

LWD MEMORY LOG



Gamma Ray

Scale:

1:1200

Measured Depth

Depth Reference:

Driller's Depth

Company: ConocoPhillips
Well: King_3-65_28-29_3CH
Field: Adams County
County: Adams
State: Colorado
Country: United States

Status:

Final Print

API No: 05001102250000

Job ID: 109811911

Permanent Datum (P.D.):

Log Measured From:

Ground Level

Rig Floor

Elevation:

Above P.D.

5585.00 ft

25.00 ft

Elev. KB:

Elev. DF:

5610.00 ft

5585.00 ft

Dates

Interval Drilled

Magnetic Field Reference

Date From: 2019-05-29

Date To: 2019-06-03

Spud Date: 2019-05-29

Azi Reference North: True

Total Magnetic Field Strength: (nT)

Mag to Reference North Correction: (deg)

Dip Angle: (deg)

51740

8.22

Borehole Record

Casing Record

Hole Size (in)

13.500

8.500

From (ft)

25.00

2214.00

To (ft)

2214.00

17867.00

Size (in)

9.625

Weight (lb/ft)

36.00

From (ft)

0.25

To (ft)

2204.00

Type

Oil Based Mud

From (ft)

2214.00

To (ft)

17867.00

Hole Size (in)

8.500

Interval (ft)

15653.00

Inc | Az (Start)

0.29 | 49.31

Inc | Az (End)

89.54 | 271.79

Deviation Record

Mud Record

Acquisition System

Software Version

RT 5.1

5.1.8355.1

Rig:

Nabors B16

Contractor:

Nabors Drilling

District:

RMA

Unit: D&E

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Log Run Summary

Run No	Bit Run No.	Bit Size (in)	Bit Type	Bit Gauge Length (in)	Assembly Type	Logged Interval		Bit Depth Interval		Date / Time		Circ. Hours (h)
						Top (ft)	Bottom (ft)	From (ft)	To (ft)	Start Logging	End Logging	
1	1	8.500	PDC	6.00	AutoTrak Curve	2201.40	8449.40	2214.50	8462.50	2019-05-29 23:15	2019-05-31 10:00	31.69
2	1	8.500	PDC	6.00	AutoTrak Curve	8449.00	17854.00	8462.00	17867.00	2019-05-31 23:54	2019-06-03 02:20	48.71

Crew

Name	Arrive Wellsite	Depart Wellsite	Name	Arrive Wellsite	Depart Wellsite	Name	Arrive Wellsite	Depart Wellsite
Adewale Adedeji	2019-05-29	2019-06-03						

Mud Properties Record

Date / Time	Run No.	Measured Depth (ft)	Mud Type	Density (ppg)	Viscosity (cP)	pH	Fluid Loss (cm3)	Oil / Water	Source	Total Chlorides (ppm)	K+ (%)
2019-05-30 00:00	1	2224.00	Oil Based Mud	9.4	12	N/A	N/A	82.2/17.8	Active Pit	43000	0.00
2019-05-30 12:00	1	5481.00	Oil Based Mud	9.4	15	N/A	N/A	78.8/21.2	Active Pit	46000	0.00
2019-05-31 00:00	1	7248.00	Oil Based Mud	9.4	14	N/A	N/A	78.3/21.7	Active Pit	48000	0.00
2019-06-01 00:00	2	8480.00	Oil Based Mud	9.5	15	N/A	N/A	79.8/20.2	Active Pit	46000	0.00
2019-06-01 12:00	2	10681.00	Oil Based Mud	9.4	17	N/A	N/A	80.1/19.9	Active Pit	48000	0.00
2019-06-02 00:00	2	13102.00	Oil Based Mud	9.5	17	N/A	N/A	79.4/20.6	Active Pit	49000	0.00
2019-06-02 12:00	2	15025.00	Oil Based Mud	9.5	16	N/A	N/A	79.4/20.6	Active Pit	47000	0.00
2019-06-03 00:00	2	17468.00	Oil Based Mud	9.5	17	N/A	N/A	82.2/17.8	Active Pit	48000	0.00

Equipment and Service Data

Run No.	Tool	Serial Number	Measurement	Sensor Offset (ft)	Bit Offset (ft)	Max O.D. (in)	Min I.D. (in)
1	AutoTrak Curve Steering Unit	14299701	Near Bit Inclination	5.93	6.93	7.000	4.330
1	AutoTrak Curve Steering Unit	14299701	Near Bit VSS	5.93	6.93	7.000	4.330
1	AutoTrak Curve MWD	14205167	Gamma (single)	2.74	13.10	7.000	3.250
1	AutoTrak Curve MWD	14205167	Directional (mag)	12.26	22.62	7.000	3.250
2	AutoTrak Curve Steering Unit	14178970	Near Bit VSS	5.93	6.93	7.000	4.330
2	AutoTrak Curve Steering Unit	14178970	Near Bit Inclination	5.93	6.93	7.000	4.330
2	AutoTrak Curve MWD	12661246	Gamma (single)	2.76	13.10	7.000	3.250
2	AutoTrak Curve MWD	12661246	Directional (mag)	12.28	22.62	7.000	3.250

Service and Tool Mnemonics

Mnemonic	Name	Description
ATC SU	AutoTrak Curve SU	Auto Trak Curve Steering Unit
ATC MWD	AutoTrak Curve MWD	Auto Trak Curve MWD
ATC LCPM	AutoTrak Curve LCPM	Auto Trak Curve LCPM

Comments



- 1 Depth measurements were obtained from a depth control system not supplied or operated by Baker Hughes, a GE Company (BHGE). Due to the lack of control by BHGE logging engineers, depth calibrations and measurements could not be independently verified.
- 2 BHGE LWD runs 1 and 2 utilized 6.75 inch NaviGamma Services (Gamma Ray and Directional) behind a 8.5 inch bit and Rotary steerable assembly from 2214 to 17867 feet MD (2214 to 7937 feet TVD).

Remarks

Number	Measured Depth (ft)	Hole Section (in)	Run No.	Remark
0	2214.00	8.500	1	BHGE logging services began at 2214 feet MD (2214 feet TVD) per customer request.
2	17867.00	8.500	2	The interval from 17854 to 17867 feet MD (7937 feet TVD) was not logged due to sensor to bit offset at TD.

Curve Mnemonics

Presented Curves	Description	Units
ROPA	Depth Averaged ROP 10 ft Average	ft/h
TVD	True Vertical Depth	ft
WOBA	Weight On Bit, Average 1 ft Average	klb
GRAM	Gamma Ray - Apparent - Memory 3 ft Average	API
TCDM	Downhole Temperature	degF



Company

Well

Interval

Created

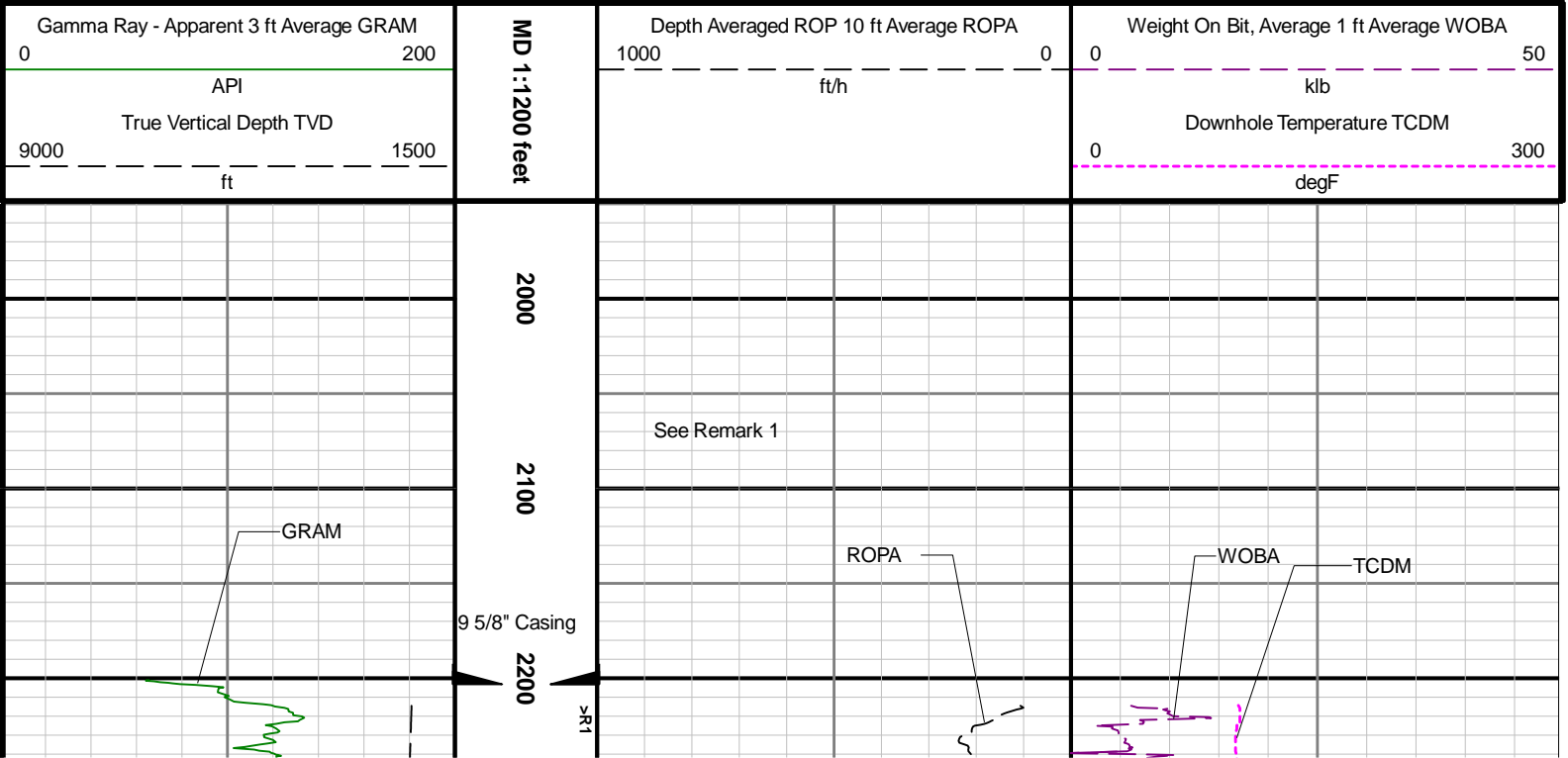
ConocoPhillips

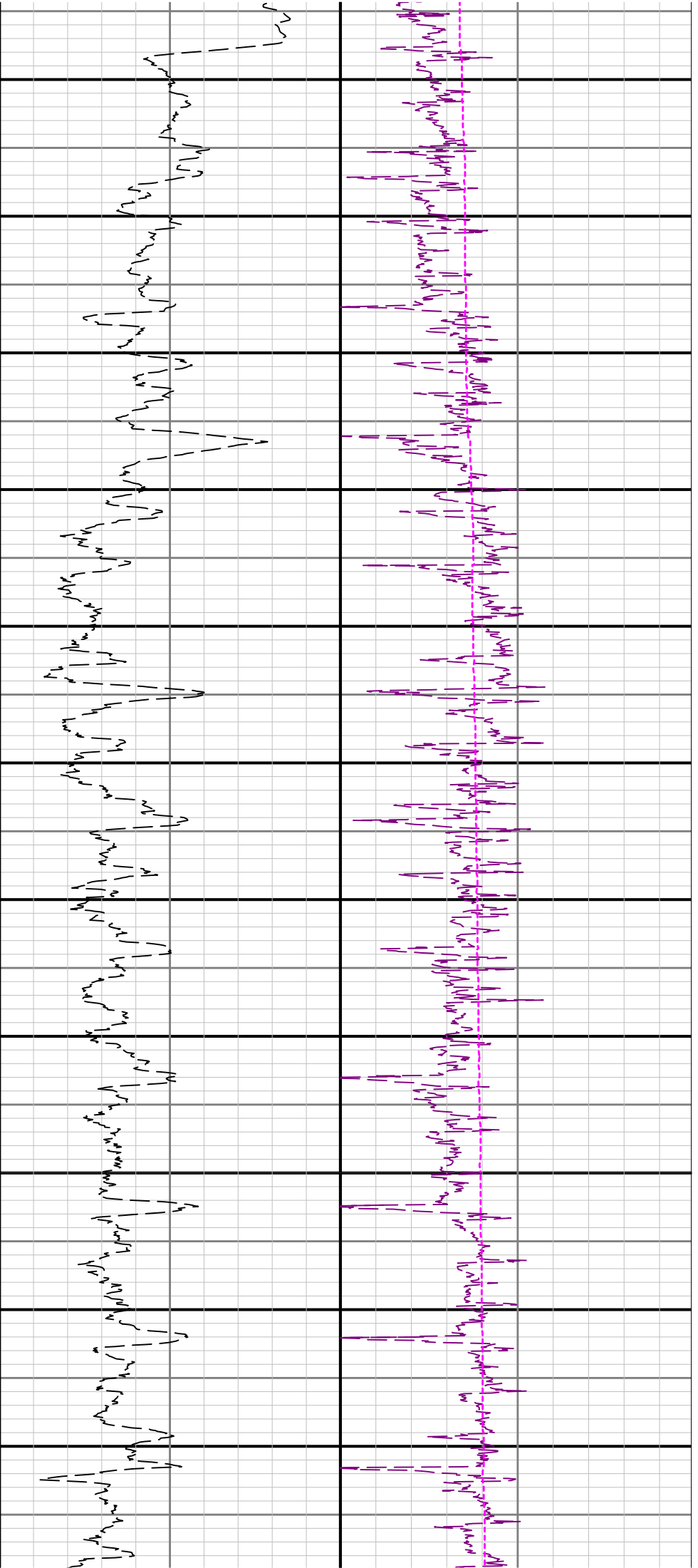
King_3-65_28-29_3CH

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Date To: 2019-06-03 13:23

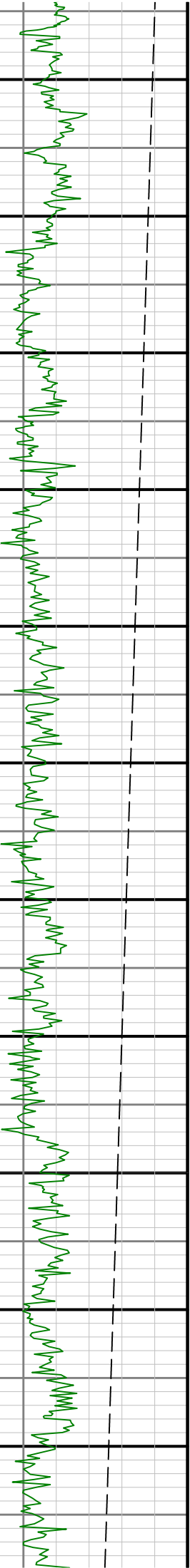
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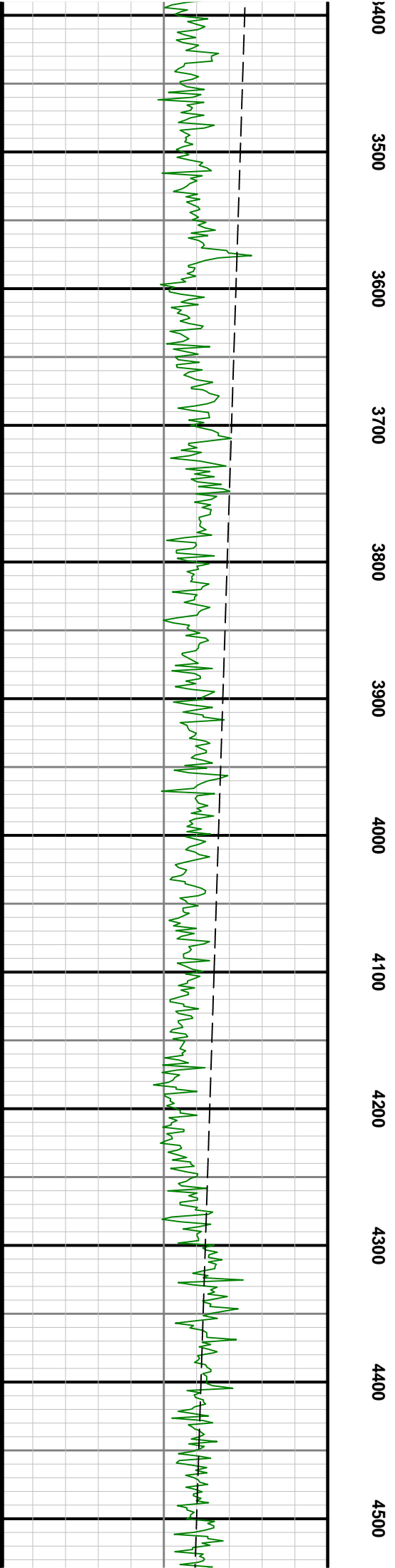
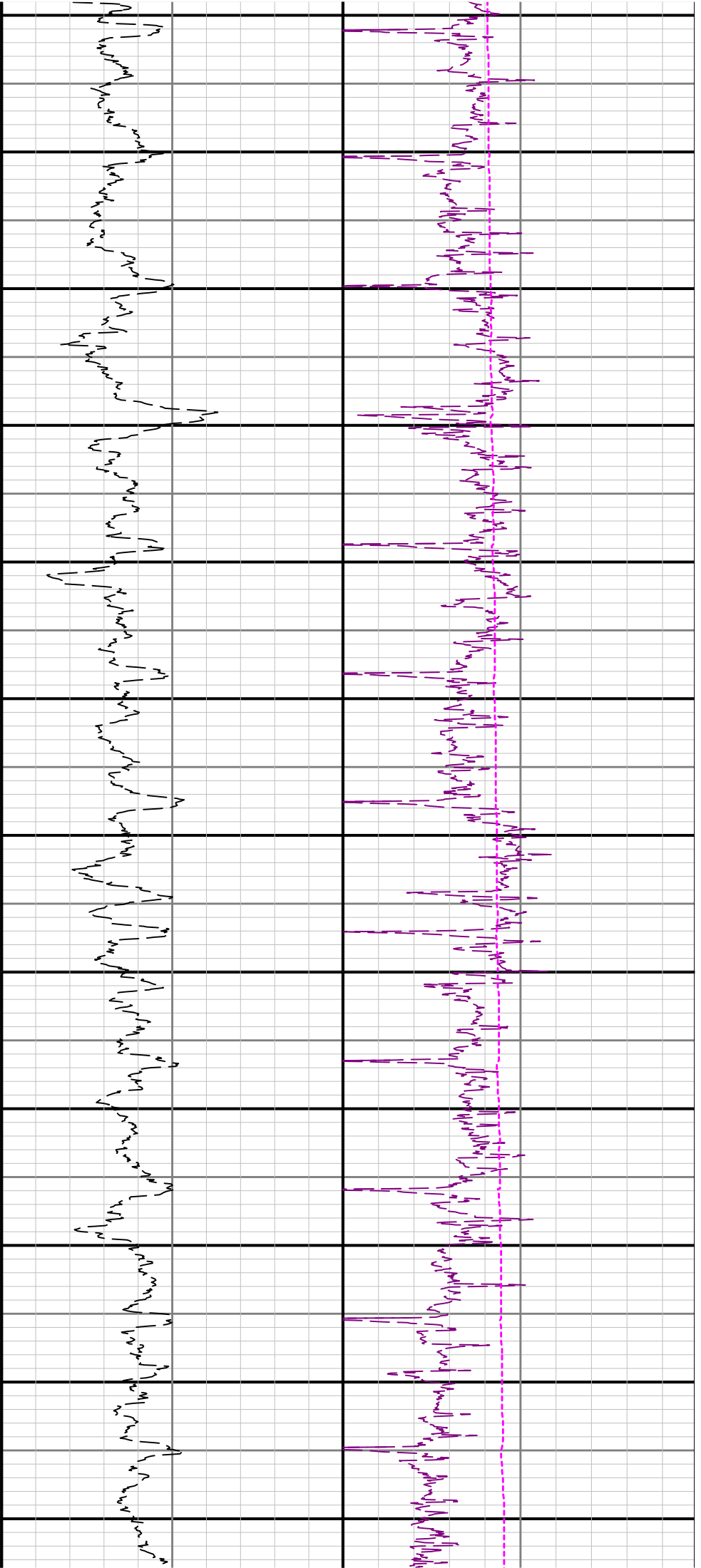
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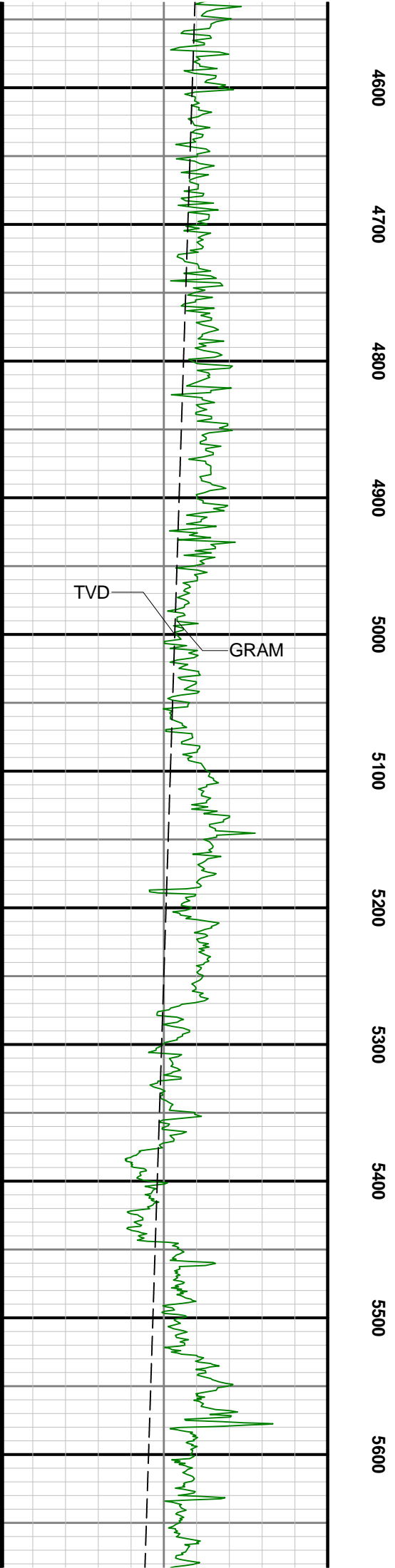
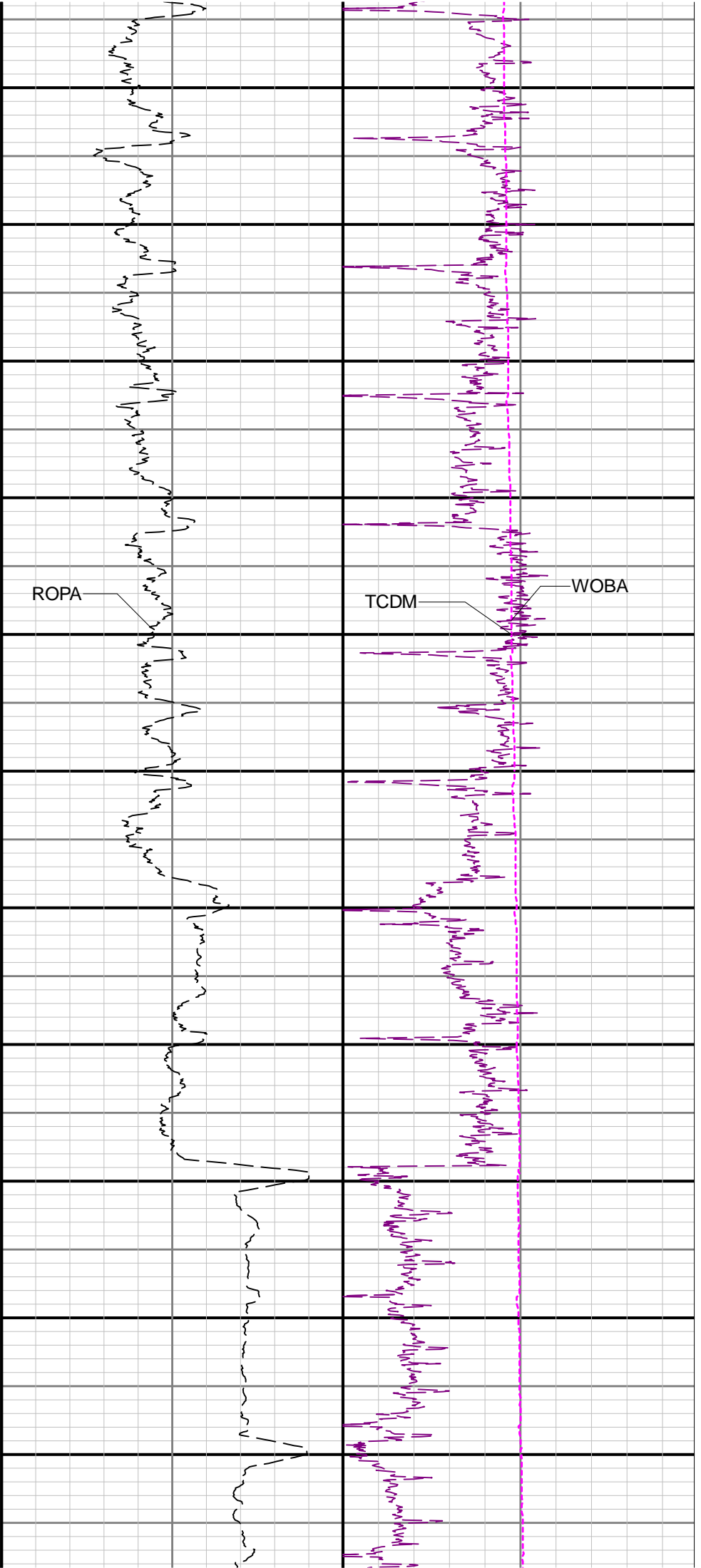


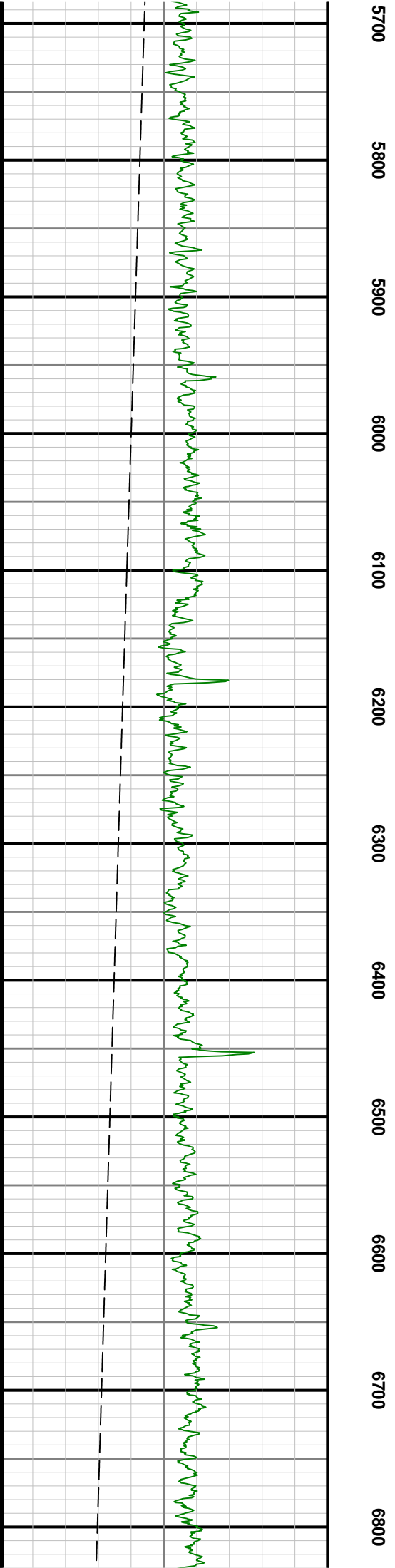
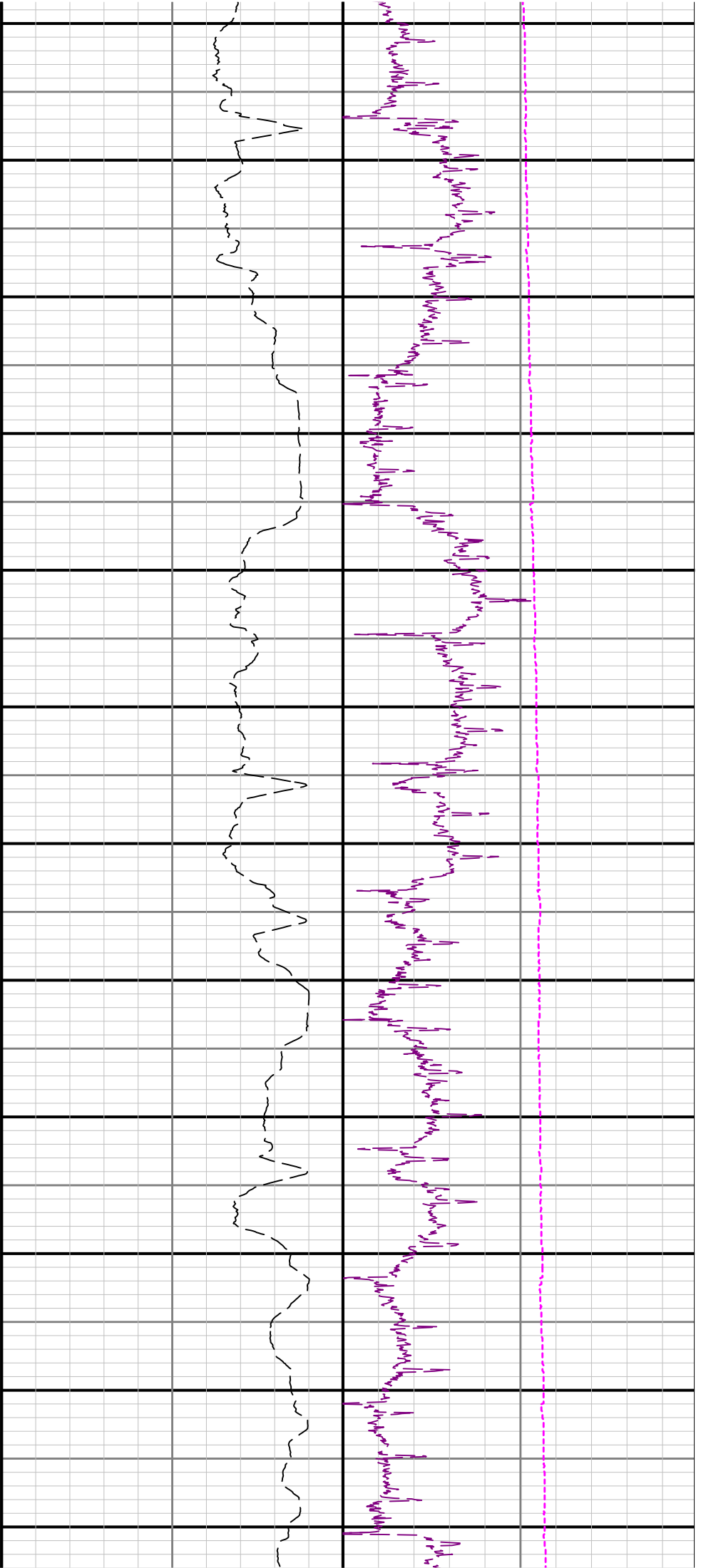


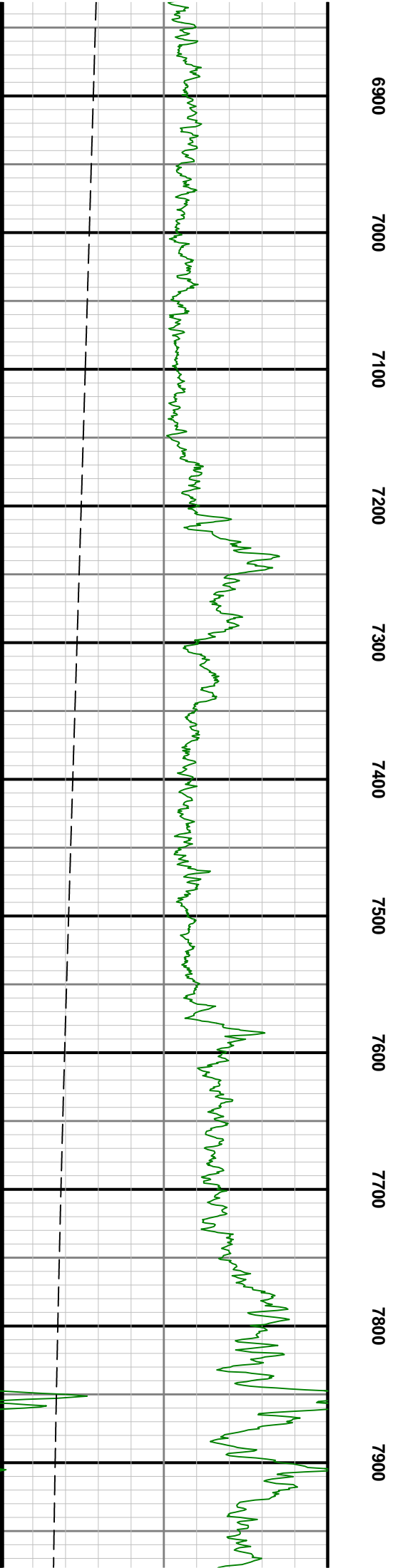
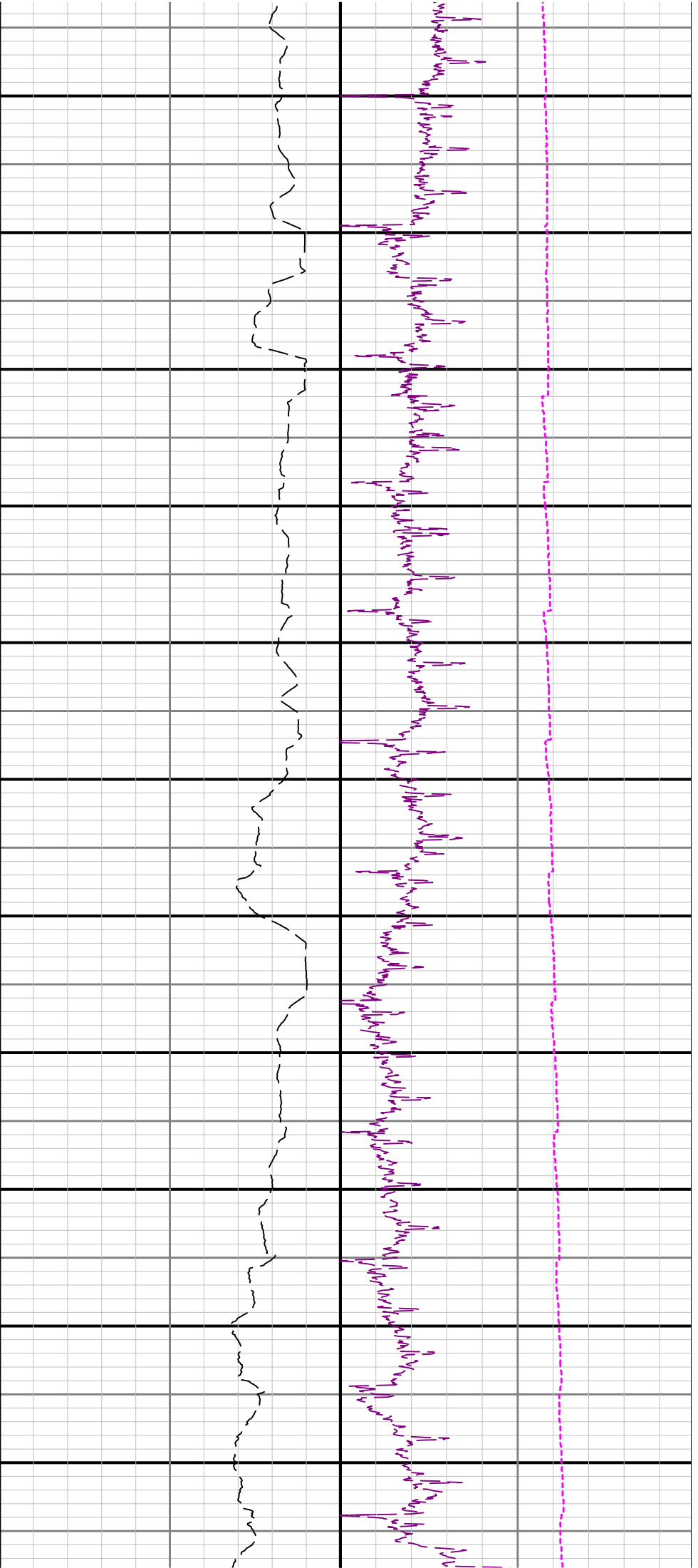
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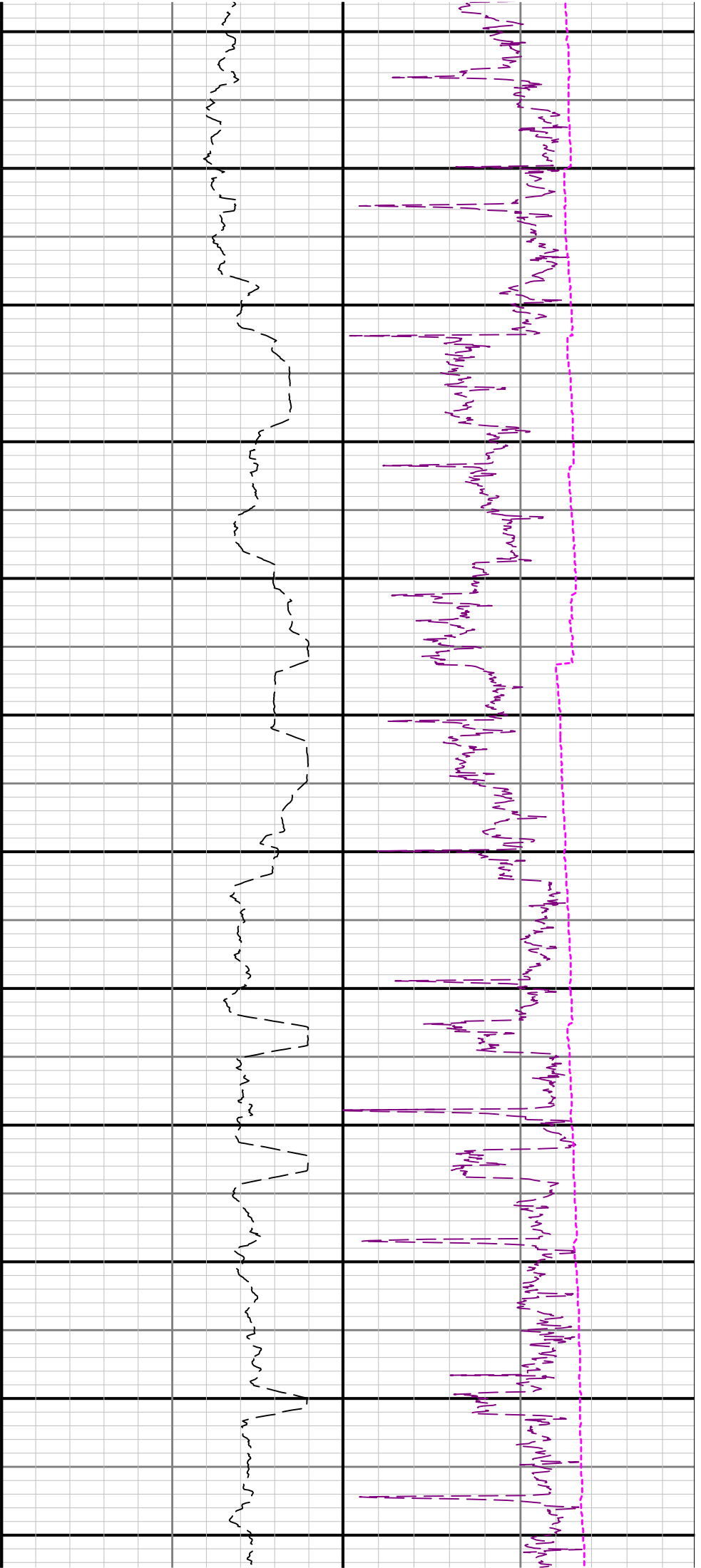












$R1 - R2$

