

**Company: ENI U&TS**

**Well: GUENDALINA 2 DIR A**

**Field: GUENDALINA**

**LOG: FSMT-E**

**Country: ITALY**

**FSMT-E RUN #4**

**Formation Subsidence Monitoring Tool**

**Log Interval 3185 – 3045m**

LOG: FSMT-E  
 Field: GUENDALINA  
 Location: ADRIATIC SEA  
 Well: GUENDALINA 2 DIR A  
 Company: ENI U&TS

LOCATION		Elev.:	K.B.	37.00 m
ADRIATIC SEA			G.L.	42.00 m
			D.F.	37.00 m
Permanent Datum:	MSL			
Log Measured From:	DF	0.00 m	above Perm. Datum	
Drilling Measured From:	DF			
RIG: RIGLESS	Max. Well Deviation	Longitude	Latitude	
	27.72 deg	12° 52' 54.083"	44° 33' 56.797"	

Logging Date	11-Nov-2018
Run Number	4 FSMT
Depth Driller	3276 m
Schlumberger Depth	3186 m
Bottom Log Interval	3185 m
Top Log Interval	3045 m
Casing Fluid Type	PRODUCTION FLUID
Salinity	
Density	1 g/cm3
Fluid Level	2080 m
BIT/CASING/TUBING STRING	
Bit Size	12.250 in
From	1340 m
To	3276 m
Casing/Tubing Size	9.625 in
Weight	43.5 lbm/ft
Grade	L80
From	0 m
To	3248.57 m
Maximum Recorded Temperatures	31 degC
Logger On Bottom	11-Nov-2018
Unit Number	729
Recorded By	M. CIVITARESE \ L. MONDELLO
Witnessed By	G. FORNAI

		Run 1	Run 2	Run
PVT DATA				
Oil Density				
Water Salinity				
Gas Gravity				
Bo				
Bw				
1/Bq				
Bubble Point Pressure				
Bubble Point Temperature				
Solution GOR				
Maximum Deviation	27.72 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				
Recorded By				
Witnessed By				

## DEPTH SUMMARY LISTING

Date Created: 11-NOV-2018 11:29:03

### Depth System Equipment

Depth Measuring Device	Tension Device	Logging Cable
Type: IDW-B Serial Number: 6743 Calibration Date: 22-sep-2017 Calibrator Serial Number: 15 Calibration Cable Type: 2-23ZT Wheel Correction 1: -3 Wheel Correction 2: 0	Type: CMTD-B/A Serial Number: 1739 Calibration Date: 07-Sep-2017 Calibrator Serial Number: 1080 Number of Calibration Points: 10 Calibration RMS: 9 Calibration Peak Error: 17	Type: 2-23ZT Serial Number: Length: 5000 M Conveyance Method: Wireline Rig Type: Rigless

### Depth Control Parameters

Log Sequence: Subsequent Log In the Well
Reference Log Name: FSMT-E
Reference Log Run Number: 3
Reference Log Date: 22-Dec-2017

### Depth Control Remarks

<ol style="list-style-type: none"> <li>1. All SLB depth policy applied</li> <li>2. IDW used as primary depth control, Z-Chart as secondary</li> <li>3.</li> <li>4.</li> <li>5.</li> <li>6.</li> </ol>
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OTHER SERVICES1 OS1: DUMMY RUN OS2: OS3: OS4: OS5:	OTHER SERVICES2 OS1: OS2: OS3: OS4: OS5:
REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
Log Objective: Monitoring Formation Subsidence by Time Laps technique	
Log correlated with FSMT-E Run #3 performed on 22-Dec-2017 by Schlumberger	
Tool ID 1.69in, Weak point used black 1500-1800Lbf with ERS. Tool zero at bottom	
R/A Pellet located @ 3060.36, 3111.31m	
Casing Pip Tag located @ 3099.25, 3104.50, 3114.98, 3120.25, 3130.74, 3141.28m	
Casing Pip Tag located @ 3151.77, 3162.20m	

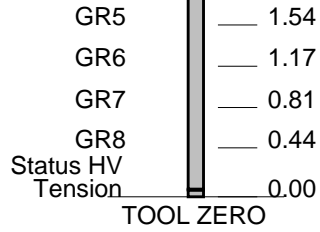
Performed 3 passes @ 300 ft/hr	
Pip Tag and bullet located below 3172 cannot be detected due to TD found @ 3186m	
Before Calibration performed on 17-Oct-2018	
After calibration to be performed on Jan-2019	
Max Deviation 27.72 deg, Rig flr to tubing hanger 21.37m, Main deck to tubing hanger 5.7m	
Pressure test performed @ 3000 psi, WHP: 16 bar	
Adapter flange 3 1/16 10 Kpis single	

RUN 1			RUN 2		
SERVICE ORDER #:	DYW3-00030		SERVICE ORDER #:		
PROGRAM VERSION:	19C2-270		PROGRAM VERSION:		
FLUID LEVEL:	2080 m		FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

**EQUIPMENT DESCRIPTION**

RUN 1	RUN 2
<b>SURFACE EQUIPMENT</b>	
WITM-A PSC_16MHZ	

DOWNHOLE EQUIPMENT			
MH-22 PEH MH-22 1152		14.77	
AH-38		13.97	
ERS 1328 ERS-E 1328	Detail MT TelStatus CTEM 	13.89	
PSPT PSC-A 701 PSPT-E PSTC-E	PSTC 	13.51 12.71	
FSMT-E FSMD-B 701 FSMX-A 701 FSMX-A 702 FSMX-A 705 FSMD-C 701 BN	Acc, GR1 GR2 GR3 GR4 	12.71 11.52 11.15 10.79 10.42	



MAXIMUM STRING DIAMETER 1.69 IN  
 MEASUREMENTS RELATIVE TO TOOL ZERO  
 ALL LENGTHS IN METERS

Client: ENI U&TS  
 Well: GUENDALINA2  
 Field: GUENDALINA  
 State: ITALY  
 Country:

Drawing Date: 10/14/2015  
 API #:

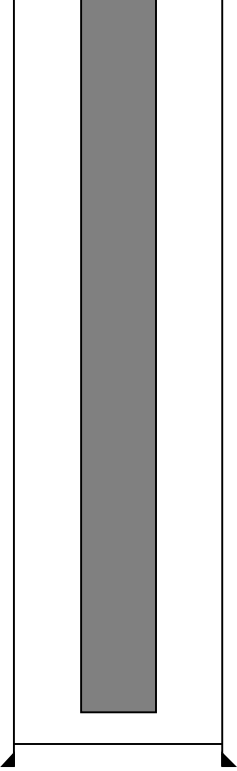
Rig Name: KEY MANHATTAN  
 Reference Datum: Mean Sea Level  
 Elevation:

Production String	(in)		(m)	Well Schematic	(m)	(in)		Casing String
	OD	ID	MD		MD	OD	ID	
Tubing	3.500		0.0		0.0	13.375		Casing String
					1330.0	9.625		
					1334.0	13.375	9.625	

Tubing Bottom

3.500

3219.2



3250.0

0.625

Casingshoe

**Schlumberger**

## JOB EVENTS SUMMARIES

MAXIS Field Log

### Schlumberger Job Event Summary

Time	Elapsed Time	Depth (M)	File
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Rig Up Started 9-Nov-2018 10:20

#### Descent 1: FSMT-E/PSPT/ERS

Begin Descent	10-Nov-2018 10:21		
Log Pass (up) Correlation	11-Nov-2018 11:35	000:07	3089.1 - 3055.2 FSMT_PSP_008LUP
Log Pass (up) Pass 1	11-Nov-2018 11:48	001:35	3185.0 - 3041.6 FSMT_PSP_009LUP
Log Pass (up) Pass 2	11-Nov-2018 13:28	001:34	3185.0 - 3043.9 FSMT_PSP_011LUP

## Schlumberger Job Event Summary

	Time	Elapsed Time	Depth (M)	File
Log Pass (up) Correlation	12-Nov-2018 10:35	000:16	3085.5 - 2998.3	FSMT_PSP_019LUP
Log Pass (up)	12-Nov-2018 10:54	000:07	3079.5 - 3045.1	FSMT_PSP_020LUP
Log Pass (up) Pass 3	12-Nov-2018 11:06	001:37	3185.9 - 3043.1	FSMT_PSP_021LUP



**FINAL RESULTS**  
**3185 m – 3045 m**

MAXIS Field Log

Well Name: GUENDALINA 2 DIR A  
 Run Date : 11-Nov-2018  
 Zone Name: 3 pass 2  
 Tool String: FSMT-E S/N 0  
 Reference Detector: DET1  
 File 0: FSMT\_12.fsf (Reference File)  
 File 1: FSMT\_14.fsf  
 File 2: FSMT\_22.fsf

17 OCT 2018 : Calibrated Detector Spacings at -1.3°C (m ):

D12 = 0.369288  
 D23 = 0.368877  
 D34 = 0.368394  
 D45 = 8.895258  
 D56 = 0.368496  
 D67 = 0.366834  
 D78 = 0.370220

Marker spacings for each pass :

Distance in m between a marker and the adjacent marker below  
 Standard Deviation always in mm

Results on all 3 passes in m :

#	Depth	Spacing Avg. (~21 Meas.)	Std Dev (3 passes)
- 0	3162.20		
1	3151.77	10.44934	2.59752
2	3141.28	10.49482	2.41209

2	3111.25	10.49102	6.11209
3	3130.74	10.49213	6.17748
4	3120.25	10.49268	1.44170
5	3114.98	5.26717	2.23118
6	3111.31	3.67212	6.67184
7	3104.50	6.80094	3.54291
8	3099.25	5.24124	7.73003
- 9	3060.36	38.89497	3.72366

All Peaks were automatically detected with the following parameters:

FSMT\_FIT = GAUSSIAN

FSMT\_FILTER = 200

FSMT\_THRESHOLD = 100

Peak at depth 3162.20 m was processed using the following parameters

FSMT\_PEAKEYTYPE = SMALL\_PEAK

FSMT\_FIT = GAUSSIAN

FSMT\_FILTER = 200

Peak at depth 3114.98 m was processed using the following parameters

FSMT\_PEAKEYTYPE = SMALL\_PEAK

FSMT\_FIT = GAUSSIAN

FSMT\_FILTER = 200

**Schlumberger**

**PASS# 3**  
**3185 m – 3045 m**

MAXIS Field Log

Company: ENI U&TS

Well: GUENDALINA 2 DIR A

**Input DLIS Files**

DEFAULT	FSMT_PSP_021LUP	FN:40	PRODUCER	12-Nov-2018 11:06	3185.9 M	3043.1 M
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**Output DLIS Files**

DEFAULT	FSMT_PSP_024PUP	FN:46	PRODUCER	12-Nov-2018 12:53	3186.2 M	3043.4 M
CUSTOMER	FSMT_PSP_024PUC	FN:47	CUSTOMER	12-Nov-2018 12:53	3186.2 M	3043.4 M

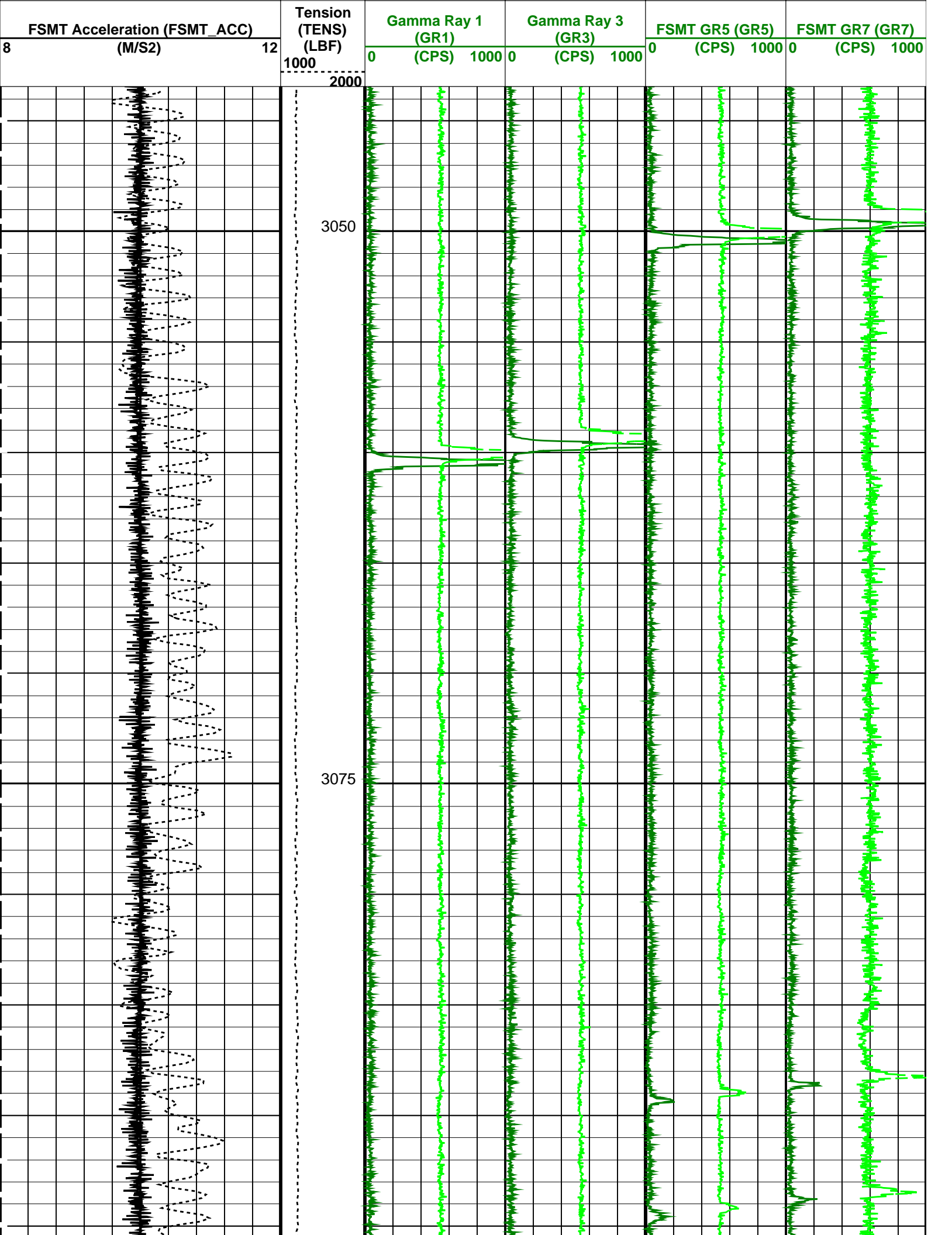
**OP System Version: 19C2-270**

FSMT-E ERS	SRPC-FSMTE-JUNE_2013_OP19C2H1 19C2-270	PSPT	19C2-270
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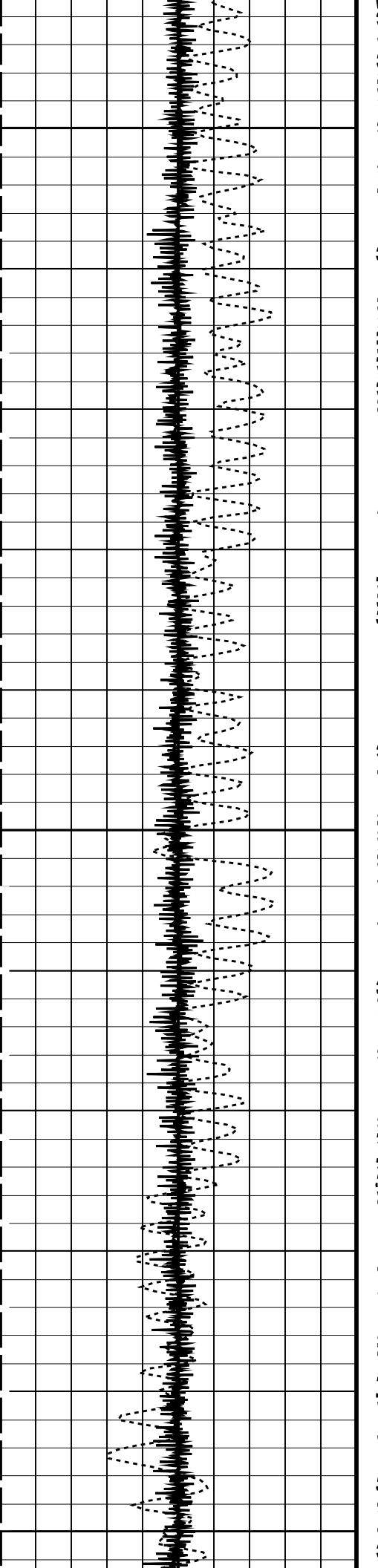
**PIP SUMMARY**

Time Mark Every 60 S

Cable Speed (CS) (F/HR)	250	Gamma Ray 2 (GR2)	Gamma Ray 4 (GR4)	FSMT GR6 (GR6)	FSMT GR8 (GR8)
		-500 (CPS) 500	-500 (CPS) 500	-500 (CPS) 500	-500 (CPS) 500



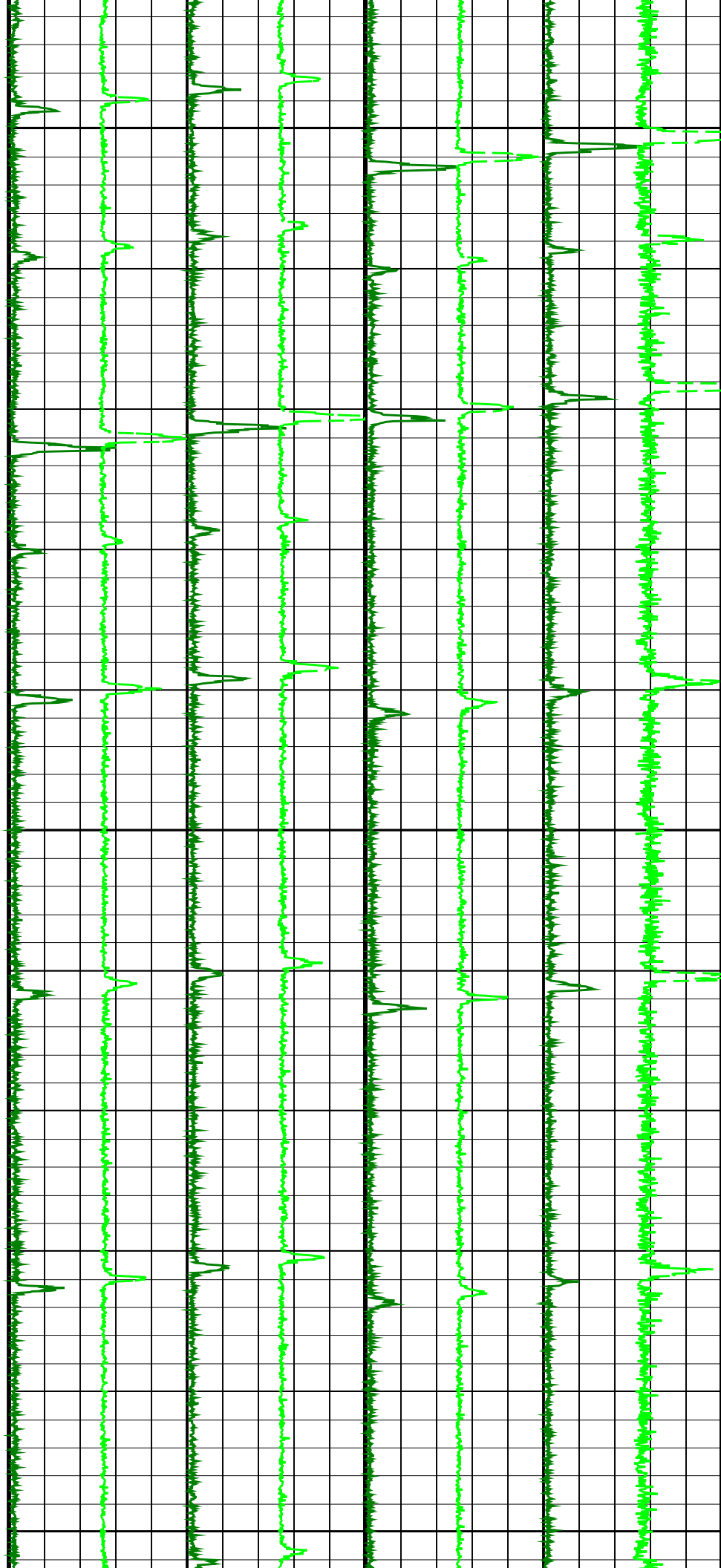


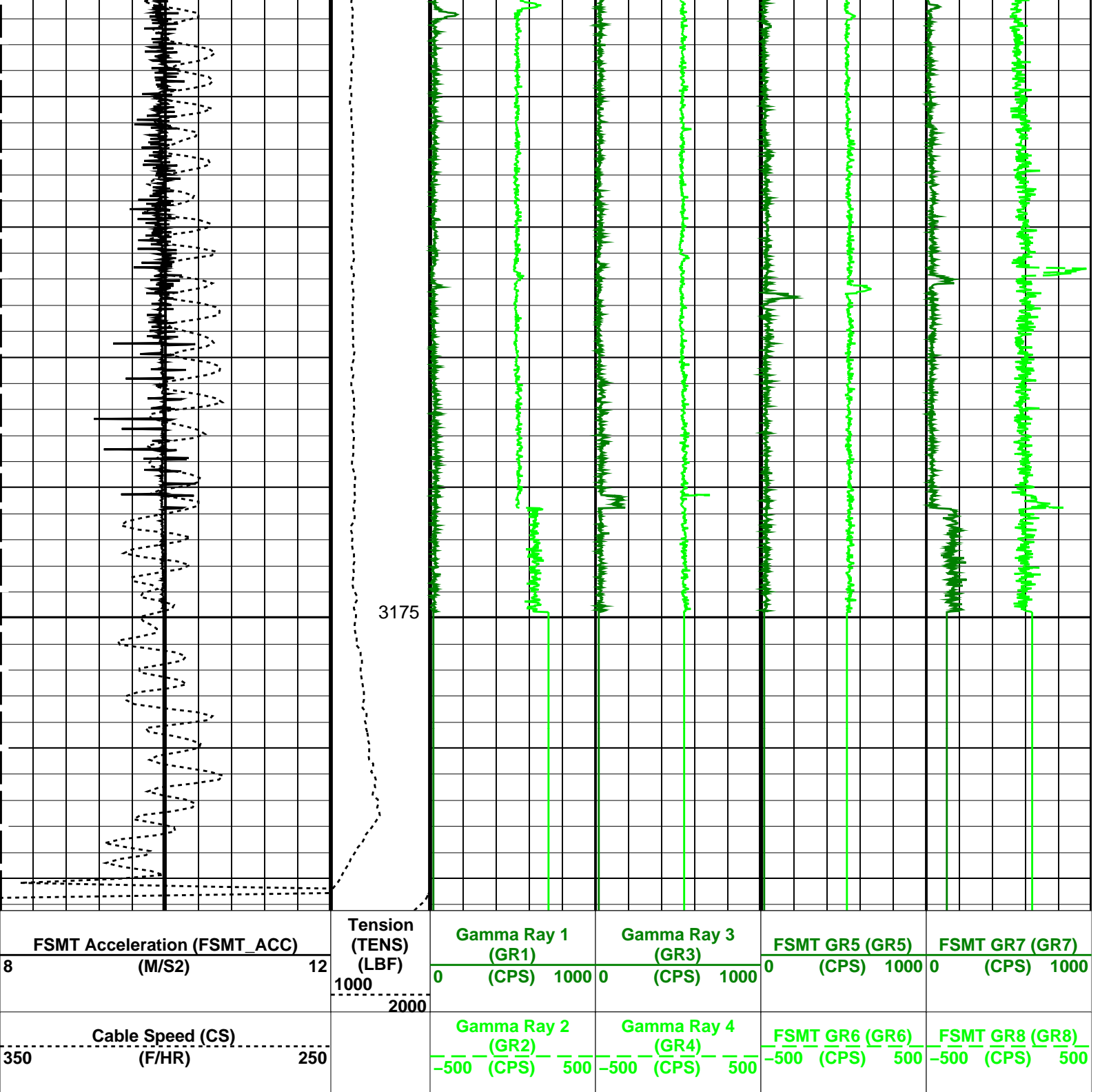


3100

3125

3150





3175

FSMT Acceleration (FSMT_ACC) (M/S2)	8	12	Tension (TENS) (LBF)	1000	2000	Gamma Ray 1 (GR1) (CPS)	0	1000	Gamma Ray 3 (GR3) (CPS)	0	1000	FSMT GR5 (GR5) (CPS)	0	1000	FSMT GR7 (GR7) (CPS)	0	1000
Cable Speed (CS) (F/HR)	350	250				Gamma Ray 2 (GR2) (CPS)	-500	500	Gamma Ray 4 (GR4) (CPS)	-500	500	FSMT GR6 (GR6) (CPS)	-500	500	FSMT GR8 (GR8) (CPS)	-500	500

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
DO	System and Miscellaneous	
PP	Depth Offset for Playback	0.3 M
	Playback Processing	NORMAL

Format: FSMT\_Basic Vertical Scale: 1:200 Graphics File Created: 12-Nov-2018 12:53

OP System Version: 19C2-270

### Input DLIS Files

DEFAULT FSMT\_PSP\_021LUP FN:40 PRODUCER 12-Nov-2018 11:06 3185.9 M 3043.1 M

### Output DLIS Files

DEFAULT FSMT\_PSP\_024PUP FN:46 PRODUCER 12-Nov-2018 12:53  
 CUSTOMER FSMT\_PSP\_024PUC FN:47 CUSTOMER 12-Nov-2018 12:53



**PASS# 2**  
**3185 m – 3045 m**

MAXIS Field Log

Company: ENI U&TS

Well: GUENDALINA 2 DIR A

### Input DLIS Files

DEFAULT FSMT\_PSP\_011LUP FN:20 PRODUCER 11-Nov-2018 13:28 3185.0 M 3043.9 M

### Output DLIS Files

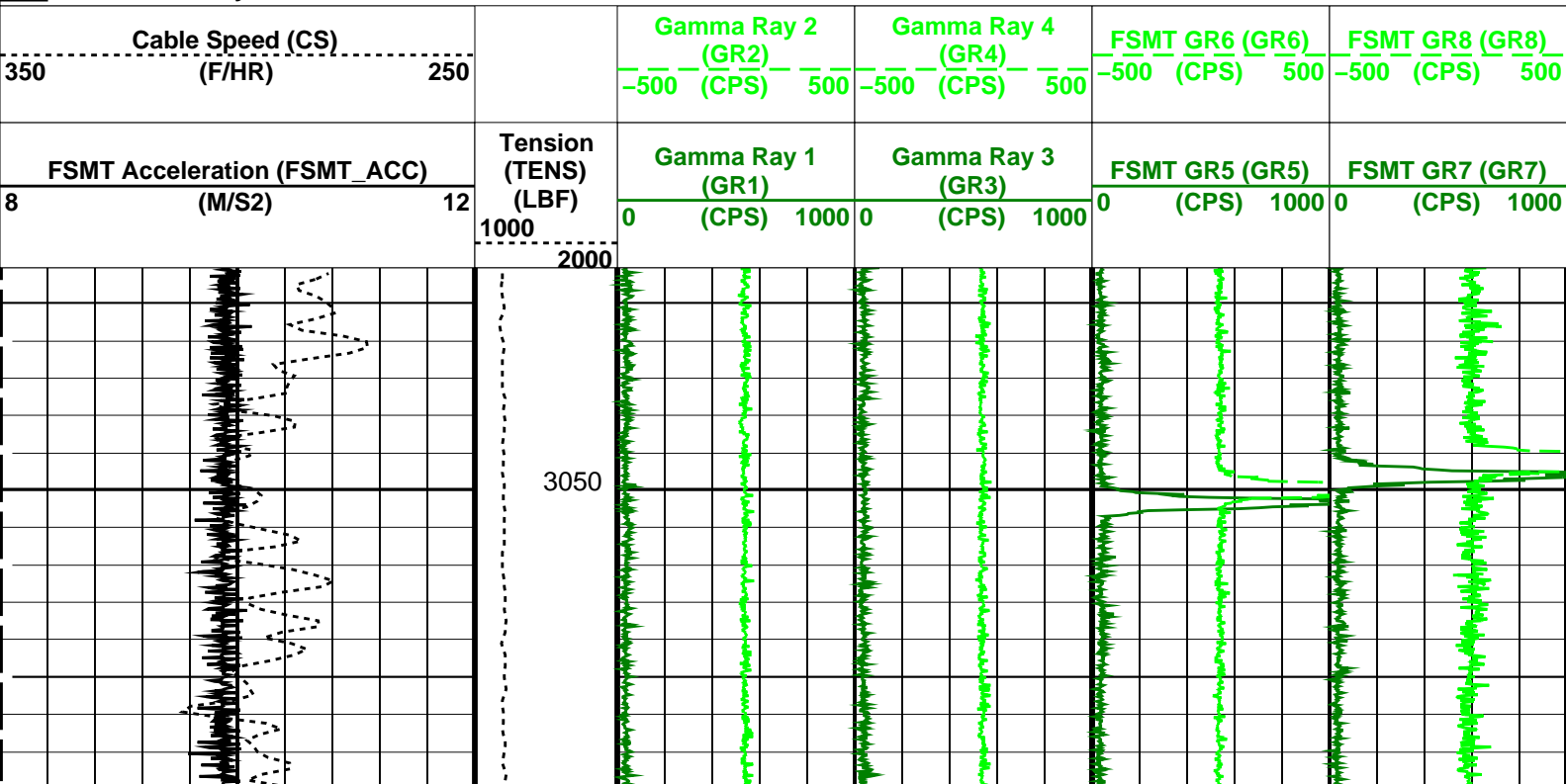
DEFAULT FSMT\_PSP\_014PUP FN:29 PRODUCER 11-Nov-2018 15:10 3185.0 M 3044.0 M  
 BACKUP FSMT\_PSP\_014PUP FN:30 PRODUCER 11-Nov-2018 15:11 3185.0 M 3044.0 M  
 CUSTOMER FSMT\_PSP\_014PUC FN:31 CUSTOMER 11-Nov-2018 15:10 3185.0 M 3044.0 M

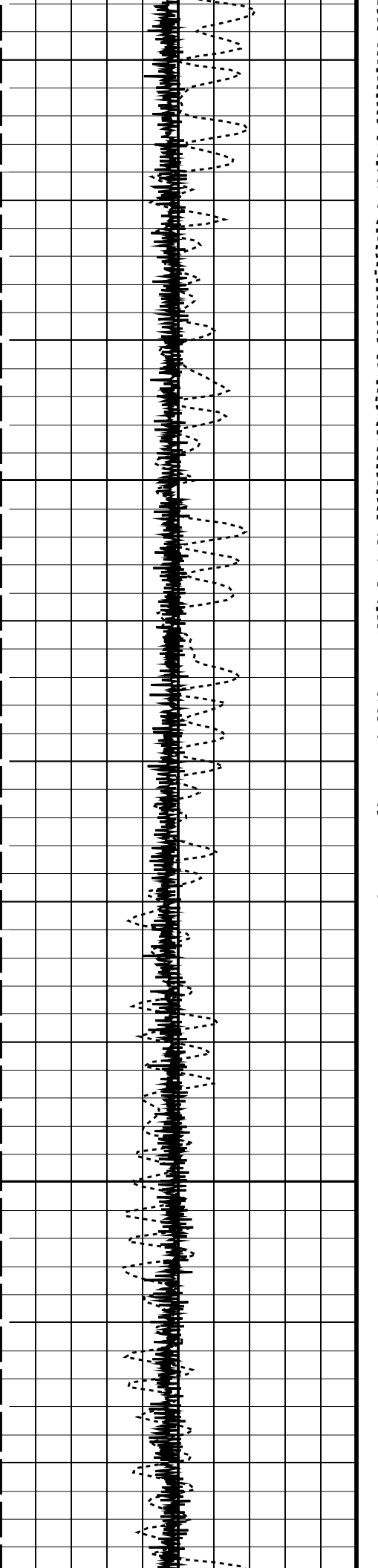
### OP System Version: 19C2-270

FSMT-E SRPC-FSMTE-JUNE\_2013\_OP19C2H1 PSPT 19C2-270  
 ERS 19C2-270

### PIP SUMMARY

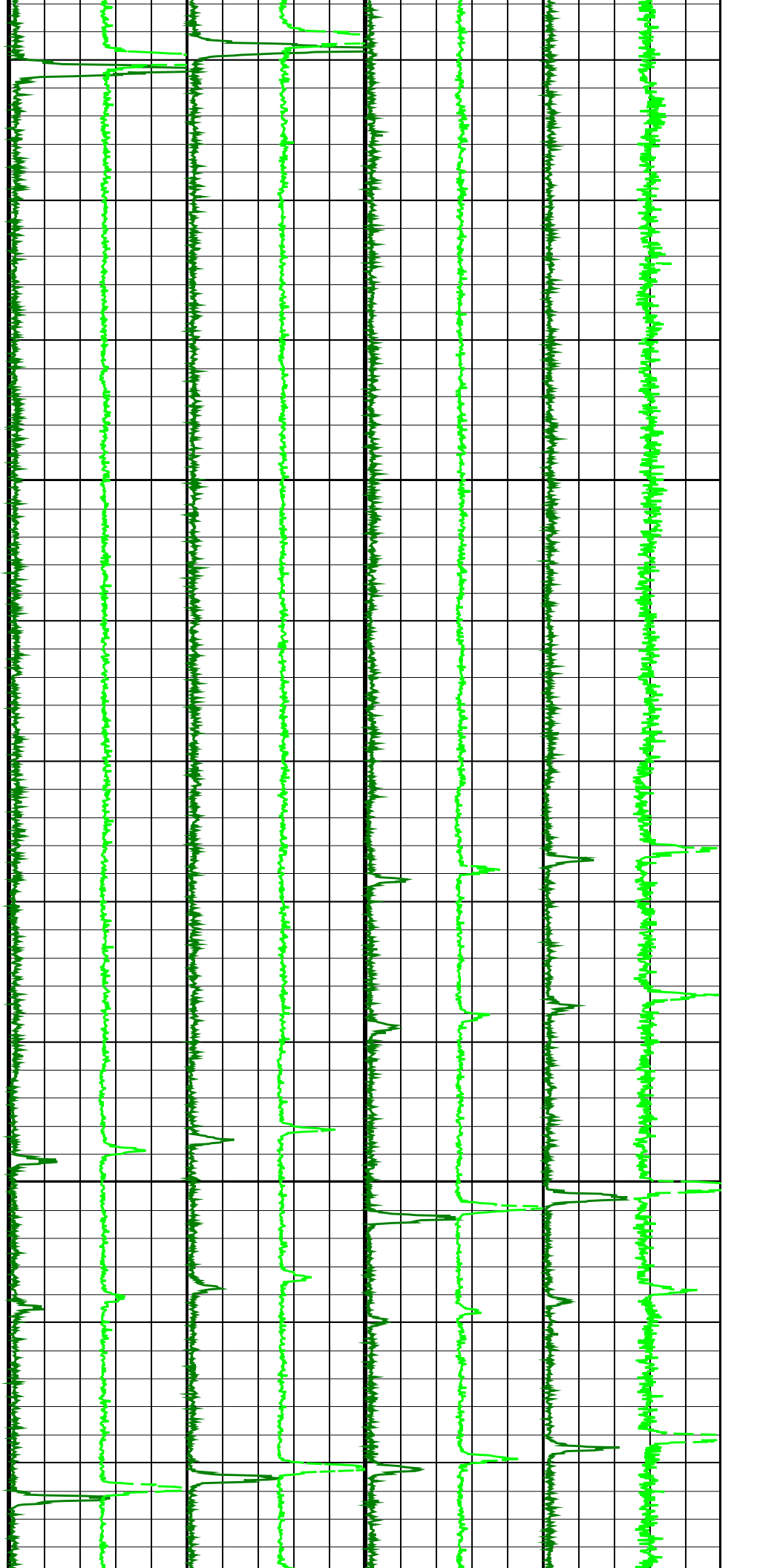
Time Mark Every 60 S

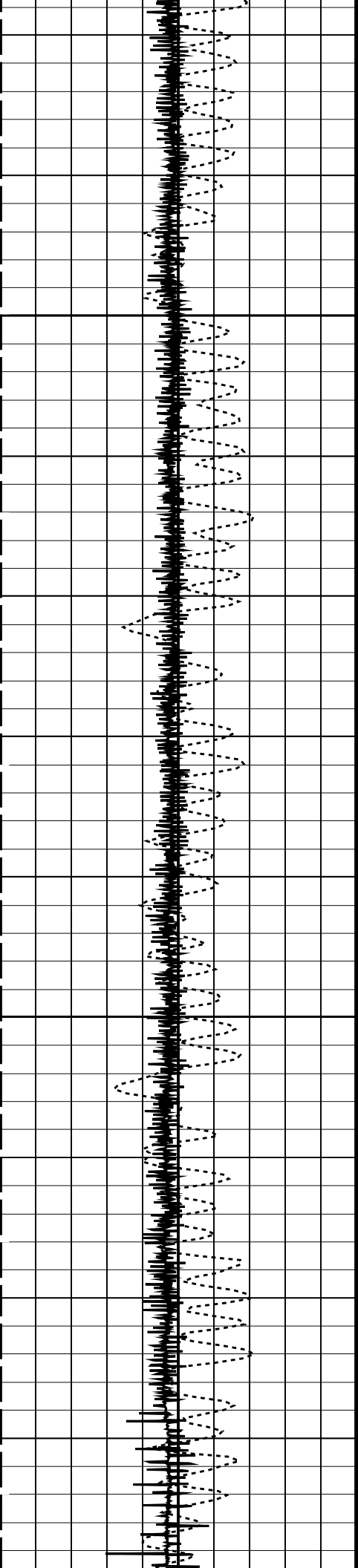




3075

3100

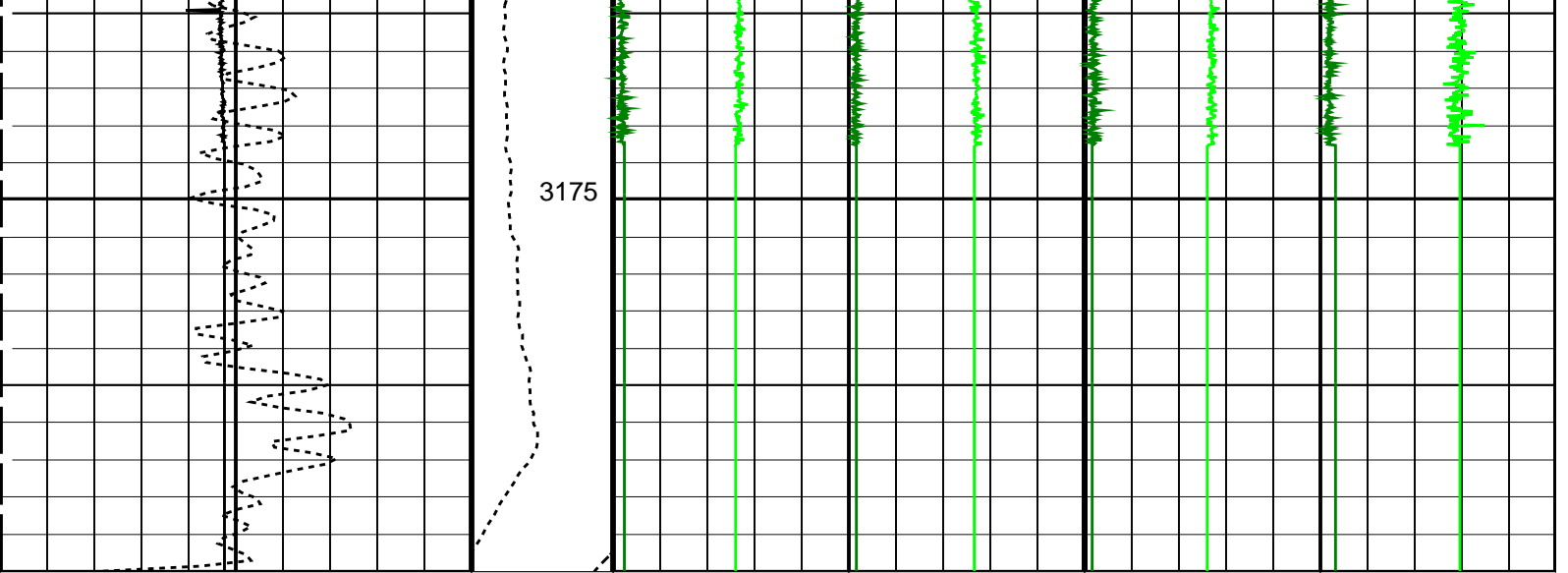




3125

3150





FSMT Acceleration (FSMT_ACC) (M/S2)	Tension (TENS) (LBF)	Gamma Ray 1 (GR1) (CPS)	Gamma Ray 3 (GR3) (CPS)	FSMT GR5 (GR5) (CPS)	FSMT GR7 (GR7) (CPS)
8 12	1000 2000	0 1000	0 1000	0 1000	0 1000
Cable Speed (CS) (F/HR)		Gamma Ray 2 (GR2) (CPS)	Gamma Ray 4 (GR4) (CPS)	FSMT GR6 (GR6) (CPS)	FSMT GR8 (GR8) (CPS)
350 250		-500 500	-500 500	-500 500	-500 500

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
DO	Depth Offset for Playback	0.0 M
PP	Playback Processing	NORMAL

Format: FSMT\_Basic Vertical Scale: 1:200 Graphics File Created: 11-Nov-2018 15:10

OP System Version: 19C2-270

FSMT-E SRPC-FSMTE-JUNE\_2013\_OP19C2H1 PSPT 19C2-270  
ERS 19C2-270

Input DLIS Files

DEFAULT FSMT\_PSP\_011LUP FN:20 PRODUCER 11-Nov-2018 13:28 3185.0 M 3043.9 M

Output DLIS Files

DEFAULT FSMT\_PSP\_014PUP FN:29 PRODUCER 11-Nov-2018 15:10  
 BACKUP FSMT\_PSP\_014PUP FN:30 PRODUCER 11-Nov-2018 15:11  
 CUSTOMER FSMT\_PSP\_014PUC FN:31 CUSTOMER 11-Nov-2018 15:10



PASS# 1  
3185 m - 3045 m

### Input DLIS Files

DEFAULT	FSMT_PSP_009LUP	FN:14	PRODUCER	11-Nov-2018 11:48	3185.0 M	3041.6 M
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### Output DLIS Files

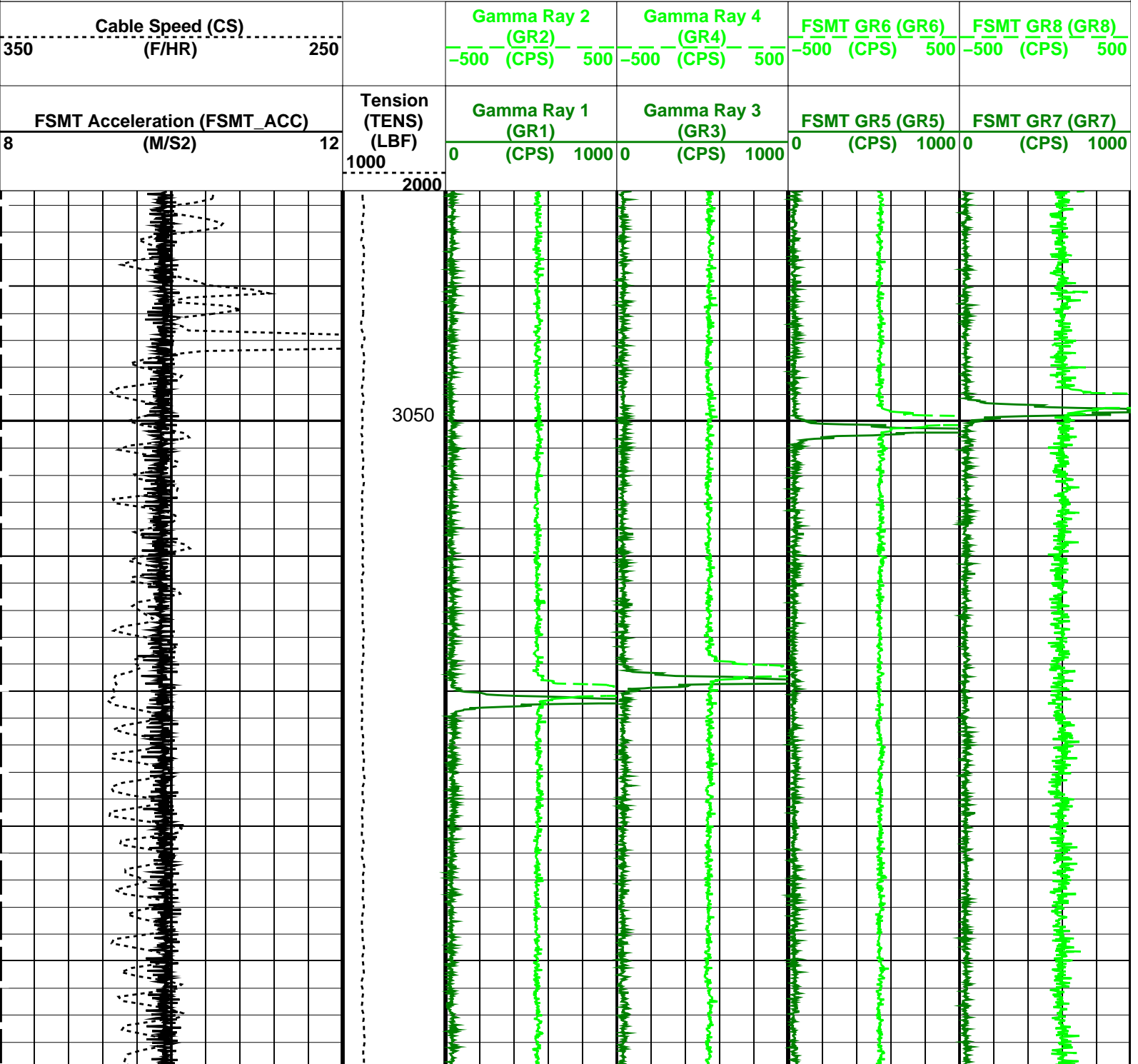
DEFAULT	FSMT_PSP_012PUP	FN:23	PRODUCER	11-Nov-2018 15:06	3184.9 M	3041.4 M
BACKUP	FSMT_PSP_012PUP	FN:24	PRODUCER	11-Nov-2018 15:07	3184.9 M	3041.4 M
CUSTOMER	FSMT_PSP_012PUC	FN:25	CUSTOMER	11-Nov-2018 15:06	3184.9 M	3041.4 M

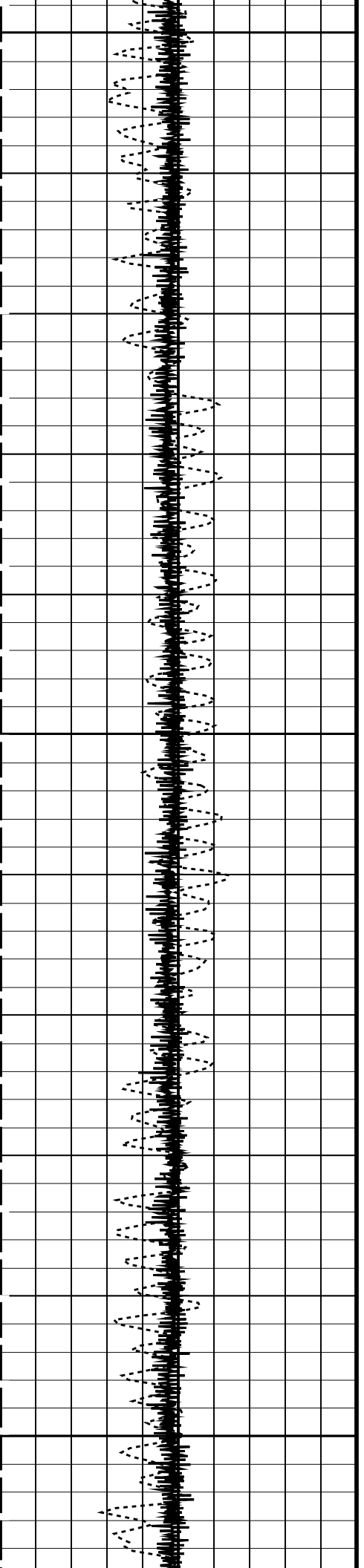
### OP System Version: 19C2-270

FSMT-E ERS	SRPC-FSMTE-JUNE_2013_OP19C2H1 19C2-270	PSPT	19C2-270
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#### PIP SUMMARY

Time Mark Every 60 S

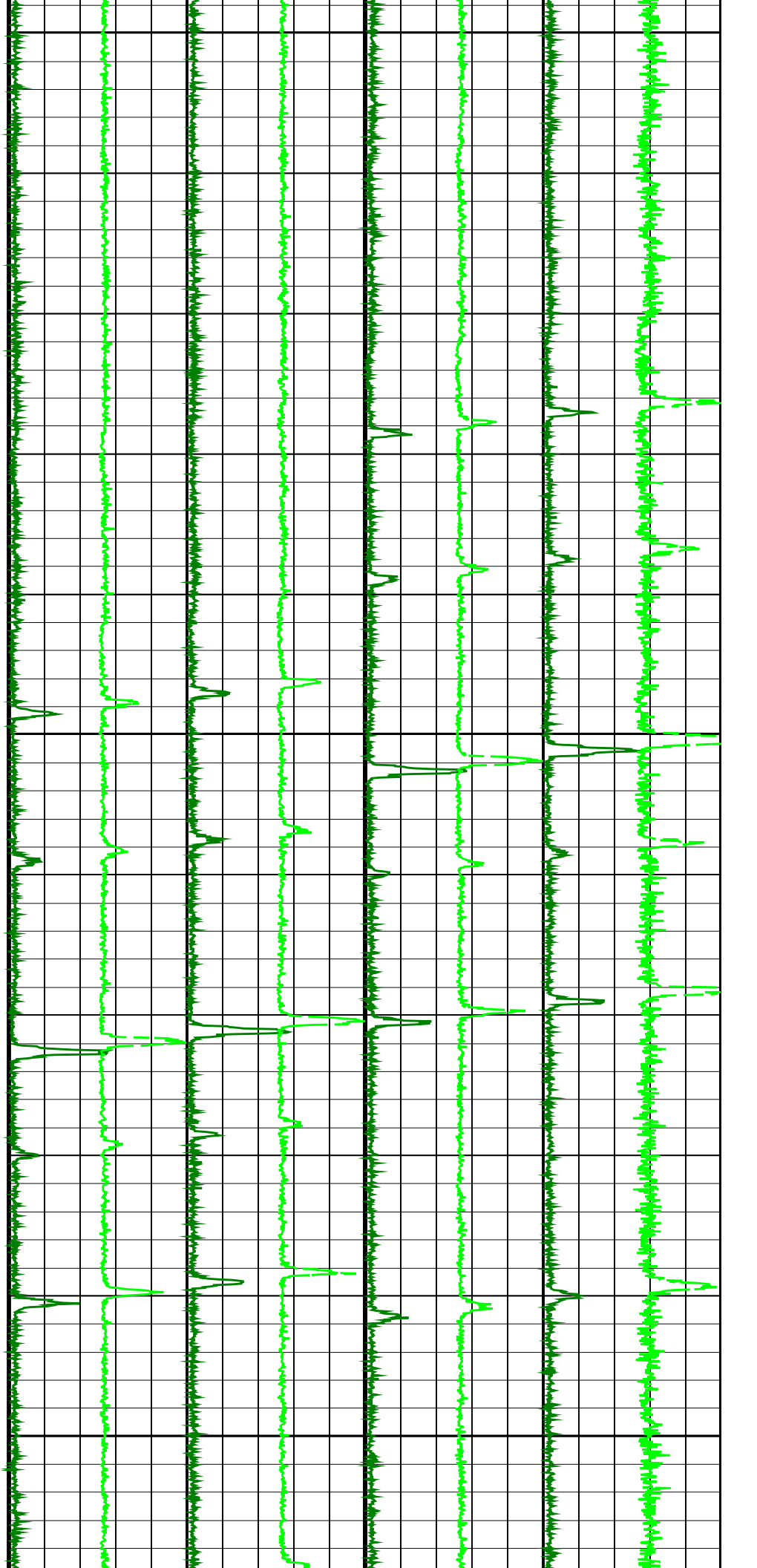




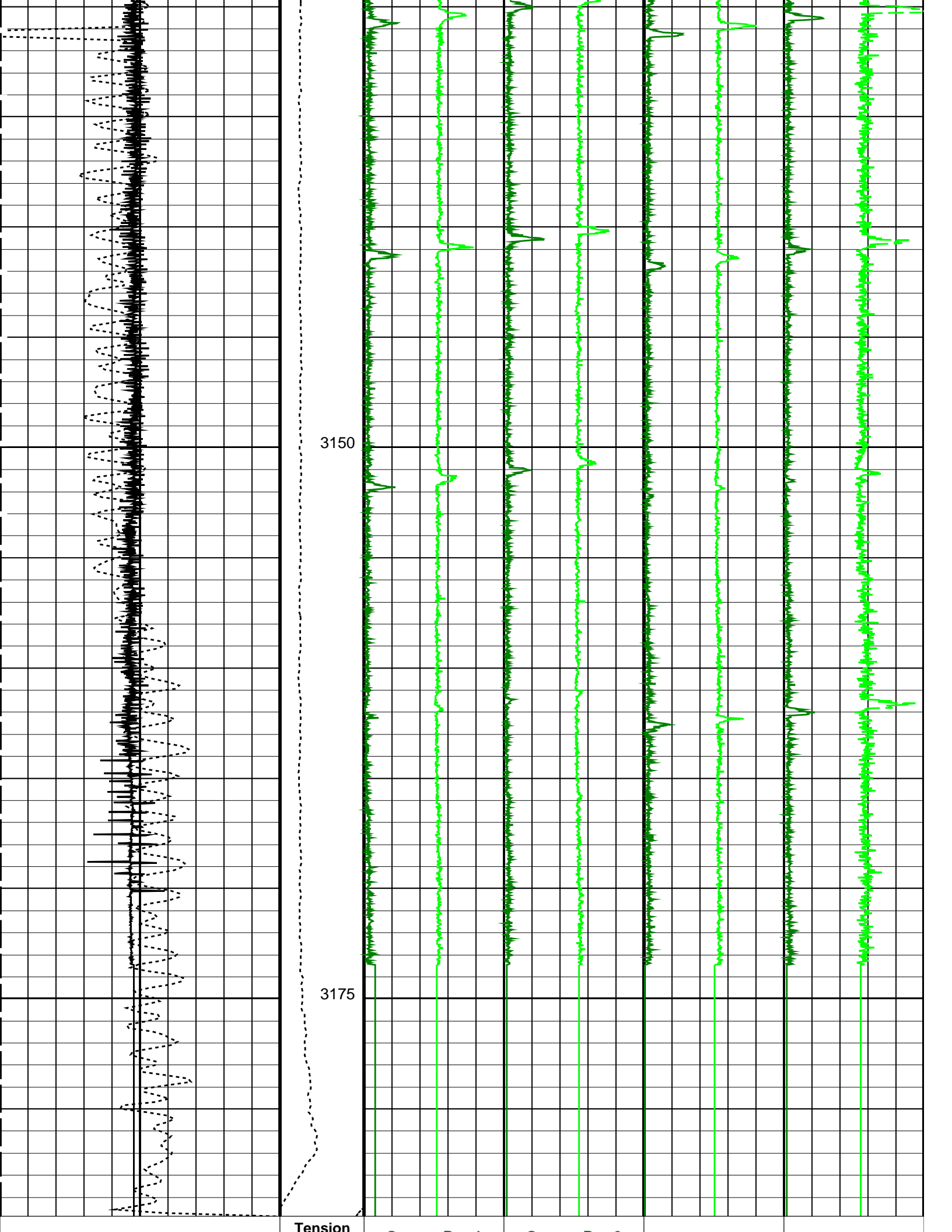
3075

3100

3125







8	FSMT Acceleration (FSMT_ACC) (M/S2)	12	(TENS) (LBF)	Gamma Ray 1 (GR1)	Gamma Ray 3 (GR3)	FSMT GR5 (GR5)	FSMT GR7 (GR7)
			1000	0 (CPS) 1000	0 (CPS) 1000	0 (CPS) 1000	0 (CPS) 1000
			2000				
350	Cable Speed (CS) (F/HR)	250		Gamma Ray 2 (GR2)	Gamma Ray 4 (GR4)	FSMT GR6 (GR6)	FSMT GR8 (GR8)
				-500 (CPS) 500	-500 (CPS) 500	-500 (CPS) 500	-500 (CPS) 500

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
DO PP	System and Miscellaneous Depth Offset for Playback Playback Processing	-0.1 M NORMAL

Format: FSMT\_Basic Vertical Scale: 1:200 Graphics File Created: 11-Nov-2018 15:06

OP System Version: 19C2-270

FSMT-E SRPC-FSMTE-JUNE\_2013\_OP19C2H1 PSPT 19C2-270  
ERS 19C2-270

Input DLIS Files

DEFAULT FSMT\_PSP\_009LUP FN:14 PRODUCER 11-Nov-2018 11:48 3185.0 M 3041.6 M

Output DLIS Files

DEFAULT FSMT\_PSP\_012PUP FN:23 PRODUCER 11-Nov-2018 15:06  
 BACKUP FSMT\_PSP\_012PUP FN:24 PRODUCER 11-Nov-2018 15:07  
 CUSTOMER FSMT\_PSP\_012PUC FN:25 CUSTOMER 11-Nov-2018 15:06

Production Services Logging Platform / Equipment Identification

Primary Equipment:

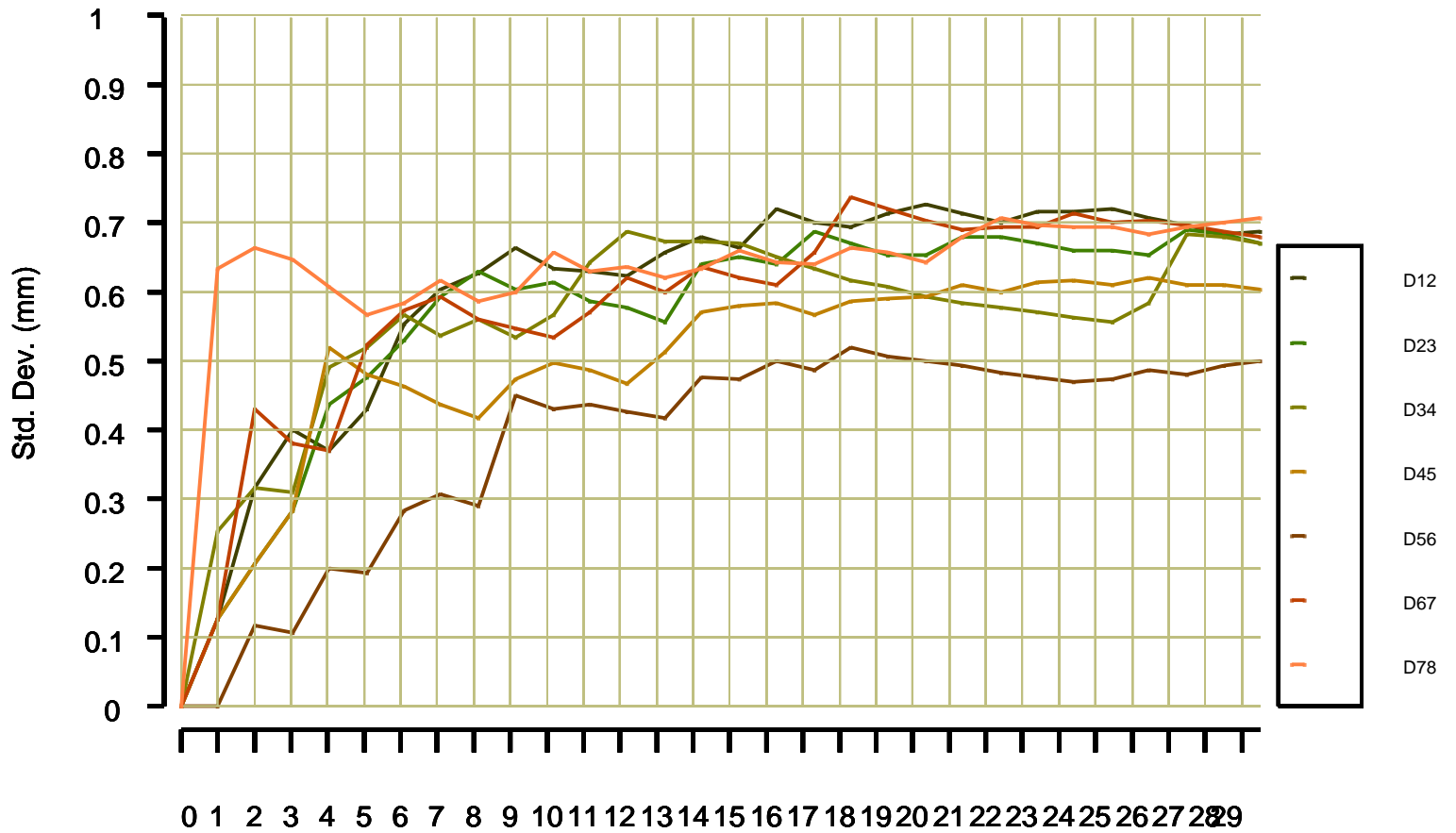
Production Logging Platform (Sapphire) 1  
 PSP Telemetry and bus master cartridge  
 PSP Telemetry Cartridge  
 PSC 16.384MHz oscillator

PSPT - E  
 PSTC - E  
 PSC - A 701  
 PSC\_ -

Auxiliary Equipment:



BEFORE CALIBRATION



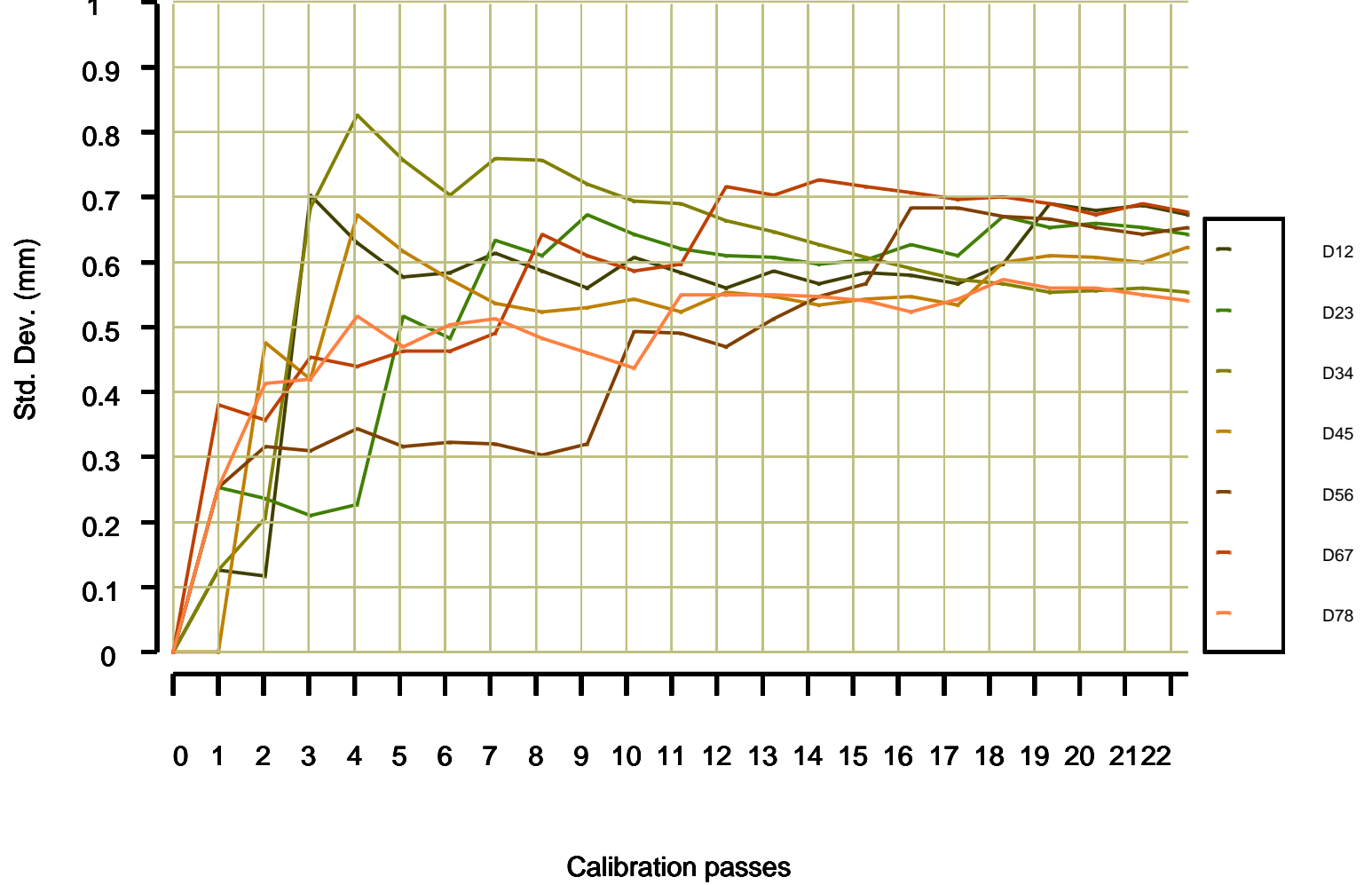
Calibration passes

- DET12 = 0.369282 m (± 0.69 mm )
- DET23 = 0.368884 m (± 0.67 mm )
- DET34 = 0.368393 m (± 0.67 mm )
- DET45 = 8.895258 m (± 0.61 mm )
- DET56 = 0.368495 m (± 0.50 mm )
- DET67 = 0.366835 m (± 0.68 mm )
- DET78 = 0.370220 m (± 0.71 mm )



**AFTER CALIBRATION**

MAXIS Field Log



DET12 = 0.369369 m (± 0.67 mm )  
 DET23 = 0.368321 m (± 0.64 mm )  
 DET34 = 0.368410 m (± 0.55 mm )  
 DET45 = 8.895102 m (± 0.63 mm )  
 DET56 = 0.368399 m (± 0.66 mm )  
 DET67 = 0.366334 m (± 0.68 mm )  
 DET78 = 0.370619 m (± 0.54 mm )

Company: **ENI U&TS**

**Schlumberger**

Well: **GUENDALINA 2 DIR A**

Field: **GUENDALINA**

LOG: **FSMT-E**

Country: **ITALY**

FSMT-E RUN #4

Formation Subsidence Monitoring Tool

Log Interval 3185 – 3045m