



Company: **Esso Australia Pty Ltd.**

Well: **BMA A9b**

Field: **Bream A**

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

2 1/8" Powerjet MWPT Perforation Record
7" Posiset Plug Setting Record
8-Nov-2009

Rig: Crane / Prod 4
Field: Bream A
Location: Gippsland
Well: BMA A9b
Company: Esso Australia Pty Ltd.

Crane / Prod 4			
Rig:		Bream A	
Field:		Gippsland	
Location:		BMA A9b	
Well:		Esso Australia Pt	
Company:			
Logging Date		LOCATION	
		State: Victoria	Permanent Datum:
			Log Measured From:
			Drilling Measured From:
		Max. Well Deviation 48 deg	Elev.: 0.00 m
Run Number		8-Nov-2009	
Depth Driller		2 through 6	
Schlumberger Depth		2281 m	
Bottom Log Interval		2192 m	
Top Log Interval		2186 m	
Casing Fluid Type		2184 m	
Salinity		Production Fluids	
Density			
Fluid Level		680 m	
BIT/CASING/TUBING STRING			
Bit Size		8.500 in	
From		1602.83 m	
To		2281 m	
Casing/Tubing Size		7.000 in	
Weight		26 lbn/ft	
Grade		L-80	
From		1602 m	
To		2281 m	
Maximum Recorded Temperatures		205 degF	
Logger On Bottom		8-Nov-2009	23:44
Unit Number		889	
Recorded By		O Darby	
Witnessed By		B White	

			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	48 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		Time			
Unit Number	Location				
Recorded By					
Witnessed By					

n 3	Run 4
-----	-------

DEPTH SUMMARY LISTING	
-----------------------	--

Depth System Equipment				Date Created: 7–NOV–2009 3:04:54	
Depth Measuring Device		Tension Device		Logging Cable	
Type:	IDW–EB	Type:	PSDS/OSDS	Type:	2–32ZT
Serial Number:	6373	Serial Number:	325357	Serial Number:	207505
Calibration Date:	13–Oct–2009	Calibration Date:	21–Oct–2009	Length:	6421 M
Calibrator Serial Number:	30	Calibrator Serial Number:	854	Conveyance Method: Wireline Rig Type: Rigless	
Calibration Cable Type:	2–32ZT	Number of Calibration Points:	9		
Wheel Correction 1:	0	Calibration RMS:	454		
Wheel Correction 2:	–2	Calibration Peak Error:	281		

Depth Control Parameters	
--------------------------	--

Log Sequence:	Subsequent Trip To the Well
Reference Log Name:	Solar Composite Log
Reference Log Run Number:	
Reference Log Date:	22-Oct-2008
Subsequent Trip Down Log Correction:	

Depth Control Remarks	
-----------------------	--

1. IDW used as primary depth control
2. Z Chart used as secondary depth control.

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: RST Survey	OS1:
OS2:	OS2:
OS3:	OS3:
OS4:	OS4:
OS5:	OS5:
REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
Log correlated to ExxonMobil composite supplied with logging program.	
Maximum well deviation = 48Deg @ 1702.8m MDKB.	
Objectives: Perforate the well using 2 1/8" Powerjet gun's 2184 – 2186m MDKB.	
Run 2.13" Dummy Plug to ensure access for Posiset Plug. Set 7" 26 lb/ft MPBT	
with Top of Seal at 2187m MDKB and then dump approx 1m of cement on top.	

Perforation Zone = 2184 to 2186 m MDKB					
CCL to Top Shot = 3.5m					
CCL Stop Depth = 2180.5m MDKB					
7" Posiset Plug top of Seal Set @2187m MDKB					
CCL to Top of Seal =7 m					
CCL stop Depth = 2180 m MDKB					
Crew :A Pratt , G Martin					
RUN 1			RUN 2		
SERVICE ORDER #:		B297-00019	SERVICE ORDER #:		
PROGRAM VERSION:		17C0-154	PROGRAM VERSION:		
FLUID LEVEL:		680 m	FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

RUN 1	RUN 2
SURFACE EQUIPMENT	SURFACE EQUIPMENT
MWPM-AA	MPBM
DOWNHOLE EQUIPMENT	DOWNHOLE EQUIPMENT
<div> <div>AH-SWBS-B 789 AH-SWBS-B 789</div> <div>12.39</div> <div></div> </div> <div> <div>AH-SWBS-B 788 AH-SWBS-B 788</div> <div>11.70</div> <div></div> </div> <div> <div>AH-SWBS-B 787 AH-SWBS-B 787</div> <div>11.01</div> <div></div> </div> <div> <div>AH-SWBS-B 786 AH-SWBS-B 786</div> <div>10.33</div> <div></div> </div> <div> <div>AH-SWBS-B 785 AH-SWBS-B 785</div> <div>9.64</div> <div></div> </div> <div> <div>MH-SWHS-A 759 MH-SWHS-A 759</div> <div>8.96</div> <div></div> </div> <div> <div>AH-124 7002</div> <div>8.63</div> <div></div> </div> <div> <div>MWGT-AA 24</div> <div>8.53</div> <div></div> </div> <div> <div>MWPG-AA 24</div> <div></div> <div></div> </div> <div> <div>MWGH-AA 24</div> <div>2.41</div> <div></div> </div> <div> <div>MWPT-CA 11</div> <div>7.55</div> <div></div> </div> <div> <div>MWPH-AA 94</div> <div></div> <div></div> </div> <div> <div>MWPS-AA 11</div> <div></div> <div></div> </div> <div> <div>CCL</div> <div>SMWP Pres</div> <div>SMWP Temp</div> <div>Tension</div> <div>TOOL ZERO</div> </div>	<div> <div>AH-SWBS-B 785 AH-SWBS-B 785</div> <div>13.84</div> <div></div> </div> <div> <div>AH-SWBS-B 786 AH-SWBS-B 786</div> <div>13.15</div> <div></div> </div> <div> <div>AH-SWBS-B 787 AH-SWBS-B 787</div> <div>12.47</div> <div></div> </div> <div> <div>AH-SWBS-B 788 AH-SWBS-B 788</div> <div>11.78</div> <div></div> </div> <div> <div>AH-SWBS-B 789 AH-SWBS-B 789</div> <div>11.10</div> <div></div> </div> <div> <div>MH-SWHS-A 759 MH-SWHS-A 759</div> <div>10.41</div> <div></div> </div> <div> <div>CCL-PCCL 08055 CCL-PCCL 8055</div> <div>10.07</div> <div></div> </div> <div> <div>MPSU-CA 1102 MPSU-CA 1102</div> <div>9.61</div> <div></div> </div> <div> <div>CCL</div> <div>Cable Cur</div> <div>Head Volt</div> <div>Tension</div> <div>TOOL ZERO</div> </div>

AH-Flex Joint 41
AH-Flex Joint 41

SAH-G 1047
SAH-G 1047

MPD-MB 336
MPD-MB 336

AH-ESIC 15042003
AH-ESIC 15042003

AH-Firing Head 1

MWP_GUN
GUN-2 1/8" Phased Powerjet 1

4.73

4.27

3.94

3.40

2.97

2.74

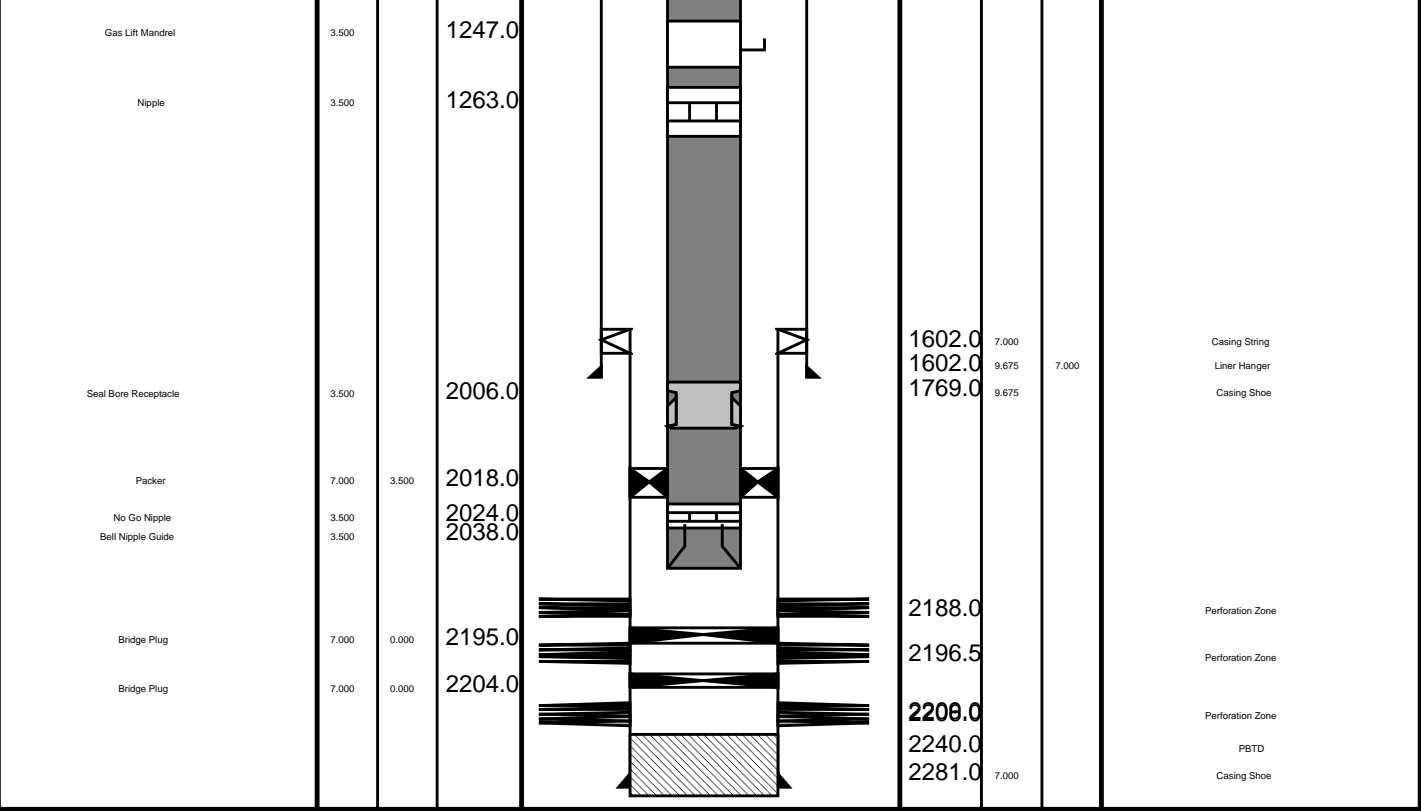
MPEX-DA 7" 26lb/ft Posiset Plug
MPEX-DA

3.20

MAXIMUM STRING DIAMETER 2.13 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN METERS

MAXIMUM STRING DIAMETER 2.13 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN METERS

Production String	(m)		MD	Well Schematic	(m)			Casing String
	OD	ID			MD	OD	ID	
Tubing Hanger	9.675	3.500	11.3		11.8	9.675	9.675	Casing String
Tubing	3.500		11.3		11.8	13.375		Liner Hanger
					12.3	13.375		Casing String
Shut-in Valve	3.500		443.0					
Gas Lift Mandrel	3.500		559.0					
Gas Lift Mandrel	3.500		904.0		796.0	13.375		Casing Shoe
Gas Lift Mandrel	3.500		1104.0					



Job Events Summary

MAXIS Field Log

Schlumberger Job Event Summary

	Time	Elapsed Time	Depth (M)	File
Simulated Log	8-Nov-2009 1:39	000:02		PERFO_042LUP
MWPT - Hot check				
Log Pass (up)	8-Nov-2009 2:39	000:07	2185.1 - 2116.8	PERFO_048LUP
MWPT - Correlation pass				
Log Pass (up)	8-Nov-2009 2:49	000:30	2186.5 - 2113.2	PERFO_049LUP
MWPT - Shooting pass				
Station Log	8-Nov-2009 2:53	000:19	2180.5	PERFO_051LTP
MWPT - Shooting station log				
Simulated Log	8-Nov-2009 18:16	000:01		PERFO_055LUP
Dummy plug - Op check				
Log Pass (up)	8-Nov-2009 19:04	000:12	2187.1 - 2020.8	PERFO_057LUP
Dummy Plug - Correlation pass				
Simulated Log	8-Nov-2009 20:21	000:07		CCL_067LUP
MPBT - Op check				
Log Pass (down)	8-Nov-2009 21:39	000:06	2110.0 - 2179.9	CCL_074LUP

MPBT - Correlation pass	8-Nov-2009	21:46	000:27		CCL_075LUP
Simulated Log					
MPBT - Setting record					
Simulated Log	8-Nov-2009	23:16	000:07		PERFO_084LUP
Dump bailer - Op check					
Log Pass (up)	9-Nov-2009	1:12	000:08	2176.1 - 2111.0	PERFO_088LUP
Dump bailer - Water dump pass					
Log Pass (up)	9-Nov-2009	2:50	000:05	2176.0 - 2105.6	PERFO_094LUP
Dump bailer - Cement dump pass					

Schlumberger

2-1/8" Dump Bailer
Cement Dump

MAXIS Field Log

PERFO2 Operational Summary Listing

Device	Status	Req Depth (M)	Obs Depth (M)	Time Used
Cement DB	Used	2173.6	2173.6	Mon Nov 09 02:55:27 20

Input DLIS Files

DEFAULT	PERFO_094LUP	FN:91	PRODUCER	09-Nov-2009 02:50	2176.0 M	2105.6 M
---------	--------------	-------	----------	-------------------	----------	----------

Output DLIS Files

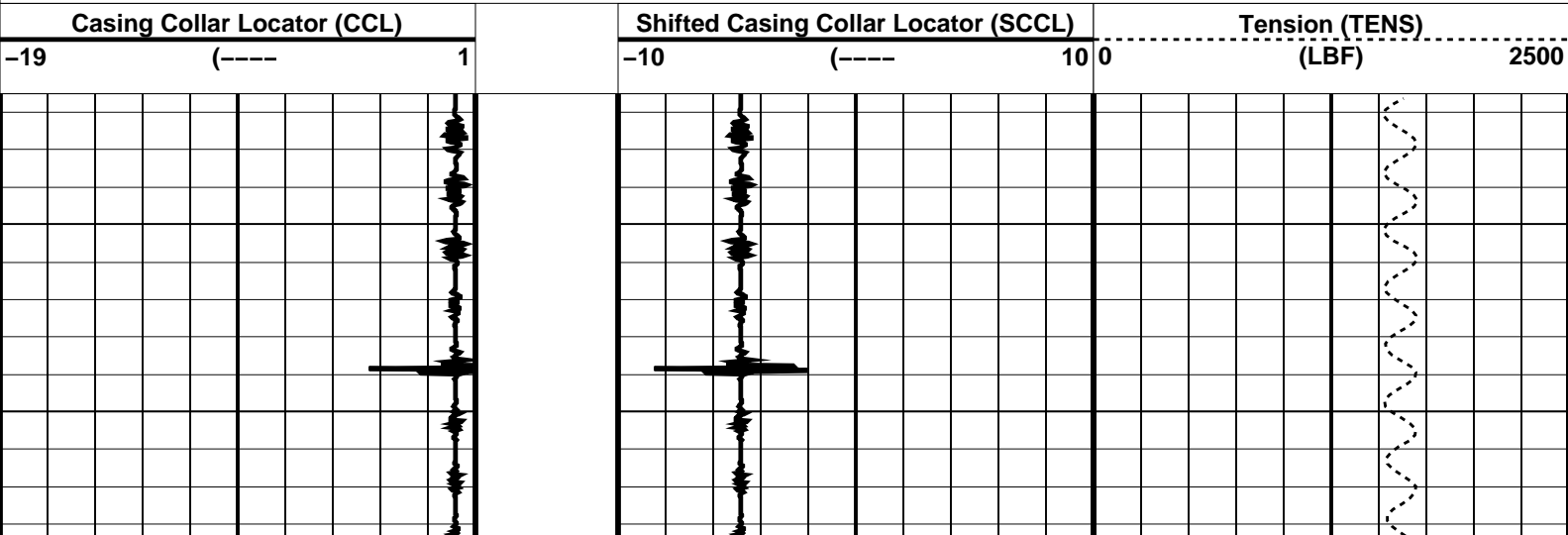
DEFAULT	PERFO_095PUP	FN:92	PRODUCER	09-Nov-2009 02:55	2176.7 M	2106.5 M
---------	--------------	-------	----------	-------------------	----------	----------

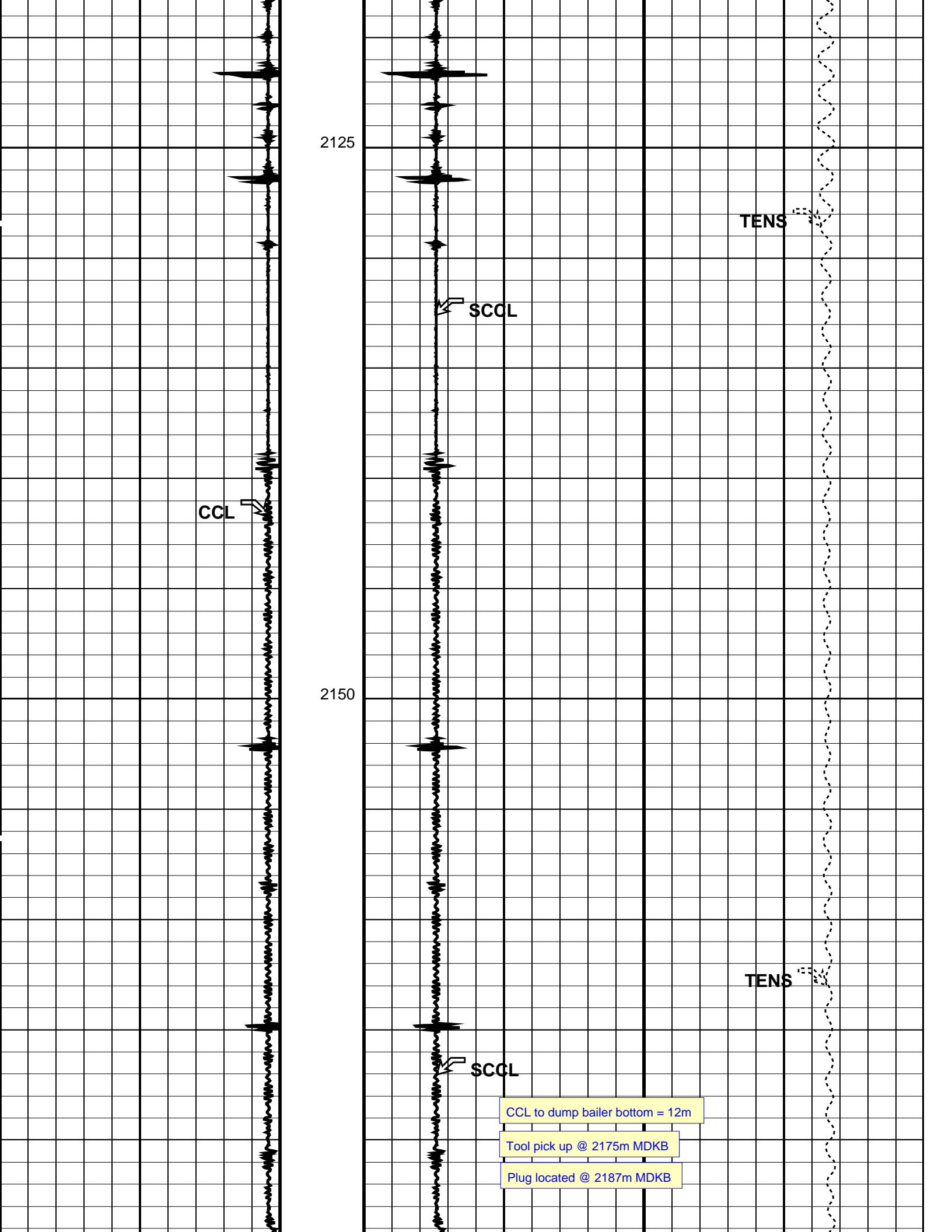
OP System Version: 17C0-154

CCL-L	17C0-154	SHM_GUN	17C0-154
-------	----------	---------	----------

PIP SUMMARY

Time Mark Every 60 S



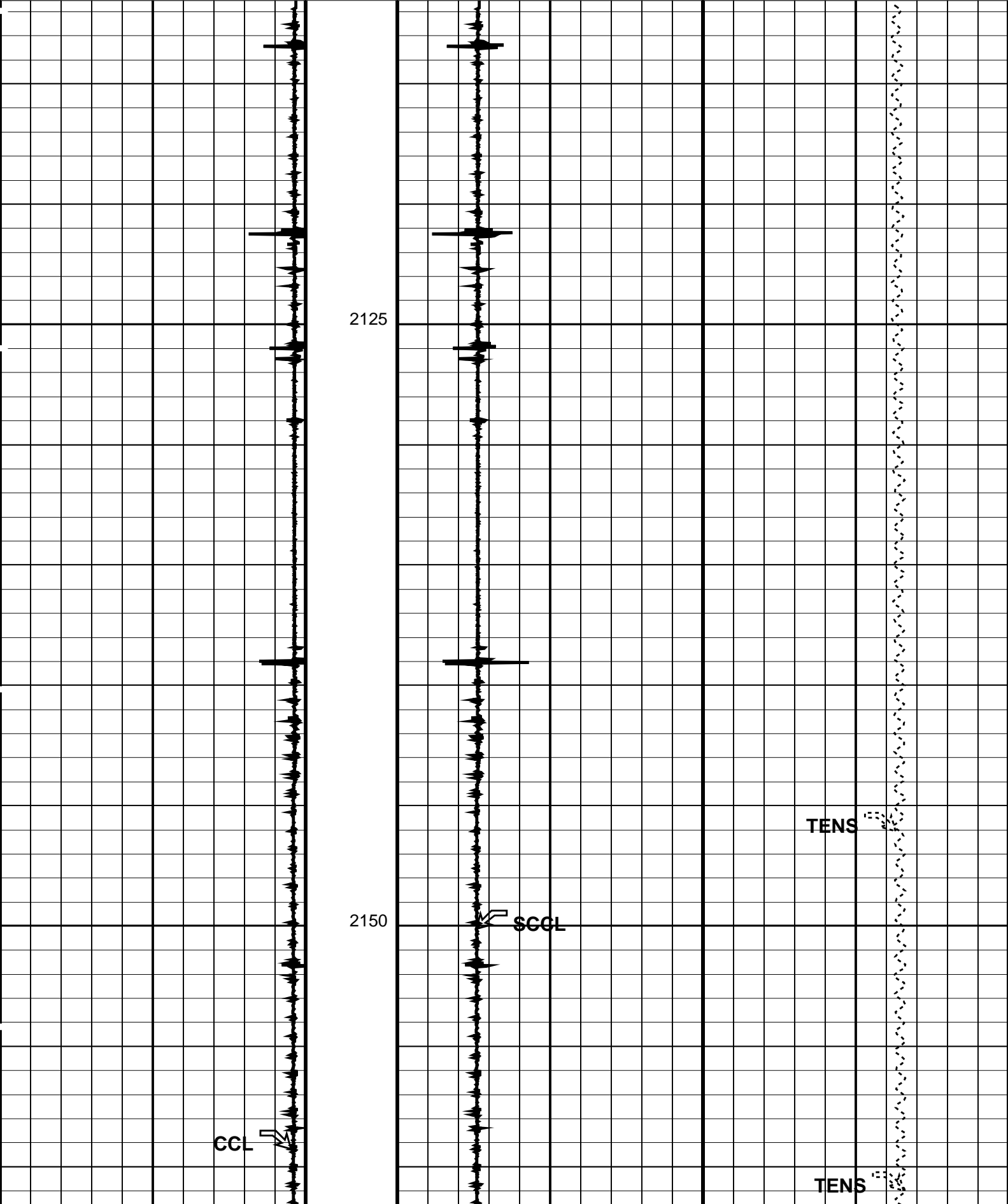


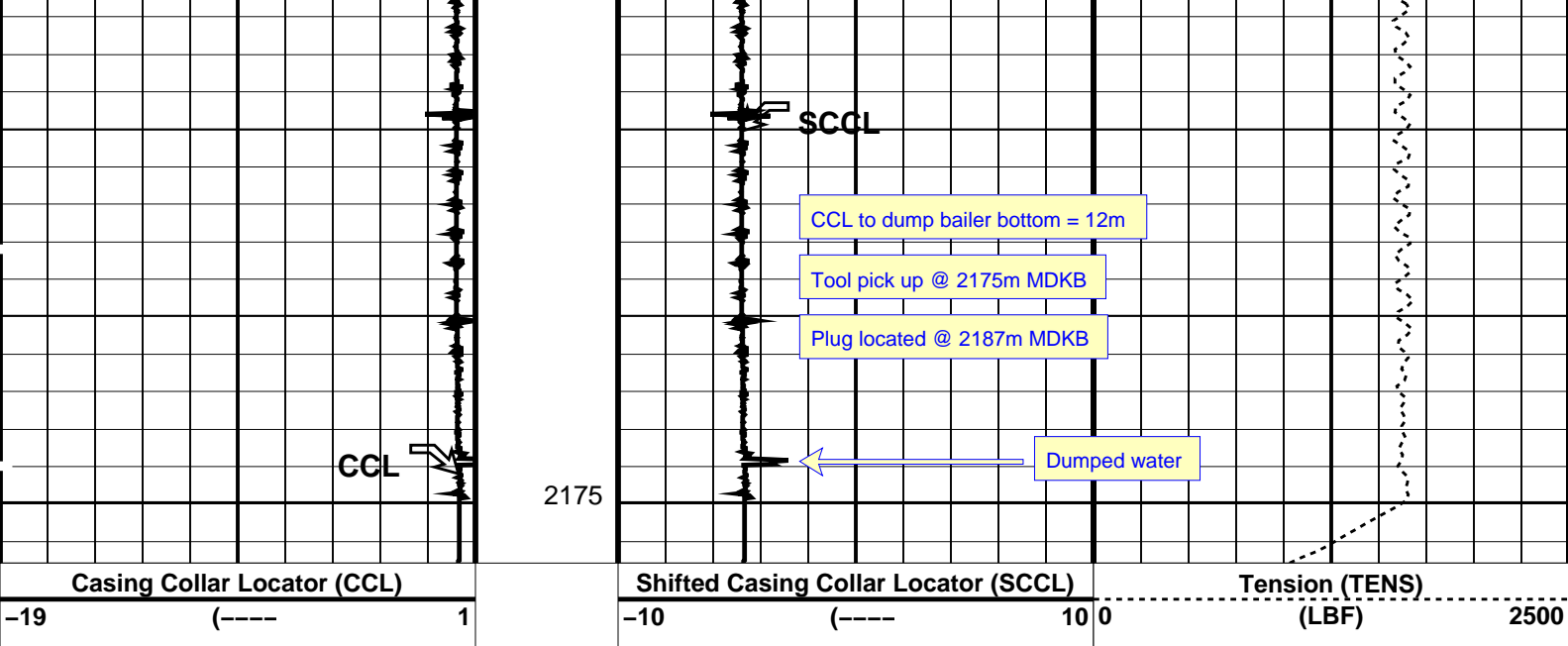
OP System Version: 17C0-154

PIP SUMMARY

Time Mark Every 60 S

Casing Collar Locator (CCL)	Shifted Casing Collar Locator (SCCL)	Tension (TENS)
-19 (----) 1	-10 (----) 10 0	0 (LBF) 2500





PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
CCLD	CCL-L: Casing Collar Locator	12 IN
CCLT	CCL reset delay	0.3 V
	CCL Detection Level	
DO	System and Miscellaneous	0.4 M
PP	Depth Offset for Playback	
	Playback Processing	NORMAL

Format: PERFO Vertical Scale: 1:200

Graphics File Created: 09-Nov-2009 01:40

OP System Version: 17C0-154

CCL-L 17C0-154 SHM_GUN 17C0-154

Input DLIS Files

DEFAULT PERFO_088LUP FN:85 PRODUCER 09-Nov-2009 01:12 2176.1 M 2111.0 M

Output DLIS Files

DEFAULT PERFO_091PUP FN:88 PRODUCER 09-Nov-2009 01:40

Schlumberger

7" MPBT Posiset Plug Setting Record

MAXIS Field Log

PERFO2 Operational Summary Listing

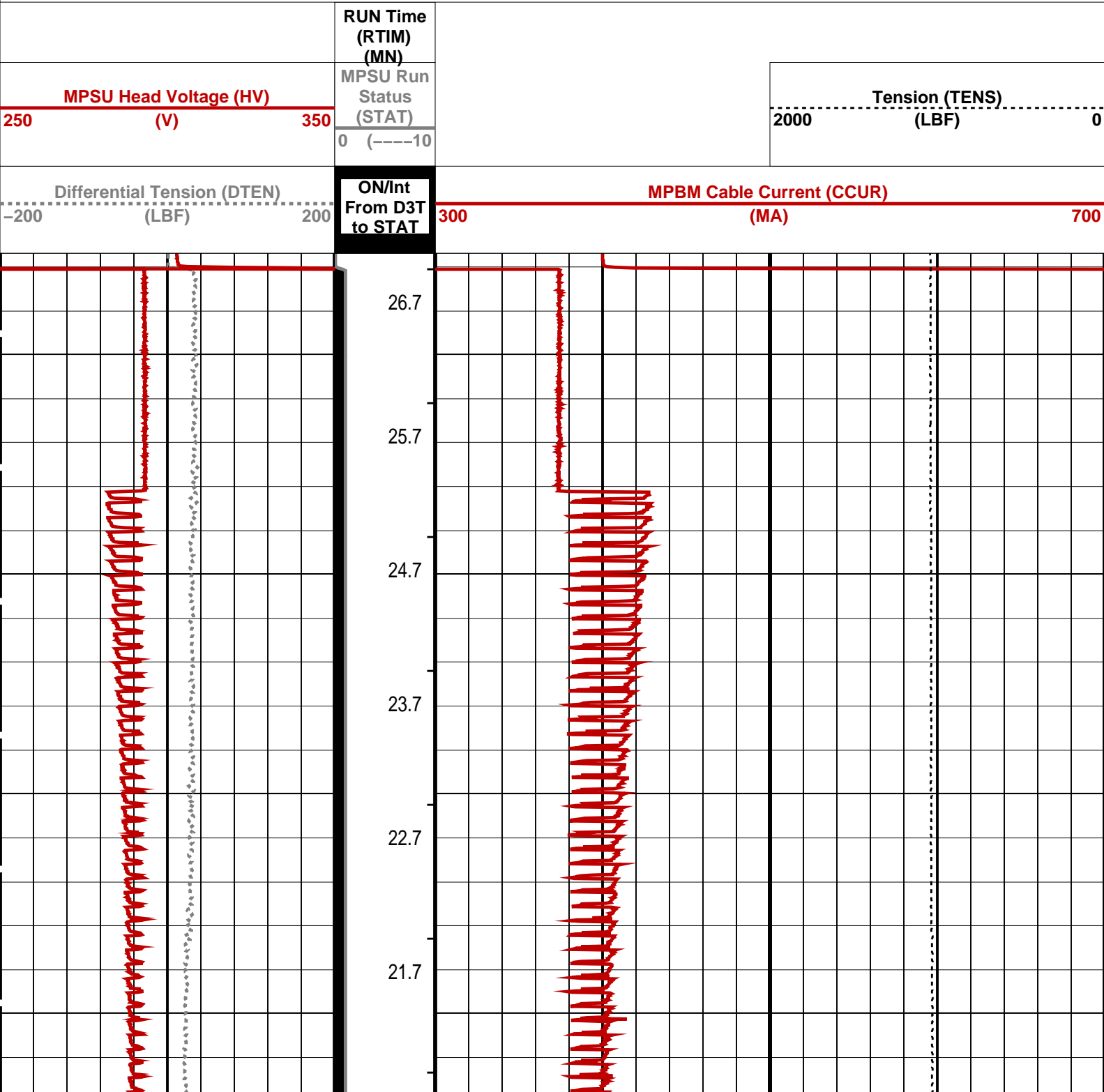
Device	Status	Req Depth (M)	Obs Depth (M)	Time Used
-----	-----	-----	-----	-----
MPEX	Used	2187.0	2187.1	Sun Nov 08 22:13:17 200

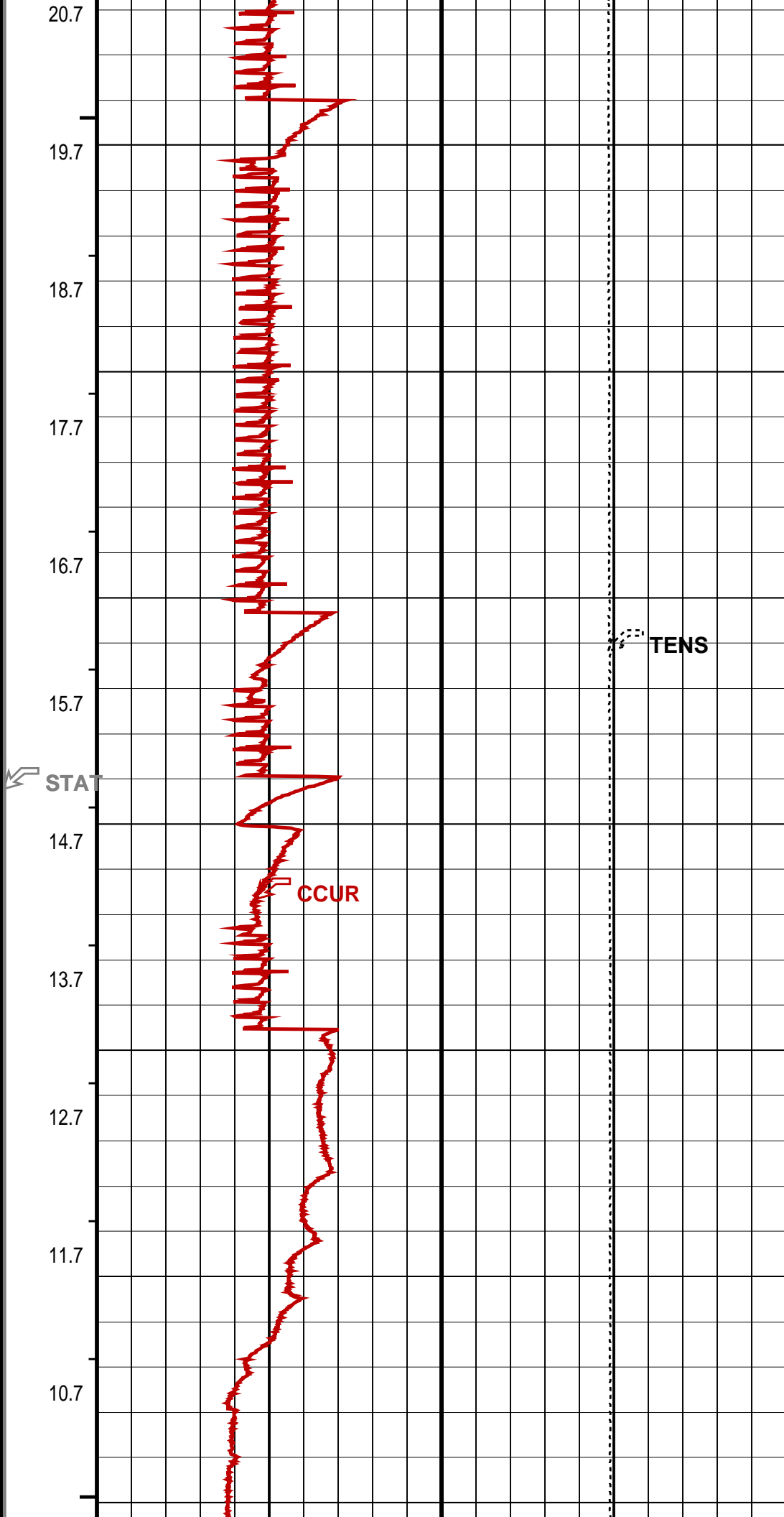
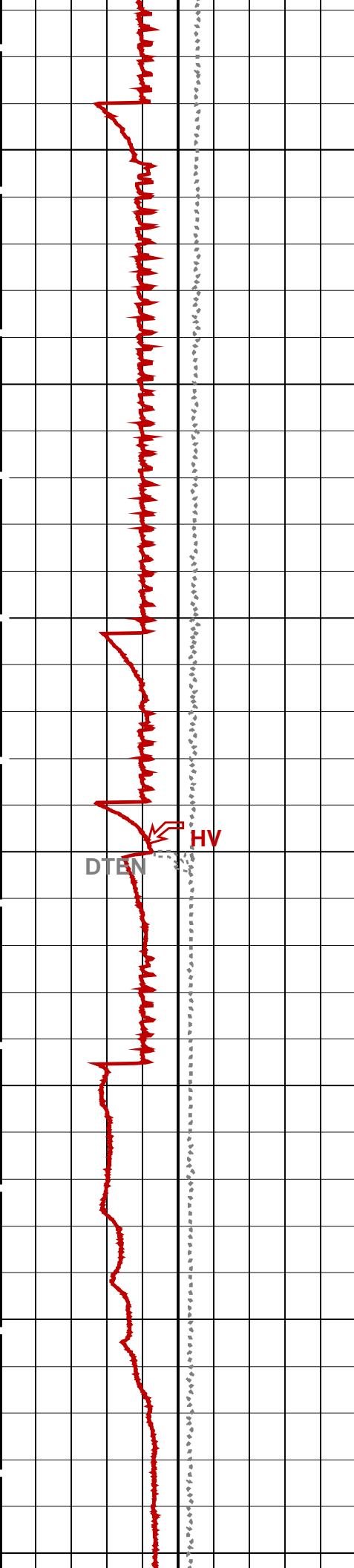
PIP SUMMARY

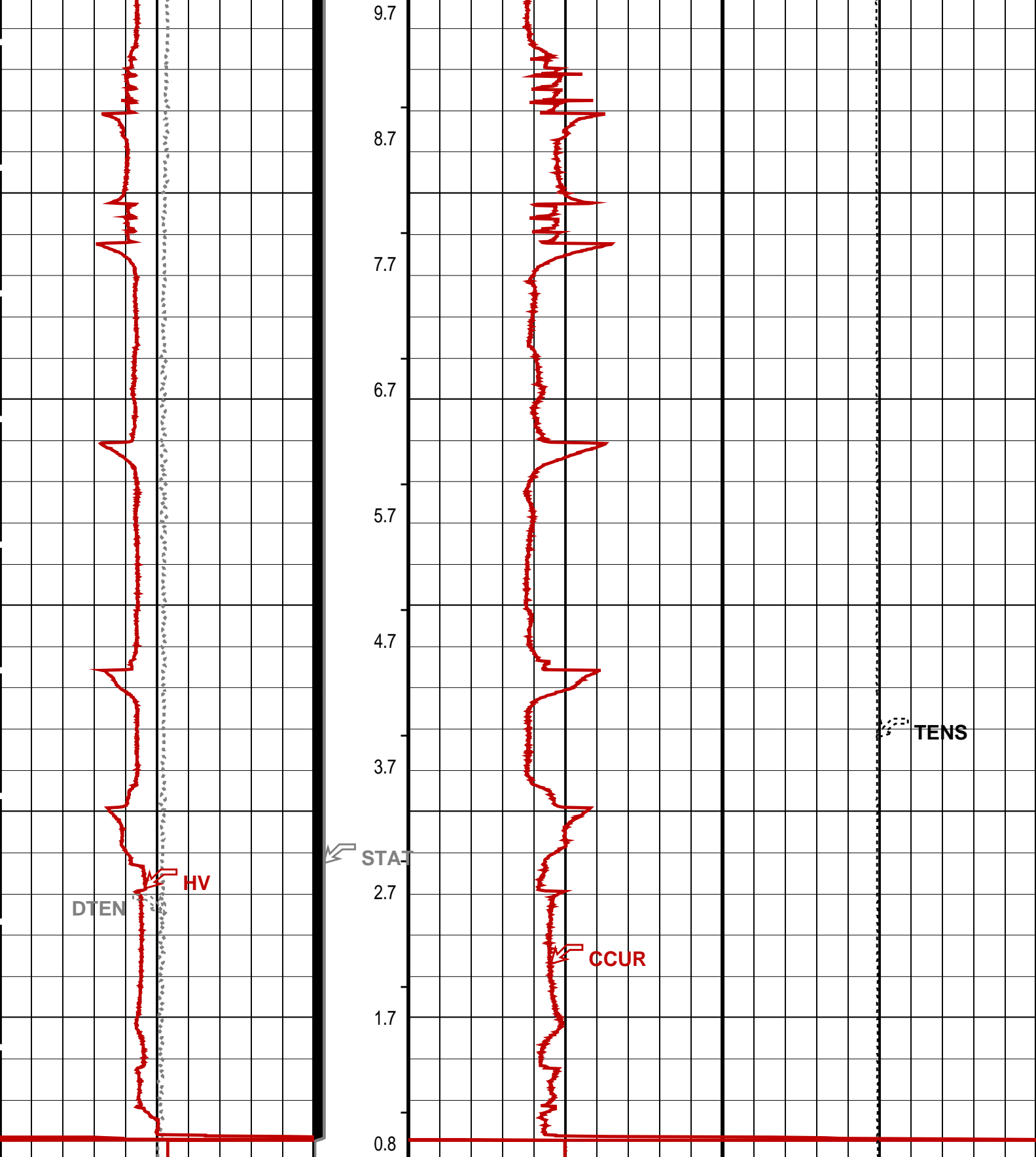
└ MPSU Run Time Every 1 MN

└ MPSU Run Time Every 10 MN

Time Mark Every 60 S







Differential Tension (DTEN) (LBF)		ON/Int From D3T to STAT	MPBM Cable Current (CCUR) (MA)	
-200	200		300	700
MPSU Head Voltage (HV) (V)		MPSU Run Status (STAT)	Tension (TENS) (LBF)	
250	350	0 (----10)	2000	0
		RUN Time (RTIM)		

- MPSU Run Time Every 1 MN
- MPSU Run Time Every 10 MN

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
IPUMP	MPSU-CA: MECHANICAL PLUGBACK SETTING UNIT Intensifier Pump	TRUE

Format: MPBT Vertical Scale: 1:600 Graphics File Created: 08-Nov-2009 21:46

OP System Version: 17C0-154

MPEX-DA	17C0-154	MPSU-CA	17C0-154
CCL-L	17C0-154		

Output DLIS Files

DEFAULT	CCL_075LUP	FN:73	PRODUCER	08-Nov-2009 21:46
---------	------------	-------	----------	-------------------



7" MPBT Posiset Plug Correlation Pass

MAXIS Field Log

Input DLIS Files

DEFAULT	Flip_CCL_080LUP	PRODUCER	08-Nov-2009 22:28	2179.9 M	2110.0 M
---------	-----------------	----------	-------------------	----------	----------

Output DLIS Files

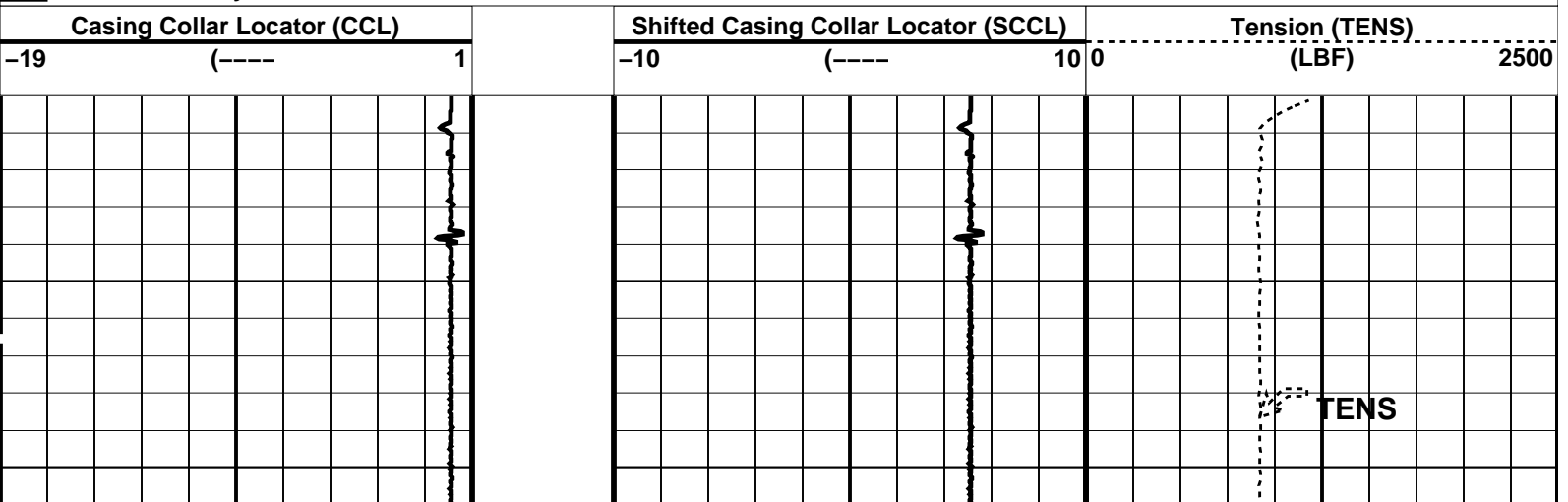
DEFAULT	PERFO_082PUP	FN:79	PRODUCER	08-Nov-2009 22:33	2179.9 M	2110.0 M
---------	--------------	-------	----------	-------------------	----------	----------

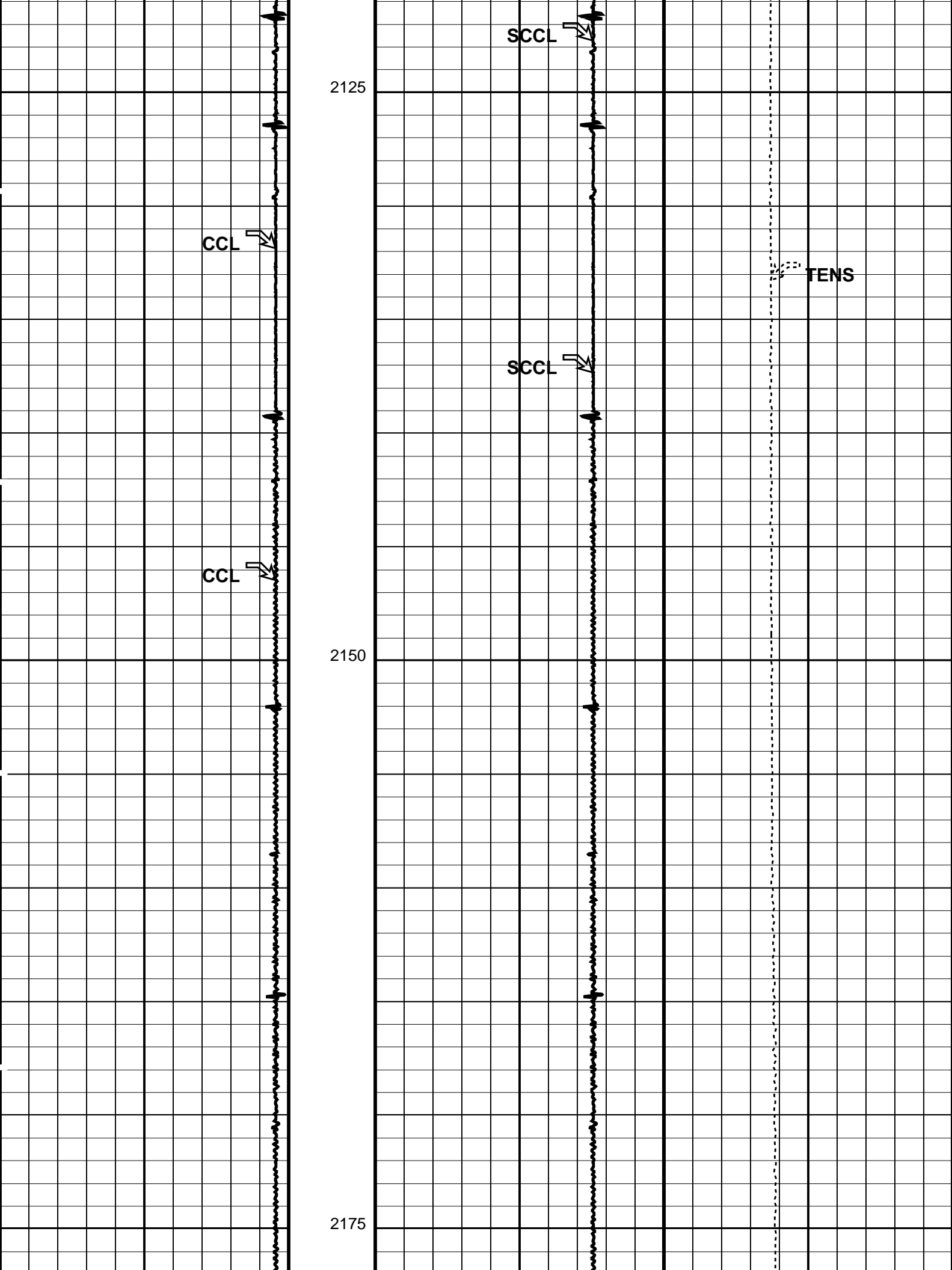
OP System Version: 17C0-154

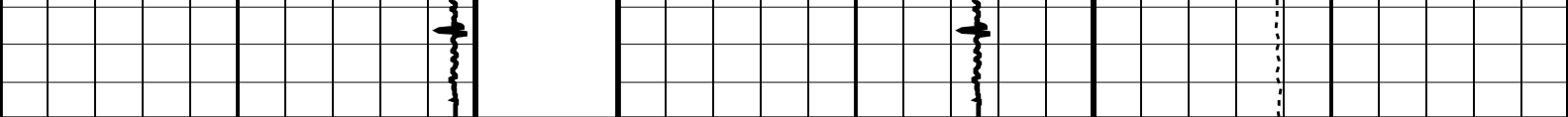
CCL-L	17C0-154	SHM_GUN	17C0-154
-------	----------	---------	----------

PIP SUMMARY

Time Mark Every 60 S







Casing Collar Locator (CCL)		Shifted Casing Collar Locator (SCCL)		Tension (TENS)	
-19	(-----) 1	-10	(-----) 10 0	(LBF)	2500


PIP SUMMARY					
Time Mark Every 60 S					

Parameters					
DLIS Name		Description		Value	
CCL-L: Casing Collar Locator		CCL reset delay		12	IN
CCLD		CCL Detection Level		0.3	V
CCLT		System and Miscellaneous			
DO		Depth Offset for Playback		0.0	M
PP		Playback Processing		NORMAL	

Format: PERFO	Vertical Scale: 1:200	Graphics File Created: 08-Nov-2009 22:34
---------------	-----------------------	--

OP System Version: 17C0-154			
CCL-L	17C0-154	SHM_GUN	17C0-154

Input DLIS Files					
DEFAULT	Flip_CCL_080LUP	PRODUCER	08-Nov-2009 22:28	2179.9 M	2110.0 M
Output DLIS Files					
DEFAULT	PERFO_082PUP	FN:79	PRODUCER	08-Nov-2009 22:33	



2-1/8" Dummy Plug Correlation Pass

MAXIS Field Log

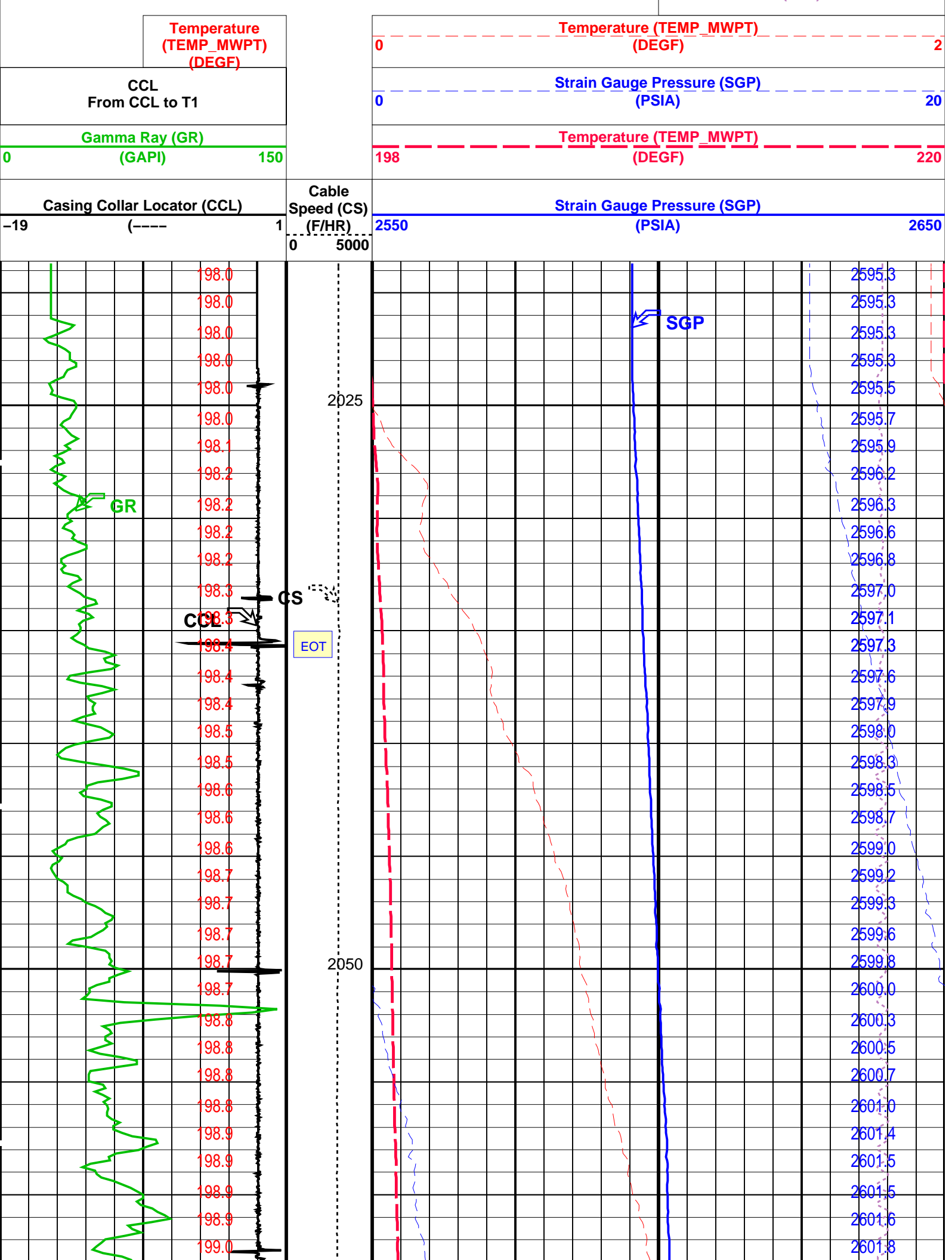
Company: Esso Australia Pty Ltd.	Well: BMA A9b
----------------------------------	---------------

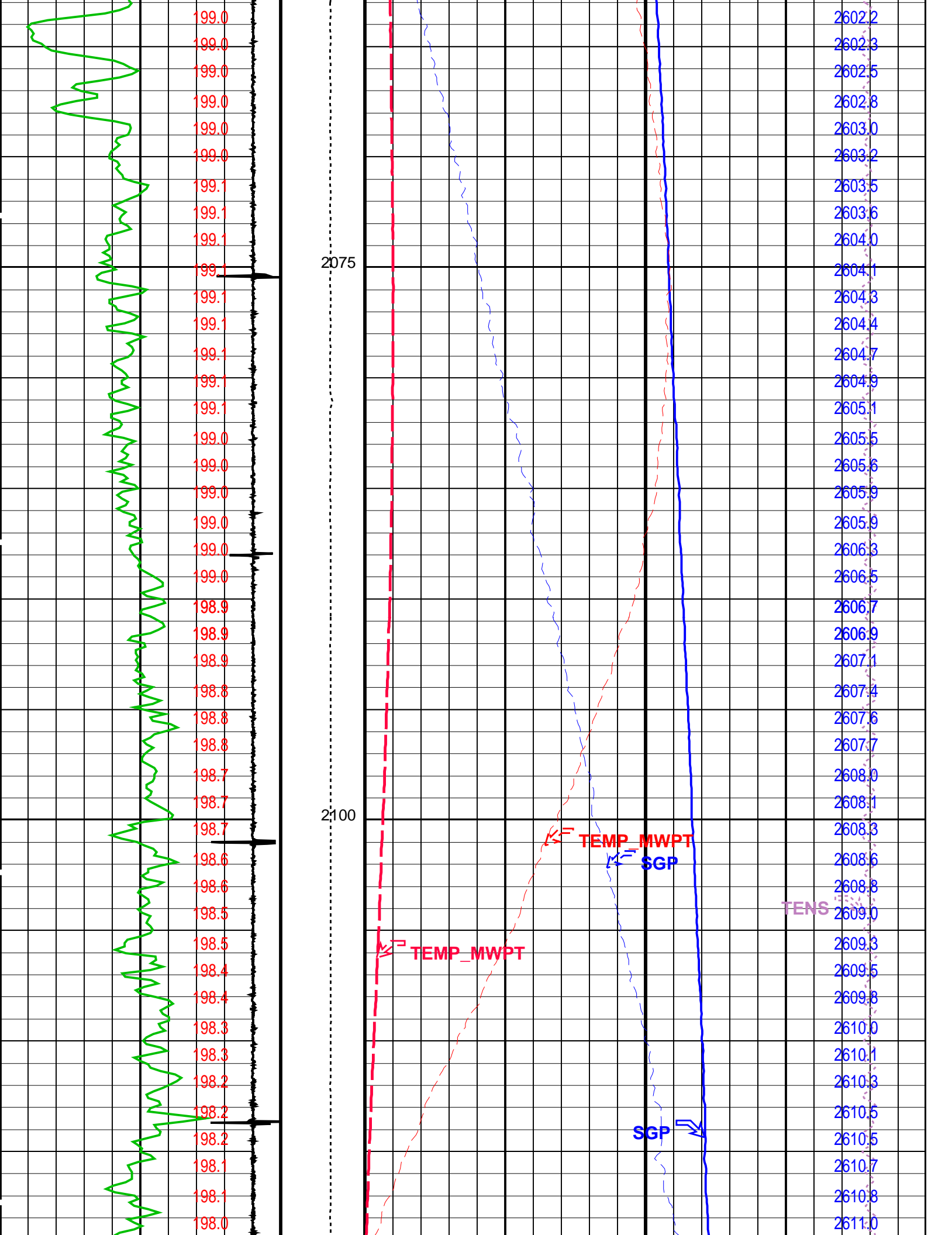
Input DLIS Files					
DEFAULT	PERFO_057LUP	FN:55	PRODUCER	08-Nov-2009 19:04	2187.1 M 2020.8 M
Output DLIS Files					
DEFAULT	PERFO_060PUP	FN:58	PRODUCER	08-Nov-2009 19:21	2187.2 M 2018.5 M

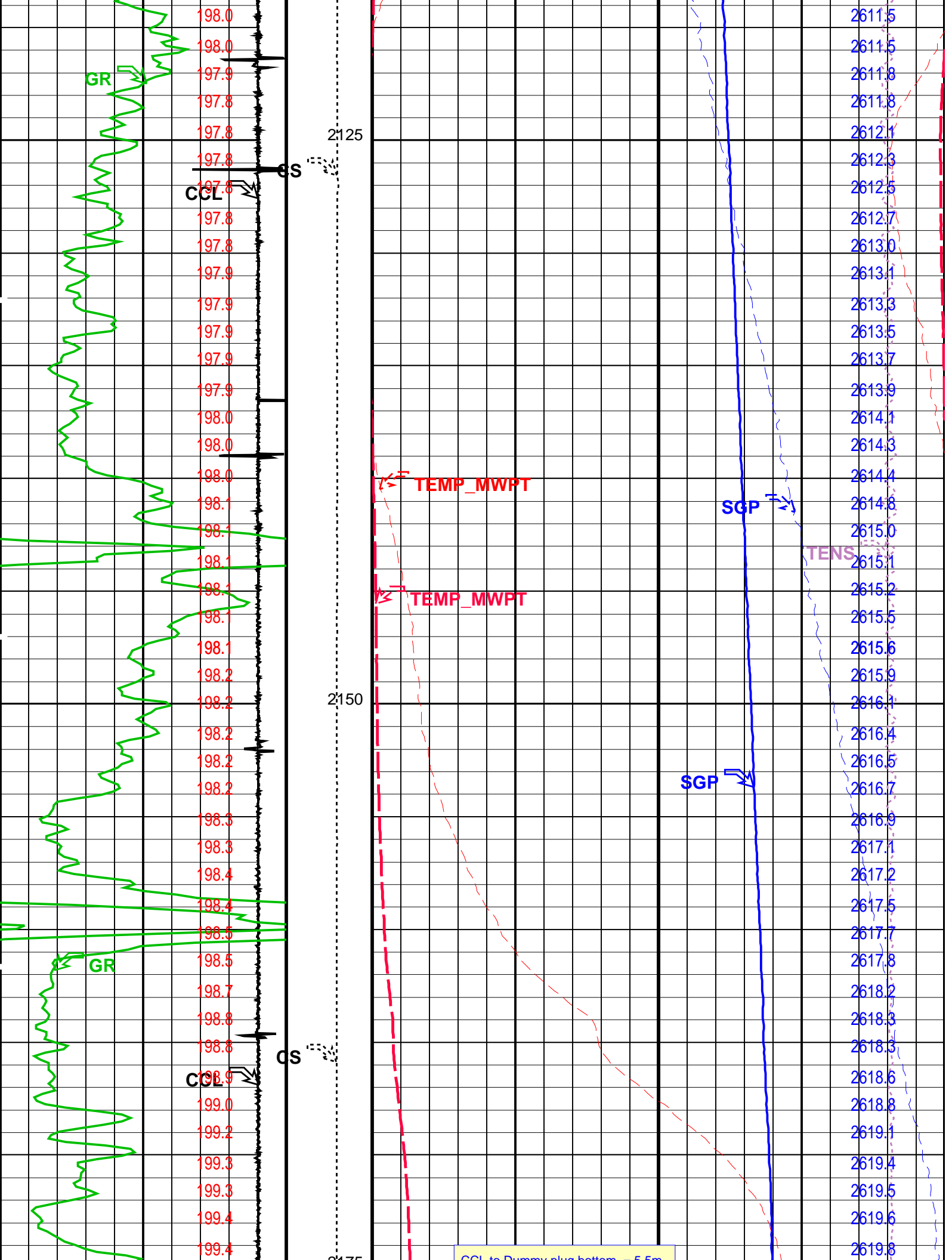
OP System Version: 17C0-154			
MWPT-CA	17C0-154	MWGT-AA	17C0-154

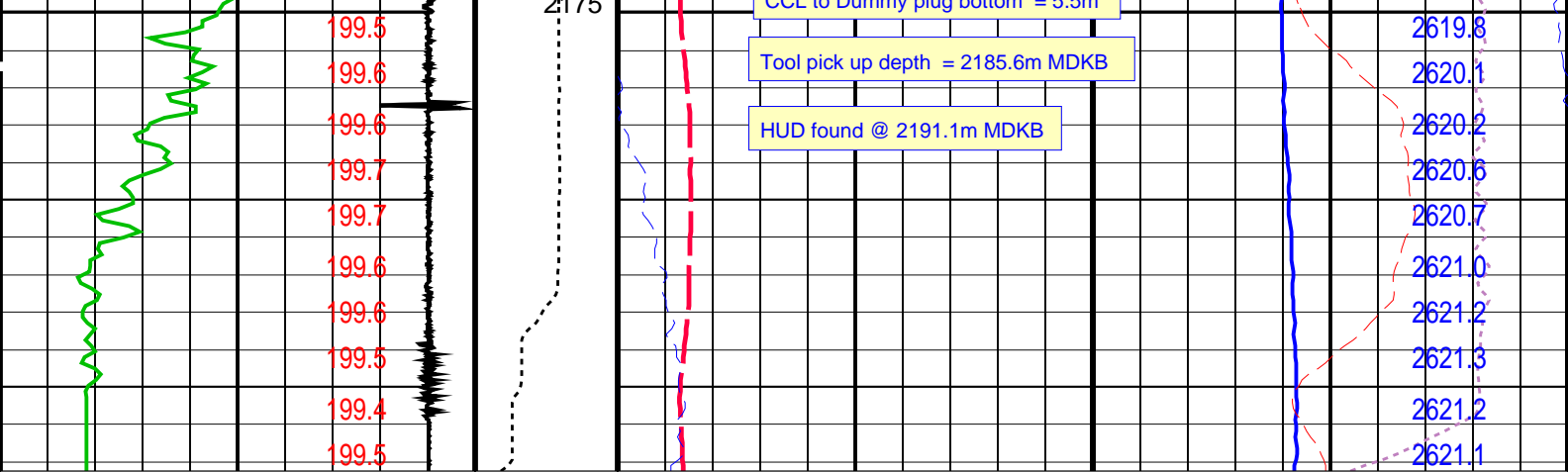
PIP SUMMARY					
Time Mark Every 60 S					

				Pressure (SGP) (PSIA)	
				Tension (TENS) (LBF)	
				0	2000









Casing Collar Locator (CCL)		Cable Speed (CS) (F/HR)	Strain Gauge Pressure (SGP)	
-19	(----		2550	2650
Gamma Ray (GR)		0	Temperature (TEMP_MWPT)	
0	(GAPI)		198	220
CCL From CCL to T1		0	Strain Gauge Pressure (SGP)	
Temperature (TEMP_MWPT) (DEGF)			0	20
		0	Temperature (TEMP_MWPT)	
			0	2
			Tension (TENS)	
			0	2000
			Pressure (SGP)	

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
System and Miscellaneous		
DO	Depth Offset for Playback	0.2 M
PP	Playback Processing	NORMAL

Format: MWP Vertical Scale: 1:200 Graphics File Created: 08-Nov-2009 19:21

OP System Version: 17C0-154

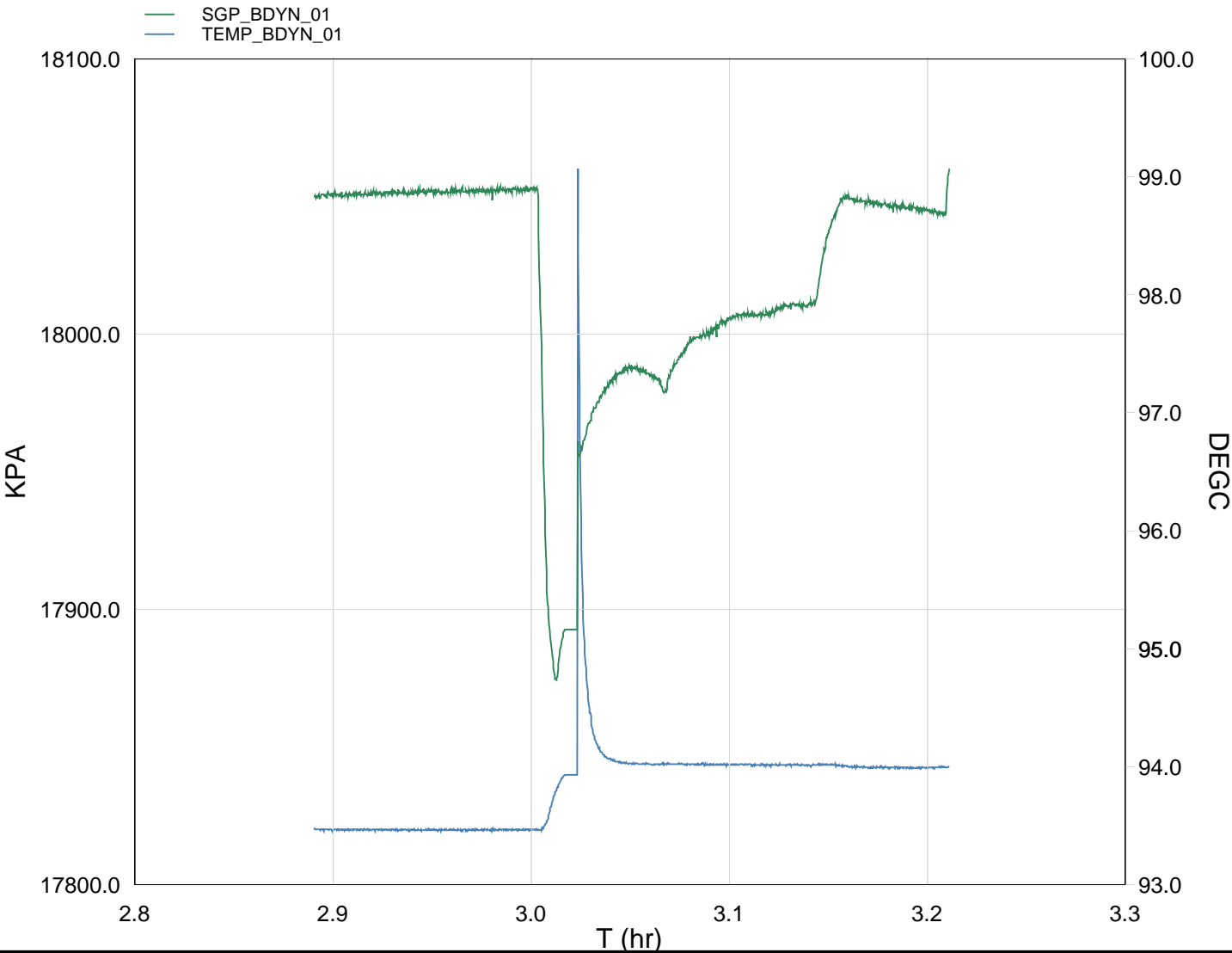
MWPT-CA 17C0-154 MWGT-AA 17C0-154

Input DLIS Files

DEFAULT PERFO_057LUP FN:55 PRODUCER 08-Nov-2009 19:04 2187.1 M 2020.8 M

Output DLIS Files

DEFAULT PERFO_060PUP FN:58 PRODUCER 08-Nov-2009 19:21



Schlumberger

**2-1/8" PowerJet Gun – MWPT
Shooting Pass**

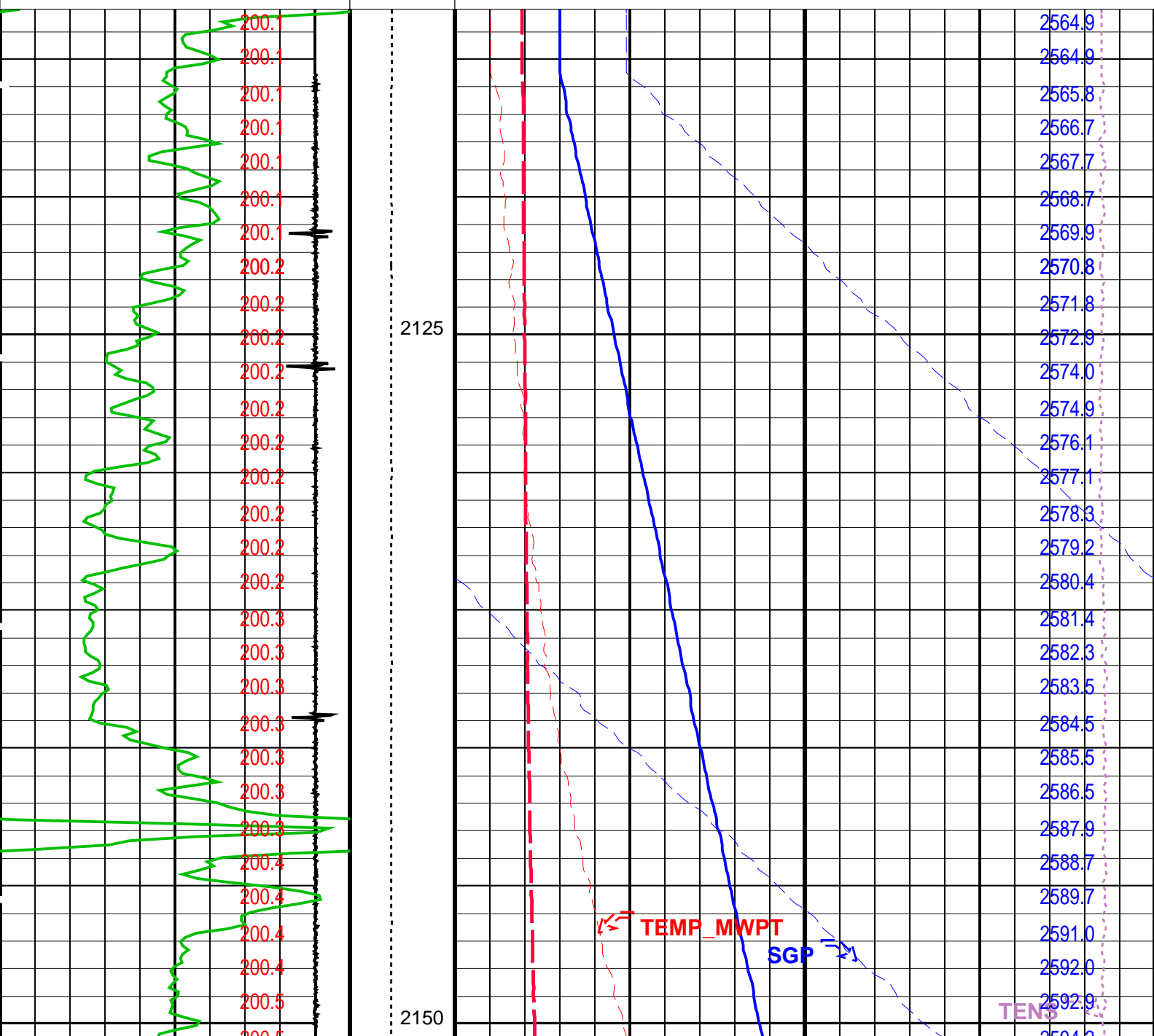
Output DLIS Files

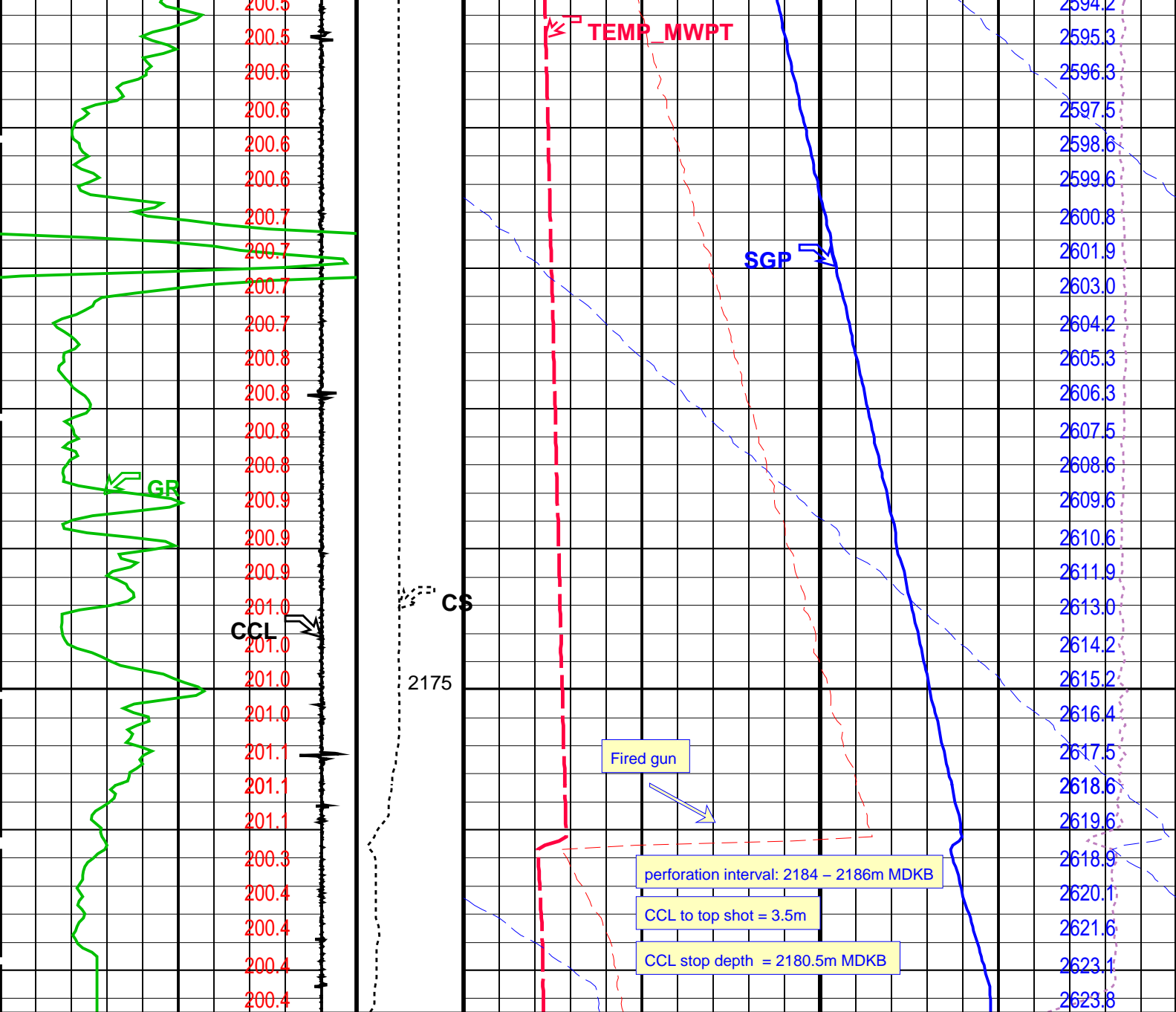
DEFAULT PERFO_049LUP FN:47 PRODUCER 08-Nov-2009 02:49 2186.5 M 2113.2 M

PIP SUMMARY

Time Mark Every 60 S

		Pressure (SGP) (PSIA)	
		Tension (TENS) (LBF)	
		0	2000
Temperature (TEMP_MWPT) (DEGF)		Temperature (TEMP_MWPT) (DEGF)	
0		2	
CCL From CCL to T1		Strain Gauge Pressure (SGP) (PSIA)	
0		20	
Gamma Ray (GR) (GAPI)		Temperature (TEMP_MWPT) (DEGF)	
0		198	
150		220	
Casing Collar Locator (CCL) (----)		Strain Gauge Pressure (SGP) (PSIA)	
-19		2550	
1		2650	
Cable Speed (CS) (F/HR)			
0		5000	





Casing Collar Locator (CCL)		Cable Speed (CS)		Strain Gauge Pressure (SGP)	
-19 (----) 1		0 (F/HR) 5000		2550 (PSIA) 2650	
Gamma Ray (GR)		Temperature (TEMP_MWPT)		Strain Gauge Pressure (SGP)	
0 (GAPI) 150		198 (DEGF) 220		0 (PSIA) 20	
CCL		Temperature (TEMP_MWPT)		Temperature (TEMP_MWPT)	
From CCL to T1		0 (DEGF) 2		Tension (TENS)	
				0 (LBF) 2000	
				Pressure (SGP)	
				(PSIA)	

Time Mark Every 60 S

PIP SUMMARY

Parameters		
DLIS Name	Description	Value

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

Format: MWP		Vertical Scale: 1:200		Graphics File Created: 08-Nov-2009 02:49	
OP System Version: 17C0-154					
MWP_GUN	17C0-154	MWPT-CA	17C0-154		
MWGT-AA	17C0-154				
Output DLIS Files					
DEFAULT	PERFO_049LUP	FN:47	PRODUCER	08-Nov-2009 02:49	



2-1/8" PowerJet Gun – MWPT Correlation Pass

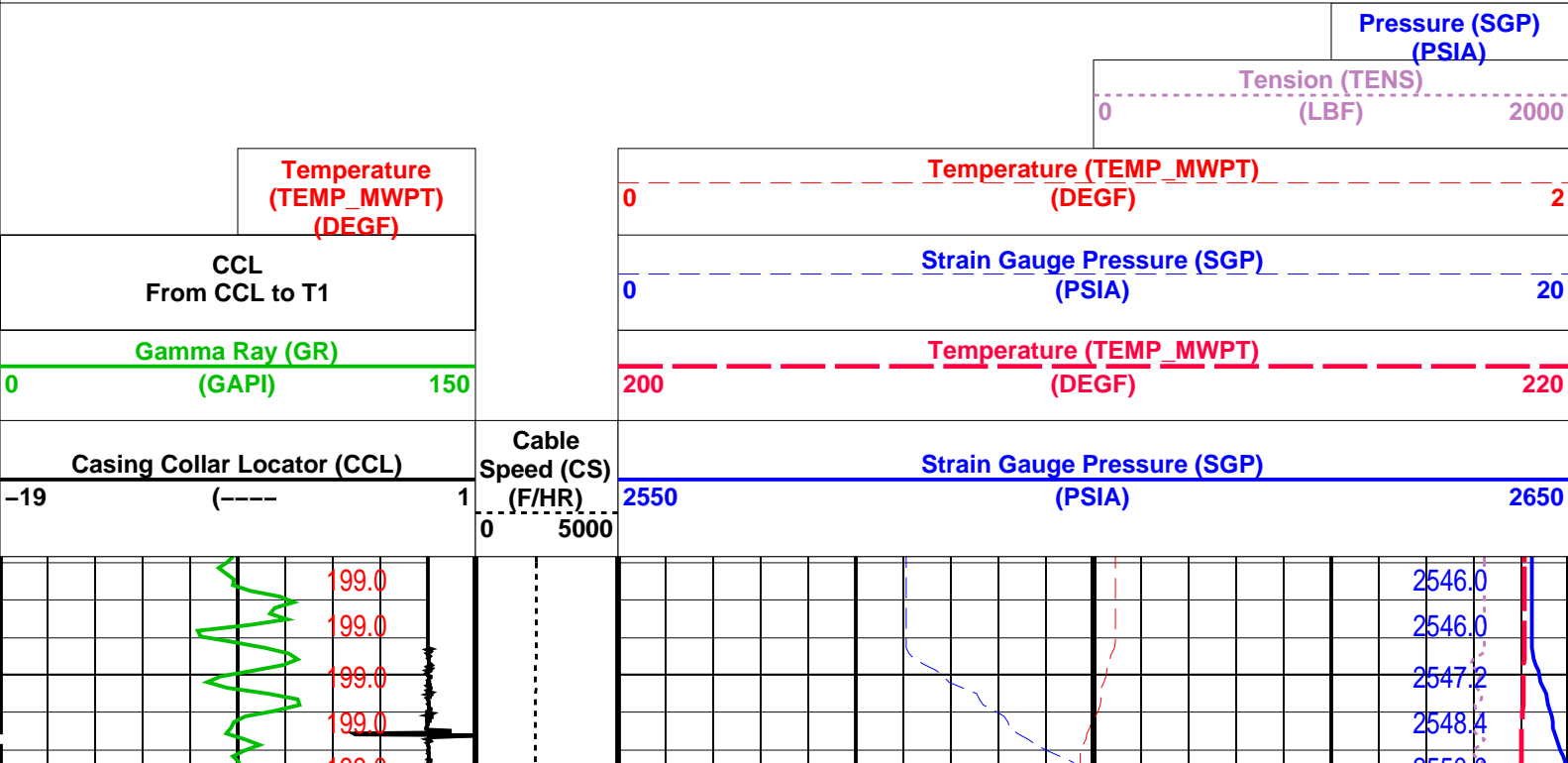
MAXIS Field Log

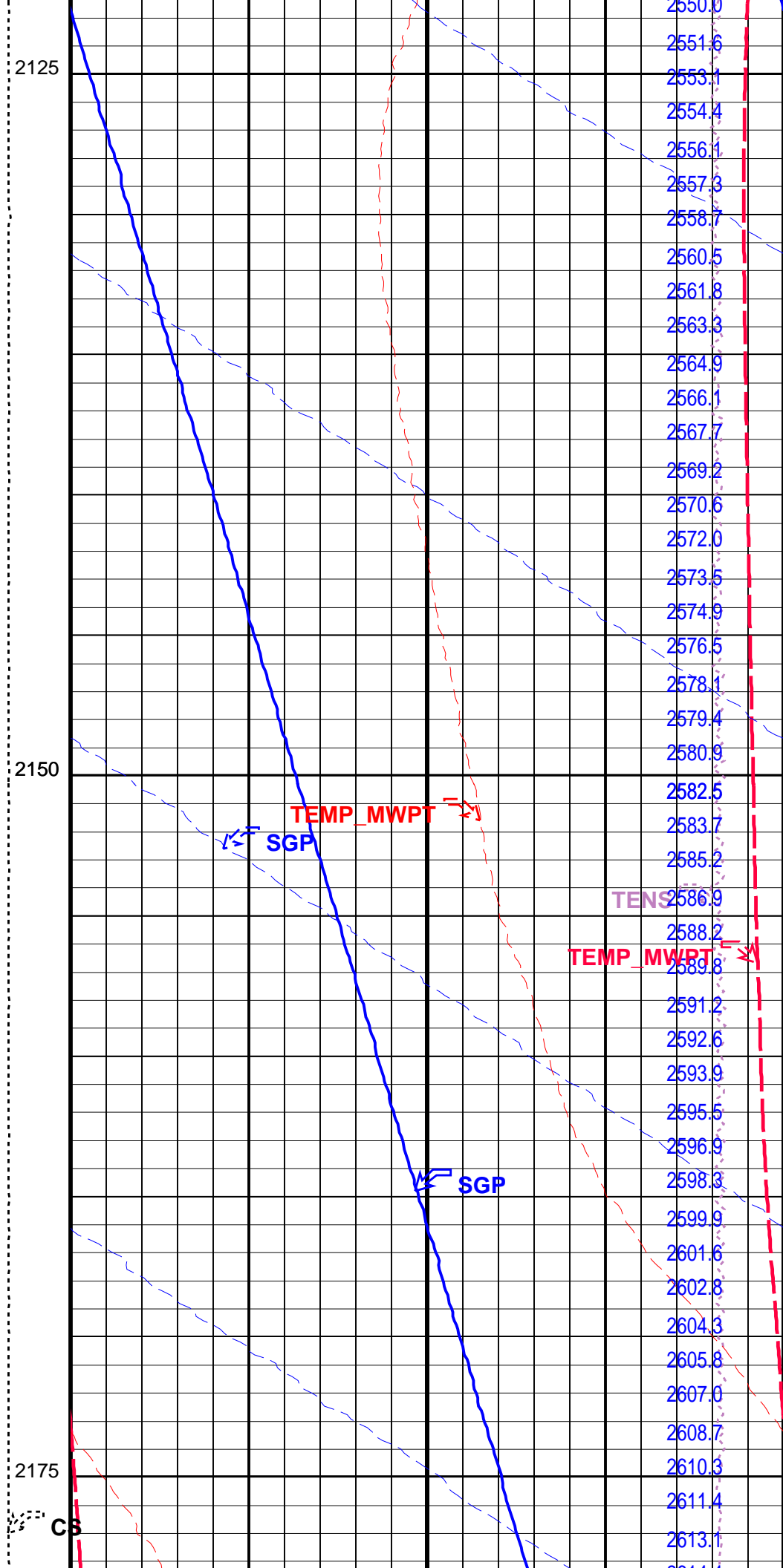
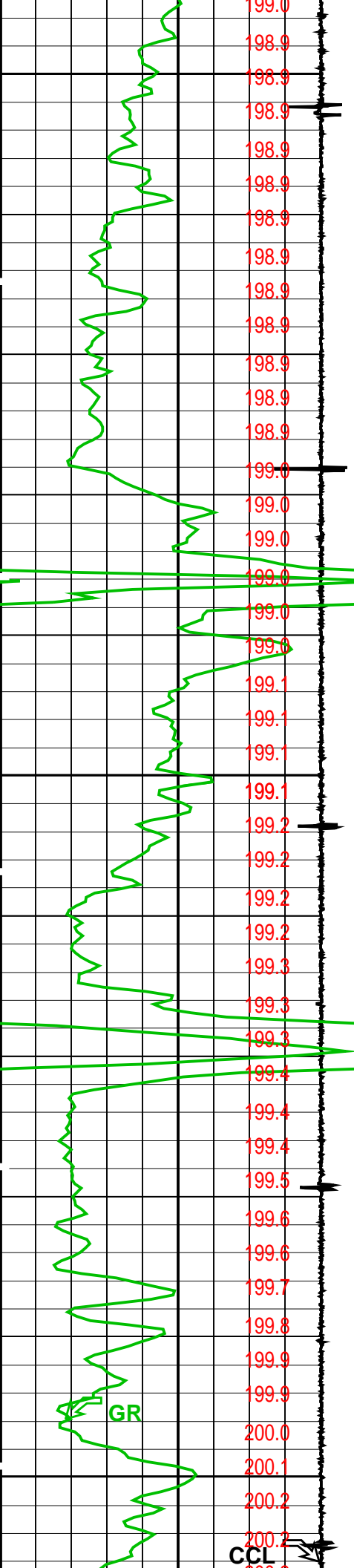
Company: Esso Australia Pty Ltd.	Well: BMA A9b
----------------------------------	---------------

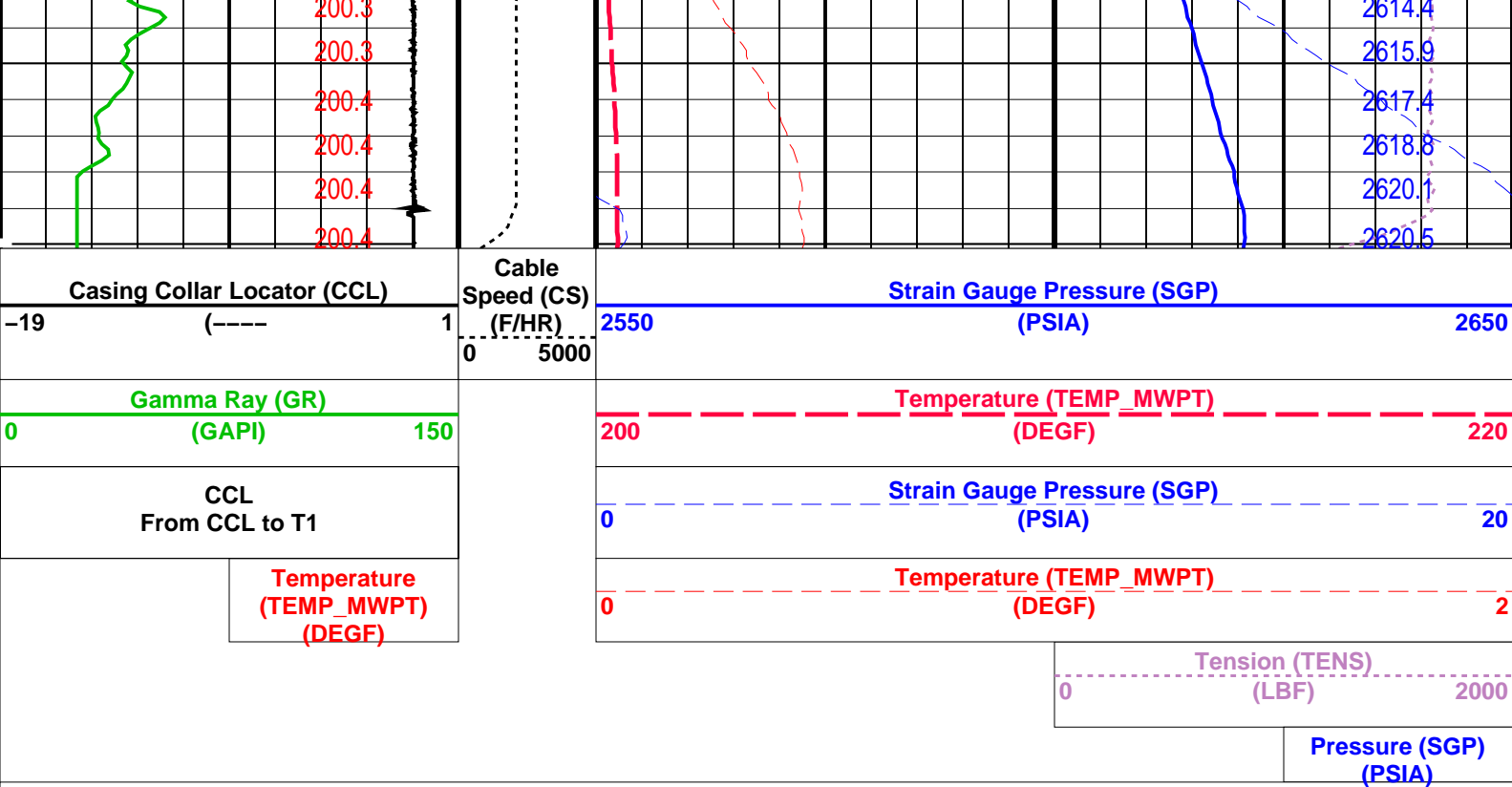
Output DLIS Files					
DEFAULT	PERFO_048LUP	FN:46	PRODUCER	08-Nov-2009 02:39	2185.1 M 2116.8 M

OP System Version: 17C0-154			
MWP_GUN	17C0-154	MWPT-CA	17C0-154
MWGT-AA	17C0-154		

PIP SUMMARY	
Time Mark Every 60 S	







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: 08-Nov-2009 02:39

OP System Version: 17C0-154			
MWP_GUN	17C0-154	MWPT-CA	17C0-154
MWGT-AA	17C0-154		

Output DLIS Files			
DEFAULT	PERFO_048LUP	FN:46 PRODUCER	08-Nov-2009 02:39

Company: **Esso Australia Pty Ltd.**

Well: **BMA A9b**

Field: **Bream A**

Rig: **Crane / Prod 4**

Country: **Australia**

Schlumberger

2 1/8" Powerjet MWPT Perforation Record
7" Posiset Plug Setting Record
8-Nov-2009