

[illegible]

Company: Esso Australia Ltd.

Well: A-3A  
Field: Halibut  
Rig : Prod4 / Crane

Country: Australia

2 1/8" Enerjet Gun  
MWPT  
Perforating Record

LOCATION

Halibut  
Gippsland Basin  
Bass Strait

Elev.: K.B. 29.45 m  
G.L. -73 m  
D.F. 29.45 m

Permanent Datum: \_\_\_\_\_  
Log Measured From: \_\_\_\_\_  
Drilling Measured From: \_\_\_\_\_

Mean Sea Level \_\_\_\_\_  
Kelly Bushing \_\_\_\_\_  
Kelly Bushing \_\_\_\_\_

Elev.: 0 m  
29.5 m above Perm. Datum

State: Victoria

Max. Well Deviation 54 deg

Longitude 148 19 07.62"E

Latitude 38 24'20.36" S

Logging Date				3-Feb-2006			
Run Number				1			
Depth Driller				3154 m			
Schlumberger Depth				2630.5 m			
Bottom Log Interval				2954.9 m			
Top Log Interval				2951.7 m			
Casing Fluid Type				Production Fluids			
Salinity							
Density							
Fluid Level							
BIT/CASING/TUBING STRING							
Bit Size				8.500 in			
From				11.67 m			
To				3103.82 m			
Casing/Tubing Size				7.625 in			
Weight				26.4 lbm/ft			
Grade				L-80			
From				11.67 m			
To				3103.82 m			
Maximum Recorded Temperatures				108 degC			
Logger On Bottom				3-Feb-2006			
Unit Number				Location			
Recorded By				1	Prod 4 / Crane		
Witnessed By				Graham Fraser, Owen Darby			
				Greg Rimmer			

				Run 1		Run 2		Run 3	
Oil Density									
Water Salinity									
Gas Gravity									
Bo									
Bw									
1/Bg									
Bubble Point Pressure									
Bubble Point Temperature									
Solution GOR									
Maximum Deviation				54 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: 16-FEB-2006 18:18:51

**Depth System Equipment**

Depth Measuring Device		Tension Device		Logging Cable	
Type:	IDW-H	Type:	CMTD-C	Type:	2-32ZT
Serial Number:	797	Serial Number:	1037	Serial Number:	4207
Calibration Date:	01-May-2005	Calibration Date:	15-Feb-2006	Length:	5098.08 M
Calibrator Serial Number:	1009	Calibrator Serial Number:	1174	Conveyance Method: Wireline Rig Type: Offshore_Fixed	
Calibration Cable Type:	2-32ZT	Calibration Gain:	1.38		
Wheel Correction 1:	-3	Calibration Offset:	448.00		
Wheel Correction 2:	2				

**Depth Control Parameters**

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








**Depth Control Remarks**




1. Correlated to ExxonMobil Solar composite log provided by client
2. Used IDW as primary depth control
3. Used Z-Chart as secondary depth control
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	OTHER SERVICES2
OS1: None	OS1:
OS2:	OS2:
OS3:	OS3:
OS4:	OS4:
OS5:	OS5:
REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
Correlated to Esso Solar log, date unknown, provided by client.	
Objective:	
To perforate well A3a at 2951.7 - 2954.9 MDKB using one 3.2m 2 1/8" Enerjet gun loaded with Power Spiral charges.	
Before perforating obtain static BHT and BHP, After Perforating	
Monitor well for 15 min and obtain BHT and BHP	
Static : BHP = Incorrect data. BHT = 224.6 DegF	

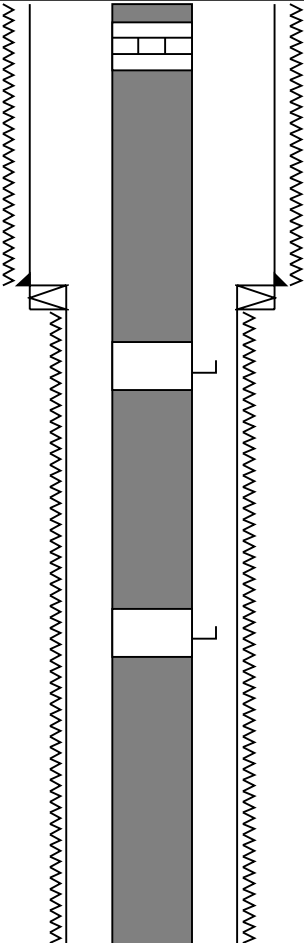
After Perforation : BHP = Incorrect data BHT = 227.2 DegF					
API Data : Power Spiral charges,					
Pentration : 27.2 "					
Entrance Hole : 0.32 "					
CCL to top shot : 3.3m, CCL to gun bottom 6.8m					
CCL stop depth: 2948.4 MDKB					
Crew : J.Annear and B. Flynn					
RUN 1			RUN 2		
SERVICE ORDER #: PROGRAM VERSION: 13C0-300 FLUID LEVEL:			SERVICE ORDER #: PROGRAM VERSION: FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP
EQUIPMENT DESCRIPTION					
RUN 1			RUN 2		
SURFACE EQUIPMENT					
MWPM-AA 3008					
DOWNHOLE EQUIPMENT					
MH-22 MH-22		7.38			
AH-SWHS AH-SWHS 726		6.90			
AH-124 . AH-124 1001		6.60			
MWGT-AA MWPG-AA MWGH-AA 69		6.29			
MWPG GR		2.41			
MWPT-CA MWPH-AA 94 MWPS-AA		5.31			
CCL SMWP Pres SMWP Temp Tension		TOOL ZERO			

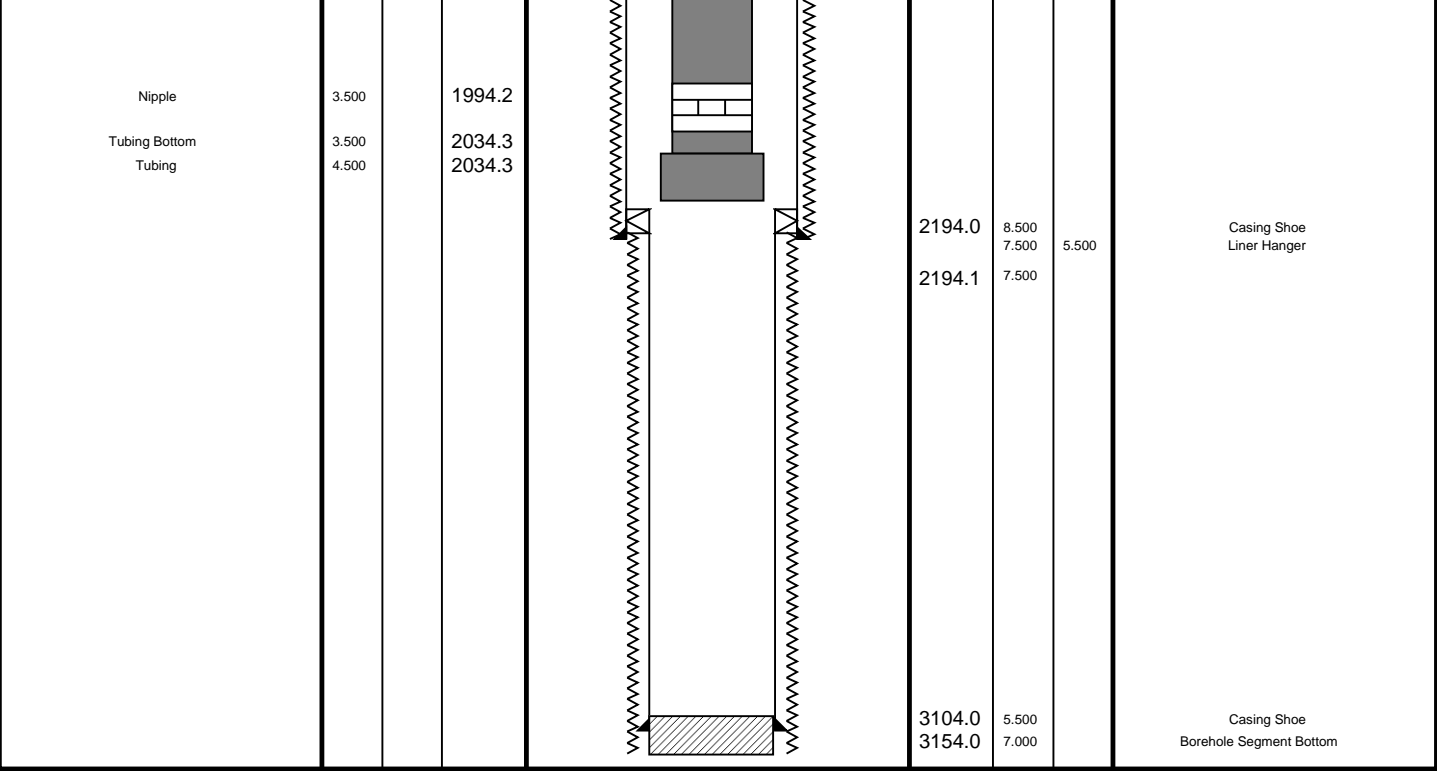
AH–Flex Joint AH–Flex Joint 42		2.49
SAH–G SAH–G 1047		1.40
MPD–H MPD–H 2868		0.54
MWP_GUN TOOL BOTTOM		0.00
MAXIMUM STRING DIAMETER 2.00 IN MEASUREMENTS RELATIVE TO TOOL ZERO ALL LENGTHS IN METERS		

Client: Esso Australia Ltd.  
 Well: A3a  
 Field: Gippsland Basin  
 State: Victoria  
 Country: Australia

Rig Name: Halibut  
 Reference Datum: Mean Sea Level  
 Elevation: 29.4 m

Drawing Date: 2/1/2006  
 API #:

Production String	(in)		(m)	Well Schematic	(m)		(in)	Casing String
	OD	ID	MD		MD	OD	ID	
Tubing Nipple	3.500		12.0		11.9	12.625		Borehole Segment Casing String, 0, 60.4 kg/m, J-55
	3.500		133.2			10.750		
Gas Lift Mandrel	3.500		724.4		533.1	12.625		Borehole Segment Bottom Casing String, 0, 43.8 kg/m, L-80
					533.1	7.500		Casing Shoe
Gas Lift Mandrel	3.500		1217.2		533.1	10.750	7.500	



All depths are drillers depths.



Job Events Summary

MAXIS Field Log

Schlumberger Job Event Summary

Time	Elapsed Time	Depth (M)	File
Rig Up Started	3-Feb-2006 14:50		
Log Pass (up)	3-Feb-2006 17:36	000:21 2956.6 - 2737.9	PERFO_015LUP
Log Pass (up)	4-Feb-2006 16:53	000:07 2953.1 - 2885.4	PERFO_047LUP
Log Pass (up)	4-Feb-2006 17:08	000:14 2952.8 - 2857.0	PERFO_049LUP
Station Log	4-Feb-2006 17:09	000:05 2948.4 - 0.7	PERFO_050LTP
Rig Down Completed	4-Feb-2006 18:15		



GUN1 Used 2951.7 2751.7 Sat Feb 04 17:20:18 2006

MAXIS Field Log

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207.0	00:01:57	1518.3
206.4	00:01:48	1518.2
	00:01:39	
206.4	00:01:30	1518.1
205.8	00:01:21	
	00:01:12	1518.1
205.8	00:01:03	
	00:00:54	1518.1
205.2	00:00:45	1517.9
	00:00:36	
205.2	00:00:27	1517.9
205.2	00:00:18	
	00:00:09	1518.0
20.0	00:00:00	1517.9

Strain Gauge Temperature (SGPT_SL) (DEGF)	Elapsed Time (ETIM) (S)	Strain Gauge Pressure (SGP_SL)	
		2000 (PSIA)	4000
		Temperature (TEMP_SL)	
		200 (DEGF)	250
			Pressure (SGP_SL) (PSIA)

PIP SUMMARY

**Time Mark Every 60 S**

## Parameters

DLIS Name	Description	Value
MWPT-CA: MEASUREMENT WHILE PERFORATING TOOL		
BHT	Bottom Hole Temperature (used in calculations)	110 DEGC
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
SHT	Surface Hole Temperature	20 DEGC
System and Miscellaneous		
TD	Total Depth	-50000 M

**Format: MWP SL      Vertical Scale: 1" per 60S**

**Graphics File Created: 04-Feb-2006 17:09**

**OP System Version: 13C0-300**

**MCM**

MWP_GUN	13C0-300	MWPT-CA	13C0-300
MWGT-AA	13C0-300		

## Output DLIS Files

DEFAULT	PERFO_050LTP	FN:49	PRODUCER	04-Feb-2006 17:09
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## 2 1/8" Phased Enerjet Shooting Pass

MAXIS Field Log

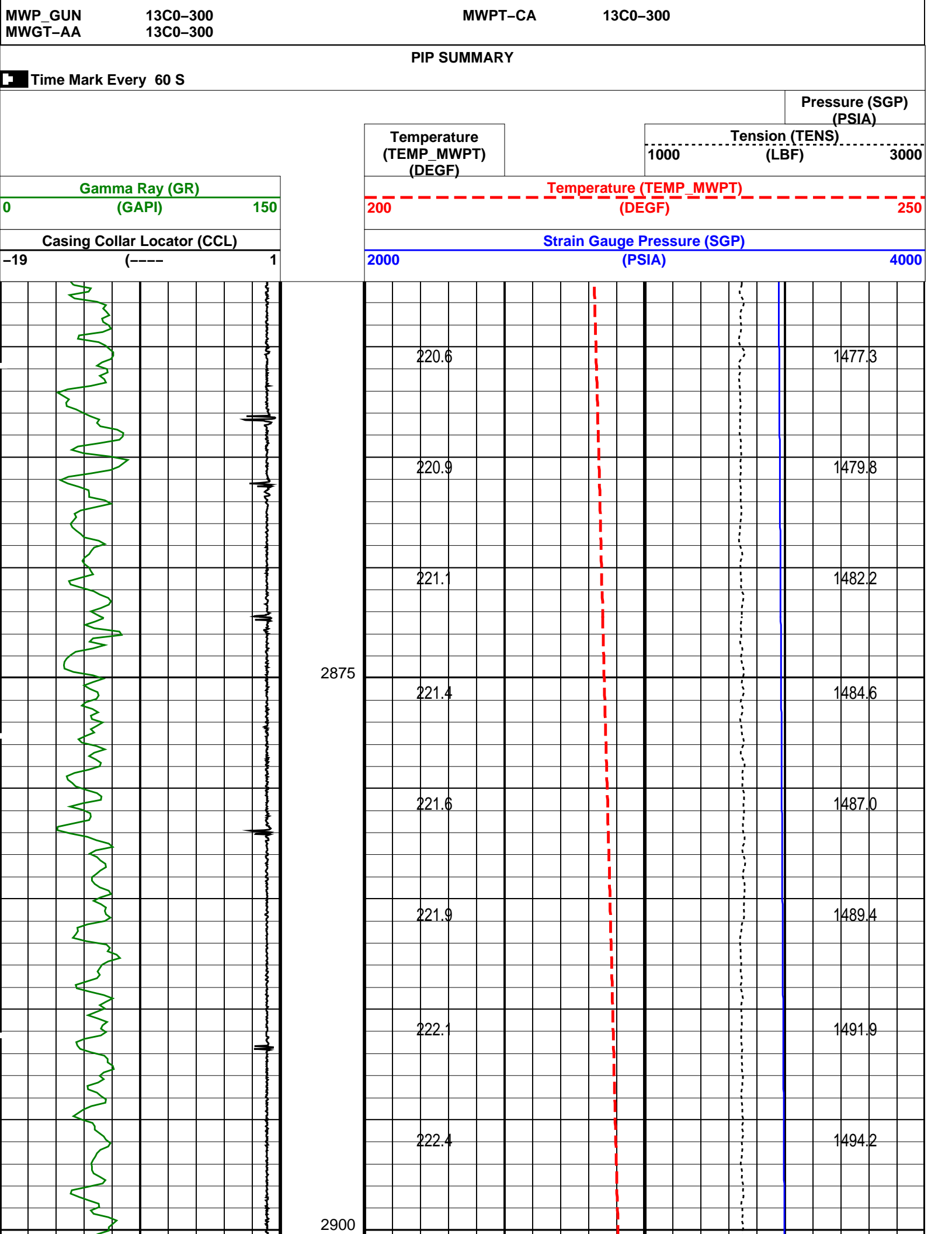
## Output DLIS Files

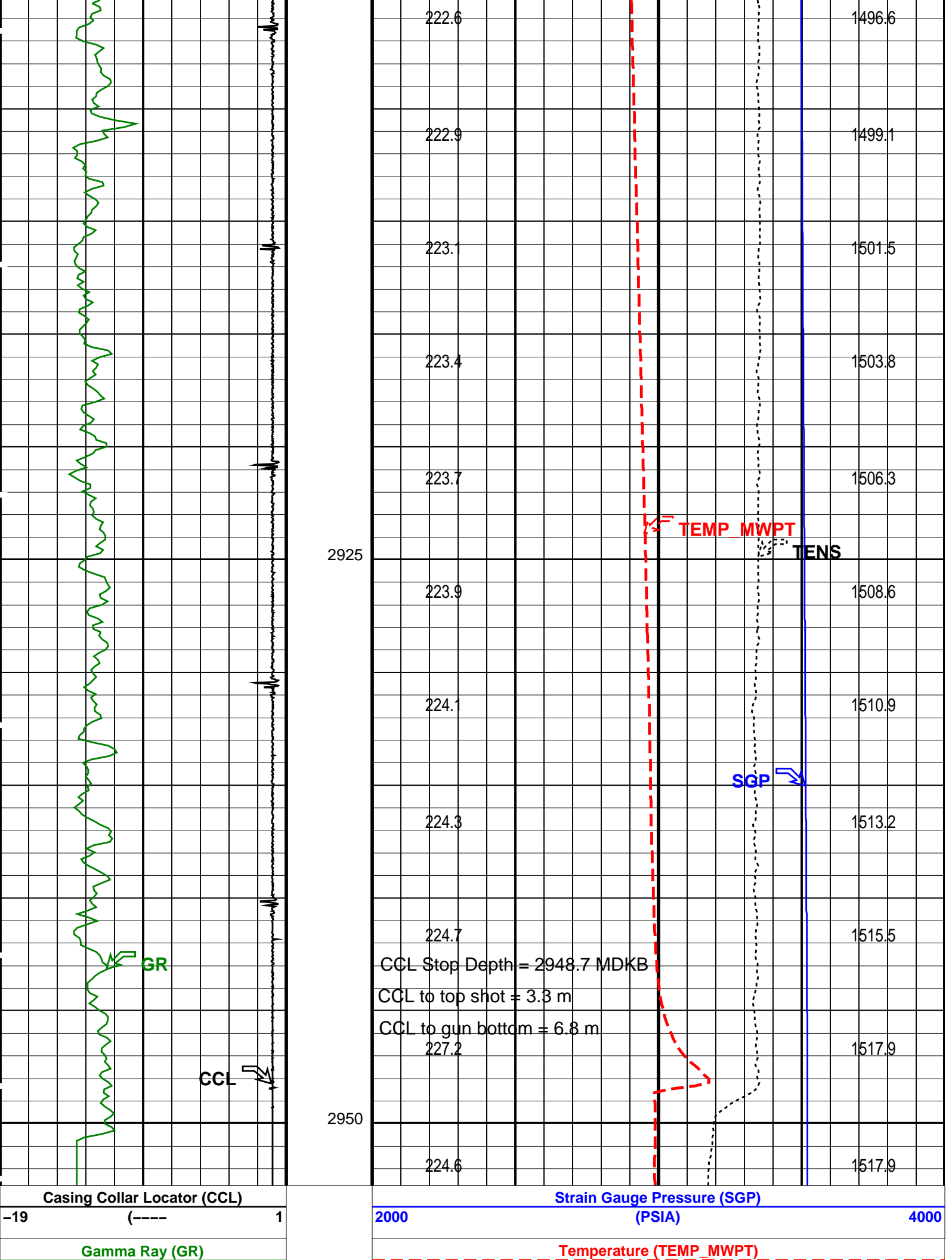
DEFAULT	PERFO_049LUP	FN:48	PRODUCER	04-Feb-2006 17:08
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**OP System Version: 13C0-300**

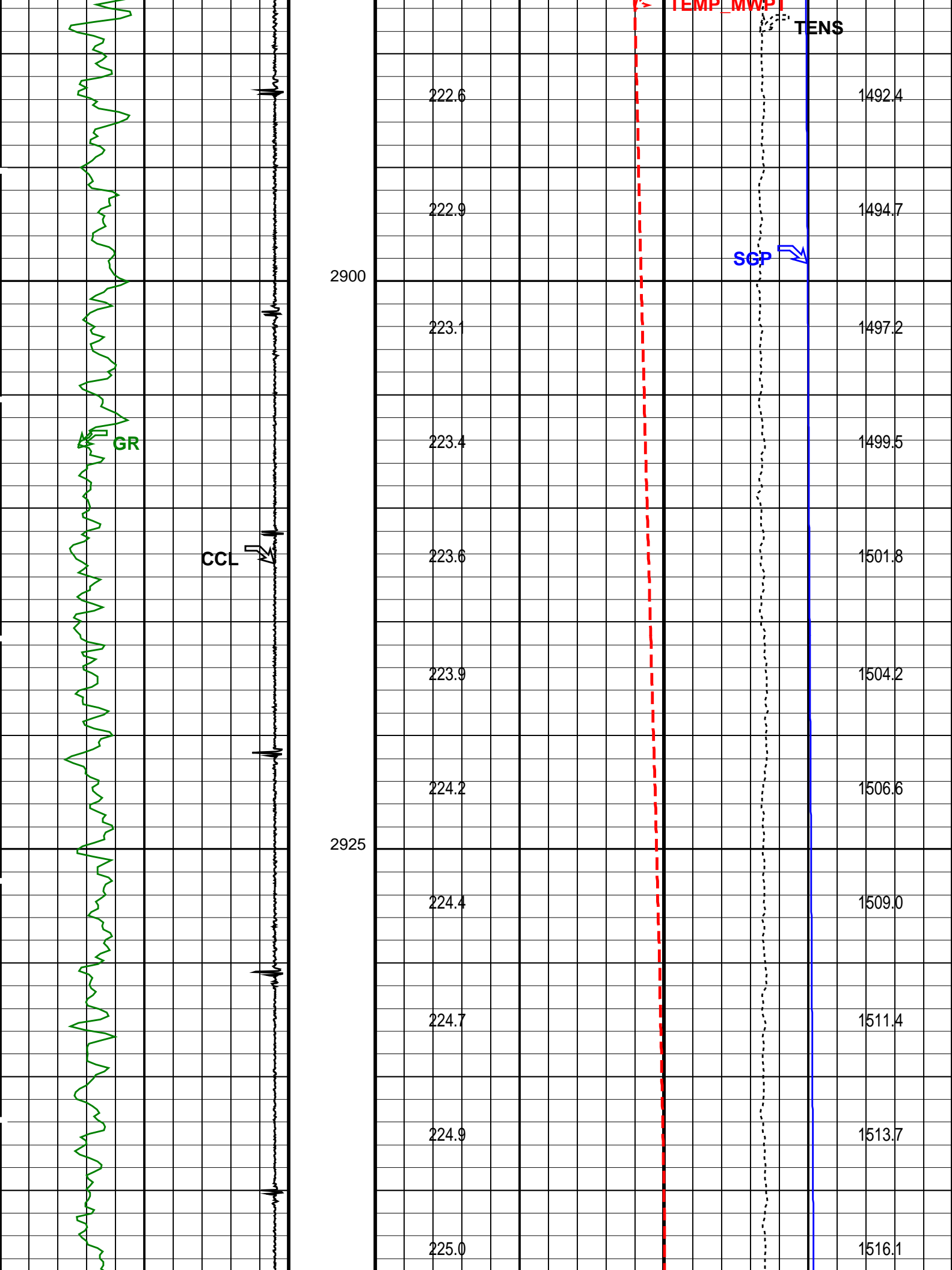
## MCM

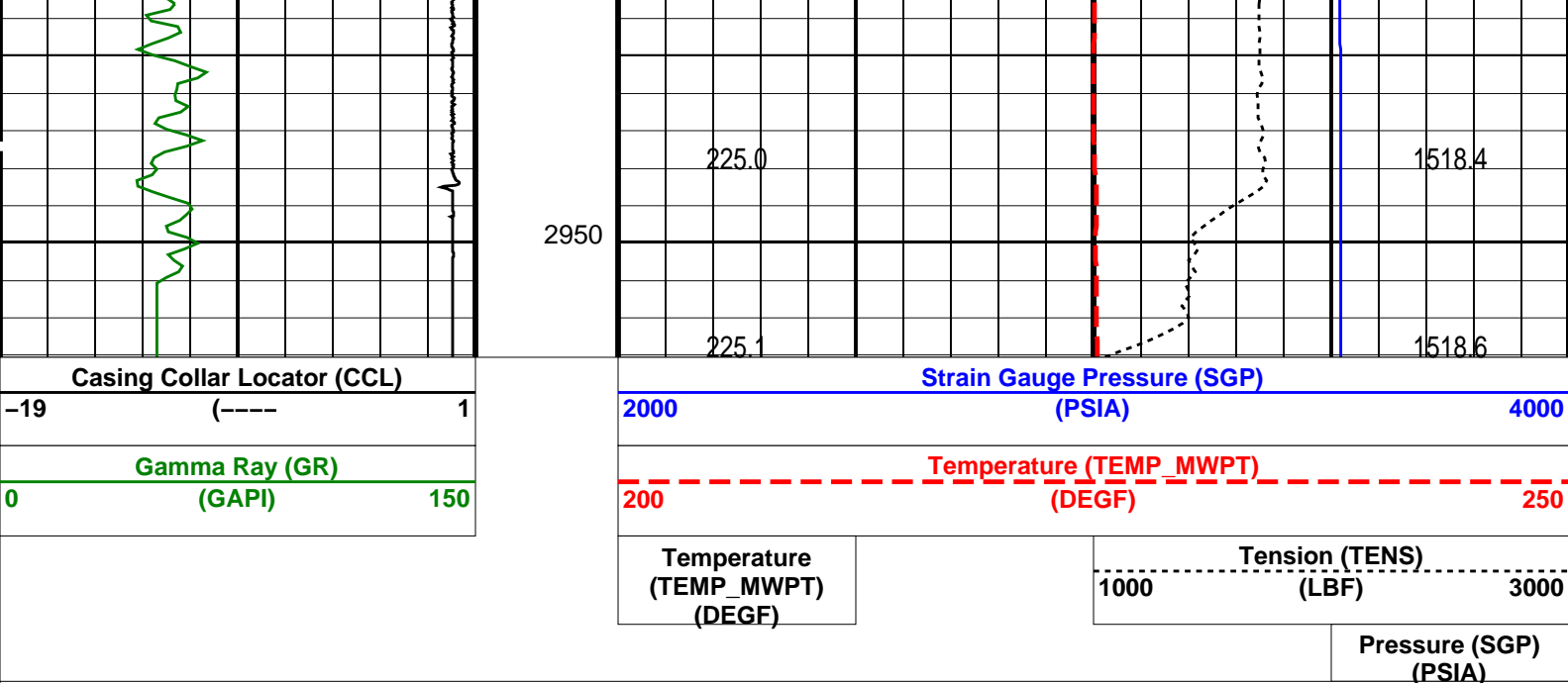












PIP SUMMARY


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: 04-Feb-2006 16:53

OP System Version: 13C0-300			
MCM			
MWP_GUN	13C0-300	MWPT-CA	13C0-300
MWGT-AA	13C0-300		

Output DLIS Files			
DEFAULT	PERFO_047LUP	FN:46 PRODUCER	04-Feb-2006 16:53



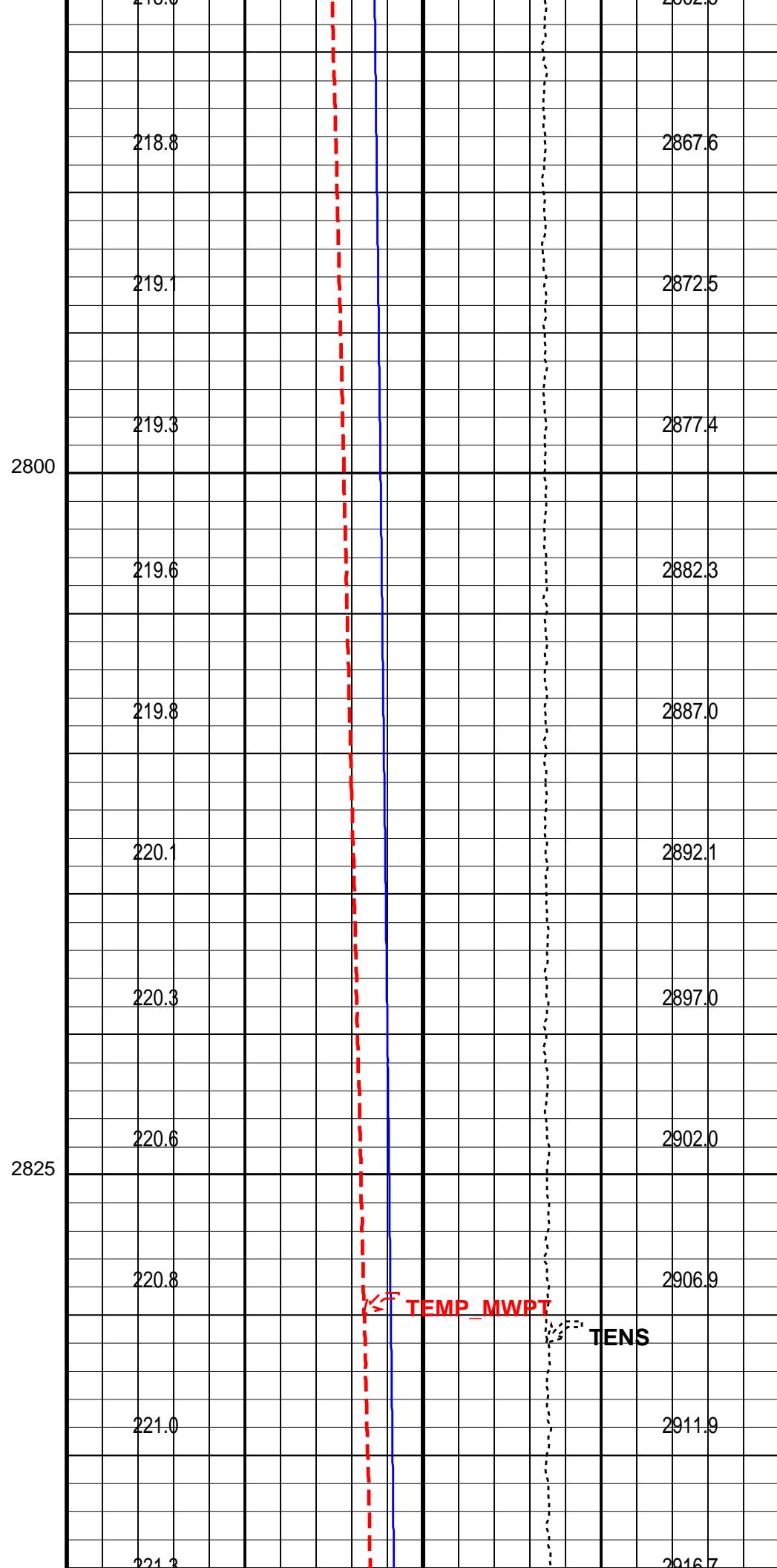
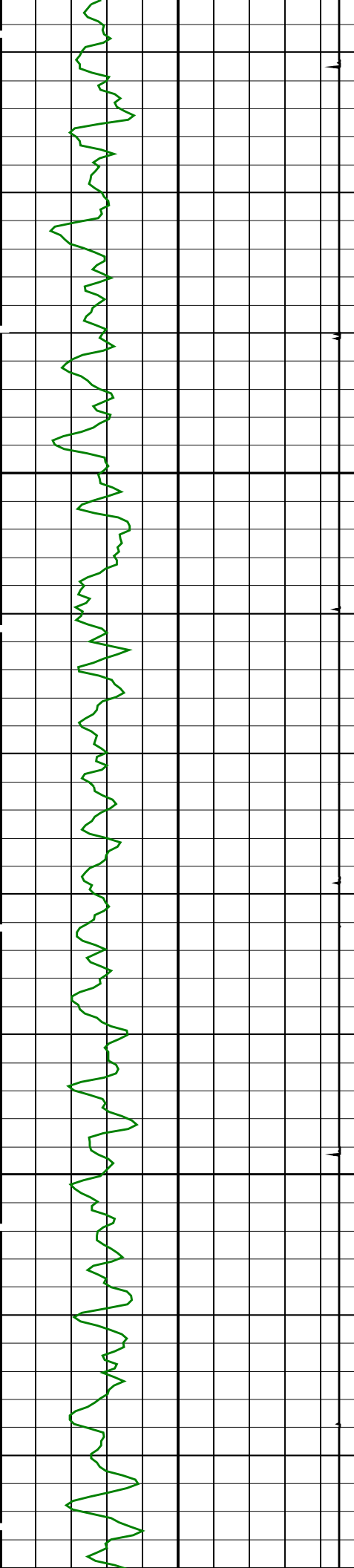
## Depth Determination Correlation Log

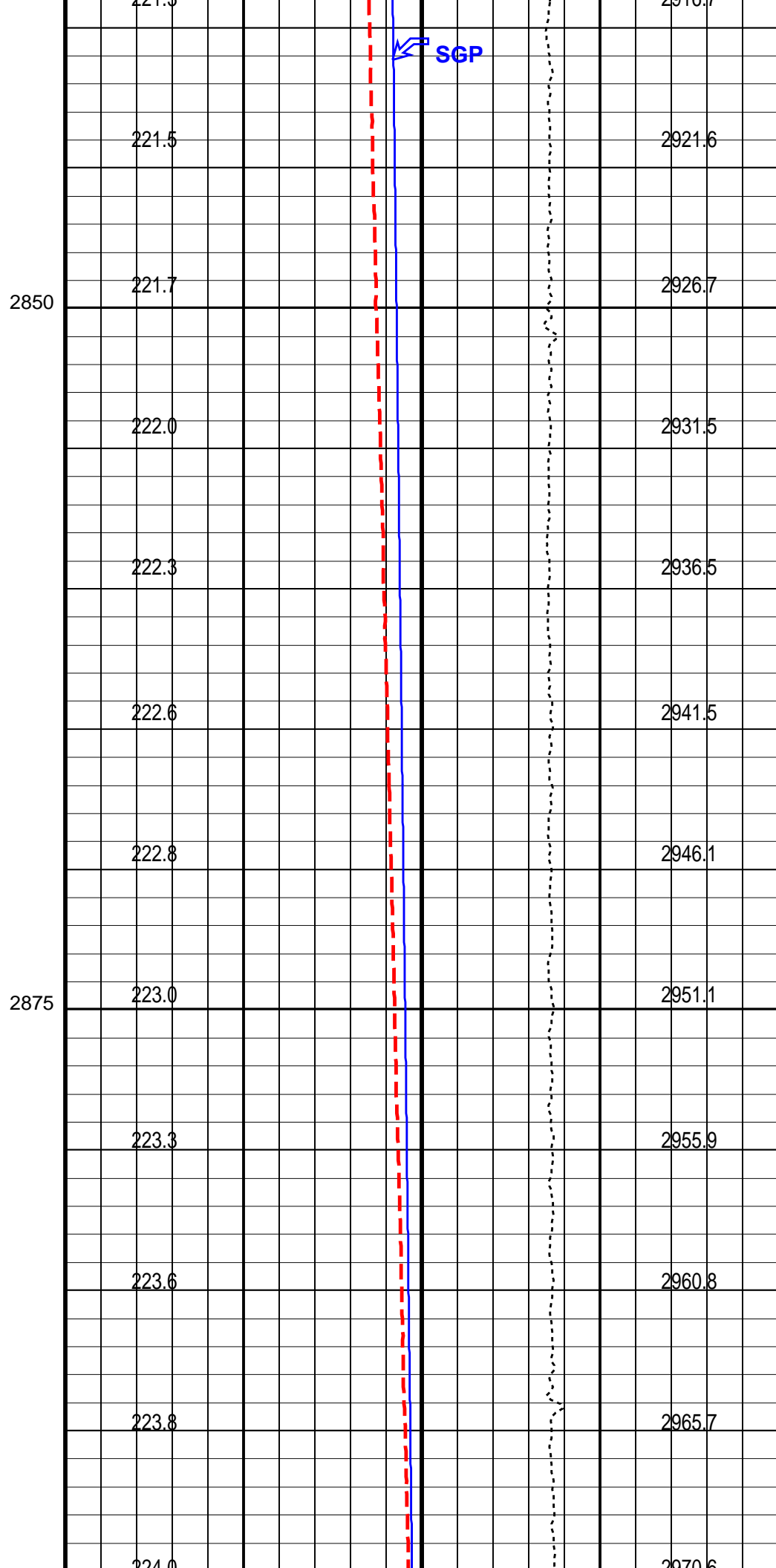
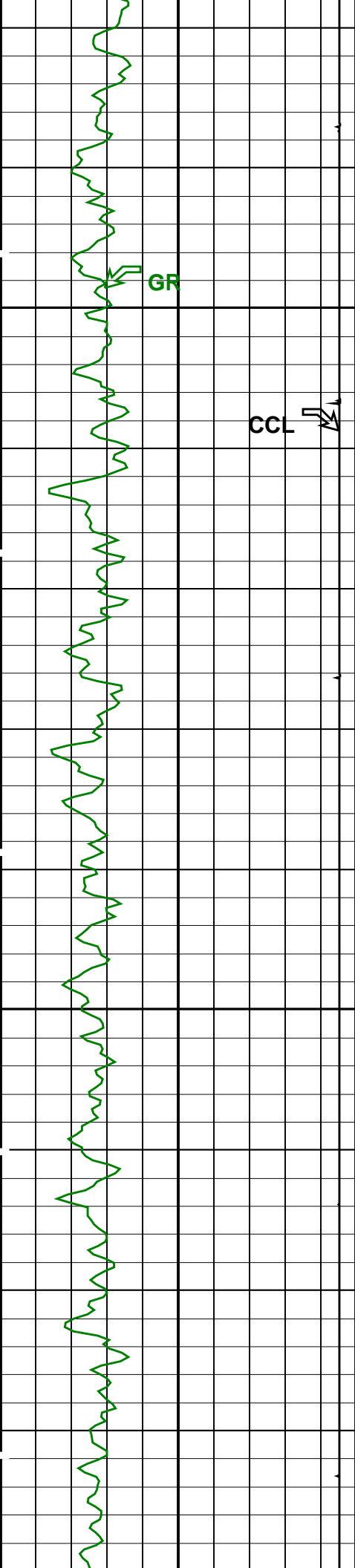
MAXIS Field Log

Output DLIS Files					
DEFAULT	PERFO_015LUP	FN:14	PRODUCER	03-Feb-2006 17:36	2956.6 M 2737.9 M
OP System Version: 13C0-300					
MCM					
MWP_GUN	13C0-300	MWPT-CA		13C0-300	
MWGT-AA	13C0-300				

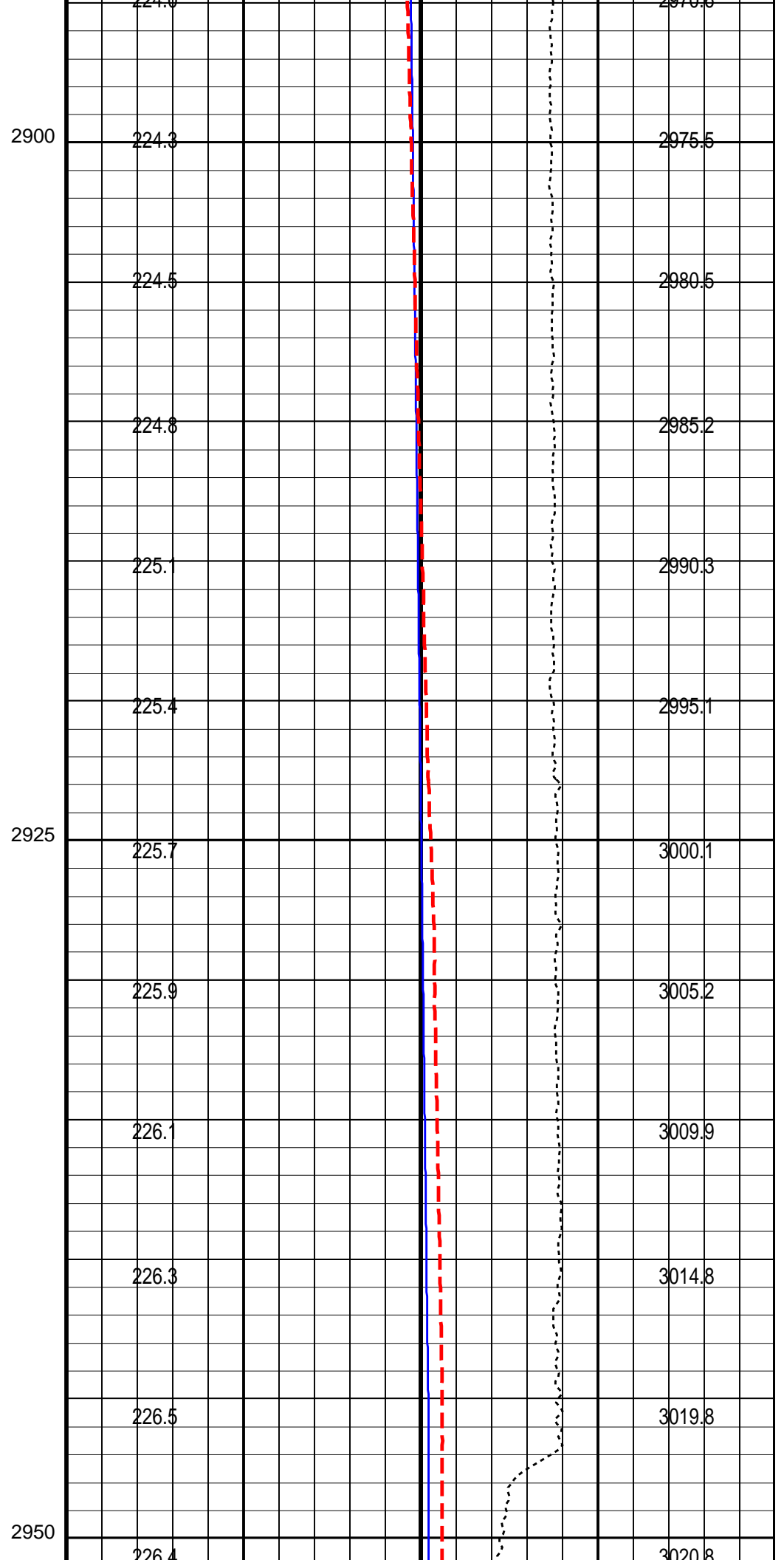
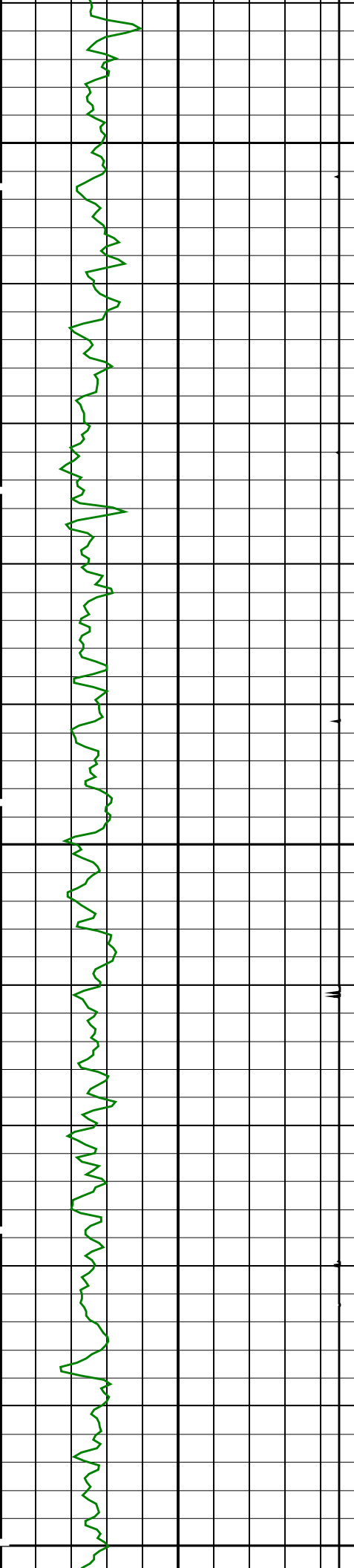
**Time Mark Every 60 S**

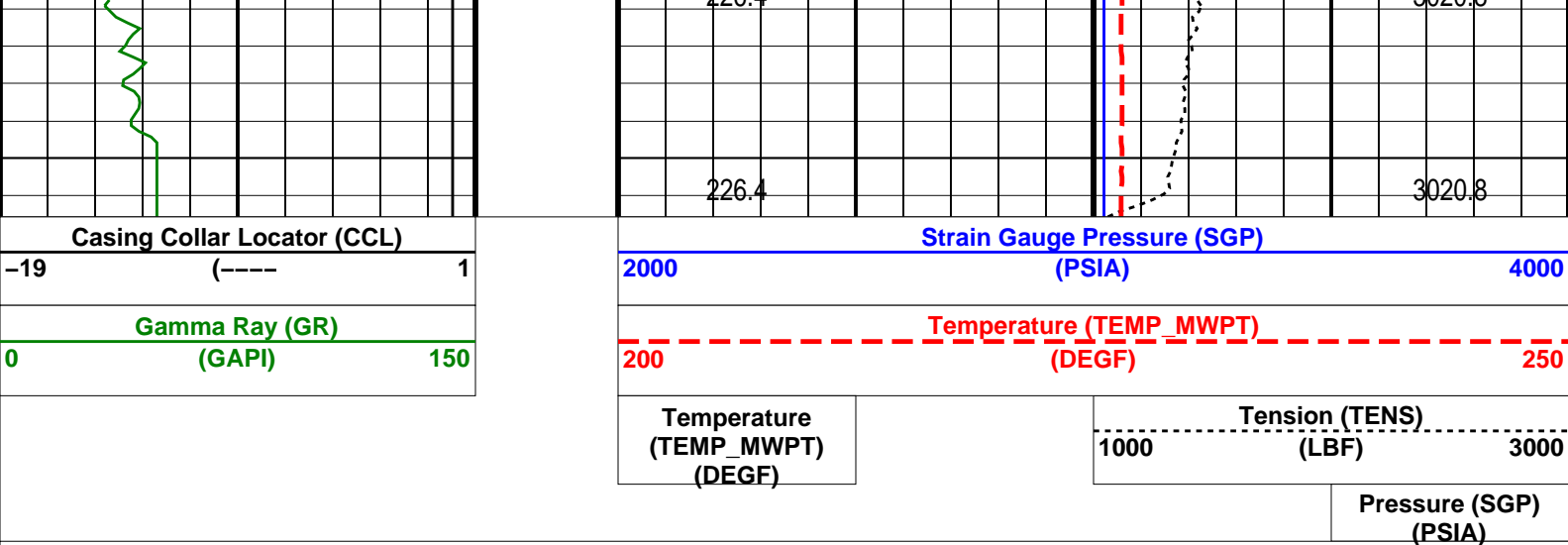
Gamma Ray (GR) (GAPI)		Temperature (TEMP_MWPT) (DEGF)	Pressure (SGP) (PSIA)
		1000	3000
		Tension (TENS) (LBF)	
Casing Collar Locator (CCL) (-----)		Strain Gauge Pressure (SGP) (PSIA)	
		2000	4000
0	150	200	250
-19	1	2000	4000
		216.7	2823.3
		216.9	2828.0
2750		217.1	2833.1
		217.4	2838.0
		217.6	2843.0
		217.8	2847.9
		218.1	2852.8
2775		218.3	2857.5
		218.6	2862.5











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: 03-Feb-2006 17:36

OP System Version: 13C0-300			
MCM			
MWP_GUN	13C0-300	MWPT-CA	13C0-300
MWGT-AA	13C0-300		

Output DLIS Files			
DEFAULT	PERFO_015LUP	FN:14	PRODUCER 03-Feb-2006 17:36

Company: **Esso Australia Ltd.**

**Schlumberger**

Well: **A-3A**

Field: **Halibut**

Rig : **Prod4 / Crane**

Country: **Australia**

2 1/8" Enerjet Gun  
MWPT  
Perforating Record