



LWD REALTIME LOG

Gamma Ray

Company: Verdad Resources

Well: TIMBRO 9-59 8B-9-1

Field: Wattenberg

County: Weld Country: United States

State: Colorado

Surface Location:

Latitude: 040° 45' 42.102" N
Longitude: 104° 00' 34.286" W

Other Services:

SEC: 8 TWN: 9N RGE: 59W

Elevation: 0.00 ft

Above P.D. 5028.00 ft

Elev. KB: 24.00 ft
Elev. DF: 5028.00 ft
Elev. GL: 5004.00 ft

Magnetic Field Reference

Date From: 2019-05-25 Top: (ft) 1877.00
Date To: 2019-05-29 Bottom: (ft) 16378.00
Spud Date: 2019-05-24
Azi Reference North: True Dip Angle: (deg) 67.19
Total Magnetic Field Strength: (nT) 52484
Mag to Reference North Correction: (deg) 7.78

Borehole Record

Casing Record

Hole Size (in)	From (ft)	To (ft)	Size (in)	Weight (lb/ft)	From (ft)	To (ft)
13.500	80.00	1877.00	16.000	42.00	24.00	80.00
8.500	1877.00	16378.00	9.625	36.00	80.00	1867.00

Mud Record

Deviation Record

Type	From (ft)	To (ft)	Hole Size (in)	Interval (ft)	Inc Az (Start)	Inc Az (End)
Synthetic Based Mud	1877.00	16378.00	13.500	1797.00	0.37 287.77	18.54 333.52
			8.500	14501.00	18.54 333.52	90.25 90.05

Acquisition System

Software Version

Other

Baker Hughes Cadence	RT 5.0	Rig: H&P290
Plot Studio	5.0.8260.3	Contractor: Helmerich & Payne Drilling Co
		District: RMD Unit: RMA

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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	
2	2	8.500	PDC	3.00	AutoTrak Curve	1864.09	16365.59	1877.00	16378.50	2019-05-25 19:57	2019-05-28 22:11	69.71

Crew

Name	Arrive Wellsite	Depart Wellsite	Name	Arrive Wellsite	Depart Wellsite	Name	Arrive Wellsite	Depart Wellsite
Emuobosan Onosu	2019-05-24	2019-05-29						

Mud Properties Record

Date / Time	Run	Measured	Mud	Density	Viscosity	Plastic	Fluid	Oil /	Source	Total	K
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Date / Time	Run No.	Measured Depth (ft)	Mud Type	Density (ppg)	Viscosity (cP)	pH	Fluid Loss (cm3)	Oil / Water	Source	total Chlorides (ppm)	K+ (%)
2019-05-25 14:00	2	1877.00	Synthetic Based Mud	9.4	59	N/A	N/A	70/30	Active Pit	35000	0.00
2019-05-26 05:02	2	3592.00	Synthetic Based Mud	9.3	64	N/A	N/A	71/29	Active Pit	45000	0.00
2019-05-26 08:33	2	4077.00	Synthetic Based Mud	9.4	55	N/A	N/A	70/30	Active Pit	49000	0.00
2019-05-26 20:00	2	6800.00	Synthetic Based Mud	9.4	51	N/A	N/A	69/31	Active Pit	49000	0.00
2019-05-27 08:19	2	9380.00	Synthetic Based Mud	9.7	47	N/A	N/A	70/30	Active Pit	45000	0.00
2019-05-27 20:00	2	11591.63	Synthetic Based Mud	9.8	50	N/A	N/A	70/30	Active Pit	45000	0.00
2019-05-28 09:27	2	14321.00	Synthetic Based Mud	9.9	47	N/A	N/A	69/31	Active Pit	44000	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)
2	AutoTrak Curve Steering Unit	14178991	Near Bit Inclination	5.93	6.74	7.000	4.330
2	AutoTrak Curve Steering Unit	14178991	Near Bit VSS	5.93	6.74	7.000	4.330
2	AutoTrak Curve MWD	14179563	Gamma (single)	2.76	12.91	7.000	3.250
2	AutoTrak Curve MWD	14179563	Directional (mag)	12.27	22.42	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

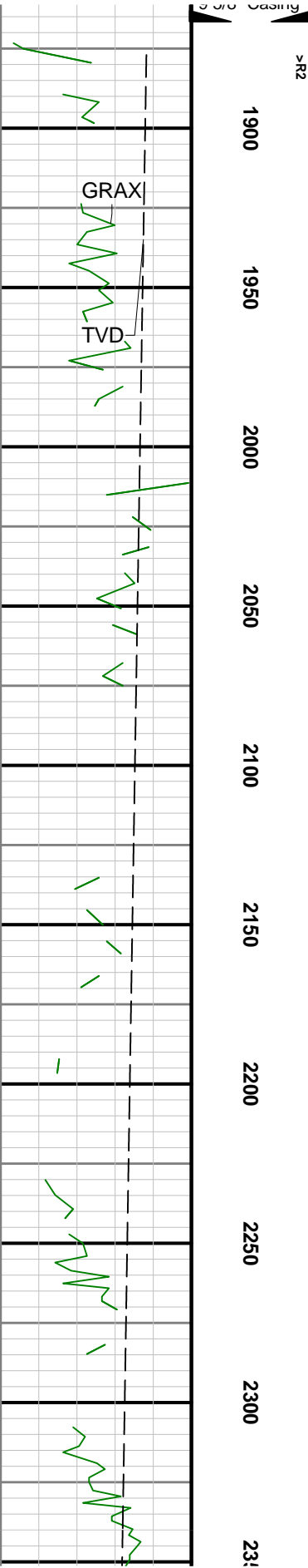
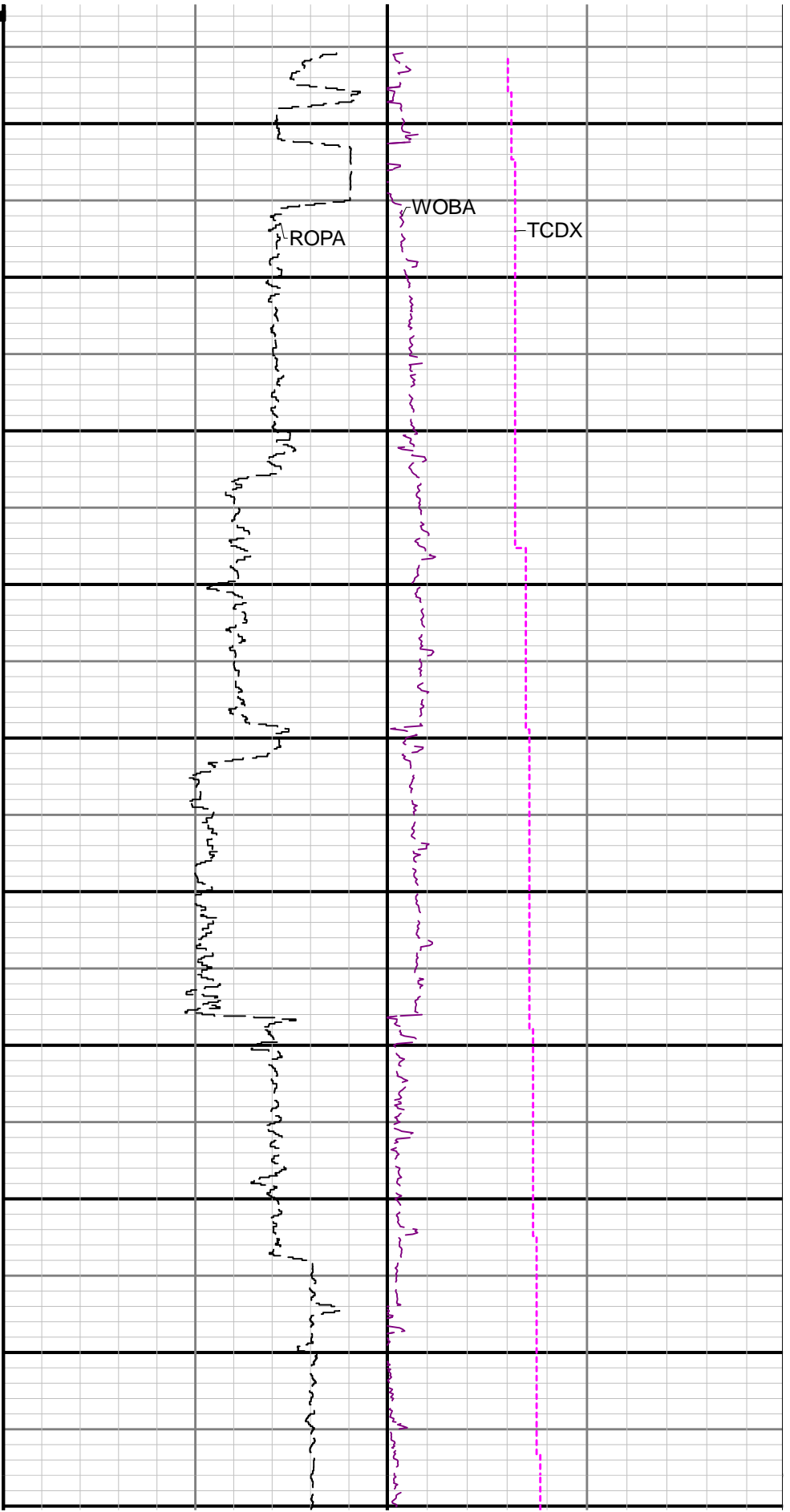
Comments

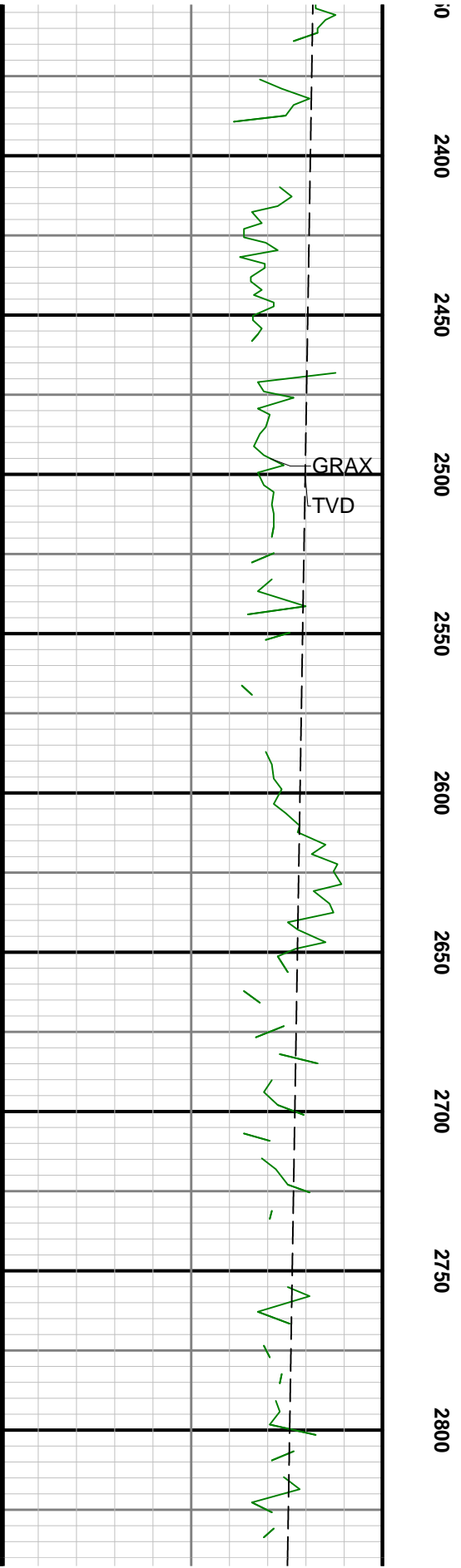
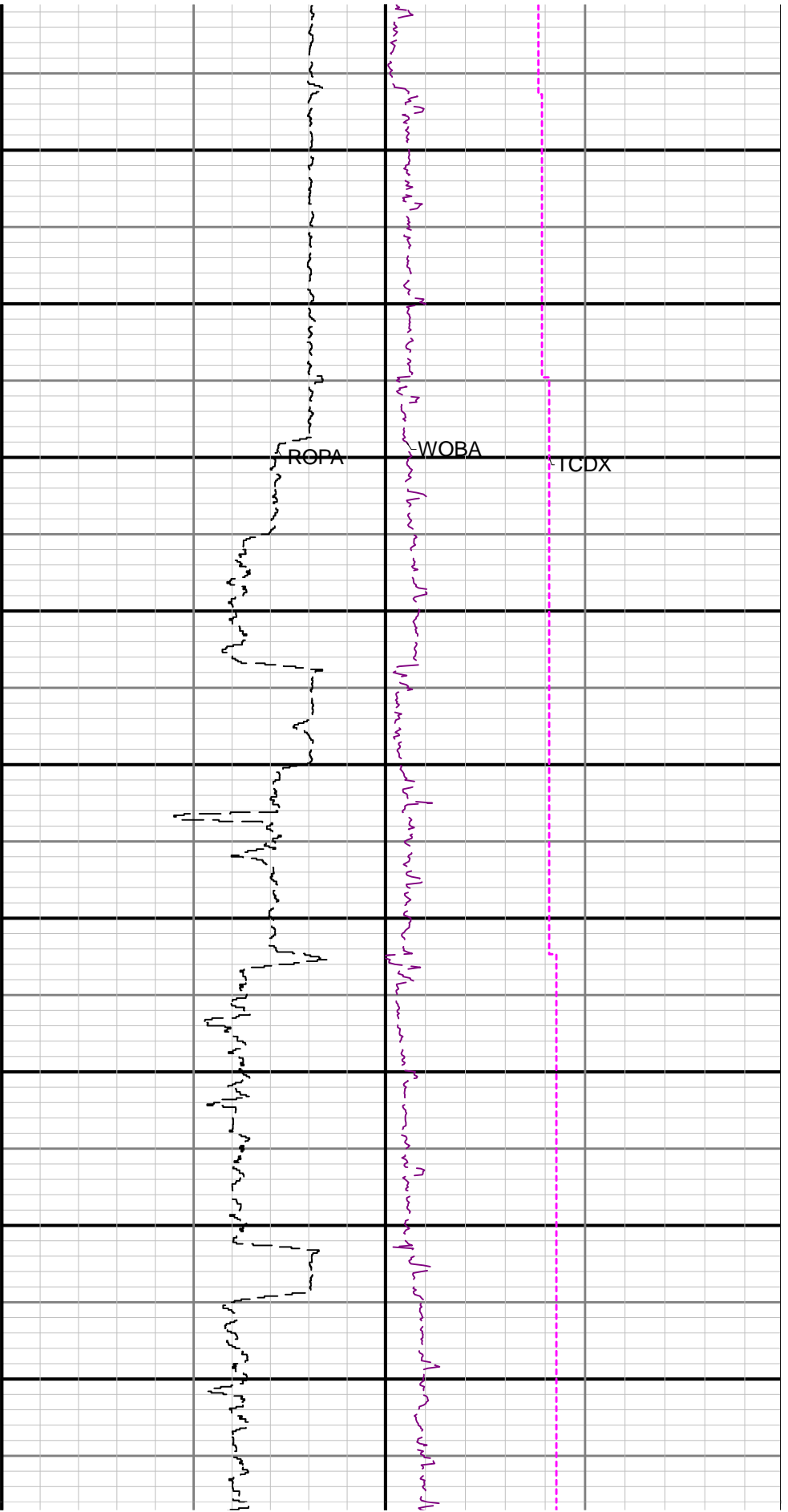
1	Depth measurements were obtained from a depth control system not supplied or operated by Baker Hughes. Due to lack of control by Baker Hughes logging engineers, depth calibrations and measurements could not be independently verified.
2	Baker Hughes Run 2 utilized 6 3/4 inch Navigamma services (Gamma Ray and Directional) to log the interval from 1877 to 16378 feet MD (1778 to 6151 feet TVD).

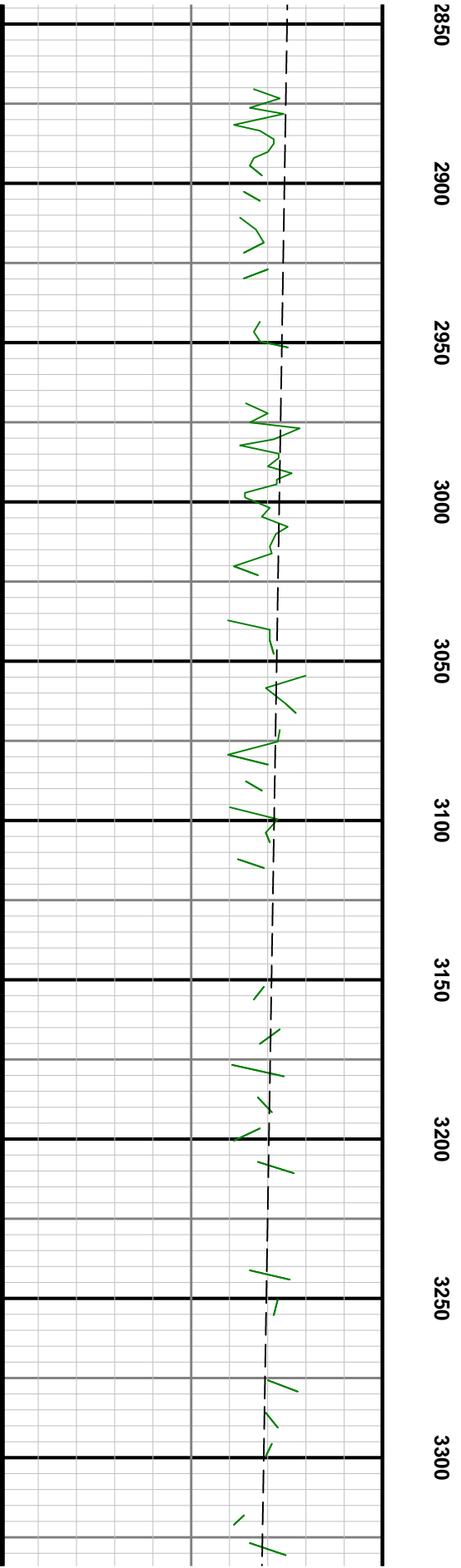
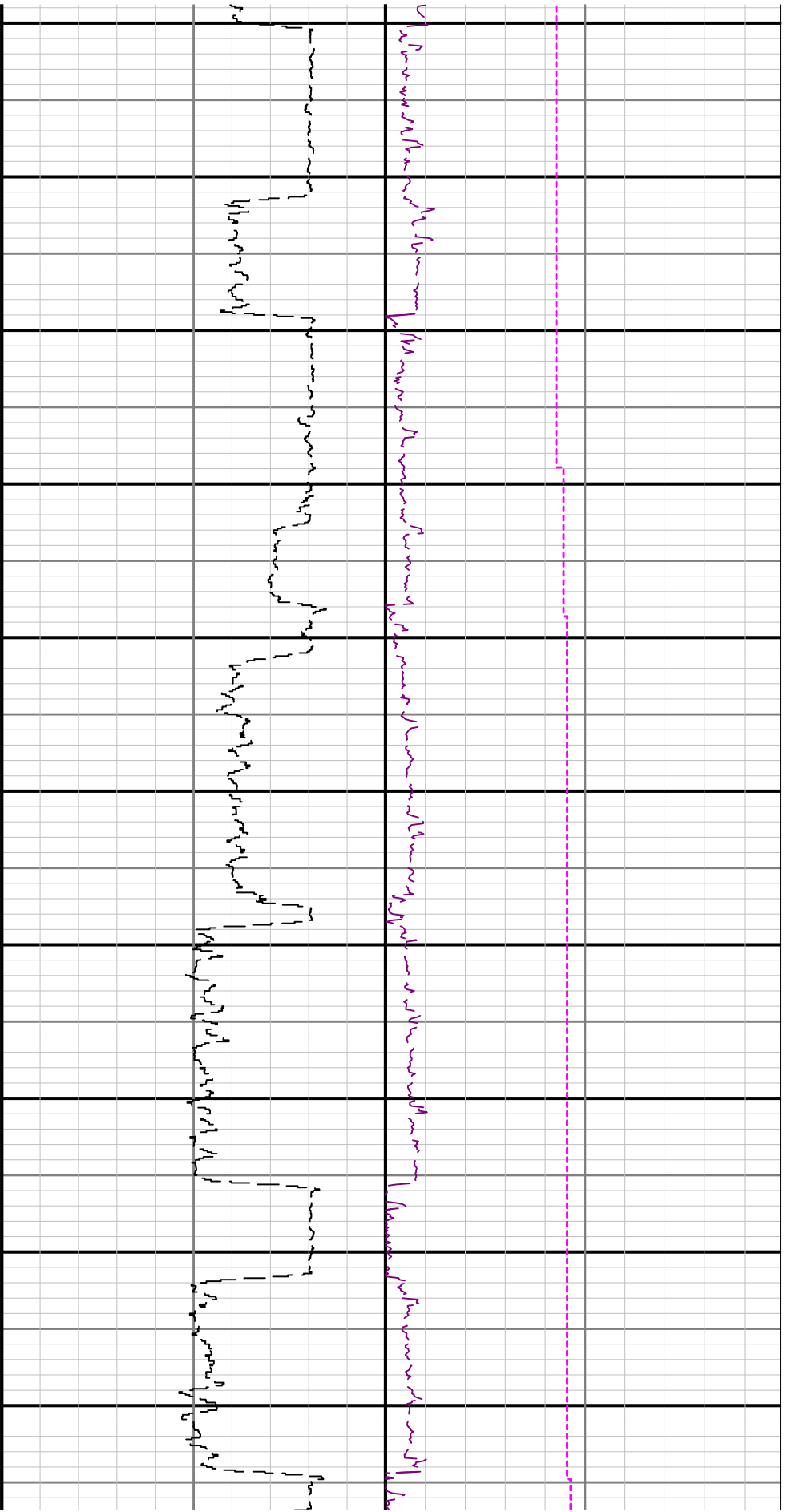
Remarks

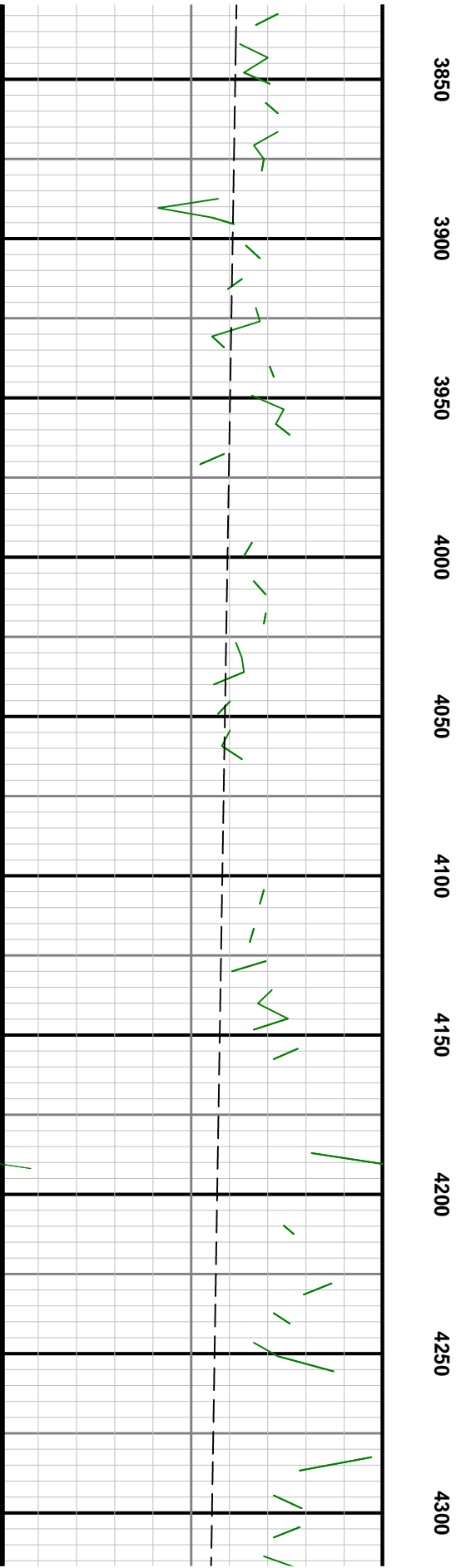
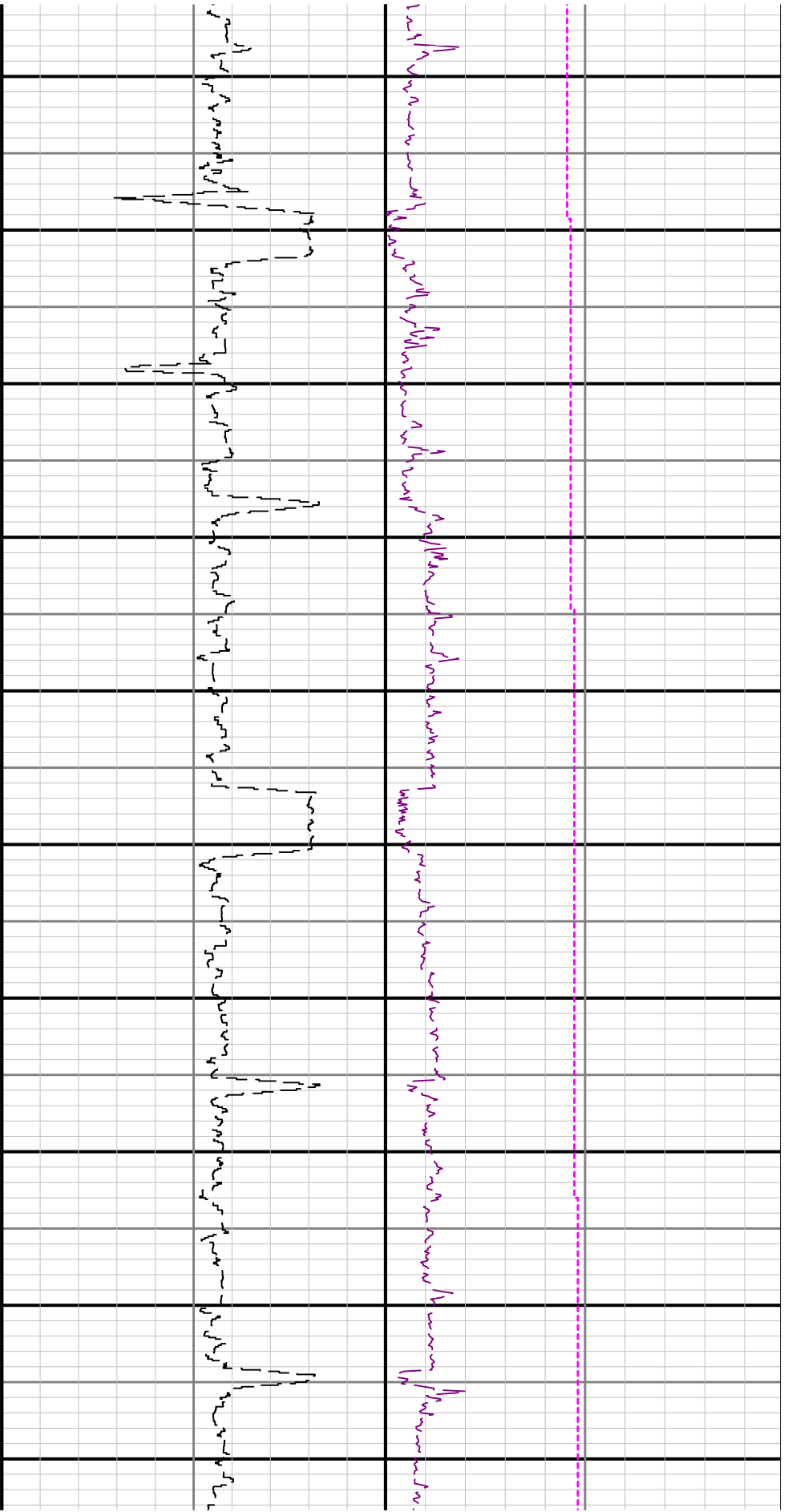
Number	Measured Depth (ft)	Hole Section (in)	Run No.	Remark
1	16370.00	8.500	2	The interval from 16365 to 16378 feet MD (6151 feet TVD) was not logged due to sensor to bit offset at Section TD.

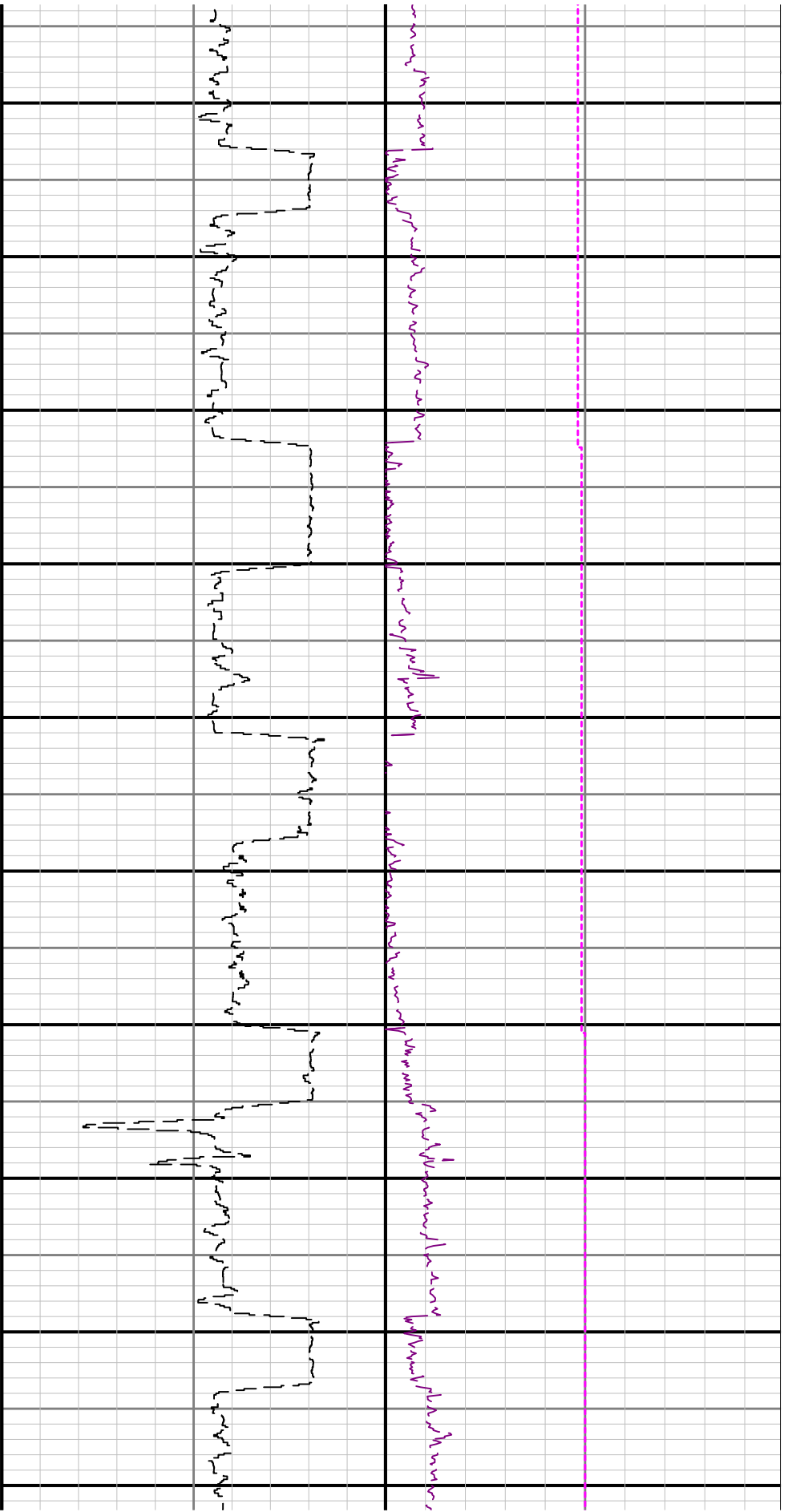
<div><div><div>BAKER HUGHES</div><div>a GE company</div></div><div></div></div>		Company	Verdad Resources			
		Well	TIMBRO 9-59 8B-9-1			
		Interval	Date From:	2019-05-25 08:37	Top:	1877.00 ft
			Date To:	2019-05-29 05:08	Bottom:	16378.00 ft
		Created	2019-05-29 05:22:55			
Gamma Ray - Apparent 3 ft Average GRAX		MD 1:600 feet	Depth Averaged ROP 3 ft Average ROPA		Weight On Bit, Average 1 ft Average WOBA	
0 150			1000 0		0 100	
API			ft/h		klb	
True Vertical Depth TVD		1800			Downhole Temperature TCDX	
8000 1000					0 300	
ft					degF	
		1850				



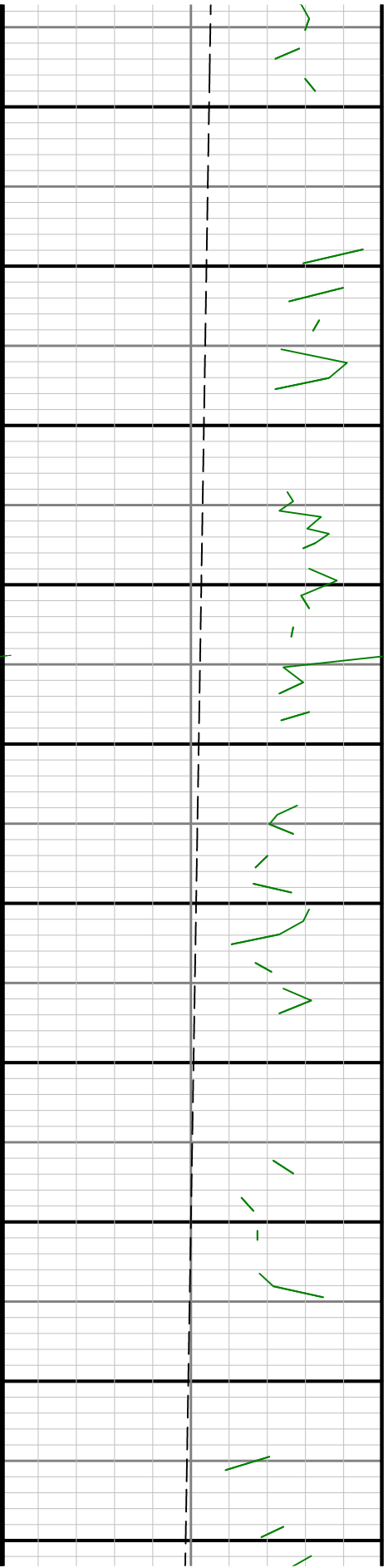


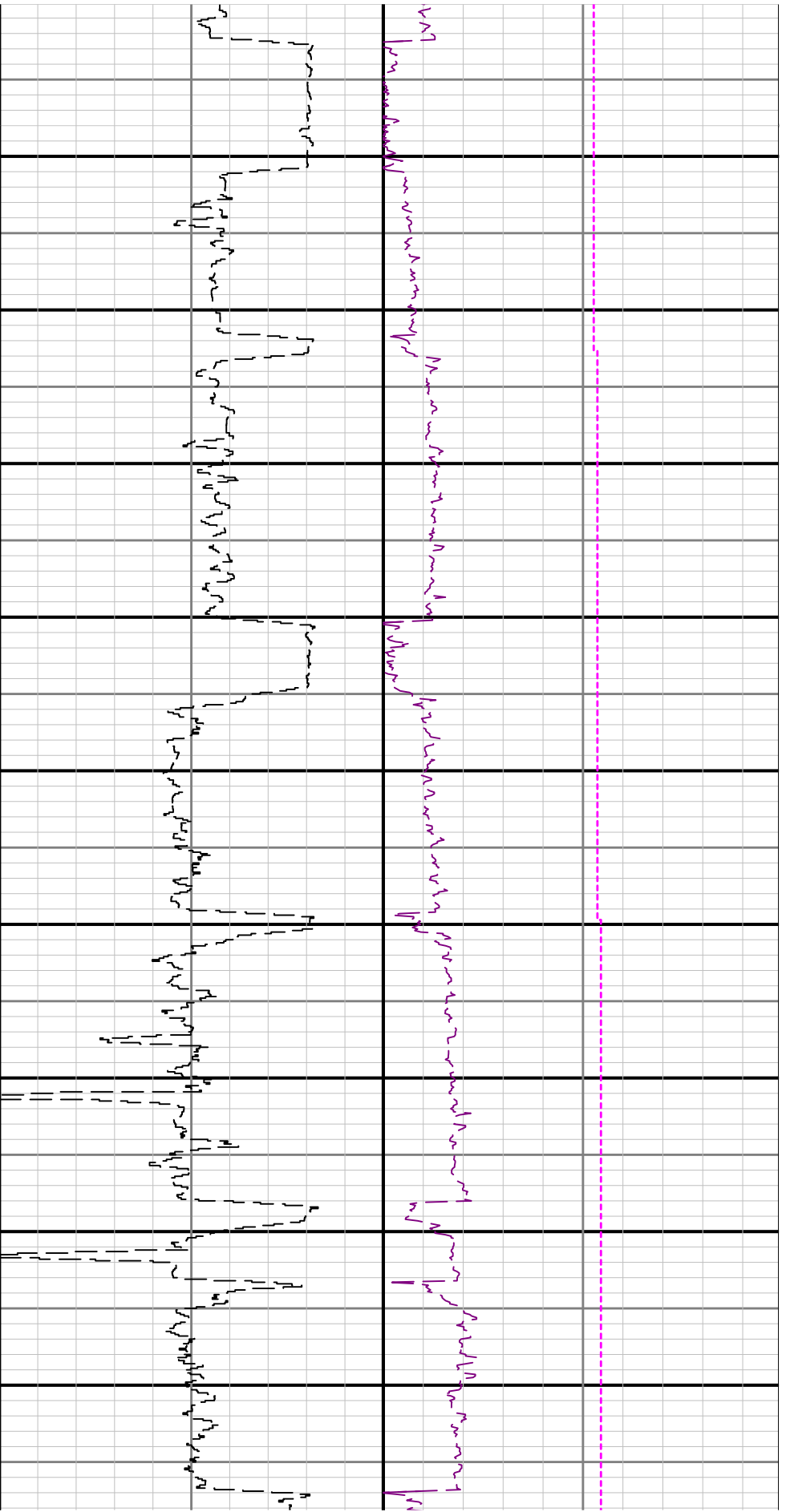






4350 4400 4450 4500 4550 4600 4650 4700 4750 4800





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