



September 24, 2020

Mike Bratcher
District 2 Supervisor
811 S. First St.
Artesia, NM 88210

**RE: WESTERN REFINING COMPANY, LP
SHELL STATE NO. 13 ANNUAL RADIOACTIVE TRACER SURVEY (2020)**

Dear Mr. Bratcher:

Please find attached the Radioactive Tracer Survey that was run on the Shell State No. 13 disposal well located at the Western Refining facility, Plant No. 4, 10 miles north of Jal, NM on September 22, 2020. The Radioactive Tracer Survey indicates all fluid is going into the perforations. There was no indication of channeling or fluid migration behind the casing. If you have any questions or would like additional information, please do not hesitate to contact me at 281-589- 5871 | Brandon.Schulte@wsp.com.

Sincerely,

Brandon Schulte

Brandon Schulte, PE, PMP
Manager—Workovers and MITs

BS/jt
Attachments

WSP USA
Suite 200
16200 Park Row
Houston, TX 77084

Tel.: +1 281 589-5900
Fax: +1 281 759-5164
wsp.com

Submit 1 Copy To Appropriate District Office
District I – (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II – (575) 748-1283
811 S. First St., Artesia, NM 88210
District III – (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV – (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
Revised July 18, 2013

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO.
30-025-10920

5. Indicate Type of Lease
STATE ☒ FEE ☐

6. State Oil & Gas Lease No.

7. Lease Name or Unit Agreement Name

Shell State

8. Well Number 13

9. OGRID Number 248440

10. Pool name or Wildcat
96108 SWD; Grayburg

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well ☐ Gas Well ☐ Other

2. Name of Operator Western Refining Company, LP

3. Address of Operator PO Box 1345 Jal, NM 88252

4. Well Location

Unit Letter L : 1980 feet from the S line and 660 feet from the W line
Section 32 Township 23S Range 37E NMPM Lea County

11. Elevation (Show whether DR, RKB, RT, GR, etc.)

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐
DOWNHOLE COMMINGLE ☐
CLOSED-LOOP SYSTEM ☐
OTHER: ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐
OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

September 22, 2020 @ 8:00 am: Conduct annual radioactive trace log to confirm fluid travel through perforations.

Spud Date:

Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE

TITLE Facility Manager

DATE: 9-17-20

Type or print name

E-mail address:

PHONE:

For State Use Only

APPROVED BY:

TITLE AO/I

DATE 09/21/20

Conditions of Approval (if any):

Submit 1 Copy To Appropriate District Office
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Form C-103
Revised July 18, 2013

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO. 30-025-10920
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name Shell State
8. Well Number 13
9. OGRID Number 248440
10. Pool name or Wildcat 96108 SWD; Grayburg

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)	
1. Type of Well: <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other-SWD	
2. Name of Operator Western Refining Company, LP	
3. Address of Operator PO Box 1345 Jal, NM 88252	
4. Well Location Unit Letter _____ L : 1980 feet from the _____ S line and 660 feet from the _____ W line Section 32 Township 23S Range 37E NMPM Lea County	
11. Elevation (Show whether DR, RKB, RT, GR, etc.)	

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	P AND A <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	MULTIPLE COMPL <input type="checkbox"/>	CASING/CEMENT JOB <input type="checkbox"/>	
DOWNHOLE COMMINGLE <input type="checkbox"/>			
CLOSED-LOOP SYSTEM <input type="checkbox"/>			
OTHER: <input type="checkbox"/>		OTHER: Annual Radioactive Tracer Survey <input checked="" type="checkbox"/>	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

The annual radioactive tracer survey was conducted on Tuesday, 9/22/2020, and indicated all fluid is going into the perforated interval. There was no indication of channeling or fluid migration behind the casing. The following activities were performed during this operation:

1. MIRU Wireline
2. Tag TD @ 3,924'
3. Record base density log from TD to 2,500'
4. Inject Radioactive tracer material and follow downhole into perforations
5. Perform time drive survey
6. Record post base density log from TD to 2,500'
7. RDMO Wireline

Spud Date:

Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Brandon Schulte TITLE Manager—Workovers and MITs DATE 9/24/2020

Type or print name Brandon Schulte E-mail address: brandon.schulte@wsp.com PHONE: 281-589-5871

For State Use Only

APPROVED BY: Mike Benavente TITLE AO/I DATE 09/21/2020
Conditions of Approval (if any):



R/A TRACER LOG INTERPRETATION

09/24/2020

PLANT: MARATHON (WESTERN REFINING)

C/O: WSP USA

WELL NAME: SHELL STATE 13 SWD

RE: Radioactive Tracer Survey ran on 09/22/2020

A Pre Base Log was run from 3924' to 2500' to detect and record background gamma counts.

Iodine 131 was then ejected at a depth of 2650' and pumped down the tubing and into the permitted interval. Overlapping logging passes tracked the R/A tracer material as it moved down in the wellbore. The R/A material was seen traveling down the tubing, and exiting into the permitted injection interval.

The flow profile log was then repeated and this survey also showed R/A material going out into the permitted interval.

One Stationary Time Drive survey was run with the tool at 3850'. No indications of upward migration were recorded.

A Post Base log was then run from 3924' to 2500' and noted that all R/A material was flushed out of the wellbore into the permitted interval.

A handwritten signature in blue ink, reading 'Wayne H. Dean III'.

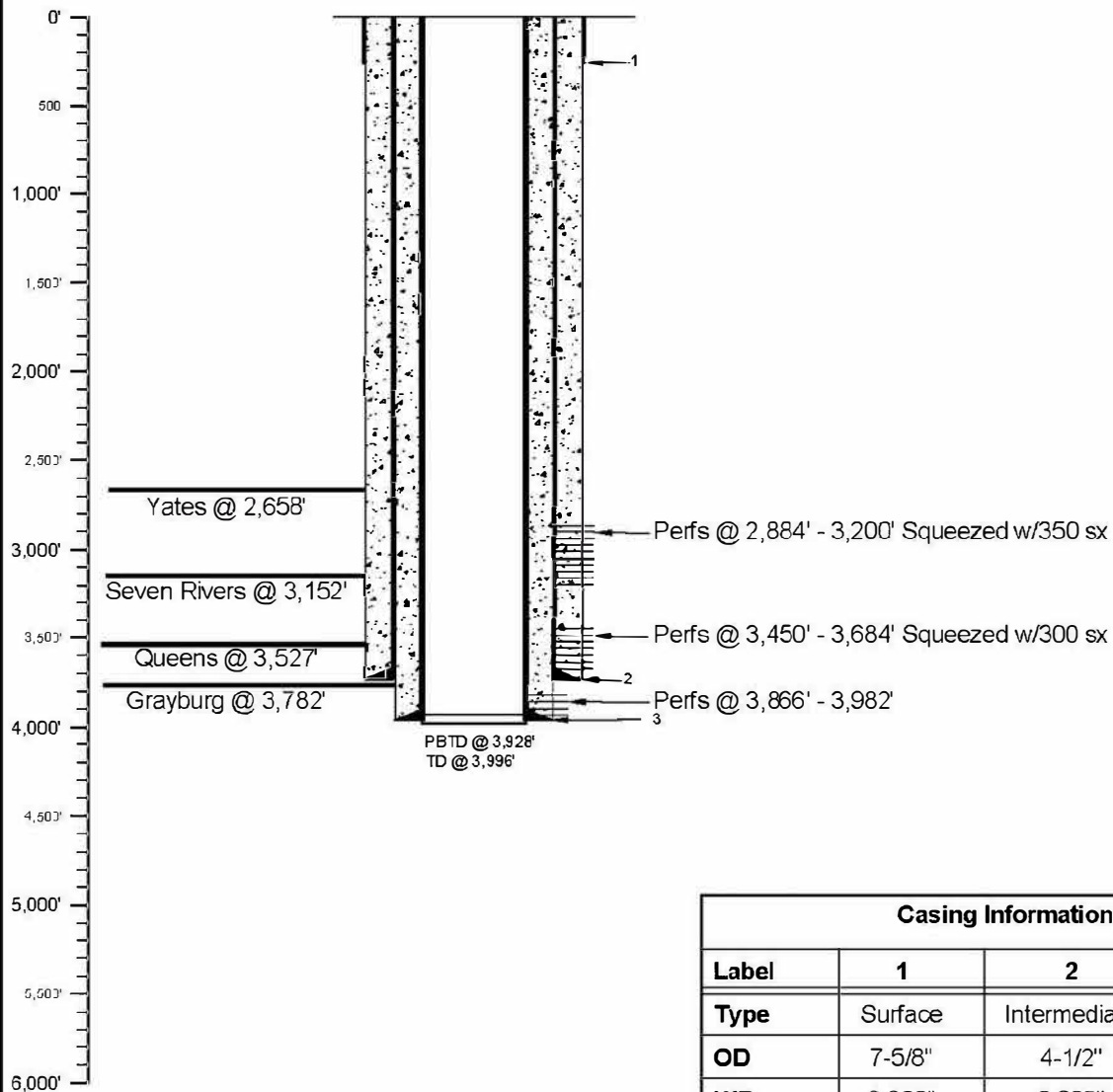
Wayne H. Dean III
Industrial Logging Department
7650 CR-48 North, Suite H
Rosharon, TX 77583



RADIOACTIVE TRACER SURVEY

QES WIRELINE LLC

Company		MARATHON (WESTERN REFINING)					
Well		SHELL STATE "13" SWD					
Field		LANGLIE MATTIX					
County		LEA		State NM			
Location:		API # :		Other Services			
Permanent Datum		NW1/4 & SW 1/4		Elevation			
Log Measured From		SEC 32 TWP 23-S RGE 37-E		3304'			
Drilling Measured From				K.B. N/A D.F. N/A G.L. 3304'			
Date	Run Number	9-22-2020					
Depth Driller		ONE		PB TD 3928'			
Depth Logger		3996'					
Bottom Logged Interval		3924'					
Top Log Interval		3923'					
Open Hole Size		2500'					
Type Fluid		N/A					
Density / Viscosity		WATER					
Max. Recorded Temp.		N/A					
Estimated Cement Top		N/A					
Time Well Ready		R.O.A					
Time Logger on Bottom		8:30 AM					
Equipment Number		104					
Location		ROSHARON					
Recorded By		STANCZAK					
Witnessed By							
Borehole Record		Tubing Record					
Run Number	Bit	From	To	Size	Weight	From	To
Casing Record	Size	Wgt/Ft	Top	Bottom			
Surface String	7.625"	24#	SURFACE	266'			
Prot. String	4.5"	9.5#	SURFACE	3719'			
Production String	2.875"	6.5#	SURFACE	3987'			
Liner							



Casing Information			
Label	1	2	3
Type	Surface	Intermediate	Production
OD	7-5/8"	4-1/2"	2-7/8"
WD	0.300"	0.205"	0.217"
ID	7.025"	4.090"	2.441"
Drift ID	6.900"	3.965"	2.347"
COD	8.500"	5.000"	3.668"
Weight	24 lb/ft	9.5 lb/ft	6.5 lb/ft
Grade	H-40	NA	NA
Hole Size	NA	NA	NA
Depth Set	266'	3,719'	3,987'
TOC	Surface (circulation)	2,600' (log)	Surface (circulation)
Volume	180 sx	200 sx	200 sx



WSP USA Inc.
16200 Park Row, Ste. 200
Houston, TX 77084
TEL: (281) 589-5900

MARATHON - WESTERN REFINING CO, LP
LEA COUNTY, NEW MEXICO

SWD WELL SCHEMATIC

Job No. 192025V

Drawn: WDD Checked: JT Approved: BS Date: 09/10/2020 Scale: None Figure No. 1

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)

Radioactive Tracer Summary Sheet

WELL INFORMATION

DATE:	9/22/20
COMPANY:	MARATHON
WELL NAME:	SHELL STATE 13 SWD
PLANT LOCATION:	LANGLIE MATTIX
COUNTY or PARISH:	LEA
STATE of TEST:	NEW MEXICO
EQUIPMENT LOCATION:	ROSHARON
LOGGING ENGINEER:	TIM STANCZAK



WELL CONNECTION
2" LP

[illegible]

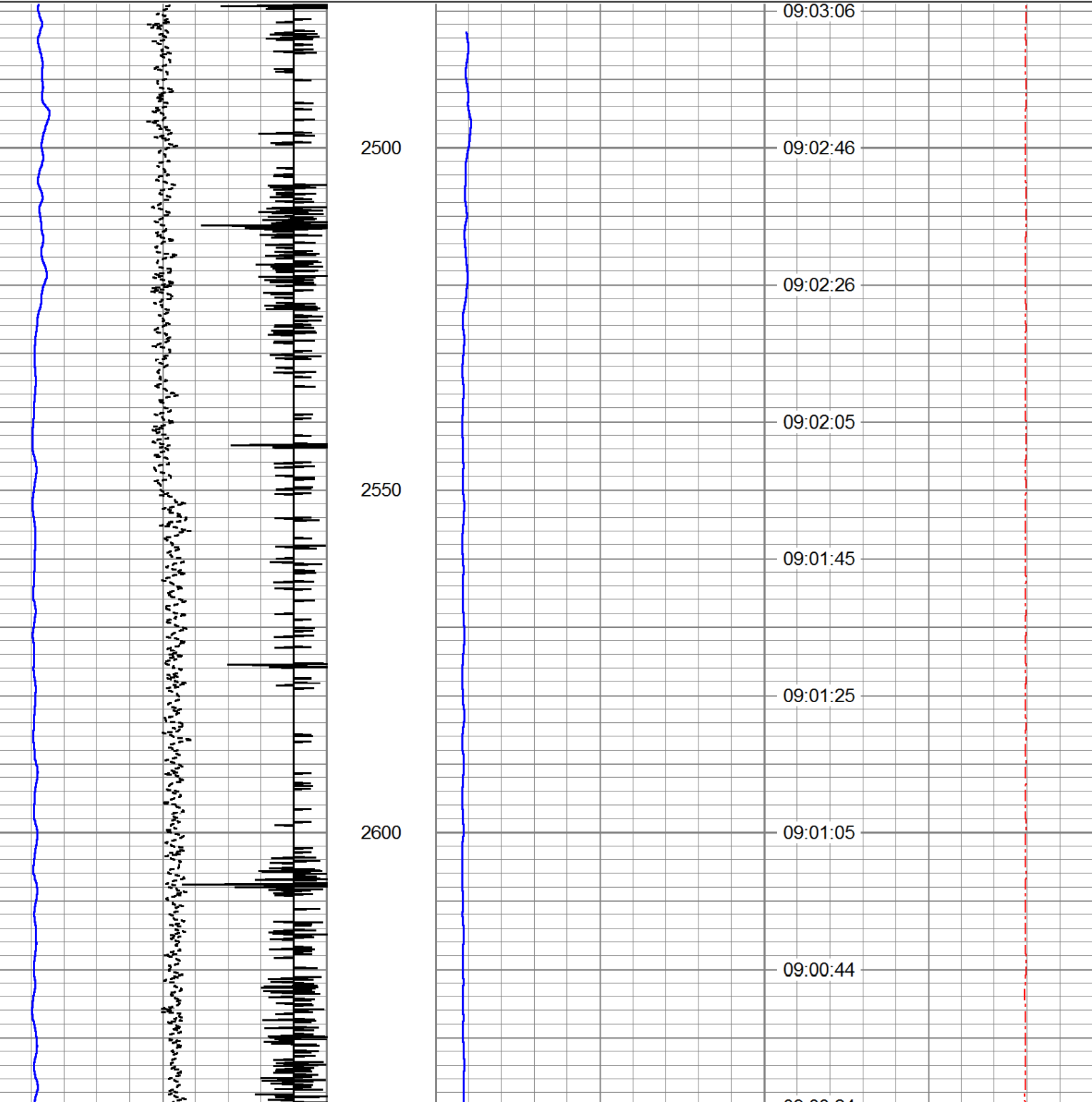


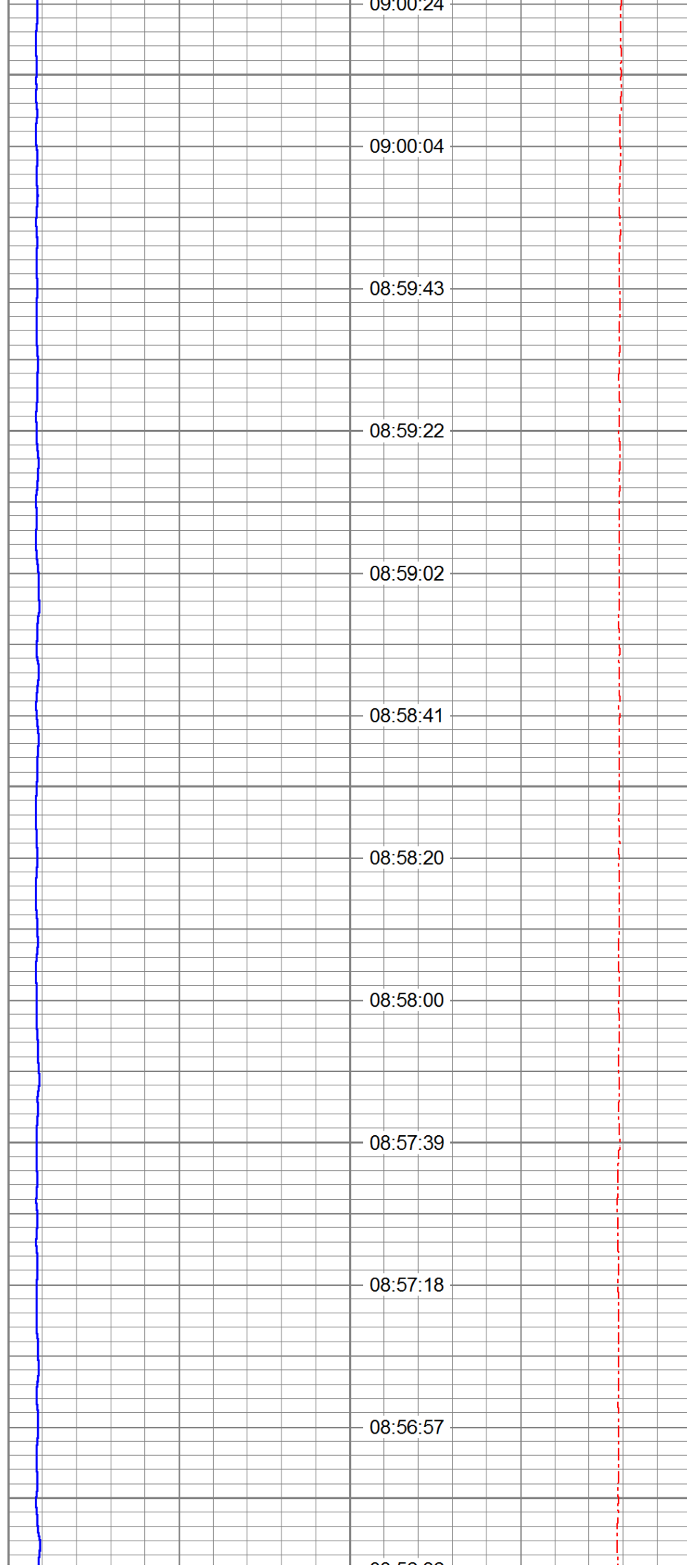
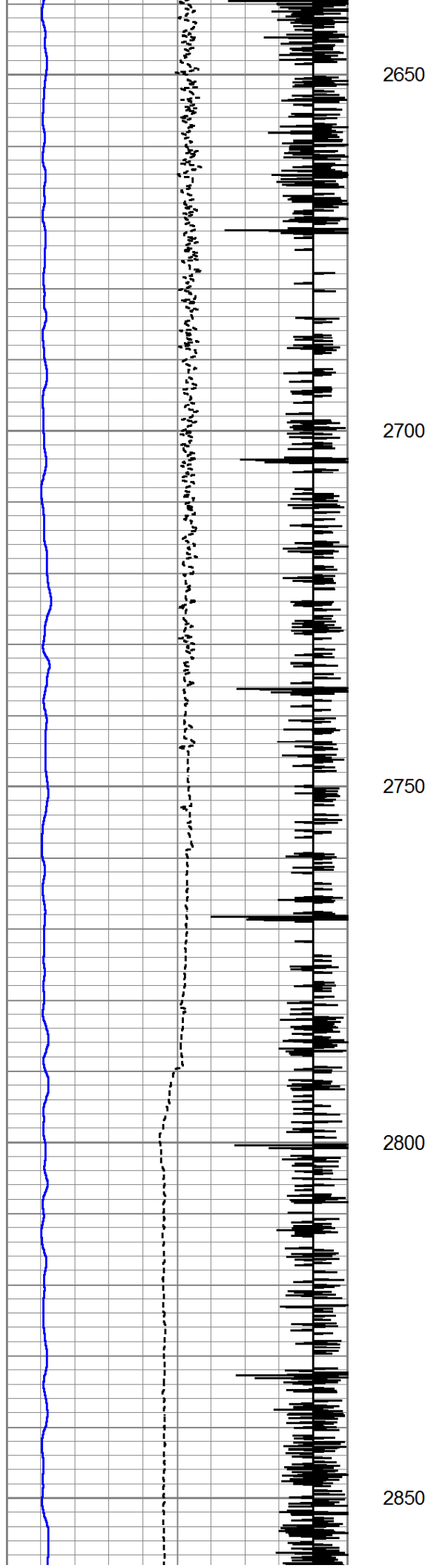
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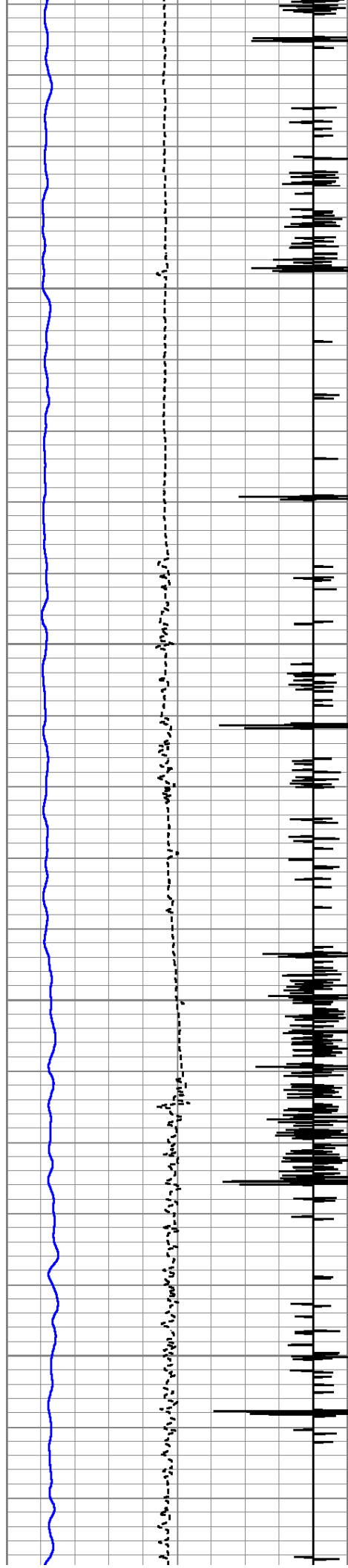
PRE-SURVEY BASE LOG
0 GPM @ 0 PSI

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Dataset Creation: Tue Sep 22 08:36:13 2020 by Log 7.0 B1
Charted by: Depth in Feet scaled 1:240

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0	LTEN (lb)	800	TOD (sec)		





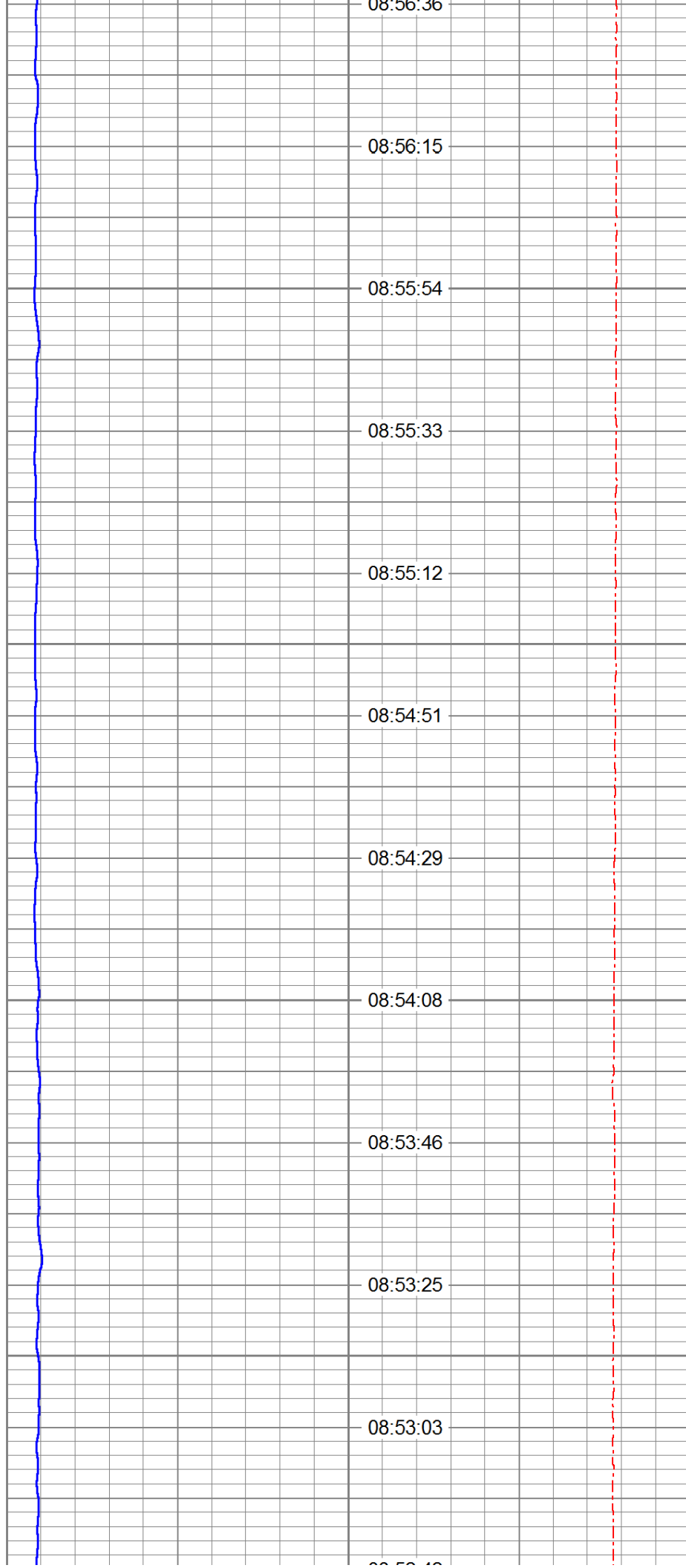


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2950

3000

3050



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08:56:15

08:55:54

08:55:33

08:55:12

08:54:51

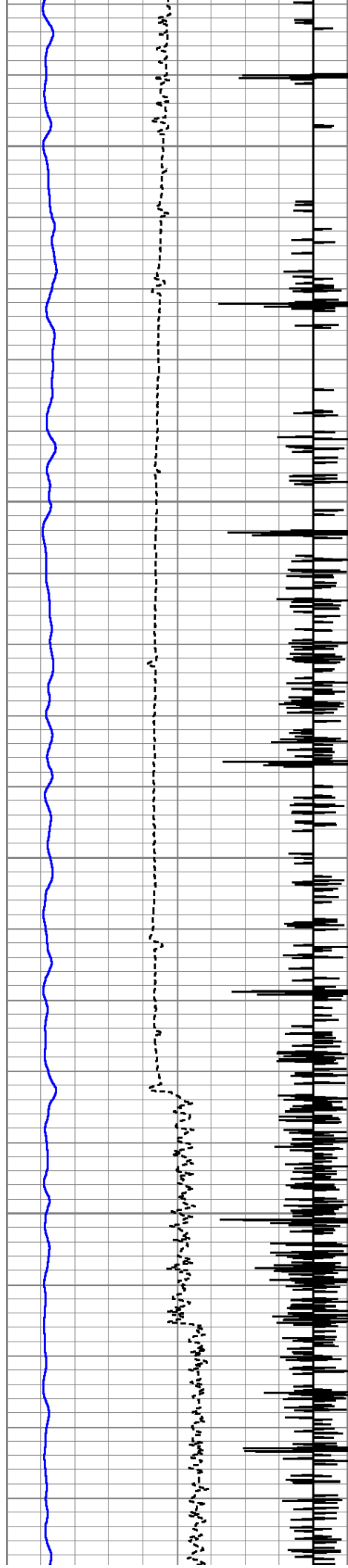
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08:53:46

08:53:25

08:53:03



3100

3150

3200

3250

3000

08:52:42

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08:51:58

08:51:37

08:51:15

08:50:53

08:50:31

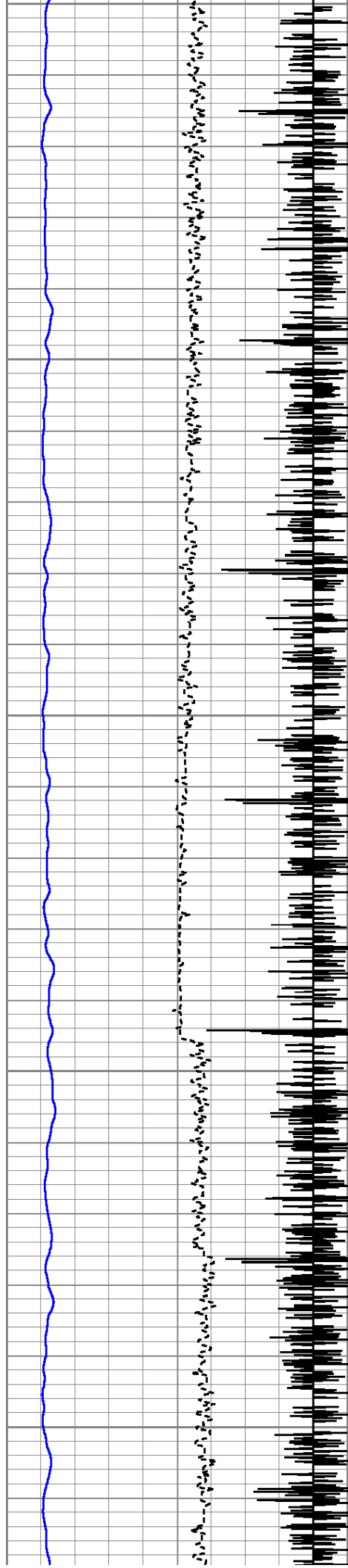
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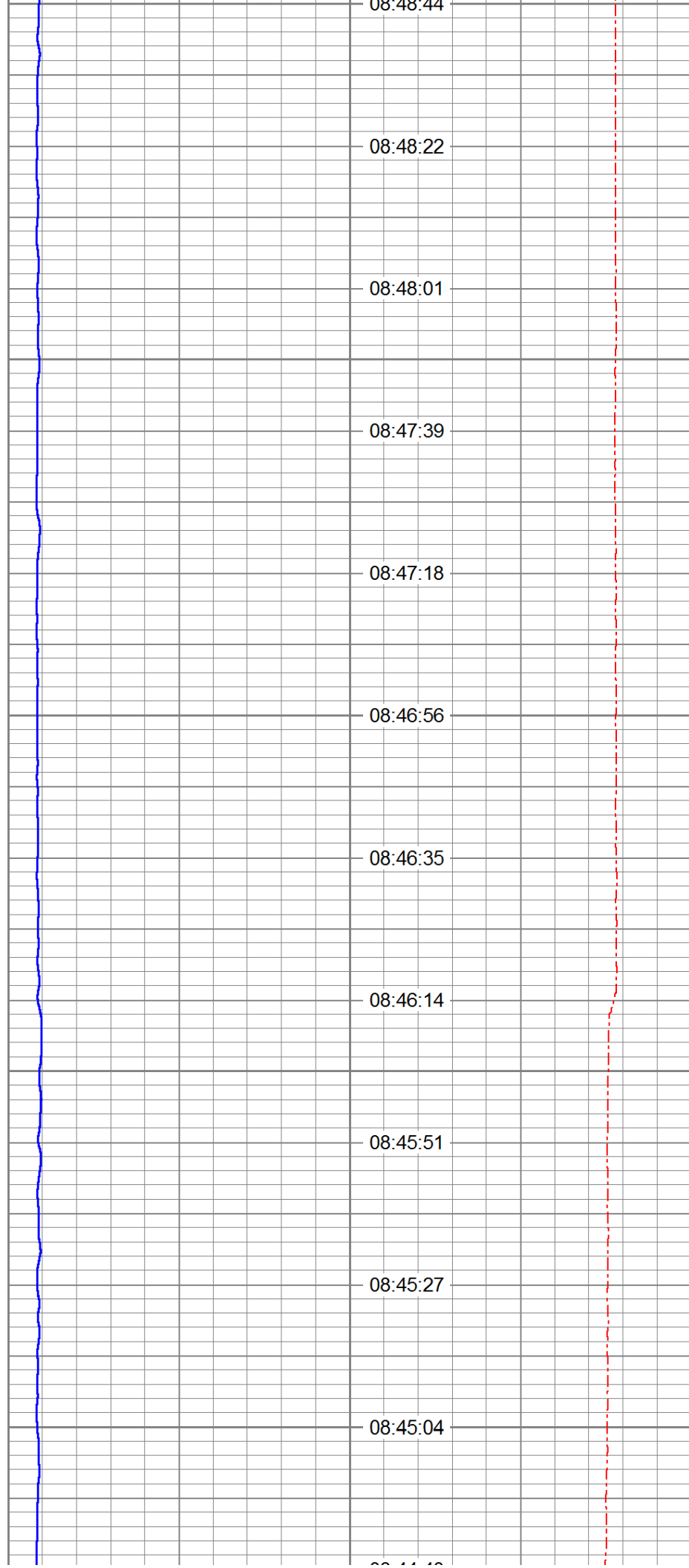
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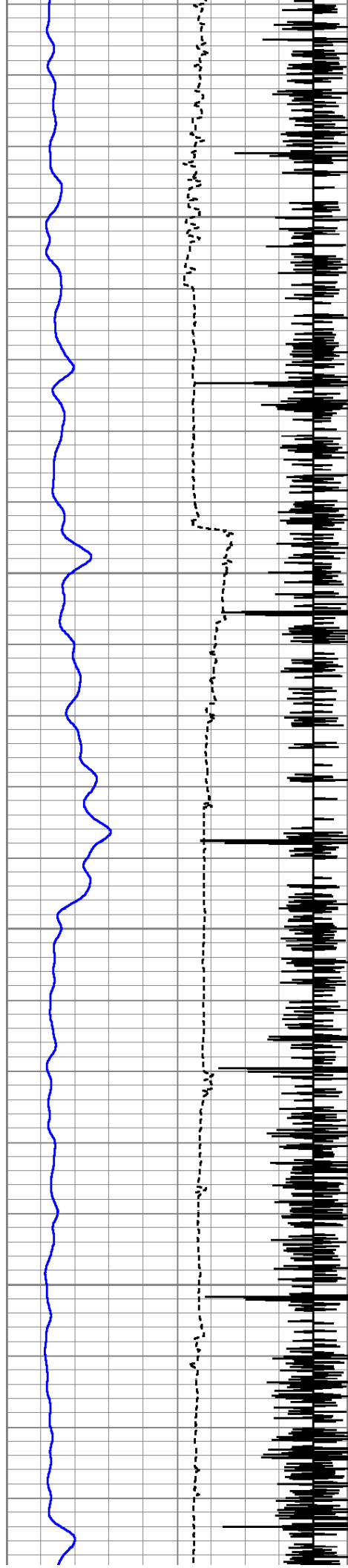
08:48:43



3300
3350
3400
3450
3500



08:48:44
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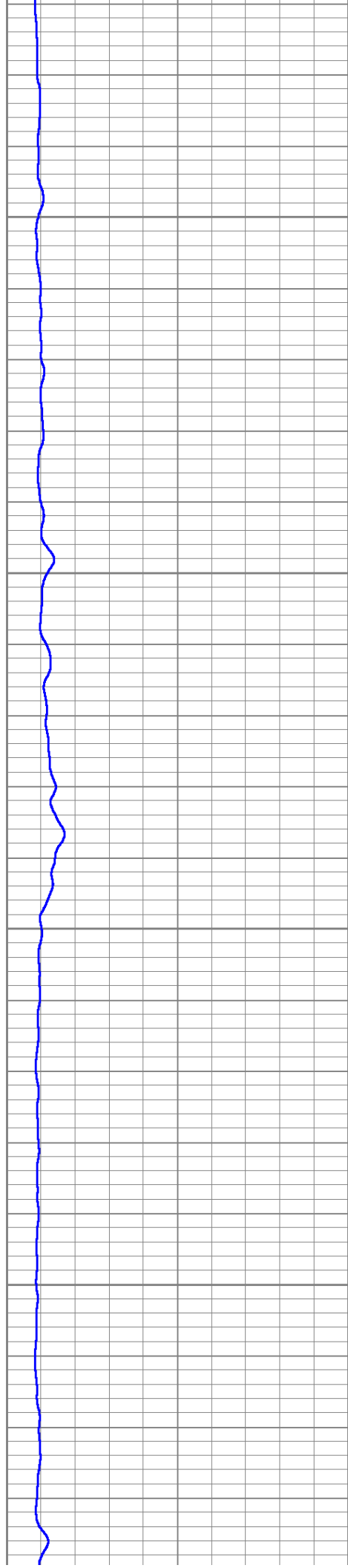


3550

3600

3650

3700



08:44:40

08:44:16

08:43:52

08:43:28

08:43:03

08:42:39

08:42:14

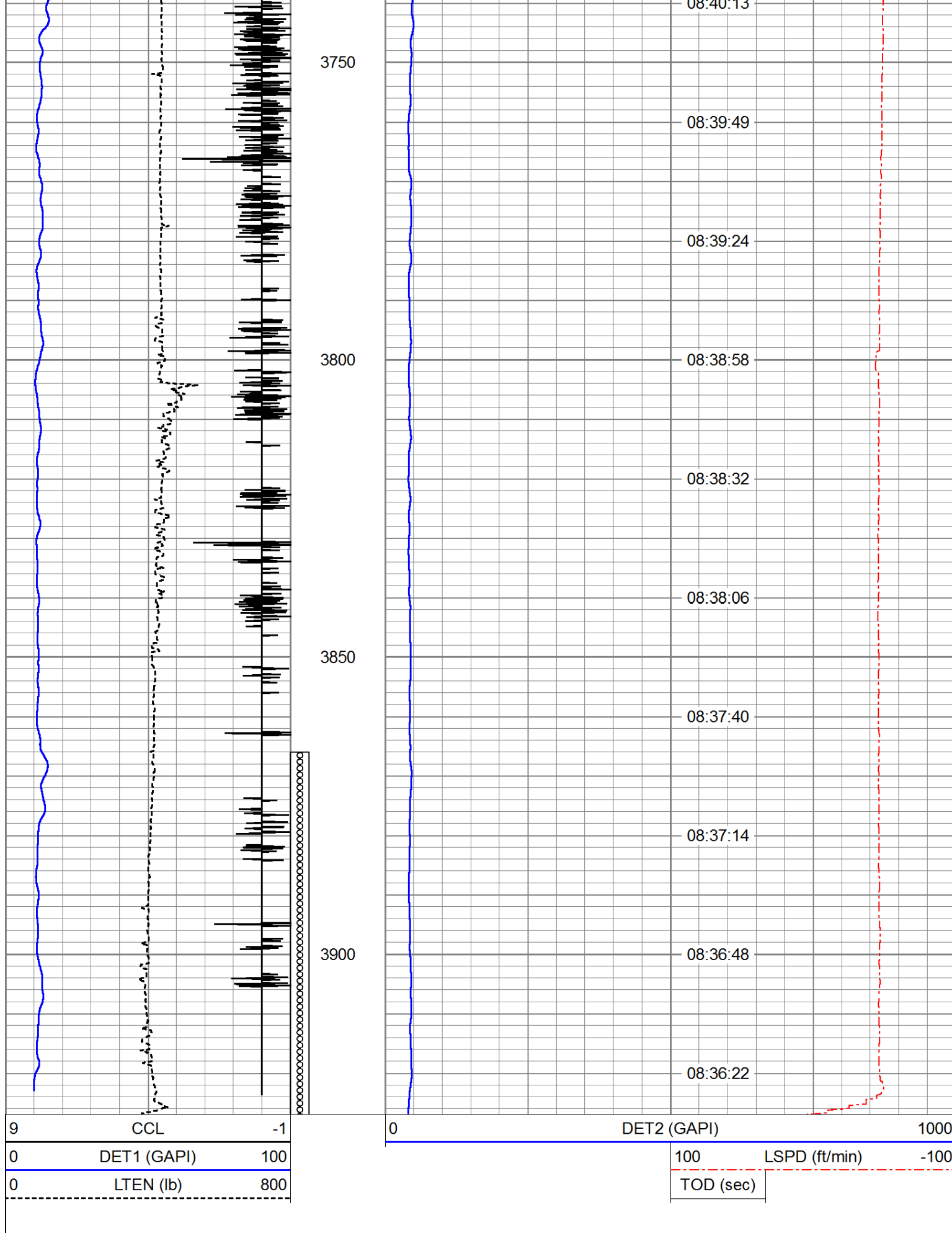
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08:40:14



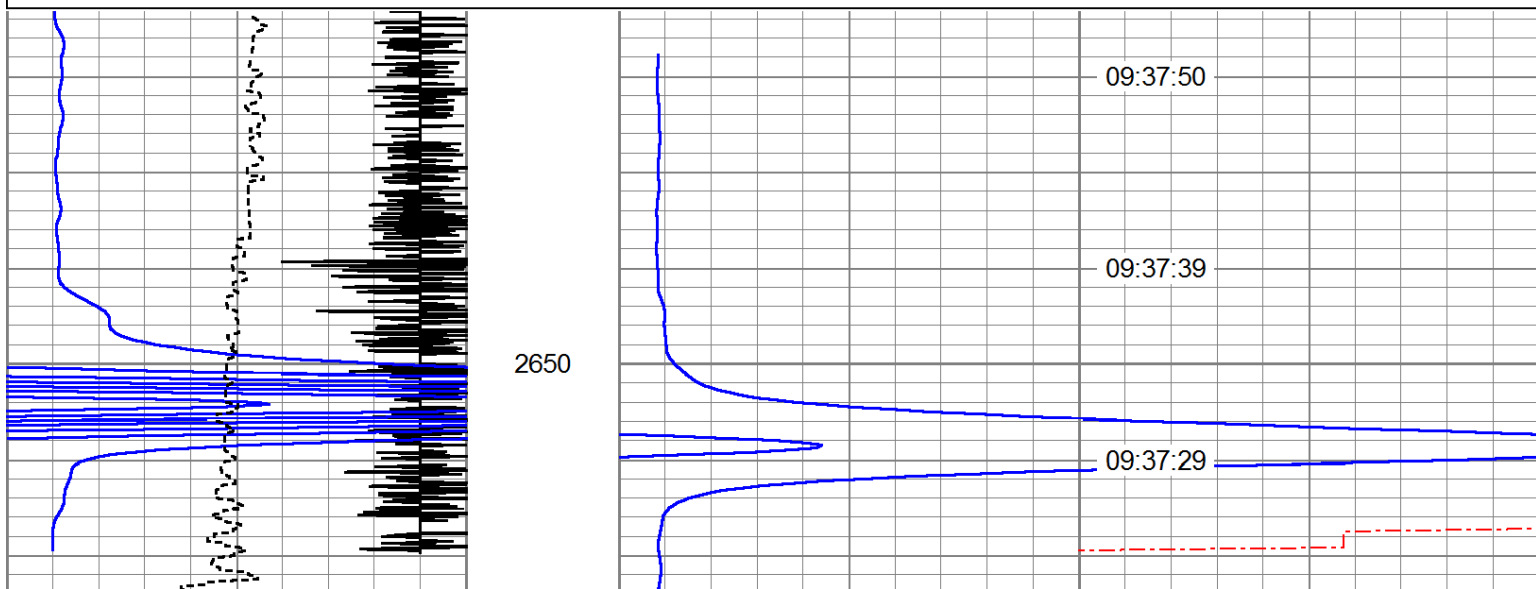
RUN # 2



SLUG # 1 CHASE # 1 EJECT @ 2650'
9.5 GPM @ 0 PSI

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Dataset Pathname: LANGLEIE/13/SLUG_1/pass2
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Charted by: Depth in Feet scaled 1:240

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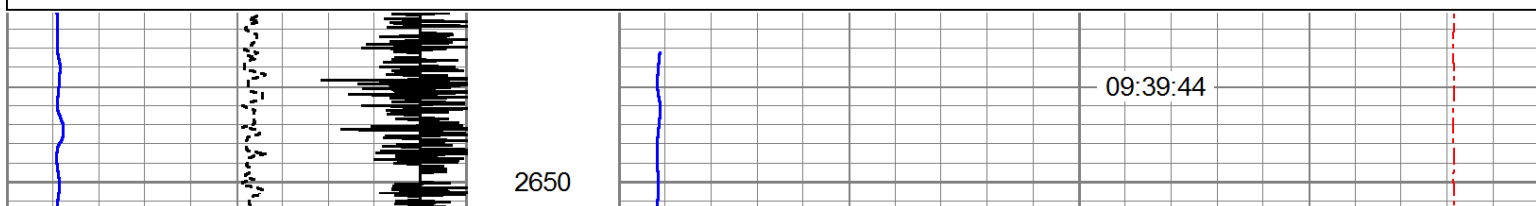
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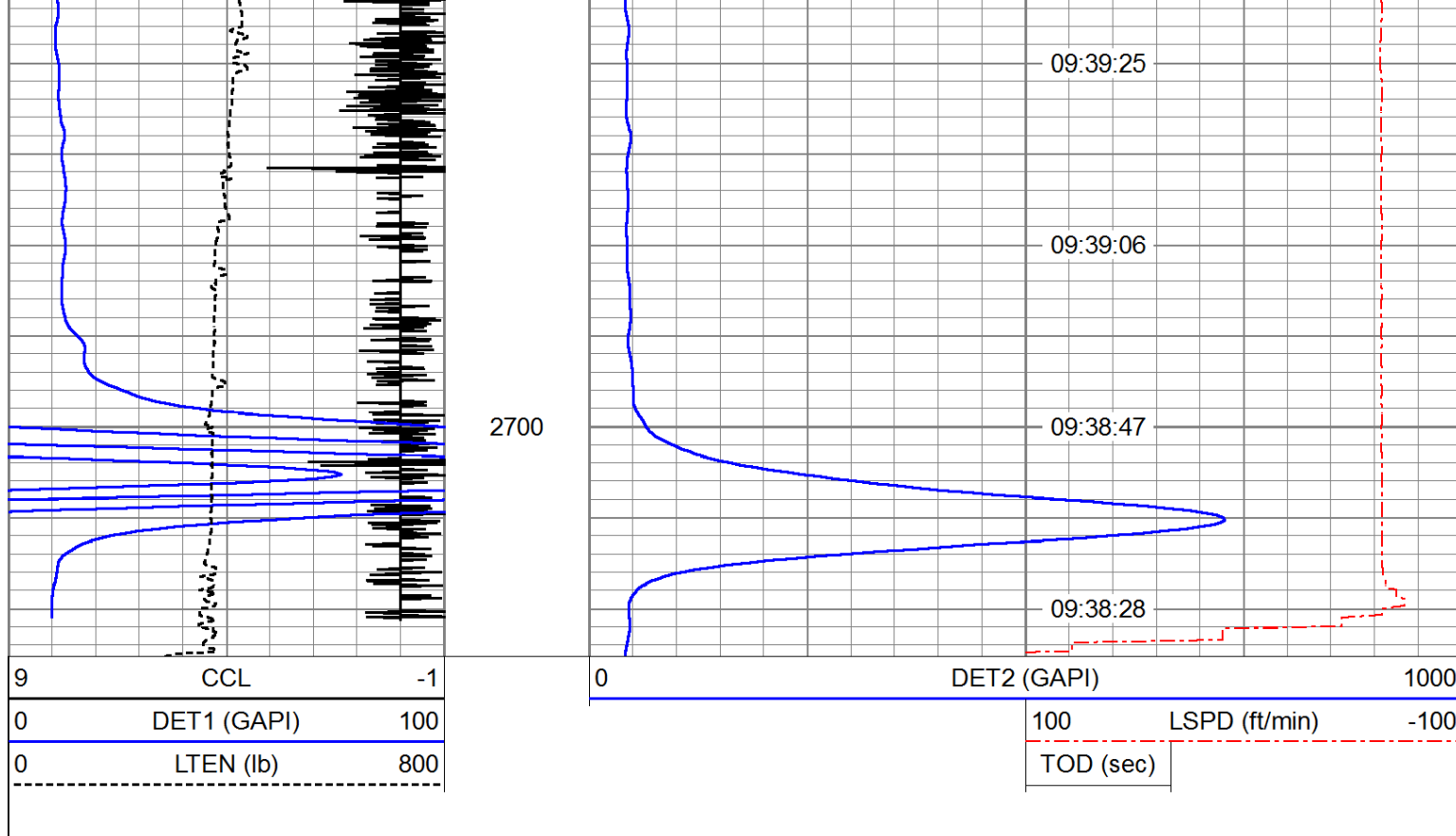



RUN # 3
SLUG # 1 CHASE # 2
9.5 GPM @ 0 PSI

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Charted by: Depth in Feet scaled 1:240

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0	DET1 (GAPI)	100	100	LSPD (ft/min)	-100
0	LTEN (lb)	800	TOD (sec)		







QES WIRELINE LLC

RUN # 4

SLUG # 1 CHASE # 3

9.5 GPM @ 0 PSI

Database File: marathon.shellstate13swd#1,9-22-2020.db

Dataset Pathname: LANGLEIE/13/SLUG_1/pass4

Presentation Format: tracer

Dataset Creation: Tue Sep 22 09:40:52 2020 by Log 7.0 B1

Charted by: Depth in Feet scaled 1:240

9 CCL -1

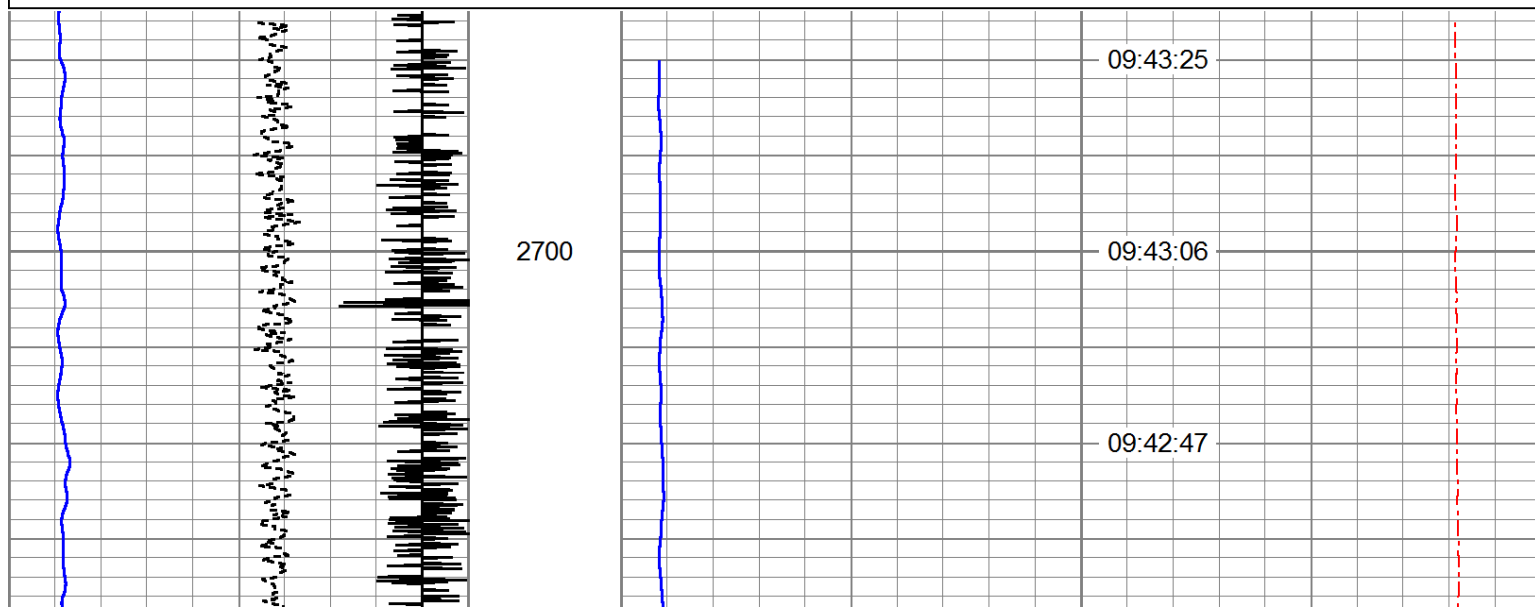
0 DET1 (GAPI) 100

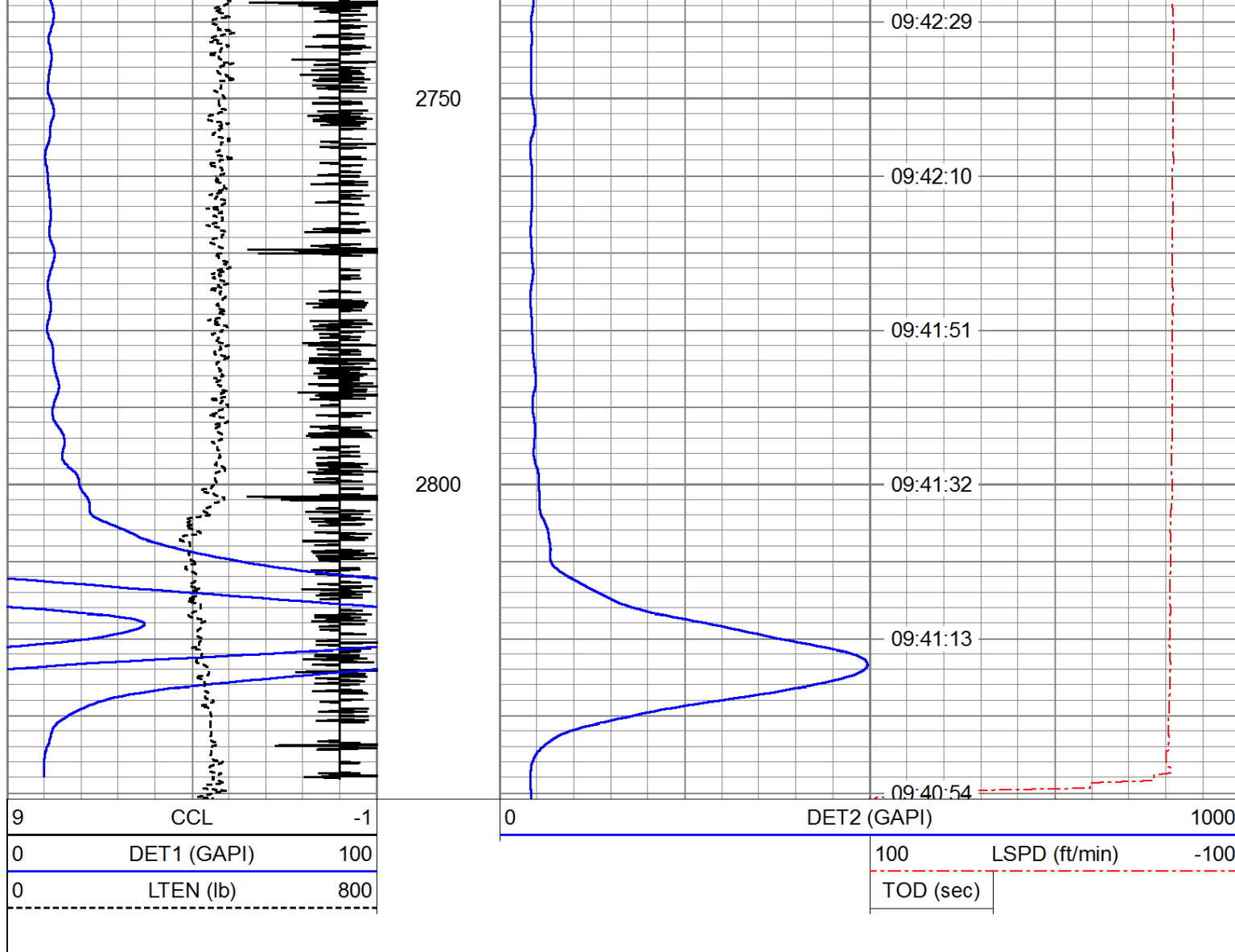
0 LTEN (lb) 800


0 DET2 (GAPI) 1000

100 LSPD (ft/min) -100

TOD (sec)







RUN # 5

SLUG # 1 CHASE # 4 DISSIPATING

9.5 GPM @ 0 PSI

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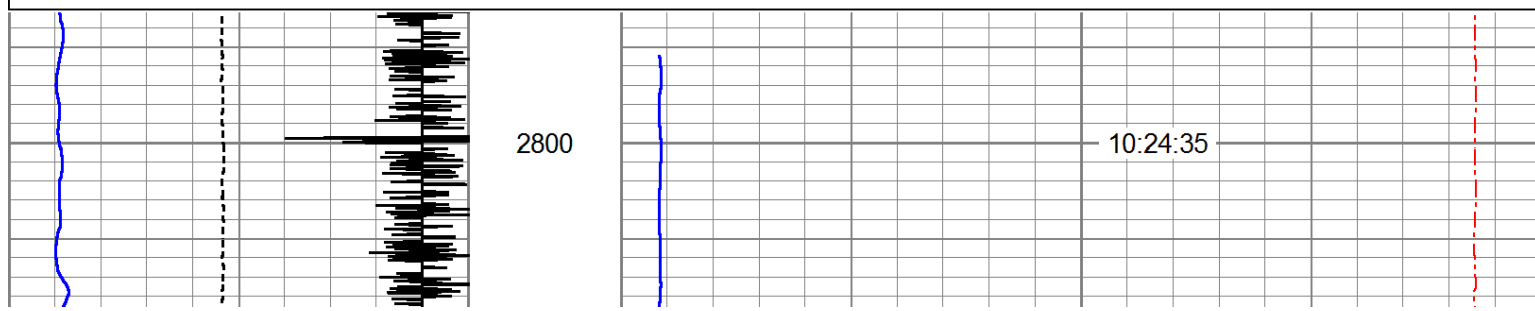
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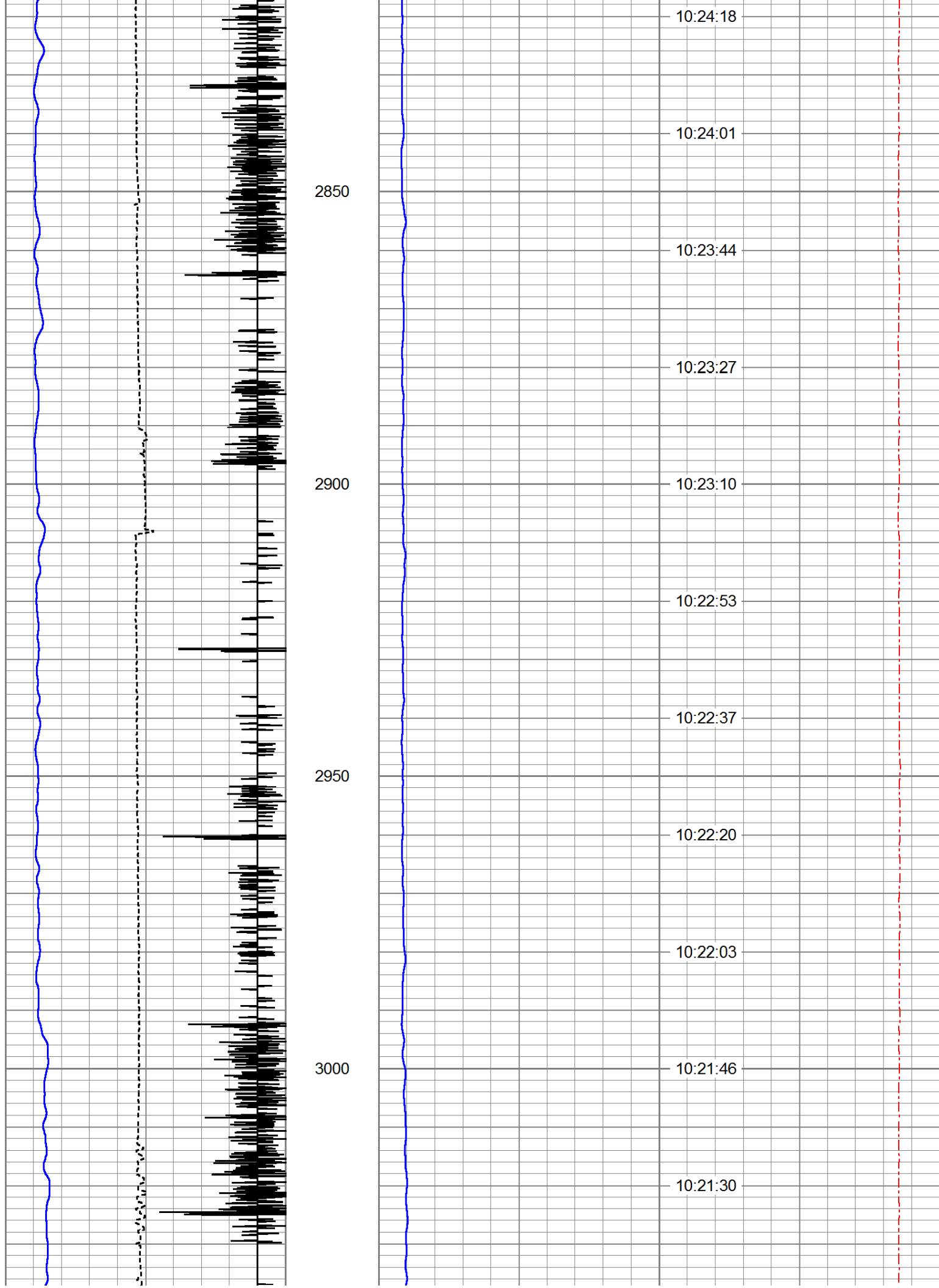
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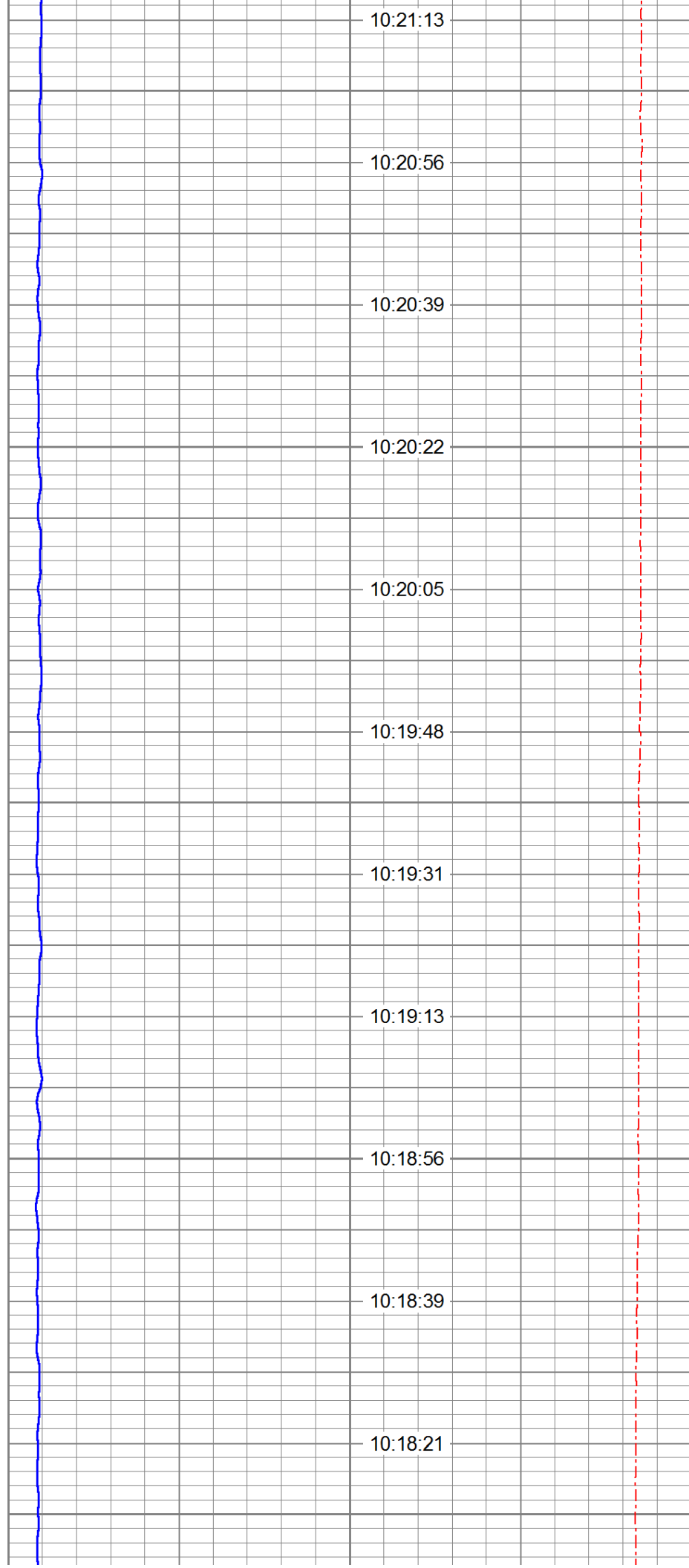
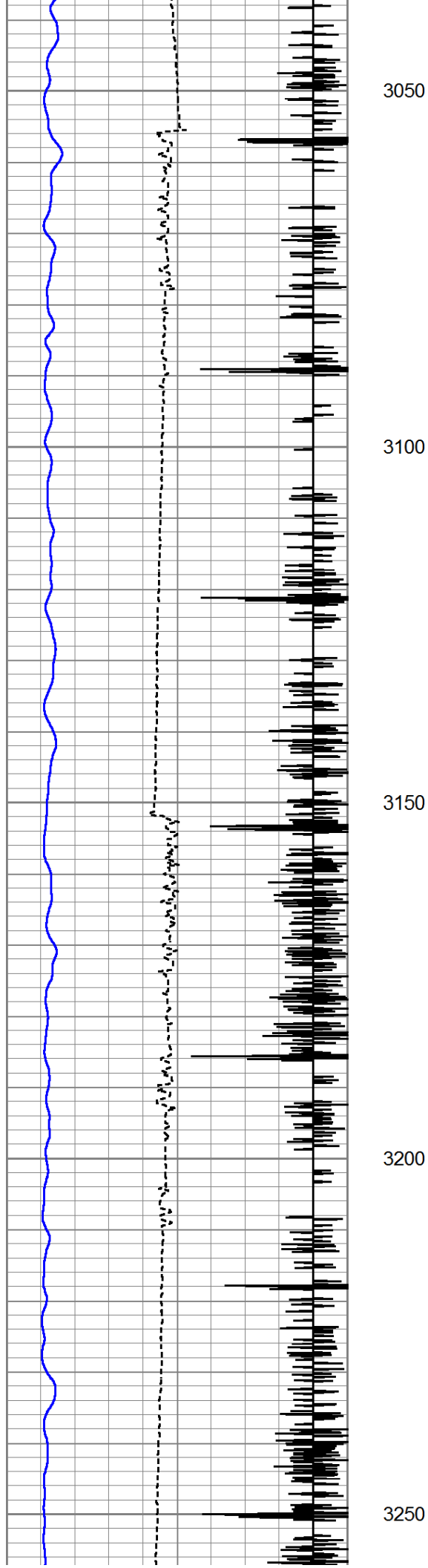
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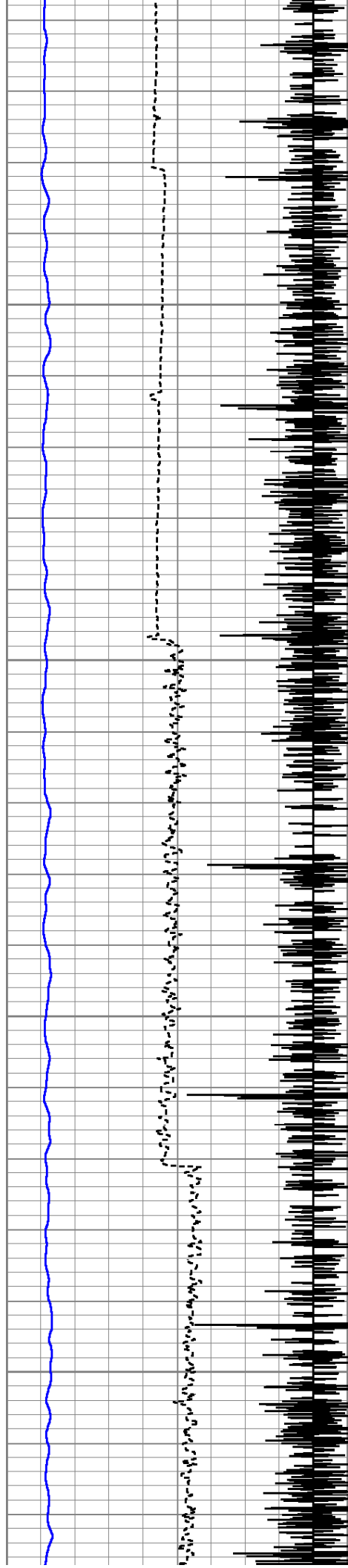
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0	LTEN (lb)	800	TOD (sec)		







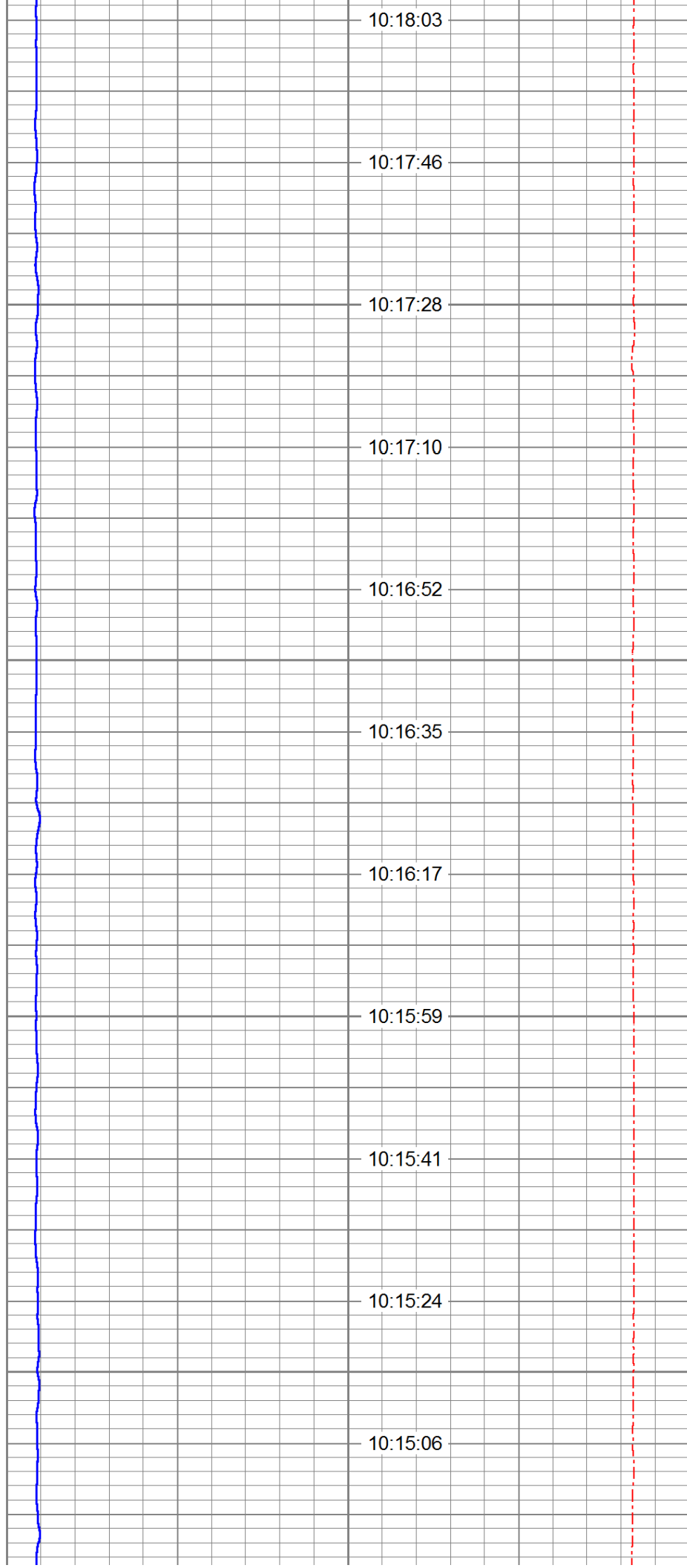


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3350

3400

3450



10:18:03

10:17:46

10:17:28

10:17:10

10:16:52

10:16:35

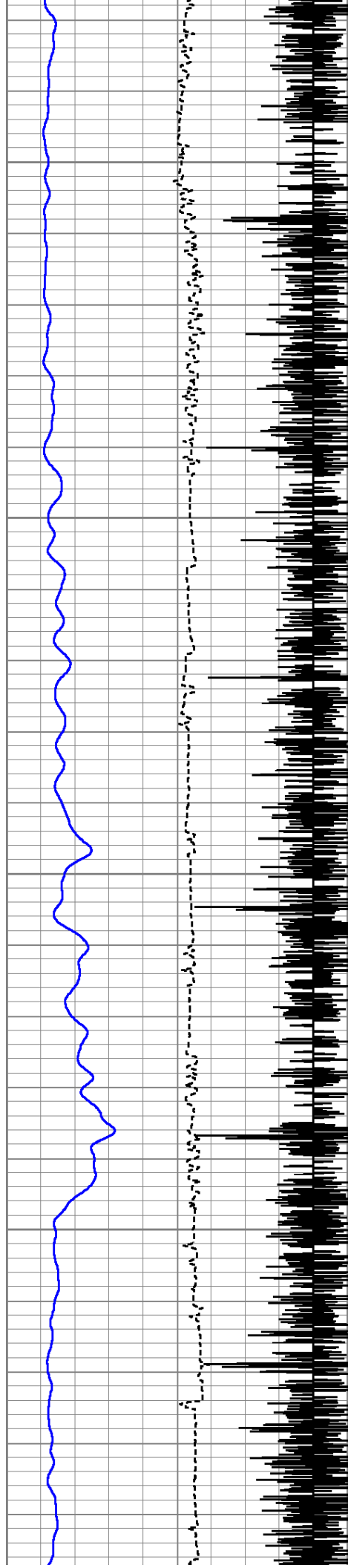
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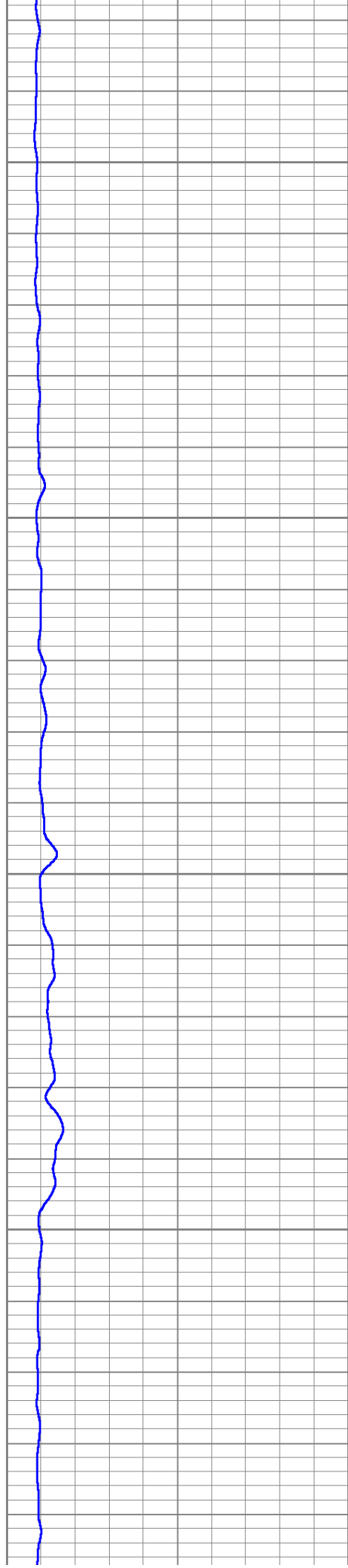


3500

3550

3600

3650



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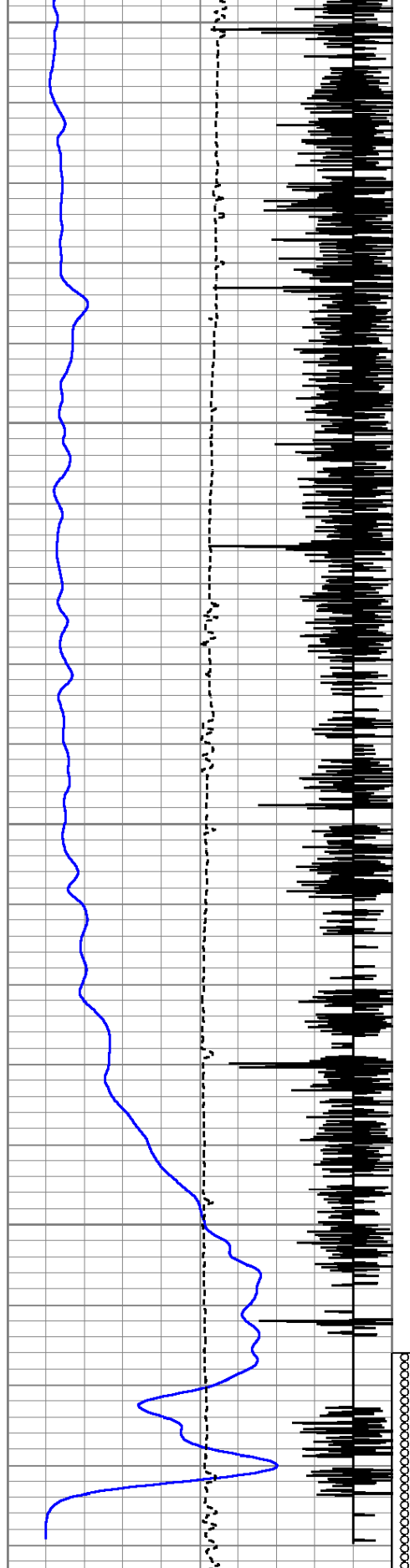
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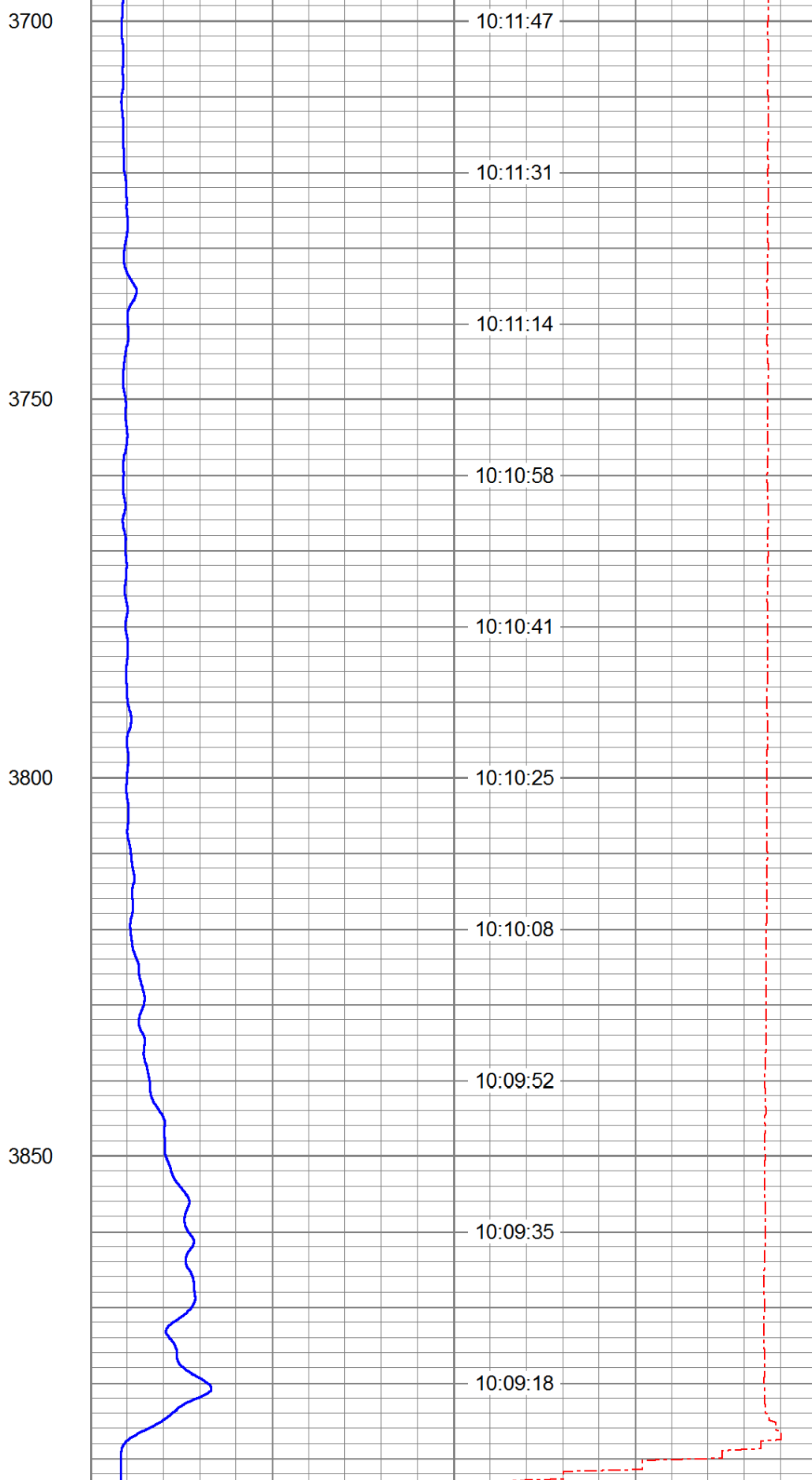
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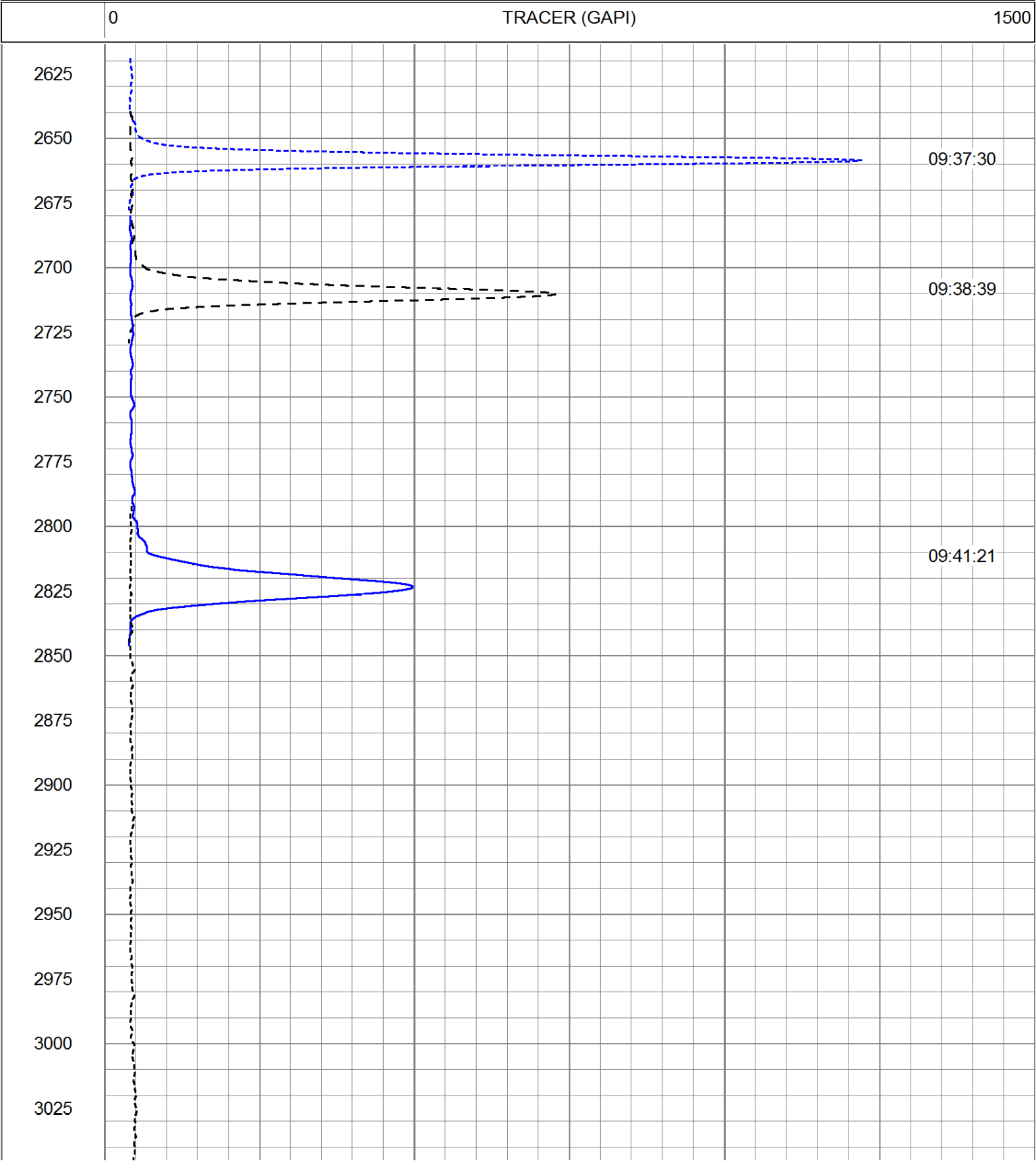


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0	LTEN (lb)	800

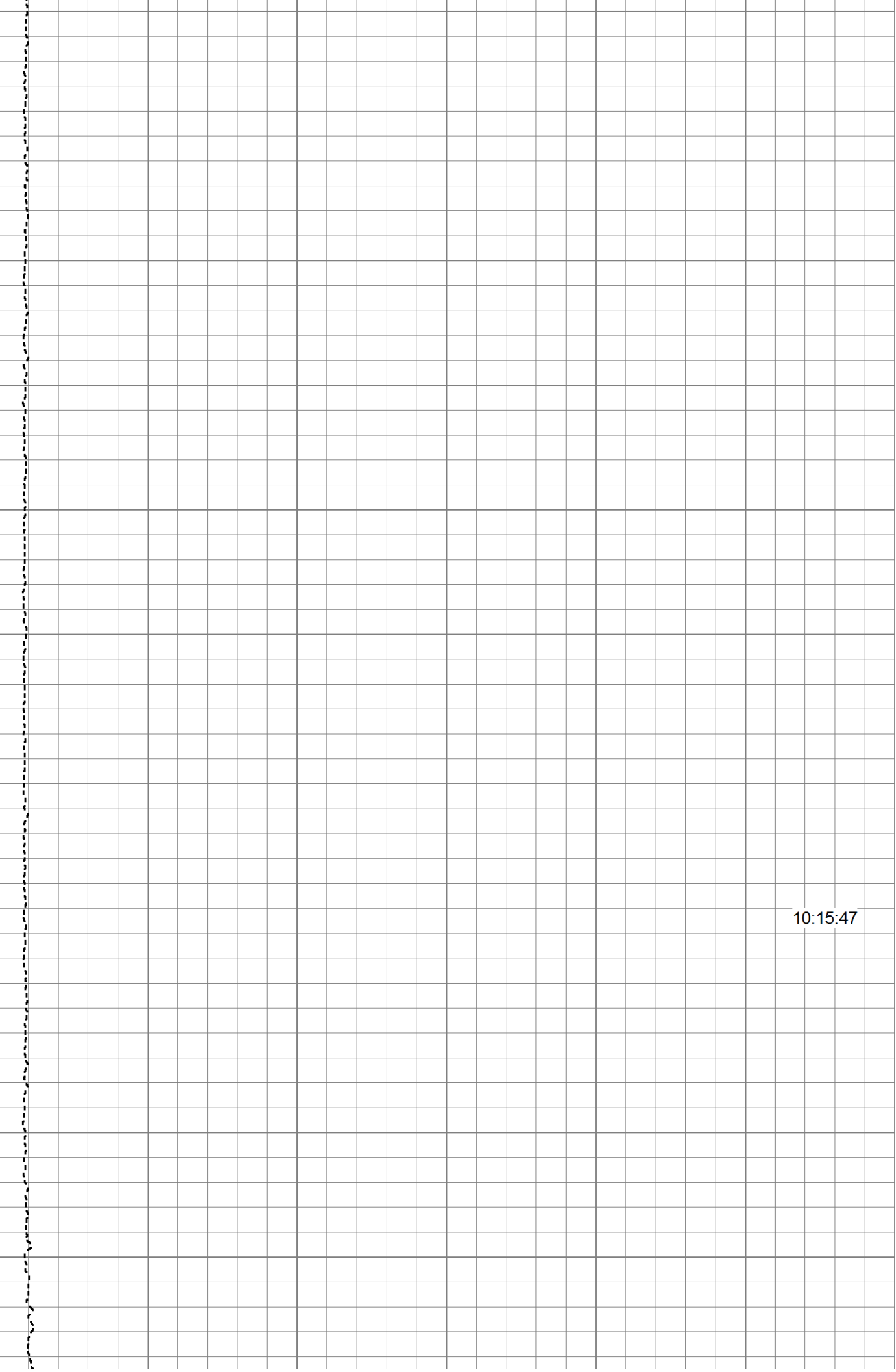


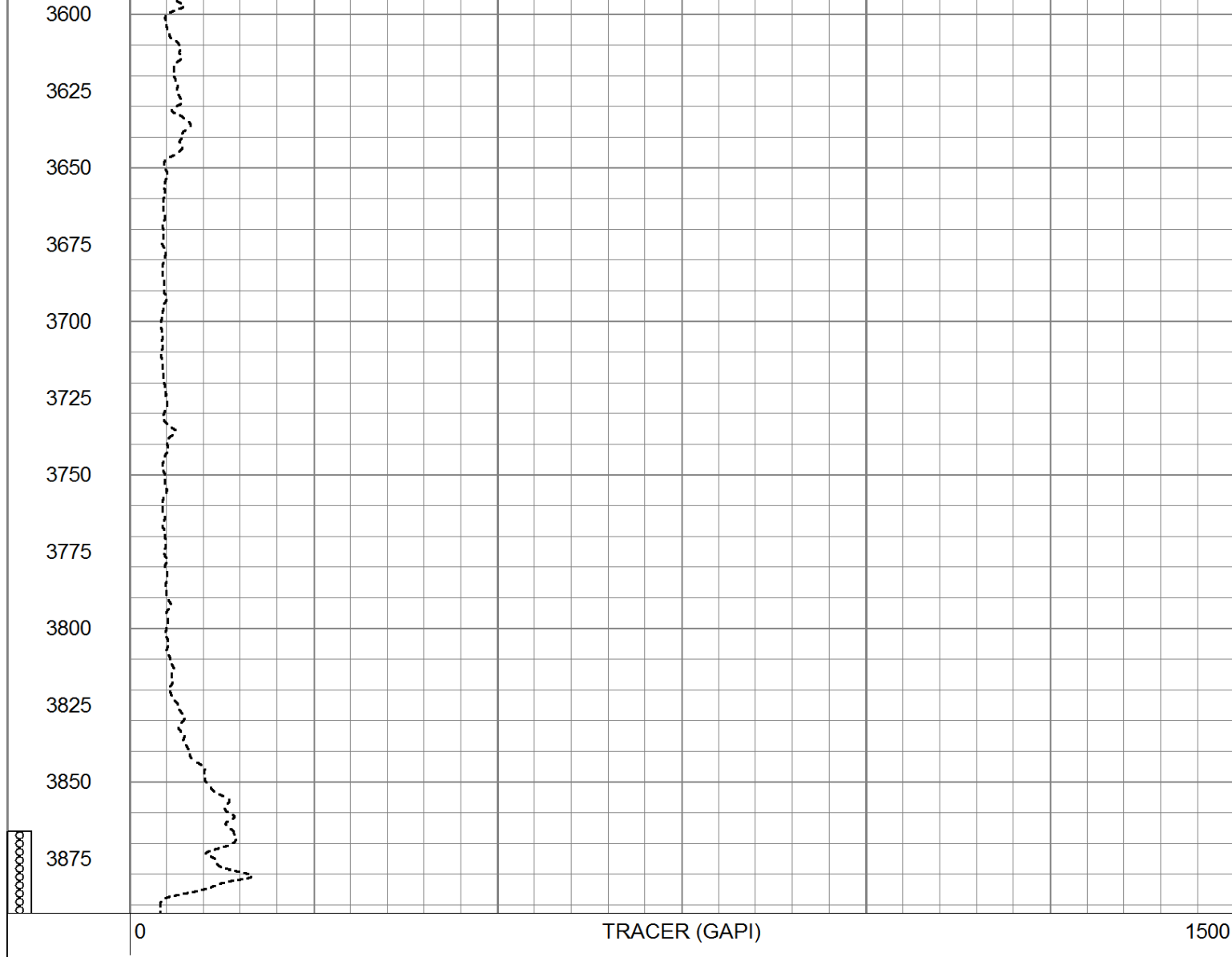
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100	LSPD (ft/min)	-100
TOD (sec)		

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 Dataset Creation: Tue Sep 22 11:59:41 2020
 Charted by: Depth in Feet scaled 1:600



3050
3075
3100
3125
3150
3175
3200
3225
3250
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3375
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3450
3475
3500
3525
3550
3575



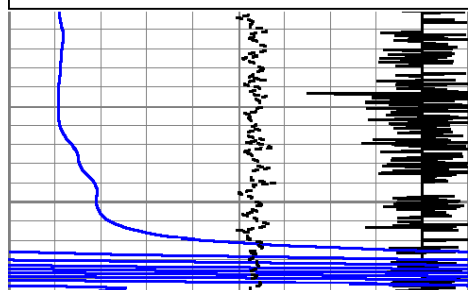


RUN # 6

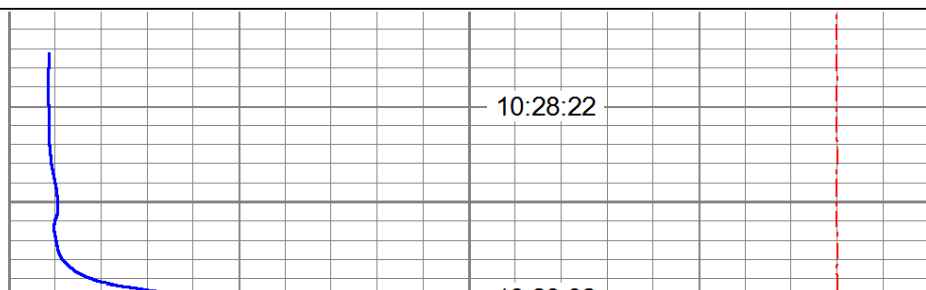
SLUG # 2 CHASE # 1 EJECT @ 2650'
9.5 GPM @ 0 PSI

Database File: marathon,shellstate13swd#1,9-22-2020.db
Dataset Pathname: LANGLEIE/13/SLUG_2/pass2
Presentation Format: tracer
Dataset Creation: Tue Sep 22 10:27:46 2020 by Log 7.0 B1
Charted by: Depth in Feet scaled 1:240

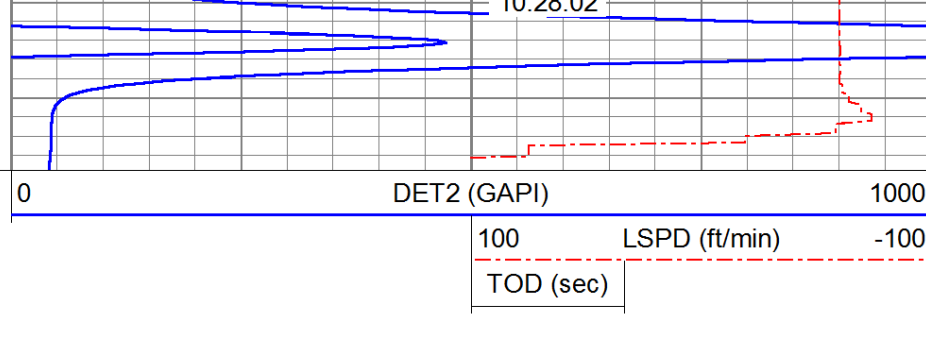
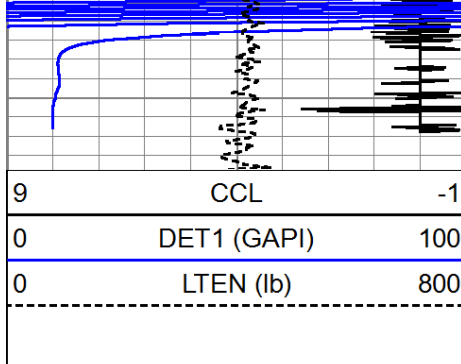
9	CCL	-1	0	DET2 (GAPI)	1000
0	DET1 (GAPI)	100	100	LSPD (ft/min)	-100
0	LTEN (lb)	800	TOD (sec)		



2650



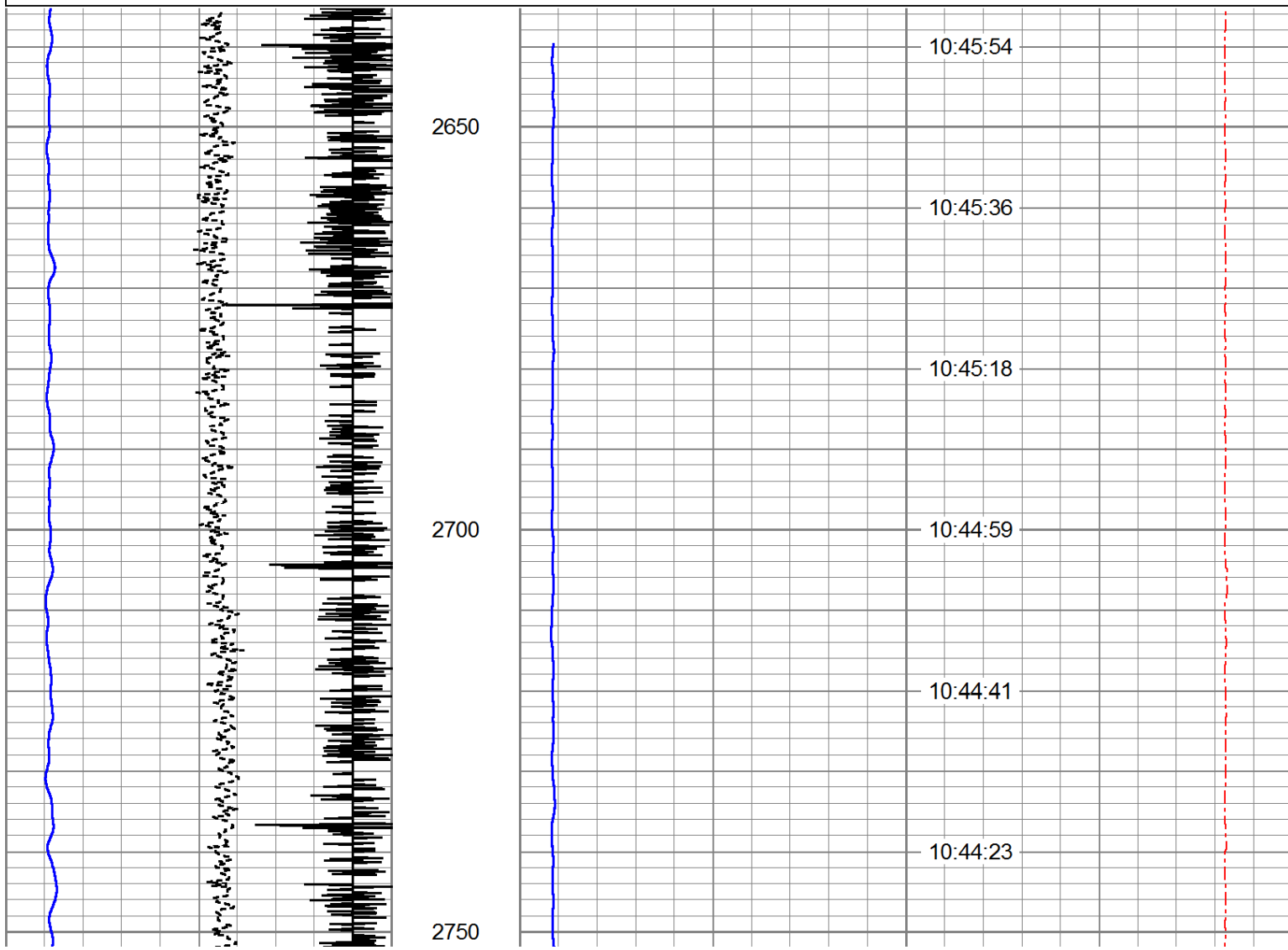
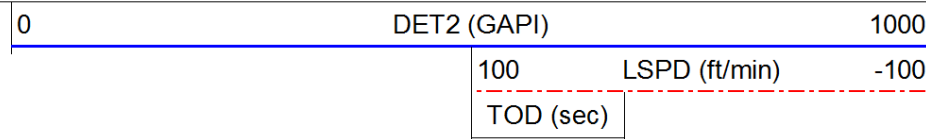
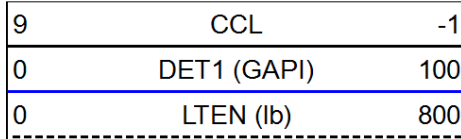
10:28:22

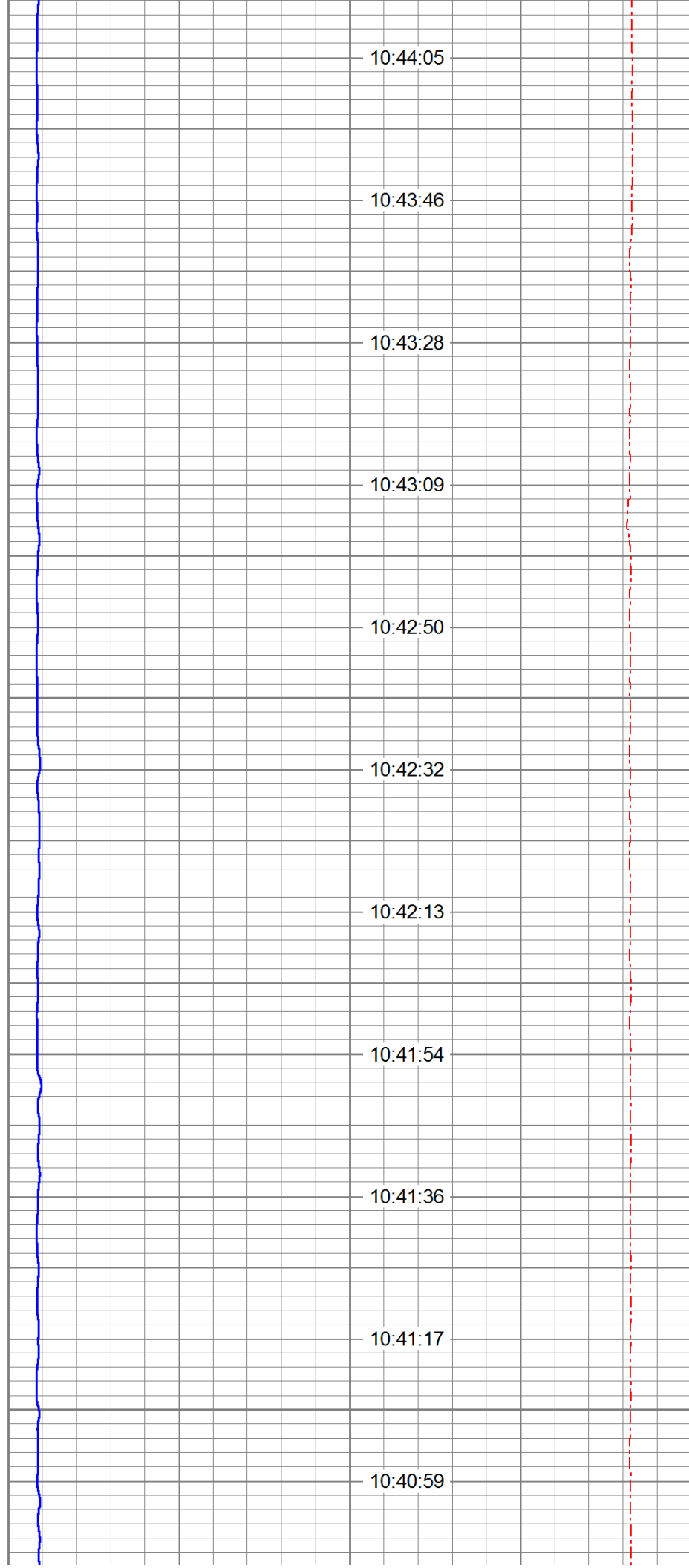
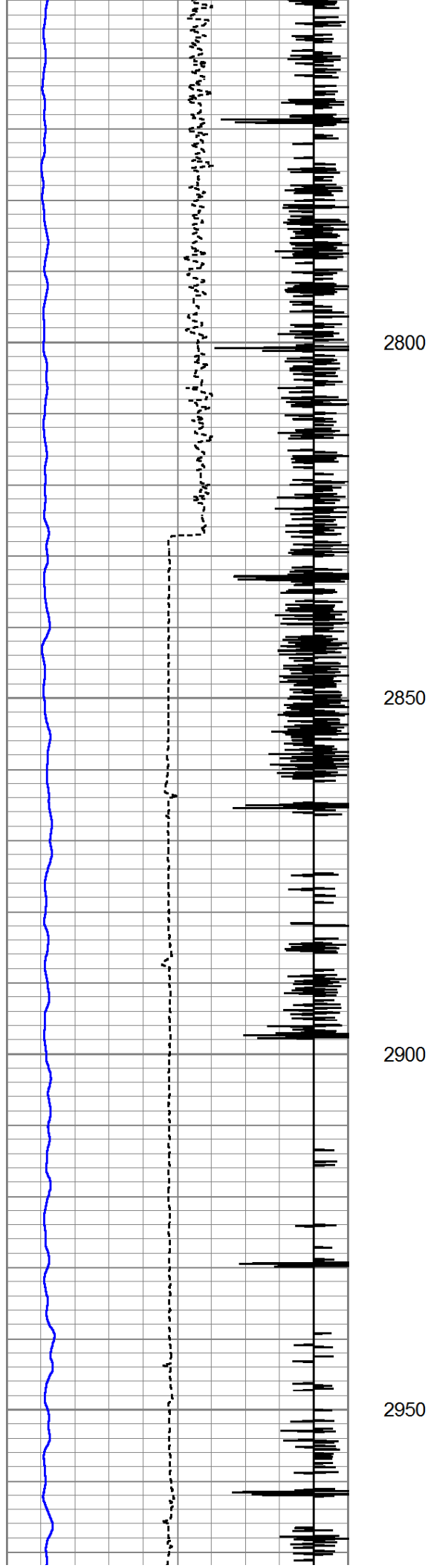


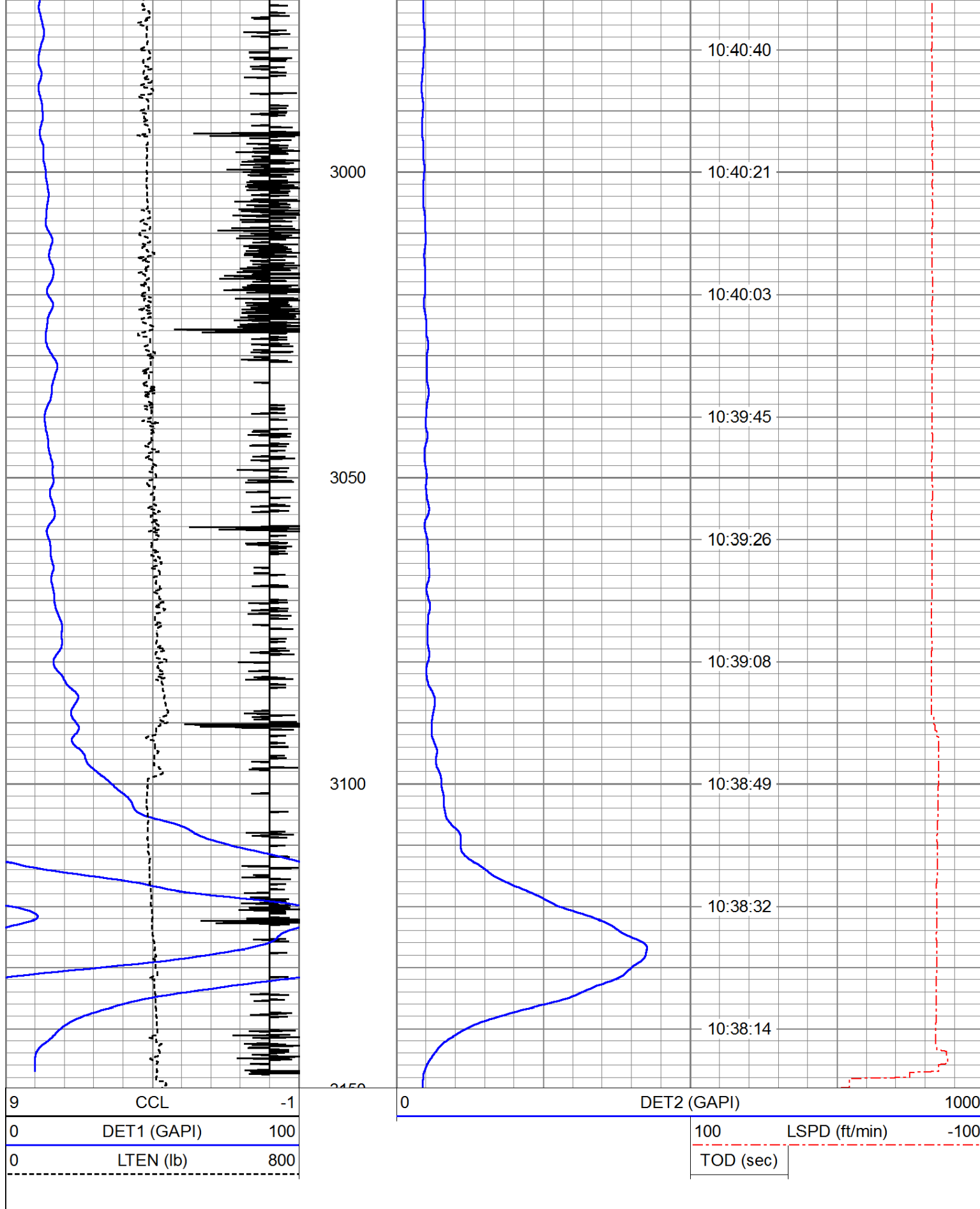
RUN # 7

SLUG # 2 CHASE # 2
9.5 GPM @ 0 PSI

Database File: marathon,shellstate13swd#1,9-22-2020.db
Dataset Pathname: LANGLEIE/13/SLUG_2/pass3
Presentation Format: tracer
Dataset Creation: Tue Sep 22 10:38:05 2020 by Log 7.0 B1
Charted by: Depth in Feet scaled 1:240







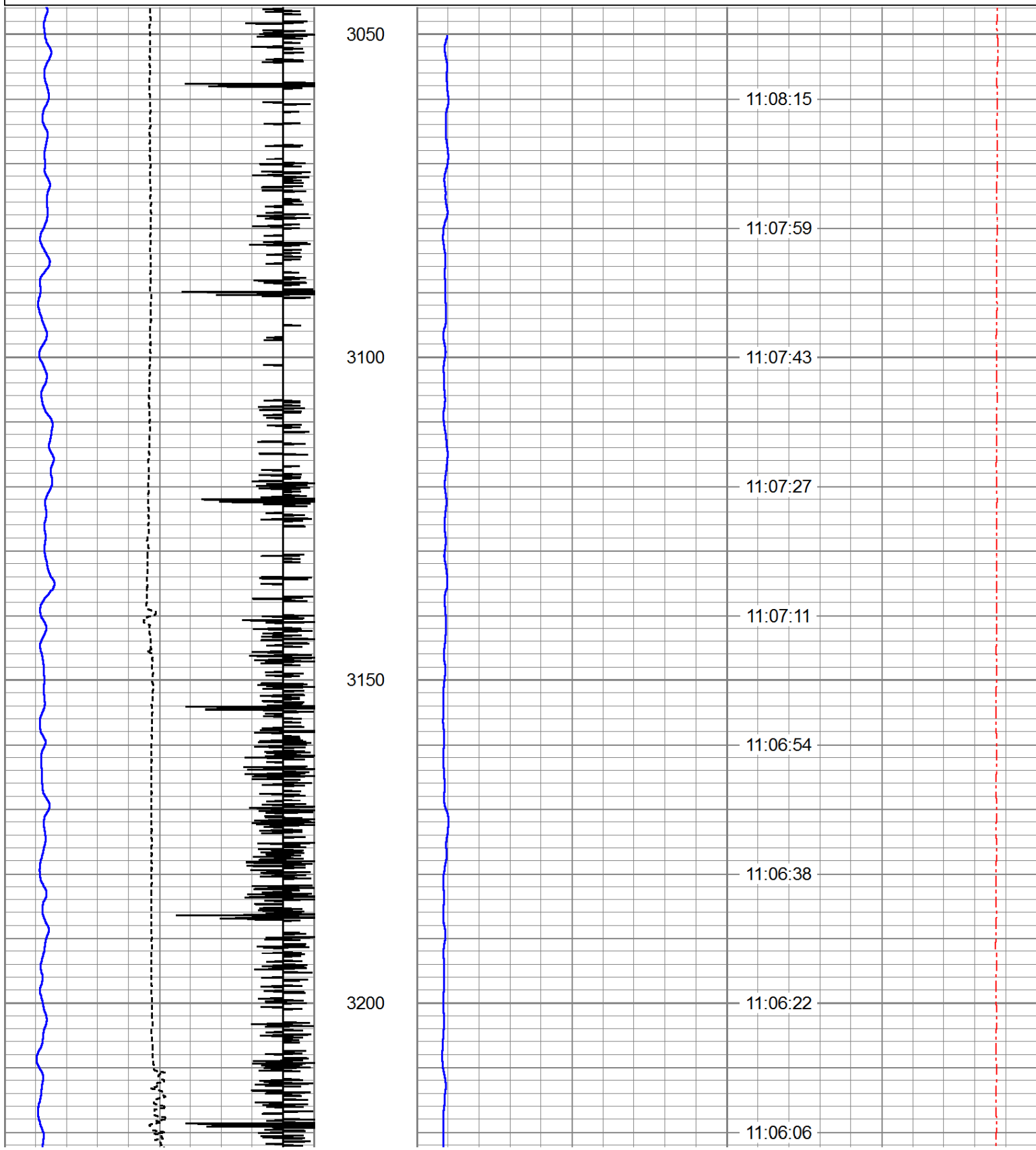
RUN # 8

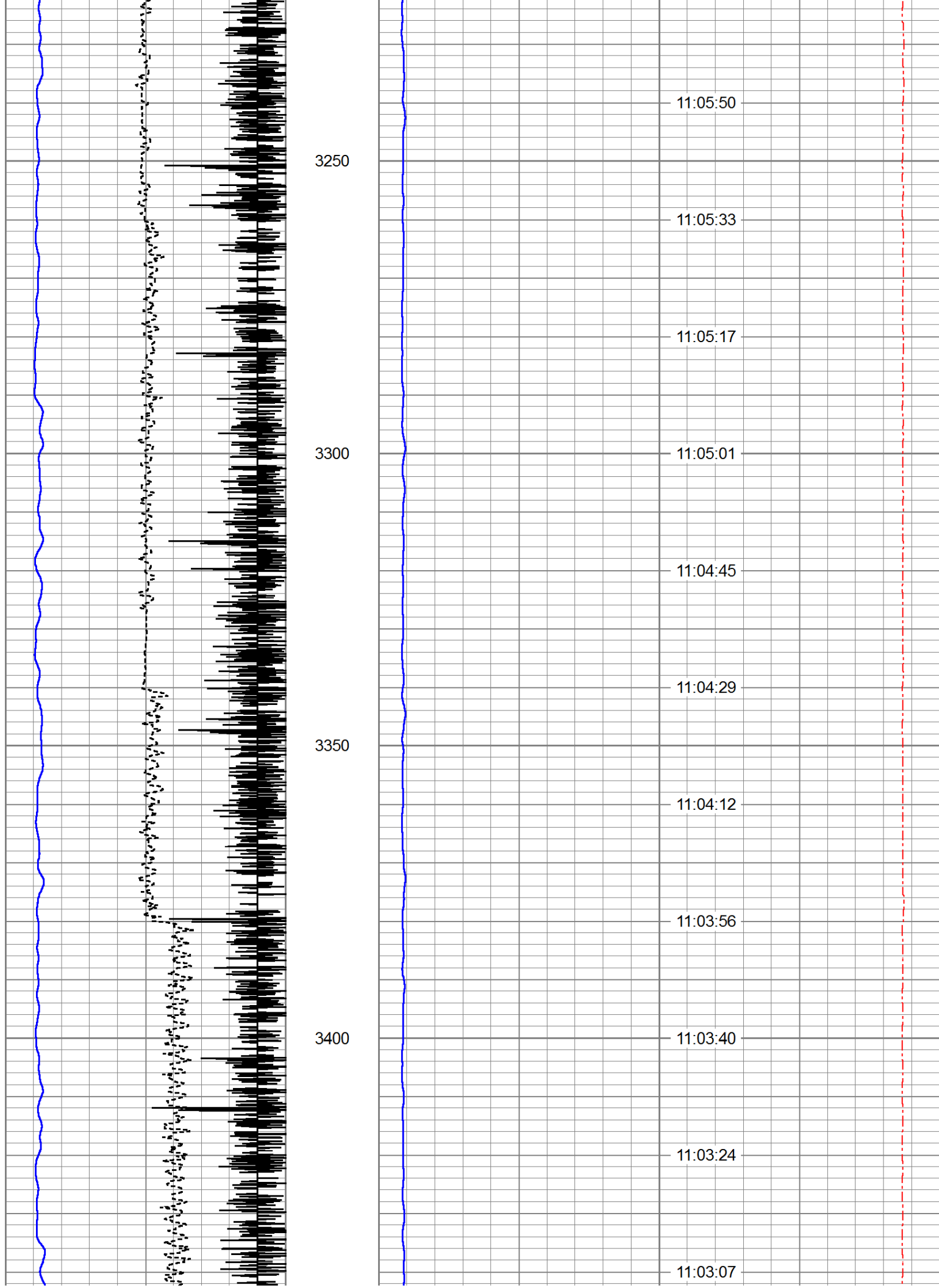
SLUG # 2 CHASE # 3

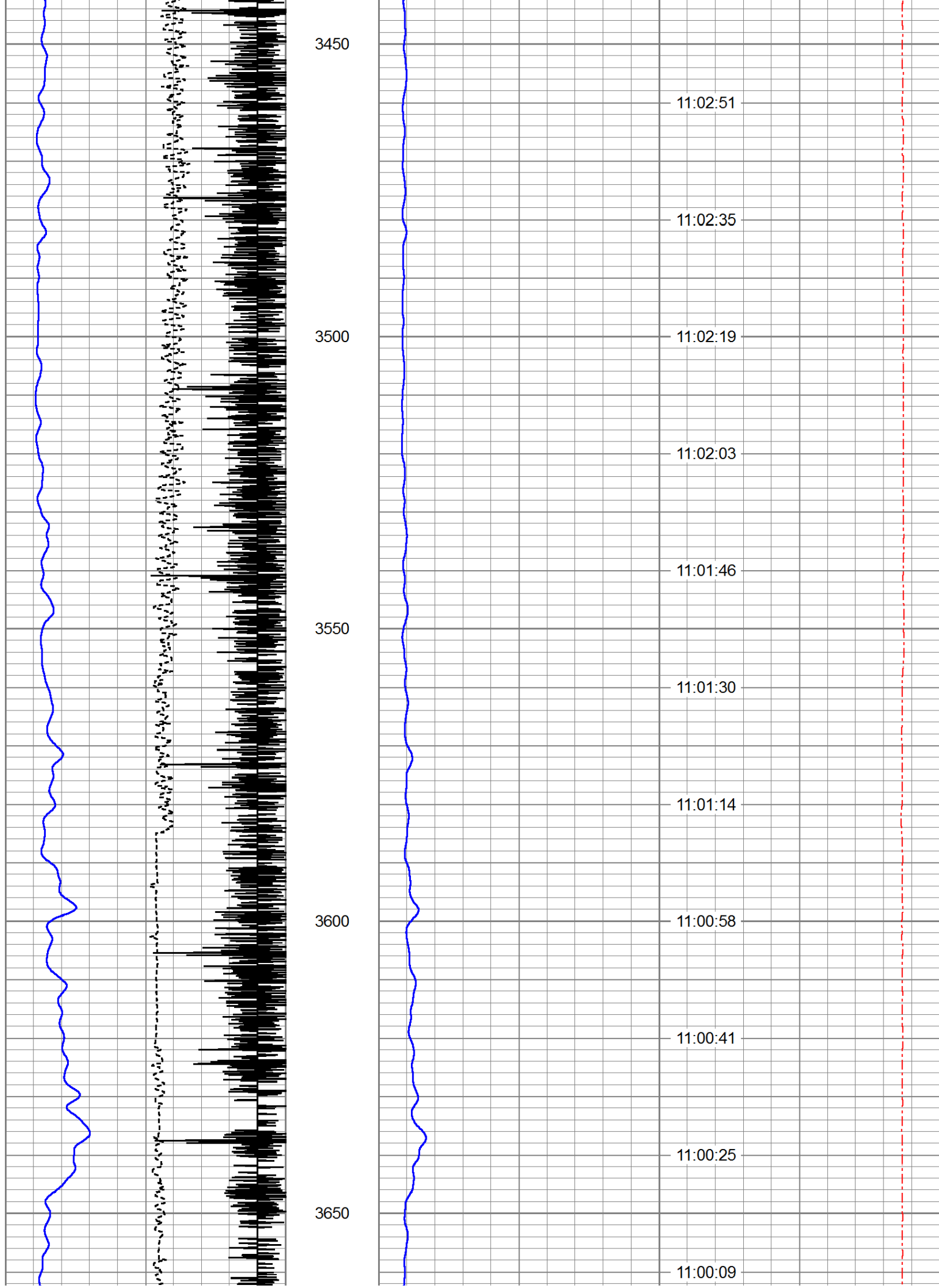
0.5 CPM @ 0 PSI

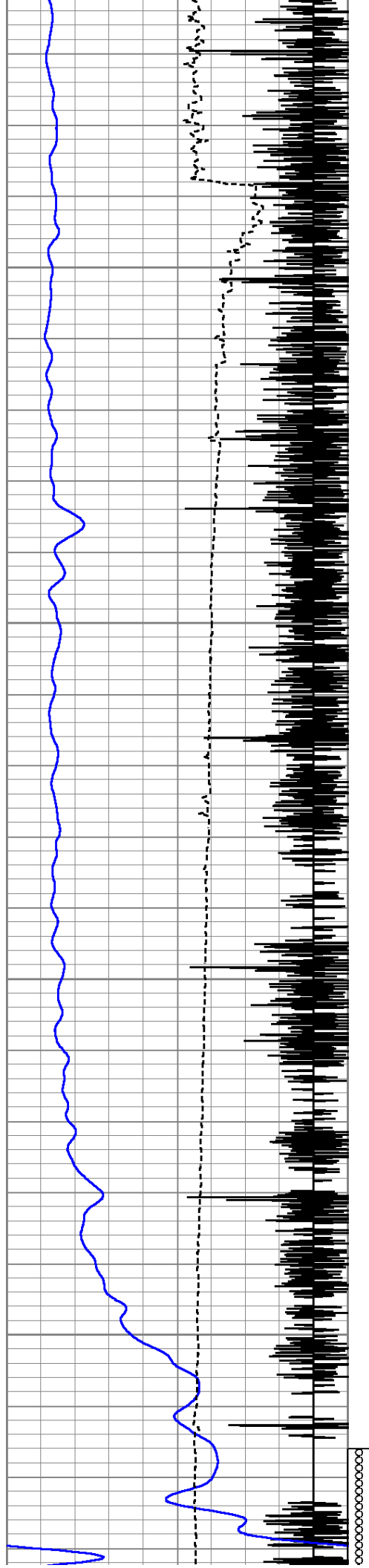
Database File: marathon,shellstate13swd#1,9-22-2020.db
Dataset Pathname: LANGLEIE/13/SLUG_2/pass4
Presentation Format: tracer
Dataset Creation: Tue Sep 22 10:56:48 2020 by Log 7.0 B1
Charted by: Depth in Feet scaled 1:240

9	CCL	-1	0	DET2 (GAPI)	1000
0	DET1 (GAPI)	100	100	LSPD (ft/min)	-100
0	LTEN (lb)	800	TOD (sec)		







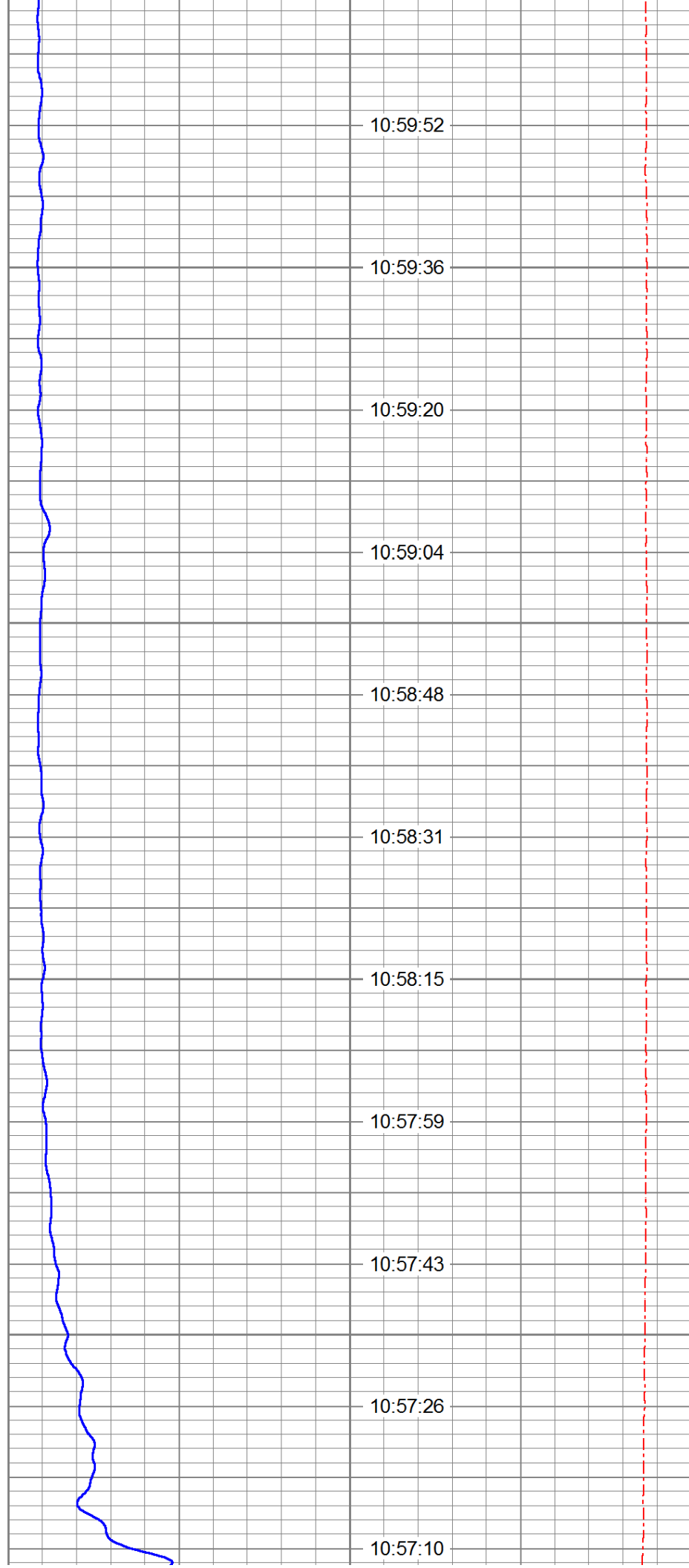


3700

3750

3800

3850



10:59:52

10:59:36

10:59:20

10:59:04

10:58:48

10:58:31

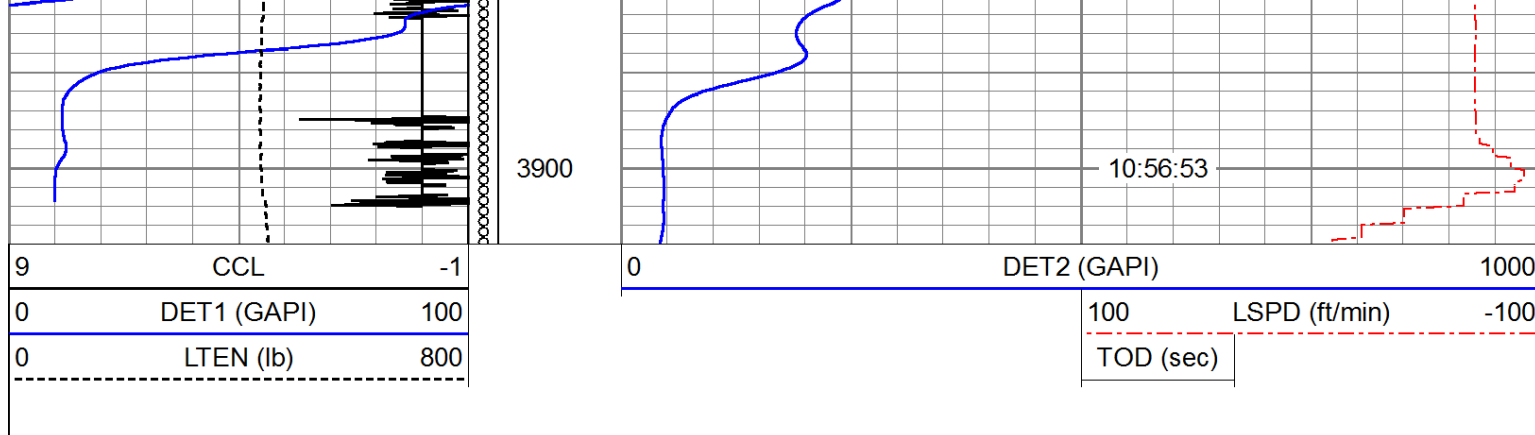
10:58:15

10:57:59

10:57:43

10:57:26

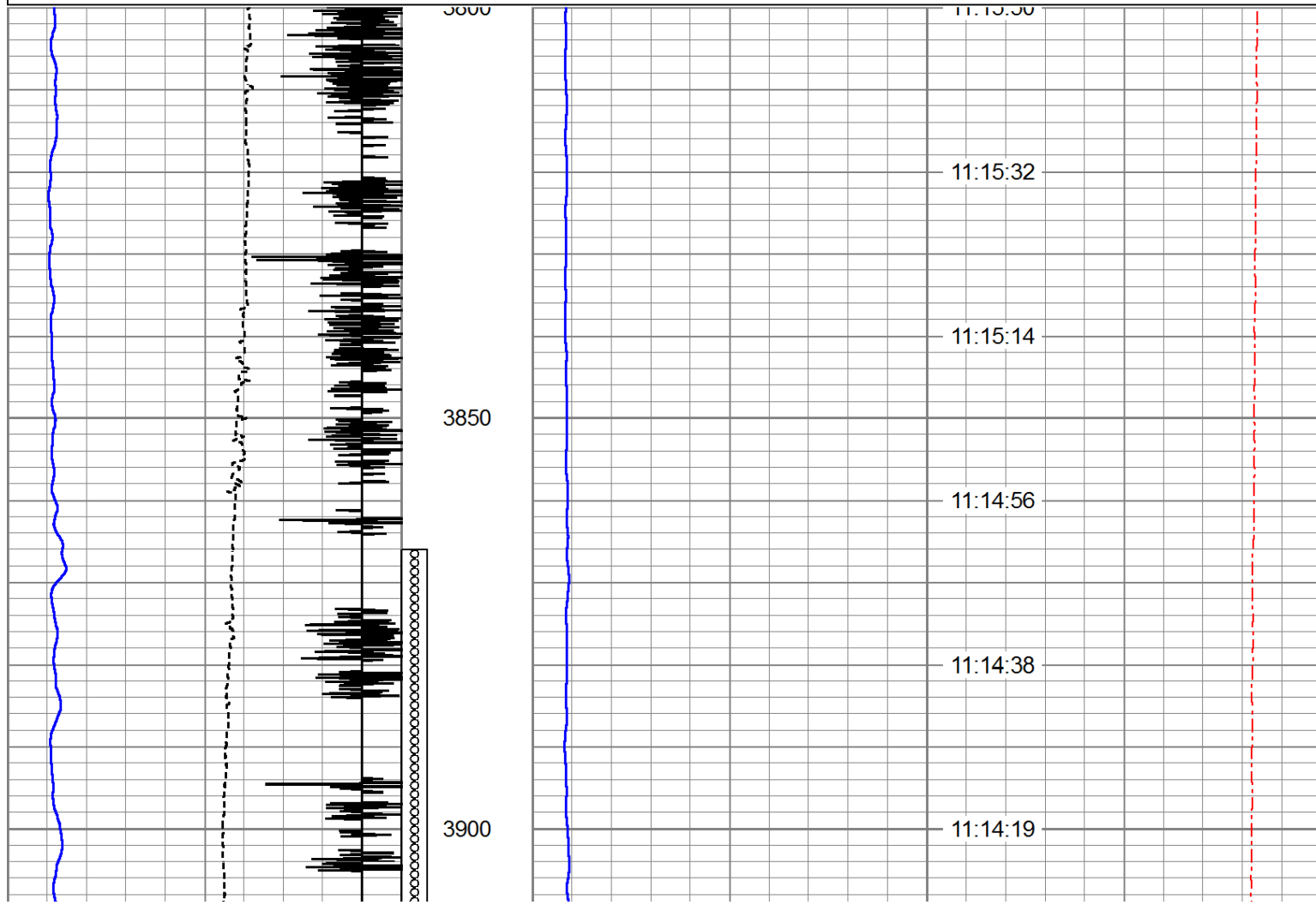
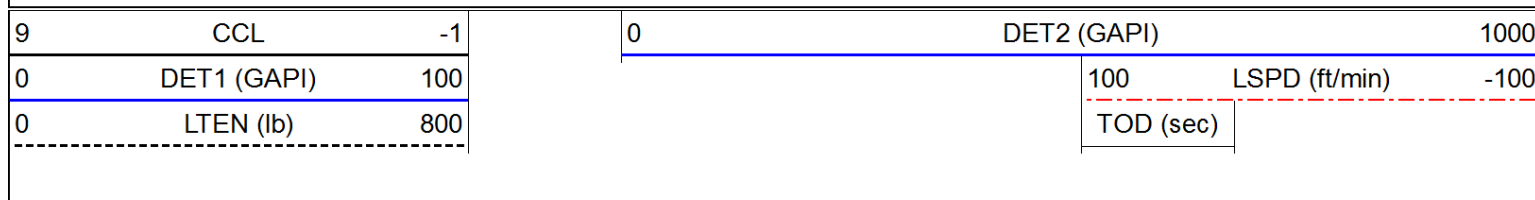
10:57:10

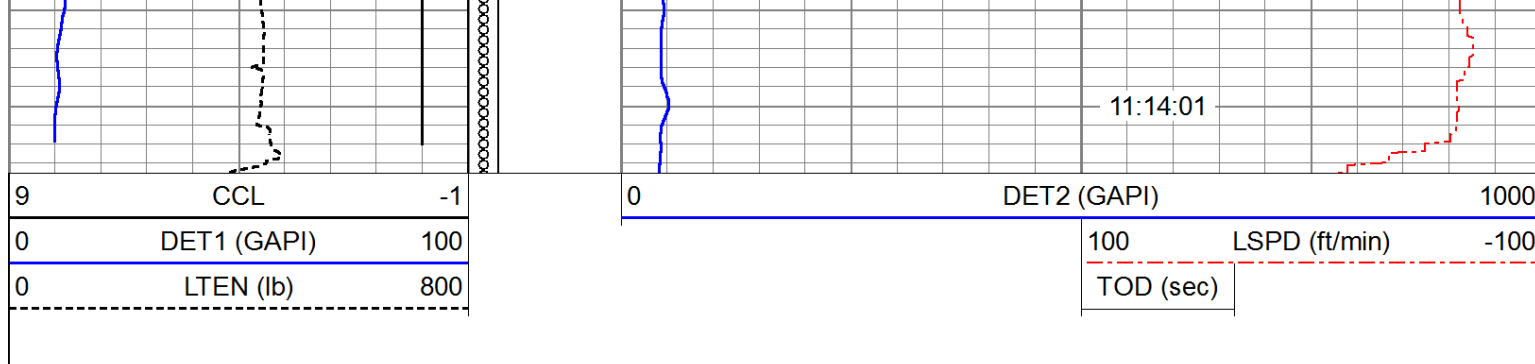


RUN # 9

SLUG # 2 CHASE # 4 DISSIPATED
9.5 GPM @ 0 PSI

Database File: marathon.shellstate13swd#1,9-22-2020.db
Dataset Pathname: LANGLEIE/13/SLUG_2/pass5
Presentation Format: tracer
Dataset Creation: Tue Sep 22 11:13:54 2020 by Log 7.0 B1
Charted by: Depth in Feet scaled 1:240

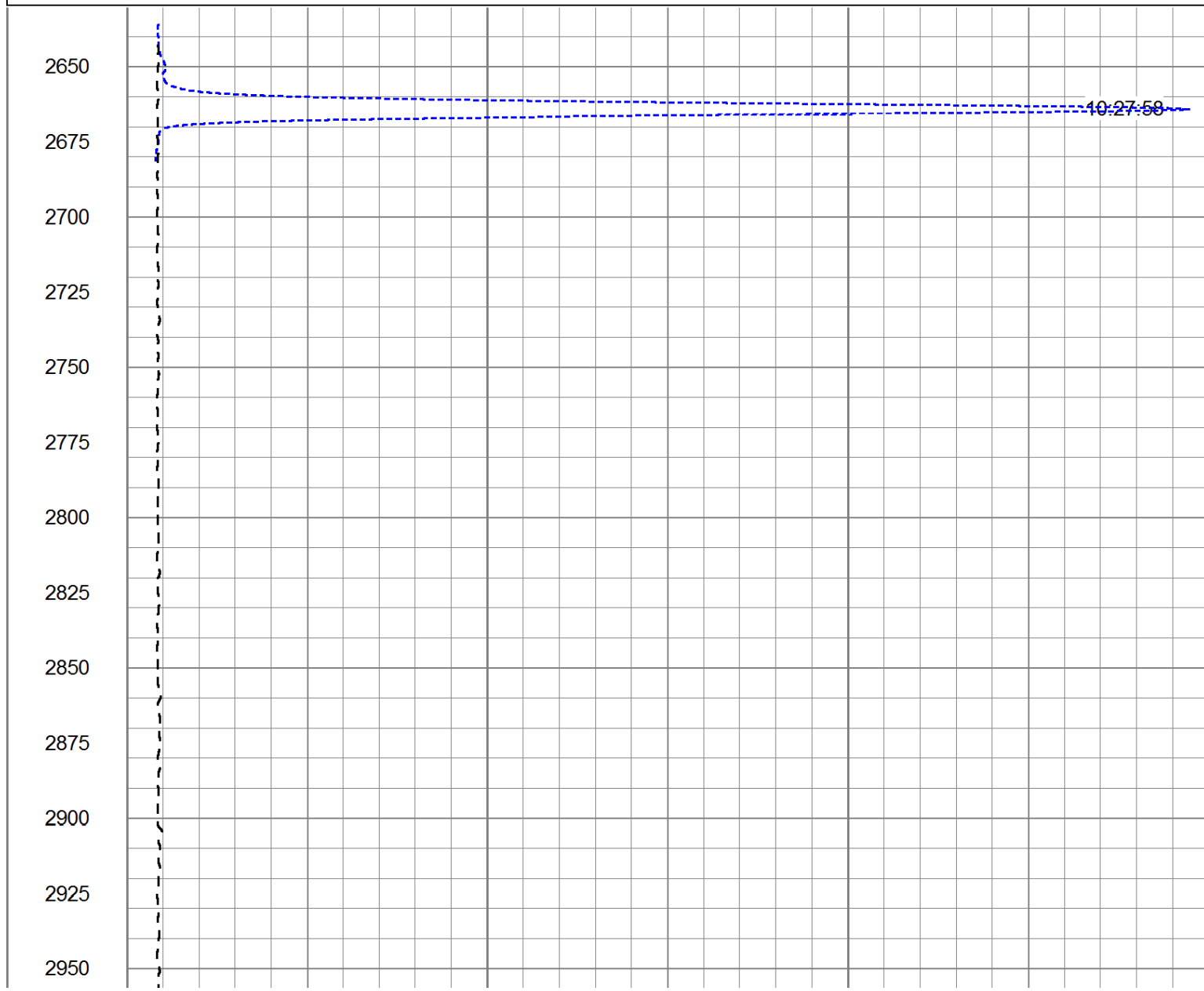




SLUG # 2 MERGED

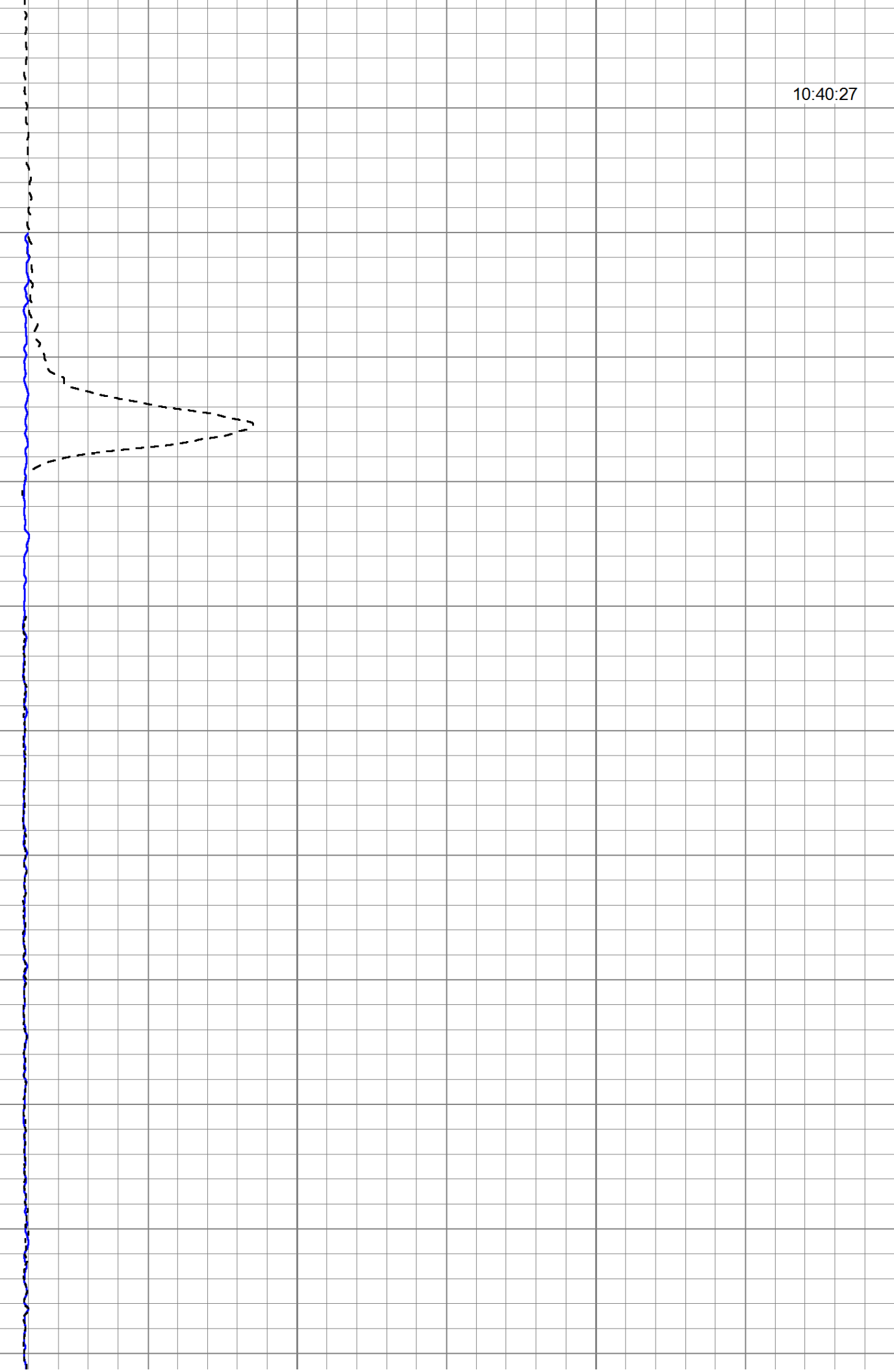
Database File: marathon,shellstate13swd#1,9-22-2020.db
 Dataset Pathname: LANGLEIE/13/SLUG_2/_profile1_
 Presentation Format: trcprof
 Dataset Creation: Tue Sep 22 12:01:40 2020
 Charted by: Depth in Feet scaled 1:600

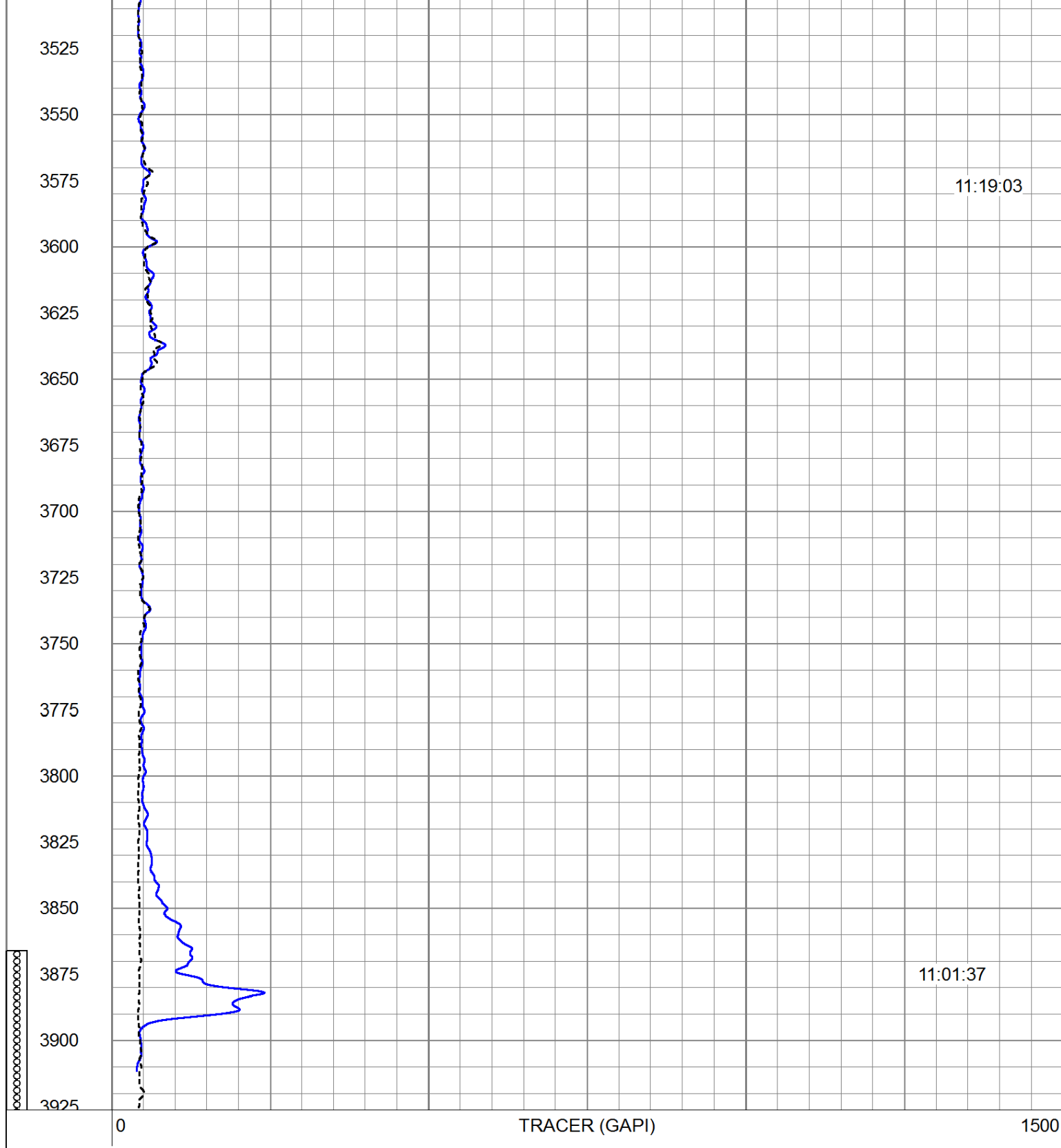
0	TRACER (GAPI)	1500
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2975
3000
3025
3050
3075
3100
3125
3150
3175
3200
3225
3250
3275
3300
3325
3350
3375
3400
3425
3450
3475
3500

10:40:27





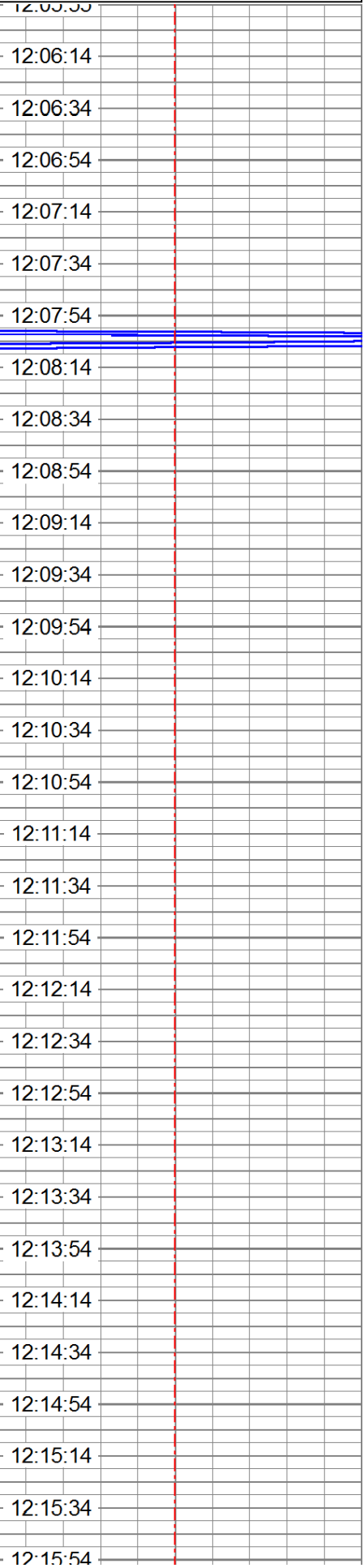
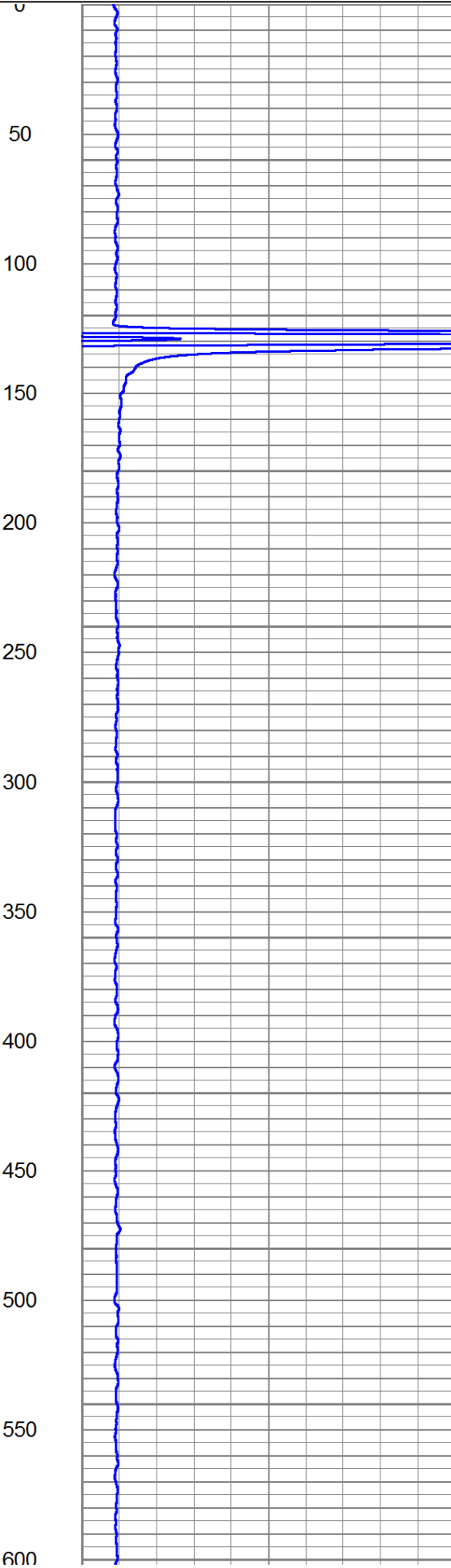
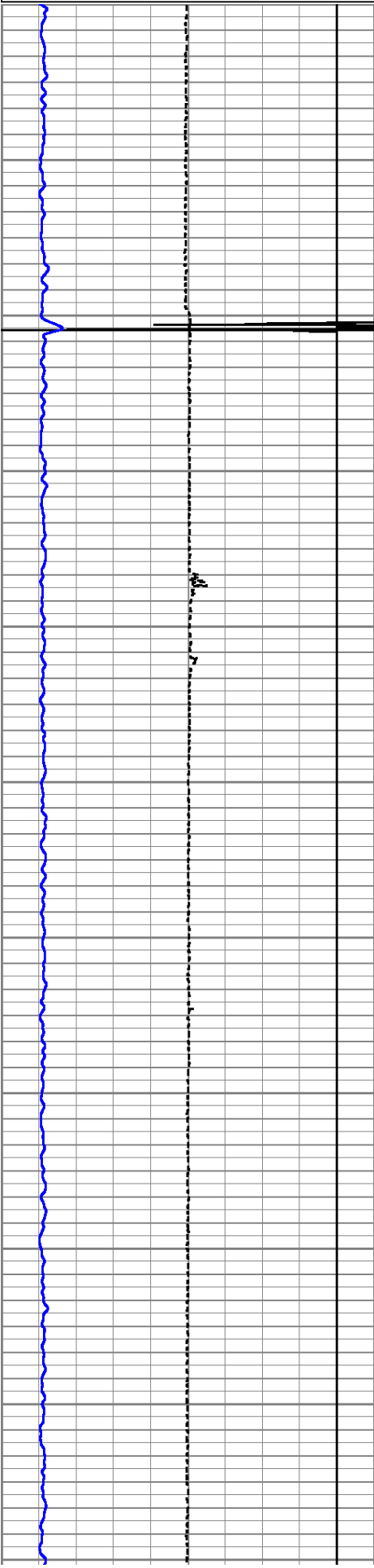
RUN # 10

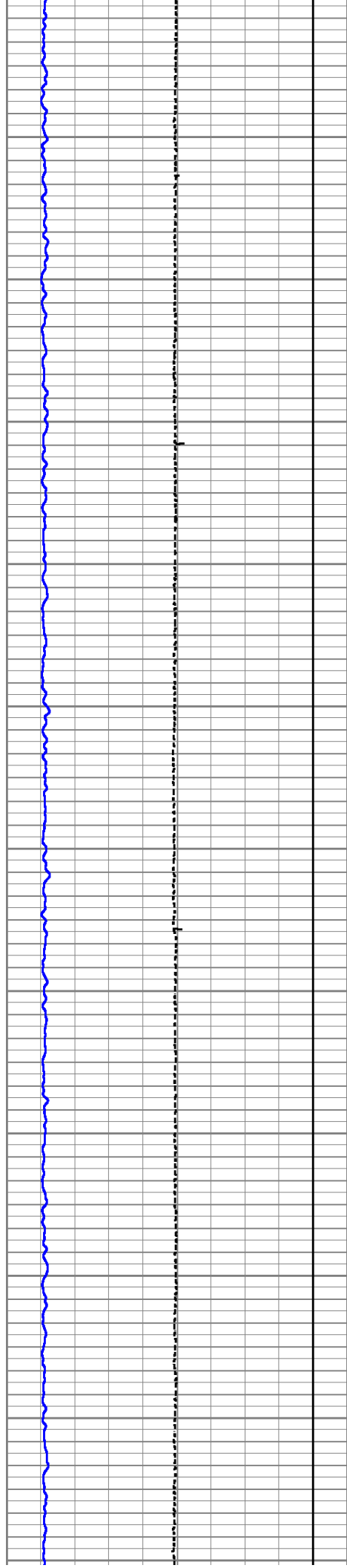
TIME DRIVE # 1 @ 3850'
22 GPM @ 0 PSI

Database File: marathon,shellstate13swd#1,9-22-2020.db
Dataset Pathname: LANGLEIE/13/TIME_DRIV/pass1
Presentation Format: tracer
Dataset Creation: Tue Sep 22 12:05:55 2020 by Log 7.0 B1
Charted by: Time scaled 60"/hour

9	CCL	-1
0	DET1 (GAPI)	100
0	LTEN (lb)	800

0	DET2 (GAPI)	1000
100	LSPD (ft/min)	-100
TOD (sec)		





650

700

750

800

850

900

950

1000

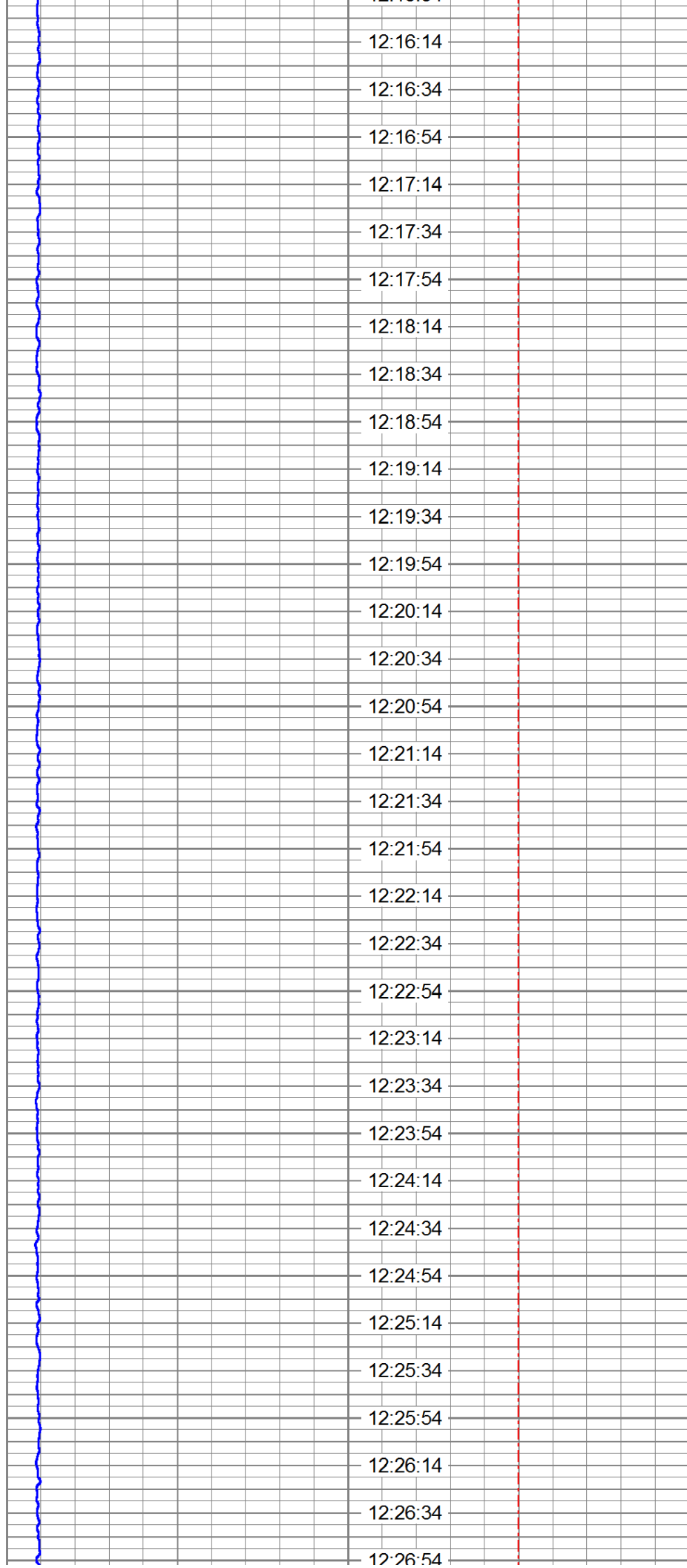
1050

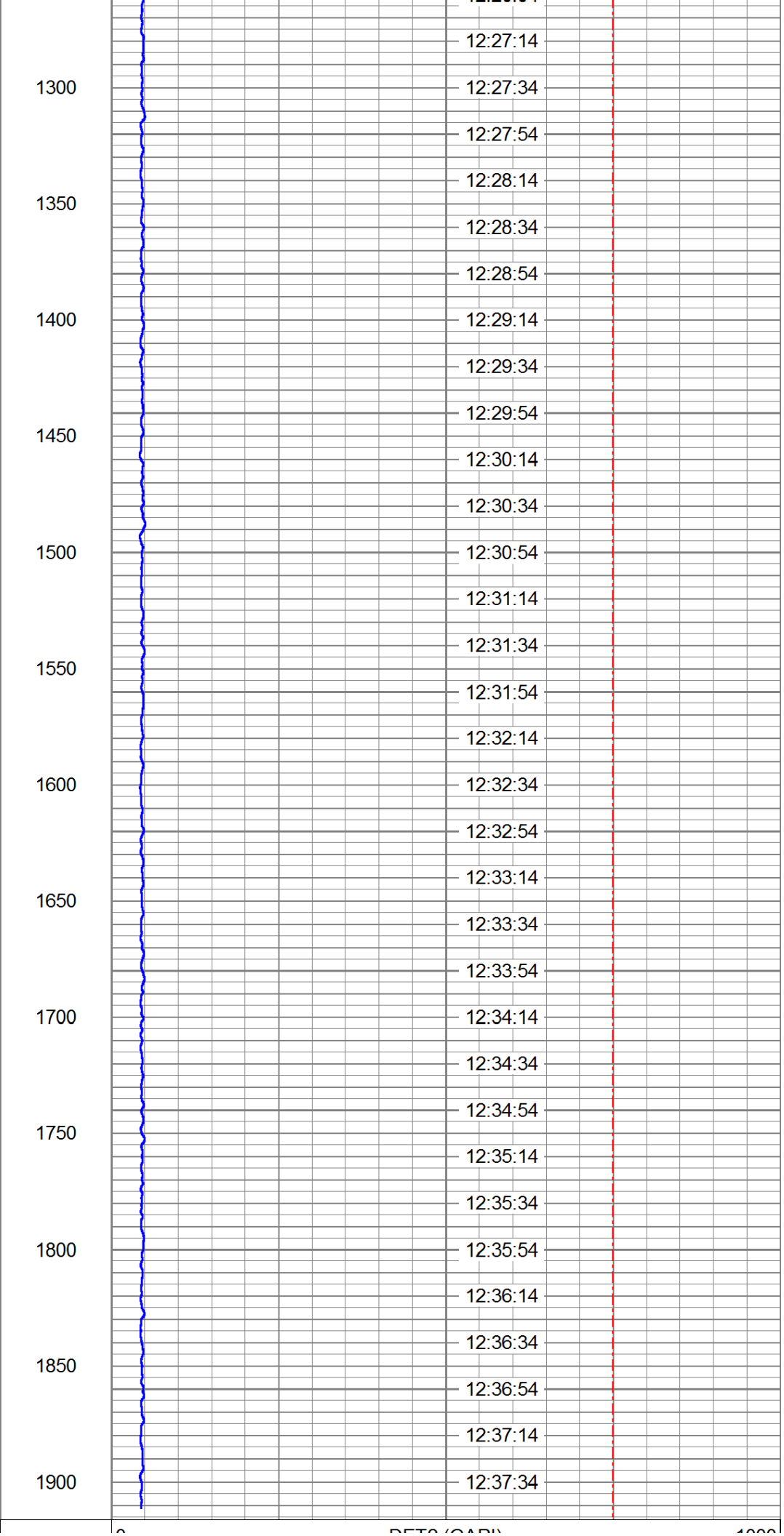
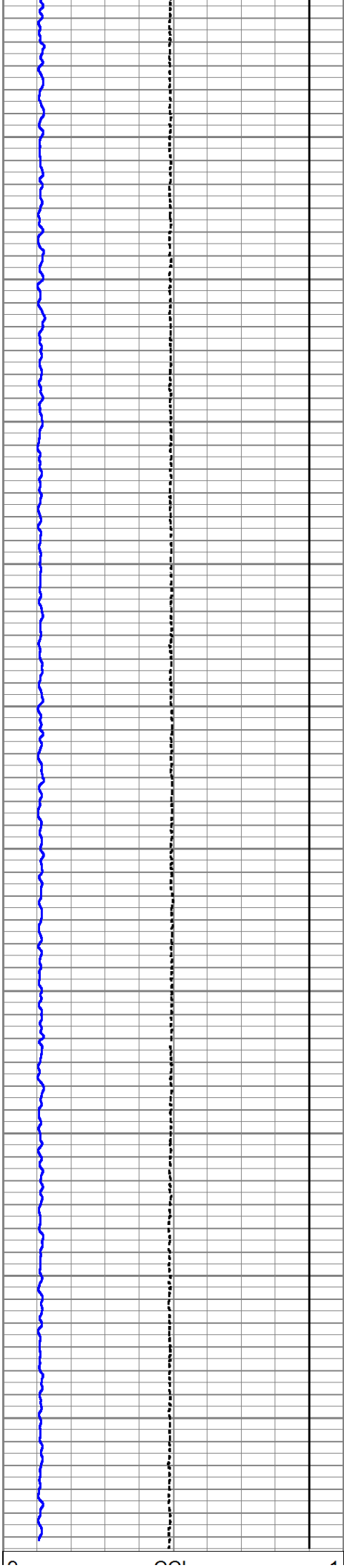
1100

1150

1200

1250





9	CCL	-1
0	DET1 (GAPI)	100
0	LTEN (lb)	800

0	DET2 (GAPI)	1000
100	LSPD (ft/min)	-100
TOD (sec)		



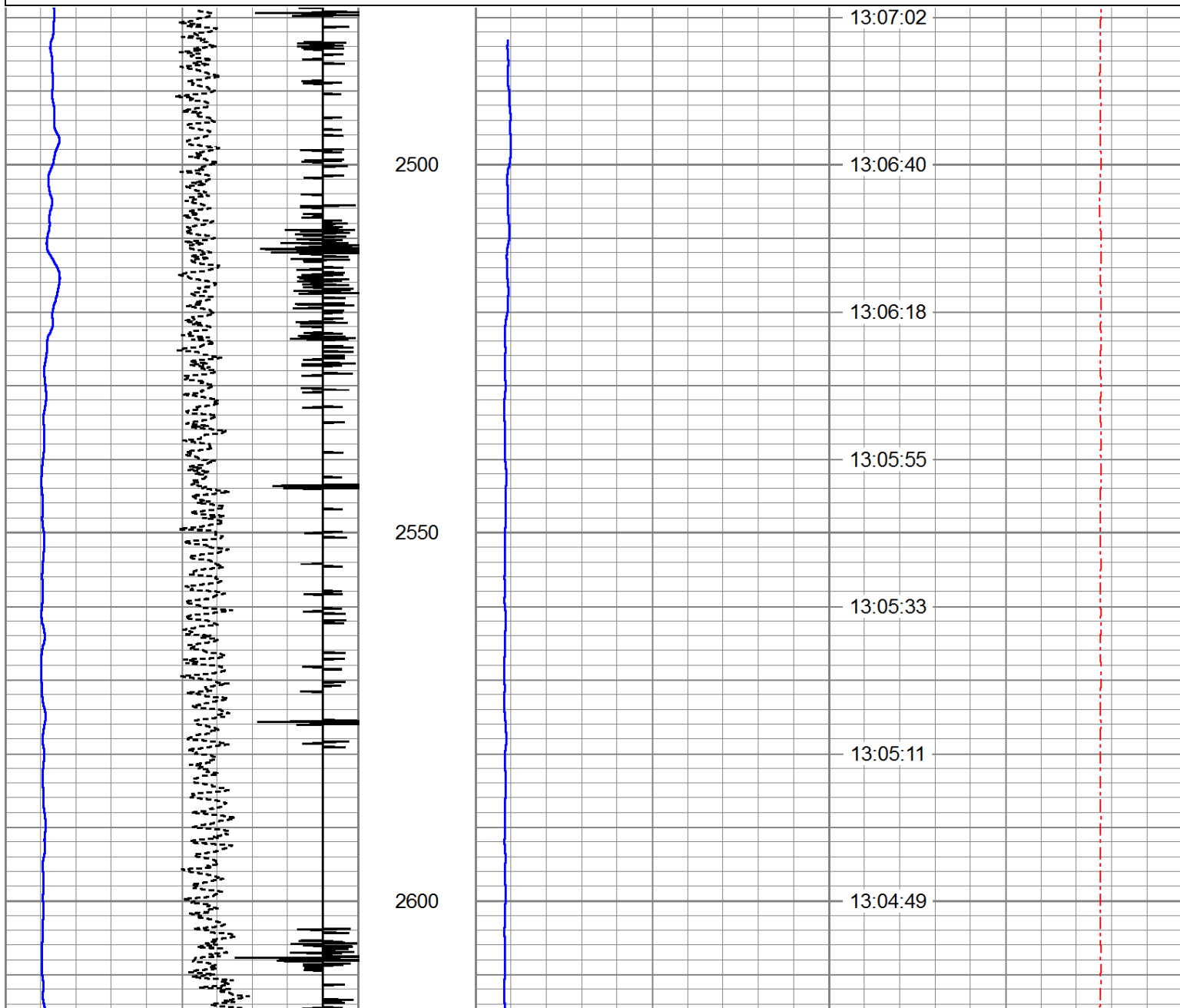
RUN # 11

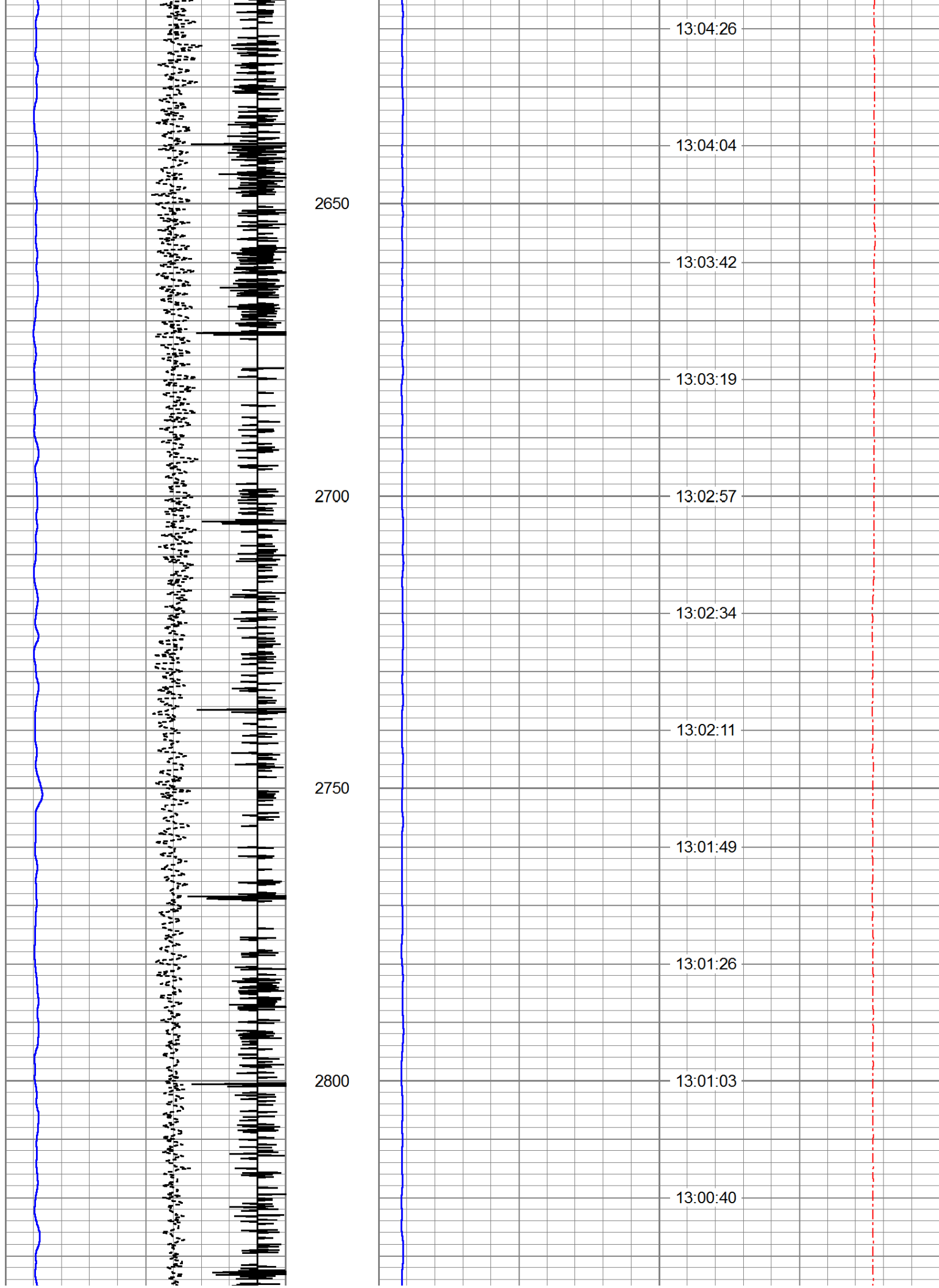
POST SURVEY BASE LOG
0 GPM @ 0 PSI

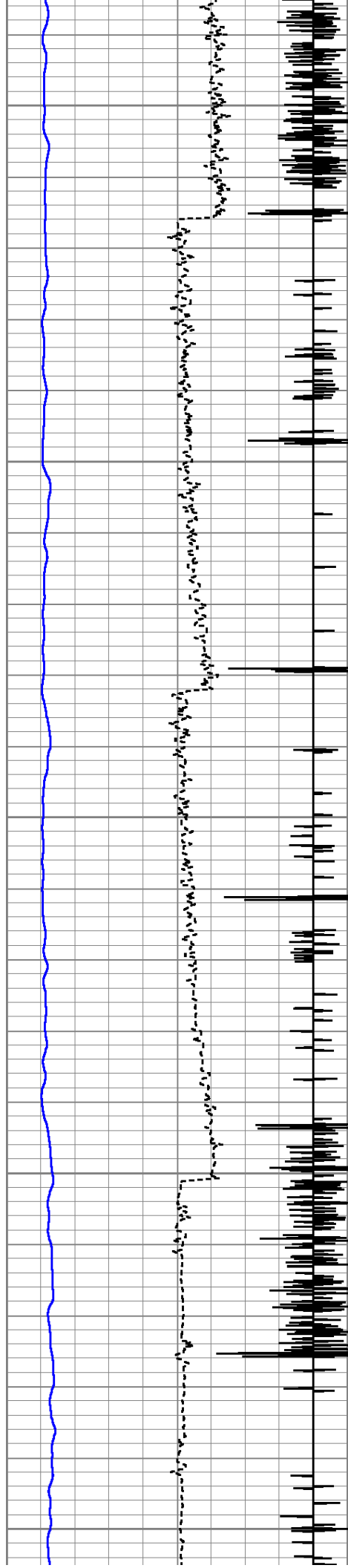
Database File: marathon,shellstate13swd#1,9-22-2020.db
Dataset Pathname: LANGLEIE/13/AFTER_BAS/pass1
Presentation Format: tracer
Dataset Creation: Tue Sep 22 12:39:33 2020 by Log 7.0 B1
Charted by: Depth in Feet scaled 1:240

9	CCL	-1
0	DET1 (GAPI)	100
0	LTEN (lb)	800

0	DET2 (GAPI)	1000
100	LSPD (ft/min)	-100
TOD (sec)		







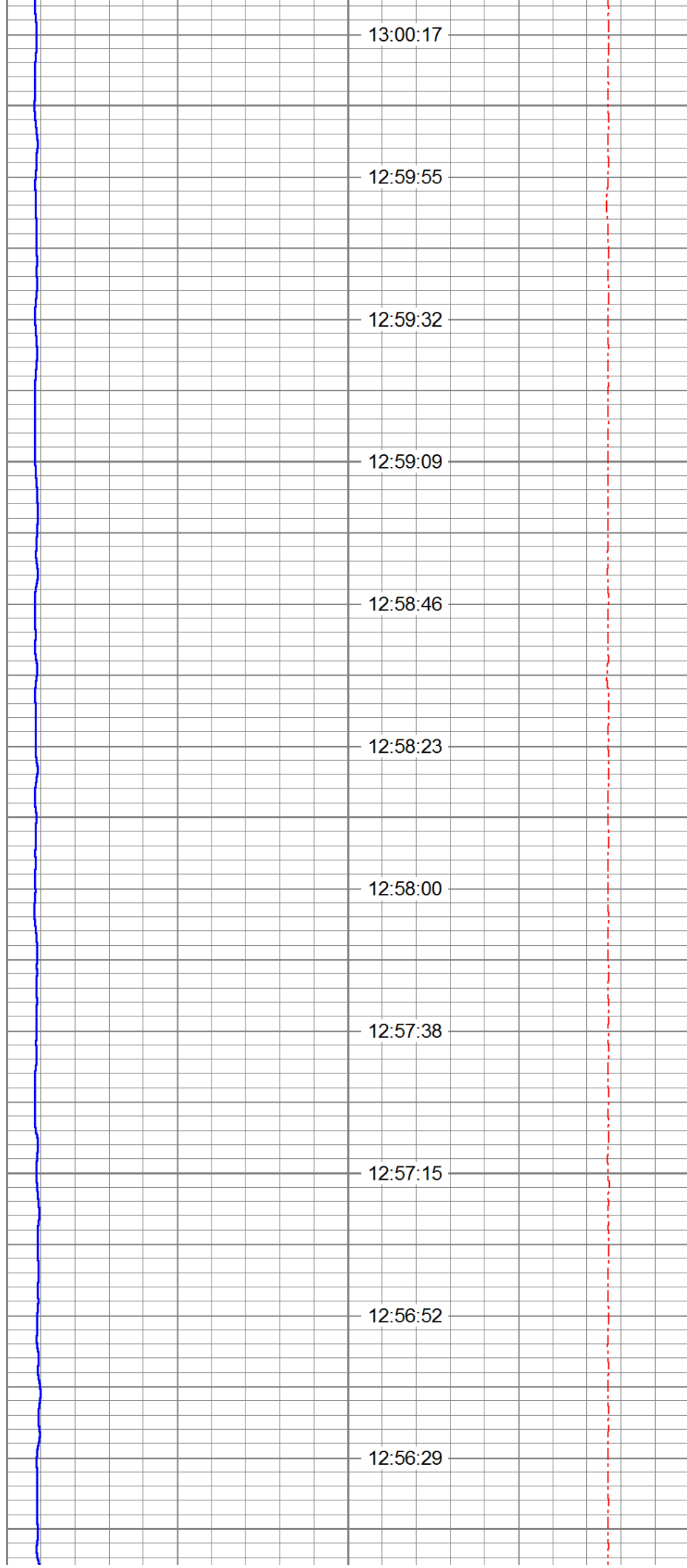
2850

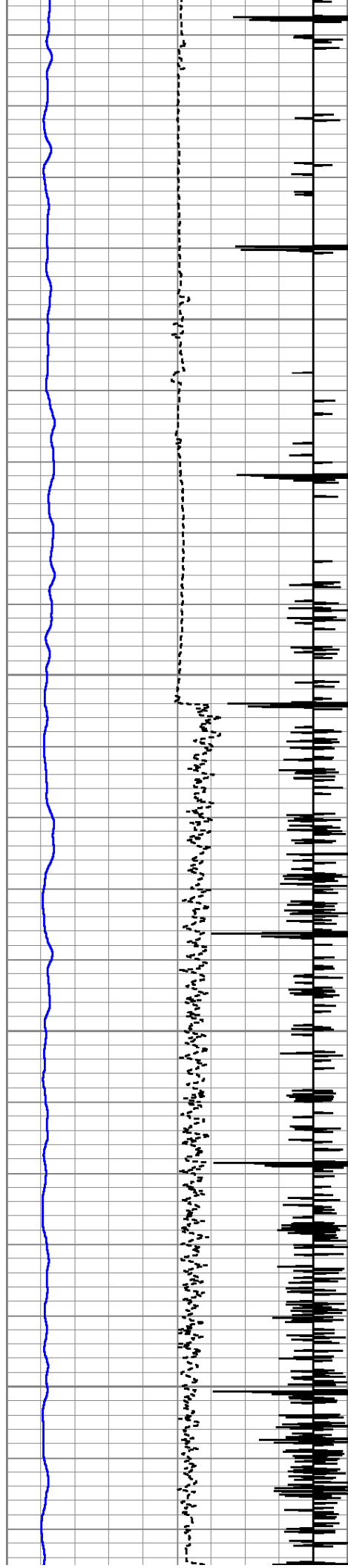
2900

2950

3000

3050



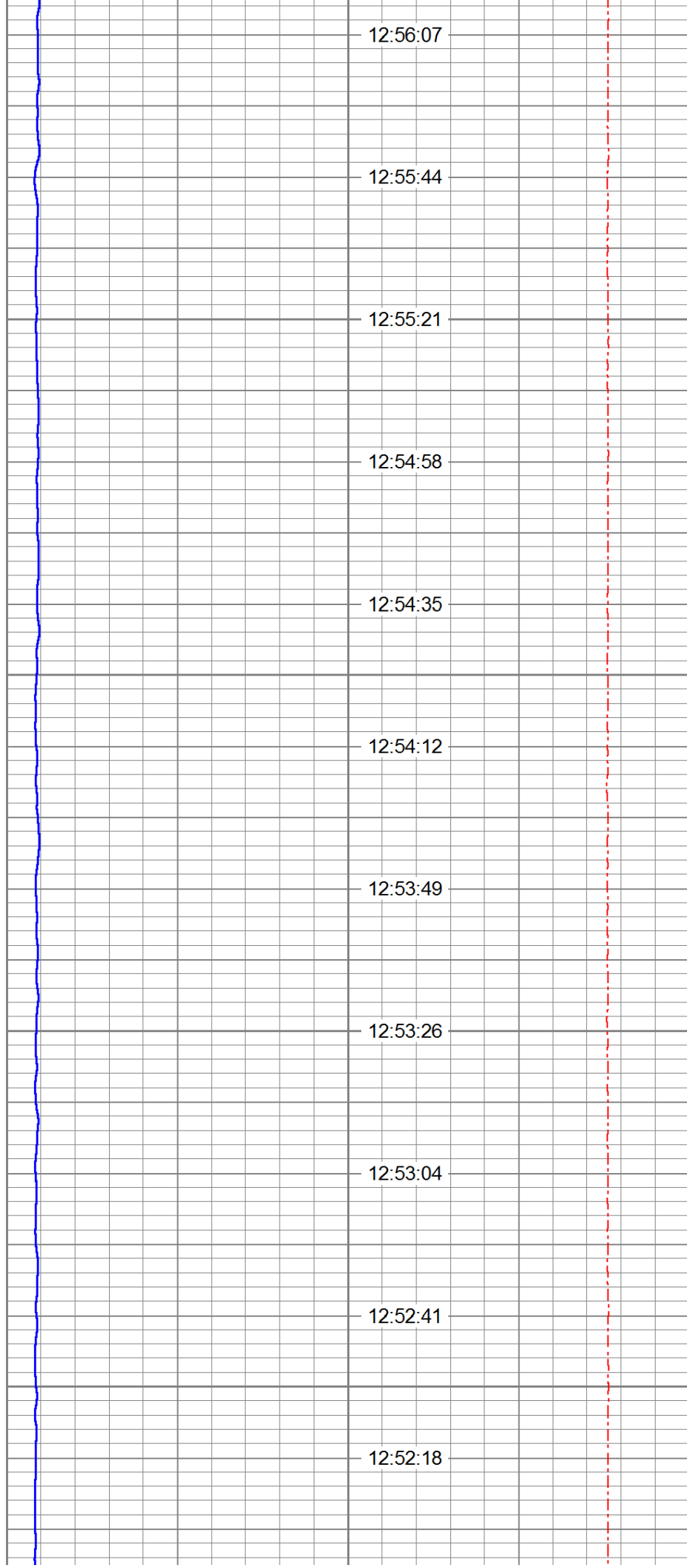


3100

3150

3200

3250



12:56:07

12:55:44

12:55:21

12:54:58

12:54:35

12:54:12

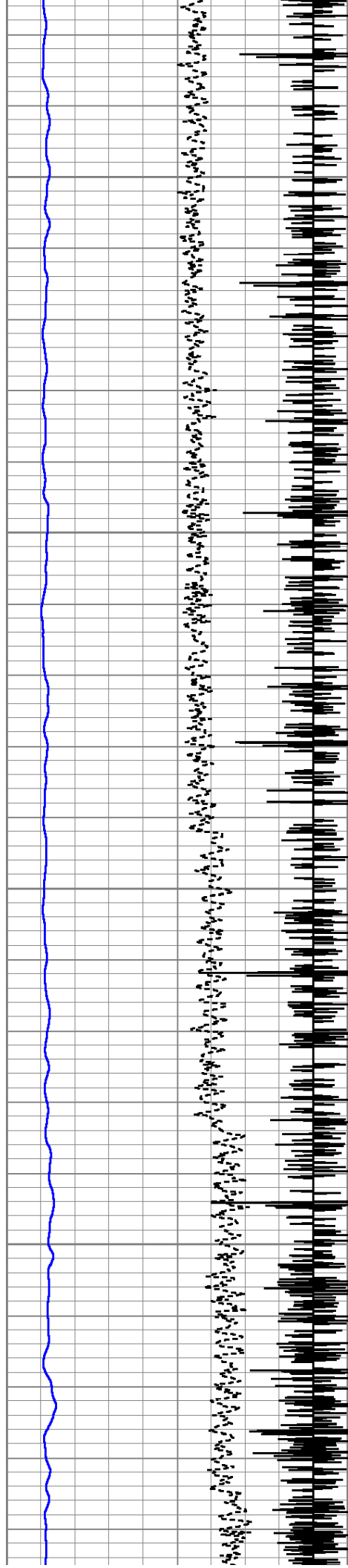
12:53:49

12:53:26

12:53:04

12:52:41

12:52:18

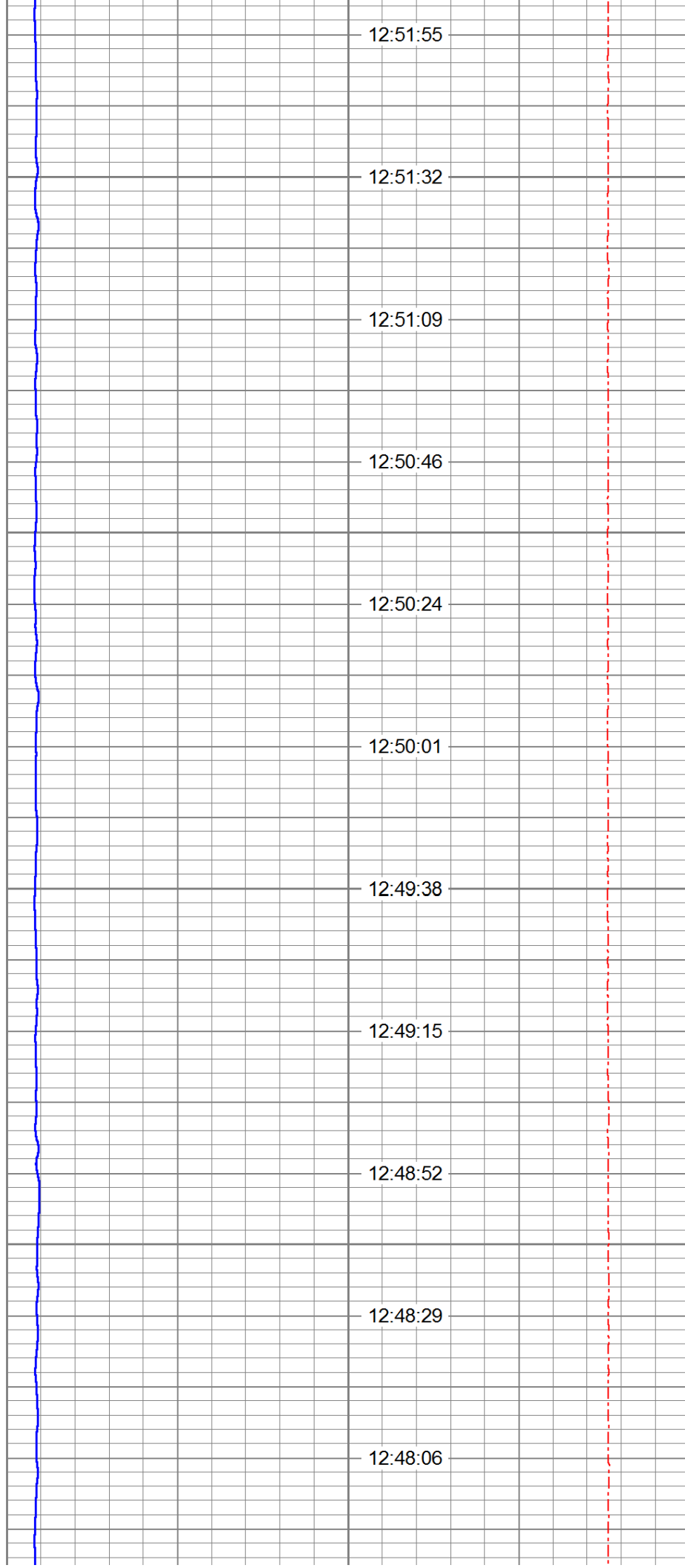


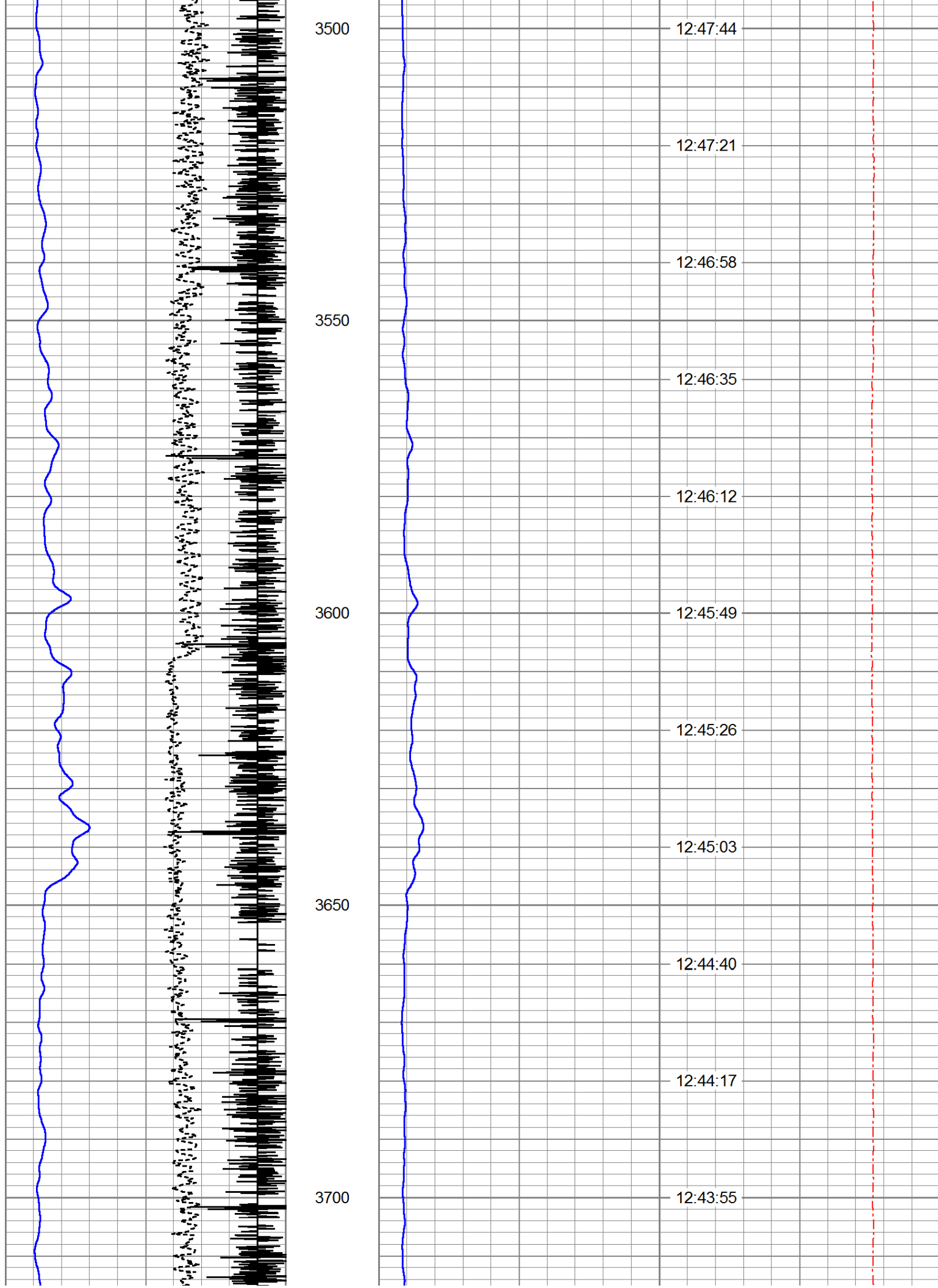
3300

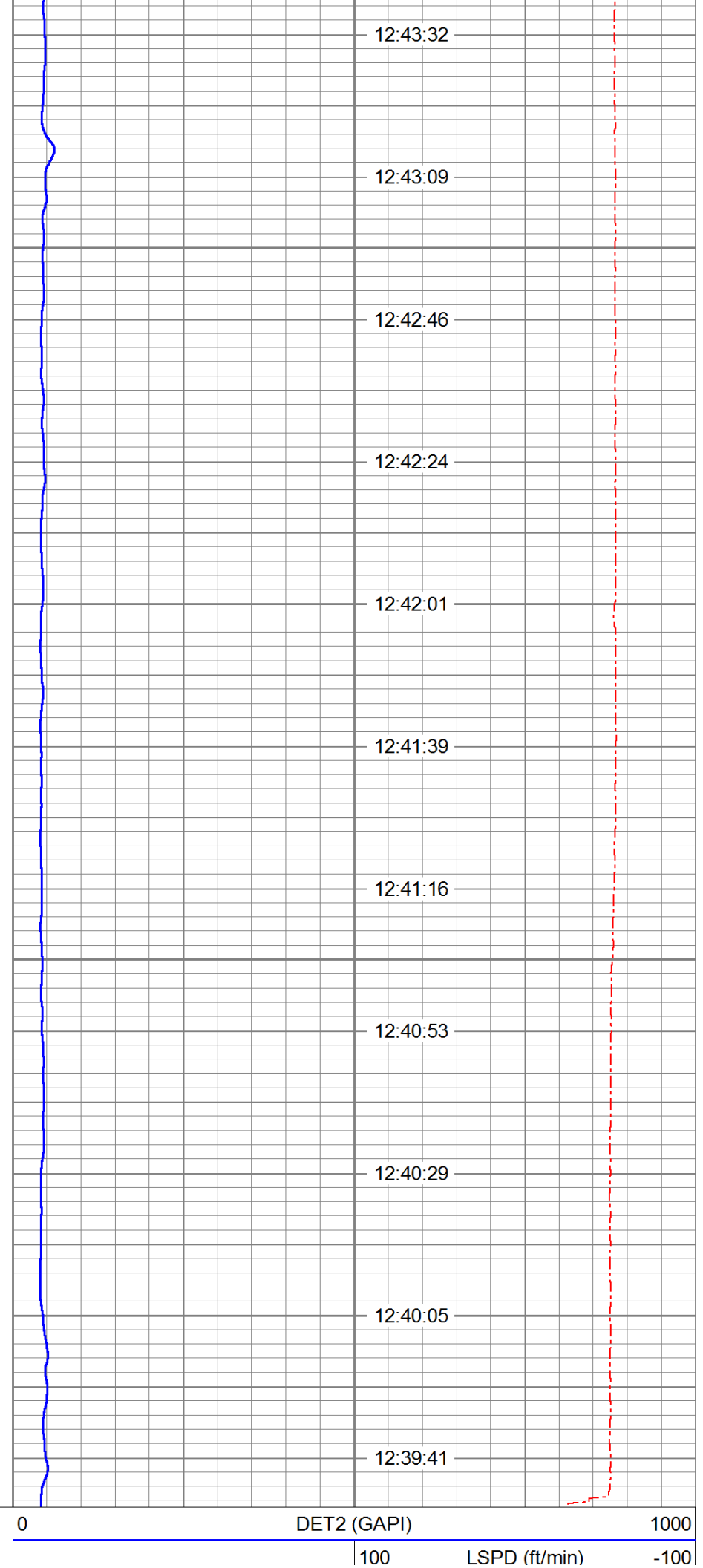
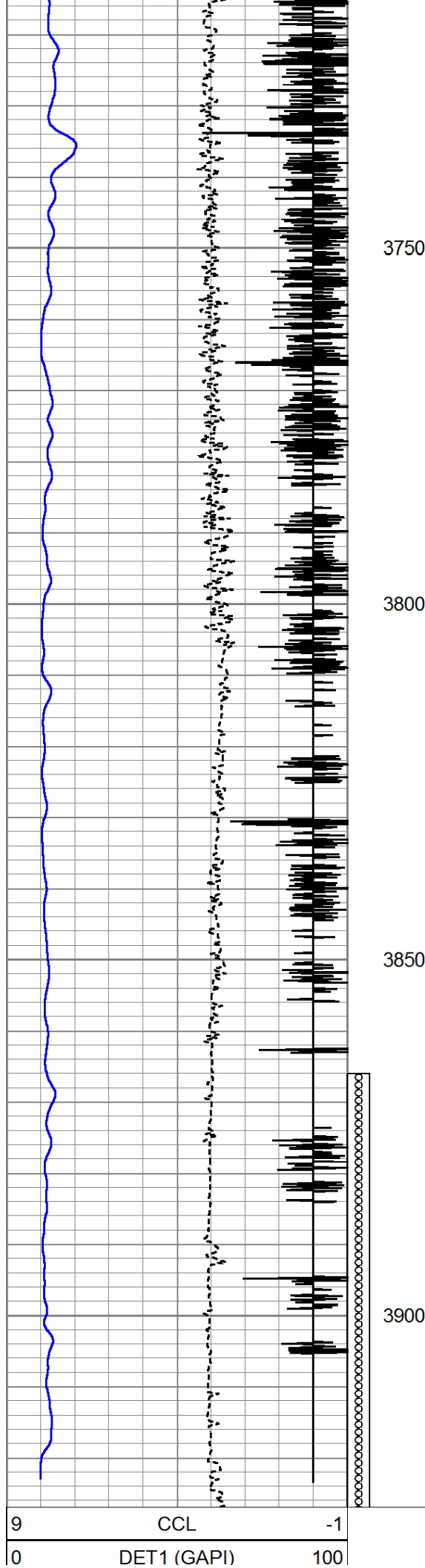
3350

3400

3450







0	LTEN (lb)	800
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TOD (sec)
