Slope (RSMM)	Intercept (M/MN)	Correl.	Slope (RSMM)	Intercept (M/MN)	Correl.
■	Zone 1 2889.0 – 2877.0 :	–1.6	0.2992	2	1	0.2745	0.4	0.999
◆	Zone 2 2898.0 – 2890.0 :	–1.7	0.3009	2	1	0.2797	–0.3	0.999
●	Zone 3 2925.0 – 2900.0 :	–0.5	0.281	0.7	1	0.2895	–0.6	0.997





Schlumberger

PLT Static down log @ 1970ft/hr 2880 – 2974m MDKB

MAXIS Field Log

Company: Esso Australia Pty Ltd.

Well: A-1L

Input DLIS Files

DEFAULT Flip_FCS_ILS_DEFT_003LUP PRODUCER 18-Dec-2009 13:26

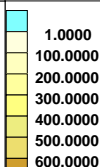
Output DLIS Files

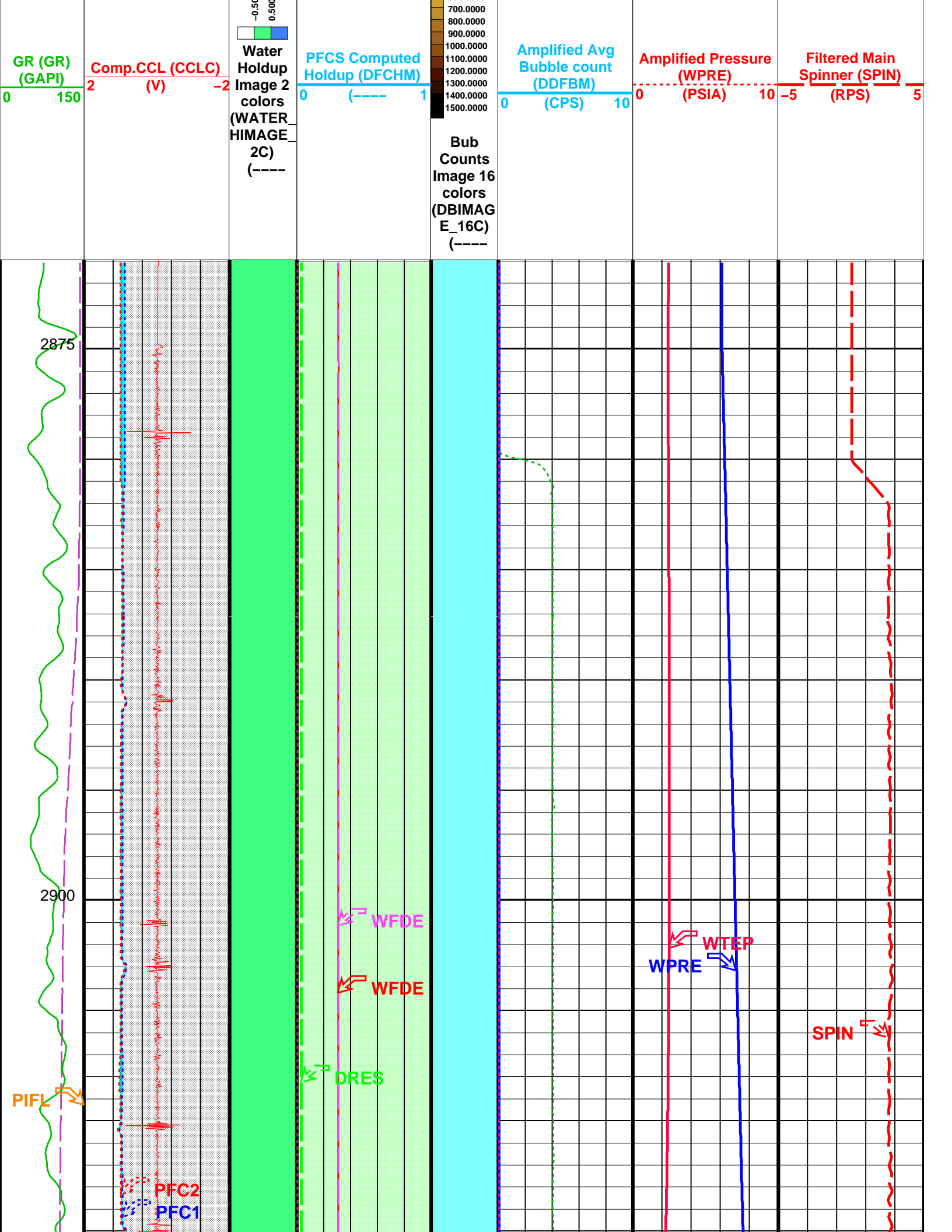
DEFAULT FCS_ILS_DEFT_GMS_009PUP FN:6 PRODUCER 18-Dec-2009 14:06 2977.1 M 2870.9 M

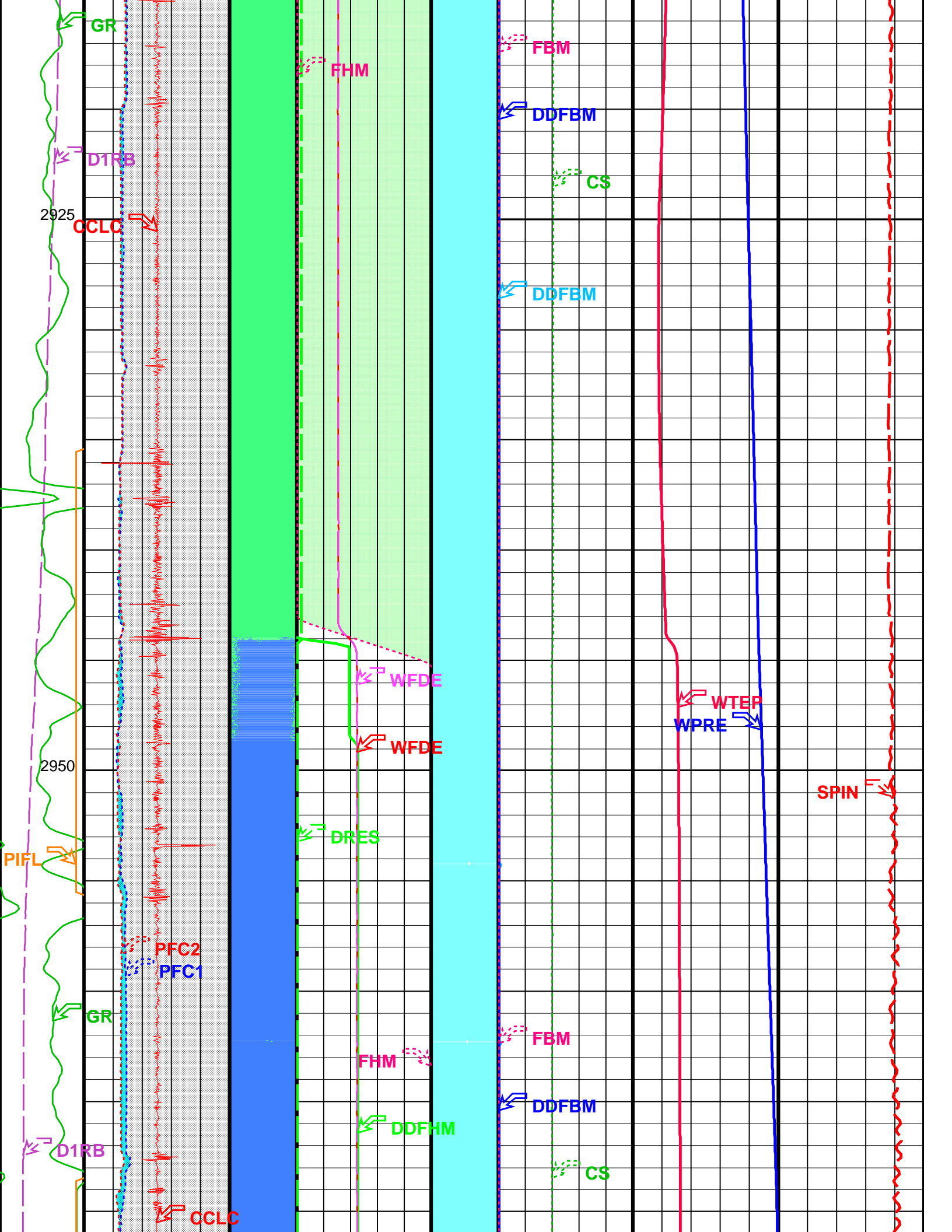
OP System Version: 17C0-154

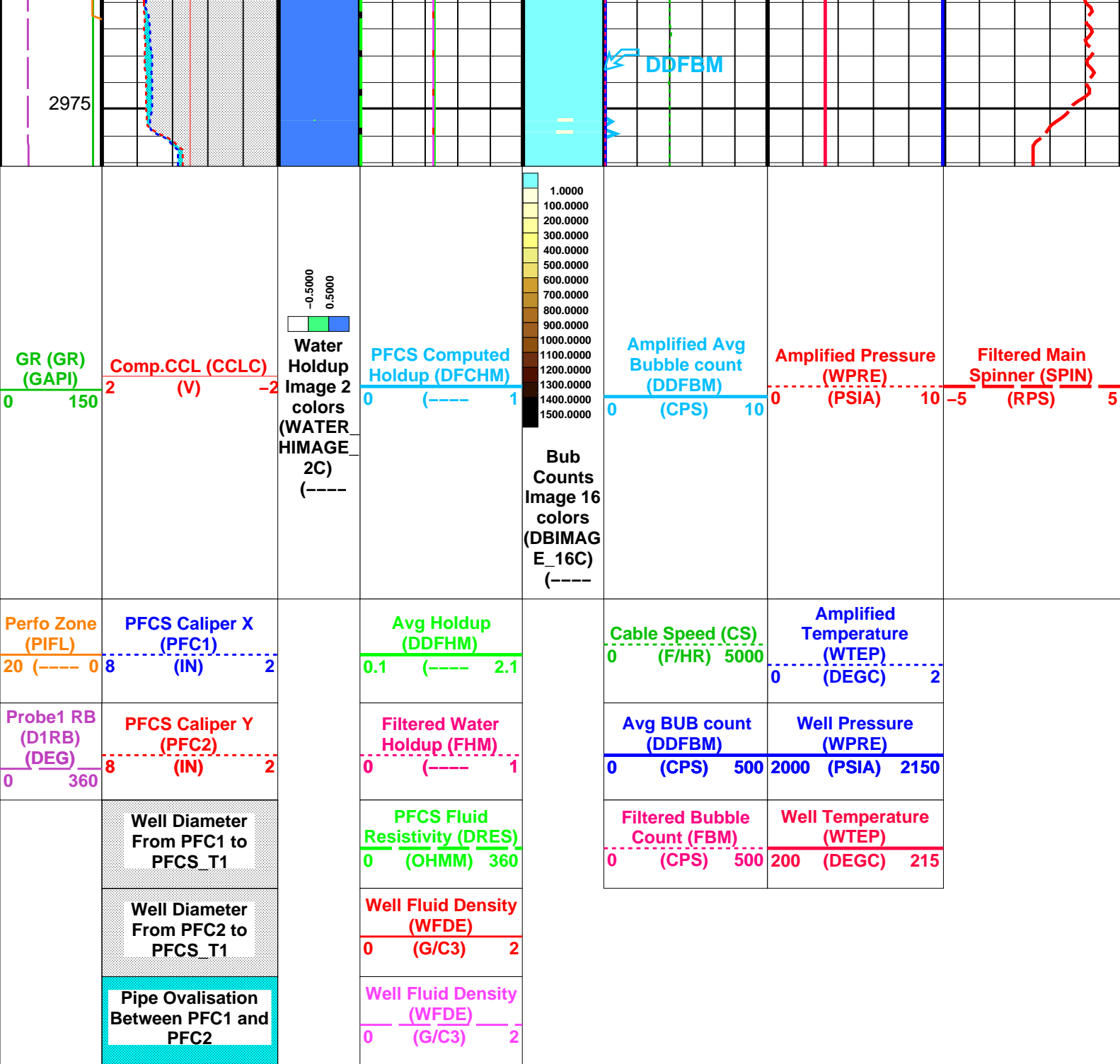
PFCs-A	17C0-154	PILS-A	17C0-154
DEFT-C2	17C0-154	PGMC-A/B	17C0-154
PSPT-A/B	17C0-154		

Pipe Ovalisation Between PFC1 and PFC2		Well Fluid Density (WFDE) 0 (G/C3) 2			
Well Diameter From PFC2 to PFCs_T1		Well Fluid Density (WFDE) 0 (G/C3) 2			
Well Diameter From PFC1 to PFCs_T1		PFCs Fluid Resistivity (DRES) 0 (OHMM) 360		Filtered Bubble Count (FBM) 0 (CPS) 500	Well Temperature (WTEP) 200 (DEGC) 215
Probe1 RB (D1RB) (DEG) 0 360	PFCs Caliper Y (PFC2) (IN) 8 2	Filtered Water Holdup (FHM) 0 (----) 1		Avg BUB count (DDFBM) 0 (CPS) 500	Well Pressure (WPRE) 2000 (PSIA) 2150
Perfo Zone (PIFL) 20 (----) 0	PFCs Caliper X (PFC1) (IN) 8 2	Avg Holdup (DDFHM) 0.1 (----) 2.1		Cable Speed (CS) 0 (F/HR) 5000	Amplified Temperature (WTEP) (DEGC) 0 2









Format: PFCS_Image_DL Vertical Scale: 1:200 Graphics File Created: 18-Dec-2009 14:06

OP System Version: 17C0-154

PFCS-A	17C0-154	PILS-A	17C0-154
DEFT-C2	17C0-154	PGMC-A/B	17C0-154
PSPT-A/B	17C0-154		

Parameters

DLIS Name	Description	Value
PFCS-A:	PSP Flow and caliper Tool	
AMOD	Spinner Filter Averaging Mode	LINEAR_AVERAGE
CSID	Casing Size I.D.	4 IN
DDRC	Dual DEFT DELTA RB COMPUTATION	D1RB2-D1RB
DDRS	Dual DEFT RB Source	D1RB
DFBD	DEFT Blank Disallowed Probes	NO
DFFI	DEFT Flip Image	NO
DFII	DEFT Image Interpolation	YES
DFIRS	DEFT Image Rotation Selection	TOP MIDDLE

DFPP	Probes Arm Position	C	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
PFGC	PFCS Geometrical coefficient	1200	
PFRE1	Downhole Resistor Probe 1	3000	OHMS
PFRE2	Downhole Resistor Probe 2	3000	OHMS
PFRE3	Downhole Resistor Probe 3	3000	OHMS
PFRE4	Downhole Resistor Probe 4	3000	OHMS
SDCF	Spinner Depth Constant Filter	6	
SPIN	Main Spinner Flowmeter Sonde	PFCS-A_3.5	
	PILS-A: PSP In Line Spinner Flowmeter		
AMOD	Spinner Filter Averaging Mode	LINEAR_AVERAGE	
SDCF	Spinner Depth Constant Filter	6	
SPIN	Main Spinner Flowmeter Sonde	PFCS-A_3.5	
	DEFT-C2: DEFT_C Tool		
CSID	Casing Size I.D.	4	IN
DDRC	Dual DEFT DELTA RB COMPUTATION	D1RB2-D1RB	
DDRS	Dual DEFT RB Source	D1RB	
DFBD	DEFT Blank Disallowed Probes	NO	
DFFI	DEFT Flip Image	NO	
DFII	DEFT Image Interpolation	YES	
DFIRS	DEFT Image Rotation Selection	TOP_MIDDLE	
DFPP2	Probes Arm Position (2nd tool)	D	
PFGC	PFCS Geometrical coefficient	1200	
	PGMC-A/B: PSP Gradiomanometer Measurement Module		
CSID	Casing Size I.D.	4	IN
PDSH	Gradio Correction Density Shift	0	G/C3
	PSPT-A/B: Production Services Logging Platform		
CSID	Casing Size I.D.	4	IN
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
	BORDYN: BorDyn (Well Test Validation)		
CSID	Casing Size I.D.	4	IN
	System and Miscellaneous		
CSIZ	Current Casing Size	7.000	IN
DO	Depth Offset for Playback	-0.3	M
PP	Playback Processing	NORMAL	

Input DLIS Files

DEFAULT Flip_FCS_ILS_DEFT_003LUP PRODUCER 18-Dec-2009 13:26

Output DLIS Files

DEFAULT FCS_ILS_DEFT_GMS_009PUP FN:6 PRODUCER 18-Dec-2009 14:06

Schlumberger

**PLT Static down log @ 1970ft/hr
1928 – 2935m MDKB**

MAXIS Field Log

Input DLIS Files

DEFAULT Flip_FCS_ILS_DEFT_002LUP PRODUCER 18-Dec-2009 13:21

Output DLIS Files

DEFAULT FCS_ILS_DEFT_GMS_007PUP FN:4 PRODUCER 18-Dec-2009 13:47 2945.0 M 1927.7 M

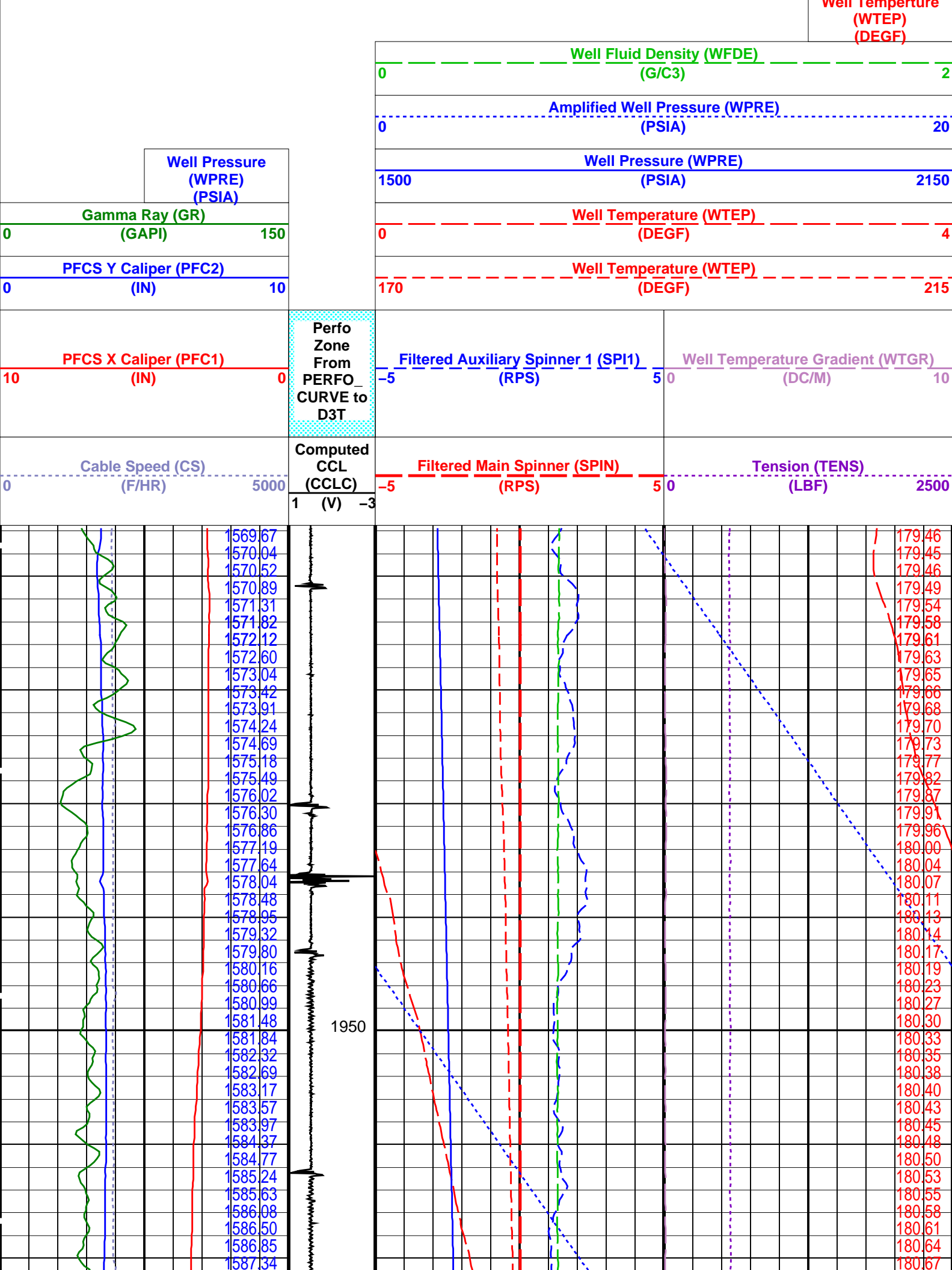
OP System Version: 17C0-154

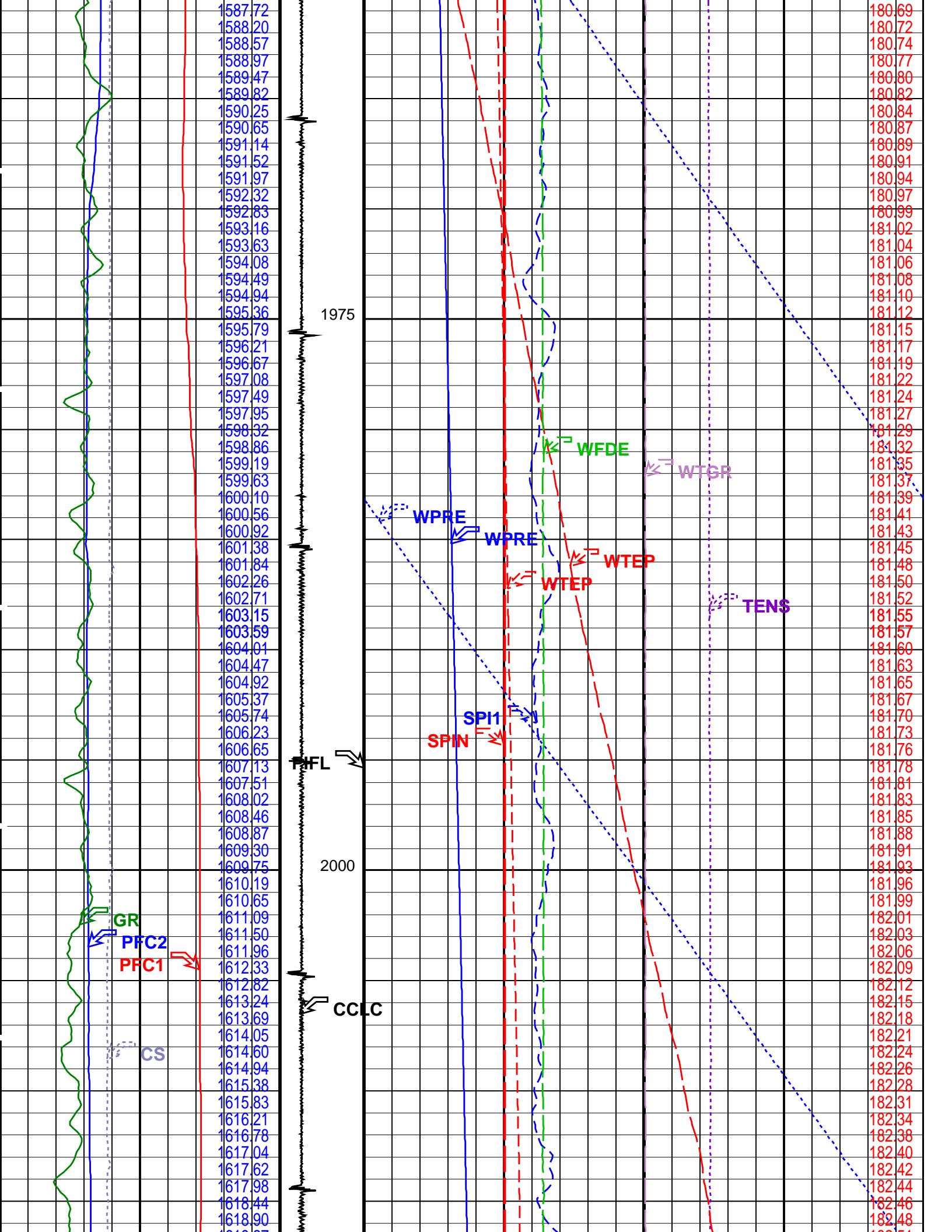
PFCS-A	17C0-154	PILS-A	17C0-154
DEFT-C2	17C0-154	PGMC-A/B	17C0-154
PSPT-A/B	17C0-154		

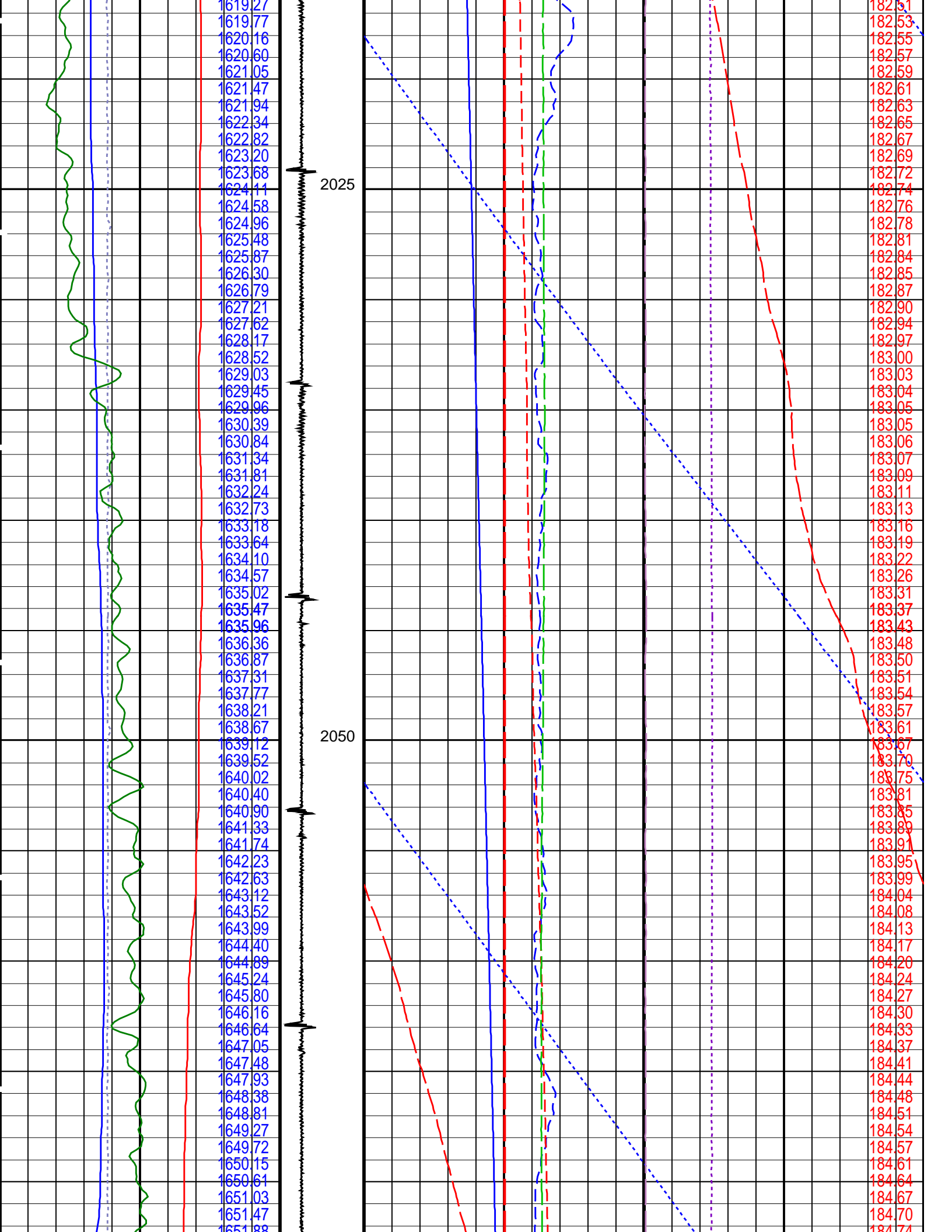
PIP SUMMARY

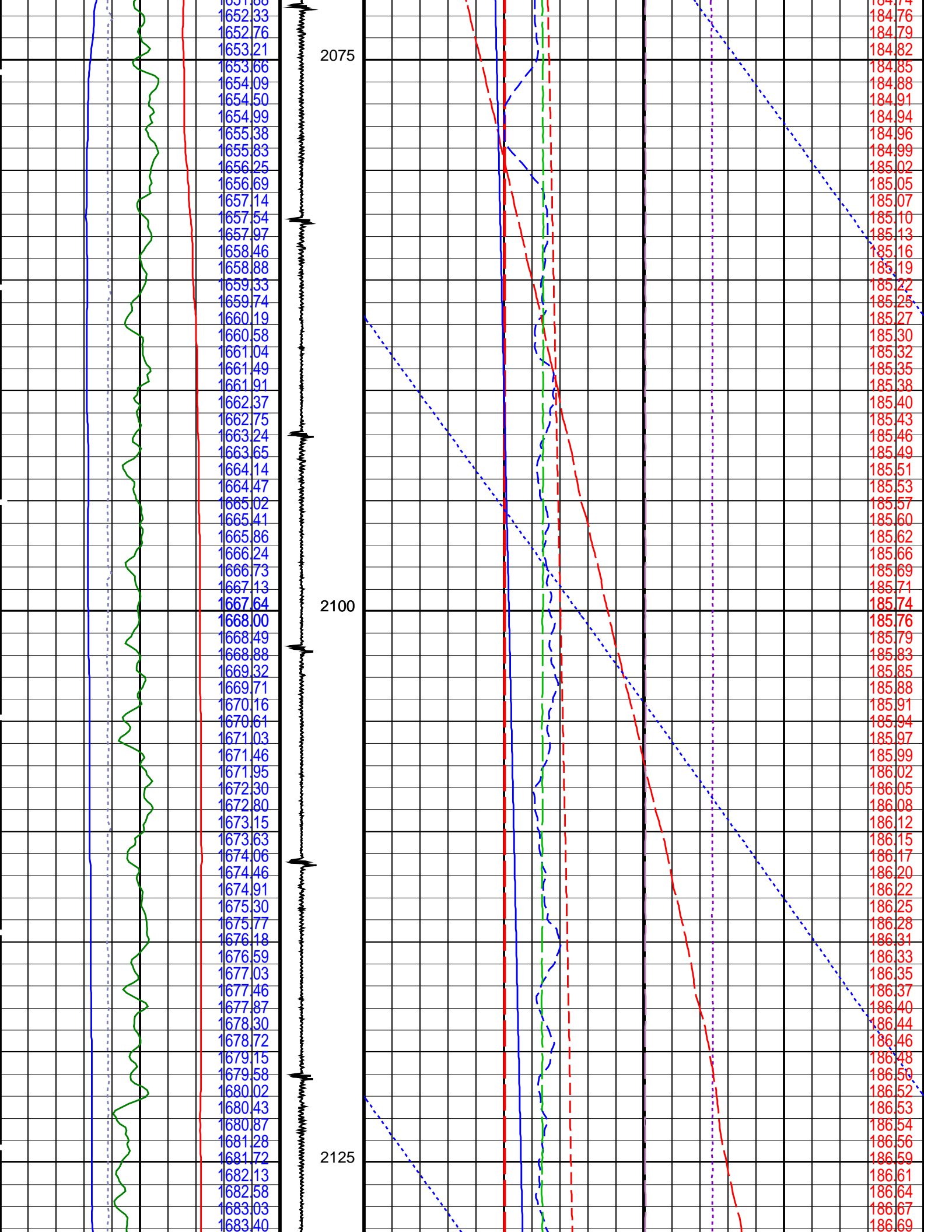
Time Mark Every 60 S

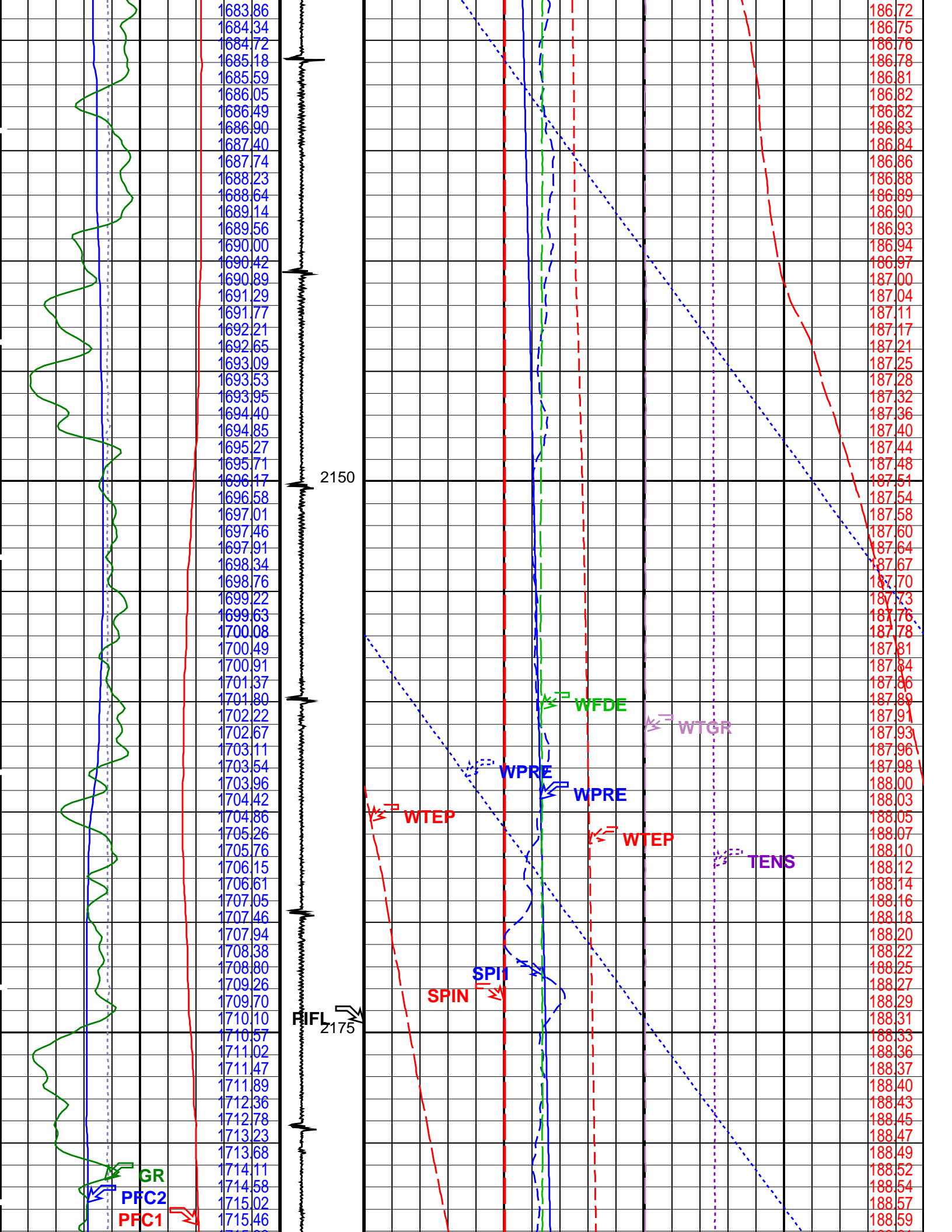
Well Temperature

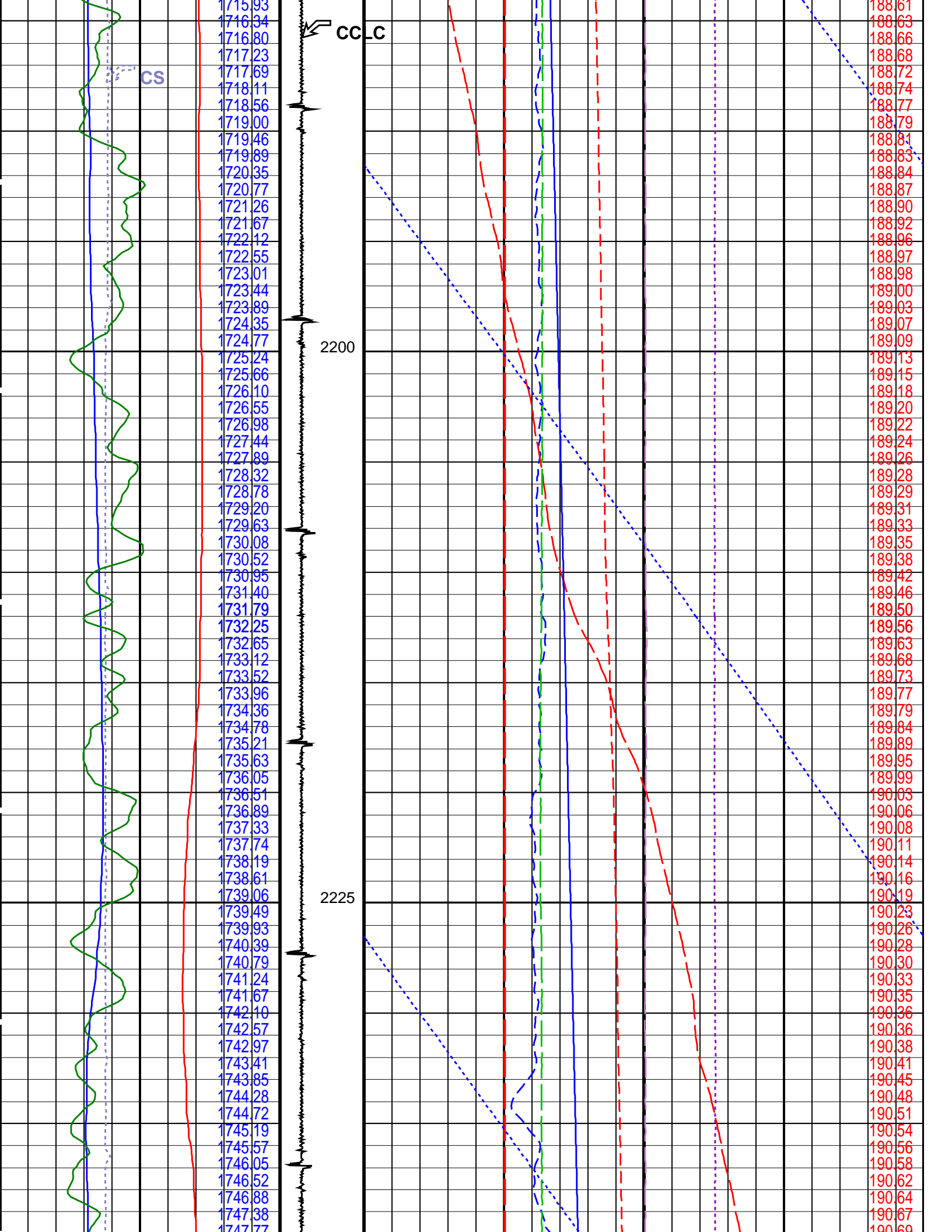


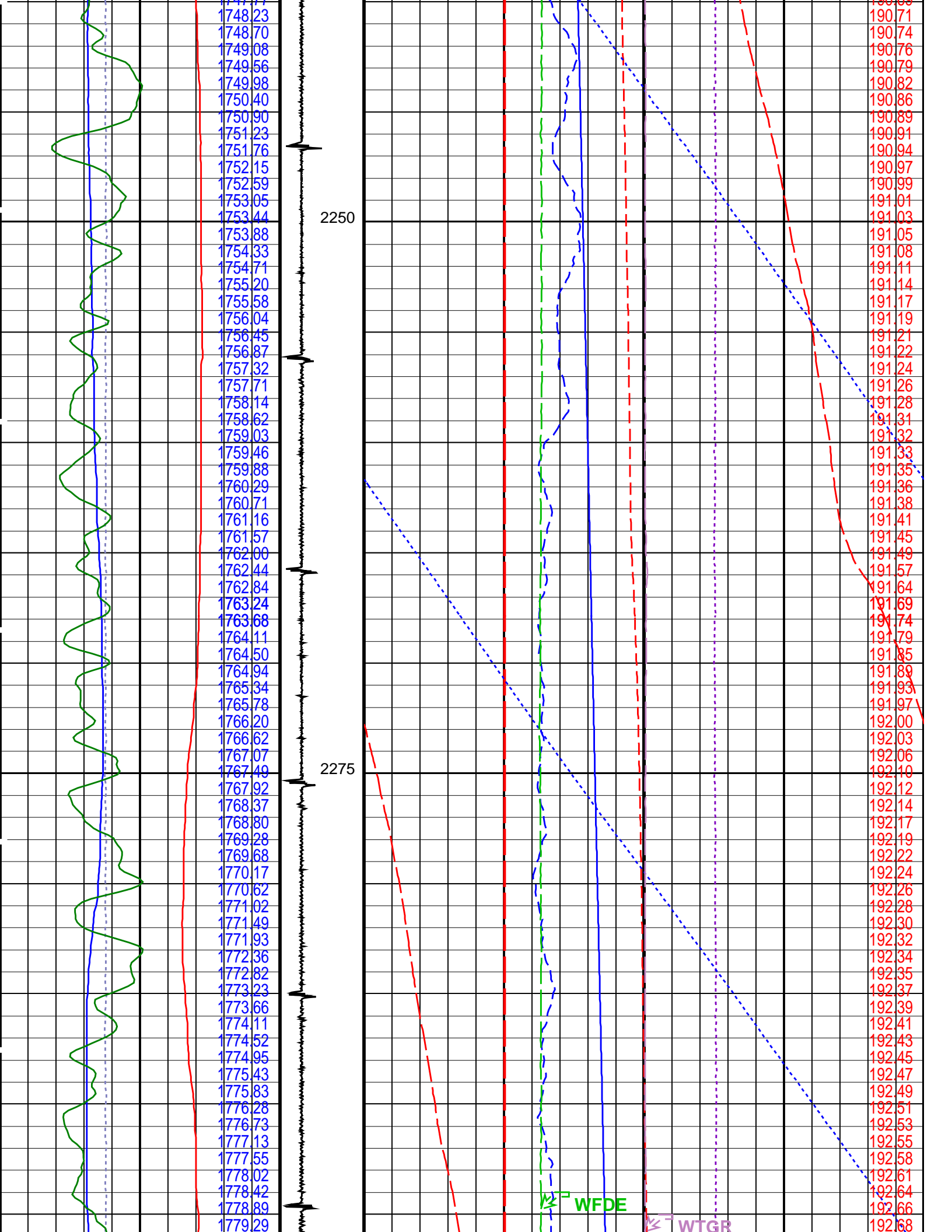


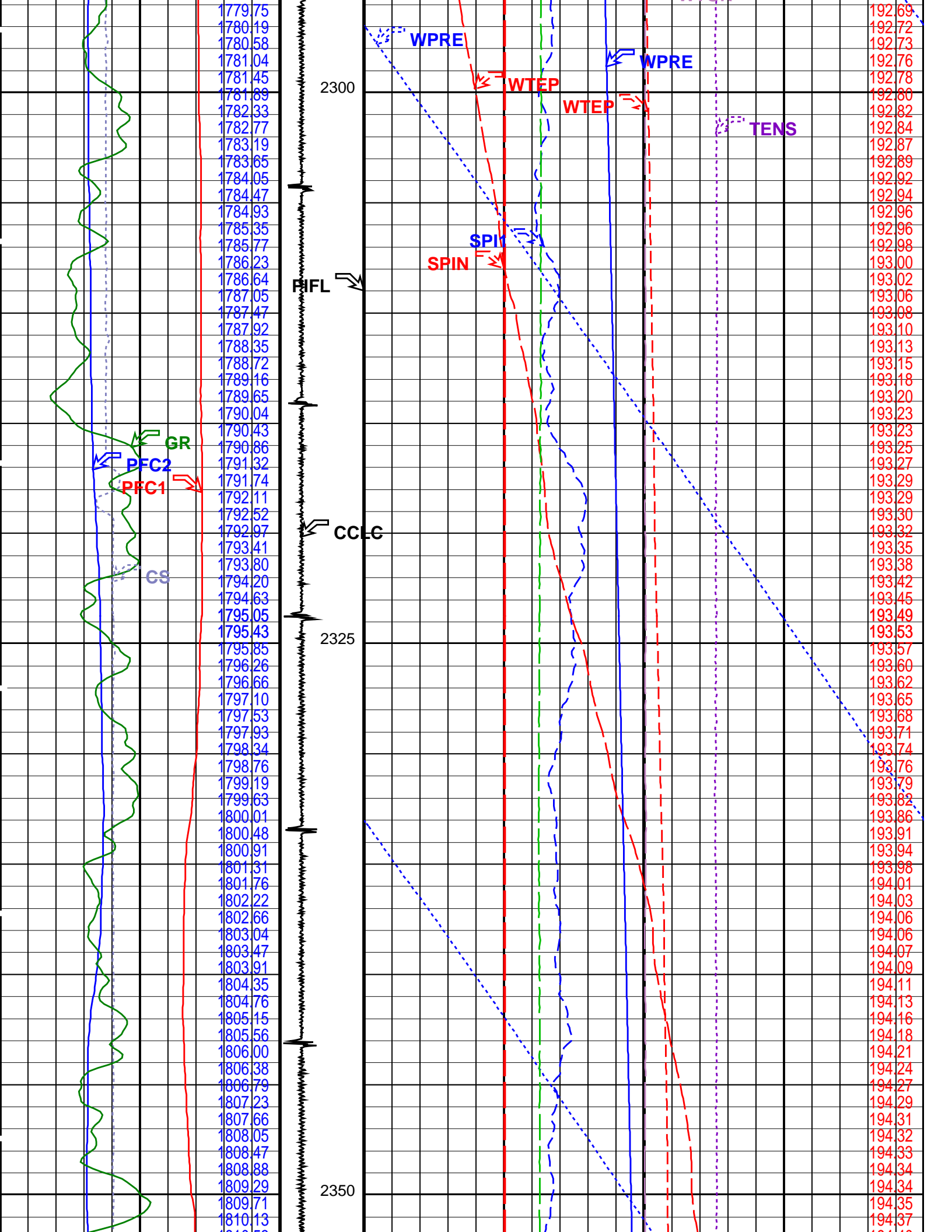


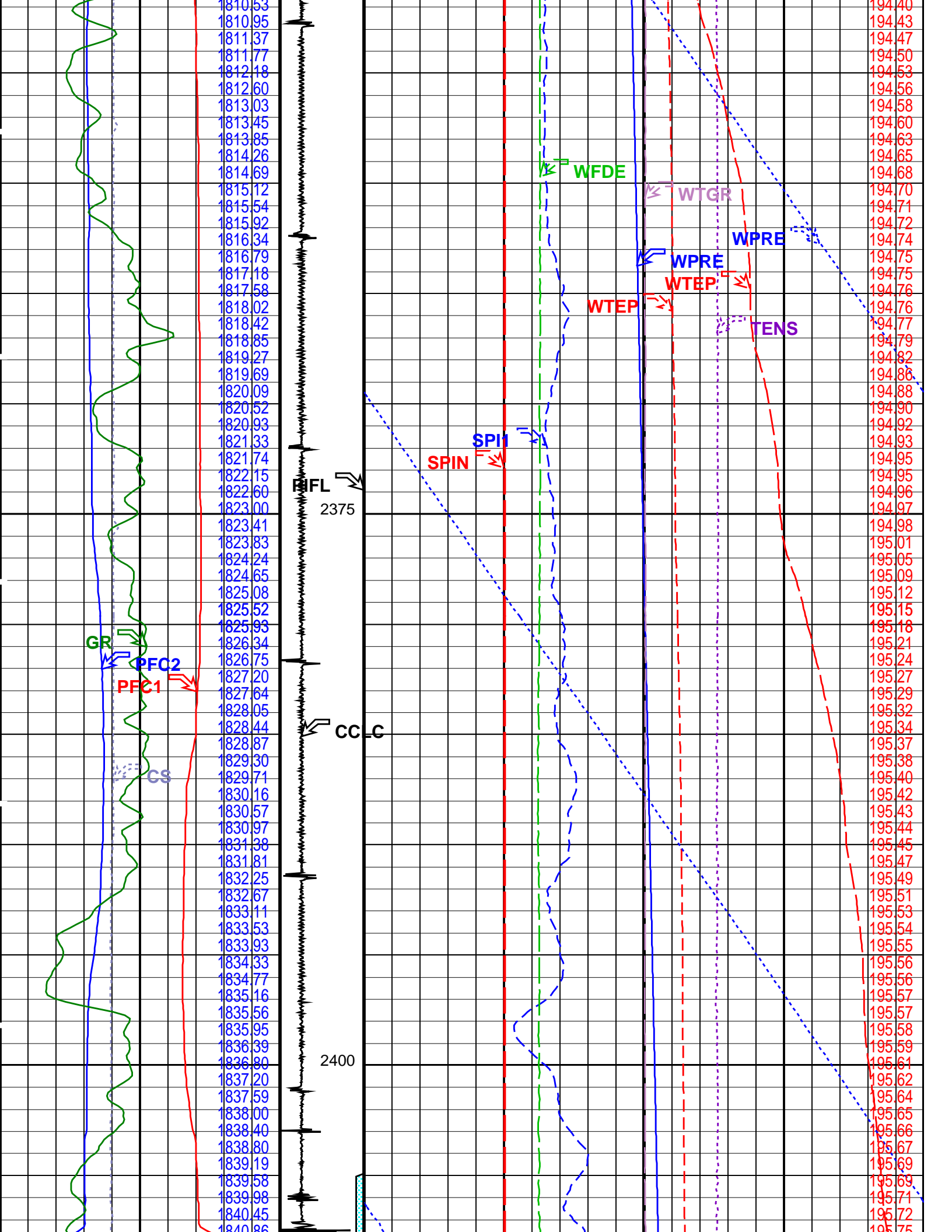


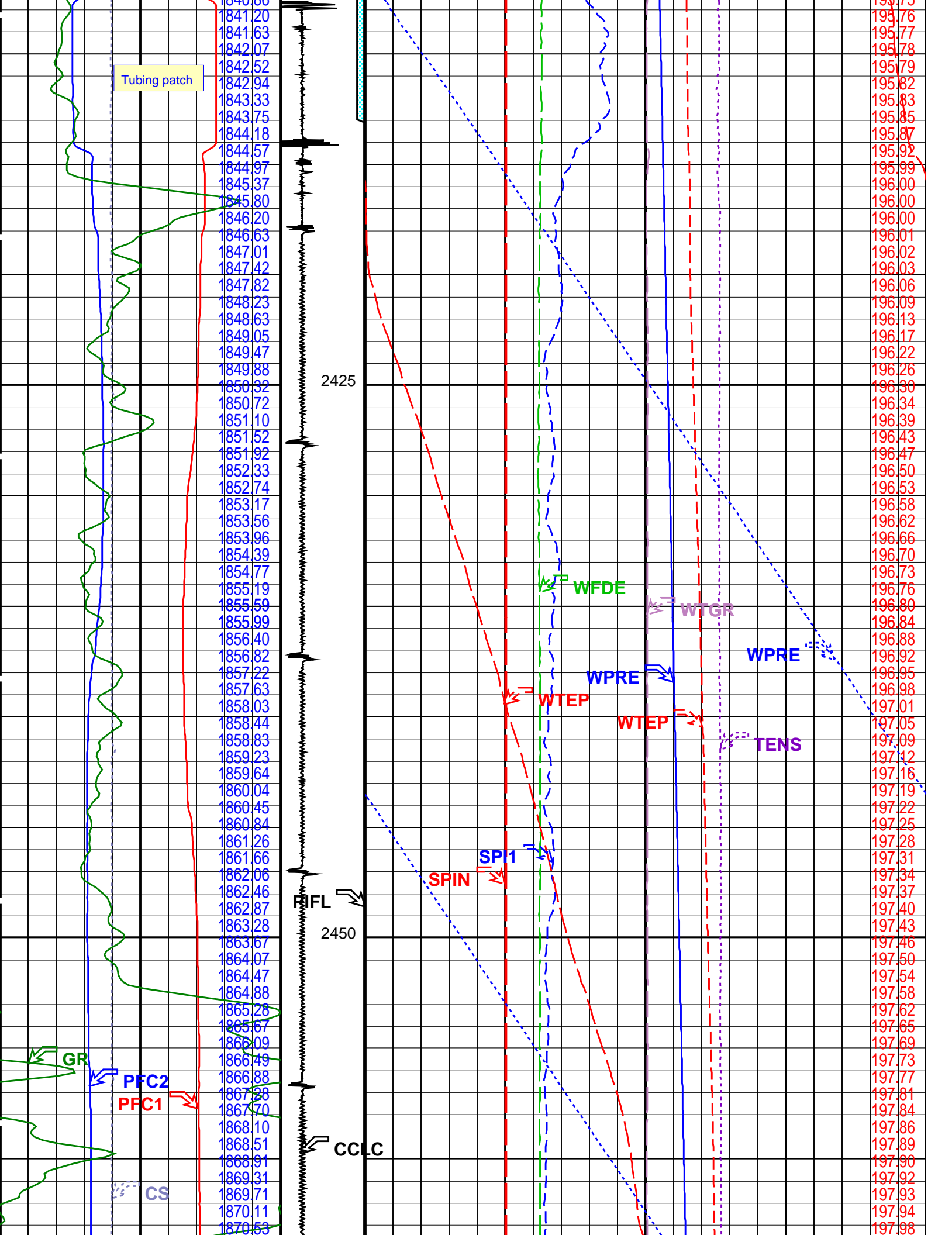


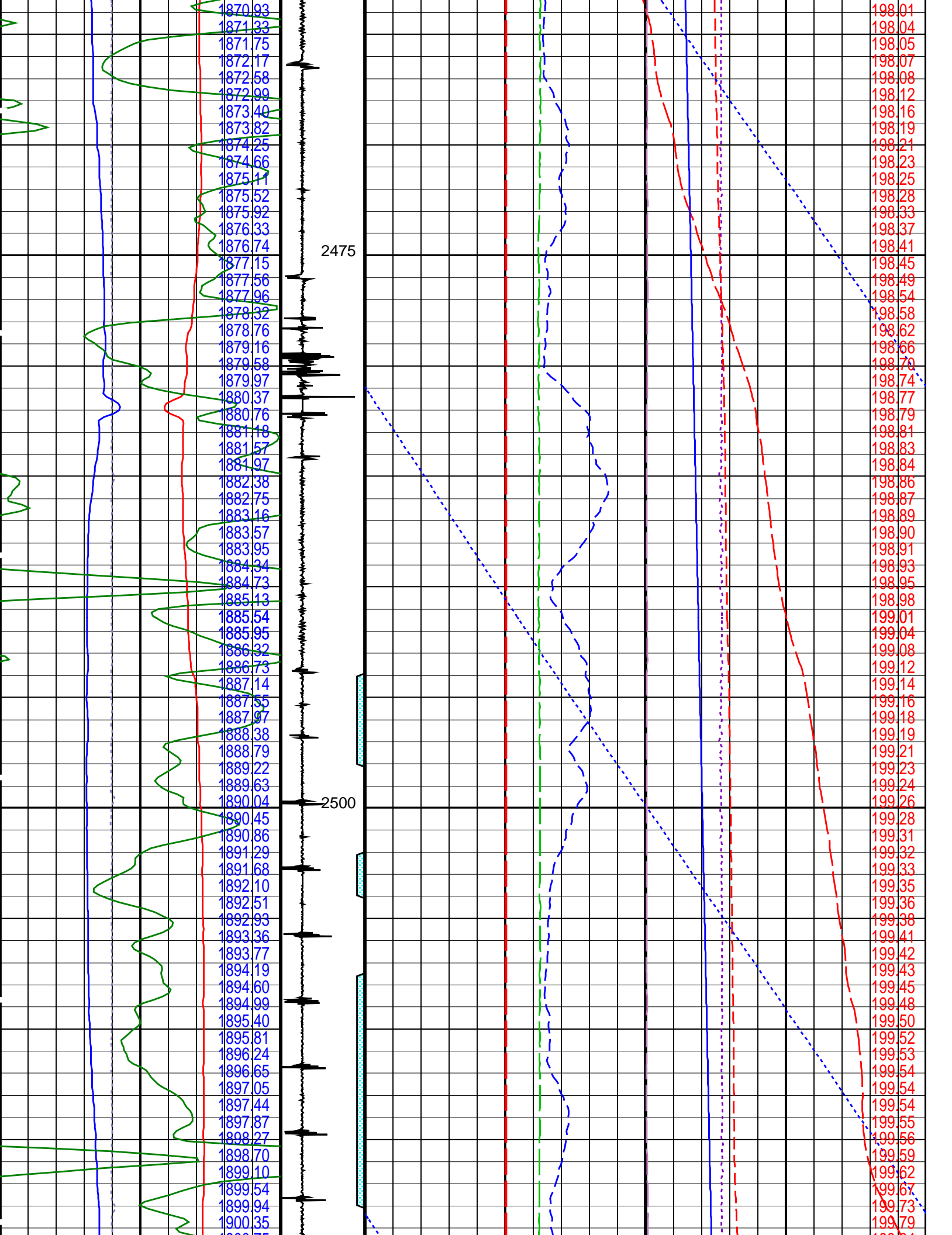


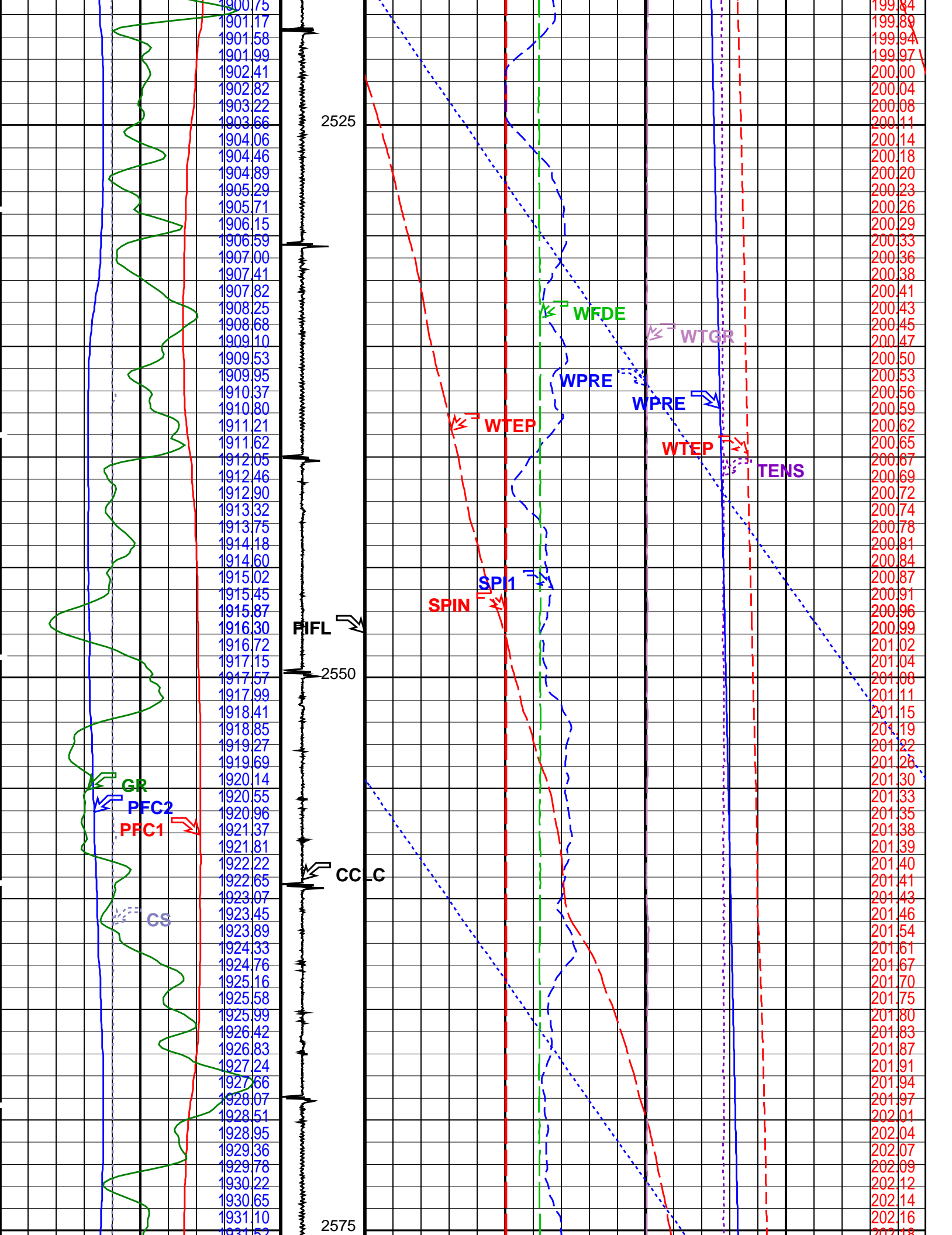


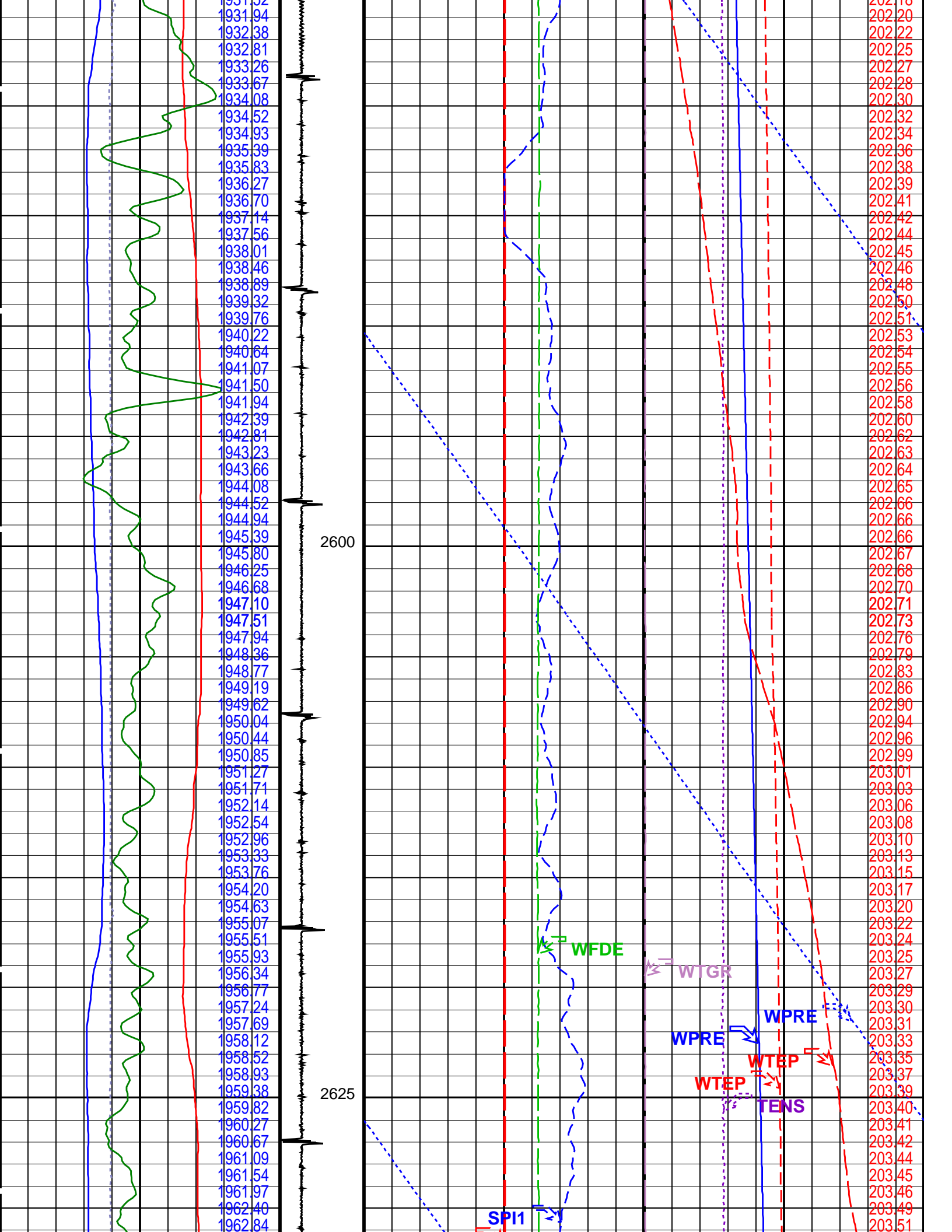


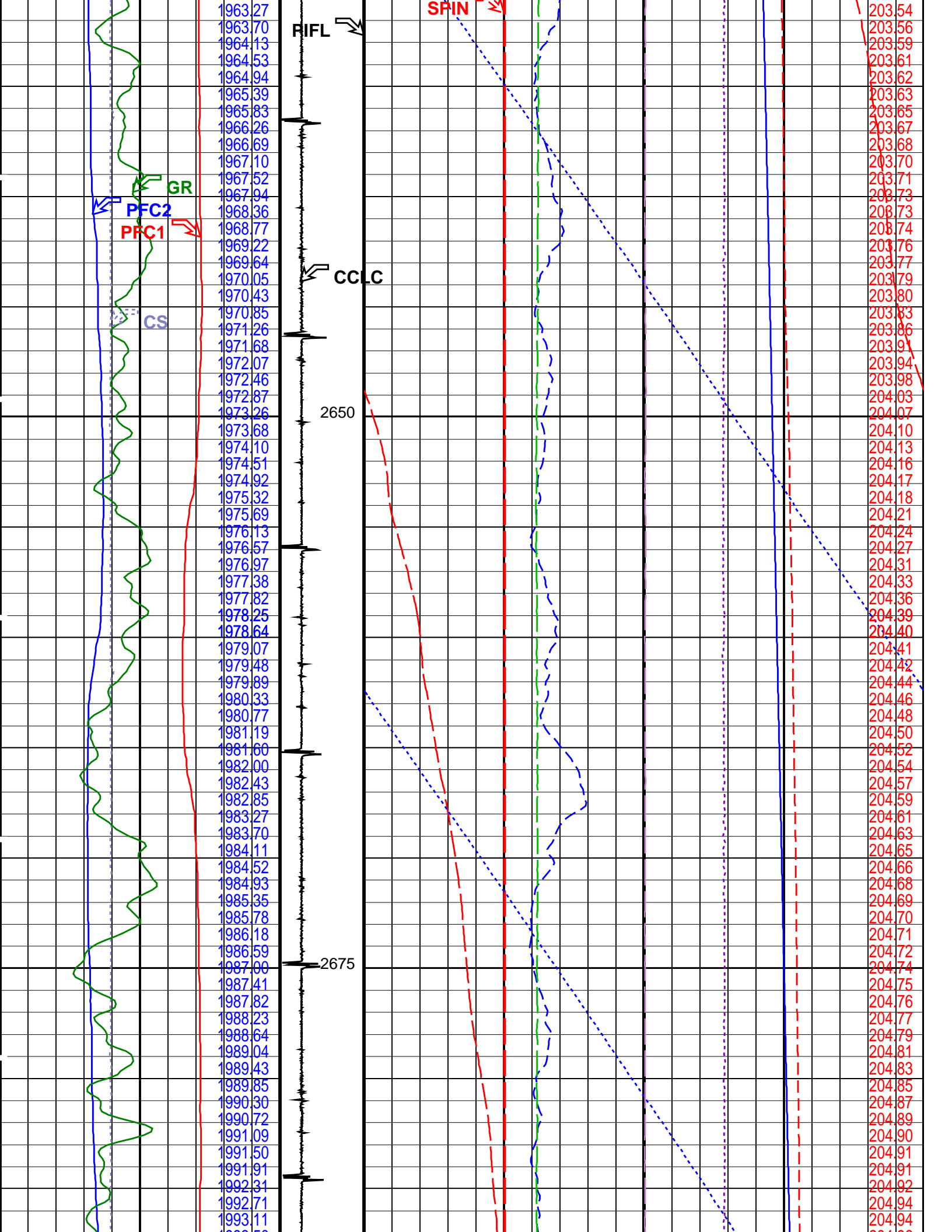


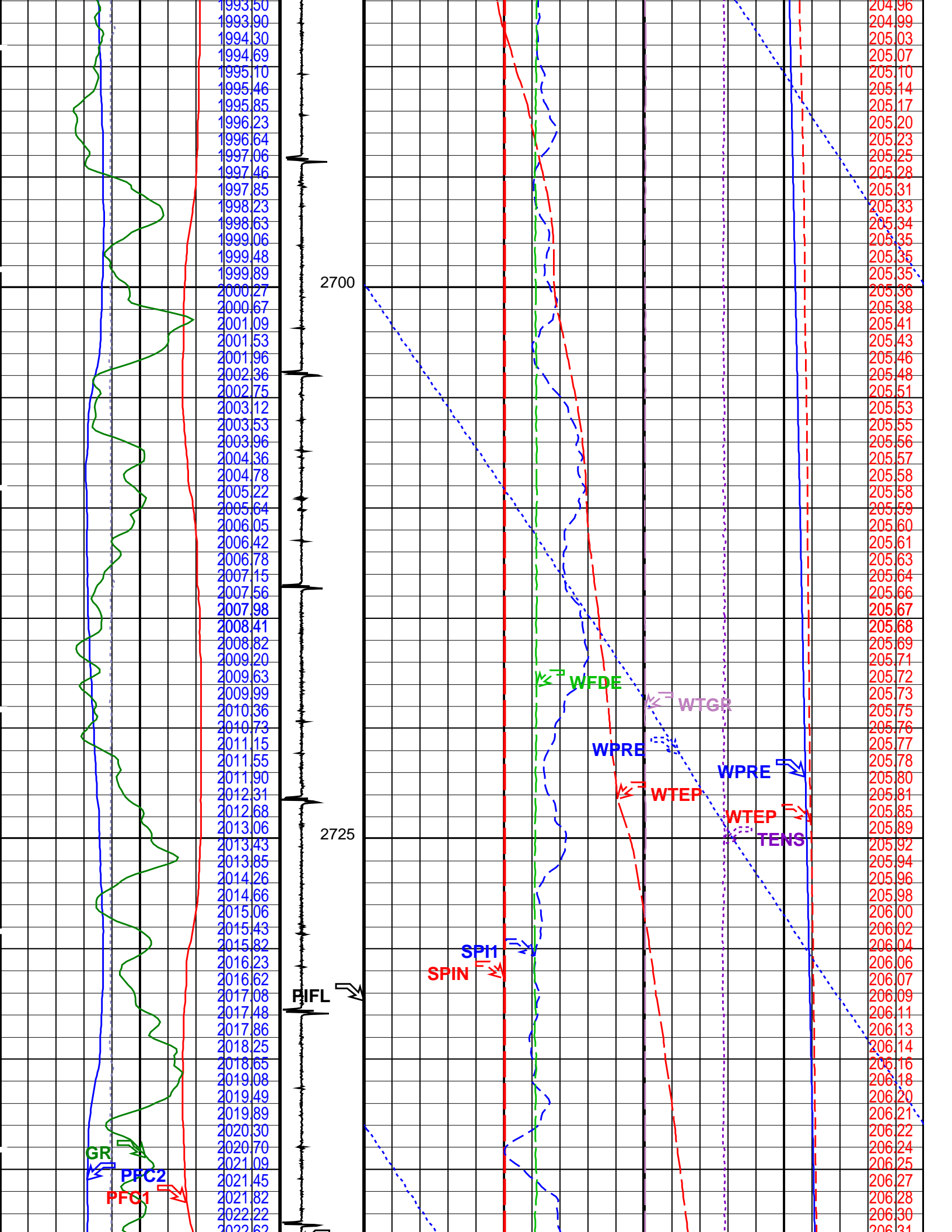


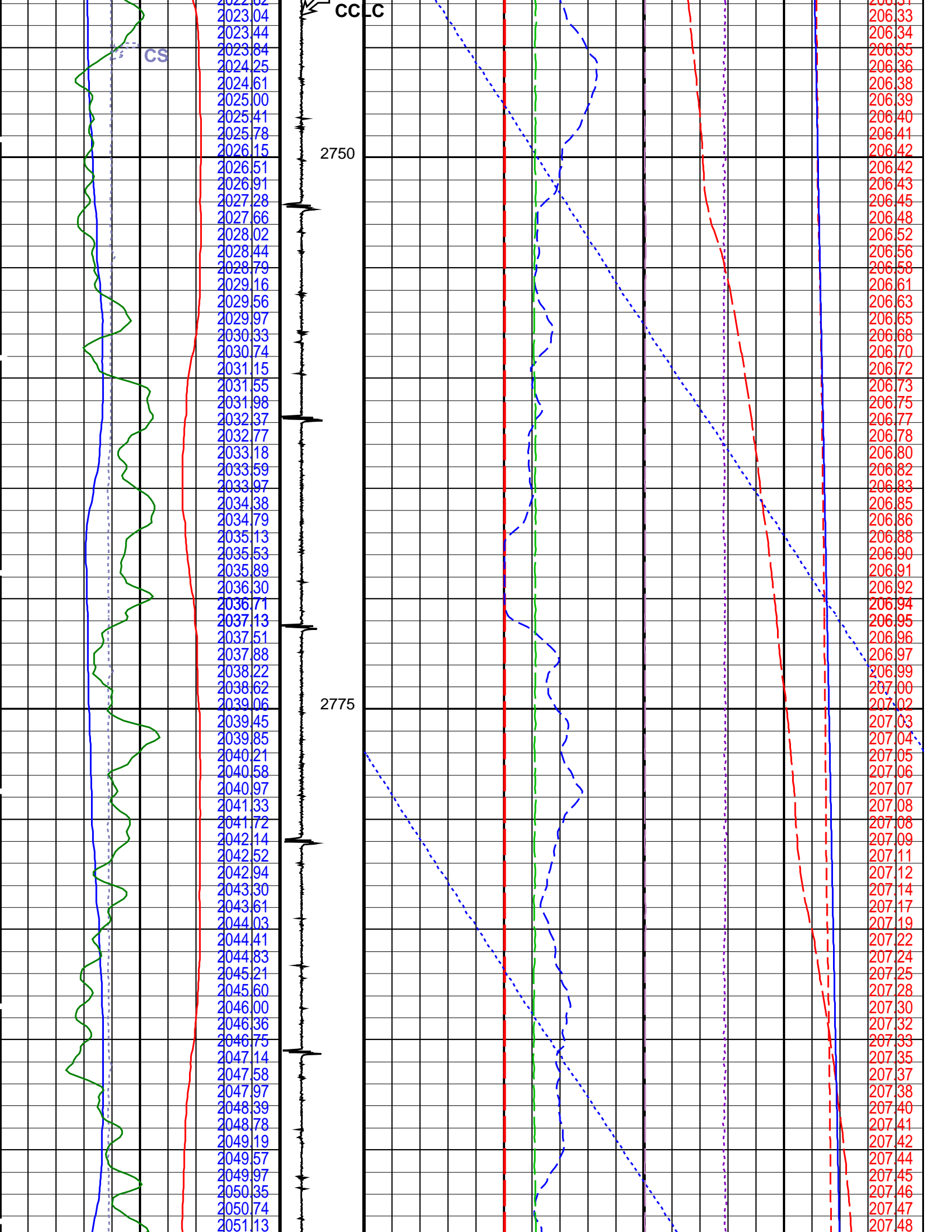


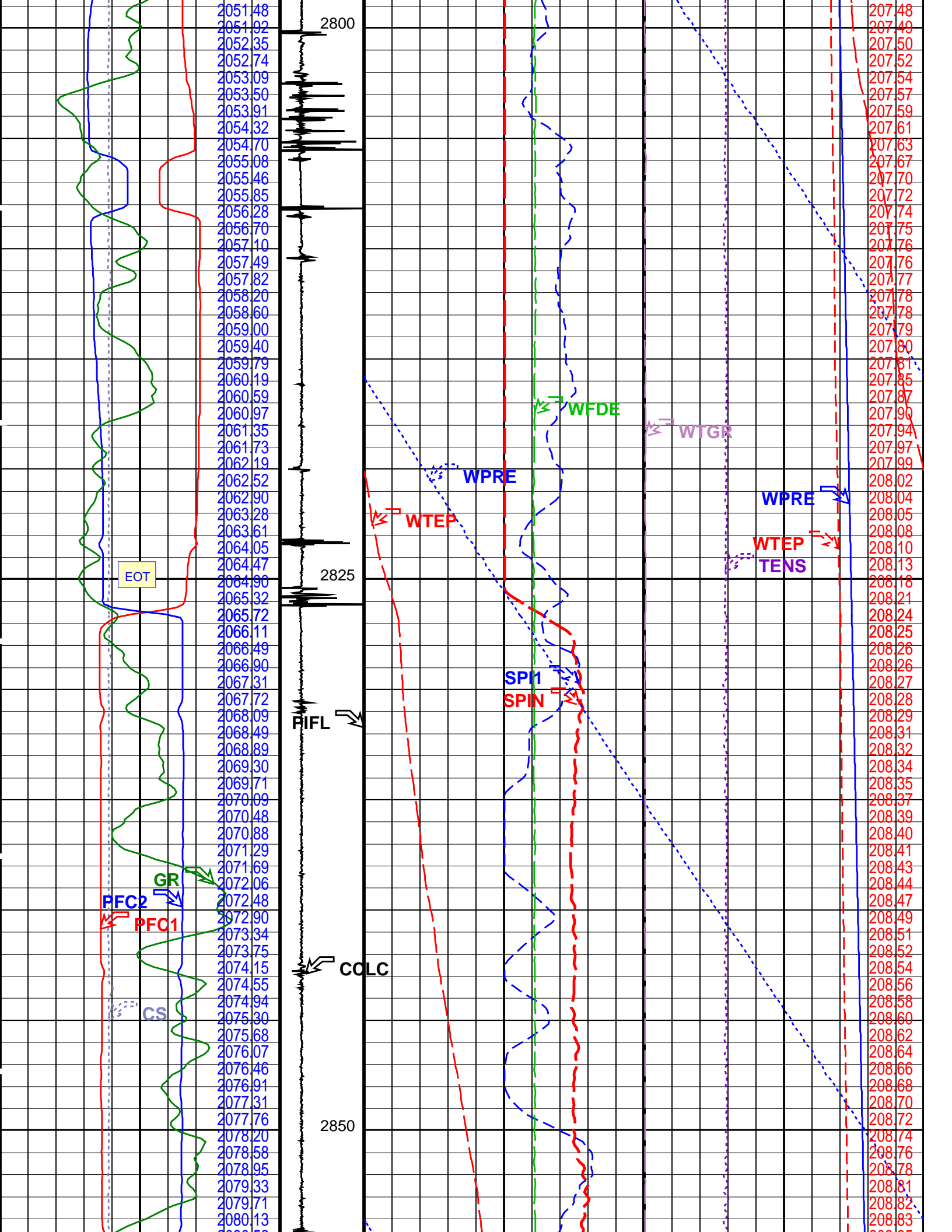


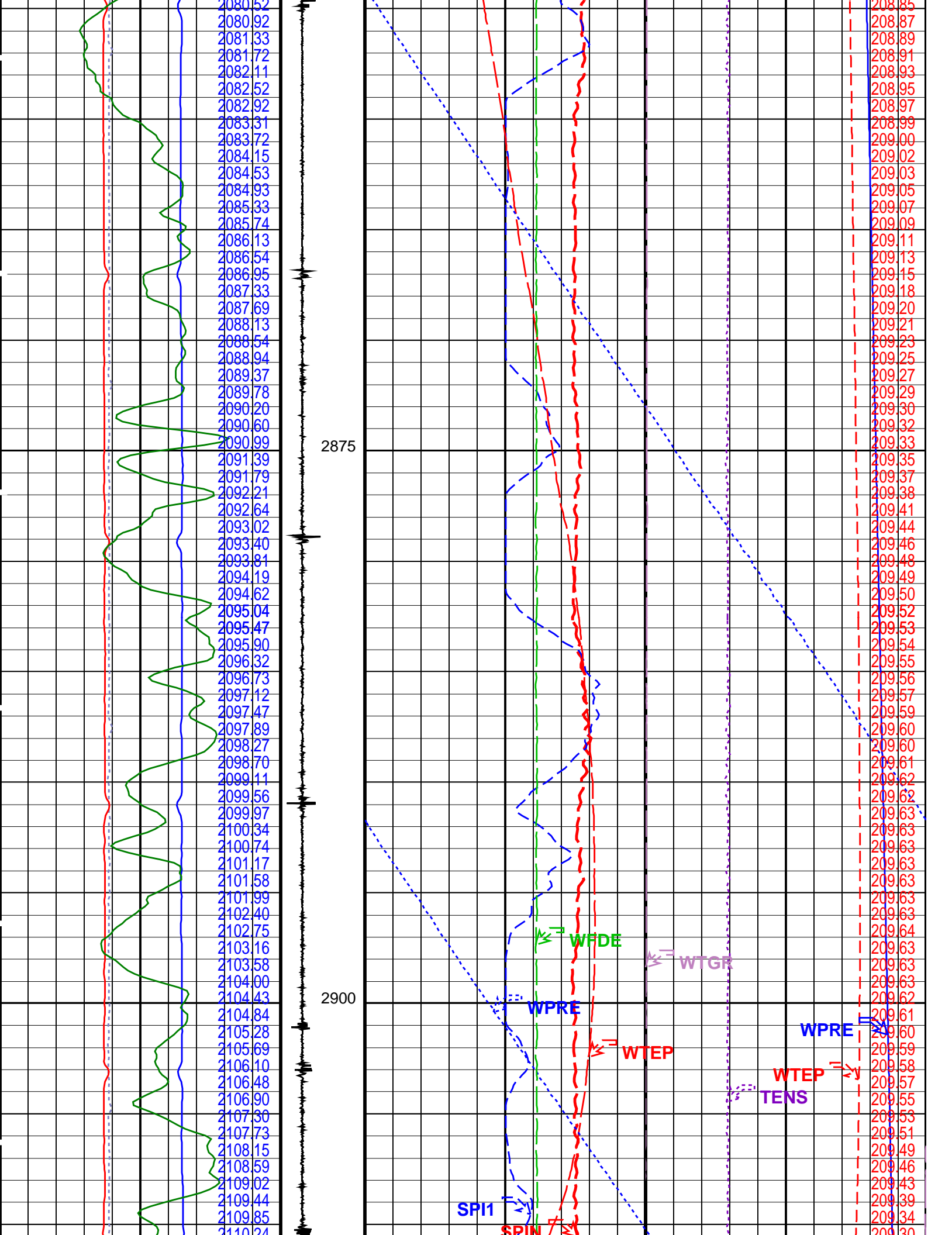


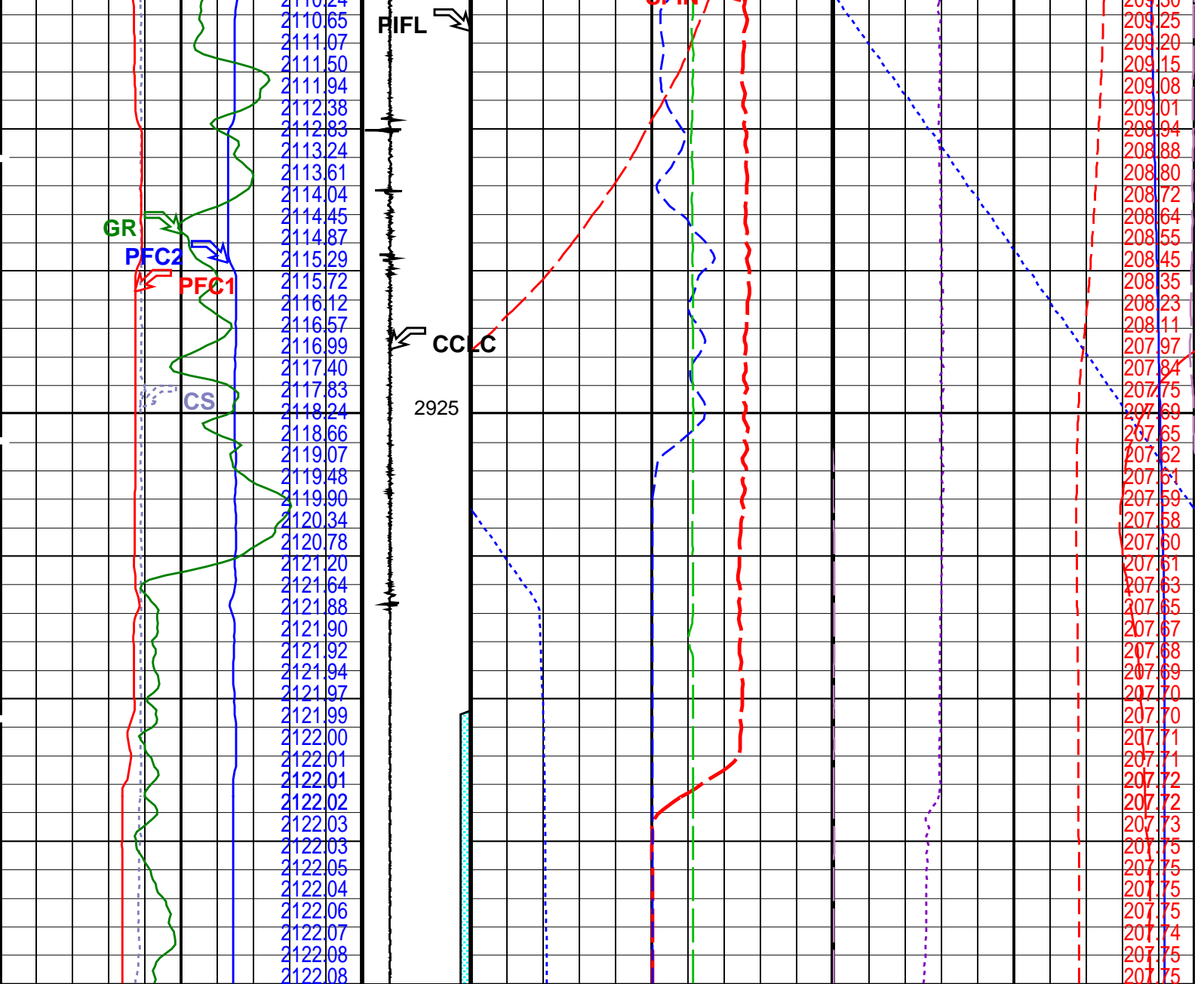












Cable Speed (CS) (F/HR)		0	5000
PFCS X Caliper (PFC1) (IN)		10	0
PFCS Y Caliper (PFC2) (IN)		0	10
Gamma Ray (GR) (GAPI)		0	150
Well Pressure (WPRE) (PSIA)		1500	2150
Amplified Well Pressure (WPRE) (PSIA)		0	20
Well Fluid Density (WFDE) (G/C3)		0	2
Computed CCL (CCLC) (V)		1	-3
Perfo Zone From PERFO CURVE to D3T			
Filtered Main Spinner (SPIN) (RPS)		-5	5
Filtered Auxiliary Spinner 1 (SPI1) (RPS)		-5	5
Tension (TENS) (LBF)		0	2500
Well Temperature Gradient (WTGR) (DC/M)		0	10
Well Temperature (WTEP) (DEGF)		170	215
Well Temperature (WTEP) (DEGF)		0	4

PIP SUMMARY

Time Mark Every 60 S

Format: PSP_1 Vertical Scale: 1:200

Graphics File Created: 18-Dec-2009 13:47

OP System Version: 17C0-154

PFCS-A	17C0-154	PILS-A	17C0-154
DEFT-C2	17C0-154	PGMC-A/B	17C0-154
PSPT-A/B	17C0-154		

Parameters

DLIS Name	Description	Value
PFCS-A: PSP Flow and caliper Tool		
AMOD	Spinner Filter Averaging Mode	LINEAR_AVERAGE
GDEV	Average Angular Deviation of Borehole from Normal	0 DEG
SDCF	Spinner Depth Constant Filter	6
SPI1	Auxiliary Spinner 1 Flowmeter Sonde	PILS-A
SPIN	Main Spinner Flowmeter Sonde	PFCS-A_3.5
PILS-A: PSP In Line Spinner Flowmeter		
AMOD	Spinner Filter Averaging Mode	LINEAR_AVERAGE
SDCF	Spinner Depth Constant Filter	6
SPI1	Auxiliary Spinner 1 Flowmeter Sonde	PILS-A
SPIN	Main Spinner Flowmeter Sonde	PFCS-A_3.5
PGMC-A/B: PSP Gradiomanometer Measurement Module		
PDSH	Gradio Correction Density Shift	0 G/C3
PSPT-A/B: Production Services Logging Platform		
GDEV	Average Angular Deviation of Borehole from Normal	0 DEG
System and Miscellaneous		
DO	Depth Offset for Playback	-0.3 M
PP	Playback Processing	NORMAL

Input DLIS Files

DEFAULT	Flip_FCS_ILS_DEFT_002LUP	PRODUCER	18-Dec-2009 13:21
---------	--------------------------	----------	-------------------

Output DLIS Files

DEFAULT	FCS_ILS_DEFT_GMS_007PUP	FN:4	PRODUCER	18-Dec-2009 13:47
---------	-------------------------	------	----------	-------------------



Calibration listing

MAXIS Field Log

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
PSP Flow and caliper Tool Wellsite Calibration – PFCS Caliper Calibration							
Before: 17-Dec-2009 18:11 After: 17-Dec-2009 18:14							
PFCS CaliperX Small Ring	5.500	N/A	5.345	5.345	0	N/A	IN
PFCS CaliperX Large Ring	8.000	N/A	7.908	7.921	0.01278	N/A	IN
PFCS CaliperY Small Ring	5.500	N/A	5.383	5.383	0	N/A	IN
PFCS CaliperY Large Ring	8.000	N/A	7.959	7.959	0	N/A	IN

PSP Flow and caliper Tool / Equipment Identification

Primary Equipment:









PFCS Cartridge	PFCC – A	1982	1982
PFCS Caliper	Cali –	1982	1982
PFCS Relative Bearing	Rela –	796	796
PFCS 3.5 Spinner Diameter	Spin –	796	796
PFCS Fluid Holdup Electric Probes	Hold –	796	796

Auxiliary Equipment:

PFCS Cartridge Housing	PFCH – A	1982	1982
------------------------	----------	------	------

PSP Flow and caliper Tool Wellsite Calibration

PFCS Caliper Calibration

Phase	PFCS CaliperX Small Ring IN	Value	Phase	PFCS CaliperX Large Ring IN	Value	Phase	PFCS CaliperY Small Ring IN	Value
Before		5.345	Before		7.908	Before		5.383
After		5.345	After		7.921	After		5.383
N/A (Minimum)	5.500 (Nominal)	N/A (Maximum)	N/A (Minimum)	8.000 (Nominal)	N/A (Maximum)	N/A (Minimum)	5.500 (Nominal)	N/A (Maximum)
Phase	PFCS CaliperY Large Ring IN	Value						
Before		7.959						
After		7.959						
N/A (Minimum)	8.000 (Nominal)	N/A (Maximum)						
Before: 17-Dec-2009 18:11			After: 17-Dec-2009 18:14					

Company: **Esso Australia Pty Ltd.**

Schlumberger

Well: **A-1L**

Field: **Tuna**

Rig: **Prod 4 / Crane**

Country: **Australia**

PLT GR/CCL/Gradio/IL-Spinner/FB-Spinner
Dual DEFT/ Pressure/ Temperature
18-12-2009