



Company: **Eso Australia Pty Ltd.**

Well: **B-14**

Field: **Bream B**

Rig: **Crane / Prod # 4** Country: **Australia**

RST-C Sigma Survey

Rig: Crane / Prod # 4
Field: Bream B
Location: Gippsland
Well: B-14
Company: Eso Australia Pty Ltd.

LOCATION	
Gippsland Basin Bass Strait	Elev.: K.B. 41.7 m G.L. 41.7 m D.F. -61 m
Permanent Datum: _____ Log Measured From: K.B. _____ Drilling Measured From: K.B. _____	Elev.: 0 m 41.7 m above Perm. Datum
State: Victoria	Max. Well Deviation 32 deg Longitude 148°06'15.37E Latitude 038°35'40.34S

Logging Date 14-Mar-2008

Run Number 1

Depth Driller 2165 m

Schlumberger Depth 2165 m

Bottom Log Interval 2165 m

Top Log Interval 2133 m

Casing Fluid Type Production Fluids

Salinity

Density

Fluid Level 0 m

BIT/CASING/TUBING STRING

Bit Size 8,000 in

From 712 m

To 2300 m

Casing/Tubing Size 7,000 in

Weight 26 lbm/ft

Grade L-80

From 20 m

To 2296.96 m

Maximum Recorded Temperatures 212 degF

Logger On Bottom 14-Mar-2008 12:40

Unit Number 889 Location Prod 4 / AUSL

Recorded By S Gilbert

Witnessed By B White

Run 1

PVT DATA

Oil Density
Water Salinity
Gas Gravity

Bo

Bw

1/Bg

Bubble Point Pressure

Bubble Point Temperature

Solution GOR

Maximum Deviation

CEMENTING DATA

Primary/Squeeze

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: 7-MAR-2008 14:44:18

Depth System Equipment

Depth Measuring Device	Tension Device	Logging Cable
Type: IDW-EB Serial Number: 6373 Calibration Date: 04-Jan-2007 Calibrator Serial Number: 9 Calibration Cable Type: 2-32ZT Wheel Correction 1: -2 Wheel Correction 2: -4	Type: PSDS/OSDS Serial Number: 325357 Calibration Date: 3-Mar-2008 Calibrator Serial Number: 1174 Calibration Gain: 0.90 Calibration Offset: 339.00	Type: 2-32ZT Serial Number: 27244 Length: 6409.94 M Conveyance Method: Wireline Rig Type: Offshore_Fixed

Depth Control Parameters

Log Sequence:	Subsequent Trip To the Well
Reference Log Name:	ExxonMobil Petrophysical Analysis
Reference Log Run Number:	
Reference Log Date:	
Subsequent Trip Down Log Correction:	

Depth Control Remarks

1. IDW used as primary depth control
2. Z-Chart used as backup
3. Rigged up using the crane
4.
5.
6.

DISCLAIMER

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

REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
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Log correlated to ExxonMobil Solar Composite Log supplied with logging program.

Objectives: Conduct Static RST-C Sigma survey to locate the Gas/Water contact making
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2 Passes at 900ft/hr from HUD to 2133m MDKB

Maximum Well Deviation = 32 deg @ 902m MDKB

HUD: 2165m MDKB

SBHP: 2621 psia

Schlumberger crews: J Annaer. C Shiells

RUN 1 SERVICE ORDER #: AUSL08356983 PROGRAM VERSION: 15C0-309 FLUID LEVEL: 0 m					
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

RUN 1

RUN 2

SURFACE EQUIPMENT

WITM-A 827
PSC_16MHZ 827

DOWNHOLE EQUIPMENT

AH-SWBS 785
AH-SWBS 785

11.95

AH-SWBS 786
AH-SWBS 786

11.26

AH-SWBS 787
AH-SWBS 787

10.58

MH-SWHS 759
MH-SWHS 759

Detail MT
TelStatus
CTEM

9.89

PSPT-B 827

9.54

9.54

PSC-A 827
PSPT-B 827
PSTC 827
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 98
RSCH-A 98
RSC-C 98
RSS-A 94
RSXH-A 179
RSX-C 179

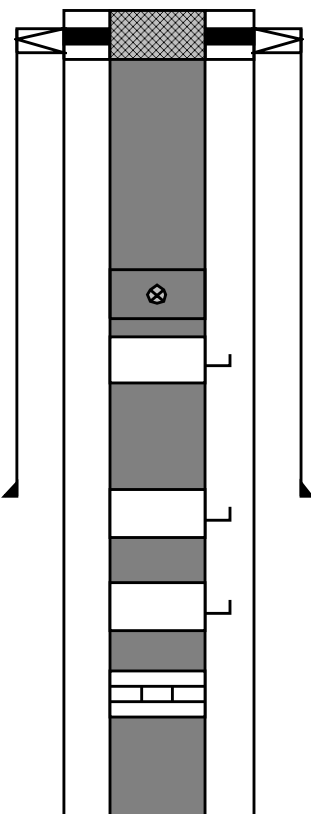
7.02

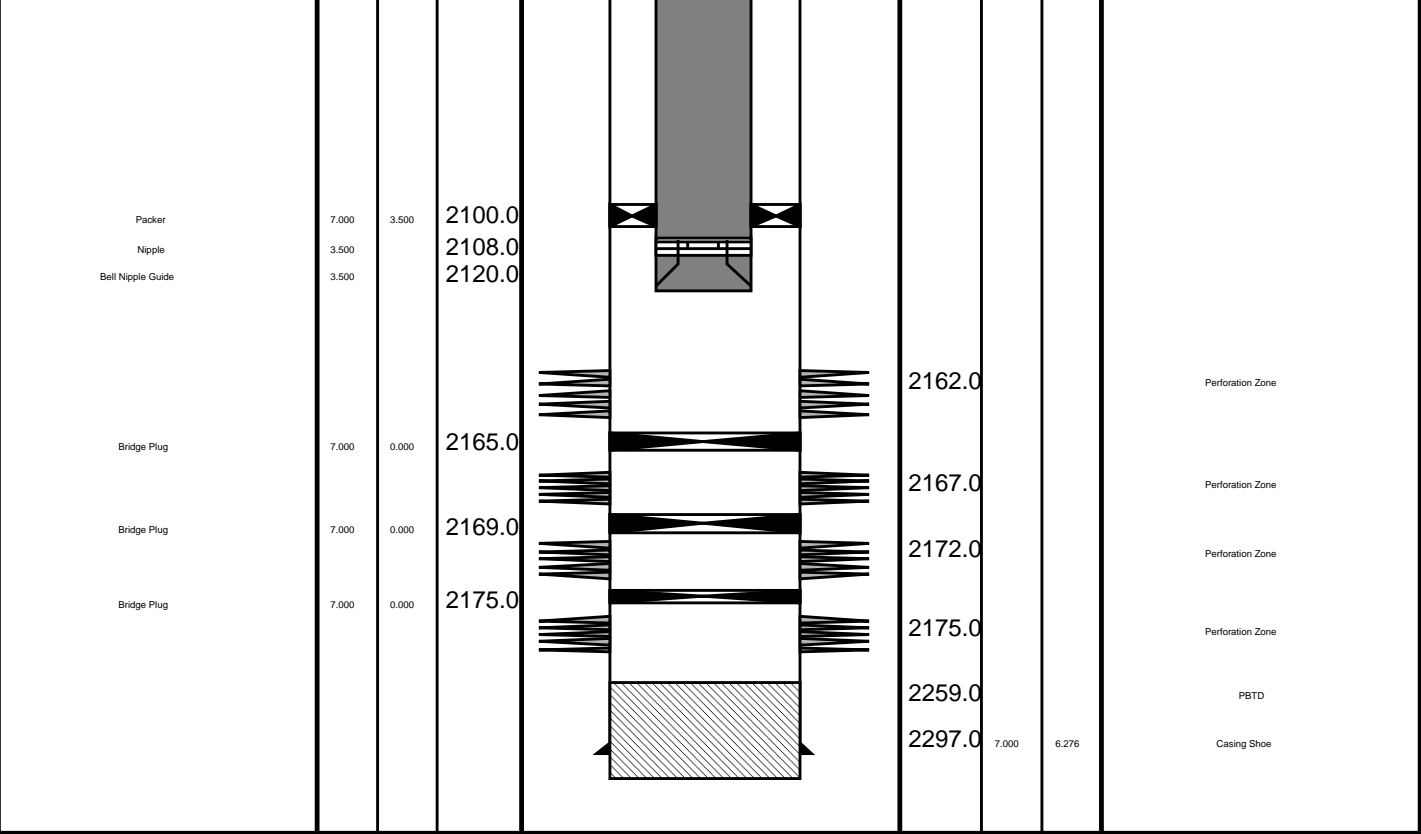
RSC-A Far
RSC-A PNG
RSC-A Nea
RSX-A PNG

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

Production String	(in)		(m)	Well Schematic	(m)	(in)		Casing String
	OD	ID	MD		MD	OD	ID	
Tubing Hanger Tubing	7.000	3.500	20.0		20.1	10.375	10.050	Casing String Casing String Liner Hanger
	3.500		20.1		20.0	7.000	6.276	
					20.0	10.375	7.000	
Shut-in Valve	3.500		450.0					Casing Shoe
Gas Lift Mandrel	3.500		545.0					
Gas Lift Mandrel	3.500		822.0		711.0	10.375	10.050	
Gas Lift Mandrel	3.500		1070.0					
Nipple	3.500		1086.0					



Job Events Summary

MAXIS Field Log

Schlumberger Job Event Summary

	Time	Elapsed Time	Depth (M)	File
Log Pass (up)	14-Mar-2008 12:18	000:06	2167.7 - 2109.8	RST_PSP_007LUP
Log Pass (up)	14-Mar-2008 12:38	000:11	2166.4 - 2116.8	RST_PSP_010LUP
Log Pass (up)	14-Mar-2008 12:49	000:14	2166.5 - 2113.3	RST_PSP_011LUP

Company: Esso Australia Pty Ltd.

Well: B-14

Input DLIS Files

DEFAULT	RST_PSP_011LUP	FN:10	PRODUCER	14-Mar-2008 12:49	2166.5 M	2113.3 M
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Output DLIS Files

DEFAULT	RST_PSP_012PUP	FN:11	PRODUCER	14-Mar-2008 13:04	2166.4 M	2108.1 M
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OP System Version: 15C0-309

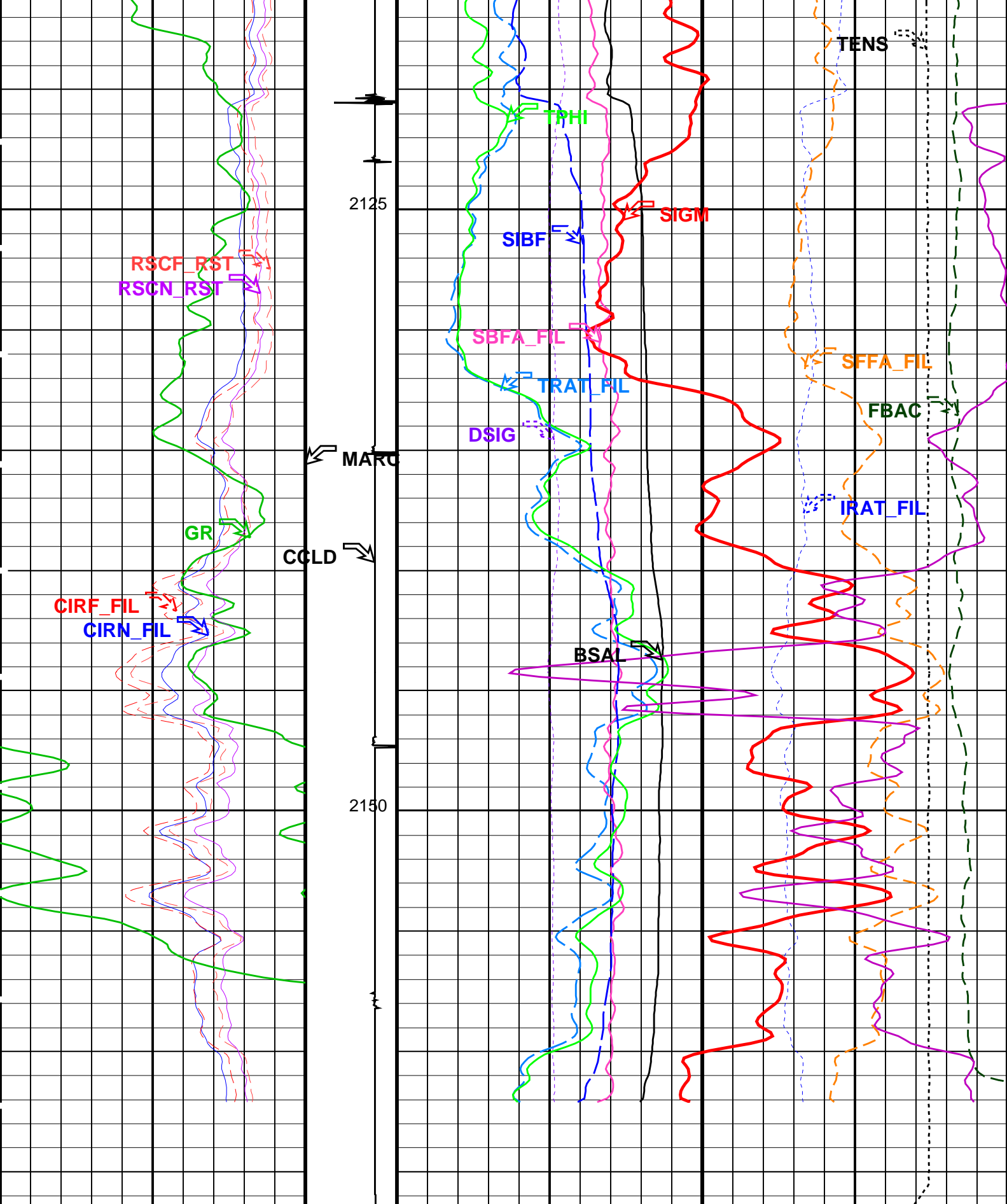
MCM

RST-C	SRPC-3546-Q1_2008_OP15	PSPT-B	SRPC-3546-Q1_2008_OP15
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PIP SUMMARY

Time Mark Every 60 S





<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)</p> <p>450 (PPK) -50</p>	<p>RST Inelastic Ratio (IRAT_FIL)</p> <p>0.75 (----) 0</p>
<p>RST Capture to Inelastic Ratio Near (CIRF_FIL)</p>	<p>Minitron Arc</p>	<p>RST Sigma Difference (DSIG)</p>	<p>MCS Far Background (filtered) (FBAC)</p>

2.5 (CIRN_FIL) (----) 0	Detection (MARC) 0 (---- 5	-30 (CU) 30 0	(CPS) 5000
RST Capture to Inelastic Ratio Far (CIRF_FIL) (----) 0		RST Capture Ratio (TRAT_FIL) (----) 0.5	Sigma Formation Far Apparent (SFFA_FIL) (CU) 0
RST Near Effective Capture CR (RSCN_RST) (----) 0		Sigma Borehole Far Apparent (SBFA_FIL) (CU) 0	Tension (TENS) (LBF) 3000
RST Far Effective Capture CR (RSCF_RST) (----) 0		RST Sigma Borehole Fluid (SIBF) (CU) 0	
		RST Porosity (TPHI) (V/V) 0	
		RST Weighted Inelastic Ratio (WINR_RST) (----) 0	
		RST Sigma (SIGM) (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	8.000	IN
BSAL	Borehole Salinity	-50000.00	PPM
CSIZ	Current Casing Size	7.000	IN
CWEI	Casing Weight	26.00	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: 14-Mar-2008 13:04
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OP System Version: 15C0-309			
MCM			
RST-C	SRPC-3546-Q1_2008_OP15	PSPT-B	SRPC-3546-Q1_2008_OP15

Input DLIS Files						
DEFAULT	RST_PSP_011LUP	FN:10	PRODUCER	14-Mar-2008 12:49	2166.5 M	2113.3 M
Output DLIS Files						
DEFAULT	RST_PSP_012PUP	FN:11	PRODUCER	14-Mar-2008 13:04		

Schlumberger		Sigma Pass # 1
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Company: Esso Australia Pty Ltd.

Well: B-14

Output DLIS Files

DEFAULT	RST_PSP_010LUP	FN:9	PRODUCER	14-Mar-2008 12:38	2166.4 M	2116.8 M
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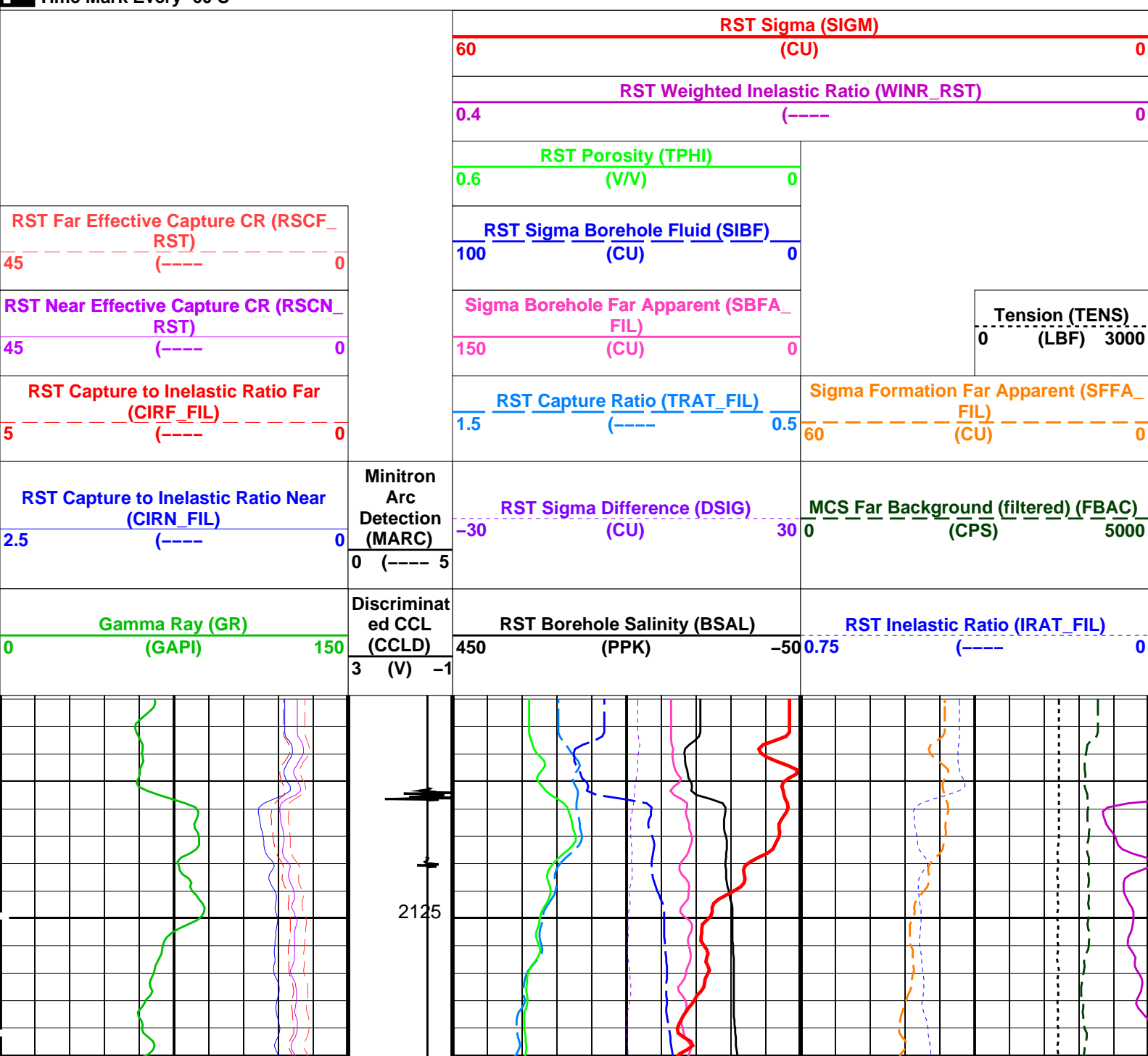
OP System Version: 15C0-309

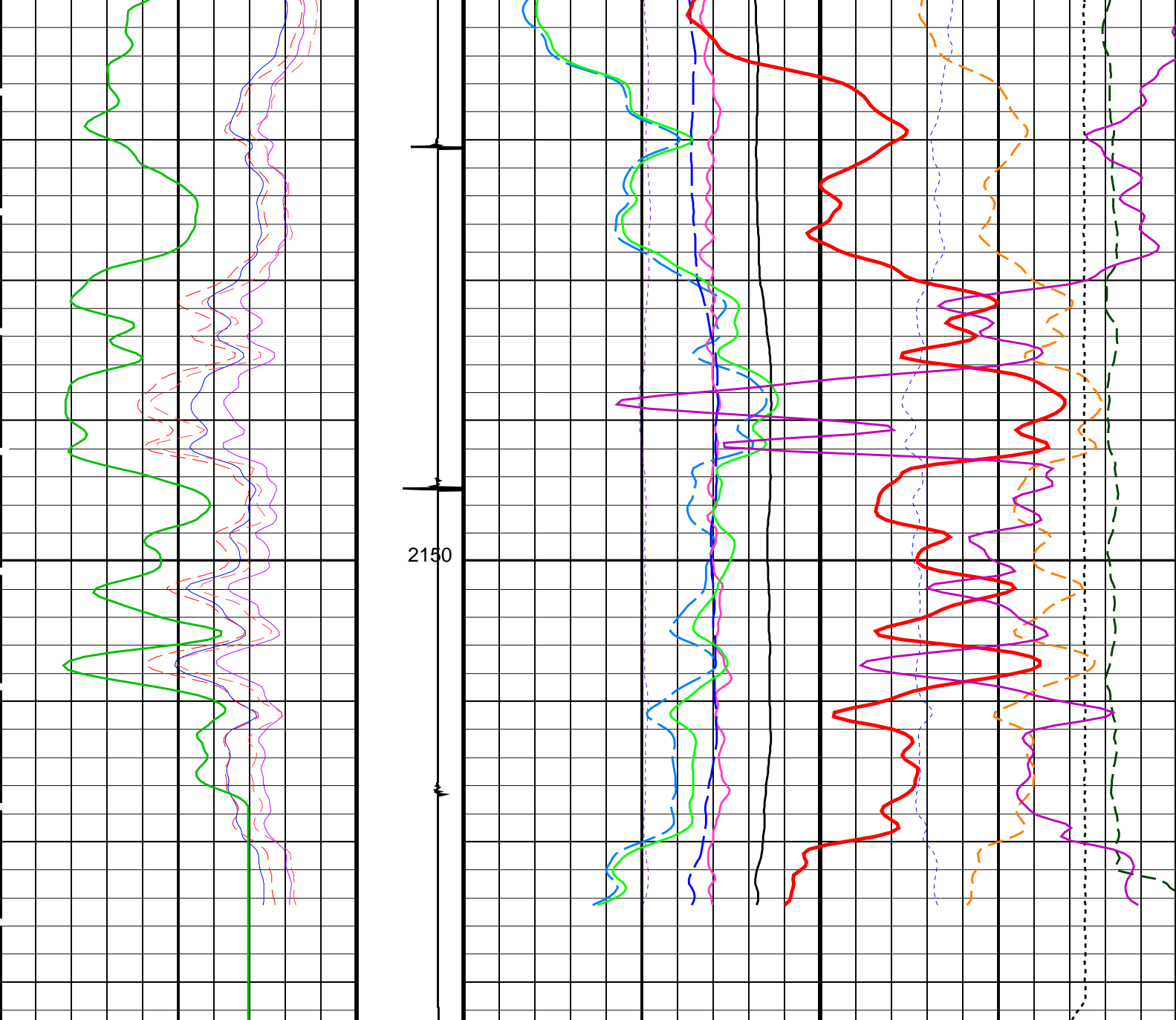
MCM

RST-C SRPC-3546-Q1 2008 OP15 PSPT-B SRPC-3546-Q1 2008 OP15

PIP SUMMARY

Time Mark Every 60 S





Gamma Ray (GR) (GAPI)		Discriminat ed CCL (CCLD) (V)	RST Borehole Salinity (BSAL) (PPK)		RST Inelastic Ratio (IRAT_FIL) (----	
0	150		450	-50	0.75	0
RST Capture to Inelastic Ratio Near (CIRN_FIL)		Minitron Arc Detection (MARC) (----	RST Sigma Difference (DSIG) (CU)		MCS Far Background (filtered) (FBAC) (CPS)	
2.5	0		-30	30	0	5000
RST Capture to Inelastic Ratio Far (CIRF_FIL)			RST Capture Ratio (TRAT_FIL) (----		Sigma Formation Far Apparent (SFFA_ FIL) (CU)	
5	0		1.5	0.5	60	0
RST Near Effective Capture CR (RSCN_ RST)			Sigma Borehole Far Apparent (SBFA_ FIL) (CU)		Tension (TENS) (LBF)	
45	0		150	0		
RST Far Effective Capture CR (RSCF_ RST)			RST Sigma Borehole Fluid (SIBF) (CU)			
45	0		100	0		
			RST Porosity (TPHI) (V/V)			
			0.6	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	
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	8.000	IN
BSAL	Borehole Salinity	-50000.00	PPM
CSIZ	Current Casing Size	7.000	IN
CWEI	Casing Weight	26.00	LB/F

Format: RST_SIG_ANSW	Vertical Scale: 1:200	Graphics File Created: 14-Mar-2008 12:38
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OP System Version: 15C0-309			
MCM			
RST-C	SRPC-3546-Q1_2008_OP15	PSPT-B	SRPC-3546-Q1_2008_OP15

Output DLIS Files			
DEFAULT	RST_PSP_010LUP	FN:9	PRODUCER 14-Mar-2008 12:38

Schlumberger

Gamma-Ray Pass

MAXIS Field Log

Company: Esso Australia Pty Ltd.	Well: B-14
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Input DLIS Files					
DEFAULT	RST_PSP_007LUP	FN:6	PRODUCER	14-Mar-2008 12:18	2167.7 M 2109.8 M
Output DLIS Files					
DEFAULT	RST_PSP_008PUP	FN:7	PRODUCER	14-Mar-2008 12:26	2167.4 M 2104.5 M

OP System Version: 15C0-309			
MCM			
RST-C	SRPC-3546-Q1_2008_OP15	PSPT-B	SRPC-3546-Q1_2008_OP15

[illegible]

PIP SUMMARY									
Time Mark Every 60 S									
		<div>Amplified Well Pressure (WPRES)</div> <div>(PSIA)</div> <div>020</div>							
		<div>Well Pressure (WPRES)</div> <div>(PSIA)</div> <div>25502650</div>							
		Well Pressure (WPRES)				Temperature (WTEMP)			
		(PSIA)				(DEGF)			
		<div>Well Temperature (WTEMP)</div> <div>(DEGF)</div> <div>02</div>							
Well Temperature Gradient (WTGR)		Computed CCL (CCLC)		Well Temperature (WTEMP)					
(DC/M)		(V)		(DEGF)					
010		1-3		210215					
Gamma Ray (GR)		Discriminated CCL (CCLD)		Cable Speed (CS)			Tension (TENS)		
(GAPI)		(V)		(F/HR)			(LBF)		
0150		3-1		05000			02000		
				2563.23			210.8		
				2563.23			210.8		
				2564.78			210.8		
				2568.02			210.8		
				2571.02			210.8		
				2574.20			210.8		
				2577.38			211.0		
		2125		2580.40			211.2		
				2583.62			211.3		
				2586.80			211.4		
				2589.89			211.6		
				2593.04			211.7		
				2596.29			211.7		

