Schlumberger

Company: **Esso Australia Pty Ltd**

Well: **CBA F4**
Field: **Cobia**
Rig: **Rig 22** Country: **Australia**

RST−C
Sigma & IC Log
24−Nov−2007

Rig: Rig 22
Field: Cobia
Location: Gippsland
Well: CBA F4
Company: Esso Australia Pty Ltd

LOCATION

Gippsland Basin
Bass Strait

Elev.: K.B. 32.4 m
G.L. −79 m
D.F. 32.4 m

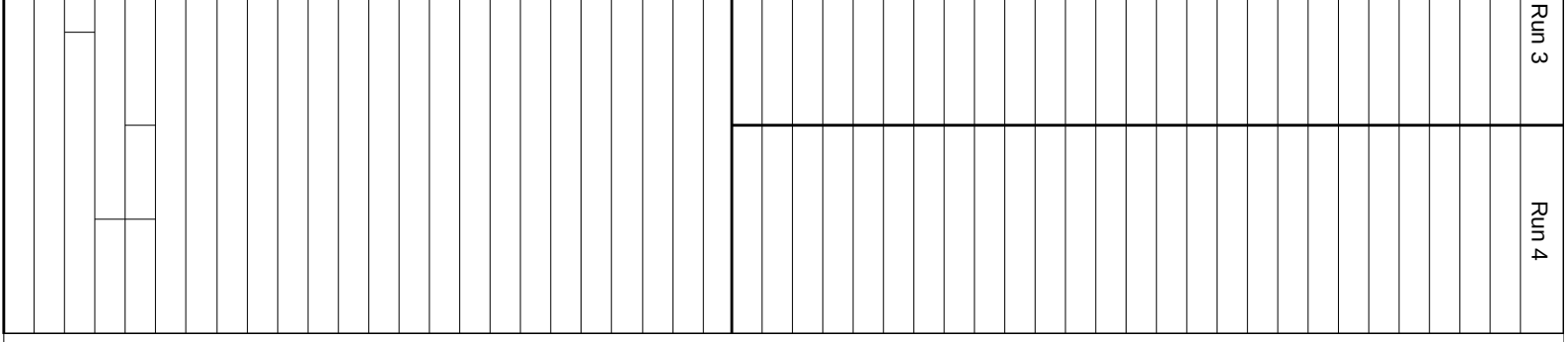
Permanent Datum: MSL
Log Measured From: DF
Drilling Measured From: DF

Elev.: 0 m
32.4 m above Perm. Datum

State:	Max. Well Deviation	Longitude	Latitude
Victoria	55 deg	148* 18' 28.3" E	38* 27' 03.5" S

		Run 1	Run 2
PVT DATA	Oil Density		
	Water Salinity		
	Gas Gravity		
	Bo		
	Bw		
	1/Bg		
	Bubble Point Pressure		
	Bubble Point Temperature		
	Solution GOR		
	Maximum Deviation	55 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		24−Nov−2007					Logging Date		
Run Number		1					Run Number		
Depth Driller		3656 m					Depth Driller		
Schlumberger Depth		3576.5 m					Schlumberger Depth		
Bottom Log Interval		3572.5 m					Bottom Log Interval		
Top Log Interval		3430 m					Top Log Interval		
Casing Fluid Type		Filtered Seawater					Casing Fluid Type		
Salinity							Salinity		
Density		1.02 g/cm3					Density		
Fluid Level		0 m					Fluid Level		
BIT/CASING/TUBING STRING							BIT/CASING/TUBING STRING		
Bit Size		9.875 in					Bit Size		
From		782 m					From		
To		3656 m					To		
Casing/Tubing Size		7.625 in					Casing/Tubing Size		
Weight		29.7 lbm/ft					Weight		
Grade		N−80					Grade		
From		12.53 m					From		
To		3606 m					To		
Maximum Recorded Temperatures		105 degC					Maximum Recorded Temperatures		
Logger On Bottom	Time	24−Nov−2007	2:15				Logger On Bottom	Time	
Unit Number	Location	3827	AUSL				Unit Number	Location	
Recorded By		C. Rowand, M. Pratt, B. Donahoe					Recorded By		
Witnessed By		Mr A. Smythe, Mr R. Schuback					Witnessed By		



DEPTH SUMMARY LISTING

Date Created: 24−NOV−2007 12:17:39

Depth System Equipment

Depth Measuring Device		Tension Device		Logging Cable	
Type:	IDW−E	Type:	CMTD−B/A	Type:	2−32ZT
Serial Number:	727	Serial Number:	1711	Serial Number:	24187
Calibration Date:	30−Sep−2007	Calibration Date:	20−Nov−2007	Length:	6239.87 M
Calibrator Serial Number:	727	Calibrator Serial Number:	1173	Conveyance Method:	Wireline
Calibration Cable Type:	2−32ZT	Calibration Gain:	1.00	Rig Type:	Offshore_Fixed
Wheel Correction 1:	−4	Calibration Offset:	3.00		
Wheel Correction 2:	−3				

Depth Control Parameters

Log Sequence:	Subsequent Log In the Well
Reference Log Name:	Solar Composite
Reference Log Run Number:	Not Provided
Reference Log Date:	Not Provided

Depth Control Remarks

1. IDW used as primary depth control
2. Z Chart used as a secondary depth control
3. Log correlated to Solar composite log provided by client
4.
5.
6.

OTHER SERVICES1	OTHER SERVICES2
OS1: None	OS1:
OS2:	OS2:
OS3:	OS3:
OS4:	OS4:
OS5:	OS5:

REMARKS: RUN NUMBER 1

Log correlated to Solar Composite Log undated, provided by client.

Objective: RIH To conduct a RST Sigma survey over the interval HUD to 3435m

and RST Carbon/ Oxygen survey over the interval 3550 to 3527m (6 passes @ 100 ft/hr)

Matrix = Sandstone, BS= 9−7/8", CSIZ= 7−5/8", CWEI= 27.9 lb/ft

HUD tagged @ 3576.5M

HUD tagged @ 3576.5M

Crew: (Days) M.Hancock & B. Glover
(Nights) D. Stucky & S. Kiss

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

RUN 2		
SERVICE ORDER #:		
PROGRAM VERSION:		
FLUID LEVEL:		
LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

RUN 1

SURFACE EQUIPMENT

WITM−A
PSC_16MHZ

DOWNHOLE EQUIPMENT

AH−SWBS YEL1 — 12.03
AH−SWBS 785

AH−SWBS YEL1 — 11.33
AH−SWBS 786

AH−SWBS YEL1 — 10.63
AH−SWBS 787

AH−SWHS YEL1 — 9.93
AH−SWHS 759

PSPT−B ORA1 — 9.54
PSC−A 1768
PSPT−B
PSTC 1768
PBMS−B 1747
CQG_F_Mano
RTD_Thermometer
GR
CCL
PBMS−B 1747

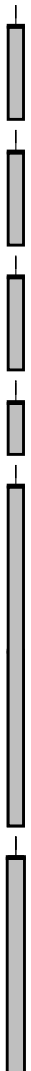
RST−C — 7.02
RSCH−A 98
RSC−CA 116
RSS−A 94
RSXH−A 179
RSX−CA 101

RUN 2

SURFACE EQUIPMENT

WITM−A
PSC_16MHZ

DOWNHOLE EQUIPMENT



AH−SWBS YEL1 — 12.03
AH−SWBS 785

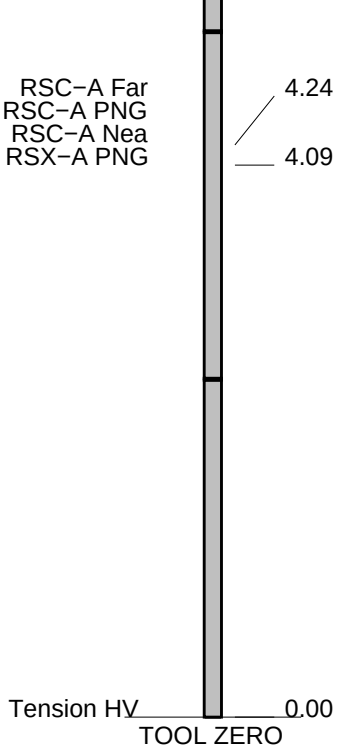
AH−SWBS YEL1 — 11.33
AH−SWBS 786

AH−SWBS YEL1 — 10.63
AH−SWBS 787

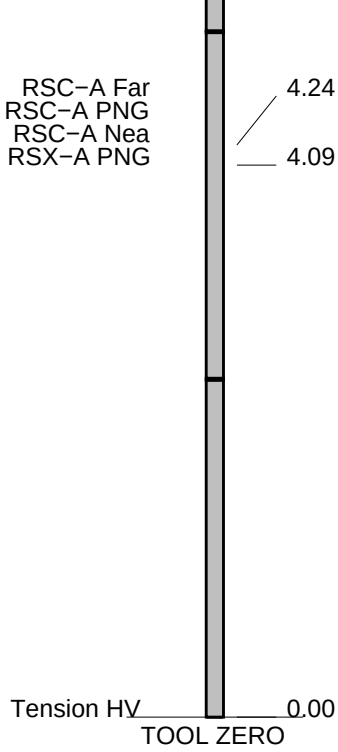
AH−SWHS YEL1 — 9.93
AH−SWHS 759

PSPT−B ORA1 — 9.54
PSC−A 1768
PSPT−B
PSTC 1768
PBMS−B 1747
CQG_F_Mano
RTD_Thermometer
GR
CCL
PBMS−B 1747

RST−C ORA1 — 7.02
RSCH−A 111
RSC−CA 132
RSS−A 108
RSXH−A 145
RSX−CA 132

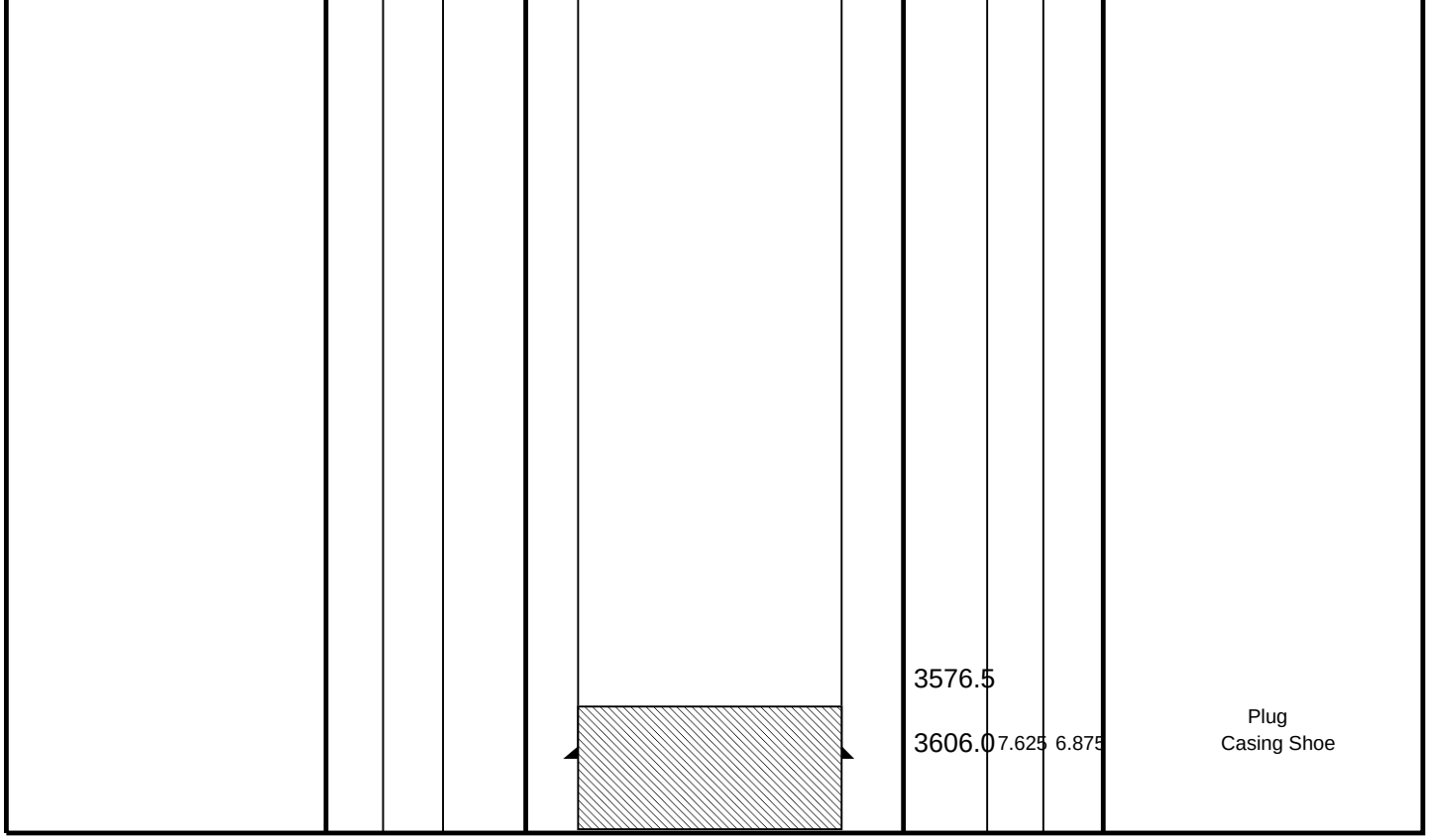


MAXIMUM STRING DIAMETER 1.72 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN METERS



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

Production String	(in) OD	(in) ID	(m) MD	Well Schematic	(m) MD	(in) OD	(in) ID	Casing String
					12.5	7.625	6.875	Casing String
					13.1	10.750	10.050	Casing String
					795.6	10.750	10.050	Casing Shoe



Schlumberger

CO Mode Pass 6, 100ft/hr

MAXIS Field Log

Company: Esso Australia Pty Ltd **Well: CBA F4**

Input DLIS Files

DEFAULT	RST_PSP_058LUP	FN:72	PRODUCER	24−Nov−2007 15:48	3557.9 M	3521.7 M

Output DLIS Files

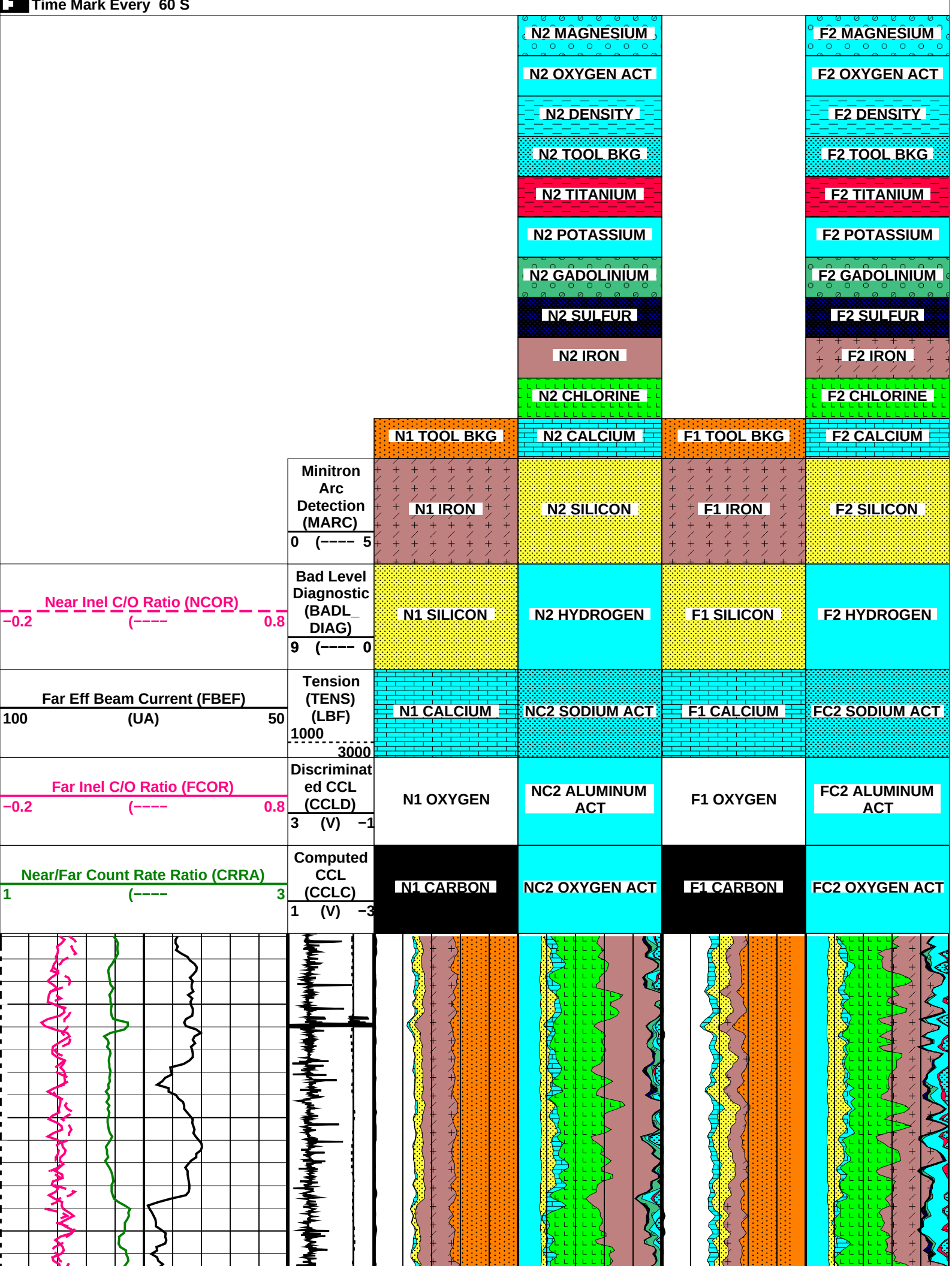
DEFAULT	RST_PSP_058PUP	FN:74	PRODUCER	24−Nov−2007 15:53	3552.4 M	3526.8 M

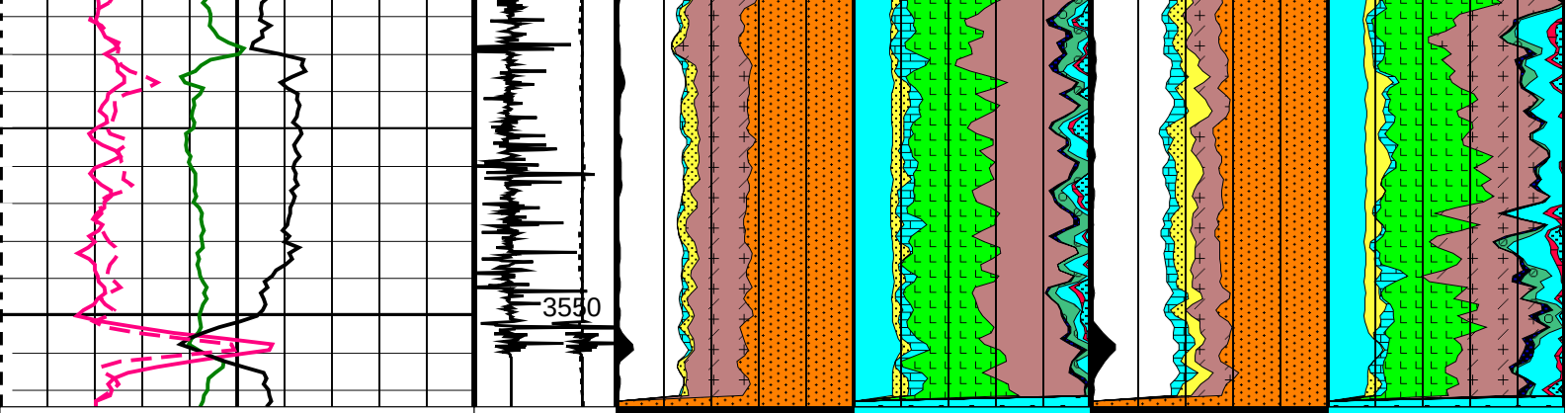
OP System Version: 15C0−309

MCM

RST−C	SRPC−3474−Q4_2007	PSPT−B	SRPC−3474−Q4_2007

PIP SUMMARY


Time Mark Every 60 S
N2 MAGNESIUM
N2 OXYGEN ACT
N2 DENSITY
N2 TOOL BKG
N2 TITANIUM
N2 POTASSIUM
N2 GADOLINIUM
N2 SULFUR
N2 IRON
N2 CHLORINE
F2 MAGNESIUM
F2 OXYGEN ACT
F2 DENSITY
F2 TOOL BKG
F2 TITANIUM
F2 POTASSIUM
F2 GADOLINIUM
F2 SULFUR
F2 IRON
F2 CHLORINE
N1 TOOL BKG
N2 CALCIUM
F1 TOOL BKG
F2 CALCIUM
Minitron Arc Detection (MARC)
0 (---- 5
N1 IRON
N2 SILICON
F1 IRON
F2 SILICON
Near Inel C/O Ratio (NCOR)
-0.2 (---- 0.8
Bad Level Diagnostic (BADL_ DIAG)
9 (---- 0
N1 SILICON
N2 HYDROGEN
F1 SILICON
F2 HYDROGEN
Far Eff Beam Current (FBEF)
100 (UA) 50
Tension (TENS) (LBF)
1000
3000
N1 CALCIUM
NC2 SODIUM ACT
F1 CALCIUM
FC2 SODIUM ACT
Far Inel C/O Ratio (FCOR)
-0.2 (---- 0.8
Discriminated CCL (CCLD)
3 (V) -1
N1 OXYGEN
NC2 ALUMINUM ACT
F1 OXYGEN
FC2 ALUMINUM ACT
Near/Far Count Rate Ratio (CRRA)
1 (---- 3
Computed CCL (CCLC)
1 (V) -3
N1 CARBON
NC2 OXYGEN ACT
F1 CARBON
FC2 OXYGEN ACT



Near/Far Count Rate Ratio (CRRA) 1 (---- 3	Computed CCL (CCLC) 1 (V) -3	N1 CARBON	NC2 OXYGEN ACT	F1 CARBON	FC2 OXYGEN ACT
Far Inel C/O Ratio (FCOR) -0.2 (---- 0.8	Discriminated CCL (CCLD) 3 (V) -1	N1 OXYGEN	NC2 ALUMINUM ACT	F1 OXYGEN	FC2 ALUMINUM ACT
Far Eff Beam Current (FBEF) 100 (UA) 50	Tension (TENS) (LBF) 1000 3000	N1 CALCIUM	NC2 SODIUM ACT	F1 CALCIUM	FC2 SODIUM ACT
Near Inel C/O Ratio (NCOR) -0.2 (---- 0.8	Bad Level Diagnostic (BADL_DIAG) 9 (---- 0	N1 SILICON	N2 HYDROGEN	F1 SILICON	F2 HYDROGEN
	Minitron Arc Detection (MARC) 0 (---- 5	N1 IRON	N2 SILICON	F1 IRON	F2 SILICON
		N1 TOOL BKG	N2 CALCIUM	F1 TOOL BKG	F2 CALCIUM
			N2 CHLORINE		F2 CHLORINE
			N2 IRON		F2 IRON
			N2 SULFUR		F2 SULFUR
			N2 GADOLINIUM		F2 GADOLINIUM
			N2 POTASSIUM		F2 POTASSIUM
			N2 TITANIUM		F2 TITANIUM
			N2 TOOL BKG		F2 TOOL BKG
			N2 DENSITY		F2 DENSITY
			N2 OXYGEN ACT		F2 OXYGEN ACT
			N2 MAGNESIUM		F2 MAGNESIUM

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
	RST−C: Reservoir Saturation Pro Tool C	
TIER_IC	RST IC Acquisition Mode	0_CO_Yield_and_Spectrolith
	System and Miscellaneous	
DO	Depth Offset for Playback	0.3 M
PP	Playback Processing	NORMAL

Format: RST_YIELDS **Vertical Scale: 1:200** **Graphics File Created: 24−Nov−2007 15:53**

OP System Version: 15C0−309

MCM

RST−C	SRPC−3474−Q4_2007	PSPT−B	SRPC−3474−Q4_2007

Input DLIS Files

DEFAULT	RST_PSP_058LUP	FN:72	PRODUCER	24−Nov−2007 15:48	3557.9 M	3521.7 M

Output DLIS Files

DEFAULT	RST_PSP_058PUP	FN:74	PRODUCER	24−Nov−2007 15:53		

Schlumberger

CO Mode Pass 5, 100ft/hr

MAXIS Field Log

Company: Esso Australia Pty Ltd **Well: CBA F4**

Input DLIS Files

DEFAULT	RST_PSP_057LUP	FN:71	PRODUCER	24−Nov−2007 14:51	3556.9 M	3520.9 M

Output DLIS Files

DEFAULT	RST_PSP_057PUP	FN:73	PRODUCER	24−Nov−2007 14:58	3552.4 M	3526.8 M

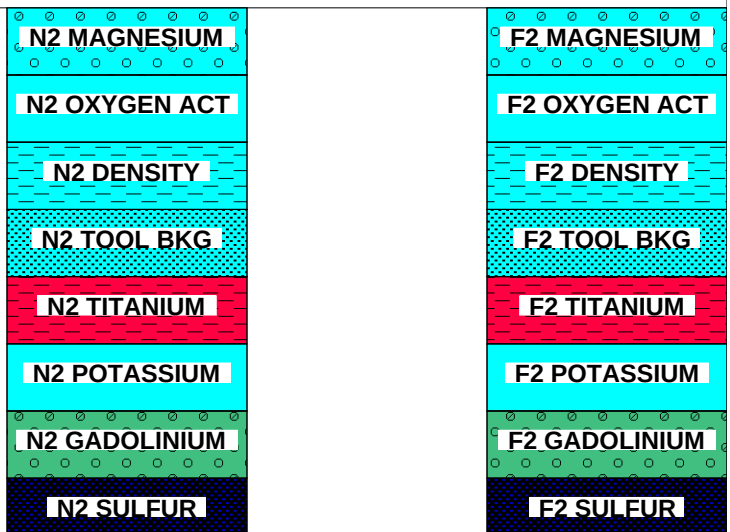
OP System Version: 15C0−309

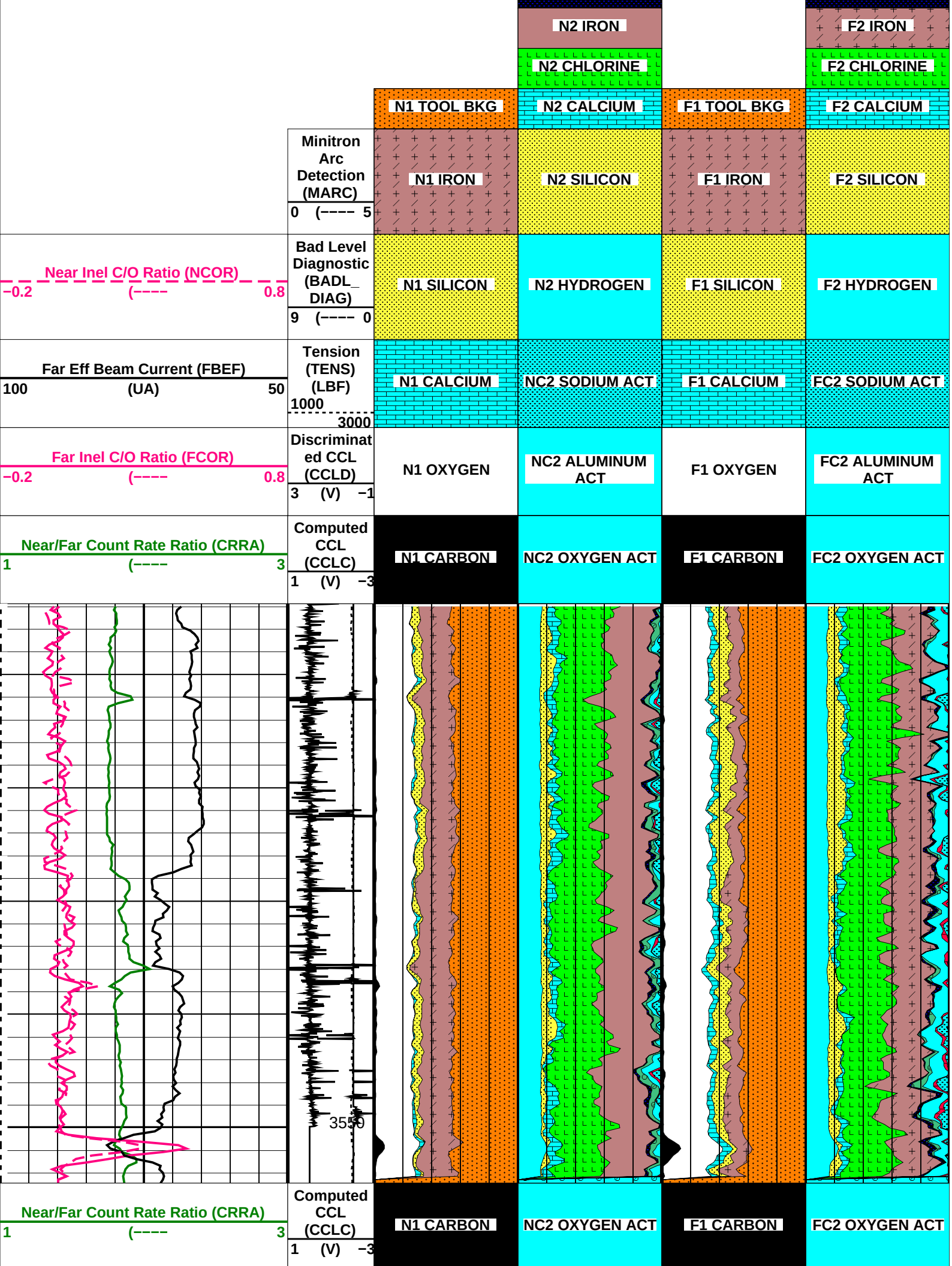
MCM

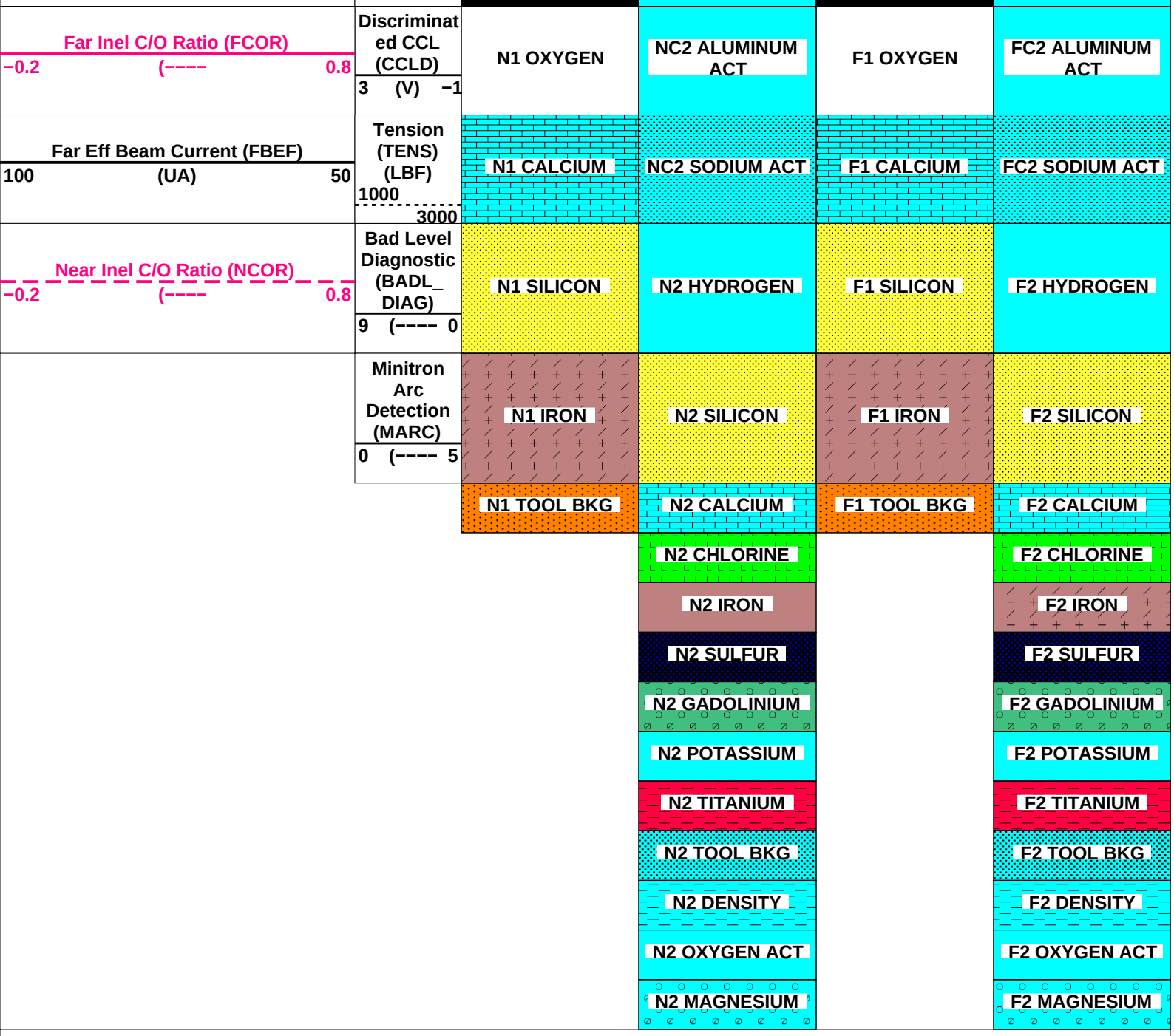
RST−C	SRPC−3474−Q4_2007	PSPT−B	SRPC−3474−Q4_2007

PIP SUMMARY

Time Mark Every 60 S




N2 IRON
F2 IRON
N2 CHLORINE
F2 CHLORINE
N1 TOOL BKG
N2 CALCIUM
F1 TOOL BKG
F2 CALCIUM
Minitron Arc Detection (MARC)
0 (---- 5
N1 IRON
N2 SILICON
F1 IRON
F2 SILICON
Near Inel C/O Ratio (NCOR)
-0.2 (---- 0.8
Bad Level Diagnostic (BADL_ DIAG)
9 (---- 0
N1 SILICON
N2 HYDROGEN
F1 SILICON
F2 HYDROGEN
Far Eff Beam Current (FBEF)
100 (UA) 50
Tension (TENS) (LBF)
1000
3000
N1 CALCIUM
NC2 SODIUM ACT
F1 CALCIUM
FC2 SODIUM ACT
Far Inel C/O Ratio (FCOR)
-0.2 (---- 0.8
Discriminated CCL (CCLD)
3 (V) -1
N1 OXYGEN
NC2 ALUMINUM ACT
F1 OXYGEN
FC2 ALUMINUM ACT
Near/Far Count Rate Ratio (CRRA)
1 (---- 3
Computed CCL (CCLC)
1 (V) -3
N1 CARBON
NC2 OXYGEN ACT
F1 CARBON
FC2 OXYGEN ACT
3550
Near/Far Count Rate Ratio (CRRA)
1 (---- 3
Computed CCL (CCLC)
1 (V) -3
N1 CARBON
NC2 OXYGEN ACT
F1 CARBON
FC2 OXYGEN ACT



PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
	RST−C: Reservoir Saturation Pro Tool C	
TIER_IC	RST IC Acquisition Mode	0_CO_Yield_and_Spectrolith
	System and Miscellaneous	
DO	Depth Offset for Playback	0.3 M
PP	Playback Processing	NORMAL

Format: RST_YIELDS Vertical Scale: 1:200 Graphics File Created: 24−Nov−2007 14:58

OP System Version: 15C0−309

MCM

RST−C	SRPC−3474−Q4_2007	PSPT−B	SRPC−3474−Q4_2007

Input DLIS Files

DEFAULT	RST_PSP_057LUP	FN:71	PRODUCER	24−Nov−2007 14:51	3556.9 M	3520.9 M

Output DLIS Files

Output DLIS Files

DEFAULT	RST_PSP_057PUP	FN:73	PRODUCER	24−Nov−2007 14:58		

Schlumberger

CO Mode Pass 4, 100ft/hr

MAXIS Field Log

Company: Esso Australia Pty Ltd **Well: CBA F4**

Input DLIS Files

DEFAULT	RST_PSP_056LUP	FN:69	PRODUCER	24−Nov−2007 13:46	3557.3 M	3521.2 M

Output DLIS Files

DEFAULT	RST_PSP_056PUP	FN:71	PRODUCER	24−Nov−2007 13:48	3552.4 M	3526.8 M

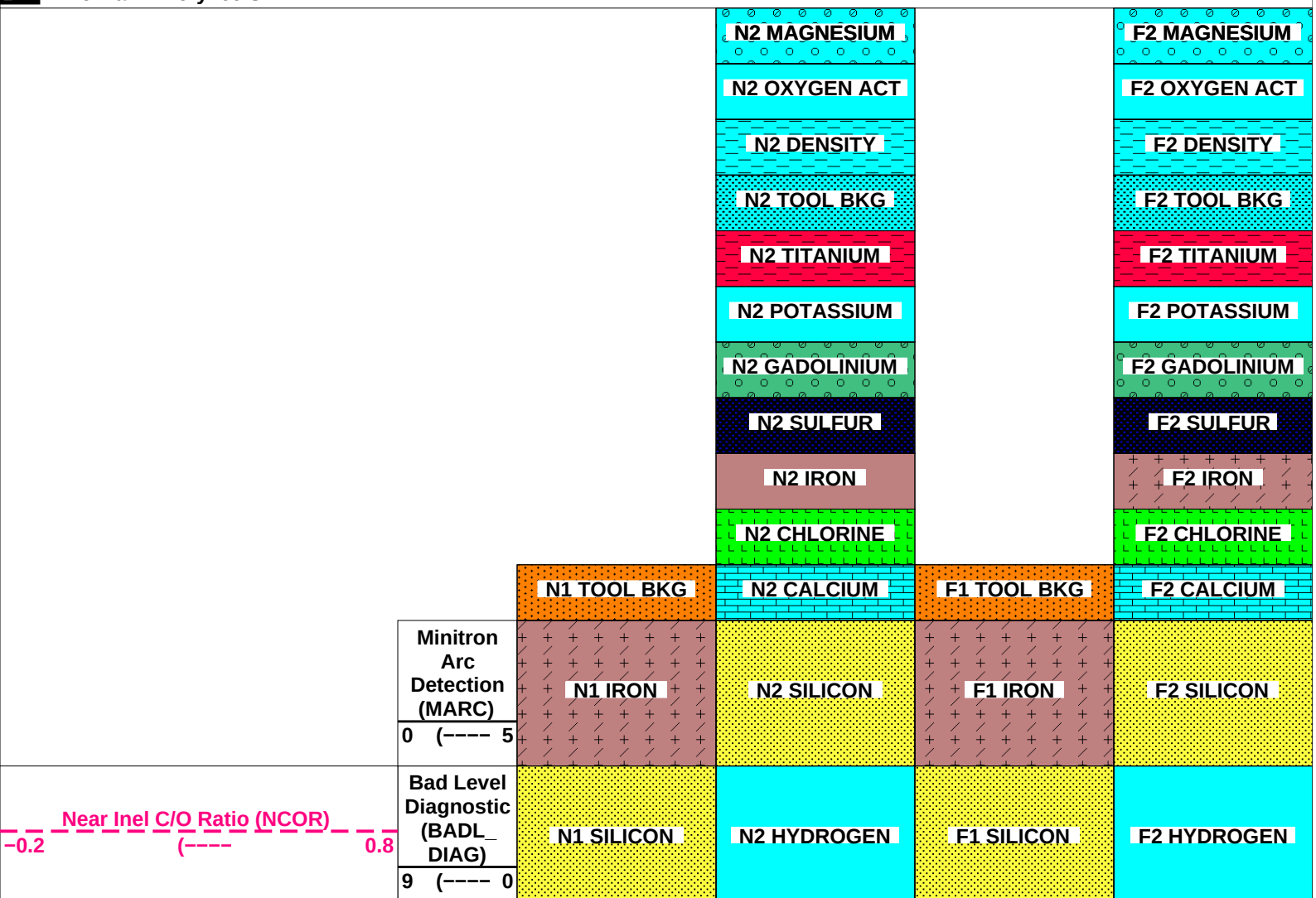
OP System Version: 15C0−309

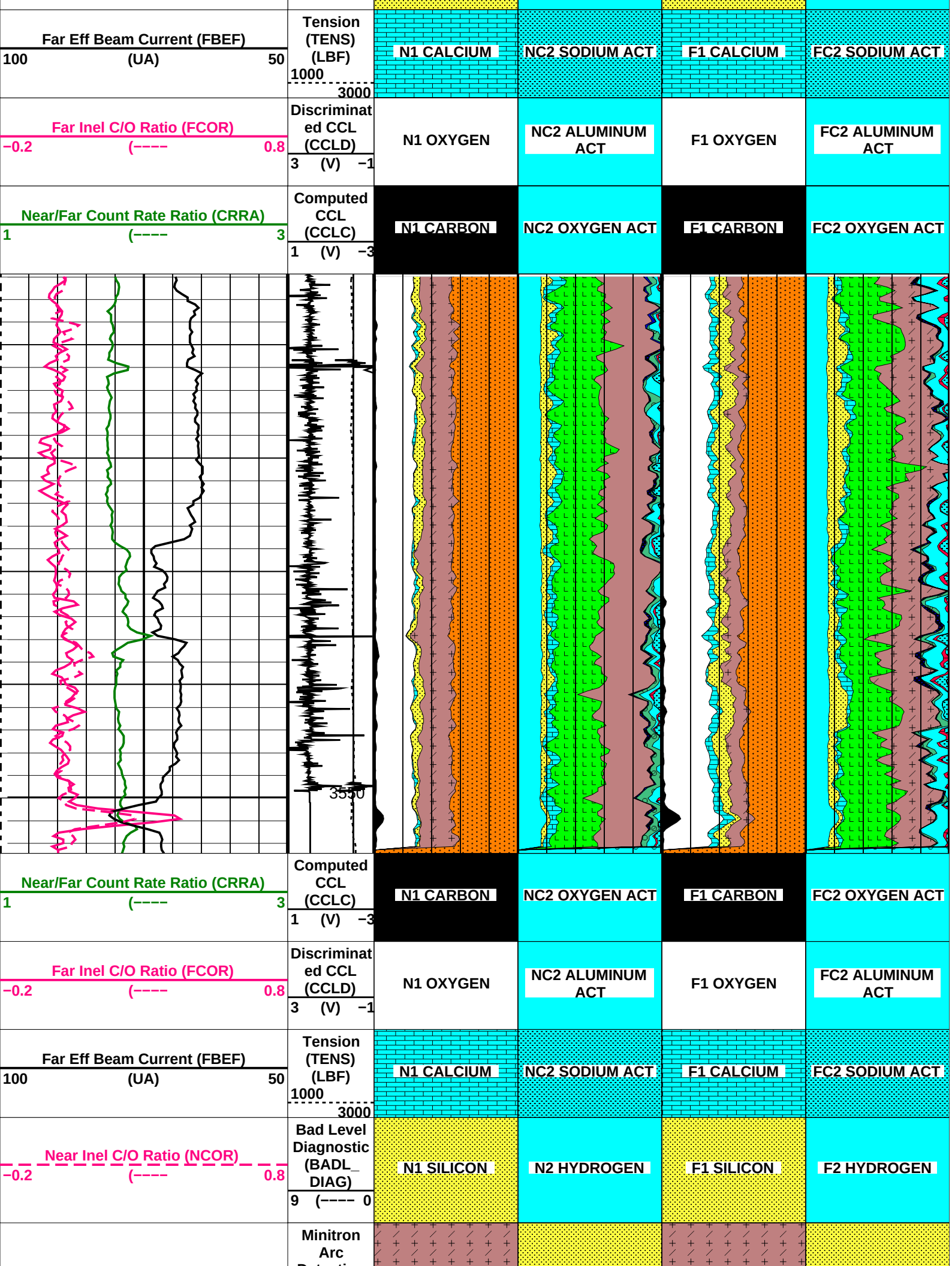
MCM

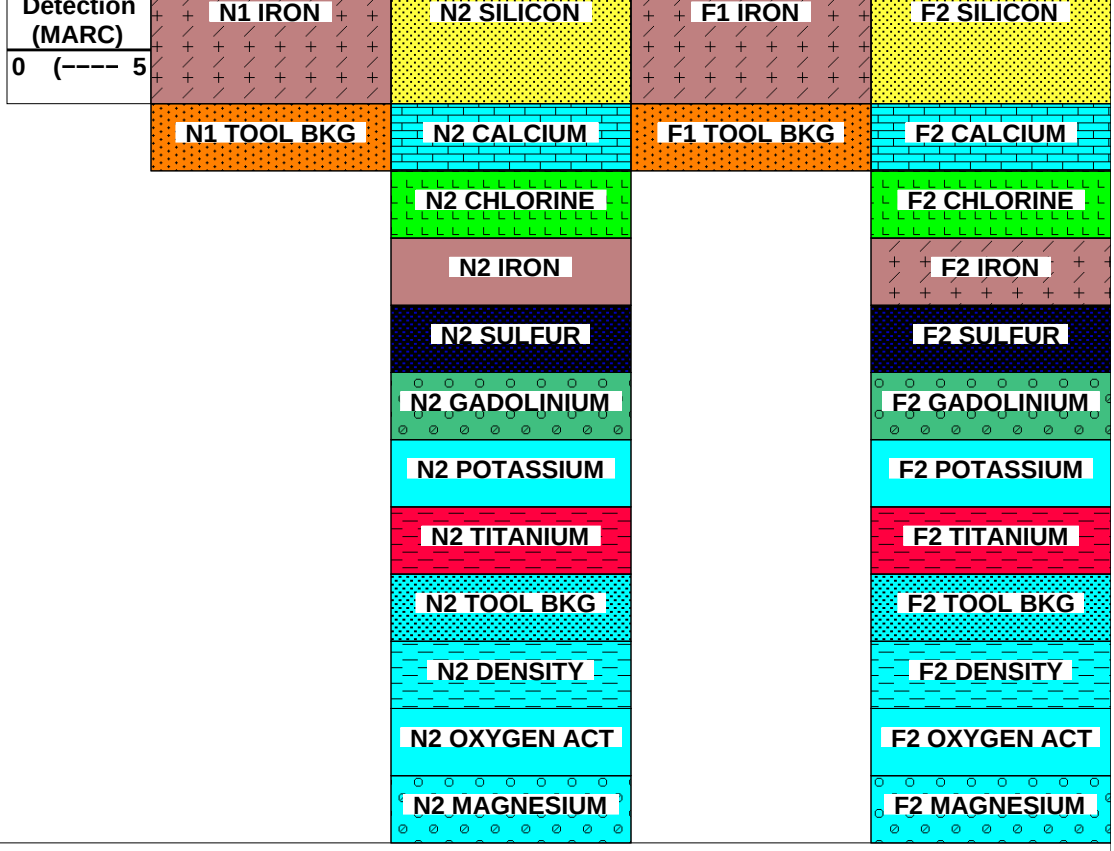
RST−C	SRPC−3474−Q4_2007	PSPT−B	SRPC−3474−Q4_2007

PIP SUMMARY

Time Mark Every 60 S




Far Eff Beam Current (FBEF)
100 (UA) 50
Tension (TENS) (LBF)
1000
3000
N1 CALCIUM
NC2 SODIUM ACT
F1 CALCIUM
FC2 SODIUM ACT
Far Inel C/O Ratio (FCOR)
−0.2 (---- 0.8
Discriminated CCL (CCLD)
3 (V) −1
N1 OXYGEN
NC2 ALUMINUM ACT
F1 OXYGEN
FC2 ALUMINUM ACT
Near/Far Count Rate Ratio (CRRA)
1 (---- 3
Computed CCL (CCLC)
1 (V) −3
N1 CARBON
NC2 OXYGEN ACT
F1 CARBON
FC2 OXYGEN ACT
3550
Near/Far Count Rate Ratio (CRRA)
1 (---- 3
Computed CCL (CCLC)
1 (V) −3
N1 CARBON
NC2 OXYGEN ACT
F1 CARBON
FC2 OXYGEN ACT
Far Inel C/O Ratio (FCOR)
−0.2 (---- 0.8
Discriminated CCL (CCLD)
3 (V) −1
N1 OXYGEN
NC2 ALUMINUM ACT
F1 OXYGEN
FC2 ALUMINUM ACT
Far Eff Beam Current (FBEF)
100 (UA) 50
Tension (TENS) (LBF)
1000
3000
N1 CALCIUM
NC2 SODIUM ACT
F1 CALCIUM
FC2 SODIUM ACT
Near Inel C/O Ratio (NCOR)
−0.2 (---- 0.8
Bad Level Diagnostic (BADL_DIAG)
9 (---- 0
N1 SILICON
N2 HYDROGEN
F1 SILICON
F2 HYDROGEN
Minitron Arc



PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
	RST-C: Reservoir Saturation Pro Tool C	
TIER_IC	RST IC Acquisition Mode	0_CO_Yield_and_Spectrolith
	System and Miscellaneous	
DO	Depth Offset for Playback	0.1 M
PP	Playback Processing	NORMAL

Format: RST_YIELDS **Vertical Scale: 1:200** **Graphics File Created: 24-Nov-2007 13:48**

OP System Version: 15C0-309

MCM

RST-C	SRPC-3474-Q4_2007	PSPT-B	SRPC-3474-Q4_2007

Input DLIS Files

DEFAULT	RST_PSP_056LUP	FN:69	PRODUCER	24-Nov-2007 13:46	3557.3 M	3521.2 M

Output DLIS Files

DEFAULT	RST_PSP_056PUP	FN:71	PRODUCER	24-Nov-2007 13:48

Schlumberger

CO Mode Pass 3, 100ft/hr

MAXIS Field Log

Input DLIS Files

DEFAULT	RST_PSP_053LUP	FN:60	PRODUCER	24−Nov−2007 12:43	3557.0 M	3521.7 M

Output DLIS Files

DEFAULT	RST_PSP_053PUP	FN:70	PRODUCER	24−Nov−2007 12:47	3552.4 M	3526.8 M

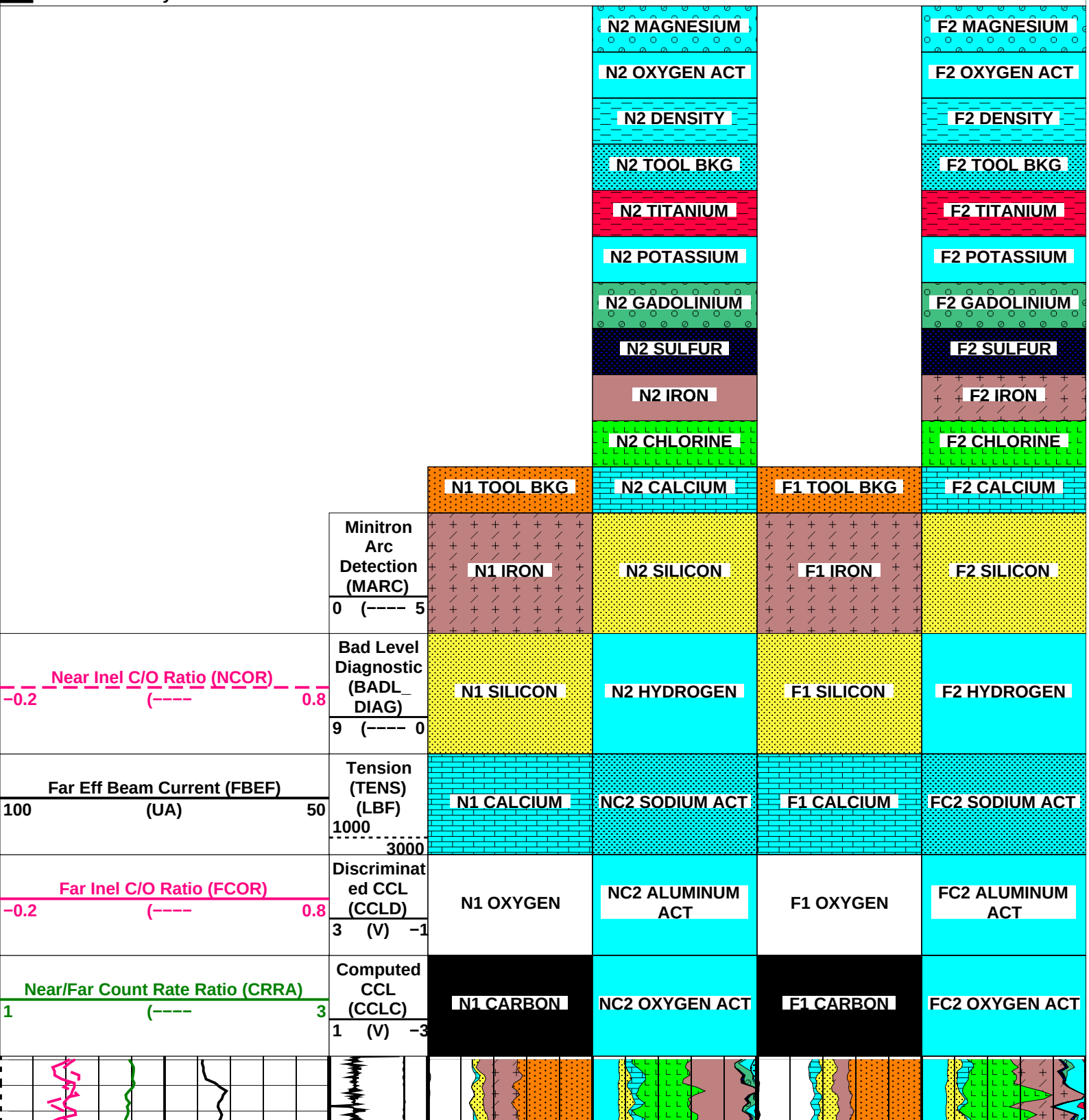
OP System Version: 15C0−309

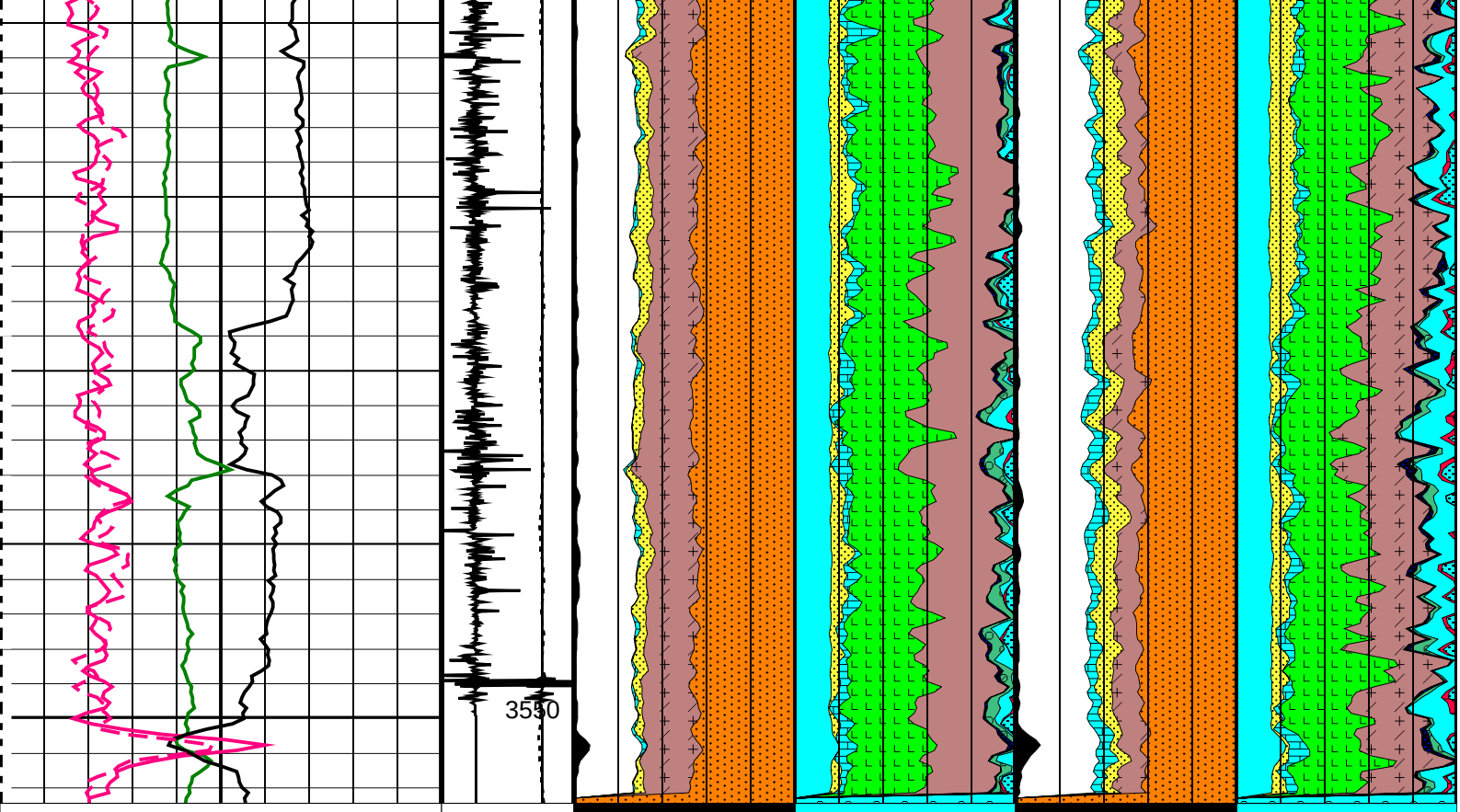
MCM

RST−C	SRPC−3474−Q4_2007	PSPT−B	SRPC−3474−Q4_2007

PIP SUMMARY

Time Mark Every 60 S





Near/Far Count Rate Ratio (CRRA)
1 (---- 3

Far Inel C/O Ratio (FCOR)
−0.2 (---- 0.8

Far Eff Beam Current (FBEF)
100 (UA) 50

Near Inel C/O Ratio (NCOR)
−0.2 (---- 0.8

Computed CCL (CCLC)
1 (V) −3

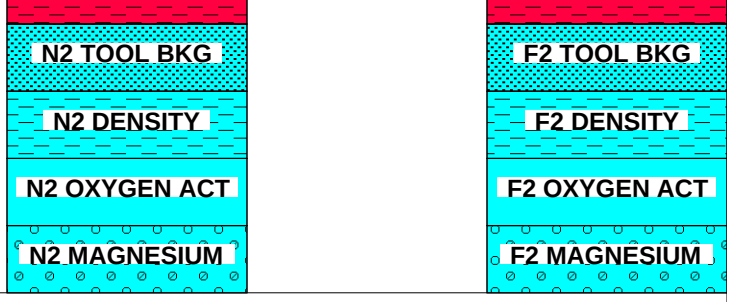
Discriminated CCL (CCLD)
3 (V) −1

Tension (TENS) (LBF)
1000
3000

Bad Level Diagnostic (BADL_DIAG)
9 (---- 0

Minitron Arc Detection (MARC)
0 (---- 5

N1 CARBON	NC2 OXYGEN ACT	F1 CARBON	FC2 OXYGEN ACT
N1 OXYGEN	NC2 ALUMINUM ACT	F1 OXYGEN	FC2 ALUMINUM ACT
N1 CALCIUM	NC2 SODIUM ACT	F1 CALCIUM	FC2 SODIUM ACT
N1 SILICON	N2 HYDROGEN	F1 SILICON	F2 HYDROGEN
N1 IRON	N2 SILICON	F1 IRON	F2 SILICON
N1 TOOL BKG	N2 CALCIUM	F1 TOOL BKG	F2 CALCIUM
	N2 CHLORINE		F2 CHLORINE
	N2 IRON		F2 IRON
	N2 SULFUR		F2 SULFUR
	N2 GADOLINIUM		F2 GADOLINIUM
	N2 POTASSIUM		F2 POTASSIUM
	N2 TITANIUM		F2 TITANIUM



PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
	RST−C: Reservoir Saturation Pro Tool C	
TIER_IC	RST IC Acquisition Mode	0_CO_Yield_and_Spectrolith
	System and Miscellaneous	
DO	Depth Offset for Playback	0.0 M
PP	Playback Processing	NORMAL

Format: RST_YIELDS Vertical Scale: 1:200 Graphics File Created: 24−Nov−2007 12:47

OP System Version: 15C0−309

MCM

RST−C	SRPC−3474−Q4_2007	PSPT−B	SRPC−3474−Q4_2007

Input DLIS Files

DEFAULT	RST_PSP_053LUP	FN:60	PRODUCER	24−Nov−2007 12:43	3557.0 M	3521.7 M

Output DLIS Files

DEFAULT	RST_PSP_053PUP	FN:70	PRODUCER	24−Nov−2007 12:47

Schlumberger

CO Mode Pass 2, 100ft/hr

MAXIS Field Log

Company: Esso Australia Pty Ltd Well: CBA F4

Input DLIS Files

DEFAULT	RST_PSP_052LUP	FN:57	PRODUCER	24−Nov−2007 11:42	3557.6 M	3521.4 M

Output DLIS Files

DEFAULT	RST_PSP_052PUP	FN:62	PRODUCER	24−Nov−2007 11:48	3552.4 M	3526.8 M

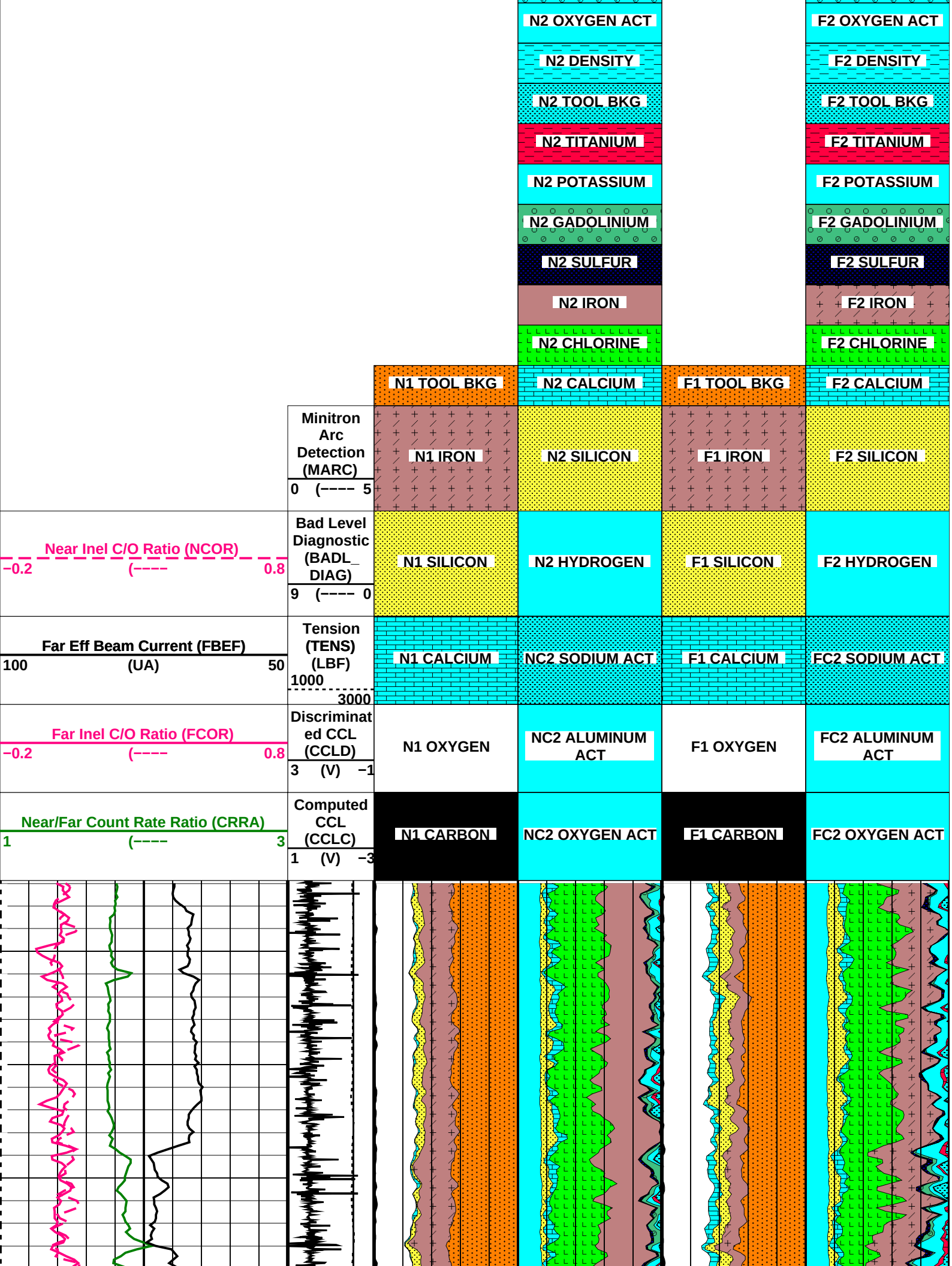
OP System Version: 15C0−309

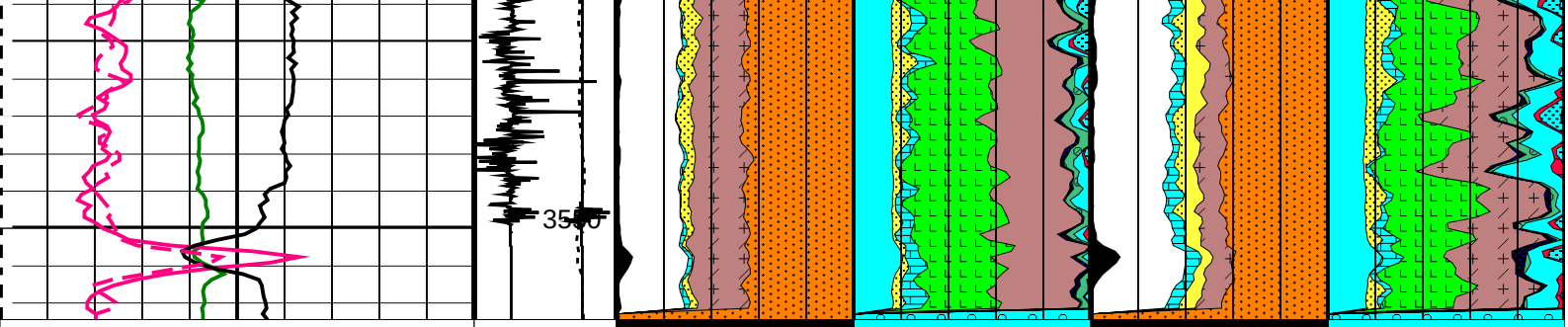
MCM

RST−C	SRPC−3474−Q4_2007	PSPT−B	SRPC−3474−Q4_2007

PIP SUMMARY

Time Mark Every 60 S


N2 OXYGEN ACT
N2 DENSITY
N2 TOOL BKG
N2 TITANIUM
N2 POTASSIUM
N2 GADOLINIUM
N2 SULFUR
N2 IRON
N2 CHLORINE
F2 OXYGEN ACT
F2 DENSITY
F2 TOOL BKG
F2 TITANIUM
F2 POTASSIUM
F2 GADOLINIUM
F2 SULFUR
F2 IRON
F2 CHLORINE
N1 TOOL BKG
N2 CALCIUM
F1 TOOL BKG
F2 CALCIUM
Minitron Arc Detection (MARC)
0 (---- 5
N1 IRON
N2 SILICON
F1 IRON
F2 SILICON
Near Inel C/O Ratio (NCOR)
-0.2 (---- 0.8
Bad Level Diagnostic (BADL_ DIAG)
9 (---- 0
N1 SILICON
N2 HYDROGEN
F1 SILICON
F2 HYDROGEN
Far Eff Beam Current (FBEF)
100 (UA) 50
Tension (TENS) (LBF)
1000
3000
N1 CALCIUM
NC2 SODIUM ACT
F1 CALCIUM
FC2 SODIUM ACT
Far Inel C/O Ratio (FCOR)
-0.2 (---- 0.8
Discriminated CCL (CCLD)
3 (V) -1
N1 OXYGEN
NC2 ALUMINUM ACT
F1 OXYGEN
FC2 ALUMINUM ACT
Near/Far Count Rate Ratio (CRRA)
1 (---- 3
Computed CCL (CCLC)
1 (V) -3
N1 CARBON
NC2 OXYGEN ACT
F1 CARBON
FC2 OXYGEN ACT



Near/Far Count Rate Ratio (CRRA) 1 (---- 3	Computed CCL (CCLC) 1 (V) −3	N1 CARBON	NC2 OXYGEN ACT	F1 CARBON	FC2 OXYGEN ACT
Far Inel C/O Ratio (FCOR) −0.2 (---- 0.8	Discriminated CCL (CCLD) 3 (V) −1	N1 OXYGEN	NC2 ALUMINUM ACT	F1 OXYGEN	FC2 ALUMINUM ACT
Far Eff Beam Current (FBEF) 100 (UA) 50	Tension (TENS) (LBF) 1000 3000	N1 CALCIUM	NC2 SODIUM ACT	F1 CALCIUM	FC2 SODIUM ACT
Near Inel C/O Ratio (NCOR) −0.2 (---- 0.8	Bad Level Diagnostic (BADL_DIAG) 9 (---- 0	N1 SILICON	N2 HYDROGEN	F1 SILICON	F2 HYDROGEN
	Minitron Arc Detection (MARC) 0 (---- 5	N1 IRON	N2 SILICON	F1 IRON	F2 SILICON
		N1 TOOL BKG	N2 CALCIUM	F1 TOOL BKG	F2 CALCIUM
			N2 CHLORINE		F2 CHLORINE
			N2 IRON		F2 IRON
			N2 SULFUR		F2 SULFUR
			N2 GADOLINIUM		F2 GADOLINIUM
			N2 POTASSIUM		F2 POTASSIUM
			N2 TITANIUM		F2 TITANIUM
			N2 TOOL BKG		F2 TOOL BKG
			N2 DENSITY		F2 DENSITY
			N2 OXYGEN ACT		F2 OXYGEN ACT
			N2 MAGNESIUM		F2 MAGNESIUM

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
	RST−C: Reservoir Saturation Pro Tool C	
TIER_IC	RST IC Acquisition Mode	0_CO_Yield_and_Spectrolith

TIER_IC	RST IC Acquisition Mode	0_CO_Yield_and_Spectrolith	
System and Miscellaneous			
DO	Depth Offset for Playback	0.0	M
PP	Playback Processing	NORMAL	

Format: RST_YIELDS Vertical Scale: 1:200 Graphics File Created: 24−Nov−2007 11:48

OP System Version: 15C0−309

MCM

RST−C	SRPC−3474−Q4_2007	PSPT−B	SRPC−3474−Q4_2007

Input DLIS Files

DEFAULT	RST_PSP_052LUP	FN:57	PRODUCER	24−Nov−2007 11:42	3557.6 M	3521.4 M

Output DLIS Files

DEFAULT	RST_PSP_052PUP	FN:62	PRODUCER	24−Nov−2007 11:48		

Schlumberger

CO Mode Pass 1, 100ft/hr

MAXIS Field Log

Company: Esso Australia Pty Ltd Well: CBA F4

Input DLIS Files

DEFAULT	RST_PSP_051LUP	FN:55	PRODUCER	24−Nov−2007 10:48	3560.4 M	3521.2 M

Output DLIS Files

DEFAULT	RST_PSP_051PUP	FN:59	PRODUCER	24−Nov−2007 10:54	3552.4 M	3526.8 M

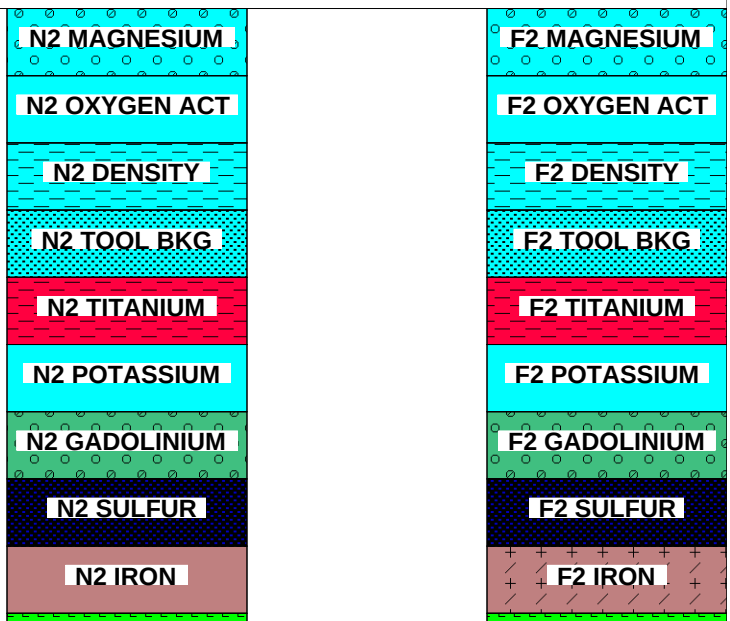
OP System Version: 15C0−309

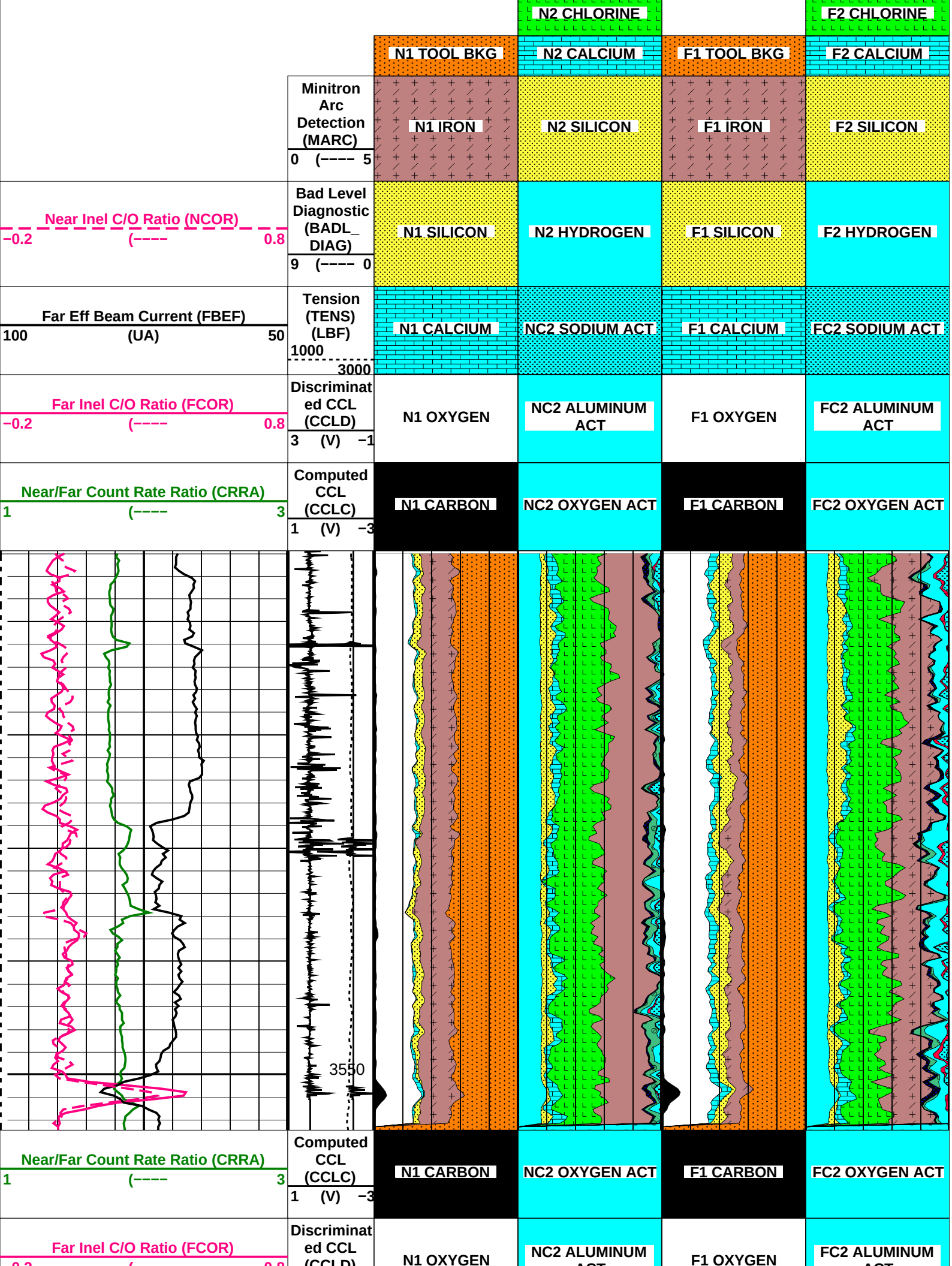
MCM

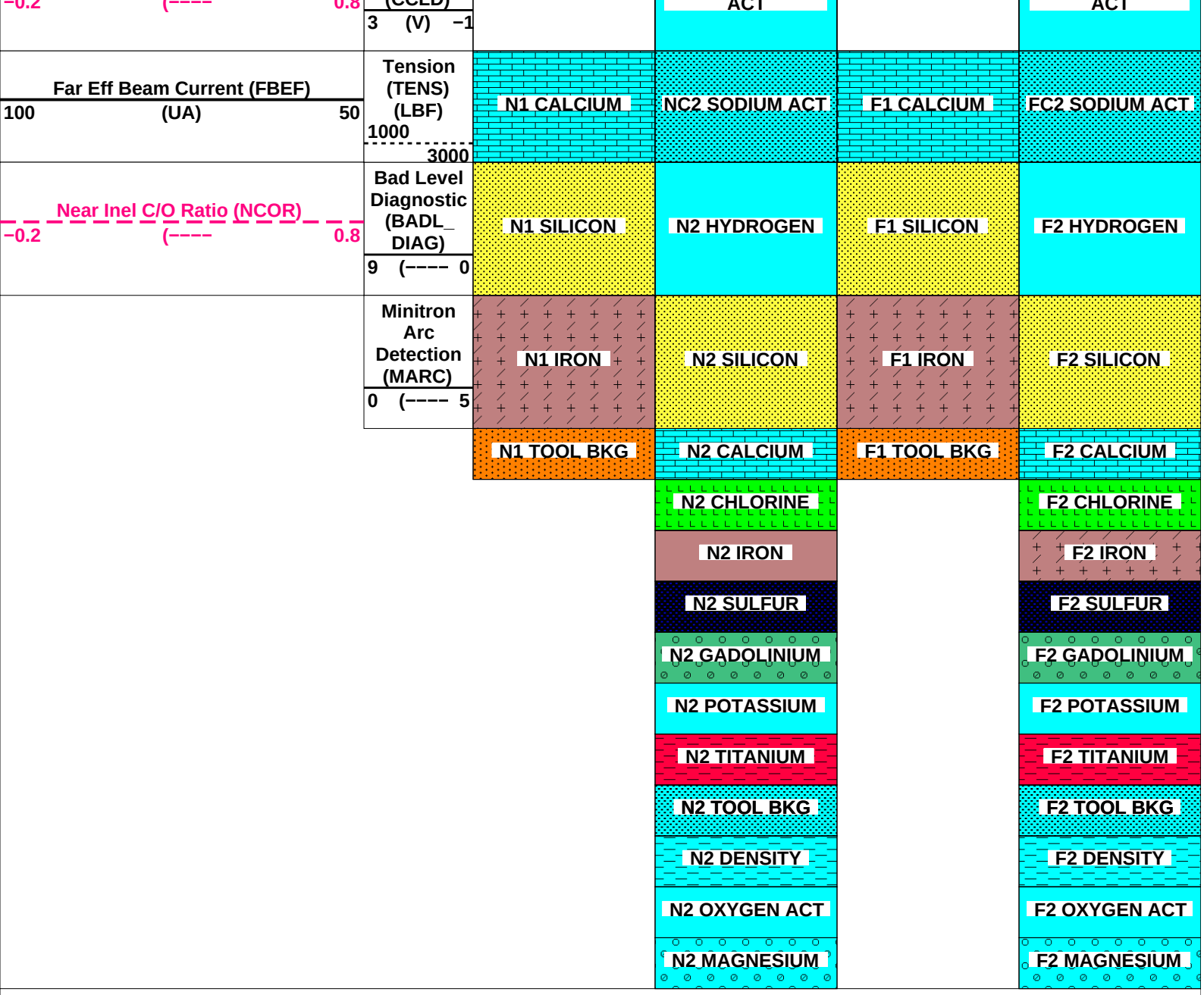
RST−C	SRPC−3474−Q4_2007	PSPT−B	SRPC−3474−Q4_2007

PIP SUMMARY

Time Mark Every 60 S




N2 CHLORINE
F2 CHLORINE
N1 TOOL BKG
N2 CALCIUM
F1 TOOL BKG
F2 CALCIUM
Minitron Arc Detection (MARC)
0 (---- 5
N1 IRON
N2 SILICON
F1 IRON
F2 SILICON
Near Inel C/O Ratio (NCOR)
-0.2 (---- 0.8
Bad Level Diagnostic (BADL_ DIAG)
9 (---- 0
N1 SILICON
N2 HYDROGEN
F1 SILICON
F2 HYDROGEN
Far Eff Beam Current (FBEF)
100 (UA) 50
Tension (TENS) (LBF)
1000
3000
N1 CALCIUM
NC2 SODIUM ACT
F1 CALCIUM
FC2 SODIUM ACT
Far Inel C/O Ratio (FCOR)
-0.2 (---- 0.8
Discriminated CCL (CCLD)
3 (V) -1
N1 OXYGEN
NC2 ALUMINUM ACT
F1 OXYGEN
FC2 ALUMINUM ACT
Near/Far Count Rate Ratio (CRRA)
1 (---- 3
Computed CCL (CCLC)
1 (V) -3
N1 CARBON
NC2 OXYGEN ACT
F1 CARBON
FC2 OXYGEN ACT
3550
Near/Far Count Rate Ratio (CRRA)
1 (---- 3
Computed CCL (CCLC)
1 (V) -3
N1 CARBON
NC2 OXYGEN ACT
F1 CARBON
FC2 OXYGEN ACT
Far Inel C/O Ratio (FCOR)
Discriminated CCL (CCLD)
N1 OXYGEN
NC2 ALUMINUM ACT
F1 OXYGEN
FC2 ALUMINUM ACT



PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
	RST−C: Reservoir Saturation Pro Tool C	
TIER_IC	RST IC Acquisition Mode	0_CO_Yield_and_Spectrolith
	System and Miscellaneous	
DO	Depth Offset for Playback	0.3 M
PP	Playback Processing	NORMAL

Format: RST_YIELDS Vertical Scale: 1:200 Graphics File Created: 24−Nov−2007 10:54

OP System Version: 15C0−309

MCM

RST−C	SRPC−3474−Q4_2007	PSPT−B	SRPC−3474−Q4_2007

Input DLIS Files

DEFAULT	RST_PSP_051LUP	FN:55	PRODUCER	24−Nov−2007 10:48	3560.4 M	3521.2 M

Output DLIS Files

DEFAULT	RST_PSP_051PUP	FN:59	PRODUCER	24−Nov−2007 10:54

Schlumberger

Merged Sigma Passes

MAXIS Field Log

Company: Esso Australia Pty Ltd **Well: CBA F4**

Input DLIS Files

DEFAULT	RST_PSP_049PUP	FN:54	PRODUCER	24−Nov−2007 08:56	3582.2 M	3430.4 M
DEFAULT	RST_PSP_050PUP	FN:55	PRODUCER	24−Nov−2007 09:38	3582.5 M	3430.4 M

Output DLIS Files

DEFAULT	RST_PSP_051PUP	FN:56	PRODUCER	24−Nov−2007 09:48	3582.2 M	3430.8 M

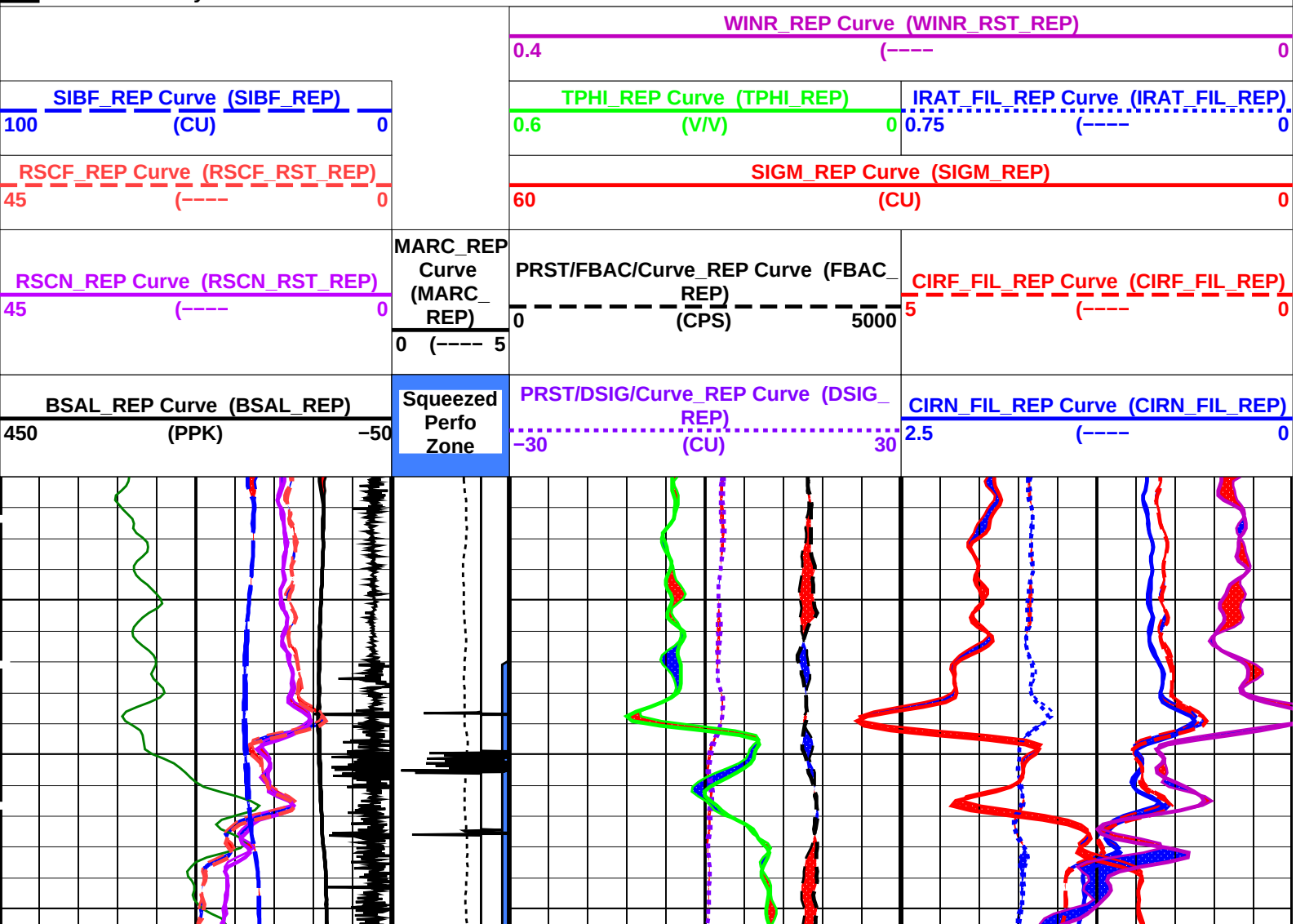
OP System Version: 15C0−309

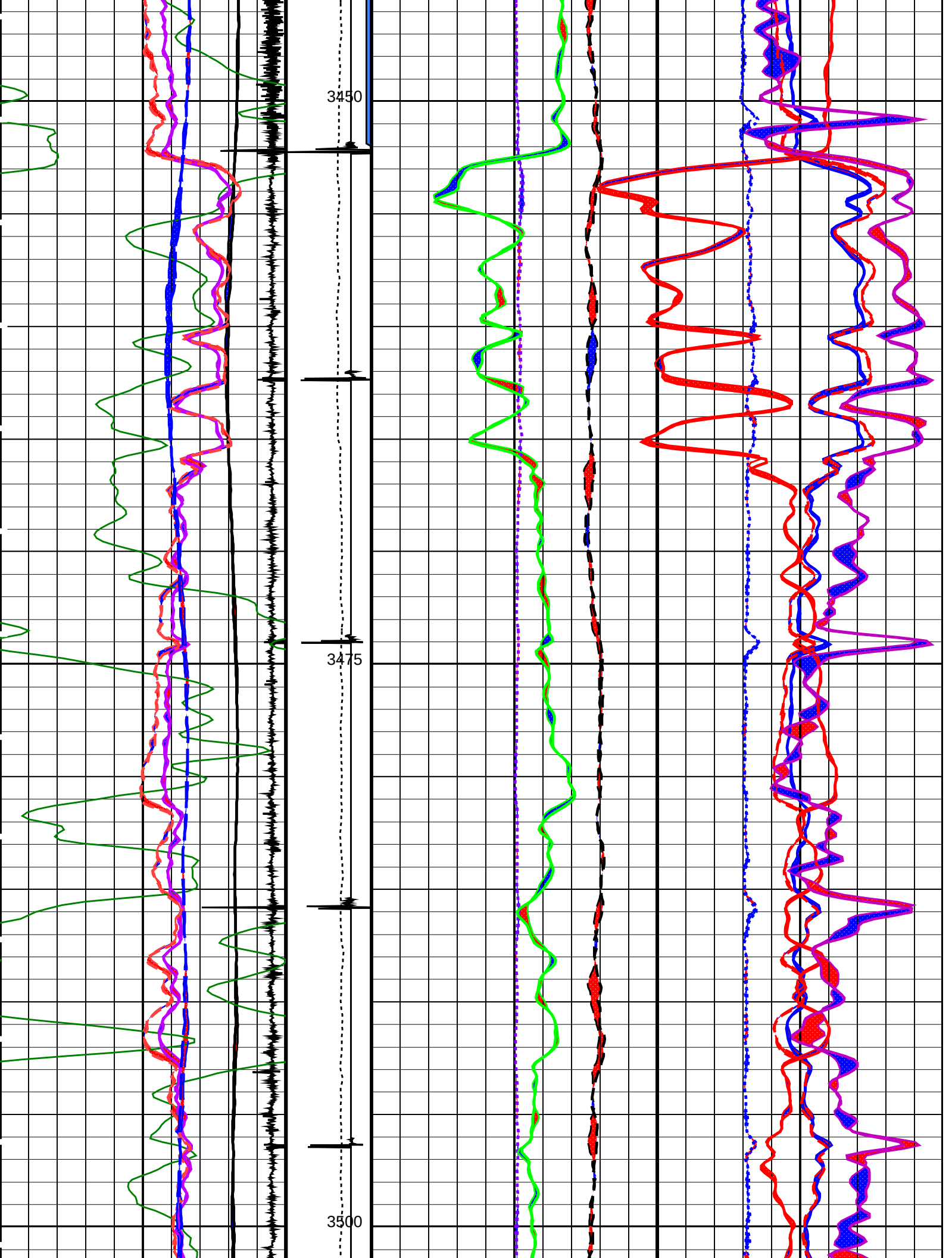
MCM

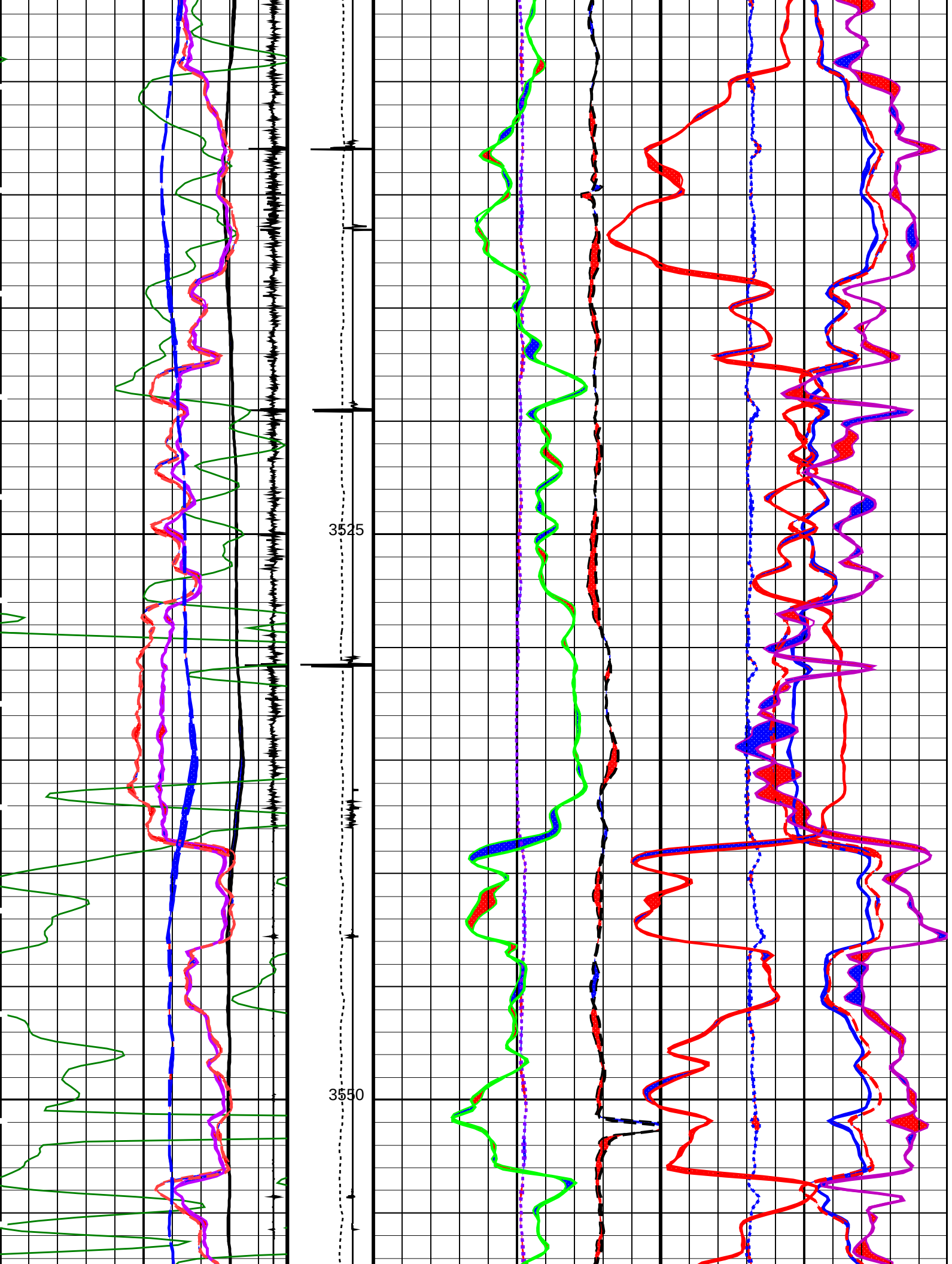
RST−C	SRPC−3474−Q4_2007	PSPT−B	SRPC−3474−Q4_2007

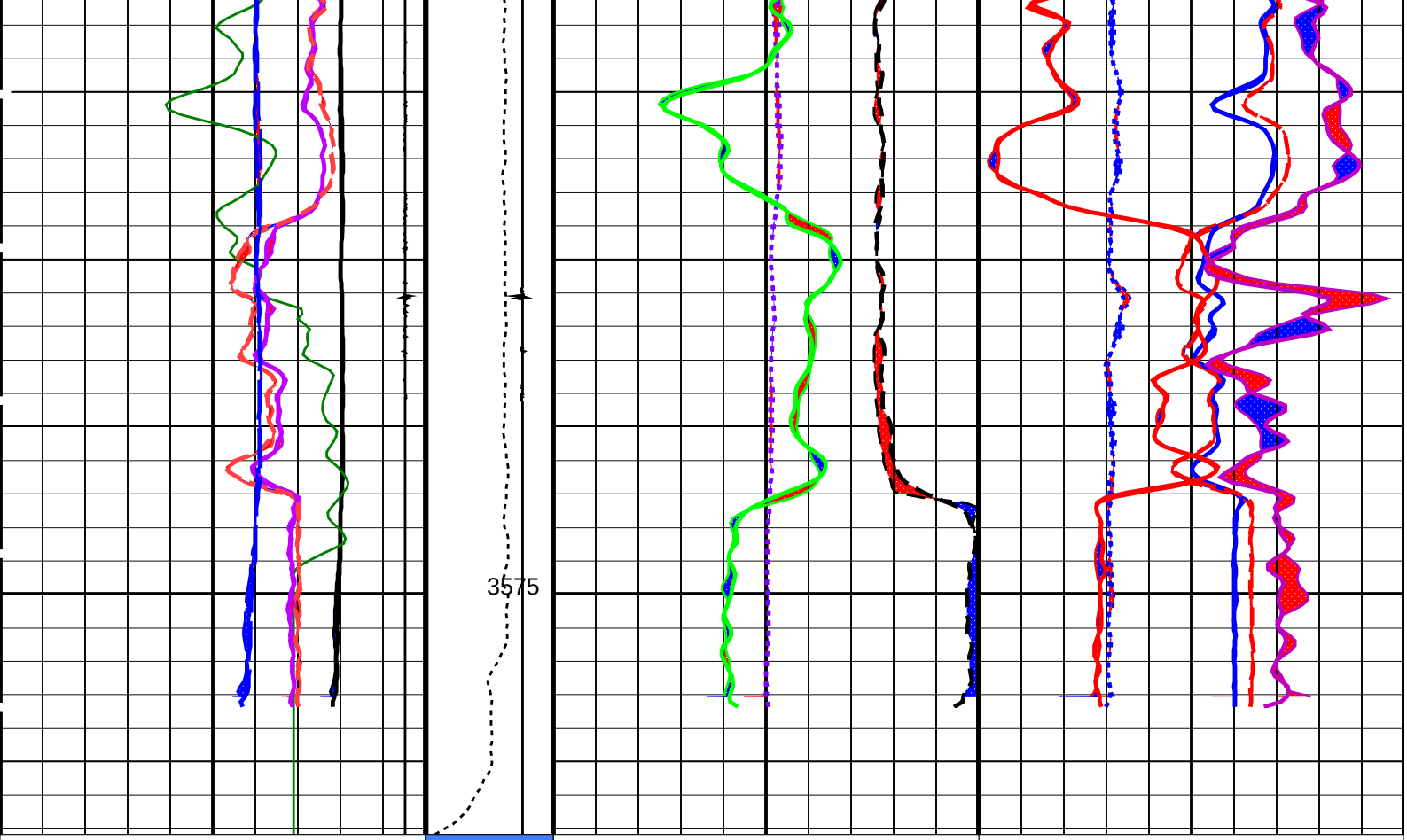
PIP SUMMARY

Time Mark Every 60 S




3450
3475
3500


3525
3550



BSAL_REP Curve (BSAL_REP) 450 (PPK) −50	Squeezed Perfo Zone	PRST/DSIG/Curve_REP Curve (DSIG_REP) −30 (CU) 30
RSCN_REP Curve (RSCN_RST_REP) 45 (---- 0	MARC_REP Curve (MARC_REP) 0 (---- 5	PRST/FBAC/Curve_REP Curve (FBAC_REP) 0 (CPS) 5000
RSCF_REP Curve (RSCF_RST_REP) 45 (---- 0		SIGM_REP Curve (SIGM_REP) 60 (CU) 0
SIBF_REP Curve (SIBF_REP) 100 (CU) 0		TPHI_REP Curve (TPHI_REP) 0.6 (V/V) 0
		WINR_REP Curve (WINR_RST_REP) 0.4 (---- 0

CIRN_FIL_REP Curve (CIRN_FIL_REP) 2.5 (---- 0
CIRF_FIL_REP Curve (CIRF_FIL_REP) 5 (---- 0
IRAT_FIL_REP Curve (IRAT_FIL_REP) 0.75 (---- 0

PIP SUMMARY

Time Mark Every 60 S

Format: RST_SIG_ANSW_REP Vertical Scale: 1:200 Graphics File Created: 24−Nov−2007 09:48

OP System Version: 15C0−309

MCM

RST−C	SRPC−3474−Q4_2007	PSPT−B	SRPC−3474−Q4_2007

Input DLIS Files

DEFAULT	RST_PSP_049PUP	FN:54	PRODUCER	24−Nov−2007 08:56	3582.2 M	3430.4 M
DEFAULT	RST_PSP_050PUP	FN:55	PRODUCER	24−Nov−2007 09:38	3582.5 M	3430.4 M

Output DLIS Files

DEFAULT	RST_PSP_051PUP	FN:56	PRODUCER	24−Nov−2007 09:48

Schlumberger

Sigma Pass Repeat, 900ft/hr

MAXIS Field Log

Company: Esso Australia Pty Ltd **Well: CBA F4**

Input DLIS Files

DEFAULT	RST_PSP_050LUP	FN:54	PRODUCER	24−Nov−2007 09:34	3581.7 M	3420.0 M

Output DLIS Files

DEFAULT	RST_PSP_050PUP	FN:55	PRODUCER	24−Nov−2007 09:38	3582.5 M	3430.4 M

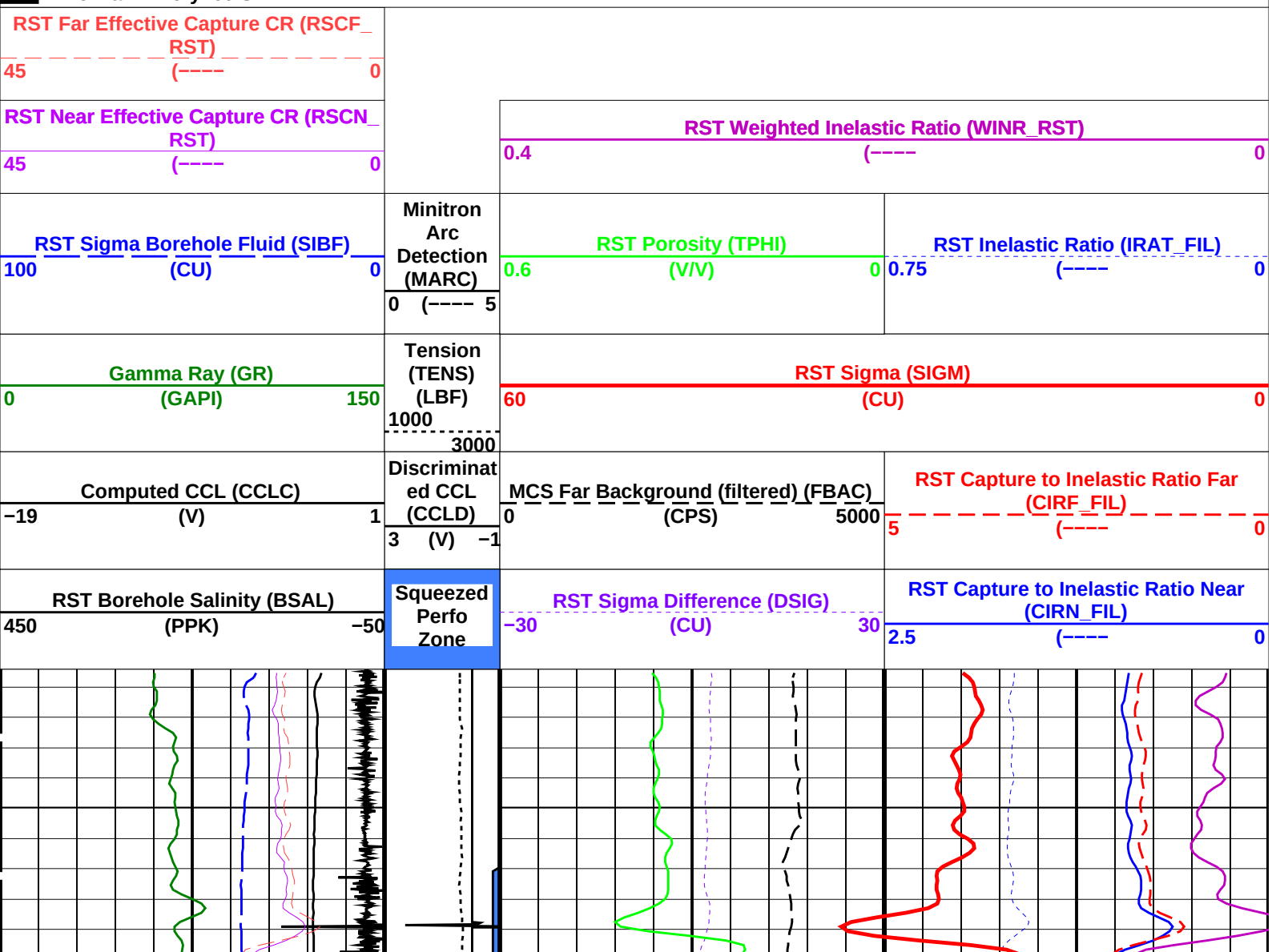
OP System Version: 15C0−309

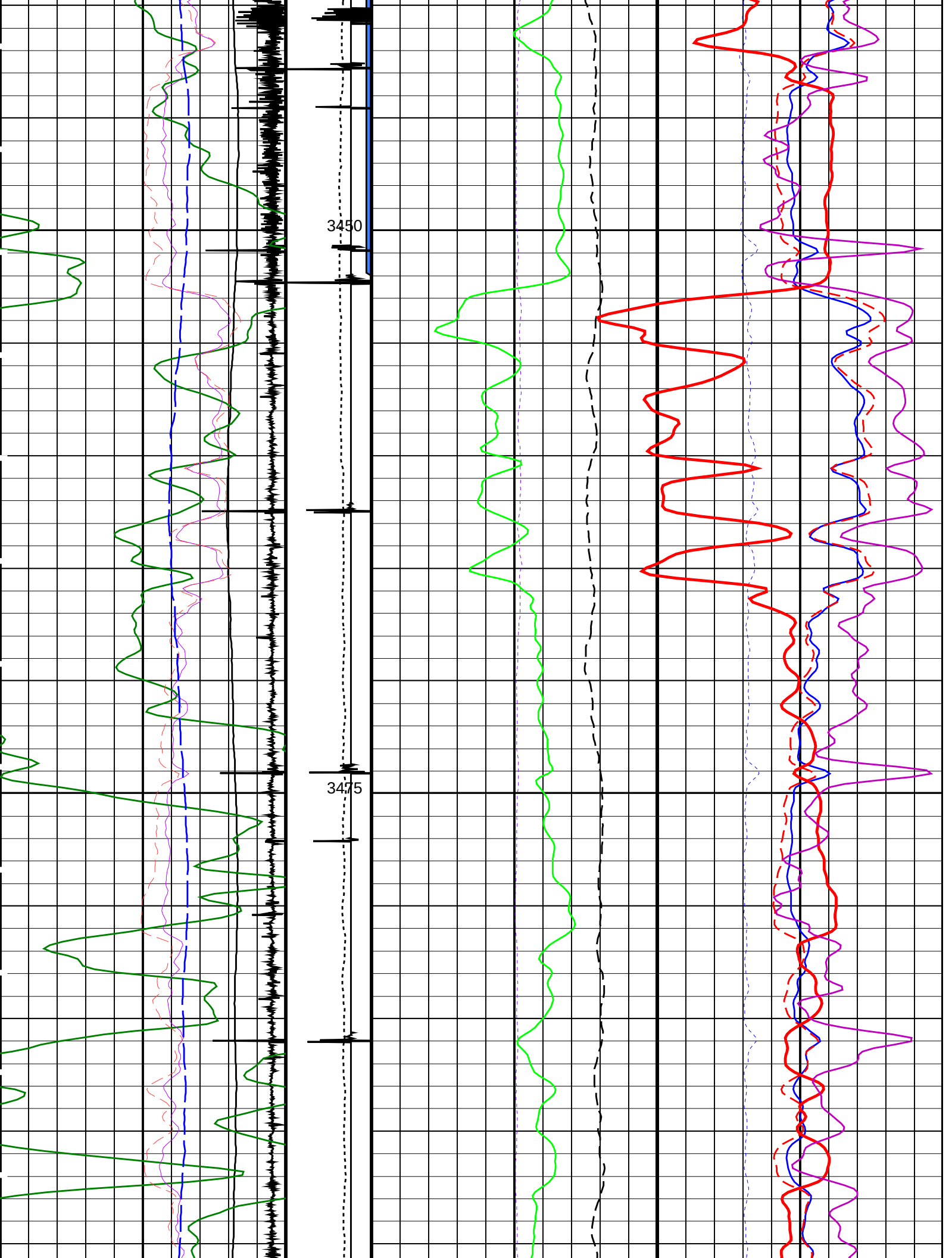
MCM

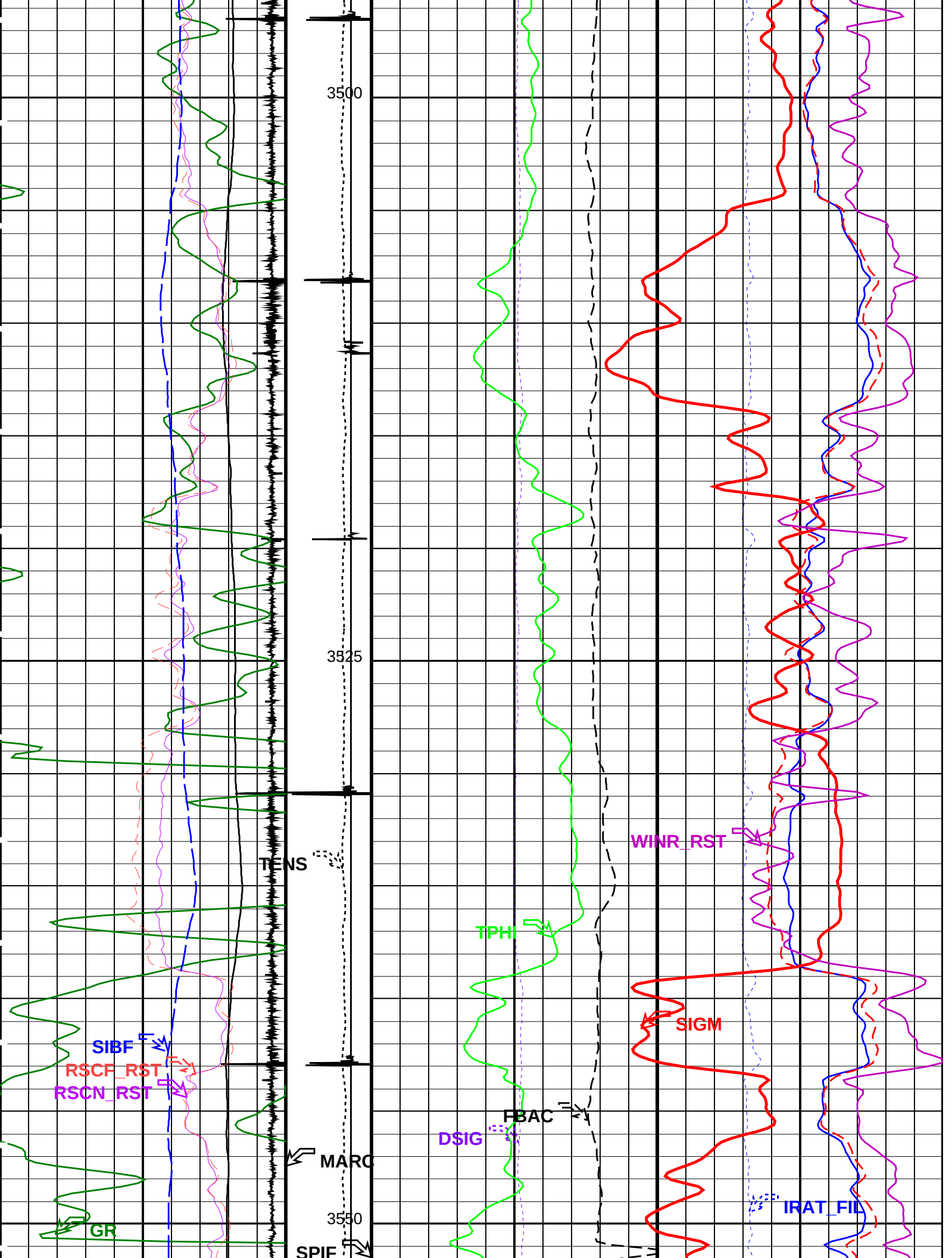
RST−C	SRPC−3474−Q4_2007	PSPT−B	SRPC−3474−Q4_2007

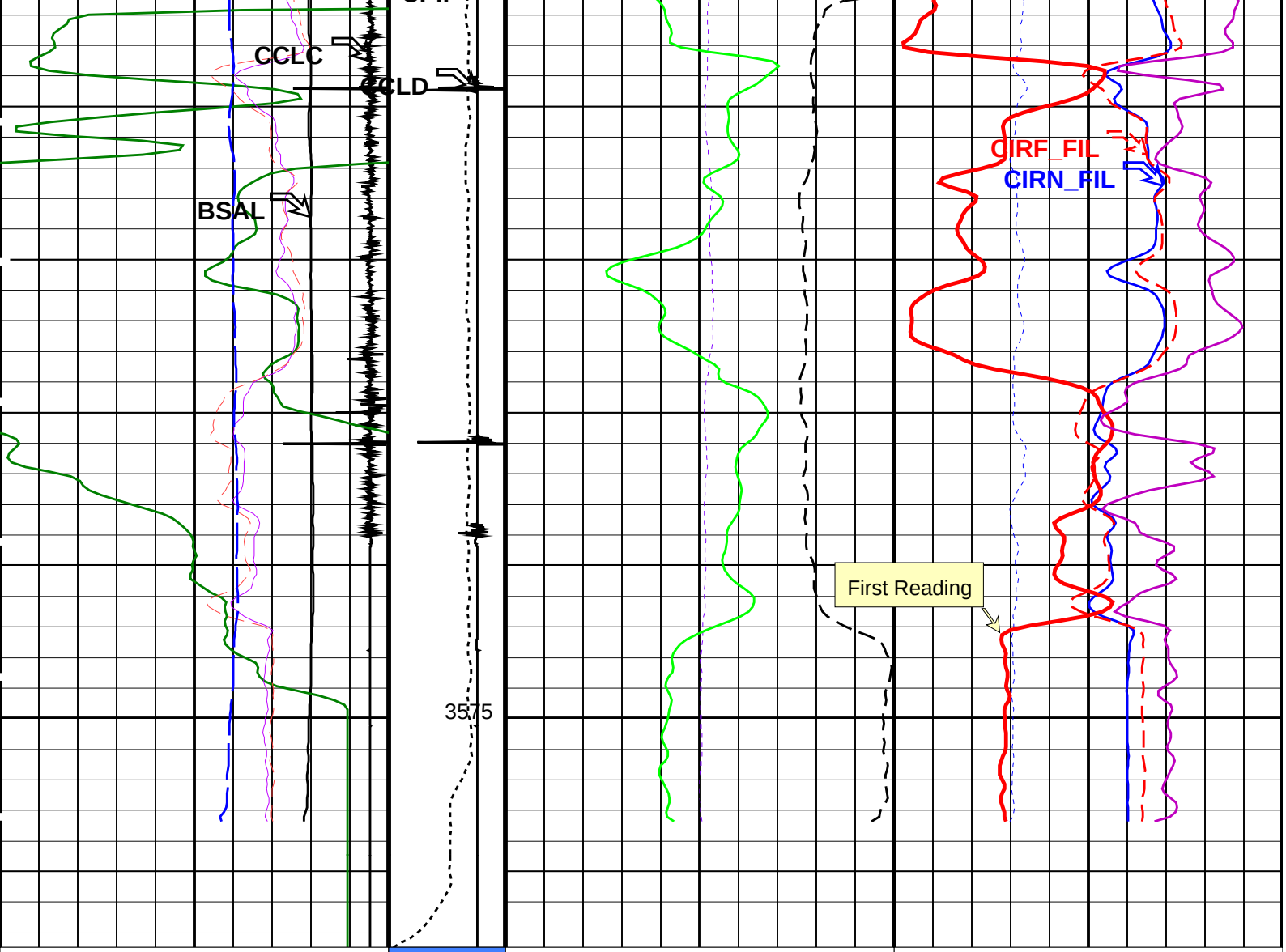
PIP SUMMARY

Time Mark Every 60 S




3450
3475


3500
3525
3550
TENS
SIBF
RSCF_RST
RSCN_RST
MARC
GR
SPIF
TPHI
FBAC
DSIG
WINR_RST
SIGM
IRAT_FIL



RST Borehole Salinity (BSAL) 450 (PPK) −50	Squeezed Perfo Zone	RST Sigma Difference (DSIG) −30 (CU) 30
RST Capture to Inelastic Ratio Near (CIRN_FIL) 2.5 (---- 0		
Computed CCL (CCLC) −19 (V) 1	Discriminated CCL (CCLD) 3 (V) −1	MCS Far Background (filtered) (FBAC) 0 (CPS) 5000
RST Capture to Inelastic Ratio Far (CIRF_FIL) 5 (---- 0		
Gamma Ray (GR) 0 (GAPI) 150	Tension (TENS) (LBF) 1000 3000	RST Sigma (SIGM) 60 (CU) 0
RST Sigma Borehole Fluid (SIBF) 100 (CU) 0	Minitron Arc Detection (MARC) 0 (---- 5	RST Porosity (TPHI) 0.6 (V/V) 0
RST Inelastic Ratio (IRAT_FIL) 0.75 (---- 0		
RST Near Effective Capture CR (RSCN_RST) 45 (---- 0		RST Weighted Inelastic Ratio (WINR_RST) 0.4 (---- 0
RST Far Effective Capture CR (RSCF_RST) 45 (---- 0		

PIP SUMMARY

Time Mark Every 60 S

Format: RST_SIG_ANSW Vertical Scale: 1:200 Graphics File Created: 24−Nov−2007 09:38

OP System Version: 15C0−309

MCM

RST−C	SRPC−3474−Q4_2007	PSPT−B	SRPC−3474−Q4_2007

Input DLIS Files

DEFAULT	RST_PSP_050LUP	FN:54	PRODUCER	24−Nov−2007 09:34	3581.7 M	3420.0 M

Output DLIS Files

DEFAULT	RST_PSP_050PUP	FN:55	PRODUCER	24−Nov−2007 09:38

Schlumberger

Sigma Pass 1, 900ft/hr

MAXIS Field Log

Company: Esso Australia Pty Ltd

Well: CBA F4

Input DLIS Files

DEFAULT	RST_PSP_049LUP	FN:58	PRODUCER	24−Nov−2007 08:50	3577.9 M	3419.4 M

Output DLIS Files

DEFAULT	RST_PSP_049PUP	FN:54	PRODUCER	24−Nov−2007 08:56	3582.2 M	3430.4 M

OP System Version: 15C0−309

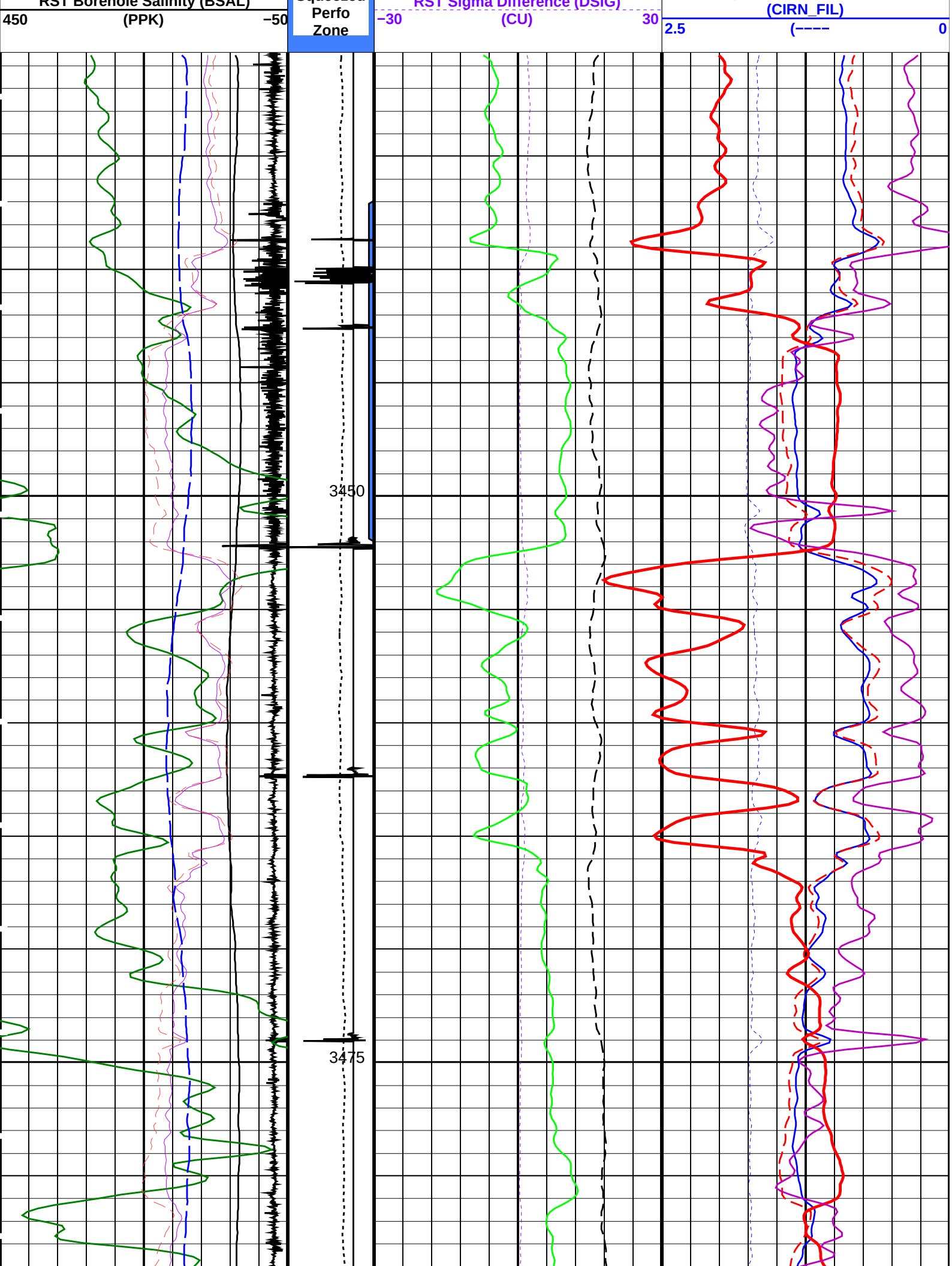
MCM

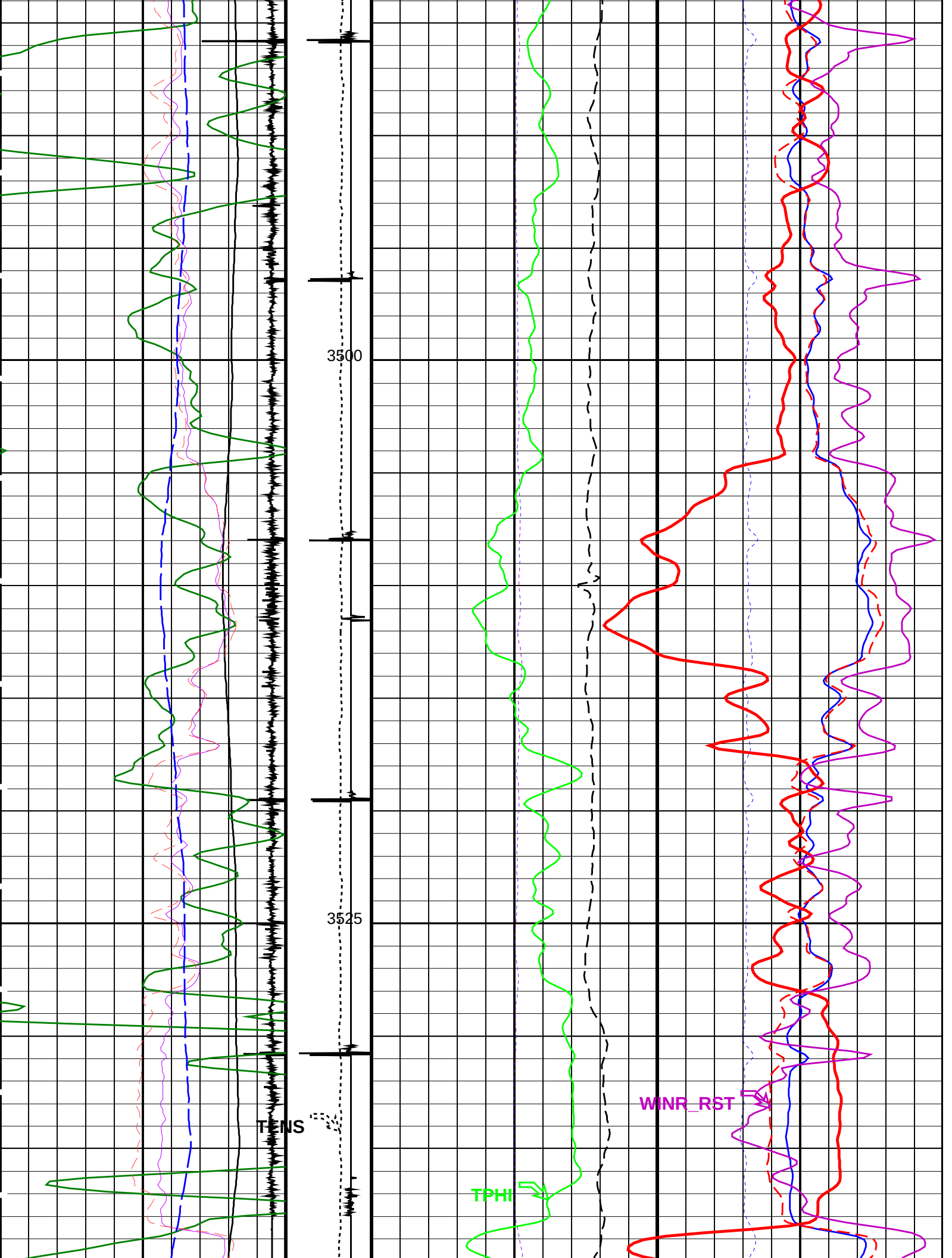
RST−C	SRPC−3474−Q4_2007	PSPT−B	SRPC−3474−Q4_2007

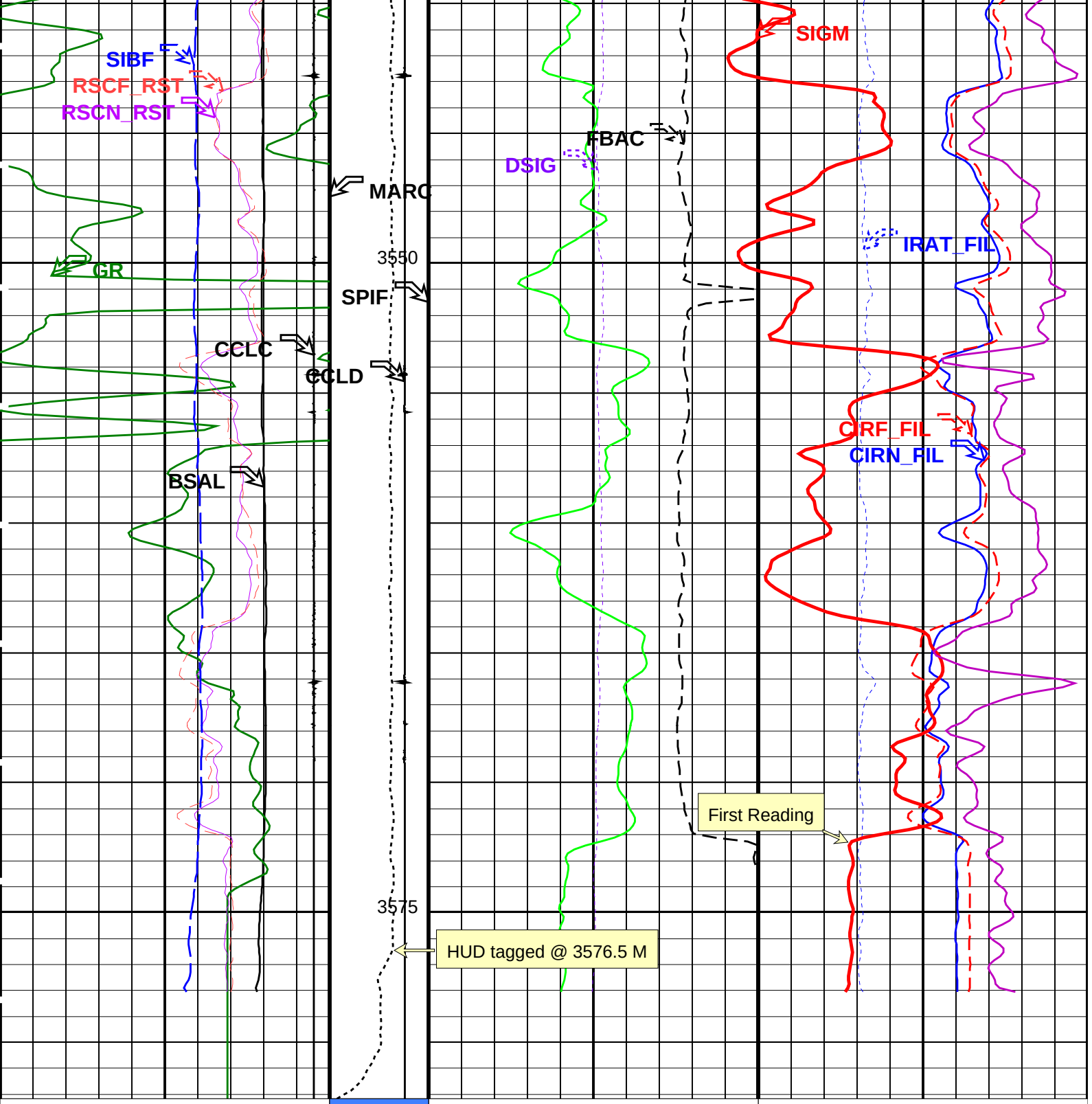
PIP SUMMARY

Time Mark Every 60 S

RST Far Effective Capture CR (RSCF_RST) 45 (---- 0		
RST Near Effective Capture CR (RSCN_RST) 45 (---- 0		RST Weighted Inelastic Ratio (WINR_RST) 0.4 (---- 0
RST Sigma Borehole Fluid (SIBF) 100 (CU) 0	Minitron Arc Detection (MARC) 0 (---- 5	RST Porosity (TPHI) 0.6 (V/V) 0 / RST Inelastic Ratio (IRAT_FIL) 0.75 (---- 0
Gamma Ray (GR) 0 (GAPI) 150	Tension (TENS) (LBF) 1000 3000	RST Sigma (SIGM) 60 (CU) 0
Computed CCL (CCLC) −19 (V) 1	Discriminated CCL (CCLD) 3 (V) −1	MCS Far Background (filtered) (FBAC) 0 (CPS) 5000 / RST Capture to Inelastic Ratio Far (CIRF_FIL) 5 (---- 0
RST Borehole Salinity (RSAL)	Squeezed	RST Sigma Difference (DSIG) / RST Capture to Inelastic Ratio Near


RST Borehole Salinity (BSAL)
450
(PPK)
−50
Perfo Zone
RST Sigma Difference (DSIG)
−30
(CU)
30
(CIRN_FIL)
2.5
(----
0
3450
3475


3500
3525
TENS
WINR_RST
TPHI



RST Borehole Salinity (BSAL) 450 (PPK) −50	Squeezed Perfo Zone	RST Sigma Difference (DSIG) −30 (CU) 30
Computed CCL (CCLC) −19 (V) 1	Discriminated CCL (CCLD) 3 (V) −1	MCS Far Background (filtered) (FBAC) 0 (CPS) 5000
Gamma Ray (GR) 0 (GAPI) 150	Tension (TENS) (LBF) 1000 3000	RST Sigma (SIGM) 60 (CU) 0
RST Sigma Borehole Fluid (SIBF)	Minitron Arc Detection	RST Porosity (TPHI)

RST Capture to Inelastic Ratio Near (CIRN_FIL) 2.5 (−−−− 0
RST Capture to Inelastic Ratio Far (CIRF_FIL) 5 (−−−− 0
RST Inelastic Ratio (IRAT_FIL)

100	(CU)	0
	(MARC)	
0	(----	5
0.8	(V/V)	0
0.75	(----	0

RST Near Effective Capture CR (RSCN_RST)

45	(----	0

RST Far Effective Capture CR (RSCF_RST)

45	(----	0

RST Weighted Inelastic Ratio (WINR_RST)

0.4	(----	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	9.875	IN
BSAL	Borehole Salinity	-50000.00	PPM
CSIZ	Current Casing Size	7.625	IN
CWEI	Casing Weight	29.70	LB/F
DO	Depth Offset for Playback	4.2	M
PP	Playback Processing	NORMAL	

Format: RST_SIG_ANSW Vertical Scale: 1:200 Graphics File Created: 24-Nov-2007 08:57

OP System Version: 15C0-309

MCM

RST-C	SRPC-3474-Q4_2007	PSPT-B	SRPC-3474-Q4_2007

Input DLIS Files

DEFAULT	RST_PSP_049LUP	FN:58	PRODUCER	24-Nov-2007 08:50	3577.9 M	3419.4 M

Output DLIS Files

DEFAULT	RST_PSP_049PUP	FN:54	PRODUCER	24-Nov-2007 08:56

Schlumberger

Correlation Pass
Gamma Ray Baseline

MAXIS Field Log

Company: Esso Australia Pty Ltd Well: CBA F4

Input DLIS Files

DEFAULT	RST_PSP_040LUP	FN:37	PRODUCER	24-Nov-2007 02:54	3578.7 M	3387.1 M

Output DLIS Files

DEFAULT RST_PSP_040PUP FN:42 PRODUCER 24−Nov−2007 03:43

OP System Version: 15C0−309

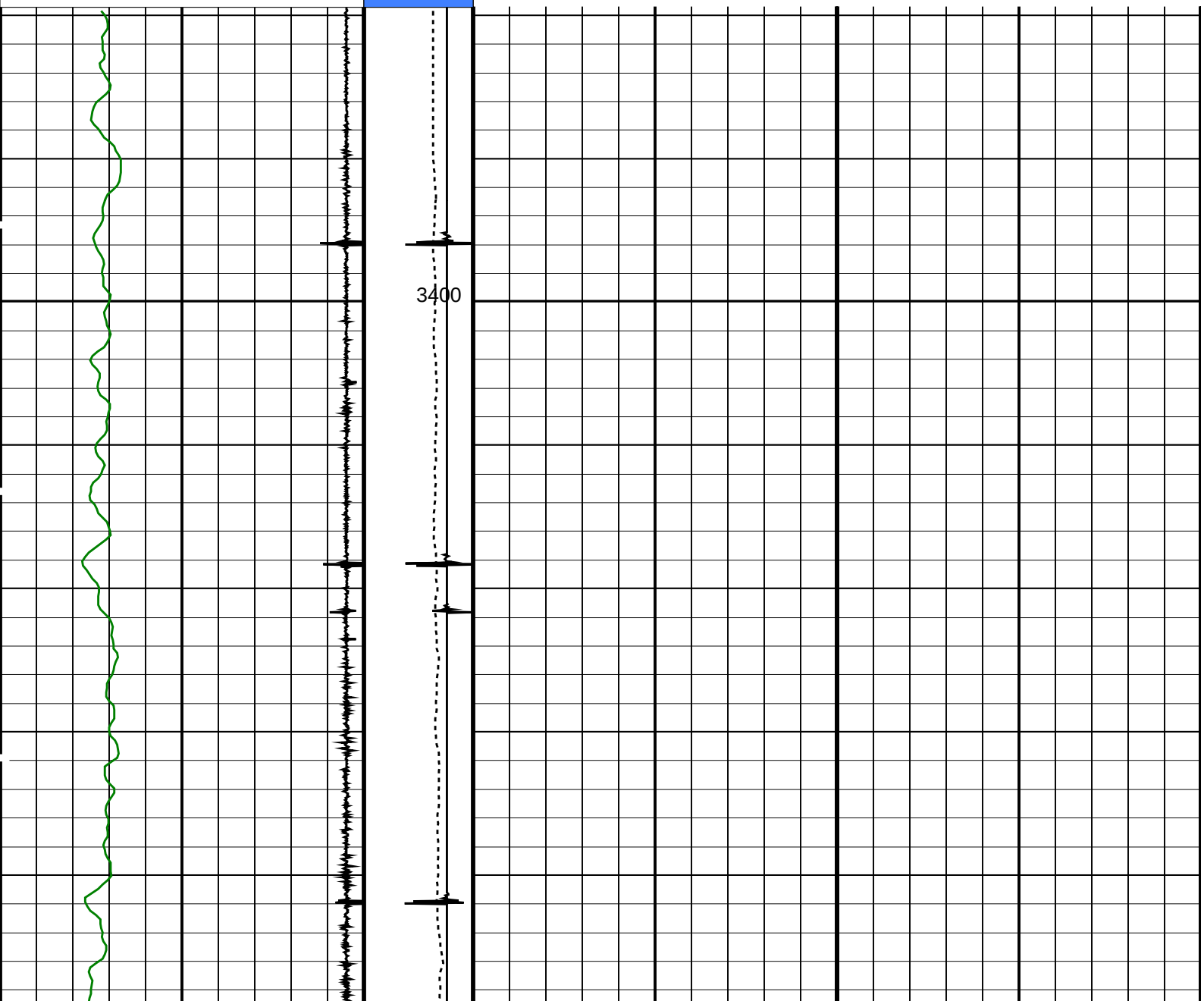
MCM

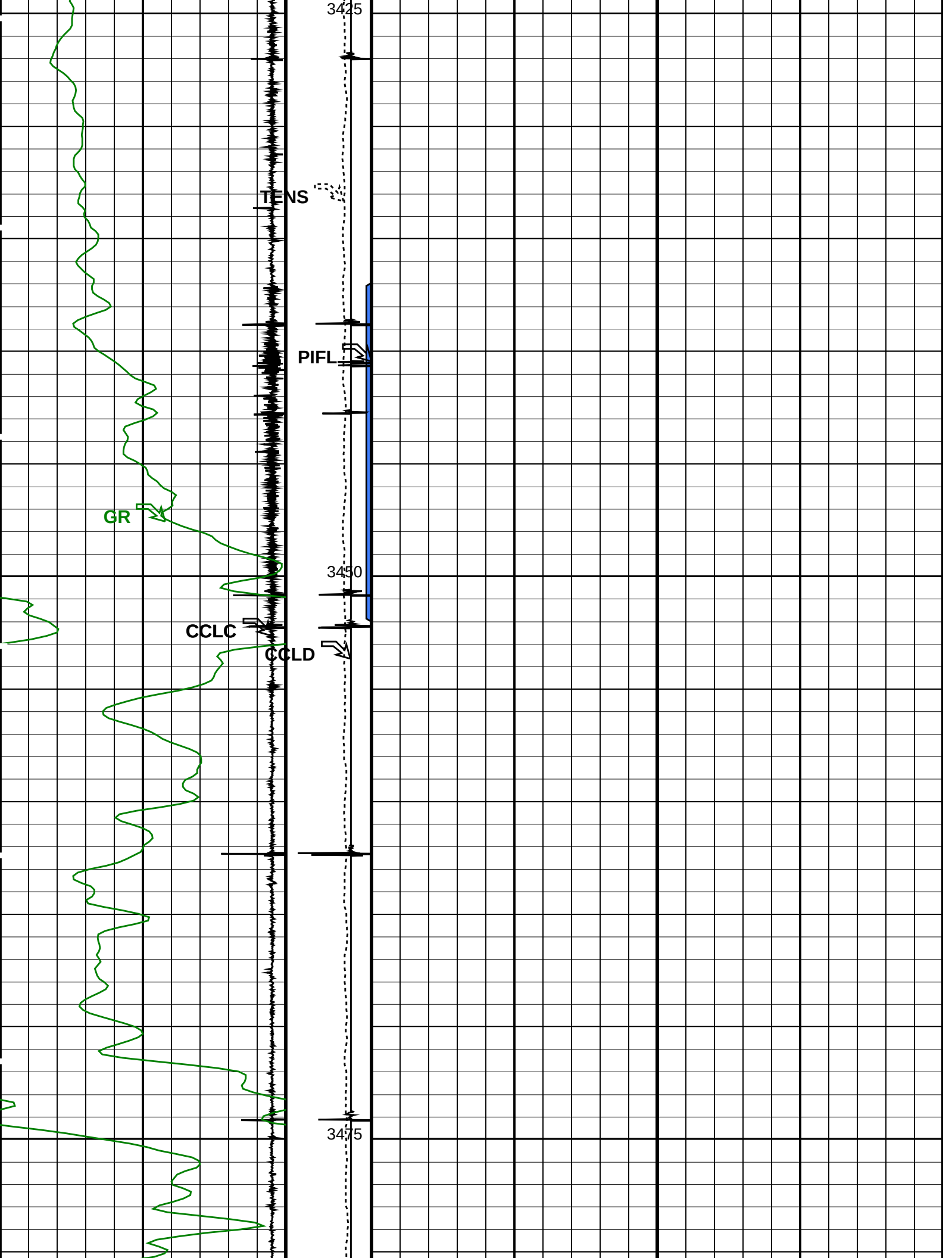
RST−C SRPC−3474−Q4_2007 PSPT−B SRPC−3474−Q4_2007

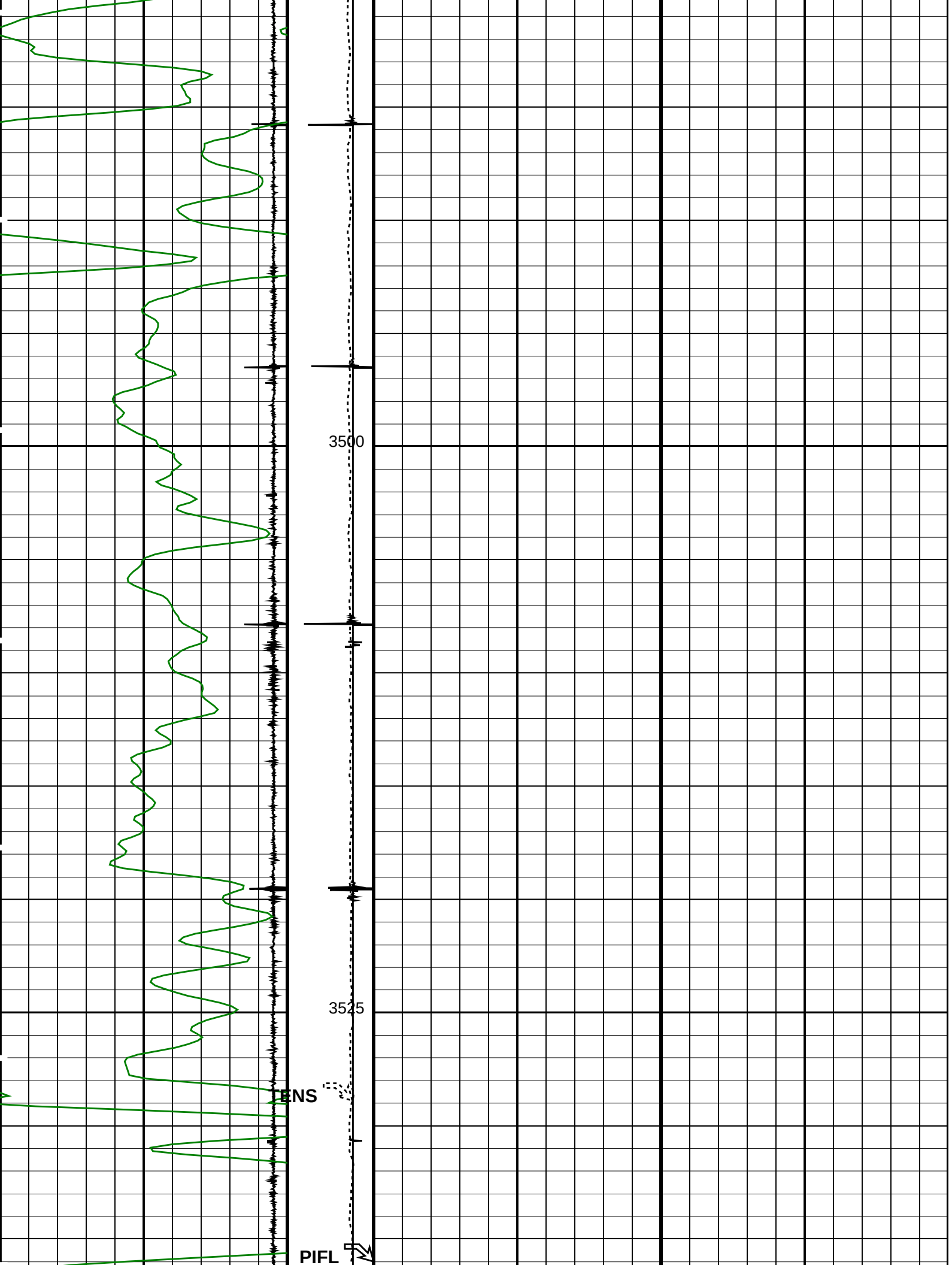
PIP SUMMARY

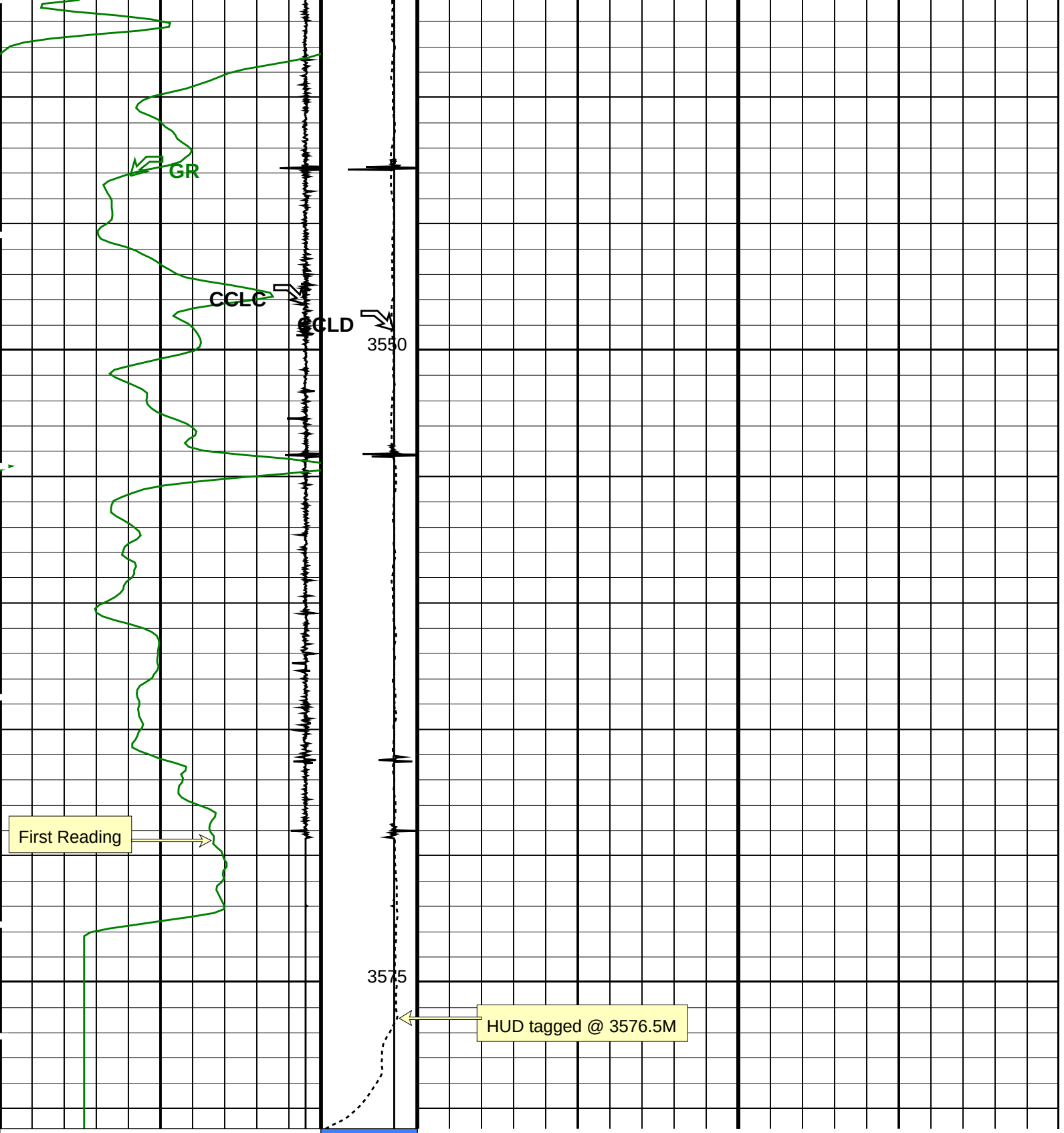
Time Mark Every 60 S

	Tension (TENS) (LBF) 1000 3000	
Gamma Ray (GR) 0 (GAPI) 150	Discriminated CCL (CCLD) 3 (V) −1	
Computed CCL (CCLC) −19 (V) 1	Squeezed Perfo Zone	




3425
TENS
PIFL
GR
3450
CCLC
CCLD
3475


3500
3525
TENS
PIFL



Computed CCL (CCLC)	Squeezed Perfo Zone
−19 (V) 1	
Gamma Ray (GR)	Discriminated CCL (CCLD)
0 (GAPI) 150	3 (V) −1
	Tension (TENS) (LBF)
	1000 3000

PIP SUMMARY

Time Mark Every 60 S

Format: PSP_1 Vertical Scale: 1:200 **Graphics File Created: 24−Nov−2007 03:43**

OP System Version: 15C0−309

MCM

RST−C	**SRPC−3474−Q4_2007**	**PSPT−B**	**SRPC−3474−Q4_2007**

Input DLIS Files

DEFAULT	**RST_PSP_040LUP**	**FN:37**	**PRODUCER**	**24−Nov−2007 02:54**	**3578.7 M**	**3387.1 M**

Output DLIS Files

DEFAULT	**RST_PSP_040PUP**	**FN:42**	**PRODUCER**	**24−Nov−2007 03:43**

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Before Survey Calibration

MAXIS Field Log

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
Production Services Logging Platform Wellsite Calibration − Detector Calibration							
Before: 20−Nov−2007 11:42							
Gamma−Ray Jig−Bkg	165.0	N/A	176.8	N/A	N/A	N/A	GAPI

Production Services Logging Platform / Equipment Identification

Primary Equipment:

Production Logging Platform (CQG−F)	PSPT − B	
PSP Basic Measurement Sonde (CQG_F)	PBMS − B	1747
PSP Basic measurement module	PBMS − B	1747
PSP CCL	CCL −	
PSP GR	GR −	
PSP RTD Well Temperature	RTD_ −	
PSP Crystal Quartz Gauge Type F	CQG_ −	
PSP Telemetry and bus master cartridge	PSTC −	1768

Auxiliary Equipment:

Production Services Logging Platform Wellsite Calibration

Detector Calibration

Phase	Gamma−Ray Background GAPI	Value	Phase	Gamma−Ray Jig−Bkg GAPI	Value
Before		4.702	Before		176.8
	0 (Minimum) 30.00 (Nominal) 120.0 (Maximum)			150.0 (Minimum) 165.0 (Nominal) 180.0 (Maximum)	

Before: 20−Nov−2007 11:42

Company:	**Esso Australia Pty Ltd**
Well:	**CBA F4**
Field:	**Cobia**
Rig:	**Rig 22**
Country:	**Australia**

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RST−C
Sigma & IC Log
24−Nov−2007