

Company: Esso Australia Ltd.

Well: A-16
Field: Bream A
Rig : Prod4

Country: Australia

Prod4
Bream A
Gippsland
A-16
Esso Australia Ltd.

RST-C
Sigma Mode
Survey

LOCATION			
Gippsland		Elev.:	K.B. 33.5 m
Basin			G.L. -59 m
Bass Strait			D.F. 33.5 m
Permanent Datum:		M.S.L.	
Log Measured From:		D.F.	33.5 m above Perm. Datum
Drilling Measured From:		D.F.	
State:	Max. Well Deviation	Longitude	Latitude
Victoria	92 deg	147 46'15.562"E	038 30'4.432"S

Logging Date	10-May-2006		
Run Number	1		
Depth Driller	2835 m		
Schlumberger Depth	2800 m – Not Tagged		
Bottom Log Interval	2800 m		
Top Log Interval	2575 m		
Casing Fluid Type	Production Fluids		
Salinity			
Density			
Fluid Level			
BIT/CASING/TUBING STRING			
Bit Size	7.000 in		
From			
To			
Casing/Tubing Size	5.500 in		
Weight	17 lbn/ft		
Grade	N-80		
From	2422.5 m		
To	3496.99 m		
Maximum Recorded Temperatures	98 degC		
Logger On Bottom	10-May-2006	21:50	
Unit Number	1	Prod4	
Recorded By	G Wright & P Tarrant		
Witnessed By	B White & B Robinson		

PVT DATA				Run 1	Run 2	Run 3
Oil Density						
Water Salinity						
Gas Gravity						
Bo						
Bw						
1/Bg						
Bubble Point Pressure						
Bubble Point Temperature						
Solution GOR						
Maximum Deviation	92 deg					
CEMENTING DATA						
Primary/Squeeze	Primary					
Casing String No						
Lead 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

Depth System Equipment

Date Created: 10-MAY-2006 0:39:45

Depth Measuring Device	Tension Device	Logging Cable
Type: IDW-H Serial Number: 797 Calibration Date: 01 May 2005 Calibrator Serial Number: 1009 Calibration Cable Type: 2-32ZT Wheel Correction 1: -3 Wheel Correction 2: -3	Type: CMTD-B/A Serial Number: 1037 Calibration Date: 01 Apr 2006 Calibrator Serial Number: 1174 Calibration Gain: 1.37 Calibration Offset: 635.00	Type: 2-23ZT Serial Number: 22372 Length: 5049.93 M Conveyance Method: Wireline Rig Type: Offshore_Fixed

Depth Control Parameters

Log Sequence:	Subsequent Trip To the Well
Reference Log Name:	Solar Log
Reference Log Run Number:	Unknown
Reference Log Date:	Unknown

Depth Control Remarks

1.
2.
3.
4.
5.
6.

DISCLAIMER

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OTHER SERVICES1 OS1: 5 1/2" PSP Plug OS2: 2 7/8" HSD OS3: Perforation OS4: OS5:
REMARKS: RUN NUMBER 1
Log correlated to ExxonMobil correlation composite dated 15-Jan-2005.
Maximum well deviation = 92 degrees at 3398m MDKB.
Objective:
RIH with PSP/RST toolstring and complete two passes in Sigma Mode over the interval 2790m to 2580m MDKB.
On the 2nd log pass, had troubles with telemetry on with the last 12m

On the 2nd log pass, had troubles with telemetry on with the last 13m of the interval, 2588m to 2575m MDKB.

Crew :

Jakob Annear & Andy Hall (days)

Rick Murray & Gary Martin (nights)

RUN 1
SERVICE ORDER #: AUSL06103816
PROGRAM VERSION: 14C0-302
FLUID LEVEL:

RUN 2
SERVICE ORDER #:
PROGRAM VERSION:
FLUID LEVEL:

LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

RUN 1RUN 2

SURFACE EQUIPMENT

WITM-A
PSC_16MHZ 1835

DOWNHOLE EQUIPMENT

AH-SWHS-A 75317.49

AH-Sondex Tractor AUSB17.16
AH-Sondex Tractor 1

Detail MT
TelStatus
CTEM
PSPT-A/B 18359.54
PSC-A 1864
PSPT-B 1835
PSTC 1864
PBMS-B 1835GR8.41
CQG_F_Mano 1835
RTD Thermometer 1835Well_Temp7.48
GR 1835CQG Manom7.37
CCL 1835CCL7.25
PBMS 1835PBMS PSTC7.02

RST-C ORA97.02

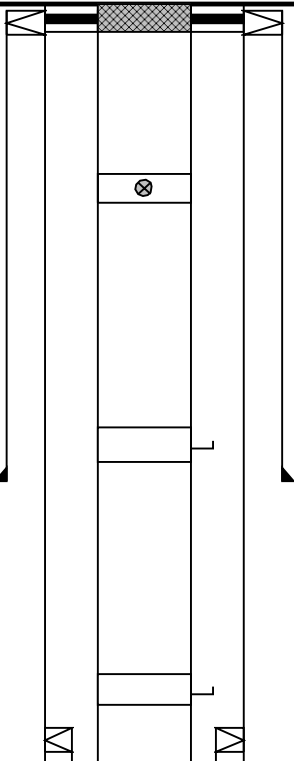
RSCH-A 111
RSC-C 132
RSS-A 106
RSXH-A 145
RSX-C 132

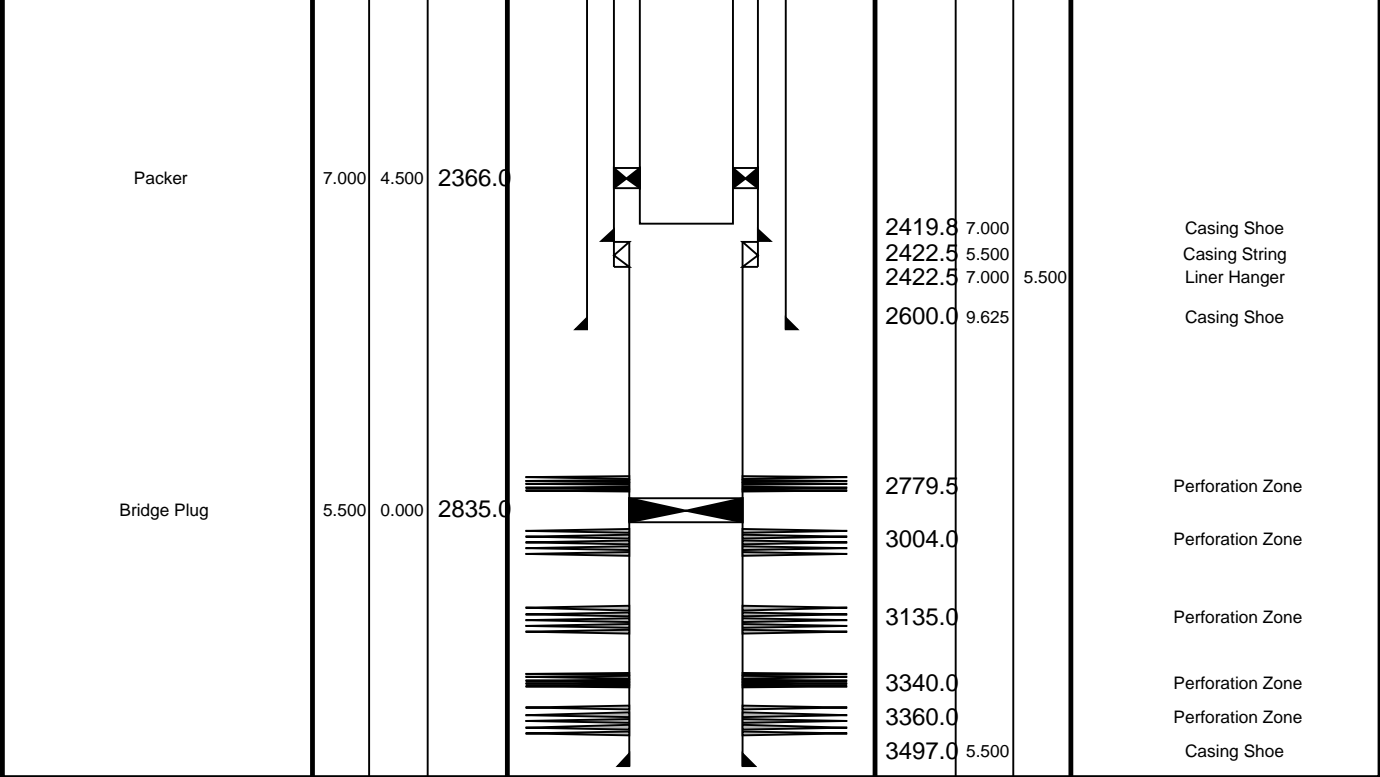
RSC-A Far
RSC-A PNG
RSC-A Nea
RSX-A PNG

4.24
4.09

Tension HV 0.00
TOOL ZERO

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

Production String	(in)		(m)	Well Schematic	(m)	(in)		Casing String
	OD	ID	MD		MD	OD	ID	
Tubing Hanger	9.875	4.500	12.0		12.0	13.375	9.625	Casing String Liner Hanger
Shutin Valve	4.500		442.0		12.7	13.375	9.625	
Gas Lift Mandrel	4.500		706.0		977.6	13.375		Casing Shoe
Gas Lift Mandrel	4.500		1473.0		1485.7	7.000		Casing String Liner Hanger
					1485.7	9.625	7.000	



RST Sigma mode
Pass 2 – 2790m to 2575m MDKB

MAXIS Field Log

Company: Esso Australia Ltd. Well: A-16

Input DLIS Files						
DEFAULT	RST_PSP_021LUP	FN:18	PRODUCER	11-May-2006 00:35	2799.9 M	2569.5 M

Output DLIS Files						
DEFAULT	RST_PSP_022PUP	FN:19	PRODUCER	11-May-2006 01:41	2800.3 M	2564.9 M

OP System Version: 14C0-302						
MCM						
RST-C	14C0-302	PSPT-A/B		14C0-302		

PIP SUMMARY

Time Mark Every 60 S

From 2588m to 2575m MDKB - Unreliable data
due to Telemetry problems with the toolstring

2575

TENS

TPHI

RSCF_RST

SIGM

SBFA_FIL

TRAT_FIL

DSIG

SFFA_FIL

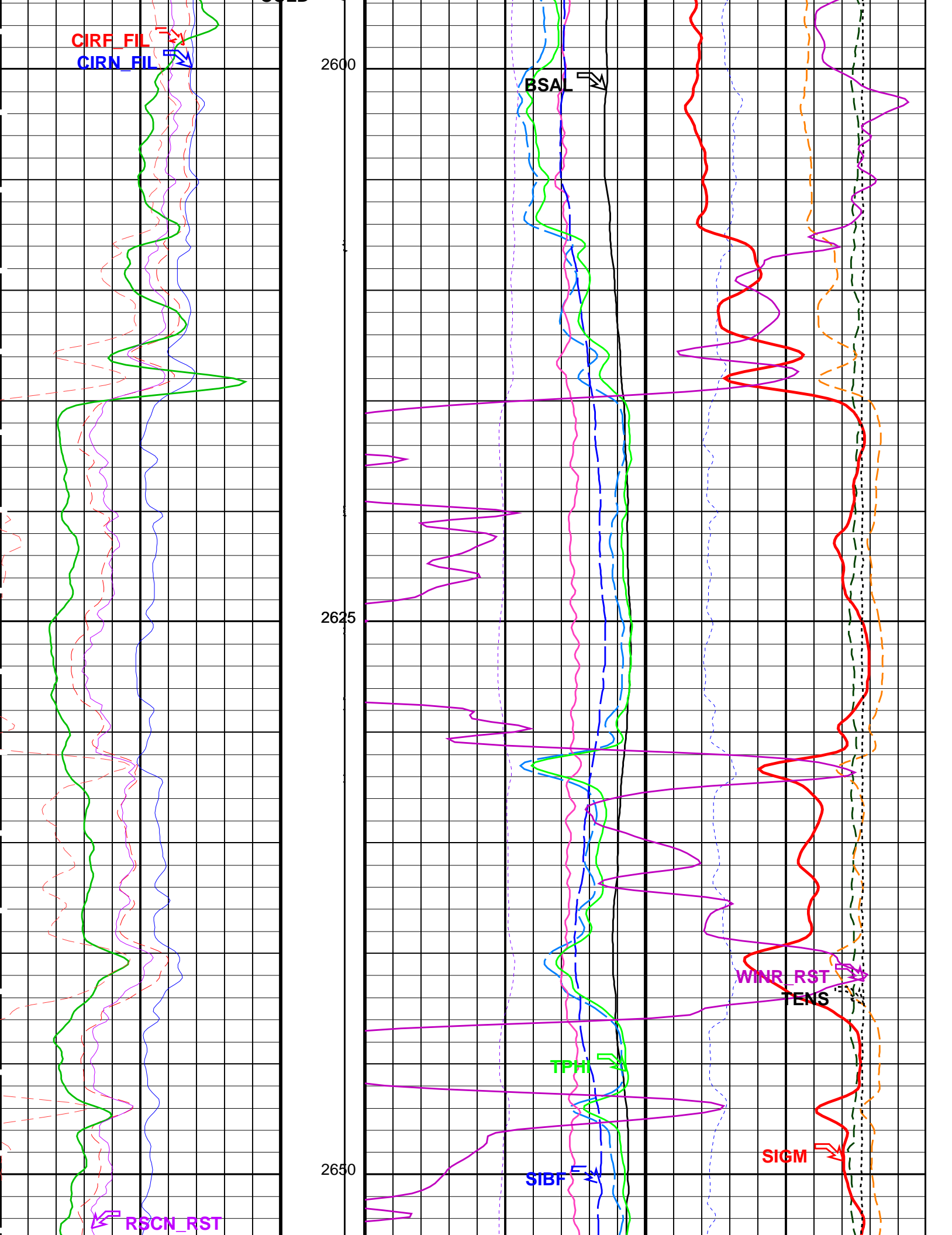
FBAC

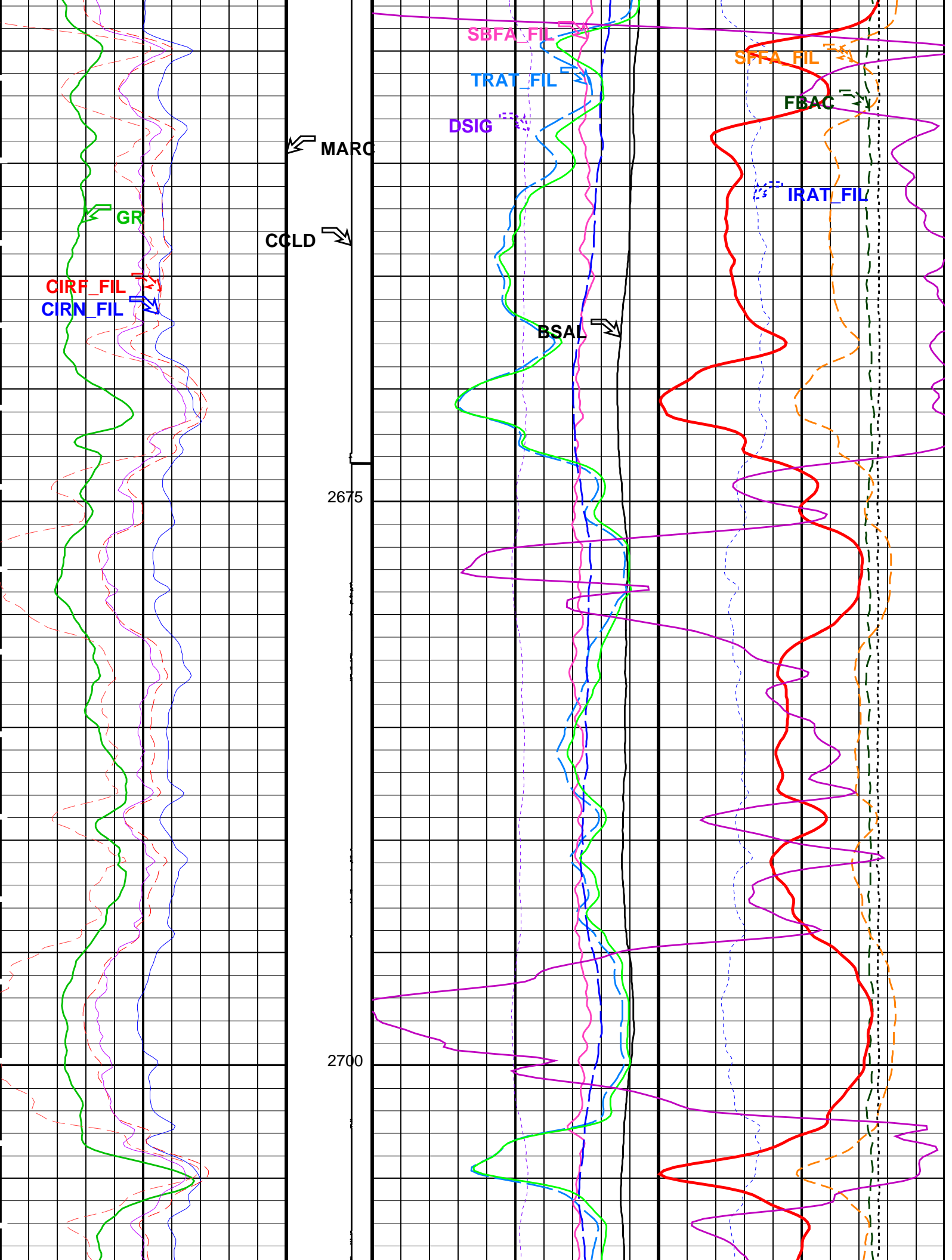
IRAT_FIL

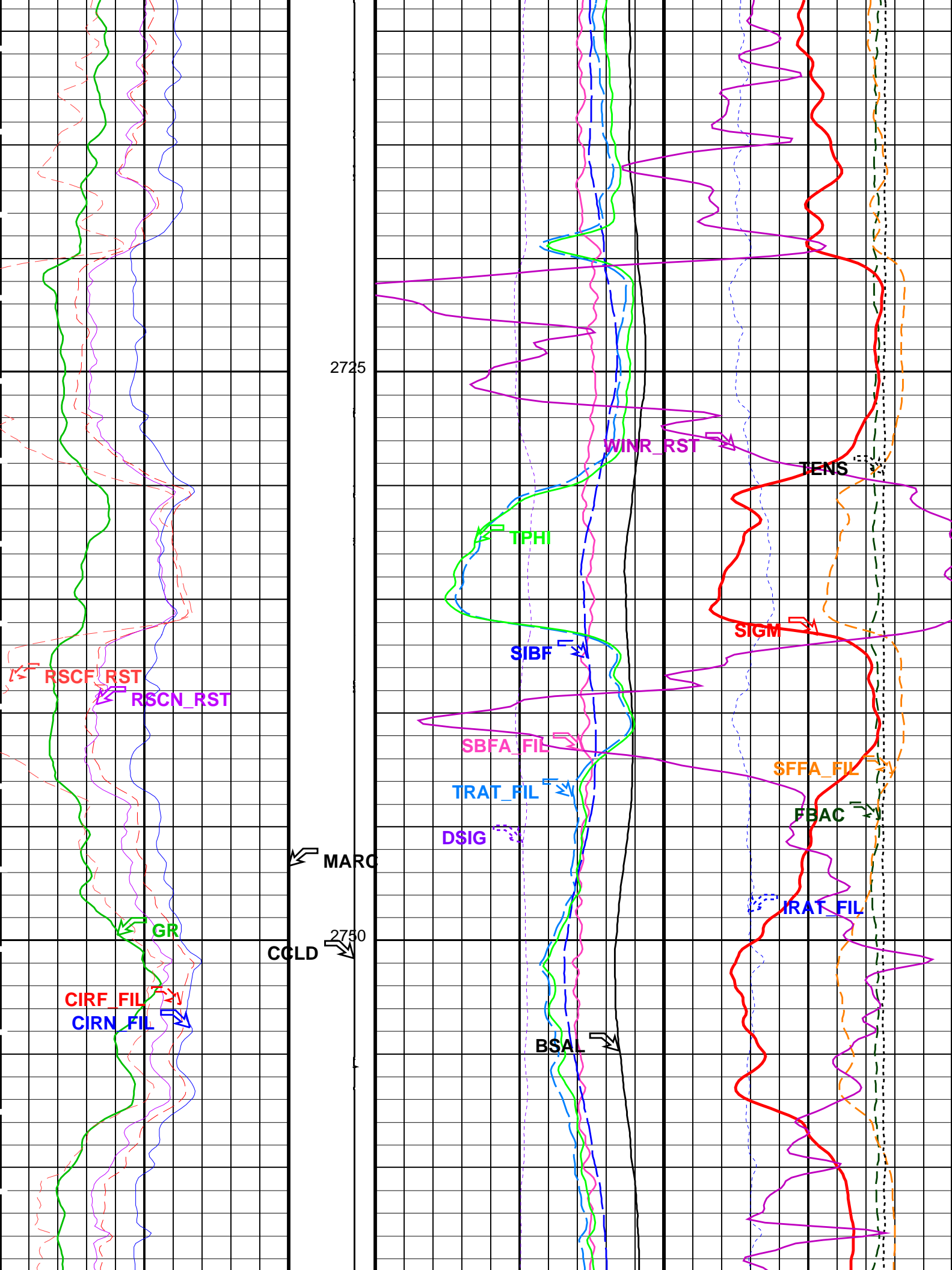
MARC

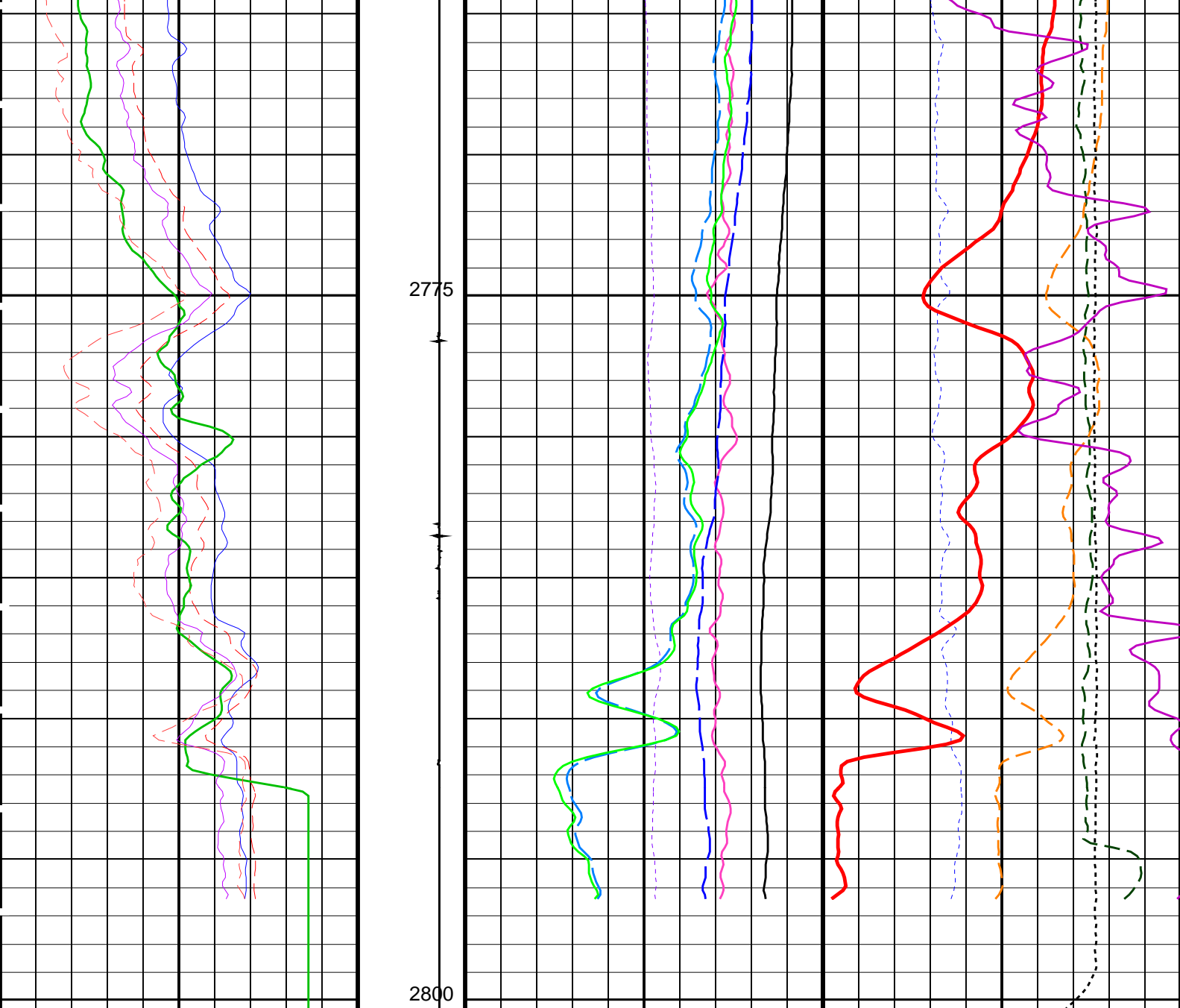
CGLD

GR









<div>Gamma Ray (GR) (GAPI)</div> <div>0150</div>	<div>Discriminat ed CCL (CCLD)</div> <div>3 (V) -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>0 (---- 5</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	
SMBMO	RST Sigma Mode Background Minित्रon Off	No	
TIER_SIGM	RST Sigma Acquisition Mode	0_RST_Sigma	
PSPT-A/B: Production Services Logging Platform			
BHS	Borehole Status	CASED	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
System and Miscellaneous			
BS	Bit Size	7.000	IN
BSAL	Borehole Salinity	-50000.00	PPM
CSIZ	Current Casing Size	5.500	IN
CWEI	Casing Weight	17.00	LB/F
DO	Depth Offset for Playback	0.4	M
PP	Playback Processing	NORMAL	

Format: RST_SIG_ANSW	Vertical Scale: 1:200	Graphics File Created: 11-May-2006 01:41
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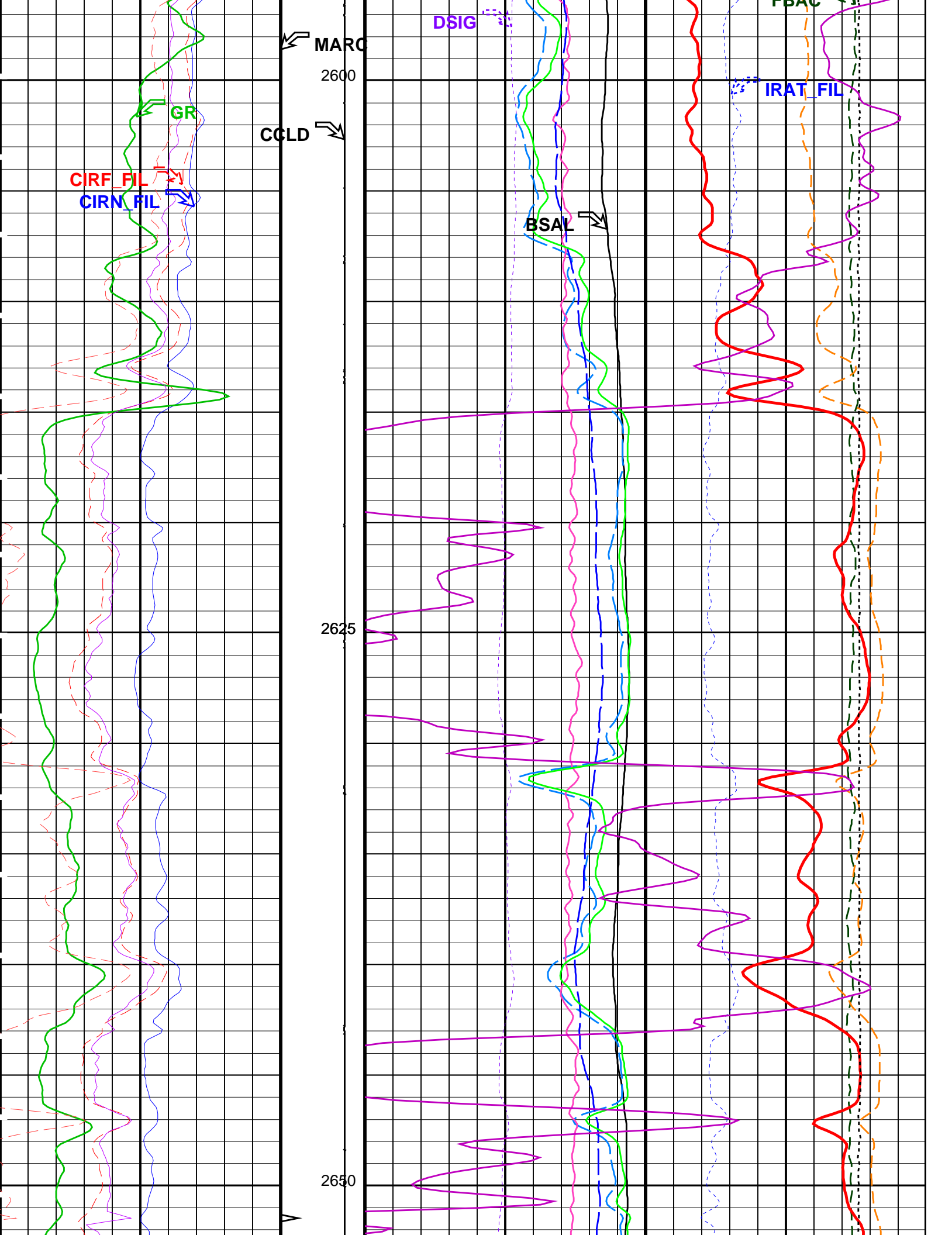
OP System Version: 14C0-302			
MCM			
RST-C	14C0-302	PSPT-A/B	14C0-302

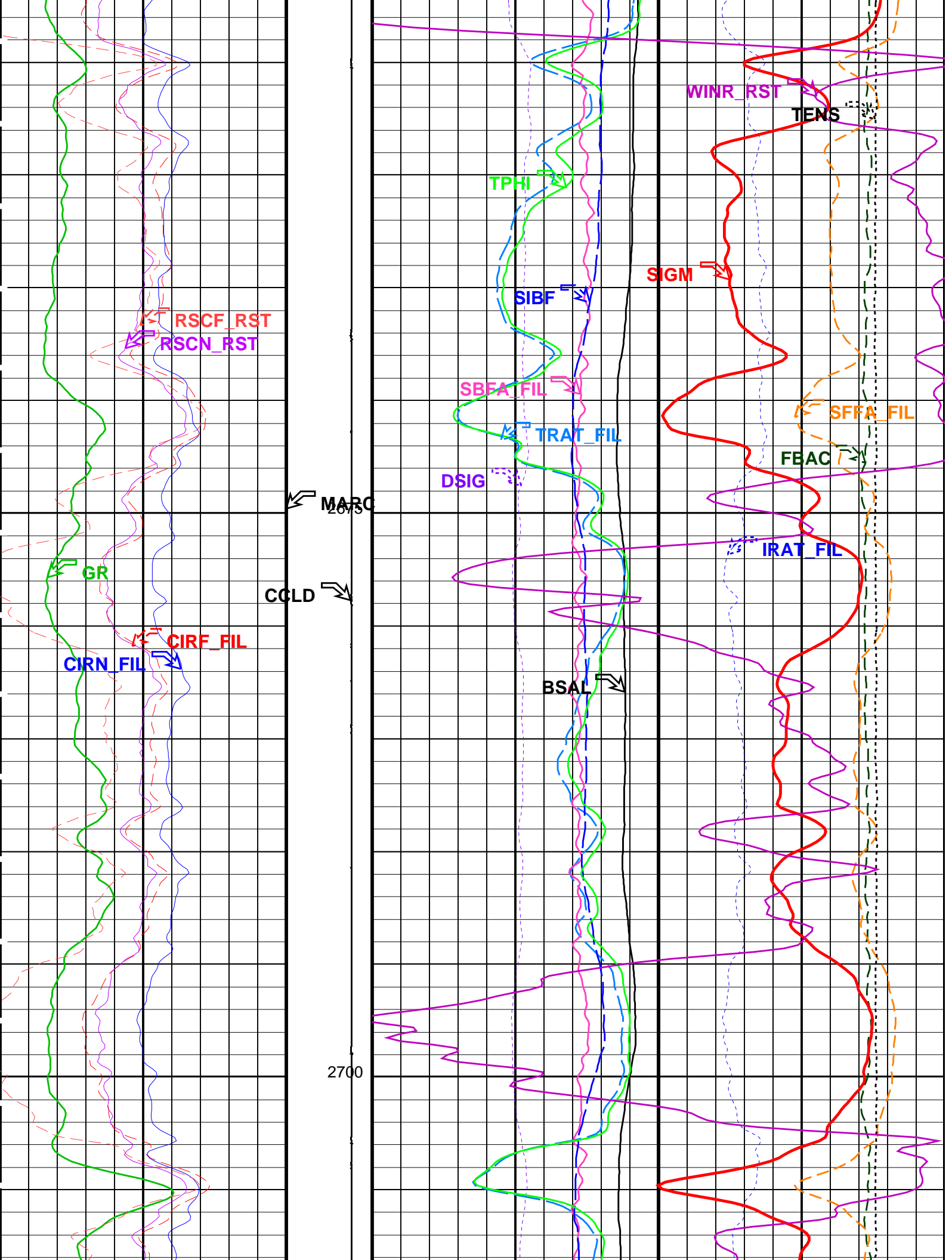
Input DLIS Files						
DEFAULT	RST_PSP_021LUP	FN:18	PRODUCER	11-May-2006 00:35	2799.9 M	2569.5 M
Output DLIS Files						
DEFAULT	RST_PSP_022PUP	FN:19	PRODUCER	11-May-2006 01:41		

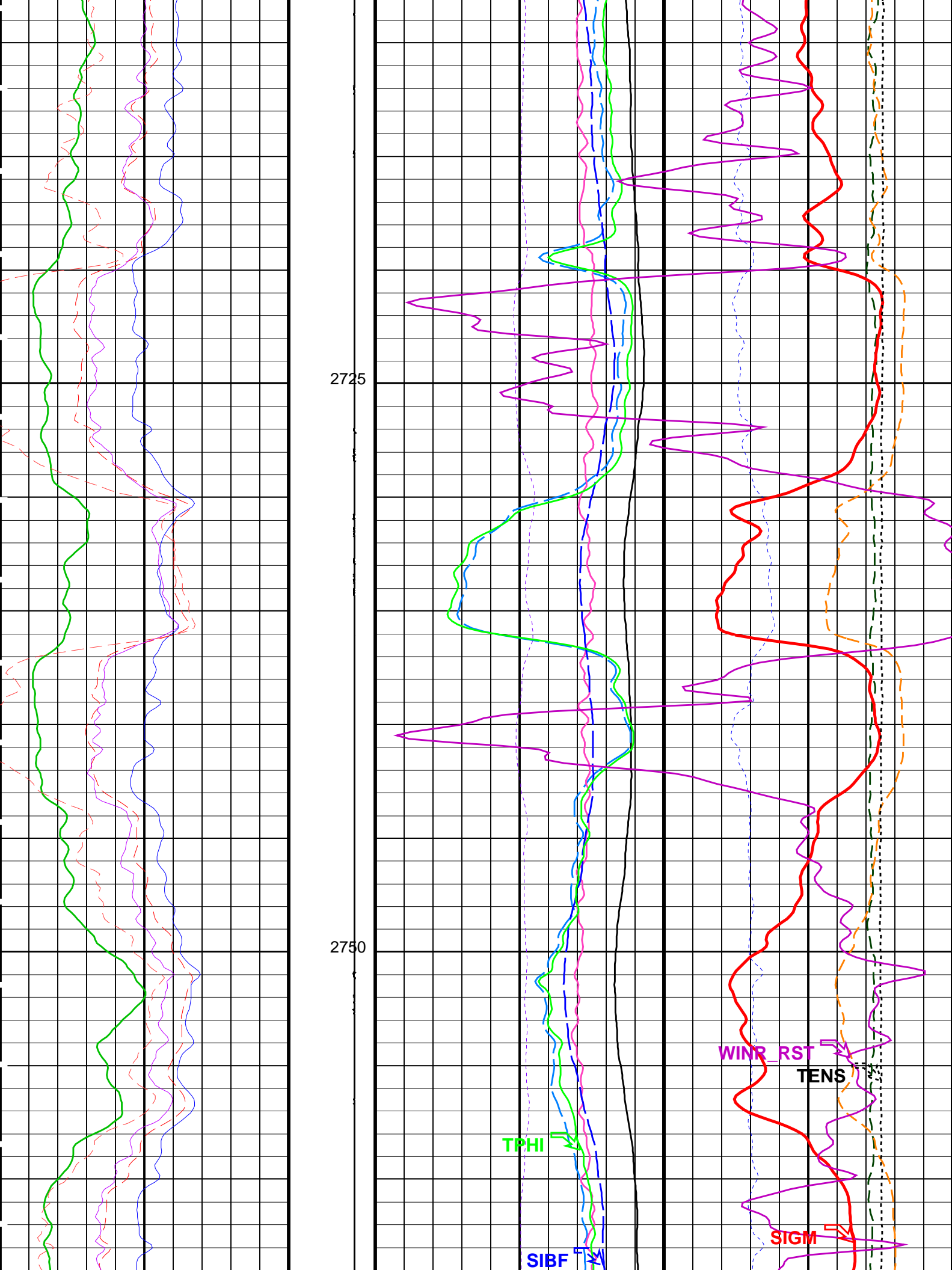
Company: Esso Australia Ltd.				Well: A-16
Output DLIS Files				
DEFAULT	RST_PSP_017LUP	FN:15	PRODUCER	10-May-2006 22:26 2800.5 M 2569.6 M

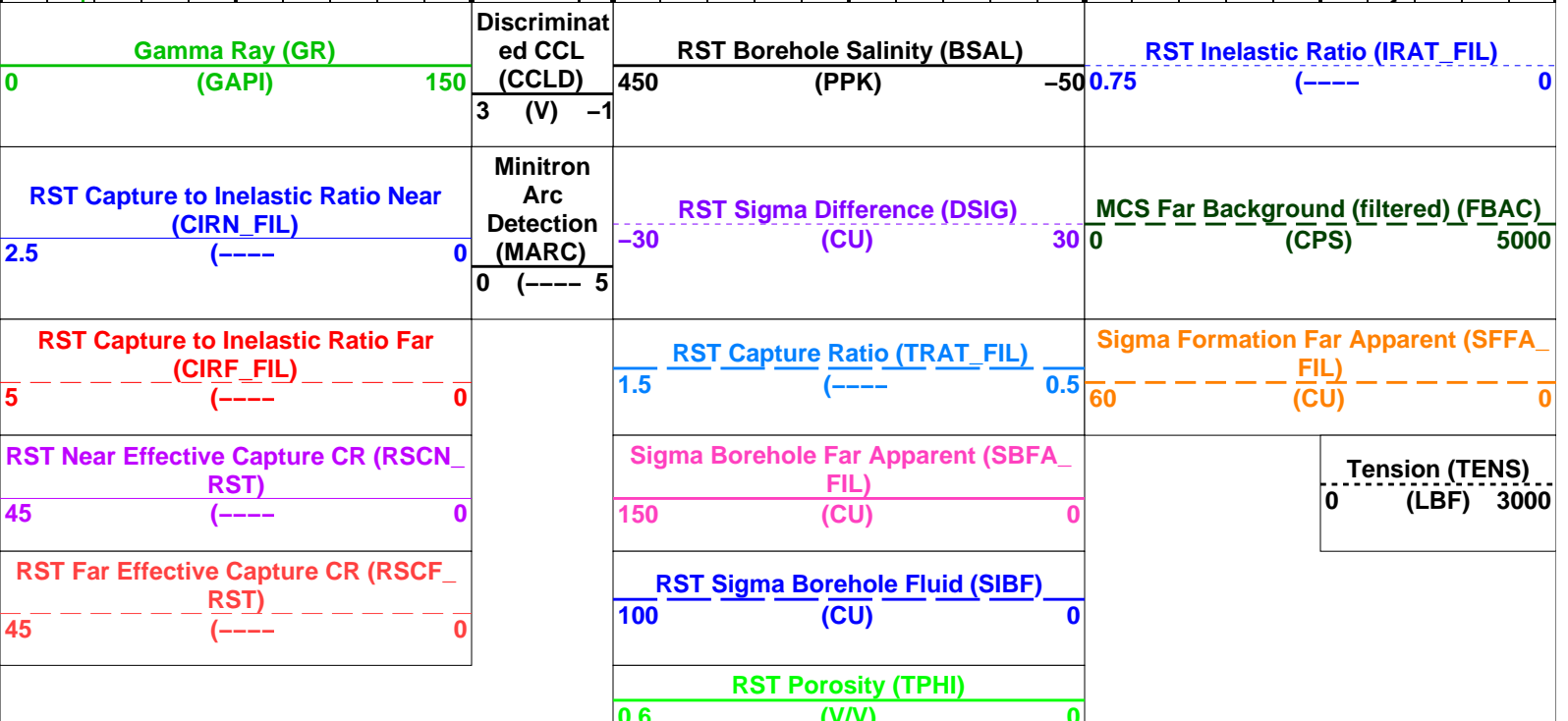
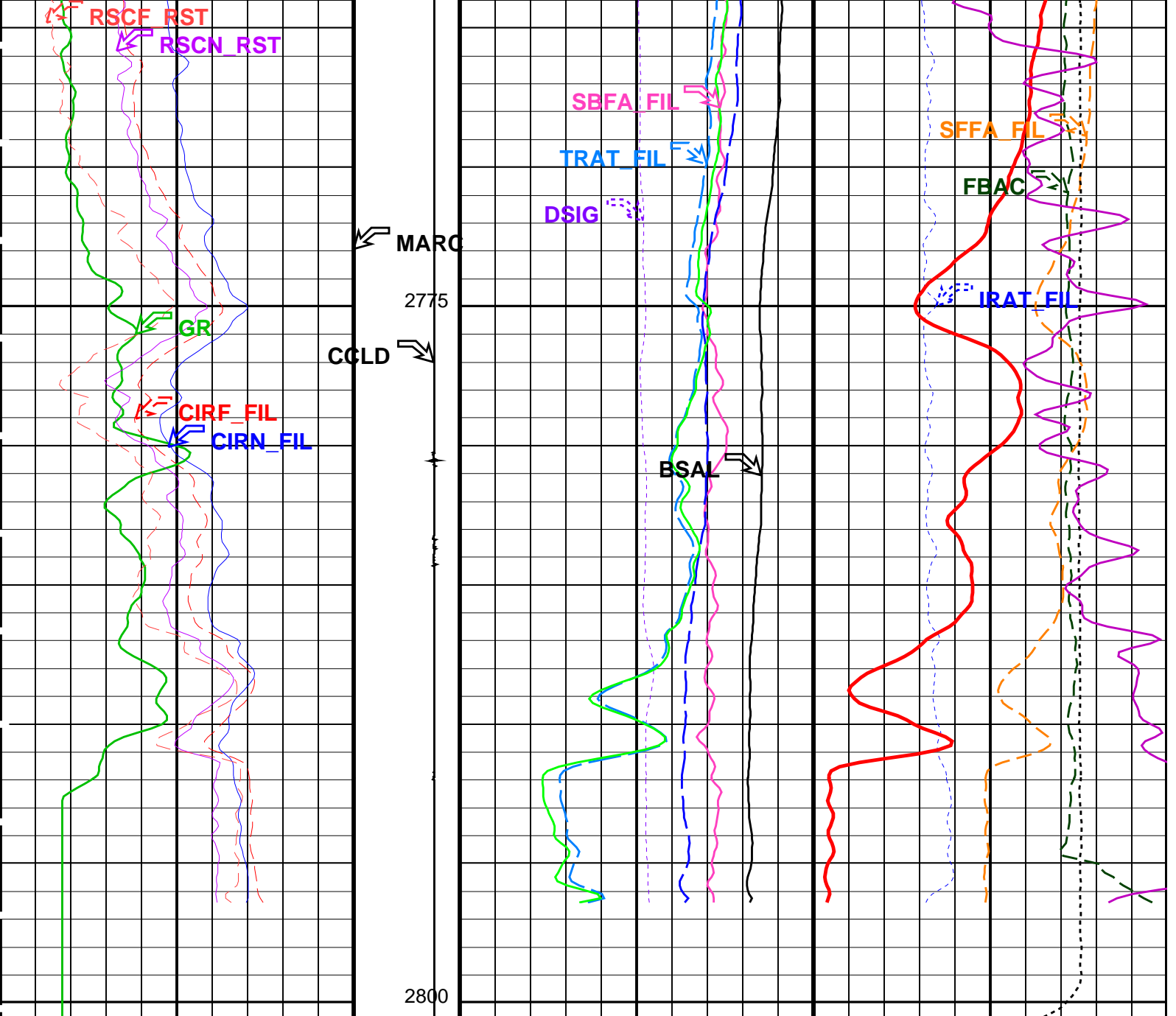
OP System Version: 14C0-302				
MCM				

Time Mark Every 60 S









0.0	(%)	0
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	
SMBMO	RST Sigma Mode Background Minitron Off	No	
TIER_SIGM	RST Sigma Acquisition Mode	0_RST_Sigma	
PSPT-A/B: Production Services Logging Platform			
BHS	Borehole Status	CASED	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
System and Miscellaneous			
BS	Bit Size	7.000	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: 10-May-2006 22:26

OP System Version: 14C0-302

MCM

RST-C	14C0-302	PSPT-A/B	14C0-302
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Output DLIS Files

DEFAULT RST_PSP_017LUP FN:15 PRODUCER 10-May-2006 22:26

PSP / RST
Correlation Pass

MAXIS Field Log

Input DLIS Files

DEFAULT	RST_PSP_013LUP	FN:11	PRODUCER	10-May-2006 21:49	2780.5 M	2681.5 M
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Output DLIS Files

DEFAULT	RST_PSP_016PUP	FN:14	PRODUCER	10-May-2006 22:16	2783.7 M	2679.6 M
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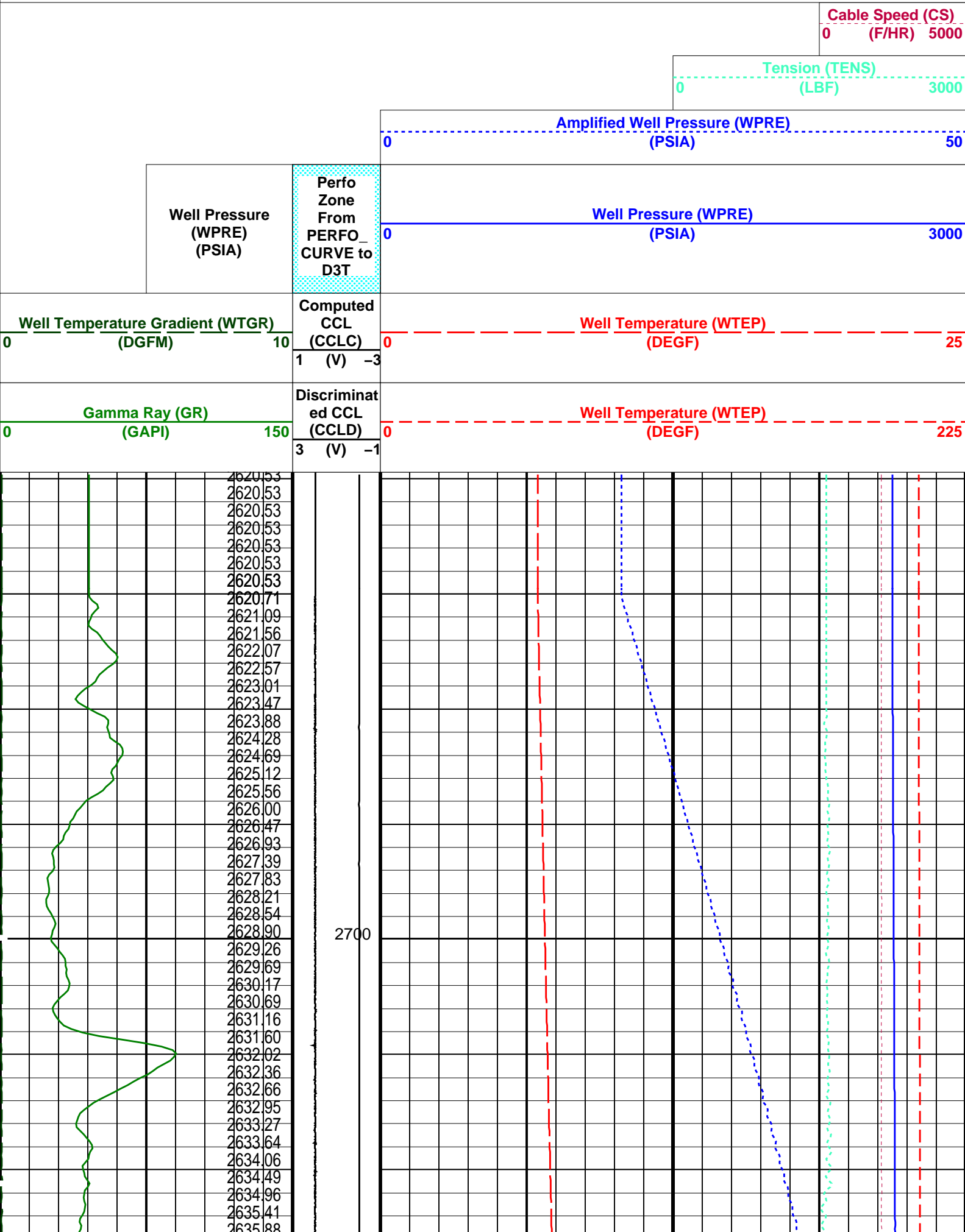
OP System Version: 14C0-302

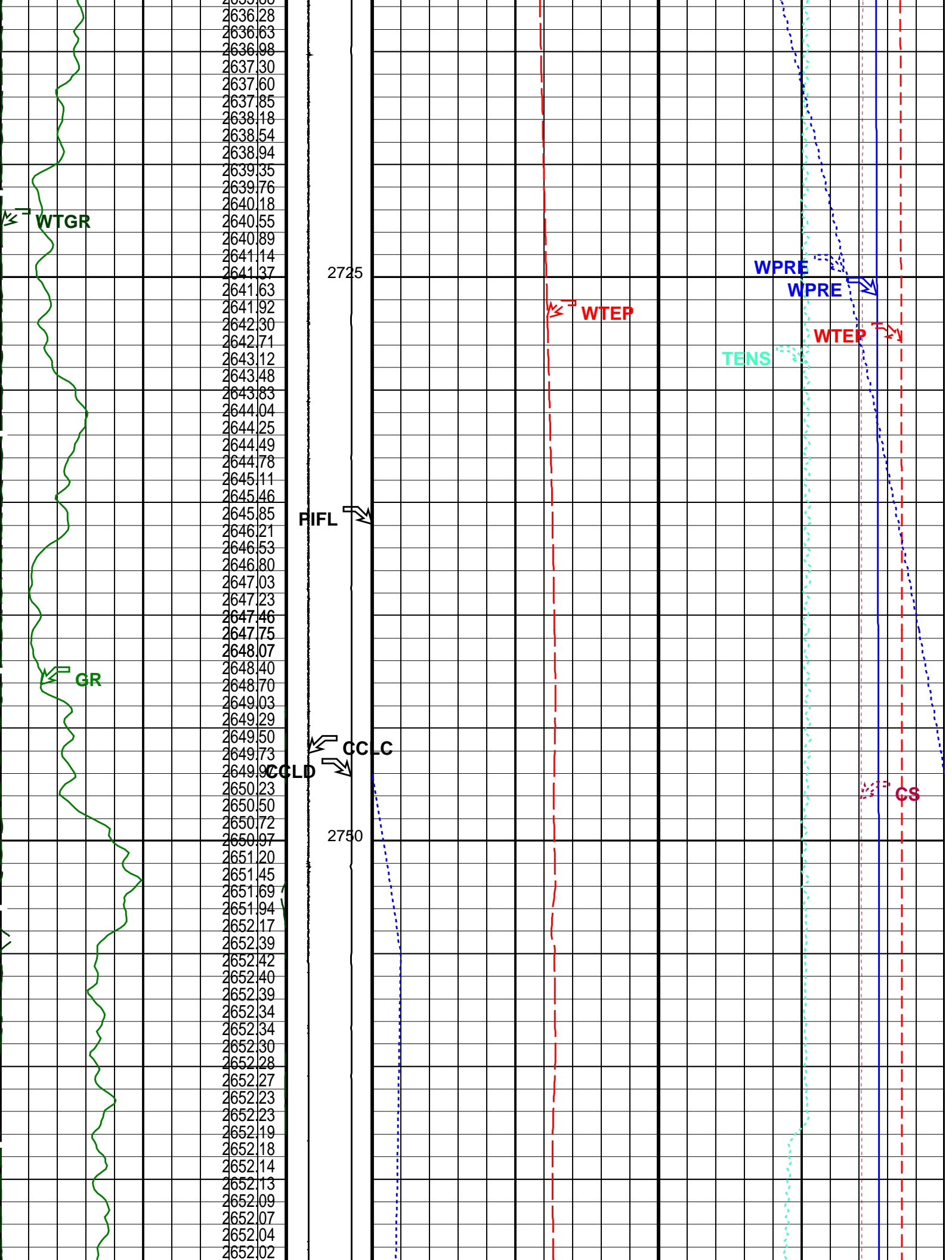
MCM

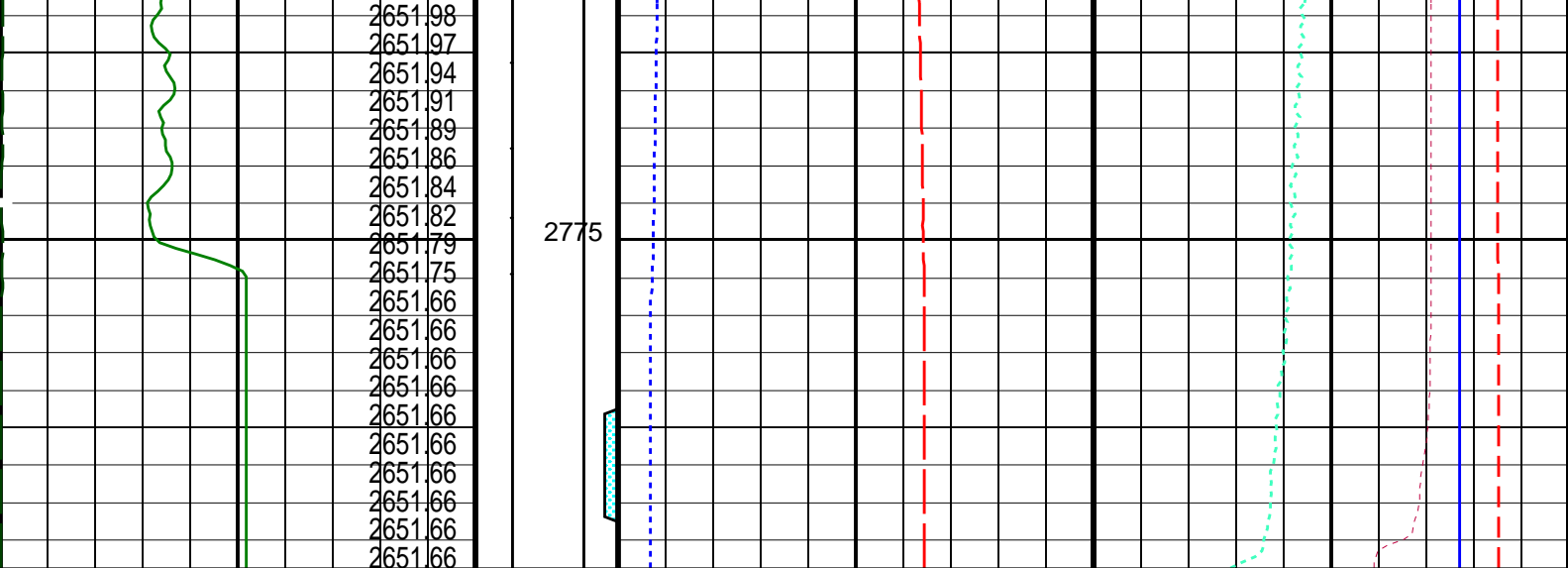
RST-C	14C0-302	PSPT-A/B	14C0-302
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PIP SUMMARY

Time Mark Every 60 S







Gamma Ray (GR) (GAPI)		Discriminat ed CCL (CCLD)	Well Temperature (WTEP) (DEGF)	
0	150	3 (V) -1	0	225
Well Temperature Gradient (WTGR) (DGFM)		Computed CCL (CCLC)	Well Temperature (WTEP) (DEGF)	
0	10	1 (V) -3	0	25
Well Pressure (WPRE) (PSIA)		Perfo Zone From PERFO_ CURVE to D3T	Well Pressure (WPRE) (PSIA)	
			0	3000
			Amplified Well Pressure (WPRE) (PSIA)	
			0	50
			Tension (TENS) (LBF)	
			0	3000
			Cable Speed (CS) (F/HR)	
			0	5000

PIP SUMMARY

Time Mark Every 60 S

Format: PSP_1_1 Vertical Scale: 1:200

Graphics File Created: 10-May-2006 22:16

OP System Version: 14C0-302

MCM

RST-C

14C0-302

PSPT-A/B

14C0-302

Parameters

DLIS Name

Description

Value

System and Miscellaneous		
DO	Depth Offset for Playback	3.2 M
PP	Playback Processing	NORMAL

Input DLIS Files

DEFAULT	RST_PSP_013LUP	FN:11	PRODUCER	10-May-2006 21:49	2780.5 M	2681.5 M
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Output DLIS Files

DEFAULT	RST_PSP_016PUP	FN:14	PRODUCER	10-May-2006 22:16
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Well: **A-16**

Field: **Bream A**

Rig : **Prod4**

Country: **Australia**

RST-C

Sigma Mode

Survey