Schlumberger

Company: **Esso Australia Ltd.**

Well: **A−14a**
Field: **Bream A**
Rig : **Prod4 / Crane** Country: **Australia**

Rig : Prod4 / Crane
Field: Bream A
Location: Gippsland
Well: A−14a
Company: Esso Australia Ltd.

2 1/8" Phased Powerjet
MWPT
Perforation Record

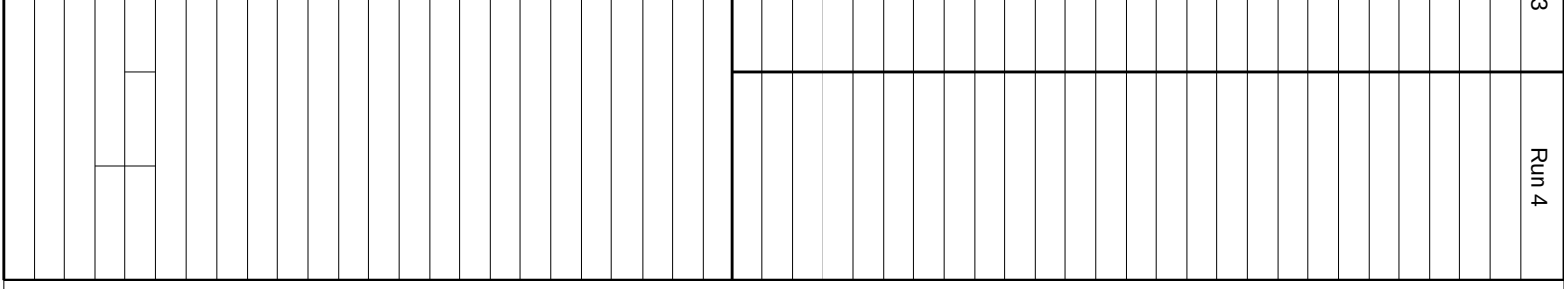
LOCATION

Gippsland		Elev.: K.B.	32.82 m
Basin		G.L.	−59 m
Bass Strait		D.F.	32.82 m
Permanent Datum:	M.S.L	Elev.:	0 m
Log Measured From:	D.F	32.8 m	above Perm. Datum
Drilling Measured From:	D.F		

State:	Max. Well Deviation	Longitude	Latitude
Victoria	49 deg	147 46'20.32673" E	038 29'58.84674" S

		Run 1	Run 2	Run 3
PVT DATA	Oil Density			
	Water Salinity			
	Gas Gravity			
	Bo			
	Bw			
	1/Bg			
	Bubble Point Pressure			
	Bubble Point Temperature			
	Solution GOR			
	Maximum Deviation	49 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		1−May−2006					Logging Date	
Run Number		One					Run Number	
Depth Driller		3076 m					Depth Driller	
Schlumberger Depth		2530 m − Not Tagged					Schlumberger Depth	
Bottom Log Interval		2529 m					Bottom Log Interval	
Top Log Interval		2471 m					Top Log Interval	
Casing Fluid Type		Production Fluids					Casing Fluid Type	
Salinity							Salinity	
Density							Density	
Fluid Level							Fluid Level	
BIT/CASING/TUBING STRING							BIT/CASING/TUBING STRING	
Bit Size		9.875 in					Bit Size	
From							From	
To							To	
Casing/Tubing Size		7.625 in					Casing/Tubing Size	
Weight		26 lbm/ft					Weight	
Grade		L−80					Grade	
From		12.98 m					From	
To		3076 m					To	
Maximum Recorded Temperatures		98 degC					Maximum Recorded Temperatures	
Logger On Bottom	Time	1−May−2006	18:15				Logger On Bottom	Time
Unit Number	Location	1	AUSL				Unit Number	Location
Recorded By		G Wright & P Tarrant					Recorded By	
Witnessed By		B White & B Robinson					Witnessed By	



DEPTH SUMMARY LISTING

Date Created: 1−MAY−2006 19:00:36

Depth System Equipment

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

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.

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

REMARKS: RUN NUMBER 1

Log correlated to ExxonMobil Solar correlation composite log supplied
by K Kuttan.
Maximum well deviation = 49 degrees at 900m MDKB.

Objective:

Perforate the interval 2500m to 2502m MDKB with 2 1/8" MWPT Enerjet Gun
loaded with Powerspirol charges.

A 300psi underbalance was not attempted as there no current
perforations in the well.
API Data:
Penetration: 30.4"
Entrance hole: 0.32"
Crew :
Luke Dooley & Andy Hall (days)
Gary Martin & Kevin Kerr

RUN 1			RUN 2		
SERVICE ORDER #:	AUSL06103809		SERVICE ORDER #:		
PROGRAM VERSION:	14C0−302		PROGRAM VERSION:		
FLUID LEVEL:			FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

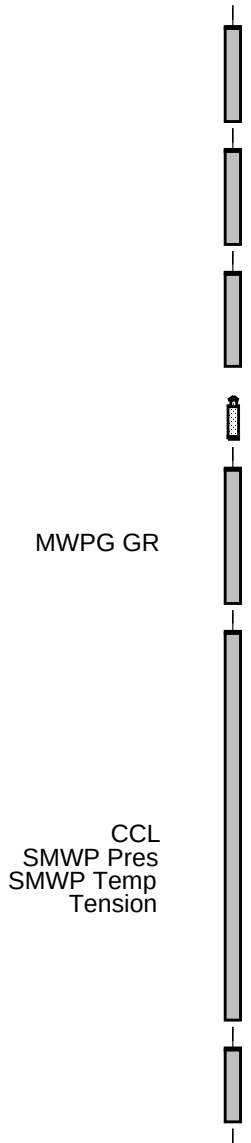
EQUIPMENT DESCRIPTION

RUN 1 RUN 2

SURFACE EQUIPMENT

MWPM−AA

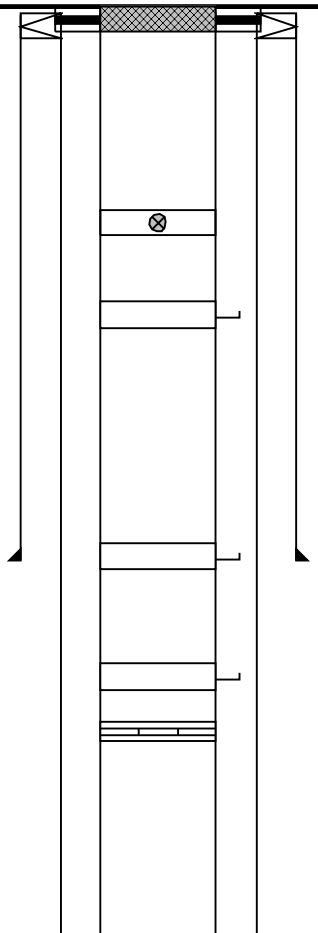
DOWNHOLE EQUIPMENT

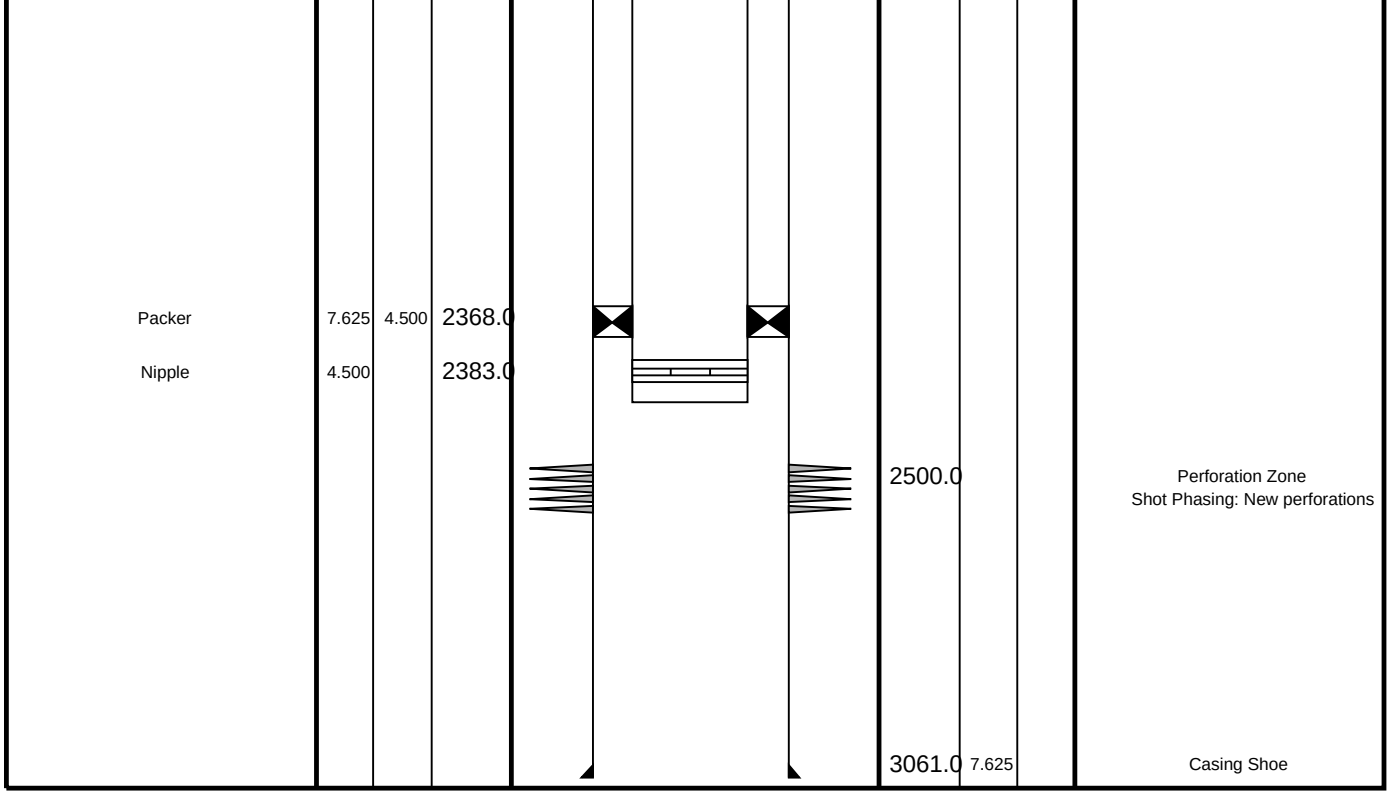


AH−SAH−G AH−SAH−G 1035		4.16
MPD−H MPD−H 2868		3.61
AH−ESIC AH−ESIC 606253		3.07
MWP_GUN GUN		2.74

TOOL BOTTOM

MAXIMUM STRING DIAMETER 2.13 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
Tubing Hanger	8.000	4.500	9.0		12.0	10.750		Casing String
Tubing	4.500		11.0		12.3	10.750	7.625	Liner Hanger
Shutin Valve	4.500		449.0					
Gas Lift Mandrel	4.500		554.0					
Gas Lift Mandrel	4.500		1054.0		993.7	10.750		Casing Shoe
Gas Lift Mandrel	4.500		1330.0					
Nipple	4.500		1347.0					

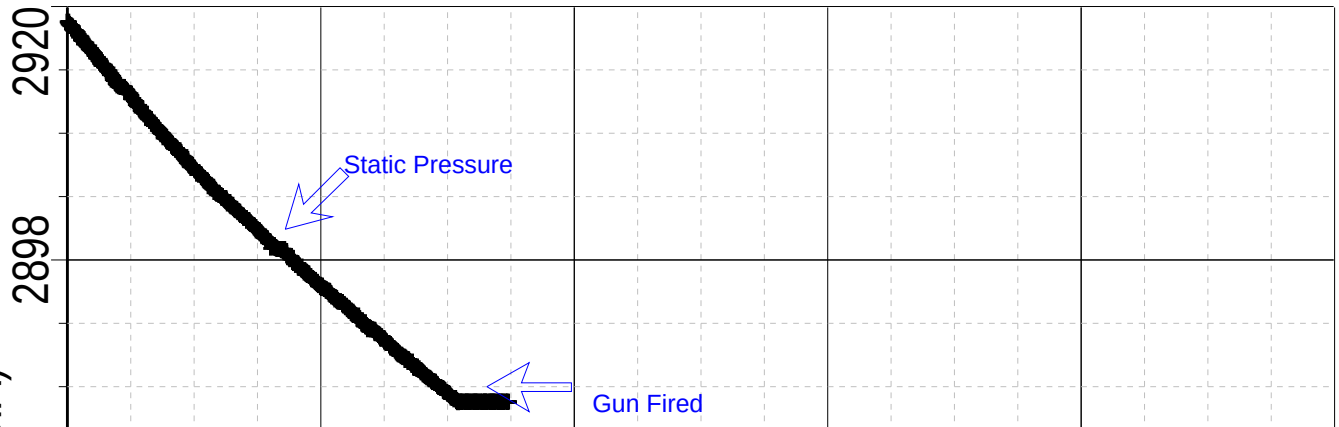


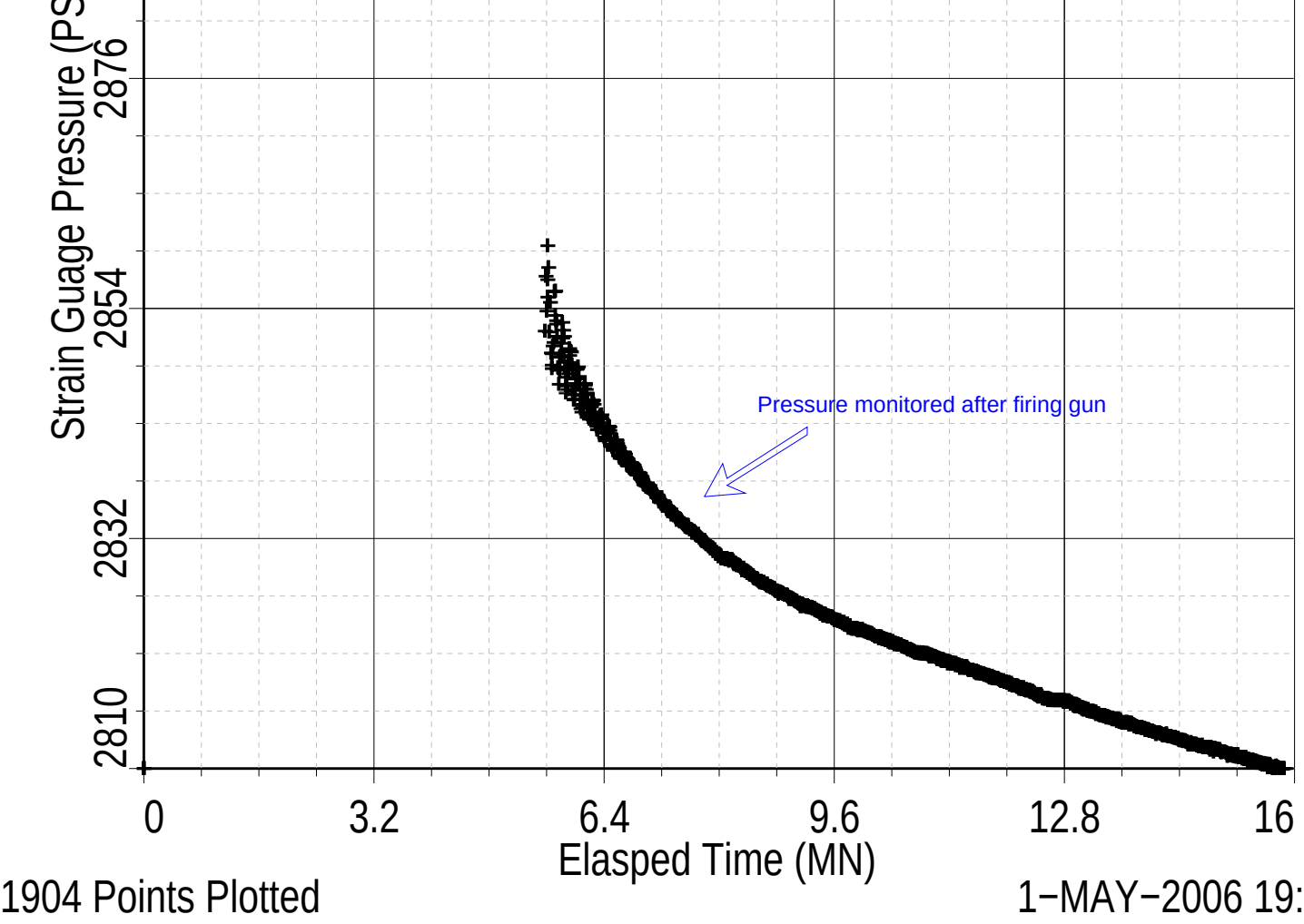
Schlumberger

2 1/8" MWPT Enerjet Gun Station Log

MAXIS Field Log

Index: 13126.7 – 17960.3 M





1904 Points Plotted

1−MAY−2006 19:11

Output DLIS Files

DEFAULT	PERFO_014LTP	FN:13	PRODUCER	01−May−2006 18:29	2496.4 M	2.4 M

OP System Version: 14C0−302

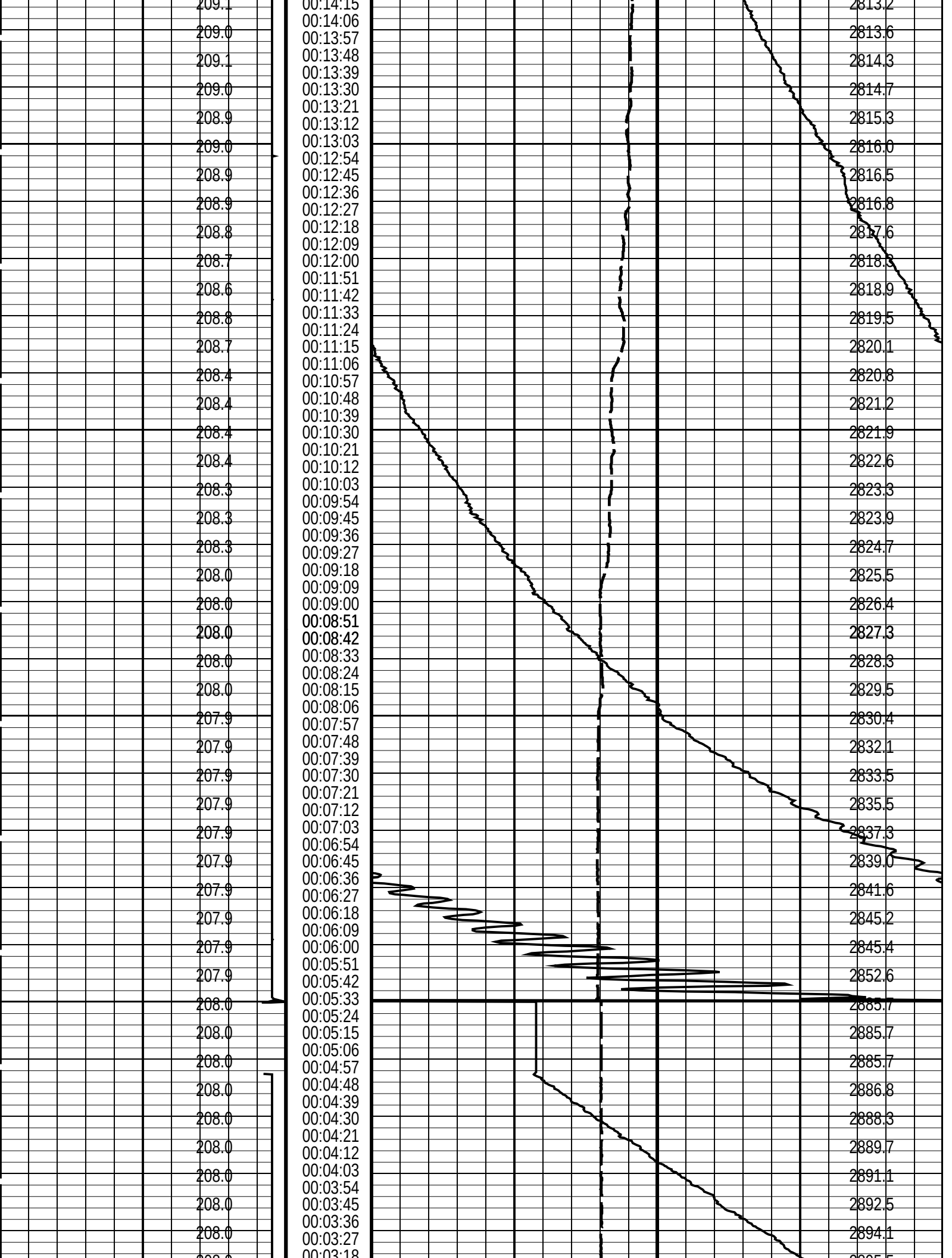
MCM

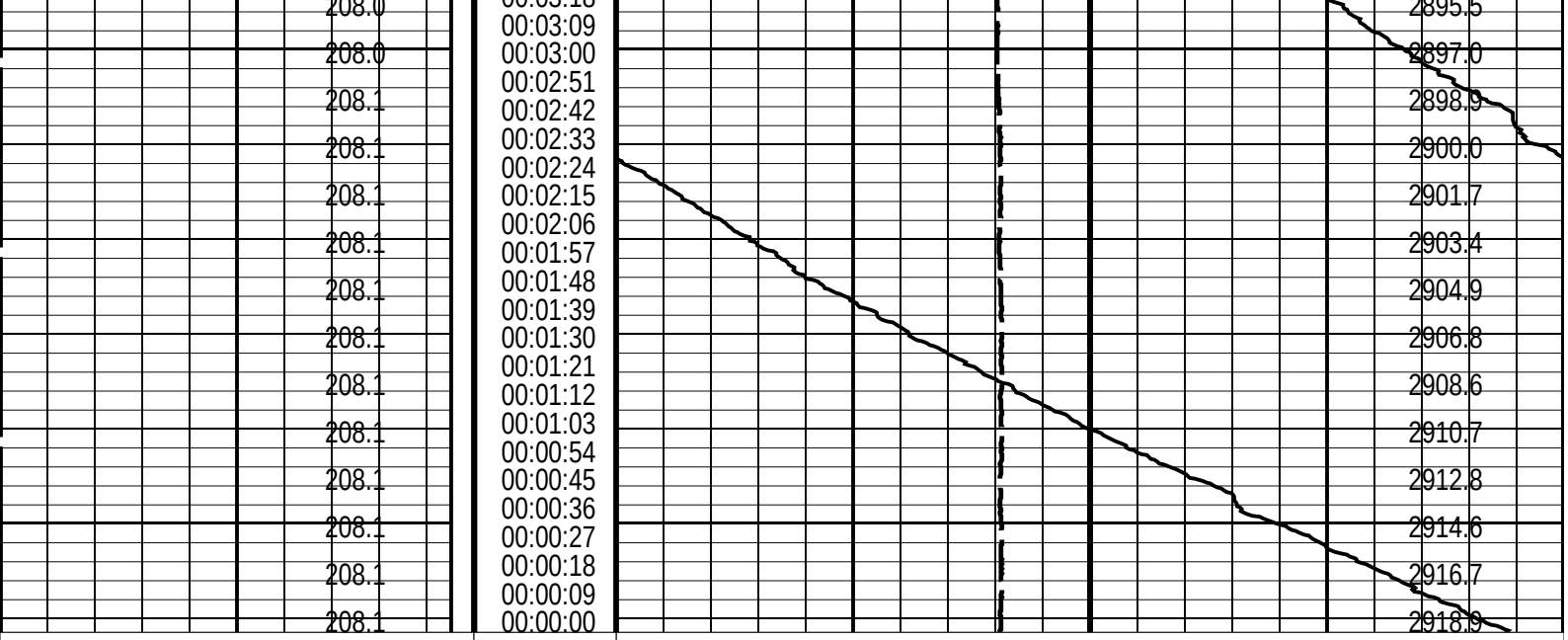
MWP_GUN	14C0−302	MWPT−CA	14C0−302
MWGT−AA	14C0−302		

PIP SUMMARY

Time Mark Every 60 S

	Temperature (TEMP_MWPT_SL) (DEGF)		Pressure (SGPA_SL) (PSIA)
CCL From CCL to T1	Firing Sequence State (FSS_SL) (−−−− 0 1024	Temperature (TEMP_MWPT_SL) 0 (DEGF) 20	
Casing Collar Locator (CCL_SL) −19 (−−−− 1	Elapsed Time (ETIM) (S)	Strain Gauge Pressure (SGP_SL) 0 (PSIA) 20	
209.2	00:15:45		2810.2
209.1	00:15:36		2810.6
209.3	00:15:27		2811.2
209.1	00:15:18		2811.6
209.2	00:15:09		2812.1
209.2	00:15:00		2812.6
	00:14:51		
	00:14:42		
	00:14:33		
	00:14:24		


209.1 209.0 209.1 209.0 208.9 209.0 208.9 208.9 208.8 208.7 208.6 208.8 208.7 208.4 208.4 208.4 208.4 208.3 208.3 208.3 208.0 208.0 208.0 208.0 207.9 207.9 207.9 207.9 207.9 207.9 207.9 207.9 207.9 208.0 208.0 208.0 208.0 208.0 208.0 208.0 208.0 208.0
00:14:15 00:14:06 00:13:57 00:13:48 00:13:39 00:13:30 00:13:21 00:13:12 00:13:03 00:12:54 00:12:45 00:12:36 00:12:27 00:12:18 00:12:09 00:12:00 00:11:51 00:11:42 00:11:33 00:11:24 00:11:15 00:11:06 00:10:57 00:10:48 00:10:39 00:10:30 00:10:21 00:10:12 00:10:03 00:09:54 00:09:45 00:09:36 00:09:27 00:09:18 00:09:09 00:09:00 00:08:51 00:08:42 00:08:33 00:08:24 00:08:15 00:08:06 00:07:57 00:07:48 00:07:39 00:07:30 00:07:21 00:07:12 00:07:03 00:06:54 00:06:45 00:06:36 00:06:27 00:06:18 00:06:09 00:06:00 00:05:51 00:05:42 00:05:33 00:05:24 00:05:15 00:05:06 00:04:57 00:04:48 00:04:39 00:04:30 00:04:21 00:04:12 00:04:03 00:03:54 00:03:45 00:03:36 00:03:27 00:03:18
2813.2 2813.6 2814.3 2814.7 2815.3 2816.0 2816.5 2816.8 2817.6 2818.3 2818.9 2819.5 2820.1 2820.8 2821.2 2821.9 2822.6 2823.3 2823.9 2824.7 2825.5 2826.4 2827.3 2828.3 2829.5 2830.4 2832.1 2833.5 2835.5 2837.3 2839.0 2841.6 2845.2 2845.4 2852.6 2883.7 2885.7 2885.7 2886.8 2888.3 2889.7 2891.1 2892.5 2894.1



Casing Collar Locator (CCL_SL)	Elapsed Time (ETIM) (S)	Strain Gauge Pressure (SGP_SL)
−19 (−−−− 1		0 (PSIA) 20
CCL From CCL to T1	Firing Sequence State (FSS_SL) (−−−− 0 1024	Temperature (TEMP_MWPT_SL) 0 (DEGF) 20

	Temperature (TEMP_MWPT_SL) (DEGF)		Pressure (SGPA_SL) (PSIA)

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
MWPT−CA: MEASUREMENT WHILE PERFORATING TOOL			
DEVI_FL_CORR	Deviation Angle for Flow Line Correction	0	DEG
FLD	Flow Line Density	1	G/C3
MWPT_NULL_SOURCE	MWPT NULL Temperature Source	TEMS	
MWPT_NULL_TEMP	MWPT NULL Temperature	0.0	DEGC

Format: MWP_SL Vertical Scale: 1" per 60S Graphics File Created: 01−May−2006 18:29

OP System Version: 14C0−302

MCM

MWP_GUN	14C0−302	MWPT−CA	14C0−302
MWGT−AA	14C0−302		

Output DLIS Files

DEFAULT PERFO_014LTP FN:13 PRODUCER 01−May−2006 18:29

Schlumberger

2 1/8" MWPT Enerjet Gun
Shooting Pass

MAXIS Field Log

Output DLIS Files

DEFAULT	PERFO_013LUP	FN:12	PRODUCER	01−May−2006 18:19	2529.8 M	2471.5 M

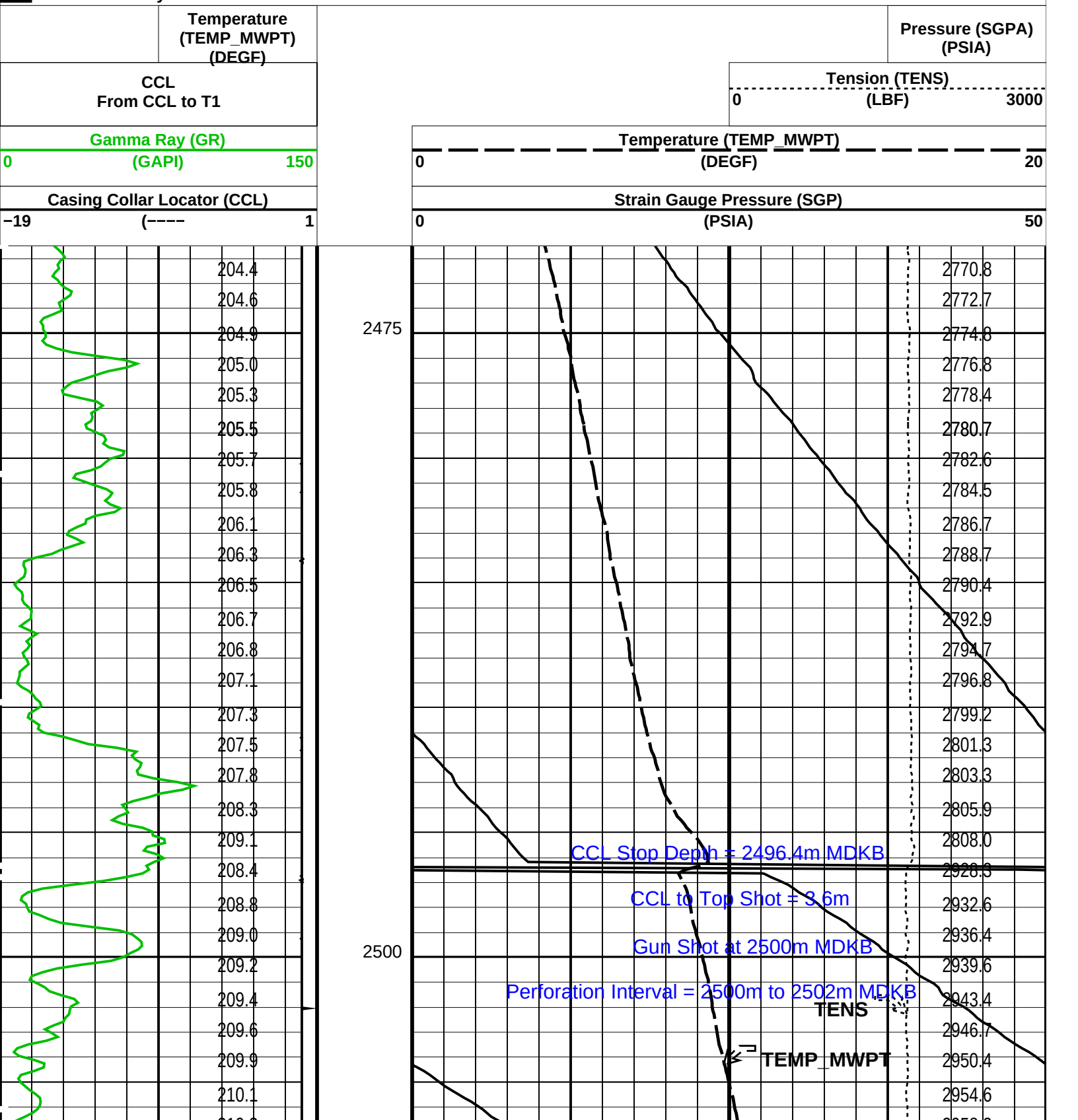
OP System Version: 14C0−302

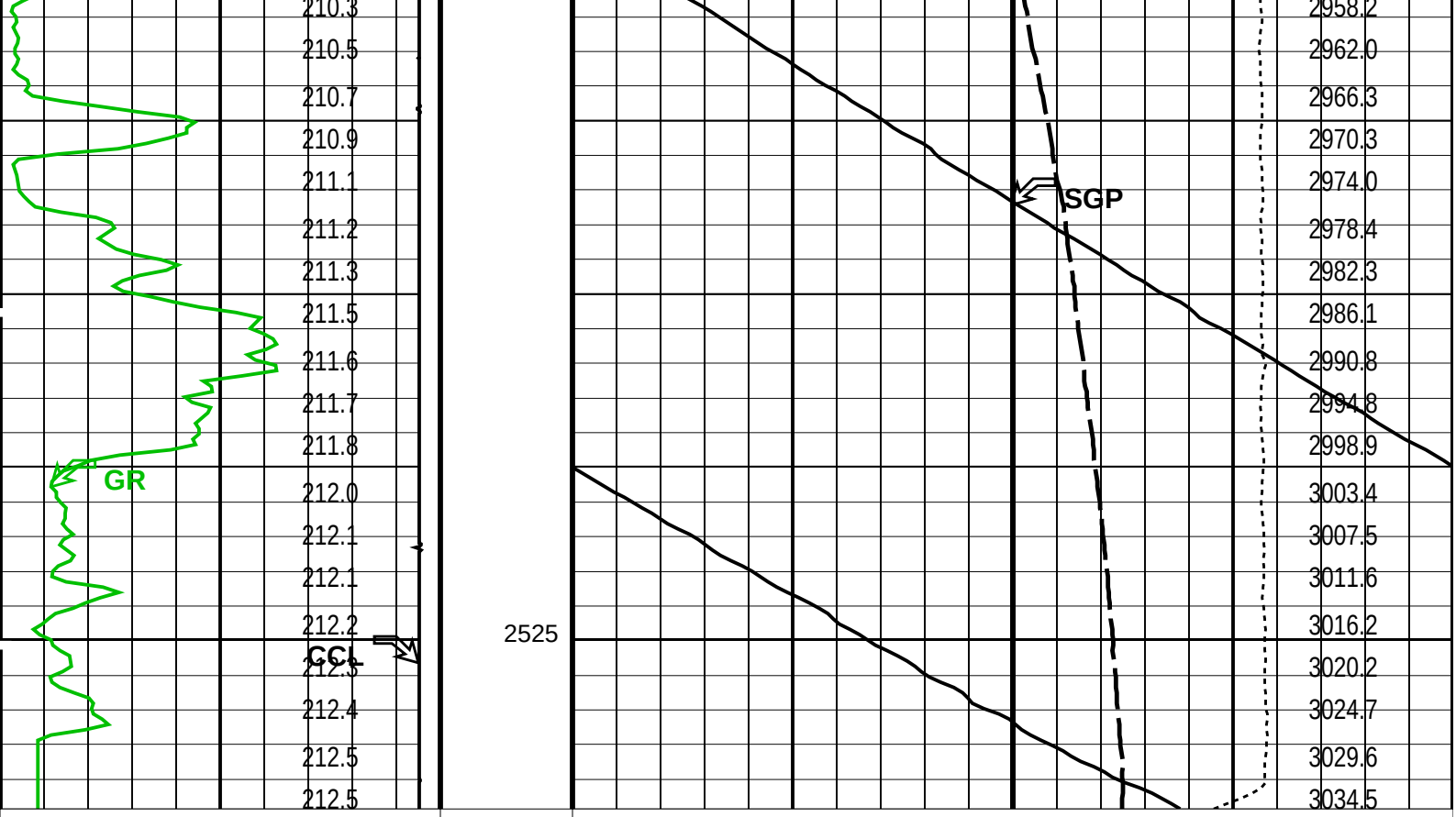
MCM

MWP_GUN	14C0−302	MWPT−CA	14C0−302
MWGT−AA	14C0−302		

PIP SUMMARY

Time Mark Every 60 S





Casing Collar Locator (CCL)		Strain Gauge Pressure (SGP)
−19	(−−−−	1
		0 (PSIA) 50
Gamma Ray (GR)		Temperature (TEMP_MWPT)
0 (GAPI) 150		0 (DEGF) 20
CCL From CCL to T1		Tension (TENS) 0 (LBF) 3000
Temperature (TEMP_MWPT) (DEGF)		Pressure (SGPA) (PSIA)

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
MWPT−CA: MEASUREMENT WHILE PERFORATING TOOL			
DEVI_FL_CORR	Deviation Angle for Flow Line Correction	0	DEG
FLD	Flow Line Density	1	G/C3
MWPT_NULL_SOURCE	MWPT NULL Temperature Source	TEMS	
MWPT_NULL_TEMP	MWPT NULL Temperature	0.0	DEGC

Format: MWP **Vertical Scale: 1:200** **Graphics File Created: 01−May−2006 18:19**

OP System Version: 14C0−302

MCM

MWP_GUN	14C0−302	MWPT−CA	14C0−302
MWGT−AA	14C0−302		

Output DLIS Files

DEFAULT	PERFO_013LUP	FN:12	PRODUCER	01−May−2006 18:19

Schlumberger

2 1/8" MWPT Enerjet Gun
Correlation Pass

Correlation Pass

MAXIS Field Log

Output DLIS Files

DEFAULT **PERFO_012LUP** **FN:11** **PRODUCER** **01−May−2006 18:10**

OP System Version: 14C0−302

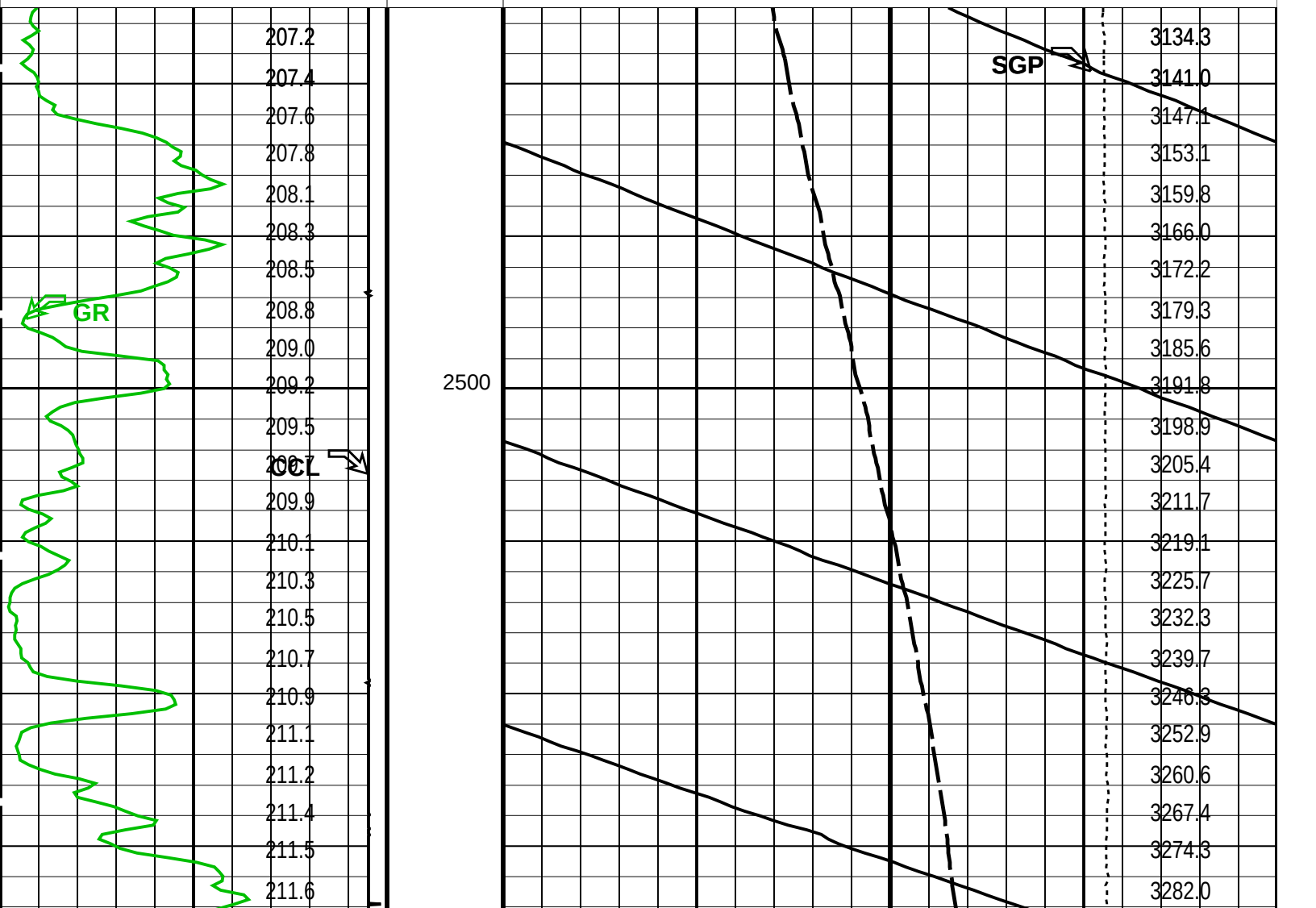
MCM

MWP_GUN	**14C0−302**	**MWPT−CA**	**14C0−302**
MWGT−AA	**14C0−302**		

PIP SUMMARY

Time Mark Every 60 S

	Temperature (TEMP_MWPT) (DEGF)	**Pressure (SGPA) (PSIA)**
CCL From CCL to T1		**Tension (TENS) 0 (LBF) 3000**
Gamma Ray (GR) 0 (GAPI) 150	**Temperature (TEMP_MWPT) 0 (DEGF) 20**	
Casing Collar Locator (CCL) −19 (−−−− 1	**Strain Gauge Pressure (SGP) 0 (PSIA) 50**	



Casing Collar Locator (CCL)		
−19	(−−−−	1

Strain Gauge Pressure (SGP)		
0	(PSIA)	50

Gamma Ray (GR)		
0	(GAPI)	150

Temperature (TEMP_MWPT)		
0	(DEGF)	20

CCL From CCL to T1

Tension (TENS)		
0	(LBF)	3000

Temperature (TEMP_MWPT) (DEGF)	Pressure (SGPA) (PSIA)

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
MWPT−CA: MEASUREMENT WHILE PERFORATING TOOL			
DEVI_FL_CORR	Deviation Angle for Flow Line Correction	0	DEG
FLD	Flow Line Density	1	G/C3
MWPT_NULL_SOURCE	MWPT NULL Temperature Source	TEMS	
MWPT_NULL_TEMP	MWPT NULL Temperature	0.0	DEGC

Format: MWP **Vertical Scale: 1:200** **Graphics File Created: 01−May−2006 18:10**

OP System Version: 14C0−302

MCM

MWP_GUN	14C0−302	MWPT−CA	14C0−302
MWGT−AA	14C0−302		

Output DLIS Files

DEFAULT	PERFO_012LUP	FN:11	PRODUCER	01−May−2006 18:10

Company: **Esso Australia Ltd.**

Schlumberger

Well: **A−14a**
Field: **Bream A**
Rig : **Prod4 / Crane**
Country: **Australia**

2 1/8" Phased Powerjet
MWPT
Perforation Record