

Company: Esso Australia Pty Ltd.

Well: A-16
Field: Bream A
Rig : Prod4 / Crane
Country: Australia

Prod4 / Crane
Rig :
Field: Bream A
Location: Gippsland
Well: A-16
Company: Esso Australia Pty Ltd.

RST-C									
Sigma									
Survey									
Rig : Prod4 / Crane									
Field: Bream A									
Location: Gippsland									
Well: A-16									
Company: Esso Australia Pty Ltd.									
LOCATION									
Gippsland									
Basin									
Bass Strait									
Permanent Datum: M.S.L									
Log Measured From: D.F									
Drilling Measured From: D.F									
State : Victoria									
Max. Well Deviation 66 deg									
Longitude 147 46'15"E									
Latitude 038 30'04"S									
Logging Date									
22-Oct-2008									
Run Number									
One									
Depth Driller									
2696 m									
Schlumberger Depth									
2696 m									
Bottom Log Interval									
2696 m									
Top Log Interval									
2580 m									
Casing Fluid Type									
Production Fluids									
Salinity									
Density									
Fluid Level									
12 m									
BIT/CASING/TUBING STRING									
Bit Size									
6.750 in									
From									
2600 m									
To									
3497 m									
Casing/Tubing Size									
5.500 in									
Weight									
17 lbn/ft									
Grade									
N-80									
From									
2422.41 m									
To									
3496.9 m									
Maximum Recorded Temperatures									
206 degF									
Logger On Bottom									
22-Oct-2008									
Time									
8:05									
Unit Number									
889									
Location									
Prod4 / Ausl									
Recorded By									
G Wright &S Gilbert.									
Witnessed By									
B White & JD.									

PVT DATA		Run 1
Oil Density		
Water Salinity		
Gas Gravity		
Bo		
Bw		
1/Bg		
Bubble Point Pressure		
Bubble Point Temperature		
Solution GOR		
Maximum Deviation		66 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	Time	
Unit Number	Location	
Recorded By		
Witnessed By		

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.

OS1: 2 1/8" Powerjet
OS2: Mwpt Perforation
OS3: 5 1/2" Mpbt Plug

Log correlated to ExxonMobil composite supplied with logging program.
Maximum well deviation = 66deg @ 2701m MDKB.
RST-C Sigma survey from 2696 m to 2580m MDKB. Making two passes at 900 ft/hr.
Following this survey the well will be re-perforated and watered out zone plugged off with a 5 1/2" MPBT plug.
SBHP = 2660 psia.
SBHT = 206 degf.
HUD was tagged at 2696 m MDKB.

RUN 1	
SERVICE ORDER #:	AUSL08602239
PROGRAM VERSION:	16C0-147
FLUID LEVEL:	12 m

LOGGED INTERVAL	START	STOP

RUN 1

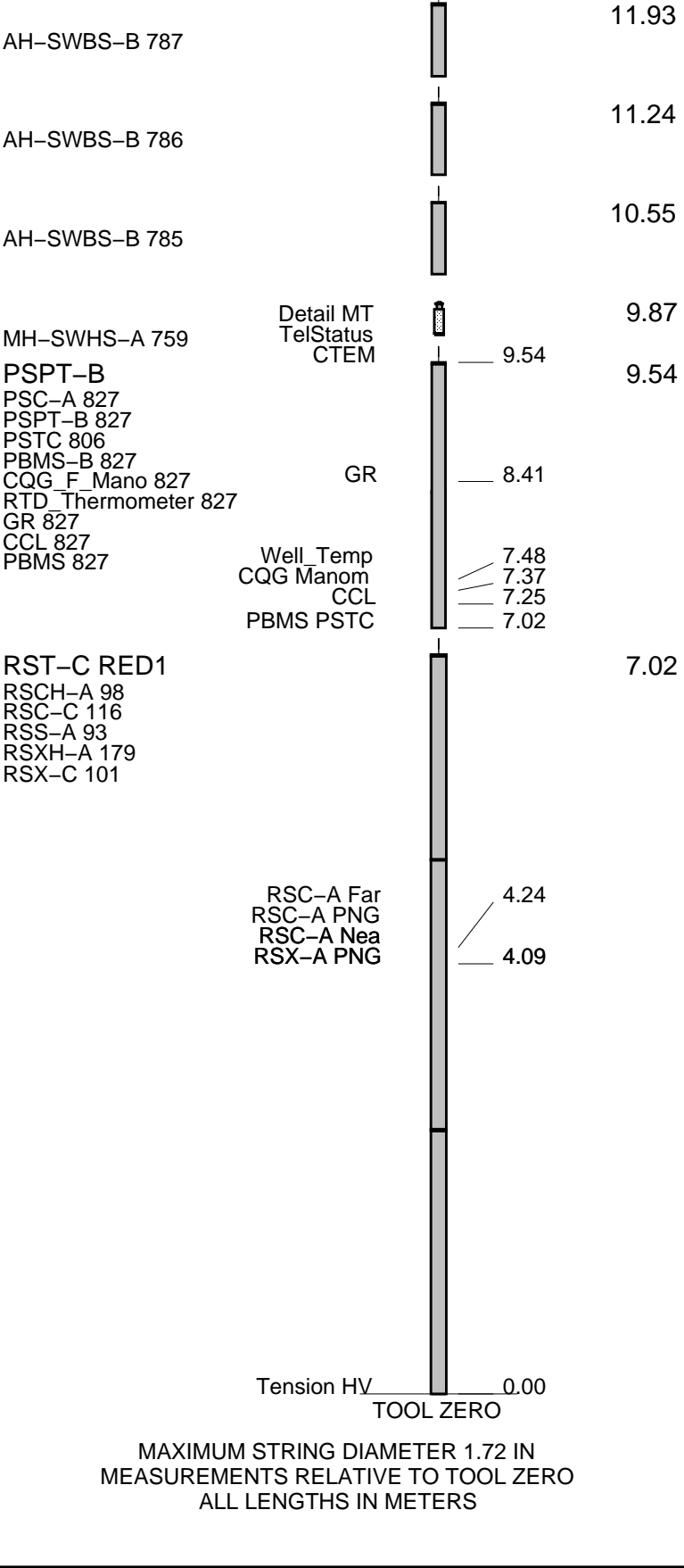
WITM-A
PSC_16MHZ

AH-SWBS-B 789

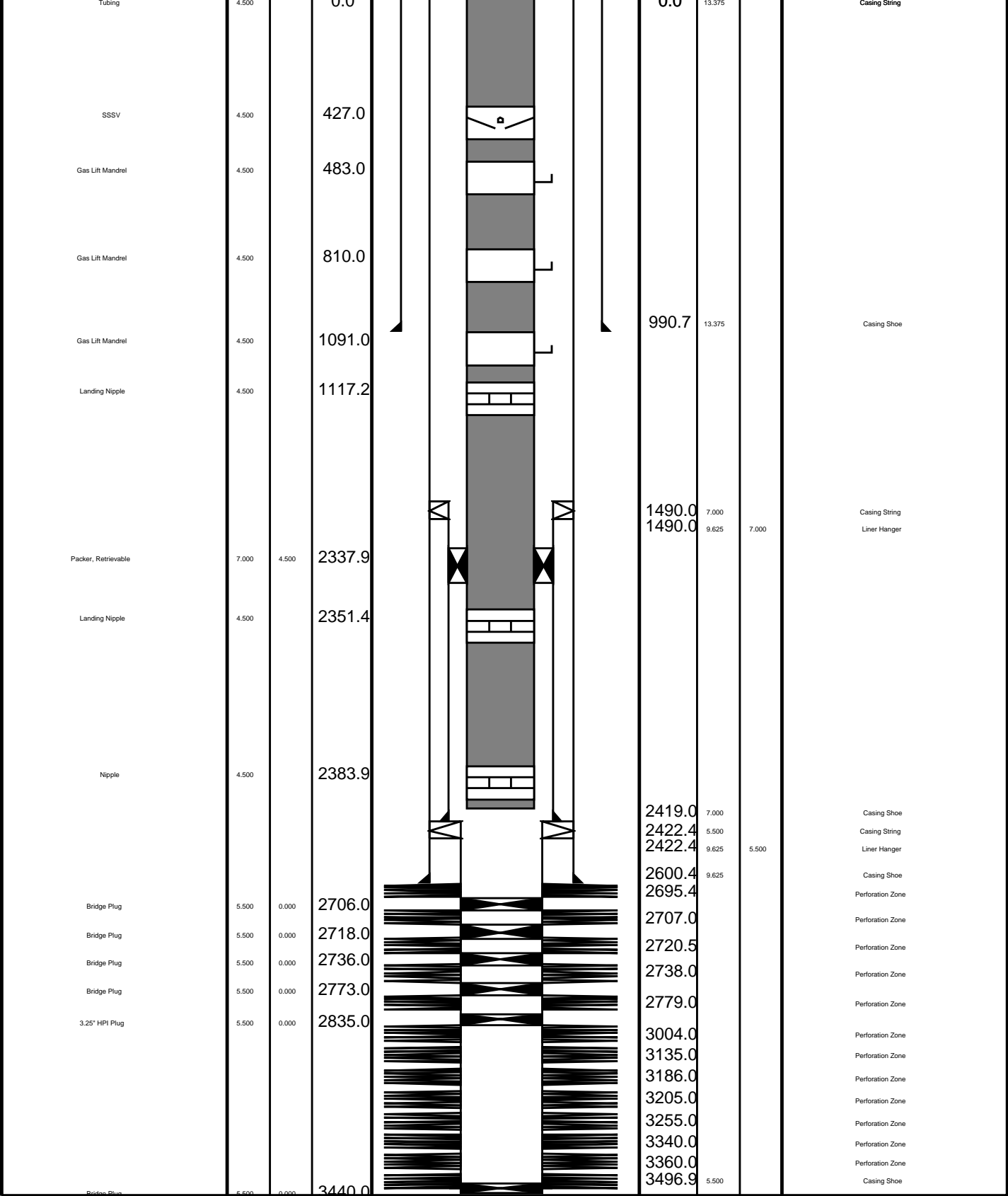
13.30

AH-SWBS-B 788

12.61



Production String	(m)	(m)	Well Schematic	(m)	(m)	Casing String
	OD	ID	MD	MD	OD	ID





Job Event Summary

MAXIS Field Log

Schlumberger Job Event Summary						
Time		Elapsed Time		Depth (M)		File
Log Pass (down)	22-Oct-2008 6:21	000:44		-5.3 - 2701.3		RST_PSP_007LDP
Log Pass (up)	22-Oct-2008 7:05	000:15		2705.4 - 2560.0		RST_PSP_008LUP
Log Pass (up)	22-Oct-2008 7:30	000:31		2702.1 - 2558.5		RST_PSP_010LUP
Log Pass (up)	22-Oct-2008 8:05	000:31		2699.8 - 2559.1		RST_PSP_011LUP

Company: Esso Australia Pty Ltd.

Well: A-16

Output DLIS Files

DEFAULT RST_PSP_011LUP FN:10 PRODUCER 22-Oct-2008 08:05 2699.8 M 2559.1 M

OP System Version: 16C0-147

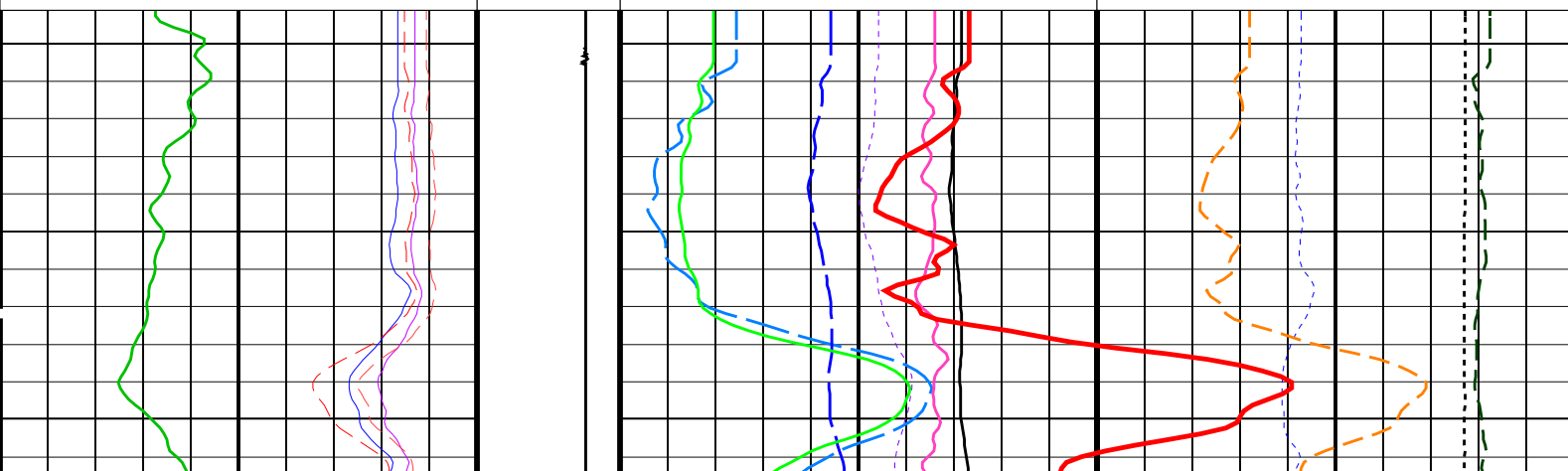
MCM

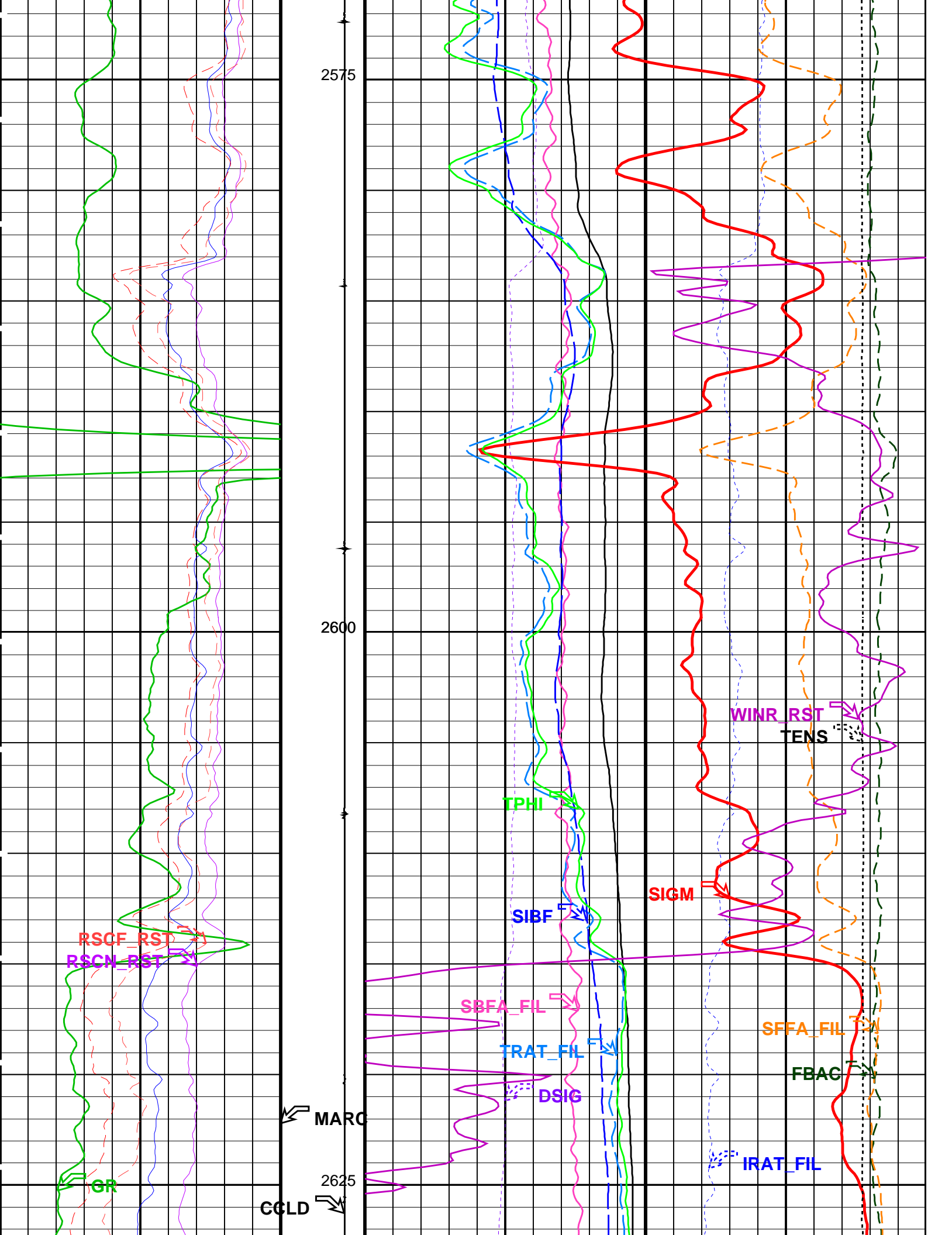
RST-C 16C0-147 PSPT-B 16C0-147

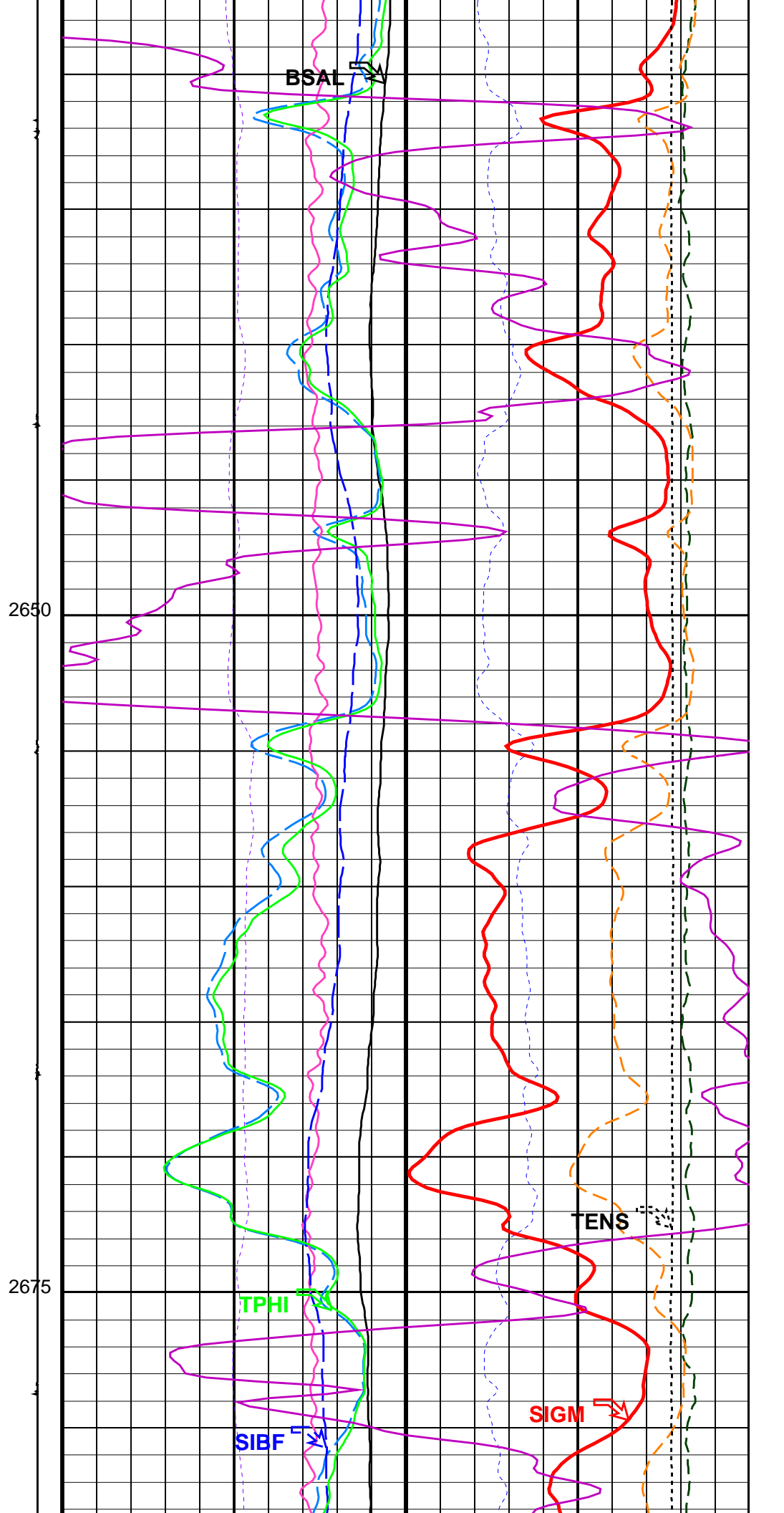
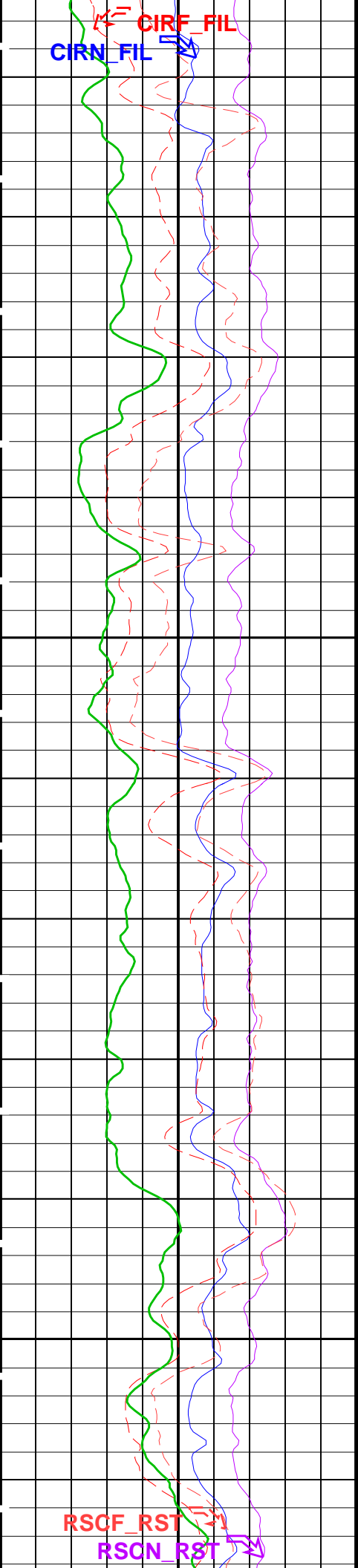
PIP SUMMARY

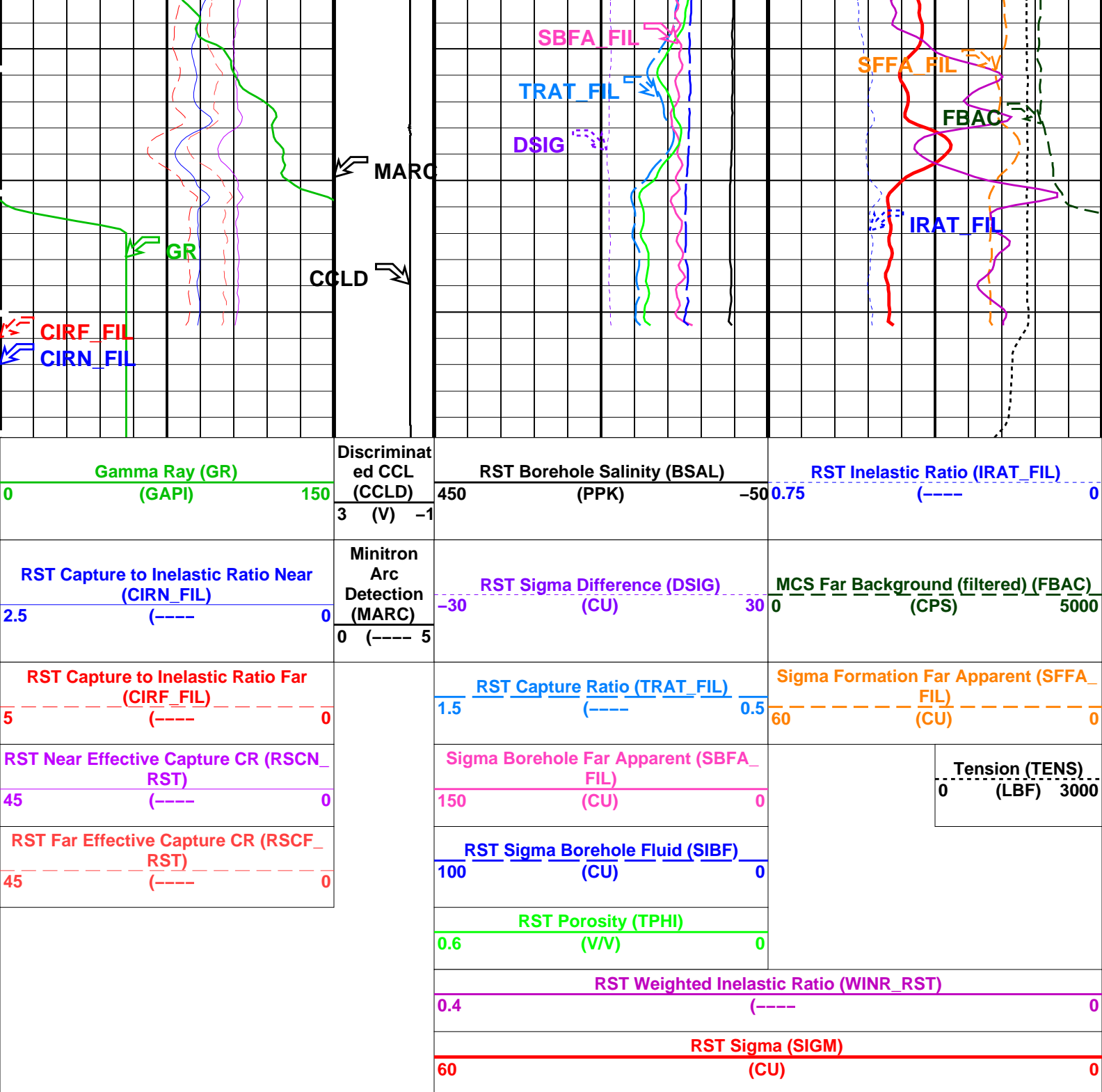
Time Mark Every 60 S

		RST Sigma (SIGM)	
60		(CU)	0
		RST Weighted Inelastic Ratio (WINR_RST)	
0.4		(----	0
		RST Porosity (TPHI)	
0.6		(V/V)	0
RST Far Effective Capture CR (RSCF_RST)		RST Sigma Borehole Fluid (SIBF)	
45	(----	100	(CU) 0
RST Near Effective Capture CR (RSCN_RST)		Sigma Borehole Far Apparent (SBFA_FIL)	
45	(----	150	(CU) 0
RST Capture to Inelastic Ratio Far (CIRF_FIL)		RST Capture Ratio (TRAT_FIL)	
5	(----	1.5	(----
RST Capture to Inelastic Ratio Near (CIRN_FIL)		Sigma Formation Far Apparent (SFFA_FIL)	
2.5	(----	0.5	60 (CU) 0
Minitron Arc Detection (MARC)		RST Sigma Difference (DSIG)	
0	(----	-30	(CU) 30
Discriminated CCL (CCLD)		MCS Far Background (filtered) (FBAC)	
3	(V) -1	450	(PPK) -50
Gamma Ray (GR)		RST Inelastic Ratio (IRAT_FIL)	
0	(GAPI) 150	0.75	(----









PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
RST-C: Reservoir Saturation Pro Tool C		
AIRB	RST Air Borehole	No
BHS	Borehole Status	CASED
BSALOPT	RST Borehole Salinity Option	Unknown
BSFL	RST Borehole Salinity Filter Length	51
DFPC	RST Depth Filter Processing Constant	One
DFPC_TDTL	RST Depth Filter Processing Constant (TDT-like)	Two
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
RGAI	Near/Far Gain Calibration Ratio	1
TIER_SIGM	RST Sigma Acquisition Mode	0_RST_Sigma
PSPT-B: Production Services Logging Platform		

BHS	Borehole Status	CASED
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE
System and Miscellaneous		
BS	Bit Size	6.750 IN
BSAL	Borehole Salinity	-50000.00 PPM
CSIZ	Current Casing Size	5.500 IN
CWEI	Casing Weight	17.00 LB/F

Format: RST_SIG_ANSW

Vertical Scale: 1:200

Graphics File Created: 22-Oct-2008 08:05

OP System Version: 16C0-147			
MCM			
RST-C	16C0-147	PSPT-B	16C0-147

Output DLIS Files			
DEFAULT	RST_PSP_011LUP	FN:10	PRODUCER 22-Oct-2008 08:05

Schlumberger

RST-C Sigma Pass # 1

900 ft/hr

MAXIS Field Log

Company: Esso Australia Pty Ltd.

Well: A-16

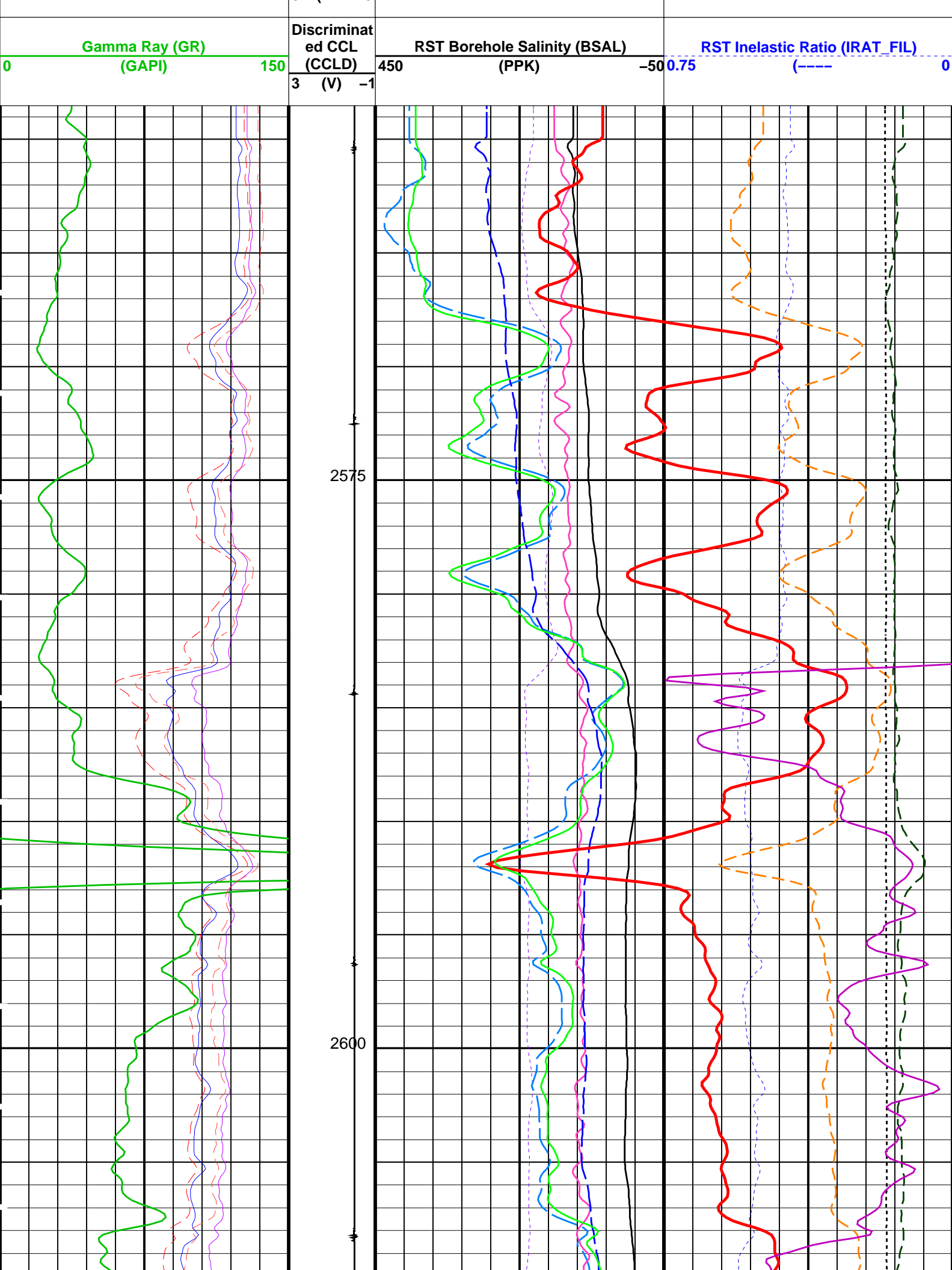
Output DLIS Files			
DEFAULT	RST_PSP_010LUP	FN:9	PRODUCER 22-Oct-2008 07:30

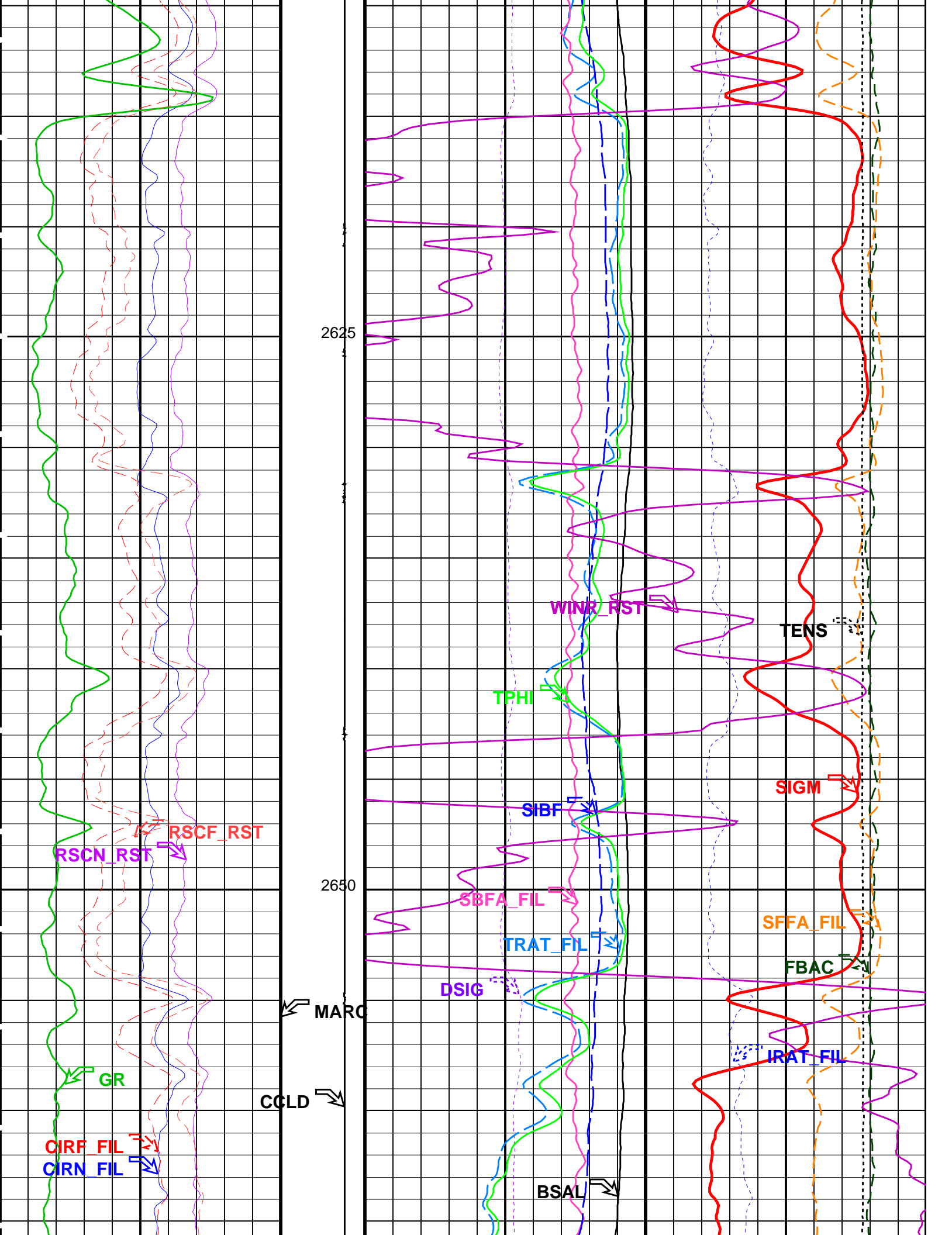
OP System Version: 16C0-147			
MCM			
RST-C	16C0-147	PSPT-B	16C0-147

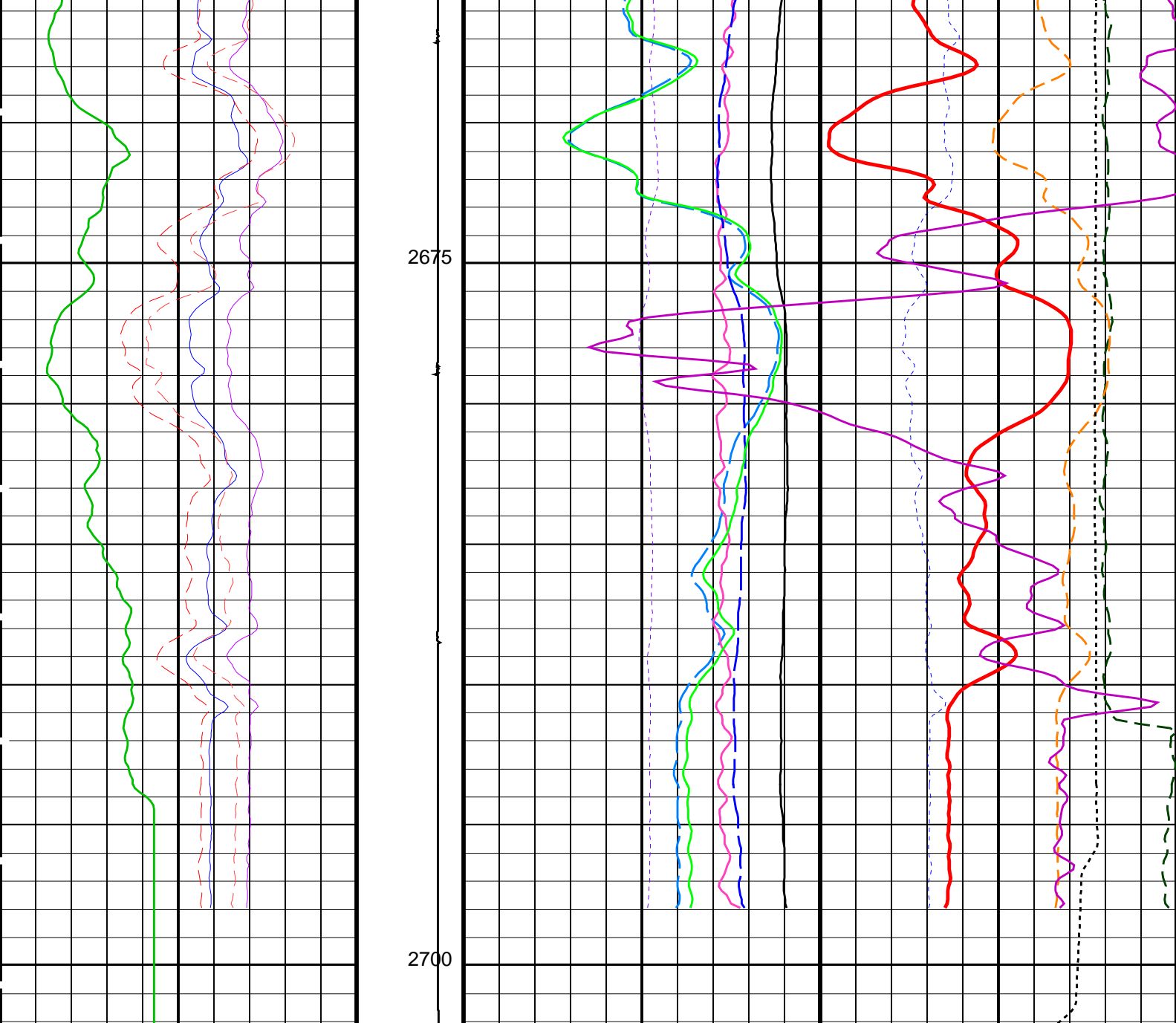
PIP SUMMARY			
<div> <div></div> <div>Time Mark Every 60 S</div> </div>			

		RST Sigma (SIGM)	
		60 (CU)	0
		RST Weighted Inelastic Ratio (WINR_RST)	
		0.4 (----	0
		RST Porosity (TPHI)	
		0.6 (V/V)	0
<div> <div>RST Far Effective Capture CR (RSCF_RST)</div> <div>45 (-----) 0</div> </div>		RST Sigma Borehole Fluid (SIBF)	
		100 (CU)	0
<div> <div>RST Near Effective Capture CR (RSCN_RST)</div> <div>45 (-----) 0</div> </div>		Sigma Borehole Far Apparent (SBFA_FIL)	
		150 (CU)	0
<div> <div>RST Capture to Inelastic Ratio Far (CIRF_FIL)</div> <div>5 (-----) 0</div> </div>		RST Capture Ratio (TRAT_FIL)	
		1.5 (-----) 0.5	Sigma Formation Far Apparent (SFFA_FIL)
<div> <div>RST Capture to Inelastic Ratio Near (CIRN_FIL)</div> <div>2.5 (-----) 0</div> </div>			60 (CU)
			0
<div> <div>Minitron Arc Detection (MARC)</div> <div>0 (-----) 5</div> </div>		RST Sigma Difference (DSIG)	
		-30 (CU)	30
		MCS Far Background (filtered) (FBAC)	
		0 (CPS)	
		5000	

Tension (TENS)
0 (LBF) 3000







<div>Gamma Ray (GR) (GAPI)</div> <div>0150</div>	<div>Discriminat ed CCL (CCLD) (V)</div> <div>3-1</div>	<div>RST Borehole Salinity (BSAL) (PPK)</div> <div>450-50</div>	<div>RST Inelastic Ratio (IRAT_FIL) (----</div> <div>0.750</div>
<div>RST Capture to Inelastic Ratio Near (CIRN_FIL) (----</div> <div>2.50</div>	<div>Minitron Arc Detection (MARC) (----</div> <div>05</div>	<div>RST Sigma Difference (DSIG) (CU)</div> <div>-3030</div>	<div>MCS Far Background (filtered) (FBAC) (CPS)</div> <div>05000</div>
<div>RST Capture to Inelastic Ratio Far (CIRF_FIL) (----</div> <div>50</div>		<div>RST Capture Ratio (TRAT_FIL) (----</div> <div>1.50.5</div>	<div>Sigma Formation Far Apparent (SFFA_ FIL) (CU)</div> <div>600</div>
<div>RST Near Effective Capture CR (RSCN_ RST) (----</div> <div>450</div>		<div>Sigma Borehole Far Apparent (SBFA_ FIL) (CU)</div> <div>1500</div>	<div>Tension (TENS) (LBF)</div> <div>03000</div>
<div>RST Far Effective Capture CR (RSCF_ RST) (----</div> <div>450</div>		<div>RST Sigma Borehole Fluid (SIBF) (CU)</div> <div>1000</div>	
		<div>RST Porosity (TPHI) (V/V)</div> <div>0.60</div>	

		RST Weighted Inelastic Ratio (WINR_RST)			
0.4		(----		0	
		RST Sigma (SIGM)			
60		(CU)		0	

PIP SUMMARY

Time Mark Every 60 S

Parameters			
DLIS Name	Description	Value	
RST-C: Reservoir Saturation Pro Tool C			
AIRB	RST Air Borehole	No	
BHS	Borehole Status	CASED	
BSALOPT	RST Borehole Salinity Option	Unknown	
BSFL	RST Borehole Salinity Filter Length	51	
DFPC	RST Depth Filter Processing Constant	One	
DFPC_TDTL	RST Depth Filter Processing Constant (TDT-like)	Two	
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
RGAI	Near/Far Gain Calibration Ratio	1	
TIER_SIGM	RST Sigma Acquisition Mode	0_RST_Sigma	
PSPT-B: Production Services Logging Platform			
BHS	Borehole Status	CASED	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
System and Miscellaneous			
BS	Bit Size	6.750	IN
BSAL	Borehole Salinity	-50000.00	PPM
CSIZ	Current Casing Size	5.500	IN
CWEI	Casing Weight	17.00	LB/F

Format: RST_SIG_ANSW Vertical Scale: 1:200 Graphics File Created: 22-Oct-2008 07:30

OP System Version: 16C0-147

MCM

RST-C	16C0-147	PSPT-B	16C0-147
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Output DLIS Files

DEFAULT	RST_PSP_010LUP	FN:9	PRODUCER	22-Oct-2008 07:30
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Schlumberger

Gamma-Ray Pass

MAXIS Field Log

Input DLIS Files

DEFAULT	RST_PSP_008LUP	FN:7	PRODUCER	22-Oct-2008 07:05	2705.4 M	2560.0 M
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Output DLIS Files

DEFAULT	RST_PSP_009PUP	FN:8	PRODUCER	22-Oct-2008 07:22	2706.5 M	2555.6 M
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OP System Version: 16C0-147

MCM

RST-C	16C0-147	PSPT-B	16C0-147
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PIP SUMMARY

Time Mark Every 60 S

Cable Speed (CS)
0 (F/HR) 5000

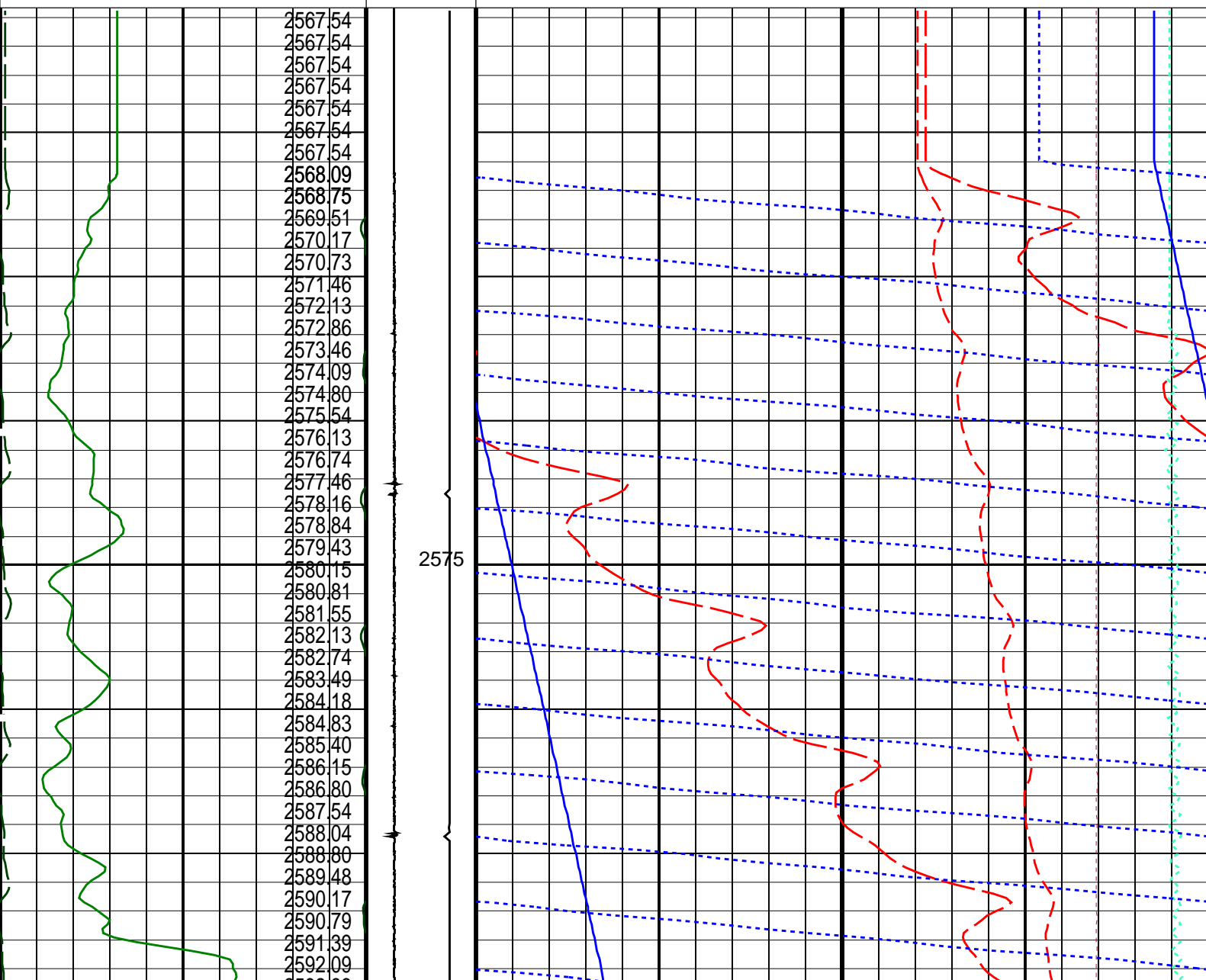
Tension (TENS)
(LBF) 0 1800

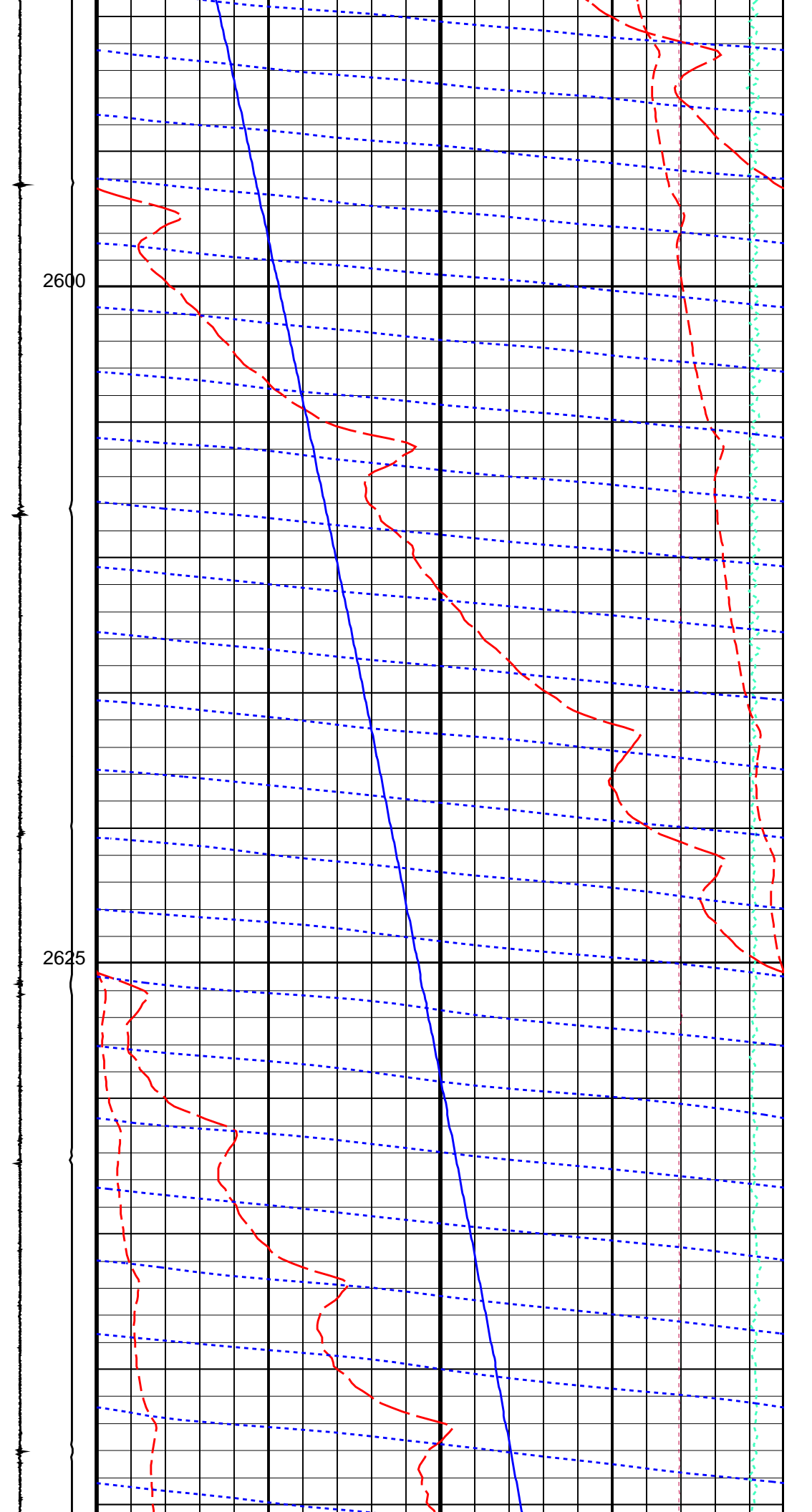
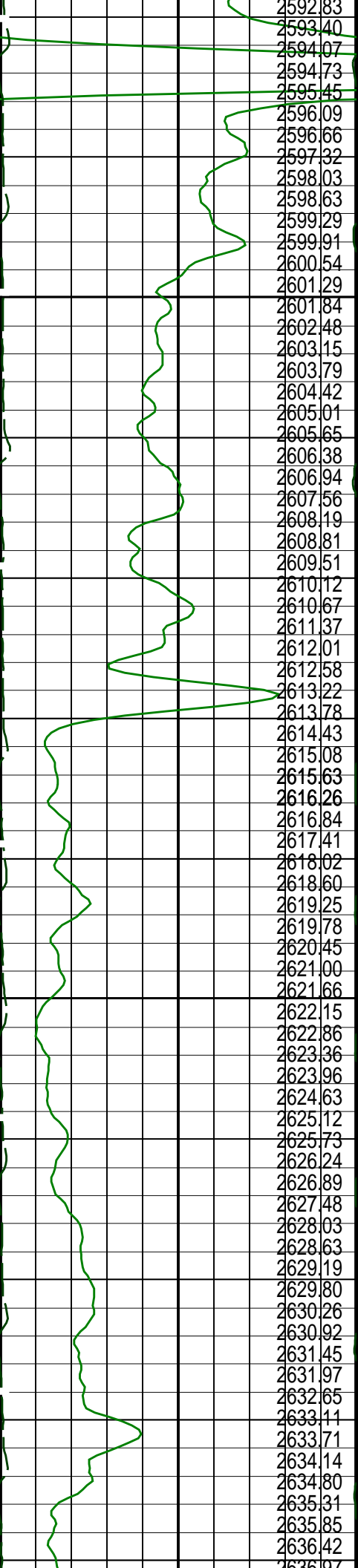
Amplified Well Pressure (WPRE)
(PSIA) 0 2

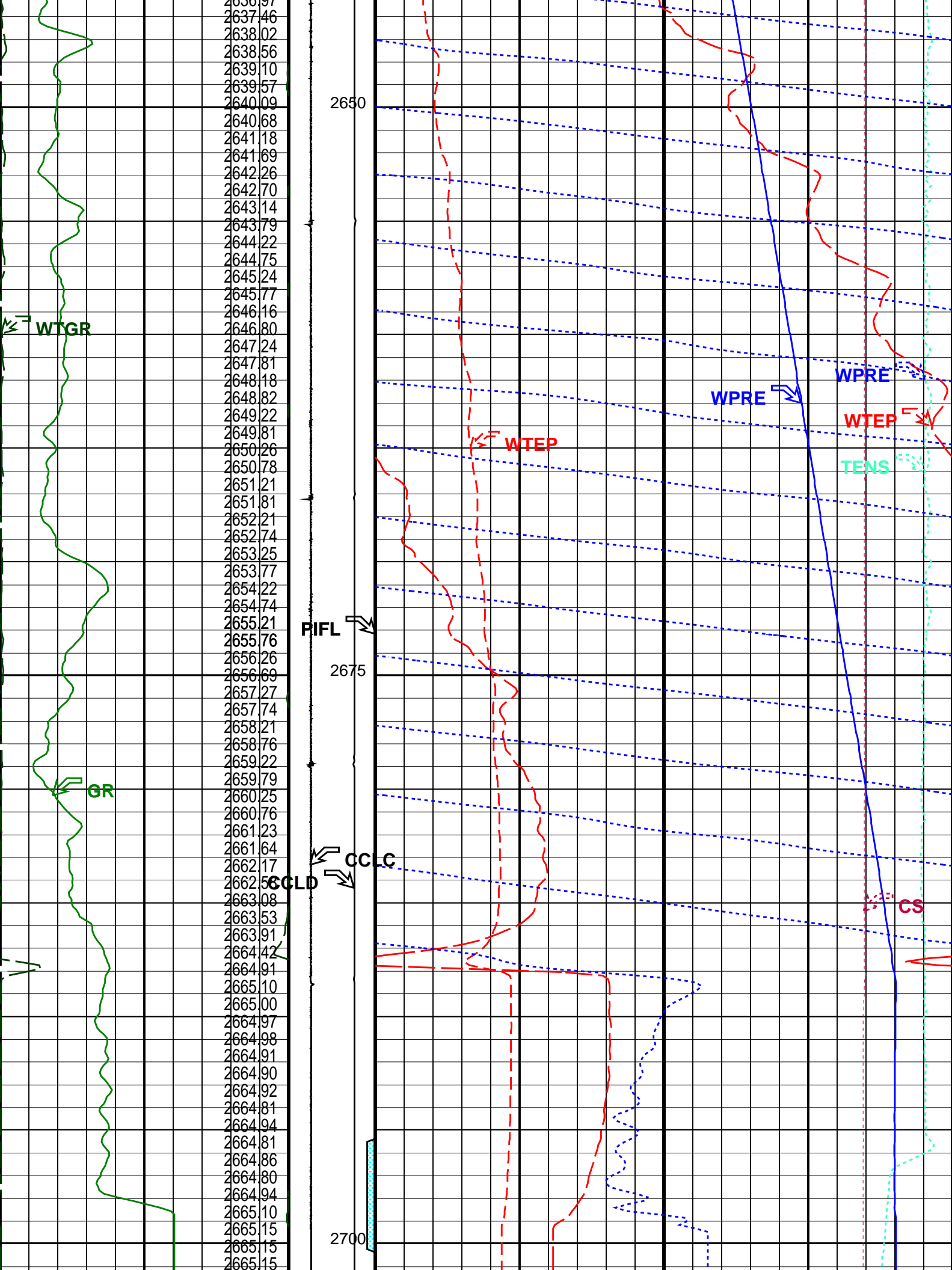
Well Pressure (WPRE) (PSIA)	Perfo Zone From PERFO_ CURVE to D3T	Well Pressure (WPRE) (PSIA)
2575		2675

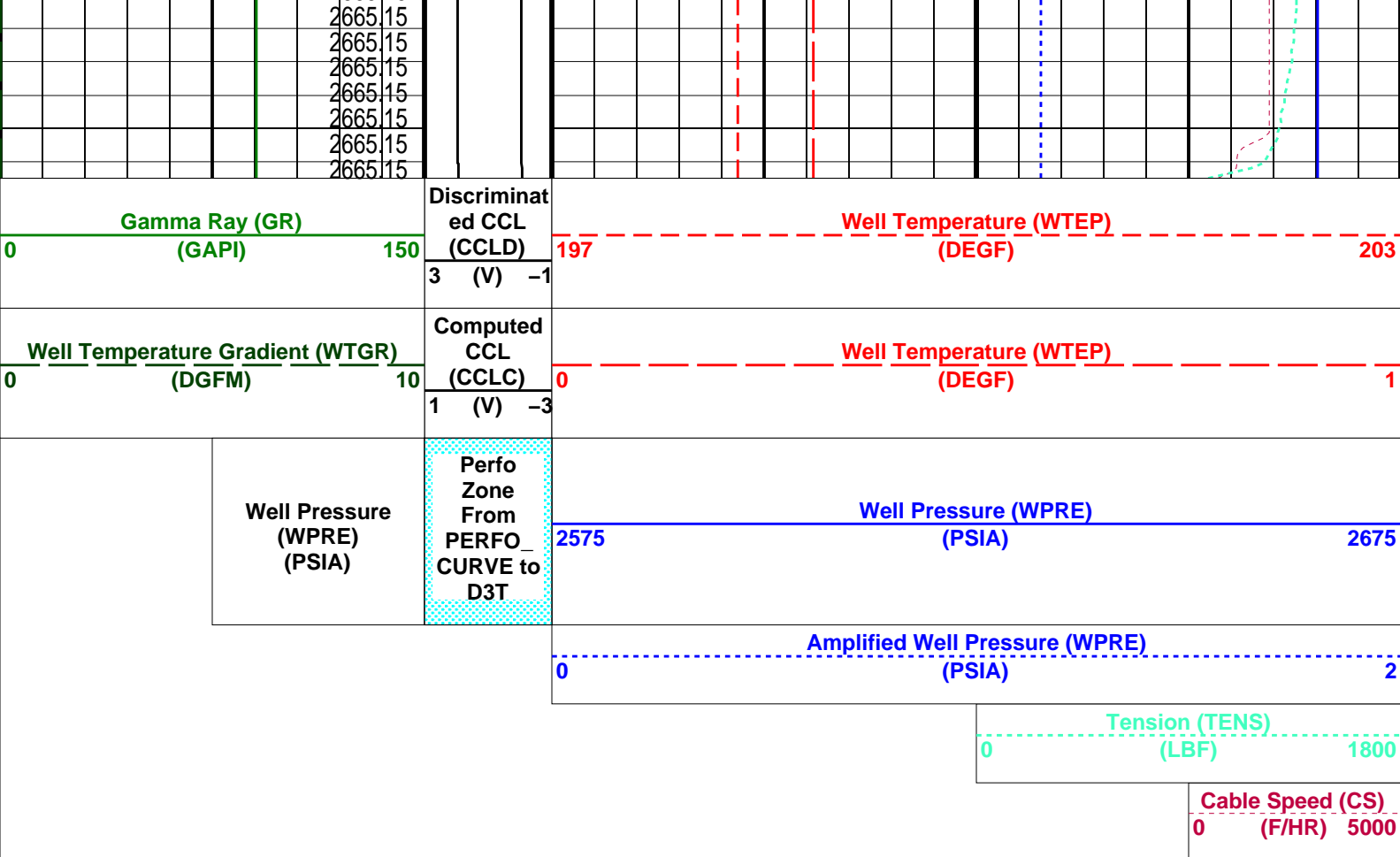
Well Temperature Gradient (WTGR) (DGFM)	Computed CCL (CCLC) (V)	Well Temperature (WTEP) (DEGF)
0 10	1 -3	0 1

Gamma Ray (GR) (GAPI)	Discriminat ed CCL (CCLD) (V)	Well Temperature (WTEP) (DEGF)
0 150	3 -1	197 203









PIP SUMMARY

Time Mark Every 60 S

Format: PSP_1_1 Vertical Scale: 1:200 Graphics File Created: 22-Oct-2008 07:22

OP System Version: 16C0-147

MCM

RST-C 16C0-147 PSPT-B 16C0-147

Parameters		
DLIS Name	Description	Value
DO	System and Miscellaneous	1.1 M
PP	Depth Offset for Playback	NORMAL
	Playback Processing	

Input DLIS Files						
DEFAULT	RST_PSP_008LUP	FN:7	PRODUCER	22-Oct-2008 07:05	2705.4 M	2560.0 M
Output DLIS Files						
DEFAULT	RST_PSP_009PUP	FN:8	PRODUCER	22-Oct-2008 07:22		

Company: **Esso Australia Pty Ltd.**

Well: **A-16**

Field: **Bream A**

Rig : **Prod4 / Crane**

Country: **Australia**

Schlumberger

RST-C

