

Company: Ezzo Australia Pty. Ltd.

Well: TNA_A13

Field: Tuna

Rig: Rig 22 / Prod 2

Country: Australia

Depth Determination
2 7/8" Pure Perforation
5-May-2006

Rig 22 / Prod 2
Tuna
Gippsland
TNA_A13
Esso Australia Pty. Ltd.

LOCATION	
Gippsland Basin Bass Strait	Elev.: K.B. 32.9 m G.L. -59 m D.F. 34.2 m
Permanent Datum: _____ Log Measured From: _____ Drilling Measured From: _____	Mean Sea Level _____ Kelly Bushing _____ Kelly Bushing _____ Elev.: 0 m 32.9 m above Perm. Datum

State: Victoria	Max. Well Deviation 27 deg	Longitude 148°25' 05.29"E	Latitude 38°10' 16.00"S
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Logging Date	5-May-2006	5-May-2006	
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Run Number	1	2	
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Depth Driller	2104 m	2104 m	
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Schlumberger Depth	2082.5 m	2082.5 m	
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Bottom Log Interval	2081 m	2074.5 m	
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Top Log Interval	2078 m	2071 m	
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Casing Fluid Type	Sea Water	Sea Water	
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Salinity			
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Density	1.1 g/cm3	1.1 g/cm3	
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Fluid Level			
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BIT/CASING/TUBING STRING			
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Bit Size	8.500 in	8.500 in	
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From	1666.6 m	1666.6 m	
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To	2272.2 m	2272.2 m	
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Casing/Tubing Size	4.500 in	4.500 in	
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Weight	12.6 lbm/ft	12.6 lbm/ft	
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Grade	L-80	L-80	
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From	1432 m	1432 m	
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To	2104.5 m	2104.5 m	
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Maximum Recorded Temperatures			
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Logger On Bottom	10-Apr-2006	19:25	5-May-2006	14:30
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Unit Number	3827	AUSL	3827	AUSL
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Recorded By	Graham Fraser, Omar Tahmisi	Graham Fraser, Omar Tahmisi		
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Witnessed By	Jimmy Dean, John Booker	Jimmy Dean, John Booker		
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	Run 1	Run 2	Run
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Oil Density			
Water Salinity			
Gas Gravity			
Bo			

Bw			
1/Bg			
Bubble Point Pressure			
Bubble Point Temperature			

Solution GOR			
Maximum Deviation	27 deg	27 deg	

CEMENTING DATA			
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Primary/Squeeze	Primary	Primary	
Casing String No			
Lead Cement Type			

Volume			
Density			
Water Loss			

Additives			
Tail Cement Type			
Volume			

Density			
Water Loss			
Additives			

Expected Cement Top			
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Logging Date			
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Run Number			
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Depth Driller			
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Schlumberger Depth			
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Bottom Log Interval			
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Top Log Interval			
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Casing Fluid Type			
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Salinity			
----------	--	--	--

Density			
---------	--	--	--

Fluid Level			
-------------	--	--	--

BIT/CASING/TUBING STRING			
--------------------------	--	--	--

Bit Size			
----------	--	--	--

From			
------	--	--	--

To			
----	--	--	--

Casing/Tubing Size			
--------------------	--	--	--

Weight			
--------	--	--	--

Grade			
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From			
------	--	--	--

To			
----	--	--	--

Maximum Recorded Temperatures			
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Logger On Bottom			
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Unit Number			
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Recorded By			
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Witnessed By			
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DEPTH SUMMARY LISTING

Date Created: 5-MAY-2006 10:40:13

Depth System Equipment

Depth Measuring Device		Tension Device		Logging Cable	
Type:	IDWC–HD	Type:	CMTD–B/A	Type:	2–32ZT
Serial Number:	727	Serial Number:	1711	Serial Number:	24031
Calibration Date:	23–MAR–2006	Calibration Date:	19–Apr–06	Length:	6249.92 M
Calibrator Serial Number:	9	Calibrator Serial Number:	1173	Conveyance Method:	Wireline
Calibration Cable Type:	2–32ZT	Calibration Gain:	1.02	Rig Type:	Offshore_Fixed
Wheel Correction 1:	–1	Calibration Offset:	306.00		
Wheel Correction 2:	–2				

Depth Control Parameters

Log Sequence:	Subsequent Trip To the Well
Reference Log Name:	TUNA A13 Correlation Logs
Reference Log Run Number:	
Reference Log Date:	2-Mar-2002
Subsequent Trip Down Log Correction:	

Depth Control Remarks

1. All Schlumberger Depth Control Procedures followed.
2. Log correlated to reference log provided by Esso.
3. Gamma Ray response used for correlation.
4. IDW used as Primary Depth Control.
5. Z-Chart used as Secondary Depth Control.
- 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 OS1: OS2: OS3: OS4: OS5:	OTHER SERVICES2 OS1: OS2: OS3: OS4: OS5:
REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
Log objectives: Perforate well from 2078m to 2081m MDKB with 2-7/8" PURE HSD Gun	Log objectives: Perforate well from 2071.0m to 2074.5m MDKB with 2-7/8" PURE HSD Gun
Correlated to "TUNA A13 Correlation Log"	Correlated to "TUNA A13 Correlation Log"
Gun used: 2-7/8" PURE HSD [2906 PJ Omega HMX Charges, 4.9 spf, 60 deg]	Gun used: 2-7/8" PURE HSD [2906 PJ Omega HMX Charges, 4.9 spf, 60 deg]
API RP 19B Data: Penetration = 36.0 in; Ent Hole = 0.34 in.	API RP 19B Data: Penetration = 36.0 in; Ent Hole = 0.34 in.

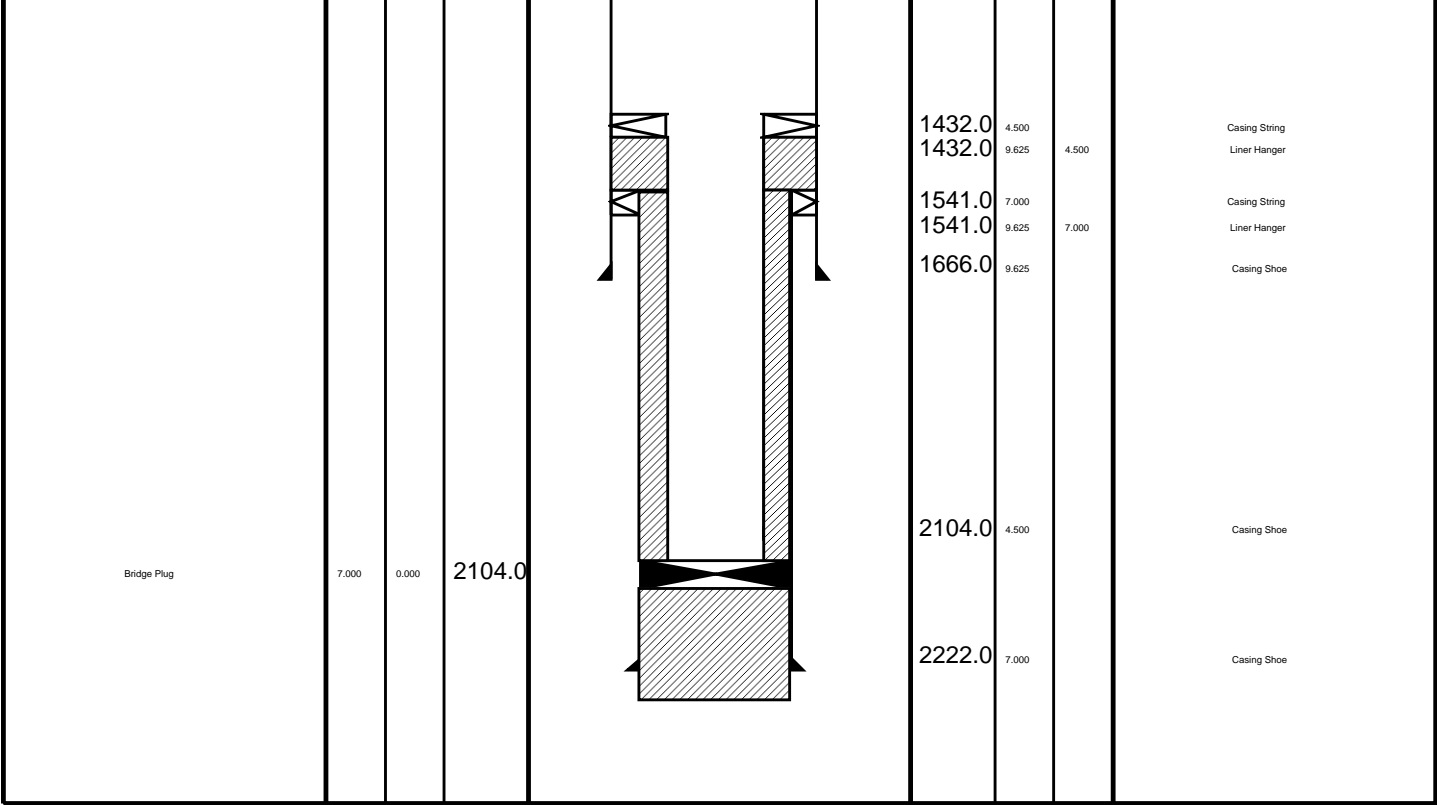
0.99

TOOL BOTTOM

TOOL BOTTOM

MAXIMUM STRING DIAMETER 2.88 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN METERS

Production String	(in) OD	(m) ID	MD	Well Schematic			(m) MD	(in) OD	ID	Casing String
							690.0	13.375		Casing Shoe



All Depths are Driller's Depths



Depth Determination-Perforation Job Event Summary

MAXIS Field Log

Schlumberger Job Event Summary

Time	Elapsed Time	Depth (M)	File
Rig Up Started	4-May-2006 16:00		
Log Pass (up)	4-May-2006 21:15	000:35	2075.4 - 1763.9 PERFO_028LUP
Log Pass (up)	4-May-2006 23:34	000:34	2084.4 - 1763.6 PERFO_032LUP
Log Pass (down)	5-May-2006 10:06	000:05	1999.5 - 2075.2 PERFO_060LDP
Log Pass (up)	5-May-2006 10:13	000:11	2075.2 - 2000.4 PERFO_061LUP
Log Pass (up)	5-May-2006 14:13	000:04	2076.9 - 2012.7 PERFO_074LUP
Log Pass (up)	5-May-2006 14:22	000:13	2075.1 - 2005.3 PERFO_076LUP
Rig Down Completed	5-May-2006 16:30		



Gun # 2
Operational Summary Listing

MAXIS Field Log

PERFO2 Operational Summary Listing

Device Status Req Depth (M) Obs Depth (M) Time Used

GUN1 Used 2071.0 2071.0 Fri May 05 14:28:56 2006



Gun # 2
Shooting Log

MAXIS Field Log

Company: Esso Australia Pty. Ltd.

Well: TNA_A13

Output DLIS Files

DEFAULT PERFO_076LUP FN:86 PRODUCER 05-May-2006 14:22

OP System Version: 14C0-302
MCM

SHM_GUN 14C0-302 PGGT-CC 14C0-302

PIP SUMMARY

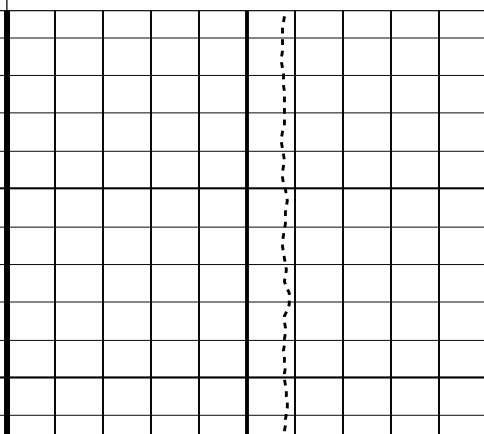
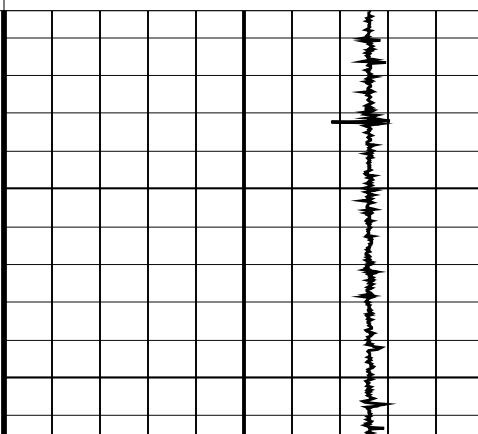
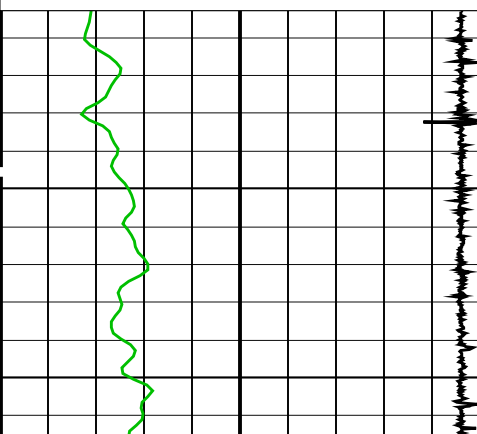
Time Mark Every 60 S

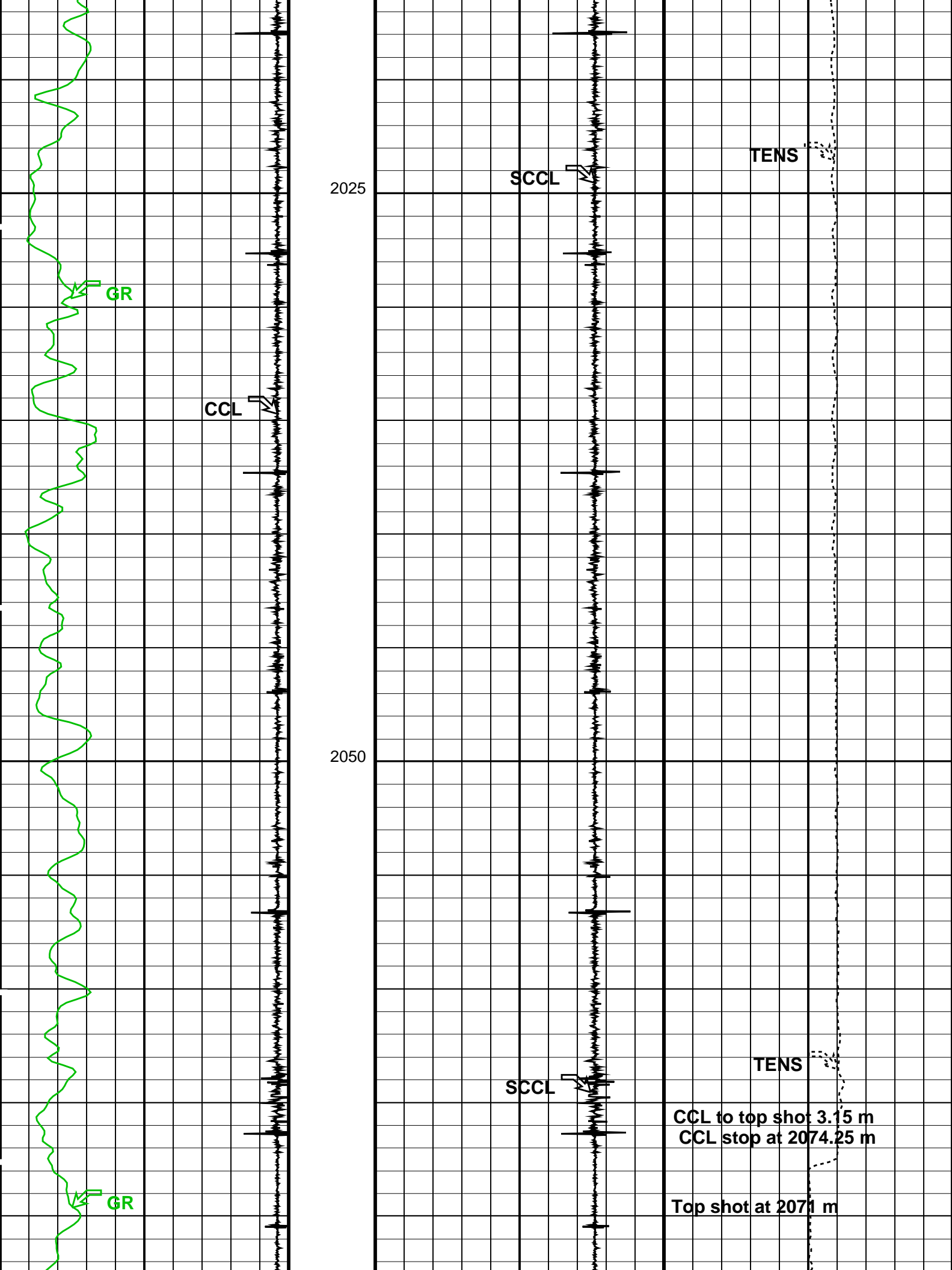
Gamma Ray (GR)
(GAPI) 0 150

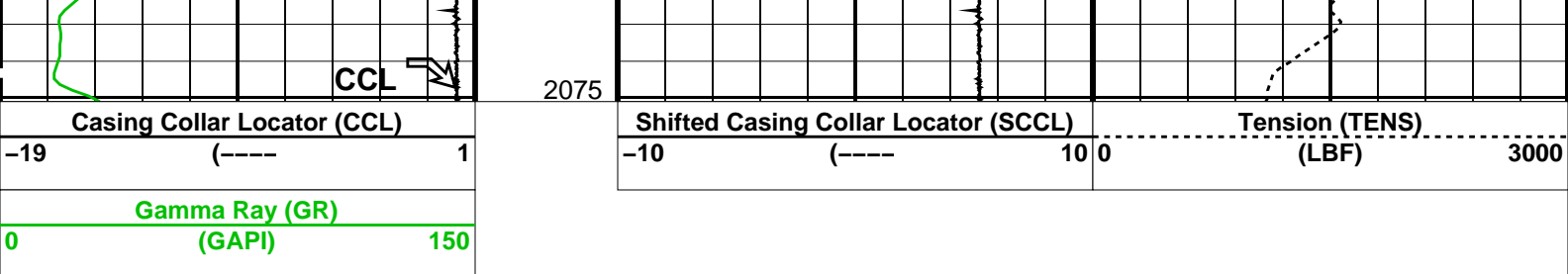
Casing Collar Locator (CCL)
-19 (----) 1

Shifted Casing Collar Locator (SCCL)
-10 (----) 10 0

Tension (TENS)
(LBF) 0 3000







PIP SUMMARY

Time Mark Every 60 S

Format: CCLLog Vertical Scale: 1:200

Graphics File Created: 05-May-2006 14:22

OP System Version: 14C0-302

MCM

SHM_GUN 14C0-302

PGGT-CC

14C0-302

Output DLIS Files

DEFAULT PERFO_076LUP

FN:86

PRODUCER

05-May-2006 14:22

Schlumberger

Gun # 2
Correlation Log

MAXIS Field Log

Company: Esso Australia Pty. Ltd.

Well: TNA_A13

Output DLIS Files

DEFAULT PERFO_074LUP

FN:84

PRODUCER

05-May-2006 14:13

OP System Version: 14C0-302

MCM

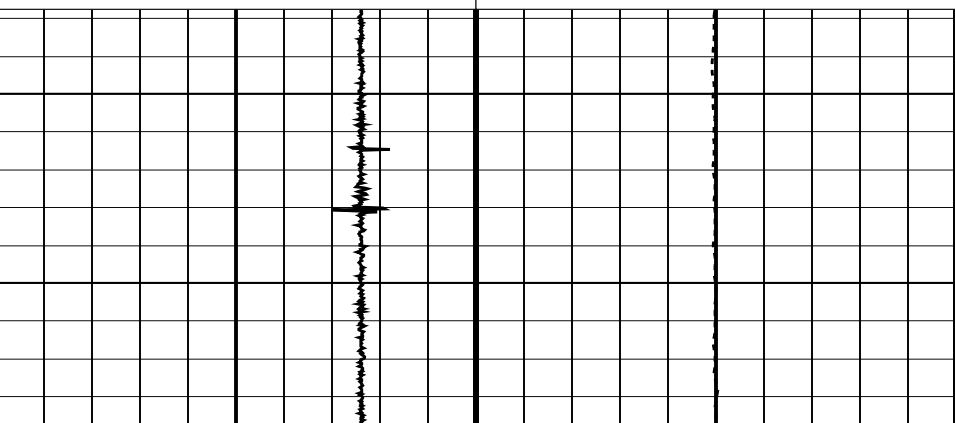
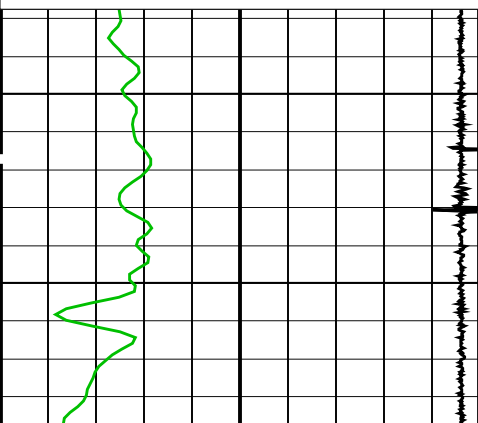
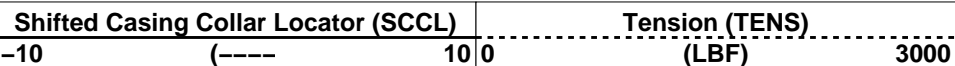
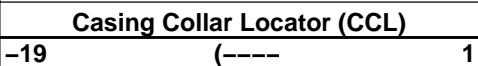
SHM_GUN 14C0-302

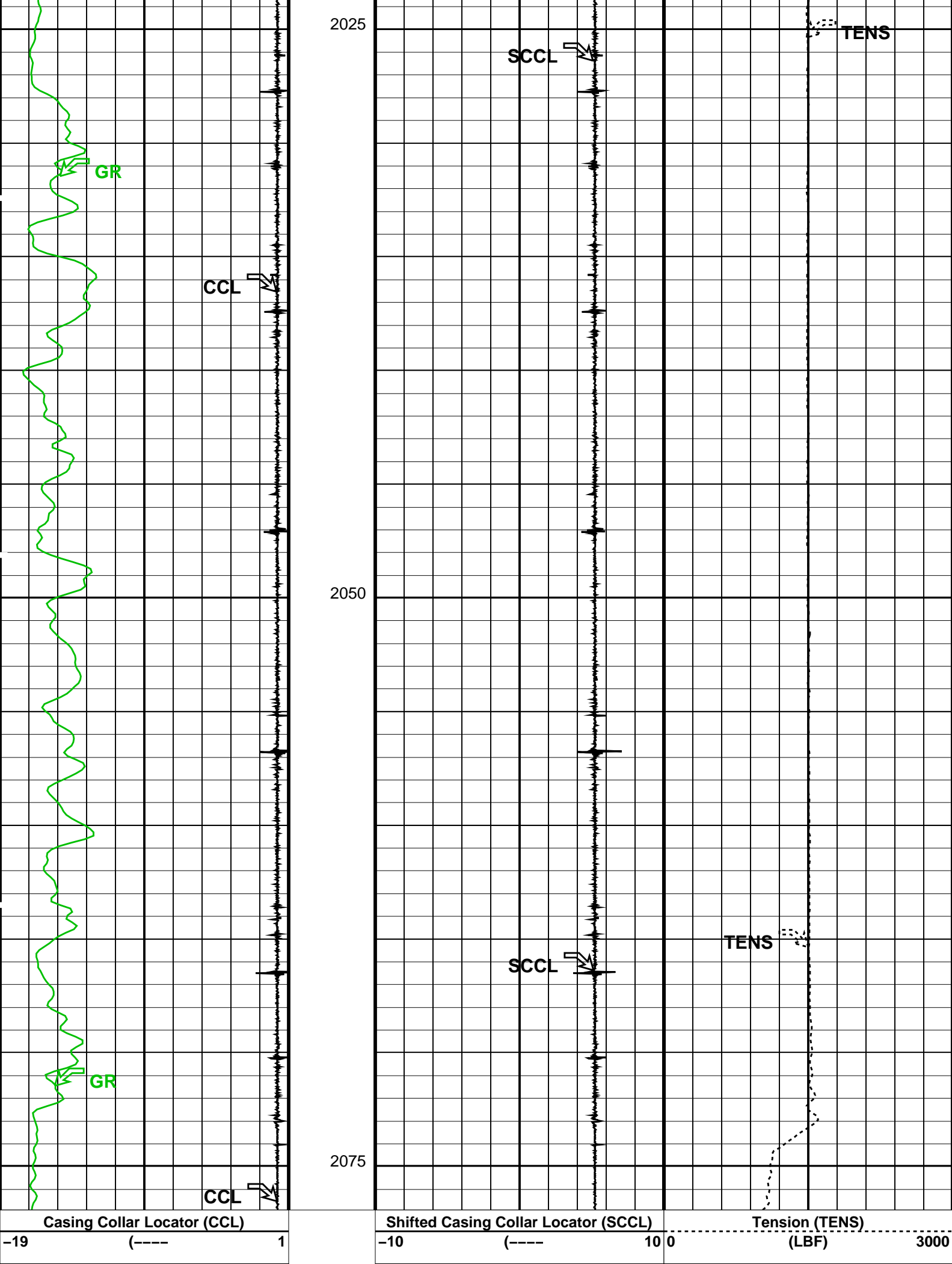
PGGT-CC

14C0-302

PIP SUMMARY

Time Mark Every 60 S





Gamma Ray (GR)
(GAPI)

0150

PIP SUMMARY

Time Mark Every 60 S

Format: CCLLog Vertical Scale: 1:200

Graphics File Created: 05-May-2006 14:13

OP System Version: 14C0-302
MCM

SHM_GUN 14C0-302 PGGT-CC 14C0-302

Output DLIS Files

DEFAULT PERFO_074LUP FN:84 PRODUCER 05-May-2006 14:13

Schlumberger

Gun # 1
Operational Summary Listing

MAXIS Field Log

PERFO2 Operational Summary Listing				
Device	Status	Req Depth (M)	Obs Depth (M)	Time Used
GUN1	Used	2078.0	2078.0	Fri May 05 10:19:34 2006

Schlumberger

Gun # 1
Shooting Log

MAXIS Field Log

Company: Esso Australia Pty. Ltd. Well: TNA_A13

Output DLIS Files

DEFAULT PERFO_061LUP FN:71 PRODUCER 05-May-2006 10:13

OP System Version: 14C0-302
MCM

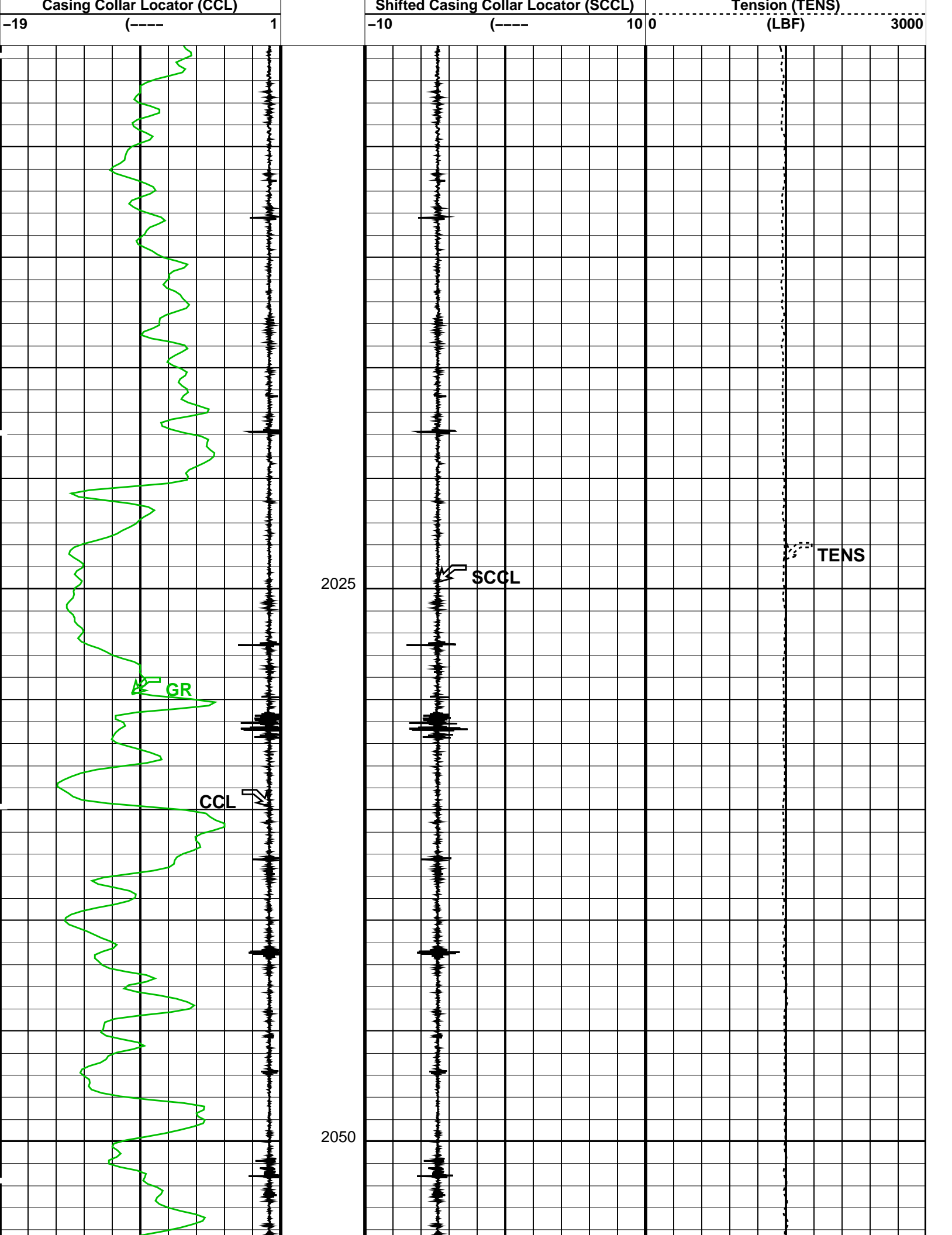
SHM_GUN 14C0-302 PGGT-CC 14C0-302

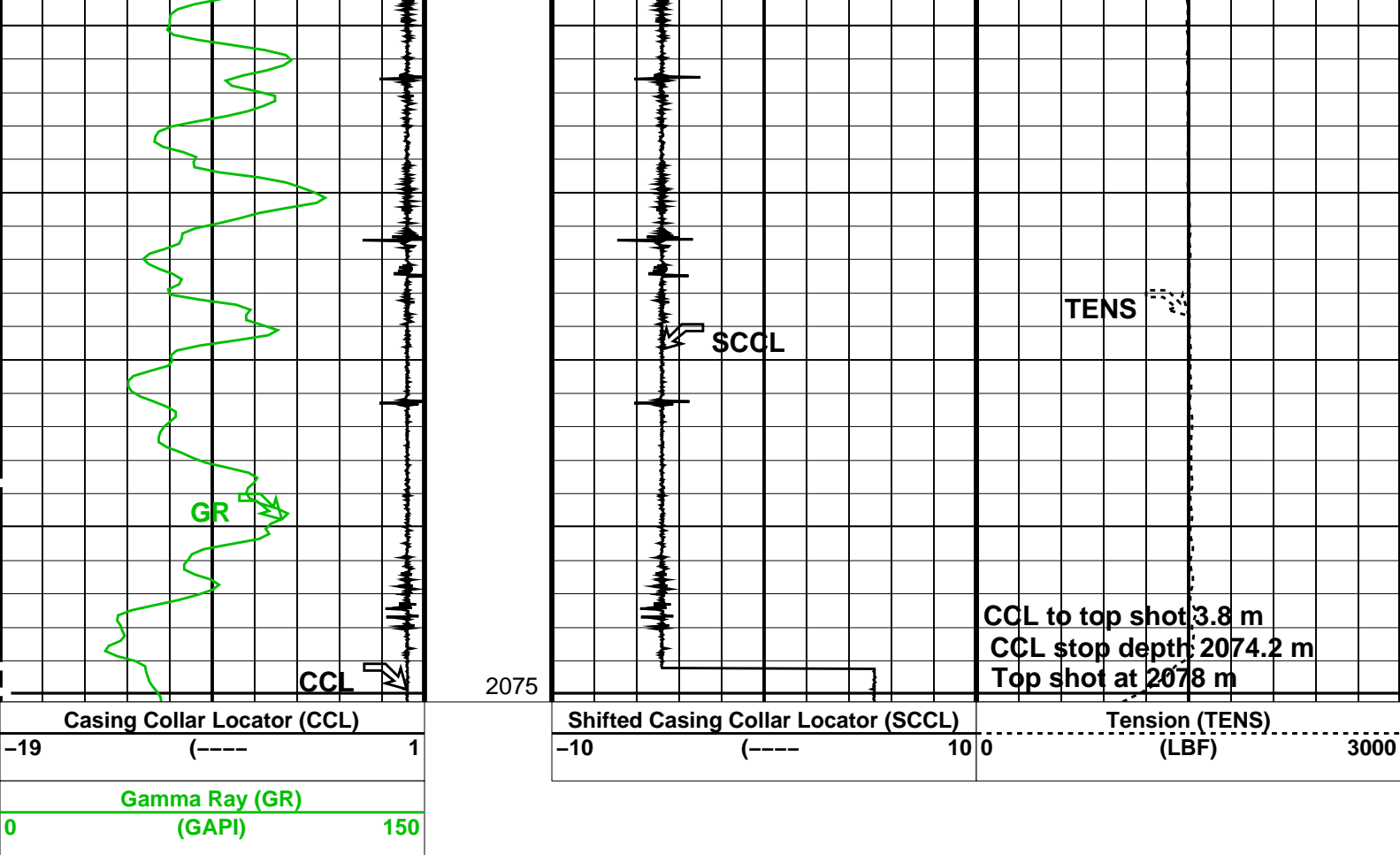
PIP SUMMARY

Time Mark Every 60 S

Gamma Ray (GR)
(GAPI)

0150





PIP SUMMARY

Time Mark Every 60 S

Format: CCLLog Vertical Scale: 1:200

Graphics File Created: 05-May-2006 10:13

OP System Version: 14C0-302

MCM

SHM_GUN

14C0-302

PGGT-CC

14C0-302

Output DLIS Files

DEFAULT

PERFO_061LUP

FN:71

PRODUCER

05-May-2006 10:13

Schlumberger

Gun # 1
Correlation Log

MAXIS Field Log

Company: Esso Australia Pty. Ltd.

Well: TNA_A13

Input DLIS Files

DEFAULT

Flip_PERFO_081LUP

PRODUCER

09-May-2006 09:43

2075.2 M

1999.5 M

Output DLIS Files

DEFAULT

PERFO_082PUP

FN:1

PRODUCER

09-May-2006 09:44

2075.2 M

1999.9 M

OP System Version: 14C0-302

MCM

SHM_GUN

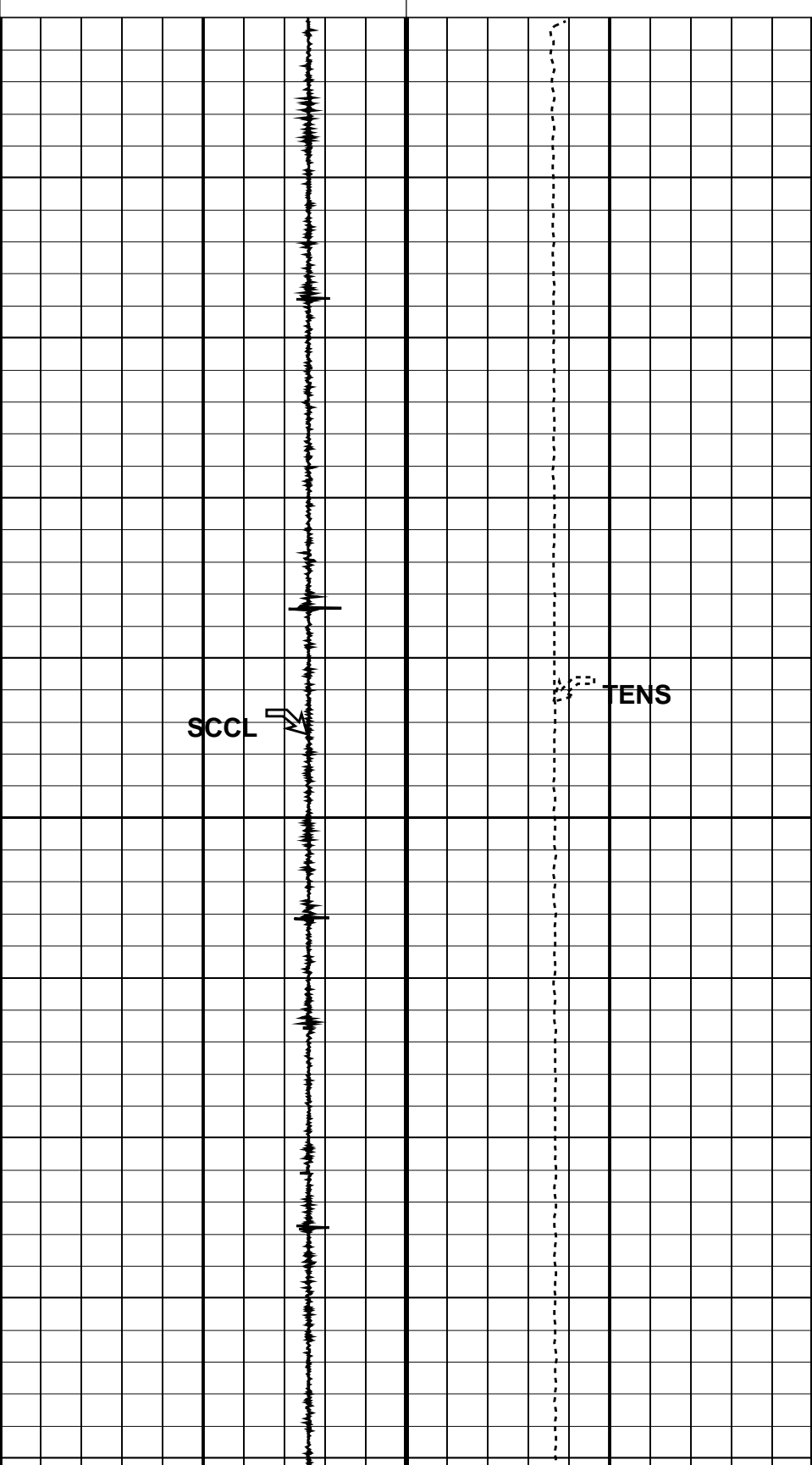
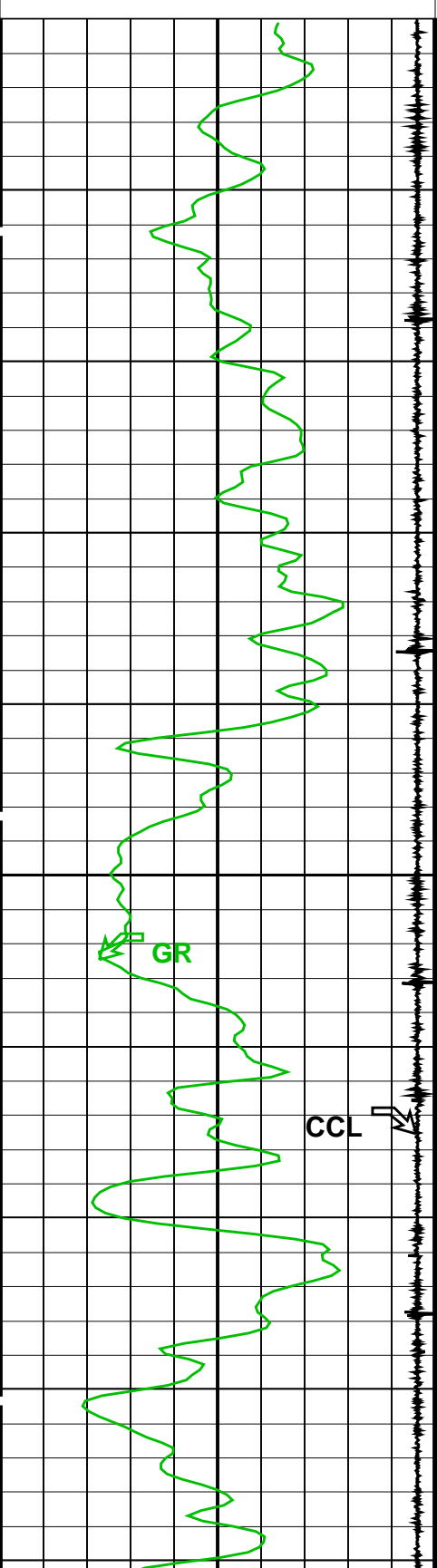
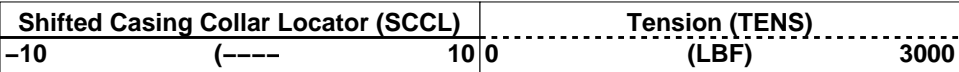
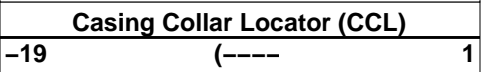
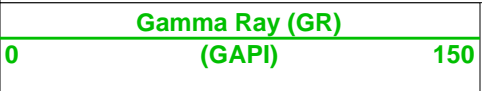
14C0-302

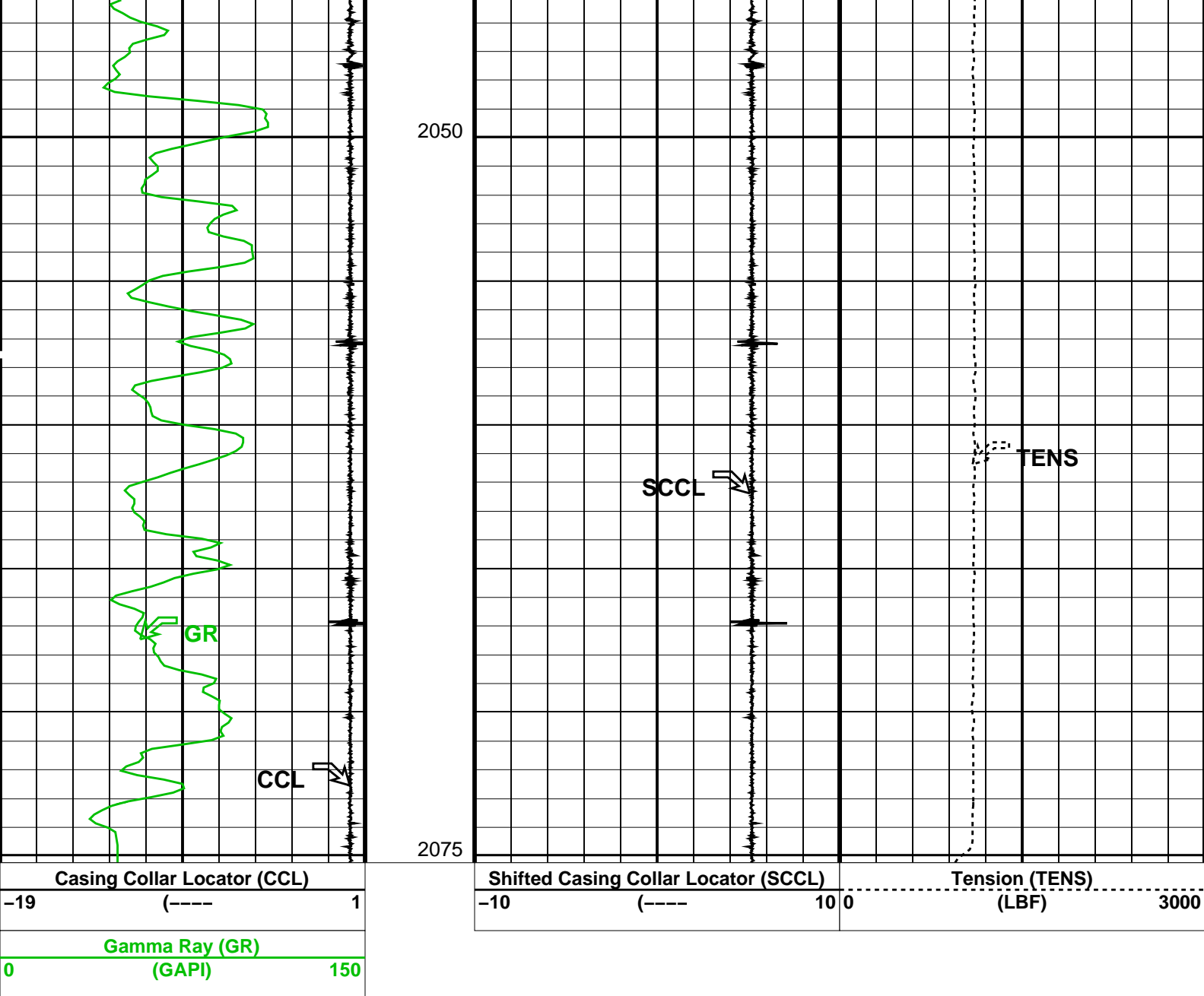
PGGT-CC

14C0-302

PIP SUMMARY

Time Mark Every 60 S





PIP SUMMARY

Parameters					
DLIS Name		Description		Value	
System and Miscellaneous					
DO		Depth Offset for Playback		0.0	M
PP		Playback Processing		NORMAL	
Format: CCLLog		Vertical Scale: 1:200		Graphics File Created: 09-May-2006 09:44	
OP System Version: 14C0-302					
MCM					
SHM_GUN	14C0-302	PGGT-CC	14C0-302		
Input DLIS Files					
DEFAULT	Flip_PERFO_081LUP	PRODUCER	09-May-2006 09:43	2075.2 M	1999.5 M
Output DLIS Files					
DEFAULT	PERFO_082PUP	FN:1	PRODUCER	09-May-2006 09:44	



Depth Determination # 2
Correlation Log

MAXIS Field Log

Company: Esso Australia Pty. Ltd. Well: TNA_A13

Output DLIS Files

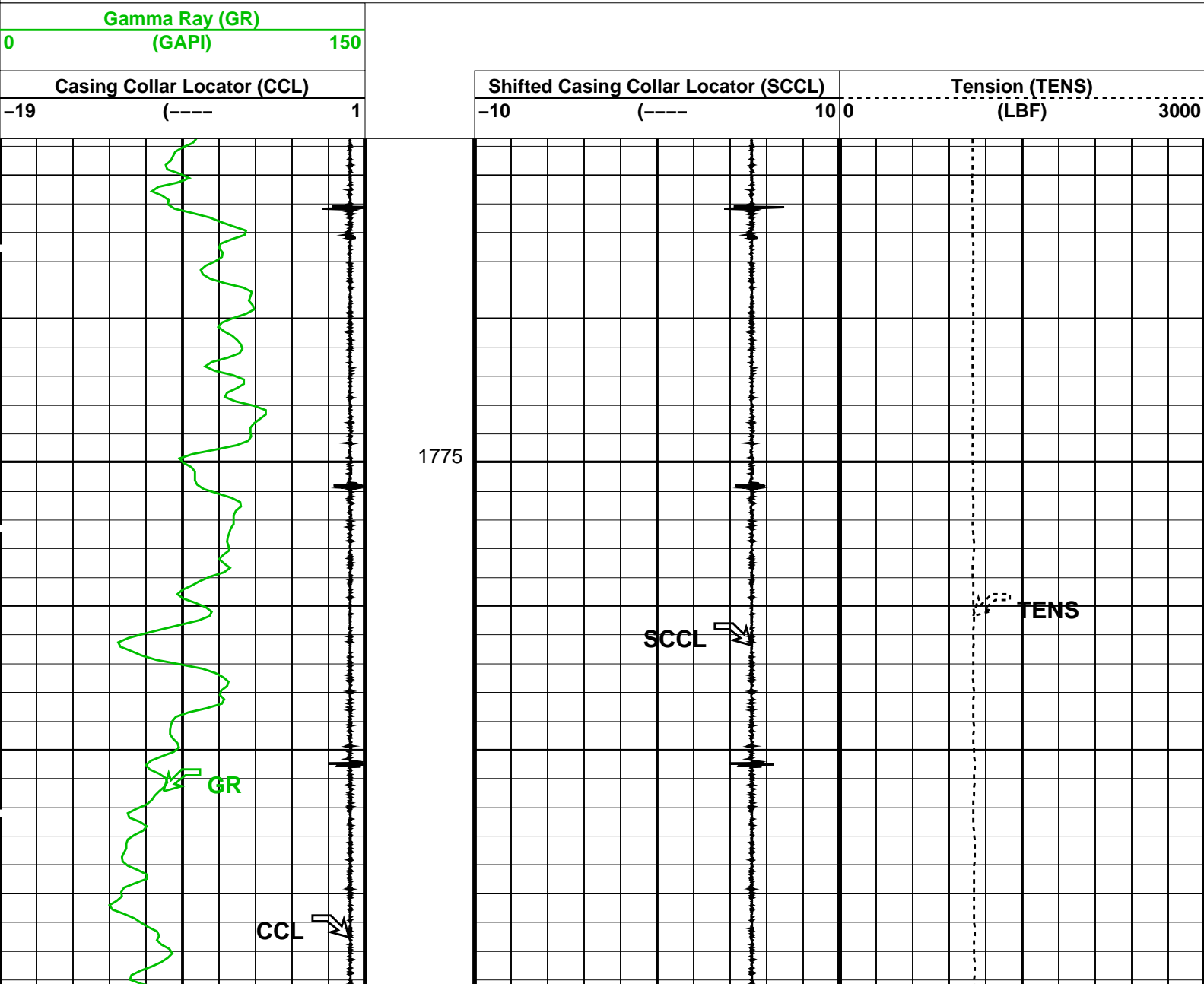
DEFAULT	PERFO_032LUP	FN:33	PRODUCER	04-May-2006 23:34	2084.4 M	1763.7 M
CUSTOMER	PERFO_032LUC	FN:34	CUSTOMER	04-May-2006 23:34	2084.4 M	1763.7 M

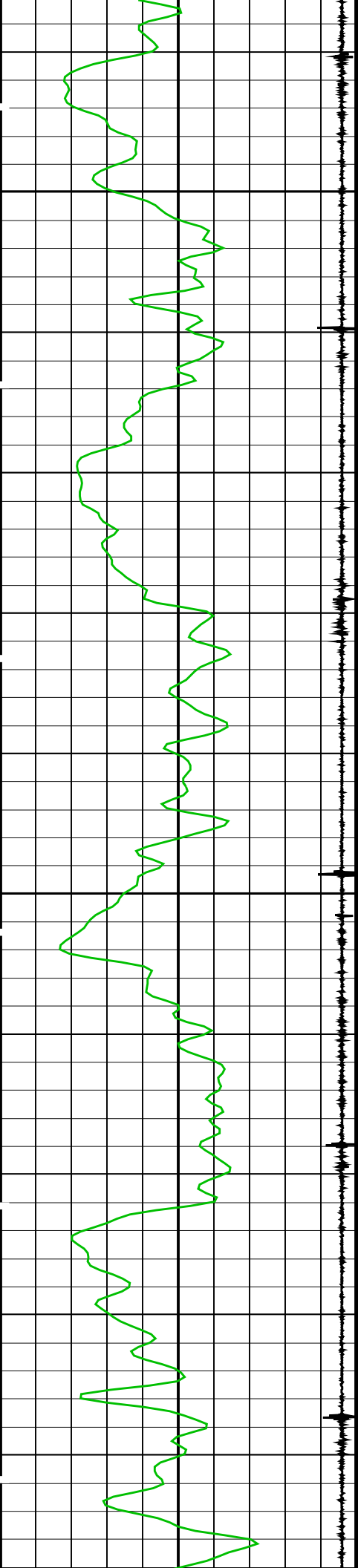
OP System Version: 14C0-302
MCM

SHM_GUN 14C0-302 PGGT-CC 14C0-302

PIP SUMMARY

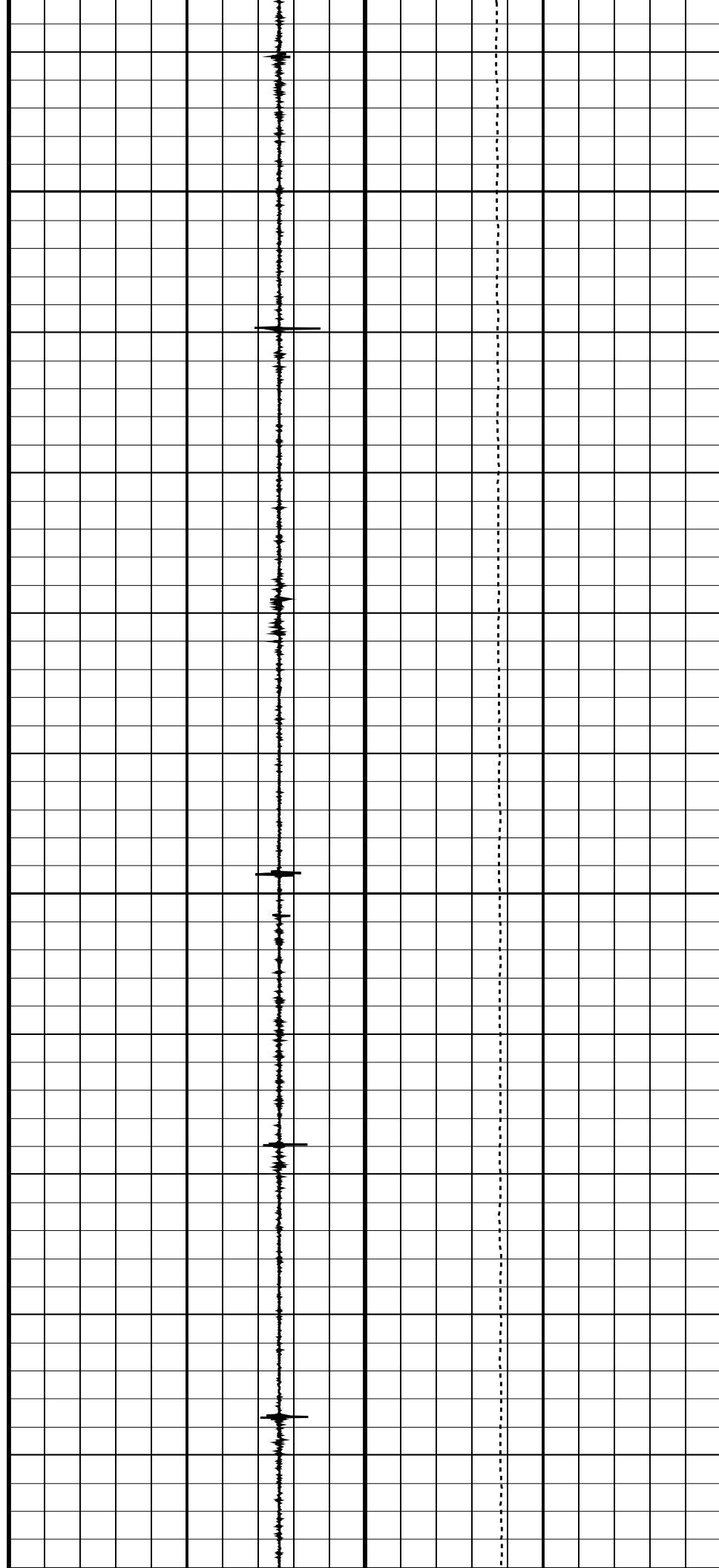
Time Mark Every 60 S

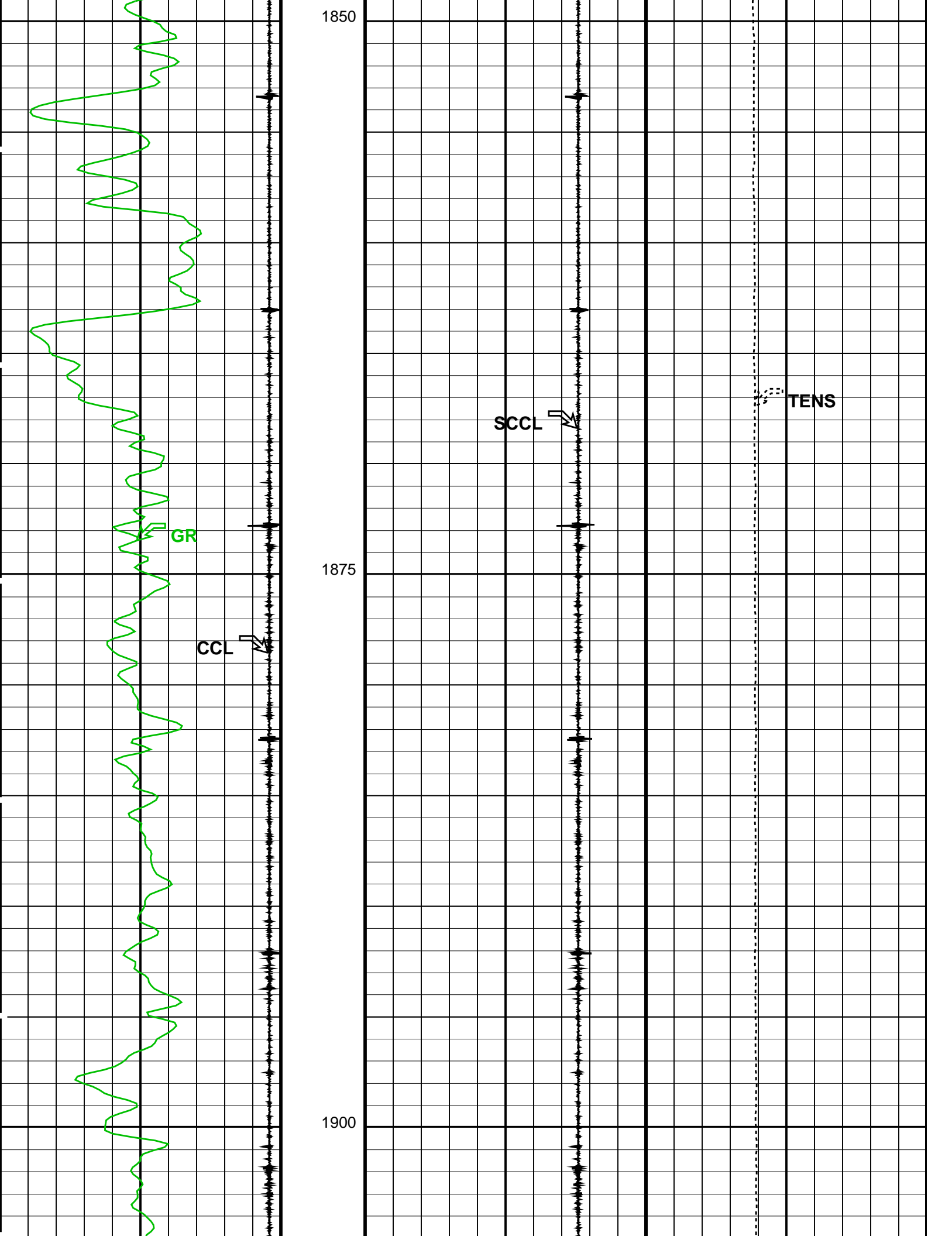


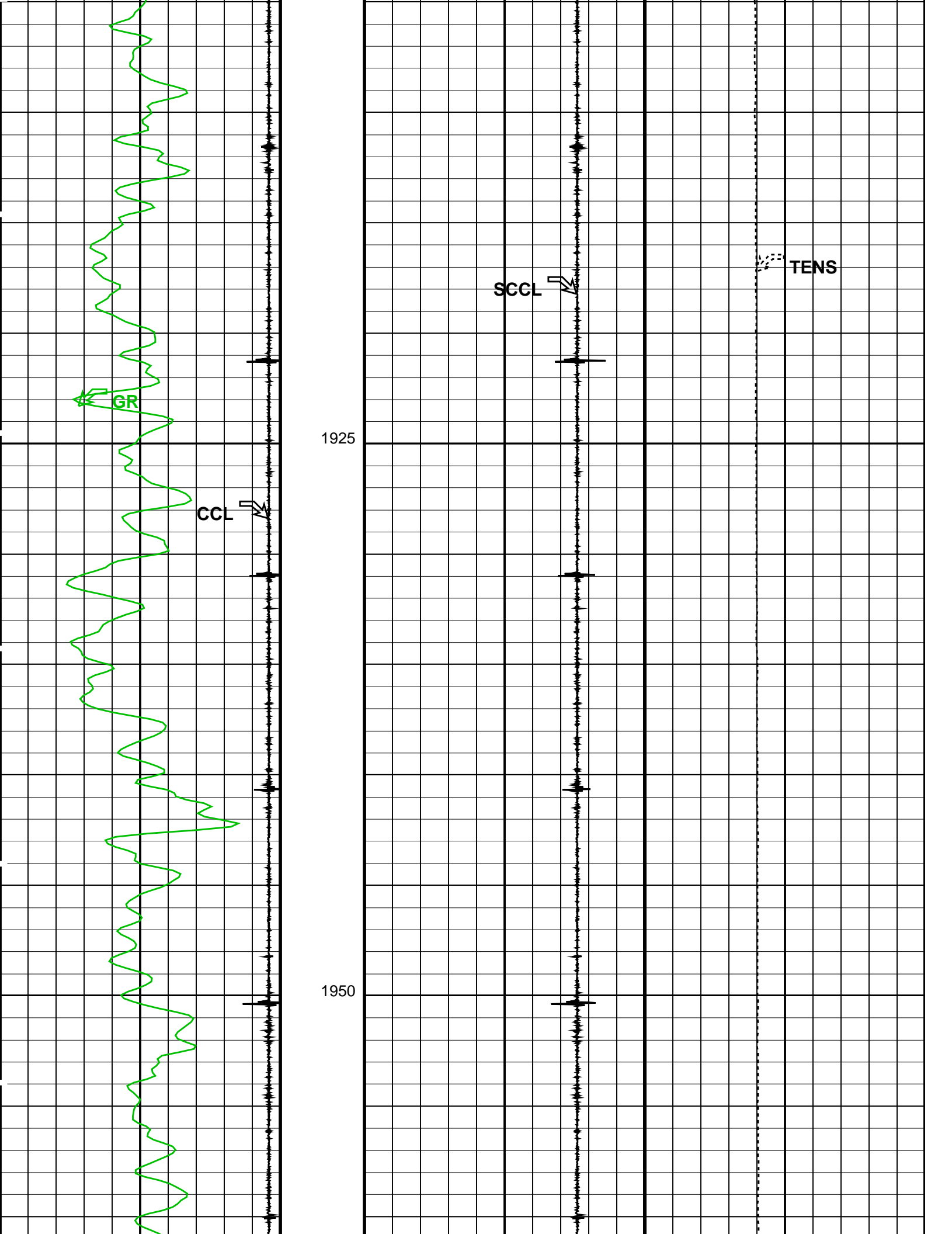


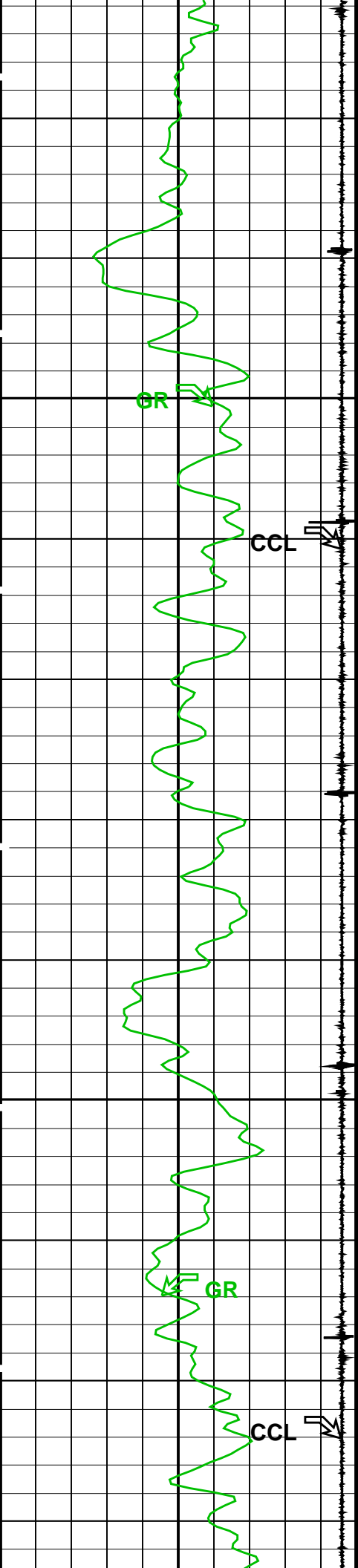
1800

1825



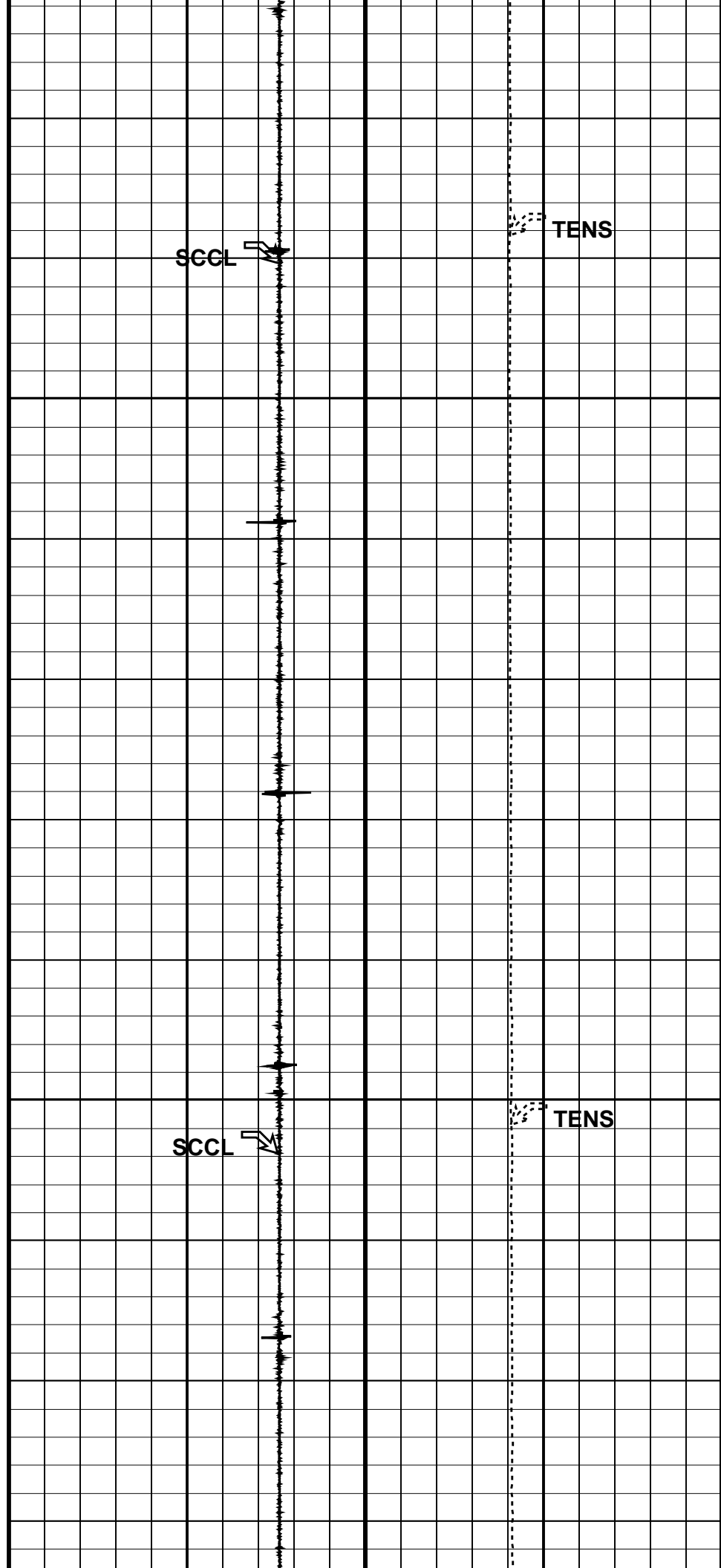






1975

2000

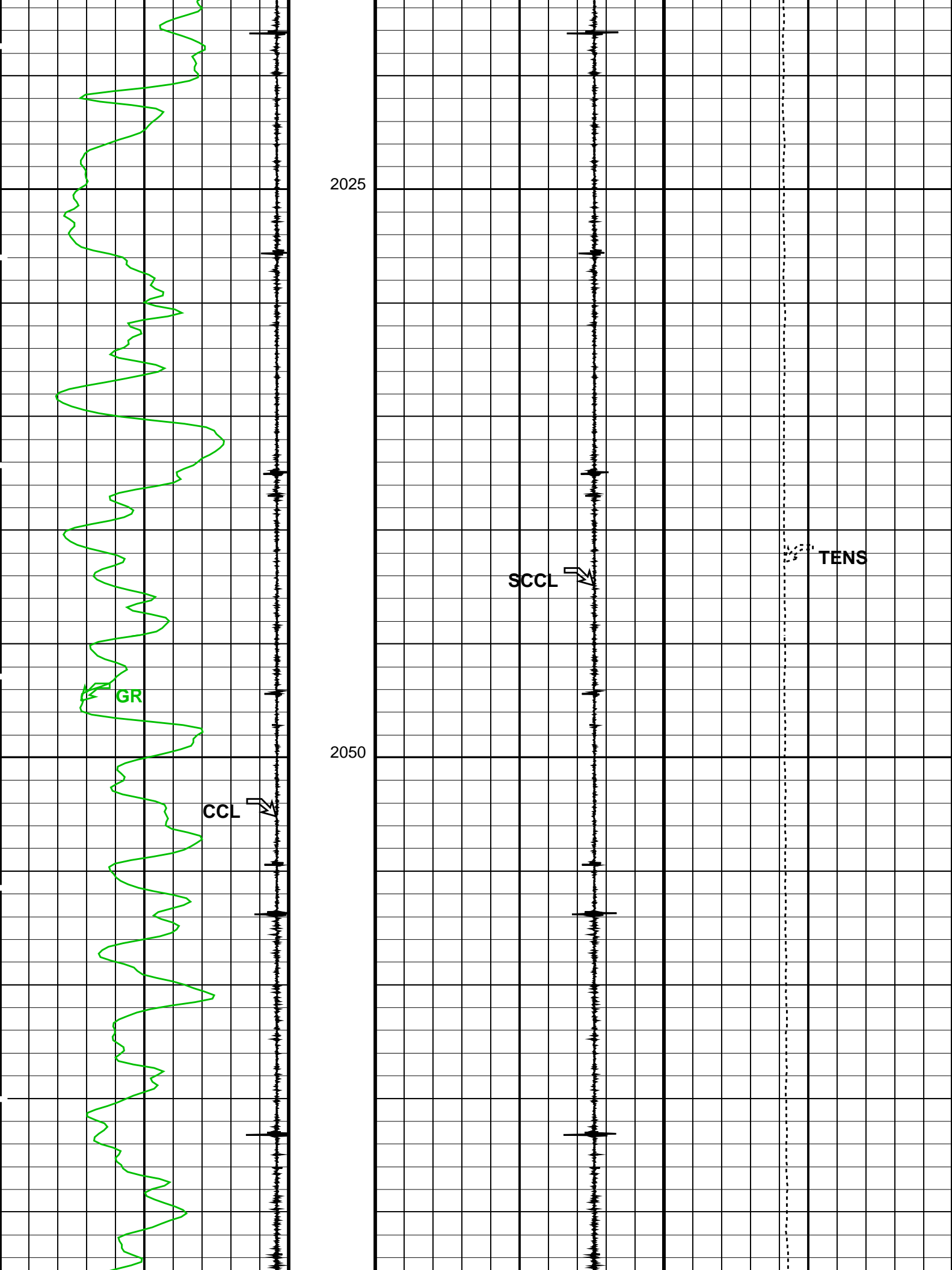


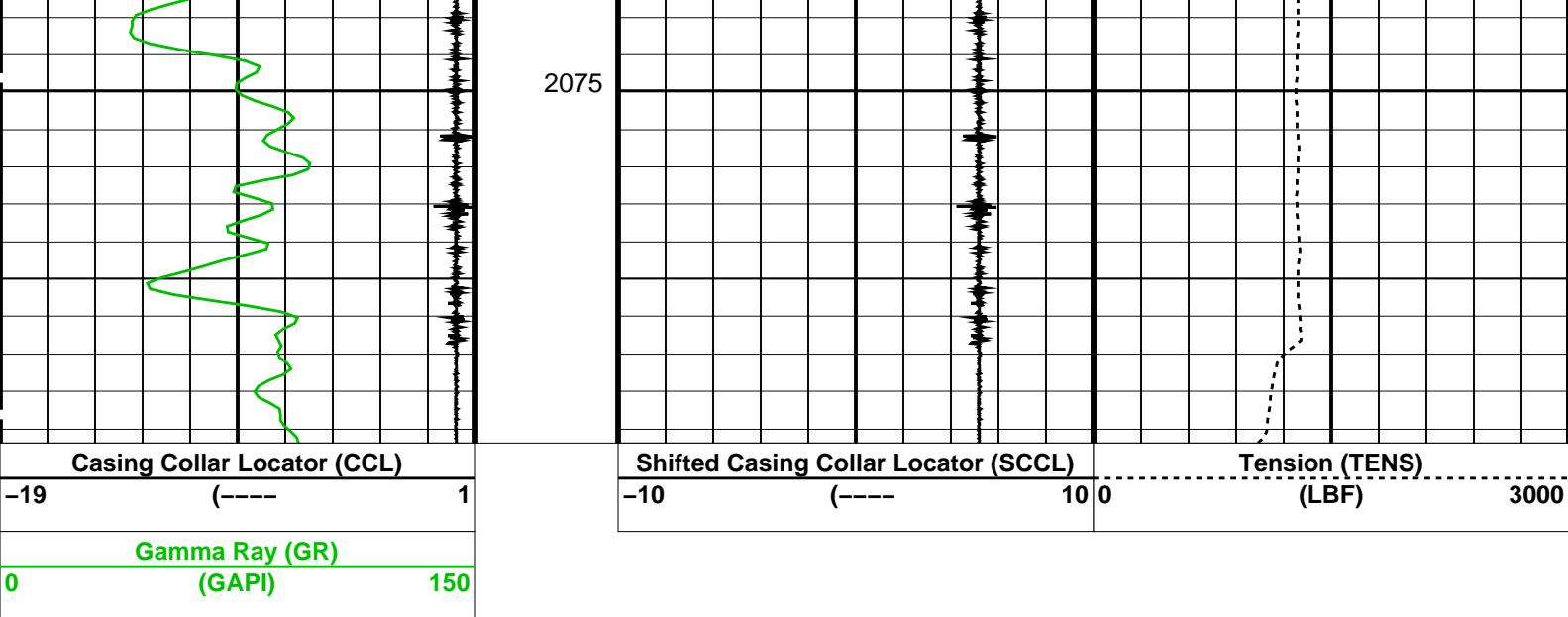
TENS

SCCL

TENS

SCCL





PIP SUMMARY

Time Mark Every 60 S

Format: CCLLog Vertical Scale: 1:200

Graphics File Created: 04-May-2006 23:34

OP System Version: 14C0-302

MCM

SHM_GUN 14C0-302 PGGT-CC 14C0-302

Output DLIS Files

DEFAULT	PERFO_032LUP	FN:33	PRODUCER	04-May-2006 23:34
CUSTOMER	PERFO_032LUC	FN:34	CUSTOMER	04-May-2006 23:34

Schlumberger

Depth Determination # 1
Correlation Log

MAXIS Field Log

Company: Esso Australia Pty. Ltd.

Well: TNA_A13

Input DLIS Files

DEFAULT	PERFO_028LUP	FN:27	PRODUCER	04-May-2006 21:15	2075.4 M	1763.9 M
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Output DLIS Files

DEFAULT	PERFO_029PUP	FN:28	PRODUCER	04-May-2006 22:08	2075.2 M	1764.2 M
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OP System Version: 14C0-302

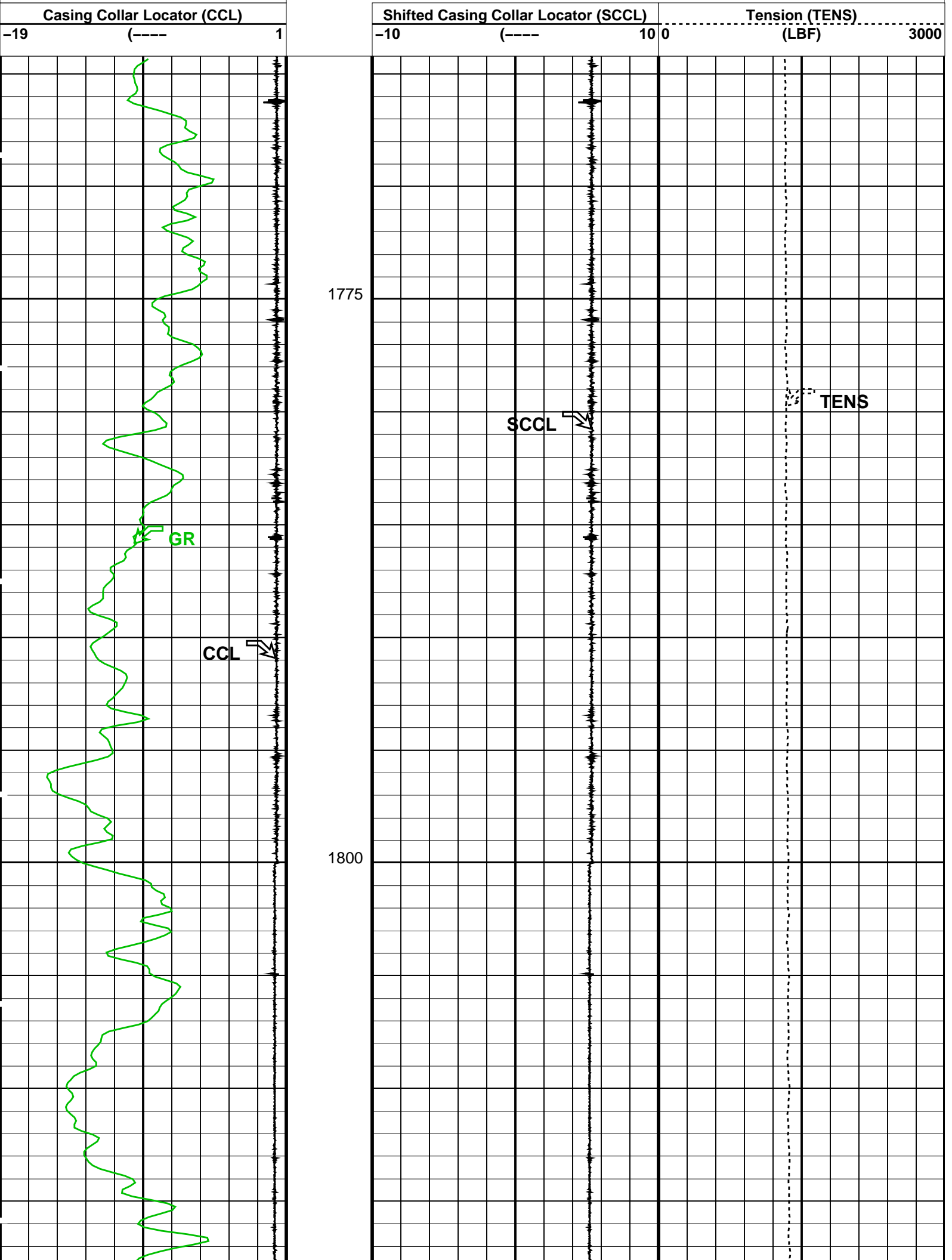
MCM

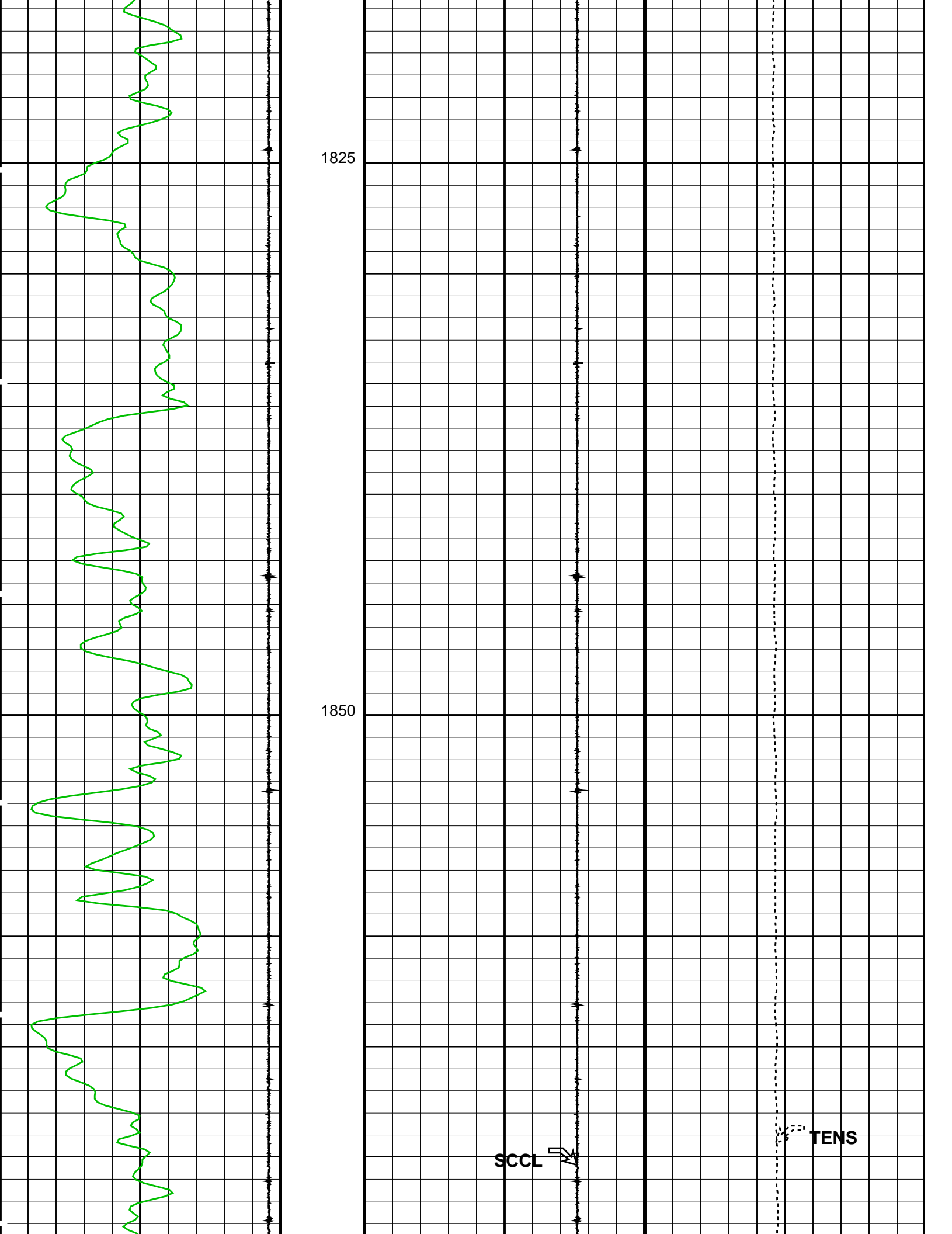
SHM_GUN 14C0-302 PGGT-CC 14C0-302

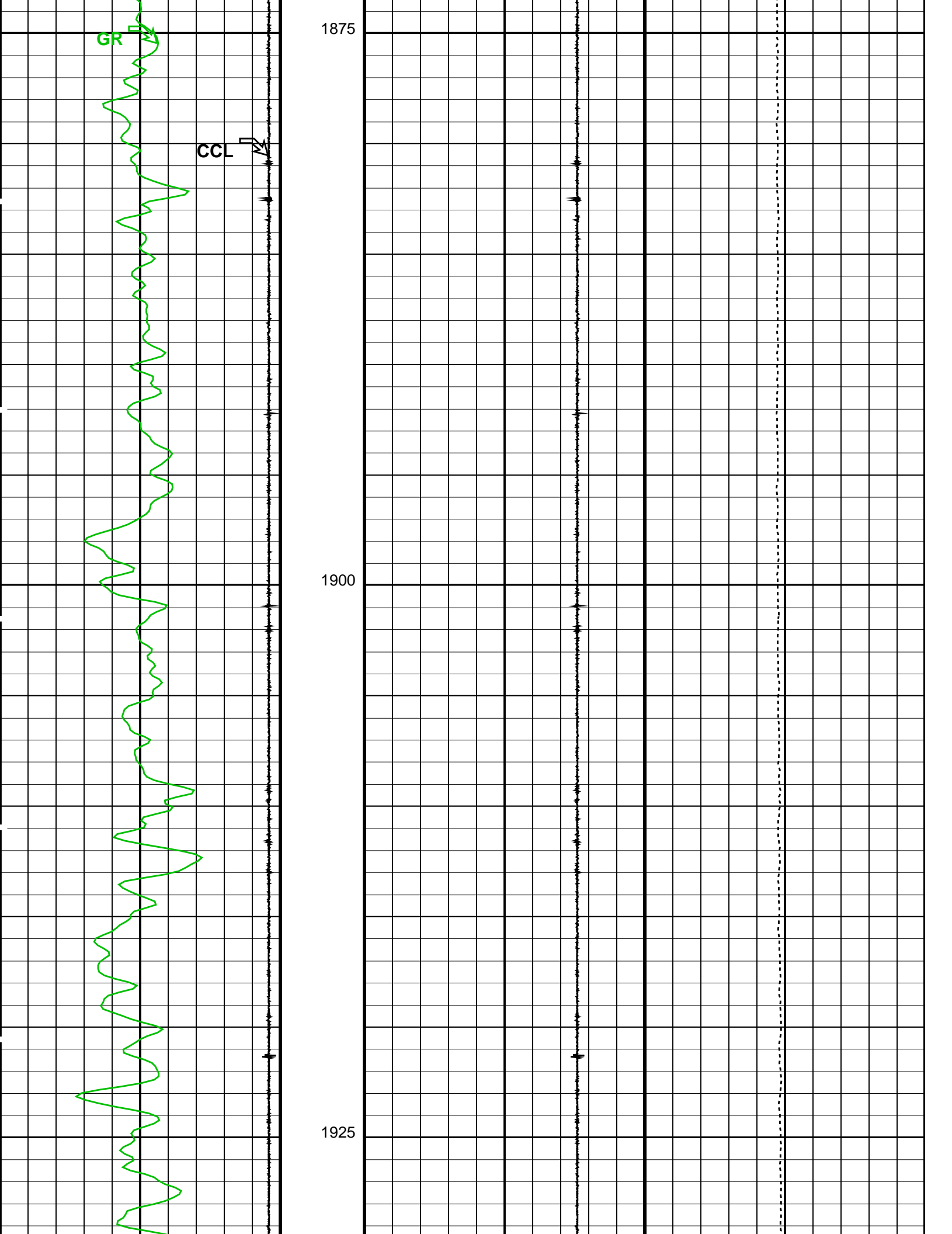
PIP SUMMARY

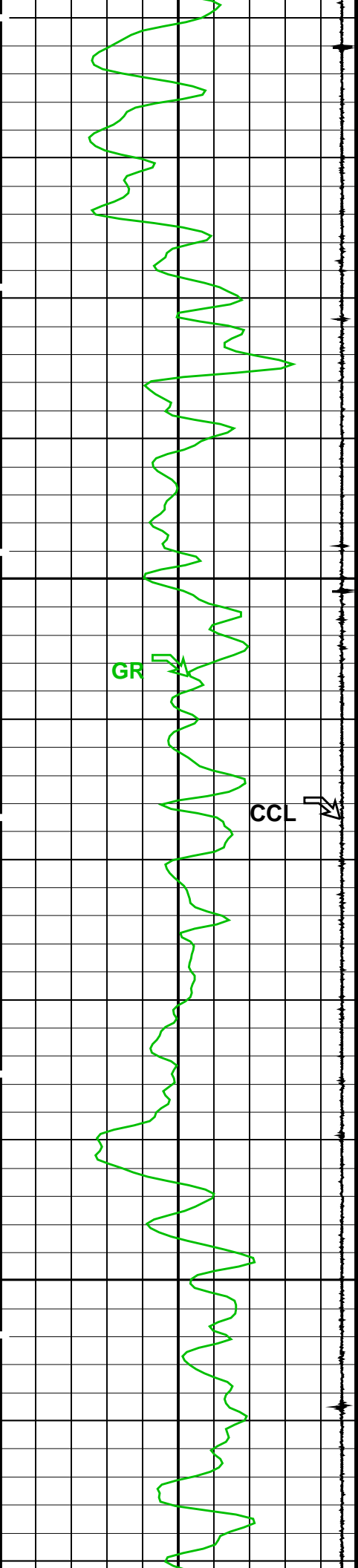
Time Mark Every 60 S

Gamma Ray (GR)
(GAPI) 0 150



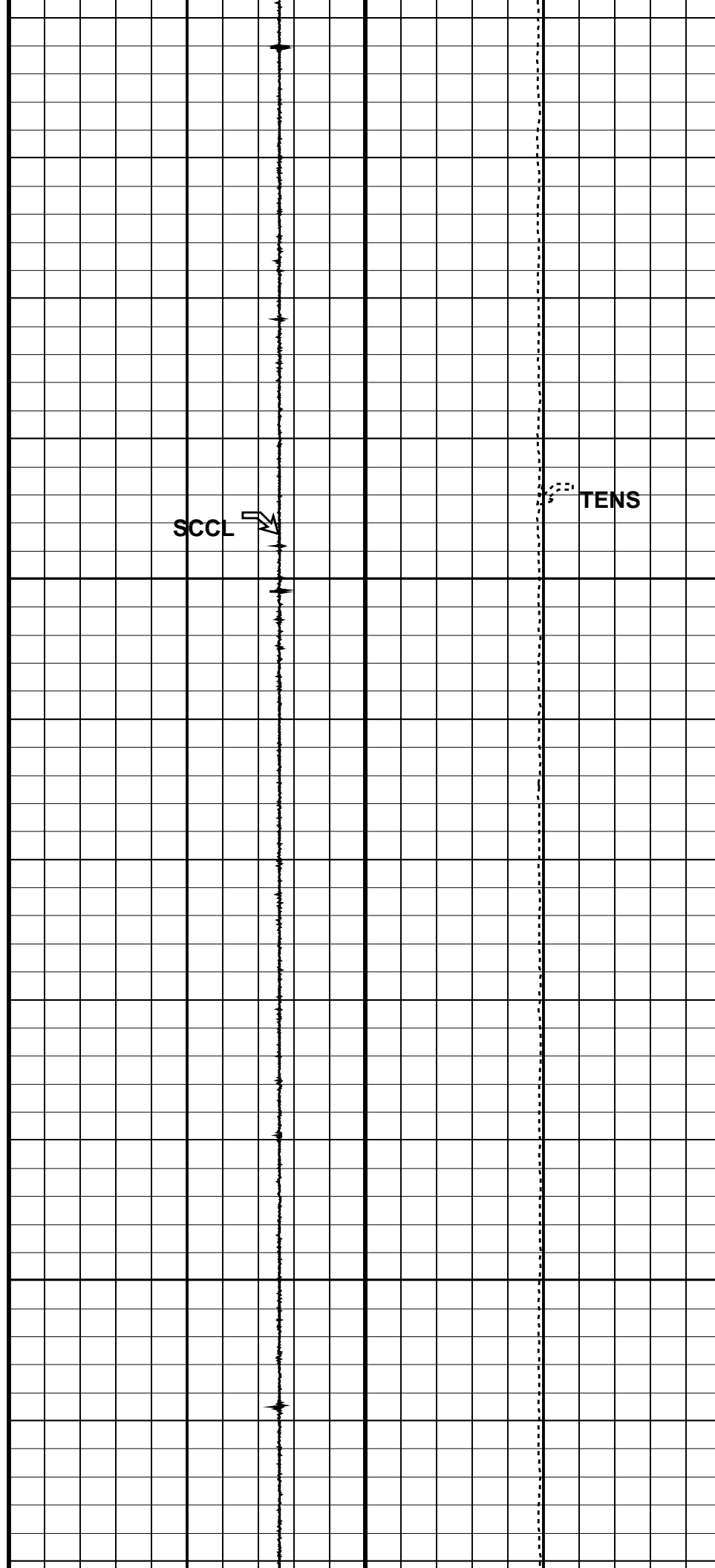


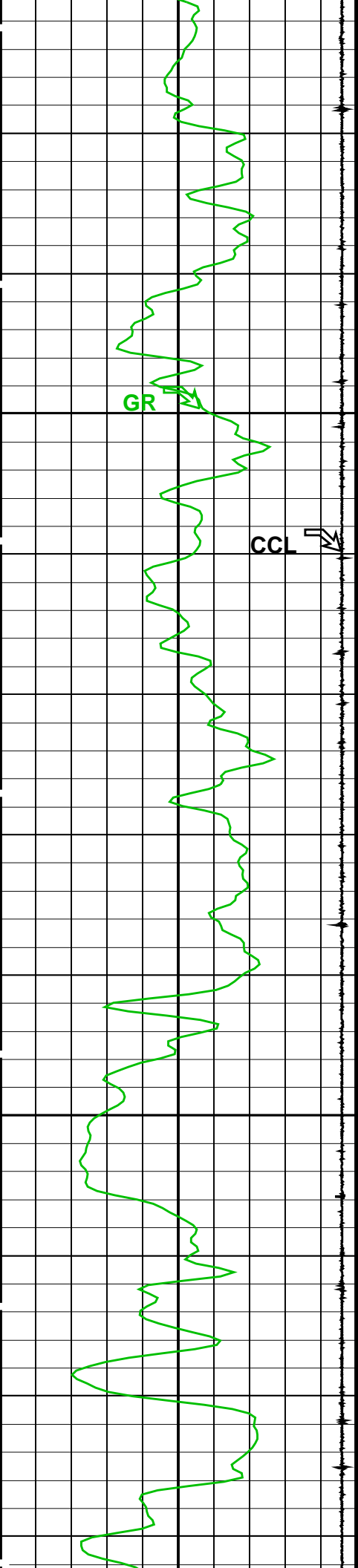




1950

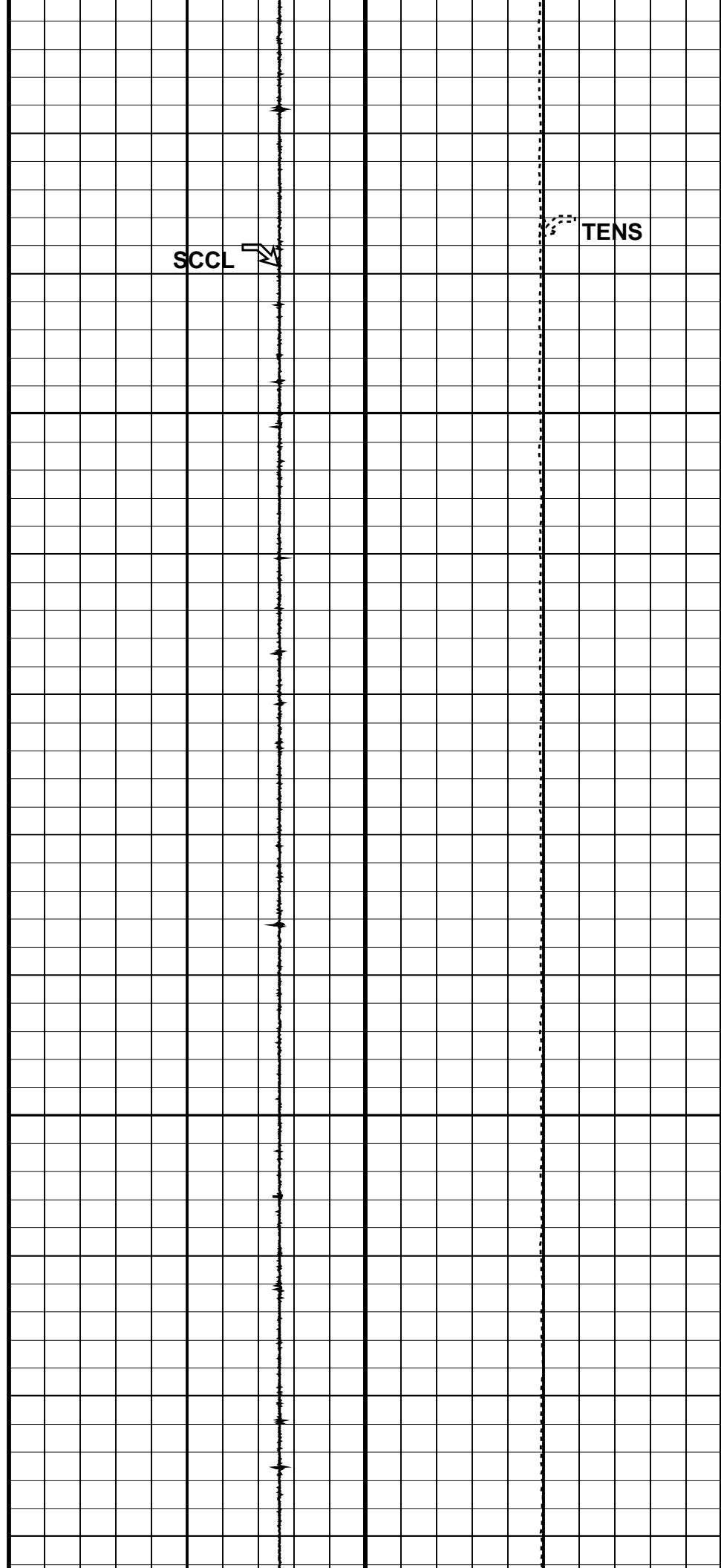
1975





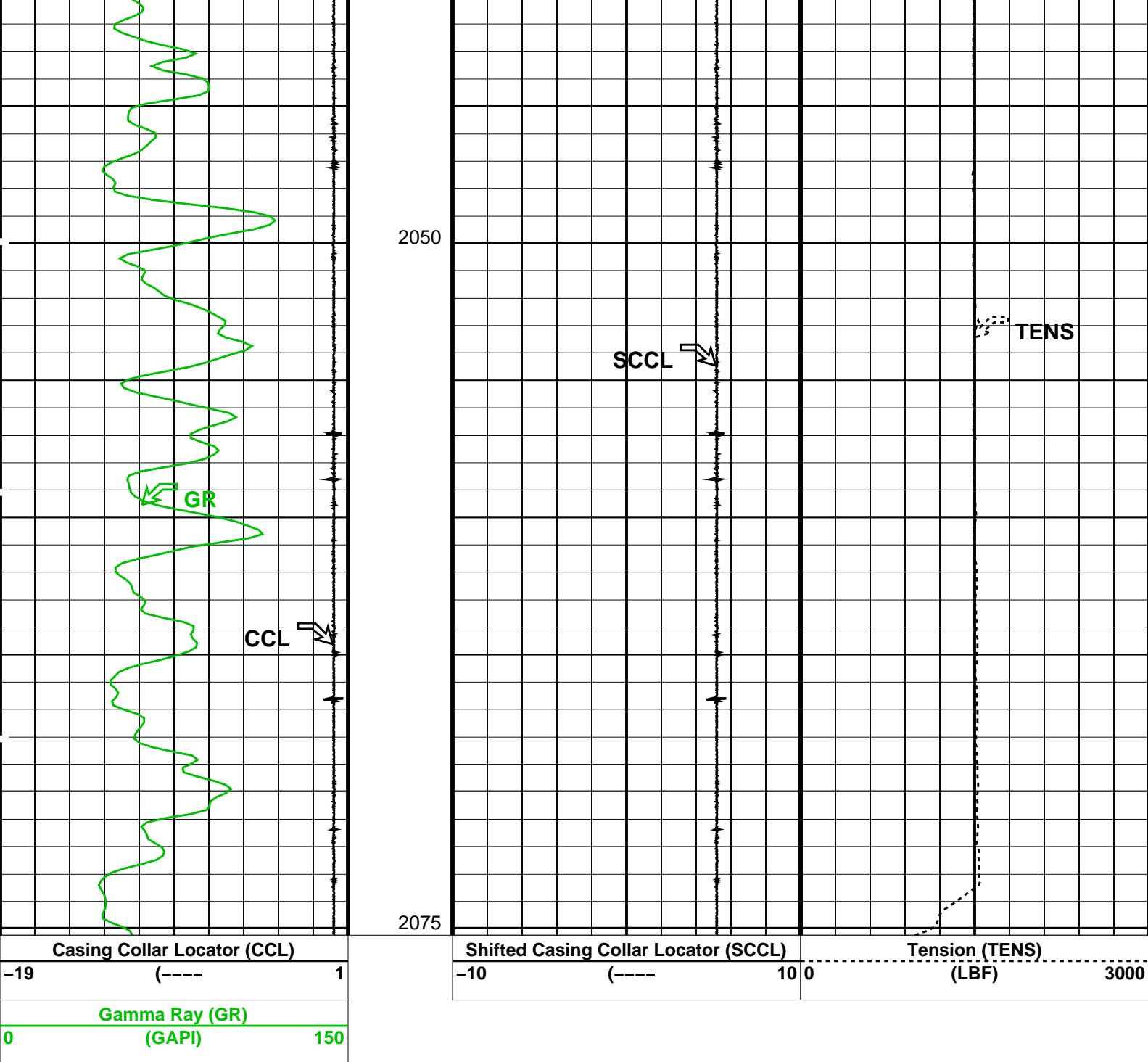
2000

2025



SCCL

TENS



Parameters						
DLIS Name		Description			Value	
System and Miscellaneous						
DO		Depth Offset for Playback			-0.2	M
PP		Playback Processing			NORMAL	
Format: CCLLog		Vertical Scale: 1:200		Graphics File Created: 04-May-2006 22:08		
OP System Version: 14C0-302						
MCM						
SHM_GUN	14C0-302		PGGT-CC	14C0-302		
Input DLIS Files						
DEFAULT	PERFO_028LUP	FN:27	PRODUCER	04-May-2006 21:15	2075.4 M	1763.9 M

Output DLIS Files

DEFAULT

PERFO_029PUP

FN:28

PRODUCER

04-May-2006 22:08

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

Schlumberger

Well: **TNA_A13**

Field: **Tuna**

Rig: **Rig 22 / Prod 2**

Country: **Australia**

Depth Determination
2 7/8" Pure Perforation
5-May-2006