



Company: **Esso Australia Pty. Ltd.**

Well: **BMA A7**

Field: **Bream**

Rig: **Prod 2 / ISS Rig 22**      Country: **Australia**

**2 1/8" Phased Powerjet  
Perforation Record  
HPI Plug Setting Record**

Prod 2 / ISS Rig 22  
Bream  
Bass Strait  
BMA A7  
Esso Australia Pty. Ltd.

LOCATION			
Bass Strait		Elev.:	K.B. 33.5 m
Gippsland			G.L. -59 m
Basin			D.F. 33.2 m
Permanent Datum:	Mean Sea Level	Elev.:	33.2 m
Log Measured From:	Drill Floor	-33.2 m above Perm. Datum	
Drilling Measured From:	Drill Floor		
State:	Max. Well Deviation	Longitude	Latitude
Victoria	59 deg	147° 46' 15.7"E	38° 30' 2.5"S

Logging Date	4-Feb-2007				
Run Number	1				
Depth Driller	2977 m				
Schlumberger Depth	2917 m Tagged				
Bottom Log Interval	2893 m				
Top Log Interval	2890 m				
Casing Fluid Type	Production Fluids				
Salinity					
Density					
Fluid Level					
BIT/CASING/TUBING STRING					
Bit Size	9.875 in				
From	1109 m				
To	2976 m				
Casing/Tubing Size	7.000 in				
Weight	29 lbm/ft				
Grade	N-80				
From	27 m				
To	2977 m				
Maximum Recorded Temperatures	208 degF				
Logger On Bottom	5-Feb-2007	Time	6:30		
Unit Number	Location				
Recorded By	3827	AUSL			
Witnessed By	C.Rowand, O.Darby, B.Donahoe				
	Mr B. Woodward / Mr M. Wilson				

PVT DATA					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	59 deg						
CEMENTING DATA							
Primary/Squeeze	Primary						
Casing String No							
Lead 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							

Date Created: 4-FEB-2007 0:04:02

## Logging Cable

Type:	2-32ZT
Serial Number:	24031
Length:	5650.08 M
<hr/>	
Conveyance Method:	Wireline
Rig Type:	Offshore Fixed

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

1. Log Correlated to Esso Composite Log
2. Primary depth control was the IDW
3. Secondary depth control was the Z-Chart
- 4.
- 5.
- 6.

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.

OS5:

solar composite log, POOH.

DIL with GGL, telectring and HPL plus, correlates to log scale during dyspnoea run

RIH with CCE toolstring and HPI plug, correlate to log made during dummy run,  
set plug with top sealing element at 2896m MDKB.

RIH with 2 1/8" Powerjet 6 spf, 45 +/- deg phased gun with MWPT, Correlate depth to Solar Composite Log. Locate guns at perforation depth and attempt to create a 300 psi underbalance. Perforate then measure static bottom hole pressure and temperature. Flow the well for 15 mins after perforating for clean up and record FBHP (=3021.6psi) / FBHT (=204.4 degf), shut in well and POOH.

Schlumberger Crew:

Days: Brendan Glover (Crew chief), Max Hancock

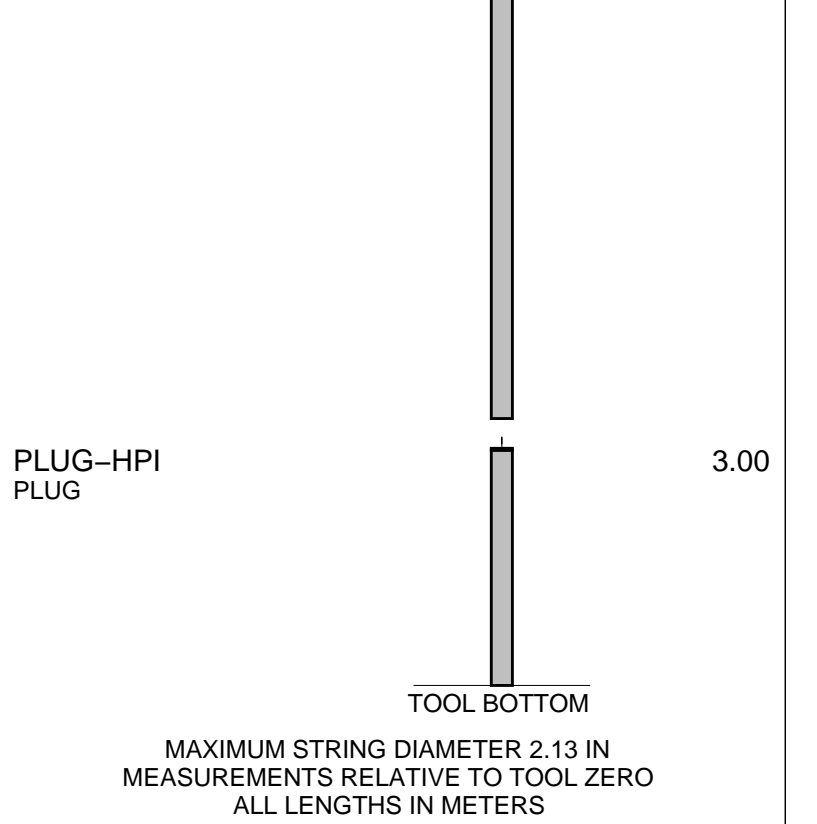
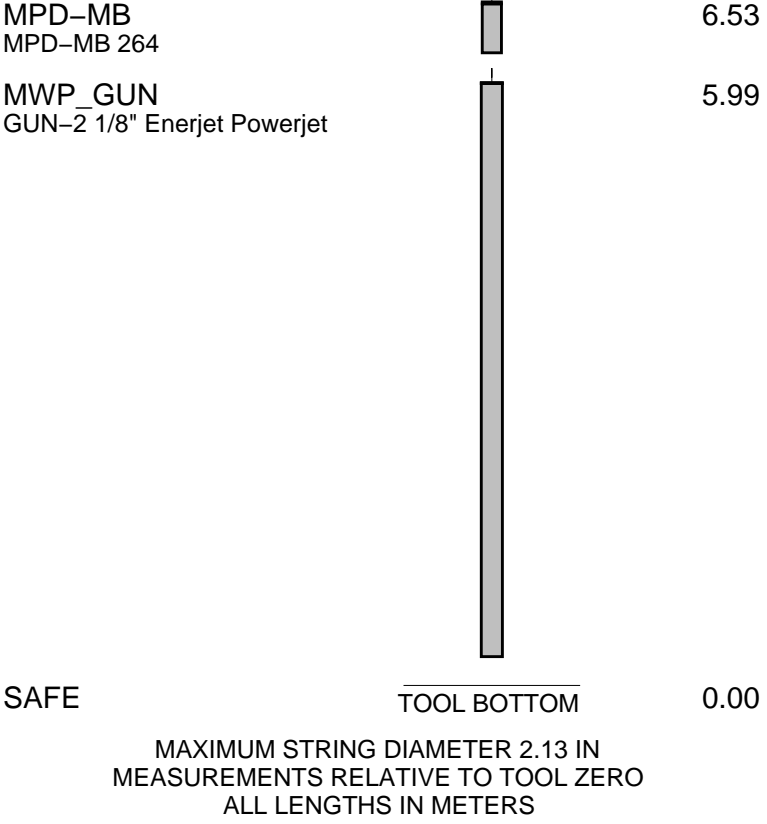
Nights: David Stuckey (Crew chief), Simon Kiss

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

## EQUIPMENT DESCRIPTION

RUN 1		RUN 2	
WITM (SHM)	SURFACE EQUIPMENT	WITM (SHM)	SURFACE EQUIPMENT

DOWNHOLE EQUIPMENT						DOWNHOLE EQUIPMENT					
MH-SWHS MH-SWHS 759				15.53		MH-SWHS MH-SWHS 759				20.19	
AH-SAH-G AH-SAH-G 1220				15.16		EQF-43 EQF-43 201				19.71	
EQF-43 EQF-43 201				14.76							
						EQF-43 EQF-43 281				17.88	
EQF-43 EQF-43 281				12.93							
						PGGT-CC PGGC PGGH-A				16.05	
AH-124				11.10			Gamma Ray Casing Co Tension		0.48		
MWGT-BA MWPG-AA MWGH-BA 124	MWPG GR		— 2.41	10.87		AH-Positive Blocker				14.10	
MWPT-CA MWPH-AA 94 MWPS-AA				9.89		AH-HPI Setting Tool AH-HPI Setting Tool				13.79	
	CCL SMWP Pres SMWP Temp Tension		— TOOL ZERO								
AH-FLEX JOINT AH-FLEX JOINT				7.07							



Client: Esso Australia Pty Ltd

Well: BMA A7

Field: Bream

State: Victoria

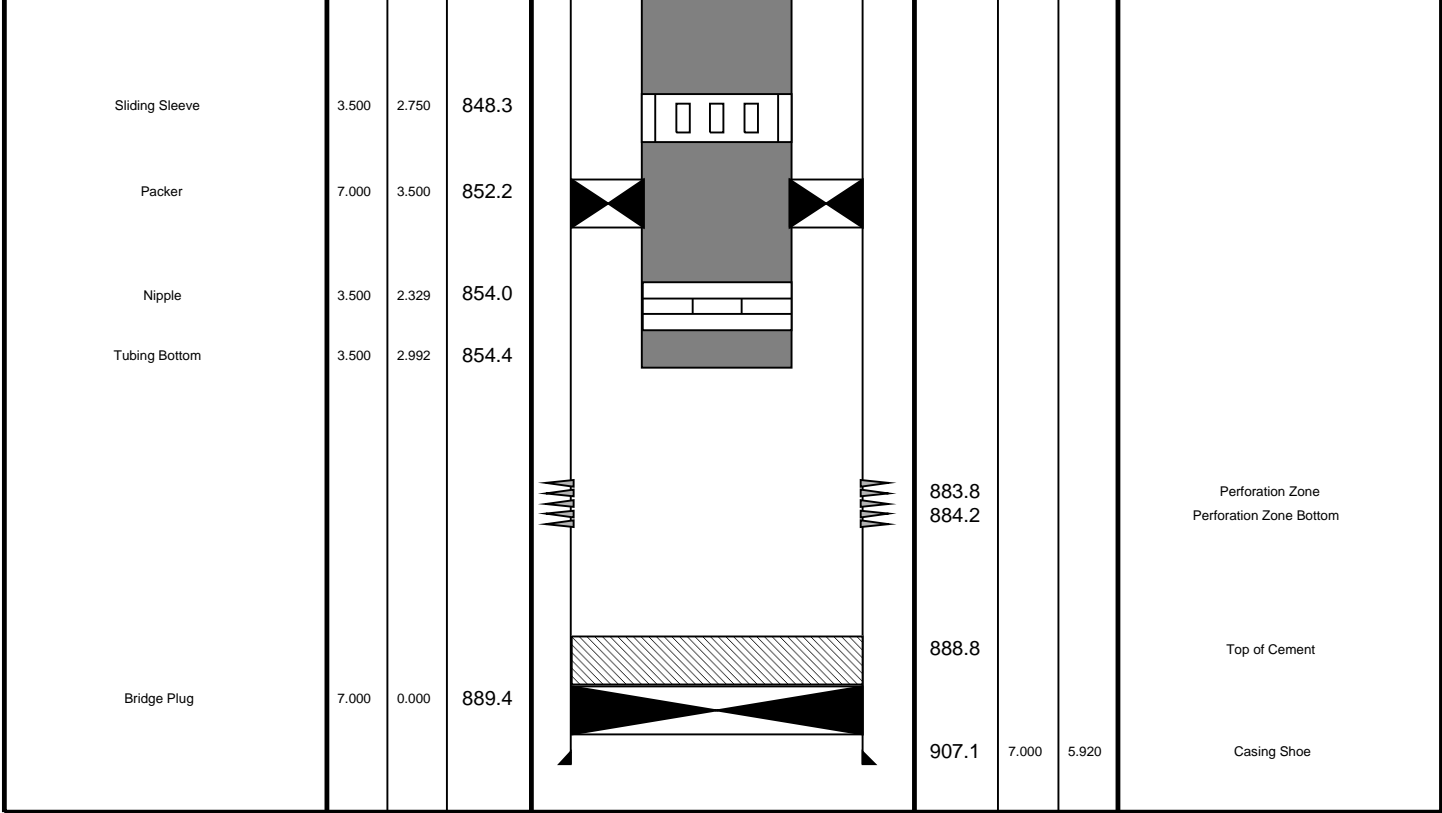
Country: Australia

Rig Name: ISS Rig 22

Reference Datum: Mean Sea Level

Elevation: 33.5 m

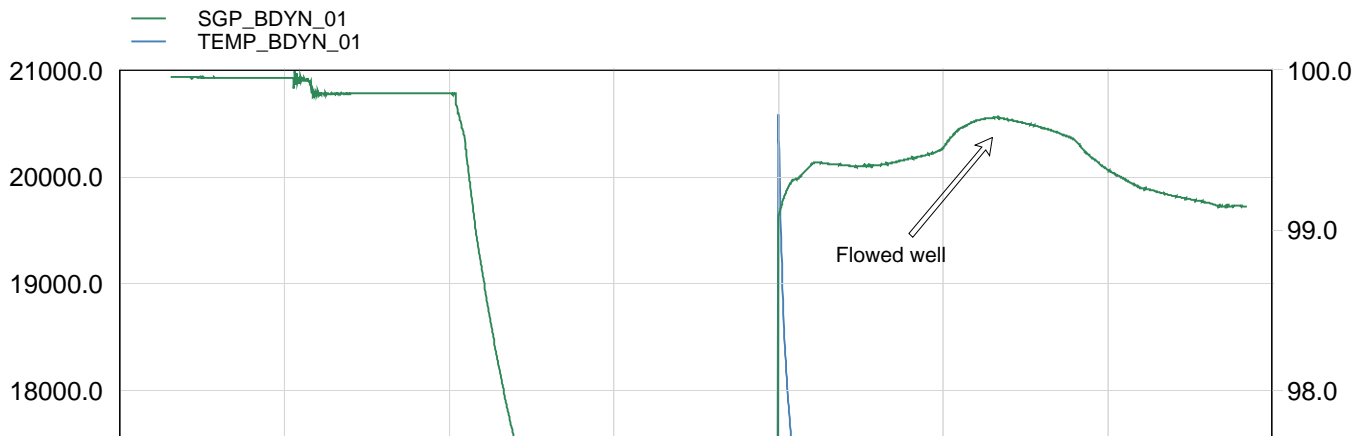
Production String	(in)			Well Schematic	(m)			Casing String
	OD	ID	MD		MD	OD	ID	
Tubing Hanger Tubing, 13.7 kg/m	7.000	3.500	3.7					Casing String, 56.7 kg/m
	3.500	2.992				7.000	5.920	
SSSV	3.500	2.750	136.9					
Side Pocket Mandrel	3.500	2.875	227.1					
Nipple	3.500	2.750	231.3					
Side Pocket Mandrel	3.500	2.875	587.0					
Nipple	3.500	2.750	591.3					
Side Pocket Mandrel	3.500	2.875	615.4					
Nipple	3.500	2.750	619.7					

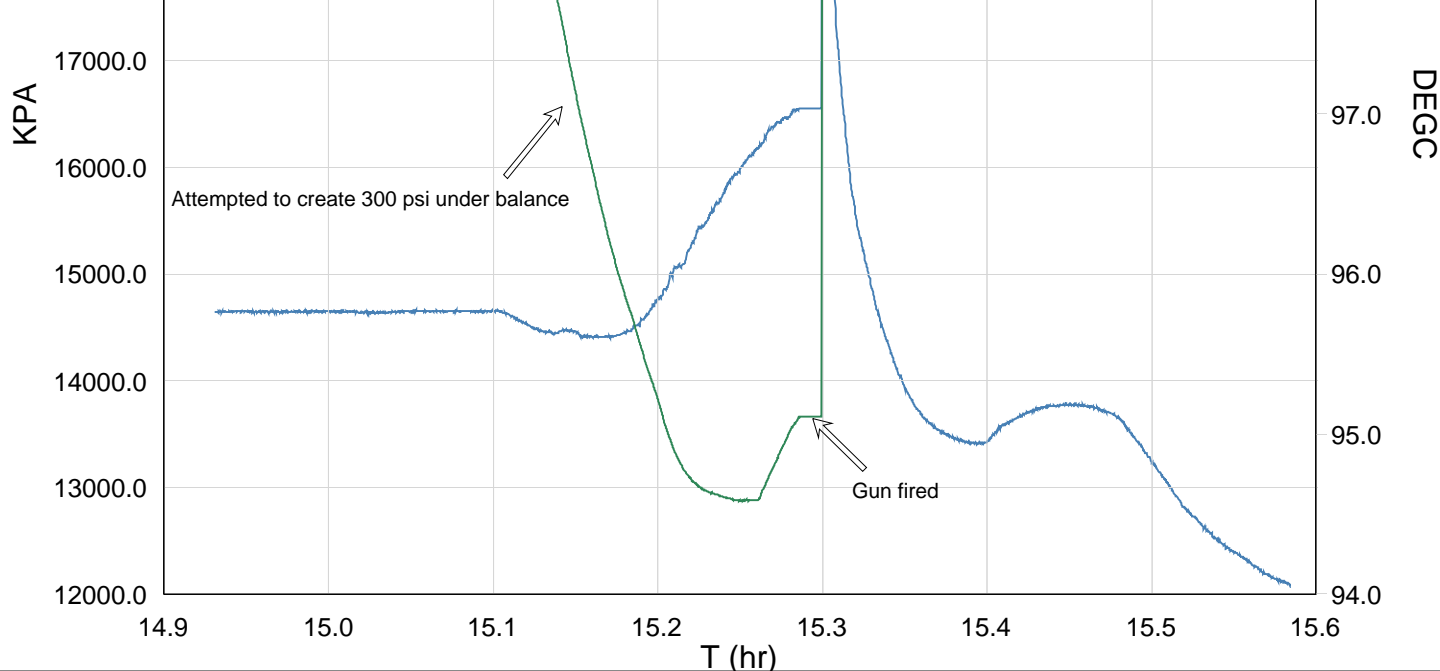


**Schlumberger**

## 2 1/8" Enerjet Powerjet BorDyn Station Log

MAXIS Field Log





**Schlumberger**

## 2 1/8" Enerjet PowerJet Station Logs

MAXIS Field Log

Company: Esso Australia Pty. Ltd.

Well: BMA A7

### Output DLIS Files

DEFAULT PERFO\_055LTP FN:60 PRODUCER 05-Feb-2007 14:55 2885.2 M 6.0 M

### OP System Version: 14C0-302

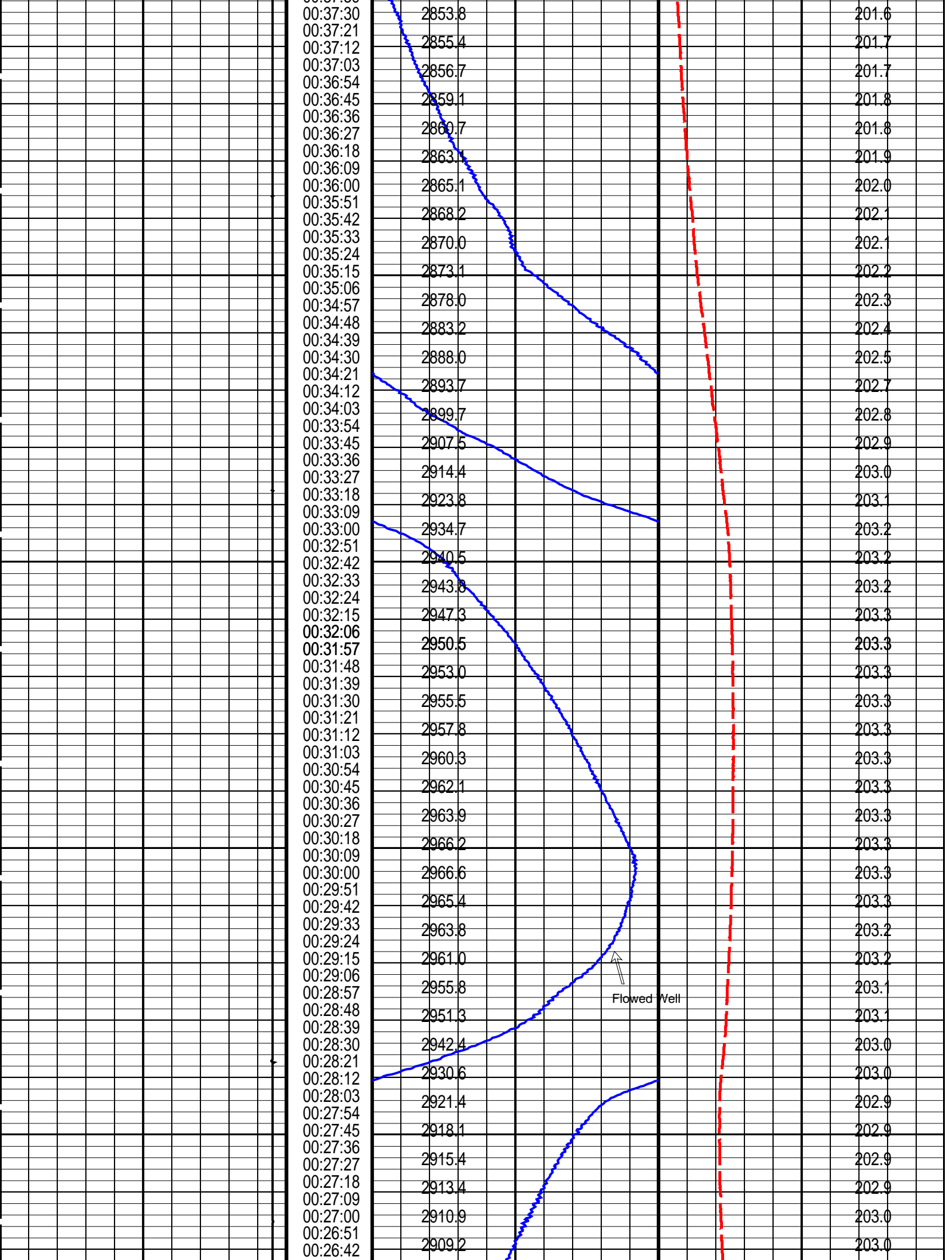
MCM

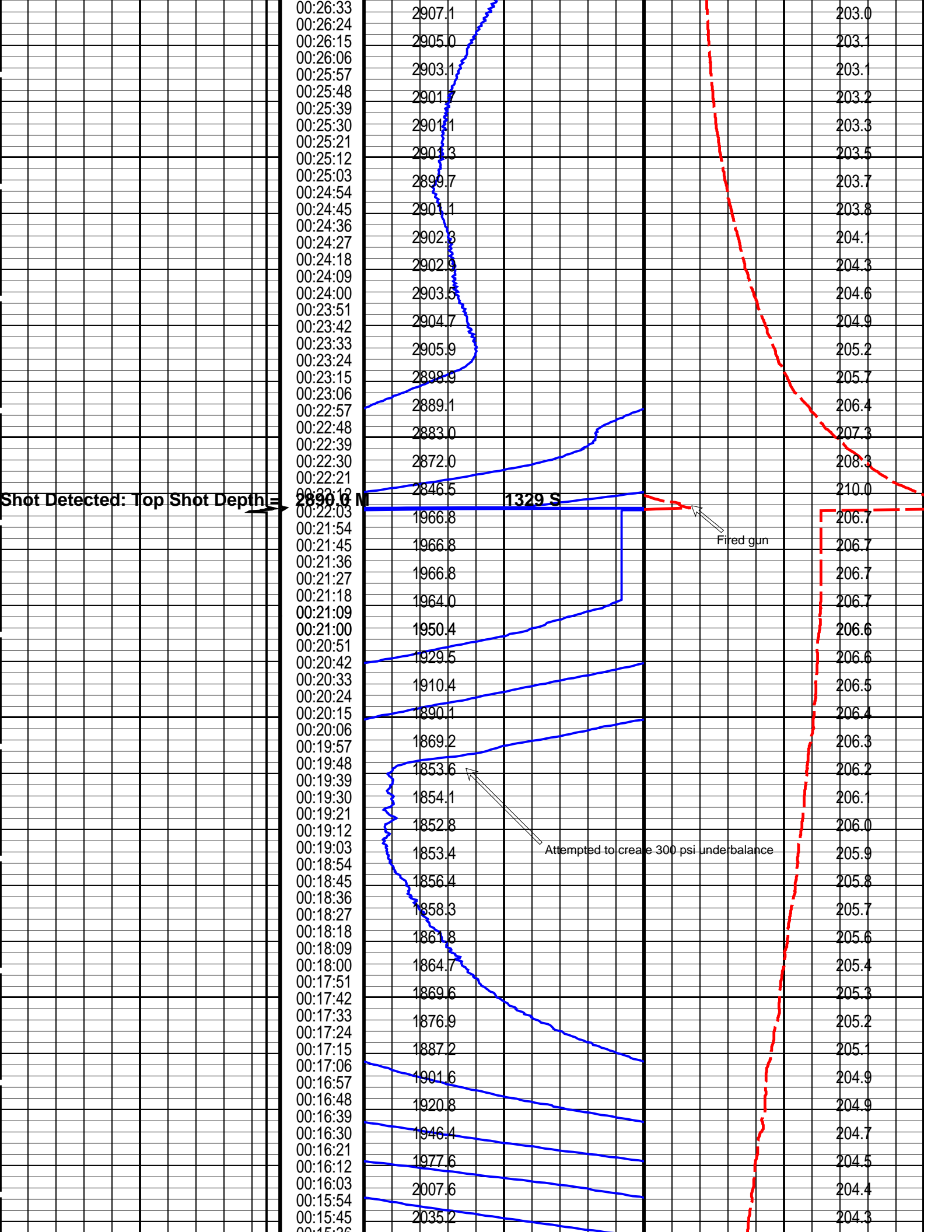
MWP\_GUN PTC-3268-NUCL\_b MWGT-BA PTC-3268-NUCL\_b  
MWPT-DA PTC-3268-NUCL\_b

### PIP SUMMARY

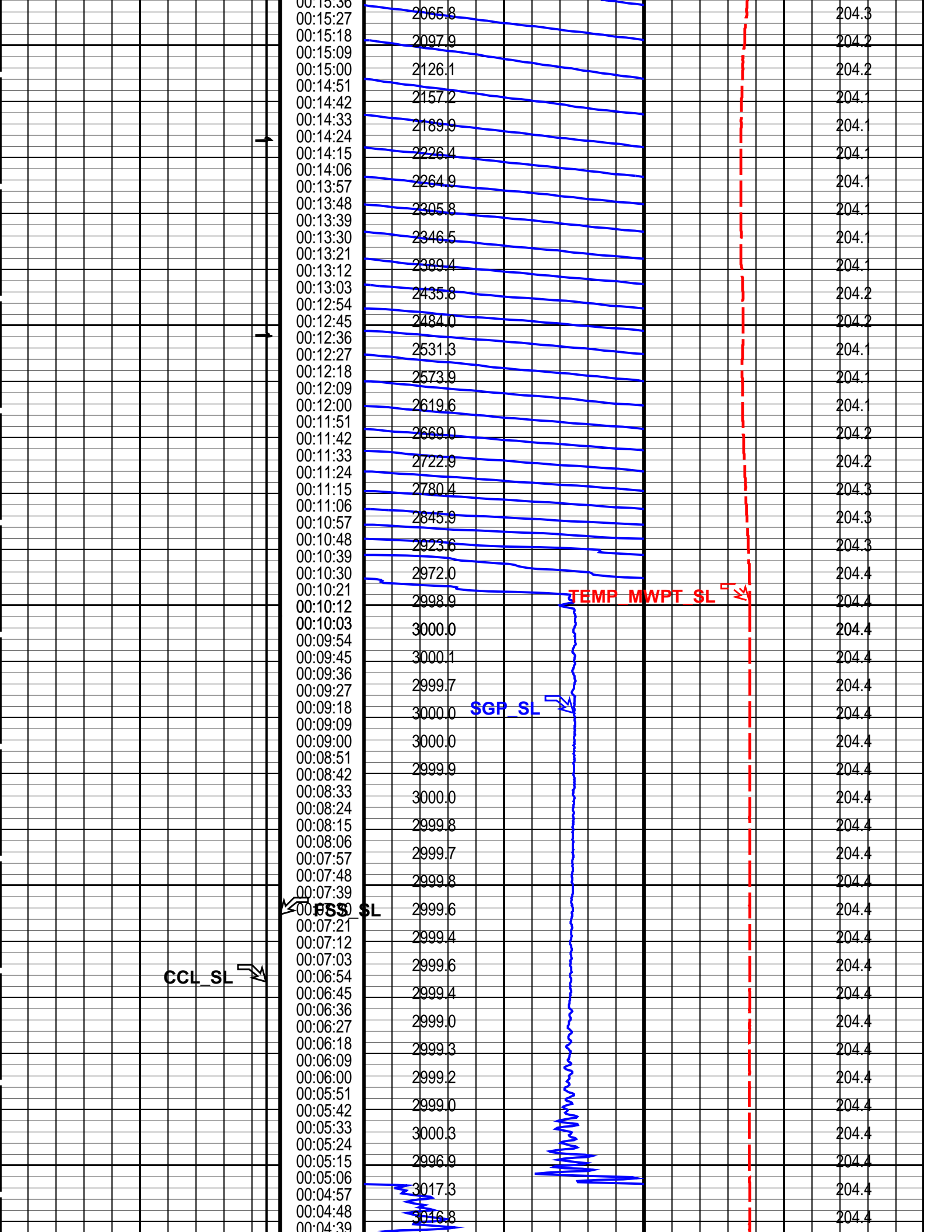
Time Mark Every 60 S

		Firing Sequence State (FSS SL) (-----)	Pressure (SGP_SL) (PSIG)		Temperature (TEMP_MWPT_SL) (DEGF)	
		0 1024				
Casing Collar Locator (CCL_SL) (-----)		Elapsed Time (ETIM) (S)	Strain Gauge Pressure (SGP_SL) (PSIG)		Temperature (TEMP_MWPT_SL) (DEGF)	
-19		1	3010	3050	201	210
		00:39:09				
		00:39:00	2846.5			201.3
		00:38:51	2846.5			201.4
		00:38:42	2846.5			201.4
		00:38:33	2846.4			201.4
		00:38:24	2846.4			201.4
		00:38:15	2846.4			201.4
		00:38:06	2848.8			201.5
		00:37:57	2851.5			201.6
		00:37:48				
		00:37:39				









	00:04:30	3016.5	204.4
	00:04:21	3016.5	204.4
	00:04:12	3020.6	204.4
	00:04:03	3020.5	204.4
	00:03:54	3020.6	204.4
	00:03:45	3020.6	204.4
	00:03:36	3020.7	204.4
	00:03:27	3020.8	204.4
	00:03:18	3020.8	204.4
	00:03:09	3020.8	204.4
	00:03:00	3020.8	204.4
	00:02:51	3020.7	204.4
	00:02:42	3020.9	204.4
	00:02:33	3020.9	204.4
	00:02:24	3020.8	204.4
	00:02:15	3021.0	204.4
	00:02:06	3021.0	204.4
	00:01:57	3021.1	204.4
	00:01:48	3021.1	204.4
	00:01:39	3021.1	204.4
	00:01:30	3021.3	204.4
	00:01:21	3021.3	204.4
	00:01:12	3021.3	204.4
	00:01:03	3021.5	204.4
	00:00:54	3021.6	204.4
	00:00:45	3021.6	204.4
	00:00:36	3021.6	204.4
	00:00:27	3021.6	204.4
	00:00:18	3021.6	204.4
	00:00:09	3021.6	204.4
	00:00:00	3021.6	204.4

Casing Collar Locator (CCL_SL)	Elapsed Time (ETIM) (S)	Strain Gauge Pressure (SGP_SL) (PSIG)	Temperature (TEMP_MWPT_SL) (DEGF)
-19 (----) 1		3010 (PSIG) 3050	201 (DEGF) 210
	Firing Sequence State (FSS_SL) (----)	Pressure (SGP_SL) (PSIG)	Temperature (TEMP_MWPT_SL) (DEGF)
	0 1024		

PIP SUMMARY			
Time Mark Every 60 S			

Parameters			
DLIS Name	Description	Value	
MWPT-DA: 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: 05-Feb-2007 14:55
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OP System Version: 14C0-302			
MCM			
MWP_GUN	PTC-3268-NUCL_b	MWGT-BA	PTC-3268-NUCL_b
MWPT-DA	PTC-3268-NUCL_b		

Output DLIS Files			
DEFAULT	PERFO_055LTP	FN:60	PRODUCER 05-Feb-2007 14:55

PERFO2 Operational Summary Listing

Device	Status	Req Depth ( M)	Obs Depth ( M)	Time Used
GUN1	Used	2890.0	2890.0	Mon Feb 05 14:59:34 2007

Company: Esso Australia Pty. Ltd.	Well: BMA A7
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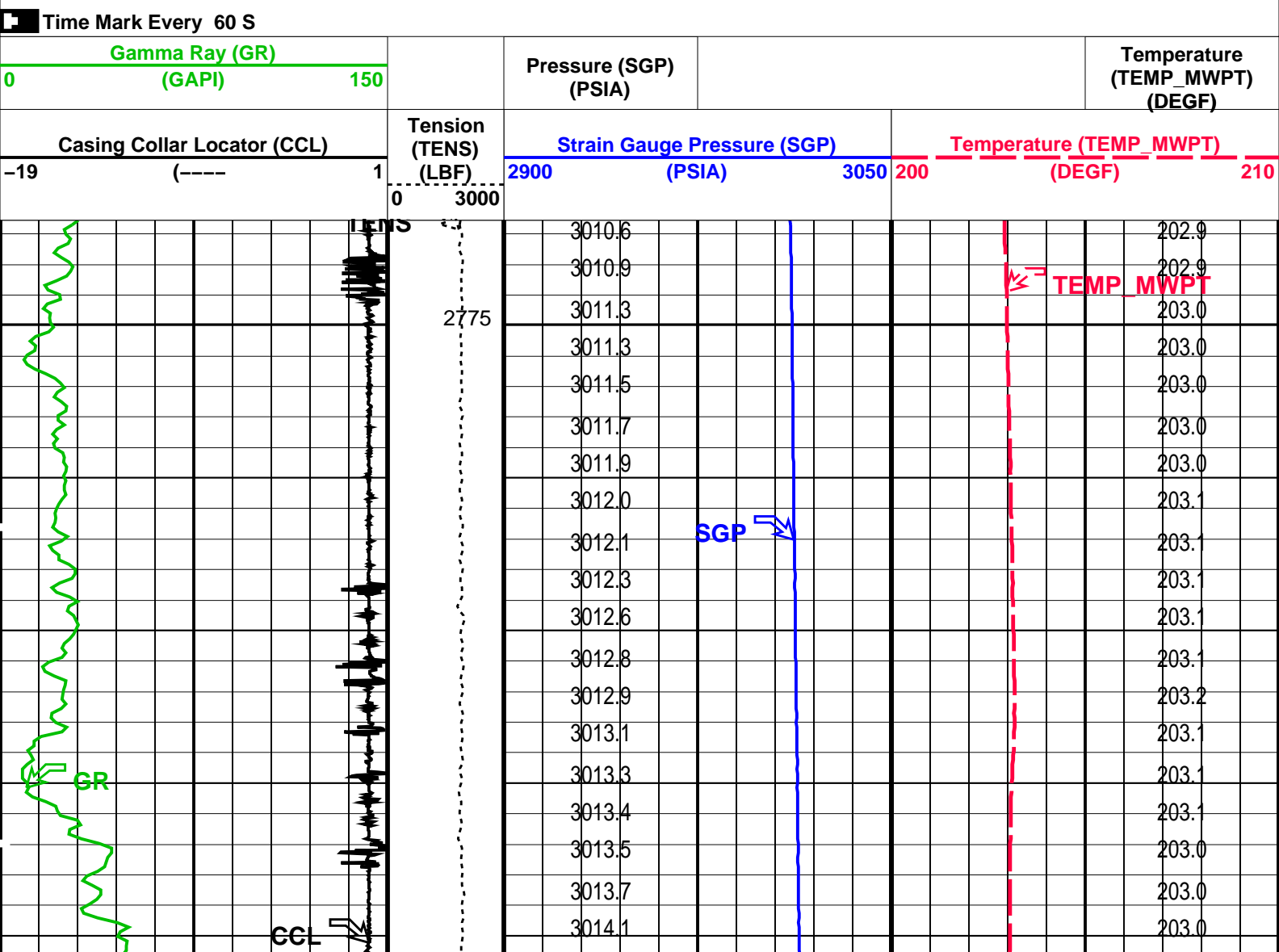
Output DLIS Files

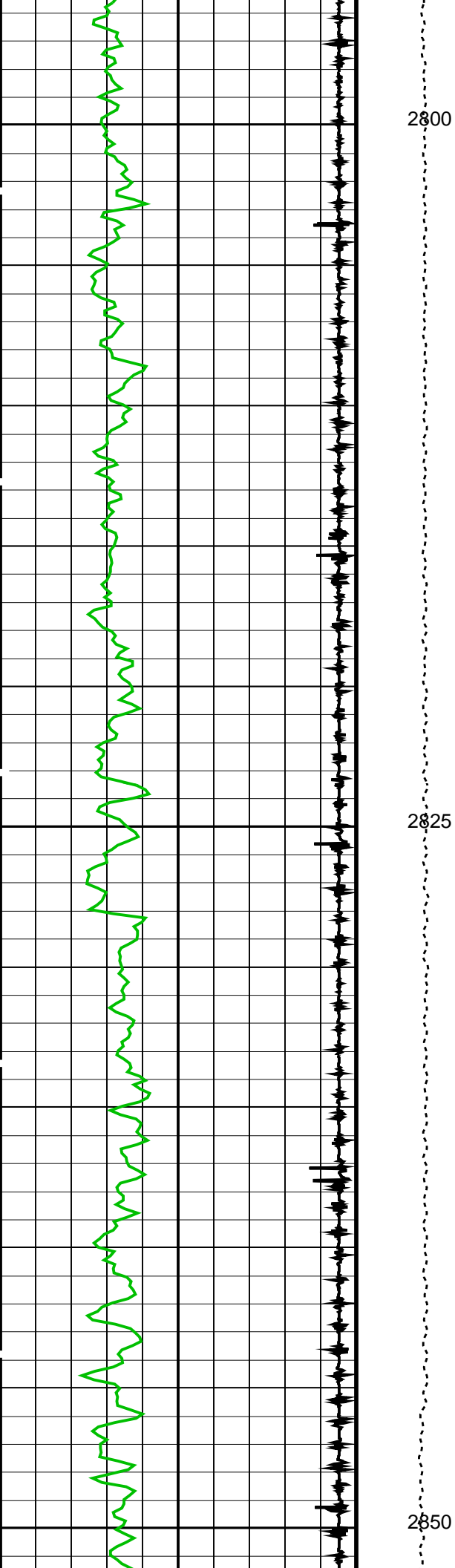
DEFAULT	PERFO_054LUP	FN:59	PRODUCER	05-Feb-2007 14:51	2895.4 M	2771.5 M
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OP System Version: 14C0-302  
MCM

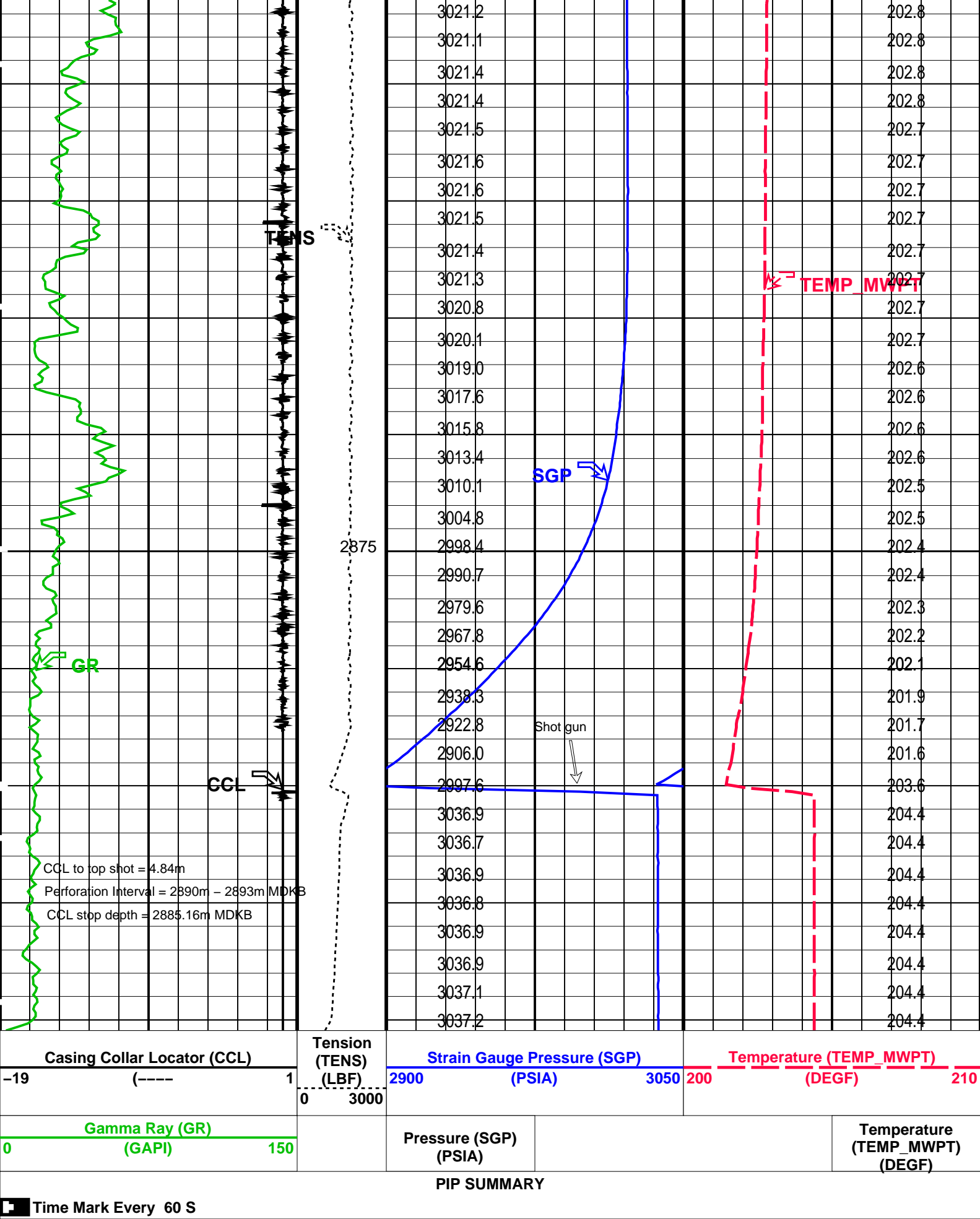
MWP_GUN	PTC-3268-NUCL_b	MWGT-BA	PTC-3268-NUCL_b
MWPT-DA	PTC-3268-NUCL_b		

PIP SUMMARY





3014.1				203.0
3014.3				203.0
3014.4				203.0
3014.8				203.0
3014.9				203.0
3015.0				203.0
3015.2				203.0
3015.4				203.0
3015.6				203.0
3015.7				203.0
3015.9				203.0
3016.1				203.0
3016.3				203.0
3016.4				203.0
3016.6				203.0
3016.7				203.0
3017.1				202.9
3017.2				203.0
3017.4				202.9
3017.5				202.9
3017.9				202.9
3017.9				202.9
3018.0				202.9
3018.0				202.9
3018.2				202.9
3018.3				202.9
3018.6				202.9
3018.8				202.9
3018.9				202.9
3019.1				202.9
3019.3				202.9
3019.5				202.9
3019.6				202.9
3019.7				202.9
3019.8				202.9
3020.0				202.9
3020.1				202.9
3020.3				202.8
3020.5				202.9
3020.5				202.8
3020.8				202.8
3020.8				202.8
3020.9				202.8
3021.0				202.8



Parameters		
DLIS Name	Description	Value

MWPT-DA: 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: 05-Feb-2007 14:51	
OP System Version: 14C0-302					
MCM					
MWP_GUN	PTC-3268-NUCL_b		MWGT-BA	PTC-3268-NUCL_b	
MWPT-DA	PTC-3268-NUCL_b				
Output DLIS Files					
DEFAULT	PERFO_054LUP		FN:59	PRODUCER	05-Feb-2007 14:51



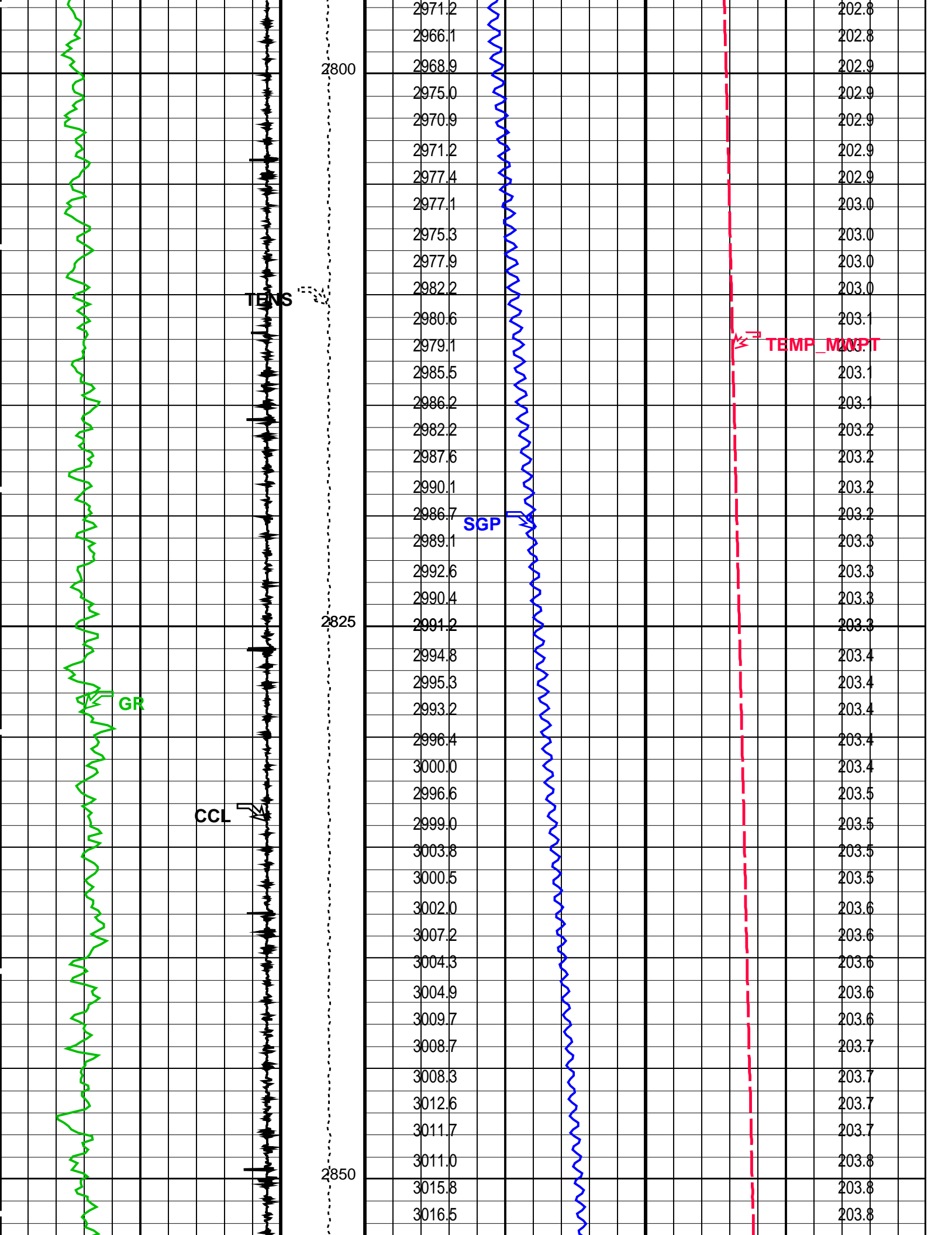
## 2 1/8" Enerjet PowerJet Correlation Pass

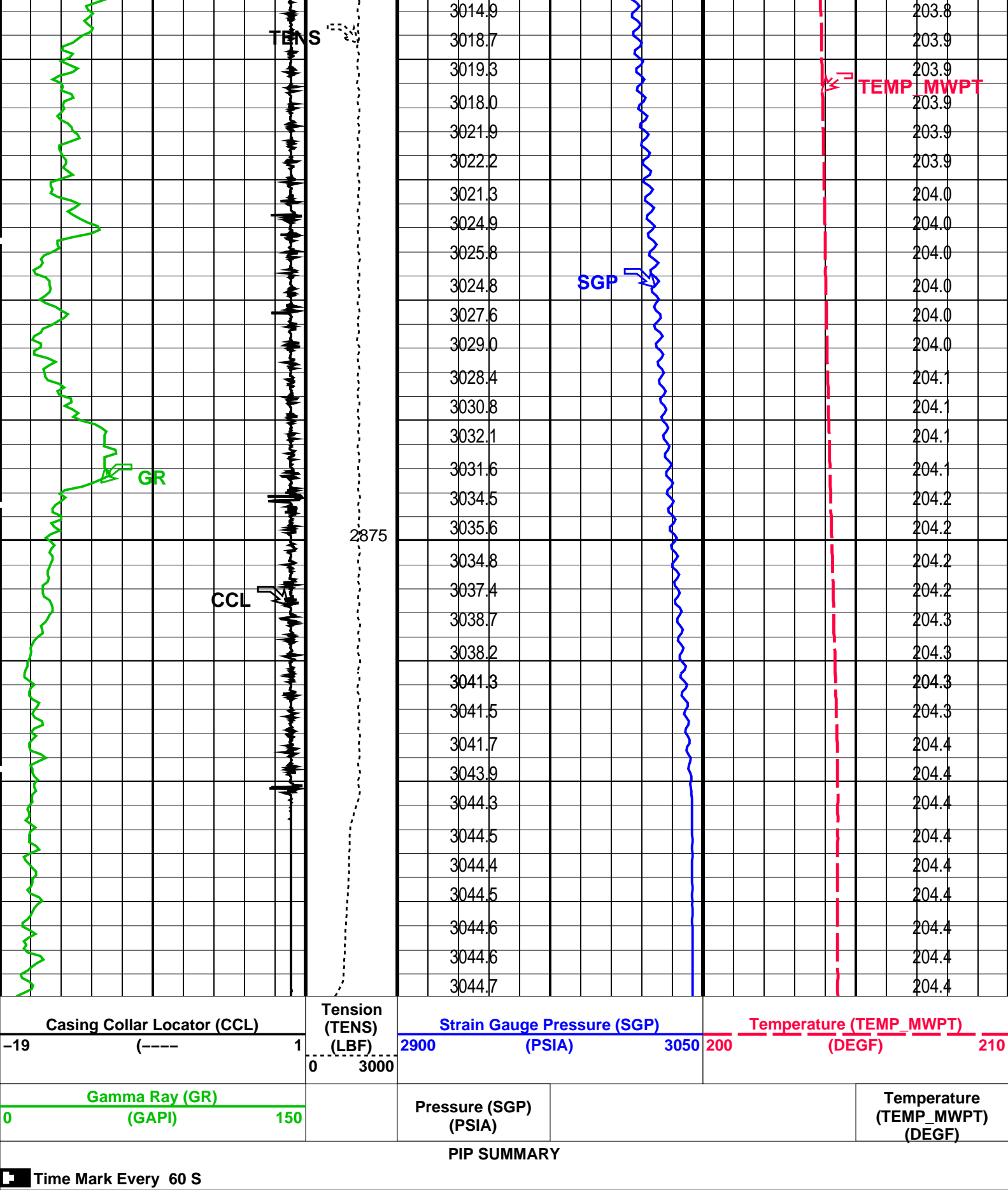
MAXIS Field Log

Company: Esso Australia Pty. Ltd. Well: BMA A7

Output DLIS Files						
DEFAULT	PERFO_052LUP	FN:57	PRODUCER	05-Feb-2007 14:29	2893.9 M	2781.6 M
OP System Version: 14C0-302						
MCM						
MWP_GUN	PTC-3268-NUCL_b		MWGT-BA		PTC-3268-NUCL_b	
MWPT-DA	PTC-3268-NUCL_b					

PIP SUMMARY					
Time Mark Every 60 S					
Gamma Ray (GR) (GAPI)		Tension (TENS) (LBF)	Pressure (SGP) (PSIA)		Temperature (TEMP_MWPT) (DEGF)
0	150				
Casing Collar Locator (CCL)		0	Strain Gauge Pressure (SGP) (PSIA)		Temperature (TEMP_MWPT) (DEGF)
-19	1		2900	3050	200 210
		3000			
			2954.9		202.4
			2955.5		202.4
			2959.6		202.4
			2957.5		202.5
			2958.3		202.5
			2961.0		202.5
			2963.0		202.6
			2960.3		202.6
			2963.3		202.6
			2967.4		202.7
			2963.4		202.8
			2966.7		202.8





Parameters		
DLIS Name	Description	Value
MWPT-DA: 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: 05-Feb-2007 14:29

OP System Version: 14C0-302

MCM

MWP\_GUN

PTC-3268-NUCL\_b

MWGT-BA

PTC-3268-NUCL\_b

MWPT-DA

PTC-3268-NUCL\_b

Output DLIS Files

DEFAULT

PERFO\_052LUP

FN:57

PRODUCER

05-Feb-2007 14:29

Schlumberger

7" HPI Plug  
Setting Pass

MAXIS Field Log

PERFO2 Operational Summary Listing

Device	Status	Req Depth ( M)	Obs Depth ( M)	Time Used
GUN1	Used	2896.5	2896.4	Mon Feb 05 06:23:34 2007

Company: Esso Australia Pty. Ltd.

Well: BMA A7

Output DLIS Files

DEFAULT

PERFO\_034LUP

FN:39

PRODUCER

05-Feb-2007 06:21

2891.6 M

2848.5 M

OP System Version: 14C0-302

MCM

SHM\_GUN

PTC-3268-NUCL\_b

CCL-L

14C0-302

PIP SUMMARY

Time Mark Every 60 S

Casing Collar Locator (CCL)

-19

(----

1

Shifted Casing Collar Locator (SCCL)

-10

(----

10

Raw Casing Collar Locator (RCCL)

-3

(----

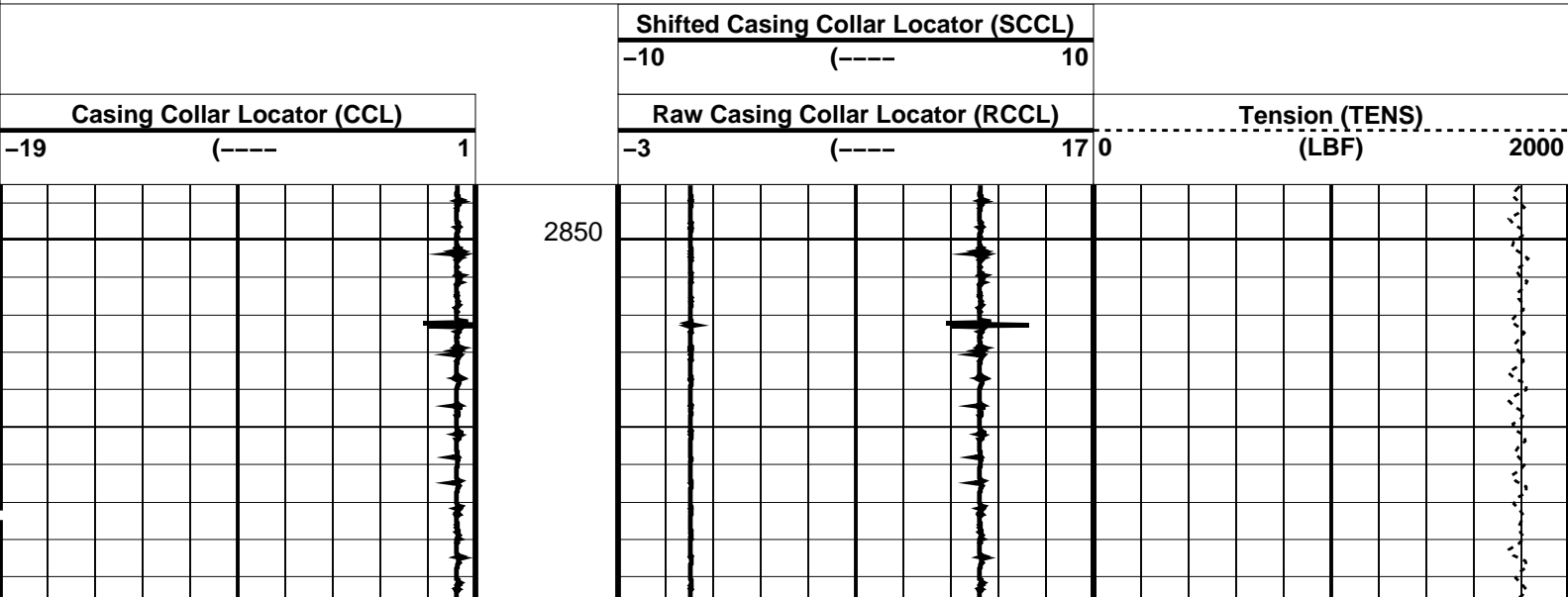
17

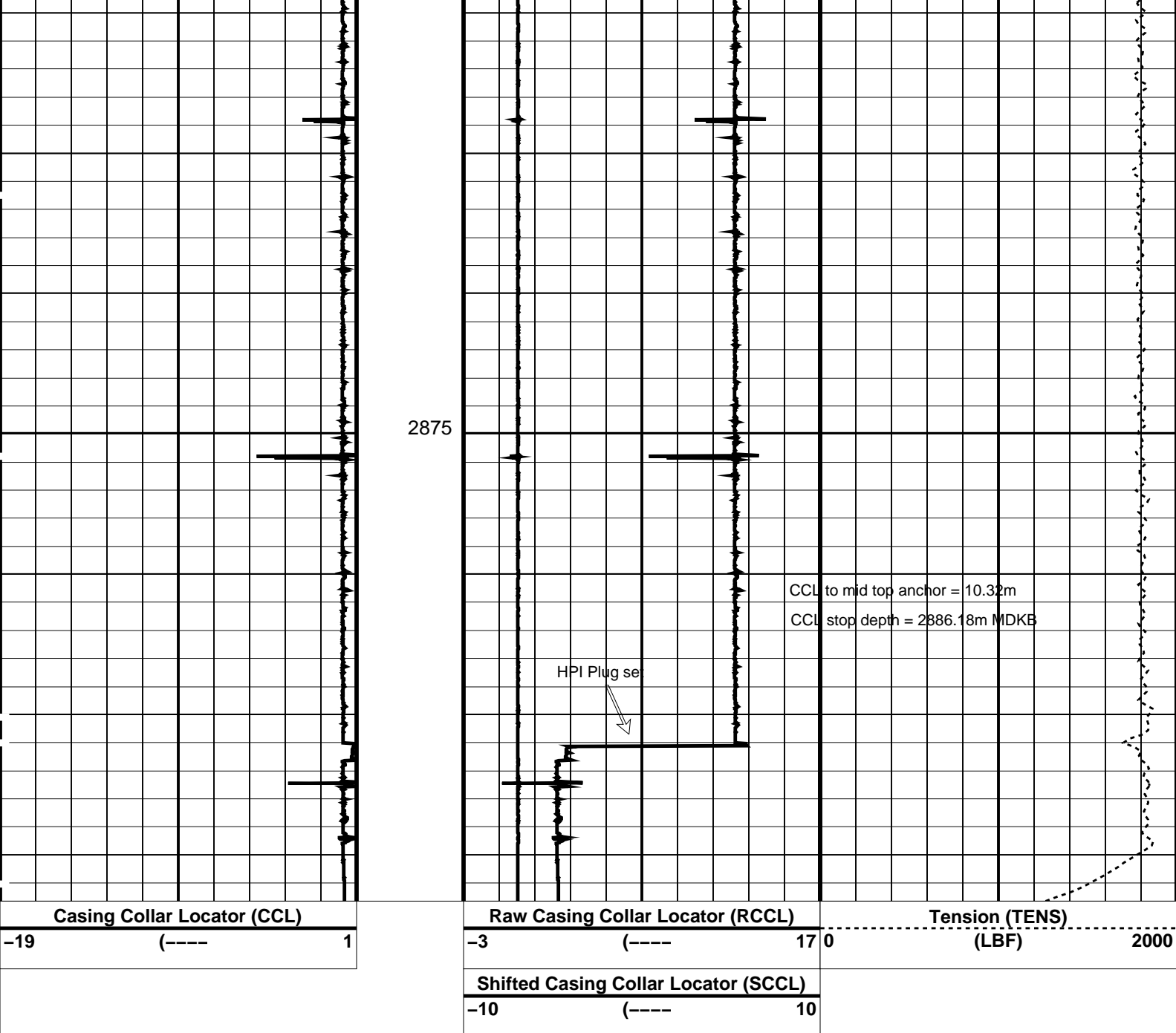
Tension (TENS)

(LBF)

2000

2850





#### PIP SUMMARY

Time Mark Every 60 S

#### Parameters

DLIS Name	Description	Value
CCLD	CCL-L: Casing Collar Locator	12 IN
CCLT	CCL reset delay	0.7 V
	CCL Detection Level	

Format: CCLLog Vertical Scale: 1:200

Graphics File Created: 05-Feb-2007 06:21

OP System Version: 14C0-302  
MCM

SHM\_GUN PTC-3268-NUCL\_b CCL-L 14C0-302

#### Output DLIS Files

DEFAULT PERFO\_034LUP FN:39 PRODUCER 05-Feb-2007 06:21

Company: Esso Australia Pty. Ltd.

Well: BMA A7

**Output DLIS Files**

DEFAULT PERFO\_032LUP FN:37 PRODUCER 05-Feb-2007 06:02

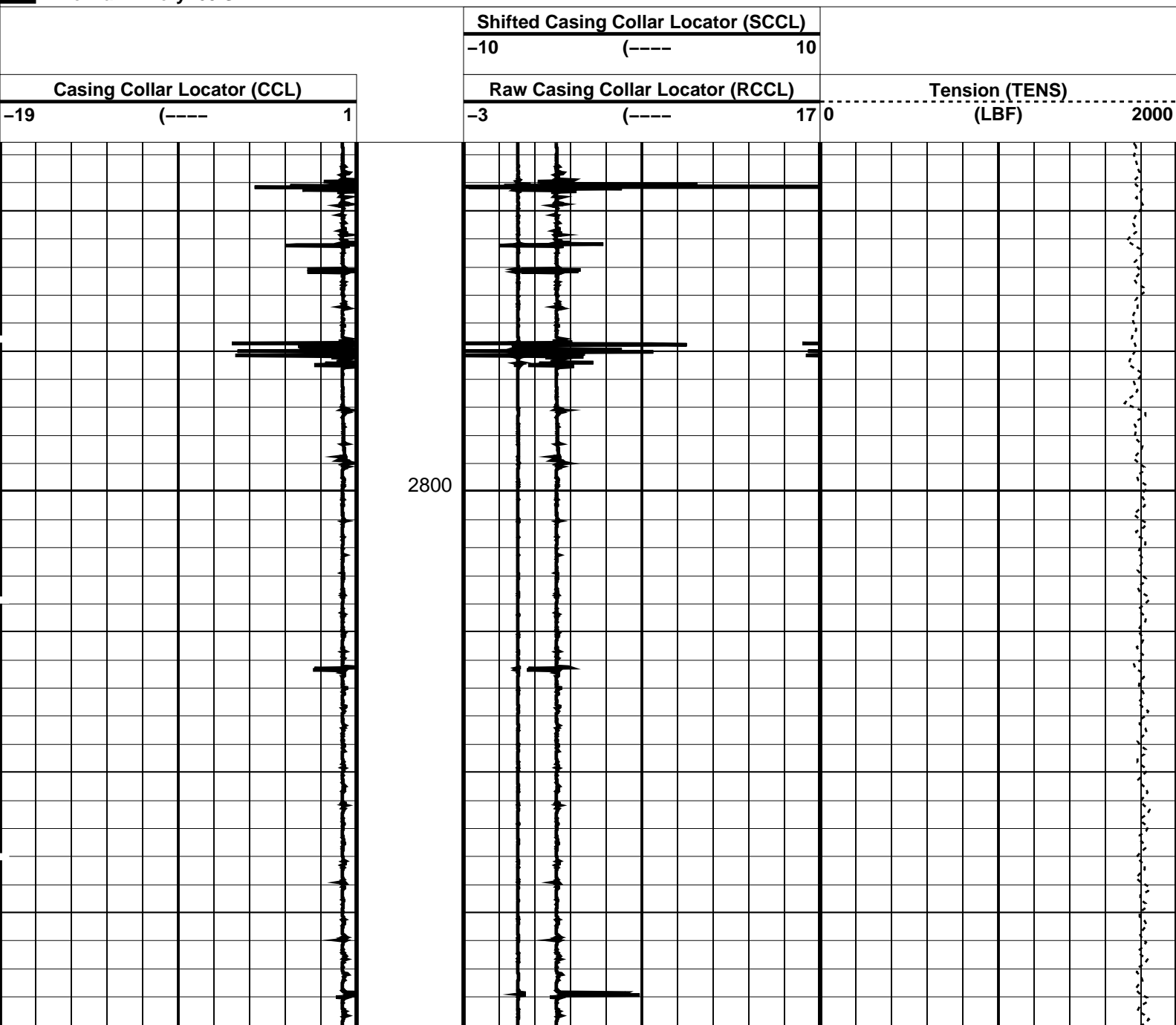
**OP System Version: 14C0-302**

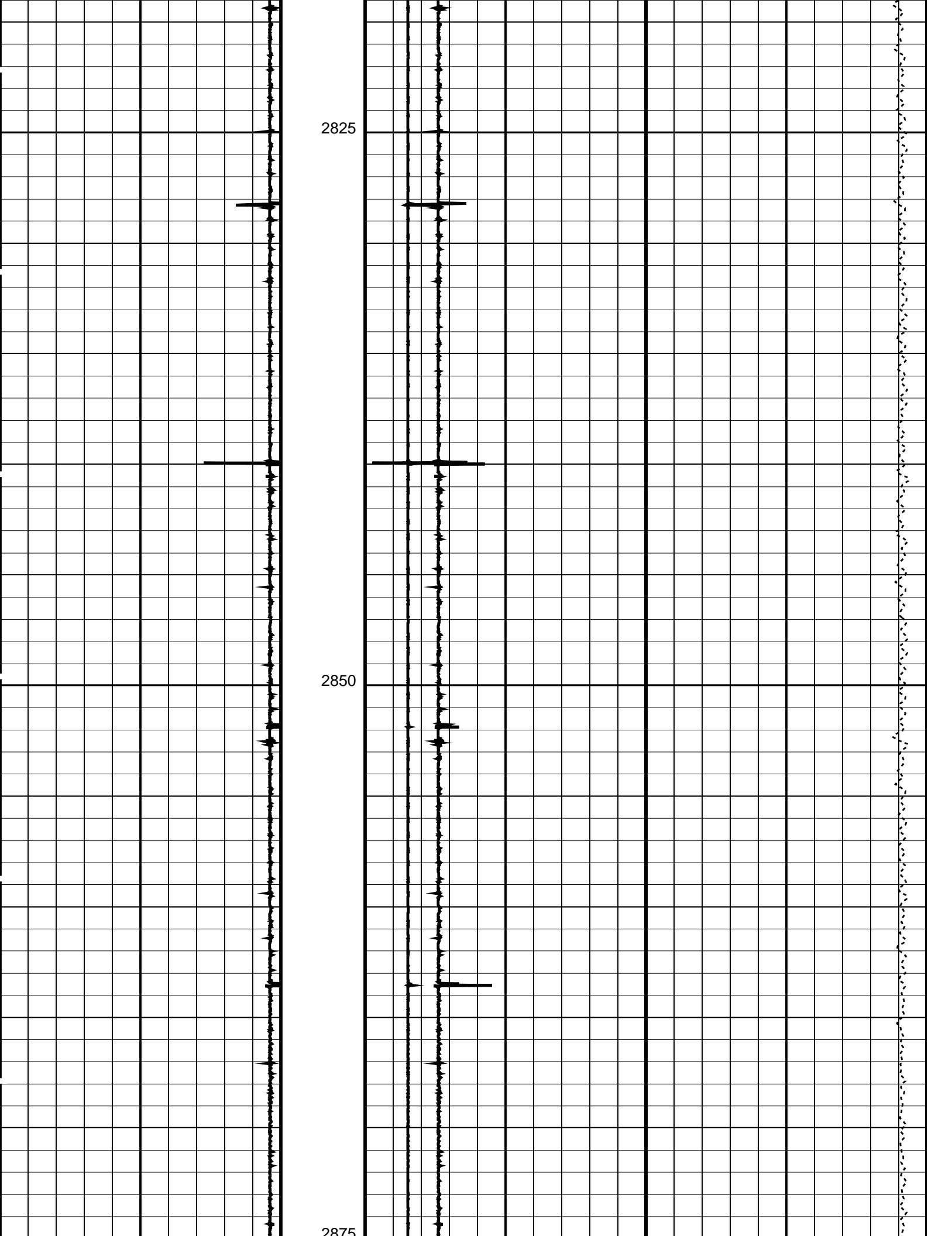
MCM

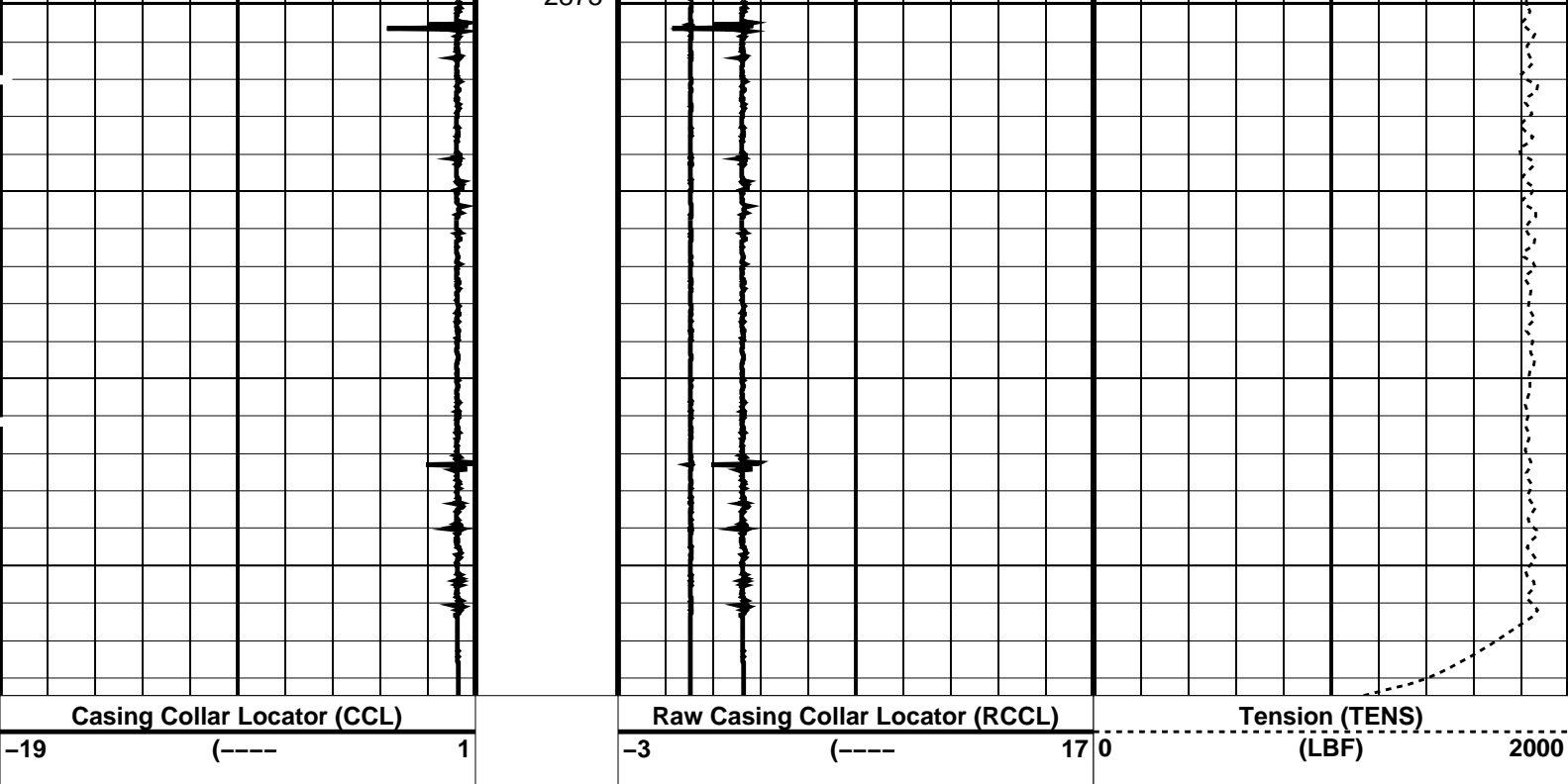
SHM\_GUN PTC-3268-NUCL\_b CCL-L 14C0-302

**PIP SUMMARY**

Time Mark Every 60 S







Casing Collar Locator (CCL)		Raw Casing Collar Locator (RCCL)	Tension (TENS)
-19 (----) 1		-3 (----) 17 0	(LBF) 2000
Shifted Casing Collar Locator (SCCL)			
		-10 (----) 10	

PIP SUMMARY

Time Mark Every 60 S

Parameters		
DLIS Name	Description	Value
CCL-L: Casing Collar Locator		
CCLD	CCL reset delay	12 IN
CCLT	CCL Detection Level	0.7 V

Format: CCLLog    Vertical Scale: 1:200    Graphics File Created: 05-Feb-2007 06:02

OP System Version: 14C0-302			
MCM			
SHM_GUN	PTC-3268-NUCL_b	CCL-L	14C0-302

Output DLIS Files			
DEFAULT	PERFO_032LUP	FN:37    PRODUCER	05-Feb-2007 06:02



7" HPI Plug  
Dummy Run

MAXIS Field Log

Company: Esso Australia Pty. Ltd.    Well: BMA A7

Output DLIS Files			
DEFAULT	PERFO_015LUP	FN:14    PRODUCER	04-Feb-2007 14:22

OP System Version: 14C0-302

MCM

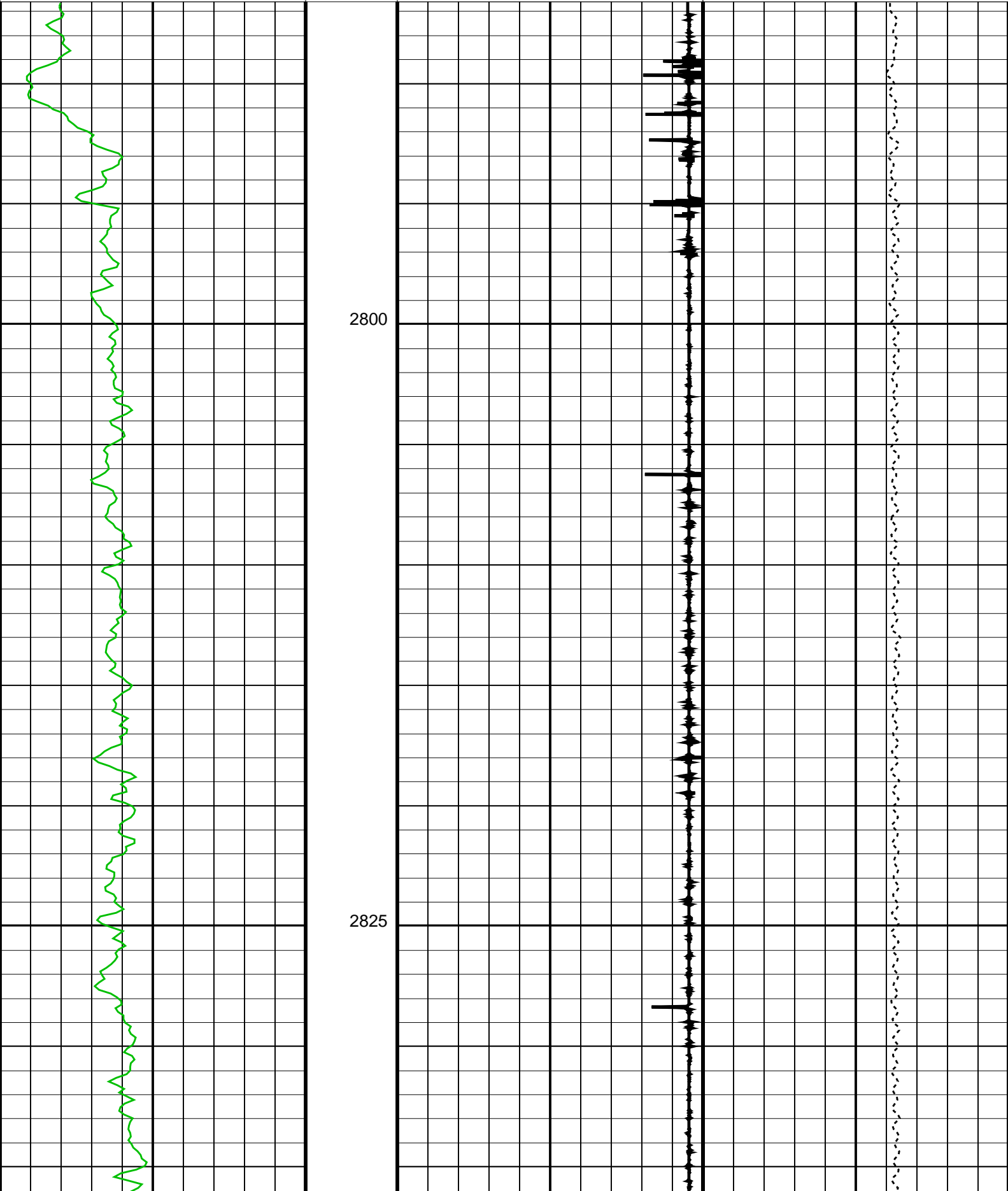
SHM\_GUN

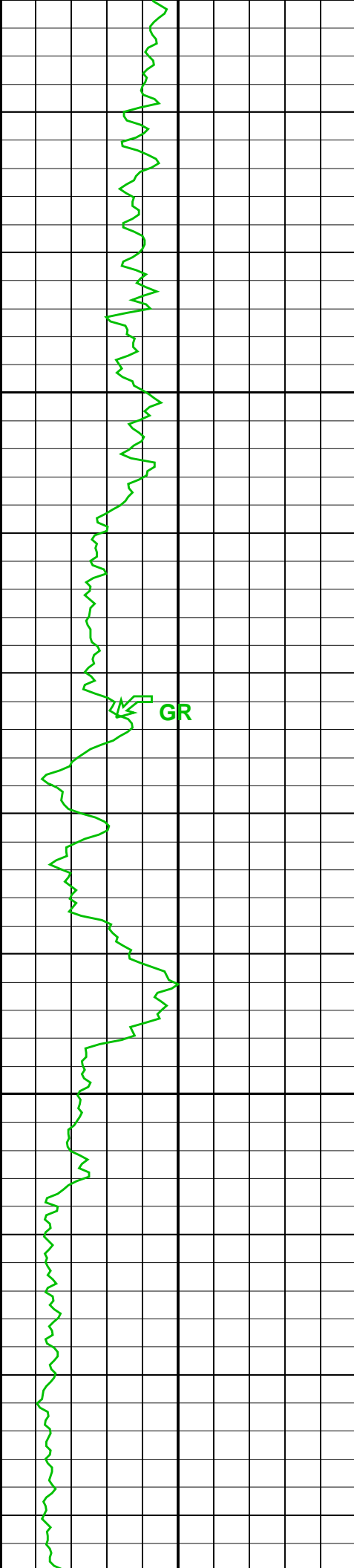
14C0-302

PGGT-C

14C0-302

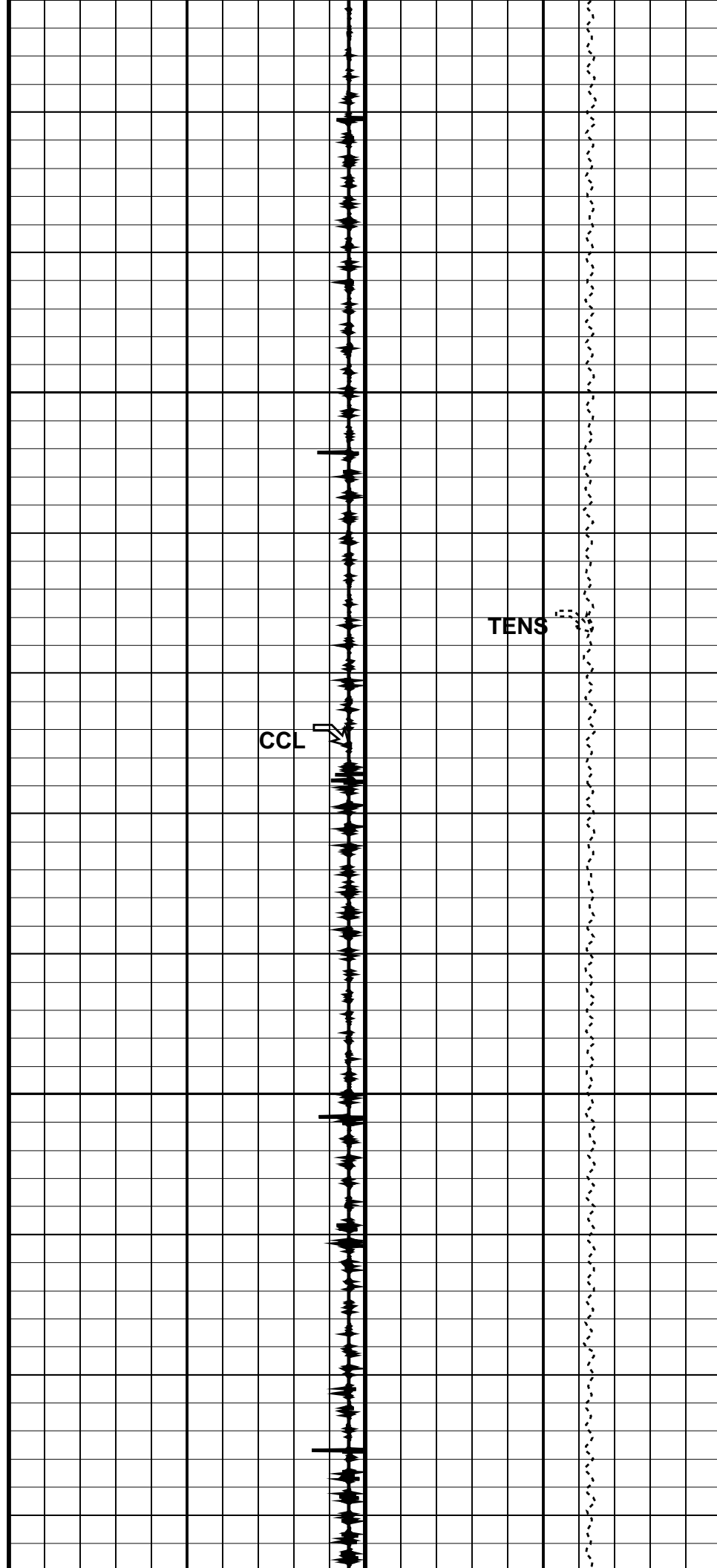
Gamma Ray (GR) (GAPI)		Casing Collar Locator (CCL) (----		Tension (TENS) (LBF)	
0	150	-19	1	0	3000

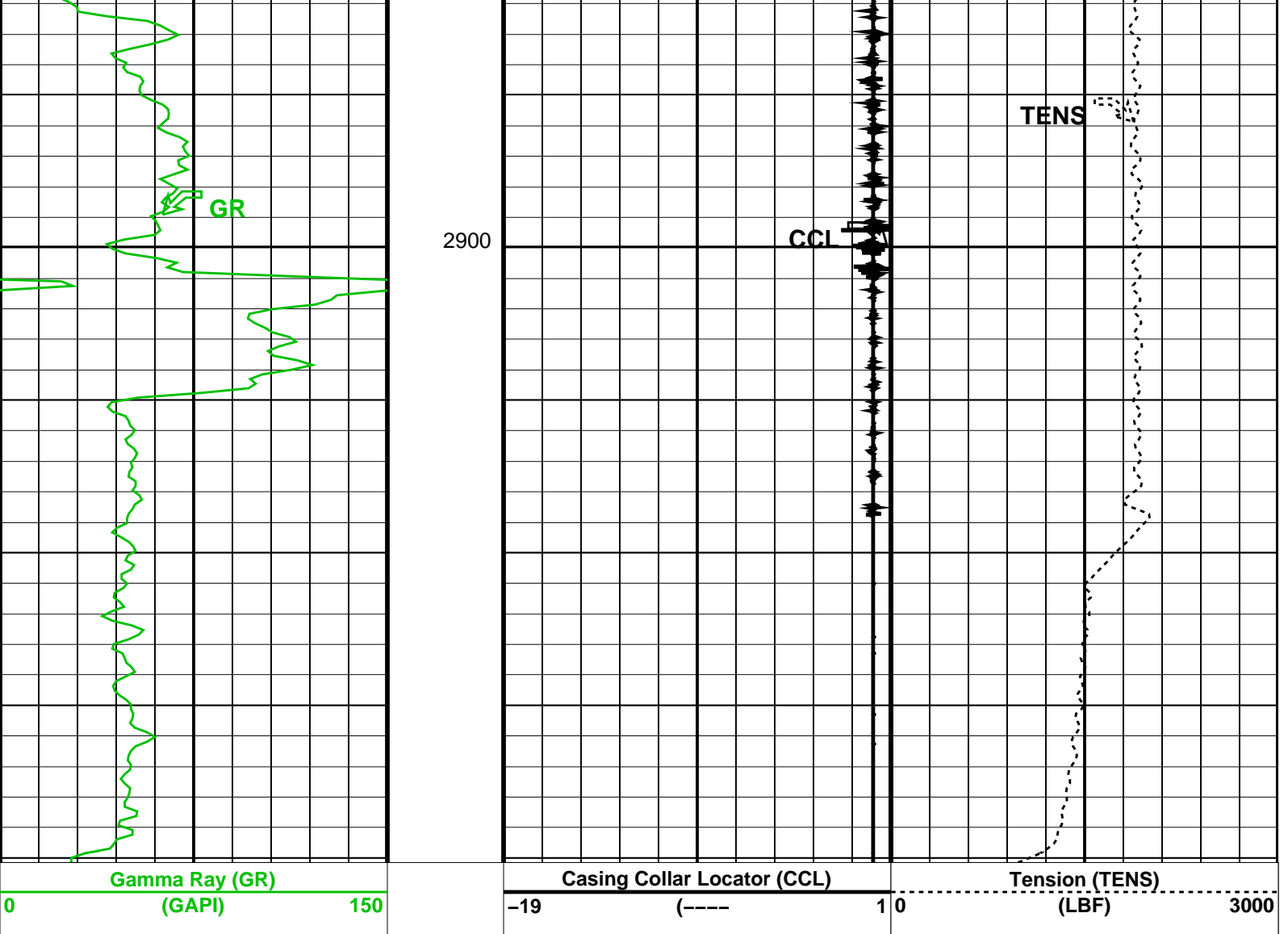




2850

2875





Format: CORRELATION    Vertical Scale: 1:200    Graphics File Created: 04-Feb-2007 14:22

**OP System Version: 14C0-302**  
MCM

SHM_GUN	14C0-302	PGGT-C	14C0-302
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**Output DLIS Files**

DEFAULT	PERFO_015LUP	FN:14	PRODUCER	04-Feb-2007 14:22
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Company: **Esso Australia Pty. Ltd.**

**Schlumberger**

Well: **BMA A7**  
Field: **Bream**  
Rig: **Prod 2 / ISS Rig 22**  
Country: **Australia**

2 1/8" Phased Powerjet  
Perforation Record  
HPI Plug Setting Record