

Company: Esso Australia Pty Ltd.

Well: A-3
Field: Bream A
Rig : Prod4 / Crane
Country: Australia

Prod4 / Crane

Rig :
Field:
Location:
Well:
Company:

Bream A
Gippsland
A-3
Esso Australia Pty Ltd.

RST-C
Sigma
Survey

Gippsland
Basin
Bass Strait

Elev.:
K.B. 33.5 m
G.L. -59 m
D.F. 33.5 m

Permanent Datum:
Log Measured From:
Drilling Measured From:

M.S.L.
D.F.
D.F.

0 m
above Perm. Datum

State :
Victoria

Max. Well Deviation
73 deg

Longitude
147 46'15"E

Latitude
038 30'04"S

Logging Date	15-Jun-2007		
Run Number	One		
Depth Driller	3328 m		
Schlumberger Depth	3324 m		
Bottom Log Interval	3324 m		
Top Log Interval	3200 m		
Casing Fluid Type	Production Fluids		
Salinity			
Density			
Fluid Level	750 m		
BIT/CASING/TUBING STRING			
Bit Size	6.750 in		
From			
To			
Casing/Tubing Size	5.000 in		
Weight	18 lbn/ft		
Grade	P-110		
From	3114.12 m		
To	3428 m		
Maximum Recorded Temperatures	205 degF		
Logger On Bottom	15-Jun-2007		
Unit Number	889	Prod4 / Ausl	3:20
Recorded By	G Wright & S Gilbert.		
Witnessed By	B White & B Robinson.		

PVT DATA				
Oil Density				
Water Salinity				
Gas Gravity				
Bo				
Bw				
1/Bg				
Bubble Point Pressure				
Bubble Point Temperature				
Solution GOR				
Maximum Deviation	73 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				

DEPTH SUMMARY LISTING

Date Created: 13-JUN-2007 13:28:25

Depth System Equipment

Depth Measuring Device	Tension Device	Logging Cable
Type: IDW-EB Serial Number: 6373 Calibration Date: 4-Jan-2007 Calibrator Serial Number: 9 Calibration Cable Type: 2-23ZT Wheel Correction 1: -2 Wheel Correction 2: -4	Type: PSDS/OSDS Serial Number: 325357 Calibration Date: 10-Jun-2007 Calibrator Serial Number: 1174 Calibration Gain: 0.92 Calibration Offset: 199.00	Type: 2-32ZT Serial Number: 24425 Length: 6449.87 M Conveyance Method: Wireline Rig Type: Rigless

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 backup
3.
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
OS1: 2 1/8" Phased
OS2: Perforation .
OS3: HPI Plug .
OS4:
OS5:
REMARKS: RUN NUMBER 1
Log correlated to ExxonMobil composite supplied with logging program.
Maximum well deviation = 73 degrees at 3414m MDKB.
Objective: conduct RST Sigma survey from HUD to 3200 MDKB
making 2 passes @ 900ft/hr with well shut in .
SBHP: 2649 psia
SBHT: 205 degf
HUD: 3328 m MDKB (not tagged due to debris)

Crew : J Annear,A Hall,P Lawrence,C Shiells.

RUN 1					
SERVICE ORDER #:		AusI07328223			
PROGRAM VERSION:		14C0-302			
FLUID LEVEL:		750 m			
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

RUN 1		RUN 2	
SURFACE EQUIPMENT			
WITM-A PSC_16MHZ 806			
DOWNHOLE EQUIPMENT			
SWBS-B 763			11.93
SWBS-B 762			11.24
SWBS-B 761			10.55
SWHS-A 726	Detail MT TelStatus CTEM		9.87
PSPT-A/B 827		9.54	9.54
PSC-A 806 PSPT-B 827 PSTC 806 PBMS-B 827 CQG_F_Mano 827 RTD Thermometer 827 GR 827 CCL 827 PBMS 827	GR	8.41	
	Well_Temp CQG Manom CCL PBMS PSTC	7.48 7.37 7.25 7.02	
RST-C BLK2			7.02
RSCH-A 98 RSC-C 116 RSS-A 93 RSXH-A 179 RSX-C 101			

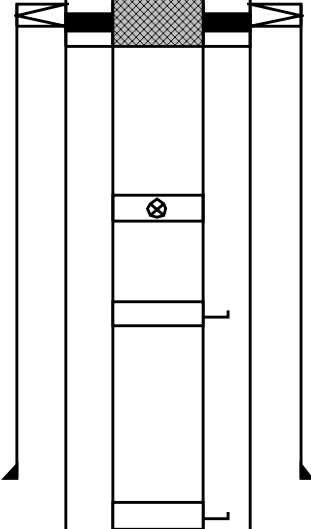
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RSC-A PNG
RSC-A Nea
RSX-A PNG

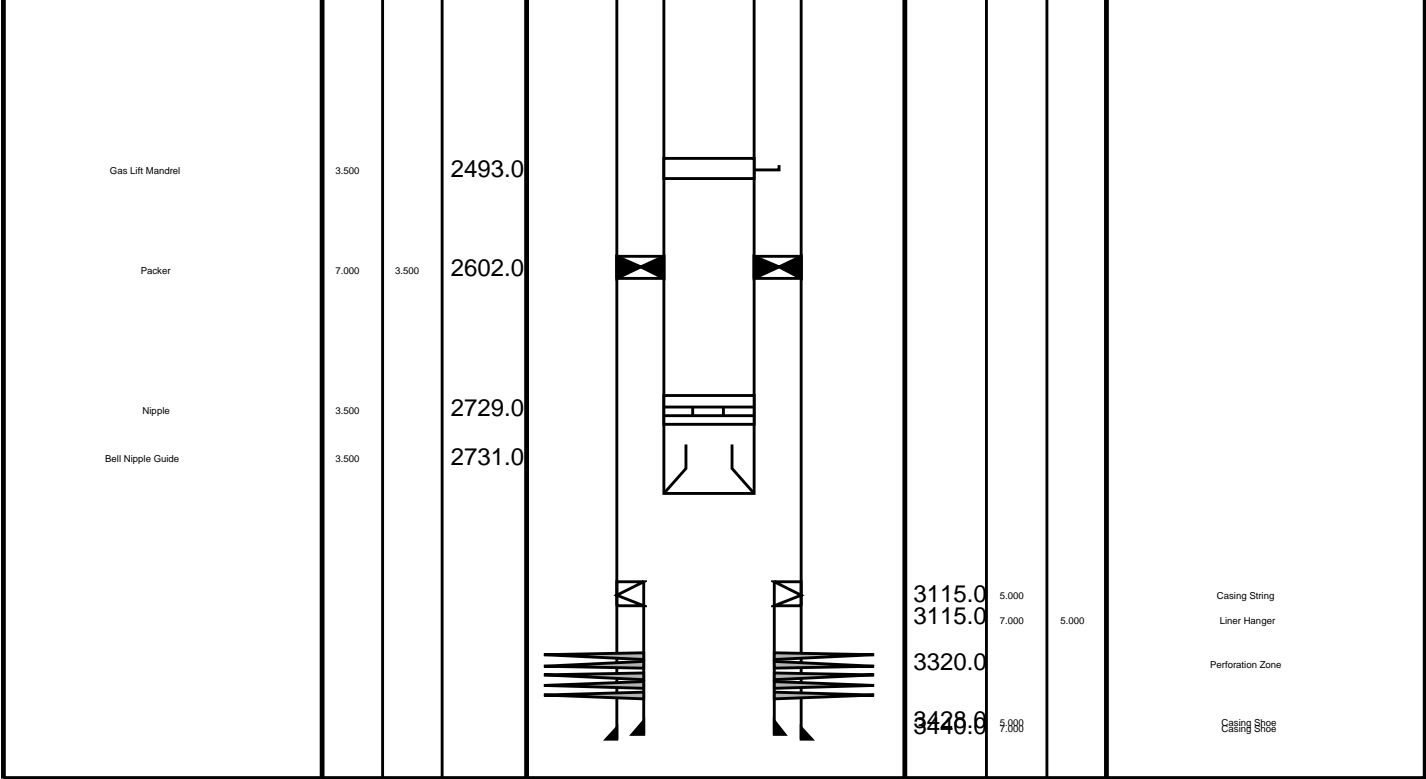
4.24

4.09

Tension HV 0.00
TOOL ZERO

MAXIMUM STRING DIAMETER 1.72 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN METERS

Production String	(m)		(m)	Well Schematic	(m)			Casing String
	OD	ID			MD	OD	ID	
Tubing Hanger	3.998	3.500	10.0		11.0	10.030		Casing String
					11.0	10.750	7.000	Liner Hanger
Shutin Valve	3.500		455.0					
Gas Lift Mandrel	3.500		568.0					
Gas Lift Mandrel	3.500		1141.0		994.0	10.750		Casing Shoe



Job Events Summary

MAXIS Field Log

Schlumberger Job Event Summary

Time	Elapsed Time	Depth (M)	File
Log Pass (down)	15-Jun-2007 2:54	000:02	3087.9 - 3113.8 RST_PSP_010LDP
Log Pass (down)	15-Jun-2007 2:56	000:02	3078.2 - 3114.9 RST_PSP_011LDP
Log Pass (down)	15-Jun-2007 3:00	000:02	3065.1 - 3117.6 RST_PSP_012LDP
Log Pass (down)	15-Jun-2007 3:03	000:03	3061.1 - 3119.8 RST_PSP_013LDP
Log Pass (down)	15-Jun-2007 3:07	000:02	3010.7 - 3122.2 RST_PSP_014LDP
Log Pass (down)	15-Jun-2007 3:11	000:03	3116.1 - 3296.4 RST_PSP_015LDP
Log Pass (up)	15-Jun-2007 3:15	000:03	3300.5 - 3267.8 RST_PSP_016LUP
Log Pass (down)	15-Jun-2007 3:21	000:01	3269.7 - 3319.1 RST_PSP_017LDP
Log Pass (up)	15-Jun-2007 3:22	000:16	3323.1 - 3184.9 RST_PSP_018LUP
Log Pass (up)	15-Jun-2007 3:51	000:30	3323.7 - 3191.7 RST_PSP_019LUP
Log Pass (down)	15-Jun-2007 4:25	000:02	3251.8 - 3285.6 RST_PSP_020LDP
Log Pass (up)	15-Jun-2007 4:27	000:33	3324.0 - 3185.8 RST_PSP_021LUP



SIGMA PASS # 2

MAXIS Field Log

Company: Esso Australia Pty Ltd. Well: A-3

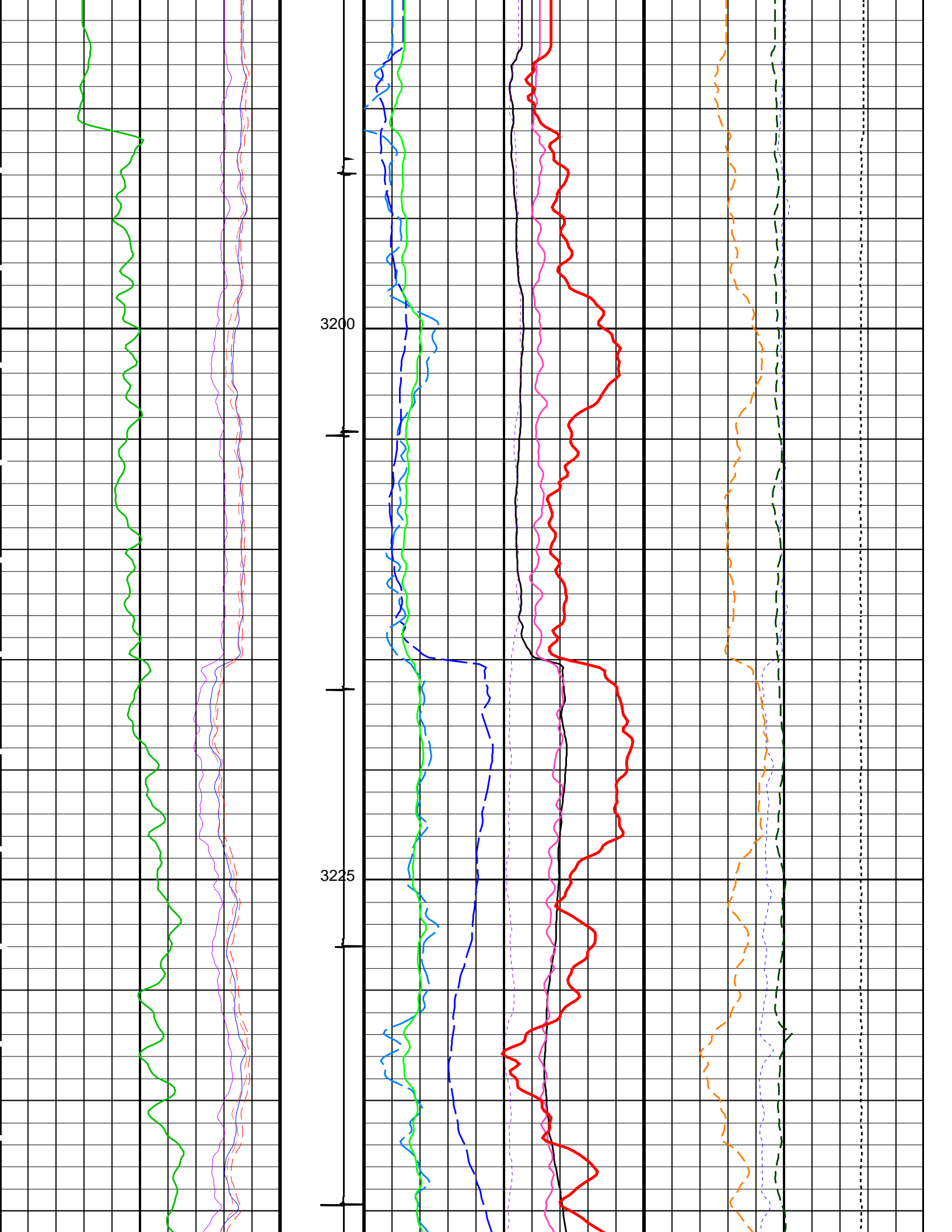
Input DLIS Files						
DEFAULT	RST_PSP_021LUP	FN:20	PRODUCER	15-Jun-2007 04:27	3324.0 M	3185.8 M
Output DLIS Files						
DEFAULT	RST_PSP_031PUP	FN:30	PRODUCER	15-Jun-2007 06:02	3324.0 M	3180.7 M

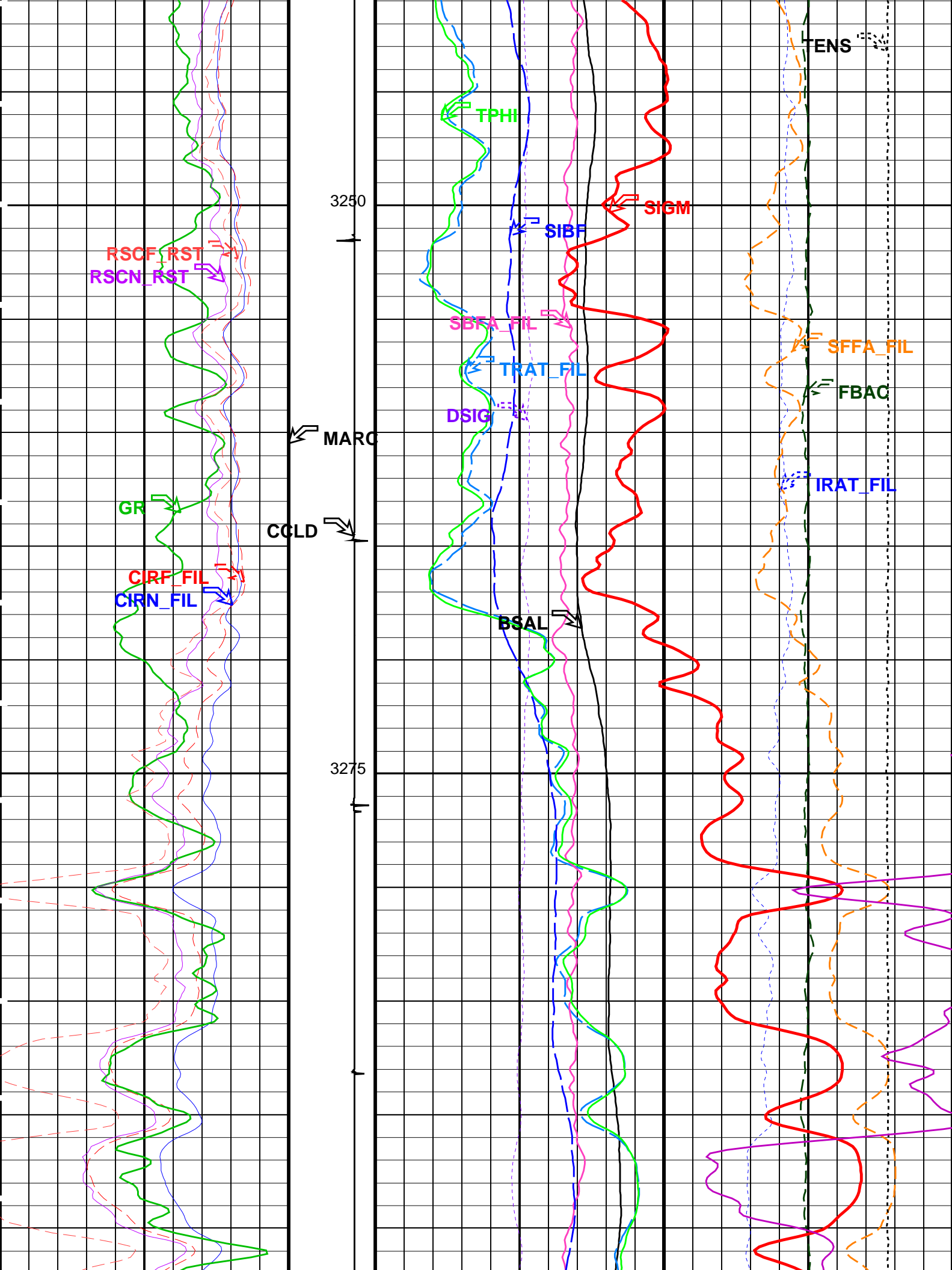
OP System Version: 14C0-302						
MCM						
RST-C	14C0-302	PSPT-A/B		14C0-302		

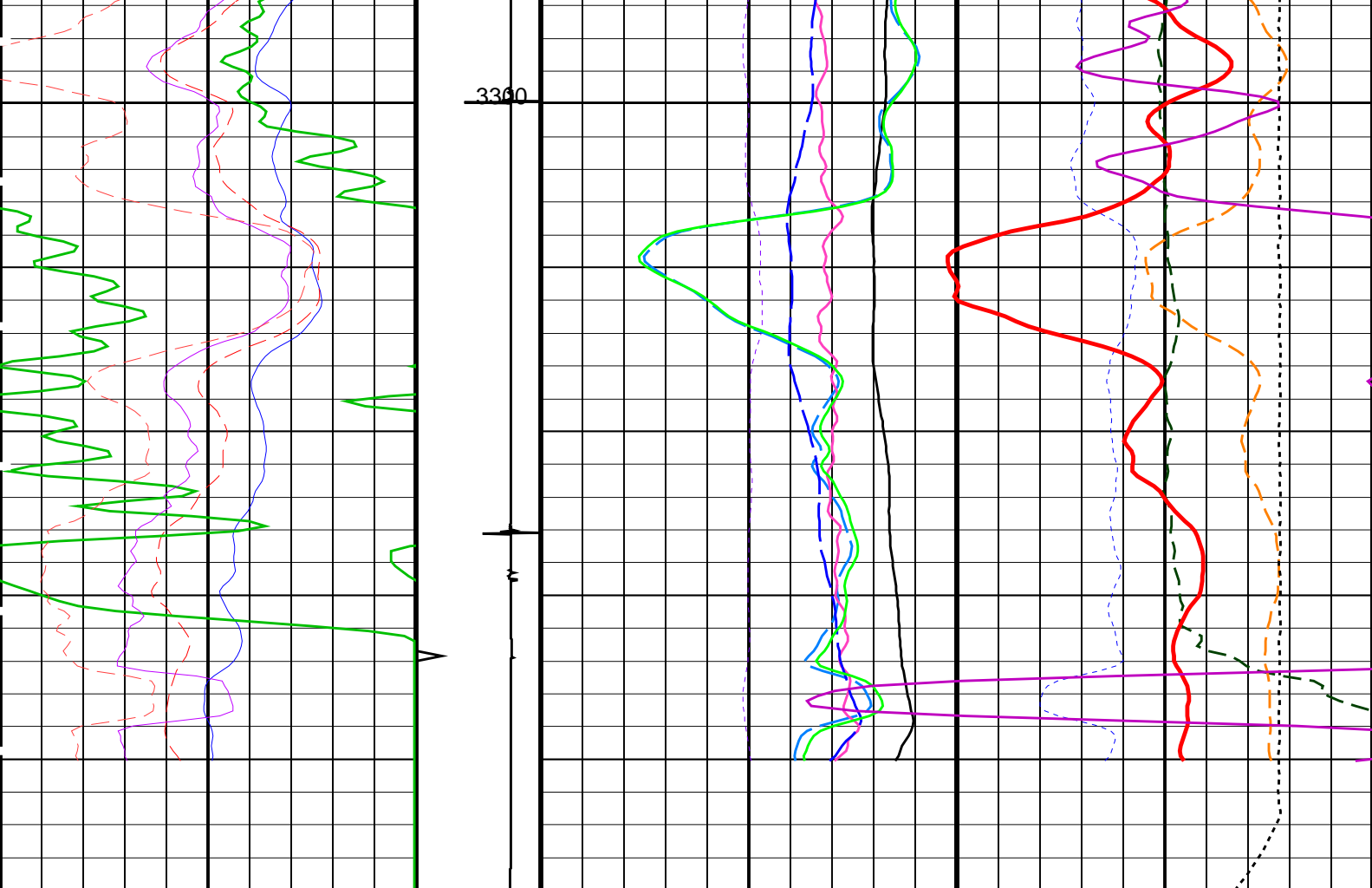
PIP SUMMARY

Time Mark Every 60 S

<div>RST Far Effective Capture CR (RSCF_RST) 45 (----) 0</div> <div>RST Near Effective Capture CR (RSCN_RST) 45 (----) 0</div> <div>RST Capture to Inelastic Ratio Far (CIRF_FIL) 5 (----) 0</div> <div>RST Capture to Inelastic Ratio Near (CIRN_FIL) 2.5 (----) 0</div> <div>Gamma Ray (GR) (GAPI) 0 150</div>		<div>RST Sigma (SIGM) 60 (CU) 0</div> <div>RST Weighted Inelastic Ratio (WINR_RST) 0.4 (----) 0</div> <div>RST Porosity (TPHI) (V/V) 0.6 0</div> <div>RST Sigma Borehole Fluid (SIBF) (CU) 100 0</div> <div>Sigma Borehole Far Apparent (SBFA_FIL) (CU) 150 0</div> <div>RST Capture Ratio (TRAT_FIL) (----) 0.5</div> <div>Sigma Formation Far Apparent (SFFA_FIL) (CU) 60 0</div>		<div>Tension (TENS) (LBF) 3000 0</div>	
		<div>RST Sigma Difference (DSIG) (CU) -30 30</div> <div>MCS Far Background (filtered) (FBAC) (CPS) 0 5000</div>			
		<div>RST Borehole Salinity (BSAL) (PPK) 450 -50</div> <div>RST Inelastic Ratio (IRAT_FIL) (----) 0</div>			
<div>Minitron Arc Detection (MARC) 0 (----) 5</div> <div>Discriminated CCL (CCLD) (V) -1 3</div>					







<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)</div> <div>450 (PPK) -50</div>	<div>RST Inelastic Ratio (IRAT_FIL)</div> <div>0.75 (----) 0</div>
<div>RST Capture to Inelastic Ratio Near (CIRN_FIL)</div> <div>2.5 (----) 0</div>	<div>Minitron Arc Detection (MARC)</div> <div>0 (----) 5</div>	<div>RST Sigma Difference (DSIG)</div> <div>-30 (CU) 30</div>	<div>MCS Far Background (filtered) (FBAC)</div> <div>0 (CPS) 5000</div>
<div>RST Capture to Inelastic Ratio Far (CIRF_FIL)</div> <div>5 (----) 0</div>		<div>RST Capture Ratio (TRAT_FIL)</div> <div>1.5 (----) 0.5</div>	<div>Sigma Formation Far Apparent (SFFA_FIL)</div> <div>60 (CU) 0</div>
<div>RST Near Effective Capture CR (RSCN_RST)</div> <div>45 (----) 0</div>		<div>Sigma Borehole Far Apparent (SBFA_FIL)</div> <div>150 (CU) 0</div>	<div>Tension (TENS)</div> <div>0 (LBF) 3000</div>
<div>RST Far Effective Capture CR (RSCF_RST)</div> <div>45 (----) 0</div>		<div>RST Sigma Borehole Fluid (SIBF)</div> <div>100 (CU) 0</div>	
		<div>RST Porosity (TPHI)</div> <div>0.6 (V/V) 0</div>	
		<div>RST Weighted Inelastic Ratio (WINR_RST)</div> <div>0.4 (----) 0</div>	
		<div>RST Sigma (SIGM)</div> <div>60 (CU) 0</div>	

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	CU	
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	6.750		IN
BSAL	Borehole Salinity	-50000.00		PPM
CSIZ	Current Casing Size	5.000		IN
CWEI	Casing Weight	18.00		LB/F
DO	Depth Offset for Playback	0.0	M	
PP	Playback Processing	NORMAL		

Format: RST_SIG_ANSW

Vertical Scale: 1:200

Graphics File Created: 15-Jun-2007 06:02

OP System Version: 14C0-302						
MCM						
RST-C	14C0-302	PSPT-A/B		14C0-302		
Input DLIS Files						
DEFAULT	RST_PSP_021LUP	FN:20	PRODUCER	15-Jun-2007 04:27	3324.0 M	3185.8 M
Output DLIS Files						
DEFAULT	RST_PSP_031PUP	FN:30	PRODUCER	15-Jun-2007 06:02		



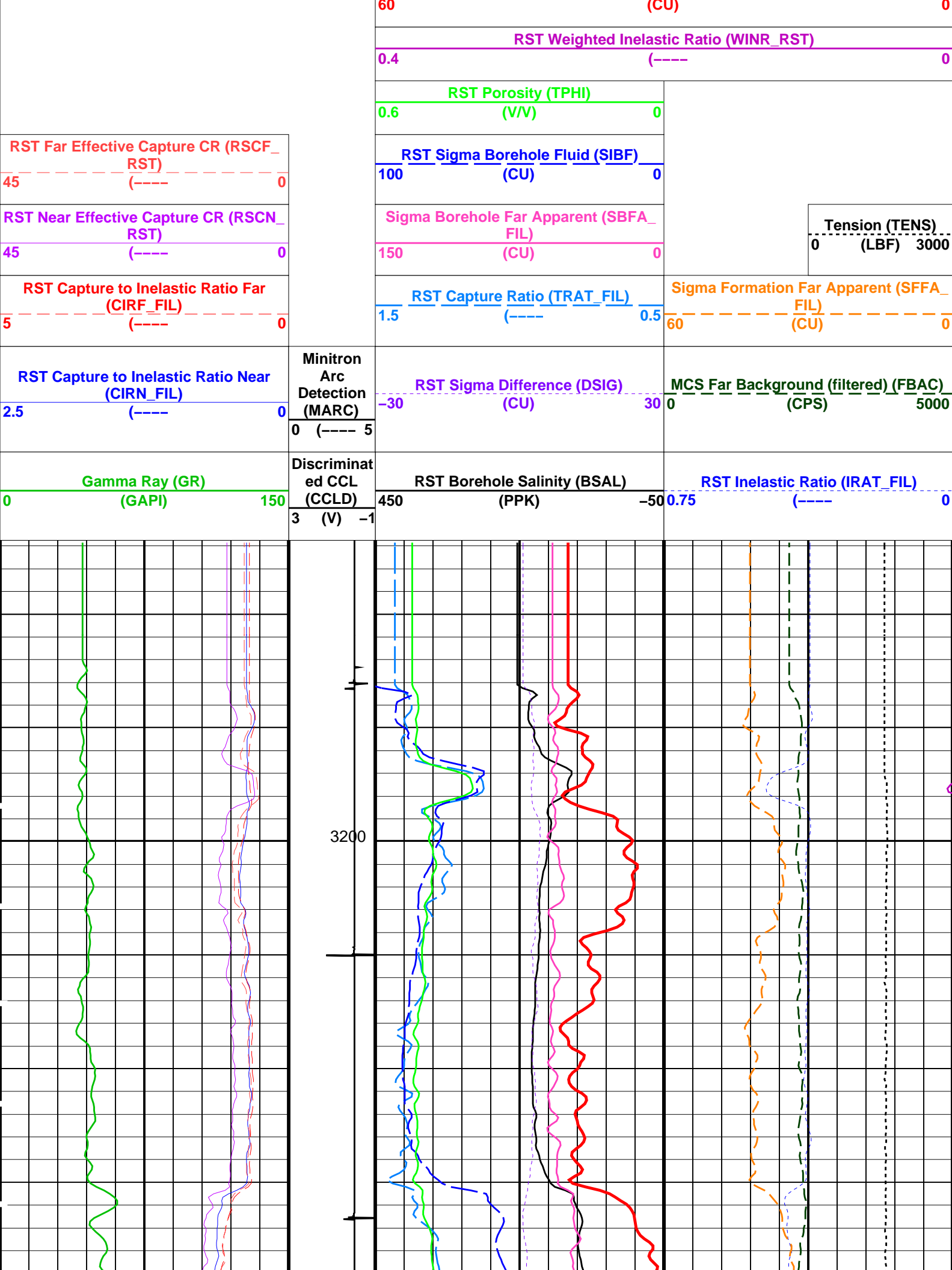
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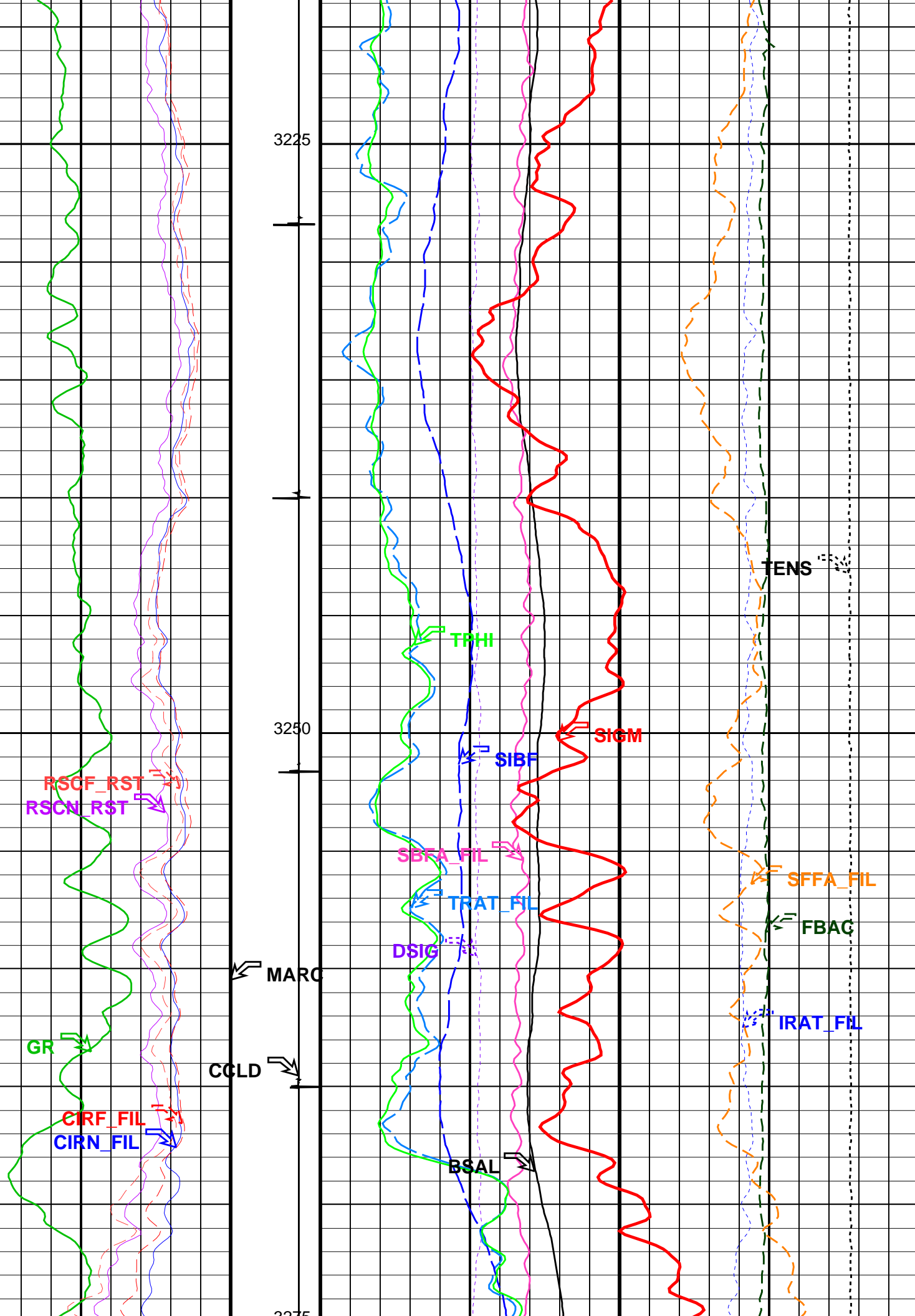
MAXIS Field Log

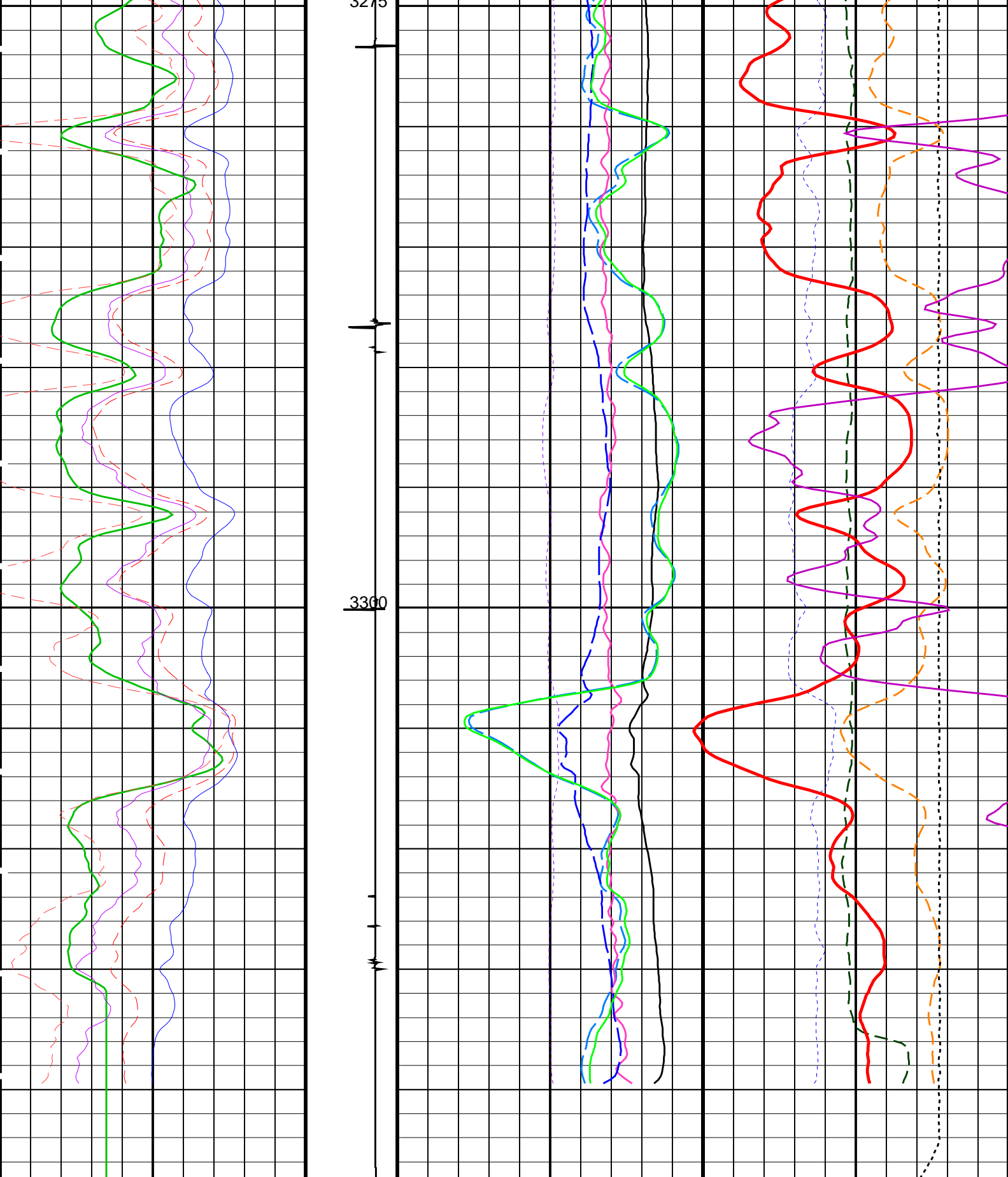
Company: Esso Australia Pty Ltd.

Well: A-3

Input DLIS Files						
DEFAULT	RST_PSP_019LUP	FN:18	PRODUCER	15-Jun-2007 03:51	3323.7 M	3191.7 M
Output DLIS Files						
DEFAULT	RST_PSP_030PUP	FN:29	PRODUCER	15-Jun-2007 06:02	3323.7 M	3186.7 M
OP System Version: 14C0-302						
MCM						
RST-C	14C0-302	PSPT-A/B	14C0-302			







<p>Gamma Ray (GR) (GAPI)</p> <p>0 150</p>	<p>Discriminat ed CCL (CCLD)</p> <p>3 (V) -1</p>	<p>RST Borehole Salinity (BSAL) (PPK)</p> <p>450 -50</p>	<p>RST Inelastic Ratio (IRAT_FIL) (----</p> <p>0.75 0</p>
<p>RST Capture to Inelastic Ratio Near (CIRN_FIL)</p> <p>2.5 (----</p> <p>0</p>	<p>Minitron Arc Detection (MARC)</p>	<p>RST Sigma Difference (DSIG) (CU)</p> <p>-30 30</p>	<p>MCS Far Background (filtered) (FBAC) (CPS)</p> <p>0 5000</p>

	0 (----- 5		
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 (----- 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	
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	6.750	IN
BSAL	Borehole Salinity	-50000.00	PPM
CSIZ	Current Casing Size	5.000	IN
CWEI	Casing Weight	18.00	LB/F
DO	Depth Offset for Playback	0.0	M
PP	Playback Processing	NORMAL	

Format: RST_SIG_ANSW Vertical Scale: 1:200 Graphics File Created: 15-Jun-2007 06:02

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

Input DLIS Files					
DEFAULT	RST_PSP_019LUP	FN:18	PRODUCER	15-Jun-2007 03:51	3323.7 M 3191.7 M
Output DLIS Files					
DEFAULT	RST_PSP_030PUP	FN:29	PRODUCER	15-Jun-2007 06:02	

MAXIS Field Log

Input DLIS Files

DEFAULT RST_PSP_018LUP FN:17 PRODUCER 15-Jun-2007 03:22 3323.1 M 3184.9 M

Output DLIS Files

DEFAULT RST_PSP_029PUP FN:28 PRODUCER 15-Jun-2007 06:00 3323.1 M 3179.8 M

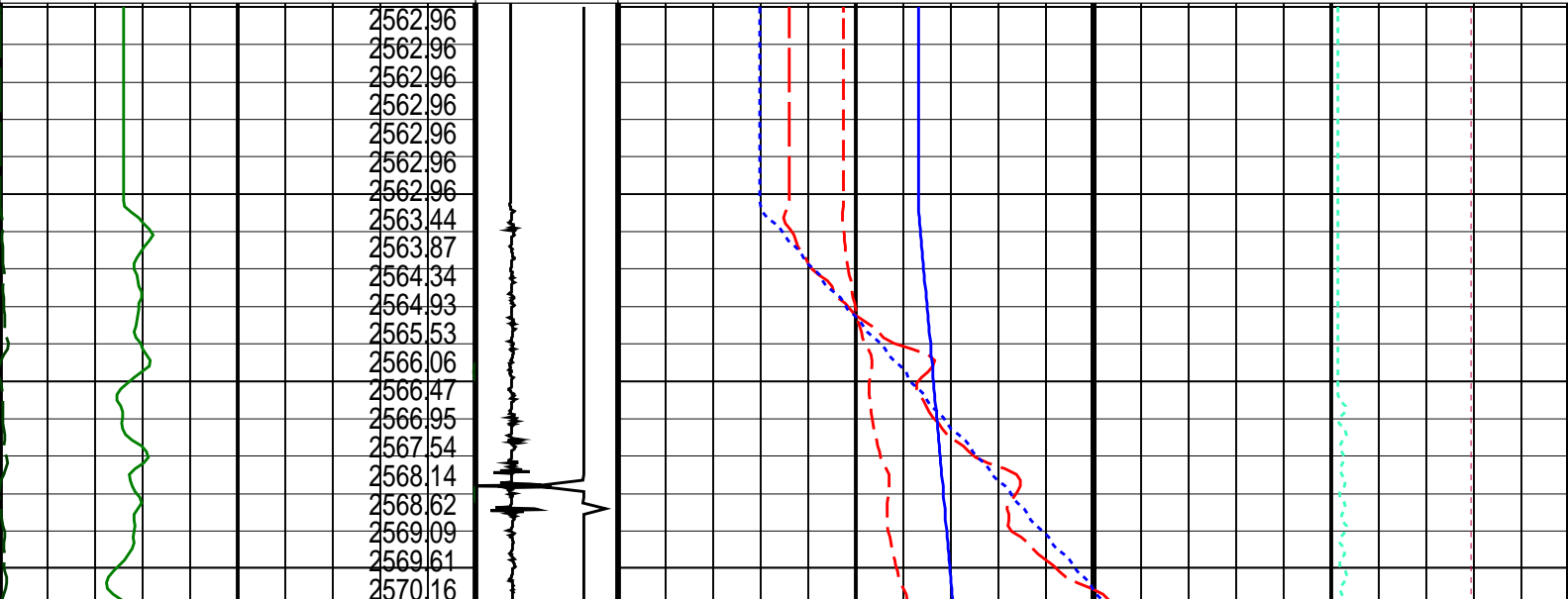
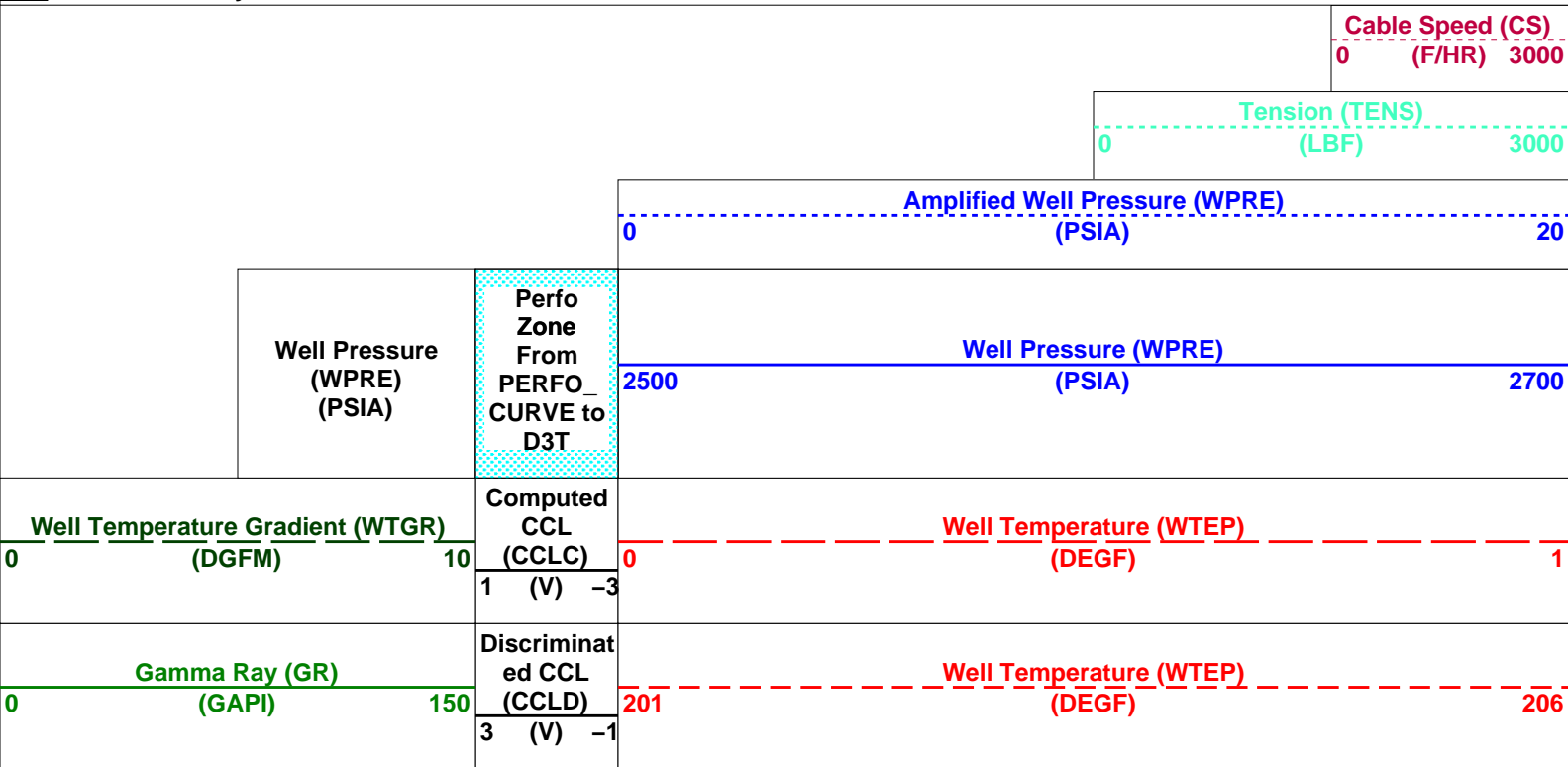
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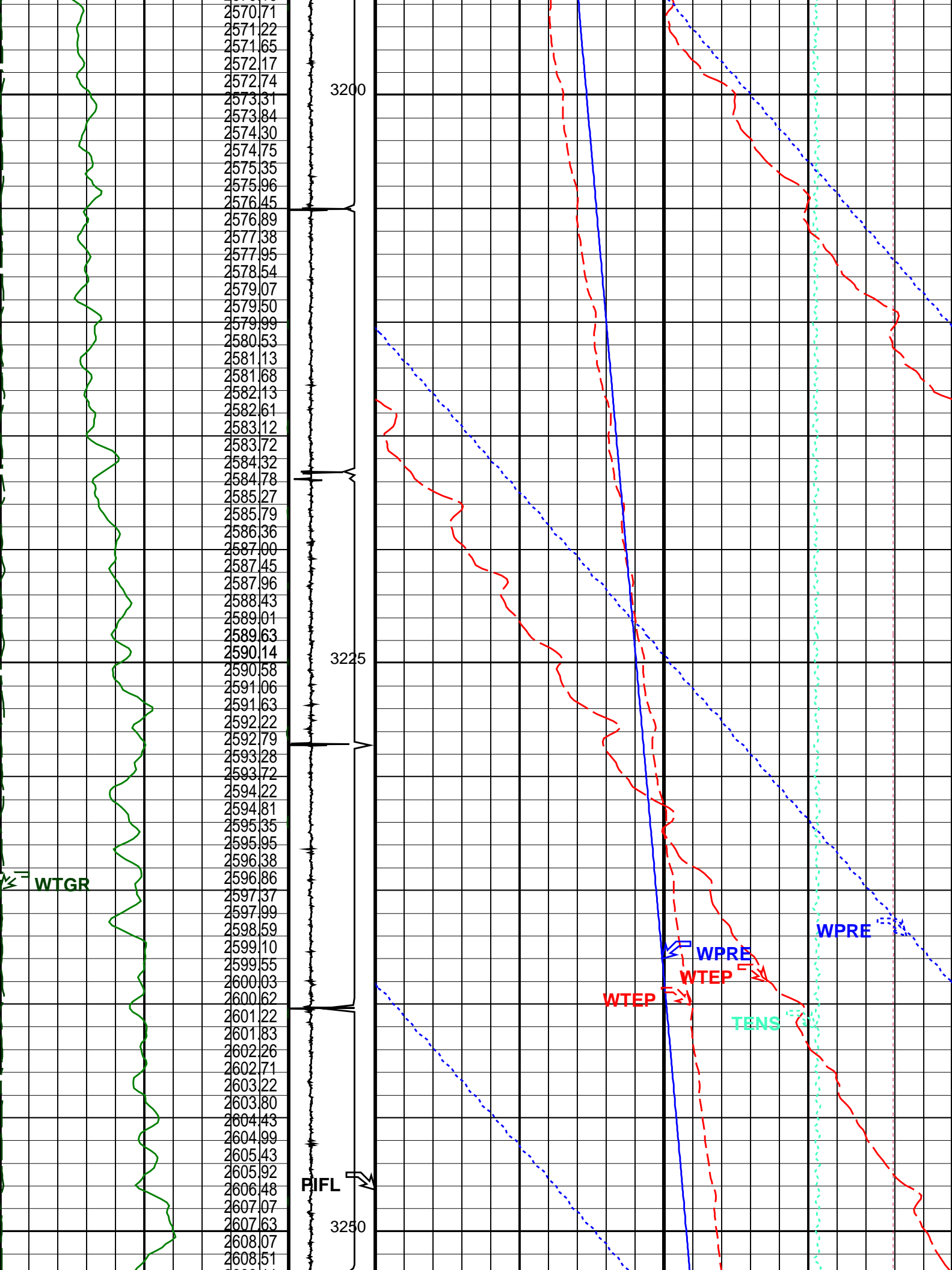
MCM

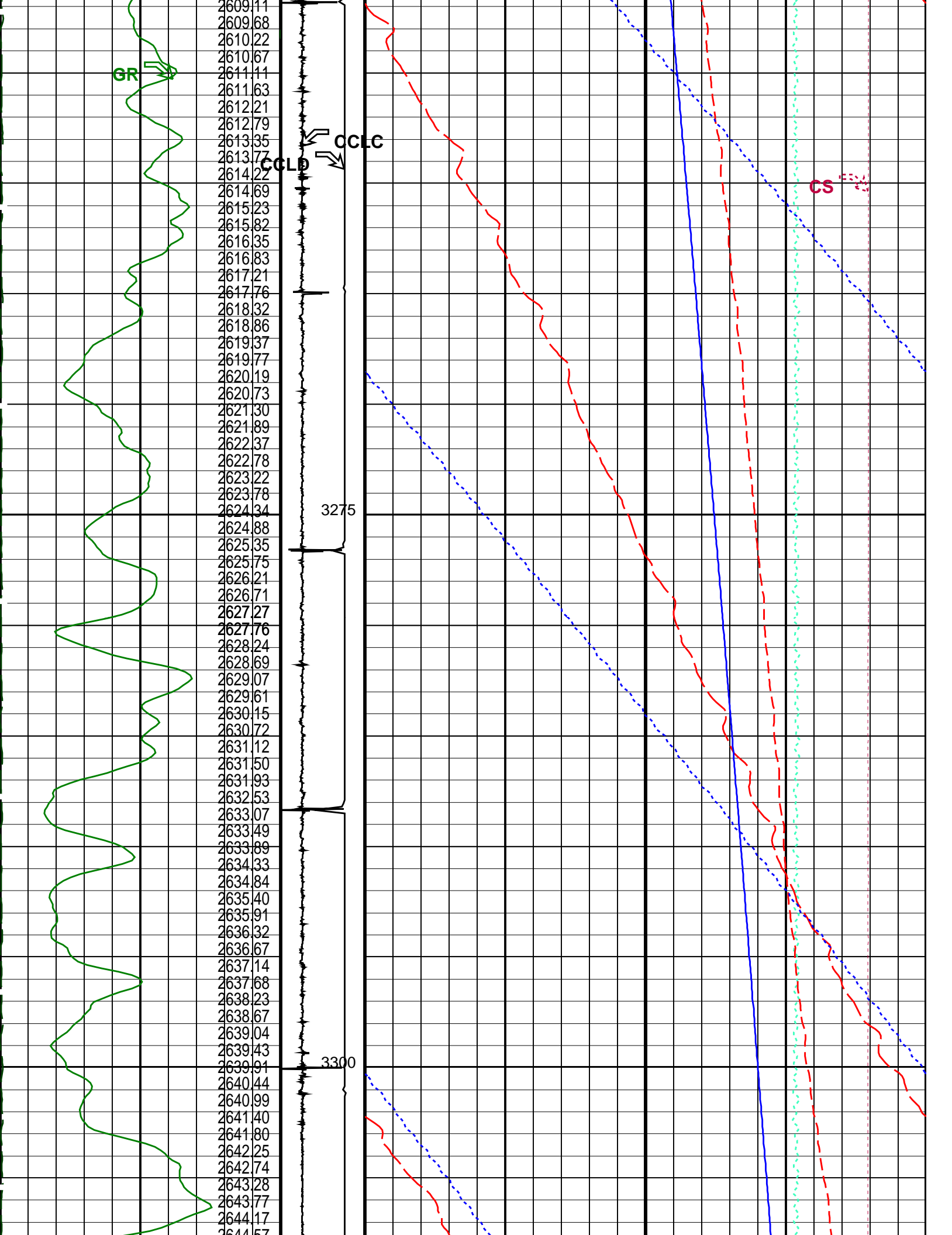
RST-C 14C0-302 PSPT-A/B 14C0-302

PIP SUMMARY

Time Mark Every 60 S







Company: **Esso Australia Pty Ltd.**

Schlumberger

Well: **A-3**

Field: **Bream A**

Rig : **Prod4 / Crane**

Country: **Australia**

RST-C
Sigma
Survey