

Company: Esso Australia Pty Ltd.

Well: A-2A
Field: Marlin
Rig: Prod 4 / Crane
Country: Australia

RST-C
Sigma
Survey

LOCATION

Gippsland Basin Bass Strait

Elev.: K.B. 27.4 m
G.L. -59 m
D.F. 27.4 m

Permanent Datum: M.S.L.
Log Measured From: K.B.
Drilling Measured From: K.B.

Elev.: 0 m
27.4 m above Perm. Datum

Rig: Prod 4 / Crane
Field: Marlin
Location: Gippsland
Well: A-2A
Company: Esso Australia Pty Ltd.

State: Victoria

Max. Well Deviation 37 deg

Longitude 148 13'09.18"E

Latitude 038 13'55.49"S

Logging Date	23-Oct-2007				
Run Number	One				
Depth Driller	1586 m				
Schlumberger Depth	1586 m				
Bottom Log Interval	1586 m				
Top Log Interval	1490 m				
Casing Fluid Type	Production Fluid				
Salinity					
Density					
Fluid Level					
BIT/CASING/TUBING STRING					
Bit Size	12.500 in				
From	642.0 m				
To	1658.1 m				
Casing/Tubing Size	9.625 in				
Weight	47 lbm/ft				
Grade	J-55				
From	11.69 m				
To	1658.11 m				
Maximum Recorded Temperatures	169 degF				
Logger On Bottom	23-Oct-2007		14:35		
Unit Number	Location	889 Ausl / Prod 4			
Recorded By	G Wright,S Gilbert.				
Witnessed By	G Rimmer,A Smyth.				

Run 1	
Oil Density	
Water Salinity	
Gas Gravity	
Bo	
Bw	
1/Bg	
Bubble Point Pressure	
Bubble Point Temperature	
Solution GOR	
Maximum Deviation	37 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	Location
Recorded By	
Witnessed By	

DEPTH SUMMARY LISTING

Date Created: 23-OCT-2007 7:18:03

Depth System Equipment

Depth Measuring Device		Tension Device		Logging Cable	
Type:	IDW-EB	Type:	PSDS/OSDS	Type:	2-32ZT
Serial Number:	6373	Serial Number:	325357	Serial Number:	24426
Calibration Date:	04-Jan-2007	Calibration Date:	10-Oct-2007	Length:	5584.85 M
Calibrator Serial Number:	9	Calibrator Serial Number:	1174	Conveyance Method: Wireline Rig Type: Rigless	
Calibration Cable Type:	2-32ZT	Calibration Gain:	0.89		
Wheel Correction 1:	-2	Calibration Offset:	180.00		
Wheel Correction 2:	-4				

Depth Control Parameters

Log Sequence:	Subsequent Log In the Well
Reference Log Name:	Solar composite log.
Reference Log Run Number:	
Reference Log Date:	

Depth Control Remarks

1. IDW used as primary depth control
2. Z Chart used as secondary depth control
3.
4.
5.
6.

DISCLAIMER

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OTHER SERVICES1
OS1: None
OS2:
OS3:
OS4:
OS5:

REMARKS: RUN NUMBER 1
Log correlated to Solar composite supplied with logging program.
Maximum well deviation = 37 degree's at 1570m MDKB.
RST-C Sigma survey with the well shut-in,2 passes at 900 ft/hr.
HUD = 1586.4m MDKB.
SBHP = 1991 psia.
SBHT = 169 degf.

Crew : J Light,J Annear,K Kerr,B Taylor.

RUN 1		
SERVICE ORDER #:	AusI07509092	
PROGRAM VERSION:	14C0-302	
FLUID LEVEL:	0 m	
LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

RUN 1		
SURFACE EQUIPMENT		
WITM-A 806 PSC_16MHZ 827		
DOWNHOLE EQUIPMENT		
AH-SWBS 731 AH-SWBS 731		12.61
AH-SWBS 763 AH-SWBS 763		11.93
AH-SWBS 762 AH-SWBS 762		11.24
AH-SWBS 761 AH-SWBS 761		10.55
MH-SWHS 753 MH-SWHS 753		9.87
PSPT-A/B 827 PSC-A 806 PSPT-B 827 PSTC 806 PBMS-B 827 CQG_F_Mano 827 RTD_Thermometer 827 GR 827 CCL 827 PBMS 827	<div>Detail MT TelStatus CTEM</div>  <div>GR</div>	9.54 9.54 8.41
RST-C 45 RSCH-A 45 RSC-C 45 RSS-A 45 RSXH-A 63 RSX-C 59	 <div>Well_Temp CQG Manom CCL PBMS PSTC</div>	7.48 7.37 7.25 7.02 7.02

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 1.72 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN METERS

Client: ExxonMobil

Well: MLA A-2a

Field: Marlin

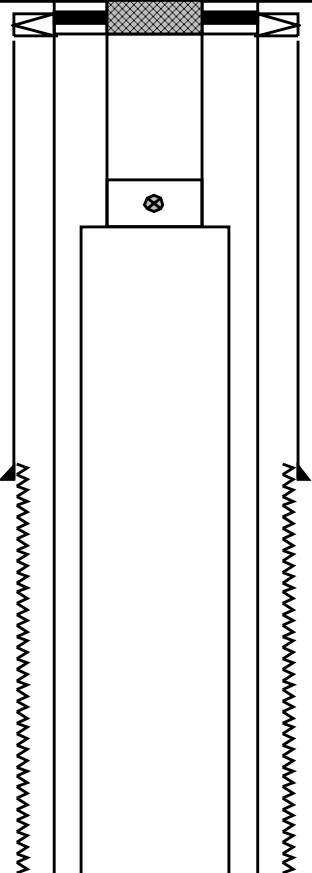
State: Victoria

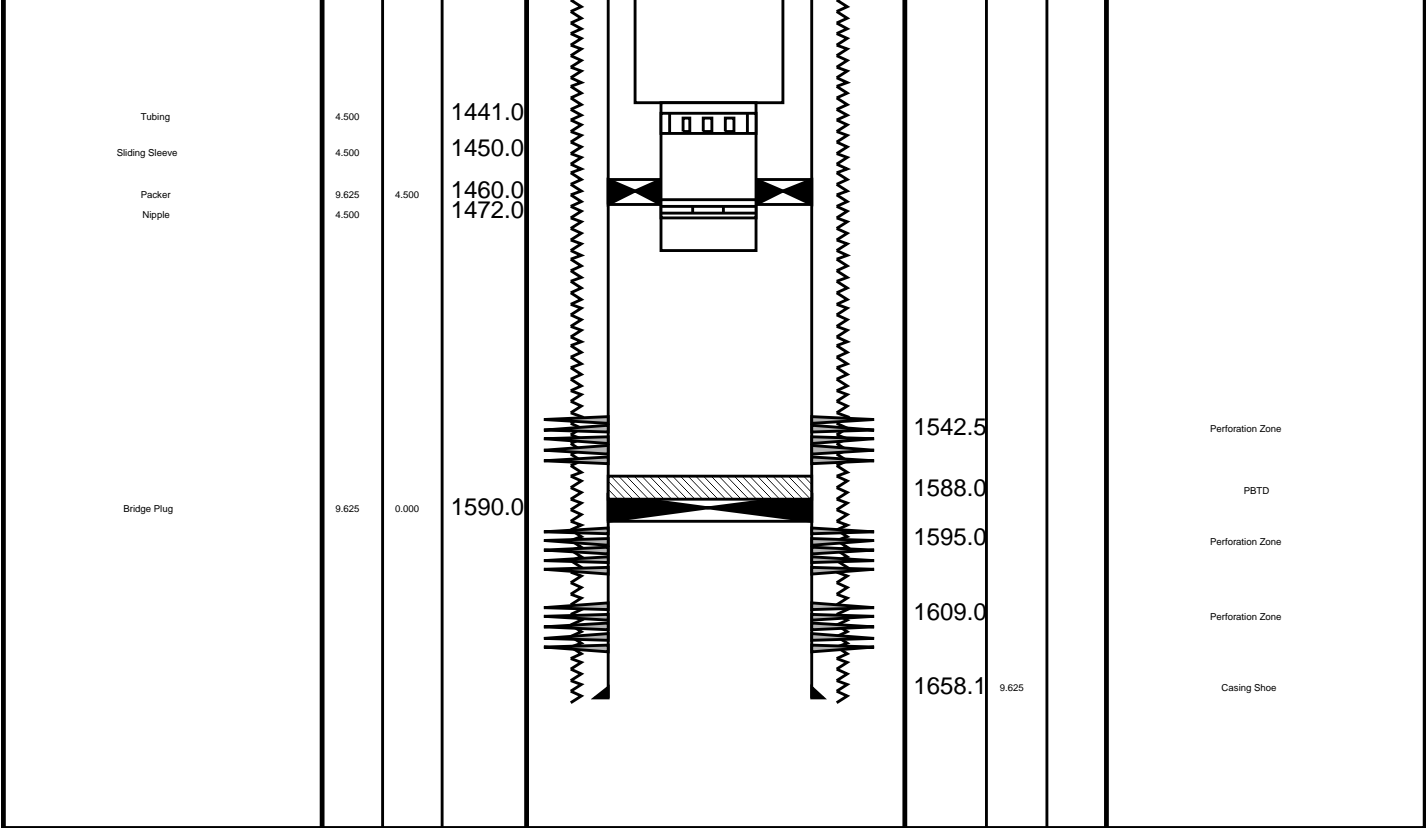
Country: Australia

Rig Name: Marlin

Kelly Bushing

Elevation: 27.4 m

Production String	(in)		(m)	Well Schematic	(m)	(in)		Casing String
	OD	ID	MD		MD	OD	ID	
Tubing Hanger	9.625	4.500	10.0		12.5	9.625		Casing String
Tubing	4.500		11.7		12.5	13.375	9.625	Casing Hanger
Shut-in Valve	4.500		124.3					
Tubing	7.000		125.0					
					642.6	13.375	12.500	Casing Shoe Borehole Segment



Job Event Summary

MAXIS Field Log

Schlumberger Job Event Summary

	Time	Elapsed Time	Depth (M)	File
Log Pass (down)	23-Oct-2007 14:08	000:28	-5.5 - 1592.1	RST_PSP_004LDP
Log Pass (up)	23-Oct-2007 14:39	000:01	1596.2 - 1589.2	RST_PSP_005LUP
Log Pass (up)	23-Oct-2007 14:41	000:23	1594.6 - 1481.5	RST_PSP_006LUP
Log Pass (up)	23-Oct-2007 15:04	000:22	1588.5 - 1479.5	RST_PSP_007LUP

Company: Esso Australia Pty Ltd. Well: A-2A

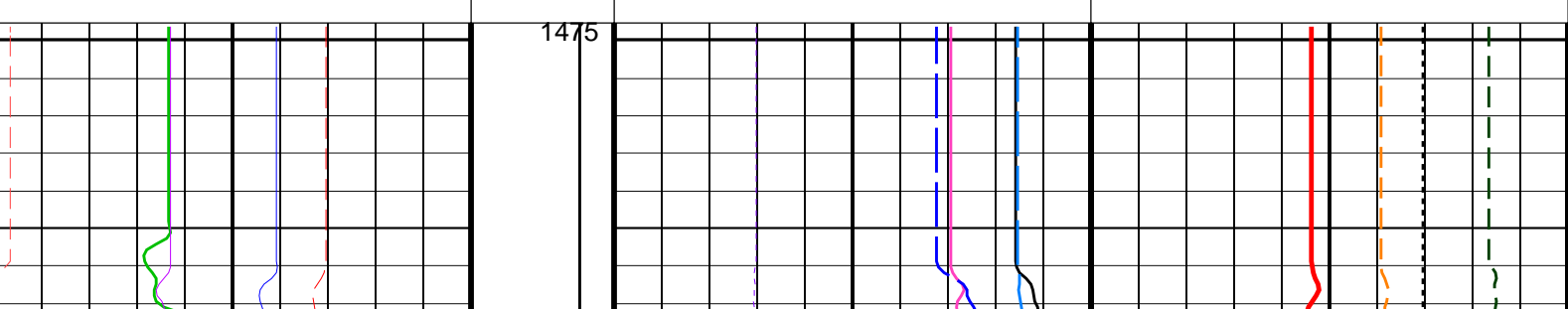
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Output DLIS Files						
DEFAULT	RST_PSP_010PUP	FN:9	PRODUCER	23-Oct-2007 15:32	1588.5 M	1474.5 M

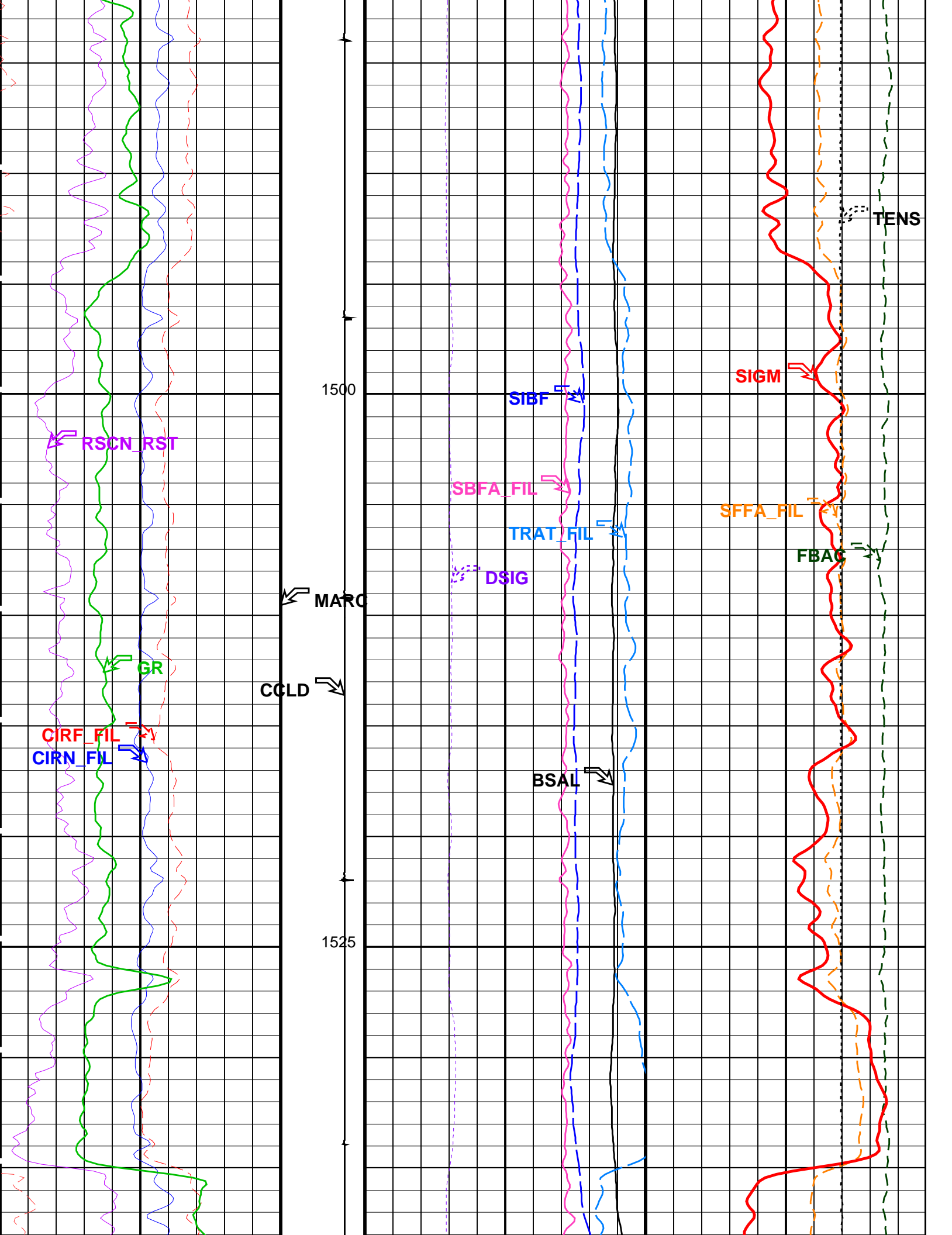
OP System Version: 14C0-302						
MCM						
RST-C	14C0-302	PSPT-A/B		14C0-302		

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 Sigma Borehole Fluid (SIBF)					
100 (CU) 0					
Sigma Borehole Far Apparent (SBFA_FIL)					
RST Far Effective Capture CR (RSCF_RST)		150 (CU) 0		Tension (TENS)	
45 (----) 0				0 (LBF) 3000	
RST Near Effective Capture CR (RSCN_RST)					
45 (----) 0					
RST Capture to Inelastic Ratio Far (CIRF_FIL)		RST Capture Ratio (TRAT_FIL)		Sigma Formation Far Apparent (SFFA_FIL)	
5 (----) 0		1.5 (----) 0.5		60 (CU) 0	
RST Capture to Inelastic Ratio Near (CIRN_FIL)		RST Sigma Difference (DSIG)		MCS Far Background (filtered) (FBAC)	
2.5 (----) 0		-30 (CU) 30		0 (CPS) 5000	
		Minitron Arc Detection (MARC)			
		0 (----) 5			
Gamma Ray (GR)		Discriminat ed CCL (CCLD)		RST Borehole Salinity (BSAL)	
0 (GAPI) 150		450 (PPK) -50		RST Inelastic Ratio (IRAT_FIL)	
		3 (V) -1		0.75 (----) 0	





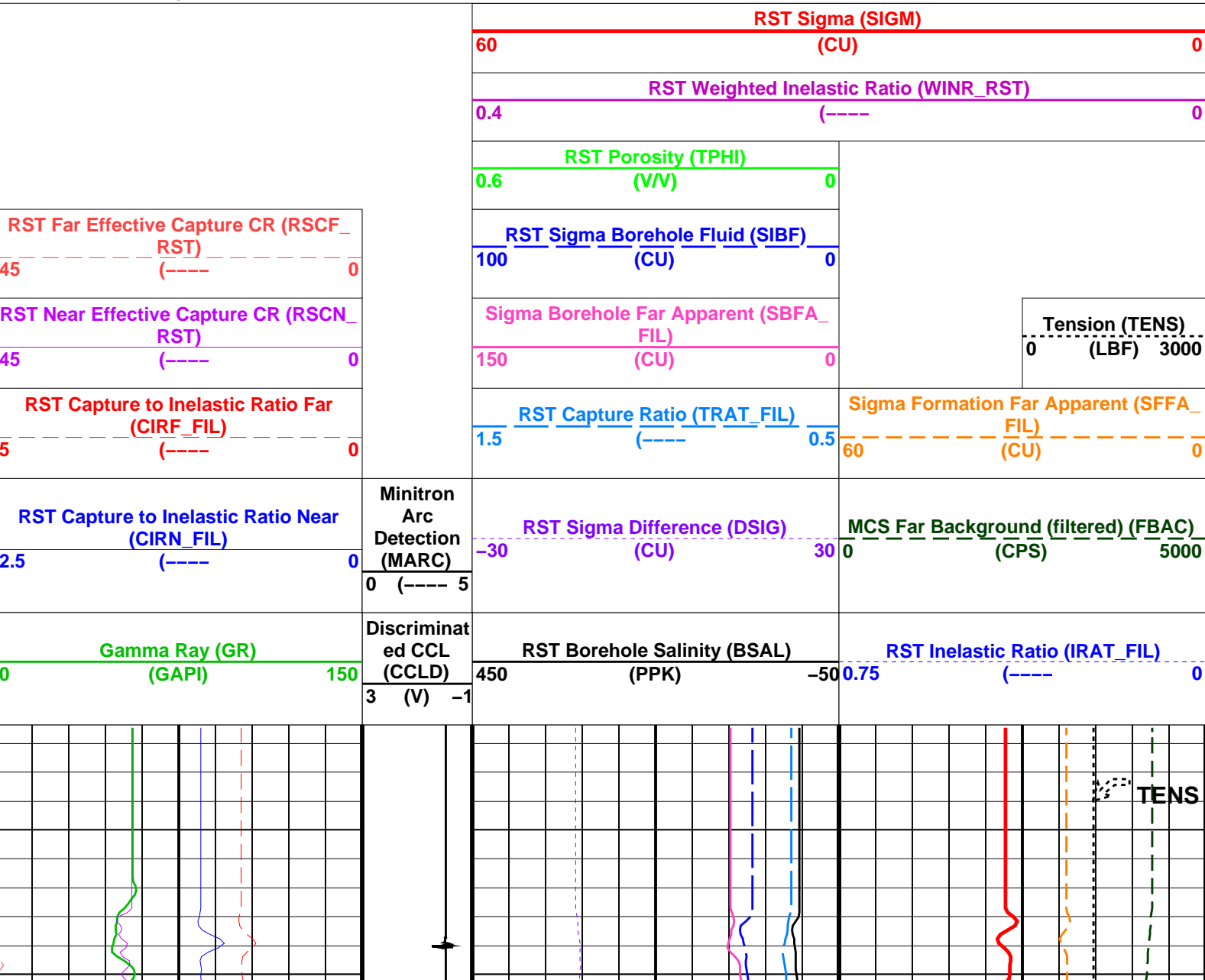
Company: Esso Australia Pty Ltd. Well: A-2A

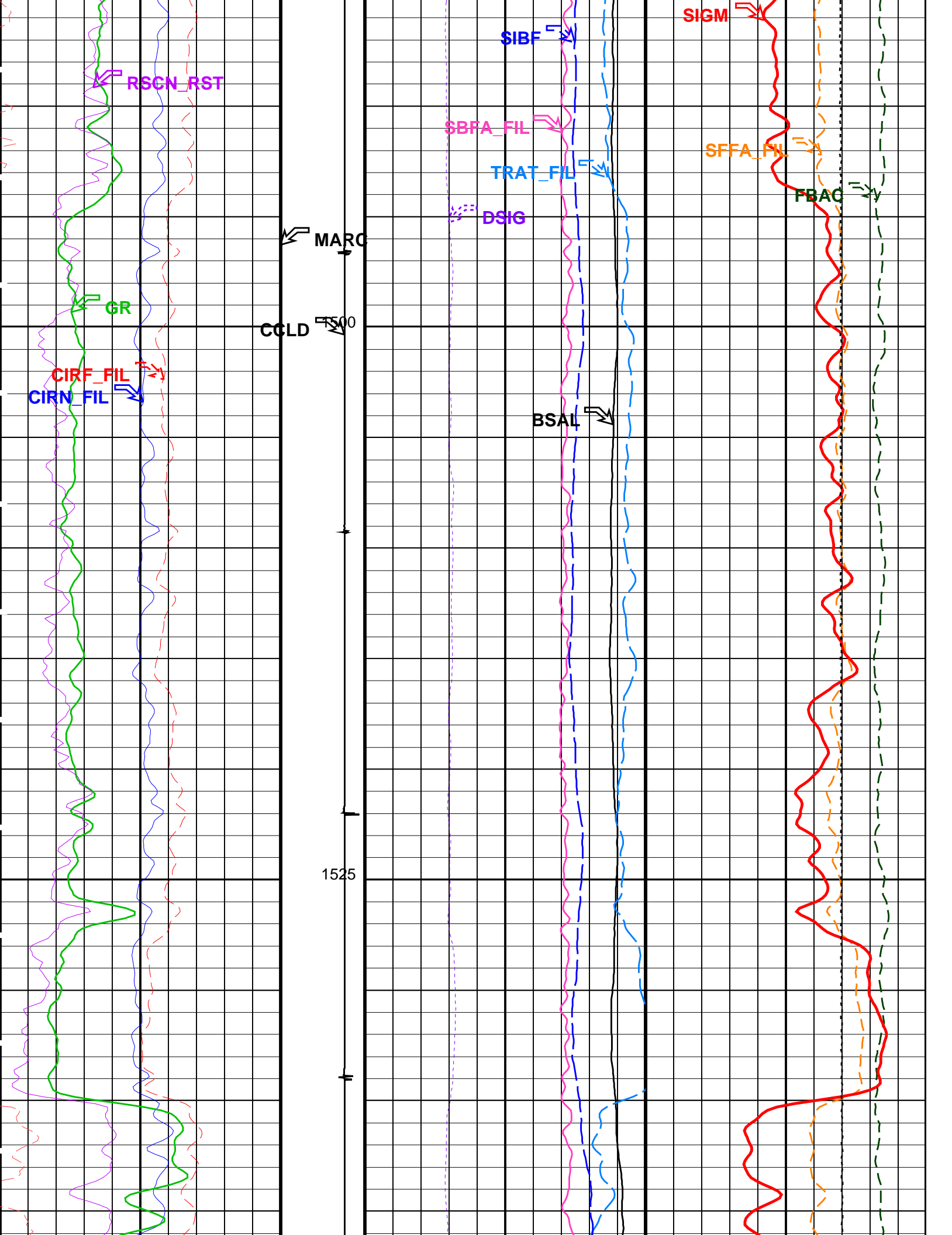
Input DLIS Files						
DEFAULT	RST_PSP_006LUP	FN:5	PRODUCER	23-Oct-2007 14:41	1594.6 M	1481.5 M
Output DLIS Files						
DEFAULT	RST_PSP_009PUP	FN:8	PRODUCER	23-Oct-2007 15:31	1594.4 M	1476.3 M

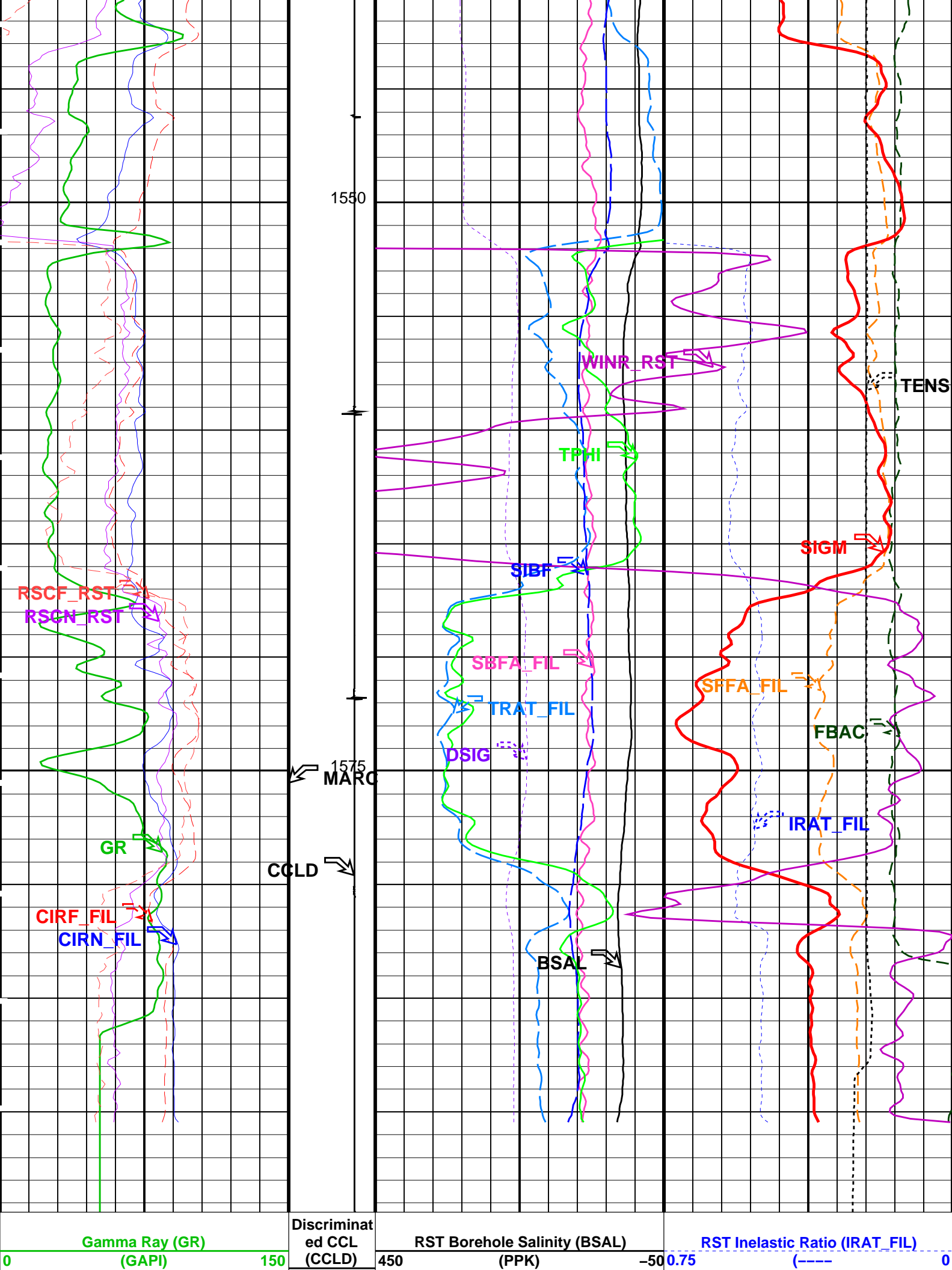
OP System Version: 14C0-302						
MCM						
RST-C	14C0-302	PSPT-A/B		14C0-302		

PIP SUMMARY

Time Mark Every 60 S







	3 (V) -1		
RST Capture to Inelastic Ratio Near (CIRN_FIL)	Minitron Arc Detection (MARC)	RST Sigma Difference (DSIG)	MCS Far Background (filtered) (FBAC)
2.5 (----) 0	0 (---- 5	-30 (CU) 30	0 (CPS) 5000
RST Capture to Inelastic Ratio Far (CIRF_FIL)		RST Capture Ratio (TRAT_FIL)	Sigma Formation Far Apparent (SFFA_FIL)
5 (----) 0		1.5 (----) 0.5	60 (CU) 0
RST Near Effective Capture CR (RSCN_RST)		Sigma Borehole Far Apparent (SBFA_FIL)	Tension (TENS)
45 (----) 0		150 (CU) 0	0 (LBF) 3000
RST Far Effective Capture CR (RSCF_RST)		RST Sigma Borehole Fluid (SIBF)	
45 (----) 0		100 (CU) 0	
		RST Porosity (TPHI)	
		0.6 (V/V) 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	CU
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	
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	12.500	IN
BSAL	Borehole Salinity	-50000.00	PPM
CSIZ	Current Casing Size	9.625	IN
CWEI	Casing Weight	47.00	LB/F
DO	Depth Offset for Playback	-0.1	M
PP	Playback Processing	NORMAL	

Format: RST_SIG_ANSW Vertical Scale: 1:200 Graphics File Created: 23-Oct-2007 15:31

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

Input DLIS Files						
DEFAULT	RST_PSP_006LUP	FN:5	PRODUCER	23-Oct-2007 14:41	1594.6 M	1481.5 M
Output DLIS Files						
DEFAULT	RST_PSP_009PUP	FN:8	PRODUCER	23-Oct-2007 15:31		

Company: Esso Australia Pty Ltd. Well: A-2A

Input DLIS Files

DEFAULT RST_PSP_006LUP FN:5 PRODUCER 23-Oct-2007 14:41 1594.6 M 1481.5 M

Output DLIS Files

DEFAULT RST_PSP_009PUP FN:8 PRODUCER 23-Oct-2007 15:31 1594.4 M 1476.3 M

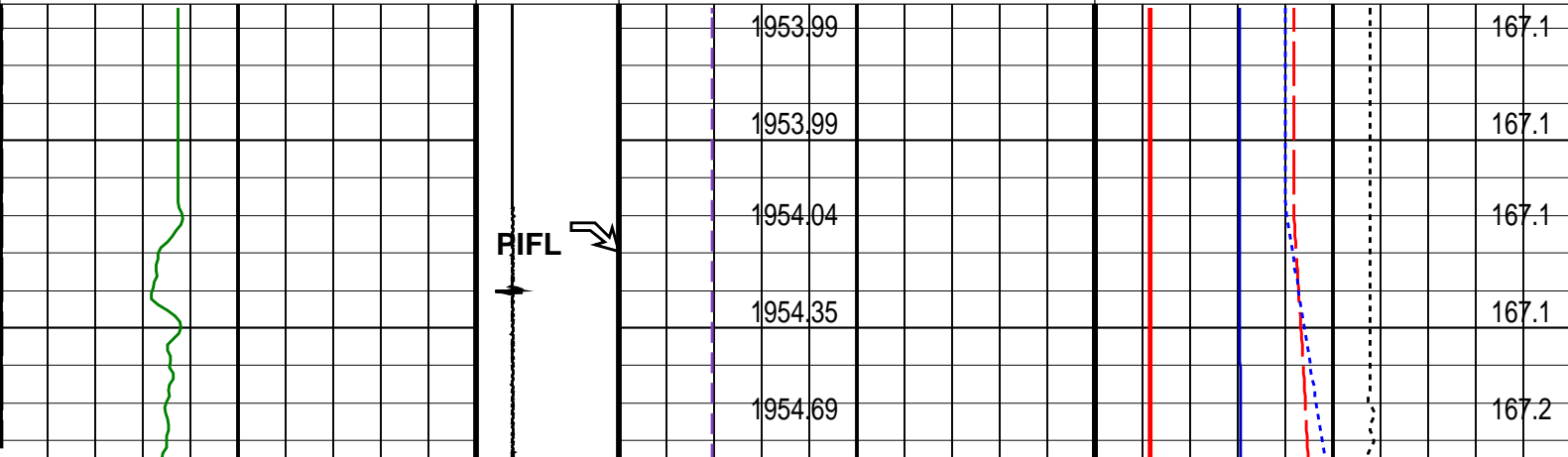
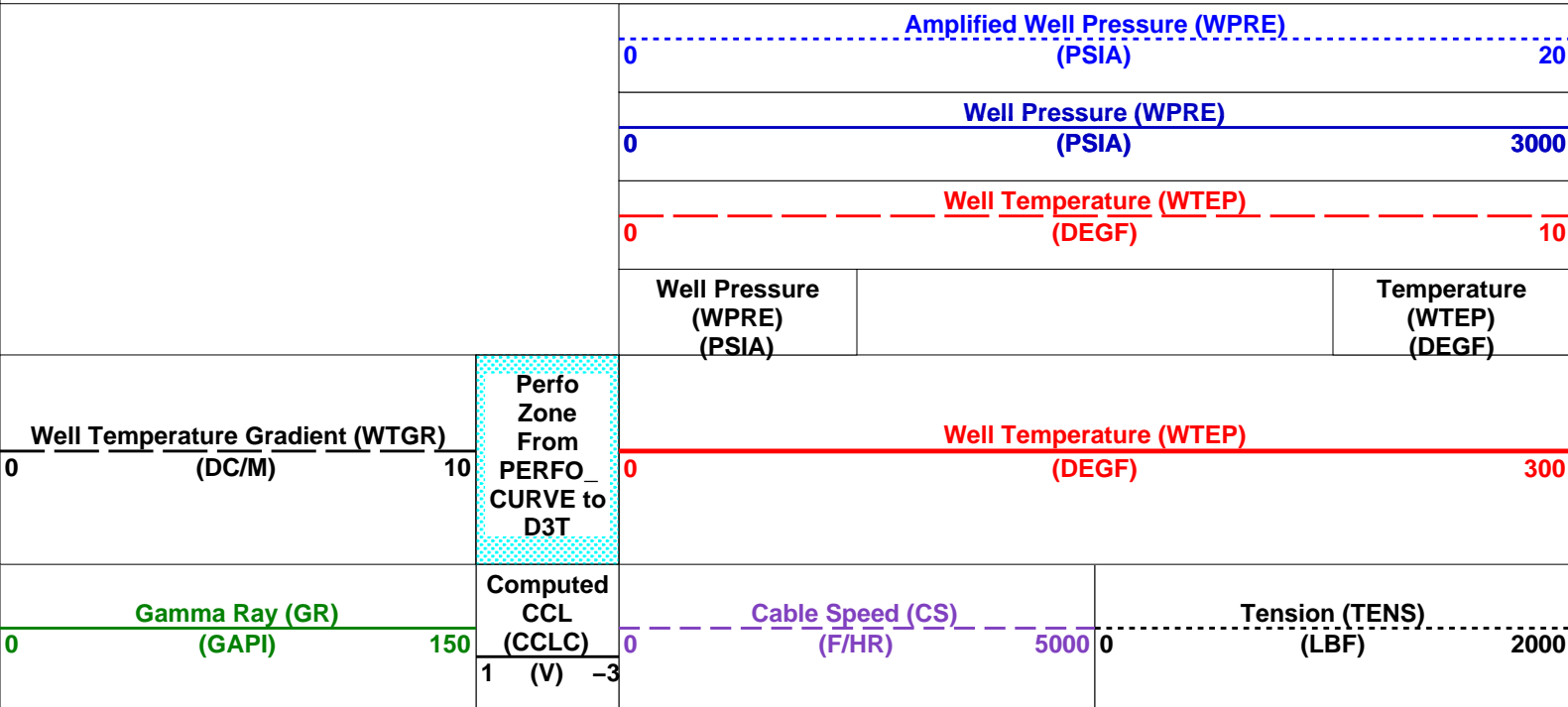
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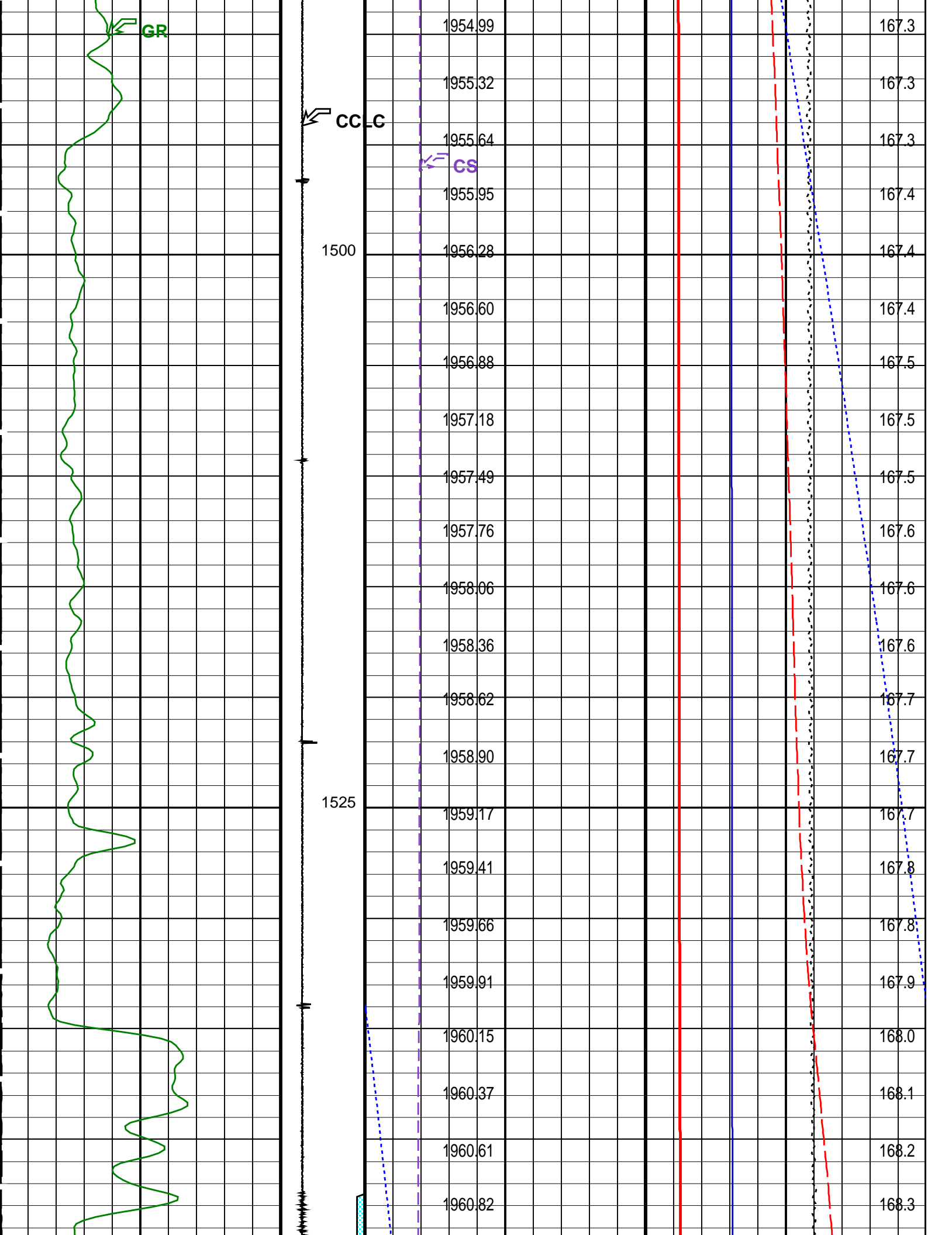
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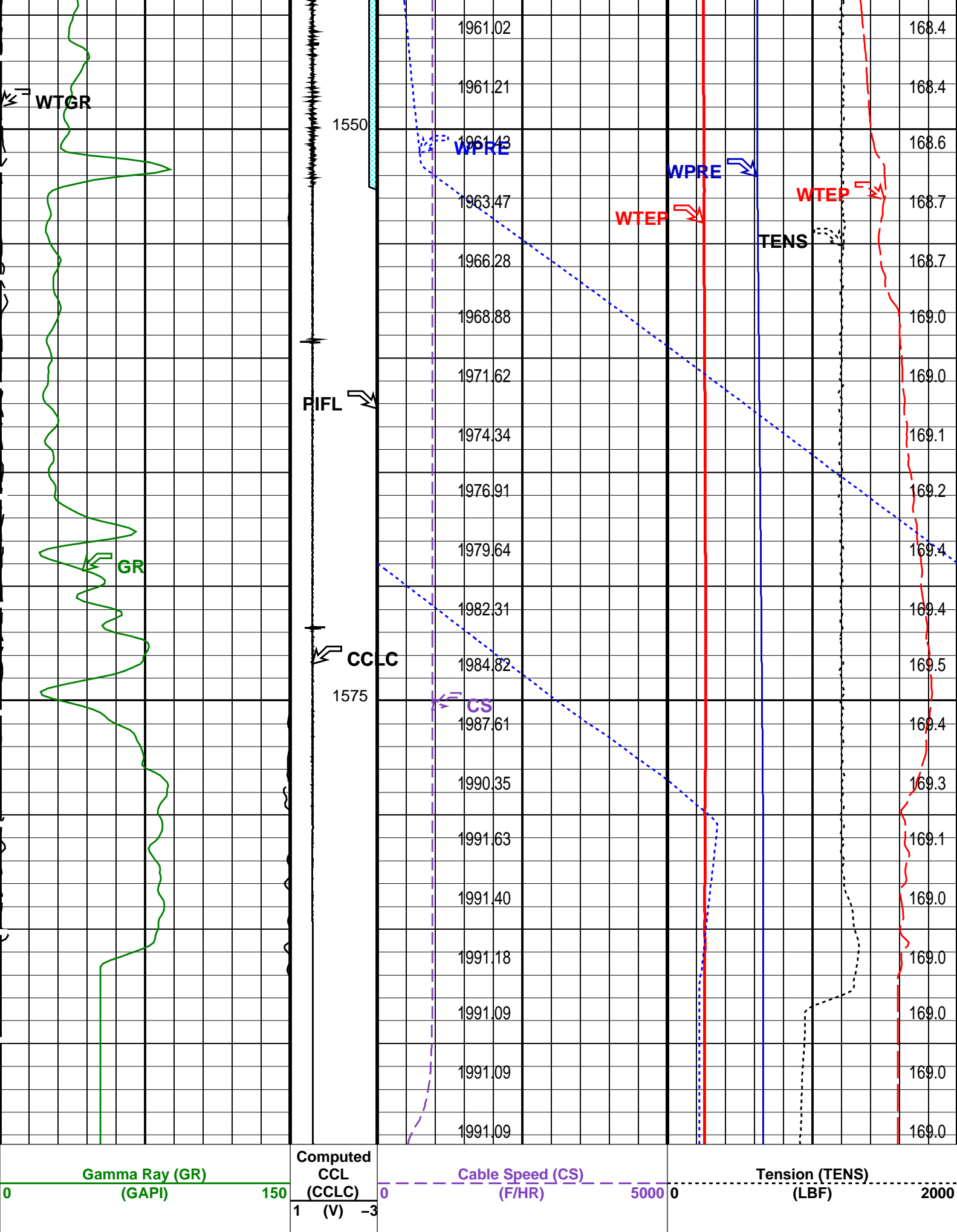
RST-C 14C0-302 PSPT-A/B 14C0-302

PIP SUMMARY

Time Mark Every 60 S







Well Temperature Gradient (WTGR) (DC/M)	From PERFO_ CURVE to D3T	Well Temperature (WTEP) (DEGF)		300
0	10	Well Pressure (WPRE) (PSIA)	Temperature (WTEP) (DEGF)	
		Well Temperature (WTEP) (DEGF)		
		Well Pressure (WPRE) (PSIA)		
		Amplified Well Pressure (WPRE) (PSIA)		
		PIP SUMMARY		

Time Mark Every 60 S	Format: PSP_1	Vertical Scale: 1:200	Graphics File Created: 23-Oct-2007 15:31
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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			-0.1	M
PP		Playback Processing			NORMAL	
Input DLIS Files						
DEFAULT	RST_PSP_006LUP	FN:5	PRODUCER	23-Oct-2007 14:41	1594.6 M	1481.5 M
Output DLIS Files						
DEFAULT	RST_PSP_009PUP	FN:8	PRODUCER	23-Oct-2007 15:31		

Company:	Esso Australia Pty Ltd.	Schlumberger
Well:	A-2A	
Field:	Marlin	
Rig:	Prod 4 / Crane	
Country:	Australia	
	RST-C	
	Sigma	
	Survey	